BBA-18 Grand Isle and Vicinity, Louisiana
Beach Erosion and Hurricane Protection Project

Project Management Plan
Version 1.0 – February 2019
Version 1.1 – June 2019
Version 1.2 – February 2020
Version History

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<th>Version #</th>
<th>Implemented By</th>
<th>Revision Purpose</th>
<th>Revision Date</th>
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<td>David Z. Bradley</td>
<td>Original</td>
<td>28 February 2019</td>
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<td>1.1</td>
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<td>Award of Breakwater Contract</td>
<td>14 June 2019</td>
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</table>

Forward

This Project Management Plan (PMP) provides a summary of tasks remaining to complete the Grand Isle and Vicinity, Louisiana, Beach Erosion and Hurricane Protection Project (the Project) and highlights recent task and revisions. The Project consists of two features: (1) Offshore stone segmented breakwaters, (2) Beach/Dune Nourishment. The Project is currently in the Construction phase for the Breakwater Contract and in the Pre-Construction, Engineering and Design (PED) phase for the Beach Nourishment Contract. This PMP will detail the tasks necessary (including cost and schedule) for the next major design and construction activities, and general estimates to complete the construction. The PMP was developed utilizing tools such as MCX certified cost estimates, P2 schedules, and Risk Registers prepared by the PDT. The inclusion of cost and schedule estimates are to support the remaining major decisions that are needed for future milestones in order to complete the construction on schedule.

The western end of the Grand Isle gulf shoreline has sustained successive damage over the years from storm and coastal activities. The Grand Isle and Vicinity, Louisiana, Beach Erosion and Hurricane Protection project, when completed, will stabilize the western end of Grand Isle and provide storm damage risk reduction to the existing dune and landward infrastructure while providing a recreational beach. The project will address gulf shoreline erosion and increased risk from hurricane and storm surge damages.

I. PROJECT INFORMATION

Authorization

The Grand Isle and Vicinity, Louisiana Beach Erosion and Hurricane Protection Project (the Project) was authorized by Section 204 of the Flood Control Act of 1965 (79 STAT 1077) (Public Law 89-298), which provides that “The project for hurricane-flood protection at Grand Isle and Vicinity, Louisiana, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers, in House Document Numbered 184, Eighty-ninth Congress, at an estimated cost of $5,500,000.” The Project was subsequently modified by, including but not limited to, Section 301 of the Water Resources Development Act (WRDA) of 1996 (110 STAT 3710) (Public Law 104-303), which authorized the Secretary to construct a permanent breakwater and levee system at a total cost of $17,000,000.” The non-Federal cost share for
the Project is 35% in accordance with Section 103 of WRDA 1986. The Project is funded by The Bipartisan Budget Act of 2018 (Public Law 115-123) Division B, Subdivision 1, Title IV, “for necessary expenses to address emergency situations at Corps of Engineers projects, and to construct, and rehabilitate and repair damages caused by natural disasters, to Corps of Engineers projects”.

Location and Description

Grand Isle is part of a barrier island chain that separates Barataria Bay from the Gulf of Mexico. Grand Isle is located on the Gulf of Mexico in Jefferson Parish, Louisiana, about 50 miles south of New Orleans and 45 miles northwest of the mouth of the Mississippi River. The island is the only inhabited barrier island in Louisiana. Grand Isle extends approximately 7.5 miles along the Gulf shore generally in a northeast to southwest direction, and is approximately 0.75 miles wide at its center. Grand Isle is the westernmost of the barrier islands lying across the mouth of Barataria Bay. The majority of the constructed Project consists of vegetated dune with a geotextile geo-tube core with anchor tube, a scour apron, and a sand cap.

The Plan for the new work for this Project is intended to stabilize the western end of Grand Isle and to provide storm damage risk reduction to the existing dune and landward infrastructure while providing a recreational beach. The proposed Plan would address Gulf shoreline erosion and increased risk from hurricane and storm surge damages. The proposed work is located on the western Gulf-side of the island.

