

PORTFOLIO

KYOUNG HWA LEE

M.S Advanced Architecture Design

Selective Work in GSAPP

Personal

First Name : Kyoung-Hwa
Last Name : Lee
Nationality : Republic of Korea

Certificate

National Technicla Qualification Certificate ; Architectural Engineer

Education

Columbia University, New York, USA
- M.S Advanced Architecture Design 2022

Chung-Ang University, Seoul, Korea
- Bachelor of Architecture (5 years Accredited Program)
- Merit-based Scholarship (2015,2018)
- Incheon Human Resource Scholarship (2017)

Professional experience

VITA Group Architects, Incheon, Korea
- Architect and Interior Designer (2019 - 2020)

Gansam Architects & Partners Company, Seoul, Korea
-Student Intern (2018)

Awards

DESIGN COMPETITION AWARDS

- The 16th Korean Docomomo Design Competition (RUNNER UP, 2020)
- The 1st Sejong Architecture Cultural Festival University Students Competition (GRAND PRIZE, 2018)
- The 10th Korea Remodeling Architecture Competition (SPECIAL PRIZE, 2018)
- The 14th Next Generation Cultural Space Contest (RUNNER UP, 2018)
- The 37th Korea Institute of Architects International Competition (RUNNER UP, 2018)

IDEA COMPETITION AWARDS

- Korea Provisional Government Memorial Building Idea Contest (RUNNER UP, 2018)
- 416 Safety Park Imagination Contest (RUNNER UP, 2015)
- AEDI Korea Business Idea Challenge (GRAND PRIZE, 2014)

Exhibition

Psy-Matrix Crystals Bridge
- Seoul Han River Archive (2016)

Software Skills

DESIGN

- Adobe Creative Suite(Photoshop, Illustrator, Indesign, After Effect), Autodesk CAD, Google Sketchup, Rhino Ceros, Grasshopper, V-ray

DOCUMENTATION

- Microsoft Office Word, PowerPoint, Excel, Adobe Acrobat Pro

Contents

1. Open Air

Complex Learning Library in the Jackson Heights

2. Elephant Shelter

Infrastructure for animal in the future

3. Sound of City

Street furniture for the human sense

Rmix Studio ; OPEN AIR

Hybrid Learning Center with subway

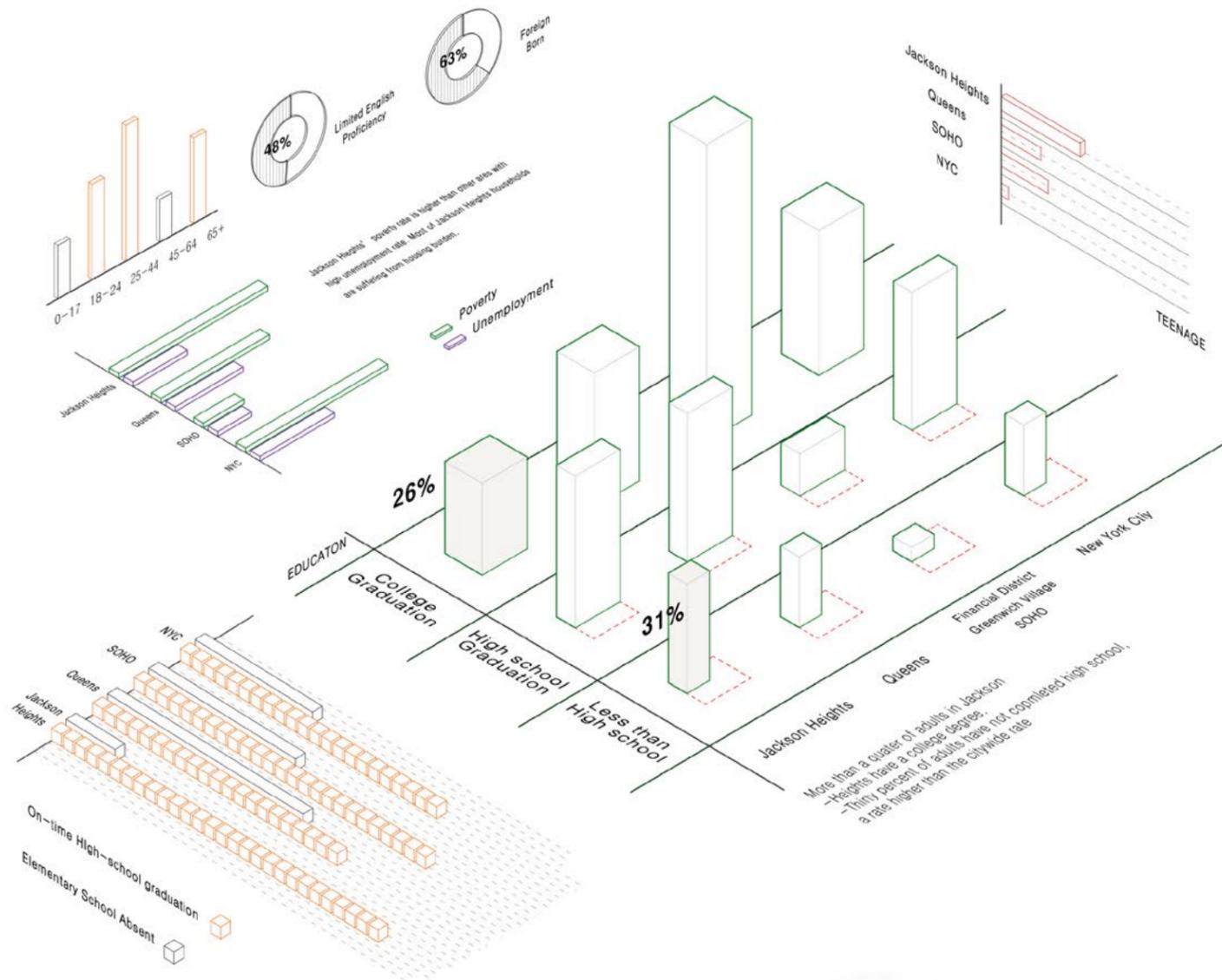
Subject of Project : Summer Studio in GSAPP (2021 Summer)
Location : Jackson Heights – Roosevelt Avenue 74th Street station, NY
Type : Academic / Pair work
Director : Mimi Hoang & Eric Bunge (nARCHITECTS)

The site 'Jackson Heights' has a unique urban context. It has been a new hometown for many immigrants and futher generation. The citizen at this place has diverse races which are using different languages. In here, there are some problems according to the their language.



Jackson Heights ; Suffering from Economic Stress

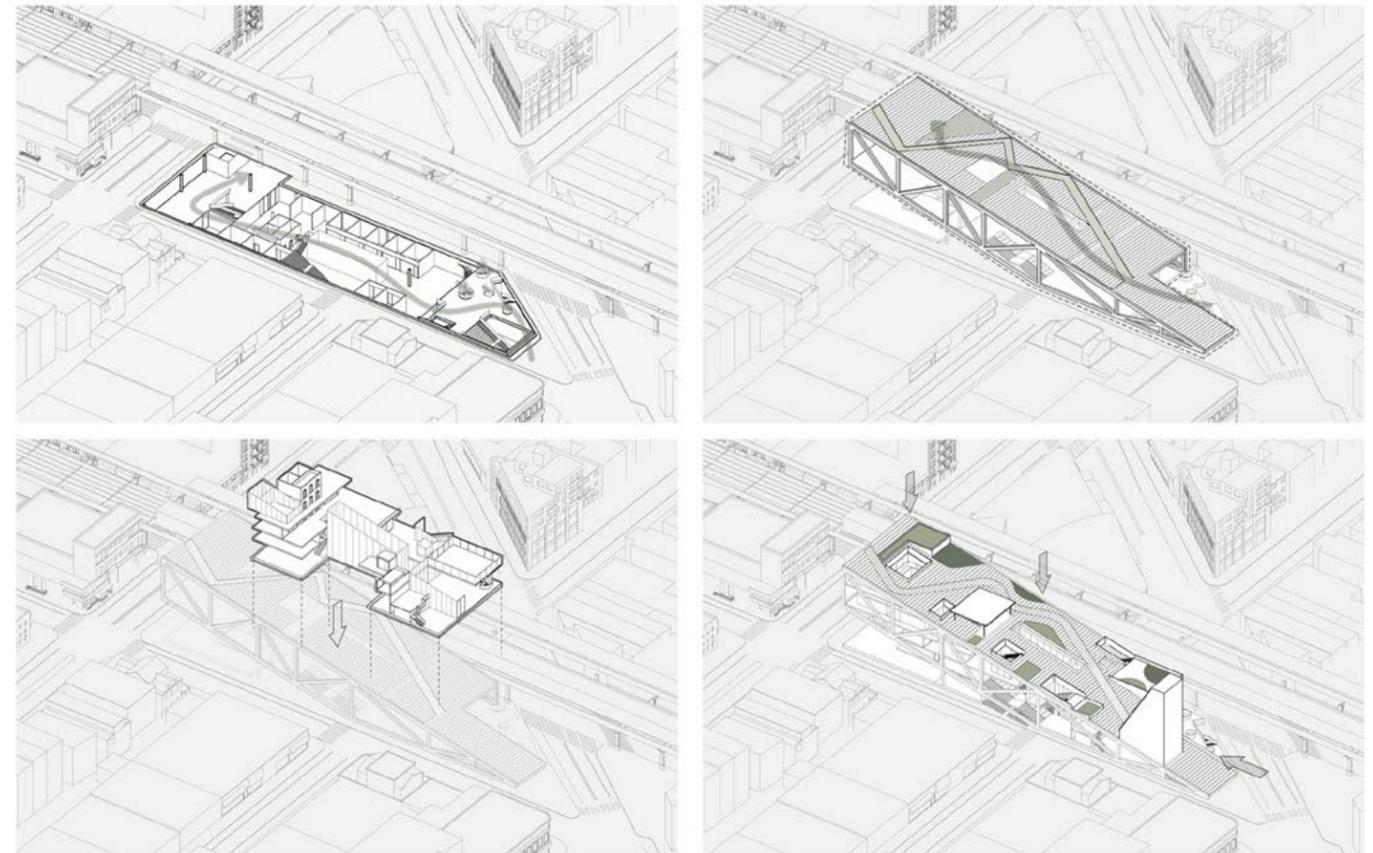
In Jackson Heights, 25% of residents live in poverty, compared with 20% of NYC residents. The economic situation deprives them of opportunities for higher education. That's the reason why high school and college enrollment rates are low despite the region's high scores and attendance rates at elementary and middle school.



REMIX ; 50/50

Every cities are staked in many layers. Here in Jackson Heights, there are lots of foot traffic workers and to them, subway station plays important role.

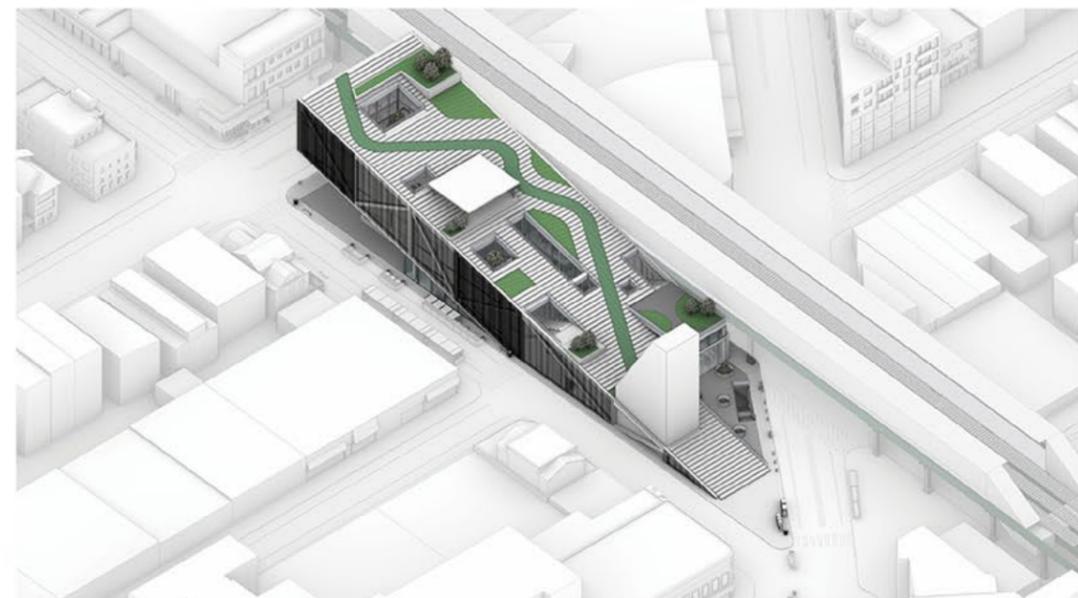
A hybrid education center is created in the center of city by remixing this infrastructure and education facilities necessary for the residents.



Design Process

Close the 76th St and diversity plaza and connect the two block, reopening 37th Rd. The retail at the plaza will be relocated under-ground arcade.

Then, place an inclined mass and extend the plaza through its rooftop. Middle of the mass, locate the Open Library which connects each educational facilities, at the same times, it serves as a structures supporting the inclined mass. Vertical voids penetrate from the roof to the underground arcade and form a courtyard for the light and green space.





