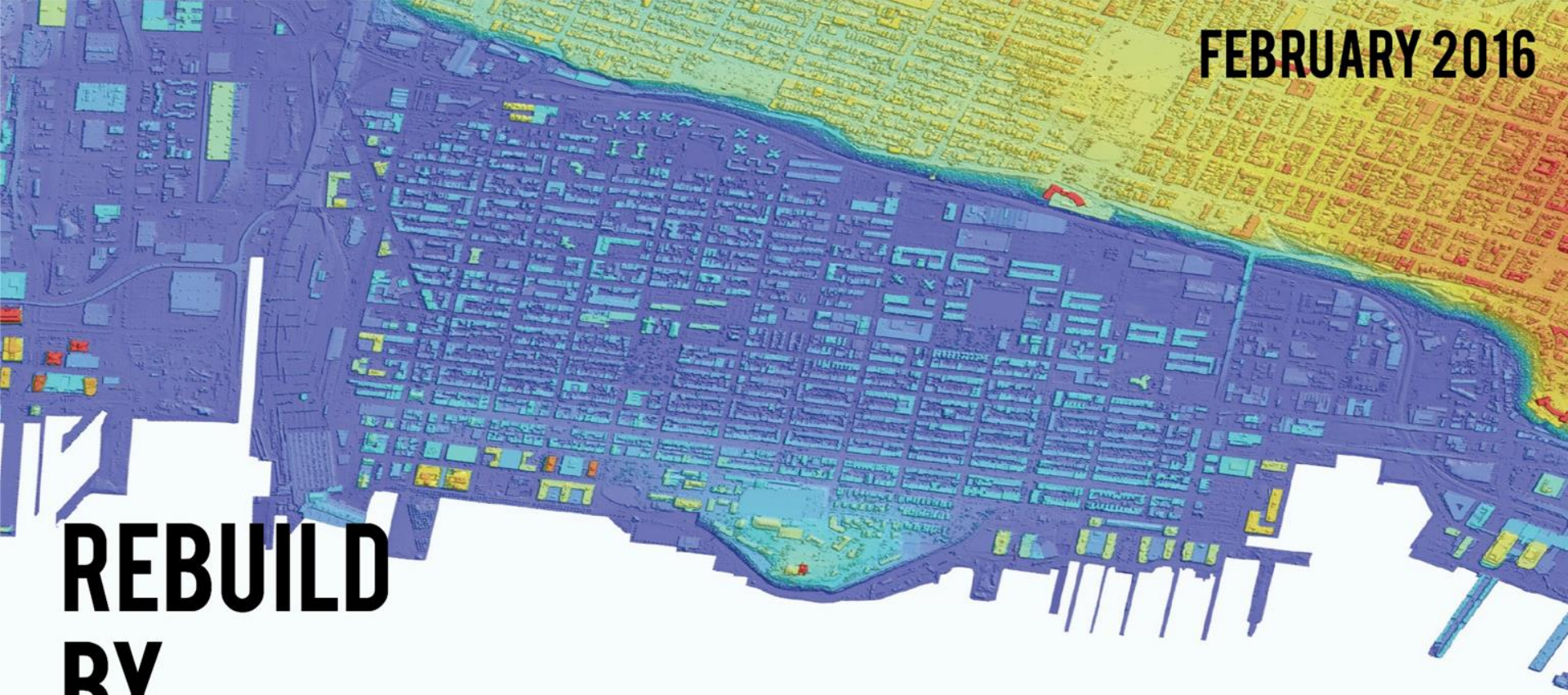

FEBRUARY 2016

REBUILD BY DESIGN

▪ RESIST ▪ DELAY ▪ STORE ▪ DISCHARGE ▪

HUDSON RIVER

COMMUNITY MEETING – PROJECT ALTERNATIVES UPDATE

AGENDA

- Project Status
- Purpose & Need/Background
- Alternatives Development
- Next Steps
- Q & A
- Open House

Project Status

PUBLIC FEEDBACK

Since Dec. 10th's public meeting, which introduced the 5 concepts, we received multiple comments from approximately 255 residents through emails and letters.

200+ Community members

Comments

Emails and Letters

FREQUENTLY ASKED QUESTIONS

Many comments were addressed in a FAQ packet, which can be found on the project website:

www.nj.gov/dep/floodhazard/rbd-hudsonriver.htm

PROJECT TIMELINE – FEASIBILITY & NEPA

The Feasibility Study allows us to design a soundly engineered project.
The NEPA* Process looks at environmental and community impacts.

*NEPA: National Environmental Policy Act

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State of New Jersey Department of Environmental Protection

PROJECT SCHEDULE

we are here

Notice of Intent	Purpose & Need	Scoping	Screening Criteria/ Metrics	Concept Screening	Alternative Analysis	Draft EIS	Final EIS	ROD
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NOI NEPA PROCESS **Technical Environmental Studies** **ROD**

FEASIBILITY STUDY

PUBLIC INVOLVEMENT

NOI - Notice of Intent **ROD** - Record of Decision **EIS** - Environmental Impact Statement