The project consists of two separate elements. The first element consist of segmented stone breakwaters to be placed on the western Gulf-side of the island from Station 0+00 to Station 70+00. The breakwaters will be comprised of armor stone on top of a crushed stone core and bedding placed on top of geotextile fabric. Navigation warning lights atop timber light platforms will front the breakwaters. The second feature is beach re-nourishment and will involve transporting 500,000 cy of dredged material via pipeline and placing the material on the beach in the Project Area from Station 0+00 to Station 70+00 to restore the beach and dune to the original Project design standards. One potential source for the borrow material is the Barataria borrow pit, which extends from approximately 0.25 miles to 1.75 miles off the coast of Grand Isle and is approximately 6 miles from the proposed beach re-nourishment site. Caminada Pass is another potential source for borrow. Both sites will need to undergo additional evaluation.

There is no mitigation or relocations anticipated for the project. The Finding of No Significant Impact (FONSI) for the Construction of Breakwaters (Environmental Assessment (EA) #573) was signed on 17 May 2019. The FONSI for the Beach Re-nourishment is expected by September 2020.

Non-Federal Sponsor
The Grand Isle and Vicinity, Louisiana, Beach Erosion and Hurricane Protection Project cost shares the responsibility for the completion of the construction with the State of Louisiana acting through the Coastal Protection and Restoration Authority Board. The Project Partnership Agreement executed on 05 April 2019 is in accordance with the authorized cost share of 65 percent Federal and 35 percent non-Federal.

Recent Project History

The following are the existing Project features that have been authorized and constructed to date by the U.S. Army Corps of Engineers (USACE):

Sand berm and vegetation-covered sand dune, reinforced with an earthen filled geo-textile core section. The majority of the core section is comprised of a sand-filled geo-textile tube, scour-apron, and a sand-filled anchor tube system. The existing dune system also contains a core composed of clay, reinforced and wrapped in a geo-textile fabric (known locally as a geo-burrito). Sand-filled geo-textile tube was placed from Stations 11+44 to 23+00 and Stations 84+50 to 386+00. Geo-burrito remains from Stations 8+80 to 11+44 and Stations 23+00 to 84+50. In addition, approximately 946,800 cubic yards of sand was placed on top of the dune and on the dry beach as a sand berm with a width of approximately 200 feet along approximately 38,600 linear feet of shoreline between Stations 0+00 and 386+00.

Geo-textile dune. The geo-textile core dune consists of a 10-foot wide crown at an elevation of +13.5 feet North American Vertical Datum 1988 (NAVD88), and side slopes of 1 foot vertical (V) on 5 foot horizontal (H). The dune was planted with bitter panicum (Panicum amarum Ell.) and sand fencing was placed continuously along the seaward side of the dune, parallel to the dune centerline. The beach elevation falls along a 1 foot V on 33 foot H slope from an elevation of +8.5 feet at the dune-side toe Gulf-ward to approximately +6 feet. A flat sand berm then extends toward the Gulf of Mexico for 50 feet, followed by beach along a 1 foot V on 20 foot H slope until it meets the existing grade, generally between +4 feet and the existing Gulf seafloor at approximately -8 feet.

West End Jetty. The West End Jetty located at Caminada Pass was constructed by the State of Louisiana and was incorporated into the USACE Project at the time of Project authorization. The West End Jetty is constructed of stone and extends from the shore into deeper water to direct the current and tides through the Pass, and provides anchor points to stabilize the west end of the island from migrating.

Original Breakwaters. Two segmented breakwaters sections were constructed as part of the original Project. The first breakwater section is located between Station 141+50 and Station 148+50 in the vicinity of Cherry Lane and consists of five 100-foot segments with four 50 foot gaps between segments for a total length of 700 feet. The second breakwater section is located between Station 200+00 and Station 210+00 in the vicinity of Naccari Lane and consists of seven 100 foot segments with six 50 foot gaps between the segments for a total length of 1000 feet. The segments are constructed from 10’x5’x2’ sand-filled bags.
**Constructed Project Breakwaters.** Thirty-six segmented breakwaters are located on Grand Isle’s east end between Station 205+00 and Station 373+00. Only 23 of the breakwaters were constructed by USACE as Project features and are located at approximately Station 206+00 extending east with an average length of 190 feet and an average gap width of 315 feet (the State of Louisiana constructed an additional 13 breakwaters east of the Federal breakwaters with an average length of 225 feet and gap width of 220 feet located 890 feet from the shoreline). Navigation warning lights atop timber light platforms front the Federal breakwaters and the West End Jetty.

