

SENSES

GSAPP PORTFOLIO

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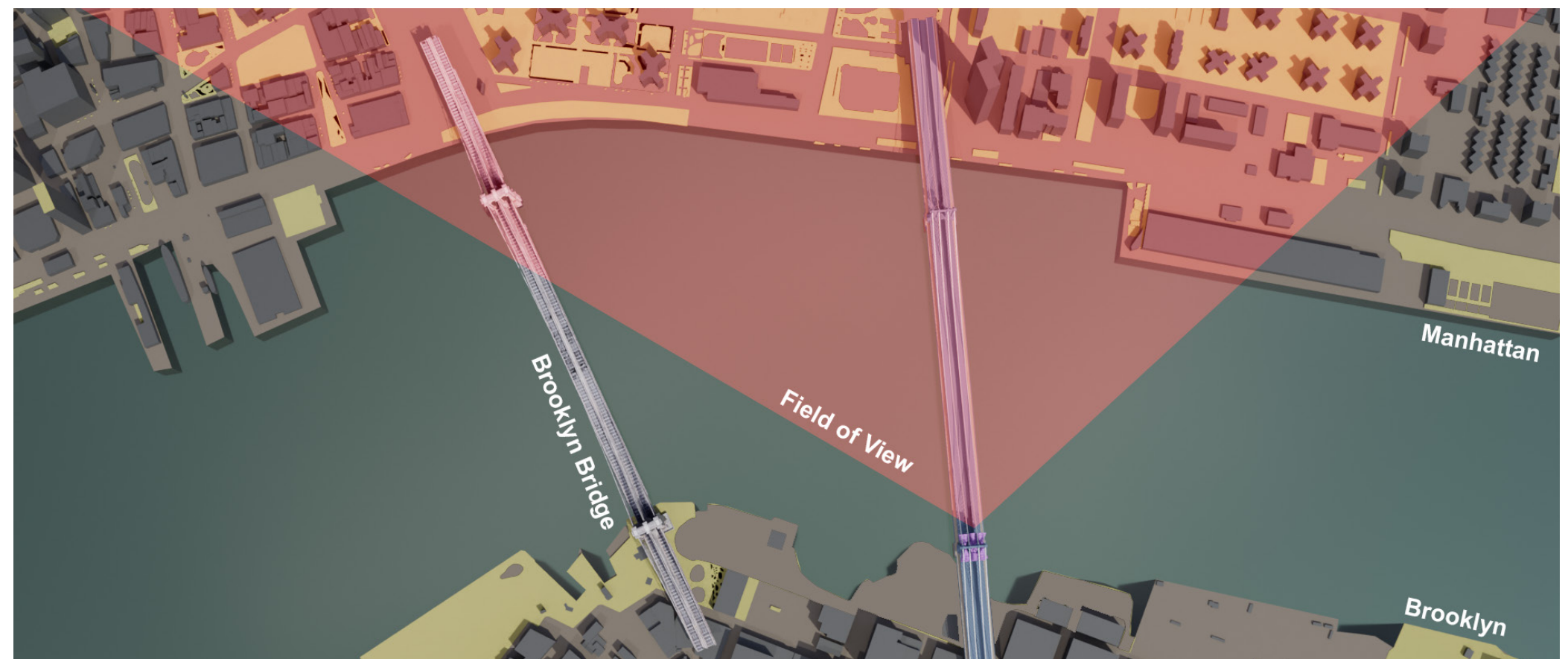
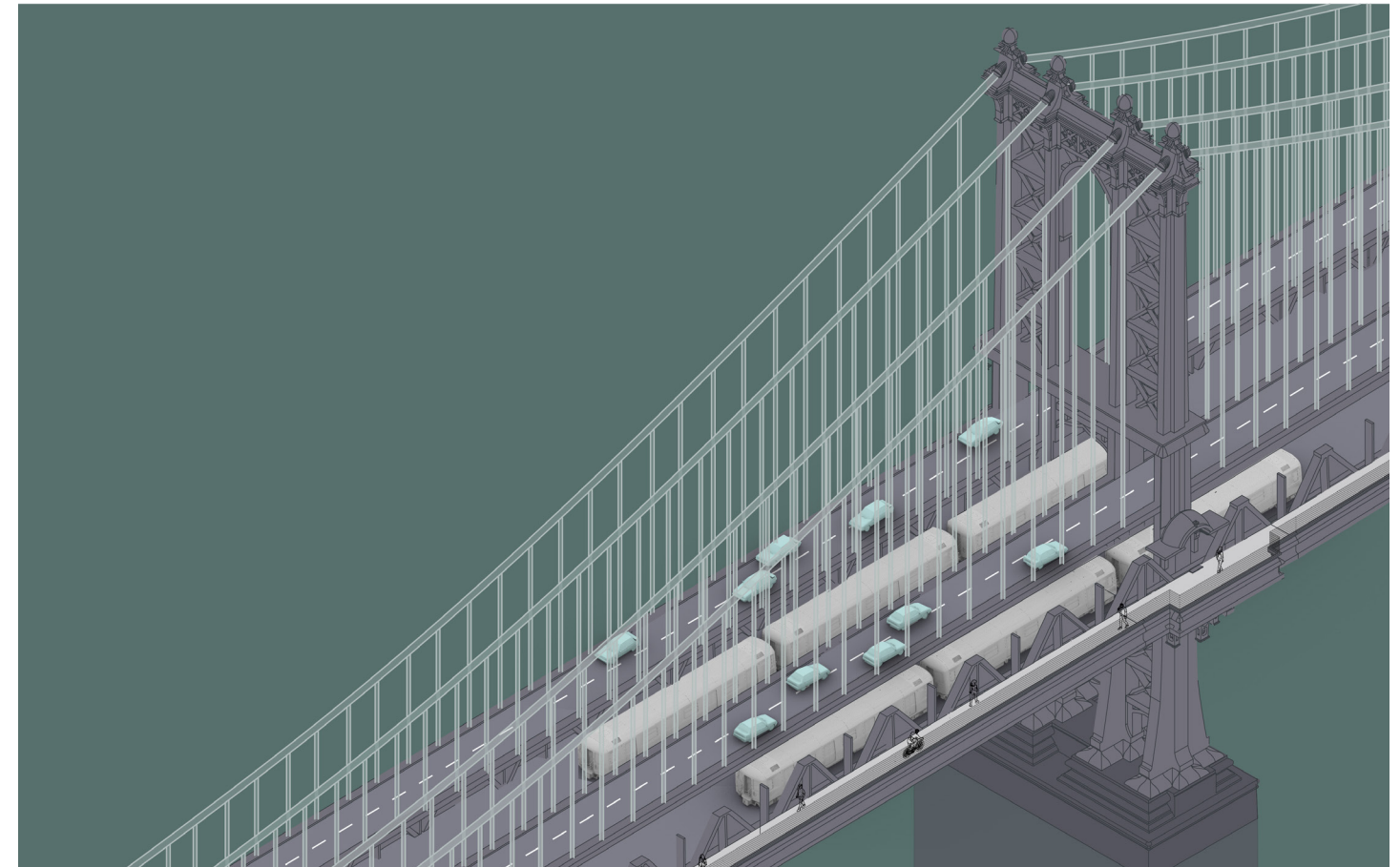
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The site focuses on the Manhattan Bridge on the Lower East Side of New York City and the many transformations that have occurred since its construction to the present day. While visiting the bridge, one of the most noticeable features was the chain-link fencing and the numerous openings cut into it by visitors.

These cutouts have become informal viewing points where people photograph the Manhattan and Brooklyn skylines.

Research into the history of the site revealed that the fencing was added during later restoration work on the bridge, prompting frustration within the community as it obstructed previously open views of the city.

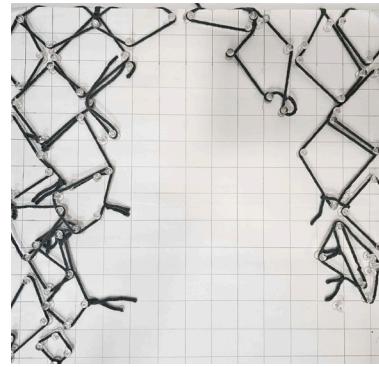


Course:
Core Studio I

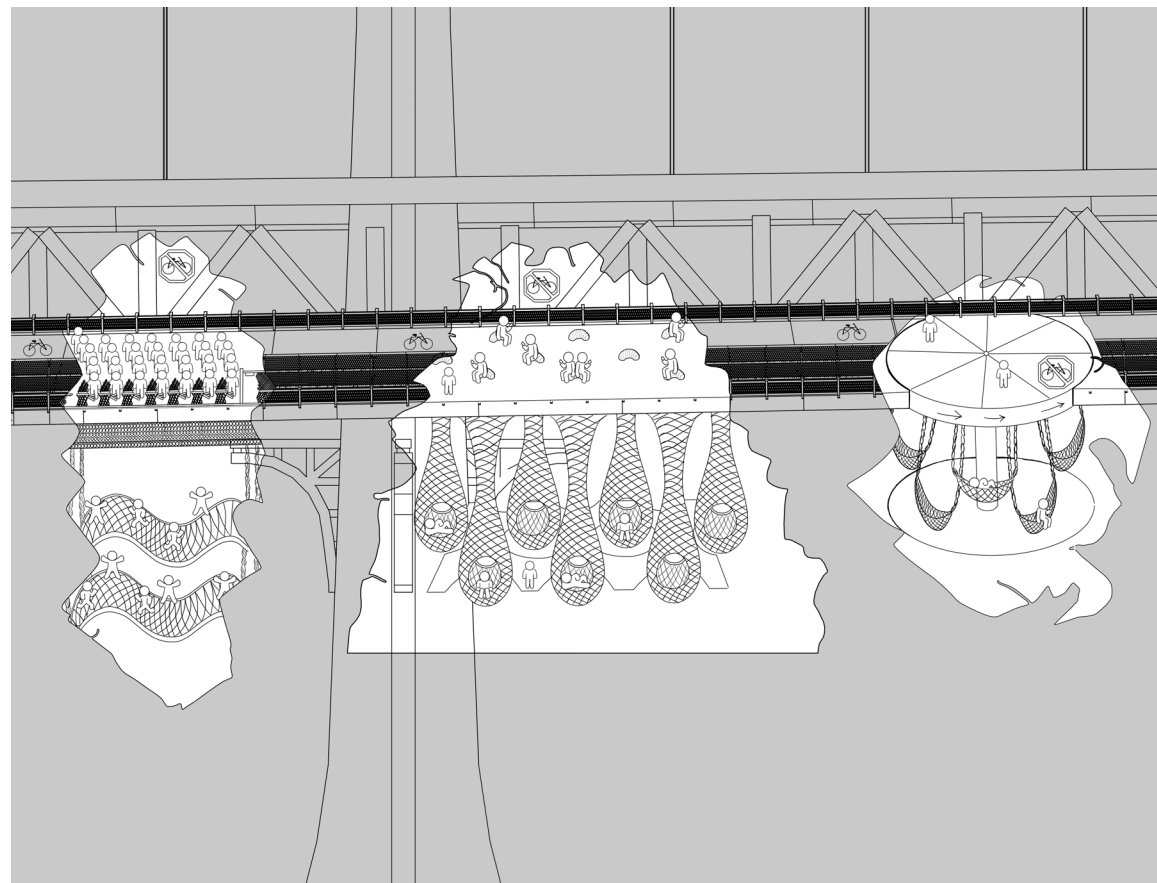
Term:
Fall 2023

Instructor:
Gregory Melitonov

Manhattan Views

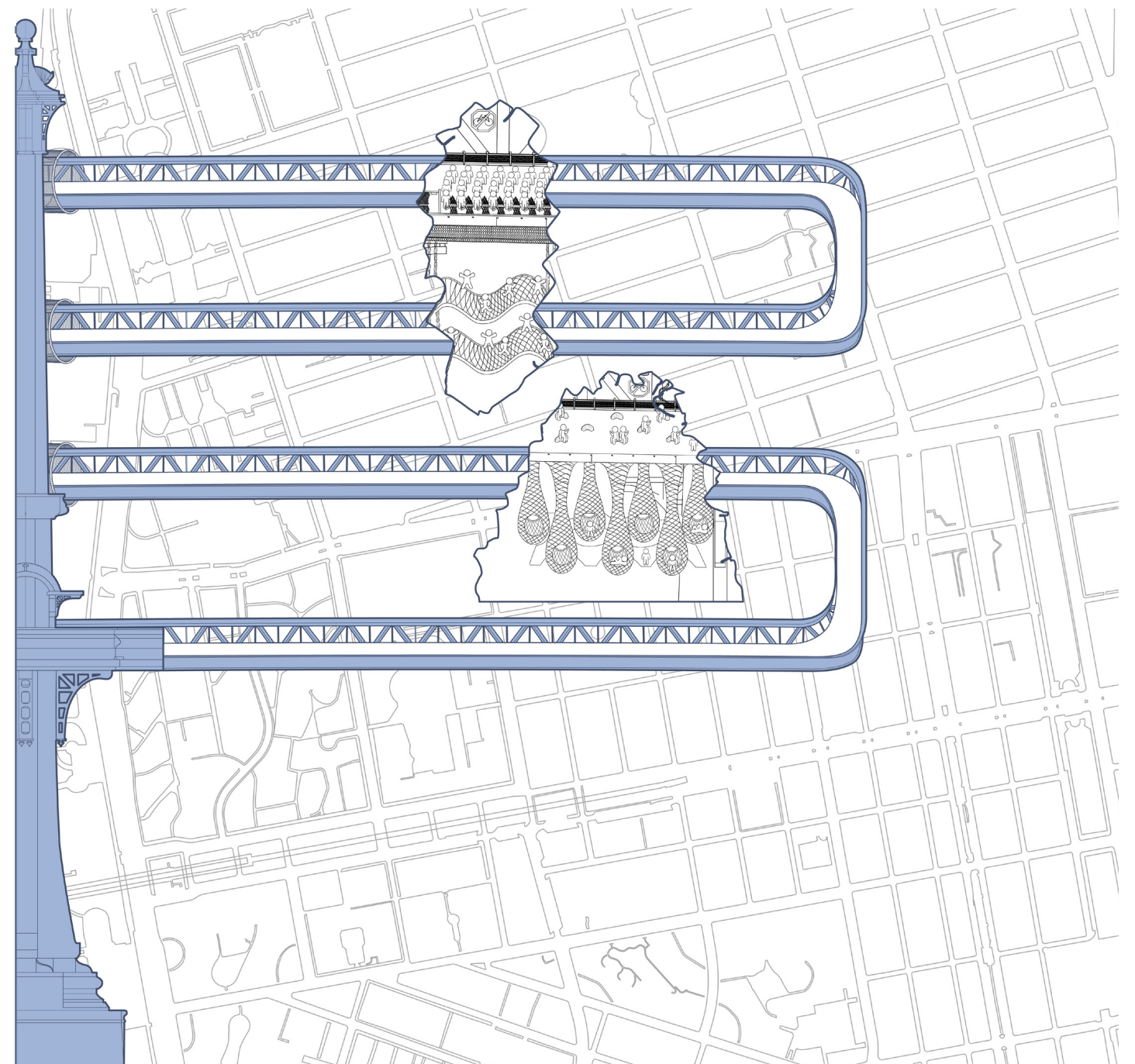


Research Drawings



The various drawings explore a series of interventions that could be implemented on the bridge. Each proposal subverts the original meaning of the chain-link fence, transforming it from a cold and restrictive barrier into a softer, more intimate architectural element.

By replacing the rigid metal mesh with woven fabric and rope, the interventions create spaces where individuals can rest, play, and interact with the structure in new ways. Touch and tactility become the primary architectural components of the project, emphasizing bodily engagement and sensory experience over separation and control.

