



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
US ARMY CORPS OF ENGINEERS  
SOUTH ATLANTIC DIVISION  
60 FORSYTH STREET SW, ROOM 10M15  
ATLANTA, GA 30303-8801

23 AUG 2013

CESAD-RBT

MEMORANDUM FOR COMMANDER JACKSONVILLE DISTRICT (CESAJ-EN-QC/  
LAUREEN A. BOROCHANER)

SUBJECT: Approval of the Review Plan for the Flood Control and Coastal Emergency and Renourishment Implementation Documents for the North Reach and South Reach Shore Protection Project, Brevard County, Florida

1. References:

a. Memorandum, CESAJ-EN-QC, 9 July 2013, subject: Approval of the Review Plan for the Flood Control and Coastal Emergency (FCCE) Renourishment Implementation Documents, for the North Reach and South Reach Shore Protection Project, Brevard County, Florida (Enclosure).

b. EC 1165-2-214, Civil Works Review, 15 December 2012.

2. The Review Plan for the Flood Control and Coastal Emergency and Renourishment Implementation Documents for the North Reach and South Reach Shore Protection Project, Brevard County, Florida submitted by reference 1.a, has been reviewed by this office. As a result of this review, minor changes were coordinated with your staff. The enclosed Review Plan with the coordinated changes incorporated is hereby approved in accordance with reference 1.b above.

3. We concur with the conclusion of the District Chief of Engineering that Type II Independent External Peer Review (Type II IEPR) is not required for this beach renourishment effort. The primary basis for the concurrence that a Type II IEPR is not required is the determination that the failure or loss of this beach periodic nourishment project would not pose a significant threat to human life. We also concur with the conclusion that Agency Technical Review is not required on this renourishment effort since the design duplicates previous editions of the Plans and Specifications that have been successfully used in the past.

4. The District should take steps to post the Review Plan to its web site and provide a link to CESAD-RBT. Before posting to the web site, the names of Corps/Army employees should be removed. Subsequent significant changes to this Review Plan, should they become necessary, will require new written approval from this office.

5. The SAD point of contact is [REDACTED].

DONALD E. JACKSON, JR.  
Brigadier General, USA  
Commanding

Encl

# **PROJECT REVIEW PLAN**

## **FLOOD CONTROL AND COASTAL EMERGENCY (FCCE) RENOURISHMENT BREVARD COUNTY NORTH REACH AND SOUTH REACH SHORE PROTECTION PROJECT**

### **BREVARD COUNTY, FLORIDA**

**Jacksonville District**

**July 2013**

THE INFORMATION CONTAINED IN THIS REVIEW PLAN IS DISTRIBUTED SOLELY FOR THE PURPOSE OF PREDISSEMINATION PEER REVIEW UNDER APPLICABLE INFORMATION QUALITY GUIDELINES. IT HAS NOT BEEN FORMALLY DISSEMINATED BY THE U.S. ARMY CORPS OF ENGINEERS, JACKSONVILLE DISTRICT. IT DOES NOT REPRESENT AND SHOULD NOT BE CONSTRUED TO REPRESENT ANY AGENCY DETERMINATION OR POLICY.



**US Army Corps  
of Engineers ®**

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## **1. PURPOSE AND REQUIREMENTS**

### **a. Purpose**

This Review Plan defines the scope and level of review activities for Brevard County North Reach and South Reach Shore Protection Project (FCCE) in Brevard County, Florida. The review activities consist of a District Quality Control (DQC) effort and a Biddability, Constructability, Operability, Environmental, and Sustainability (BCOES) Review. An Agency Technical Review (ATR) and Independent External Peer Review (IEPR) are not recommended in this review plan since failure of this project does not pose a significant threat to human life and this project has been recently constructed in a near exact manner. The project is in the Periodic Nourishment Phase and the related documents including Plans and Specifications (P&S) and a Design Documentation Report (DDR), are considered routine. Upon approval, this review plan will be included into the Project Management Plan for each of these projects as an appendix to the Quality Management Plan.

