ERIC JULIAN HAGERMAN

MASTER OF ARCHITECTURE, COLUMBIA U. GSAPP
BACHELOR OF SCIENCE IN CIVIL ENGINEERING, HOWARD U.

I start and end my academic journey at GSAPP with one word in mind. This is **community**.

My passion for engineering and architecture stems directly from my childhood experiences in my hometown of Chicago, Illinois. Too often, redeveloped communities in Chicago are disadvantaged by gentrification, corporate greed, and systemic disinvestment. This phenomenon is further exacerbated by problems faced by urban areas across the world – issues such as access/mobility, climate change, resource management, and so forth. However, I have also witnessed firsthand how thoughtful design could bring people together and solve issues effectively. This is what has driven my career in the built environment.

When I sought out admission in 2021, I stood firmly on the shoulders of a village: my family, my friends, and a number of ancestors whose prayers paved the way for my existence and vitality. My application portfolio – also titled **community** – included multimedia projects showcasing the people and spaces that have molded me into the man I am today. Further catalyzed by the systemic disenfranchisement of this village, a global pandemic, and a worldwide movement against police violence towards Black and brown people, I became certain that engineers, architects, and designers-at-large would be crucial to solving modern-day issues plaguing our society.

Therefore, I dedicated my time at GSAPP to sharpening my creative skillsets and finding novel community engagement tools. I leveraged my background as a civil engineer to solve technical problems. I traveled to unfamiliar places in New York, Puerto Rico, Tanzania, Zanzibar, and Brazil to listen, learn, and exchange. Through an innumerable amount of models, diagrams, and all-nighters, I dedicated blood, sweat, and tears to the pursuit of a higher education in architecture. Lastly – and perhaps most importantly – I stayed true to my original mission.

The following projects, thus, are imaginative, yet spatially rooted in reality – each seeking to bring people together for a common good.

This is community.

CONTENTS

EVERYDAY LIFE
CORE I // PROF. LINDSEY WIKSTROM

Once known as "The Common", New York's City Hall Park once served as home for several civic service buildings no longer extant: including a prison, poor people's house, military barracks, and so forth. Many of these buildings had their own informal burial grounds. Adjacent to the Common, was the African Burial Ground. As cycles of demolition and reconstruction continued over time, many of these grounds were lost or destroyed.

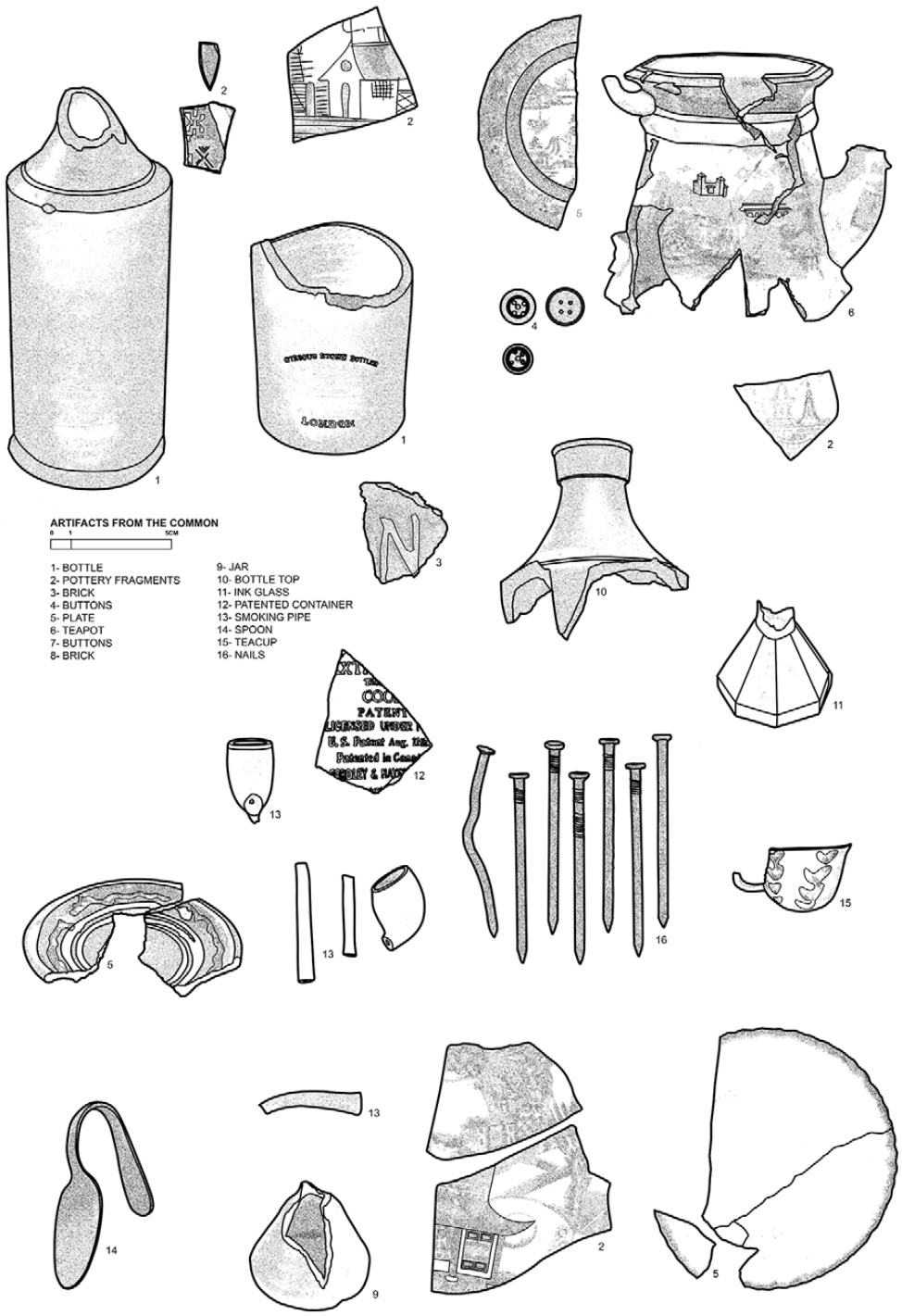
Black and white line drawings observe and document 1) the invisible conditions of City Hall: archaeological finds, previous facades of City Hall, and potential extents of human remains; and 2) the contemporary use of the park as a site of occupation for resistance movements.

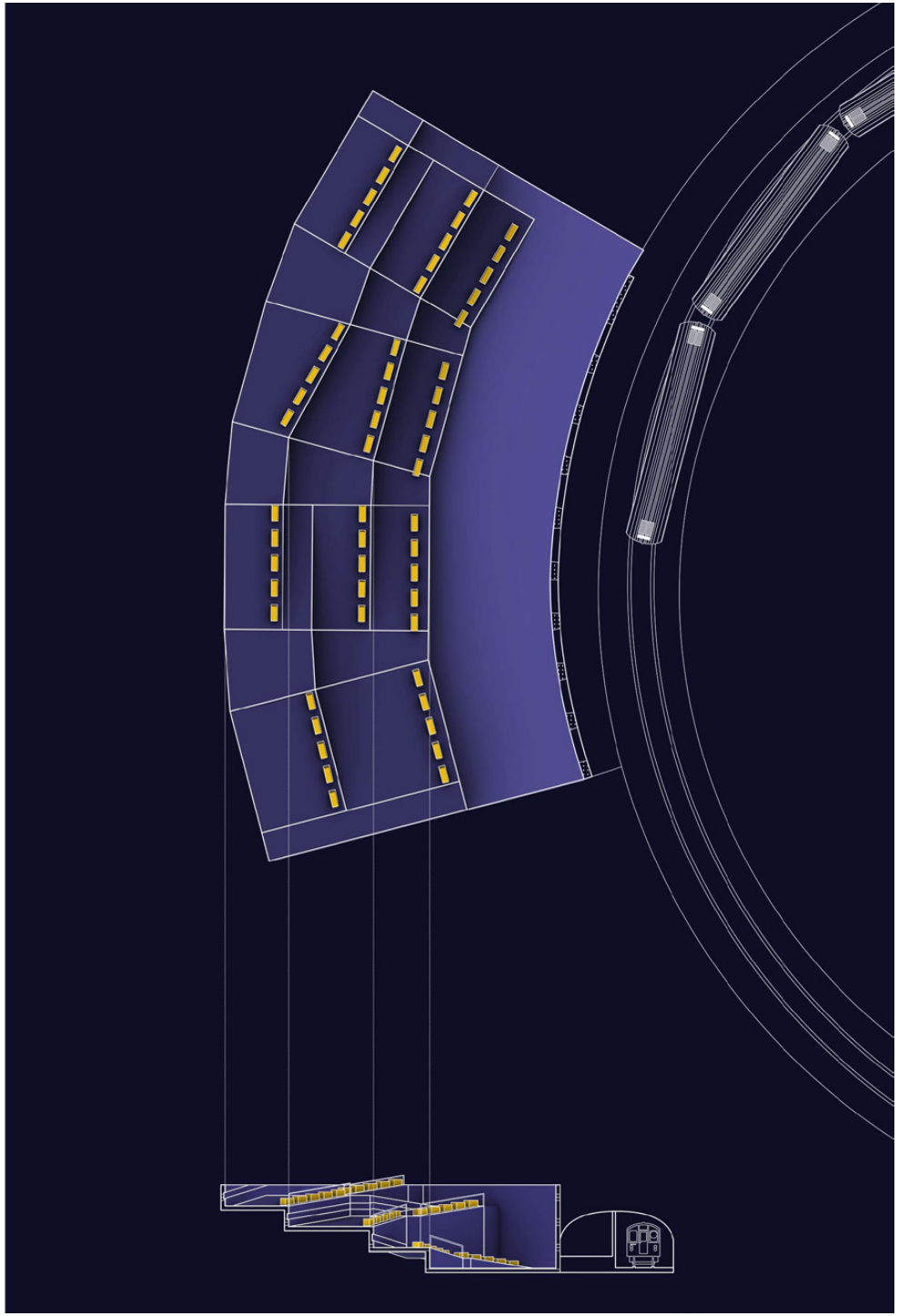
The proposed intervention is a cut through City Hall Park. A sunken gallery of what used to be. A theater for the mundane. A remembrance of what was once everyday life.

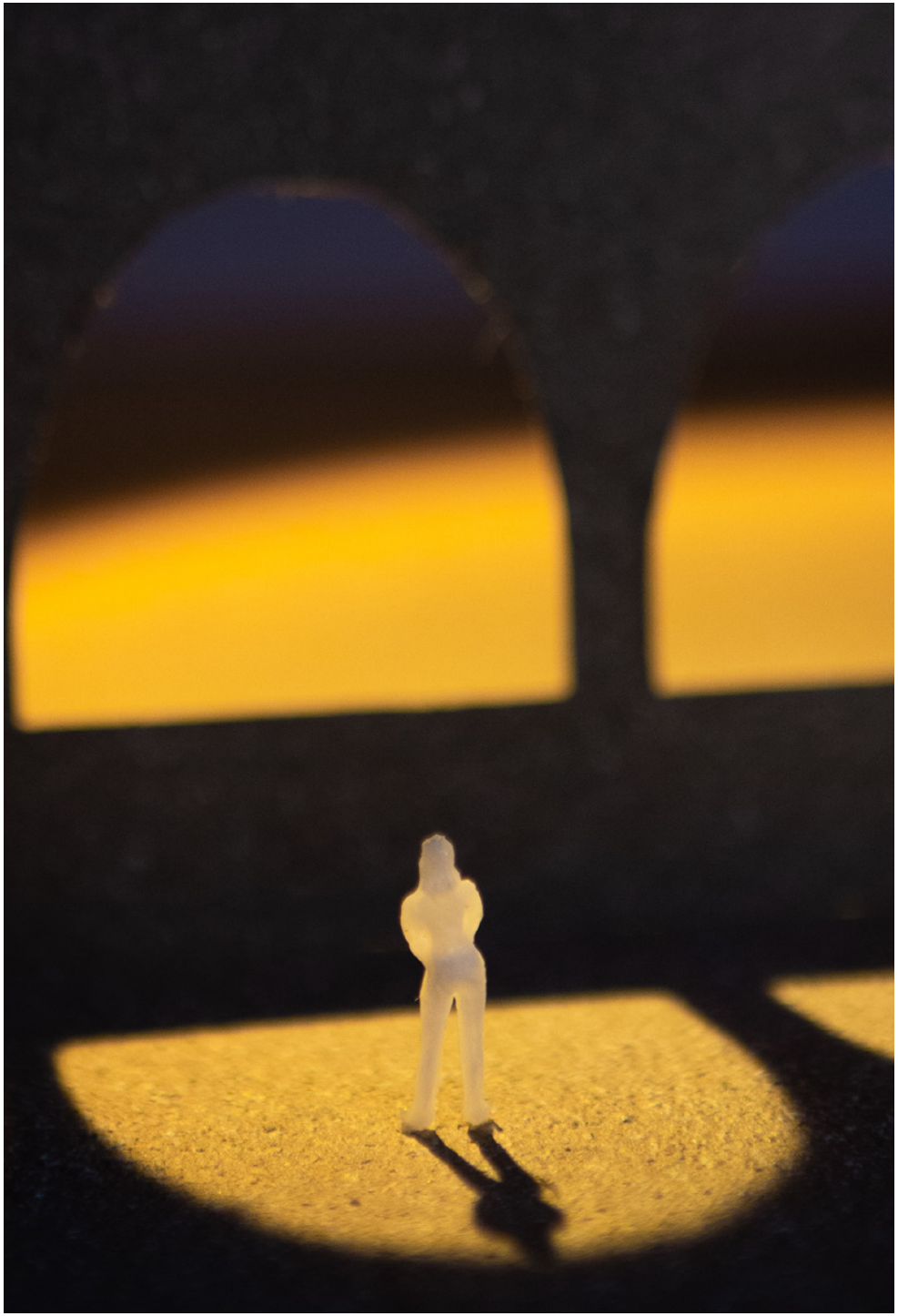
The cut through the park becomes structural - the soil removed is transformed into rammed earth walls which serve as another preservation and exaltation of existing material. One side of the gallery coincides with an abandoned platform for the 4/5/6 subway line. A cut into this wall shared with the station activates this boundary and provides views from the gallery into the forgotten extravagance of the former City Hall station.

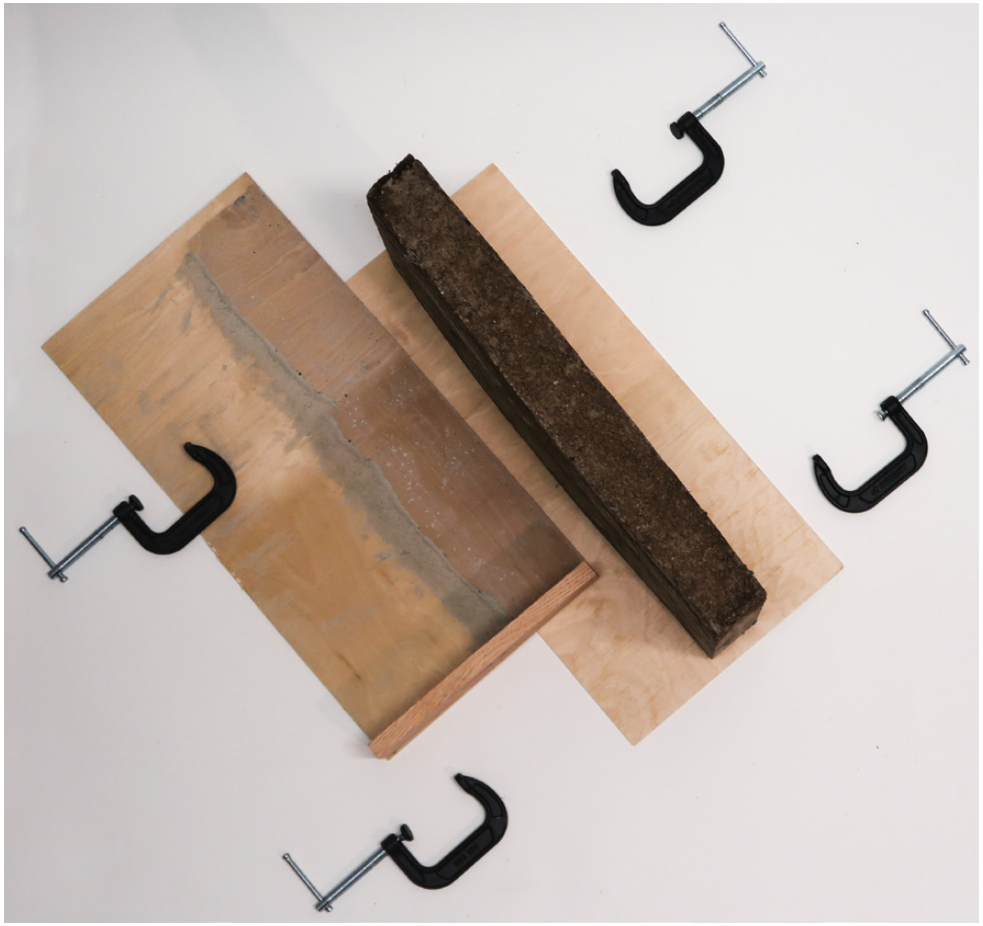
Left drawing completed in collaboration with
Anoushka Mariwala.


N
2020


ARTIFACTS FROM THE COMMON
0 1 5CM
1- BOTTLE
2- POTTERY FRAGMENTS
3- BRICK
4- BUTTONS
5- PLATE
6- TEAPOT
7- BUTTONS
8- BRICK
9- JAR
10- BOTTLE TOP
11- INK GLASS
12- PATENTED CONTAINER
13- SMOKING PIPE
14- SPOON
15- TEACUP
16- NAILS







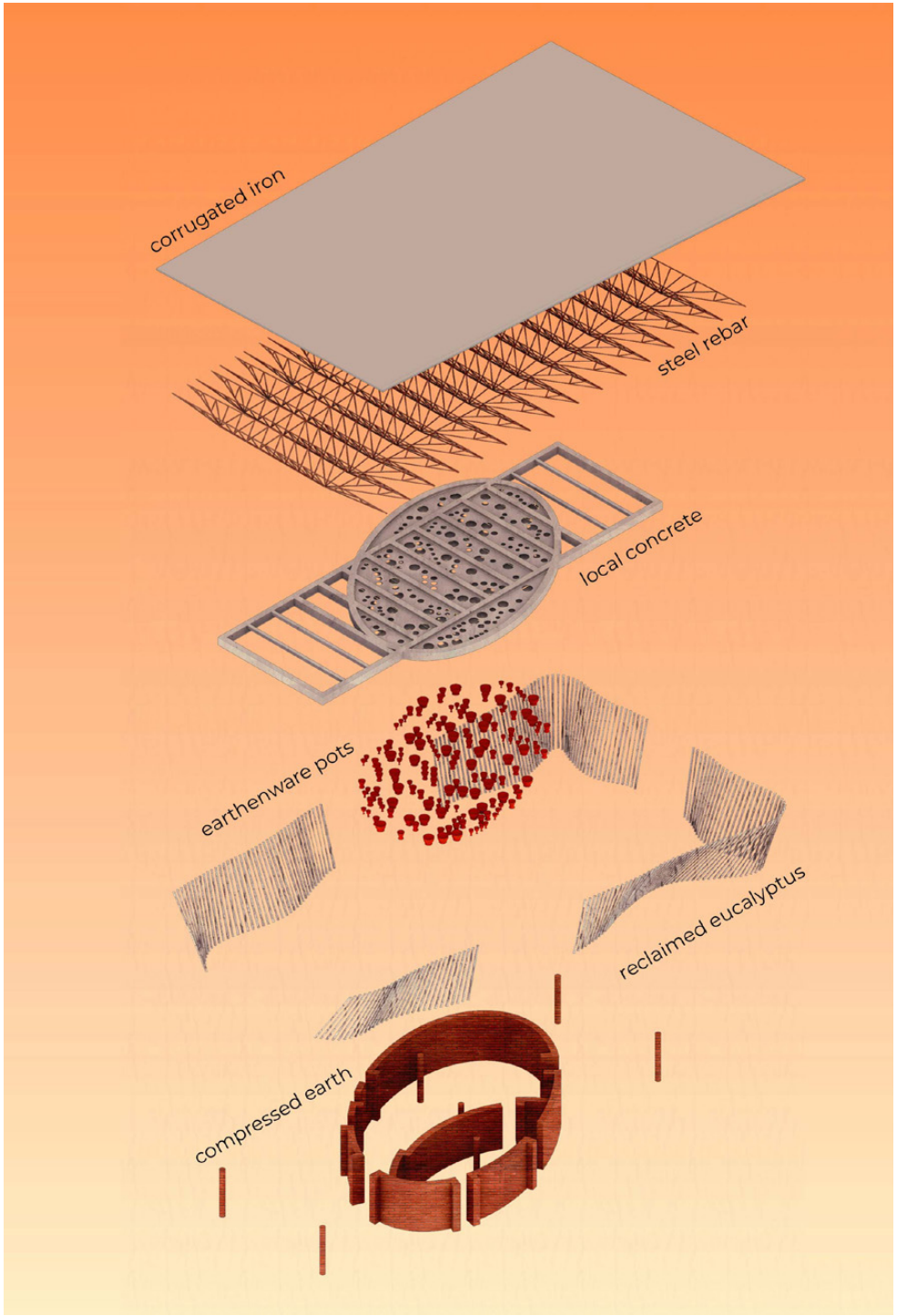
1:1 MODEL

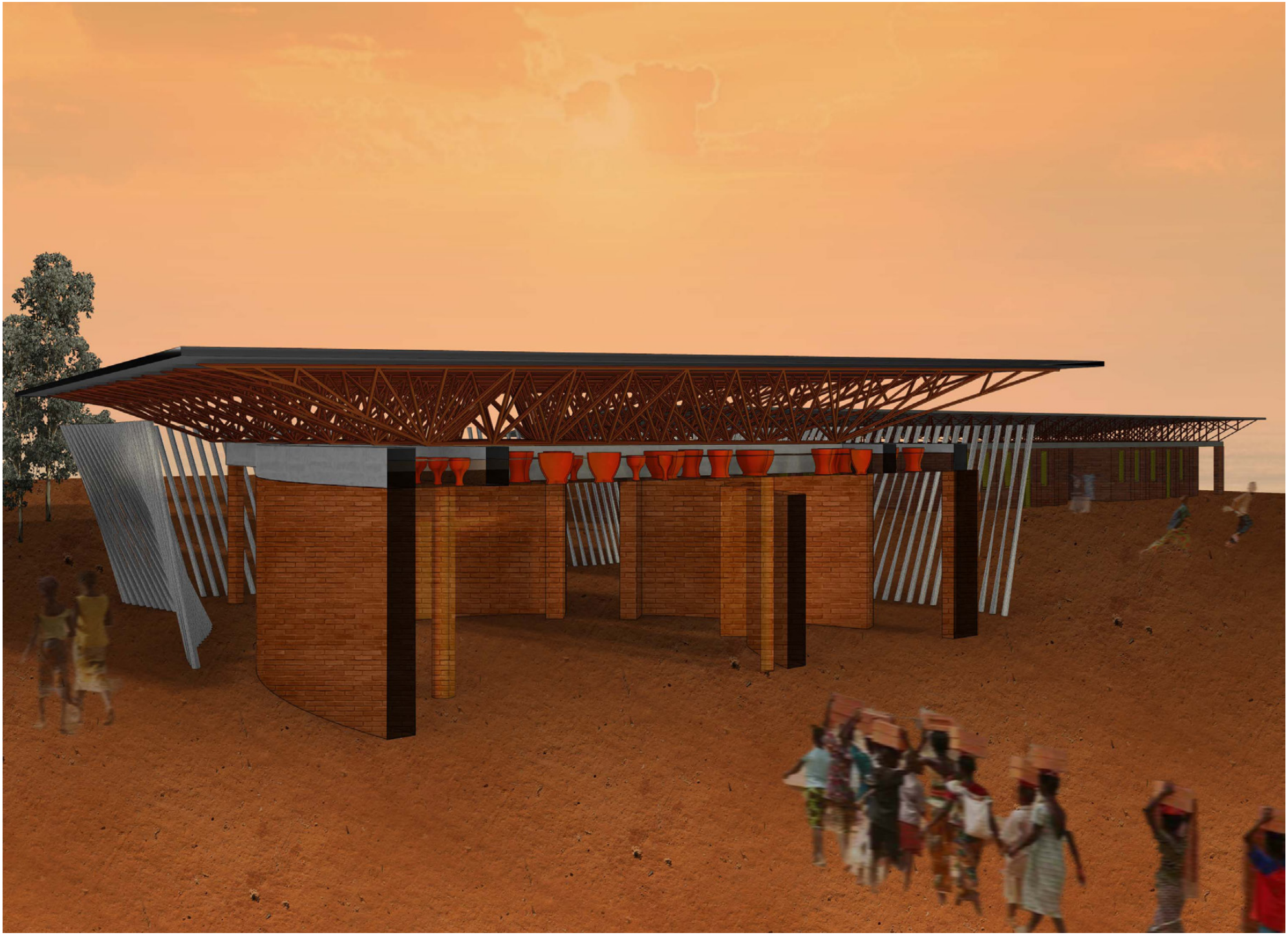
How can local materials be transformed into something sustainable?