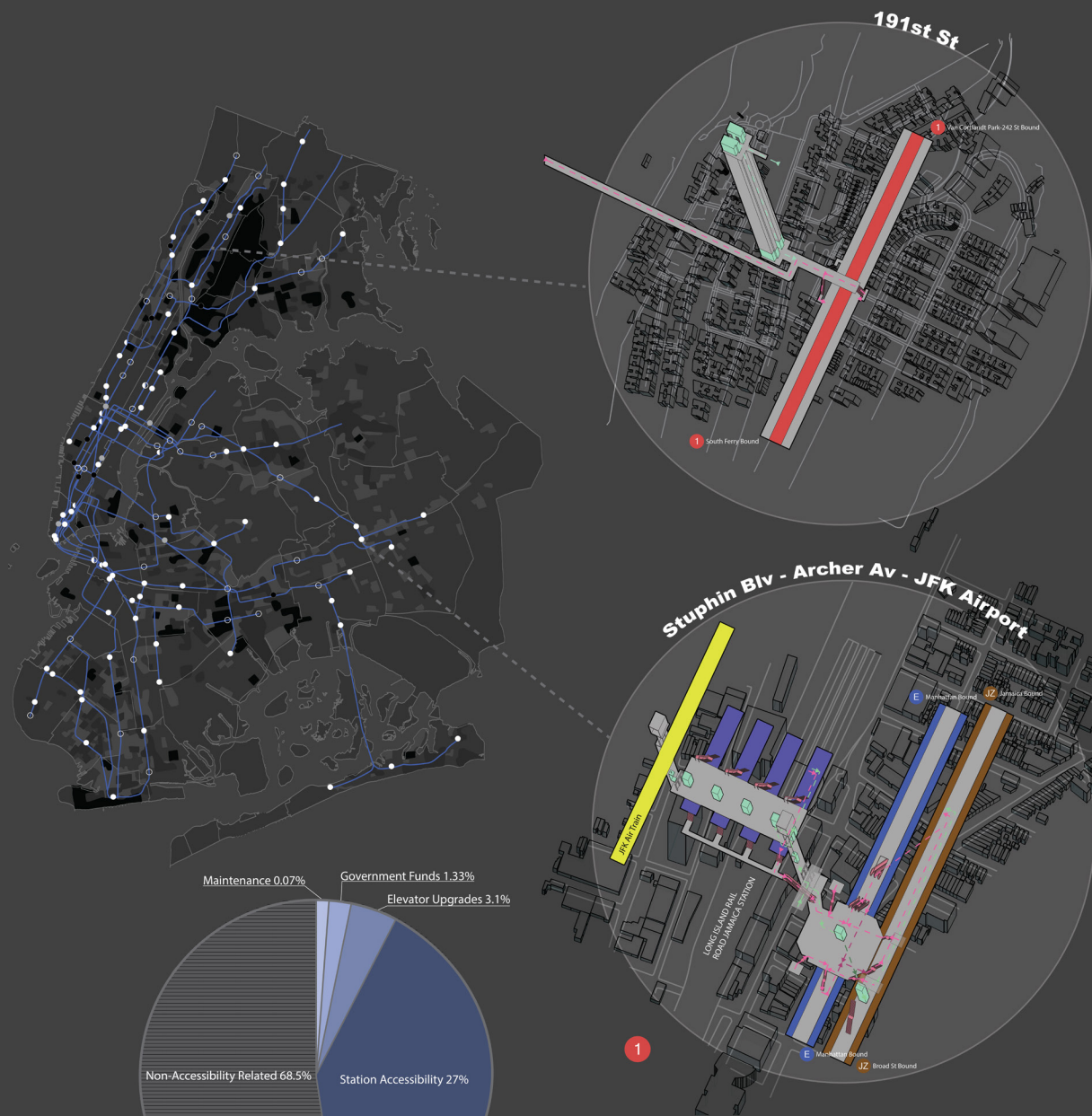


Course:
Core Studio II

Term:
Spring 2024

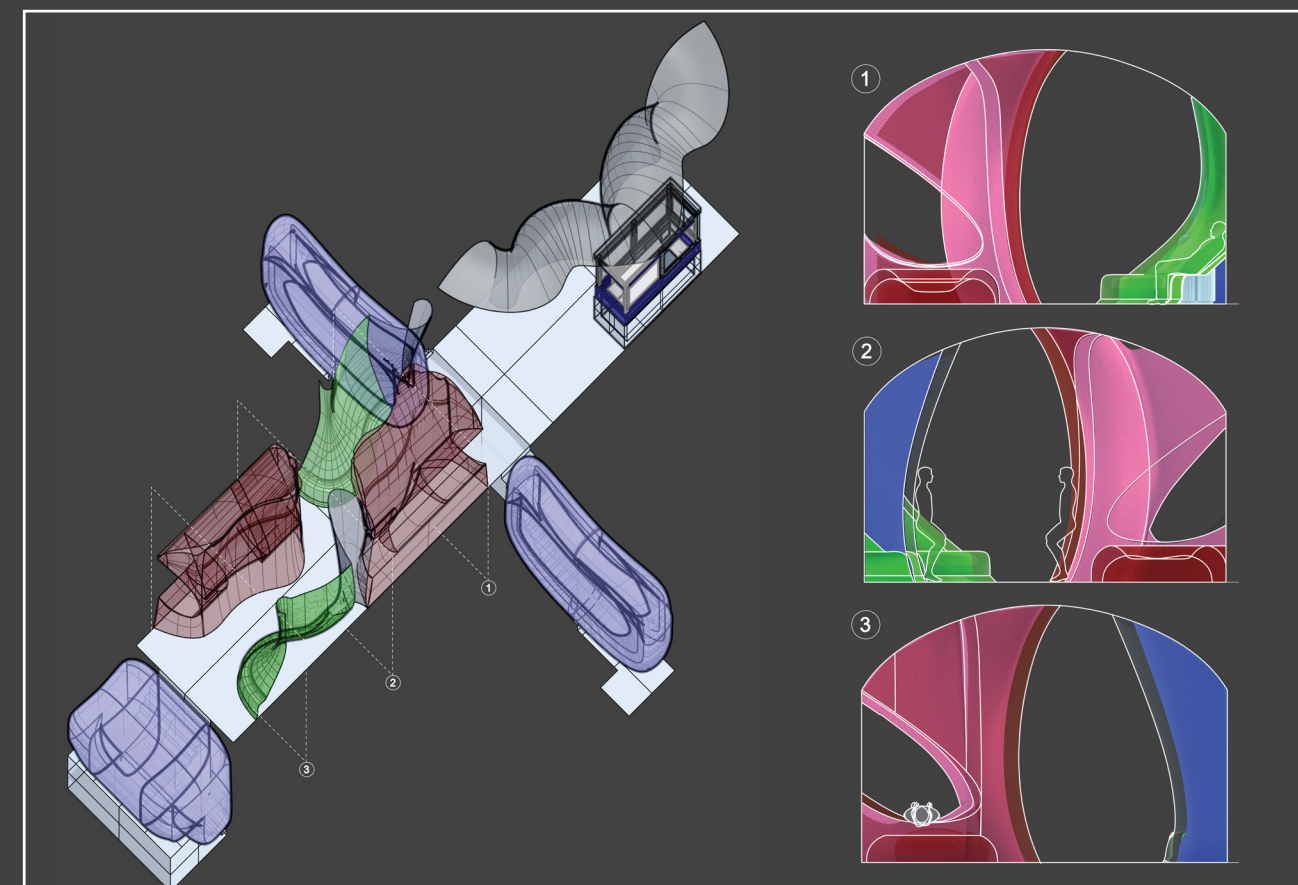
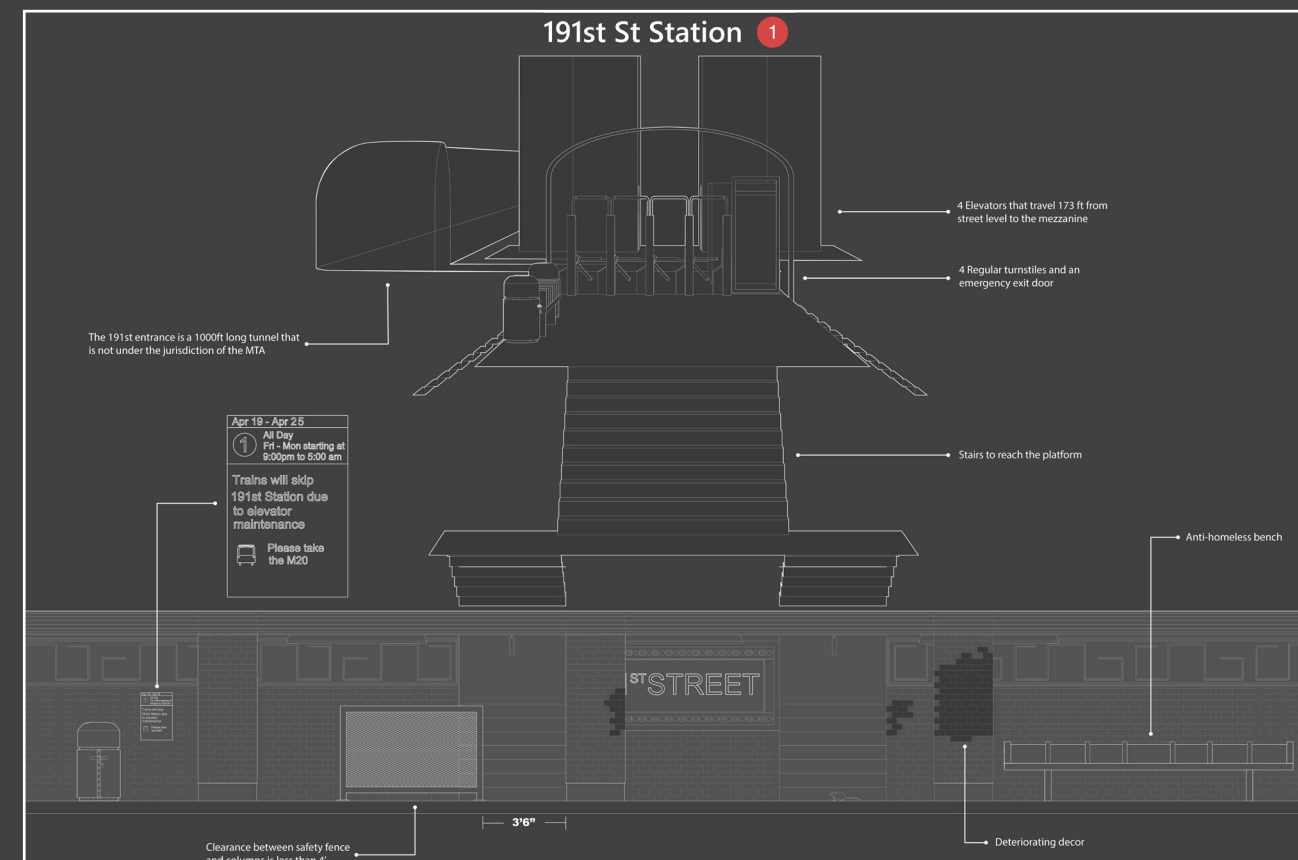
Instructor:
Maria Linares Trelles

Lungs of the Subway

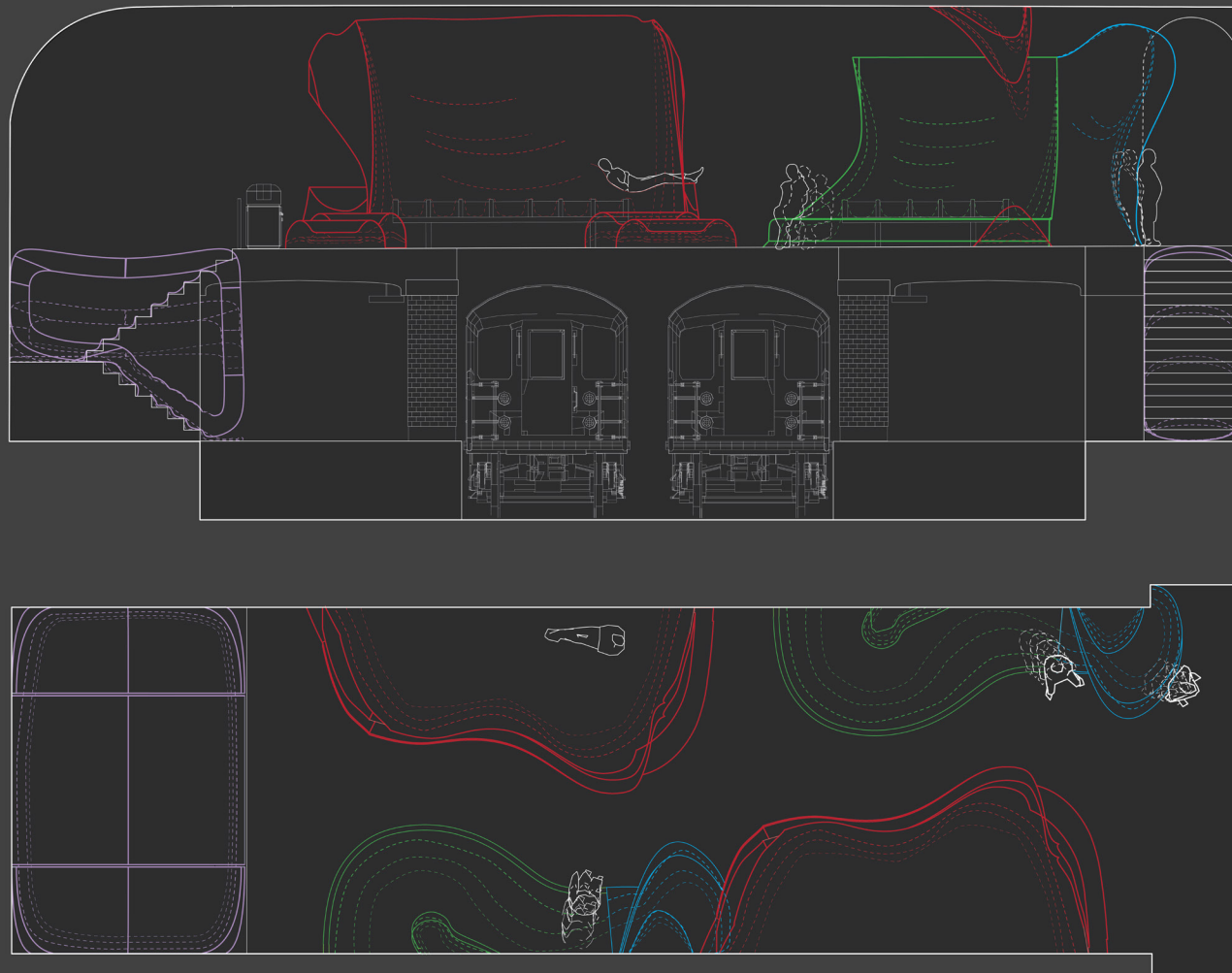


The subject of focus is the accessibility of New York City Transit, specifically the subway system. Initial research examined the number of accessible stations in 2024, alongside the maintenance and reliability of elevators and escalators.

A close study of the Sutphin Boulevard–Archer Avenue Station, one of the most improved stations in terms of accessibility, brings to question what accessibility truly means. Although Sutphin Boulevard is considered one of the most “accessible” stations in the network, the design fails to account for the amount of time and physical effort required for mobility-impaired individuals to travel between the station’s highest and lowest levels.



Deflation Process



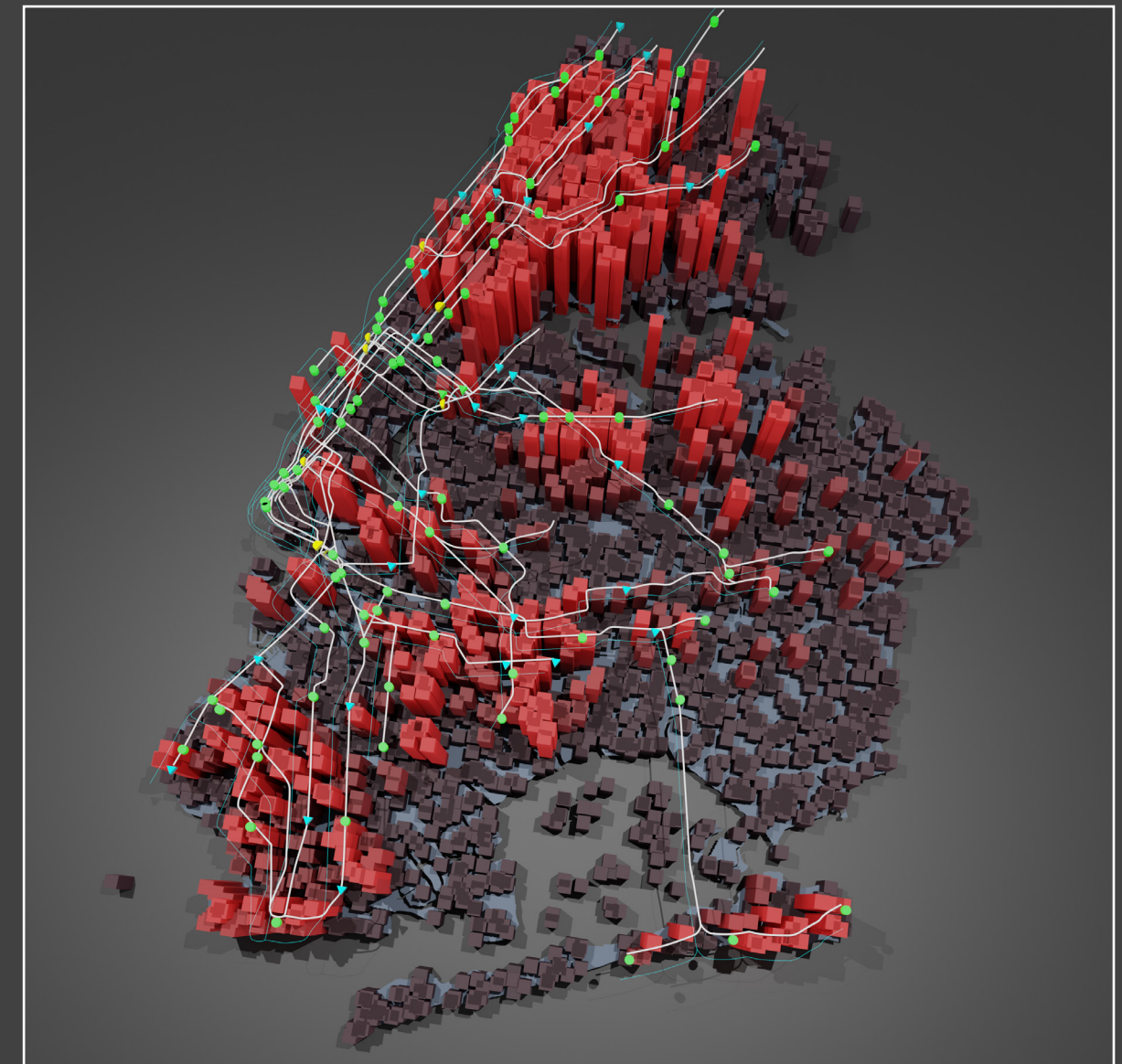
Beyond movement, the project also considers sensory accessibility. The combined noise pollution produced by subway trains, the Long Island Rail Road, and MTA buses creates an overwhelming environment for individuals who are noise-sensitive.

The intervention takes the form of an inflatable structure integrated throughout subway stations. These inflatables function not only as physical barriers that help protect passengers from falling onto the tracks, but also as acoustic buffers that absorb and reduce the intense noise generated by arriving trains.



Their soft, inflated forms transform the edge of the platform into a space of comfort and care, allowing users to sit, lean, or even recline while waiting. The structures also act as tactile indicators for incoming trains. As a train approaches the station, the inflatables gradually deflate, creating a physical and visual signal that alerts passengers to the train's arrival. Through this responsive behavior, the intervention introduces a new form of sensory communication within the subway environment.

In contrast to the aging and neglected atmosphere of many stations, the inflatables create a softer, more caring architectural experience centered on comfort, protection, and accessibility. This project ultimately asks whether accessibility should be limited to meeting ADA requirements, or if transit infrastructure must move beyond basic mobility standards to create environments that are genuinely welcoming and inclusive for all users.



Research Drawing: Investigations revealed a significant disparity in the level of care and maintenance provided to stations located in lower-income areas.