### **b. References**

- (1). ER 1110-2-1150, "Engineering and Design for Civil Works Projects", 31 August 1999
- (2). ER 1110-1-12, "Engineering and Design Quality Management", 31 March 2011
- (3). ER 415-1-11, "Biddability, Constructability, Operability, Environmental, and Sustainability (BCOES) Review", 1 January 2013
- (4). Section 101(b)(7) of WRDA 1996 (Public Law 104-303) 12 October 1996
- (5). EC 1165-2-214, "Civil Works Review", 15 December 2012
- (6). Limited Reevaluation Report (LRR) 1999, Brevard County SPP, 113619
- (7). 02611-SAJ Quality Control of In-House Products: Civil Works PED, 21 November 2011
- (8). 08550-SAJ, BCOES Reviews, 21 September 2011

### **c. Requirements**

This review plan was developed in accordance with EC 1165-2-214, which establishes an accountable, comprehensive, life-cycle review strategy for Civil Works products by providing a seamless process for review of all Civil Works projects from initial planning through design, construction, and Operation, Maintenance, Repair, Replacement and Rehabilitation (OMRR&R). The EC provides the procedures for ensuring the quality and credibility of U.S. Army Corps of Engineers (USACE) decision, implementation, and operations and maintenance documents and other work products.

### **d. Review Management Organization (RMO)**

The South Atlantic Division is designated as the RMO for this Review Plan effort.

## **2. PROJECT INFORMATION**

### **a. Project Location and Name**

The Brevard County Shore Protection Project is comprised of three shore protection project segments along a 72-mile long coastline. This project is broken into two segments, the North Reach and South Reach. Brevard County is located on the east coast of Florida, approximately half way down the peninsula near Cape Canaveral. The shoreline consists of a coastal barrier island separated from the mainland by Indian River, Banana River, and Mosquito Lagoon. Access to the project area is by causeways and bridges over the Indian River from the mainland cities of Titusville, Cocoa, and Melbourne, in addition to Coast Highway A1A, which traverses the whole area.

**b. Project Authorization**

- (1). **NORTH REACH:** This project is a Federally authorized and constructed project; it was constructed between 2000 and 2001. The project was authorized by Section 101(b)(7) of the Water Resource Development Act of 1996 (Public Law 104-303), 12 October 1996. The authorization was provided contingent upon a final report for the project. The Chief's Report was finalized and signed on 23 December 1996. As authorized, the plan included two separable reaches for the North and South Reaches. As authorized, the plan consisted of a 0 foot design berm at elevation +10 ft MLW over a distance of 9.4 miles for the north reach. The design template has slopes of 1V on 15H seaward to the location of MLW, thence 1V to 50H out to the existing bottom.

The Brevard County Shore Protection Project (SPP) Feasibility Study (USACE 1996) calls for renourishment of the North Reach with 516,000 CY on 6-yr intervals from offshore borrow sites. The North Reach segment first had an issued LRR in October 1999 and subsequent Project Cooperation Agreement (PCA) executed on 20 April 2000 describing the project approved by the Chief of Engineers on 23 December 1996. Initial Construction of North Reach involved the placement of approximately 2.8 million CY of beach quality material from November 2000 through April 2001. In 2006, FCCE and CG funds were used to renourish North Reach with the placement of 754,000 CY of material due to the Tropical Storms/Hurricanes of 2005.

- (2). **SOUTH REACH:** This project is a Federally authorized and constructed project; it was constructed between 2002 and 2003. The project was authorized by Section 101(b)(7) of the Water Resource Development Act of 1996 (Public Law 104-303), 12 October 1996. The authorization was provided contingent upon a final report for the project. The Chief's Report was finalized and signed on 23 December 1996. As authorized, the plan included two separable reaches for the North and South Reaches. The south reach design included a 0 foot design berm (equivalent of holding the shoreline in place) at elevation +10 ft Mean Low Water (MLW) over a 10.5-mile shore length. The Chief's Report, through the District's and Division's reports, modified the authorized project to change the South Reach's project length from 10.5 miles to 3.4 miles. This was done in order to eliminate adverse environmental impacts to over 32 acres of nearshore coquina rock outcrops and to avoid costly mitigation measures. Therefore, the South Reach of the Brevard County Shore Protection Project consists of a beach fill along 3.4 miles of shoreline (R119 – R137.5) with a 1,000-foot transition section (taper) at the northern limit and a 1,500 foot transition (taper) at the southern limit of the reach. The design berm elevation is +10 ft MLW with a design template width of 0 feet and slopes of 1V on 15H seaward to the location of MLW, thence 1V to 50H out to the existing bottom.

