

# CODY B. DAVIS

ARCHITECTURE & DESIGN PORTFOLIO

## Hi, I'm Cody Davis.

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Designer trained in *Art & Architecture* with an eye for detail and sophistication.  
Oriented in the beauty & cosmetic industry, I bring creative ideas to life through design.  
Here you will find a collection of my architecture projects and other significant works.

Location: Brooklyn, NY, 11221, USA

BA : Architecture - Pratt Institute



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# SKATEBOARD BAKERY - COMMUNITY CENTER / EMERGENCY SHELTER

ROCKAWAY BEACH BLVD, BROOKLYN,  
NY, 11629

2021

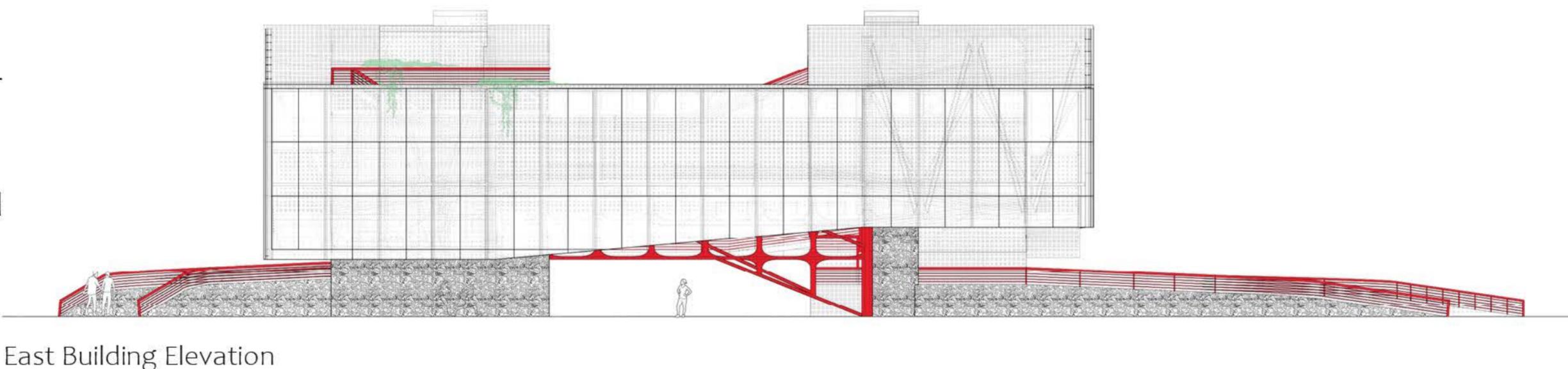
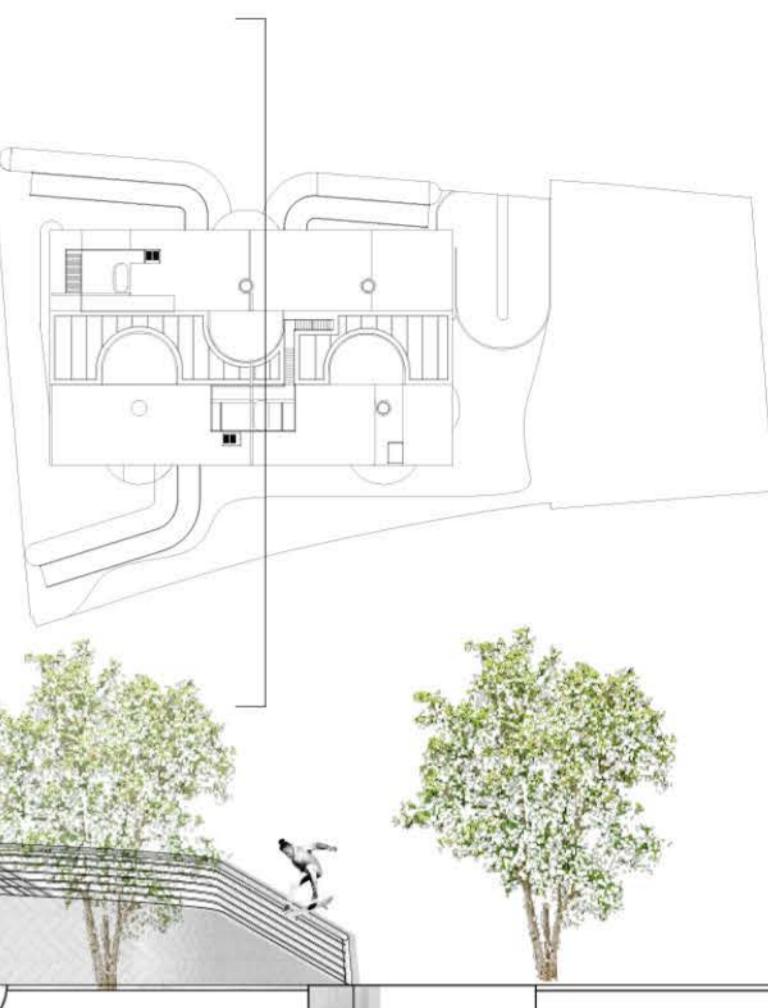
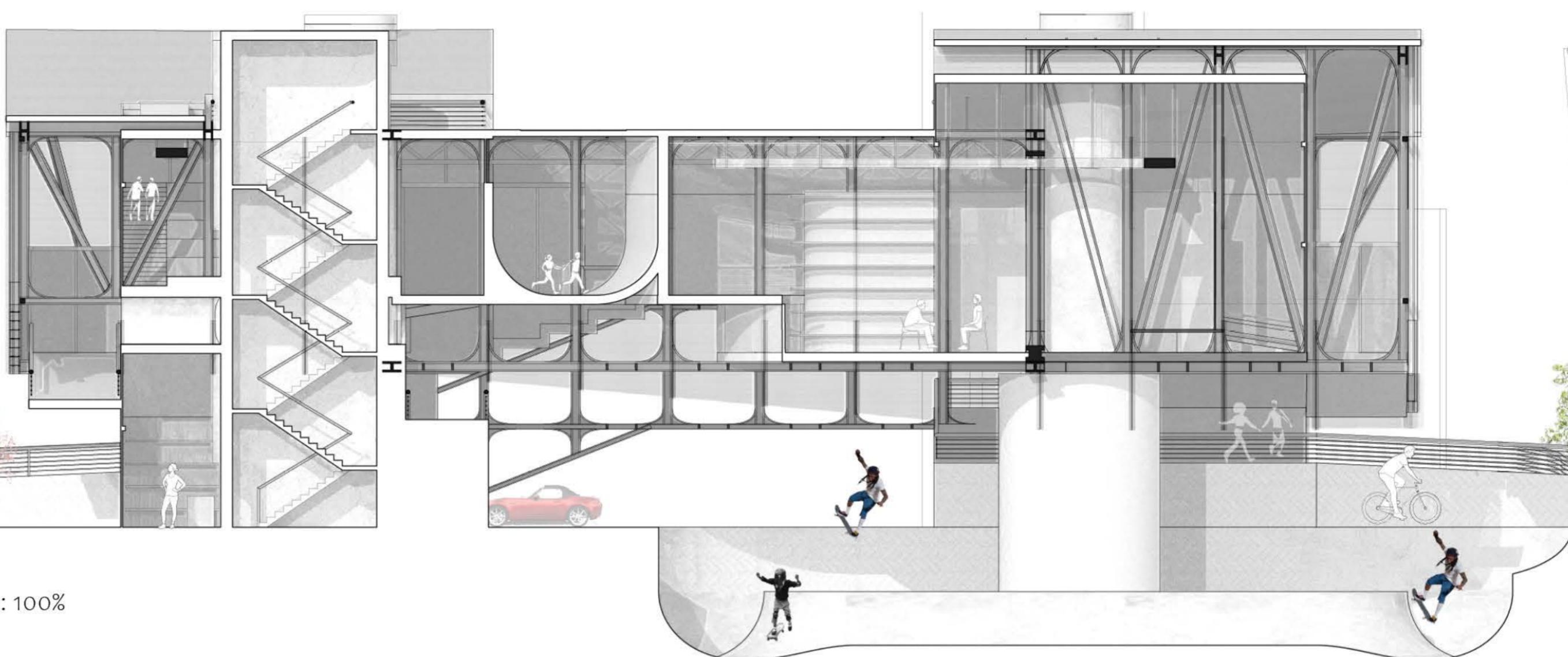
COLLABORATED W/ - M. OLSEN

This project is a reaction to the damage done to the communities of Rockaway beaches from hurricane Sandy. The mission was to provide a space for shelter during strong storm surges and a community oriented service. The center operates as a skate park, a recycling center, and a maker space for creating recycled plastic outdoor activity equipment.

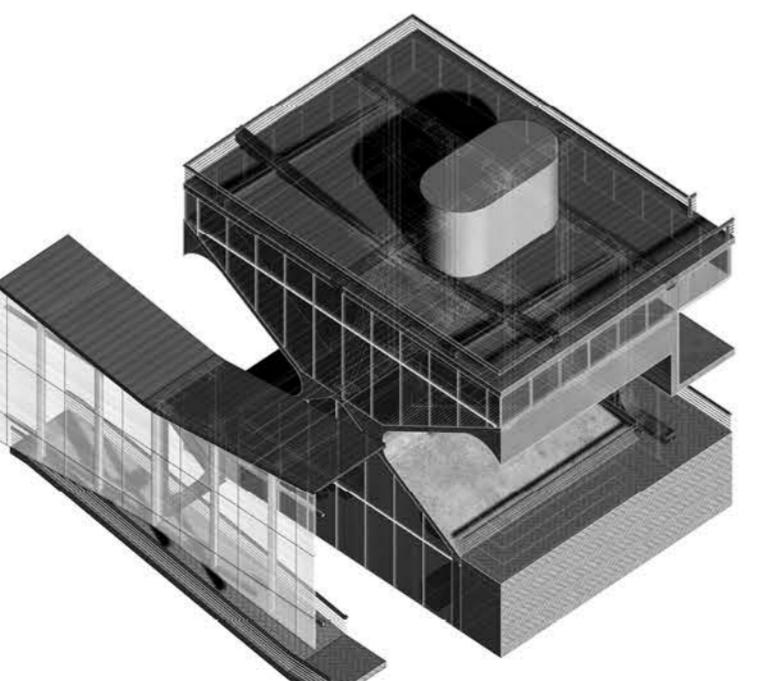
The structure is hung from a skeleton of trusses, resting on 6 cores. The first floor is programmed to be sacrificial in the event of flooding. The second floor program is elevated 15 ft above grade, with a series of ADA ramps circulating to the roof. The program was designed with an open air concept. You can find 6 isolated conditioned spaces in the floor plans that hold offices, storage, recycling facilities, shelter, locker rooms, merchant spaces, classrooms, and workshops. The majority of these spaces had the ability to quickly convert to full service shelters during emergencies. The glue holding the building and program together is an active 'secondary landscape'. Optimized for outdoor activities such as skateboarding or roller-blading. The floors, structure, and walls took on roles larger than architecture and stimulated activity.



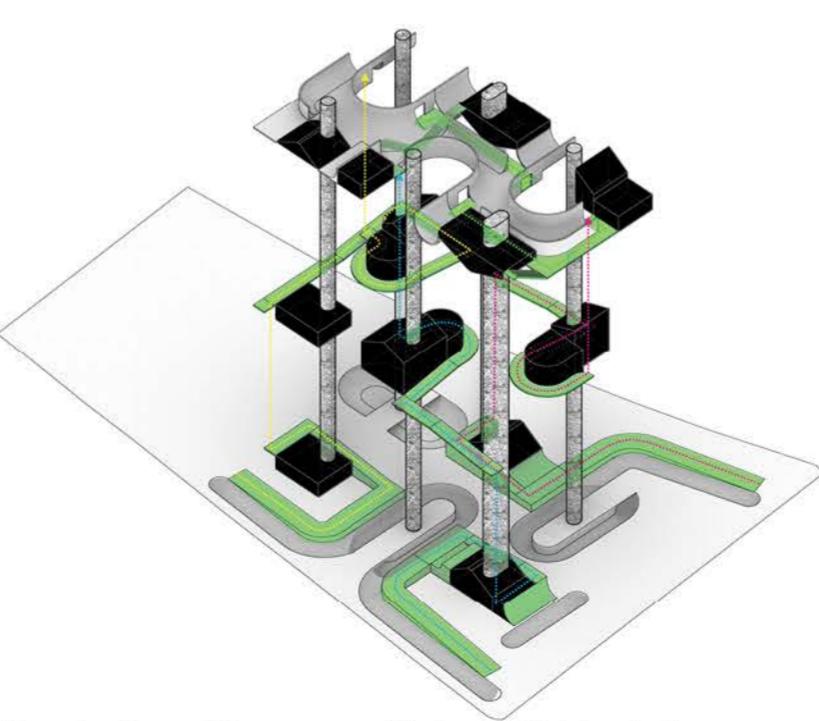
West Building Section - Role: 100%



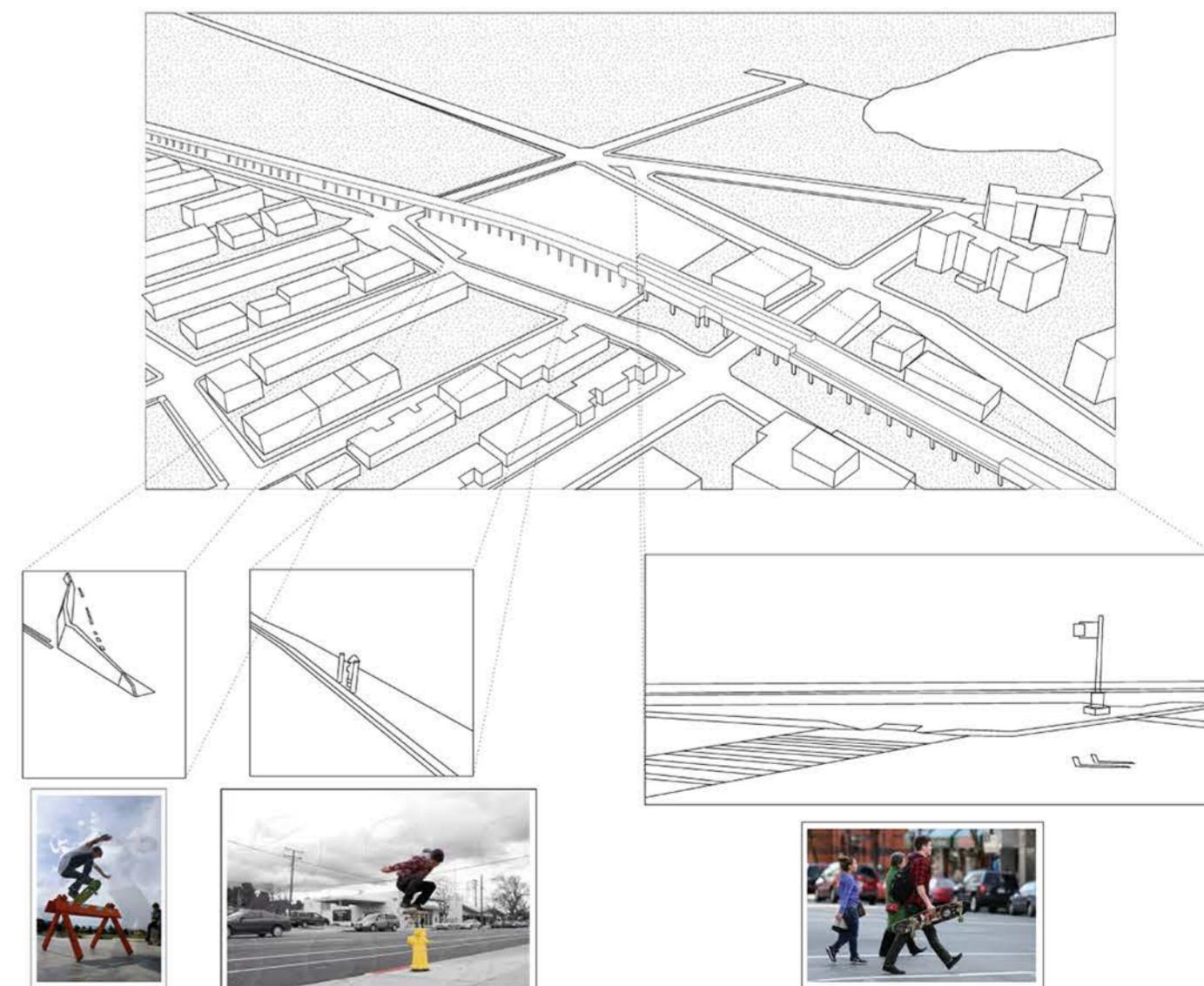
East Building Elevation

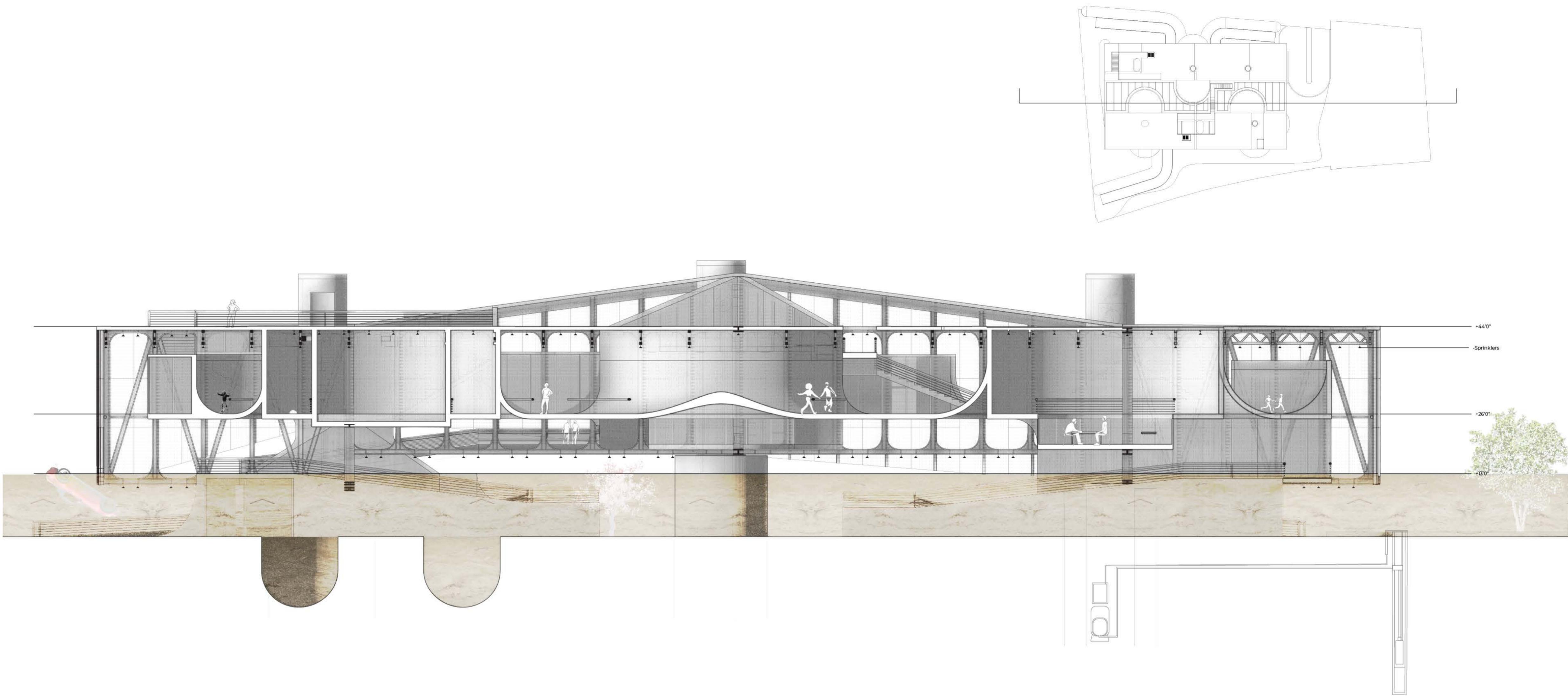


Facade Chunk Study - Role: 3D Model

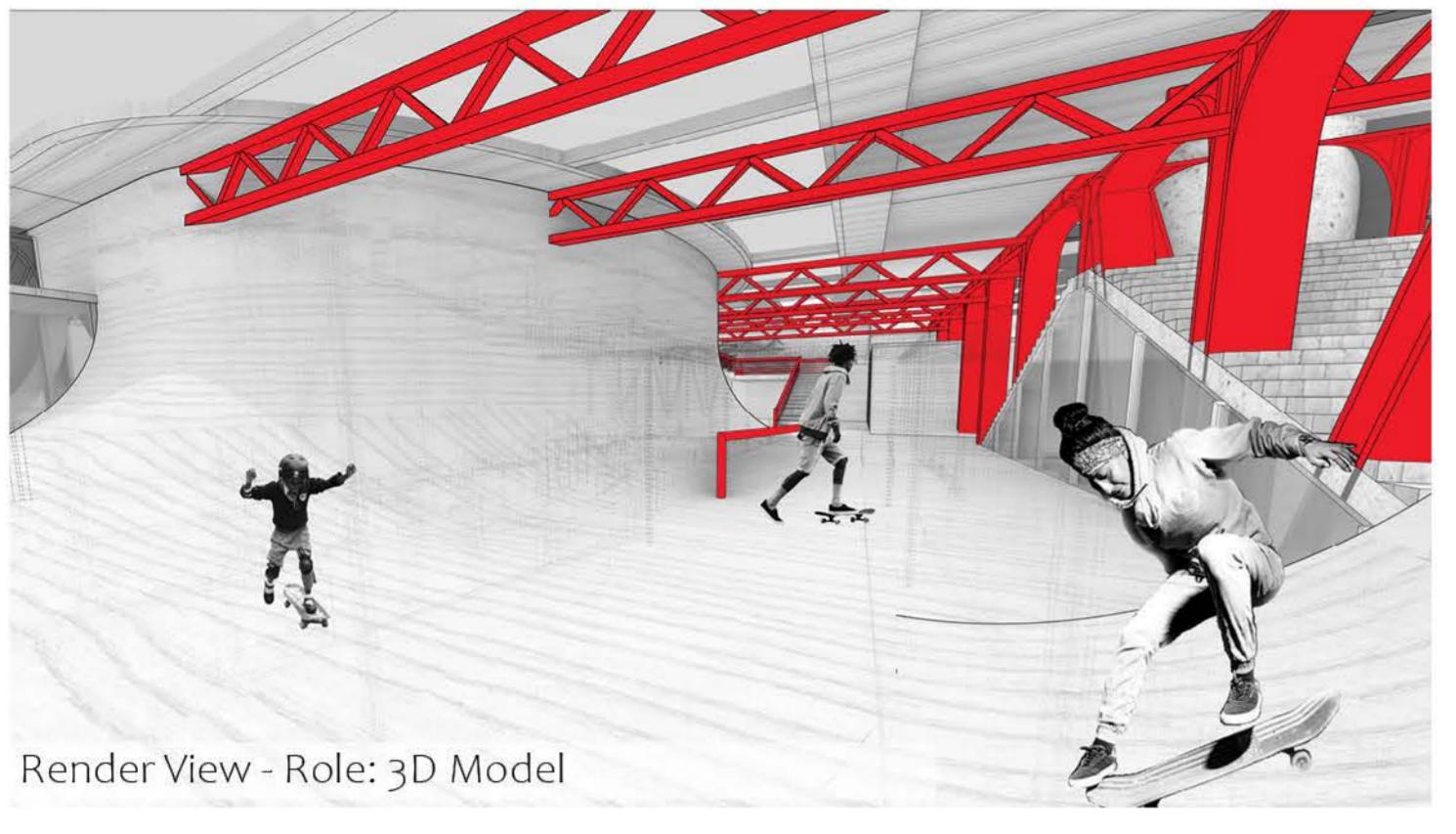


Circulation Diagram - Role: 3D Model





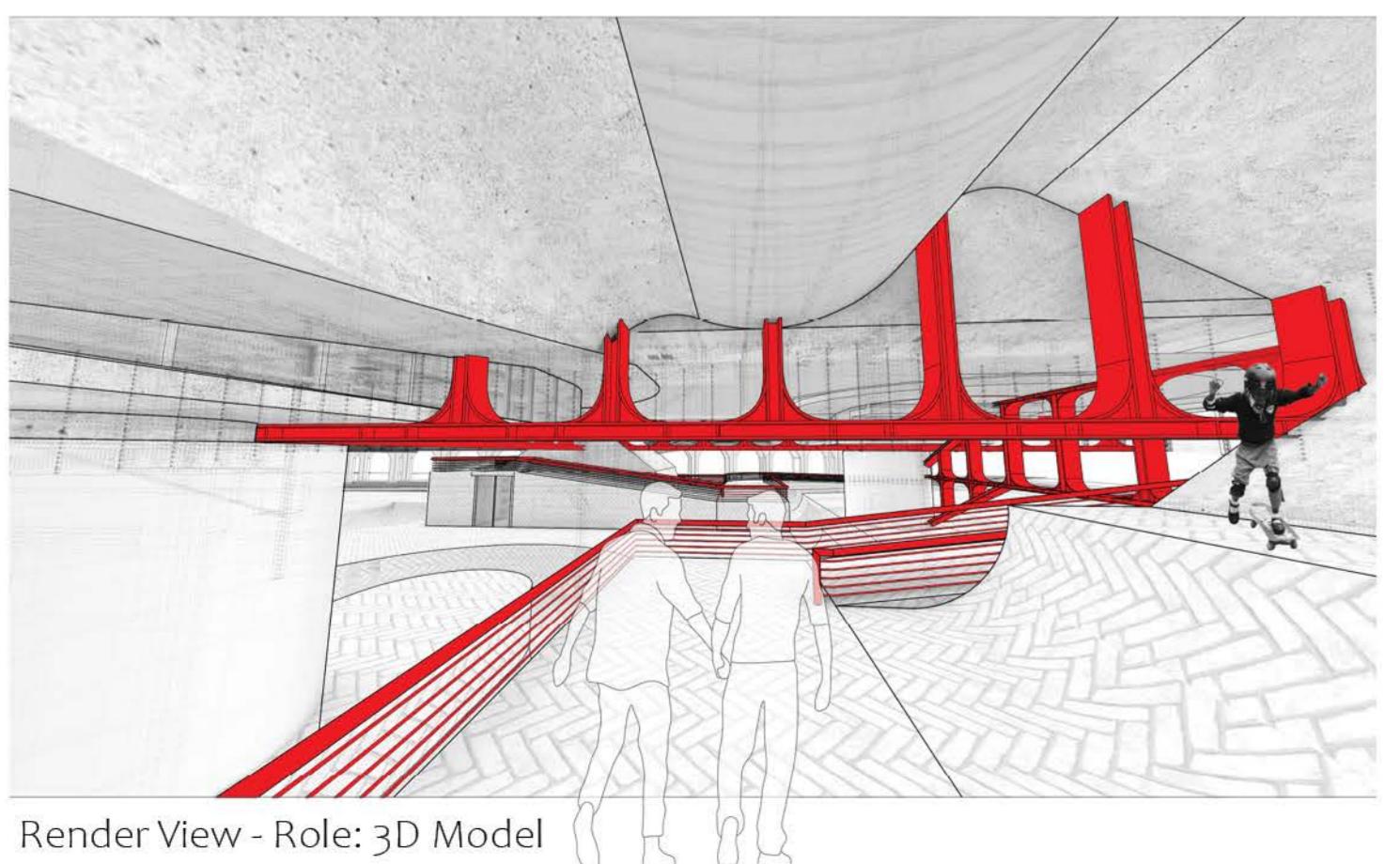
North Perspective Section (Flooded) - Role: 100%



