



# Design in and with Dynamic Environments

**Chris Reed**

STOSS Landscape Urbanism

Harvard University Graduate School of Design

# King Tide / Long Wharf Boston



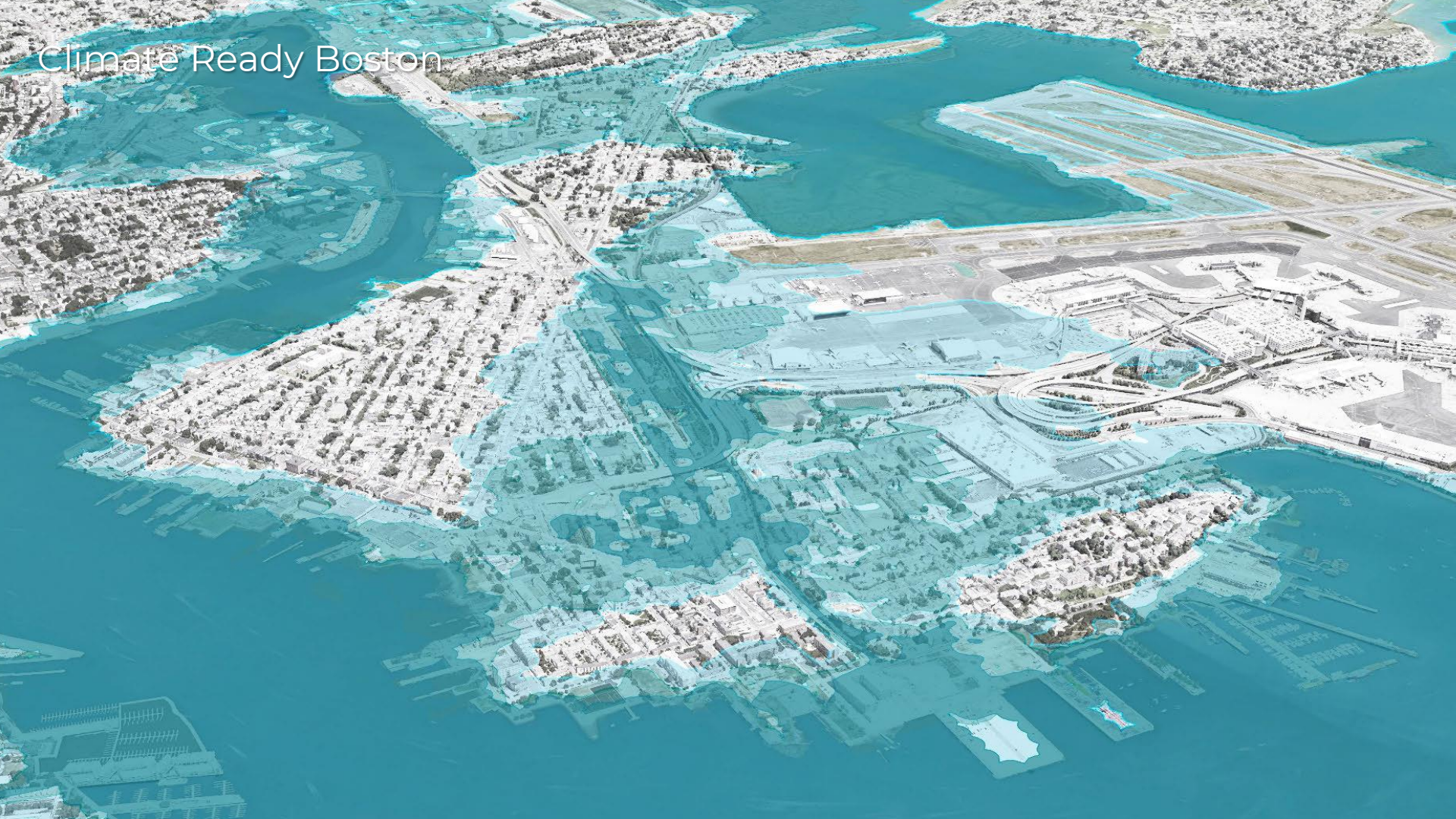


# King Tide / Boston Harbor





# Climate Ready Boston









# Bass River Park / Cape Cod













# Madaket- Ames Bridge

## Near-Term Strategy

ECOLOGICAL RESTORATION

MAINTENANCE AND MONITORING  
OF AMES AVENUE BRIDGE

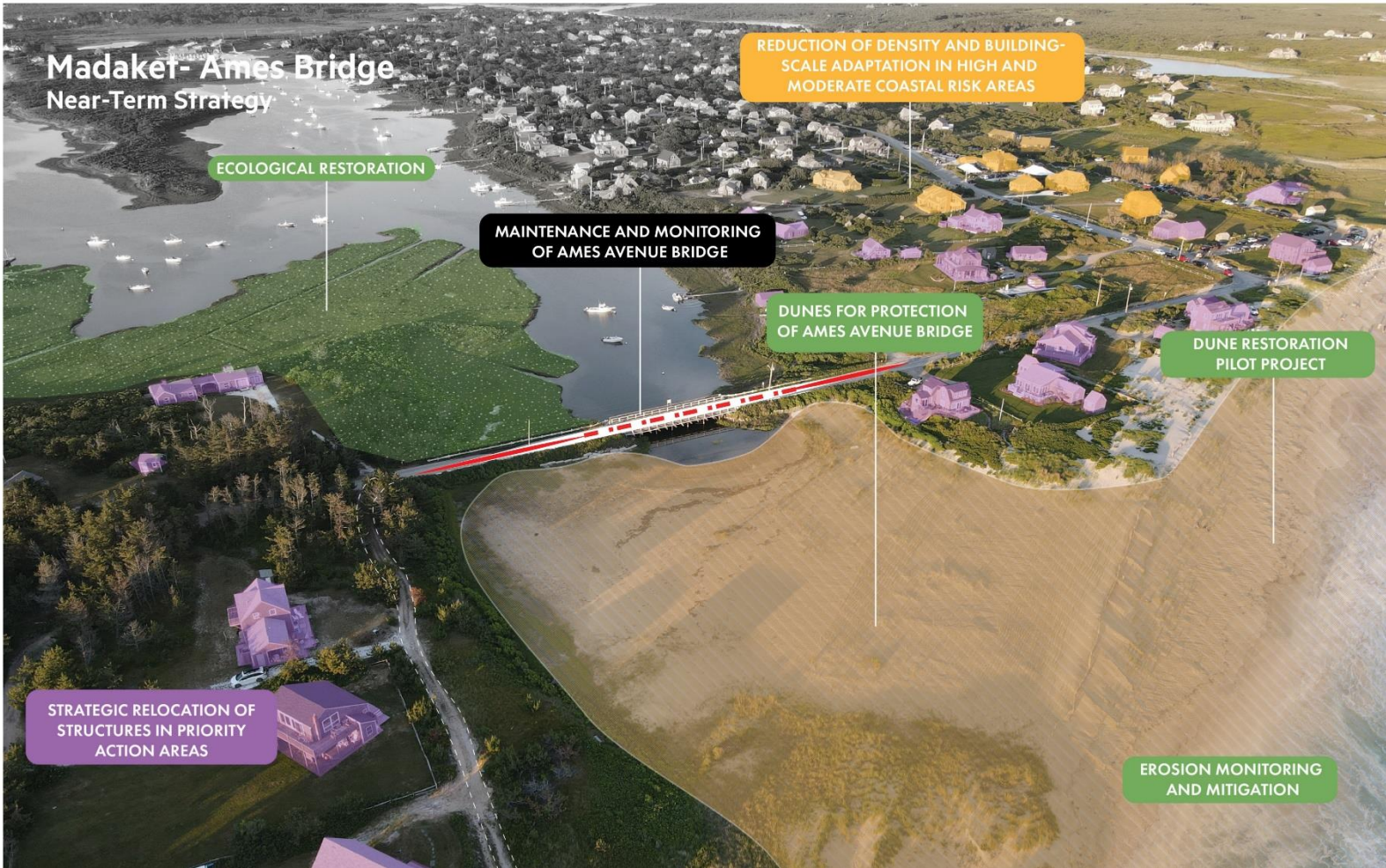
REDUCTION OF DENSITY AND BUILDING-  
SCALE ADAPTATION IN HIGH AND  
MODERATE COASTAL RISK AREAS

