

G r a d u a t e
P o r t f o l i o

R i y a C h a d h a

Selected Works 2021-2022 | Columbia GSAPP
Master of Science in Architecture & Urban Design

PROJECTS

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01.

Rewilding Caye Caulker

Resiliency through knowledge generation,
conservation and scientific tourism

Type: UD Studio III

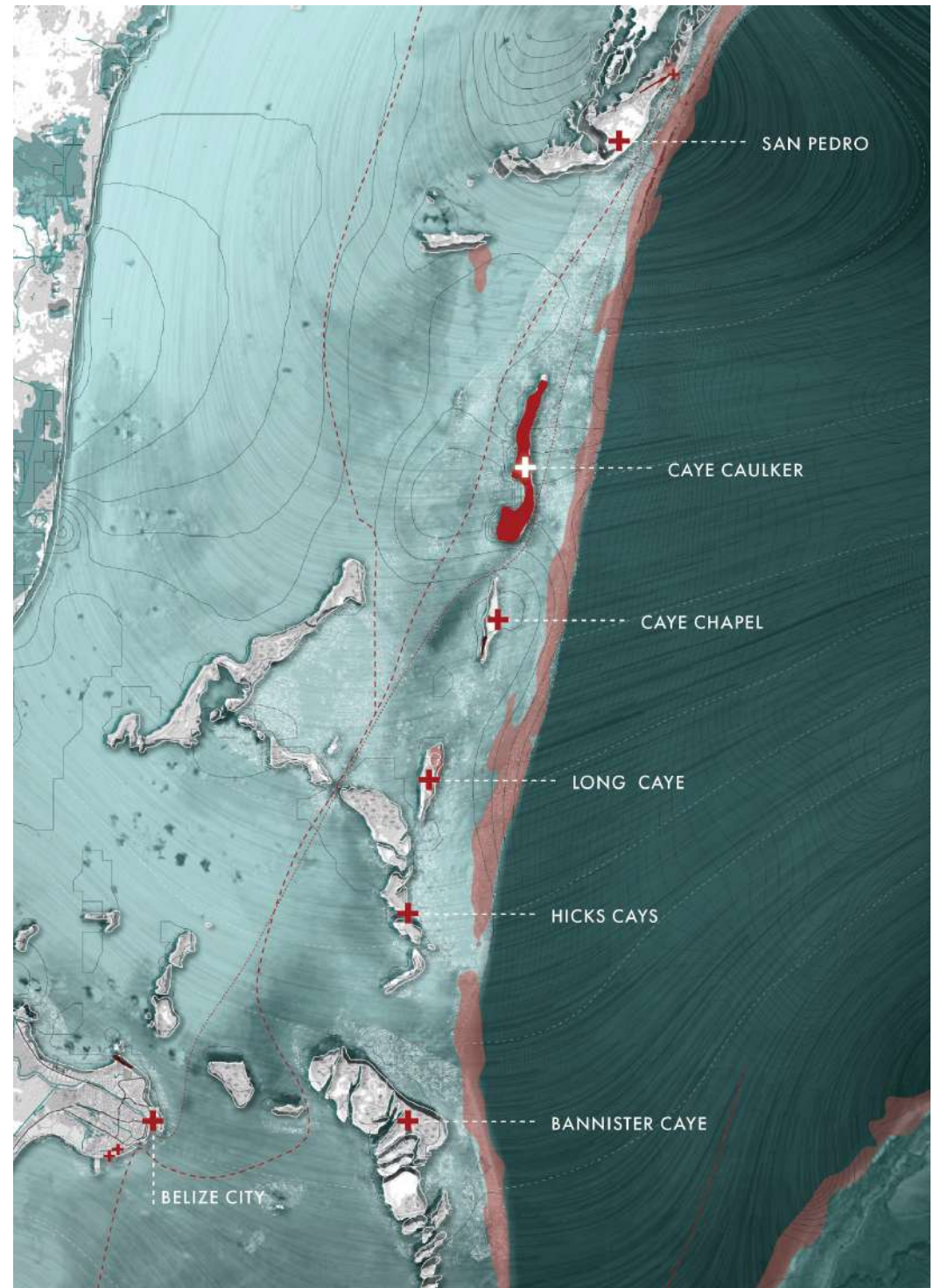
Team: Avani Agarwal, Lamisa Haque, Rhea Pai

Role : Team Project

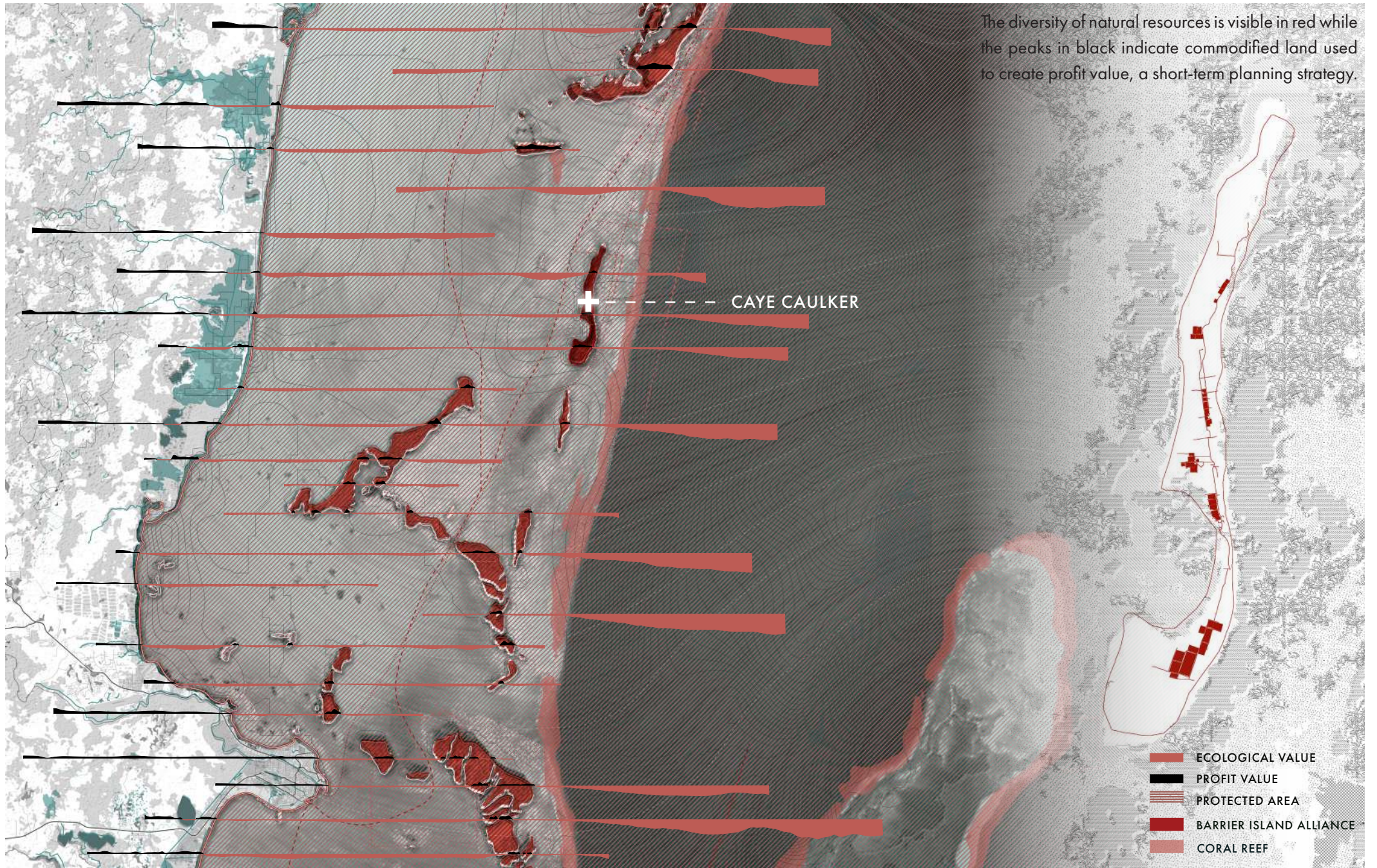
Date: Spring 2022

Location: North Caye Caulker, Belize

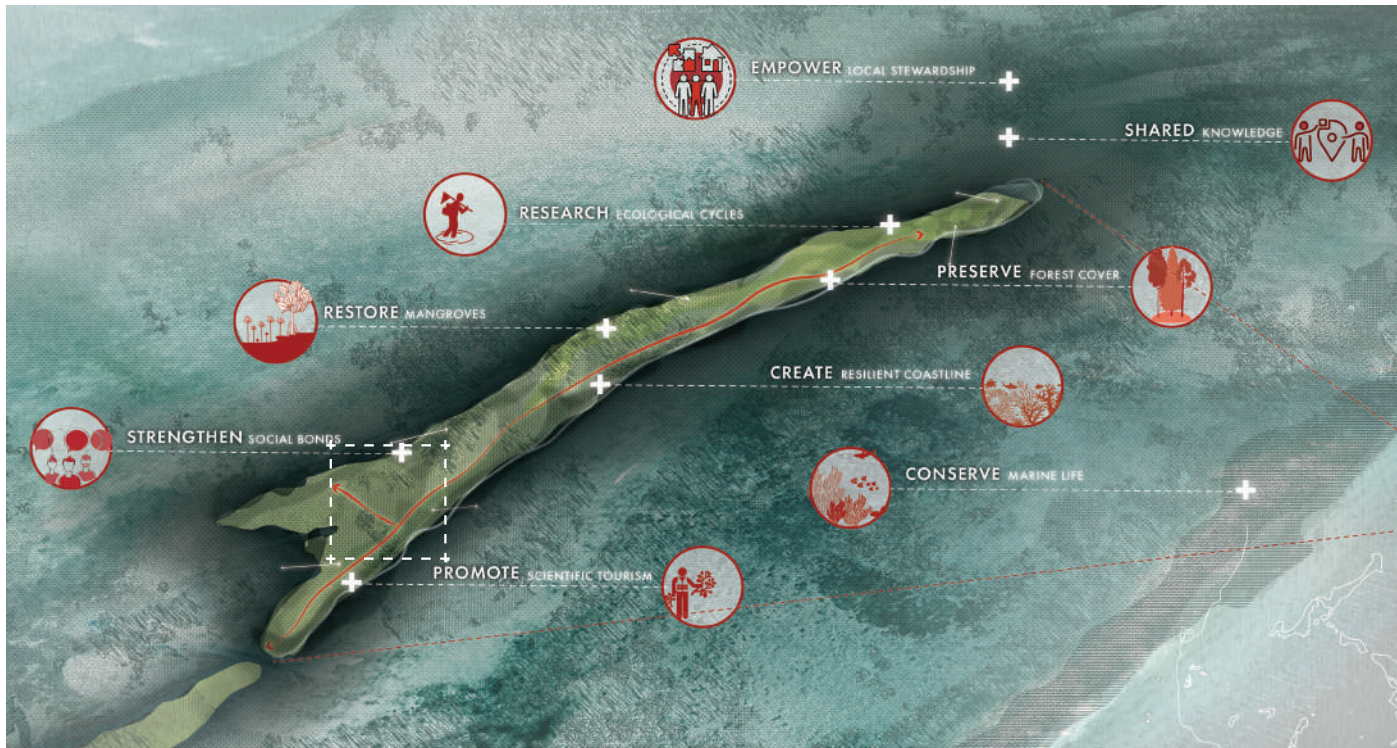
By creating a National Park Alliance, Caye Caulker can become a model for redefining protected areas. Dissolving arbitrary borders value is redefined through ecosystem services with long-term landscape first strategies. This framework of knowledge production, conservation, and scientific tourism increases civic engagement and empowers the local community to protect the Barrier Islands as critical infrastructure -restoring and rewilding the inherent ecological balance.