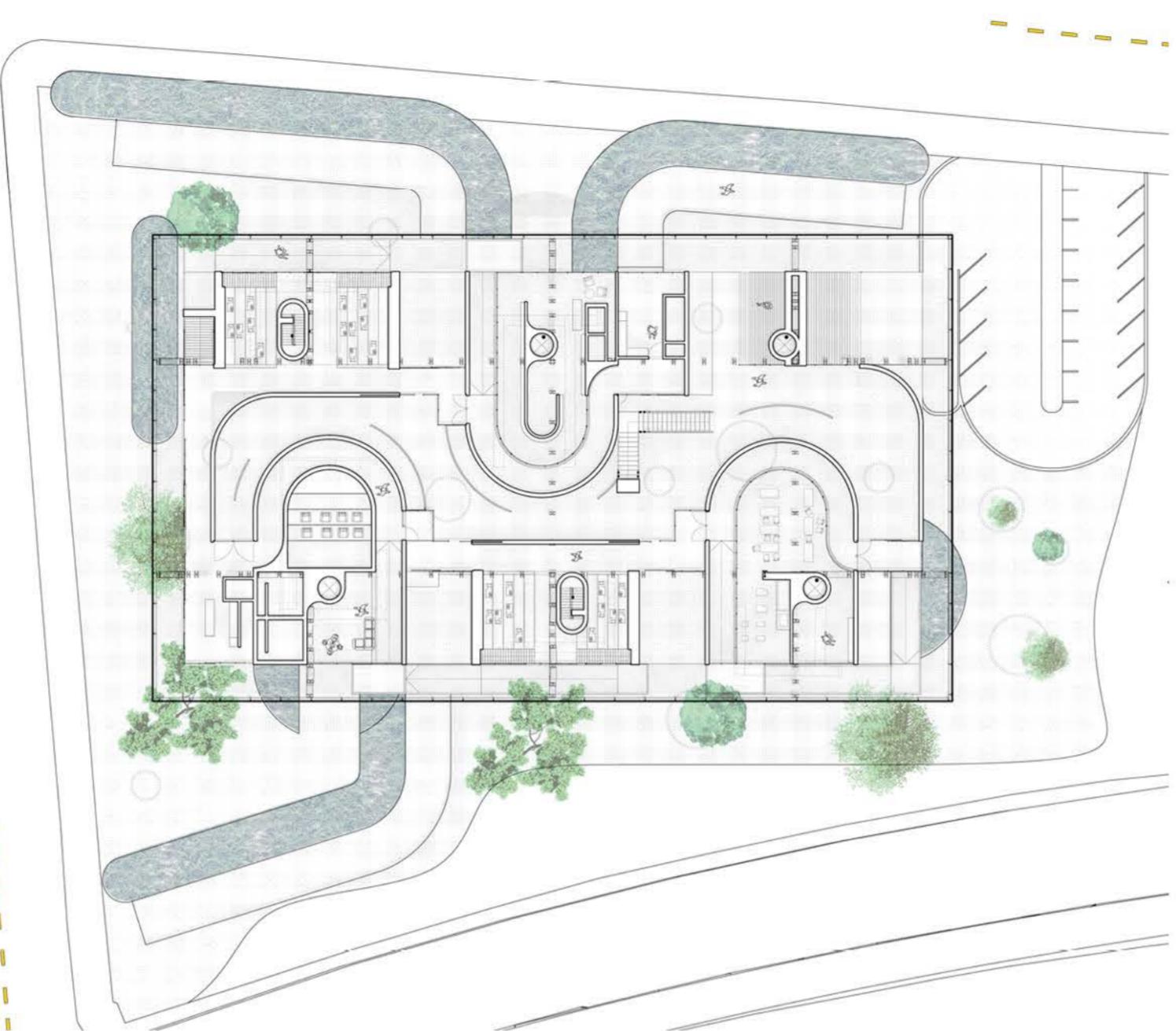
Render View - Role: 3D Model



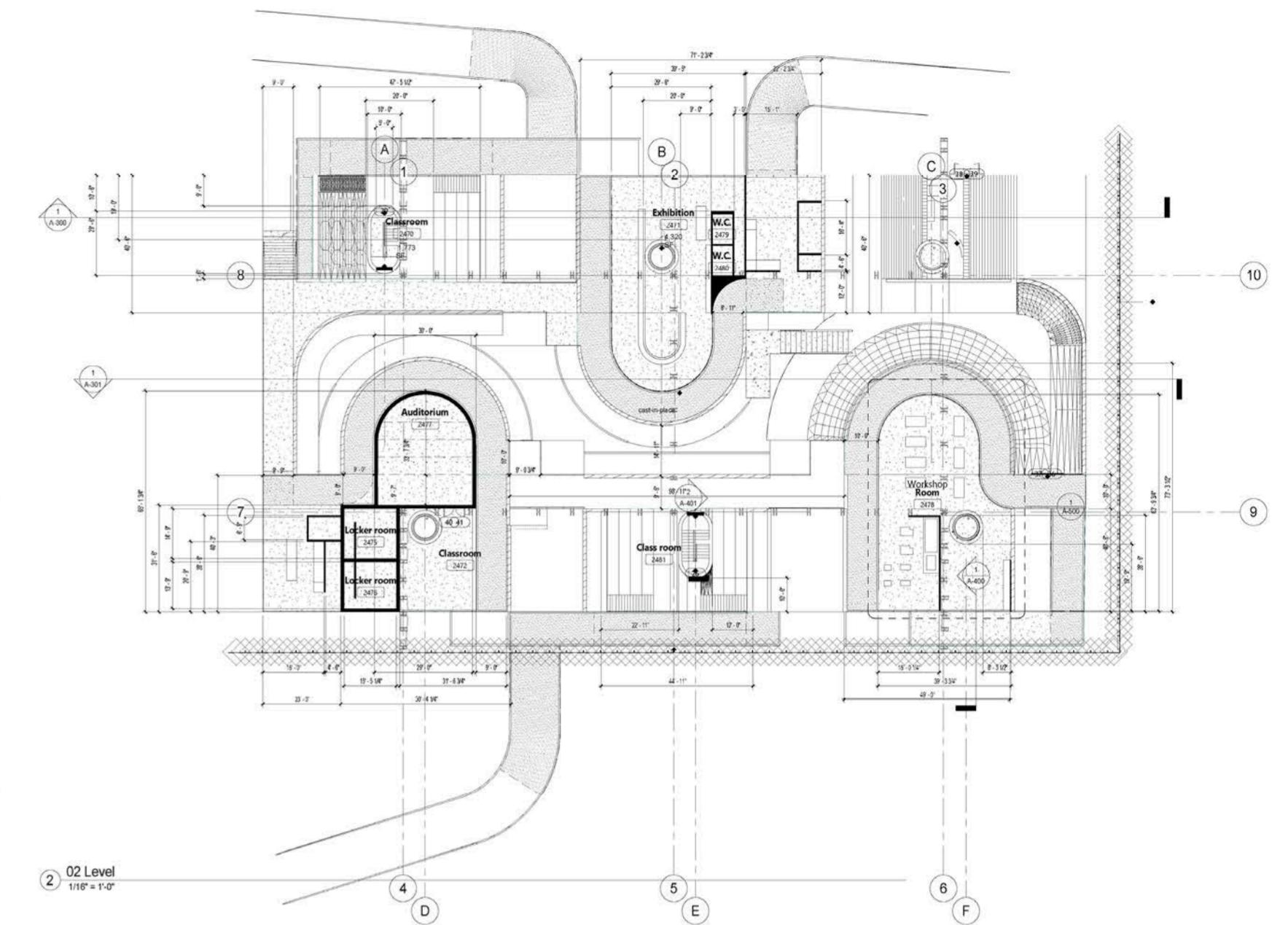
Render Elevation View - Role: 100%



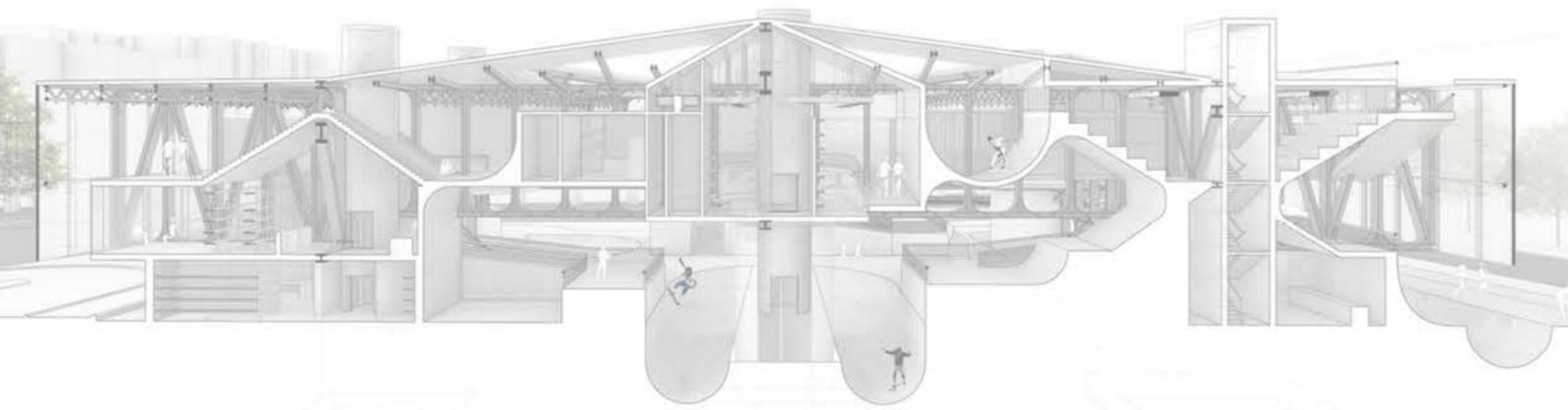
Render View - Role: 3D Model



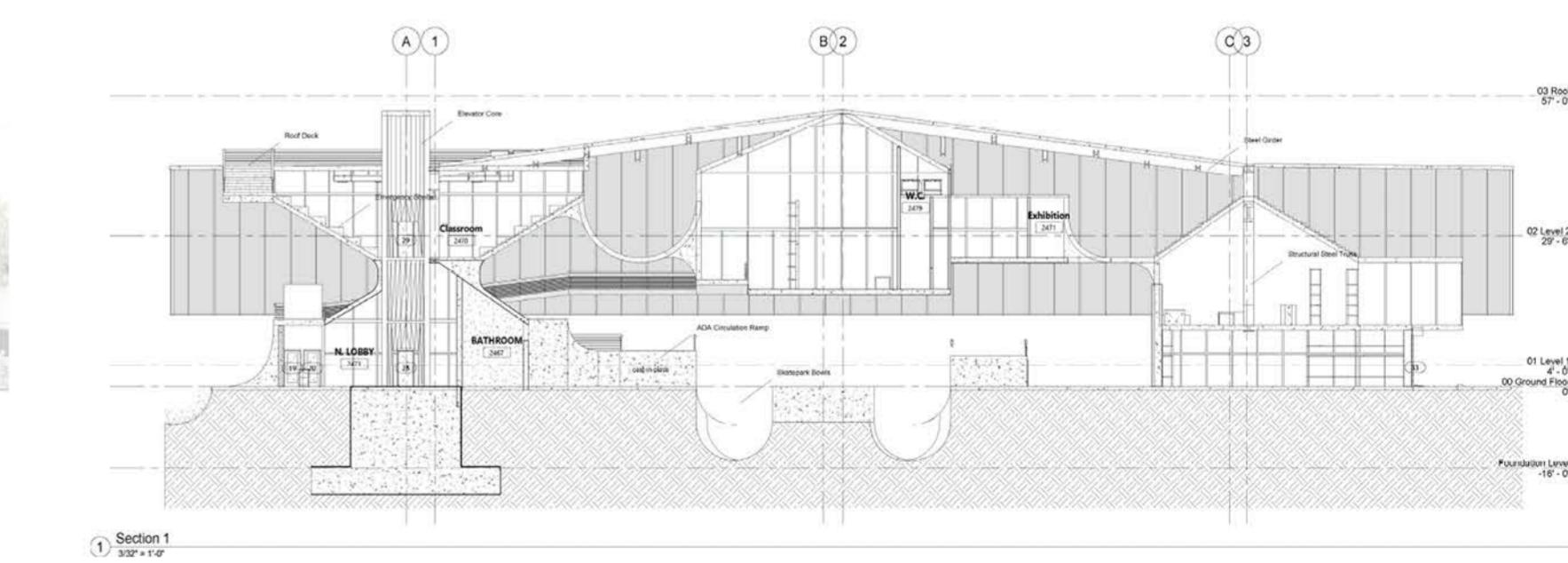
Presentation Second Floor Plan - Role: 3D Model - line work



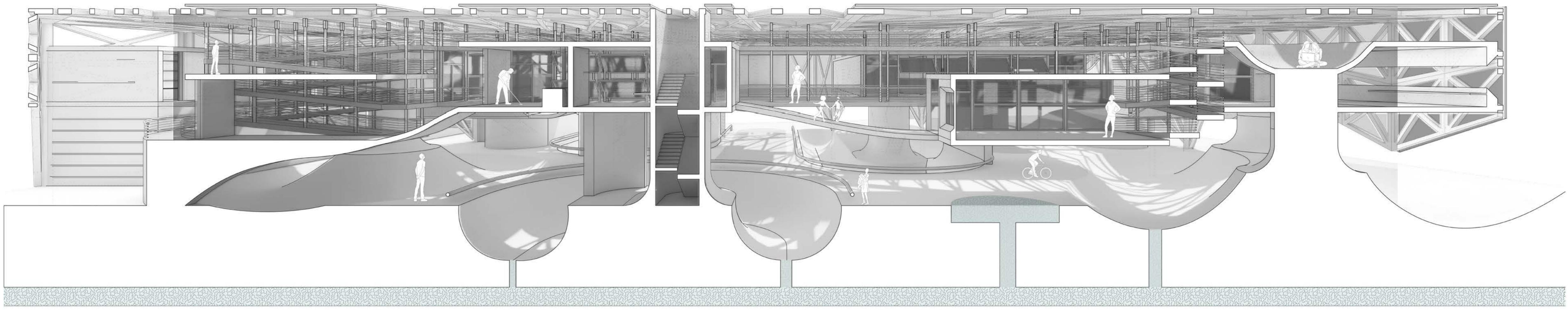
Revit C.D. Second Floor Plan - Role: 100%