FACADE FROM 37th Road

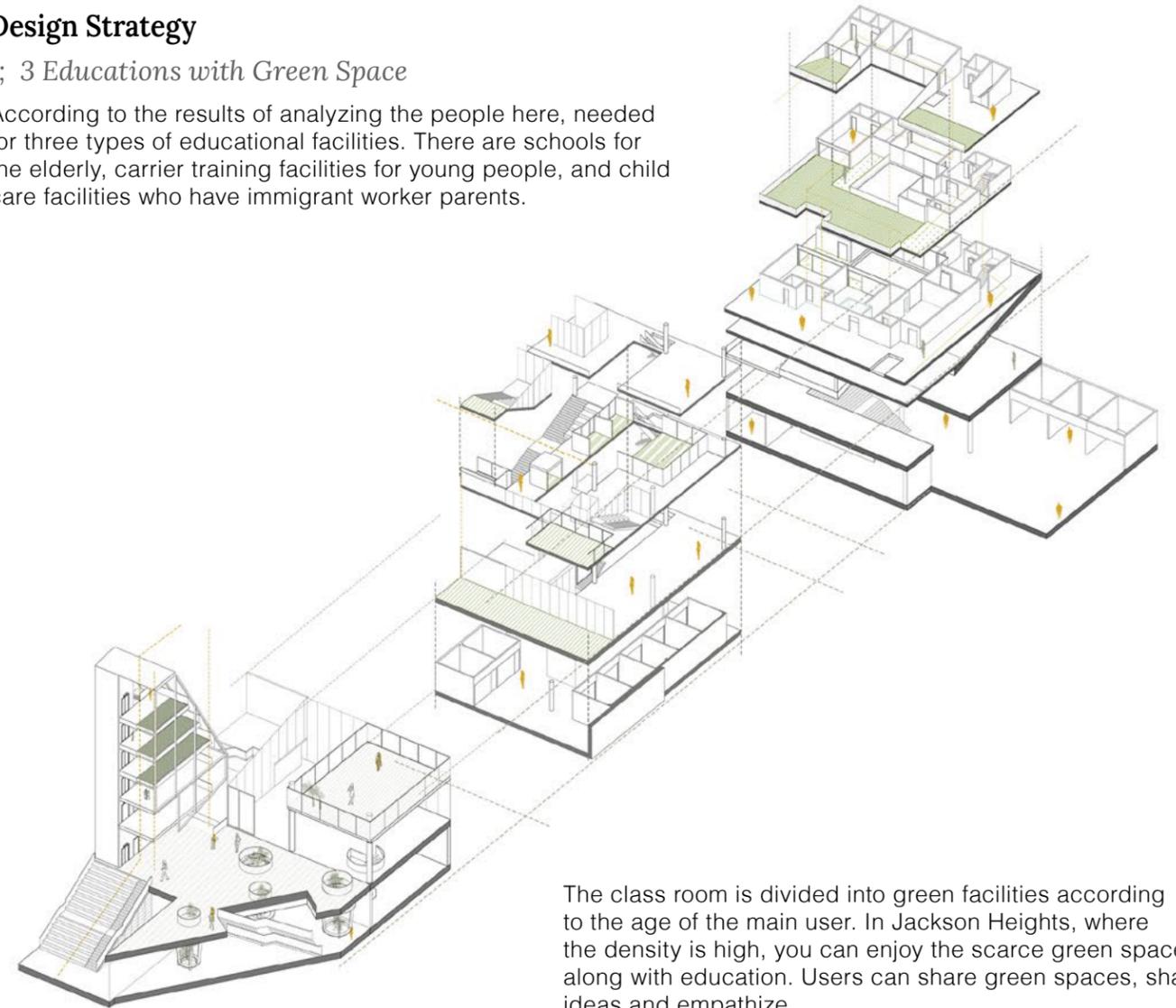


Entrance from the East

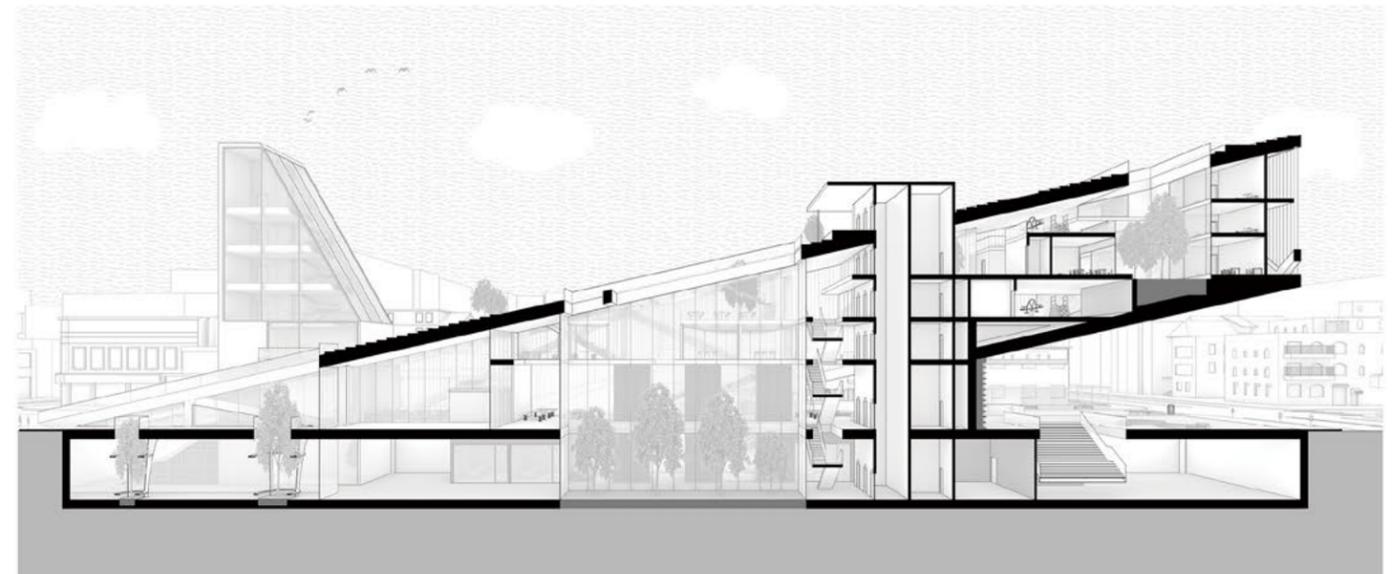
Design Strategy

; 3 Educations with Green Space

According to the results of analyzing the people here, needed for three types of educational facilities. There are schools for the elderly, carrier training facilities for young people, and child care facilities who have immigrant worker parents.



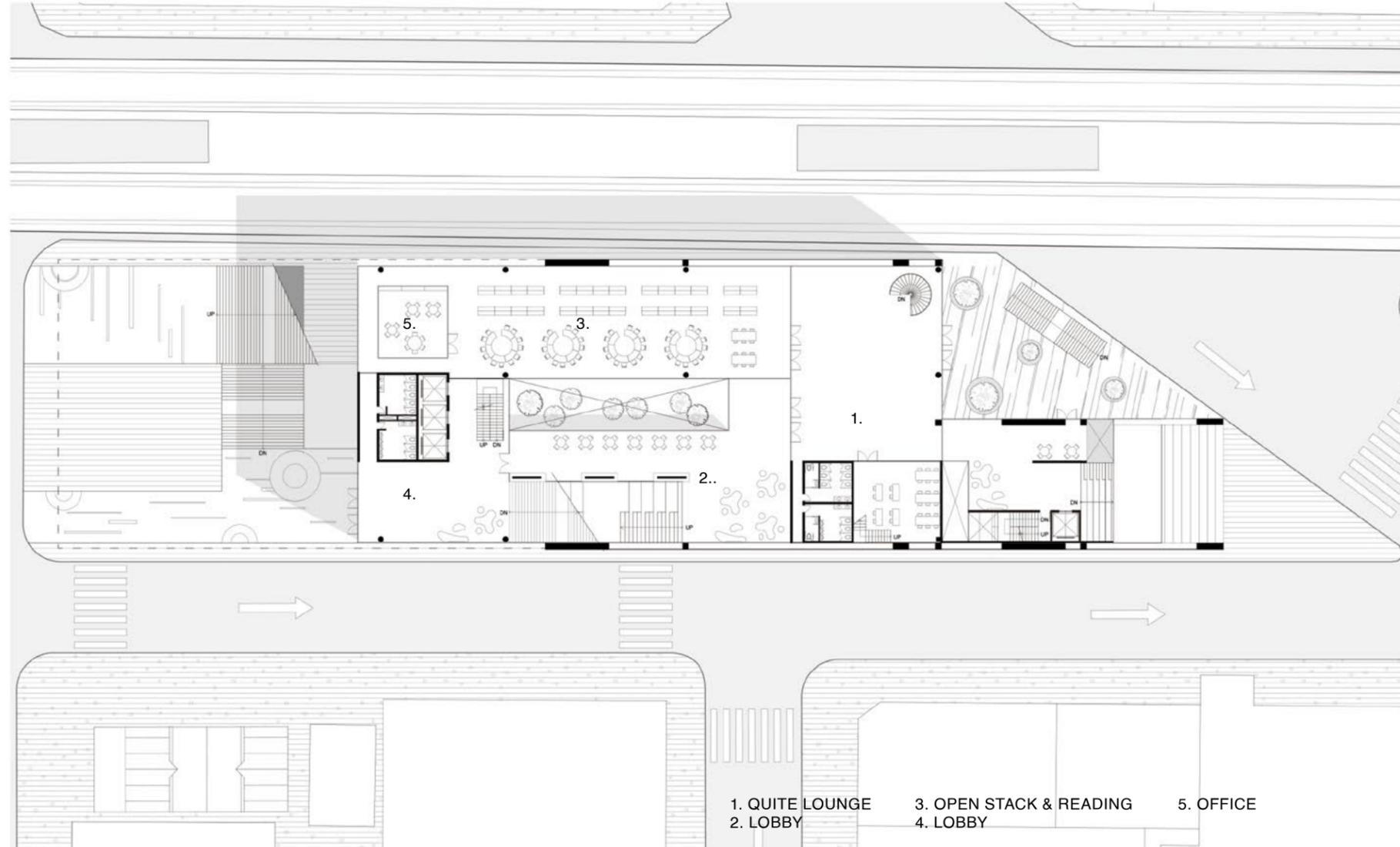
The class room is divided into green facilities according to the age of the main user. In Jackson Heights, where the density is high, you can enjoy the scarce green space along with education. Users can share green spaces, share ideas and empathize.



Education Facility with Green Space

First Floor Plan ; *Easy access to citizens*

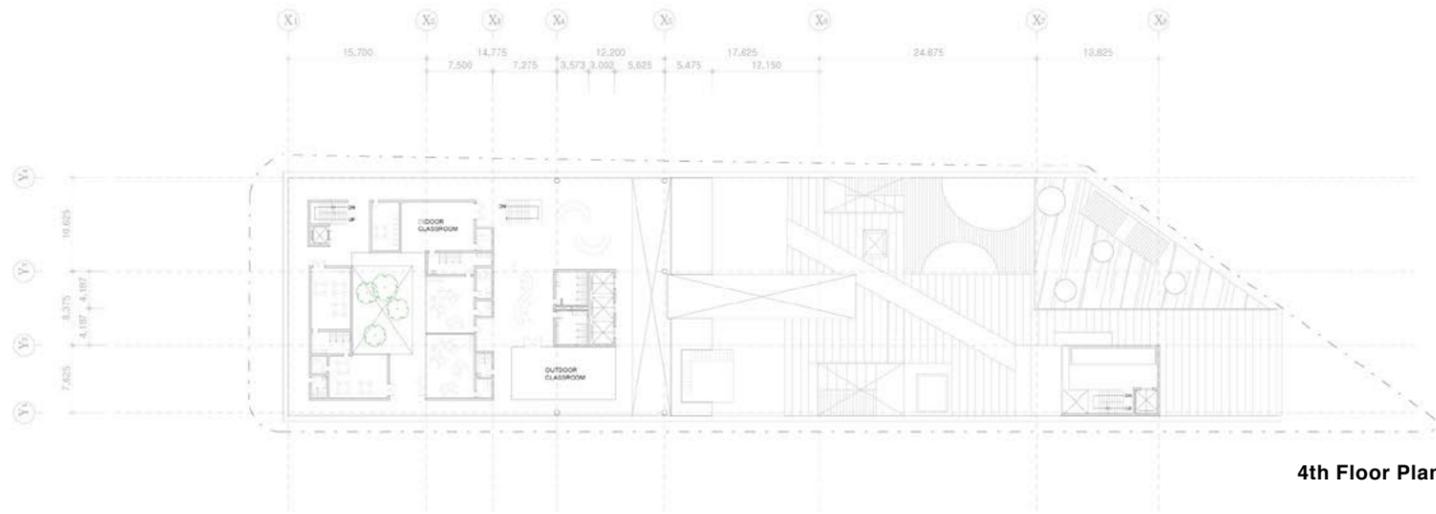
The educational facility, which faces between the subway station and Roosevelt Avenue, is accessible via both 74th and 75th Streets. Easy and quick access for busy Jackson Heights residents. Also, at 75th St, it can be connected to the Rooftop Green Park. The rooftop park, accessible from the first floor, has a slope shape, allowing you to enjoy greenery up to the top floor. In addition, the green atrium, which runs from the basement, is connected to the necessary library on each floor, so you can enjoy an open educational facility.



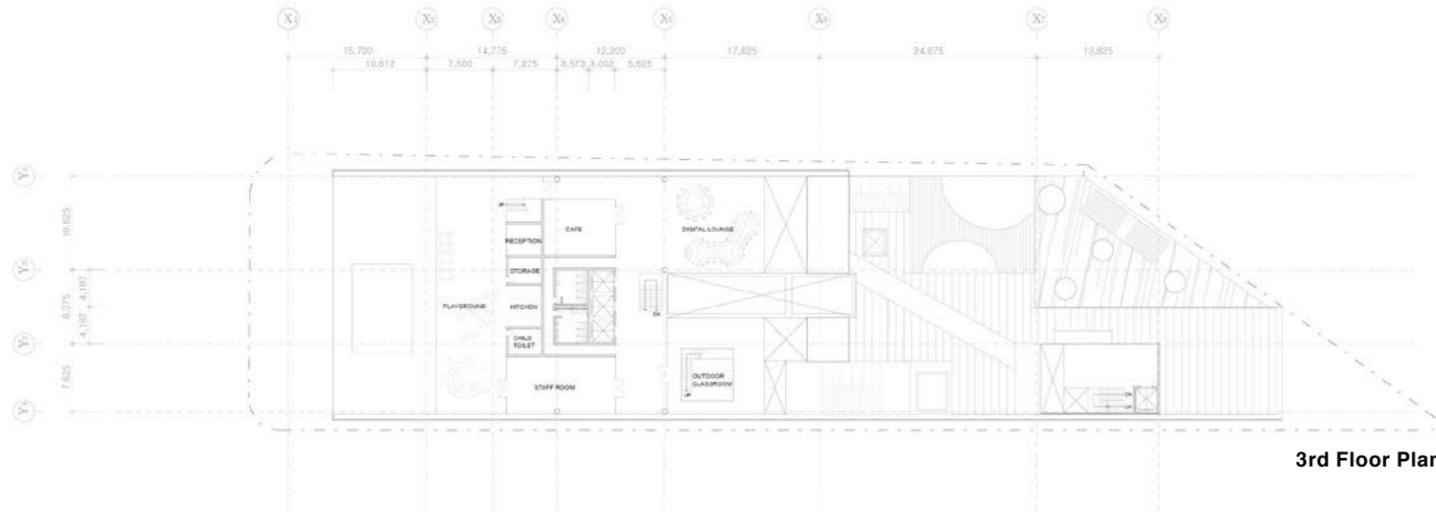
Green Courtyard starting from the basement



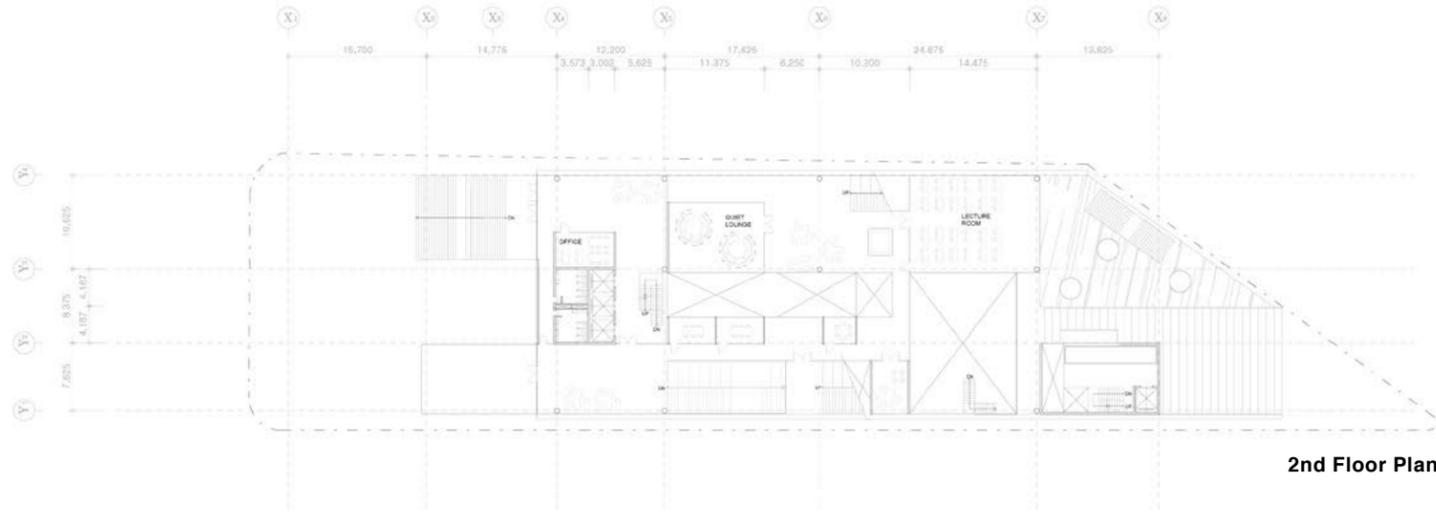
After school/Carrier School Education Center