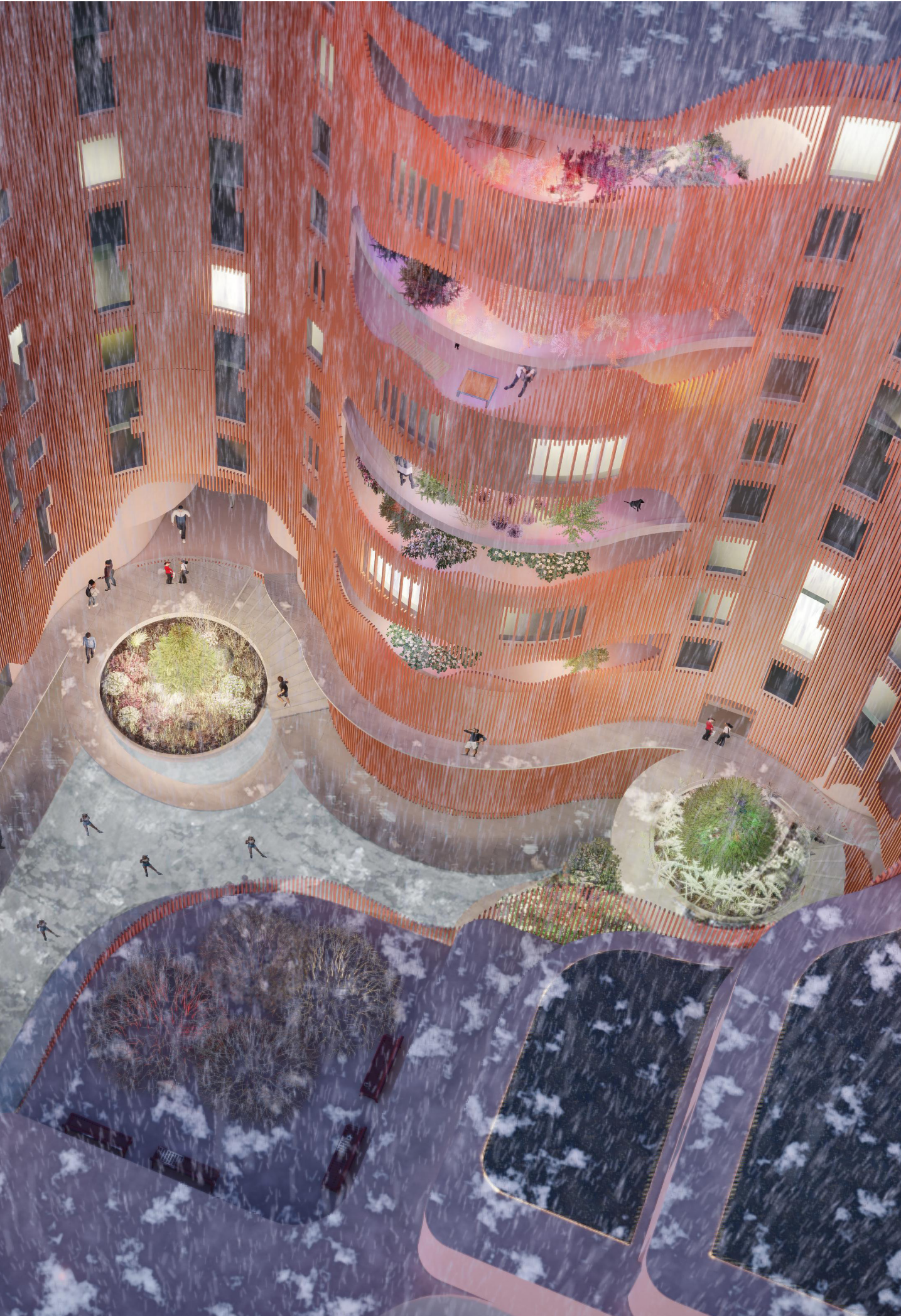
Course:
Core Studio III

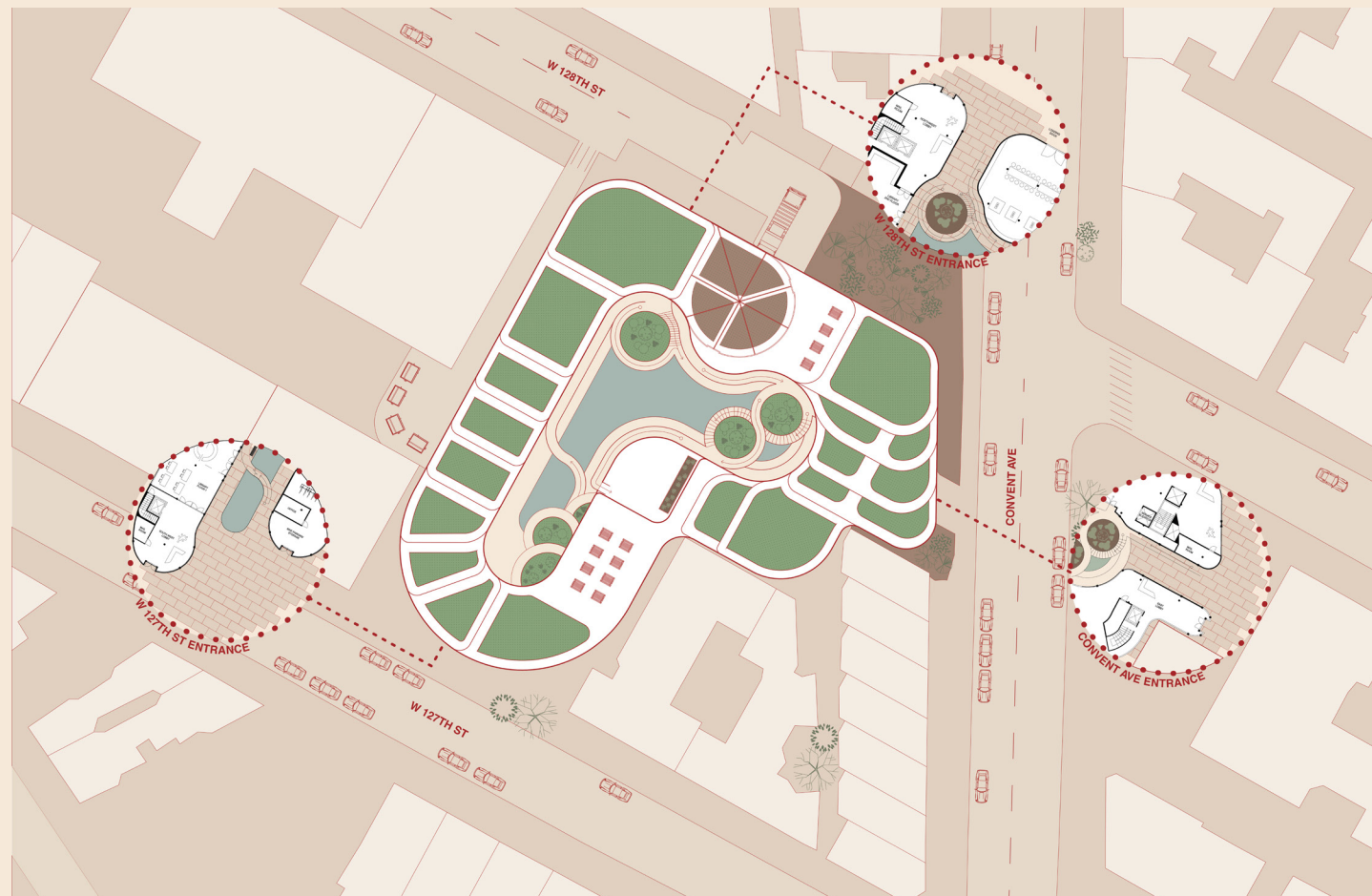
Term:
Fall 2024

Instructor:
Galia Solomonoff

Collaborator:
Nancy Zhang

P-Block Apartments



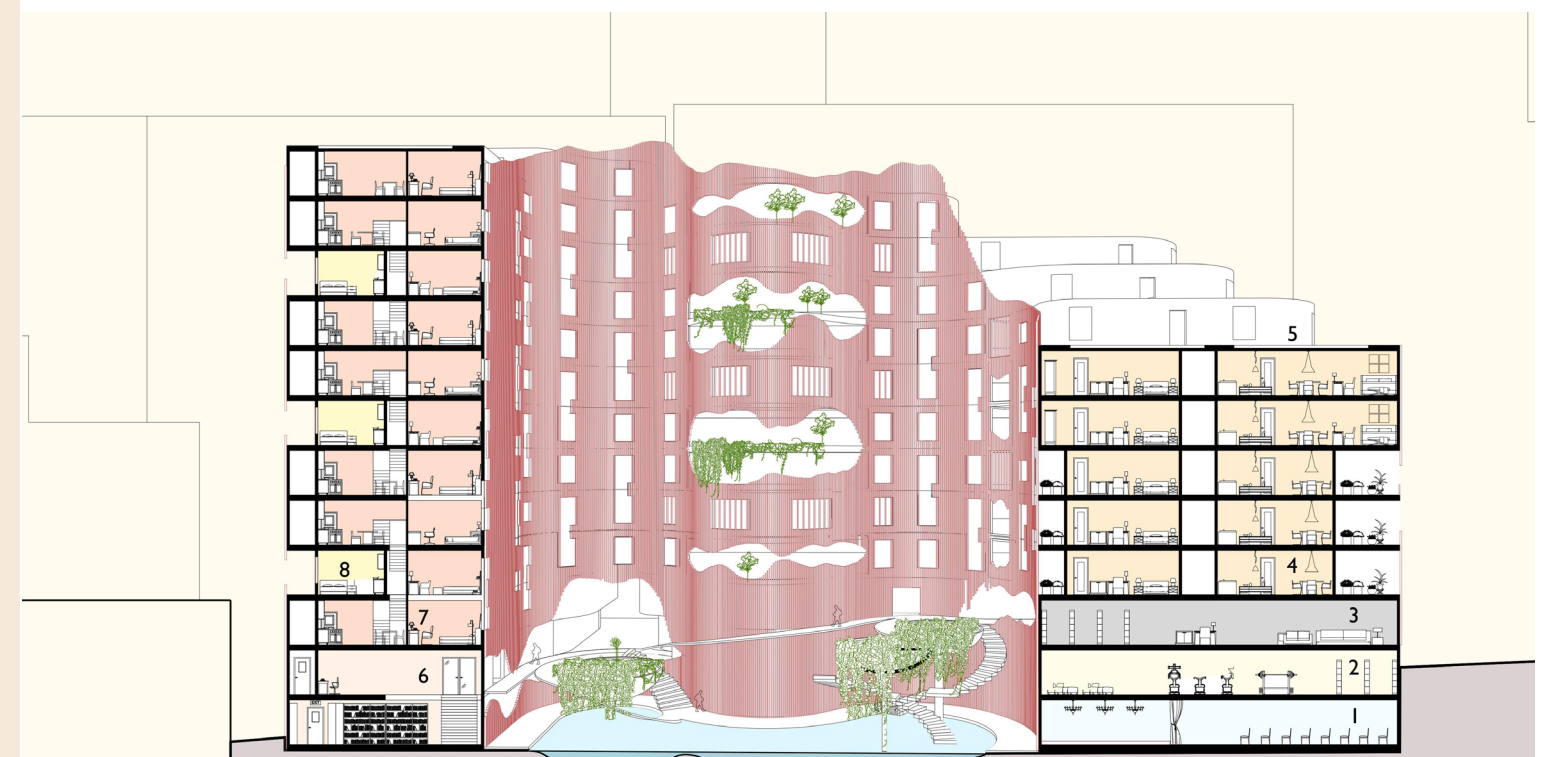
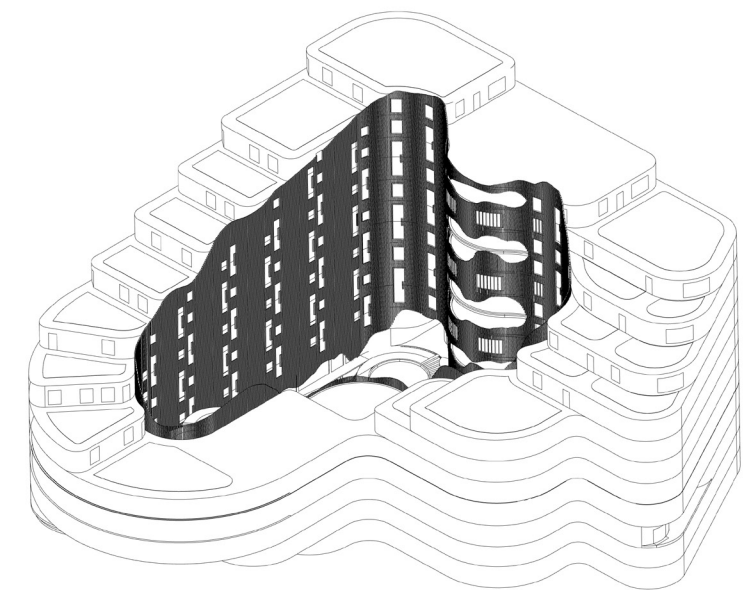


This project proposes an affordable housing complex located in the Manhattanville neighborhood of New York City, at the intersection of West 127th Street and Convent Avenue. The site is uniquely defined by a ten-foot change in topography from the southwest to the northeast corner.

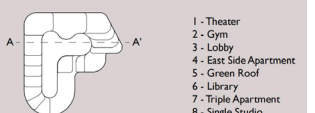


Rather than excavating and flattening the lot, the design embraces the existing terrain, creating three separate entrances along West 127th Street, West 128th Street, and Convent Avenue. These entrances are connected through a network of walkways and bridges that converge at a central courtyard containing a shallow, man-made pond.

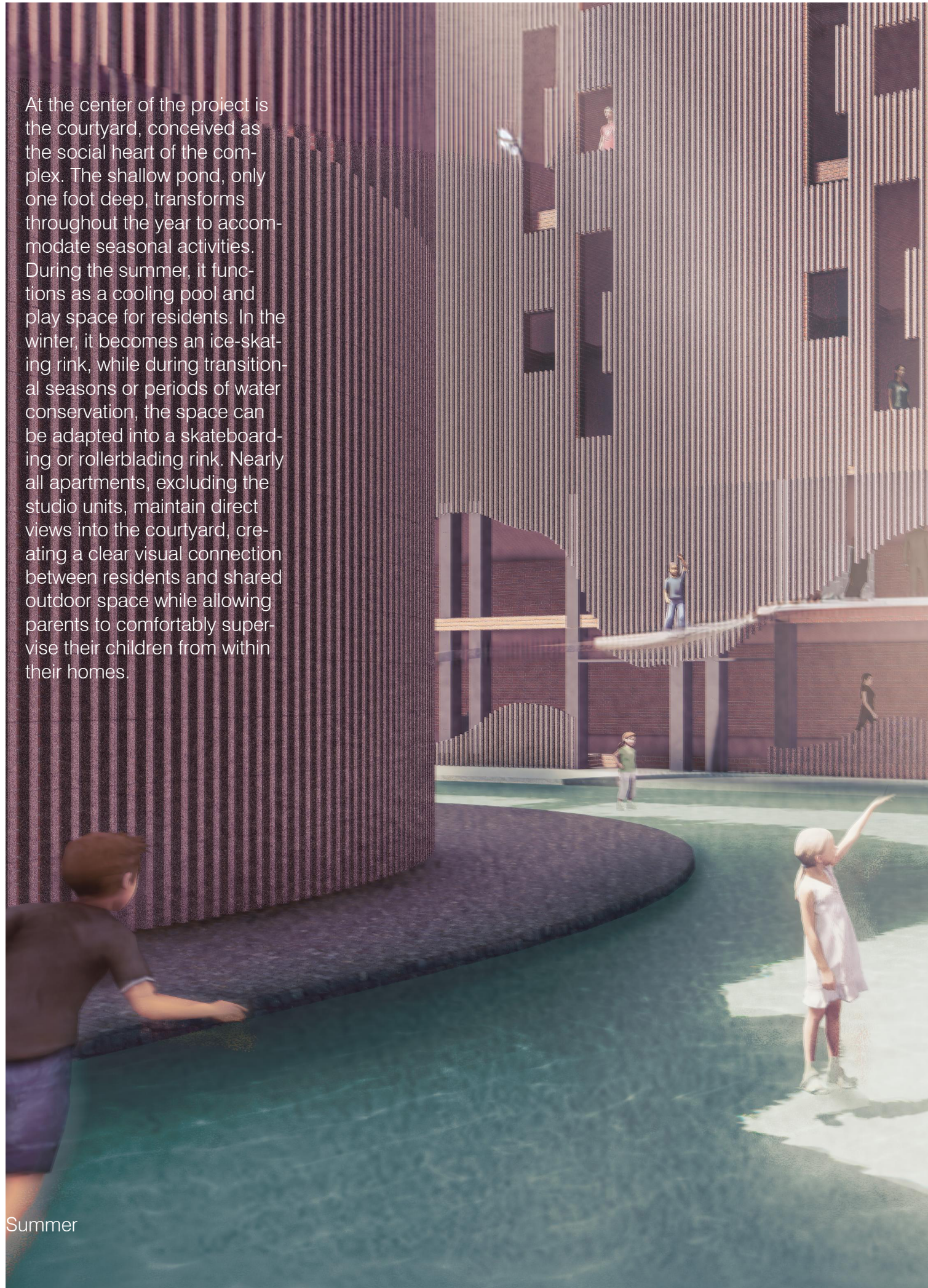
The complex contains 150 units across 13 floors, with a majority dedicated to family housing for four to six occupants. In addition to these larger apartments, the project also includes two-bedroom, three-bedroom, and studio units. Many of the family units are designed as duplexes, with one level containing the kitchen, bathroom, and a bedroom, while the upper level contains the remaining private bedrooms.



The lower floors of the complex house a variety of shared amenities, including a library, gymnasium, multipurpose performance spaces, and a maker space.



At the center of the project is the courtyard, conceived as the social heart of the complex. The shallow pond, only one foot deep, transforms throughout the year to accommodate seasonal activities. During the summer, it functions as a cooling pool and play space for residents. In the winter, it becomes an ice-skating rink, while during transitional seasons or periods of water conservation, the space can be adapted into a skateboarding or rollerblading rink. Nearly all apartments, excluding the studio units, maintain direct views into the courtyard, creating a clear visual connection between residents and shared outdoor space while allowing parents to comfortably supervise their children from within their homes.



Summer



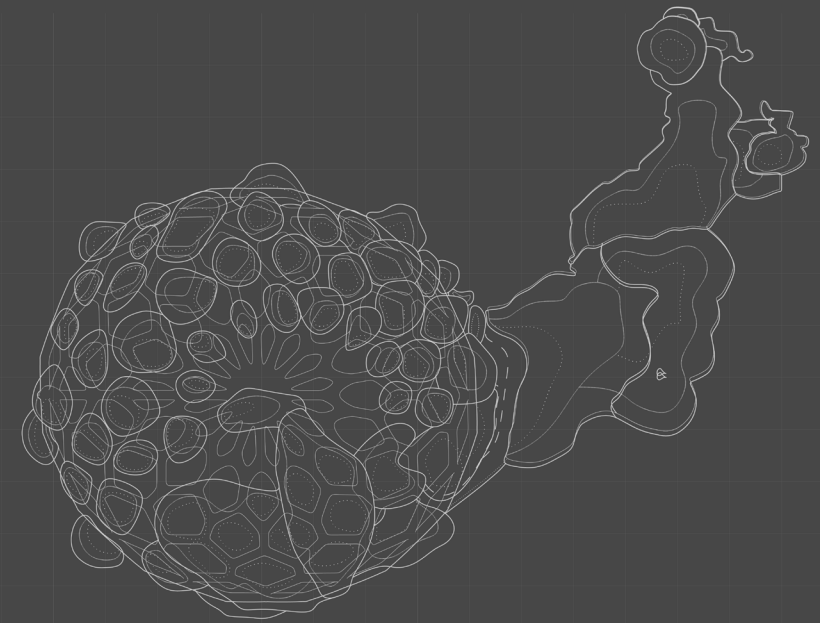
Winter

Course:
Advance Studio IV

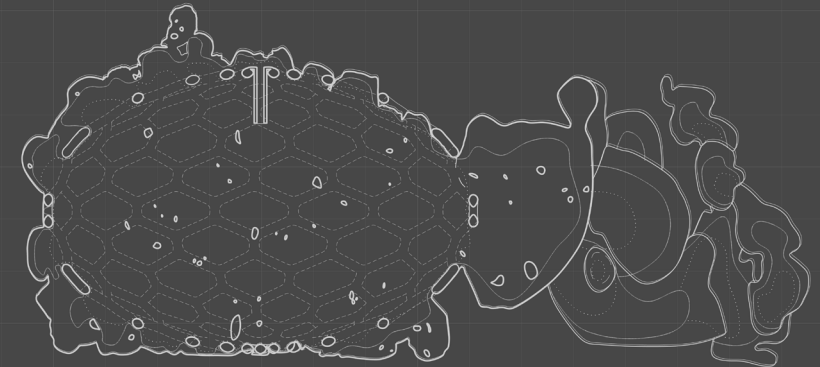
Term:
Spring 2025

Instructor:
Rachely Rotem

Pollination Stack



Plan View



Section View

Pollination Stack is a re-search-driven project centered on the themes of spread, uncertainty, and environmental visibility. The project began through a series of experiments investigating how chaotic, non-solid elements move through space, eventually connecting to the environmental history of Mount Trashmore in the East End of Bridgeport, Connecticut. Once a thriving industrial neighborhood, the East End experienced severe environmental neglect following the decline of manufacturing after World War II. Factories left behind contaminated brownfields and toxic waste sites that continue to affect the health and daily lives of local residents.





