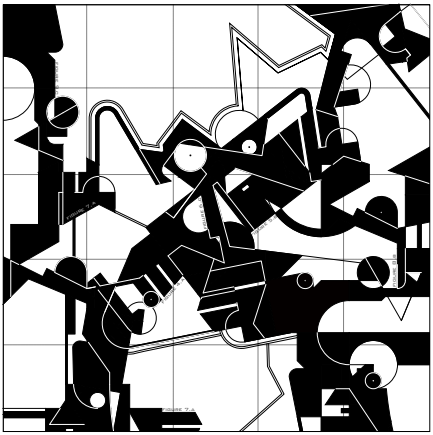


WEI WANG

ARCHITECTURE PORTFOLIO
SELECTED WORKS FROM 2019-2024

ARCHITECTURE

INSTALLATION DESIGN

PROFESSIONAL WORK AND OTHER WORK

POROSITY SPACE

AN INTEGRATION OF THE EXTENSION HOUSE AND EXISTING CREATIVE COMMUNITY PROGRAMS INTO THE LIBERTY WAREHOUSE.

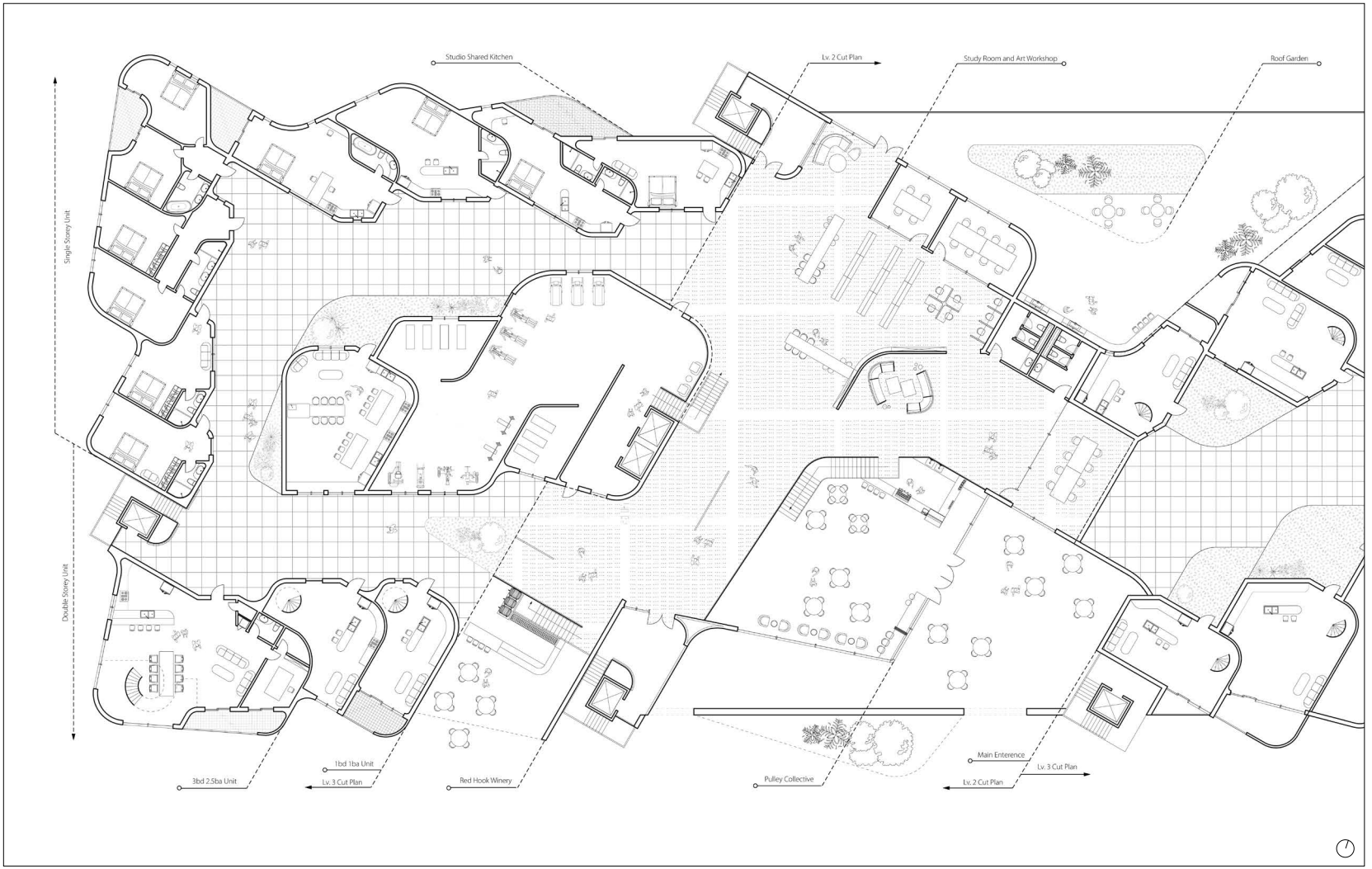
SITE: BROOKLYN
INSTRUCTOR: BEN KRONE
SEPTEMBER 2022
INDIVIDUAL WORK

Today, industrial history in Red Hook, Brooklyn is being erased. Despite protectors, politicians and locals, many significant historical industrial buildings are demolished, and new warehouses are constructed on sites.

In the past, production, inventory, transportation and sales were combined. At this time, brand image equal to community image, or exists as a local landmark, attractive from an advertising standpoint. The factory uses local materials and workers from the warehouse were also an important part of the community. In spatial, different doors allowing people or carriages to pass, and different windows in shapes and sizes considering ventilation, natural lighting, and access for workers. Operable iron doors and shutters provide the security and fire suppression system, while providing openings and forming various spatial qualifications.

Presently, most of the current business models are online. Production, inventory and sales are all separated. The business owners only consider the beauty of the store, the website and advertisement, while ignoring the appearance of the warehouse. The architecture for manufacture is carelessly about the building's effect on the local community. At this time, brand image is not equal to community image. What the owners request for the warehouse is - saving money, efficiency, volume.

The porosity space through th porosity and revitalize as the main design concept. Through openings of different sizes and arrangements of different densities, they extend to the inside or outside to break the boundary of the wall itself. The openings are re-considered for sunlight, ventilation, and the possibility of activities of different sizes, allowing the inner and outer spaces to penetrate each other. And reuse traditional industrial building elements, make a translation, and activate the community again

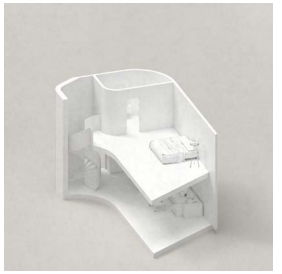


FLOOR PLAN

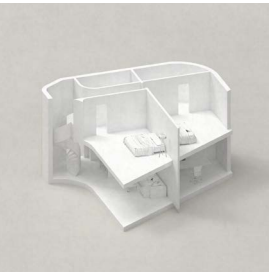
The circulation of the building includes four private cores for residents and a public circulation that runs through the whole building. This circulation starts from the public common space, including an outdoor garden beside the existing historic wall. The first floor connects with the current coffee roasting studio, and the second floor contains the library, study room, workshop, and exhibition space. The third floor connects with the gym. These semi-open spaces can better establish the relationship between residents, artists, and staff, which creates more space possibilities.

The residential houses are built on the existing Liberty Warehouse, forming a courtyard space, with public programs in the middle and residential programs around. In response to the Inclusionary housing concept, the residential area includes four units. The Studio unit is located in the northwest corner of the building, all of which are one-story residences and surround the shared kitchen, targeting low-income groups. One bedroom and one bathroom, two bedrooms and 1.5 bathrooms, and three bedrooms and 2.5 bathrooms are located on the south side of the building, all of which are double-story houses similar to townhouses. All residential units face the sea through angled walls to create open views.

STDUIO

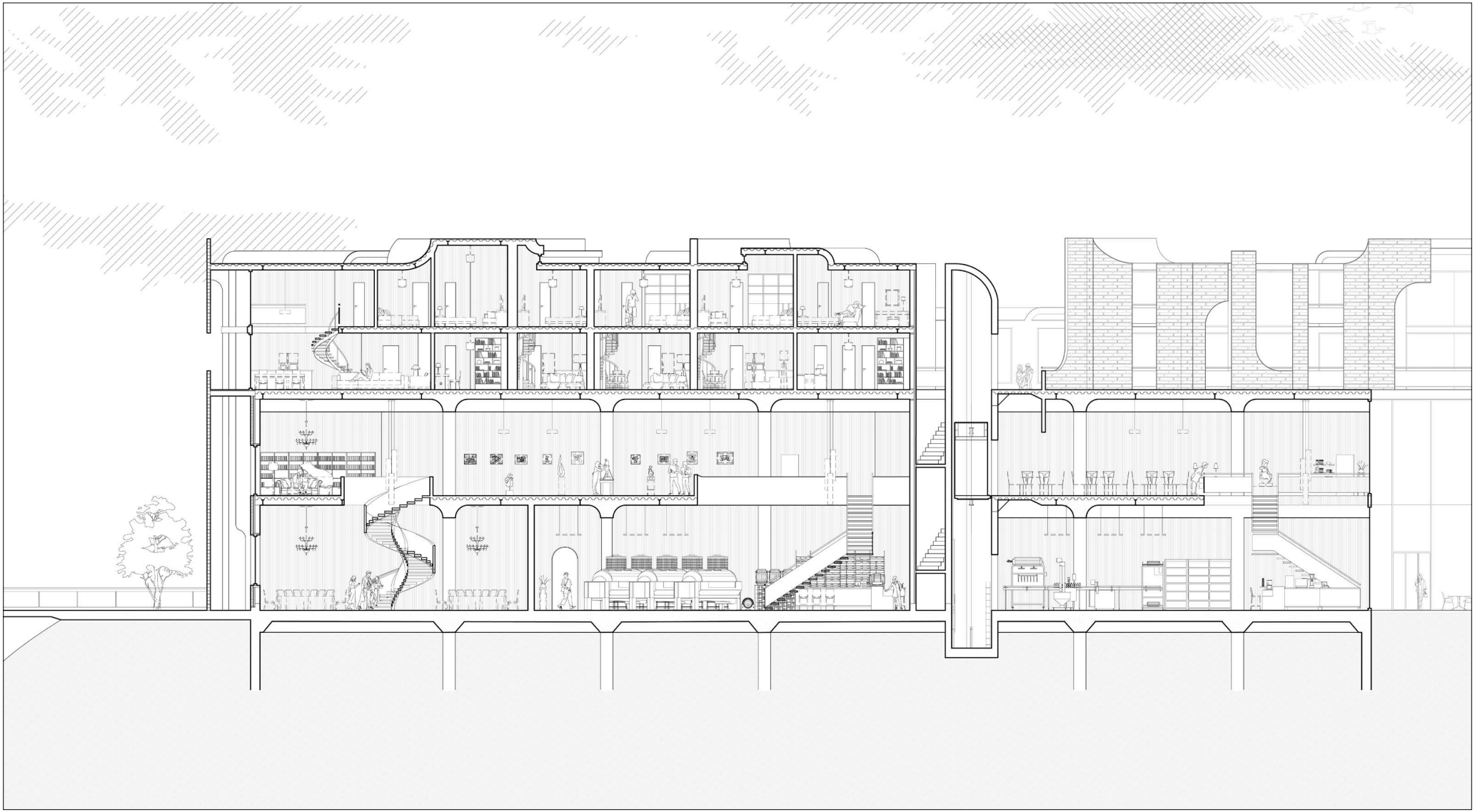


1 BD | 1 BA

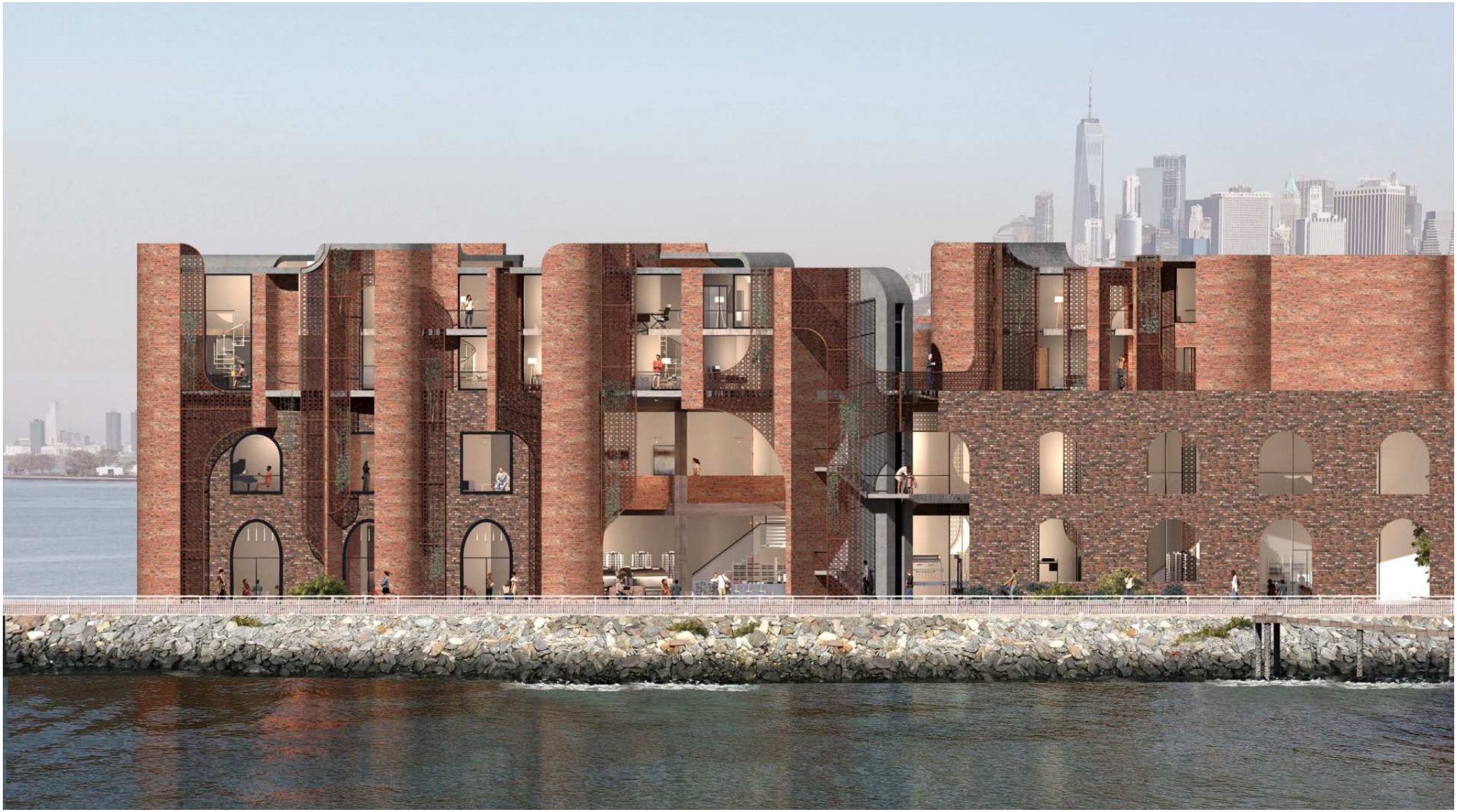


2 BD | 1.5 BA

3 BD | 2.5 BA



SECTION WITH EXISTING CREATIVE COMMUNITY PROGRAMS AND RESIDENTIAL PROGRAM



SOUTH SIDE ELEVATION

PUBLIC COMMON SPACE

PUBLIC COMMON SPACE ENTERANCE

RESIDENTAL HOULIVING ROOM

ARTIFICIAL CLIMATES AND THE AGILE CONSERVATORY

A NEW BOTANIC INFRASTRUCTURE

SITE: NEW YORK
INSTRUCTOR: MARION WEISS
SPRING 2024
COOPERATION WITH: SIYU GAO

The legacy of conservatories as cultural destinations showcasing botanical marvels is at a critical juncture. With rising temperatures and worsening weather events, climate-adaptive transparent structures are evolving into fully living and breathing systems that passively regulate indoor climates, significantly enhancing their relevance to plant research. The urgency of botanical studies related to climate change has never been more pressing.

