

# South Shore of Staten Island, New York

April 2021



**US Army Corps of Engineers**  
New York District  
BUILDING STRONG

## Dec '92 Nor'easter



## Oct 2012 Sandy



## Hurricane Sandy

- Water levels peaked at 12.5 ft NAVD
- Flooding depths over 10 ft
- 4 ft higher than prior record
- 24 Staten Island deaths
- 43 total in New York City
- 80% structures damaged in project area
- Over \$1B in damages

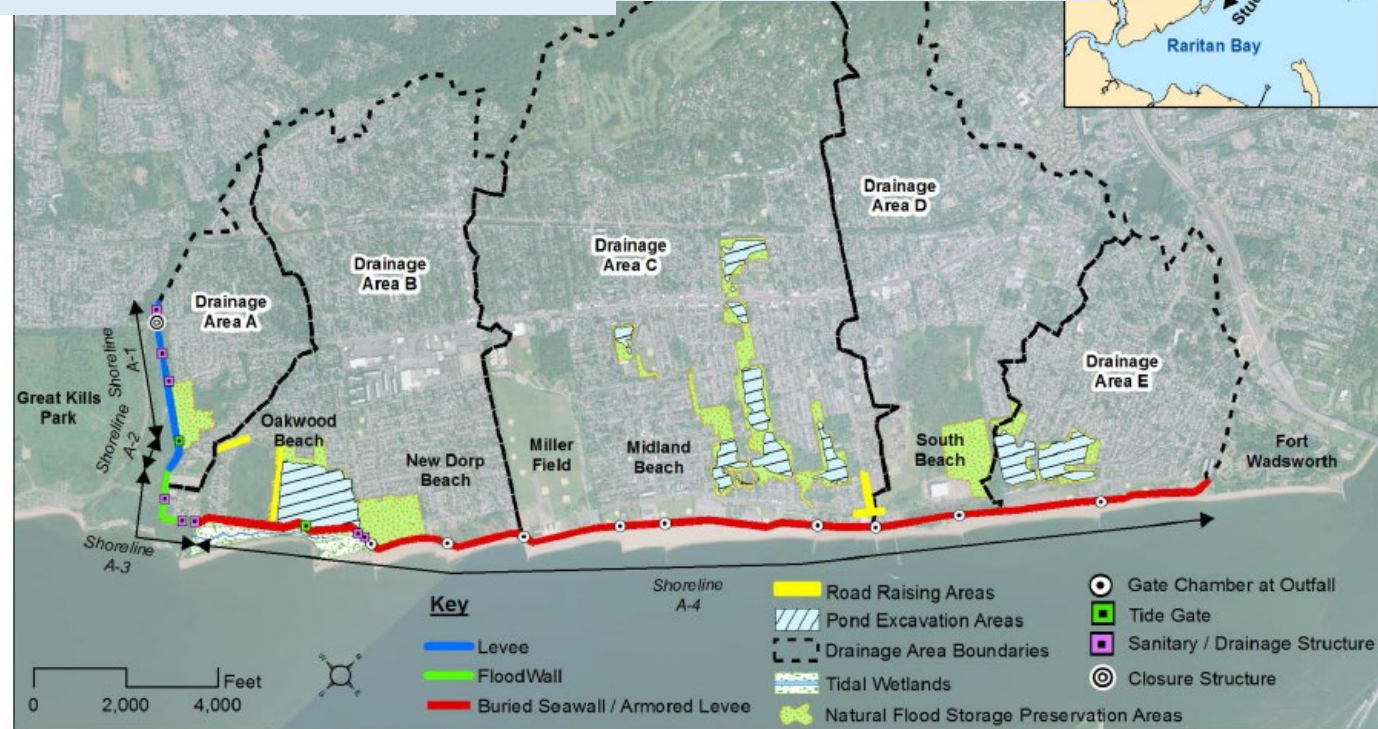
## Project Features (final design underway)

- 4.5 miles buried seawall
- 0.6 miles levee & road raising
- 0.35 miles floodwall
- Natural storage & excavated ponds
- Tidal wetlands

A-1/2 (levee) 3,400 ft @ +16.9 ft NAVD

A-3 (floodwall) 2,100 ft @ +19.4 ft NAVD

A-4 (buried seawall) 22,700 ft @ +21.4 ft NAVD



## Project Area Key Facts

- Flood-prone, high risk, low-lying area, low capacity storm sewers
- Nearly 7,300 structures; over 30,000 people

### Critical infrastructure:

Wastewater Plant; SI University Hospital; Fire/police stations; schools & senior centers