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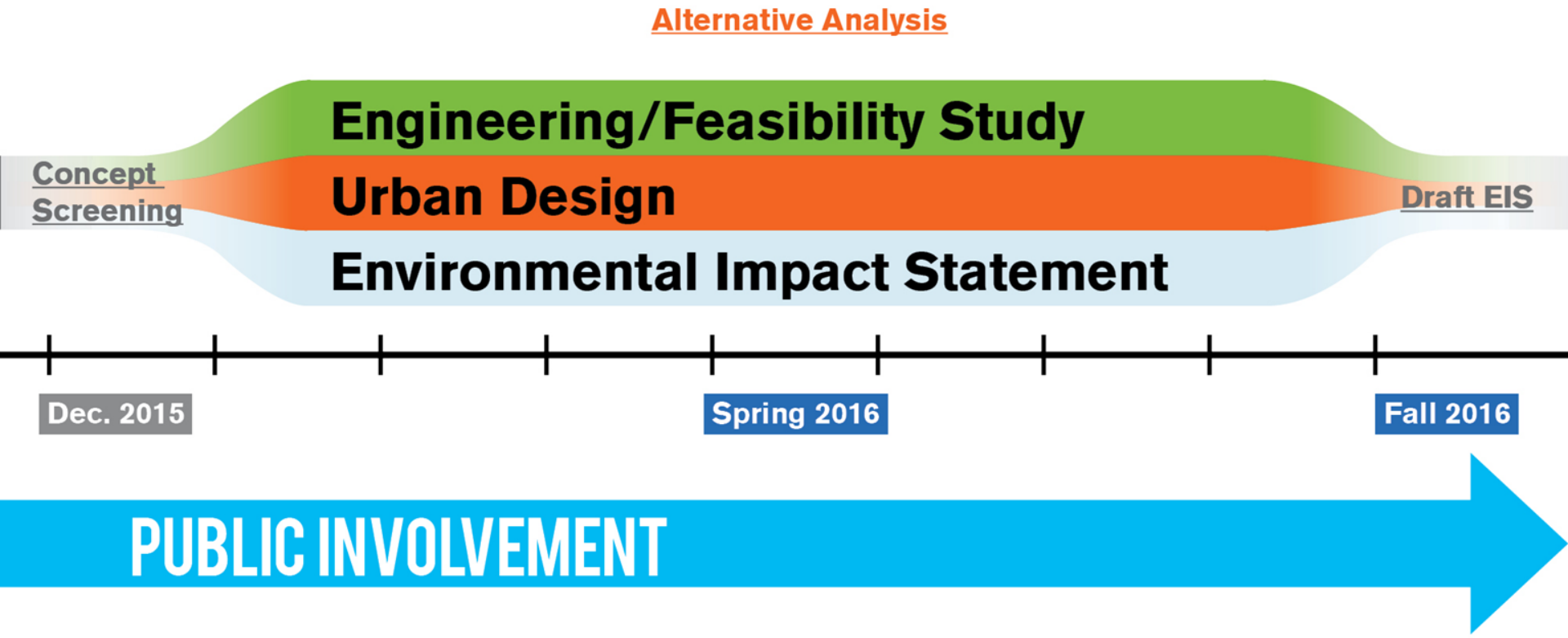
ALTERNATIVES ANALYSIS PHASE

In the Alternatives Analysis phase, we are simultaneously exploring design, conducting analysis, and soliciting engagement.



OPPORTUNITIES TO PARTICIPATE

How are we soliciting community input in this project phase?

CAG Meetings

Public Meetings

(hudsonreporter.com)