The Brevard County Shore Protection Project (SPP) Feasibility Study (USACE 1996) calls for renourishment of the South Reach with 601,000 CY on 6-yr intervals from offshore borrow sites. The South Reach segment first had an issued LRR in October 1999 and subsequent Project Cooperation Agreement (PCA) executed on 20 April 2000 describing the project approved by the Chief of Engineers on 23 December 1996. Initial Construction of South Reach involved the placement of approximately 1.6 million CY of beach quality material in two segments. Segment I (R122.5 to R-137) was constructed from February 2002 through April 2002. Segment II (R-119 to R-123.5) was constructed from March 2003 through April 2003. In 2005, FCCE and CG funds were used to renourish South Reach with the placement of 723,000 CY of material due to the Tropical Storms/Hurricanes of 2005. Another Renourishment of South Reach occurred in 2010 with 650,000 CY of beach quality material placed.

**c. Current Project Description**

The project will consist of the placement of beach quality material in North Reach using both FCCE and CG funding; and the placement of beach quality material in South Reach using FCCE funding only. All material will be placed between Florida Department of Environmental Protection (FDEP) monuments R-1 to R-54.5 (a distance of approximately 10.3 miles) in North Reach and R-118.3 to R-139 (a distance of approximately 3.9 miles) in South Reach. The boundaries of North Reach are from immediately

south of Canaveral Harbor down to Patrick Air force Base. The limits of South Reach are from the Indianalantic Beach to Melbourne Beach South. The beach fill template to be constructed is a berm of varying width at elevations +6.7-ft to +8.2-ft (NAVD-88), with a foreshore slope of 1 vertical on 15 horizontal slope. A small dune feature is to be constructed along the landward edge of the majority of the South Reach segment. All construction activity on the beach must be completed before May 1, 2014.

Two offshore sand borrow areas are identified for use. Canaveral Shoals I (CS-I) is located approximately 5 nautical miles (nm) east-northeast of Port Canaveral Entrance. Canaveral Shoals II (CS-II) is located approximately 7.6 nm east of Port Canaveral Entrance. The CS-I and CS-II borrow areas are respectively located approximately 6.3 to 8 nm from the Northern North Reach fill area, approximately 10.2 to 10.7 nm from the Southern North Reach fill area, and approximately 20 nm from the South Reach fill area. The CS-II borrow area has been previously utilized as a borrow source for sand fill placement along both the North and South Reach project segments.

A nearshore disposal and sand rehandling area is provided offshore of the North Reach and South Reach project fill areas, for which utilization is at the discretion of the Contractor. Pipeline corridors are not prescribed for the work; however, no pipelines or other elements of the work may impede navigation through the Canaveral Harbor entrance channel.

### 3. DISTRICT QUALITY CONTROL

District Quality Control and Quality Assurance activities for the project documents (DDR and P&S) are stipulated in ER 1110-1-12, Engineering & Design Quality Management and SAJ QMS 02611. The subject project DDR and P&S will be prepared by the Jacksonville District using ER 1110-1-12 procedures and will undergo DQC.

### 4. AGENCY TECHNICAL REVIEW

#### a. Risk Informed Decision on Appropriate Level of Review

Renourishment of Brevard County North Reach & South Reach Shore Protection Project is considered routine with the last renourishments occurring in 2006 and 2010.

Renourishment will be performed as previously constructed by SAJ in 2006 and 2010 with material obtained from the same borrow source and the beach template constructed to previous design grade using the same means and methods. Based on the responses to the risk-informed decision questions from EC 1165-2-214, Para 15, as shown below, it is recommended that an ATR for North Reach & South Reach Shore Protection Project renourishment is not warranted.

