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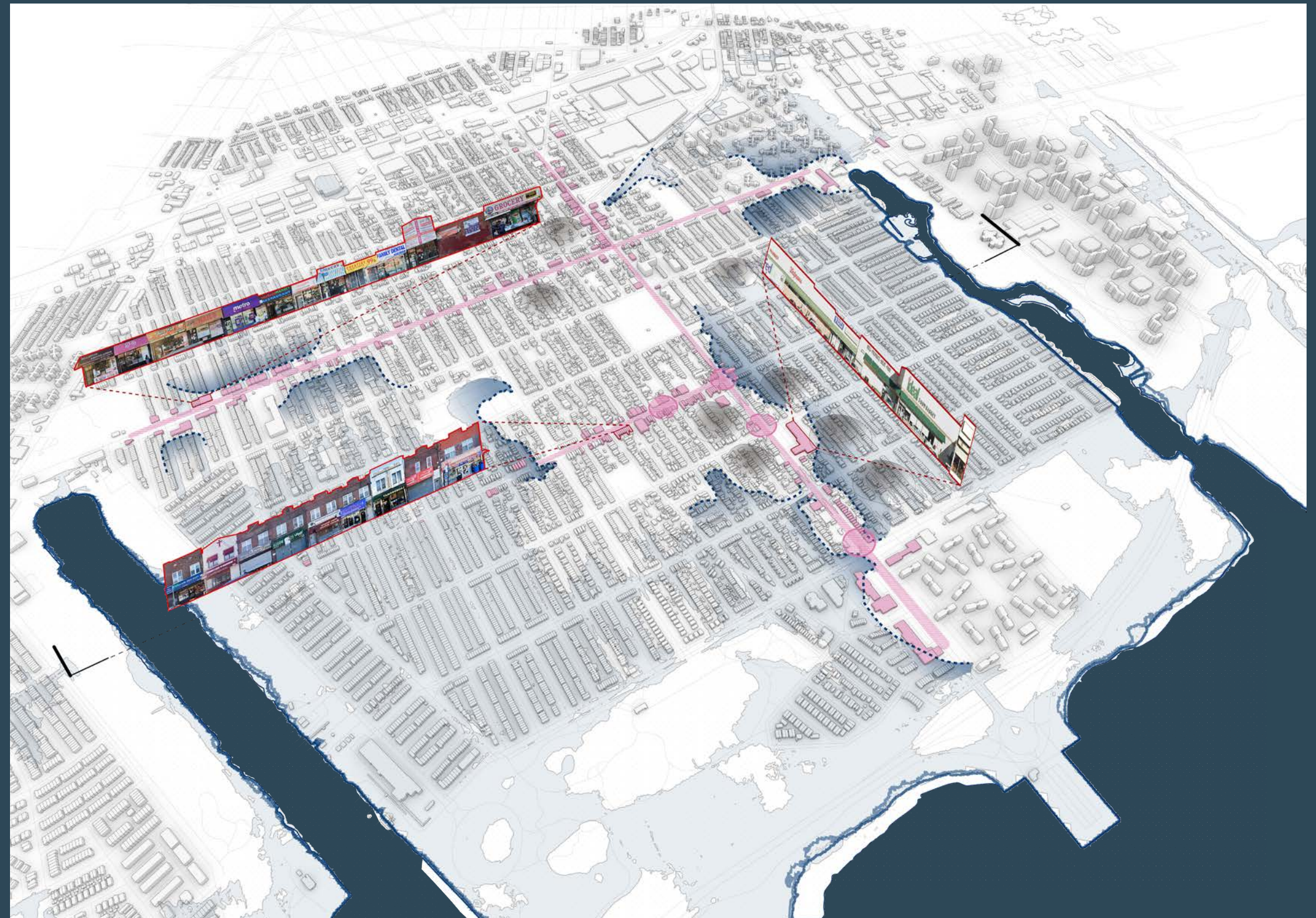


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On Dry Ground

Managed Retreat for Community Livelihood in Canarsie, Brooklyn

Rising sea levels resulting from climate change affect the livelihood of coastal communities everywhere, more so when working with the underrepresented. In designing for future high tides, foreseeable burdens to residential health and wellness are evident, in a city laden with major repairs and maintenance to infrastructure in obsolescence, costly improvements to storm water drainage, and perimeter barriers for waterfront protection. Facing the crossroads of an ethical dilemma – to remain a steadfast stronghold within one's community or to go elsewhere, this project proposes a resilient alternative: to stay within the community, but relocate on dry ground.





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Landscapes in transition: Living with water at Canarsie's edge

