East Side Coastal Resiliency Preliminary Design Update

Community Board 3 Review

Parks Committee: March 15, 2018
Full Board: March 27, 2018
PRESENTATION CONTENTS

A. SITE STRATEGY

B. SITE DESIGN
PRESENTATION CONTENTS

A. SITE STRATEGY

B. SITE DESIGN
• Provide a reliable, integrated flood protection system; minimize use of closure structures

• Improve waterfront open spaces and access

• Respond quickly to the urgent need for increased flood protection and resiliency

• Achieve implementation milestones and project funding allocations as established by HUD
Iterative Design Process
**HUD Funding Requirement:**

The system must pursue FEMA accreditation with minimum system elevation at current FEMA 100-year storm elevation + freeboard.

<table>
<thead>
<tr>
<th>Elevation (ft)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>+16.00</td>
<td>FEMA 100-year flood + freeboard/wave requirement (current)</td>
</tr>
<tr>
<td>+16.50</td>
<td>ESCR design storm exceedance contingency (2050s)</td>
</tr>
<tr>
<td>+13.50</td>
<td>FEMA 100-year flood + freeboard/wave requirement (high end 2050s projection)</td>
</tr>
<tr>
<td>+10.90</td>
<td>FEMA 100-year flood stillwater (current)</td>
</tr>
<tr>
<td>+8.00</td>
<td>Approximate grade at esplanade (current)</td>
</tr>
<tr>
<td>+2.28</td>
<td>Mean higher high water (MHHW) (current)</td>
</tr>
</tbody>
</table>

30" Sea Level Rise

Note: All elevations shown in NAVD88.
Site Strategy

Parks & Flood Protection

COMMUNITY BOARD PROJECT UPDATE
EAST SIDE COASTAL RESILIENCY PROJECT
MARCH 27, 2018

AKRF-KSE, JV
NEW YORK CITY DEPT. OF DESIGN AND CONSTRUCTION

NEW YORK CITY DEPT. OF PARKS AND RECREATION
NEW YORK CITY DEPT. OF TRANSPORTATION
NEW YORK CITY DEPT. OF ENVIRONMENTAL PROTECTION
NEW YORK CITY MAYOR'S OFFICE OF RECOVERY AND RESILIENCY

NEW YORK CITY DEPT. OF ENVIRONMENTAL PROTECTION
NEW YORK CITY MAYOR'S OFFICE OF RECOVERY AND RESILIENCY

LEGEND

2015 FEMA 100-YEAR Flood Hazard Boundary
2050s FEMA 100-YEAR Flood Hazard Boundary
Flood Hazard Area Protected by ESCR
Floodwall
Existing VA Hospital Floodwall
Earthen Levee
ESCR Park Area
LEGEND

- 2015 FEMA 100-YEAR Flood Hazard Boundary
- 2050s FEMA 100-YEAR Flood Hazard Boundary
- Flood Hazard Area Protected by ESCR
- Floodwall
- Existing VA Hospital Floodwall
- Earthen Levee
- ESCR Limit of Work (L.O.W.)
- Swing Gate
- Roller Gate

Site Strategy

Flood Protection
THE PARALLEL CONVEYANCE SYSTEM WILL BE ACTIVATED SIMULTANEOUSLY WITH THE FLOOD PROTECTION SYSTEM DURING A LARGE STORM EVENT
EAST SIDE COASTAL RESILIENCY PROJECT
MARCH 27, 2018

AKRF-KSE, JV
NEW YORK CITY DEPT. OF DESIGN AND CONSTRUCTION
NEW YORK CITY DEPT. OF PARKS AND RECREATION
NEW YORK CITY DEPT. OF TRANSPORTATION
NEW YORK CITY DEPT. OF ENVIRONMENTAL PROTECTION
NEW YORK CITY MAYOR'S OFFICE OF RECOVERY AND RESILIENCY

COMMUNITY BOARD PROJECT UPDATE
EAST SIDE COASTAL RESILIENCY PROJECT
MARCH 27, 2018

Site Strategy
Park Access A-11

LEGEND
- Floodwall
- Earthen Levee
- FDR Drive at-grade
- FDR Drive elevated
- Park Access (Bridge)
- Park Access (At Grade)