**Dune crossovers.** Four articulated concrete block (ACB) vehicular dune crossovers at Cranberry Lane, Krantz Lane, Capital Lane, and Birch Lane were restored and extended approximately 80 feet beyond the beach-side toe of the dune onto the Gulf-side beach area that would end in a vehicular drop-off area. Geo-textile separator fabric was placed beneath the six-inch interlocking ACB to provide stability and reduce foundation material from pushing into the void space of the ACB. Use of the four vehicular crossovers was expanded from access for emergency and other official vehicles only to also allow for the unloading and loading of persons with physical disabilities for a safer and easier mode of accessing the beach-side of the dune. No parking is allowed on the crossovers or within the drop-off areas. With the exception of emergency and official vehicles, all vehicles are prohibited from accessing the beach side of the dune beyond the location of the crossover and drop off area. The Birch Lane crossover and loading/unloading area is for seasonal use only except for emergency and official use. The loading and unloading areas at each of the four extended vehicle crossovers were constructed on the Gulf side of the dune and tied into the existing ACB paved dune crossings at each location. New cable wire gates were placed on the protected-side toe of the dune and consist of a single cable wire crossing supported by wooden posts embedded securely on either side of the access road. No trespassing signs have been posted at the center of the cable crossing. Keys to these locked cable gates are maintained by Town of Grand Isle personnel for authorized access only. New sand fencing was placed on the Gulf-side dune toe extending 100 feet east and 100 feet west. The project also included an American with Disability Act (ADA) compliant elevated timber pedestrian dune crossover at Burnette Lane.

**Note:** The original Project included 21 wooden pedestrian dune crossovers at Mary Lane, Oliver Lane, Boudreaux Lane, Blackberry Lane, Apple Lane, Plum Lane, Cherry Lane, Margot Lane, Grape Lane, Santiny Lane, Colonigou Lane, at the Bertin Camp near Minnich Lane, Oak Lane, Elm Lane, Cedar Lane, Walnut Lane, Willow Lane, Yacht Harbor Road, the east end of the State Park near Bathhouse No. 1, the east end of the State Park near Bathhouse No. 2, the east end of the State Park near the Visitor Center, and 3 handicapped ramps located at Burnette Street, Chighizola Lane, and Naccari Lane. These 24 original dune crossovers were damaged and ultimately destroyed as a result of a series of hurricanes and storms commencing in 2005, with Hurricanes Katrina and Rita, as well as additional hurricanes and severe storm events that have since occurred. By virtue of the approval of the 2015 Project Information Report (PIR) Amendment #2, the 21 pedestrian and 3 handicapped dune crossovers listed herein above
were forever eliminated as elements/features of the Project and none of these former dune
crossover structures will be reconstructed or rebuilt by USACE.

Stone Armored Dune Reach. An approximate 1,500 foot stone toe dike approximately 50 feet
from the centerline of the dune with earthen material was placed between the stone toe dike
and the existing dune. An approximate 1,000 foot reach of the west beach was not maintaining
sand fill and required more specific measures to protect the dune alignment and has been
further protected by construction of a rock-faced sand section extending from approximate
elevation 0.0 to elevation +10.0 NAVD88. This three foot thick rock blanket was underlain with
geotextile fabric to minimize losses of sand through the rock section. Within this section, a
failed 400 foot reach of geotextile tube core was replaced between Stations 16+00 and 20+00.
A sand cap above elevation +10.0 was installed to cover the geo-textile tube core to maintain
the desired dune height, width, and aesthetics.

Sand Fencing. The dune was planted with bitter panicum (Panicum amarum Ell.) and sand
fencing was placed along the seaward side of the dune. The sand fence was placed continuously
along the entire face of the dune, parallel to the dune centerline, except that no fencing was
placed within 5 feet of the vehicular and pedestrian crossovers.

