Raritan & Sandy Hook Bay- Highlands, NJ

Flood Risk Management Project

13 May 2024

DESCRIPTION: Highlands is located on the shoreline of Sandy Hook Bay and the Shrewsbury River approximately 20 miles south of Manhattan, New York. Its "working waterfront" is lined with marinas, docks, piers, and a ferry terminal that serves many businesses throughout the northeast and provides mass transportation for commuters to New York City. Access to the waterfront is critical to the Borough's economy. Large-scale flood risk management structures that could improve use of the waterfront have not been built. Because of this, the Borough is highly susceptible to flooding. Most homes and businesses in Highlands are located in the relatively low-lying downtown area extending from the shoreline to Shore Drive. The land is generally at an elevation lower than +10 feet (ft) North American Vertical Data of 1988 (NAVD88).The Highlands study area, about 0.7 square miles in extent, located at the eastern limit of the overall Raritan Bay and Sandy Hook Bay study area and is bordered to the north by Sandy Hook Bay, to the west by the corporate limits of Atlantic Highlands, and to the east by the Shrewsbury River and Route 36 bridge. The Borough of Highlands is located in Monmouth County, New Jersey. Highlands is generally about 2,000 feet wide, and its topography is flat for about 1,500 feet onshore from the bay, after which the ground rises rapidly. This is a fully developed community with most year-round residences and commercial establishments located on the low-lying area along the bay. Highlands has a history of devastating flood damages. Approximately 880 residential, trailer home, apartment, and commercial structures are subject to severe flooding with approximately 670 located below 9 feet NAVD. Many low-lying roadways are flooded during severe storm events, cutting off access to large portions of Highlands. This area was devastated by Superstorm Sandy.

AUTHORIZATION: The completed study was authorized by a resolution of the Committee on Public Works and Transportation, U.S. House of Representatives, adopted August 1, 1990. Subsequent funding and authorization were provided via P.L. 113-2, The Disaster Relief Appropriations Act, 2013. The project was authorized for construction under the Water Resources Development Act of 2020 that was enacted on December 27, 2020.

Local Sponsor: New Jersey Department of Environmental Protection
Project Partners: Borough of Highlands

STATUS: In response to the flooding from back-to-back December 1992 Nor'easters, Congress funded the Corps to conduct a reconnaissance study of the Raritan Bay and Sandy Hook Bay Communities. In March 1993, the Corps issued a favorable Reconnaissance Study and in May 2000 issued a favorable Pre-Feasibility Report recommending that a feasibility study be conducted. The State of New Jersey Department of Environmental Protection concurred with the Corps recommendations and signed a Feasibility Cost Sharing Agreement (FCSA) on August 1, 2001 to cost share the feasibility study. The draft feasibility report has been completed and released to the public on 17 July 2015 and the comment period closed on 31 August 2015. The tentatively selected plan has been optimized and the report completed. The project spans a geographic distance of approximately 8,000 linear feet along the coast of the Borough of Highlands (Highlands) and ties into high ground (+14 ft NAVD88) at each end. Because the project follows the actual perimeter of the shoreline, its total length of the floodwall 10,737 linear ft. The project includes a detention pond, diversion culverts, raised ground surfaces, floodwall, floodgate and a pump station for interior drainage. The Chief's Report was approved on 25 August 2020. Project was appropriated funding under the BIL and DRSAA supplementals in 2020. NAN is currently performing data collection for the implementation of the Plans & Specifications for the first constructible element, the flood closure gate. It is anticipated the Plans & Specifications for the first constructible element will be completed in the fall of 2025.

PRE-CONSTRUCTION, ENGINEERING, AND DESIGN COST (PED):
Federal Cost: $2,400,000
Non-Federal Cost: $0

ESTIMATED CONSTRUCTION COST (subject to change as design progresses):
Federal Cost: $84,000,000
Non-Fed Cost: $45,000,000

CONTACT:
Bethany McClanahan PE, CFM
Project Manager
P: (917) 790-8426
Email: bethany.m.mcclanahan@usace.army.mil
U.S. Army Corps of Engineers, New York District
Programs and Project Management Division, Civil Works Branch
26 Federal Plaza
New York, NY 10278
CONGRESSIONAL DISTRICT: NJ-06

ACRONYMS AND ABBREVIATIONS

Acronym/ Abbreviation	Definition
AE zone	Federal Emergency Management Agency (FEMA) 1 percent (also known as base flood) floodplain
ARA	Abbreviated Risk Analysis
ASA (CW)	Assistant Secretary to the Army (Civil Works)
BCR	Benefit to Cost Ratio
BFE	Base Flood Elevation
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
cfs	cubic feet per second
CZM	Coastal Zone Management
CZMA	Coastal Zone Management Act
CRF	Code of Federal Regulations
CSRM	Coastal Storm Risk Management
D&I	Design & Implementation
EA	Environmental Assessment
ECB	Engineering Construction Bulletin
EFH	Essential Fish Habitat
EO	Executive Order
EQ	Environmental Quality
ER	Engineering Regulation
ETL	Engineering Technical Letter
FCSA	Feasibility Cost Sharing Agreement
FEMA	Federal Emergency Management Agency
FRRS	Flood risk reduction standard
ft	Feet
FY	Fiscal Year
HQUSACE	United States Army Corps of Engineers – Headquarters
Hs	Significant wave height
HTRW	Hazardous, toxic & radioactive waste
HUD	Housing and Urban Development
LERRD	Lands, Easements, Rights of Way, Relocations, & Disposal
lf	Linear feet
MLW	Mean Low Water
NAVD88	North American Vertical Datum of 1988
NED	National Economic Development
NEPA	National Environmental Policy Act of 1970
NFIP	National Flood Insurance Program
NJDEP	New Jersey Department of Environmental Protection
NOAA	National Oceanic and Atmospheric Administration
NRC	National Research Council

Acronym/ Abbreviation	Definition
OMRR&R	Operations, Maintenance, Repair, Rehabilitation & Replacement
OSE	Other Social Effects
P&G	Principles & Guidelines
PED	Pre-Construction Engineering and Design
PFIRM	Preliminary Flood Insurance Rate Map
PL	Price level
PL	Public Law
PMP	Project Management Plan
PPA	Project Partnership Agreement
RED	Regional Economic Development
RONA	Record of Non-Applicability
RSLC	Relative sea level change
SCC	Soil cleanup criteria
SLR	Sea Level Rise
TES	Threatened and Endangered Species
Tp	Peak wave period
TSP	Tentatively Selected Plan
USACE	United States Army Corps of Engineers
USC	United States Code
USEPA	United States Environmental Protection Agency
USFWS	United States Fish & Wildlife Service
VE zone	Federal Emergency Management Agency (FEMA) 1 percent (also known as base flood) floodplain that is subject to additional hazards due to storm-induced velocity wave action.
VLM	Vertical land movement