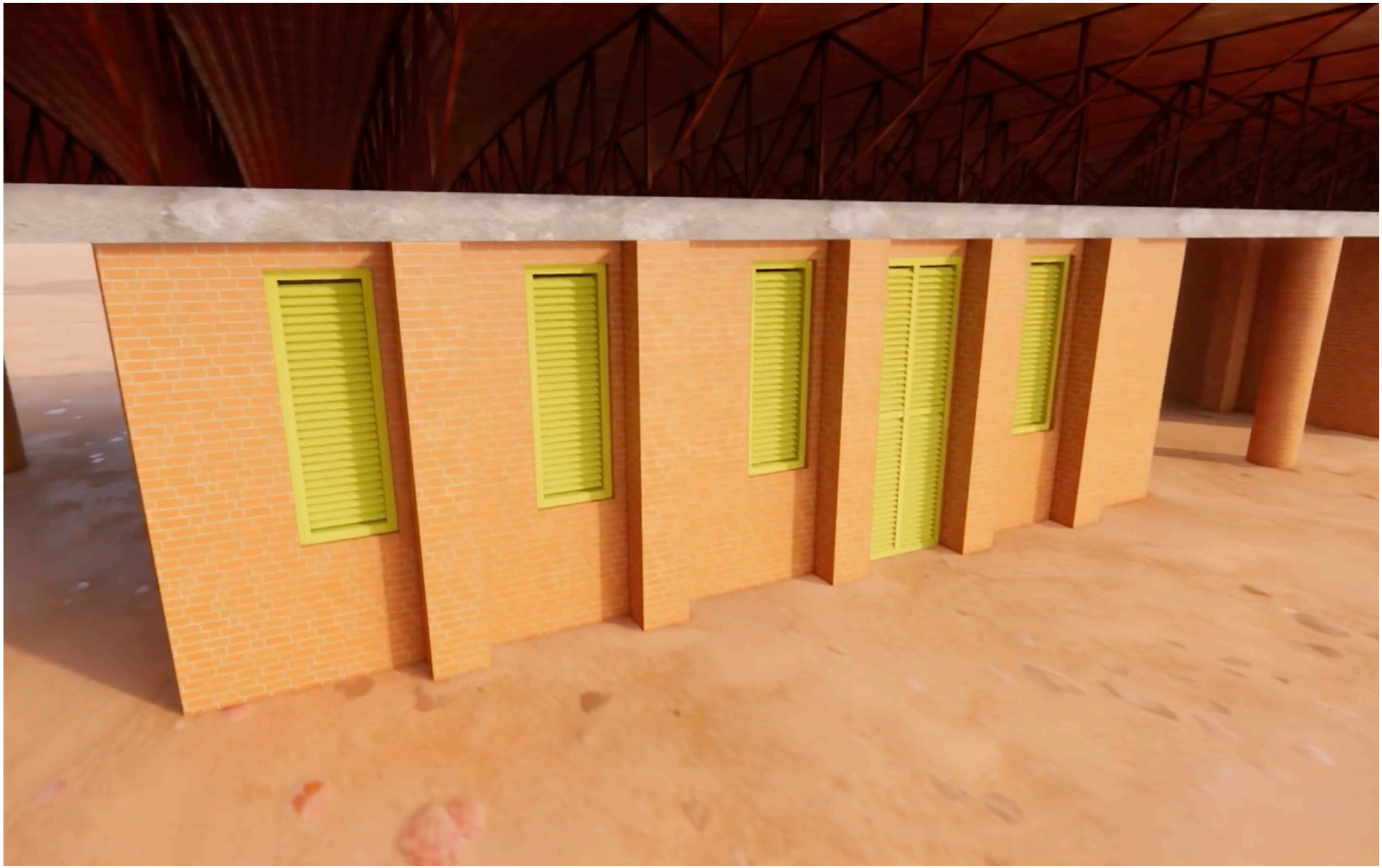
As the intervention goes further and further below ground, layers of life forgotten emerge. The striation of this 1:1 rammed earth handrail symbolize the collapsing of these timelines into one location.

GANDO PRIMARY SCHOOL
ADR I // PROF. ZACHARY WHITE

The Gando Primary School in Burkina Faso was designed by local architect Francis Diebedo Kere. As a native, he understood the social and climatic importance of using local materials. The school was constructed through a collective effort: fathers casted mudbricks for the structure, mothers handcrafted clay pots for roof ventilation, and schoolchildren carried materials to and from the site.







VIDEO STILLS

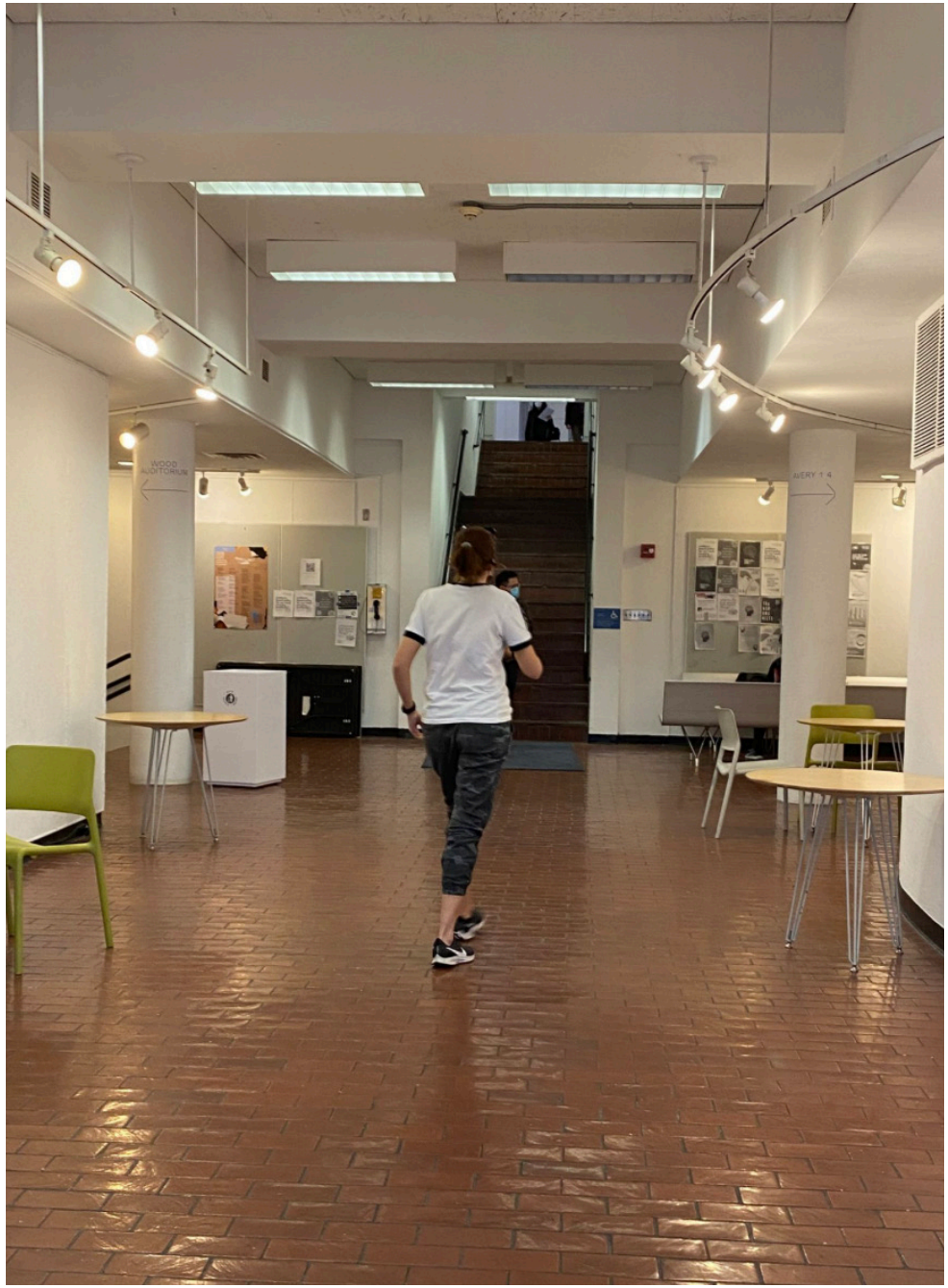
How can local materials be transformed into something sustainable?

GSAPP RELAXATION STATION

IF BUILDINGS COULD TALK // PROF. SHARON AYALON

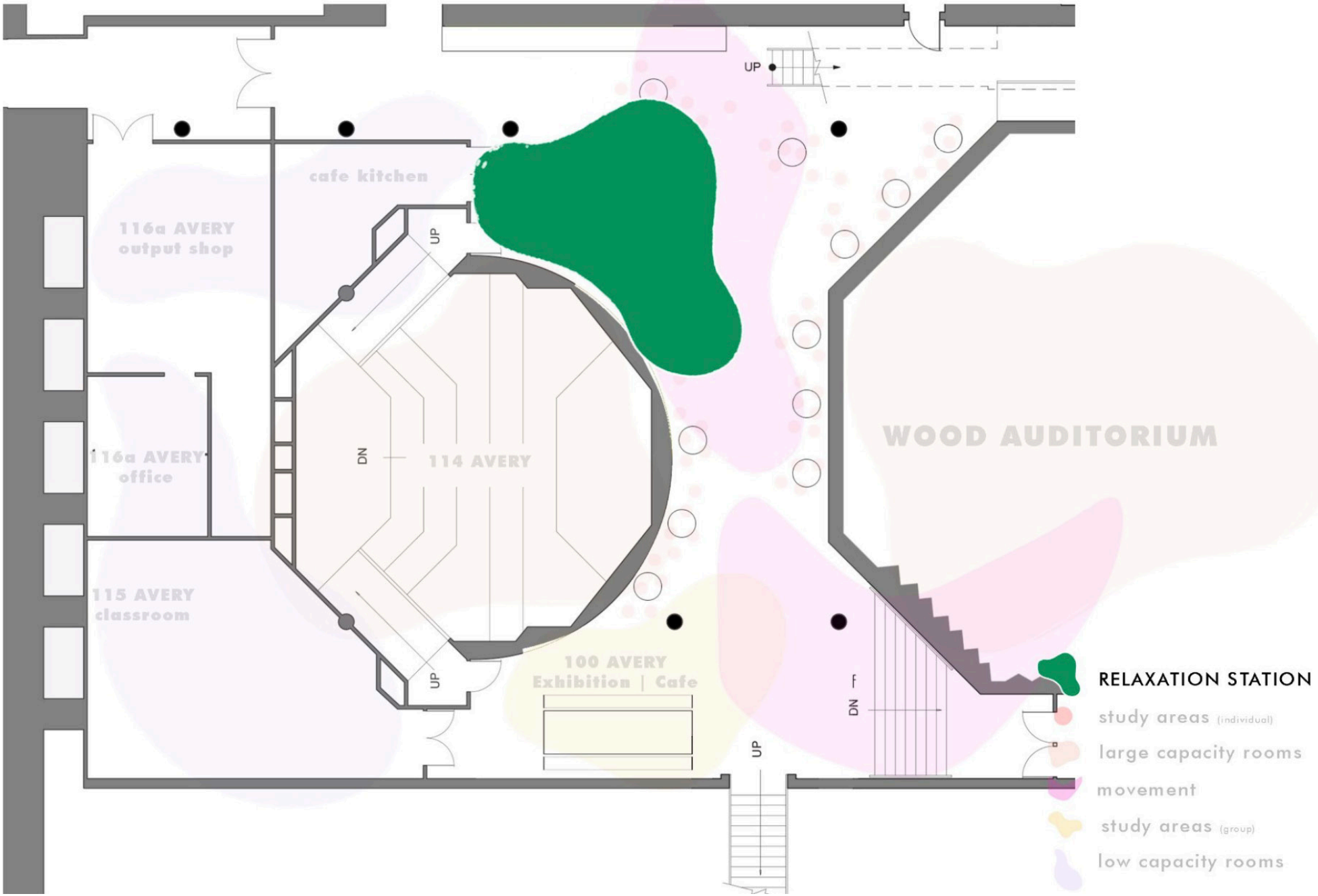
When GSAPP fully reopened post-COVID, the basement of Avery Hall was quiet, cold, and secluded. Using a number of research-backed techniques, this project offered students a more comfortable space to study, commune with one another, lower stress levels. The project was installed temporarily in Spring 2022.

Project completed in collaboration with Aikaterini Papoutsa, Kennedy Vantrump, Laurin Moseley, Zhanhao Fan, and Mudoung Jung.



BEFORE

AFTER


UP
cafe kitchen
116a AVERY
output shop
UP
DN
114 AVERY
116a AVERY
office
115 AVERY
classroom
WOOD AUDITORIUM
100 AVERY
Exhibition | Cafe
UP
UP
DN
RELAXATION STATION
study areas (individual)
large capacity rooms
movement
study areas (group)
low capacity rooms

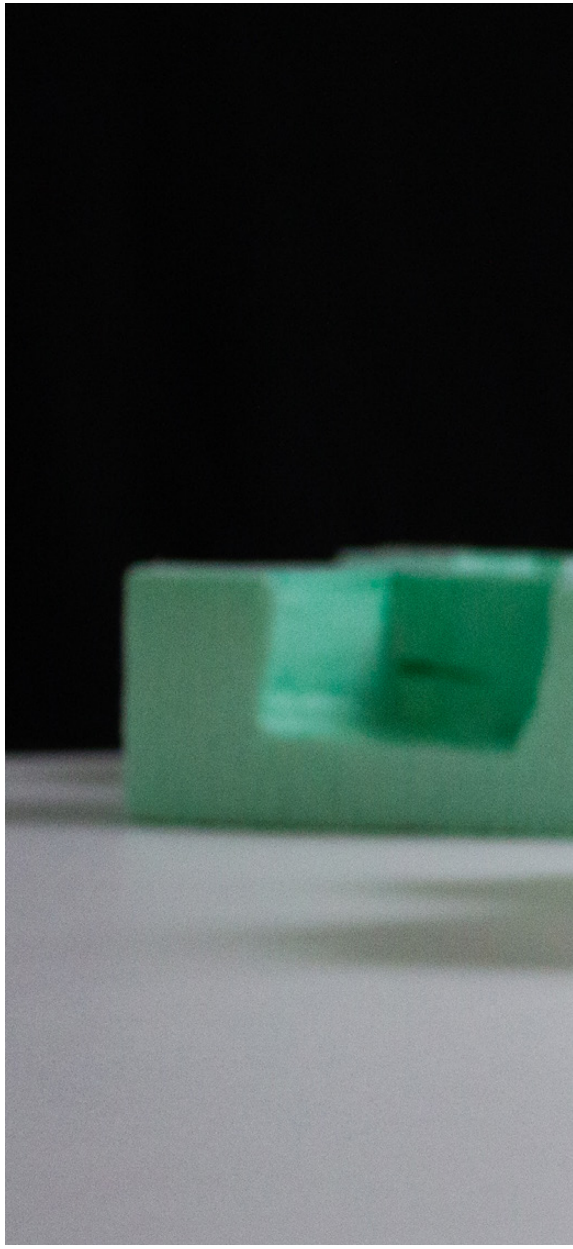
PROVISION OF SHARED RESOURCES

CORE II // PROF. CARLYLE FRASER

Children are uniquely capable of learning in various modes. Through a greater focus on project-based learning, peer social interaction & local neighborhood engagement, childhood education can expand from static classwork into a dynamic, multi-faceted preparation for life as an individual part of a greater collective.

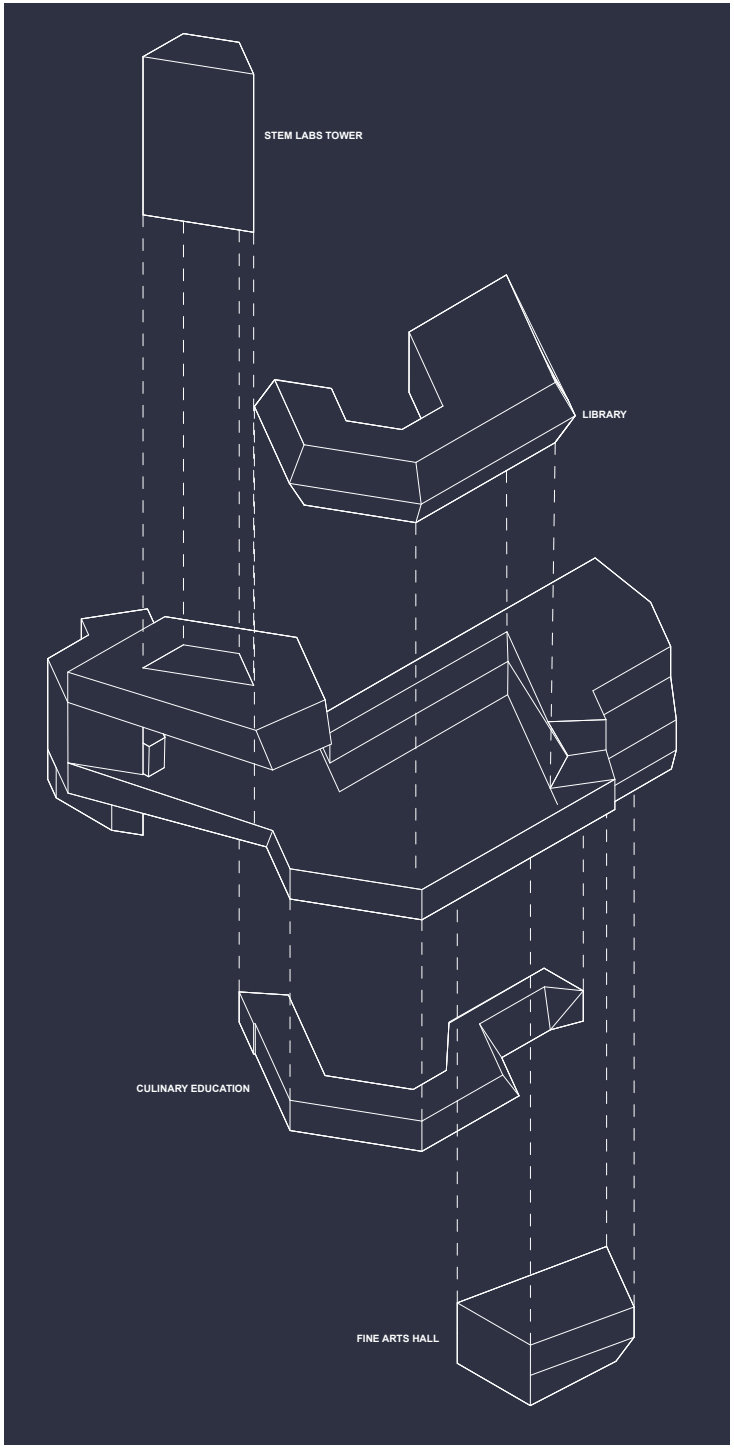
The provision of resources for students thus becomes a provision for the community itself.

Classrooms are organized around shared-learning spaces like wet labs, theaters, and hands-on workshops. A unique, polygonal geometry emerges.

