



2024

Portfolio

selected architectural works

Columbia , GSAPP

Pratt Institute , SOA

Participated Professional Projects

+

jingwei
WU

Contact Information

Address / 350w 42nd St, 10036

Phone / 347-282-0466

Email / jingwei1123@hotmail.com
jw4471@columbia.edu

SKILL

Skills

3D digital modeling
3D print Operating skills
physical model making ability
2D drawing and Rendering
VR/AR scene creation
architect practical experience

Software

Adobe Set
Photoshop/ Illusrator/Indesign
3D Modeling tools
Rhino/Maya/Blender
Render
V-ray/Maxwell
BIM(building information modeling)
Revit/Auto Cad
Game Engine
Unreal/Unity
Programing
Python/Grasshopper w Rhino

Language

English

Chinese

EXPERIENCE

- **2021-2023**
Designer
Woods Bagot
interior and architectural designer.
- **2019-2021**
Junior Architect
Wid Chapman Architects
Projects are mainly located in New York City area, including commercial and residential projects.
- **2018**
Intern Architect
Kohn Pedersen Fox Associates
Worked for 4 different projects in various stages. Made VR demonstration test demo for clients, and material booklet for construction document set.
- **2018**
Research Assistant
Pratt Institute/ Japan Travel Studio
- **2017-2018**
Research Assistant
Pratt Institute/ Center of Experimental Strucutre
- **2016-2017**
Research Assistant / Teacher Assistant
Pratt Institute / Gaming Architecture

EDUCATION

- **2023-2024**
Advanced Architecture Design
GSAPP , Columbia University
- **2021**
MIT x PRO (certificated program)
Virtual Reality and Augmented Reality
- **2014-2019**
Pratt Institute/ School of Architecture
Bachelor of Architecture

01 Academic Projects 1

EcoHub
Grown from Within
Airea III
Rikers Marsh
Kensington Stable

P 4

02 Professional Works

Dhamaka
World Spa
Emmons Hotel
Interior Snapshots
Manhattan Residence
Participated Architecture Projects

P 60

END

P 68



EcoHub

Studio Kingsbridge Armory Refurbishment Design
Fall 2023

Critic: Lawurie Hawkinson / Academic Partner: JJ Zhijie Jin

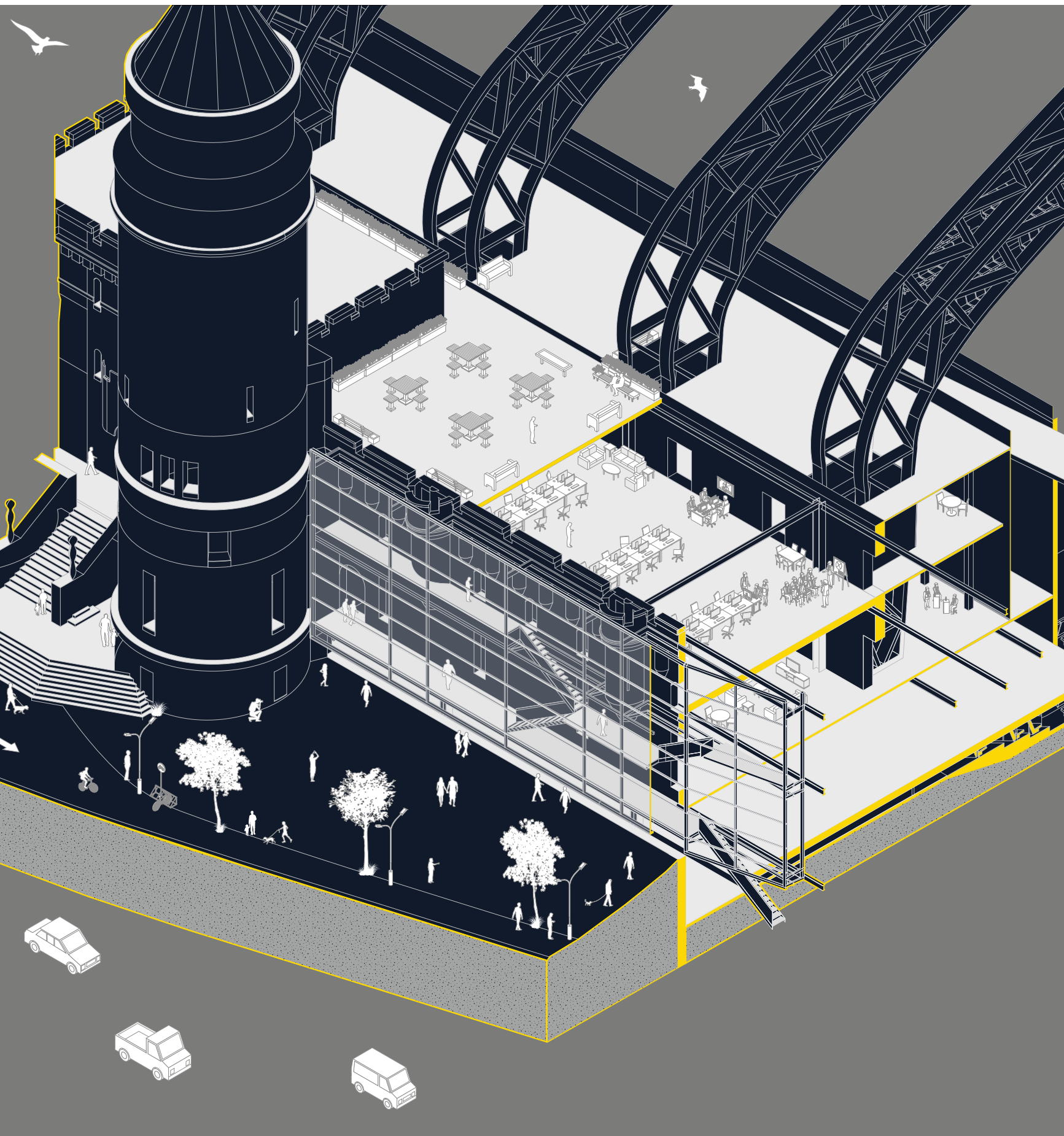
What if the Armory, currently a monolithic shell blockading communities around it, became a social emulsifier, drawing in diverse communities through a mission of both service and economic growth? In our proposal, the headhouse serves as a career and business incubator, becoming an economic engine that weaves its reach through the armory and extends to the greater neighborhood around it. Spaces within the incubator partner with other programs in and outside the armory, becoming a symbiotic catalyst for community members to not just find jobs, but further their careers.

◀ Central Market Render

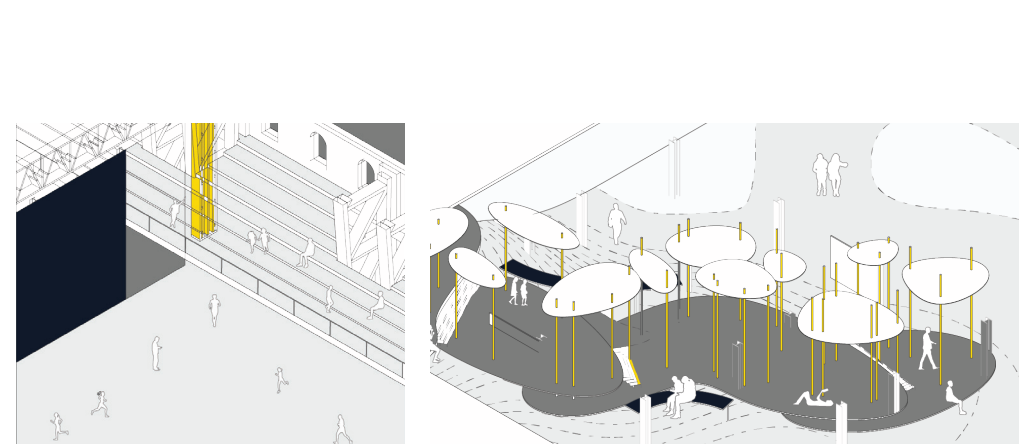
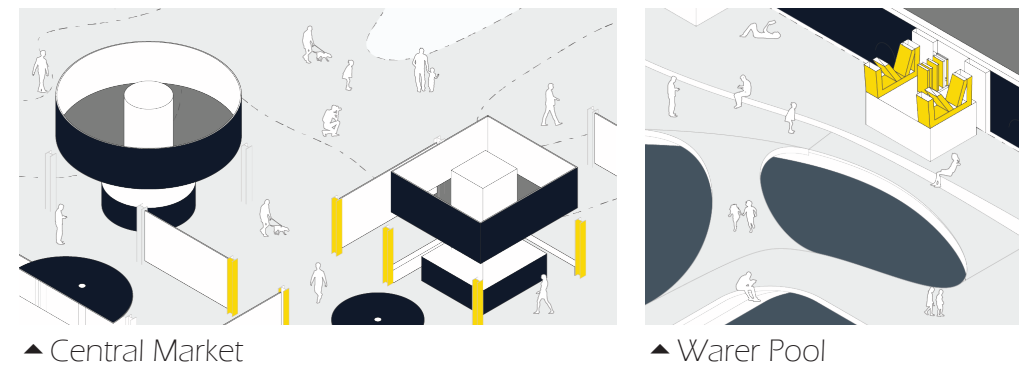
▼ "Our Armory" Yellow Sign

▼ Street Vendors



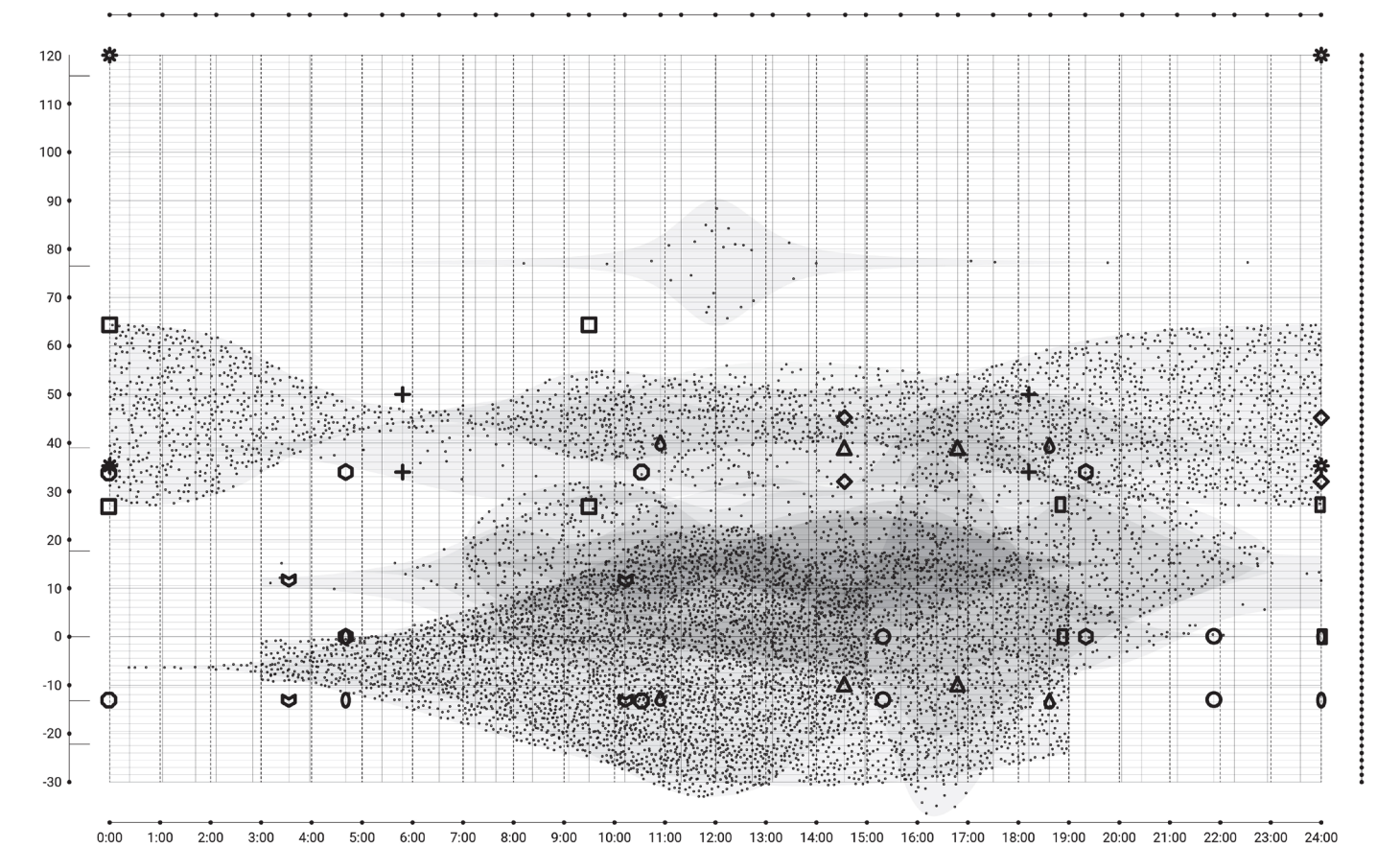


Axon-Sectional

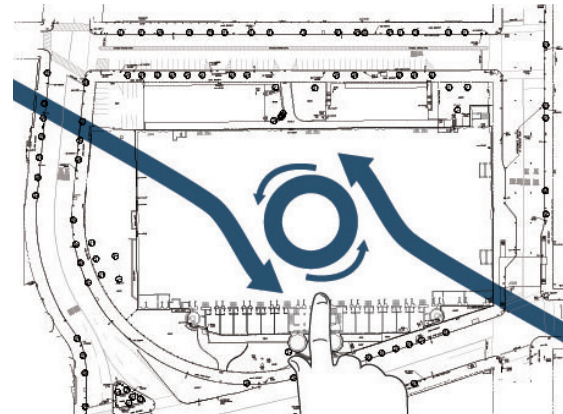


▲ Central Market
▲ Water Pool
▲ Gym Court
▲ Atrium Resting
◀ Sectional Axonometric Diagram
▼ Program Schedule Heat Diagram

The latter serves as a hub of commercial activity, hosting an array of shops and restaurants, and is notably marked by the presence of an existing subway entrance. This vibrant area is further defined by the front brick head house, which stands as a focal point of interaction and commerce. The design proposes an innovative integration of street vendors into the market area by opening up the existing fences, thereby creating a more inclusive and dynamic commercial space.



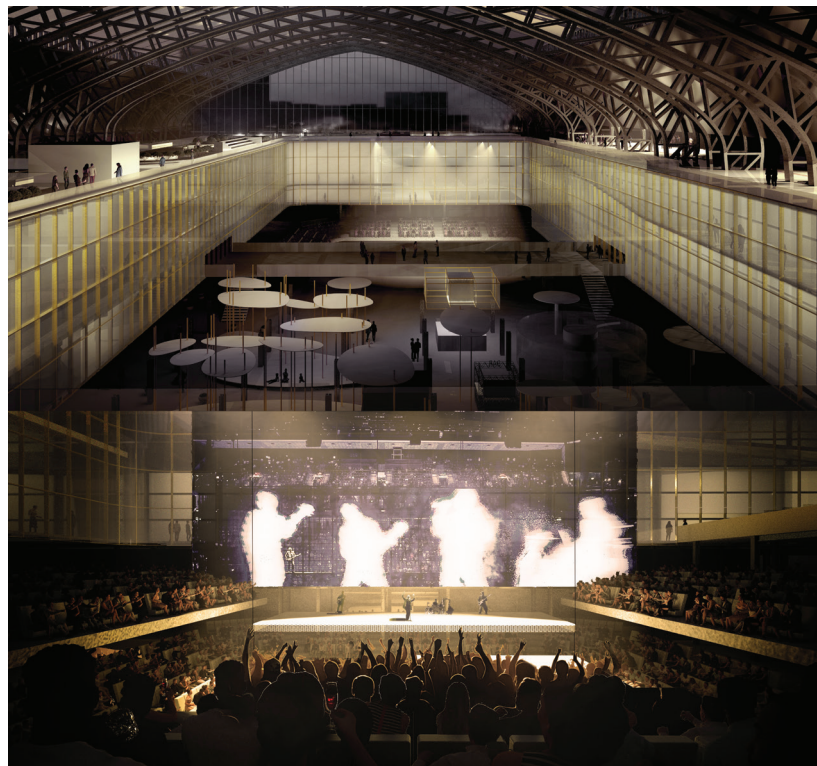
The architectural design is strategically oriented to prioritize two central spaces: the Market and the Open Theater. These pivotal areas are seamlessly connected through a ramped circulation system, which facilitates the movement of visitors across various levels, enhancing the overall navigational experience within the structure. Notably, the design exhibits a deliberate contrast in the ambiance of different sections; the West-North side is characterized by its tranquility and quietude, starkly differing from the bustling nature of the South-East end.



