Hazard Mitigation Workshop



NJIT Technical Assistance for Resilience Program E&LP Associates



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Presenter Profile Hazard Mitigation Workshop June 7, 2023

Case Study Highlights

Impacts of Flooding on Hoboken

Resiliency Planning - Parks as Defense

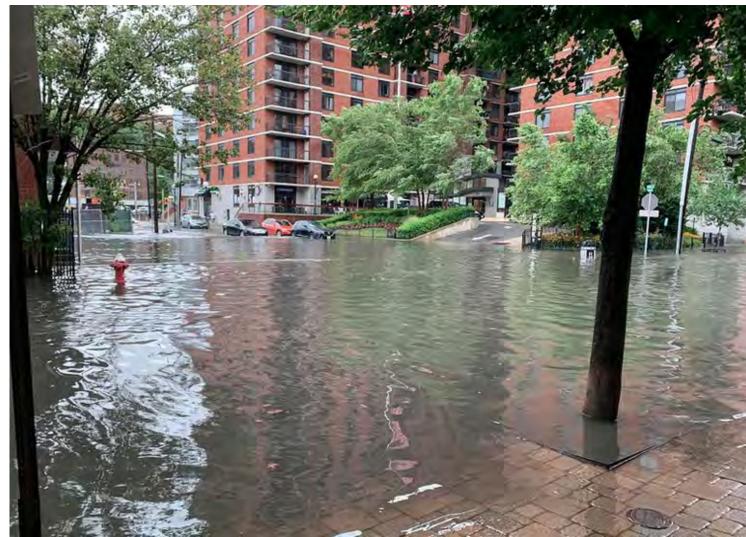
Community Benefits from resilient strategic planning

Designing & Funding a Resiliency Park















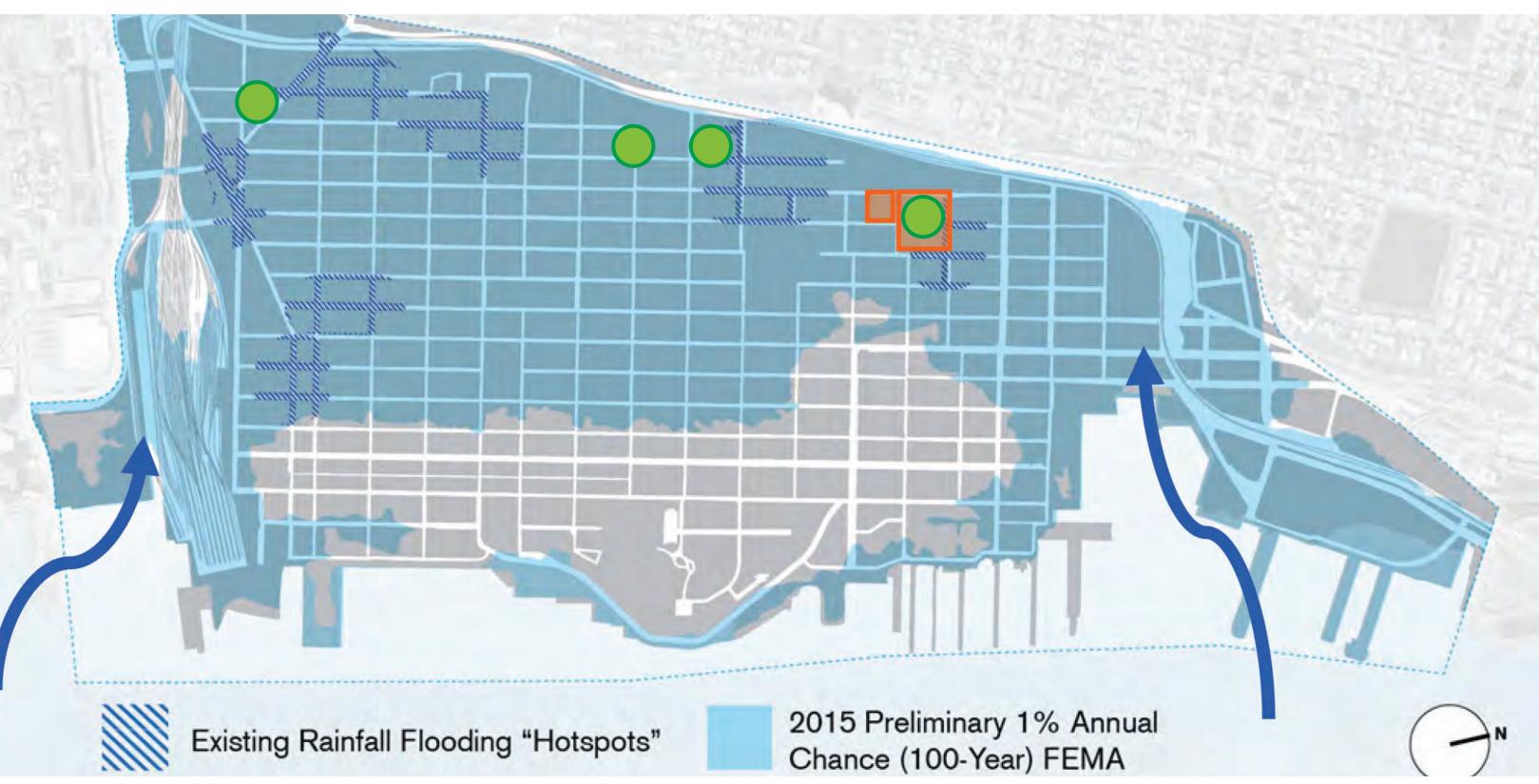


Image Credit: Rebuild By Design Hudson River Final Environmental Impact Statement

