



DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS, NORTH ATLANTIC DIVISION
FORT HAMILTON MILITARY COMMUNITY
302 GENERAL LEE AVENUE
BROOKLYN NY 11252-6700

CENAD-RBT

3 July 2013

MEMORANDUM FOR Commander, Baltimore District, (CENAB-EN/Mr. Maj), 10 South Howard Street, Baltimore, MD 21201-2526

SUBJECT: Review Plan Approval for Prince George's County Levee System Evaluation Reports, Prince George's County, Maryland

1. References:

a. E-Mail, CENAB-PL-P (D. Bierly), 12 April 2013, Subject: FY13 Investigation version 1 studies w/o a Review Plan

b. EC 1165-2-214, Water Resources Policies and Authorities – Civil Works Review Policy, 15 Dec 2012

c. EC 1110-2-6067, USACE Process for the National Flood Insurance Program (NFIP) Levee System Evaluation, 31 August 2010

2. The enclosed Review Plan for the Prince George's Levee System Flood Risk Management Project in Prince George's County, MD has been prepared in accordance with Reference 1.b. The Review Plan covers the preparation of four Levee System Evaluation Reports (LSER) for levees which comprise the Prince George's County Levees Flood Risk Management Project.

3. The Review Plan does not include Agency Technical Review (ATR) since the PDT has performed an evaluation and determined that an ATR is not required for the LSERs. The Review Plan also does not include Independent External Peer Review (as defined by Ref 1.b) since the project does not involve potential hazards which pose a significant threat to human life. However, the Review Plan does include review of the hydrology and hydraulic analyses by New England District.

4. The Review Plan for the Prince George's Levee System Flood Risk Management Project in Prince George's County, MD is approved. The Review Plan is subject to change as circumstances require, consistent with study development under the Project Management Business Process. Subsequent revisions to this Review Plan or its execution will require new written approval from this office.

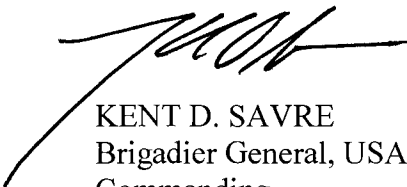
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5. In accordance with Reference 1.b, Appendix B, Paragraph 6, this approved Review Plan shall be posted on your district website for public review and comment. The plan will also be posted on NAD's website.

6. The Point of Contact for this action is Alan Huntley, Business Technical Division, 347-370-4664 or Alan.Huntley@usace.army.mil.

Encl
as



KENT D. SAVRE
Brigadier General, USA
Commanding

CF (w/ encl):
CENAD-PDX (L. Cocchieri)
CENAB-EN (B. Fedor)

**REVIEW PLAN
FOR
PRINCE GEORGE'S COUNTY LEVEE, MD

BALTIMORE DISTRICT**

MSC Approval Date: 03 JUL 2013

Lat Revision Date: April 2013

1. PURPOSE AND REQUIREMENT

- a. **Purpose:** The purpose of this review plan is to identify the requirements and plan of action for the review of the products for Prince George's County Levee, Maryland feasibility study. At this time, the project is focused on preparation of four levee system evaluation reports. Although it is in the feasibility phase, this effort will not generate a decision document.
- b. **References:**
- EC 1165-2-214, *Civil Works Review*, 15 Dec 2012;
 - ER 1110-2-1150, *Engineering and Design for Civil Works Projects*, 31 Aug 1999;
 - ER 1110-1-12, *Engineering and Design Quality Management*, 21 Jul 2006 as revised through 31 March 2011; and
 - EC 1110-2-6067, *Engineering and Design – Process for the National Flood Insurance Program (NFIP) Levee System Evaluation*, 31 August 2010.
- 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 all Civil Works projects from initial planning through design and construction, as well as operation, maintenance, repair, replacement and rehabilitation (OMRR&R). The EC's outline includes three levels of review: district quality control/quality assurance (DQC), agency technical review, independent external peer review (IEPR), and policy and legal compliance review.
- d. **Review Management Organization (RMO):** The RMO is responsible for managing the overall peer review effort described in this Review Plan. The RMO for decision documents is typically either a Planning Center of Expertise (PCX) or the Risk Management Center (RMC), depending on the primary purpose of the decision document. The RMO for the peer review effort described in this Review Plan is the Flood Risk Management PCX.