4th Floor Plan



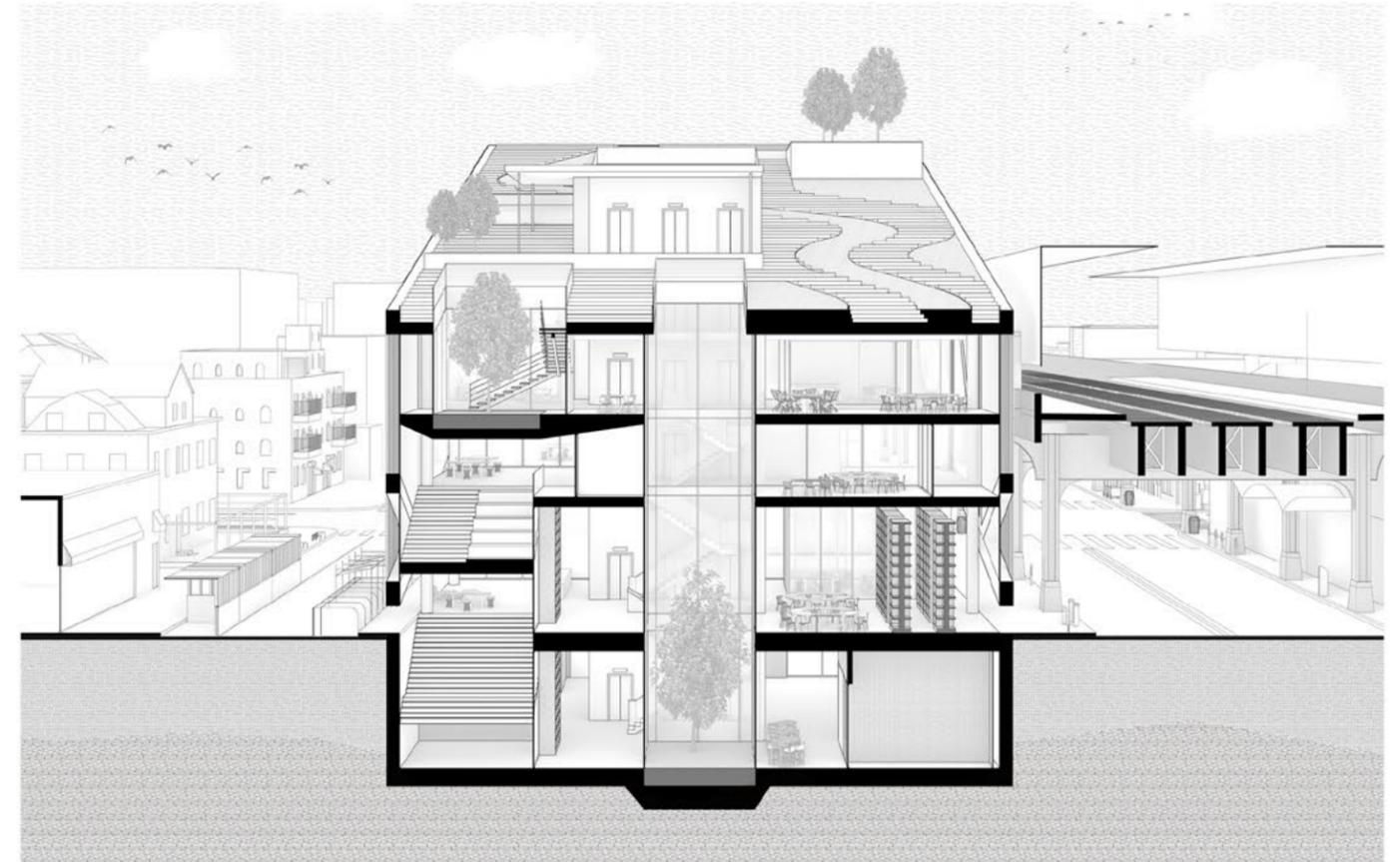
3rd Floor Plan



2nd Floor Plan

Breathe in Jackson Heights ; Education/ Greenary

Due to the slope, the shape of the plane changes as the floor rises. If you go up gradually along the roof, you can see the movement of the city at a level higher than the platform of the subway, which divides the order of educational facilities. Education facilities for the elderly are located on the lower floors, career classes for young people are located on the middle floors, and childcare facilities for children are located on the upper floors.

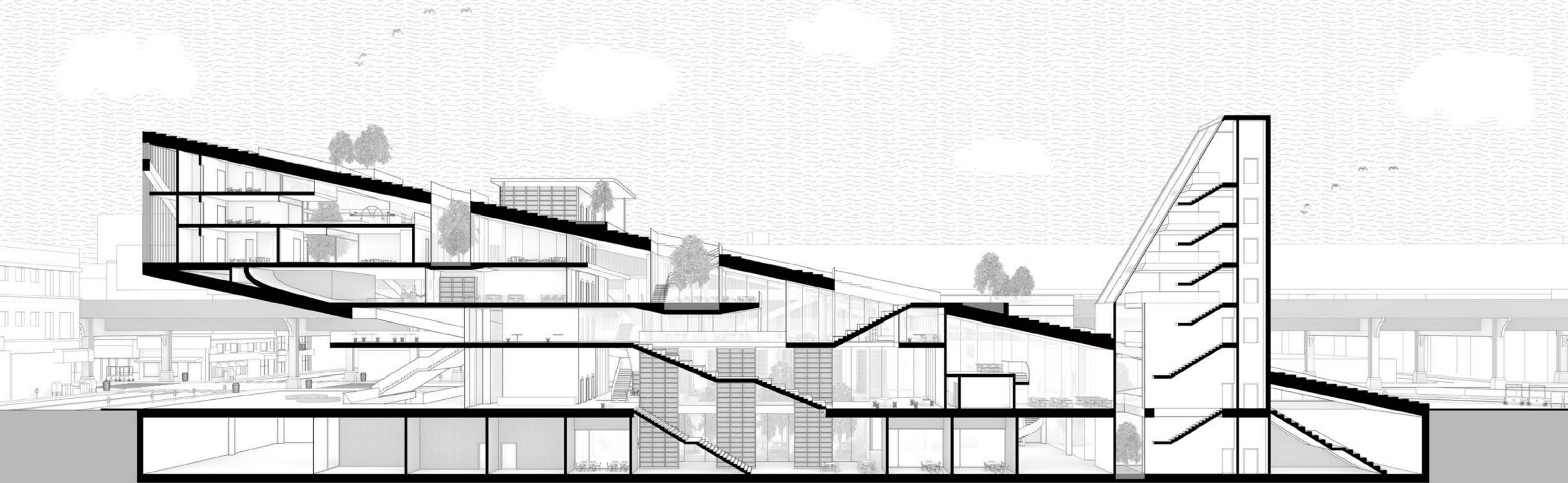




The nursery facilities for children located on the 3rd and 4th floors have each green space and are designed in a courtyard shape so that children can play together effectively and safely.



Educational facilities for the elderly consist of a separate building. For the elderly with limited mobility, a separate core was installed to make it more effective and safe to view the city.



Risk Studio ; Elephant Shelter

Infrastructure for animal in the future

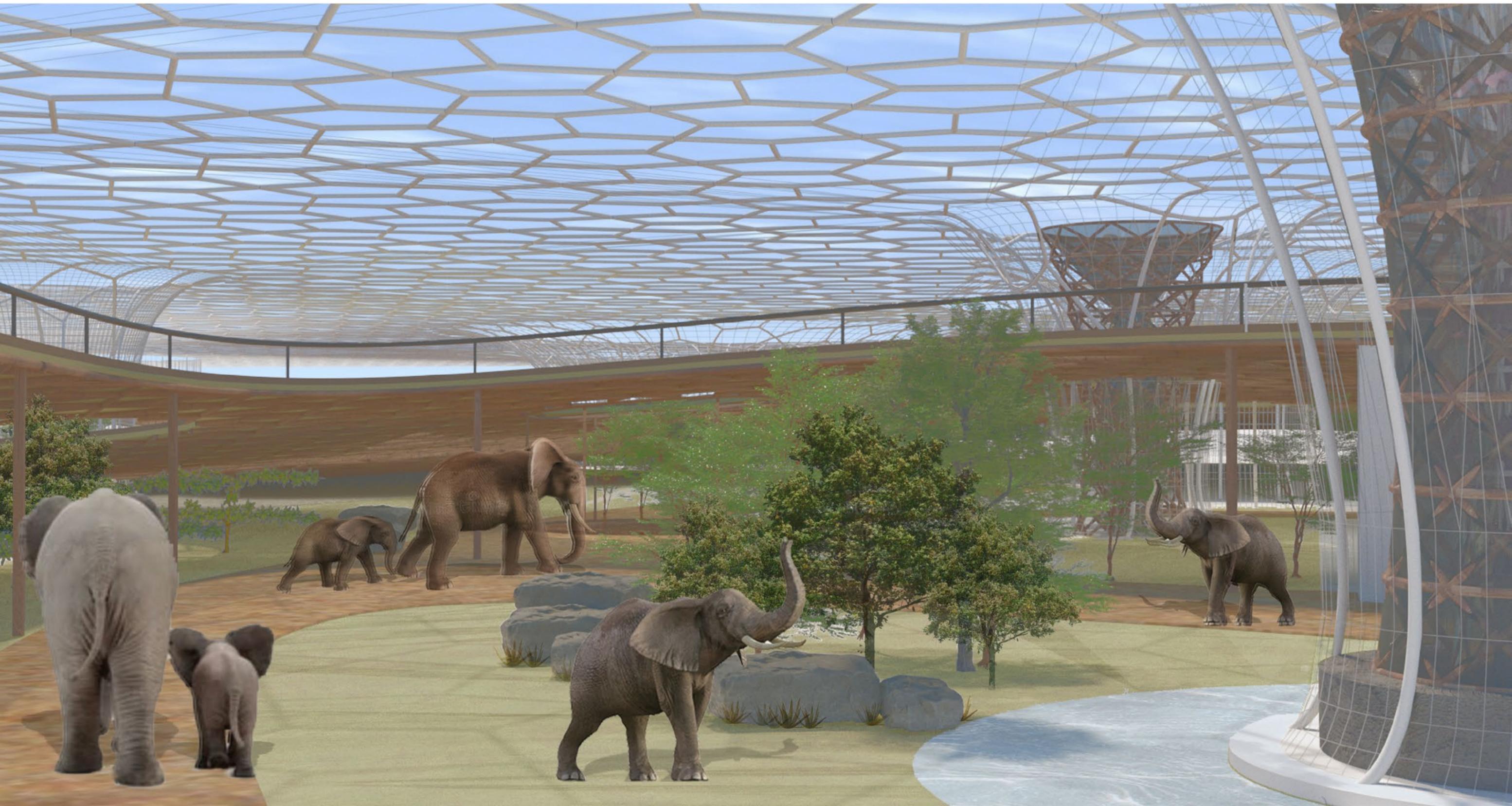
Subject of Project : Spring Studio in GSAPP (2022 Spring)

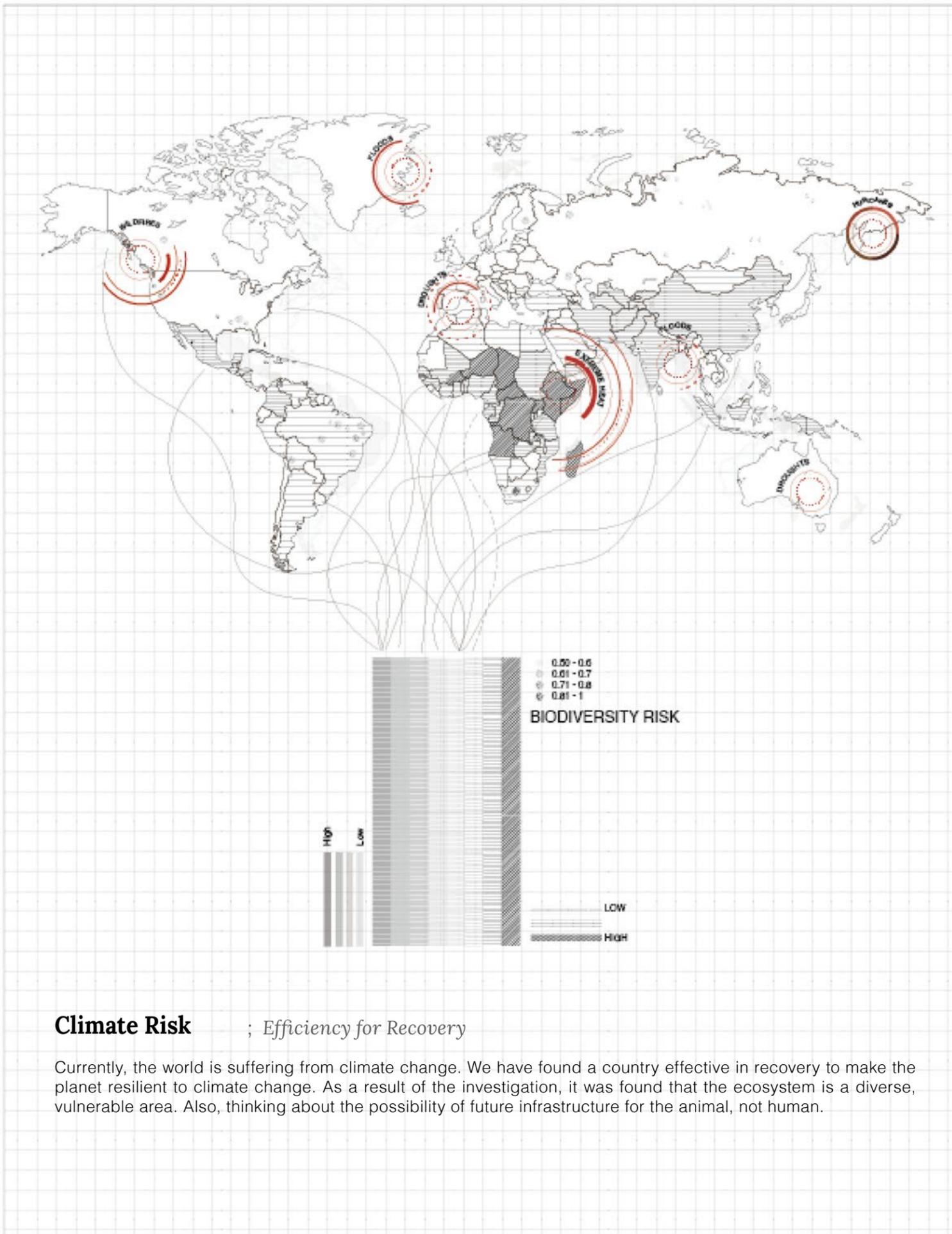
Location : Lake Manyara, Tanzania, Africa