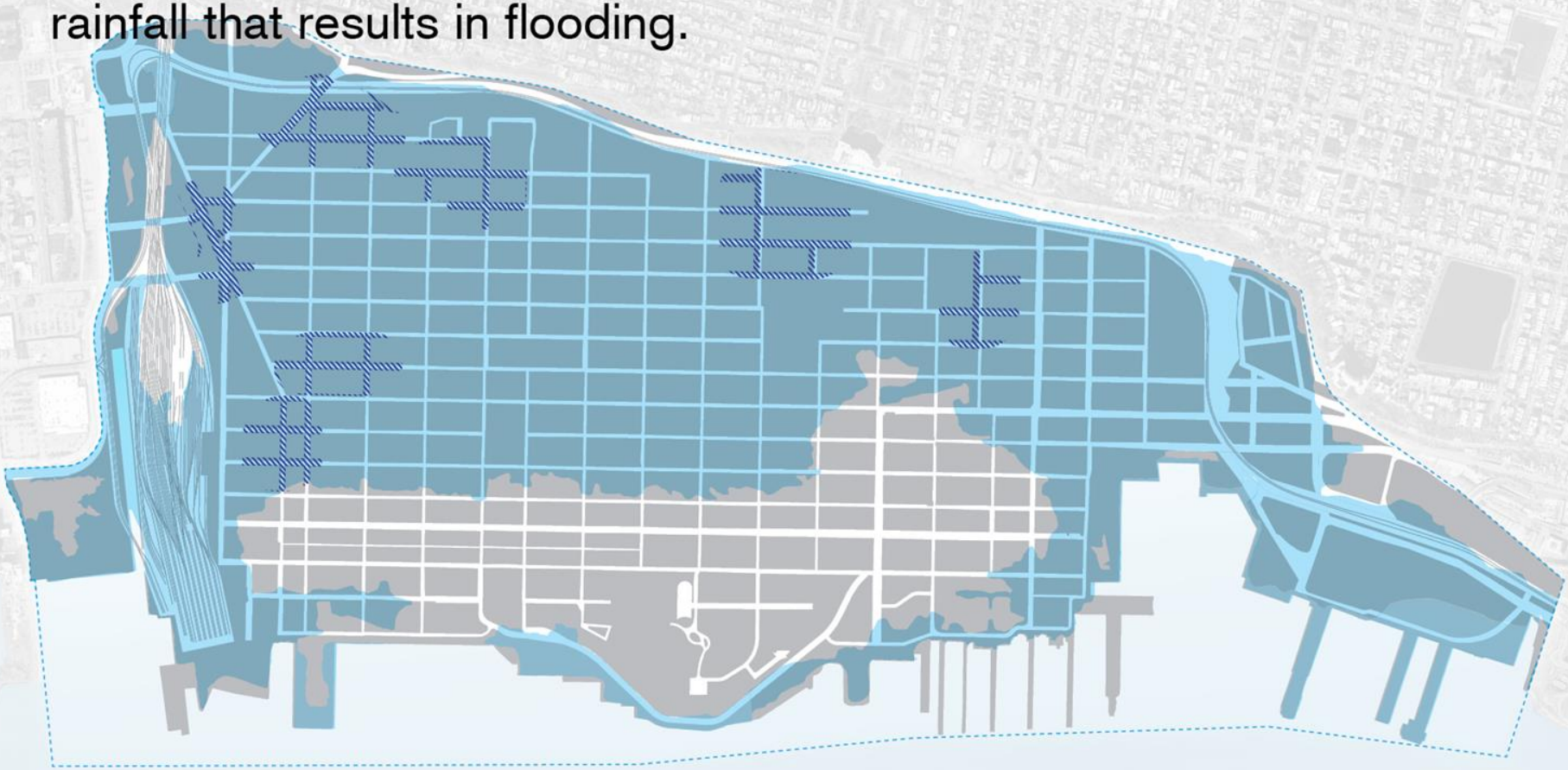
Workshops

PUBLIC INVOLVEMENT

Purpose & Need/ Background

WHY DO WE NEED THE PROJECT?

The project area is at risk from storm surge events and heavy rainfall that results in flooding.



Existing Rainfall Flooding "Hotspots"

2015 Preliminary 1% Annual Chance (100-Year) FEMA

N

WHAT WILL HAPPEN IF WE DO NOTHING?

The frequency and intensity of flooding in Hoboken will get worse.

Everything is Connected.
FutureStructure

HOME NEWS

BY NEWS STAFF / NOVEMBER 24, 2015

A woman stan… much of the cit… …n Sandy left …KR/DVIDSHUB

"The city sits right on the Hudson River and is particularly vulnerable to flooding. According to the Environmental Defense Fund (EDF), 70 percent of Hoboken's population lives in flood zones."

nj.com True Jersey

Clean up continues after heavy flooding in Hoboken

Stormwater rushed past the Shop Rite on Madison Street on May 31, 2015. (Photo courtesy of Maria Vallejo)

By Kathryn Br… Email the auth… on June 01, 20…

MOST READ

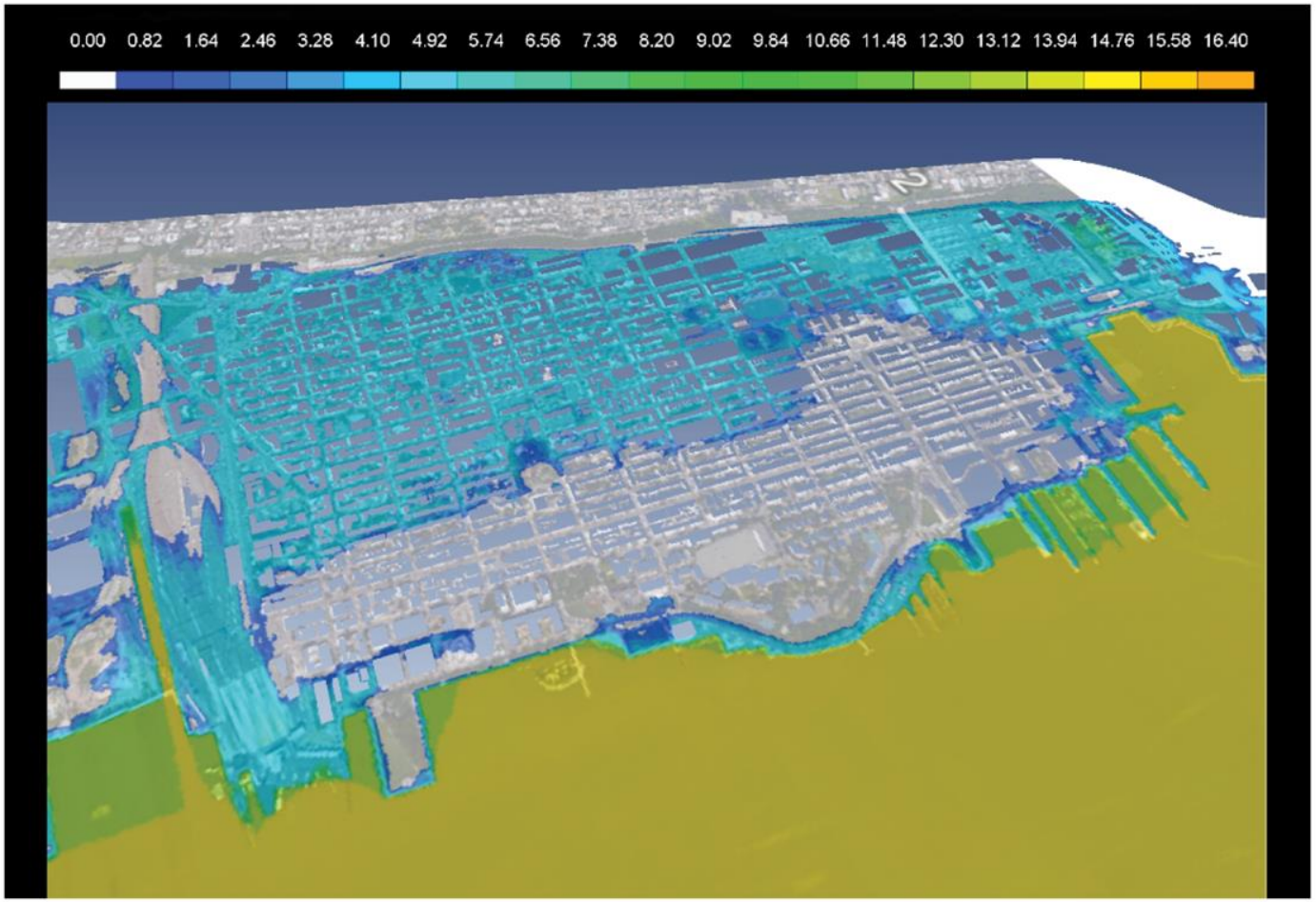
- Prosecutor: Cops should be 'commended' in Princeton professor arrest
- Woman dies in jump from Garden State Parkway bridge, police say
- Police who arrested Princeton professor get lunch from town leaders

