



NYC Parks

The East River Esplanade

Located on the East River between East 62nd Street and East 125th Street
In the borough of Manhattan

Town Hall Meeting
September 19, 2017

Erik Linsalata, PE, Gabrielle Czernik, PE
Parks Capital Design

Presentation Outline

- Overview
- Construction
- Inspections
- Design
- Concurrent work
- Summary



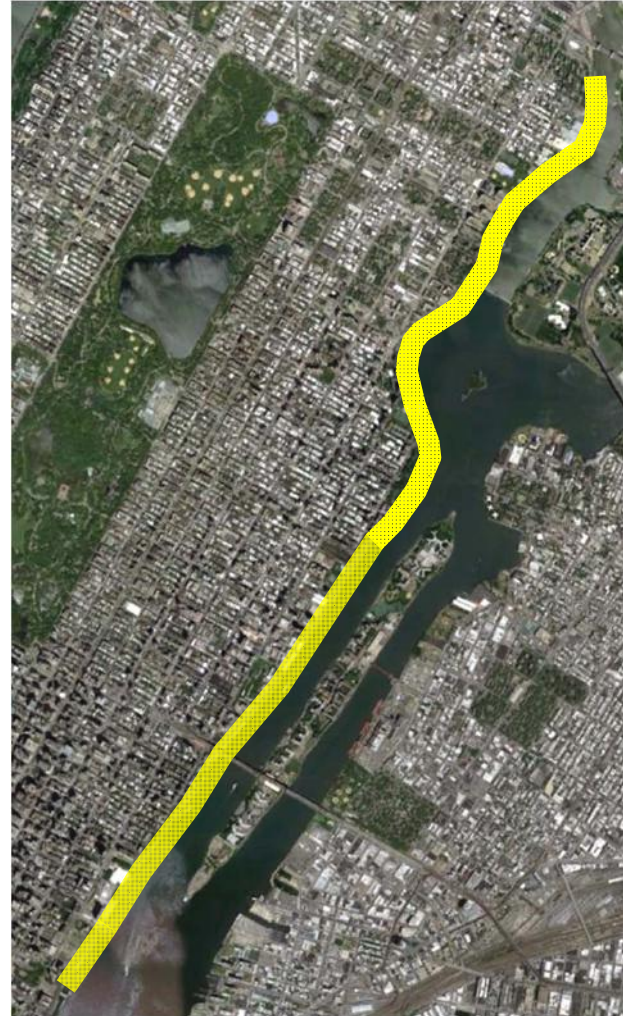
Presentation Outline

- Overview
- Construction
- Inspections
- Design
- Concurrent work
- Summary



2012/13 Study

- OMB pre-scoping program
 - DPR supervised project
 - Performed by OMB-procured consultant ARCADIS and its team
- Underwater survey and inspection of accessible, City-owned shoreline structures along the East River from 41st to 124th Sts & 36th to 38th Sts (Glick Park).
 - Assess current conditions
 - Identify critical areas
 - Recommend appropriate repairs
- Entire area of study classified into various individual locations
 - Different specific types of seawall structures
 - Over 45 homogeneous sub-segments



East River Esplanade
9/19/17 Update

Overview
Prescoping Study Scope

2012/13 Study

Findings

Gravity retaining wall structures

- Over 10,000 linear feet inspected
- Characteristic grout loss along granite fascia block joints
- Loose/displaced/missing fascia blocks in various locations
- Exposed concrete seawall surfaces exhibit cracking, spalling and/or erosion

Timber-supported platform structures

- Over 11,000 linear feet inspected
- Overall moderate marine borer activity observed
- Minor to severe timber deterioration

Recommendations for Rehabilitation

Based on the observed condition and level of deterioration of a location inspected, the recommended repair for **that** specific location is one of the following:

1. Repair of individual elements of structures (ER)
(e.g., repair of individual piles)
2. Partial reconstruction of platform structures (PR)
(i.e., partial demolition of existing platform structure and construction of new portions)
3. Complete reconstruction (CR)
(i.e., complete demolition of existing structure and rebuilding a new platform replacement)



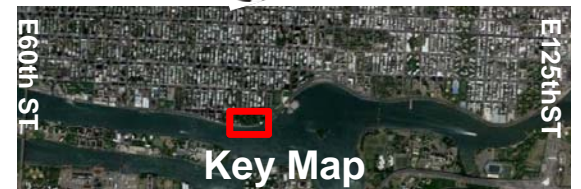
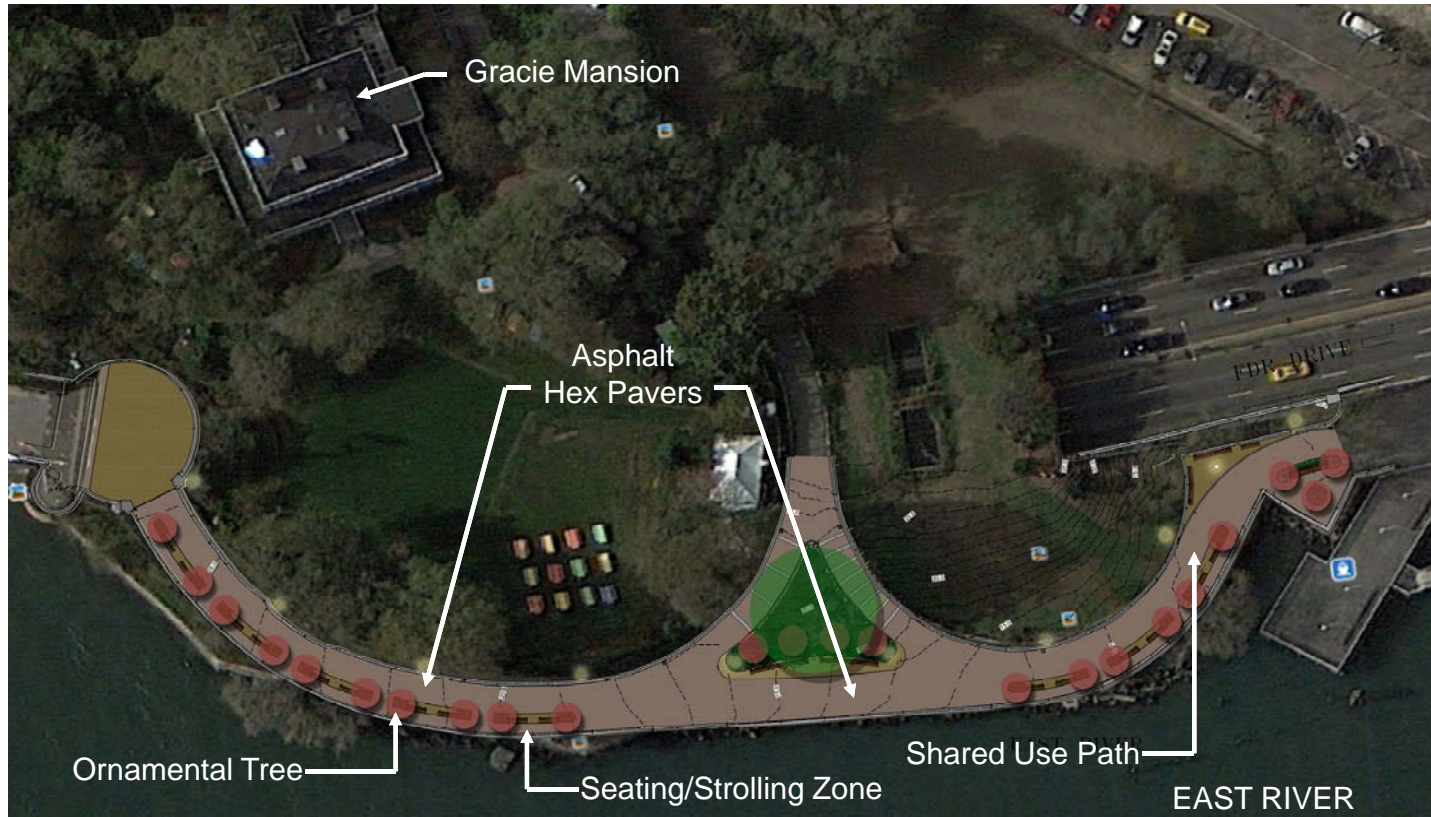
East River Esplanade
9/19/17 Update

Overview
Prescoping Study Findings

Presentation Outline

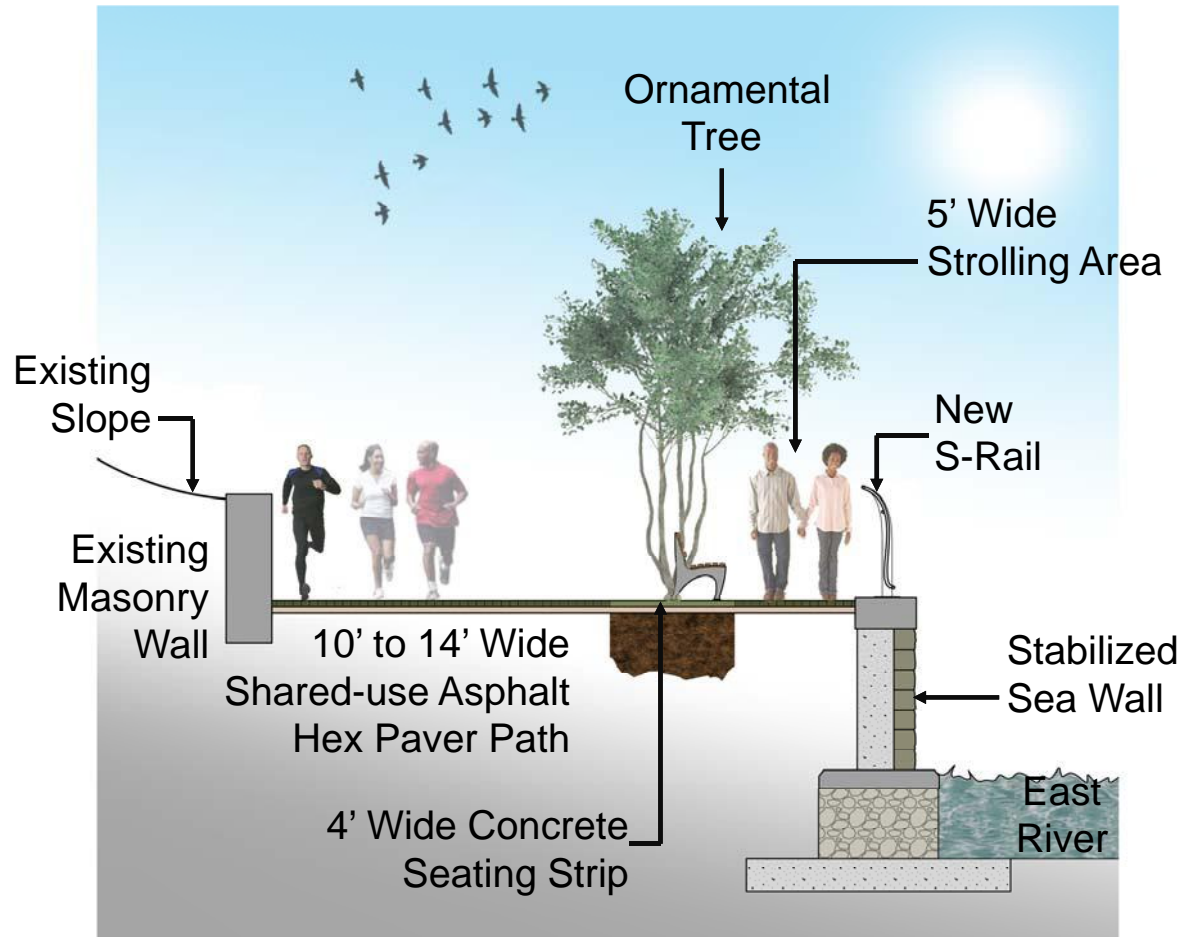
- Overview
- Construction
- Inspections
- Design
- Concurrent work
- Summary





