HOUSTON SHIP CHANNEL EXPANSION

CHANNEL IMPROVEMENT PROJECT 11-001

BOLIVAR ROADS TO REDFISH REEF
DOLLAR REEF OYSTER MITIGATION

Coastal Navigation and Environmental Restoration

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Office of the District Engineer
U. S. Army Engineer District, Galveston
Corps of Engineers
Galveston, Texas
December 2020

This project was designed by the Galveston District of the U.S. Army Corps of Engineers. The initials or signatures and registration designations of individuals appear on these project documents within the scope of their employment as required by ER 1110-1-8152.

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FILE NO.: XXX 0000-0000

GALVESTON DISTRICT
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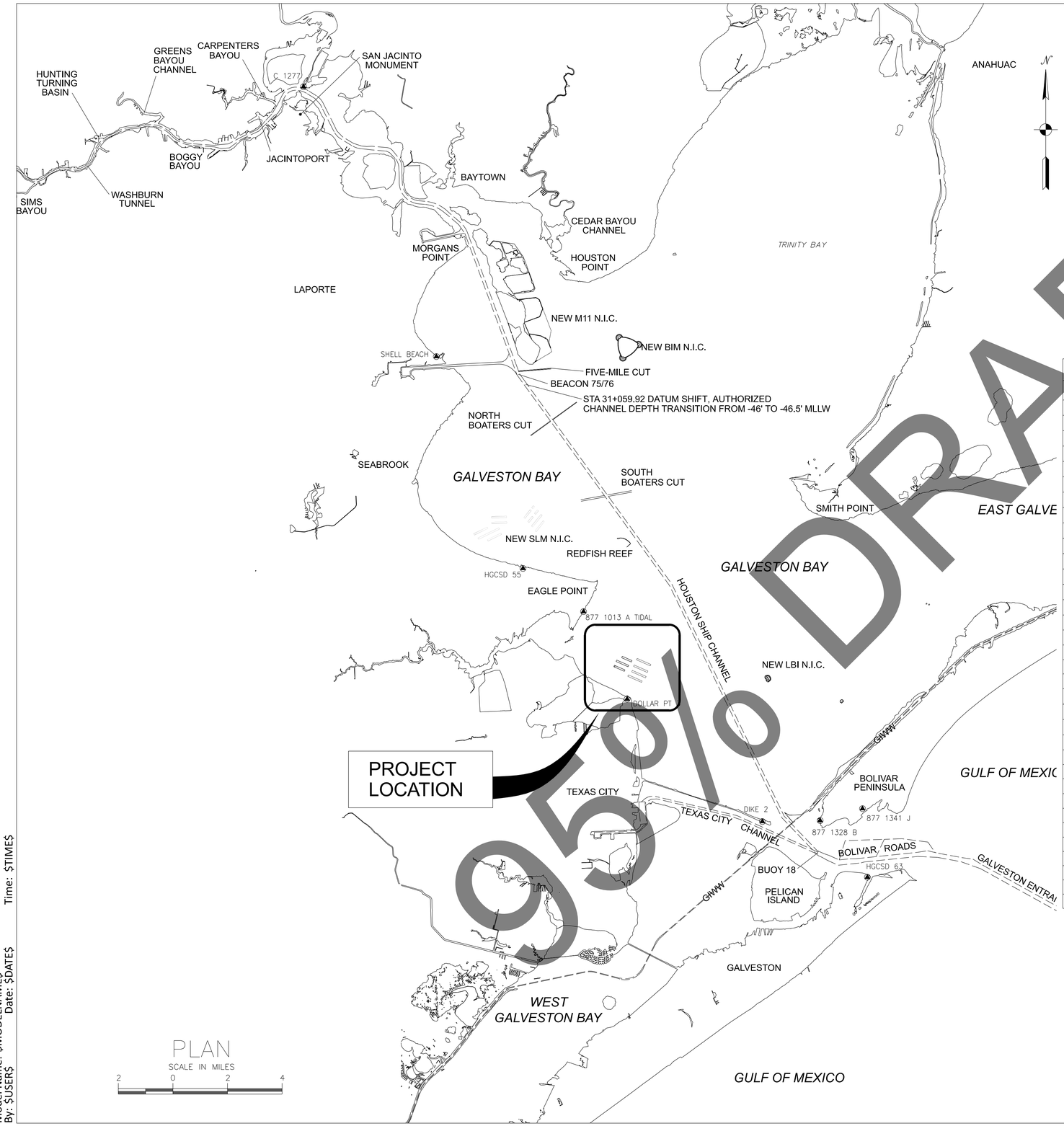
$SheetXofXX$



PLAN
SCALE IN MILES
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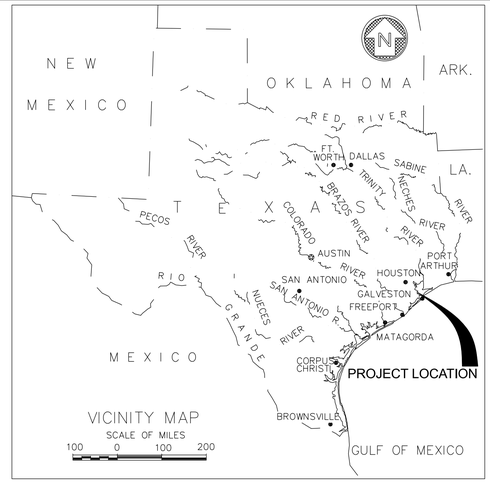

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U.S. ARMY ENGINEER DISTRICT, GALVESTON
CORPS OF ENGINEERS
GALVESTON, TEXAS

HOUSTON SHIP CHANNEL EXPANSION
CHANNEL IMPROVEMENT PROJECT 11-001
BOLIVAR ROADS TO REDFISH REEF
DOLLAR REEF OYSTER MITIGATION
LOCATION MAP
AND INDEX OF DRAWINGS

Drawing No.:
G-101
Sheet 2 of 9

File: $FILE$
Model Name: $MODELNAME$
By: $USER$
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Time: $TIME$

GENERAL NOTES

1. ALL EXISTING CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL NOTIFY THE GOVERNMENT AND CONTRACTING OFFICER IMMEDIATELY OF ANY CONFLICTS OR DISCREPANCIES.

2. THE CONTRACTOR SHALL MAKE HIS OWN ARRANGEMENTS AND OBTAIN PERMISSION FROM APPLICABLE PROPERTY OWNERS FOR STAGING AREAS AND LOADING BARGES ON PUBLIC OR PRIVATE PROPERTY. ALL COSTS ASSOCIATED WITH PREPARATION AND USE OF SUPPORT FACILITIES FOR THIS PROJECT SHALL BE PAID BY THE CONTRACTOR. THESE AREAS SHALL BE RESTORED TO PRE-PROJECT CONDITIONS UPON COMPLETION OF WORK.

3. THE CONTRACTOR SHALL TAKE MEASURES TO PROTECT ALL EXISTING IMPROVEMENTS WITHIN AND ADJACENT TO THE WORK AREA. ANY DAMAGE CAUSED BY THE CONTRACTOR'S ACTIVITIES SHALL BE REPLACED OR REPAIRED AT THE EXPENSE OF THE CONTRACTOR AND AT NO COST TO THE GOVERNMENT. STRUCTURES THAT ARE TO BE PROTECTED FROM DAMAGE OR REPAIRED IF DAMAGED INCLUDE BUT ARE NOT LIMITED TO FENCES, LEVEE EMBANKMENTS, OUTLET STRUCTURES, DRAINAGE PIPES, ROADS, DITCHES, PRIVATE OR PUBLIC GROUNDS, AND OTHER STRUCTURES OR IMPROVEMENTS.

4. THE CONTRACTOR SHALL TAKE PRECAUTIONS, SECURE EQUIPMENT, AND PROTECT THE WORK AREA AGAINS ADVERSE WEATHER CONDITIONS AND SURGE/WAKE INFLUENCES FROM PASSING VESSELS. PROVISIONS SHALL BE MADE TO ACCESS SHALLOW AREAS THROUGH THE USE OF LIGHT-LOADED BARGES OR OTHER EQUIPMENT SUITABLE FOR SHALLOWER WATER. EXCAVATION FOR ACCESS AND FLOATATION DREDGING IS NOT PERMITTED UNLESS GRANTED IN WRITING BY THE GOVERNMENT.

5. THE PROJECT MAY BE ADJACENT TO ENVIRONMENTALLY SENSITIVE AREAS. THE CONTRACTOR SHALL AVOID / MINIMIZE IMPACTS TO THESE AREAS DURING THE COURSE OF CONSTRUCTION. ANY DAMAGE CAUSED BY THE CONTRACTOR'S ACTIVITIES SHALL BE RESTORED AT THE EXPENSE OF THE CONTRACTOR AND AT NO COST TO THE GOVERNMENT. THE GOVERNMENT SHALL BE THE SOLE ASSESSOR AS TO WHETHER ENVIRONMENTAL IMPACTS HAVE OCCURRED AS A RESULT OF THE CONTRACTOR'S ACTIVITIES. THE GOVERNMENT RESERVES THE RIGHT TO SUSPEND WORK AT ANY TIME IF IMPACTS OCCUR AND UNTIL SATISFACTORY CORRECTIVE MEASURES ARE IMPLEMENTED BY THE CONTRACTOR.

6. CONTRACTOR EQUIPMENT SHALL NOT OPERATE ON PRIVATE PROPERTY UNLESS WRITTEN PERMISSION HAS BEEN ACQUIRED BY THE CONTRACTOR FROM THE LAND OWNER. A COPY OF THE WRITTEN PERMISSION SHALL BE FURNISHED TO THE CONTRACTING OFFICER FOR REVIEW AND APPROVAL PRIOR ACCESSING THE PROPERTY FOR SITE ACCESS, STAGING, OR OTHER OPERATIONS ASSOCIATED WITH THE WORK.

7. THE PROJECT IS LOCATED NEAR THE HOUSTON SHIP CHANNEL, WHICH IS HIGHLY UTILIZED BY MARINE TRAFFIC. THE CONTRACTOR SHALL NOT STAGE EQUIPMENT WITHIN THE NAVIGATION CHANNEL NOR INTERFERE WITH OR INTERRUPT VESSEL NAVIGATION.

8. THE CONTRACTOR SHALL REQUEST A NOTICE TO MARINERS FROM THE U.S. COAST GUARD PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES.

9. THE CONTRACTOR SHALL REMOVE ANY ENCOUNTERED DEBRIS AND DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

10. THE LOCATIONS OF EXISTING UTILITIES AND SUBSTRUCTURES SHOWN HEREIN HAVE BEEN TAKEN FROM AVAILABLE RECORDS. THE GOVERNMENT DOES NOT WARRANT THE COMPLETENESS OR CORRECTNESS OF THE LOCATIONS OF UTILITIES AND SUBSTRUCTURES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO IDENTIFY AND PROTECT EXISTING UTILITIES AND SUBSTRUCTURES. SHOULD UTILITIES, PIPELINES, CABLING OR OTHER SUBSTRUCTURES BE ENCOUNTERED THAT ARE NOT IDENTIFIED AND INDICATED ON THESE PLANS, THE CONTRACTING OFFICER'S REPRESENTATIVE SHALL BE NOTIFIED IMMEDIATELY.

11. ATTENTION IS DIRECTED TO THE SPECIFICATIONS WHERE BIDDERS ARE REQUIRED TO EXAMINE AND JUDGE, AS THEIR OWN RESPONSIBILITY THE LOCATION, PHYSICAL CONDITIONS, AND SURROUNDINGS OF THE PROPOSED WORK.

12. THE CONTRACTOR SHALL SCHEDULE AND COORDINATE WITH THE VARIOUS COMPANIES AND AGENCIES WHO MAY BE AFFECTED BY THIS PROJECT. THE CONTRACTOR SHALL OBTAIN THE REQUIRED PERMITS AS MAY BE REQUIRED BEYOND THE AUTHORIZATIONS PROVIDED TO PERFORM THE WORK.

13. THE CONTRACTOR SHALL ADHERE TO THE REQUIREMENTS OF THE TECHNICAL SPECIFICATIONS, AS WELL AS ANY APPLICABLE FEDERAL, STATE, OR LOCAL RULES, REGULATIONS, AND SAFETY CODES AS MAY BE REQUIRED, WHETHER OR NOT SPECIFICALLY STATED IN THE TECHNICAL SPECIFICATIONS, FOR THE DURATION OF THE CONTRACT.

14. THE CONTRACTOR SHALL COMPLETE ALL WORK SHOWN ON THE DRAWINGS AND IN THE SPECIFICATIONS, UNLESS INDICATED AS NOT IN CONTRACT (N.I.C.).

LEGEND:

ECP-1070 BORING LOCATION

ABBREVIATIONS:

AC	ACRES
APPROX	APPROXIMATE
C.S.	CROSS SECTION
DRM	DOLLAR REEF OYSTER MITIGATION
FT	FEET
HSC	HOUSTON SHIP CHANNEL
N	NORTHING
E	EASTING
MLLW	MEAN LOWER LOW WATER
N.I.C.	NOT IN CONTRACT
TYP	TYPICAL

PUBLISHED CONTROL POINTS

CONTROL POINT	EASTING	NORTHING	ELEV. (NAVD88)
877 1341J	3,320,641.68	13,706,863.63	3.51'
HGCSD 63	3,321,588.04	13,693,607.86	2.33'
8771328 B	3,312,451.66	13,704,558.73	6.17'
DIKE 2	3,301,284.90	13,704,367.72	6.68'
DOLLAR PT 3	3,275,129.11	13,728,051.27	21.20'
8771013 A	3,266,697.46	13,744,960.72	4.33'
HGCSD 55	3,254,993.22	13,753,303.29	12.62'
SHELL BEACH	3,238,239.66	13,794,271.83	9.69'

SURVEY NOTES:

1. HORIZONTAL COORDINATES ARE IN U.S. SURVEY FEET AND REFERENCED TO THE TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE 4204, NAD83.
2. CONTRACTOR SHALL CONDUCT PRE-CONSTRUCTION SURVEY CHECKS OF PROJECT MONUMENTATION AND IMMEDIATELY REPORT DISCREPANCIES TO THE CONTRACTING OFFICER.
3. ALL ELEVATIONS ON PLAN DRAWINGS AND CROSS-SECTIONS ARE REFERENCED TO MEAN LOWER LOW WATER (MLLW).
4. RELATIONSHIP BETWEEN MLLW AND NAVD88 IS BASED ON THE USACE TIDAL DATUM CONVERSION BETWEEN HSC STATION 110+000 TO 78+844, WHERE EL. 0' MLLW = EL. -0.05' NAVD88.

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U.S. Army Corps of Engineers
Galveston District

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U.S. ARMY ENGINEER DISTRICT, GALVESTON
CORPS OF ENGINEERS
GALVESTON, TEXAS

HOUSTON SHIP CHANNEL EXPANSION
CHANNEL IMPROVEMENT PROJECT 11-001
BOLIVAR ROADS TO REDFISH REEF
BOLLAR REEF OYSTER MITIGATION
GENERAL NOTES

Drawing No.:
G-102
Sheet 3 of 9

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By: $USER$
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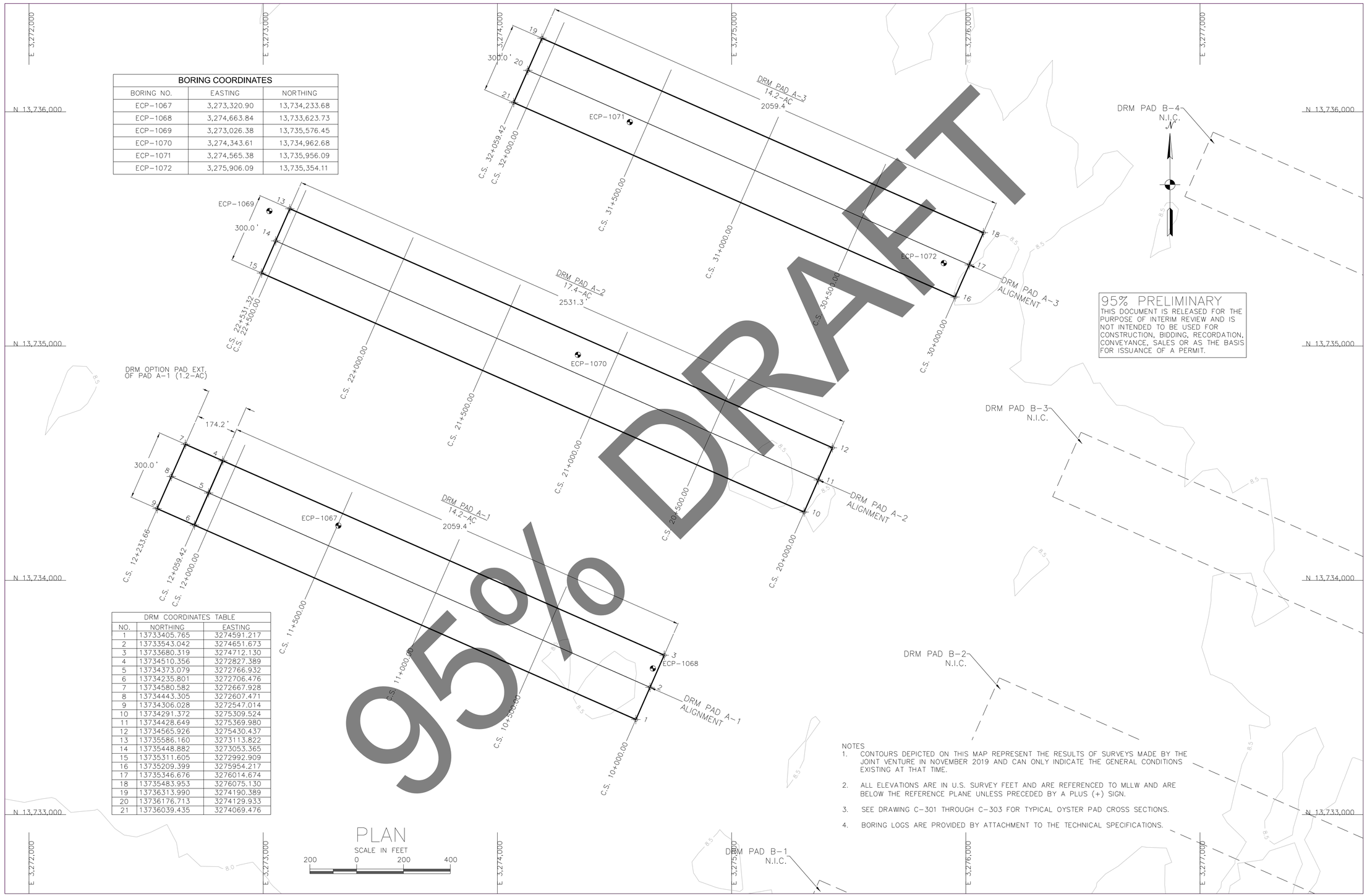

BORING COORDINATES		
BORING NO.	EASTING	NORTHING
ECP-1067	3,273,320.90	13,734,233.68
ECP-1068	3,274,663.84	13,733,623.73
ECP-1069	3,273,026.38	13,735,576.45
ECP-1070	3,274,343.61	13,734,962.68
ECP-1071	3,274,565.38	13,735,956.09
ECP-1072	3,275,906.09	13,735,354.11

DRM COORDINATES TABLE		
NO.	NORTHING	EASTING
1	13733405.765	3274591.217
2	13733543.042	3274651.673
3	13733680.319	3274712.130
4	13734510.356	3272827.389
5	13734373.079	3272766.932
6	13734235.801	3272706.476
7	13734580.582	3272667.928
8	13734443.305	3272607.471
9	13734306.028	3272547.014
10	13734291.372	3275309.524
11	13734428.649	3275369.980
12	13734565.926	3275430.437
13	13735586.160	3273113.822
14	13735448.882	3273053.365
15	13735311.605	3272992.909
16	13735209.399	3275954.217
17	13735346.676	3276014.674
18	13735483.953	3276075.130
19	13736313.990	3274190.389
20	13736176.713	3274129.933
21	13736039.435	3274069.476

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NOTES
1. CONTOURS DEPICTED ON THIS MAP REPRESENT THE RESULTS OF SURVEYS MADE BY THE JOINT VENTURE IN NOVEMBER 2019 AND CAN ONLY INDICATE THE GENERAL CONDITIONS EXISTING AT THAT TIME.
2. ALL ELEVATIONS ARE IN U.S. SURVEY FEET AND ARE REFERENCED TO MLLW AND ARE BELOW THE REFERENCE PLANE UNLESS PRECEDED BY A PLUS (+) SIGN.
3. SEE DRAWING C-301 THROUGH C-303 FOR TYPICAL OYSTER PAD CROSS SECTIONS.
4. BORING LOGS ARE PROVIDED BY ATTACHMENT TO THE TECHNICAL SPECIFICATIONS.

PLAN
SCALE IN FEET
200 0 200 400

U.S. Army Corps of Engineers
Galveston District

Rev.	Description	Date	By

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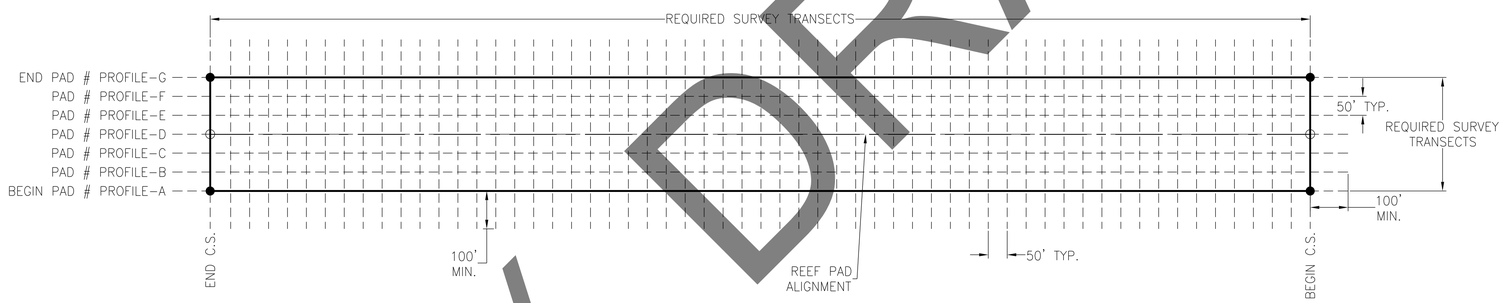
HOUSTON SHIP CHANNEL EXPANSION
CHANNEL IMPROVEMENT PROJECT 11-001
BOLIVAR ROADS TO REDFISH REEF
DOLLAR REEF OYSTER MITIGATION
SITE PLAN

Drawing No.:
C-101
Sheet 4 of 9

SOLICITATION NO.
W9126G-00-X-0000

File: $FILE$
Model Name: $MODELNAME$
By: $USER$
Date: $DATE$
Time: $TIME$

TYPICAL REEF PAD SURVEY LAYOUT FOR INITIAL AND FINAL SURVEYS



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HOUSTON SHIP CHANNEL EXPANSION
CHANNEL IMPROVEMENT PROJECT 11-001
BOLIVAR ROADS TO REDFISH REEF
DOLLAR REEF OYSTER MITIGATION
SURVEY LAYOUT PLAN

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C-102
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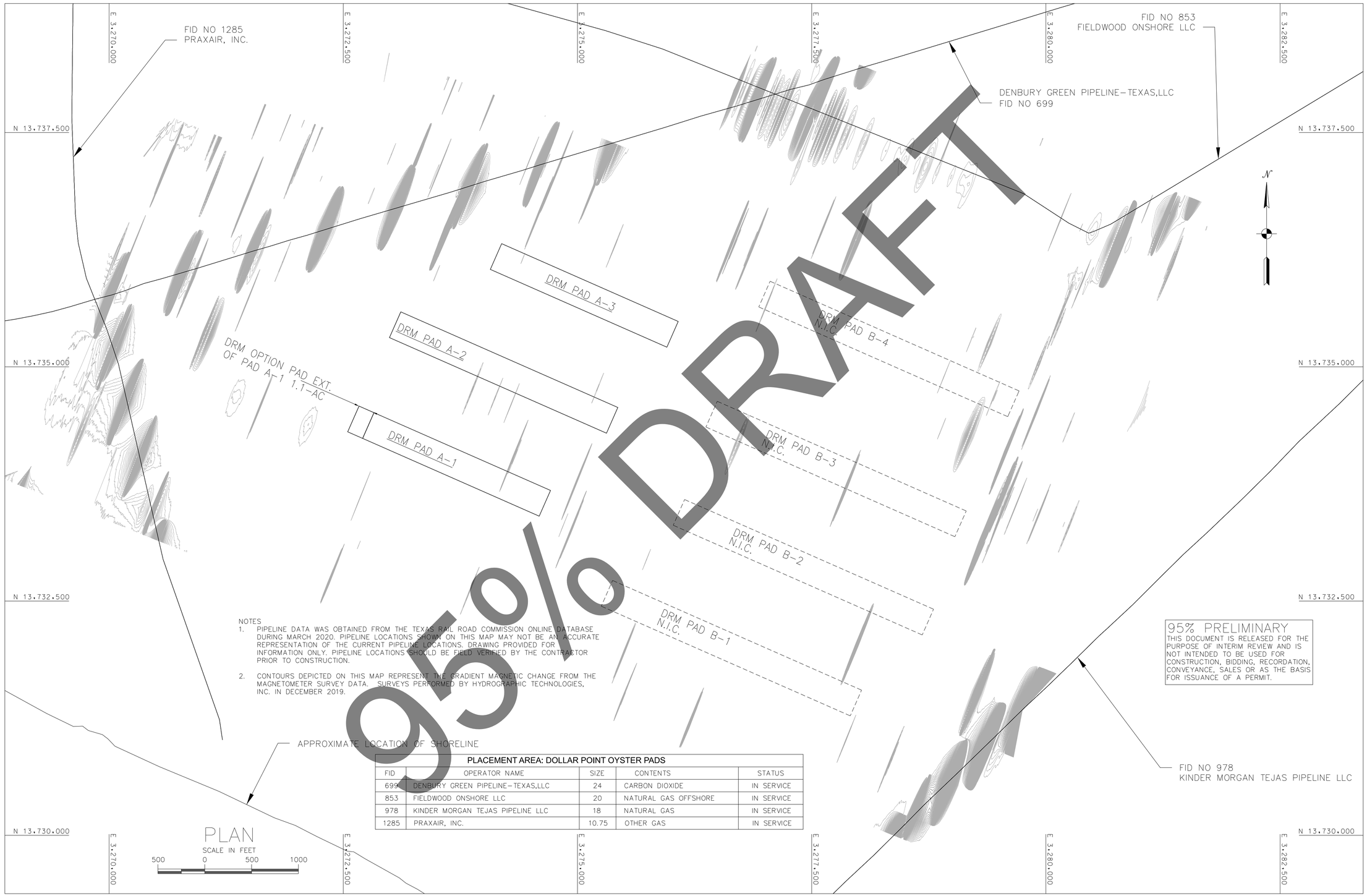

NOTES

1. PIPELINE DATA WAS OBTAINED FROM THE TEXAS RAIL ROAD COMMISSION ONLINE DATABASE DURING MARCH 2020. PIPELINE LOCATIONS SHOWN ON THIS MAP MAY NOT BE AN ACCURATE REPRESENTATION OF THE CURRENT PIPELINE LOCATIONS. DRAWING PROVIDED FOR INFORMATION ONLY. PIPELINE LOCATIONS SHOULD BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
2. CONTOURS DEPICTED ON THIS MAP REPRESENT THE GRADIENT MAGNETIC CHANGE FROM THE MAGNETOMETER SURVEY DATA. SURVEYS PERFORMED BY HYDROGRAPHIC TECHNOLOGIES, INC. IN DECEMBER 2019.