Goals and Objectives

The goal of this project is for the construction of the segmented breakwaters and beach re-
nourishment to stabilize the western end of the island and to provide storm damage risk
reduction to the existing dune and landward infrastructure while maintain a recreational beach.
To accomplish this will require the completion of the PED components of the project and the
award and completion of multiple construction contracts. The required construction
completion date is July 2022.

The following tasks were identified by the PDT as crucial milestones that will need to be
completed in order to accomplish the proposed milestones of the project.

- Execute new Project Partnership Agreement (PPA) with CPRAB to complete the plans
  and specification (P&S) and construction of segmented stone breakwaters and beach re-
nourishment features. PPA executed on 05 April 2019.
- Obtain Environmental Compliance for segmented stone breakwaters. FONSI signed 17
  May 2019.
- Complete P&S for the segmented stone breakwaters and DQC, BCOE, and ATR review.
  BCOES certified 19 April 2019.
- Award construction contract for segmented stone breakwaters. Contract awarded 12
  Jun 2019.
- Identify an acceptable borrow source for the beach re-nourishment element of the
  project.
• Obtain Environmental Compliance for beach re-nourishment.
• Complete P&S for the beach re-nourishment and DQC, BCOE, and ATR review.
• Award construction contract for beach re-nourishment.

PMP Purpose
This PMP describes the required tasks to get through the PED and Construction Milestones with the understanding that more detail will be provided for future tasks and milestones as the project progresses. Updates to this PMP will be prepared as needed but no less frequently than around every milestone in the study. The information contained in this PMP will be used to update future appropriate budgetary and other related documents for the project. The bulk of the information in this PMP will focus on the schedule and cost to complete the PED and construction of the project since it encompasses the majority of the tasks and milestones remaining.

II. PROJECT MANAGEMENT PLAN TASKS

Completed and Current Activities (2018-2019)
The activities completed to date have focused on executing the PPA, completing the P&S and appropriate reviews for award of the segmented stone breakwater contract, identifying a borrow pit for suitable beach material and completing the P&S and appropriate reviews for the remaining project features.

Major Task Accomplished as of February 2020
• 5 April 2019 - Executed new PPA with CPRAB to complete the plans and specifications (P&S) for construction of segmented stone breakwaters and beach re-nourishment.
• 19 April 2019 - Completed P&S, DQC, ATR and BCOE review for the segmented stone breakwaters.
• 6 May 2019 – Advertised the segmented stone breakwater contract
• 17 May 2019 - Obtained Environmental Compliance for segmented stone breakwaters.
• 12 June 2019 - Awarded construction contract for segmented stone breakwaters.
• 10 February 2020 – Completed P&S, DQC and ATR review for the beach re-nourishment (BCOES is awaiting Environmental Compliance).

Planned Activities (2020-2021)
The activities moving forward will focus primarily on completing the environmental compliance and appropriate reviews for the remaining project features as well as awarding and managing construction contracts. Managing the remaining estimated project costs and milestones will be crucial to meet the project requirements for the BBA 18 funding. The cost estimates were
developed by MVN and certified by the Cost MCX. Further cost breakdowns will be developed
by members of the PDT and will be added to this PMP when they become available.

The current project schedule was developed by the PDT and provides the detailed activities and
milestones required to ensure the project remains on schedule. Each of the remaining project
features will require input from every member of the PDT to complete.

**Major Task to Accomplish Project Completion**

- Obtain data and complete analysis for suitable borrow material.
- Obtain concurrence from CPRAB on a suitable borrow pit.
- Obtain Environmental Compliance for beach re-nourishment.
- Complete BCOES review for the beach re-nourishment contract.
- Award construction contract for beach re-nourishment.
- Manage the construction contracts for the segmented stone breakwaters and the beach
  re-nourishment.
- Project closeout

**Current Assumptions that will Shape the Project**

- USACE in coordination with the NFS will finalize the location of the borrow pit to be
  used for the beach re-nourishment on the southwest end of Grand Isle.
- NFS acquires and provides Rights-of-Entry as required for construction of the project.