DUNES FOR PROTECTION  
OF AMES AVENUE BRIDGE

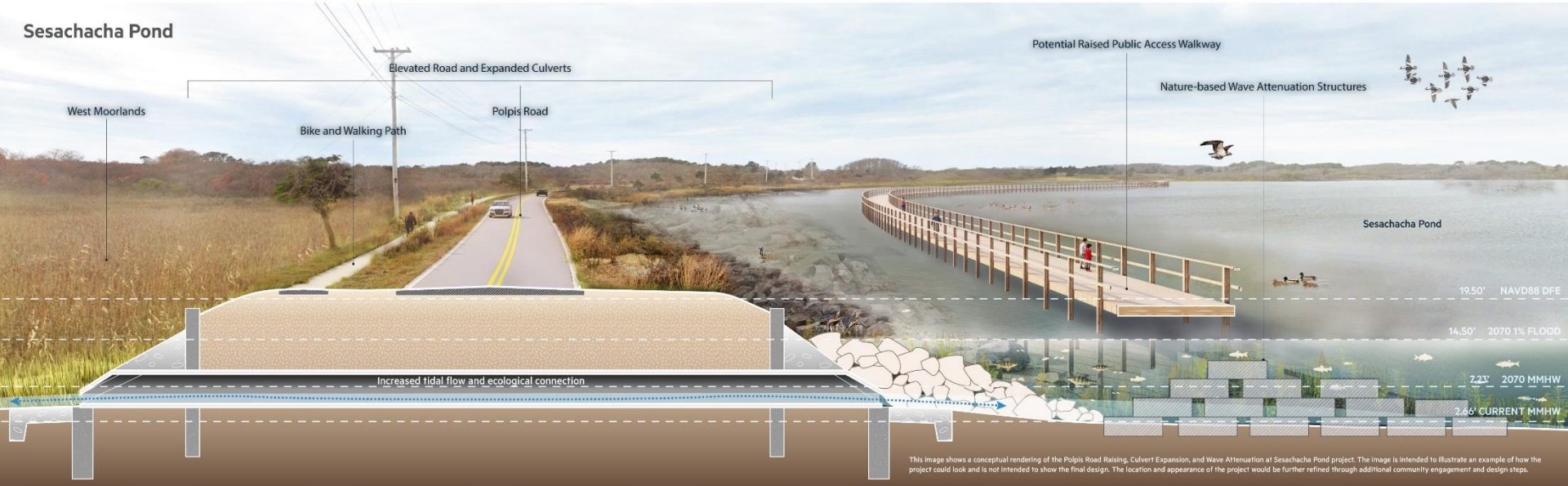
DUNE RESTORATION  
PILOT PROJECT

STRATEGIC RELOCATION OF  
STRUCTURES IN PRIORITY  
ACTION AREAS

EROSION MONITORING  
AND MITIGATION



# Polpis- Road Raising, Culver Expansion, + Wave Attenuation



Potential future condition



# New England Aquarium / The BlueWay / Boston







# Erie Street Plaza



**SITE**























*Erie Street Plaza - Milwaukee  
Stoss . photo by John December*















A nighttime photograph of a campus area. In the background, a large, multi-story brick building with many windows is illuminated from within. The sky is a deep purple and blue. In the middle ground, there are several trees and a paved area. In the foreground, there is a grassy slope with several young trees planted in rows, each supported by a colorful, glowing stake. The text "UMich Gerstacker Grove" is overlaid in the center of the image.

# UMich Gerstacker Grove

















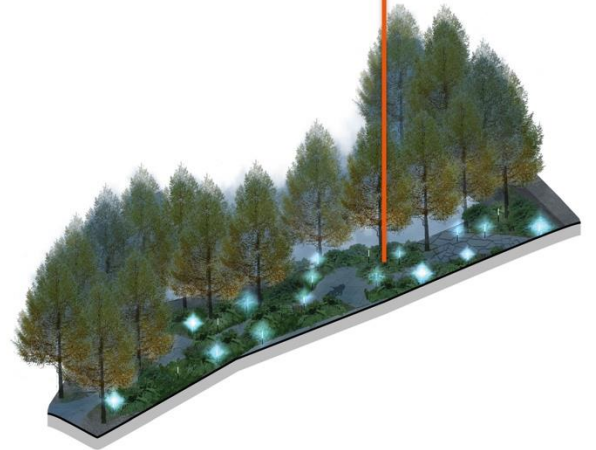
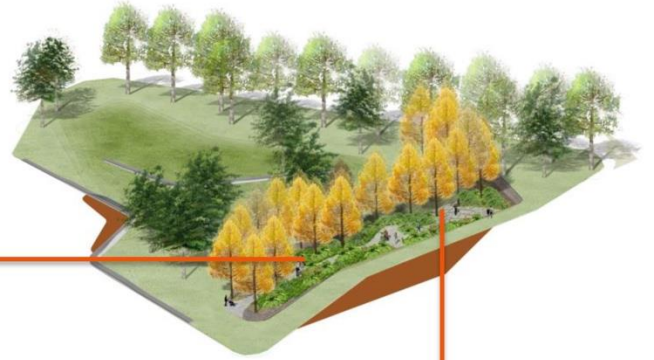
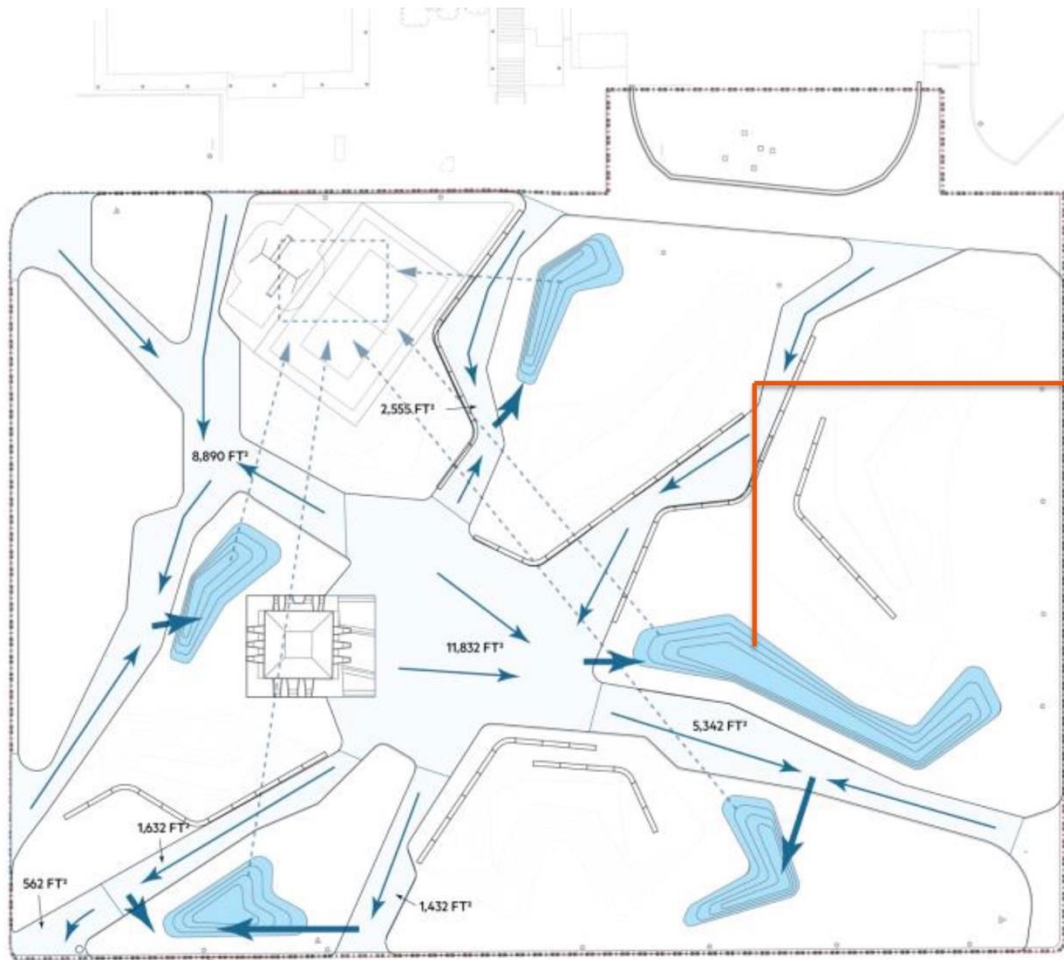
Eda U. Gerstacker Grove

