

REBUILD BY DESIGN



REBUILD BY DESIGN

develops innovative research, collaboration, and design processes to catalyze equitable adaptation.

Because of the enormity of this challenge, the Rebuild by Design process was developed to find better ways of implementing designs and improving policy.

Bringing together interdisciplinary teams of internationally renowned designers, scientists, economists, and other experts with a diverse range of thousands of stakeholders, Rebuild by Design has developed innovative, equitable solutions that better protect residents from future climate risks, while strengthening everyday resilience within communities.

This graphic provides an overview of the Rebuild by Design process, from its June 2013 launch to the unveiling of final design proposals in April 2014 and beyond, as well as key themes and strategies. The following graphic includes detailed descriptions and images representing the design proposals.

REBUILD BY DESIGN

Lead Supporter
The Rockefeller Foundation

Additional Supporters
Deutsche Bank
Hearst Foundation
The JPB Foundation
Surdna Foundation
The New Jersey Recovery Fund

In collaboration with
the Institute for Public Knowledge at
New York University
Municipal Art Society of New York
Regional Planning Association
Van Alen Institute

Design Teams

BIG Team

HR&A Advisors w/ Cooper, Robertson & Partners
The Commercial Corridor Resiliency Project

Interboro Team

Living with the Bay: a Comprehensive Regional Resiliency Plan for Nassau County's South Shore

MIT CAU + ZUS + URBANISTEN
New Meadowlands: Productive City + Regional Park

OMA
Resist, Delay, Store, Discharge:
a comprehensive strategy for Hoboken

PennDesign / OLIN
Hunts Point Lifelines

Sasaki / Rutgers / Arup
Resilience + The Beach

SCAPE / Landscape Architecture
LIVING BREAKWATERS

WB unbridged with Yale ARCADIS
Resilient Bridgeport

WXY / WEST 8
Blue Dunes - The Future of Coastal Resiliency

Build by Design

Transforming the region and its future

4

Collaboration by Design

Form coalitions to innovate

3



Design can catalyze...
collaborative...
interdisciplinary...
design...
collaboration...



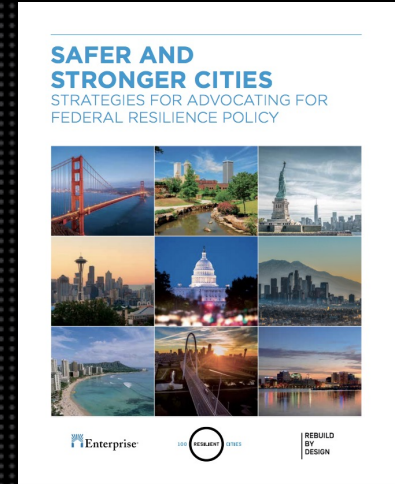
RESEARCH ADVISORY GROUP
John Schellinger, Chair
Phyllis K. Block
Victoria Chalkovskiy
Phyllis C. Hollander
Michael J. Hines
Gordon H. Jones
Michael J. Katz
Katie Kline
Walter Nelson
Walter Nelson