**III. SUMMARY COST ESTIMATES**

The current plan outlined in this PMP are based on the Bi-partisan Budget act of 2018. The
costs presented in this PMP exclude the cost of activities that occurred during the Planning
Stage of the project. The table below displays the estimated cost for individual components
associated with each of the contracts of the Project. The estimated cost for each activity will be
replaced with the actual cost once the construction project is turned over to the NFS.
Additional components could be added if necessary.

**Summary Cost Estimate**

<table>
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<tr>
<th>Project Features</th>
<th>Current Total Estimated Cost</th>
<th>PM</th>
<th>HIR</th>
<th>Surveys</th>
<th>Borings</th>
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IV. PROJECT SCHEDULE

The Grand Isle and Vicinity, Louisiana Beach Erosion and Hurricane Protection Project will be completed over a 3 year timeframe ending in 2021. This version of the PMP is primarily focused on project details to carry the PDT through PED and construction. The PMP is a living document that will be reviewed at least at each major milestone and updated as necessary. A detailed P2 schedule has been developed which includes all of the milestones shown below. The schedule for both contracts is included in Appendix A of this PMP.

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<th>Major Milestones for the Project:</th>
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<tr>
<td>Execute an MOU for WIK</td>
<td>20 Nov 2018A</td>
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<td>CW130 – Execute Design Agreement / PPA</td>
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<td>CW320 – BCOE Certification Complete</td>
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<td>CW420 – Advertise Contract</td>
<td>6 May 2019A</td>
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<td>17 May 2019A</td>
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<td>CC800 – Contract Award</td>
<td>12 Jun 2019A</td>
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<tr>
<td>CW440 – Issue NTP</td>
<td>21 Jun 2019A</td>
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<td>CC815 – Construction Start</td>
<td>16 Sep 2019A</td>
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<td>CC845 – Redzone Meeting</td>
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<td>CC820 – Substantial Completion</td>
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VI. CHANGE MANAGEMENT

PDT members are responsible for monitoring their work items and identifying when changes are necessary. Scope changes, including any cost or schedule impacts, will be provided to the project manager as soon as the scope change is identified by the team member. Scope changes are to be signed by the branch chief executing this PMP as a resource provider, unless authority has been delegated to another supervisor. Any significant changes will be summarized in the PMP revision table at the front of this document. Significant changes may include:

- Congressional funding reductions or other directives;
- New information or additional data-gathering requirements;
- Vertical Team requested scope changes; and
- Schedule changes delaying project implementation.

The PDT will determine whether the cost, schedule, or scope changes warrant a formal update of the PMP (i.e., a revised document). Routine scope or budget changes that can be funded out of the project contingency or handled by task transfers will be considered minor and not significant. These changes will be documented by the Corps project managers and recorded in the project files.

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<table>
<thead>
<tr>
<th>Name</th>
<th>Office</th>
<th>Phone</th>
<th>Email</th>
</tr>
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<tbody>
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<tr>
<td>Eric Salamone</td>
<td>MVN-EDS</td>
<td>504 862-1676</td>
<td><a href="mailto:Benjamin.E.Salamone@usace.army.mil">Benjamin.E.Salamone@usace.army.mil</a></td>
</tr>
</tbody>
</table>
Should the projected cost of the completion of the project exceed the amount indicated in the PMP or should scope changes described in the agreement change significantly, then upward reporting through the MVN executive office may be warranted. The project manager is responsible for identifying the need for an agreement amendment. The study coordination team will prepare and negotiate the amendment with the USACE project manager having the lead in the amendment drafting process. Legal counsel from USACE will be consulted and approve the amendment. Depending on the nature of the amendment, approval within USACE may reside at the MSC level (MVD) or may require approval by a higher command. Once approved, the amendment will be executed by pertinent signatories from within USACE.

VII. RISK MANAGEMENT

A risk-based analysis framework will be developed as the project progresses in accordance with current HQUSACE guidelines. This analysis will include the development of probability distributions of underlying variables, parameters, and components and shall combine these distributions into higher-level measures of overall economic and engineering performance and reliability for the project. The major scope, quality, schedule, and cost-related risks are outlined below. Risks will be monitored throughout the development of the Project and will be captured in the Risk Register.

