COASTAL DEFENSE - RESIST ALIGNMENT CONSTRUCTION FACT SHEET

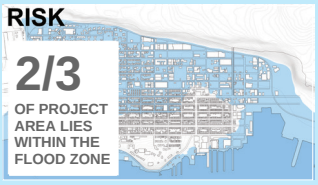
How the planned Resist Alignment construction relates to the ongoing Rebuild by Design Hudson River Program

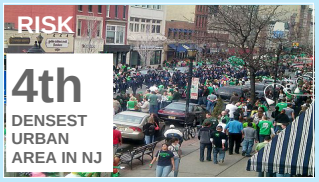
REBUILD BY DESIGN
HUDSON RIVER
JERSEY CITY HOBOKEN WEEHAWKEN | NEW JERSEY

BACKGROUND

The U.S. Department of Housing and Urban Development (HUD) created the **Rebuild by Design** competition following Superstorm Sandy in 2012 to develop ideas on how to improve the physical, ecological, and economic resilience of coastal areas following times of flood.

Hoboken, Weehawken, and Jersey City were selected through the competition based on damages suffered from Sandy and the long-term historical flooding patterns of the region. The project is being led by the **New Jersey Department of Environmental Protection (NJDEP)**.





A COMPLEX PROBLEM

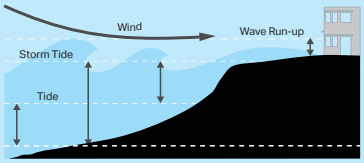
The world's climate is changing. Sea levels are rising. Storms are occurring more often and with more rainfall. These changes make it harder for communities to address flood risk.

Hoboken, Jersey City and Weehawken are particularly susceptible to flooding from coastal storm surge and high tides cycles. Due to their urban landscape, a majority of the surface is impermeable and critical utility infrastructure is within the flood zone.

These conditions increase the area's risk profile and led to widespread flood damage from Hurricane Irene (approximately 50-year event) in 2011 and Superstorm Sandy (more than 100-year event) in 2012.

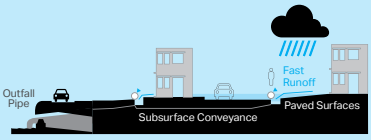
PROTECTION FOR THE FUTURE

The Project Area, comprising the **City of Hoboken and adjacent areas of Weehawken and Jersey City**, is vulnerable to flooding from coastal storm surge events. The Project intends to **minimize the impacts from surge and rainfall flood events** on the community including adverse impacts to public health and safety, as well as economic vitality.



Coast

High water levels from the Atlantic Ocean are the result of a combination of causes, including storm surge, increased wave action, and high tide scenarios



Urban Drainage

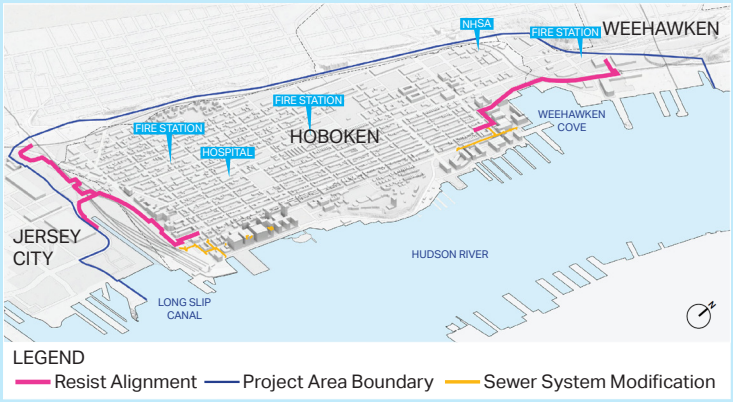
Precipitation may lead to flash flooding or inland flooding. High amounts of rain water that cannot be stored or drained in a timely manner leads to overwhelming of the drainage system and flooding.

REBUILD BY DESIGN HUDSON RIVER

The Rebuild by Design Hudson River (RBDH) Project is a **comprehensive urban stormwater management program** that takes a multi-faceted approach intended to **address flooding from major storm surges and high tide, as well as from heavy rainfall events.** These events often occur individually but can also occur together and increase the total impact of a single storm event.

