



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

CENAD-RBT

NOV 14 2014

MEMORANDUM FOR Commander, New York District, (CENAN-EN / Mr. Connolly),
26 Federal Plaza, New York, NY 10278-0090

SUBJECT: Review Plan Approval for Fire Island Inlet to Montauk Point, Downtown
Montauk Stabilization Project

1. References:

a. Email, CENAN-EN (A. Zuzulock), 1 July 2014, Subject: Review Plan- Downtown
Montauk Emergency Stabilization

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

2. The enclosed Review Plan for Fire Island Inlet to Montauk Point, Downtown Montauk
Stabilization Project was prepared in accordance with Reference 1.b. The plan outlines
the review of implementation documents (design and construction) of all project
features.

3. NAD Business Technical Division is the Review Management Organization for the
Agency Technical Review. The Review Plan does not include Type II Independent
External Peer Review (Safety Assurance Review) because the project does not include
design or construction activities that involve potential hazards which pose a significant
threat to human life.

4. The Review Plan for the Fire Island Inlet to Montauk Point, Downtown Montauk
Stabilization Project 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 require new written approval from this office.

5. In accordance with Reference 1.b, Appendix B, Paragraph 6, post this approved
Review Plan on your district website for public review and comment. NAD will similarly
post on the Division website.

CENAD-RBT

SUBJECT: Review Plan Approval for Fire Island Inlet to Montauk Point, Downtown
Montauk Stabilization Project

6. The point of contact is Jeffrey Wisniewski, Sandy Lead Engineer, 347-370-4783 or
jeffrey.wisniewski@usace.army.mil.

Encl



KENT D. SAVRE
Brigadier General, USA
Commanding

CF: (w/ encl)
CECW-NAD-RIT (M. Voich)
CENAN-EN (A. Zuzulock)

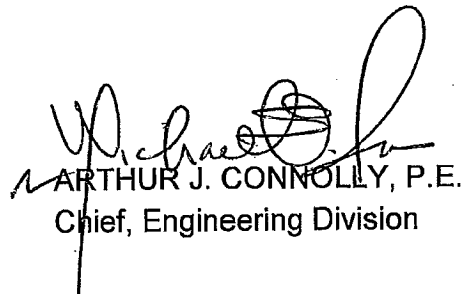
CENAN-EN

1 July 2014

MEMORANDUM FOR Commander, North Atlantic Division, ATTN: Sandy Coastal Management Division

SUBJECT: Review Plan for Fire Island Inlet to Montauk Point, Downtown Montauk Stabilization Project

1. In accordance with EC 1165-2-214 (Civil Works Review Policy), enclosed for your review and approval is the subject document.
2. The point of contact for the Review Plan is Andrew Zuzulock of my staff at (917) 790-8241.


ARTHUR J. CONNOLLY, P.E.
Chief, Engineering Division

Encl
Review Plan

CF:
C, CENAN-PL
C, CENAN-PP

Table of Contents

1. Purpose and Requirements.....	1
Purpose.....	1
References.....	1
Requirements.....	1
2. Review Management Organization (RMO)	1
3. Project Information and Background	1
4. District Quality Control (DQC).....	2
5. Agency Technical Review (ATR)	3
6. Independent External Peer Review (IEPR)	5
7. Policy and Legal Compliance Review	7
8. Cost Engineering Directorate of Expertise (DX) Review and Certification.....	7
9. Model Certification and Approval	7
10. Review Schedules and Costs	8
11. Public Participation	8
12. Review Plan Approval and Updates	8
13. Review Plan Points of Contact	8
Attachment 1: Team Rosters.....	9
Attachment 2: Sample Statement of Technical Review.....	11
Attachment 3: List of Acronyms.....	13
ATTACHMENT 4: MFR ON RISK INFORMED ASSESSMENT OF SIGNIFICANT THREAT TO HUMAN LIFE BY CENAN C, ENGINEERING DIVISION.....	15

3. PROJECT INFORMATION AND BACKGROUND

a. Implementation Documents. This Review Plan has been prepared for the implementation documents for the Downtown Montauk Stabilization Project within the overall Fire Island Inlet to Montauk Point project area. The purpose of these documents is to provide a record of final design for the reinforced dune. Approval of the implementation documents is at the District Command level. The plans and specifications for the implementation documents will be developed in one phase.

b. Project Description.

