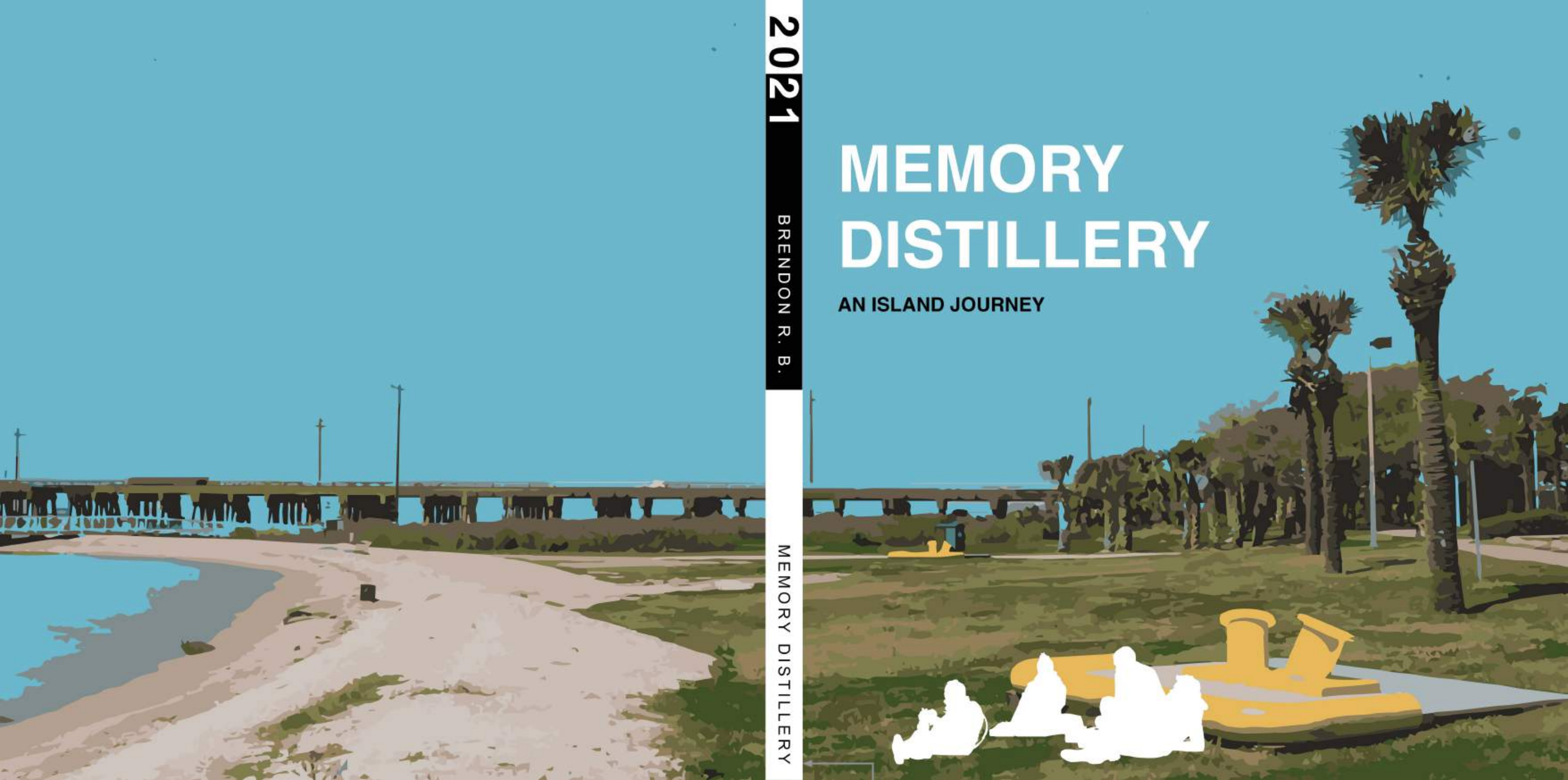
2021
BRENDON R. B.
MEMORY DISTILLERY
MEMORY DISTILLERY
AN ISLAND JOURNEY

For those who led me to this point, and
continue to push me to the next.

A special thanks to my parents, who made my
education, career, and life truly un-comparable.

"The purpose of the final project is to show a culmination of six years of architectural education" - Ray Holliday

Constrained with nothing more than two semesters, an historical preservation component, and something architecturally bound the final project began in the summer of 2021. Under the shadow of the COVID-19 pandemic, the final project is spent researching, refining, producing, and presenting an original question and idea. Not only did this project test me as a student, but as a professional and person in general. Starting from the humble beginnings of re-purposing a movie theater in Galveston Texas, this book summarizes a majority of the work that was completed in an attempt to help illustrate a simple idea of using memory as a tool to educate, preserve, and change human perspectives of climate change.

Can we understand the memory of a place not by what remains, but what has changed over time?

- THESIS

PROLOGUE

Although the project started on a much different chord, the following collection of evidence shown leads to an open-case investigation, the crime: Human impacted climate change. In an attempt to respond to the growing beat of the oil industry a drastic stance had to be taken. To not only halt the continued effects of industry in a particular area, but the ignition of catalysts for change; heritage, ecology, and tourism in the digital age.

Throughout the course of this project, there are a series of QR codes that should be scanned to explore digital compilations of research, data, and images that help to better explain all aspects of the project. The book composed encourages readers to utilize digital formats whenever possible. All content produced is available in a digital, open-source format, and can be retrieved via contacting me at brendon.bangert@gmail.com.

SCAN ME

ARTSTATION PROJECT POST

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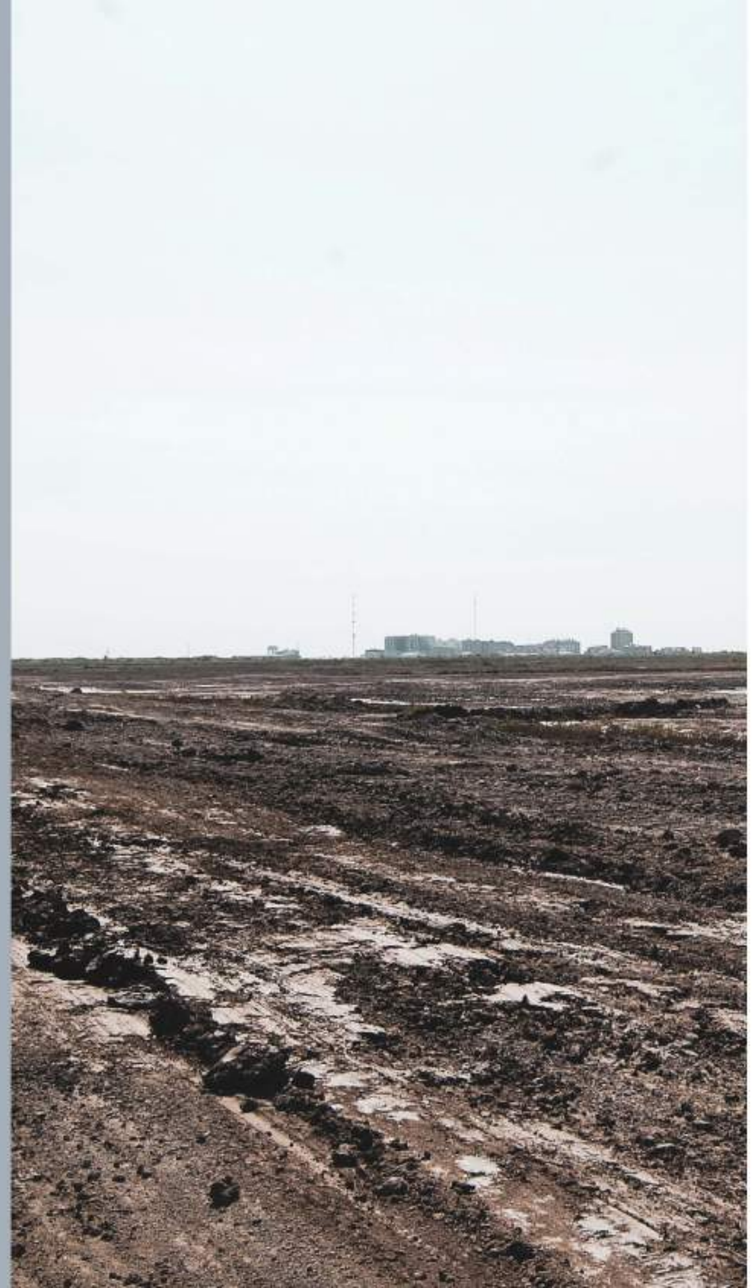

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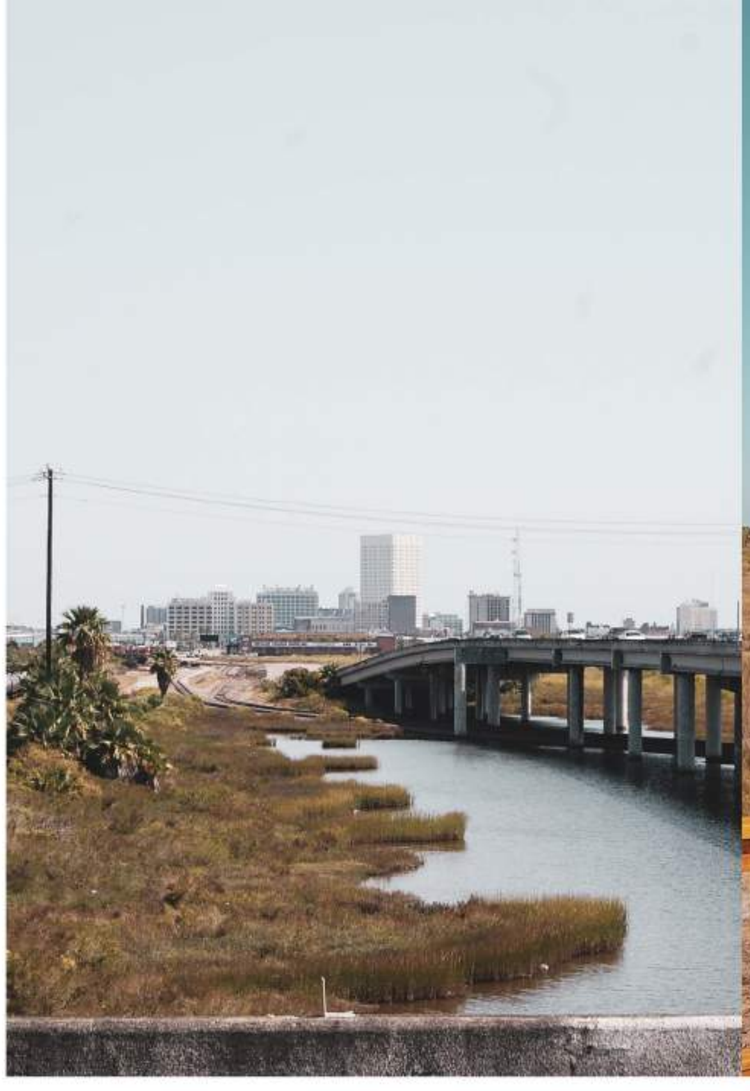
Catherine C. Lavoie
Stacy Alaimo
JF Johnson

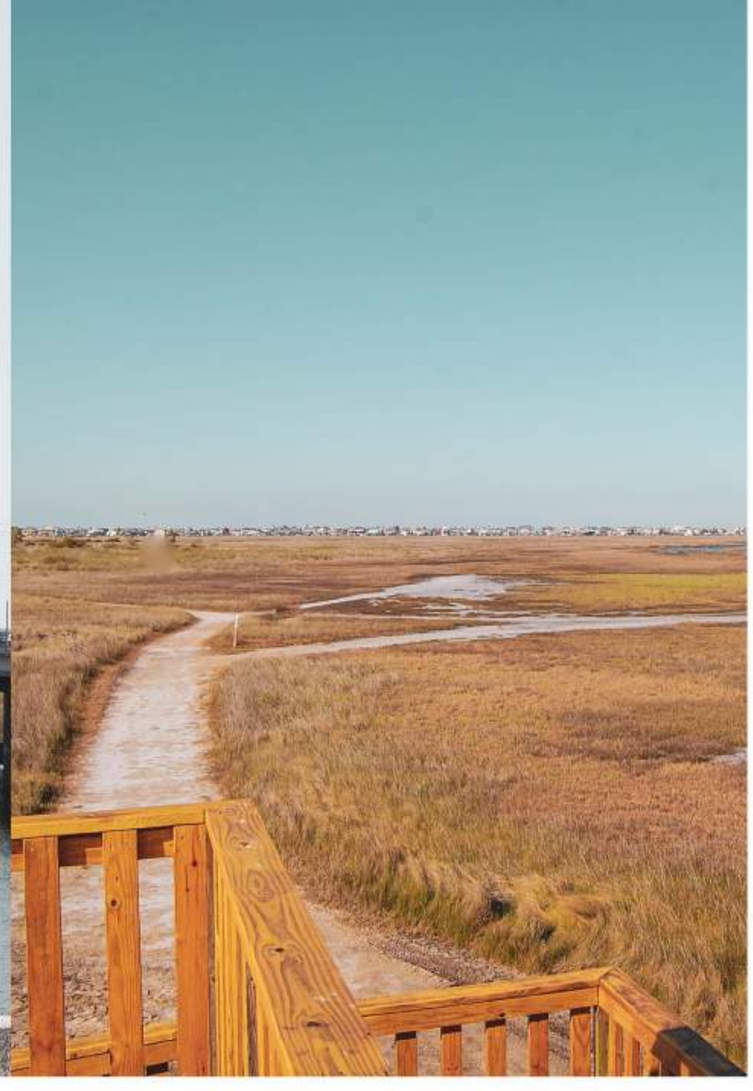
Can we understand the memory of a place not by what remains but what has changed over time? When beginning the final project, the thesis was derived from general interests in adaptive reuse, visualization, and historic preservation. Although the final presented response embodies these interests, they remain supplementary to the overall goal of the project.

The thesis question, serving as an ambitious backdrop, came from asking a bigger question: how can we use design as a tool to address the growing scars of climate change? The issue of climate change was originally approached, under a global lens, and left very little opportunity for a specific area of research. Until providing specific aspects of climate change to address, the project waded on varying locations in an attempt to narrow down research venues.

Through combining the interests of visualization, historicpreservation,nature,andmaritimearchitecture Galveston Texas was selected as a location for where the project was to reside. After declaring the location of the project, the thesis was revisited, under the specificity of Galveston, with a focus on the preceding interests, and the umbrella of climate change.

With the ideas laid out, research proceeded in the Summer of 2020 and resulted in focuses being drawing to ecology, memory, tourism, heritage, and historic preservation. Once the Committee was finalized, a project methodology was introduced as a way to recognize future architectural engagement. With the methodology being that of cartography, research was visualized into maps that directly associate with cultural, historical, and governmental pre-conditions present in Galveston.





By established existing conditions over the summers, coincidences began to formalize once maps, documents, and data were compared. Entering into the semester, the expectations for specificity fueled the project into a dilemma of introducing specificity without project clarity. As research progressed, the specific topics of heritage, ecology, and tourism began to serve as parameters for explaining the change in memory and space.

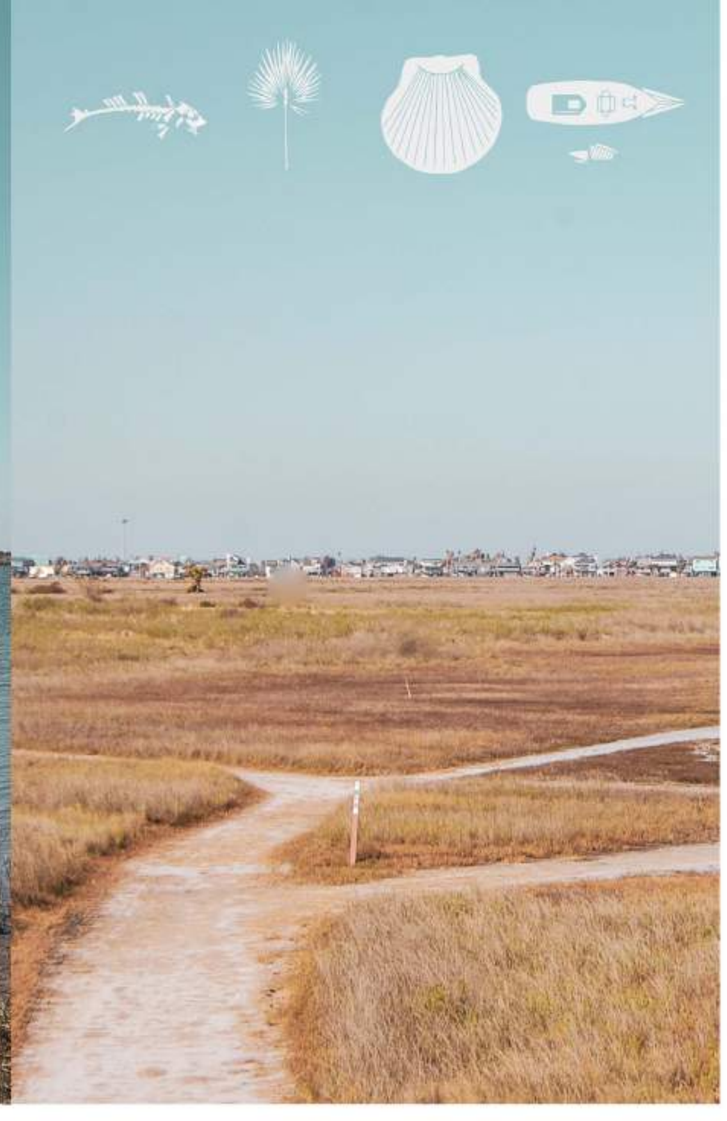
After continuing work on both illustrating and documenting research, specific sites were proposes as a way to catalyze an architectural response. Initially looking toward heritage at-risk locations such as the Martini Theater, McCrory 5 & Dime, and Seawolf Park there arrived a larger development in the project narrative, that being focus drawn to the landscape. As derived by the committee, the landscape offers more depth to understanding the memory of a place rather than a specific building, or 'site'.

In an attempt to understand the next steps in the project, larger 'plots' of land were identified and timelines created. After prompting a total of 15 different sites spread across Galveston, efforts were drawn back into the production of maps. Upon the completion of a series of demographic maps produced for central Galveston, a coincidence was realized,

Aside from Pelican Island hosting one of the biggest dredging sites in Houston Bay, it shows a rather muddied past. By switching focus towards Pelican island, a collection of historical maps were compiled to reveal how much 'memory' was really present. Upon further exploration, Pelican island showed a plethora of ownership changes, architectural antiquities, and the presence of a once large salt marsh. In addition to bearing witness to deadliness natural disaster in US history, Pelican island has increased in size by nearly 300% over the past 200 years. With such a resume of elements present, the 'memory of landscape' was specified to Pelican Island, an intention drawn in specificity, and more specific cartography. Producing the most specific set of maps, the history, ecology, and demographics of Pelican Island were transcribed, analyzed, and compared to idealize how engagement, and if engagement should occur.

SCAN ME

SITE VISIT PHOTO DUMP



With rising sea levels expected to be upwards of 10' over the next 100 years, the Texas coastline receives no exemption from being consumed by the Gulf of Mexico. As a result, flooding was addressed in the early stages of the project and led to the interest drawn climate change. Although Galveston suffers severely from the rise in water, Pelican Island found itself to be ½ submerged. Considering this, regardless of what architectural interventions made, flooding was more than liking going to be inevitable, as a result, a project stance issued: Sea-levels are going to continue to rise if drastic measures are not taken, as a result, industry needs to be halted, if not controlled.

By putting a halt to afflictions of climate change: the Oil-Rig repair station, industrial park, and dredging infrastructure supporting Pelican Island, cease to operate. Once their function is hated the large elements present on Pelican island enable for potential engagement. Posing positive human interaction with Pelican island, the aspects of heritage, ecology, and tourism were deployed as methods for how to engage with the Island. Because effects of climate change remain as undefined variables in the project all engagements made, were framed as scenarios for 'how things could occur' rather than 'how things do occur'.

Having the project framed as potential outcomes, creating a balancing act of specific elements and larger narratives. By having a series of maps as devices to produce design solutions, the project was refined into strategies for turning the entirety of Pelican Island into a Memory Distillery. A place where individuals go to experience the history of the island through, heritage scars, ecological observations, and tourism intentions.

By cultivating a series of responses the project provides templates for human intervention in places that have been tarnished by un-regulated industry. Templates that serve as a reminder of what could occur, if stances are not taken, but what can occur if they are.

The Galveston island maps presented were the first collection created in an attempt to understand Galveston as a whole. Utilizing primarily demographics as a tool to establish coincidences that occur when relating social, economic, and social data. Although these maps have shown support to larger project ideas, they serve as supplements to the scenario derived.

The barcode provided takes you, the reader, to a digital GIF that combines all maps listed below in timed sequence. It is heavily advised the maps shown be viewed in this format, as they all build upon one another rather than serving as independent statements.

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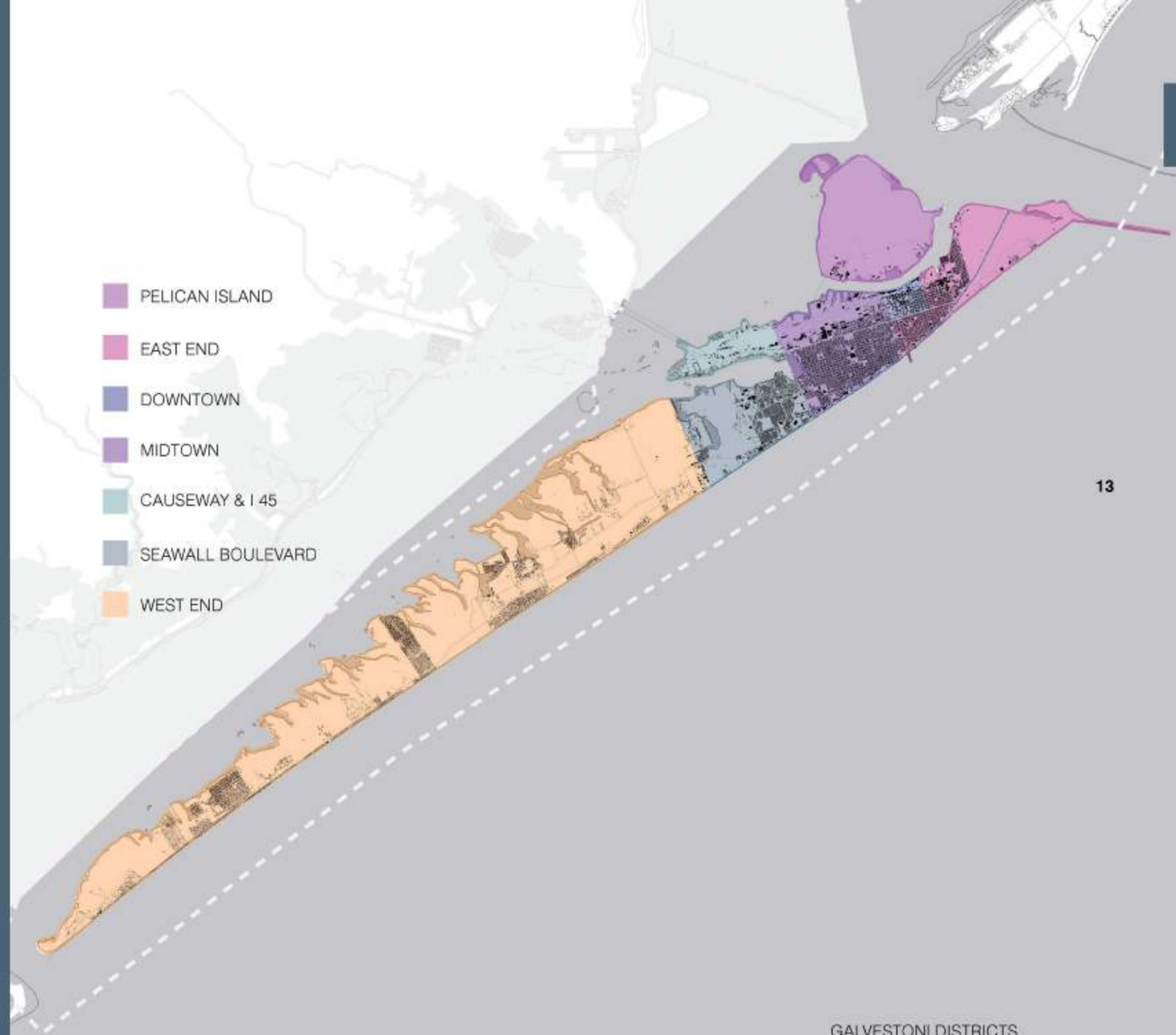
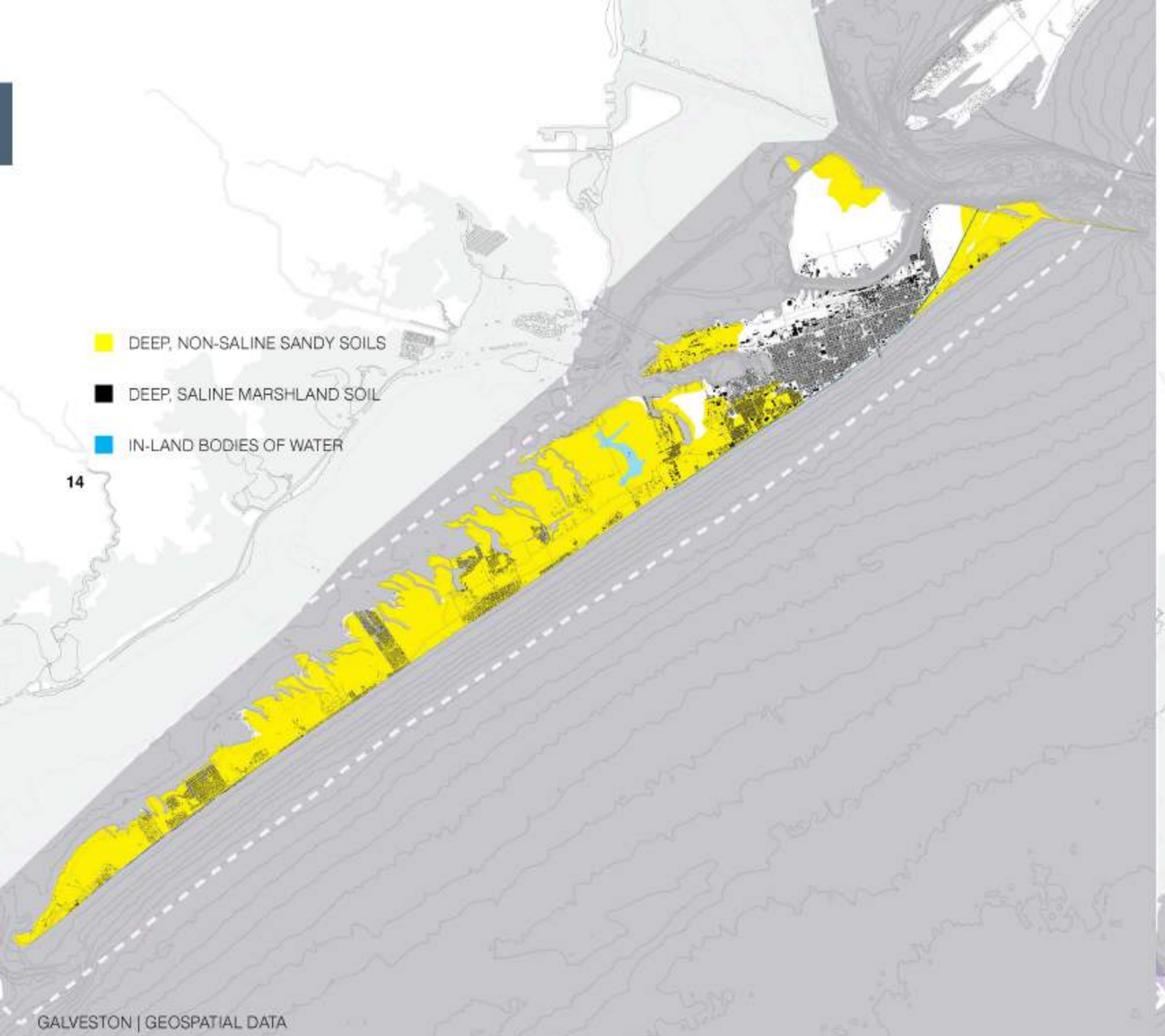
GALVESTON ISLAND

GALVESTON

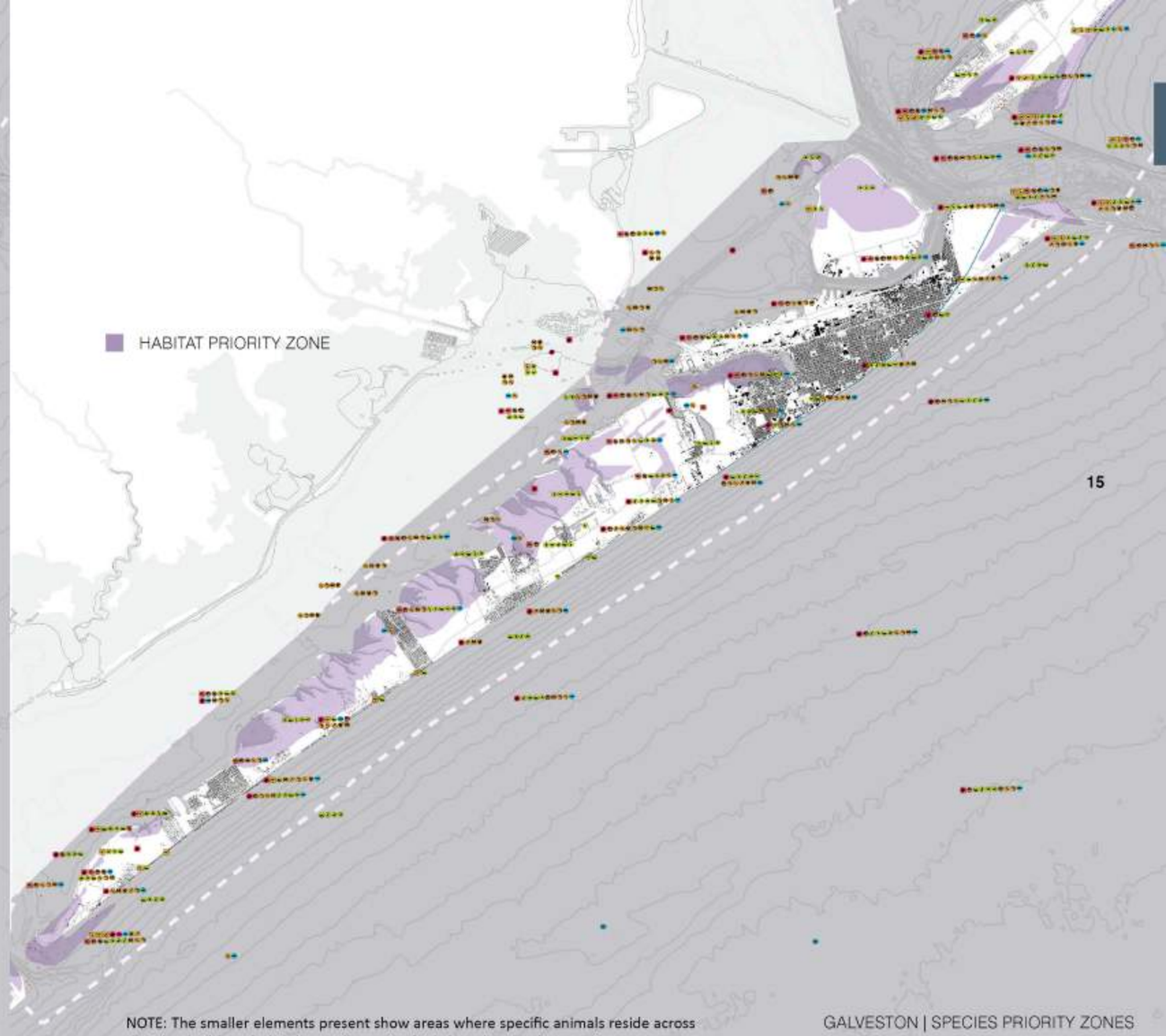


GALVESTON| DISTRICTS



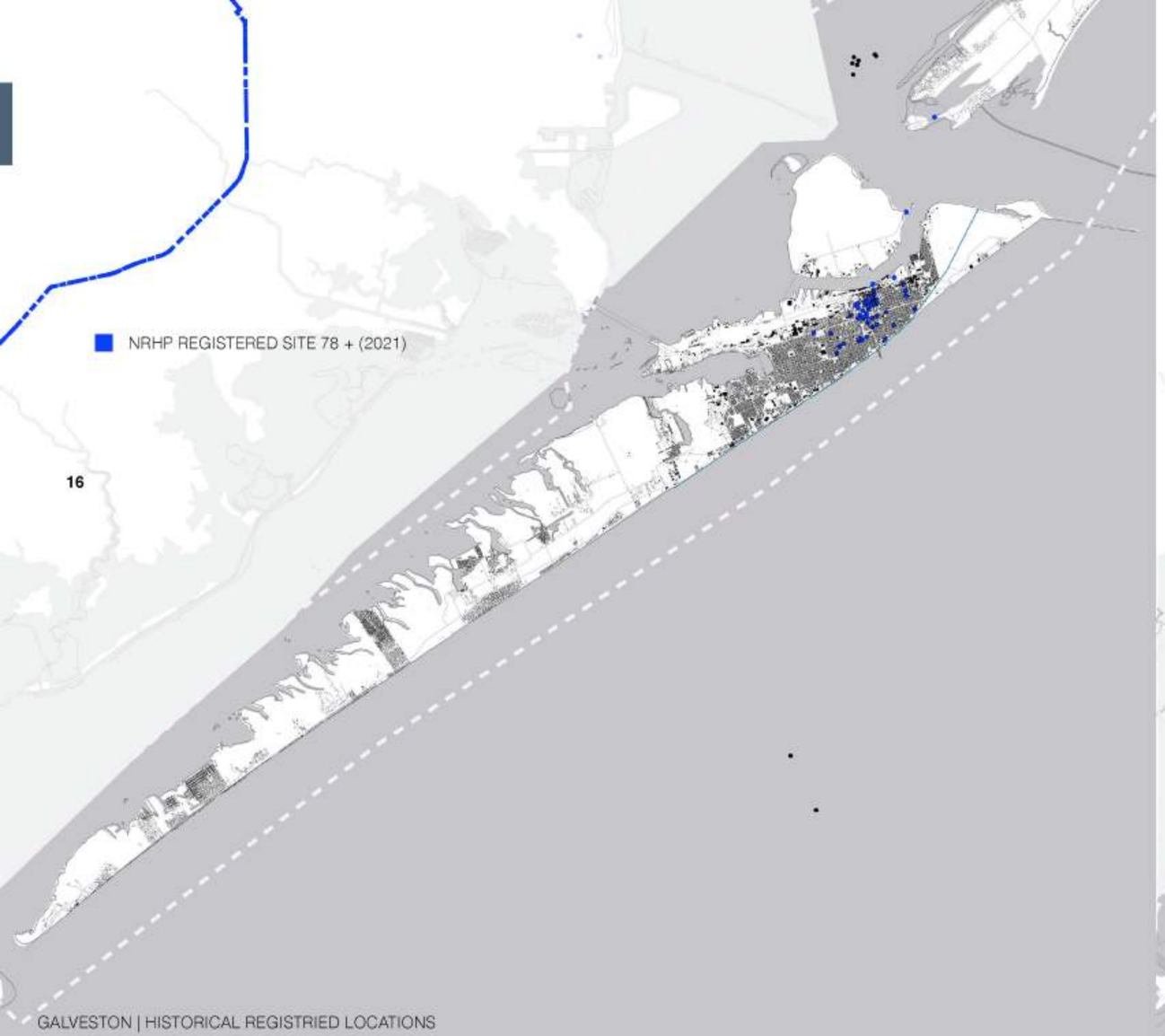
GALVESTON | GEOSPATIAL DATA

GALVESTON



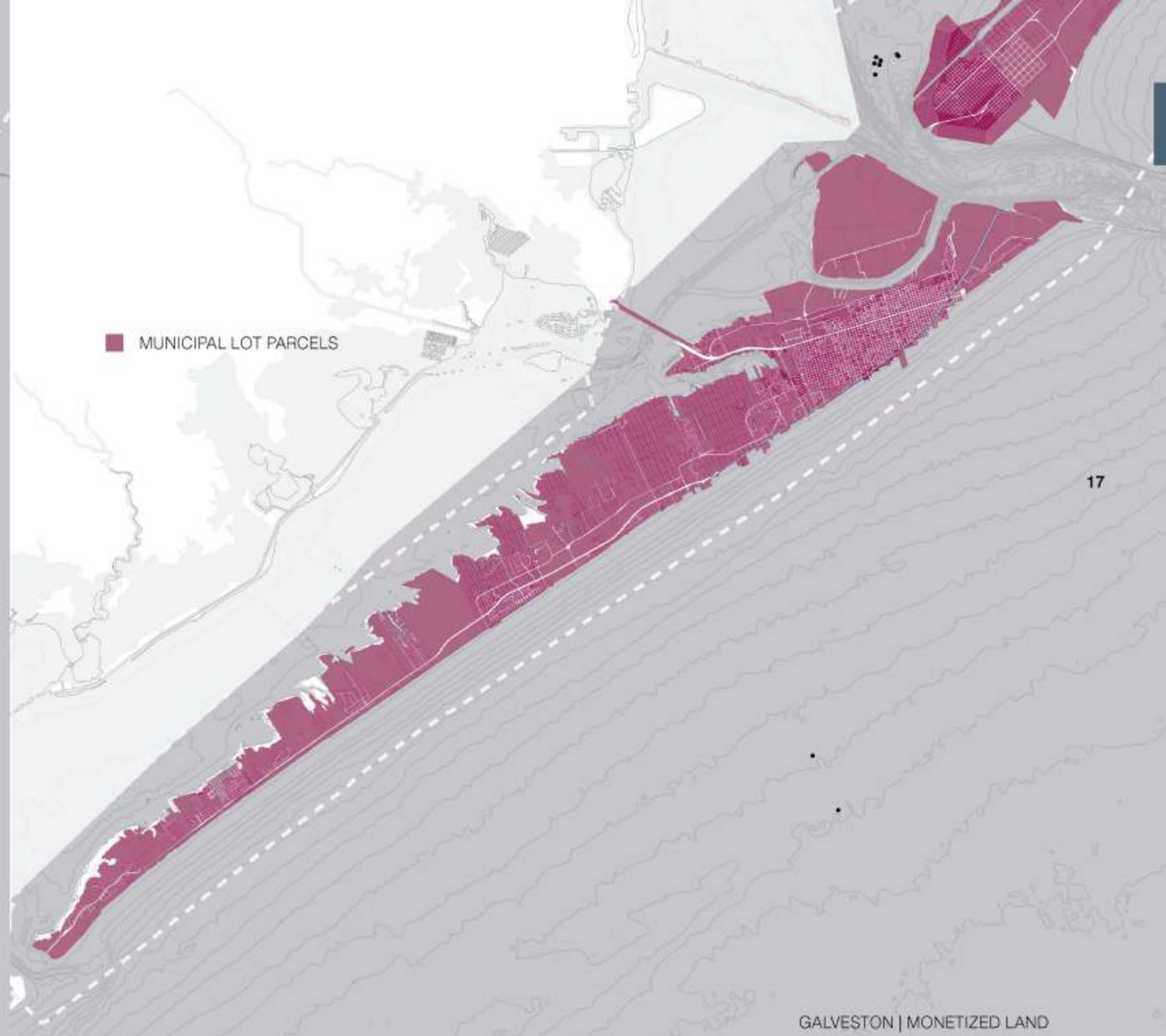
NOTE: The smaller elements present show areas where specific animals reside across the island. Although this data still remains fairly broad as to what species are present, it served as a way of understanding the macro -presence of particular animals.