TOWARDS A NATIONAL PARK | PROFIT VS ECOLOGICAL VALUE

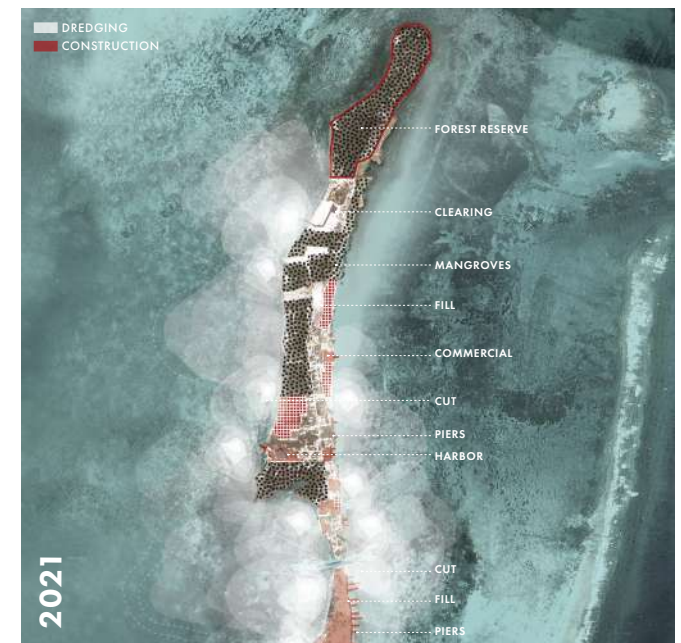
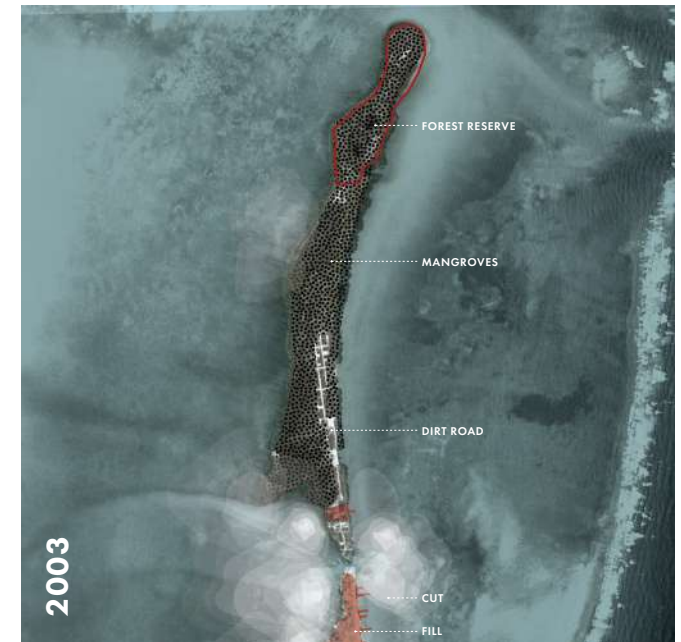
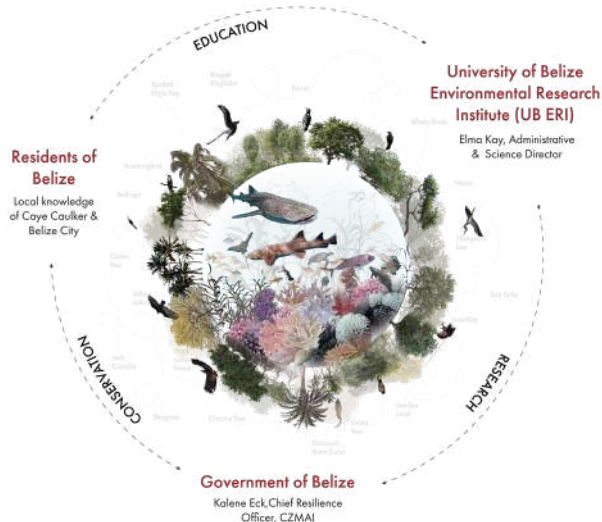


BARRIER ISLAND ISLAND | LANDSCAPE BASED APPROACH



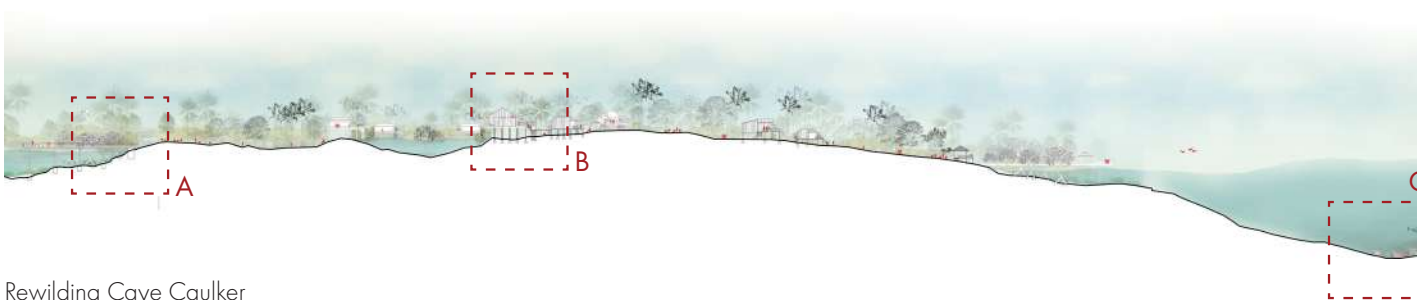
- ✦ KNOWLEDGE PRODUCTION
- ✦ CONSERVATION
- ✦ SCIENTIFIC TOURISM

The goal is to create a National Park Alliance among the Barrier Islands to empower the local community to protect their home. Through this we shift the current trajectory of development to a 'Landscape based approach' by redefining protected areas. The future resilient landscape enhances the inherent interconnectedness between the human and natural ecosystems.

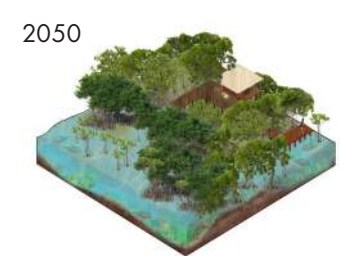
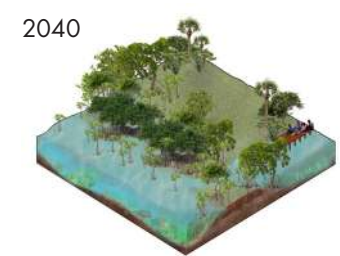
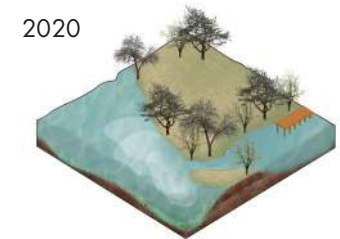
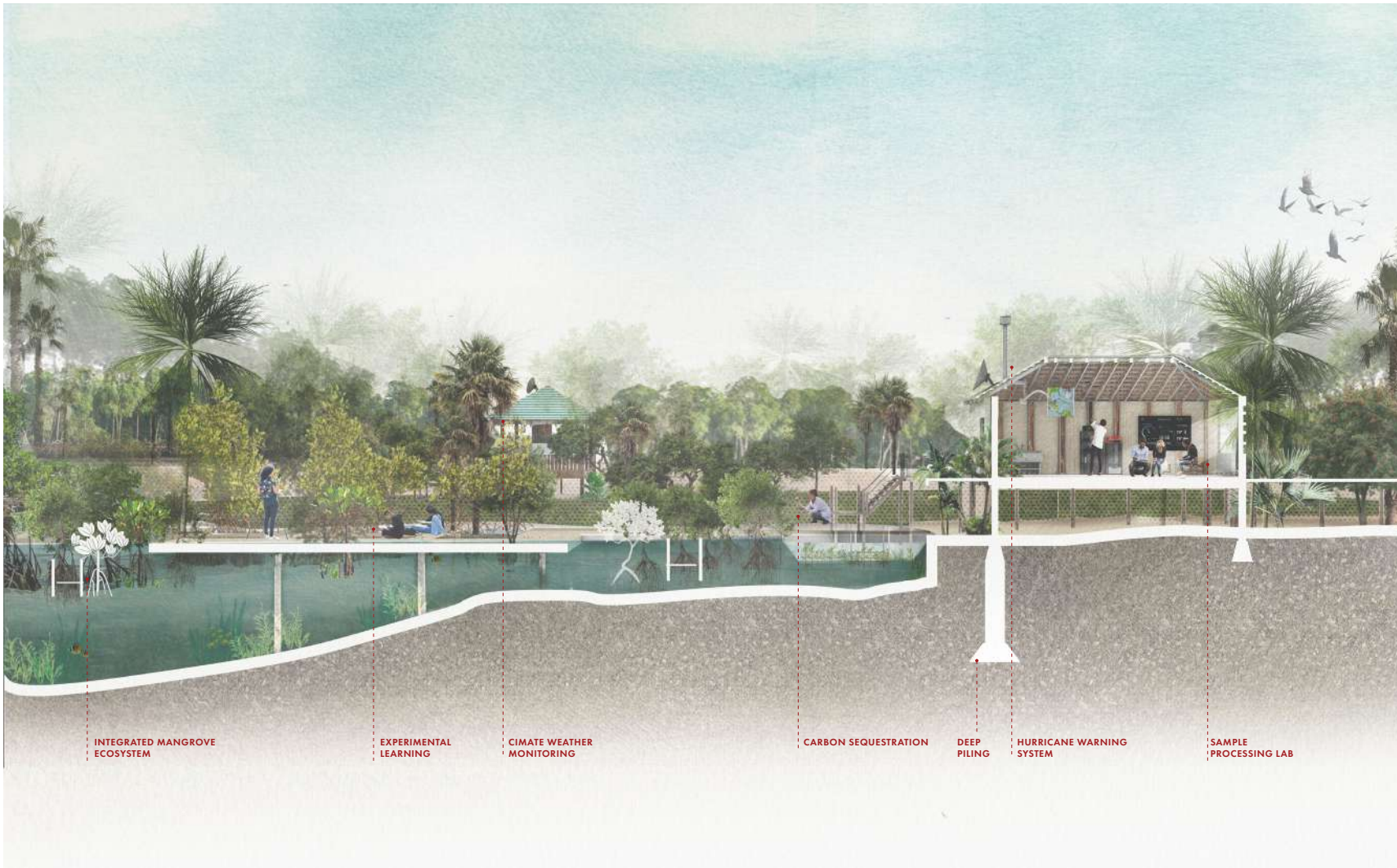


LANDSCAPE IN TRANSITION | HARBOUR TO REEF

The aim to create a holistic environment by looking at the entire ecosystem as a continuum and operating at the intersection of economy and ecology. This entails striking a balance between people's needs and environmental protection and conservation. This is accomplished through adaptive management of resources, mangrove restoration and repair, retrofitting of existing resorts and the development of mangrove based housing typologies



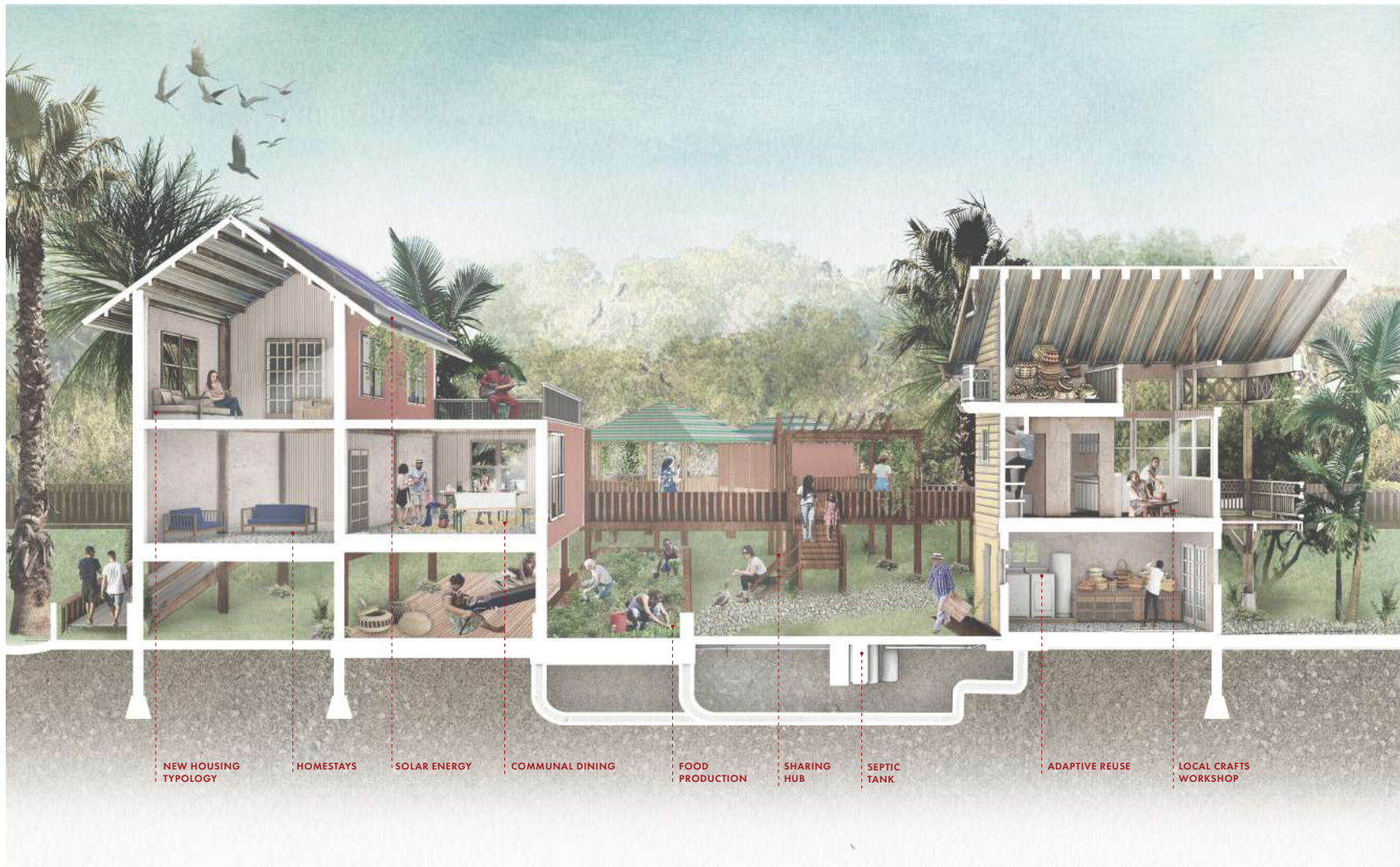
RIDGE TO REEF CONNECTION | HARBOUR EDGE



At the harbours edge one can see systems of climate monitoring, hurricane warning, weather tracking. Integrated mangrove ecosystem provides nurseries for fishes and enriches the marine life. Soil research, water temperature and carbon sequestration all provide data that allow for a better understanding of how to create a dynamic living edge that exists in harmony with human and ecology

RIDGE TO REEF CONNECTION | COMMUNITY LIVING

Tools of community science is used to increase civic engagement and empower the local community to protect their home. Integrating into the existing systems the new residential clusters on the left show communal living to accomodate homestays allowing the tourists to emmerge themselves within the local culture. Communal dining around local food production and retaining the culture of local handicrafts strengthens social bonds, enabling stronger interaction with locals, tourists and nature.



