

NEW JERSEY

UNION BEACH

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RUMSON

Ambika Kannusami, Elsa Paas, Ziheng Zhao (Henry), M.Raffy.Prawira.P

LONG BRANCH

Ayesha De Sousa, Juliana Leite Neri, Vanessa Gallego, Guoguo Chen

ASBURY PARK

Geethika Lakshmi T S, Nicole Quah, Junbo Chen, Zong Ping

POINT PLEASANT

Gracia Ignatius, Jianing (Cecily) Tang, Yangjing Cheng, Vera Leon

TOMS RIVER

Jennie J. Zhou, Yuchen Zhang, Atharv Bhole, Tianyi Dai

PINE BARRENS

Eric Lin, Xire Sangpei, Inhoo Seo, Megan Chen

54

64

72

80

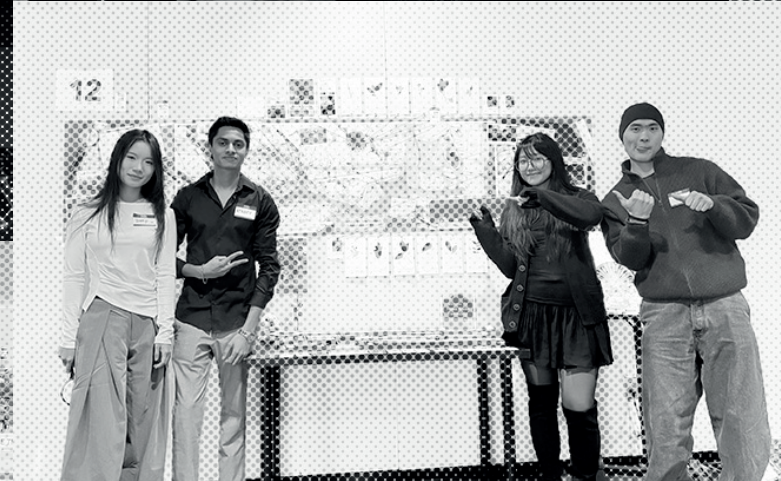
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TWO RIVER TALK SHOW



Raritown:

A New Way to Stay in Place

HOLMDEL TO UNION BEACH, KEANSBURG, NEW JERSEY

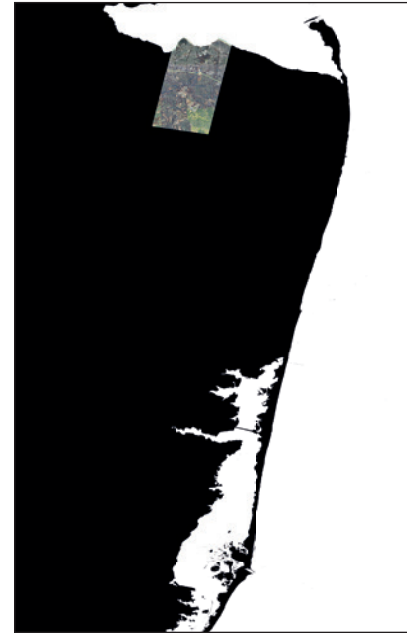
Team

- / Amalia Kamien
- / Kuan-Fu (Jeff) Huang
- / Jihye Park
- / Wenxin Dai

Raritown begins from a simple but urgent question: what does it mean to stay in place along the New Jersey coast when rebuilding in place no longer ensures survival?

Beneath the familiar image of suburban stability, long-standing vulnerabilities have accumulated through fragmented mobility, limited housing choice, and an increasingly unstable relationship with water. Rather than responding to each disaster by repairing damage in isolation, the project asks how coastal communities might remain while fundamentally changing the spatial logic that produced their vulnerability.

Raritown explores a new way of staying—one that gradually inhabits water through canals, floating housing, and protective barrier landscapes. Existing creeks become connective infrastructure, linking inland towns to a shared waterfront spine and a new water-based transit corridor. Raritown is a bay community that lives with water, not against it.



UNION BEACH



Video Link





Master Plan

Land Use

- Municipal Boundaries
- Forest
- Agriculture
- Recreation Area
- Education
- Commercial
- Cultural Building
- Corporate Campus
- Barrier Island
- Floodable Park
- Canal
- Transportation Hub

Residential

- High Density
- Medium Density
- Low Density
- Rural

Hydrology

- Water
- Wetlands
- Ridgeline

Transportation Infrastructure

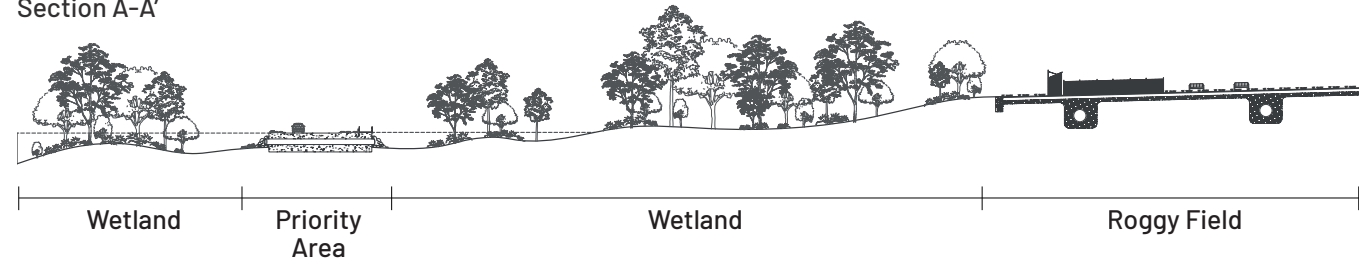
- Major Roadways
- Local Roads
- Railroads



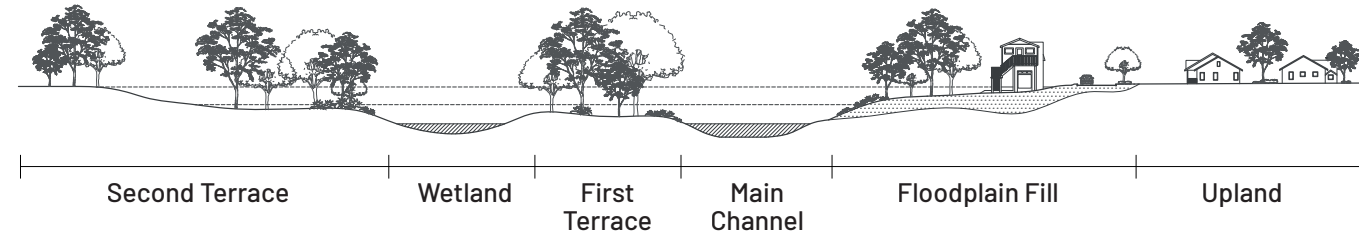
- A** Garden State Parkway
- B** North Jersey Coast Line
- C** Route 35
- D** Route 36
- E** Route 37

Existing Condition

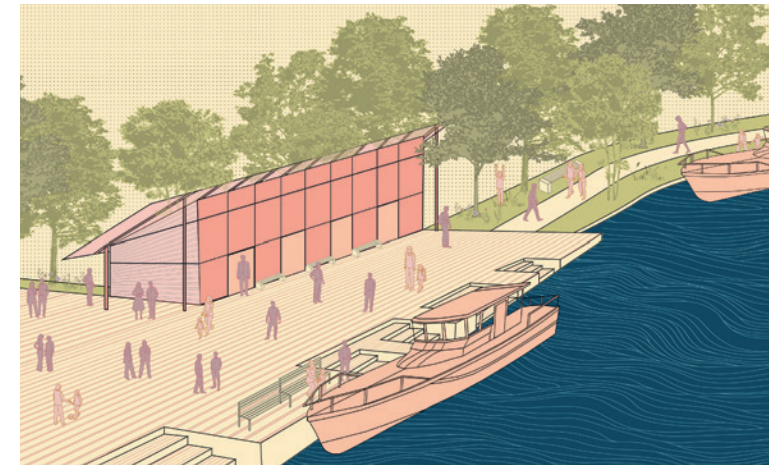
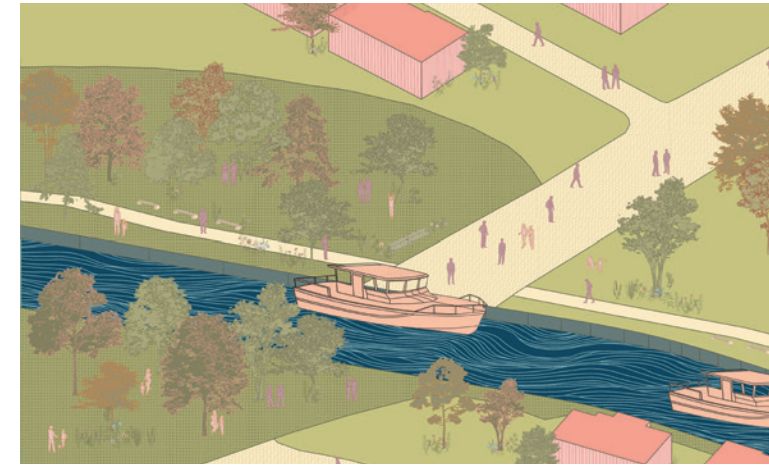
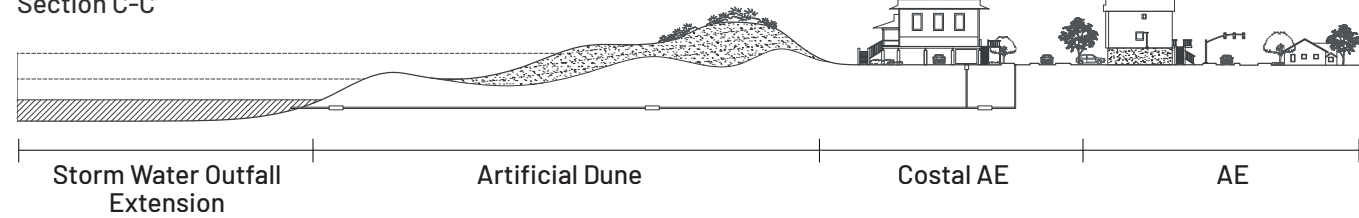
Holmdel
Section A-A'



Hazlet
Section B-B'



Union Beach
Section C-C'