STUYVESANT COVE PARK
- ELEVATED FDR
- FLOOD GATE
- CITY
- CROSS UNDER
- PARK
- RIVER

EAST RIVER PARK
- BRIDGE OVER
- RAISE PARK
- CITY
- AT-GRADE FDR
- PARK
- RIVER

STREET-LEVEL CONNECTIONS AT AVENUE C, 20TH STREET & 23RD STREET

10TH STREET BRIDGE REPLACED

EXISTING 6TH STREET BRIDGE TO REMAIN

EXISTING HOUSTON STREET OVERPASS TO REMAIN

NEW DIRECT PATH TO WATERFRONT AT HOUSTON STREET

EXISTING CHERRY STREET BRIDGE TO REMAIN

DELANCEY STREET BRIDGE REPLACED

NEW YORK CITY DEPT. OF ENVIRONMENTAL PROTECTION
NEW YORK CITY MAYOR'S OFFICE OF RECOVERY AND RESILIENCY
NEW YORK CITY DEPT. OF DESIGN AND CONSTRUCTION
NEW YORK CITY DEPT. OF PARKS AND RECREATION
NEW YORK CITY DEPT. OF TRANSPORTATION
NEW YORK CITY DEPT. OF ENVIRONMENTAL PROTECTION
NEW YORK CITY MAYOR'S OFFICE OF RECOVERY AND RESILIENCY

COMMUNITY BOARD PROJECT UPDATE
EAST SIDE COASTAL RESILIENCY PROJECT
MARCH 27, 2018
LOW WALL + HIGH FENCE

HIGH WALL + LOW FENCE

RETAINING WALL + FENCE (AT LEVEE)

NO FENCE
INFORMATION
The wall texture expresses each foot of wall height. At select locations, such as entry locations and bridge abutments, elevation letterforms are recessed into the wall face.

ELEVATION MARKER
The floodwall finish responds to the overall project intent by registering elevation markers. Water Level Meter, Chicago, IL
COMMUNITY BOARD PROJECT UPDATE
EAST SIDE COASTAL RESILIENCY PROJECT
MARCH 27, 2018
AKRF-KSE, JV
NEW YORK CITY DEPT. OF DESIGN AND CONSTRUCTION
NEW YORK CITY DEPT. OF PARKS AND RECREATION
NEW YORK CITY DEPT. OF TRANSPORTATION
NEW YORK CITY DEPT. OF ENVIRONMENTAL PROTECTION
NEW YORK CITY MAYOR’S OFFICE OF RECOVERY AND RESILIENCY

Flood Protection
Typical Swing Gate Design
Flood Protection
Typical Roller Gate Design
COMMUNITY BOARD PROJECT UPDATES

A. SITE STRATEGY

B. SITE DESIGN
PIER 42
SHED

EXISTING AMPHITHEATER

MULTI-USE TURF

(12) TENNIS COURTS

DANCE CIRCLE

DELANCEY STREET BRIDGE

BASKETBALL COURTS

COMFORT STATION

SEAL PLAZA

HOUSTON ST OVERPASS

MAINTENANCE

FIELDS 1 & 2

FIELDS 3 & 4

FIELDS 5 & 6

FIELDS 7 & 8

EXISTING 6TH STREET TRACK & FIELD

PLAYGROUND

BBQ & BASKETBALL

10TH ST BRIDGE

EAST RIVER

Site Plan - Project Area 1
Existent Conditions

COMMUNITY BOARD PROJECT UPDATE
EAST SIDE COASTAL RESILIENCY PROJECT
MARCH 27, 2018
Site Plan - Project Area 1
Concept Review Design
PERENNIALS ADD COLOR, TEXTURE & SEASONAL INTEREST

TALL GRASS ROOTS HOLD SOILS, PROVIDE TEXTURE & SEASONAL INTEREST

NO TREES, SHRUBS, OR WOODY VEGETATION IS ALLOWED WITHIN THE "VEGETATION-FREE" ZONE

LOW CREEPING FESCUES PROVIDE DENSE COVERAGE TO PREVENT EROSION

PLANTING RESTRICTIONS KEEP FLOOD PROTECTION INTACT AND VISIBLE FOR INSPECTION

LEGEND
- Floodwall
- Levee
- Flood Protection Planting Zone

COMMUNITY BOARD PROJECT UPDATE
EAST SIDE COASTAL RESILIENCY PROJECT
MARCH 27, 2018
In areas of flood protection existing trees will be removed, topography will be elevated, and park landscapes will be planted with resilient tree species at higher elevations. Project-wide approximately 700-750 trees will be removed in a phased construction approach, and approximately 1,200 new trees will be planted.
**High, Full Canopy Creates Connected, Dappled Shade**

**Location:** Existing groves
- Mulch groundplane maintains open sight lines and open circulation
- Maintenance: Mature trees, mulch

**Location:** Open lawns and spectator areas
- Lawn groundplane maintains open sight lines and open circulation
- Maintenance: Trees, lawn