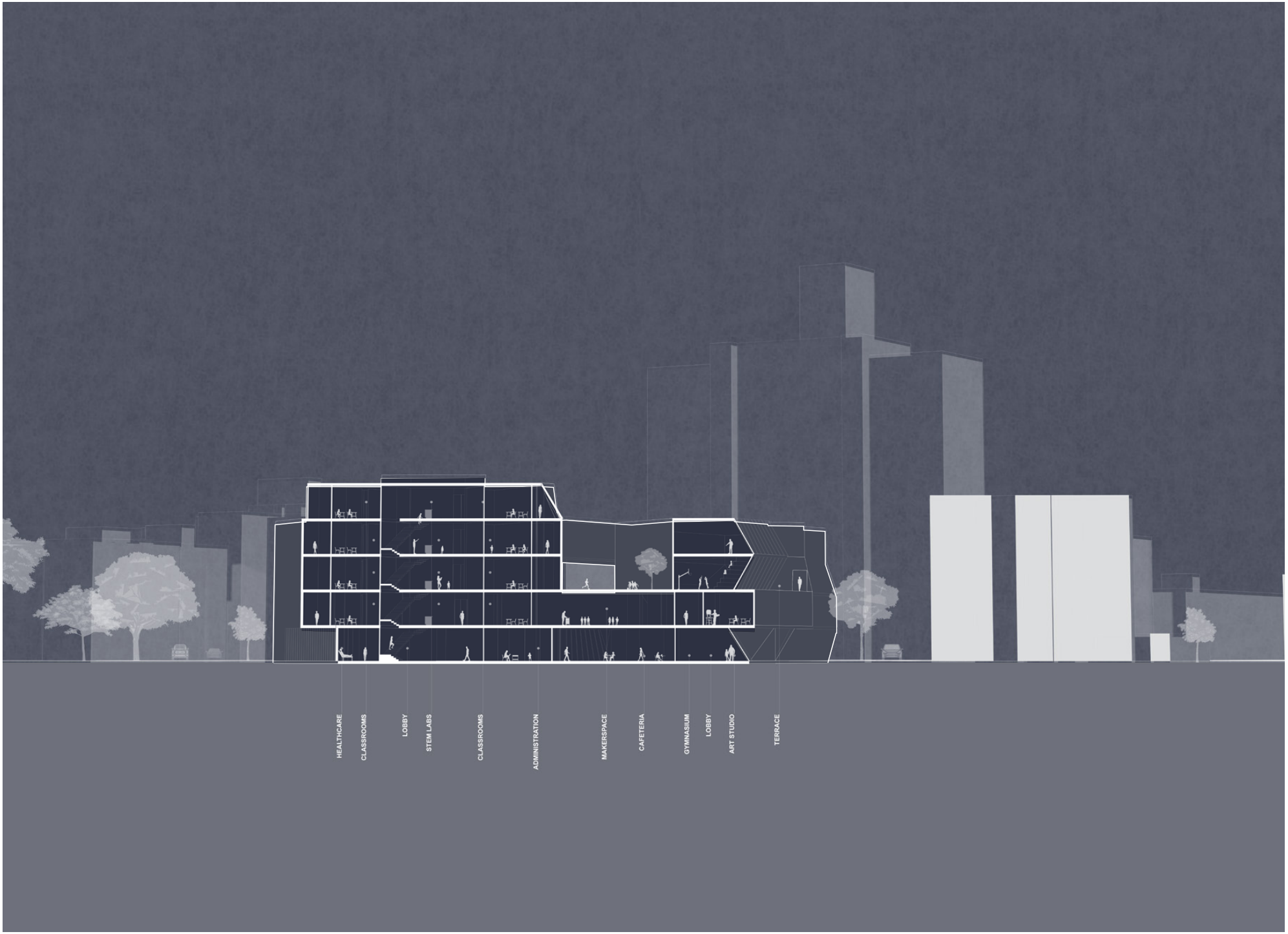


MODEL IMAGE

Iterative sketch models were used for form-finding.


STEM LABS TOWER
LIBRARY
CULINARY EDUCATION
FINE ARTS HALL

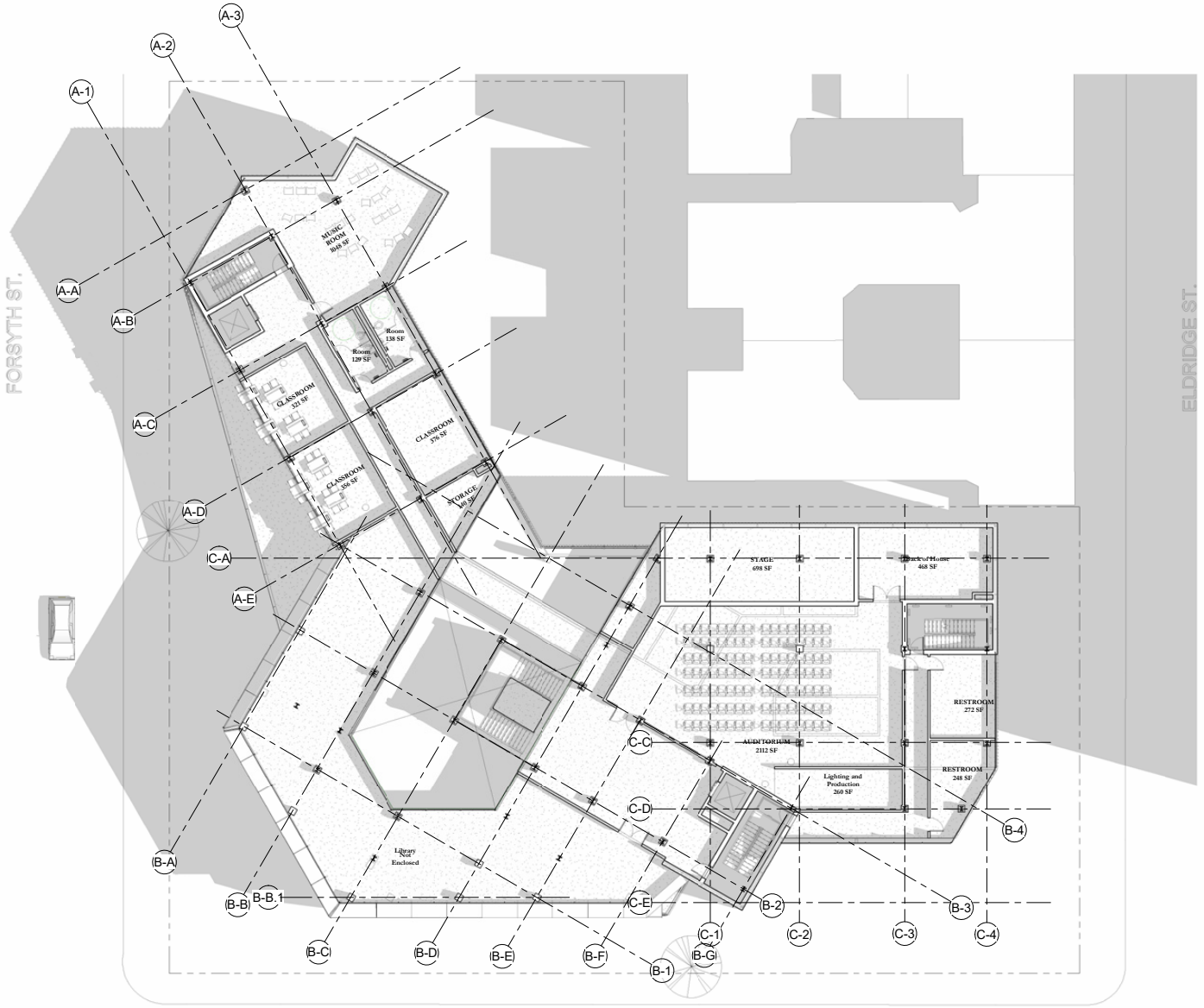

A
B
A
B


HEALTHCARE
CLASSROOMS
LOBBY
STEM LABS
CLASSROOMS
ADMINISTRATION
MAKERSPACE
CAFETERIA
GYMNASIUM
LOBBY
ART STUDIO
TERRACE

SILKE - NEW YORK CITY
AT IV // PROF. BERARDO MATALUCCI

Through the addition of structural and mechanical systems, as well as egress plans and facade details, the previous school project concept was fully rationalized and brought to life,

Construction documentation was completed in collaboration with Syeeda Simmons, Sarah Bruce-Eisen, Isaiah Graham, Laurin Moseley, and Kayla Parsons.



SILKE NEW YORK CITY

Architectural Consultant
Akiko Kyei-Aboagye

Structural Consultant
Justin Stolze

Mechanical Consultant
Matthew Hochberger

Facade Consultant
Ryan Donaghy

Designers:

Syeeda Simmons
Sarah Bruce-Eisen
Isaiah Graham
Laurin Moseley
Kayla Parson
Eric Hagerman

Revisions

No.	Description	Date

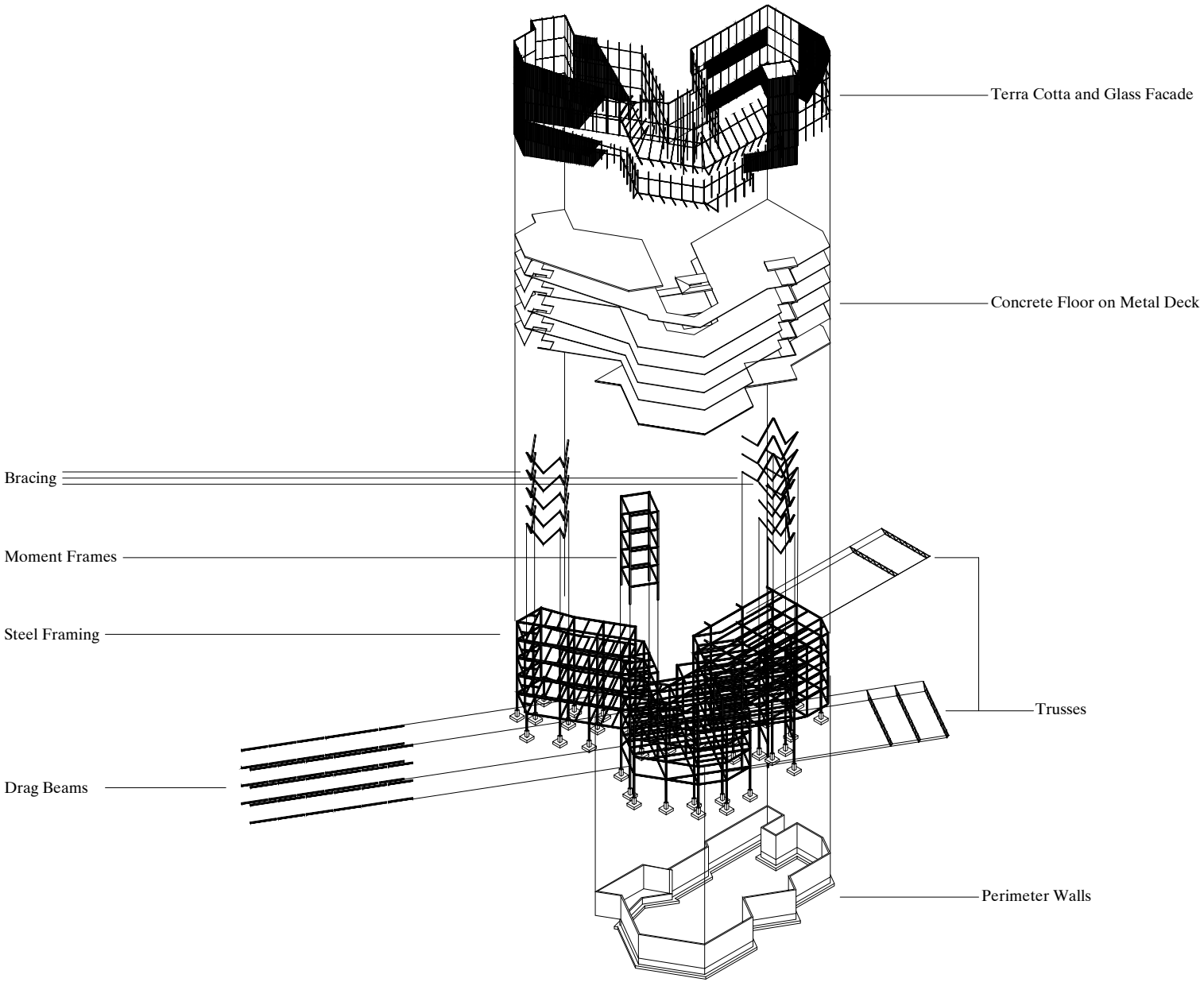
Notes

Forsyth School

Fourth Floor Plan

Project Number 01
Date 13 December 2022
Scale 3/32" = 1'-0"

A104



SILKE NEW YORK CITY

Architectural Consultant
Akiko Kyei-Aboagye

Structural Consultant
Justin Stolze

Mechanical Consultant
Matthew Hochberger

Facade Consultant
Ryan Donaghy

Designers:

Syeeda Simmons
Sarah Brwe-Eisen
Isaiah Graham
Laurin Moseley
Kayla Parson
Eric Hagerman

Revisions

No.	Description	Date

Notes

Forsyth School

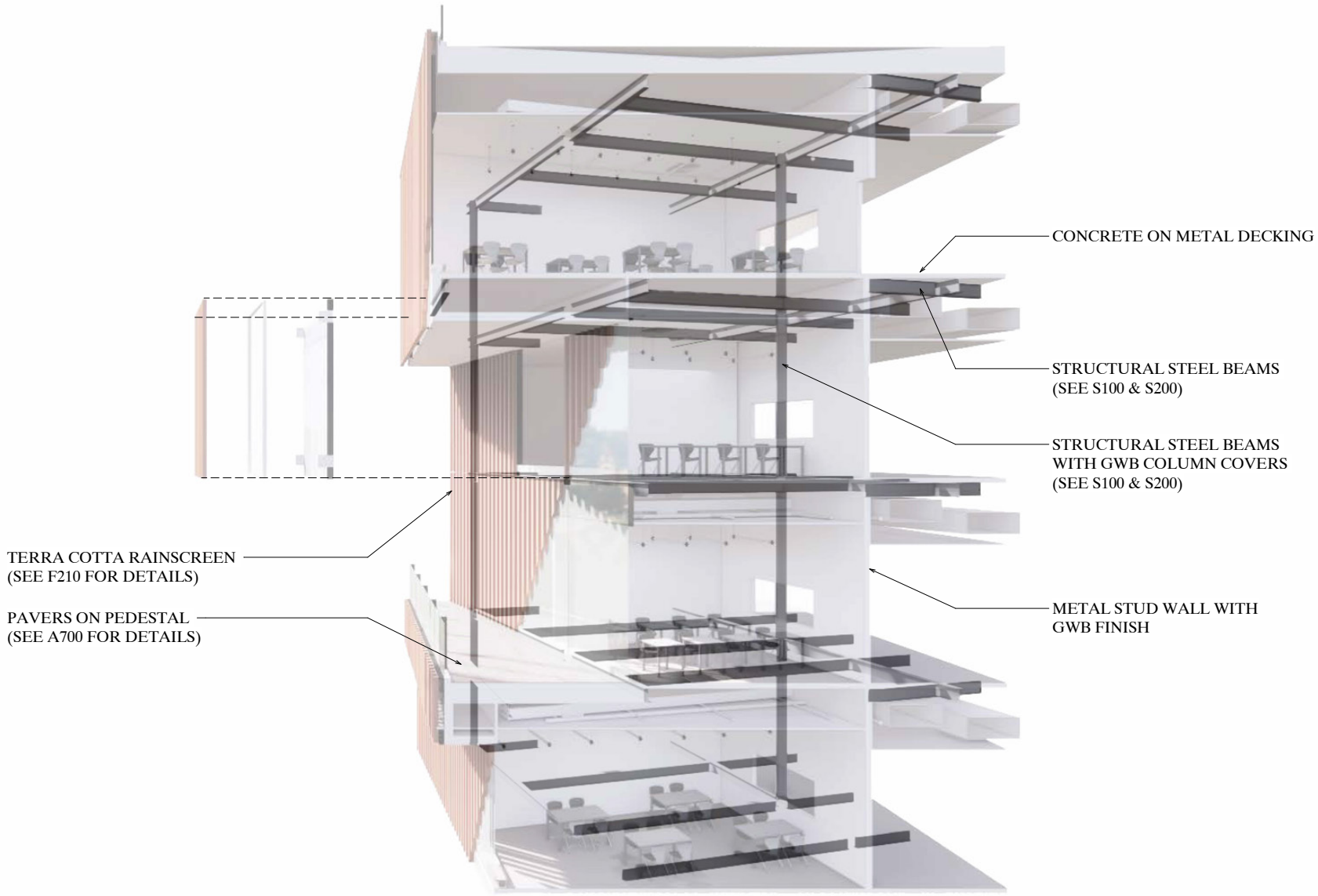
Structural Exploded Axon

Project Number 01

Date 13 December 2022

Scale

S200



SILKE NEW YORK CITY

Architectural Consultant
Akiko Kyei-Aboagye

Structural Consultant
Justin Stolze

Mechanical Consultant
Matthew Hochberger

Facade Consultant
Ryan Donaghy

Designers:

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Isaiah Graham
Laurin Moseley
Kayla Parson
Eric Hagerman

Revisions

No.	Description	Date

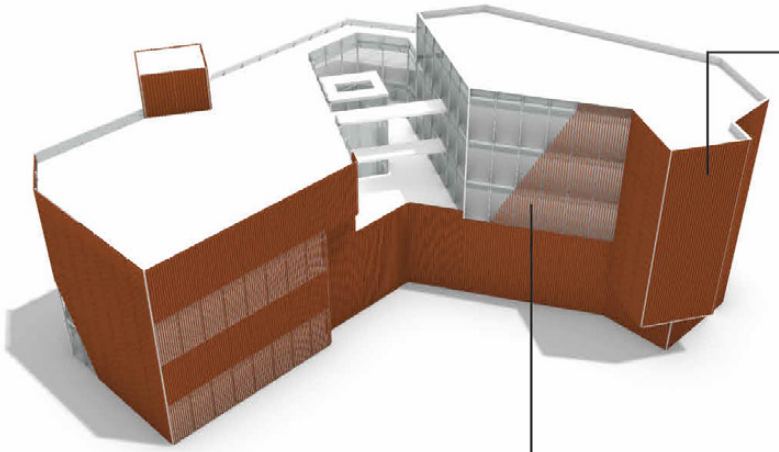
Notes

Forsyth School

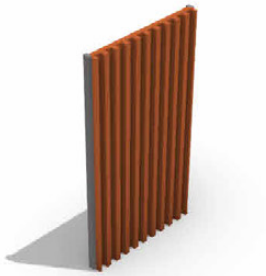
Structural Cross Section Overlay

Project Number 01
Date 13 December 2022
Scale 3" = 1'-0"

S300

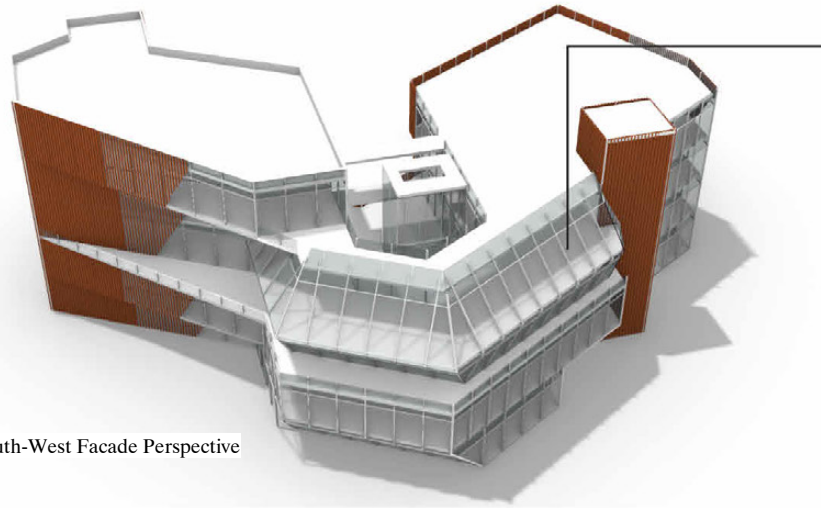


North-East Facade Perspective



Facade Type 1: Solid Terra Cotta Unitized Panel

Facade Type 2: Terra Cotta & Glass Hybrid Unitized Panel



South-West Facade Perspective

Facade Type 3: Vision & Spandrel Glass Unitized Panel

SILKE NEW YORK CITY

Architectural Consultant
Akiko Kyei-Aboagye

Structural Consultant
Justin Stolze

Mechanical Consultant
Matthew Hochberger

Facade Consultant
Ryan Donaghy

Designers:

Syeeda Simmons
Sarah Bruce-Eisen
Isaiah Graham
Laurin Moseley
Kayla Parson
Eric Hagerman