GALVESTON | SPECIES PRIORITY ZONES



GALVESTON | HISTORICAL REGISTRIED LOCATIONS

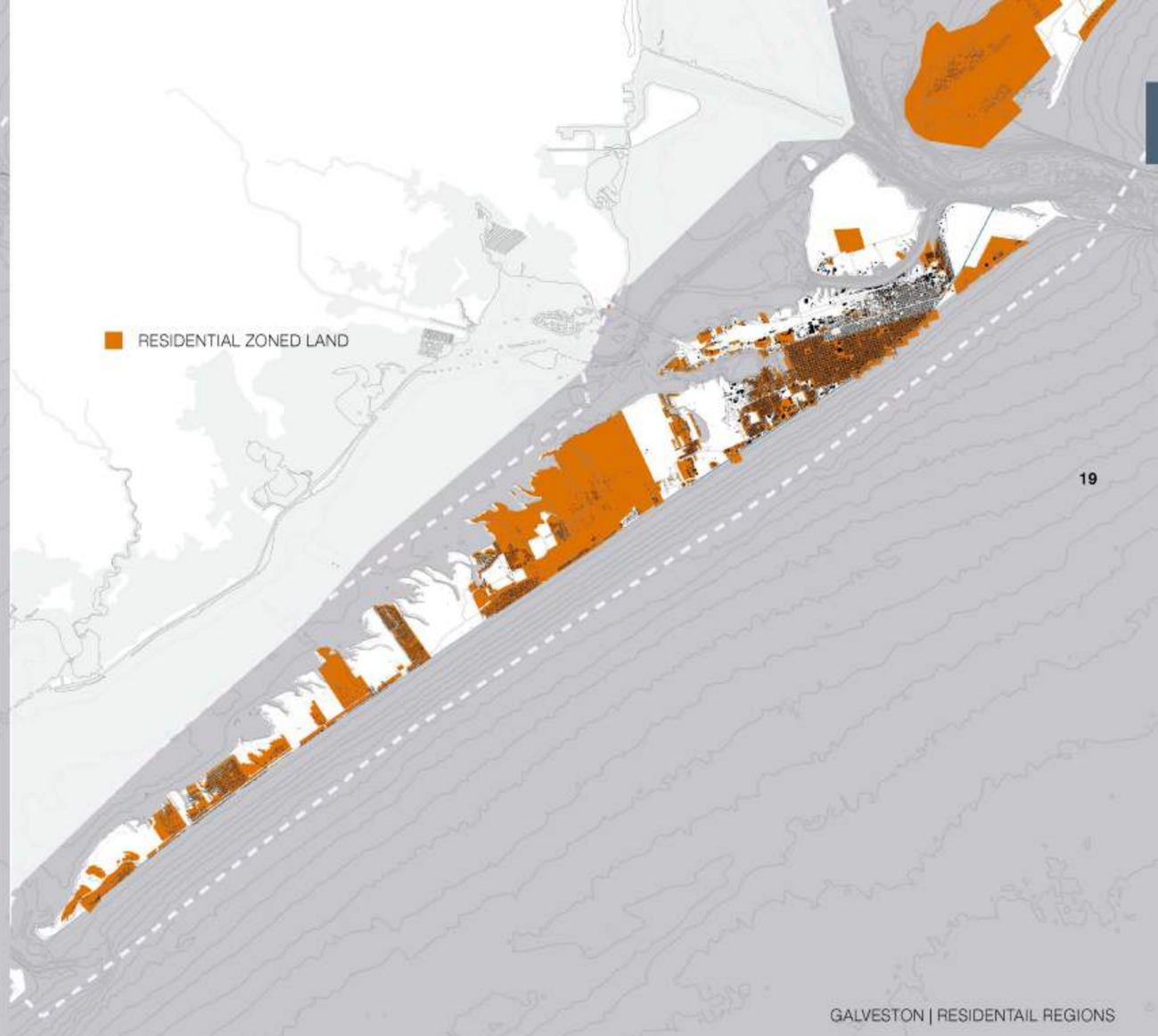
GALVESTON



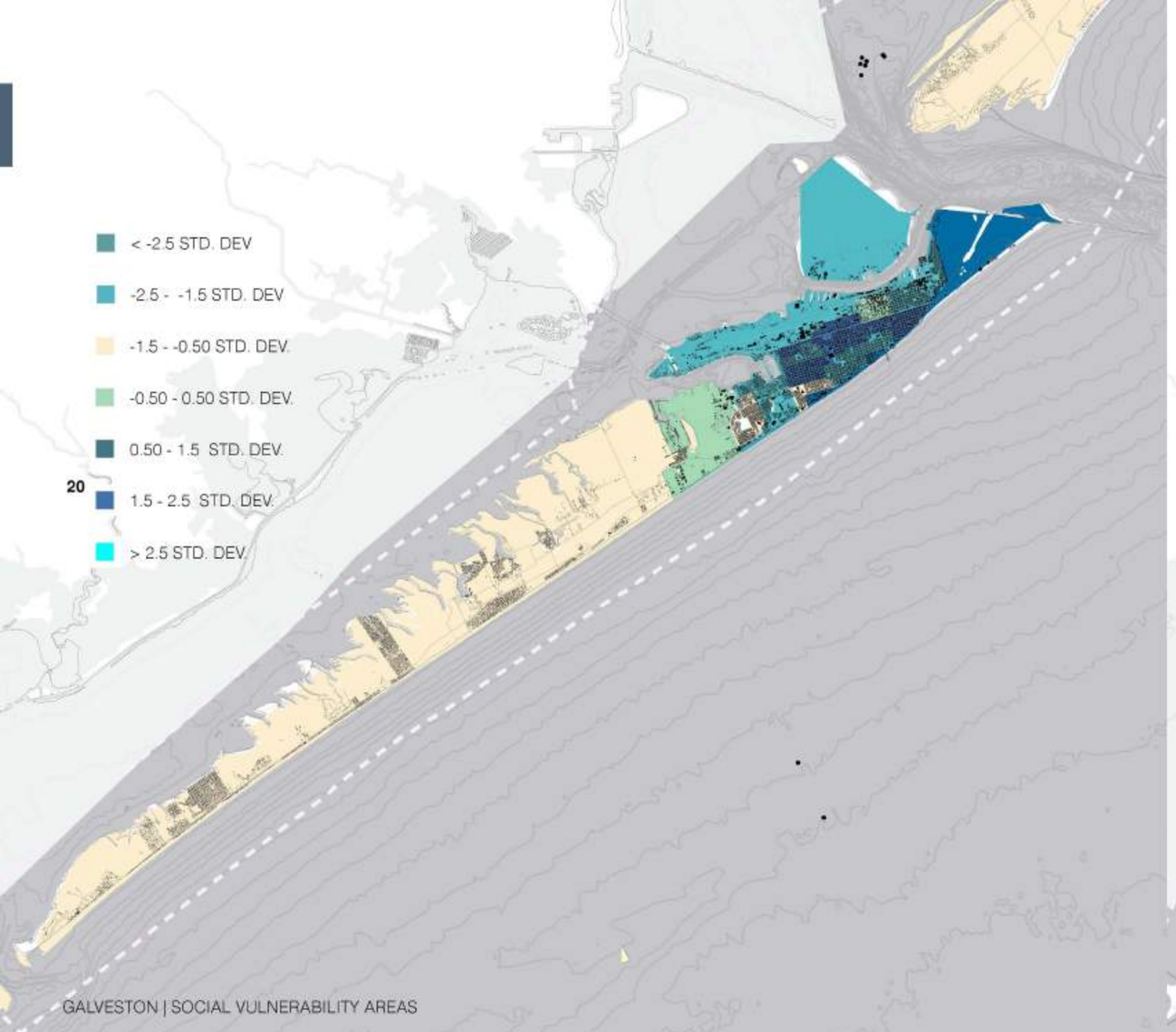
GALVESTON | MONETIZED LAND

GALVESTON | OIL RIG LOCATIONS

GALVESTON

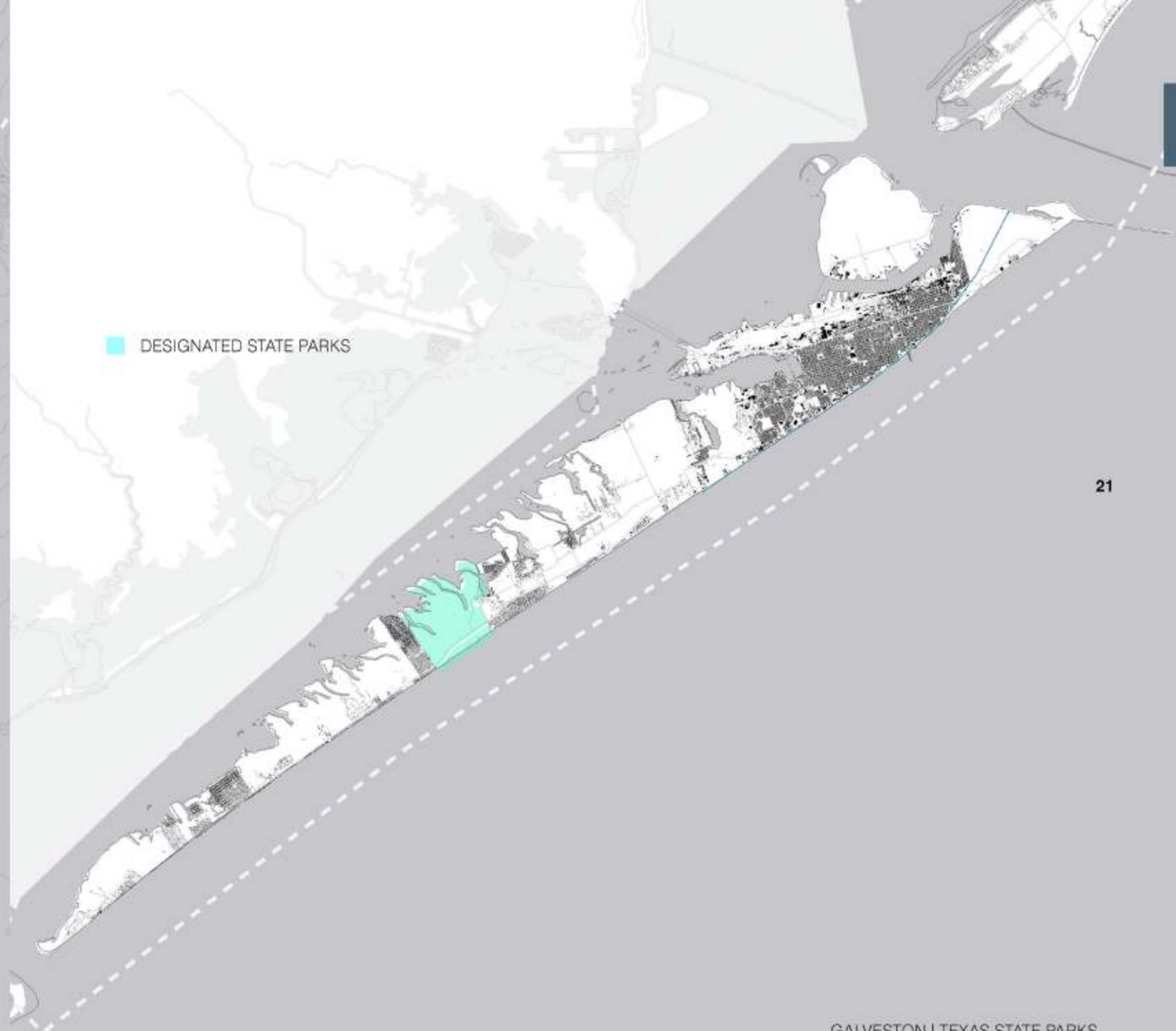


GALVESTON | RESIDENTAIL REGIONS

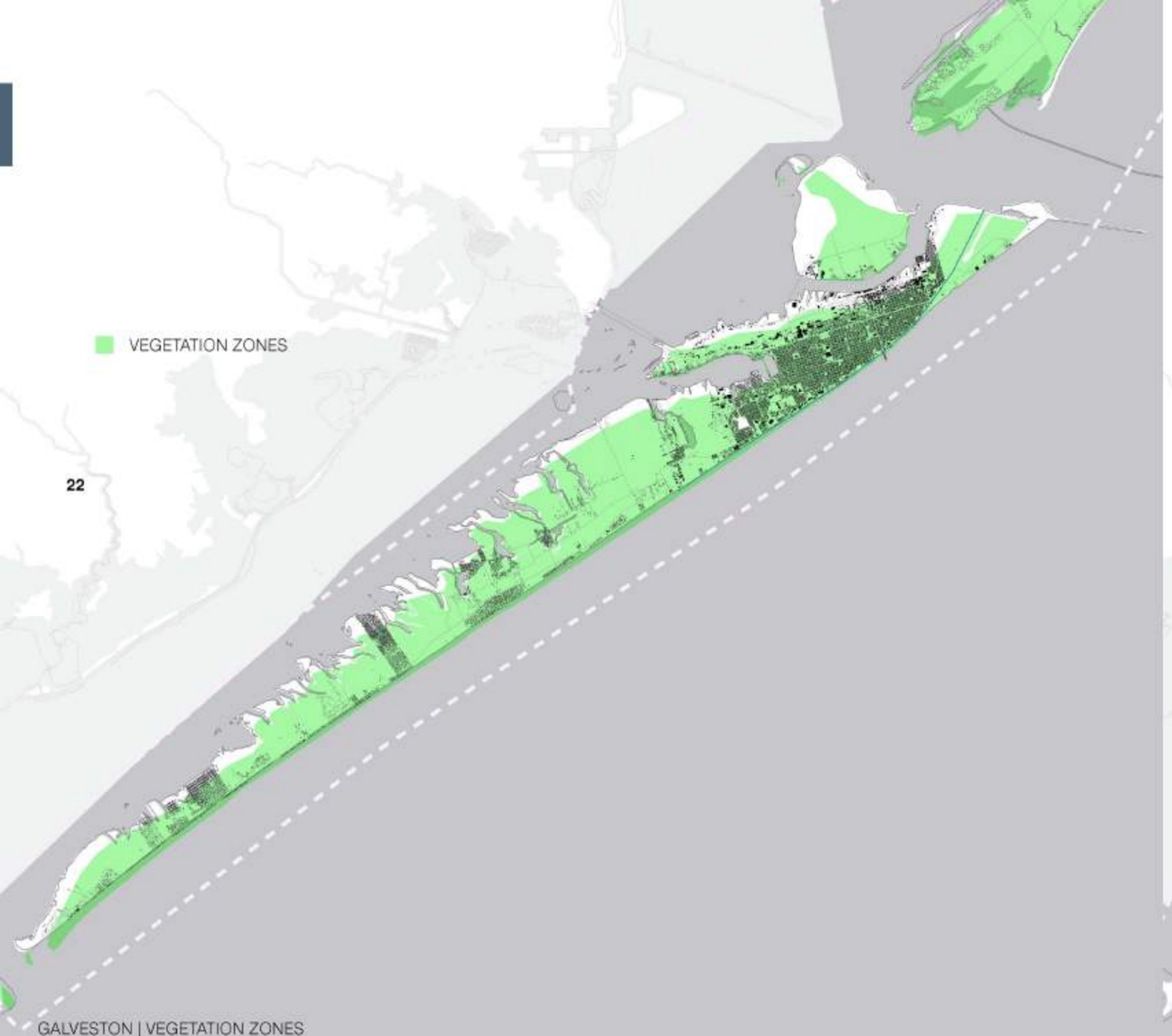


GALVESTON | SOCIAL VULNERABILITY AREAS

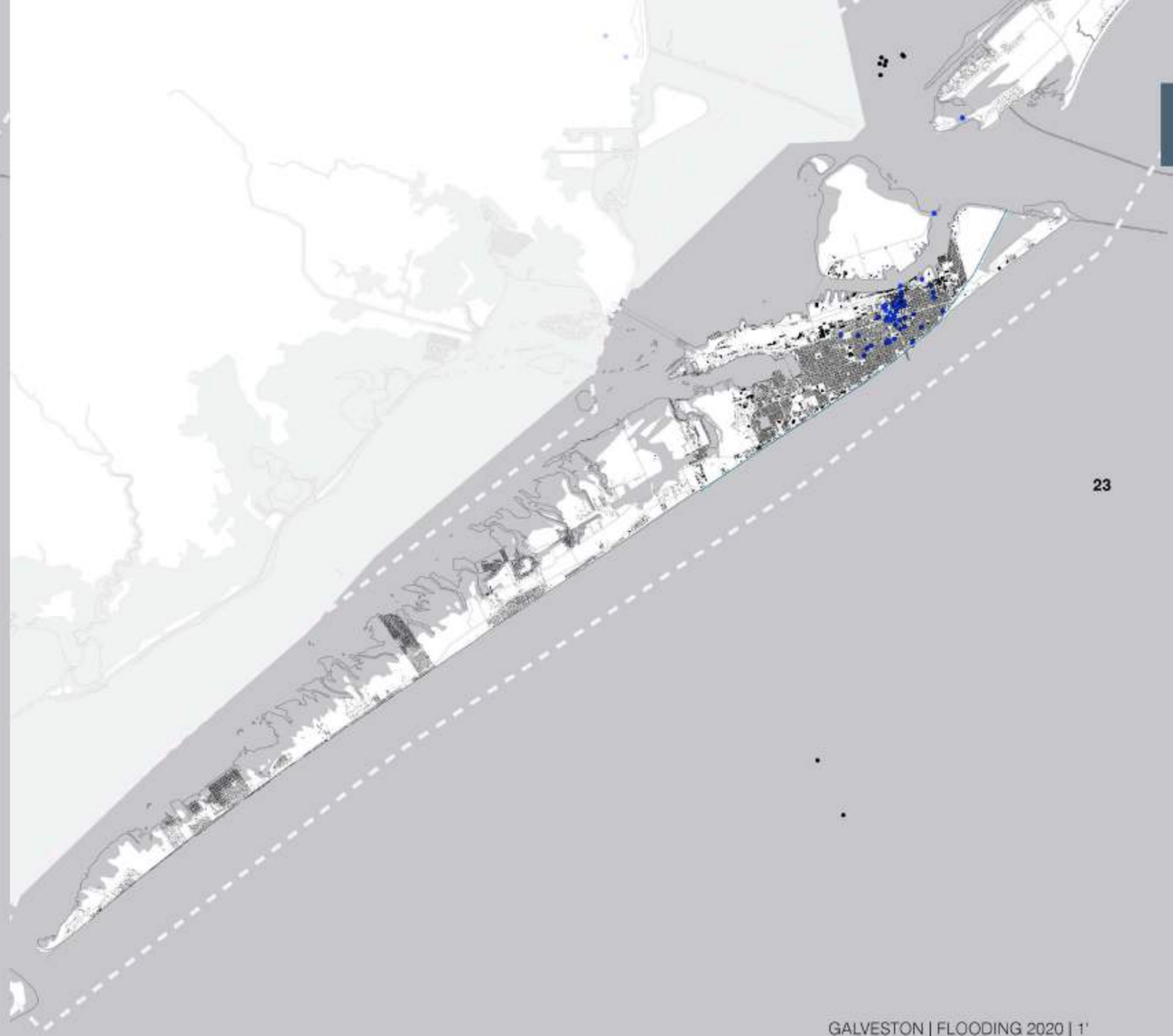
GALVESTON



GALVESTON | TEXAS STATE PARKS



GALVESTON | VEGETATION ZONES

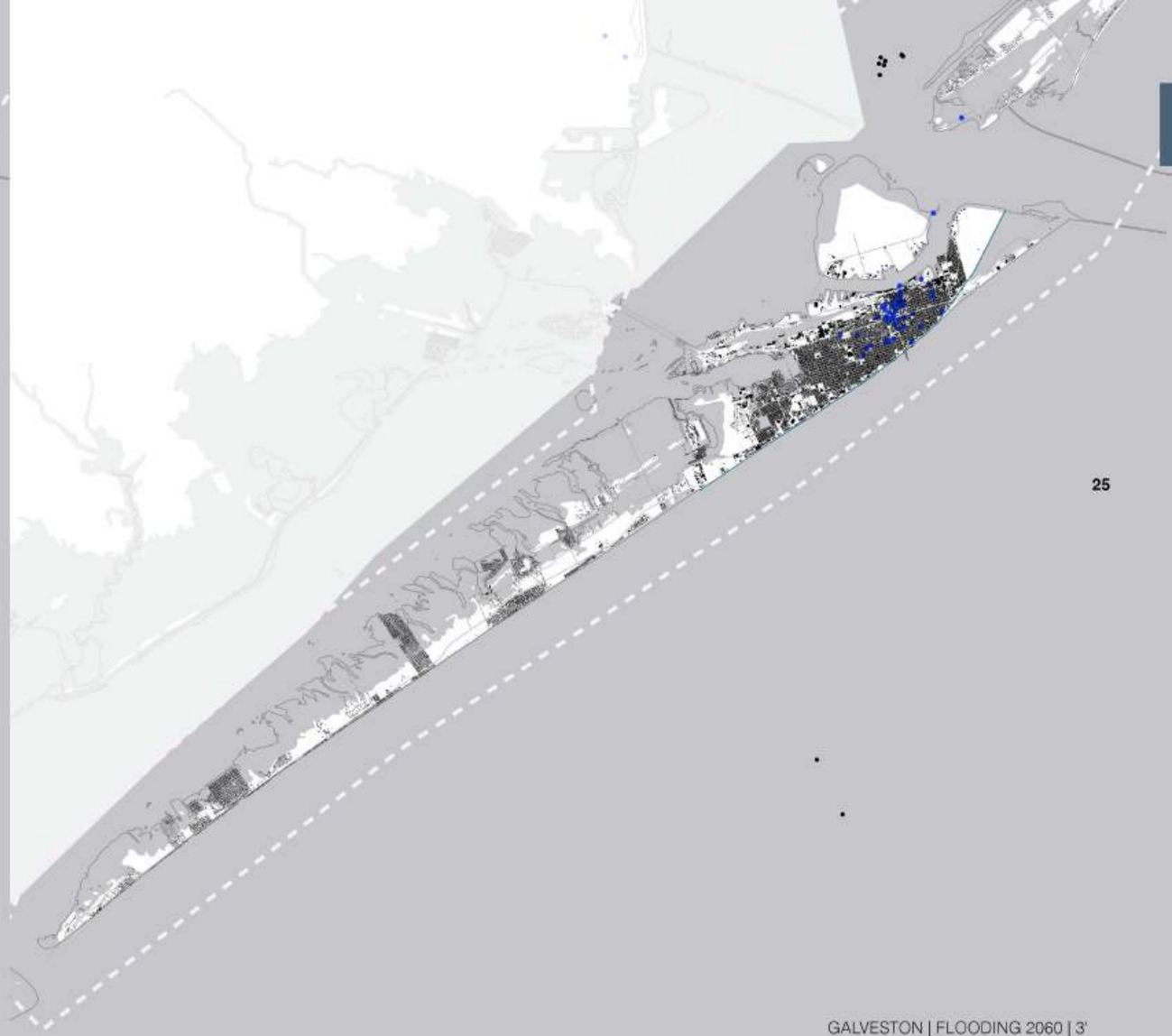


GALVESTON | FLOODING 2020 | 1'

GALVESTON

GALVESTON | FLOODING 2040 | 2'

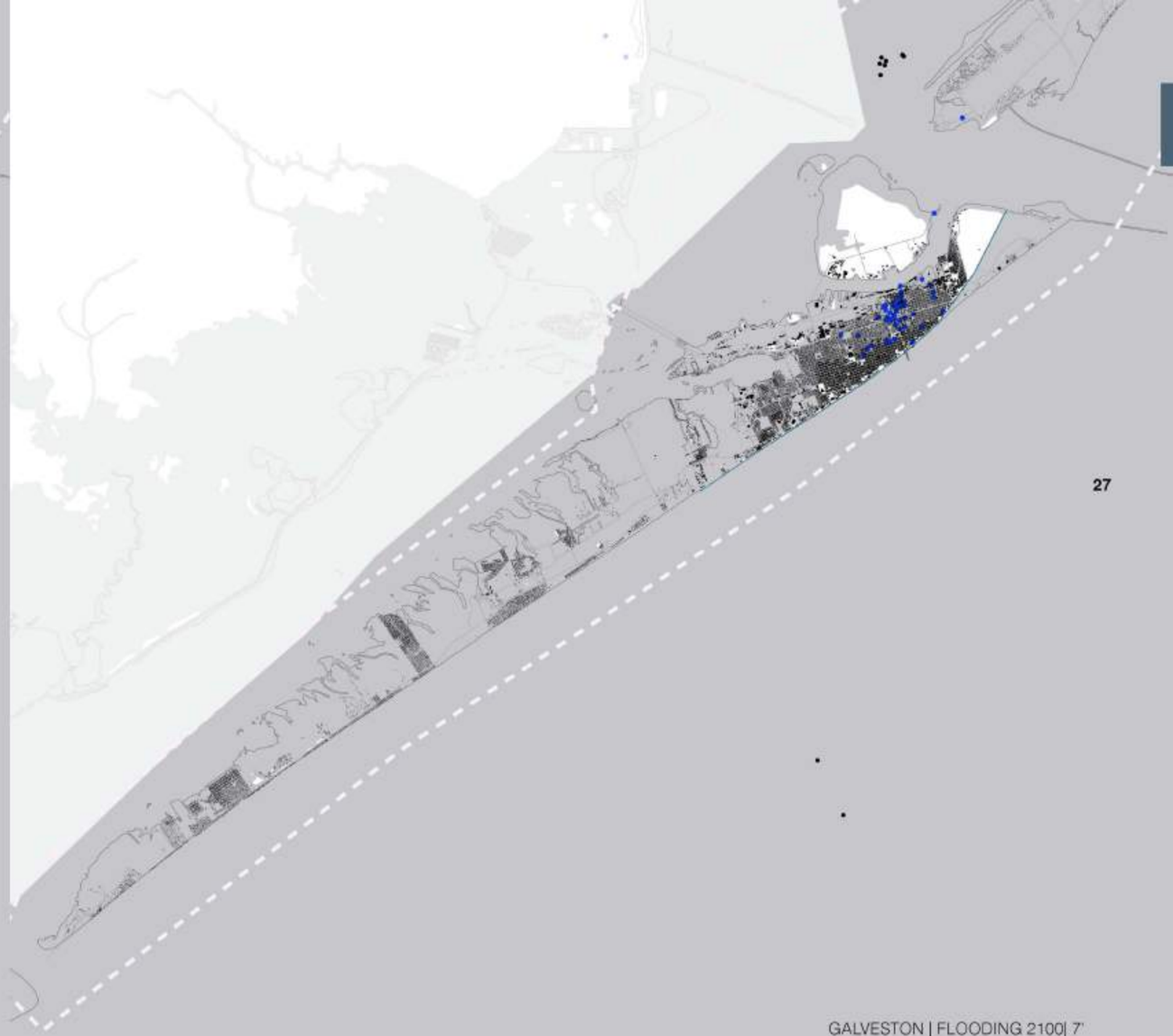
GALVESTON



GALVESTON | FLOODING 2060 | 3'

GALVESTON | FLOODING 2080 | 5'

GALVESTON



GALVESTON | FLOODING 2100| 7'

The Central Galveston maps were constructed after it has been proposed that a historical architectural element was to be the focus of the project. Although this idea was transformed into heritage landscapes, that data present, draws from more specific demographic information, that drew initial interest to Pelican Island.

Similar to the previous section of this visual story, the barcode provided links to a GIF that sequences the maps listed in a digital format. It is encouraged that this GIF be utilized in building the narrative of the project itself, as the idea of lenses and layers remains an underlying theme for understanding the past, present, and future of Galveston at large.

