

PORTFOLIO

Peyton Hall

CONTENTS

PROJECT 1

Techniflora
Fourth Year Spring Studio

PROJECT 2

The Courtyard
Fourth Year Fall Studio

PROJECT 3

Museo Sull'Arno
Third Year Spring Studio in Florence, Italy

PROJECT 4

Fragments of Dystopia: Crafting Community Space From Industrial Fragments
Third Year Fall Studio

PROJECT 5

Lux
Second Year Spring Studio

PROJECT 6

Scholar's Cottage
Second Year Fall Studio

MODEL MAKING

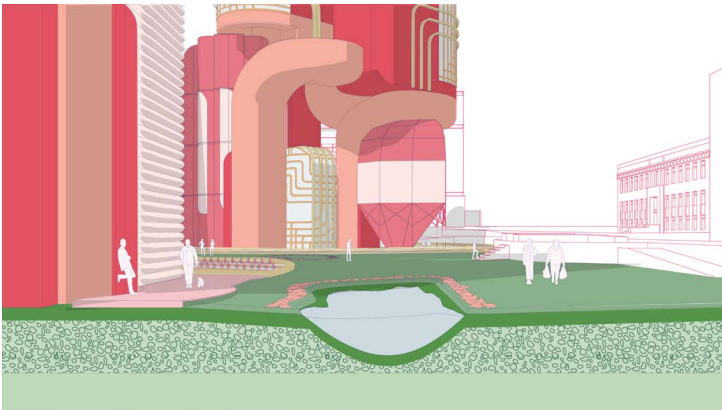
Supporting Models

TECHNOFLORA

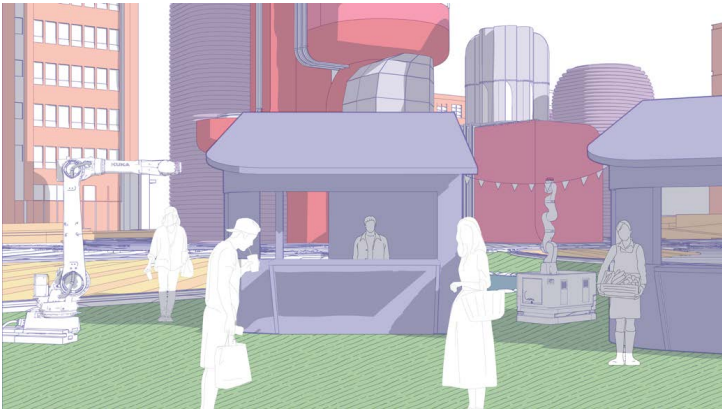
Fourth Year Spring Studio

Partners: Addison Henson, Taite McCray, Kendall Royer

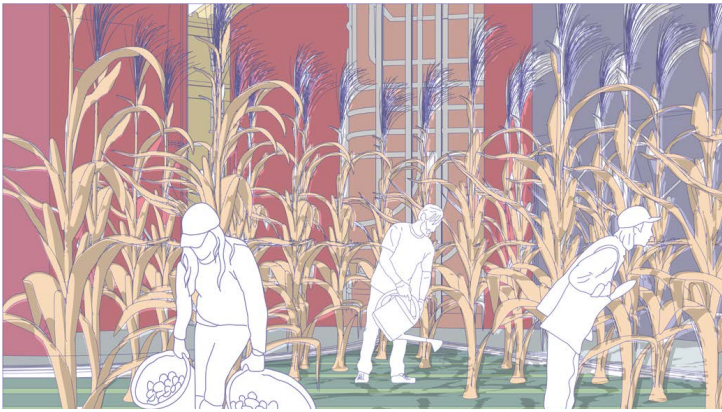
Techniflora is a futuristic agricultural complex on the Texas A&M campus that merges advanced technology, sustainable agriculture, and student well-being. This hybrid facility houses greenhouses, research labs, and classrooms designed to foster hands-on learning and interdisciplinary collaboration between students, artificial intelligence, and robotics. The project addresses the urgent issue of food insecurity on college campuses, with 48% of Texas A&M students reportedly experiencing food insecurity within a recent 30-day period, and 25–30% having to skip meals due to financial strain. Techniflora was envisioned as both a learning environment and a productive landscape. Students are encouraged to engage directly with crop growth, food systems, and AI-assisted farming tools, building knowledge while also contributing to the nourishment of their peers. The integration of cutting-edge technology and regenerative agriculture in a campus setting is meant to reflect an optimistic and action-oriented vision where food, innovation, and education intersect to cultivate a more secure and sustainable future.



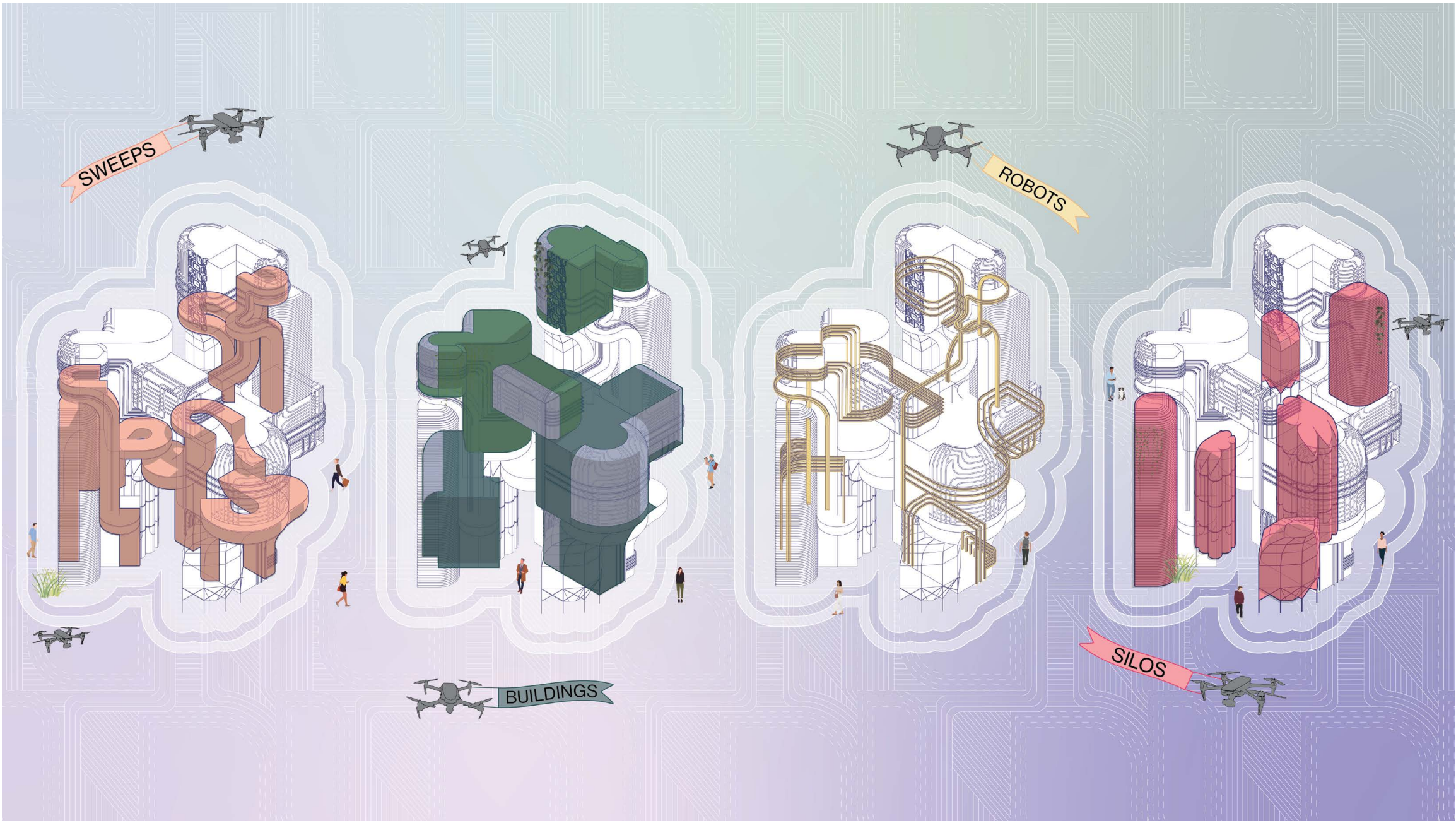
PERSPECTIVE VIEW OF IRRIGATION



PERSPECTIVE VIEW OF MARKET



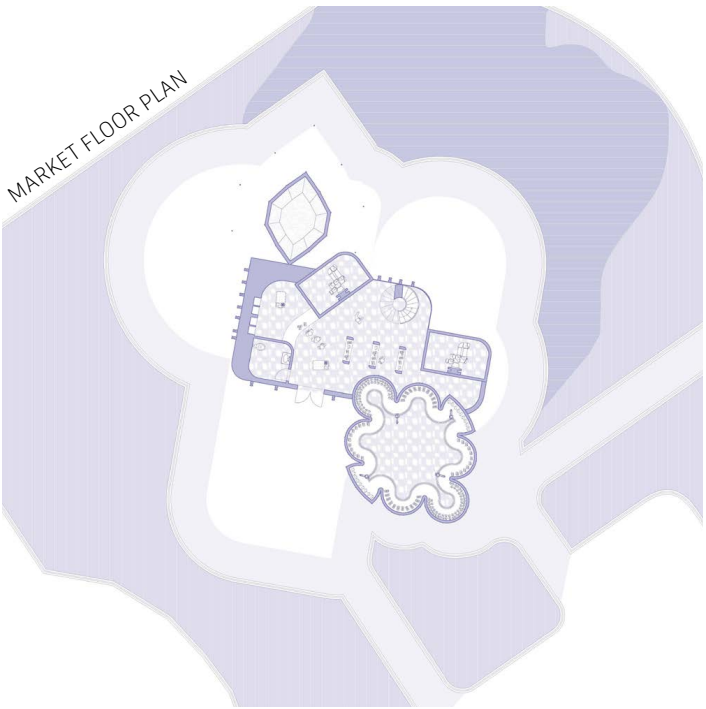
PERSPECTIVE VIEW OF CROPS



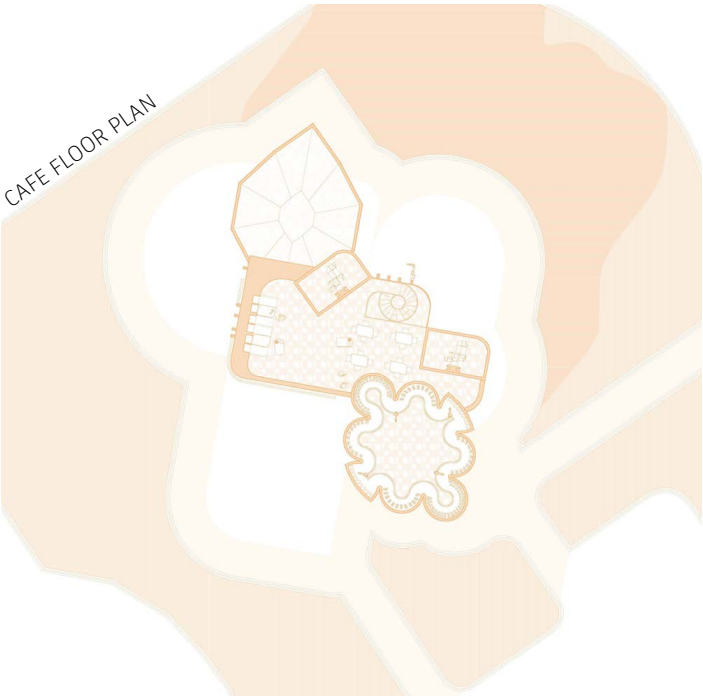
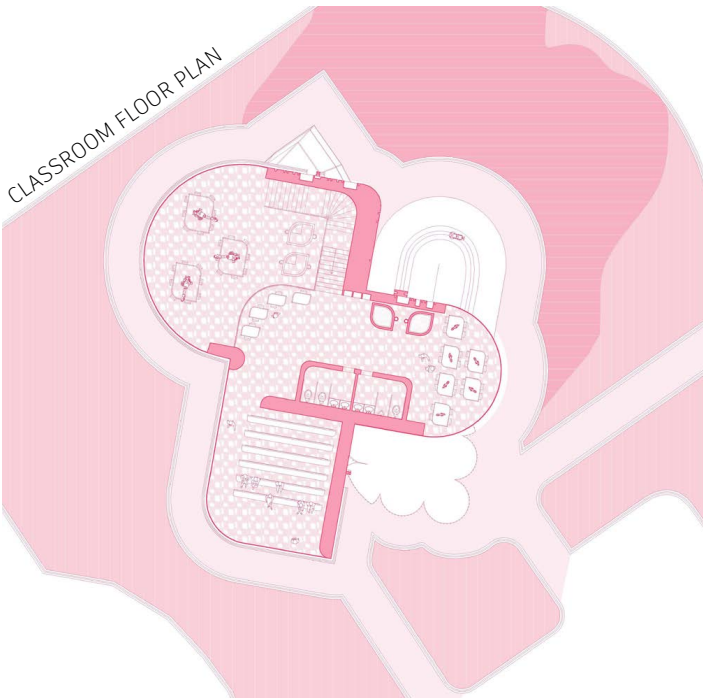
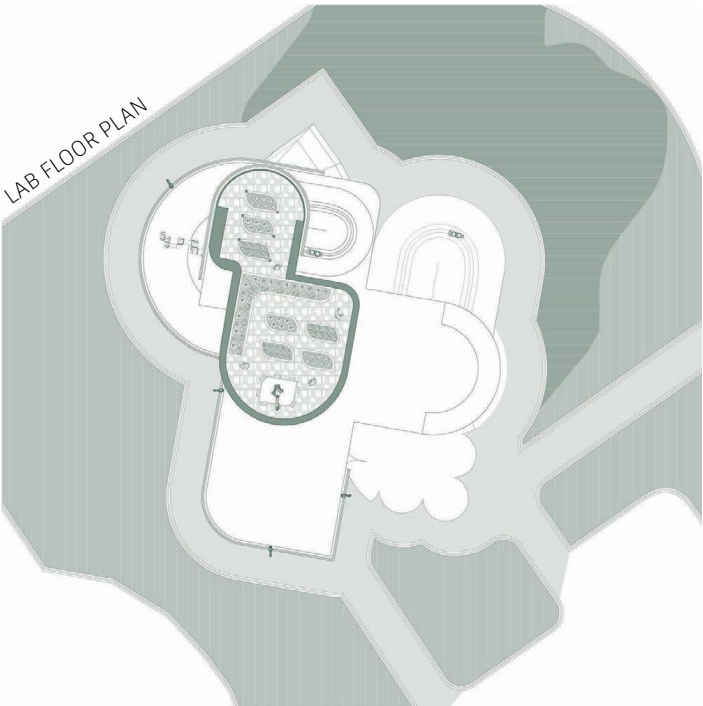
MAIN PROJECT ASPECTS: SWEEPS FOR TRAVEL, BUILDINGS FOR PEOPLE, TRACKS FOR ROBOTS, SILOS FOR STORAGE

The exterior of Techniflora is activated by a network of tracks and sweeping pathways that allow autonomous machines to navigate the site with precision. These exterior routes connect the greenhouses, silos, classrooms, and café, which enables efficient transport of crops, supplies, and data throughout the complex. The movement of robots flows between the interior and exterior where students can observe and interact with these systems as part of their daily experience on site. This open integration reflects the project's commitment to transparency in automation and fosters a deeper understanding of emerging agricultural technologies.

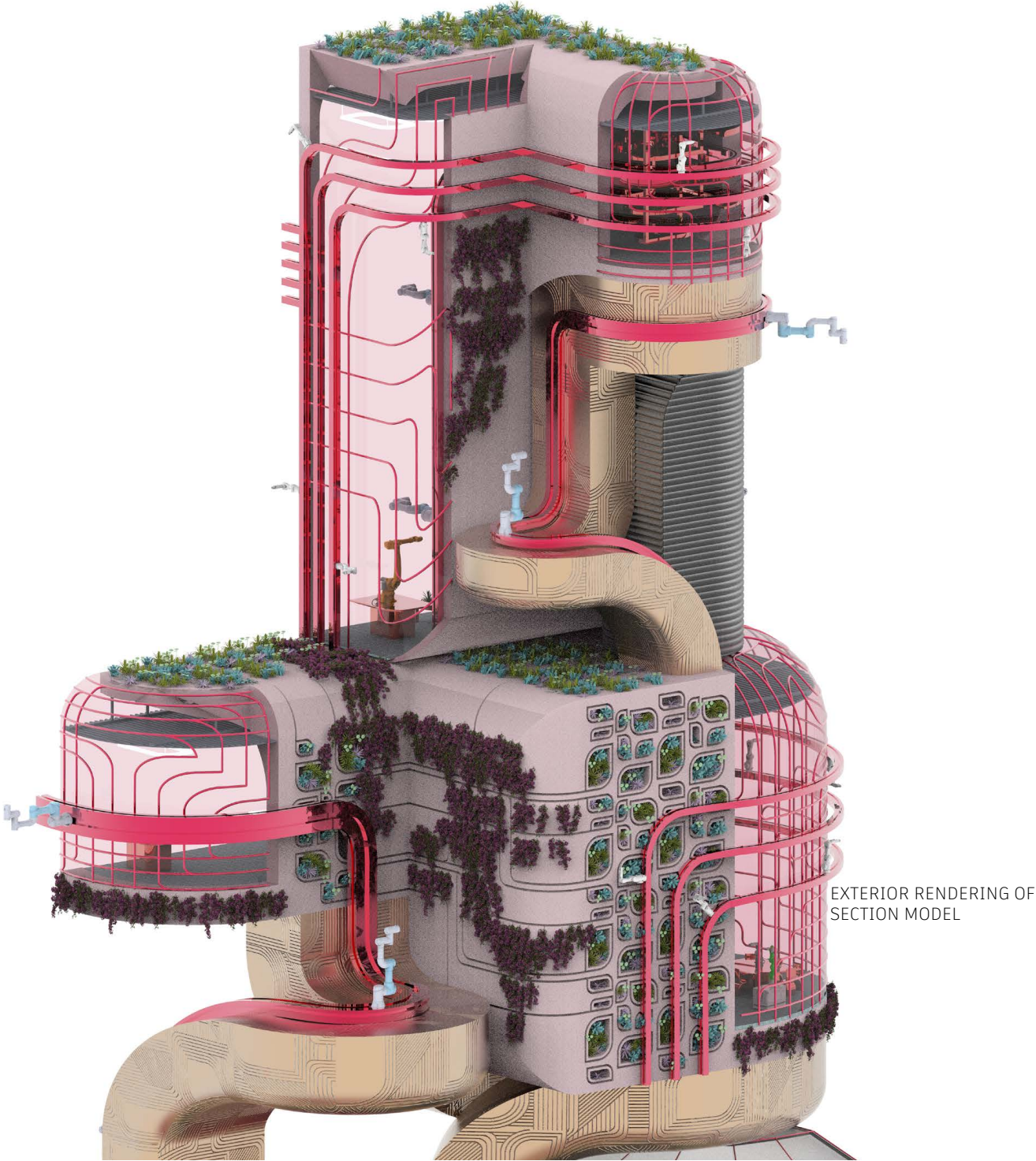
In addition to the robotic infrastructure, the building is wrapped in a system of exterior planting pockets that are distributed across façades and balconies. These vegetated areas are designed to be maintained by robots and drones. Visually, the pockets soften the building's industrial aesthetic and create moments of green contrast, while functionally supporting passive environmental strategies by enhancing insulation, regulating solar heat gain, and promoting evaporative cooling. These systems also serve as micro-experiments in vertical farming and biodiversity, turning the building itself into a living laboratory.