PLACEMENT AREA: DOLLAR POINT OYSTER PADS

FID	OPERATOR NAME	SIZE	CONTENTS	STATUS
699	DENBURY GREEN PIPELINE-TEXAS,LLC	24	CARBON DIOXIDE	IN SERVICE
853	FIELDWOOD ONSHORE LLC	20	NATURAL GAS OFFSHORE	IN SERVICE
978	KINDER MORGAN TEJAS PIPELINE LLC	18	NATURAL GAS	IN SERVICE
1285	PRAXAIR, INC.	10.75	OTHER GAS	IN SERVICE

PLAN
SCALE IN FEET
500 0 500 1000

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HOUSTON SHIP CHANNEL EXPANSION
CHANNEL IMPROVEMENT PROJECT 11-001
BOLIVAR ROADS TO REDFISH REEF
DOLLAR REEF OYSTER MITIGATION
EXISTING UTILITIES AND PIPELINE PLAN

Drawing No.:
C-103
Sheet 6 of 9

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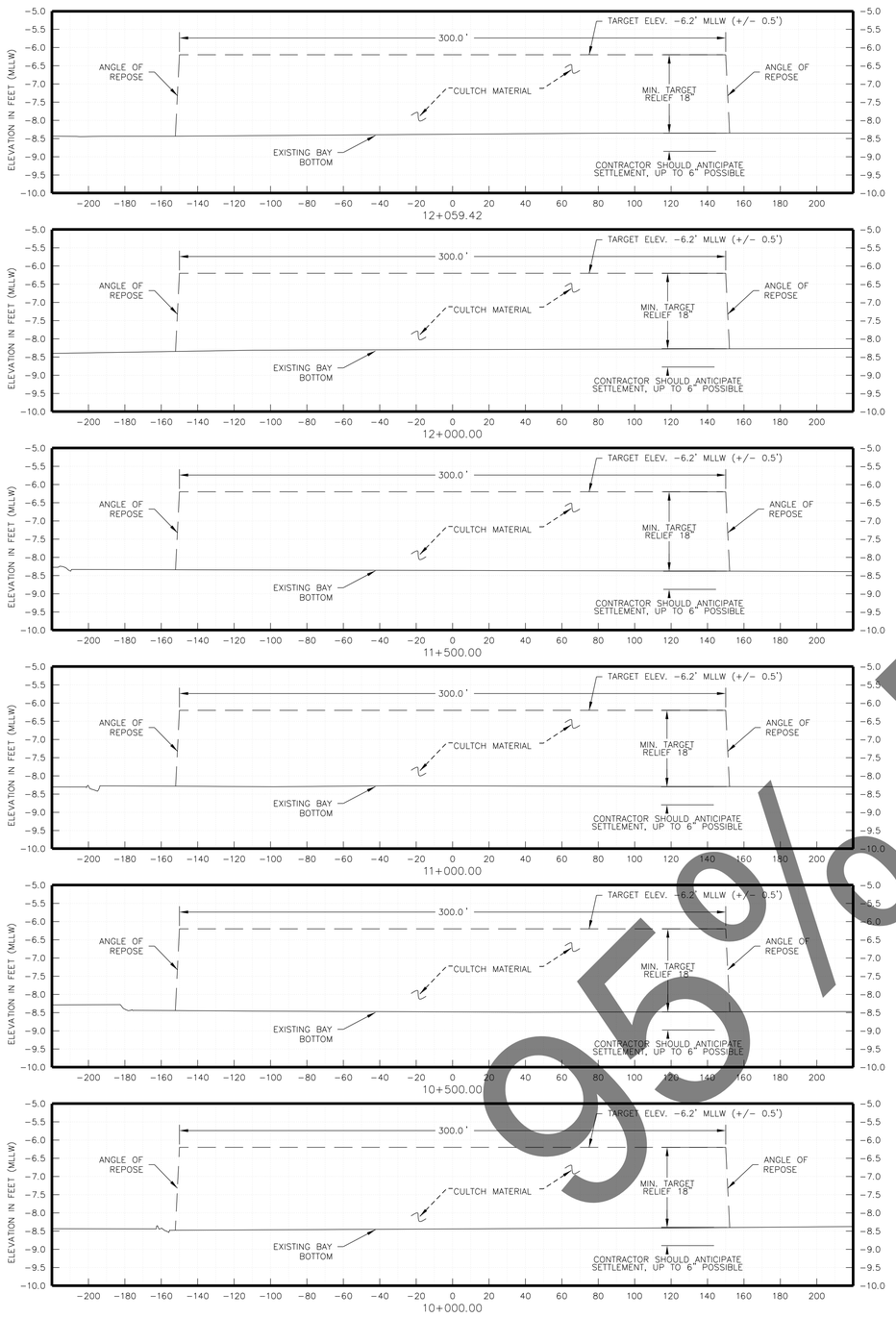


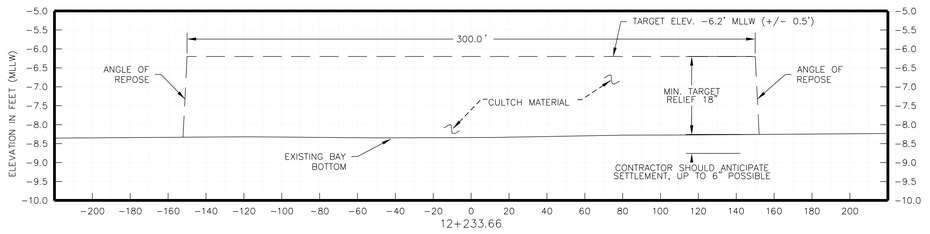
DRM PAD A-1

PAD NUMBER:	DRM A-1
PAD CROWN ACREAGE:	14.2 AC
CULTCH MATERIAL QTY.:	88,000 TONS

PAD NUMBER:	DRM A-1 OPT.
PAD CROWN ACREAGE:	1.2 AC
CULTCH MATERIAL QTY.:	7,200 TONS

GRADATION REQUIREMENTS FOR REEF PAD MATERIAL

SIEVE SIZE, INCH	% PASSING
3	100
1/2	0-5



DRM OPTION PAD

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BOLIVAR ROADS TO REDFISH REEF
DOLLAR REEF OYSTER MITIGATION
OYSTER PAD A-1 AND OPTION SECTIONS

Drawing No.:
C-301
Sheet 7 of 9

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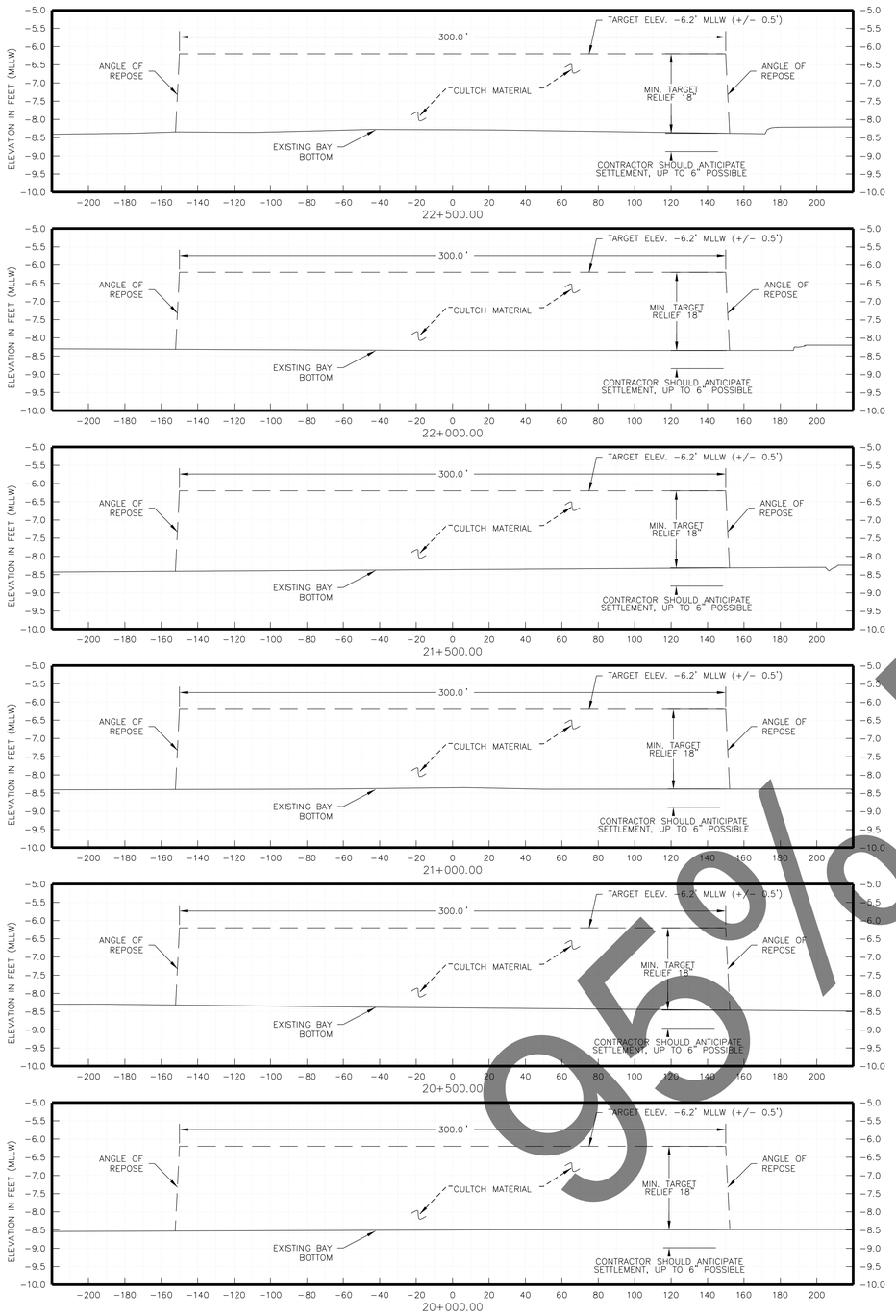
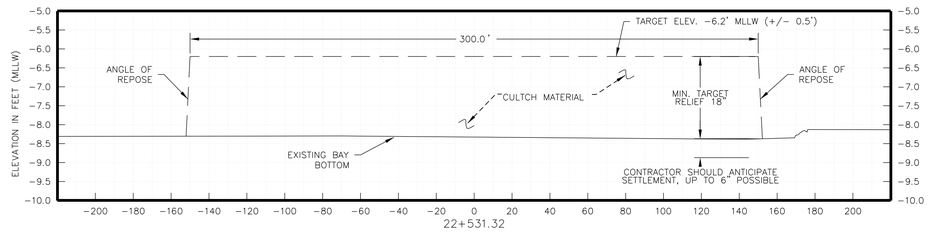


DRM PAD A-2



DRM PAD A-2

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PAD NUMBER:	DRM A-2
PAD CROWN ACREAGE:	17.4 AC
CULTCH MATERIAL QTY.:	103,300 TONS

GRADATION REQUIREMENTS FOR REEF PAD MATERIAL

SIEVE SIZE, INCH	% PASSING
3	100
1/2	0-5

File: $FILE$
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By: $USER$ Date: $DATE$ Time: $TIME$

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BOLIVAR ROADS TO REDFISH REEF
DOLLAR REEF OYSTER MITIGATION
OYSTER PAD A-2 SECTIONS

Drawing No.:
C-302
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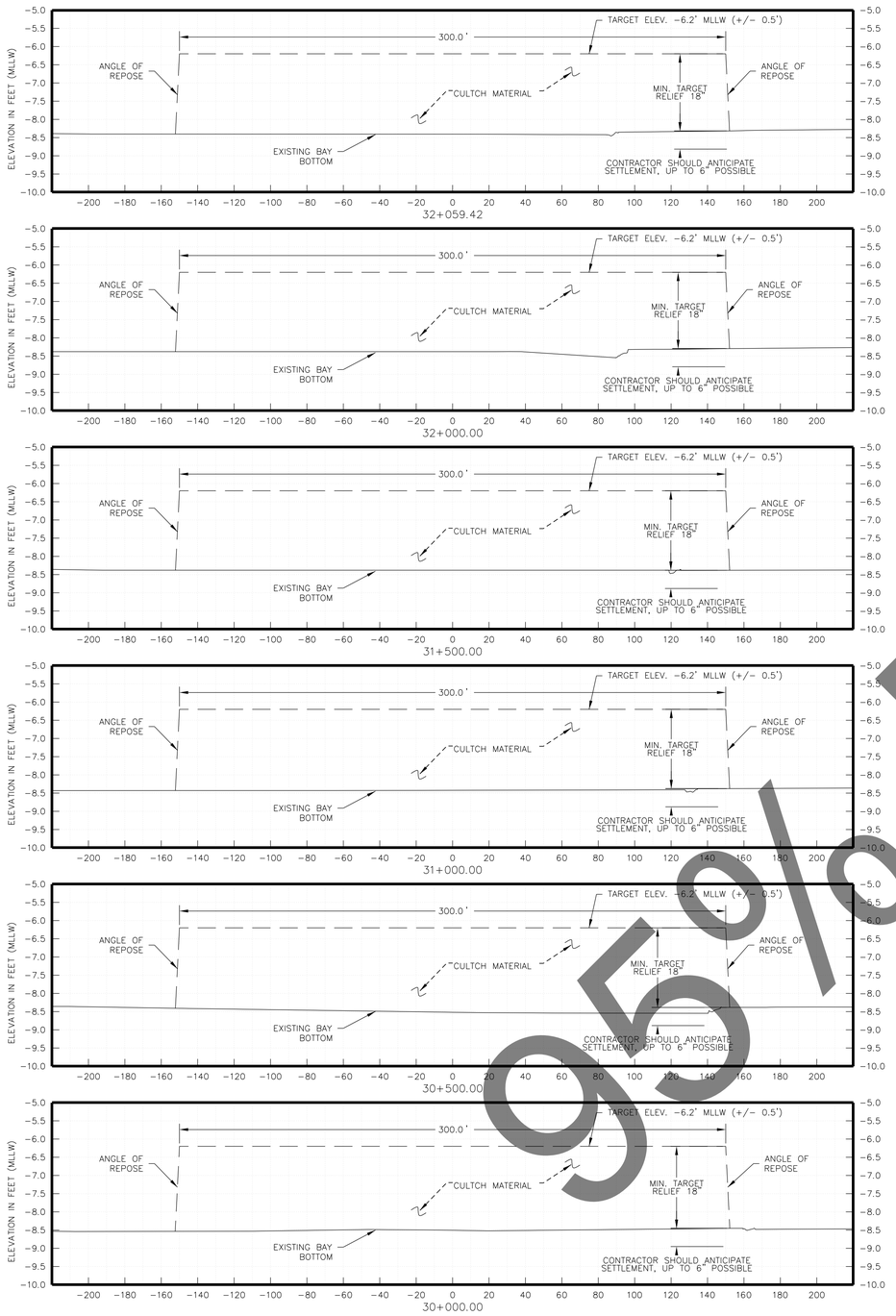

DRM PAD A-3

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PAD NUMBER:	DRM A-3
PAD CROWN ACREAGE:	14.2 AC
CULTCH MATERIAL QTY.:	89,500 TONS

GRADATION REQUIREMENTS FOR REEF PAD MATERIAL

SIEVE SIZE, INCH	% PASSING
3	100
1/2	0-5

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BOLIVAR ROADS TO REDFISH REEF
DOLLAR REEF OYSTER MITIGATION
OYSTER PAD A-3 SECTIONS

Drawing No.:
C-303
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SECTION 00 00 00

SOLICITATION, OFFER AND AWARD, SF-1442

1/21

PART 1 PLACE HOLDER - ACTUAL SECTION ADDED BY CONTRACTING -

-- End of Section Table of Contents --

SECTION 00 00 00

SOLICITATION, OFFER AND AWARD, SF-1442
1/21

PART 1 PLACE HOLDER - ACTUAL SECTION ADDED BY CONTRACTING -

SECTION TABLE OF CONTENTS

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

SECTION 00 11 00.00 45

BID SCHEDULE

1/21

SECTION 00 11 00.00 45

BID SCHEDULE
1/21

PART 1 GENERAL

1.1 BID SCHEDULE

BID SCHEDULE
(TO BE ATTACHED TO STANDARD FORM 1442)

1.1.1 Schedule No. 1

Item No.	Description	Estimated Quantity	Unit	Unit Price	Estimated Amount
SCHEDULE NO. 1					
0001	Mobilization and Demobilization	1	Job	SUM	$_____
0002	Surveying	1	Job	SUM	$_____
0003	Reef Pad Construction - DRM Pad A-1 (14.2 AC)	1	Job	SUM	$_____
0004	Reef Pad Construction - DRM Pad A-2 (17.4 AC)	1	Job	SUM	$_____
0005	Reef Pad Construction - DRM Pad A-3 (14.2 AC)	1	Job	SUM	$_____
TOTAL SCHEDULE NO. 1					$_____

NOTE: Completion time stated in SECTION 00 73 00.01 45 SPECIAL CONTRACT REQUIREMENTS, STANDARD is for SCHEDULE NO. 1 work.

1.1.2 Option No. 1

Item No.	Decription	Estimated Quantity	Unit	Unit Price	Estimated Amount
OPTION NO.1					
0006	OPTION NO. 1 Reef Pad Construction - DRM Pad A-1 Extension (1.20 AC)	1	JOB	SUM	$_____
TOTAL OPTION NO. 1					$_____
TOTAL SCHEDULE NO.1 AND OPTION NO.1					$_____

NOTE FOR OPTION NO.1: The Owner may excercise this Option by written notice to the Contractor prior to completion of all authorized work. Award of this Option is contingent upon availability of funds. An additional time of 7 calendar days will be added to this contract if this Option is excerised.

BID SCHEDULE (CONT'D)
(TO BE ATTACHED TO STANDARD FORM 1442)

1.2 MODIFICATIONS (CESWG)

If a modification to a bid based on unit prices is submitted, which provides for a job adjustment to the total estimated cost, the application of the job adjustment of each unit price in the bid schedule must be stated. If it is not stated, the bidder agrees that the job adjustment shall be applied on a pro rata basis to every unit price in the bid schedule.

1.3 EVALUATION OF OPTIONS (JULY 1990) (FAR 52.217-5)

Except when it is determined in accordance with FAR 17.206(b) not to be in the Government's best interests, the Government will evaluate offers for award purposes by adding the total price for all options to the total price for the basic requirement. Evaluation of options will not obligate the Government to exercise the option(s).

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BIDDING SCHEDULE/INSTRUCTIONS TO BIDDERS
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PART 1 PLACE HOLDER - ACTUAL SECTION WILL BE INSERTED BY CONTRACTING.

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PART 1 PLACE HOLDER - ACTUAL SECTION WILL BE INSERTED BY CONTRACTING.

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REPRESENTATION AND CERTIFICATIONS
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PART 1 PLACE HOLDER - ACTUAL SECTION WILL BE INSERTED BY CONTRACTING.

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PART 1 PLACE HOLDER - ACTUAL SECTION WILL BE INSERTED BY CONTRACTING.

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CONTRACT CLAUSES
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PART 1 PLACE HOLDER - ACTUAL SECTION WILL BE INSERTED BY CONTRACTING.

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PART 1 GENERAL

1.1 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (APR 1984) (FAR 52.211-10)

The Contractor shall be required to:

(a) Commence work under this contract within 10 calendar days after the date of acknowledgment of Notice to Proceed

(b) Prosecute the work diligently, and

(c) Complete the entire work ready for use not later than 200 calendar days after date of acknowledgment of Notice to Proceed. The time stated for completion shall include final cleanup of the premises.

1.2 LIQUIDATED DAMAGES - CONSTRUCTION (SEPT 2000) (FAR 52.211-12)

(a) If the Contractor fails to complete the work within the time specified in the contract, the Contractor shall pay liquidated damages to the Government in the amount of $1,000 for each calendar day of delay until the work is completed or accepted.

(b) If the Government terminates the Contractor's right to proceed, liquidated damages will continue to accrue until the work is completed. These liquidated damages are in addition to excess costs of repurchase under the Termination clause.

1.3 PHYSICAL DATA (APR 1984) (FAR 52.236-4)

Data and information furnished or referred to below is for the Contractor's information. The Government shall not be responsible for any interpretation of or conclusion drawn from the data or information by the Contractor.

(a) The indications of physical conditions on the drawings and in the specifications are the result of site investigations as described on the drawings.

(b) Weather Conditions. Under ordinary conditions, the mean tidal range is about 1 foot. The height of tide is largely dependent on the force, direction, and duration of the wind. Strong northerly winds may depress the water surface by as much as, and in some instances more than 2 feet, while southerly winds may raise the water surface by as much as, and in some instances more than 2 feet.

(c) Transportation Facilities. The immediate vicinity is served by railroad, highway, and deep and shallow draft channels. The work site is accessible by open water in Galveston Bay via the Houston Ship Channel. Public wharves, rail and highway connections are available throughout the Houston and Galveston Region.

1.4 EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE (MAR 1995)

(a) This special contract requirement does not apply to terminations. See 52.249-5000, Basis for Settlement of Proposals, and FAR Part 49.

(b) Allowable cost for construction and marine plant and equipment in sound workable condition owned or controlled and furnished by a contractor or subcontractor at any tier shall be based on actual cost data for each piece of equipment or groups of similar serial and series for which the Government can determine both ownership and operating costs from the contractor's accounting records. When both ownership and operating costs cannot be determined for any piece of equipment or groups of similar serial or series equipment from the contractor's accounting records, costs for that equipment shall be based upon the applicable provisions of EP 1110-1-8, Construction Equipment Ownership and Operating Expense Schedule, Region VI. Working conditions shall be considered to be average for determining equipment rates using the schedule unless specified otherwise by the contracting officer. For equipment not included in the schedule, rates for comparable pieces of equipment may be used or a rate may be developed using the formula provided in the schedule. For forward pricing, the schedule in effect at the time of negotiations shall apply. For retroactive pricing, the schedule in effect at the time the work was performed shall apply.

(c) Equipment rental costs are allowable, subject to the provisions of FAR 31.105(d)(ii) and FAR 31.205-36, Rental Costs. Rates for equipment rented from an organization under common control, lease-purchase arrangements, and sale-leaseback arrangements, will be determined using the schedule, except that actual rates will be used for equipment leased from an organization under common control that has an established practice of leasing the same or similar equipment to unaffiliated lessees.

(d) When actual equipment costs are proposed and the total amount of the pricing action exceeds the SAT, the contracting officer shall request the contractor to submit either certified cost or pricing data, or partial/limited data, as appropriate. The data shall be submitted on Standard Form 1411, Contract Pricing Proposal Cover Sheet.

