



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

CESAD-RBT

30 April 2012

MEMORANDUM FOR COMMANDER, JACKSONVILLE DISTRICT (CESAJ-EN-QC/
LUIS A. RUIZ)

SUBJECT: Approval of the Review Plan for Contract 10, C-38 Reach 2 & MacArthur Ditch Backfill, Kissimmee River Restoration Project, Highlands and Okeechobee Counties, Florida

1. References:

a. Memorandum, CESAJ-EN-QC, 2 April 2012, subject: Approval of Review Plan for Contract 10, C-38 Reach 2 & MacArthur Ditch Backfill, Kissimmee River Restoration Project, Highlands and Okeechobee Counties, Florida (Enclosure).

b. EC 1165-2-209, Civil Works Review Policy, 31 January 2010.

2. The enclosed Review Plan for C-38 Reach 2 & MacArthur Ditch Backfill, Kissimmee River Restoration Project, dated 2 April 2012, submitted by reference 1.a, has been reviewed by this office and is approved in accordance with reference 1.b.

3. The South Atlantic Division concurs with the determination that a Type II Independent External Peer Review (IEPR) is not required on this project. The primary basis for the concurrence that a Type II IEPR is not required is the determination that neither the failure of the backfilling nor demolishing of the S-65C spillway and lock structures effort poses a significant threat to human life. Non-substantive changes to this RP do not require further approval.

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.

5. The SAD point of contact is Mr. James Truelove, CESAD-RBT, 404-562-5121.

FOR THE COMMANDER:

Encl


CHRISTOPHER T. SMITH, P.E.
Chief, Business Technical Division



DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
P.O. BOX 4970
JACKSONVILLE, FLORIDA 32232-0019

REPLY TO
ATTENTION OF

CESAJ-EN-QC

2 April 2012

MEMORANDUM FOR Commander, South Atlantic Division (CESAD-RBT)

SUBJECT: Approval of Review Plan for Contract 10, C-38 Reach 2 & MacArthur Ditch Backfill, Kissimmee River Restoration Project, Highlands and Okeechobee Counties, Florida

1. References.


- a. EC 1165-2-209, Civil Works Review Policy, 31 January 2010
- b. WRDA 2007 H. R. 1495 Public Law 110-114, 08 Nov 07

2. I hereby request approval of the enclosed Review Plan and concurrence with the conclusion that Type II Independent External Peer Review (IEPR) of this project is not required. The Type II IEPR determination is based on the EC 1165-2-209 Risk Informed Decision Process as presented in the Review Plan. Approval of this plan is for Preconstruction, Engineering and Design Phase Implementation Documents. The Review Plan complies with applicable policy, provides Agency Technical Review 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 are withheld from the posted version, in accordance with guidance.

FOR THE COMMANDER:

Encl


LUIS A. RUIZ, P.E.
Chief, Engineering Division

REVIEW PLAN

For

Preconstruction Engineering and Design Phase

For

**Contract 10, C-38 Reach 2 &
MacArthur Ditch Backfill**

of the

Kissimmee River Restoration Project

Jacksonville District

2 April 2012

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 of review activities for the C-38 Reach 2 and MacArthur Ditch Backfill of the Kissimmee River Restoration Project. Review activities consist of District Quality Control (DQC) and Agency Technical Review (ATR). The project is in the Preconstruction Engineering Design (PED) Phase that includes preparation of Plans and Specifications (P&S), a Design Documentation Report (DDR), and related computations. Upon approval, this review plan will be included into the Project Management Plan as an appendix to the Quality Management Plan.

b. References.

- (1). EC 1165-2-209, Civil Works Review Policy, 31 January 2010
- (2). ER 1110-2-1150, Engineering and Design for Civil Works Projects, 31 Aug 1999
- (3). ER 1110-1-12, Engineering and Design Quality Management, 21 Jul 2006
- (4). 114520 Project Management Plan, Kissimmee River Restoration Projects, Section, is currently being updated to reflect updated costs and a revised schedule.

c. Requirements. This review plan was developed in accordance with EC 1165-2-209, 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 three levels of review: District Quality Control, Agency Technical Review, and Independent External Peer Review. Refer to the EC for the definitions and procedures for the three levels of review.

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

2. PROJECT INFORMATION AND BACKGROUND

The C-38 Reach 2 and MacArthur Ditch Backfill project is part of the Kissimmee River Restoration Project and is located in both Highlands and Okeechobee Counties in central Florida. The scope of work involves channel backfill and the removal of water control structure S-65C. Portions of the C-38 canal within Reach 2 of the Kissimmee River Basin will be backfilled along with the MacArthur ditch located within the Pool C floodplain. The material used for the backfill of the C-38 and the MacArthur ditch will be sourced from existing spoil mounds located along the adjacent canal banks. The canal will be backfilled starting approximately 500 LF north of the US HWY 98 bridge crossing, continuing north for approximately 35,800 LF stopping at the terminus of Reach 1 Backfill (KRR CNT 7). The MacArthur ditch, located northwest of C-38 Reach 2, is approximately 20,000 LF in length. The extent of ditch backfill will be based upon the available material remaining after the C-38 Reach 2 backfill. Near the completion of backfilling, S-65C spillway and lock structures will be demolished, starting with removal of any toxic materials. After the structures are removed, the tieback levees will be degraded and the cross structure removed.

