



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

CESAD-RBT

2 Aug 2017

MEMORANDUM FOR COMMANDER, JACKSONVILLE DISTRICT

SUBJECT: Approval of the Review Plan for the Brevard County Shore Protection Project, 2017 North and South Reaches Periodic Nourishment, Brevard County, Florida

1. References:

a. Memorandum, CESAJ-EN-Q, 13 July 2017, subject: Approval of Review Plan for Shore Protection Project, Brevard County, Florida, Beach Renourishment 2017, North Reach and South Reach (Encl).

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

2. The Review Plan (RP) for the Brevard County Shore Protection Beach Project 2017 periodic nourishment submitted by the Jacksonville District via reference 1.a has been reviewed by this office. Some minor clarification edits to the RP were coordinated with [REDACTED], your point of contact. The enclosed RP, with the coordinated edits incorporated, is hereby approved in accordance with reference 1.b above.

3. As indicated in the RP, the Brevard County Shore Protection Project 2017 periodic nourishment is within the authorized permitted and previously constructed template limits and also follows the same means and methods as the Brevard County 2013 periodic nourishment contract. Therefore, the South Atlantic Division (SAD) Office concurs with the District's RP recommendation that Agency Technical Review is not needed on this design effort. We also concur with the determination of the District Chief of Engineering and conclusion in the RP that a Type II Independent External Peer Review (IEPR) is not required on the Design Documentation Report and Plans and Specification. The primary basis for our IEPR concurrence is that the failure or loss of the features associated with this periodic nourishment will not pose a significant threat to human life.

4. The District should take steps to post the approved RP 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 RP, such as scope or level of review changes, should they become necessary, will require new written approval from this office.

CESAD-RBT

SUBJECT: Approval of the Review Plan for the Brevard County Shore Protection Project, 2017 North and South Reaches Periodic Nourishment, Brevard County, Florida

5. The SAD point of contact is [REDACTED]

[REDACTED]

Encl

[REDACTED]  
Brigadier General, USA  
Commanding

CF:

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]



DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT CORPS OF ENGINEERS  
701 SAN MARCO BOULEVARD  
JACKSONVILLE, FLORIDA 32207

REPLY TO  
ATTENTION OF

13 JUL 2017

CESAJ-EN-Q

MEMORANDUM FOR Commander, South Atlantic Division (CESAD-RBT), 60 Forsyth Street SW 10M15, Atlanta, GA 30303

SUBJECT: Approval of Review Plan for Shore Protection Project, Brevard County, Florida, Beach Renourishment 2017, North Reach and South Reach

1. References:

- a. EC 1165-2-214, Civil Works Review, 15 Dec 12.
- b. WRDA 1996, PL 104-303, 12 Oct 96 (Project Authorization).

2. I hereby request approval of the enclosed Review Plan and concurrence with the conclusion that a Type II Independent External Peer Review (IEPR) of the subject project is not required. The recommendation to exclude Type II IEPR is based on the EC 1165-2-214 Risk Informed Decision Process as presented in the Review Plan. Documents to be reviewed include the plans, specifications, and design documentation report. The Review Plan complies with applicable policy and has been coordinated with the CESAD. It is my understanding that non-substantive changes to this Review Plan, should they become necessary, are authorized by CESAD.

3. The district will post the CESAD approved Review Plan to its website and provide a link to the CESAD for its use. Names of Corps/Army employees will be withheld from the posted version, in accordance with guidance.

4. If you have any questions regarding the information in this letter, please feel free to contact me or you may contact [REDACTED]