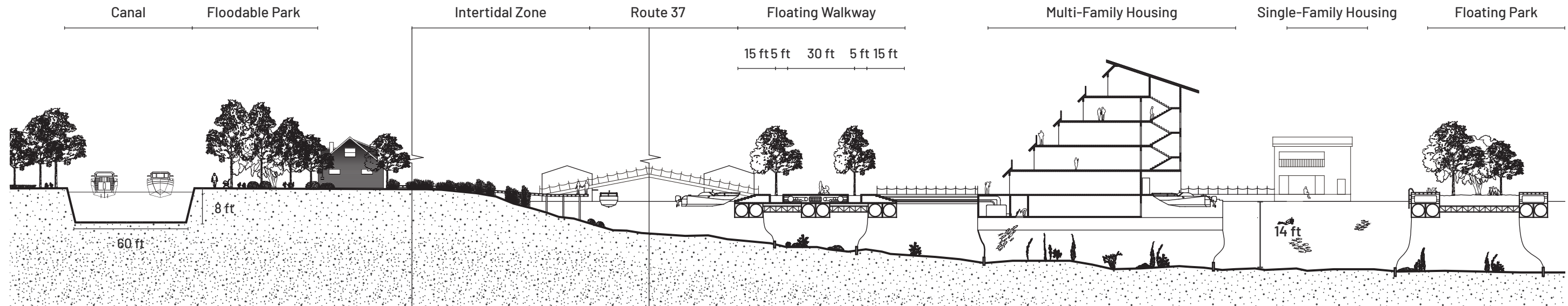


- 1
- 2
- 3

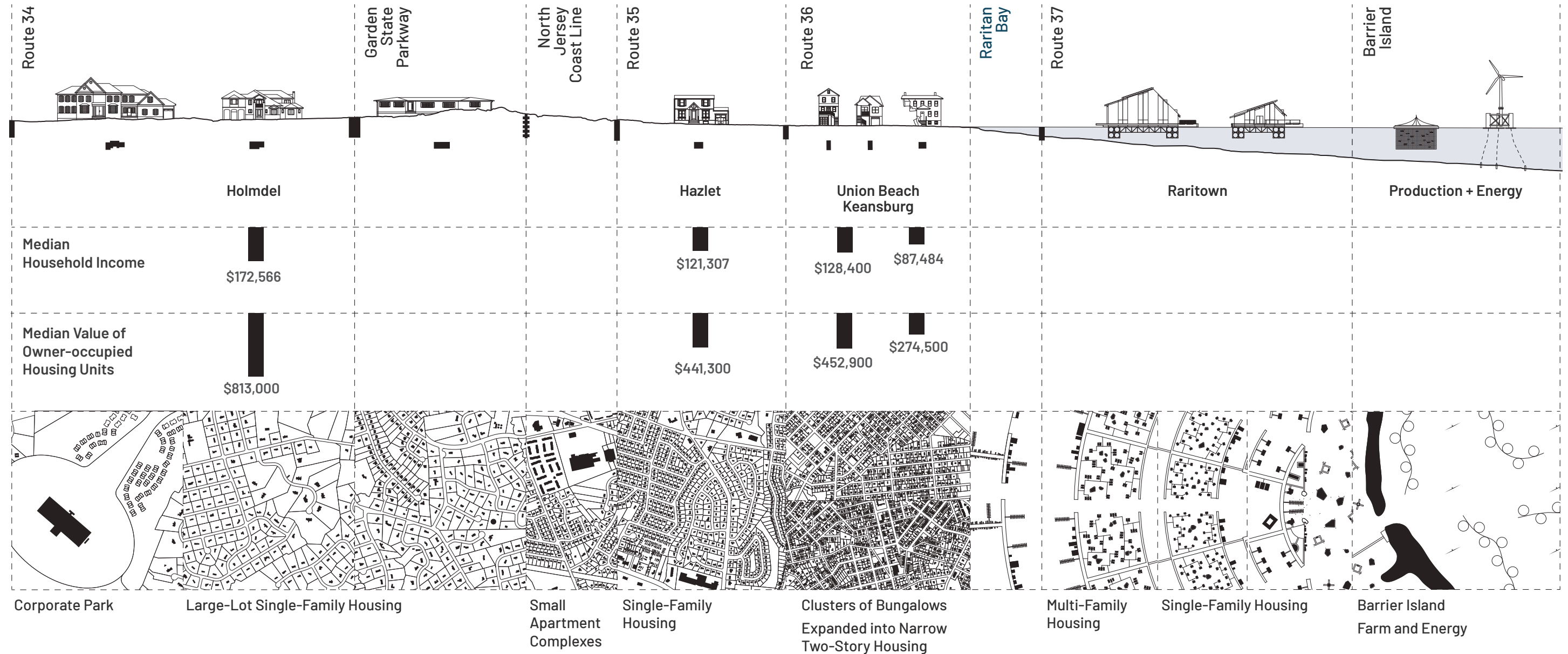
1 Canal
2 Transportation Hub
3 Floating Park

Proposed Section

Inland – Intertidal Zone – Raritown



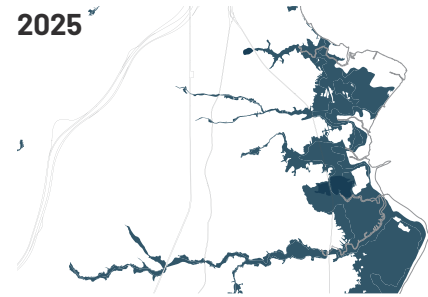
Development Pattern and Housing Typology



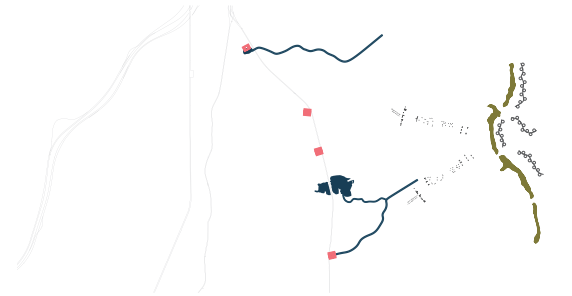
The research examines how water and transportation infrastructure have historically shaped Holmdel, Hazlet, Union Beach, and Keansburg. State highways divide the area into four distinct quadrants, each defined by different development patterns, housing typologies, and property values. While these routes function as regional connectors, they also act as boundaries, reinforcing an inversion in which inland suburbs accumulate stability and value while waterfront communities remain more exposed to flooding and disinvestment. Sectional studies across inland, wetland, and coastal zones reveal how this perpendicular relationship between infrastructure and water organizes settlement and risk.

Phasing

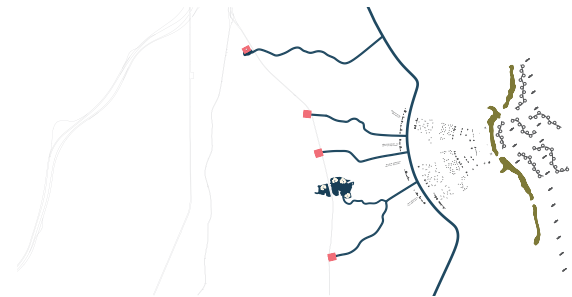
2025



Initial development begins at flood-prone creeks.



Dredged soil from these canals forms new barrier islands at the edge of the eventual neighborhood, slowing storm impacts as growth begins.

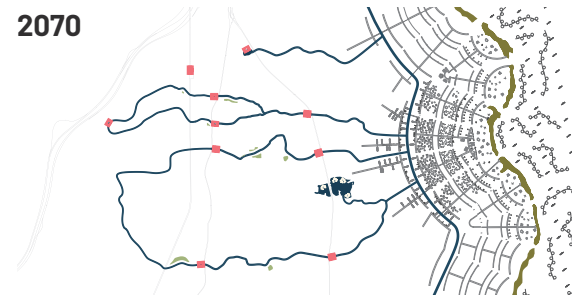


A waterway becomes a transit corridor for boats along the coast—Route 37. Local wind and tidal stations replace reliance on inland energy.



A transportation hub connects waterways with existing transit.

2070



Raritown emerges as a resilient bay community linked to Keansburg, Union Beach, Hazlet, and Holmdel through its canal network.



Through canals, housing, and shared blue space, Raritown introduces a new coastal condition that connects inland communities to the water while remaining adaptable to flooding.

It is imagined as a settlement logic that can continue along the Raritan Bay coastline. In this way, Raritown operates not only as a place, but as an expanding framework for coastal living—one that links multiple towns through a common relationship to water.

Two River Times

RUMSON TO RED BANK , NEW JERSEY

TEAM

- / Ambika Kannusami
- / Elsa Paas
- / Ziheng Zhao (Henry)
- / M.Raffy.Prawira.P

Water is regarded by local residents as the most vital and meaningful part of everyday life, yet it is also the element they fear the most. For a peninsula surrounded on three sides by water, genuine water access has become a rarity. In Rumson, where privatization is deeply entrenched, nearly all waterfront areas have been enclosed as private property. In Sea Bright, despite possessing kilometers of continuous sandy shoreline, people are unable to reach, or even see the ocean because the sea wall cuts off all physical and visual access.

This inability to engage with the water has gradually eroded people's sense of care for it, leading to long-standing issues of water pollution and chronic flooding that have never been properly addressed.

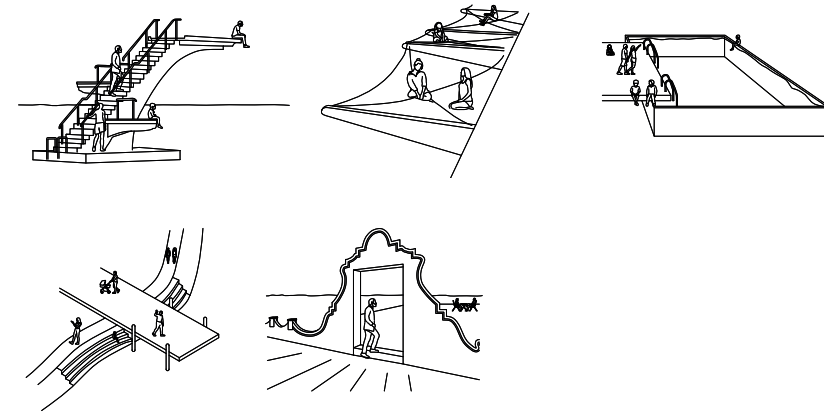
Our strategy responds to this condition at a regional scale. Through a combination of strategic renovation and retreat in Sea Bright, the creation of resilient landscapes within existing parks and parking lots across Rumson, Fair Haven, and Red Bank, and the introduction of new housing along the Red Bank waterfront and the upper Swimming River, designed respectively to support rainwater collection and algae-bloom remediation, we systematically improve the region's hydrological and ecological performance.

Ultimately, by connecting all resilience landscapes and housing nodes, we establish a continuous Green Trail that restores public access, reshapes environmental stewardship, and redefines the relationship between people and water in this unique estuarine territory.