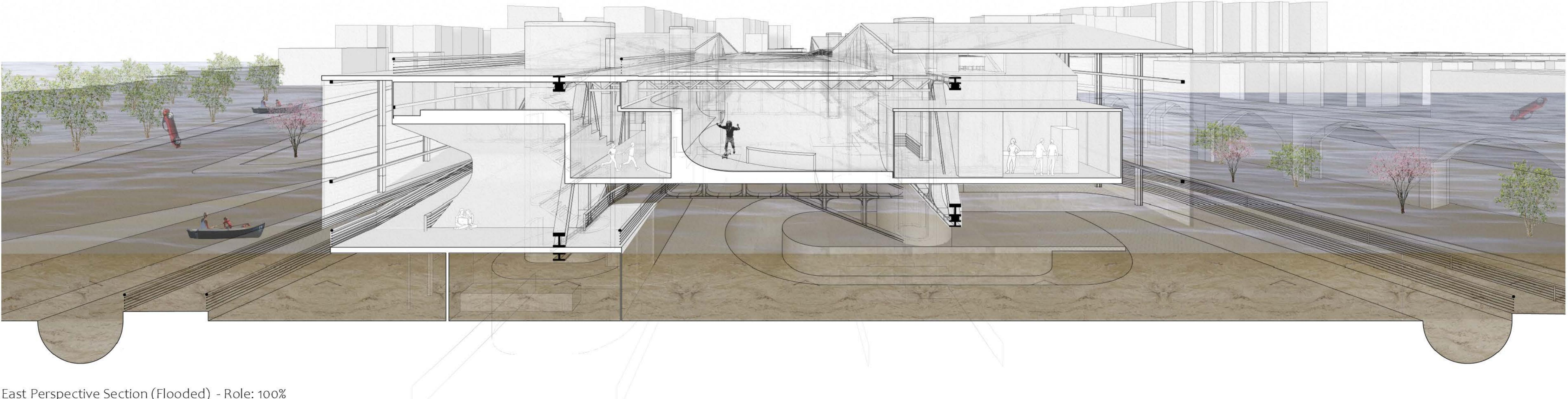
South Section Perspective - Role: 100%



Revit C.D. North Building Section - Role: 100%



South Perspective Section (Process) - Role: 100%



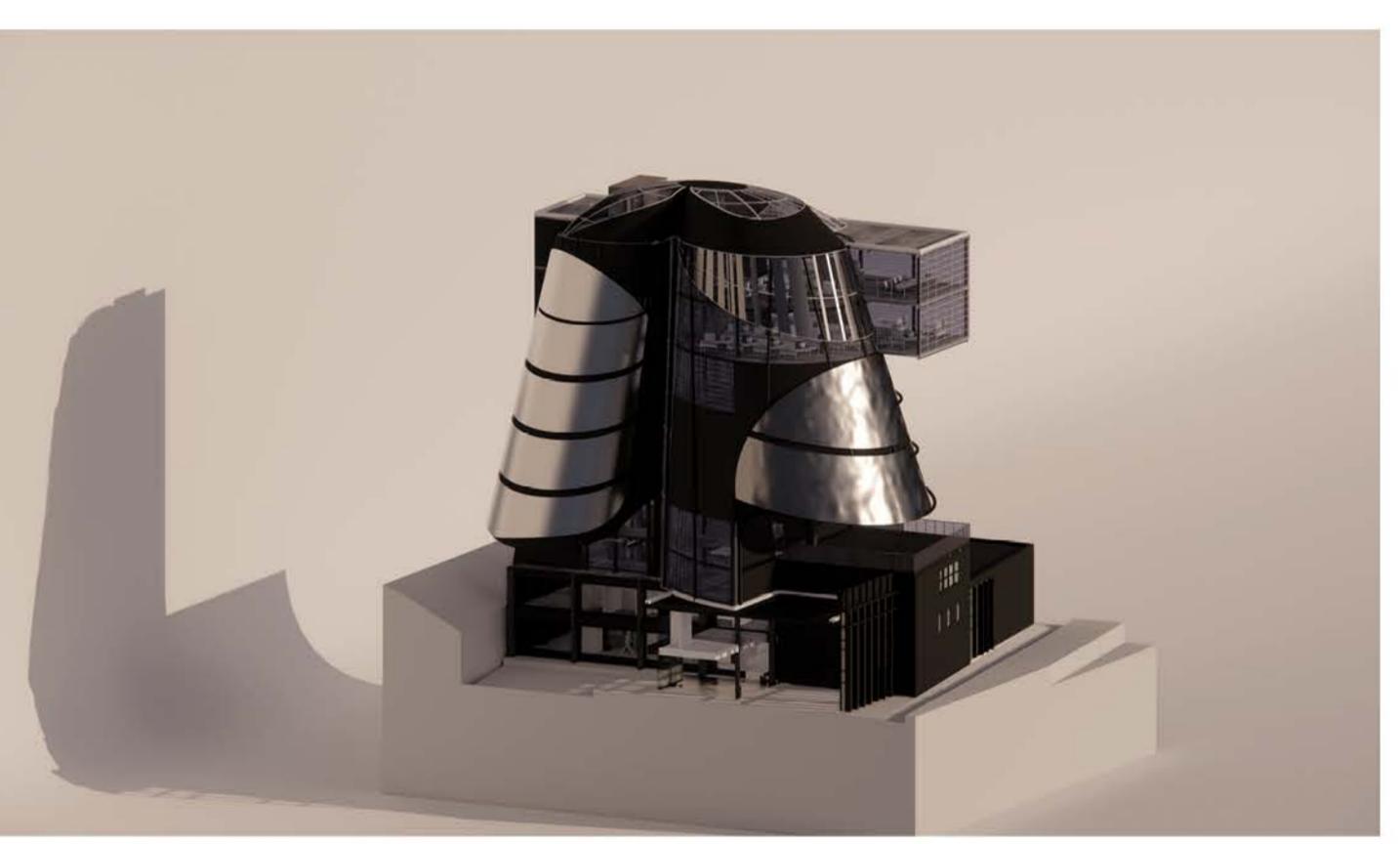
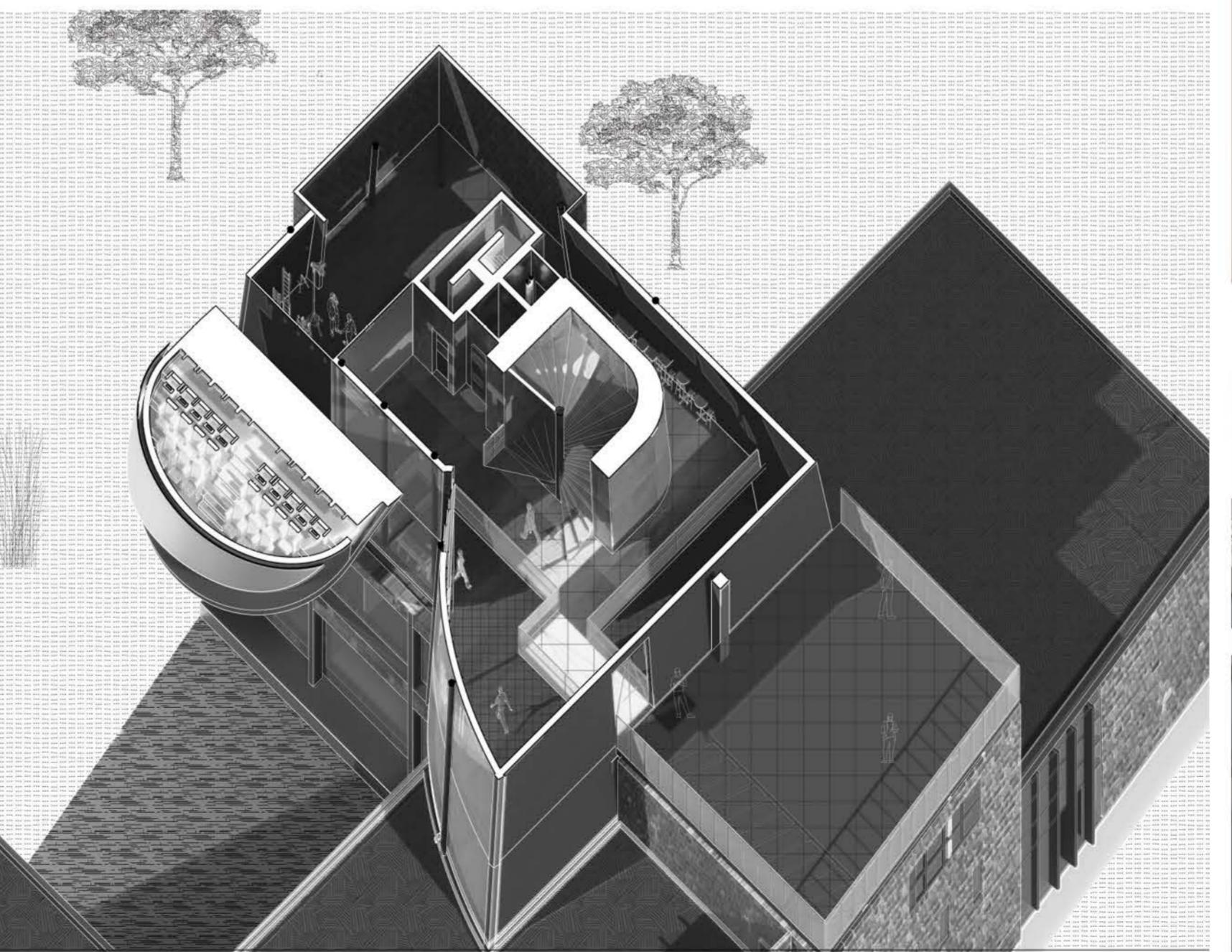
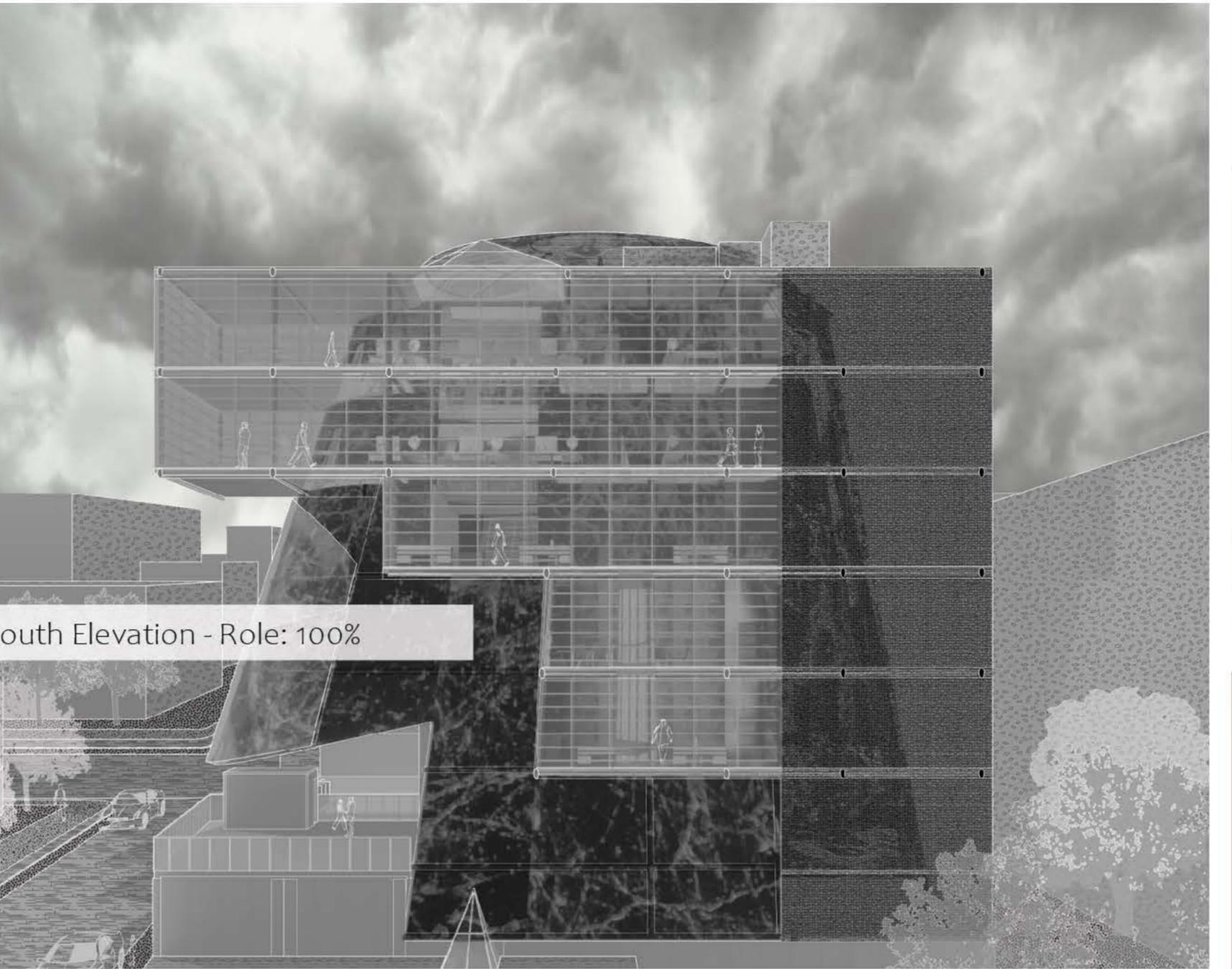
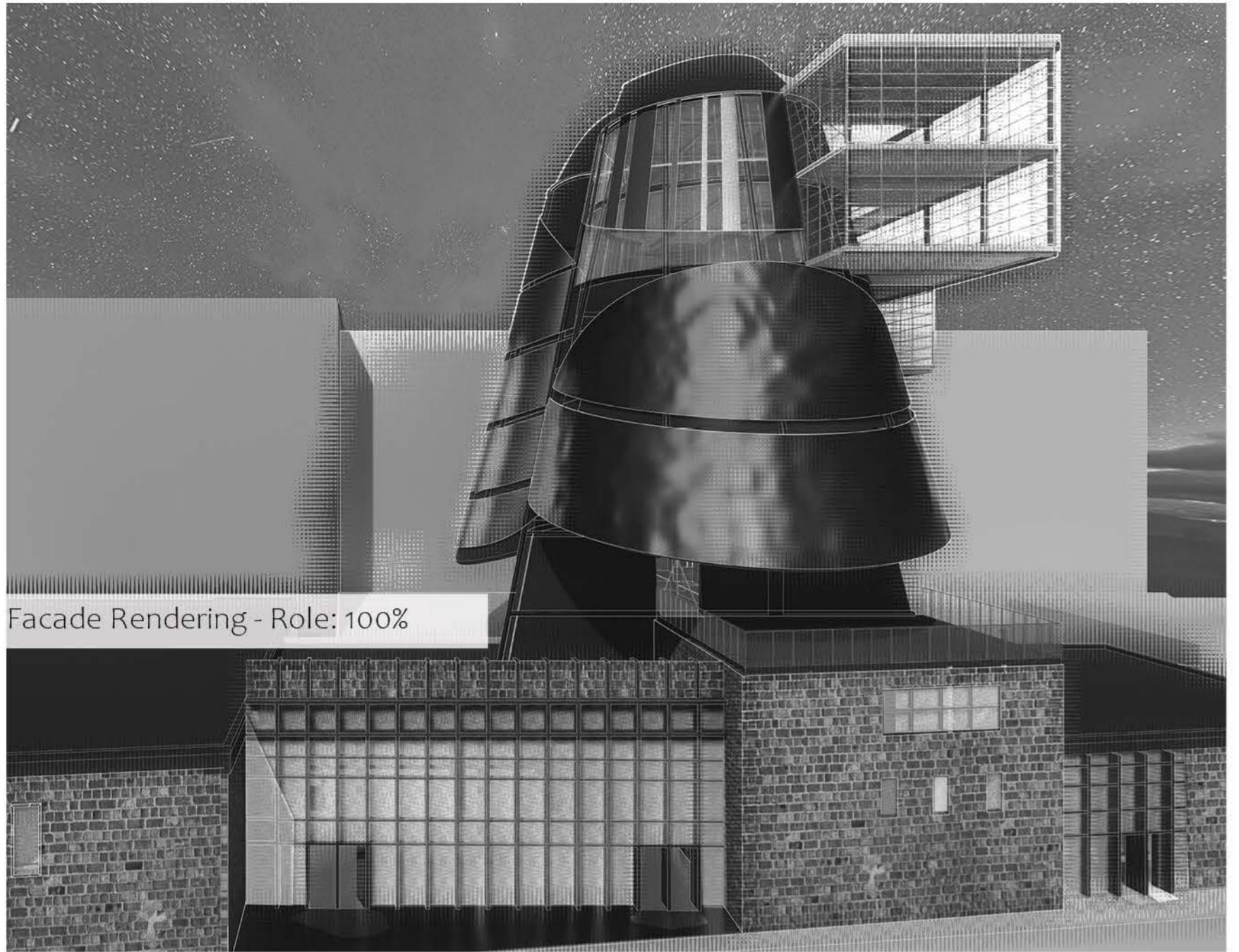
East Perspective Section (Flooded) - Role: 100%

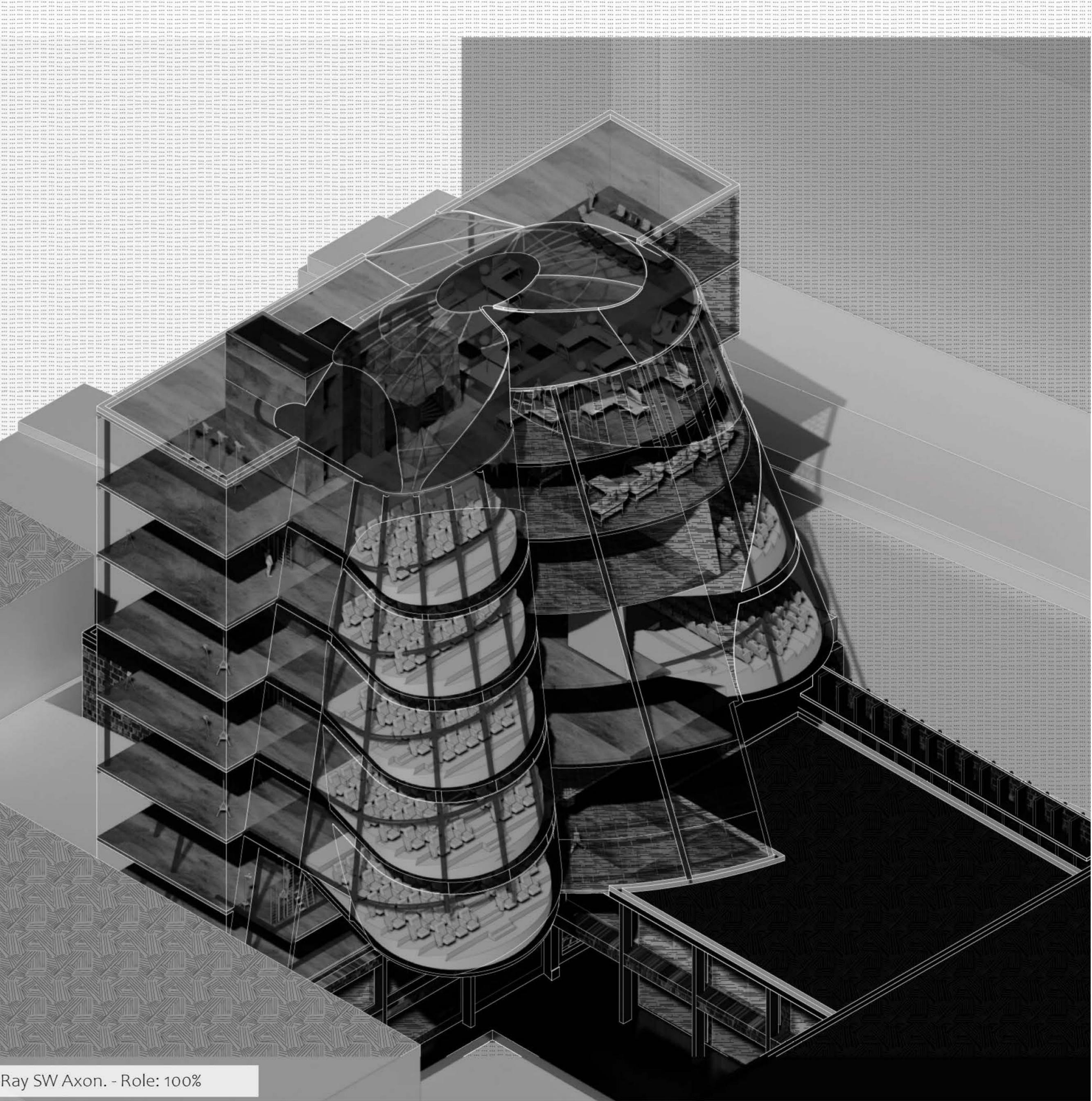
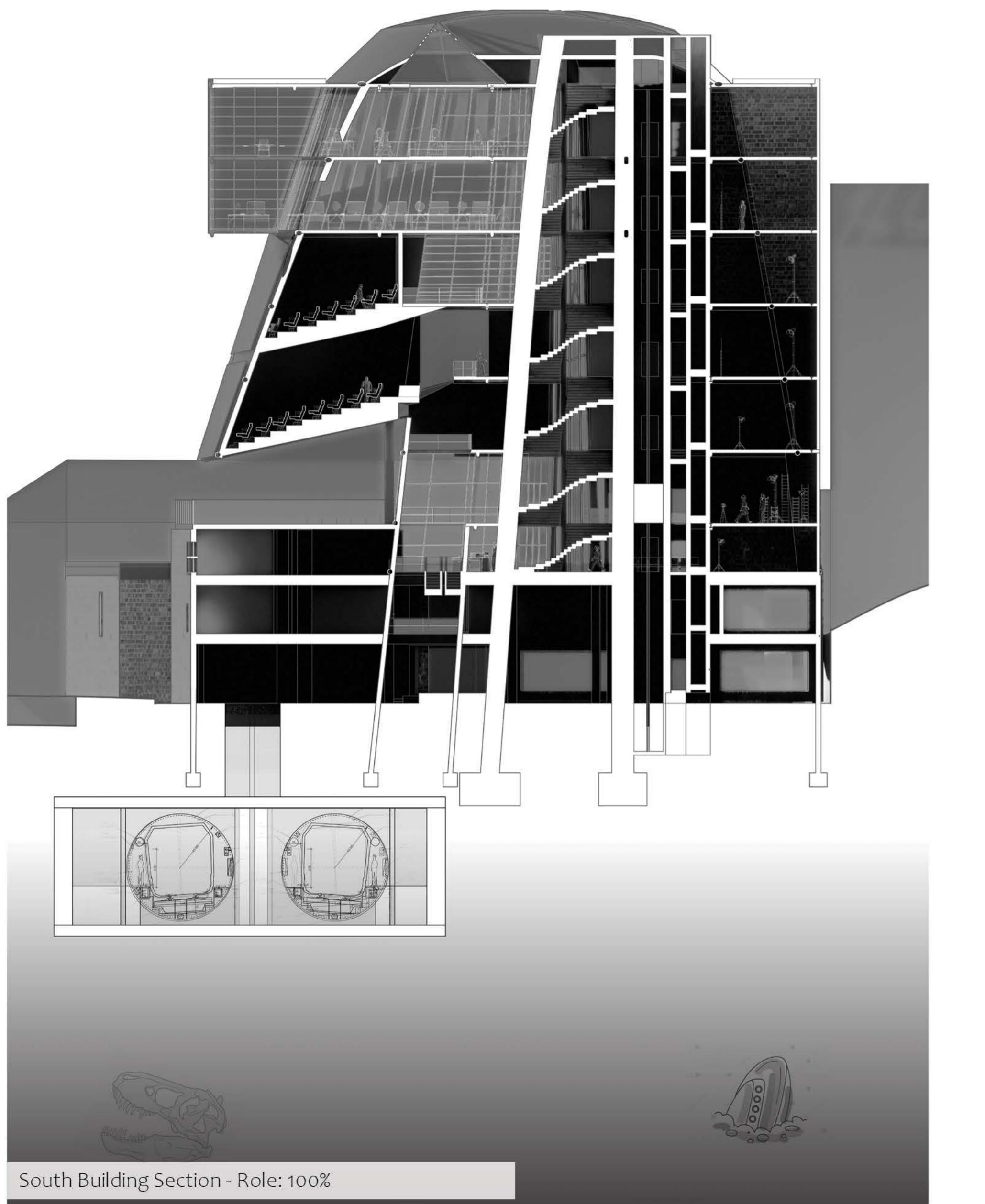
# HARLEM SCHOOL OF THE ARTS - FILM SCHOOL ADDITION

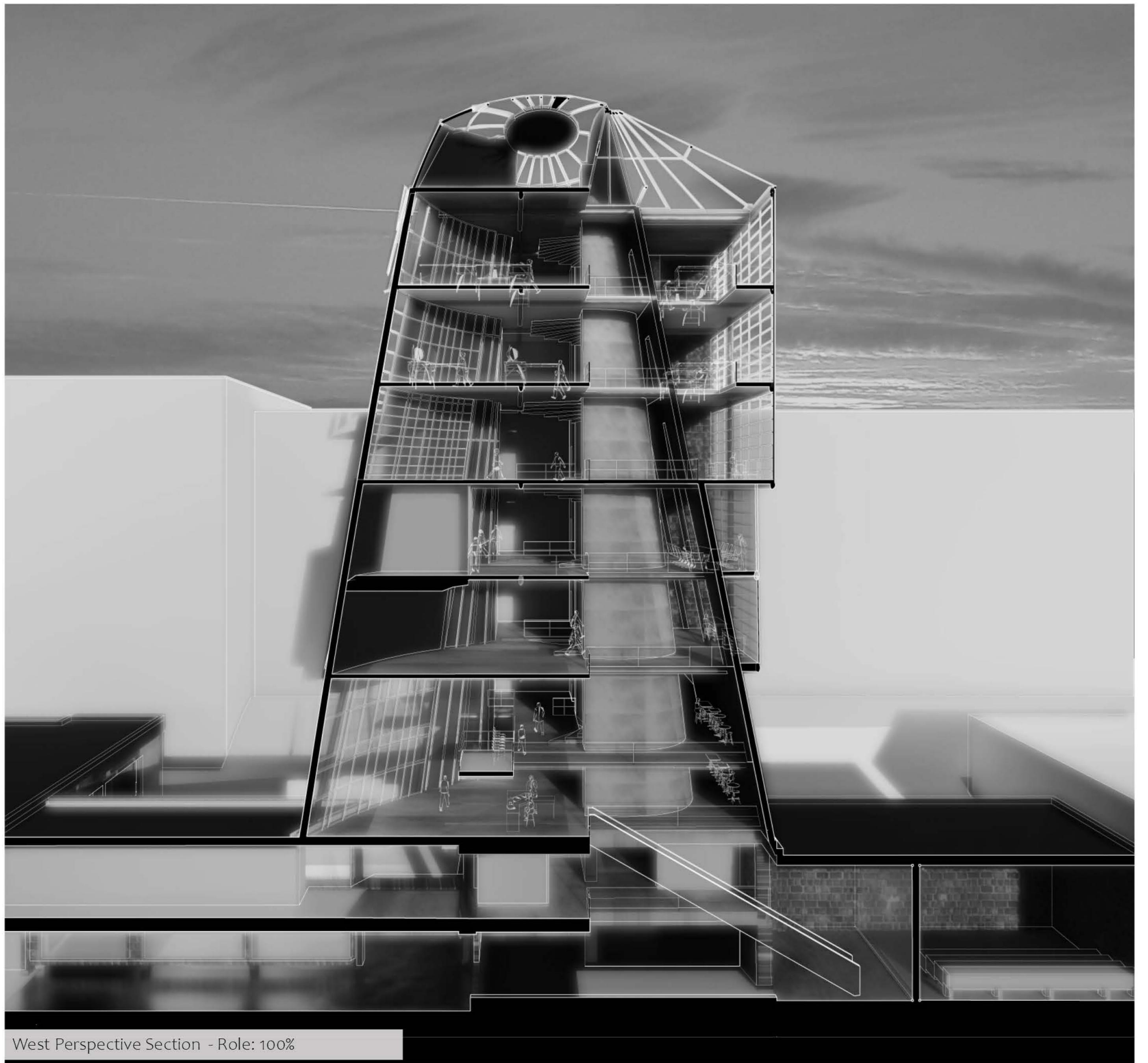
645 St Nicholas Ave,  
New York, NY 10030  
2020

This project was an addition to the existing school of arts in Harlem. Through the design process I interrogated formal qualities of a cone structure, gathering precedent from Tschumi's Exploratorium in Tianjin, China. The form demanded movie theater style seating and a curved film screen. The glass curtain walls revealed administration offices and classrooms. Film sets could be found stacked along the west corner providing the conditions for production. The circulation utilized the existing entrances and brought the schools occupants through a series of escalators, elevators, and stair cores. The buildings appearance and materiality related back to the current modern renovation the existing structure was undergoing. The intention was to invoke a feeling of curiosity and fantasy upon approaching the building. A building that would inspire creativity and inspiration for future generations to come.





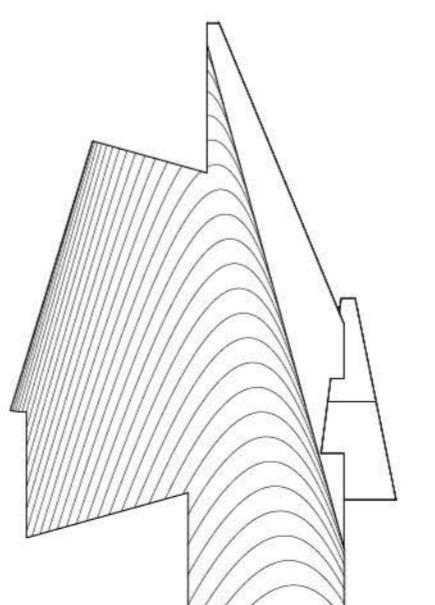
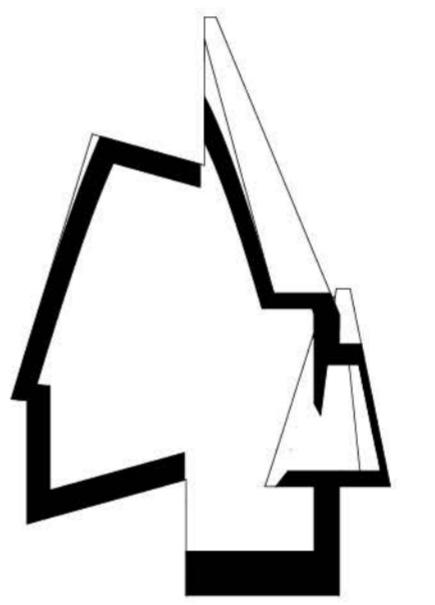




Formal Studies - Role: 100%



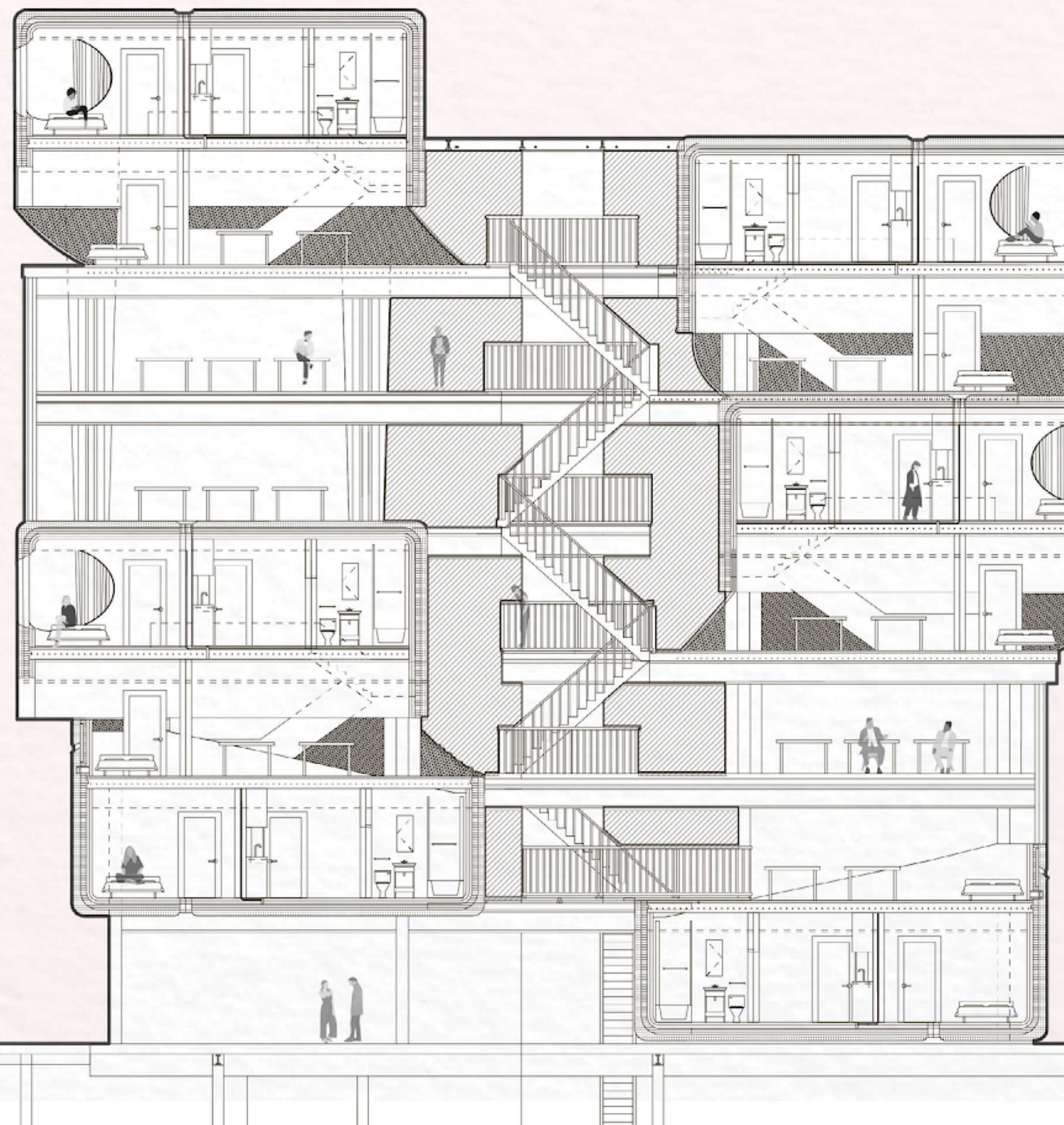
'Domino' Study- Role: 100%



# MYRTLE AVE. HOUSING

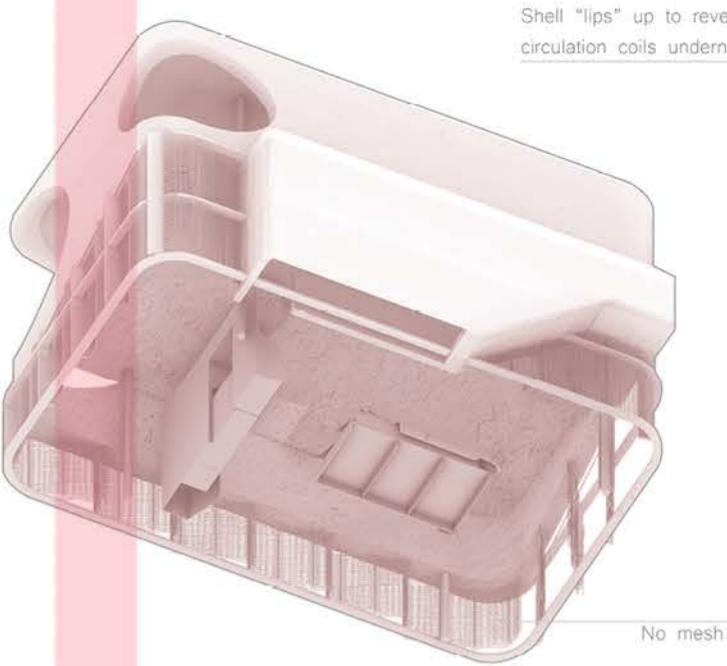
784 Myrtle Ave, Brooklyn, NY  
Collaborated w/ : M. Medley

This housing project was a discovery of creating pre-fab units that could be assembled on a structural cage on site. A stab at Metabolist & Modern architecture, inspired from the Isokon Flats in the UK, by the Pritchards and Well Coates. The formal quality of this project leaned on the modern smooth edges of the Isokon and proposed adaptable metabolism with the modular pre fab units. The process began with establishing three sets of modular units. A studio, a two bedroom unit, and two single bedroom duplex's. The circulation was meant to anticipate meetings. Guiding occupants into one another as they traverse through the building. The gallery style balcony and switch back stair of the Isokon was inverted into an interior courtyard or "spine" of the building. The pre-fab units are to be constructed in reinforced carbon-fiber shells that attach directly to the steel structure and offset floor slabs. To establish a larger connection the street & community. The ground floor was designed to 'swing' open during working hours. Inviting neighbors and tenants to mutually benefit from merchants and maker space.