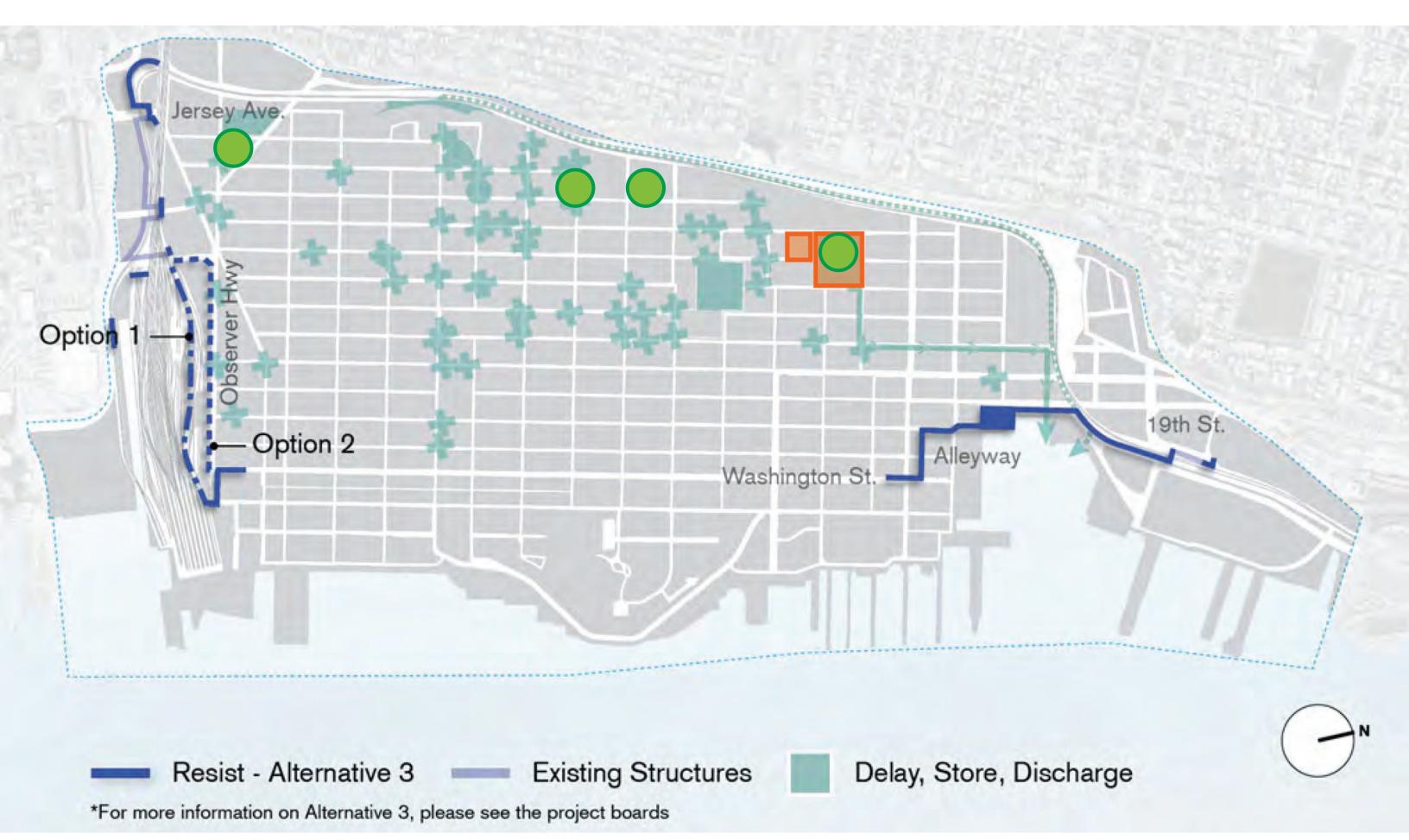


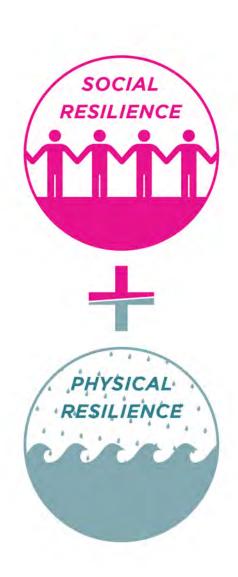


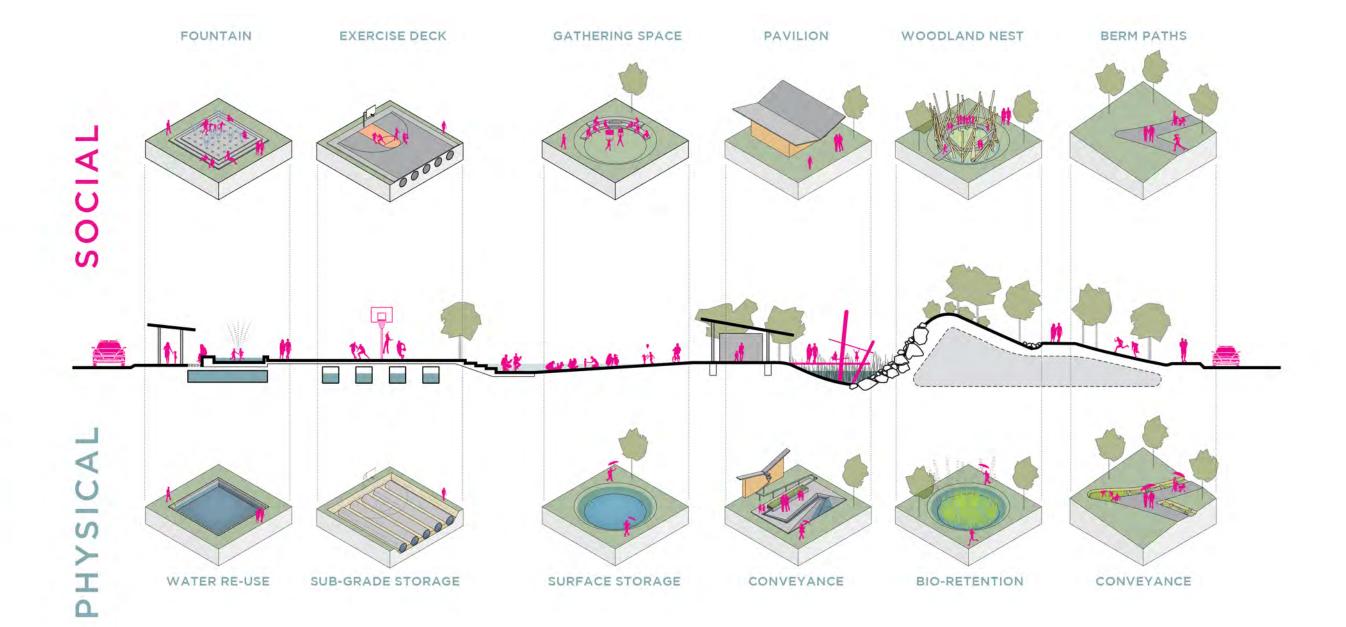


Image Credit: E&LP Associates



Define design and performance criteria for both physical infrastructure systems as well as community based social interdependencies







Hoboken Master Plan identifies former BASF site as future parkland

2004

Green Infrastructure Strategic Plan identifies former BASF site as future resiliency park

2014

Rebuild by Design advances former BASF site as part of Delay, Store, Discharge strategy