Encl

[REDACTED]  
Colonel, EN  
Commanding

# **PROJECT REVIEW PLAN**

**For**

## **Preconstruction, Engineering and Design Phase Implementation Documents**

**For**

### **Brevard County Shore Protection Project North and South Reach FY17**

**Brevard County, Florida**

**Project P2 Number: 464383**

**Jacksonville District**

**July 2017**



**US Army Corps  
of Engineers®**

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## TABLE OF CONTENTS

|  |          |
|--|----------|
| <b>1. PURPOSE AND REQUIREMENTS .....</b>   | <b>1</b> |
| a. Purpose .....   | 1        |
| b. References .....  | 1        |
| c. Requirements.....   | 1        |
| d. Review Plan Approval and Updates .....  | 2        |
| e. Review Management Organization .....  | 2        |
| <b>2. PROJECT INFORMATION .....</b>  | <b>2</b> |
| a. Project Background.....   | 2        |
| b. Project Authorization .....   | 4        |
| c. Current Project Description .....   | 4        |
| d. Public Participation .....  | 4        |
| e. Civil Works Cost Engineering Mandatory Center of Expertise Certification .....                    | 5        |
| <b>3. DISTRICT QUALITY CONTROL .....</b>   | <b>5</b> |
| a. Requirements.....   | 5        |
| b. Documentation.....  | 5        |
| <b>4. AGENCY TECHNICAL REVIEW .....</b>  | <b>5</b> |
| <b>5. BIDDABILITY, CONSTRUCTABILITY, OPERABILITY, ENVIRONMENTAL, AND SUSTAINABILITY REVIEW .....</b> | <b>5</b> |
| <b>6. INDEPENDENT EXTERNAL PEER REVIEW .....</b>   | <b>6</b> |
| a. General.....  | 6        |
| b. Type I Independent External Peer Review Determination. ....                                       | 6        |
| c. Type II Independent External Peer Review Determination. ....                                      | 6        |
| <b>7. POLICY AND LEGAL COMPLIANCE .....</b>  | <b>7</b> |
| <b>8. MODEL CERTIFICATION AND APPROVAL .....</b>   | <b>7</b> |
| <b>9. PROJECT DELIVERY TEAM DISCIPLINES.....</b>   | <b>7</b> |
| <b>10. SCHEDULE .....</b>  | <b>7</b> |

ATTACHMENT A - Approved Review Plan Revisions

ATTACHMENT B - Partial List of Acronyms and Abbreviations

## **1. PURPOSE AND REQUIREMENTS**

### **a. Purpose**

This Review Plan defines the scope and level of review activities for the Brevard County Shore Protection Project North and South Reaches in Brevard County, Florida. As discussed below, the review activities consist of a District Quality Control (DQC) effort and a Biddability, Constructability, Operability, Environmental, and Sustainability (BCOES) Review. Also as discussed below, an Independent External Peer Review (IEPR) and an Agency Technical Review (ATR) are not recommended. The project is in the Pre-Construction, Engineering and Design (PED) phase. The implementation documents to be reviewed are Plans and Specifications (P&S) and a Design Documentation Report (DDR). Upon approval, this Review Plan will be included into the Project Management Plan (PMP) for this project as an appendix to the Quality Management Plan (QMP).

### **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). EC 1165-2-214, "Civil Works Review", 15 December 2012
- (4). ER 415-1-11, "Biddability, Constructability, Operability, Environmental, and Sustainability (BCOES) Review", 1 January 2013
- (5). SAJ EN QMS 02611, "SAJ Quality Control of In-House Products: Civil Works PED", 21 November 2011
- (6). SAJ EN QMS 08550, "BCOES Reviews", 21 September 2011
- (7). Enterprise Standard (ES) 08025, "Government Construction Quality Assurance Plan and Project/Contract Supplements"
- (8). Enterprise Standard (ES) 08026, "Three Phase Quality Control System"
- (9). Project Management Plan, Brevard County Shore Protection North and South Reach Beach Renourishment Project, Brevard County, Florida, P2 Number 464383

### **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. The EC outlines five levels of review: District Quality Control (DQC), Agency Technical Review (ATR), and an Independent External Peer Review (IEPR), Policy and Legal Review, and a Biddability, Constructability, Operability, Environmental, and Sustainability (BCOES) Review.

**d. Review Plan Approval and Updates**

The South Atlantic Division Commander is responsible for approving this Review Plan. The Commander's approval reflects vertical team input (involving district, MSC, RMO, and HQUSACE members) as to the appropriate scope and level of review. Like the PMP, the Review Plan is a living document and may change as the project progresses. The Jacksonville District is responsible for keeping the Review Plan up to date. Minor changes to the Review Plan since the last MSC Commander approval are documented in Attachment A. Significant changes to the Review Plan (such as changes to the scope and/or level of review) will be re-approved by the MSC Commander following the process used for initially approving the plan. The latest version of the Review Plan, along with the Commanders' approval memorandum, will be posted on the Jacksonville District's webpage. The latest Review Plan will be provided to the RMO and home MSC.