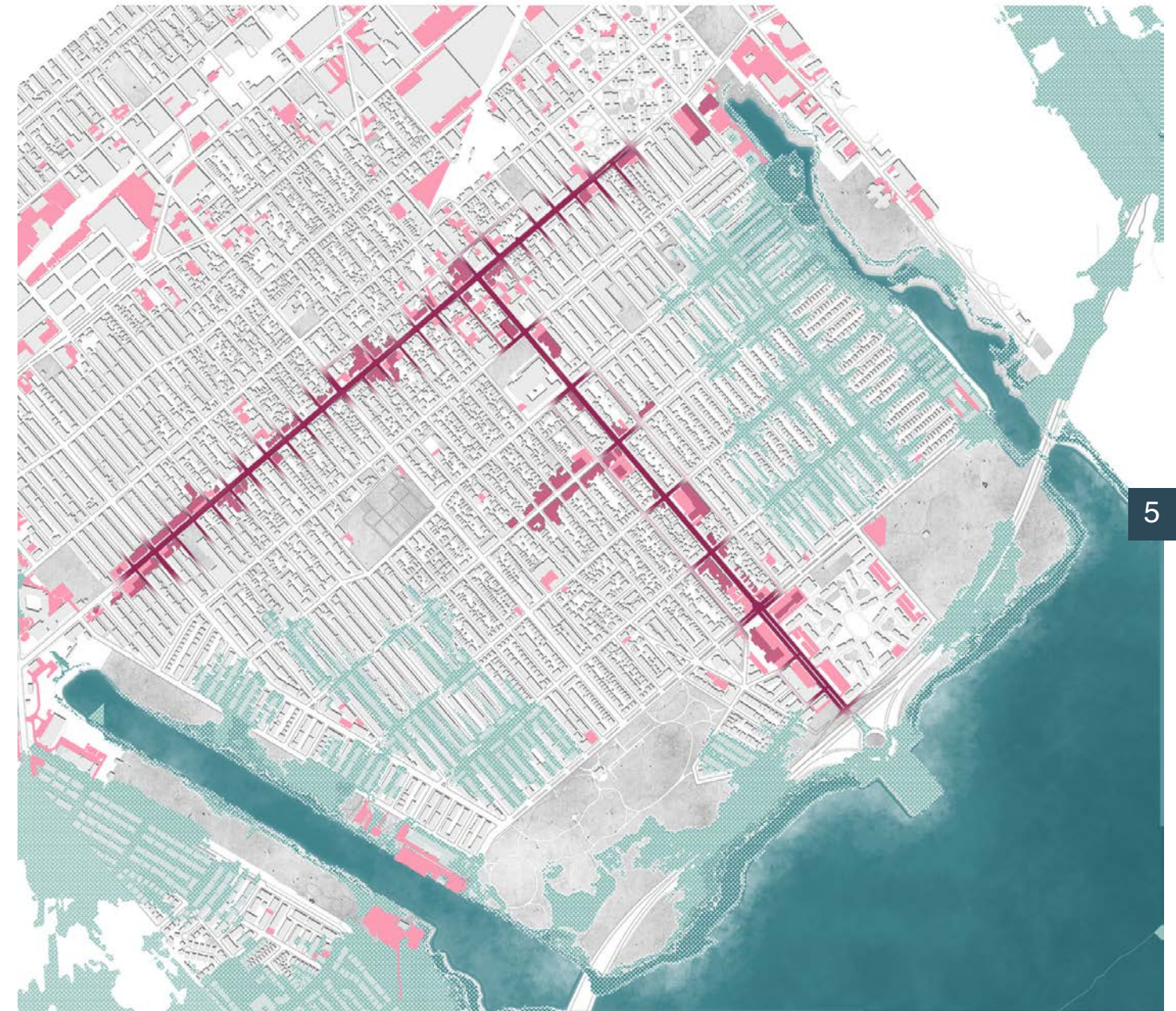


Managed retreat, houses left as breakwater

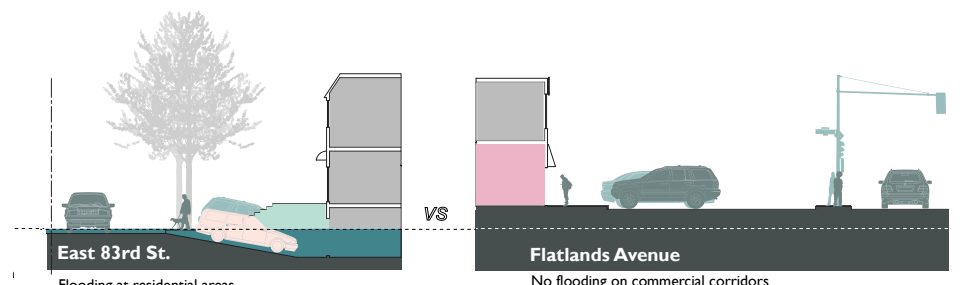
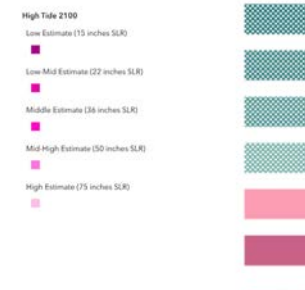
Urban Design Studio I



Urban growth in Canarsie, 1900 - 1967



5



East 83rd St.