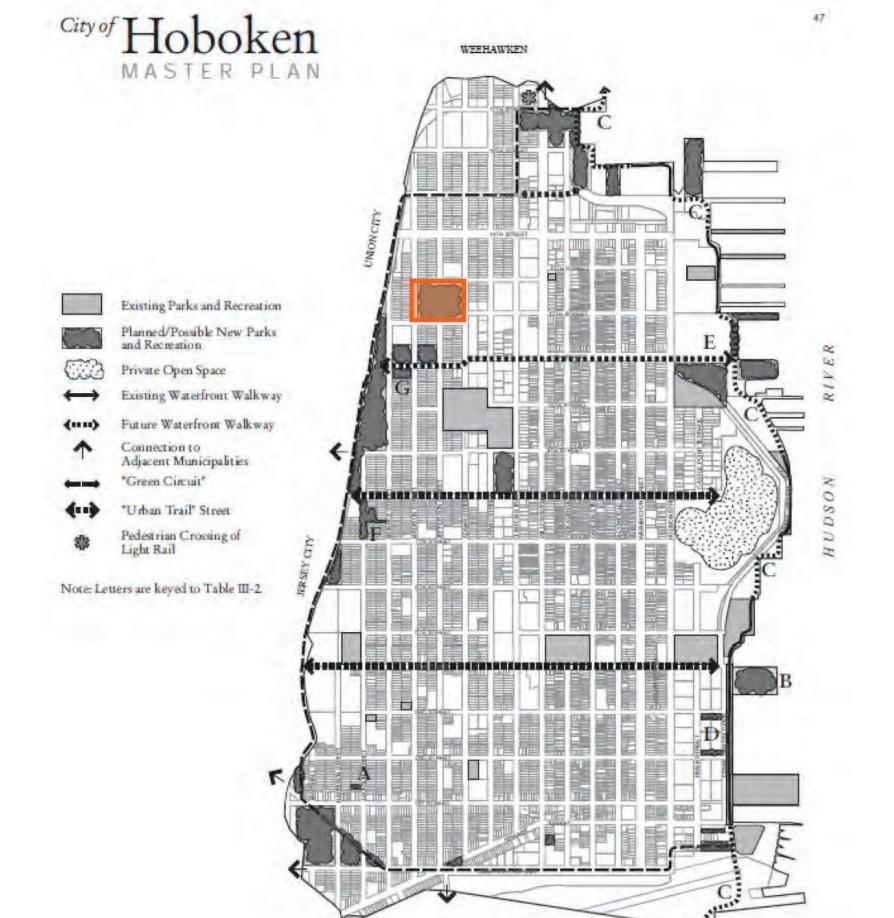
2016

City of Hoboken acquires former BASF property and opens Northwest Pop-Up Park

2017

NHSA incorporates Northwest Resiliency Park in CSO Reduction Long Term Control Plan

2019



JERSEY CITY

Map prepared by Phillips Press Shapiro Associates, Inc. March 2004 Base map source: Wilbur Smith Associates

1,000

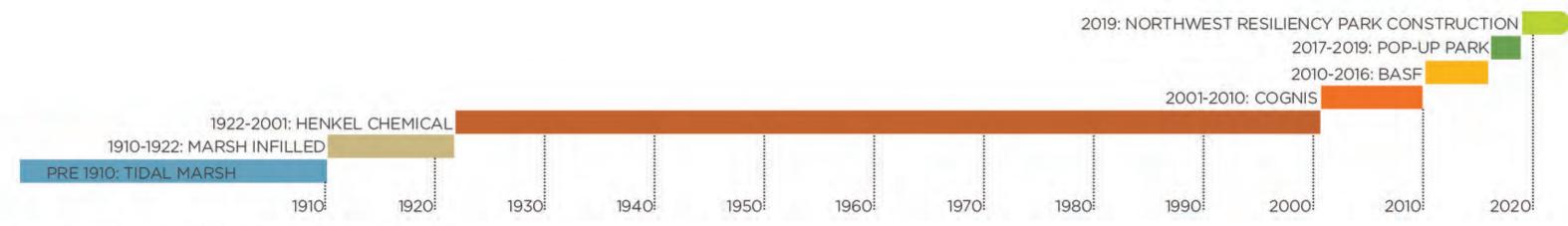


Figure 1.2.1 (Timeline of Development and Ownership)

Source: The New York Public Library Digital Collections

1897



Figure 1.2.2 (1897 photograph of Hoboken meadows) Source: Rutgers University Community Repository

1890

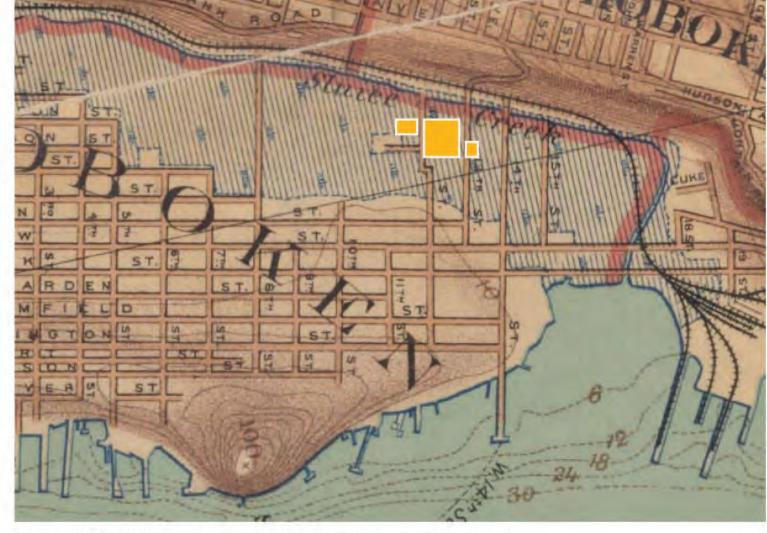


Figure 1.2.3 (1890 topographic map showing marsh extent) Source: New York Public Library Digital Collections

APPROXIMATE SITE LOCATION

Figure 1.2.4 (1967 photograph of northwest Hoboken) Source: Rutgers University Community Repository

2017

Figure 1.2.6 (2017 photograph of Pop-Up Park)

1930



Figure 1.2.5 (1930 aerial image) Source: New Jersey Geographical Information Network

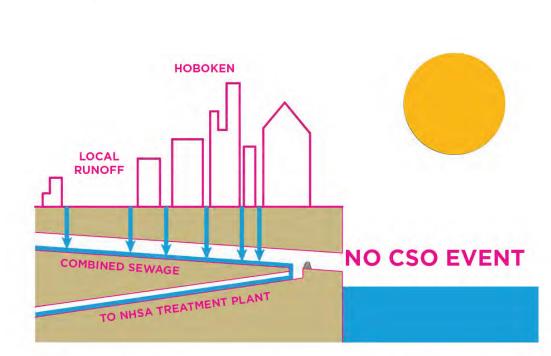
2015



Figure 1.2.7 (2015 aerial image) Source: New Jersey Geographical Information Network