Gift of Rollin M. Gerstacker Foundation, 2016













Amelanchier  
arborea

Taxodium distichium

Taxodium distichium

No-Mow Grass

Water-Responsive  
Lighting

Planting with  
Infiltration Soil

Concrete  
Channel

Geotextile  
Fabric

Infiltration Garden

Sod

Custom Pavers

Raised  
Curb











An aerial photograph of Moakley Park in Chicago. The park features several baseball fields, a red running track, and a large green lawn. In the foreground, there is a sandy beach and a body of water. The background shows a dense urban landscape with numerous skyscrapers and buildings, including the Willis Tower. The text "Moakley Park" is overlaid in the center of the image.

# Moakley Park



# SITE



BOSTON



HARBOR



FLOODING



EMERALD NECKLACE



NEIGHBORS



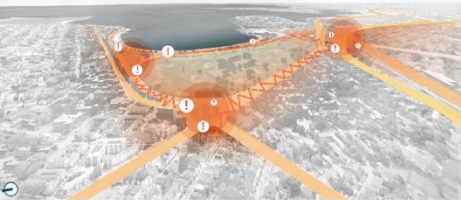


# CONSTRAINTS AND OPPORTUNITIES

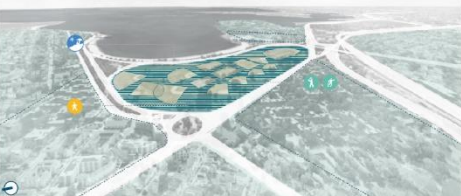
## CHALLENGE



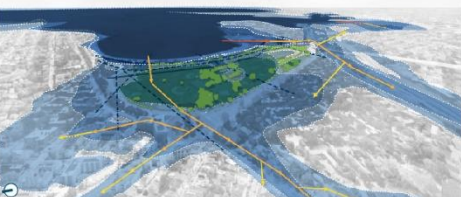
**BARRIERS**  
UNSAFE CROSSINGS + BARRIER TO WATER



**UNDERUTILIZED**  
SINGLE USE + LEFTOVER SPACE

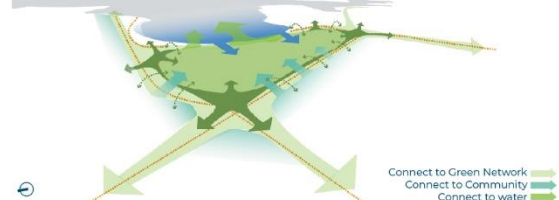


**FLOODING**  
COASTAL FLOODING + STORMWATER

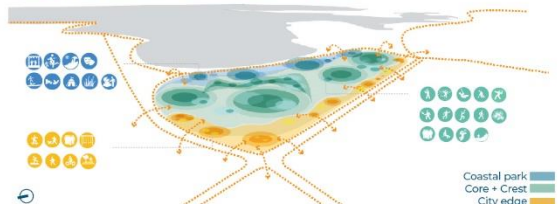


## STRATEGY

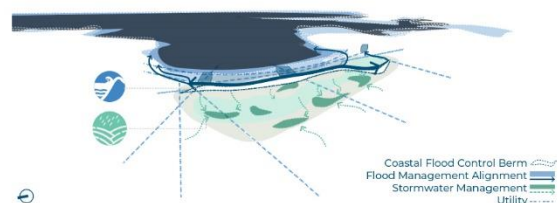
**STITCH**  
SAFE CROSSINGS + CONNECTIONS