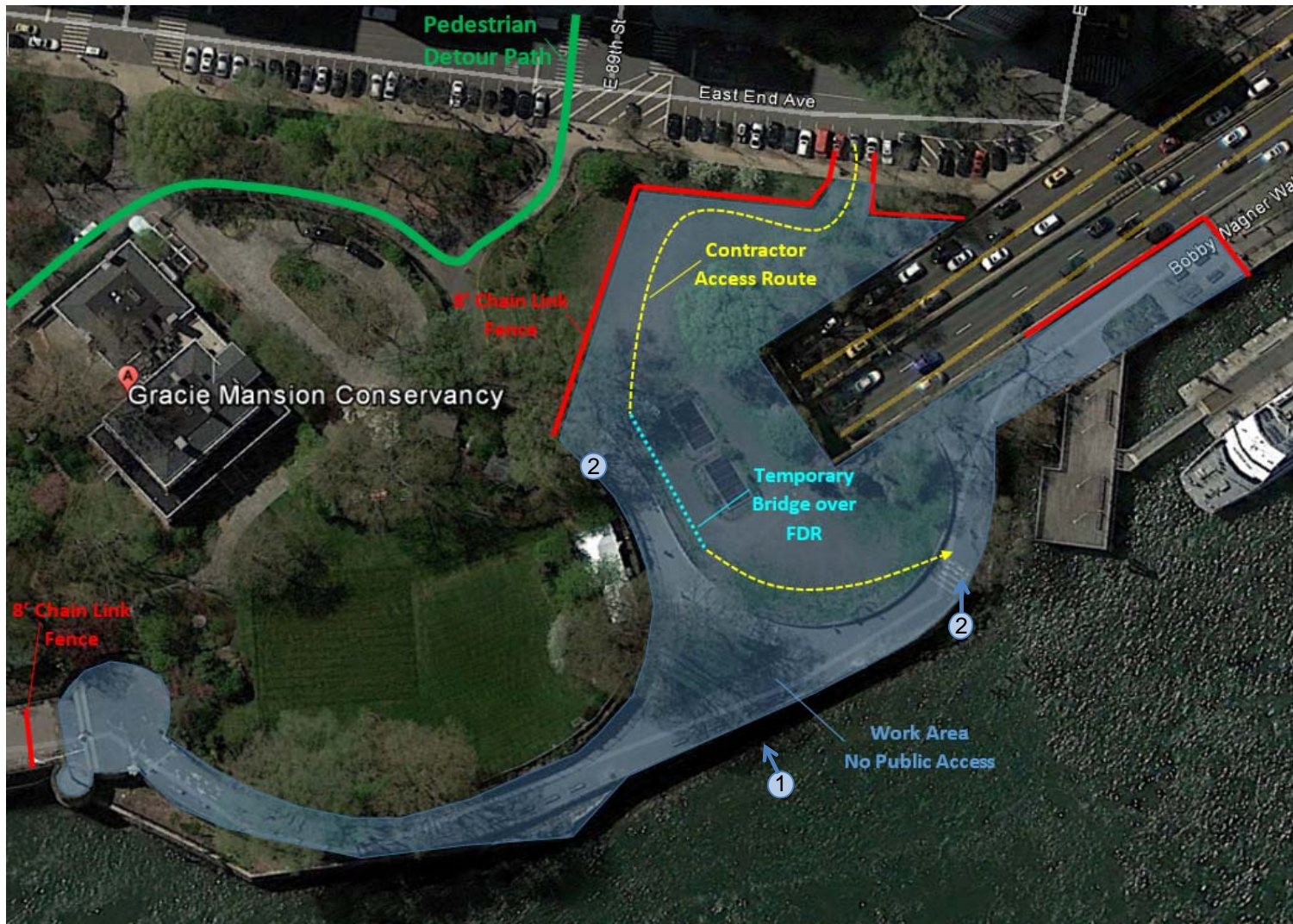
East River Esplanade
9/19/17 Update

E 88th St. to E 90th St. (Carl Schurz Park)
Schematic Plan



East River Esplanade
9/19/17 Update

E 88th St. to E 90th St. (Carl Schurz Park)
Section View



1



2




East River Esplanade
9/19/17 Update

E 88th St. to E 90th St. (Carl Schurz Park)
Construction Plan

The map shows a section of the East River Esplanade in New York City, bounded by East End Avenue to the north and the East River to the south. A red shaded area labeled "WORK AREA NO ACCESS" covers the esplanade between East 88th Street and East 90th Street. A blue line indicates a "PEDESTRIAN DETOUR ROUTE" that starts at East 89th Street, goes east along the street, then south along East End Avenue, then east along East 96th Street, and finally south back to East 89th Street. A green line indicates a "BICYCLE DETOUR ROUTE" that starts at East 90th Street, goes east along the street, then south along East End Avenue, then east along East 96th Street, and finally south back to East 90th Street. An orange dashed line along East End Avenue is labeled "OPEN TO PUBLIC ENTER AND EXIT AT 96TH ST. ONLY". Pedestrian and bicycle icons are placed at various points along the detour routes. The text "ESPLANADE CLOSED" is prominently displayed in white on a black background at the bottom of the map area.

ESPLANADE CLOSED

Use the detour shown to access the esplanade at 89th Street and East End Avenue, or at 96th Street.



East River Esplanade
9/19/17 Update

E 88th St. to E 90th St. (Carl Schurz Park)
Pedestrian Detour Route

Presentation Outline

- Overview
- Construction
- Inspections
- Design
- Concurrent work
- Summary



2017 Design Inspections

- Phase II re-inspection program
- Underwater and topside survey and inspection of sites of concern along the East River
 - Assess current conditions
 - Identify most critical areas
 - Recommend repairs alternatives
- Three segments inspected:
 - 62nd-64th: low-level relieving platforms and gravity retaining wall
 - 90th-94th: low-level relieving platforms
 - 115th-116th: low-level relieving platforms and gravity retaining wall



East River Esplanade
9/19/17 Update

Inspections
2017 Inspections

2017 Inspection Findings

LOCATION (appx X-street)	STRUCTURE TYPE	LENGTH (ft)	CONDITION RATING		NOTES
			2013	2017	
116th St	gravity retaining wall	111	FAIR	FAIR	Concrete spalling along front face and top of seawall; efflorescence
115th-116th	low-level relieving platform	228	FAIR	FAIR	Signs of sinkholes forming at topside; 90% deterioration at 4 piles
114th-115th	low-level relieving platform	174	FAIR	CRITICAL	77% of piles exhibit >25% section loss; topside sinkholes; large voids underneath walkway
92nd-94th	low-level relieving platform	441	FAIR	POOR	Accelerating pile deterioration; 24% of piles exhibit >25% section loss
91st-92nd	low-level relieving platform	239	FAIR	FAIR	Sinkholes in line with expansion joints
90th-91st	low-level relieving platform	450	FAIR	FAIR	Sinkholes in line with expansion joints
62nd-63rd	low-level relieving platform	297	POOR	POOR	26% of piles exhibit >25% section loss



East River Esplanade
9/19/17 Update

Inspections
Findings

Presentation Outline

- Overview
- Construction
- Inspections
- Design
- Concurrent work
- Summary

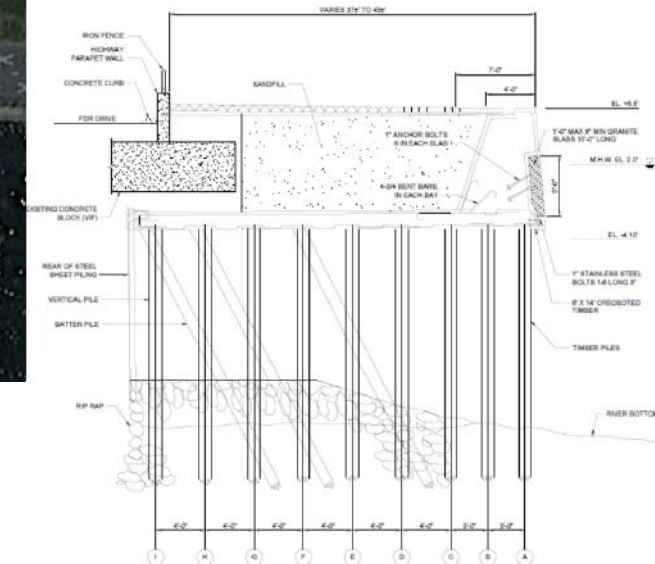
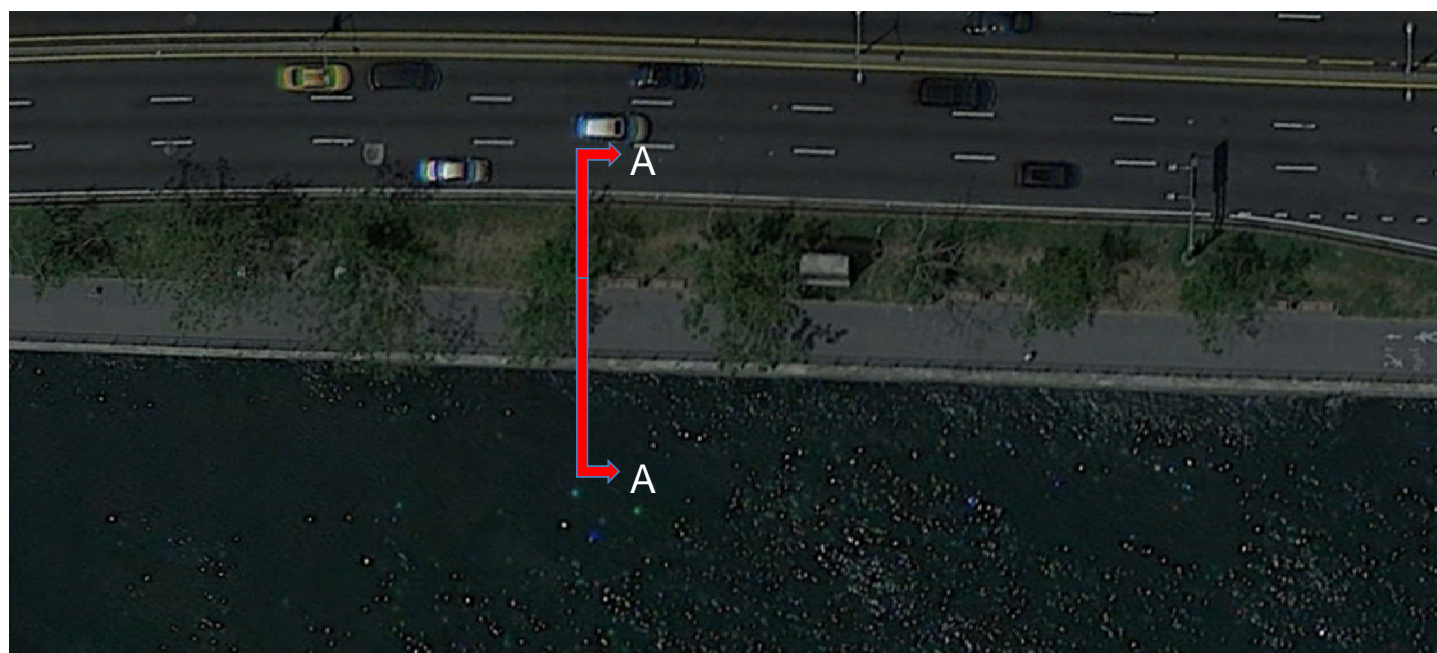


Repair Options

Alternative	Description	Add'l Work Req'd
Alt #1	Priority underdeck repairs to severe and advanced elements	5-10 years
Alt #2	Priority underdeck repairs to severe, advanced, and moderate elements	10-15 years
Alt #3	Repair of all underdeck elements	15-25 years
Alt #4	Repair of all underdeck and topside to "SATISFACTORY" condition	25-30 years
Reconstruction	Complete reconstruction of the site location	50+ years