## Hurricane Sandy Inundation

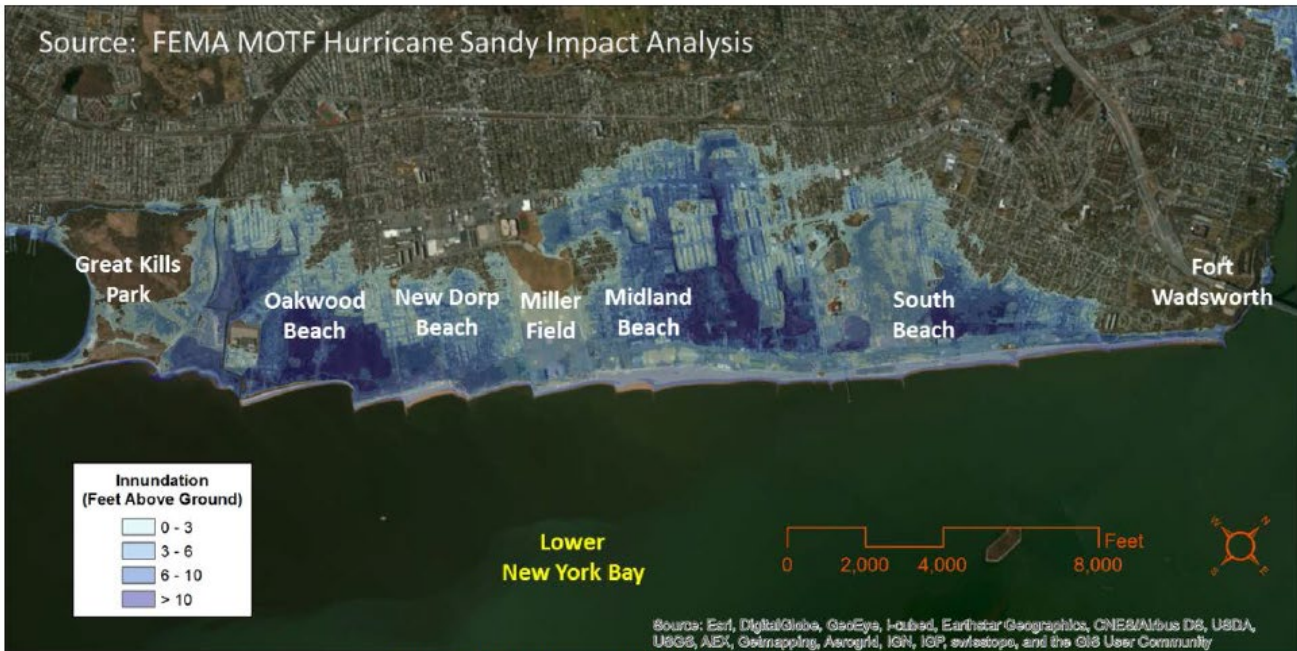