Contamination Research Map

Official government records often conflict with historical documentation and community accounts. Many of these sites contain heavy metals, volatile organic compounds, lead, and other toxic pollutants that continue to spread over time. Conversations with local residents and community leaders revealed ongoing concerns about the safety of the soil, where children can safely play, and whether anything can be grown in the area without risk of contamination.



Medium: Rockite & 3D Print

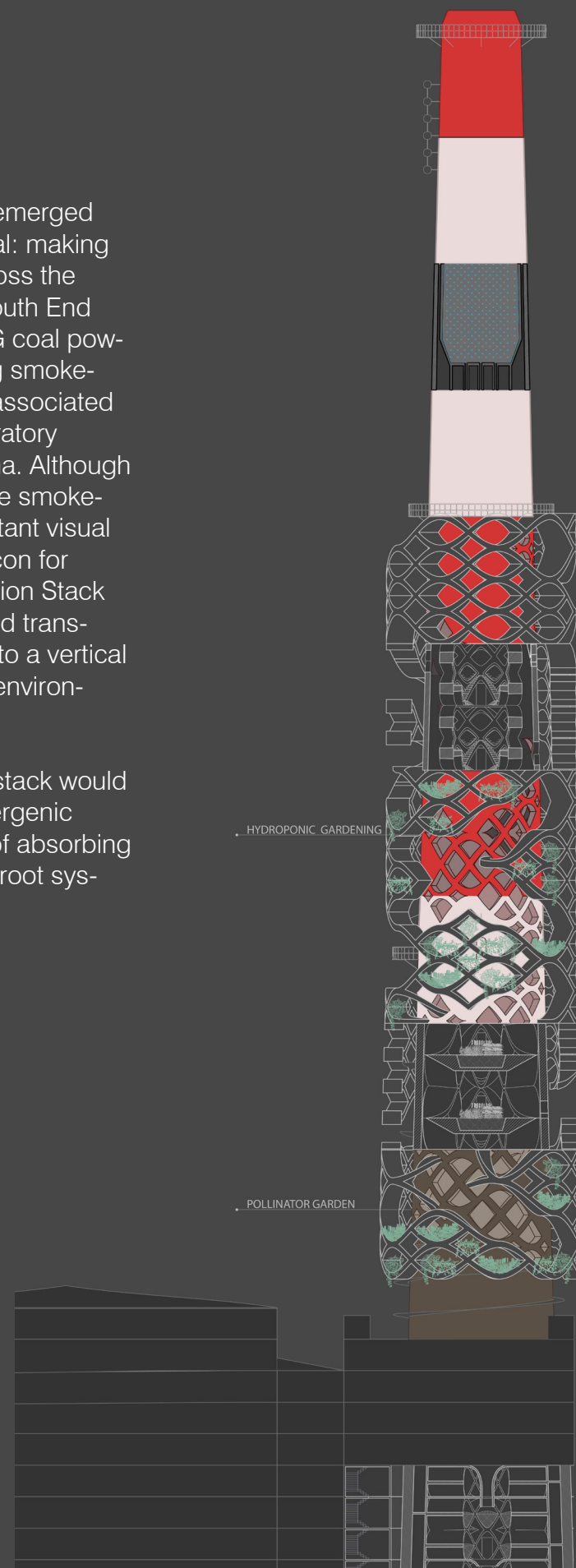


From these conditions emerged the project's central goal: making the invisible visible. Across the water in Bridgeport's South End stands the former PSEG coal power plant and its towering smokestack, a structure long associated with pollution and respiratory illnesses such as asthma. Although slated for demolition, the smokestack remains an important visual landmark and cultural icon for many residents. Pollination Stack proposes preserving and transforming this structure into a vertical pollination garden and environmental research center.

The redesigned smokestack would support native, hypoallergenic plant species capable of absorbing pollutants through their root systems.

HYDROPONIC GARDENING

POLLINATOR GARDEN



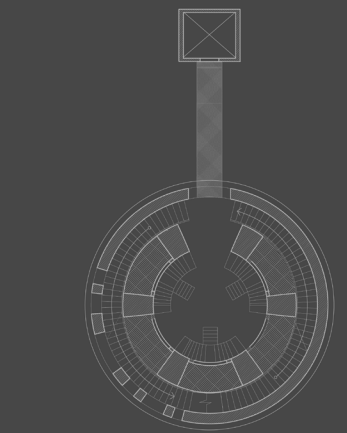
Elevation and Section: Planters hold the Pollination Garden

Acting as environmental indicators, these plants would disperse pollen across Bridgeport through wind and pollinators, encouraging the spread of local flora while simultaneously allowing researchers to monitor where contaminated soil exists within an approximately 4,000-meter radius. By testing the roots and growth patterns of the plants, researchers could better identify and map polluted areas throughout the city. Integrated within the smokestack is a research laboratory intended for use by students and researchers from nearby universities.

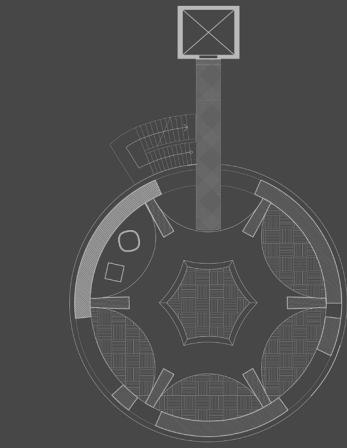
The project ultimately subverts the smokestack's original purpose. Once a symbol and source of pollution, the structure is reimagined as an instrument for environmental detection, remediation, and public awareness. Pollination Stack preserves a defining icon of Bridgeport while giving it new life as a civic and ecological resource dedicated to the well-being of the surrounding community.



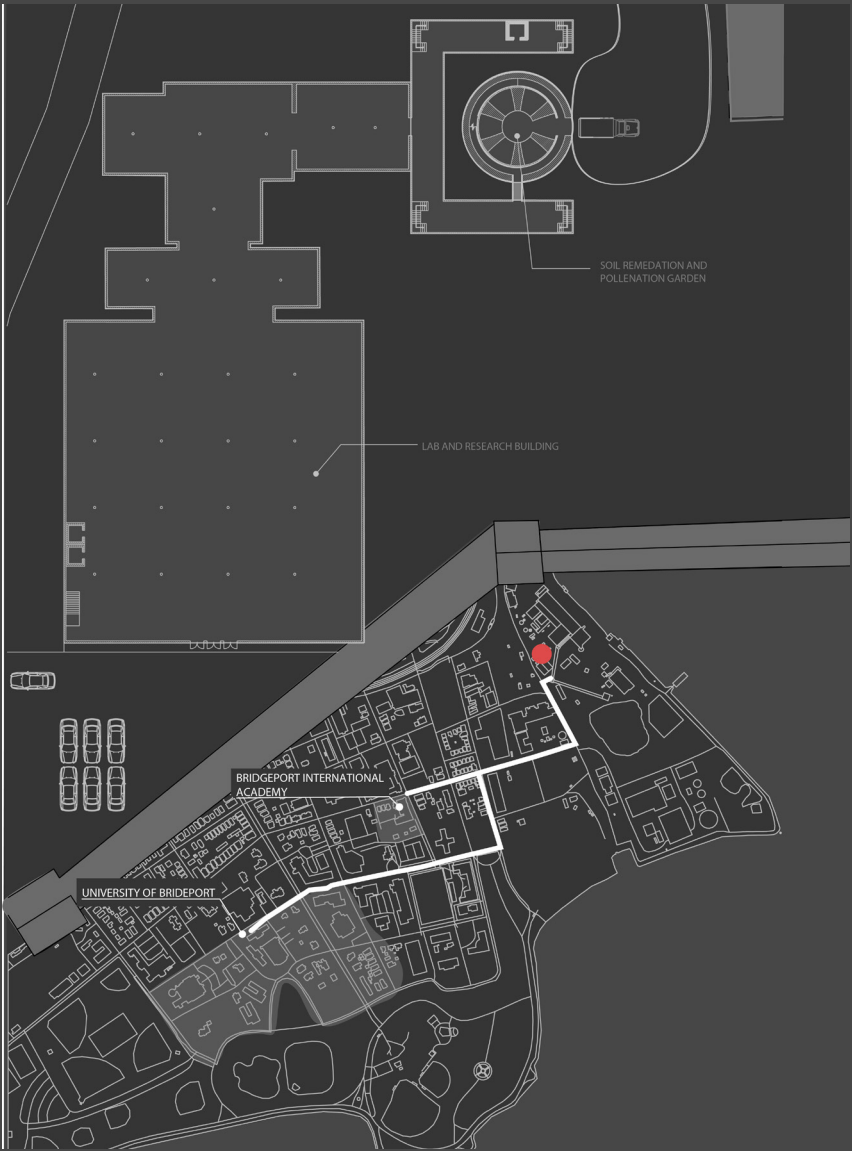
Medium: 3D Print



Research Lab Floor Plan



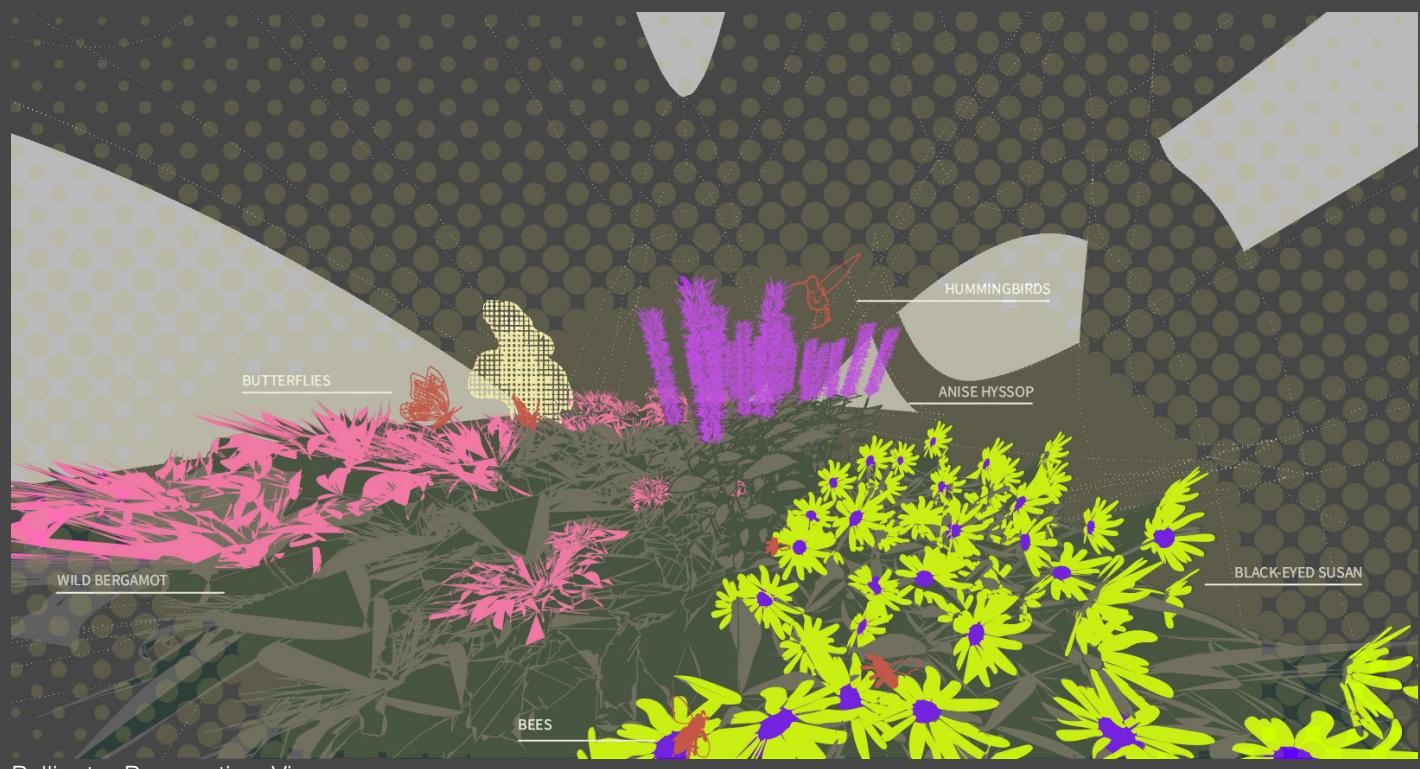
Root and Soil Testing Floor Plan



Site Plan



Pollination Stack Range



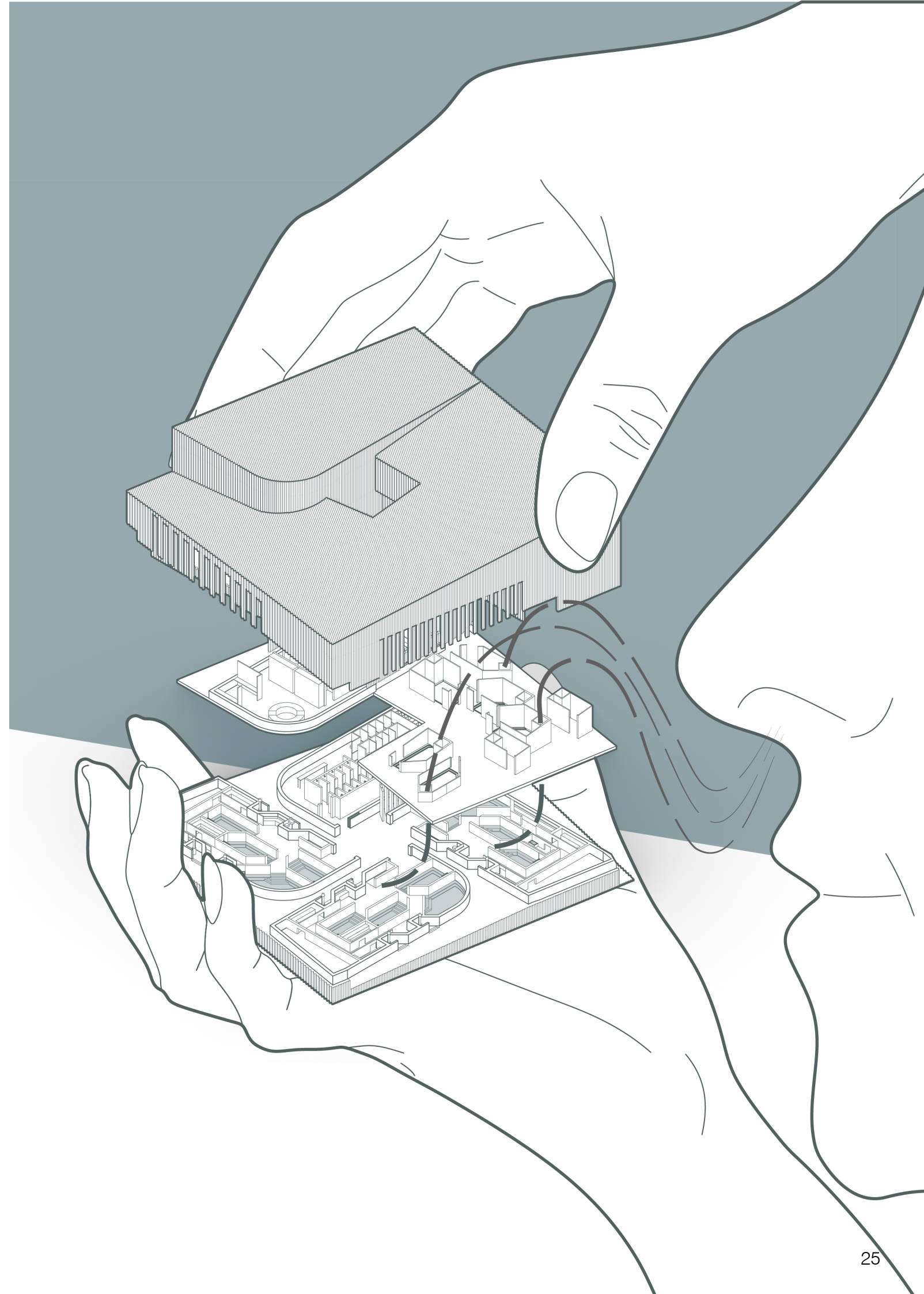
Pollinator Perspective View

Course:
Advance Studio V

Term:
Fall 2025

Instructor:
Leslie Gill & Khoi Nguyen

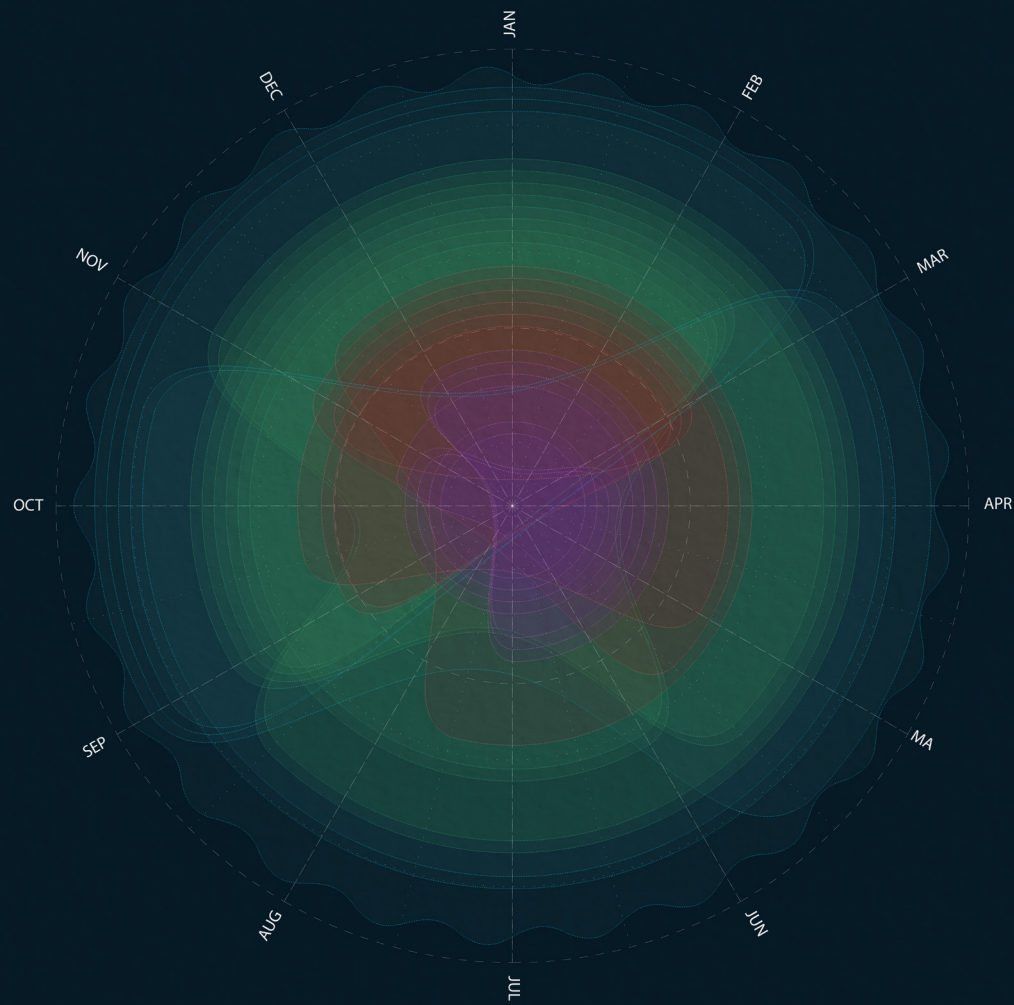
Scent Sauna



What does the Arctic tundra smell like?