TRENDING VIDEOS

"It's no secret that northwestern Hoboken is particularly flood-prone. Stormwater causes the sewage system to overflow and flood back into the city's lowest lying streets."

WHAT HAPPENS WHEN IT FLOODS?

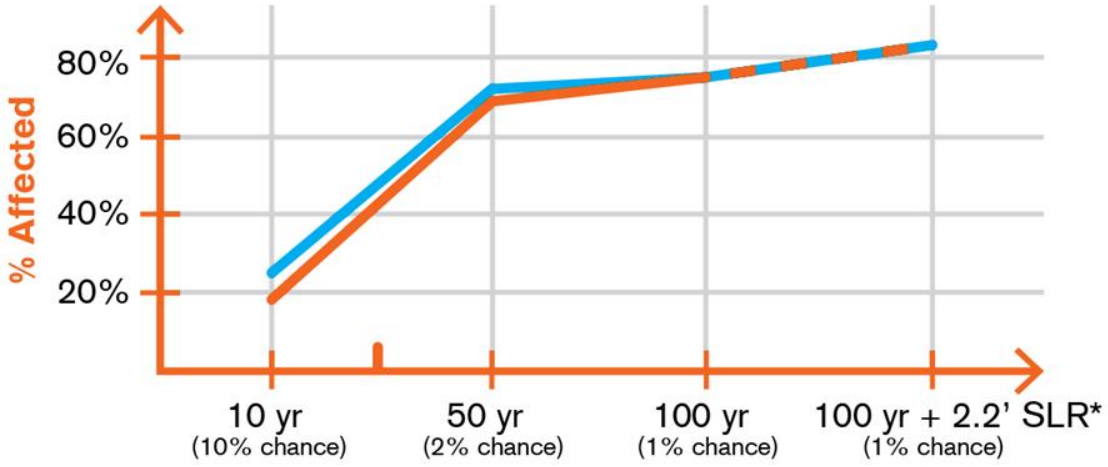
Coastal flood model demonstrating a propogation of coastal storm surge during Hurricane Sandy.



WHAT DRIVES THE NEED FOR THE PROJECT?

The greater the storm, the greater the effect.

Storm	Approximate Area Flooded		Approximate Affected Population	
	Acres	% of Total	Population	% of Total
10 yr (10% chance)	179	18%	13,129	25%
50 yr (2% chance)	679	69%	37,067	71%
100 yr (1% chance)	738	75%	39,344	75%
100 yr + 2.2' SLR*	801	82%	43,283	82%



These storms do not include wave action and represent only stillwater

*SLR = Sea Level Rise

Alternatives Development

FURTHER ANALYSIS

The Five concepts were revised to reflect community input, minimize impacts, and represent a full range of alternatives that reduce flood risk for the project area.