**e. Review Management Organization**

The South Atlantic Division (SAD) is designated as the Review Management Organization (RMO).

**2. PROJECT INFORMATION**

**a. Project Background**

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. The Brevard County Shore Protection Project North and South Reach comprises over 12.8 miles of the 72-mile long coastline in Brevard County, Florida. The project is broken into two reaches, the North Reach and South Reach. The North Reach is approximately 9.4 miles in Length between between Florida Department of Environmental Protection (FDEP) range monuments R-1 to R-53 and is in the vicinity of Cocoa Beach between Patrick Air Force Base and Cape Canaveral. The South Reach is approximately 3.4 miles in length between FDEP monuments R-118 to R-139 and is in the vicinity of Indialantic and Melbourne Beach.



Figure 1: Brevard County Project Map

## **b. Project Authorization**

This project is a Federally authorized and constructed project. North Reach was constructed between 2000 and 2001, and South Reach 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. 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. A zero foot berm means that the authorized design berm (+10.0 ft MLW elevation) extends seaward to the pre-project mean high water line. Zero foot refers to the measurement from the pre project mean high water line to the seaward extent of the authorized project fill. This measurement includes only the design berm on which the storm damage prevention is calculated and is exclusive of the advance fill. The design template has slopes of 1V on 15H seaward to the location of MLW, thence 1V to 50H out to the existing bottom. Periodic renourishment is estimated at 516,000 CY every 6 years in the North Reach and 601,000 CY every 6 years in the South Reach.

In October 1999 a Limited Reevaluation Report (LRR) was prepared to address four Headquarters' issues after authorization. These consisted of 1) project refinements for the borrow areas to be used for construction 2) updated project description 3) current benefit to cost ratio and 4) updated cost allocation. The LRR addressed an "Access Channel" that needed to be constructed for the North Reach and developed a closer borrow area for the South Reach, greatly reducing its construction costs. An Environmental Assessment was prepared for the changes in borrow areas; Space Coast Shoals for the South Reach and Canaveral Shoals II for the North Reach.

## **c. Current Project Description**

The federally authorized project extends from FDEP monuments R-1 to R-53 and from R-118 to R-139. The FY17 work will nourish eroded shoreline in Brevard County between FDEP monuments R-3 to R-53 for the North Reach segment and FDEP monuments R-118 and R-139 for the South Reach segment. The fill template for North Reach is situated between Patrick Air Force Base and Cape Canaveral (9.4 miles in length). The fill template for South Reach is located between Indialantic and Melbourne Beach (3.4 miles in length). The project beach has a maximum berm elevation of +8.2 feet, NAVD88, and a minimum berm elevation no less than +6.7 feet, NAVD88 with a foreshore slope of 1 Vertical on 15 Horizontal to tie into existing grade. The width of the berm varies from the Construction Baseline. The sand for the project will be sourced from an offshore borrow area. Project work also includes, but is not limited to, vibration control and monitoring, environmental species monitoring, turbidity monitoring.

## **d. Public Participation**

The Jacksonville District Corporate Communications Office continually keeps the affected public informed on Jacksonville District projects and activities. There are no planned activities, public participation meetings or workshops that could generate issues needing provision to review teams. The approved Review Plan will be posted on the Jacksonville District Internet. Any comments or questions regarding the Review Plan will be addressed by the Jacksonville District.

**e. Civil Works Cost Engineering Mandatory Center of Expertise Certification**

The cost related documents associated with the P&S and DDR and the associated contract do not require external peer review or certification by the Cost Engineering Mandatory Center of Expertise (MCX).

**3. DISTRICT QUALITY CONTROL**

**a. Requirements**

District Quality Control and Quality Assurance activities for DDRs and P&S are stipulated in ER 1110-1-12, Engineering & Design Quality Management and SAJ EN 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 District Quality Control by Jacksonville District personnel. SAJ EN QMS 02611 defines DQC as the sum of two reviews, Discipline Quality Control Review (DQCR) and Product Quality Control Review (PQCR).