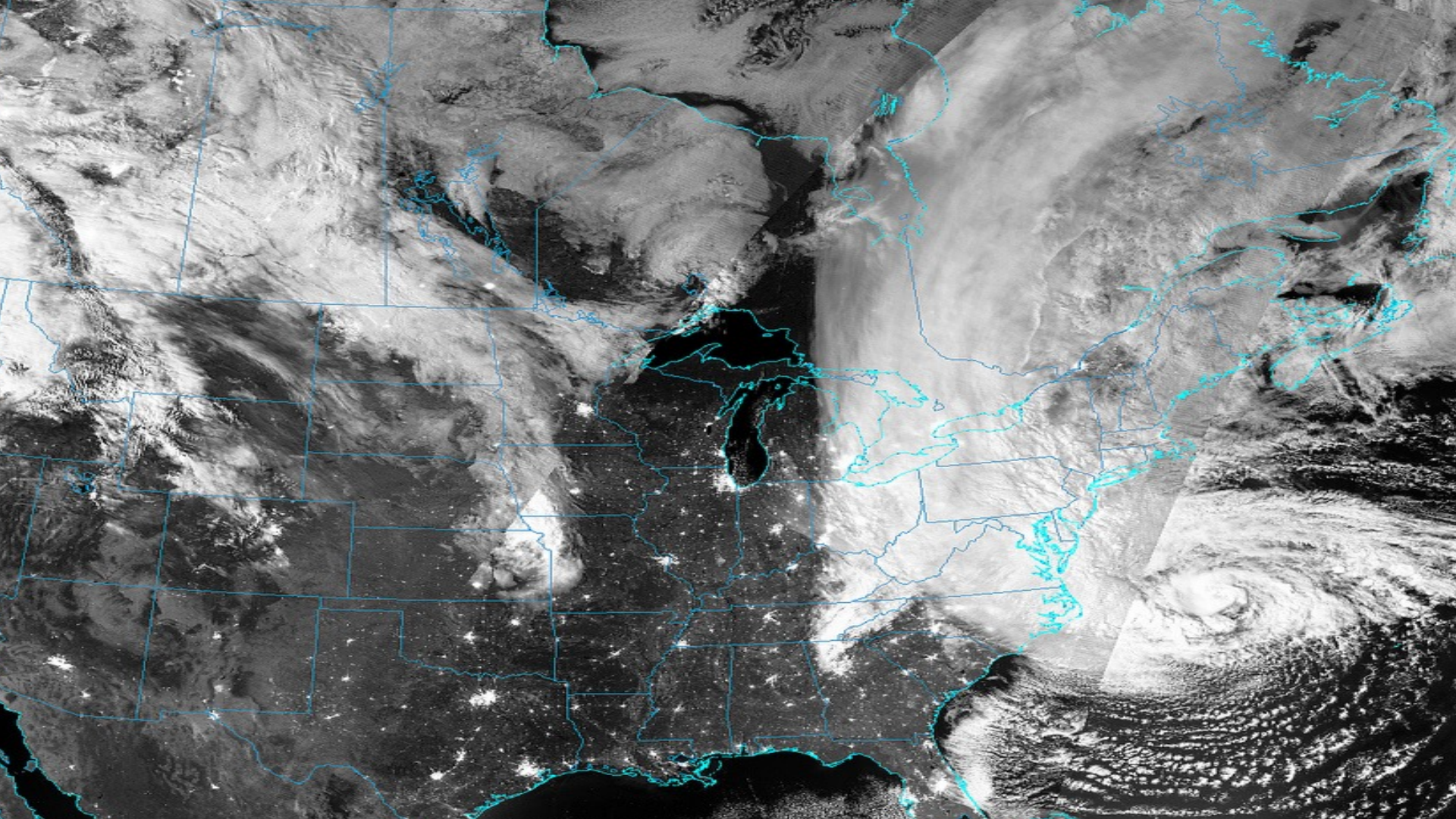


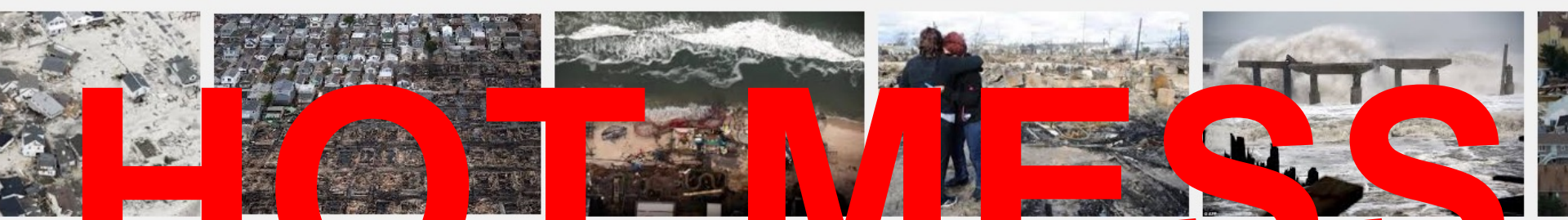
REBUILD BY DESIGN

WHAT WE DO

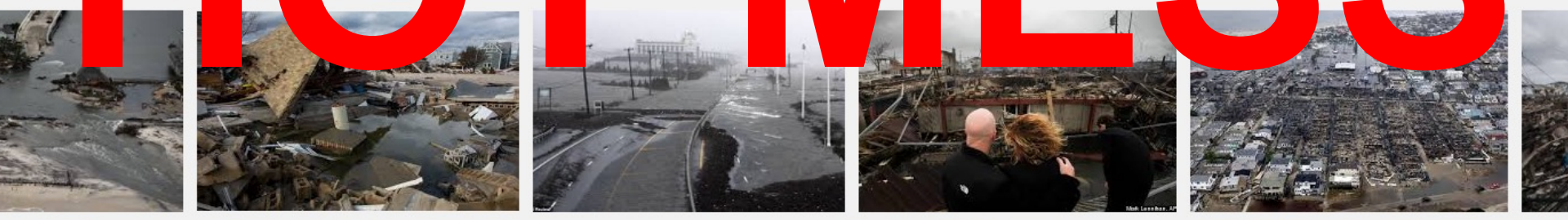
- 1 Large Scale Regional Design Competitions
- 2 Innovative Processes to Address Cities' Challenges
- 3 Research and Policy