NOTE: A copy of EP 1110-1-8, "CONSTRUCTION EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE," is available at the following website: https://www.publications.usace.army.mil/USACE-Publications/Engineer-Pamphlets/u435

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

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NON-REGULATED SPECIAL CONTRACT REQUIREMENTS
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PART 1 GENERAL

1.1 SIGNAL LIGHTS (CESWG)

The Contractor shall display signal lights and conduct its operations in accordance with the General Regulations of the Department of the Army and of the U.S. Coast Guard governing the:

i) lights and day signals to be displayed by towing vessels with tows on which no signals can be displayed, vessels working on wrecks, dredges, and vessels engaged in laying cables or pipe or in submarine or bank protection operations;

ii) day signals to be displayed by vessels of more than 65 feet in length moored or anchored in a fairway or channel;

iii) and the passing by other vessels of floating plant working in navigable channels as set forth in United States Coast Guard publication entitled Navigation Rules and Regulations Handbook. Web site location: http://www.navcen.uscg.gov/?pageName=navRuleChanges

1.2 INSPECTION (CESWG)

The Government will inspect the maintenance of the gages, ranges, location marks, and limit marks in proper order and position; but the presence of the inspector shall not relieve the Contractor of responsibility for the proper execution of the work in accordance with the specifications. The Contractor shall be required to furnish the following items.

1.2.1 Equipment

At the request of the Government, the Contractor shall furnish the use of boats, boatmen, laborers, and material forming a part of the ordinary and usual equipment and crew of the construction plant as may be reasonably necessary in inspecting and supervising the work.

1.2.2 Transportation

At the request of the Government, the Contractor shall furnish suitable transportation from all points on shore designated by the Contracting Officer to and from the various pieces of plant, and to and from the work areas. If the Contractor refuses, neglects, or delays compliance with these requirements, the specific facilities may be furnished and maintained by the Contracting Officer, and the cost thereof will be deducted from the amounts due or to become due the Contractor.

1.3 FINAL EXAMINATION AND ACCEPTANCE (CESWG)

As soon as practicable after the completion of the entire work or any section thereof if the work is divided into sections and in the opinion of the Contracting Officer will not be subject to damage by further

operations under this Contract, this work will be thoroughly examined in accordance
with SECTION 35 32 16.10 45 REEF PAD CONSTRUCTION Paragraph titled Surveys. The Contracting Officer or its authorized representative will be notified when surveys are to be made and will be permitted to accompany the survey party. When the area is found to be in a satisfactory condition it will be accepted finally.

1.3.1 Acceptance

Final acceptance of the whole or a part of the work and the deductions or corrections of deductions made thereon will not be reopened after having once been made, except on evidence of collusion, fraud, or obvious error, and the acceptance of a completed section shall not change the time of payment of the retained percentages of the whole or any part of the work.

1.4 ACCEPTANCE SURVEYS (CESWG)

1.4.1 General

Acceptance surveys shall be conducted, and the data derived from these surveys shall be used in determining whether the completed work complies with the specified lines/grades and other requirements.

1.4.2 Submittals

Promptly upon completing a survey, the Contractor shall submit the originals of every field note and other record relating to the survey or to the layout of the work in accordance with the SECTION 01 33 00 SUBMITTAL PROCEDURES. The Contracting Officer will use them as necessary to determine the amount of progress payments. The Contractor shall retain copies of submitted material.

1.5 TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER (31 OCT 1989)(ER 415-1-15)

1.5.1 General

This provision specifies the procedure for determination of time extensions for unusually severe weather in accordance with the CONTRACT CLAUSE entitled DEFAULT (FIXED-PRICE CONSTRUCTION). For the Contracting Officer to award a time extension under this CLAUSE, the following conditions shall be satisfied.

1.5.1.1 Unusually Severe Weather

The weather experienced at the project site during the Contract period must be found to be unusually severe, that is, more severe than the adverse weather anticipated for the project location during any given month.

1.5.1.2 Completion Delay

The unusually severe weather must actually cause a delay to the completion of the project. The delay must be beyond the control and without the fault or negligence of the Contractor.

1.5.2 Baseline for Monthly Weather Time Evaluations

The following schedule of monthly anticipated adverse weather delays is

based on National Oceanic and Atmospheric Administration (NOAA) or similar data for the project location and will constitute the base line for monthly weather time evaluations. The Contractor's progress schedule must reflect these anticipated adverse weather delays in all weather dependent activities.

MONTHLY ANTICIPATED ADVERSE WEATHER DELAY											
WORK DAYS BASED ON (7) DAY WORK WEEK											
JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
(12)	(9)	(9)	(7)	(8)	(10)	(9)	(9)	(9)	(13)	(8)	(9)

1.5.3 Record

Upon acknowledgment of the Notice to Proceed (NTP) and continuing throughout the Contract, the Contractor will record on the daily Contractor Quality Control (CQC) report, the occurrence of adverse weather and resultant impact to normally scheduled work. Actual adverse weather delay days must prevent work on critical activities for 50 percent or more of the Contractor's scheduled work day. The number of actual adverse weather delay days shall include days impacted by actual adverse weather (even if adverse weather occurred in previous month), be calculated chronologically from the first to the last day of each month, and be recorded as full days. If the number of actual adverse weather delay days exceeds the number of days anticipated in Subparagraph: Baseline for Monthly Weather Time Evaluations above, the Contracting Officer will convert any qualifying delays to calendar days, giving full consideration for equivalent fair weather work days, and issue a modification in accordance with the CONTRACT CLAUSE entitled DEFAULT (FIXED PRICE CONSTRUCTION).

1.6 LAYOUT OF WORK (CESWG)

The Contractor shall lay out its work from Government-established ranges and gages shown, and shall be responsible for the measurements in connection therewith. The Contractor shall furnish, at its expense, stakes, templates, platforms, equipment, range markers, and labor as may be required to lay out any part of the work from the ranges and gages established by the Government. The Contractor shall be responsible for executing the work to the lines and grades that may be established or indicated by the Contracting Officer. The Contractor shall also be responsible for maintaining and preserving the stakes and other markers established by the Contracting Officer until authorized to remove them. If these markers are destroyed by the Contractor or through its negligence before their removal is authorized, they may be replaced by the discretion of the Contracting Officer. The expense of replacement will be deducted from the amounts due or to become due, to the Contractor.

In lieu of laying out its work from the ranges and gages, the Contractor shall lay out its work from the Government furnished reference points/ coordinates and benchmarks provided.

1.7 DAMAGE TO WORK (CESWG)

The responsibility for damage to any part of the permanent work shall be as set forth in the CONTRACT CLAUSE entitled PERMITS AND RESPONSIBILITIES. However, if in the judgment of the Contracting Officer,

any part of the permanent work performed by the Contractor is damaged by flood, earthquake, hurricane or tornado, which damage is not due to the failure of the Contractor to take reasonable precautions or to exercise sound engineering and construction practices in the conduct of the work, the Contractor will make the repairs as ordered by the Contracting Officer and full compensation for these repairs will be made at the applicable Contract unit or job prices as fixed and established in this Contract. If, in the opinion of the Contracting Officer, there are no Contract unit or job prices applicable to any part of this work an equitable adjustment pursuant to the CONTRACT CLAUSE entitled CHANGES of the Contract, will be made as full compensation for the repairs of that part of the permanent work for which there are no applicable Contract unit or job prices. Except as herein provided, damage to work, including temporary construction; utilities; materials; equipment; and plant shall be repaired to the satisfaction of the Contracting Officer at the Contractor's expense regardless of the cause of this damage.

1.8 CERTIFICATES OF COMPLIANCE (CESWG)

Certificates required for demonstrating proof of compliance of materials with specification requirements shall be executed in three copies. Each certificate shall be signed by an official authorized to certify on behalf of the manufacturing company and shall contain the name and address of the Contractor, the project name and location, and the quantity and date or dates of shipment or delivery to which the certificates apply. Copies of laboratory test reports submitted with certificates shall contain the name and address of the testing laboratory and the date or dates of the tests to which the report applies. Certification shall not be construed as relieving the Contractor from furnishing satisfactory material, if after tests are performed on selected samples, the material is found not to meet the specific requirements.

1.9 ENVIRONMENTAL LITIGATION (CESWG)

If the performance of all or any part of the work is suspended, delayed, or interrupted due to an order of a court of competent jurisdiction as a result of environmental litigation, as defined below, the Contracting Officer, at the request of the Contractor, shall determine if the order is due in any part to the acts or omissions of the Contractor or a subcontractor at any tier not required by the terms of this Contract. If it is determined that the order is not due in any part to acts or omissions of the Contractor or a subcontractor at any tier other than as required by the terms of this Contract, the suspension, delay, or interruption shall be considered as if ordered by the Contracting Officer in the administration of this Contract under the terms of the CONTRACT CLAUSE entitled SUSPENSION OF WORK. The period of this suspension, delay or interruption shall be considered unreasonable, and an adjustment shall be made for an increase in the cost of performance of this Contract (excluding profit) as provided in this CLAUSE, subject to all the provisions thereof.

1.9.1 Definition

The term "environmental litigation," as used herein, means a lawsuit alleging that the work will have an adverse effect on the environment or that the Government has not duly considered, either substantively or procedurally, the effect of the work on the environment.

1.10 CONTRACTING OFFICER SIGNATURE (CESWG)

The Contracting Officer signing this Contract is the Procuring Contracting Officer on this Contract. However, a Contracting Officer that is assigned to the Galveston District and acting within its authority may take formal action on this Contract when a Contract action needs to be taken and the primary Contracting Officer is away from the office.

1.11 TRADE NAMES AND PROPRIETARY ITEMS (CESWG)

The use of trade names or proprietary items is only for specified materials or equipment generally known to and used by the industry that meets minimum requirements in terms of physical characteristics, chemical composition, laboratory test results performance in actual use, or a combination of these as applicable. Other trade names or proprietary items may be substituted if approved equal.

1.12 HARBOR MAINTENANCE FEE (1 SEP 1995)(EAL 88-1)

Offerors contemplating use of U.S. ports in the performance of this Contract are subject to paying a harbor maintenance fee on cargo. Federal law establishes an ad valorem port use fee on commercial cargo imported into or exported from various U.S. ports. The fee is 0.125 percent (.00125). Cargo to be used in performing work under Contracts with the U.S. Government is not exempt from the fee, although certain exemptions do exist. Offerors are responsible for ensuring that the applicable fee and associated costs are taken into consideration in the preparation of their offers. Failure to pay the harbor maintenance fee may result in assessment of penalties by the U.S. Customs and Border Protection.

The statute is at Title 26 U.S. Code sections 4461 and 4462. Department of Treasury U.S. Customs and Border Protection regulations implementing the statute, including a list of ports subject to the fee, are found at 19 CFR Section 24.24, Harbor Maintenance Fee. Additional information may be obtained from local U.S. Customs and Border Protection offices or by writing to the Director, Budget Division, Office of Finance, Room 6328, U.S. Customs and Border Protection, 1301 Constitution Avenue, N.W., Washington, D.C. 20229.

1.13 WORK IN QUARANTINED AREA (CESWG)

The work called for by this Contract involves activities in counties quarantined by the Department of Agriculture to prevent the spread of certain plant pests which may be present in the soil. The Contractor agrees that construction equipment and tools to be moved from Chambers County shall be thoroughly cleaned of soil residues at the construction site with water under pressure and that hand tools shall be thoroughly cleaned by brushing or other methods to remove the soil. In addition, if this Contract involves the identification, shipping, storage, testing, or disposal of soils from this quarantined area(s), the Contractor agrees to comply with the provisions of ER 1110-1-5 - PLANT PEST QUARANTINED AREA AND FOREIGN SOIL SAMPLES and its attachments. The Contractor agrees to assure compliance with this obligation by all subcontractors.

1.14 COVID19 Guidelines and PROCEDURES

Placeholder until the USACE provides guidance for construction with regards to COVID 19

1.15 COORDINATION MEETINGS (CESWG)

The Contractor shall schedule and attend regular coordination meetings with the Government and local sponsor. Meetings shall be scheduled every other week. Schedule and format of meetings to be determined at the Pre-Construction Conference.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

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MEASUREMENT AND PAYMENT

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MEASUREMENT AND PAYMENT
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PART 1 GENERAL

1.1 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 01 33 00 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

1.2 job PAYMENT ITEMS

Payment items for the work of this Contract for which Contract job payments will be made are listed in the BID SCHEDULE and specified below. All costs for items of work, which are not specifically mentioned to be included in a particular job or unit price payment item, shall be included in the listed job item most closely associated with the work involved. The job price and payment made for each item listed shall constitute full compensation for furnishing plant, labor, materials, and equipment, and performing any associated Contractor Quality Control, administrative requirements, environmental protection, meeting safety requirements, tests and reports, and for performing the work required for which separate payment is not otherwise provided.

1.2.1 Mobilization and Demobilization

1.2.1.1 Payment

The Contract price for "Mobilization and Demobilization" will include the costs in connection with mobilization and demobilization of the plant necessary to perform work under the various bid items. The Contract price shall include transportation and other costs incidental to delivery of the plant and other equipment to the general work area in condition ready for operation and, after the completion of the work, for removal of the plant and equipment from the work site(s). Payment for mobilization and demobilization will be pursuant to the conditions as defined in the SECTION 00 72 00 CONTRACT CLAUSES.

1.2.1.2 Unit of Measure

Unit of measure: Job.

1.2.2 Reef Pad Construction

1.2.2.1 Payment

Payment for "Reef Pad Construction - DRM Pad A-1 (14.2 AC)" and "Reef Pad Construction - DRM Pad A-2 (17.4 AC)" and "Reef Pad Construction - DRM Pad

A-3 (14.2 AC)" in Schedule No. 1 will be made at the contract Job price and include all costs in connection with construction of Oyster Pads, including incidental and subsidiary items such as material procurement, transportation, and placement.

Payment for " OPTION NO. 1 Reef Pad Construction - DRM Pad A-1 Ext. (1.20 AC)" in Option No. 1, if exercised, will be made at the contract Job price and include all costs in connection with construction of Oyster Pads, including incidental and subsidiary items such as material procurement, transportation, and placement.

Progress payments for "Reef Pad Construction - DRM Pad A-1 (14.2 AC)" and "Reef Pad Construction - DRM Pad A-1 Ext. (1.20 AC)" will be made based upon percentage of actual quantity of work performed. Percentage of work performed will be based on approximate acreage constructed by fathometer soundings.

1.2.2.2 Unit of Measure

Unit of measure: Job.

1.2.3 Surveying

1.2.3.1 Payment

Payment for "Surveying" will be made at the Contract job price and include all specified initial (pre-construction) Bathymetric Surveys, final (acceptance) bathymetric Surveys, sidescan surveys, and magnetometer surveys of the required areas. Payment will include all incidental and subsidiary items associated with surveys including preparation of survey drawings and other submittals specified in Section 35 32 16.10 45 REEF PAD CONSTRUCTION. Close Out Submittal will require Contractor to provide a copy of side scan-sonar data (processed into ArcGIS), As-Builts, and Record Drawings that includes acreages constructed to be provided to USACE at Notice of Construction Complete or no later than 90 days after placement of the reef substrate.

1.2.3.2 Unit of Measure

Unit of measure: Job.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

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PROJECT SCHEDULE

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PROJECT SCHEDULE
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PART 1 GENERAL

1.1 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. Submit the following in accordance with the SECTION 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Project Schedule; G

Submit to the Contracting Officer no later than 10 calendar days after acknowledgement of the Notice to Proceed.

1.2 QUALITY ASSURANCE

The Contractor shall designate an authorized representative to be responsible for the preparation of the Schedule and the required updating (activity status) and preparation of reports. The authorized representative shall be experienced in scheduling projects similar in nature and complexity to this project and shall be experienced in the use of the scheduling software that meets the requirements of this specification.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

Prepare for approval a Project Schedule, as specified herein, pursuant to FAR Clause 52.236-15, SCHEDULE FOR CONSTRUCTION CONTRACTS. Show in the schedule the proposed sequence to perform the work and dates contemplated for starting and completing all schedule activities. The scheduling of the entire project, including the design and construction sequences, is required. The scheduling of construction is the responsibility of the Contractor. Contractor management personnel shall actively participate in its development. Subcontractors and suppliers working on the project shall also contribute in developing and maintaining an accurate Project Schedule. Provide a Schedule that is forward planning and is a project monitoring tool.

3.1.1 Approved Project Schedule

The approved Project Schedule will be used to measure the progress of the work and to aid in evaluating time extensions. The Schedule shall depict activity durations, be based on the percentage of fiscal completion, and provide the basis for progress payments. Use ENG Form 2454 or equivalent

produced by a scheduling program to depict the Progress Schedule and ensure that the Schedule conforms with the requirements outlined in the FAR 52.236-15 SCHEDULES FOR CONSTRUCTION CONTRACTS. Schedule shall show anticipated earnings per Contract Line Item Number (CLIN) for each pay period, and total earnings per pay period. If the Contractor fails to submit a schedule within the time prescribed, the Contracting Officer may withhold approval of progress payments until the Contractor submits the required Schedule. Once approved, the Contractor may not change the schedule for any reason without permission from the Contracting Officer or the ACO.

3.1.2 Updated Progress Schedule

Provide an updated Progress Schedule on at least a monthly basis and submit this updated Schedule along with the monthly pay request. The Government may request the Contractor to provide the Government with an updated Schedule as a result of a change in order of work, activity sequences, or activity duration prior to the monthly pay request. If, in the opinion of the Contracting Officer, the Contractor falls behind the approved Schedule, the Contractor shall take steps necessary to improve its progress including those that may be required by the Contracting Officer, without additional cost to the Government and submit an updated Progress Schedule to the Government. In this circumstance, the Contracting Officer may require the Contractor to increase the number of shifts, overtime operations, days of work, or the amount of construction plant, and to submit for approval supplementary Schedule or Schedules as the Contracting Officer deems necessary to demonstrate how the approved rate of progress will be regained.

3.1.3 Default Terms

Failure of the Contractor to comply with the requirements of the Contract will be grounds for a determination, by the Contracting Officer, that the Contractor is not prosecuting the work with sufficient diligence to ensure completion within the time specified in this Contract. Upon making this determination, the Contracting Officer may terminate the Contractor's right to proceed with the work, or separable parts of it, in accordance with the default terms of the Contract.

3.2 BASIS FOR PAYMENT AND COST LOADING

The schedule is the basis for determining Contract earnings during each update period and therefore the amount of each progress payment. Lack of an approved Schedule update, or qualified scheduling personnel, will result in the inability of the Contracting Officer to evaluate Contract earned value for the purposes of payment. Failure of the Contractor to provide required information will result in the disapproval of the preliminary, initial, and subsequent Schedule updates. If Schedule revisions are directed by the Contracting Officer and those revisions have not been included in subsequent revisions or updates, the Contracting Officer may hold retainage up to the maximum allowed by this Contract, each payment period, until revisions to the Project Schedule have been made. Activity cost loading shall be reasonable, as determined by the Contracting Officer.

3.3 PROJECT SCHEDULE DETAILED REQUIREMENTS

A computer software system utilized to produce and update the Project Schedule shall be capable of meeting the requirements of this

specification. Failure of the Contractor to meet the requirements of this specification will result in the disapproval of the Schedule.

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TRANSMITTAL FORM ENG FORM 4025-R

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SECTION 01 33 00

SUBMITTAL PROCEDURES
1/21

PART 1 GENERAL

1.1 SUMMARY

The Contracting Officer may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections.

Units of weights and measures used on all submittals are to be the same as those used on the Contract drawings.

Each submittal is to be complete and in sufficient detail to allow ready determination of compliance with Contract requirements.

Contractor's Quality Control (CQC) System Manager to check and approve each item prior to submittal and stamp, sign, and date indicating action taken. Proposed deviations from the Contract requirements are to be clearly identified. Include within submittals items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including, but not limited to catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals, including parts list; certifications; warranties; and other required submittals.

Submittals requiring Government approval are to be scheduled and made prior to the acquisition of the material or equipment covered thereby. Samples remaining upon completion of the work shall be picked up and disposed in accordance with manufacturer's Safety Data Sheets (SDS) and in compliance with existing laws and regulations.

A submittal register showing items of equipment and materials for which submittals are required by the specifications is provided at the end of this section.

1.2 DEFINITIONS

1.2.1 Submittal Descriptions (SD)

Submittal requirements are specified in the technical sections. Submittals are identified by Submittal Description (SD) numbers and titles as follows:

SD-01 Preconstruction Submittals

Submittals which are required prior to start of construction (work) or the start of the next major phase of the construction on a multi-phase Contract, includes schedules, tabular list of data or tabular list including location, features, or other pertinent information regarding products, materials, equipment, or components to be used in the work.

List Of Proposed Subcontractors
List Of Proposed Products
Construction Progress Schedule
Submittal Register
Accident Prevention Plan
Quality Control(QC) Plan
Environmental Protection Plan
Barge Displacement Table(s)

SD-02 Shop Drawings

Drawings, diagrams and schedules specifically prepared to illustrate some portion of the work.

Diagrams and instructions from a manufacturer or fabricator for use in producing the product and as aids to the Contractor for integrating the product or system into the project.

Drawings prepared by or for the Contractor to show how multiple systems and interdisciplinary work will be coordinated.

SD-06 Test Reports

Report signed by authorized official of testing laboratory that a material, product or system identical to the material, product or system to be provided has been tested in accord with specified requirements. (Testing shall have been within three years of date of Contract award for the project.)

Report which includes findings of a test required to be performed by the Contractor on an actual portion of the work or prototype prepared for the project before shipment to jobsite.

Report which includes finding of a test made at the jobsite or on sample taken from the jobsite, on portion of work during or after installation.

Investigation reports.
Daily logs and checklists.
Final acceptance test and operational test procedure.

SD-07 Certificates

Statements printed on the supplier's letterhead and signed by responsible officials of supplier of product, system or material attesting that product, system or material meets specification requirements. Certificates shall be dated after award of project Contract and clearly name the project.

Document required of Contractor, or of a manufacturer, supplier, installer or subcontractor through Contractor, the purpose of which is to further the quality of orderly progression of a portion of the work by documenting procedures, acceptability of methods or personnel qualifications.

Confined space entry permits.
Text of posted operating instructions.

SD-11 Closeout Submittals

Special requirements necessary to properly close out a construction Contract. For example, Record Drawings and As-built Drawings. Also, submittal requirements necessary to properly close out a major phase of construction on a multi-phase Contract.

1.2.2 Approving Authority

Office or designated person authorized to approve submittal.

1.2.3 Work

As used in this Section, on- and off-site construction required by Contract documents, including labor necessary to produce submittals, except those SD-01 Pre-Construction Submittals noted above, construction, materials, products, equipment, and systems incorporated or to be incorporated in this construction.

1.3 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. Submit the following in accordance with this section.

SD-01 Preconstruction Submittals

Submittal Register; G

1.4 SUBMITTAL CLASSIFICATION

Submittals are classified as follows:

1.4.1 Government Approved (G)

Government approval is required for extensions of design, critical materials, deviations, equipment whose compatibility with the entire system must be checked, and other items as designated by the Contracting Officer. Within the terms of the CONTRACT CLAUSE entitled SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION, they are considered to be "shop drawings."

1.4.2 Information Only

Submittals not requiring Government approval will be for information only. They are not considered to be "shop drawings" within the terms of the Contract Clause referred to above.

1.5 PREPARATION

1.5.1 Transmittal Form

Use the attached sample transmittal form in TRANSMITTAL FORM ENG FORM 4025-R for submitting both Government approved and information only submittals in accordance with the instructions on the reverse side of the form. Properly complete this form by filling out the heading blank spaces and identifying each item submitted. Exercise special care to ensure proper listing of the specification paragraph and sheet number of the

Contract drawings pertinent to the data submitted for each item.

1.5.2 Source Drawings for Shop Drawings

The entire set of Source Drawing files (DWG) will not be provided to the Contractor. Only those requested by the Contractor to prepare shop drawings may be provided. Request the specific Drawing Number only for the preparation of Shop Drawings. These drawings may only be provided after award.

1.5.2.1 Terms and Conditions

Data contained on these electronic files must not be used for any purpose other than as a convenience in the preparation of construction data for the referenced project. Any other use or reuse shall be at the sole risk of the Contractor and without liability or legal exposure to the Government. The Contractor must make no claim and waives to the fullest extent permitted by law, any claim or cause of action of any nature against the Government, its agents or sub consultants that may arise out of or in connection with the use of these electronic files. The Contractor must, to the fullest extent permitted by law, indemnify and hold the Government harmless against all damages, liabilities or costs, including reasonable attorney's fees and defense costs, arising out of or resulting from the use of these electronic files.

These electronic Source Drawing files are not construction documents. Differences may exist between the Source Drawing files and the corresponding construction documents. The Government makes no representation regarding the accuracy or completeness of the electronic Source Drawing files, nor does it make representation to the compatibility of these files with the Contractor hardware or software. In the event that a conflict arises between the signed and sealed construction documents prepared by the Government and the furnished Source Drawing files, the signed and sealed construction documents govern. The Contractor is responsible for determining if any conflict exists. Use of these Source Drawing files does not relieve the Contractor of duty to fully comply with the contract documents, including and without limitation, the need to check, confirm and coordinate the work of all contractors for the project. If the Contractor uses, duplicates or modifies these electronic Source Drawing files for use in producing construction data related to this contract, remove all previous indicia of ownership (seals, logos, signatures, initials and dates).