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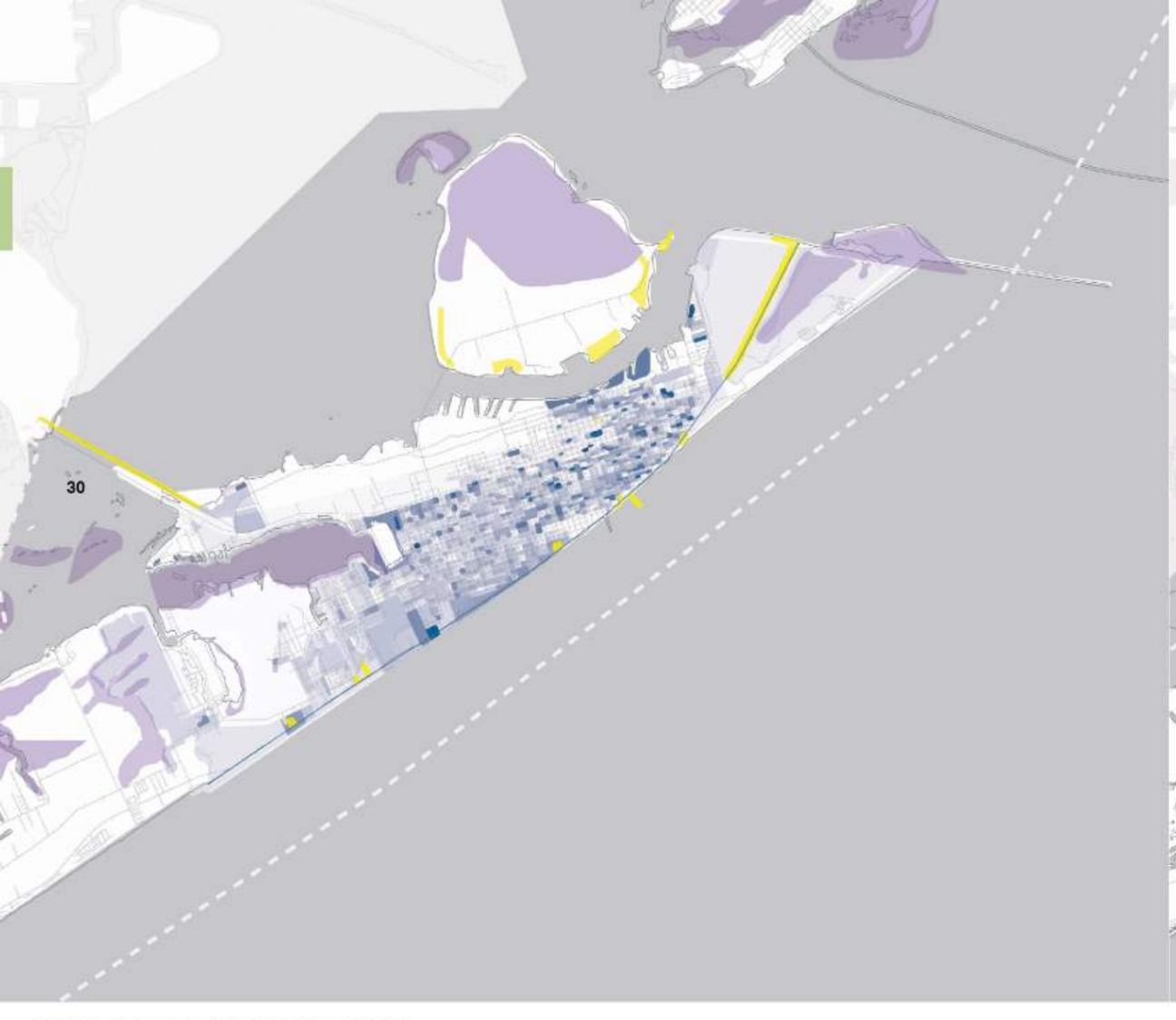
SCAN ME

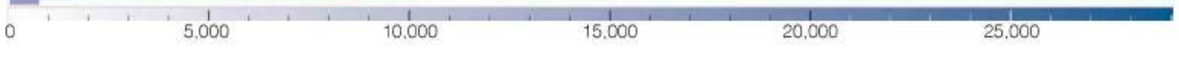
CENTRAL GALVESTON

CENTRAL

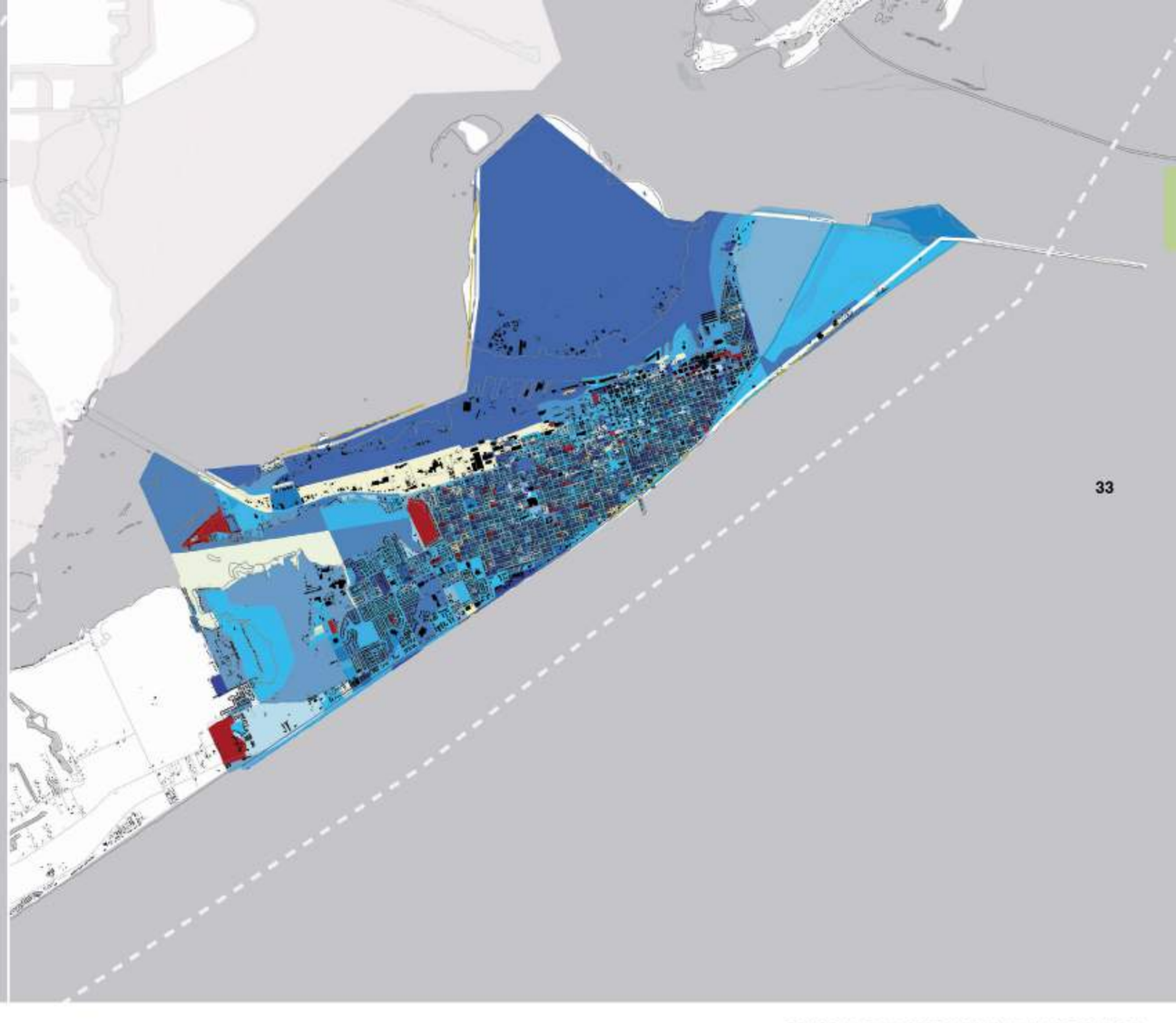
CENTRAL GALVESTON | AIR POLLUTION



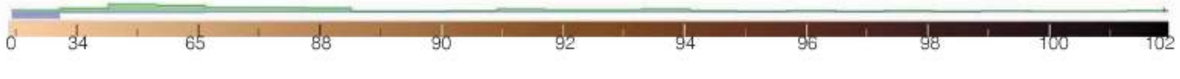
CENTRAL GALVESTON | POPULATION DENSITY



CENTRAL GALVESTON | COMMUTE TIME



CENTRAL GALVESTON | COST OF LIVING



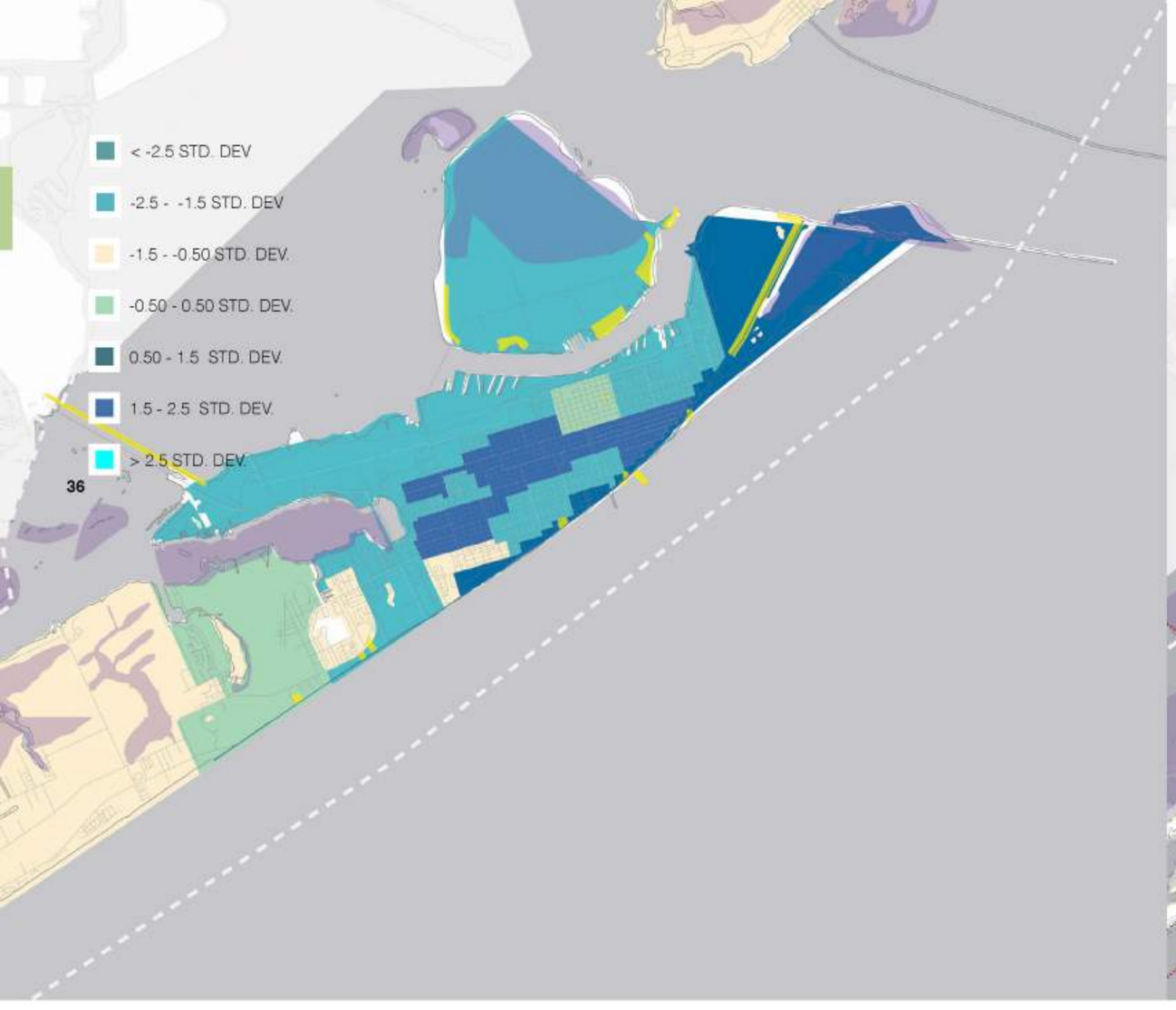
CENTRAL GALVESTON | MEDIUM AGE RANGE

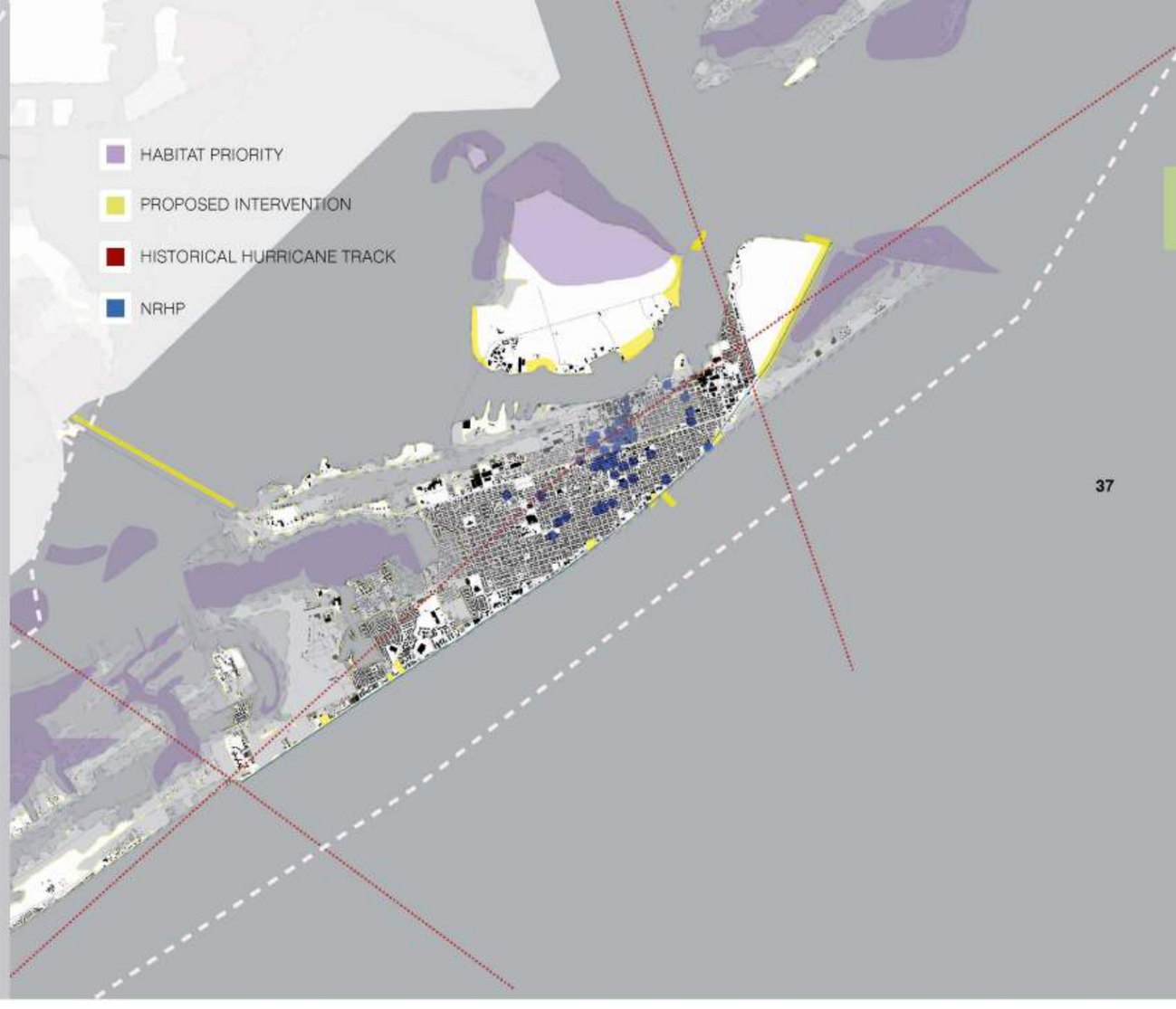
CENTRAL GALVESTON | HOUSEHOLD INCOME

$10,000 $20,000 $30,000 $40,000 $50,000 $60,000 $70,000 $80,000 $90,000 $100,000 $110,000 $120,000

CENTRAL GALVESTON | MEDIUM HOUSEHOLD VALUE

$50,000 $100,000 $150,000 $200,000 $250,000 $300,000 $350,000 $400,000





CENTRAL GALVESTON | SOCIAL VULNERABILITY

CENTRAL GALVESTON | SITE PROJECTION

The Pelican Island maps were the final series of maps created in a series of batches that were built off the aspects of heritage, ecology, and tourism. By locating historical maps through a collection of sources, information is transcribed and then overlaid in an attempt to discover coincidences. It was through elements present in these maps, design strategies were executed and later combined.

Contrary to previous sections, this section provides a collection of barcodes that link to external GIFs. Due to the nature of these maps, the GIFs were separated based on content rather than scale. Especially for the physical island boundaries (that have changed drastically over the past two centuries), the digital format is necessary for understanding how the island has transformed over time.

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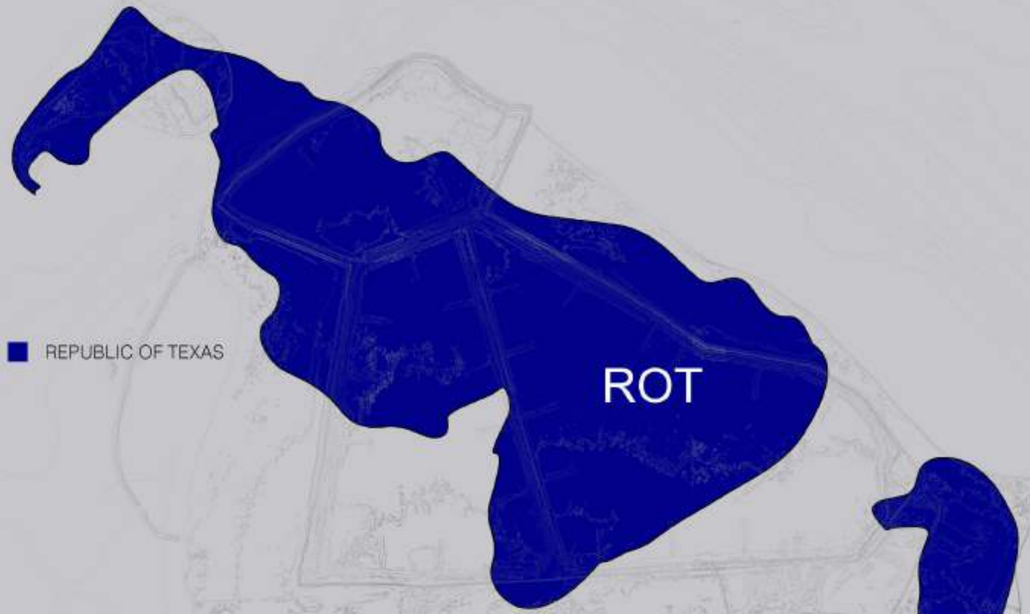
SCAN ME
HISTORICAL OWNERSHIP

SCAN ME
HISTORICAL BORDERS

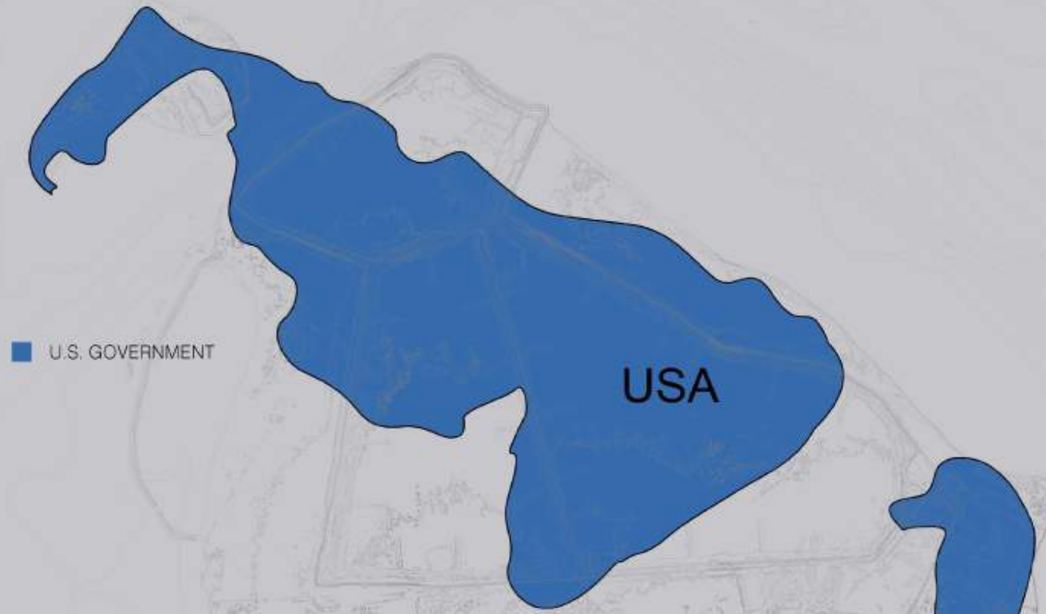
SCAN ME
GREEN SPACES

SCAN ME
SOIL MAP

PELICAN



PELICAN ISLAND | 1845 | REPUBLIC OF TEXAS



PELICAN ISLAND | 1852 | US GOVERNMENT

4B

CONFEDERATE STATES

CSA

42

PELICAN ISLAND | 1861 | CONFEDERATE STATES

CITY OF GALVESTON

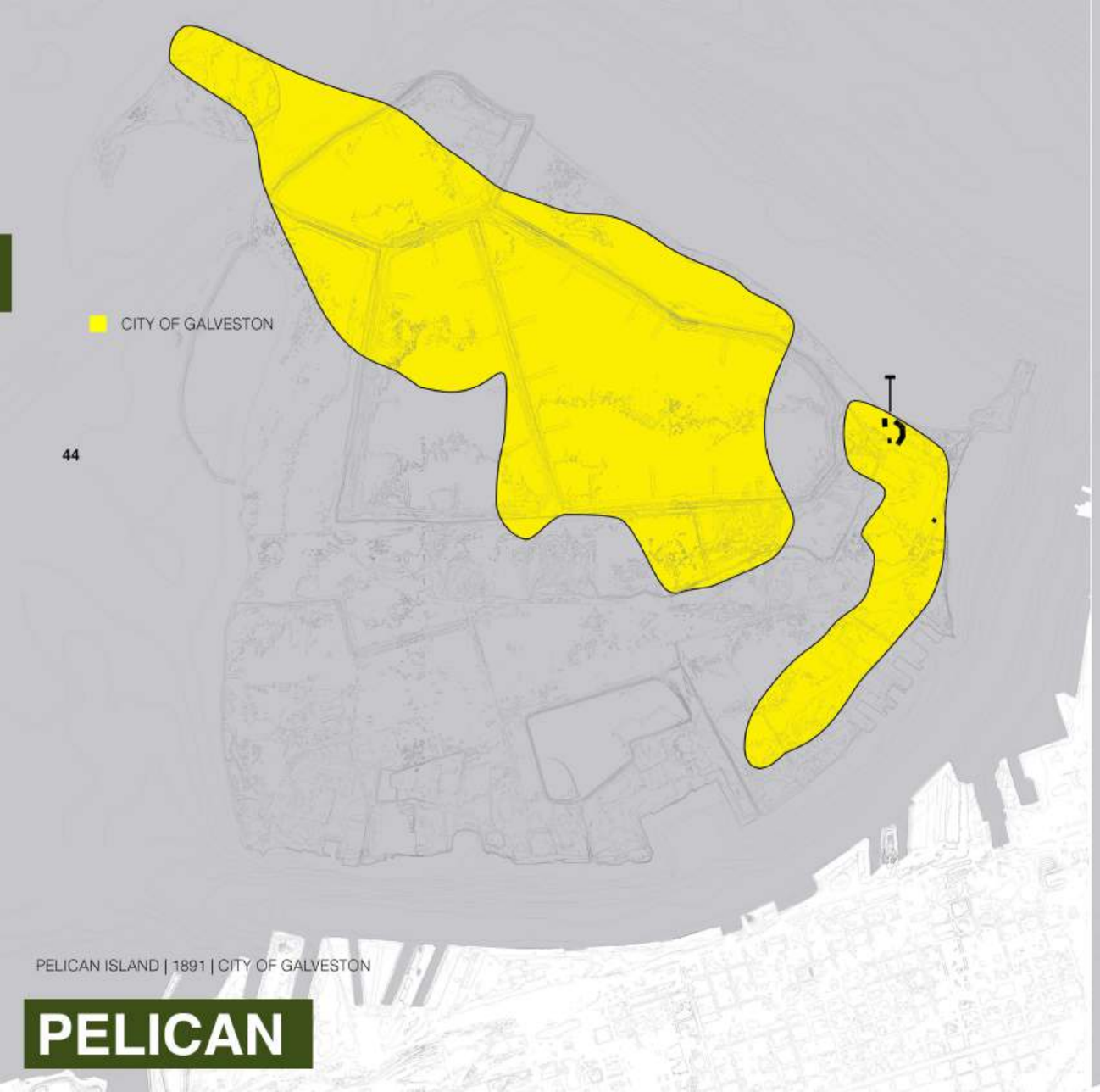
U.S. GOVERNMENT

GAL

43

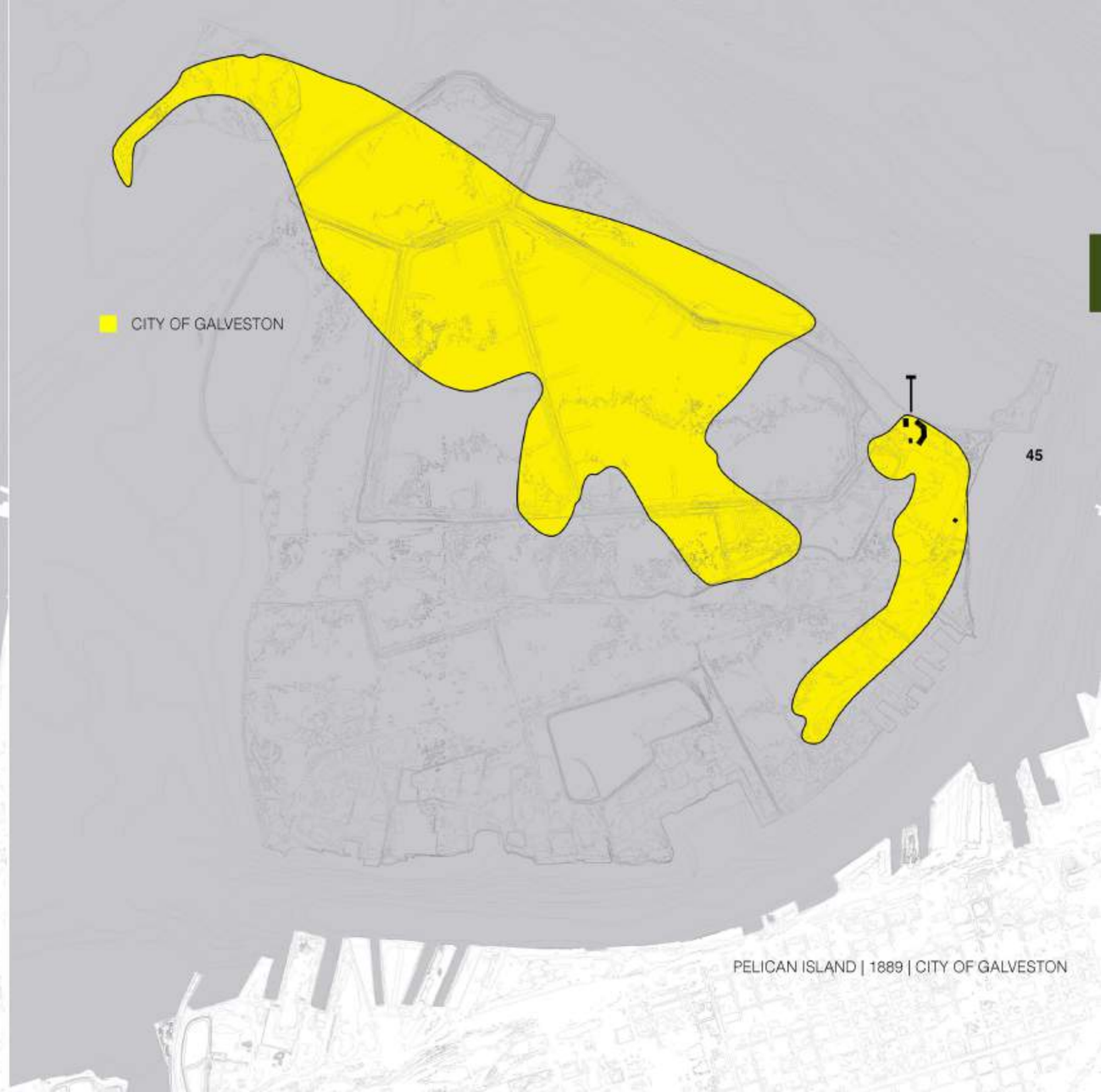
PELICAN ISLAND | 1880 | CITY OF GALVESTON

PELICAN



PELICAN ISLAND | 1891 | CITY OF GALVESTON

PELICAN

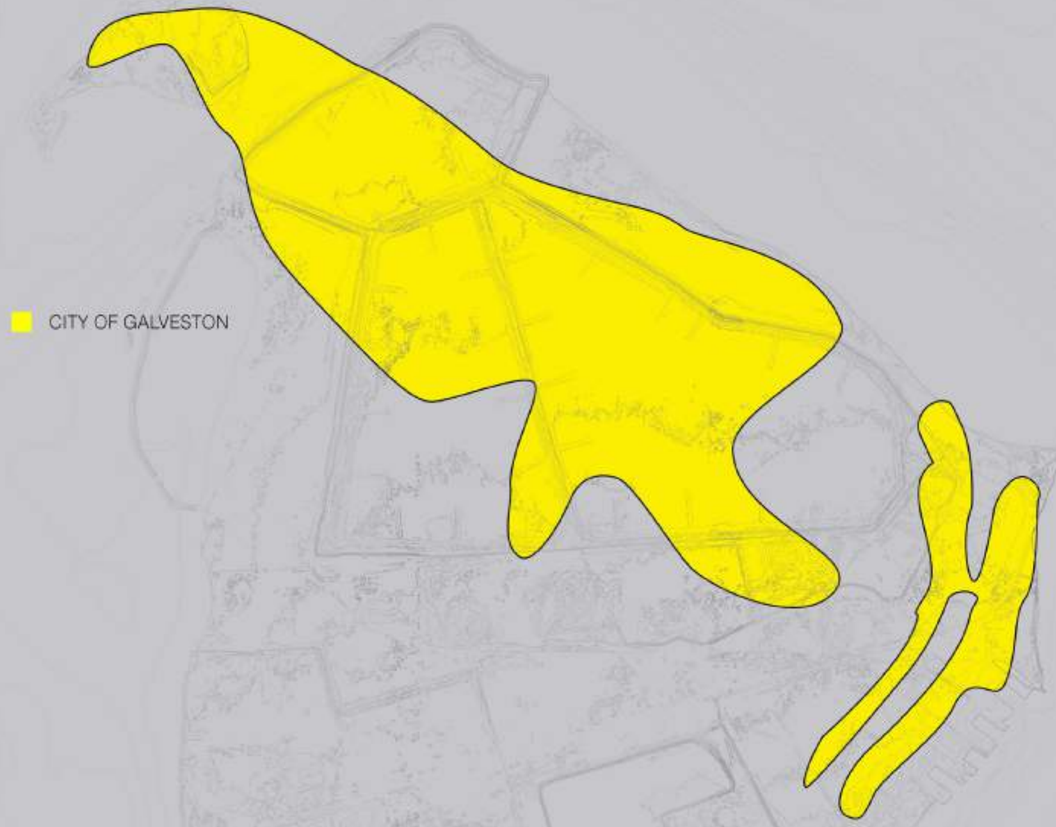


PELICAN ISLAND | 1889 | CITY OF GALVESTON

PELICAN ISLAND | 1900 | THE GREAT STORM

NOTE: The second boundary present represents a "proposed boundary" for Pelican Island as part of a massive dredging project planned for the Houston/Galveston harbor. Although the project never passed the conceptualization phase, this "industrial milestone" served as a guide for proposed schemes later in the project.