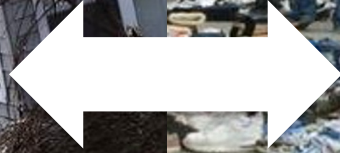


HOT MESS





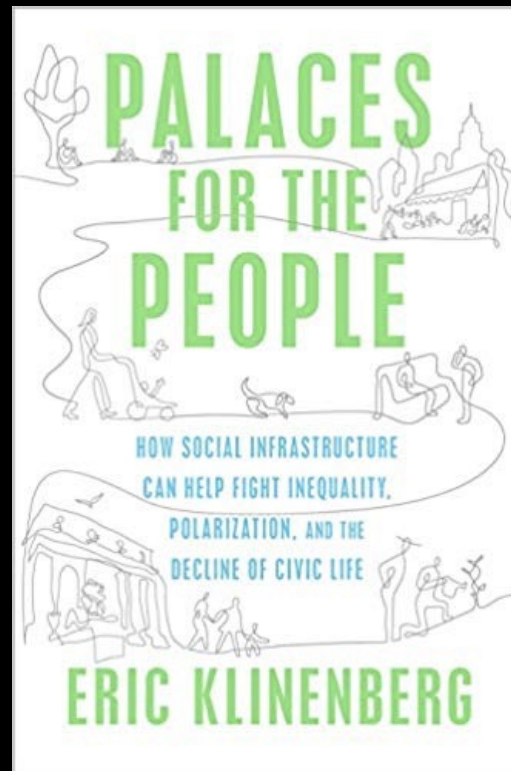
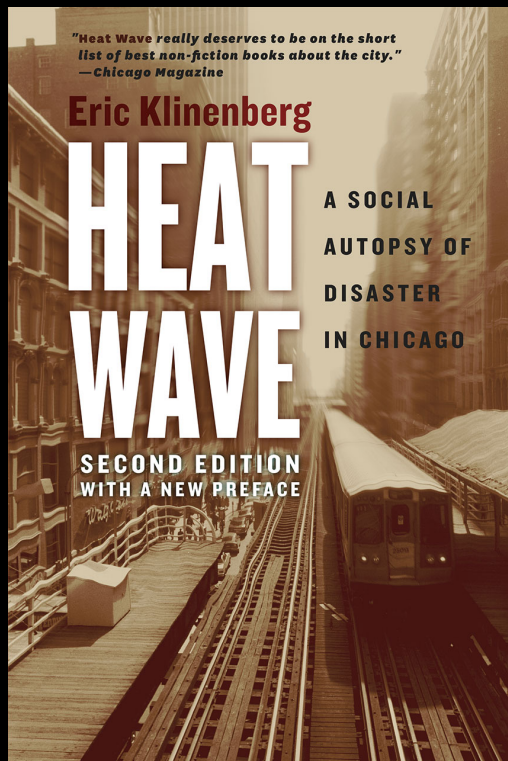
PHYSICAL



SOCIAL

SOCIAL RESILIENCE

1995 Chicago Heat
Wave Killed 700
people



TYPICAL DESIGN PROCESS

Site

Budget

Program

Square Footage

Timeline



DESIGN DETOUR



HURRICANE SANDY DESIGN COMPETITION JUNE 2013 – JUNE 2014

- 10 Interdisciplinary Teams
- Northeast United States
- Federal Disaster Dollars (CDBG-DR) to be awarded by HUD
- Focus on the Future, Not Returning to the Past
- Infrastructure should address multiple goals at the same time
- Judged on Innovation, Collaboration and Implementation





COLLABORATIVE RESEARCH



COLLABORATIVE DESIGN



STAGE 1: COLLABORATIVE RESEARCH



STAGE 2: COLLABORATIVE DESIGN



COLLABORATIVE DESIGN

- Analysis of All Stakeholders
- Government Agency Meetings
- Meetings w existing coalitions
- Forming new coalitions
- Creating unusual events (bike tours, dance parties, movie screenings, parade)
- Design Charrettes
- Brainstorming sessions
- Site tours
- Wholesale Presentations at existing meetings



Design + Program developed with stakeholders



EVENTS

**MARCH 13
2014 - 6:30 PM**

Innovating for a Resilient Rockaway

SOLUTIONS FOR SMALL BUSINESS

Hosted by the Beach 116th Street Partnership
Support from The Municipal Art Society of New York
Presentation by Rebuild by Design's HRA Advisors
and Cooper, Robertson & Partners team

What can I do to protect my small business?
How do I measure resilient improvements?
What are my options?

231 Beach 116th Street
Thursday-March, 13th
6:30 PM - 8:30 PM
www.shopbeach116.com/news-events/resilientrock/

BEACH 116TH STREET PARTNERSHIP
HRA

**firstannual hunts point
slam bake**



Hosted by the
Cooking
Channels Baron
Ambrosia

**Cooking
Competition
featuring the
Talent, Bounty and
Businesses of Hunts Point**

**Wednesday, March 19
5:00 PM - 8:30 PM**

banknote building

3rd Floor Event Space, 1231 Lafayette Avenue

Presentation of Dishes to Judges 5:00 PM
Slam Bake Public Tasting at 5:30 PM
Judges Announce Winners at 6:30 PM
Rebuild by Design Public Meeting 7:00 PM

Chickens, dinner, and Spanish-language translation will be provided

Presented by the PeerDesign / OUN Rebuild by Design team. PeerDesign and OUN were selected through the U.S. Department of Housing and Urban Development's Rebuild by Design competition to identify and develop viable infrastructure strategies for protecting Hunts Point from adverse weather events. Rebuild by Design is aimed at addressing structural and environmental vulnerabilities that Sandy imposed in communities throughout the region and developing functional solutions to better protect residents and businesses in the future.