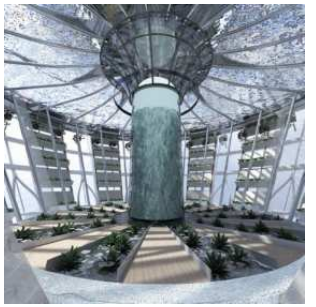
The goal is to create a new "Conservatory and Climate Center" that combines elements of a cultural conservatory and a climate laboratory. This center will not only expand research on weather-sensitive collections but also serve as a retreat and research hub for workshops and conferences on climate change and botanic life.

Located next to the emerging climate center on the eastern side of Governors Island, the conservatory research center will become a landmark destination. Accessible only by boat and ferry, it has the potential to establish a resilient island edge and test new architectural designs at the water's edge, addressing contemporary risks like rising water levels.

CONSERVATORY TYPE

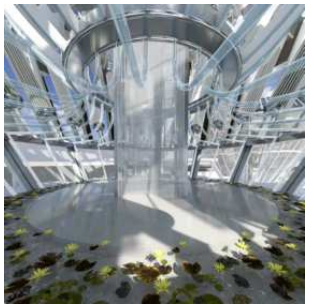
TYPE A

Herbaceous plants are cultivated using a hanging method in the greenhouse. The adjustable roof cap rotates to optimize sunlight exposure. Rainwater collection systems along the eaves and central roof direct water into the greenhouse through pipelines.



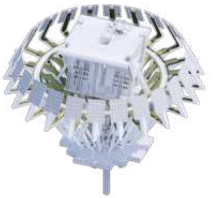
TYPE B

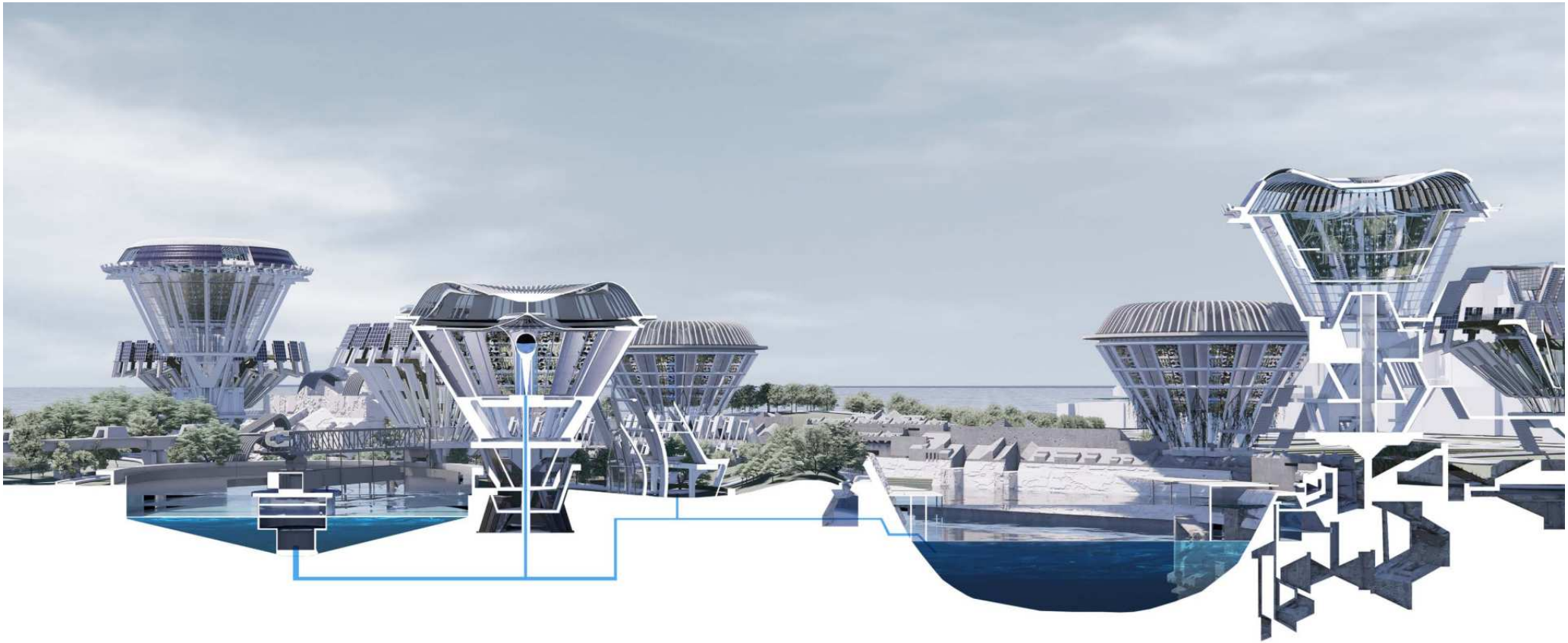
The herbaceous plants are cultivated using soil-based methods under a stable roof. High-transparency glass ensures ample natural light. The primary focus is on cultivating plants native to the local climate. The greenhouse is equipped with a rainwater collection system.



TYPE C

The herbaceous plants are grown hydroponically, with the structure able to switch between open and closed states. Each arm has a cylindrical hydroponic container and a solar panel. The transition depends on sunlight angles and is used for rainwater collection.





SUSTAINABLE WATER MANAGEMENT AND GREENHOUSE CULTIVATION ON THE ISLAND

Sea water will be input into the desalination system inside the dam through pipelines, with designated internal spaces for personnel to work. The desalinated water will be utilized for greenhouse cultivation. A pedestrian walkway will be created on top of the dam, forming an artificial coastal pathway, with shading panels arranged using solar panels for energy generation. Additionally, the island features comprehensive wastewater treatment infrastructure, ensuring wastewater is thoroughly treated, recycled, and reused, contributing to sustainable water management. The greenhouse structures are designed with eaves and central roof depressions for rainwater collection, using a fan-shaped architectural design to transport rainwater from higher to lower areas for plant irrigation.

CLUSTER OF CONSERVATORIES

Just as Chanterelle mushrooms form clusters in their natural environment, the individual modular greenhouses will be arranged in groups across the island, creating a cohesive and efficient research ecosystem. Each greenhouse unit will offer a unique space for researchers to conduct experiments, study soil properties, and receive materials for their studies. This modular approach not only optimizes space but also encourages collaboration and knowledge sharing among researchers, fostering a dynamic and productive research environment.

PERSPECTIVE OF THE BRIDGE

The bridge serves as the vital link between the public and private islands situated in the northern and southern parts. It stands as the exclusive route, other than by boat, connecting the public areas to the research island, providing a means to control visitor access effectively. Additionally, the bridge's connection to the dam's walkway area offers visitors breathtaking views of the greenhouse and coastline, enhancing their experience with the serene beauty of the surroundings.

WATER TREATMENT AND RAINWATER COLLECTION

The river divides the island into two sections: a public island and a private island. The public island features parks and public conservatories and remains open to society, showcasing some research results to attract visitors from the city. The private island is designated for researchers to study plants and marine life. Additionally, a new waterway has been opened, creating new transportation options. The vertically arranged conservatories, combined with the varying terrain, create a unique skyline that merges with the city's skyline, adding a distinctive touch of green to the overall cityscape.

CAMERA OBSCURA

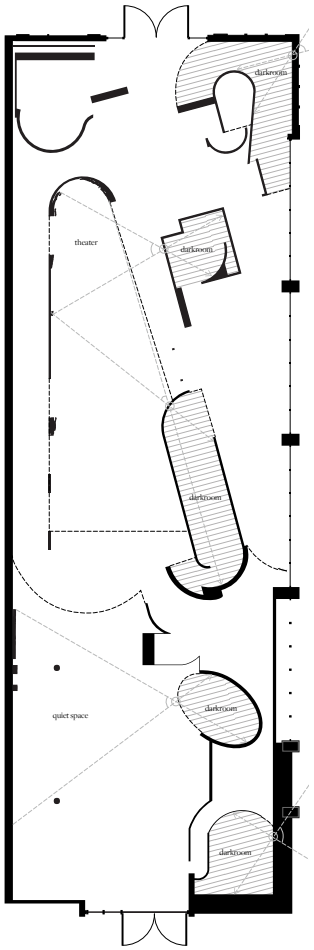
USING AI-GENERATED TECHNIQUES TO RESHAPE A HISTORIC THEATER

SITE: LOS ANGELES
INSTRUCTOR: KAREL KLEIN
SEPTEMBER 2023
COOPERATION WITH: SHENGNAN GAO

The project is situated at the Apple Tower Theatre in Los Angeles, a redevelopment of The Tower Theatre initially designed in Renaissance Revival style. The theater's original design prompts an exploration: Can the essence of the city be infused into architecture? How can the boundaries of the building itself be blurred?

The project addresses these questions through three methods. Firstly, employing a labyrinthine layout to gradually disorient individuals entering the building, simultaneously diminishing sound and light, achieving a sensory blur upon entering. Secondly, adopting the role of a Flaneur to explore and discover the unique historical charm and architectural elements of the surrounding site. Through extensive photography, the surroundings are categorized, and relief and light elements are extracted to create seeds using Style-Gan. These seeds, along with the initial design model, are further blended through Ostagram to extract inspiration. These patterns are viewed as a form of urban texture incorporated into the building. Lastly, using the concept of Camera Obscura, outdoor and urban textures are projected into each darkroom.

The design incorporates extensive AI techniques while reflecting on historical elements, achieving a fusion of the past and future in the present, and presenting an alternative approach to the integration of city and architecture.

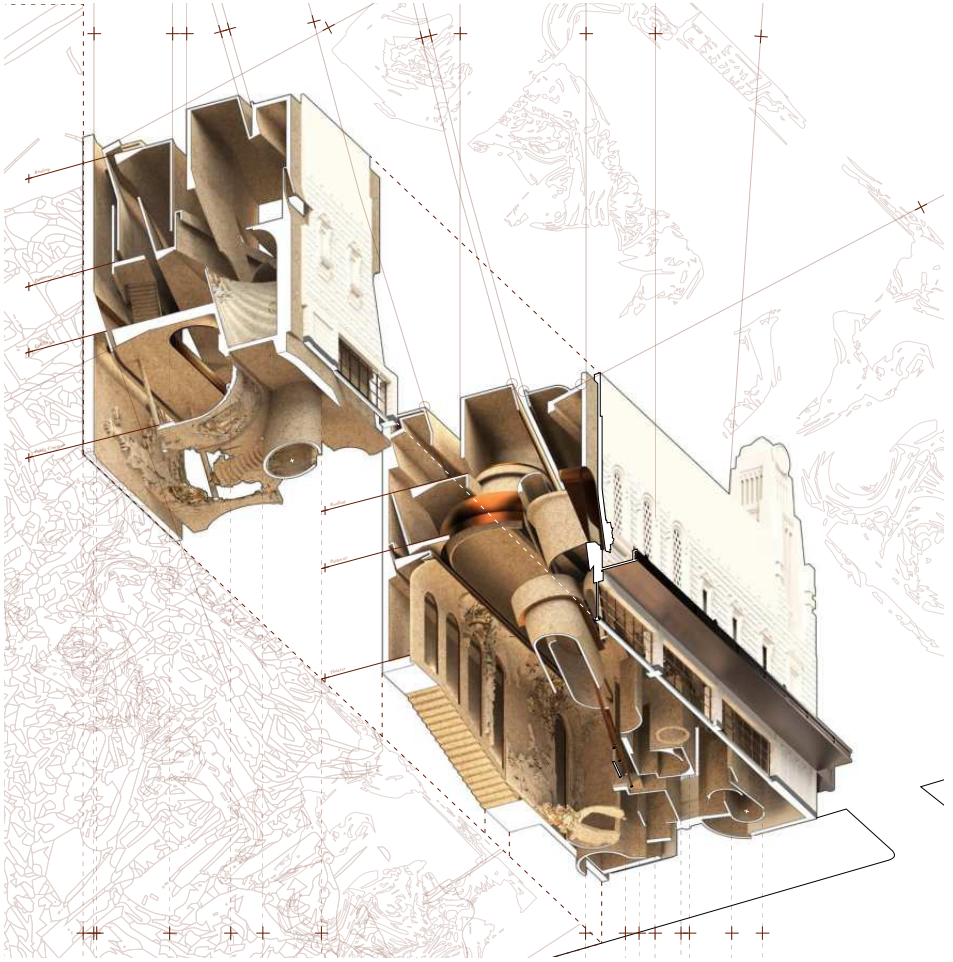


DRAFT PLAN

Drawing from Renaissance architecture and incorporating elements like corridors, courtyards, and mazes, a foundational floor plan is crafted to create a rich spatial experience. The space features two open theaters and several darkroom spaces.

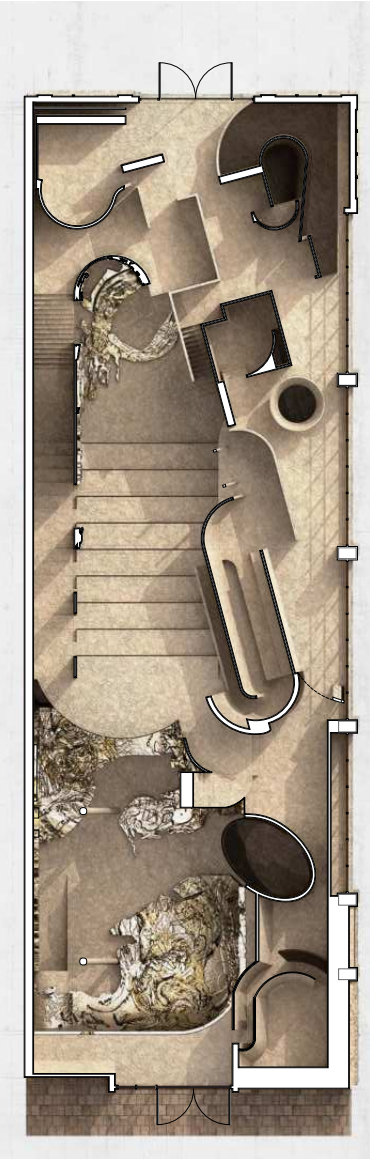
OSTAGRAM PLAN

Utilizing the initial draft floor plan and seed images, integration is achieved in Ostagram, defining areas to encompass urban textures. These urban texture zones are situated within expansive courtyard spaces and depicted on walls, floors, and roofs using ZBrush.



CHUNK AND STYLE-GAN SEEDS

The core architecture features expansive communal areas and narrow maze-like corridors. In addition to serving basic theater functions, it offers ample private spaces for individual experiences. The maze concept is integrated across the floor plan, floor slabs, and roof structures.