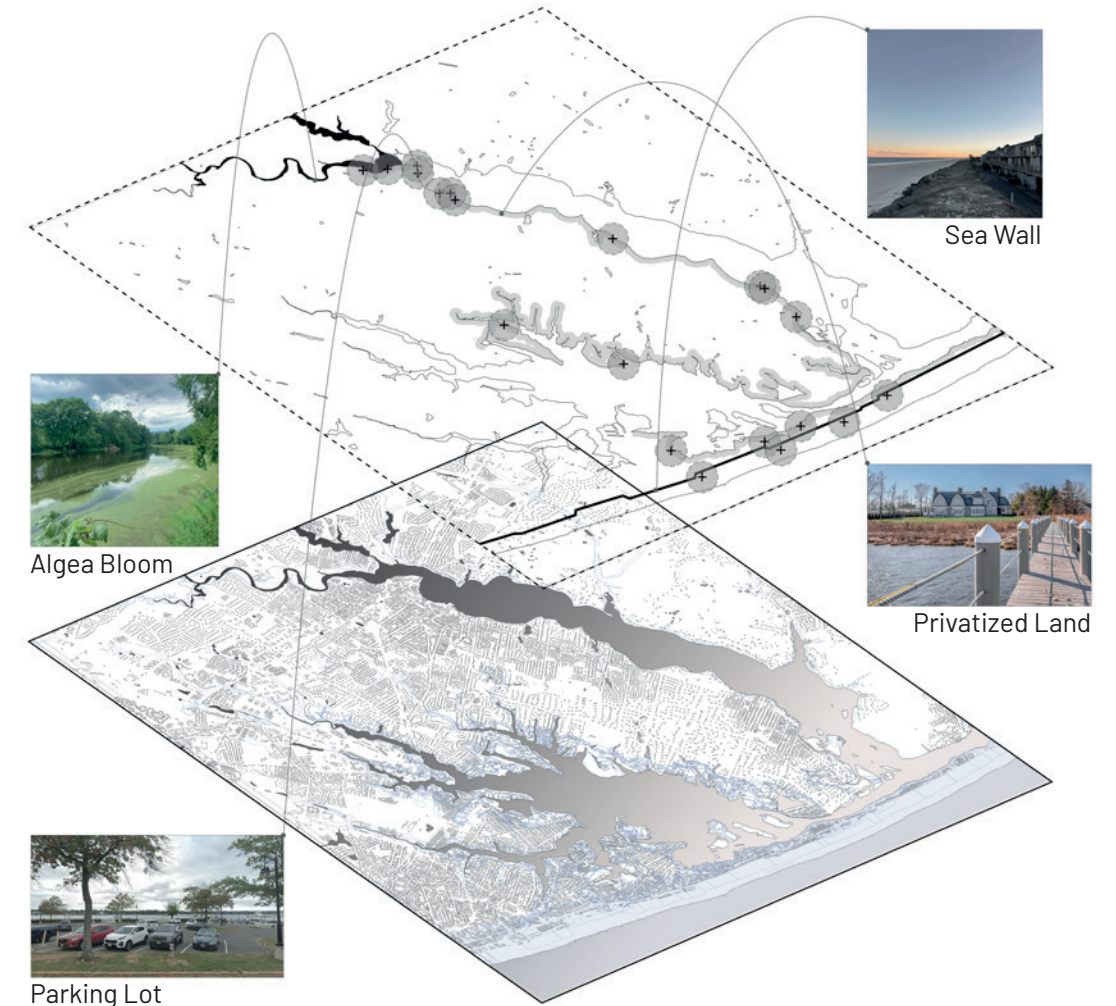


RUMSON

MANIFESTO

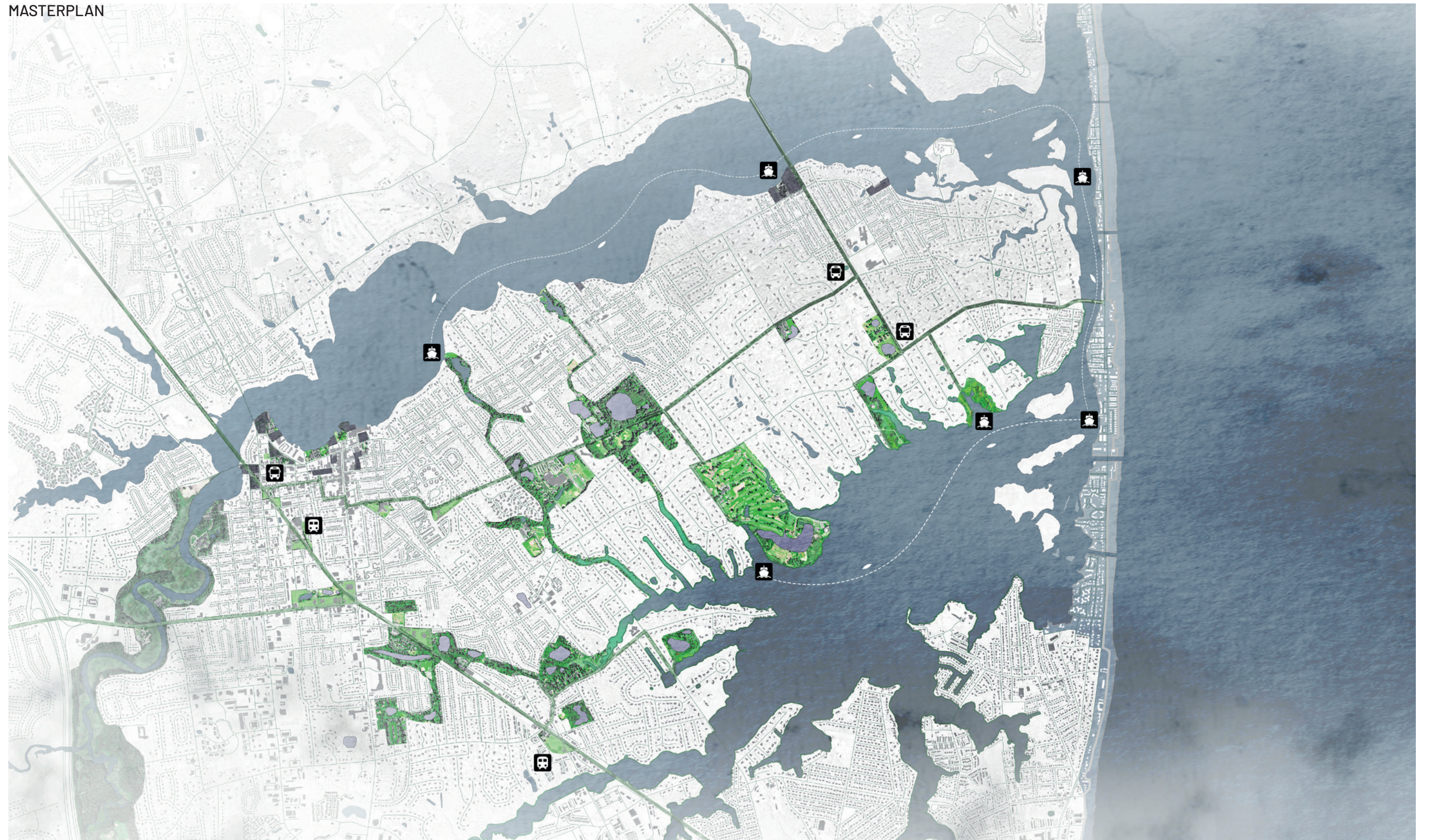


CONTEXT



Video Link





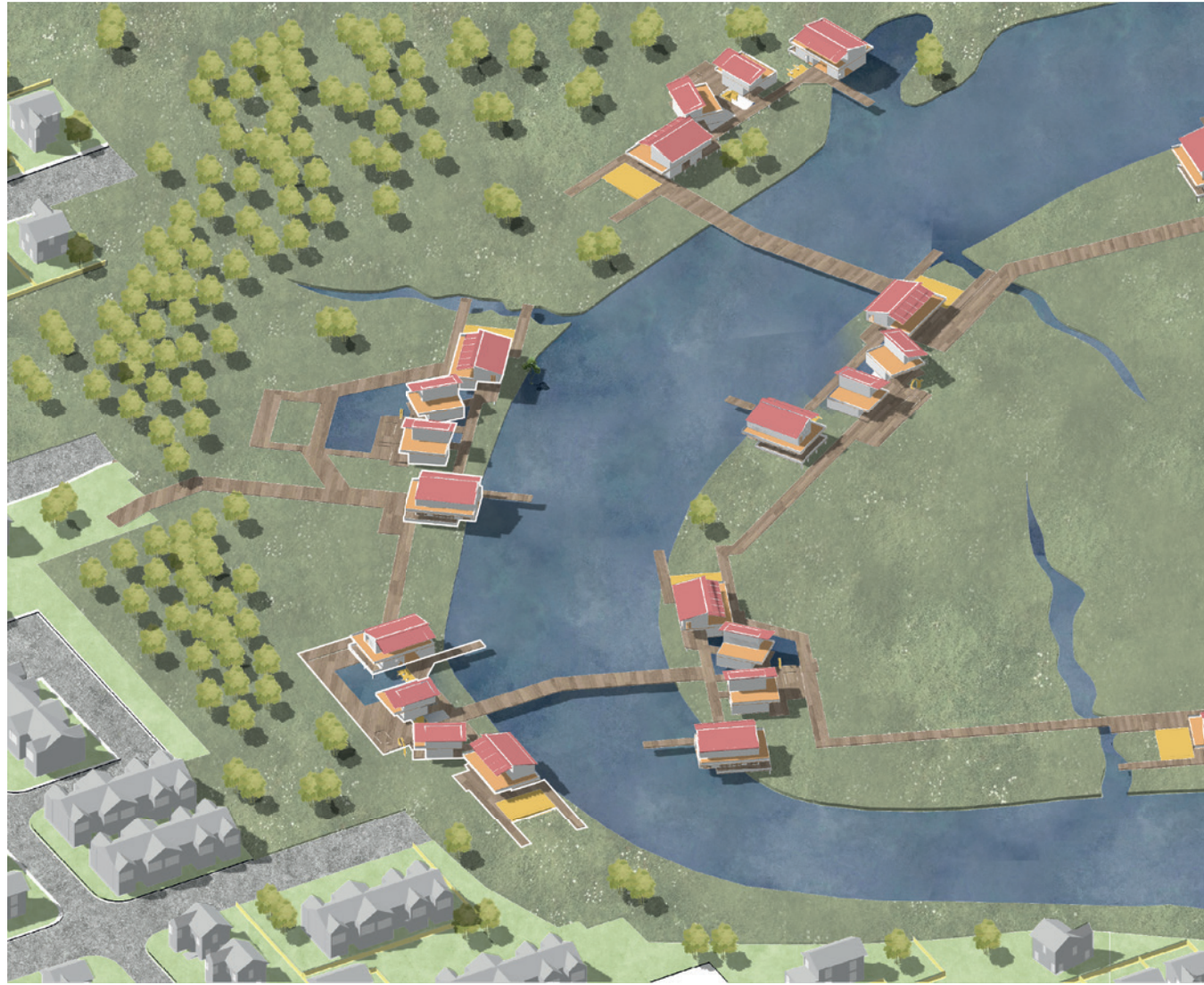
SEA BRIGHT



RED BANK



SWIMMING RIVER



RED BANK



SWIMMING RIVER



The Bale Trail:

Growing the future of the Region

LONG BRANCH TO COLTS NECK, NEW JERSEY

TEAM

- / Ayesha De Sousa
- / Juliana Leite Neri
- / Vanessa Gallego
- / Guoguo Chen

Looking beyond its summer-centricism, the region revealed the earth's rich agricultural potential, and the opportunity to use preserved farmland as a catalyst for new forms of development. We explored how locally grown straw can serve as a sustainable construction material, offering a carbon-negative alternative to conventional building systems.

The project also proposes a shared ADU system that incentivizes homeowners in the suburbs to build ADUs and open up backyards to longer grasses for shared harvesting, and supporting aging in place and strengthening long-term community ties. By integrating cultivation, construction, and education, the project envisions a model where agricultural practices not only shape the built environment but also engage and inspire younger generations.