Type : Academic / Pair work

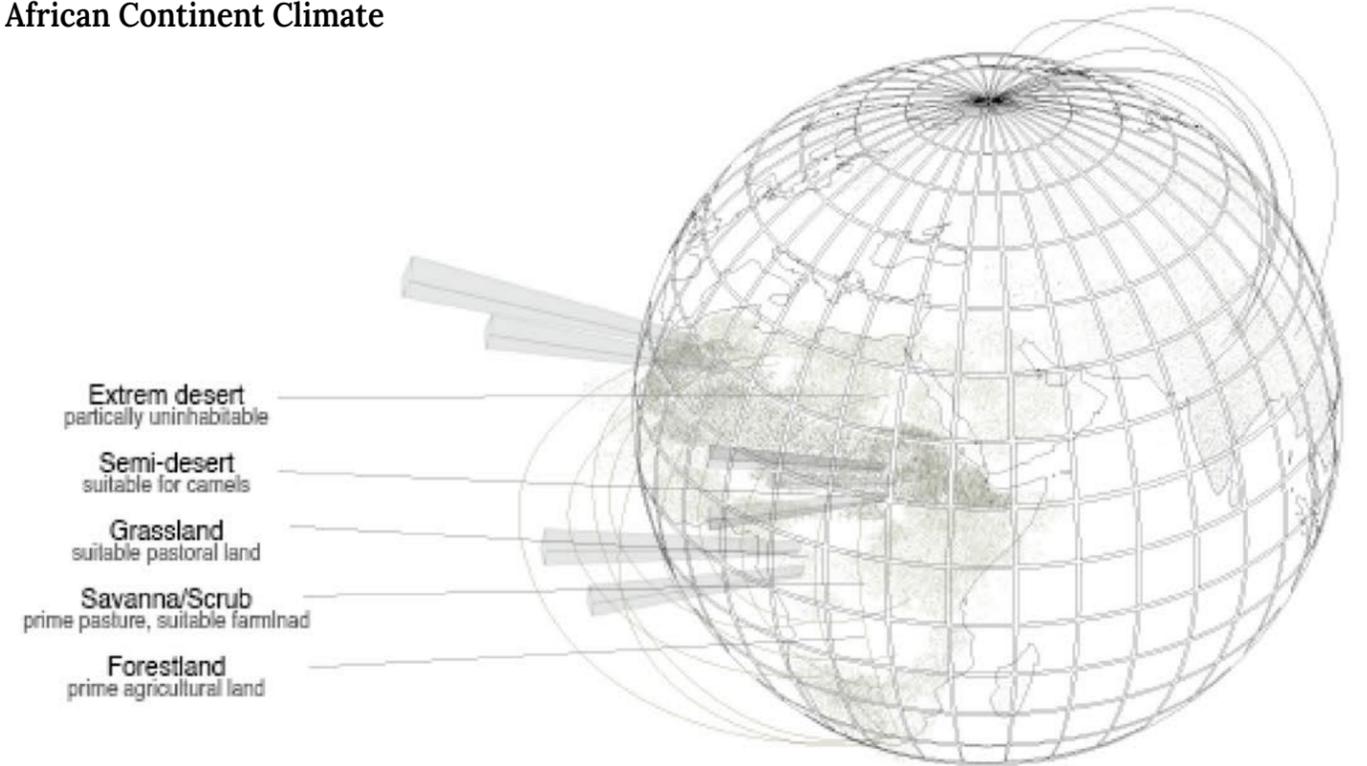
Director : David Benjamin

Africa is the most vulnerable area where the temperature increases due to climate risk and also one of the most efficient areas to recover from global warming. Climate risk in Africa threatens not only humans but also biodiversity. Maintaining biodiversity eventually determines the viability of people in the region.



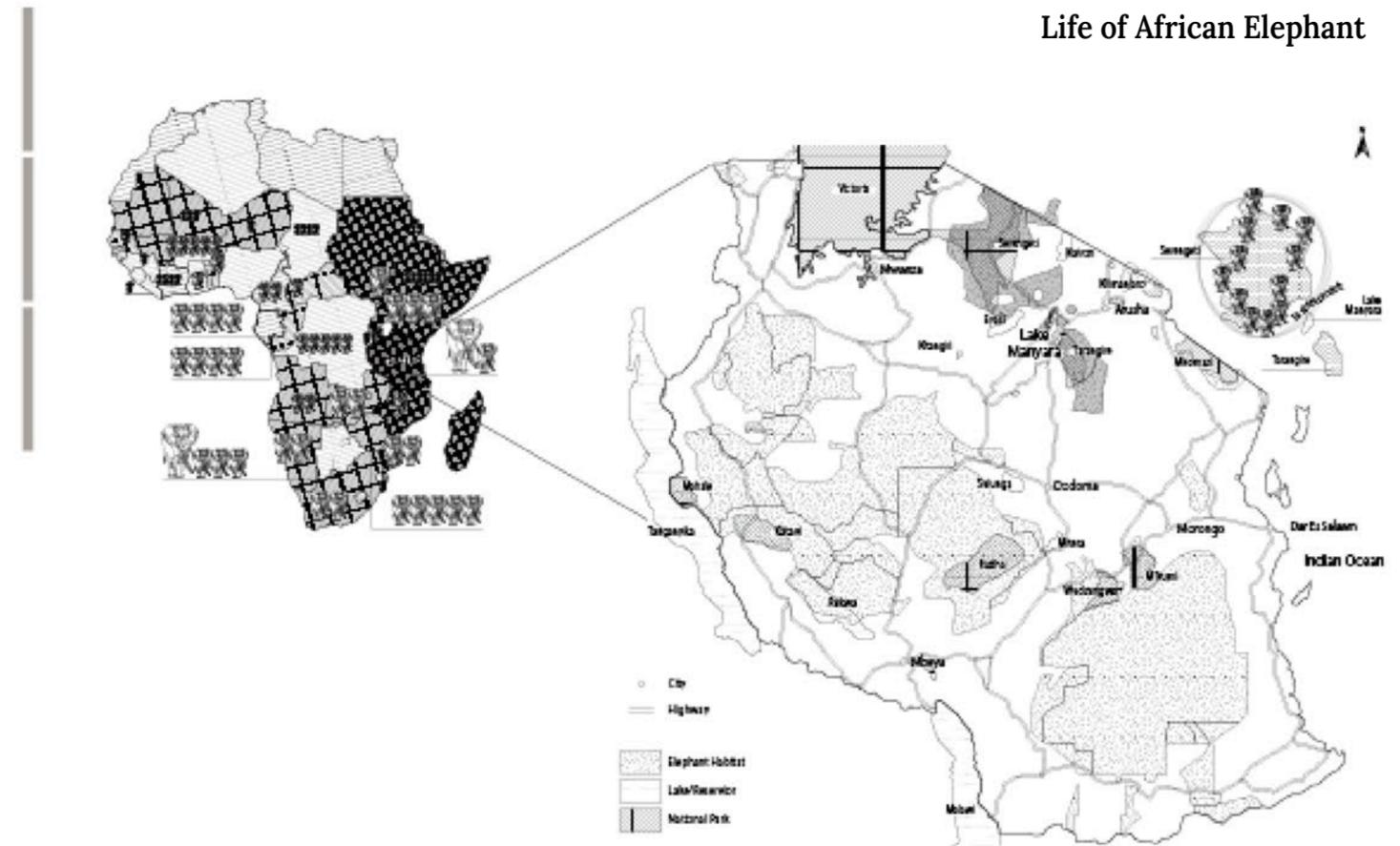


African Continent Climate



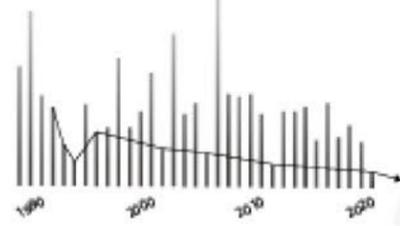
Tanzania is more vulnerable than others in Africa and has the second largest population of African elephants, where its climate gets extreme heat. Elephants migrate all year round in search of water, Lake Manyara exists in conjunction with Serengeti and Tarangire.

Life of African Elephant



Environmental Conditions of Lake Manyara

Water Body
Annual Rainfall (mm/year)

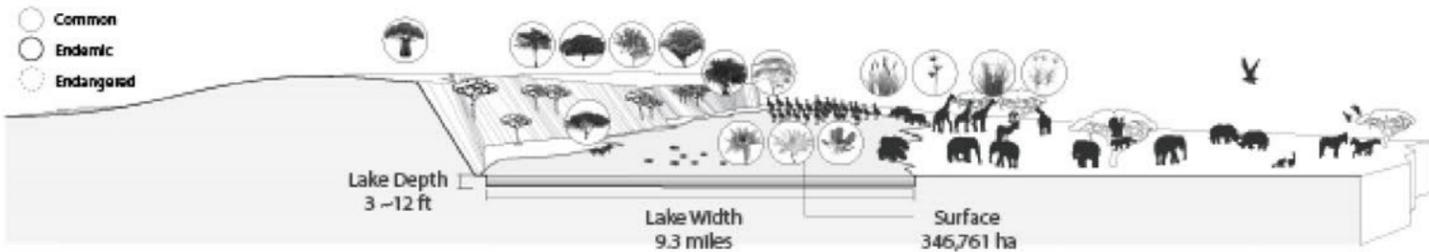
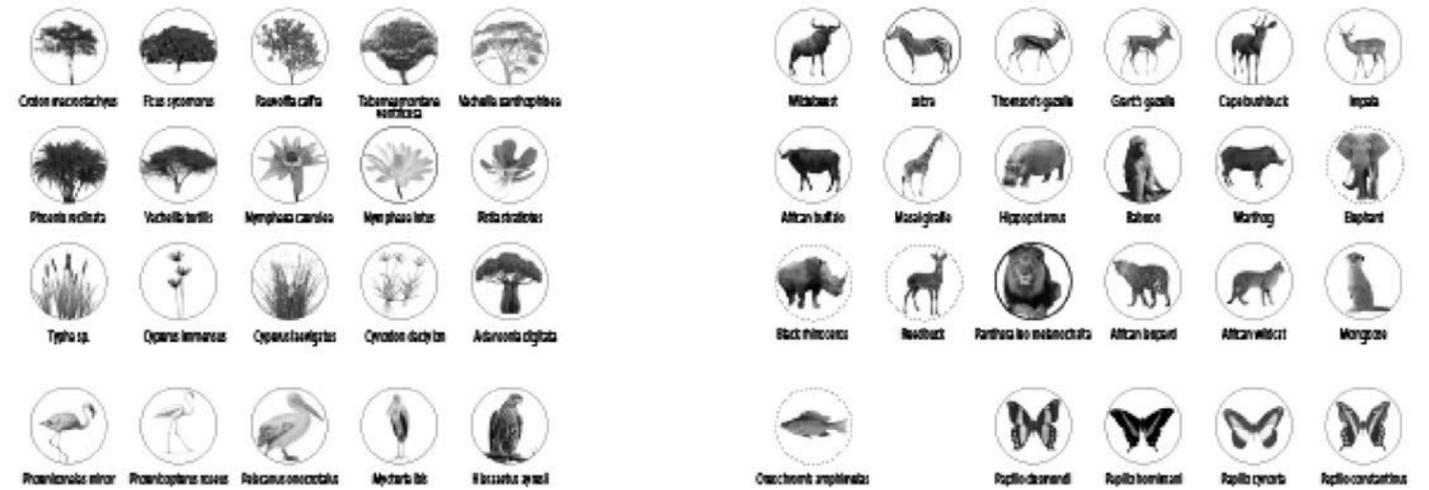


Ecology
Manyara National Park

Human Occupancy

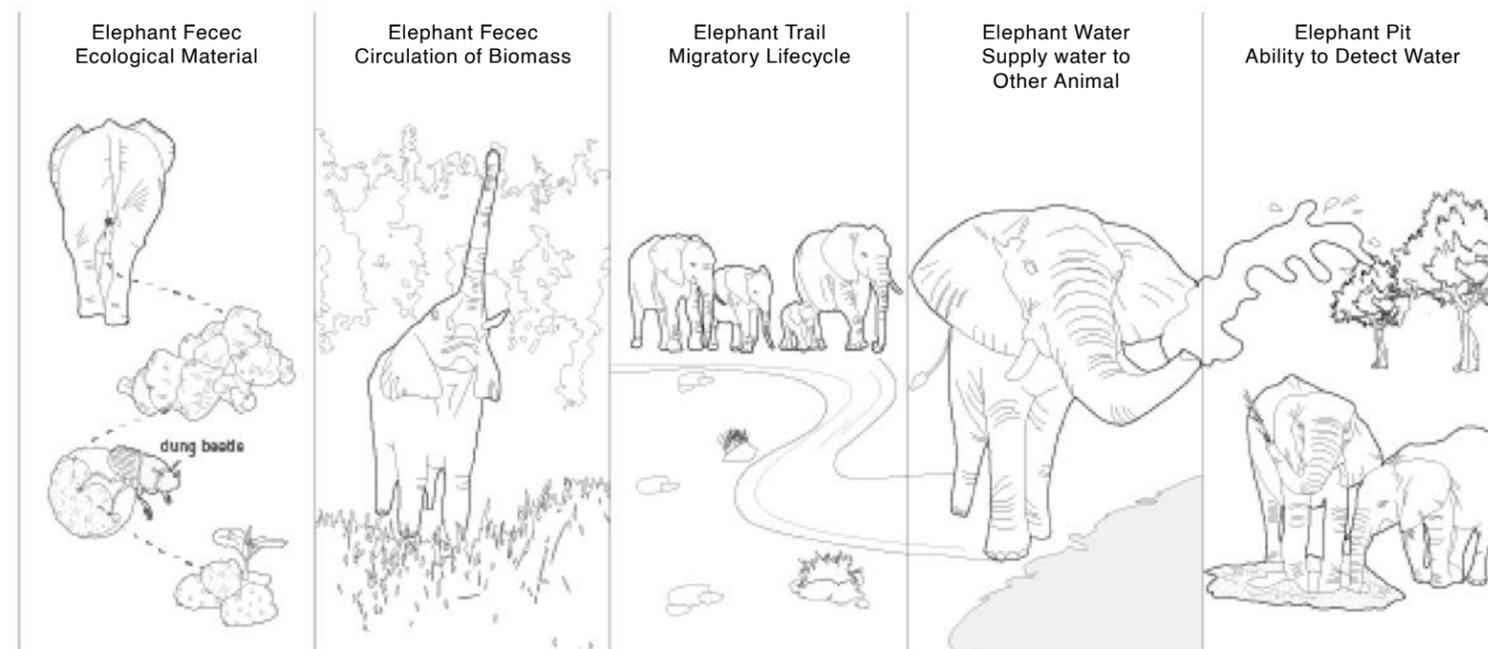
Lake Manyara Biosphere Reserve

Lake Manyara National Park has the greatest biomass density of mammals in the world.



Elephant as Biomarker

The African elephant is the most important species that indicates the viability of wilderness from drought. The life cycle of African elephants can be described as a journey for water and biomes in African Continent.