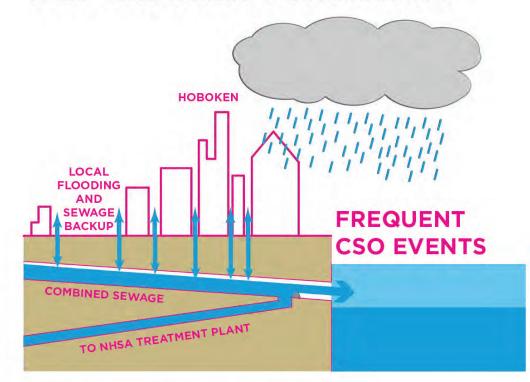
DRY WEATHER CONDITIONS



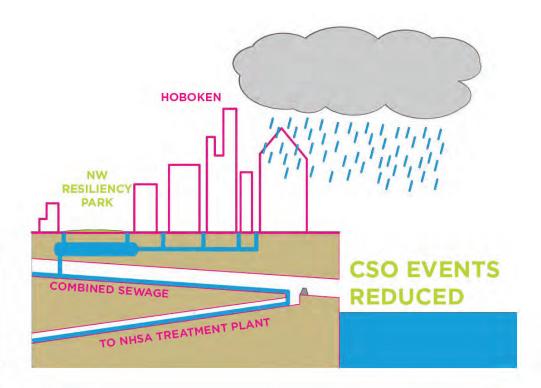
IN DRY WEATHER COMBINED SEWAGE IS CONVEYED TO THE NHSA TREATMENT PLANT BEFORE DISCHARGE.

Image Credit: E&LP Associates

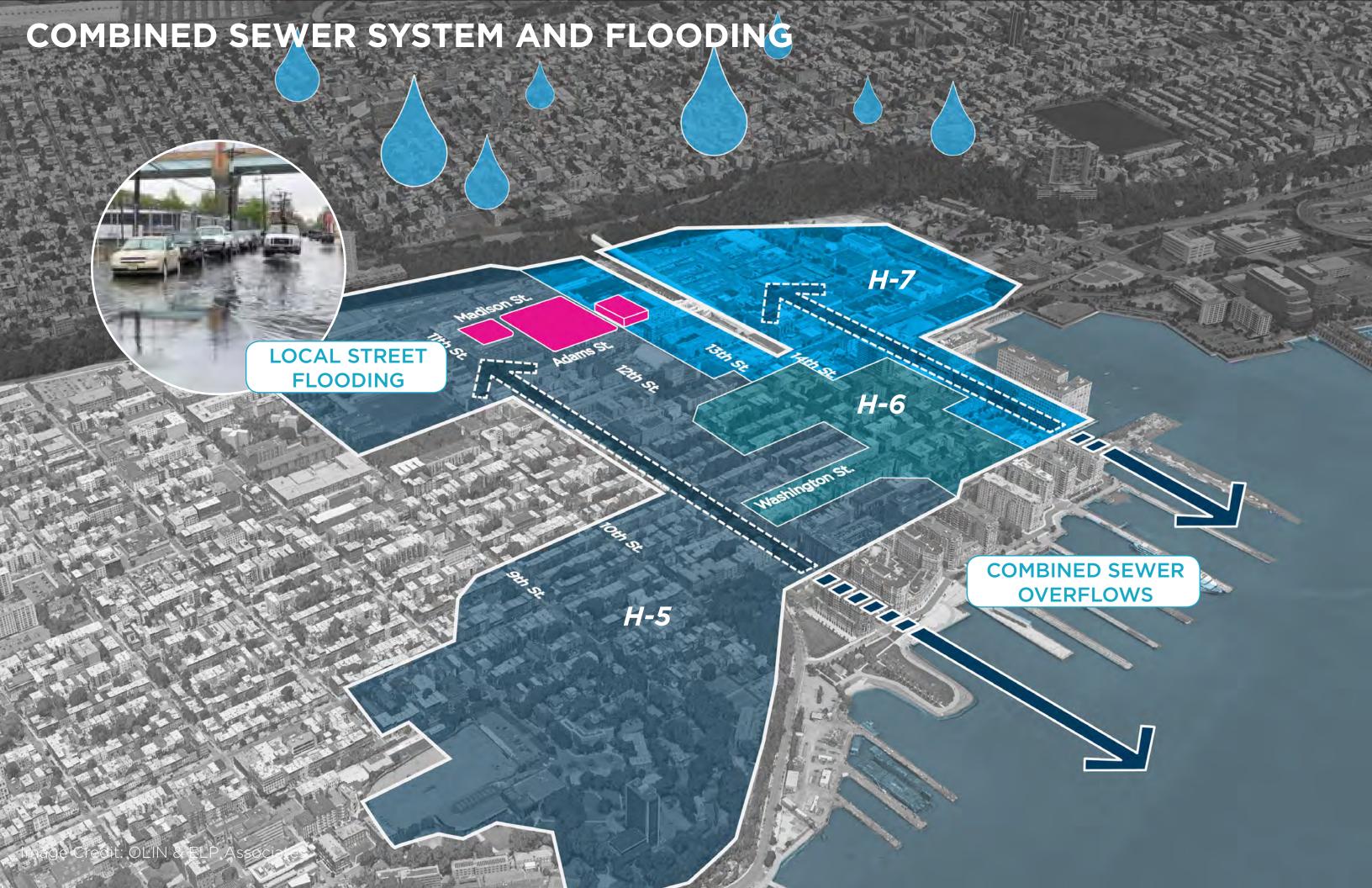
WET WEATHER CONDITIONS



IN WET WEATHER COMBINED SEWAGE OVERFLOWS DIRECTLY TO THE HUDSON RIVER AND FLOODS LOCAL NEIGHBORHOODS.



ONE MILLION GALLONS OF STORAGE AT NORTHWEST RESILIENCY PARK WILL HELP REDUCE COMBINED SEWAGE OVERFLOWS AND LOCAL FLOODING.