LONG BRANCH

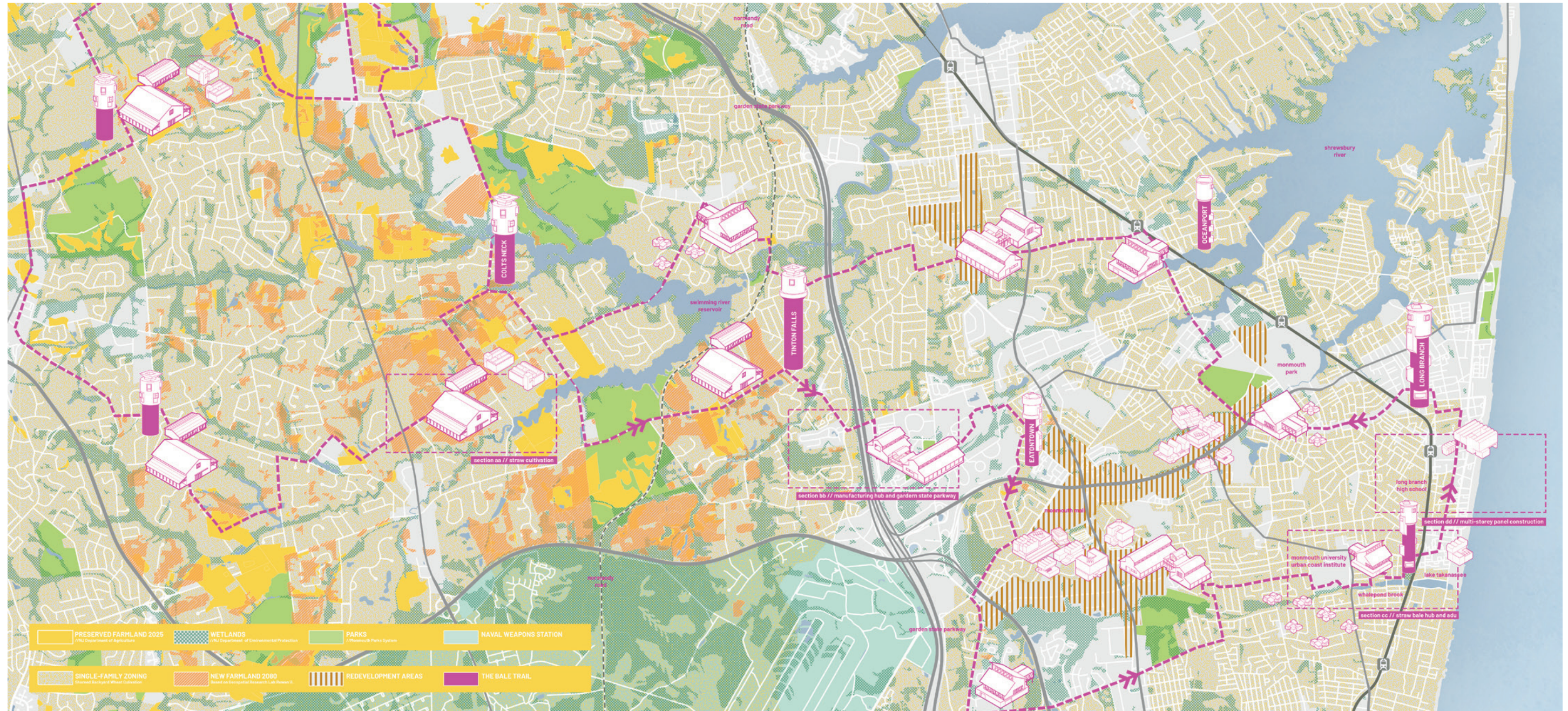


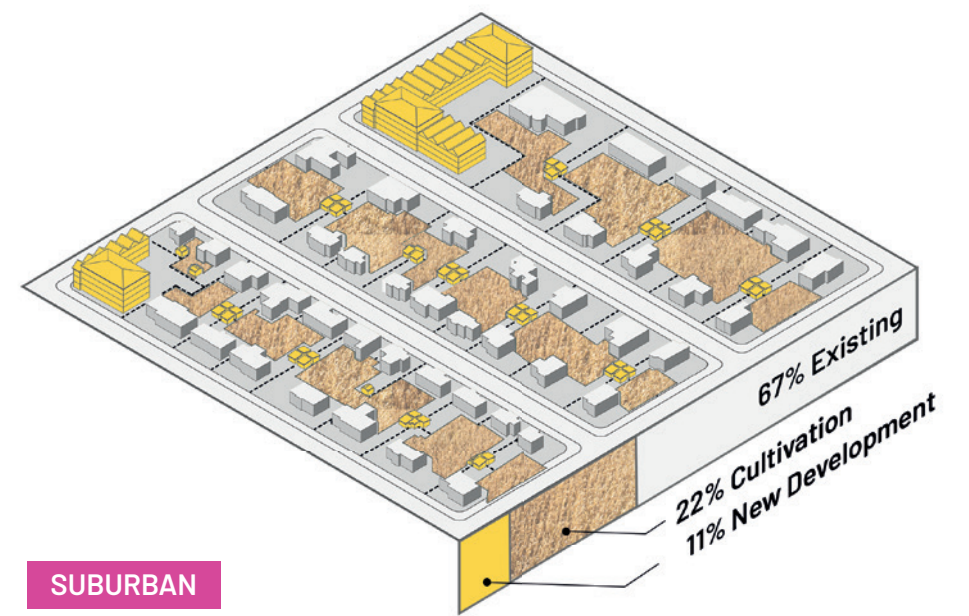
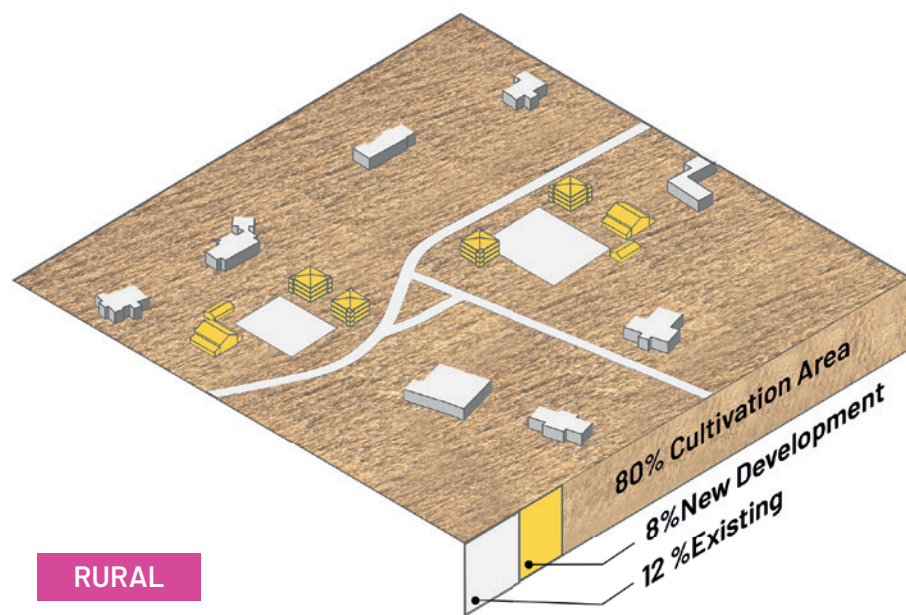
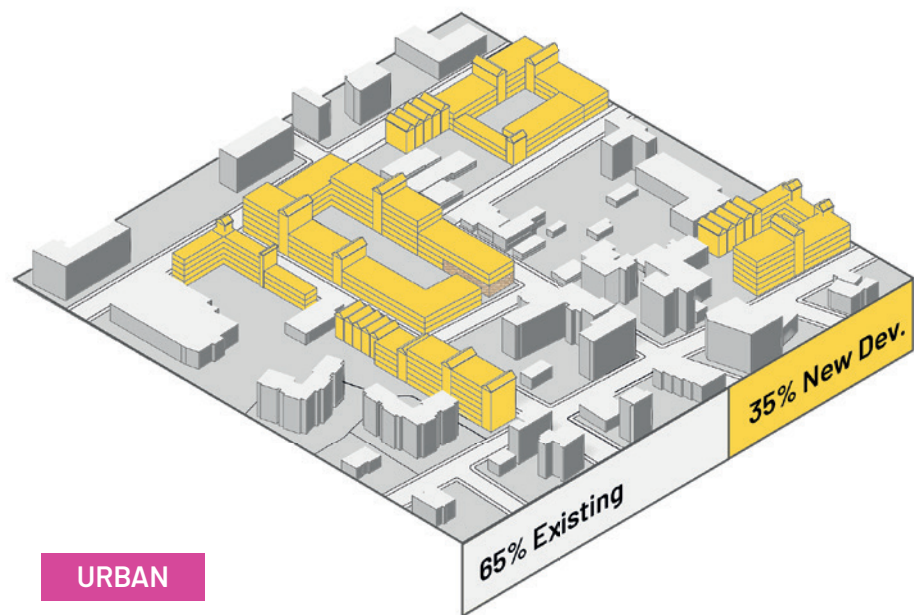
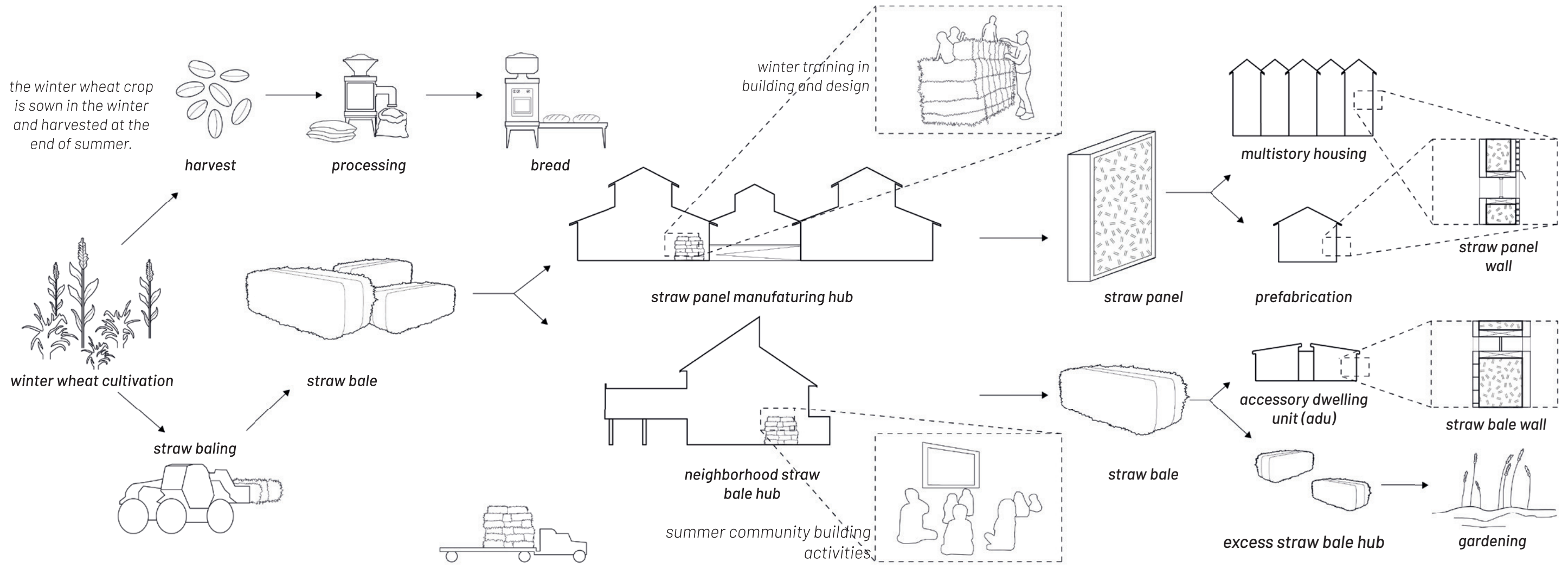
Video Link

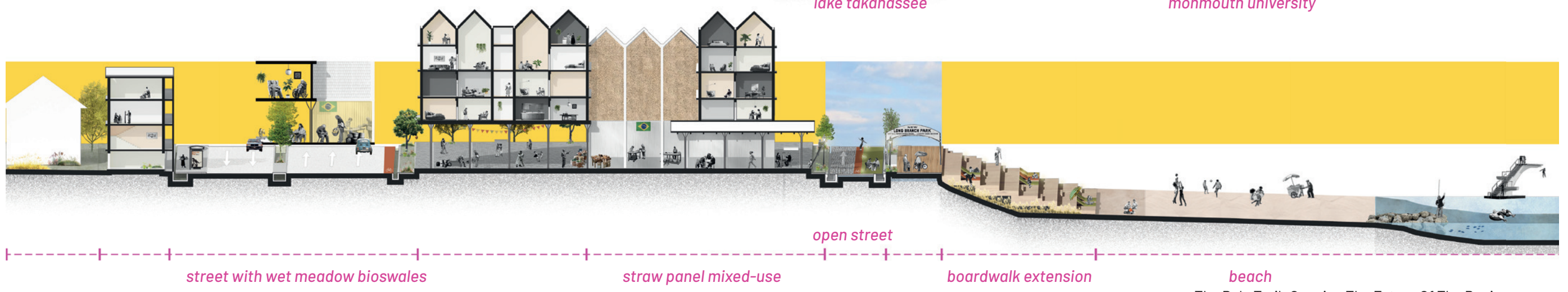
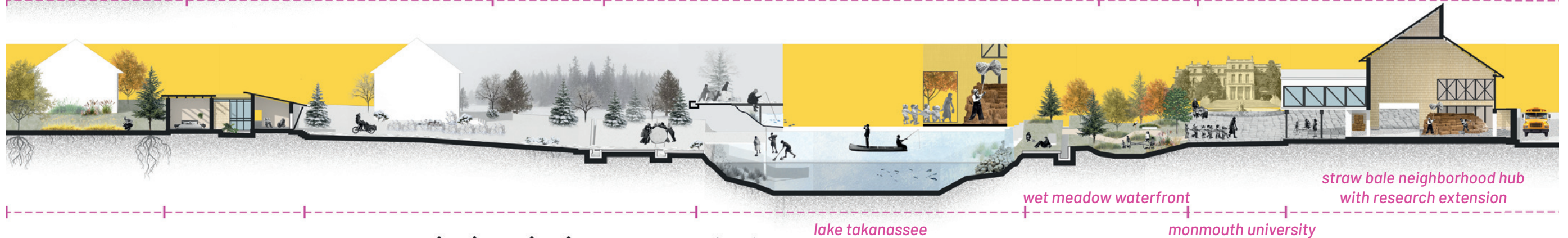


Design Principles:

- giving people visceral connections with ecology as a connective tissue across the transect
- allowing more opportunities for people to connect to each other and to place
- building knowledge around water systems, and build capacity in carbon negative growth
- expanding local and new economies to support equitable growth across the transect







Stewards of the Coast

ASBURY PARK - NWS WEAPONS STATION EARLE, NEW JERSEY

TEAM

- / Geethika Lakshmi T S
- / Nicole Quah
- / Junbo Chen
- / Zong Ping

The United States faces a critical problem of inadequate and unaffordable housing that disproportionately affects low-income families, people of color, and individuals experiencing homelessness. The escalating unaffordability of housing, particularly the "missing middle," has been the primary driver of the rapidly widening wealth gap and the disappearance of the middle class. Owning a home was once perceived as a bedrock of social mobility, the "American Dream," but now that goal is out of reach for most people in the United States, even professional double-salaried families. According to a recent survey, 82% of Gen Z believes homeownership is unattainable. The lack of affordable housing is endemic in both urban and rural areas. The United States currently lacks 3.8 million available and affordable housing units, and over 8 million extremely low-income households spend more than 50% of their income on housing, putting them at a high risk of housing instability and homelessness.



ASBURY PARK



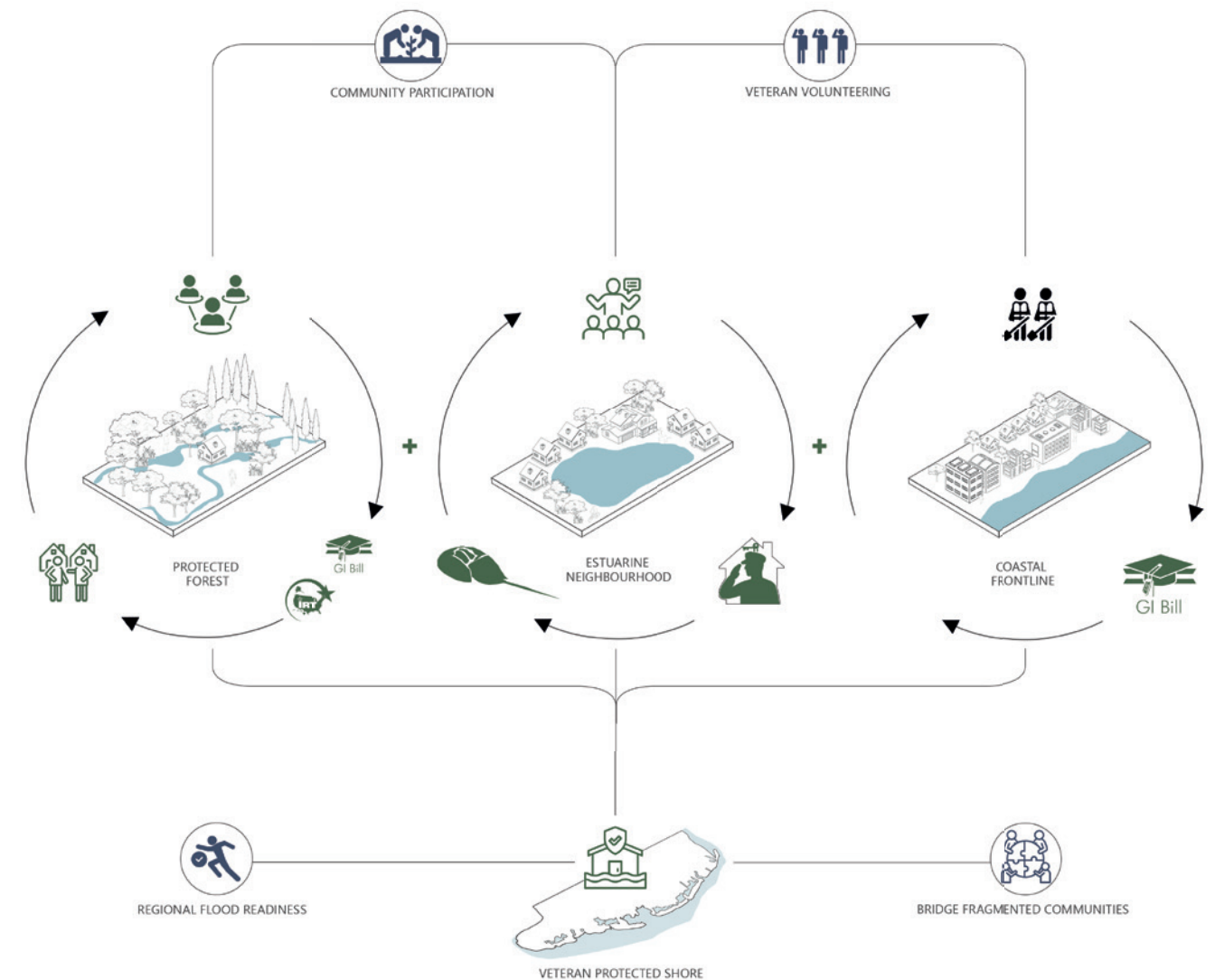
PROTECTED FORESTS NEAR NWS WEAPONS STATION EARLE