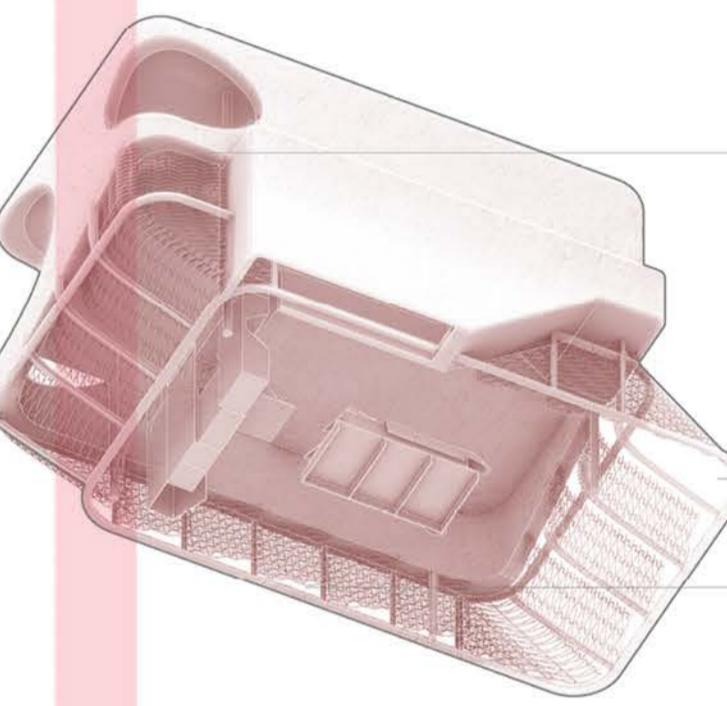


East Building Section - Role : 3D Model / line work

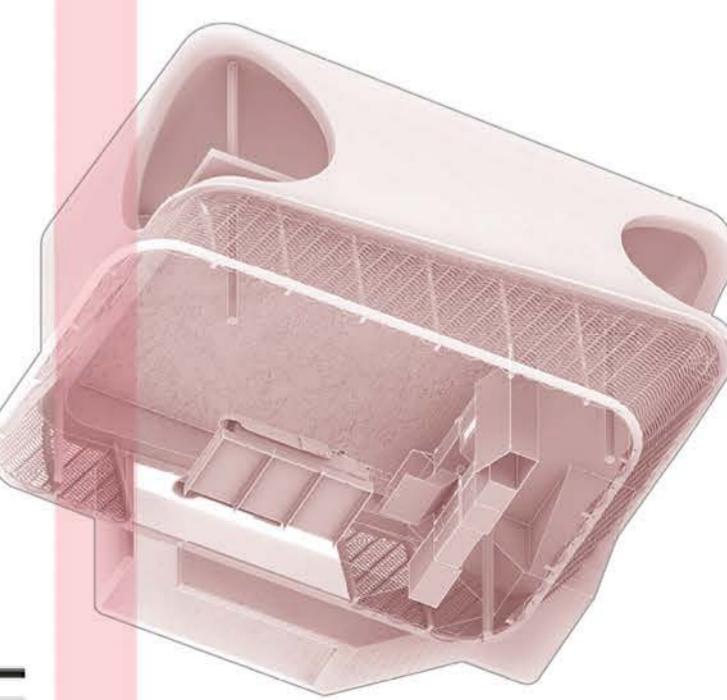
Shell "lips" up to reveal circulation coils underneath



1 BD Duplex - Role: 100%

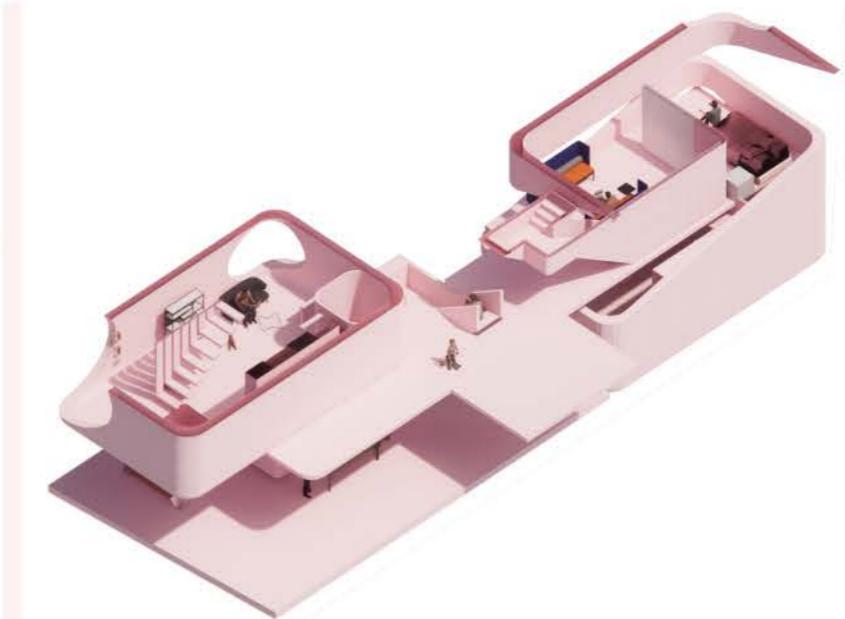
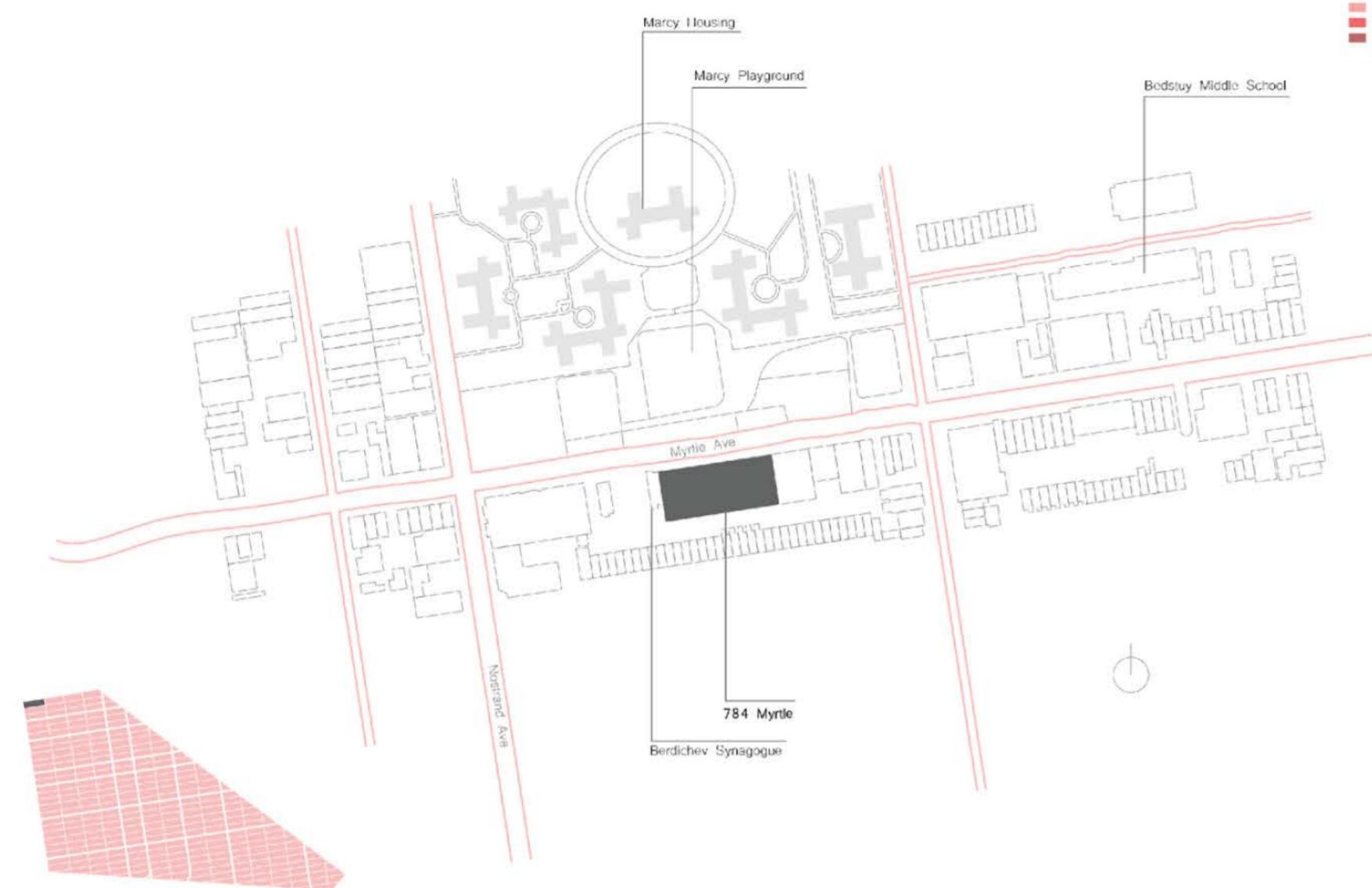


Studio Unit - Role: 3D Model

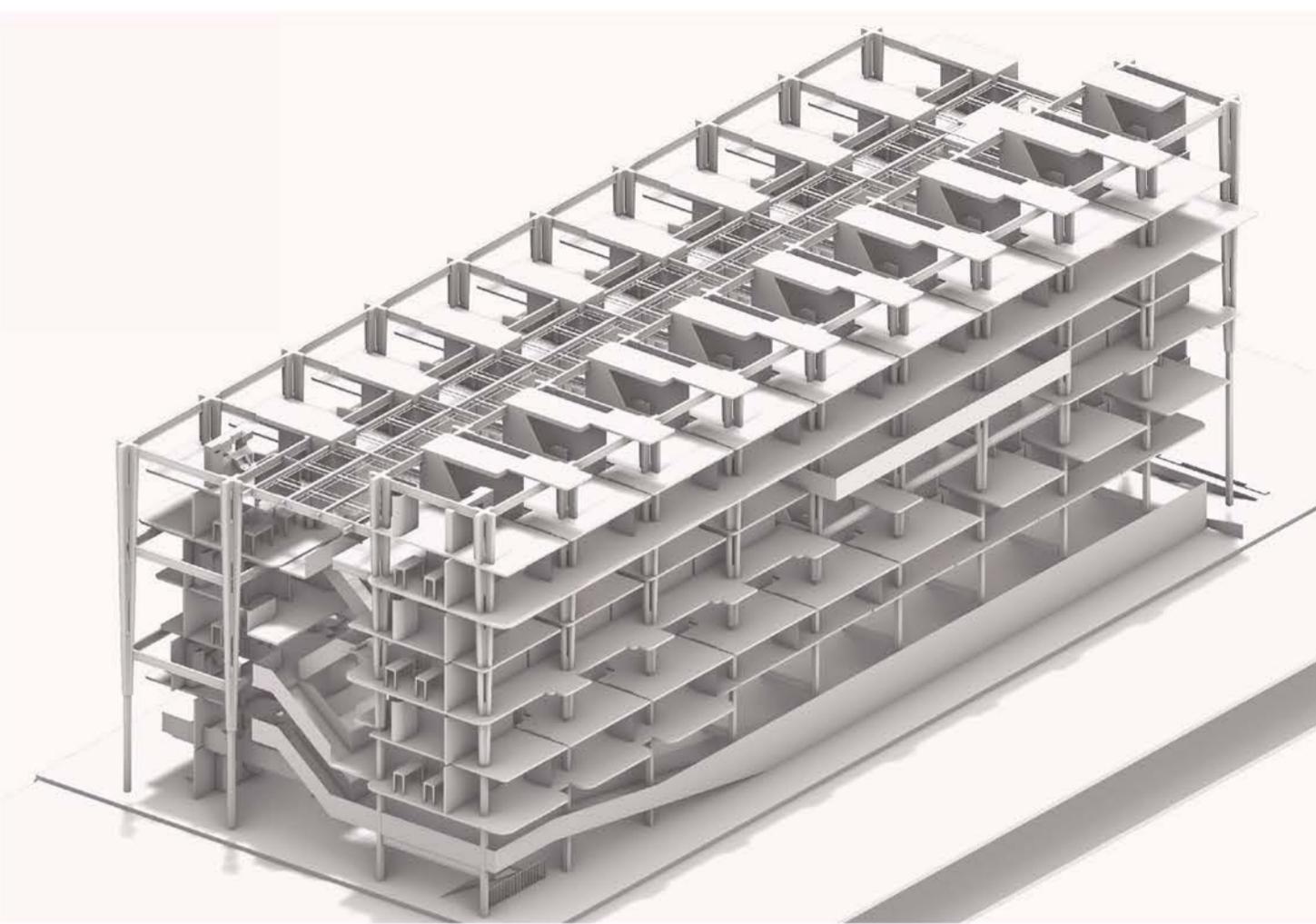
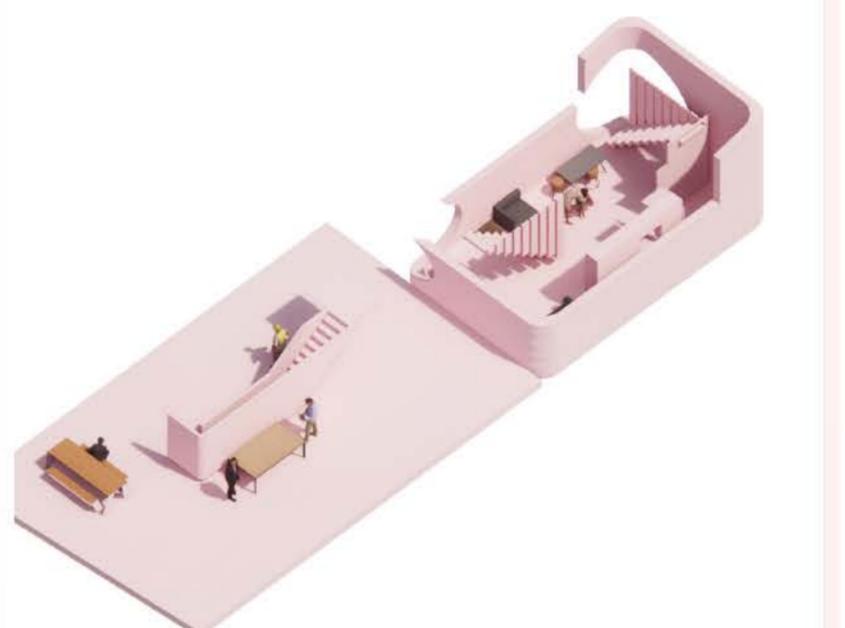


2 bd Unit - Role: 3D Model

## Site Analysis - Role: 100%



## Generative Units - Role: 100%



## Building Structure - Role: 100%

Isokon Precedent Analysis - Role: 3D Model

1. Carbon Fiber Reinforced Sheathing
  2. Polystyrene Board Insulation
  3. Wallboard
  4. Facade Anchor
  5. Wet Wall
  6. Plumbing/Heating
  7. White Oak Veneer Flooring
  8. Polished Concrete Flooring
  9. Prefabricated Unit Circulation
  10. Recycled Kitchen Tile
  11. Cruciform Concrete Column
  12. Desk/Storage

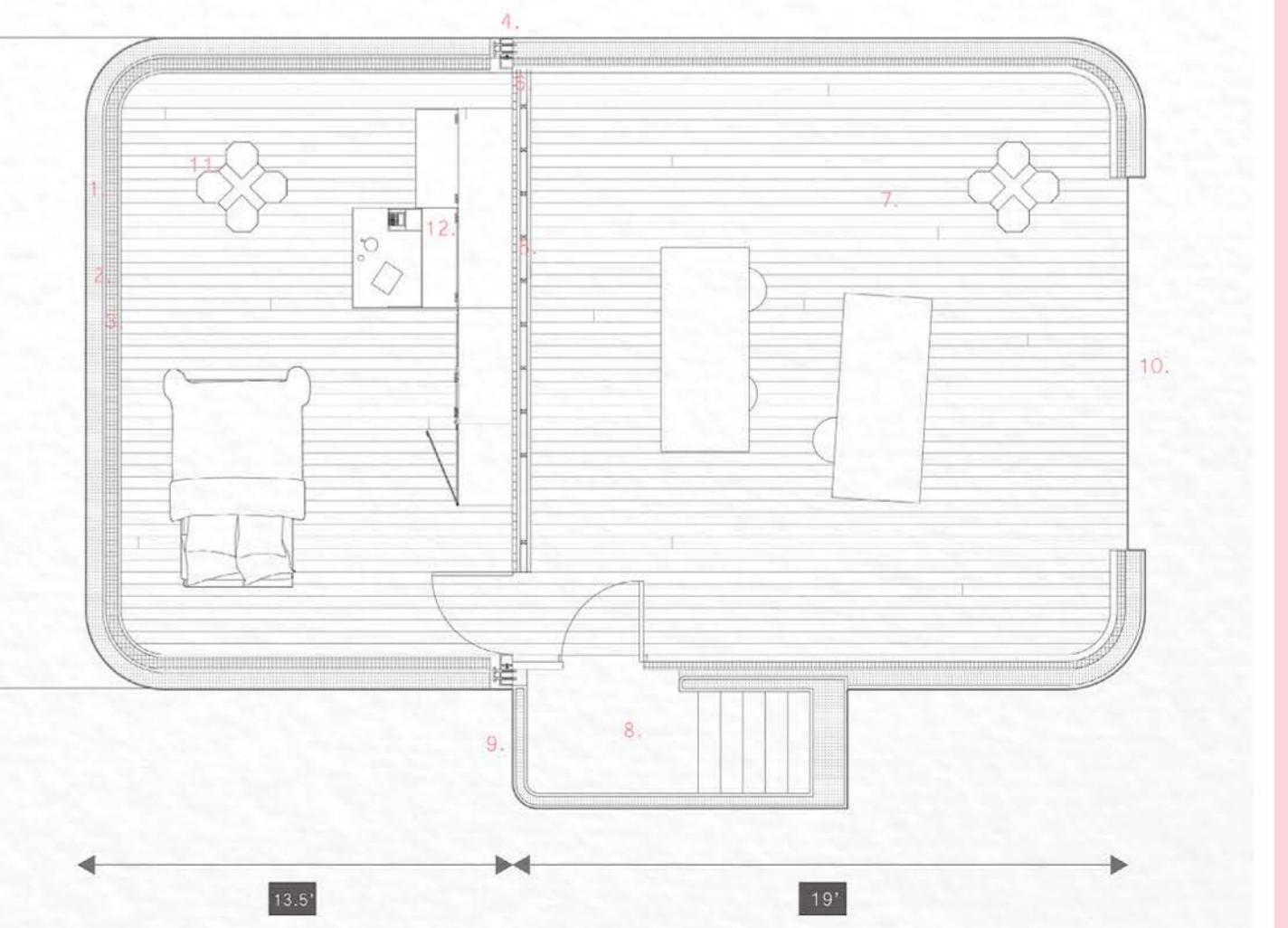
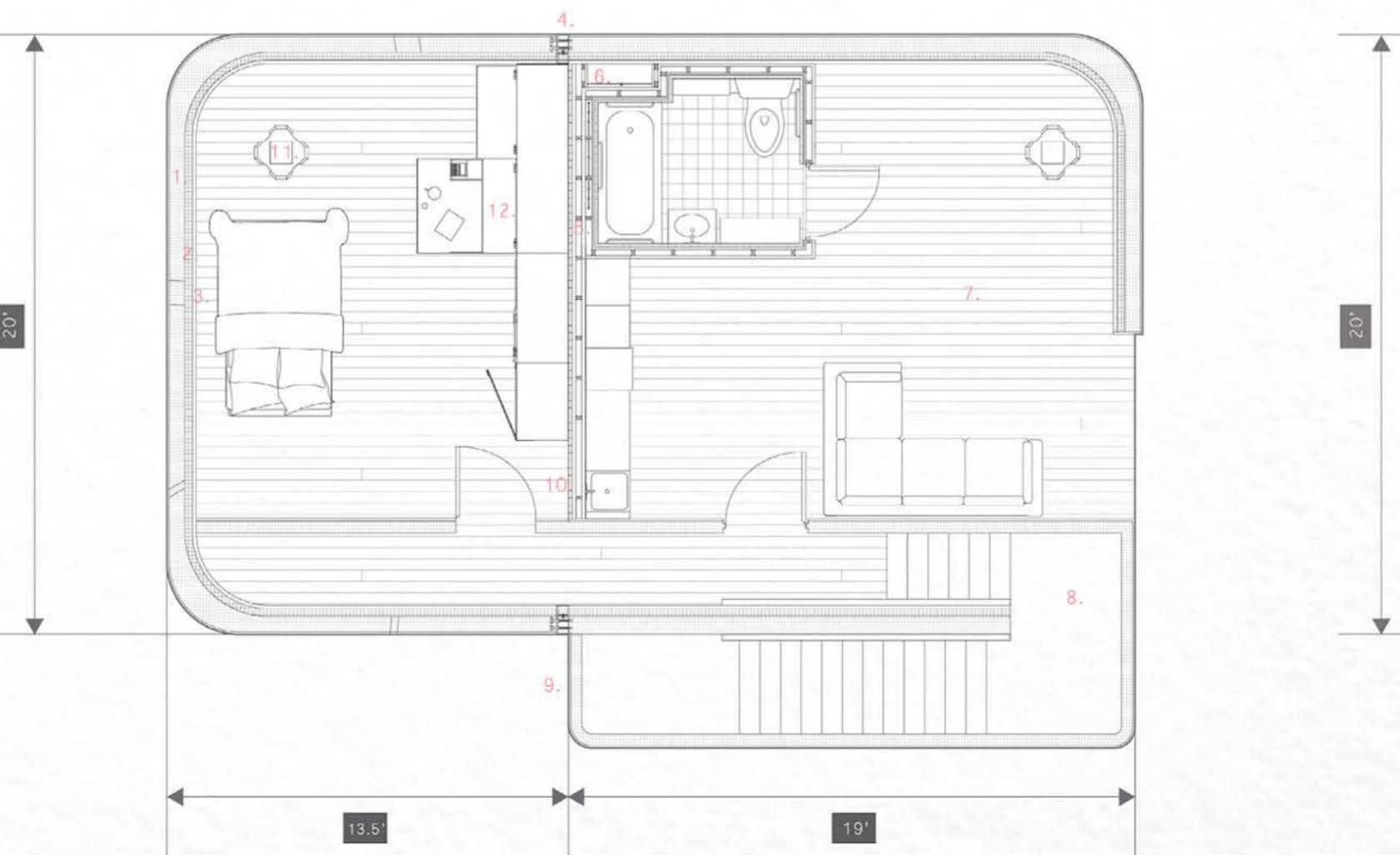
**Pre-Cast, Shell-Type Unit**  
**Brooklyn, New York**