RIDGE TO REEF CONNECTION | COMMUNITY LIVING



02.

Spatial Exclusion through the pedestrianization of Chandni Chowk Market, Old Delhi

Public Spaces: Rhetorics & Practices
Urban Design Elective Spring 2022

Through the analysis and critique of Chandni Chowk market, the essay focuses on the evolution of the relationship between the various stakeholders like shopkeepers, tourists, residents and street vendors in a social space that is full of culture, history and heritage. Can it be considered a successful public space? Is pedestrianisation always better?



CHANDNI CHOWK MARKET PEDESTRIANISATION | PUBLIC SPACE DESIGN



Chandni Chowk in the 1860s / Source: Soofi, Mayank Austen, Epitaph on Chandni Chowk, Mughal Delhi, 2013



Architecture of Chandni Chowk / Source: Times of India



New Pedestrianized Chandni Chowk Street / Source: The Indian Express



Render of Proposed Design Scheme by Pradeep Sachdeva Architects

"It's an iconic, historic area. This is state-sponsored vandalism. In my opinion, doing nothing is a better alternative than desecration." AGK Menon, former convener of INTACH.

Chandni Chowk is a dynamic, many-layered market street in Old Delhi, India. Dating back from the mid-17th century the market had come under pressure to modernize, reduce congestion, enhance the flow of goods and increase tourism. In 2020, it was redeveloped as a pedestrian-only street.

This dramatic change elicited a range of reactions from residents, shopkeepers, local visitors and tourists, historians and architects. While some residents were thrilled by the absence of cars, others were disappointed by the spatial exclusion that was evident in the planning. The conflicts of values that shape the experience and use of public spaces like Chandni Chowk were apparent.

The basic design decision split the 26-meter wide Chandni Chowk street in half, disrupting the integrity of the whole settlement. It also created broad sandstone walkways, clean storefronts & manicured landscaping.

The top-down approach toward a 'world-

class street design' led to a significant change in local people's relationships with the built environment. Impractical solutions have resulted from the use of street guides and toolkits produced in the Global North for implementation in the Global South.

The redevelopment plan could have been an excellent opportunity to reaffirm the historic significance of this major Mughal ceremonial boulevard, which is an ode to asymmetry and irregularity. The street design could have also carefully analyzed the importance of daily vendors and included them in the proposed scheme. However, it aims to assist specific types of business owners and promote typical tourists to use the space. This raises the questions about why cities and other entities of power are given the almost complete authority to decide how shared spaces and infrastructure should be used and changed.

Having gone from one of the dense crowds to one of car-free tranquillity, this design questions the feasibility of doing so without sacrificing the culture, history, or identity of the space.

The full essay can be found [here](#).

03.

Enclave of Resistance

Pratt Pullman Yard

Type: UD Studio II

Team: Bianca Bryant, Avani Agarwal, Gloria Mah

Role : Team Project

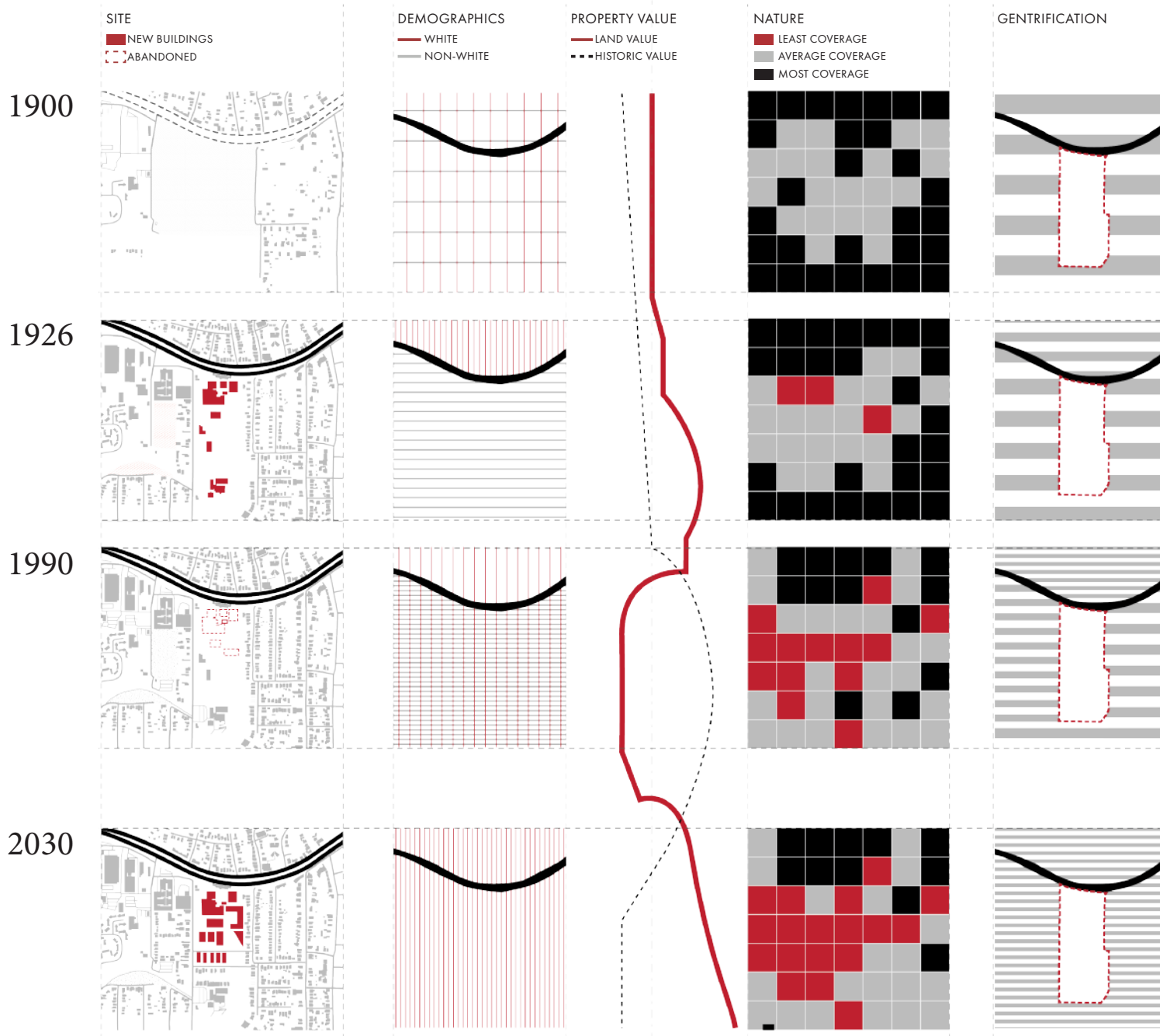
Date: Fall 2021

Location: Atlanta, Georgia

Imagining a world after property, we envision an equitable environment focused on social capitalism and community resources that benefit all. Divesting wealth from property and into a collective fund enforces housing as a human right, prioritizes a sense of belonging, and fosters community wealth building beyond boundaries.