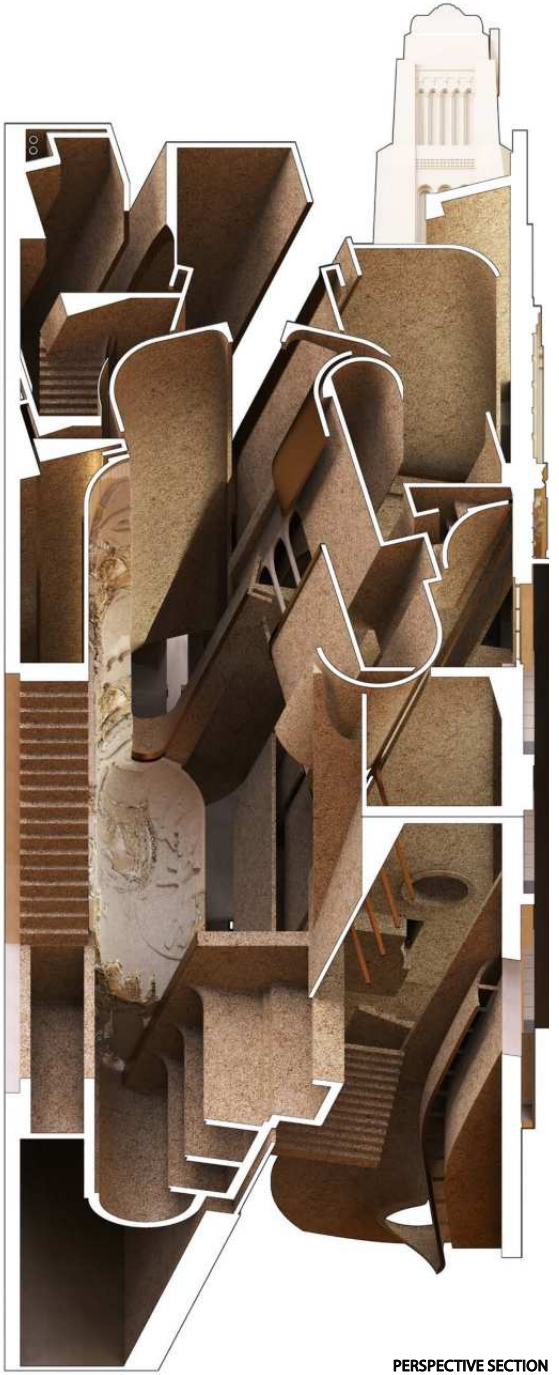


GROUND LEVEL

The theater consists of numerous darkrooms, with expansive spaces hosting urban textures, enabling Camera Obscura projections onto adjacent darkrooms. Conversely, darkrooms positioned at the building's periphery allow for projecting outdoor landscapes into indoor spaces.

UPPER LEVEL

The upper levels are primarily composed of corridors and void spaces. The void spaces provide varied perspectives to appreciate the interplay of light and shadow within the space, while also affording opportunities to overlook the urban textures situated on the ground level.



PERSPECTIVE SECTION

CHUNK MODEL

The facade of the historical architecture has been preserved.Light is refracted or isolated through layered stacking. The design avoids fully enclosed spaces, opting for a gradual attenuation of light through layers of walls, floors, and roofs.

INTERIOR PERSPECTIVE

THEATER WALL TEXTURE

TEXTURE CONNECTION WITH FLOOR

THE MOUNTAIN IN THE MOUNTAINS

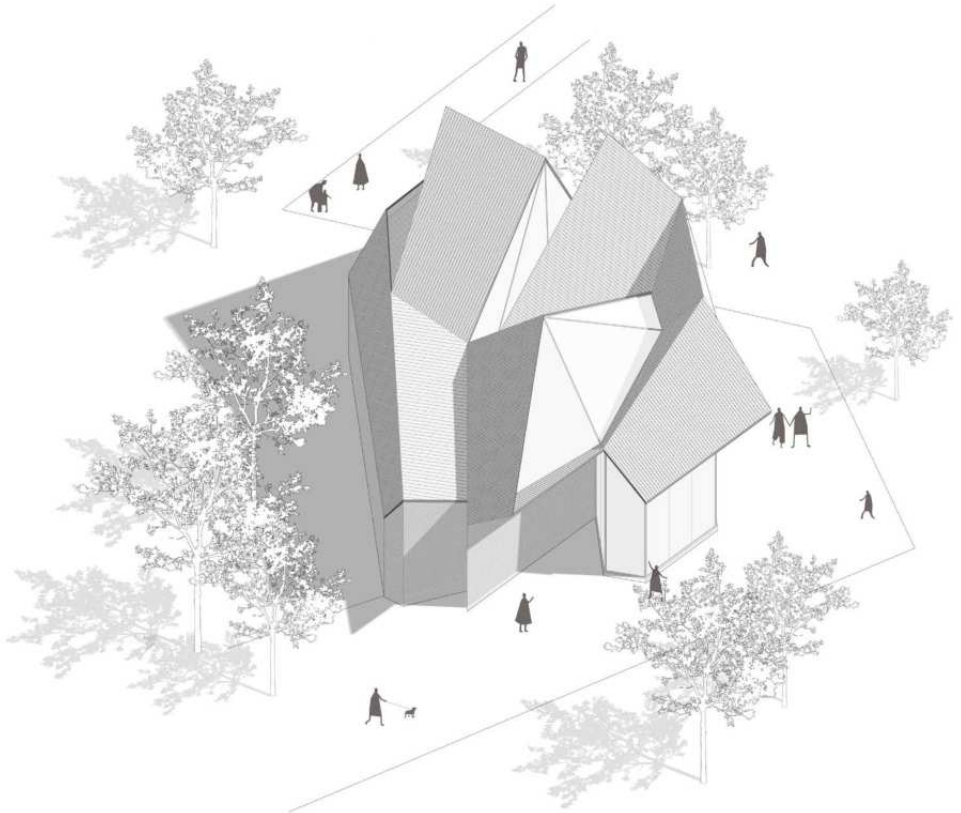
A VISITOR CENTER SERVES AS A PLACE FOR PEOPLE TO INTERACT WITH NATURE.

SITE: BOULDER
INSTRUCTOR: PING XU
JANUARY 2020
COOPERATION WITH MENGXI XU: SITE ANALYSIS
INDIVIDUAL WORK: DESIGN, MODEL, DRAWING

South Mesa Trail is a famous hiking area in Boulder and features homestead vestiges with a long history and meandering grasslands and pine forests. During the hiking, visitors may enjoy the eastern plains, Flatirons, and mouth of Eldorado Canyon. The environment and roads here are quite suitable for jogging and winter recreational activities.

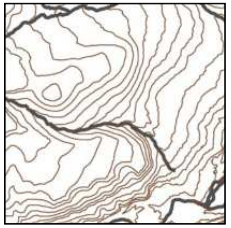
The visitor center is established to meet tourists' demands on more infrastructure to understand local biodiversity better. It also serves as the arena for local activities and is a comfortable indoor landscape space. The center is the place to build an interactive point for people and nature.

The form of the center is inspired by paper folding. Different angles and layers represent the rolling mountains. The natural landscape is presented in a geometrical architecture form.

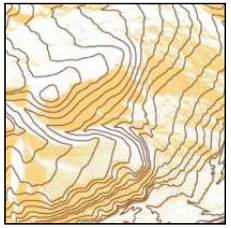


SITE ANALYSIS

RIDGE LINES



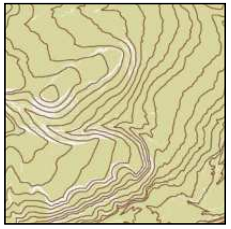
STREAM AND DITCHES



AWAY FROM NOISE

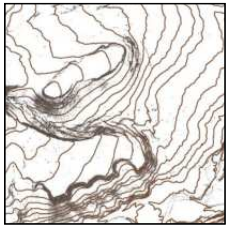
WILDFIRE PROTECTION

NORTH AND NORTHWEAT FACING

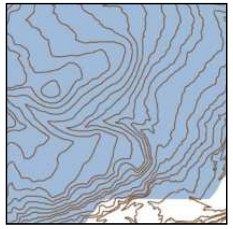


SOUTH AND SOUTHEAST FACING

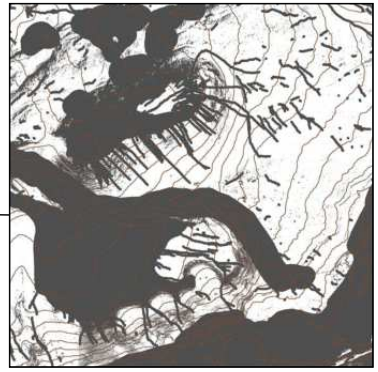
WETLAND



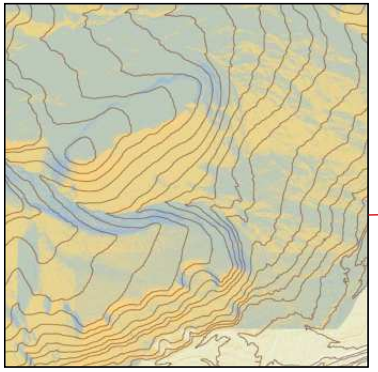
>35% SLOPE



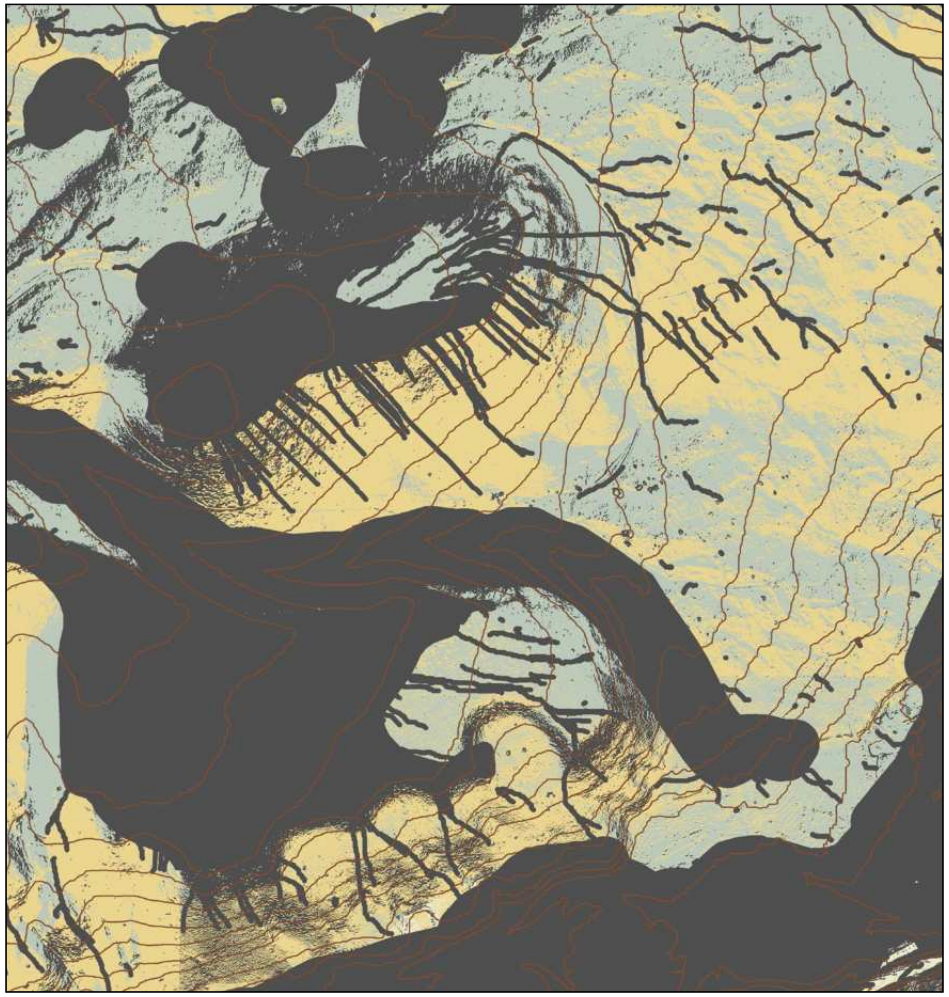
<25% SLOPE



CONSTRAINTS

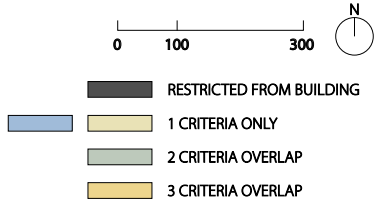


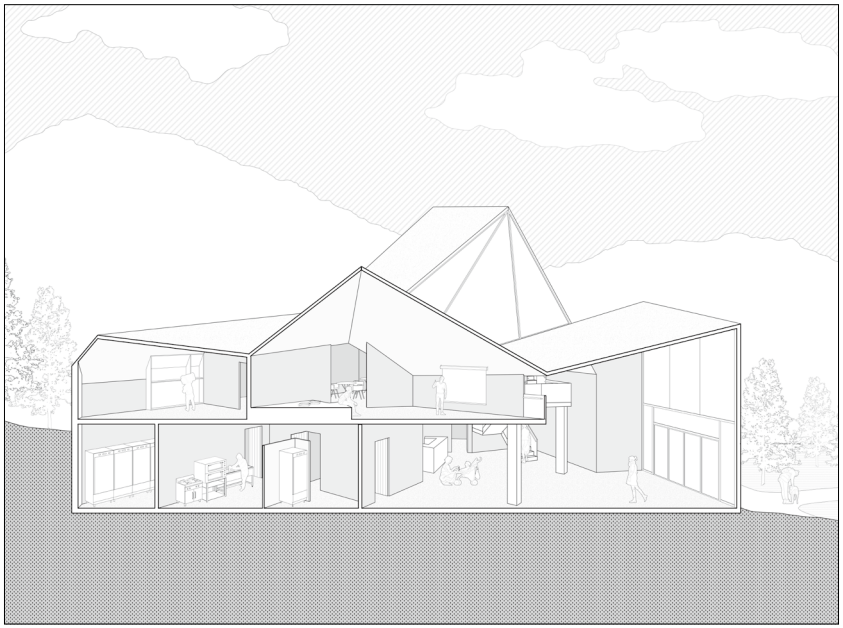
OPPORTUNITIES



SUITABILITY ANALYSIS

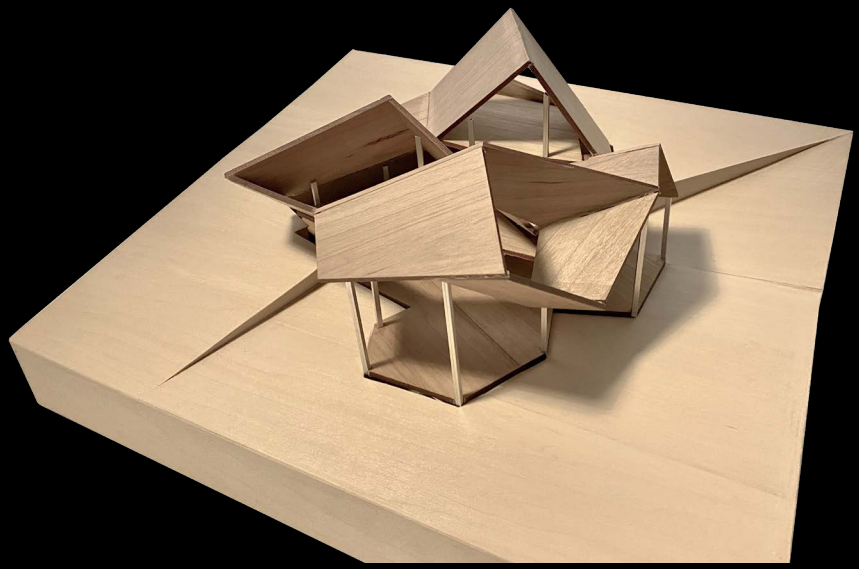
Mesa Trail is located in Boulder, Colorado. GIS is used for site surveying and data analysis in the preliminary design stage to understand the local environment's influence and climate on architecture. The collected data are then classified as constraints and opportunities. A suitable architectural site can be obtained by comparing all the GIS data layers. The site is eventually confirmed after the field survey.