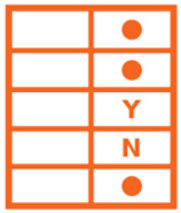
Dec 2015

5

Concepts

→

Receive Feedback



Apply Screening Criteria

Minimize Impacts

Represent Full Range of Alternatives

=

Feb 2016

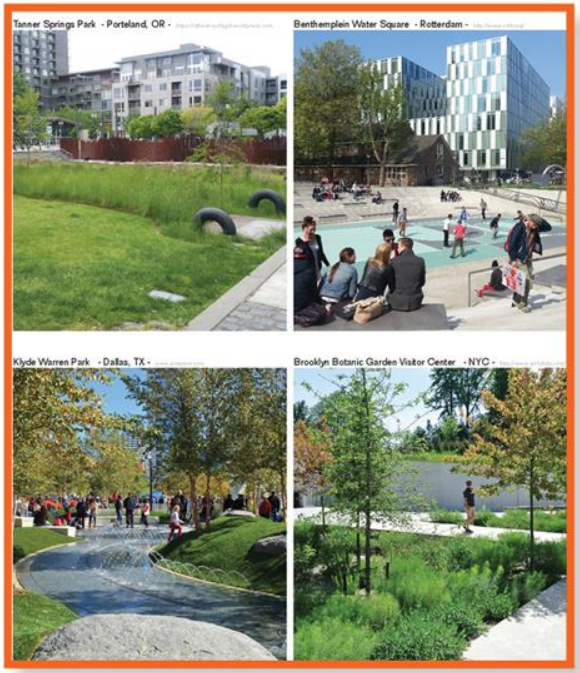
3

Alternatives

DELAY, STORE, & DISCHARGE

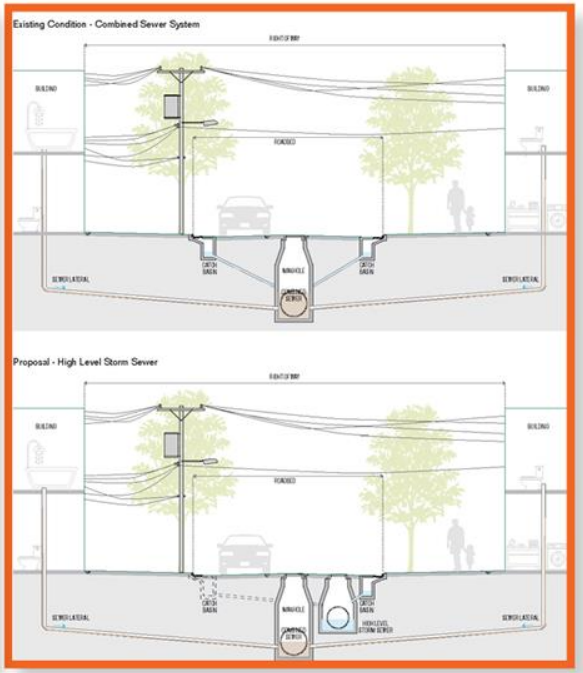
Using “green” and “grey” stormwater management strategies to achieve community benefits while reducing flooding from rainfall.

Retrofitted Parks



Bio-retention Basin

Storage & Pump Station



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DELAY, STORE, & DISCHARGE

Tank

Tank Bumpout

Parks

Pumps

N

*For more information on Delay Store & Discharge, please see the project boards

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ONGOING INITIATIVES

Independent work on several stormwater projects in conjunction with the overall masterplan to alleviate flooding.

Southwest Park

7th & Jackson Park

BASF Property

City Hall Demonstration

H5 Wet Weather Pump Station

ALTERNATIVE 1

Resist - Alternative 1

Existing Structures

Delay, Store, Discharge

*For more information on Alternative 1, please see the project boards

ALTERNATIVE 1

Weehawken Cove

Sinatra Drive North

1st Street & Sinatra Drive

Observer Highway - Options 1 & 2

Flood Barrier
Elevated Walkway
Landscape
Raised Path
Gate (Swinging, Sliding)
Deployable

ALTERNATIVE 1 CHARACTERISTICS

Provides highest coastal flood risk reduction.

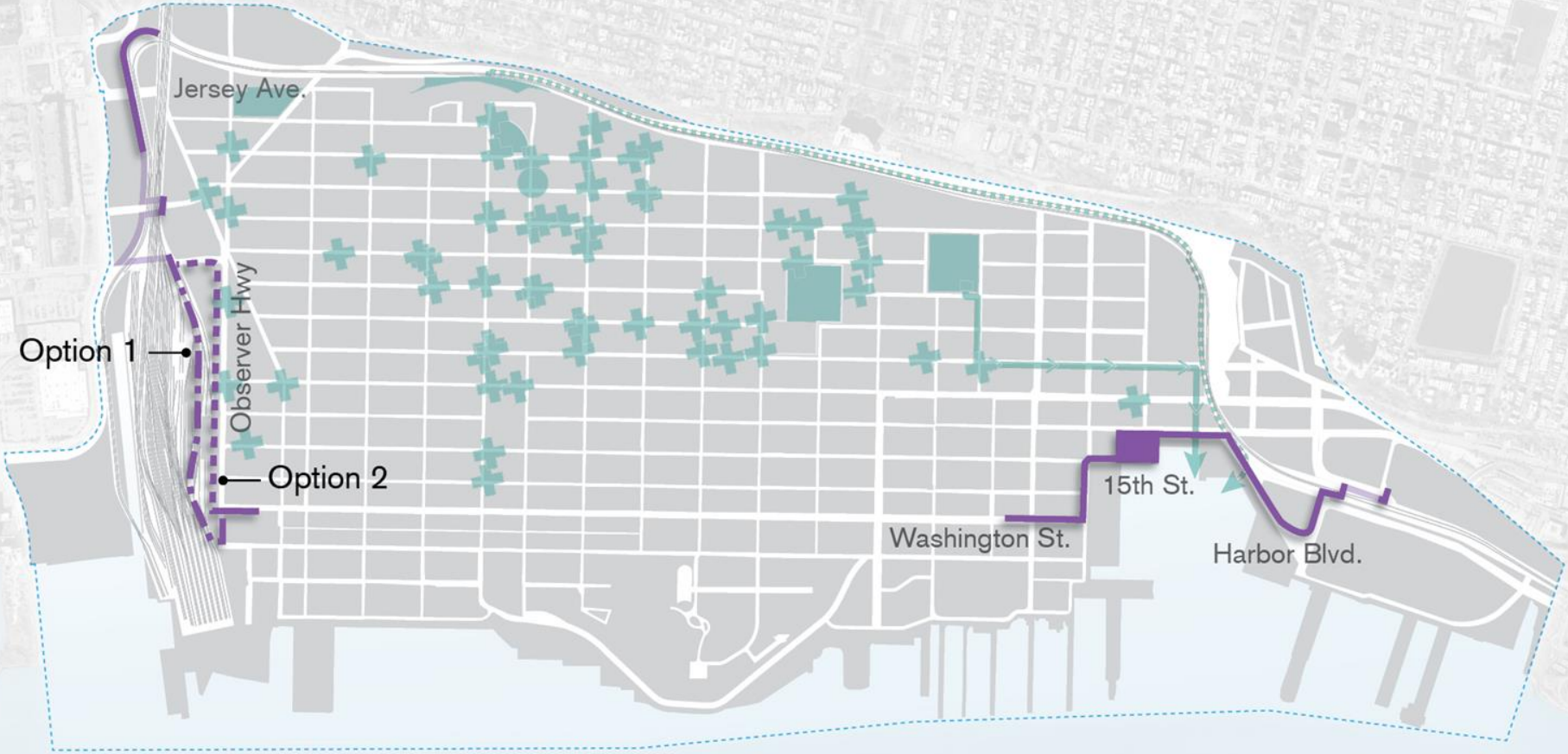
Provides highest level of coastal flood risk reduction.