RESIDENTIAL TOWNSHIPS SURROUNDING SHARK RIVER



COMMERCIAL WATERFRONT ALONG ATLANTIC OCEAN



Video Link





VETERAN POPULATION

MONMOUTH COUNTY



This transect from Asbury Park to Naval Weapons Station Earle maps the overlap between projected FEMA 2050 flood risk and the concentration of veteran populations along Monmouth County's coast. Within this vulnerable corridor, four key actors guide the project's framework: historic ammunition bunkers, the Asbury Park boardwalk as an economic and cultural edge, retired veteran volunteers, and horseshoe crabs whose spawning cycles anchor the region's ecological health.

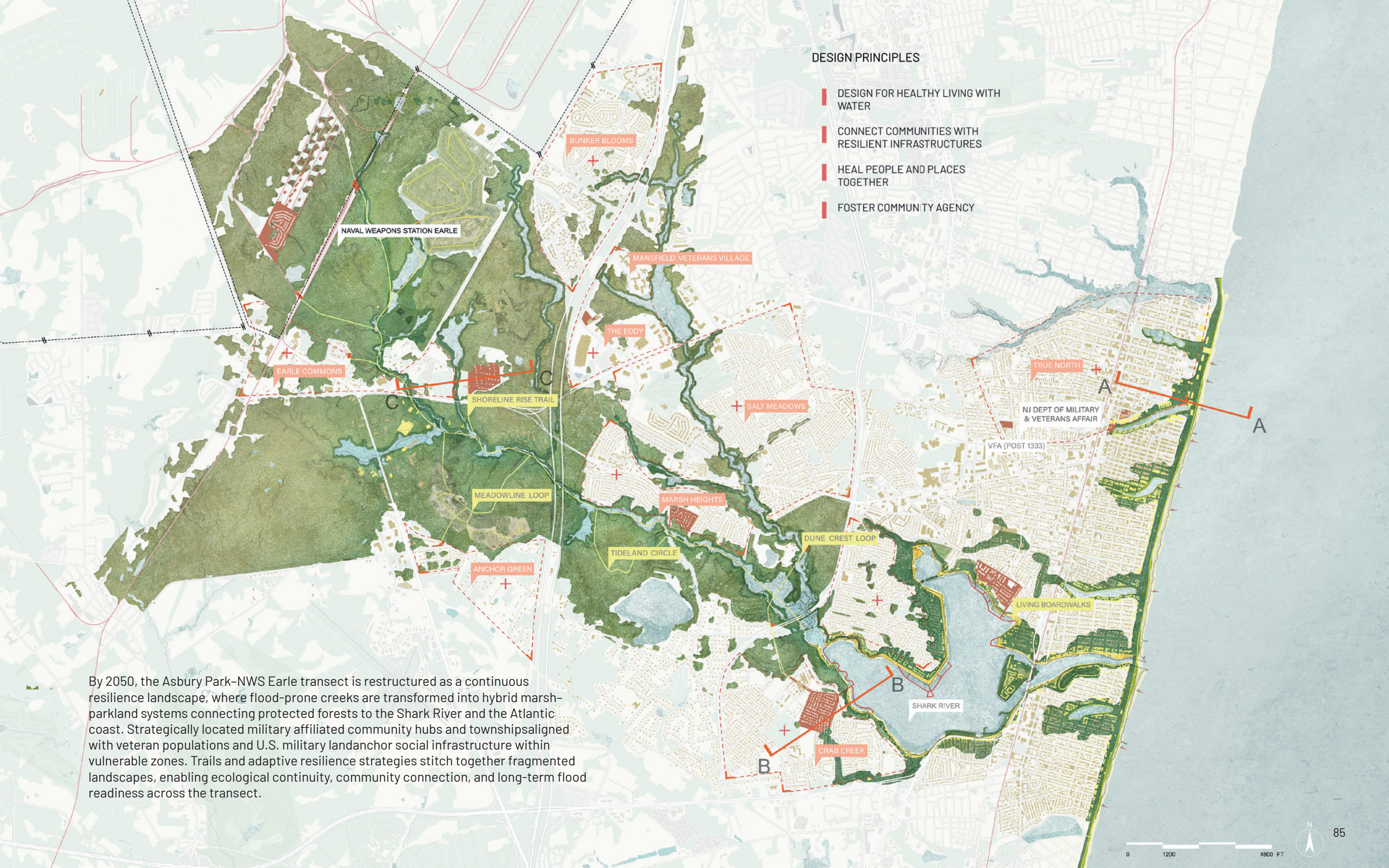


Today, many of these veterans face new pressures such as rising housing costs, limited local job opportunities, and increasing climate risk. Through maintaining living shorelines, adapting boardwalk infrastructure, and activating community hubs, veteran stewardship becomes both a pathway to local employment and a mechanism for strengthening ecological resilience and social cohesion across the Jersey Shore.



DESIGN PRINCIPLES

- DESIGN FOR HEALTHY LIVING WITH WATER
- CONNECT COMMUNITIES WITH RESILIENT INFRASTRUCTURES
- HEAL PEOPLE AND PLACES TOGETHER
- FOSTER COMMUNITY AGENCY



By 2050, the Asbury Park-NWS Earle transect is restructured as a continuous resilience landscape, where flood-prone creeks are transformed into hybrid marsh-parkland systems connecting protected forests to the Shark River and the Atlantic coast. Strategically located military affiliated community hubs and townships aligned with veteran populations and U.S. military land anchor social infrastructure within vulnerable zones. Trails and adaptive resilience strategies stitch together fragmented landscapes, enabling ecological continuity, community connection, and long-term flood readiness across the transect.

PHASE 1 2030
FORTIFY THE COAST



PHASE 2A 2035
BUILD LIVING SHORELINES



PHASE 2B 2035
RESTORE INLETS



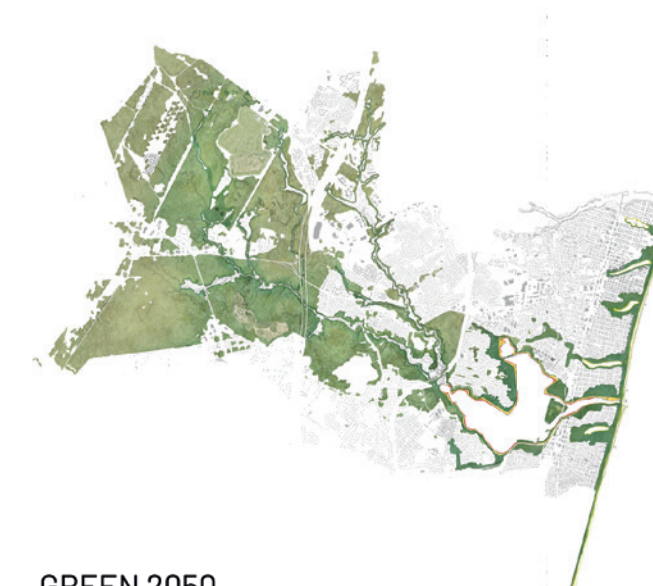
PHASE 3A 2050
CONNECT FRAGMENTED LANDS



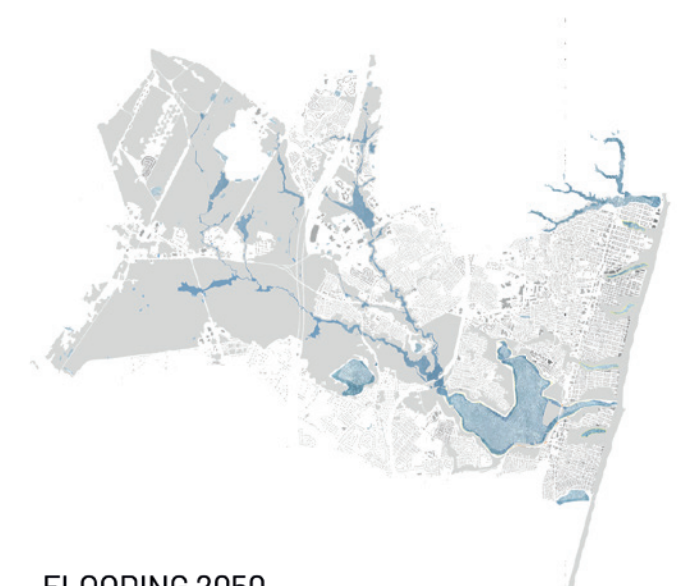
PHASE 3B 2050
ESTABLISH COMMUNITY HUBS



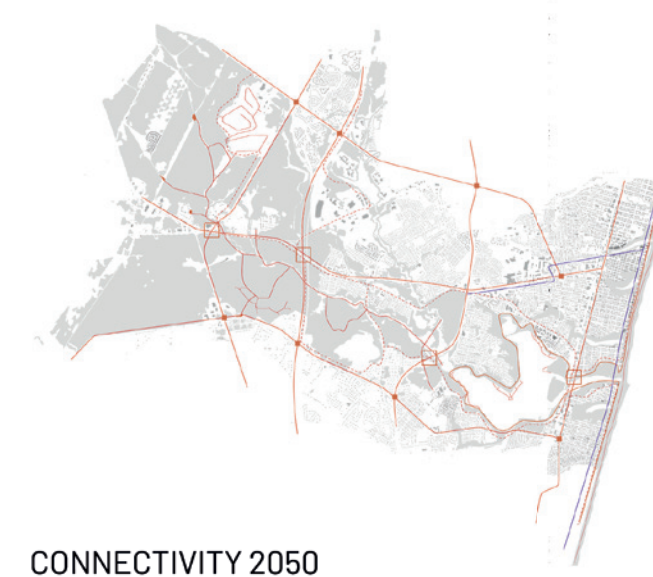
The transformation of the transect is illustrated through a series of phased plans. Beginning with coastal fortification, the project progresses toward restoring softer edges along inlets and ultimately establishing a network of community hubs, unfolding across key milestones in 2030, 2035, and 2050. Complementary diagrams overlay the final 2050 condition to reveal the expanded green landscape, emergent flood-driven streams and rivers, enhanced connectivity networks, and the strategic distribution of community hubs— together illustrating a coordinated ecological and social framework for long-term coastal resilience.



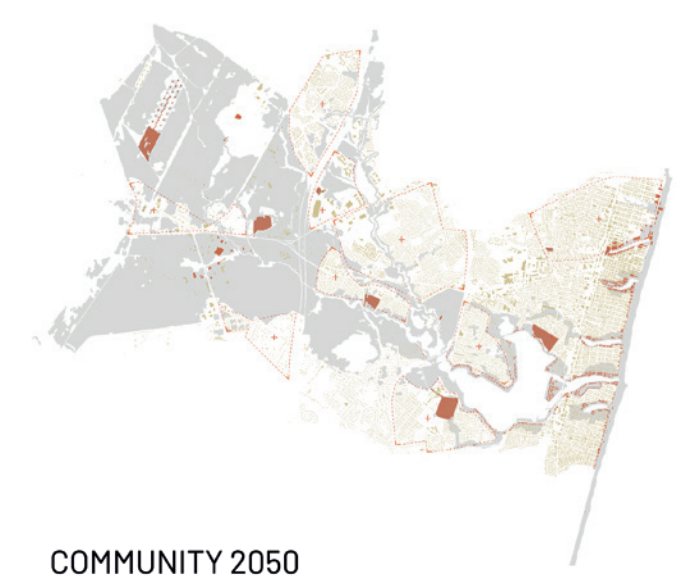
GREEN 2050



FLOODING 2050



CONNECTIVITY 2050



COMMUNITY 2050

Moving Riverward

POINT PLEASANT, BRICK, LAKEWOOD NEW JERSEY

TEAM

- / Gracia Ignatius
- / Jianing (Cecily) Tang
- / Yangjing Cheng
- / Vera Leon

For decades, the Metedeconk River has been treated as a forgotten backyard—polluted in Lakewood, privatized in Brick, and overburdened by commercial infrastructure and flood vulnerability in Point Pleasant—fracturing ecological systems and social ties.