Background: Historically, the Kissimmee River meandered approximately 103 miles from Lake Kissimmee to Lake Okeechobee through a one to two mile wide floodplain. In 1954, the Comprehensive Central and Southern Florida (C&SF) Flood Control project authorized the Kissimmee River Flood Control works to relieve flooding and minimize flood damages within the Kissimmee Basin and to improve navigation opportunities. With the construction of 13 structures, addition of multiple canals in the Upper Basin, and the channelization of the river floodplain with the C-38 Canal, two-thirds of the historical floodplain were drained and the hydrology of the

Kissimmee Basin drastically modified. Excavation of the canal and placement of the spoil material destroyed one-third of the river channel.

In 1986, the Kissimmee River Restoration (KRR) project and Headwaters Revitalization, intended to restore the ecological integrity of the river and lakes, was authorized by the following Water Resource Development Act (WRDA) Sections:

- Section 1135 of the WRDA 1986 (Public Law 99-662)
- Section 46 of the WRDA 1988 (Public Law 100-676)
- Section 116 (h) of the WRDA 1990 (Public Law 101-640)
- Section 101 (8) of the WRDA 1992 (Public Law 102-580)

The project is intended to restore over 40 square miles of river and floodplain ecosystem including 43 miles of meandering river channel and 27,000 acres of wetlands. The project area covers 3,000 square miles, stretching from the southern Orlando area south to Lake Okeechobee. Restoration efforts will re-establish an environment conducive to the fauna and flora that existed there prior to the channeling efforts in the 1960s.

3. DISTRICT QUALITY CONTROL

District Quality Control (DQC) activities for engineering products are stipulated in ER 1110-1-12, Engineering & Design Quality Management and EC 1165-2-209. DQC will be performed on the P&S and DDR in accordance CESAJ Engineering Division Quality Management System (EN QMS). The EN QMS defines DQC as the sum of two reviews, Discipline Quality Control Review and Product Quality Control Review. Product Quality Control Review is the DQC Certification that will precede ATR.

4. AGENCY TECHNICAL REVIEW

a. Scope. Agency Technical Review (ATR) is undertaken to "ensure the quality and credibility of the government's scientific information" in accordance with EC 1165-2-209 and ER 1110-1-12. An ATR will be performed on the DDR and P&S pre-final submittals.

ATR will be conducted by individuals and organizations that are external to the Jacksonville District. The ATR Team Leader is a Corps of Engineers employee outside the South Atlantic Division. The required disciplines and experience are described below.

ATR comments are documented in the DrCheckssm model review documentation database. DrCheckssm is a module in the ProjNetsm suite of tools developed and operated at ERDC-CERL (www.projnet.org).

At the conclusion of ATR, the ATR Team Leader will prepare a Review Report that summarizes the review. The report will consist of the ATR Certification Form from EC 1165-2-209 and the DrCheckssm printout of the closed comments.

b. ATR Disciplines. As stipulated in ER 1110-1-12, ATR members will be sought from the following sources: regional technical specialists (RTS); appointed subject matter experts (SME) from other districts; senior level experts from other districts; Center of Expertise staff; experts from other USACE commands; contractors; academic or other technical experts; or a combination of the above. The ATR Team will be comprised of the following discipline; knowledge, skills and abilities; and experience levels.

Civil Engineering. The civil/site team member should be a registered professional engineer with a minimum 7 years experience. Experience should include site development expertise that includes canal design, earthwork operations, material balancing, embankment design and construction phasing.

Geotechnical Engineering. The team member should be a registered professional engineer with a minimum of 7 years experience. Experience needs to encompass embankment design and analyses for the construction of earthwork projects.

ATR Team Leader. The ATR Team Leader should have experience with flood risk management projects. ATR Team Leader may be a co-duty to one of the review disciplines.

5. INDEPENDENT EXTERNAL PEER REVIEW

a. General. EC 1165-2-209 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 (Section 2034). A Type I IEPR is associated with decision documents. No decision documents are addressed by this Review Plan

c. Type II Independent External Peer Review (IEPR) Determination (Section 2035). This project does not trigger WRDA 2007 Section 2035 factors for Safety Assurance Review (termed Type II IEPR in EC 1165-2-209) 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 is necessary as stated under Section 2035 along with this review plan applicability statement follow.

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

This project will backfill portions of the C-38 and an existing farm ditch to restore natural sheet flows. A water control structure and lock will also be removed. Failure of either feature 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 a 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 installation sequence and schedule has been used successfully by the Corps of Engineers on other similar works.

6. MODEL CERTIFICATION AND APPROVAL

This ecosystem restoration project does not use any engineering models that have not been approved for use by USACE.

7. SCHEDULE AND COST ESTIMATE

a. Project Milestones.

EN8180	ATR/sponsor Review	15 days	16-May-12	6-Jun-12
	Cost Presentation to Sponsor	1 day	7-Jun-12	7-Jun-12
	ATR/sponsor Review Comment Evaluation	5 days	7-Jun-12	13-Jun-12
	ATR/sponsor Review Comment Backcheck / Close	5 days	14-Jun-12	20-Jun-12
	Incorporate ATR/sponsor comments	10 days	21-Jun-12	5-Jul-12
	ATR Package Submitted and Reviewed For Certification	3 days	6-Jul-12	10-Jul-12
EN8185	ATR CERTIFIED	0 days	10-Jul-12	10-Jul-12

b. ATR Schedule and Cost. Funds are available to execute ATR and schedule as outlined above. It is envisioned that the reviewer will be afforded 24 hours for ATR plus 8 hours for coordination. The estimated cost range is \$8,000 to \$10,000.

8. POINTS OF CONTACT

Per guidance, the names of the following individual will not be posted on the Internet with the Review Plan. Their titles and responsibilities are listed below.

Jacksonville District POCs:

Review Plan, ATR and QM Process, Jimmy D. Matthews
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