SECTIONAL PERSPECTIVE A - A'

SECTIONAL PERSPECTIVE B - B'

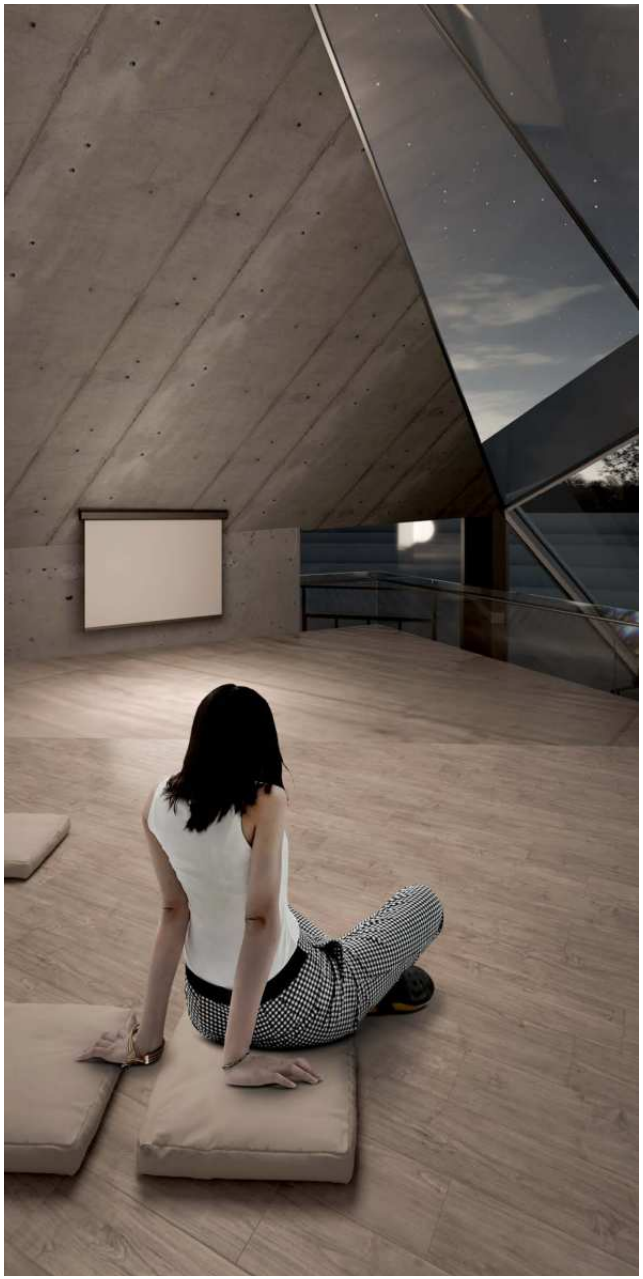


QUADRILATERAL OPENINGS FACE DIFFERENT DIRECTIONS

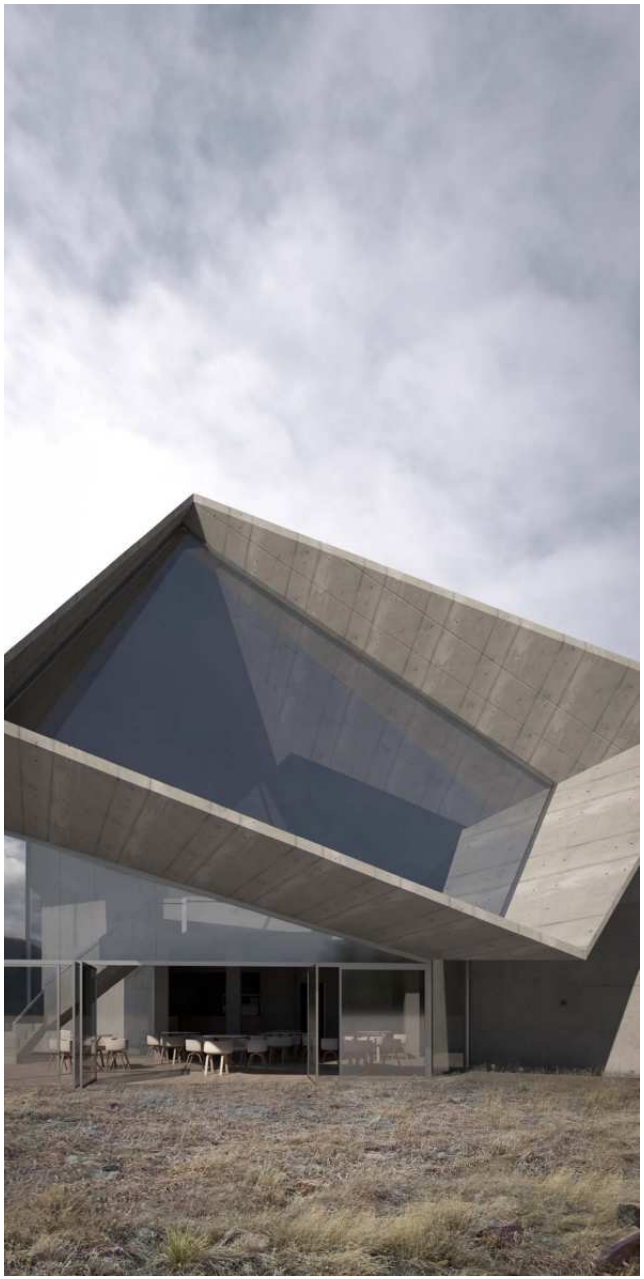
Phyiscal Model/ Cherry Wood and Square Aluminum Tube

BUILDING INTEGRATED WITH THE SURROUNDING TERRAIN ENVIRONMENT

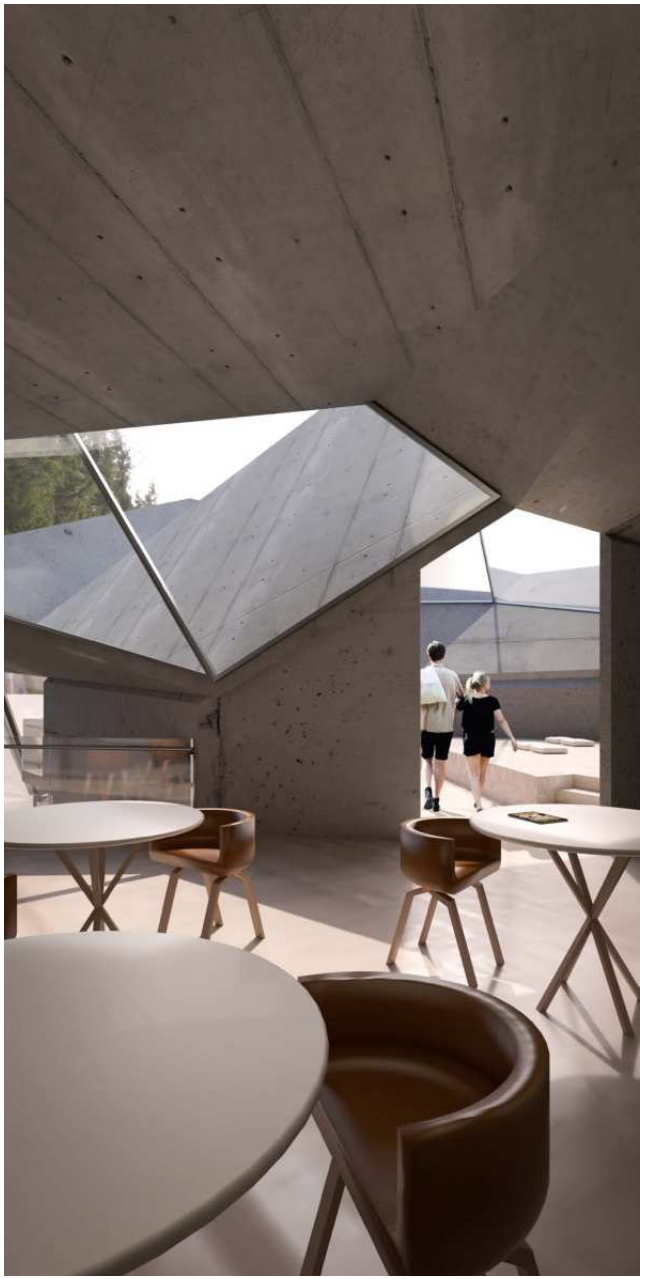
Phyiscal Model/ Cherry Wood and Square Aluminum Tube



ENJOY THE LANDSCAPE AND STAR SKY IN THE MULTI-PURPOSE SPACE



THE VIEW FROM SOUTH MESA TRAIL



MULTI-SPACE VIEW IN THE CAFE SHOPSHOP

HOME IN THE ERA OF PANDEMIC

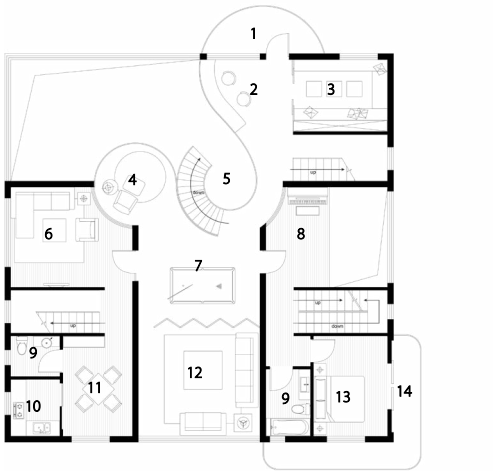
REDEFINE RESIDENTIAL SPACE IN THE POST-PANDEMIC ERA.

INSTRUCTOR: WENBO NI
SEPTEMBER 2020
INDIVIDUAL WORK

COVID-19 has introduced social distance rules and changed the boundary between private space and public space. During the pandemic, people have to stay at home most of the time, and homes need to meet more people's demands and take up more functions. It has become a major concern for designers of residences to balance social distance and proper socializing.

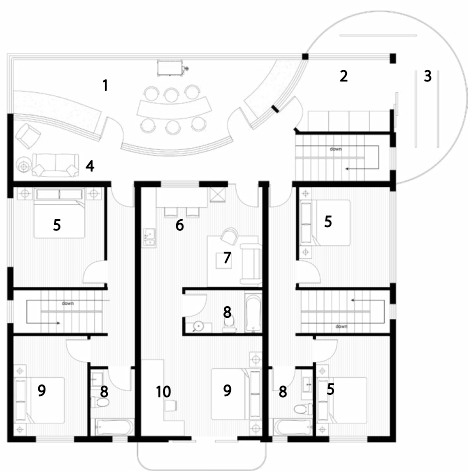
In this design of Home in the Era of Pandemic, a concept of semi-public and semi-private space is introduced as a supplement to traditional concepts of public space and private space. A collective residence is used to show the flexible space, diversified functions, and comfortable home.

The interior space for the use of different households is appropriately designed according to their different modes. While imparting new functions to traditional residences, this design also redefines some functions. Many curve elements and indoor windows are used to soften the boundary between public and private space. Connection to the community is strengthened while ensuring safety and privacy.



1. BALCONY
2. WORKING AREA
3. LIBRARY
4. ACTIVITY AREA
5. ATRIUM
6. LIVING ROOM
7. ACTIVITY AREA
8. MUSIC AREA
9. BATHROOM
10. KITCHEN
11. DINNING ROOM
12. THEATER ROOM
13. MASTER ROOM
14. PRIVATE BALCONY

SECOND FLOOR PLAN



1. ROOF GARDEN
2. LAUNDRY ROOM
3. LIVING BALCONY
4. SUNROOM
5. KID'S ROOM
6. KITCHEN
7. LIVING ROOM
8. BATHROOM
9. MASTER ROOM
10. WORKING AREA

THIRD FLOOR PLAN

SINKING ATRIUM IN PUBLIC SPACE

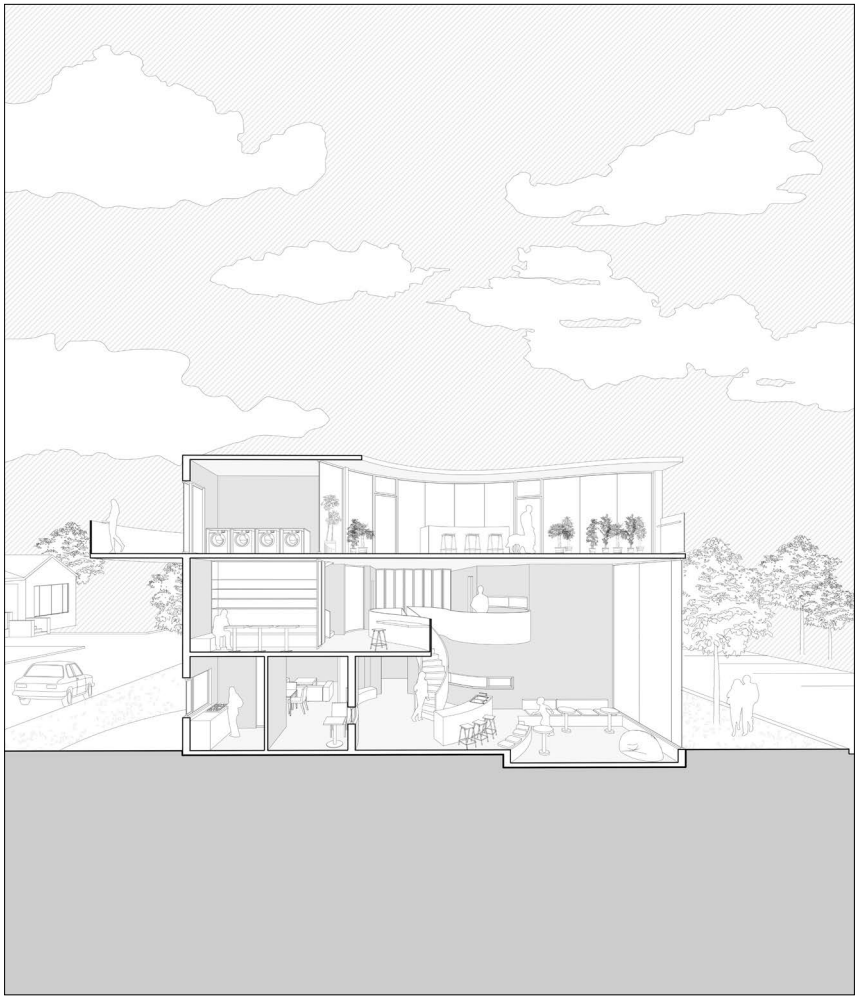
Cutting of the space on different levels with curves. Different areas of openings are arranged in different parts of the architecture. Family members are able to interact with and connect to other family members, public spaces and outdoor environments while ensuring privacy

INTERACTION WINDOW BETWEEN SEMI-PUBLIC AND SEMI-PRIVATE SPACES

The indoor openings and arc-shaped elements reduce dead spaces in the semi-public space of families. Families could also have the chance to communicate with neighbors. It also allows parents to attend to their children wherever they are in the residence.

SPATIAL RELATIONSHIP BETWEEN DIFFERENT HOUSEHOLDS

3D Print Model/ Photosensitive esin



SECTIONAL PERSPECTIVE A - A'

Public areas mainly include laundry room, roof garden, library, working area, lobby and traditional family space.

HEALING SPACE

A COMMUNITY SPACE FOR PEOPLE TO REVITALIZE THEMSELVES AND RELEASE PRESSURE.

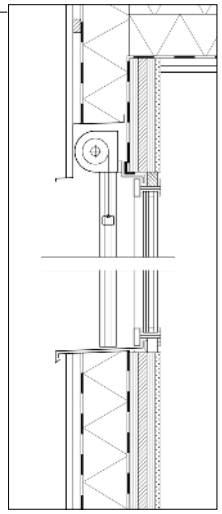
SITE: BEIJING
INSTRUCTOR: LINGZHE WANG
SEPTEMBER 2019
INDIVIDUAL WORK

Quite a number of problems are challenging the development of old downtown areas in Beijing: unreasonably planned living environment, public spaces occupied for other purposes, increasing populations, etc., all of which have made the downtown area increasingly crowded and closed. On the other hand, people living in cities face immense pressure from society, work, and life.

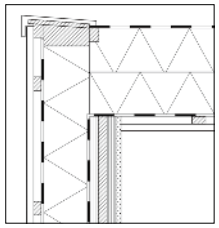
Healing Space is located in Dongsishiyitiao, Beijing, and is surrounded by densely placed architectures and narrow alleys. Space is a healing recreation space that allows people to release pressure and revitalize themselves. It takes the form of a community public architecture and imparts new significance to people and hutongs.

The space is highly flexible in both interior and exterior terms. It uses many vertical openings on the exterior, whose degree of openness is determined by doors and windows. The interior does not have any functional limits or closed rooms, which gives the space a great degree of flexibility and would not make users feel restrained inside. An indoor green garden is introduced to connect the indoor space with outdoor streets, bringing more vitality to the interior space and making the street greening more beautiful.

SPACE ANALYSIS

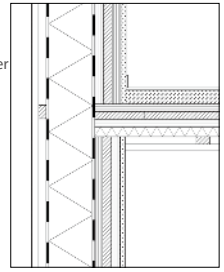


WINDOW
1. fabric sunblind;
2. double glazing: 2x8mm+10mm lam;
3. safety glass with 16mm cavity.