2. PROJECT INFORMATION

- a. **Project Description:** The project is focused on flood risk management analysis for the existing Prince George's County levee on the Anacostia River. Specifically, the analyses being conducted support the preparation of four separate levee system evaluation reports corresponding to the four levee systems that comprise the Prince George's County, Maryland – Anacostia Levees Flood Risk Management Project (FRMP). These levee system evaluations are in support of the National Flood Insurance Program (NFIP) as administered by the Federal Emergency Management Agency (FEMA). The levee system evaluations are being accomplished in accordance with Title 44 Code of Federal Regulations, Section 65.10, Mapping of Areas Protected by Levee Systems, dated 1 October 2002, and USACE's Engineering Circular (EC) 1110-2-6067, Engineering and Design – Process for the National Flood Insurance Program (NFIP) Levee System Evaluation, dated 31 August 2010.

The Prince George's County, Anacostia FRMP is located in Prince George's County, Maryland, along both banks of the Anacostia River at the confluence of the Northwest and Northeast Branches of the Anacostia River. The project was authorized by the Flood Control Act of May 17, 1950 (Public Law 516, of the 81st Congress 2nd session, House Report 5472).

Construction of the Prince George's County Levee was started in November 1954, and completed approximately 5 years later. The project was formally transferred to the project sponsor on 17 November 1959, for operation and maintenance.

The protective works of the Prince George's County Levee consist of 14,400 feet of flood control channels and 28,100 feet of levee embankment along the Anacostia River main stem, the Northeast Branch, and the Northwest Branch. In addition, the constructed project included four pumping stations with connecting storm sewers for interior drainage, one pressure conduit for interior drainage, and relocation and reconstruction of four highway bridges and one railroad bridge. The project was designed to protect seven Maryland communities – the towns of Bladensburg, Edmonston, Riverdale, Hyattsville, Brentwood, Cottage City, and Colmar Manor – from high flows.

Pumping stations for interior drainage are located in Colmar Manor, Brentwood, Bladensburg, and Edmonston. The level of protection was designed to be substantially higher than the maximum flood of record at the time of construction (23 August 1933). For the Northeast Branch, the design discharge at the Riverdale Road gage (drainage area of 49.4 square miles) was 8,000 cubic feet per second (cfs). The design discharge on the Northwest Branch at the Queens Chapel Road gage (drainage area of 72.8 square miles) was 10,000 cfs. The computed design discharge for the main stem was 15,000 cfs (roughly 80 percent of the combined peak flows from the two tributaries).

- b. **Implementation Documents:** This review plan has been prepared for the four levee system evaluation reports that will be provided to Prince George's County, FEMA Region III, and the Maryland and county NFIP coordinators. No decision document will be generated as part of this effort.

3. DISTRICT QUALITY CONTROL (DQC)

All implementation documents shall undergo DQC fulfilling the project quality requirements defined in the project management plan (PMP) and ER 1110-2-1150. DQC will be documented through the use of DrChecks and an independent technical review certification, which will be signed by all reviewers. Products that will undergo DQC include the hydrologic and hydraulic analyses, inspections of the levee system's features, and the levee assessment. DQC will be performed by senior managers at the Baltimore District that have not been involved in the preparation of the documents.

4. AGENCY TECHNICAL REVIEW (ATR)

ATR is mandatory for all implementation documents. The levee system evaluation reports are provided to FEMA for their use; as such, they are not USACE implementation documents. Consequently, ATR is not required for this project. However, due to the critical nature of the hydrology and hydraulic analyses, an independent external review of these analyses was determined to be desirable. This review will be conducted by senior staff at USACE's New England District. All comments from this review will be captured in DrChecks so that a record of the comment and response can be formally documented.