There is no single answer. The tundra's smellscape is defined by location, season, temperature, and time, shaped by the total collection of scents present at a specific moment and experienced by a person. Plants, animals, humans, and environmental processes all produce scent. Each carries both a molecular composition and a descriptive, perceptual quality. Together, these layers form a smellscape that is dynamic, fragile, and constantly shifting.

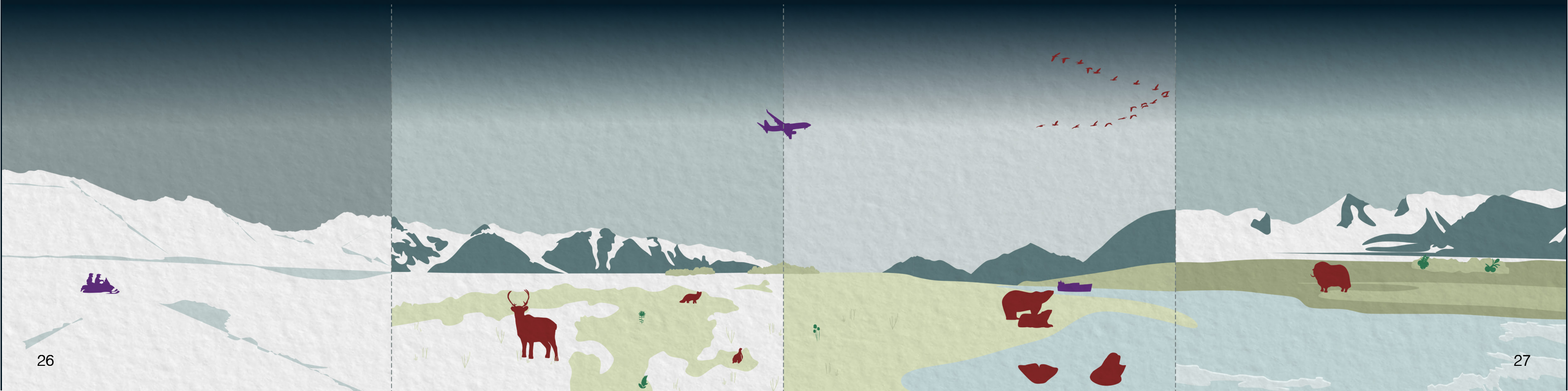
Rather than attempting to preserve a singular scent, this project asks: how can the Arctic tundra's smellscape be archived?



Season Smell Graph: The more stagnet the line the least notable the smell



Arctic Tundra Scent Chart: Various smells that can be found in the tundrfa



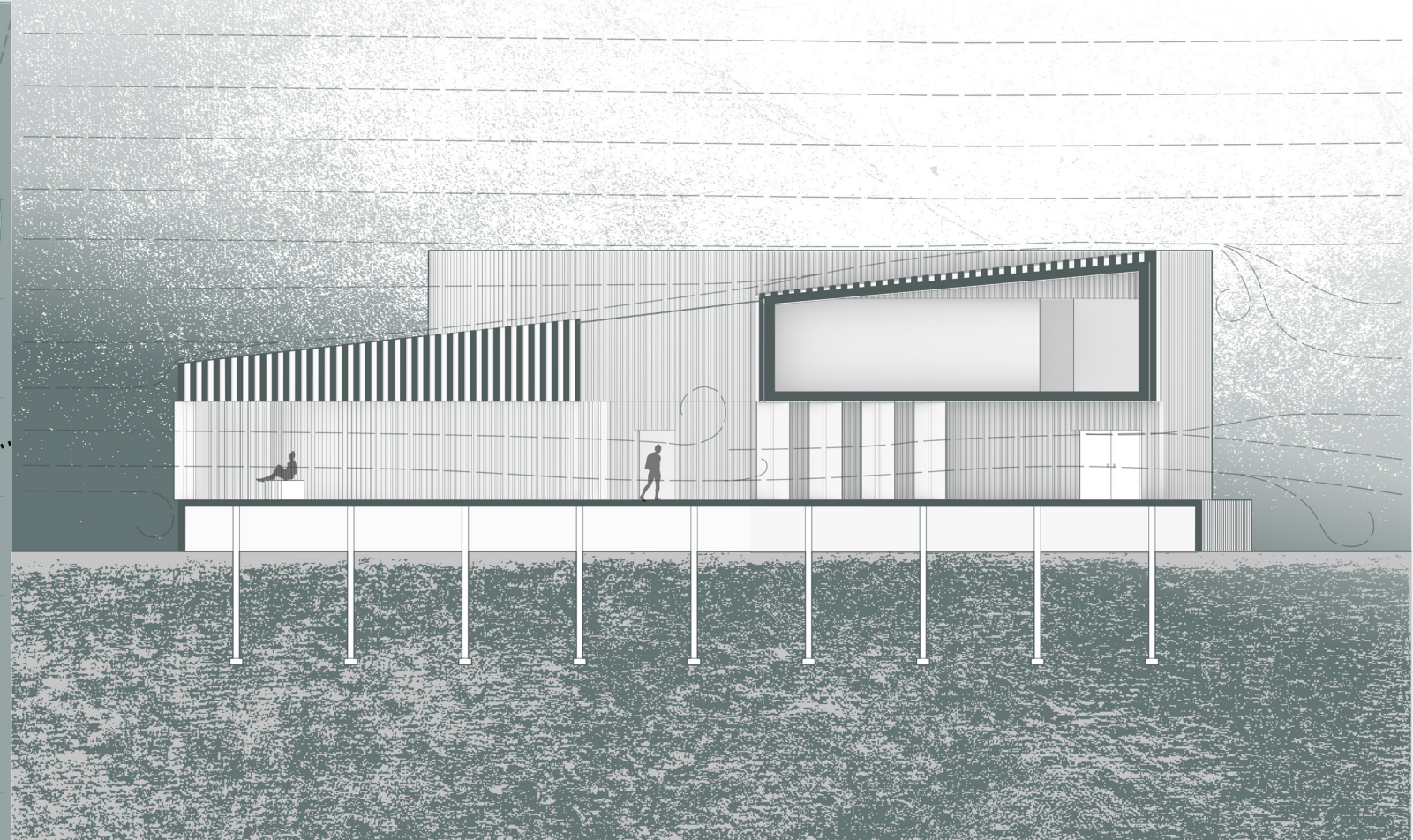
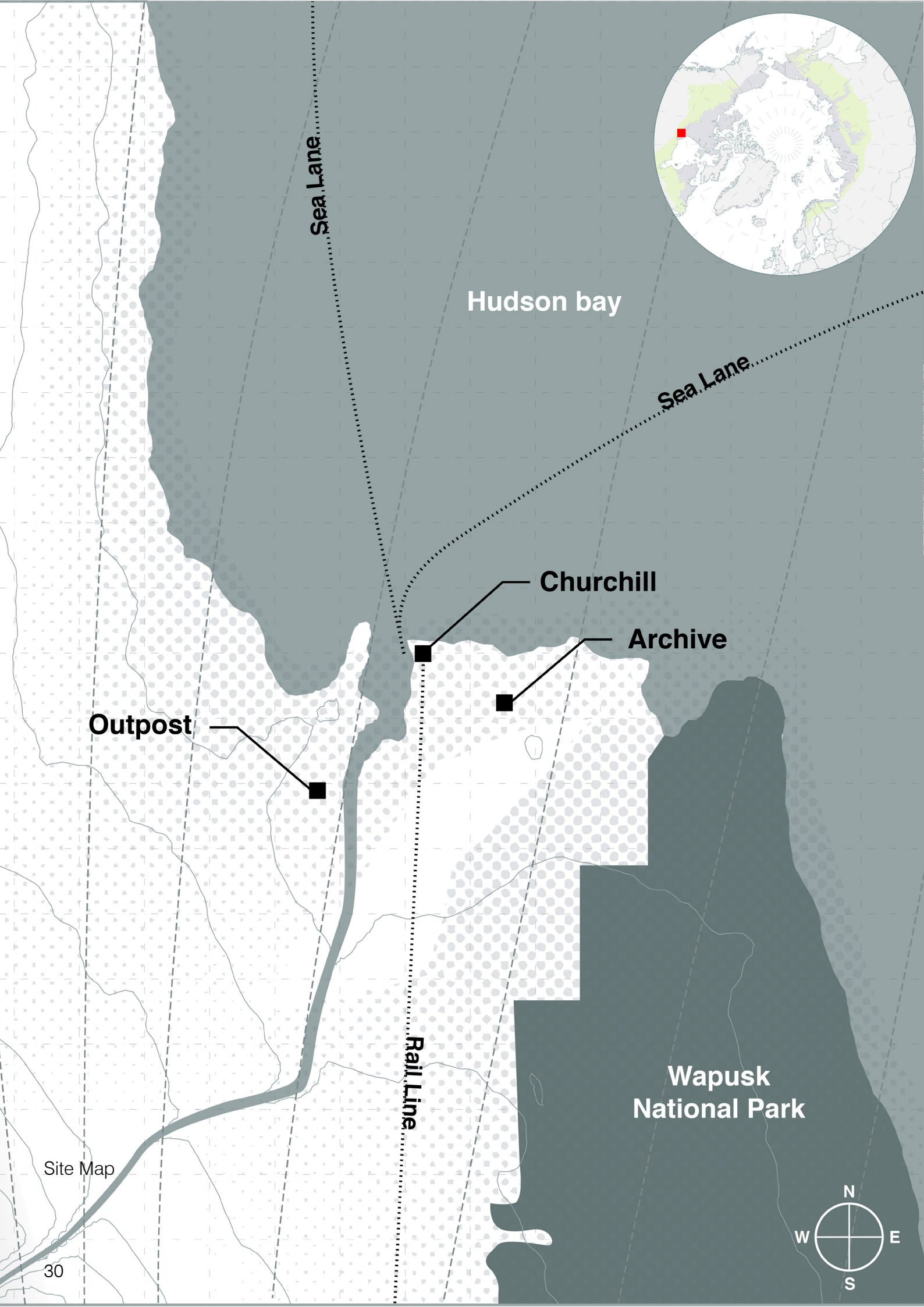
Archiving scent presents unique challenges. Scent molecules deteriorate over time, making them difficult to preserve, and unlike video or sound, smell cannot be easily accessed or replayed by the public. Perception further complicates this process—smell is deeply subjective, shaped by memory, culture, and personal experience.

As a result, archiving smell is inherently a multi-layered task. It requires both a scientific approach—analyzing and recording the molecular composition of scents for future reference—and a spatial framework in which people can physically experience them. While technological tools exist to document the chemical makeup of smell, spaces dedicated to public engagement with scent remain underdeveloped.

The Scent Sauna addresses this by taking the form of a public bath, drawing inspiration from Inuit hygienic and wellness practices. Inuit communities traditionally used *maqivk*—a form of steam and sweat bath—not only for cleansing and healing, but also as a social and communal space. Heat and moisture intensify scent, making the bath an ideal environment for sensory archiving.

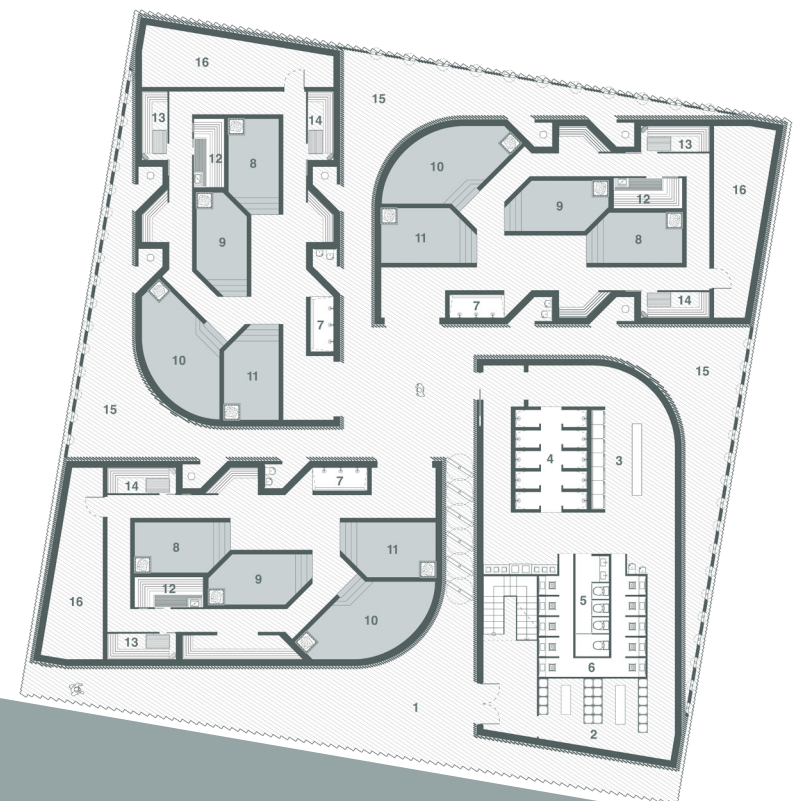


Model: Medium Basswood



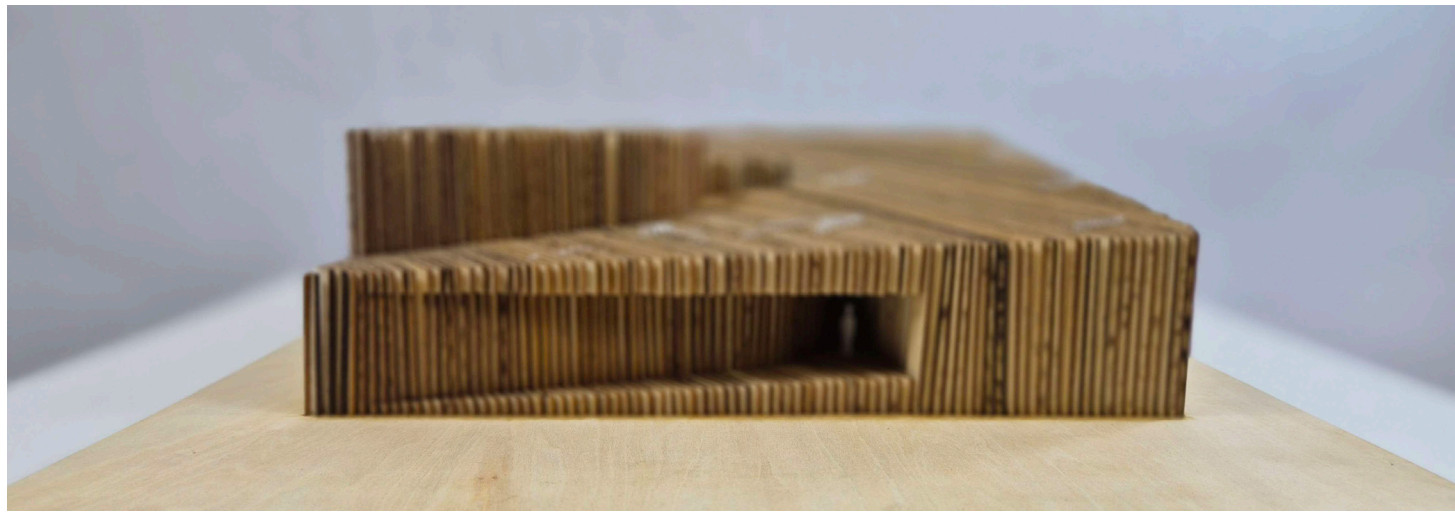
Micro Tundra Section: Similar to a cold plunge, using the properties of the Arctic, the micro tundra allows the minimum amount of arctic air into the building to refresh the scent pallets of users.