- (1). Does it include any design (structural, mechanical, hydraulic, etc)?  
*Yes. The design duplicates previous editions of P&S that have been used successfully in past renourishments. No changes will be made to beach template or borrow areas and the method of construction is expected to occur as before.*
- (2). Does it evaluate alternatives? *No.*
- (3). Does it include a recommendation? *No.*
- (4). Does it have a formal cost estimate?  
*Yes, an Independent Government Estimate for the contract will be developed.*

- (5). Does it have or will it require a NEPA document? *No.*
- (6). Does it impact a structure or feature of a structure whose performance involves potential life safety risks? *No. There is no life safety risk associated with this renourishment project.*
- (7). What are the consequences of non-performance?  
*The renourishment beach fill is a sacrificial fill section. Failure or non-performance of the nourishment would not in itself pose any safety issues as project monitoring triggers its replacement such that the project function is maintained.*
- (8). Does it support a significant investment of public monies? *Yes. The project is cost shared between the Government and local sponsor.*
- (9). Does it support a budget request? *No. The project implements appropriated funds.*
- (10). Does it change the operation of the project? *No.*
- (11). Does it involve ground disturbances?  
*Yes, dredging and beach placement are in areas that have been disturbed in accordance with authorized purposes in the past. Equipment will be used to place material to design grade and perform beach tilling, as in past contracts.*
- (12). Does it affect any special features, such as cultural resources, historic properties, survey markers, etc, that should be protected or avoided?  
*No. All project areas have appropriate clearances from cultural and environmental resources.*
- (13). Does it involve activities that trigger regulatory permitting such as Section 404 or stormwater/NPDES related actions?  
*Yes, the project uses an existing Environmental Assessment and Water Quality Certificate.*
- (14). Does it involve activities that could potentially generate hazardous wastes and/or disposal of materials such as lead based paints or asbestos? *No.*
- (15). Does it reference use of or reliance on manufacturers' engineers and specifications for items such as prefabricated buildings, playground equipment, etc? *No.*
- (16). Does it reference reliance on local authorities for inspection/certification of utility systems like wastewater, stormwater, electrical, etc? *No.*
- (17). Is there or was there expected to be any controversy surrounding the Federal action associated with the work product? *No.*

##### **5. BIDDABILITY, CONSTRUCTABILITY, OPERABILITY, ENVIRONMENTAL, AND SUSTAINABILITY (BCOES) REVIEW**

The value of a BCOES review is based on minimizing problems during the construction phase through effective checks performed by knowledgeable, experienced personnel prior to advertising for a contract. Biddability, constructability, operability, environmental, and sustainability requirements must be emphasized throughout the planning and design processes for all programs and projects. This will help to ensure that the government's contract requirements are clear, executable, and readily understandable by private sector bidders or proposers. It will also help ensure that the construction may be done efficiently and in an environmentally sound manner, and that the construction activities and projects are sufficiently sustainable. Effective BCOES reviews of design and contract documents will reduce risks of cost and time growth, unnecessary changes and claims, as well as support safe, efficient, sustainable operations and maintenance by the facility users and maintenance organization after construction is complete. A BCOES Review will be conducted for this project. Requirements and further details are stipulated in ER 1110-1-12, ER 415-1-11, and 08550-SAJ, BCOES Reviews.

## 6. INDEPENDENT EXTERNAL PEER REVIEW

### a. General.

EC 1165-2-214 provides implementation guidance for both Sections 2034 and 2035 of the Water Resources Development Act (WRDA) of 2007 (Public Law (P.L.) 110-114). The EC addresses review procedures for both the Planning and the Design and Construction Phases (also referred to in USACE guidance as the Feasibility and the Pre-construction, Engineering and Design Phases). The EC defines Section 2035 Safety Assurance Review (SAR), Type II Independent External Peer Review (IEPR). The EC also requires Type II IEPR be managed and conducted outside the Corps of Engineers.

### b. Type I Independent External Peer Review (IEPR) Determination.

A Type I IEPR is generally associated with decision documents. A Type I IEPR is not applicable to the P&S and DDR documents covered by this Review Plan.