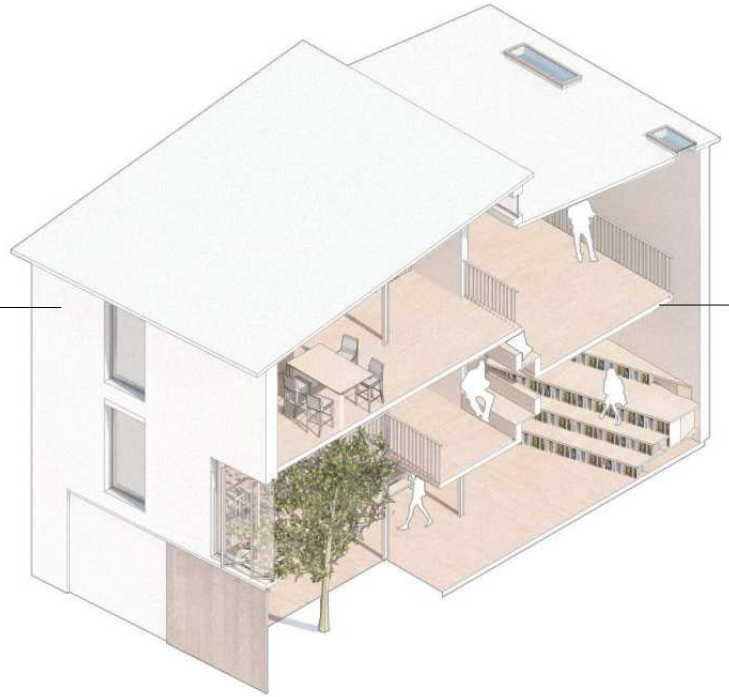


ROOF
1. two-ply bitumen sealing membrane 260mm mineral wool thermal insulation;
2. vapor barrier;
3. 25/38mm battens breather membrane;
3. 0.8mm aluminum sheet.

WALL
1. 0.8mm aluminum sheet;
2. 25/38mm battens breather membrane;
3. 140mm mineral wool thermal insulation;
4. vapor barrier;
4. 80mm three-ply cross-laminated timber;
5. 12.5mm plasterboard panel.



FLOOR
1. 6mm PVC tiling;
2. glued;
3. 40mm concrete screed;
4. 80mm three-ply cross-laminated timber;
5. 30mm mineral wool thermal insulation;
6. 25/38mm battens breather membrane,
7. 0.8mm aluminum sheet.



SECTIONAL PERSPECTIVE

SECTION DETAIL This displays the interaction between people and people and between space and space. The function of the furniture is weakened inside, and without completely closed space.

INDOOR AND OUTDOOR SPACE TRANSITION

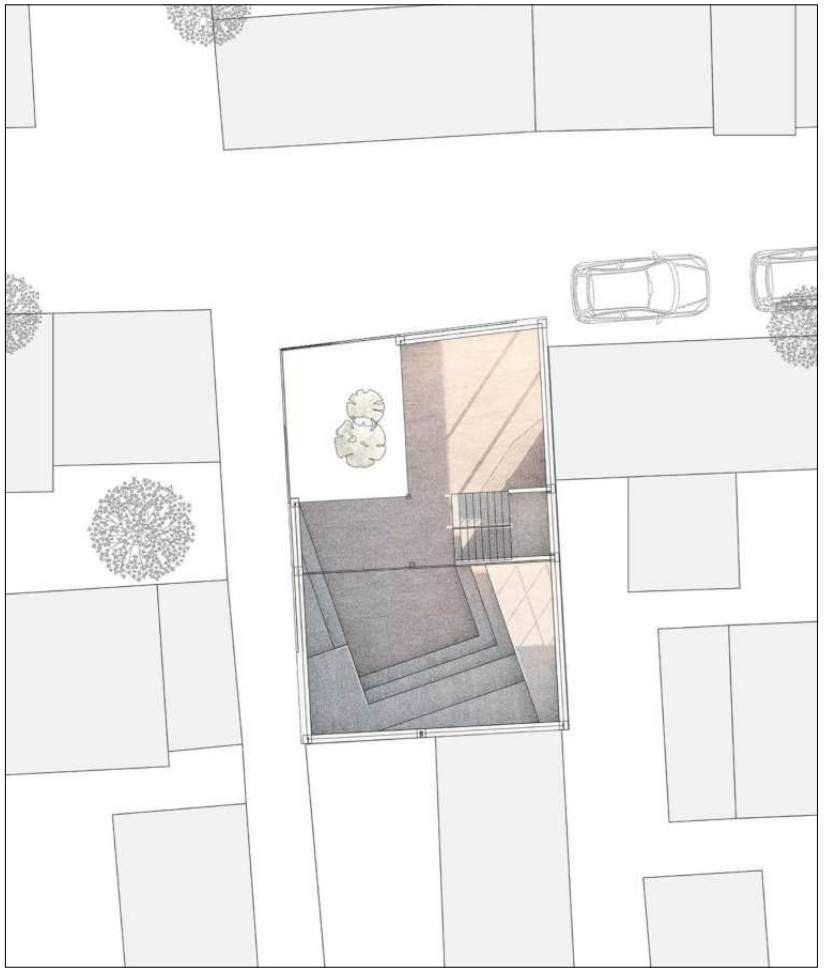
The bar counter, spring layer step multi-media space, and the atrium; The indoor space is bright and broad when the door is open. Vegetation can improve the vitality of the environment and at the same time play a soft partition effect on indoor and outdoor spaces.

MULTIPLE INTERIOR SPACES CONNECTION

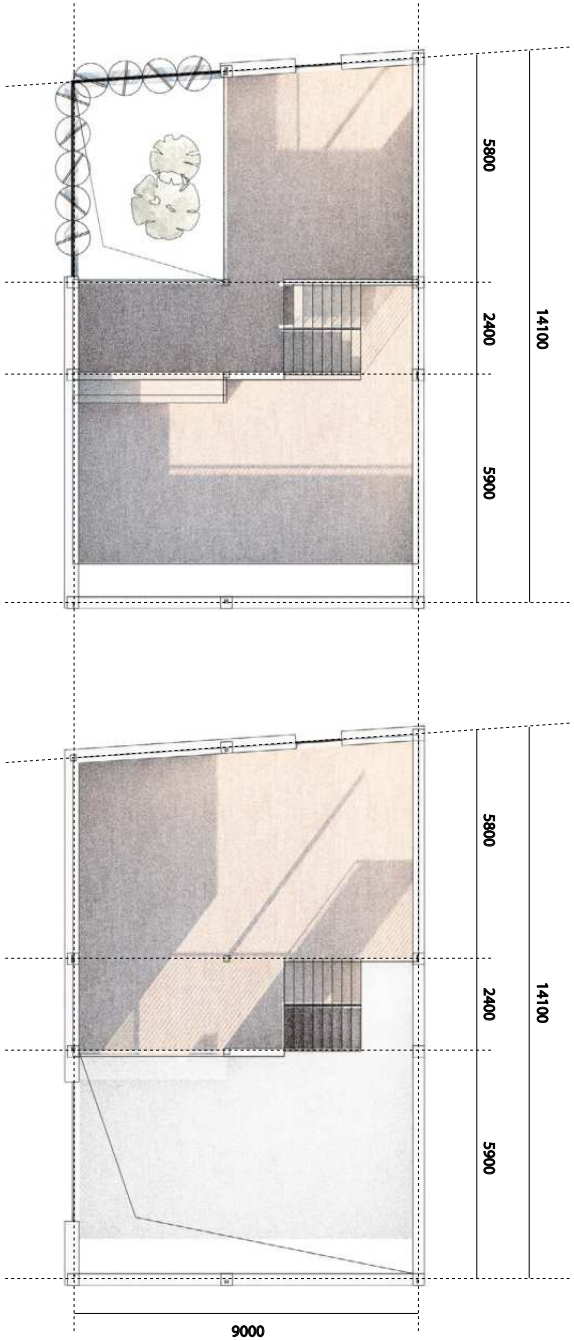
The split-level floor slab establishes connectivity between multiple different spaces while ensuring spatial independence. Improve the variability of spatial functions and the freedom of users in the environment.

UNIQUE FACADE ON THE STREET

The north of the architecture uses large areas of openings to improve the narrow street appear broad visually. In the meantime, materials and styles different from those of the facades of surrounding architectures are used to make the architecture stand out and attract people to gather and activity.



FIRST FLOOR PLAN



SECOND FLOOR PLAN

The north is used for recreation such as reading, chatting, studying, etc. The south is for activities such as playing and gaming.

THIRD FLOOR PLAN

The north is a semi-recreation and semi-activity space for studios, reading, meetings, etc.

AQUAWORKS

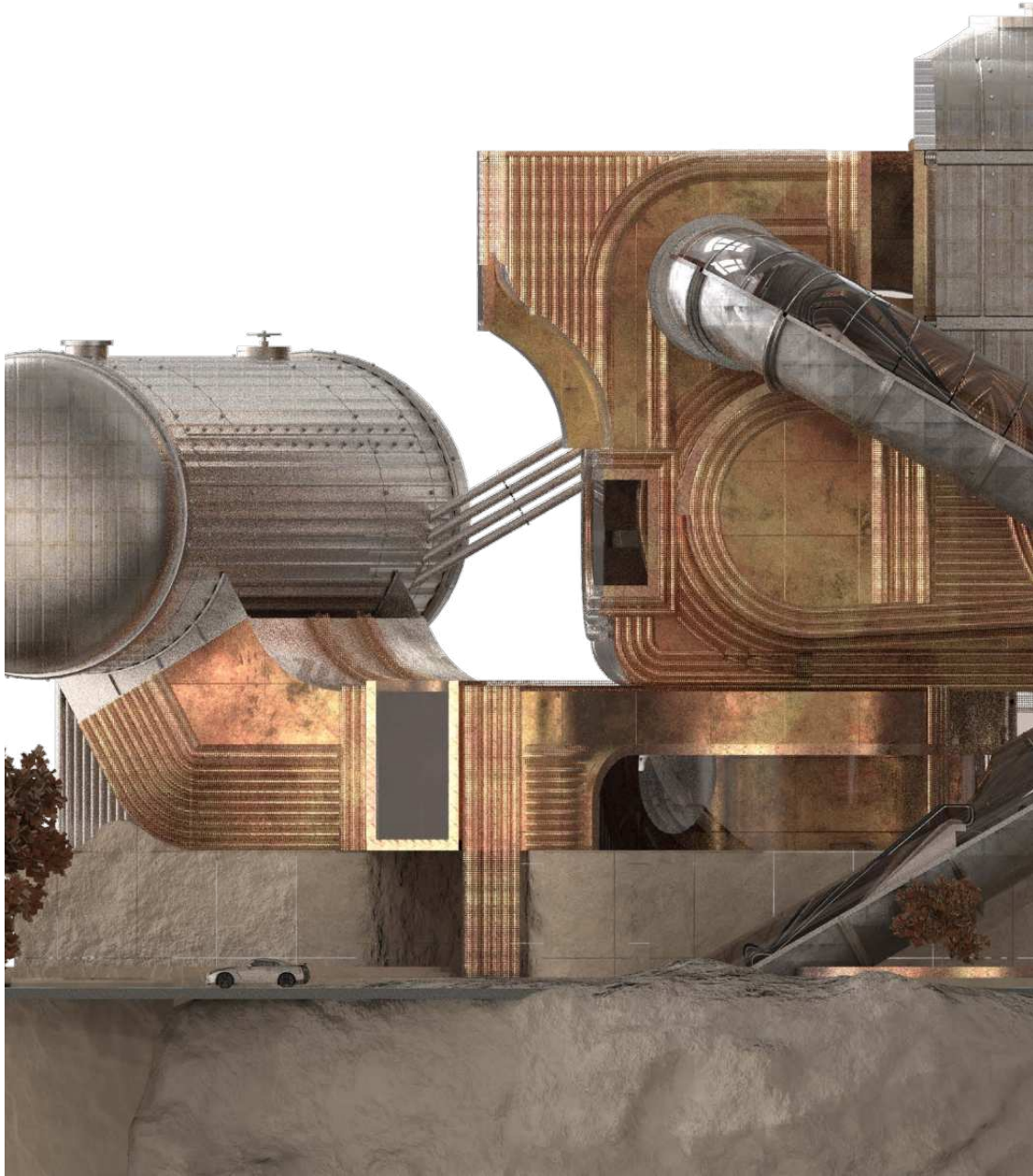
A WATER TREATMENT PLANT BASED ON THE ASSEMBLAGE CONCEPT.

SITE: QUEENS
INSTRUCTOR: DORIAN BOOTH
JANUARY 2023
COOPERATION WITH: WEN QING

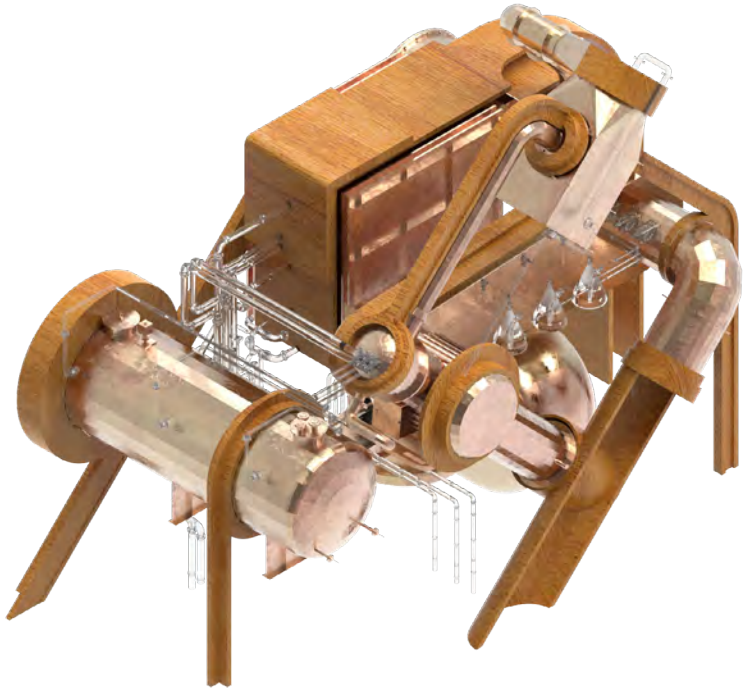
The project is situated in Flushing, Queens, along College Point Boulevard, and is adjacent to a heavy industry hub near Flushing Creek. Over the past decade, this area has experienced extensive residential and commercial development. Although the area was originally settled by the Canarsee and Rockaway Lenape groups, it now hosts diverse structures and uses.

This design aims to explore the idea of assemblage as an architectural technique for creating form and space, building upon its use within the field of art. Purpose-built industrial structures will serve as the medium for constructing these architectural assemblages.

The primary concept of this design project takes inspiration from Eduardo Paolozzi's print, which utilizes offset language to illustrate simple components such as arcs, lines, and curves—integrating offset language into the initial industrial assembly model. This approach allowed for exploring and refining multidimensional offset language in the project's development. Additionally, to extract a pattern language from their geometry pattern studies to inform and guide the design decisions. Drawing upon these techniques and inspirations creates a unique and sophisticated final product.