Revisions

No.	Description	Date

Notes

Forsyth School

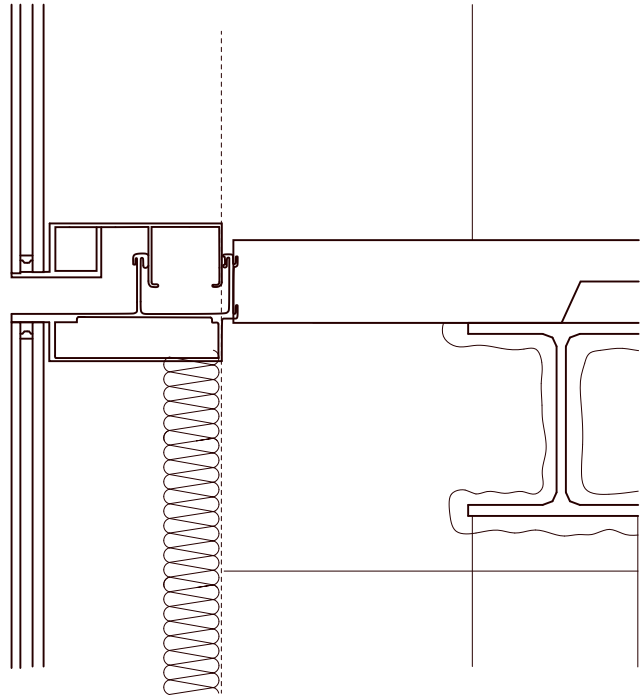
Mapped Elevations Axon Views

Project Number 01

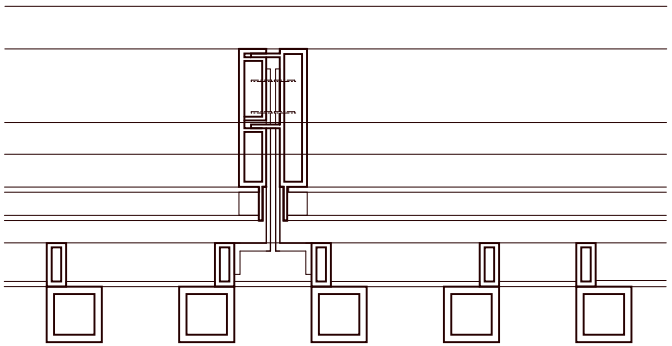
Date 13 December 2022

Scale

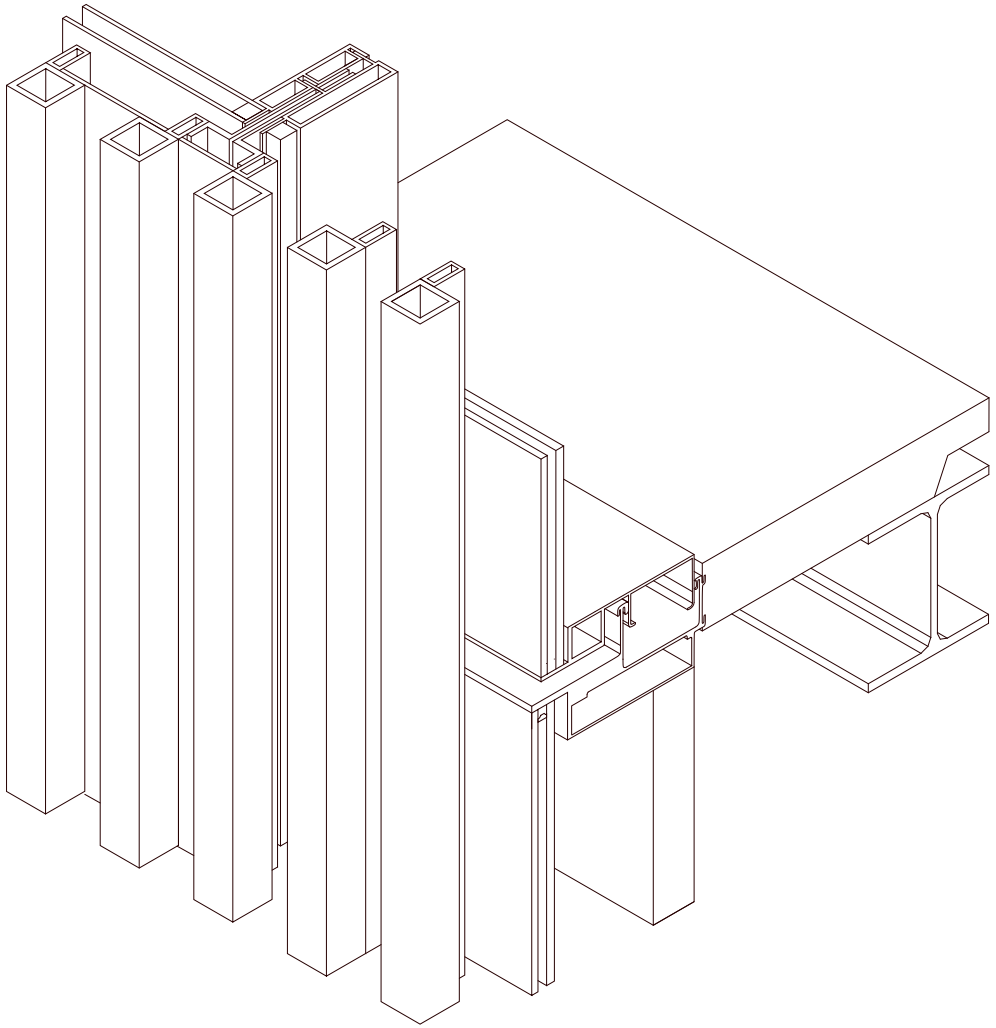
F100



1 Terra Cotta Fins Section Detail
3" = 1'-0"



2 Terra Cotta Fins Plan Detail
3" = 1'-0"



3 Terra Cotta Fins Axon Detail
3" = 1'-0"

SILKE NEW YORK CITY

Architectural Consultant
Akiko Kyei-Aboagye

Structural Consultant
Justin Stolze

Mechanical Consultant
Matthew Hochberger

Facade Consultant
Ryan Donaghy

Designers:

Syeeda Simmons
Sarah Bruce-Eisen
Isaiah Graham
Laurin Moseley
Kayla Parson
Eric Hagerman

Revisions

No.	Description	Date

Notes

Forsyth School

System 2 Details

Project Number 01
Date 13 December 2022
Scale 3" = 1'-0"

F310

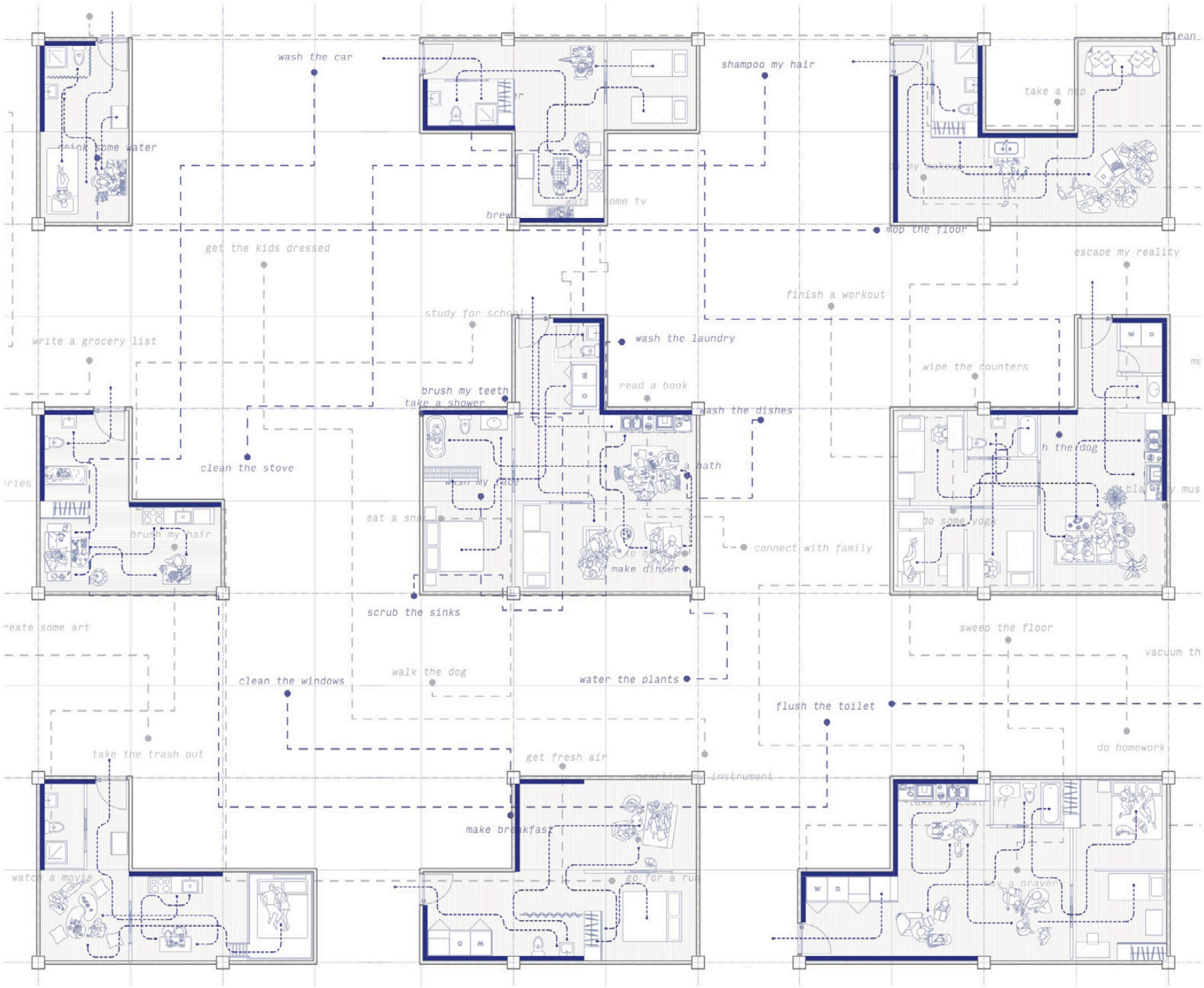
MEMORY OF WATER
CORE III // PROF. GALIA SOLOMONOFF

"Occasionally the river floods these places. "Floods" is the word they use, but in fact it is not flooding; it is remembering. Remembering where it used to be. All water has a perfect memory and is forever trying to get back to where it was."

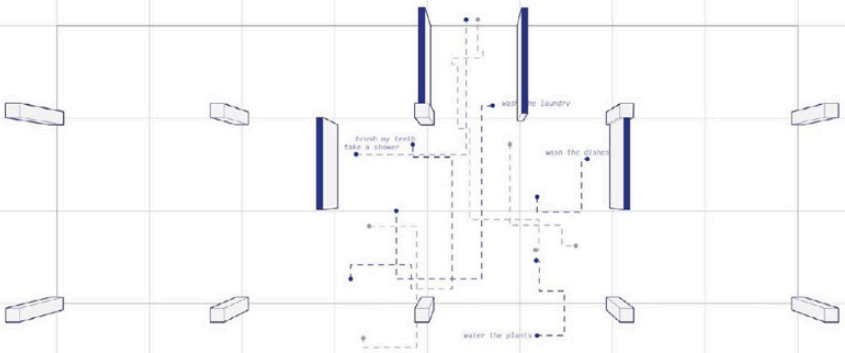
-Toni Morrison

This housing project seeks to design novel housing units on a flood-prone site in the Bronx, New York, leveraging rituals and routines found in former habitats to yield flexible spaces for future tenants. Water - physically and symbolically - becomes the architectural element that connects all.

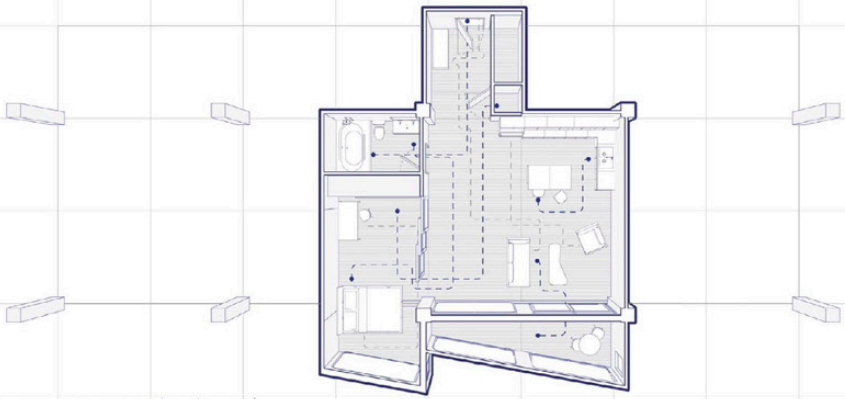
Project completed in collaboration with Farah Ahmed.


wash the car
shampoo my hair
take a nap
mop the floor
get the kids dressed
escape my reality
finish a workout
study for school
write a grocery list
wash the laundry
read a book
brush my teeth
take a shower
wash the dishes
wipe the counters
clean the stove
brush my hair
connect with family
make dinner
scrub the sinks
sweep the floor
vacuum th
clean the windows
walk the dog
water the plants
flush the toilet
take the trash out
do homework
get fresh air
make breakfast
go for a run

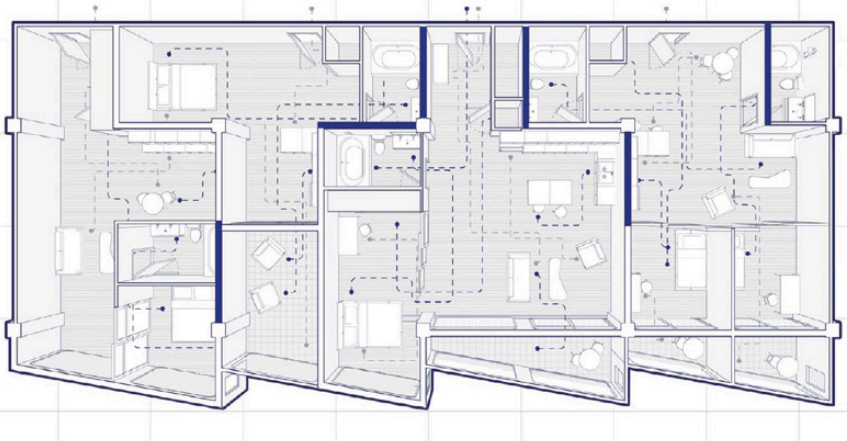
Chase walls supply water for daily routines.

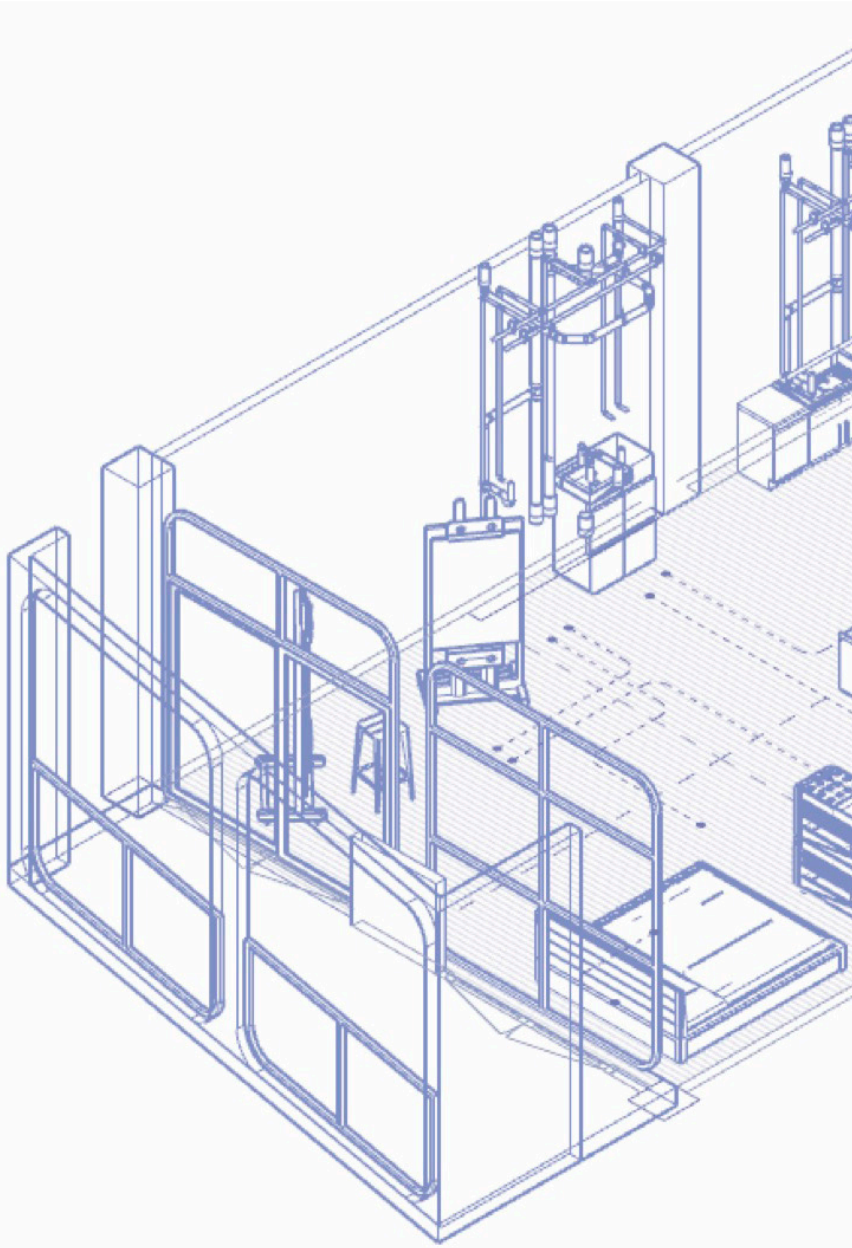


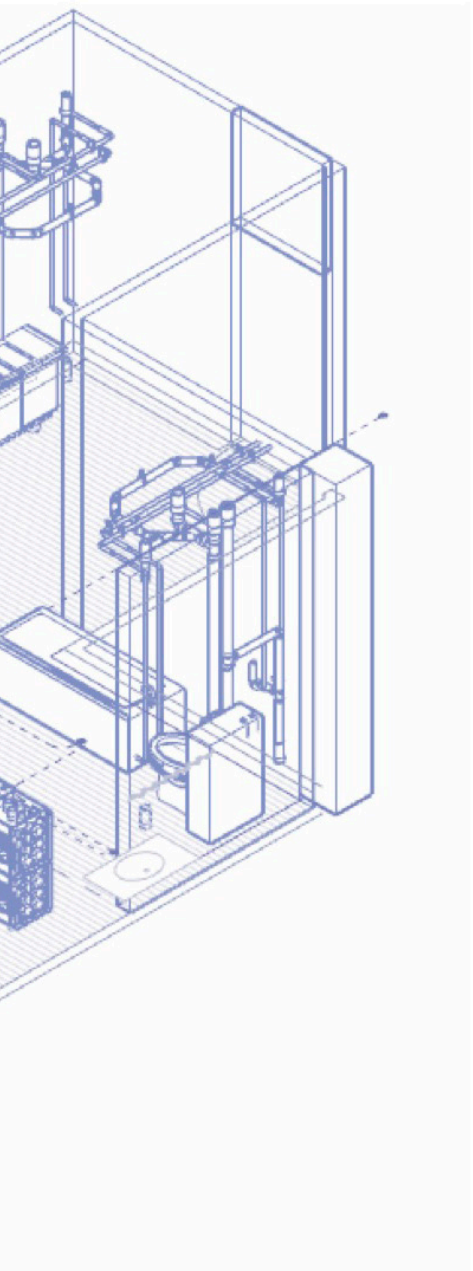
The unit is outfitted with fixtures and furnishings unique to the household's ritual.

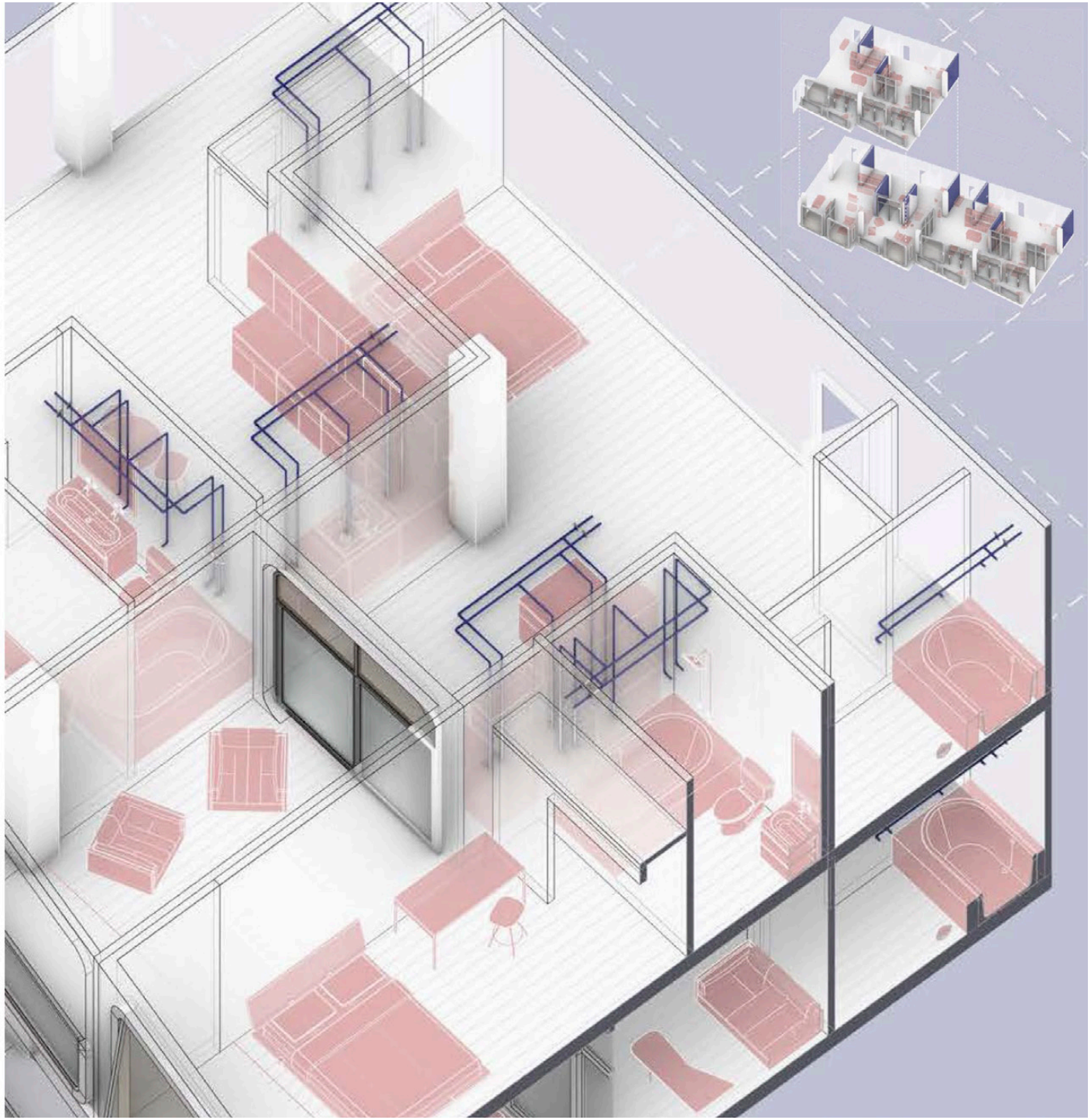


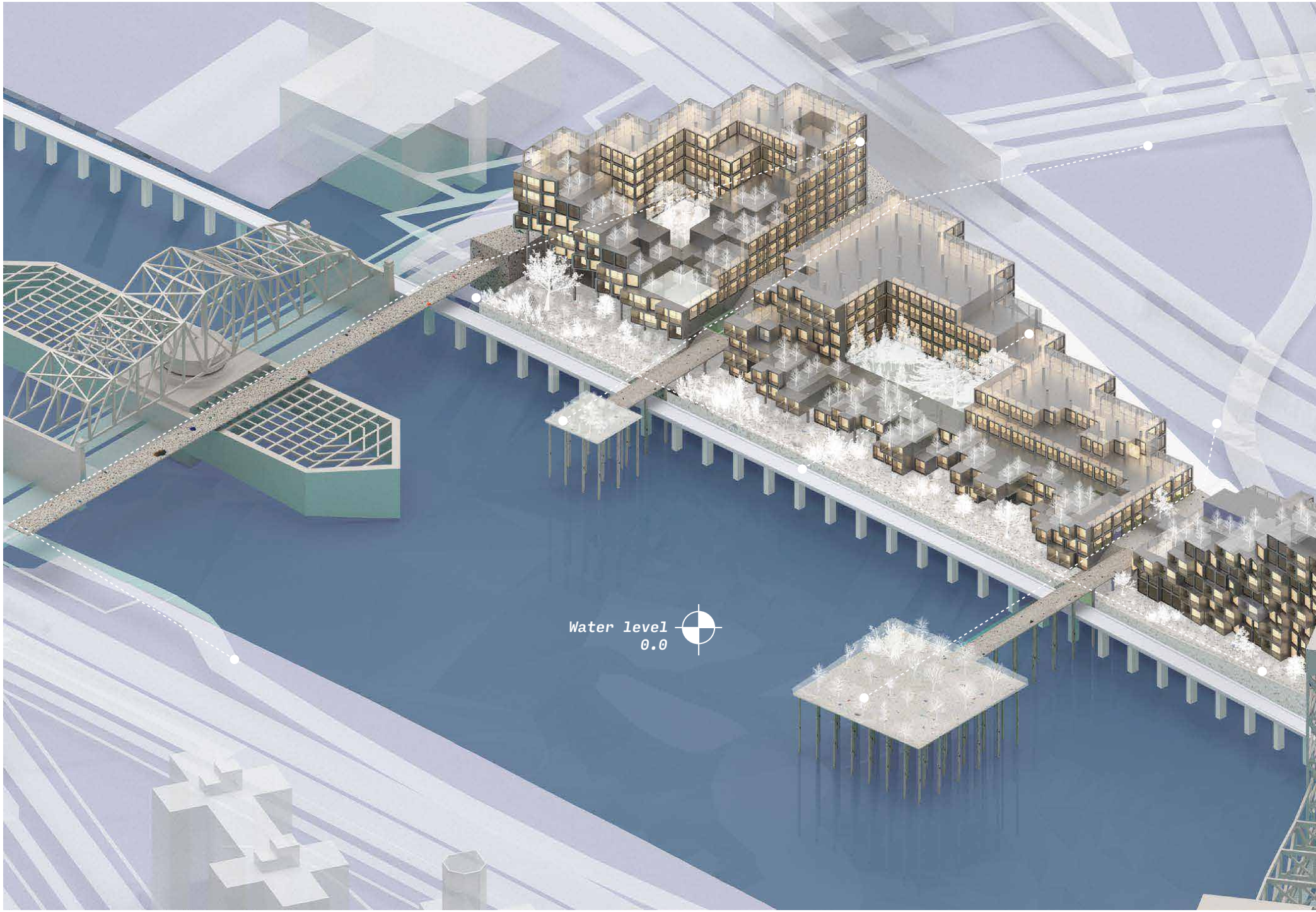
The units aggregate across the site, each interconnected by shared chase walls and an urban routine.