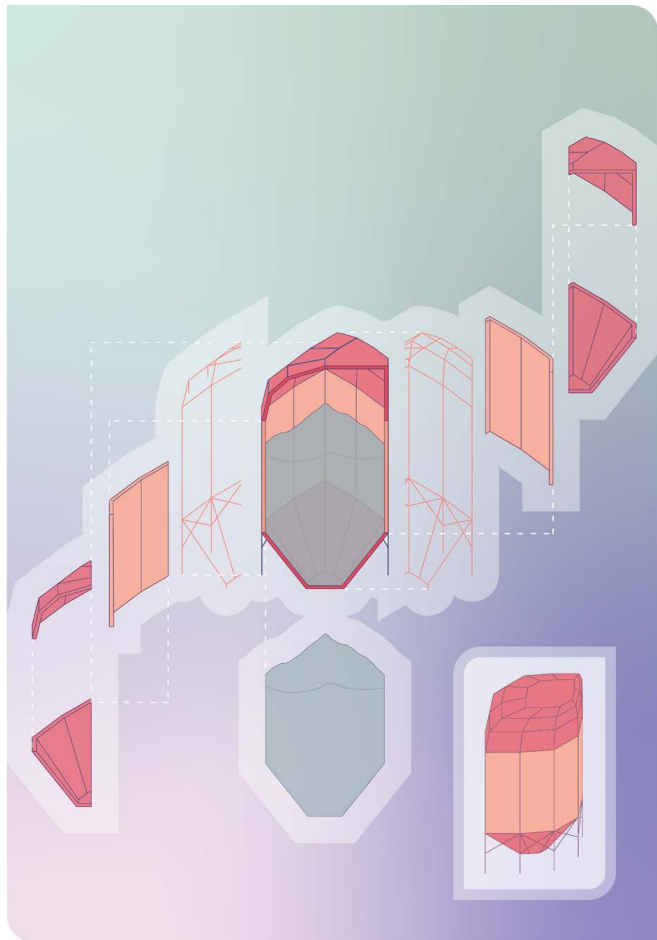
The sidewalks throughout the site and surrounding the buildings were formed by offsetting the building's footprint from above, creating natural circulation paths that mirror the geometry of the architecture.



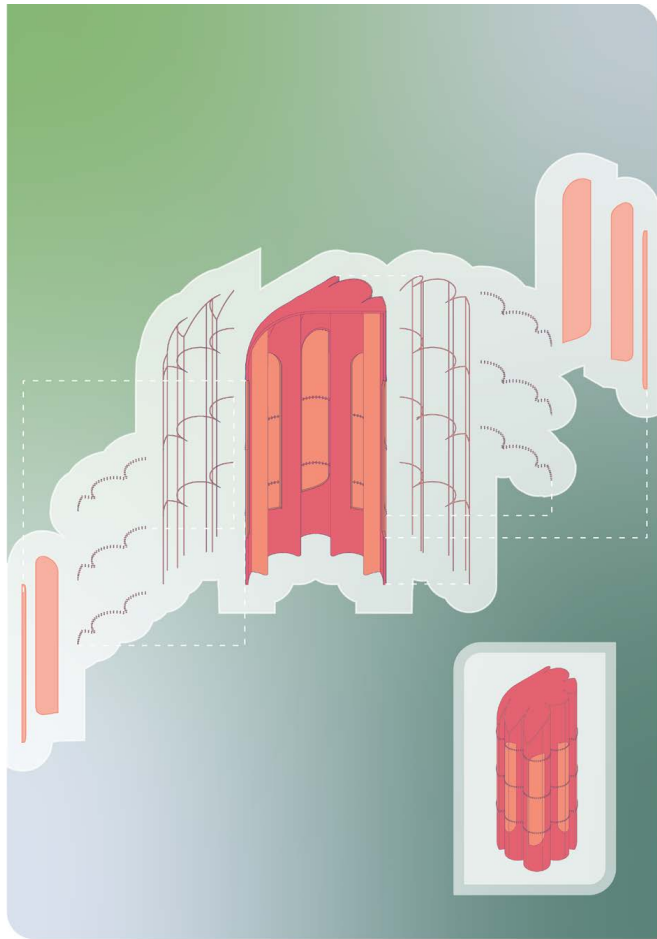
Surrounding the sidewalks are flexible robotic tracks that extend across the landscape. These tracks can be assembled, adjusted, or reconfigured by the robots themselves based on seasonal needs and site activity. This creates a responsive, self-organizing transportation system.



EXTERIOR RENDERING OF SECTION MODEL

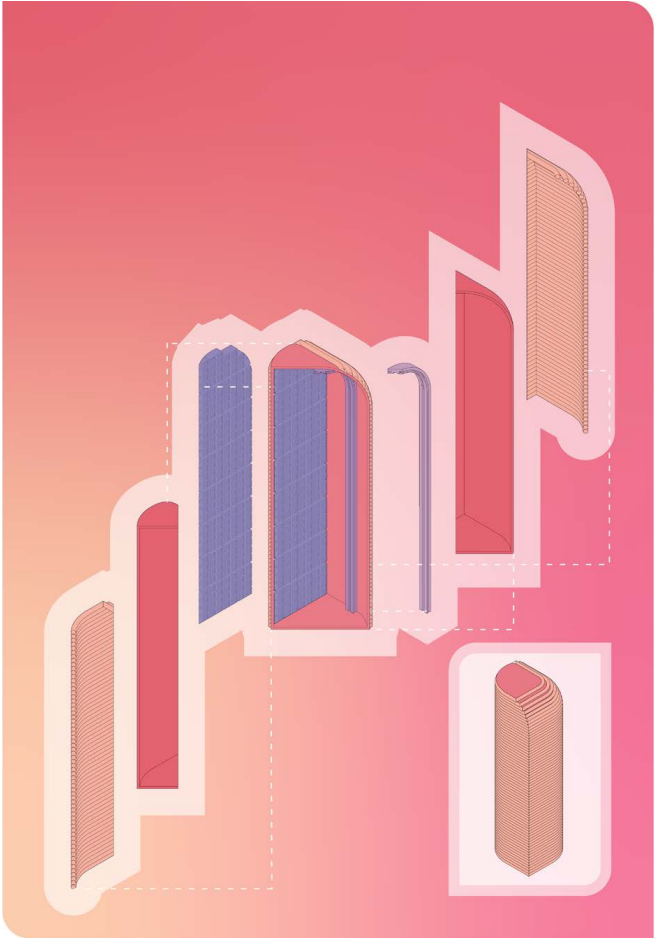


WATER SILO SILO



FOOD STORAGE SILO

Distributed throughout the site are three distinct types of silos dedicated to water, food, and data storage. These structures play a vital role in supporting the complex's agricultural and technological systems. These structures create a strong agricultural presence across the site and represent the cyclical processes that sustain the project's mission. Water silos feed into the irrigation systems used throughout the greenhouses and crop zones, food silos store on-site harvests for distribution to the market and café, and data silos house robotics equipment and servers for AI-controlled farming and transport systems. Together, they circulate resources, nourishment, and information across the site.



DATA SILO

The materiality of the silos celebrates both industrial resilience and transparency. They are fabricated primarily from stainless steel and assembled using welded rods and bolted plates. Each silo integrates polycarbonate panels and internal lighting to reveal the contents and operational layers within, whether it's food supply levels, irrigation tanks, or AI systems. This creates a lantern-like glow that doubles as both functional indicator and visual feature. This approach allows students and visitors to visually engage with the infrastructure and reinforces the project's emphasis on accessibility and learning.

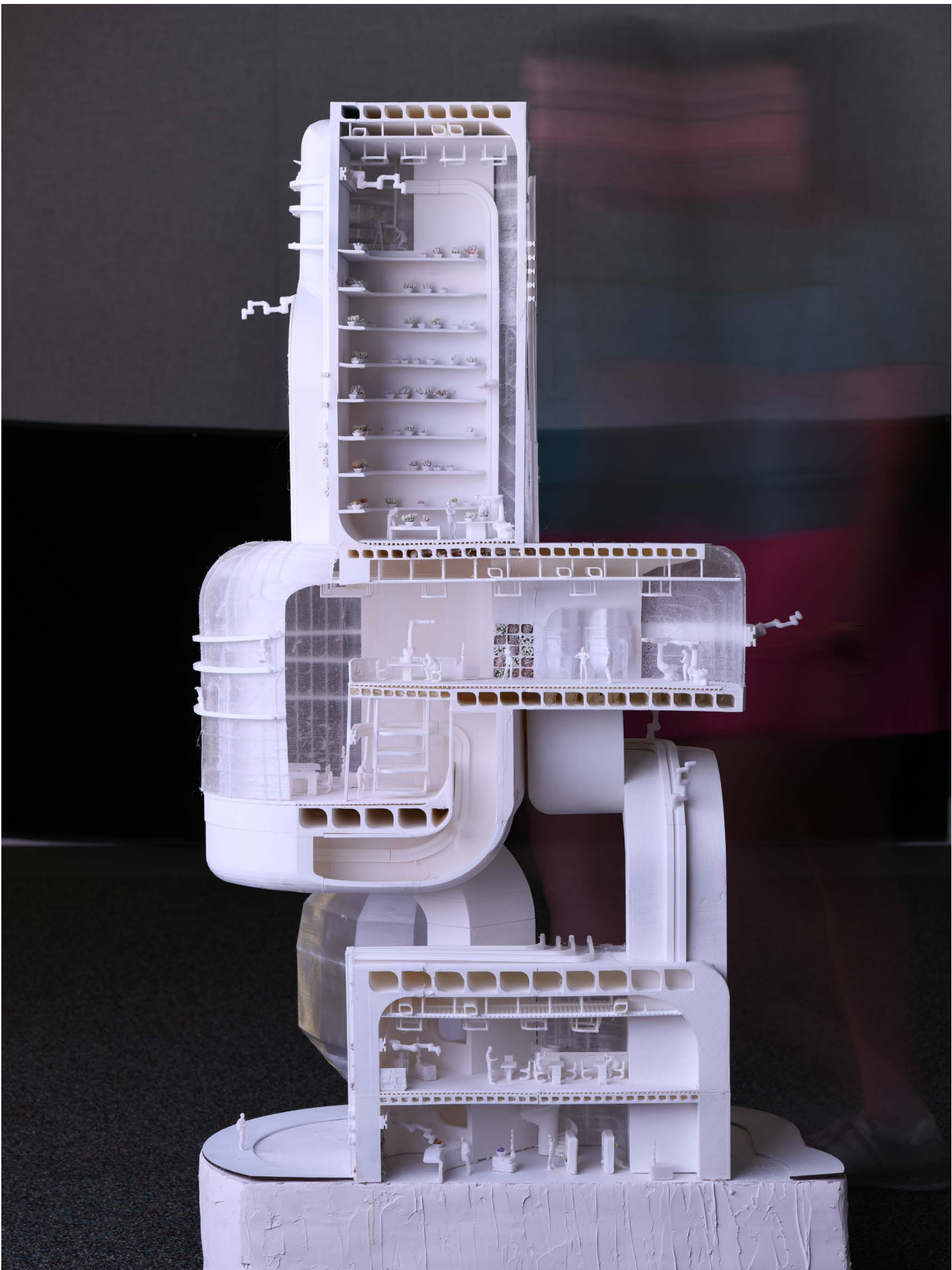
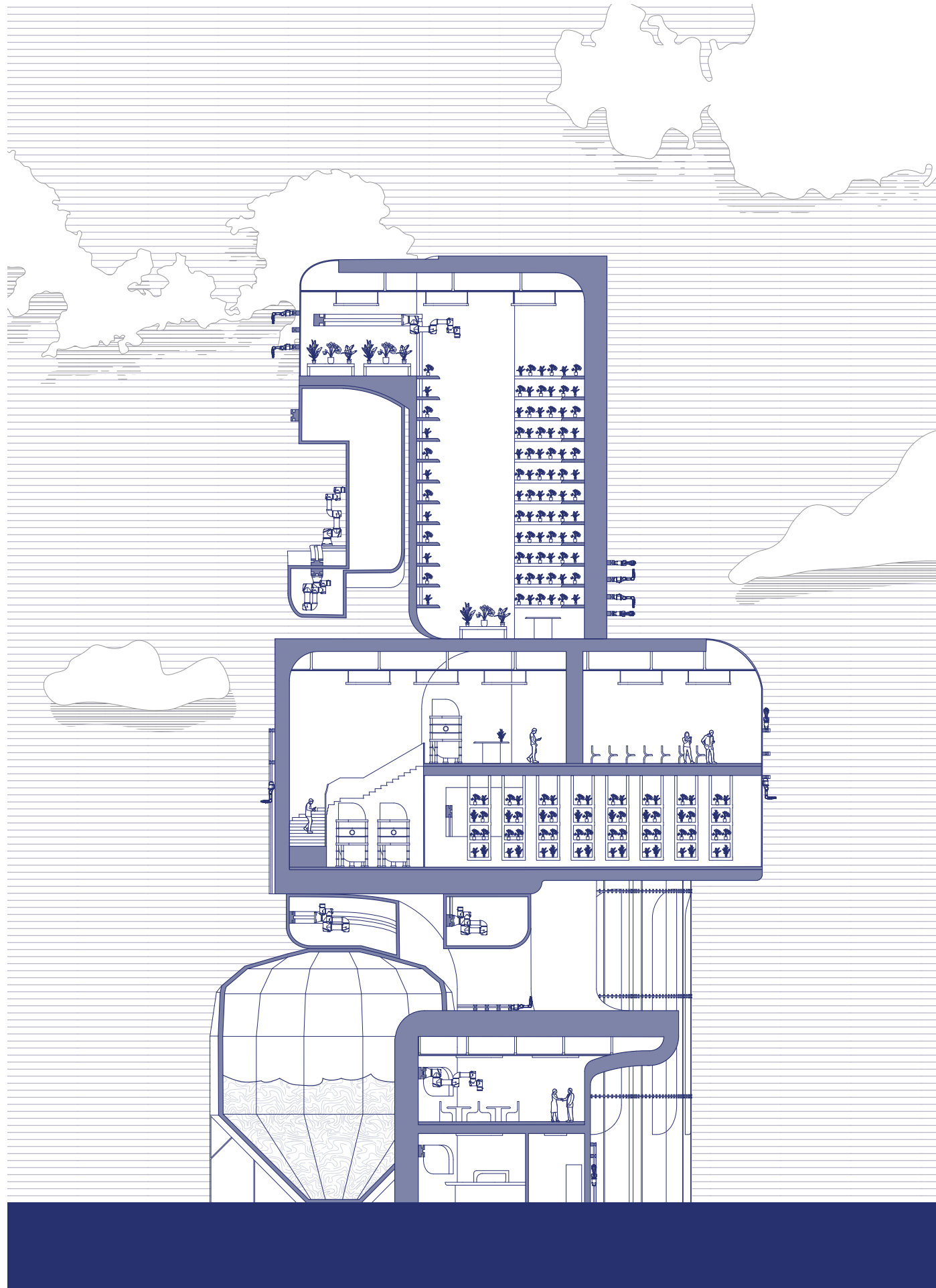
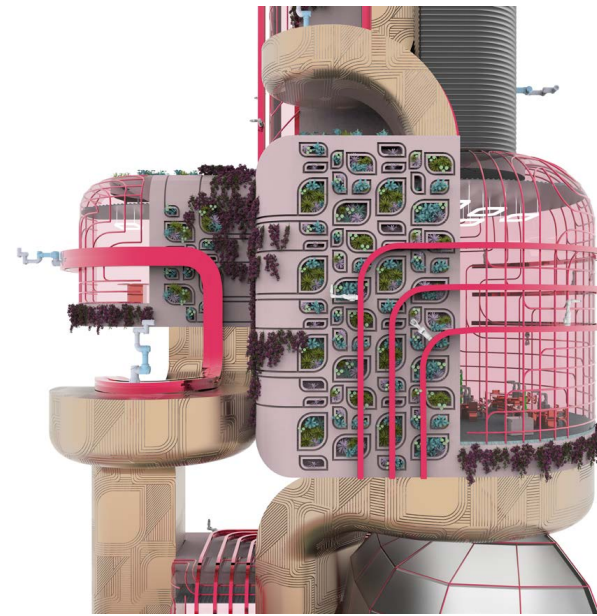