PELICAN



PELICAN ISLAND | 1902 | CITY OF GALVESTON

U.S. GOVERNMENT

USA

PELICAN ISLAND | 1905 | US GOVERNMENT

PELICAN

6A

JOHN MCDONOUGH & ASSOCIATES

U.S. GOVERNMENT

PELICAN ISLAND | 1921 | US GOVERNMENT

CITY OF GALVESTON

U.S. GOVERNMENT

JOHN MCDONOUGH & ASSOCIATES

PELICAN ISLAND | 1930 | CITY OF GALVESTON

PELICAN

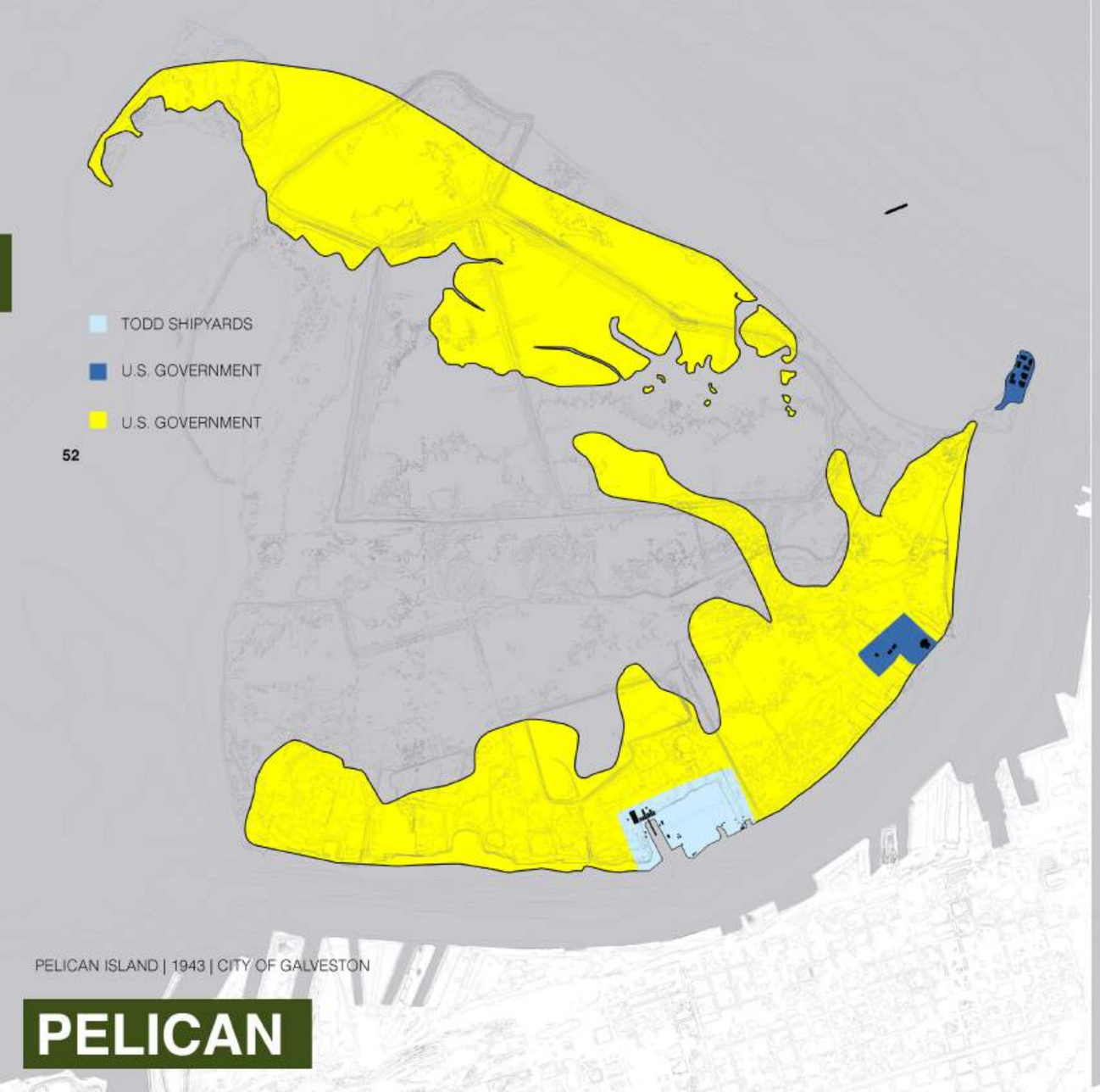
CITY OF GALVESTON

U.S. GOVERNMENT

JOHN MCDONOUGH & ASSOCIATES

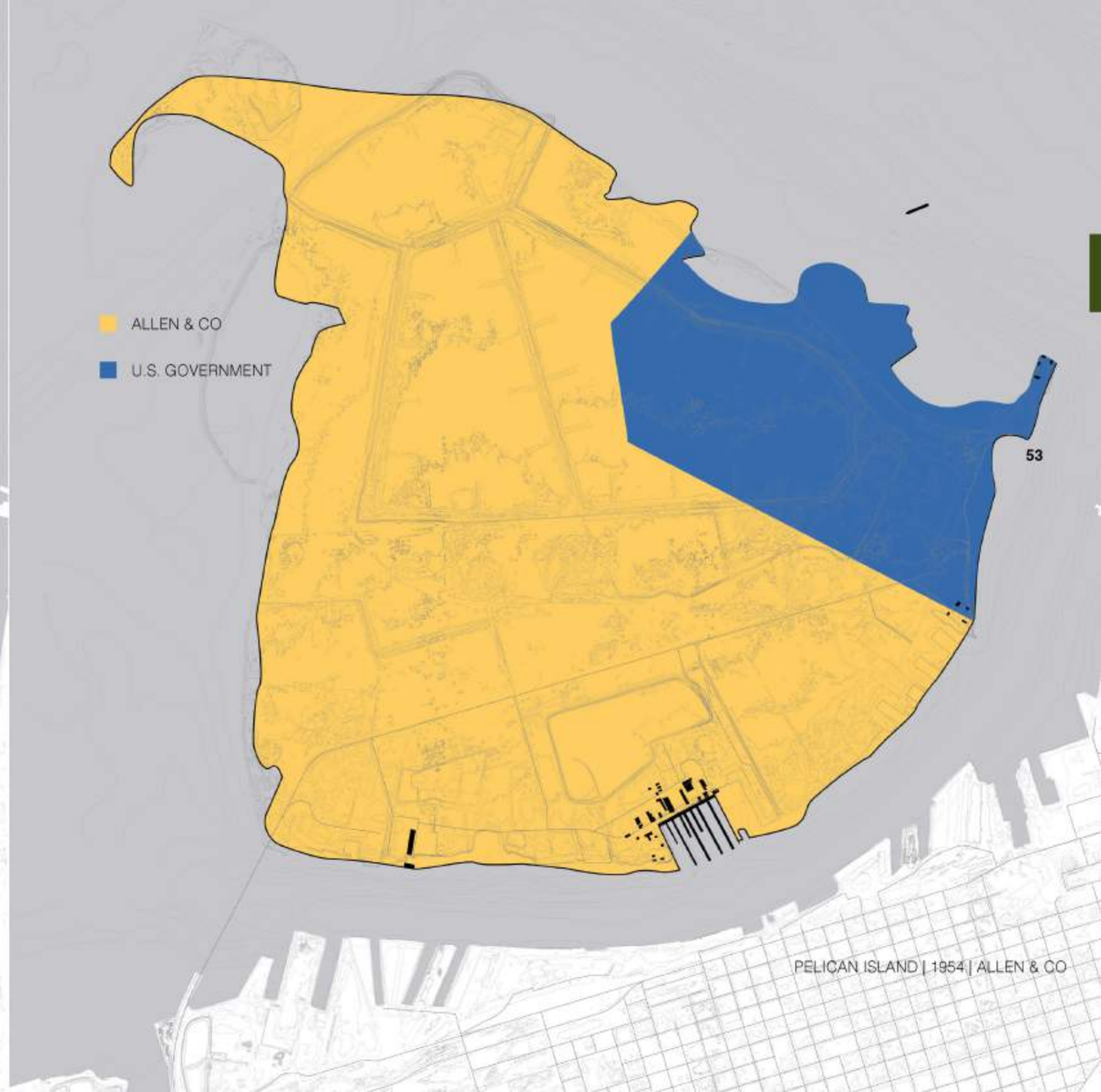
7A

PELICAN ISLAND | 1933 | CITY OF GALVESTON



PELICAN ISLAND | 1943 | CITY OF GALVESTON

PELICAN



PELICAN ISLAND | 1954 | ALLEN & CO

9A

ALLEN & CO

U.S. GOVERNMENT

DOBBINS LAND DEV

A&M GALVESTON

54

PELICAN ISLAND | 1975 | ALLEN & CO

5A

PORT AUTHORITY

U.S. GOVERNMENT

PRIVATELY OWNED

COMMERCIAL

A&M GALVESTON

55

PELICAN ISLAND | 1994 | PORT AUTHORITY

PELICAN

PORT AUTHORITY
U.S. GOVERNMENT
PRIVATELY OWNED
ENTERPRISE
A&M GALVESTON

PELICAN ISLAND | 2020 | PORT AUTHORITY

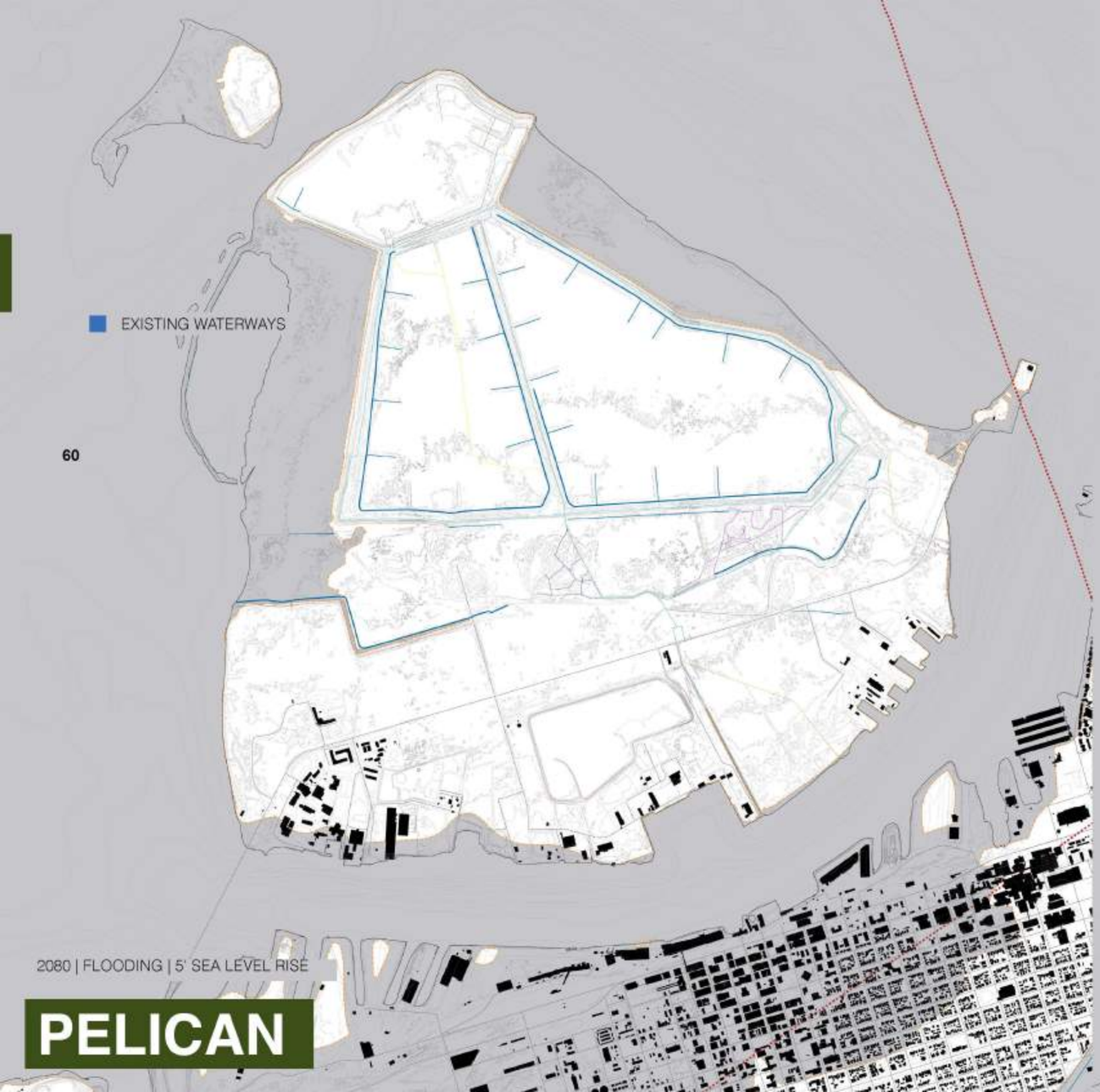
PELICAN

EXISTING WATERWAYS

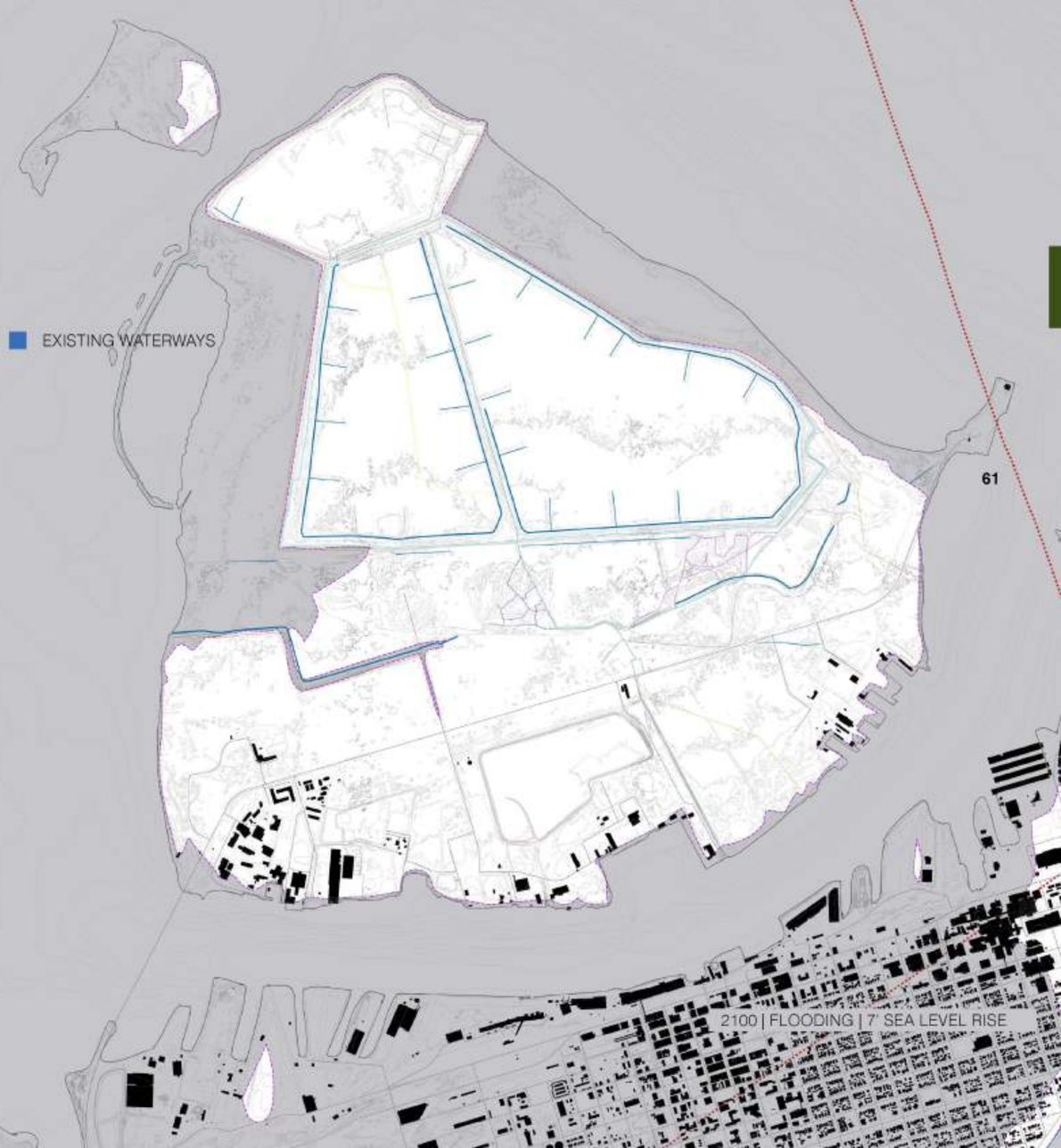
2020 | FLOODING | 1' SEA LEVEL RISE

2040 | FLOODING | 2' SEA LEVEL RISE

2060 | FLOODING | 3' SEA LEVEL RISE

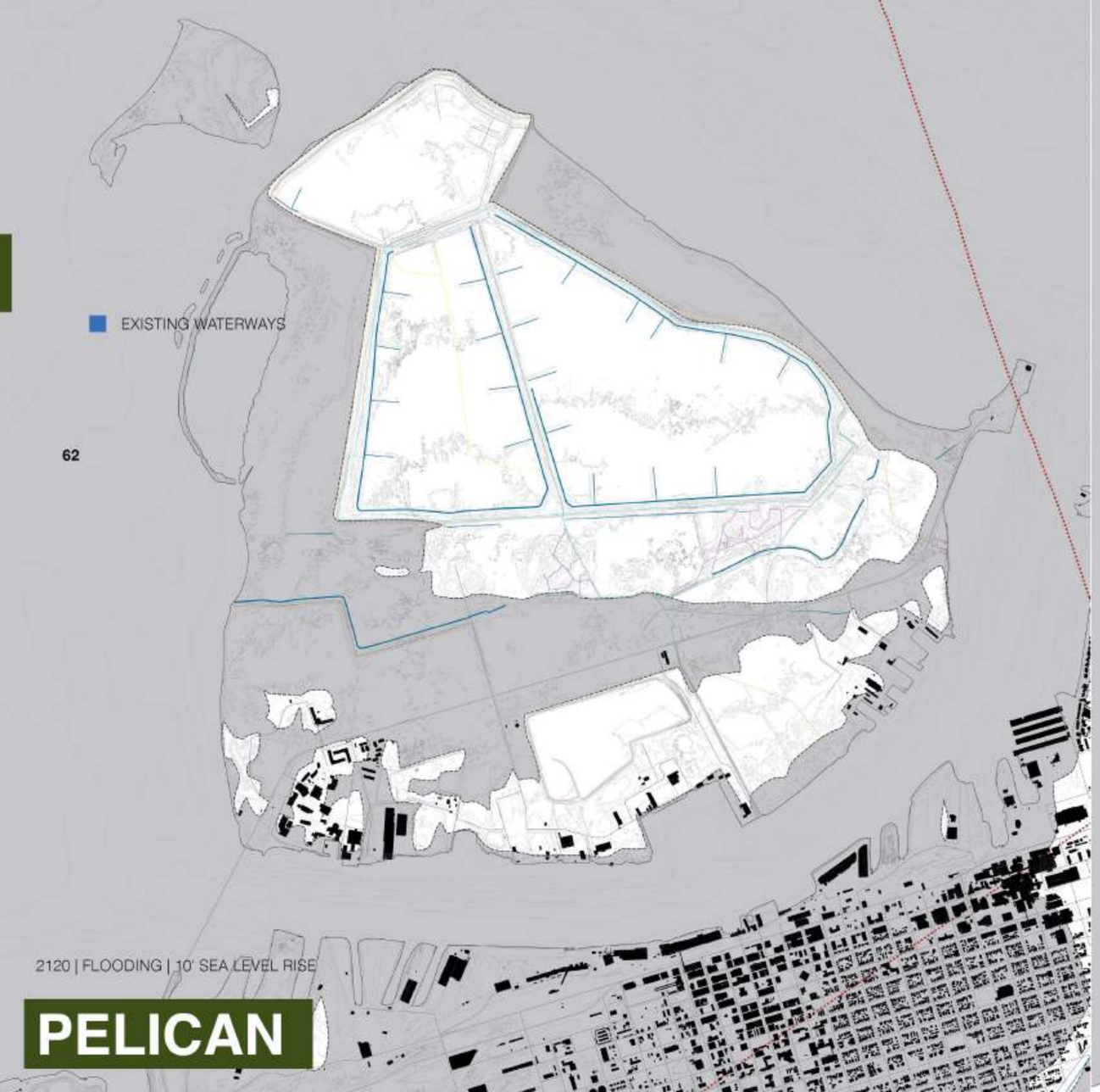


2080 | FLOODING | 5' SEA LEVEL RISE



2100 | FLOODING | 7' SEA LEVEL RISE

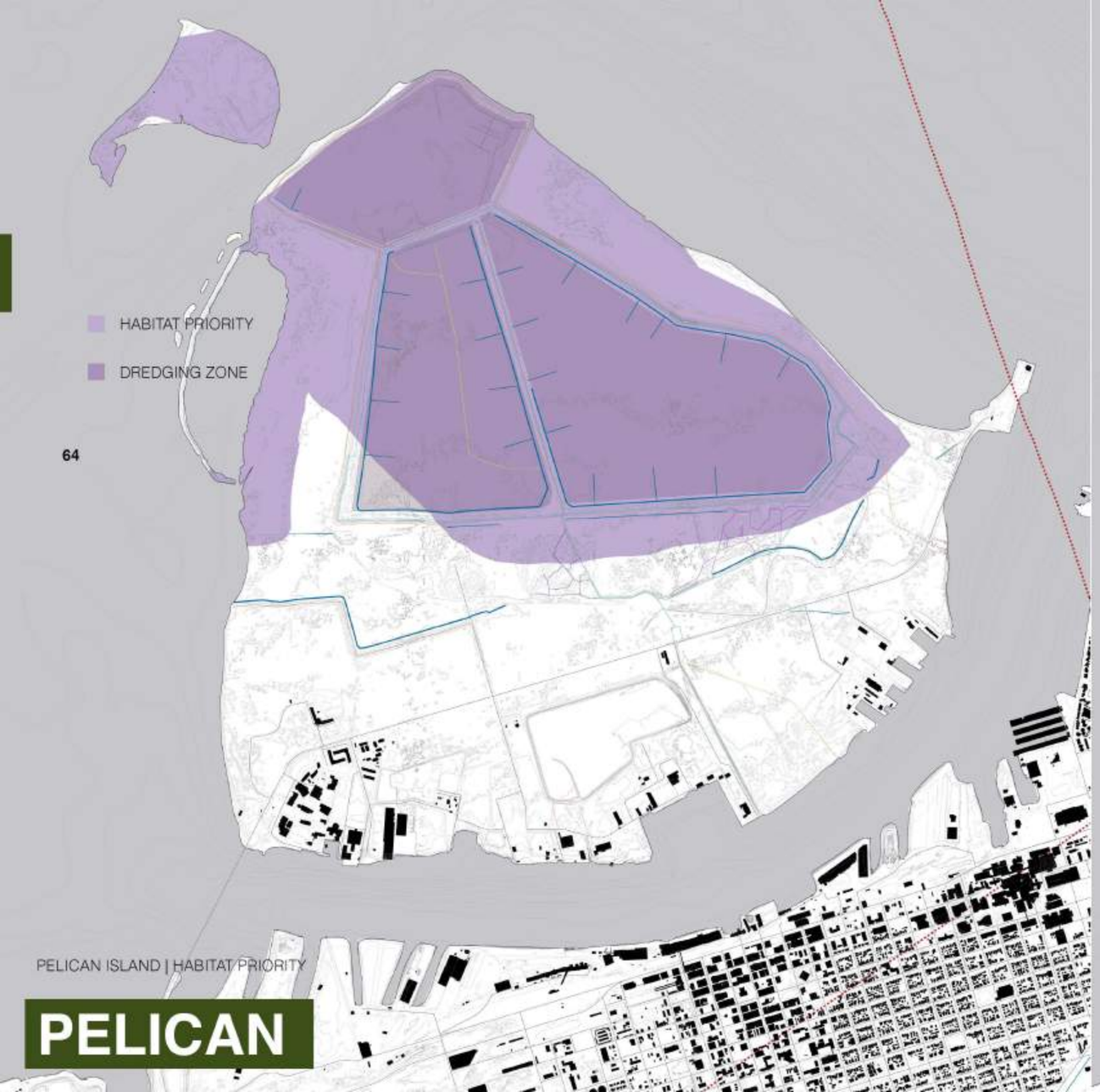
PELICAN



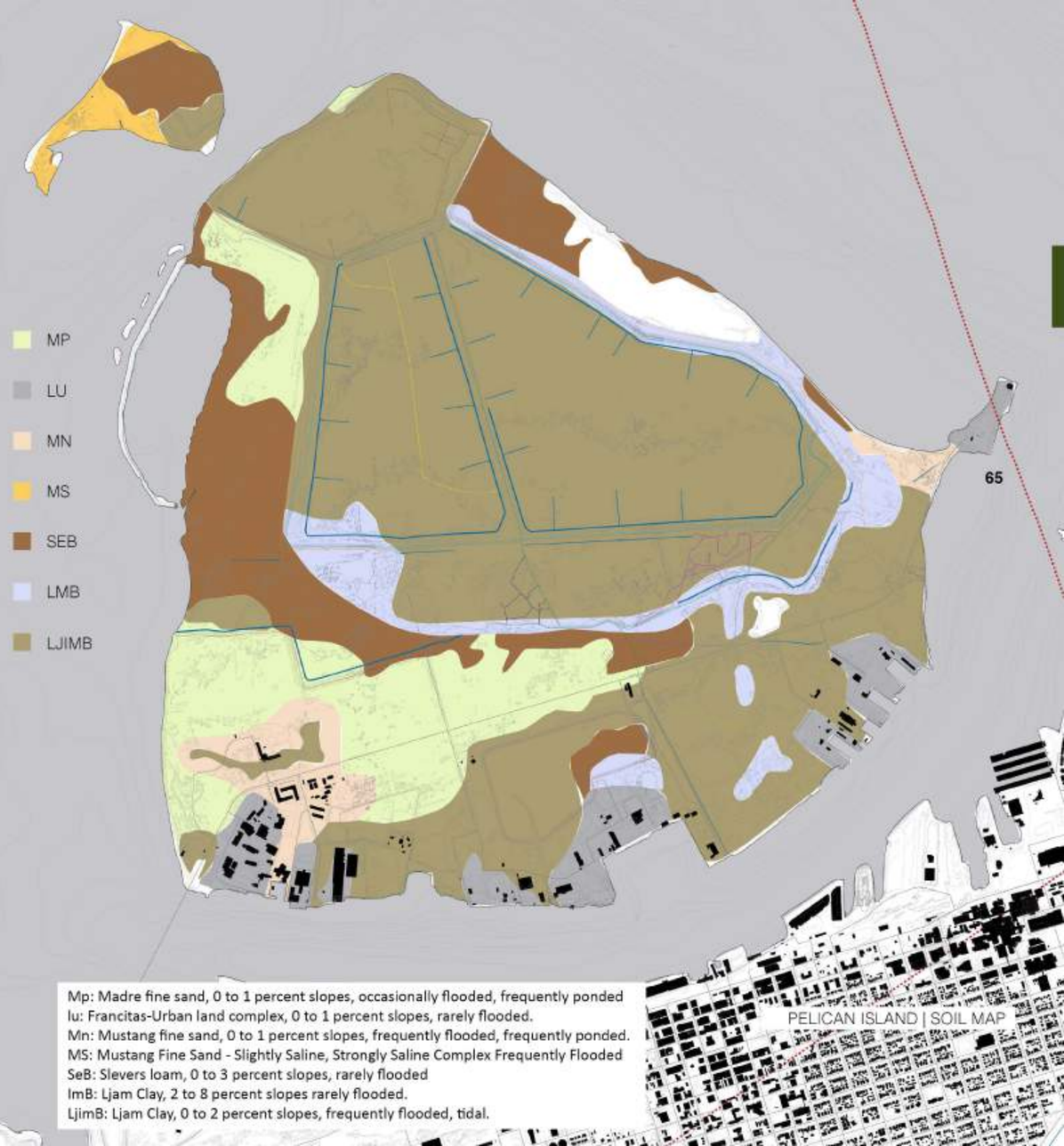
2120 | FLOODING | 10' SEA LEVEL RISE

PELICAN

PELICAN ISLAND | VEGETATION MAP



PELICAN ISLAND | HABITAT PRIORITY



Mp: Madre fine sand, 0 to 1 percent slopes, occasionally flooded, frequently ponded
lu: Francitas-Urban land complex, 0 to 1 percent slopes, rarely flooded.
Mn: Mustang fine sand, 0 to 1 percent slopes, frequently flooded, frequently ponded.
MS: Mustang Fine Sand - Slightly Saline, Strongly Saline Complex Frequently Flooded
SeB: Slevers loam, 0 to 3 percent slopes, rarely flooded
ImB: Ljam Clay, 2 to 8 percent slopes rarely flooded.
LjimB: Ljam Clay, 0 to 2 percent slopes, frequently flooded, tidal.

PELICAN ISLAND | SOIL MAP

PELICAN

Through compiling maps as a series of layers, opportunities for engagement revealed themselves. Although specific architectural follies did not arrive until much later; zones, pathways, and vegetation elements revealed themselves throughout the investigation/analysis phase of the project. By having such a plethora of visual and textual documentation, scenarios were designed with clear intention and a setlist of parameters. By forecasting what could lay in the future, design responses could be specified accordingly. However, even with specific time-lines approached specific design solutions were heavily dependant upon programmatic and functional purpose.

Even though the idea of 'layered' maps served as a foundational tool for the early research conducted, GIFs allow for the sequencing of visuals thus allowing for change viewed simultaneously. It is encouraged to scan the barcodes provided before navigating through the succeeding pages listed in the table of contents.

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SCAN ME STRATEGY 01

SCAN ME STRATEGY 02

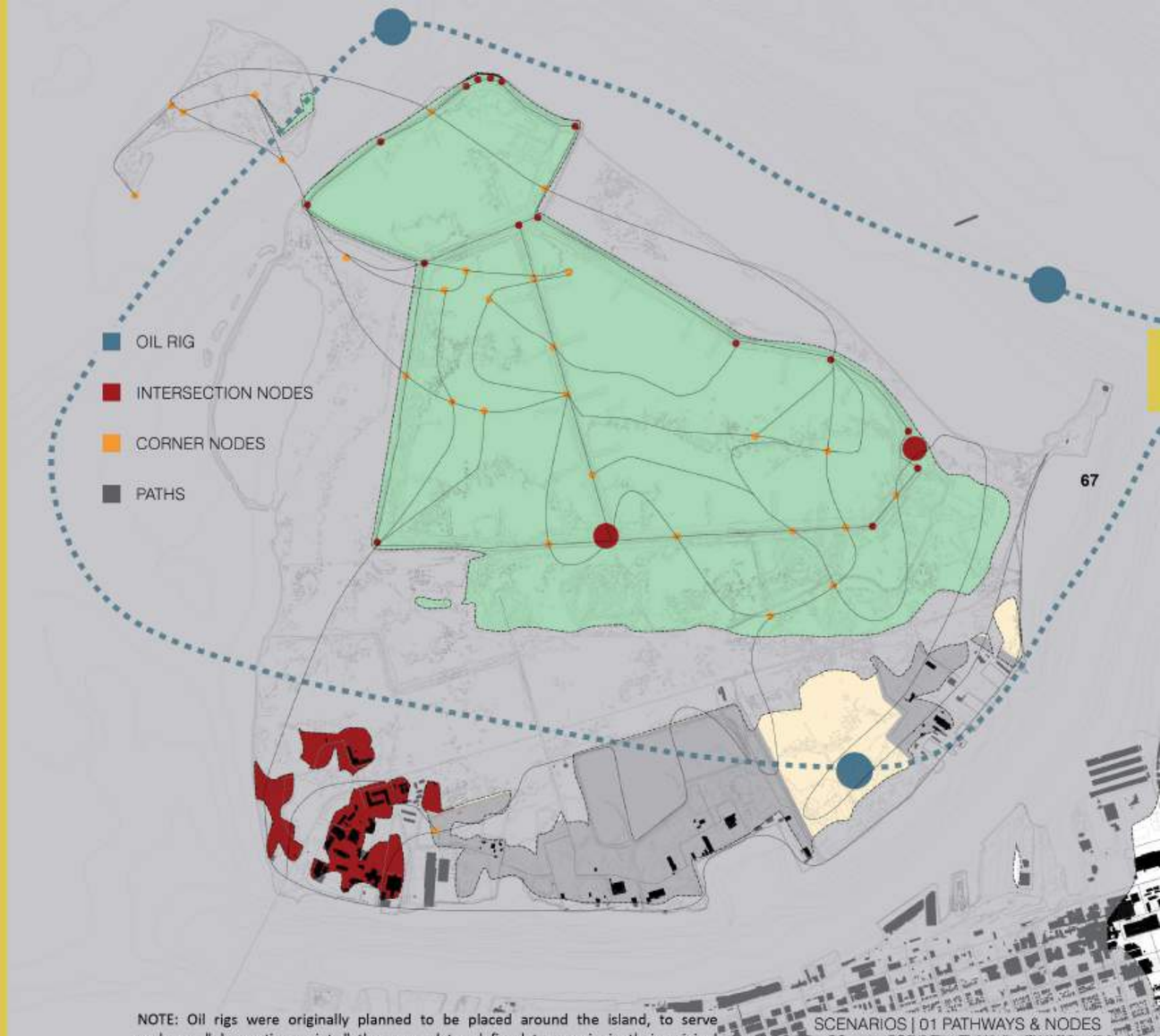
SCAN ME STRATEGY 03

SCAN ME 03: WATER&POWER

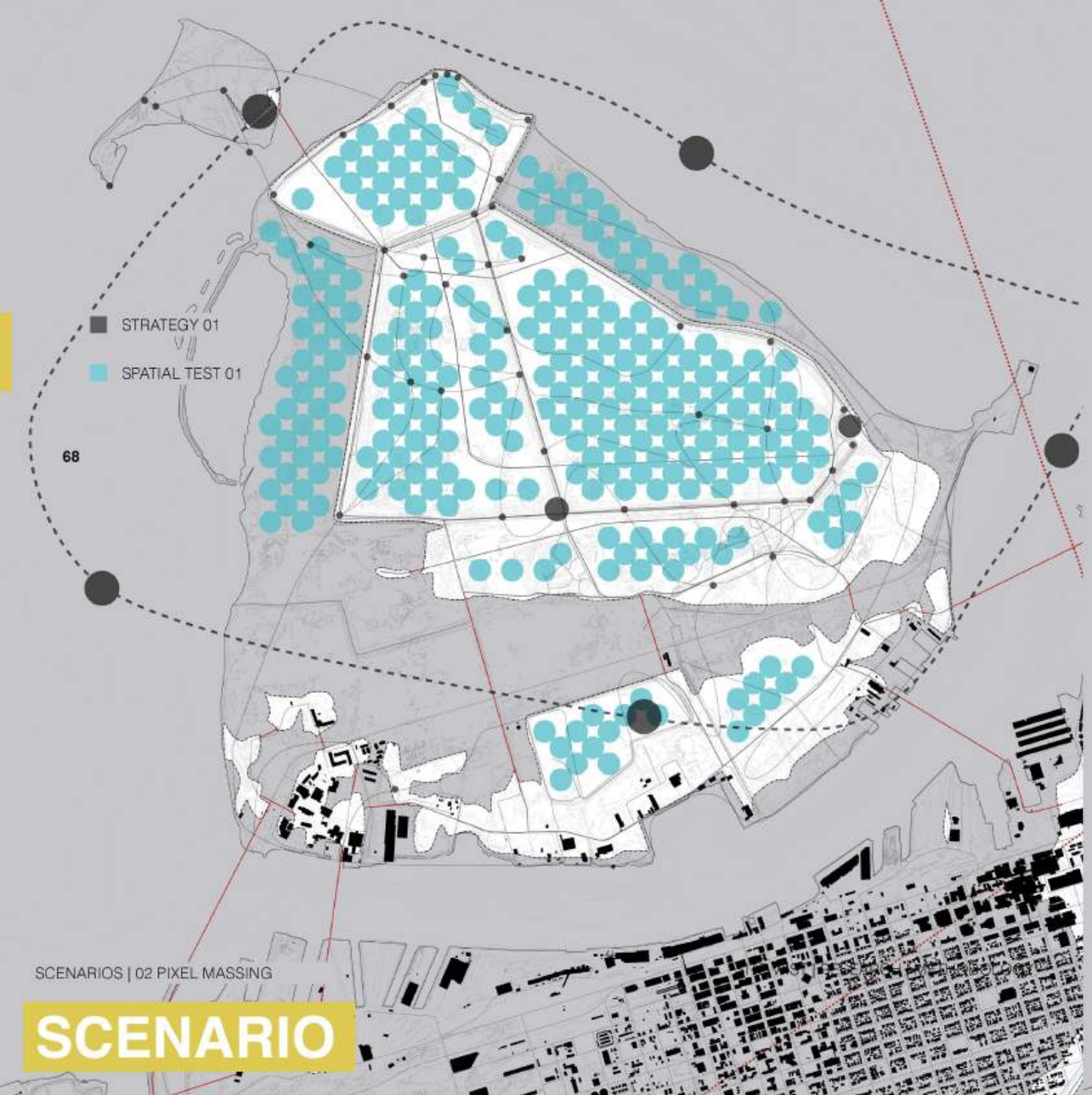
SCAN ME 03: PATHWAYS

SCAN ME 03: AR SYSTEMS

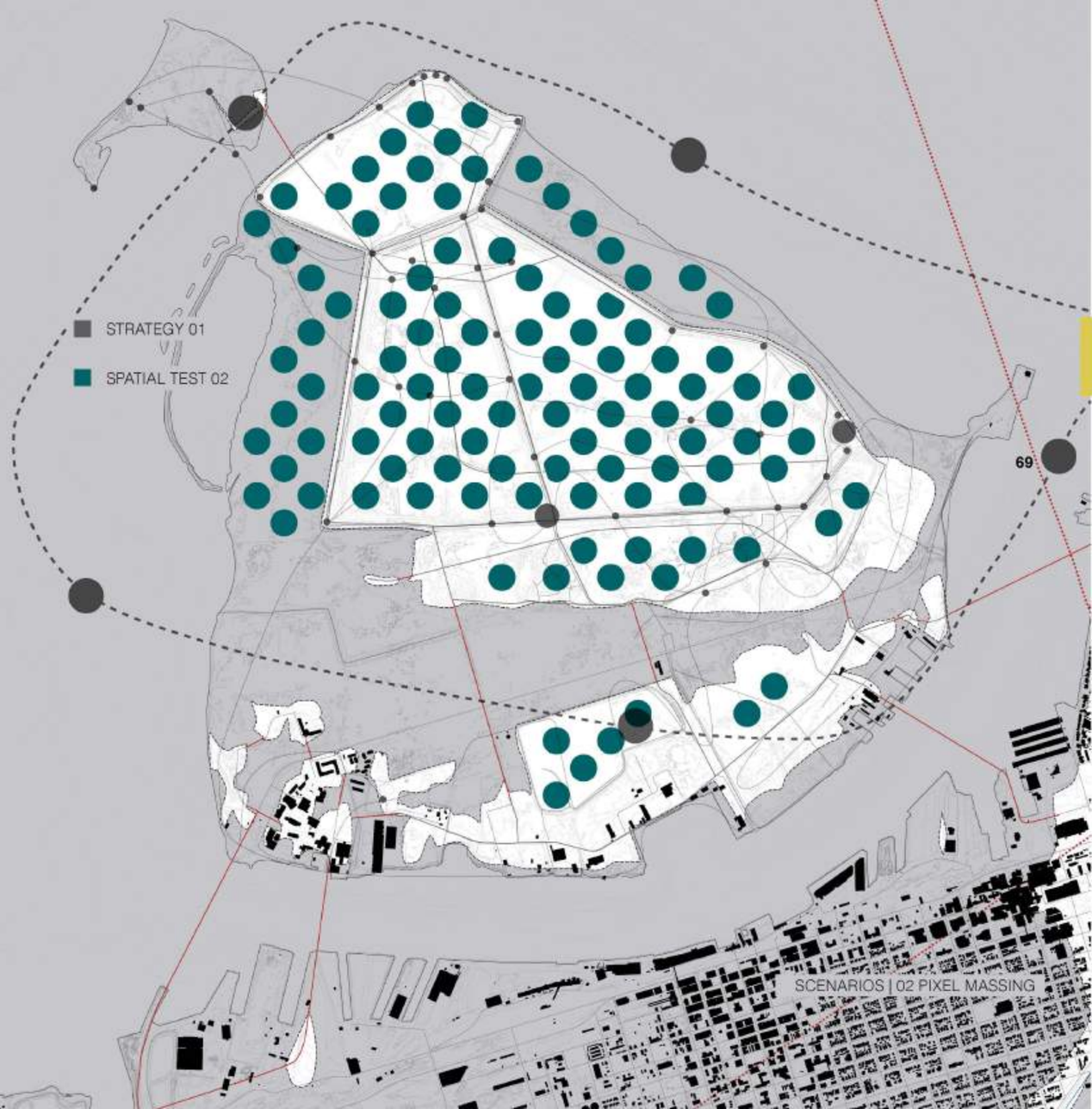
SCENARIO

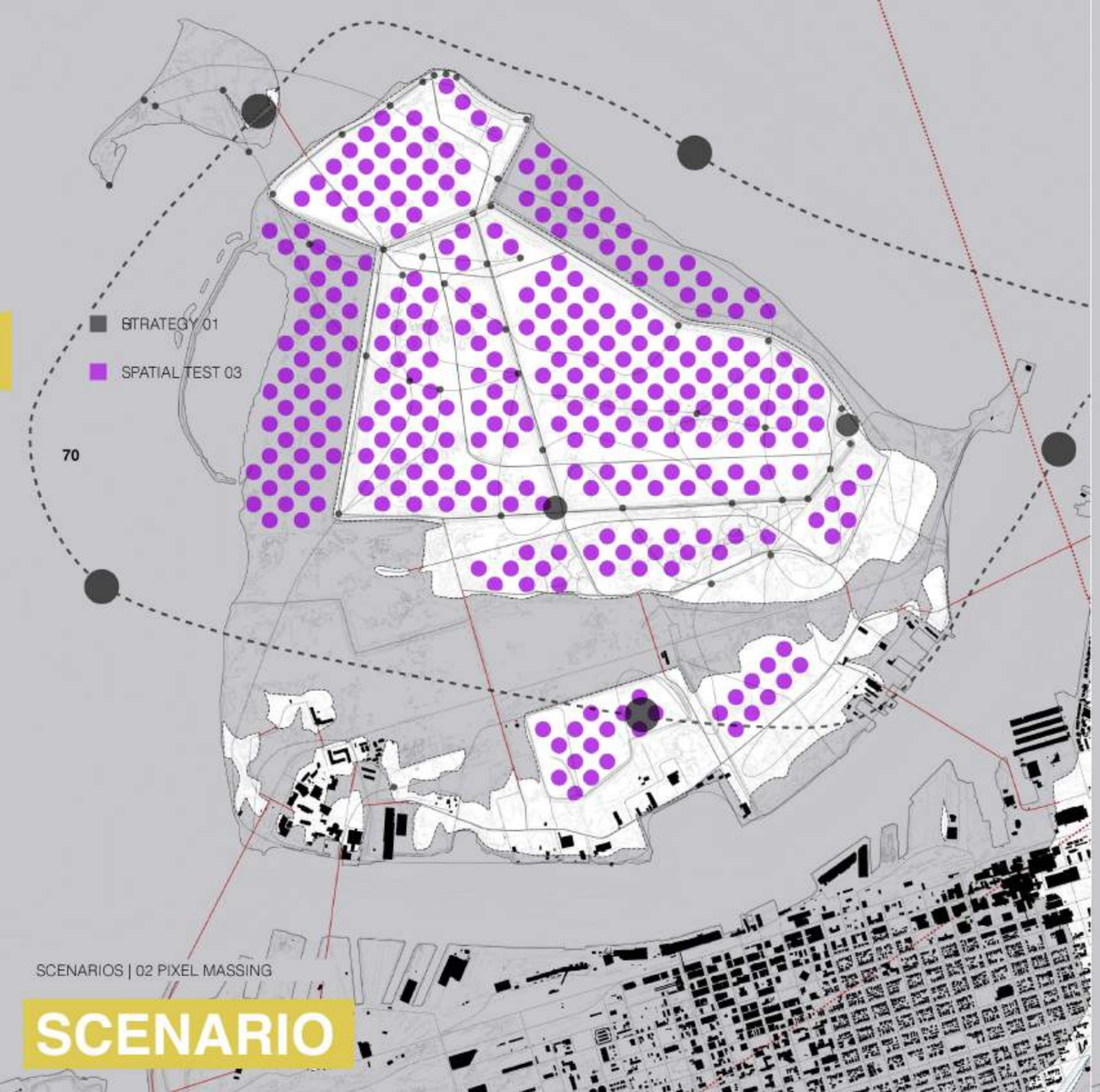


NOTE: Oil rigs were originally planned to be placed around the island, to serve as larger "observation points," they were later defined to remain in their original locations. Their relocation was decided to be unnecessary, and that leaving elements in their existing locations would more align with the idea of 'heritage scars.