**PROGRAM**  
DIVERSE ACTIVITIES + COMMUNITY EVENTS



**MANAGE**  
COASTAL FLOODING PROTECTION + STORMWATER MANAGEMENT



ACCESSIBILITY  
+ SAFETY

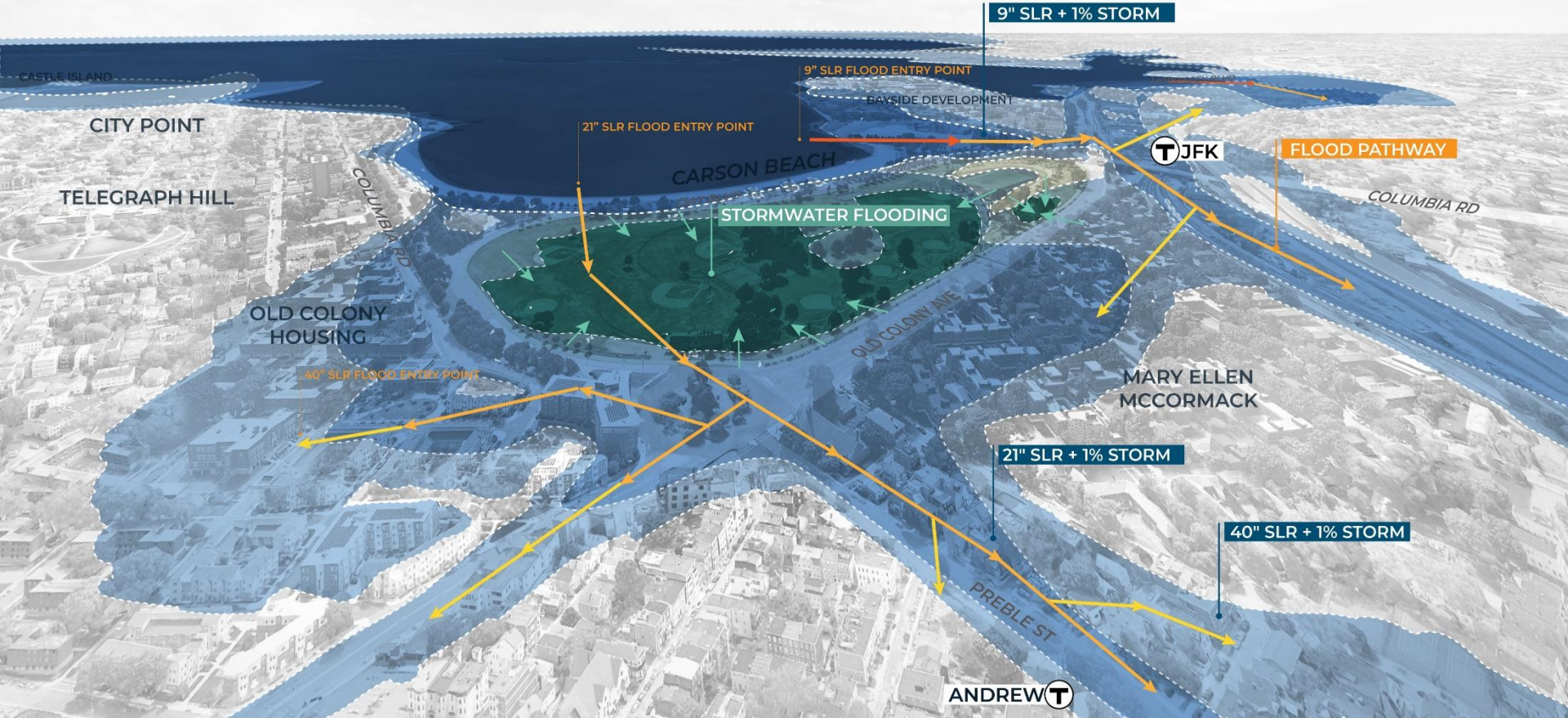
PUBLIC HEALTH  
+ COMMUNITY

RESILIENCY  
+ BIODIVERSITY

INCLUSION

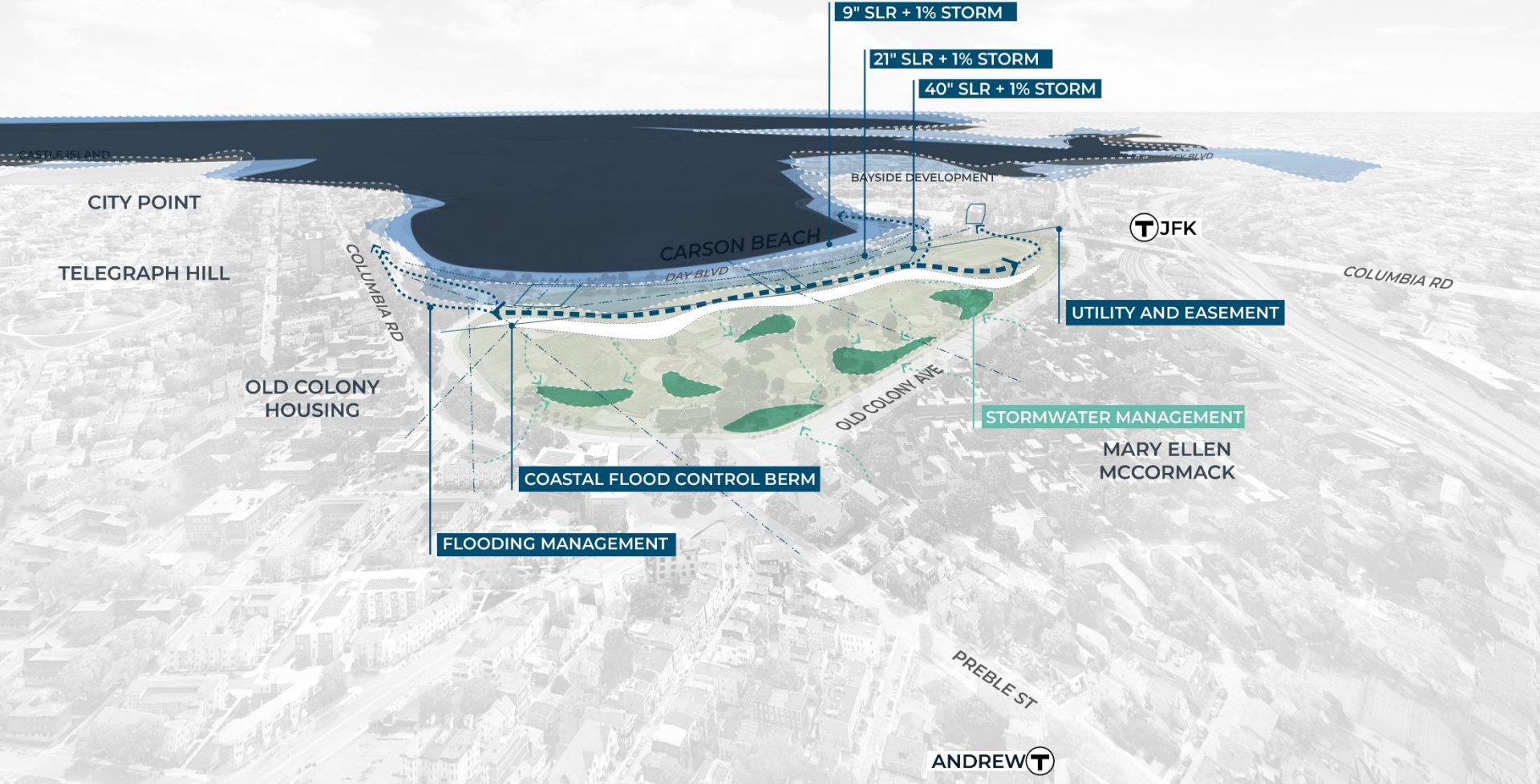


EXISTING- FLOODING





PROPOSED- RESILIENCY



9" SLR + 1% STORM

21" SLR + 1% STORM

40" SLR + 1% STORM

CITY POINT

TELEGRAPH HILL

OLD COLONY  
HOUSING

COASTAL FLOOD CONTROL BERM

FLOODING MANAGEMENT

CARSON BEACH

BAYSIDE DEVELOPMENT

T JFK

UTILITY AND EASEMENT

STORMWATER MANAGEMENT

MARY ELLEN  
MCCORMACK

ANDREW T



**UNSAFE STREETS**

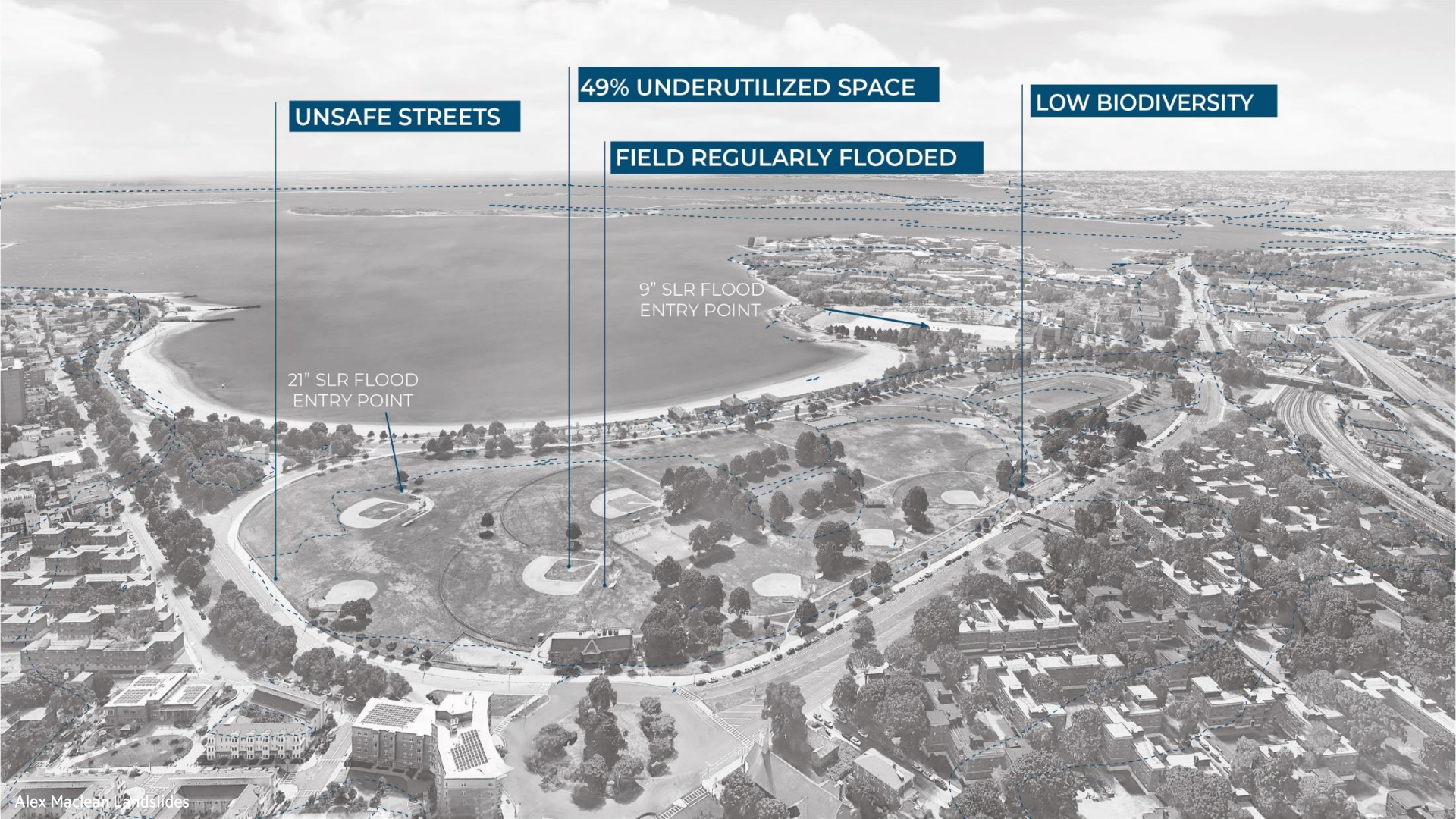
**49% UNDERUTILIZED SPACE**

**LOW BIODIVERSITY**

**FIELD REGULARLY FLOODED**

21" SLR FLOOD  
ENTRY POINT

9" SLR FLOOD  
ENTRY POINT





**99,848 SF GREEN INFRASTRUCTURE**

**WATERFRONT PLAZA AND AMPHITHEATER**

**MULTI-USE FIELD**

**COMMUNITY HUB ENTRY**

**SPECIES DIVERSITY**

**DOUBLED CANOPY**

**IMPROVED PLAY AREA**

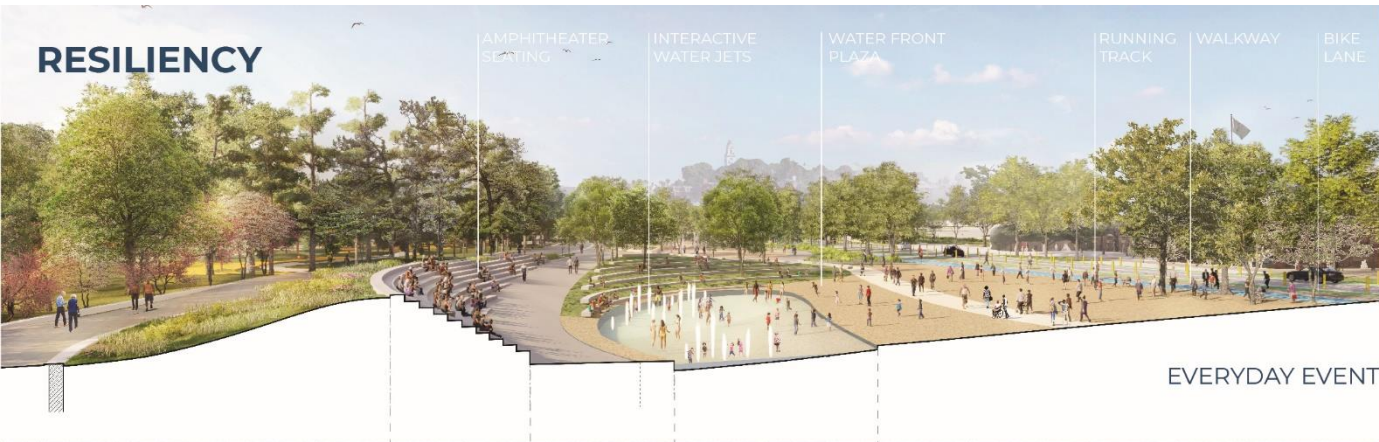








# RESILIENCY



AMPHITHEATER SEATING

INTERACTIVE WATER JETS

WATER FRONT PLAZA

RUNNING TRACK

WALKWAY

BIKE LANE

EVERYDAY EVENT