1.5.3 Electronic File Format

Provide submittals in electronic format. Compile the submittal file as a single, complete document, to include the Transmittal Form described within. Name the electronic submittal file specifically according to its contents, coordinate the file naming convention with the Contracting Officer. Electronic files must be of sufficient quality that all information is legible. Electronic format shall be in PDF, unless otherwise specified or directed by the Contracting Officer. Generate PDF files from original documents with bookmarks so that the text included in the PDF file is both searchable and can be copied. If documents are scanned, Optical Character Resolution (OCR) routines are required. Index and bookmark files exceeding 30 pages to allow efficient navigation of the file. When required, the electronic file must include a valid electronic signature, or scan of a signature.

Email electronic submittal documents fewer than 10MB to an email address as directed by the Contracting Officer. Provide electronic documents over 10MB on an optical disc, or through an electronic file sharing system such as the DOD SAFE Web Application located at the following website: https://safe.apps.mil.

Provide hard copies of submittals when requested by the Contracting Officer. Up to 3 additional hard copies of any submittal may be requested at the discretion of the Contracting Officer, at no additional cost to the Government.

1.6 QUANTITY OF SUBMITTALS

1.6.1 Number of Copies SD-07 Certificates

a. Submit two copies of submittals of certificates requiring review and approval by Contracting Officer.

b. Submit two copies of submittals of test reports requiring review and approval by Contracting Officer.

1.6.2 Number of Copies of SD-01 Preconstruction Submittals and SD-11 Closeout Submittals

Unless otherwise specified, submit two sets of administrative submittals.

1.7 INFORMATION ONLY SUBMITTALS

Normally submittals for information only will not be returned. Approval of the Contracting Officer is not required on information only submittals. The Government reserves the right to require the Contractor to resubmit any item found not to comply with the Contract. This does not relieve the Contractor from the obligation to furnish material conforming to the plans and specifications; will not prevent the Contracting Officer from requiring removal and replacement of nonconforming material incorporated in the work; and does not relieve the Contractor of the requirement to furnish samples for testing by the Government laboratory or for check testing by the Government in those instances where the technical specifications so prescribe.

1.8 VARIATIONS

Variations from Contract requirements require Government approval pursuant to CONTRACT CLAUSE FAR 52.236-21 and will be considered where advantageous to Government.

1.8.1 Considering Variations

Discussion with Contracting Officer prior to submission will help ensure functional and quality requirements are met and minimize rejections and re-submittals. When contemplating a variation which results in lower cost, consider submission of the variation as a Value Engineering Change Proposal (VECP).

Specifically point out variations from Contract requirements in transmittal letters. Failure to point out deviations may result in the Government requiring rejection and removal of such work at no additional cost to the Government.

1.8.2 Proposing Variations

When proposing variation, deliver written request to the Contracting Officer, with documentation of the nature and features of the variation and why the variation is desirable and beneficial to Government. If lower cost is a benefit, also include an estimate of the cost savings. In addition to documentation required for variation, include the submittals required for the item. Clearly mark the proposed variation in all documentation.

Check the column "variation" of ENG Form 4025 for submittals which include proposed deviations requested by the Contractor. Set forth in writing the reason for any deviations and annotate such deviations on the submittal. The Government reserves the right to rescind inadvertent approval of submittals containing unnoted deviations.

1.8.3 Warranting That Variations Are Compatible

When delivering a variation for approval, Contractor warrants that this contract has been reviewed to establish that the variation, if incorporated, will be compatible with other elements of work.

1.8.4 Review Schedule is Modified

In addition to normal submittal review period, a period of 10 working days will be allowed for consideration by the Government of submittals with variations.

1.9 SUBMITTAL REGISTER

Prepare and maintain a Submittal Register, as the work progresses. Do not change data which is output in columns (c), (d), (e), and (f) as delivered by Government; retain data which is output in columns (a), (g), (h), and (i) as approved. A Submittal Register showing items of equipment and materials for which submittals are required by the specifications is provided as an attachment. This list may not be all inclusive and additional submittals may be required. . The Government will provide the initial Submittal Register.

Column (c): Lists specification Section in which submittal is required.

Column (d): Lists each submittal description (SD No. and type, e.g. SD-02 Shop Drawings) required in each specification Section.

Column (e): Lists one principal paragraph in specification section where a material or product is specified. This listing is only to facilitate locating submitted requirements. Do not consider entries in column (e) as limiting project requirements.

Thereafter, the Contractor is to track the submittals by maintaining a complete list, including completion of all data columns, including dates on which submittals are received and returned by the Government.

1.9.1 Use of Submittal Register

Submit Submittal Register. Submit with QC plan and Project Schedule. Verify that submittals required for project are listed and add missing submittals. Coordinate and complete the following fields on the Register

submitted with the QC plan and the Project Schedule:

Column (a) Activity Number: Activity number from the project schedule.

Column (g) Contractor Submit Date: Scheduled date for approving authority to receive submittals.

Column (h) Contractor Approval Date: Date Contractor needs approval of submittal.

Column (i) Contractor Material: Date that Contractor needs material delivered to Contractor control.

1.9.2 Contractor Use of Submittal Register

Update the following fields with each submittal throughout Contract.

Column (b) Transmittal Number: Contractor assigned list of consecutive numbers.

Column (j) Action Code (k): Date of action used to record Contractor's review when forwarding submittals to QC.

Column (l) List date of submittal transmission.

Column (q) List date approval received.

1.9.3 Approving Authority Use of Submittal Register

Update the following fields.

Column (b) Transmittal Number: Contractor assigned list of consecutive numbers.

Column (l) List date of submittal receipt.

Column (m) through (p) List Date related to review actions.

Column (q) List date returned to Contractor.

1.9.4 Copies Delivered to the Government

Deliver one copy of Submittal Register updated by the Contractor to the Government with each invoice request.

1.10 SCHEDULING

Schedule and submit concurrently submittals covering component items forming a system or items that are interrelated. Include certifications to be submitted with the pertinent drawings at the same time. No delay damages or time extensions will be allowed for time lost in late submittals.

a. Coordinate scheduling, sequencing, preparing and processing of submittals with performance of work so that work will not be delayed by submittal processing. Allow for potential resubmittal of requirements.

b. Submittals called for by the contract documents will be listed on the register. If a submittal is called for but does not pertain to the contract work, the Contractor is to include the submittal in the register and annotate it "N/A" with a brief explanation. Approval by the Contracting Officer does not relieve the Contractor of supplying submittals required by the contract documents, but which have been omitted from the register or marked "N/A."

c. Re-submit register and annotate monthly by the Contractor with actual submission and approval dates. When all items on the register have been fully approved, no further re-submittal is required.

d. Carefully control procurement operations to ensure that each individual submittal is made on or before the Contractor scheduled submittal date shown on the approved "Submittal Register."

1.11 GOVERNMENT APPROVING AUTHORITY

When approving authority is the Contracting Officer, the Government will:

a. Note date on which submittal was received from QC Manager.

b. Review submittals for approval within scheduling period specified and only for conformance with project design concepts and compliance with contract documents.

c. Identify returned submittals with one of the actions defined in Paragraph entitled Review Notations, of this section and with markings appropriate for action indicated.

Upon completion of review of submittals requiring Government approval, stamp and date approved submittals. Three copies of the approved submittal will be retained by the Contracting Officer and two copy of the submittal will be returned to the Contractor.

1.11.1 Review Notations

Contracting Officer review will be completed within 20 calendar days after date of submission. Submittals will be returned to the Contractor with the following notations:

a. Submittals marked "approved" or "accepted" authorize the Contractor to proceed with the work covered.

b. Submittals marked "approved as noted" "or approved except as noted, resubmittal not required," authorize the Contractor to proceed with the work covered provided he takes no exception to the corrections.

c. Submittals marked "not approved" or "disapproved," or "revise and resubmit," indicate noncompliance with the Contract requirements or design concept, or that submittal is incomplete. Resubmit with appropriate changes. No work shall proceed for this item until resubmittal is approved.

d. Submittals marked "not reviewed" will indicate submittal has been previously reviewed and approved, is not required, does not have evidence of being reviewed and approved by Contractor, or is not complete. A submittal marked "not reviewed" will be returned with an explanation of the reason it is not reviewed. Resubmit submittals

returned for lack of review by Contractor or for being incomplete, with appropriate action, coordination, or change.

1.12 DISAPPROVED SUBMITTALS

Contractor shall make corrections required by the Contracting Officer. If the Contractor considers a correction or notation on the returned submittals to constitute a change to the Contract drawings or specifications; notice as required under the CONTRACT CLAUSE entitled CHANGES is to be given to the Contracting Officer. Contractor is responsible for the dimensions and design of connection details and construction of work. Failure to point out deviations may result in the Government requiring rejection and removal of this work at the Contractor's expense.

If changes are necessary to submittals, make revisions and submission of the submittals in accordance with the procedures above. No item of work requiring a submittal change is to be accomplished until the changed submittals are approved.

1.13 APPROVED OR ACCEPTED SUBMITTALS

The Contracting Officer's approval or acceptance of submittals is not to be construed as a complete check, and indicates only that the general method of construction, materials, detailing and other information are satisfactory.

Approval or acceptance will not relieve the Contractor of the responsibility for errors which may exist, as the Contractor under the Contractor Quality Control (CQC) requirements of this Contract is responsible for dimensions, the design of adequate connections and details, and the satisfactory construction of all work

After submittals have been approved or accepted by the Contracting Officer, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

1.14 WITHHOLDING OF PAYMENT

Payment for materials incorporated in the work will not be made if required approvals have not been obtained.

1.15 STAMPS

Stamps used by the Contractor on the submittal data to certify that the submittal meets Contract requirements is to be similar to the following:

CONTRACTOR (Firm Name)   _____ Approved _____ Approved with corrections as noted on submittal data and/or attached sheets(s)   SIGNATURE: _____ TITLE: _____ DATE: _____

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

-- End of Section --

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION
Segment 1A Oyster Specs

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAG # RAPH	CLASSIFICATION	GOVT OR A/E REVWR	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION			APPROVING AUTHORITY					REMARKS
							SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION	MAILED TO CONTR/ DATE RCD FRM APPR AUTH	
(a)	(b)	(c)	(d)	(e)	(f)		(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		01 32 01.01 45	SD-01 Preconstruction Submittals															
			Project Schedule	3.1	G													
		01 33 00	SD-01 Preconstruction Submittals															
			Submittal Register	1.9	G													
		01 35 26.01 45	SD-01 Preconstruction Submittals															
			Accident Prevention Plan (APP)	1.7	G													
			SD-06 Test Reports															
			Monthly Exposure Reports	1.4														
			Notifications and Reports	1.12														
			Accident Reports	1.12.2														
			LHE Inspection Reports	1.12.3														
			SD-07 Certificates															
			Crane Operators/Riggers	1.6.1.5														
			Naval Architect Analysis															
			Standard Lift Plan	1.7.2.1														
			Critical Lift Plan	1.7.2.2														
			Activity Hazard Analysis (AHA)	1.8														
			Certificate of Compliance	1.12.4														
			License Certificates	1.2.11														
		01 45 01.00	SD-01 Preconstruction Submittals															
			Contractor Quality Control (CQC) Plan	3.2	G													
		01 50 00.00 45	SD-01 Preconstruction Submittals															
			Construction Site Plan	1.3	G													
		01 57 20.00 45	SD-01 Preconstruction Submittals															
			Environmental Protection Plan	1.7	G													

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION
Segment 1A Oyster Specs

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAG # RAPH	CLASSIFICATION	GOVT OR A/E REVWR	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
							SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)		(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		01 58 13.01 45	SD-02 Shop Drawings															
			Sign Legend Orders	2.1.1	G													
		01 78 00.00 45	SD-11 Closeout Submittals															
			Record Drawings	1.2.2	G													
			Final Record Drawings	3.1.2														
		35 32 16.10 45	SD-01 Preconstruction Submittals															
			Reef Pad Placement Plan;	3.1	G													
			Reef Pad Material Type	1.6.3														
			Barge Displacement Table(s)															
			Gradation	1.6.4														
			Reef Pad Material	1.6.3														
			Reef Pad Material	2.1														
			SD-07 Certificates															
			Certificates of Compliance															
			Materials Testing Center Qualifications															
			SD-11 Closeout Submittals															
			Pre-Construction Hazard Survey	3.2.2														
			Surveys	3.3.3														
			Final Survey Drawings	3.3.3														

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SECTION 01 35 26.01 45

GOVERNMENTAL SAFETY REQUIREMENTS
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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 within the text by the basic designation only.

AMERICAN SOCIETY OF SAFETY ENGINEERS (ASSE/SAFE)

ASSE/SAFE A10.34	(2001; R 2012) Protection of the Public on or Adjacent to Construction Sites
ASSE/SAFE Z359.0	(2012) Definitions and Nomenclature Used for Fall Protection and Fall Arrest

ASME INTERNATIONAL (ASME)

ASME B30.20	(2013; INT Oct 2010 - May 2012) Below-the-Hook Lifting Devices
ASME B30.22	(2010) Articulating Boom Cranes
ASME B30.26	(2015; INT Jun 2010 - Jun 2014) Rigging Hardware
ASME B30.3	(2012) Tower Cranes
ASME B30.5	(2014) Mobile and Locomotive Cranes
ASME B30.8	(2010) Floating Cranes and Floating Derricks
ASME B30.9	(2014; INT Feb 2011 - Nov 2013) Slings

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 10	(2013) Standard for Portable Fire Extinguishers
NFPA 241	(2013; Errata 2015) Standard for Safeguarding Construction, Alteration, and Demolition Operations
NFPA 70	(2014; AMD 1 2013; Errata 1 2013; AMD 2 2013; Errata 2 2013; AMD 3 2014; Errata 3-4 2014; AMD 4-6 2014) National Electrical Code
NFPA 70E	(2015; ERTA 1 2015) Standard for Electrical Safety in the Workplace

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(2014) Safety and Health Requirements Manual

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910	Occupational Safety and Health Standards
29 CFR 1926.1400	Cranes and Derricks in Construction
29 CFR 1926.16	Rules of Construction

1.2 DEFINITIONS

1.2.1 Competent Person (CP)

The CP is a person designated in writing, who, through training, knowledge and experience, is capable of identifying, evaluating, and addressing existing and predictable hazards in the working environment or working conditions that are dangerous to personnel, and who has authorization to take prompt corrective measures with regards to such hazards.

1.2.2 Competent Person, Cranes and Rigging

The CP, Cranes and Rigging, as defined in EM 385-1-1 Appendix Q, is a person meeting the competent person, who has been designated in writing to be responsible for the immediate supervision, implementation and monitoring of the Crane and Rigging Program, who through training, knowledge and experience in crane and rigging is capable of identifying, evaluating and addressing existing and potential hazards and, who has the authority to take prompt corrective measures with regard to such hazards.

1.2.3 Competent Person, Fall Protection

The CP, Fall Protection, is a person meeting the competent person requirements as defined in EM 385-1-1 Appendix Q and in accordance with ASSE/SAFE Z359.0, who has been designated in writing by the employer to be responsible for immediate supervising, implementing and monitoring of the fall protection program, who through training, knowledge and experience in fall protection and rescue systems and equipment, is capable of identifying, evaluating and addressing existing and potential fall hazards and, who has the authority to take prompt corrective measures with regard to such hazards.

1.2.4 Competent Person (CP) Trainer

A competent person trainer as defined in EM 385-1-1 Appendix Q, who is qualified in the material presented, and who possesses a working knowledge of applicable technical regulations, standards, equipment and systems related to the subject matter on which they are training Competent Persons. A competent person trainer must be familiar with the typical hazards and the equipment used in the industry they are instructing. The training provided by the competent person trainer must be appropriate to that specific industry. The competent person trainer must evaluate the knowledge and skills of the competent persons as part of the training process.

1.2.5 High Risk Activities

High Risk Activities are activities that involve work at heights, crane and rigging and electrical work.

1.2.6 High Visibility Accident

A High Visibility Accident is any mishap which may generate publicity or high visibility.

1.2.7 Load Handling Equipment (LHE)

LHE is a term used to describe cranes, hoists and all other hoisting equipment (hoisting equipment means equipment, including crane, derricks, hoists and power operated equipment used with rigging to raise, lower or horizontally move a load).

1.2.8 Medical Treatment

Medical Treatment is treatment administered by a physician or by registered professional personnel under the standing orders of a physician. Medical treatment does not include first aid treatment even through provided by physician or registered personnel.

1.2.9 Near Miss

A Near Miss is a mishap resulting in no personal injury and zero property damage, but given a shift in time or position, damage or injury may have occurred (e.g., a worker falls off a scaffold and is not injured; a crane swings around to move the load and narrowly misses a parked vehicle).

1.2.10 Operating Envelope

The Operating Envelope is the area surrounding any crane or load handling equipment. Inside this "envelope" is the crane, the operator, riggers and crane walkers, other personnel involved in the operation, rigging gear between the hook, the load, the crane's supporting structure (i.e. ground or rail), the load's rigging path, the lift and rigging procedure.

1.2.11 Qualified Person (QP)

The QP is a person designated in writing, who, by possession of a recognized degree, License certificates, or professional standing, or extensive knowledge, training, and experience, has successfully demonstrated their ability to solve or resolve problems related to the subject matter, the work, or the project.

1.2.12 Recordable Injuries or Illnesses

Recordable Injuries or Illnesses are any work-related injury or illness that results in:

a. Death, regardless of the time between the injury and death, or the length of the illness;

b. Days away from work (any time lost after day of injury/illness onset);

c. Restricted work;

d. Transfer to another job;

e. Medical treatment beyond first aid;

f. Loss of consciousness; or

g. A significant injury or illness diagnosed by a physician or other licensed health care professional, even if it did not result in (a) through (f) above.

1.2.13 USACE Property and Equipment

Interpret "USACE" property and equipment specified in USACE EM 385-1-1 as Government property and equipment.

1.2.14 Load Handling Equipment (LHE) Accident or Load Handling Equipment Mishap

A LHE accident occurs when any one or more of the eight elements in the operating envelope fails to perform correctly during operation, including operation during maintenance or testing resulting in personnel injury or death; material or equipment damage; dropped load; derailment; two-blocking; overload; or collision, including unplanned contact between the load, crane, or other objects. A dropped load, derailment, two-blocking, overload and collision are considered accidents, even though no material damage or injury occurs. A component failure (e.g., motor burnout, gear tooth failure, bearing failure) is not considered an accident solely due to material or equipment damage unless the component failure results in damage to other components (e.g., dropped boom, dropped load, or roll over). Document any mishap that meets the criteria described in the Contractor Significant Incident Report (CSIR).

1.3 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 the SECTION 01 33 00 SUBMITTAL PROCEDURES:

Government acceptance, as defined in EM 385-1-1, is required for submittals with a "G,A" designation.

SD-01 Preconstruction Submittals

Accident Prevention Plan (APP); G

SD-06 Test Reports

Monthly Exposure Reports

Notifications and Reports

Accident Reports

LHE Inspection Reports

SD-07 Certificates

Crane Operators/Riggers

Naval Architect Analysis

Standard Lift Plan

Critical Lift Plan

Activity Hazard Analysis (AHA)

Certificate of Compliance

License Certificates

1.4 MONTHLY EXPOSURE REPORTS

Provide a Monthly Exposure Report no later than the fifth calendar day of the following month, and is to be submitted in RMS CM. This report is a compilation of employee-hours worked each month for all site workers, both Prime and subcontractor. Failure to submit the report may result in retention of up to 10 percent of the voucher.

1.5 REGULATORY REQUIREMENTS

In addition to the detailed requirements included in the provisions of this contract, comply with the most recent edition of USACE EM 385-1-1, and the following federal, state, and local laws, ordinances, criteria, rules and regulations. Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting work. Where the requirements of this specification, applicable laws, criteria, ordinances, regulations, and referenced documents vary, the most stringent requirements govern.

1.6 SITE QUALIFICATIONS, DUTIES, AND MEETINGS

1.6.1 Personnel Qualifications

1.6.1.1 Site Safety and Health Officer (SSHO)

Provide an SSHO that meets the requirements of EM 385-1-1 Section 1. The SSHO must ensure that the requirements of 29 CFR 1926.16 are met for the project. Provide a Safety oversight team that includes a minimum of one (1) person at each project site to function as the Site Safety and Health Officer (SSHO). The SSHO or an equally qualified Alternate SSHO must be at the work site at all times to implement and administer the Contractor's safety program and government-accepted Accident Prevention Plan. The SSHO and Alternate SSHO must have the required training, experience, and qualifications in accordance with EM 385-1-1 Section 01.A.17, and all associated sub-paragraphs.

If the SSHO is off-site for a period longer than 24 hours, an equally qualified alternate SSHO must be provided and must fulfill the same roles and responsibilities as the primary SSHO. Either the SSHO or an Alternative SSHO must be on site at all times. The SSHO and Alternative SSHO may not have other collateral duties.

1.6.1.2 Contractor Quality Control (QC) Manager

The Contractor Quality Control Manager cannot be the SSHO on this project. The SSHO must be a full-time stand-alone position.

1.6.1.3 Competent Person Qualifications

Provide Competent Persons in accordance with EM 385-1-1, Appendix Q and herein. Competent Persons for high risk activities include cranes and rigging, fall protection, and electrical work. The CP for these activities must be designated in writing and meet the requirements for the specific activity (i.e. competent person, fall protection).

The Competent Person identified in the Contractor's Safety and Health Program and accepted Accident Prevention Plan, must be on-site at all times when the work that presents the hazards associated with their professional expertise is being performed. Provide the credentials of the Competent Persons(s) to the Contracting Officer for information in consultation with the Safety Office.

1.6.1.4 Qualified Trainer Requirements

Individuals qualified to instruct the 40 hour contract safety awareness course, or portions thereof, must meet the definition of a Competent Person Trainer, and, at a minimum, possess a working knowledge of the following subject areas: EM 385-1-1, Electrical Standards, Lockout/Tagout and Fall Protection.

Instructors are required to:

a. Prepare class presentations that cover construction-related safety requirements.

b. Ensure that all attendees attend all sessions by using a class roster signed daily by each attendee. Maintain copies of the roster for at least five (5) years. This is a certification class and must be attended 100 percent. In cases of emergency where an attendee cannot make it to a session, the attendee can make it up in another class session for the same subject.

c. Update training course materials whenever an update of the EM 385-1-1 becomes available.

d. Provide a written exam of at least 50 questions. Students are required to answer 80 percent correctly to pass.

e. Request, review and incorporate student feedback into a continuous course improvement program.

1.6.1.5 Crane Operators/Riggers

Provide Operators meeting the requirements in EM 385-1-1, Section 15.B for Riggers and Section 16.B for Crane Operators. In addition, for mobile cranes with Original Equipment Manufacturer (OEM) rated capacities of 50,000 pounds or greater, designate crane operators qualified by a source that qualifies crane operators (i.e., union, a government agency, or an organization that tests and qualifies crane operators). Provide proof of current qualification.

1.6.2 Personnel Duties

1.6.2.1 Duties of the Site Safety and Health Officer (SSHO)

The SSHO must:

a. Conduct daily safety and health inspections and maintain a written log which includes area/operation inspected, date of inspection, identified hazards, recommended corrective actions, estimated and actual dates of corrections. Attach safety inspection logs to the Contractors' daily production report.

b. Conduct mishap investigations and complete required accident reports. Report mishaps and near misses.

c. Use OSHA's Form 300 to log work-related injuries and illnesses occurring on the project site for Prime Contractors and subcontractors. Post and maintain the Form 300 on the site Safety Bulletin Board.

d. Maintain applicable safety reference material on the job site.

e. Attend the pre-construction conference, pre-work meetings including preparatory meetings, and periodic in-progress meetings.

f. Review the APP and AHAs for compliance with EM 385-1-1, and approve, sign, implement and enforce them.

g. Establish a Safety and Occupational Health (SOH) Deficiency Tracking System that lists and monitors outstanding deficiencies until resolution.

h. Ensure subcontractor compliance with safety and health requirements.

i. Maintain a list of hazardous chemicals on site and their material Safety Data Sheets (SDS).

j. Maintain a weekly list of high hazard activities involving energy, equipment, and elevation, and be prepared to discuss details during QC Meetings.

k. Provide and keep a record of site safety orientation and indoctrination for Contractor employees, subcontractor employees, and site visitors.

Superintendent, QC Manager, and SSHO are subject to dismissal if the above duties are not being effectively carried out. If Superintendent, QC Manager, or SSHO are dismissed, project work will be stopped and will not be allowed to resume until a suitable replacement is approved and the above duties are again being effectively carried out.

1.6.3 Meetings

1.6.3.1 Preconstruction Conference

a. Contractor representatives who have a responsibility or significant role in accident prevention on the project must attend the preconstruction conference. This includes the project superintendent, Site Safety and Occupational Health officer, quality control manager,

or any other assigned safety and health professionals who participated in the development of the APP (including the Activity Hazard Analyses (AHAs) and special plans, program and procedures associated with it).

b. Discuss the details of the submitted APP to include incorporated plans, programs, procedures and a listing of anticipated AHAs that will be developed and implemented during the performance of the contract. This list of proposed AHAs will be reviewed at the conference and an agreement will be reached between the Contractor and the Contracting Officer as to which phases will require an analysis. In addition, establish a schedule for the preparation, submittal, and Government review of AHAs to preclude project delays.

c. Deficiencies in the submitted APP, identified during the Contracting Officer's review, must be corrected, and the APP re-submitted for review prior to the start of construction. Work is not permitted to begin work until an APP is established that is acceptable to the Contracting Officer.