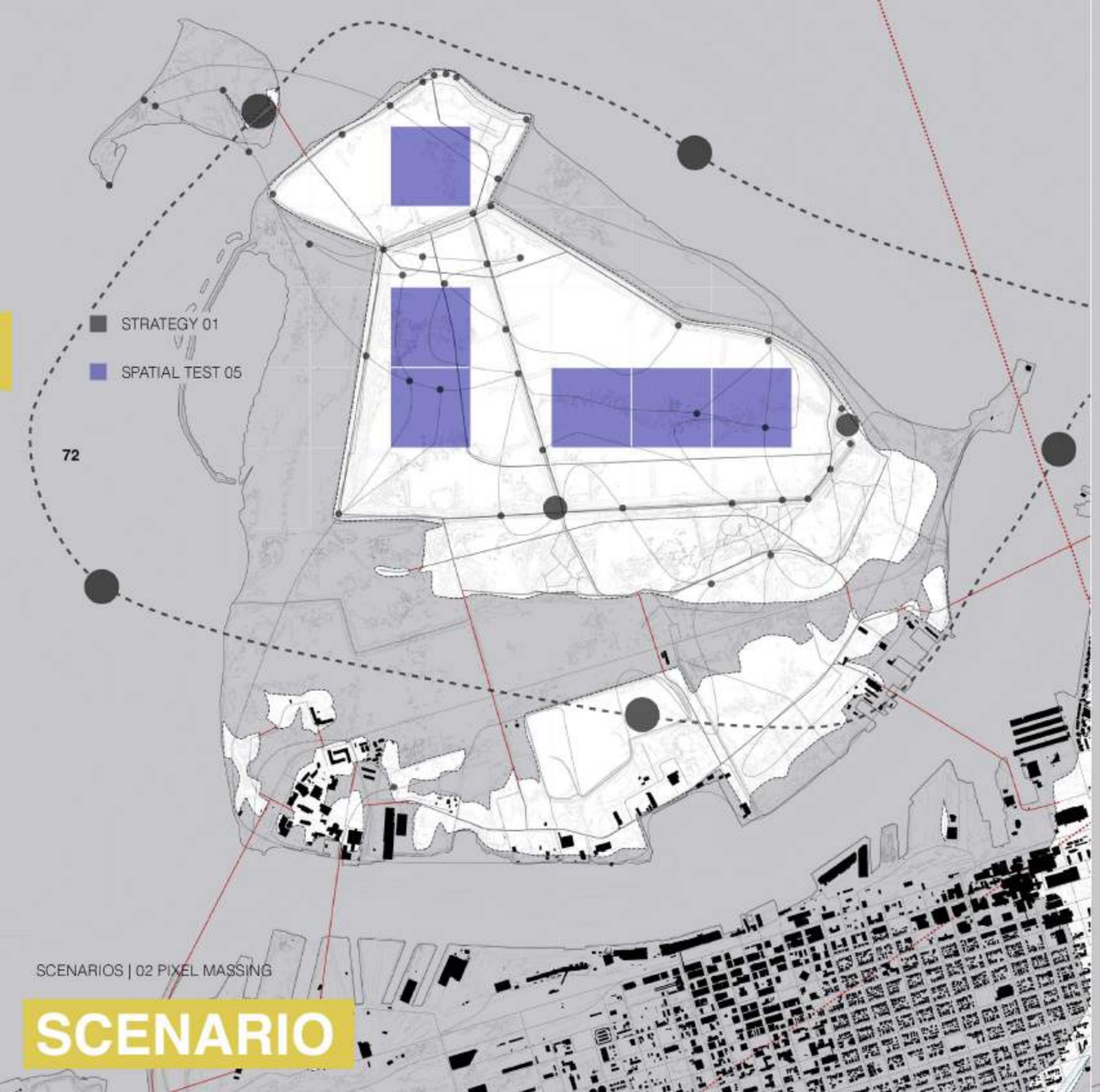
SCENARIO





SCENARIO

Although each strategy varies in clarity and in specificity, each was made with a different intention in mind. Different approaches were tested regularly because specific programmatic engagements were not discovered as readily.



SCENARIO

STRATEGY 01

SPATIAL TEST 07

SCENARIO

GRASSLANDS

MARSHLANDS

DENSE VEGETATION

LIGHT VEGETATION

BUILDINGS

Spending the first half of the project directing focus toward existing oil rigs, present on the island, the more intimate architectural engagements proposed became necessary as the project continued. Note that the presence of vegetation and water were identified through, a culmination of overlaying maps, and research data.

SCENARIO

NOTE: The colored splines shown are derived from historical landscape boundaries, and were repurposed into a series of guided trails. Each trail is proposed to allow a visitor to experience a particular sequence of events, places, and timelines.


GRASSLANDS
MARSHLANDS
DENSE VEGETATION
LIGHT VEGETATION
BUILDINGS


GRASSLANDS
MARSHLANDS
DENSE VEGETATION
LIGHT VEGETATION
BUILDINGS

SCENARIO

SCENARIOS | 03 ANTICIPATED 2120

SCENARIO

NOTE: Different vegetation zone types were introduced as the timeline progressed. Not only did this anticipate different growth rates of plant and animal life, but also provide different outcomes for how the island could develop.

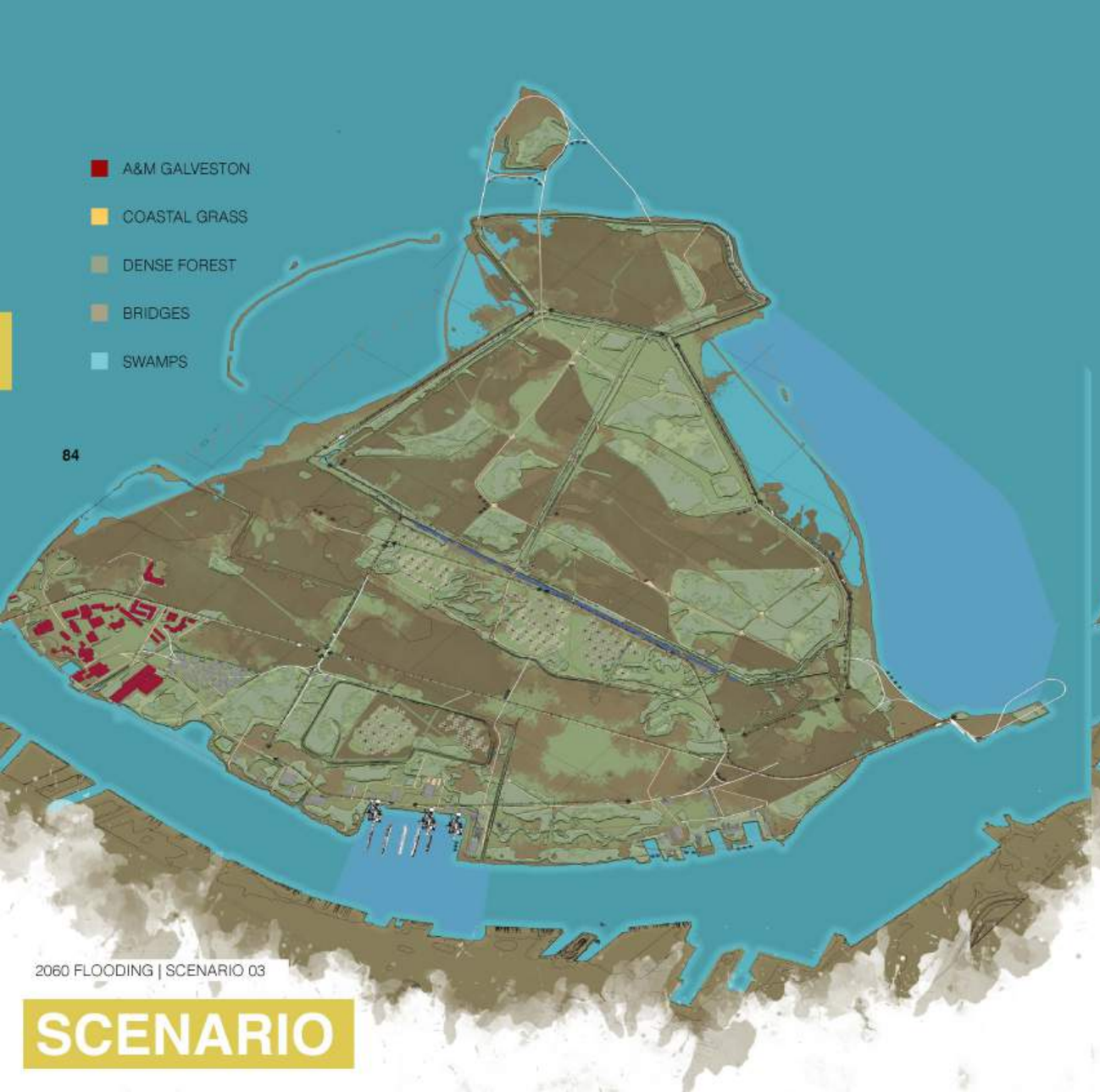
2020 FLOODING |04 EXISTING

2020 FLOODING | SCENARIO 01

SCENARIO

NOTE: Axonometrics were employed for the "selected" series of scenarios as a way to idealize scale, materiality, and verticality. After shifting to 3D drawing, the shift between macro and microelements across the project became essential for the remainder of active drawing development.

2040 FLOODING | SCENARIO 02



2060 FLOODING | SCENARIO 03

SCENARIO

2080 FLOODING | SCENARIO 04

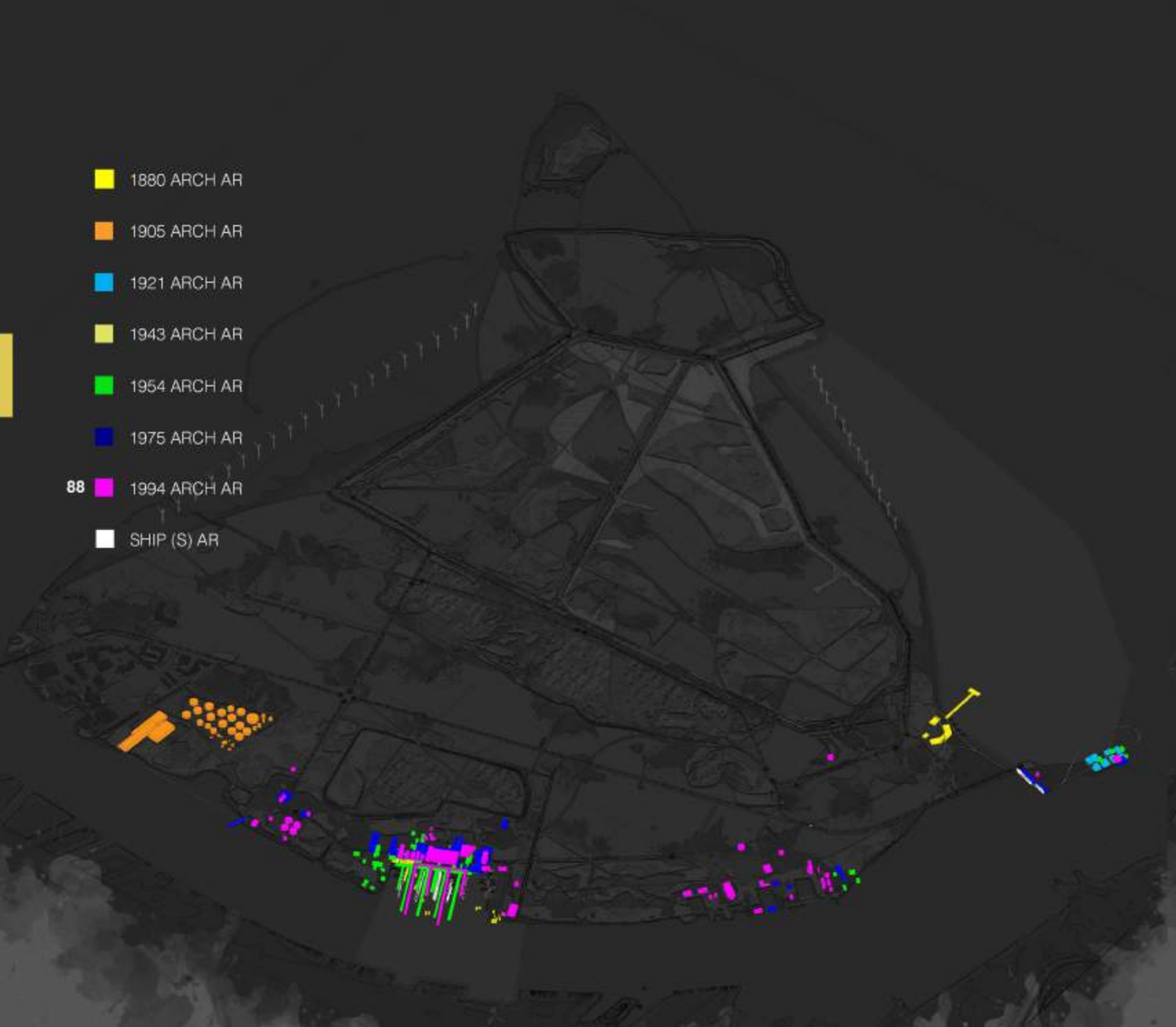
2100 FLOODING | SCENARIO 05

SCENARIO

NOTE: Because the project serves merely as an "investigation into a potential outcome," this scenario from 2100 was utilized for all macro detailing. Without acknowledging the long-term effects of climate change, any proposed outcome would be skewed by long-term flooding and sea-level rise.

2100 FLOODING | SCENARIO 06

1880 ARCH AR
1905 ARCH AR
1921 ARCH AR
1943 ARCH AR
1954 ARCH AR
1975 ARCH AR
1994 ARCH AR
SHIP (S) AR



INFRASTRUCTURE | AUGMENTED REALITY

SCENARIO

NOTE: Augmented reality systems serve as a means to understand physical elements of the past that have since been changed or are no longer present. Through the photographic, map, and textual historical research conducted, the shown heritage sites have been approximated.

POWER GRID

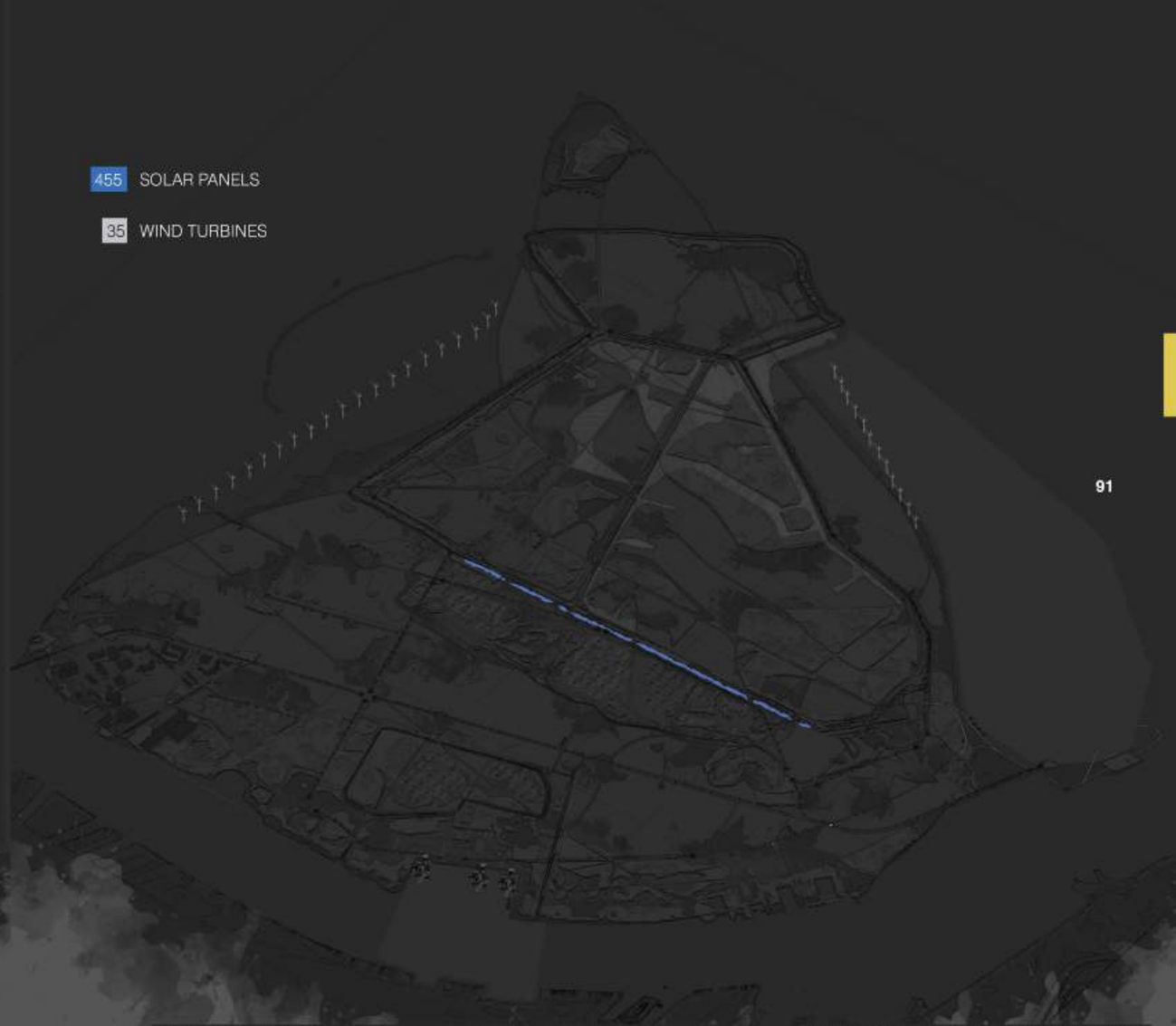
NOTE: The grid map shown connects all energy farming devices to larger electrically consuming elements. Although macro networks of electrical connections are not shown, the use of energy is primarily drawn to the southern parts of the island and central Galveston. Even with a majority of electrical lines being run above ground, subterranean power proved to be necessary for offshore wind turbines, and architectural follies.

INFRASTRUCTURE | POWER GRID

INFRASTRUCTURE | WATER & SEWAGE

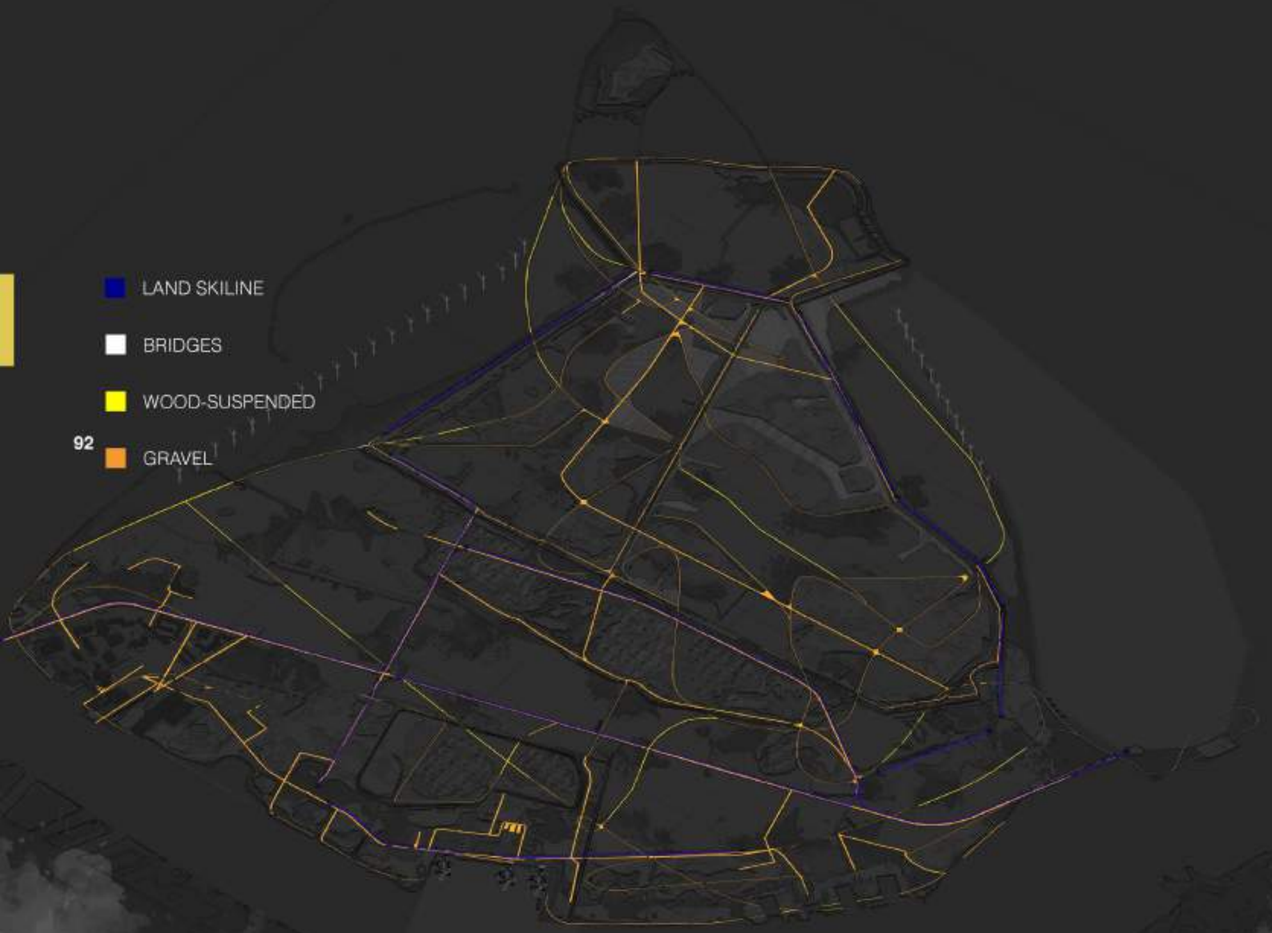
SCENARIO

NOTE: In addition to an electrical grid, water, and sewage pipelines were essential to maintaining a freshwater presence in existing site elements, new proposed camping infrastructure, and larger off-shore rig figures. Even though waterlines provide more micro clarity to aspects of the site, maintaining sewage and water pipelines was essential.



NOTE: Connected directly into the power grid system shown earlier, the solar panels (10 KW/h) and wind turbines (6 million KW/h per year) are shown to provide enough annual power for the island itself and for nearly 58,000 homes in the surrounding area. Note, that special considerations were made for wind-turbine proximity to human-accessible areas of the project.

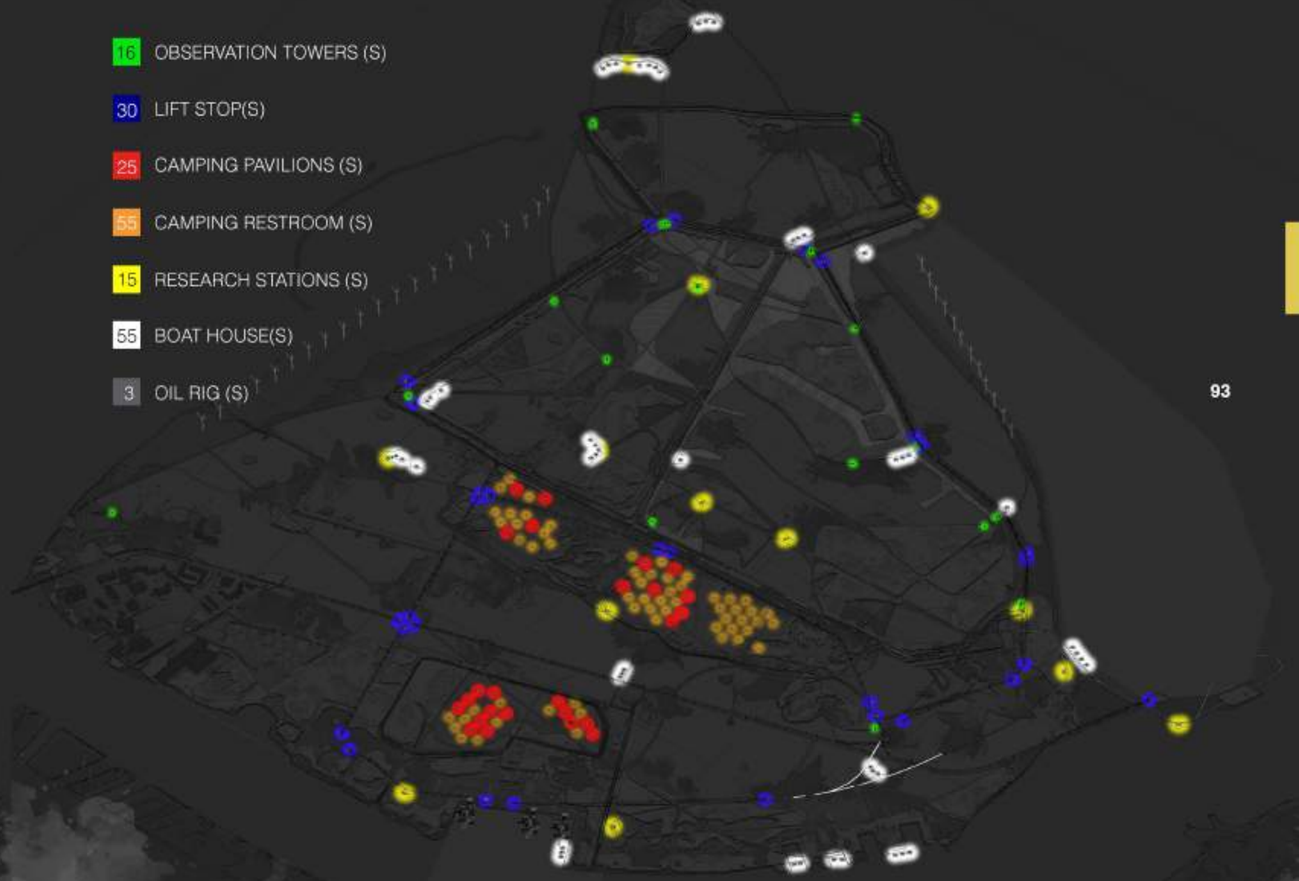
INFRASTRUCTURE | ENERGY HARVESTING



INFRASTRUCTURE | WATER & SEWAGE

SCENARIO

NOTE: Due to the nature of pathways across the island constantly shifting proximity from marshlands, to coastal edges, to inland forests the need for different pathways was necessary. As a result bridges, wood-supported, and gravel paths were plotted accordingly. Additionally, due to the scale of the project, a larger movement element was needed to allow for elevated, long-span movement, thus a skylift was introduced.



NOTE: Research conducted revealed the use and purpose of each element. Observation towers, lift stops, camping pavilions, restrooms, research stations, boathouses, and oil rigs served as "built" acupunctural elements spread throughout the site. Their placement was dictated via programmatic, functional, and proximity-based design parameters.

INFRASTRUCTURE | ARCHITECTURAL FOLLIES

The next series of sections break up the selected scenario into a series of specific moments. Each section title corresponds to elements present in each instance. For this particular moment, the arrival to the island remained essential in the maintenance of a symbiotic relationship between Galveston and Pelican Island. Currently, Pelican Island serves as the only non-maritime access point to the island. The bridge being constructed in the mid-1950s allows for boat and vehicular access.

Because climate change serves as a backdrop for the project narrative, vehicular transport has been ultimately prohibited for public use. As a result, a Sky-lift (Ski-lift) system has been proposed to take people both on and off the island.

SCAN ME

MOMENT 01 AXO

MOMENTS 01 | ARRIVAL | INTRODUCTION

ARRIVAL

NOTE: With A&M Galveston still occupying the south-western corner of the Island, direct access to campus remained necessary throughout the project. Additional areas that were left untampered are that of Seawolf Park and the existing post-industrial sites.

Additionally, to view the relationship between the shown moment, and the proposed infrastructure elements, each section is given a dedicated barcode to showcase sequential maps, GIFs, and animated elements.

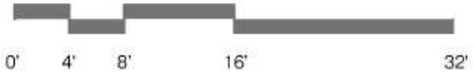
MOMENTS 01 | ARRIVAL | A&M GALVESTON

MOMENTS 01 | ARRIVAL | CAUSEWAY

ARRIVAL

NOTE: The Sky-lift allows for passive observation and movement throughout the island. Whether it be suspended above Galveston Harbor, Pelican Island, or the Houston Channel the Skylift could allow for vertical engagement. By giving users an opportunity to view pelican island from an elevated position, boundaries and elements can be seen more collectively rather than isolated.

MOMENTS 01 | ARRIVAL | SECTION



ARRIVAL

NOTE: Allowing for the regrowth and erosion created through the introduction of indigenous plant life, could yield opportunities for natural habitat creation of animal life. Although the manicured land would remain necessary for pathways and larger support elements, allowing the island to be its own custodian ideally could rebuild disrupted ecological hierarchy.