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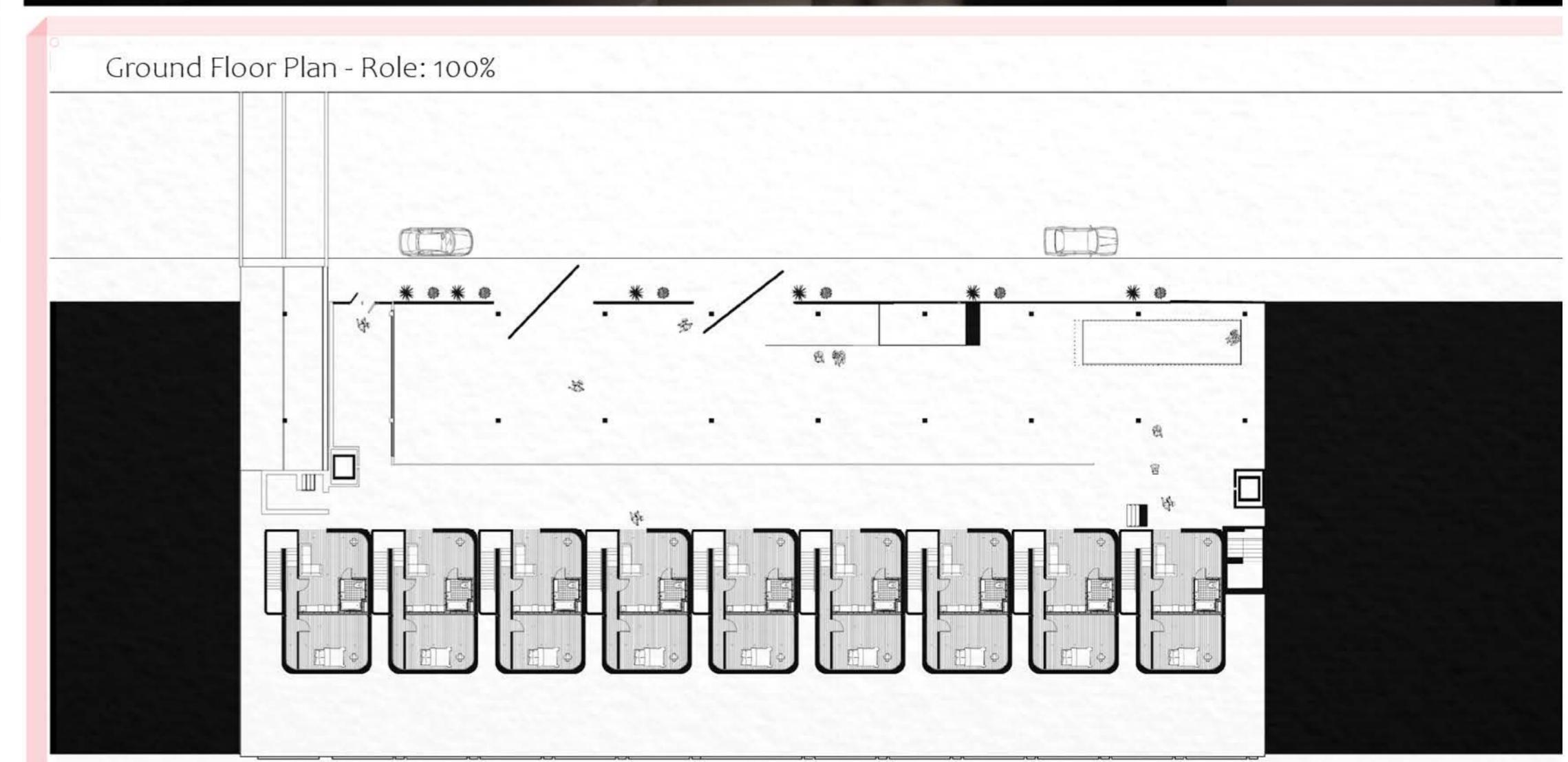
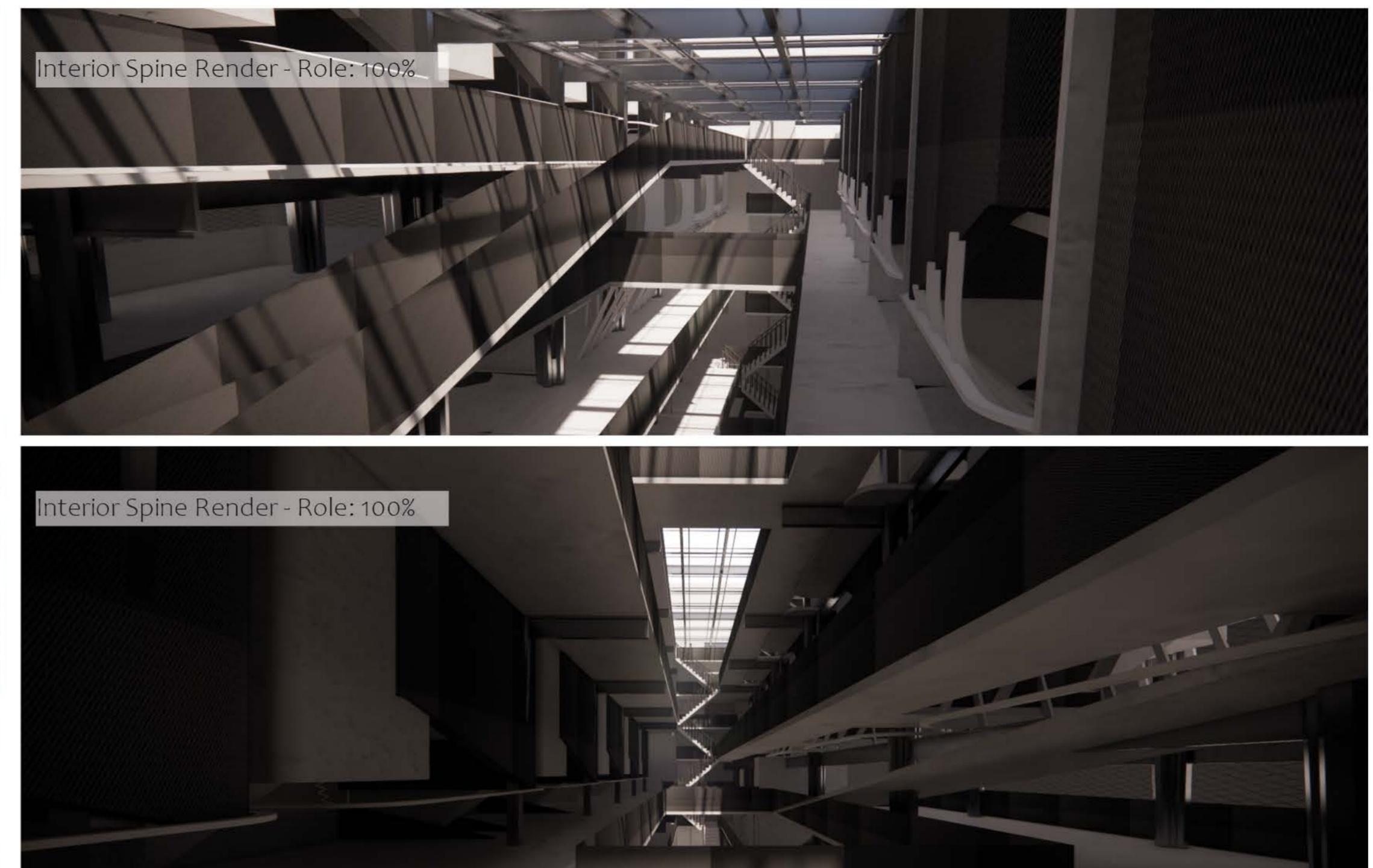
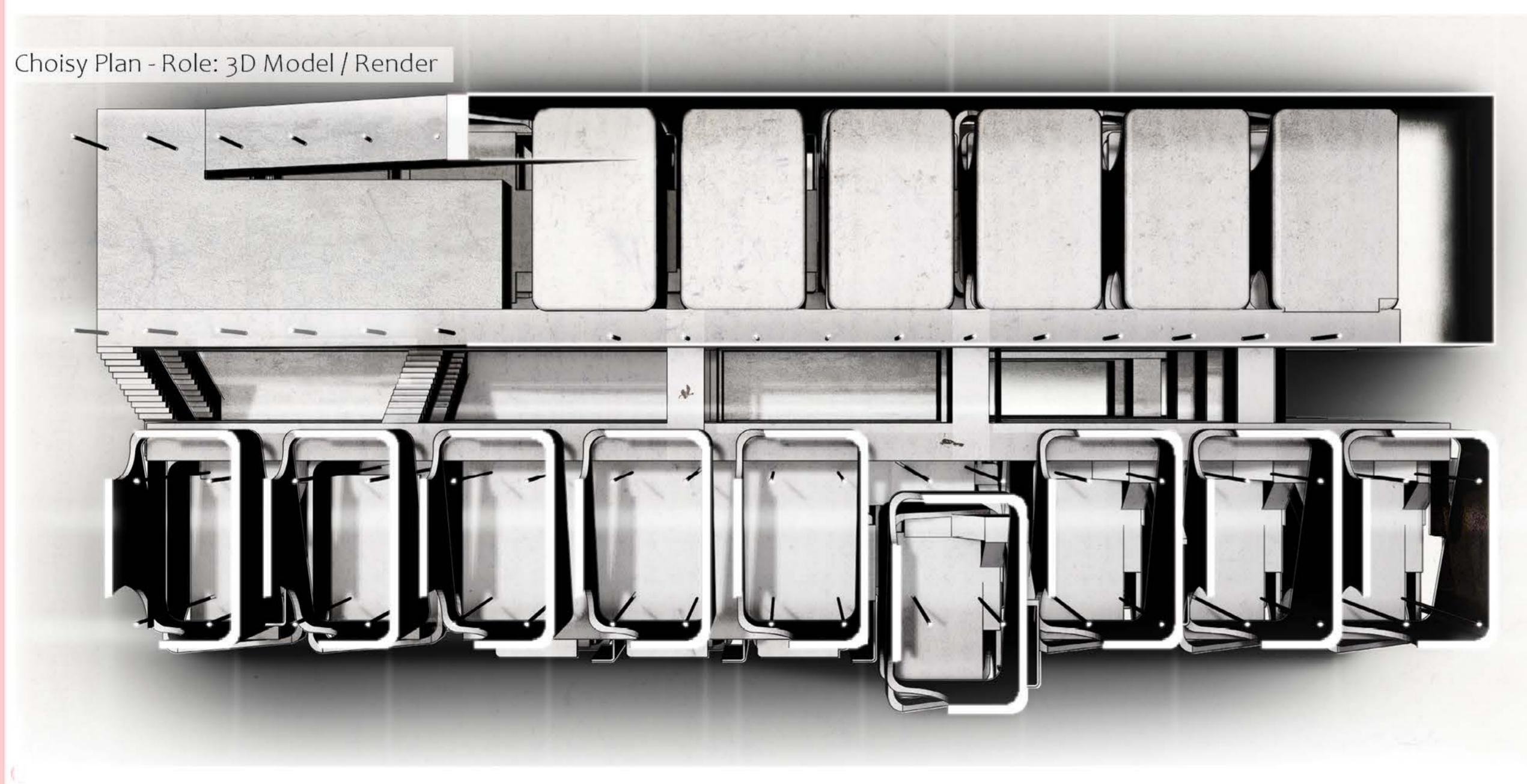
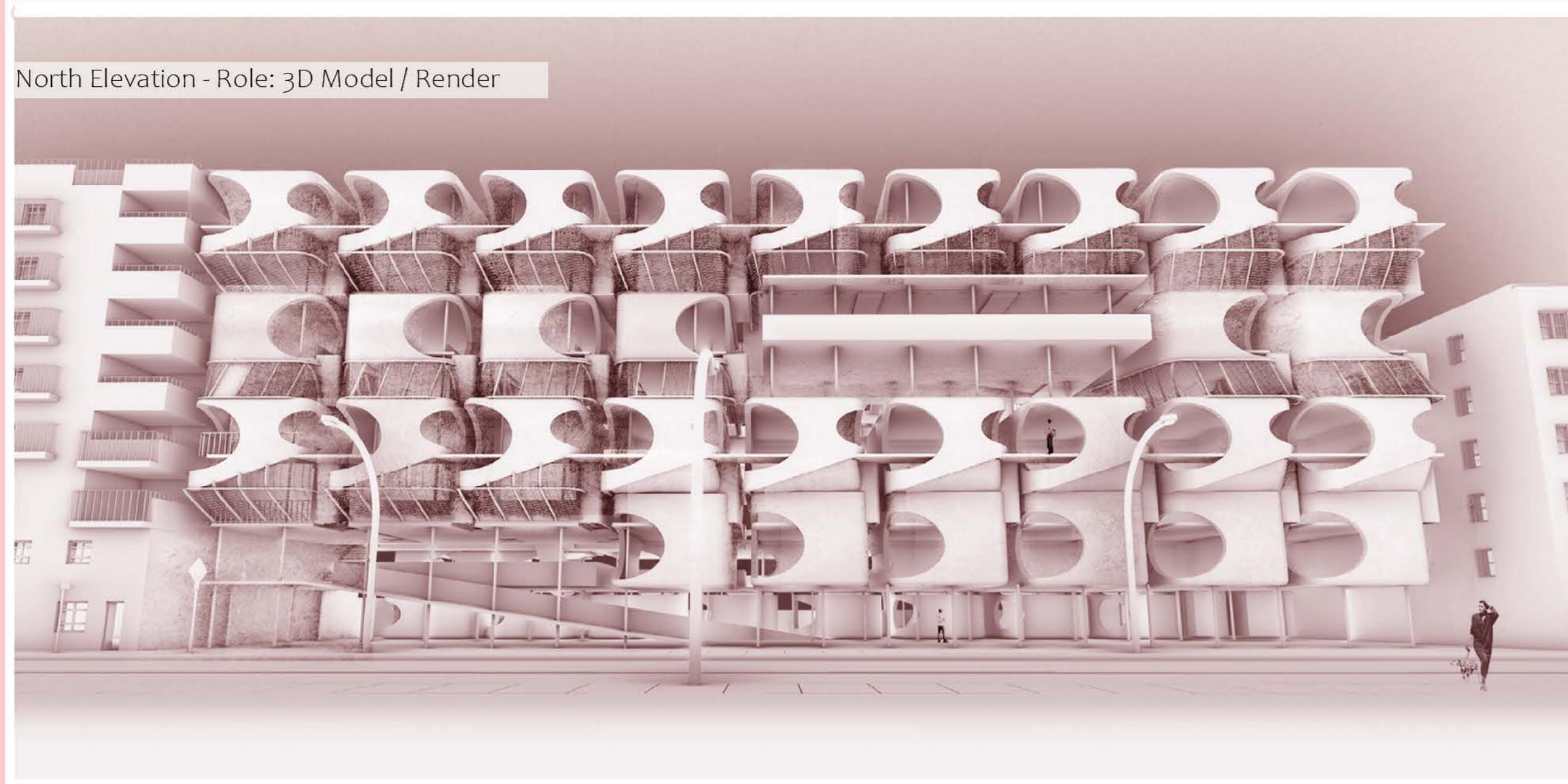
The Shell-Type Unit is a vertical, brownstone-like housing unit that consists of private living and semi-private working environments. The flexibility of the working environments allow for unit-dwellers to change the degree of privacy to their unit at will. This allows the units to become dynamic vessels of community and creativity, empowering the inhabitants to create their own definition of the neighborhood.

Precast concrete elements allow for the entire unit to be prefabricated in three parts: the facade-facing shell, the interior-facing shell, and the shell circulation. The elements plug into the general structure, allowing themselves to be displaced by larger spaces. This allows the building to become both structurally and programmatically malleable.

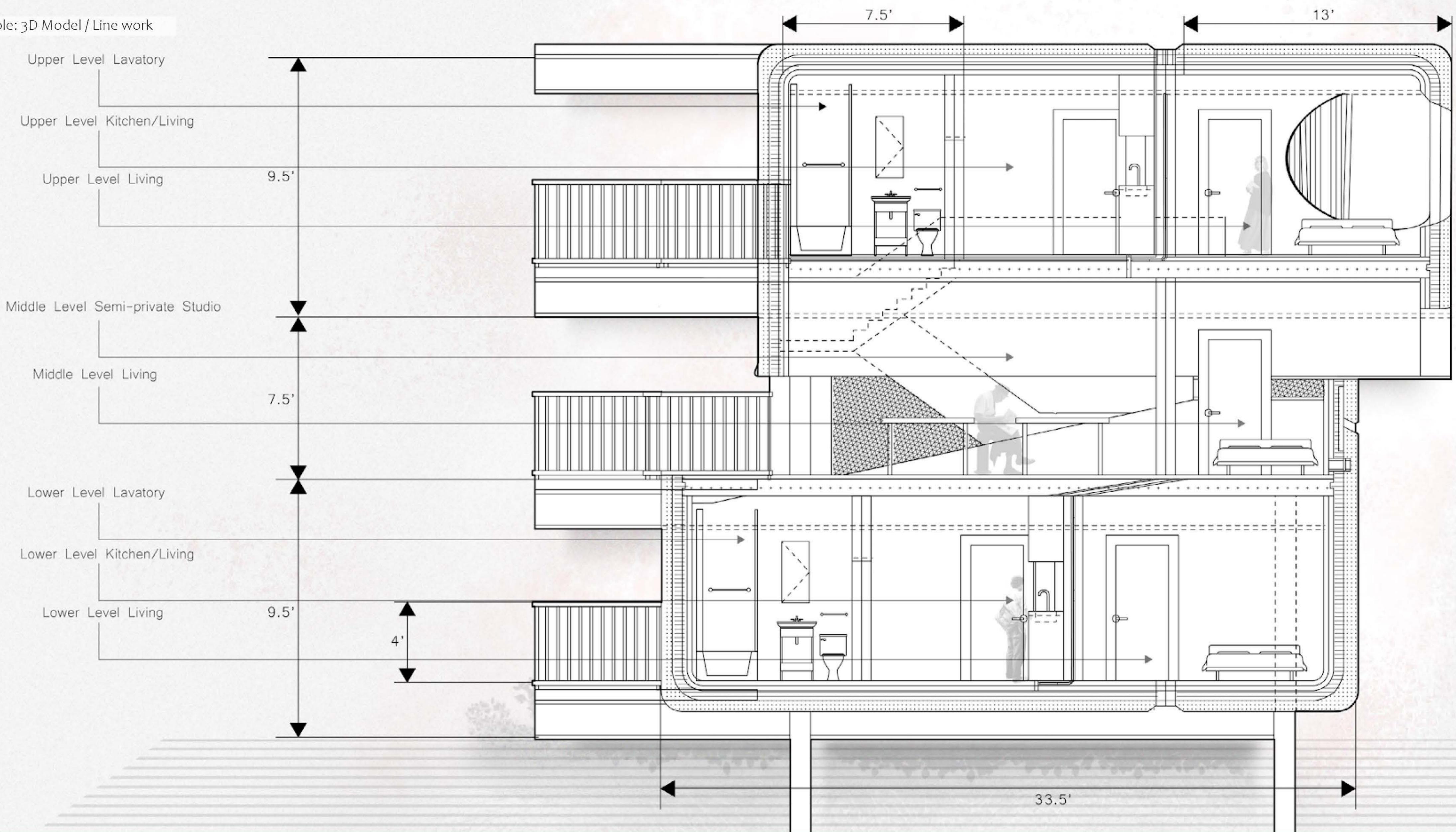
## Unit Floor Plans - Role: 3D Model



The ISOKON building, or the Lawn Road Flats, is a reinforced concrete block of 36 flats in the London borough of Camden. Designed by Wells Coates in 1929, the building serves as an early experiment in minimalist, social dwelling. The small, studio flats feature a community kitchen and an exterior staircase, which creates a sharing paradigm throughout the building. Other features include an open gallery, a roof terrace, and a dumbwaiter.



Unit Section - Role: 3D Model / Line work



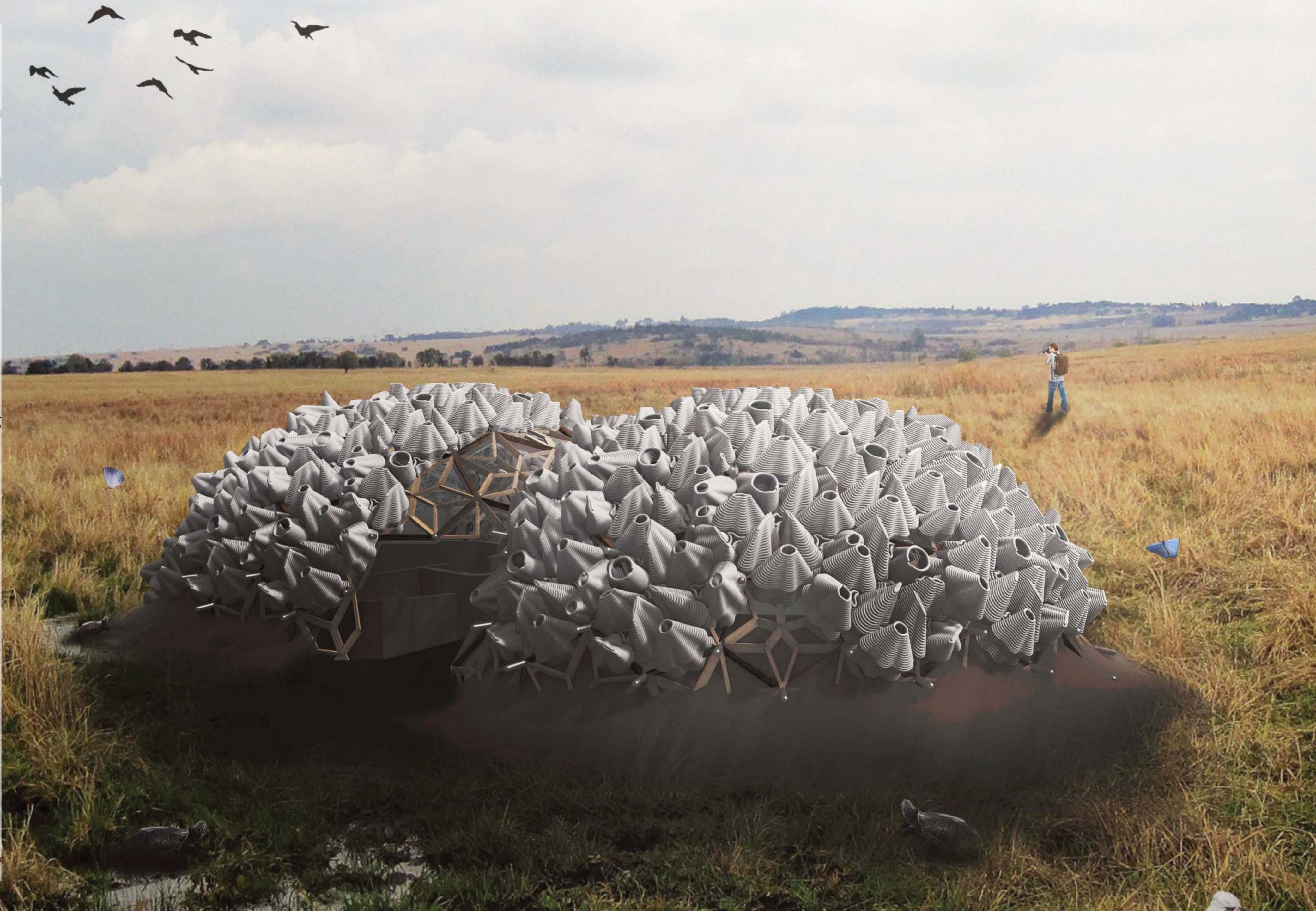
# HAVERSTRAW BRICK MUSEUM EXHIBITION & LEARNING HABITAT