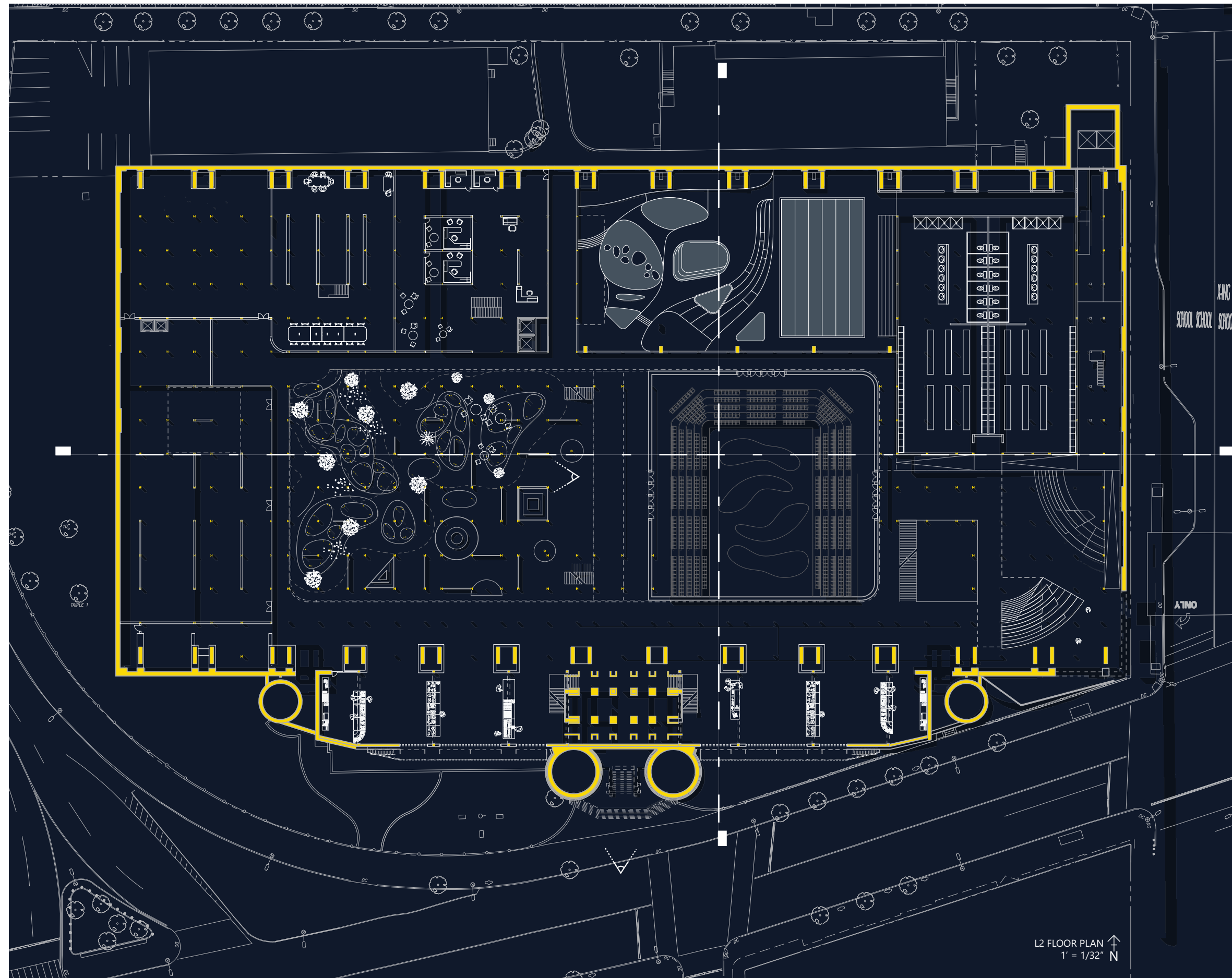
▲ Street Scale

▲ Gesture Diagram

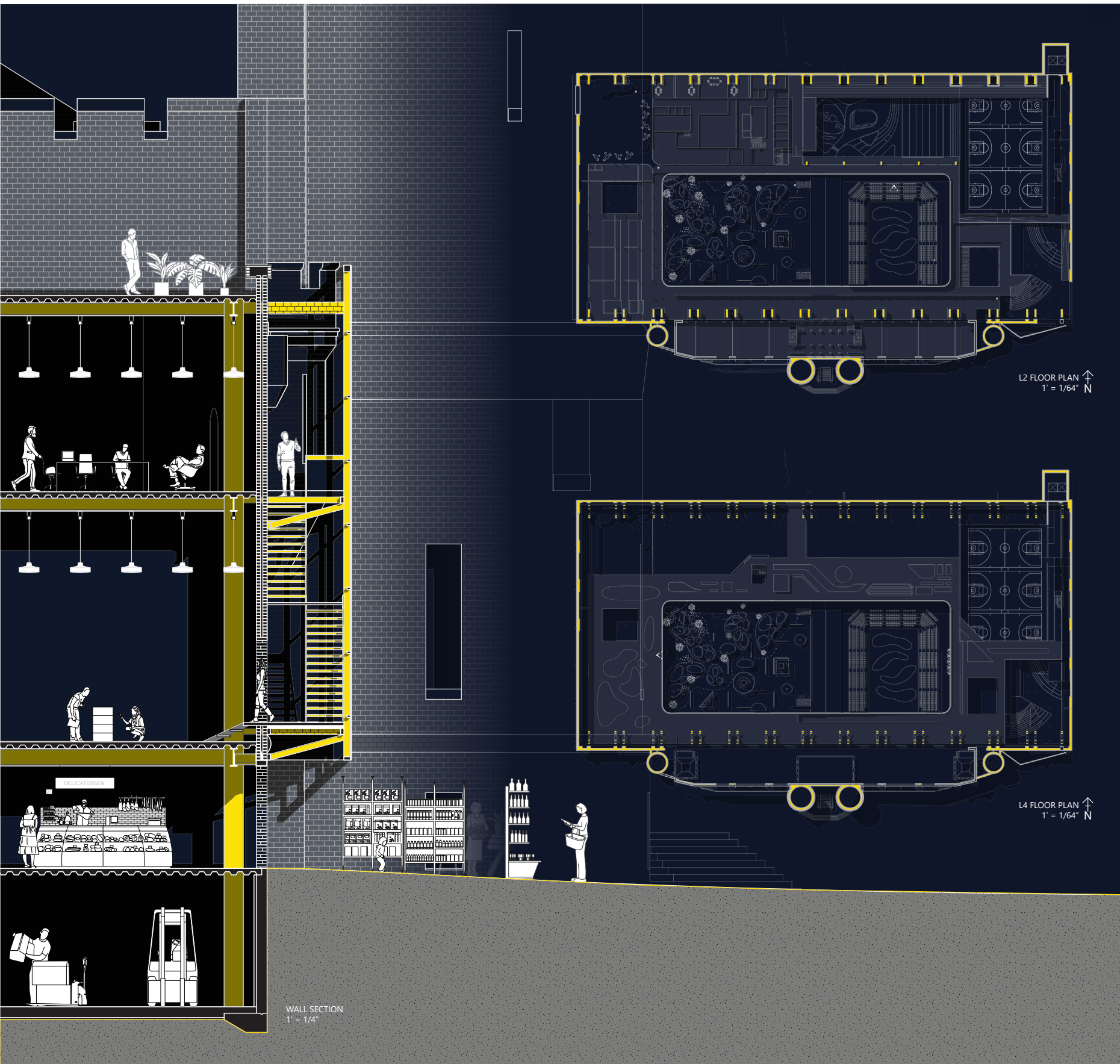
▼ Interior Renders



▼ B1 Level Floor Plan

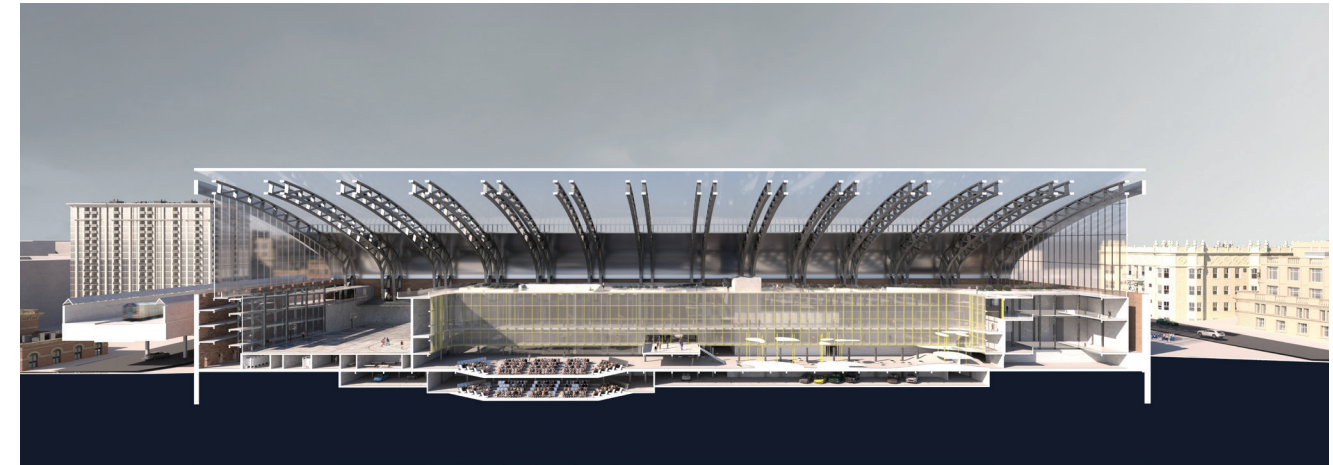


L2 FLOOR PLAN
1' = 1/32" N

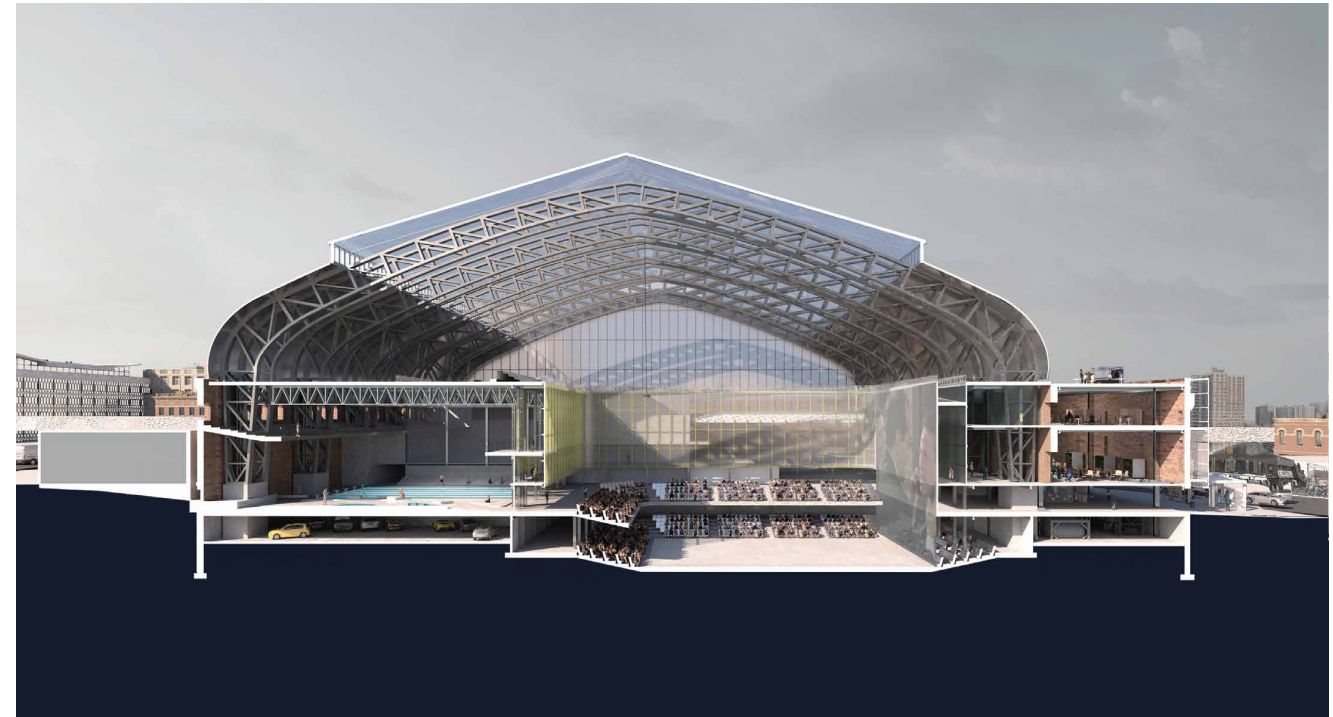


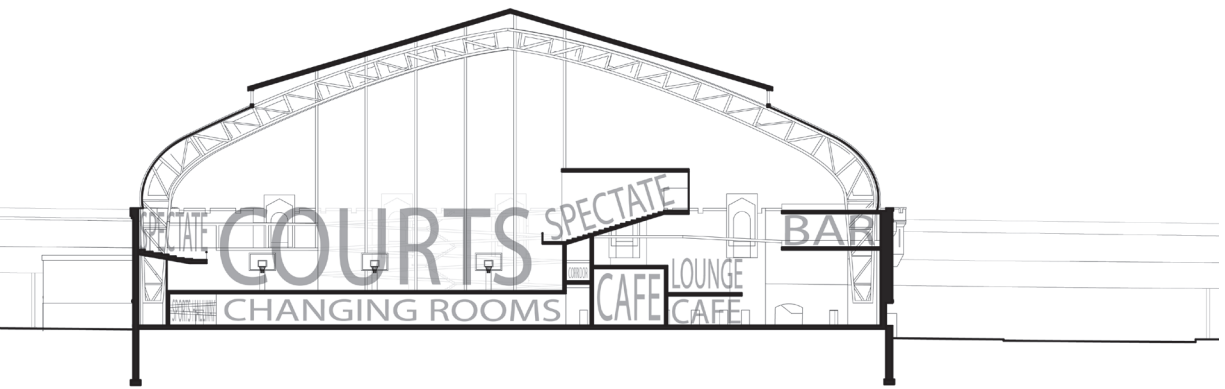
◀ Headhouse Wall Section / Plans

Through the introduction of a secondary circulation layer, crafted from semi-transparent materials, additional spatial volume has been ingeniously incorporated within the headhouse's interior. Concurrently, this design intervention has facilitated a comprehensive refurbishment of the facade, particularly addressing the previously bulky and visually dominant brick front. This strategic incorporation of light-permeable elements not only enhances the spatial dynamics within but also significantly transforms the external aesthetic, imbuing it with a sense of modernity and openness.

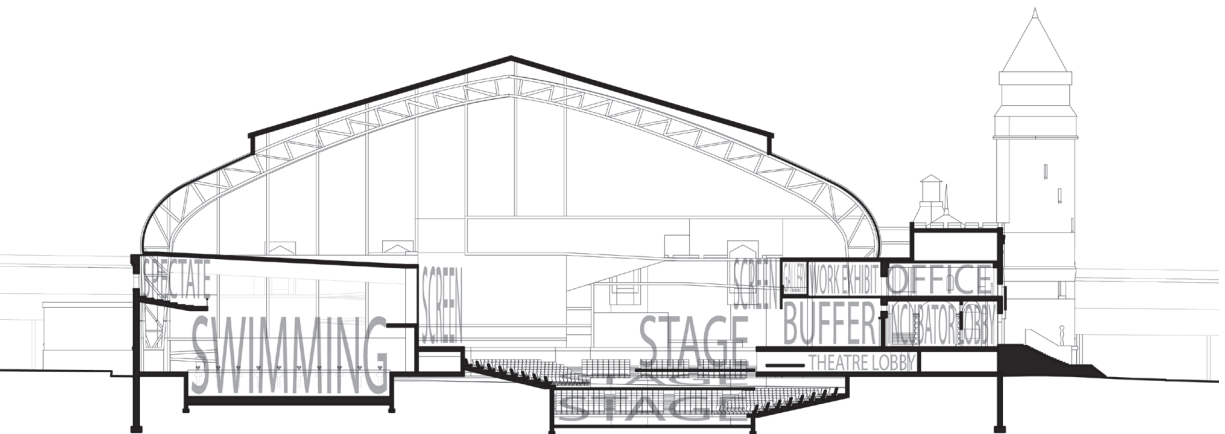


▲ West-East Section
▼ North-South Section

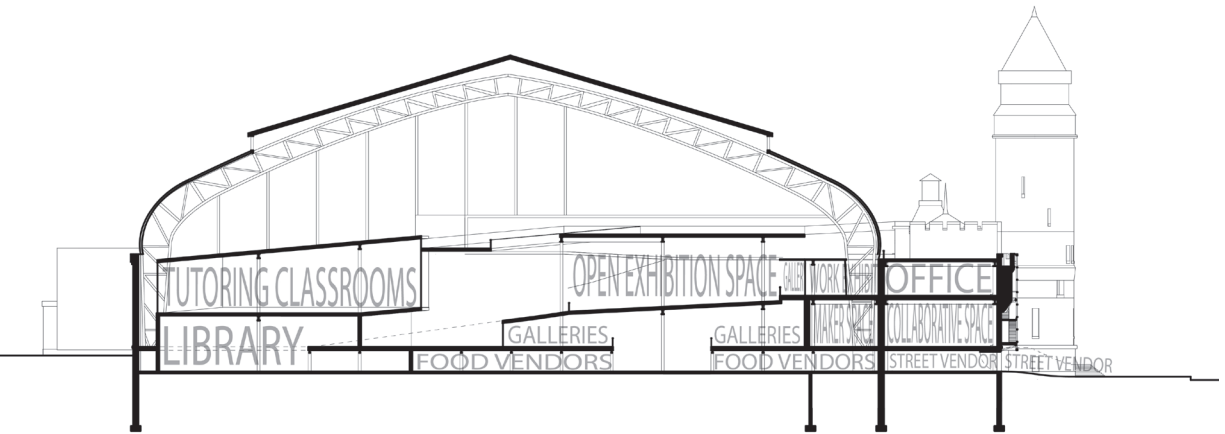




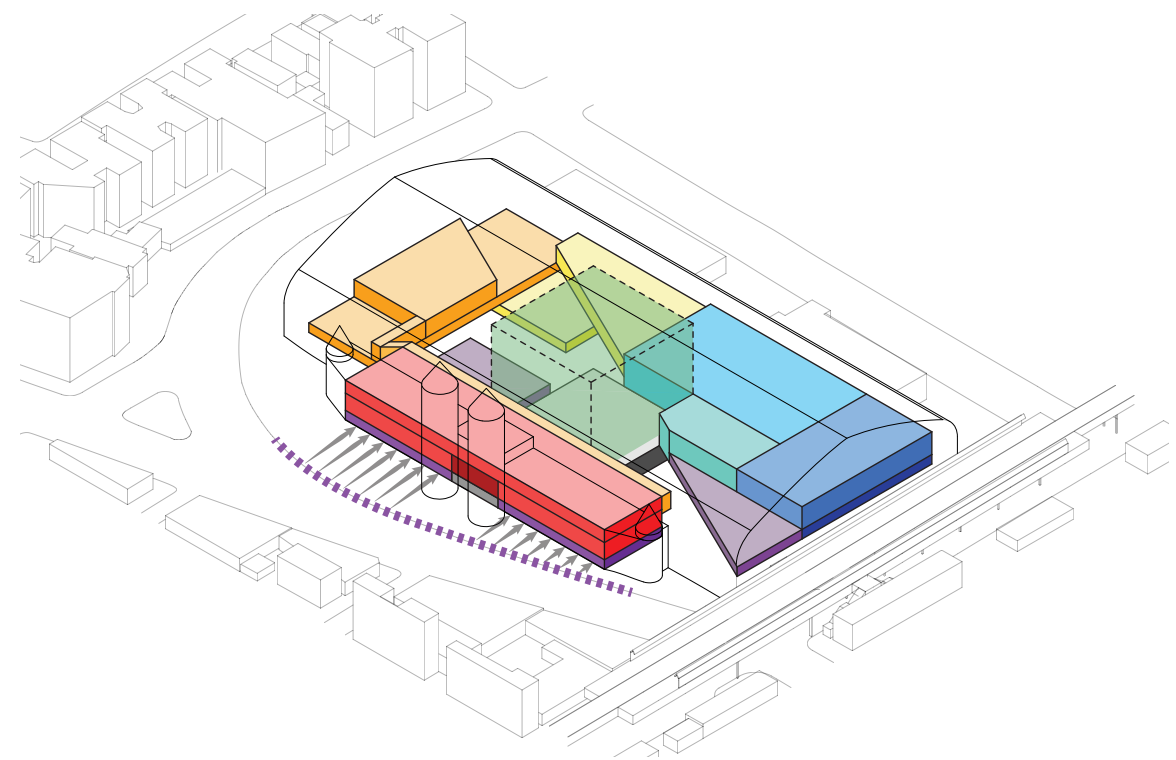
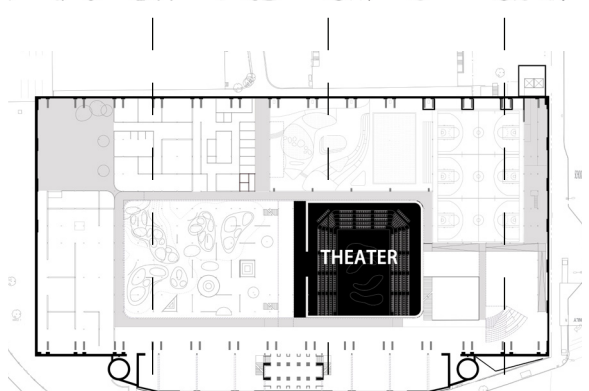
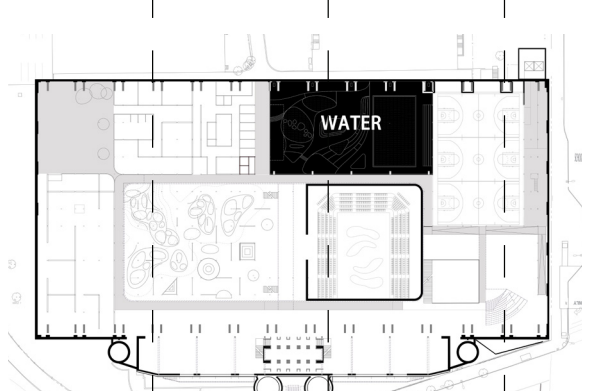
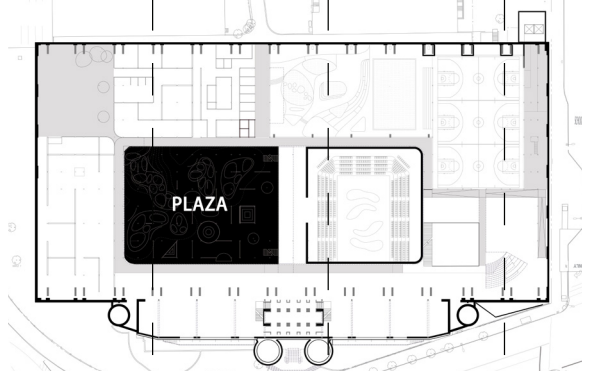
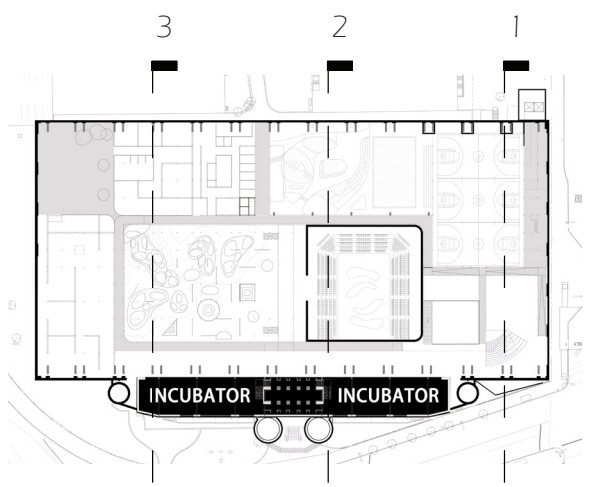
▲ North-South Section 1



▲ North-South Section 2



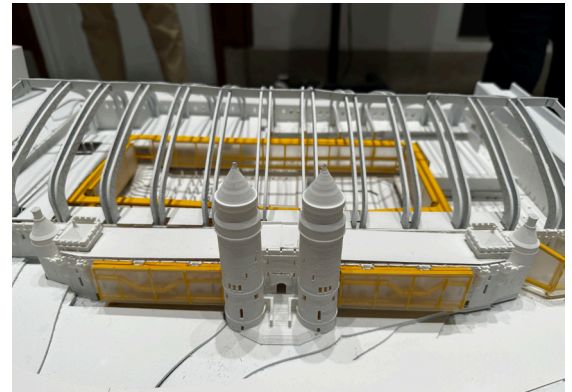
▲ North-South Section 3



▲ Program Blocking Diagram

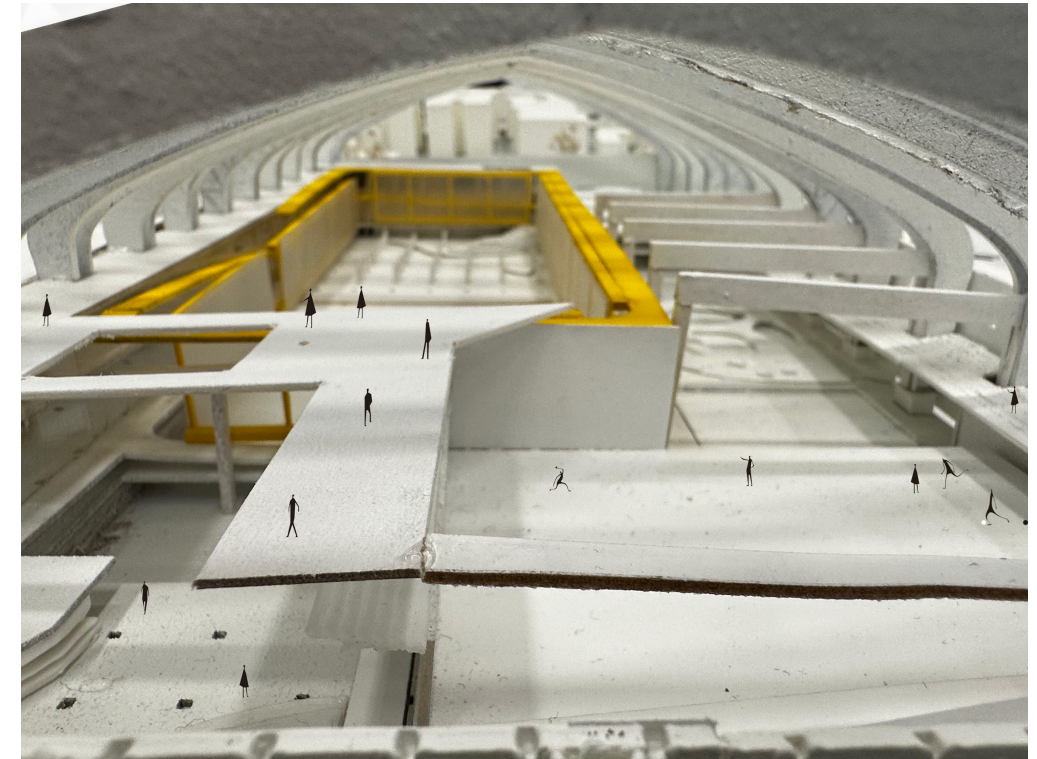
▼ Presenting the design with Congressman, Adriano Espaillat, Dean of GSAPP, Andrés Jaque, President of Columbia, Minouche Shafik

▼ Model on GSAPP Exhibition "Extreme Scale"