<table>
<thead>
<tr>
<th>Project Feature</th>
<th>Milestone Code &amp; Name</th>
<th>Risk and its cause</th>
<th>Consequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakwaters</td>
<td>CW480 - Notice of Project Completion</td>
<td>Missing scheduled completion milestone due to tropical weather. Construction will be in the Gulf of Mexico during hurricane season.</td>
<td>Construction delays due to tropical weather could lead to delay in project construction completion of a critical &quot;no fail&quot; mission at risk.</td>
</tr>
<tr>
<td>Beach Renourishment*</td>
<td>Identification of an acceptable borrow pit</td>
<td>Borrow pits outside of the currently identified area would create changes to the environmental information and could require resubmission to NMFS.</td>
<td>NMFS process has an 18 month &quot;standard duration&quot; for T&amp;E coordination which is needed for FONSI. Cannot award project without the FONSI.</td>
</tr>
<tr>
<td>Beach Renourishment*</td>
<td>Environmental Compliance</td>
<td>Missing scheduled milestone due to NMFS duration of 18 months for T&amp;E coordination.</td>
<td>Substantially delay award of the construction project.</td>
</tr>
<tr>
<td>Beach Renourishment</td>
<td>CC800 - Contract Award</td>
<td>Delay of award due to environmental compliance</td>
<td>Delay start of construction putting execution of a critical &quot;no fail&quot; mission at risk.</td>
</tr>
<tr>
<td>Beach Renourishment</td>
<td>CW480 - Notice of Project Completion</td>
<td>Missing scheduled completion milestone due to delayed start and tropical weather. Construction will be in the Gulf of Mexico during hurricane season.</td>
<td>Construction delays due to delayed start and tropical weather could lead to delay in project construction completion of a critical &quot;no fail&quot; mission at risk.</td>
</tr>
</tbody>
</table>

*Risk mitigation strategy needed for these items
VIII. COMMUNICATIONS

Communications may be external to the project team as well as internal. Regarding internal project communications, distribution lists will be established that include all in-house team members, sponsors, and other stakeholders. All general project notifications will be delivered using these distribution lists. E-mail and face-to-face meetings will be the primary mode of communication. Project meetings will occur regularly at a frequency of at least one per month. The plan formulator will ensure that meeting notes are taken during all meetings. If a major project change is identified during a meeting, a draft memorandum for record will be developed and circulated to all meeting attendees to ensure that the memorandum accurately conveys items discussed during the meeting. Following the opportunity for all team members to provide comment, the project manager will finalize the memorandum for record to be included in the project’s decision log.

Vertical team In Progress Review meetings will likely involve teleconferences and webinars. The same protocol will be adhered to document communications with the vertical team. A final memorandum for record will be included in the project’s decision log.

The project manager will communicate regularly with the project sponsor. This will include email, teleconferences, and face to face meetings as appropriate. The project manager will serve as the primary point of contact with communication with the vertical team, which consists of the MVD District Support Team and the HQUSACE Regional Integration Team. All external communications with the media and any news releases will be coordinated with the New Orleans District Public Affairs Office.
IX. PMP APPROVAL SIGNATURES

David Bradley – Project Manager

Nick Sims – Assistant Deputy District Engineer for Programs and Project Management – Baton Rouge Office

Judi Gutierrez – Chief, Real Estate Division

Jean Vossen – Chief, Engineering Division

Marie Constance – Chief, K-LEA

Durando Elizay – Assistant Deputy District Engineer for Programs and Project Management

Mark Wingate – Deputy District Engineer for Programs and Project Management
APPENDIX A – P2 schedule by Construction Contract
## MILESTONES

<table>
<thead>
<tr>
<th>Milestone Description</th>
<th>Baseline</th>
<th>Current</th>
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## STATUS as of 02-13-2020

### ISSUES / UPCOMING TASKS
- NSTR

### 30 DAY COMMENTS

### 60 DAY COMMENTS

### 90 DAY COMMENTS

## BUDGET INFO

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## CONTRACT INFO B2001713

- **Contract No:** W912PF19C00048
- **Contractor:** BIS Services, LLC
- **Contract Award Amount:** $3,406,415
- **Duration:** 282
- **Original Duration (RMS):** 120
- **Modifications:**
  - Executed Mods: 3, $11,824
  - Pending Mods: 1, $687,301
  - Total Mods: 4, $999,126
- **Scheduled % Complete:** 0%
- **Actual % Complete:** 0%
### MILESTONES