Flooding at residential areas

VS

Flatlands Avenue

No flooding on commercial corridors

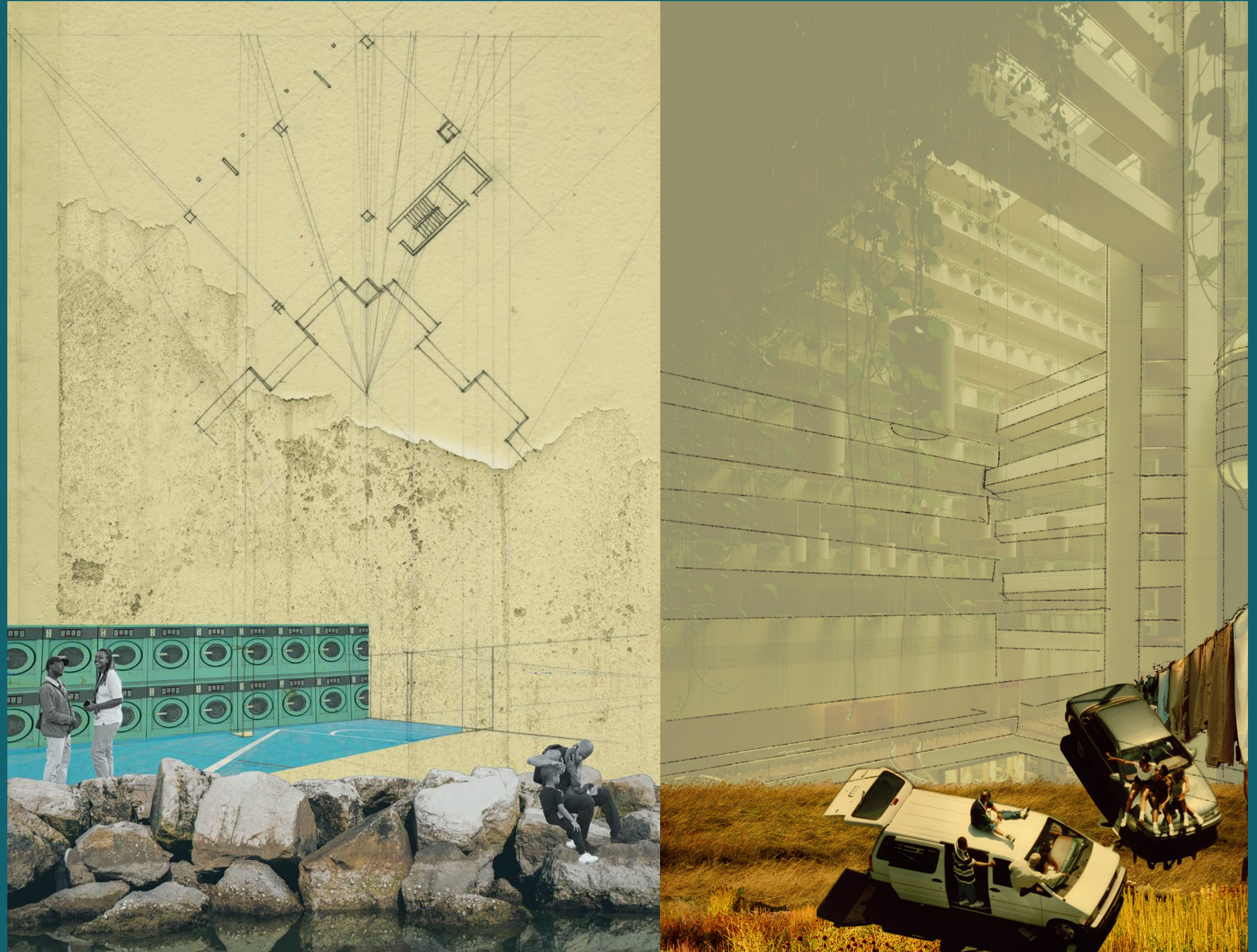
On Dry Ground

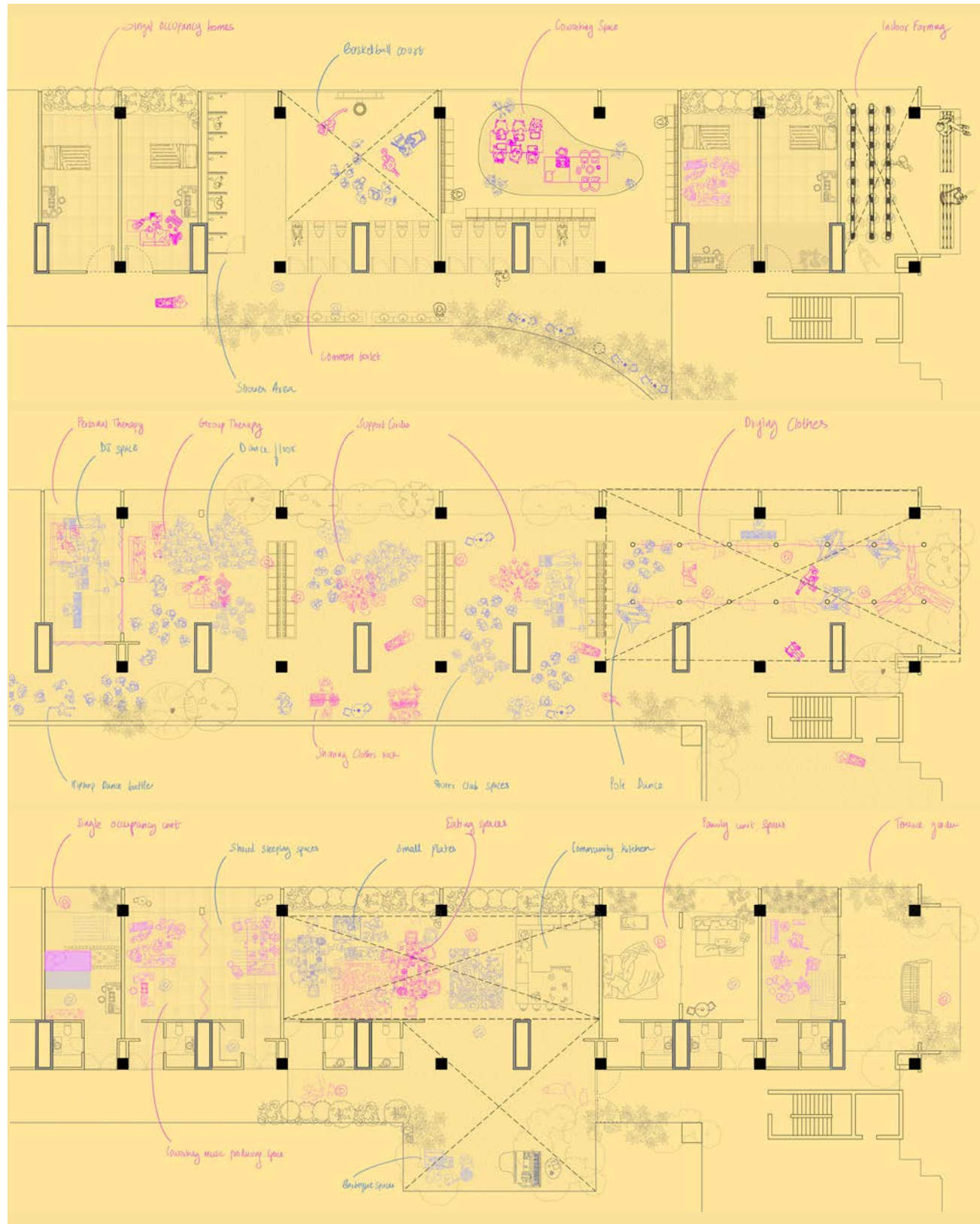
Re-Wilding Downtown Peachtree

Atlanta, Georgia

Emblematic of large-scale division and dispossession of land alongside typologies of skyscrapers with internal atriums, John Portman's Downtown Peachtree encapsulate the pervasive forms of property. Legacies of neoliberalism have left future generations with regimes of property that manifest the relationship between architecture and politics, both involving architecture's role in the economy, as well as its role as a cultural object.

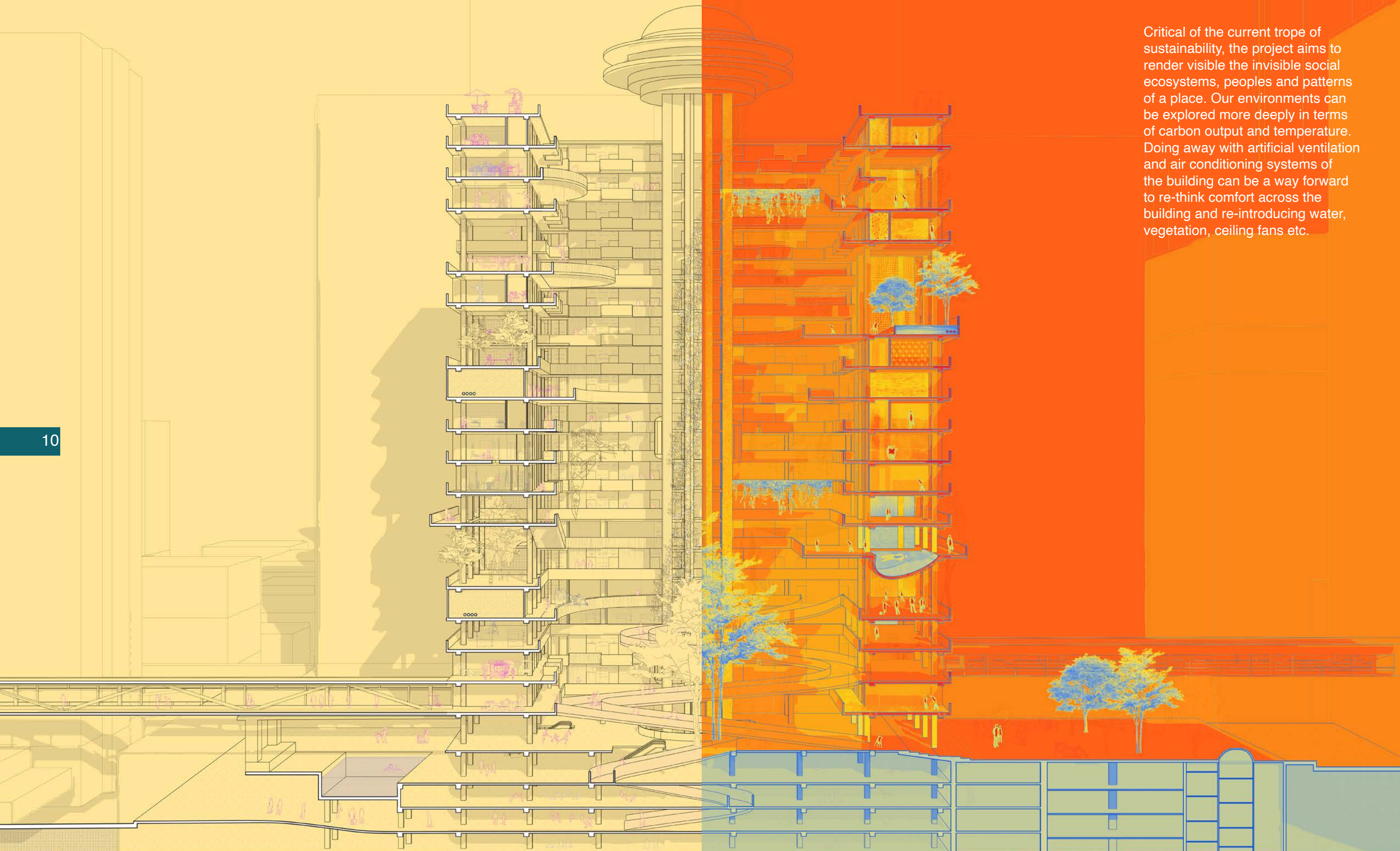
In its current expression, interior urbanism leaves the city outside. Artificial ecologies are imagined, underserved people are marginalized, and everyday living experiences are suppressed. Individual comfort predominates over collective care. The thermally conditioned interior becomes symbolic for the intensification of sexuality, race and class difference. This project envisions a future for the interior urbanism of atrium spaces that supplants the oppressive cartesian regime of property. It rejects the current, exclusive, and proprietary building owner and embrace long-term tenure of the land by welcoming the systemically overlooked and dispossessed. The unhoused, the housing-insecure, the sex worker, and the student come together in spaces of collective care to re-imagine spaces of transgression, ecology and the senses.





Collective care at 6th, 12th and 18th Floor





Critical of the current trope of sustainability, the project aims to render visible the invisible social ecosystems, peoples and patterns of a place. Our environments can be explored more deeply in terms of carbon output and temperature. Doing away with artificial ventilation and air conditioning systems of the building can be a way forward to re-think comfort across the building and re-introducing water, vegetation, ceiling fans etc.



'The City Too Busy To Hate'

Demographic Shifts in South Central Atlanta, 1940 - 1968

The Federal Highway Act of 1956 created the interstate system of highways prevalent in American cities today. At the time, the implementation of this planning vision was equivalent to progress, national defense and the immediate creation of jobs. In Atlanta, interstate highway I-85 was conceived as a part of this program. Its history is deeply intertwined with the discussion around racial inequality and displacement in the United States.

We know today that the creation of large-scale transportation infrastructure had contentious effects on future land use and demographic change in the city, especially in the southern portions of metropolitan Atlanta where population is predominantly composed of Black, Indigenous and people of color. We believe there is a correlation between the geographic areas selected for eminent domain to be used for the purposes of green and gray infrastructural acts and the racial qualities of the people affected by these actions. We begin the investigation with the assumption that the highway system had huge impacts on the residential racial pattern of the directly impacted and adjacent neighborhoods.