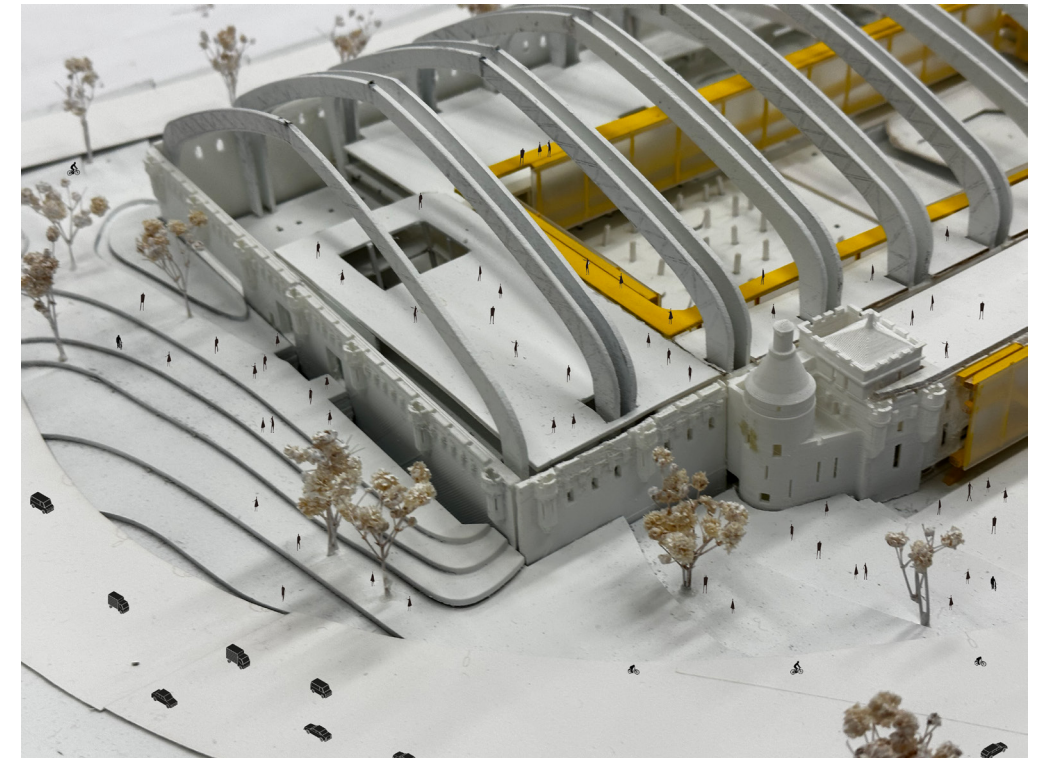




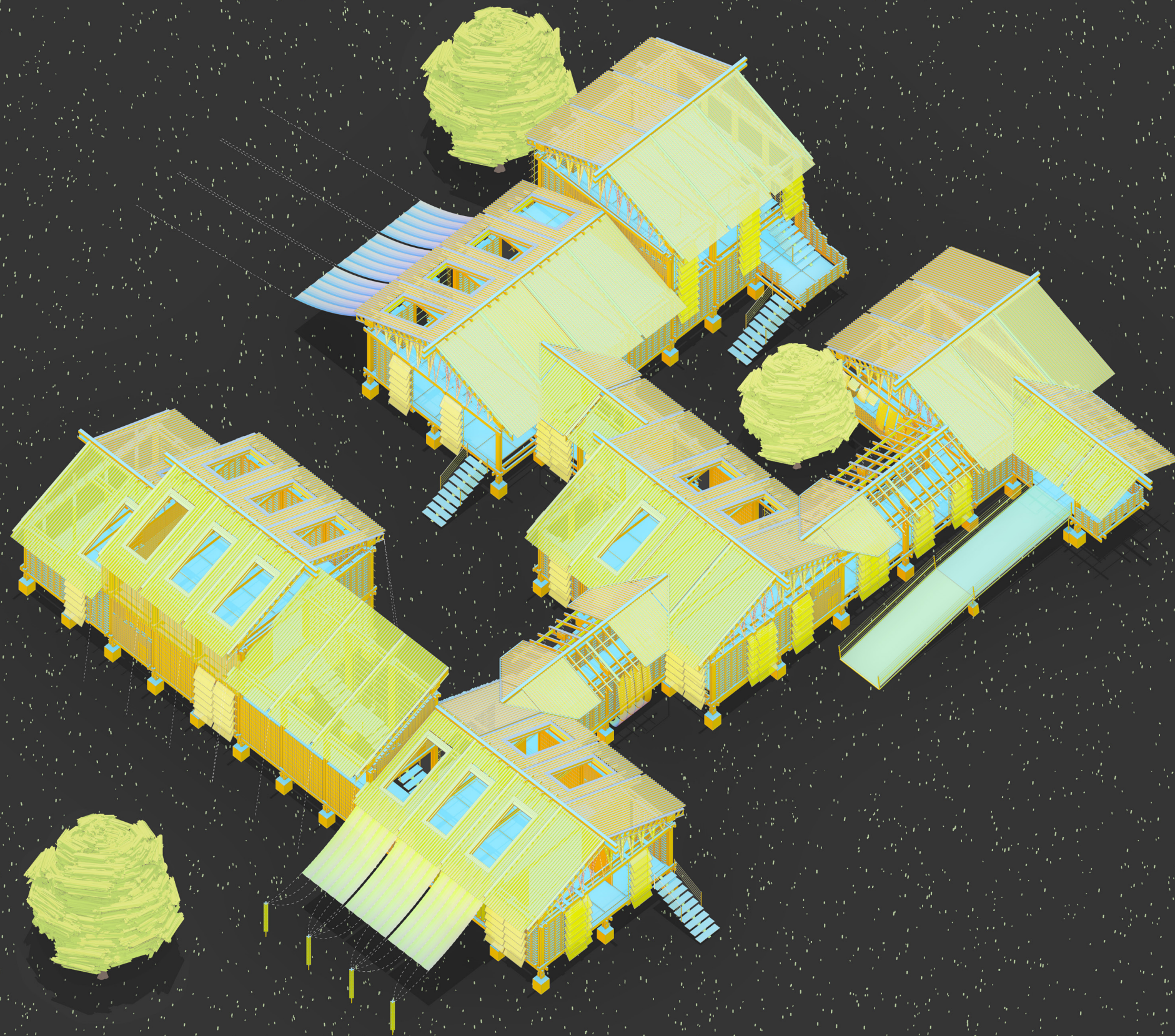
▲ Model - South View



▲ Model - Inner East View



▲ Model - South View



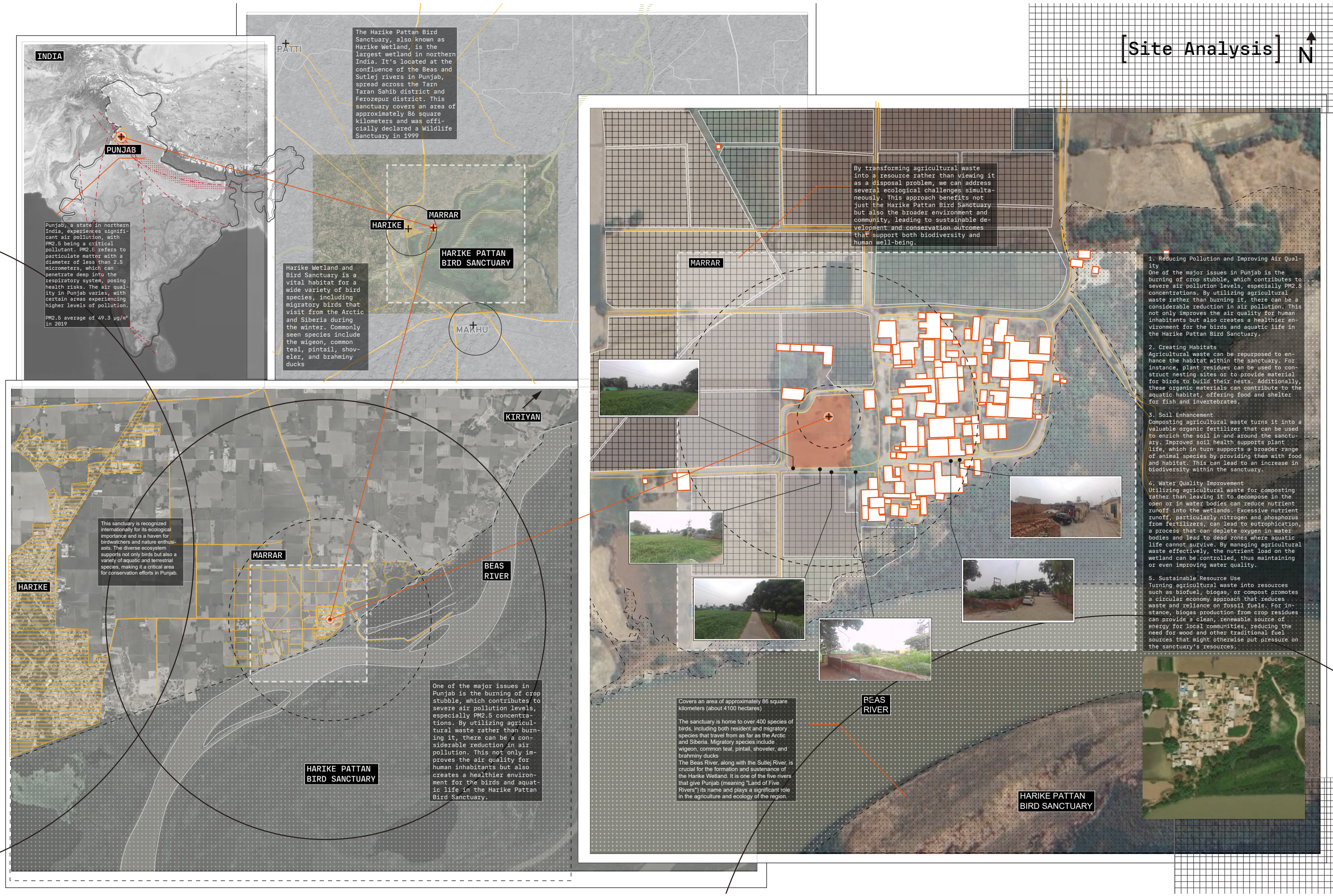
Grown from Within

OPEN studio Design
Spring 2024

Critic: David Benjamin
Academic Partner: Taha Erdem Özturk

Our project is located in a small agricultural community in India's Punjab region, a state that's well-known as the agricultural hub of the country - especially in terms of rice and wheat production. "Growing from Within" directly addresses the critical issues of mass-production and agricultural waste that's created as a result of this, which is the single most reason behind heavy air pollution in many cities due to burning of the stubs and other leftover by-products. Our project harnesses novel AI methods for analysis, and generative techniques for discovery of new material compositions and "recipes" that reutilizes waste into various construction and production related materials; from bricks to textiles, to prevent heavy carbon emissions and air pollution, as well as empower these communities with more diverse forms of societal contribution and production.

◀ Axonometric Illustration



INDIA

PUNJAB

Punjab, a state in northern India, experiences significant air pollution, with PM2.5 being a critical pollutant. PM2.5 refers to particulate matter with a diameter of less than 2.5 micrometers, which can penetrate deep into the respiratory system, posing health risks. The air quality in Punjab varies, with certain areas experiencing higher levels of pollution. PM2.5 average of 49.3 µg/m³ in 2019.

The Harike Pattan Bird Sanctuary, also known as Harike Wetland, is the largest wetland in northern India. It's located at the confluence of the Beas and Sutlej rivers in Punjab, spread across the Tarn Taran Sahib district and Ferozepur district. This sanctuary covers an area of approximately 86 square kilometers and was officially declared a Wildlife Sanctuary in 1999.

Harike Wetland and Bird Sanctuary is a vital habitat for a wide variety of bird species, including migratory birds that visit from the Arctic and Siberia during the winter. Commonly seen species include the wigeon, common teal, pintail, shoveler, and brahminy ducks.

HARIKE

HARIKE PATTAN BIRD SANCTUARY

MARRAR

MARRAR

MARRAR

MARRAR

MARRAR

MARRAR

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HARIKE

This sanctuary is recognized internationally for its ecological importance and is a haven for birdwatchers and nature enthusiasts. The diverse ecosystem supports not only birds but also a variety of aquatic and terrestrial species, making it a critical area for conservation efforts in Punjab.

MARRAR

BEAS RIVER

HARIKE PATTAN BIRD SANCTUARY

One of the major issues in Punjab is the burning of crop stubble, which contributes to severe air pollution levels, especially PM2.5 concentrations. By utilizing agricultural waste rather than burning it, there can be a considerable reduction in air pollution. This not only improves the air quality for human inhabitants but also creates a healthier environment for the birds and aquatic life in the Harike Pattan Bird Sanctuary.

Covers an area of approximately 86 square kilometers (about 4100 hectares)

The sanctuary is home to over 400 species of birds, including both resident and migratory species that travel from as far as the Arctic and Siberia. Migratory species include wigeon, common teal, pintail, shoveler, and brahminy ducks. The Beas River, along with the Sutlej River, is crucial for the formation and sustenance of the Harike Wetland. It is one of the five rivers that give Punjab (meaning "Land of Five Rivers") its name and plays a significant role in the agriculture and ecology of the region.

By transforming agricultural waste into a resource rather than viewing it as a disposal problem, we can address several ecological challenges simultaneously. This approach benefits not just the Harike Pattan Bird Sanctuary but also the broader environment and community, leading to sustainable development and conservation outcomes that support both biodiversity and human well-being.

- 1. Reducing Pollution and Improving Air Quality**
One of the major issues in Punjab is the burning of crop stubble, which contributes to severe air pollution levels, especially PM2.5 concentrations. By utilizing agricultural waste rather than burning it, there can be a considerable reduction in air pollution. This not only improves the air quality for human inhabitants but also creates a healthier environment for the birds and aquatic life in the Harike Pattan Bird Sanctuary.
- 2. Creating Habitats**
Agricultural waste can be repurposed to enhance the habitat within the sanctuary. For instance, plant residues can be used to construct nesting sites or to provide material for birds to build their nests. Additionally, these organic materials can contribute to the aquatic habitat, offering food and shelter for fish and invertebrates.
- 3. Soil Enhancement**
Composting agricultural waste turns it into a valuable organic fertilizer that can be used to enrich the soil in and around the sanctuary. Improved soil health supports plant life, which in turn supports a broader range of animal species by providing them with food and habitat. This can lead to an increase in biodiversity within the sanctuary.
- 4. Water Quality Improvement**
Utilizing agricultural waste for composting rather than leaving it to decompose in the open or in water bodies can reduce nutrient runoff into the wetlands. Excessive nutrient runoff, particularly nitrogen and phosphorus from fertilizers, can lead to eutrophication, a process that can deplete oxygen in water bodies and lead to dead zones where aquatic life cannot survive. By managing agricultural waste effectively, the nutrient load on the wetland can be controlled, thus maintaining or even improving water quality.
- 5. Sustainable Resource Use**
Turning agricultural waste into resources such as biofuel, biogas, or compost promotes a circular economy approach that reduces waste and reliance on fossil fuels. For instance, biogas production from crop residues can provide a clean, renewable source of energy for local communities, reducing the need for wood and other traditional fuel sources that might otherwise put pressure on the sanctuary's resources.

BEAS RIVER

HARIKE PATTAN BIRD SANCTUARY

Brick Mixture Experiments

mixture manual

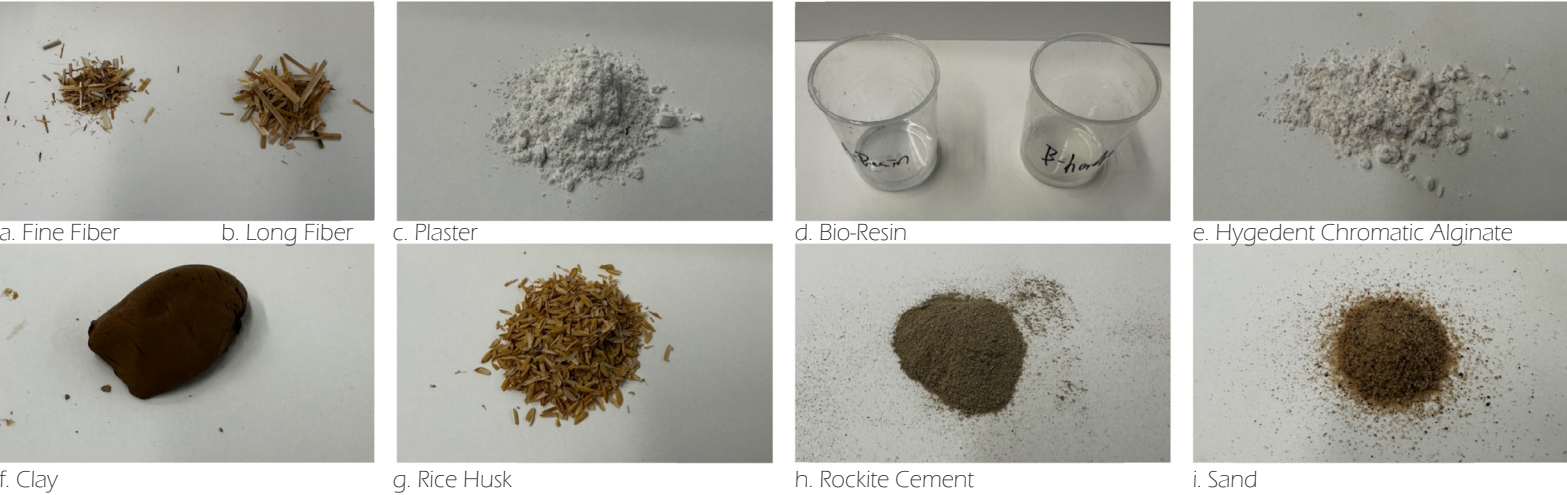
▼ Ingridents Dry Mix



▼ Brick Mold



▼ Ingridents



▼ Brick Mix 1:8



▼ Brick Mix 1:1



- 1. Plaster + Rice Husk + Straw + Rockite Cement
- 2. Clay + Alginite + Rice Husk
- 3. Quickrete + Plaster
- 4. Bio-Resin + Rice Husk + Straw
- 5. Plaster + Husk + Straw + Rockite Cement
- 6. Resin + Rice Husk + Straw
- 7. Clay + Rice Husk + Straw
- 8. Plaster + Rice Husk + Sand

A VISUAL MANUAL OF STARTING YOUR VERY OWN SELF-GROWING TOWN

16TH EDITION

LOCATION:
The Indo-Gangetic Plain
MAIN AGRICULTURAL
BINDING AGENT:
Rice
Wheat



STARTING WITH THE BAREBONES

To order your "self-building town starter" kit, you need to meet basic criteria, such as an incorporated community that has agricultural land and product that produces significant byproduct or waste after harvest. If this is ensured, contact us, and we will send you your starter kit - which includes the starter housing units and production hall, as well as compressors (both manual and mechanical) to you.

To make sure you receive your delivery, please confirm your geolocation information with us, and we will ship your delivery via a solar powered vintage looking cargo aircraft as soon as we can. Included with your shipment is this manual you are holding right now - congratulations, you've made it this far.

Proceed to Step 1 to continue.

EITHER USE THE MATERIALS
TO EXPAND AND DEVELOP
YOUR SETTLEMENTS,
OR SELL AND TRADE
THEM FOR PROFIT!

A
RECEIVE THE
BUILDER'S STARTER KIT

PLANNED HOUSING UNITS
TO BE BUILT WITH YOUR
BUILDING BLOCKS!

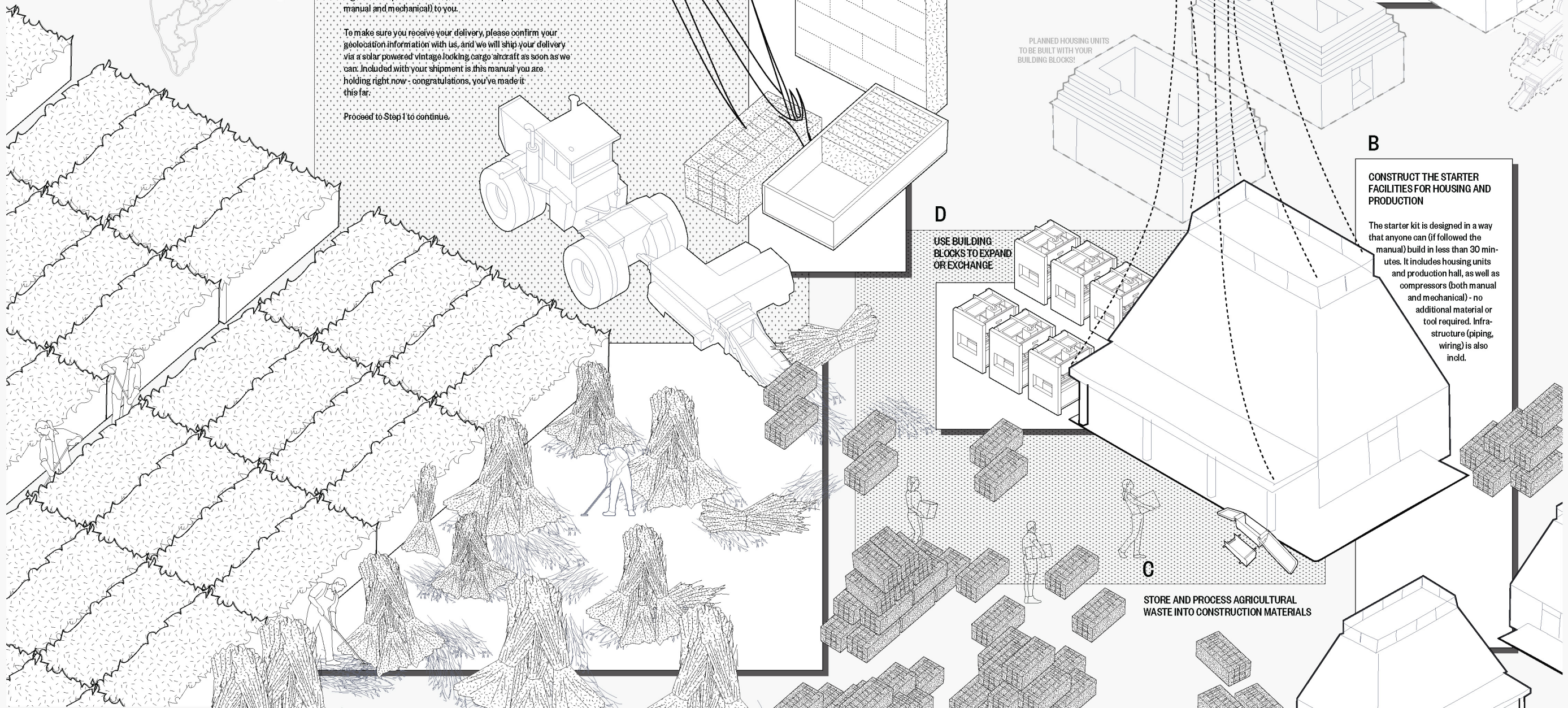
B
CONSTRUCT THE STARTER
FACILITIES FOR HOUSING AND
PRODUCTION

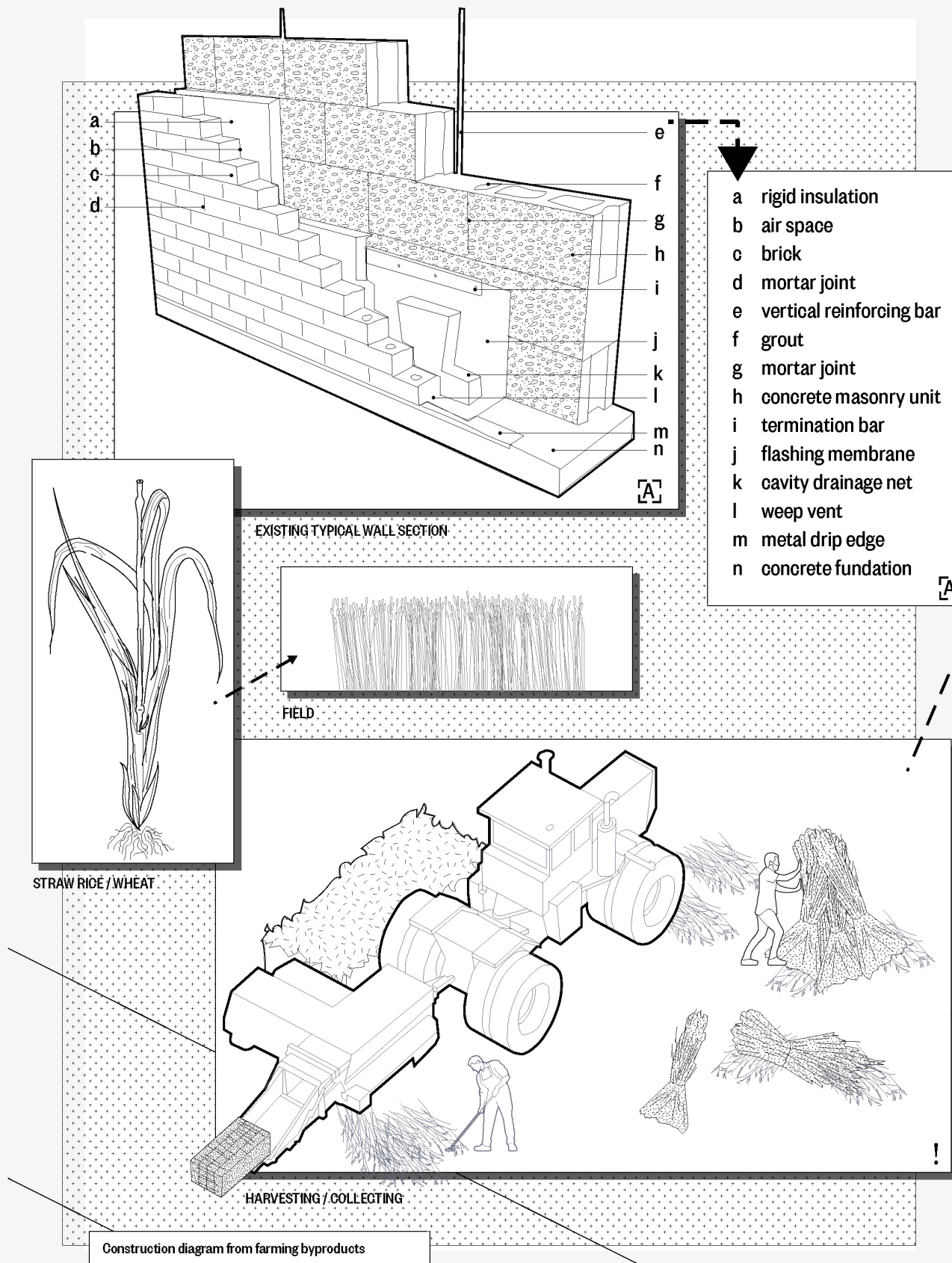
The starter kit is designed in a way that anyone can (if followed the manual) build in less than 30 minutes. It includes housing units and production hall, as well as compressors (both manual and mechanical) - no additional material or tool required. Infrastructure (piping, wiring) is also indd.

D
USE BUILDING
BLOCKS TO EXPAND
OR EXCHANGE

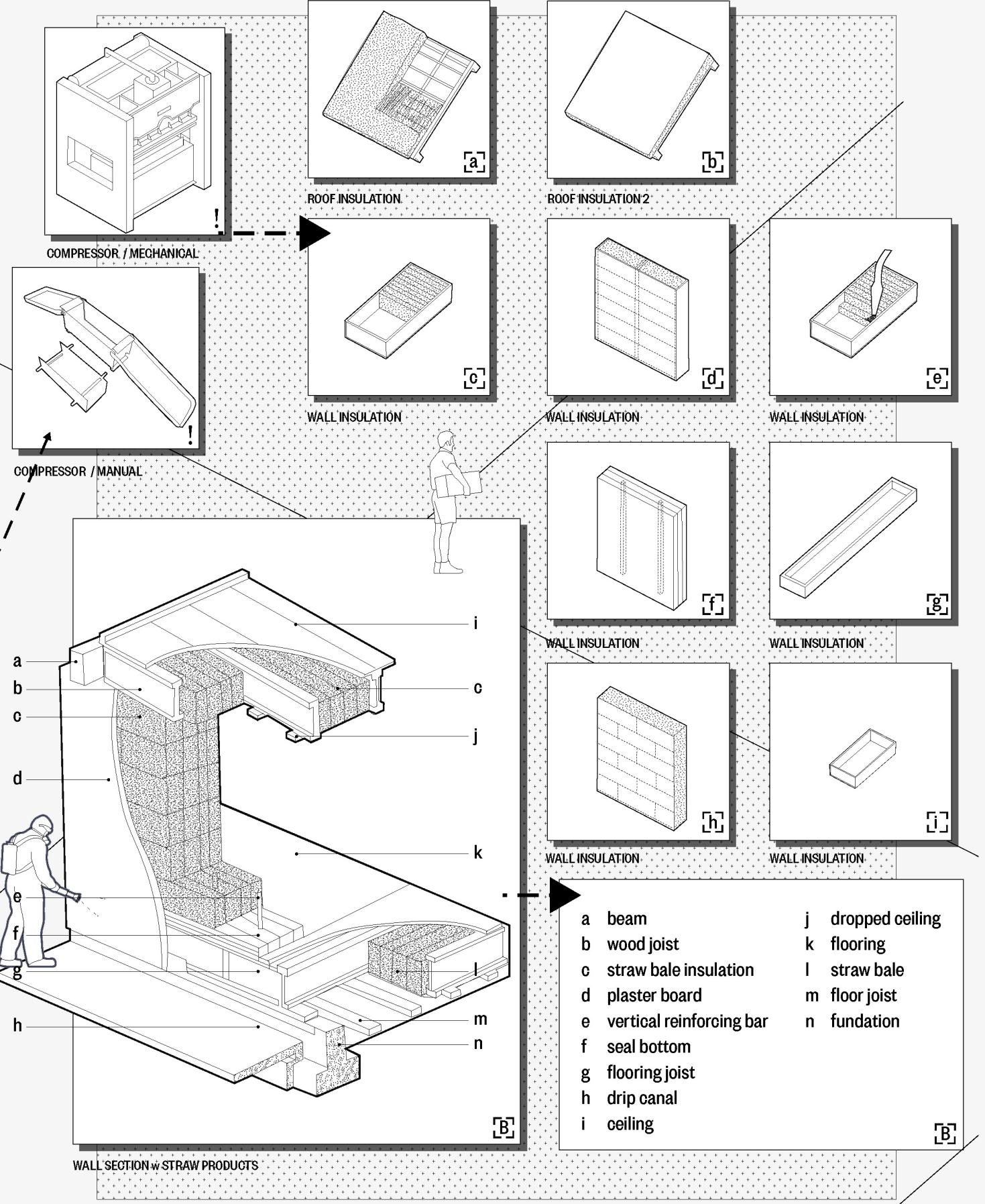
C

STORE AND PROCESS AGRICULTURAL
WASTE INTO CONSTRUCTION MATERIALS





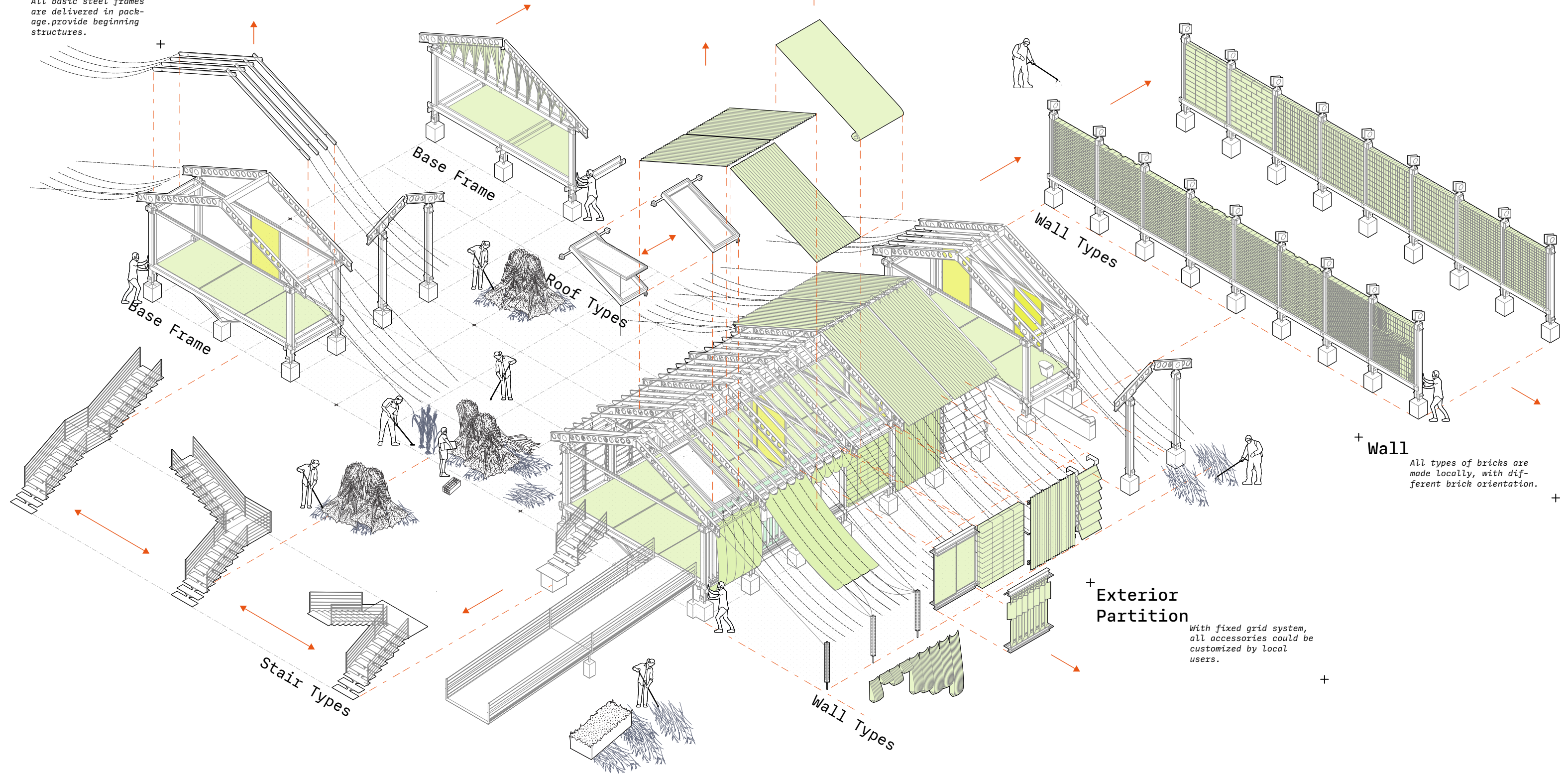
- a rigid insulation
- b air space
- c brick
- d mortar joint
- e vertical reinforcing bar
- f grout
- g mortar joint
- h concrete masonry unit
- i termination bar
- j flashing membrane
- k cavity drainage net
- l weep vent
- m metal drip edge
- n concrete foundation



+ Frame

All basic steel frames are delivered in package. provide beginning structures.