The Scent Sauan first floor contains various shared baths that contain various scents from the articThe central area and openings to the outdoors become a micro tundra where the arctic wind can travel in and resfresh smell pallets by drying the part of the nose and when users return to heated areas will moisten the nose and amplify scents



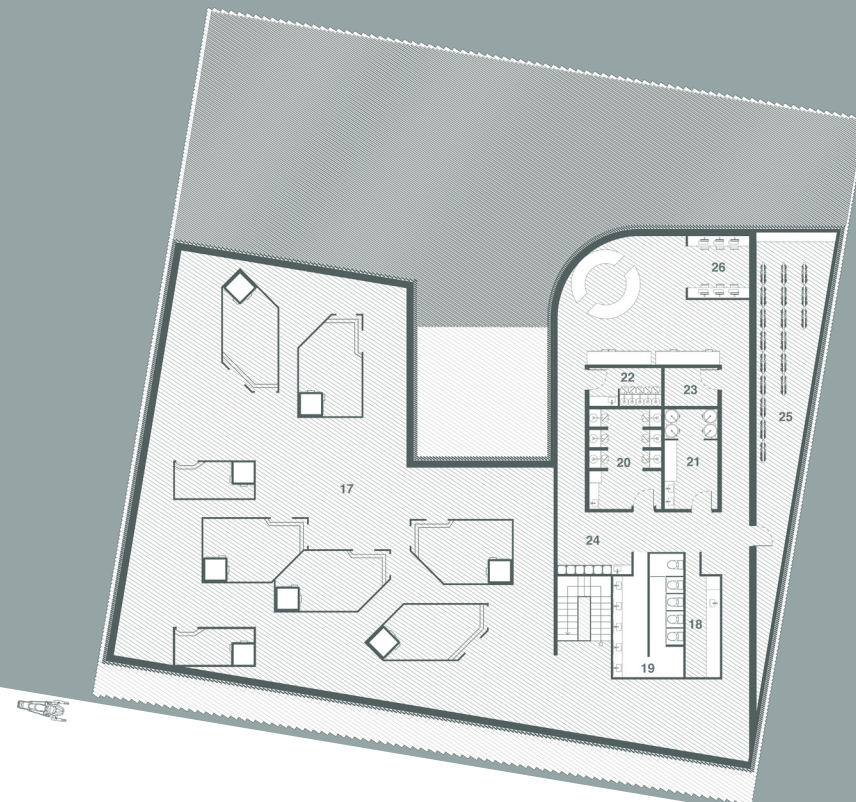
Floor Plan Bathing Level

- | | | | |
|------------------|----------------|-----------------|-------------------|
| 1. Entrance/Exit | 5. Restrooms | 9. Bath 38 ° C | 13. Steam Room |
| 2. Lockers | 6. Vanity Area | 10. Bath 32 ° C | 14. Salt Room |
| 3. Laundry | 7. Rinse Zone | 11. Bath 13 ° C | 15. Micro Tundra |
| 4. Showers | 8. Bath 42 ° C | 12. Sauna | 16. Back of House |



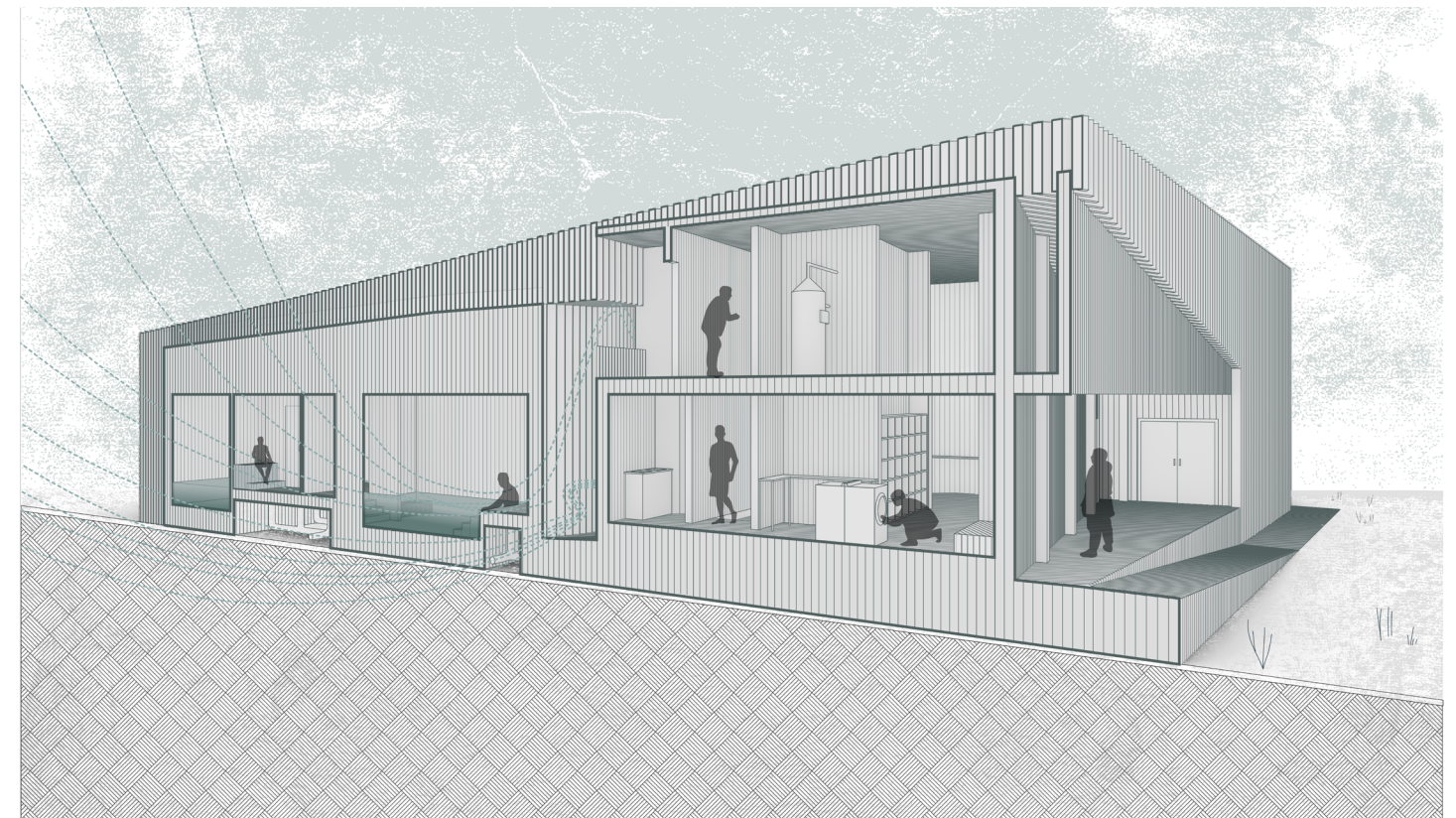
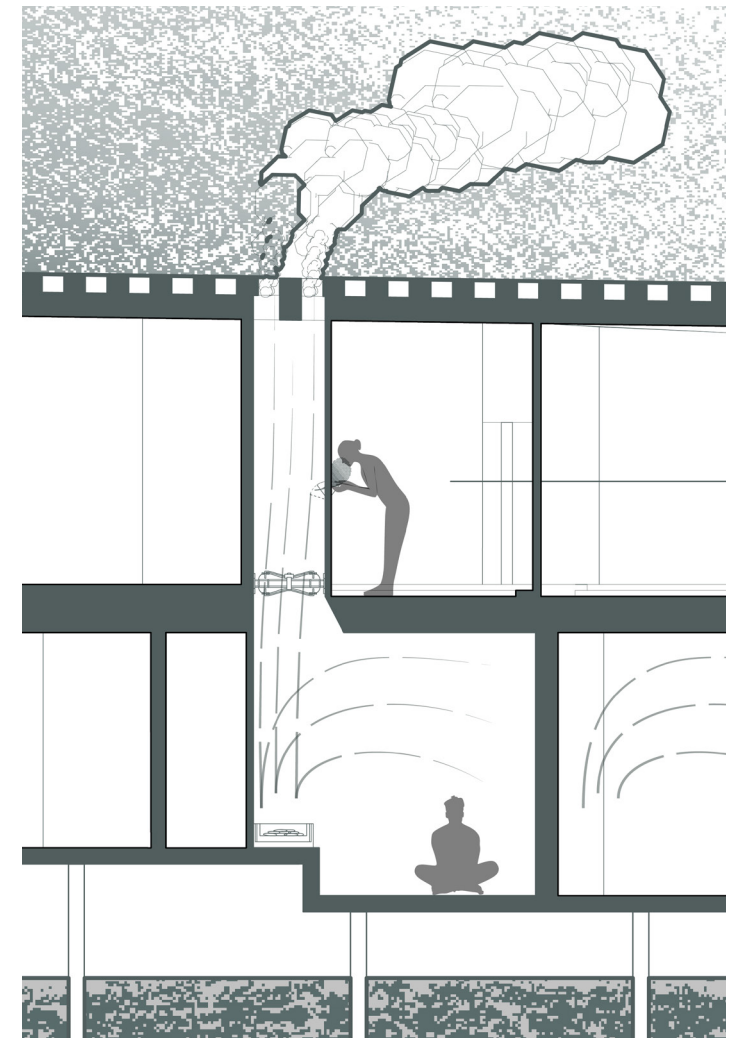
Model: Medium Basswood

- Floor Plan Learning Level
- 17. Smell Archive
- 18. Breakroom
- 19. Restroom
- 20. Hydrosol Distillation Room
- 21. Infusion/Oil Making Room
- 22. Essential Oil Distillation Room
- 23. Storage
- 24. Bottling Room
- 25. Dry Storage
- 26. Data Hub



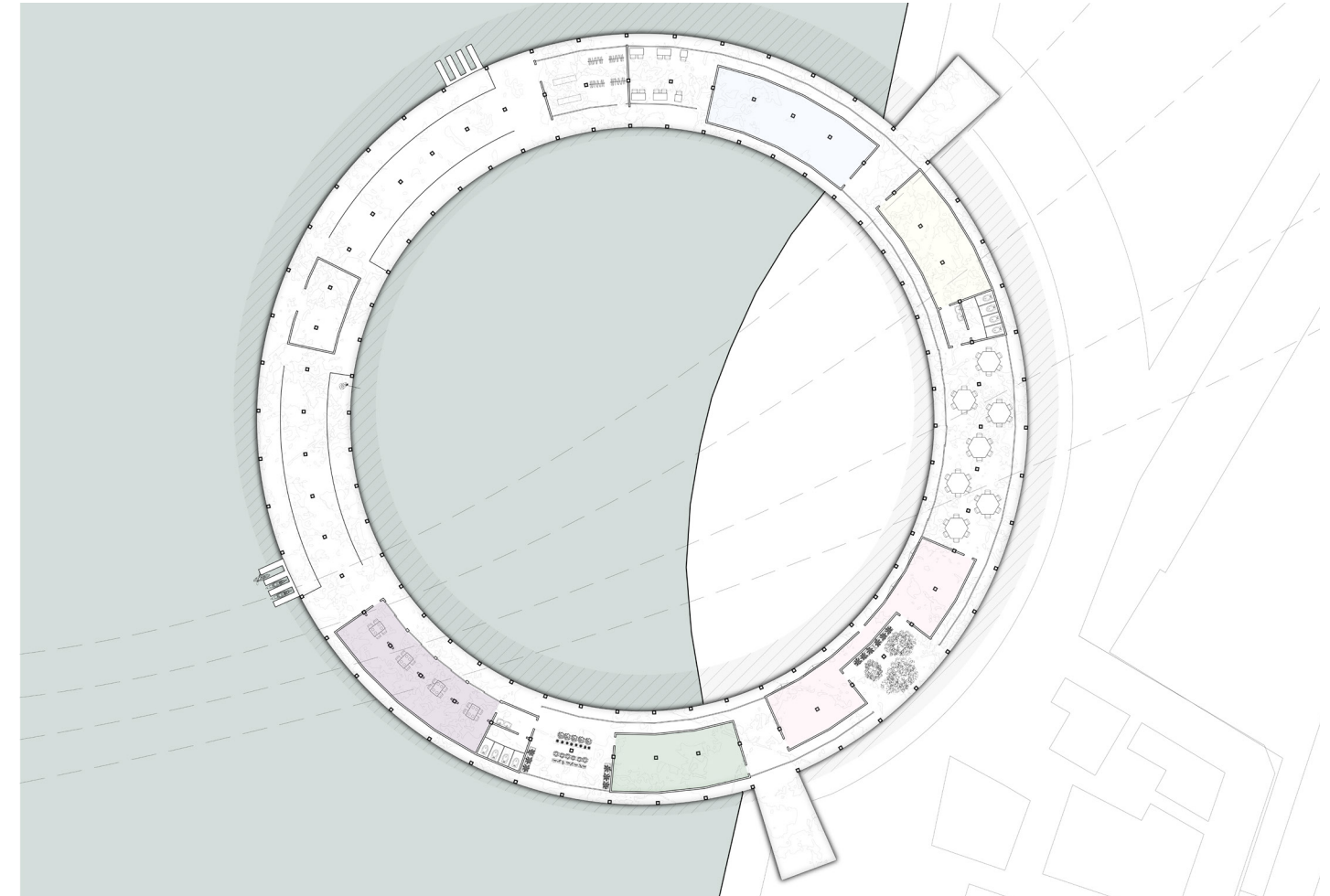
The second floor of the Scent Sauan holds the Archive, where users who do not wish to participate in the bathing aspect of the archive can still experience the same scents as those below. Using the properties of scent particles, the heat from the baths will make the scents rise upwards where fans can help carry the smell upwards towards users on the upper level. In addition to the smell chimneys, there are areas where operators of the suana create the essential oils and smell sticks for the baths below using data from a digital archive.

Image on the right is a detail of how the scent particles will travel upwards



Oblique Section: The two floors of the Archive. The bottom a public bath the top a learning center

Food for Thought is a school centered on the sense of taste and the many experiences that shape it, including growing, catching, preparing, cooking, and sharing food. Unlike sight or sound, taste is deeply influenced by memory and the other senses, making it both a physical and emotional experience. By encouraging children to actively explore their taste buds, the project aims to support cognitive development, reduce selective eating habits, encourage healthier eating, and promote cultural exploration through food.

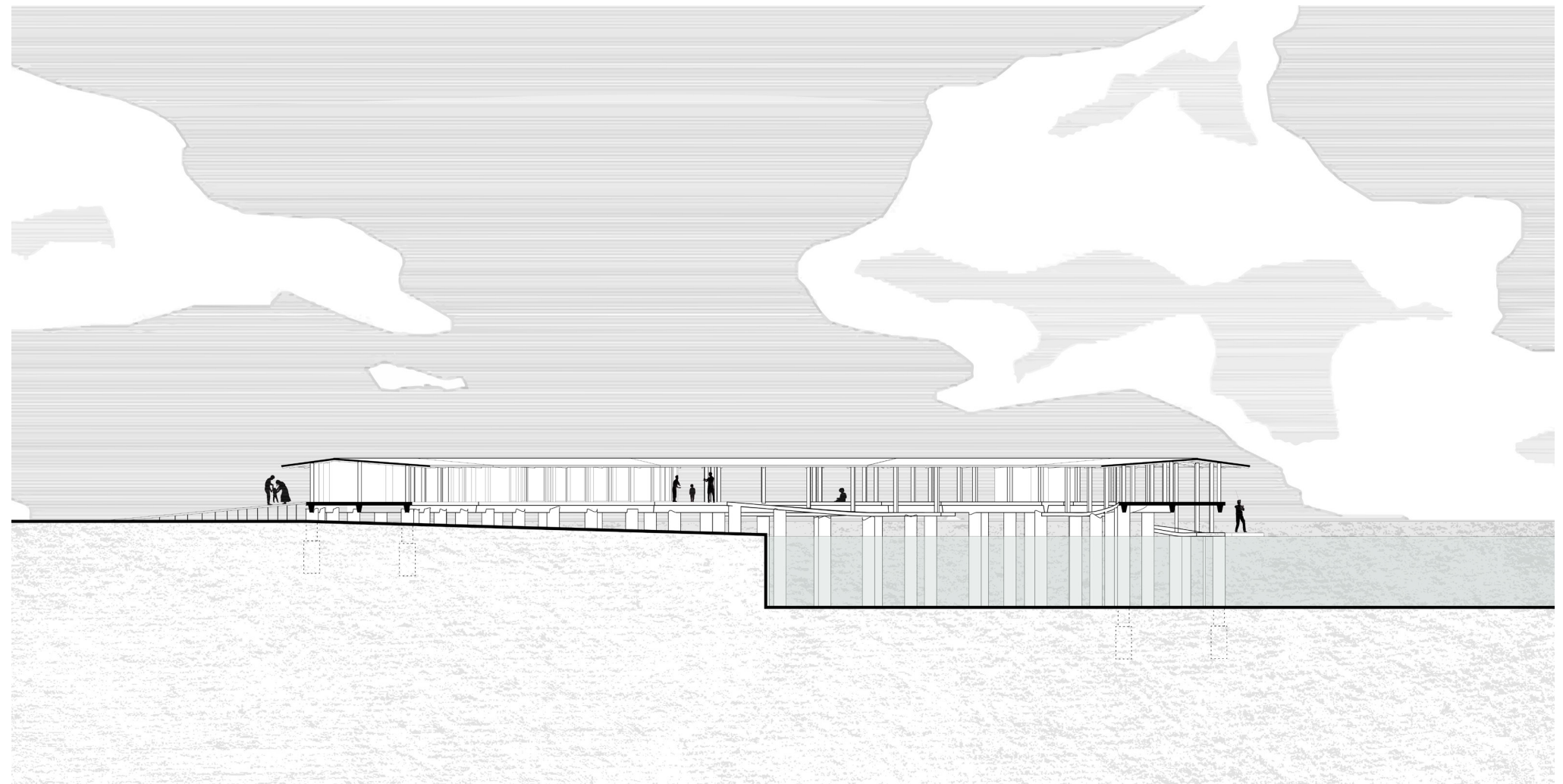


Course:
Advance Studio VI

Term:
Spring 2026

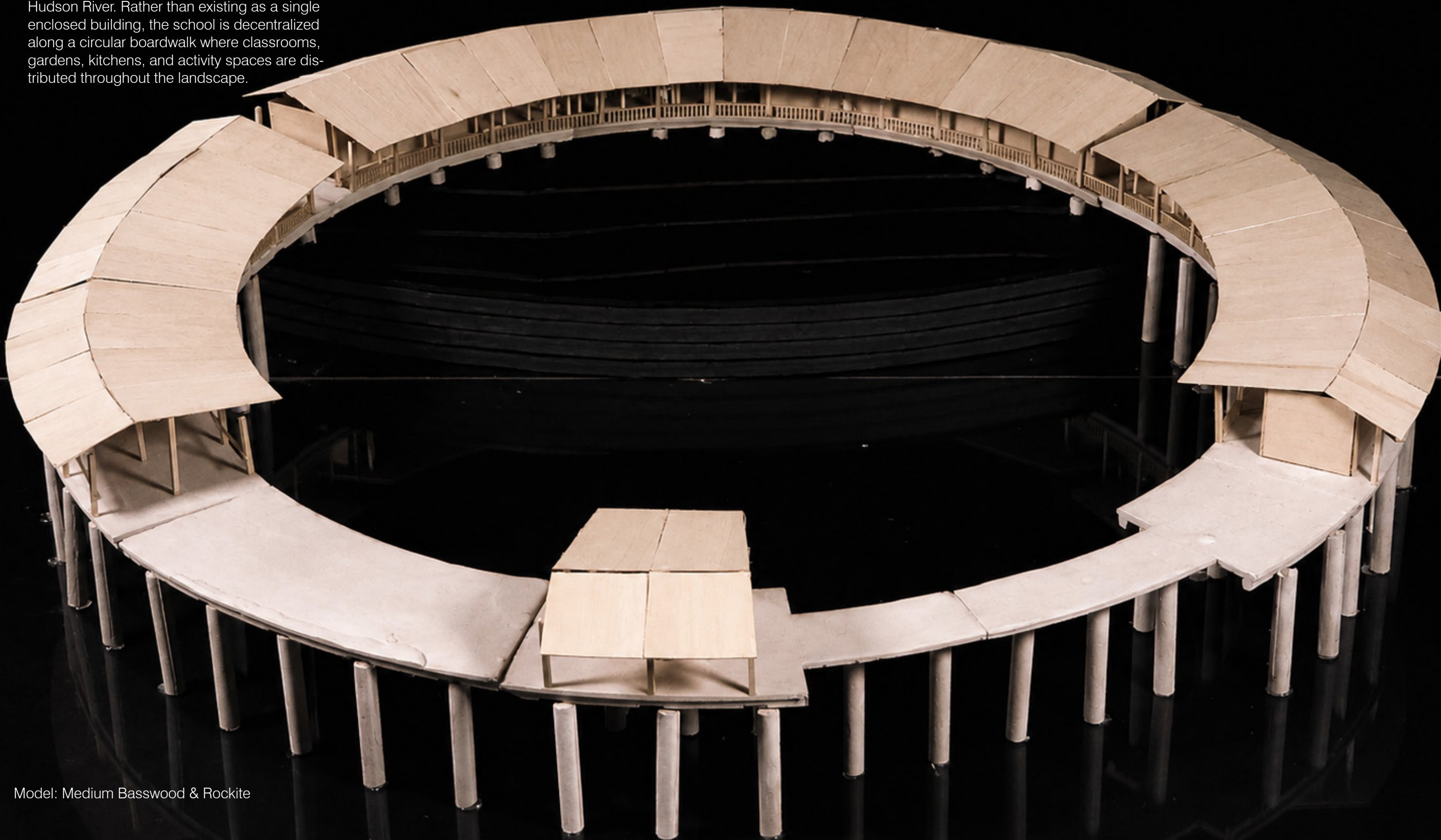
Instructor:
Takaharu & Yui Tezuka + Abraham Murrell