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### STATUS as of 02-13-2020

#### ISSUES / UPCOMING TASKS
- NSTR

#### 30 DAY COMMENTS

#### 60 DAY COMMENTS

#### 90 DAY COMMENTS

#### RISK NARRATIVE

#### GOALS

### BUDGET INFO

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<th>Actual Cost</th>
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</thead>
<tbody>
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<td>$0.00</td>
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Project Scope
This component of the project consists of construction of 5 stone segmented breakwaters on the western gullisde of Grand Isle. The primary function of the breakwaters is to provide additional stability and coastal storm damage risk reduction to the island and to restore the shoreline.

Engineering Division (ED)
Organization Code: B2L0000

What: Provide technical leadership, oversight, supervision, and review of all ED offices and the associated output generated. Provide oversight, review and approval of all ED products and deliverables ensuring they meet the requirements as defined by ER 1110- 1-1 2. Provide financial management. i.e. budgeting, funding allocations, for the Engineering Appendix for Engineering Division.

Who: Division Chief (GS-15)
Office of the Chief Support Staff

Cost: $ 5,000

Duration: throughout project

Hydraulics & Hydrologic Branch (ED-H)
Organization Code: B2L0200

What: Study relevant documents previously prepared for Grand Isle & Vicinity, collect and process tidal & stage data for the hydraulic design. Will attend PDT meetings and provide assistance with ATR and BCOES reviews.

Who: GS-13 Section Chief, GS-12 Hydraulic Engineer

Cost: $30,000

Duration: Throughout design and up to advertisement
Geotechnical Branch (ED-F)
Organization Code: B2L0300

What: Analyze Existing Geotechnical Data and determine if additional data is needed. Coordinate further investigation is warranted. Provide all geotechnical input into the breakwater foundation and design. Will attend PDT meetings and provide assistance with ATR and BCOES reviews.

Who: GS-12 Civil Engineer

Cost: $15,000

Duration: Throughout design and up to advertisement

Civil/Design (ED-L)
Organization Code: B2L0400

What: Incorporate all field data, hydraulic designs, and geotechnical designs to complete the detailed design of the breakwaters. The effort includes the completion of detailed designs, preparation of plans and specifications, field investigations and final preparation or contract documents for advertisement. The in-house effort will include technical and BCOE reviews, preparation of contract documents for advertisement, and coordination with other offices within the Corps and with Local Sponsors. This also includes preparation of all QA/QC documentation in accordance with current MVN Requirements, completion of a Design Documentation Report (DCR), and completion of Plans and Specifications.

Who:
GS-13 Supervisory Engineer
GS-12 Lead Design Engineer

Cost: Total: $60,000

Duration: Throughout design and up to advertisement

What: Field and Hydrographic surveys.

Why: Surveys are required for design, preferably in feasibility phase, but certainly needed for PED phase. Cost may be dramatically affected by survey results, showing us water elevations in various areas, and the subsequent dike heights required.
Who: Shops/Facility
Design Engineer to compile survey request and process surveys.

Cost:
In-house Administration (Shops/Facility): $25,000

Duration: 30 days

Design Services Branch (EDD)
Organization Code: B21.0500

Cost and Specifications Section

What: Develop costs and contract durations through 95% BCOES review and IGEs. This will include:
• Participation in PDT meetings documentation and Quality Assurance (QA) resolution.
• Development of the following the breakwater contract: 95% BCOES estimates, construction durations, specifications, and DQC review.
• Development Preparation or official IGEs for bid opening and specification support for amendments during the advertisement process.

Who: GS-12 Cost Engineer

Cost: $15,000

Duration: Throughout design and up to advertisement

Relocations Section

What: Relocation or pipelines, facilities and utility crossings impacted by the proposed project. PDT meeting attendance. Minimal relocations activities anticipated.