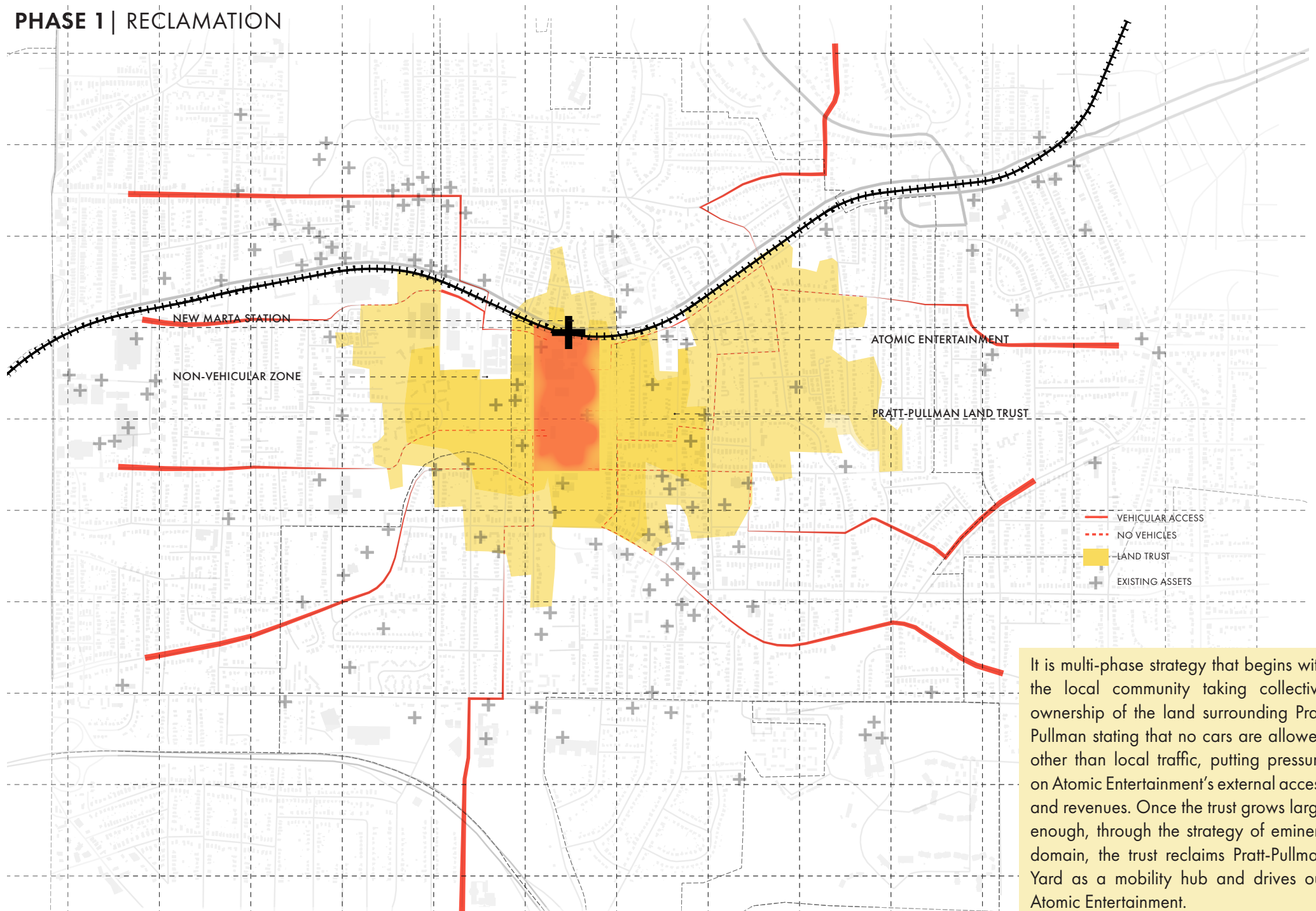


PRATT PULLMAN YARD | TIMELINE



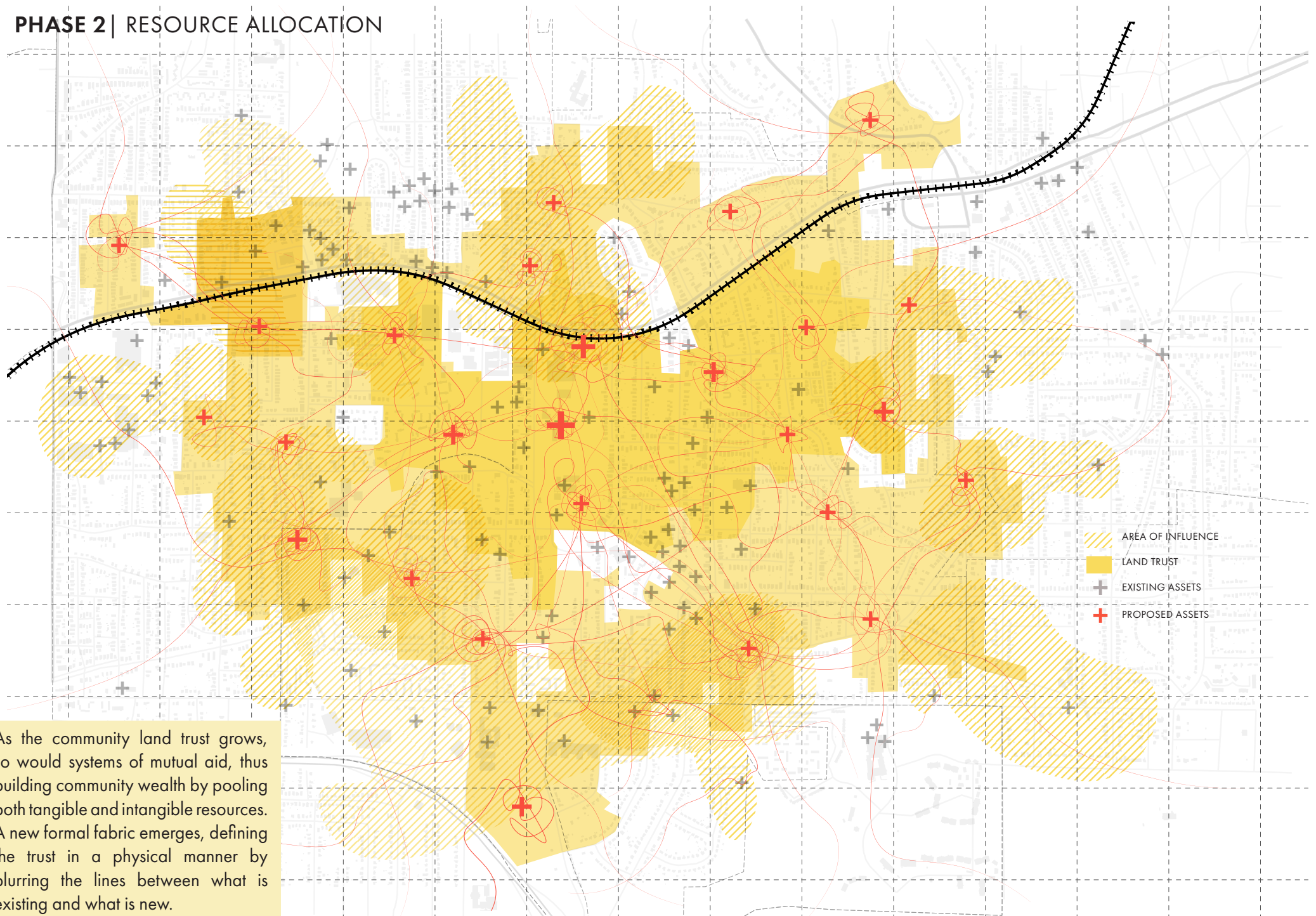
Pratt-Pullman Yard is a site rich with history. It originated as farmlands in the early 1900s and eventually became a railroad hub in 1926. The neighborhood historically has been home to increasing numbers of African Americans due to industrial work opportunities and white flight. For roughly the last two decades, Pratt-Pullman remained vacant until 2016, when Atomic Entertainment bought the property with plans to develop a “creative city” - a new film production district. This development proposal threatens the existing community by gentrifying the city at an alarming rate.

PHASE 1 | RECLAMATION



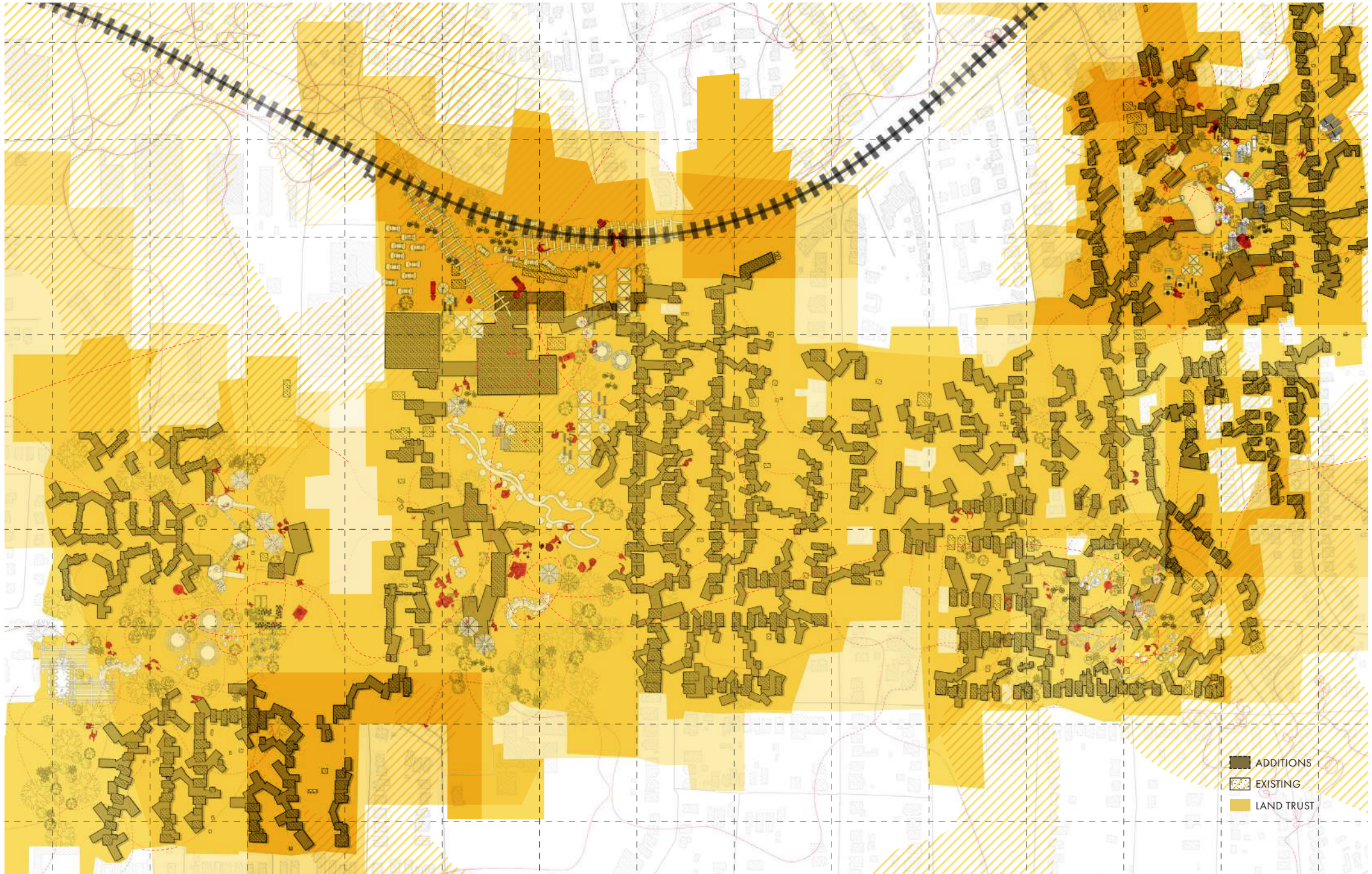
It is multi-phase strategy that begins with the local community taking collective ownership of the land surrounding Pratt Pullman stating that no cars are allowed other than local traffic, putting pressure on Atomic Entertainment's external access and revenues. Once the trust grows large enough, through the strategy of eminent domain, the trust reclaims Pratt-Pullman Yard as a mobility hub and drives out Atomic Entertainment.

PHASE 2 | RESOURCE ALLOCATION



As the community land trust grows, so would systems of mutual aid, thus building community wealth by pooling both tangible and intangible resources. A new formal fabric emerges, defining the trust in a physical manner by blurring the lines between what is existing and what is new.