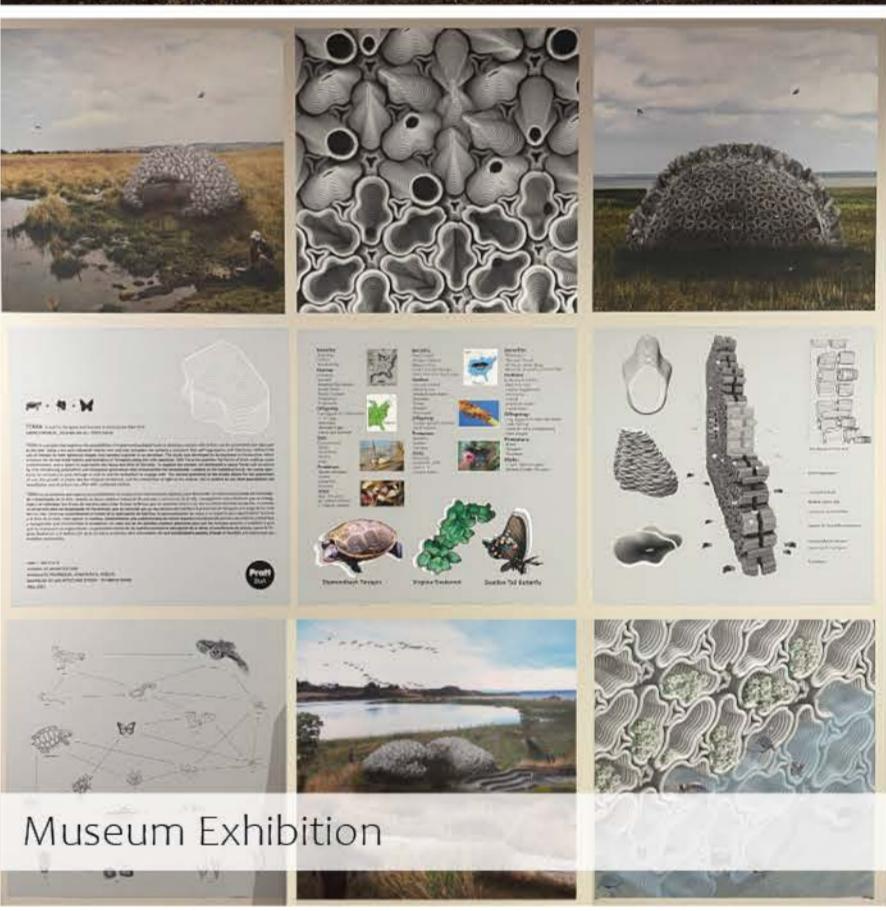
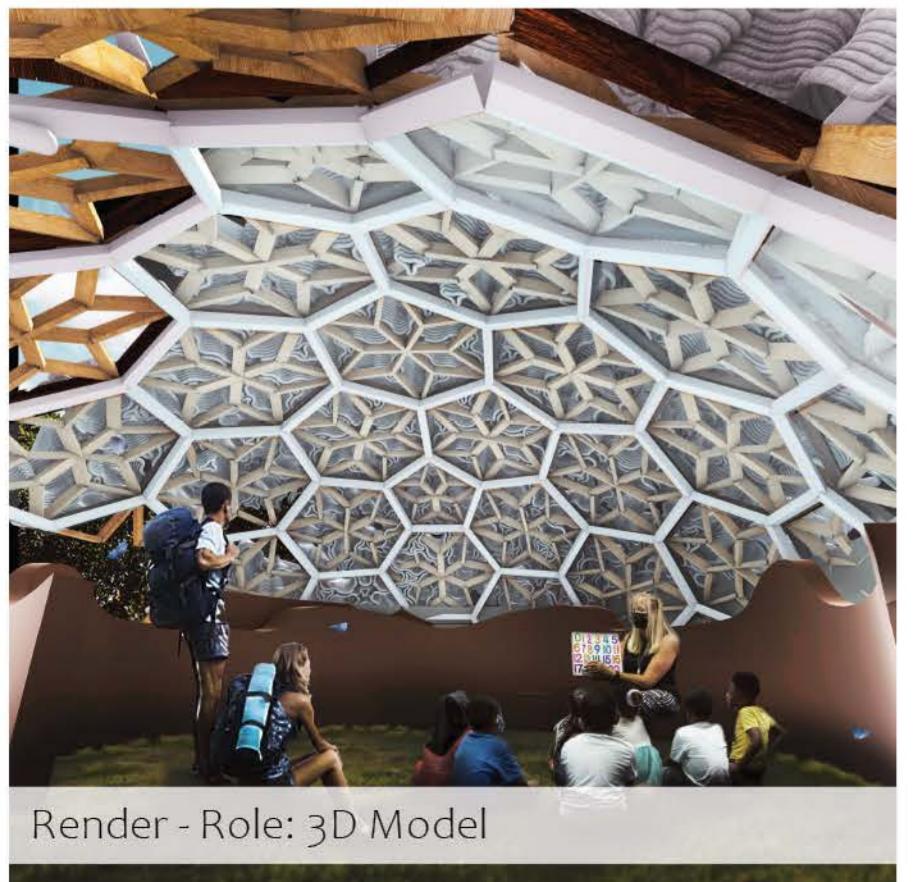
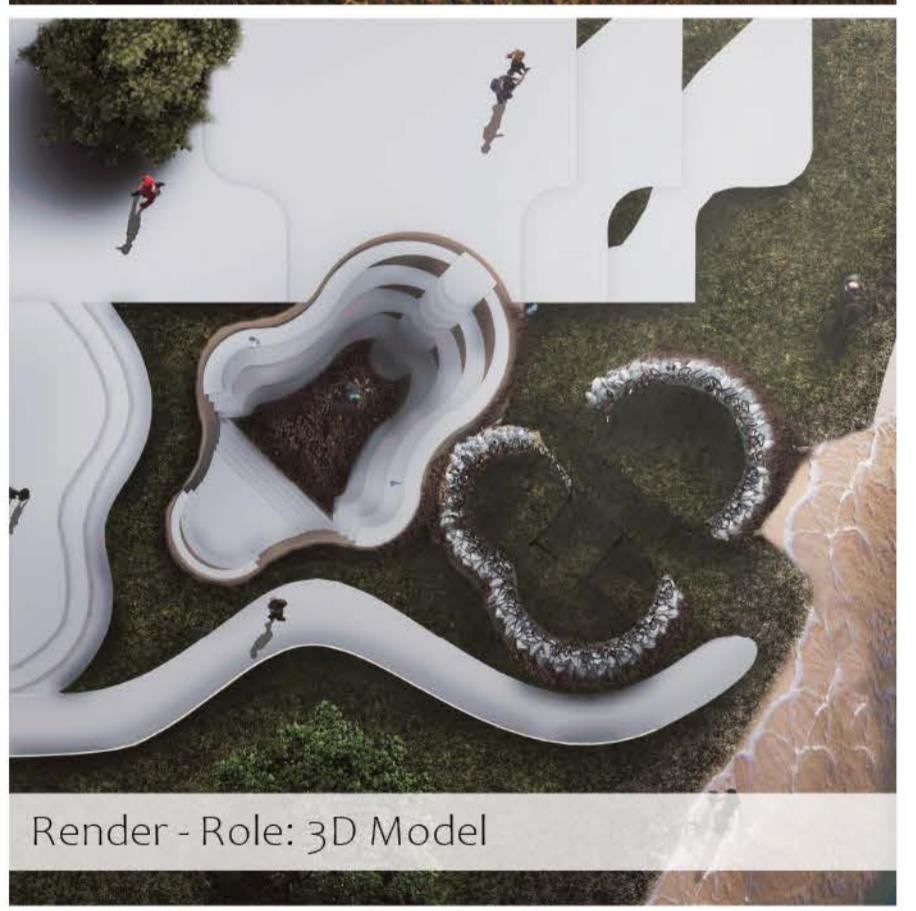
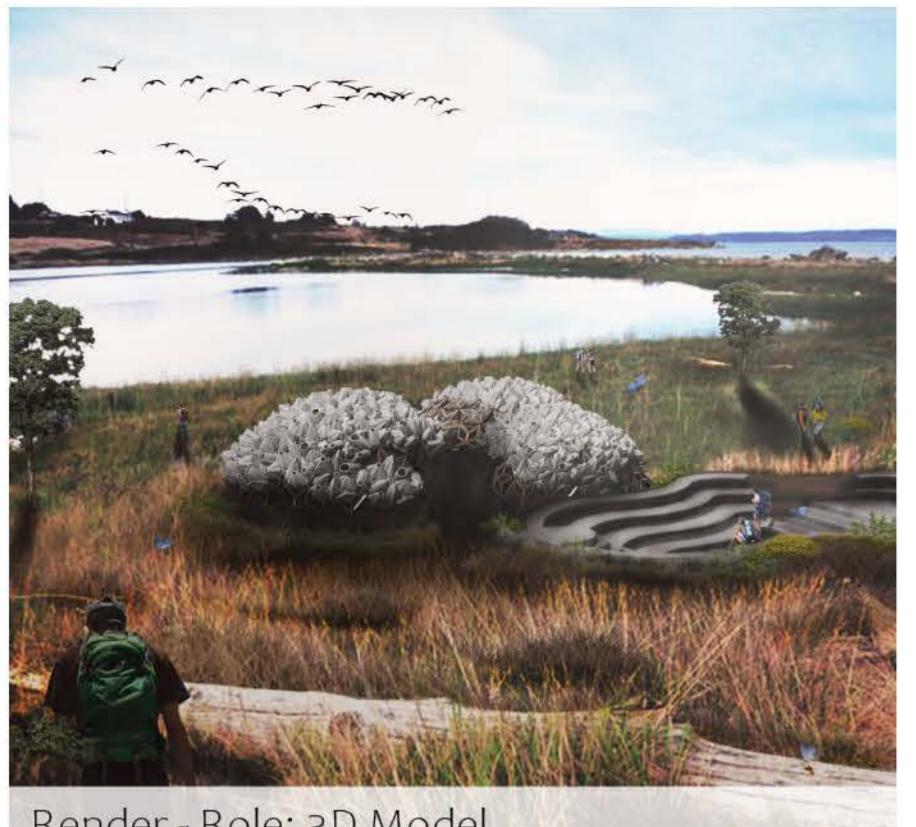
12 Main St, Haverstraw, NY 10927

2021

Collaborated w/ : A.Roncal, A. Bajaj

TERRA is a project that explores the possibilities of implementing digital fabrication tools to develop a system which can be aggregated and deployed on site. Through the use of six axis industrial robotic arm and clay extruder we achieve a system that self aggregates and interlocks to create spherical envelope. The study was developed to be deployed at Haverstraw, known for it's rich brick history and presence of Terrapins along the river coastline. With TERRA we question the future of brick making, mass customization, and a space to experience the flora and fauna of the area. Through the use of a tessellation study, we developed a system that interlocks and self aggregates without the use of mortar to form spherical shapes. To support the system we developed a space frame sub-structure by first introducing a Polyhedron and hexagonal geometries that circumscribe the tessellation. Looking at the individual brick, we create apertures for terrapins to pass or nest and for butterflies to engage with. The conical geometry of the bricks allow for the placement of soil and the growth of plants like the Virginia snakeroot and redirect light to the interior.





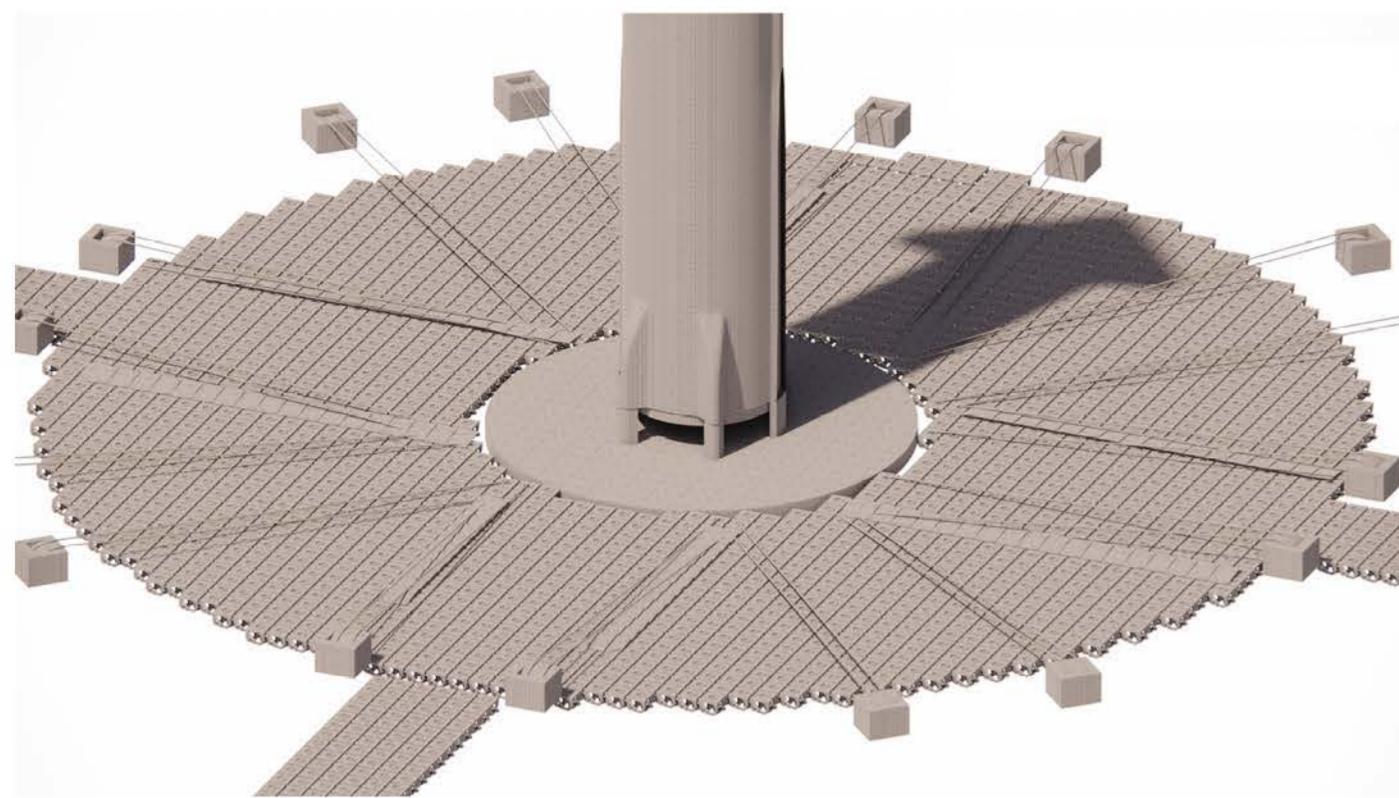
# PRATT X NASA LUNAR RESEARCH STUDIO - LUNAR LANDER

Earth's moon - Shackleton Crater

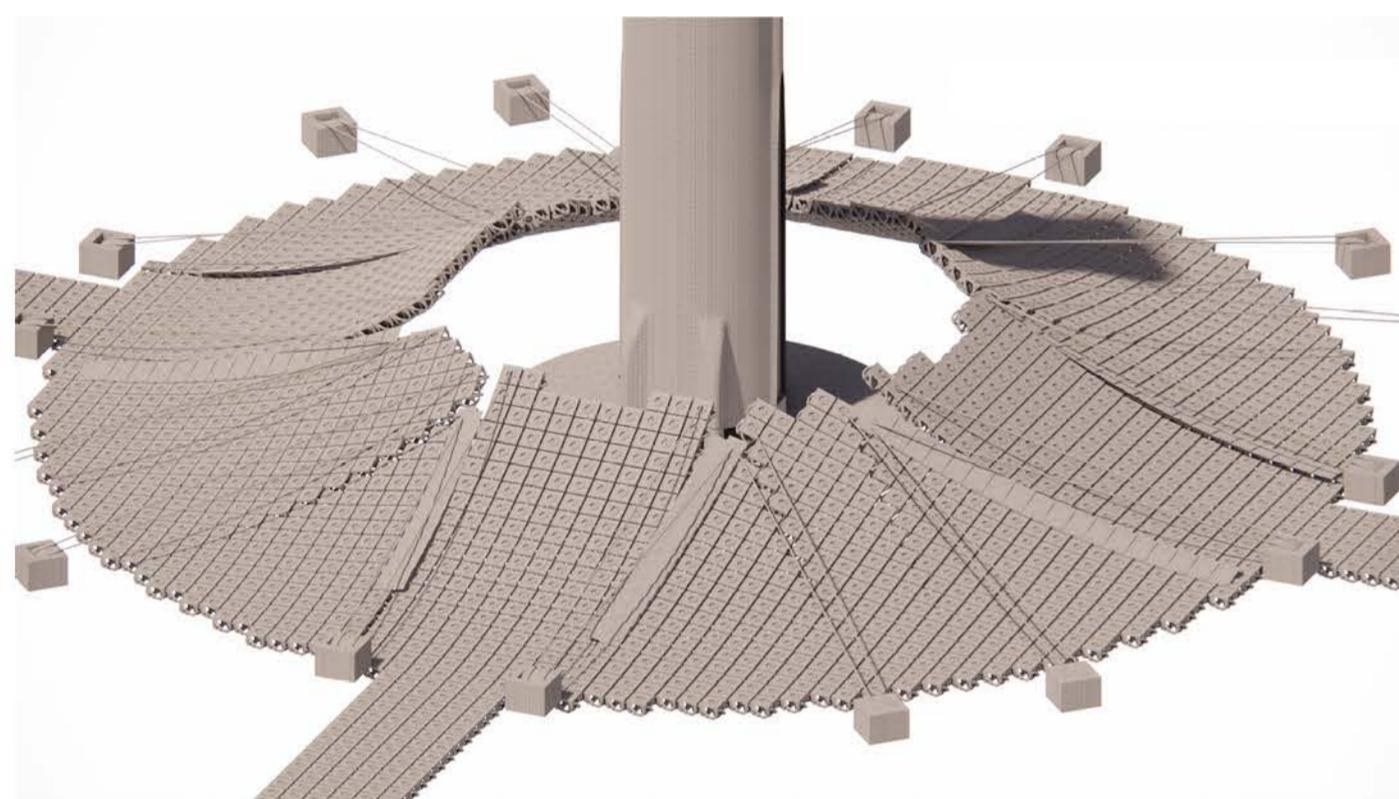
2022

This project was a crash course on architecture of the future. Partnered with NASA, the prompt was to engage in architectural theory in conjunction with developing space programs. The area of study I worked on had to do with the control of lunar launching & landing. The issue that sparked the design was that moon dust causes hazardous interference to potential lunar bases. How could architecture and future fabrication techniques propose a solution? My solution for this moon dust problem was creating active landers that would be constructed in phases, using the moons resources and imported Earth technology. Combining existing & projected technology to deploy a series of 3D printing regolith bots to autonomously print a lander. The proposal required human interaction within some stages of the construction but upon completion the operation of landing and launching would become full autonomous. The landers design mimics chain-mail linking technology, and a series of pulley systems. The impact of propulsion would sweep the airborne particles beneath the lander and contain a majority of debris. This project was a hypothetical exploration of science and architecture.