Repair Options



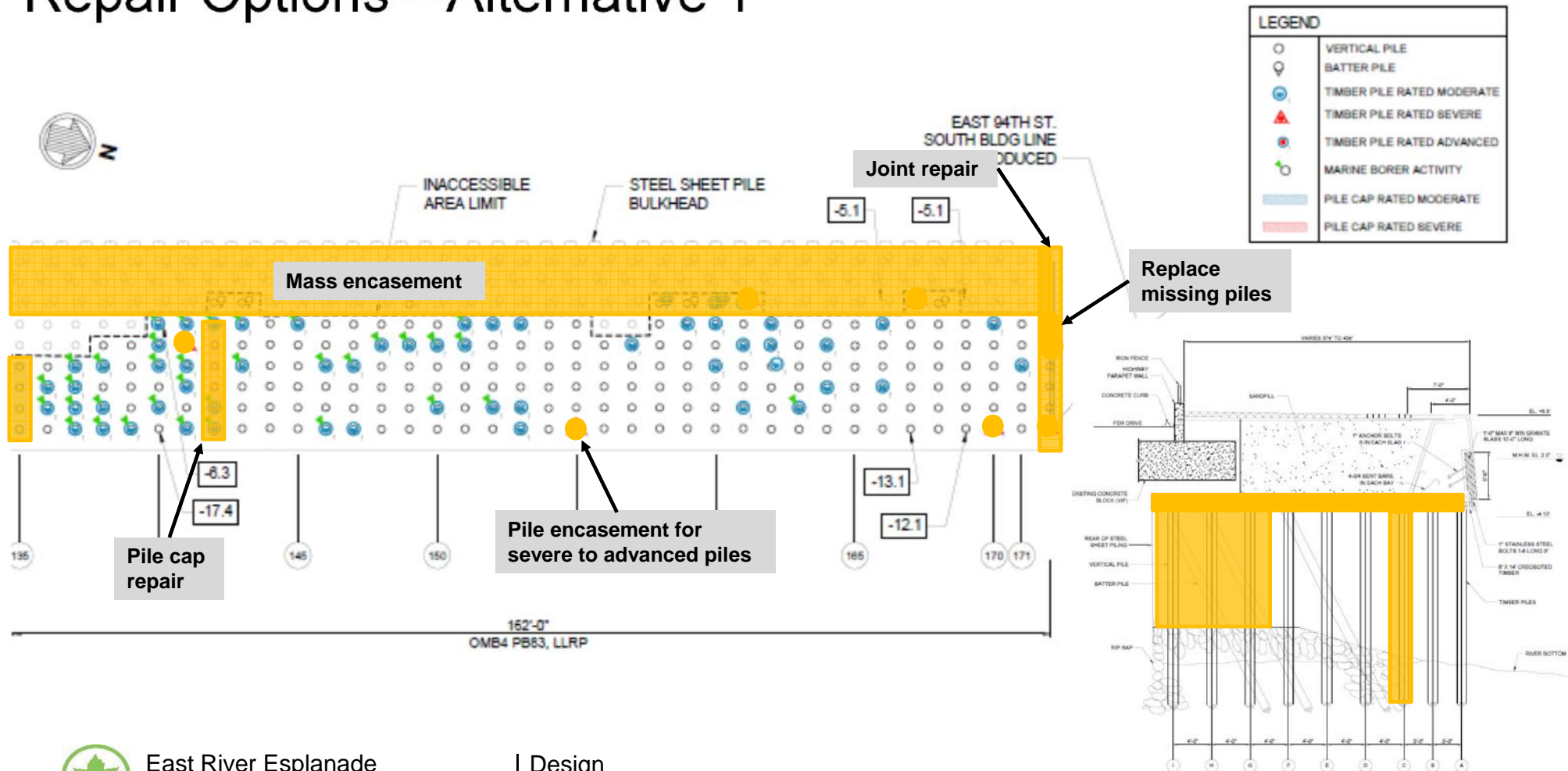
Section A-A



East River Esplanade
9/19/17 Update

Design
Repair Alternatives

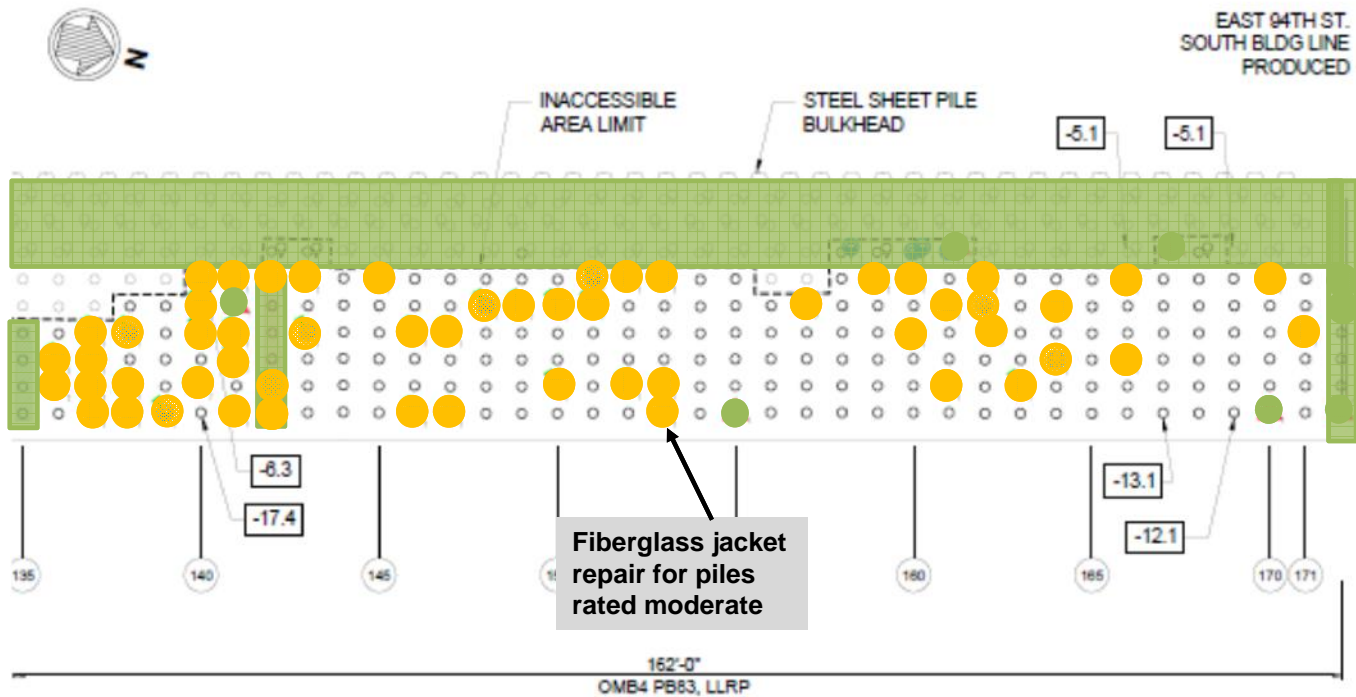
Repair Options – Alternative 1



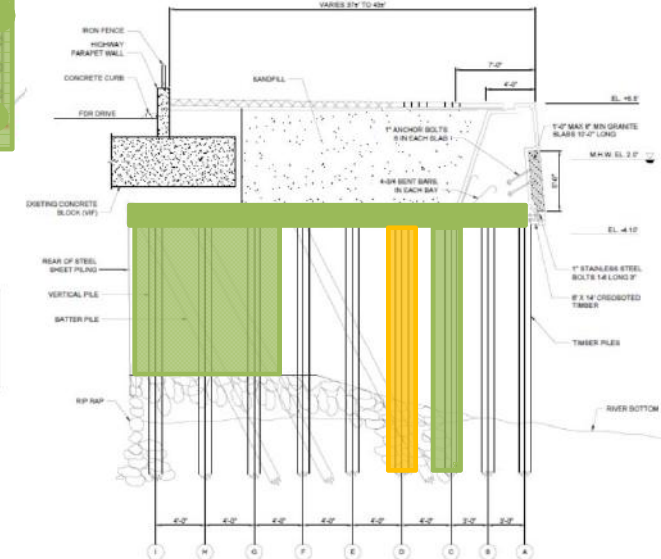
East River Esplanade
9/19/17 Update

Design
Repair Alternatives

Repair Options – Alternative 2



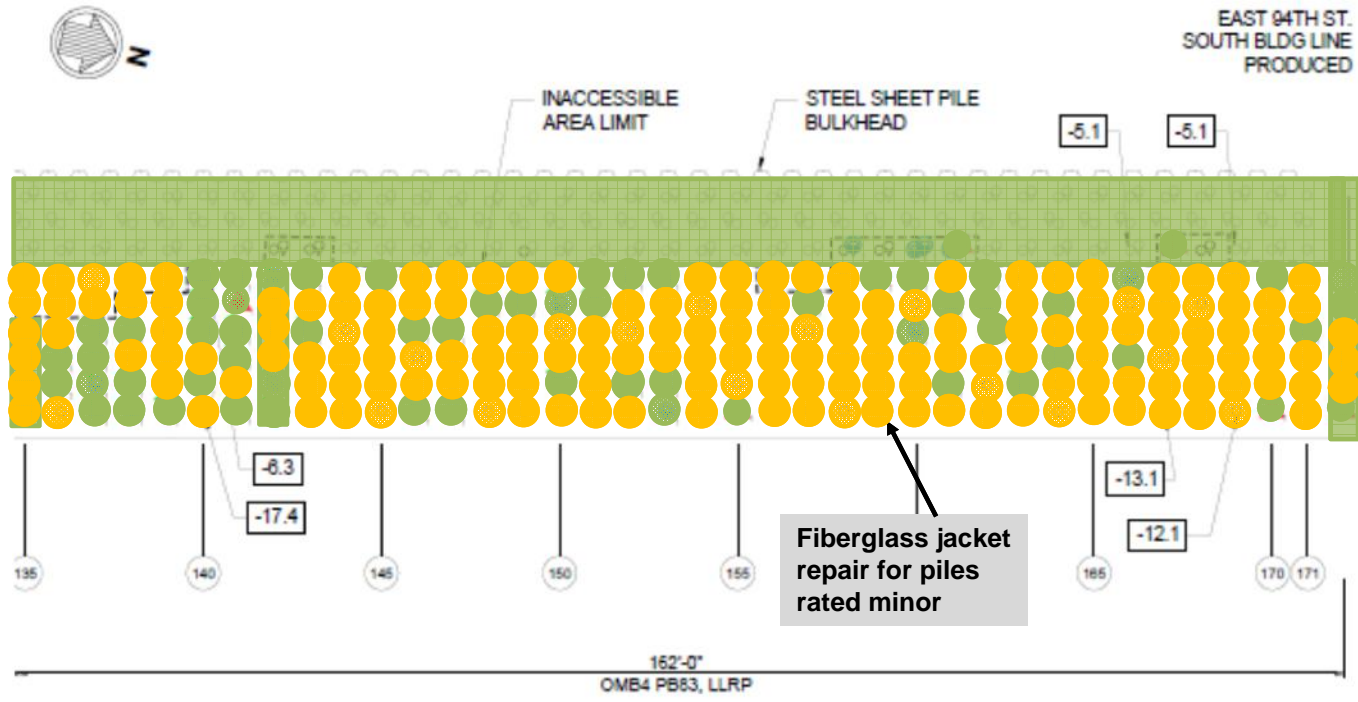
LEGEND	
○	VERTICAL PILE
◊	BATTER PILE
⊕	TIMBER PILE RATED MODERATE
⊖	TIMBER PILE RATED SEVERE
⊗	TIMBER PILE RATED ADVANCED
⊙	MARINE BORER ACTIVITY
■ (light blue)	PILE CAP RATED MODERATE
■ (pink)	PILE CAP RATED SEVERE