1.6.3.2 Safety Meetings

Conduct safety meetings to review past activities, plan for new or changed operations, review pertinent aspects of appropriate AHA (by trade), establish safe working procedures for anticipated hazards, and provide pertinent Safety and Occupational Health (SOH) training and motivation. Conduct meetings at least once a month for all supervisors on the project location. The SSHO, supervisors, foremen, or CDSOs must conduct meetings at least once a week for the trade workers. Document meeting minutes to include the date, persons in attendance, subjects discussed, and names of individual(s) who conducted the meeting. Maintain documentation on-site and furnish copies to the Contracting Officer on request. Notify the Contracting Officer of all scheduled meetings 7 calendar days in advance.

1.7 ACCIDENT PREVENTION PLAN (APP)

A qualified person must prepare the written site-specific APP. Prepare the APP in accordance with the format and requirements of EM 385-1-1, Appendix A, and as supplemented herein. Cover all paragraph and subparagraph elements in EM 385-1-1, Appendix A. The APP must be job-specific and address any unusual or unique aspects of the project or activity for which it is written. The APP must interface with the Contractor's overall safety and health program referenced in the APP in the applicable APP element, and made site-specific. Describe the methods to evaluate past safety performance of potential subcontractors in the selection process. Also, describe innovative methods used to ensure and monitor safe work practices of subcontractors. The Government considers the Prime Contractor to be the "controlling authority" for all work site safety and health of the subcontractors. Contractors are responsible for informing their subcontractors of the safety provisions under the terms of the contract and the penalties for noncompliance, coordinating the work to prevent one craft from interfering with or creating hazardous working conditions for other crafts, and inspecting subcontractor operations to ensure that accident prevention responsibilities are being carried out. The APP must be signed by an officer of the firm (Prime Contractor senior person), the individual preparing the APP, the on-site superintendent, the designated SSHO, the Contractor Quality Control Manager, and any designated Certified Safety Professional (CSP) or Certified Health Physicist (CIH). The SSHO must provide and maintain the APP and a log of signatures by each subcontractor foreman, attesting that they have read

and understand the APP, and make the APP and log available on-site to the Contracting Officer. If English is not the foreman's primary language, the Prime Contractor must provide an interpreter.

Submit the APP to the Contracting Officer no later than 15 calendar days after award for acceptance. Work cannot proceed without an accepted APP. Once reviewed and accepted by the Contracting Officer, the APP and attachments will be enforced as part of the contract. Disregarding the provisions of this contract or the accepted APP is cause for stopping of work, at the discretion of the Contracting Officer, until the matter has been rectified. Continuously review and amend the APP, as necessary, throughout the life of the contract. Changes to the accepted APP must be made with the knowledge and concurrence of the Contracting Officer, project superintendent, SSHO and Quality Control Manager. Incorporate unusual or high-hazard activities not identified in the original APP as they are discovered. Should any severe hazard exposure (i.e. imminent danger) become evident, stop work in the area, secure the area, and develop a plan to remove the exposure and control the hazard. Notify the Contracting Officer within 24 hours of discovery. Eliminate and remove the hazard. In the interim, take all necessary action to restore and maintain safe working conditions in order to safeguard onsite personnel, visitors, the public (as defined by ASSE/SAFE A10.34), and the environment.

1.7.1 Names and Qualifications

Provide plans in accordance with the requirements outlined in Appendix A of EM 385-1-1, including the following:

a. Names and qualifications (resumes including education, training, experience and certifications) of site safety and health personnel designated to perform work on this project to include the designated Site Safety and Health Officer and other competent and qualified personnel to be used. Specify the duties of each position.

b. Qualifications of competent and of qualified persons. As a minimum, designate and submit qualifications of competent persons for each of the following major areas: fall protection; health hazard recognition, evaluation and control of chemical, physical and biological agents; and personal protective equipment and clothing to include selection, use and maintenance.

1.7.2 Plans

Provide plans in the APP in accordance with the requirements outlined in Appendix A of EM 385-1-1, including the following:

1.7.2.1 Standard Lift Plan (SLP)

Plan lifts to avoid situations where the operator cannot maintain safe control of the lift. Prepare a written SLP in accordance with EM 385-1-1, Section 16.A.03, using Form 16-2 for every lift or series of lifts (if duty cycle or routine lifts are being performed). The SLP must be developed, reviewed and accepted by all personnel involved in the lift in conjunction with the associated AHA. Signature on the AHA constitutes acceptance of the plan. Maintain the SLP on the LHE for the current lift(s) being made. Maintain historical SLPs for a minimum of 3 months.

1.7.2.2 Critical Lift Plan - Crane or Load Handling Equipment

Provide a Critical Lift Plan as required by EM 385-1-1, Section 16.H.01, using Form 16-3. Critical lifts require detailed planning and additional or unusual safety precautions. Develop and submit a critical lift plan to the Contracting Officer 30 calendar days prior to critical lift. Comply with load testing requirements in accordance with EM 385-1-1, Section 16.F.03.

In addition to the requirements of EM 385-1-1, Section 16.H.02, the critical lift plan must include the following:

a. For lifts of personnel, demonstrate compliance with the requirements of 29 CFR 1926.1400 and EM 385-1-1, Section 16.T.

b. For barge mounted mobile cranes, provide a Naval Architecture Analysis and include an LHE Manufacturer's Floating Service Load Chart in accordance with the criteria from the selected standard in EM 385-1-1, Section 16.L.02. The Floating Service Load Chart must provide a table of rated load versus boom angle and radius. The Floating Service Load Chart must also provide the maximum allowable machine list and trim associated with the tabular loads and radii provided. If the Manufacturer's Floating Service Load Chart is not available, a floating service load chart may be developed and provided by a qualified Registered Professional Engineer (RPE), competent in the field of floating cranes. The Load Chart must be in accordance with the criteria from the selected standard in EM 385-1-1, Section 16.L; provide a table of rated load versus boom angle and radius; provide the maximum allowable machine list and machine trim associated with the tabular loads and radii provided; and be stamped by a RPE qualified and competent in the field of floating cranes. The RPE, competent in the field of floating cranes must stamp and certify (sign) that the Naval Architectural Analysis (NAA) meets the requirements of EM 385-1-1, Section 16.L.03.

c. Multi-purpose machines, material handling equipment, and construction equipment used to lift loads that are suspended by rigging gear, require proof of authorization from the machine OEM that the machine is capable of making lifts of loads suspended by rigging equipment. Demonstrate that the operator is properly trained and that the equipment is properly configured to make such lifts and is equipped with a load chart.

1.8 ACTIVITY HAZARD ANALYSIS (AHA)

Before beginning each activity, task or Definable Feature of Work (DFOW) involving a type of work presenting hazards not experienced in previous project operations, or where a new work crew or subcontractor is to perform the work, the Contractor(s) performing that work activity must prepare an AHA. AHAs must be developed by the Prime Contractor, subcontractor, or supplier performing the work, and provided for Prime Contractor review and approval before submitting to the Contracting Officer. AHAs must be signed by the SSHO, Superintendent, QC Manager and the subcontractor Foreman performing the work. Format the AHA in accordance with EM 385-1-1, Section 1 or as directed by the Contracting Officer. Submit the AHA for review at least 15 working days prior to the start of each activity task, or DFOW. The Government reserves the right to require the Contractor to revise and resubmit the AHA if it fails to effectively identify the work sequences, specific anticipated hazards,

site conditions, equipment, materials, personnel and the control measures to be implemented.

AHAs must identify competent persons required for phases involving high risk activities, including crane and rigging, electrical work, and fall protection, and scaffolding.

1.8.1 AHA Management

Review the AHA list periodically (at least monthly) at the Contractor supervisory safety meeting, and update as necessary when procedures, scheduling, or hazards change. Use the AHA during daily inspections by the SSHO to ensure the implementation and effectiveness of the required safety and health controls for that work activity.

1.8.2 AHA Signature Log

Each employee performing work as part of an activity, task or DFOW must review the AHA for that work and sign a signature log specifically maintained for that AHA prior to starting work on that activity. The SSHO must maintain a signature log on site for every AHA. Provide employees whose primary language is other than English, with an interpreter to ensure a clear understanding of the AHA and its contents.

1.9 DISPLAY OF SAFETY INFORMATION

1.9.1 Safety Bulletin Board

Within one calendar day after commencement of work, erect a safety bulletin board at the job site. Where size, duration, or logistics of project do not facilitate a bulletin board, an alternative method, acceptable to the Contracting Officer, that is accessible and includes all mandatory information for employee and visitor review, may be deemed as meeting the requirement for a bulletin board. Include and maintain information on safety bulletin board as required by EM 385-1-1, Section 01.A.06.

1.9.2 Safety and Occupational Health (SOH) Deficiency Tracking System

Establish a SOH deficiency tracking system that lists and monitors the status of SOH deficiencies in chronological order. Use the tracking system to evaluate the effectiveness of the APP. A monthly evaluation of the data must be discussed in the QC or SOH meeting with everyone on the project. The list must be posted on the project bulletin board and updated daily, and provide the following information:

a. Date deficiency identified;

b. Description of deficiency;

c. Name of person responsible for correcting deficiency;

d. Projected resolution date;

e. Date actually resolved.

1.10 SITE SAFETY REFERENCE MATERIALS

Maintain safety-related references applicable to the project, including

those listed in paragraph REFERENCES. Maintain applicable equipment manufacturer's manuals.

1.11 EMERGENCY MEDICAL TREATMENT

Contractors must arrange for their own emergency medical treatment. Government has no responsibility to provide emergency medical treatment.

1.12 NOTIFICATIONS AND REPORTS

1.12.1 Mishap Notification

Notify the Contracting Officer as soon as practical, but no more than twenty-four hours, after any mishaps, including recordable accidents, incidents, and near misses, as defined in EM 385-1-1 Appendix Q, any report of injury, illness, load handling equipment (LHE) or rigging mishaps, or any property damage. The Contractor is responsible for obtaining appropriate medical and emergency assistance and for notifying fire, law enforcement, and regulatory agencies. Immediate reporting is required for electrical mishaps, to include Arc Flash; shock; uncontrolled release of hazardous energy (includes electrical and non-electrical); load handling equipment or rigging; fall from height (any level other than same surface); and underwater diving. These mishaps must be investigated in depth to identify all causes and to recommend hazard control measures.

Within notification include Contractor name; contract title; type of contract; name of activity, installation or location where accident occurred; date and time of accident; names of personnel injured; extent of property damage, if any; extent of injury, if known, and brief description of accident (for example, type of construction equipment used and PPE used). Preserve the conditions and evidence on the accident site until the Government investigation team arrives on-site and Government investigation is conducted. Assist and cooperate fully with the Government's investigation(s) of any mishap.

1.12.2 Accident Reports

a. Conduct an accident investigation for recordable injuries and illnesses, property damage, and near misses as defined in EM 385-1-1, to establish the root cause(s) of the accident. Complete the applicable The Contracting Officer will provide copies of any required or special forms.

b. Near Misses: Near miss reports are considered positive and proactive Contractor safety management actions.

1.12.3 LHE Inspection Reports

Submit LHE inspection reports required in accordance with EM 385-1-1 and as specified herein with Daily Reports of Inspections.

1.12.4 Certificate of Compliance and Pre-lift Plan/Checklist for LHE and Rigging

Provide a FORM 16-1 Certificate of Compliance for LHE entering an activity under this contract and in accordance with EM 385-1-1. Post certifications on the crane.

Develop a Standard Lift Plan (SLP) in accordance with EM 385-1-1, Section

16.H.03 using Form 16-2 Standard Pre-Lift Crane Plan/Checklist for each lift planned. Submit SLP to the Contracting Officer for approval within 15 calendar days in advance of planned lift.

1.13 SEVERE STORM PLAN

This plan shall be detailed for the protection and evacuation of personnel and plant in the event of an impending severe storm or hurricane, and is required as an enclosure to the Contractor's Accident Prevention Plan. This plan shall be submitted to the Contracting Officer, or his/her representative, for review prior to the preconstruction conference. Work being performed to satisfy the Hurricane Plan will not be measured for payment. Payment for all work associated with the Hurricane Plan, and providing the equipment required for the duration specified shall be distributed amongst the existing bid items. The Plan shall include at least the following:

a. The time each phase of the plan will be put in effect. The time shall be the number of hours remaining for the storm to reach the worksite if it continues at the predicted speed and direction.

b. The safe harbor for personnel and plant specifically identified.

c. The name of the boat(s) which will be used to move the plant, its type, capacity, speed, and availability. If the boat to be used has not yet been identified, the Contractor shall indicate (a) if the vessel will come from his own resources or from an outside source, (b) the type of boat proposed, and (c) the horsepower that would be needed. Upon verifying the boat to be used, the Contractor will amend the Hurricane Plan to document the boat name and applicable information initially requested (type, capacity, speed, and availability). Finalization of this plan shall be completed prior to mobilization of the dredge to the availability.

d. The estimated time necessary to move the plant to the safe harbor after movement is started.

In the event of a severe storm warning, the Contractor must:

a. Secure outside equipment and materials and place materials that could be damaged in protected areas.

b. Check surrounding area, including roof, for loose material, equipment, debris, and other objects that could be blown away or against existing facilities.

c. Ensure that temporary erosion controls are adequate.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.1 CONSTRUCTION AND OTHER WORK

Comply with EM 385-1-1, NFPA 70, NFPA 70E, NFPA 241, the APP, the AHA, Federal and State OSHA regulations, and other related submittals and activity fire and safety regulations. The most stringent standard prevails.

PPE is governed in all areas by the nature of the work the employee is

performing. Use personal hearing protection at all times in designated noise hazardous areas or when performing noise hazardous tasks. Safety glasses must be worn or carried/available on each person. Mandatory PPE includes:

a. Hard Hat

b. Long Pants

c. Appropriate Safety Shoes

d. Appropriate Class Reflective Vests

e. Life Jackets

3.1.1 Worksite Communication

Employees working alone in a remote location or away from other workers must be provided an effective means of emergency communications (i.e., cellular phone, two-way radios, land-line telephones or other acceptable means). The selected communication must be readily available (easily within the immediate reach) of the employee and must be tested prior to the start of work to verify that it effectively operates in the area/environment. An employee check-in/check-out communication procedure must be developed to ensure employee safety.

3.1.2 Unforeseen Hazardous Material

Contract documents identify materials such as PCB, lead paint, and friable and non-friable asbestos and other OSHA regulated chemicals (i.e. 29 CFR Part 1910.1000). If material(s) that may be hazardous to human health upon disturbance are encountered during construction operations, stop that portion of work and notify the Contracting Officer immediately. Within calendar days the Government will determine if the material is hazardous. If material is not hazardous or poses no danger, the Government will direct the Contractor to proceed without change. If material is hazardous and handling of the material is necessary to accomplish the work, the Government will issue a modification pursuant to FAR 52.243-4, "Changes" and FAR 52.236-2, "Differing Site Conditions."

3.2 EQUIPMENT

3.2.1 Material Handling Equipment (MHE)

a. Material handling equipment such as forklifts must not be modified with work platform attachments for supporting employees unless specifically delineated in the manufacturer's printed operating instructions. Material handling equipment fitted with personnel work platform attachments are prohibited from traveling or positioning while personnel are working on the platform.

b. The use of hooks on equipment for lifting of material must be in accordance with manufacturer's printed instructions. Material Handling Equipment Operators must be trained in accordance with OSHA 29 CFR 1910, Subpart N.

c. Operators of forklifts or power industrial trucks must be licensed in accordance with OSHA.

3.2.2 Load Handling Equipment (LHE)

a. Equip cranes and derricks as specified in EM 385-1-1, Section 16.

b. Notify the Contracting Officer 15 working days in advance of any LHE entering the activity, in accordance with EM 385-1-1, Section 16.A.02, so that necessary quality assurance spot checks can be coordinated. Contractor's operator must remain with the crane during the spot check. Rigging gear must comply with OSHA, ASME B30.9 Standards safety standards.

c. Comply with the LHE manufacturer's specifications and limitations for erection and operation of cranes and hoists used in support of the work. Perform erection under the supervision of a designated person (as defined in ASME B30.5). Perform all testing in accordance with the manufacturer's recommended procedures.

d. Comply with ASME B30.5 for mobile and locomotive cranes, ASME B30.22 for articulating boom cranes, ASME B30.3 for construction tower cranes, ASME B30.8 for floating cranes and floating derricks, ASME B30.9 for slings, ASME B30.20 for below the hook lifting devices and ASME B30.26 for rigging hardware.

e. Under no circumstance must a Contractor make a lift at or above 90 percent of the cranes rated capacity in any configuration.

f. When operating in the vicinity of overhead transmission lines, operators and riggers must be alert to this special hazard and follow the requirements of EM 385-1-1 Section 11, and ASME B30.5 or ASME B30.22 as applicable.

g. Do not use crane suspended personnel work platforms (baskets) unless the Contractor proves that using any other access to the work location would provide a greater hazard to the workers or is impossible. Do not lift personnel with a line hoist or friction crane. Additionally, submit a specific AHA for this work to the Contracting Officer. Ensure the activity and AHA are thoroughly reviewed by all involved personnel.

h. Inspect, maintain, and recharge portable fire extinguishers as specified in NFPA 10, Standard for Portable Fire Extinguishers.

i. All employees must keep clear of loads about to be lifted and of suspended loads.

j. Use cribbing when performing lifts on outriggers.

k. The crane hook/block must be positioned directly over the load. Side loading of the crane is prohibited.

l. A physical barricade must be positioned to prevent personnel access where accessible areas of the LHE's rotating superstructure poses a risk of striking, pinching or crushing personnel.

m. Maintain inspection records in accordance by EM 385-1-1, Section 16.D, including shift, monthly, and annual inspections, the signature of the person performing the inspection, and the serial number or other identifier of the LHE that was inspected. Records must be available for review by the Contracting Officer.

n. Maintain written reports of operational and load testing in accordance with EM 385-1-1, Section 16.F, listing the load test procedures used along with any repairs or alterations performed on the LHE. Reports must be available for review by the Contracting Officer.

o. Certify that all LHE operators have been trained in proper use of all safety devices (e.g. anti-two block devices).

p. Take steps to ensure that wind speed does not contribute to loss of control of the load during lifting operations. At wind speeds greater than 20 mph, the operator, rigger and lift supervisor must cease all crane operations, evaluate conditions and determine if the lift may proceed. Base the determination to proceed or not on wind calculations per the manufacturer and a reduction in LHE rated capacity if applicable. Include this maximum wind speed determination as part of the activity hazard analysis plan for that operation.

3.2.3 Machinery and Mechanized Equipment

a. Proof of qualifications for operator must be kept on the project site for review.

b. Manufacture specifications or owner's manual for the equipment must be on-site and reviewed for additional safety precautions or requirements that are sometimes not identified by OSHA or USACE EM 385-1-1. Incorporate such additional safety precautions or requirements into the AHAs.

3.2.4 Use of Explosives

Explosives will not be allowed on this contract.

Storage of explosives, when permitted on Government property, must be only where directed and in approved storage facilities. These facilities must be kept locked at all times except for inspection, delivery, and withdrawal of explosives.

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SOURCES FOR REFERENCE PUBLICATIONS
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PART 1 GENERAL

1.1 REFERENCES

Various publications are referenced in other sections of the specifications to establish requirements for the work. These references are identified in each section by document number, date and title. The document number used in the citation is the number assigned by the standards producing organization (e.g. ASTM B564 Standard Specification for Nickel Alloy Forgings). However, when the standards producing organization has not assigned a number to a document, an identifying number has been assigned for reference purposes.

1.2 ORDERING INFORMATION

The addresses of the standards publishing organizations whose documents are referenced in other sections of these specifications are listed below, and if the source of the publications is different from the address of the sponsoring organization, that information is also provided.

AMERICAN SOCIETY OF SAFETY ENGINEERS (ASSE/SAFE)
1800 East Oakton Street
Des Plaines, IL 60018 USA
Ph: 847-699-2929

ASME INTERNATIONAL (ASME)
Two Park Avenue, M/S 10E
New York, NY 10016-5990
Ph: 800-843-2763
Fax:973-882-1717
E-mail: customercareasme.org
Internet:

ASTM INTERNATIONAL (ASTM)
100 Barr Harbor Drive, P.O. Box C700
West Conshohocken, PA 19428-2959
Ph: 610-832-9500
Fax: 610-832-9555
E-mail: service@astm.org
Internet: https://www.astm.org/

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
1 Batterymarch Park
Quincy, MA 02169-7471
Ph: 800-344-3555
Fax: 800-593-6372

Internet: https://www.nfpa.org

U.S. ARMY CORPS OF ENGINEERS (USACE)
CRD-C DOCUMENTS available on Internet:
http://www.wbdg.org/ffc/army-coe/standards
Order Other Documents from:
Official Publications of the Headquarters, USACE
E-mail: hqpublications@usace.army.mil
Internet: http://www.publications.usace.army.mil/
or
https://www.hnc.usace.army.mil/Missions/Engineering-Directorate/TECHINFO/

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)
8601 Adelphi Road
College Park, MD 20740-6001
Ph: 866-272-6272
Internet: https://www.archives.gov/
Order documents from:
Superintendent of Documents
U.S. Government Publishing Office (GPO)
732 N. Capitol Street, NW
Washington, DC 20401
Ph: 202-512-1800 or 866-512-1800
Bookstore: 202-512-0132
Internet: https://www.gpo.gov/

PART 2 PRODUCTS

Not used

PART 3 EXECUTION

Not used

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RESIDENT MANAGEMENT SYSTEM CONTRACTOR MODE (RMS CM)

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RESIDENT MANAGEMENT SYSTEM CONTRACTOR MODE (RMS CM)
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PART 1 GENERAL

1.1 REFERENCES

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

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(2014) Safety and Health Requirements Manual

1.2 CONTRACT ADMINISTRATION

The Government will use the Resident Management System (RMS) to assist in its monitoring and administration of this contract. The Government accesses the system using the Government Mode of RMS (RMS GM) and the Contractor accesses the system using the Contractor Mode (RMS CM). The term RMS will be used in the remainder of this section for both RMS GM and RMS CM. The joint Government-Contractor use of RMS facilitates electronic exchange of information and overall management of the contract. The Contractor accesses RMS to record, maintain, input, track, and electronically share information with the Government throughout the contract period in the following areas:

Administration
Finances
Quality Control
Submittal Monitoring
Scheduling

Import/Export of Data

1.2.1 Correspondence and Electronic Communications

For ease and speed of communications, exchange correspondence and other documents in electronic format to the maximum extent feasible. Some correspondence, including pay requests and payrolls, are also to be provided in paper format with original signatures. Paper documents will govern, in the event of discrepancy with the electronic version.

1.2.2 Other Factors

Particular attention is directed to CONTRACT CLAUSE, "Schedules for Construction Contracts", CONTRACT CLAUSE, "Payments", SECTION 01 32 01.01 45 PROJECT SCHEDULE, SECTION 01 33 00 SUBMITTAL PROCEDURES, and SECTION 01 45 01.00 QUALITY CONTROL, which have a direct relationship to the reporting to be accomplished through RMS. Also, there is no separate payment for establishing and maintaining the RMS database; costs associated will be included and considered incidental in the contract

pricing for the work.

1.3 RMS SOFTWARE

RMS is a web-based application. Download, install, and be able to utilize the latest version of RMS within 7 calendar days of receipt of the Notice to Proceed. RMS software, user manuals, access and installation instructions, program updates and training information are available from the RMS website (https://rms.usace.army.mil). The Government and the Contractor will have different access authorities to the same contract database through RMS. The common database will be updated automatically each time a user finalizes an entry or change.

1.4 CONTRACT DATABASE - GOVERNMENT

The Government will enter the basic contract award data in RMS prior to granting the Contractor access. The Government entries into RMS will generally be related to submittal reviews, correspondence status, and Quality Assurance (QA)comments, as well as other miscellaneous administrative information.

1.5 CONTRACT DATABASE - CONTRACTOR

Contractor entries into RMS establish, maintain, and update data throughout the duration of the contract. Contractor entries generally include prime and subcontractor information, daily reports, submittals, RFI's, schedule updates and payment requests. RMS includes the ability to import attachments and export reports in many of the modules, including submittals. The Contractor responsibilities for entries in RMS typically include the following items:

1.5.1 Administration

1.5.1.1 Contractor Information

Enter all current Contractor administrative data and information into RMS within 7 calendar days of receiving access to the contract in RMS. This includes, but is not limited to, Contractor's name, address, telephone numbers, management staff, and other required items.

1.5.1.2 Subcontractor Information

Enter all missing subcontractor administrative data and information into RMS CM within 7 calendar days of receiving access to the contract in RMS or within 7 calendar days of the signing of the subcontractor agreement for agreements signed at a later date. This includes name, trade, address, phone numbers, and other required information for all subcontractors. A subcontractor is listed separately for each trade to be performed.