1938-43 Mosaic

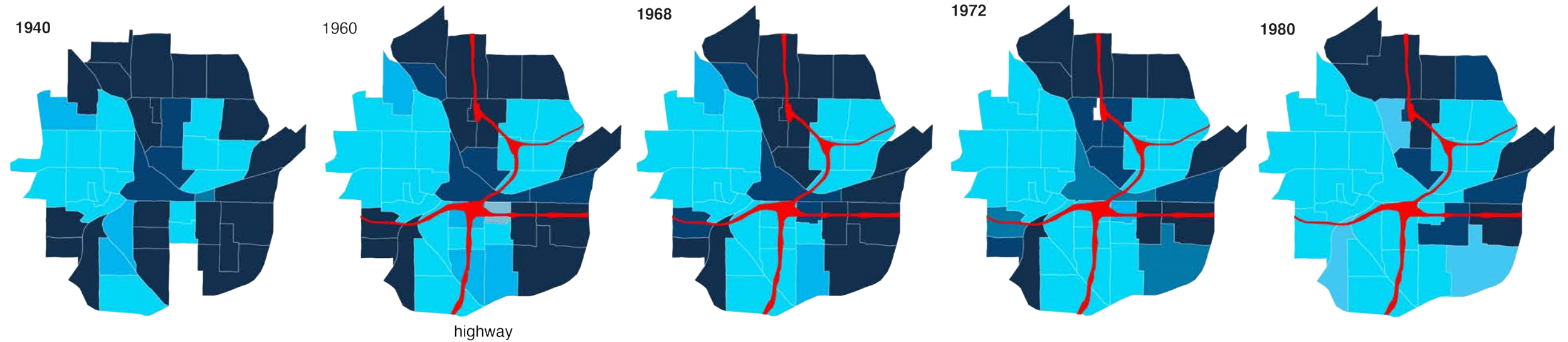


1968

Share of Black Population in %

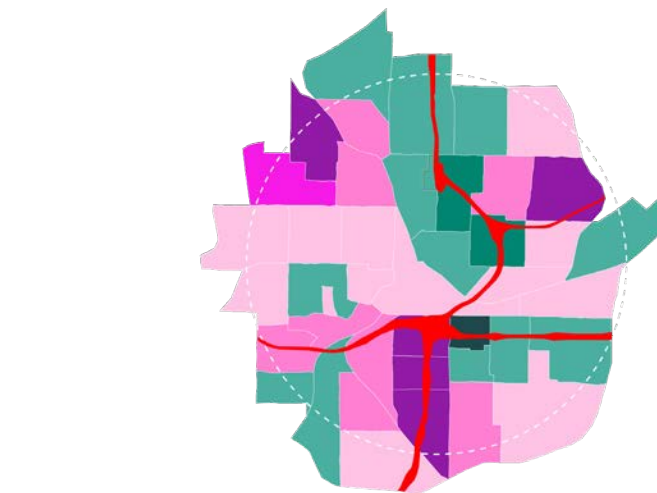
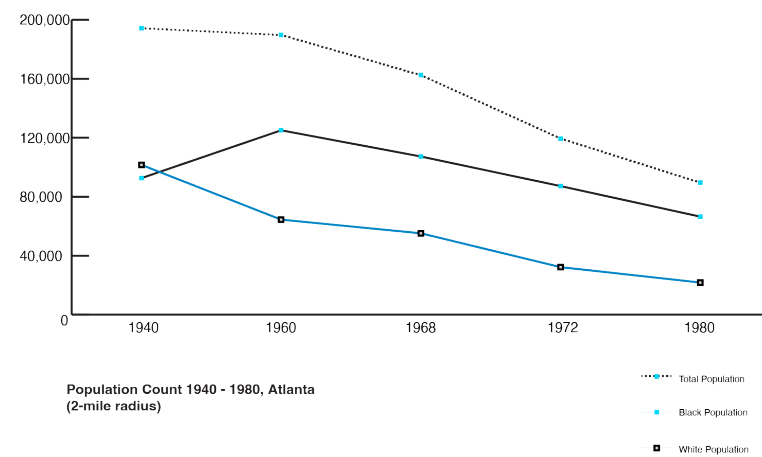
- 0 - 20
- 20 - 40
- 40 - 60
- 60 - 80
- 80 - 100

0 1 2 miles



On cause and effect. The decades between 1940 and 1980 saw enormous changes in non-white population in metropolitan Atlanta. This series of maps highlight our findings. On the one hand, our initial hypothesis posited the prospect that I-85 was built primarily on areas occupied by the non-white population. However, contrary to our initial supposition, U.S. Census Data shows that much of the interstate highway was planned with equal disregard to the entire spectrum of racial demographics of the population at that time.

On the other hand, we believe that the paving of this large-scale transportation infrastructure likely created segregation, dissociation, and physical barriers leading to poor walkability, land devaluation and isolation of racial enclaves, such that the census tracts affected by the construction of I-85 shifted considerably in racial composition in ensuing decades.



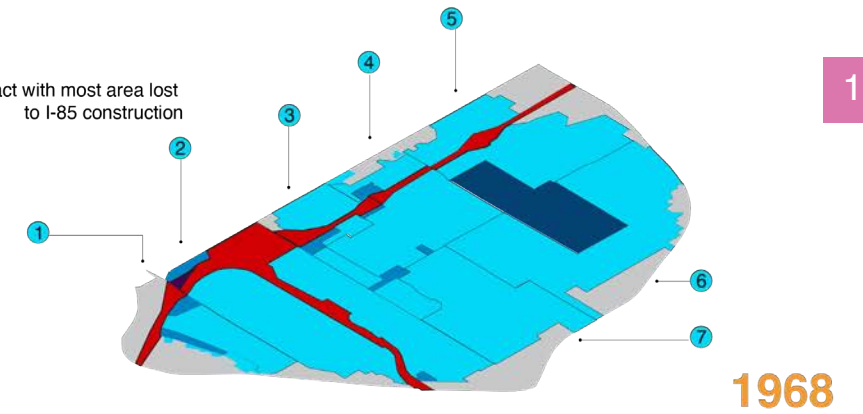
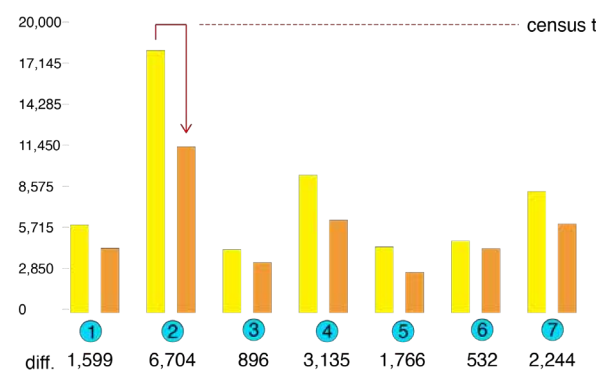
Highways
2 mile radius

Demographic Shift from 1940 to 1968 in %

- 90 - 51
- 51 - 30
- 30 - 10
- 10 - 0
- 0 - 10
- 10 - 30
- 30 - 51

Decrease of White-Population

Increase of White Population



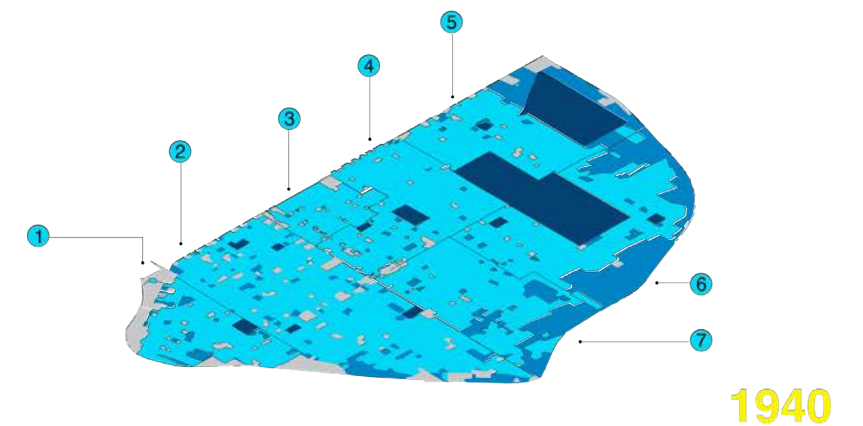
residential area
(*traced from zoning and land use plans)

parks

vacant land

industrial / commercial

highway infrastructure, I-85



IV

Landscape to Line

This project focuses on the relationship between art and architecture in the work of Thom Mayne and the Land Art movement of the 1960's and 70's in the United States. Mayne's time as a student, his early works, his movement from the West coast for studies at GSD, and his subsequent return to LA coincided with seminal works by Michael Heizer's, Walter Di Maria, and others.