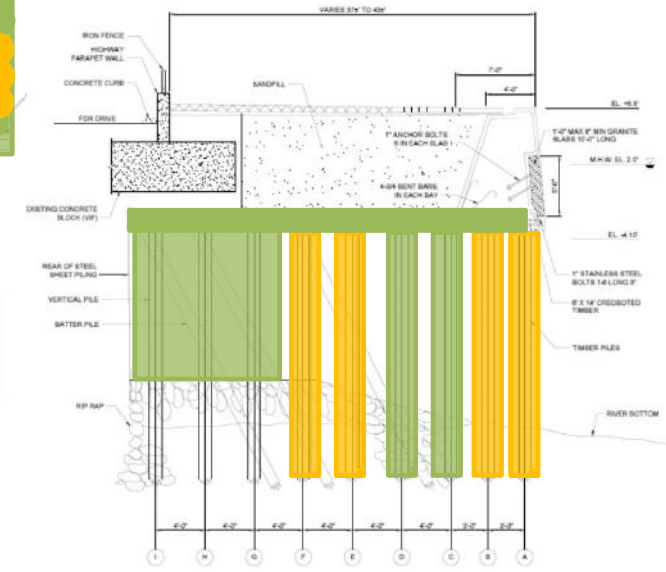
East River Esplanade
9/19/17 Update

Design
Repair Alternatives

Repair Options – Alternative 3



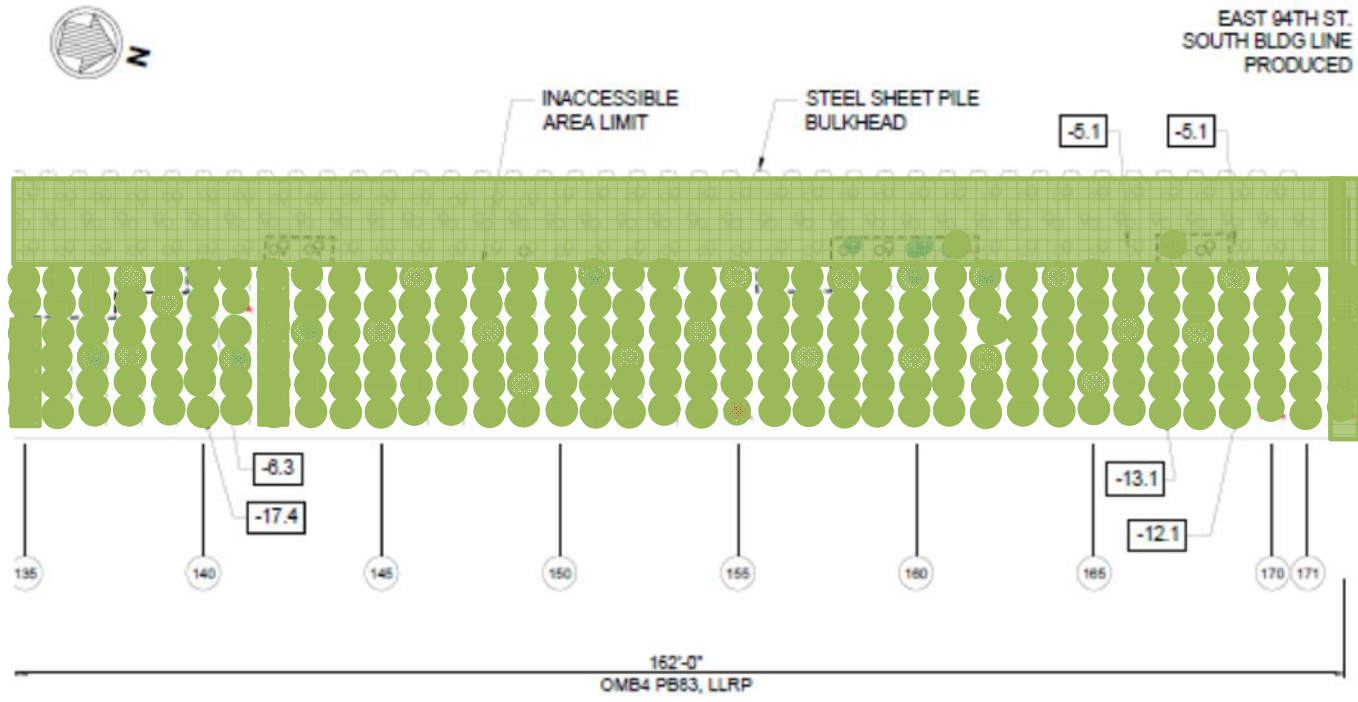
LEGEND	
○	VERTICAL PILE
◊	BATTER PILE
●	TIMBER PILE RATED MODERATE
▲	TIMBER PILE RATED SEVERE
●	TIMBER PILE RATED ADVANCED
⊗	MARINE BORER ACTIVITY
■	PILE CAP RATED MODERATE
■	PILE CAP RATED SEVERE



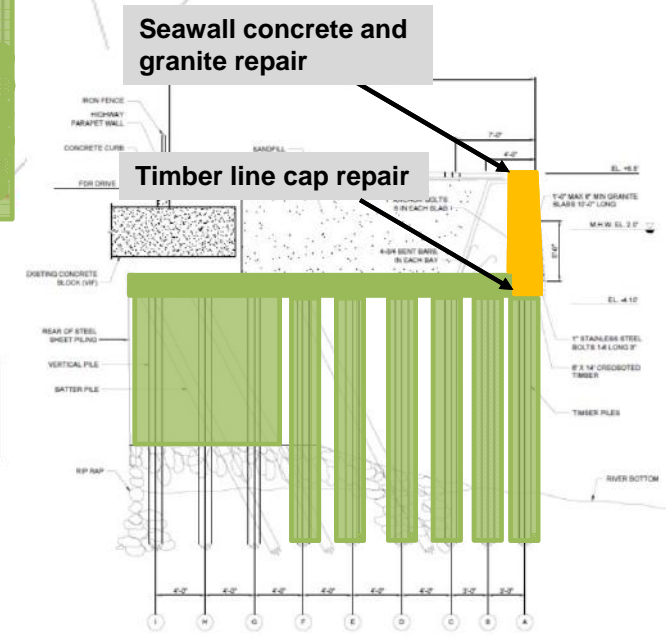
East River Esplanade
9/19/17 Update

Design
Repair Alternatives

Repair Options – Alternative 4



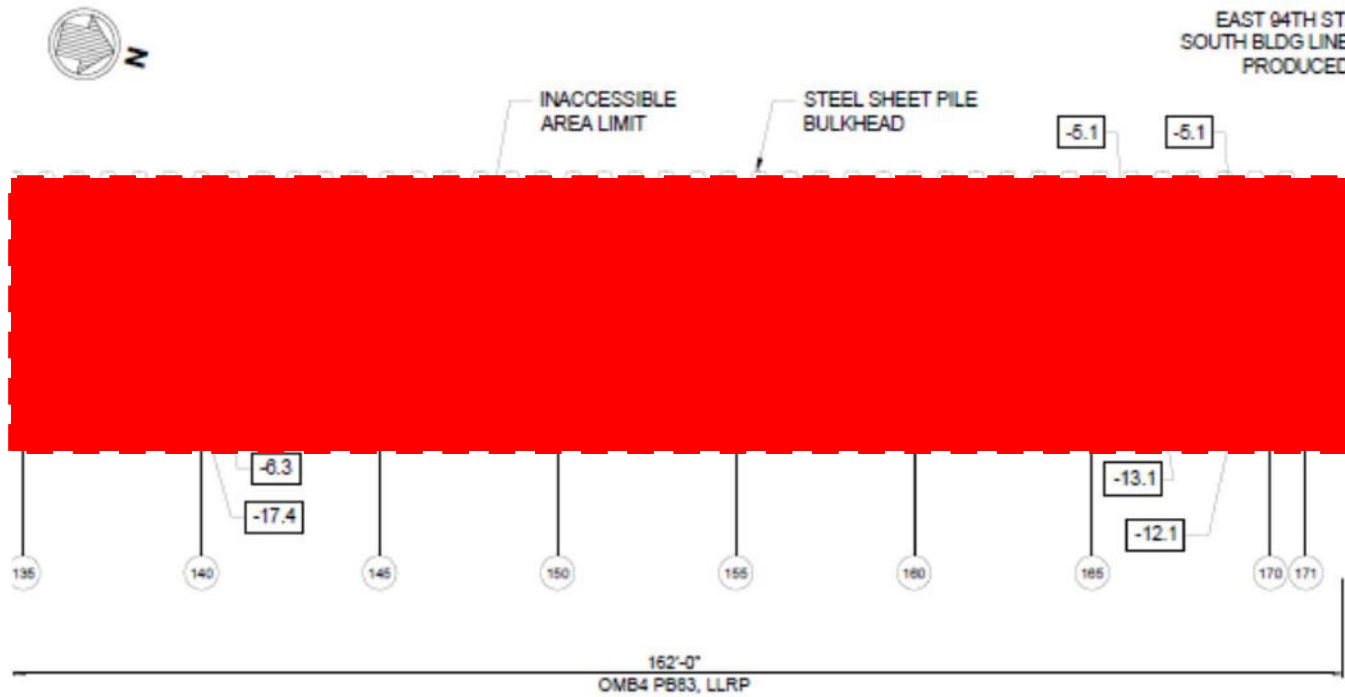
LEGEND	
○	VERTICAL PILE
◊	BATTER PILE
⊙	TIMBER PILE RATED MODERATE
⊚	TIMBER PILE RATED SEVERE
⊛	TIMBER PILE RATED ADVANCED
⊜	MARINE BORER ACTIVITY
■	PILE CAP RATED MODERATE
■	PILE CAP RATED SEVERE



East River Esplanade
9/19/17 Update

Design
Repair Alternatives

Repair Options – Full Reconstruction



LEGEND	
○	VERTICAL PILE
♀	BATTER PILE
⊕	TIMBER PILE RATED MODERATE
⚠	TIMBER PILE RATED SEVERE
⊕	TIMBER PILE RATED ADVANCED
🌿	MARINE BORER ACTIVITY
■	PILE CAP RATED MODERATE
■	PILE CAP RATED SEVERE



East River Esplanade
9/19/17 Update

Design
Repair Alternatives

Projected Repair Costs

LOCATION (appx X-street)	STRUCTURE TYPE	CURRENT CONDITION	REPAIR OPTIONS (\$M)				
			Alt 1	Alt 2	Alt 3	Alt 4	Reconstr
116th St	gravity retaining wall	FAIR	-	-	-	-	-
115th-116th	low-level relieving platform	FAIR	\$0.2	\$0.7	\$4.5	\$5.9	\$12.0
114th-115th	low-level relieving platform	CRITICAL	-	-	-	-	\$11.5
92nd-94th	low-level relieving platform	POOR	\$7.9	\$9.3	\$16.9	\$18.9	\$29.9
91st-92nd	low-level relieving platform	FAIR	-	-	\$4.8	\$5.0	\$15.7
90th-91st	low-level relieving platform	FAIR	\$1.6	\$1.7	\$10.2	\$11.8	\$33.9
62nd-63rd	low-level relieving platform	POOR	\$5.7	\$8.4	\$21.1	\$22.3	\$22.4

These costs are for comparison of options only. Actual repair costs will be determined based on additional analysis and will be finalized after design.

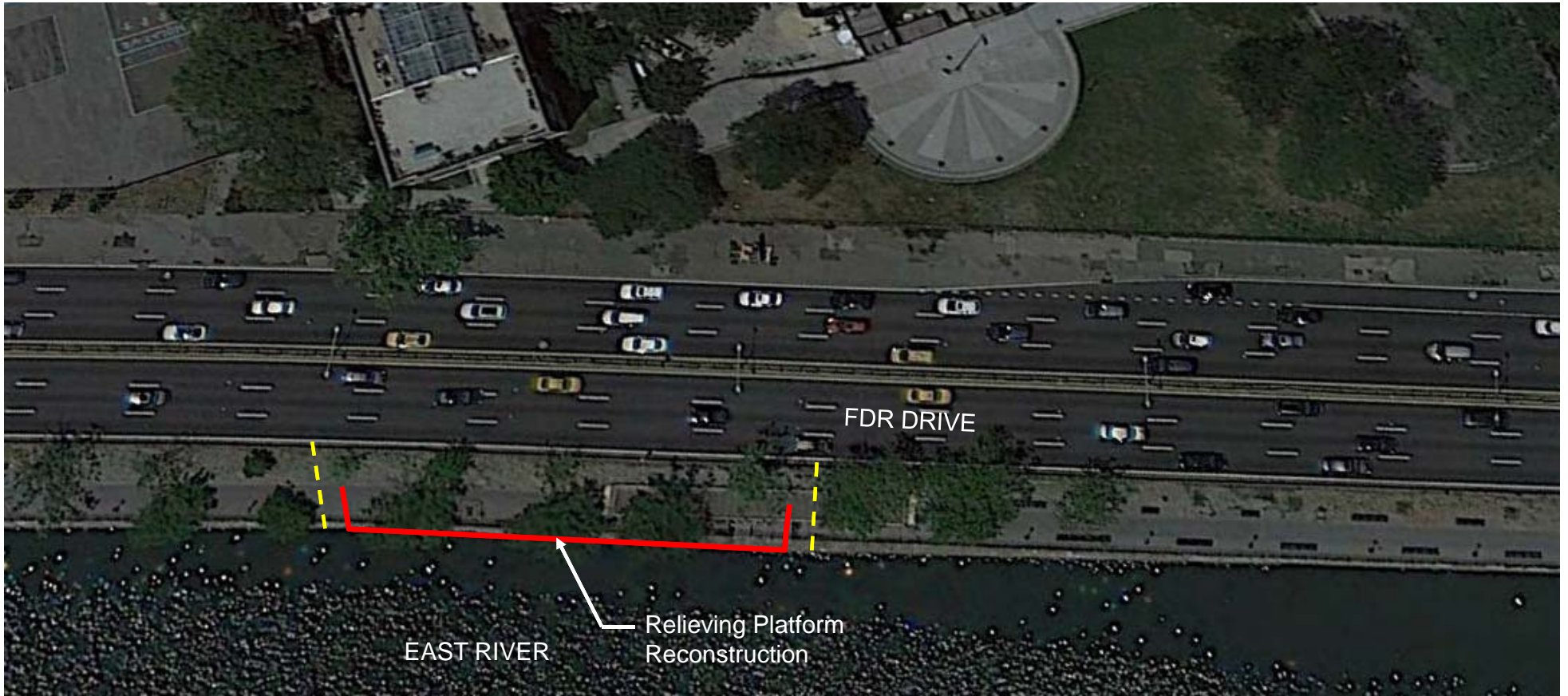


Selected Alternatives

LOCATION (appx X-street)	STRUCTURE TYPE	CURRENT CONDITION	REPAIR OPTIONS (\$M)				
			Alt 1	Alt 2	Alt 3	Alt 4	Reconstr
116th St	gravity retaining wall	FAIR	-	-	-	-	-
115th-116th	low-level relieving platform	FAIR	\$0.2	\$0.7	\$4.5	\$5.9	\$12.0
114th-115th	low-level relieving platform	CRITICAL	-	-	-	-	\$11.5
92nd-94th	low-level relieving platform	POOR	\$7.9	\$9.3	\$16.9	\$18.9	\$29.9
91st-92nd	low-level relieving platform	FAIR	-	-	\$4.8	\$5.0	\$15.7
90th-91st	low-level relieving platform	FAIR	\$1.6	\$1.7	\$10.2	\$11.8	\$33.9
62nd-63rd	low-level relieving platform	POOR	\$5.7	\$8.4	\$21.1	\$22.3	\$22.4

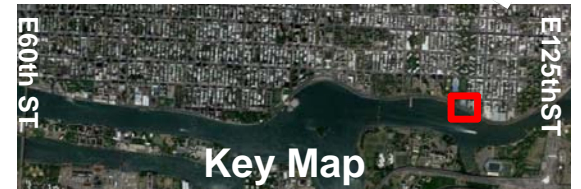
These costs are for comparison of options only. Actual repair costs will be determined based on additional analysis and will be finalized after design.