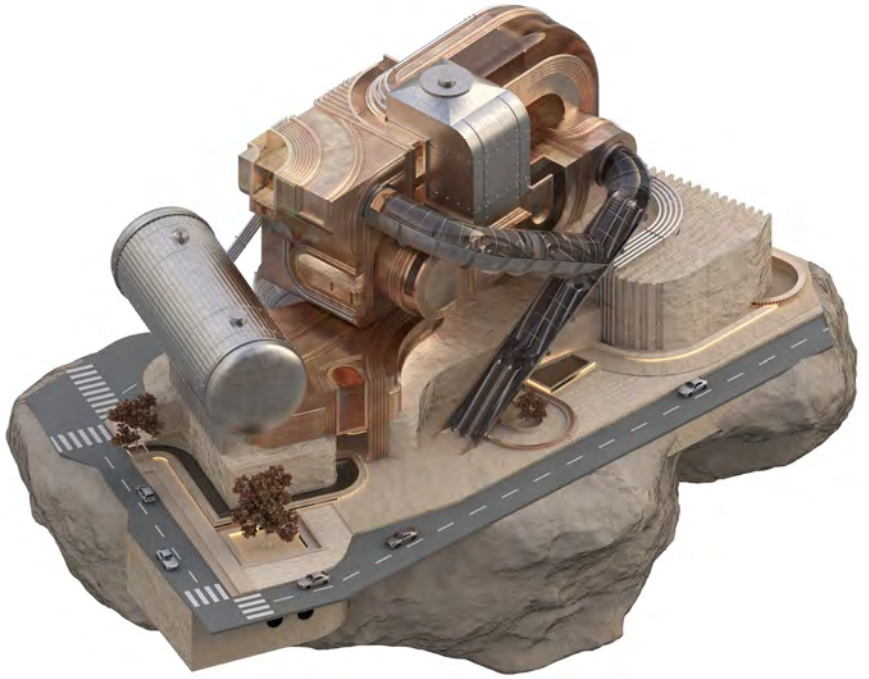
ASSEMBLEAGE GENERATIVEPROCESS



DIAGITAL ASSEMBLY MODEL

Inspired by Eduardo Paolozzi's artwork, the design process translates lightness and shadow into depth in 3D. The model features primary and secondary volumes connected with offset language, crafted with 3D printing, corrugated boards, and acrylic dowels, creating a striking design.

PHYSICAL ASSEMBLY MODEL

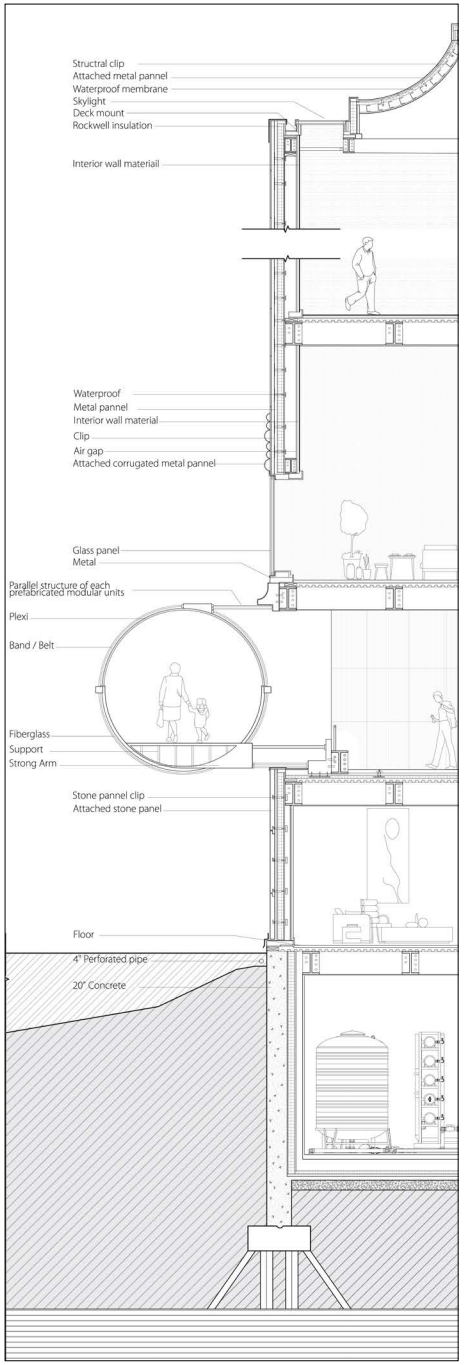


DIAGITAL ASSEMBLY MODEL

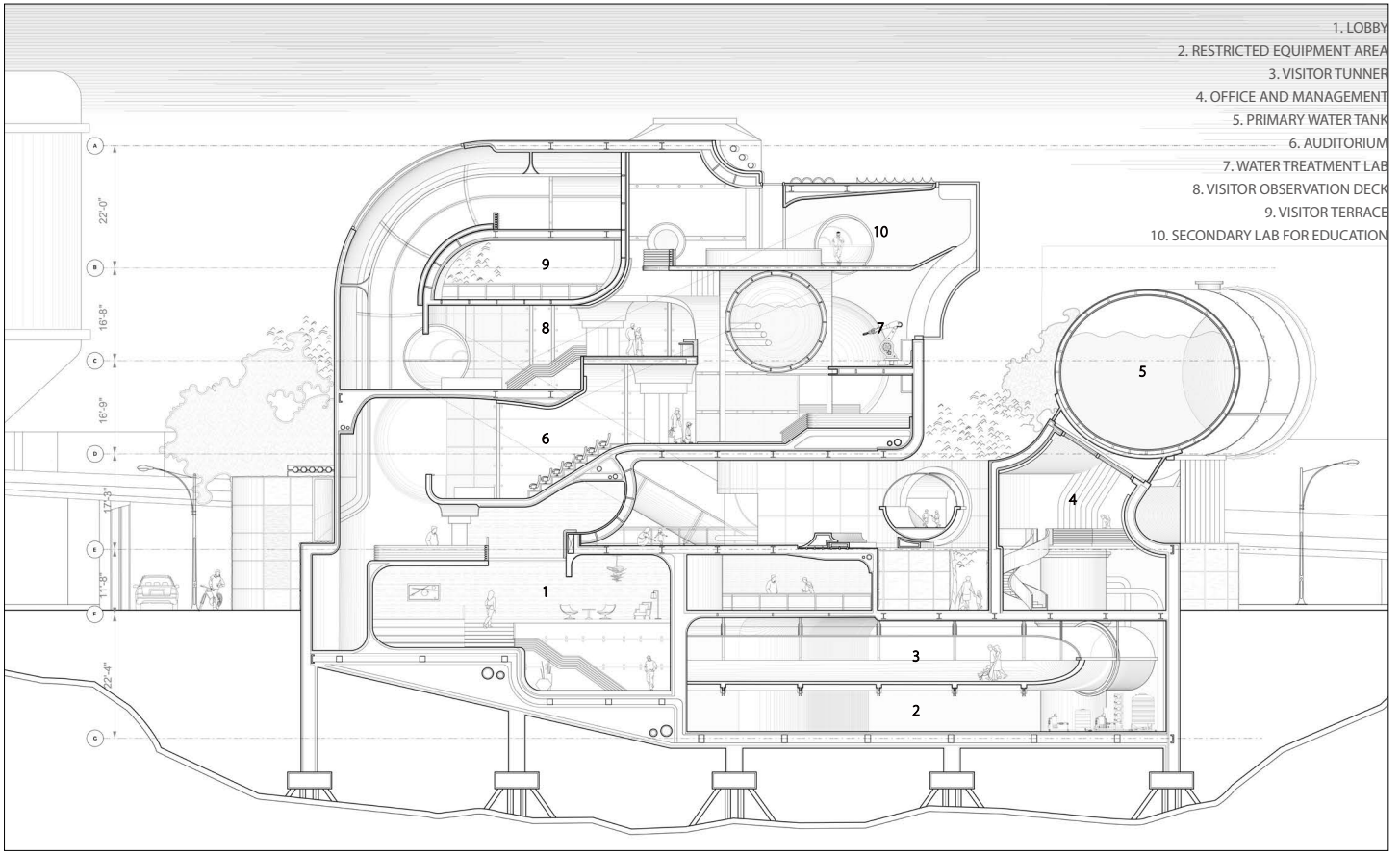
In translating the assembly model into architecture, realistic materials shape practical and functional spaces. Functional areas are allocated across volumes, with offset connections becoming traffic and water transportation routes.

CIRCULATION TUNNEL

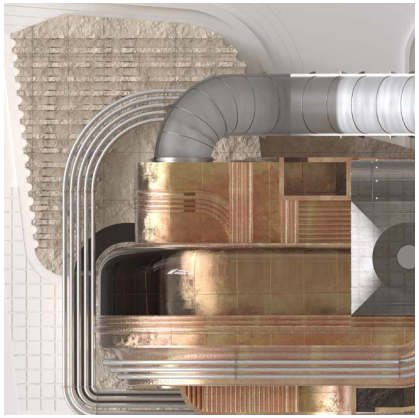
FROM INTERIOR LAB TO LAB WATER TANK



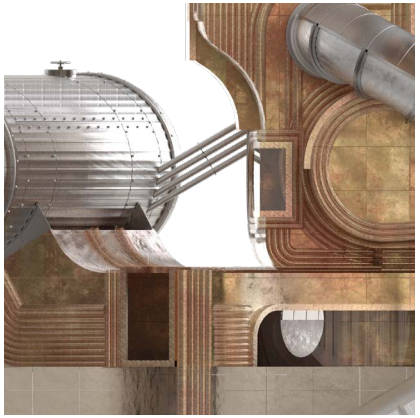
WALL SECTION



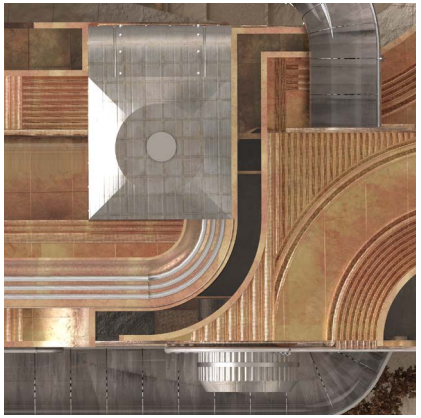
SECTION



TOP DETAIL WITH STONE PANEL AND OFFEST PIPES



NORTH DETAIL WITH PREFABRICATED MODULES TUNNEL



TOP DETAIL WITH GALVANIZED STEEL WATER TANK

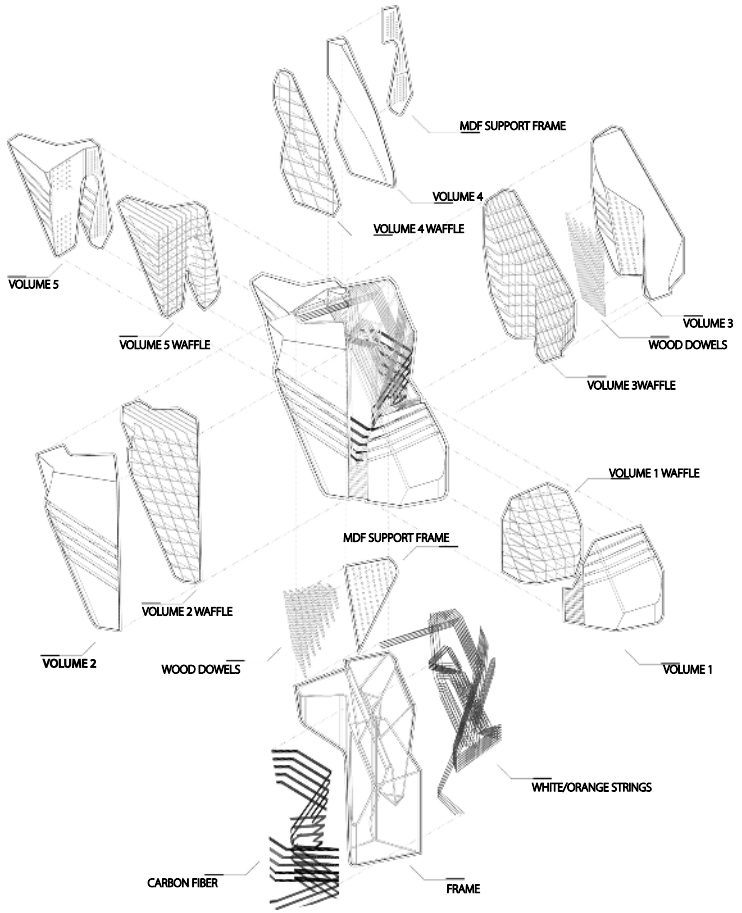
IMPLIOIT EDGE

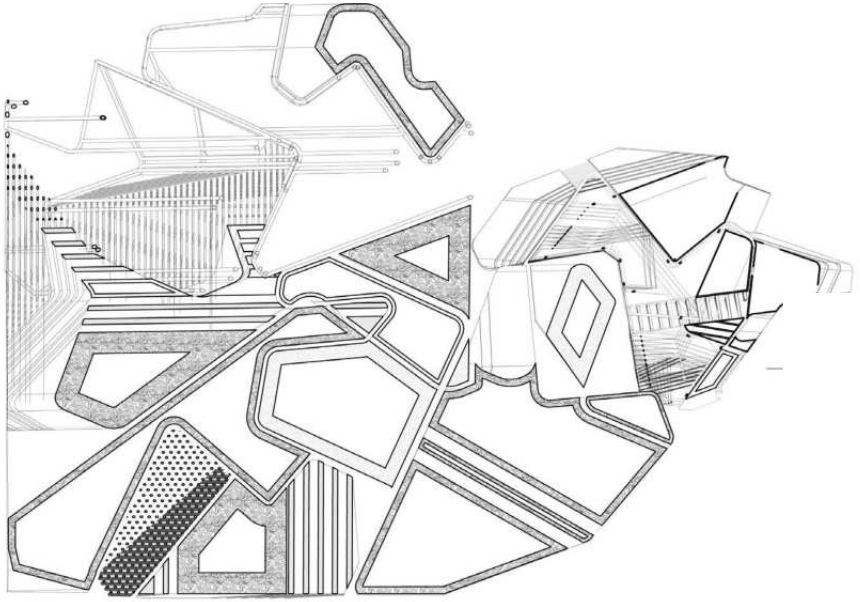
AN INSTALLATION FOR DEVELOPING A PRIMARY KNOWLEDGE OF MATERIAL PROPERTIES

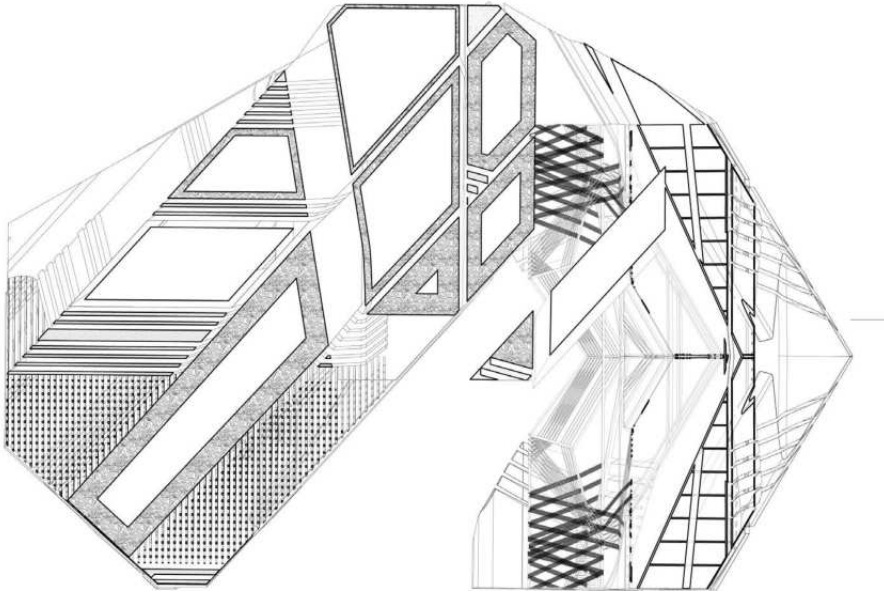
SITE: PHILADELPHIA
INSTRUCTOR: DANIELLE WILLEMS
OCTOBER 2021
COOPERATION WITH BOHAN LANG, COURTNEY WARD,
JINYI HUANG, AND SHENGNAN GAO

The description of the edge condition is controlled through the interpretation of the solid edge, implied edge, and constructed edge. The assembly of a joint object is rendered through the solid, frame, and lines. Through this, the whole is constructed to be read as different conditions of the same object.