These influences, as well as Mayne's own early career interests in Ian McHarg's *Design with Nature*, and his first professional experiences and incursions in the field of urban design while working for Victor Gruen, are all evident in his architectural drawings, models and proposals in collaboration with Michael Rotondi until 1986.

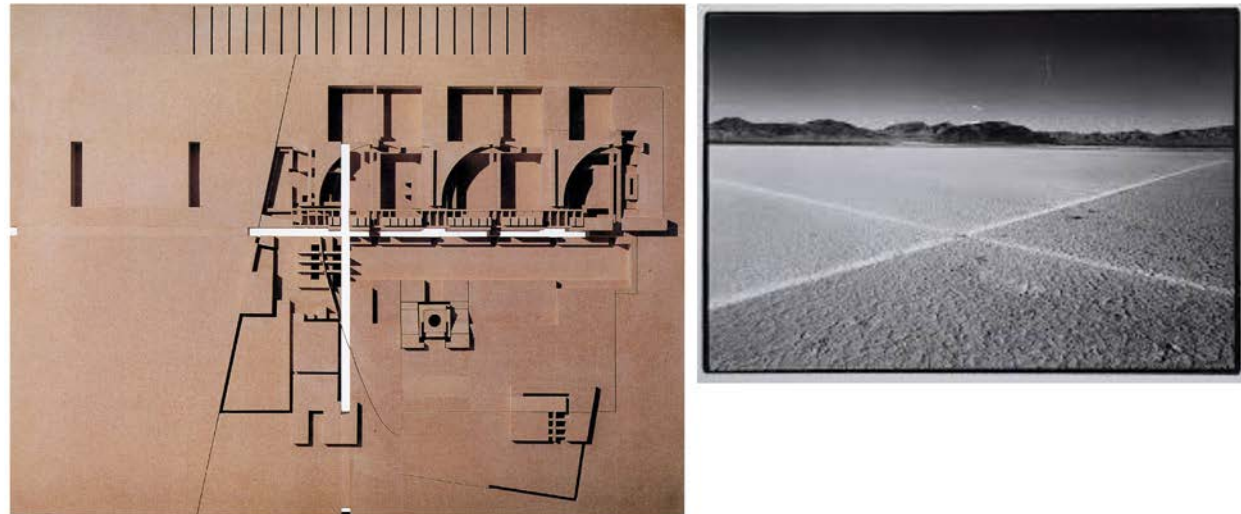
An in-depth analysis of drawings, collages, models, and mixed media was undertaken for Architecture Apropos Art.



At left, Morphosis, Crawford Residence. 1987. Study model. At right, Michael Heizer, Double Negative. 1969-70. 240,000 ton displacement of rhyolite and sandstone, 50 x 30 x 1500 ft. Museum of Contemporary Art, Los Angeles



At left, Mixed media drawing composed for Crawford Residence. Thom Mayne. At right, Michael Heizer, City (begun in 1972).



At left, Mophosis Malibu House 1986. At right, Walter De Maria, Desert Cross. El Mirage Dry Lake. Nevada. 1969.



Centering Cartagena

Healing Biodiversity and Livelihoods in Tourism's Wake

Today, Cartagena de Indias faces an untenable growth of extractive tourism which leaves negative impacts on the environment and its communities. The Ciénaga de la Virgen - a critical part of the city's watery urban landscape that connects the Caribbean Sea, the Bay of Cartagena, and the canal network - is collapsing from pressures of urban expansion and climate change.

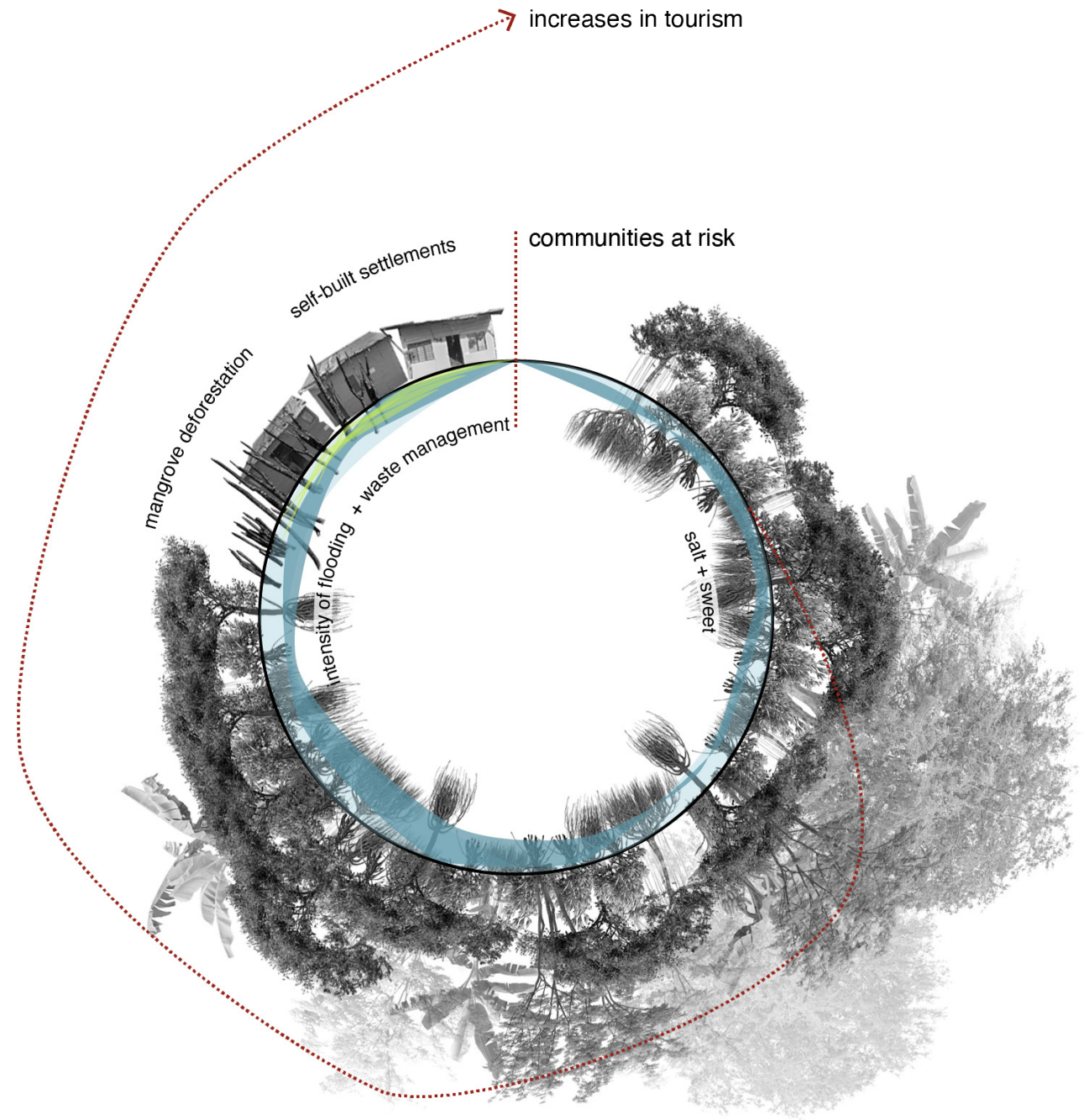
Like Cartagena's confluence of coastal tides and inland rains, our design exists at intersections of biodiversity restoration and celebration of intergenerational Afro-Colombian heritage that can support locals and tourists.

The project envisions establishing an amphibious housing armature, seeding ecological stewardship, reviving water mobility, and enhancing economic opportunities for locals.