East River Esplanade
9/19/17 Update

E 114th St.
Existing Conditions



STRUCTURAL CONDITIONS



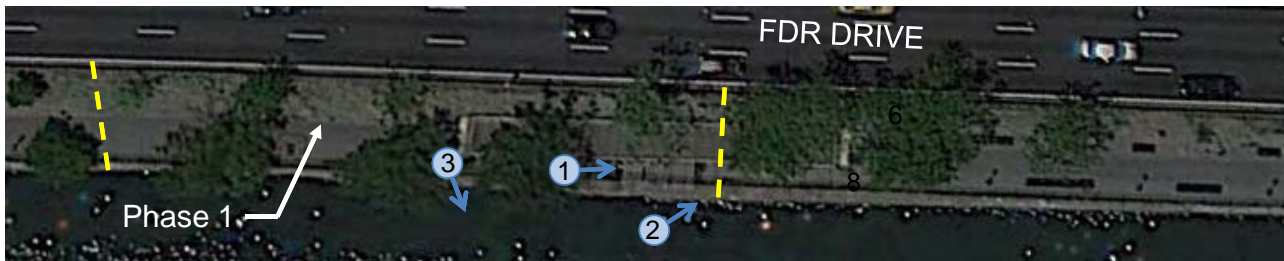
①



②

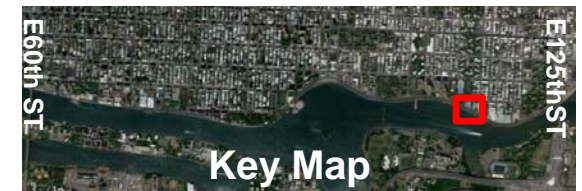


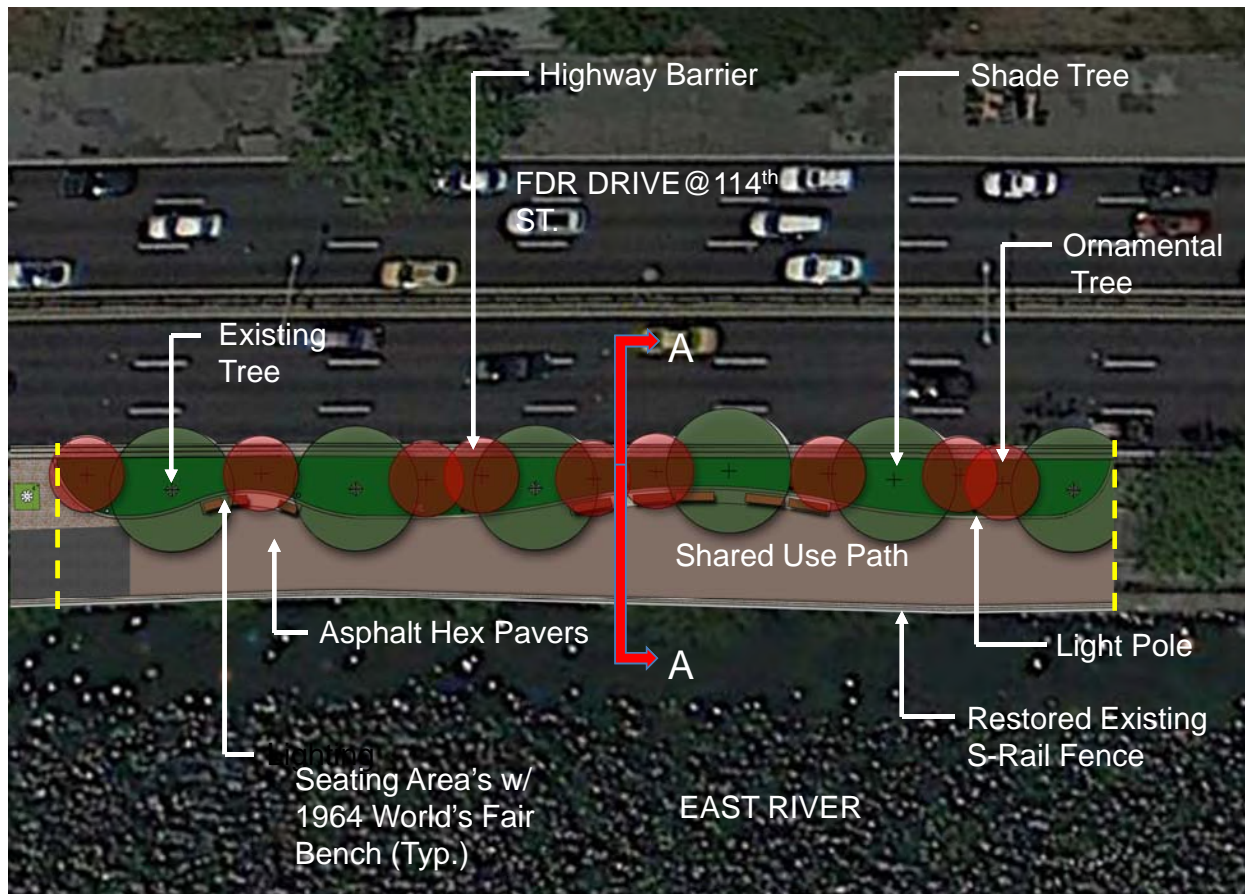
③



East River Esplanade
9/19/17 Update

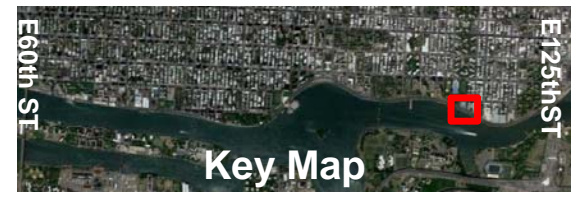
E 114th St.
Existing Conditions

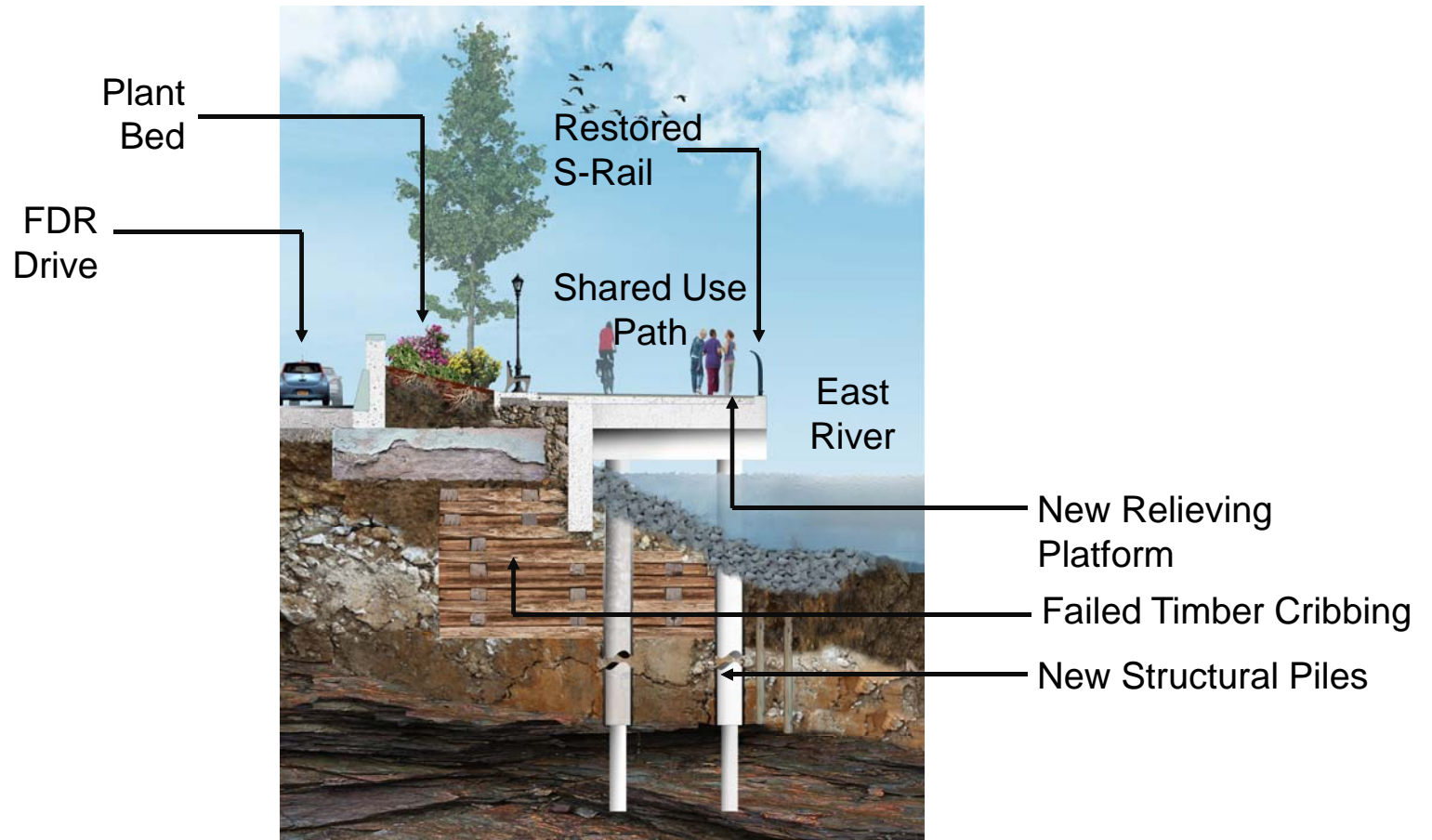




East River Esplanade
9/19/17 Update

E 114th St.
Schematic Plan – Phase 1





East River Esplanade
9/19/17 Update

E 114th St. – Structural Design
Section A-A

Washburn Wire Co. Pier Collapse (E. 117th St.)

- Partial collapse of concrete pier remains, October 2016
- Some damage to bulkhead and esplanade
- Former factory site, only pier remnants and abandoned utilities remain (DCAS jurisdiction)