1% STORM + 40" SLR (+20.6 BCB)

1% STORM + 9" SLR (+17.1 BCB)

1% STORM + 21" SLR (+8.9 BCB)

30" BCB (+18.9 BCB)

172" BCB

CORE WALL

CORE WALL

PATH

PLANTED SLOPE

SEATING

PATHWAY

SEATING

WATER PLAZA

PLAZA

40" SLR + 1% STORM

MULTI-LAYERED APPROACH: BEACH NOURISHMENT DUNE RESTORATION AND LANDSCAPE BERM



COASTAL FLOOD MANAGEMENT

99,848SF GREEN INFRASTRUCTURE



STORMWATER MANAGEMENT

INCREASE SPECIES DIVERSITY PRESERVE EXISTING TREES + DOUBLE TREE CANOPY



BIODIVERSITY



# RESILIENCY + BIODIVERSITY



COASTAL FLOOD MANAGEMENT



STORMWATER MANAGEMENT



BIODIVERSITY





# MOAKLEY PARK

Boston, MA

SAUNDERS ARENA

21" SLR + 1% STORM

ADVENTURE PLAY

OLD HARBOR OVERLOOK

40" SLR + 1% STORM

MULTIUSE FIELDS

COASTAL FLOOD ALIGNMENT

BEACH  
NOURISHMENT

DUNES  
RESTORATION

BABE RUT  
FIELD









# ENGAGEMENT

## STRATEGIES

VISION PLAN PHASE



ONE-ON-ONE INTERVIEWS



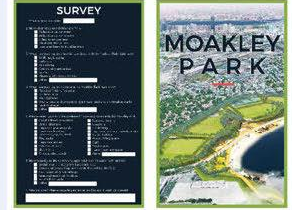
COMMUNITY ADVISORY GROUP



ON-SITE EVENTS

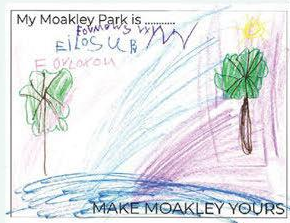


ON-SITE BIKE TOUR



PHYSICAL SURVEY

PRELIMINARY PHASE



KIDS COLORING SHEETS



MOAKLEY TRAILER



BUS CAMPAIGN



NEIGHBORHOOD EVENTS



HARBOR TOUR

CURRENT PHASE



MAKE IT YOURS!