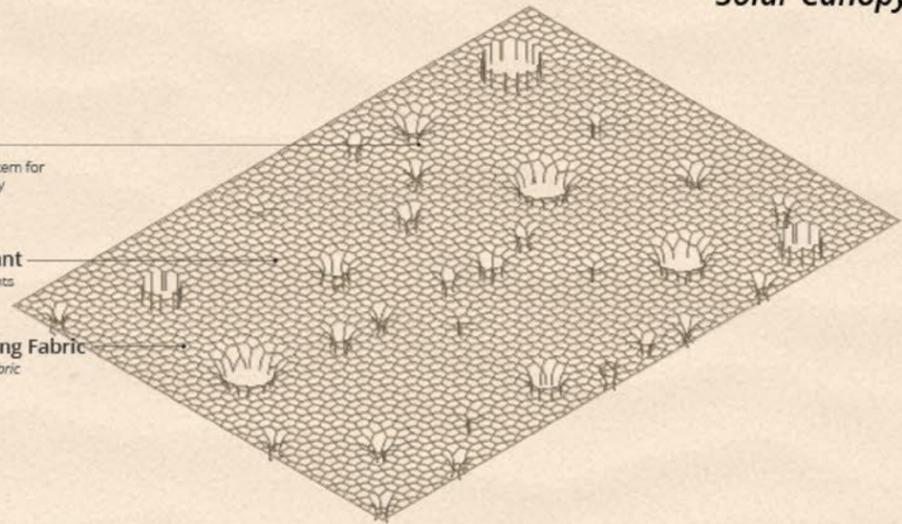
Proposed Cycle of Architecture

Lake Manyara



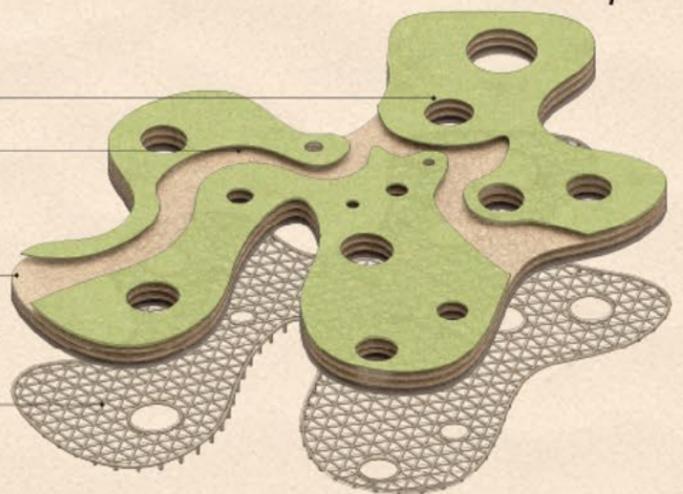
Solar Canopy

- Water Pillar**
Water Harvesting System for Resilience of Greenery
- Shade for Elephant**
Safe Zone for Elephants from Extreme Heat
- Moisture Retaining Fabric**
Degradable Warka Fabric Using Natural Fibers



Elephant Terrace

- Terrace**
- Elephant Trail**
The Nature of Elephants That Feed on The Move
- Degradable Slab**
Decaying With Intended Period
Material Can Be Eaten by Elephants
- Supporting Structure**
Decaying With Intended Period



Ground Spcae

- Vegetation Recovery**
Conservation of Soil Moisture To Restore Vegetation
- Research Facility**
Interaction Between Humans And Elephants
- Elephant Trail**
- Open Walls**
Provides Spaces for Elephant's Activities
- Open Space for Elephant**
- Pond**
Water Places are essential To Elephant's Life



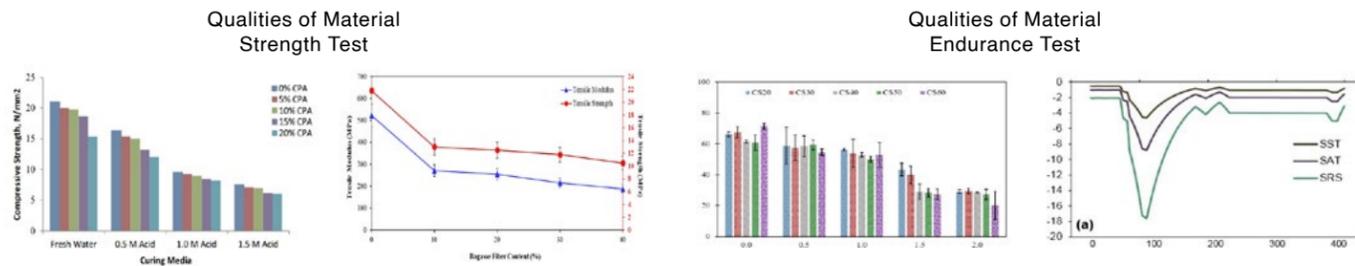
Material Experiment ; Sugarcane Bagasse & Cassava

Sustainable & Bio - Degradable Material in Africa



The first proposal is to use sustainable but at the same time decaying African material for structure because architecture does not have to exist forever in nature.

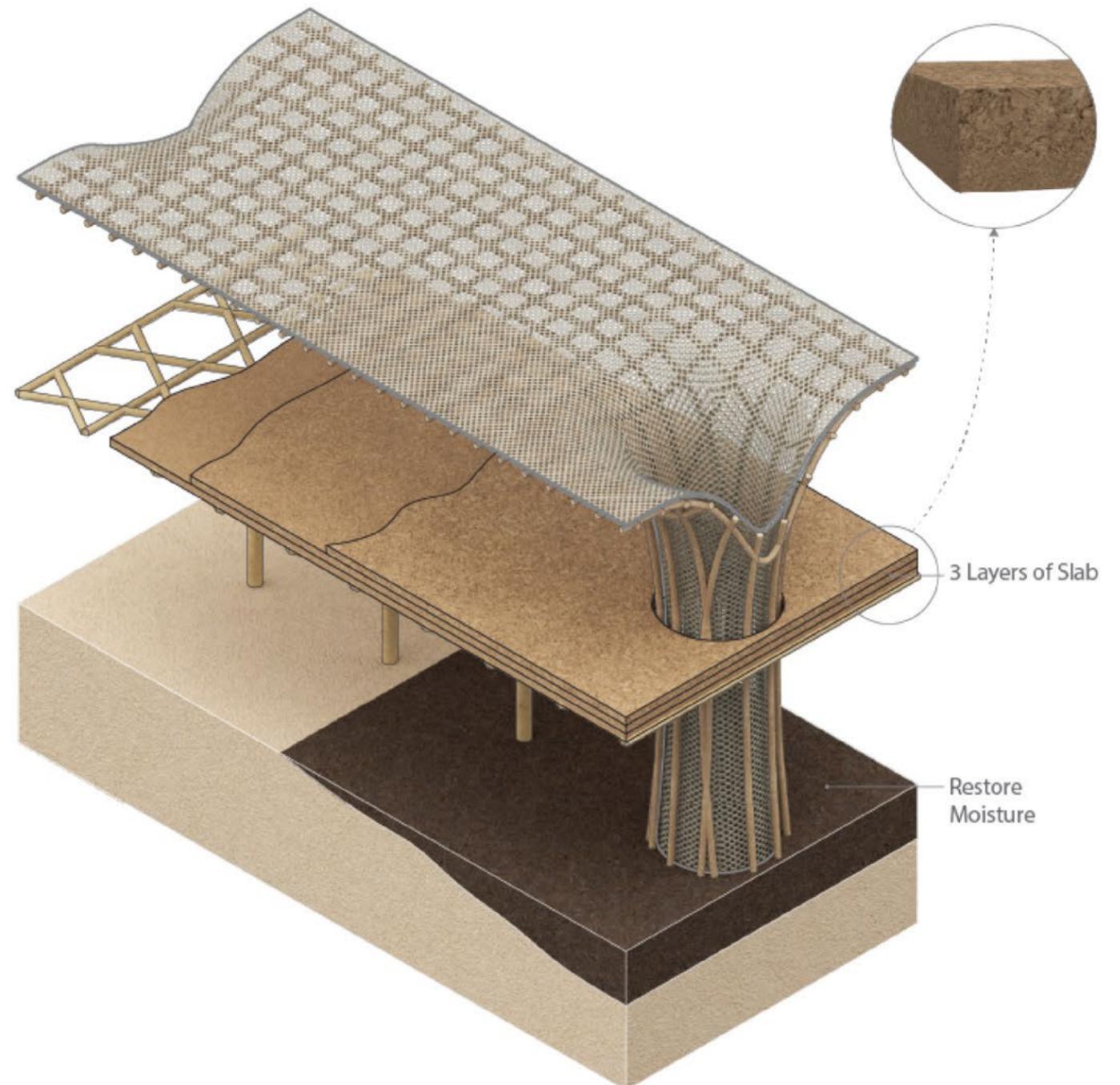
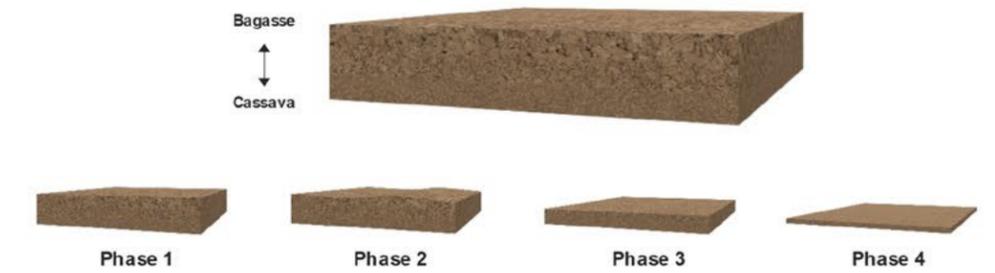
By considering the following two conditions, We selected cassava and bagasse by exploring natural materials that can be used as building materials.



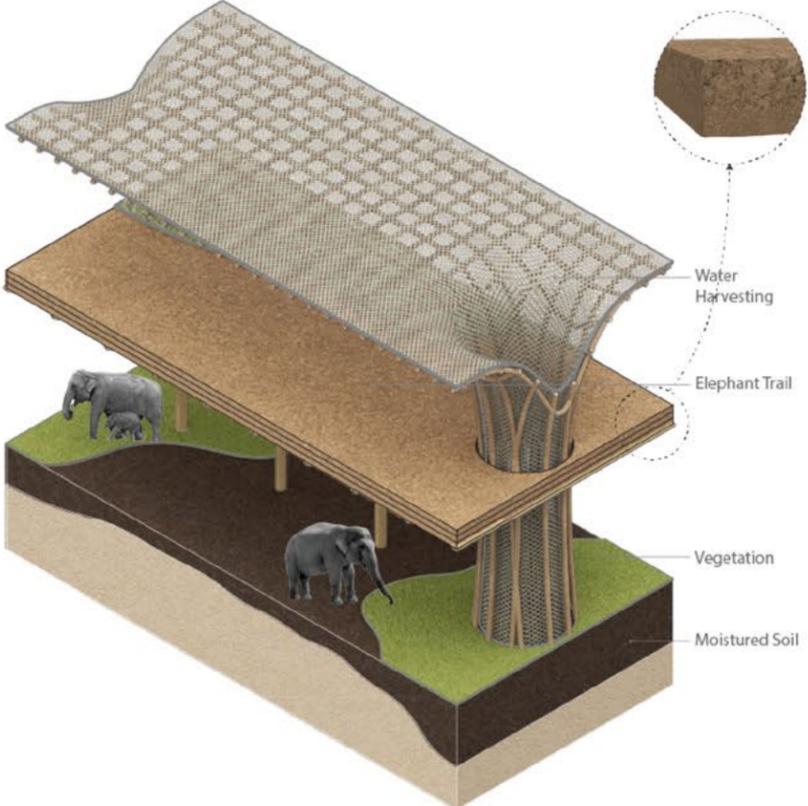
Cassava resists compression and water well, and bagasse resists tension and high temperatures.



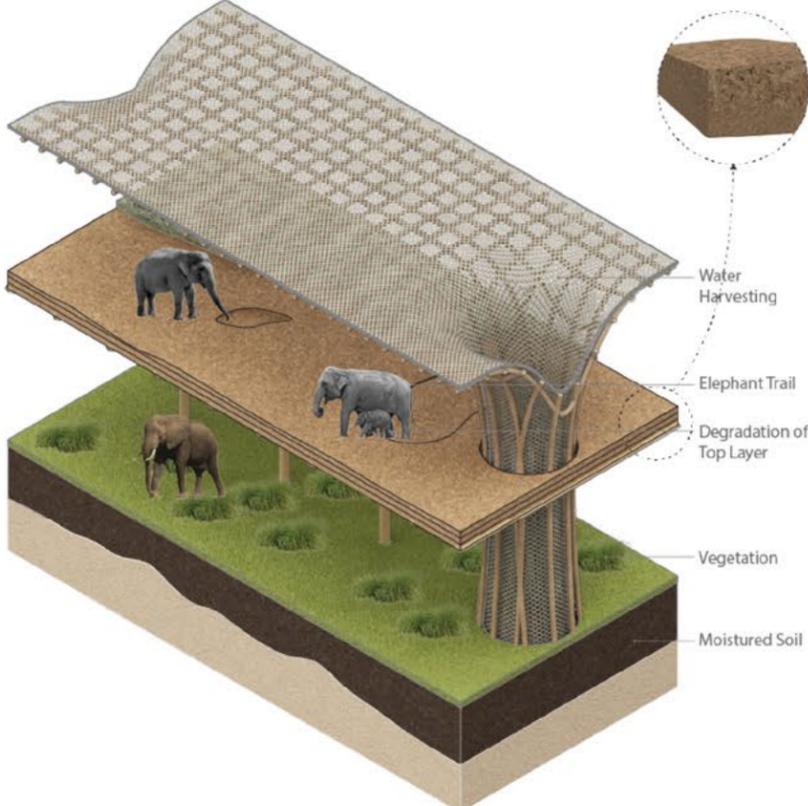
Application of Material ; Degradable Slab