**b. Documentation**

DQCRs occur during the design development process and are carried out as a routine management practice by each discipline. Checklists are utilized by each discipline to facilitate the review and to document the DQCR review comments. Certifications of the Discipline Quality Check and Review are signed by the Engineering Division Branch Chiefs certifying that the DQCR on all design analyses and products have been completed in accordance with the EN QMS process prior to release from their Branch.

The PQCR shall ensure consistency and effective coordination across all disciplines and to assure the overall coherence and integrity of the products. Review comments and responses for this review will be documented in DrChecks. The Product Quality Control Review shall be QC certified by the Lead Engineer and all applicable Engineering Division Section and Branch Chiefs. This PQCR certification signifies that all Discipline Specific Quality Checks and Review Certification are complete, as well as the Product Quality Control Reviews.

**4. AGENCY TECHNICAL REVIEW**

An ATR review is not recommended since this periodic nourishment mirrors the 2013 periodic nourishment, which was successfully constructed between December 2013 and March 2014. The construction limits of this contract are within the same limits as the 2013 periodic nourishment and will be constructed using the same means and methods since the material source will be the ebb shoal. The beach template has not changed in any way (e.g. berm width, elevation, alongshore limits, etc.). The scope of the this project is within the authorized, permitted, and previously constructed template limits and follows the same means, methods and sediment source methodology as the 2013 periodic nourishment contract. Therefore, an ATR is not recommended.

**5. BIDDABILITY, CONSTRUCTABILITY, OPERABILITY, ENVIRONMENTAL, AND SUSTAINABILITY 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, including during planning and design. 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 during the Final Design Phase. Requirements and further details are stipulated in ER 1110-1-12, ER 415-1-11, and SAJ EN QMS 08550.

## **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 and Construction 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 Determination.**

A Type I IEPR is primarily associated with decision documents. A Type I IEPR is not applicable to the implementation documents covered by this Review Plan.

### **c. Type II Independent External Peer Review Determination.**

This project does not trigger WRDA 2007 Section 2035 factors for Safety Assurance Review (termed Type II IEPR in EC 1165-2-214), and therefore, a review under Section 2035 is not required. The factors in determining whether a review of design and construction activities of a project are necessary as stated under Section 2035 along with this Review Plan's applicability statements follow.

- (1) The failure of the project would pose a significant threat to human life.

*This project will renourish portions of Brevard County North and South Reaches. Failure will not pose a threat to human life.*

- (2) The project involves the use of innovative materials or techniques.

*This project will utilize methods and procedures used by the Corps of Engineers on other similar works.*

- (3) The project design lacks redundancy.

*The project features are not complex in nature and do not employ the concept of redundancy.*

- (4) The project has unique construction sequencing or a reduced or overlapping design construction schedule.

*This project's construction does not have unique sequencing or a reduced or overlapping design. The construction sequence and schedule has been used successfully by the Corps of Engineers on other similar works.*

Based on the discussion above, the District Chief of Engineering, as the Engineer-In-Responsible-Charge, does not recommend a Type II IEPR Safety Assurance Review of the P&S and DDR.

**7. POLICY AND LEGAL COMPLIANCE**

The Jacksonville District Office of Counsel reviews all contract actions for legal sufficiency in accordance with Engineer Federal Acquisition Regulation Supplement 1.602-2 Responsibilities. The subject implementation documents and supporting environmental documents will be reviewed for legal sufficiency prior to advertisement.

**8. MODEL CERTIFICATION AND APPROVAL**

This project will not use any engineering models that have not been approved for use by USACE.