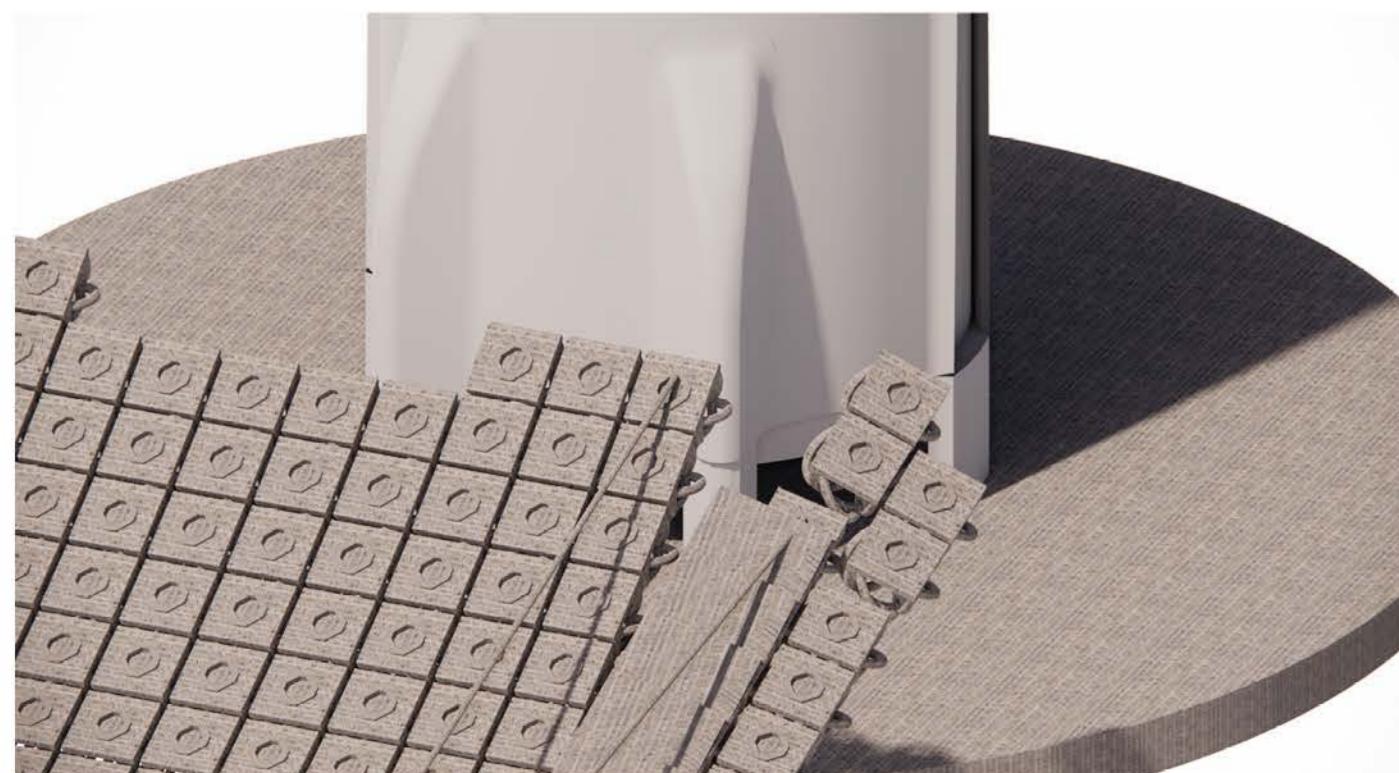




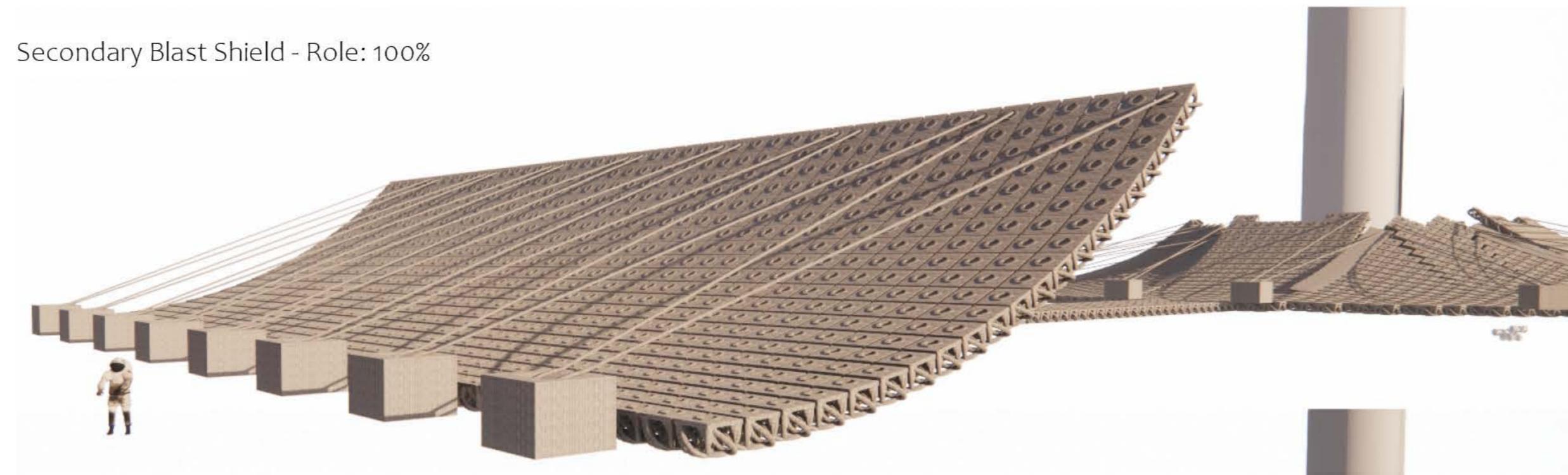
Inactive Lander - Role: 100%



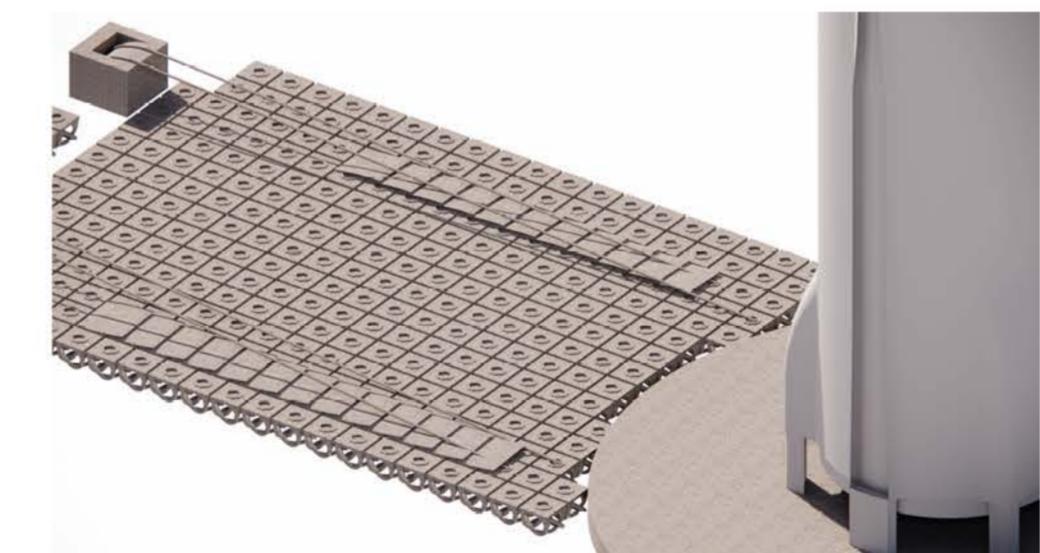
Active Lander - Role: 100%



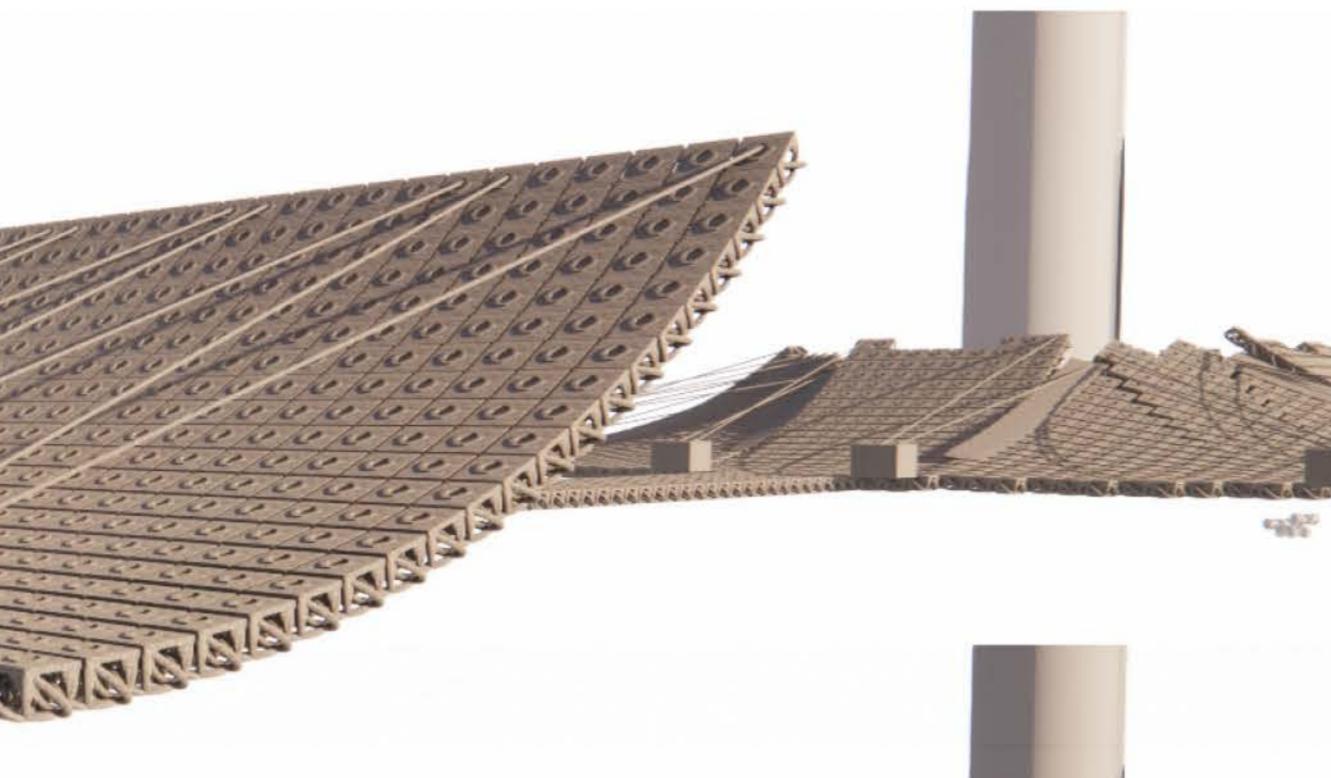
Whipple Shield Detail - Role: 100%



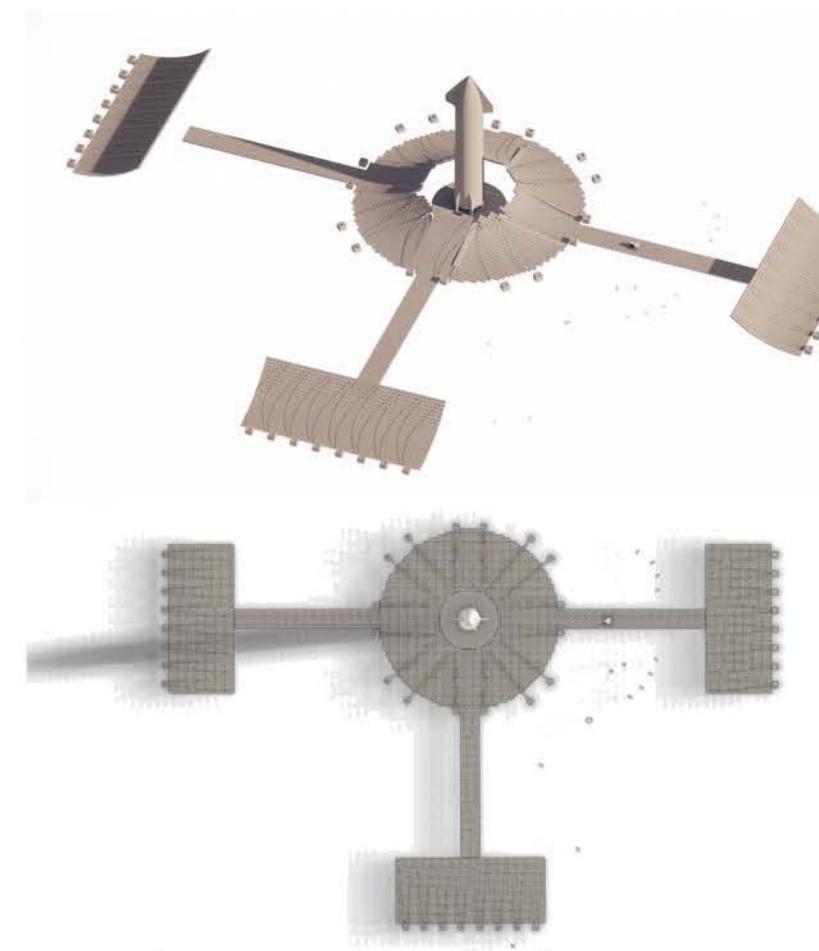
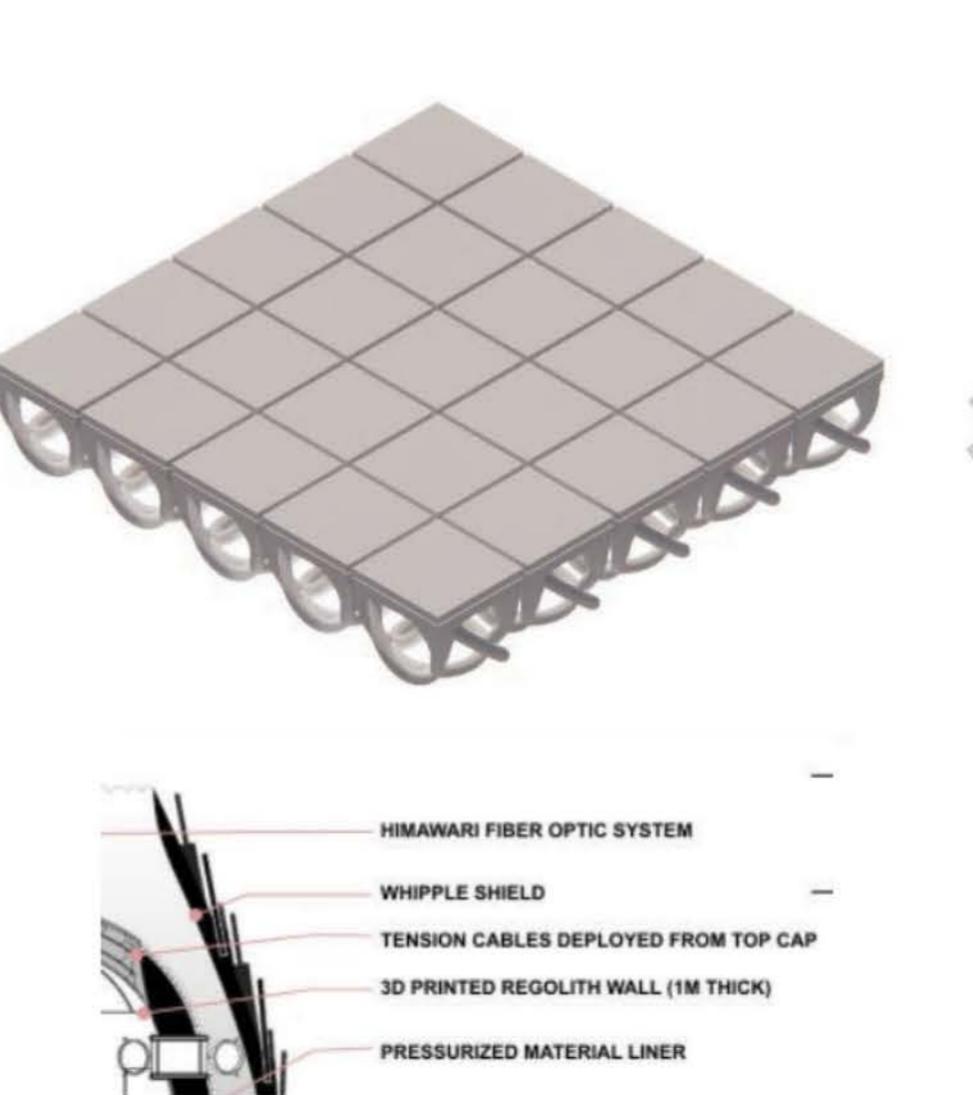
Blast Shield Disengaged - Role: 100%



Whipple Shield Inactive/ Active - Role: 100%



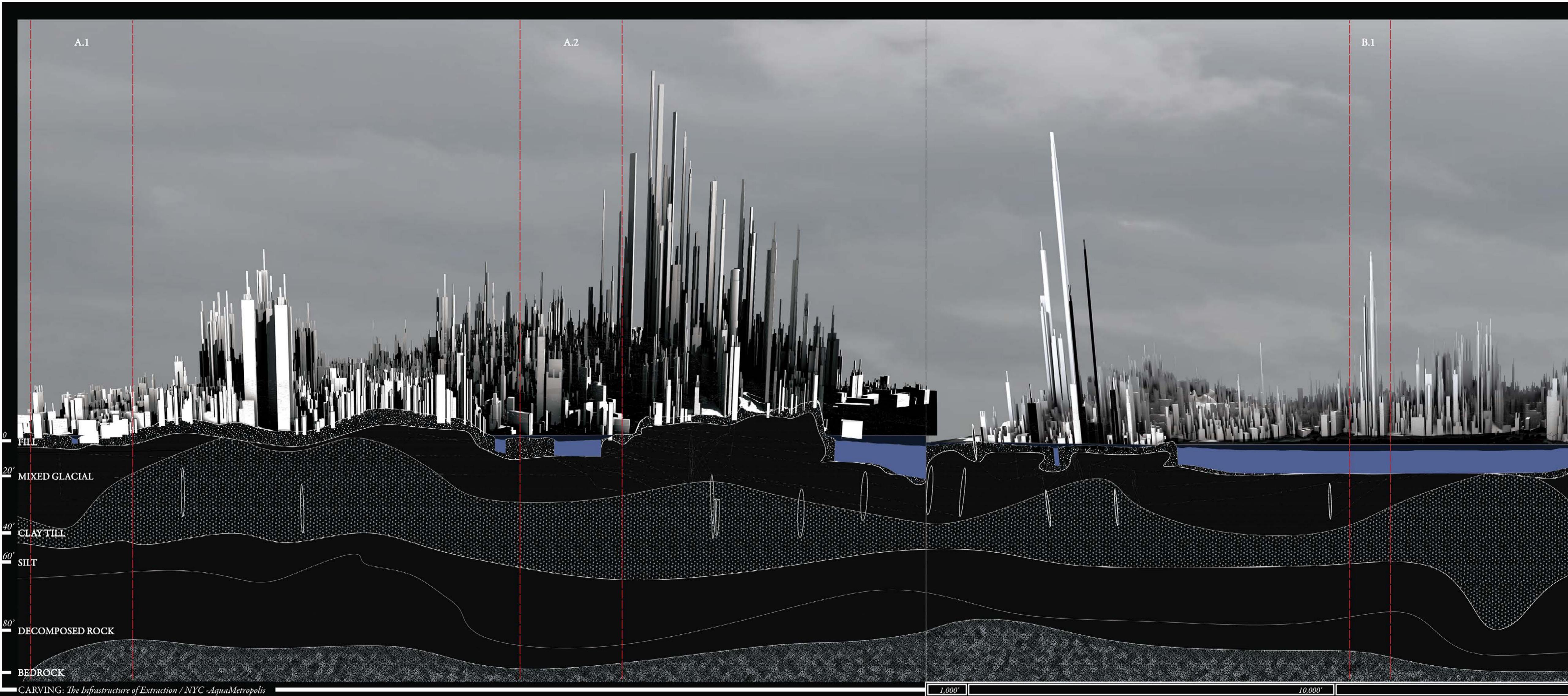
Chain-mail Detail - Role: 100%



Site Plan & Aerial View- Role: 100%



Physical Mode Prototypes - Role: 100%



## EXTRACTION: Operational Provocations Within NYC Water Supply System

New York City,  
NY, USA  
2023

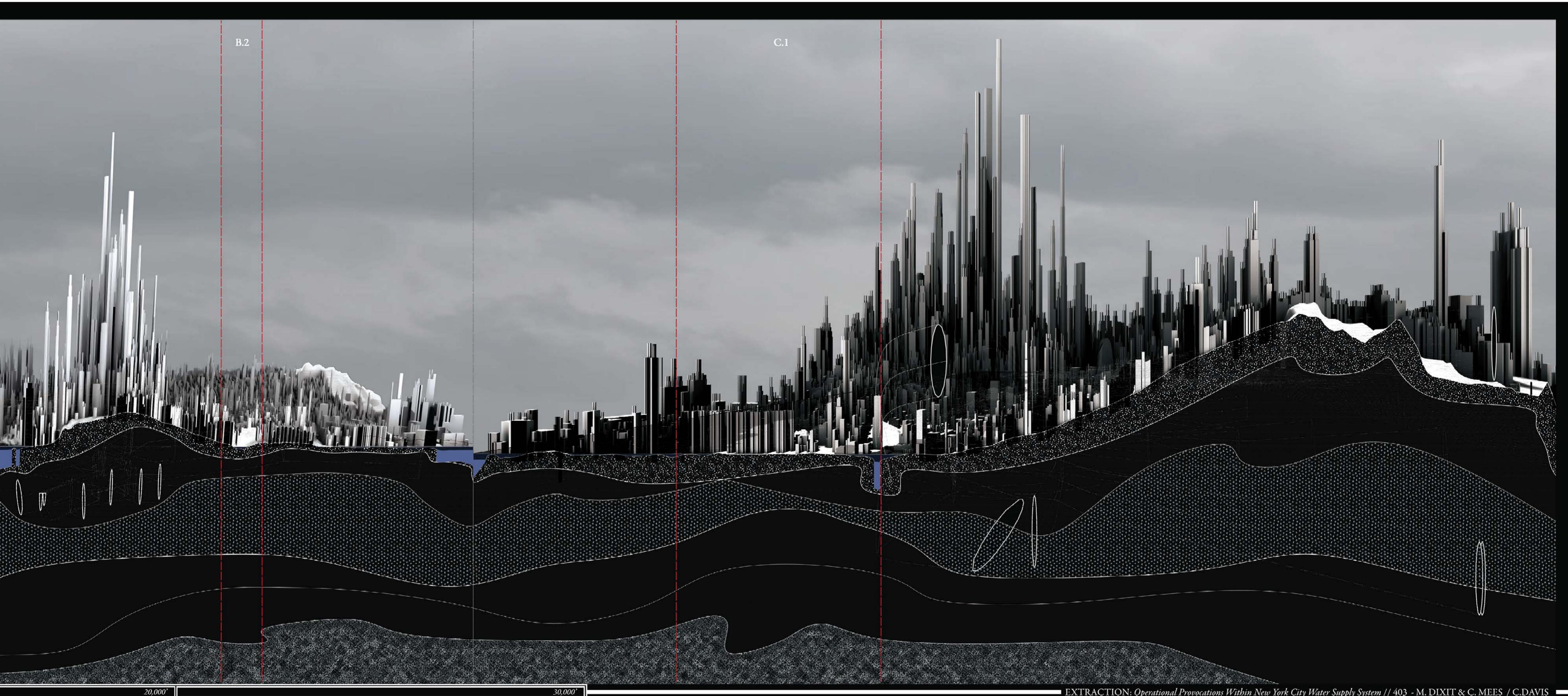
### CARVING:

*The Infrastructure of Extraction // The New York AquaMetropolis*

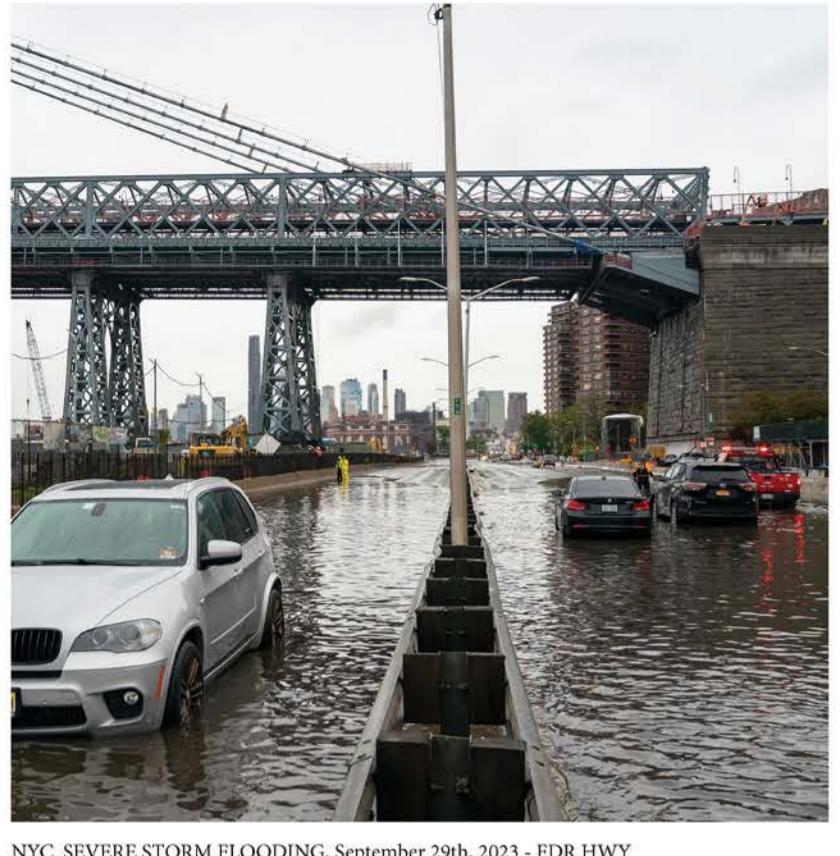
This project lies in a realm of research and anticipated destruction. Where architecture will take on a larger role in infrastructure and coexisting with the impacts of over extraction and over consumption. This project took two phases of discovery. The first phase was oriented on the entire NYC metro area and phase two deployed the research in one local neighborhood in Manhattan.

### PHASE ONE:

In the year 2100, the world has changed dramatically. Climate disasters that were once considered distant threats, are now an everyday reality. Rising sea levels, catastrophic fires, and increasingly severe weather patterns have reshaped the landscape of our cities. As the waters encroach, NYC's crumbling infrastructure now stands vulnerable, groaning under the relentless assault of the changing climate. The urgency to adapt and prepare for what seems inevitable is calling for a revolution in urban design.



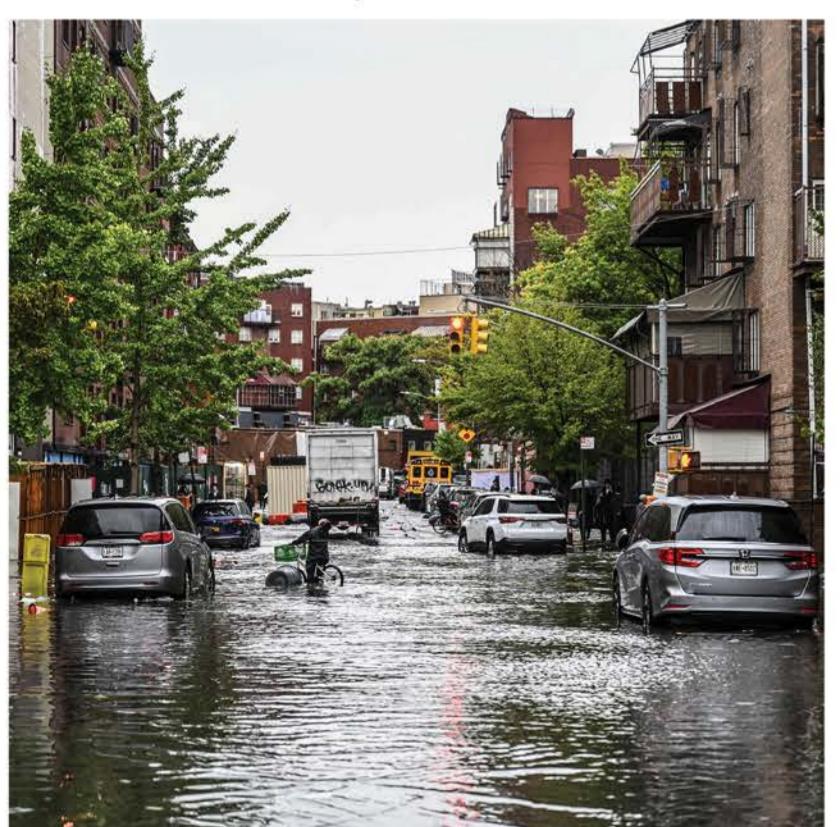
It's in this challenging environment that the AquaMetropolis project emerges—a bold and visionary response to the perils of climate change. Drawing upon more than a century of planning and a profound understanding of the power of water, this project envisions a new, water-oriented infrastructure, a lifeline that will ensure the city's survival and transformation in the post-climate change world. At its heart, AquaMetropolis recognizes that water is no longer just a threat; it's a lifeline, a resource, and a source of resilience. The project's core principles are to harness, adapt, and coexist with water, embracing it as an integral part of the city's identity. Harness: AquaMetropolis involves the construction of an intricate network of infrastructural canals, reservoirs, and aqueducts, meticulously designed to manage and distribute water resources efficiently. These not only protect the city from rising sea levels but also provide clean water, reduce flooding, and sustain essential ecosystems. Adapt: Innovative architectural designs and technologies are employed to raise buildings above sea levels, fortify waterfronts, and create resilient, adaptable spaces. Parks and green spaces provide refuge from the urban hustle while serving as natural buffers against flooding and extreme heat. Coexist: The AquaMetropolis isn't just about defending against the encroaching waters but also living in harmony with it. Floating neighborhoods, eco-parks, and aquatic farms become integral to the urban fabric, offering a unique blend of ecological harmony and modern living in a post-climate change world.



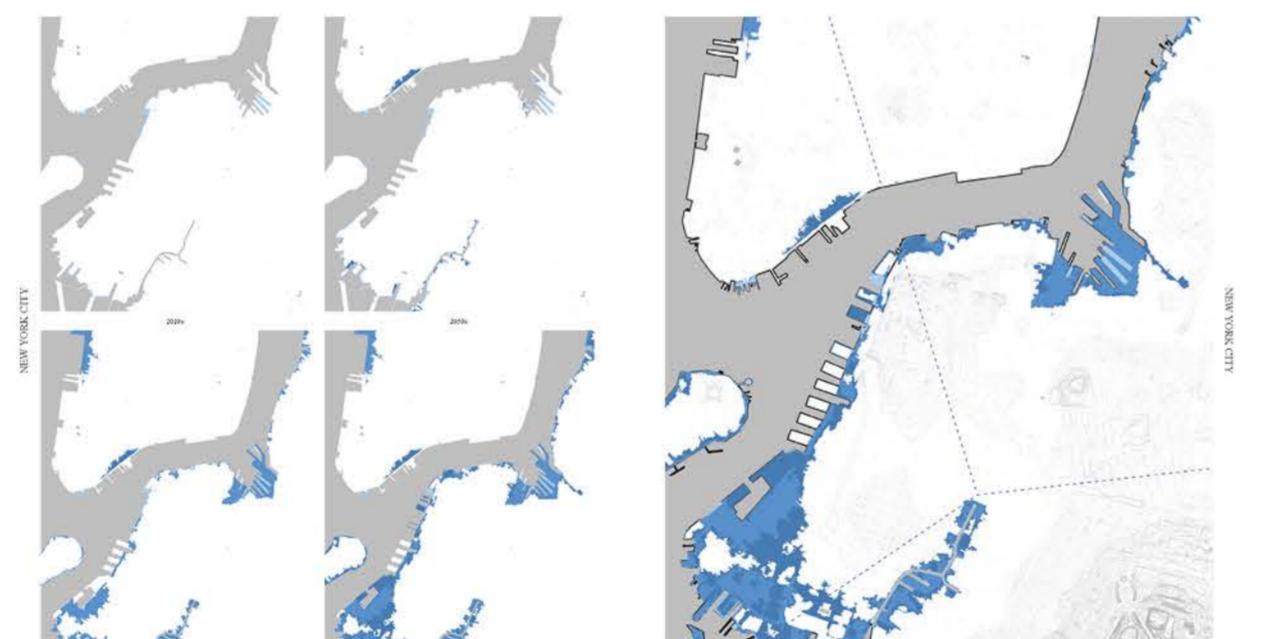
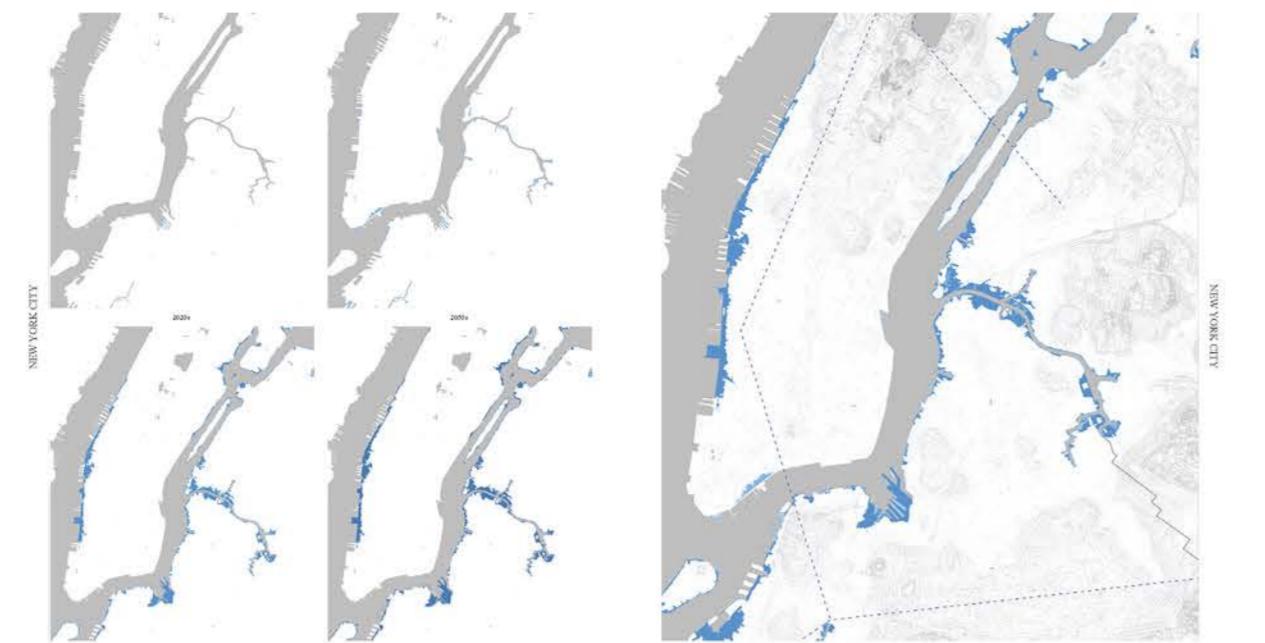
NYC SEVERE STORM FLOODING, September 29th, 2023 - FDR HWY