Judging and public tasting followed
Immediately by a public meeting to review
draft ideas for HUD's

Rebuild by Design:
**plans for new infrastructure
to protect Hunts Point
from the next
Superstorm**



Citymaking Bridgeport



**Saturday
March 15
1-4pm**

Bridgeport Public Library
Pop room, 1st. floor
925 Broad St, Bridgeport CT

Bike Tour Along the Pequonnock
Design Your Ideal City: Workshop
Bike Repair: Demonstration and Clinic
Living With Water: Urban Design Station
Hack Your Bike!
Bike Art
DJ and Live Music
Free food from Pantanal, Ms Thelma's,
and Rootsman
Win a Free Bike!!

This afternoon festival highlights ways people around the city can take an active role in making

Citymaking Bridgeport is a coalition of Rebuild by Design, a design firm, and the U.S. Department of Housing and Urban Development (HUD). rebuildbydesign.org

Contact: jchou@v
212-924-7000 x2

INCLUSIVE

5

Philanthropic
Fundors

4

Partner
NGOs

141

Neighborhoods

19

Universities

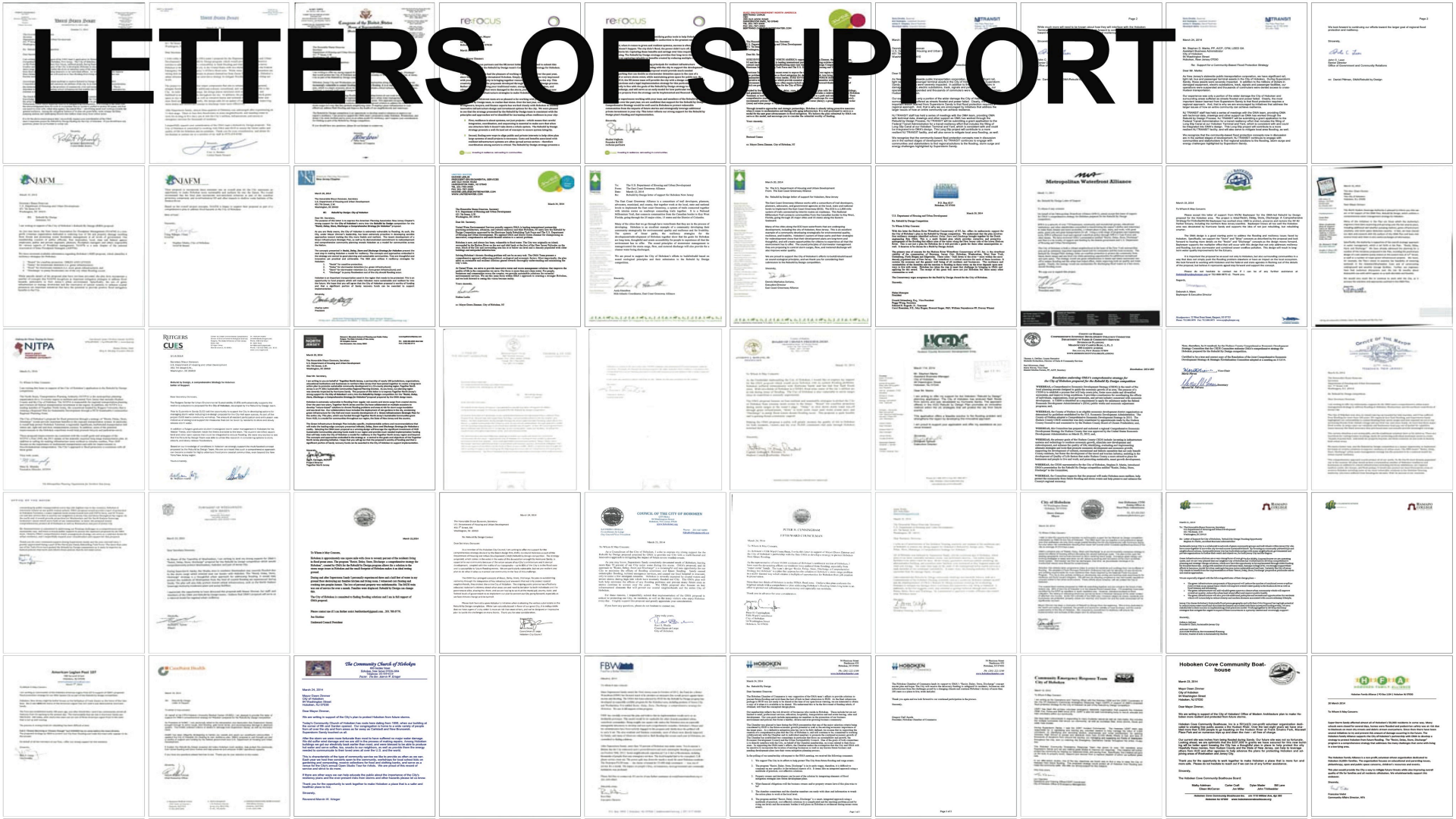
535

Community
Stakeholder Orgs

181

Government
Agencies

LETTERS OF SUPPORT



PROJECTS



A
BIG Team
 The BIG U
 Manhattan, NY

B
HR&A Advisors, Inc.
 with Cooper, Robertson
 & Partners
 Commercial Corridor
 Resilience Project
 Asbury Park, NJ; Rockaways, NY;
 Red Hook, NY