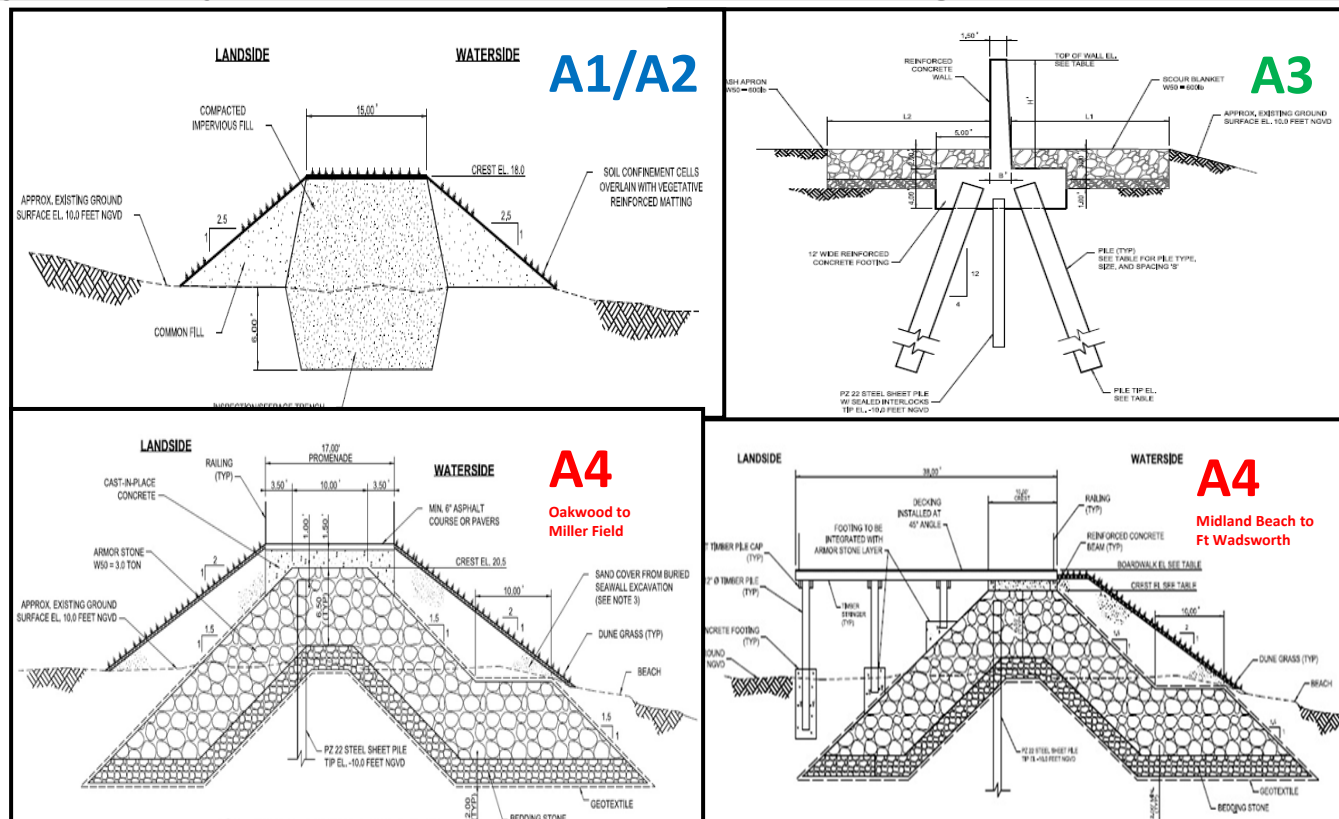
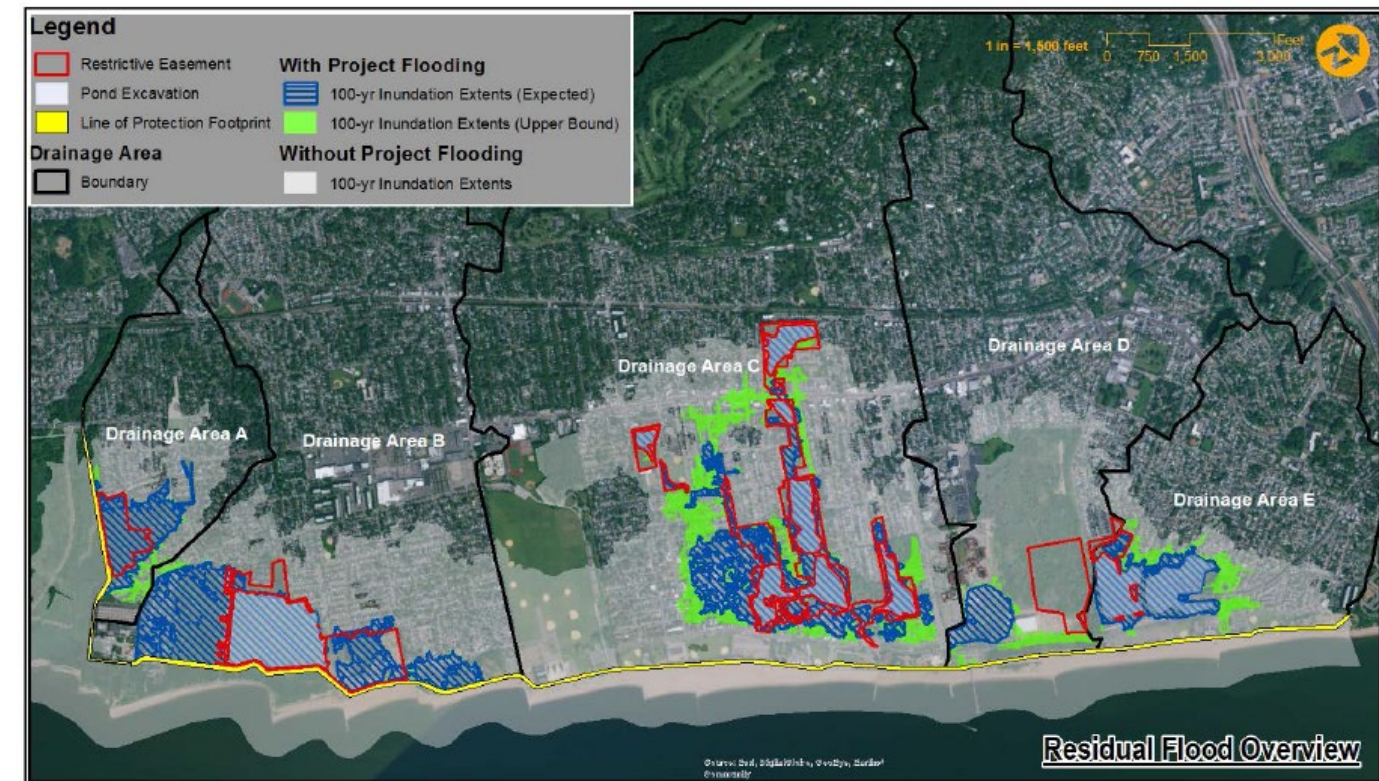