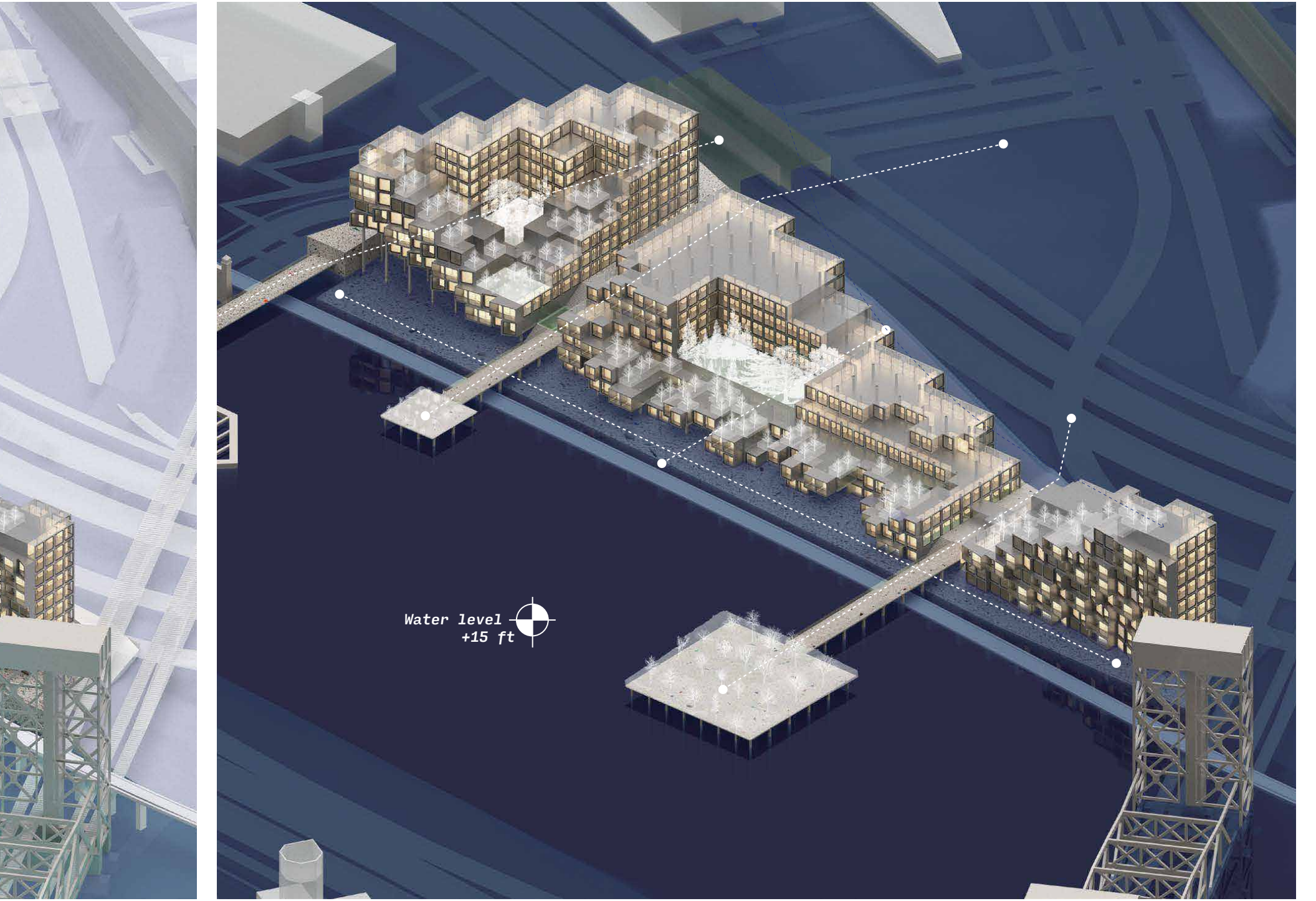









Water level
0.0


Water level
+15 ft

PLAZA DEL SOL BORINCANO

ADV. IV // PROFS. PEDRO RIVERA AND UBALDO ESCALANTE

In the past, blackouts were a common concern faced by the Culebrenses due to a lack of energy sovereignty and autonomy on the island. Since the 1980s, PREPA has supplied power to Culebra, Puerto Rico through an underwater transmission line that runs from the big island via Vieques. The line forces Culebra to be heavily reliant on fossil fuels for energy generation. In 2017, Hurricanes Irma & Maria brought these issues to light when most locals on the island had no access to electricity for 3 months, and some were left in the dark for as long as 11 months.

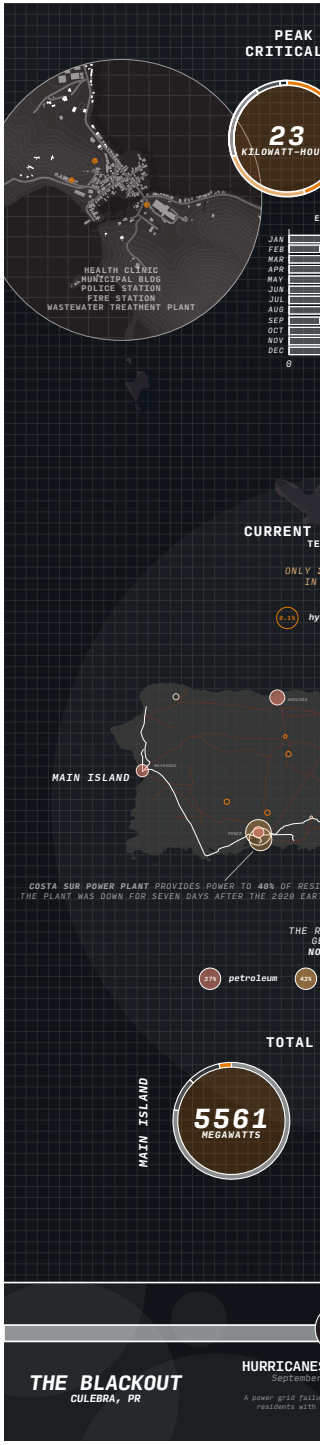
The challenge with solar power in Culebra is that replacement parts and technical expertise don't exist on the island. This is made more problem-some by the Jones Act as it restricts the transportation of energy-related goods and materials to Puerto Rico resulting in higher shipping costs and higher energy prices for consumers on Culebra.

The dry dock in Dewey, Culebra, as it stands currently, houses four abandoned steel structures, leftover from the days when the site was used for the construction, maintenance, and repair of ships, boats, and other watercraft. Today, these structures are being proposed for adaptive reuse to create the structural layout for 'Cuna Del Sol Borincano,' the island's first and only solar hub. The intentionality behind this hub is to enable a communal space for the Culebrenses to gather and learn about solar power.

Site programming is dictated by conversations with the local community and energy stakeholders. It includes an indoor workshop for technical training and solar panel repair, communal space for learning about solar power, an assembly space for administrative meetings, an indoor technical room for power storage and backup energy infrastructure (backup batteries, etc.), an indoor administrative space for the office managing and overseeing solar infrastructure on the island, and both outdoor and indoor practical lecture spaces and classrooms.

These practical elements are complemented with more playful site components like outdoor cardio gym equipment that generates kinetic electricity, an open exhibition space for creative and educational pieces, an open cafe space for the community to gather, outdoor seating, an electric bicycle rack and golf cart station, and more trees and greenery to allow for a more pedestrian-friendly site with shading and cooling benefits.

Project completed in collaboration with Soichiro Harada and Dhwani Laddha.



ENERGY USE:
INFRASTRUCTURE

- space cooling
- ventilation fans
- equipment operation
- lighting
- other

LECTRIC CONSUMPTION (KWH)

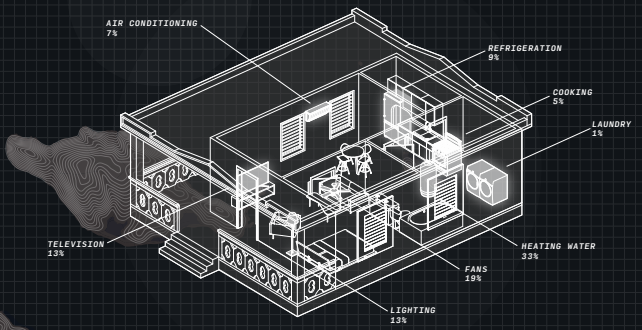
10 20 25

ENERGY USE BY SECTOR
CULEBRA, PR

43% RESIDENTIAL

- commercial
- residential
- industrial

TYPICAL RESIDENTIAL ENERGY USAGE
PUERTO RICO



MAP OF CULEBRA, PUERTO RICO

LEGEND
- RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL
- PUBLIC SOLAR PROJECTS
- EVACUATION ZONES

N 0 0.5 1 2 2.5mi

WASTEWATER TREATMENT PLANT
POWER PLANT: DIESEL GENERATORS
MUNICIPAL BLDG
FIRE STATION
POLICE STATION
HEALTH CENTER
CULEBRA
VIEQUES
UNDERWATER TRANSMISSION LINE
UNDERWATER TRANSMISSION LINE FROM VIEQUES

ENERGY INFRASTRUCTURE
RRITORY OF PUERTO RICO

% OF THE ENERGY GENERATED PUERTO RICO COMES FROM RENEWABLE SOURCES

dro 1.1% wind 0.7% solar

ONLY **20%** OF PUERTO RICO'S POWER LINES SURVIVED HURRICANE MARIA

2017 OUTAGE TRANSMISSION LINES

NET SUMMER CAPACITY
1800 MW
400MW
1MW

DENTS.
THQUAKE.

*EMAINING **97%** OF ENERGY ENERATED COMES FROM N-RENEWABLE SOURCES*

natural gas 17% coal 0.1% landfill gas

ENERGY GENERATED

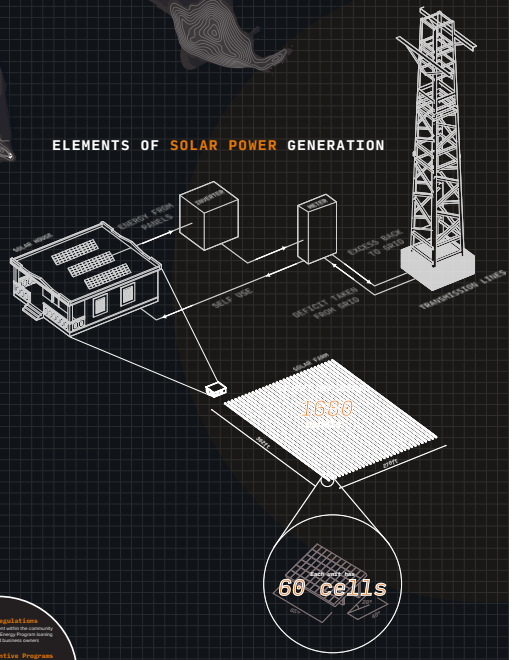
- oil
- gas
- coal
- solar

CULEBRA

6 MEGAWATTS

- diesel
- oil
- solar

ELEMENTS OF SOLAR POWER GENERATION



Puerto Rico Electric Power Authority

GRID PRIVATIZATION
May 2021
PREPA sells assets and operations to a private American/Canadian company

LUMA

10% SOLAR HOUSES
- solar homes
- other

Land Use Regulations
Power Purchase Agreement within the community
Property Assessed Clean Energy Program is only money to home and business owners

Financial Incentive Programs
Net Metering
Green Energy Fund
Economic Development Incentives
Sales and Use Tax Exemption
Property Tax Exemption
Excise Tax Exemption for Partners
Solar and Wind Contractor Certification

Programs & Structures
Solar Ordinances
Solar Overlay Zoning
Incentive Zoning

BLACKOUT

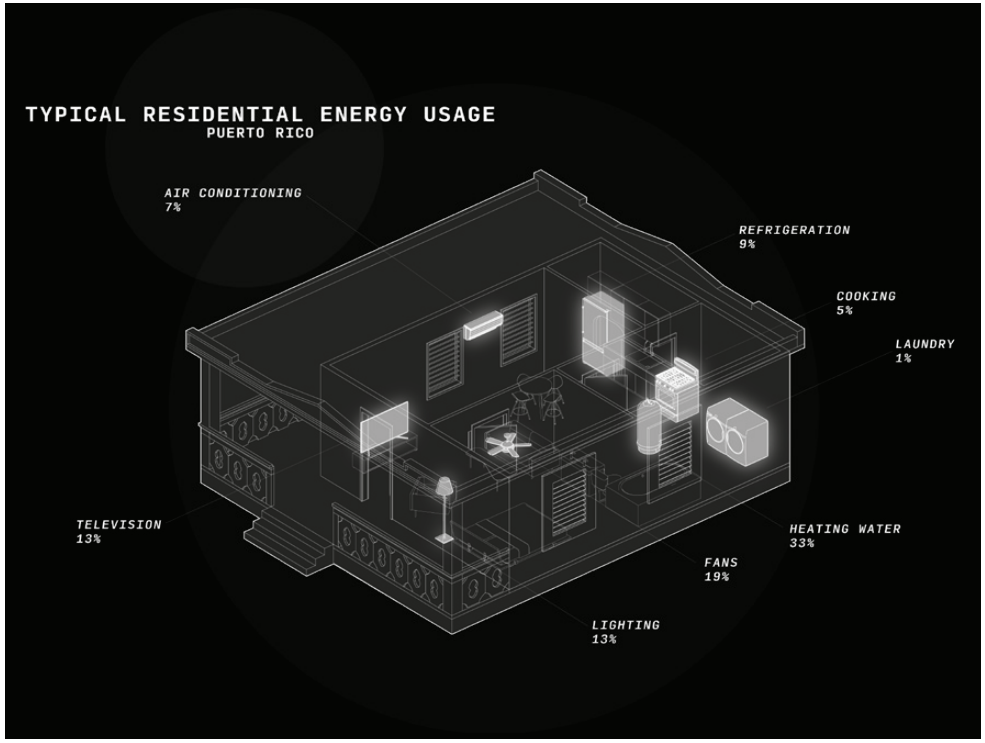
S IRMA & MARIA
& October 2017
re from the hurricanes left no access to electricity

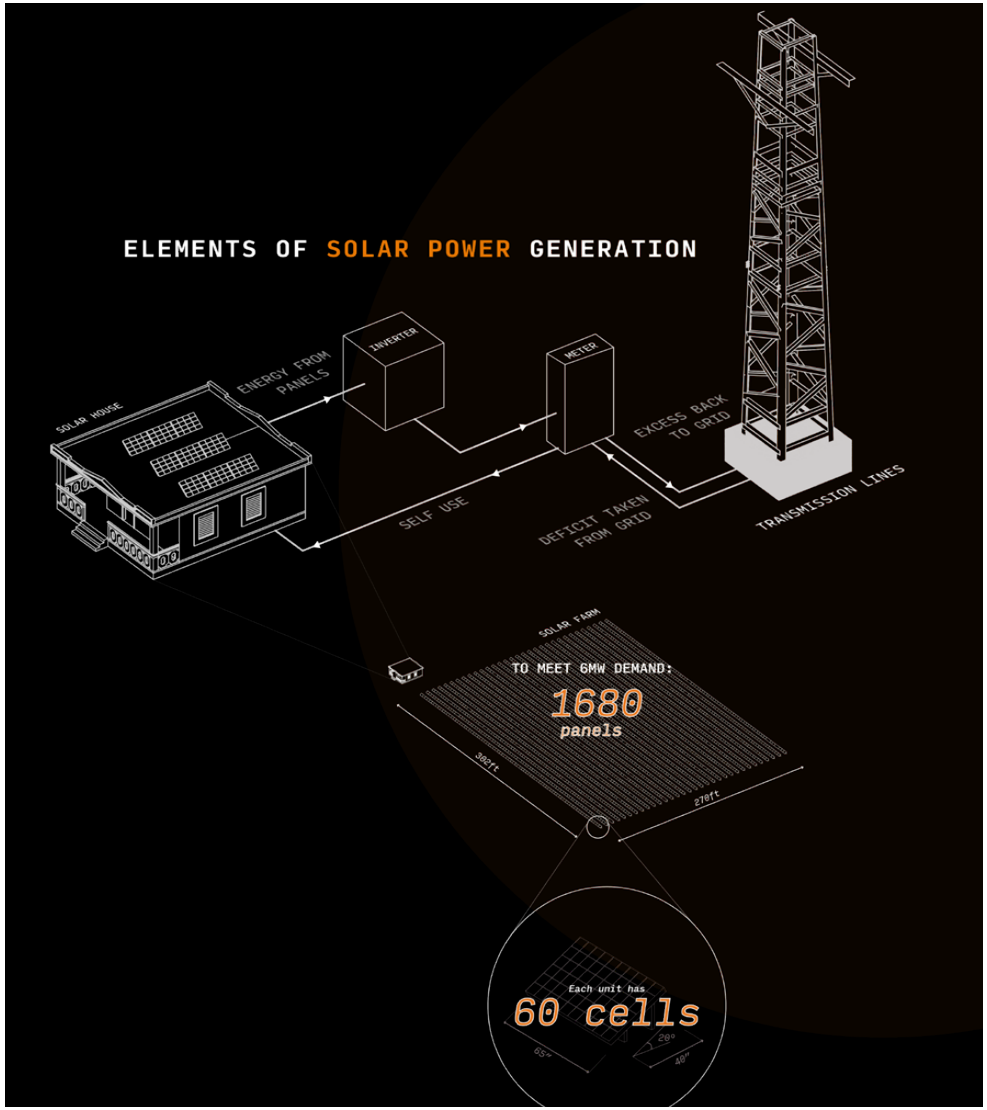
DISASTER RECOVERY
November 2017
PREPA intermittently supplied energy to main island for 12 hours per day; Tesla donated batteries for storage

GENERATOR IMPLEMENTATION
December 2017
After 3 months in the dark, USACE lends two diesel generators to Culebra

BUILDING RESILIENT SYSTEMS
Year 2023
While energy remains unstable and increasingly expensive, Islanders seek to implement resilient generation systems

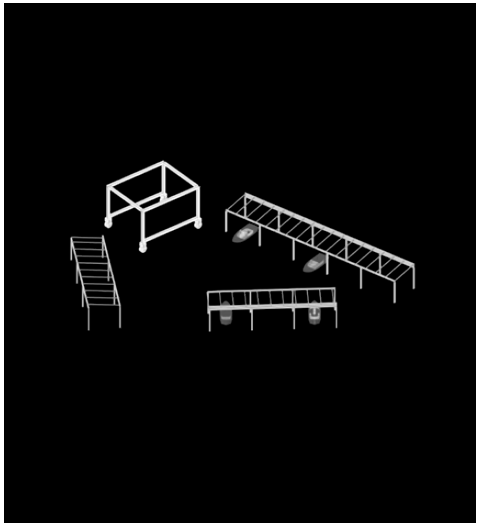
THE FIRST 100% SOLAR ISLAND?
Year 2050
The Energy Public Policy Act requires Culebra to obtain 100% of its energy from renewable sources


TYPICAL RESIDENTIAL ENERGY USAGE
PUERTO RICO
AIR CONDITIONING
7%
REFRIGERATION
9%
COOKING
5%
LAUNDRY
1%
TELEVISION
13%
HEATING WATER
33%
FANS
19%
LIGHTING
13%


ELEMENTS OF SOLAR POWER GENERATION
SOLAR HOUSE
ENERGY FROM PANELS
INVERTER
METER
EXCESS BACK TO GRID
SELF USE
DEFICIT TAKEN FROM GRID
TRANSMISSION LINES
SOLAR FARM
TO MEET 6MW DEMAND:
1680
panels
360ft
270ft
Each unit has
60 cells
95"
20°
40"

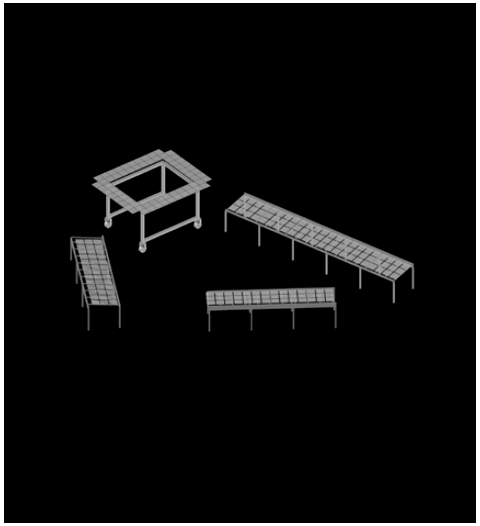
COMMUNITY ENGAGEMENT

A series of interviews and roundtable discussions were conducted on-site in Culebra, Puerto Rico to determine site, objectives, and approach.