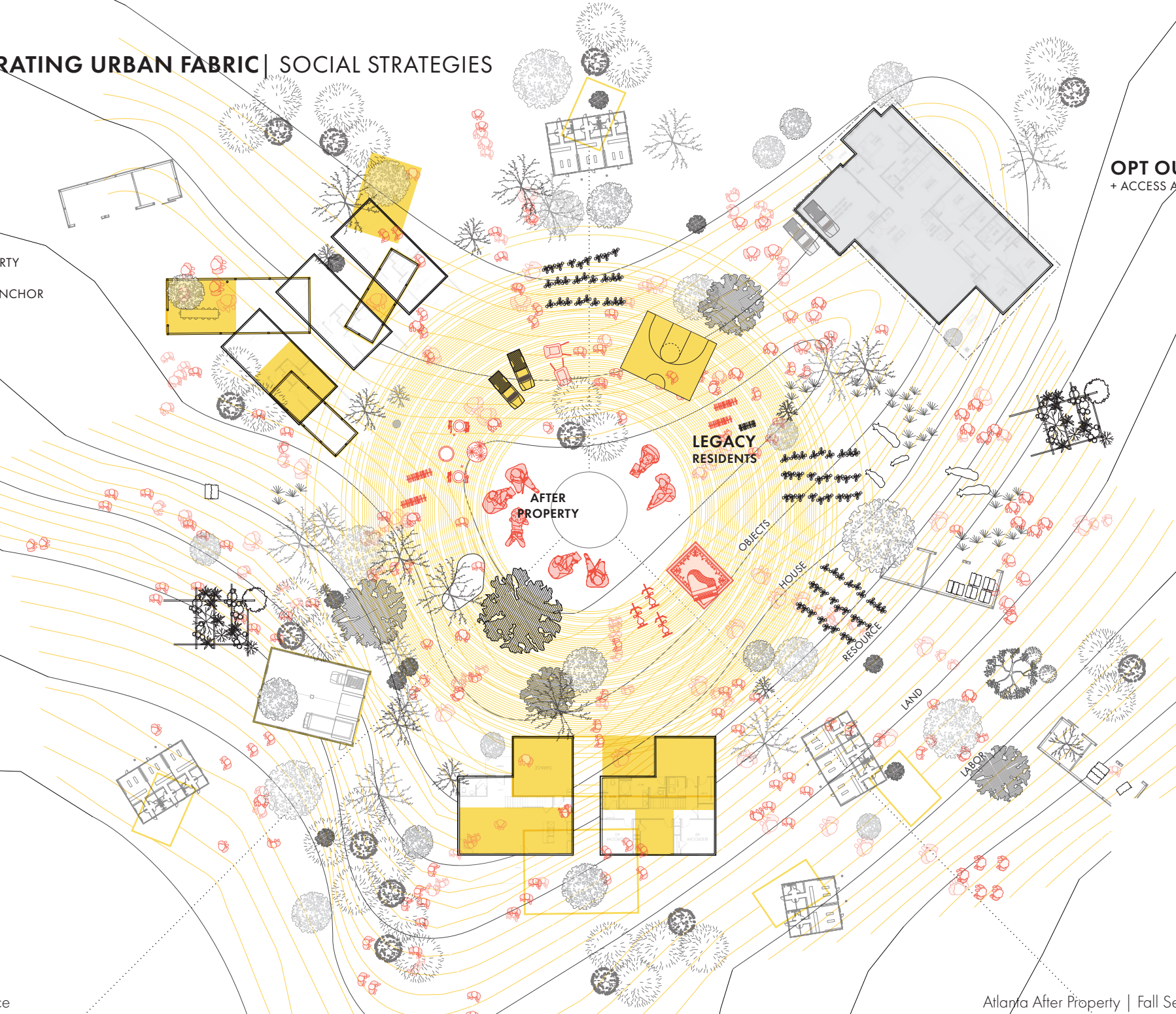
PHASE 3 | COLLECTIVE HOUSING

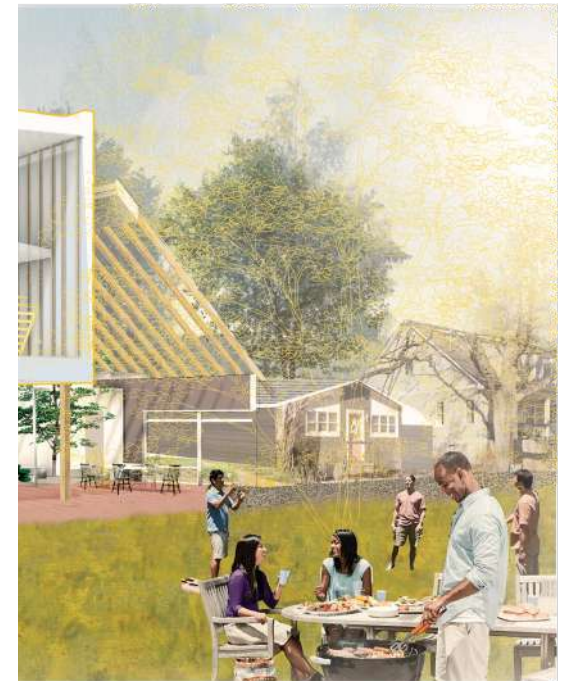
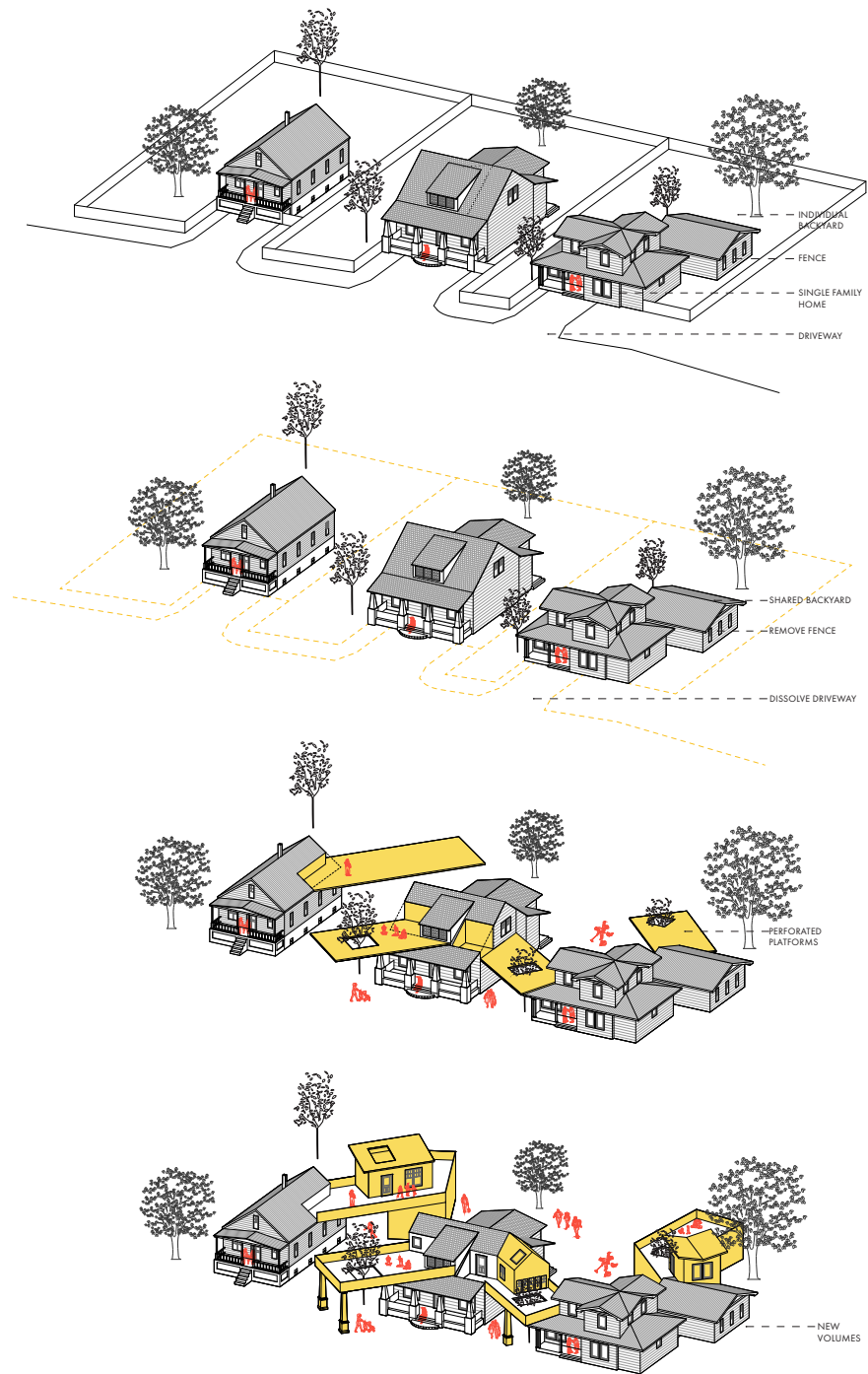


REGENERATING URBAN FABRIC | SOCIAL STRATEGIES

OPT IN
+ DONATE PROPERTY
+ DONATE CAR
+ WORK AT AN ANCHOR

OPT OUT
+ ACCESS ANCHORS





The physical form of the land trust emerges through the deconstruction of the single family home. By expanding and merging, dissolving boundaries and morphing into a rhizomatic structure it creates fluid, multi-generational relationships between the individual and the collective.

The single family home is deconstructed by removing individual backyard boundaries. This is followed by the addition of platforms anchored by the existing houses, which furthers the process of dismantling the rigid, car-dependent grid. The platforms are perforated to preserve existing trees on site. Lastly, the trust will build up volumes above, below and around the platforms as needed over time, creating more housing and civic amenities as the collective grows.