NYC SEVERE STORM FLOODING, September 29th, 2023 - Carroll St, BK



NYC SEVERE STORM FLOODING, September 29th, 2023 - Williamsburg, BK

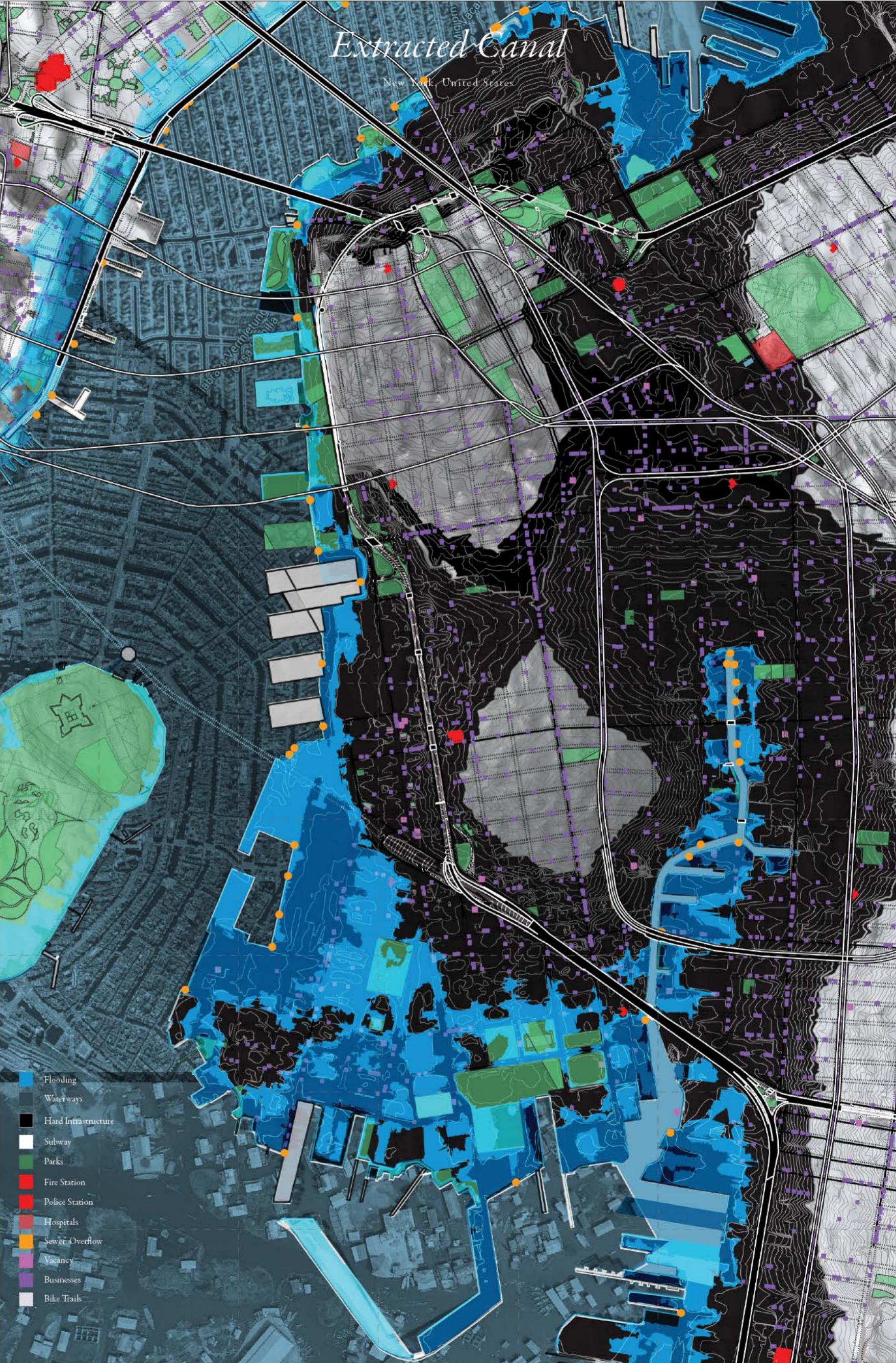


### Intuitively Mapping:

AquaMetropolis: Sustaining NYC pre/post Climate Change

The ambition for my map is to illustrate a multifaceted strategy for mitigating flood risks through the integration of hard and soft infrastructure, centered around the construction of a network of canals. Flooding represents a pervasive and growing threat to communities worldwide, driven by climate change and urbanization. In response, this map serves as a visual blueprint for a comprehensive flood risk management system. The canals' locations, dimensions, and connectivity are to be determined by the observation of the preexisting hard and soft infrastructure of the city.

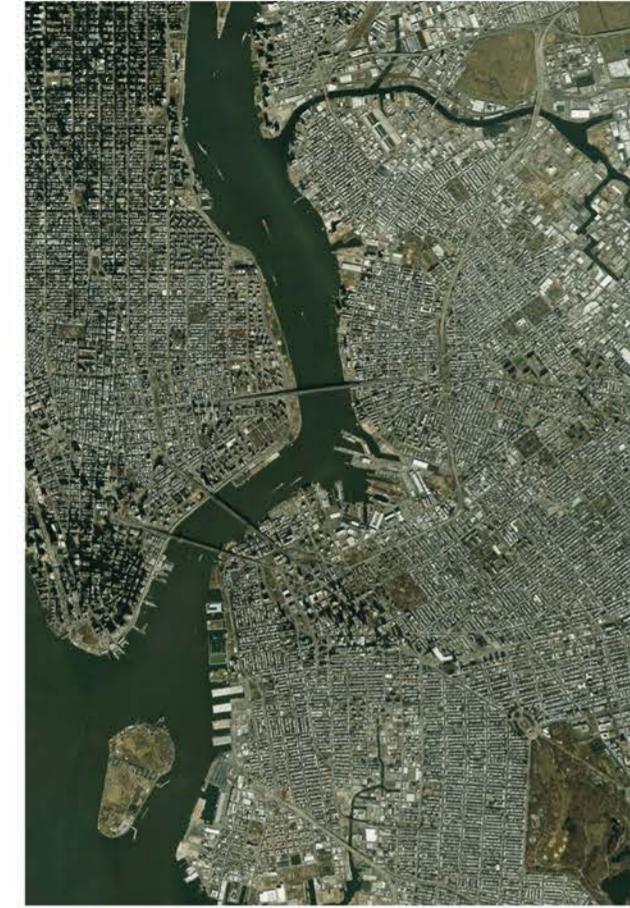
The map further emphasizes the synergy between hard and soft infrastructure. Canals are not standalone solutions but are integrated into a broader flood risk management framework. For instance, monitoring stations along the canals help track water levels, feeding data into early warning systems that alert communities downstream. New floodplain zoning will be informed by canal design, ensuring that vulnerable areas are adequately protected.



METHOD



1876



2023. 1:100,000



2123. 1:100,000



Figure Progreso Pier

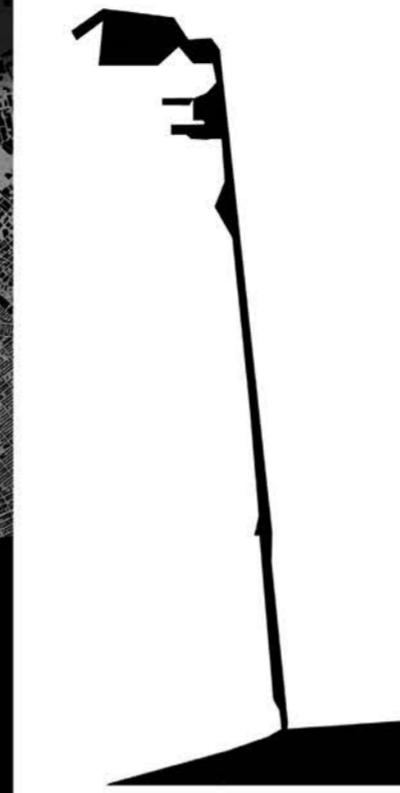


Figure Hoover Dam



Figure Venice, Italy



Figure



Blocking



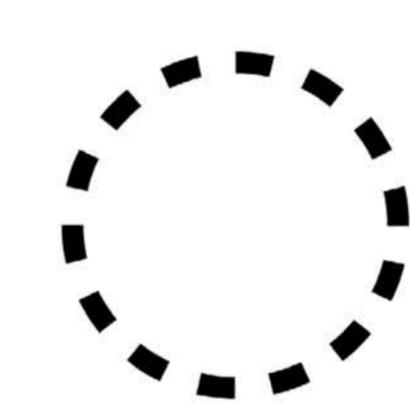
Diffusion



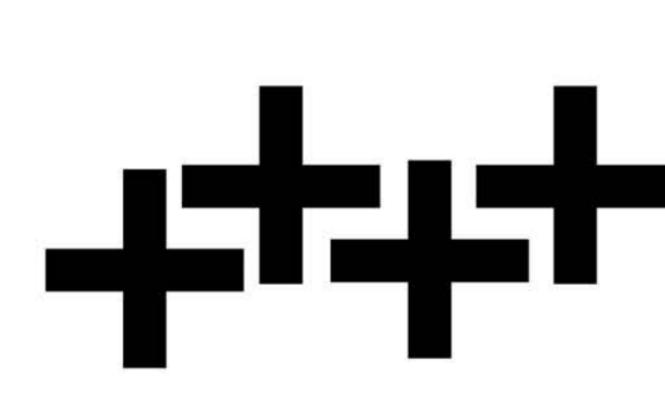
Trenching



Extension



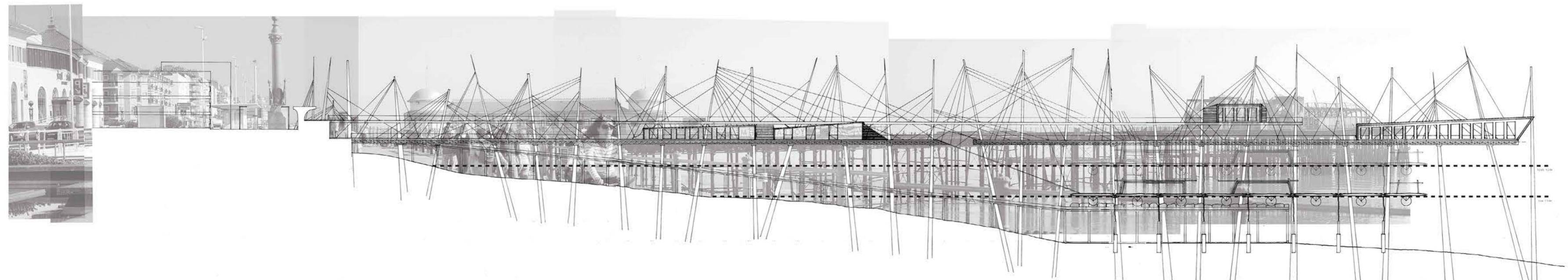
Oscillating

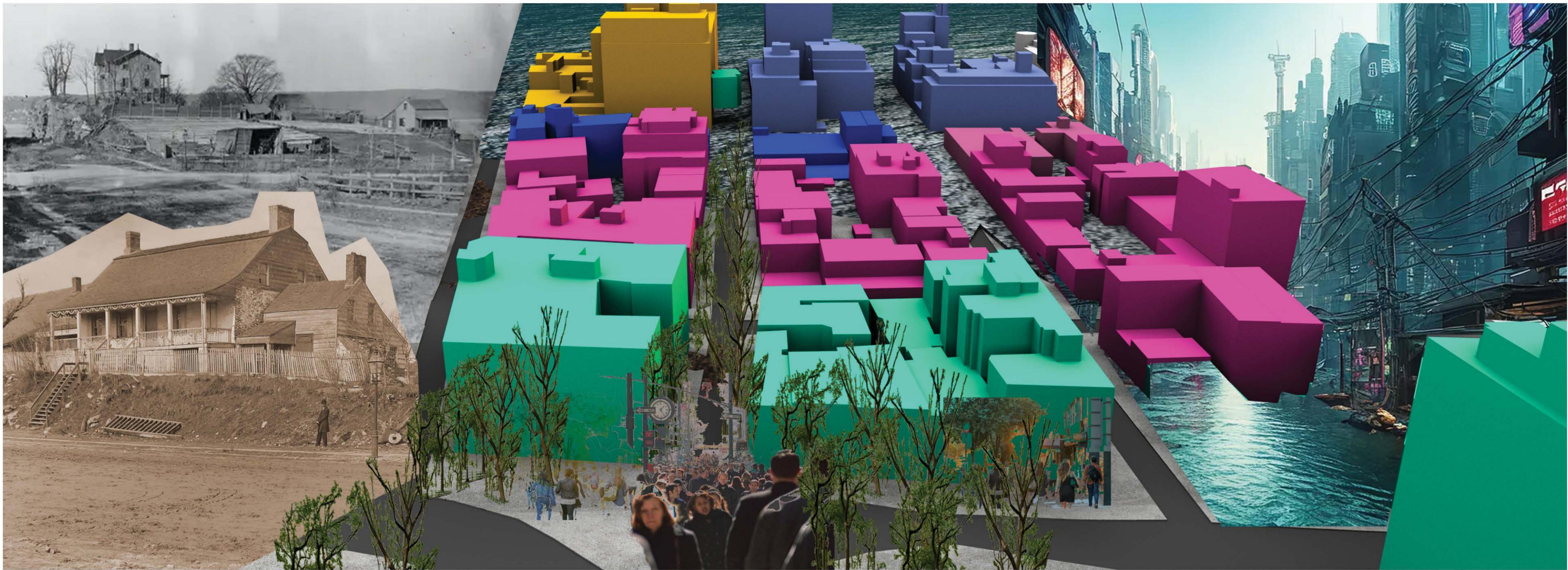


Connecting



Absorbing





## EXTRACTION: Operational Provocations Within NYC Water Supply System

West Village,  
NY, USA  
2023

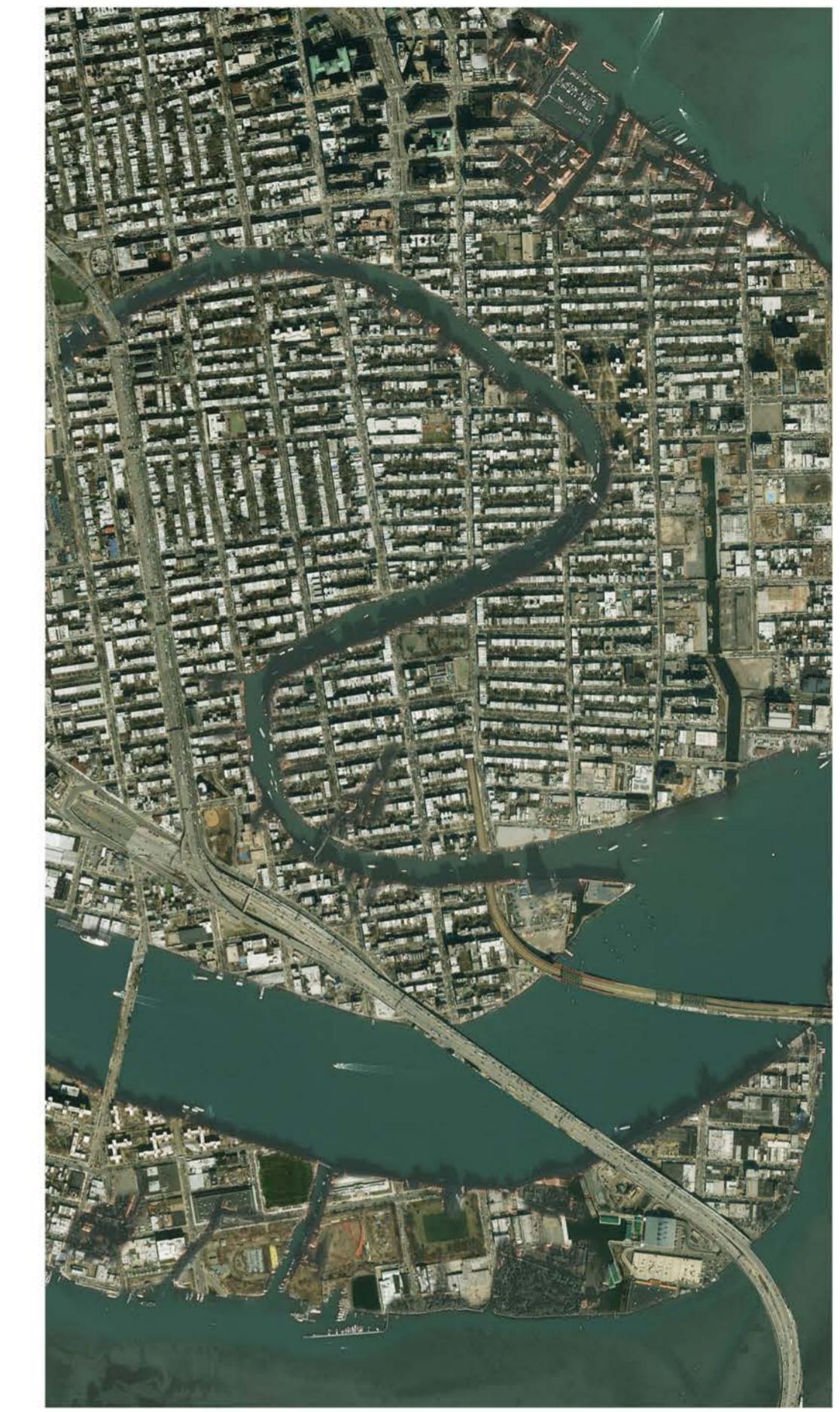
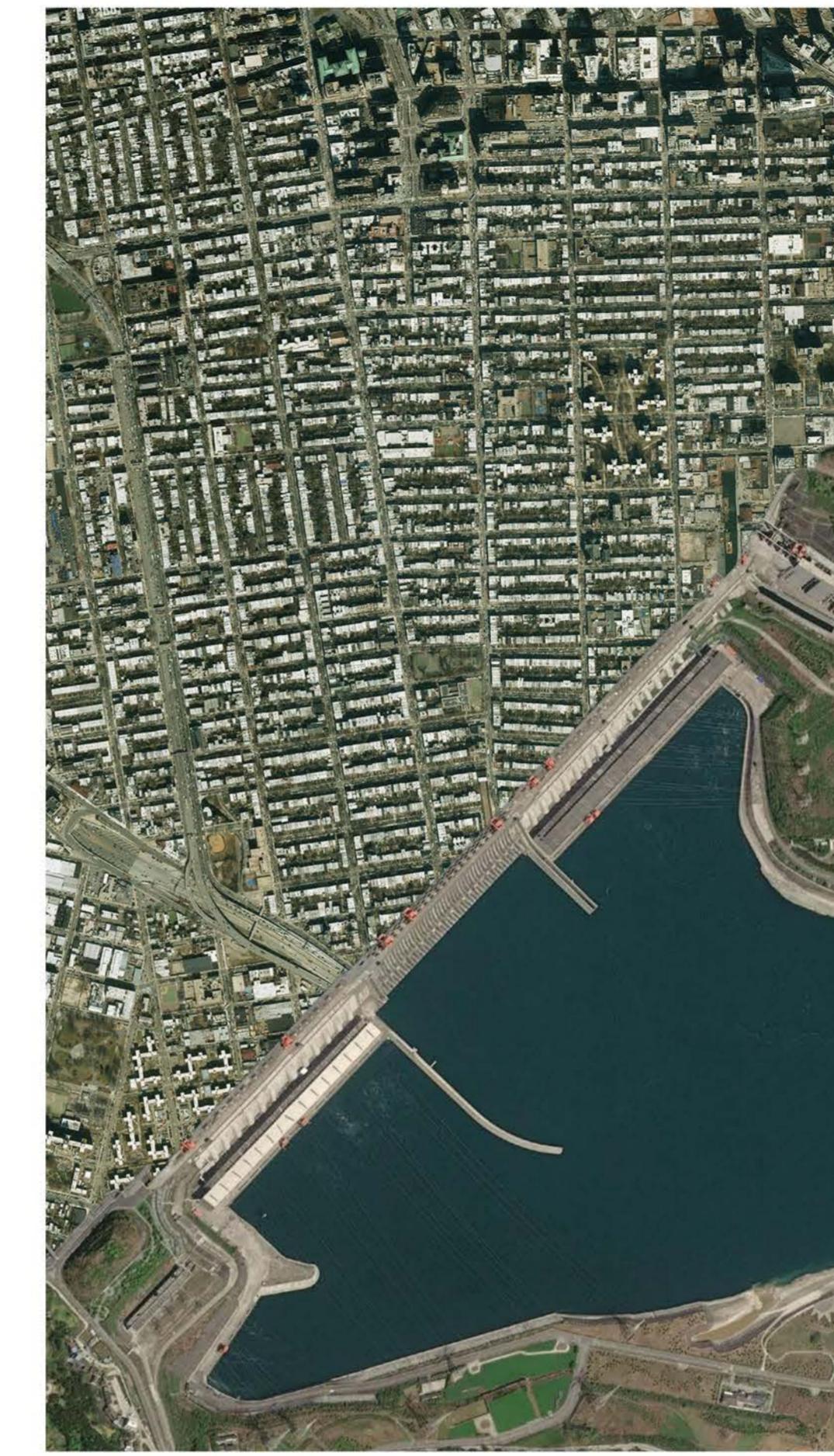
### PHASE TWO

#### *Flooding the Grid: Living With Water in the West Village*

This immersive exploration of water & community attempts to spark a new interest amongst New Yorkers to begin to welcome the impacts of climate change. This project relies on the belief that living with water will become more welcomed in the coming decades. As we encroach on the real impacts of climate change. While researching and designing I have been asking myself a few questions in relation to this concern with water.

- How can designing space for flood water change the experience of climate change for the residents of the West Village, and is there a way to bring communities together through the collective hardship?
- Is there a way to reorganize and rezone the streetscape to enable vacancy for people and water to occupy, and generate a system alongside the existing street frontage to coexist with water and harbor social change through a new way of life.

I engaged with thinkers like Olafur Eliasson and Brook Muller, who focus their work on designing with water. I was moved by the idea in Muller's book 'Blue Architecture - Water, Design, and Environmental Futures'. Muller claims, "Reengaging infrastructure as a matter of design, and gaining deeper awareness of the numerous and growing water challenges cities now face, the architect can play an important role in a transition to more sustainable, resilient, culturally meaningful, community-oriented, and visibly expressive urban water systems." (pg14)



With this idea in mind, the attention was placed on designing a system of infrastructure that attempts to answer my inquiry question and expand on the existing quality of the West Village. A series of canals and shallow channels will replace overcrowded car centric streets. These canals would act as agents for flood prevention, water retention, recreation, and community engagement. The potential for the canals are not limited to just flood prevention. By removing the street and cars from the equation there is now a vacancy ready to be occupied by a redefined idea of the streetscape and public sphere. The sidewalk space becomes larger and has the scale to host the community. Through elements of the design, the community and visitors of the area can connect with water visually and physically, allowing for a richer social context and experience to the West Village. What is significant about this area is there is a vacancy in terms of social, ecological, and economic stimulation. By removing streets and expanding the frontage of the area, the increase of space allows for a multitude of functions that address the vacancy. The new sidewalk space can host large gatherings, once car occupied garages will act as local merchant spaces or event spaces. The private gated gardens within the area will be seized and intertwined into the public sphere, to increase the access to nature. With the canals depositing into the Hudson, the West Side Highway along these three blocks will be elevated, distorting the visual “edge” of the city and bringing the water into the grid. Underneath the overpass will be four new parks speaking directly to the residents of the area. The project aims to increase the quality of living for residents and test climate crisis solutions, through a lens of infrastructure and design. This project proposes a new way of life within the city with the potential to expand the system to larger portions of Manhattan’s shoreline neighborhoods.

C1-6. Retail and Local Service Commercial Zoning District

C1-7. Commercial Zoning district in NYC

C1-6A. Zoning District is primarily residential with commercial uses on the street level (residential)

C1-6A. Zoning District is primarily residential with commercial uses on the street level (commercial and residential zoning)

C2-6. Zoning is a Local Retail and Local Service Commercial

C4-5. General Commercial Zoning District with residential and commercial uses

C4-4A. General Commercial Contextual Zoning District has normally commercial and residential use. The commercial uses are usually department stores, retail, entertainment, offices, and other commercial uses.

C6-2 General central Zoning district, large buildings having retail, department stores, large offices, hotels, and residential uses

C6-3 General Central Commercial Zoning, typically large buildings having retail, department stores, large offices, hotels, and residential uses

M1-5. Light Manufacturing Zoning district having manufacturing, commercial, and community facility uses

MX-6. SPECIAL MIXED USE DISTRICTS

R7-2. Medium-density Apartment House Districts

R7-X. Medium-density Residential Zoning District. It is a contextual zone and must follow the regulations for the Quality Housing Program.

R6. Medium density Residential Zoning District, you can develop townhouses or small residential buildings, typically four to six stories high