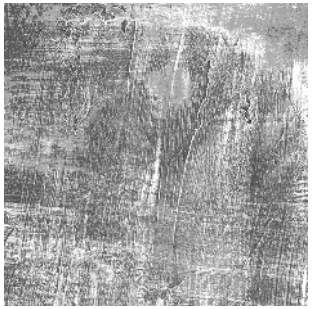
This is done through the use of solid plaster structures that show the direct condition of the object, the dowels that use repetition and implied angles to complete the object, and the frame that show the wireframe of the object. Through all of these conditions, the edge condition is furthered through the continuous line, crossing each condition. This suggests the index of the corner condition into the edge condition.







DETAILS



Plaster texture on chipboard

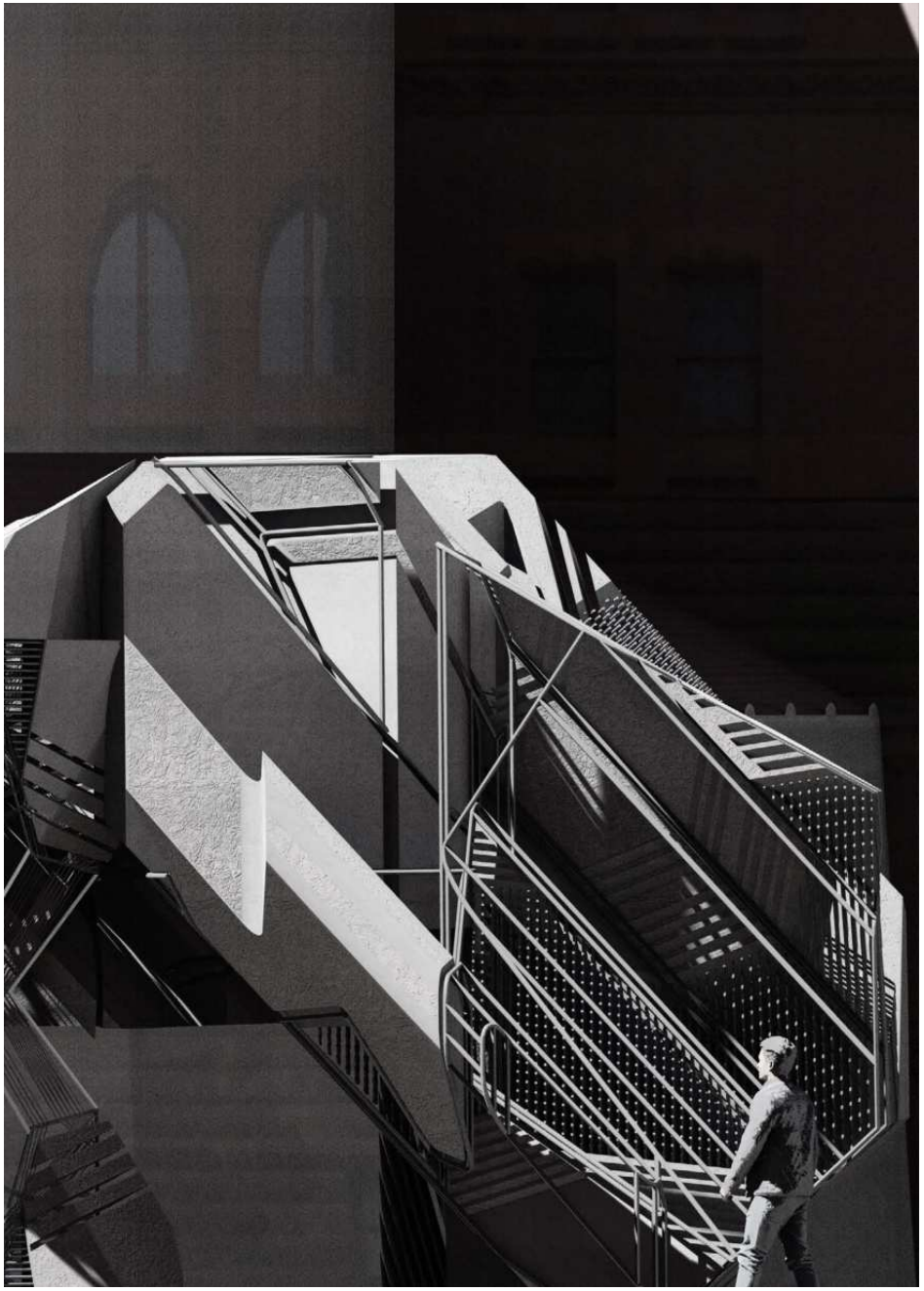
Carbon Fiber

Wooden dowels and joints

Waffle slab structure inside of the chipboard

PROCESS

B'



EMPOWERMENT

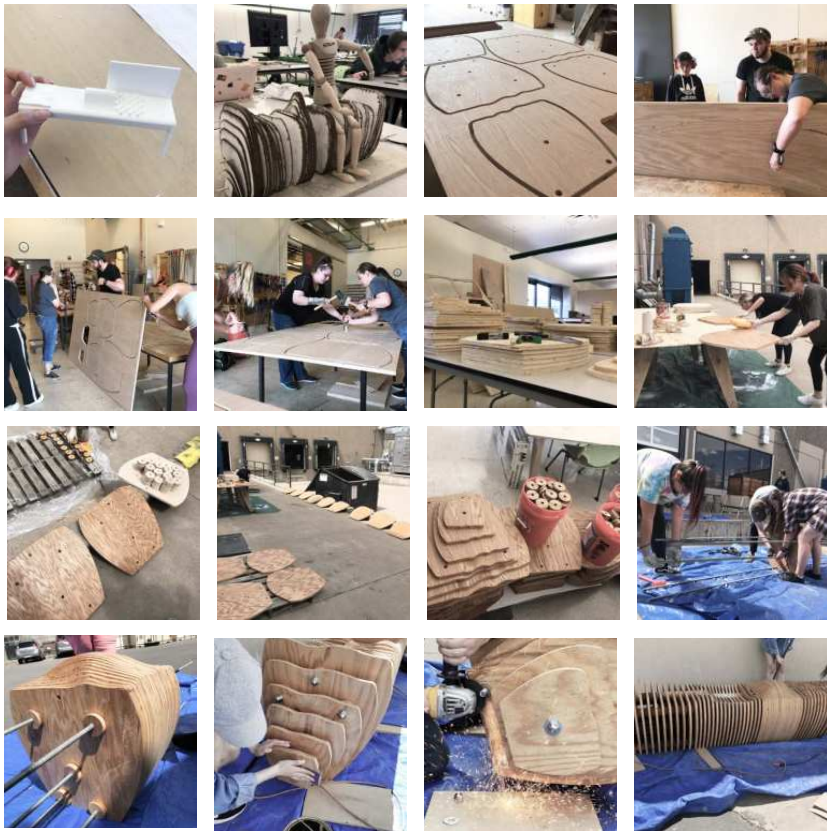
AN INSTALLATION EXEMPLIFIES THE POWER OF STUDENT ACTIVISM.

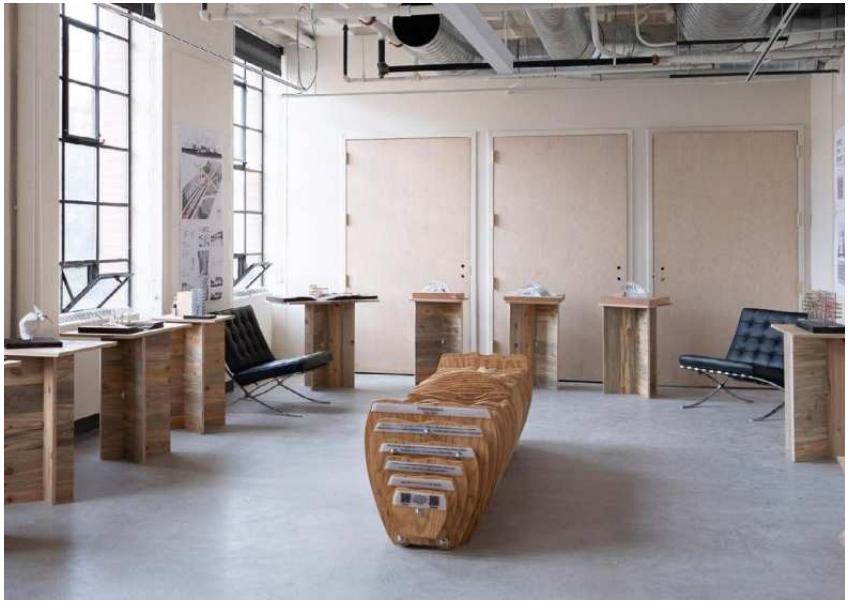
SITE: BOULDER
INSTRUCTOR: EMILY GREENWOOD
JANUARY 2019
COOPERATION WITH: ALYSSA DRAIN, MEGAN MEEK, RILEY CHUSTZ, SARAH KENNEDY, SEBASTIAN ELVERSKOG.

The University of Colorado at Boulder was founded in 1876 and had many rich and interesting histories. But with the rapid development of the times, stories have been forgotten.

In 1904, law students protested for more comfortable seats and removed the monolithic wooden benches from Hale Sciences. After talk of expelling the entire law program, the University of Denver admission students, and ensure better seats. The CU administration realized the seriousness of the situation, after which it provided a better learning environment for the students.

The work uses the bench design to narrate a well-known history story that attracts and inspires students, faculty, visitors, and residents to learn more about campus history.



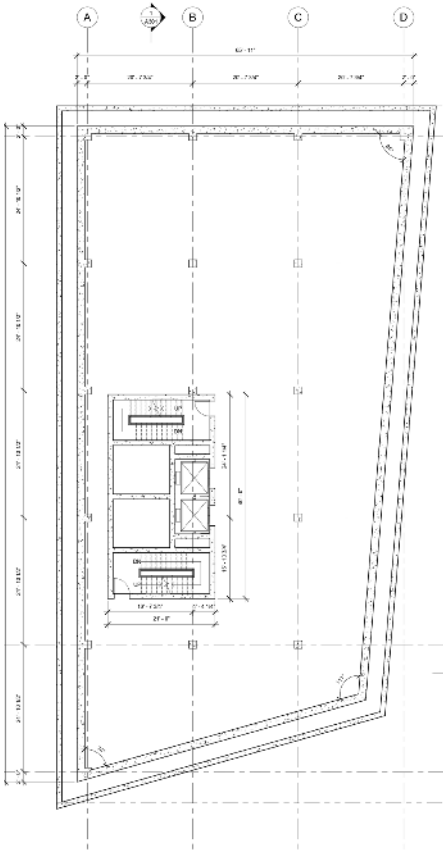


OTHER WORK

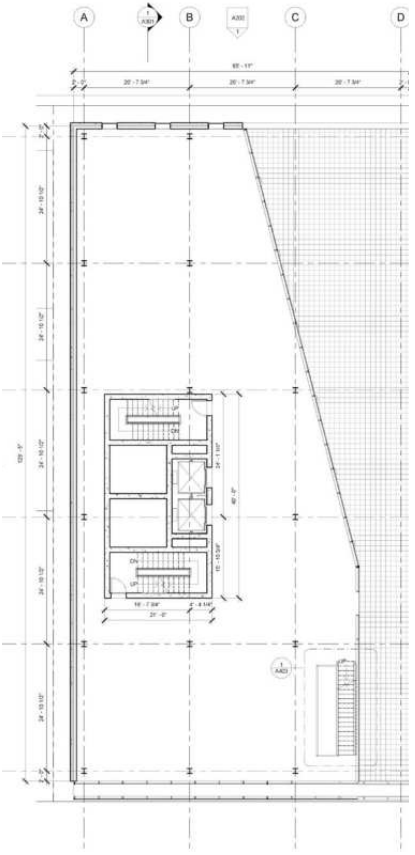
RITTENHOUSE PROJECT

SITE: PHILEDALPHIA
INSTRUCTOR: FRANCA TRUBIANO
MAY 2022
INDIVIDUAL WORK

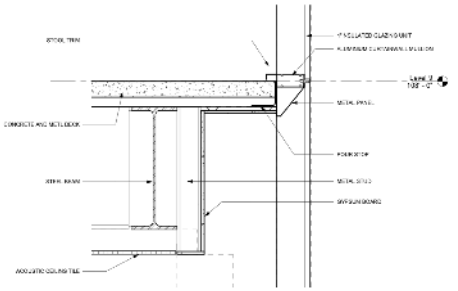
This project entails the design of a high-rise office building, with architectural drawings meticulously crafted using Revit software. The building's primary structure will feature a steel frame combined with a glass curtain wall facade, while the basement section will be constructed using concrete. The design process involves careful consideration of the column grid layout, structural connections and sections, floor and ceiling plans, and detailed elements for both the interior and exterior. Revit's advanced capabilities enable precise modeling and coordination of these aspects, ensuring a comprehensive and efficient design process that meets the project's architectural and structural requirements.