This project is authorized by the River and Harbor Act of 1960. A Hurricane Sandy Limited Reevaluation Report for the Downtown Montauk Stabilization Project is currently under review by the North Atlantic Division. The recommended plan provides for reduction of storm damages from coastal erosion and flooding caused by high surge events through a reinforced dune. The State of New York, acting through the Department of Environmental Conservation, is the non-Federal sponsor for this project. The implementation documents reflect post- Hurricane Sandy conditions.

c. Factors Affecting the Scope and Level of Review.

The focus of this Review Plan is on the implementation documents (DDR, plans, and specifications) for the Downtown Montauk Stabilization Project.

An assessment of the need for a Type II Independent External Peer Review, Safety Assurance Review, is documented in Section 6 of this Review Plan. This assessment by the New York District Chief of Engineering Division considered life safety and other factors including whether the project includes redundancy, resiliency, and robustness; and whether the project has unique construction sequencing. This assessment was conducted for the entirety of the Downtown Montauk Stabilization Project and includes all components of the selected plan.

4. DISTRICT QUALITY CONTROL (DQC) AND BCOES Review

All implementation documents shall undergo DQC. DQC is an internal review process of basic science and engineering work products focused on fulfilling the project quality requirements defined in the Project Management Plan (PMP). The New York District will manage the DQC and BCOES reviews.

a. Documentation of DQC and BCOES Reviews. DQC and BCOES will be documented through the use of DrChecks and DQC/ BCOES certificates.

	with identifying and resolving environmental issues in a coastal ecosystem, and will have experience with Section 106 actions and documentation.
Coastal Engineering	Team member will be an expert in the field of coastal processes and have a thorough understanding of sediment transport, application of wave forces and water levels over the likely range of storm return periods, beach fill design including renourishment, determination of risk due to sea level rise, and design of dune systems. The team member will be a licensed professional engineer.
Civil Engineering	Team member will be an expert in the field of civil engineering, especially in the review of coastal projects. Team member will have experience in the design of dune systems. The team member will be a licensed professional engineer.
Construction Manager	Team member will be a construction manager with 10 years experience in the management of coastal projects. Team member will have experience as an Administrative Contracting Officer of both beach fill placement projects and construction of coastal structures. Team member will be a licensed professional engineer.

- c. **Documentation of ATR.** DrChecks review software will be used to document all ATR comments, responses, and associated resolutions accomplished throughout the review process. Comments should be limited to those that are required to ensure adequacy of the product. The four key parts of a quality review comment will normally include:
1. The review concern- identify the product's information deficiency or incorrect application of policy, guidance, or procedures;
 2. The basis for the concern- cite the appropriate law, policy, guidance, or procedure that has not been properly followed;

- e. **ATR Certification.** ATR will be certified when all ATR concerns are either resolved or referred to the vertical team for resolution and the ATR documentation is complete. The ATR Lead will prepare a Statement of Technical Review certifying that the issues raised by the ATR team have been resolved (or elevated to the vertical team). A Statement of Technical Review should be completed for the implementation documents. A sample Statement of Technical Review is included in Attachment 2.

6. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)

An IEPR may be required for implementation documents under certain circumstances. 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:

- a. **Type I IEPR.** Type I IEPRs are managed outside the USACE and are conducted on project studies. Type I IEPR panels assess the adequacy and acceptability of the economic and environmental assumptions and projections, project evaluation data, economic analysis, environmental analyses, engineering analyses, formulation of alternative plans, methods for integrating risk and uncertainty, models used in the 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.
- b. **Type II IEPR.** Type II IEPRs, or Safety Assurance Reviews (SAR), 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.
- c. **Decision on IEPR.**
 - (1) Type I IEPR's are conducted on project studies and reports. Since this review plan deals with implementation documents, a Type I IEPR is not applicable.
 - (2) Type II Independent External Peer Review, Safety Assurance Review, is required by EC 1165-2-214 for hurricane and storm risk management and flood risk management

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, will be posted on the Home District's web page.