View from FDR Drive Northbound, pre-collapse

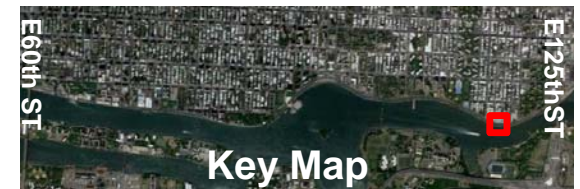


Partial collapse and loss of bulkhead

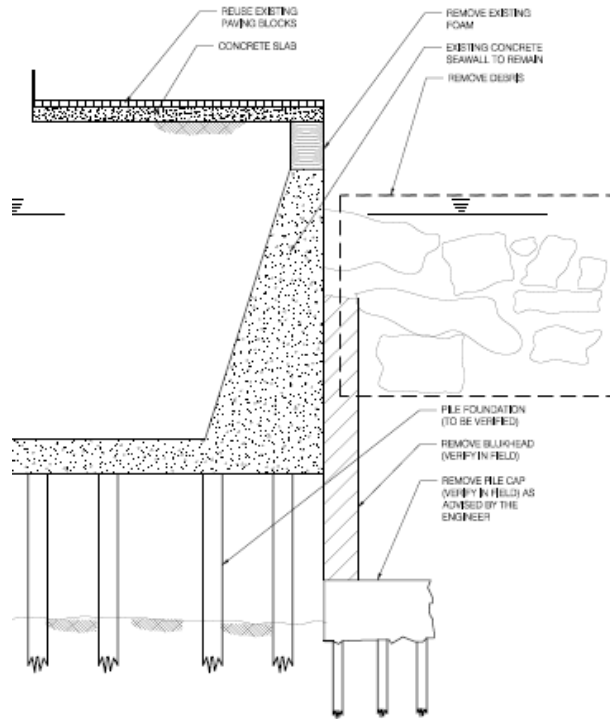


East River Esplanade
9/19/17 Update

| E 117th St.
| Pier Collapse

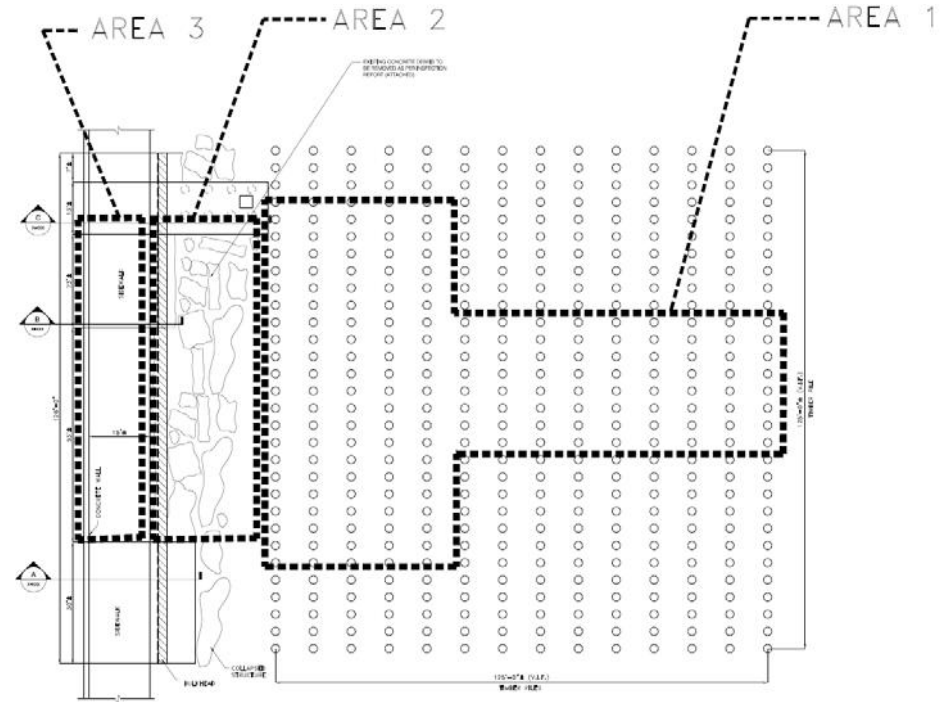


Washburn Wire Co. Pier Collapse (E. 117th St.)



SECTION B-B

SCALE: NTS



DEMOLITION PLAN

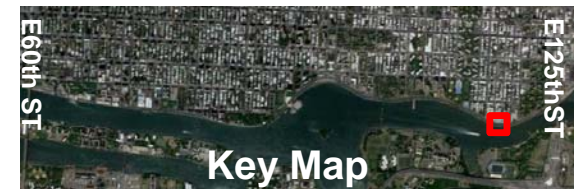
Scale: 1/8" = 1'-0"



NYC Parks

East River Esplanade
9/19/17 Update

E 117th St.
Pier Collapse

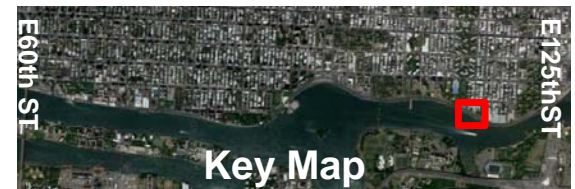
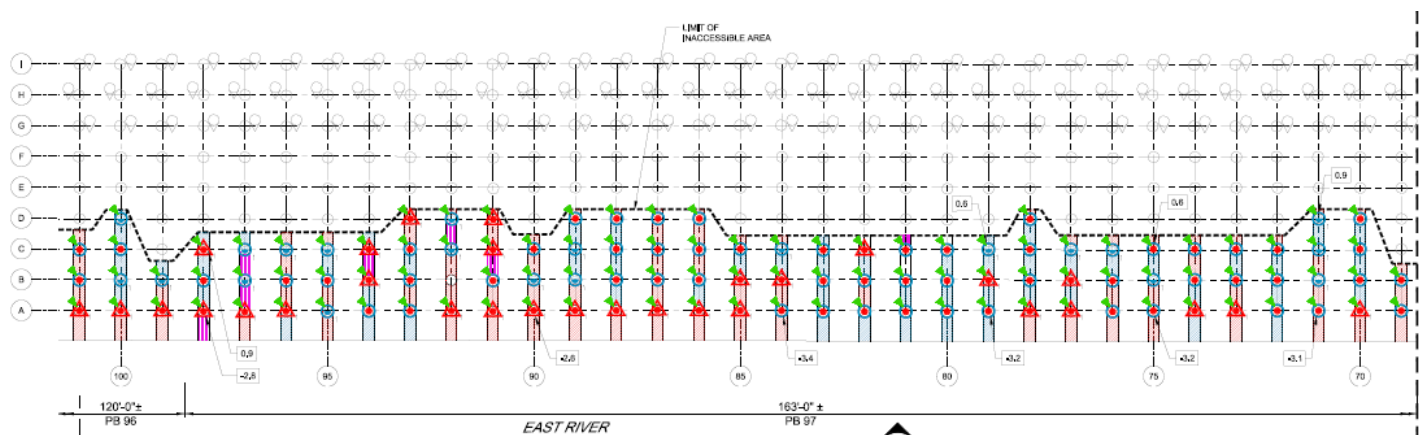


E 115th St. Low-Level Relieving Platform



Overall Rating: **CRITICAL**
 Timber piles = **POOR**
 Timber pile cap = **POOR**
 Timber line cap = **POOR**
 Granite fascia panels = **FAIR**
 Concrete seawall = **POOR**
 Hexblock pavers = **POOR**

- Three locations at topside exhibit voids
- Timber line cap in moderate to severe condition
- Timber pile caps in advanced to severe condition
- Moderate to severe pile deterioration on all observed piles
- Critical sections now fenced off from public use



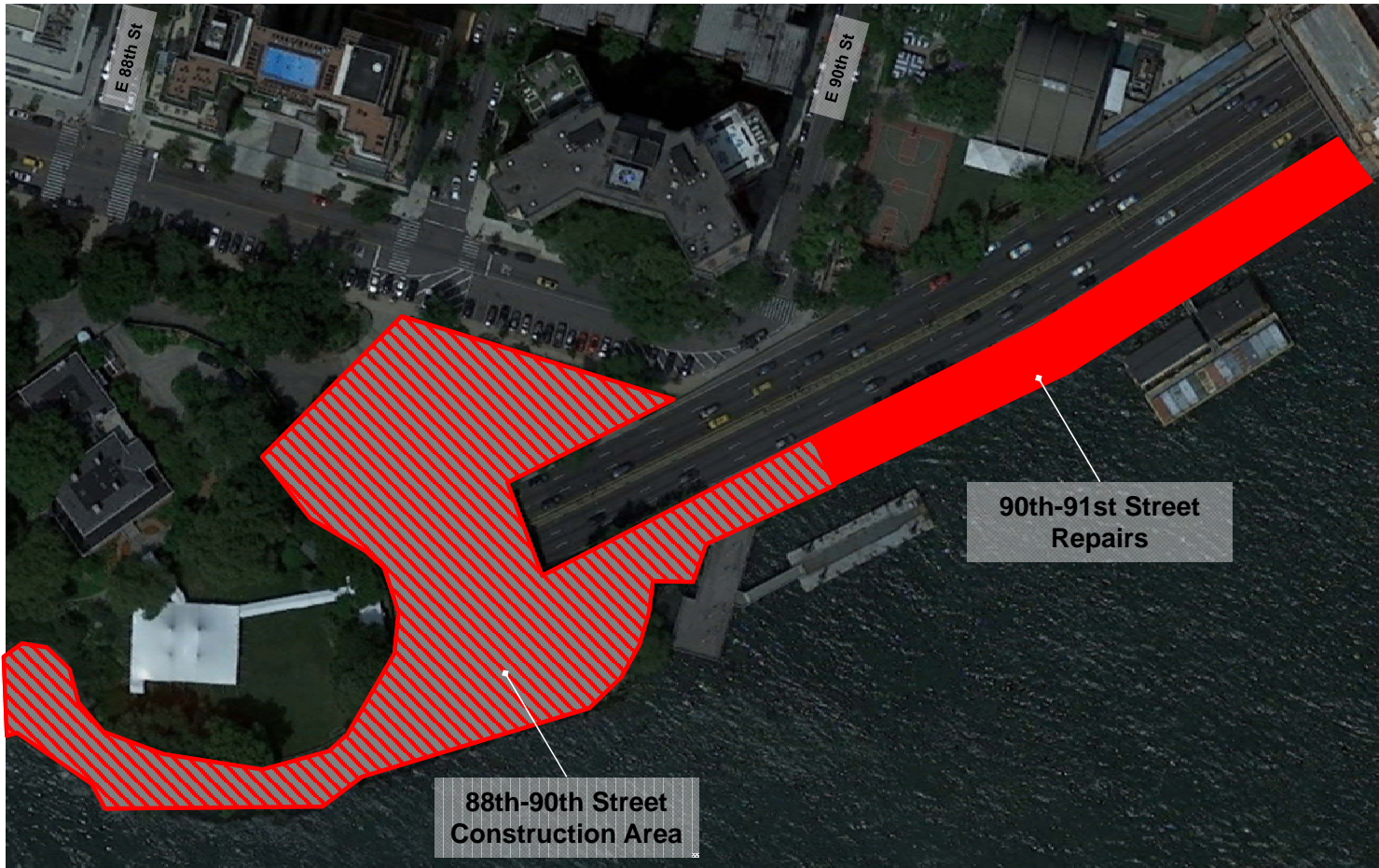
East River Esplanade
 9/19/17 Update

Inspections
 E 115th St.



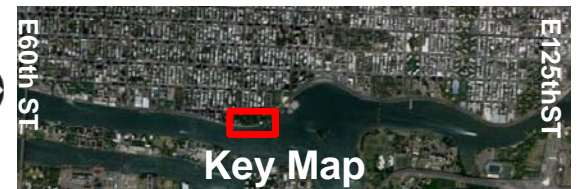
East River Esplanade
9/19/17 Update

E 114th – 117th
Construction Area



East River Esplanade
9/19/17 Update

E 88th – 91st Construction Area



Presentation Outline

- Overview
- Construction
- Inspections
- Design
- Concurrent work
- Summary



SCOPE OF WORK

The damaged pavilion located on top of the existing pier will be completely removed, leaving its former footprint level with the pier itself. Existing damaged elements (paving, railings, timber fenders at the perimeter of the pier) will be replaced. The easternmost part of the pier will be fenced off from the public.

Proposed work includes:

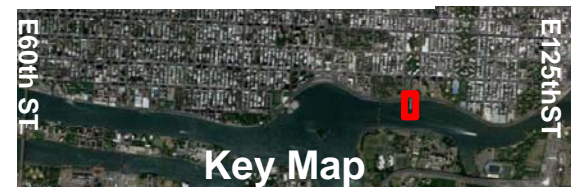
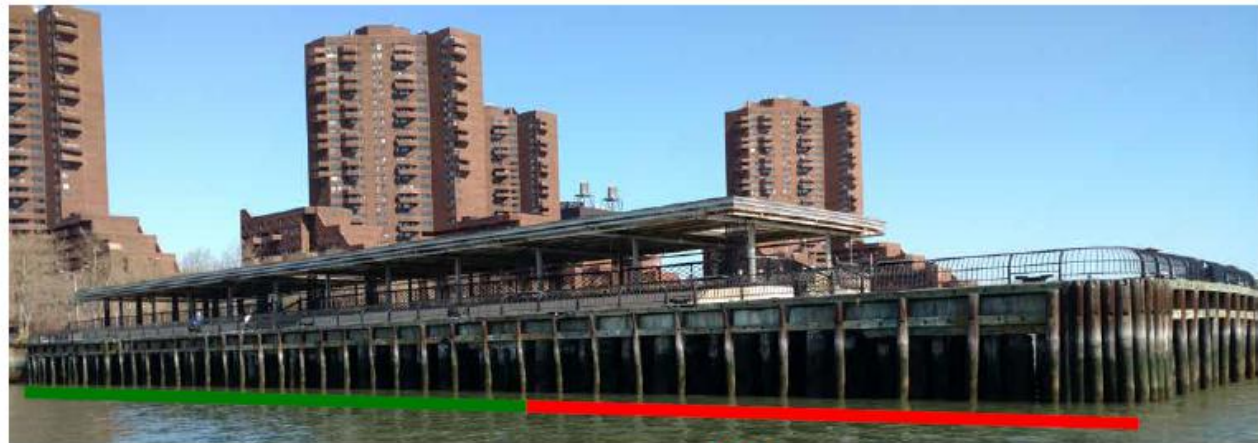
1. Demolition of pavilion and removal of debris by barge
2. Replacement of paving, railings and timber fenders
3. Fencing off the eastern portion (supported by piles damaged beyond repair)