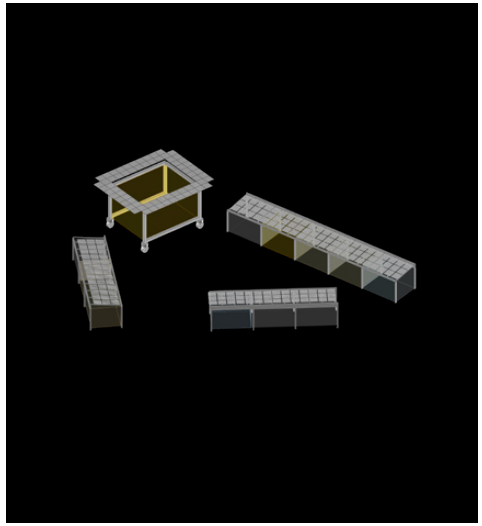
EXISTING STRUCTURE

Currently, there are four abandoned steel structures spread across the dry dock site. These structures are being adaptively reused for the purposes of establishing 'Cuna Del Sol Borincano,' Culebra's solar hub.



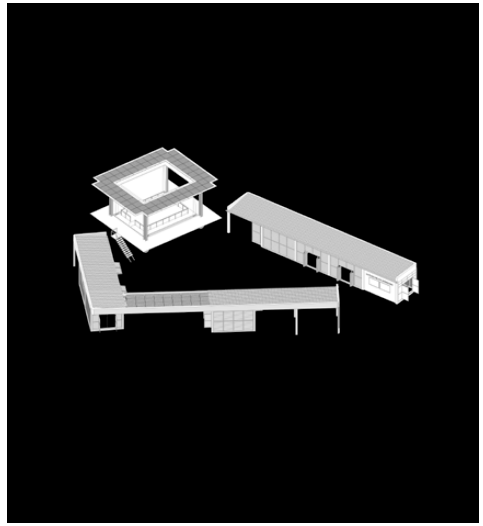
SOLAR PANEL ACTIVATION

Adding solar panels to the steel structures allows for their adaptive reuse. As 20 watts can be generated per square foot, this site will generate X watts in total.



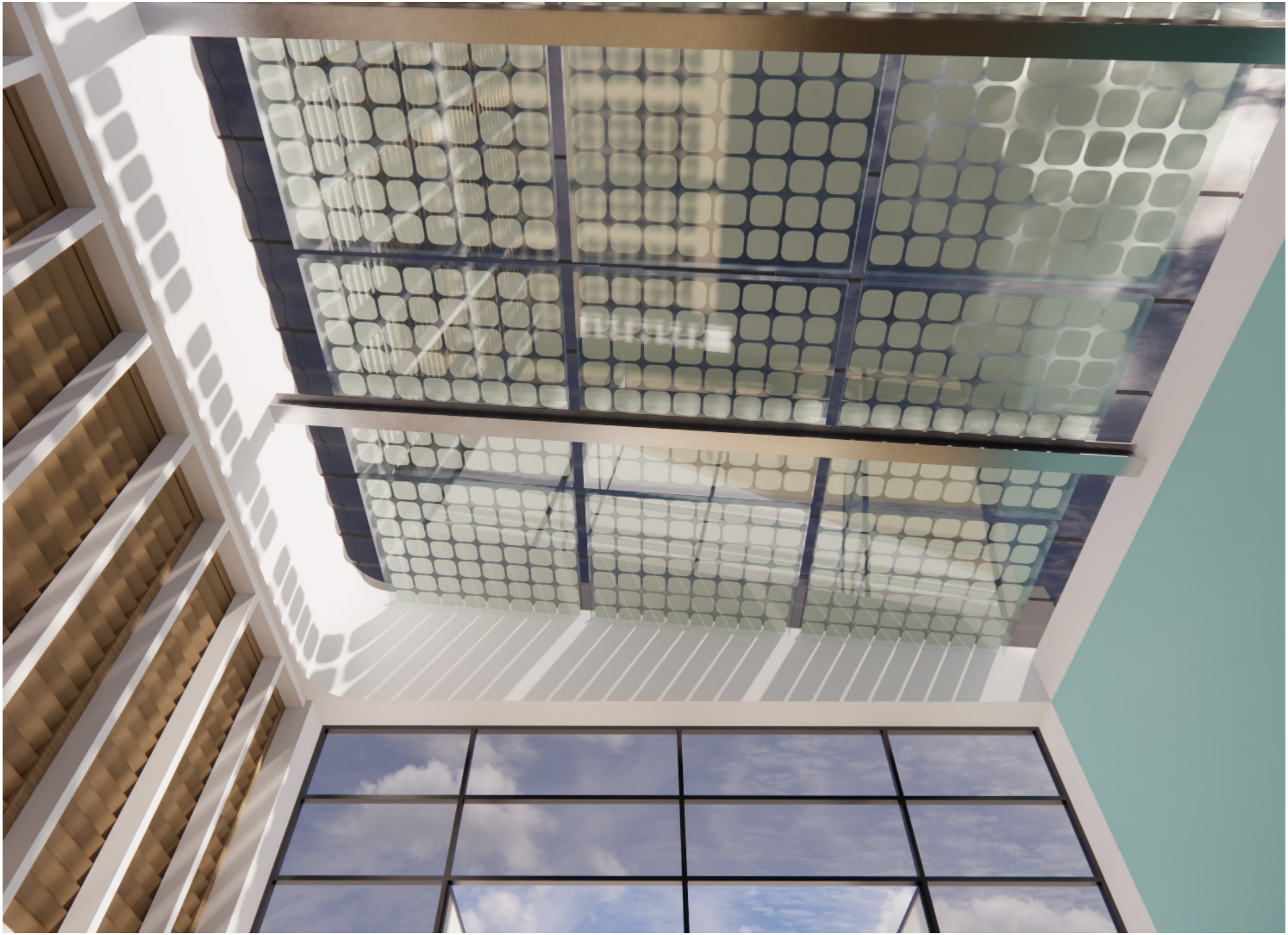
SITE PROGRAMMING

With the architectural forms under the solar panels, this site incorporates an indoor storage space for backup energy infrastructure, an indoor workshopping space for panel repairs & maintenance, an indoor administrative space, an outdoor practical lecture space, an indoor classroom, an open exhibition space, and an open cafe space.



ARCHITECTURAL FORMS

The structures under the solar panels enable the site programming and create an interactive space. Sliding doors and glass walls allow for visitors to get a glimpse at the technical room with solar infrastructure, work ongoing in indoor classrooms, etc.



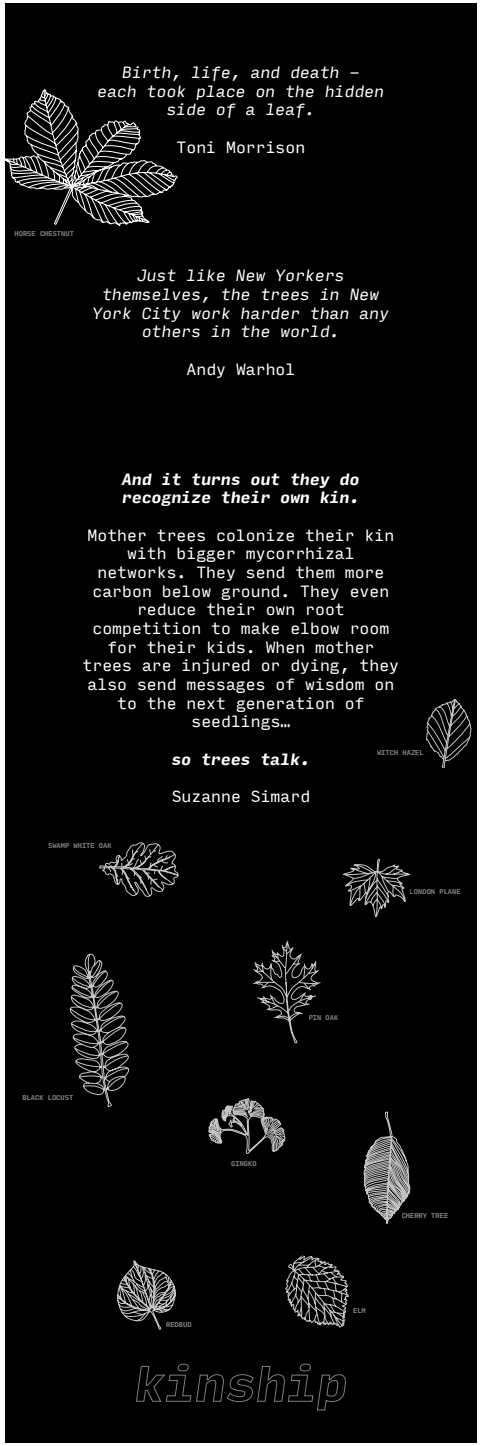

LA PLAZA DE

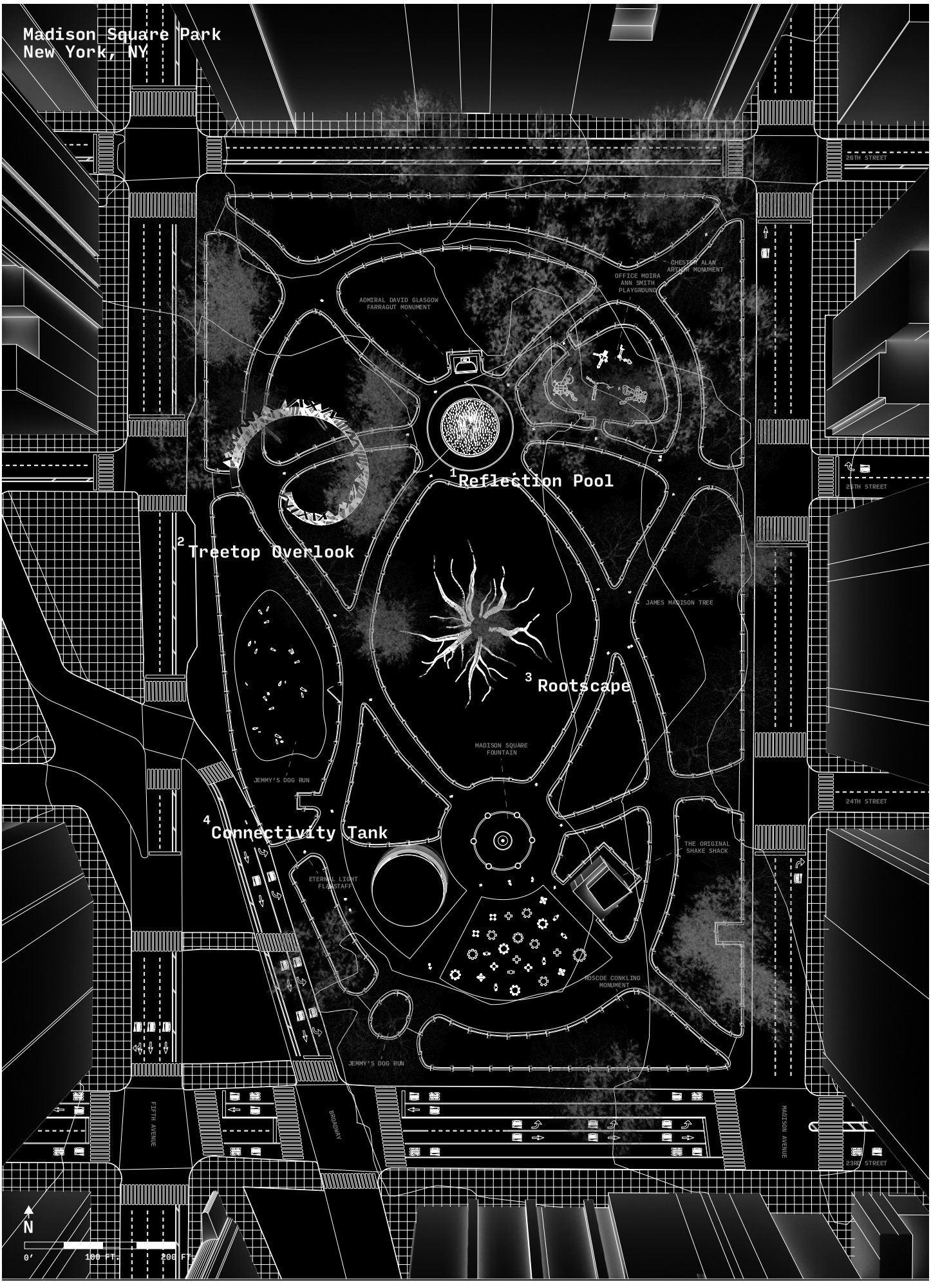

SOL BORINCANO

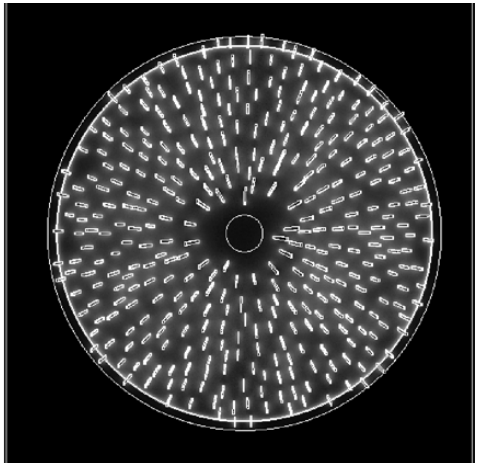
KINSHIP
ADV. V // PROFS. YUSSEF AGBO-OLA AND CORY ARCHIE

All trees are connected through a network of below-ground fungi. They share excess resources, knowledge of disease, and other chemical signals to each other through this network. They look out for each other, as if they are all kin.

This intervention in Madison Square Park intends to leverage an architecture to catalyze social interconnectivity between the park's occupants.

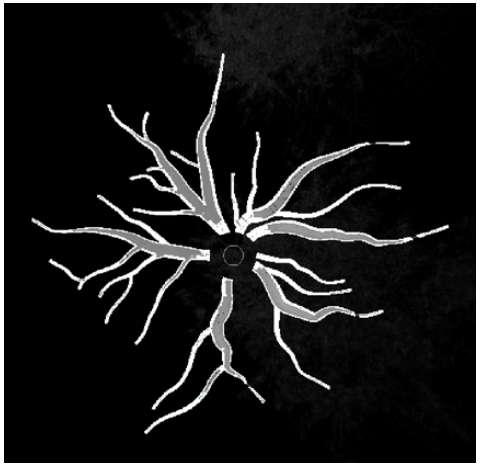



Madison Square Park
New York, NY
1 Reflection Pool
2 Treetop Overlook
3 Rootscape
4 Connectivity Tank
ADMIRAL DAVID GLASGOW FARRAGUT MONUMENT
OFFICE MOIRA ANN SMITH PLAYGROUND
CHESTER ALAN ARTHUR MONUMENT
JAMES MADISON TREE
MADISON SQUARE FOUNTAIN
JEMMY'S DOG RUN
ETERNAL LIGHT FLAGSTAFF
THE ORIGINAL SHAKE SHACK
ROSCOE CONKLING MONUMENT
26TH STREET
25TH STREET
24TH STREET
23RD STREET
FIFTH AVENUE
BROADWAY
MADISON AVENUE
N
0'
100 FT.
200 FT.



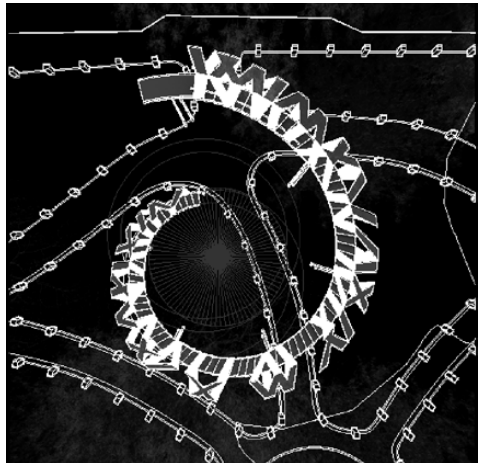
REFLECTION POOL

An adaptive reuse of the Reflection Pool memorializes all of the trees that have died or been removed since the park's inception as arboretum.



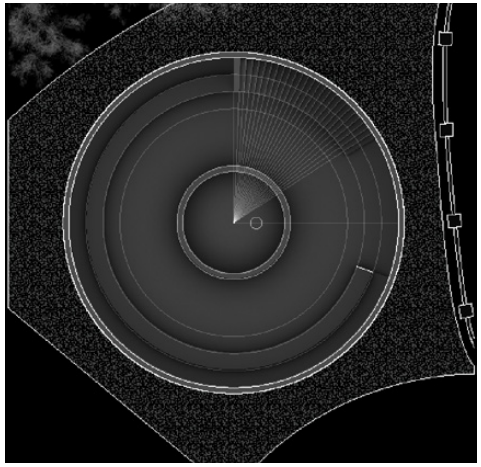
ROOTSCAPE

This interactive playscape offers space for groups and individuals to sit.



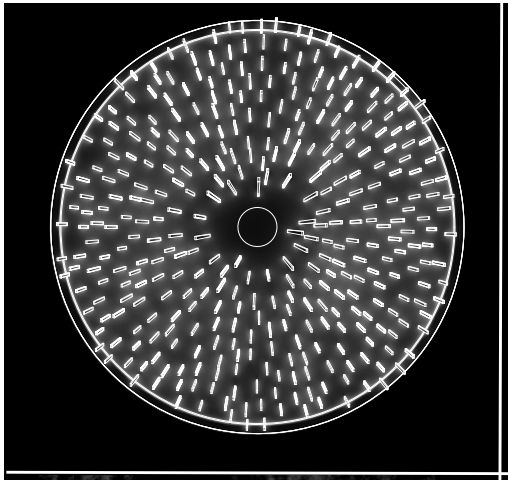
TREETOP OVERLOOK

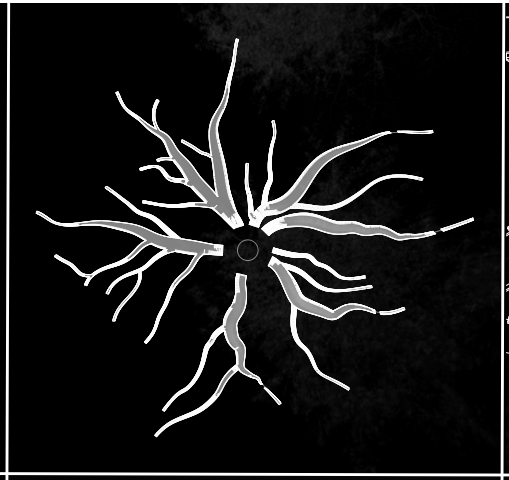
This pier into the sky allows visitors to walk amongst the leaves and branches.

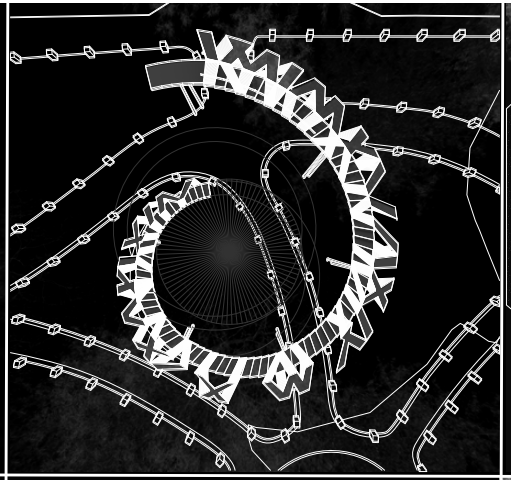


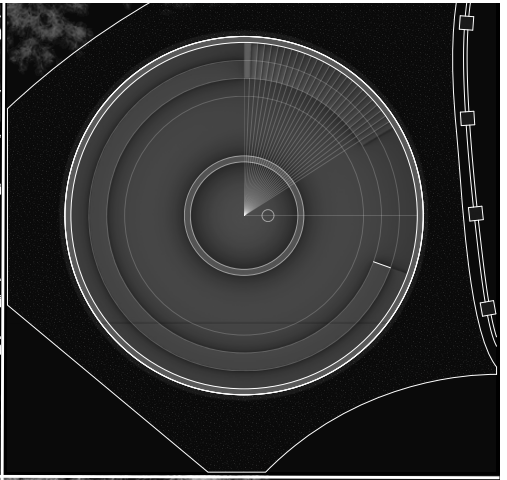
CONNECTIVITY TANK

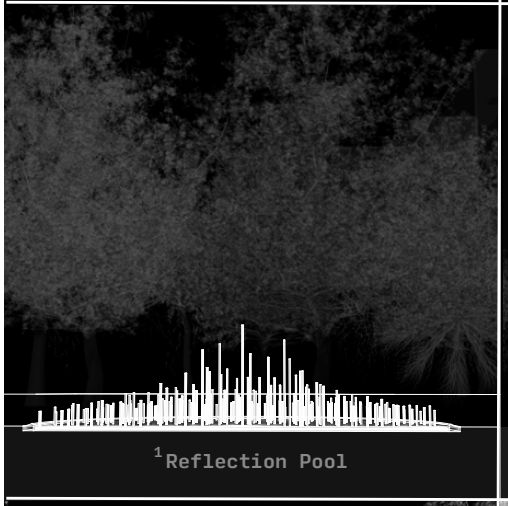
This below-ground space offers a quiet space to gather within the busy park.