Basic Unit Diagram +

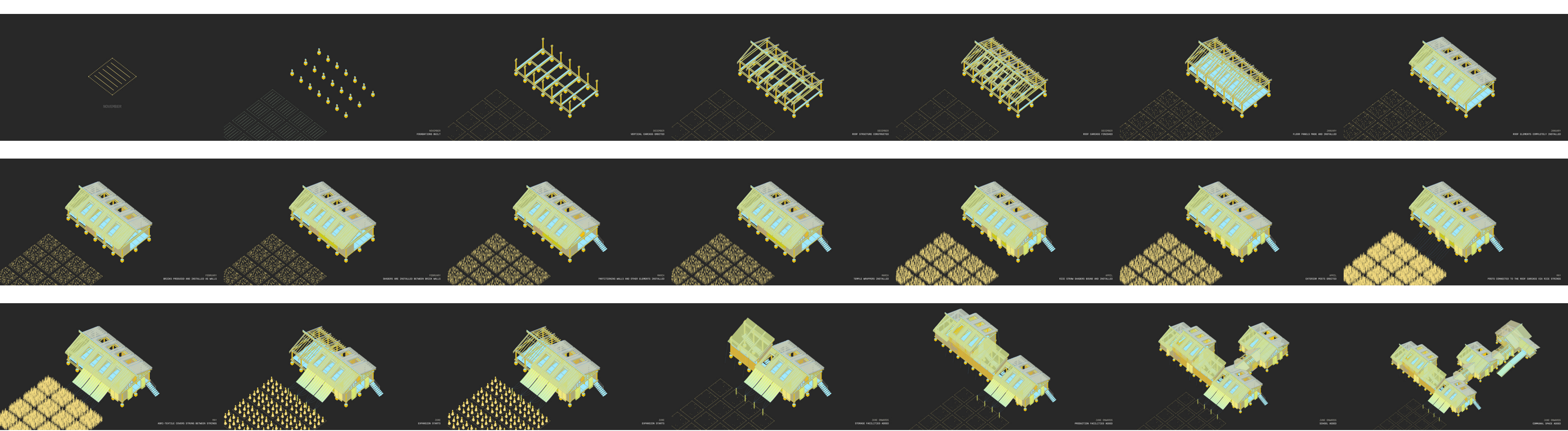


+ Wall

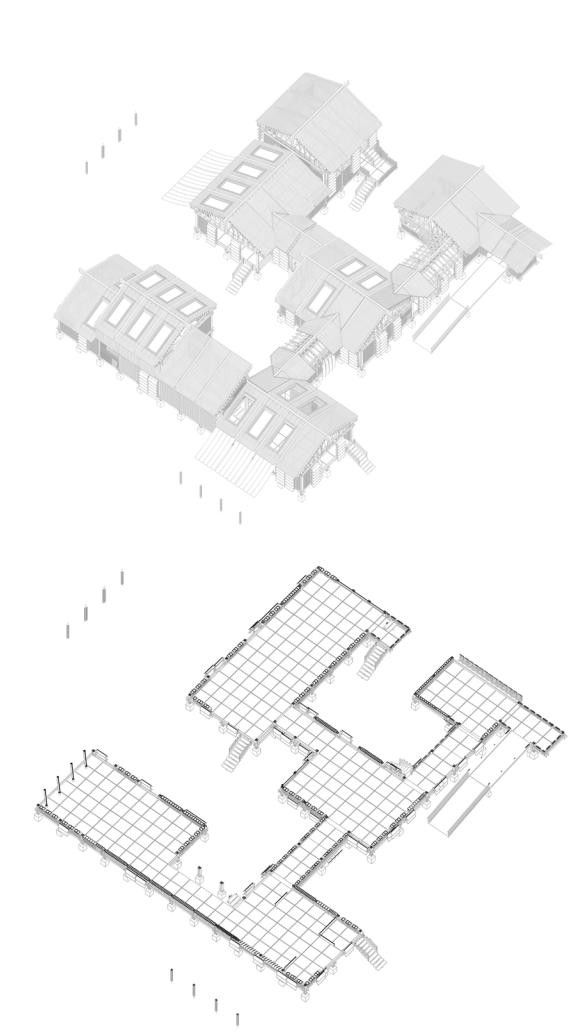
All types of bricks are made locally, with different brick orientation.

+ Exterior Partition

With fixed grid system, all accessories could be customized by local users.

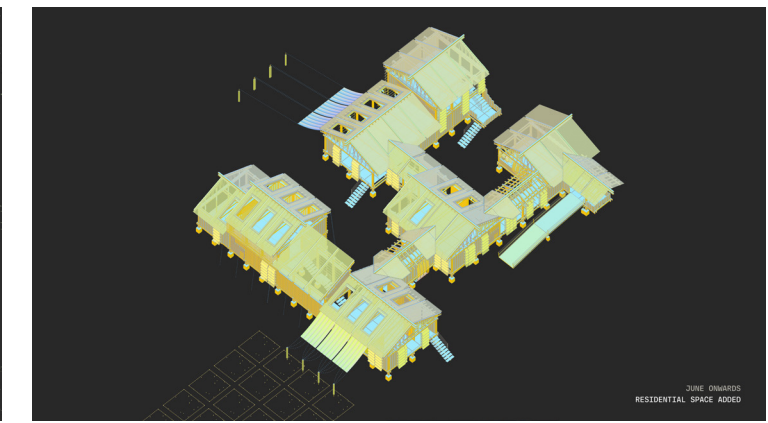
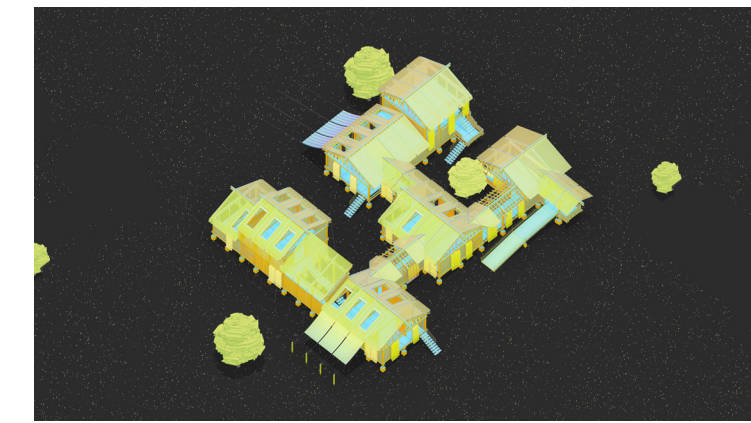
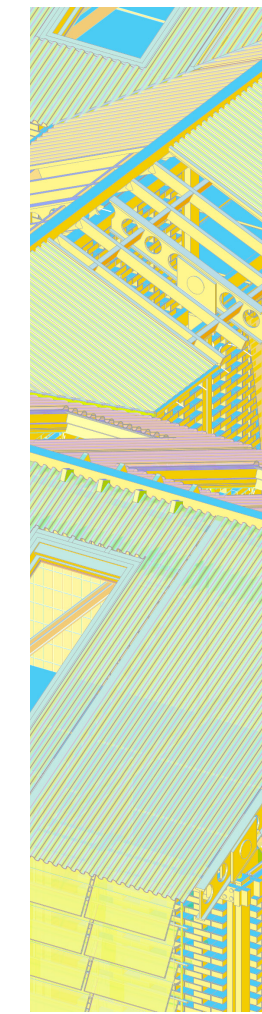
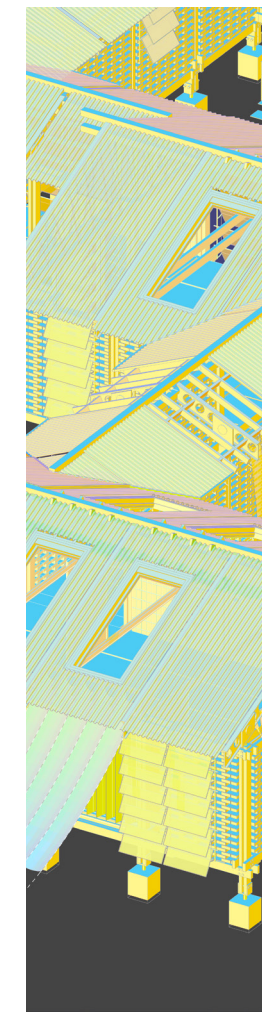
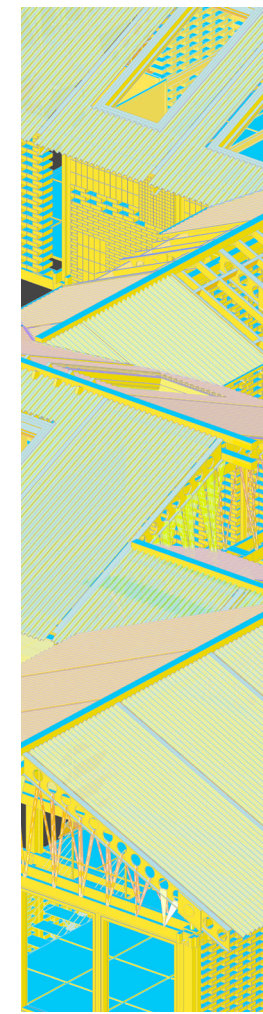


▲ Sequential Development Roll



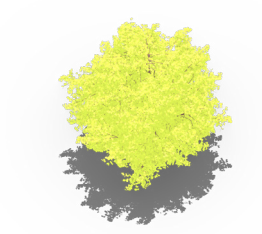
▲ Axonometric Line Drawing

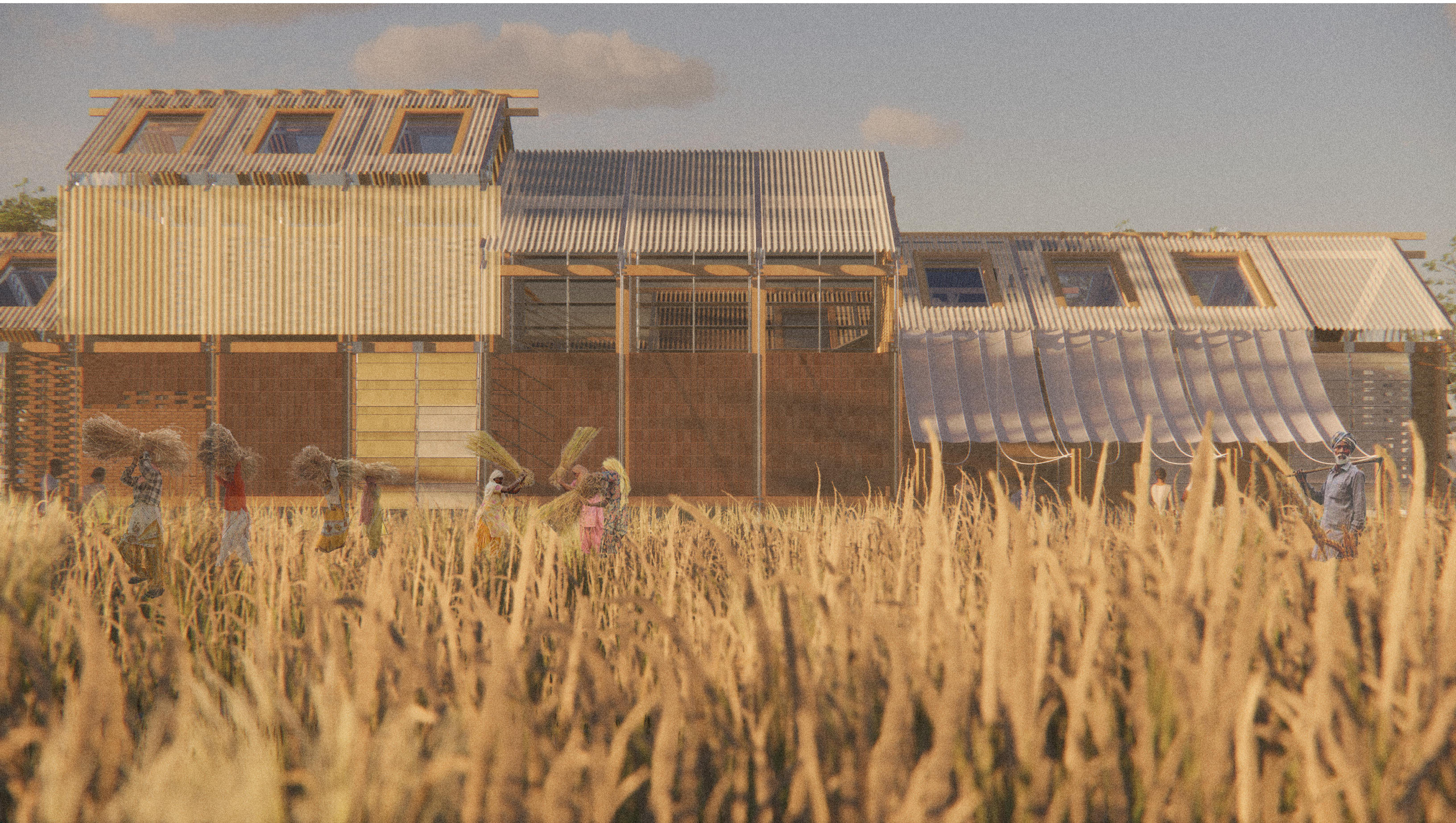
▲ Axonometric Planar Cut

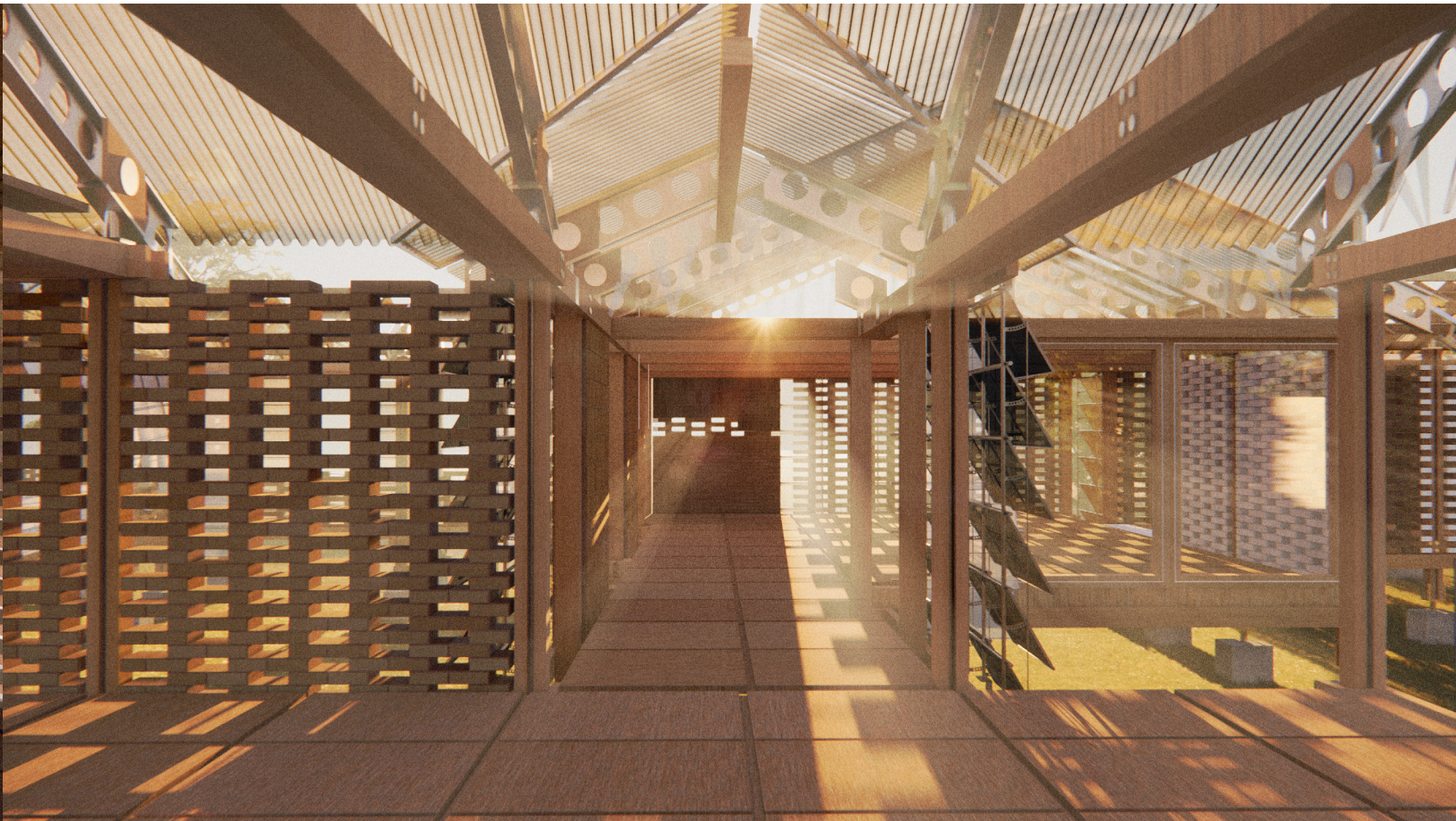


Harvest to Construction

sequential diagrams





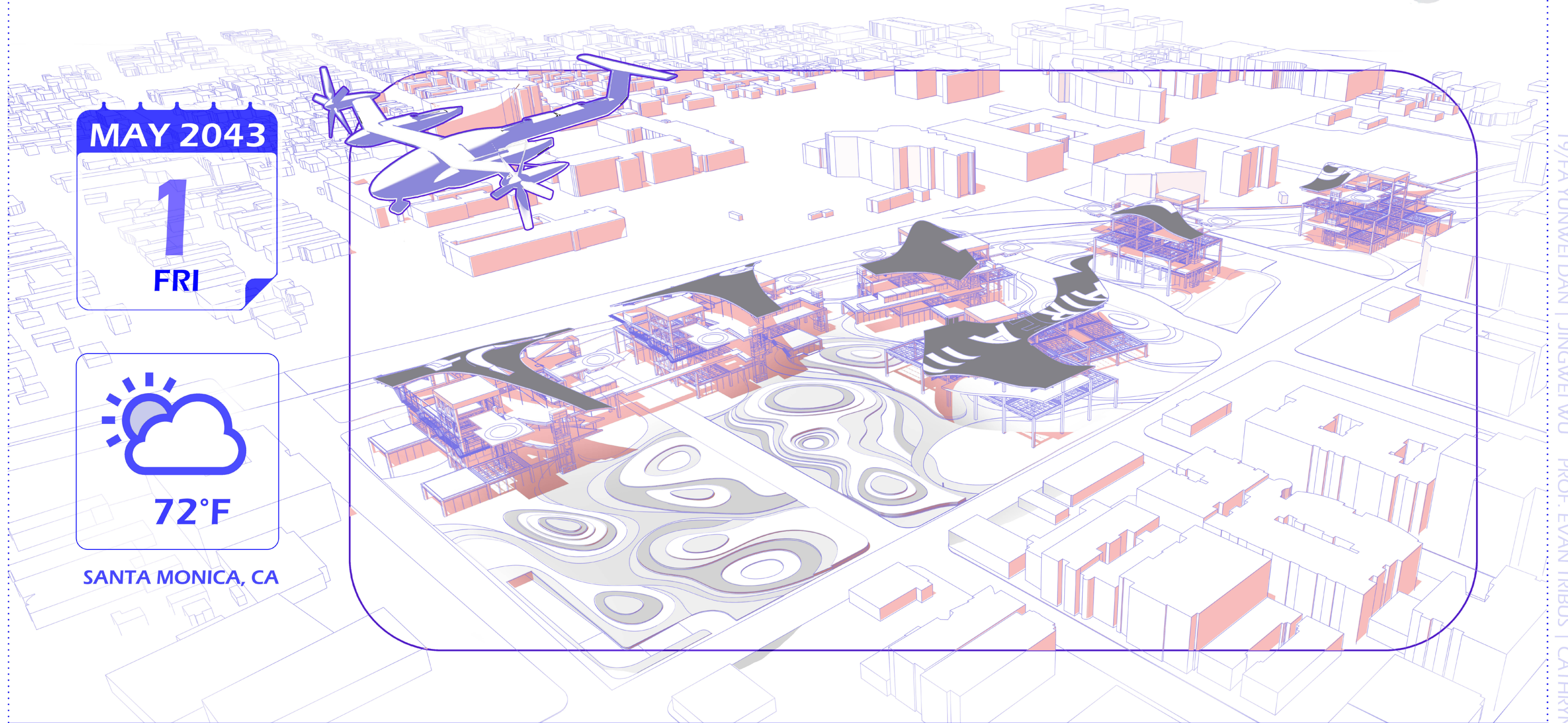






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MAY 2043

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FRI

72°F

SANTA MONICA, CA

19/FA YUNWEI DAN | JINGWEI WU | PROF. EVAN TRIBUS | CATHRYN DWYRE

HOME

DESTINATIONS

SCHEDULE

WAYS TO GET HERE

AIRCRAFT INFORMATION

PLAN YOUR TRIP

ACTIVITIES

CONTACT

DESTINATIONS

AIRCRAFT INFORMATION

AIRBUS A370

52'-0"
5'-4" 11' 7'-4" 5'-8"

17'-4"
8'-9"

48'-3"
24'-0"

48'-3"
14'-11"

48'-3"

14'-11"