**9. PROJECT DELIVERY TEAM DISCIPLINES**

| <b>PDT Disciplines</b>   |
|--------------------------|
| Civil/Dredge Engineering |
| Construction Management  |
| Coastal Geology          |

**10. SCHEDULE**

| <b>Milestone</b> | <b>Task</b>         | <b>Start Date</b> | <b>End Date</b> |
|------------------|---------------------|-------------------|-----------------|
| CW310            | Draft P&S Complete  | 3-MAR-2017        | 31-MAY-2017     |
|                  | DQCR                | 1-JUN-2017        | 5-JUN-2017      |
|                  | PQCR/DQC*           | 6-JUN-2017        | 3-JUL-2017      |
|                  | BCOES Review        | 5-JUL-2017        | 8-AUG-2017      |
| CW320            | BCOES Certification | 8-AUG-2017        | 8-AUG-2017      |
| CW400            | Advertisement **    | 24-JUL-2017       | 22-AUG-2017     |
| CC800            | Award               | 29-SEP-2017       | 29-SEP-2017     |

\* SAJ EN QMS 02611 defines DQC as the sum of DQCR and PQCR.

\*\* Concurrent BCOES and advertisement to meet FY17 award date.

**ATTACHMENT A: APPROVED REVIEW PLAN REVISIONS**

| <b>Revision Date</b> | <b>Description of Change</b> | <b>Page / Paragraph Number</b> |
|----------------------|------------------------------|--------------------------------|
|                      |                              |                                |
|                      |                              |                                |
|                      |                              |                                |
|                      |                              |                                |
|                      |                              |                                |

**ATTACHMENT B: PARTIAL LIST OF ACRONYMS AND ABBREVIATIONS**

| <u>Acronyms</u> | <u>Defined</u>  |
|-----------------|---|
| AFB             | Alternatives Formulation Briefing   |
| ATR             | Agency Technical Review   |
| BCOES           | Biddability, Constructability, Operability, Environmental, and Sustainability Review    |
| CAP             | Continuing Authorities Program  |
| CERCAP          | Corps of Engineers Reviewer Certification and Access Program                            |
| CY              | Cubic Yards   |
| DDR             | Design Documentation Report   |
| DQC             | District Quality Control  |
| DQCR            | Discipline Quality Control Review   |
| EC              | Engineering Circular  |
| EA              | Environmental Assessment  |
| ER              | Engineering Regulation  |
| ERDC-CERL       | Engineer Research and Development Center – Construction Engineering Research Laboratory |
| ESA             | Endangered Species Act  |
| ETL             | Engineering Technical Lead  |
| FDEP            | Florida Department of Environmental Protection  |
| FONSI           | Findings of No Significant Impacts  |
| FSCA            | Feasibility and Cost Sharing Agreement  |
| FY              | Fiscal Year   |
| GRR             | General Reevaluation Report   |
| IEPR            | Independent External Peer Review  |
| LPP             | Locally Preferred Plan  |
| MCX             | Mandatory Center of Expertise   |
| MLLW            | Mean Low Low Water  |
| MSC             | Major Subordinate Command   |
| NAS             | National Academy of Sciences  |
| NEPA            | National Environmental Policy Act   |
| ODMDS           | Ocean Dredged Material Disposal Site  |
| OMB             | Office of Management and Budget   |
| OMRR&R          | Operation, Maintenance, Repair, Replacement and Rehabilitation                          |
| P&S             | Plans and Specifications  |
| PED             | Preconstruction Engineering and Design  |
| PDT             | Project Delivery Team   |
| PM              | Project Manager   |
| PMP             | Project Management Plan   |

| <u>Acronyms</u> | <u>Defined</u>  |
|-----------------|---|
| PPA             | Project Partnering Agreement                            |
| PQCR            | Product Quality Control Review                          |
| QA              | Quality Assurance                                       |
| QCP             | Quality Control Plan                                    |
| QMP             | Quality Management Plan                                 |
| QMS             | Quality Management System                               |
| RMC             | Risk Management Center                                  |
| RMO             | Review Management Organization                          |
| RP              | Review Plan   |
| RTS             | Regional Technical Specialist                           |
| SAJ             | South Atlantic Jacksonville District Office             |
| SAD             | South Atlantic Division Office                          |
| SAR             | Safety Assurance Review (also referred as Type II IEPR) |
| SME             | Subject Matter Expert                                   |
| USACE           | U.S. Army Corps of Engineers                            |
| WRDA            | Water Resources and Development Act                     |