Potentially least amount of transportation network disruption.

Most impact to existing waterfront views/access.

Highest cost and complexity to construct.

ALTERNATIVE 2



Resist - Alternative 2

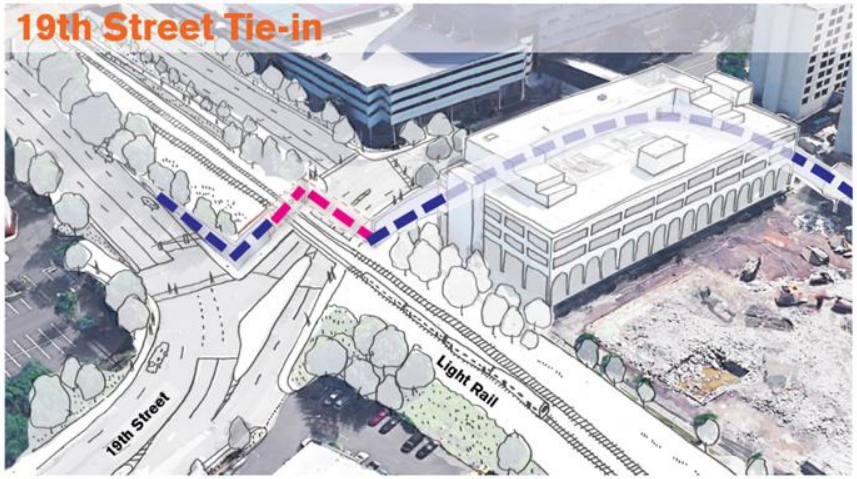
Existing Structures

Delay, Store, Discharge

*For more information on Alternative 2, please see the project boards

ALTERNATIVE 2

19th Street Tie-in



15th Street to Washington Street

Observer Highway - Option 1 & 2

Jersey Avenue Underpass

Flood Barrier
Deployable
Gate (Swinging, Sliding)
Landscape
Berm

ALTERNATIVE 2 CHARACTERISTICS

Provides storm surge risk reduction benefits by using right-of-way.

No impact to existing waterfront access.

No impact to waterfront views.

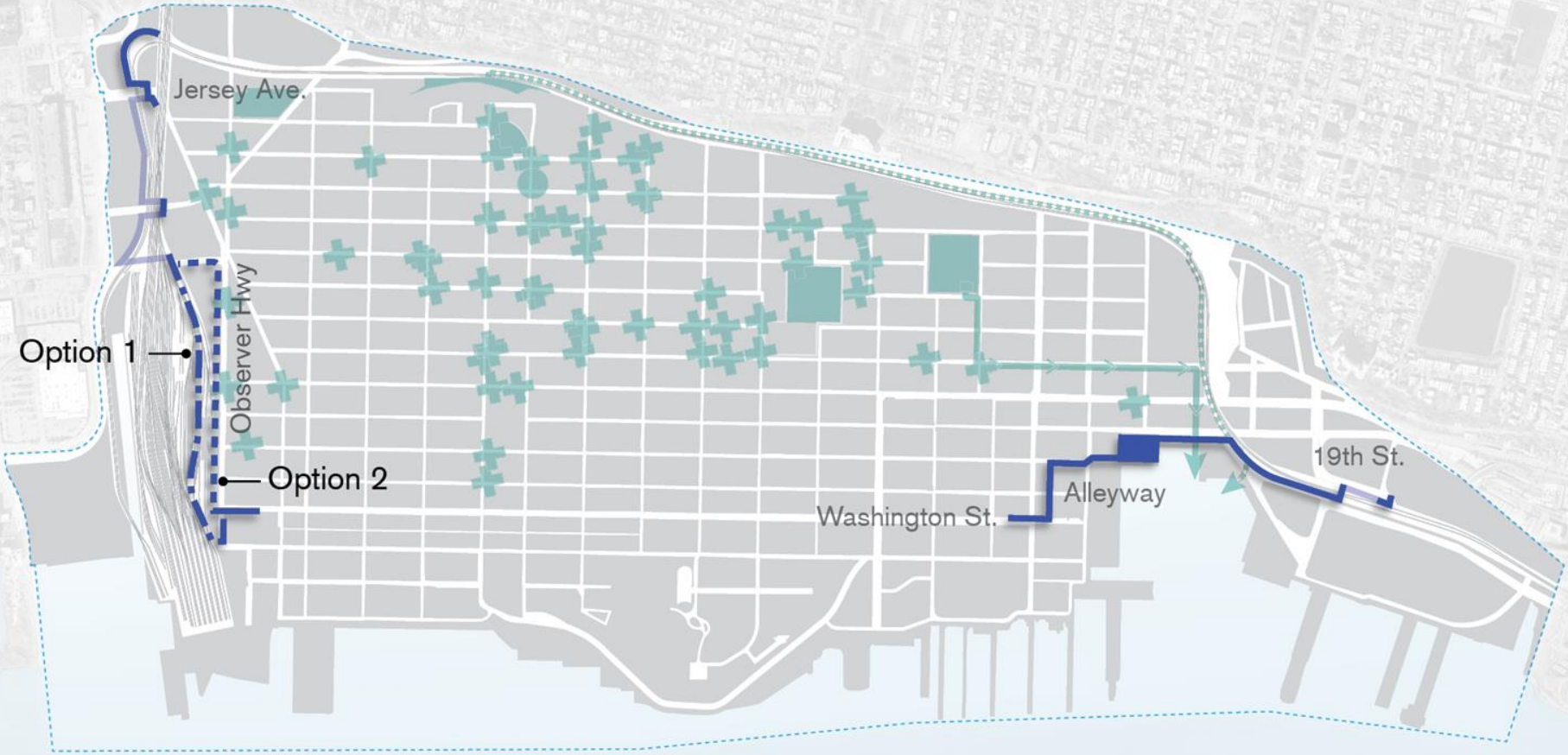
Less costly to construct compared to ALT 1.