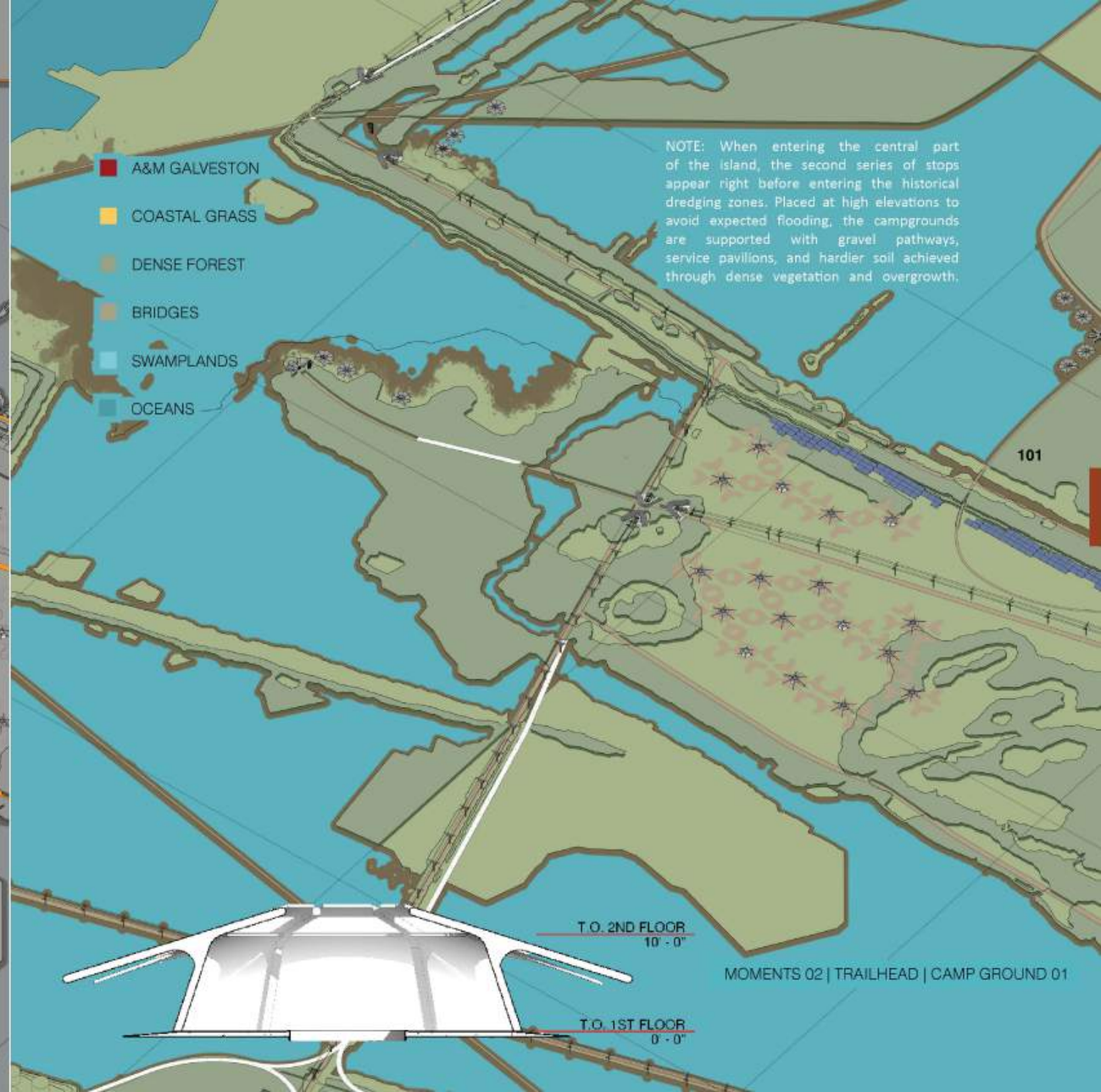
Moving deeper into the island, the central Pelican Island Causeway transitions into Seawolf Parkway. Anticipated to be underwater by the year 2100; elevated gravel pathways were splintering across the island to allow for complete access. By introducing periodic stops on the skylift, island-goers will be able to decide what portions of the island to explore. Due to the nature of expected flooding, camping was only idealized to be located on elevated portions of the island away from large wind turbines and expected terra-changes.

The title of Trailhead alludes to the many routes campers and hikers can take to varying portions of Pelican Island. Although the skylift does allow for an elevated experience, pedial travel should allow for a more intimate interaction with various elements of the island.

SCAN ME

MOMENT 02 AXO

TRAILHEAD



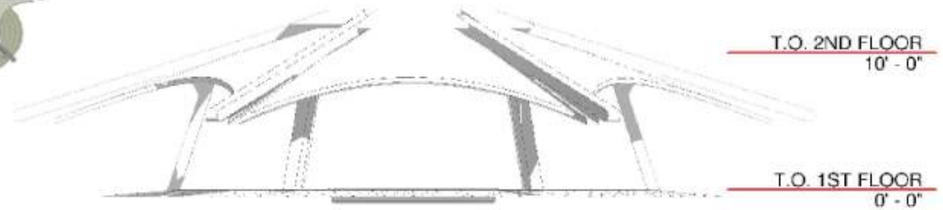
MOMENTS 02 | TRAILHEAD | DREDGING SECTION

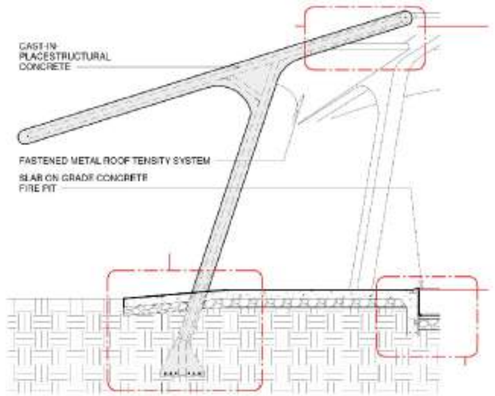
MOMENTS 02 | TRAILHEAD | SKILINE TOUR

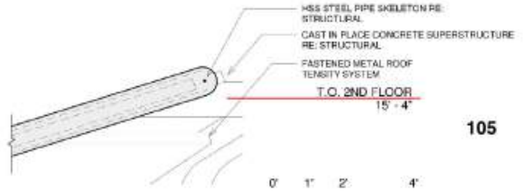
TRAILHEAD

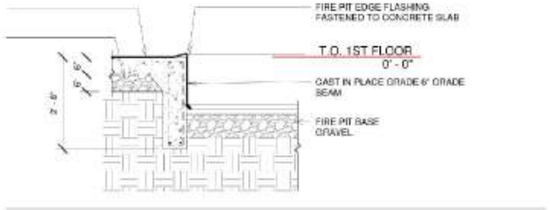
MOMENTS 02 | TRAILHEAD | SKILINE STOP

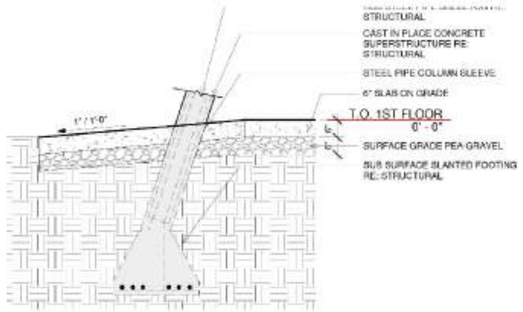
TRAILHEAD











MOMENTS 02 | TRAILHEAD | CAMPING DETAILS

MOMENTS 02 | TRAILHEAD | CAMPING SECTION

TRAILHEAD

NOTE: Campgrounds function almost boundlessly aside from the directed pathways, architectural elements, and dense vegetation areas. Besides recommendations on where to camp, each visitor can choose when and how to camp. By having direct access to pathways, and the skylift system, getting from one part of the island to the next becomes an unconstrained leisurely experience.

MOMENTS 02 | TRAILHEAD | PERSPECTIVE

Heading further North, this specific route leads to one of the larger intersections that occur across the Island. Primarily a focus of one of the earlier strategies proposed, intersections serve as both a meeting and decision point for travelers.

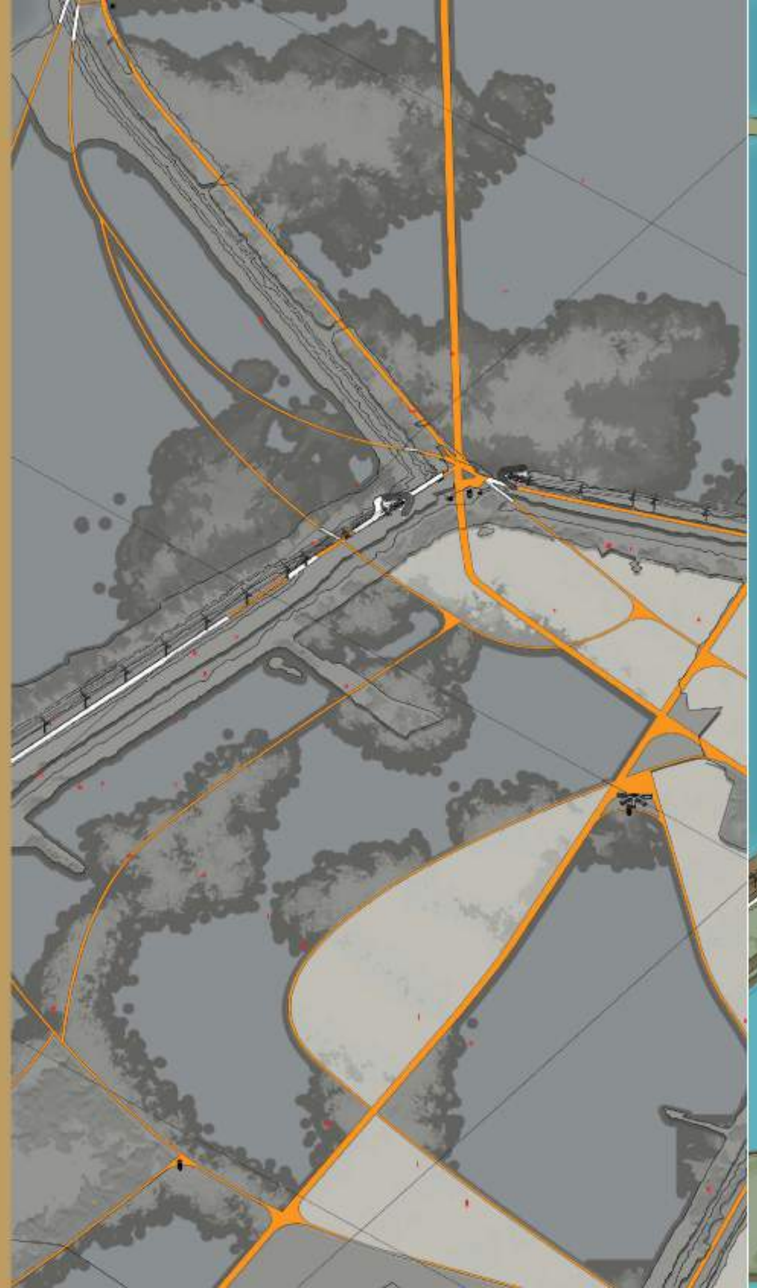
The idea of decisions was extremely important in how pathways were laid out throughout the island. Because of how much change has occurred over the past 200 years, the fragmented appearance of pathways is a direct result of human decisions. Whether it be the introduction of coastal dredging or architectural development of various companies, there are scars present everywhere.

Although the presence of scars will be less apparent as the island gives way to vegetation growth, the presence of the past will be ghosted via the presence of artifacts and augmented systems.

SCAN ME

MOMENT 03 AXO

ADVENTURE



NOTE: Coastal grass and marshlands serve as both acknowledgments of the historically present brackish and salt marshes. After observing coastal planes present in nearby areas of present-day Galveston and Galveston state park, idealized outcomes of expected lagoons and grasslands are projected throughout the shown scenarios.

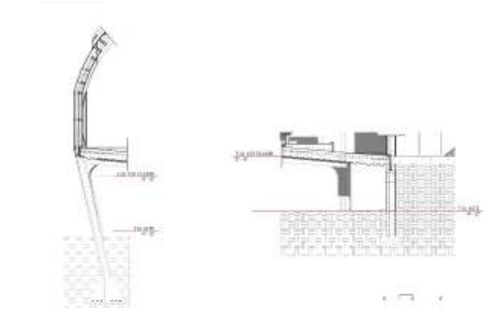
Additional attention should also be drawn to the larger presence of marshland in the northern part of the island. This due to the decreased presence of human infrastructure and, the potential increase of serene plant and animal life

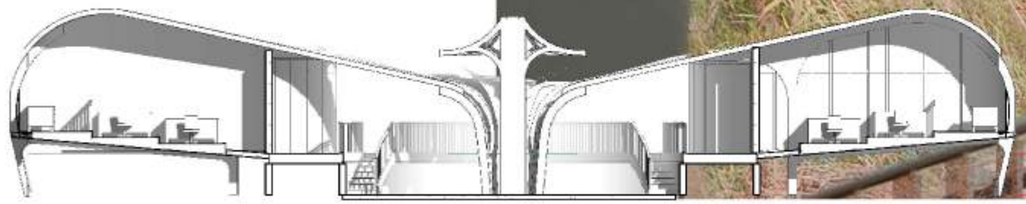
MOMENTS 03 | ADVENTURE | BIRDWATCHING SCHEMATIC

MOMENTS 03 | ADVENTURE | SKYSTOP SECTION

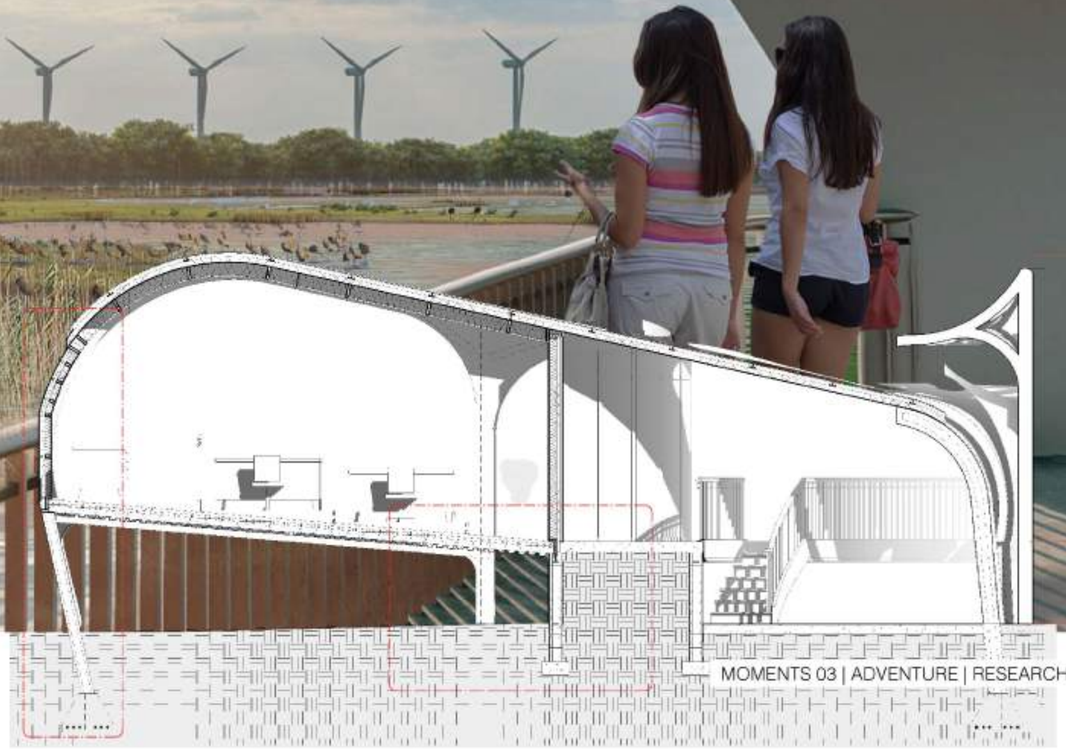
ADVENTURE

NOTE: The research stations shown are proposed to serve as more permanent means to conduct on-site research, observation, and data collection. By having a series of "pedals " that function independently of one another, island visitors can observe research being conducted without the concern of direct interference or distraction.





MOMENTS 03 | ADVENTURE | BIRDWATCHING DETAILS



MOMENTS 03 | ADVENTURE | RESEARCH STATION

ADVENTURE

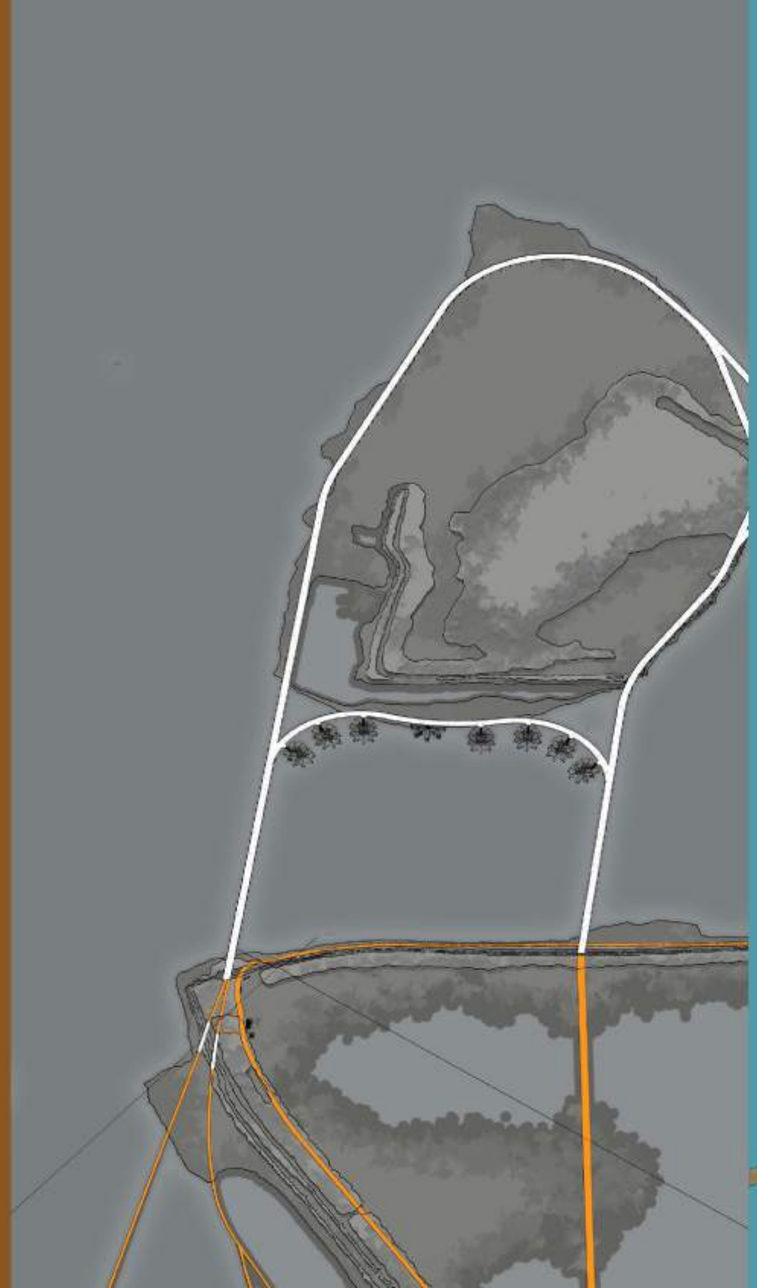
Sailing off the most northern point of the island, "The Cut" of Pelican Island remains as a fragment of one of the many boundaries of the island's past. Although the neck of this fragment should be entirely submerged by the year 2040, the southern coast serves as an anchor point for an elevated bridge and boathouse pier. Mimicking the presence of a shipyard on the southern coast of Pelican Island, the Pelican Cut channel could prove to be the ideal area for watersports.

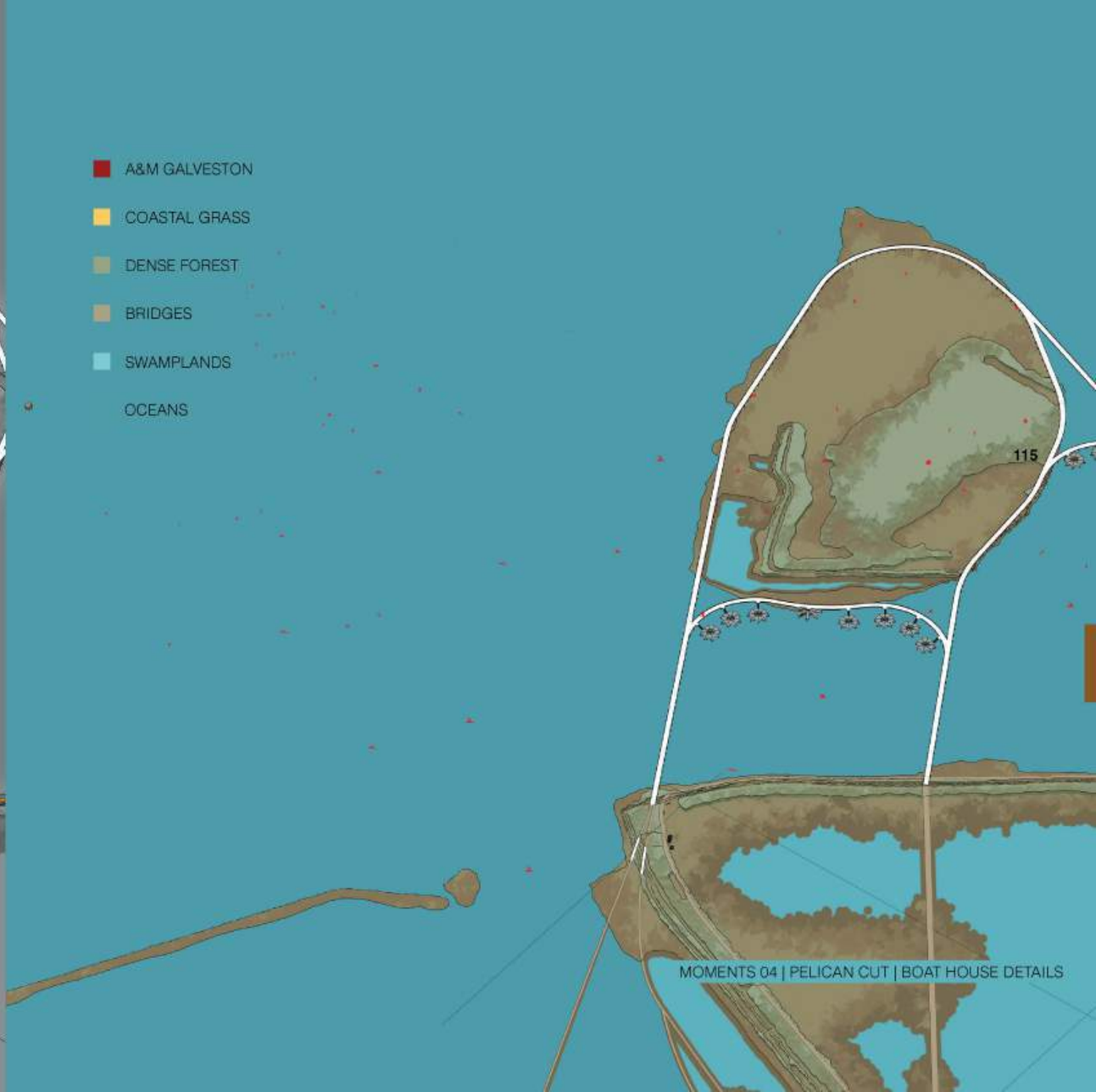
Although there is no electrically powered movement element present, the Pelican Cut allows for easy access to the Houston Bay, and an easy view of the Houston Skyline. Sandwiched between two coastlines, Pelican Cut should allow for easy docking and undocking of small watercraft.

SCAN ME

MOMENT 04 AXO

PELICAN CUT





116

117

PELICAN CUT

MOMENTS 04 | PELICAN CUT | BOAT HOUSE SECTION

PELICAN CUT

NOTE: Small-craft non-mechanized watercraft would greet a majority of on-site areas to minimize plant and animal life interference. By having designated areas were human interfacing can occur, natural phenomena can occur more often without the concern of industrial pollution of noise, light, and gas.

MOMENTS 04 | PELICAN CUT | KAYAKING TOURS

Leaving the far northern portion of the island and heading south toward Seawolf Park, the view of Port Balivair is easily seen from the entire eastern coast of Pelican Island. In addition to an elevated view from the skylift, the former dredging plots spread across the island create opportunities to see newly formed, grasslands, forests, and antiquity elements offshore.

Although the USS Selma is constantly being consumed by the sea, the shallow surrounding waters of Pelican would still minimize larger boat traffic. And if dredging is ceased, could result in maintenance of this site.

Similar to the "Adventure" section of these series of moments, the Bayside experience hones in on providing varying opportunities and routes for Pelican Island visitors to birdwatch, hike, backpack, camp, and traverse the historical slopes of Pelican Island.

SCAN ME

MOMENT 05 AXO

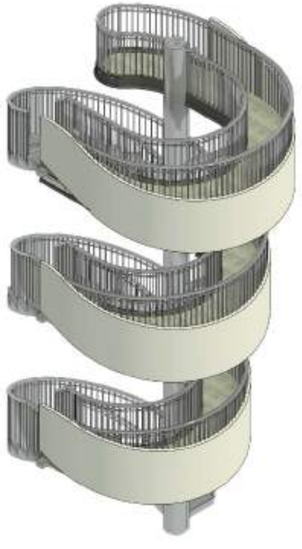
MOMENTS 05 | BAYSIDE | INTRODUCTION

BAYSIDE

NOTE: Offshore wind turbines have seen a rise in presence globally over the past decade. In this case, they also serve as visual boundaries for both island goers and sailors. Similar to most on-shore wind energy systems, minimized presence of trees and habitual locations for aviary animal life is a necessary consideration. Given such, coastal grass and marshland regions have been shown as potential solutions if wind energy systems are to be deployed.

MOMENTS 05 | BAYSIDE | OBERSERVATION DETAIL

NOTE: The more elevated the observation spot, the farther the user can see. By proposing varying heights for observation booths, visitors are given the choice of areas and elevations to view plant and animal life without harm of direct interference.



MOMENTS 05 | BAYSIDE | TOWER AXONOMETRIC

MOMENTS 05 | BAYSIDE | OBSERVATION TOWER PLAN

0' 4' 8' 16' 32'

BAYSIDE

MOMENTS 05 | BAYSIDE | AXONOMETRIC

BAYSIDE

NOTE: The presence of birds in the Galveston Bay and the Pelican Island area also served as a guide for the creation of observation and bird-watching booths across the island. With the proposed return of natural vegetation areas and the introduction of the various watchtower, opportunities to see birds safely and from a distance.

MOMENTS 05 | BAYSIDE | MARSHLAND PERSPECTIVE

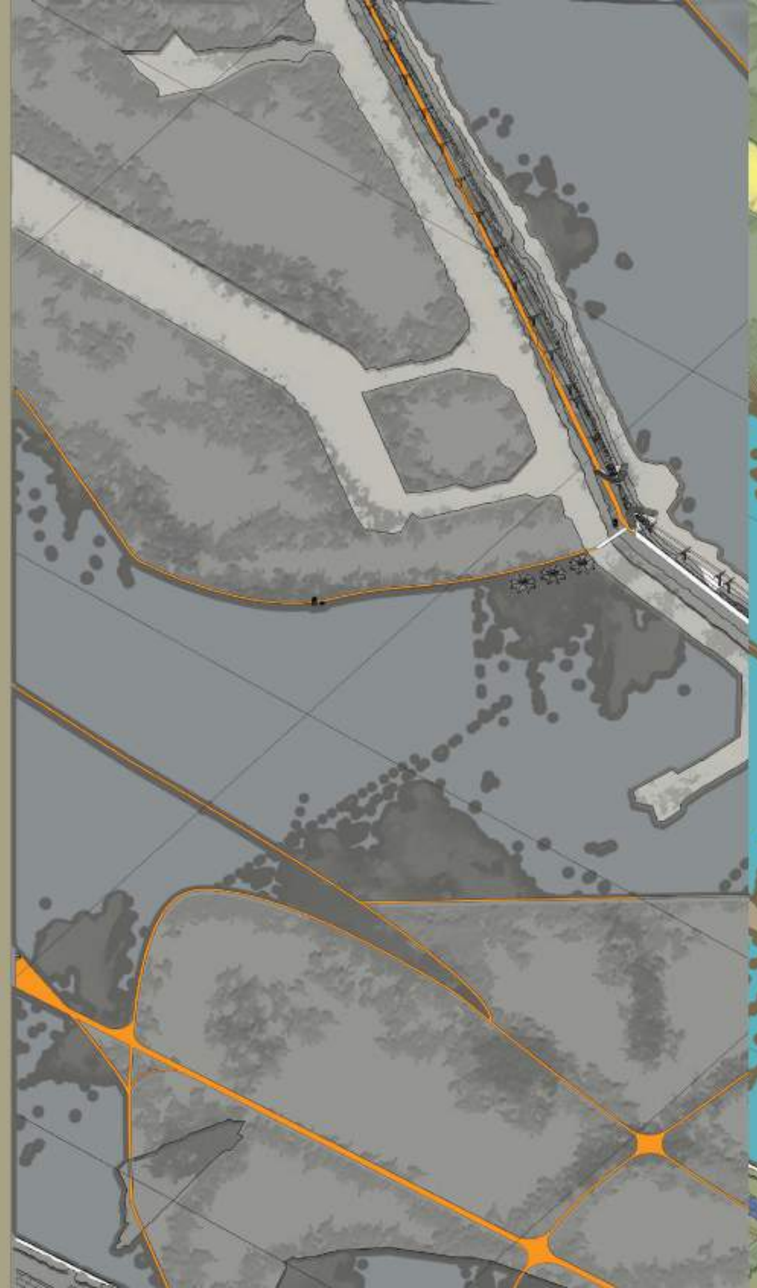
With energy farming serving as a supplementary aspect of the island, both coastlines are proposed to be greeted with a familiar silhouette of wind turbines. Spaced 500ft + offshore, the elements serve as a visual and physical boundary for both plant and animal life.

By having solar panels more centrally located toward areas that help maximize solar gain and minimized wind load applications, their presence central to the island was done strategically. Tied with a collective grid, energy storage would be managed off-island due to the amount of energy produced versus the amount utilized.

SCAN ME

MOMENT 06 AXO

FARMING



MOMENTS 06 | FARMING | SOLAR COLLECTION

FARMING

NOTE: By establishing energy harvesting elements as the first path toward a proposed future for the Island, there is an immediate presence of a cleaner energy solution. Additionally, by integrating solar panels and wind turbines early, plant and animal life can grow and adapt, rather than be distressed in the future.

MOMENTS 06 | FARMING | COASTAL WALK

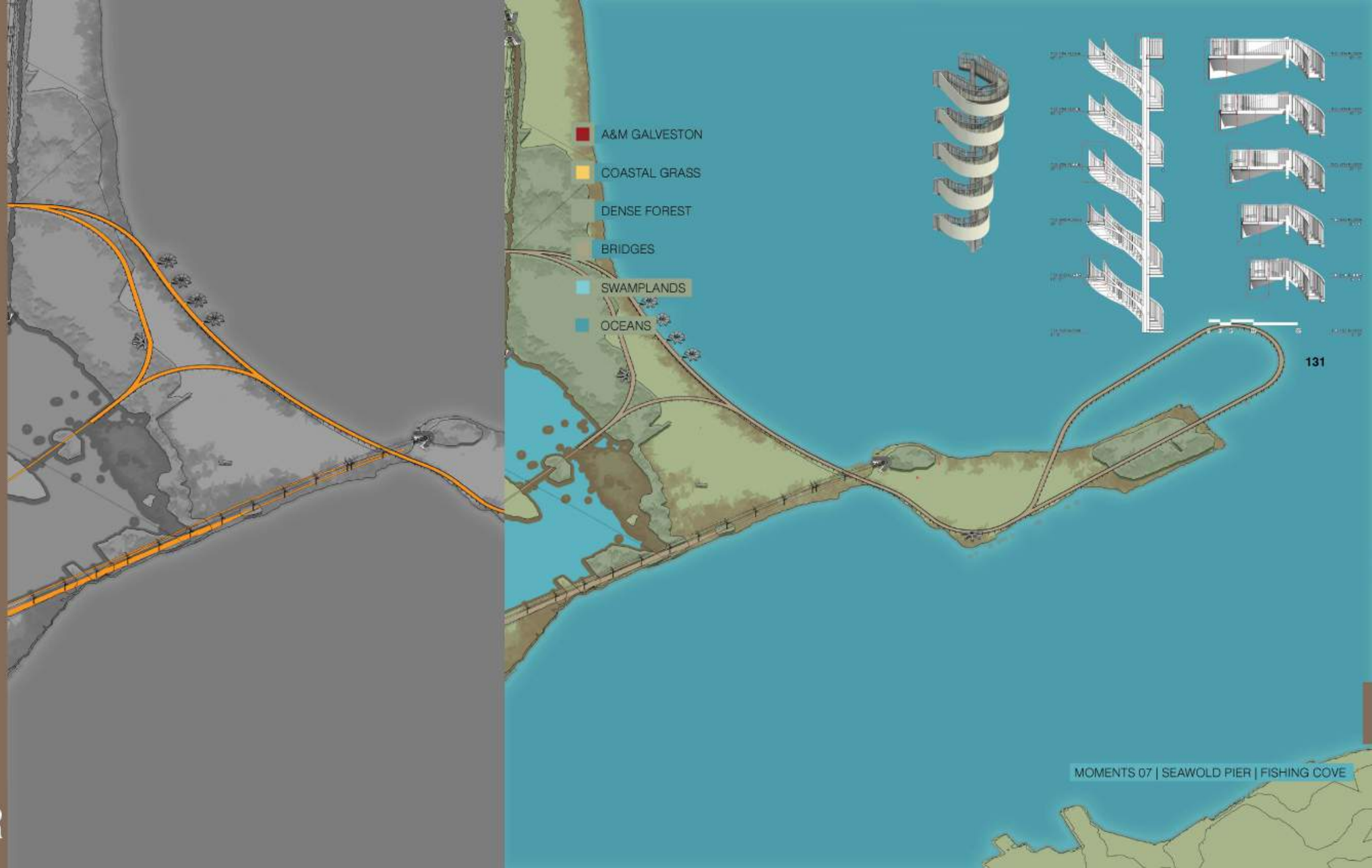
Upon visiting Pelican Island, Seawolf Park currently serves as a massive fishing pier and historical maritime site. By having a close view of the USS Selma and relatively shallow-depth saltwater fishing, architectural engagement was approached explicitly. Through the addition of observation towers for bird watching and the introduction of a larger pier, fishing is still encouraged; however, less commercialized. By removing vehicular access, more direct engagement with the landscape is enticed and boat travel encouraged, yet ecologically considerate.

Due to the current maritime museum in Seawolf Park being hosted in the WWII era destroyer and submarine, the need for additional architectural elements on the Seawolf Park location was avoided.

SCAN ME

MOMENT 07 AXO

SEAWOLF PIER



MOMENTS 07 | SEAWOLF PIER | WADE FISHING

SEAWOLF PIER

NOTE: As realized when visiting Pelican Island, fishing serves as a massive leisure activity for locals and visitors alike. By maintaining both the location and the idea of leisure through fishing, Seawolf Pier is proposed to be expanded and embellished with boathouses, that allow for craft-based fishing alongside the beach, pier, and wade fishing.

MOMENTS 07 | SEAWOLF PIER | COVE PERSPECTIVE

NOTE: Augmented reality systems serve as a necessary tool toward bridging the gap between understanding and relating to the past. The image shown idealizes what a Civil War fort could look like through the lens of an augmented visual aide. If such a system was utilized in a project such as the proposed one, heritage is introduced 3-Dimensionally.