1.5.1.3 Correspondence

Identify all Contractor correspondence to the Government with a serial number. Prefix correspondence initiated by the Contractor's site office with "S". Prefix letters initiated by the Contractor's home (main) office with "H". Letters are numbered starting from 0001. (e.g., H-0001 or S-0001). The Government's letters to the Contractor will be prefixed with "C" or "RFP".

1.5.1.4 Equipment

Enter and maintain a current list of equipment planned for use or being used on the jobsite, including the most recent and planned equipment inspection dates.

1.5.1.5 Reports

Track the status of the project utilizing the reports available in RMS. The value of these reports is reflective of the quality of the data input. These reports include the Progress Payment Request worksheet, Quality Control (QC) comments, Submittal Register Status, and Three-Phase Control worksheets.

1.5.1.6 Request For Information (RFI)

Create and track all Requests For Information (RFI) in the RMS Administration Module for Government review and response.

1.5.2 Finances

1.5.2.1 Pay Activity Data

Develop and enter a list of pay activities in conjunction with the project schedule. The sum of pay activities equals the total contract amount, including modifications. Each pay activity must be assigned to a Contract Line Item Number (CLIN). The sum of the activities assigned to a CLIN equals the amount of each CLIN.

1.5.2.2 Payment Requests

Prepare all progress payment requests using RMS. Update the work completed under the contract at least monthly, measured as percent or as specific quantities. After the update, generate a payment request and prompt payment certification using RMS. Submit the signed prompt payment certification and payment request as well as supporting data either electronically or by hard copy. Unless waived by the Contracting Officer, a signed paper copy of the approved payment certification and request is also required and will govern in the event of discrepancy with the electronic version.

1.5.3 Quality Control (QC)

Enter and track implementation of the 3-phase QC Control System, QC testing, transferred and installed property and warranties in RMS. Prepare daily reports, identify and track deficiencies, document progress of work, and support other Contractor QC requirements in RMS. Maintain all data on a daily basis. Ensure that RMS reflects all quality control methods, tests and actions contained within the Contractor Quality Control (CQC) Plan and Government review comments of same within 7 calendar days of Government acceptance of the CQC Plan.

1.5.3.1 Quality Control (QC) Reports

The Contractor's Quality Control (QC) Daily Report in RMS is the official report. The Contractor can use other supplemental formats to record QC data, but information from any supplemental formats are to be consolidated and entered into the RMS QC Daily Report. Any supplemental information may be entered into RMS as an attachment to the report. QC Daily Reports

must be finalized and signed in RMS within 24 hours after the date covered by the report. Provide the Government a printed signed copy of the QC Daily Report, unless waived by the Contracting Officer.

1.5.3.2 Deficiency Tracking.

Use the QC Daily Report Module to enter and track deficiencies. Deficiencies identified and entered into RMS by the Contractor or the Government will be sequentially numbered with a QC or QA prefix for tracking purposes. Enter each deficiency into RMS the same day that the deficiency is identified. Monitor, track and resolve all QC and QA entered deficiencies. A deficiency is not considered to be corrected until the Government indicates concurrence in RMS.

1.5.3.3 Three-Phase Control Meetings

Maintain scheduled and actual dates and times of preparatory and initial control meetings in RMS. Worksheets for the three-phase control meetings are generated within RMS.

1.5.3.4 Labor and Equipment Hours

Enter labor and equipment exposure hours on a daily basis. Roll up the labor and equipment exposure data into a monthly exposure report.

1.5.3.5 Accident/Safety Reporting

Both the Contractor and the Government enter safety related comments in RMS as a deficiency. The Contractor must monitor, track and show resolution for safety issues in the QC Daily Report area of the RMS QC Module. In addition, follow all reporting requirements for accidents and incidents as required in EM 385-1-1, Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS and as required by any other applicable Federal, State or local agencies.

1.5.3.6 Definable Features of Work

Enter each feature of work, as defined in the approved CQC Plan, into the RMS QC Module. A feature of work may be associated with a single or multiple pay activities; however, a pay activity is only to be linked to a single feature of work.

1.5.3.7 Activity Hazard Analysis

Import activity hazard analysis electronic document files into the RMS QC Module utilizing the document package manager.

1.5.4 Submittal Management

Enter all current submittal register data and information into RMS within 7 calendar days of receiving access to the contract in RMS. The information shown on the submittal register following the specification Section 01 33 00 SUBMITTAL PROCEDURES will already be entered into the RMS database when access is granted. Group electronic submittal documents into transmittal packages to send to the Government, except very large electronic files, samples, spare parts, mock-ups, color boards, or where hard copies are specifically required. Track transmittals and update the submittal register in RMS on a daily basis throughout the duration of the contract. Submit hard copies of all submittals unless waived by the

Contracting Officer.

1.5.5 Schedule

Enter and update the contract project schedule in RMS by either manually entering all schedule data or by importing the Standard Data Exchange Format (SDEF) file, based on the requirements in Section 01 32 01.00 13 PROJECT SCHEDULE.

1.5.6 Closeout

Closeout documents, processes and forms are managed and tracked in RMS by both the Contractor and the Government. Ensure that all closeout documents are entered, completed and documented within RMS.

1.6 IMPLEMENTATION

Use of RMS as described in the preceding paragraphs is mandatory. Ensure that sufficient resources are available to maintain contract data within the RMS system. RMS is an integral part of the Contractor's required management of quality control.

1.7 NOTIFICATION OF NONCOMPLIANCE

Take corrective action within 7 calendar days after receipt of notice of RMS non-compliance by the Contracting Officer.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

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SECTION 01 45 01.00

QUALITY CONTROL
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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 within the text by the basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM E329	(2014a) Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction

U.S. ARMY CORPS OF ENGINEERS (USACE)

ER 1110-1-261	(1999) Quality Assurance of Laboratory Testing Procedures

1.2 PAYMENT

Separate payment will not be made for providing and maintaining an effective Quality Control program, and all associated costs will be included in the applicable Bid Schedule unit or job prices.

1.3 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. Submit the following in accordance with SECTION 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Contractor Quality Control (CQC) Plan; G

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

Establish and maintain an effective Quality Control (QC) system that complies with the CONTRACT CLAUSE titled INSPECTION OF CONSTRUCTION. QC consists of plans, procedures, and organization necessary to produce an end product which complies with the Contract requirements. The QC system must cover all construction operations, both onsite and offsite, and be keyed to the proposed construction sequence. The project superintendent will be held responsible for the quality of work and is subject to removal by the Contracting Officer for non-compliance with the quality

requirements specified in the Contract. In this context the highest-level manager responsible for the overall construction activities at the site, including quality and production, is the project superintendent. The project superintendent must maintain a physical presence at the site at all times and is responsible for all construction and related activities at the site, except as otherwise acceptable to the Contracting Officer.

3.2 QUALITY CONTROL PLAN

Submit no later than 10 calendar days from the award date, the Contractor Quality Control (CQC) Plan proposed to implement the requirements of the CONTRACT CLAUSE entitled INSPECTION OF CONSTRUCTION. Oyster reef construction will be permitted to begin only after acceptance of the CQC Plan applicable to the particular feature of work to be started. Work outside of the accepted plan will not be permitted to begin until acceptance of a CQC Plan containing the additional work.

3.2.1 Content of the CQC Plan

Include, as a minimum, the following to cover all operations, both on-site and off-site, including work by:

a. A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff will implement the three-phase control system for all aspects of the work specified. Include a CQC System Manager who reports to the project superintendent.

b. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function.

c. A copy of the letter to the CQC System Manager signed by an authorized official of the firm which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the CQC System Manager, including authority to stop work which is not in compliance with the contract. Letters of direction to all other various quality control representatives outlining duties, authorities, and responsibilities will be issued by the CQC System Manager. Copies of these letters must be furnished to the Government.

d. Procedures for scheduling, reviewing, certifying, and managing submittals. These procedures shall be in accordance with SECTION 01 33 00 SUBMITTAL PROCEDURES.

e. Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and person responsible for each test. (Laboratory facilities approved by the Contracting Officer must be used.)

f. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests including documentation.

f. Procedures for tracking deficiencies from identification through acceptable corrective action. Establish verification procedures that identified deficiencies have been corrected.

h. Reporting procedures, including proposed reporting formats.

i. A list of the definable features of work. A definable feature of work is a task which is separate and distinct from other tasks, has separate control requirements, and may be identified by different trades or disciplines, or it may be work by the same trade in a different environment. Although each section of the specifications may generally be considered as a definable feature of work, there are frequently more than one definable feature under a particular section. This list will be agreed upon during the coordination meeting.

3.2.2 Acceptance of Plan

Acceptance of the Contractor's Plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. The Government reserves the right to require the Contractor to make changes in the CQC Plan and operations including removal of personnel, as necessary, to obtain the quality specified.

3.2.3 Notification of Changes

After acceptance of the CQC Plan, notify the Contracting Officer in writing of proposed change. Proposed changes are subject to acceptance by the Contracting Officer.

3.3 COORDINATION MEETING

After the Preconstruction Conference, before start of construction, and prior to acceptance by the Government of the CQC Plan, meet with the Contracting Officer or Authorized Representative and discuss the CQC System. Submit the CQC Plan a minimum of 10 calendar days after award to the Preconstruction Conference. During the Coordination Meeting, a mutual understanding of the system details shall be developed, including the forms for recording the CQC , control activities, testing, administration of the system for both on-site and off-site work, and the interrelationship of Contractor's Management and control with the Government's Quality Assurance. Minutes of the meeting will be prepared by the Government, signed by both the Contractor and the Contracting Officer and will become a part of this Contract file. There may be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings and/or address deficiencies in the CQC system or procedures which may require corrective action by the Contractor.

3.4 QUALITY CONTROL ORGANIZATION

3.4.1 Personnel Requirements

The requirements for the CQC organization are a Safety and Health Manager, and sufficient number of additional qualified personnel to ensure safety and Contract compliance. The Safety and Health Manager must report directly to a senior project (or corporate) official independent from the CQC System Manager. The Safety and Health Manager will also serve as a member of the CQC Staff. Personnel identified in the technical provisions as requiring specialized skills to assure the required work is being performed properly shall also be included as part of the CQC organization. The Contractor's CQC staff shall maintain a presence at the site continuously during progress of the work and have complete authority and responsibility to take actions necessary to ensure Contract

compliance. The CQC staff shall be subject to acceptance by the Contracting Officer. Provide adequate office space, filing systems and other resources as necessary to maintain an effective and fully functional CQC organization. Promptly complete and furnish all letters, material submittals, shop drawing submittals, schedules, and all other project documentation to the CQC organization. The CQC organization is responsible to maintain these documents and records at the site at all times, except as otherwise acceptable to the Contracting Officer.

3.4.2 Contractor Quality Control (CQC) System Manager

Identify as CQC System Manager an individual within the on-site work organization who is responsible for overall management of CQC and has the authority to act in every CQC issue for the Contractor. The CQC System Manager shall be a construction person with a minimum of 5 years in related work. This CQC System Manager must be on the site at all times during construction and be employed by the prime Contractor. The CQC System Manager must be a stand-alone position and may not have other collateral duties. Identify in the Plan an alternate to serve in the event of the CQC System Manager's absence. The requirements for the alternate are the same as the CQC System Manager. Contractor shall designate only one individual as CQC System Manager, and only one individual as Alternate, at any given time during the work.

3.4.3 Contractor Quality Control (CQC) Personnel

In addition to CQC personnel specified elsewhere in this Contract, provide as part of the CQC organization specialized personnel to assist the CQC System Manager for the following areas: materials technician. These individuals shall be responsible to the CQC System Manager; be physically present at the construction site during work on their areas of responsibility; have the necessary education and/or experience in accordance with the experience matrix listed herein. These individuals may perform other duties but shall be allowed sufficient time to perform their assigned quality control duties as described in the Quality Control Plan. A single person may cover more than one area provided that they are qualified to perform QC activities in each area designated and that workload allows.

Experience Matrix	
Area	Qualifications
Concrete, Pavements and Soils	Materials Technician with 2 years experience for the appropriate area

3.4.4 Additional Requirement

In addition to the above experience and education requirements the CQC System Manager must have completed the Construction Quality Management (CQM) For Contractors course. If the CQC System Manager does not have a current certification, obtain the CQM for Contractors course certification within 90 days of award. This course is periodically offered by the Army Corps of Engineers. More information can be obtained from the web site: Construction Quality Management (CQM) for Contractors.

The Construction Quality Management Training certificate expires after 5 years. If the CQC System Manager's certificate has expired, retake the course to remain current.

3.4.5 Organizational Changes

Maintain the CQC staff at full strength at all times. When it is necessary to make changes to the CQC staff, revise the CQC Plan to reflect the changes and submit the changes for acceptance.

3.5 SUBMITTALS AND DELIVERABLES

Submittals, if needed, must comply with the requirements in SECTION 01 33 00 SUBMITTAL PROCEDURES. The CQC organization is responsible for certifying that all submittals and deliverables are in compliance with the Contract requirements.

3.6 CONTROL

Contractor Quality Control is the means by which the Contractor to ensure that the construction, to include that of subcontractors and suppliers, complies with the requirements of the Contract. At least three phases of control must be conducted by the CQC System Manager for each definable feature of the construction work as follows:

3.6.1 Preparatory Phase

This phase is performed prior to beginning work on each definable feature of work, after all required plans/documents/materials are approved/accepted, and after copies are at the work site. This phase includes:

a. A review of each paragraph of applicable specifications, reference codes, and standards. Make available during the preparatory inspection a copy of those sections of referenced codes and standards applicable to that portion of the work to be accomplished in the field. Maintain and make available in the field for use by Government personnel until final acceptance of the work.

b. Review of the contract drawings.

c. Check to assure that all materials and/or equipment have been tested, submitted, and approved.

d. Review of provisions that have been made to provide required control inspection and testing.

e. Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the contract.

f. Examination of required materials, equipment, and sample work to assure that they are on hand, conform to approved shop drawings or submitted data, and are properly stored.

g. Review of the appropriate activity hazard analysis to assure safety requirements are met.

h. Discussion of procedures for controlling quality of the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that feature of work.

i. Check to ensure that the portion of the plan for the work to be performed has been accepted by the Contracting Officer.

j. Discussion of the initial control phase.

k. The Government must be notified at least 72 hours in advance of beginning the preparatory control phase. Include a meeting conducted by the CQC System Manager and attended by the superintendent, other CQC personnel (as applicable), and the foreman responsible for the definable feature. Document the results of the preparatory phase actions by separate minutes prepared by the CQC System Manager and attach to the daily CQC report. Instruct applicable workers as to the acceptable level of workmanship required in order to meet contract specifications.

3.6.2 Initial Phase

This phase is accomplished at the beginning of a definable feature of work. Accomplish the following:

a. Check work to ensure that it is in full compliance with contract requirements. Review minutes of the preparatory meeting.

b. Verify adequacy of controls to ensure full contract compliance. Verify required control inspection and testing are in compliance with the contract.

c. Establish level of workmanship and verify that it meets minimum acceptable workmanship standards. Compare with required sample panels as appropriate.

d. Resolve all differences.

e. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.

f. The Government must be notified at least 24 hours in advance of beginning the initial phase for definable feature of work. Prepare separate minutes of this phase by the CQC System Manager and attach to the daily CQC report. Indicate the exact location of initial phase for definable feature of work for future reference and comparison with follow-up phases.

g. The initial phase for definable feature of work should be repeated for each new crew to work onsite, or any time acceptable specified quality standards are not being met.

3.6.3 Follow-up Phase

Perform daily checks to assure control activities, including control testing, are providing continued compliance with Contract requirements, until completion of the particular feature of work. Record the checks in the CQC documentation. Conduct final follow-up checks and correct deficiencies prior to the start of additional features of work which may be affected by the deficient work. Do not build upon nor conceal non-conforming work.

3.6.4 Additional Preparatory and Initial Phases

Conduct additional preparatory and initial phases on the same definable features of work if: the quality of on-going work is unacceptable; if

there are changes in the applicable CQC staff, onsite production supervision or work crew; if work on a definable feature is resumed after a substantial period of inactivity; or if other problems develop.

3.7 TESTS

3.7.1 Laboratory Validation Requirements

The Contractor shall propose the minimum number of laboratories that can attain or have attained U.S. Army Corps of Engineers (USACE) validation in accordance with ER 1110-1-261 Quality Assurance of Laboratory Testing Procedures and consistent with the testing requirements in this Contract. The Contractor may propose laboratories that shall be subsequently validated by USACE or select currently validated USACE laboratories.

3.7.2 Laboratory Validation Procedures

If not currently validated, the laboratory shall be validated by the Engineering Research and Development Center, Materials Testing Center (MTC). The MTC may be contacted at (601) 634-2142. The laboratory validation fee shall be paid directly to the MTC by the Contractor. The validation process requires 45 days to complete for laboratories without significant deficiencies. Validation shall be accomplished by one of the following processes:

(1) Inspection shall be performed by the MTC in accordance with ASTM E329.

(2) A laboratory may be validated by auditing if it has been inspected by the Concrete and Cement Reference Laboratory (CERL) or AASHTO Materials Reference Laboratory (AMRL) within the past 2 years in accordance with ASTM E329. The audit shall be performed by the MTC. Inspection by the MTC may be required after auditing if one or more of the critical testing procedures required in this project specification were not included in the CCRL or AMRL inspection report or if there is a concern that the laboratory may not be able to provide the required services.

3.7.3 Coordination

Each specific test, exact delivery location, and dates will be coordinated with the Contracting Officer.

3.8 COMPLETION INSPECTION

3.8.1 Punch-out Inspection

Conduct an inspection of the work by the CQC System Manager near the end of the work, or increment of the work established by a time stated in the SPECIAL CONTRACT REQUIREMENTS,STANDARD Clause, "Commencement, Prosecution, And Completion Of Work", or by the specifications. Prepare and include in the CQC documentation a punch list of items which do not conform to the approved drawings and specifications, as required by Paragraph: DOCUMENTATION. Include within the list of deficiencies the estimated date by which the deficiencies will be corrected. Make a second inspection by the CQC System Manager or staff to ascertain that deficiencies have been corrected. Once this is accomplished, notify the Government that the facility is ready for the Government Pre-final inspection.

3.8.2 Pre-final Inspection

The Government will perform the pre-final inspection to verify that the facility is complete and ready to be occupied. A Government Pre-final Punch List may be developed as a result of this inspection. Ensure that all items on this list have been corrected before notifying the Government, so that a Final inspection with the customer can be scheduled. Correct any items noted on the Pre-final inspection in a timely manner. These inspections and any deficiency corrections required by this Subparagraph shall be accomplished within the time slated for completion of the entire work or a particular increment of the work if the project is divided into increments by separate completion dates.

3.8.3 Final Acceptance Inspection

The Contractor's Quality Control Inspection personnel, plus the superintendent or other primary management person, and the Contracting Officer's Representative must be in attendance at the final acceptance inspection. Additional Government personnel including, but not limited to, those from user groups and the Contracting Officer may also be in attendance. The final acceptance inspection will be formally scheduled by the Contracting Officer based upon results of the Pre-final inspection. Notify the Contracting Officer at least 14 days prior to the final acceptance inspection and include the Contractor's assurance that all specific items previously identified to the Contractor as being unacceptable, along with the remaining work performed under this Contract, will be complete and acceptable by the date scheduled for the final acceptance inspection. Failure of the Contractor to have the Contract work acceptably complete for this inspection will be cause for the Contracting Officer to bill the Contractor for the Government's additional inspection cost in accordance with the CONTRACT CLAUSE titled "Inspection Of Construction".

3.9 DOCUMENTATION

Maintain current records providing factual evidence that required quality control activities and/or tests have been performed. Include in these records the work of subcontractors and suppliers on an acceptable form that includes, as a minimum, the following information:

a. Contractor/subcontractor and their area of responsibility.

b. Operating plant/equipment with hours worked, idle, or down for repair.

c. Work performed each day, giving location, description, and by whom. When Network Analysis (NAS) is used, identify each phase of work performed each day by NAS activity number.

d. Test and/or control activities performed with results and references to specifications/drawings requirements. Identify the control phase (Preparatory, Initial, Follow-up). List of deficiencies noted, along with corrective action.

e. Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications/drawings requirements.

f. Submittals and deliverables reviewed, with contract reference, by whom, and action taken.

g. Offsite surveillance activities, including actions taken.

h. Job safety evaluations stating what was checked, results, and instructions or corrective actions.

i. Instructions given/received and conflicts in plans and/or specifications.

j. Contractor's Verification Statement.

Indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any delays encountered. Cover both conforming and deficient features and include a statement that equipment and materials incorporated in the work and workmanship comply with the contract. Furnish the original and one copy of these records in report form to the Government daily within 24 hours after the date covered by the report, except that reports need not be submitted for days on which no work is performed. As a minimum, prepare and submit one report for every 7 days of no work and on the last day of a no work period. All calendar days must be accounted for throughout the life of the contract. The first report following a day of no work will be for that day only. Reports must be signed and dated by the CQC System Manager. Include copies of test reports and copies of reports prepared by all subordinate quality control personnel within the CQC System Manager Report.

3.10 NOTIFICATION OF NON-COMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the foregoing requirements. Take immediate corrective action after receipt of this notice. This notice, when delivered to the Contractor at the worksite, will be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders will be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

-- End of Section --

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TEMPORARY CONSTRUCTION FACILITIES AND CONTROLS
1/21

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 within the text by the basic designation only.

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2014) Safety and Health Requirements Manual

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. Submit the following in accordance with SECTION 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Construction Site Plan; G

Within 10 calendar days after award, prepare and submit for approval, the specified Plan.

1.3 CONSTRUCTION SITE PLAN

Prior to the start of work, submit a Construction Site Plan showing the locations and dimensions of temporary facilities (including layouts and details, equipment and material storage areas (on-site and off-site)), and access and routes, Indicate if the use of a supplemental or other staging area is desired. Show locations of safety and construction fences, site trailers, construction entrances, trash dumpsters, temporary sanitary facilities, and worker parking areas.

1.4 WORKING HOURS

Seven-day work weeks and daylight working hours are permitted for execution of this work. Night or 24-hour working may be permitted subject to the submission and acceptance of a Safe Work Plan which covers construction operations undertaken in darkness.

1.5 ACCESS AND COORDINATION

The sites are located in Galveston Bay near Bacliff and Dollar Point in Texas City in North-Central Galveston County. The site is accessible by boat.

1.6 HURRICANE CONDITION OF READINESS

Unless directed otherwise, comply with:

a. Condition FOUR (Sustained winds of 50 knots or greater expected within 72 hours): Normal daily jobsite cleanup and good housekeeping practices. Collect and store in piles or containers scrap lumber, waste material, and rubbish for removal and disposal at the close of each work day. Maintain the construction site including storage areas, free of accumulation of debris. Stack form lumber in neat piles less than 4 feet high. Remove all debris, trash, or objects that could become missile hazards. Contact Contracting Officer for Condition of Readiness (COR) updates and completion of required actions.

b. Condition THREE (Sustained winds of 50 knots or greater expected within 48 hours): Maintain "Condition FOUR" requirements and commence securing operations necessary for "Condition ONE" which cannot be completed within 18 hours. Cease all routine activities which might interfere with securing operations. Commence securing and stow all gear and portable equipment. Make preparations for securing buildings. Review requirements pertaining to "Condition TWO" and continue action as necessary to attain "Condition THREE" readiness. Contact Contracting Officer for weather and COR updates and completion of required actions.

c. Condition TWO (Sustained winds of 50 knots or greater expected within 24 hours): Curtail or cease routine activities until securing operation is complete. Reinforce or remove form work and scaffolding. Secure machinery, tools, equipment, materials, or remove from the jobsite. Expend every effort to clear all missile hazards and loose equipment from general base areas. Contact Contracting Officer for weather and Condition of Readiness (COR) updates and completion of required actions.

d. Condition ONE. (Sustained winds of 50 knots or greater expected within 12 hours): Secure the jobsite and leave Government premises.

PART 2 PRODUCTS

2.1 TEMPORARY SIGNAGE

2.1.1 Bulletin Board

Immediately upon beginning work, provide in accordance with USACE EM 385-1-1, a weatherproof glass-covered bulletin board not less than 36 by 48 inches in size and having not less than two hinged or sliding glazed doors with provisions for locking for displaying the Equal Employment Opportunity poster, a copy of the wage decision contained in the Contract, Wage Rate Information poster, and other information approved by the Contracting Officer.

The posters specified above, can be obtained from the U.S. Department of Labor.

2.1.2 Construction Project and Safety Signs

The requirements for the signs, their content, and locations are as specified in SECTION 01 58 13.01 45 PROJECT IDENTIFICATION. Erect signs

within 50 days after receipt of the notice to proceed. Correct the data required by the safety sign daily, with light colored metallic or non-metallic numerals.

PART 3 EXECUTION

3.1 TEMPORARY BULLETIN BOARD

Locate the bulletin board at the project site in a conspicuous place easily accessible to all employees, as approved by the Contracting Officer.

3.2 AVAILABILITY AND USE OF UTILITY SERVICES

Provide temporary utilities required for construction. Materials may be new or used, must be adequate for the required usage, not create unsafe conditions, and not violate applicable codes and standards.

Utilities will not be furnished by the Government.