May have impact on roadway/traffic flow on 15th St.

May require reduction in space along Washington St. for structural footprint.

Waterfront communities do not receive flood risk reduction benefits.

ALTERNATIVE 3



Resist - Alternative 3 | Existing Structures | Delay, Store, Discharge

*For more information on Alternative 3, please see the project boards

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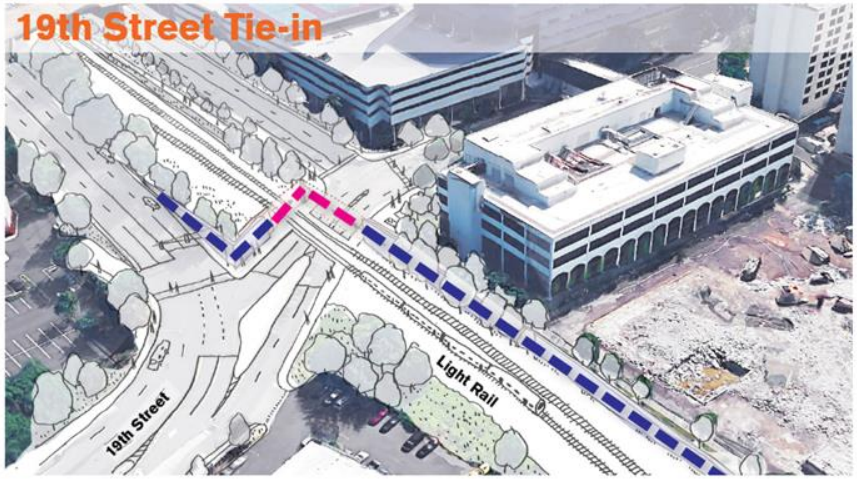
ALTERNATIVE 3

19th Street Tie-in



Alley to Washington Street

Observer Highway - Option 1 & 2

Jersey Avenue Underpass

Flood Barrier

Deployable

Landscape

Gate (Swinging, Sliding)

ALTERNATIVE 3 CHARACTERISTICS

Provides storm surge risk reduction benefits by using alley easement.

No impact to existing waterfront views/access.

Least expensive alternative (cost, maintenance).

May enhance the urban design and existing use of public space within the alleyway.

Reduced traffic and circulation impacts compared to ALT 2.

May require reduction in space along Washington St. for structural footprint.

Waterfront communities do not receive flood risk reduction benefits.

FURTHER ANALYSIS TO BE PERFORMED

Flood Modeling

Cost-Benefit Analysis

Feasibility-Constructability

Emergency Access

Natural Habitats

Environmental Impacts

Urban Design

URBAN DESIGN

Each of the RDSD sites will be designed to optimize flood risk reduction, while providing benefits to the community.

Barriers can be programmed

Parks can delay and store water

New amenities can be provided within the study area

GATHERING SPACE

A terraced flood barrier can be carved into a gathering or play space.

PLAY

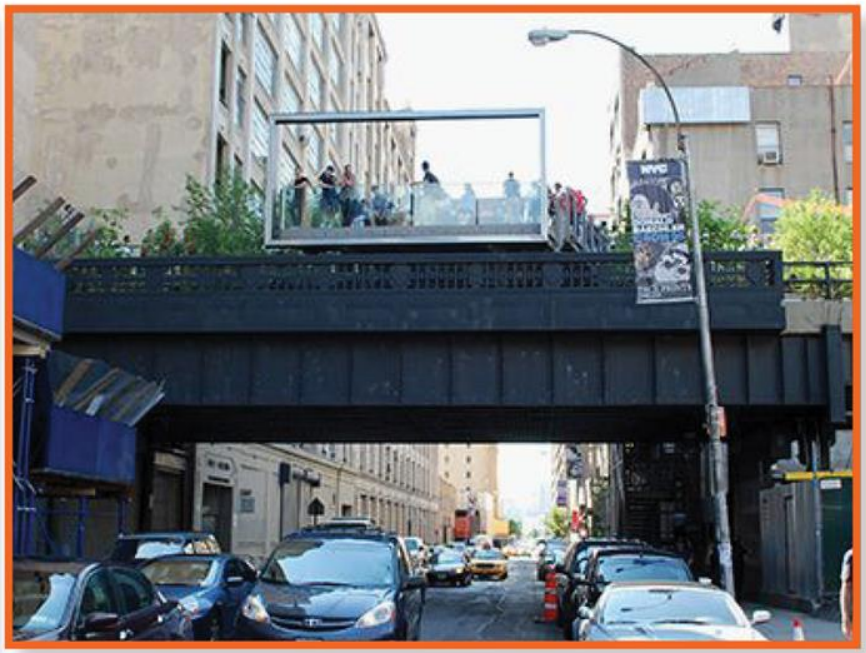
Playspaces can be built on any of the Resist, Delay or Store sites.