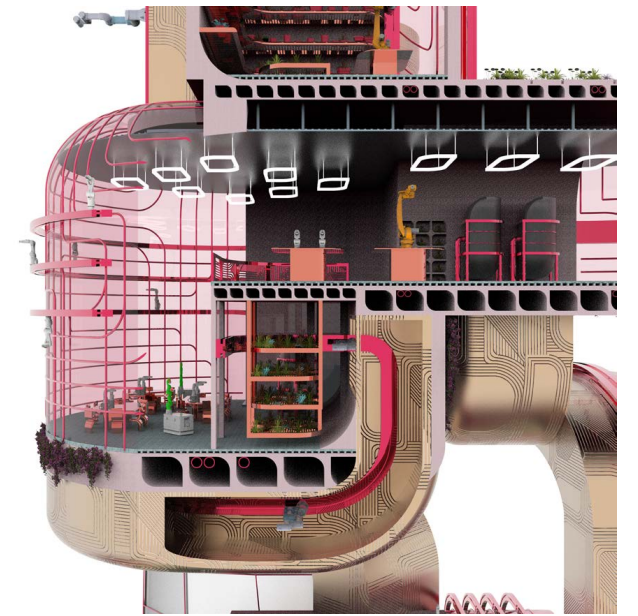
PHOTO BY MARCEL ERMINY



SECTION DRAWING



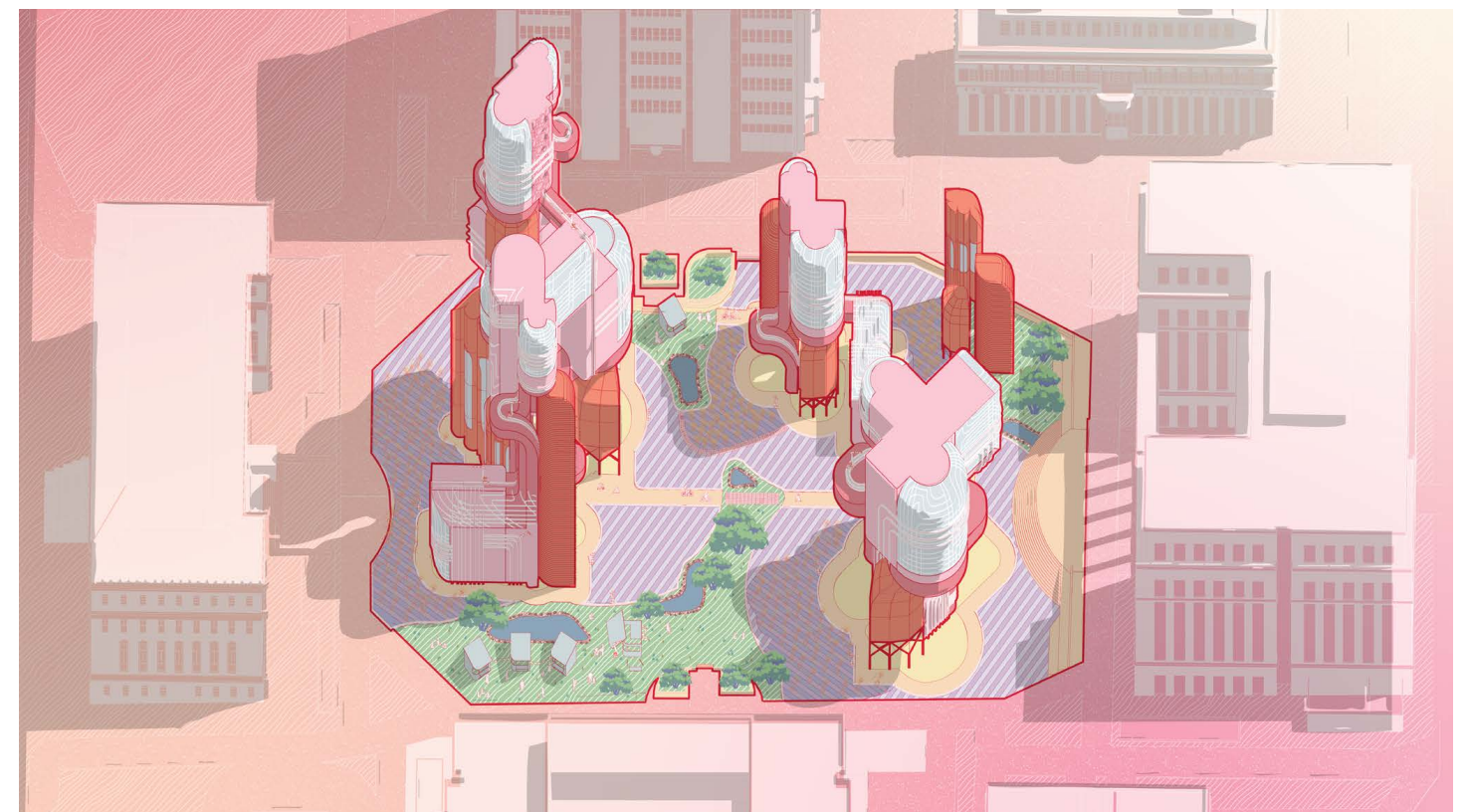
VIEW OF EXTERIOR



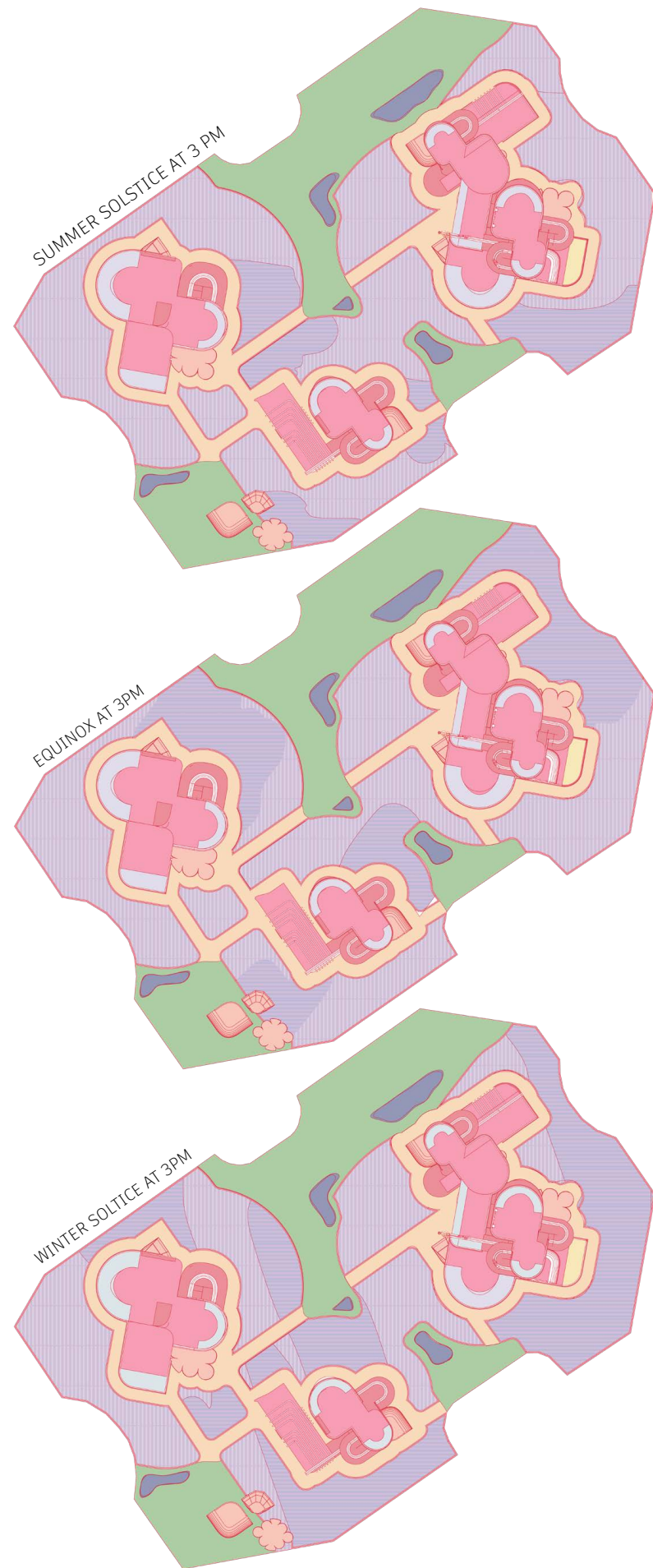
VIEW OF LAB AND CLASSROOM SPACES

The lab and classroom spaces are equipped with shelving systems to hold plants for research and observation. These learning environments include miniature water storage tanks, specialized lights tailored to different plant species, and robot tracks that allow for continuous monitoring and movement. These features turn the classrooms into hands-on laboratories where students collaborate with intelligent systems.

The crop layout on the site is designed to respond to seasonal shifts and the sun's changing path throughout the year. Crops and plant beds are positioned based on their sunlight requirements, with robots continuously adjusting the layout by relocating potted plants and planting new seasonal crops in optimal zones. As the sun angle shifts, the crop boundaries are adjusted accordingly. This approach optimizes growing conditions to achieve maximum crop yield and operational efficiency year-round.

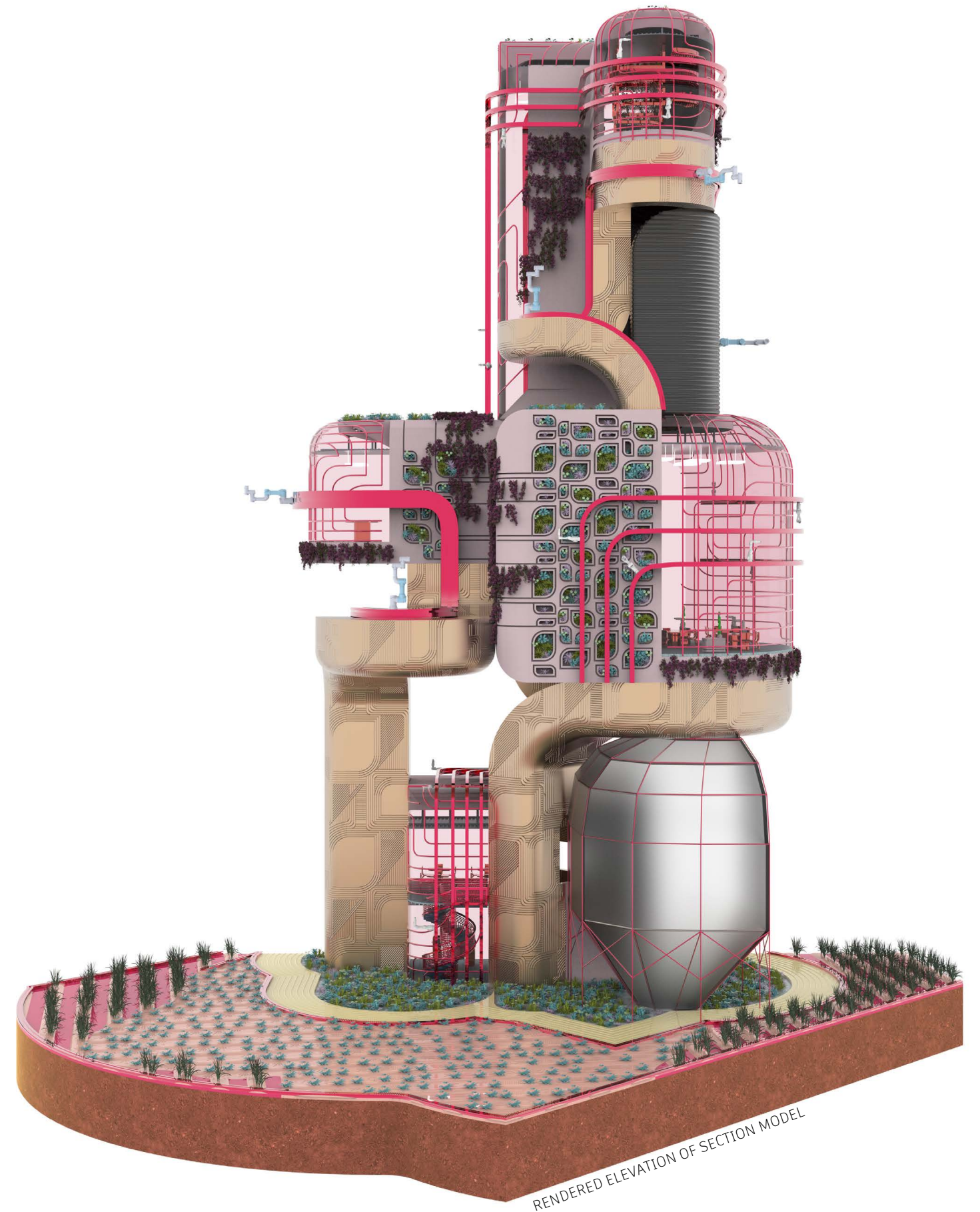


ORTHOGRAPHIC VIEW



The crop boundaries are shaped by the movement of shadows across the site, responding to the sun's path during the equinoxes and solstices. As sunlight shifts throughout the year, the shadows cast by the building and surrounding structures fall differently on the landscape, creating a natural guide for organizing planting zones. These shadow lines are used to determine where crops with varying light needs should be located. Shadier areas are reserved for low-light crops, while sun-heavy zones support light-intensive varieties.

In the drawings, this is visualized with the darker purple indicating areas shaded by the buildings, and lighter purple for areas with the most sun. To enhance solar access, crop rows in the shaded zones follow a traditional east-west orientation, while those in sun-rich areas are arranged north-south, a less common but still effective agricultural strategy. This dual layout combines traditional farming techniques with responsive, site-specific design.



RENDERED ELEVATION OF SECTION MODEL

THE COURTYARD

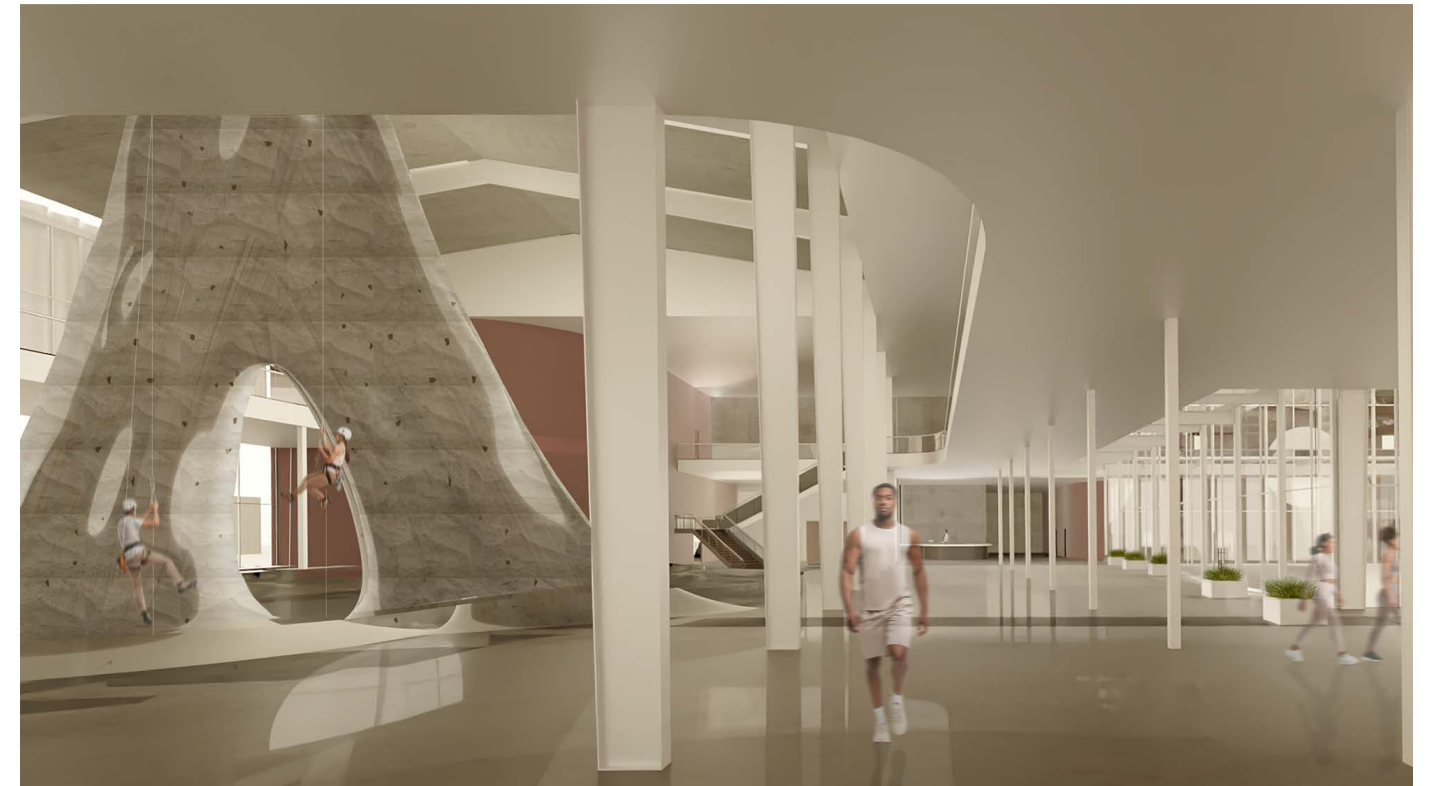
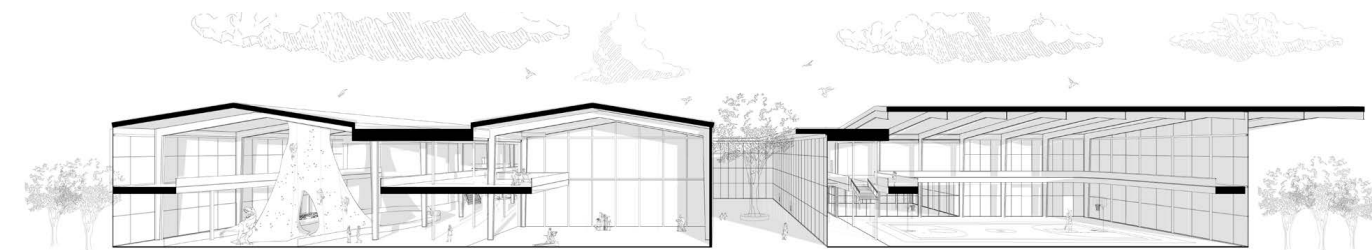
Fourth Year Fall Studio

Partner: Maria Nguyen

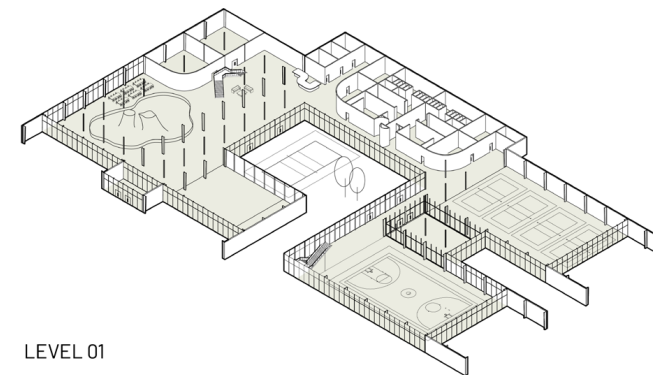
The Courtyard is a sports and recreation center designed for the RELLIS campus in Bryan, Texas. We wanted to create a space that promotes health and wellness and fosters a sense of community for the students. We started the project by researching similar projects, and coming up with four main ideas central to any sports complex or wellness center: unity, wellness, passion, and discipline. This idea of four is reflected through our four main spaces containing the lobby, rockwall, weight rooms, and interior courts. The building site is located near an existing softball field, which allows for more interaction with our building. A Planned pedestrian boulevard also runs through the middle, and on the north side of our site. This allows multiple entry points to our main building, the courtyard, and the exterior courts. The building incorporates energy conscious and efficient design, such as the exterior metal mesh skin wrapping the building on the west, south, and east facades, providing shade and preventing glare. The overall layout of the building is designed to provide a welcoming feel for the students on campus and provide active engagement in several different ways.