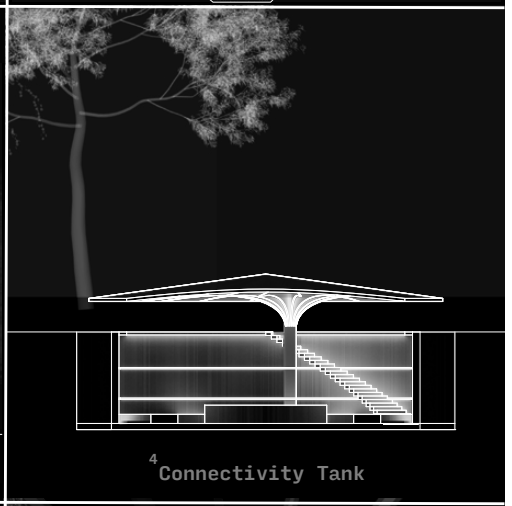




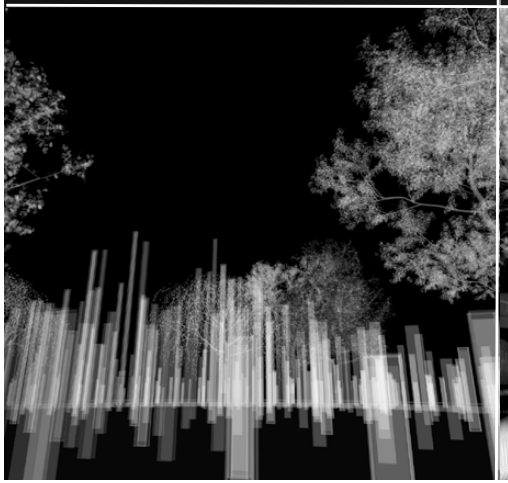
[1] Reflection Pool

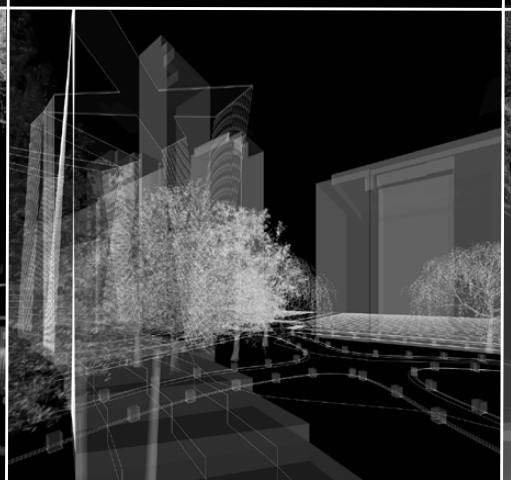
[3] Rootscape

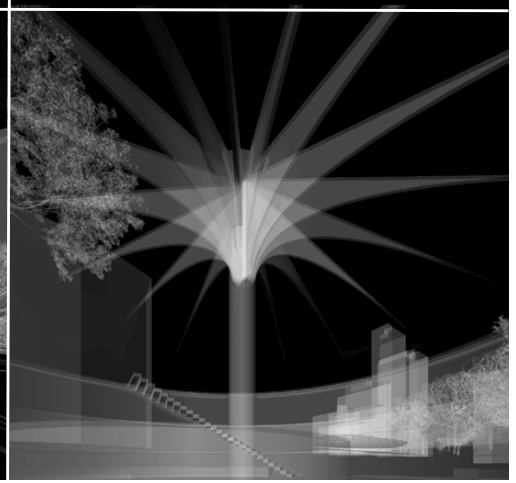
[2] Treetop Overlook



[4] Connectivity Tank





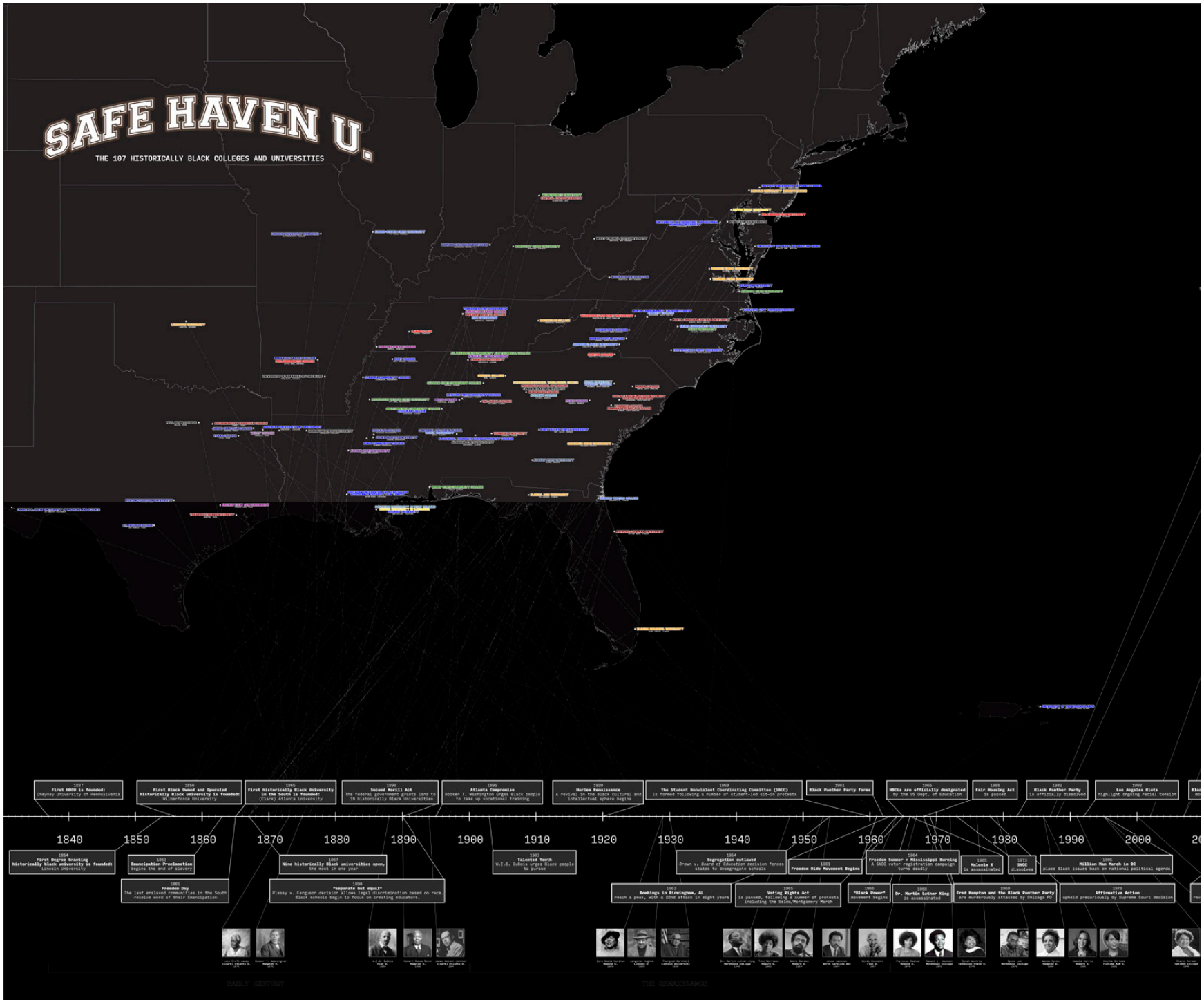


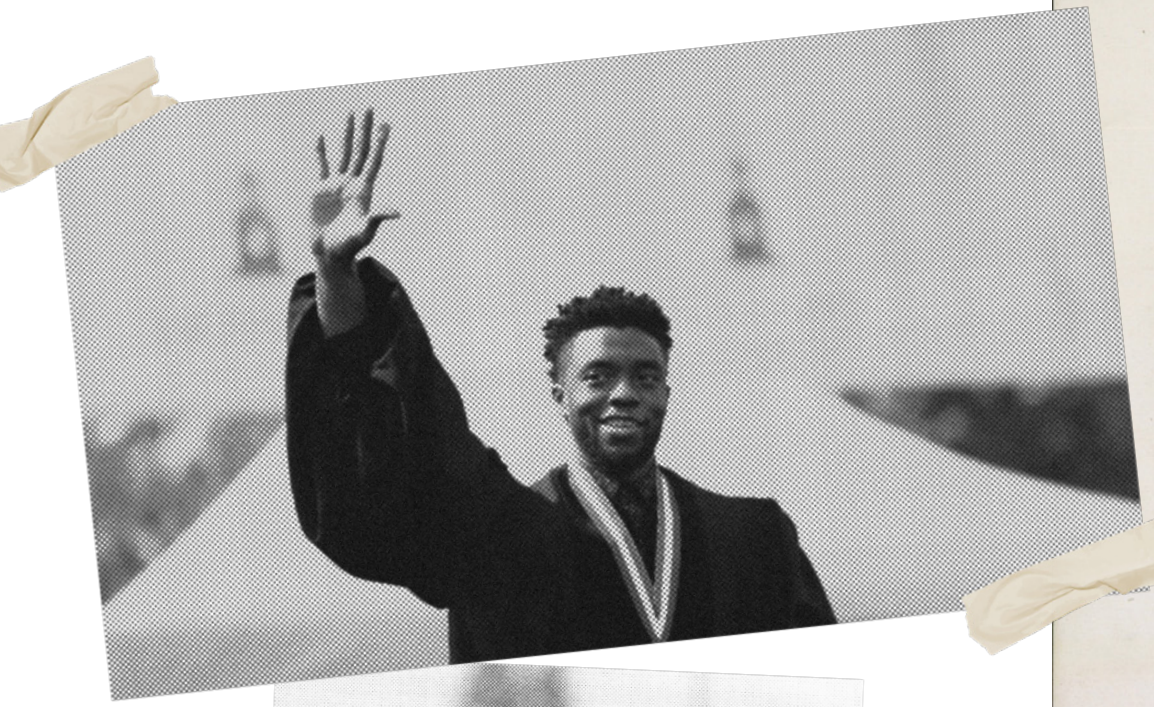
SAFE HAVEN U.
ADV. VI // PROFS. PAULO TAVARES AND MAX GOLDNER

Since their inception in 1837, Historically Black Colleges and Universities (HBCUs) have offered refuge from widespread racial violence in the United States. Many HBCUs were founded in a post-Emancipation context, with the sole intent to educate formerly-enslaved Black Americans in a still-segregated country. However, over the last two centuries, students from across the African diaspora have instead leveraged their enrollment at HBCUs to further their communities, build grassroot movements, and impact society at-large. Today, the legacy continues: despite having to navigate widespread financial disparity stemming from structural racism, HBCUs are collectively thriving - dictating mainstream culture and producing high proportions of Black professionals in the US.

Safe Haven U. curates an abbreviated archive of the vibrant histories, cultures, and stories of student success found at HBCUs (specifically in the context of ongoing racialized violence in the United States) to begin to question how college campuses of the future can better serve as incubators for thought and expression, culture and (counter)protest, legacy and success, etc. The Safe Haven U. online database is an advocacy resource, increasing access to previously disparate data - such as financial analyses, an aggregated timeline of HBCU histories, and thorough insight into campus architectures. The Safe Haven U. era-book mirrors the database, offering a physical chronicle of HBCU history that collapses past into present, and present into future.


CHEER LEADERS
SAFE HAVEN U.
College Orchestra
COLLEGE BAND
For Whom The Alma Mater Rings . . .
It Rings for Thee
Founder's Library 149


SAFE HAVEN U.
THE 107 HISTORICALLY BLACK COLLEGES AND UNIVERSITIES
1837
First HBCU is founded:
Cheyney University of Pennsylvania
1856
First Black Owned and Operated historically Black university is founded:
Wilberforce University
1865
First historically Black University in the South is founded:
(Clark) Atlanta University
1890
Second Morill Act
The federal government grants land to 19 historically Black Universities
1895
Atlanta Compromise
Booker T. Washington urges Black people to take up vocational training
1920
Harlem Renaissance
A revival in the Black cultural and intellectual sphere begins
1960
The Student Nonviolent Coordinating Committee (SNCC)
is formed following a number of student-led sit-in protests
1967
Black Panther Party forms
1965
HBCUs are officially designated
by the US Dept. of Education
1968
Fair Housing Act
is passed
1982
Black Panther Party
is officially dissolved
1992
Los Angeles Riots
highlight ongoing racial tension
1840
1850
1860
1870
1880
1890
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
1854
First Degree Granting historically black university is founded:
Lincoln University
1863
Emancipation Proclamation
begins the end of slavery
1865
Freedom Day
The last enslaved communities in the South receive word of their Emancipation
1867
Nine historically Black universities open,
the most in one year
1899
"separate but equal"
Plessy v. Ferguson decision allows legal discrimination based on race.
Black schools begin to focus on creating educators.
1903
Talented Tenth
W.E.B. DuBois urges Black people to pursue
1954
Segregation outlawed
Brown v. Board of Education decision forces states to desegregate schools
1961
Freedom Ride Movement Begins
1963
Bombings in Birmingham, AL
reach a peak, with a 22nd attack in eight years
1964
Freedom Summer + Mississippi Burning
A SNCC voter registration campaign turns deadly
1965
Voting Rights Act
is passed, following a summer of protests including the Selma/Montgomery March
1965
Malcolm X
is assassinated
1966
"Black Power"
movement begins
1968
Dr. Martin Luther King
is assassinated
1969
Fred Hampton and the Black Panther Party
are murderously attacked by Chicago PD
1973
SNCC
dissolves
1978
Affirmative Action
upheld precariously by Supreme Court decision
1995
Million Man March in DC
place Black issues back on national political agenda
EARLY HISTORY
THE RENAISSANCE



COLLEGE CHOIR

First row, left to right: Eloise Rogers, Bettye Patterson, Ethel Taylor, Mary L. Wilson, Doretha Johnson, Ruby Ann Williams, Louise Lofton, Jakie Simmons, Audrey Glenn, Catherine Jewel, Hestiza Evans, Bettye Simpson, Emma Jean Brown, Lillian Hill, Dorothy Parker, Norma Jean Ward, Geraldine O'Neal.

Second row, left to right: Gussie Dickey, Grace Jackson, Verdie Childress, Aurelia Elders, Bobbie Jackson, Jane Hayes, Marian Williams, Laverne Lofton, Jean Bell, Jewel Lofton, Tremilla Blye, Laura Jean Jones, Doris Creggett, Ernestine Rowell, Jacquelyn Price, Anita Nance, Lillie Larkin, Ruby Preston.

Third row, left to right: Benjamin Henry, James Martin, Clifford Graham, Vernon Nichols, Nathaniel Stovall, Carl Reeves, Burl Smith, Edward Waller, James Evans, Prentic Henry, Louie Terrell, Hobart Cope, James Thomas, James Washington, L. Hampton, Sanford Tollett, Freddie Berth, Merriland Overall, Ariel M. Lovelace.

Fourth row, left to right James Bostic, Clarence Fields, Elliot McKinney, William Filer, Howard Pledge, Ezra Scoggins, Arnett Gill, Fredrick Evans, Scotty Williams, Jack Gilbert, Berneil Brown, Harlan Fiddmont, Shelton McGhee.

KUWAITI POST-OIL SOCIO-SPATIAL SEGREGATION

ADV. VI // PROF. YASSER ELSHESHTAWY

This written project serves as a capstone to several years of studying how urban planning and architecture shape society at large.

Essay completed in collaboration with Jess Kuntz and Benjamin Vassar.

Kuwaiti Post-Oil Socio-Spatial Segregation

Eric Julian Hagerman, Jess Kuntz, and Benjamin Vassar

Arab Modernisms, Prof. Yasser Elsheshtawy
Spring 2024

FIGURE 01: Kuwait Oil Company laborers at the oilfield. Source: Kuwait Oil Archives.

I. Introduction

Kuwait's discovery of commercial quantities of oil in 1938 — and the subsequent exportation of oil in 1946 — marked a significant shift in the country's history. In a very short period of time, Kuwait saw exponential growth in oil revenue; in her book, *Kuwait Transformed*, historian Farah Al-Nakib writes that "oil revenue brought about a major shift in the social pact between the rulers and the ruled."[1] The ruling class became so independently wealthy that they no longer relied on the symbiotic relationship with the merchant class, nor did they require public taxation. This effectively put all public spending at the sole discretion of the ruling class and marked the beginning of the welfare state of Kuwait. The term "post-oil" thus applies to this transformational period following the discovery of oil.

[1] Farah Al-Nakib, Kuwait Transformed: a History of Oil and Urban Life. (Stanford, CA: Stanford University Press, 2016), 91-119.

Driven by a desire to distribute this new post-oil wealth across the country, Kuwaiti launched a widespread modernization project, which included government investments in health, education, utility network upgrades, social welfare, urbanization, and housing. Notably, the country's modernization project served as a worldmaking strategy to project the nation's newfound prosperity to the world stage. While the welfare state greatly benefited already-wealthy and well-connected Kuwaitis, it had polarizing and disenfranchising effects on migrant labor populations and bedouins, as well as disenfranchised Kuwaiti citizens such as unwed women, widowed women, and women married to non-Kuwaiti citizens. This issue was particularly exacerbated by housing policies, urban master planning and suburbanization schemes — strategies that have been perpetuated since their initial development in the 1950s. These policies fostered extreme socio-spatial segregation and xenophobia that persists in Kuwait to this day.

This essay examines how the planned implementation of welfare-state housing schemes precipitated a socio-spatial legacy of segregation and xenophobia throughout Kuwait City on three different scales. On the urban scale, this essay analyzes how the 1951 masterplan for Kuwait City created a physical and social hierarchy that enriched the wealthy while simultaneously ostracizing poorer residents socially and financially. As a case study, the current conditions of Jeleeb Al-Shuyouk as described in contemporary Kuwaiti media sources are specifically investigated. Next, on the scale of single-family housing, the research illustrates the housing plot and the post-oil villa as tools of socio-spatial segregation, highlighting how government-led land acquisition and relocation strategies impacted the architectural and social heritage of Kuwait City in the long-term. Lastly, at the scale of multi-family housing, the essay examines why the Al-Sawaber project failed to alleviate the housing shortage and create a sense of community among Kuwaitis and non-Kuwaitis alike. Additionally, the essay presents novel ideas led by architects and planners of the time and speculates on potential contemporary applications that address previous shortcomings.

II. Urban Planning

Urban redevelopment of Kuwait City began in earnest in the 1950s when the Kuwaiti government engaged British planners Minoprio, Spencely, and Macfarlane to design a master plan for Kuwait City based on the Garden City model developed by British social reformer Ebenezer Howard. Minoprio, Spencely, and Macfarlane's plan followed a model of concentric ring roads emanating from the old *sur* (the original fortress wall) of Kuwait City. The concentric ring roads were then connected by radial roads cutting through the rings and converging at the old city center[2] (see Figure 02). This redevelopment model served multiple purposes: firstly, to accommodate unprecedented levels of vehicular traffic; secondly, to relocate Kuwaitis living in the city center to facilitate the revitalization of the city center; and thirdly, to establish specialized industrial, educational, and health districts outside of the city center. Importantly — though not explicitly stated as a model objective — the master plan and subsequent land acquisition and housing distribution enabled the Kuwaiti government and ruling class to consolidate political power by essentially monopolizing the housing market, thus inducing almost complete reliance on the government by Kuwaitis.

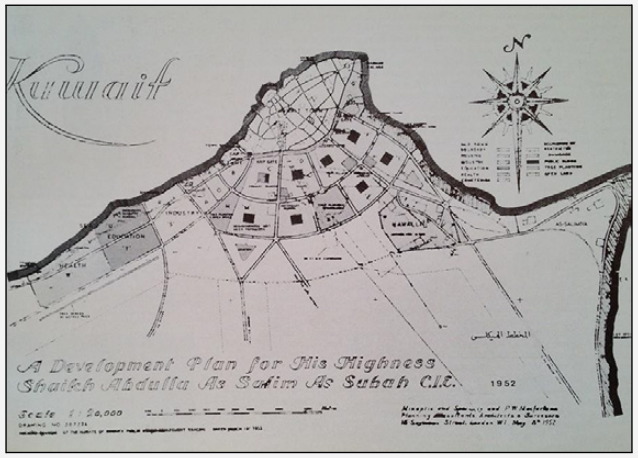


FIGURE 02. 1951 Minoprio, Spencely, Macfarlane Masterplan. Source: Kuwait Municipality

[2] Al-Nakib, *Kuwait Transformed*, 100.

To implement the urban redevelopment scheme, the government began a land acquisition campaign to empty Kuwait City, relocate Kuwaitis living in the urban center, and distribute some of the oil revenue to Kuwaiti citizens. This land acquisition policy was both attractive and lucrative for Kuwaitis who had begun to reject their past in favor of a prosperous future, as "the government convinced people that their old houses were dirty, unhealthy, and infested with insects, and they promised to build them new, cleaner, and better houses outside of the city."[3]

However, there were several factors to this land acquisition policy that exacerbated socio-spatial segregation and xenophobia in Kuwait. Firstly, this policy was easily exploited; well-connected Kuwaitis and corrupt bureaucrats quickly began to rig the system. As Al-Nakib writes, “for a percentage of profit, [these] bureaucrats leaked information on areas earmarked for expropriation to their wealthy patrons, who would then quickly buy this land for a fraction of the price before the expropriation was announced.”[4] This corruption essentially enabled well-connected and wealthy Kuwaitis to become wealthier, thus further reinforcing the social and economic divide between privileged Kuwaitis and disenfranchised populations. Secondly, the 1950s master plan and land acquisition policy created a physical socio-spatial hierarchy with economic, health, and safety implications. The first eight neighborhoods were constructed between 1954 and 1959.[5] These neighborhoods were inherently more desirable and well-developed in terms of access to resources and sanitation. Included in these first eight neighborhoods are the suburbs of Shuwaikh, Shamiya, and Dasma, which are notably affluent areas located within the first concentric ring outside of Kuwait City (see Figure 03). Notably, residents of Jibla, a “socially elite quarter of the pre-oil town,” were relocated to Shuwaikh and Shamiya, thus establishing a social hierarchy within the neighborhoods. As Al-Nakib writes:

> “The timing of acquisitions largely determined the areas to which families moved. Those whose properties inside the town were acquired by the state early on - namely families who lived in the most sought-after real estate along the coast or near what became the central business district, and those who had the most influence within the development apparatus - moved out to the first eight neighborhoods to be fully allocated by 1960.”[6]

Ultimately, the land acquisition policy was lucrative for already wealthy Kuwaitis who were able to become early beneficiaries both financially and in terms of social status, expressed by geographic proximity to the city center. By contrast, less affluent or well-connected Kuwaitis who were considered part of the Low-Income

[3] Al-Nakib, *Kuwait Transformed*, 97.
[4] Al-Nakib, 104.
[5] Al-Nakib, 121-147.
[6] Al-Nakib, 127.

Group, or LIG, remained in the city for a longer period, as the government had not yet created enough LIG pre-built housing stock in the early established affluent neighborhoods.