Capacity: 4 seats

Gross Weight: 55 lb / 24.9 kg

Payload: 1+ hr

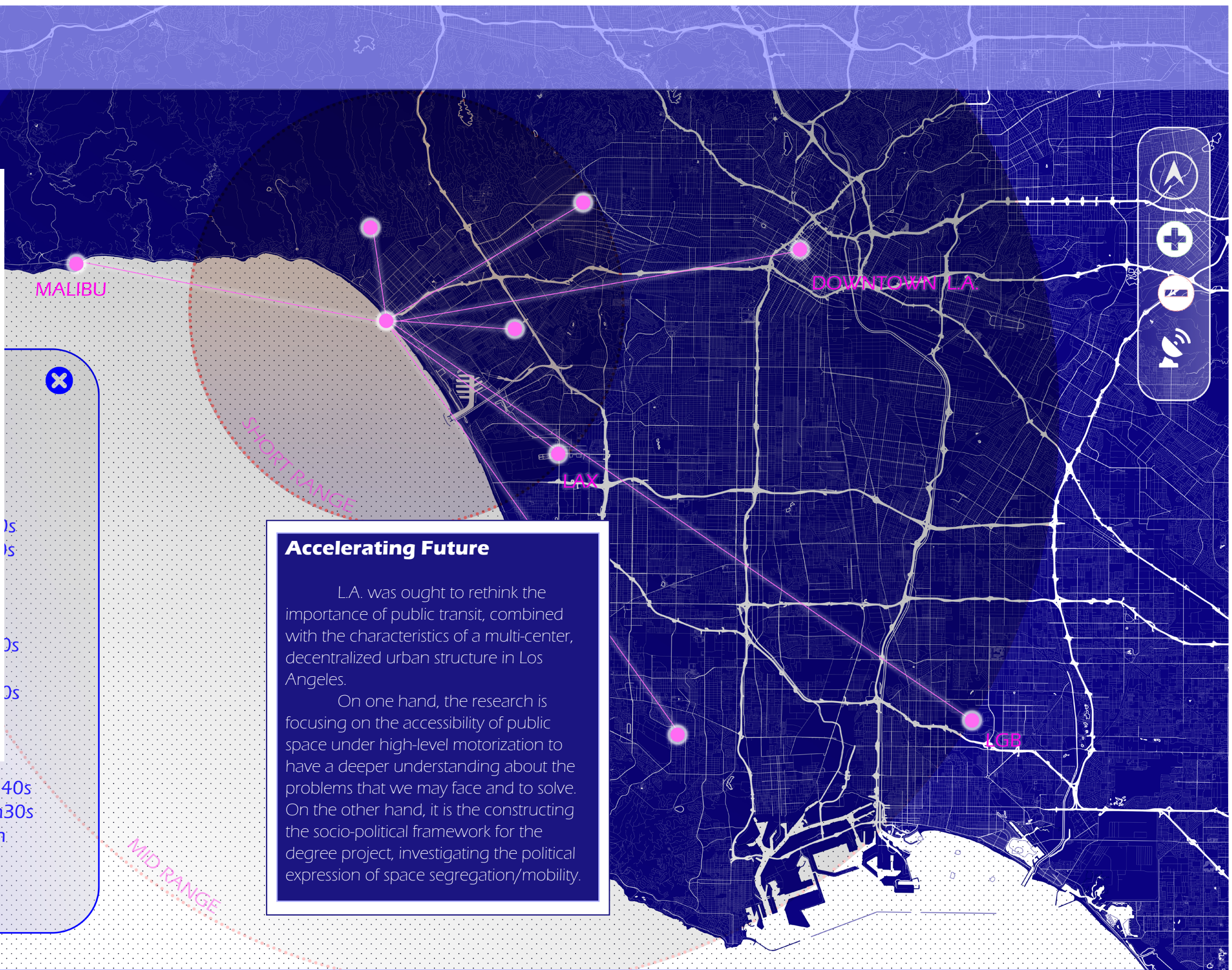
Endurance: 62 kts / 114.8 kph

Cruise Speed: 100 kts / 185.2 kph

Cruise Altitude: 10,000 ft / 3048 m

BASIC INFORMATION
SEAT CONFIGURATION

AIRBUS A370 AIRBUS K666 AIRBUS C650

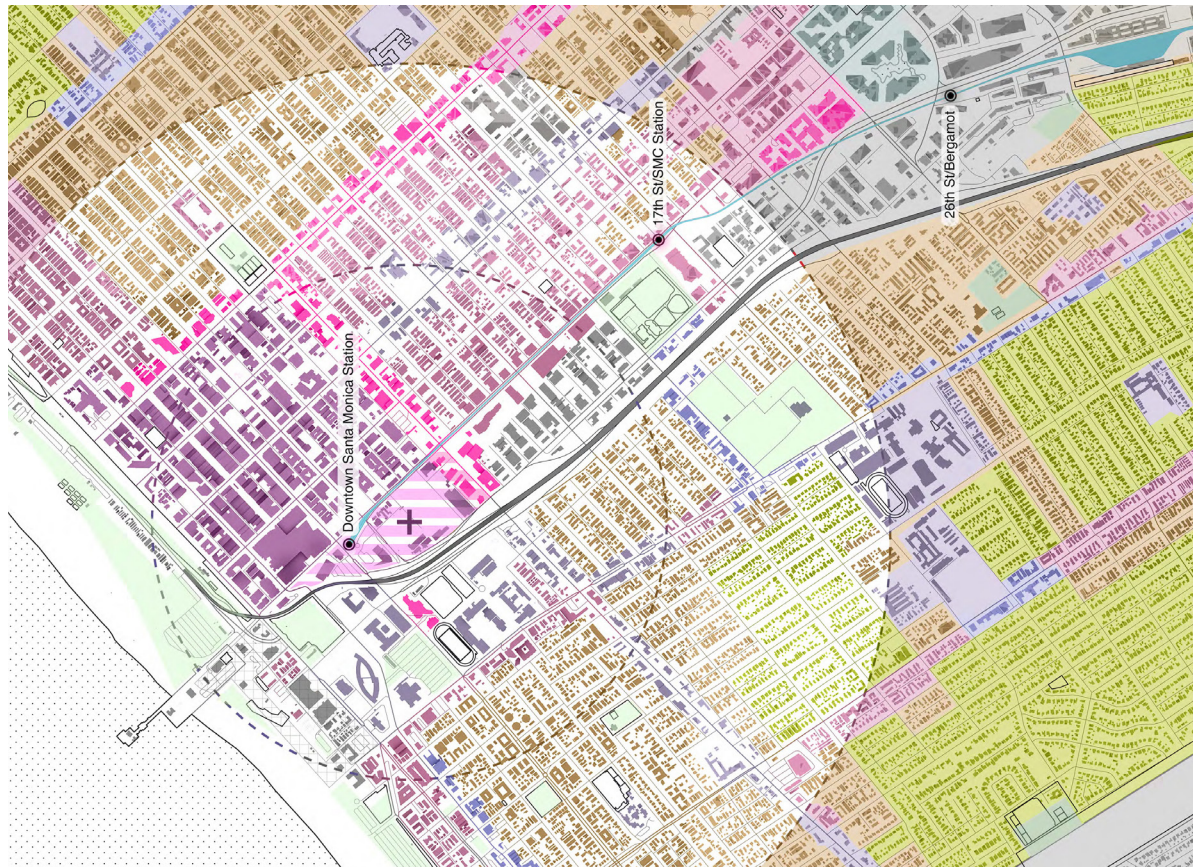


Accelerating Future

LA. was ought to rethink the importance of public transit, combined with the characteristics of a multi-center, decentralized urban structure in Los Angeles.

On one hand, the research is focusing on the accessibility of public space under high-level motorization to have a deeper understanding about the problems that we may face and to solve. On the other hand, it is the constructing the socio-political framework for the degree project, investigating the political expression of space segregation/mobility.

San Diego	12m40s
Las Vegas	11m30s
San Francisco	25m



site surrounding study



Schematic Plan 01:
Helipad & Basic Topography



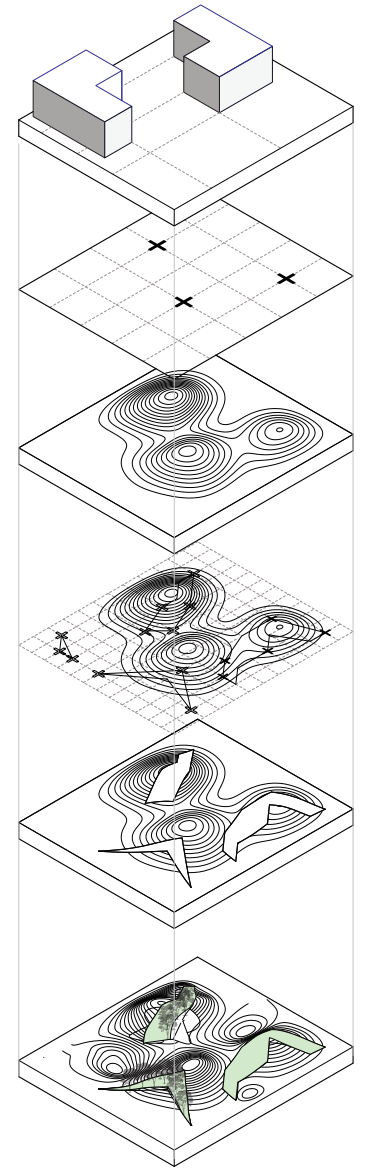
Schematic Plan 02:
Helipad & Basic Topography



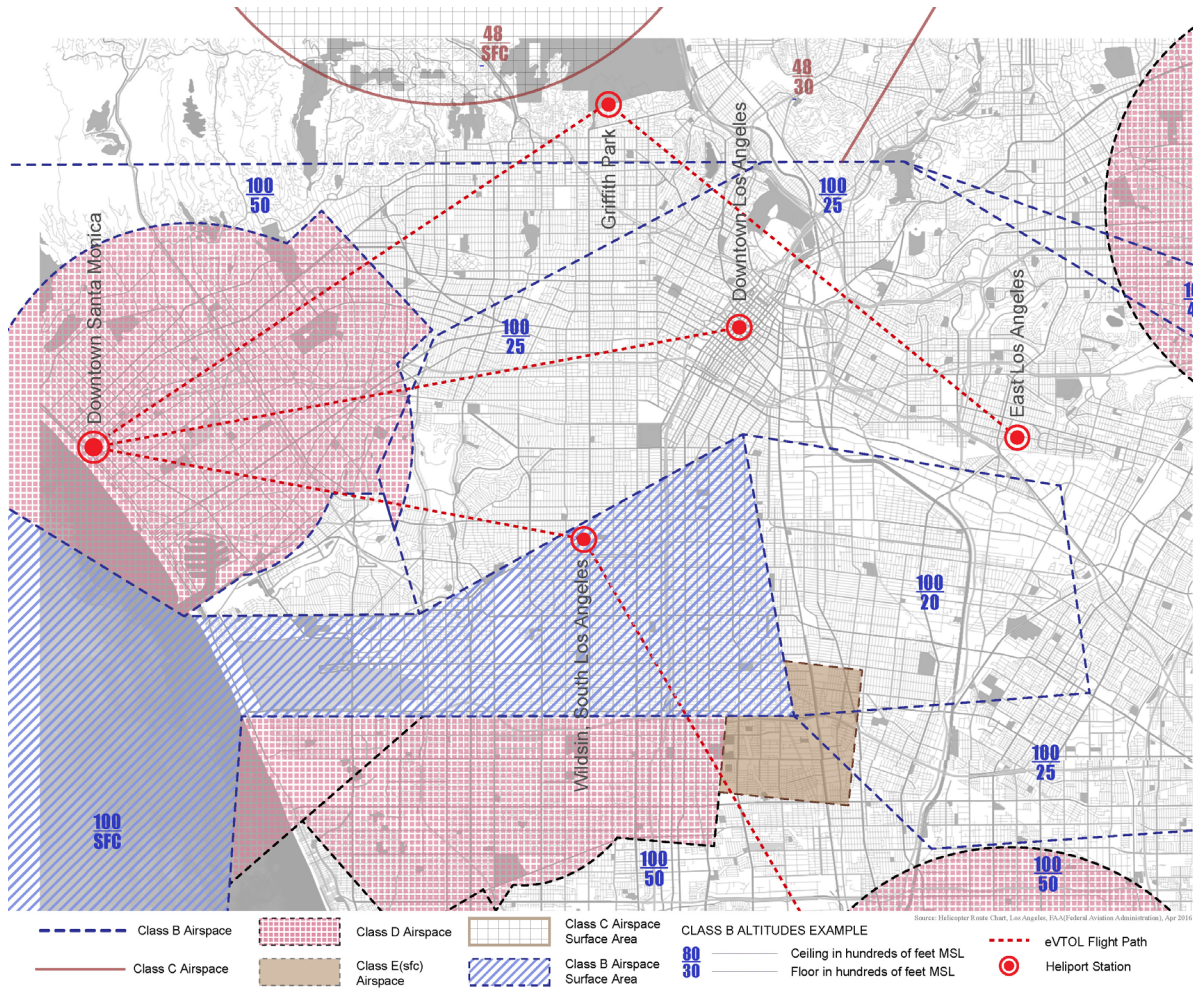
Schematic Plan 01:
Programs



Schematic Plan 02:
Programs



landscape method



aviation study



Schematic Plan 03:
Helipad & Basic Topography



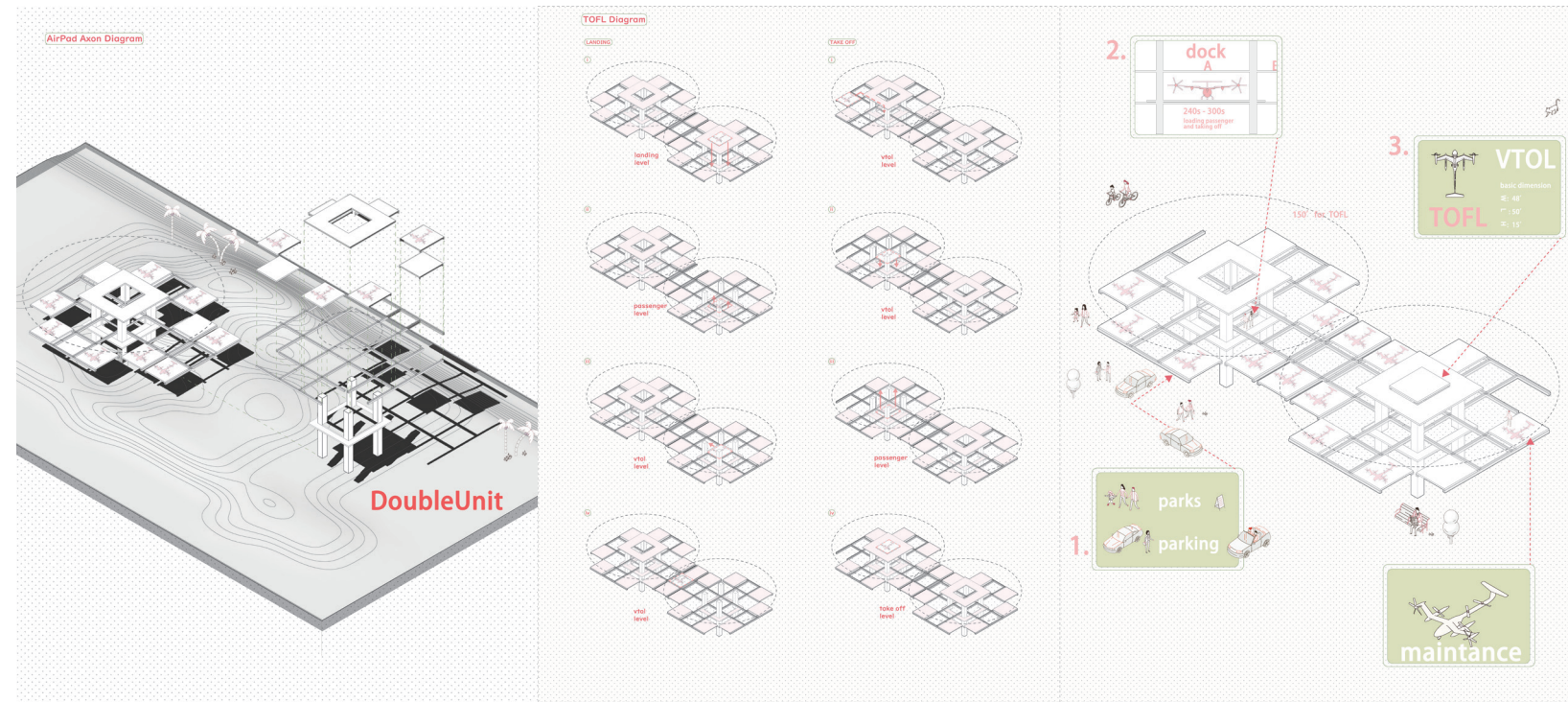
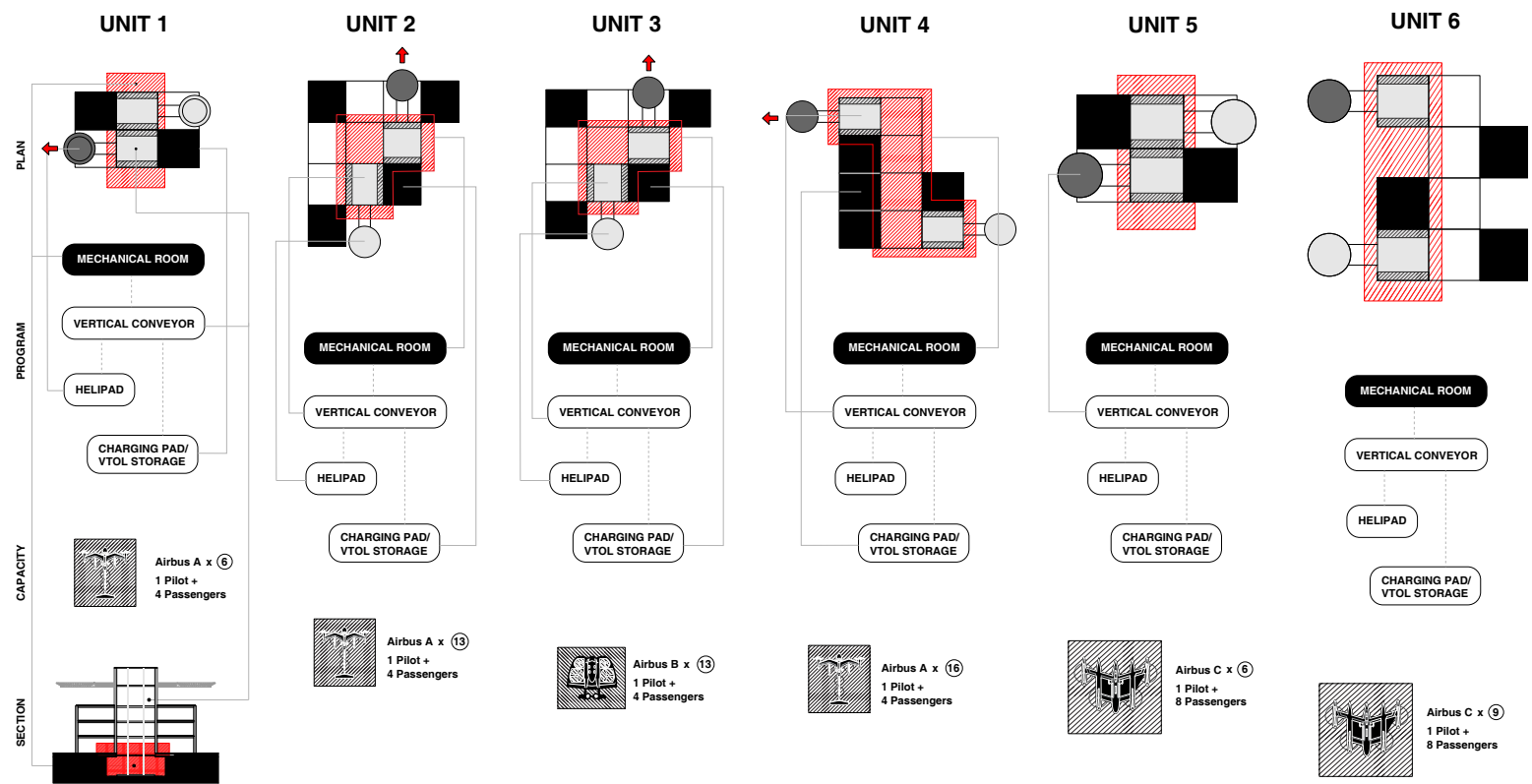
Schematic Plan 04

Third Space and Transportation

Ray Oldenburg first pioneered the concept in *The Great Good Place*, 1989, in which he explains that your third place is a hangout spot, community center or “home away from home” that provides an essential zone outside of home and work. According to his observation, most American cities are lacking third places, which means that they are missing out on a crucial space of expression, connection and growth. In combining Oldenburg’s theory of the “third place” and the technical research of eVTOL (electrical Vertical Take-off and Landing aircrafts), we are integrating public spaces in to the transportation infrastructure, which in the public common sense is featured by large interior spaces for the gathering of the busy crowds. None of the Trans-hub landmarks in NYC, like Fulton Street Station, the Oculus (WTC) and the Grand Central doesn’t own a clearly defined boundary. Either shielded by walls or a structured skin, the hub is separating the undercurrent of commute population from the street population, where people without a destination is not welcomed, or either feeling oneself lost in the bustling crowds. Thus, we are also interested in eliminating the frontier of a transportation hub and rebuilding the ambiguous boundary of public space as a third place of leisure and happiness.