3.2.1 Sanitation

Provide and maintain within the construction area minimum field-type sanitary facilities approved by the Contracting Officer and periodically empty wastes into a municipal, district, or station sanitary sewage system, or remove waste to a commercial facility. Obtain approval from the system owner prior to discharge into any municipal, district, or commercial sanitary sewer system. Any penalties or fines associated with improper discharge will be the responsibility of the Contractor. Coordinate with the Contracting Officer and follow station regulations and procedures when discharging into the station sanitary sewer system. Maintain these conveniences at all times without nuisance. Include provisions for pest control and elimination of odors. Government toilet facilities will not be available to Contractor's personnel.

3.2.2 Telephone

Make arrangements and pay all costs for telephone facilities desired.

3.3 PLANT COMMUNICATION

Whenever the Contractor has the individual elements of its plant so located that operation by normal voice between these elements is not satisfactory, the Contractor must install a satisfactory means of communication, such as telephone or other suitable devices and made available for use by Government personnel.

3.4 CLEANUP

Remove construction debris, waste materials, packaging material and the like from the work site daily. Any dirt or mud which is tracked onto paved or surfaced roadways must be cleaned away. Store any salvageable materials resulting from demolition activities within the fenced area described above or at the supplemental storage area. Neatly stack stored materials not in trailers, whether new or salvaged.

3.5 RESTORATION OF STORAGE AREA

Upon completion of the project remove the bulletin board, signs, barricades, haul roads, and any other temporary products from the site.

Restore to the original or better condition, areas used by the Contractor for the storage of equipment or material, or other use.

-- End of Section --

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SECTION 01 57 20.00 45

ENVIRONMENTAL PROTECTION
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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 within the text by the basic designation only.

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(2014) Safety and Health Requirements Manual
WETLANDS DELINEATION MANUAL	(1987) Corps of Engineers Wetlands Delineation Manual

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

33 CFR 328	Definitions of Waters of the United States
40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 262	Standards Applicable to Generators of Hazardous Waste
40 CFR 279	Standards for the Management of Used Oil
40 CFR 302	Designation, Reportable Quantities, and Notification
40 CFR 355	Emergency Planning and Notification
40 CFR 68	Chemical Accident Prevention Provisions
49 CFR 171 - 178	Hazardous Materials Regulations

1.2 DEFINITIONS

1.2.1 Environmental Pollution and Damage

Environmental pollution and damage is the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade the environment aesthetically, culturally and/or historically.

1.2.2 Environmental Protection

Environmental protection is the prevention/control of pollution and habitat disruption that may occur to the environment during construction.

The control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy; and radioactive material as well as other pollutants.

1.2.3 Contractor Generated Hazardous Waste

Contractor generated hazardous waste means materials that, if abandoned or disposed, may meet the definition of a hazardous waste. These waste streams will typically consist of material brought on-site by the Contractor to execute work but are not fully consumed during the course of construction. Examples include, but are not limited to excess paint thinners, (i.e. methyl ethyl ketone, toluene etc.), waste thinners, excess paints, excess solvents, waste solvents, and excess pesticides, and contaminated pesticide equipment rinse water.

1.2.4 Land Application for Discharge Water

The term "Land Application" for discharge water implies that the Contractor shall discharge water at a rate which allows the water to percolate into the soil. No sheeting action, soil erosion, discharge into storm sewers, discharge into defined drainage areas, or discharge into the "waters of the United States" shall occur. Land Application shall be in compliance with the applicable Federal, State, and local laws and regulations.

1.2.5 Pesticide

Pesticide is defined as a substance or mixture of substances intended for preventing, destroying, repelling, or mitigating pest, or intended for use as a plant regulator, defoliant or desiccant.

1.2.6 Pests

The term "pests" includes arthropods, birds, rodents, nematodes, fungi, bacteria, viruses, algae, snails, marine borers, snakes, weeds, and other organisms (except for human or animal disease-causing organisms) that adversely affect readiness, military operations, or the well-being of personnel and animals; attack or damage real property, supplies, equipment, or vegetation; or are otherwise undesirable.

1.2.7 Surface Discharge

The term "Surface Discharge" implies that the water is discharged with possible sheeting action and subsequent soil erosion may occur. Waters that are surface discharged may terminate in drainage ditches, storm sewers, creeks, and/or "waters of the United States" and will require a permit to discharge water from the governing agency.

1.2.8 Waters of the United States

All waters which are under the jurisdiction of the Clean Water Act, as defined in NARA 33 CFR 328.

1.2.9 Wetlands

Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal

circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, and bogs. Official determination of whether or not an area is classified as a wetland must be done in accordance with WETLANDS DELINEATION MANUAL.

1.3 GENERAL REQUIREMENTS

Minimize environmental pollution and damage that may occur as the result of construction operations. The environmental resources within the project boundaries and those affected outside the limits of permanent work must be protected during the entire duration of this Contract. Comply with all applicable environmental Federal, State, and local laws and regulations. Any delays resulting from failure to comply with environmental laws and regulations will be the Contractor's responsibility.

1.4 SUBCONTRACTORS

Ensure compliance with this Section by subcontractors.

1.5 PAYMENT

No separate payment will be made for work covered under this section. Payment of fees associated with environmental permits, application, and/or notices obtained by the Contractor, and payment of all fines/fees for violation or non-compliance with Federal, State, Regional and local laws and regulations are the Contractor's responsibility. All costs associated with this section must be included in the contract price.

1.6 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. Submit the following in accordance with the SECTION 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Environmental Protection Plan; G

Within 10 calendar days from award date, submit in writing the Environmental Protection Plan. Approval of the Contractor's Plan will not relieve the Contractor of its responsibility for adequate and continuing control of pollutants and other environmental protection measures.

1.7 ENVIRONMENTAL PROTECTION PLAN

Prior to commencing construction activities or delivery of materials to the site, submit an Environmental Protection Plan for review and approval by the Contracting Officer. The purpose of the Environmental Protection Plan is to present a comprehensive overview of known or potential environmental issues which the Contractor shall address during construction. Issues of concern shall be defined within the Environmental Protection Plan as outlined in this Section. Address each topic at a level of detail commensurate with the environmental issue and required construction task(s). Topics or issues which are not identified in this Section, but are considered necessary, shall be identified and discussed

after those items formally identified in this Section. Prior to submittal of the Environmental Protection Plan, meet with the Contracting Officer for the purpose of discussing the implementation of the initial Environmental Protection Plan; possible subsequent additions and revisions to the Plan including reporting requirements; and methods for administration of the Contractor's Environmental Plans. The Environmental Protection Plan shall be current and maintained on-site by the Contractor.

1.7.1 Compliance

No requirement in this Section will relieve the Contractor of the applicable Federal, State, and local environmental protection laws and regulations. During construction, be responsible for identifying, implementing, and submitting for approval of additional requirements to be included in the Environmental Protection Plan.

1.7.2 Contents

Include in the Environmental Protection Plan, but not limit it to, the following:

a. Name(s) of person(s) within the Contractor's organization who is(are) responsible for ensuring adherence to the Environmental Protection Plan.

b. Name(s) and qualifications of person(s) responsible for manifesting hazardous waste to be removed from the site, if applicable.

c. Name(s) and qualifications of person(s) responsible for training the Contractor's environmental protection personnel.

d. Description of the Contractor's environmental protection personnel training program.

e. An erosion and sediment control plan which identifies the type and location of the erosion and sediment controls to be provided. The plan must include monitoring and reporting requirements to assure that the control measures are in compliance with the erosion and sediment control plan, Federal, State, and local laws and regulations.

f. Work area plan showing the proposed activity in each portion of the area and identifying the areas of limited use or nonuse. Plan should include measures for marking the limits of use areas including methods for protection of features to be preserved within authorized work areas.

g. Include in the Spill Control plan the procedures, instructions, and reports to be used in the event of an unforeseen spill of a substance regulated by 40 CFR 68, 40 CFR 302, 40 CFR 355, or regulated under State or Local laws and regulations. The Spill Control Plan supplements the requirements of EM 385-1-1. Include in this plan, as a minimum:

(1) The name of the individual who will report any spills or hazardous substance releases and who will follow up with complete documentation. This individual will immediately notify the Contracting Officer and the local Fire Department in addition to the legally required Federal, State, and local reporting channels (including the National Response Center 1-800-424-8802) if a

reportable quantity is released to the environment. Include in the plan a list of the required reporting channels and telephone numbers.

(2) The name and qualifications of the individual who will be responsible for implementing and supervising the containment and cleanup.

(3) Training requirements for Contractor's personnel and methods of accomplishing the training.

(4) A list of materials and equipment to be immediately available at the job site, tailored to cleanup work of the potential hazard(s) identified.

(5) The names and locations of suppliers of containment materials and locations of additional fuel oil recovery, cleanup, restoration, and material-placement equipment available in case of an unforeseen spill emergency.

(6) The methods and procedures to be used for expeditious contaminant cleanup.

h. A non-hazardous solid waste disposal plan identifying methods and locations for solid waste disposal including clearing debris and schedules for disposal.

(1) Identify any subcontractors responsible for the transportation and disposal of solid waste. Submit licenses or permits for solid waste disposal sites that are not a commercial operating facility.

(2) Evidence of the disposal facility's acceptance of the solid waste must be attached to this plan during the construction. Attach a copy of each of the Non-hazardous Solid Waste Diversion Reports to the disposal plan. Submit the report for the previous quarter on the first working day after the first quarter that non-hazardous solid waste has been disposed or diverted (e.g. the first working day of January, April, July, and October).

(3) Indicate in the report the total amount of waste generated and total amount of waste diverted in cubic yards or tons along with the percent that was diverted.

(4) A recycling and solid waste minimization plan with a list of measures to reduce consumption of energy and natural resources. Detail in the plan the Contractor's actions to comply with and to participate in Federal, State, Regional, and local government sponsored recycling programs to reduce the volume of solid waste at the source.

i. An air pollution control plan detailing provisions to assure that dust, debris, materials, trash, etc., do not become air borne and travel off the project site.

j. A contaminant prevention plan that: identifies potentially hazardous substances to be used on the job site; identifies the intended actions to prevent introduction of such materials into the air, water, or ground; and details provisions for compliance with Federal, State, and local laws and regulations for storage and handling of these

materials. In accordance with EM 385-1-1, a copy of the Safety Data Sheets (SDS) and the maximum quantity of each hazardous material to be onsite at any given time must be included in the contaminant prevention plan. Update the plan as new hazardous materials are brought onsite or removed from the site.

k. A waste water management plan that identifies the methods and procedures for management and discharge of waste waters which are directly derived from construction activities, such as concrete curing water, clean-up water, dewatering of ground water, disinfection water, hydrostatic test water, and water used in flushing of lines. If a settling/retention pond is required, the plan must include the design of the pond including drawings, removal plan, and testing requirements for possible pollutants. If land application will be the method of disposal for the waste water, the plan must include a sketch showing the location for land application along with a description of the pretreatment methods to be implemented. If surface discharge will be the method of disposal, include a copy of the permit and associated documents as an attachment prior to discharging the waste water. If disposal is to a sanitary sewer, the plan must include documentation that the Waste Water Treatment Plant Operator has approved the flow rate, volume, and type of discharge.

l. A historical, archaeological, cultural resources biological resources and wetlands plan that defines procedures for identifying and protecting historical, archaeological, cultural resources, biological resources and wetlands known to be on the project site: identifies procedures to be followed if historical archaeological, cultural resources, biological resources and wetlands not previously known to be onsite or in the area are discovered during construction. Include in the plan methods to assure the protection of known or discovered resources, identifying lines of communication between Contractor personnel and the Contracting Officer.

1.7.3 Appendix

Attach to the Environmental Protection Plan, as an Appendix, copies of environmental permits, permit application packages, approvals to construct, notifications, certifications, reports, and termination documents.

1.8 PROTECTION FEATURES

This Paragraph supplements the CONTRACT CLAUSE PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS. Prior to start of any onsite construction activities, the Contractor and the Contracting Officer will make a joint condition survey. Immediately following the survey, prepare a brief report including a plan describing the features requiring protection under the provisions of the Contract Clauses, which are not specifically identified on the drawings as environmental features requiring protection along with the condition of trees, shrubs, and grassed areas immediately adjacent to the site of work and adjacent to the Contractor's assigned storage area and access route(s), as applicable. This survey report will be signed by both the Contractor and Contracting Officer upon mutual agreement as to its accuracy and completeness. Protect those environmental features included in the survey report and any indicated on the drawings, regardless of interference which their preservation may cause to the work under this Contract.

1.9 ENVIRONMENTAL ASSESSMENT OF CONTRACT DEVIATIONS

Any deviations from the drawings, plans, and specifications, requested by the Contractor and which may have an environmental impact, will be subject to approval and may require an extended review, processing, and approval time. The Contracting Officer reserves the right to disapprove alternate methods, even if they are more cost effective, if the Contracting Officer determines that the proposed alternate method will have an adverse environmental impact.

1.10 NOTIFICATION

The Contracting Officer will notify the Contractor in writing of any observed noncompliance with Federal, State or local environmental laws or regulations, permits, and other elements of the Contractor's Environmental Protection plan. After receipt of such notice, the Contractor will inform the Contracting Officer of the proposed corrective action and take such action when approved by the Contracting Officer. The Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No time extensions will be granted or equitable adjustments allowed for any such suspensions. This is in addition to any other actions the Contracting Officer may take under the contract, or in accordance with the Federal Acquisition Regulation or Federal Law.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.1 WATER RESOURCES

Monitor all water areas affected by construction activities to prevent pollution of surface and ground waters. Do not apply toxic or hazardous chemicals to soil or vegetation unless otherwise indicated. For construction activities immediately adjacent to impaired surface waters, the Contractor must be capable of quantifying sediment or pollutant loading to that surface water when required by State or Federally issued Clean Water Act permits.

3.1.1 Wetlands

Do not enter, disturb, destroy, or allow discharge of contaminants into wetlands. The protection of wetlands shown and in accordance with Paragraph ENVIRONMENTAL PERMITS AND COMMITMENTS is the Contractor's responsibility. Authorization to enter specific wetlands identified will not relieve the Contractor from the obligation to protect other wetlands within, adjacent to, or in the vicinity of the construction site and associated boundaries.

3.2 AIR RESOURCES

Equipment operation, activities, or processes will be in accordance with all Federal and State air emission and performance laws and standards.

3.2.1 Particulates

Dust particles; aerosols and gaseous by-products from construction activities; and processing and preparation of materials, such as from

asphaltic batch plants; must be controlled at all times, including weekends, holidays, and hours when work is not in progress. Maintain stockpiles, haul roads, permanent and temporary access roads, plant sites, spoil areas, borrow areas, and other work areas within or outside the project boundaries free from particulates which would cause the Federal, State, and local air pollution standards to be exceeded or which would cause a hazard or a nuisance. Sprinkling, chemical treatment of an approved type, baghouse, scrubbers, electrostatic precipitators or other methods will be permitted to control particulates in the work area. Sprinkling, to be efficient, must be repeated to keep the disturbed area damp at all times. Provide sufficient, competent equipment available to accomplish these tasks. Perform particulate control as the work proceeds and whenever a particulate nuisance or hazard occurs. Comply with all State and local visibility regulations.

3.2.2 Odors

Odors from construction activities must be controlled at all times. The odors must be in compliance with State regulations and local ordinances and may not constitute a health hazard.

3.2.3 Sound Intrusions

Keep construction activities under surveillance and control to minimize environment damage by noise. Comply with the provisions of the State of Texas rules.

3.2.4 Burning

Burning will not be allowed on the project site unless specified in other sections of the specifications or authorized in writing by the Contracting Officer. The specific time, location, and method of burning will be subject to approval.

3.3 CHEMICAL MATERIALS MANAGEMENT AND WASTE DISPOSAL

Disposal of wastes shall be as directed below, unless otherwise specified in other sections or as shown.

3.3.1 Solid Wastes

Place solid wastes, excluding clearing debris, in containers which are emptied on a regular schedule. Handling, storage, and disposal shall be conducted to prevent contamination. Employ segregation measures so that no hazardous or toxic waste shall become co-mingled with solid waste. Transport solid waste off Government property and dispose it in compliance with Federal, State, and local requirements for solid waste disposal. A Subtitle D RCRA permitted landfill will be the minimum acceptable off-site solid waste disposal option. Verify that the selected transporters and disposal facilities have the necessary permits and licenses to operate.

3.3.2 Chemicals and Chemical Wastes

Dispense chemicals ensuring no spillage to the ground or water. Perform and document periodic inspections of dispensing areas to identify leakage and initiate corrective action. This documentation will be periodically reviewed by the Government. Collect chemical waste in corrosion resistant, compatible containers. Collection drums shall be monitored and removed to a staging or storage area when contents are within 6 inches of

the top. Wastes will be classified, managed, stored, and disposed in accordance with Federal, State, and local laws and regulations.

3.3.3 Contractor Generated Hazardous Wastes and Excess Hazardous Materials

Hazardous wastes are defined in 40 CFR 261, or are as defined by applicable State and local regulations. Hazardous materials are defined in 49 CFR 171 - 178. At a minimum, manage and store hazardous waste in compliance with 40 CFR 262. Take sufficient methods to prevent spillage of hazardous and toxic materials during dispensing. Segregate hazardous waste from other materials and wastes, protect it from the weather by placing it in a safe covered location, and take precautionary measures, including berming or other appropriate methods against accidental spillage. Storage, describing, packaging, labeling, marking, and placarding of hazardous waste and hazardous material in accordance with 49 CFR 171 - 178, State, and local laws and regulations is the Contractor's responsibility. Transport Contractor generated hazardous waste off Government property within 60 days in accordance with the Environmental Protection Agency and the Department of Transportation laws and regulations. Dispose of hazardous waste in compliance with Federal, State and local laws and regulations. Spills of hazardous or toxic materials shall be immediately reported to the Contracting Officer. Cleanup and cleanup costs due to spills are the Contractor's responsibility. Coordinate the disposition of hazardous waste with the Contracting Officer.

3.3.4 Fuel and Lubricants

Storage, fueling and lubrication of equipment and motor vehicles shall be conducted in a manner that affords the maximum protection against spill and evaporation. Manage and store fuel, lubricants, and oil in accordance with all Federal, State, Regional, and local laws and regulations. Used lubricants and used oil to be discarded shall be stored in marked corrosion-resistant containers and recycled or disposed in accordance with 40 CFR 279, State, and local laws and regulations. Storage of fuel shall be in accordance with applicable Federal, State, and local laws and regulations.

3.4 RECYCLING AND WASTE MINIMIZATION

The Contractor is encouraged to participate in State and local government sponsored recycling programs. The Contractor is further encouraged to minimize solid waste generation throughout the duration of this project.

3.5 HISTORICAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

Existing historical, archaeological, and cultural resources within the Contractor's work area will be designated by the Contracting Officer and the Contractor shall protect these resources and be responsible for their preservation during the life of this Contract. The resources shall be preserved as they existed at the time they were pointed out to the Contractor. If during construction previously unidentified or unanticipated historical, archaeological, and cultural resources are discovered or found, activities shall cease pursuant to the CONTRACT CLAUSE entitled SUSPENSION OF WORK and the Contracting Officer shall be notified by the fastest available method.

Resources covered by this Paragraph include, but are not limited to: any human skeletal remains or burials; artifacts; shell, midden, bone,

charcoal, or other deposits; rock or coral alignments, pavings, wall, or other constructed features; and indication of agricultural or other human activities or shipwrecks.

After investigation by the Contracting Officer, the Contractor will be instructed on the procedures to follow and if an unreasonable delay is incurred or the work is changed, this Contract will be modified accordingly. Secure the area and prevent employees or other persons from trespassing on, removing, or otherwise disturbing these resources.

3.6 BIOLOGICAL RESOURCES

Minimize interference with, disturbance to, and damage to fish, wildlife, and plants including their habitat. The protection of threatened and endangered animal and plant species, including their habitat, is the Contractor's responsibility in accordance with applicable Federal, State, Regional, and local laws and regulations.

Implementation of NMFS's Sea Turtle and Smalltooth Sawfish Construction Conditions will require all construction workers to observe water-related activities for the presence of sea turtles. If a sea turtle or manta ray is seen within 100 yards of the active daily construction operation or vessel movement, all appropriate precautions shall be implemented to ensure its protection. These precautions shall include cessation of operation of any moving equipment closer than 50 feet of a sea turtle. Operation of any mechanical construction equipment shall cease immediately if a sea turtle or manta ray is seen within a 50-ft radius of the equipment. Activities may not resume until the protected species has departed the project area of its own volition.

All personnel associated with the project shall be instructed about the presence of manatees and manatee speed zones, and the need to avoid collisions with and injury to manatees. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act and the Endangered Species Act; All vessels associated with the construction project shall operate at "Idle Speed/No Wake" at all times while in the immediate area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible; Siltation or turbidity barriers shall be made of material in which manatees cannot become entangled, shall be properly secured, and shall be regularly monitored to avoid manatee entanglement or entrapment. Barriers must not impede manatee movement; All on-site project personnel are responsible for observing water-related activities for the presence of manatee(s). All in-water operations, including vessels, must be shut down if a manatee(s) comes within 50 feet of the operation. Activities will not resume until the manatee(s) has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapses if the manatee(s) has not reappeared within 50 feet of the operation. Animals must not be herded away or harassed into leaving; and Any collision with or injury to a manatee shall be reported immediately to the Texas Marine Mammal Stranding Network (TMMSN) Hotline at 1-888-9-MAMMAL and also reported to the USFWS (1-281-286-8282).

3.7 PREVIOUSLY USED EQUIPMENT

Clean previously used construction equipment prior to bringing it onto the project site. Ensure that the equipment is free from soil residuals, egg

deposits from plant pests, noxious weeds, and plant seeds. Consult with the USDA jurisdictional office for additional cleaning requirements.

3.8 MAINTENANCE OF POLLUTION FACILITIES

Maintain permanent and temporary pollution control facilities and devices for the duration of this Contract or for that length of time construction activities create the particular pollutant.

3.9 TRAINING OF CONTRACTOR PERSONNEL

The Contractor's personnel shall be trained in every phase of environmental protection and pollution control. Conduct environmental protection and pollution control meetings for personnel prior to starting construction activities. Additional meetings shall be conducted for new personnel and when site conditions change. Include in the training and meeting agenda: methods of detecting and avoiding pollution; familiarization with statutory and contractual pollution standards; installation and care of devices, vegetative covers, and instruments required for monitoring purposes to ensure adequate and continuous environmental protection and pollution control; anticipated hazardous or toxic chemicals or wastes, and other regulated contaminants; recognition and protection of archaeological sites, artifacts, wetlands, and endangered species and their habitat that are known to be in the area.

3.10 POST CONSTRUCTION CLEANUP

Clean up all areas used for construction in accordance with CONTRACT CLAUSE entitled CLEANING UP. Unless otherwise instructed in writing by the Contracting Officer, obliterate every sign of temporary construction facilities, for example: haul roads, work area, structures, foundations of temporary structures, stockpiles of excess or waste materials, and other vestiges of construction prior to final acceptance of the work. The disturbed area shall be graded, filled, and the entire area seeded unless otherwise indicated.

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PROJECT IDENTIFICATION

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SECTION 01 58 13.01 45

PROJECT IDENTIFICATION
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PART 1 GENERAL

1.1 SUMMARY

Requirements of this Section apply to, and are a component of, each Section of the specifications.

1.2 REFERENCES

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

U.S. ARMY CORPS OF ENGINEERS (USACE)

EP 310-1-6a	(2006) Sign Standards Manual, VOL 1
EP 310-1-6b	(2006) Sign Standards Manual, VOL 2, Appendices

1.3 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. Submit the following in accordance with SECTION 01 33 00 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Sign Legend Orders; G

PART 2 PRODUCTS

2.1 PROJECT SIGN

2.1.1 Construction Project Signs (USACE)

Furnish the construction project sign package, maintain the signs during construction, and remove the signs from the job site upon completion of the project. The construction project sign package consists of two signs: one for project identification and the other to show the on-the-job safety performance of the Contractor. The package shall conform to the requirements of EP 310-1-6a and EP 310-1-6b, specifically Section 16. Submit the sign legend orders as described in Section 16 of EP 310-1-6a prior to erecting the signs.

The exact placement location shall be approved.

2.1.2 Fabricators

The Contractor may have signs fabricated by the fabricators listed below

or other approved fabricators. The fabricators specified below have the capability to fabricate signs in accordance with U.S. Army Corps of Engineers Sign Standards Manual with a completion time of 50 days.

FABRICATOR	ADDRESS	CITY, STATE	PHONE NO.
UNICOR Industrial Products Business Group	320 First Street, N.W.	Washington, D.C. 20534	800-827-3168
Hall Signs, Inc.	4495 W Vernal Pike	Bloomington, Indiana 47404	1-800-284-7446
Interstate Highway Sign Co.	7415 Lindsey Road	Little Rock, Arkansas 72206	501-490-4242
Lyle Sign	6294 Bury Drive	Eden Prairie, MN 55346	1-877-895-8816

PART 3 EXECUTION (Not Used)

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CLOSEOUT SUBMITTALS

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CLOSEOUT SUBMITTALS
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PART 1 GENERAL

1.1 REFERENCES

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

U.S. ARMY CORPS OF ENGINEERS (USACE)

ERDC/ITL TR-12-1 (2012) CAD Drafting Standard

ERDC/ITL TR-12-6 (2012) A/E/C CAD Standard - Release 5.0

1.2 DEFINITIONS

1.2.1 As-Built Drawings

As-built drawings are developed and maintained by the Contractor and depict actual conditions, including deviations from the Contract Documents. These deviations and additions may result from coordination required by, but not limited to: contract modifications; official responses to Contractor submitted Requests for Information; direction from the Contracting Officer; designs which are the responsibility of the Contractor, and differing site conditions. Maintain the as-builts throughout construction as red-lined hard copies on site or red-lined PDF files. These files serve as the basis for the creation of the record drawings.