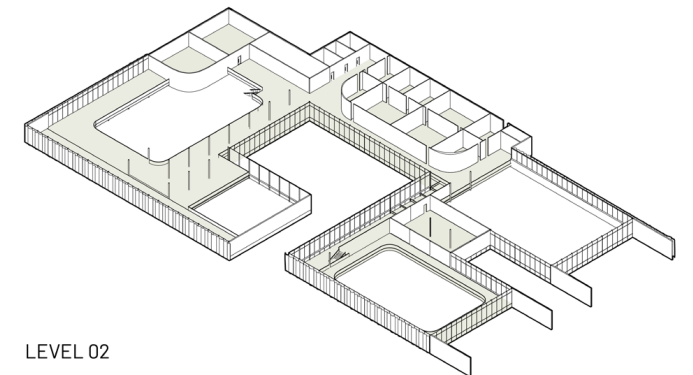
RENDER OF COURTYARD



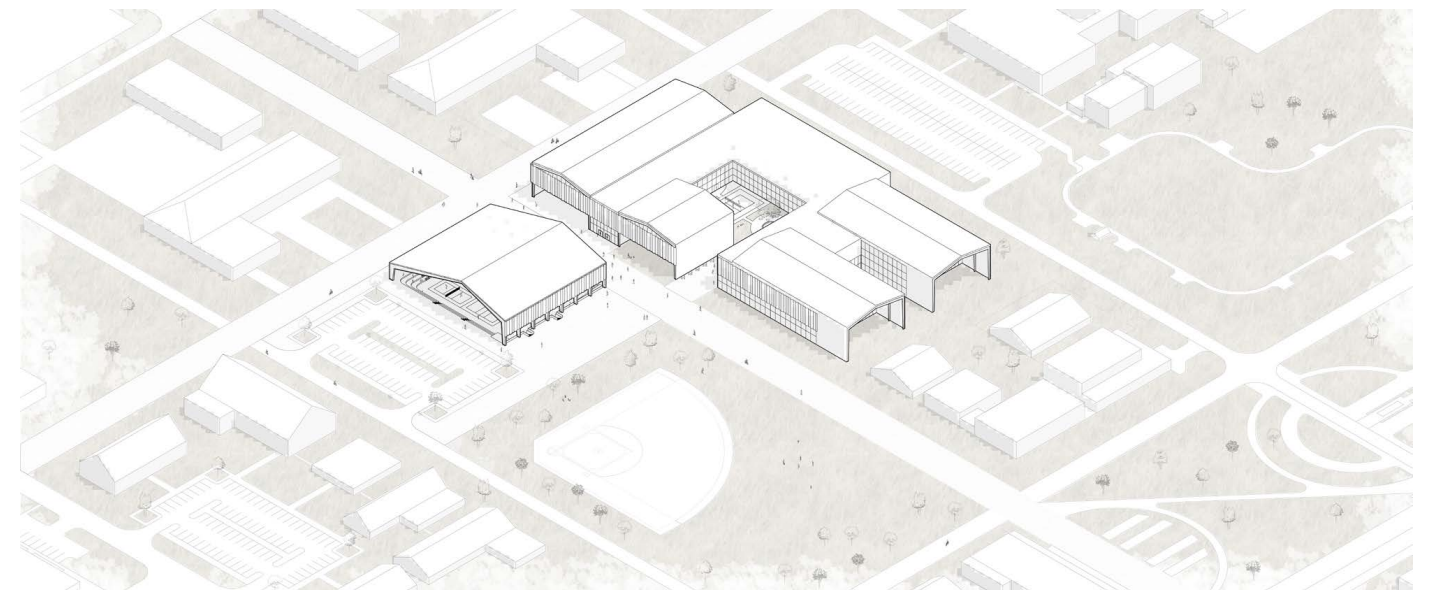
RENDER OF LOBBY



LEVEL 01



LEVEL 02



SOUTHWEST BIRDS EYE VIEW

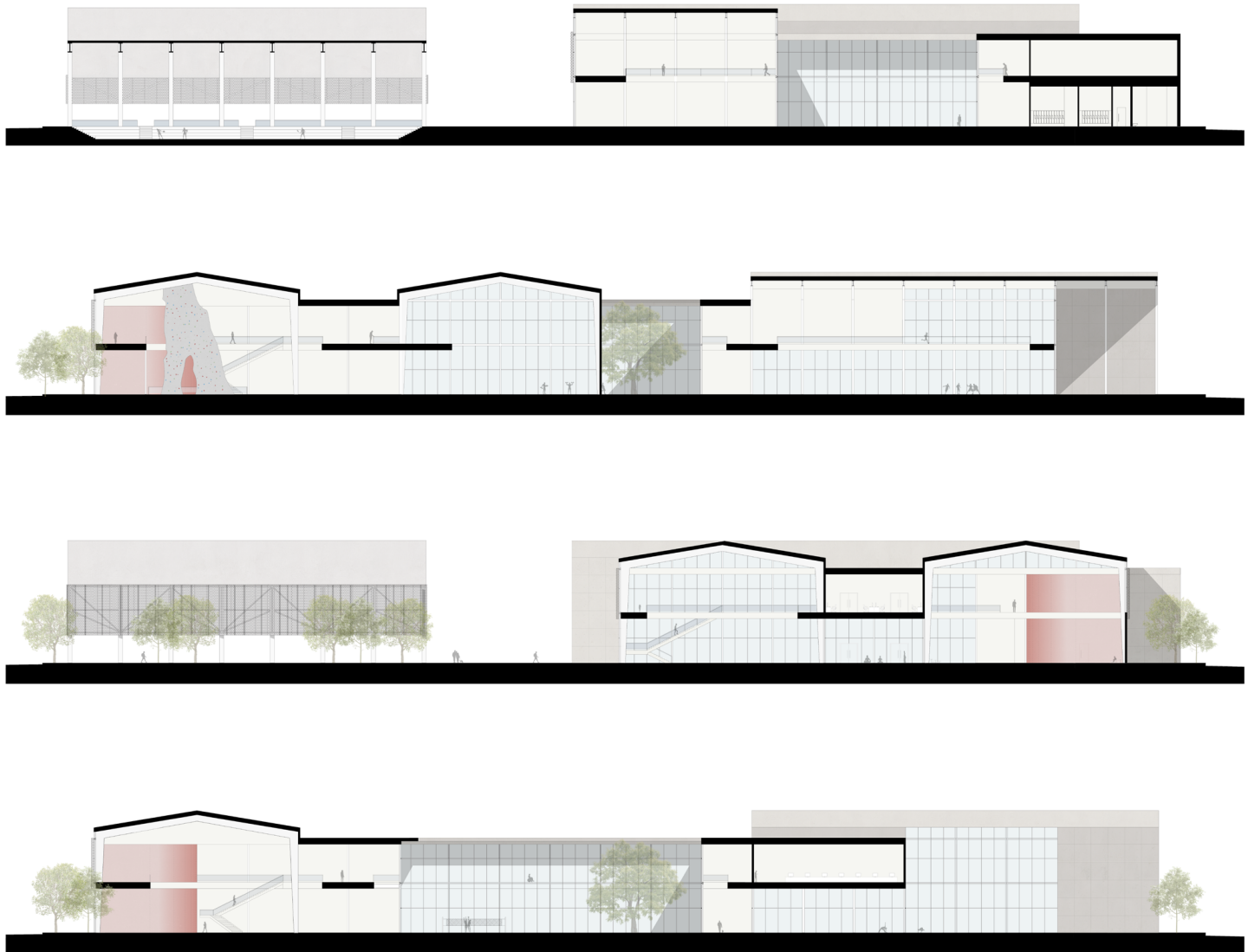


RENDER OF CIRCULATION THROUGH BUILDING

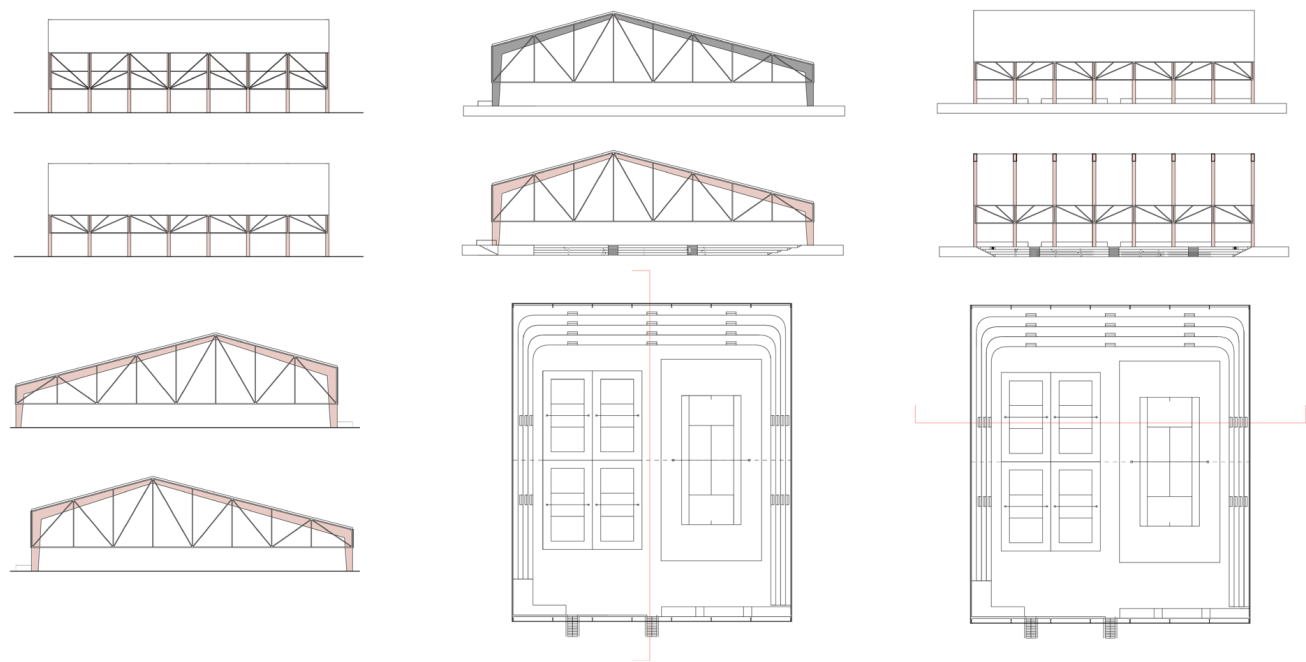


RENDER OF LOBBY

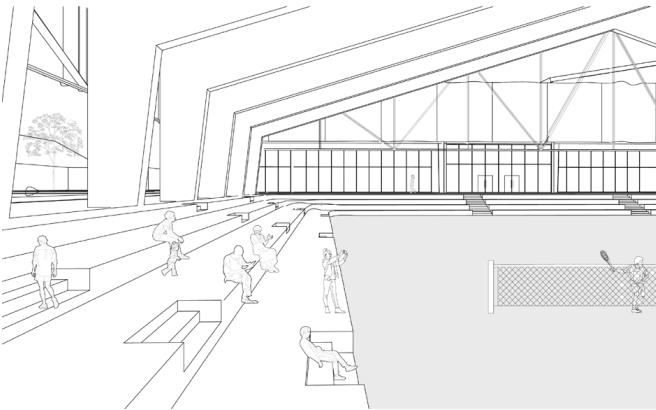
A key feature of the lobby is the rock wall, which can be seen from outside the building when walking on the pedestrian boulevard. The lobby also includes a second-level viewpoint that overlooks the main lobby area, and provides space for study and seating areas for visitors. Circulation within the building is designed to flow around the central courtyard, which allows for views of the volleyball court, seating, and vegetation. This connection to nature enhances the overall experience and invokes a sense of openness. Some of the building's structure is left exposed, which adds a visual interest and emphasizes the integration of the rigid steel frame with organic forms throughout the space.



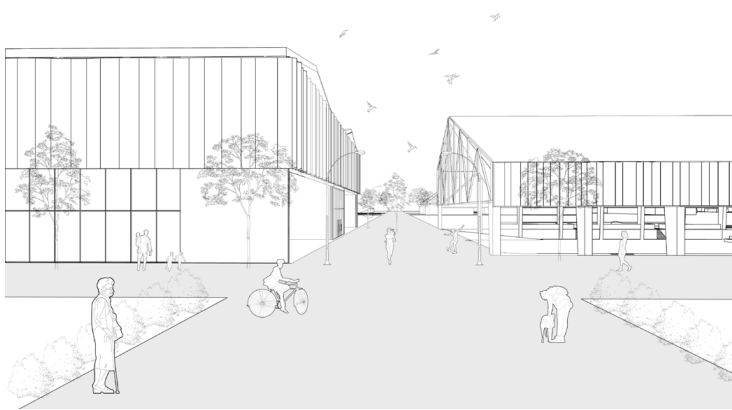
SECTIONS



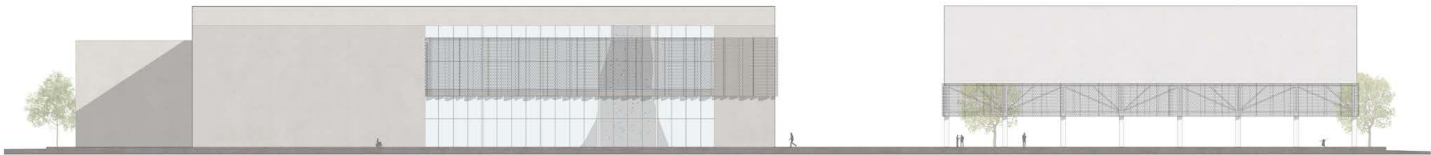
PLANS, ELEVATIONS, AND SECTIONS OF EXTERIOR COURTS



PERSPECTIVE DRAWING OF EXTERIOR COURTS



PERSPECTIVE DRAWING OF PEDESTRIAN BOULEVARD



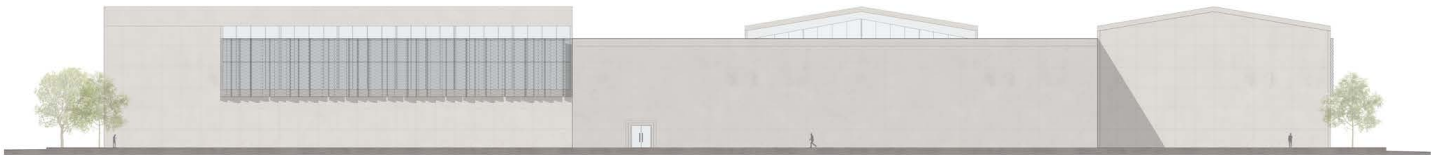
NORTH ELEVATION



WEST ELEVATION



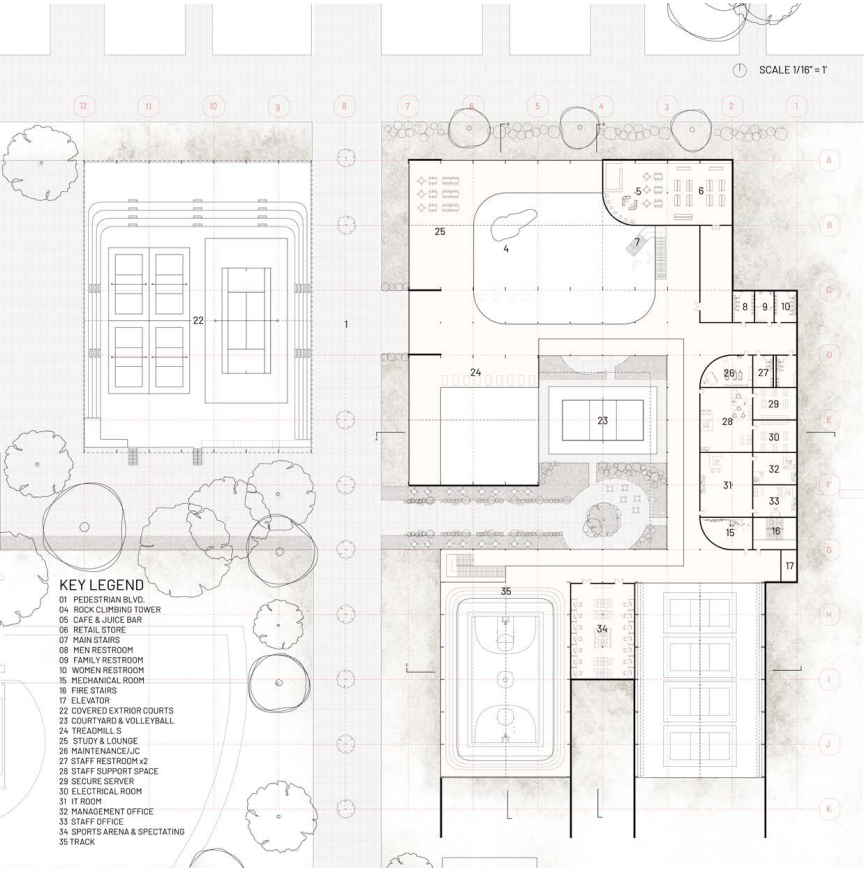
SOUTH ELEVATION



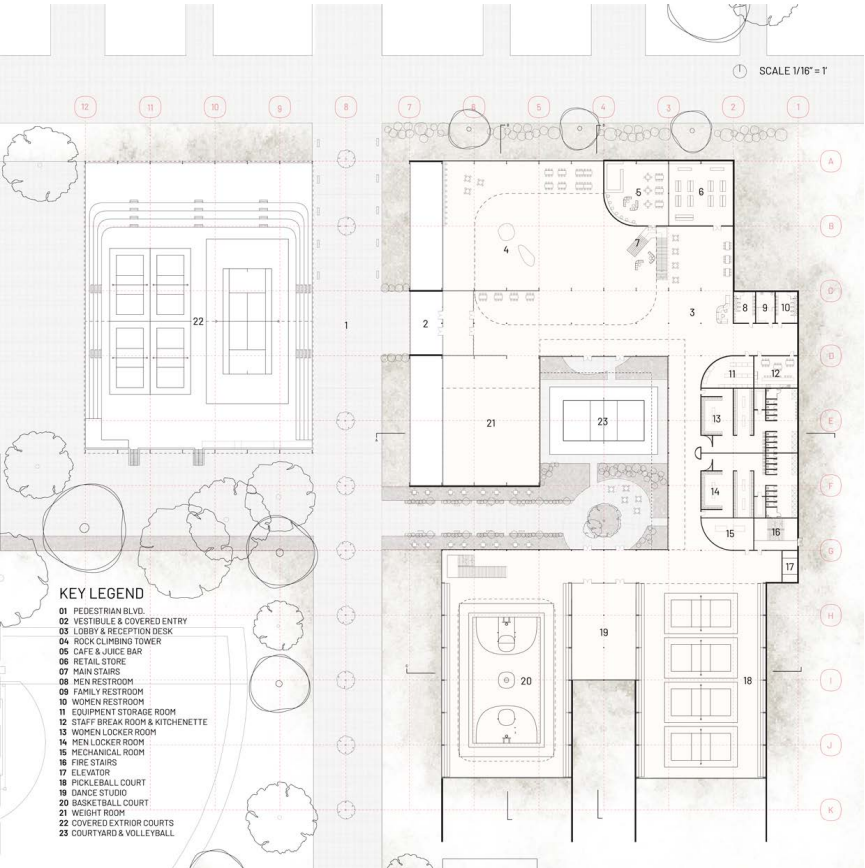
EAST ELEVATION



RENDER OF ELEVATED RUNNING TRACK



SECOND LEVEL FLOOR PLAN



GROUND FLOOR PLAN



RENDER OF EXTERIOR COURTS AT NIGHT

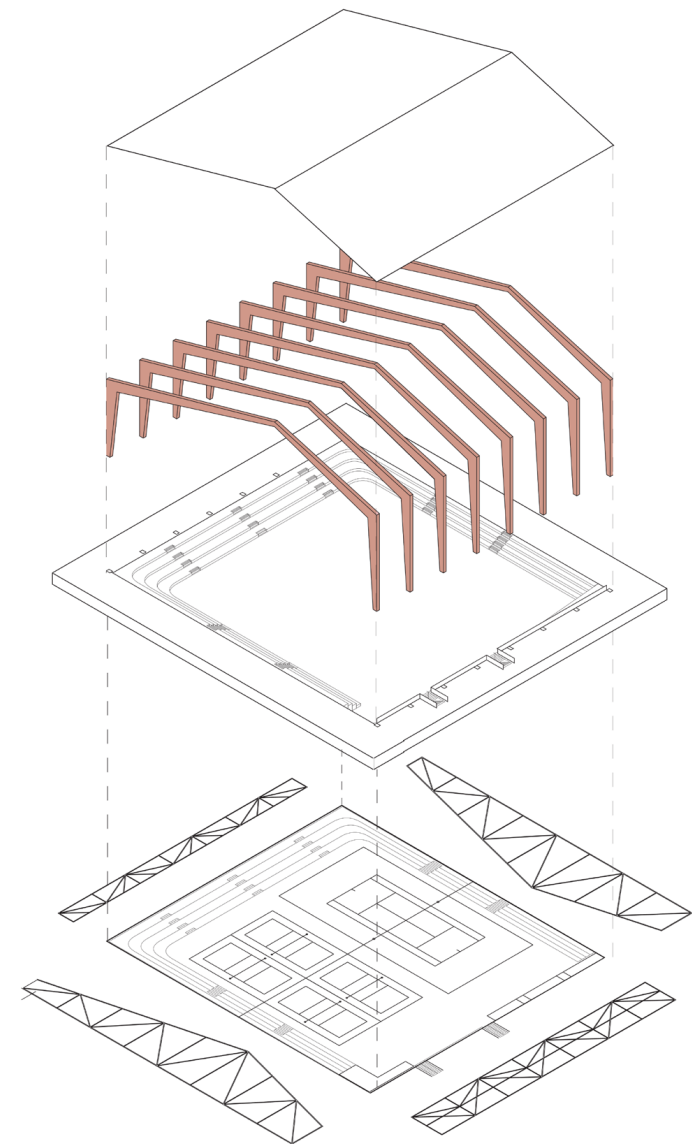


RENDER OF COURTYARD

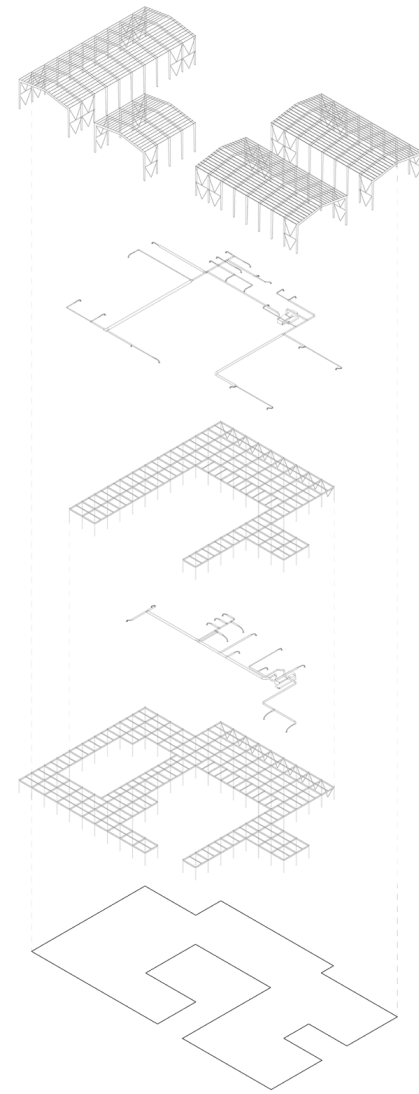
The exterior courts are designed to be slightly recessed below ground level. This creates a unique and engaging space for recreation. The area features several courts and is also surrounded by seating areas where visitors can watch games or simply relax.

Access to the courts is provided through both stairs and a ramp, ensuring easy entry for all. Additionally, there is a designated space for services, like concessions, further enhancing the functionality of the exterior area. Lights above the courts are also provided to ensure the courts can be used at all times.

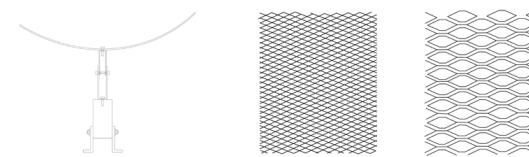
The rigid frame structure is staggered off-center, which aligns with the main building to create a cohesive visual connection. The structure is supported on all sides by a diagonal truss system, which serves both as lateral bracing and a visual design element. The same metal mesh skin of the main building is also applied to the south side for shading.