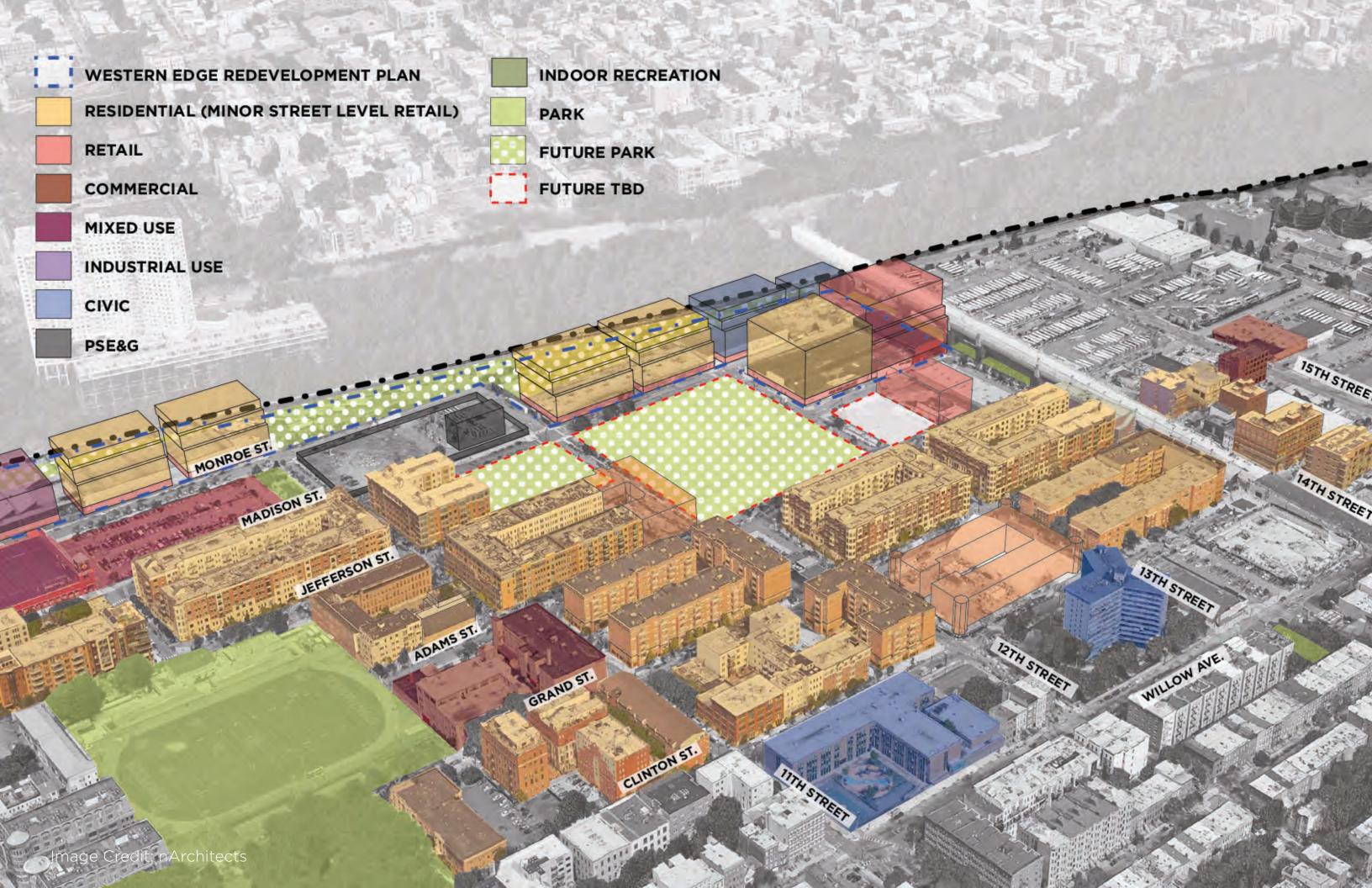
STORMWATER MANAGEMENT STRATEGIES SUBSURFACE STORAGE FOR AT LEAST 1 MILLION GALLONS TO RELIEVE SEWER SYSTEM H-7 **LOCAL STREET** Half St **FLOODING** H-6 **GREEN INFRASTRUCTURE TO** Washington St. MANAGE ON-SITE STORMWATER GREEN INFRASTRUCTURE TO ABSORB **COMBINED SEWER** RUNOFF FROM SURROUNDING STREETS **OVERFLOWS** H-5 Image Credit: OLIN & ELP Associates

