C
Interboro Team
 Living with the Bay:
 A Comprehensive Regional
 Resilience Plan for
 Nassau County's South Shore
 Nassau County, NY

D
**MIT CAU + ZUS +
 URBANISTEN**
 New Meadowlands: Productive
 City + Regional Park
 Meadowlands, NJ

E
OMA
 Resist, Delay, Store, Discharge:
 A Comprehensive Strategy
 for Hoboken
 Hoboken, NJ

F
PennDesign/OLIN
 Hunts Point Lifelines
 Bronx, NY

G
Sasaki/Rutgers/Arup
 Resilience + The Beach
 Union Beach, Asbury Park,
 Toms River, NJ

H
**SCAPE/Landscape
 Architecture**
 Living Breakwaters
 Staten Island, NY

I
**WB unabridged
 with Yale ARCADIS**
 Resilient Bridgeport
 Bridgeport, CT

J
WXY/West 8
 Blue Dunes - The Future of
 Coastal Protection
 Atlantic Coastline

-  Connecticut
-  New Jersey
-  New York

HURRICANE SANDY COMPETITION PROJECT TIMELINE

HURRICANE SANDY

REBUILD WINNING PROJECTS
ANNOUNCED

PROJECT IMPLEMENTATION BEGINS

OCT 2012 JUNE 2014 2016 2017 2018 2019 2020 2021



BRIDGEPORT, CT

AGREEMENT ON DRY EGRESS
STORMWATER PARK

30 % DESIGN

DEIS

CONSTRUCTION START



HOBOKEN, NJ

ALIGNMENT 3
SELECTED

EIS

DEIS

RECORD OF DECISION

SELECTION OF CONTRACTOR
(ANTICIPATED)

CONSTRUCTION START



HUNTS POINT, NY

RESILIENT ENERGY PILOT PROJECT AND FLOOD
RISK REDUCTION STUDIES BEGIN

30 % DESIGN
FOR ENERGY PROJECT

ENVIRONMENTAL REVIEW
COMPLETE

CONSTRUCTION START



LONG ISLAND, NY

DESIGN OF THE VARIOUS PROJECTS

DEIS

PRIORITIZATION OF
KEY PROJECTS

CONSTRUCTION START:
MULTIPLE PROJECTS

EIS

RECORD OF
DECISION

CONSTRUCTION CONTINUES FOR MULTIPLE PROJECTS



MANHATTAN, NY:
East Side Coastal Resiliency

NDRC WINNERS ANNOUNCED **

DEIS

FINAL DESIGN

RECORD OF
DECISION

EIS

CONSTRUCTION START



Lower Manhattan
Coastal Resiliency

STUDY LAUNCHED

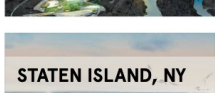
FINAL DESIGN
CONCEPT

DEIS

RECORD OF DECISION

EIS

CONSTRUCTION START



MEADOWLANDS, NJ

RECOMMENDATION OF
PREFERRED ALTERNATIVE

DEIS

EIS

RECORD OF
DECISION

CONSTRUCTION START
MULTIPLE CONTRACT AWARDS

CONSTRUCTION CONTINUES FOR MULTIPLE PROJECTS



STATEN ISLAND, NY

DEIS

PRELIMINARY
30 % DESIGN

EIS

PERMIT APPROVALS

COMPLETE DESIGN

CONSTRUCTION START

HURRICANE SANDY COMPETITION PROJECT TIMELINE

HURRICANE SANDY

REBUILD WINNING PROJECTS
ANNOUNCED

PROJECT IMPLEMENTATION BEGINS

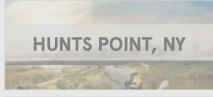
OCT 2012 JUNE 2014 2016 2017 2018 2019 2020 2021