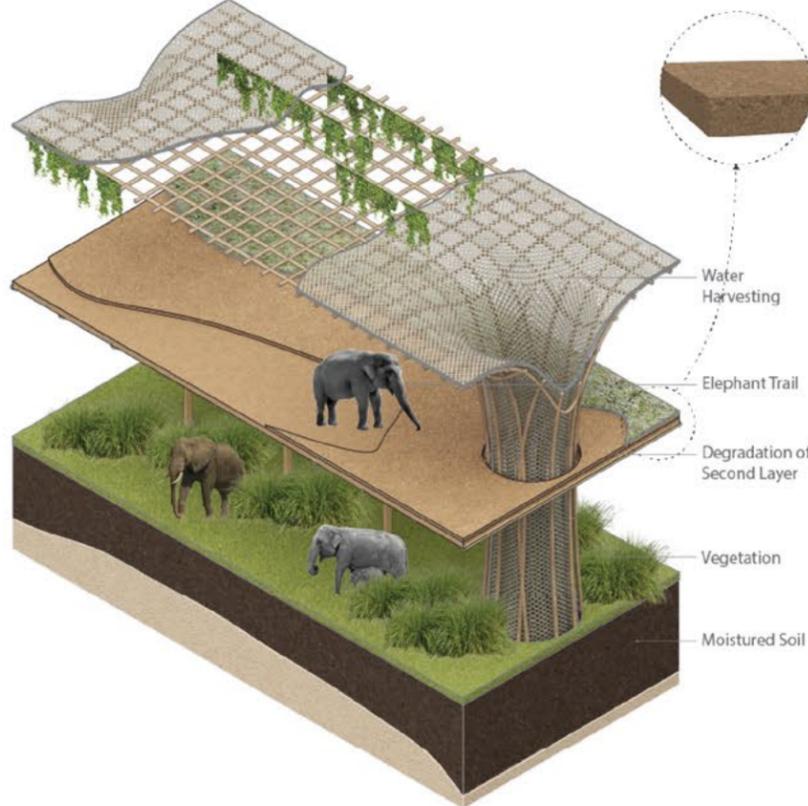
Phase 1 ; Application of Material



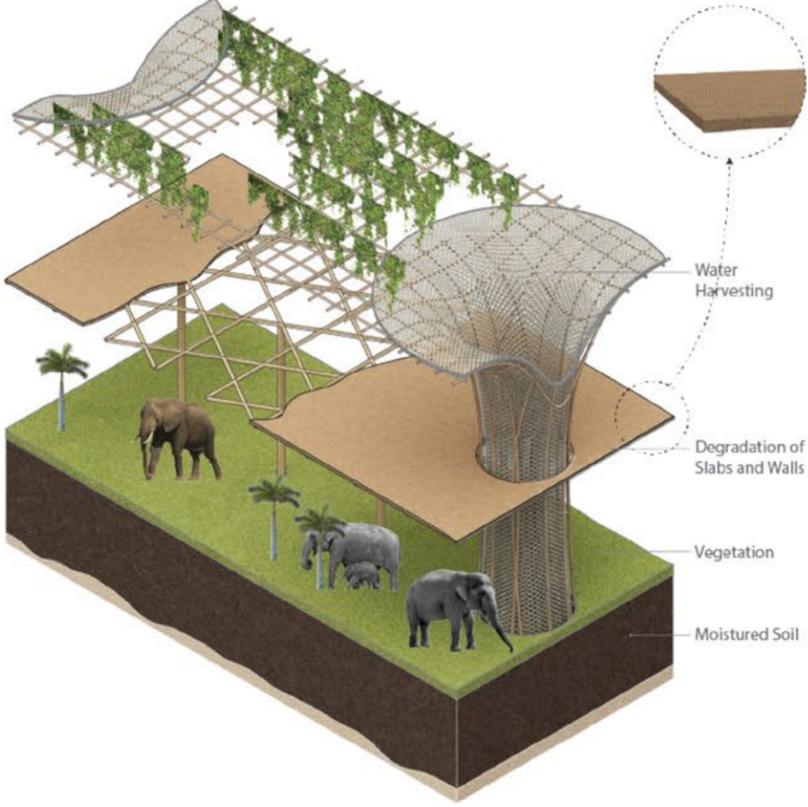
Phase 2 ; Accumulation of Local Biome



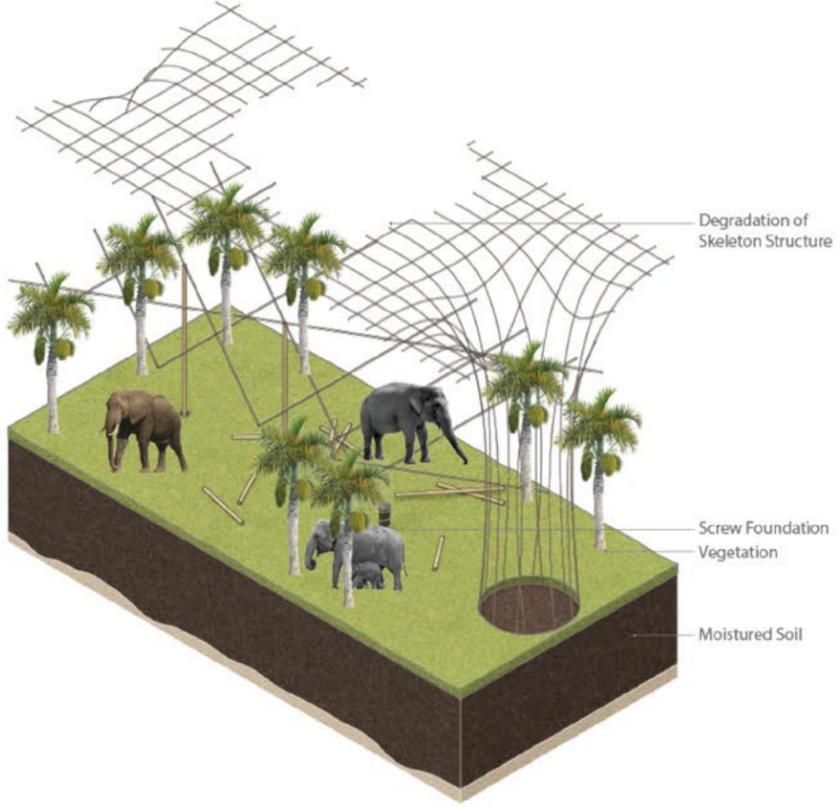
Phase 3 ; Beginning of Degradation



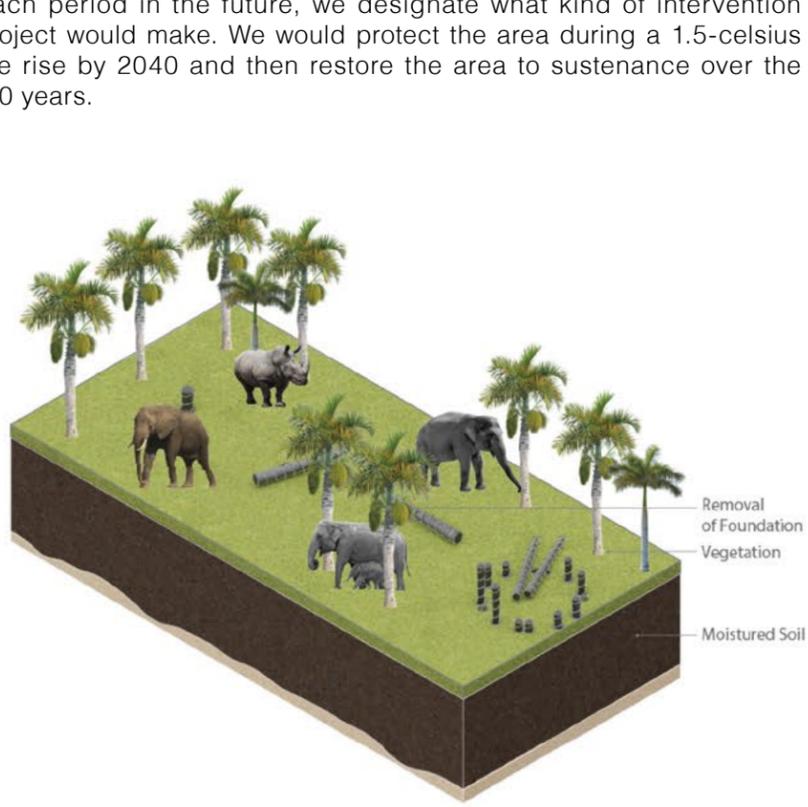
Phase 4 ; Structure Degradation



Phase 5 ; Deconstruction of Architecture



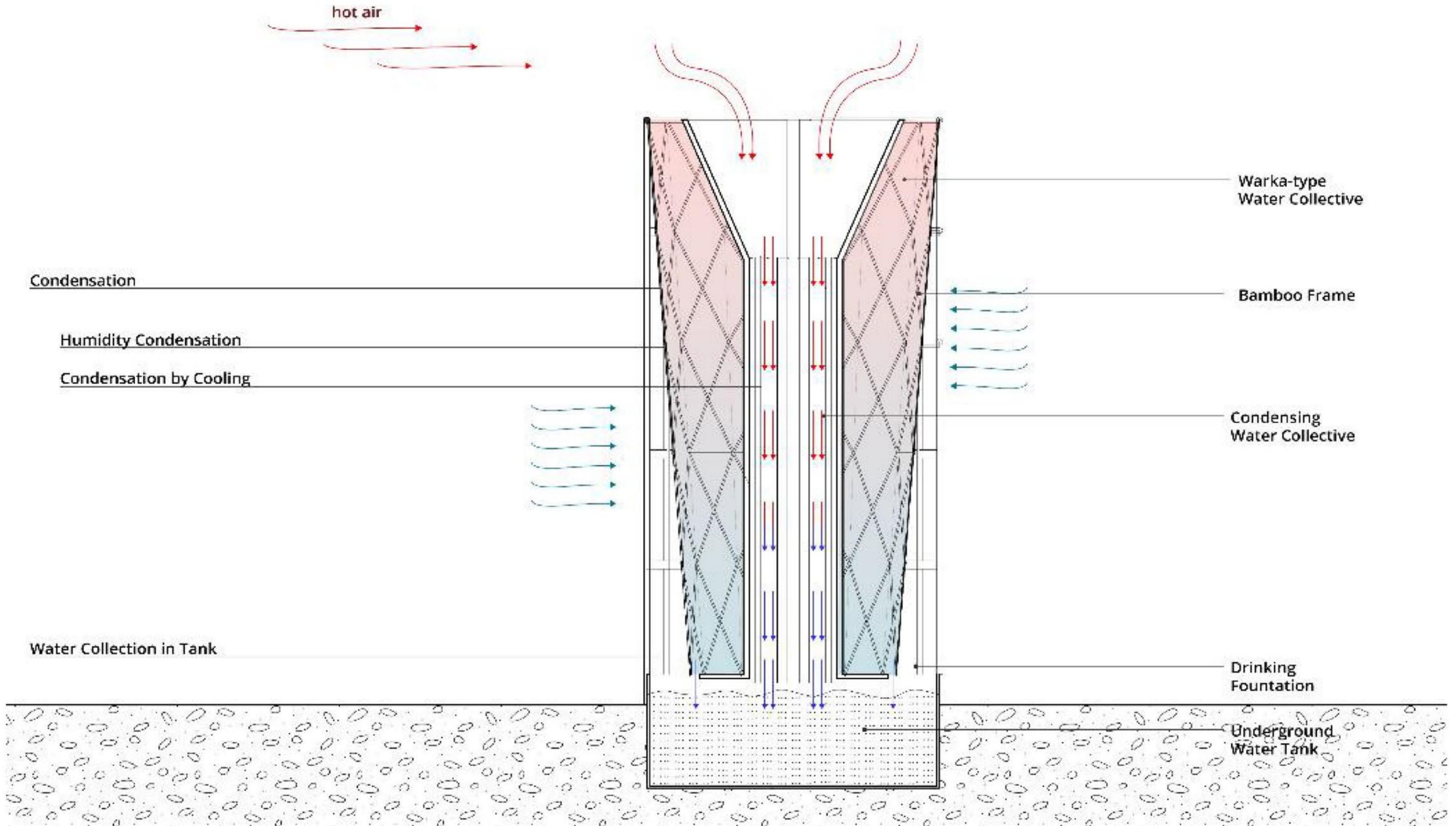
Phase 6 ; Resilience of Ecosystem

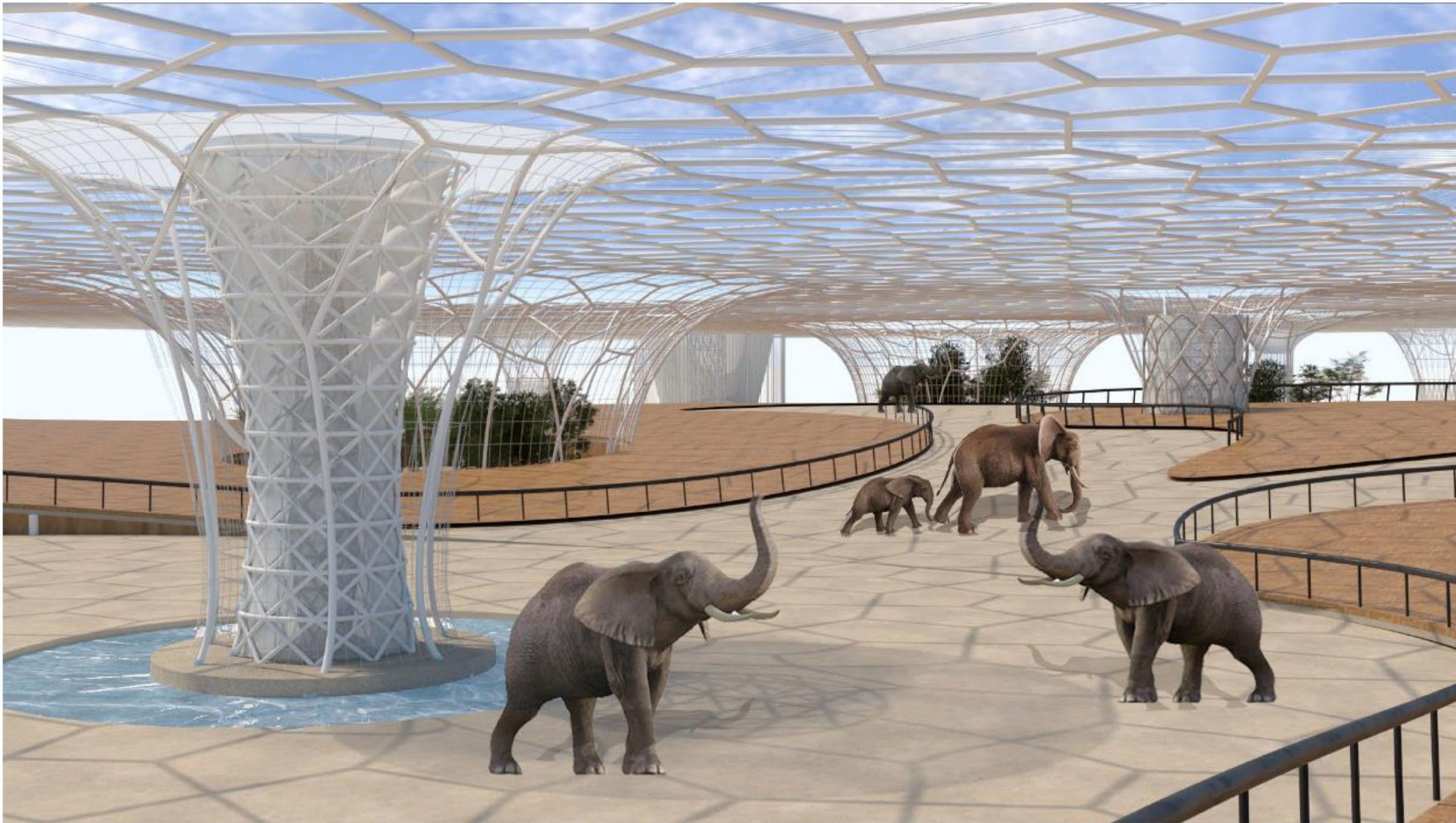


For each period in the future, we designate what kind of intervention our project would make. We would protect the area during a 1.5-celsius degree rise by 2040 and then restore the area to sustenance over the next 20 years.

Water Harvesting ; Principle of Water Harvesting Pillar

By turning the megastructure of the solar canopy into a water harvesting pillar. Using the warka method of water harvesting, which is the idea of using dew condensation to convert moisture in the air into usable water. Based on this method, applying several variations like the evaporation of vegetation and etc.