ONLINE SURVEY

GAMES

237

BASIC AMENITIES

PLAY

AREAS

382

COMMUNITY

CENTER

260

FOOD/CAFE

510



SURFACE/

WADING WATER

FEATURE

207

ROCK/NET

CLIMBING

224

ENVIRONMENTAL

EDUCATION

157

BIKE

RENTAL

194

CAR

PARKING

132

BLEACHERS



EVALUATING FEATURES



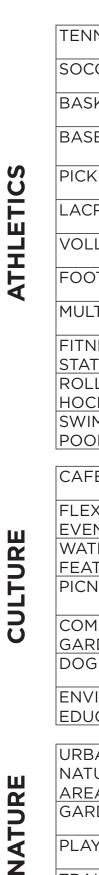










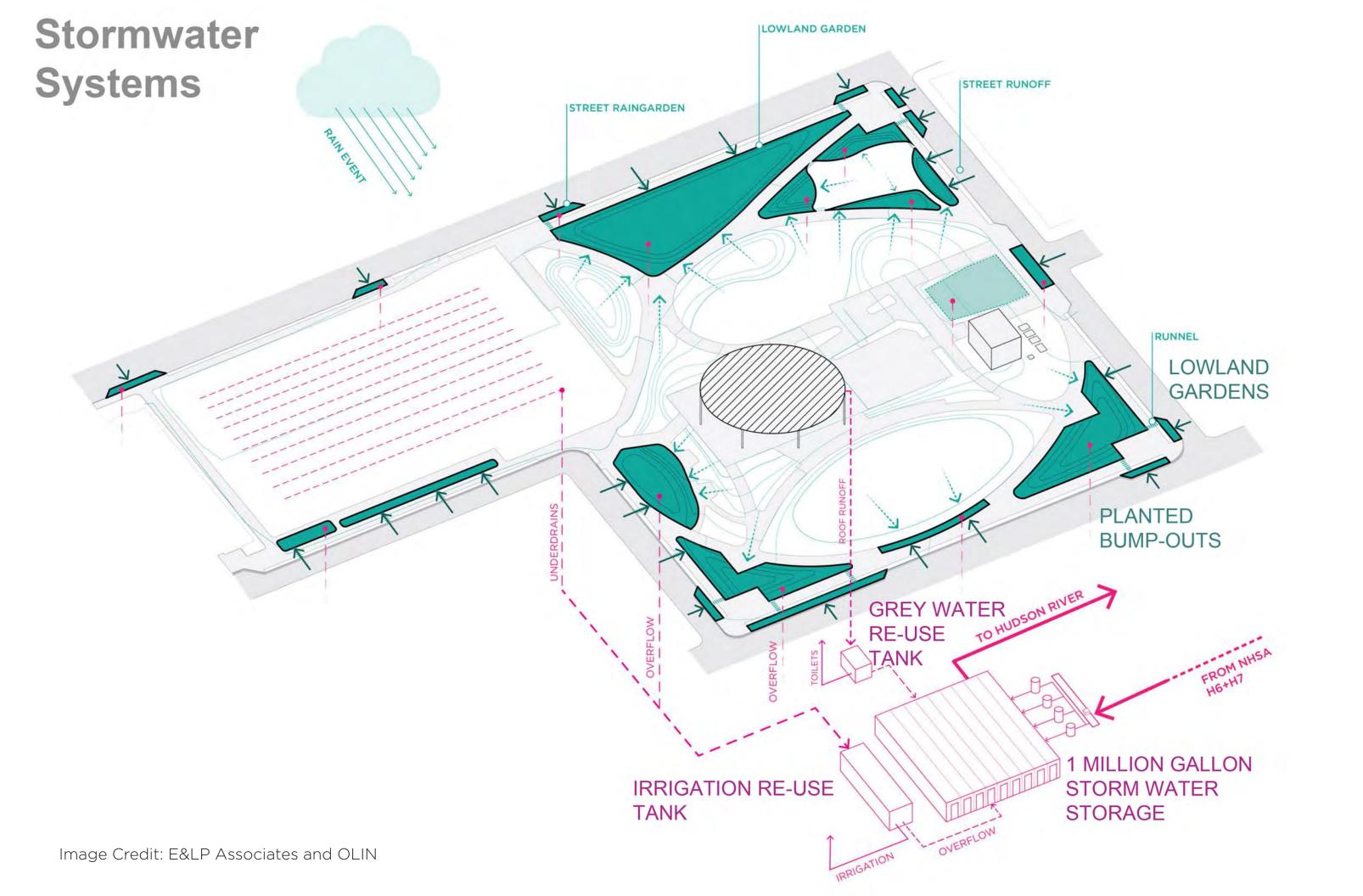


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	IN HIGH DEMAND	ENGAGES MANY PEOPLE PER SQUARE FOOT	MULTI- GENERATIONAL	MULTI-USE/ MULTI-SEASION	NOT PRESENT/ NEARBY IN HOBOKEN	ENVIRONMENTAL BENEFIT
TENNIS	+++	++	+++	+	+++	
SOCCER	+++	+	+	+	+	
BASKETBALL	++	++	+	+	+	
BASEBALL	++	+	++	+	++	
PICKLEBALL	+	+++	+++	+	+	
LACROSSE	+	+	+	+	+++	
VOLLEYBALL	+	+++	++	+	+++	
FOOTBALL	+	+	++	++	++	
MULTI-USE	+	+	+++	+++	++	
FITNESS STATIONS	++	***	***	++	+	
ROLLER/ICE HOCKEY	+	+	+++	++	+++	
SWIMMING POOL	+++	++	++	+	+++	
CAFE	+++	+++	+++	+++	++	
FLEXIBLE EVENT SPACE	+++	+++	+++	++	+	
WATER FEATURE	++	++	++	+	++	
PICNIC AREA	+++	+++	+++	+	+	
COMMUNITY GARDENS	++	+	+++	+	+++	++
DOG PARK	++	+	++	++	+	
ENVIRON. EDUCATION	+	+++	+++	+++	+	+++
URBAN NATURE AREAS	***	++	***	+	***	***
GARDENS	++	++	+++	+	++	+++
PLAY AREAS	++	++	+	++	+	
TRAILS	++	+++	+++	+++	+	++









Project Funding



Hoboken Open Space Trust Fund - Initial property purchase



Hudson County Open Space Trust Fund



FEMA Pre-disaster Mitigation Resilient Infrastructure Grant



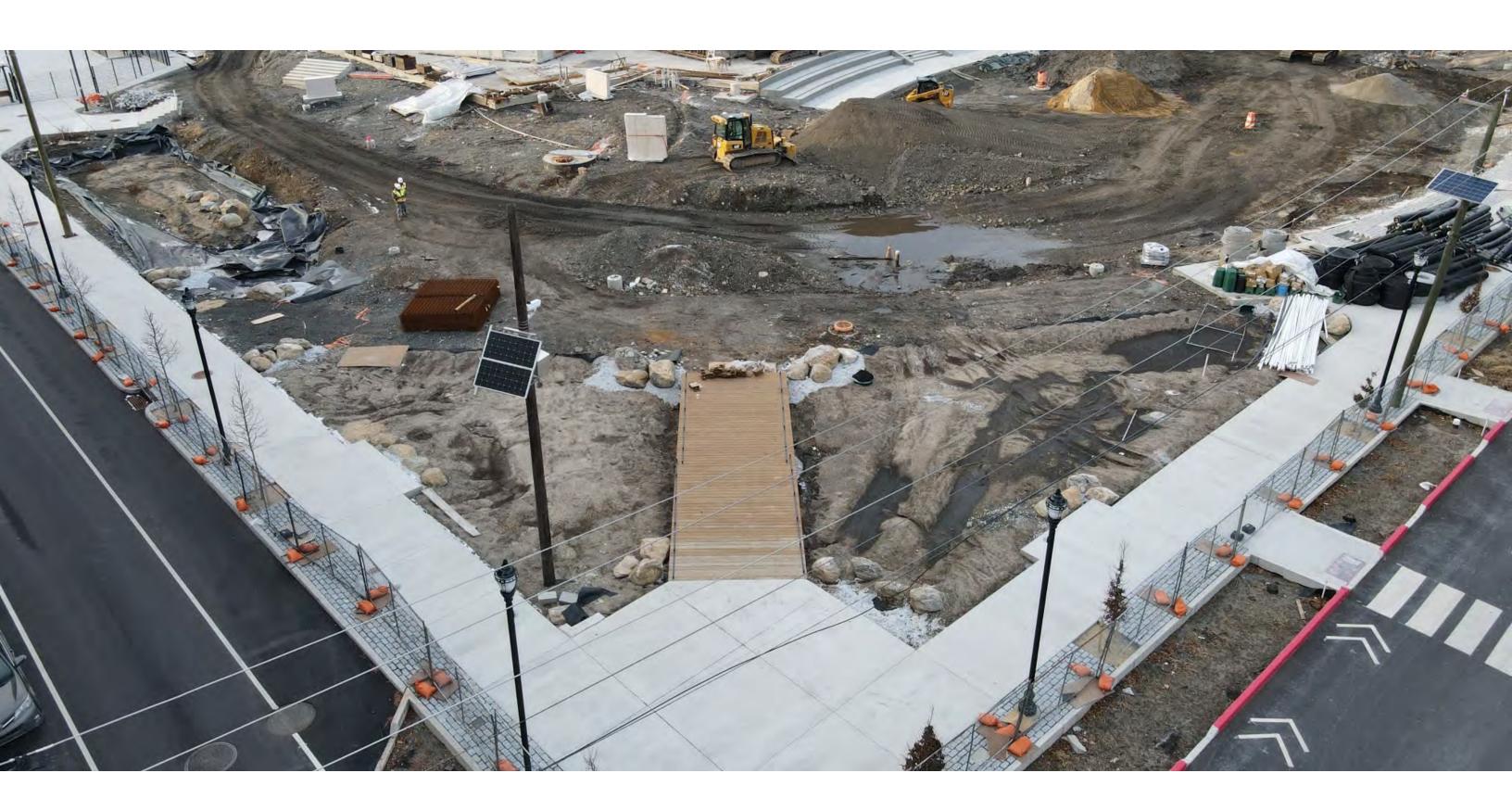
NJ I-Bank - Low Interest Loan and Principal Forgiveness on Environmental Infrastructure Costs