Who: GS-12 Civil Engineer

Cost: $10,000

Duration: throughout project
ENGINEERING DIVISION
PMP for Grand Isle
Dune and Beach Nourishment

Project Scope
This component of the project consists of nourishing approx. 10,000 LF of beach and dune on the western gulfside of Grand Isle. The primary function of the nourishment is to restore the beach and dune to the original project design section.

Engineering Division (ED)
Organization Code: B2L0000

What: Provide technical leadership, oversight, supervision, and review of all ED offices and the associated output generated. Provide oversight, review and approval of all ED products and deliverables ensuring they meet the requirements as defined by ER 1110- 1-1 2. Provide financial management, i.e. budgeting, funding allocations, for the Engineering Appendix for Engineering Division.

Who: Division Chief (GS-15)
Office of the Chief Support Staff

Cost: $ 5,000

Duration: throughout project

Hydraulics & Hydrologic Branch (ED-H)
Organization Code: B2L0200

What: Study relevant documents previously prepared for Grand Isle & Vicinity, collect and process tidal & stage data for the hydraulic design. Will attend PDT meetings and provide assistance with ATR and BCOES reviews.

Who: GS-13 Section Chief, GS-12 Hydraulic Engineer

Cost: $30,000

Duration: Throughout design and up to advertisement
Geotechnical Branch (ED-F)
Organization Code: B21.0300

What: Analyze Existing Geotechnical Data and determine if additional data is needed. Coordinate further investigation is warranted. Provide all geotechnical input into borrow material and borrow pit selection. Will attend PDT meetings and provide assistance with ATR and BCOES reviews.

Who: GS-12 Civil Engineer

Cost: $15,000

Duration: Throughout design and up to advertisement

What: Exploratory soil borings with the proposed borrow pit locations - Drill 10 borings with Caminada Pass and Barataria Waterway. The work shall consist of advancing to a boring depth of 20 feet below the mudline. Rough sea conditions are anticipated.

Why: To determine the soil types within the potential offshore borrow pits. To obtain soil samples for classification and laboratory tests.

Who: A-E Driller(s)

Cost: $150,000

Duration: 45 days

Civil/Design (ED-L)
Organization Code: B21.0400

What: Incorporate all field data, hydraulic designs, and geotechnical designs to complete the detailed design of the breakwaters. The effort includes the completion of detailed designs, preparation of plans and specifications, field investigations and final preparation or contract documents for advertisement. The in-house effort will include technical and BCOE reviews, preparation of contract documents for advertisement, and coordination with other offices within the Corps and with Local Sponsors. This also includes preparation of all QA/QC documentation in accordance with current MVN Requirements, completion of a Design Documentation Report (DDR), and completion of Plans and Specifications.

Who: GS-13 Supervisory Engineer
GS-12 Lead Design Engineer

Cost: Total: $75,000
**Duration:** Throughout design and up to advertisement

**What:** Field and Hydrographic surveys.

**Why:** Surveys are required for design, preferably in feasibility phase, but certainly needed for PED phase. Cost may be dramatically affected by survey results, showing us water elevations in various areas, and the subsequent dike heights required.

**Who:** Shops/Facility Design Engineer to compile survey request and process surveys.

**Cost:**
In-house Administration (Shops/Facility): $25,000

**Duration:** 30 days

---

**Design Services Branch (EDD)**
Organization Code: B21.0500

**Cost and Specifications Section**

**What:** Develop costs and contract durations through 95% BCOES review and IGs. This will include:
- Participation in PDT meetings documentation and Quality Assurance (QA) resolution.
- Development of the following the breakwater contract: 95% BCOES estimates, construction durations, specifications, and DQC review.
- Development Preparation or official IGs for bid opening and specification support for amendments during the advertisement process.

**Who:** GS-12 Cost Engineer

**Cost:** $15,000

**Duration:** Throughout design and up to advertisement

---

**Relocations Section**

**What:** Relocation or pipelines, facilities and utility crossings impacted by the proposed project. PDT meeting attendance. Minimal relocations activities anticipated.
Who: GS-12 Civil Engineer

Cost: $10,000

Duration: throughout project