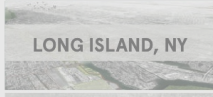
BRIDGEPORT, CT



HOBOKEN, NJ



HUNTS POINT, NY



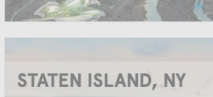
LONG ISLAND, NY



MANHATTAN, NY:
East Side Coastal Resiliency

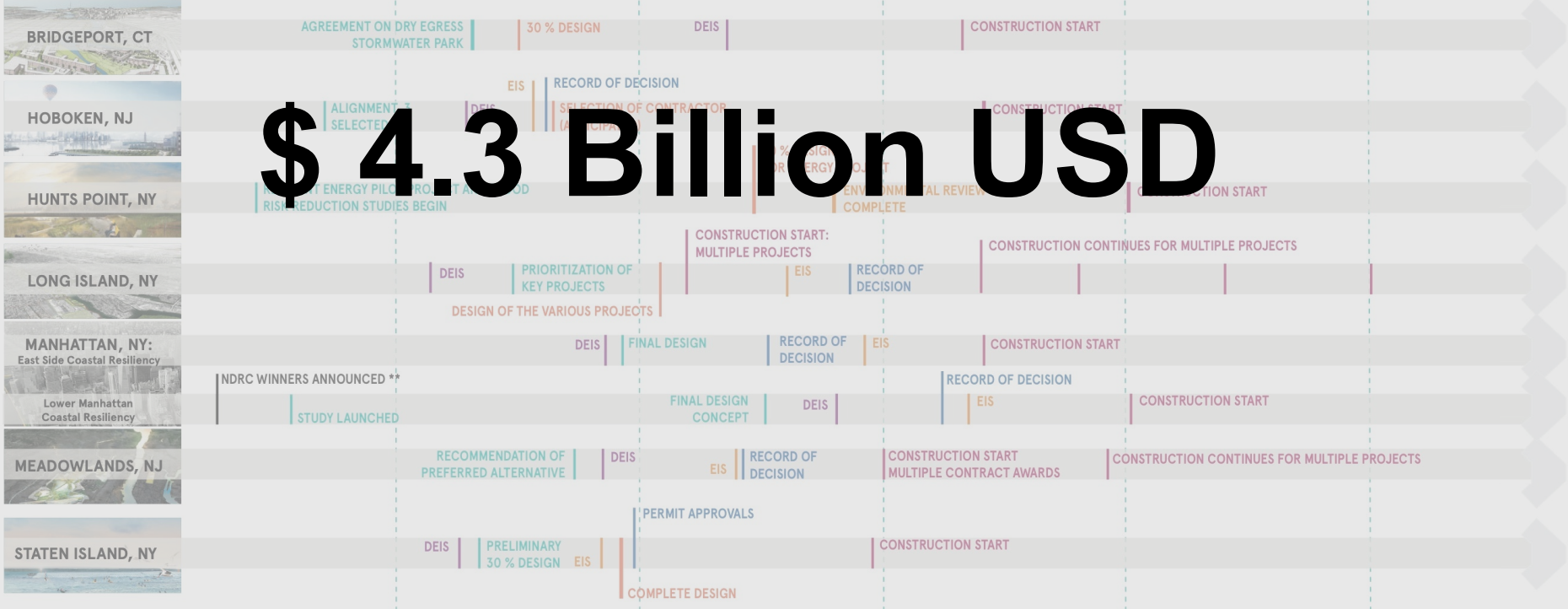


MEADOWLANDS, NJ



STATEN ISLAND, NY

\$ 4.3 Billion USD



NDRC WINNERS ANNOUNCED **

INFORMING SIMILAR APPROACHES

**REBUILD
BY
DESIGN**

2013

National Disaster
Resilience
Competition



2014



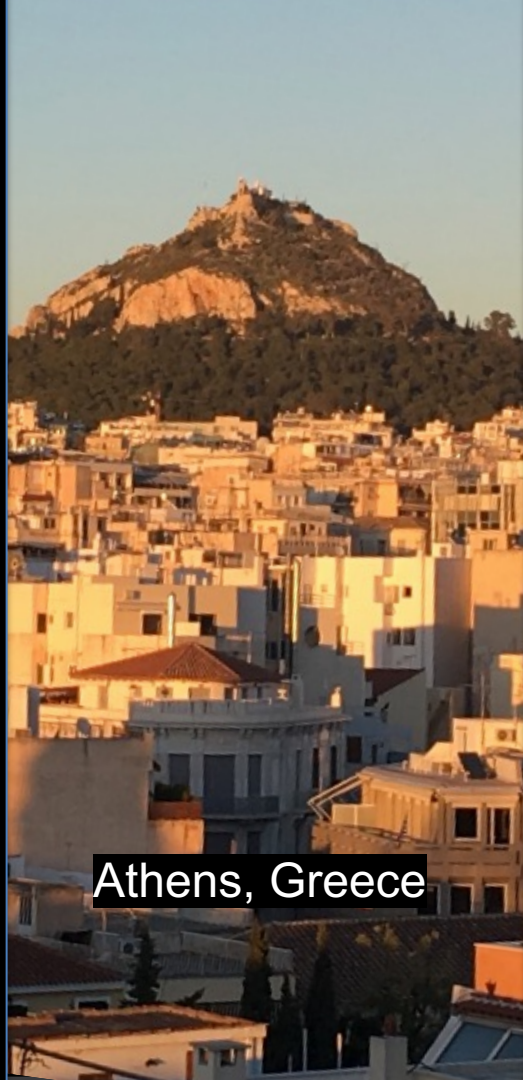
2018



2018



**San Francisco
Bay Area**



Athens, Greece



Mexico City, Mexico



Singapore

The BIG U

BIG (Bjarke Ingels Group)