13. REVIEW PLAN POINTS OF CONTACT

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

- Andrew Zuzulock, NAN, EN Technical Manager, 917-790-8241
- Jeffrey Wisniewski, Lead Engineer, NAD Sandy Coastal Management Division, 347-370-4783

Vertical Team

Name	Role	Phone Number	E-mail Address
Anthony Ciorra, P.E.	NAN PPMD; Chief, Coastal Restoration and Special Projects Branch	917-790-8208	Anthony.Ciorra@usace.army.mil
Peter Weppler	NAN-PL, Environmental Analysis Branch Chief	917-790-8634	peter.m.weppler@usace.army.mil
Thomas Dannemann, P.E.	NAN-EN, Design Branch Chief	917-790-8363	Thomas.R.Dannemann@usace.army.mil
Mukesh Kumar, P.E.	NAN-EN, Cost Engineering Branch Chief	917-790-8421	Mukesh.Kumar@usace.army.mil
Lynn Bocamazo, P.E.	NAN-EN, Chief, Hurricane Sandy Branch	917-790-8396	Lynn.M.Bocamazo@usace.army.mil
Jeff Wisniewski, P.E.	NAD, Lead Engineer, Sandy Coastal Management Division	347-370-4783	Jeffrey.wisniewski@usace.army.mil

SIGNATURE

Name

Date

Review Management Office Representative

Office Symbol

CERTIFICATION OF AGENCY TECHNICAL REVIEW

Significant concerns and the explanation of the resolution are as follows: Describe the major technical concerns and their resolution.

As noted above, all concerns resulting from the ATR of the project have been fully resolved.

SIGNATURE

Name

Date

Chief, Engineering Division

Office Symbol

SIGNATURE

Name

Date

Architect Engineer Principal

Office Symbol

¹ Only needed if some portion of the ATR was contracted

<u>Term</u>	<u>Definition</u>	<u>Term</u>	<u>Definition</u>
IEPR	Independent External Peer Review	RTS	Regional Technical Specialist
ITR	Independent Technical Review	SAR	Safety Assurance Review
LRR	Limited Reevaluation Report	USACE	U.S. Army Corps of Engineers
MSC	Major Subordinate Command	WRDA	Water Resources Development Act

Inlet to Montauk Point, Downtown Montauk Stabilization Project. Accordingly, it is recommended that a Type II IEPR, Safety Assurance Review, is not warranted.

Encl


ARTHUR J. CONNOLLY, P.E.
C, Engineering Division

	failure		failure of any portion of the berm.	
3	Shoreline Storm Erosion	Low	Coastal storms often result in significant shore erosion over short time periods which can undermine structures	Construction of the dune will increase width, height, and volume which will lessen the risk of storm erosion because of increased dune size.
4	Wave Attack	Low	Overtopping of the dune by waves during high water level events can result in damage to structures from direct wave impact.	Construction of the shore protection component will increase dune width, which will lessen the risk of damage due to wave attack.
5	Use of unique or non-traditional design methods	Low	Unique or non-traditional design methods may be poorly understood or inadequately designed and may be more subject to failure than proven design methods.	Engineering for the project elements employed accepted methods in accordance with COE guidance. No innovative or precedent setting methods or models were used.
6	Use of unique or non-traditional design features	Low	Unique or non-traditional design features may be poorly understood or inadequately designed and may be more subject to failure than proven design features.	Design of the project component features fall within prevailing practice and include only time-tested design features (e.g. dune).
7	Use of unique or non-traditional construction materials or methods	Low	Unique or non-traditional construction materials or methods may be poorly understood or executed inadequately resulting in a project feature that may be more subject to failure than those built with proven materials and methods.	All materials and construction techniques used for the project are in common practice.
8	Does the project have unique construction sequencing or a reduced or overlapping design/construction schedule?	Low	Unique or accelerated construction sequencing may lead to poor quality work, leading to greater possibility of future project failure.	The project does not have any accelerated design or construction scheduling. Sufficient time is available for completion of construction.
9	Does the project design require:			
9a	Redundancy	Low	Failure of one critical project element would result in sudden, catastrophic damage. Duplication of critical components of the protective system are required to increase the reliability of the system.	Nonperformance of the dune would result in flood levels, erosion, and/or wave forces less than or equal to those present under existing conditions.
9b	Resiliency	Low	Erodible structures are reduced in volume over time, providing less protective capacity.	Resiliency is provided by the geotextile bags that form the core of the dune and by post-storm emergency rehabilitation.
9c	Robustness	Low	Natural events can occur that are greater than the optimized project design, and may lead to project failure.	The berm design considered storm events up to a 100-year return interval. Dune designs are adaptable to changes in water level due to climate change (sea level rise), with opportunities to