PROJECT BUDGET

City Council: \$250,000

Borough Pres: \$250,000

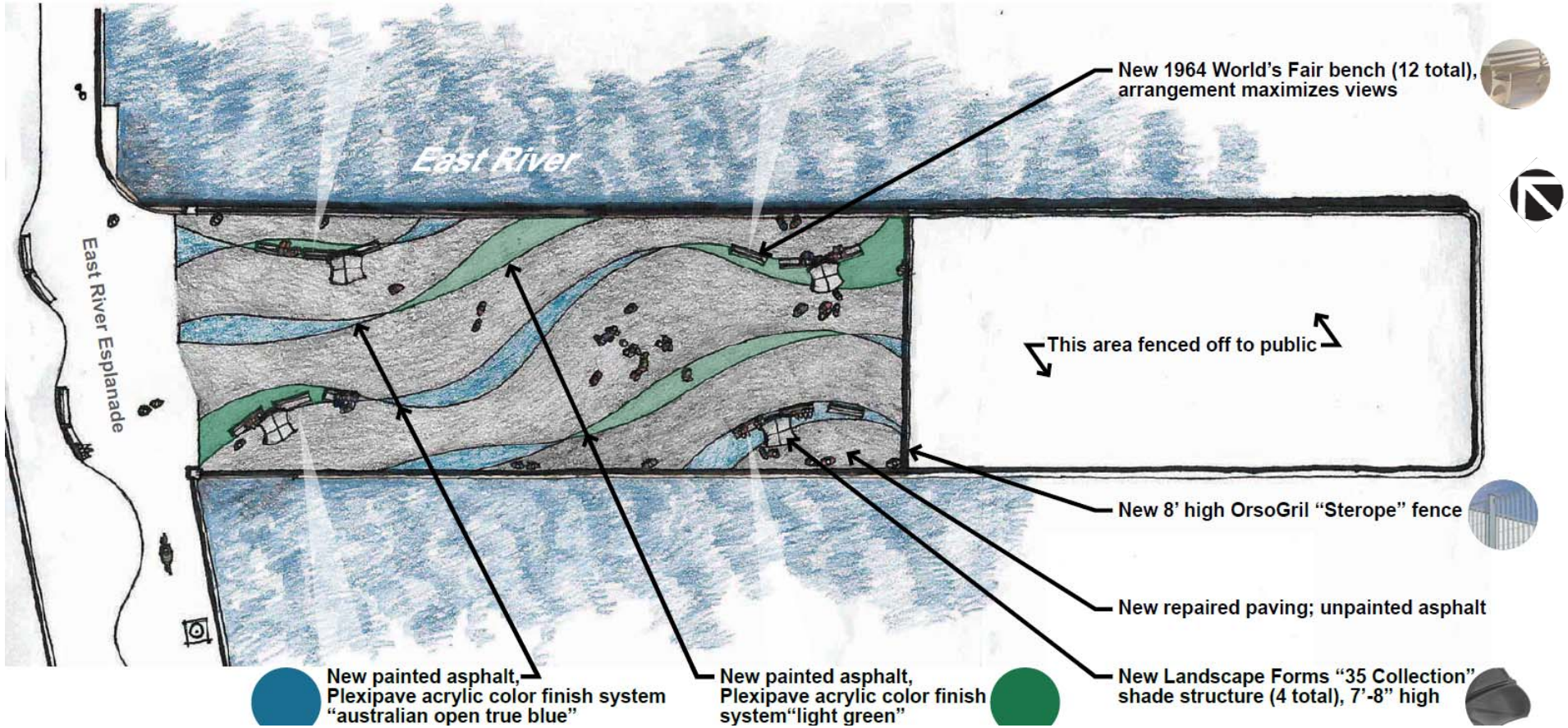
(~\$18M needed for new pier)



NYC Parks

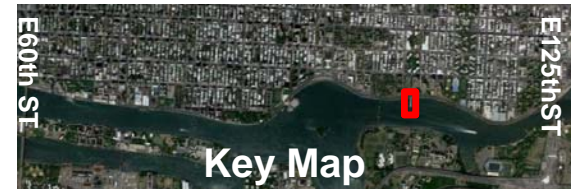
East River Esplanade
9/19/17 Update

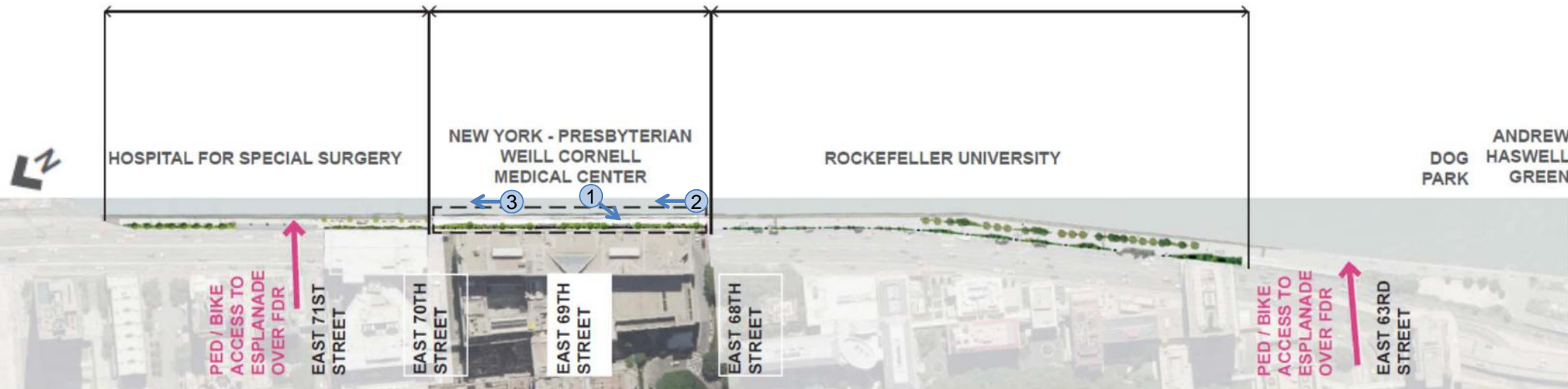
| E 107th St. Pier
| Scope



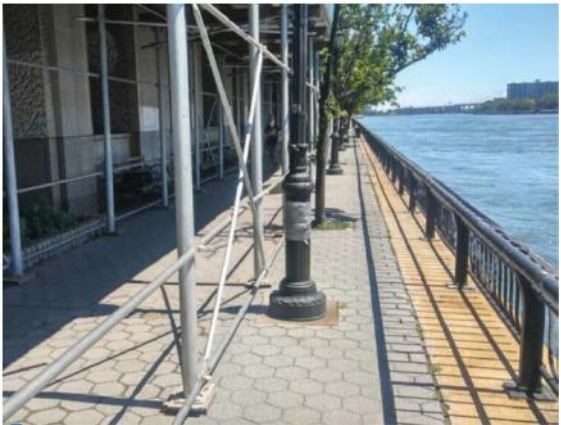
East River Esplanade
9/19/17 Update

E 107th St. Pier
Plan Concept Sketch

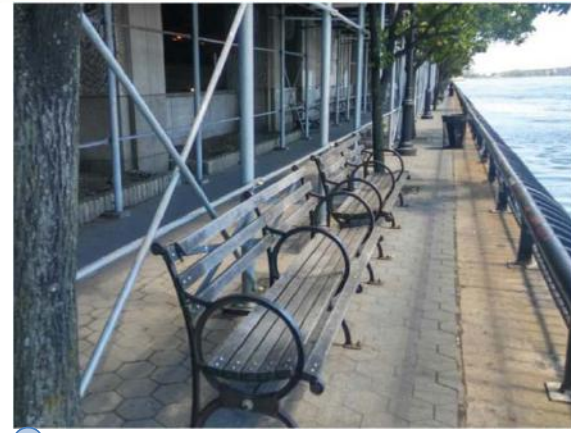




1



2

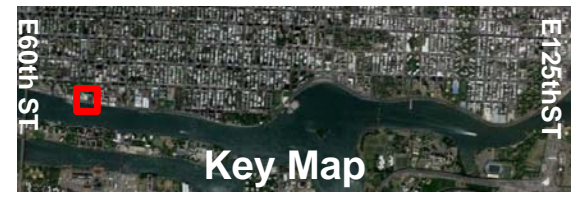


3



East River Esplanade
9/19/17 Update

E 68th-70th St.
Topside



Key Map

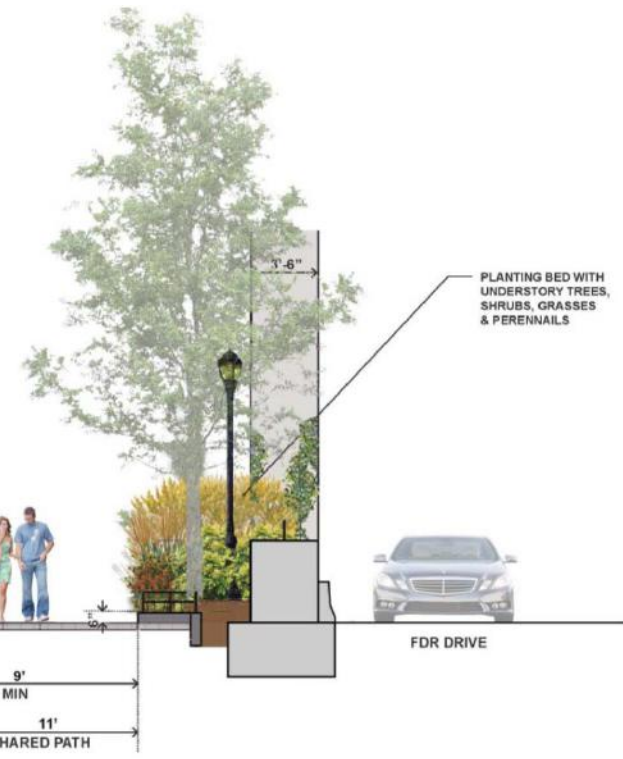
East River



(FDR Drive Below Hospital)