One Architecture

Starr Whitehouse

Buro Happold

Level Agency for Infrastructure

James Lima Planning + Development

Green Shield Ecology

AEA Consulting, Arcadis

Project Projects,

Parsons School of Constructed

Environments



LIVING BREAKWATERS

SCAPE LANDSCAPE ARCHITECTURE

Parsons Brinckerhoff

Dr. Philip Orton

Stevens Institute of Technology Ocean & Coastal

Consultants SeArc Ecological Consulting

LOT-EK, MTWTF, The Harbor School and Paul Greenberg

LIVING BREAKWATERS

STATEN ISLAND + RARITAN BAY HUD REBUILD BY DESIGN



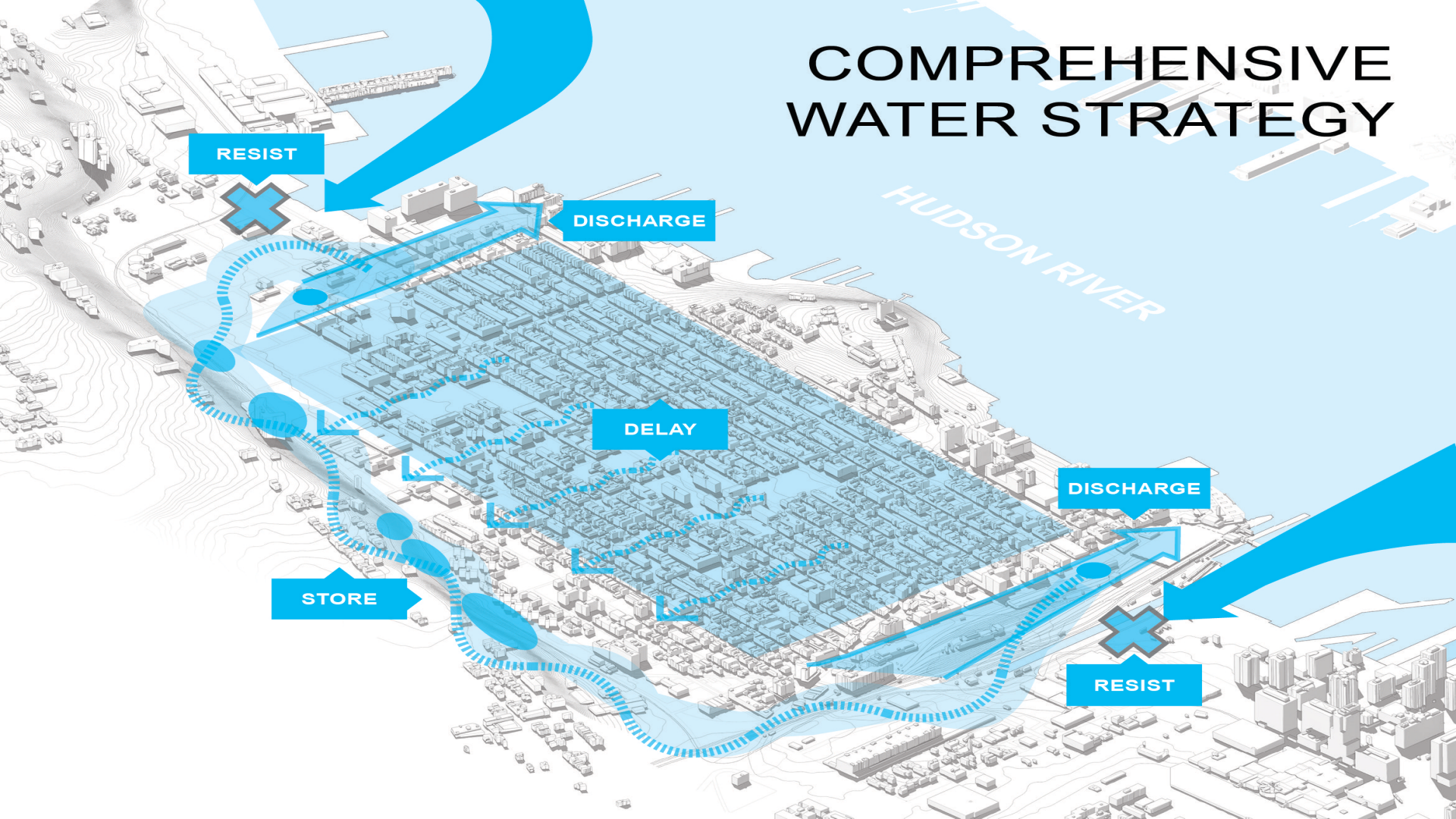
Resist, Delay, Store, Discharge: A Comprehensive Strategy for Hoboken



OMA

—
Royal HaskoningDHV
HR&A Advisors,
Balmori Associates

COMPREHENSIVE WATER STRATEGY



WHAT HAVE WE LEARNED?

INTERDISCIPLINARY GROUPS CREATE BETTER OUTCOMES

- Architects
- Designers
- Engineers
- Scientists
- Academics
- Writers
- Artist
- Community Engagement Specialists
- Government
- NGO Leaders



THERE IS DISTRUST IN GOVERNMENT IS EVERYWHERE

But in most cases they are needed for
implementation

Designers in the lead with the government and
community assures that community and
government are kept separate and you are
working towards the goals of each.