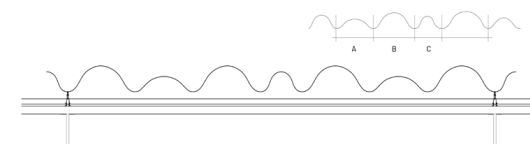
EXPLODED AXON OF EXTERIOR COURTS



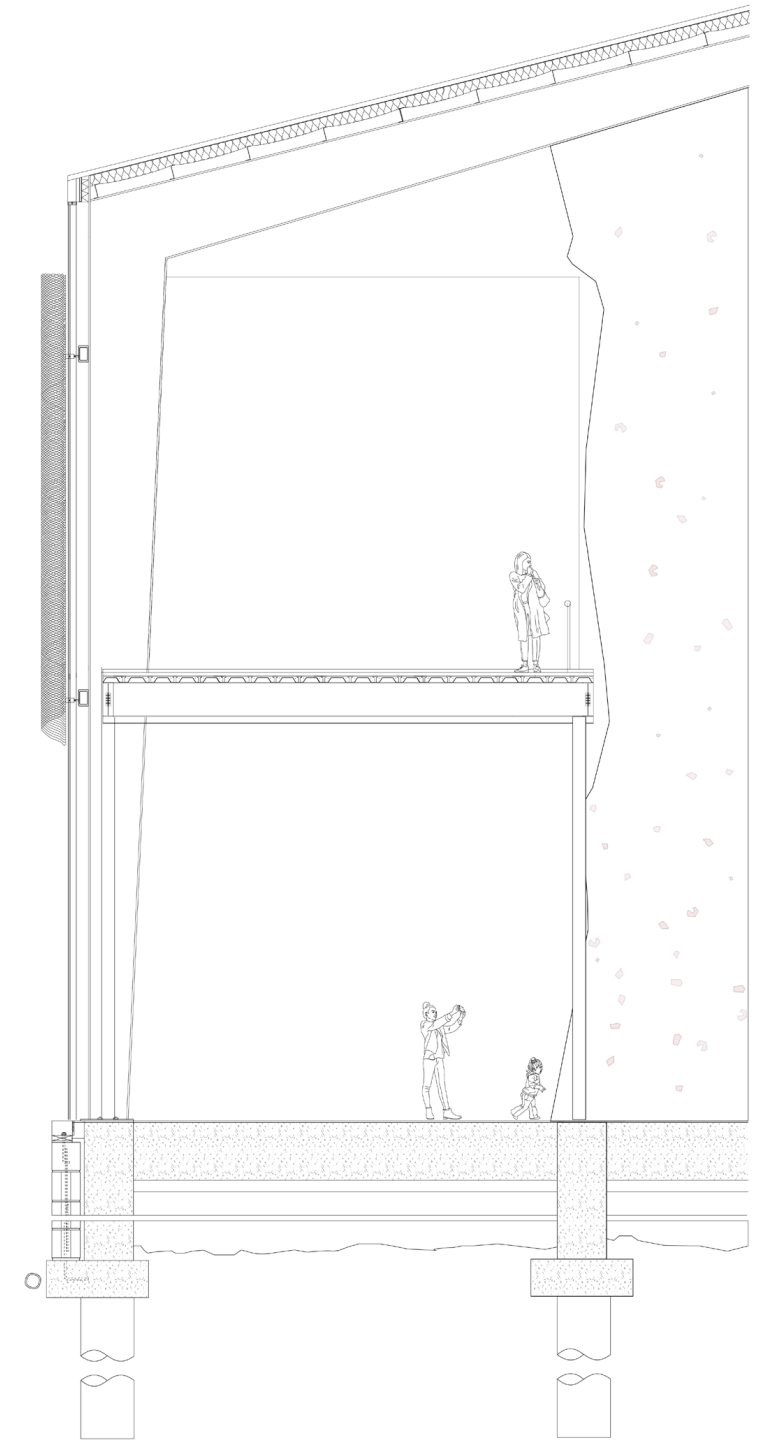
EXPLODED STRUCTURAL/SYSTEMS AXON



EXTERIOR SKIN CONNECTION AND APPEARANCE



DETAILS OF EXTERIOR SKIN CONNECTION



FULL HEIGHT EXTERIOR SECTION

The structure of the recreation center utilizes rigid portal frames in the main spaces, and a smaller framing system that includes HSS columns and wide flange beams to support the secondary areas. In compliance with the RELLIS campus code, the building includes a crawl space supported by a concrete foundation and drilled piers. The exterior metal mesh skin is seamlessly connected to the building through the glazing structural system, integrating both form and function to enhance the building's energy efficiency.

MUSEO SULL'ARNO

Third Year Spring Studio in Florence, Italy

Partner: Taite McCray

Florence's architectural landscape, especially along the river, is characterized by unique, overhanging buildings. These structures often extend beyond the riverbanks, creating a dynamic interplay of light and shadow that enhances the experience of the space both from the river and within the city. In this project, a goal was to replicate this overhanging characteristic, drawing inspiration from the historical context of Florence while integrating contemporary design elements.

Central to the design is a second-level terrace that serves dual purposes. Inside, the terrace offers an elevated vantage point, allowing visitors to view the museum exhibits from above, providing a unique perspective on the collection. Outside, the terrace opens up to a garden, offering stunning views of both the carefully curated outdoor space of the museum grounds and the surrounding Florentine landmarks, including Piazza Poggi, the Piazza Poggi Tower, and Piazzale Michelangelo. This integration of interior and exterior spaces creates a seamless experience that connects the visitor with the museum's exhibits and the historical context of Florence.



PERSPECTIVE VIEW OF UPPER LEVEL TERRACE

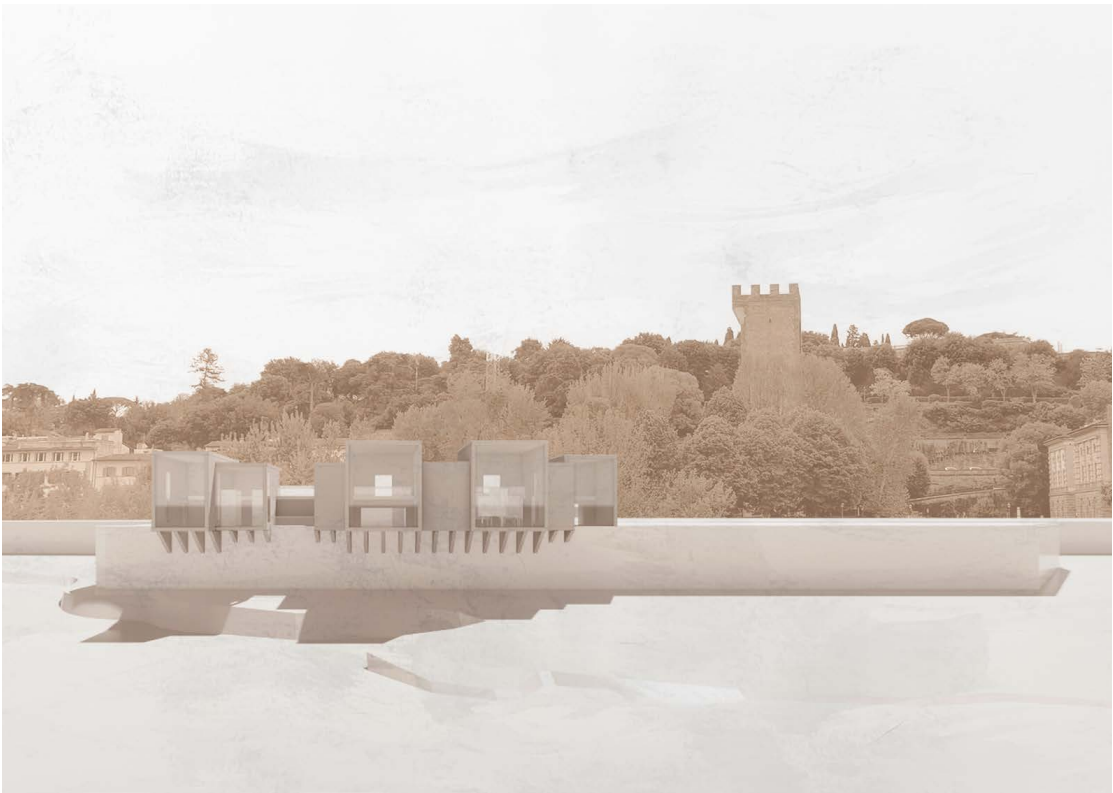


LONGITUDINAL SECTION

ARNO RIVER



SITE PLAN OF FLORENCE, ITALY



PERSPECTIVE NORTHERN ELEVATION

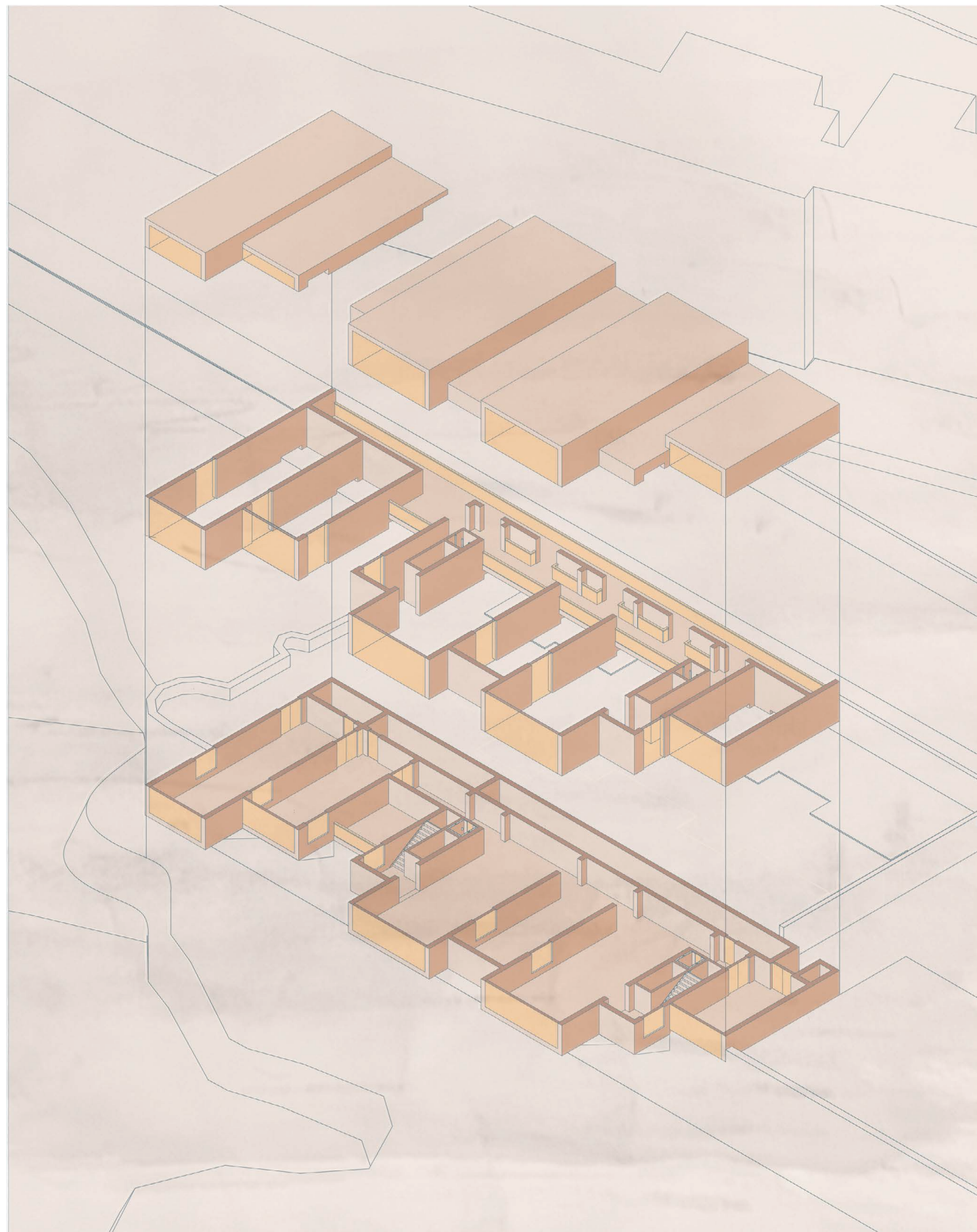


ENLARGED SITE PLAN



GARDEN

SOUTHEAST AXON



EXPLODED FLOOR PLAN



GROUND LEVEL FLOOR PLAN



SECOND LEVEL FLOOR PLAN

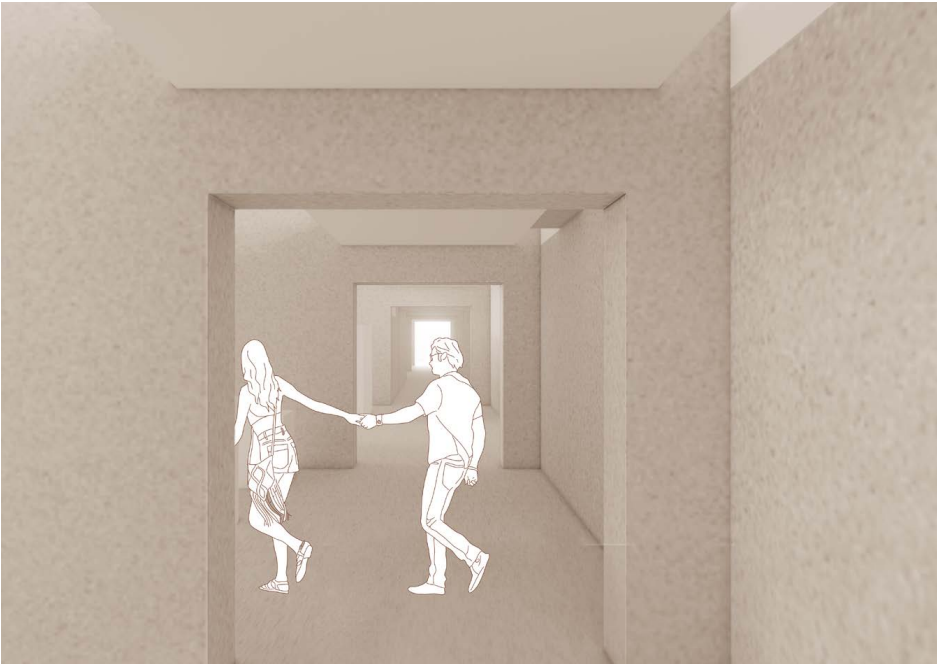
The first floor of the museum is designed to create a seamless flow between the indoor and outdoor spaces. Upon entering, visitors first gain access to a landscaped garden, where they can choose to either enter the museum building or continue exploring the garden's serene environment. Inside, each room is designed with a modular system, allowing for flexible configurations of movable exhibit pieces. This adaptability ensures that the museum can accommodate a variety of exhibitions and installations.

The floor plan also capitalizes on its prime location by offering stunning views of the Arno River and the iconic Ponte Vecchio bridge through a series of windows. In addition to the exhibition spaces, the first floor includes a conference room, providing a versatile area for lectures, events, and other activities. Before exiting back into the garden, visitors can stop by the cafe, offering a place to relax and reflect on their experience in the museum.

The second floor of the museum is designed to enhance the visitor experience by offering elevated views of both the interior and the surrounding Florentine landscape. This level serves as a vantage point for appreciating the museum's exhibits from above while also providing views of the garden, the Arno River, and the surrounding landmarks, including Piazza Poggi, the Piazza Poggi Tower, and Piazzale Michelangelo. This terrace seamlessly connects the indoor and outdoor spaces and allows visitors to enjoy Florence from multiple perspectives, making it a central feature of the museum.



PERSEPECTIVE VIEW OF GARDEN AND FRONT FACADE



VIEW THROUGH GROUND FLOOR SERIES HALLWAY



FRONT ELEVATION AND SECOND LEVEL FLOOR PLAN



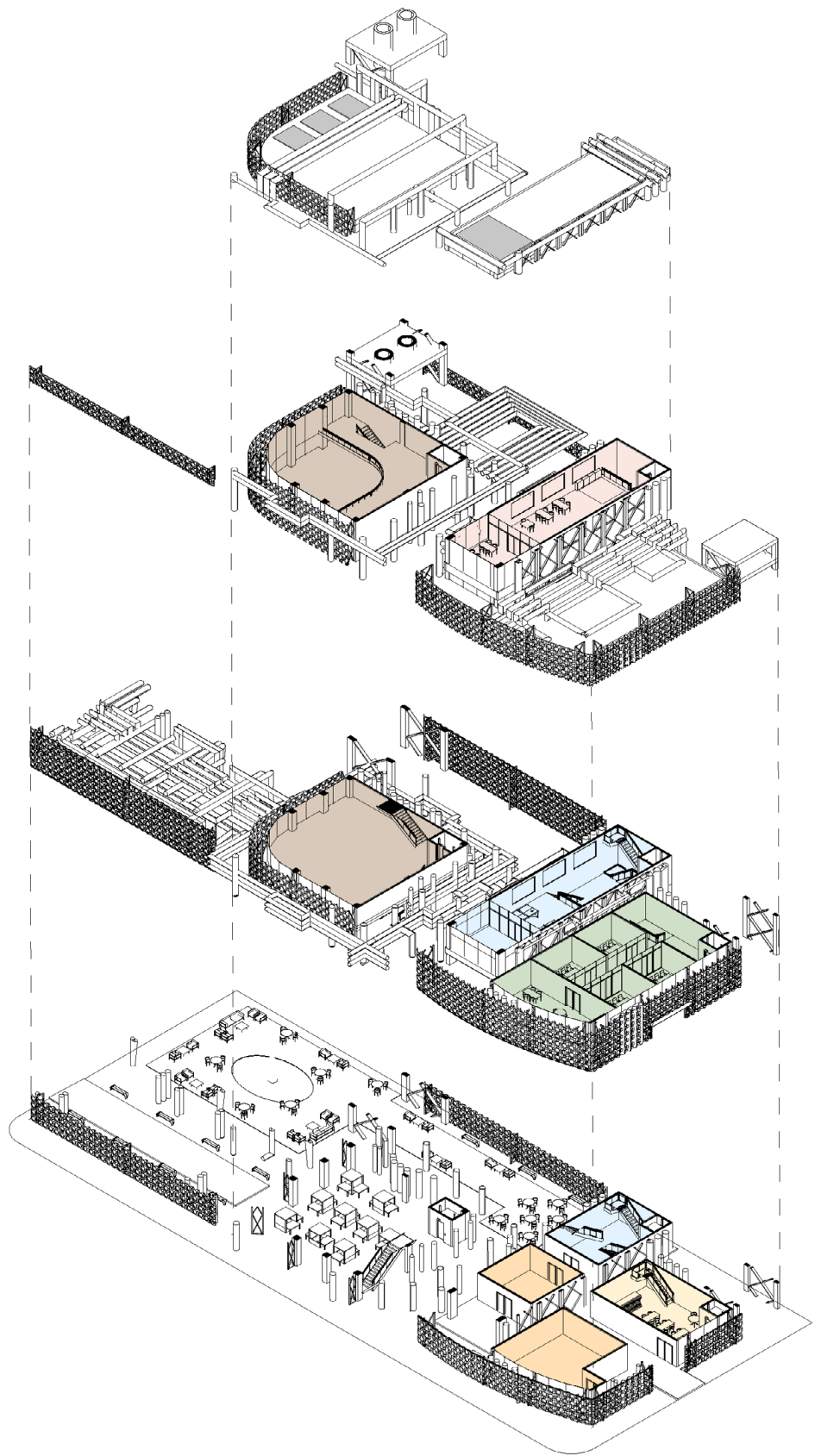
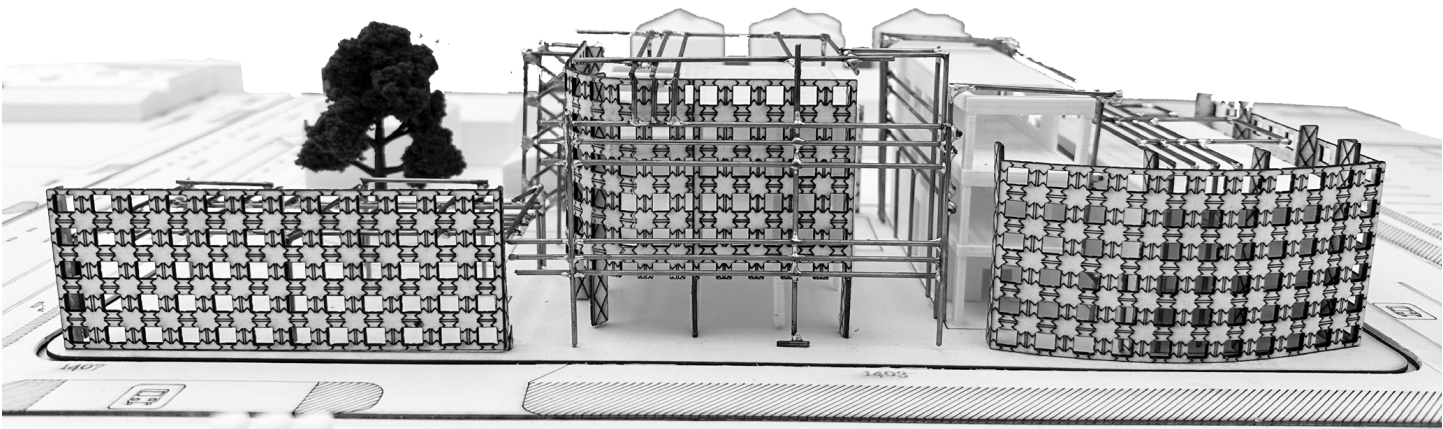
ART DISPLAY
HAND DRAWINGS DISPLAYING INK DRAWINGS OF FLORENCE LANDSCAPES AND ARCHITECTURE