Unit Diagrams

PROGRAM CATALOG: AUTOMATED AIRCRAFT CONVEYOR SYSTEM



double-unit diagram

structural mechanism

moving flow diagram

Physical Models

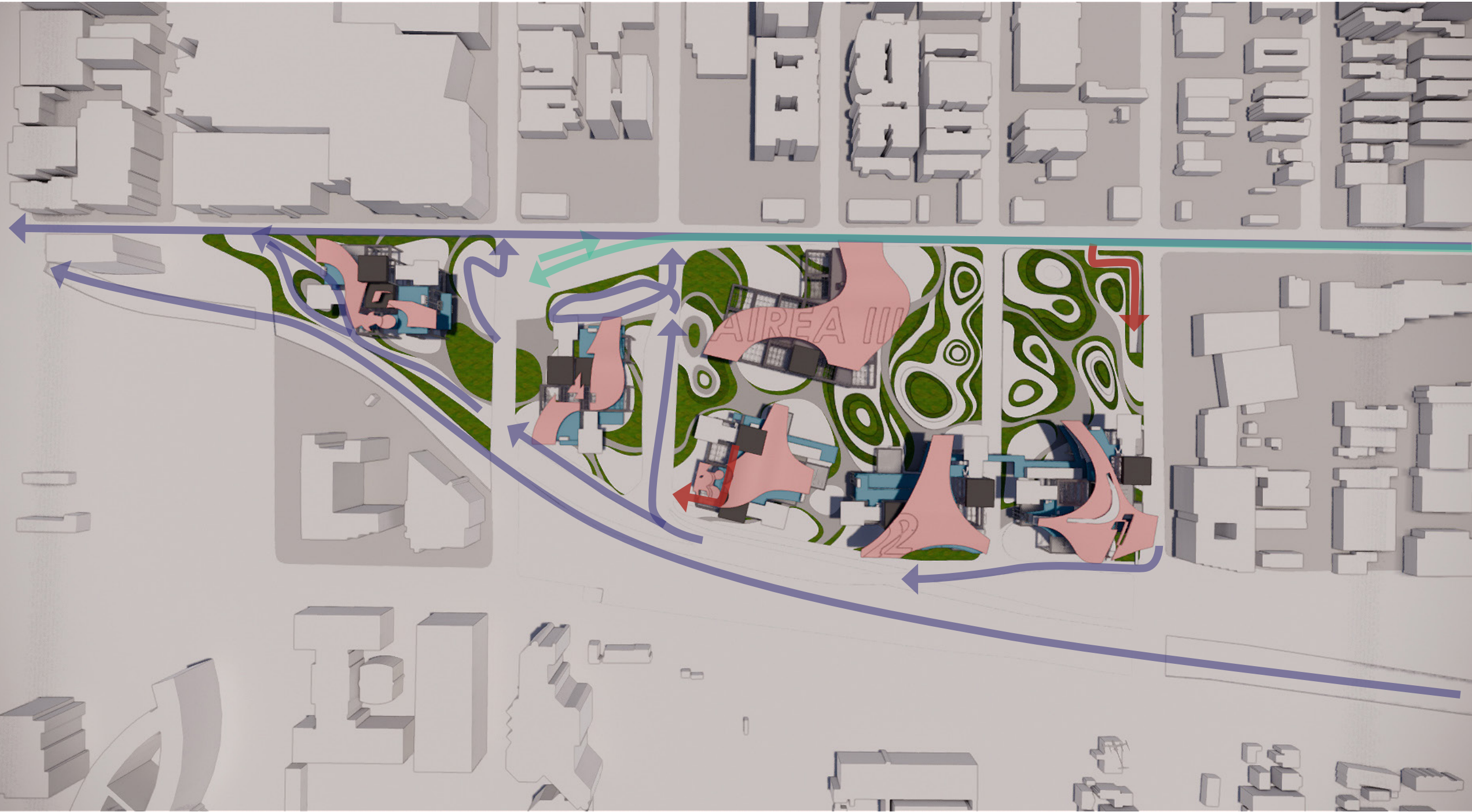


site model



sectional model

eVTOL Hub at Santa Monica



AIR TERMINALS

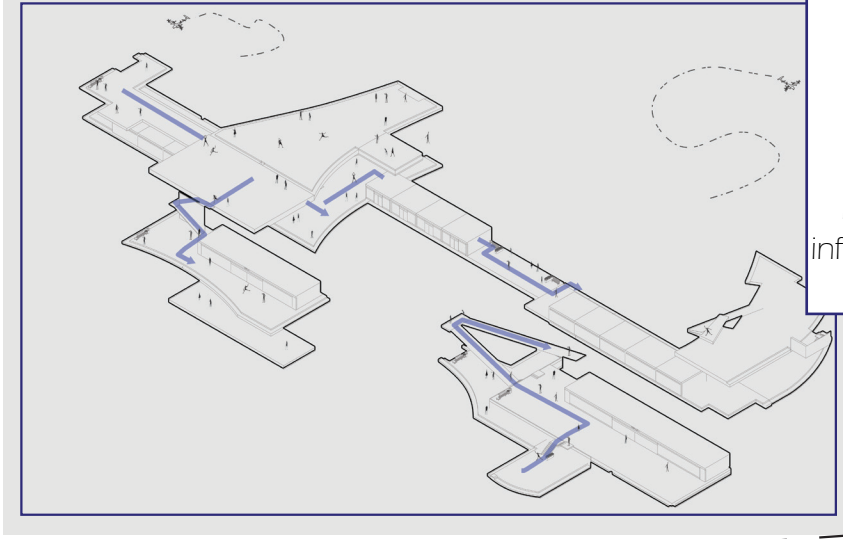
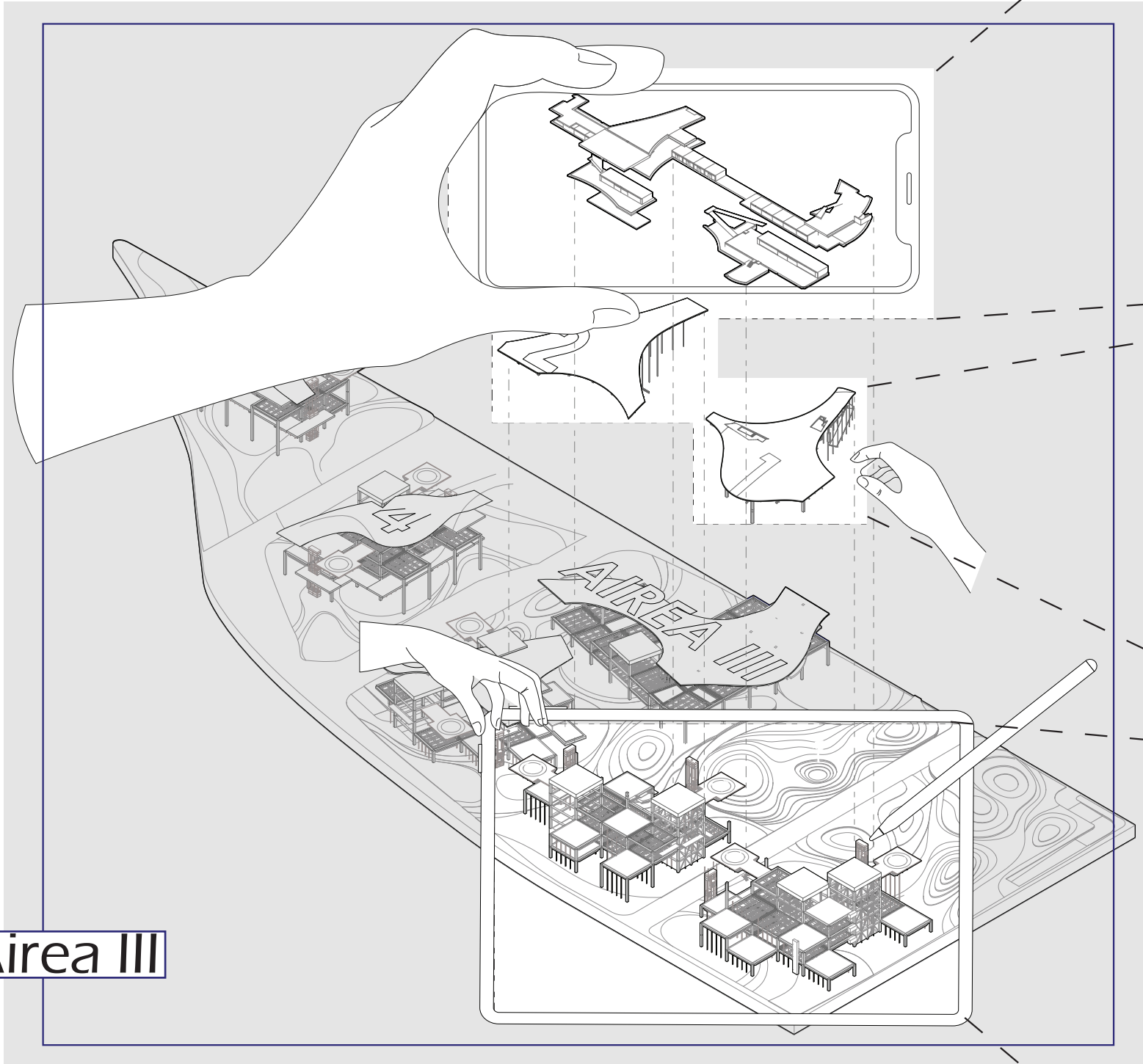
		<p>CAPACITY </p> <p>RANGE </p> <p>COMMERCIAL </p>
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		<p>CAPACITY </p> <p>RANGE </p> <p>COMMERCIAL </p>
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bird view

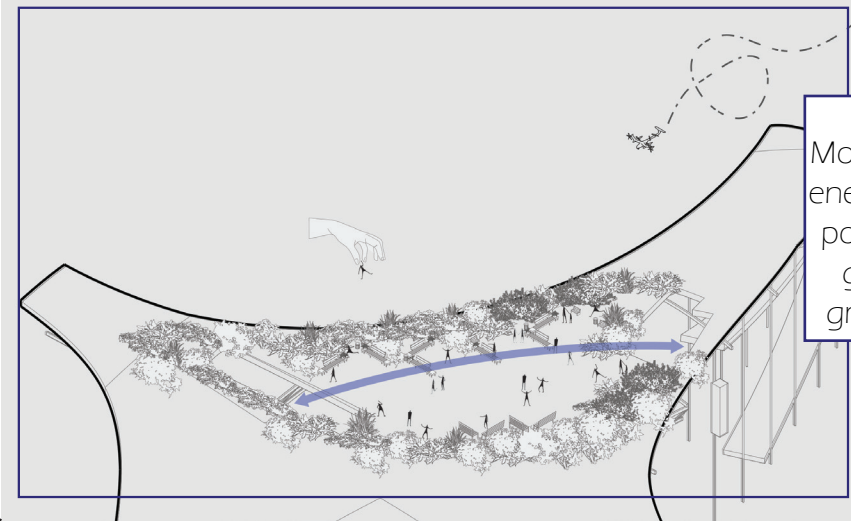
unit types

Unit 1 + 2

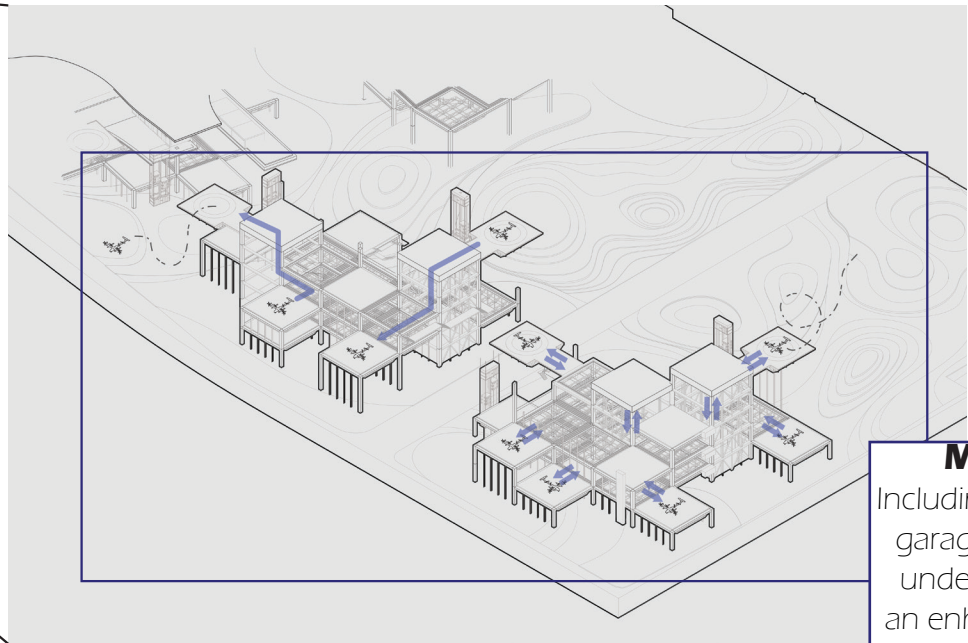
Airea III



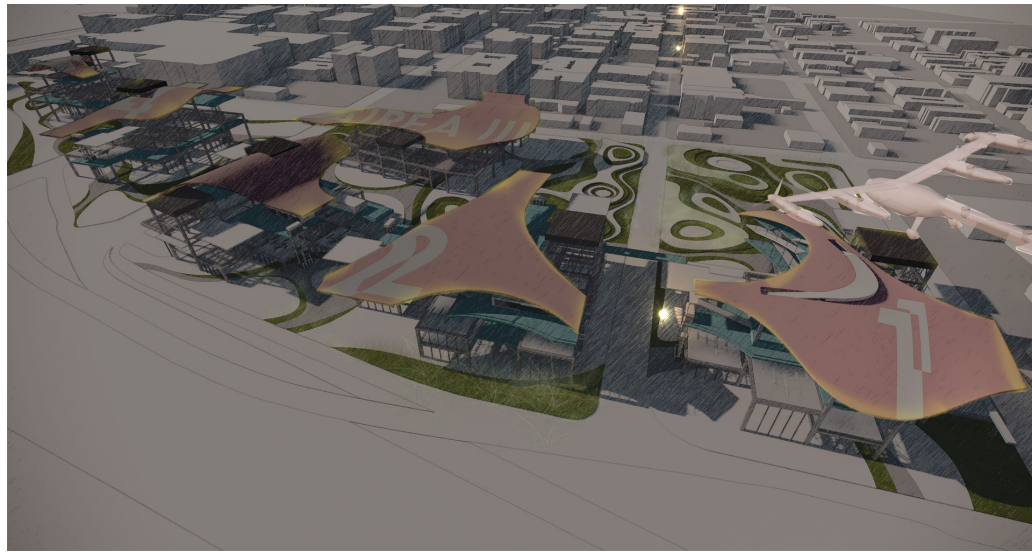
Public Space
Space is built for public use that is interlaced with the industrial pads system. the function serves the community, such as commercial space, educational rooms, and natural walking parks. It made the infrastructure provides destination and grouping nodes for the public.



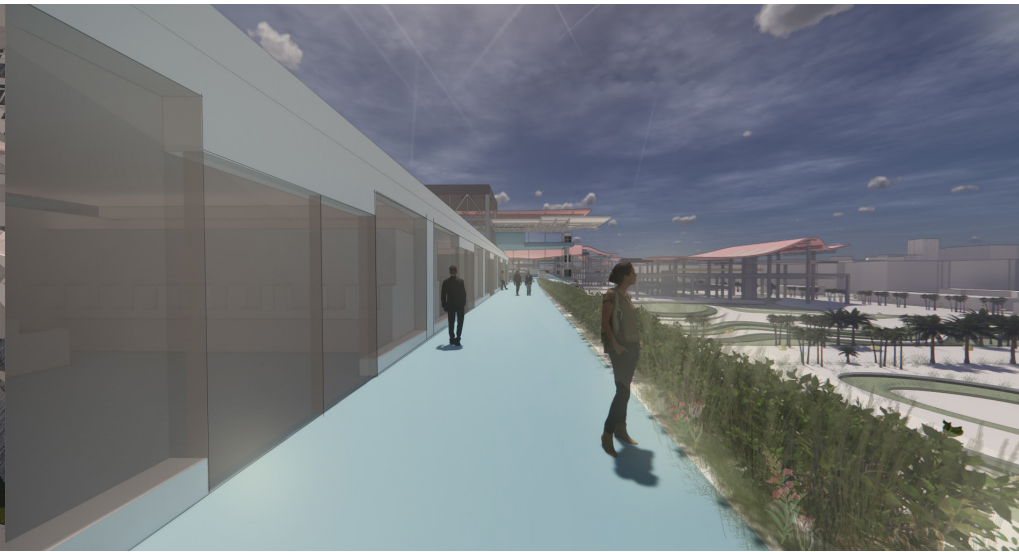
Green Roof
Most areas are paved with solar energy panels used as charging power for eVtols. And the rest gives a comfortable resting green spot in the urban area.



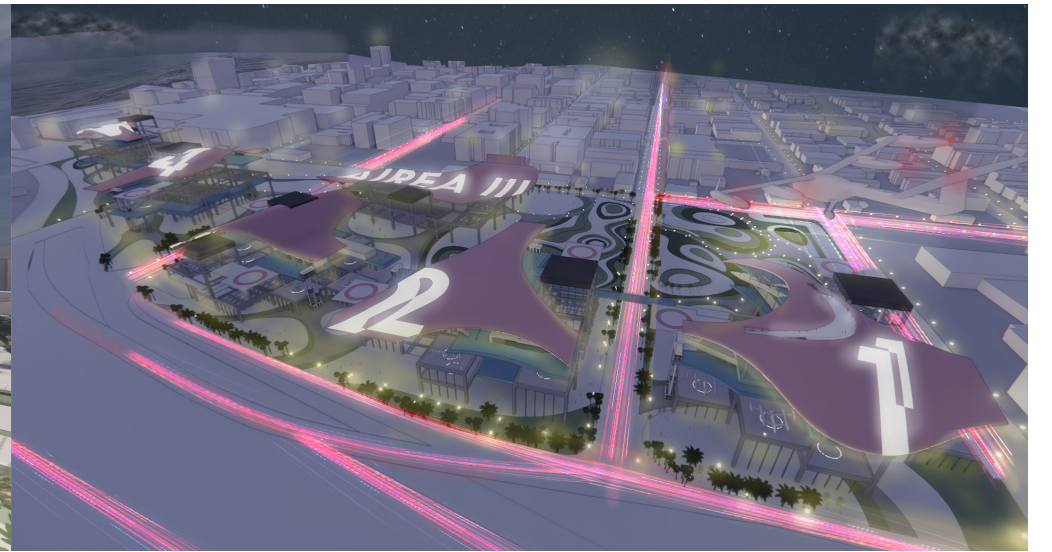
Mobile eVTOL Pads
Including garage storage, repair shop garage, and transportation tunnels underground. Not only a stop but an enhanced complex facility for the electric vertical take-off and landing aircrafts(eVTOL)



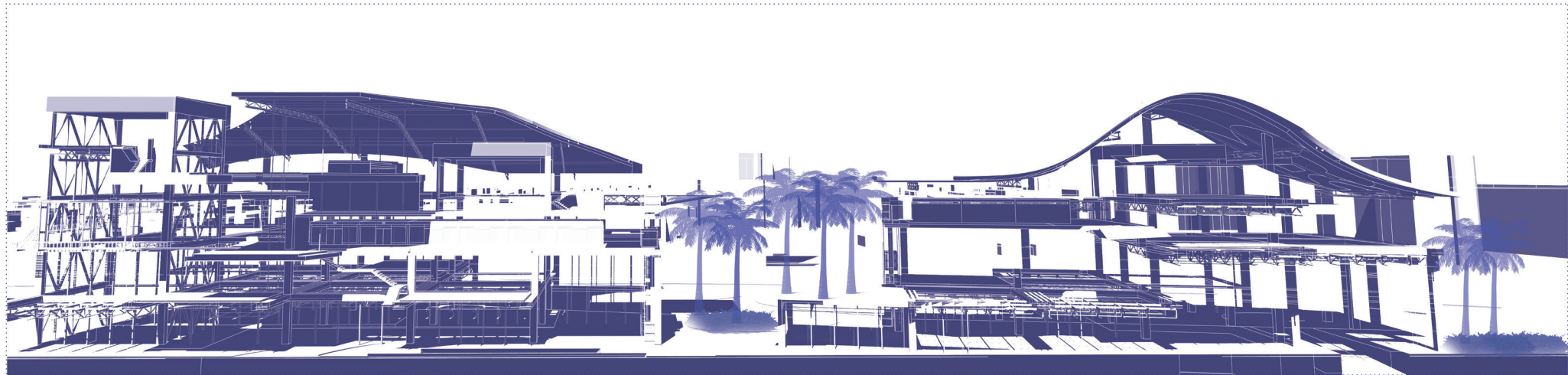
bird view 1



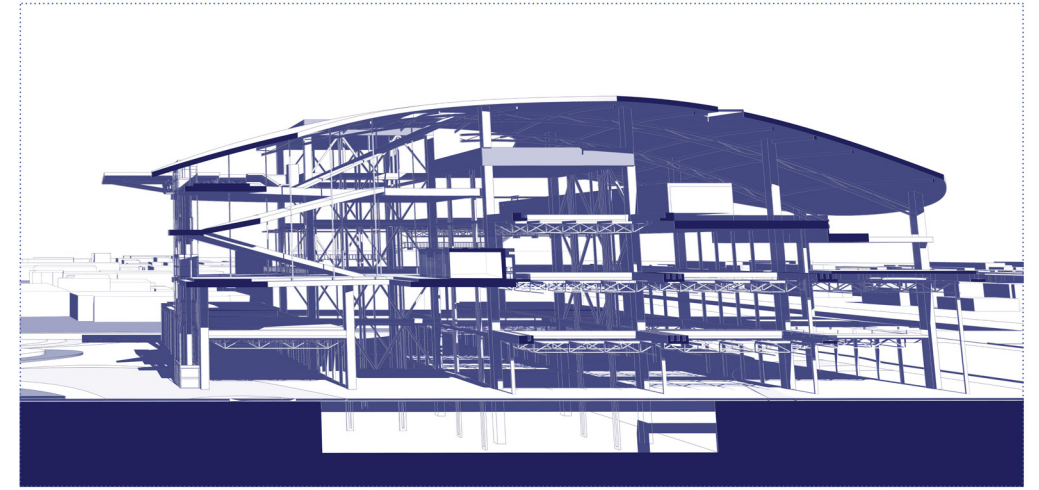
commercial bridge



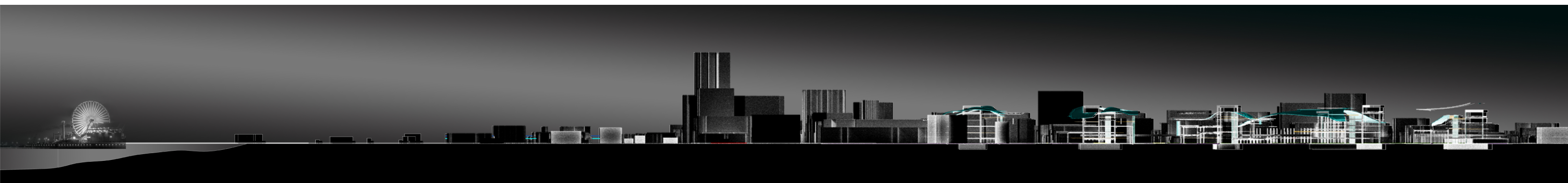
bird view 2



section 1



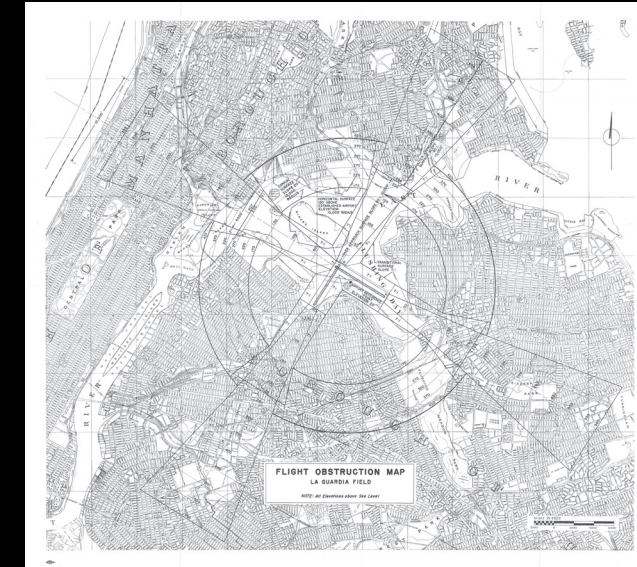
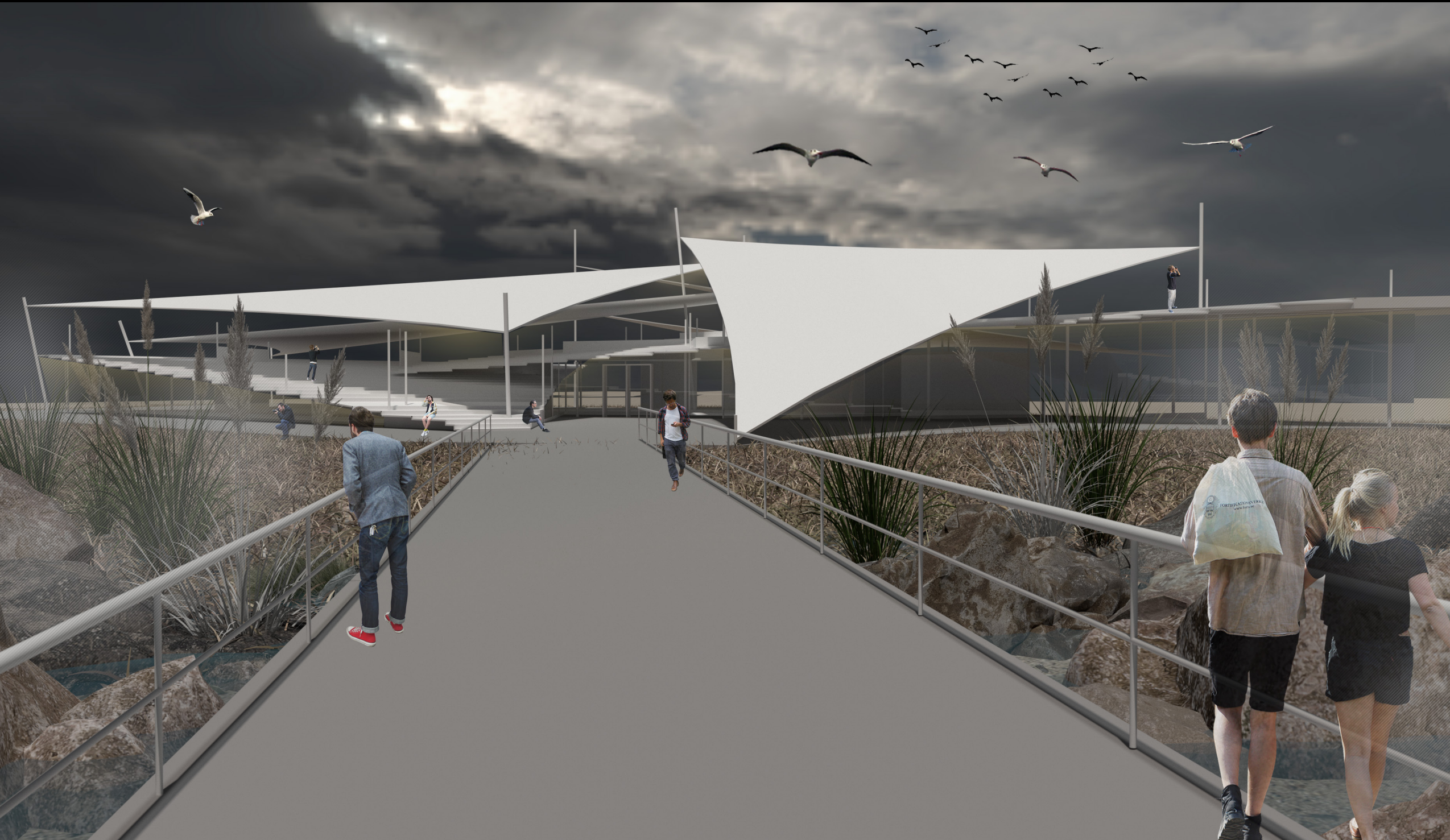
section 2



Rikers Marsh

Rikers Island Refurbishment Planning and Bird Observatory

Fall 2018 Critic: Enrique Limon



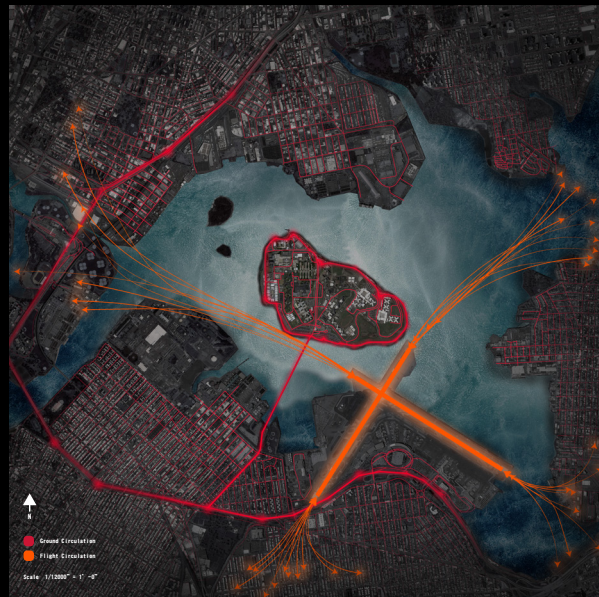
Rikers Island Map

The Buffer Between the Artificial and Natural Ecosystem

Rikers island is often known as the “dirtiest” spot in New York City. Rikers Island prison is sitting on this island, which is built more than 70% by trash dump. It emitting testified biological and chemical harmful gas and receiving the noise, wastewater, and trash dump at the same time.

This project contained two parts, one is the masterplan for abandoning Rikers Island and a detailed migratory bird center on its neighbor island.