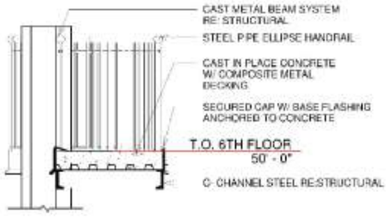
2B

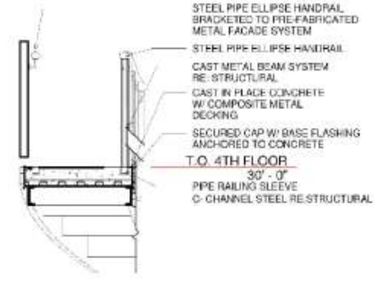
3B

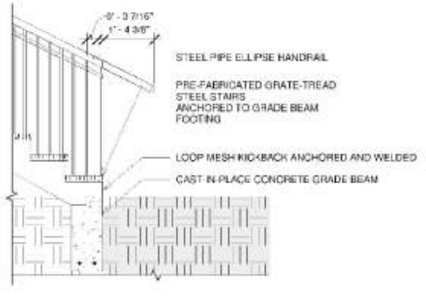
SCAN ME

CIVIL WAR FORT AUGMENTED REALITY

SEAWOLF PIER







SEAWOLF PIER

Looping back toward the west, the camping sectors of the island are proposed to be an opportunity for long-term engagements with the island itself. While infrastructure follies such as the observation towers and boat houses serve more for entertainment, camping and research stations serve extended, functional use.

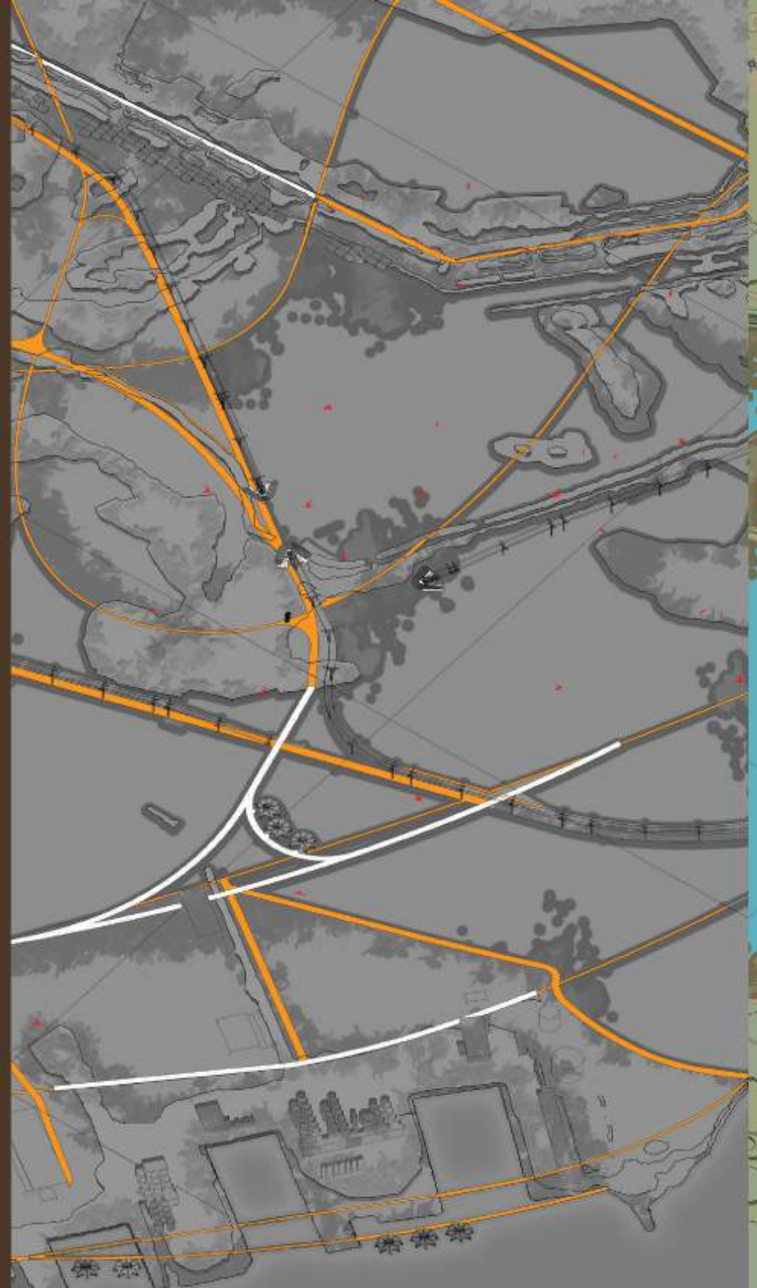
With a slew of different camping areas provided, thousands of people could spend their evenings on the island and witness a completely different island experience. Falling in tune with a collection of pavilions, restroom facilities, and service pavilions the camping spaces are anchored via paths and a new treelines.

SCAN ME

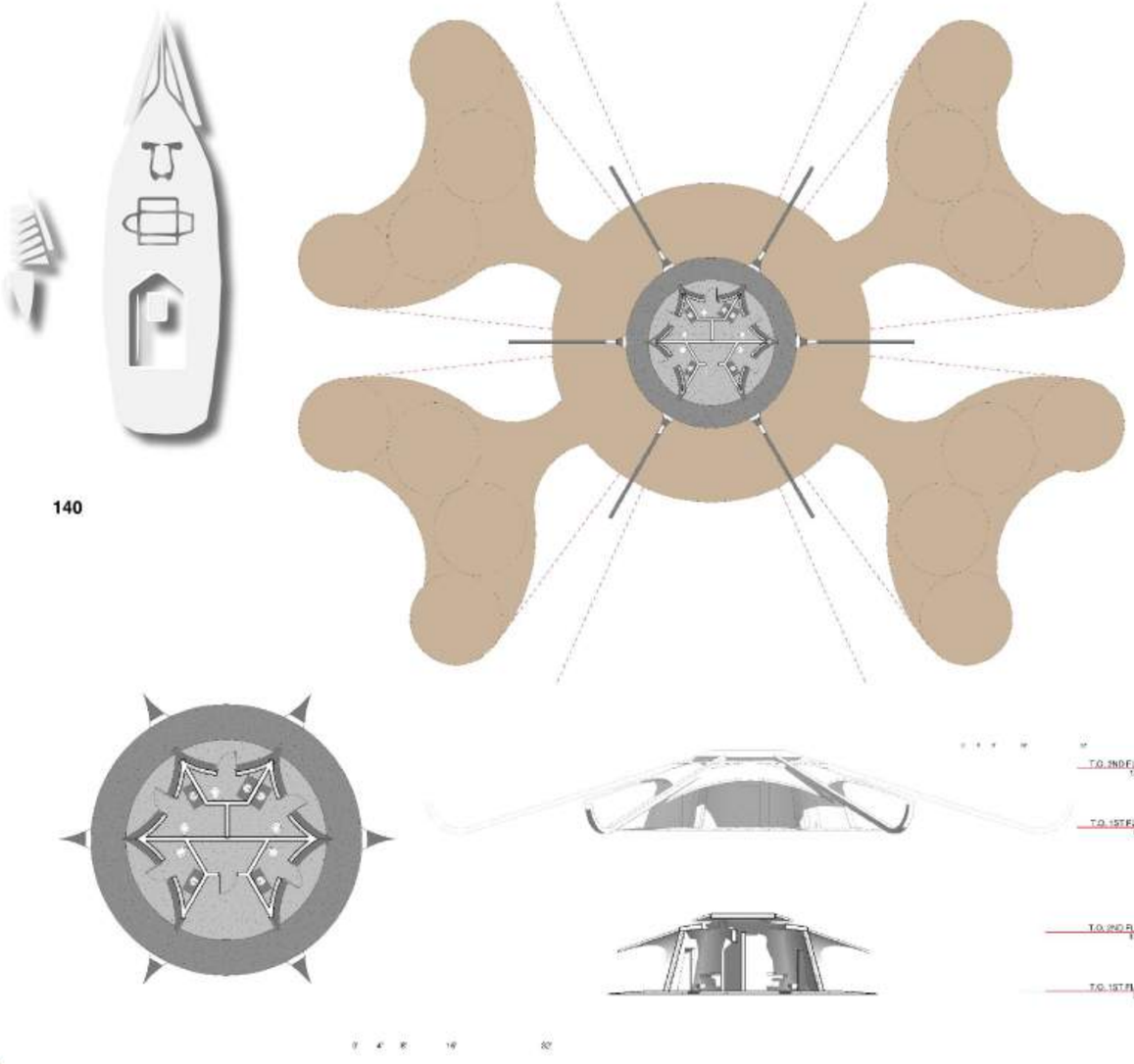
MOMENT 08 AXO

MOMENTS 08 | CAMPING | INTRODUCTION

CAMPING



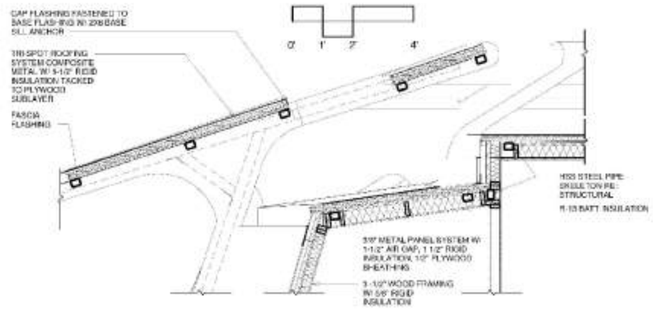
MOMENTS 08 | CAMPING | CAMPGROUND 02

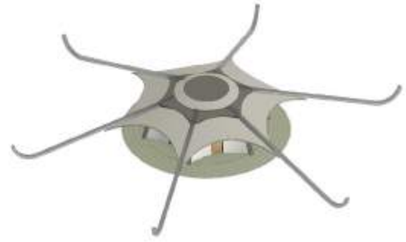


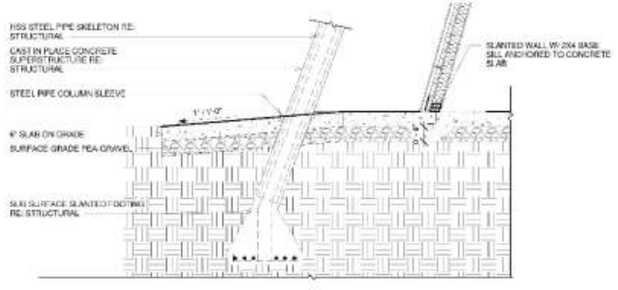
MOMENTS 08 | CAMPING | RESTROOM PLAN

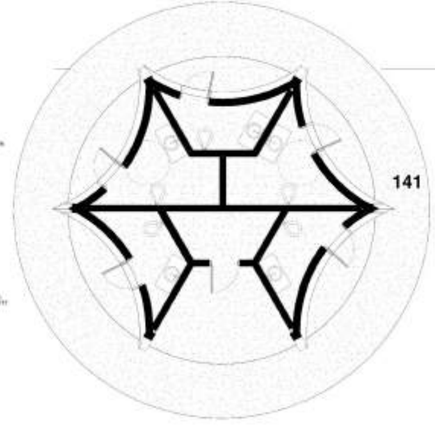
CAMPING

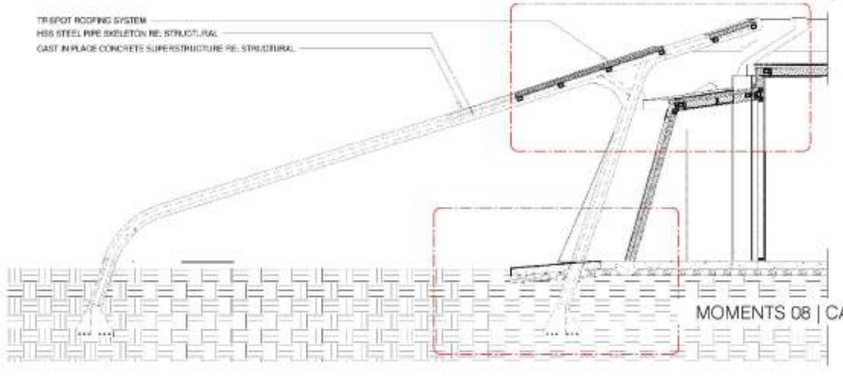
NOTE: By providing guides for camping facilities, spatial proximities could be established and quantities specifically realized. Without having a sense of location, purpose, and use, the specific proposals of restrooms & pavilions lose tangible execution. However, by providing detailed visual documentation, design decisions and project program became solidified.



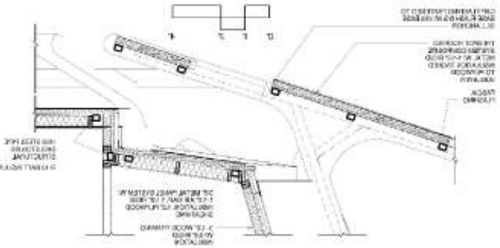


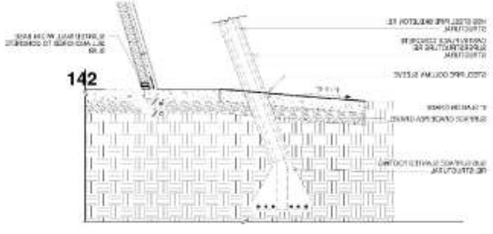


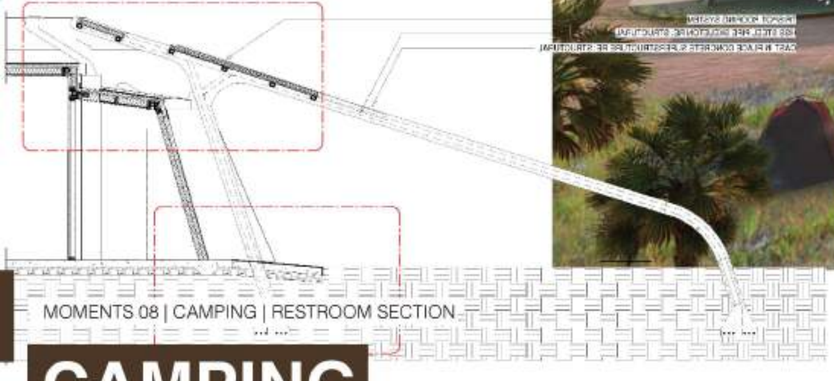




MOMENTS 08 | CAMPING | RESTROOM DETAILS







MOMENTS 08 | CAMPING | RESTROOM SECTION

CAMPING

NOTE: As shown by the combination of energy harvesting, varying forms of movement and direct engagement with the Island, a combination of elements pose a multitude of ways people define their own experiences throughout the island.

MOMENTS 08 | CAMPING | SOLAR PERSPECTIVE

MOMENTS 08 | CAMPING | RESTROOM PLAN

CAMPING

NOTE: Developing support facilities as part of a proposed camping area became the result of detailed refinement. Considering accessibility paired with minimized impact on the island, the pavilion-like structure was mimicked across the island. Material selection was the result of making elements structurally sound, and minimally present.

MOMENTS 08 | CAMPING | COMMUNE PERSPECTIVE

MOMENTS 08 | CAMPING | ELEVATED MARSHLAND

CAMPING

MOMENT 08 | CAMPING | CAMPGROUND SECTION 03

T.O. SITE/BRIDGES
0' - 0"

10' WATER RISE

6' WATER RISE
-9' - 3"

3' WATER RISE
-12' - 3"

1' WATER RISE
SEA -14' -3"
-15' - 3"

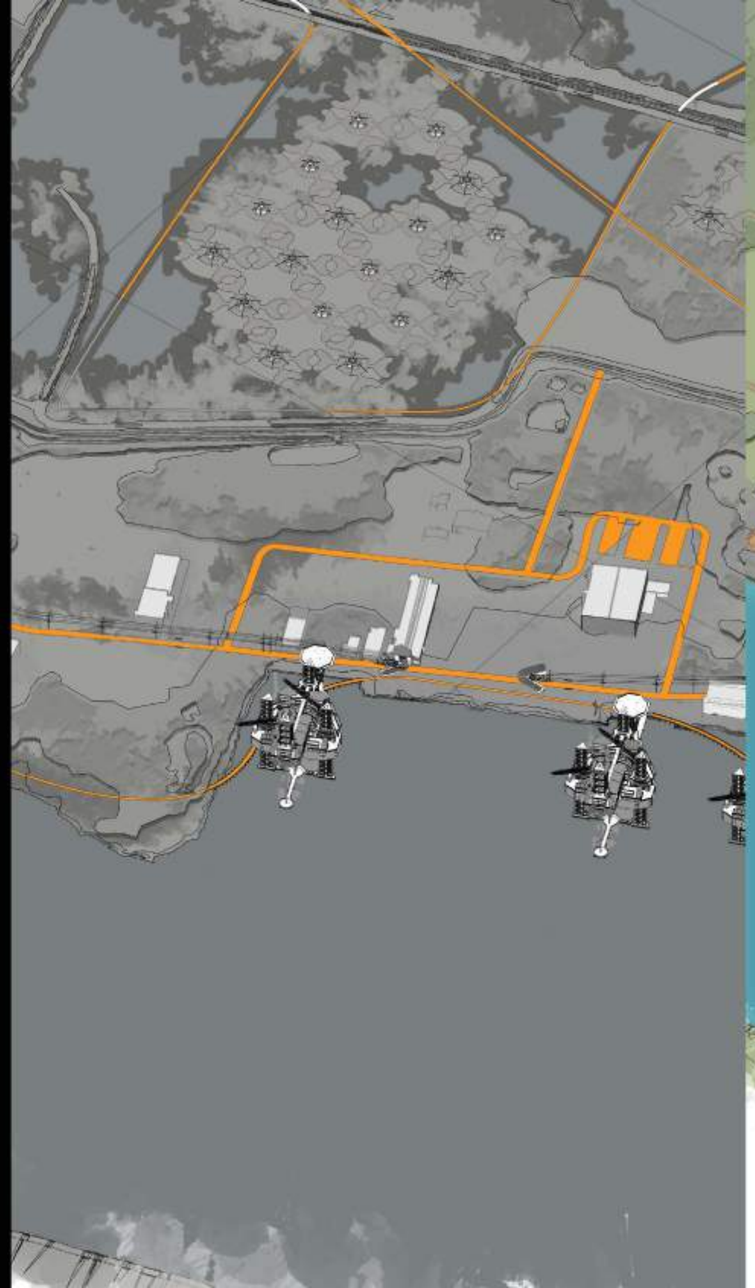
Previously serving as an offshore drilling repair port and commercial shipping hub, the Pelican Island port could become a hub for tourism, education, and research. By no longer enabling offshore drilling to occur, the giant oil rigs of industry-past become skeletons of opportunity. Proposing three remaining oil rigs as a heritage education center, an ecological research station, and a camping/overnight support facility, the port potentially becomes a refuge for tired campers, hikers, and researchers alike.

In addition to oil rigs serving as pillars for infrastructure, remaining commercial warehouses, and office buildings (all built within the past 50 years) yield potential to become research pavilions, camping shelters, bird habitats, or even butterfly atria.

SCAN ME

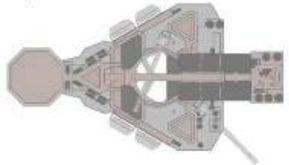
MOMENT 09 AXO

PORT



NOTE: Although only one rig was chosen to specifically detail and explore further, three rigs are proposed to remain in the port area of the Island. Serving each as a variation of each other, they are derived from the three design pillars of the project: Heritage, Tourism, and Ecology.

Tourism Rig: Vertical camping, museums, education center, and island management.



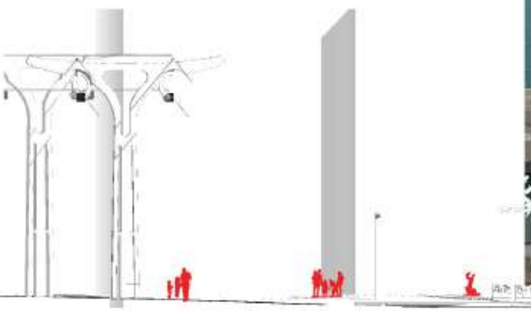
Heritage Rig: Exposed oil-rig, offshore drilling education, industrial exposure.

Ecologocial Rig: Research stations, classrooms, and education facilities.

SCAN ME

AUGMENTED SHIPYARD

NOTE: The industrial jungle that remains as a skeleton of the industries that will once have occupied the port side of Pelican island serves now as areas for re-use. Although their exact purpose varies from element to element, they weave themselves into the line of sight as the skylift takes hikers across the southern coastline.



MOMENTS 09 | PORT | PORT DETAIL

MOMENTS 09 | PORT | RIG BASE SECTION

PORT

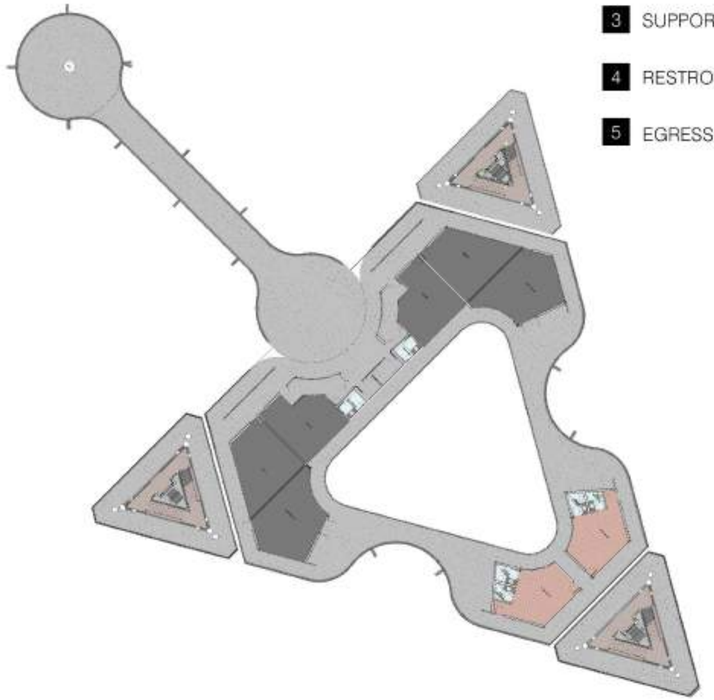
The shown oil rig is one of three potential outcomes for what is proposed for the project. With this rig's purpose being an ecological research and education center, programmatic infrastructure would be introduced to engage with existing elements and new additions. By introducing classrooms, office spaces, and laboratories, A&M Galveston and education facilities across Texas can conduct research both on and off the island.

Through having areas where the public interest can be nurtured through fenestrations, classrooms, and observation booths, the oil rig that once harvested the earth for resources now provides opportunities for education.

SCAN ME

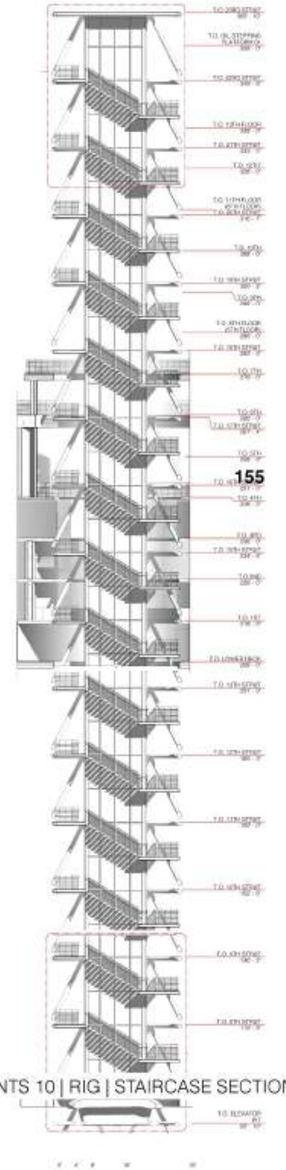
PRE-REFINMENTE RIG CONCEPT

RIG



1. RESEARCH LABS
2. OUTDOOR PLANTERS
3. SUPPORT OFFICE SPACES
4. RESTROOMS
5. EGRESS SYSTEMS

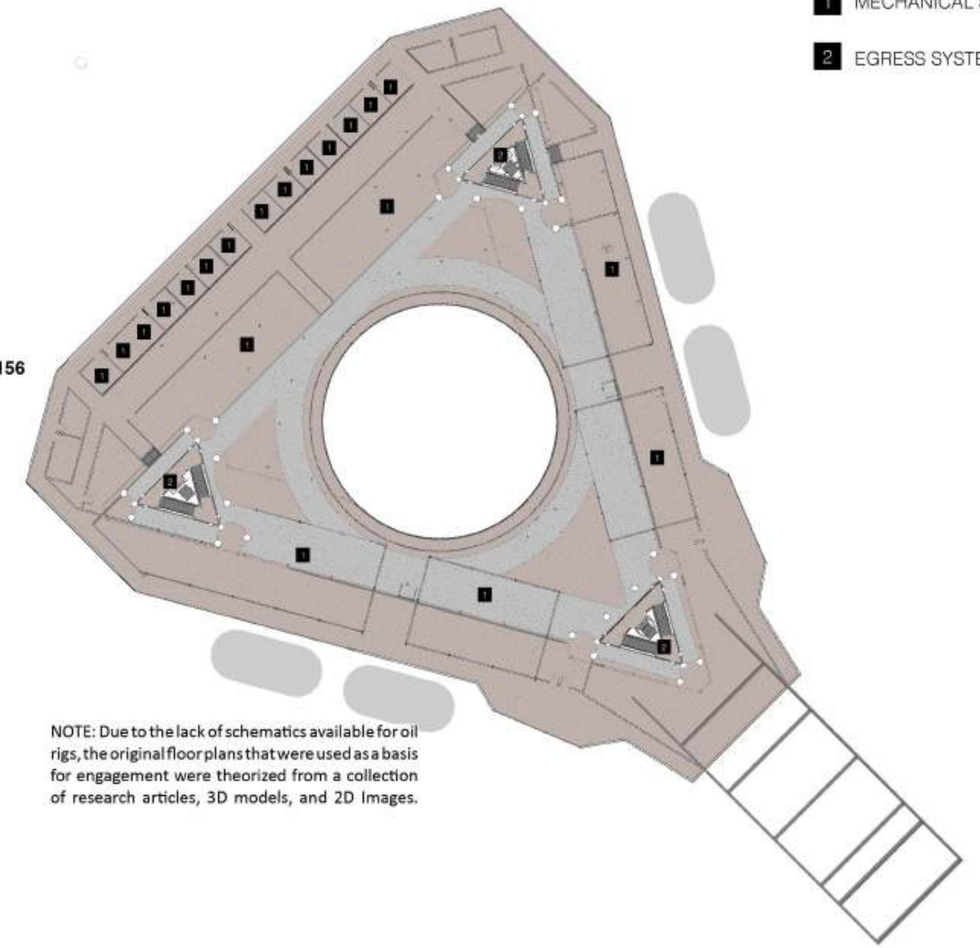
NOTE: The base level of the Ecological Rig would serve as a terminal for users coming and going while minimizing visual obstruction between the ocean surface and the proposed physical elements.



MOMENTS 10 | RIG | STAIRCASE SECTION

1 MECHANICAL SPACES

2 EGRESS SYSTEMS



NOTE: Due to the lack of schematics available for oil rigs, the original floor plans that were used as a basis for engagement were theorized from a collection of research articles, 3D models, and 2D Images.

MOMENTS 10 | RIG | 1ST - 3RD SUB LEVELS

NOTE: The oil rig utilized is labeled as a "three-leg jack-up" oil rig and is typically accessed via helicopter. To avoid the need to employ aerial transportation methods, three staircase elevator systems were introduced.

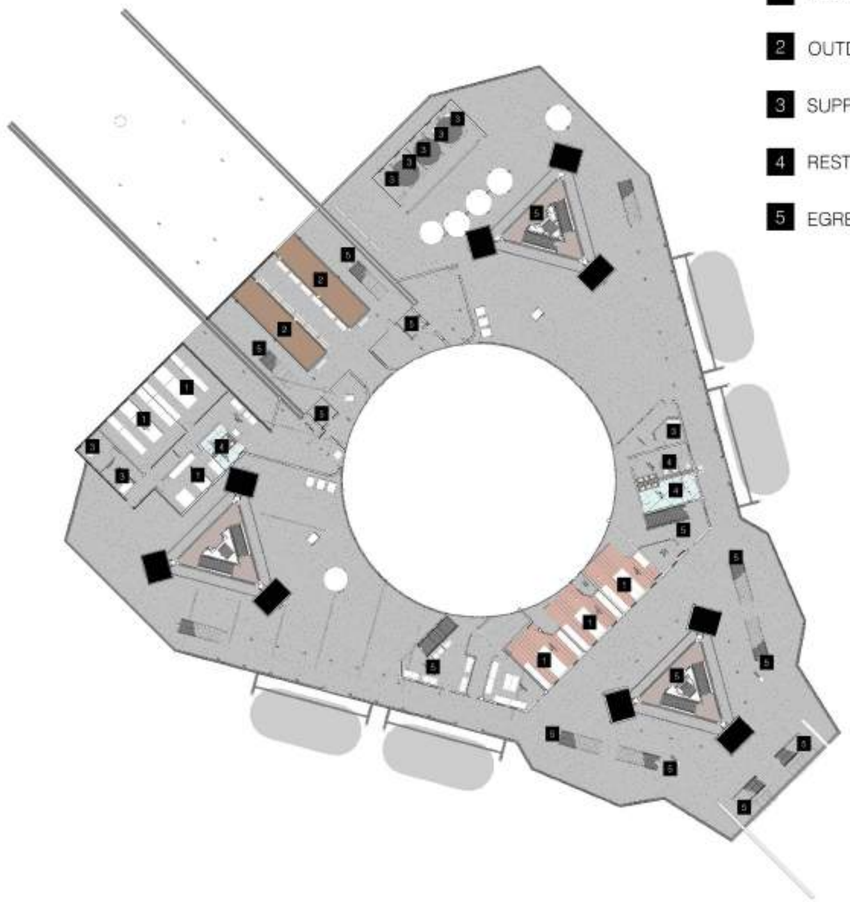
1 RESEARCH LABS

2 OUTDOOR PLANTERS

3 SUPPORT OFFICE SPACES

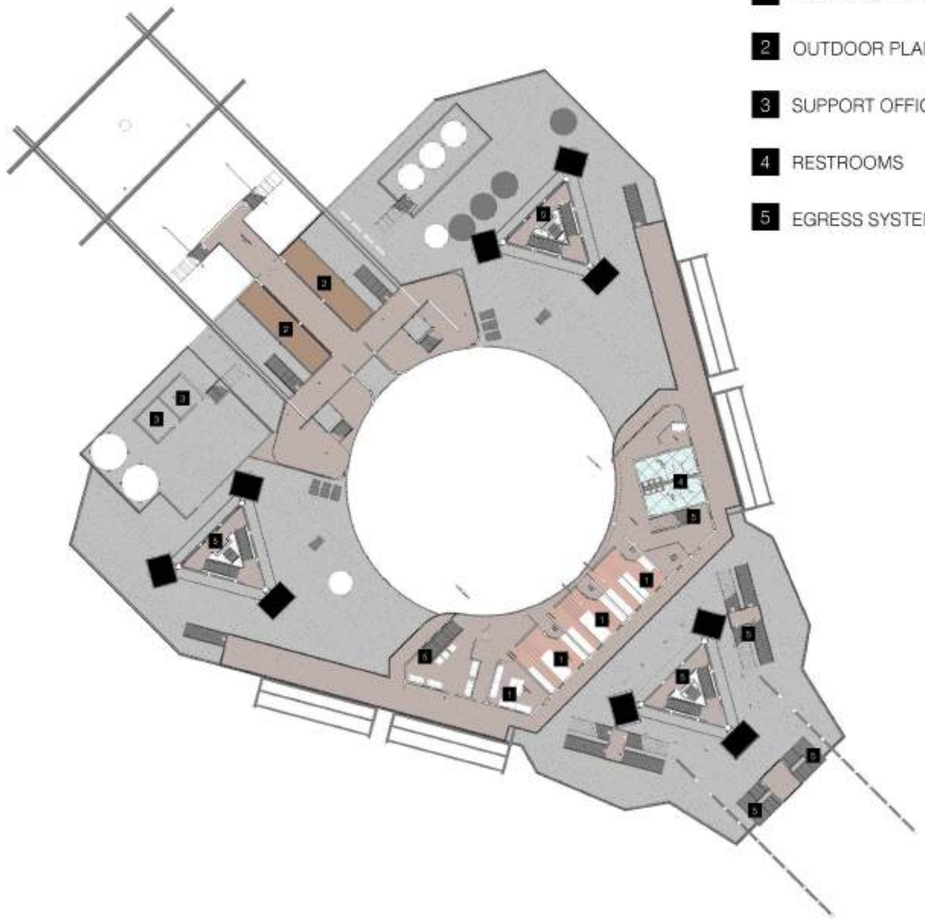
4 RESTROOMS

5 EGRESS SYSTEMS



NOTE: Avoid was introduced to the center of the platform in order to expose both existing infrastructural elements and to allow for unobstructed visual verticality. Originally proposed was a plaza; however, there was little purpose or programmatic cause, thus the idea was shelved.