FRAGMENTS OF DYSTOPIA: CRAFTING COMMUNITY SPACE FROM INDUSTRIAL FRAGMENTS

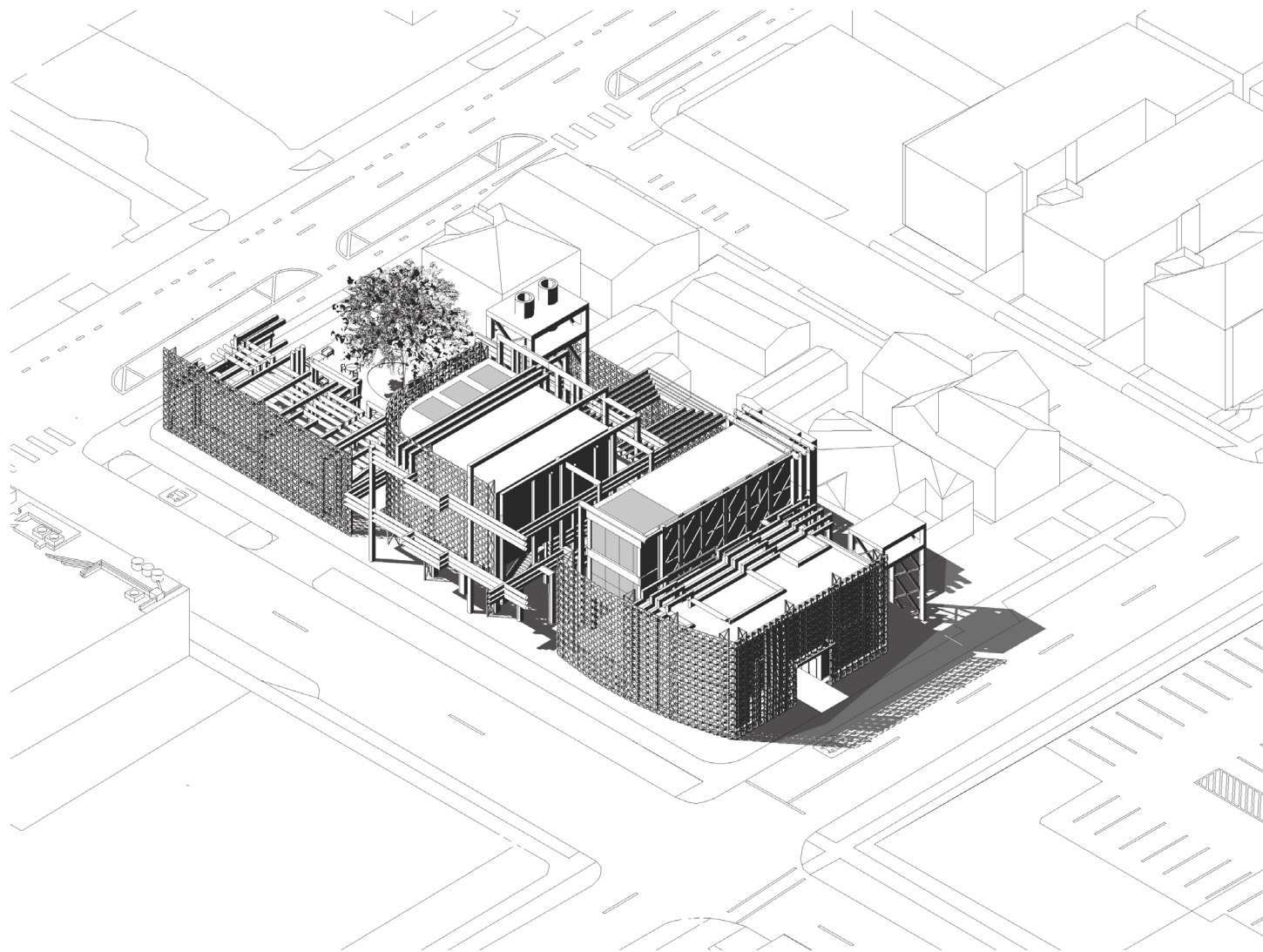
Third Year Fall Studio

The dystopian aesthetic contains dark, desolate themes that portray a deteriorating societal landscape. The existing dystopian aesthetic features inspired the design concept embracing decayed materials alongside modern architecture. This project draws dystopian inspiration from the fragments of an industrial site in Houston, Texas. Select disassembled pieces containing symbolic visual power are reused within a new mixed-use building complex. The chaotic yet captivating aesthetic mirrors dystopian landscapes where oppression meets architectural diversity.

This project reimagines an industrial Houston plant by repurposing fragments into a new mixed-use community center. It focuses on aspects of the site already exemplifying some of these dystopian features through overlapping pipes, structures, and an overall sense of despair. The fragments scattered throughout the site contain an inherent aesthetic that will drive the new building design. By harvesting select materials and fragments that would otherwise be discarded and integrating them into the architectural composition, the industrial fragments can become the point for innovative community space. Transforming these pieces for reuse allows sustainable material sourcing for construction. Additionally, the design intentionally harnesses natural light through fragment placement, bringing sunlight into community areas. Sunlight exposure boosts mental health while reducing electricity usage. The end goal is to uplift the neighborhood by fostering local arts and culture through unique mixed-use facilities specifically tailored for this diverse district.



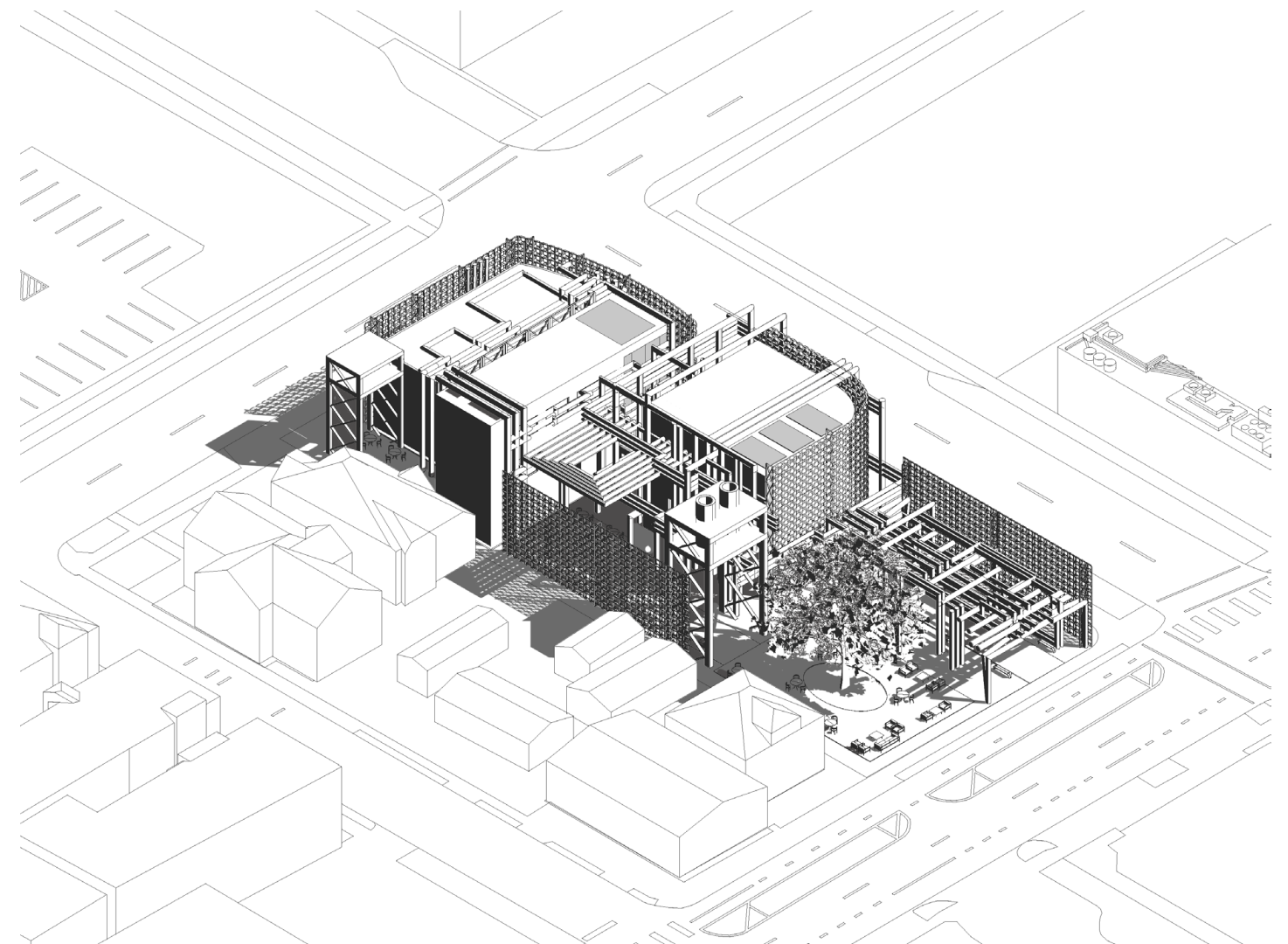
- | | | |
|------------------|------------------|--------------------|
| EXHIBITION SPACE | RECREATION SPACE | PUBLIC VENUE |
| CAFE | CO-WORKING SPACE | EDUCATION FACILITY |

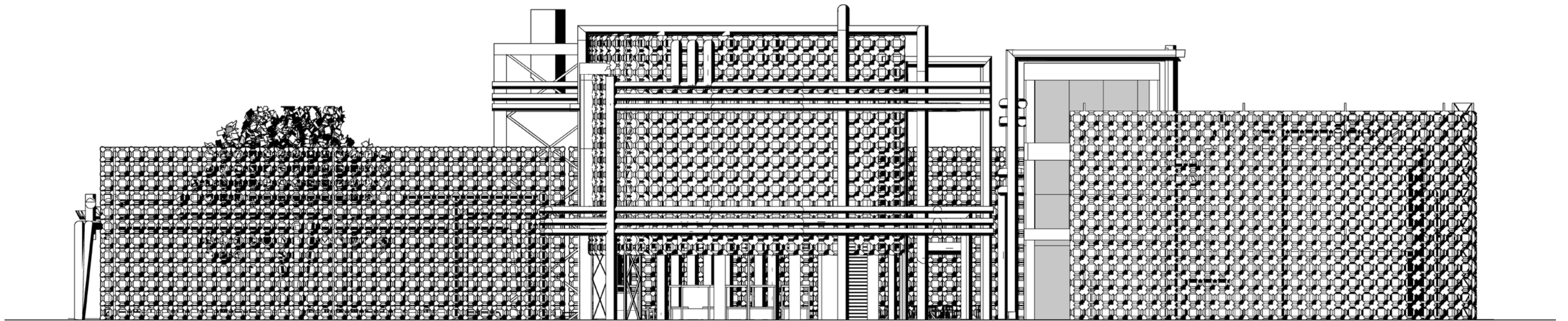


Larger fragments and pipes were integrated into the interior and exterior framework. This allowed for the buildings and spaces to be encased by these pieces. The fragmented aesthetic conceptually stitches the local community into the architecture. Additionally, some fragments were integrated into the interior framework for partial structural duties as well as objects to contain electrical systems and duct work.

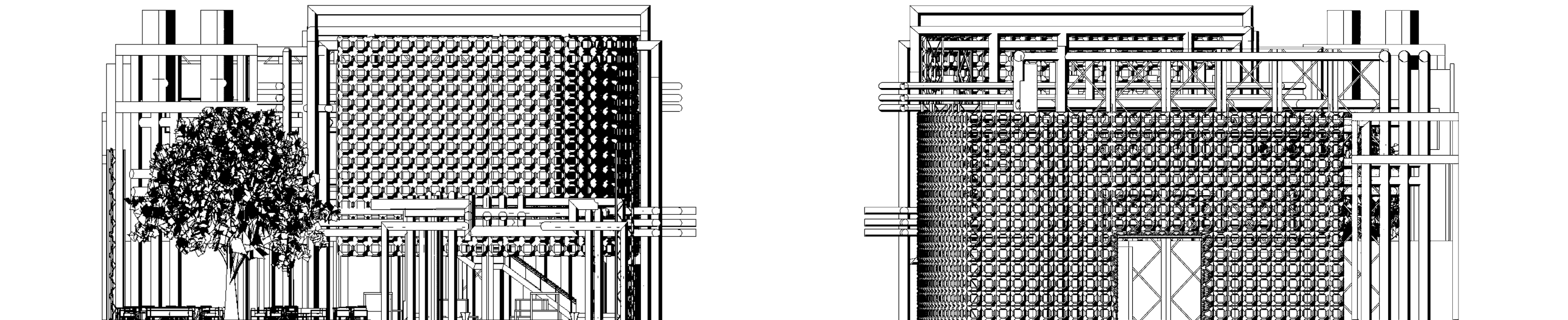
The exterior walls were inspired by works such as the National Museum of African American History and Culture's angular bronze lattice work, and The Louvre Abu Dhabi's perforated dome. This generated an idea for a translucent fragmented shell encasing the building's interior. Deconstructed materials from around the industrial site, like steel structures and corroded pipe segments, were disassembled and refabricated into the shell's paneling. The fragmented outer layer references back to the initial site conditions while creating an opportunity for interesting light effects. The fragmentation and reconstruction process also promotes sustainable methods through reuse rather than demolition waste.

Observing the industrial site, exposed striking, fragmented, features that stood out as quintessential dystopian scenes. Large intersecting pipe segments and structural remnants provide unique shapes and textures. The destroyed building pieces also project a sense of deterioration across the site. Specific viewpoints highlighted key artifacts and moments with bold aesthetic appeal. Through this surveying process, a distinct material language emerged that influenced the building's design, material choices, and programmatic layout. The vision moving forward relied on deconstructing and reconstructing the most significant fragments to create a visually striking architectural narrative. Rather than demolishing all site artifacts, the reuse of materials allowed dystopian inspiration to inspire the new spaces. The design aims to preserve and celebrate the site's industrial history while integrating it into the architecture.



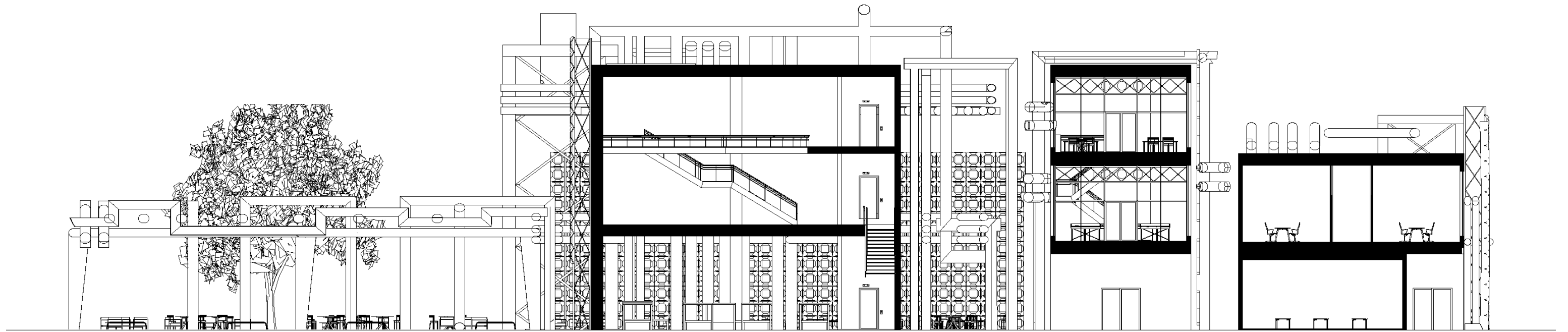


SW ELEVATION



NW ELEVATION

SE ELEVATION



SW SECTION

The idea driving this project is the repurposing of the fragments that embody the visual and thematic elements of the dystopian aesthetic. This design blends the raw, rugged beauty of the fragments from the industrial site with modern architectural elements, creating a unique design with contrasting materials and styles. The use of these fragments also promotes sustainability by reusing these items that may otherwise be discarded.

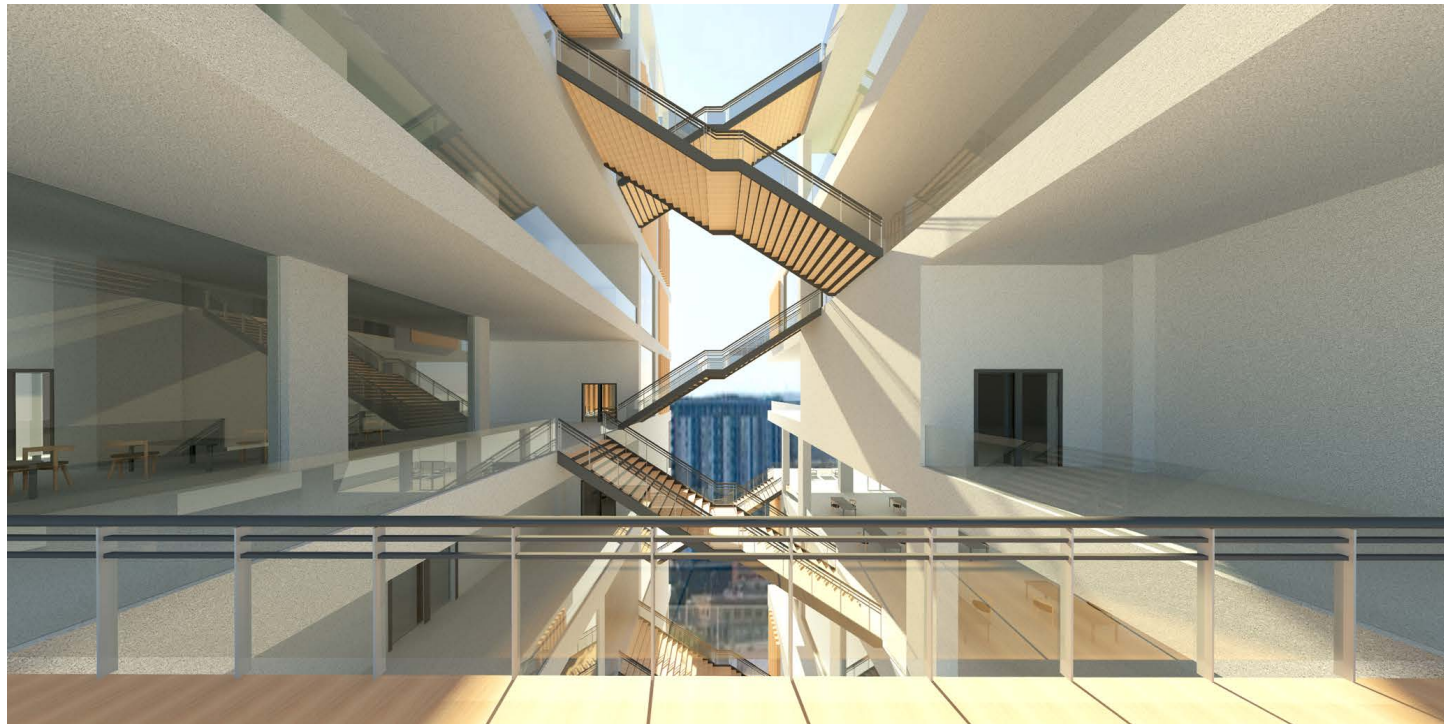
The mixed-use facility is designed to reflect neighborhood values, utilize sustainably sourced materials, and create spaces that encourage connection and growth. The goal is to strengthen the community's identity by integrating innovative architecture that aligns with the character of the local environment. This approach fosters a renewed sense of unity and belonging and offers a shared creative space that supports future development and collaboration among the residents.