Figure 11 - Hurricane Sandy Flood Inundation

## Typical Project Cross-Sections (note, final design revisions underway)



## Residual Flooding After Project Construction



Residual Flood Overview

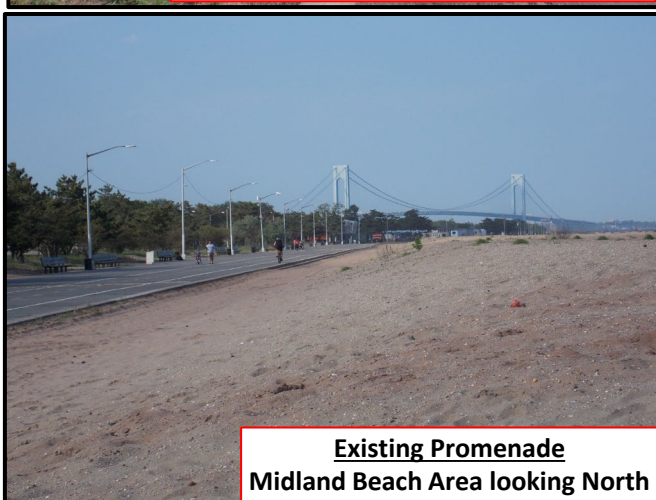
## Project Renderings (Before & After)



**Existing Boardwalk**  
South Beach Area looking South



**Buried Seawall with New Boardwalk**  
South Beach Area looking South



**Existing Promenade**  
Midland Beach Area looking North



**Buried Seawall with NEW Boardwalk**  
Midland Beach Area looking North

- ✓ Project is technically feasible, economically justified, environmentally acceptable
- ✓ Federally funded through Public Law 113-2
- ✓ Initial Construction cost-shared 65% Federal, 35% Non-Federal
- ✓ Project Operation & Maintenance is State/City of New York 100% responsibility
- ✓ Assistant Secretary of Army approved Final Feasibility Report, EIS, Record Of Decision, Director's Report, with Congressional notification, Dec 2016
- ✓ Residual Risk – project annual exceedance probability is 0.3% (300-yr event)
- ✓ Resiliency – allows emergency response in previously flooded areas; accelerated recovery
- ✓ Reliability – proven engineering solution to withstand multiple storms
- ✓ Adaptability - project can be modified in future to address sea level rise, if required
- ✓ **3-party agreement with Corps, NYS (sponsor), NYC (party) executed 15 Feb 2019**
- ✓ **Design Phase of entire project is currently underway:** Surveys/mapping, utilities, geotechnical, cultural investigations, physical modeling, interior drainage modeling, construction contract designs, plans, specifications, various contractual packages
- ✓ **Coordination is underway with various sponsors/stakeholders:** Corps of Engineers, State of New York, Gov Office, City of New York, Mayor Office, City Parks, City DEP, City DOT, Boro Pres Office, National Park Service, FEMA, Congressionals, and local interests
- ✓ **Design of all eight (8) construction contracts is underway, including significant coordination with State & City of New York to finalize specific project design details**