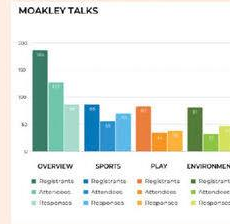
DIGITAL CAMPAIGN



ON-SITE SIGNAGE



ONLINE SURVEY

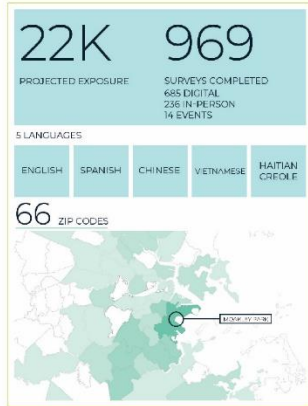


ONLINE OPEN HOUSE

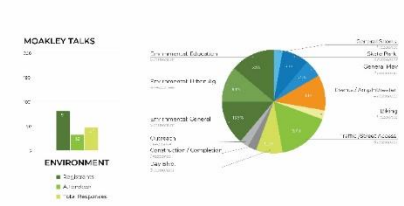
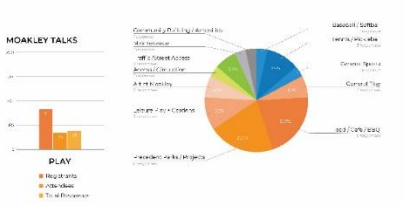
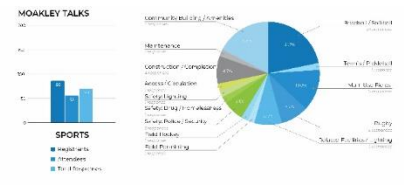
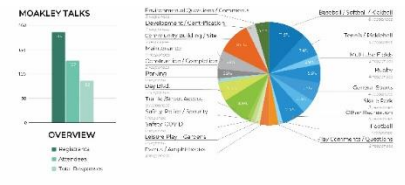


FOCUS GROUP MEETINGS





- ### TOP PREFERRED FUTURE IMPROVEMENTS
- SEASONAL EVENTS 46%
  - CULTURAL EVENTS / MUSIC EVENTS 45%
  - CAFE / FOOD TRUCKS 44%
  - IMPROVED SPORT FACILITIES 41%
  - EXERCISING / JOGGING ON DESIGNATED TRAILS 37%
- I would like to see the concession opens back up with clean bathrooms and more options for food and drinks. Closing the road is a great idea and extending the park over to the beach.
- "Closing the road is a great idea and extending the park over to the beach"
- "I really hope they put a water feature, preferably a pool, like fountains surrounding them. I love and if not a pool, an actual functioning splash pad."
- "Please build a skate park on Day Blvd side near police station. Accessible by T. Noise not an issue!"