Food for Thought

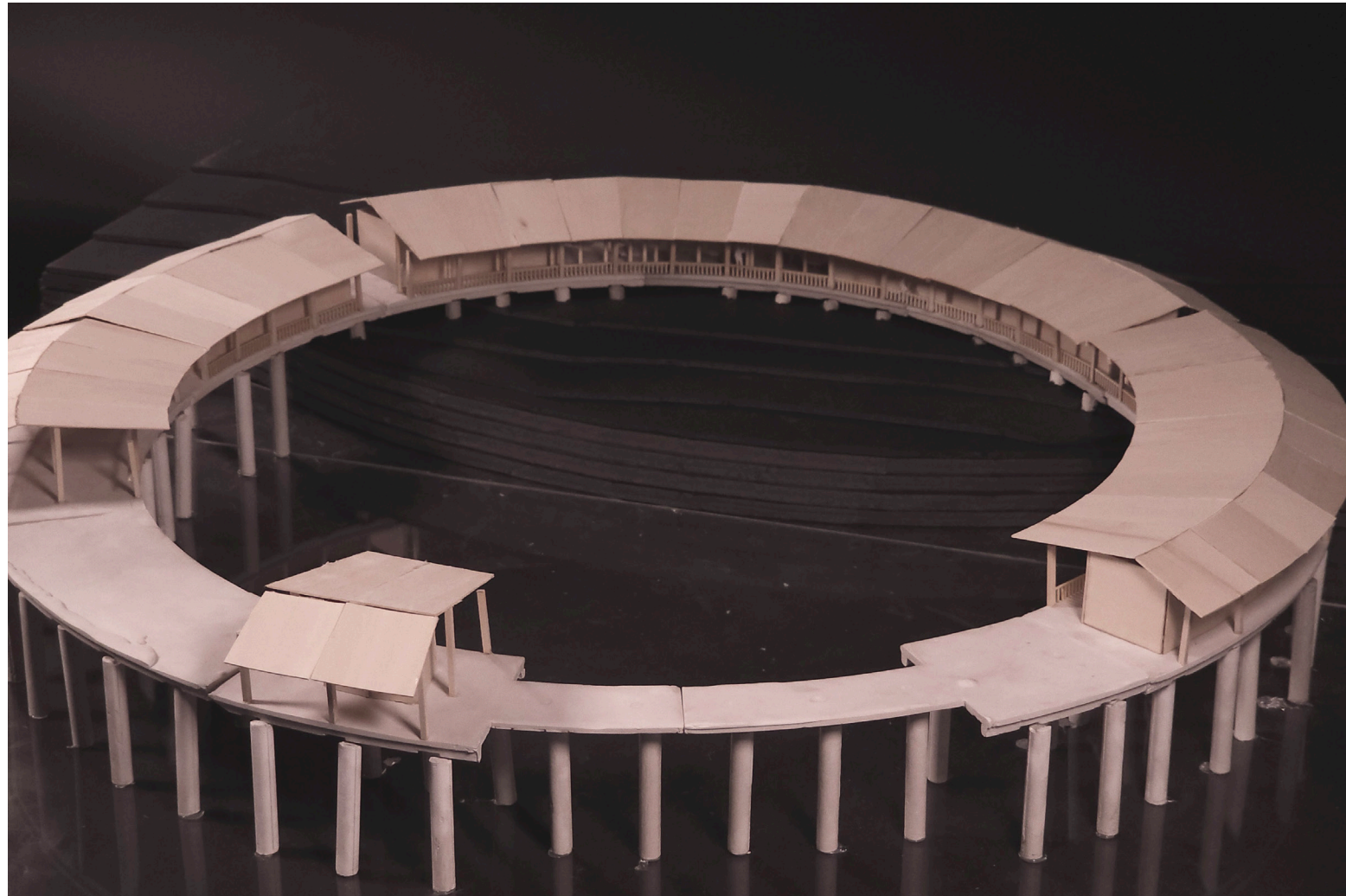


The school is located at North Cove in New York City's Financial District, a site chosen in reference to the city's historical ecological relationship with seafood before the pollution of the Hudson River. Rather than existing as a single enclosed building, the school is decentralized along a circular boardwalk where classrooms, gardens, kitchens, and activity spaces are distributed throughout the landscape.

As students move along the boardwalk, they engage with a variety of lessons and hands-on activities such as gardening, fishing, boating, and food preparation.



Model: Medium Basswood & Rockite



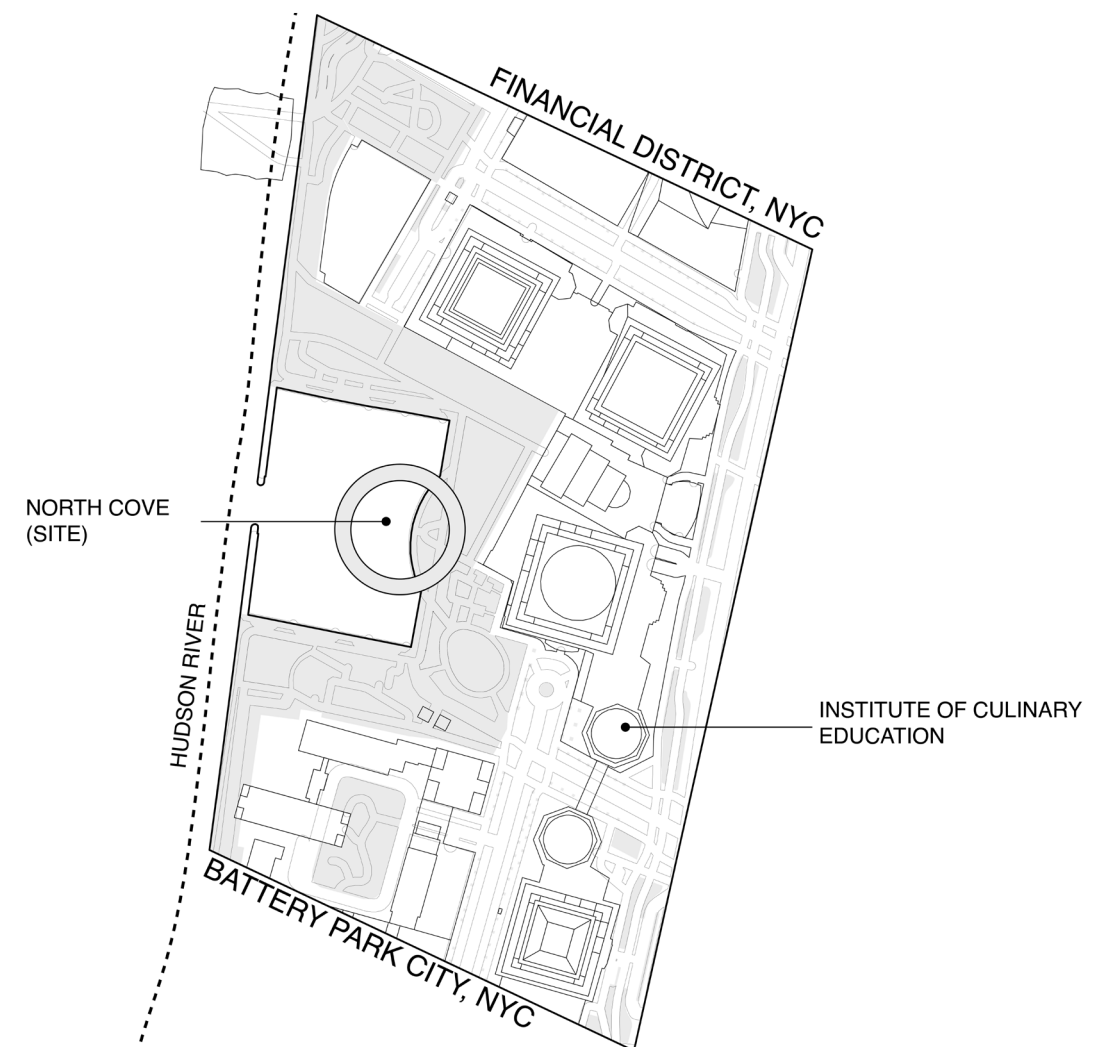
Knowledge gathered from each experience is ultimately brought back into the kitchen, where students apply what they have learned through the collective act of cooking lunch. In this way, subjects such as science, ecology, agriculture, culture, and collaboration become directly connected to the food students eat every day.

The daily routine of the school is structured around sensory engagement. In the morning, students are welcomed by the smell of breakfast, using scent as a way to awaken the senses and prepare for learning.

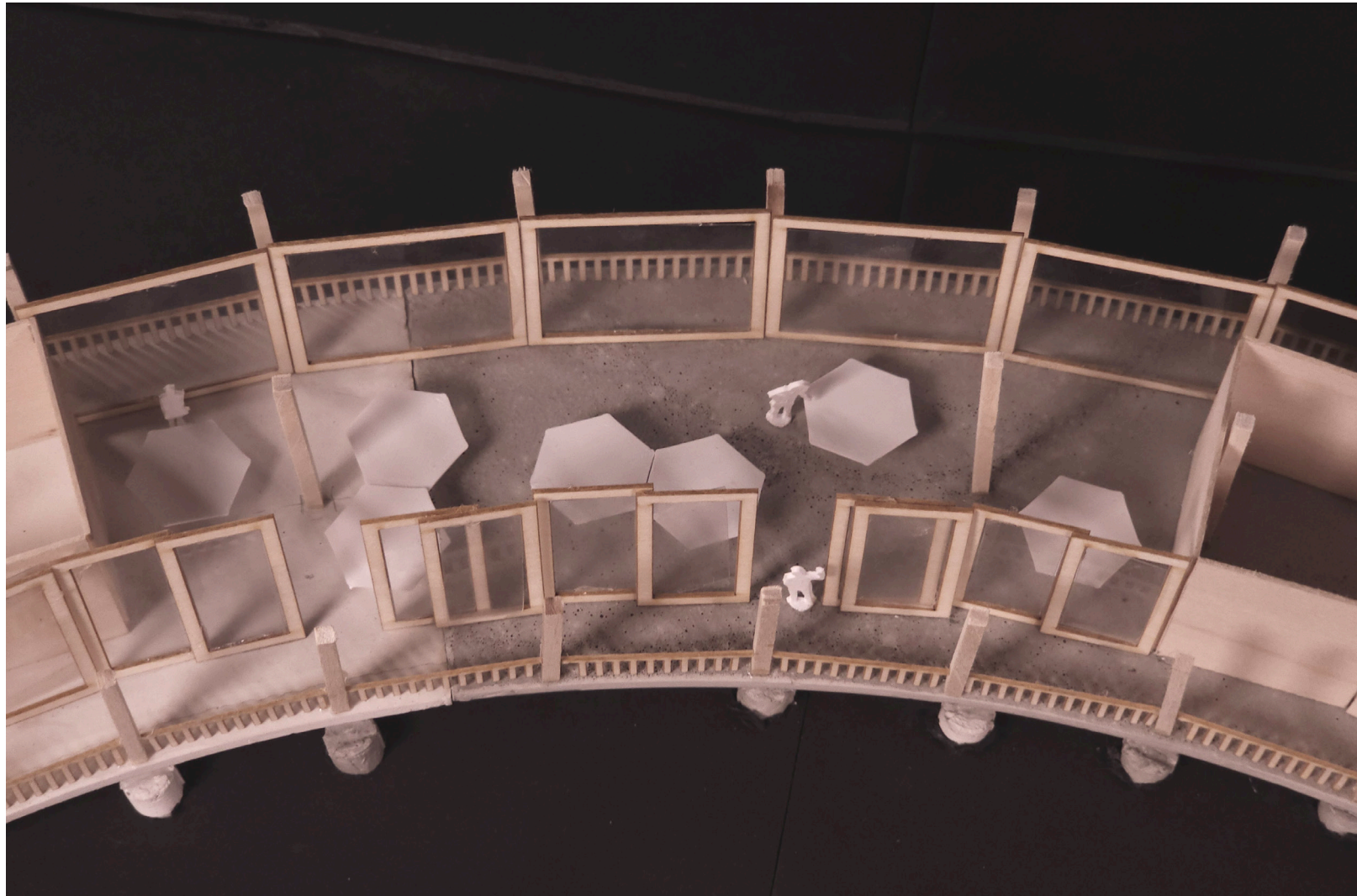


Mid-morning is dedicated to more traditional classroom instruction, where students gain knowledge they can later apply in the kitchen. At lunchtime, students divide into groups to gather ingredients, harvest produce, or collect oysters and fish from areas surrounding the boardwalk. Through these activities, they experience the tactile qualities of ingredients and develop a stronger connection to the origins of their food. Students then work together to prepare a shared meal, creating a sense of accomplishment, cooperation, and community through the collective cooking process.

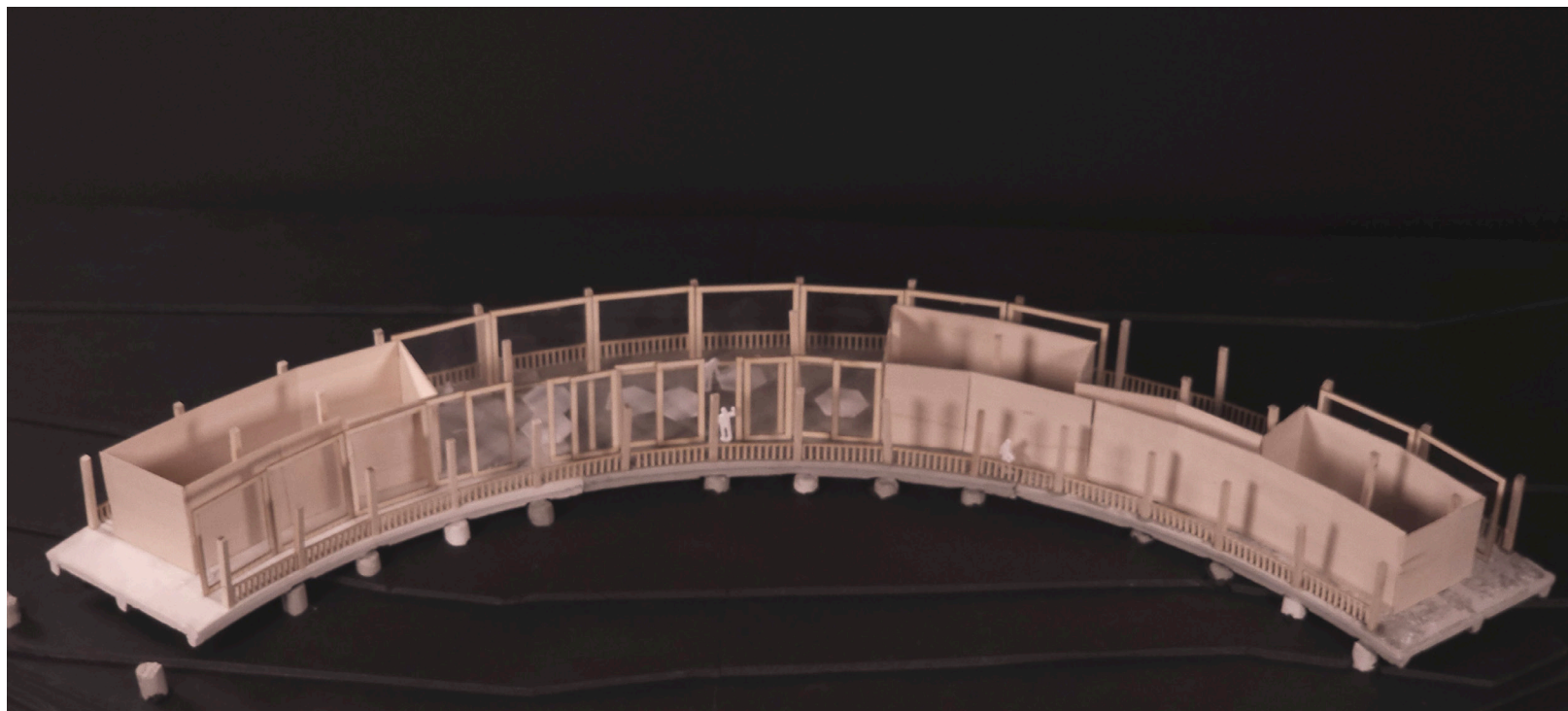
The boardwalk also contains specialized classrooms dedicated to the five primary taste categories: sweet, salty, sour, bitter, and umami. Each space is designed to encourage different forms of social interaction and sensory exploration, ranging from large communal seating areas for shared meals to smaller group settings and individual spaces for more personal taste experimentation



The site is located near the Institute of Culinary Education, which could lead to collaboration between institutions.



By combining movement, sensory discovery, and shared meals, Food for Thought transforms education into an immersive journey where learning is experienced through flavor, curiosity, and collective participation.