This project proposes a fundamental reorientation, transforming the river into a shared public front door. Guided by principles of living waters, inclusive access, connective infrastructure, and place-based resilience, we dissolve hard boundaries between town and river, democratize the waterfront, and weave blue, green, and gray mobility networks. New mixed-income centers anchor growth, address housing and climate risk, and reconnect communities to their greatest natural asset.



POINT PLEASANT

BRICK - DENSIFIED CITY CENTER



LAKEWOOD - GREEN HIKING TRAIL



Video Link



MASTERPLAN



LAKEWOOD WATERFRONT



LAKEWOOD PLAZA



HIKING TRAIL



BRICK BOARDWALK



FLOATING HOUSES



YEAR-ROUND BOARDWALK



LIVING SHORELINE

Phase 1 (2030) addresses the immediate need for regional connectivity by activating a comprehensive multi-modal transportation system. Building upon this foundation.

Phase 2 (2040) anticipates population growth by developing a City Center in Brick and inaugurating ferry routes between Brick and Point Pleasant, solidifying the "Public Front Door."

Phase 3 (2050) is strategically timed to utilize the opportunity presented by a hypothetical major climate event (e.g., Hurricane Cecily) to implement large-scale resilience measures, including a resilient housing adaptation program, extensive dune restoration, and the activation of a riverfront boardwalk.

Phase 4 (2060) represents the full realization of the project, establishing a new commercial corridor and riverwalk in Brick, completing a hiking trail to Lakewood, and constructing the emblematic Brick Bridge Terminal, an infrastructural and affordable housing hub.

PHASE 1 - 2030



PHASE 2 - 2040



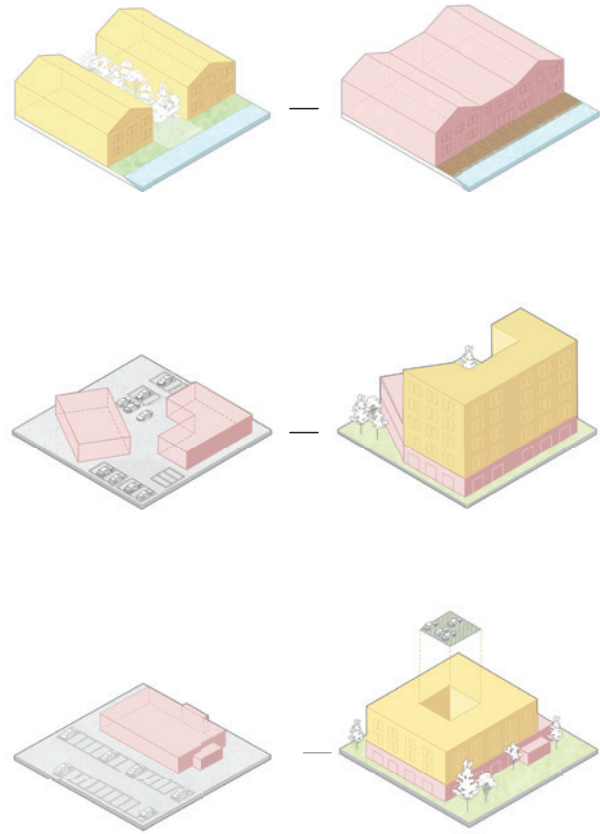
PHASE 3 - 2050



PHASE 4 - 2060



EXISTING TYPOLOGIES PROPOSED ADAPTATION



PRINCIPLES

Creating Fluid Boundaries & Living Waters: This principle centers on ecological restoration. By integrating local ecology and restoring the aquatic habitat, the design aims to revitalize the river's biological health, enhancing the overall resilience of the watershed ecosystem.

The Public Front Door: This addresses issues of accessibility and connectivity. The goal is to transform the waterfront from a neglected boundary into a shared, inclusive, and highly accessible public space.

Forge the Connecting Spine: This is an infrastructural imperative focused on regional integration. By weaving the three municipalities together through a comprehensive multi-modal transportation network, the project aims to create a central connecting spine.

Cultivate Place-Based Resilience: This principle focuses on socio-economic durability. It seeks to celebrate and highlight the distinct local cultures and communities within each town while simultaneously addressing critical regional needs, most notably the persistent demand for diverse and affordable housing options.

POINT PLEASANT COMMERCIAL CORRIDOR



POINT PLEASANT TRANSIT - ORIENTED DEVELOPMENT



POINT PLEASANT RAISED DUNE SECTION



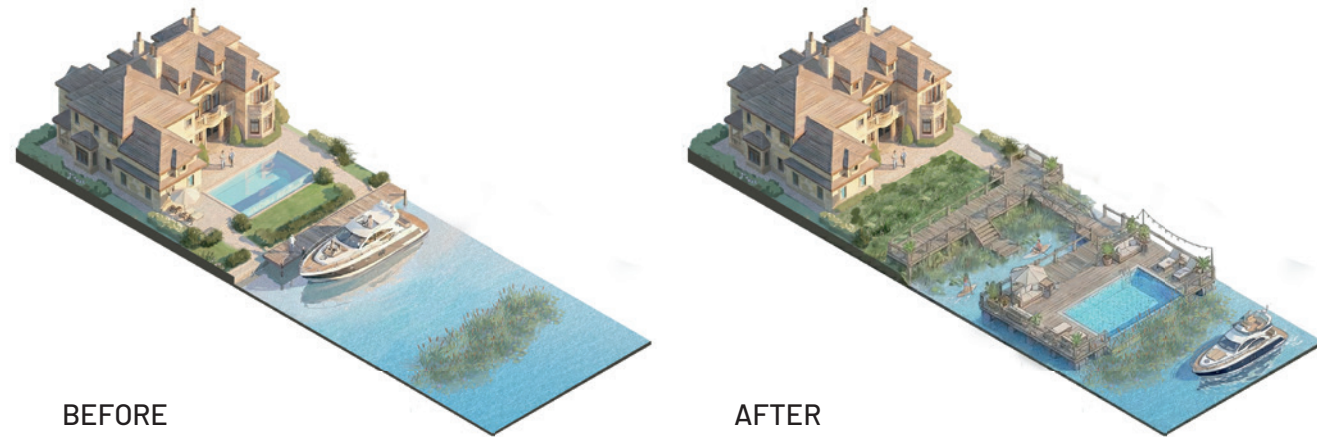
BRICK COMMUNAL BOARDWALK SECTION



BRICK CITY CENTER & BRIDGE SECTION



BRICK NEIGHBORHOOD - SHARED BOARDWALK & FACILITIES



BEFORE

AFTER

Here, instead of each household maintaining its own private swimming pool—which pushes backyards away from ecological resilience and diminishes the vitality of the riverfront—we propose a system of shared boardwalks and floating water-based facilities. This approach allows the land to remain ecologically productive while creating an open, collective riverfront where people can share leisure and everyday enjoyment together.

At the same time, this vision opens up new opportunities for the many families in the area who already own yachts. We imagine using yachts as a form of water-based mobility to replace part of the existing Uber traffic, easing pressure on roads while fostering a way of life that is more closely intertwined with ecology, water, and the riverfront itself.



FERRY TERMINAL



POINT PLEASANT BLUE CRAB & OYSTER



Searching for New Resilient Landscapes of Joy

TOMS RIVER, NEW JERSEY

TEAM

/ Jennie J. Zhou
 / Yuchen Zhang
 / Atharv Bhole
 / Tianyi Dai

Seaside Heights is a popular coastal destination known both for its vibrant boardwalk and its nightlife scene as documented in MTV's iconic reality show, Jersey Shore. Yet beneath this familiar image lies a region increasingly defined by vulnerability, from rising seas to intensifying storms. Together with Toms River, the neighboring township across the Barnegat Bay, the two form a landscape shaped by intersecting forces: seasonal tourism, party, suburban expansion, and coastal flood risks.

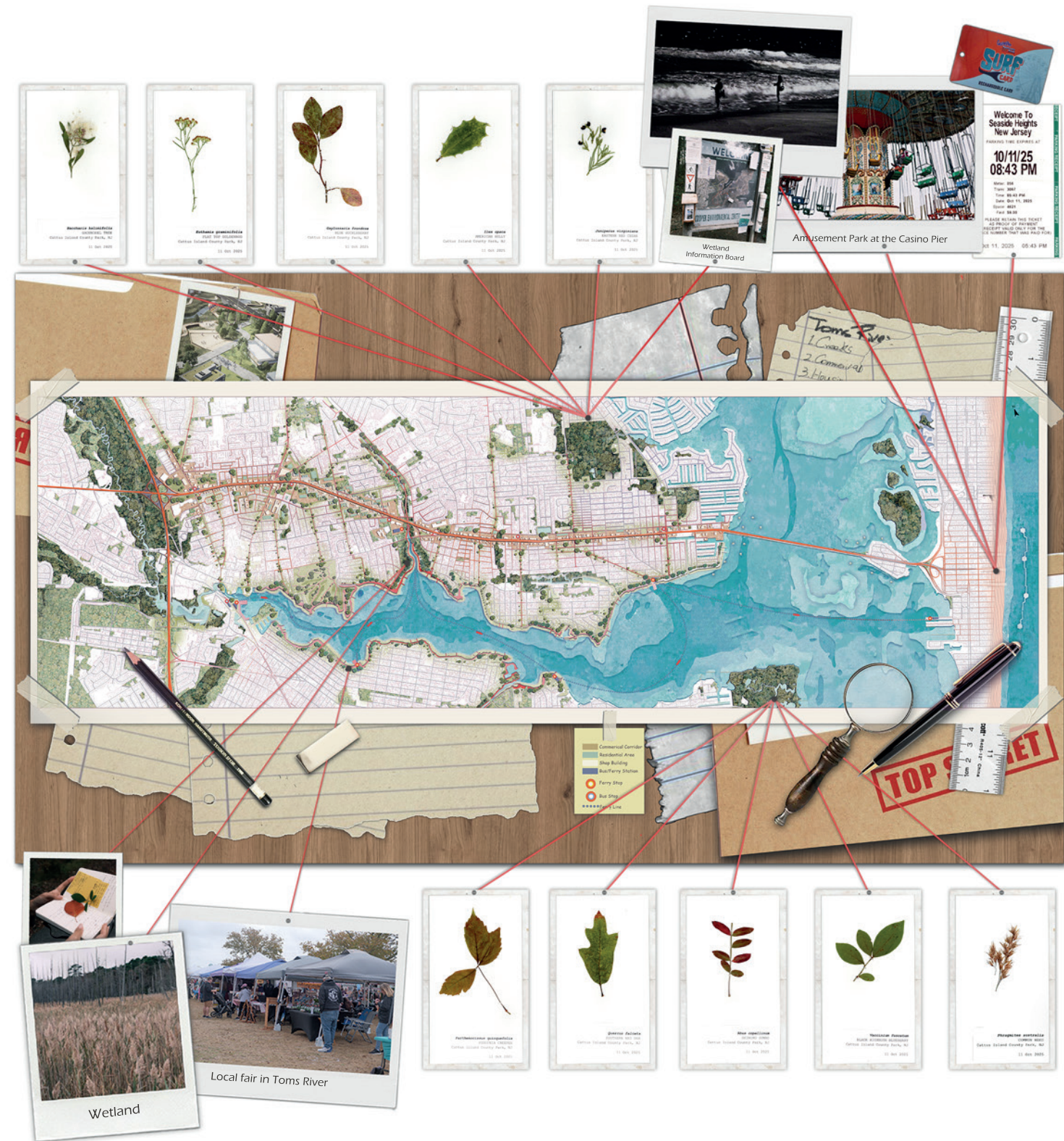
This project investigates how joy, play, and resilience can coexist across Seaside Heights and Toms River. By viewing the region as a landscape of joy, the project reimagines how urban design and place-making can utilize our desires for fun to advance ecological resiliency and revive suburban towns.

The final design creates a distributed geography of playspaces that relieves tourism pressure on Seaside Heights by dispersing pockets of joy, while still honoring the party culture that the region embodies.