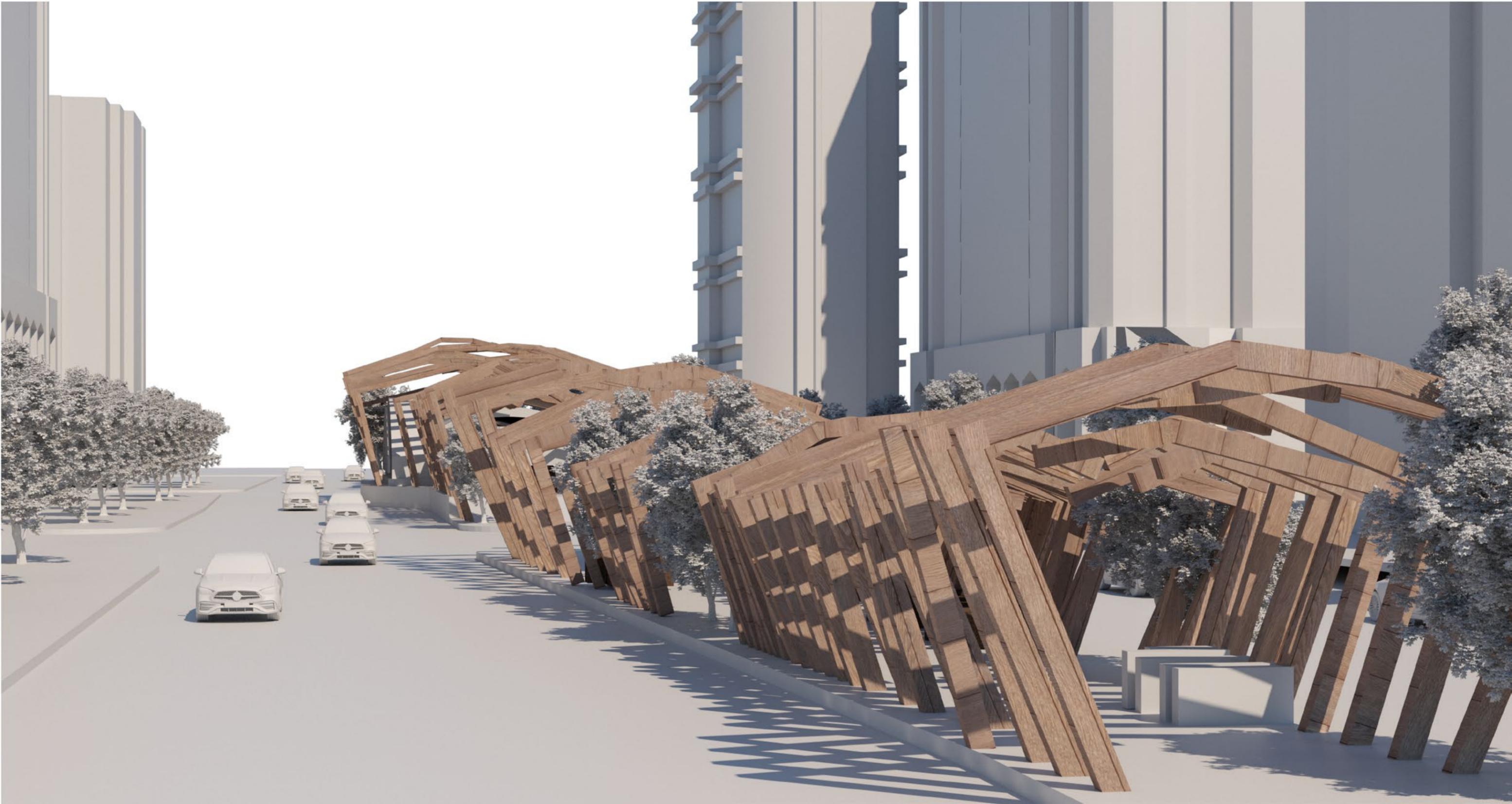


Sensory Studio ; Sound of City

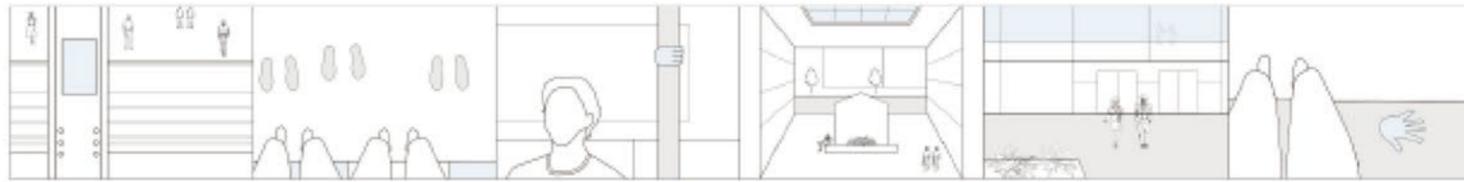
Street furniture for the human sense

Subject of Project : Fall Studio in GSAPP (2021 Fall)
Location : 96th street Subway Station, New York, US
Type : Academic
Director : Bryony Roberts

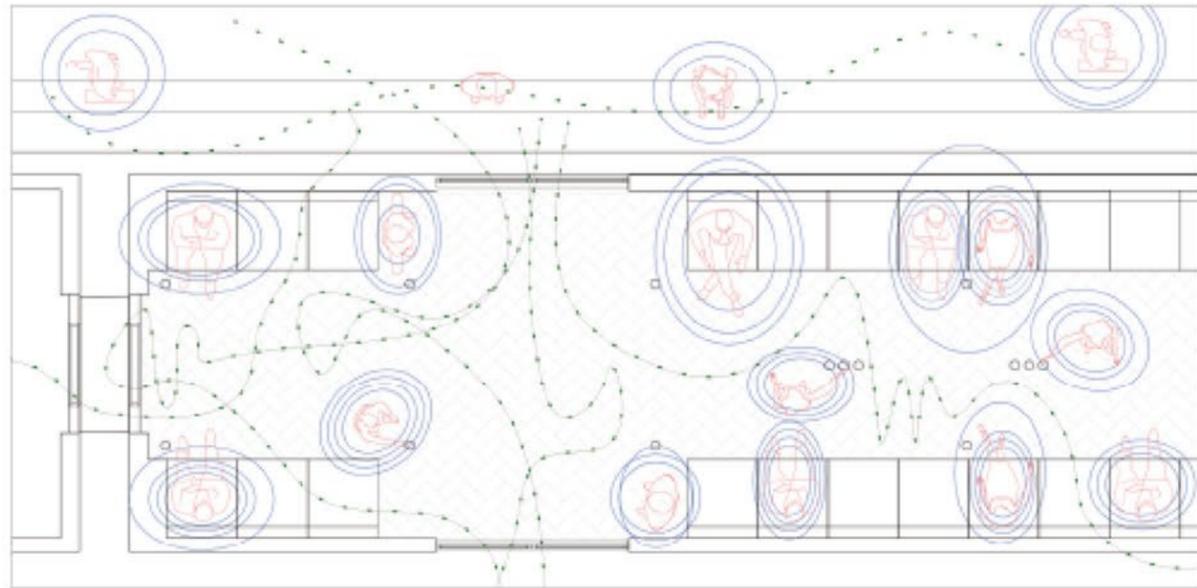
One of the things that impressed me the most when I first came to New York was the 'MEDIAN' road. My site is 'mediaN ROAD' where the 96th Street subway station is located. Talking about how to deal with the noise of city.



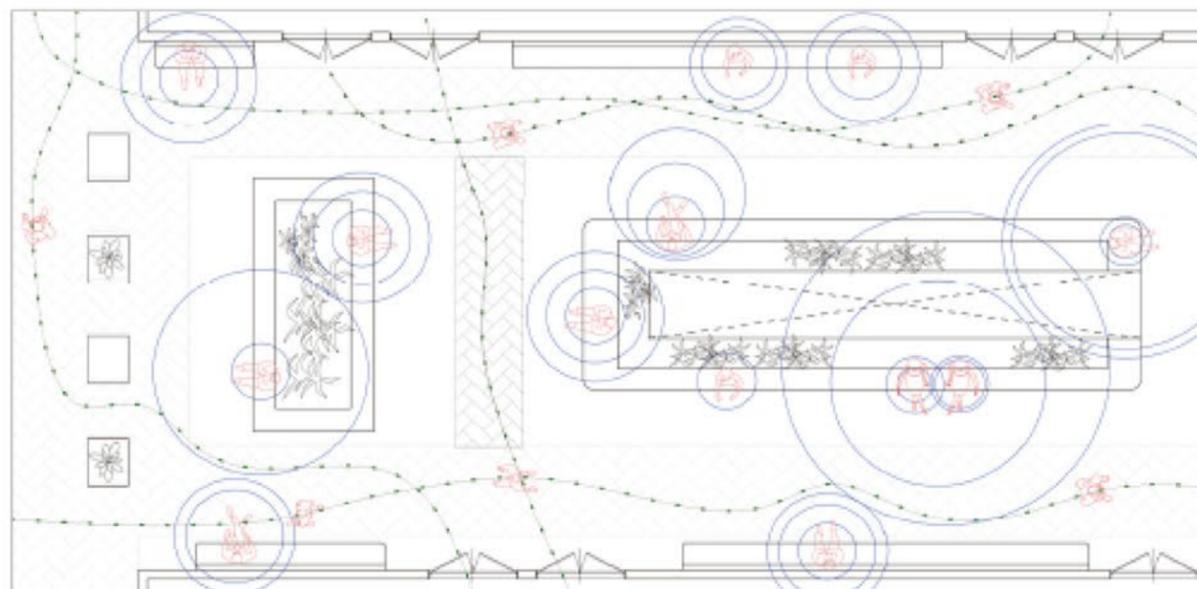
Sensory in the City ; From Discomfort



Research of Seansory. In a city where various elements are combined, the senses that people can feel are diverse.



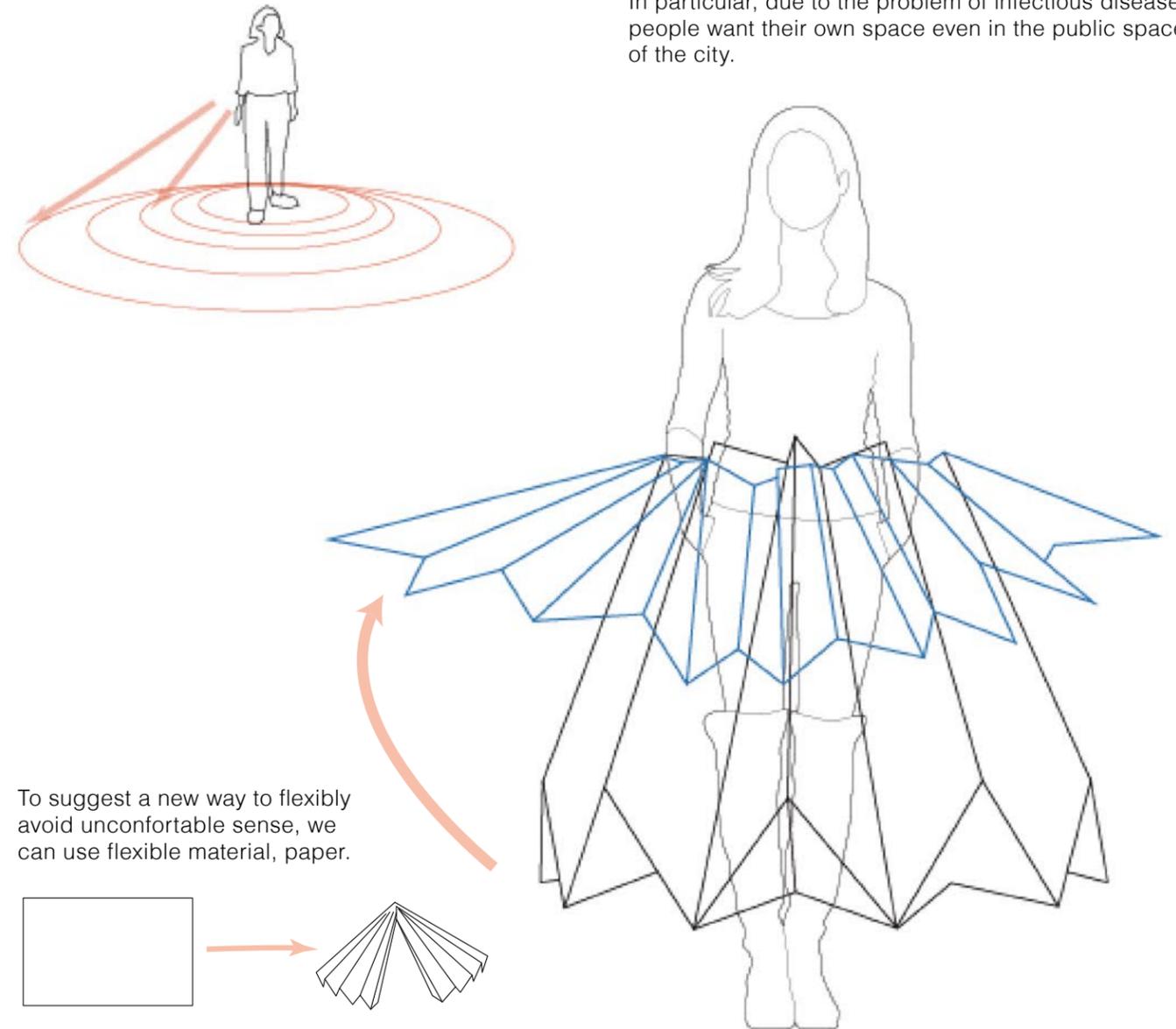
In New York's dense subway system, people's movements are unpredictable and irregular. This makes the tactile sensation tense and sometimes unpleasant. Also, sounds and smells from various people in an enclosed space stimulate our senses. People must experience all senses irresistibly in the city.



Irresistible to Resitible

There are many cases in the city where people feel uncomfortable by encountering the sensations they want to avoid.

In particular, due to the problem of infectious diseases, people want their own space even in the public space of the city.

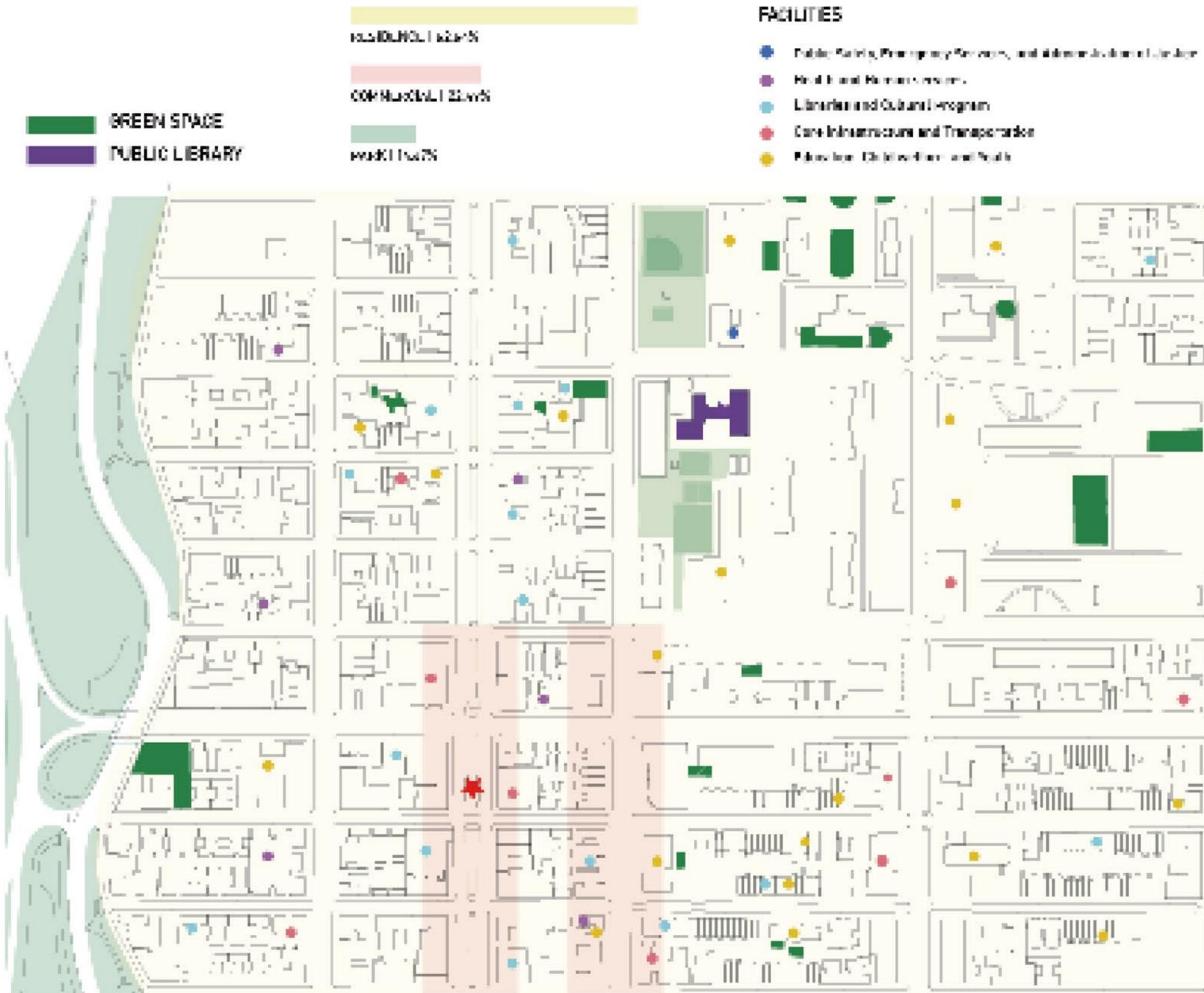


To suggest a new way to flexibly avoid uncomfortable sense, we can use flexible material, paper.