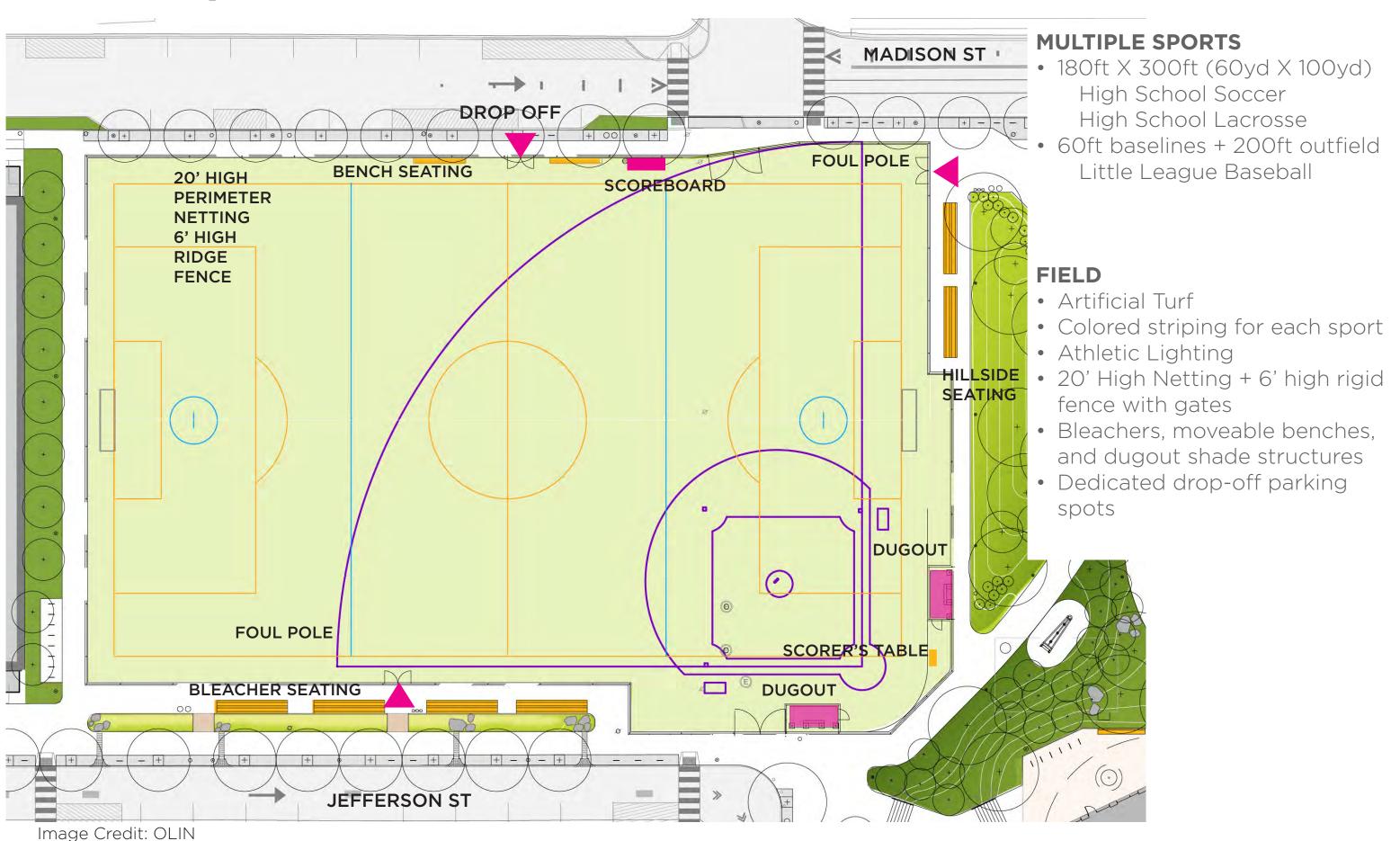


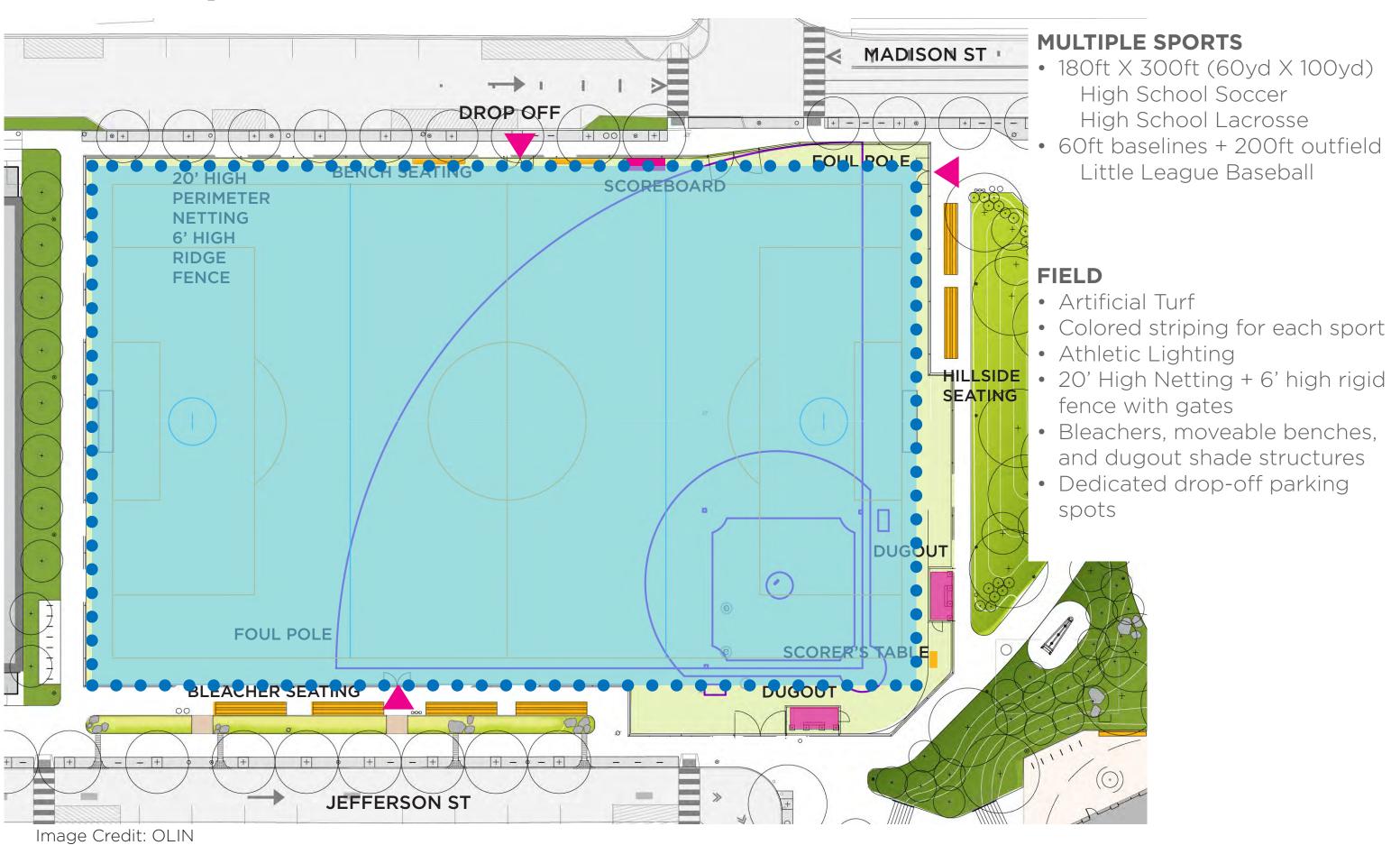
Adams Street Entry Gardens



Adams Street Entry Gardens











Madison Gardens + Play Valley



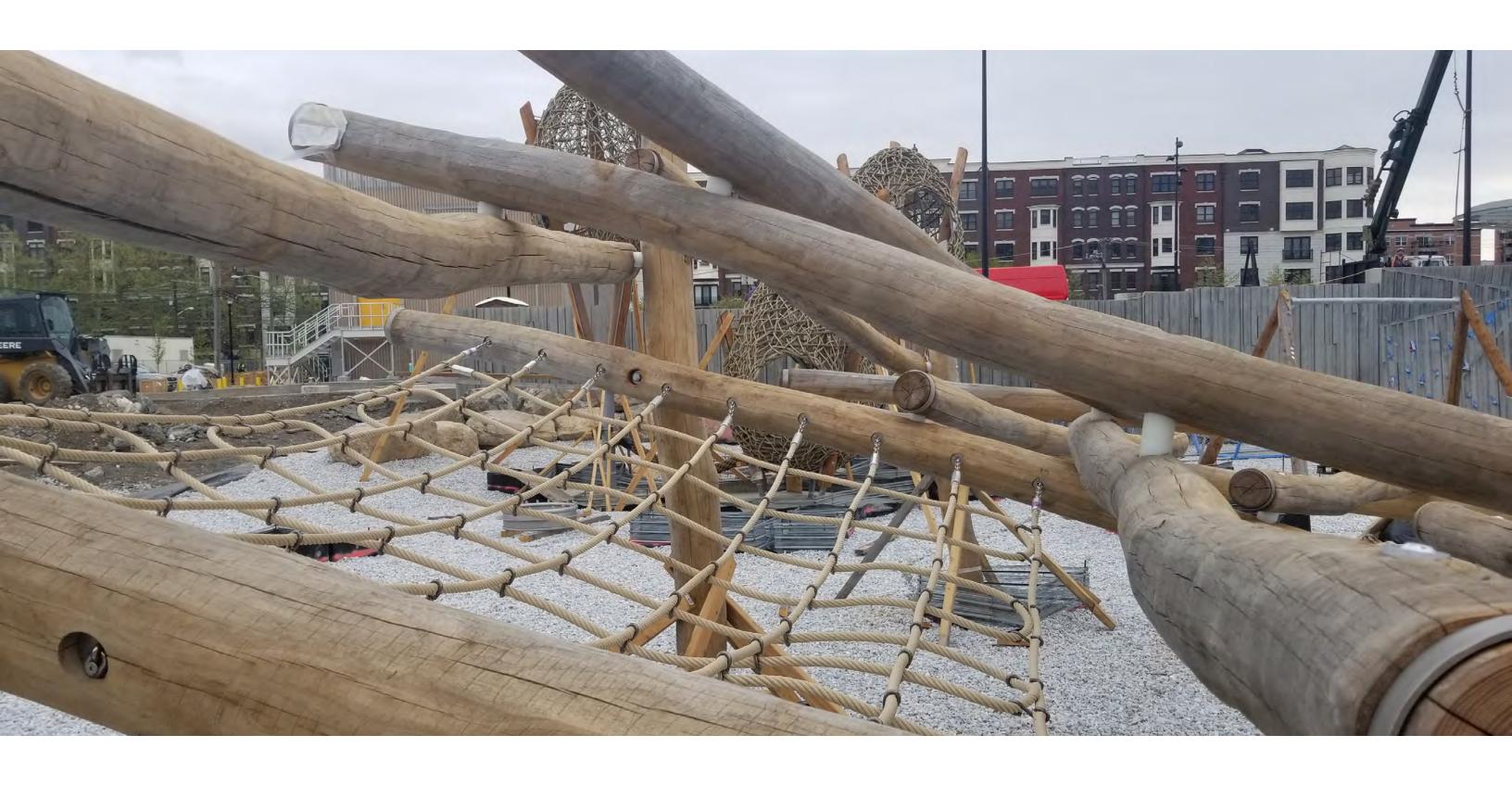
Play Valley



Play Valley







Madison Gardens + Play Valley



Madison Gardens + Play Valley



Madison Garden + Learning Walk



Madison Garden + Learning Walk



Image Credit: City of Hoboken





Client:

City of Hoboken

Stakeholders:

New Jersey Infrastructure Bank (I-Bank)
Hudson County
New Jersey Department of Environemental Protection
North Hudson Sewerage Authority

Design Team

E&LP Associates, Team Lead + Civil
OLIN, Landscape Architecture
nArchitects, Architecture
Silman, Structural
OLA, MEP
Tillett, Lighting Design
Studio Ludo, Playground Design
Lynch & Associates, Irrigation
Delta Fountains, Fountain Design
Excel Environmental, Environmental Remediation
Michael Baker International, Construction Management



Acknowledgements Hazard Mitigation Workshop