# COMMUNITY ENGAGEMENT

## SUMMARY OF FEEDBACK



EXISTING MOAKLEY PARK FEEDBACK

PRELIMINARY PLAN RESPONSE



# Vision Galveston

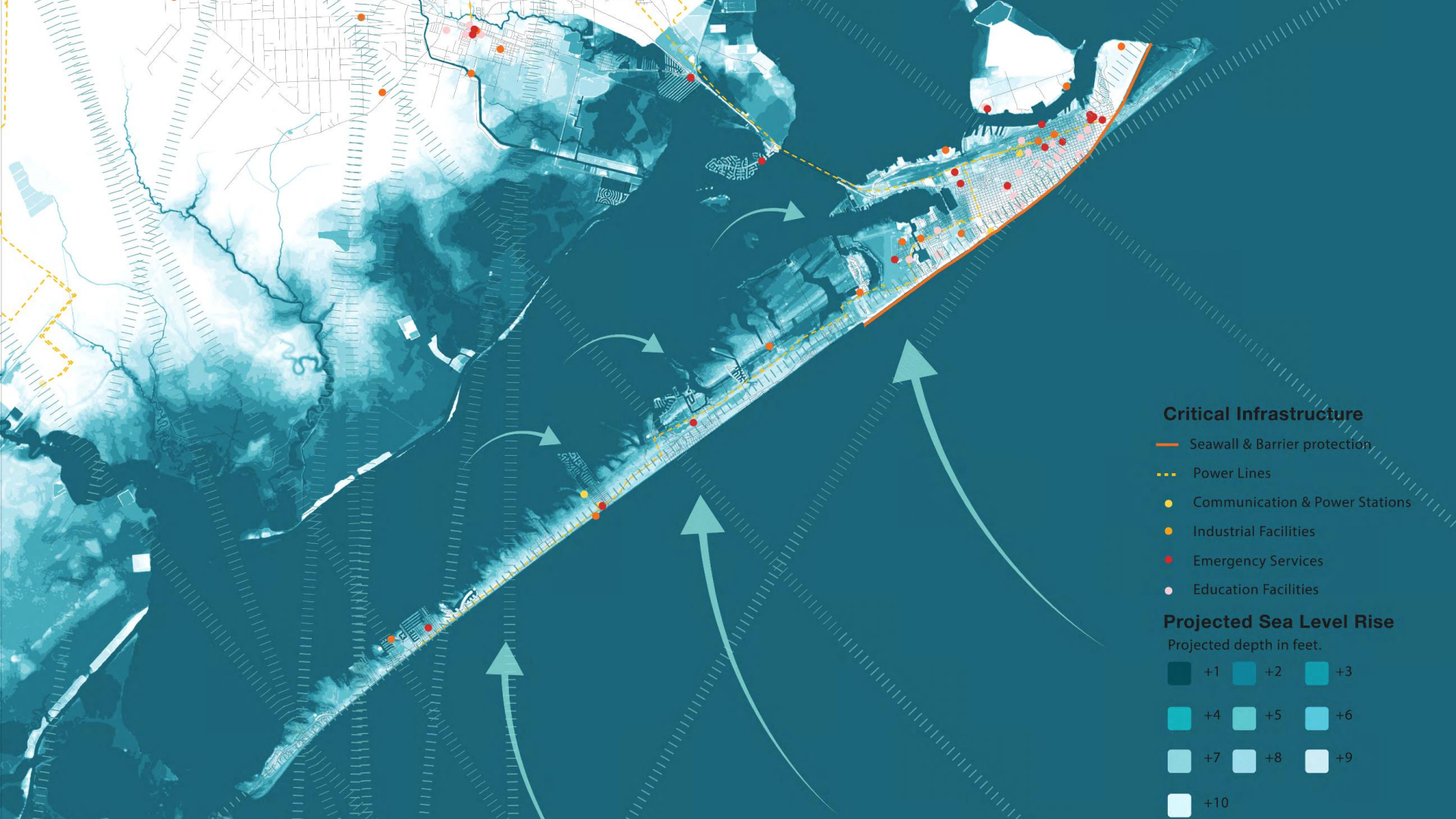
BUMP











### Critical Infrastructure

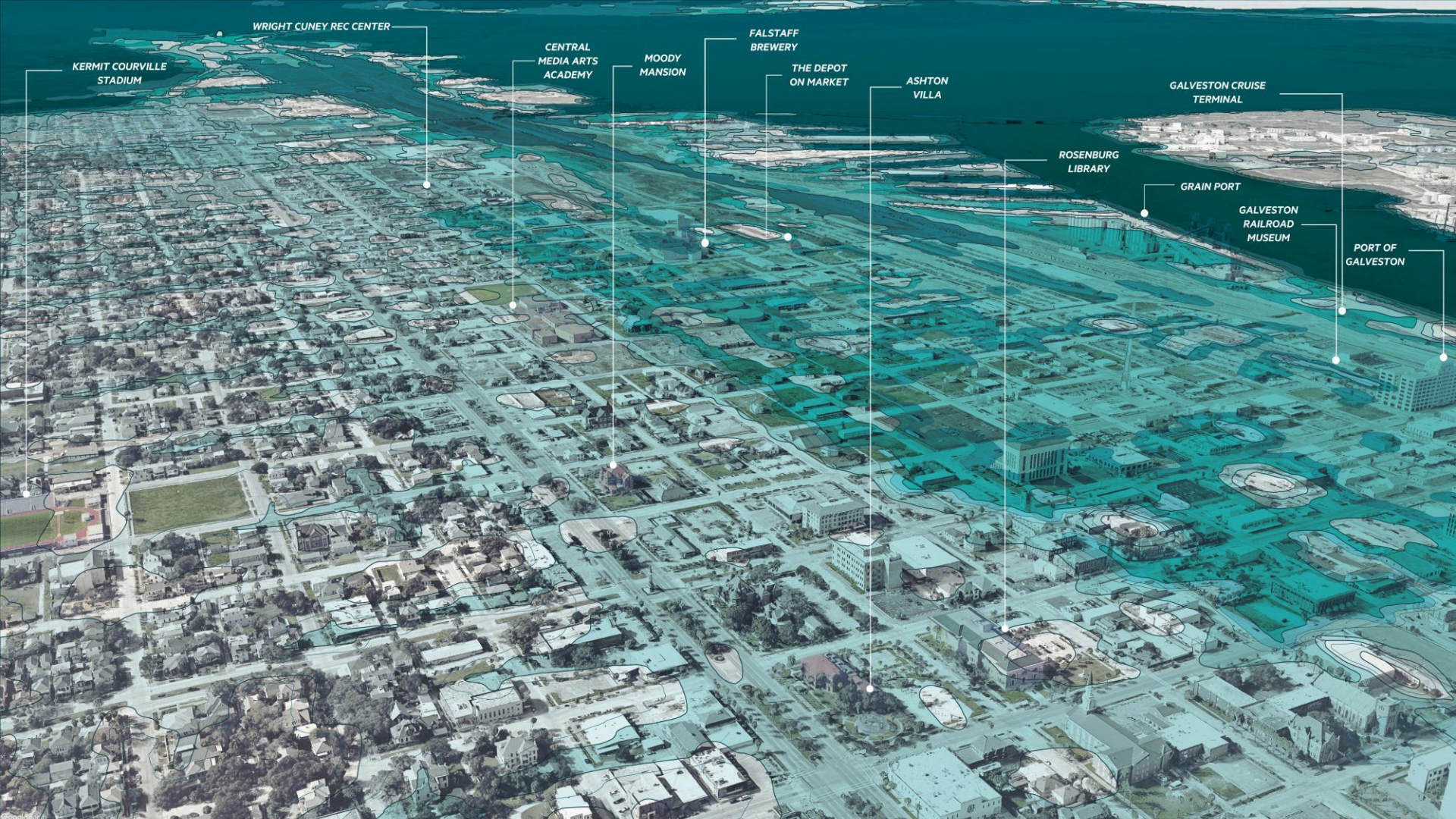
- Seawall & Barrier protection
- - - Power Lines
- Communication & Power Stations
- Industrial Facilities
- Emergency Services
- Education Facilities

### Projected Sea Level Rise

Projected depth in feet.

- |       |      |      |
|-------|------|------|
| ■ +1  | ■ +2 | ■ +3 |
| ■ +4  | ■ +5 | ■ +6 |
| ■ +7  | ■ +8 | ■ +9 |
| ■ +10 |      |      |