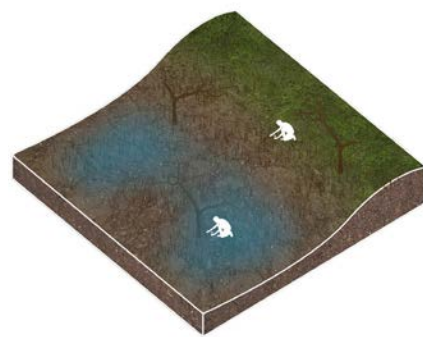
The Ciénaga has gone through major landscape changes since 1776. This includes heavy infrastructure like Aeropuerto Rafael Nunez, La Bocana, and the Gran Manglar Viaduct, which have all caused the cienaga to choke over time.



Mangrove forest
Before urbanization



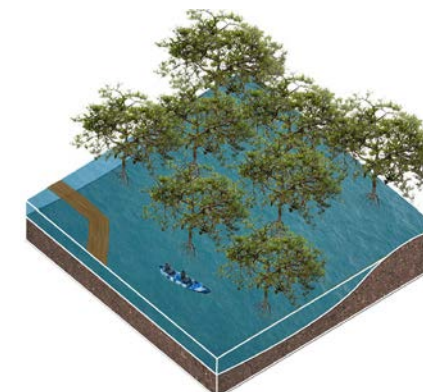
Mangrove deforestation
Current conditions



Mangrove planting
Seeds on the ground



Payment for ecosystem services
Policy framework



Future sea level rise
2035



2050
Eco-tourism

Communities are fragmented by channels. **Most people have never been to the beach or seen the Caribbean Sea.**



the mangroves are part of our natural assets.. we need to have solidarity and take care of our public assets.



women in our community are very entrepreneurial, we work with the youth and promote **intergenerational transfer of skills and knowledge** so they can become better leaders and manage their own communities

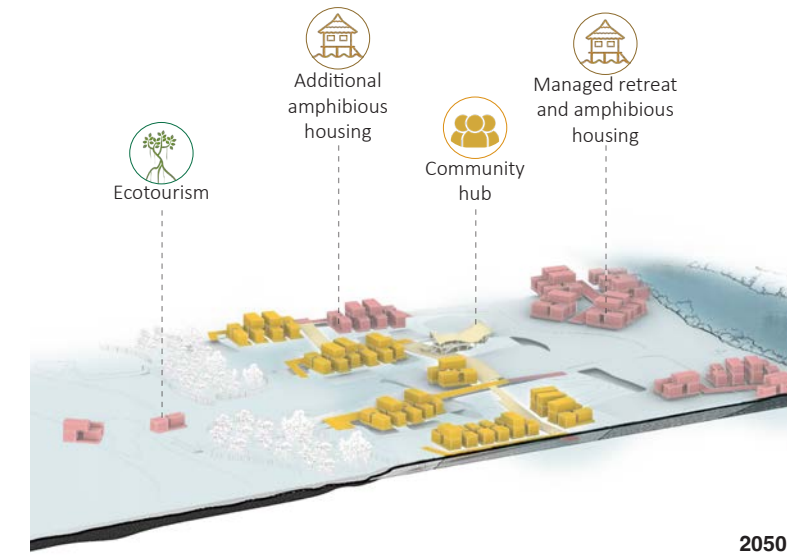
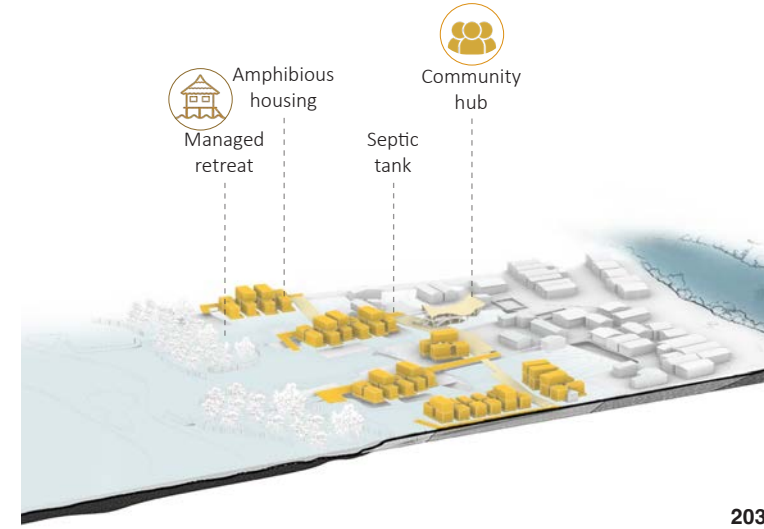
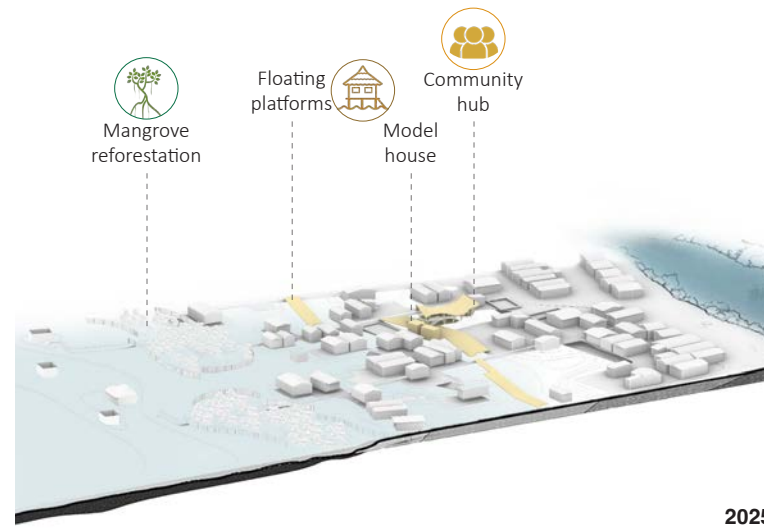


We worked with actors like Fundacion Grupo Social and Ecovida. During our visit to Cartagena, we witnessed the interchange of hard edges everywhere, from the oceanfront, to the system of concretized inner city canals, to the hard earth resulting from deforestation of mangroves at the Ciénaga. Houses turn their backs to water, and the underserved are pushed to the periphery.

We recognize three seeds of change: the community, the mangroves, and adaptable and densified housing! We envision three policy frameworks to implement these seeds: a tourism tax that will go directly to the community for their ecosystem services, and a community land trust to avoid further displacement and empower people to care for their environment.



Phasing over time. Existing conditions within our pilot site show people living precariously on the water's edge. Families claim space through an informal rule of law, rendering the edge of the ciénaga inaccessible. In the short term, we include public elevated platforms, care for mangroves for natural protection and water filtration, a small community hub, and a model amphibious house to establish trust with the community and show what is to come. Floating houses are a desire of local community partners we interacted with.





Amphibious Edge and Communal Livelihoods. The amphibious edge begins with the restoration of the mangrove ecosystem by expanding the existing nursery, creating a community of environmental stewards. Healing the water of the Cienaga also envisions the dredging of the sediment-carrying canals. From our continued conversations with the community, we learned of their interest in floating houses, so we envision a model housing unit in 2023 with future opportunities for adaptation and densification. In 2035, the waters edge transforms into a soft public realm with a floating community hub as an anchor. With makerspaces and self governance areas, it brings the focus to communal skill development and local entrepreneurship. The amphibious housing densifies itself with opportunities adapted for inter-generational living. With a healthy mangrove population, in 2050, carbon data monitoring hubs and floating apiaries are introduced.



Habitat Puerto Rico

“Originality in and of itself cannot be the criteria for measuring excellence and relevance in architecture. Only originality and invention, as they pertain to the resolution and insight of truly architectural issues, contribute to design. Current explorations appear to be deeply interested in the human psyche. Released from the traditional confines of architecture, however, they now extend to those aspects of the human psyche that heretofore have been reserved to other art forms, including music, literature, painting and sculpture.”