LUX

Second Year Spring Studio

Partner: Kaden Thurmound

Lux is the latin word for light and a measurement of light, which inspired a great deal of this project. Lux is a mixed-use building located in the Rainey Street District of Austin, Texas. This building was meant to accomodate for needs in the area. The program consists of a theater, an outdoor market, recreation and performance spaces, green spaces, educational facilities, and small cafes. Revit, Rhino and several Adobe softwares, including After Effects, were used to edit and animate this project.



VIDEO ANIMATION - <https://vimeo.com/823611989>

This video contains animations of the site, structure and massings, as well as renderings and details of program.

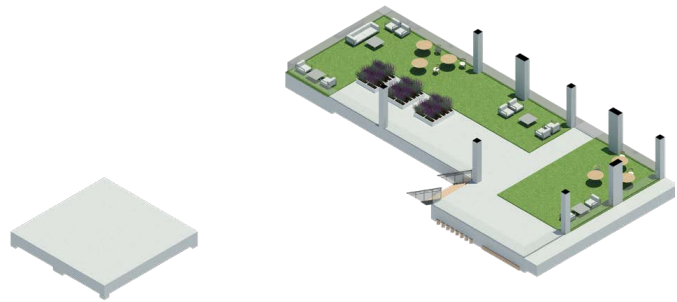


AXON DURING WINTER SOLSTICE

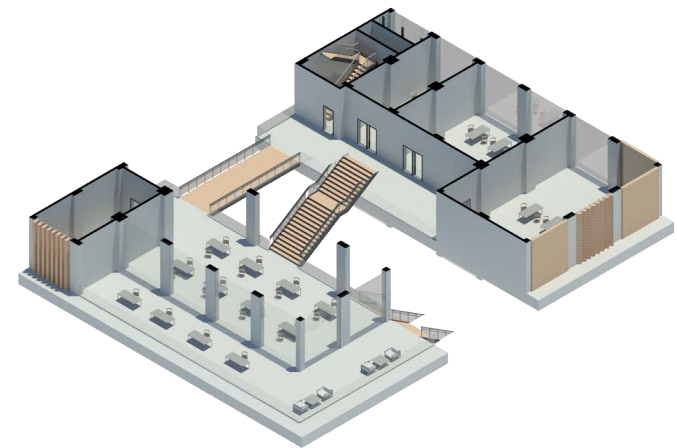


AXON DURING SUMMER SOLSTICE

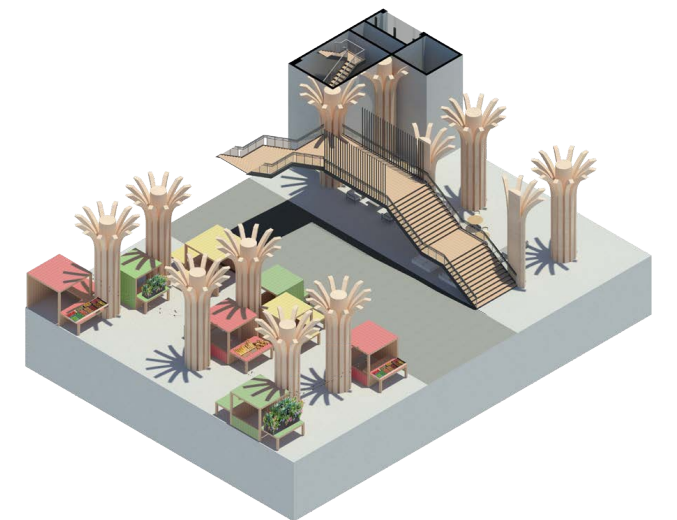
This building was designed in two towers with a large atrium in the middle. The atrium is central to the project, as it allows sunlight to enter the entire building and acts as the main circulation. This brings a sense of openness to the building. In the summer, the sun travels almost directly over the building and more shade is provided by the atrium stairs, overhangs, and adjustable louvres. In the winter, the building receives more direct sun on the south facade so more light and warmth is able to enter the building.



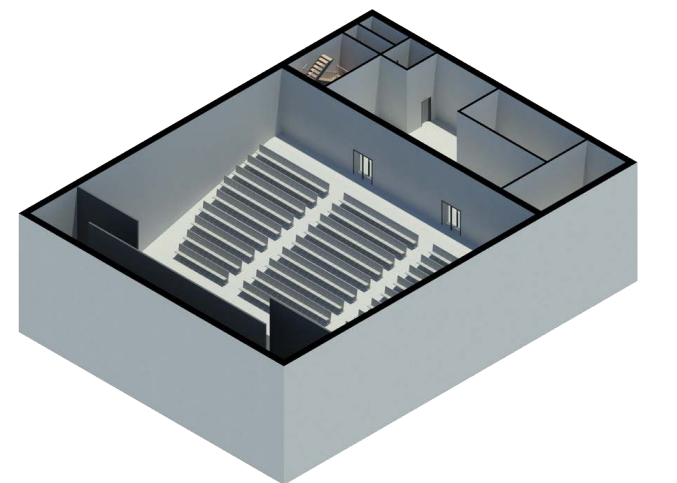
LEVEL 11
This level has rentable
plant boxes and lounge
and seating areas



LEVEL 06
This is the upper level of
the library with seating,
a patio, and educational
spaces



LEVEL 01
This level is the outdoor
market and plaza. this
area is meant to activate
the street level and invite
people in. The colorful
market stalls are meant
to point to the Mexican
American Cultural Center
across the street



LEVEL -01
This theater is below
ground level and is meant
to be used in different
ways such as plays,
movies, speakers, and
more