WRIGHT CUNEY REC CENTER

KERMIT COURVILLE  
STADIUM

CENTRAL  
MEDIA ARTS  
ACADEMY

MOODY  
MANSION

FALSTAFF  
BREWERY

THE DEPOT  
ON MARKET

ASHTON  
VILLA

GALVESTON CRUISE  
TERMINAL

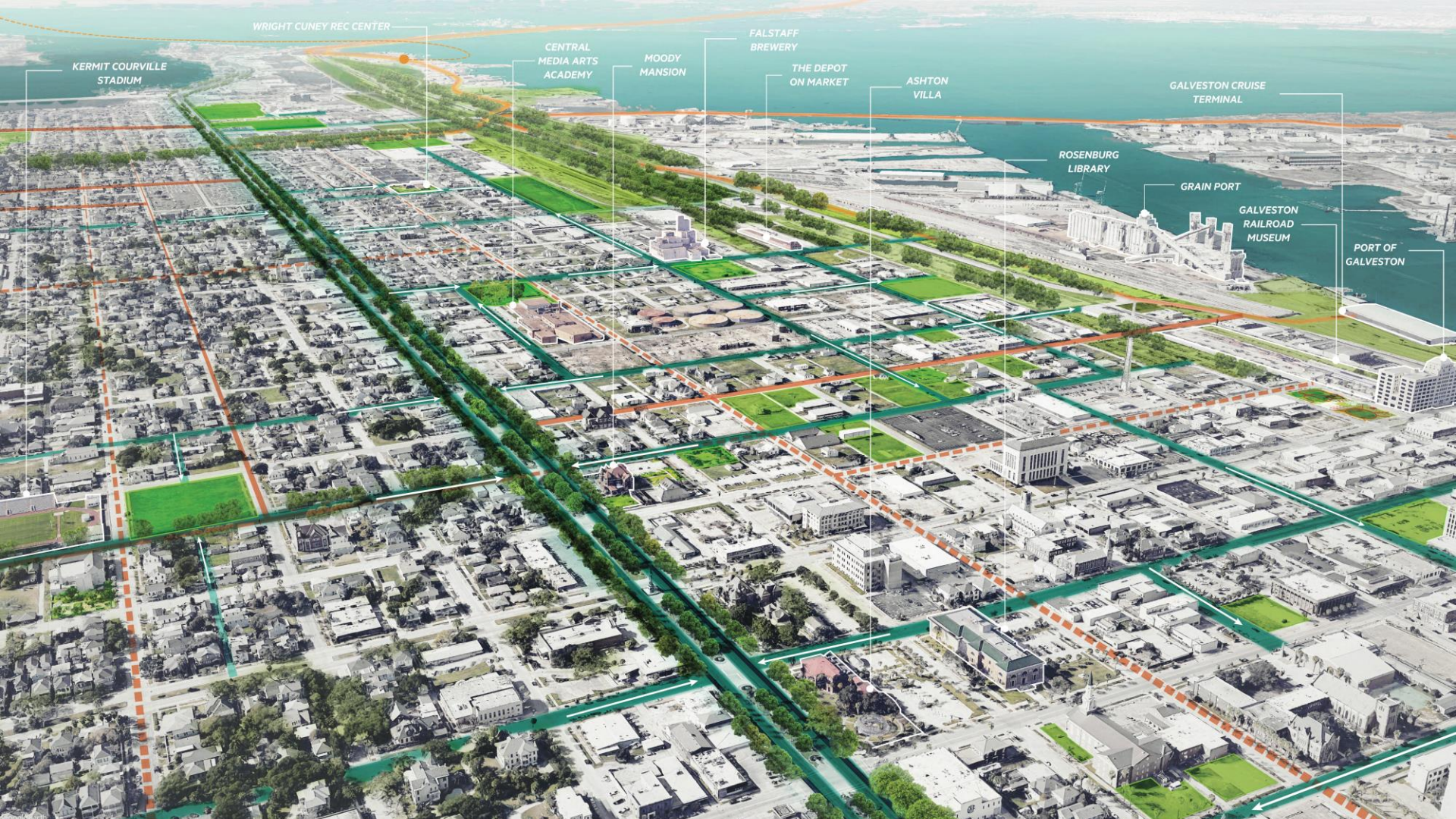
ROSENBERG  
LIBRARY

GRAIN PORT

GALVESTON  
RAILROAD  
MUSEUM

PORT OF  
GALVESTON





WRIGHT CUNEY REC CENTER

KERMIT COURVILLE STADIUM

CENTRAL MEDIA ARTS ACADEMY

MOODY MANSION

FALSTAFF BREWERY

THE DEPOT ON MARKET

ASHTON VILLA

GALVESTON CRUISE TERMINAL

ROSENBERG LIBRARY

GRAIN PORT

GALVESTON RAILROAD MUSEUM

PORT OF GALVESTON





WETLAND RESTORATION

ARTIST BOAT PRESERVE

LAFITTE'S COVE

GALVESTON COUNTRY CLUB

LANDSCAPE SPONGES

BIKEWAY

LAND BRIDGE

LAND BRIDGE

POCKET PARK

D







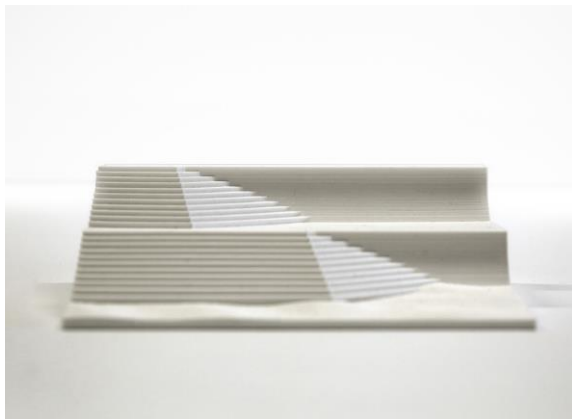




01. Existing Condition



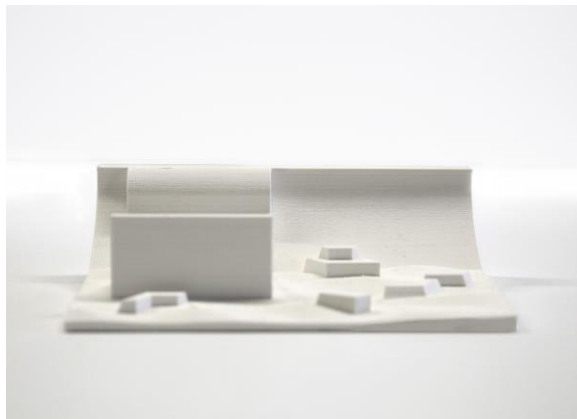
02. Grand Staircase



03. Overlook



04. Skate Park



05. Rocky Shore



06. Access Ramp





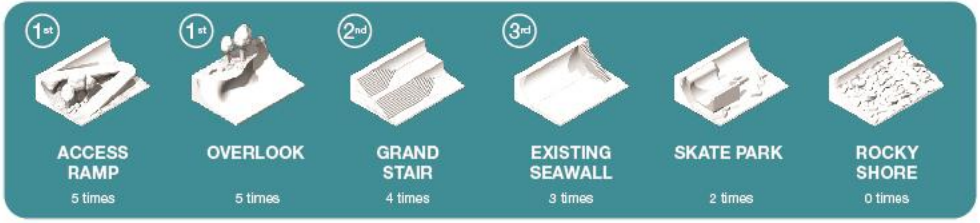
# Build Your Seawall

PROMENADE



1 time each

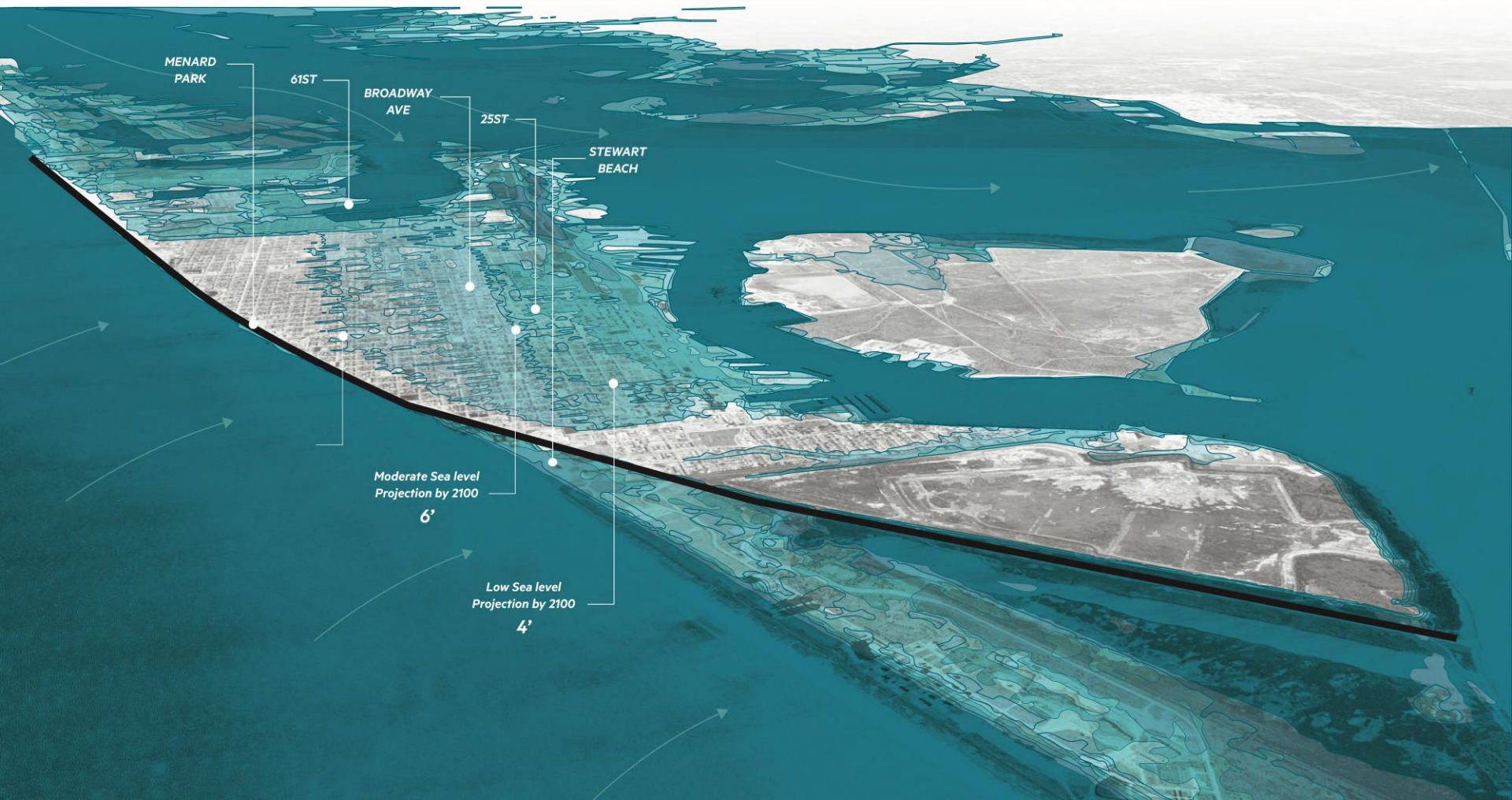
SEAWALL



BEACH







MENARD  
PARK

61ST

BROADWAY  
AVE

25ST

STEWART  
BEACH

Moderate Sea level  
Projection by 2100

6'

Low Sea level  
Projection by 2100

4'





MENARD PARK

61ST

BROADWAY AVE

RAILYARD WATER PARK

25ST

STEWART BEACH

EAST END STORM PARK

SPONGE PARKS

SEAWALL BOULEVARD

WATER BOULEVARD

FORT SAN JACINTO









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STOSS Landscape Urbanism  
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