**Location:** Clearing edges and special areas
- Ornamental understory trees and a low perennial groundplane maintain veiled, eye-level sight lines
- Plant rails at planting beds guide circulation
- Maintenance: Trees, garden beds

**Location:** Paths and thresholds to frame views and buffer spaces
- Understory trees and shrub layer frame views and guide circulation forward
- Maintenance: Trees, shrubs
COMMUNITY BOARD PROJECT UPDATE
EAST SIDE COASTAL RESILIENCY PROJECT
MARCH 27, 2018

Montgomery St Tie-Back Preliminary Review
Montgomery St Tie-Back
Preliminary Review - Closed
Southern Park Entrance
Aerial View

COMMUNITY BOARD PROJECT UPDATE
EAST SIDE COASTAL RESILIENCY PROJECT
MARCH 27, 2018
COMMUNITY BOARD PROJECT UPDATE
EAST SIDE COASTAL RESILIENCY PROJECT
MARCH 27, 2018

AKRF-KSE, JV BJARKE INGELS GROUP
MATHEWS NIELSEN LANDSCAPE ARCHITECTS, P.C.
NEW YORK CITY DEPT. OF DESIGN AND CONSTRUCTION
NEW YORK CITY DEPT. OF PARKS AND RECREATION
NEW YORK CITY DEPT. OF TRANSPORTATION
NEW YORK CITY DEPT. OF ENVIRONMENTAL PROTECTION
NEW YORK CITY MAYOR'S OFFICE OF RECOVERY AND RESILIENCY

COMMUNITY BOARD PROJECT UPDATE
EAST SIDE COASTAL RESILIENCY PROJECT
MARCH 27, 2018

Delancey Street Bridge Aerial: Preliminary Review
6.6'

SIDEWALK

12'

BRIDGE

COMMUNITY BOARD PROJECT UPDATE

EAST SIDE COASTAL RESILIENCY PROJECT

MARCH 27, 2018

AKRF-KSE, JVBJARKE
INGELS
GROUP
MATHEWS NIELSEN
LANDSCAPE ARCHITECTS, P.C.
NEW YORK CITY DEPT. OF DESIGN AND CONSTRUCTION
NEW YORK CITY DEPT. OF PARKS AND RECREATION
NEW YORK CITY DEPT. OF TRANSPORTATION
NEW YORK CITY DEPT. OF ENVIRONMENTAL PROTECTION
NEW YORK CITY MAYOR'S OFFICE OF RECOVERY AND RESILIENCY
NEW YORK CITY DEPT. OF ENVIRONMENTAL PROTECTION
NEW YORK CITY MAYOR'S OFFICE OF RECOVERY AND RESILIENCY

Delancey Street Bridge
Preliminary Review
Delancey Street Bridge
Existing Conditions

COMMUNITY BOARD PROJECT UPDATE
EAST SIDE COASTAL RESILIENCY PROJECT
MARCH 27, 2018

Existing Conditions
Delancey Bridge Landing
Existing Conditions

Existing Conditions
Tennis Courts / Fields 3&4
Aerial View
Baruch Houses Ground Floor
Existing Conditions
10th Street Bridge
Existing Conditions

COMMUNITY BOARD PROJECT UPDATE
EAST SIDE COASTAL RESILIENCY PROJECT
MARCH 27, 2018
10th St. Playground
Preliminary Review
NEXT STEPS

- Final design advancement
  - Finalize materials and finishes
  - Continue coordination with City Agencies, Utilities, Community Boards, and PDC
- Advance construction phasing and sequencing studies
- Release draft EIS - anticipated July 2018
- Submit ULURP application - anticipated July 2018
- Final Design - PDC and Community Board review
UPCOMING MEETINGS

• PDC - Preliminary Design Review
  • CB6 Full Board Meeting  (4/11/18)

• Community Engagement Meetings (TBD - late April / May)
  • Study Area 1 South (Montgomery St to Houston St)
  • Study Area 1 North (Houston St to 14th St)
  • Study Area 2 (14th St to 25th St)
The East Side Coastal Resiliency Project is a federally funded coastal protection initiative aimed at reducing flood risk due to coastal storms and sea level rise on Manhattan's East Side from East 23rd Street to Montgomery Street.

The ESCR Project is a priority of the City of New York as outlined in the 2015 One New York: The Plan for a Strong and Just City and by the Innovative Rebuild by Design competition sponsored by the U.S. Federal Emergency Management and Urban Development.

Visit Us Online

www.nyc.gov/escr

E-Mail: nycresiliency@cityhall.nyc.gov

Twitter: @NYClimate