East 70th St

New York - Presbyterian Weill Cornell Medical Center



1964 World's Fair Bench



Asphalt Hex Block

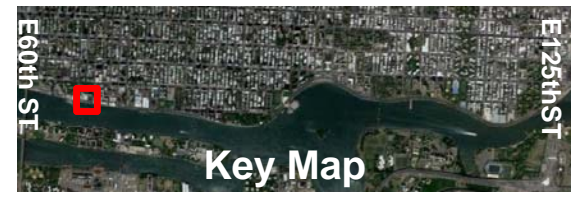


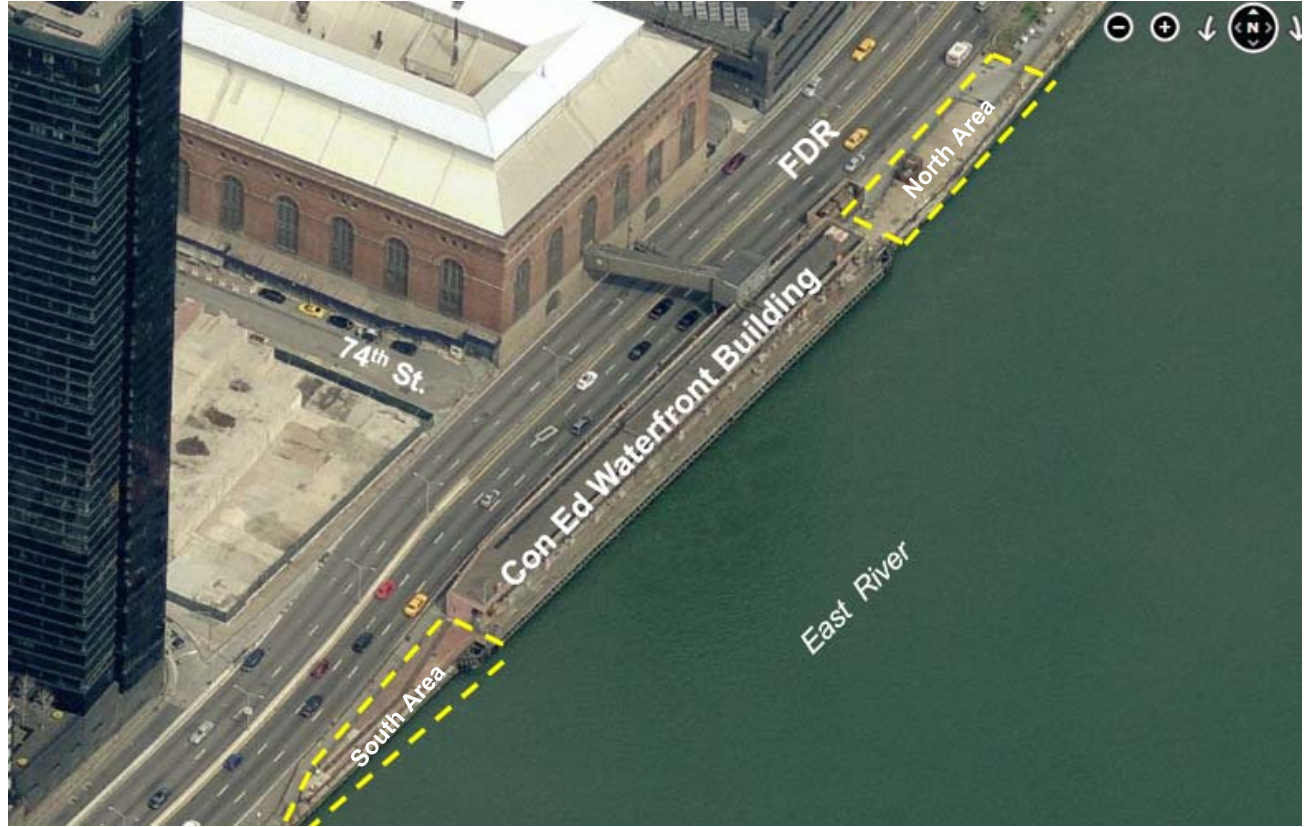
Refurbished Sea Rail



East River Esplanade
 9/19/17 Update

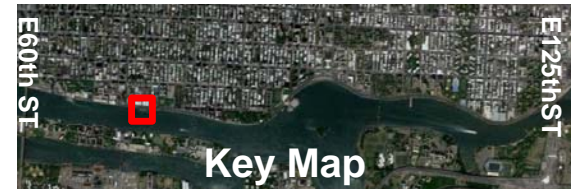
E 68th-70th St.
 Topside

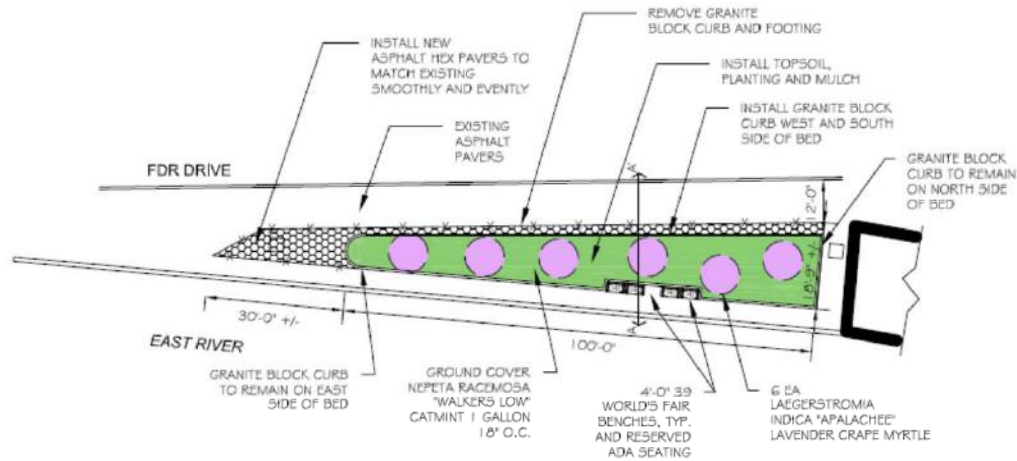




East River Esplanade
9/19/17 Update

E 74th St.
Con Edison Site





**PARCEL "B"
ENLARGED PLAN**

LEGEND:

- ▣ NEW ASPHALT PAVERS
- x REMOVE GRANITE BLOCK CURB

NOTE: ALL DIMENSIONS TO BE VERIFIED IN FIELD

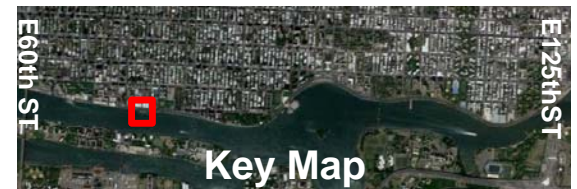


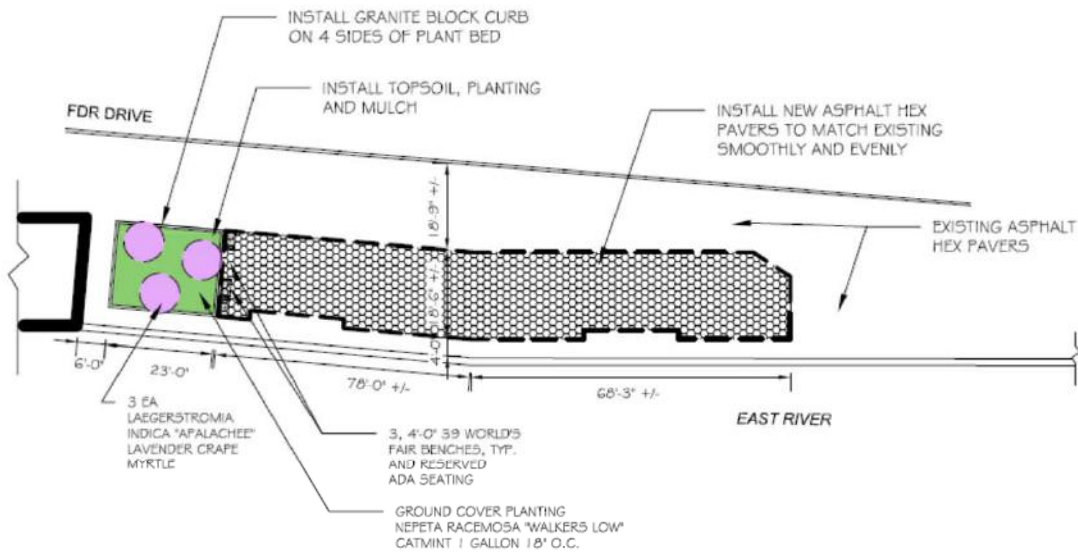
EAST RIVER ESPLANADE - CON ED SITE AT EAST 74TH STREET - SOUTH PLAN
PROPOSED REVISION, JANUARY 13, 2015



East River Esplanade
9/19/17 Update

E 74th St.
Con Edison Site





LEGEND

▣ NEW ASPHALT PAVERS

**PARCEL "A"
ENLARGED PLAN**

NOTE: ALL DIMENSIONS TO BE VERIFIED IN FIELD

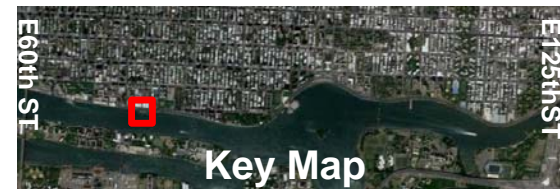


EAST RIVER ESPLANADE - CON ED SITE AT EAST 74TH STREET - NORTH PLAN
PROPOSED REVISION, JANUARY 13, 2015



East River Esplanade
9/19/17 Update

E 74th St.
Con Edison Site

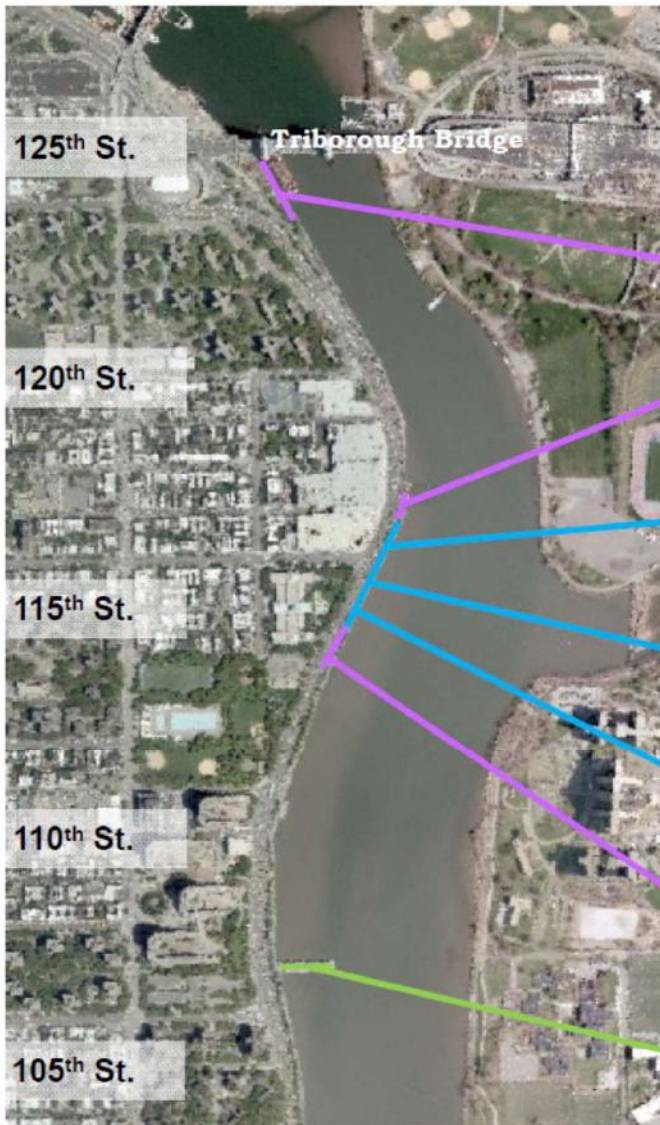


Presentation Outline

- Overview
- Construction
- Inspections
- Design
- Concurrent work
- Summary



East River Esplanade Ongoing & Upcoming Work



LOCATION (appx X-street)	STRUCTURE TYPE	REPAIR TYPE	REPAIR COST (M)	DESIGN	CONSTR	NOTES
124th-125th	high platform	topside only	\$0.4	complete	2017	Railing in fabrication
117th	low-level relieving platform	pile removal, bulkhead rehab	\$0.8	complete	2019-2020	Moved to phase 2 to combine closures
116th	gravity retaining wall	N/A	-	N/A	N/A	No repair recommended at this time
115th-116th	low-level relieving platform	repair	\$0.2	2018	2019-2020	Alternative #1 repair
114th-115th	low-level relieving platform	reconstr	\$11.5	2018	2019-2020	Full reconstruction necessary
114th	low-level relieving platform	reconstr	\$6.5	2017	2019-2020	Moved to phase 2 to combine closures
107th St Pier	pier	pier rehab	\$0.5	complete	2019-2020	Full reconstruction needed but not funded



LOCATION (approx X-street)	STRUCTURE TYPE	REPAIR TYPE	REPAIR COST (M)	DESIGN	CONSTR	NOTES
92nd-94th	low-level relieving platform	repair	\$7.9	2018	2019-2020	Alternative #1 repair
91st-92nd	low-level relieving platform	N/A	-	N/A	N/A	No repair recommended at this time
91st MTS (DDC/DSNY)	DSNY facility	N/A	\$180	complete	2018-2020	DDC/DSNY
90th-91st	low-level relieving platform	repair	\$1.6	2018	2018	Alternative #1 repair with current 88th-90th construction
90th St Ferry	new ferry station at existing pier	N/A	[UNK]	finalizing	2018	EDC ferries
88th-90th [Carl Schurz]	gravity retaining wall	reconstr	\$6.2	complete	2017-2018	In construction
81st St Pedestrian Bridge (DDC)	new bridge	n/a	\$15	complete	2017	Includes ramp to esplanade and landscape work
76th-81st	gravity retaining wall	repair	-	complete	N/A	Bumped based on phase 2 insp



LOCATION (appx X-street)	STRUCTURE TYPE	REPAIR TYPE	REPAIR COST (M)	DESIGN	CONSTR	NOTES
76th-81st	gravity retaining wall	repair	-	complete	N/A	Bumped based on phase 2 insp
Con Edison	gravity retaining wall	topside only	[UNK]	complete	2018	Hex pavers and planting beds
70th - 73rd (Hospital for Special Surgery)	gravity retaining wall	topside only	[UNK]	complete	2017?	Work by 3rd party
68th-70th	gravity retaining wall	topside only	\$1.5	2018	2019	Landscaping to match 63rd-73rd
63rd - 68th (Rockefeller University)	gravity retaining wall	rehab gravity wall and topside	\$2.5	complete	2018	Work by 3rd party
62nd-63rd	low-level relieving platform	repair	\$5.7	2018	2019-2020	Alternative #1 repair
61st - 62nd (AHGreen Phase 2B)	high platform	rehab and topside	\$25	2017	[TBD]	Design underway, managed by EDC
60th - 61st (AHGreen Phase 2A)	low-level relieving platform	rehab and topside	\$4	complete	complete 2017	Complete

Thank you

Questions?



NYC Parks

East River Esplanade
9/19/17 Update