PROCUREMENT IS HARD

The laws that were created to prevent corruption, also prevent innovation. Inflexible rules favors the status quo in:

- Using the same firms
- Using large multinational firms who can support the paperwork and reporting measures
- Prevents opportunities for younger and more diverse firms

The screenshot shows the NYC Environmental Protection website. At the top, there are COVID-19 alerts and a search bar. The main navigation includes 'Pay My Bills', 'About', 'Water', 'Environment', 'Recreation', and 'What's New'. Below this is a secondary navigation with 'Mission & Leadership', 'Working With Us', 'Publications', and 'Contact'. The 'Bids & Proposals' section is highlighted, featuring several key announcements: 'Electronic Receipt and Processing for All Vendor Invoices', 'Notice for all Current Bids', 'Safety Practices of Public-Facing Contracted Personnel During The COVID-19 Crisis', and 'Notice to Contractors Regarding Safety Practices of Public-Facing Contracted Personnel During The COVID-19 Crisis'. A paragraph below these announcements states: 'We are the largest construction agency in the City, awarding more than \$1 billion in contracts for construction, construction related services and engineering services annually. Learn about our bids, request for proposals, project delivery procedures, and [prevailing wage](#).' At the bottom, there are buttons for 'Expand All' and 'Collapse All', and a list of categories: 'Bids', 'Request for Proposals', and 'Project Delivery Procedures', each with an expand/collapse icon.

REPLICABLE + TRANSFERABLE

Initial investment can have lasting payoffs to other locations in the same region and inspire others.

Examples:

- High Density
- Low Density
- Bay
- Barrier Island
- Wetland/Marsh
- Infill
- High Precipitation
- Drought



HAVING FAITH IN COMMUNITIES ALWAYS WORKS OUT IN THE END

They have great ideas
and their ideas can work!



PLANS CHANGE!

October 2019

Mayor announced a changed plan at a cost of \$700 million, which the City would fund

After Superstorm Sandy civic groups and foundations joined with the federal government to create Rebuild by Design, an international competition to develop creative, resilient new infrastructure to guard New York and New Jersey from climate change.

Seven projects, including one called the Big U, emerged and were awarded nearly a billion dollars from the federal government to start building.

Six years later, the Big U still hasn't broken ground, and the city has just abruptly announced major changes to the project with an expanded price tag and unclear additional benefits.

That's left many of the original stakeholders asking: Just how committed is the city to leading the way on resilience?

The Big U, which called for a series of berms and parkland that would act as a sponge during major storms, was designed to protect Lower Manhattan from flooding. This area houses more than 220,000 residents as well as a \$10 billion business sector; if it gets hit by seawater, the whole country is in trouble.

The city's odd storm splurge

BE OUR GUEST
BY AMY CHESTER AND TOM WRIGHT

By 2015, the first two sections of the project — from E. 25th St. to the Brooklyn Bridge — received \$511 million in federal funding, later matched by \$542 million from the city, which also led dozens of meetings with residents to craft an intelligent, effective plan.

Then earlier this year, the city went dark.

A few weeks ago, after several months of silence, the mayor's office announced radical changes to the northern portion of this project. Instead of building a berm, or narrow shelf of land, alongside the FDR Drive, and leaving East River Park to act as a sponge during major storms, they now plan to completely raise the entire, recently renovated park 8 to 10 feet.

It's hard to determine whether the new design will be better or worse since the city hasn't released any details. We do know a few things: The northern portion of the Big U will now cost an additional \$700 million (bringing the price tag for this section to \$1.45

billion); offers no additional flood protection; no additional community amenities, and should have already been well underway.

Spending \$700 million to get a better park or more flood protection might be welcomed, but that's not what the city is offering. Instead, it seems, this money is buying the city out of having to grapple with two thorny problems.

The first, inconveniencing drivers on the FDR, which would require overnight closures to build the original design.

The second challenge is more complex. The original design called for East River Park to flood in the event of a big storm. Other privately managed parks including Brooklyn Bridge Park and Domino Park are designed to do this, and provide an extra layer of protection to their surrounding communities.

But the Parks Department doesn't have a maintenance budget or process to restore city parks after a major storm event. Instead of fixing that problem,

the city proposes to skirt it by lifting the whole park. That seems unwise.

The city has said that this new approach will shorten construction by six months, but for a project that is designed to last for more than a generation, that's already been slow-walked, let's make sure we get it right.

Mayor de Blasio should engage with the public to determine the best use of

an additional \$700 million. Perhaps that will mean using the funds to extend the Big U to the Battery, which was underfunded. Perhaps we should use the money to create a maintenance budget for the

city to maintain flood infrastructure over time.

If they want to insist their way forward is the best, let's hear them make the case.

Chester is managing director of Rebuild by Design. Wright is the president of Regional Plan Association, one of the original partners of the Rebuild by Design competition.

Why does Blaz want to spend \$700M more on a resiliency plan?

New York Daily News

THANK YOU!

Amy Chester, Managing Director
achester@rebuildbydesign.org