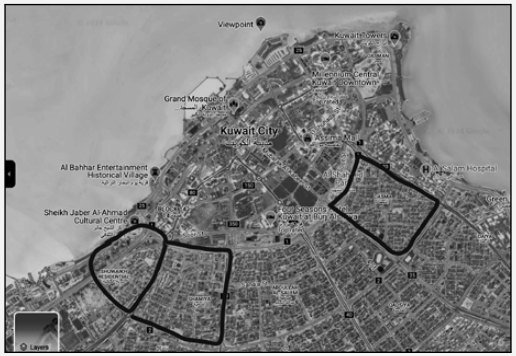


FIGURE 03. Shuwaikh, Shamiya, Dasma. Source: Google Maps

Thirdly, a number of policies introduced in the 1950s were intentionally exclusionary and divisive, in order to increase political power and favor:

1. Non-Kuwaitis were not allowed to buy property and were relegated to renting from privately-owned multifamily buildings in neighborhoods like Salimya, Hawalli, or the city center — three areas which collectively housed 80% of all renting households in the city by 1965. (By 1969, 81% of the population living in these three areas was non-Kuwaiti; in the original 8 suburbs, only 28% of the population was non-Kuwaiti.);

2. Villagers were prohibited from moving outside of the neighborhood in which they initially settled, keeping them further away from the city center and containing their social and physical mobility within the older suburbs; and

3. Former Bedouins seeking to settle down in Kuwait — though allowed to live in state housing — were housed in the furthest outskirts of the city, in “areas developed specifically for that purpose” of housing Bedouins. These areas, known as *al-manatiq al-kharijiyya* or “outlying areas,” were basically an entirely new set of suburbs placed in the middle of the desert. These were intended to

be “self-contained” and totally separate from Kuwait City — complete with their own services and commercial centers.[7]

Not only did this approach to master planning exacerbate wealth disparity in Kuwait, it disenfranchised all migrant labor populations and un-naturalized Bedouins who were prohibited from land ownership and any Kuwaiti welfare state benefits. The housing policies induced in the Kuwaiti population a tendency toward self-segregation and xenophobia, which is still palpable in Kuwait today. It appears, however, that socio-spatial segregation enabled the government to consolidate power through gerrymandering-like tactics. By examining parliament election results from 1963 and 1967, Al-Nakib concludes that neighborhoods were also demarcated by religious affiliations, as Kuwaitis have typically voted along religious lines. Al-Nakib finds that the early affluent neighborhoods of Shamiya and Shuwaikh were almost entirely Sunni in population, whilst “a large portion of the Shi’a were deliberately the last to have their property in the city… acquired by the state.”[8] In other words, Al-Nakib argues that “through land acquisition and relocation tactics the state guaranteed the Shi’a (traditional government supporters) representation in Parliament.”[9] Additionally, the state used Bedouin naturalization and subsequent housing allocation to gain political favor from newly sedentary Bedouins. Notably, these naturalized Bedouin neighborhoods were on the very outskirts of the city, distinctly separate from wealthy Kuwaiti neighborhoods. Ultimately, Kuwaitis and expats mingling had the potential to promote Arab nationalism ideologies, which posed a threat to the state — which, in turn, responded by again fostering socio-spatial segregation through housing policies.

Contemporary media coverage of the neighborhood Jeleeb Al-Shuyoukh provides an illustrated example of the continued social, financial, and health stigma faced by those who are subject to Kuwaiti welfare state exclusion. Jeleeb Al-Shuyoukh is located on the extreme periphery of the suburban sprawl near the desert and the Kuwait International Airport and is currently inhabited by expat labor populations mostly from India, Pakistan, Bangladesh, Sri Lanka, Egypt, and Syria (see Figure 04). Contemporary Kuwaiti media coverage of Jeleeb Al-Shuyoukh highlights the continued negative impacts of socio-spatial segregation induced by the 1950s housing policies. An article published in 2023 in the *Arab Times - Kuwait*, an English-language newspaper, describes the “chaotic” environment of Jeleeb Al-Shuyoukh in which “an overwhelming portion of the streets [were] submerged in sewage water, some so severely that their contours became obscured, rendering

[7] Al-Nakib, *Kuwait Transformed*, 137-140.
[8] Al-Nakib, 135.
[9] Al-Nakib, 136.

them impassable for both pedestrians and vehicles."[10] In addition to the poor health conditions, Jeleeb Al-Shuyoukh faced governmental expropriation as recently as 2019, illustrating the intolerance of migrant populations. The government's plan for Jeleeb Al-Shuyoukh would "result in evicting all bachelors [single migrant male laborers] from Jleeb whose presence is starting to pose social and security threats as well as becoming a center for illegal residents."[11] As in the 1950s and 60s, the government continues to perpetuate the idea that migrant populations pose a threat and thus must be removed. The 1950s housing policies have created a pervasive culture of exclusion and socio-spatial segregation, the effects of which continue to negatively impact disenfranchised communities.

FIGURE 04. Jeleeb Al-Shuyoukh. Source: Kuwait Times

Whether or not socio-spatial segregation was an intentional byproduct of the original state housing policies remains heavily debated; however, the process of homogenizing neighborhoods effectively molded social dynamics across the city long-term. By the year 1969, 78% of residents in Shamiya (a socially-elite, older suburb) said that they did not interact with non-Kuwaitis. 83% of residents in Hawalli (a newer suburb that housed the majority of renting households) said that they did not interact with Kuwaiti nationals at all. By 1980, only 7% of the Kuwaiti population lived in the older suburbs.[12]

[10] "Chaos Unveiled," *Arab Times Kuwait, April 08, 2023.*
[11] Saleh, "Jleeb Al-Shuyoukh Clean Up," *Kuwait Times*, October 27, 2019.
[12] Al-Nakib, *Kuwait Transformed*, 141, 144.

III. Single Family Housing

As the urban fabric of the city continued to morph into a collection of homogeneous sectors, the single-family house simultaneously became indicative of shifting attitudes amongst the population — effectively changing how Kuwaitis perceived space in the long-term. In 1954, the Kuwaiti government launched a number of schemes to incentivize single-family households to migrate outwards into suburbs:

1. Relocation: Those who sold their urban land to the government were granted a plot of suburban land, in addition to monetary compensation;

2. LIG: Limited-Income Group households were granted access to government-built houses at a significant discount — on average, at a price equivalent to 30 to 40% of the houses true value; and

3. Plot and Loan: The government granted LIG households an undeveloped plot of land and an interest-free loan to construct their own house.

Each of these schemes created distinct socio-economic groupings of urban households. Moreover, housing plots in the new suburbs were typically distributed via lottery. Most migrating households could not choose their new neighbors, and by the 1970s, the majority of suburban citizens were completely unrelated to their neighbors.[13]

This land acquisition and relocation process made way for the construction of new villas in the suburbs. The differences in scale, style, material, organization, aesthetic, form, and construction between pre-oil houses (known as *firjan*, see Figure 05) and post-oil villas, however, was so drastic that the completion of these suburbs marked an entire departure from the existing architectural heritage found within the city center.

[13] Al-Nakib, *Kuwait Transformed*, 123-127.

FIGURE 05. Traditional *Firjan* houses. Source: Kuwait Oil Company Archive.

Firjan were connected houses organized around social courtyards and shared periphery walls. These houses employed massive, solid walls for thermal comfort, and neighboring houses shared the same architectural form and style — making it nearly impossible to determine the boundary where one house ended and the next started.

In contrast, post-oil villas were detached, single-family houses distributed onto spacious plots of 750 to 1000 square meters. Whereas *firjan* hid behind tall boundary walls, the twentieth-century villa could display the wealth of the family that lived inside it. Placed away from the street behind relatively low perimeter walls, these homes were able to parade their architecture. Houses merged the traditional verandahs and *mashrabiyya* (open-air porches and bay windows, see Figures 06 and 07) typically found in the *firjan* with strong, geometric forms inspired by Western styles such as Googie, Brutalist, Bauhaus modernist, Streamline modernist, and Art Deco. Moreover, with heightened social pressure to leverage one's house as a status symbol, households began to compete with each other by continuously "demolishing and rebuilding" new features on their house — largely in response to renovations on neighboring properties. This focus on eclecticism, Western style, and high "renovatability" led to extreme stylistic diversity in the suburbs, but it also yielded houses that were wholly unique from their neighbors and yet architecturally indistinct — two features that were uncharacteristic of residential architecture in the city center.

FIGURE 06. A verandah, or open-air porch, in a post-oil villa. Source: Charles Cecil, 1968.

FIGURE 07. A *mashrabiyya*, or bay window, in a post-oil villa. Source: Charles Cecil, 1968.

A portion of post-oil villas were built by the government within the initial city limits, before the creation of LIG schemes in 1954. These government-built houses were pre-designed in only two styles, and families living in them were prohibited from renovating the house before completing all payments — a process which usually took about ten years.[14] Thus, household socioeconomic status was woven into a semi-permanent urban fabric: smaller, uniform, and static houses threaded together amongst neighborhoods of two-story, eclectic, and ever-changing villas.

By leaving the traditional architectural heritage of pre-oil *firjan* for more Western forms, expatriate architects solidified Kuwait's changing social norms into space. For example, the *diwaniyya* or reception hall (see Figure 08) is an architectural feature initially distinct to old *firjan* houses in Kuwait City, but it grew in popularity with suburbanization, since houses in the suburbs had more space for them.[15] Traditionally utilized by households hosting visiting businessmen, the continued presence of the *diwaniyya* in post-oil villas illustrates an architectural continuation of social traditions despite the city's new social dynamics. In contrast, as women slowly gained more agency in the mid-twentieth century, new villa designs attempted less to hide women behind high perimeter walls and entry curtain walls — an architectural adaptation illustrating changing social norms.

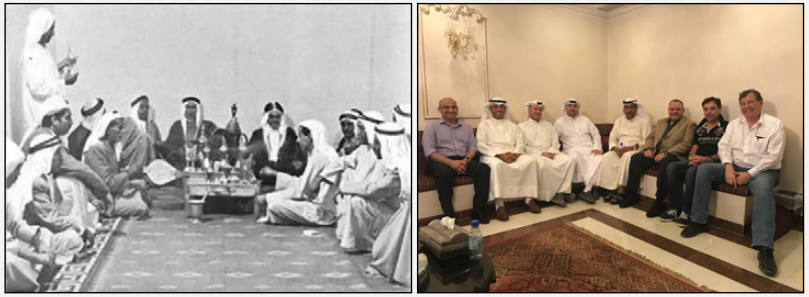


FIGURE 08. Traditional and contemporary *diwaniyya*. Source: Dr. Mussaad M. Al-Razouki, 2019.

The old *firjan* relied on local materials for their construction: sea rocks, clay, wood, hay, mudbrick and plaster. These materials were easily accessible and well-suited for the harsh summer and winter climates in Kuwait.[16] Global industrialization and newfound wealth, however, allowed for builders of post-oil villas

[14] Al-Nakib, *Kuwait Transformed*, 131.
[15] Al-Razouki, "The Diwaniya: A Uniquely Kuwaiti Institution," *Medium*, October 31, 2019.
[16] Al-Fadhli, "Old Kuwaiti Houses Built to Suit Climate," *Kuwait News Agency*, April 04, 2008.

to import novel building materials such as concrete, glass wool, plastics, gypsum, and sheet metal. Thus, the material economy of the city shifted in parallel with the architectural identity of the city.

	Old *Firjan*	**New Villas**
Scale	Houses of various sizes that "huddled together in a closely knit texture."	Plot sizes ranged from 750 or 1000 sq. meters (or 400-750 sq. meters on government plots)
Style	Uniform	Diverse
Material	Local materials such as wood, hay, burned sand + plants, mudbrick, mud plaster	Concrete, glass wool, plastics/foams, plaster, gypsum, metal
Organization	Connected	Detached
Form	High boundary walls and central courtyards	Low boundary walls, acute angles, cantilevers, decorative slabs
Renovation	Largely unchanged	Partially demolished and rebuilt continuously throughout lifespan
Occupancy	Extended family, multigenerational	Single, nuclear family

TABLE 01. Comparison between architectural features of Kuwaiti houses constructed pre- and post-oil

This gradual shift in architectural dynamics affected how Kuwaitis perceived space, even in more modern times. In 2011, 66 Kuwaiti residents were surveyed and asked to cognitively map their home. Those living in old *firjan*-style houses tended to explicitly remember the courtyard and the one-story height of the house. By contrast, those in newer villas tended to point out the entrance (or several entrances) of the house, as well as the villa's multi-story height.[17] Through the Kuwaiti government's utilization of the housing plot and post-oil villa as tools of segregation, an architectural divide between old *firjan* and post-oil villas emerged — a divide which became a mental signifier for the increasingly fragmented social hierarchy within Kuwait City — which consequently fostered an environment for the spatialized xenophobia that persists today.

[17] Al Haroun, *Contemporary Attitudes to Vernacular Elements in Kuwait's Domestic Architecture: A Mixed Method Study* (PhD diss., University of Sheffield, 2015), 434-428.

IV. Multi-Family Housing

Beginning in the mid 1960s — only about a decade after the welfare state in Kuwait began with the Land Acquisition Policy (LAP) of 1954 — urban planner Saba Shiber began cautioning the national government of the potential consequences of their plot-and-loan schemes. In his 1964 book, *The Kuwait Urbanization: Documentation, Analysis, Critique,* he writes:

> "If Kuwait continues to grow according to the pattern of the 750- and 1000-square-meter plot, it will become even a more tremendously extended city than it is at present. This is not only uneconomical but it is not conducive to social interaction and the conservation of valuable urban land. It is therefore necessary to reconsider the question of urban plots."[18]

Two main values can be extrapolated from this quote. The first is the importance of relative density and proximity of neighbors to allow for impromptu social interaction. This is far less possible on the spatially extended suburban block. The second is the need to conserve urban land to allow for future growth, rather than to precede and preclude it. Ironically, in Kuwait, the government had almost full control over the extent to which urban land got used as opposed to the laissez-faire real estate speculation that exists in other countries the world over. Despite this, by the end of the '60s, the National Housing Authority (NHA) was already commissioning foreign architects and planners to devise new schemes for higher-density housing in Kuwait.

FIGURE 09. 1971 Buchanan Master Plan. Source: Asseel Al-Ragam

[18] Al-Ragam, *The Destruction of Modernist Heritage: The Myth of Al-Sawaber*, 246.

These plans were to follow guidelines established in a 1971 master plan report by Scottish urban planner Colin Buchanan. This report called for high-density, multi-family housing in Kuwait City's Center — the area located within the first ring road which had gradually become depopulated as a result of the suburbanization spurred by the 1951 Minoprio, Spencely, and Macfarlane plan. According to Asseel Al-Ragam, the Kuwaiti Municipality had two primary motivations for constructing this housing — firstly to address the housing shortage, and secondly to re-integrate Kuwaiti citizens into the center's population, which had become almost entirely composed of foreign nationals. These ideals seem to align with Saba Shiber's prior-stated goals to re-integrate and de-segregate populations while addressing broader societal housing needs.

However, convincing Kuwaiti citizens — even the younger generation looking to leave their parents' homes and start their own families — to move into apartment blocks in the city center was always going to be difficult. The biggest obstacle was most certainly getting people to accept that, as opposed to receiving 750-1,000 square meters of space per family, they would instead get "30 square meters per person with 40 square meters for 'ancillary uses.'"[19] Even with a family of 10, the suburban house was much more spacious. An additional obstacle to filling these new apartment blocks was that Kuwaiti citizens were not accustomed to living in such close proximity to foreign nationals, and were likely biased against doing so. This is an issue that perpetuates itself, as the aforementioned denial of rights to housing to foreigners and bedouins only reproduces the image in people's minds that these groups are poorer, more criminal, etc.

Nonetheless, dozens of international architecture firms — who some might label utopian — still entered the Kuwait Municipality's design competition for new multifamily housing in the City Center. One noteworthy proposal was Georges Candilis' for the Al Sharq district in 1968. His first operating design principle was that the housing typology would be varied, with "200 row houses, 200 pyramid-type apartments, and 600 semi-duplex units."[20] The intention of this was supposedly to allow for social interaction between groups of varied income levels. This directly ties Candilis to Shiber, vis-a-vis a desire to better integrate Kuwaiti society. Two additional design principles further demonstrate this desire – the first being to design the transition from private to semi-public to public space, and the second being to connect via "elevated streets" neighborhoods currently separated by arterial highways.

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[19] Al-Ragam, *The Myth of Al-Sawaber*, 246.
[20] Al-Ragam, *Negotiating the Politics of Exclusion*, 8.

In this way, Candilis' proposal transcended the boundaries of architecture set forth by original Modernists like Le Corbusier with an impetus on how people would move across broader urban space. For various reasons, namely that the approval of his proposal would have produced unprecedented land speculation and inflation, it was never approved to be built. It was not until 8 years later, in 1976, that the state finally demonstrated a willingness to build multifamily housing with Arthur Erickson's proposal for the Al-Sawaber neighborhood.

FIGURE 10. Al-Sawaber Concept Model. Source: Arthur Erickson

Like Candilis' proposal, Erickson's also emphasized mobility via the formation of pedestrian corridors. Understanding the local climate, Erickson's scheme involved buildings that stepped back at each floor, canopying themselves over the ground plane to produce shade. When two buildings stepped towards each other, they created an "A" shape in section that formed a broad outdoor courtyard almost entirely shaded and open to natural ventilation. At the ground floor of these courtyards, Erickson intended commercial space serving the residences above. These courtyards were all connected building-to-building via a network of walkways that were also tied into the surrounding streets. It was a "15-minute city" within the broader sprawling, car-centric Kuwait City.

In this proposal is legible a balance between consideration for local customs and the imposition of a Modernist tabula rasa approach. For example, the fragmentation of the volume of the buildings gives the projects a human scale and ties them visually back to the old pre-oil *firjan* style homes Kuwaitis lived in for generations. At the same time, the design ignores basic customary spaces of the Kuwaiti home like the *diwaniyya*. As mentioned earlier, this is a space present in almost all Kuwaiti suburban villas and certainly would need to be re-created in some way by the residents as a modification to the original design.

Eventually, Al-Sawaber was built but with little of Erickson's original design intent. The "A" shaped corridors were never formed and their microclimate never established. The pedestrian road network was modified, and only half of the original intended 900 units were built. A limited number of Kuwaitis moved in, though they were gradually replaced through the '80s and '90s by foreign nationals and bedouins, and the complex became stigmatized in local media as poor and dangerous. A local paper named Al-Watan Daily published an article in 2009 titled "Al-Sawaber Complex: Unfit for Living, Haven for Prostitution" enumerating the complex's various health and safety issues. On Erickson's website today, the project lives under the "unbuilt" category and its description reads, "Unfortunately, the government lost sight of its original objective when it put the project out to bid. As a result, only the unique outline was vaguely ours, and no Kuwaiti of means would live there."[21] It was demolished in 2019.

To this day, the project lives on under the rubric of failed social housing experiments of the mid-20th century. But it was never properly tested in the first place given administrative shortcomings in its construction. Nonetheless, its failure has solidified in Kuwaiti's minds to this day a mistrust of the apartment block. No significant state-led multifamily housing has been built in the country since. In this sense, multifamily housing is a model still yet to be tested in Kuwait.

[21] Arthur Erickson, *Sawaber Housing Development.*

V. Conclusion

Multifamily housing today still represents what it meant to Saba Shiber in the 1960s — a means through which to address the housing shortage and to integrate the nation's diverse groups socially. Looking back at Erickson and Candilis' proposals, any new proposal would also require some balance of sensitivity to local tradition and the implementation of new ways of living that acknowledge the transformation that Kuwait has undergone since the discovery of oil. One potentially vital change, for example, could be the introduction of co-op boards responsible for multifamily building management, as opposed to the state-led NHA. Such an agency is too big and bureaucratic to address the constant daily needs of residents.

At the single-family scale today, there remains a stark contrast between the architectural language of post-oil villas, twenty-first century mansions, and the last remaining *firjan* houses. Architectural historian Yousef Al-Haroun sees these three distinct architectural languages as a concrete reminder of socio-cultural and economic change throughout Kuwait City post-oil, as well as symbols of increasing mismanagement via the government.[22] Despite the fact that these houses uphold a legacy of socio-spatial segregation, many Kuwaiti residents acknowledge that — at the time of their creation — these new villas were more spacious, comfortable, and luxurious, and that they symbolized socioeconomic mobility for their households. Wistfulness for their old ways of life pre-oil came subsequently.[23] The downstream effects of land acquisition strategies, relocation schemes, and architectural divergences may be inextricable from Kuwait's social hierarchy today; however, Al-Haroun nonetheless advocates for designers to raise cultural awareness via the re-inclusion of traditional architectural vernacular, and the preservation of remaining historic buildings.[24] It may not be too late to change spatial perceptions of Kuwaitis today.

As far as how social change may arise within Kuwait, Shiber offers additional thoughts in his book *The Kuwait Urbanization: Documentation, Analysis, Critique.* Shiber rejects the country's reliance during his time (and to this day) on foreign experts visiting the country and offering design solutions, as they are too universalist and not contextual enough. At the same time, he is skeptical of putting too much emphasis on the country's past, writing "another bitter question: do we write about the past by being inspired by the bankruptcy of the present?" A reaching for past ways is natural in any society undergoing transformation. Kuwait throughout the '50s

[22] Al-Haroun, *Contemporary Attitudes*, xxi.
[23] Todd Reisz, *Kuwait Transformed.*
[24] Al-Haroun, 433.

and ‘60s experienced an unprecedented boom of Post-Oil material affluence. To this day, it is in the top 15% of world countries by GDP per capita.[25] But it does not have a thriving knowledge economy, and this leads to the state’s continued reliance on foreign expertise in fields like architecture. This could also relate to the society’s intransigence towards foreign nationals, bedouins, and women’s rights. Historically, in the U.S. at least, universities have been sites where all of these disenfranchised groups have advanced their civil liberties. Shiber, educated at M.I.T. himself, seems to lament the state of education in Kuwait and continually alludes to the need for some native expert to guide the country on issues of urbanism (he, himself, was Palestinian).

Architecture signifies and reinforces societal stereotypes, whether in the grand portico of a suburban villa or in the crumbling floor tile of an apartment building’s lobby. Architects like Georges Candilis and Arthur Erickson saw the field’s power to change people’s circumstances. “Modernism released us from the constraints of everything that had gone before with a euphoric sense of freedom,” Erickson said in 2000.[26] But it takes a will from those in power to implement it, and certain pre-existing societal structures in Kuwait led to architecture’s weaponization in service of separating different population groups. Since the 1951 MSM masterplan, the social hierarchy of Kuwaiti society has been locked in along with its street grid. Now, it seems only a rupture in the grid itself can spur new possibilities for cultural exchange across “distinct” groups who are all, in fact, Kuwaiti.

[25] Central Intelligence Agency. *Country Comparisons - Real GDP per capita*
[26] Al-Ragam, 247

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ERIC JULIAN HAGERMAN

MASTER OF ARCHITECTURE, COLUMBIA U. GSAPP
BACHELOR OF SCIENCE IN CIVIL ENGINEERING, HOWARD U.