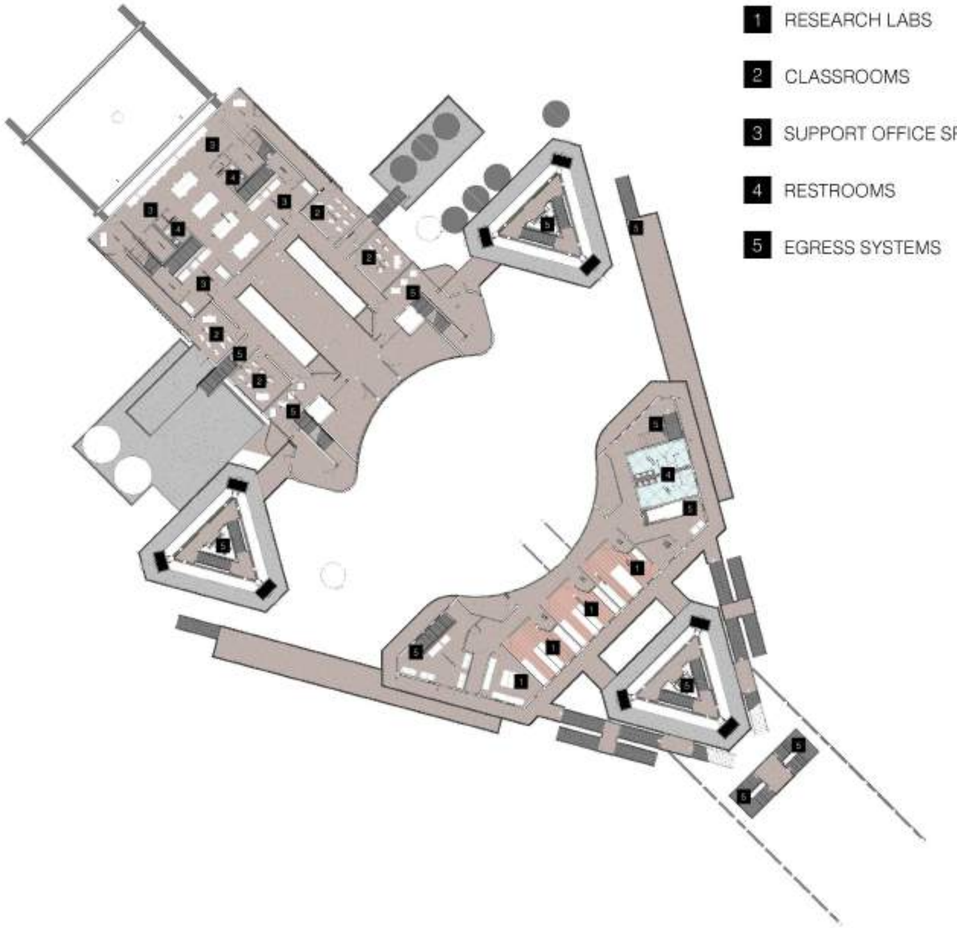
MOMENTS 10 | RIG | 4TH FLOOR | PLAZA



1 RESEARCH LABS
2 OUTDOOR PLANTERS
3 SUPPORT OFFICE SPACES
4 RESTROOMS
5 EGRESS SYSTEMS

MOMENTS 10 | RIG | 5TH FLOOR | BALCONYS

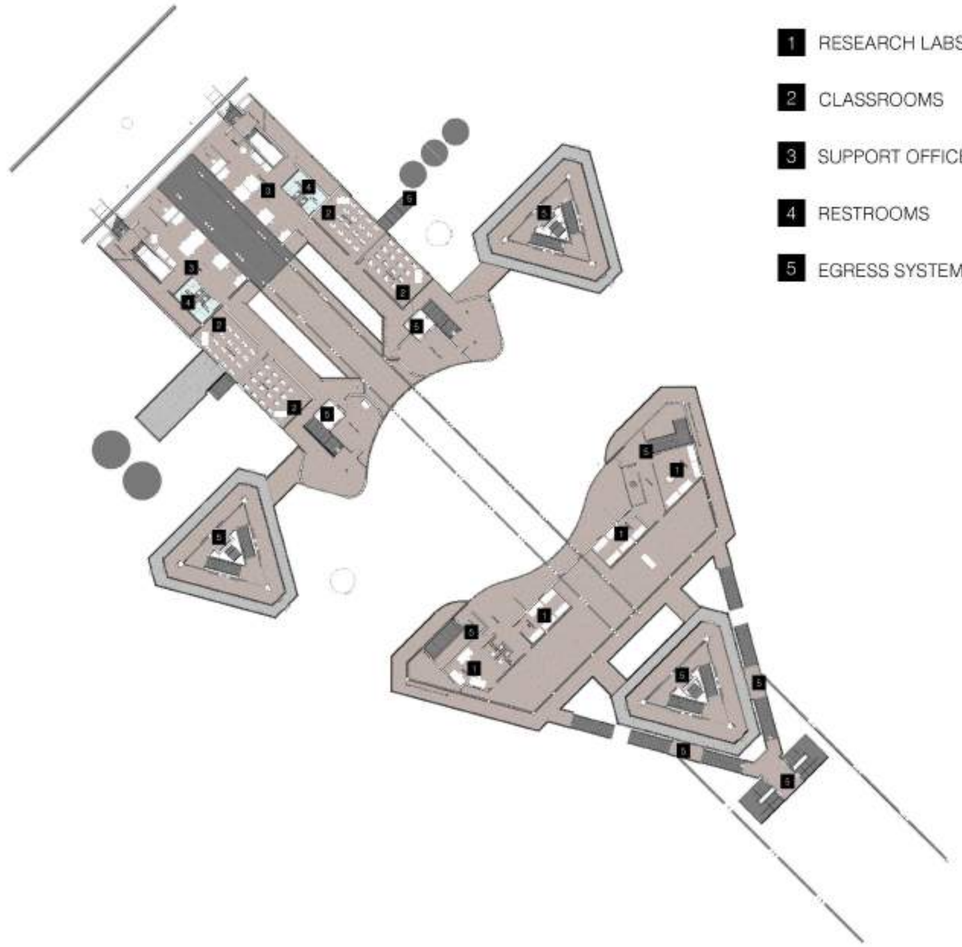
NOTE: Existing balconies, storage systems, doors, and interior rooms ideally were repurposed when applicable. The exposure of industrial machinery, pipes, and mechanisms maintain the ghost of what the rig used to function as while avoiding the entire removal of the identity.



1 RESEARCH LABS
2 CLASSROOMS
3 SUPPORT OFFICE SPACES
4 RESTROOMS
5 EGRESS SYSTEMS

NOTE: Additional classroom spaces and office spaces were added to open areas of the platforms as a means to provide a programmatic function to a relatively open-top platform.

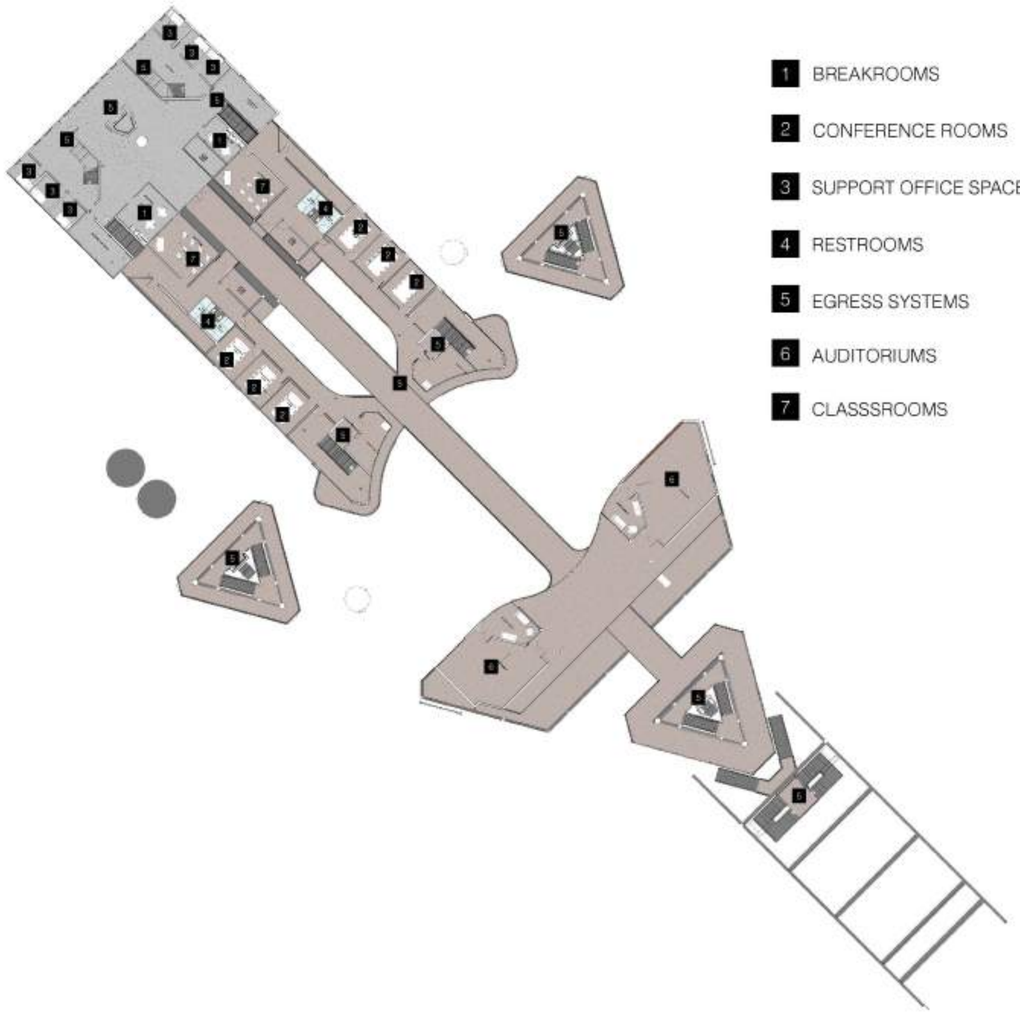
MOMENTS 10 | RIG | 6TH FLOOR | CLASSROOM



1 RESEARCH LABS
2 CLASSROOMS
3 SUPPORT OFFICE SPACES
4 RESTROOMS
5 EGRESS SYSTEMS

MOMENTS 10 | RIG | 7TH FLOOR | OFFICES

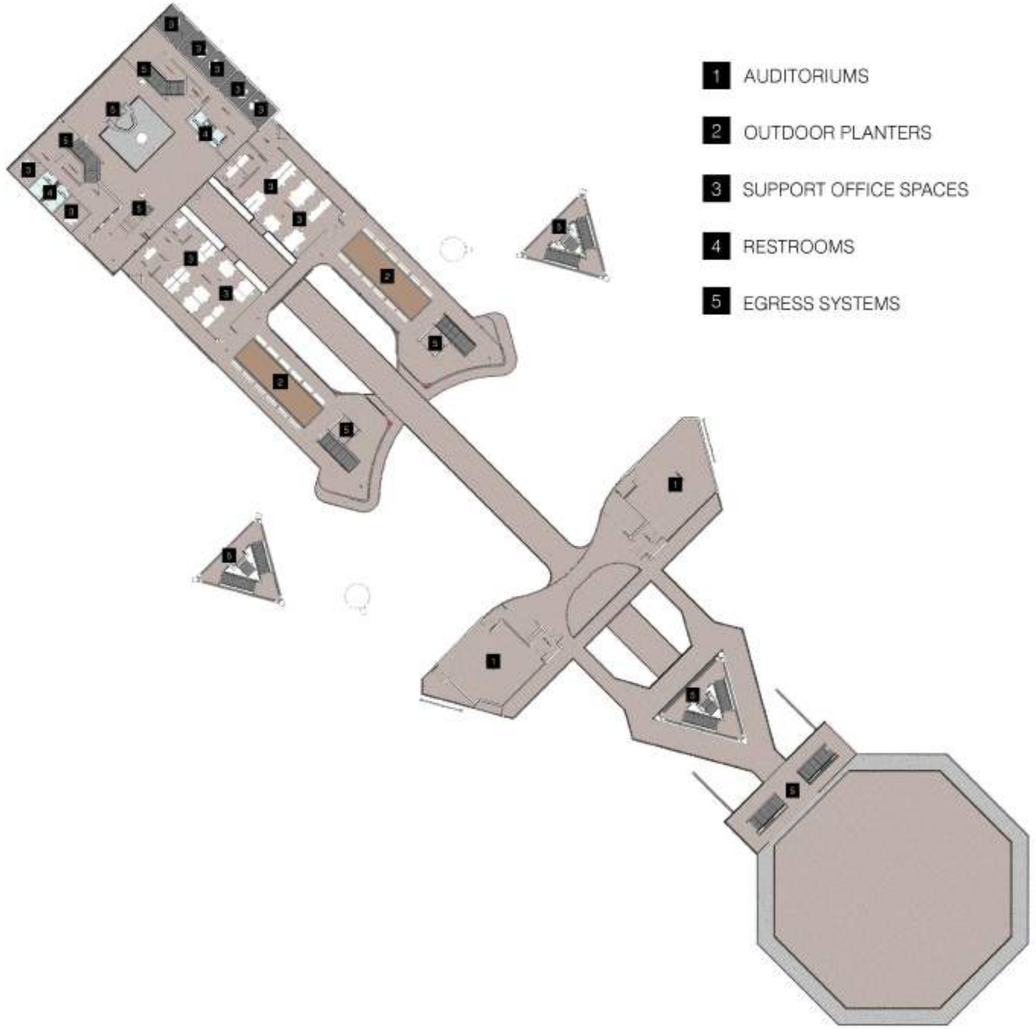
NOTE: Office spaces are to be added in conjunction with additional balcony spaces to encourage simultaneous exterior and interior movement, and to direct interaction with the main atrium space.



1 BREAKROOMS
2 CONFERENCE ROOMS
3 SUPPORT OFFICE SPACES
4 RESTROOMS
5 EGRESS SYSTEMS
6 AUDITORIUMS
7 CLASSSROOMS

NOTE: By introducing a bridge, the new classroom/office module is tethered into the existing residential and derrick refinement facilities. Concrete and structural steel would be utilized to mimic existing elements.

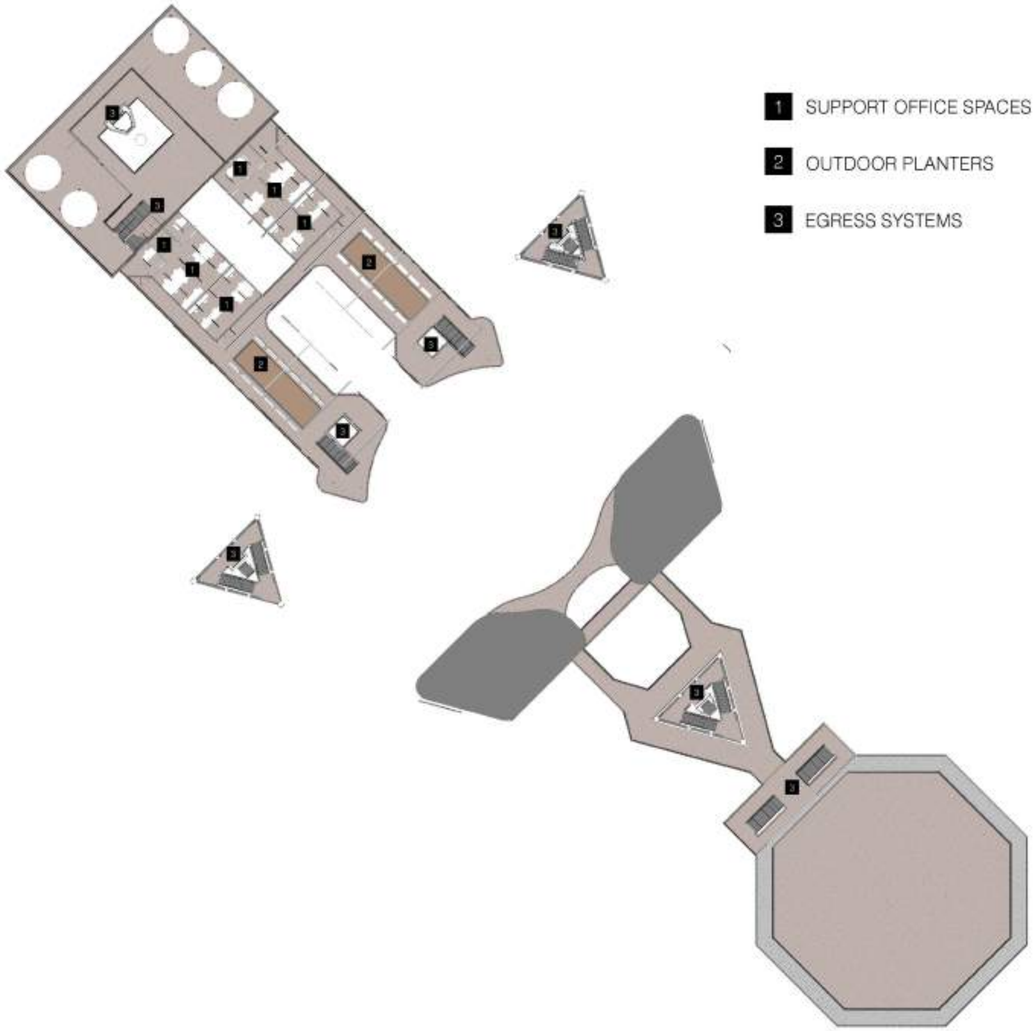
MOMENTS 10 | RIG | 8TH FLOOR | DESALINATION



1 AUDITORIUMS
2 OUTDOOR PLANTERS
3 SUPPORT OFFICE SPACES
4 RESTROOMS
5 EGRESS SYSTEMS

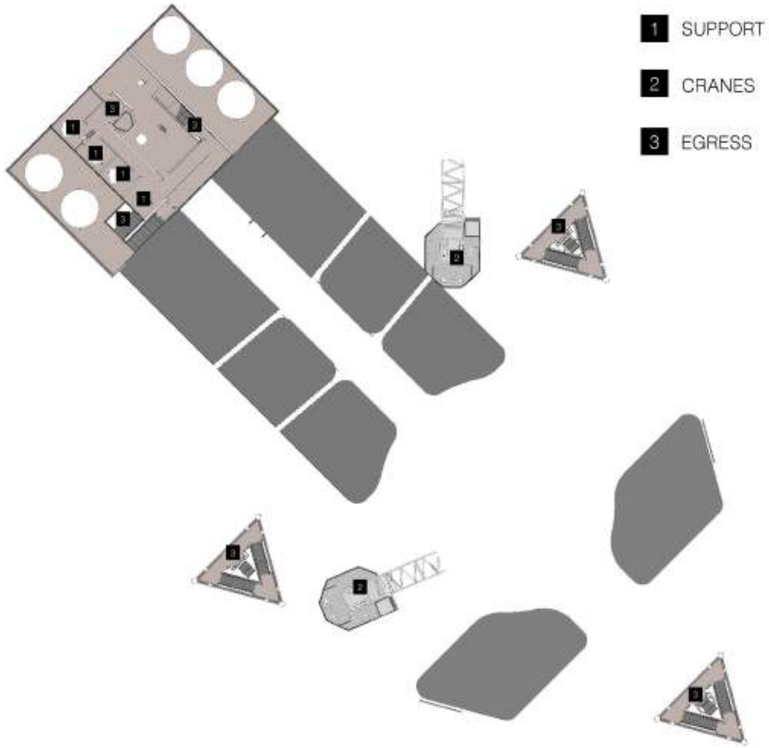
MOMENTS 10 | RIG | 9TH FLOOR | ROOF TOP

NOTE: Rooftop gardens are mirrored from the entry/plaza level and are open to guardrails, while the helicopter pad is left fairly unmodified (minus railings introduced for safety measures).



1 SUPPORT OFFICE SPACES
2 OUTDOOR PLANTERS
3 EGRESS SYSTEMS

MOMENTS 10 | RIG | 10TH FLOOR | HELICOPTER PAD



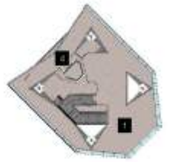
1 SUPPORT OFFICE SPACES

2 CRANES

3 EGRESS

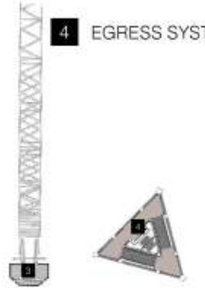
MOMENTS 10 | RIG | 11TH FLOOR | STORAGE

NOTE: Existing rig utility cranes should be maintained in addition to all pre-existing elements, as a necessary means of identity. Repurposement of course is done when possible, however in most cases inapplicable. Although repurposing the cranes into vertical gardens had been explored earlier in the semester, the idea was abandoned due to the lack of feasibility and flexibility of crane attachments.



T.O. TOWER

SUB TOWER LEVEL



1 OBSERVATION SPACES

2 OFFICE SPACES

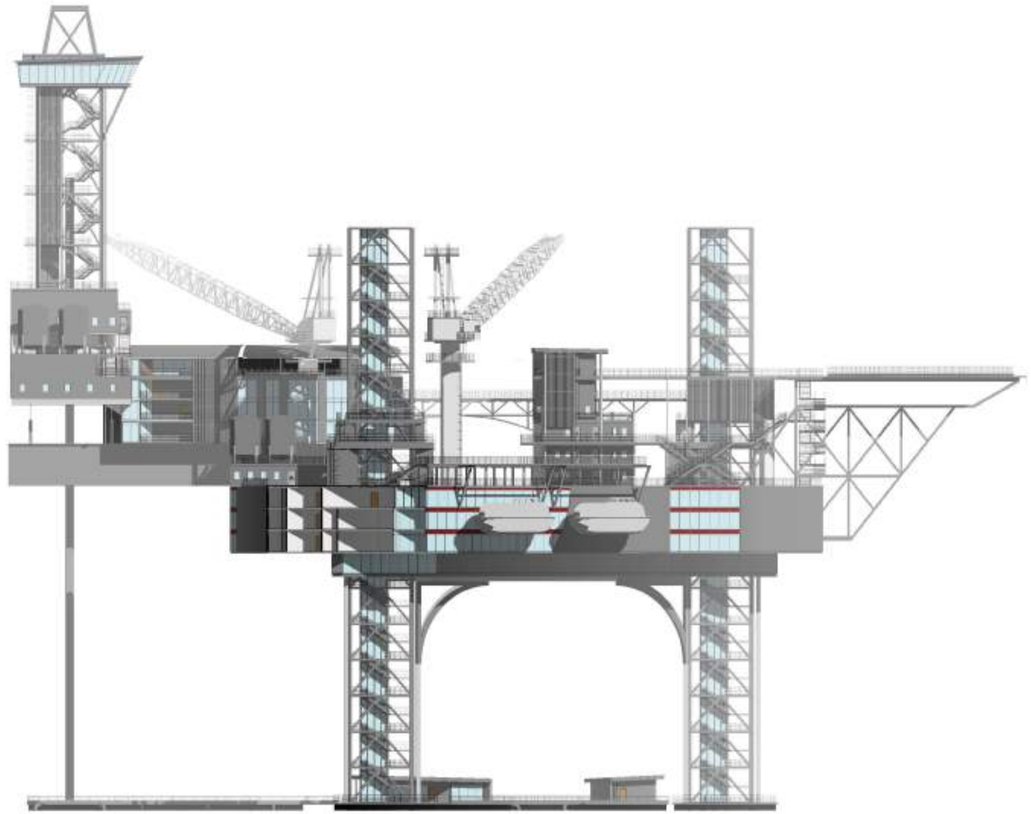
3 CRANES

4 EGRESS SYSTEMS

CRANE LEVEL

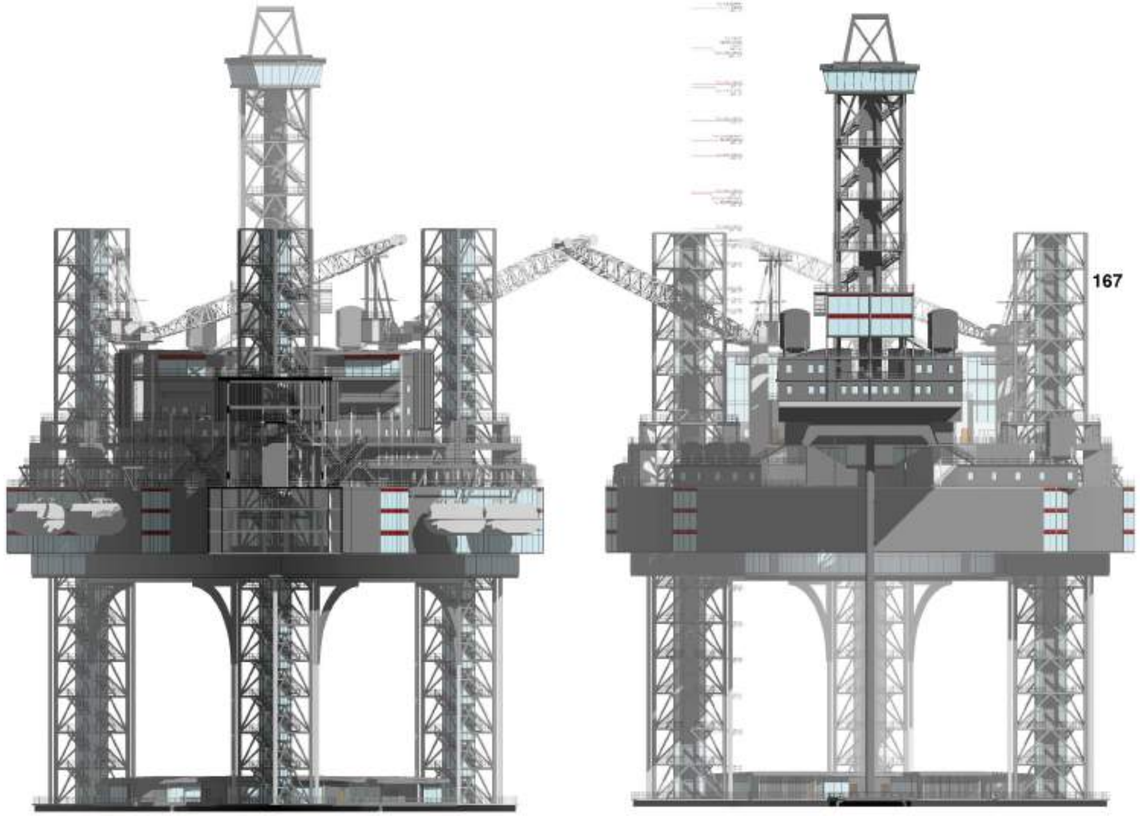
MOMENTS 10 | RIG | 11TH AND TOP FLOOR |

NOTE: The oil derrick tower and steel superstructure was proposed to be turned into an observation tower (and desalination pipeline) reaching the highest point from ground level (245ft). In addition to all three jack-up legs, the inclusion of elevators allows for ease of access and vertical versatility.



MOMENTS 10 | RIG | S TO N SECTION

NOTE: Jack-up oil remains to be an extremely flexible oil drilling apparatus with the ability to adjust height and position while out at sea. Although they are not capable of deep-water drilling (due to their depth being limited by their legs) they are usually towed out to sea via tugboat. Because they have the capability to oscillate their vertical position, earlier design strategies explored allowing for movement; however, later the idea was abandoned due to structural and functional concerns.



NOTE: The piping and extraction apparatus were also left in place following the schematics obtained with the intention to re-purpose the drilling system into a desalination mechanism. Depending on the variable functionality of the rig, the oil drilling system could either be left as is or repurpose for additional uses.

MOMENTS 10 | RIG | E TO W SECTION & ELEVATION |

MOMENTS 10 | RIG | BRIDGE PERSPECTIVE

NOTE: Vertical movement is essential in traveling from the island to the oil rig. Because the helicopter pad has been proposed to no longer be the main point of travel, the transformation of the jack-up struts was necessary for getting visitors, researchers, and staff both on and off the rig's facilities. Anchoring to the existing systems required some analysis to be done, but additional detailing would have to be completed to best idealize a potential means to integrate new elements with existing constraints.

NOTE: Although acknowledging the idea of "green spaces" does provide some discredit to the idea of unconstrained regrowth, it does allow for controlled research. Because this particular oil-rig is to be purposed into a research center, the planters present would serve strictly for research purposes, and be controlled as such.

MOMENTS 10 | RIG | S TO N SECTION CUT |

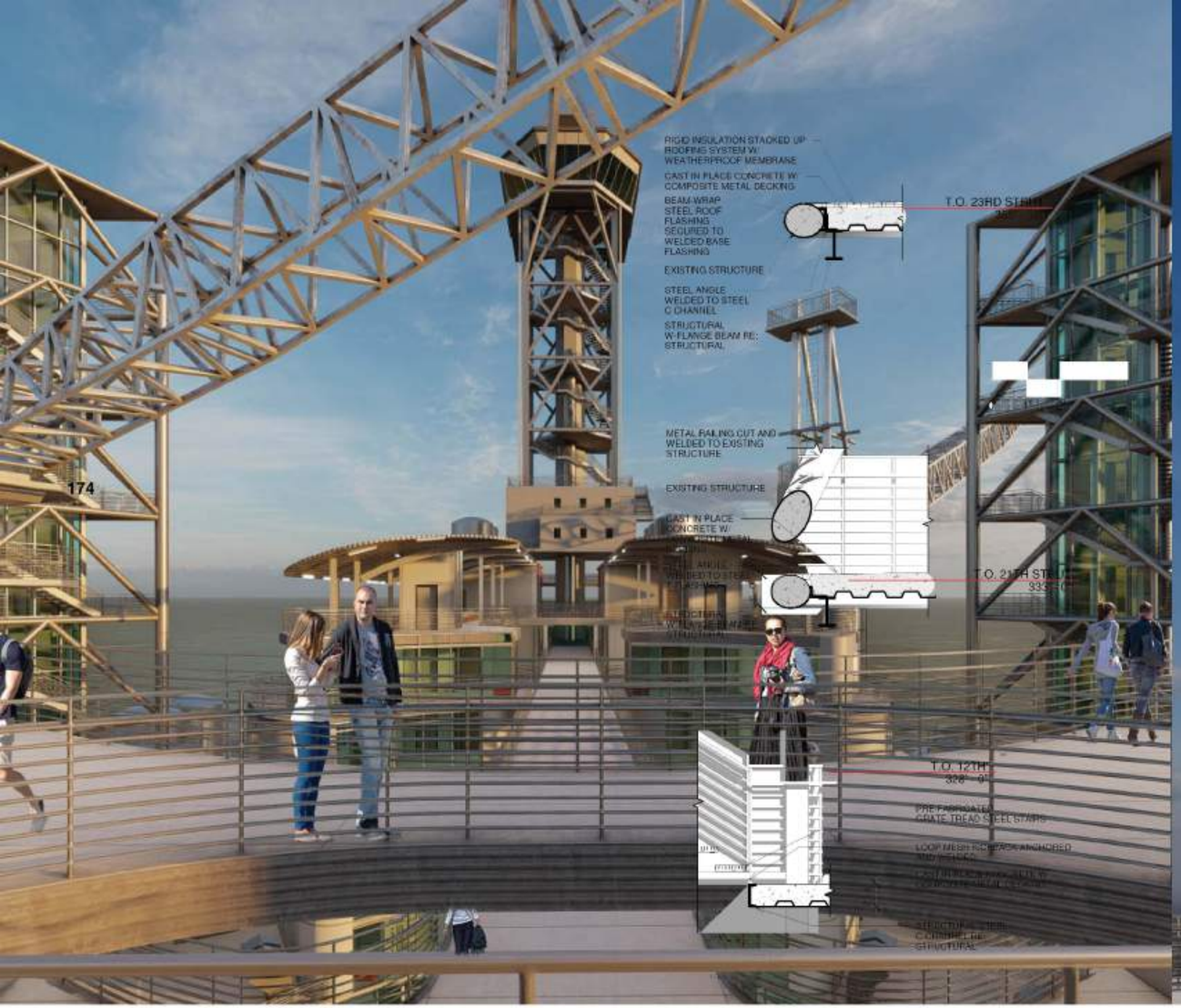
RIG

NOTE: Open-air pathways remained essential in maintaining the industrial platform experience of an oil rig, and the unbarred visual relationship with the island and context. Although the educational aspects of the rig proved to be more commercialized and industrial, they did yield to the functionality of particular program-dependent spaces.

MOMENTS 10 | RIG | INTERIOR DETAILING

NOTE: The rooftop spaces on the education module were designed with the intention to both visually engage through views of the island and the presence of local plants life. Because of the saline air properties present paired with the temperate climate zone of Galveston Texas, plant life is fairly specific to the context.

MOMENTS 10 | RIG | LOWER PLAZA GREENSPACE



MOMENTS 10 | RIG | OBSERVATION PERSPECTIVE

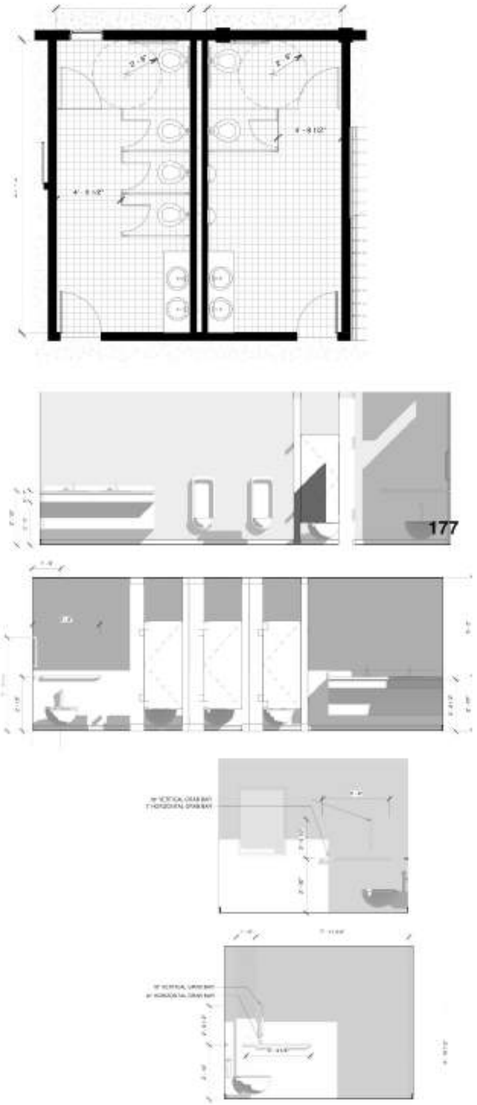
NOTE: Constant visual relationships throughout the project enable ease of access and wayfinding. As a result, glazing was used strategically to allow for maximum opportunities to see throughout the platform and out across the Island.

Even with glazing serving as a way to create thermal barriers, in most cases, it was abandoned when applicable. Due to commercial associations with glass and the boundaries created, solid surfaces were minimized when at all possible. Open surface roofing, walls, and flooring systems were proposed for a majority of elements present throughout the island.

MOMENTS 10 | RIG | HELICOPTER PAD

MOMENTS 10 | RIG | CRANE PERSPECTIVE

NOTE: Accessibility remained to be a constant consideration for the entirety of the project. With this in consideration wheel-chair accessible restrooms, egress systems, and openings were employed throughout. In addition to these considerations, details were examined in an effort to test, refine, and implement applicable standards that allow for much more realized programmatic design.



MOMENTS 10 | RIG | HALLWAY DETAILS

MOMENTS 10 | RIG | OBSERVATION TOWER

NOTE: By turning the helicopter pad into an observation platform, there is an open-air opportunity to view the majority of the island from a raised elevated view. Although the derrick observation tower and skylift do provide opportunities to see above ground-level and allow for potential views of augmented reality, point-of-interests, and 360-degree sightseeing of the Pelican, Houston, and Galveston skylines.

MOMENTS 10 | RIG | HELICOPTER PAD VIEW

Can you understand the memory of a place not by what remains, but what has changed over time?

Throughout the course of a year, there were many times where interpreting memory as a tool to understand the past seemed perplexing. There were definitely times it proved to be challenging, however through the continued efforts of heritage, ecology, and tourism, the final project solidified into what it was. By employing the methodology of cartography, there was always room for new iterations, maps, and sequences to be tested.

By having the opportunity to specifically work with Pelican Island there were things learned about Galveston, and Texas at large that were unknown at the beginning of the project. Not only were phenomenon realized, but coincidences drew. It was after these types of associations were constructed that the project began to take form, and it arrived in the state it lays in now.

Although the project continues to serve as a narrative for future design projects, it does bring light to how when applied, a stance is all it takes to really create a driving force of change. That not until it was realized that climate change is an issue, that needs to be addressed through design the project gained clarity.

All in all, can memory be viewed not by what remains, but what has changed over time? Based on how the project has changed over time, we can look at the documents presented and see how change helps us understand a greater idea. That through producing all the drawings, illustrations, maps, and documents shown change can culminate, so why can't memory?

CONCLUSION

WHATS NEXT? The utilization of Barcodes throughout the book is a small idealization of how easy it is to tether a digital environment to a physical one. With this in consideration, a project of this caliber, or even small elements of this project are more achievable than initially realized. If this holds true, then there are more than enough opportunities for us to take a step in the right direction to realize the cause of change over time. What if we chose an acknowledgment of memory, it could help us better understand the past, but also help us better prepare for the future?

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CONCLUSION

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