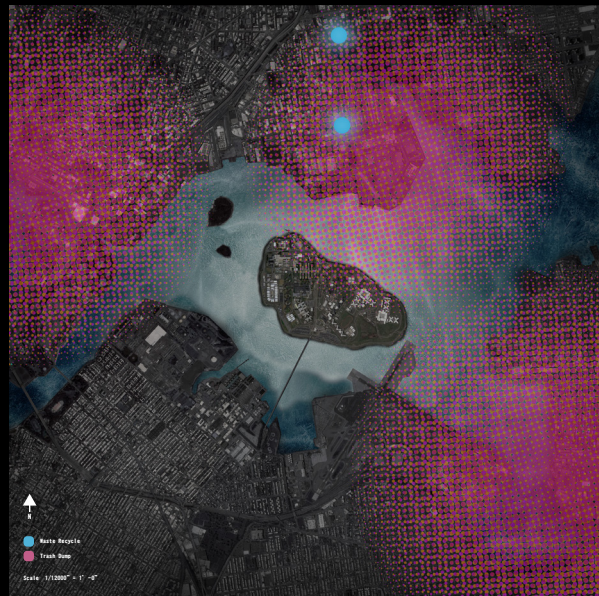
providing an eco-friendly buffer, let time and artificial intervention to create an eco-friendly marsh buffer for humans and nature



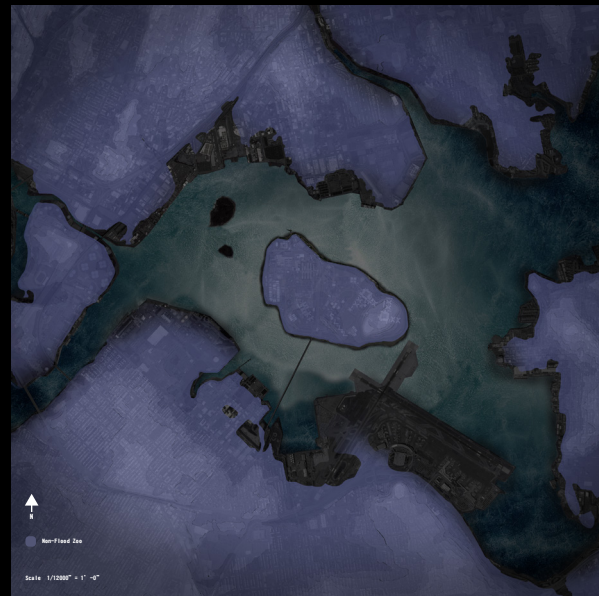
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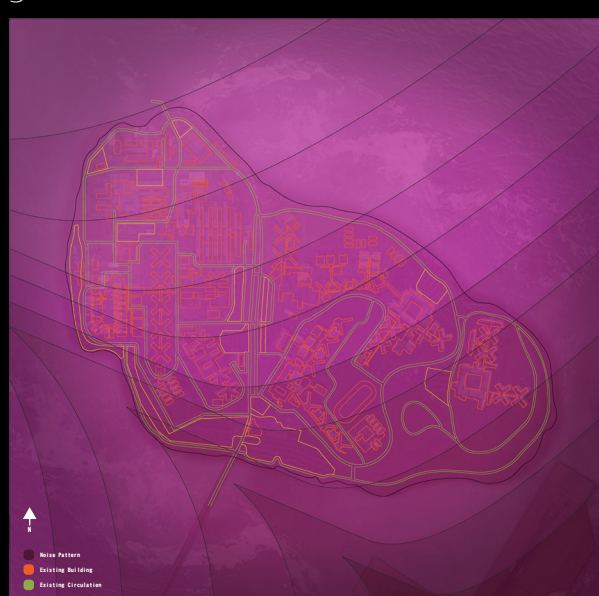
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3



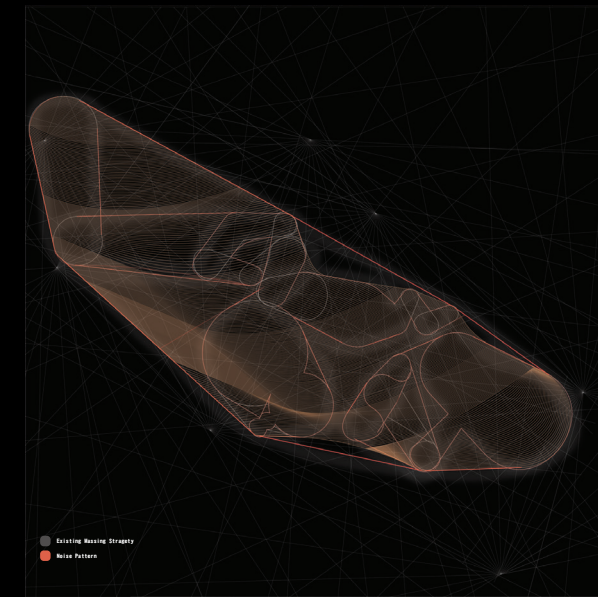
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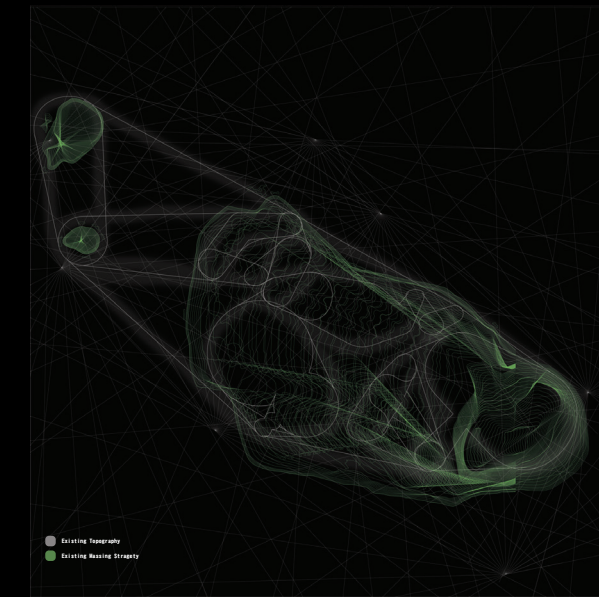
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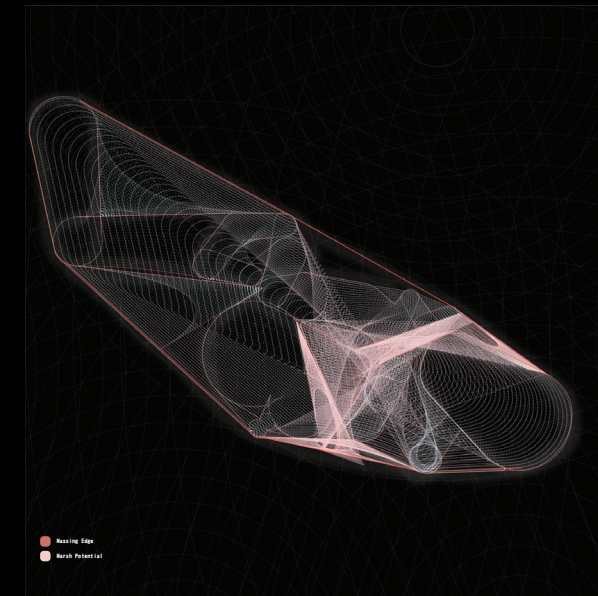
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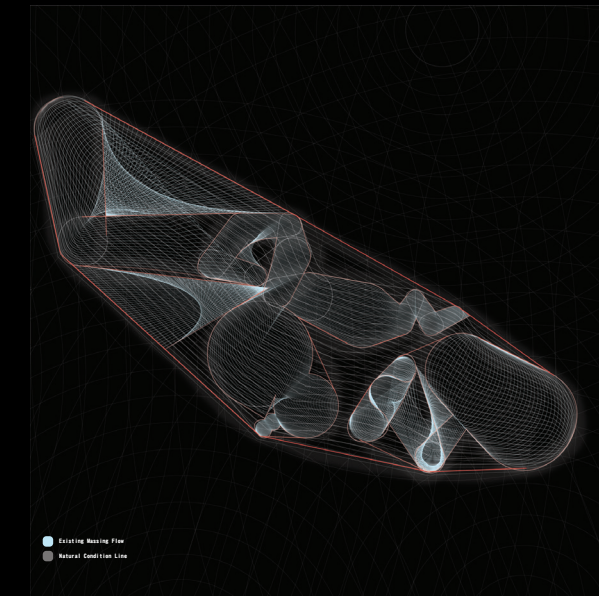
7



8



9



10

1. LGA airport aviation route analysis diagram

2. Water plant impact radius diagram

3. Historical growing map

4. Trash dump spots radius diagram

5. Flood map

6. Noise impact diagram and prison plan

7. Existing Massing vs Noise Impact

8. Existing Massing vs Topography

9. Existing Massing vs Marsh Growing Poential

10. Existing Massing vs Existing Natural Elements

site analysis drawings are created based on different attraction points and impact spots on site

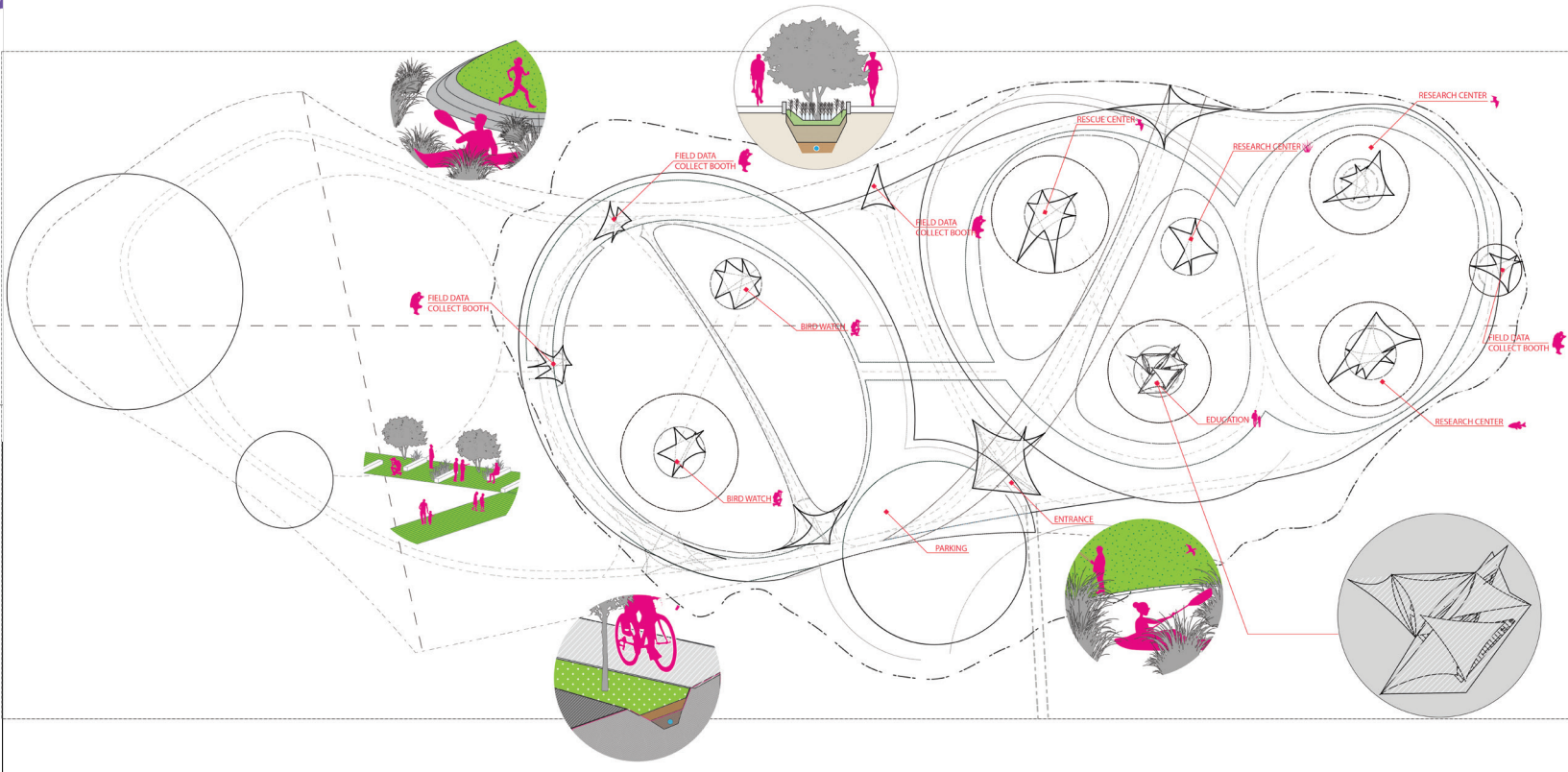
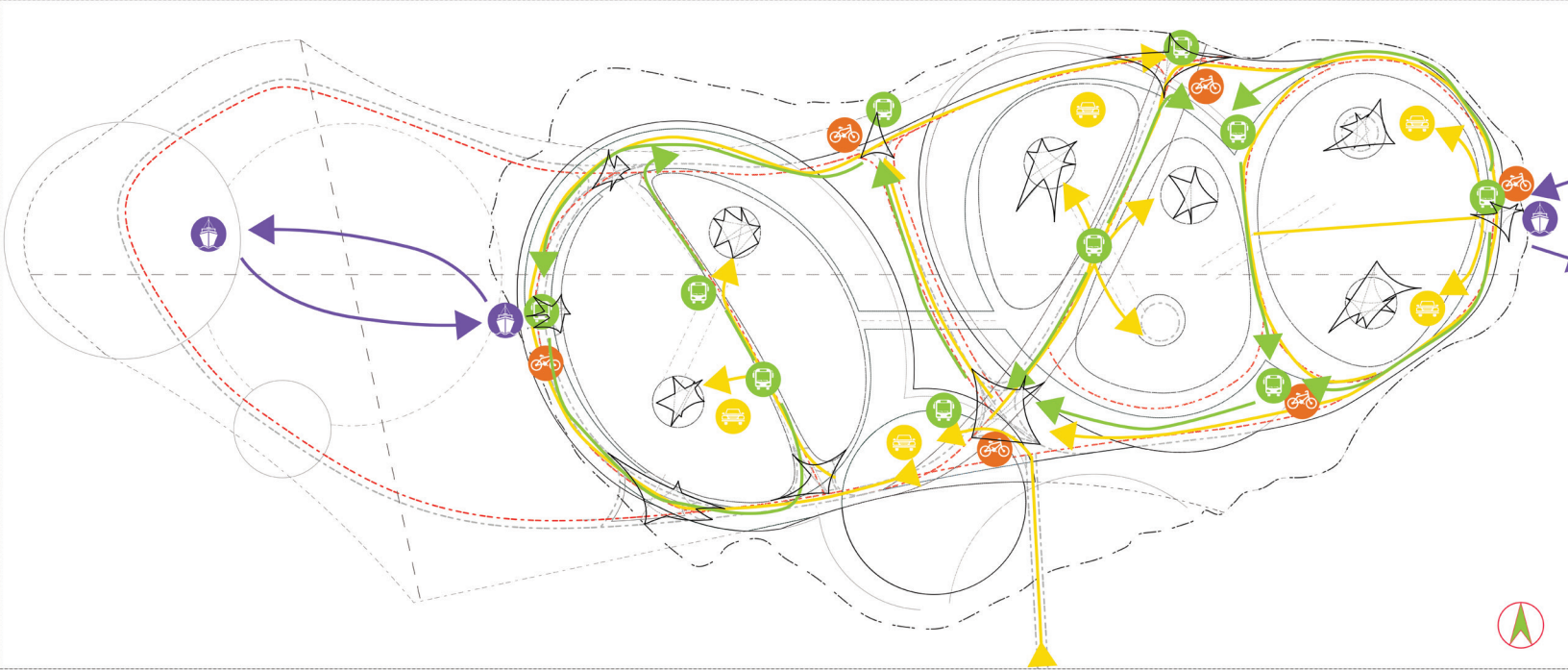
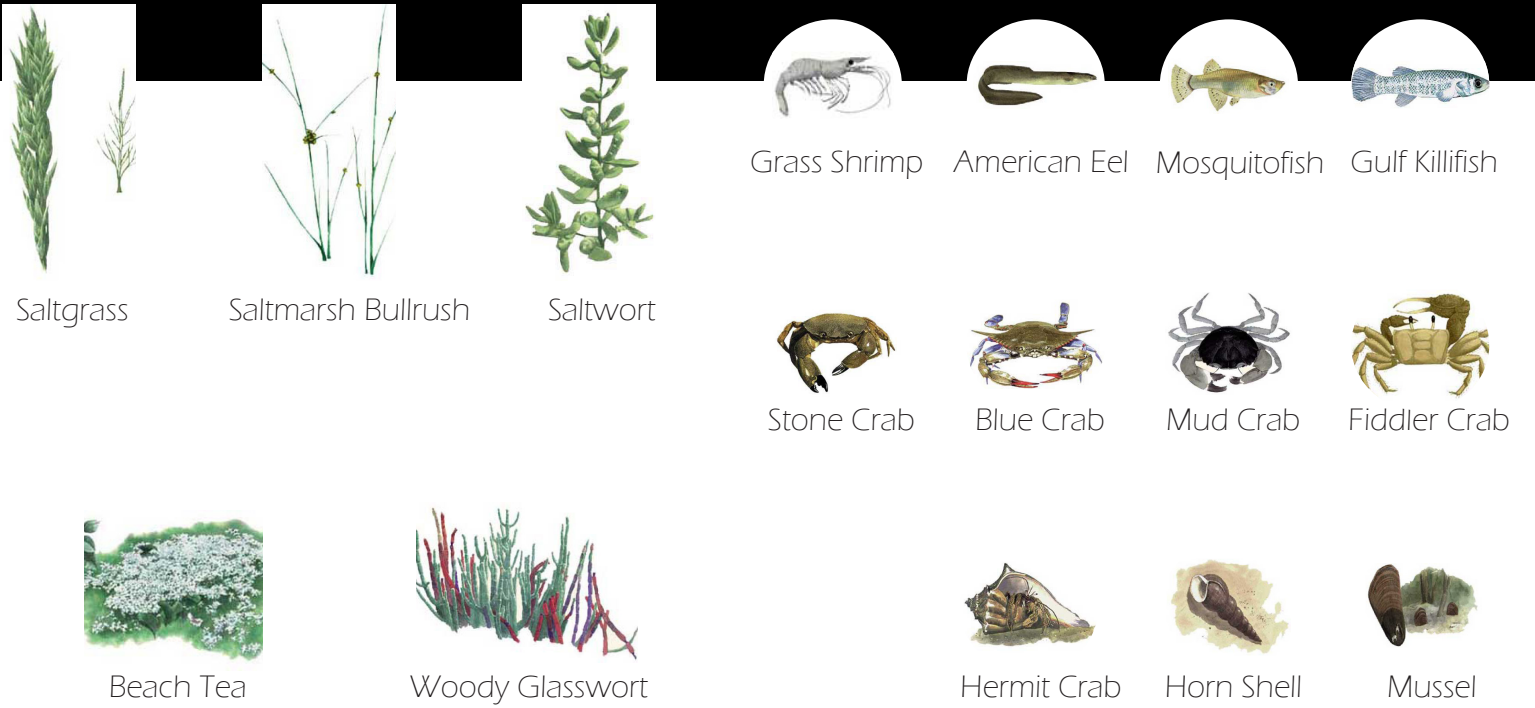
generated density line drawings generated based on existing site condition under various impact.