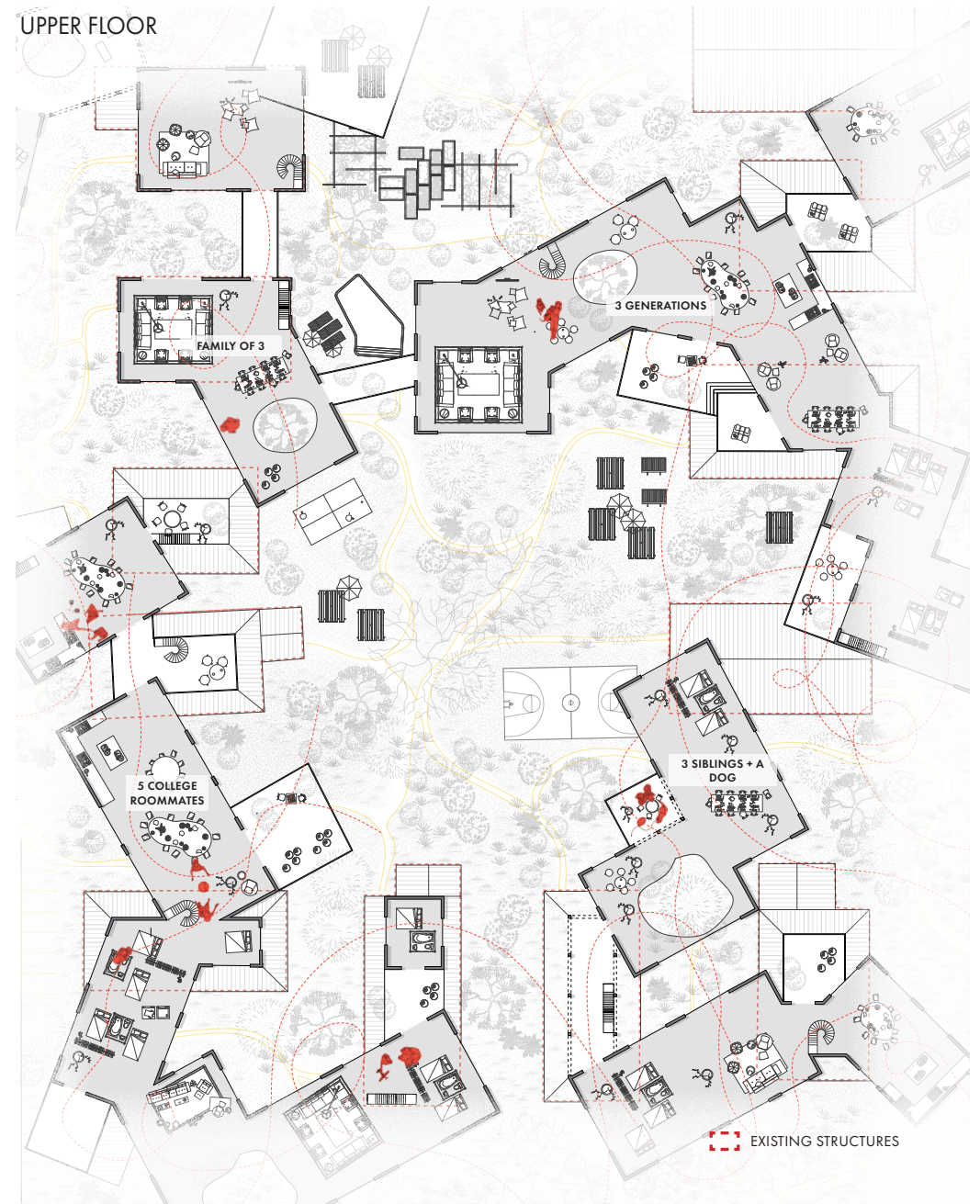


REGENERATING URBAN FABRIC | FLOOR PLANS

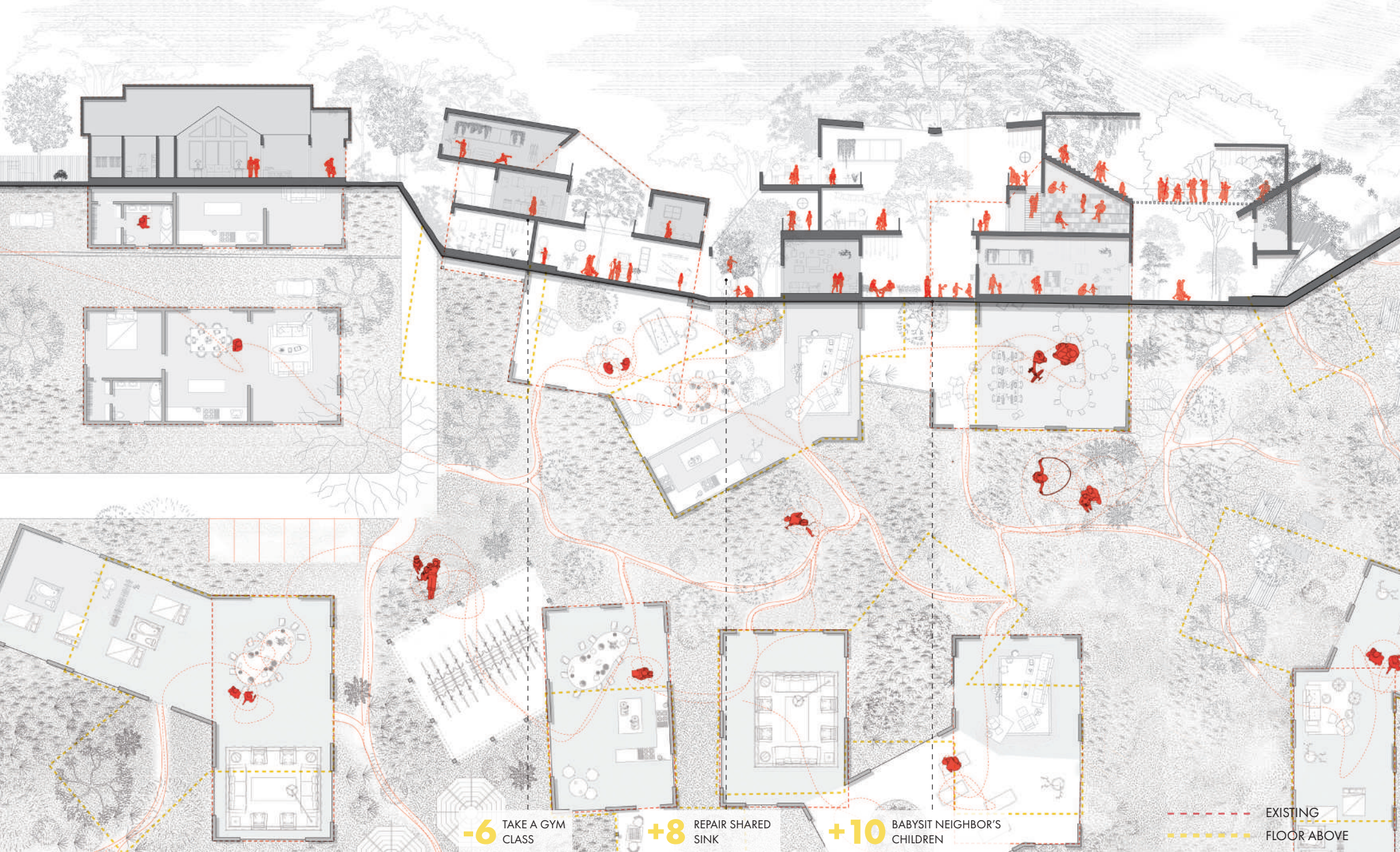
GROUND FLOOR



UPPER FLOOR



REGENERATING URBAN FABRIC | COLLECTIVE LIVING

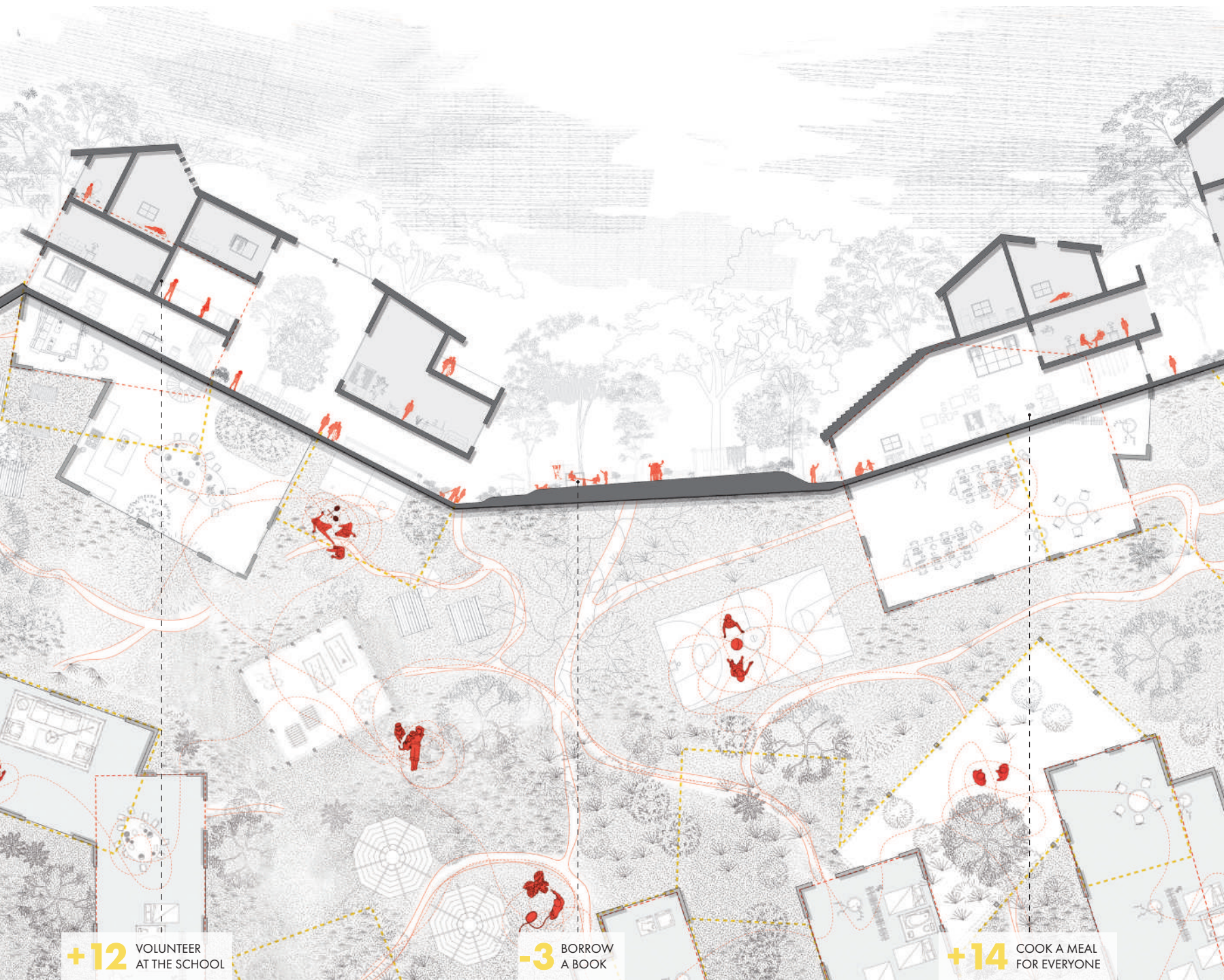


-6 TAKE A GYM CLASS

+8 REPAIR SHARED SINK

+10 BABYSIT NEIGHBOR'S CHILDREN

--- EXISTING
--- FLOOR ABOVE



The new fabric combines the principles of porosity with the spirit of the longhouse typology, where walkability is preserved on the ground floor creating a continuous flow between the interior and exterior. This perforated yet interconnected built environment fosters a symbiotic relationship between humans and ecology, instilling a sense of care for both human and environmental surroundings. Structures have the ability to grow and overflow on upper levels, providing more space for individual living and clustering of community activities.

03.

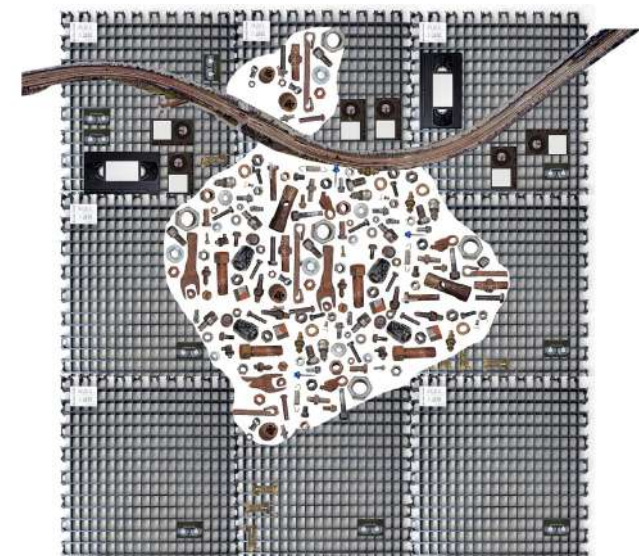
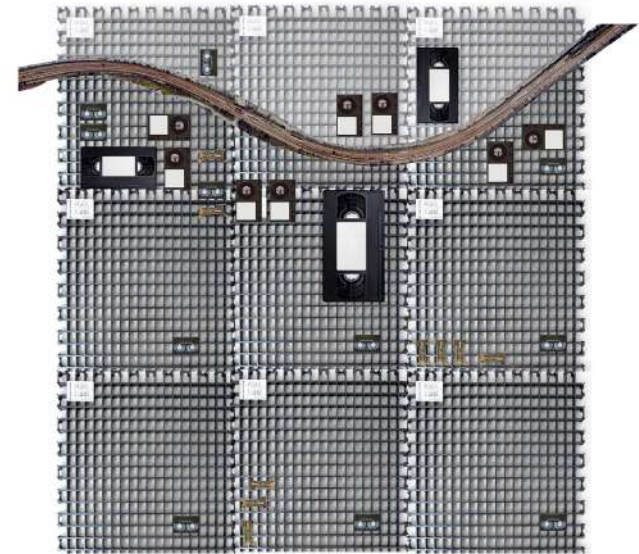
Samples, Sites & Readings

UD Studio II: Atlanta After Property

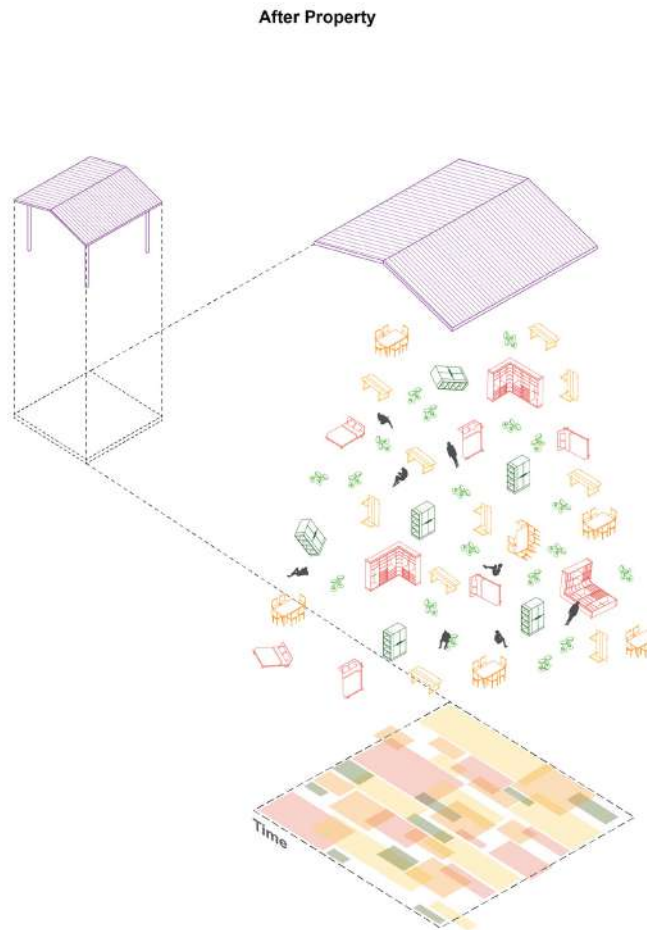
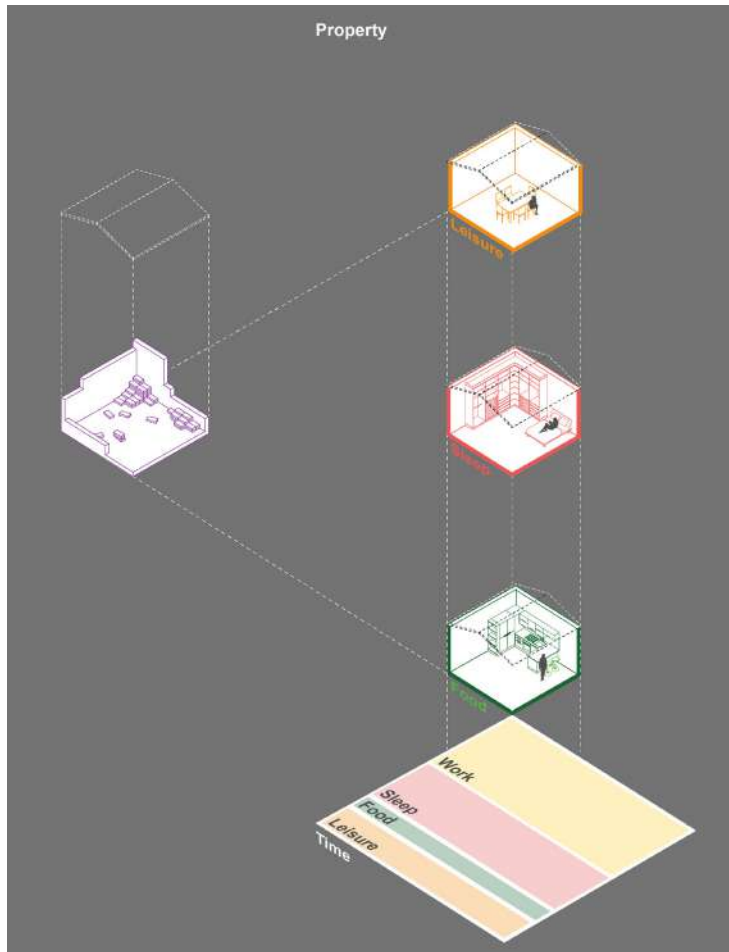
Reading 01: "Prisoners of the Present: Transient Populations, Sovereign Thoughts, and the Depoliticization of Housing in the Postwar Era," by Muzaffar, Ijlal in *After Belonging: The Objects, Spaces, and Territories of the Ways We Stay in Transit*, edited by Lluís Alexandre Casanovas Blanco et al., (Zurich: Lars Muller, 2016), 166 – 178.