MULTIPURPOSE SPACE

A transformable multipurpose space can be built.

FRAMING VIEWS

The Resist barriers could frame views of the city and the Waterfront.



GREENERY

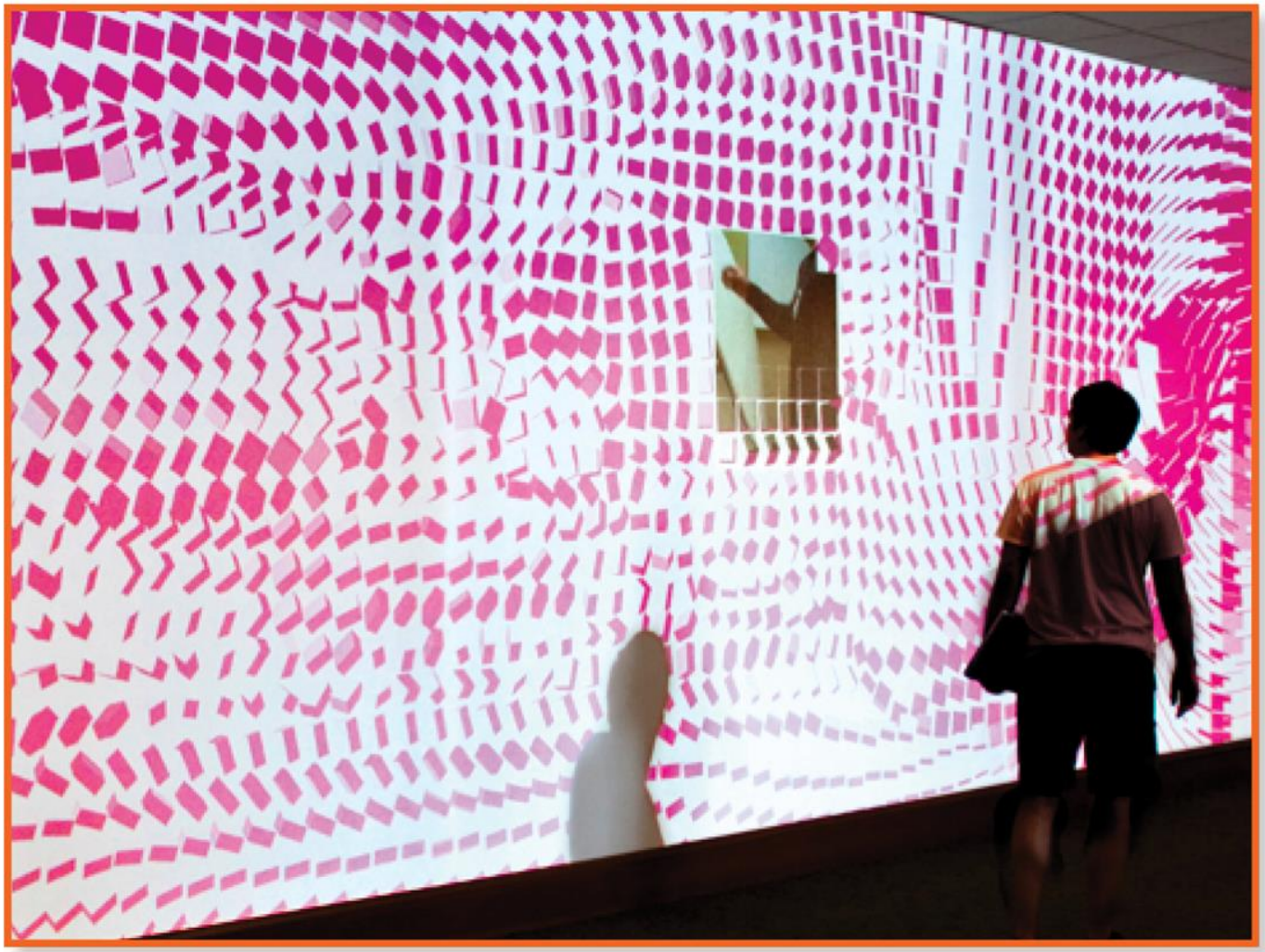
Greenery can be embedded into newly constructed elements.

ART

Art can be integrated into the design proposals.

MEDIA DISPLAY

Elements can have media or LED display embedded.



NEW PUBLIC SPACE

Resist, Delay, Store and Discharge sites provide opportunities for new public space for the city.

Next Steps

PROJECT SCHEDULE

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FEASIBILITY ASSESSMENT

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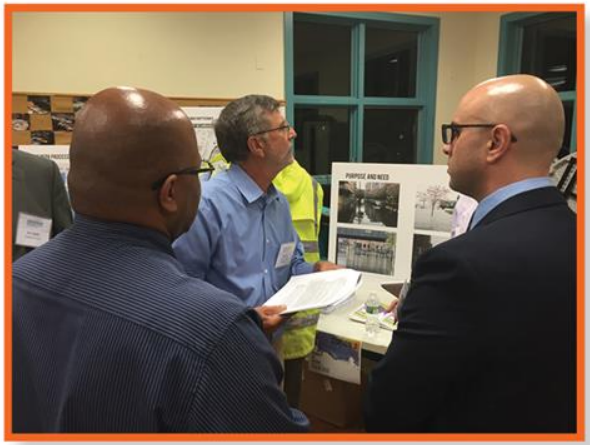
PUBLIC INVOLVEMENT

Next Steps:

CAG Meetings



Public Meetings

Workshops

Q & A

Open House