PORTFOLIO

KYOUNG HWA LEE

M.S Advanced Architecture Design
Selective Work in GSAPP
First Name : Kyoung-Hwa  
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Nationality : Republic of Korea

National Technica Qualification Certificate ; Architectural Engineer

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)

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

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

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)

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

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

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
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 the younger generation. The citizens at this place have diverse races who are using different languages. In here, there are some problems according to 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 importan role.

A hybrid education center is created in the ceter 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 retails 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 eucational facilities, at the same times, it serves as a structures supporting the inclined mass. Vertical vioids penetrate from the roof to the underground arcade and form a courtyard for the light and green space.
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.
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.

**First Floor Plan**  
Easy access to citizens

After school/Carrier School Education Center
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.

*Breathe in Jackson Heights* : *Education/Greenary*
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.
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.
Currently, the world is suffering from climate change. We have found a country effective in recovery to make the planet resilient to climate change. As a result of the investigation, it was found that the ecosystem is a diverse, vulnerable area. Also, thinking about the possibility of future infrastructure for the animal, not human.

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.
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 wildness from drought. The life cycle of African elephants can be described as a journey for water and biomes in African Continent.

Elephant Feces
Ecological Material

Elephant Feces
Circulation of Biomass

Elephant Trail
Migratory Lifecycle

Elephant Water
Supply water to Other Animal

Elephant Pit
Ability to Detect Water
Material Experiment: Sugarcane Bagasse & Cassava

Sustainable & Biodegradable 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.
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.
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.
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 Resistible
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 senses, we can use flexible material, paper.
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.
Site Analysis: Diverse Sensory in the site
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.

Concept: Making sound for Covering Sound

Strategy: Connecting Median Road
Expanding; by Street & by Avenue

The meaning of this project is that it is an extension of the community. If the project is connected with more MEDIAN ROAD instead of 3 blocks, it will be possible to create an axle for one pedestrian in a large driveway. This project seems to be more valuable in that its applications are endless.

The program and pleasant can spread by people through streets and avenues. It can be a one of prototype of how to use median road.
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, so 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.

Expanding ; by Street & by Avenue
Thank you