Sample 01: Kumbh Mela, India
Spatio-temporal flux

Site 01: Bowen Homes - Atlanta, GA

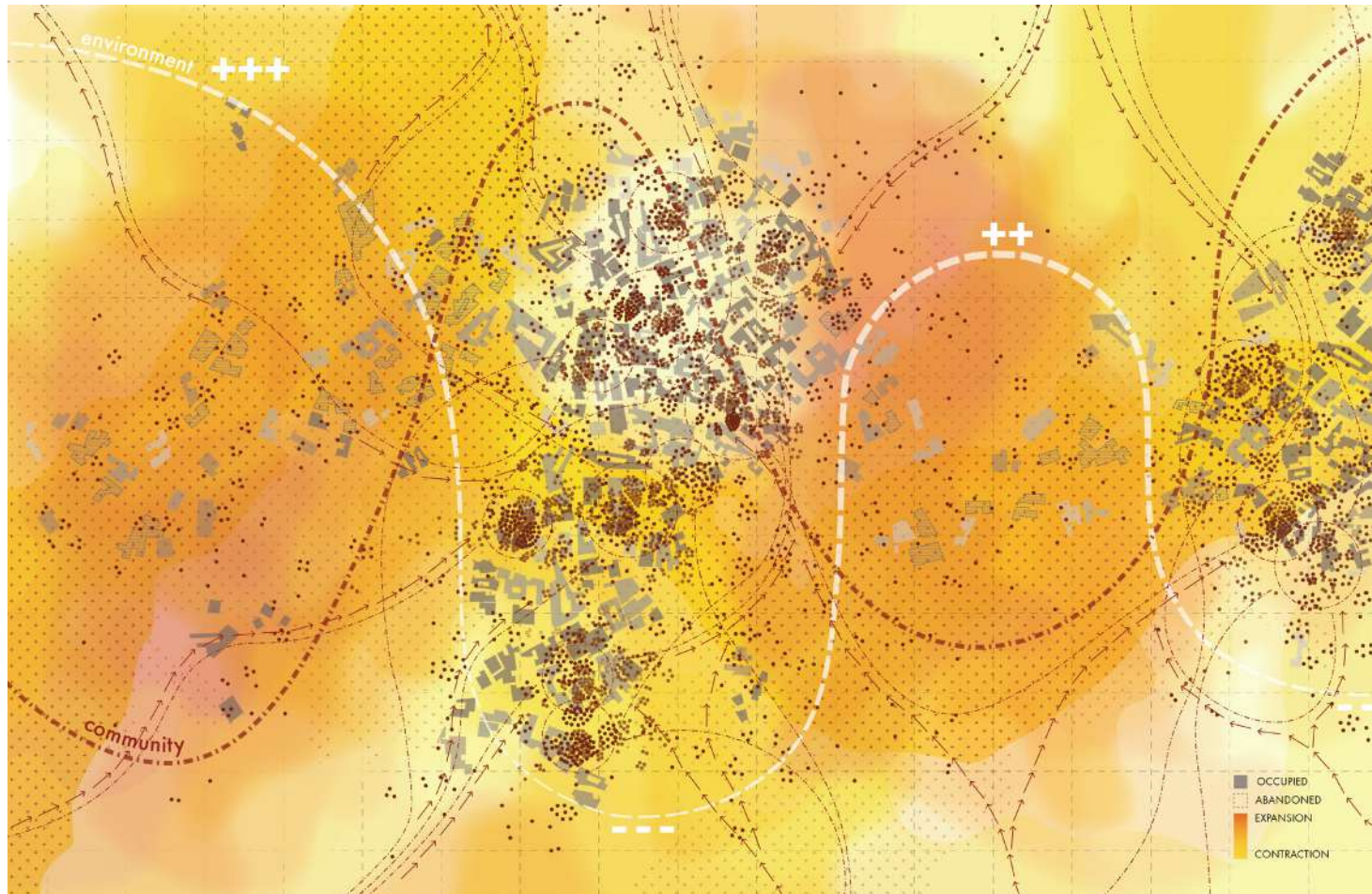


PRISONERS OF THE PRESENT, IJLAL MUZZAFAR | READING 01



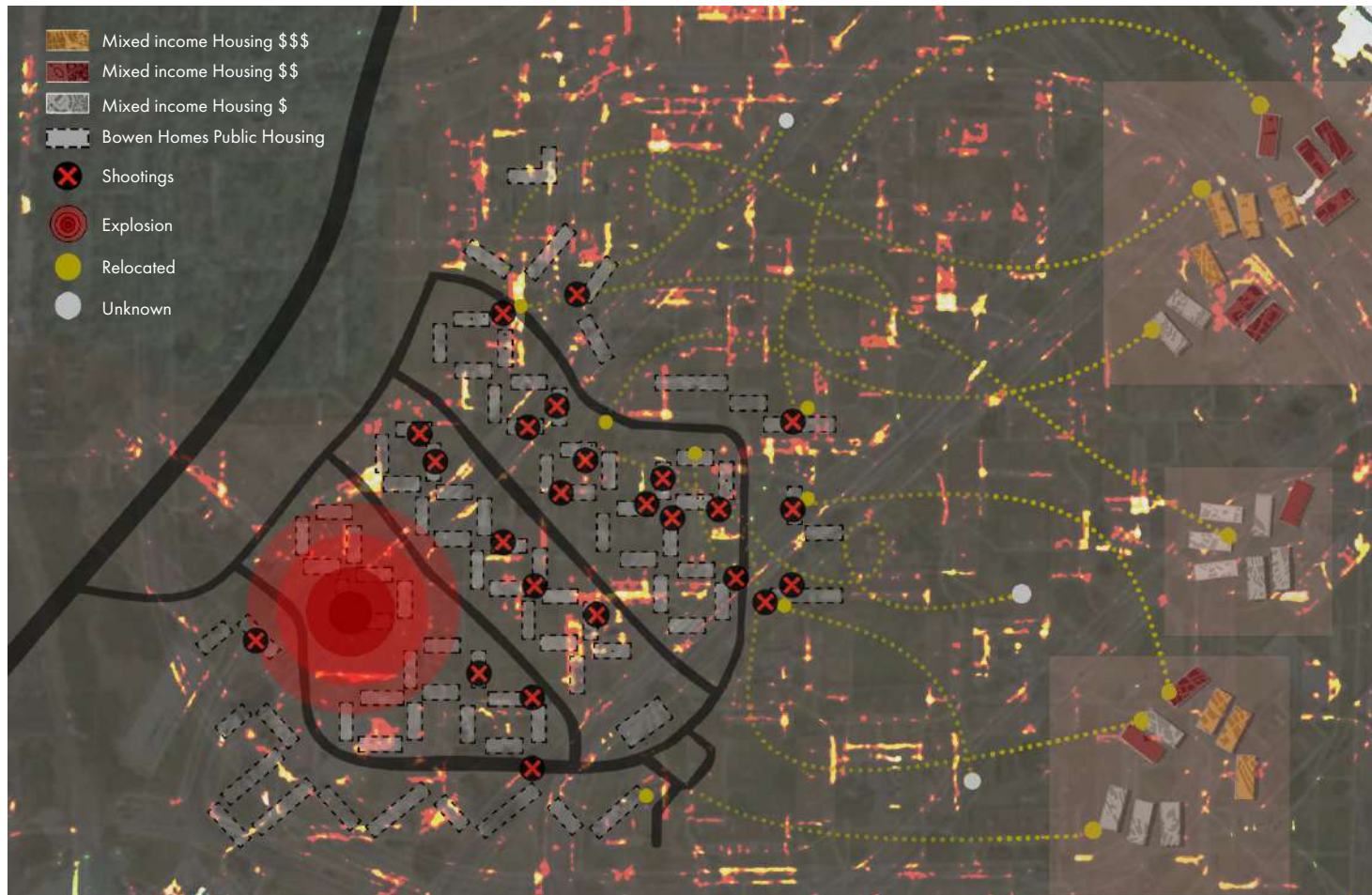
"This complexity must be displaced or replaced, in time, by invoking transitions and systems. The variants of housing allow the experts to both be relieved of the responsibility of planning and yet be able to plan. The plan, instead of being an instrument of organizing space, becomes one of organizing time."

KUMBH MELA, INDIA | SAMPLE 01



Allowing the natural environment to dictate the space and time when the community can use the land defies preconceived bounds of the built environment and the regime of property. The unpredictable expansion and contraction of environmental factors determines the way people adapt and live with nature and not against it, as is evident on the site of Kumbh Mela.

BOWEN HOMES, ATLANTA | SITE 01



In 2009, Atlanta demolished its last public housing project - Bowen Homes - due to high rates of violent crime, drug use, and vandalism. Bowen Homes falls into the regime of property as its failure can be attributed to its lack of maintenance, security, and governmental support of its low-income African American population.

05.

Beyond Walls

Reinventing Springfield neighbourhood & its learning environment through its vacant lots

Type: UD Studio 1

Team: Jiaxin Li, Qiqi Huang, Rhea Pai

Role : Team project

Date: Summer 2021

Location: Newark, New Jersey

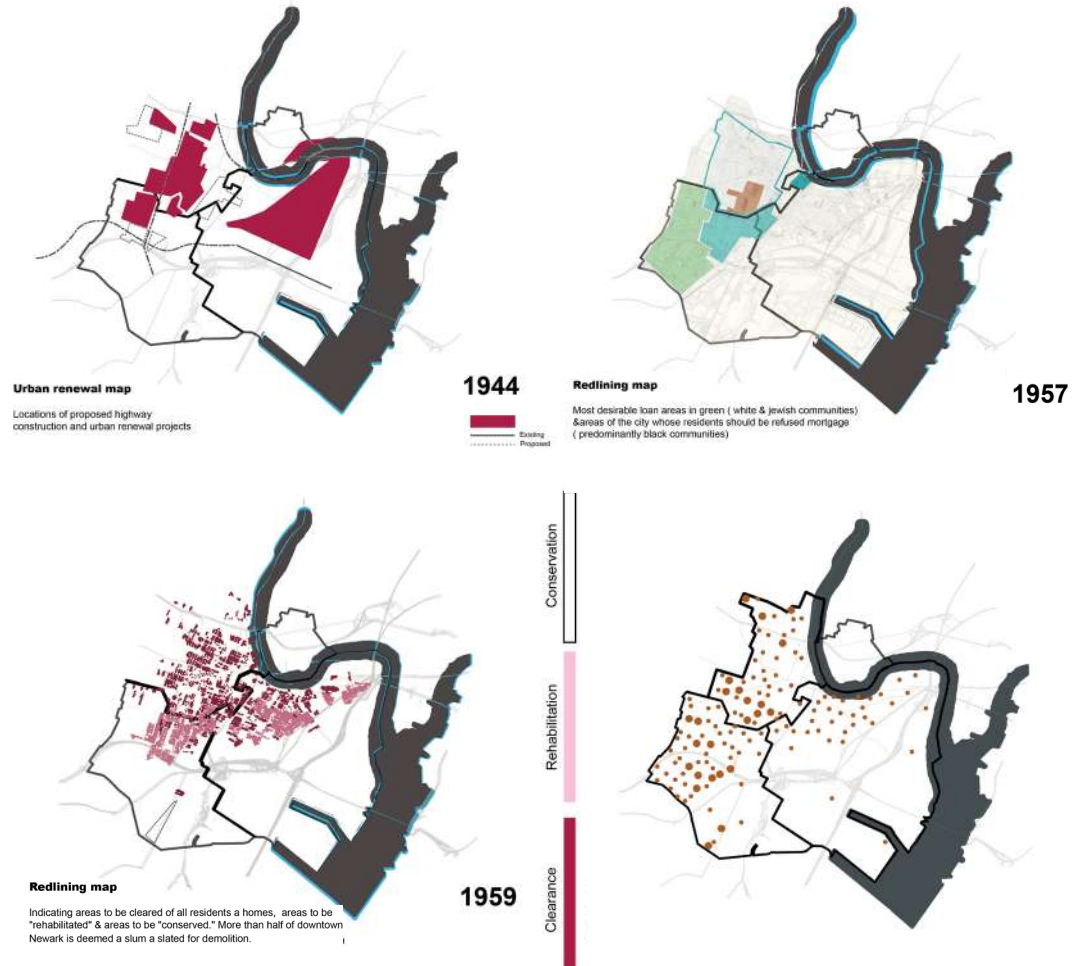
The Education system in Newark has induced decades of segregation and community disputes. The occurrence of this phenomena creates unequal and uncollaborative learning spaces. To begin to address this issue, Beyond Walls prompts residents a new methodology of interaction and develop a system of learning that goes beyond schools into the vacant spaces in the city aimed to puncture the current system to bring about systemic change.



SHARED ENVIRONMENT | STAKEHOLDERS

Urban policies and systemic inequality structures have led to disinvestment in Newark both in housing as well as education and urban amenities. There is a high degree of disparity & unfairness that predominantly black & brown children face in Newark. Through this project, the aim is to look at bridging this inequality that is by creating more sensitive urban design interventions & modules to better integrate these communities within the built environment.

<p>1968</p> <p>A Takeover Proposal after the Newark Riots</p>	<p>1984</p> <p>State Introduces School Monitoring</p>	<p>1993</p> <p>Report, Newark Schools deficient</p>	<p>1995</p> <p>Judge Orders Quick Takeover of School District. Charter School Program Act</p>
<p>1997</p> <p>First Launched Charter School in NJ</p>	<p>2007</p> <p>Newark Got Back Management Control</p>	<p>2010</p> <p>Zuckerberg Donated \$100M to Fix the Public School System in the Blighted, Violent city of Newark</p>	<p>2012</p> <p>Anderson, 'Renew Schools'</p>
<p>2013</p> <p>'One Newark'</p>	<p>2014</p> <p>District Finances Returned to Local Control</p>	<p>2015</p> <p>Protest - 'One Newark'</p>	<p>PTSD</p> <p>PTSD Education Reform</p>

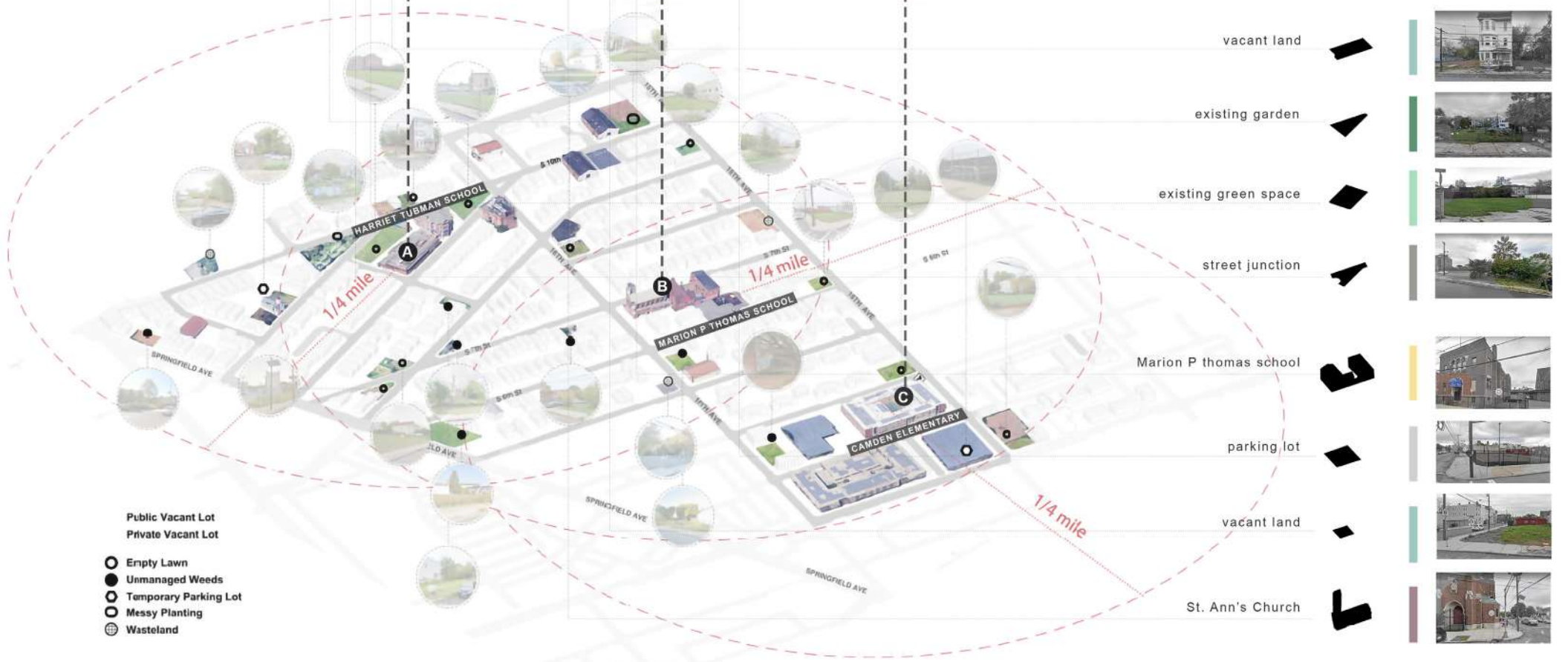
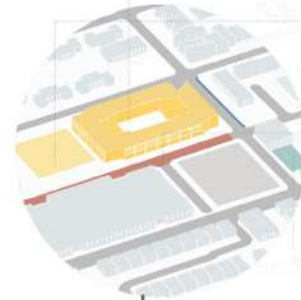
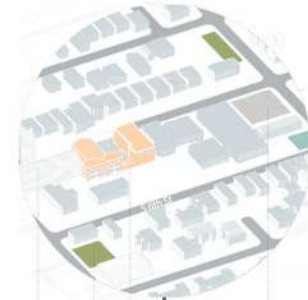