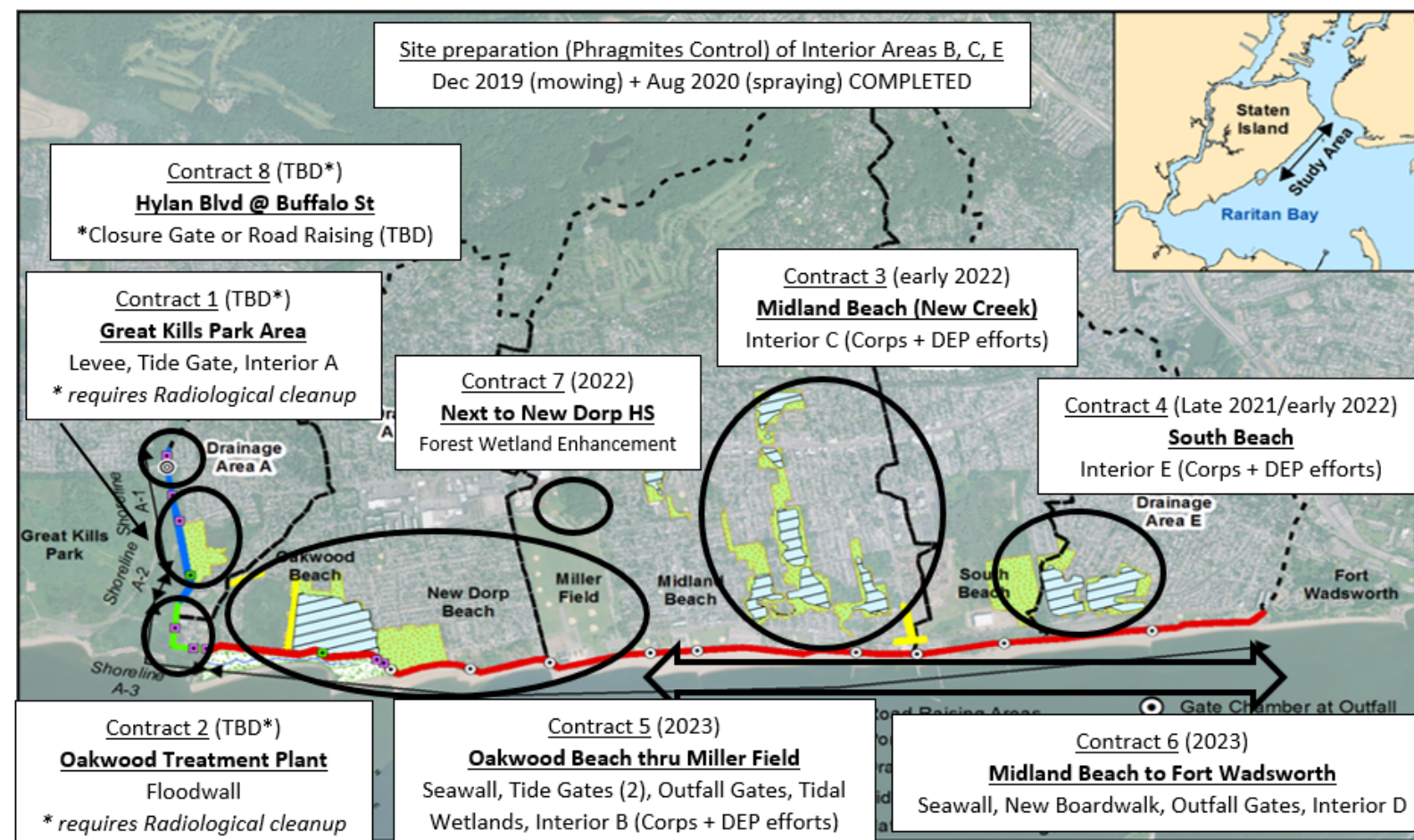
## Estimated Project Cost

<b>Initial Construction Cost (ESTIMATED)</b>	<b>\$615,231,000</b>
<b>Project Cost-share – Federal (65%)</b>	<b>\$399,900,150</b>
<b>Project Cost-share – Non Federal (35%)</b>	<b>\$215,330,850</b>
<b>Annual Operation &amp; Maintenance (Non Federal)</b>	<b>\$679,000</b>

## Estimated Project Schedule

<b>Project Partnership Agreement Executed between Corps, NYS, NYC</b>	15 Feb 2019
<b>Phragmites control efforts completed in Interior Areas B, C, E</b>	2019 (mow) 2020 (spray)
<b>Estimated Start Project Construction Contracts 4 (Interior E) &amp; 3 (Interior C) Additional contracts in 2022, 2023</b>	E - Late 21/Early 22 C – Early 2022
<b>Estimated Project Total Completion</b>	2026 (estimated)

## Anticipated Contract Breakouts with Estimated Contract Award Timelines



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[US Army Corps of Engineers \(website\)](http://www.nan.usace.army.mil/Missions/Civil-Works/Projects-in-New-York/South-Shore-of-Staten-Island/)  
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