VIEW OF LEVEL 11 TERRACE



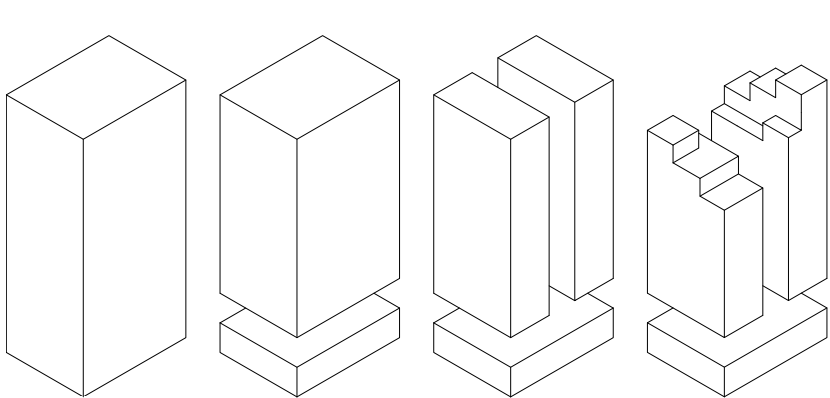
VIEW OF LEVEL 06 LIBRARY



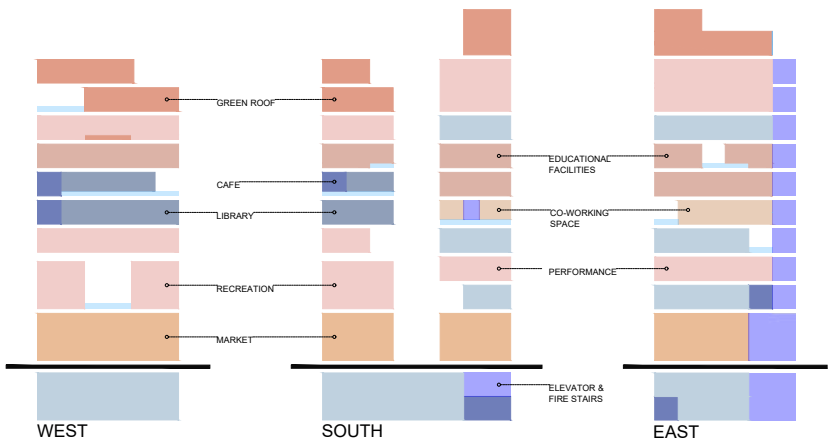
VIEW OF LEVEL 01 MARKET



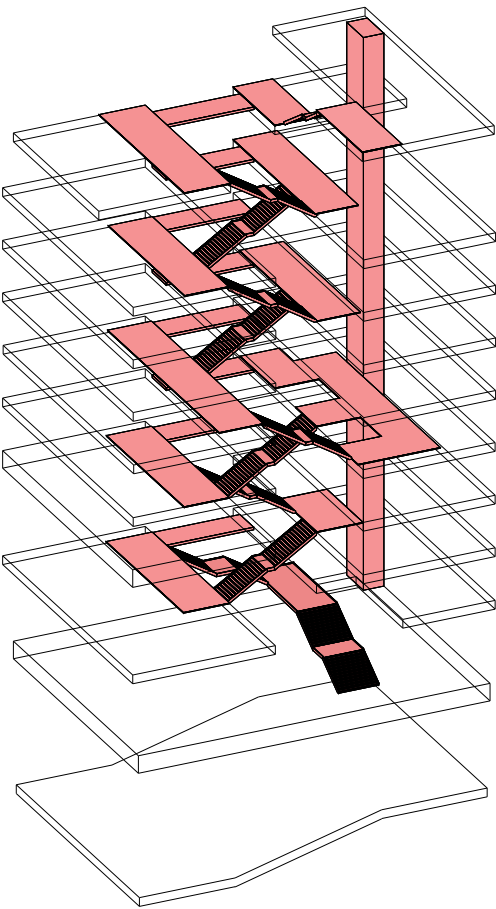
VIEW OF ATRIUM



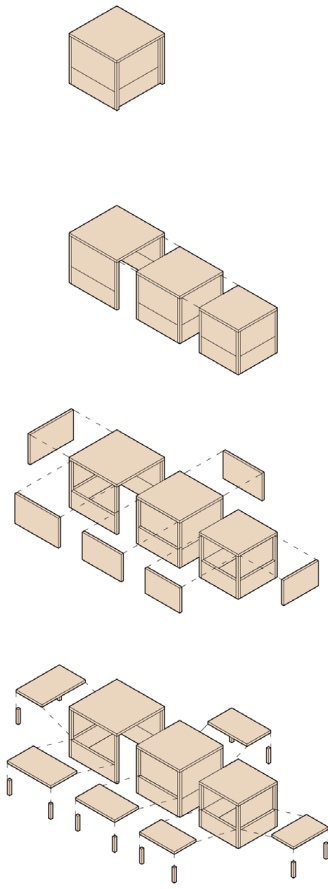
CONCEPTUAL MASSING PROGRESSION



PROGRAM MASSING



CIRCULATION DIAGRAM



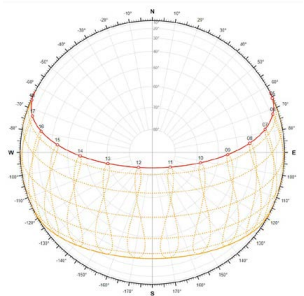
EXPLODED COLLAPSING BOOTHS



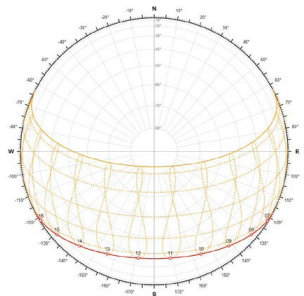
AXON DURING SUMMER SOLSTICE



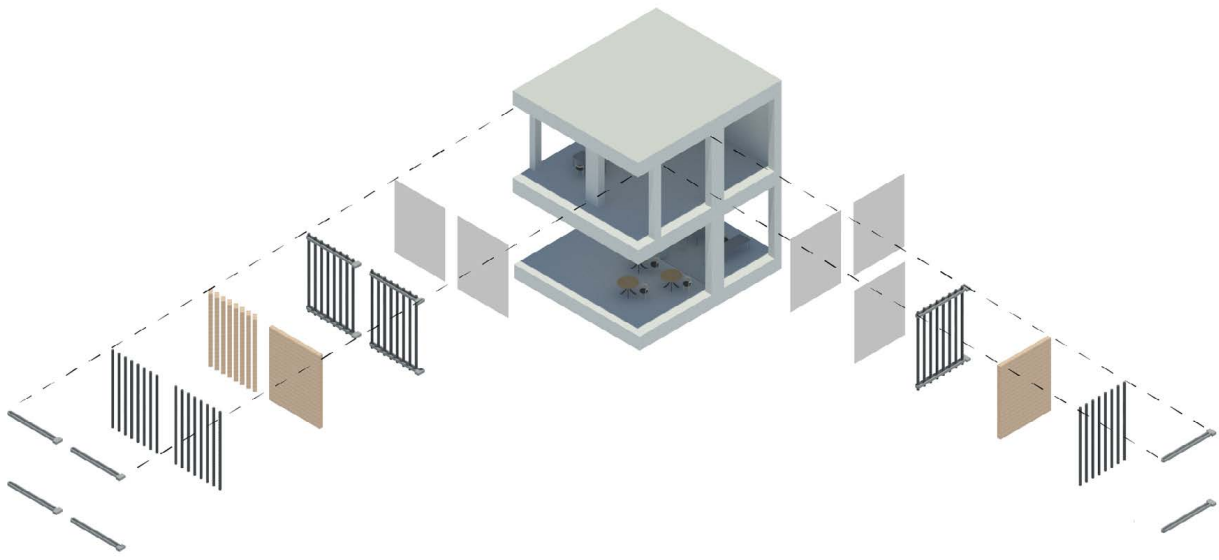
AXON DURING WINTER SOLSTICE



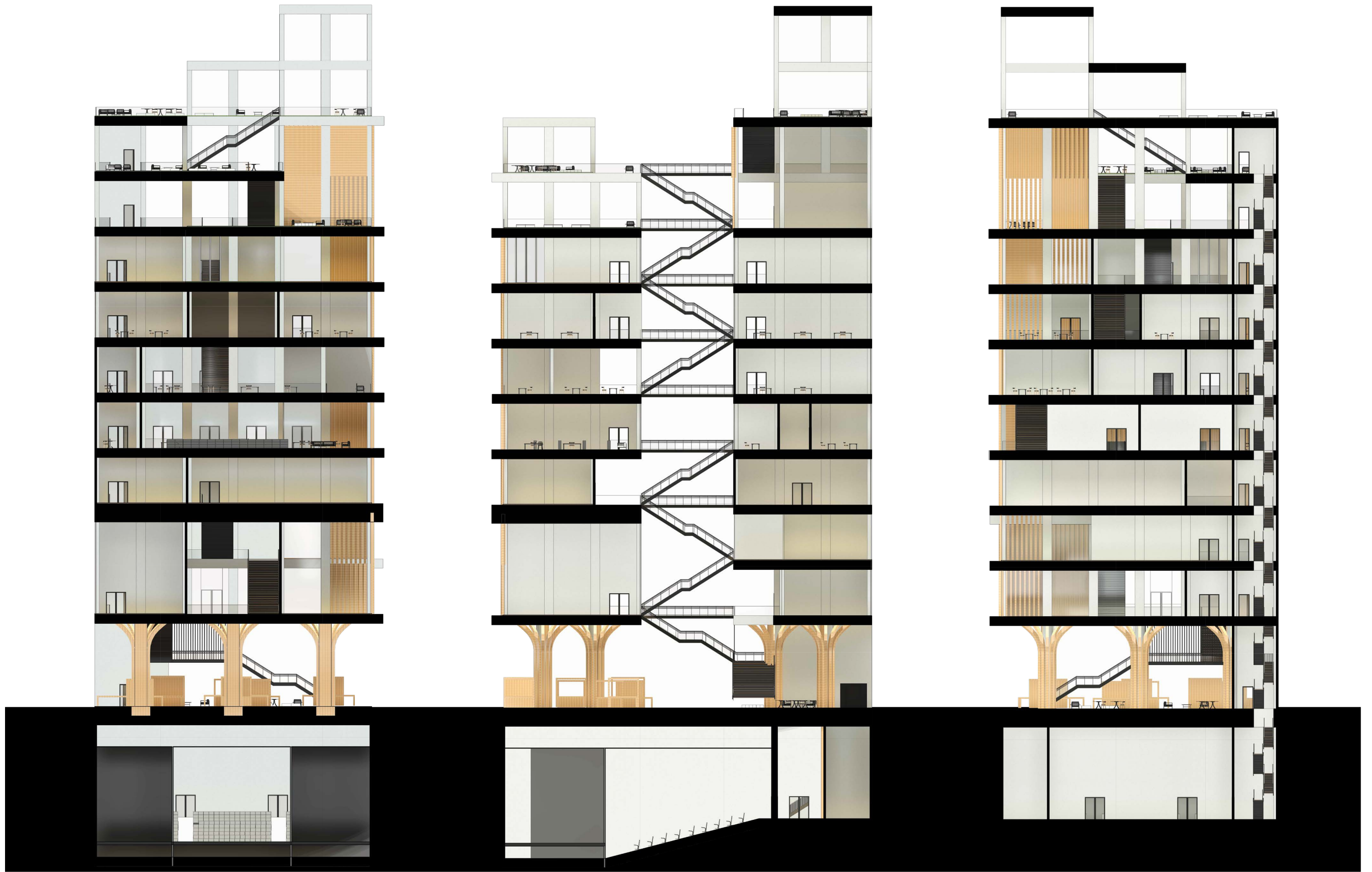
SUMMER SOLSTICE SUN PATH



WINTER SOLSTICE SUN PATH



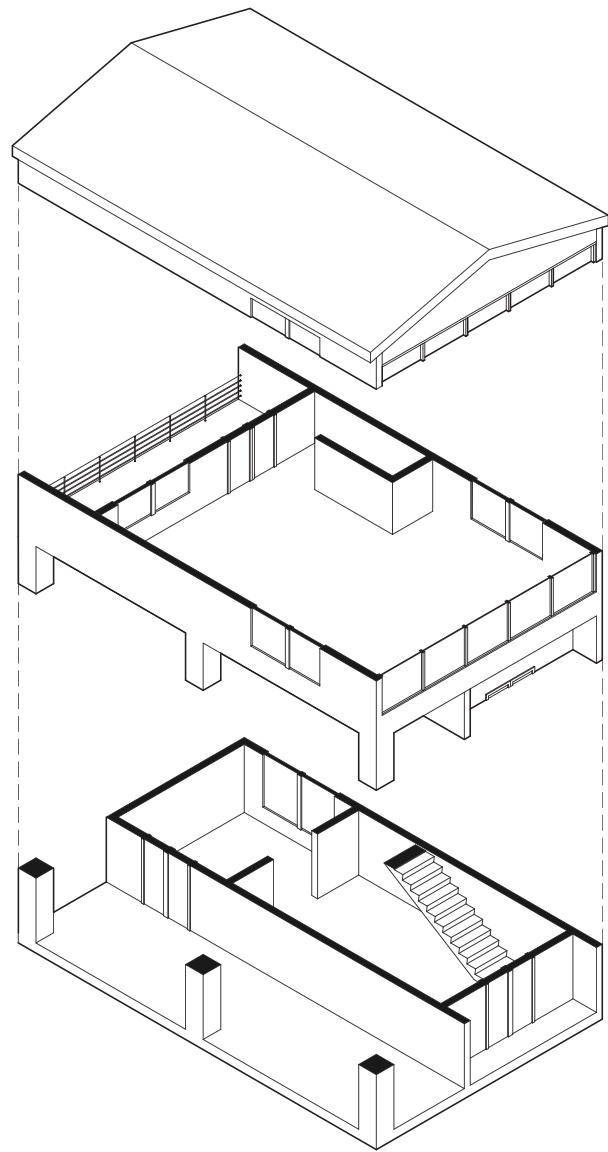
EXPLODED SLAT LAYER DESIGN



EAST SECTION

SOUTH SECTION

WEST SECTION



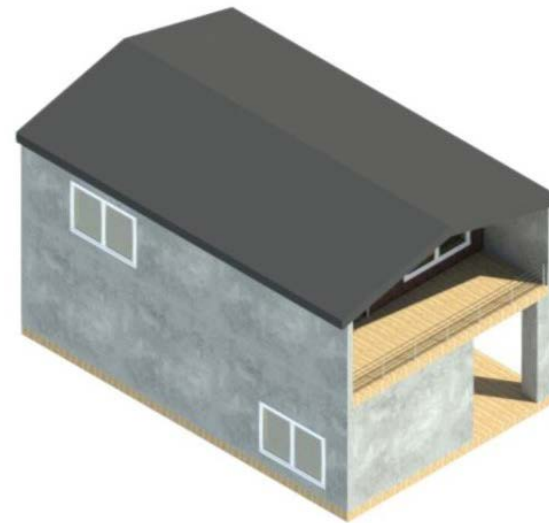
EAST ELEVATION



WEST ELEVATION



TRANSVERSE SECTION

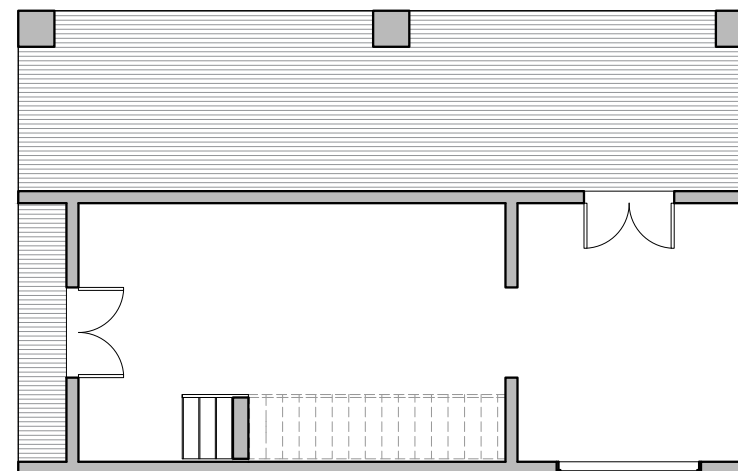


LONGITUDINAL SECTION

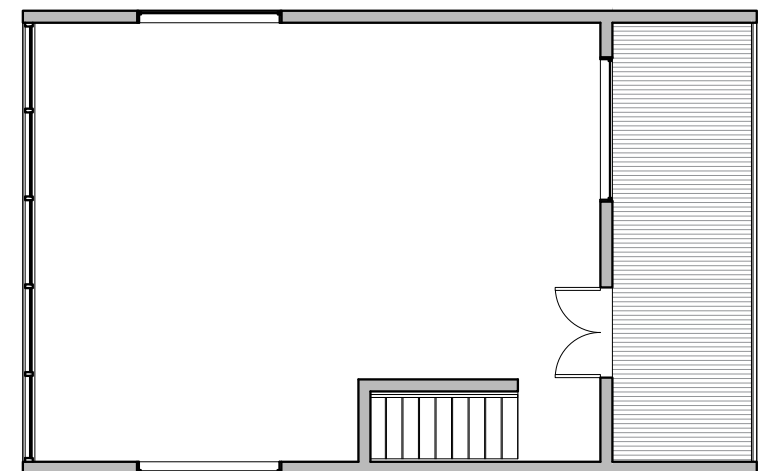
SCHOLAR'S COTTAGE

Second Year Fall Studio

This project is a house for the university to accommodate visiting scholars. The house is meant to be a functional place to stay for one or two people as short-term living. There is a patio incorporated into the side of the house, a balcony on the second floor, and a large span of windows entering the second floor in order for natural light to pour in and allow a view of the river and its surroundings. The patio and balcony are both partially covered by either the roof or house to protect from bad weather and provide shade, allowing it to still feel like a part of the house. There are also two entrances to the house, one in the front and one on the north side leading to the patio. This allows for multiple paths of circulation and ways to access to the patio.



GROUND LEVEL FLOOR PLAN



SECOND LEVEL FLOOR PLAN

MODEL MAKING

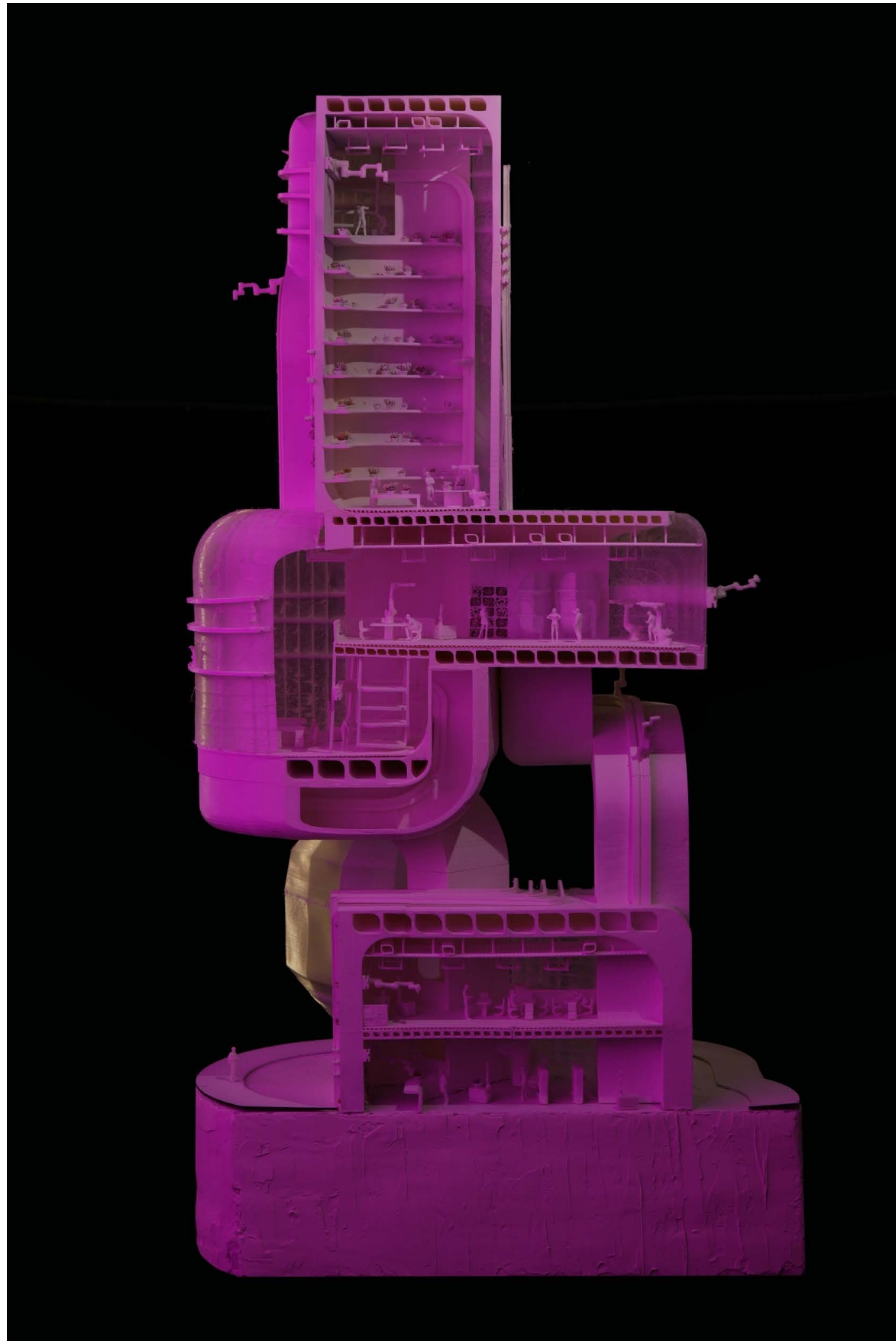
Models Through Undergrad

Techniflora Final Model

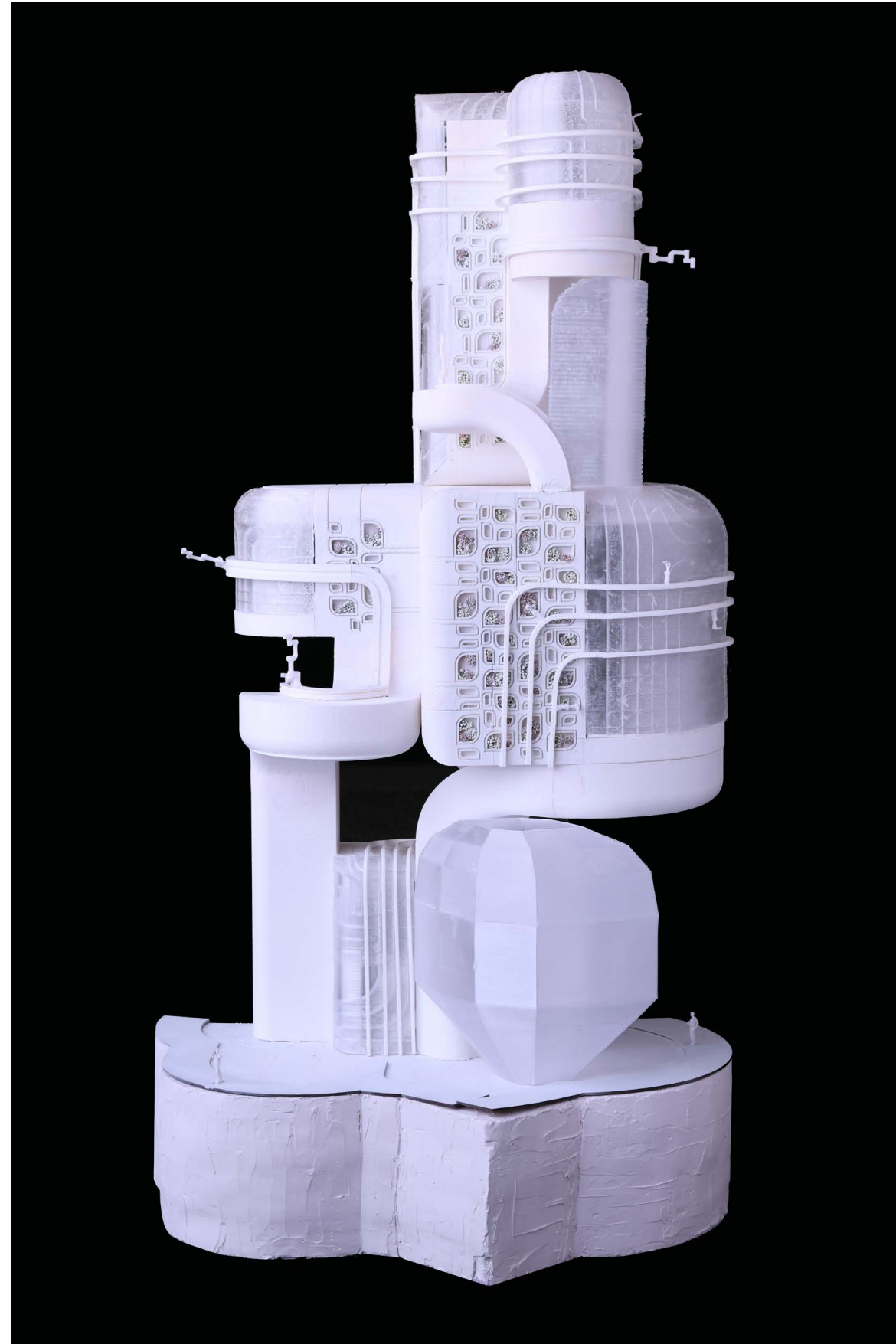
This five foot tall model was constructed with 3D printed and resin printed pieces, artificial plants, plaster, and foam board insulation.

Partner: Addison Henson, Taite McCray, Kendall Royer

Photography by Marcel Erminy



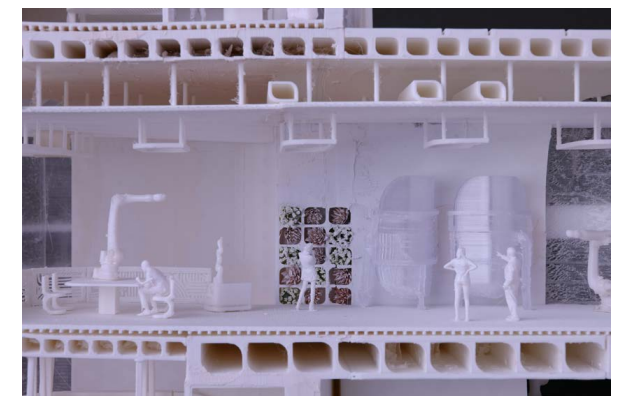
ELEVATION OF SECTION CUT



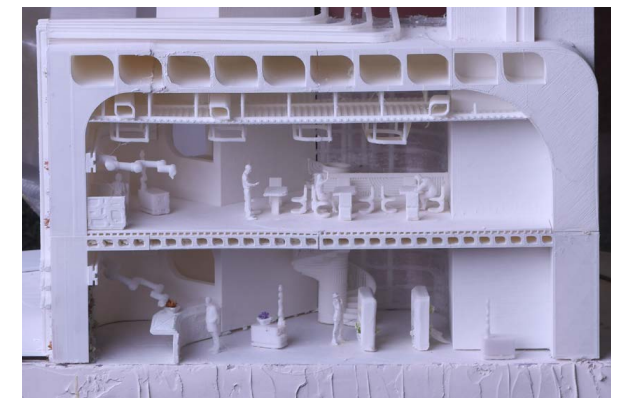
ELEVATION



LAB SPACE



CLASSROOM SPACE



MARKET AND CAFE

MODEL MAKING

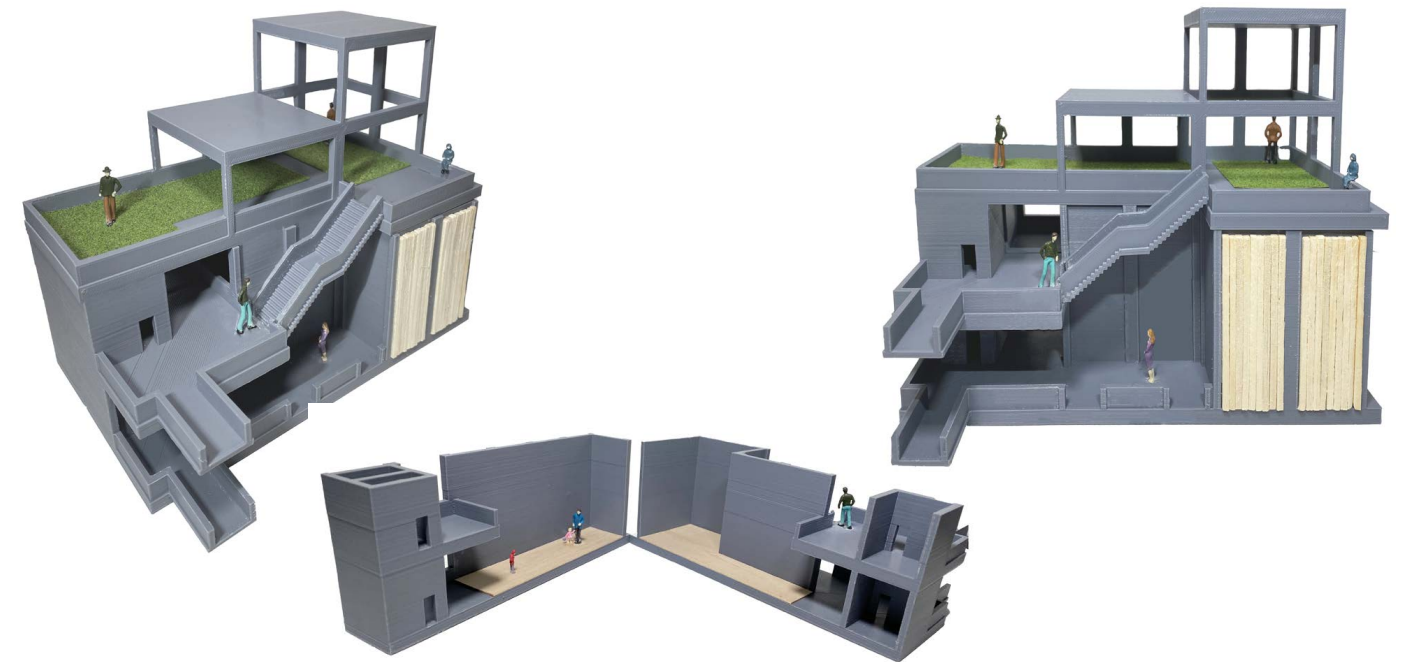
Models Through Undergrad



The Courtyard Structural Model

This model features the primary, secondary, and lateral structural components for this project. We used primarily wood to show the structure using a stick-framing approach, while emphasizing the rigid frames.

Partner: Maria Nguyen



Lux Partial Section Model

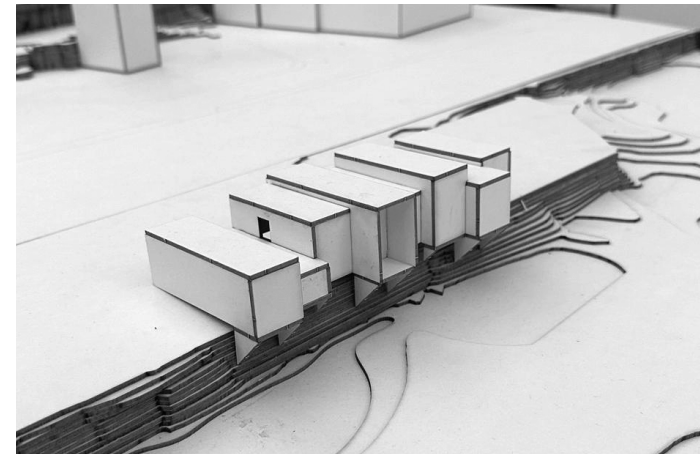
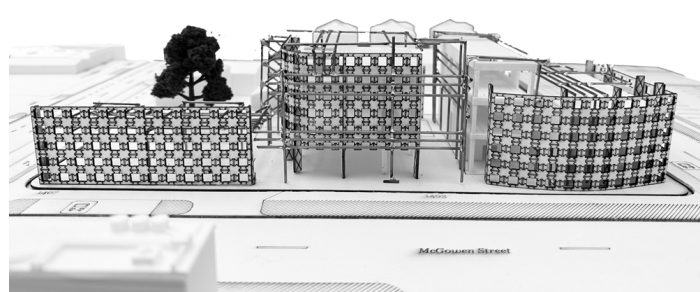
This model is constructed of three different 3d printed pieces, wood sticks to represent our wooden slat shading devices, and a green felt-like material representing the green roof areas. We wanted to be able to pull this model apart to view the inside and be able to see the connecting levels.

Partner: Kaden Thurmond



Fragments of Dystopia Final Model

This model shows the full building, including exterior features like the shading, aesthetic components, and the tree located on the site. To make this model I used three mediums: soldered metal wire, lasercut chipboard, and 3d printed elements. The buildings themselves are represented through 3d printed masses with openings for glass. The exterior conditions, like the metal mesh skin is represented through lasercut and scored pieces. The metal piping aspects of the project were built by soldering metal wires together and placing them on and around the buildings.



Museo Sull'Arno Final Model

This model was constructed with lasercut pieces glued, with openings for large glass and doors. Since this building is overhung off of the site's edge we wanted to show the support of this condition in the model as well. These "sporti" are shown supporting under the cantilevered portion of the building.

Partner: Taite McCray