SHARED ENVIRONMENT | EXISTING CONDITIONS

Harriet School

Marion P Thomas School

Camden School



camden school

school open space

non vehicular road

vacant land

vacant land

existing garden

existing green space

street junction

Marion P thomas school

parking lot

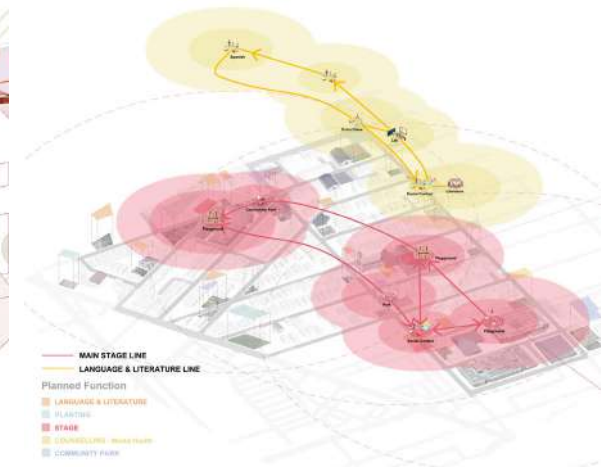
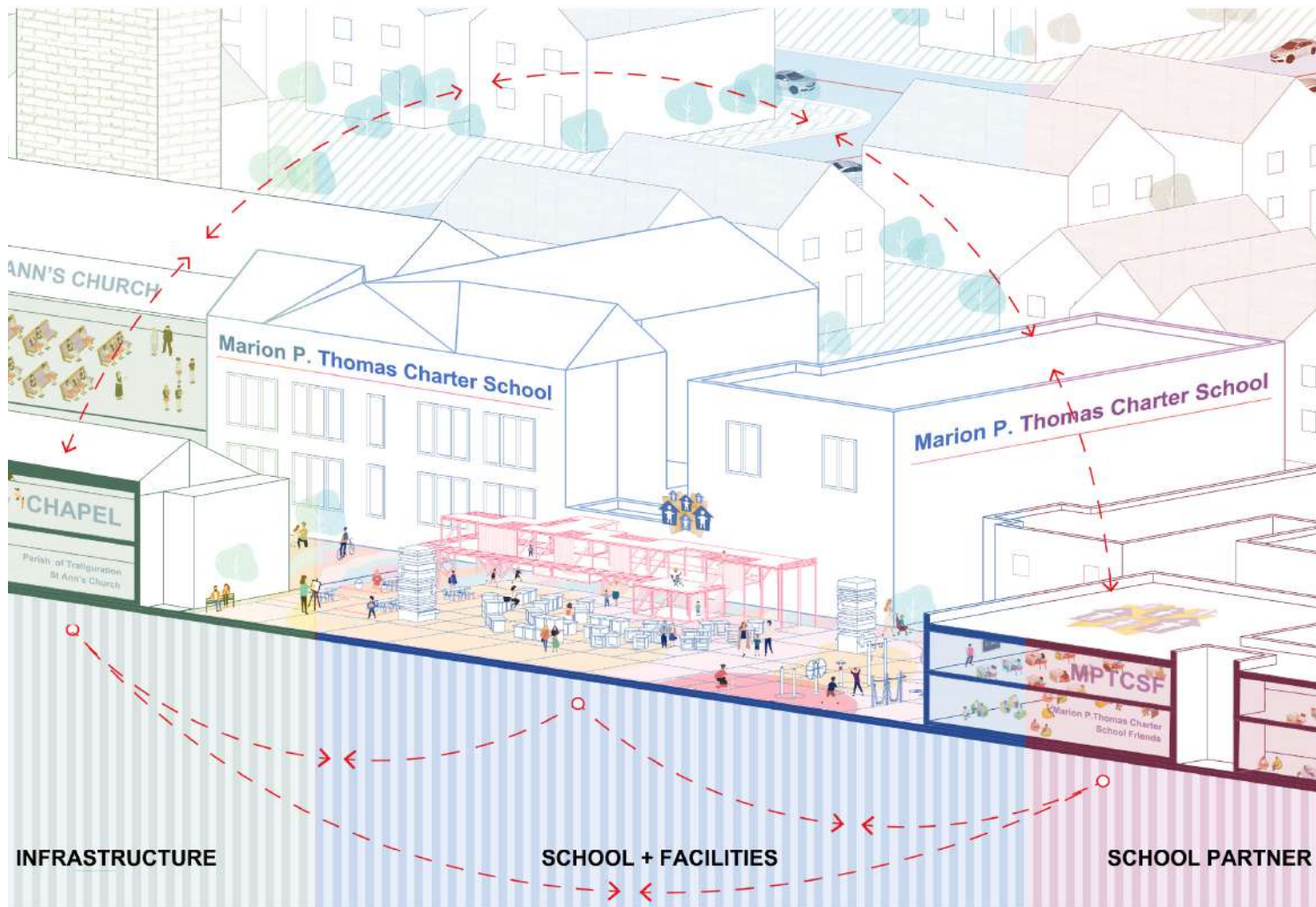
vacant land

St. Ann's Church

Public Vacant Lot
Private Vacant Lot

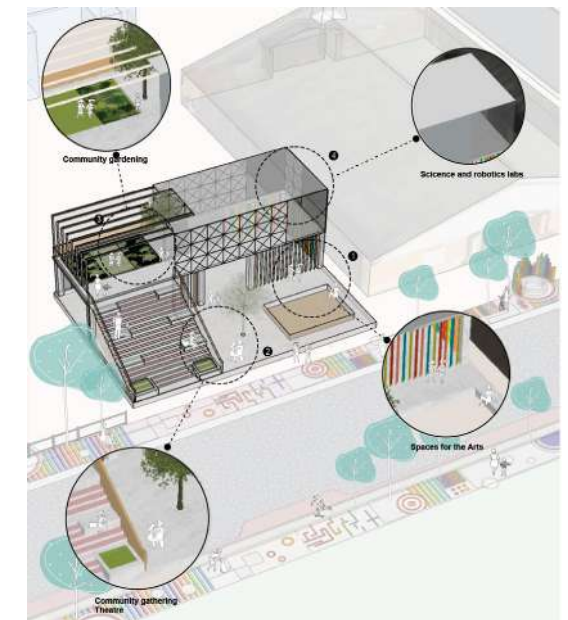
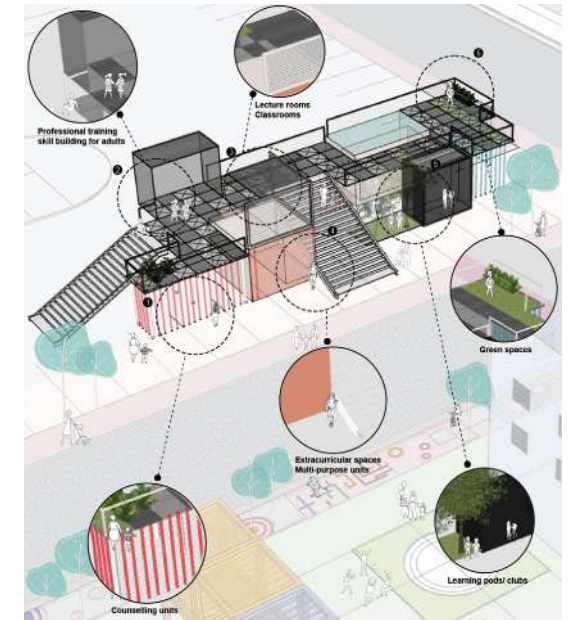
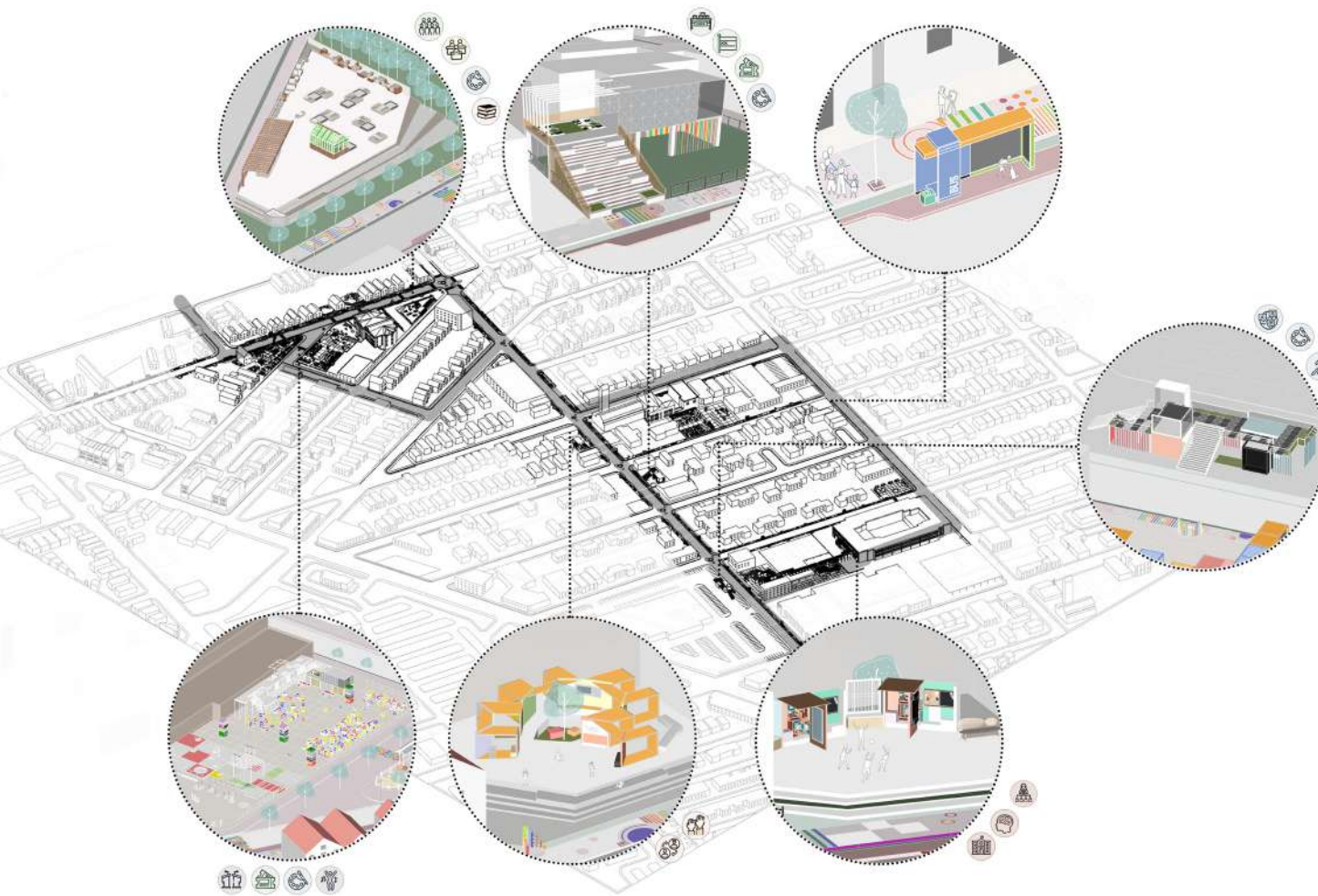
- Empty Lawn
- Unmanaged Weeds
- Temporary Parking Lot
- Messy Planting
- ⊕ Wasteland

SHARED ENVIRONMENT | STAKEHOLDERS



Schools and their surrounding communities are constantly shaping & being shaped by one another. This plan envisions a neighborhood-wide integrated system of schools that pool resources to build new facilities for people of all ages. This benefits the community and their spaces while also reducing redundant educational structures. The new facilities are created based on the existing education system and extracurricular activities offered in the chosen schools.

SHARED ENVIRONMENT | INTERVENTIONS



In order to strengthen the sense of participation in the community, strategies like buildable libraries on the sidewalk, urban farming, lego-style children's furniture are included. The proposal also focuses on identifying different functions of the same building. Interventions such as movable study pods in identified vacant lots enable students to learn in different social spaces thereby making their streets safer. Other interventions include community center and consultation center to expand the opportunities for all residents of the neighbourhood.

SHARED ENVIRONMENT | HARRIET SCHOOL



Community Centre



Tactical study pods



Multi Functional Zones



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