(Safdie, Language 12)

Montréal’s 1967 Universal and International Exhibition, better known as Expo ‘67, was a showcase for modernity, similar to the manner in which previous world’s fairs espoused demonstrations of national progress and prowess at a global scale. Daniel van Ginkel and Blanche Lemco van Ginkel, husband and wife, architects and town planners with prior involvement in the Congrès Internationaux d’Architecture Moderne (CIAM), ideated Expo ‘67’s theme, Man and His World (Riar 29). The Van Ginkels enticed their former student, Israeli-born architect Moshe Safdie (working with Louis Kahn at the time), to assist them in the development of the project’s Master Plan. While Safdie acquiesced, he also counter proposed including a new model of housing within the fairgrounds; one heavily based on his thesis project as their student at the School of Architecture at McGill University. From this collaboration, Habitat ‘67 was born. While a fundamental and emblematic living example of the achievable diversity of urban housing in our built environment, Habitat ‘67 can also be considered a false promise of



dwelling by the impossibility of its replicability.

The project came to light as a response to the immeasurable suburban expansion experienced in the 1950s and 60s. Its design reflects a profound curiosity for the lack of diversity found in public housing being built at the time. Safdie’s own assertion that his reactionary design for Habitat ‘67 was conceived as a response against the success of Le Corbusier’s Unité d’Habitation is also telling of its time and context. Safdie felt that the extreme systematization, repetition and use of interior circulation spaces seen in

the Unité projects were a betrayal of Le Corbusier’s earlier principles (Habitat 3-4).

Sited on a landfill peninsula, 354 of the 1,000 dwellings eventually conceived as houses rather than apartments are stacked in a seemingly aleatory manner so that each forms the garden for the unit above it. As the project embraced a technology of prefabricated construction, each unit is made up of one or more concrete ‘boxes’ measuring 38.5 feet long by 18 feet wide and 10 feet tall (equivalent to 11.7 x 5.3 x 3 meters) (French 134). These three-dimensional modules were

pre-finished in a factory setting in order to minimize time on the ground and maximize efficiency during construction.

From the perspective of urban design, the relationship between the individual (unit) and the whole (project) is presented in a novel and notable manner. The materiality and structural integrity of the independent units allow the possibility of each of these units to be opened in three of its directions providing natural light, views, privacy and soundproofing for the spaces within. As such, there is an illusion of an absence of spatial hierarchy.

The image of the project provokes questions of efficiency and of scale. There is a sense of fragmentation but also of continuity. Furthermore, the disposition of the units themselves can be served by a network of 'open streets' (Safdie, Habitat 2) rather than corridors, which is perhaps a nod to the tenets of Team 10 and the work of Peter and Allison Smithson, colleagues to the Van Ginkels at CIAM. The resulting form is a geometrically complex configurative order of house-city duality (house as city and city as house) working towards an 'organized casbah' as coined by Aldo Van Eyck (Oxman 323, 325).

Expo '67 held fairgrounds to a unique time and sense of place existing for six months and was crowded with more than 50 million visitors. Within that timespace, Safdie held an unprecedented opportunity to showcase the experimental housing ideas that would become Habitat '67. Soon afterwards, the architect and his team encountered countless opportunities to propose variations on the Habitat '67 theme; in New York, Rochester, Tehran, Israel, and Puerto Rico, in particular. In spite of all these commissions, none were built.

Habitat Puerto Rico (1968-1973) was designed soon after Montréal's success. The project was commissioned as a partnership between the Puerto Rico Cooperative Development Administration and private developers and aimed to provide 800 housing units to middle to low income families in San Juan for a fraction of Habitat '67's costs (Architectural Forum 93). In contrast to Habitat '67, the design for Puerto Rico followed a hexagonal design of overlapping overhangs to create shading for the units below, taking climate into consideration. As there were no local factories available to manufacture the

units, the initial design of these modules was constricted to the widths of transport by boat and freight to the island and to the site.

Although construction began in 1969, Habitat Puerto Rico never came to fruition. Thirty modules were built yet there were issues with the project's location and the Puerto Rican topography. Moreover, the general public rejected the aesthetics of the proposal, it being too foreign to cultural perceptions of Puerto Rican housing of the moment. Only a few repurposed modules exist in the tropical landscape, one of which has been seen to serve as a corral and shelter for cows in the town of Camuy (Mignucci 16).

The transformative method of construction proposed by Habitat '67 was largely based on an economy of scale where the costly initial upfront values of prefabrication of modules were to be amortized by an increased level of production within the logic of repetition. However, the possibilities afforded by the utopian setting of a world's fair were not replicable in everyday cities and circumstances due to practical issues of building codes, implications on construction labor, skilled labor, unions, and zoning restrictions, to name a few. Therefore, as the changeability and evolutionary potential of this project remains stunted by externalities, Habitat '67 prevails as a singular example of what a distant future may bring.



'Puerto Rico Ja...Ja...bitat' cartoon by Enver Azizi (1969). Biblioteca Digital Puertorriqueña UPR

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VII

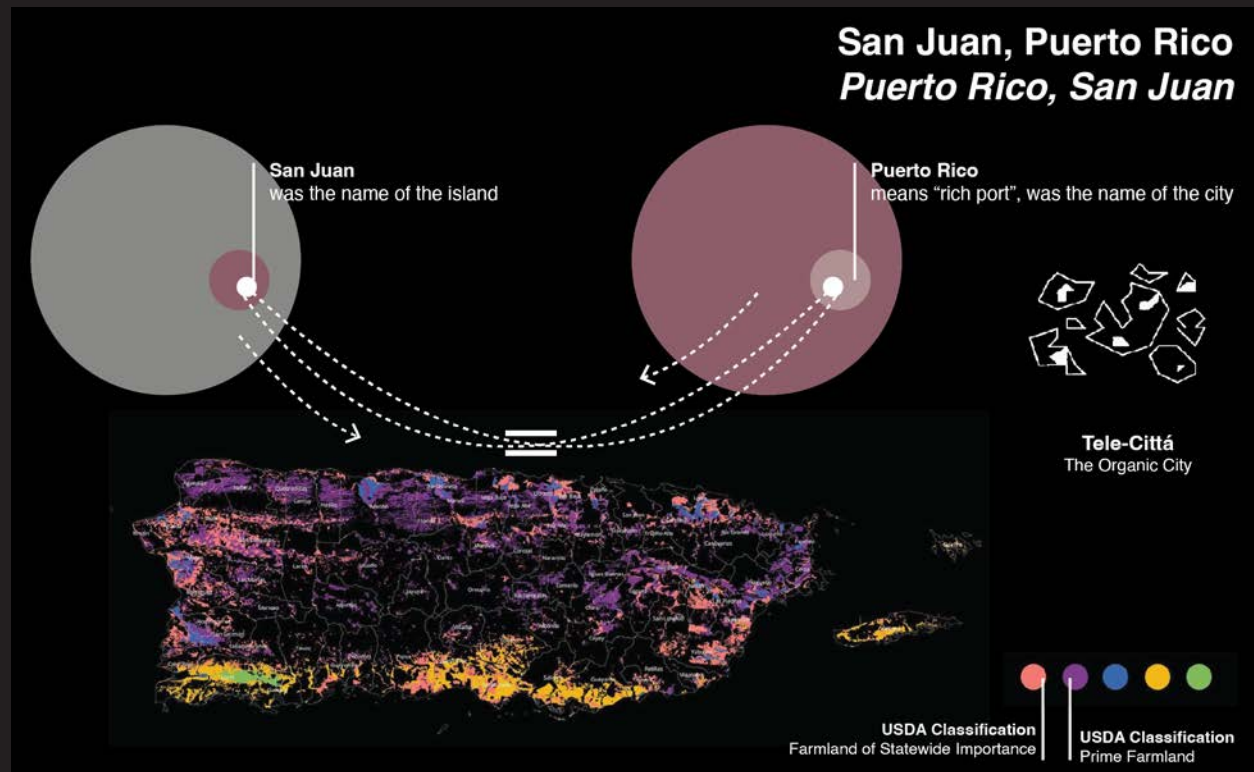
Puerto Rico and the Caribbean Archipelago

Puerto Rico and the Caribbean continuously face legacies of colonialism and untenable extractive tourism. This collective geography presents a complex landscape upon which to understand enclaves, armatures and heterotopias of socio-ecological urgency.