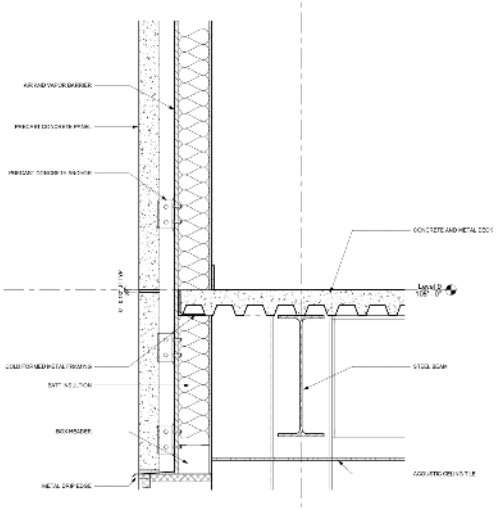
FLOOR PLAN - BASEMENT



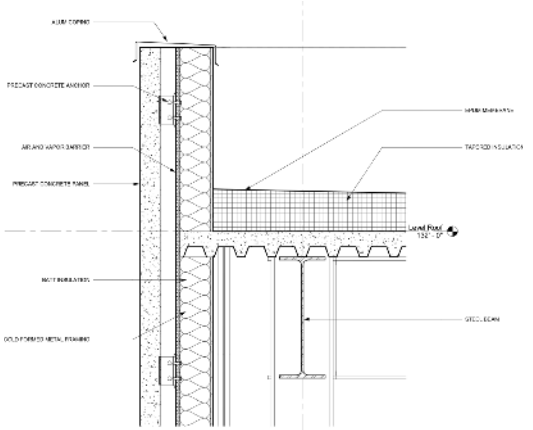
FLOOR PLAN - STANDARD LEVEL



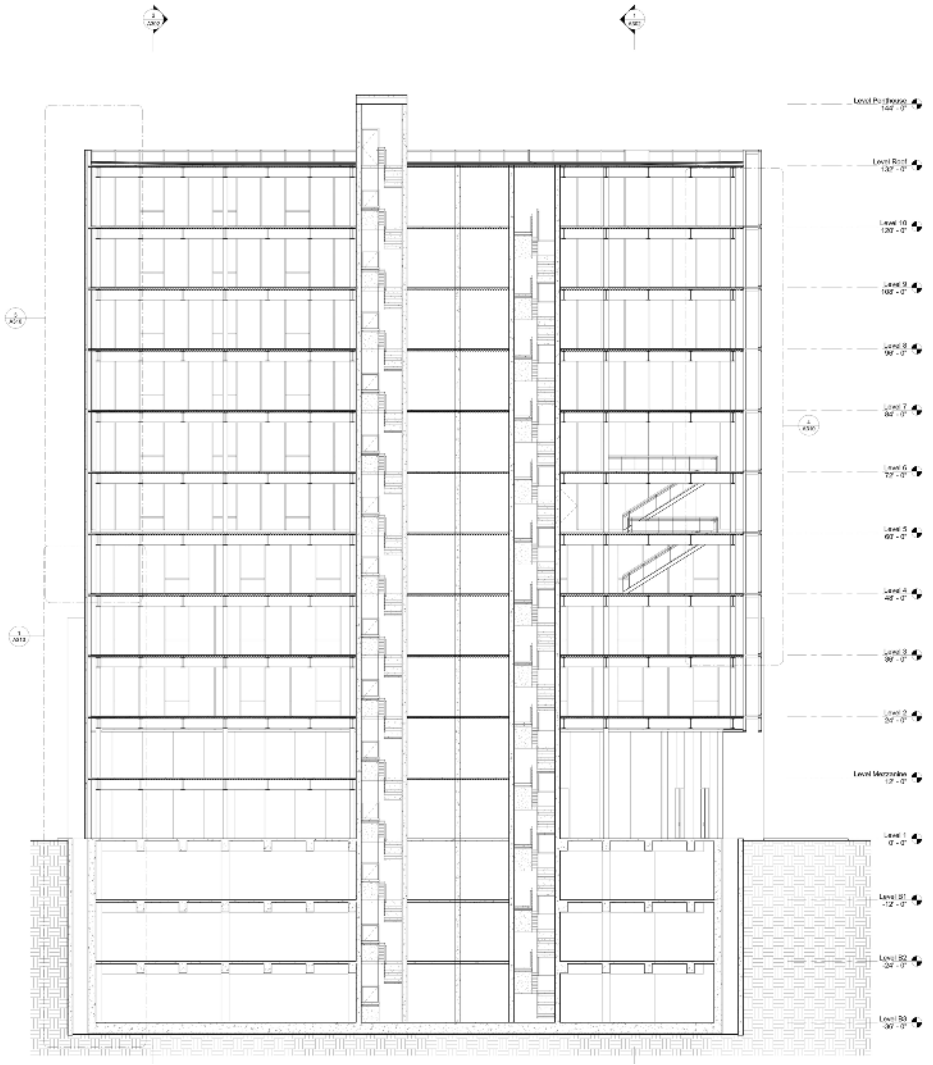
DETAIL SECTION - CURTAINWALL AT PAPAPET



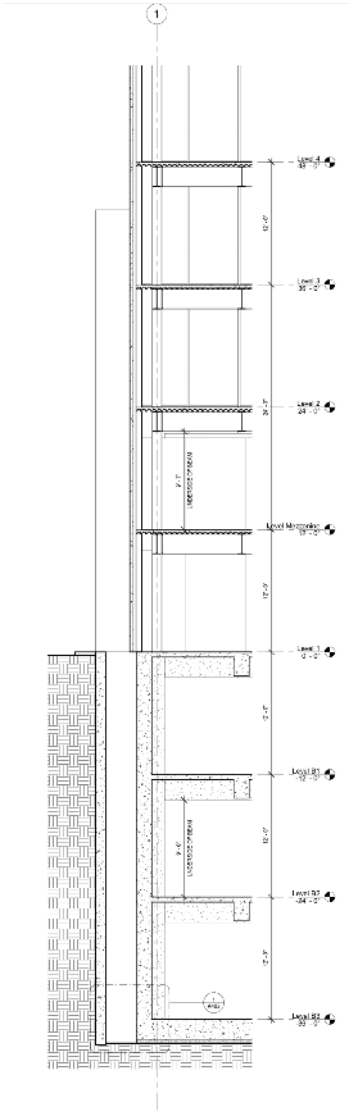
DETAIL SECTION - CAVITY WALL AT FLOOR



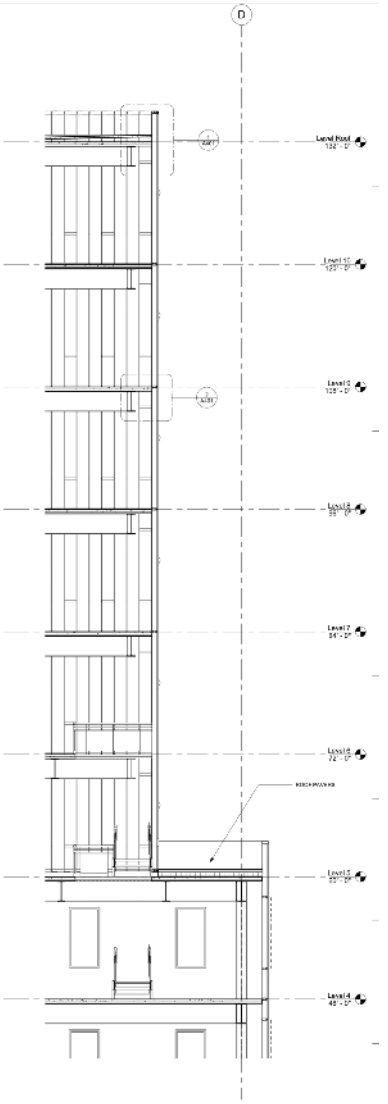
DETAIL SECTION - CURTAINWALL AT PAPAPET



BUILDING SECTION - LONGITUDIONAL



WALL SECTION - TYPICAL FOUNDATION



BUILDING SECTION - TYPICAL CURTAINWALL

OTHER WORK

DAYLIGHTING ANALYSIS

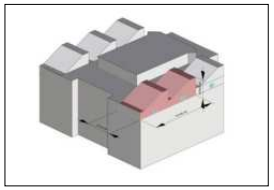
SITE: PHILEDALPHIA
INSTRUCTOR: JANKI VYAS
MAY 2024
COOPERATION WITH: ZIHAN LI

The Fabrication Lab serves as a practical laboratory extension of classroom theory. The Lab is equipped for all phases of woodworking, metalworking, and machining, as well as digital fabrication with CNC routing, laser cutting, and 3D printing.

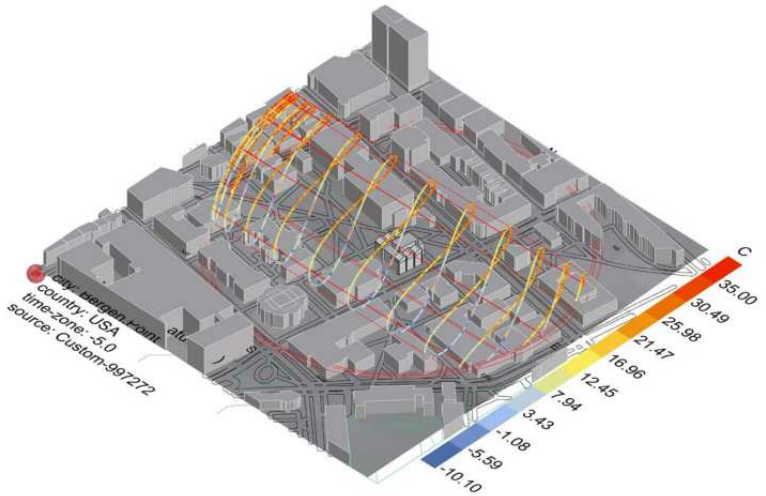
Investigate the illumination conditions of the Fabrication Lab during operation hours, including sunlight hours, daylight delivery, the annual hourly illuminance of different working desks, and whether these working desks have potential glaring issues.

Based on the analysis results through Ladybug Tools, determine whether the distribution of illumination in the lab space is reasonable and optimize artificial lighting to reduce energy consumption. According to the glaring analysis results, optimize the glaring issues on the working surface by changing the glass material or louver design.

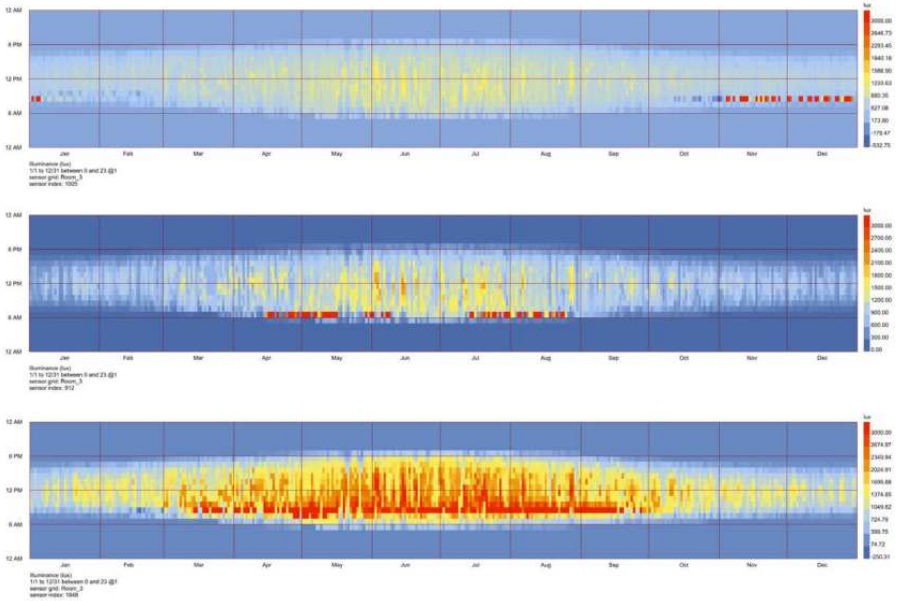
SITE PLAN



LABORATORY

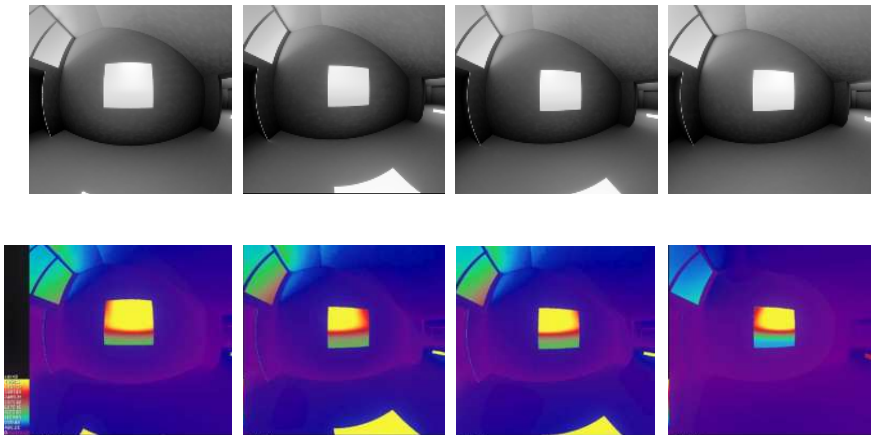


SUNPATH



ANNUAL HOURLY ILLUMINANCE DATA

Analyzing the illuminance data for work desks in the lab using Annual Hourly Illuminance Data.



VIEW BASED ANALYSIS

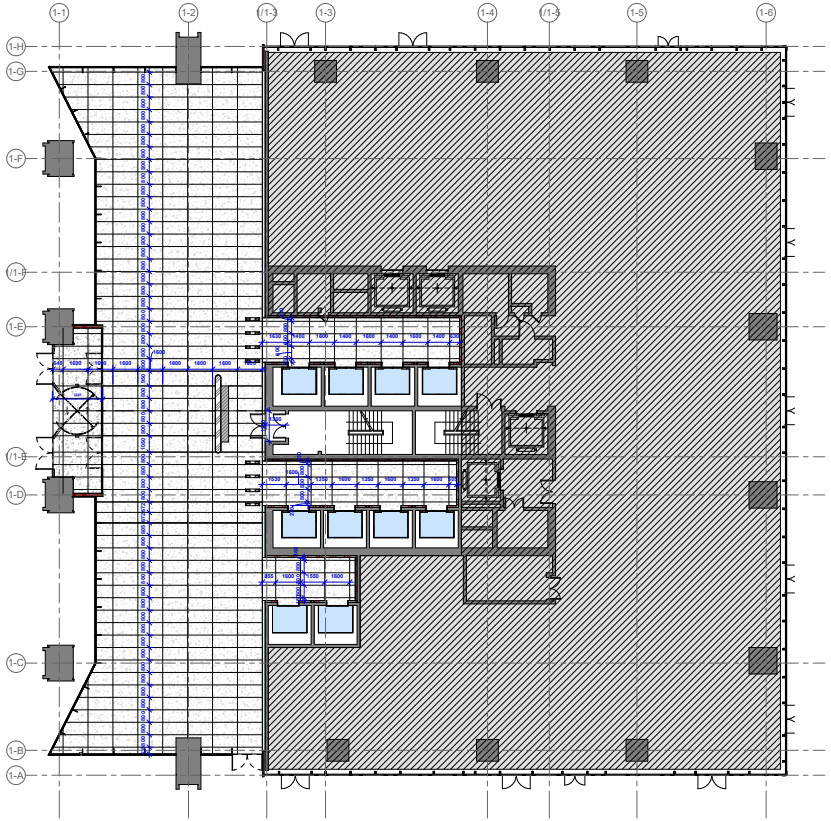
Setting up a view-based study to evaluate glare potential from a given perspective in a room.

PROFESSIONAL WORK

MIXED-USE INTERIOR DESIGN PROJECT

SITE: NAJING, CHINA
CLIENT: CHINA RESOURCES LAND
PHASE: SCHEMATIC DESIGN AND DESIGN DEVELOPMENT
TEAM: PELLI CLARKE & PARTNERS
JUNE 2023

This project involved the interior design of the lobby and standard levels of a mixed-use office building. Responsibilities included developing multiple design proposals, selecting materials, and creating detailed plans using Revit. These plans encompassed floor layouts, ceiling plans, and tile layouts. Additionally, renderings were produced to visualize the designs. The project is currently in the Construction Documentation (CD) phase.



REVIT DRAWING

LOBBY RENDERING

LOBBY RENDERING

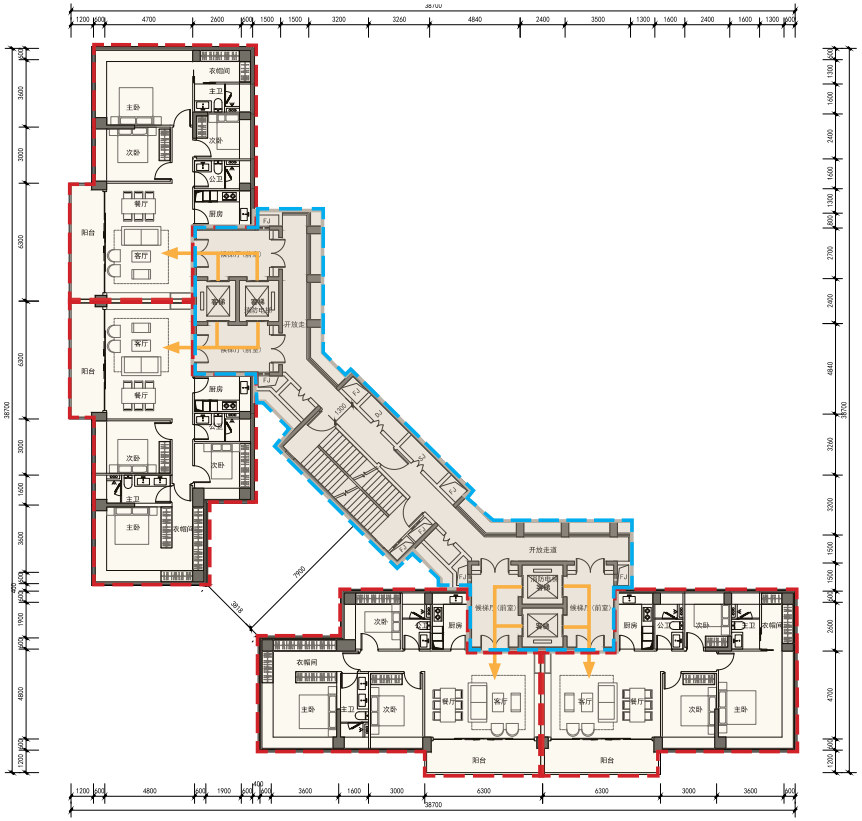
STANDARD FLOOR RENDERING

PROFESSIONAL WORK

MIXED-USE TOWER AND COMMERCIAL PROJECT

SITE: SHENZHEN, CHINA
CLIENT: CITIC
PHASE: COMPETITION
TEAM: PELLI CLARKE & PARTNERS
AUGEST 2023

Project was a collaborative competition focused on the design of a mixed-use complex comprising commercial, residential, and mixed-use tower sections. The primary focus was on the design of the mixed-use tower, which included creating diagrams, planning spatial usage and floor allocation, calculating area, and rendering specific areas.



REVIT DRAWING

MASTER PLAN

COMMERCIAL RENDERING

MIXED-USE TOWER RENDERING