The program includes four components: Resist, Delay, Store, and Discharge. While the Resist component is being implemented by DEP, Hoboken has already started efforts for Delay, Store, and Discharge through additional pump stations, rain gardens, and resiliency parks.

RESIST	DELAY	STORE	DISCHARGE
Hard infrastructure + soft landscaping to act as coastal barriers during high tide/storm surge events	Reduce the volume of stormwater entering the combined sewer system during rainfall events	Create additional storage capacity in the system to detain stormwater during rainfall events	Actively pumping stormwater from the combined sewer system during rainfall events



FLOOD RISK REDUCTION

In addition to providing flood risk reduction to Hoboken and neighboring areas of Jersey City and Weehawken, the Resist Structure will also protect critical infrastructure located in those communities, including **three fire stations**, **one hospital**, Jersey City Municipal Utility Authority Infrastructure (JCMUA) and the **North Hudson Sewerage Authority (NHSA)** wastewater treatment plant. This alignment provides coastal flood risk reduction to approximately **85 percent of the population** residing within the Project Area 100-year floodplain.

THE FIRST PHASE OF CONSTRUCTION IS COMPLETE

The City of Hoboken has a combined sewer system. Installation of the Resist Alignment away from the shoreline of the Hudson River results in portions of the existing combined system being outside the Line of Protection (LOP). **Exterior inlets and manholes are subject to inundation by a storm surge,** which during times of tidal flooding, could allow water to breach the LOP and flood the existing North Hudson Sewage Authority (NHSA) Wastewater Treatment Plants as well as portions of the City. **To prevent this, a separate storm sewer system was installed on the exterior of the LOP.** The existing NHSA storm sewer inlets were relocated and disconnected from the combined sewer and a new storm sewer system was installed.

STORMWATER TREATMENT MANHOLE INSTALLATION

RESIST ALIGNMENT

The Resist Alignment of the RBDH Project is being implemented by the NJDEP. **The Resist portion includes the installation of a flood risk reduction alignment** which incorporates hard infrastructure (i.e. walls, gates, and supporting drainage features) for coastal defense, as well as soft (i.e. landscaping and urban amenity) improvements.

The Project will **minimize the impacts from surge flood events** on the community including adverse impacts to public health and safety, as well as economic vitality, while providing benefits that will **enhance the urban condition**, recognizing the unique challenges that exist within a highly developed urban area.

WASHINGTON STREET - PLANTING + INFRASTRUCTURE

GARDEN STREET - PLANTING, SIGNAGE, SEATING + INFRASTRUCTURE

WHAT CAN WE EXPECT DURING THE TIME OF CONSTRUCTION?

The upcoming work involves constructing the Resist Alignment and associated urban amenities. Included in the scope of construction is:

- Installing approximately 59,000 linear feet (LF) of **H-Piles**
- Installing approximately 9,900 LF of **concrete floodwall**
- Installing 28 **flood gates**
- Installing 6 **sluice gates** and 2 **steel flap gates**
- Creating Improvements to **Harborside Park**
- Integrating **urban amenities** to the Resist Alignment
- Installing approximately 58,000 LF of **micropiles**
- Installing approximately 88,000 SF of **sheet piles**

CONSTRUCTION MITIGATION

Construction impacts during construction will be monitored and addressed.

- Construction noise, dust, and vibrations will be monitored for **compliance with applicable Local, State and Federal Regulations.**
- Police will be on site to **maintain traffic and pedestrian control.**
- **Community Construction Liaison** (CCL) has been assigned to this project.
- **Work hours will be coordinated** with Local, County, and State agencies.

HOW TO STAY INFORMED? Sign up to receive Weekly Construction Advisories here.

QUESTIONS? If you have questions, or would like to learn more about the Resist Alignment construction, please contact your CCL: **Isabella Brascetta | 1-800-252-0219 | rbdhinquiries@portal3.pbid.com**

LOOKING FOR MORE INFORMATION? Visit the NJDEP website: https://www.nj.gov/dep/floodresilience/rbd-hudsonriver.htm