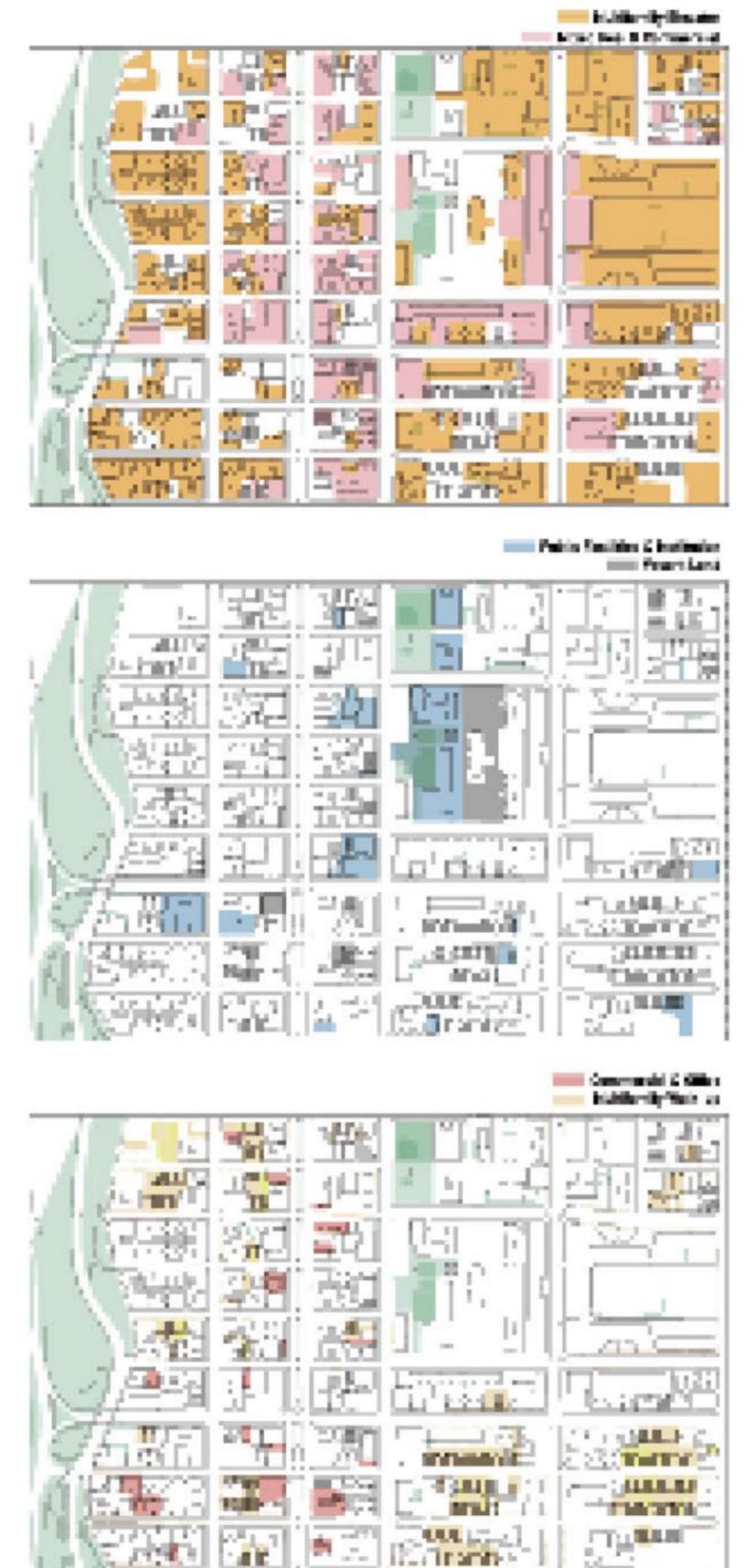


Site Analysis ; Demographic of site

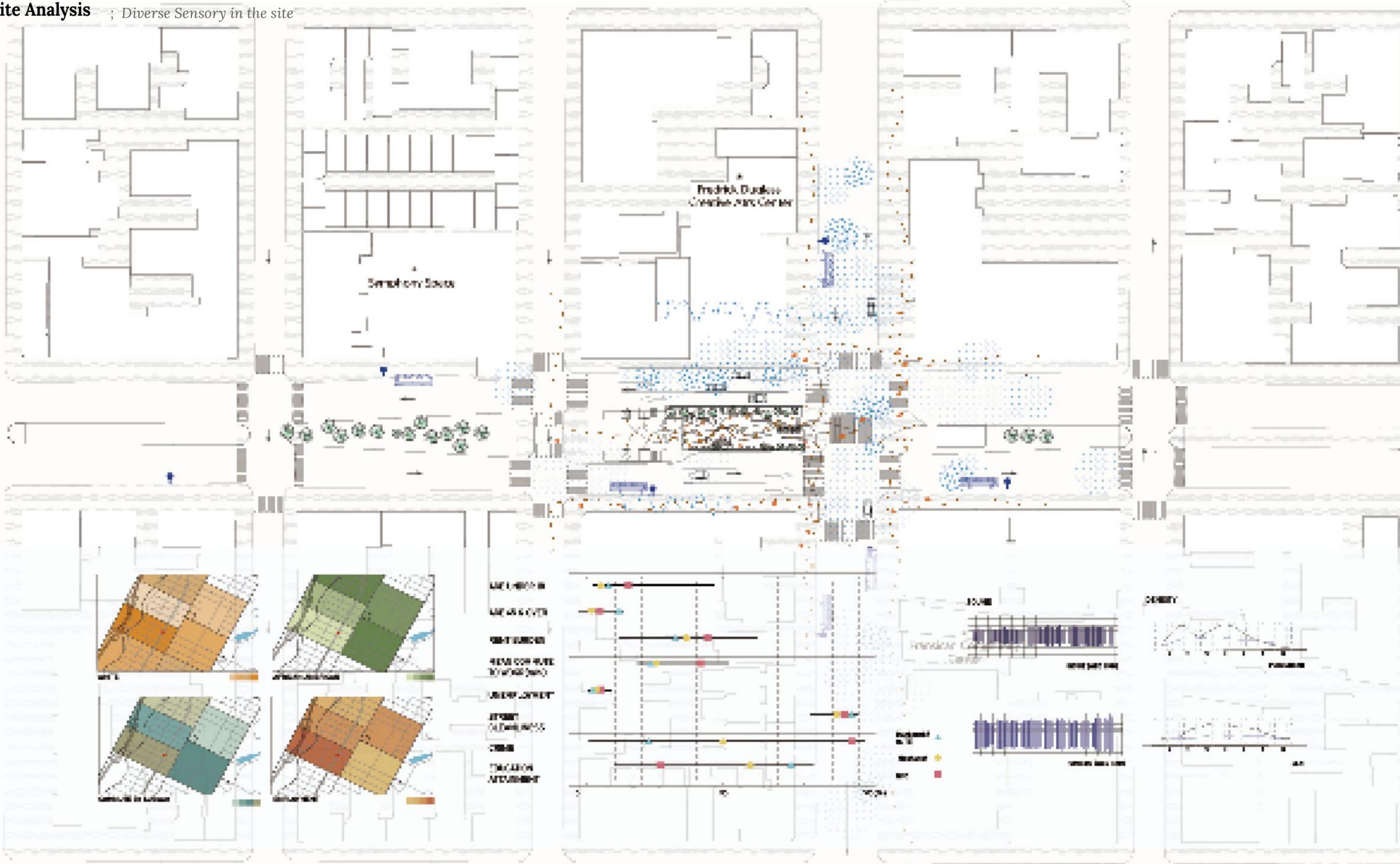
People of all ages lived here and their level of education was high compared to other regions. Broadway also had the least amount of green space among the avenues between the other Morningside Parks and Central Park.

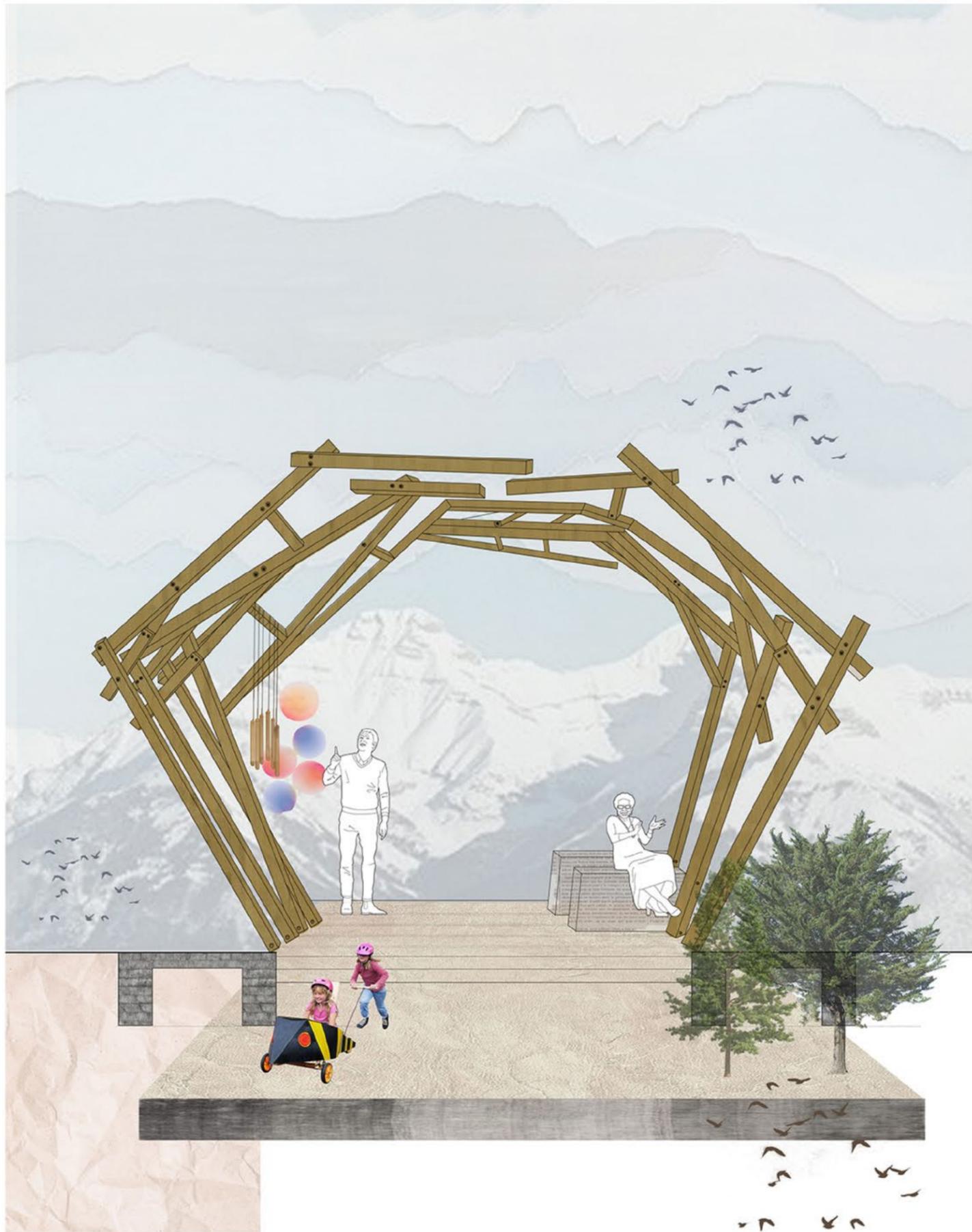


LAND USE



Site Analysis ; *Diverse Sensory in the site*





Concept ; *Making sound for Covering Sound*

The program is divided into three main categories. First, the block located in front of the symphony will be composed of the Music LIBRARY, the block connected to the station entrance will be the TRAVEL LIBRARY, and the NATURE LIBRARY where you can feel the sounds of nature more.



MUSIC LIBRARY

Music Concert
Play Ground
Small Music Hall
Outdoor Music Room

MUSIC SOUND
CHILDREN'S LAUGHING



TRAVEL LIBRARY

Cafe
Meeting Room
Discussion Room

WATER FROM FOUNTAIN
WINDCHIME



NATURE LIBRARY

Reading Room

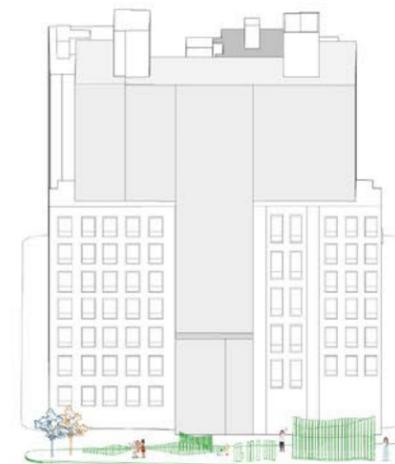
HUMMING BIRD

liberal

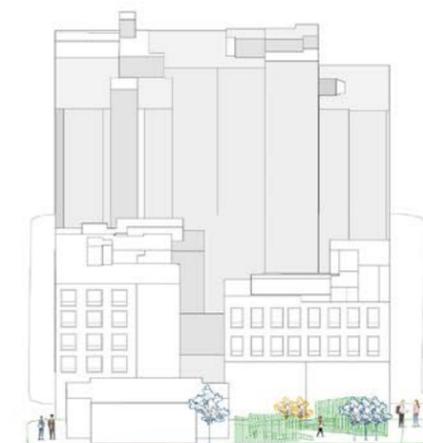


private

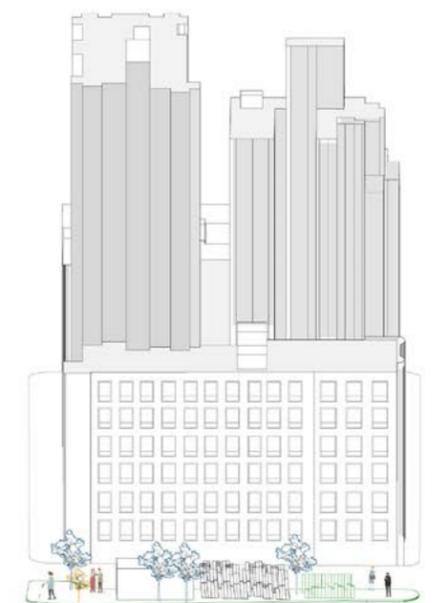
Strategy ; *Connecting Median Road*



MUSIC LIBRARY



TRAVEL LIBRARY



NATURE LIBRARY



Expanding ; *by Street & by Avenue*

The noise of the city is blocked by the sounds of children's laugh and people performing music. In particular, the PLAYGROUND has a TOUCHABLE wooden WINDCHIME, creating a new sound of nature. The angle of the backrest is between 20 and 15 degrees, so you can read a book comfortably whenever you use the subway. Place a tree between the chairs to bring it closer to nature. In addition, the urban environment can be seen through the gap so that it can be contrasted with nature.

The main program in the music library is a small concert hall that can be connected to a PLAYGROUND for children and a symphony venue. In the TRAVEL LIBRARY, it is a library for busy commuters, that they can read books naturally while commuting. A chair like a passageway connected to the subway station entrance is placed, a WINDCHIME is connected to the structure, and whenever the subway moves underneath, the wind blows out of the VENTILATION to make a sound.



Thank you