### c. Type II Independent External Peer Review (IEPR) Determination (Section 2035).

The Brevard County Shore Protection Project does not trigger WRDA 2007 Section 2035 factors for Safety Assurance Review and, therefore, the District Engineering Chief does not recommend a Type II IEPR review under Section 2035 and/or EC 1165-2-214 be performed for this project. The factors, as stated under Section 2035 and EC 1165-2-214, are used in determining whether a Safety Assurance Review of design and construction activities is warranted. These factors and their applicability to this project are as follows:

- (1). The failure of the project would pose a significant threat to human life.  
*The project will perform periodic nourishment that will re-establish authorized beach sections. The beach is designed to protect structures through its sacrificial nature and is continually monitored and renourished in accordance with program requirements and constraints. Failure or loss of the beach fill will not pose a significant threat to human life.*  
*In addition, the prevention of loss of life within the project area from hurricanes and severe storms is via public education about the risks, warning of potential threats and evacuations before hurricane landfall.*
- (2). The project involves the use of innovative materials or techniques.  
*The project will utilize standard methods and procedures used by the Corps of Engineers on other similar works.*
- (3). The project design lacks redundancy.  
*The beach fill design for the project is in accordance with the USACE Coastal Engineering Manual. The manual does not employ the concept of redundancy for beach fill design.*
- (4). The project has unique construction sequencing, or a reduced, or overlapping design construction schedule.  
*Construction schedules do not have unique sequencing and activities are not reduced or overlapped. The construction methods associated with these renourishment contracts have been used successfully by the Corps of Engineers on other similar projects.*

## 7. MODEL CERTIFICATION AND APPROVAL

The project does not use any engineering models that have not been approved for use by USACE.

## 8. BUDGET AND SCHEDULE

- (1). Project Milestones. (Dates subject to change based on funding)
  - Initiate Draft P&S: 29-April-2013
  - Complete Draft P&S: 9-July-2013
  - DQC Review: 7 July 2013 to 12 July 2013



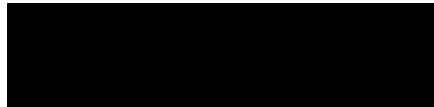
- BCOES Review: 23 July 2013 to 1 August 2013
- Advertisement: 23 July 2013 (Concurrent BCOE & Advertisement)

**9. POINTS OF CONTACT**

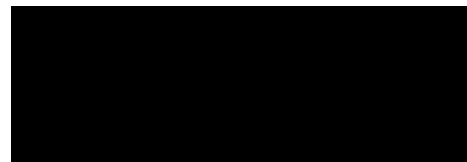
Jacksonville District points of contact names, titles, and responsibilities are listed below.

Per guidance, the names of the following individuals will not be posted on the Internet with the Review Plan.

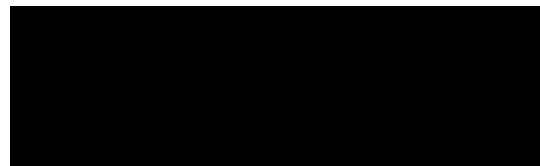
Review Manager



Project Information (PM)



Project Information (ETL)



South Atlantic Division



**ATTACHMENT A**

**ABBREVIATIONS**

<b><u>ABBREVIATIONS</u></b>	<b><u>DEFINED</u></b>
ATR	Agency Technical Review
BCOES	Biddability, Constructability, Operability, Environmental, and Sustainability
DQC	District Quality Control
EC	Engineering Circular
ER	Engineering Regulation
ETL	Engineering Technical Lead
FCCE	Flood Control and Coastal Emergencies
NEPA	National Environmental Policy Act
IEPR	Independent External Peer Review
MLW	Mean Low Water
NGVD	National Geodetic Vertical Datum
OMRR&R	Operation, Maintenance, Repair, Replacement and Rehabilitation
PDT	Project Delivery Team
PMP	Project Management Plan
QA	Quality Assurance
QCP	Quality Control Plan
QMS	Quality Management System
RMC	Risk Management Center
RMO	Review Management Organization
RP	Review Plan
SAD	South Atlantic Division
SAJ	South Atlantic Jacksonville
SAR	Safety Assurance Review (also referred as Type II IEPR)
WRDA	Water Resources Development Act