TOMS RIVER

Video Link





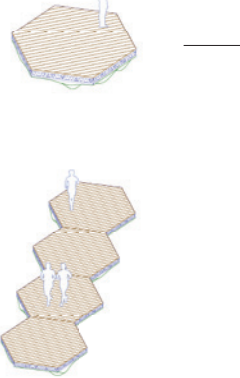
REIMAGINED PLAYScape OF SEASIDE HEIGHTS



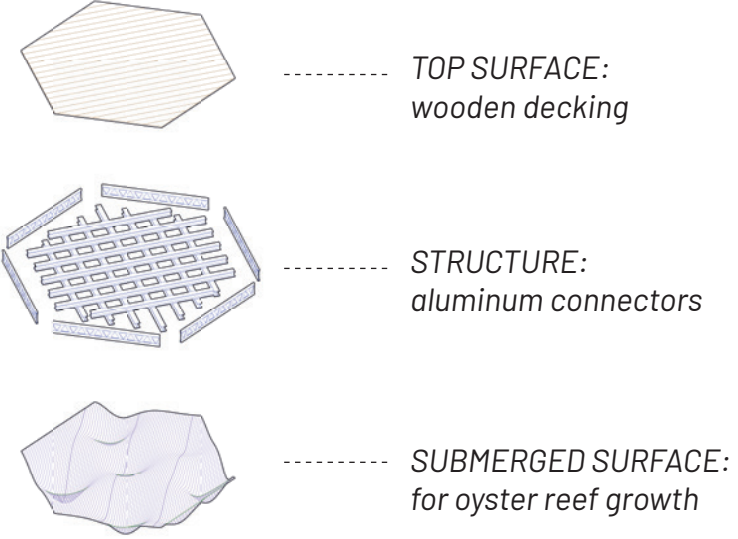
MULTI-USE TUNNEL running through natural sand dune:

- DAYTIME: direct access to the elevated Seaside Heights boardwalk, amusement park, and beach.
- NIGHTTIME: event and party space for concerts and raves.

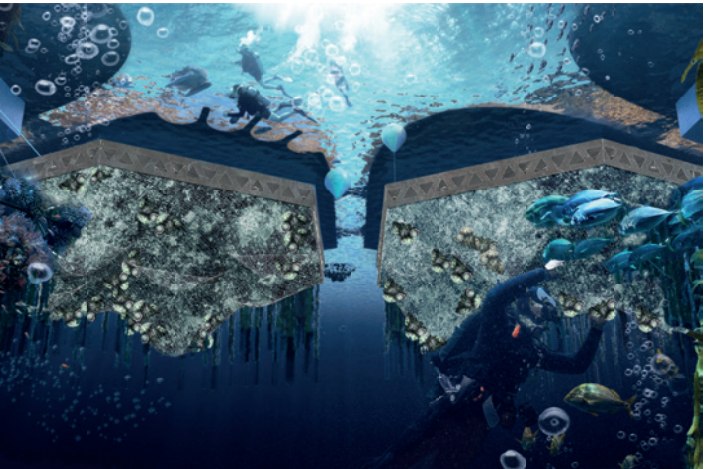
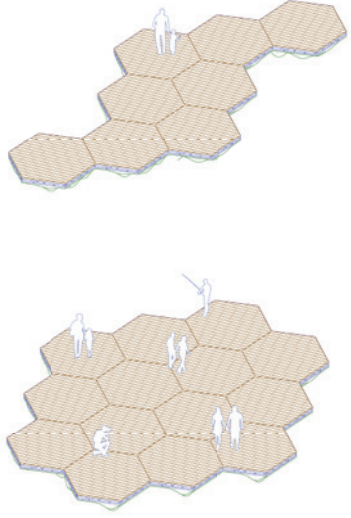
WAVE ATTENUATOR CONFIGURATIONS



MODULAR ATTENUATOR DESIGN

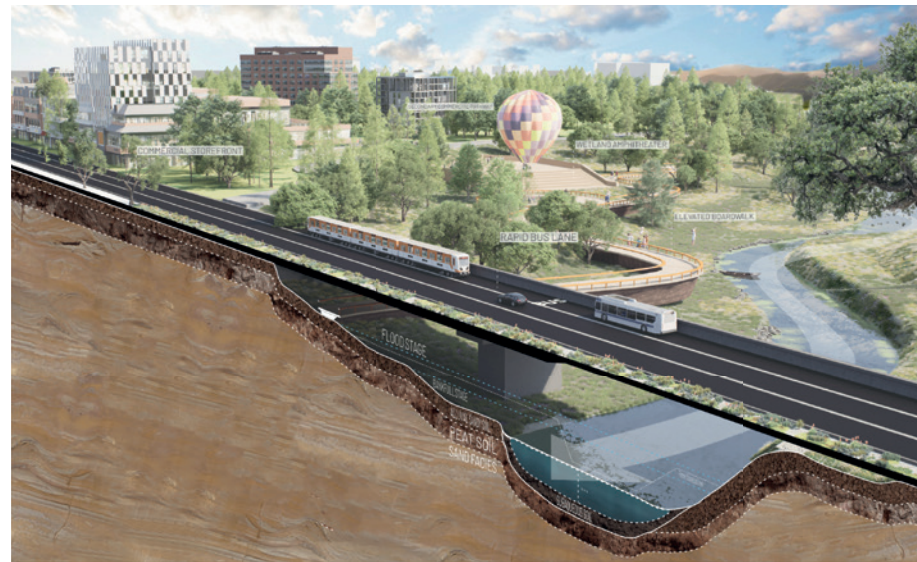
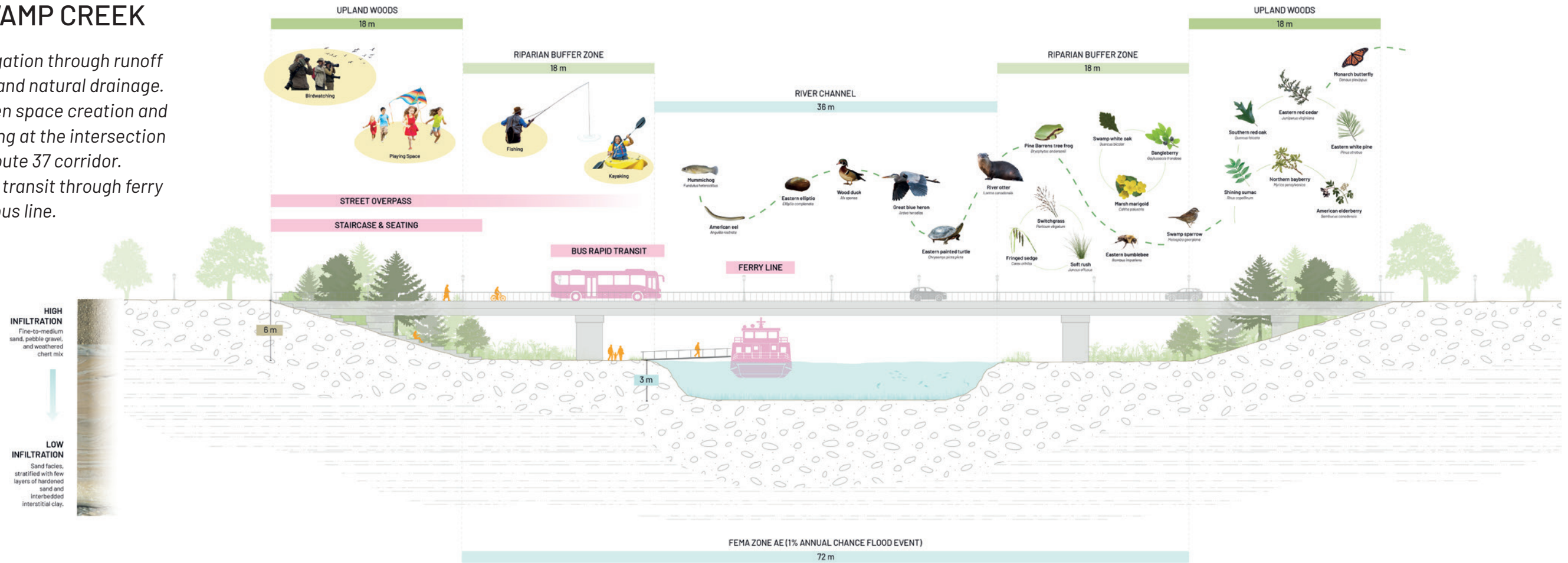


ACTIVATING THE THOMAS A. MATHIS BRIDGE AS A FLOATING PARTY



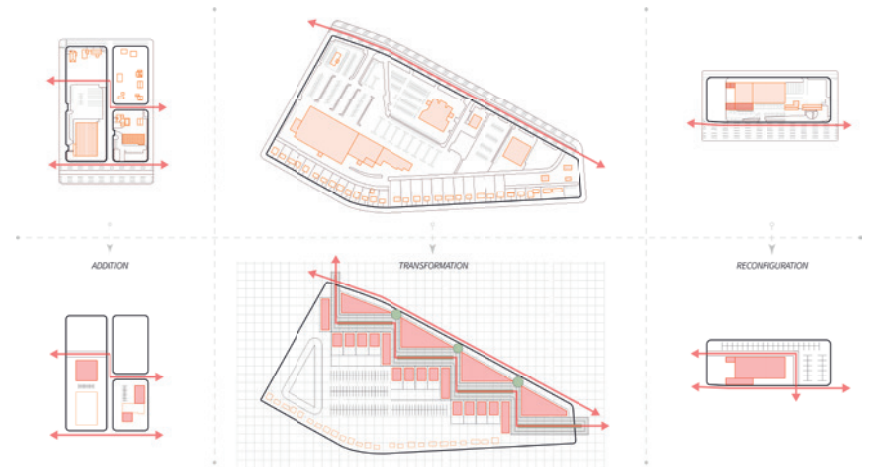
DAYLIGHTING THE LONG SWAMP CREEK

- Flood mitigation through runoff collection and natural drainage.
- Public green space creation and placemaking at the intersection with the Route 37 corridor.
- Diversified transit through ferry and rapid bus line.



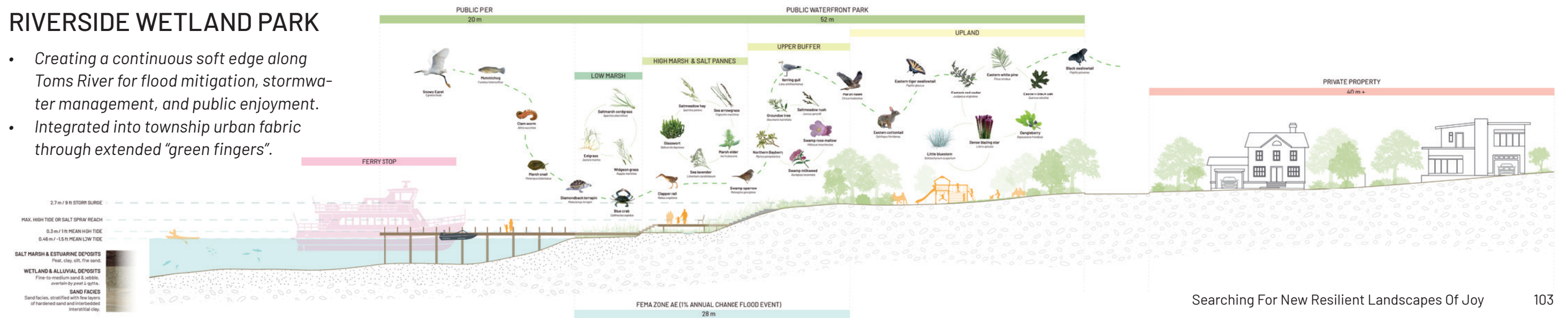
ROUTE 37 COMMERCIAL AND TRANSIT CORRIDOR

SUBURBAN BLOCK TYPOLOGY TRANSFORMATIONS



RIVERSIDE WETLAND PARK

- Creating a continuous soft edge along Toms River for flood mitigation, stormwater management, and public enjoyment.
- Integrated into township urban fabric through extended "green fingers".



The Hearth Barren

PINE BARRENS, NEW JERSEY

TEAM

/ Eric Lin
/ Xire Sangpei
/ Inhoo Seo
/ Megan Chen

The Pine Barrens is a unique ecosystem nested in the heart of New Jersey. The local piney people have lived in the area for years, developing a unique culture and economy dependent on the ecology. Towards the coast, baypeople thrive cultivating oysters and navigating the streams of water. Once believed as separate communities, pineys and baypeople are one of the same, migrating across the landscape and the seasons.

By 2050, a naturally forming coastal inlet begins to reshape the shoreline. Our proposal embraces it, leveraging the inlet to improve tidal flushing and establish a new ecological exchange corridor between the bay and the forested interior. The future of the Pine Barrens will be determined by its ability to adapt to accelerating environmental pressures of sea-level rise, fire risk, habitat fragmentation, and growing warehouse development along the highway.