1.2.2 Record Drawings

The record drawings are the final compilation of actual conditions reflected in the as-built drawings.

1.3 SOURCE DRAWING FILES

Request the full set of electronic drawings, in the source format, for Record Drawing preparation, after award and at least 30 days prior to required use.

1.3.1 Terms and Conditions

Data contained on these electronic files must not be used for any purpose other than as a convenience in the preparation of construction drawings and data for the referenced project. Any other use or reuse shall be at the sole risk of the Contractor and without liability or legal exposure to the Government. The Contractor must make no claim and waives to the fullest extent permitted by law, any claim or cause of action of any nature against the Government, its agents or sub consultants that may arise out of or in connection with the use of these electronic files. The Contractor must, to the fullest extent permitted by law, indemnify and

hold the Government harmless against all damages, liabilities or costs, including reasonable attorney's fees and defense costs, arising out of or resulting from the use of these electronic files.

These electronic CAD drawing files are not construction documents. Differences may exist between the CAD files and the corresponding construction documents. The Government makes no representation regarding the accuracy or completeness of the electronic CAD files, nor does it make representation to the compatibility of these files with the Contractor hardware or software. In the event that a conflict arises between the signed and sealed construction documents prepared by the Government and the furnished Source drawing files, the signed and sealed construction documents govern. The Contractor is responsible for determining if any conflict exists. Use of these Source Drawing files does not relieve the Contractor of duty to fully comply with the contract documents, including and without limitation, the need to check, confirm and coordinate the work of all contractors for the project. If the Contractor uses, duplicates or modifies these electronic source drawing files for use in producing construction drawings and data related to this contract, remove all previous indicia of ownership (seals, logos, signatures, initials and dates).

1.4 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 the SECTION 01 33 00 SUBMITTAL PROCEDURES:

SD-11 Closeout Submittals

Record Drawings; G

Final Record Drawings

1.5 PAYMENT

No separate payment will be made for record drawings required under this Contract, and all costs accrued in connection with such drawings are considered a subsidiary obligation of the Contractor.

1.6 QUALITY CONTROL

Additions and corrections to the contract drawings must be equal in quality and detail to that of the originals. Line colors, line weights, lettering, layering conventions, and symbols must be the same as the original line colors, line weights, lettering, layering conventions, and symbols.

PART 2 PRODUCTS

2.1 GOVERNMENT FURNISHED MATERIALS

The Government will provide an optical disc (CD or DVD) at the preconstruction conference that contains the following:

a. One set of "as-designed" electronic CAD files in the specified software and format revised to reflect all amendments and the final

contract PDF drawings. The CAD files are provided to enable preparation of as-built or as-constructed drawings. If discrepancies exist between the CAD files and the contract PDF drawings, correct the CAD files to show the contract PDF drawings.

b. A submittal register data file in comma separated value (CSV) format for import into the Resident Management System (RMS).

2.2 SYSTEM DESCRIPTION

Prepare the DGN drawing files in MicroStation CONNECT Edition 10 format compatible with a Windows 7 operating system.

2.2.1 Additional Drawings

If additional drawings are required, prepare them using the specified electronic file format applying the same graphic standards specified for original drawings. The title block and drawing border to be used for any new final record drawings must be identical to that used on the contract drawings.

2.2.1.1 Sheet Numbers and File Names

If a sheet needs to be added between two sequential sheets, append a Supplemental Drawing Designator in accordance with ERDC/ITL TR-12-6 Adding a drawing sheet, and ERDC/ITL TR-12-1 Adding or deleting drawing sheets and index sheet procedures.

PART 3 EXECUTION (Not Used)

3.1 AS-BUILT DRAWINGS

Provide and maintain two black line print copies of the PDF contract drawings for As-Built Drawings.

3.1.1 Markup Guidelines

Make comments and markup the drawings complete without reference to letters, memos, or materials that are not part of the As-Built drawing. Show what was changed, how it was changed, where items(s) were relocated and change related details. These working as-built markup prints must be neat, legible and accurate as follows:

a. Use base colors of red, green, and blue. Color code for changes as follows:

(1) Special (Blue) - Items requiring special information, coordination, or special detailing or detailing notes.

(2) Deletions (Red) - Over-strike deleted graphic items (lines), lettering in notes and leaders.

(3) Additions (Green) - Added items, lettering in notes and leaders.

b. Provide a legend if colors other than the "base" colors of red, green, and blue are used.

c. Add and denote any additional equipment or material facilities, service lines, incorporated under As-Built Revisions if not already

shown in legend.

d. Use frequent written explanations on markup drawings to describe changes. Do not totally rely on graphic means to convey the revision.

e. Use legible lettering and precise and clear digital values when marking prints. Clarify ambiguities concerning the nature and application of change involved.

f. Wherever a revision is made, also make changes to related section views, details, legend, profiles, plans and elevation views, schedules, notes and call out designations, and mark accordingly to avoid conflicting data on all other sheets.

g. For deletions, cross out all features, data and captions that relate to that revision.

h. For changes on small-scale drawings and in restricted areas, provide large-scale inserts, with leaders to the applicable location.

i. Indicate one of the following when attaching a print or sketch to a markup print:

1) Add an entire drawing to contract drawings

2) Change the contract drawing to show

3) Provided for reference only to further detail the initial design.

j. Incorporate all shop and fabrication drawings into the markup drawings.

3.1.2 As-Built Drawings Content

Revise As-Built Drawings in accordance with ERDC/ITL TR-12-1. Provide 2 sets of paper copies from PDF drawings to show the as-built conditions by red-line process during the execution of the project. Keep these working as-built markup drawings current on a weekly basis and at least one set available on the jobsite at all times. Changes from the contract drawings which are made during construction or additional information which might be uncovered in the course of construction must be accurately and neatly recorded as they occur by means of details and notes. Submit the working as-built markup drawings for approval prior to submission of each monthly pay estimate. For failure to maintain the working and final record drawings as specified herein, the Contracting Officer will withhold 10 percent of the monthly progress payment until approval of updated drawings. Show on the as-built drawings, but not limited to, the following information:

a. Utility locations as verified by Owners, including ownership, description and owner contact information.

b. Correct grade, elevations, cross section, or alignment of roads, earthwork, structures or utilities if any changes were made from contract plans.

c. Changes or Revisions which result from the final inspection.

d. Where contract drawings or specifications present options, show only

the option selected for construction on the working as-built markup drawings.

d. Modifications (include within change order price the cost to change working as-built markup drawings to reflect modifications).

f. Unusual or uncharted obstructions that are encountered in the contract work area during construction.

g. Location, extent, thickness, and size of stone protection particularly where it will be normally submerged by water.

h. Before and after reef pad surveys

i. Plan plot of construction area covering the full extent of material placed within each reef pad, including gross and net tons placed distinguished by dates of placement

j. Vertical control utilized including any applicable conversions

k. Actual location of limits of cultch placed at each reef pad location

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 35 - WATERWAY AND MARINE CONSTRUCTION

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REEF PAD CONSTRUCTION

1/21

ATTACHMENTS:

Appendix A.

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REEF PAD CONSTRUCTION
1/21

PART 1 GENERAL

1.1 SUMMARY

The work includes furnishing all materials, labor, and equipment for construction of DRM reef pads (oyster reef) in accordance with these specifications and applicable drawings. Oyster reef construction must meet minimum requirements shown on the Plans in order to achieve oyster recruitment and establish living reef. Construction to consist of mechanical placement of cultch into a pad within the designed horizontal limits and to the specified elevations as shown on the plans. All of the pads shall have finished elevations as shown on the Plans plus or minus 0.5-feet of tolerance. The contractor shall determine its own means and methods of construction and quantity of materials to achieve this elevation.

1.2 MEASUREMENT AND PAYMENT

Measure and payment for Reef Pad Construction will be paid for in accordance with provisions of Section 01 22 00.10 MEASUREMENT AND PAYMENT in Appendix A attached at the end of this Section.

1.3 ORDER OF WORK

The sequence of construction shall be determined by the Contractor except as stated within these specifications or on the drawings. Construction shall be continuous from start to finish with no appreciable shut-down periods.

1.4 REFERENCES

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

ASTM INTERNATIONAL (ASTM)

ASTM C127	(2015) Standard Test Method for Density, Relative Density (Specific Gravity), and Absorption of Coarse Aggregate
ASTM C136/C136M	(2014) Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
ASTM C535	(2012) Standard Test Method for Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C702/C702M	(2011) Reducing Samples of Aggregate to Testing Size

ASTM D75/D75M	(2014) Standard Practice for Sampling Aggregates
ASTM D3740	(2012a) Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction
ASTM E329	(2014a) Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction

Texas Department of Transportation (TxDOT)

TxDOT Item 247	Flexible Base

1.5 SUBMITTALS

Government approval is required for the following submittals:

SD-01 Preconstruction Submittals

Reef Pad Placement Plan; G

Reef Pad Material Type

Barge Displacement Table(s)

Prior to commencement of construction, Contractor shall submit a Reef Pad Placement Plan describing the planned sequence, placement method, material source, and surveying methodology for the work.

SD-06 Test Reports

Gradation

Reef Pad Material

SD-07 Certificates

Certificates of Compliance from testing laboratory attesting that the materials meet specification requirements.

Materials Testing Center Qualifications. Submit a copy of the documents, provided by the Materials Testing Center (MTC) at ERDC, that validates that the laboratory is qualified to perform the required tests. The individual tests shall be listed for which the validation covers along with the date of the inspection.

SD-11 Closeout Submittals

Pre-Construction Hazard Survey

Surveys

Final Survey Drawings

1.6 QUALITY CONTROL

1.6.1 General

All reef pad material shall be durable material as approved by the Contracting Officer. Reef pad material shall be of a suitable quality to ensure permanence in the structure and in the environment in which it is to be used. It shall be free from cracks, blast fractures, bedding, seams and other defects that would tend to increase its deterioration from natural causes. The reef pad material shall be clean and adequately free from all foreign matter. Any foreign material adhering to or combined with the reef pad material as a result of stockpiling shall be removed prior to placement.

1.6.2 Sources

Before reef pad material is produced from a source for completion of the work, the source of reef pad material shall be approved by the Contracting Officer. Approval of a reef pad material source shall not be construed as a waiver of the right of the Government to require the Contractor to furnish reef pad material that complies as specified herein. Materials produced from localized areas, zones, or strata will be rejected when these materials do not comply as specified herein.

a. Source Documentation: Authorization of proposed reef pad material source will be based on prior test results and service records. The Contracting Officer may elect to use either past USACE test results or a combination of service records along with USACE approved test results from other agencies or private laboratories. A service record is considered acceptable if reef pad material from the proposed source has remained sound and functional after at least 10 years of exposure on a project similar to the one to be constructed under this contract.

b. Acceptance of Materials: During the contract period, both prior to and after materials are delivered to the job site, visual inspections and measurements of the reef pad material may be performed by the Contracting Officer. Per USACE EM 1110-2-2302, the Contracting Officer shall be notified at least 3 working days in advance of both shipment and anticipated delivery dates of the materials so that visual inspections may be performed. If the Contracting Officer, during the inspections, finds that the reef pad material quality, gradation or weights of reef pad material being furnished are not as specified or are questionable, re-sampling and re-testing by the Contractor shall be required. Sampling of the delivered reef pad material for re-testing and the manner in which the re-testing is to be performed shall be as directed by the Contracting Officer. This additional sampling and testing shall be performed at the Contractor's expense when test results indicate that the materials do not meet specified requirements. Any material rejected shall be removed or disposed of as specified and at the Contractor's expense.

1.6.3 Quality Testing

Contractor's quality assurance testing shall be performed by a qualified testing laboratory meeting the requirements of ASTM D3740 and ASTM E329, and qualified by USACE Materials Testing Center (MTC). At least 15 calendar days in advance of shipment of reef pad material to the work site, a copy of quality test results shall be furnished. Samples to be

tested shall be selected by the Contractor, unless otherwise directed by the Government if present. The Government reserves the right to perform independent testing. Costs for this additional sampling and testing shall be at the Contractor's expense.

At least one set of quality tests shall be performed of reef pad material. Periodic tests for specific gravity and gradation shall be performed by the Contractor for each 2,000 tons of reef pad material shipped. Not less than 3 sets of specific gravity and gradation tests shall be performed for each reef pad material type. Sampling of the reef pad material shall be performed in accordance with ASTM D75/D75M and ASTM C702/C702M.

1.6.4 Gradation Testing

Perform a gradation test or tests on the reef pad material at the quarry. Notify the Contracting Officer not less than 3 days in advance of each test. At least one gradation test(s) shall be performed per 10,000 cubic yards of each size for each reef pad material type placed, but not less than 3 tests shall be performed for each reef pad material type. At least 15 calendar days in advance of shipment of reef pad material to the work site, a copy of initial gradation test results shall be furnished.

1.6.5 Quarry Operations

Conduct quarry operations in a manner to produce stone conforming to the requirements specified; this may involve selective quarrying, handling, processing, blending, and loading as necessary.

1.6.6 Daily Records

Contractor's daily activity reports shall include barge displacement measurements and associated calculations as documentation of the volume and/or tonnage of reef pad material placed each day. This information shall be provided for use by Contracting Officer and shall not serve as the basis for payment.

1.6.6.1 Barge Placement Measurements

The barge shall be gaged at an approved protected location near the site. For this purpose, each barge shall be fitted by the Contractor at its expense, with gages graduated either to inches or tenths of a foot, located either inside or outside of the hull as directed and attached solidly to the hull itself. These gages shall be located two near each end of the vessel on opposite sides and two additional gages amid ship if deemed necessary by the Contracting Officer. If located inside the hull, provision shall be made for the free passage of the outside water to a transparent tube placed or capable of being placed, in contact with the gage. If located outside upon wooden hulls, the gages shall be protected by solid fenders or recessed into the planking, or if upon steel hulls, the gage marks may be placed directly on the plates and identified by punch marks. Gages shall be placed so that their zeros are below water when the vessel is in its normal trim, light, and free from water. In lieu of the gages in the interior of the barge, the Contractor may at its discretion, provide an equal number of wells for determining the amount of the load. These wells shall be located as specified for interior gages and shall be constructed as approved.

1.6.6.2 Fore and Aft Displacements

Fore and aft displacements, due to load, shall not differ more than 10 percent from their mean for the determination of tonnage of each barge load of stone ready for placement. In determining the tonnage of a cargo, the change in gage readings due to discharge of the cargo shall be used.

1.6.6.3 Barge Displacement Tables

The barges shall be fitted for the work sufficiently ahead of the time fixed for commencement to enable the Contracting Officer to measure them accurately before beginning work. The Contractor shall at its expense place barges in dry dock for measurement and furnish materials and facilities for taking the necessary measurements for preparing barge displacement tables. The Contractor shall pump the water from the barges when so requested but no pumping of a barge shall be done between the time it is gaged loaded and light to determine the amount of barge load.

1.6.6.4 Repairs and Additions

Repairs and additions made to the barges during the progress of the work shall be promptly reported to the Contracting Officer. During the progress of the work, when the Contracting Officer deems it advisable or necessary, each barge shall be re-measured at the expense of the Contractor and under the supervision of the Contracting Officer. No barge shall be used which is not in a seaworthy condition or which leaks excessively. The barges used shall be so constructed that when loaded they do not bend or warp so that the gages are unreliable. Each barge load shall contain only one type of material.

1.6.6.5 Determination of Weights

The gages shall be read in calm water conditions which will allow accurate determination of weights. Locations of the gauge readings shall be approved in advance. To determine the load, measurements will be taken immediately before a barge starts for its point of unloading and immediately after it returns from that point. The gages will be read by the Contracting Officer and the Contractor is invited to be present when the readings are taken. Disagreements on the part of the Contractor as to the weight of material will be submitted in writing within 10 days of their occurrence. To ensure the use of the proper weight of surrounding water in calculating the weight of material from the barge gage readings, hydrometer measurements will be made alongside each barge when it is gaged loaded and light. Other methods of measurement may be used when approved.

1.7 UTILITIES ACROSS THE LIMITS OF WORK

It is the Contractor's responsibility to investigate the location of utility crossings. The Contractor is to take precautions against damages which can result from dredging operations in the vicinity of the utility crossings. If damage occurs as a result of the work, the Contractor will be required to suspend work until the damage is repaired and approved. Costs of these repairs and downtime of the equipment is to be at the Contractor's expense.

1.7.1 Known Pipeline/Utility Crossings

There are pipelines and/or utilities which are near the work limits. The following pipeline/utilities are near the work area:

Permit No.	Description	Status	Owner
7737	24-in Carbon Dioxide Pipeline	In Service	Denbury Green Pipeline - Texas, LLC Billy Shoen 281-996-7251 Billy.shoen@denbury.com
5505	20-in Natural Gas Pipeline	In Service	Fieldwood Onshore LLC
774	18-in Natural Gas Pipeline	In Service	Kinder Morgan Tejas Pipeline Inc. Oscar Zapata 713-420-4654 Oscar_Zapata@kindermorgan.com
4966	10-in Gas Pipeline	In Service	Praxair, Inc.

EVERY EFFORT HAS BEEN MADE TO GIVE ALL PERTINENT DETAILS ON THE LOCATION OF PIPELINES/UTILITIES. THE DATA FURNISHED ON THE PLANS ARE BELIEVED TO BE SUBSTANTIALLY CORRECT. HOWEVER, THE EXACT LOCATIONS MAY VARY FROM THAT SHOWN: THEREFORE, THE CONTRACTOR IS TO COOPERATE WITH THE RESPECTIVE OWNERS TO ESTABLISH THE ACTUAL POSITION OF THE PIPELINES/UTILITIES. THE U.S. ARMY CORPS OF ENGINEERS PERMITS OF THE RESPECTIVE PIPELINE/UTILITIES AND PREVIOUS SURVEYS ARE AVAILABLE IN THE GALVESTON RESIDENT OFFICE. THE FOLLOWING IS FURNISHED FOR INFORMATION ON VERIFYING PIPELINE OWNERSHIPS:

Lonestar Notification Center
1-800-545-6005 or online at www.Lonestar811.com

Texas 811 (Dig-Tess)
1-800-344-8377

PART 2 PRODUCTS

2.1 REEF PAD MATERIAL

2.1.1 Material Options

At Contractor's option, crushed limestone, concrete riprap (crushed concrete), or river rock may be utilized at the discretion and approval of the contracting officer.

2.1.2 Crushed Limestone

Crushed limestone shall have a minimum unit weight of 140 PCF and an absorption no greater than 5 percent. The unit weight shall be reported based on the apparent specific gravity determined in accordance with ASTM C127. Crushed limestone shall have a maximum abrasion loss of 40 percent in accordance with ASTM C535. Crushed limestone shall comply with the gradation requirements stated in paragraph titled Gradation.

2.1.3 Crushed Concrete

Concrete shall comply with the requirements of TxDOT Item 247 (Flexible Base), have a minimum unit weight of 140 pounds per cubic foot (based on apparent specific gravity), and comply with the gradation requirements stated in paragraph titled Gradation. If concrete is recycled, any rebar shall be cut flush with exposed surfaces of concrete unit. All concrete shall be clean and free of chemical contaminants. Provide test reports showing conformance of concrete riprap with TxDOT Item 247 requirements.

2.1.4 River Rock

River rock shall consist of natural fragments of rock and meet the requirements stated for crushed limestone. River rock shall comply with the gradation requirements stated in paragraph titled Gradation.

2.1.5 Gradation

Reef pad material shall be well graded. The gradation shall conform to the table below when tested following the procedures stated in ASTM C136/C136M:

TABLE 1 - GRADATION REQUIREMENTS FOR REEF PAD MATERIAL

SIEVE SIZE, INCH	PERCENT PASSING
3	100
1/2	0-5

2.1.6 Inspection

The Government will conduct inspections as necessary, at its discretion.

2.2 REEF PAD FOUNDATION MATERIAL

Limited sampling and testing of foundation materials at the reef pad locations has been performed. Results of these are provided in the drawings. Boring logs and lab analysis of the foundation materials is provided in Appendix A.

PART 3 EXECUTION

3.1 CONSTRUCTION METHODS AND EQUIPMENT

Contractor shall select materials, methods, and equipment to construct the reef pads within the specified locations and to the specified dimensions. Contractor shall submit reef pad placement plan, sequence, and equipment for Government review and approval prior to construction.

3.2 PREPARATION

3.2.1 Base Preparation

The surface to receive the reef pad material shall be free of debris and obstructions. No other base preparation (grading, mucking, etc.) is required.

3.2.2 Pre-Construction Hazard Survey

Prior to commencing construction activities, a magnetometer survey shall be performed over the entire work area to search for uncharted pipelines and/or other anomalies below the existing bay bottom. Four pipelines/utilities which are near the work limits have been included in 1.7.1 Known Pipeline/Utility Crossings. Survey passes shall be no further apart than the spacing of hydrographic surveying transects shown on the drawings.

3.3 REEF PAD CONSTRUCTION

3.3.1 Material Placement

Reef pad material shall be placed within the limits indicated on the drawings. Displacement and settlement of the foundation material can be expected and shall be anticipated by the Contractor during construction. The Contractor shall satisfy itself as to the nature of the foundation characteristics and shall base its Contract unit prices and conduct its work accordingly. Reef pad material shall be placed, spread, and evenly distributed in such a manner that produces a relatively uniform surface within the limits specified on the drawings.

3.3.2 Misplaced Materials

If any reef pad material is deposited elsewhere than in places designated or approved, Contractor shall remove such misplaced material and redeposit it where directed at his expense.

3.3.3 Surveys

a. General: Contractor shall provide initial and final hydrographic surveys, as described below, for measurement and acceptance of the reef pads. Plan-view, profile, and cross section plots showing initial and final lines and grades shall accompany monthly payment requisitions. The profile and cross section plots shall be plotted with the reef pad design template superimposed upon the plot. Survey data shall also be provided in a digital format approved by the Contracting Officer. All survey shots shall be referenced to the project datums shown on the drawings. All survey plots submitted to the Contracting Officer shall bear the seal of a professional land surveyor registered in the State of Texas.

b. Survey Notification: The Contracting Officer shall be notified at least 3 days prior to all surveys performed by the Contractor so that he may have the opportunity to accompany the survey crew and observe the work.

c. Survey Transects: Required survey transect locations for the initial survey and final survey shall be taken both horizontally and longitudinally across the reef pad, along and parallel to the reef pad alignments shown on the plans, extending a minimum of 100 feet past the boundary limits of the reef pad. Survey transects shall be spaced 50 feet apart as shown on the drawings and on even stations based upon the reef pad alignments. Shot spacing along these transects shall not exceed 10 feet.

d. Transducer frequency: Transducer frequency shall be documented on survey drawings. Transducer frequency shall not vary between initial

and final survey. Soundings shall be obtained by using a single beam sonar system operating nominally at 200 kHz.

e. Initial Survey: Lines and grades of the reef pad subgrade shall be surveyed by the Contractor and submitted to the Contracting Officer prior to placement of reef pad material.

f. Daily Surveys: Daily surveys shall be performed to ensure Reef Pads are being constructed to the required dimensions as work progresses.

g. Final Survey: Upon completion of placement of reef pad material, lines and grades of the reef pad shall be surveyed by the Contractor to provide verification that reef pad was constructed as shown on the drawings. Final survey submittal shall include a complete set of final survey drawings showing the constructed condition of the entire project. Cross-section and profile plots shall show the reef pad design template with grades from initial survey and final survey for verification that reef pad thickness (as measured above existing grade) requirements shown on drawings have been met. Additionally, a sidescan sonar survey shall be performed over all constructed pads and provided by the Contractor for verification of placed rock across and within all limits of the pads.

3.4 ACCEPTANCE

Acceptance of reef pads shall be based on Government's review of survey data and compliance with the locations and dimensions specified on the drawings. For acceptance, the oyster pads shall be constructed, at a minimum, to the grades and elevations shown in the Plans. Tolerances shall include minus 0.5 to plus 0.5 feet on the design pad elevation. Final constructed pad boundary area shall not be less than 0.5 feet inside of, nor more than 5 feet beyond, the boundary defined by the reef coordinates shown unless otherwise approved by the Contracting Officer. Abrupt changes in alignment, as determined by the Contracting Officer, will not be permitted and shall be corrected by the Contractor at no cost to the Government.

3.5 CORRECTIVE ACTIONS

Thickness of reef pad, as measured above existing grade as shown on the drawings, shall comply with the minimum and maximum dimensions stated on the drawings. If thickness is less than the minimum thickness specified on the drawings, additional material shall be added and reef pad shall be re-surveyed. If thickness is greater than the maximum thickness specified on the drawings, material redistribution or removal shall be performed, as directed by Contracting Officer, to bring non-compliant portions of reef pad within specified thickness range, and reef pad shall be re-surveyed. No dragging or raking of reef pad shall be performed without prior approval by Contracting Officer.

-- End of Section --