SITE ANALYSIS

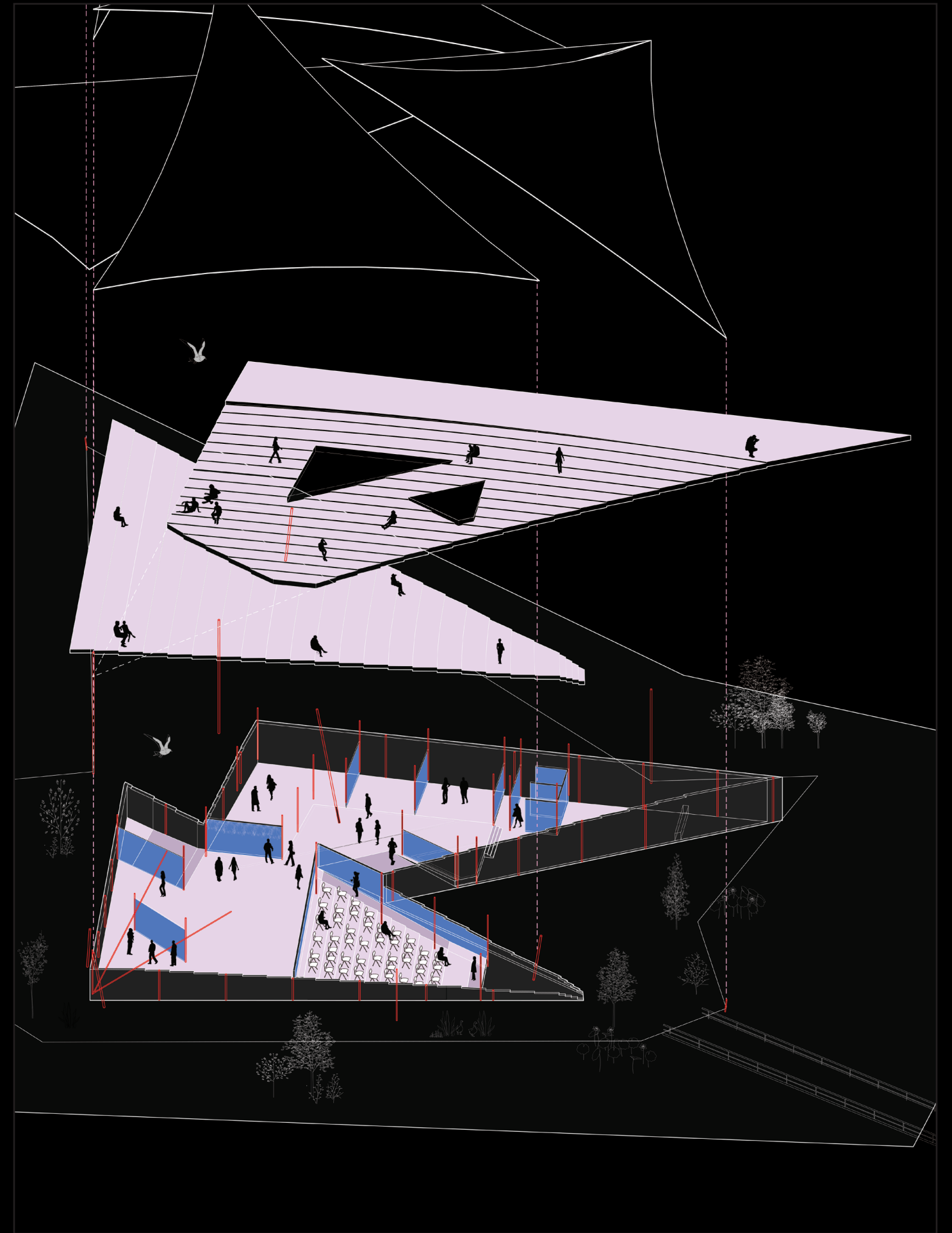
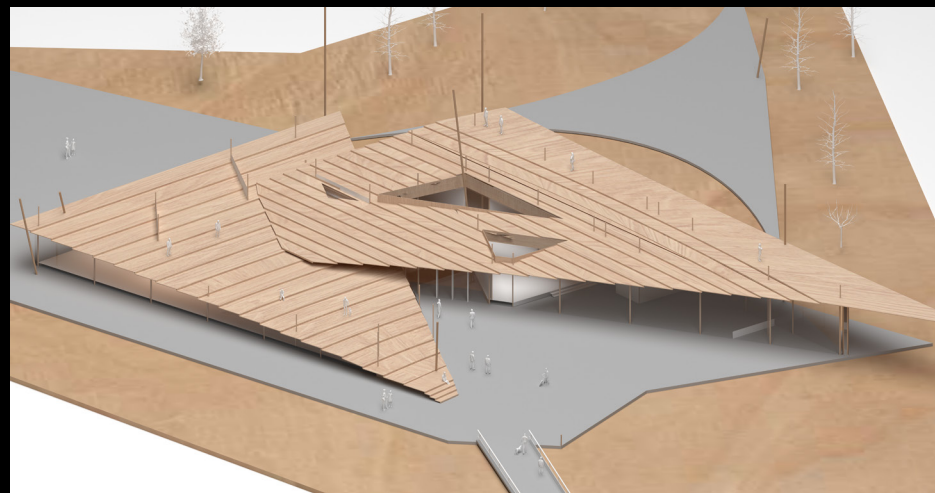
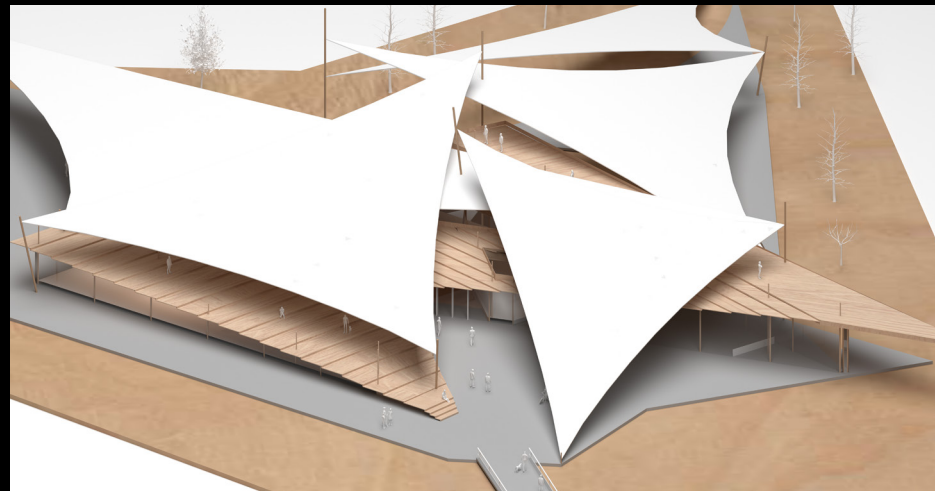
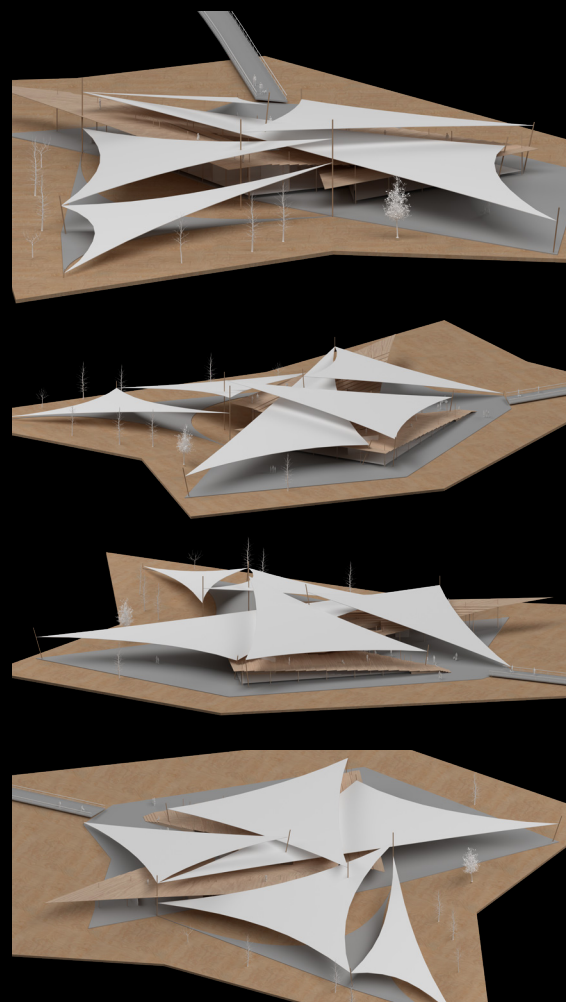
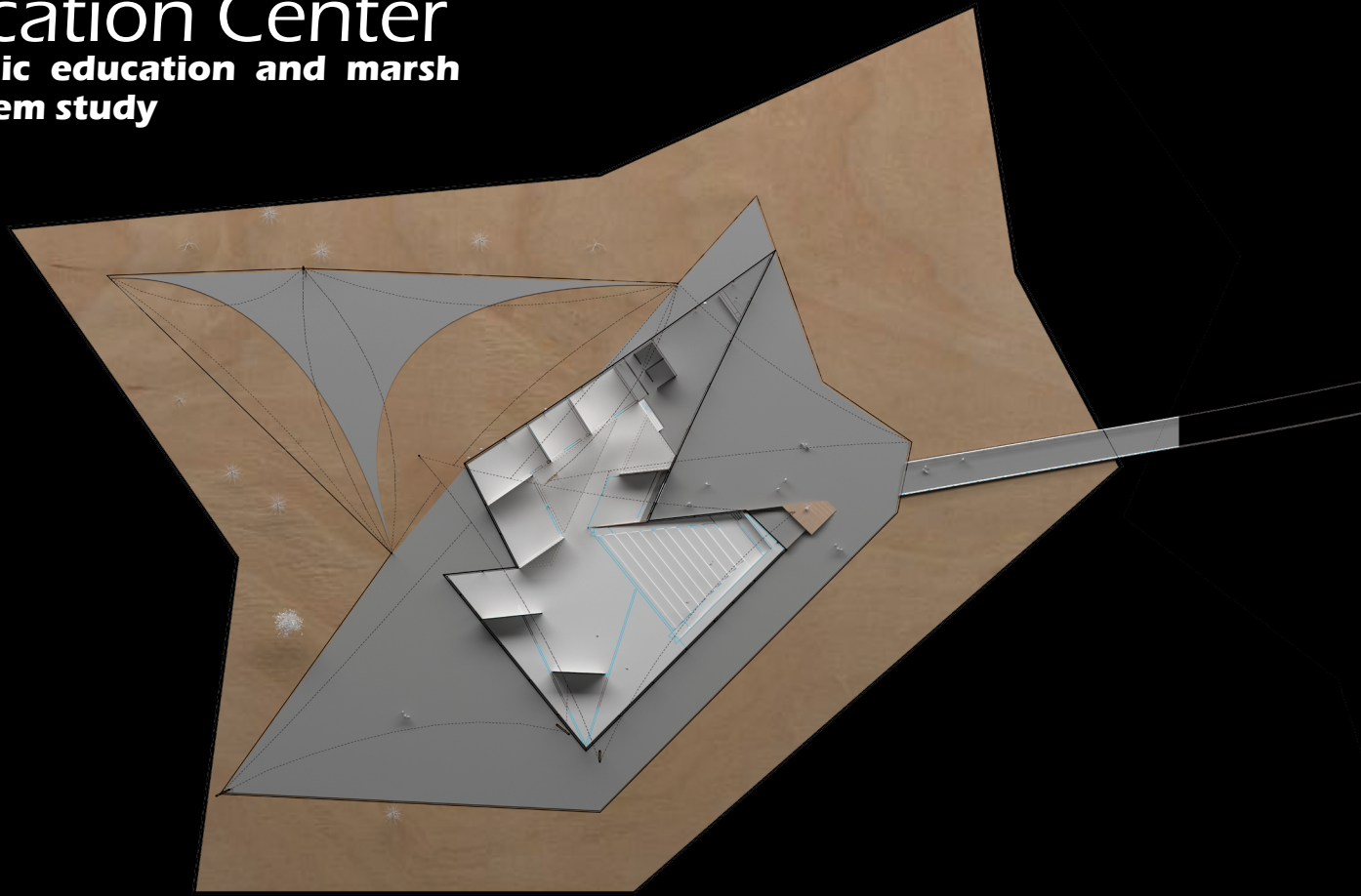
Rikers Marsh

from the Stinky Prison Island to A Natural Habitats with Institutional Facilities

Rikers Island currently functions as a prison island. A landfill island surrounded by not welcoming environments, such as the airport's noise, water treatment factories, and dumpster nodes. This project aims to transfer the landfill island to a natural salt marsh with a landfill gas collecting system, upgrade this unwelcome island to public salt marsh habitats for not only human beings but also the animals and plants



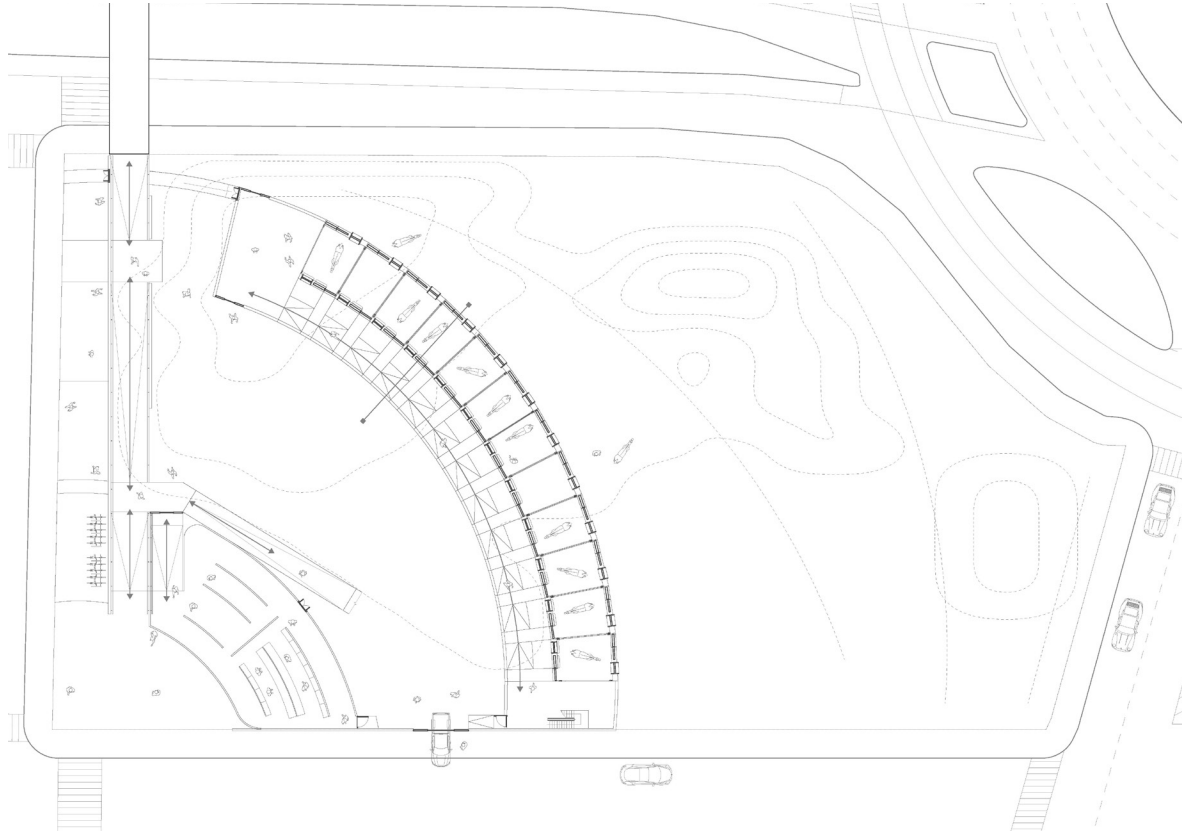
Education Center for Public education and marsh eco system study



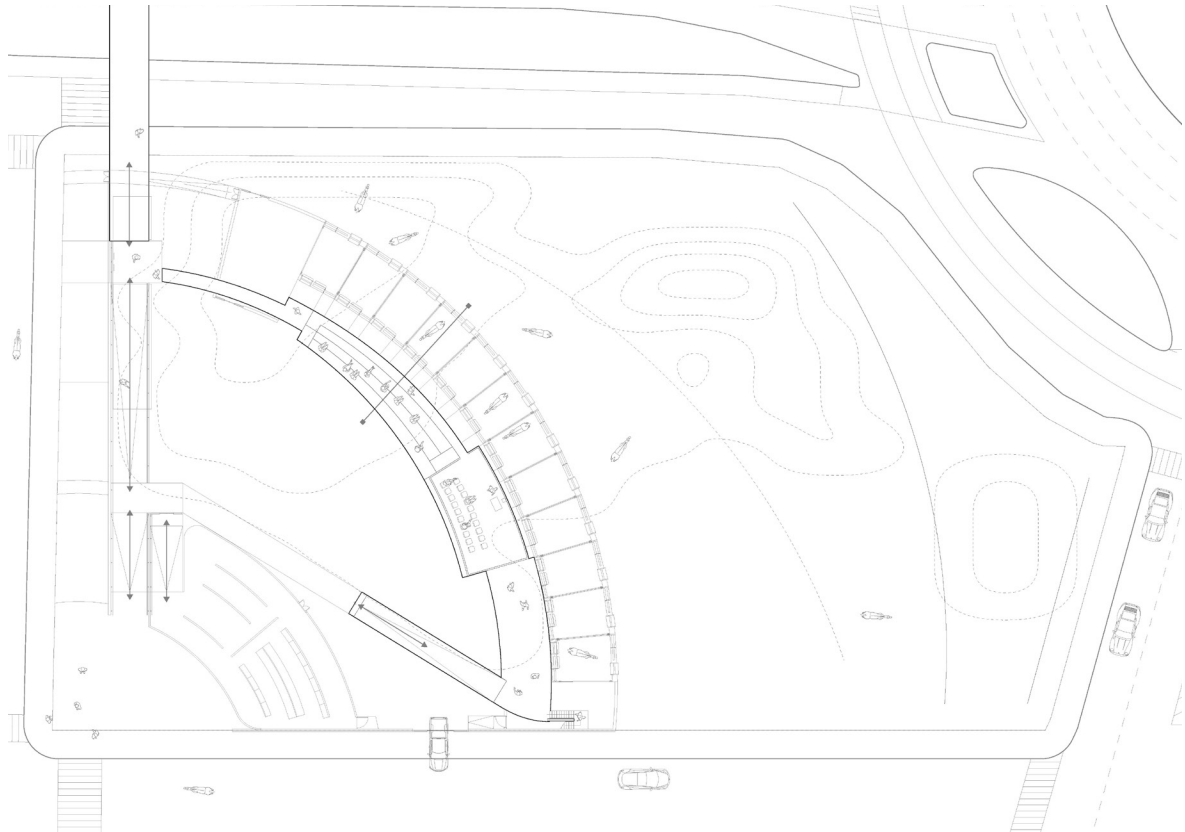
Kensington Horse Stable

Kensington SOIL Design Studio
Summer 2023

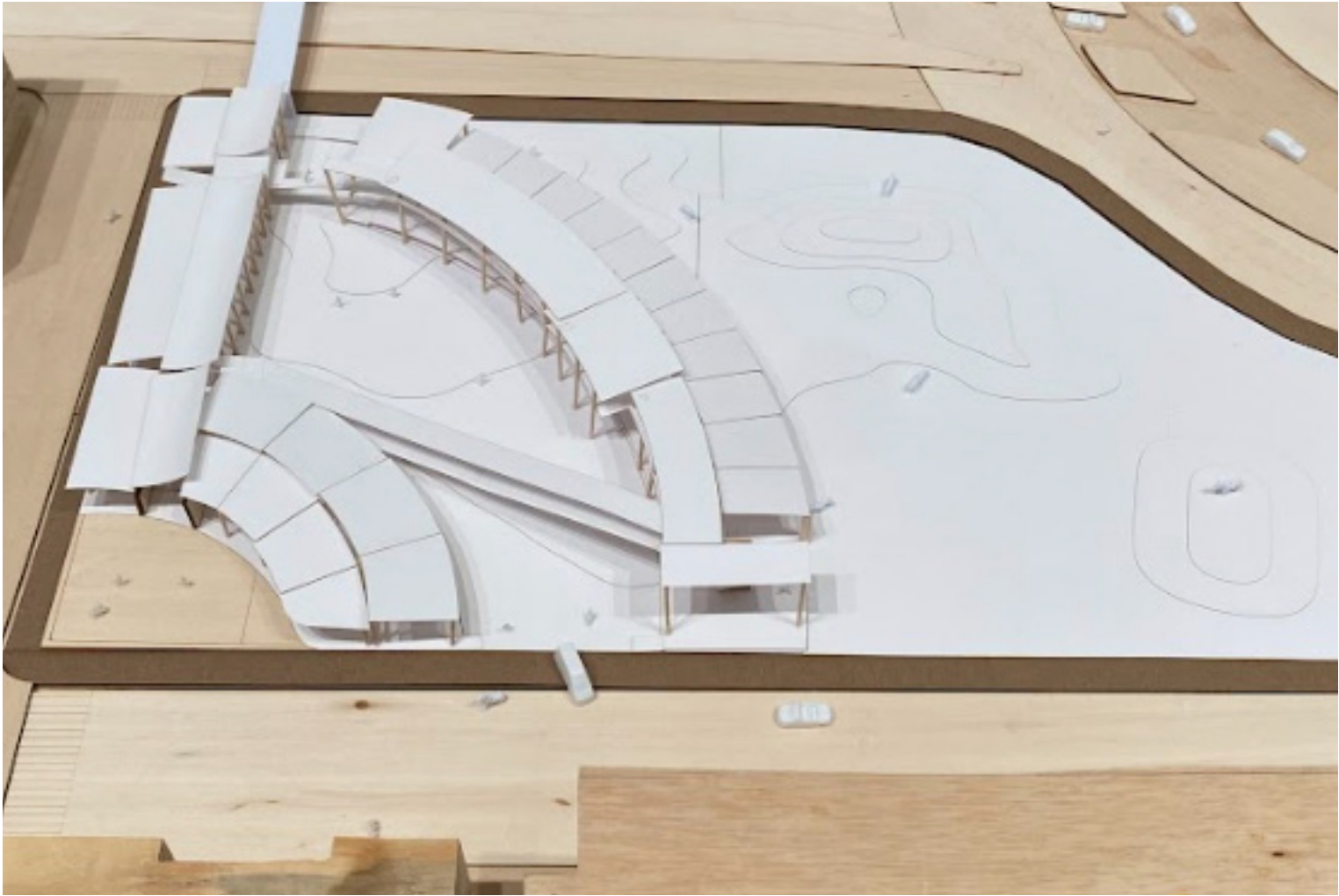
Critic: Mio Tsuneyama / Fuminori Nousaku



▲ Floor 1 Plan

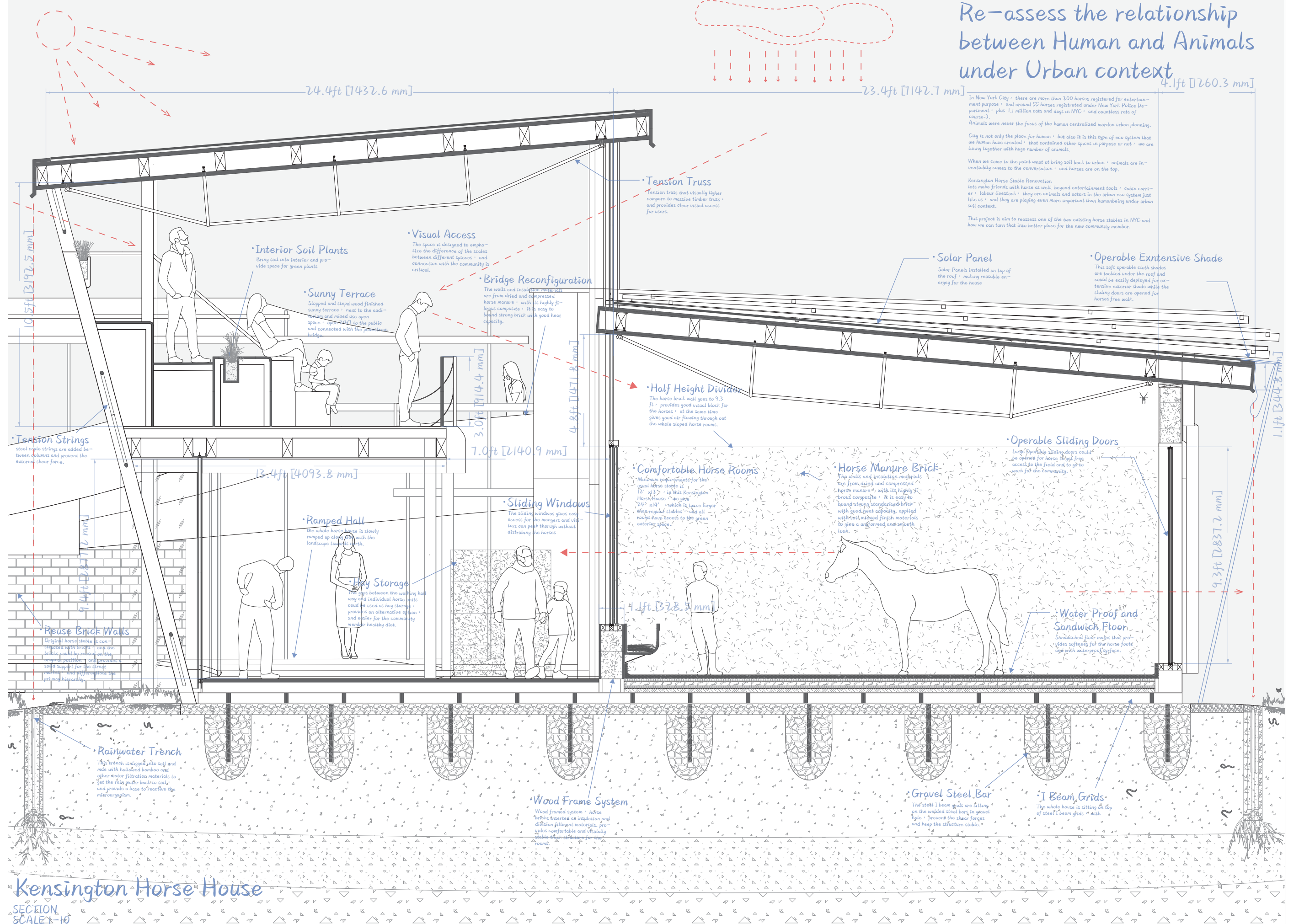


▲ Floor 2 Plan



▲ Physical Model

Re-assess the relationship between Human and Animals under Urban context



In New York City, there are more than 200 horses registered for entertainment purpose, and around 35 horses registered under New York Police Department, plus 1.1 million cats and dogs in NYC, and countless rats of course. Animals were never the focus of the human centralized modern urban planning. City is not only the place for human, but also it is this type of eco system that we human have created, that contained other species in purpose or not, we are living together with huge number of animals. When we come to the point want of bring soil back to urban, animals are inevitably comes to the conversation, and horses are on the top. Kensington Horse Stable Renovation lets make friends with horse as well, beyond entertainment tools, cabin carrier, labour livestock, they are animals and actors in the urban eco system just like us, and they are playing even more important than human being under urban soil context. This project is aim to reassess one of the two existing horse stables in NYC and how we can turn that into better place for the new community member.

Kensington Horse House

SECTION SCALE 1:10



1



2



3



4



1



2



3



4



5



6



1



2



3



4



5



6



1. Lefrak City Lobby



2. Kirkland & Ellis D.C interior



3. LiveRamp New York



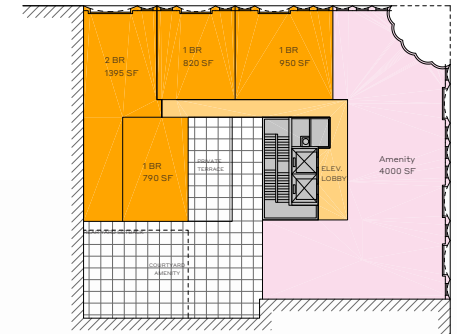
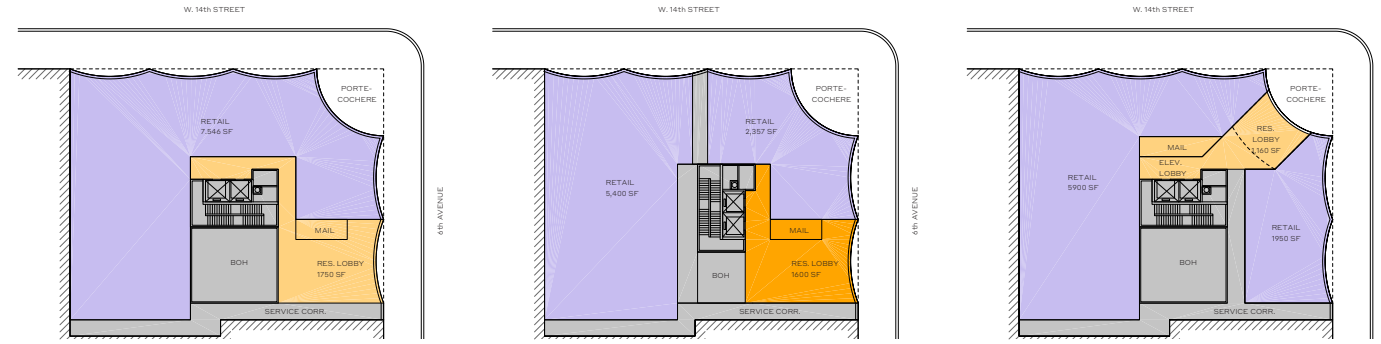
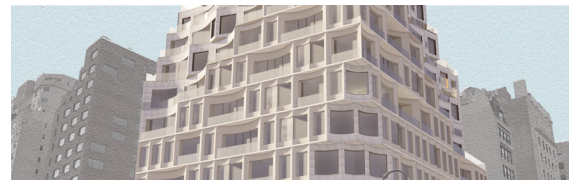
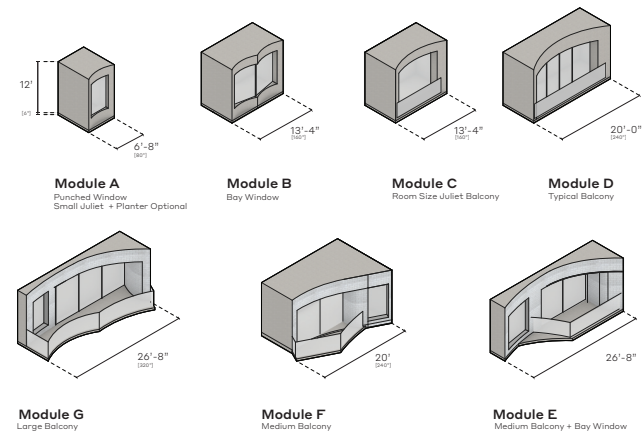
4. Symphony House

Downtown Apartment

Location New York, NY

Date 2021

"Professional Works"





1



2



4



3



5

1. Bund Fosun CenteWuhan
by Kohn Pedersen Fox
2. Chongqing 100
by Kohn Pedersen Fox
3. Park Hyatt Suzhou
by Kohn Pedersen Fox
4. Emmons Hotel
by Wid Chapman Architects
5. Barn House in New York
by Wid Chapman Architects

jingwei **WU**

2024