The Hearth Barren envisions a future of reconnected ecologies, productive infrastructures, and adaptive settlement patterns that transforms the Pine Barrens into a regenerative landscape while continuing to sustain the communities that depend on it. The proposal ultimately reframes the territory as a model for how coastal forests, working lands, and logistics regions can transition toward a climate-adaptive future without losing their cultural identity or ecological depth.



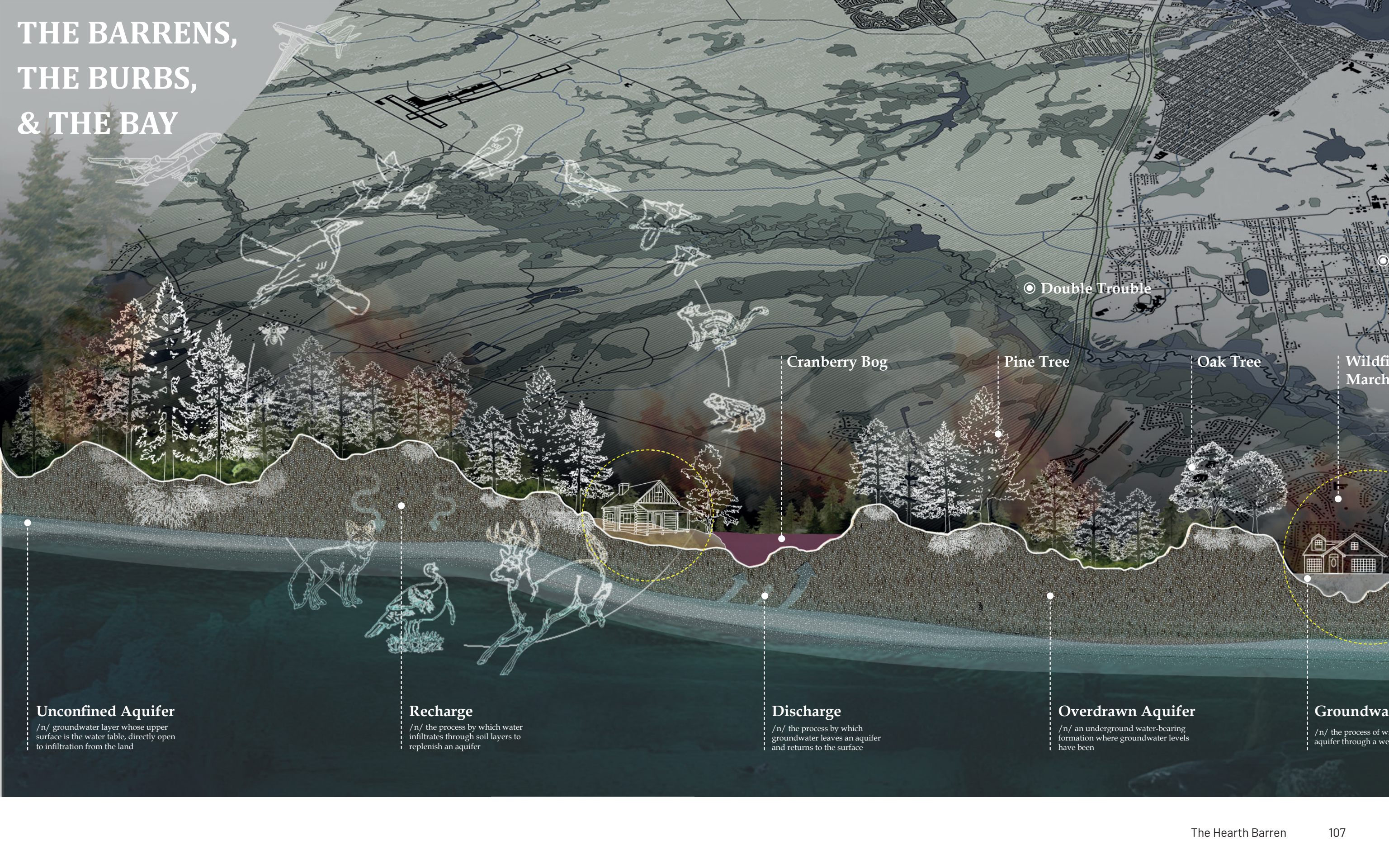
PINE BARRENS



Video Link



THE BARRENS, THE BURBS, & THE BAY



● Double Trouble

Cranberry Bog

Pine Tree

Oak Tree

Wildfire
March

Unconfined Aquifer

/n/ groundwater layer whose upper surface is the water table, directly open to infiltration from the land

Recharge

/n/ the process by which water infiltrates through soil layers to replenish an aquifer

Discharge

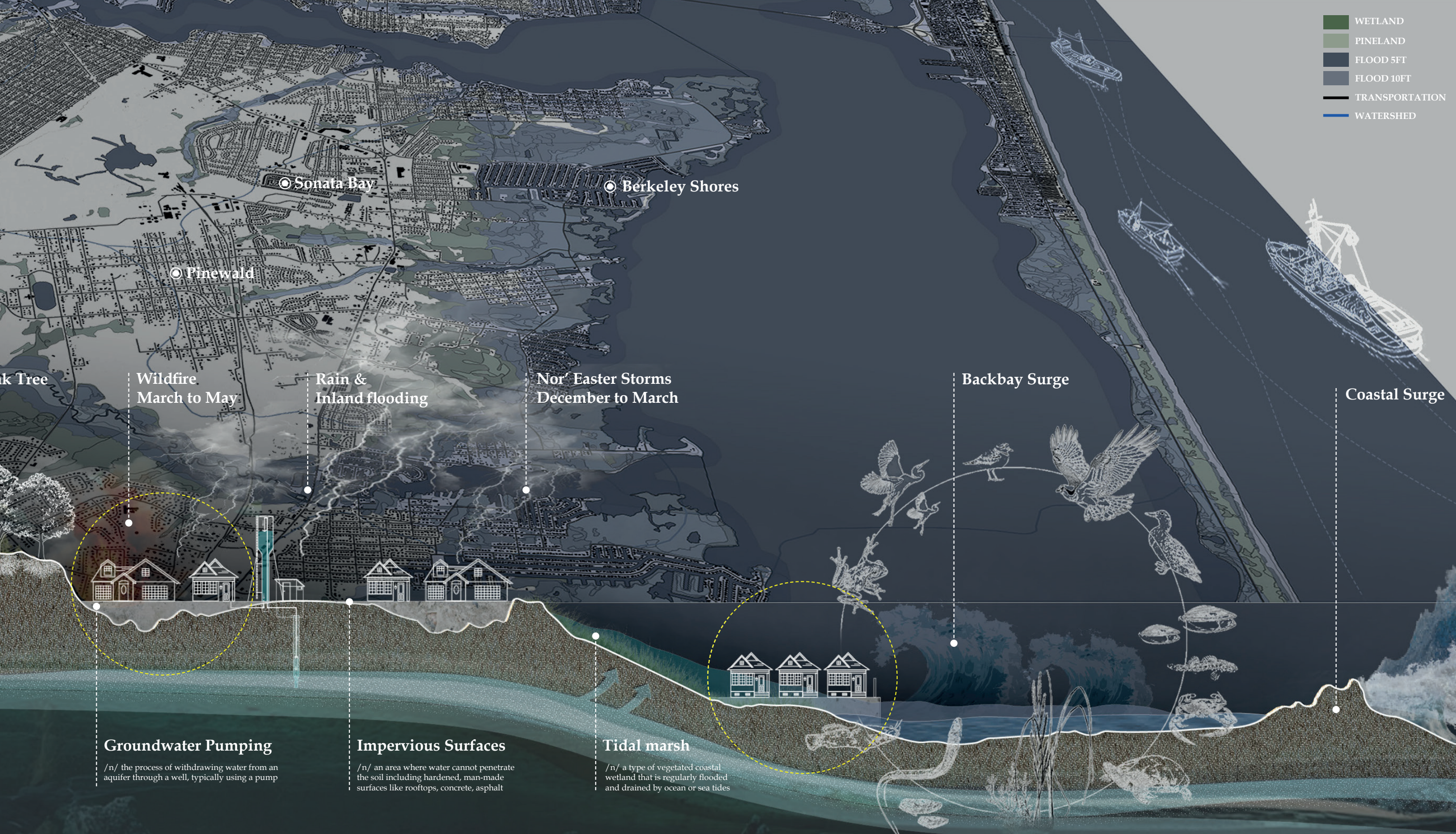
/n/ the process by which groundwater leaves an aquifer and returns to the surface

Overdrawn Aquifer

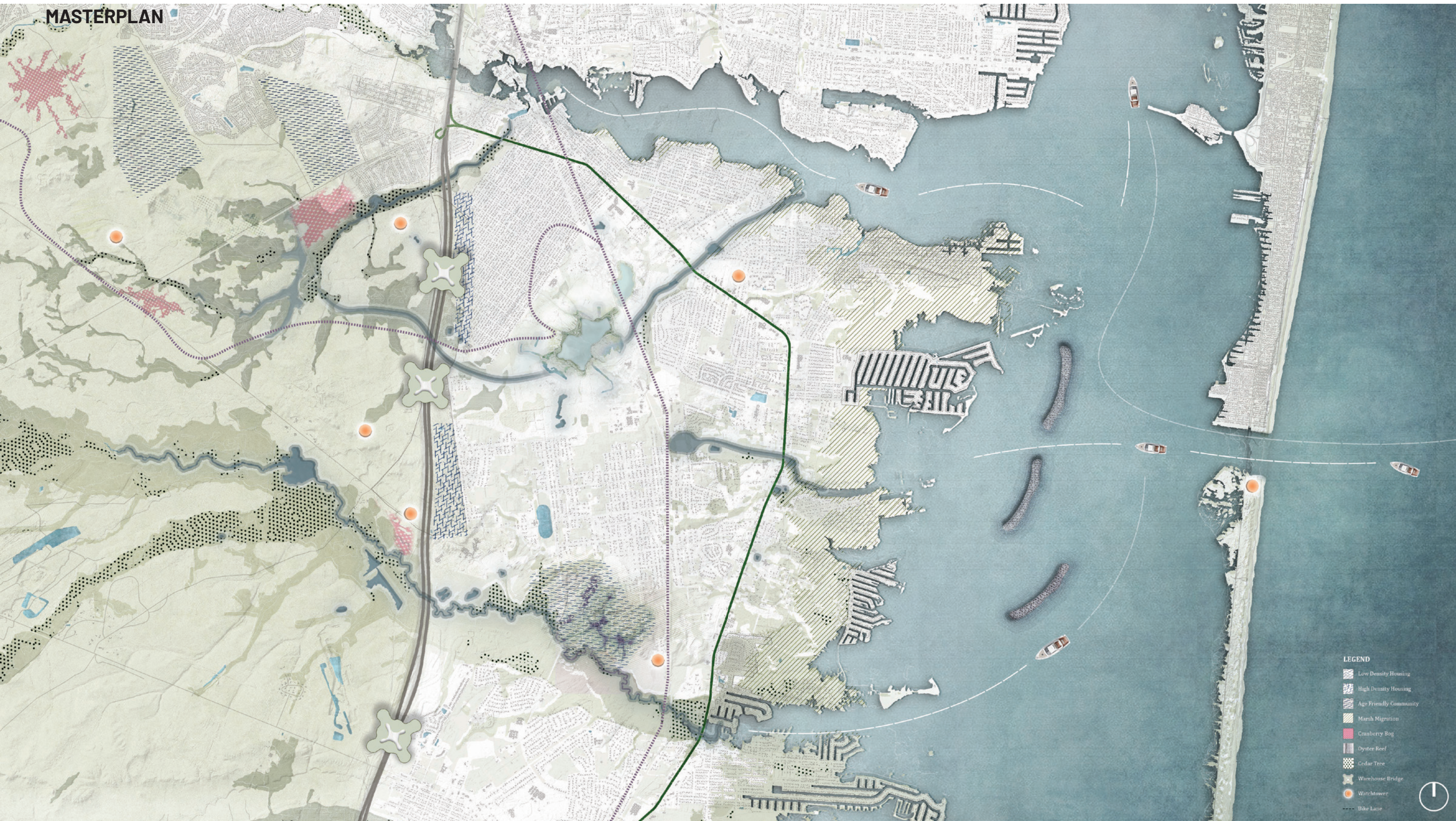
/n/ an underground water-bearing formation where groundwater levels have been

Groundwa

/n/ the process of w
aquifer through a we



MASTERPLAN



- LEGEND**
- Low Density Housing
 - High Density Housing
 - Age Friendly Community
 - Marsh Migration
 - Cranberry Bog
 - Dyster Reef
 - Cedar Tree
 - Warehouse Bridge
 - Watchtower
 - Dike Lane

MATERIAL CYCLE



PINLAND WATCHTOWER



CEDAR SWAMPS



WAREHOUSE BRIDGE



MARSH MIGRATING AND BAY

SECTION & PHASES