At this time, no further documents are anticipated to be prepared for this project. If the situation were to change and implementation documents were to be prepared, this review plan would be modified to reflect the need for formal ATR.

5. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)

Under certain circumstances, an IEPR may be required for implementation documents. IEPR is the most independent level of review, and is applied in cases that meet certain criteria where the risk and magnitude of the proposed project are such that a critical examination by a qualified team outside of USACE is warranted. A risk-informed decision, as described in EC 1165-2-214, is made as to whether IEPR is appropriate. IEPR panels will consist of independent, recognized experts from outside of the USACE in the appropriate disciplines, representing a balance of areas of expertise suitable for the review being conducted. There are two types of IEPR:

- Type I IEPR. Type I IEPRs are managed outside USACE and are conducted on project studies. Type I panels assess the adequacy and acceptability of the economic and environmental assumptions and projections, project evaluation data, economic analyses, environmental analyses, engineering analyses,

formulation of alternative plans, methods for integrating risk and uncertainty, models used in evaluation of environmental impacts of proposed projects, and biological opinions of the project study. Type I IEPR will cover the entire decision document or action and will address all underlying engineering, economics, and environmental work, not just one aspect of the study. For decision documents where a Type II IEPR (Safety Assurance Review) is anticipated during project implementation, safety assurance shall also be addressed during the Type I IEPR per EC 1165-2-214.

- Type II IEPR. Type II IEPRs, or Safety Assurance Review), are managed outside the USACE and are conducted on design and construction activities for hurricane, storm, and flood risk management projects or other projects where existing and potential hazards pose a significant threat to human life. Type II IEPR panels will conduct reviews of the design and construction activities prior to initiation of physical construction and, until construction activities are completed, periodically thereafter on a regular schedule. The reviews shall consider the adequacy, appropriateness, and acceptability of the design and construction activities in assuring public health safety and welfare.

IEPR is not applicable as per ER 1165-2-214 since levee system evaluation reports for the Prince George's County Levee Project are not implementation or decision documents.

6. POLICY AND LEGAL COMPLIANCY REVIEW

All implementation documents will be reviewed for their compliance with law and policy. The levee system evaluation reports are not implementation documents so no policy or legal compliance review is appropriate.

7. COST ENGINEERING DIRECTORATE OF EXPERTISE (DX) REVIEW AND CERTIFICATION

Any cost estimate updates shall be coordinated with the Cost Engineering DX which is located in the Walla Walla District. The levee system evaluation reports do not involve cost estimates; hence, there will be no need for the Cost Engineering DX to review the documents.

8. REVIEW SCHEDULES AND COSTS

- a. ATR Schedule and Cost.** Not-Applicable
- b. Type I IEPR Schedule and Cost.** Not-Applicable
- c. Model Certification/Approval Schedule and Cost.** Not-Applicable

9. PUBLIC PARTICIPATION

It is not envisioned that there will be any public participation during the development of the system evaluation reports. The information being generated is purely engineering in nature and does not affect the public.

10. REVIEW PLAN APPROVAL AND UPDATES

The North 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 for the decision document. Like the PMP, the review plan is a living document and may change as the study progresses.

The home district is responsible for keeping the review plan up to date. Minor changes to the review plan since the last MSC commander approval will be documented. Significant changes to the review plan (such as changes to the scope and/or level of review) should 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 commander's approval memorandum, should be posted on the home district's webpage. The latest review plan should also be provided to the home MSC.

11. REVIEW PLAN POINTS OF CONTACT

Public questions and/or comments on this review plan can be directed to the following points of contact:

Claire D. O'Neill, Project Manager, Programs and Project Management Division, Baltimore District (410) 962-0876.

Joe Vietri, Chief Planning and Policy Division, North Atlantic Division (718) 765-7070.

Karen Miller, Regional Director, Flood Risk Management Planning Center of Expertise, (304) 399-5859.