This project looks at the islands of Borinquen (Puerto Rico), Soualiga (St. Maarten), and Wai'tukubuli (Dominica). Through the Recombinant Urbanism city model lens, it is important to see the historic timeline of extraction through pre-colonialism and the city of faith, extractive colonialism as the city as a machine, and the expansion through the organic city as the modern city.

Re-drawing the bathymetry of these Caribbean islands as one land mass, commonalities of climate, patterns of urbanization, risks and vulnerabilities can be found.





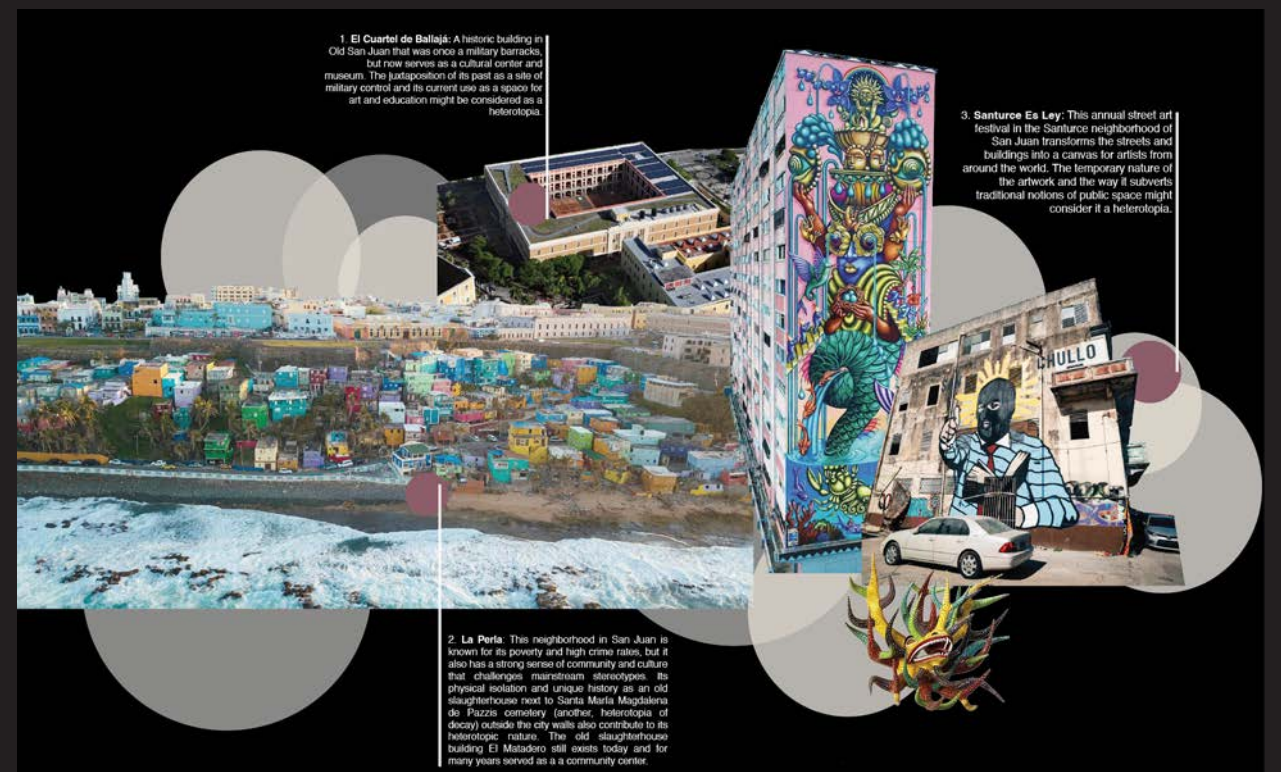
Nomenclature and city growth



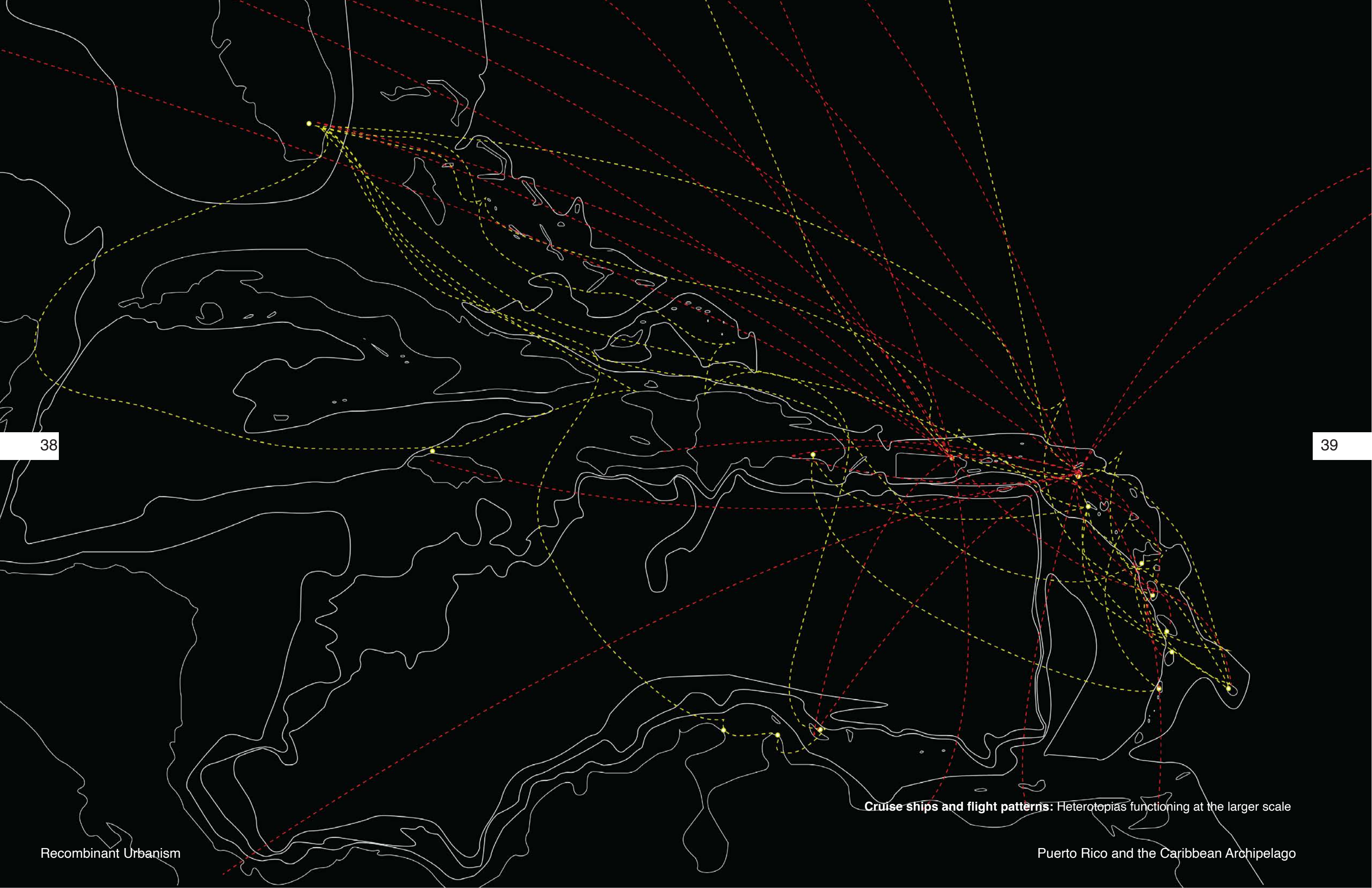
Enclaves throughout time



Ave. Ponce de León: model of city armature



Heterotopias in San Juan



Cruise ships and flight patterns: Heterotopias functioning at the larger scale