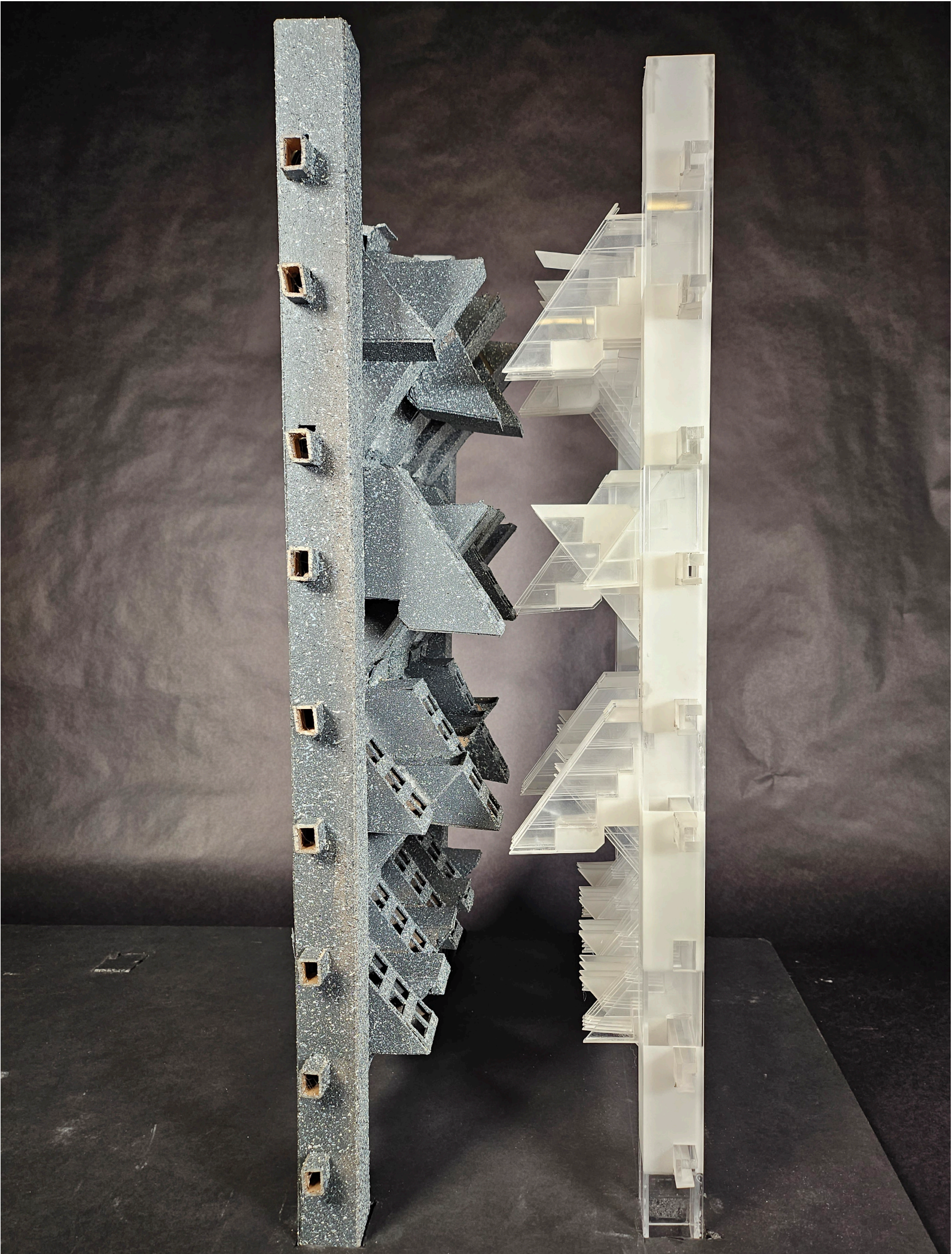


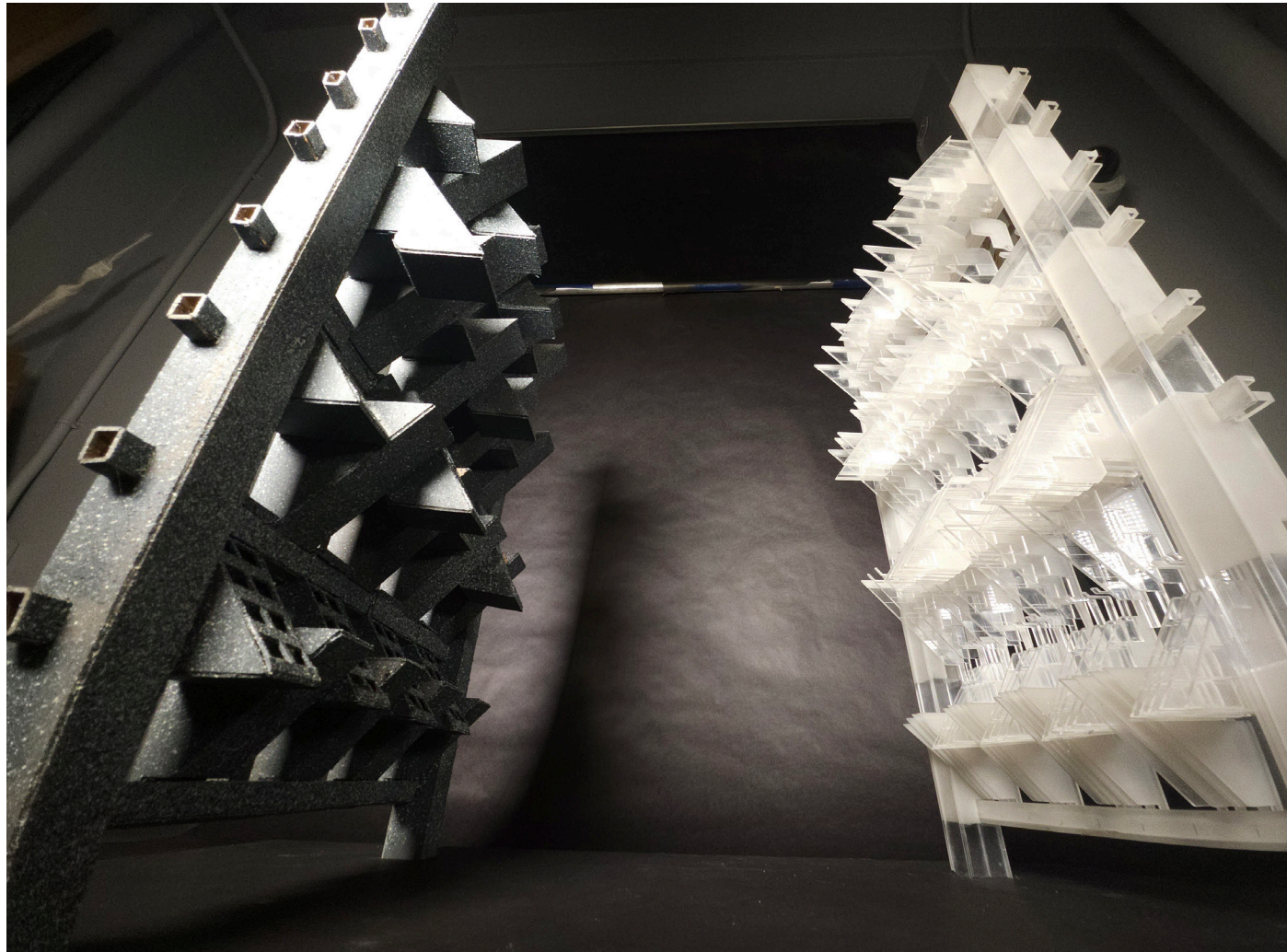
Course:
Architectural Drawing and Representation I

Term:
Fall 2023

Instructor:
Bo Liu

L.O.M.E.X Study



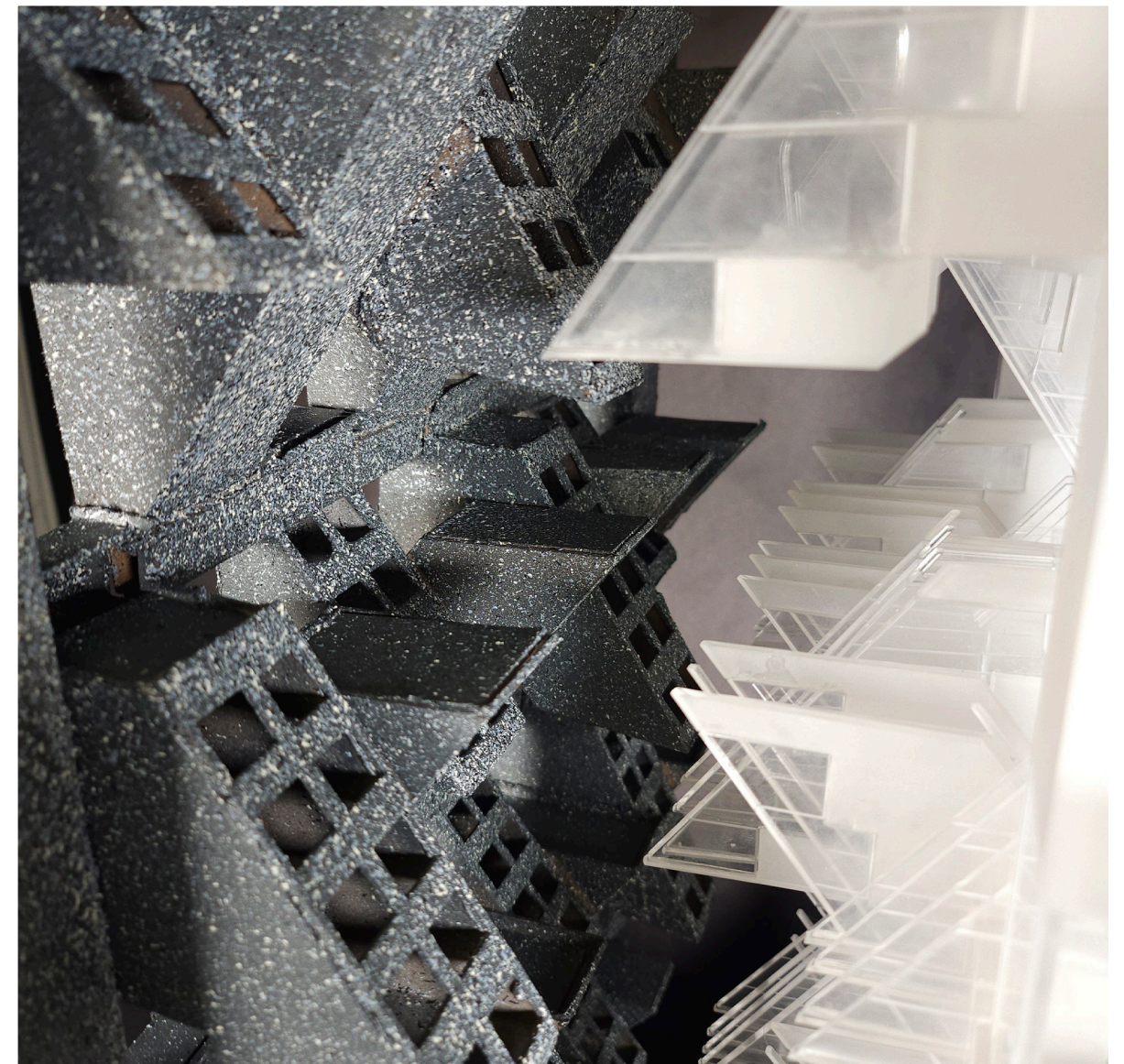


Medium: Chipboard & Acrylic



A study of Paul Rudolph's unbuilt Lower Manhattan Expressway proposal. The model contrasts two visions of life within the megastructure: the left side imagines how the project may have been experienced during the period in which it was originally conceived, while the right reinterprets the structure through a contemporary lens.

Materiality becomes the primary distinction between the two conditions. The historical interpretation is constructed from textured chipboard, evoking the heaviness and permanence of concrete associated with mid-century megastructural architecture. In contrast, the contemporary interpretation utilizes acrylic to suggest glass, transparency, and lightness. The juxtaposition raises questions about how architectural ideals shift over time and whether a predominantly glass megastructure, once unimaginable, could now be technically feasible in the present day.



Past [left] Current Day [Right]

Course:
Waste/Works

Term:
Spring 2025

Instructor:
Amelyn Ng

Collaborator:
Alexandra Zhao

Stoneyard ASMR

EXHIBITION





ASMR



FACTORY

This exhibition explores the sounds and sensory experience of stone manufacturing. Through recordings of industrial processes such as cutting, polishing, finishing, and packaging stone, the project reveals the intense mechanical energy required to produce marble and the large quantity of cutoffs and scraps generated throughout the process. These recordings are paired with ASMR-style audio of slower, non-industrial versions of the same actions, creating a contrast between mass production and intimate, hand-crafted labor. By placing these sounds in dialogue with one another, the exhibition draws attention to the material life of stone beyond its final polished form.



Visitors experience not only the sound of production, but also the hidden labor, force, and waste embedded within architectural materials. The exhibition also incorporates a tactile component, allowing guests to physically sand and interact with the stone off-cuts used in the installation. This hands-on experience transforms the audience from passive listeners into active participants, encouraging a deeper sensory understanding of texture, sound, labor, and material transformation.

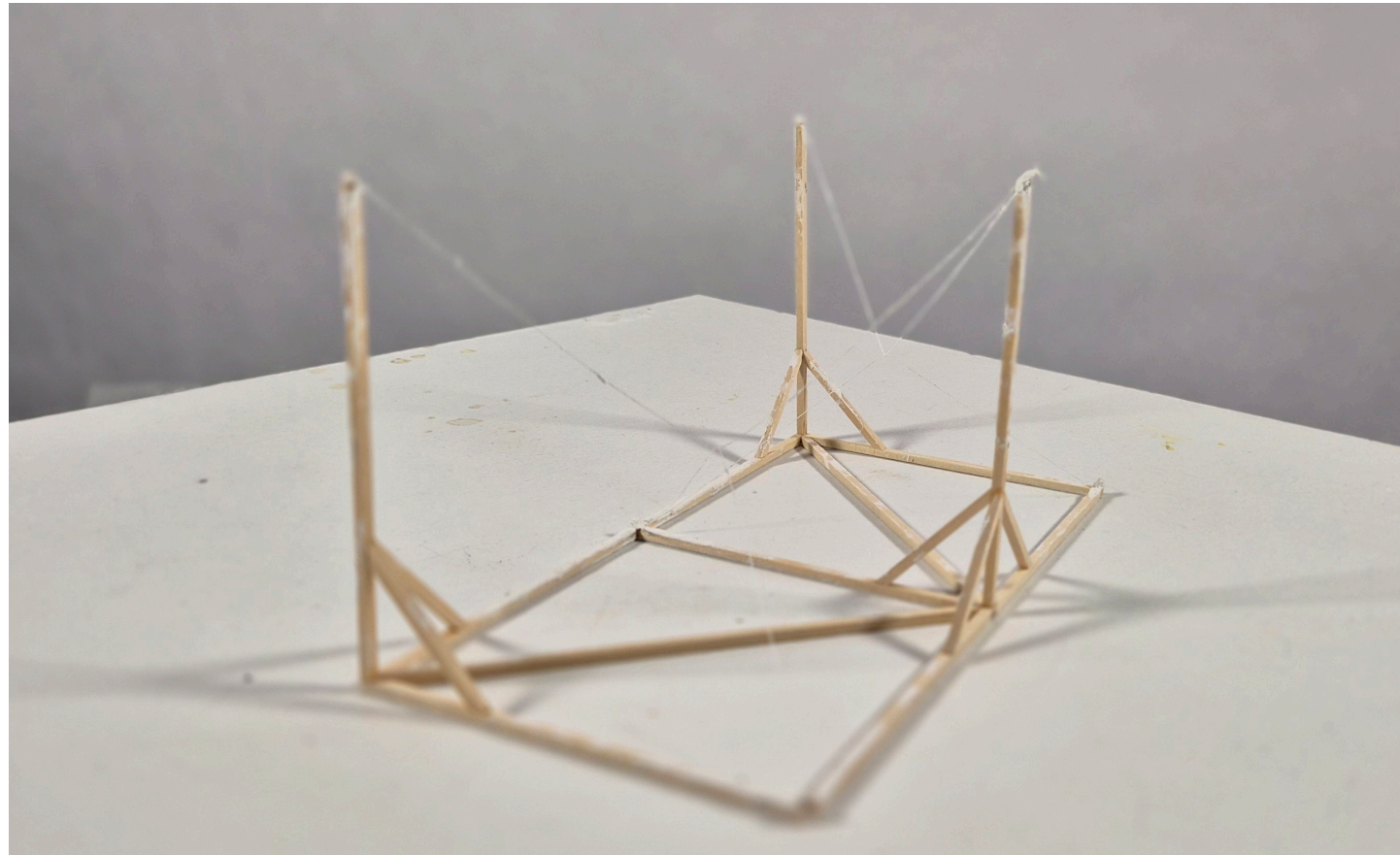
Course:
Tensile/Compression Surfaces

Term:
Fall 2025

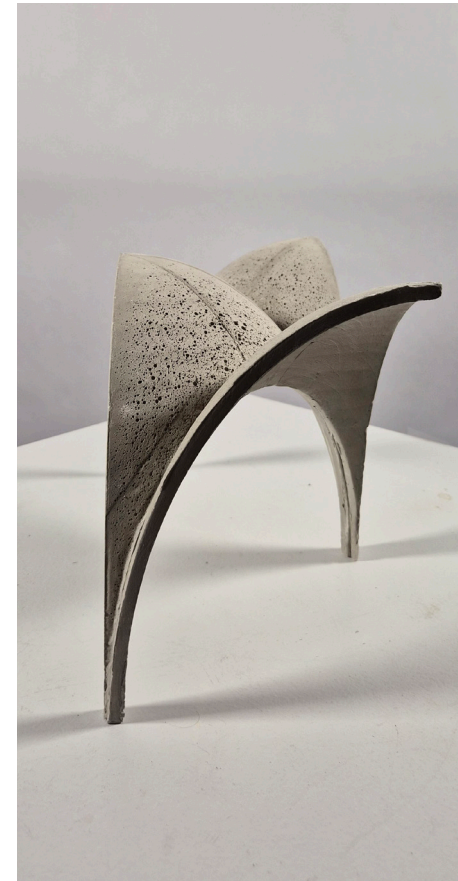
Instructor:
Robert Marino

Compressive Shell





Shell Basis



Medium: Rockite

A shell casting made from Rockite and composed of six individual pieces. The project explored the creation of a unitized shell system capable of being reproduced and assembled into a variety of larger forms and configurations.

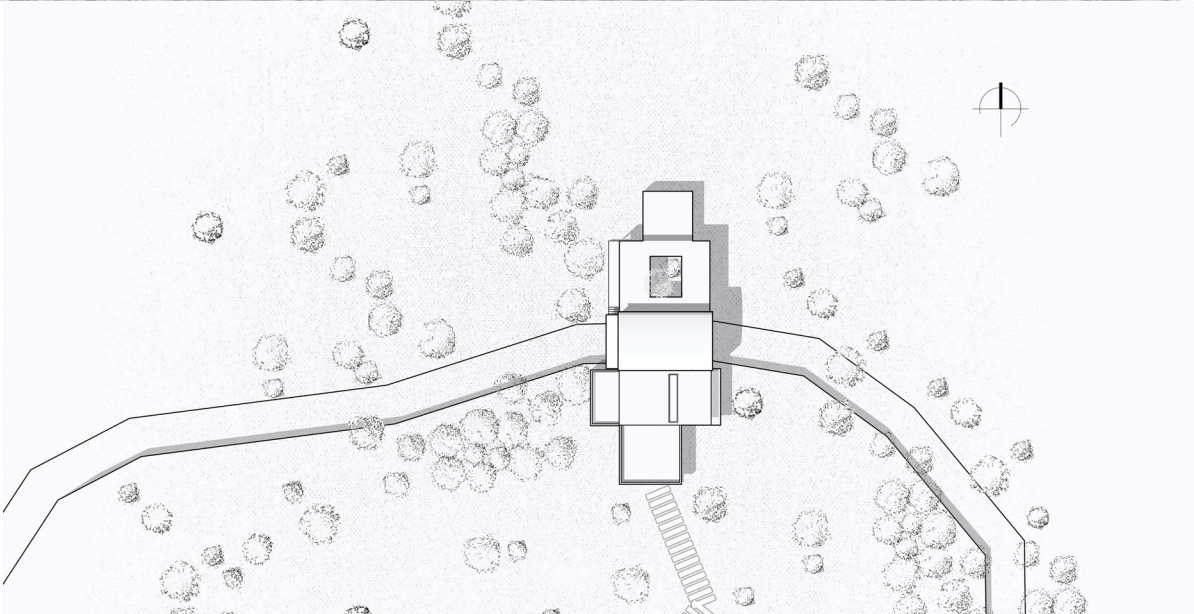
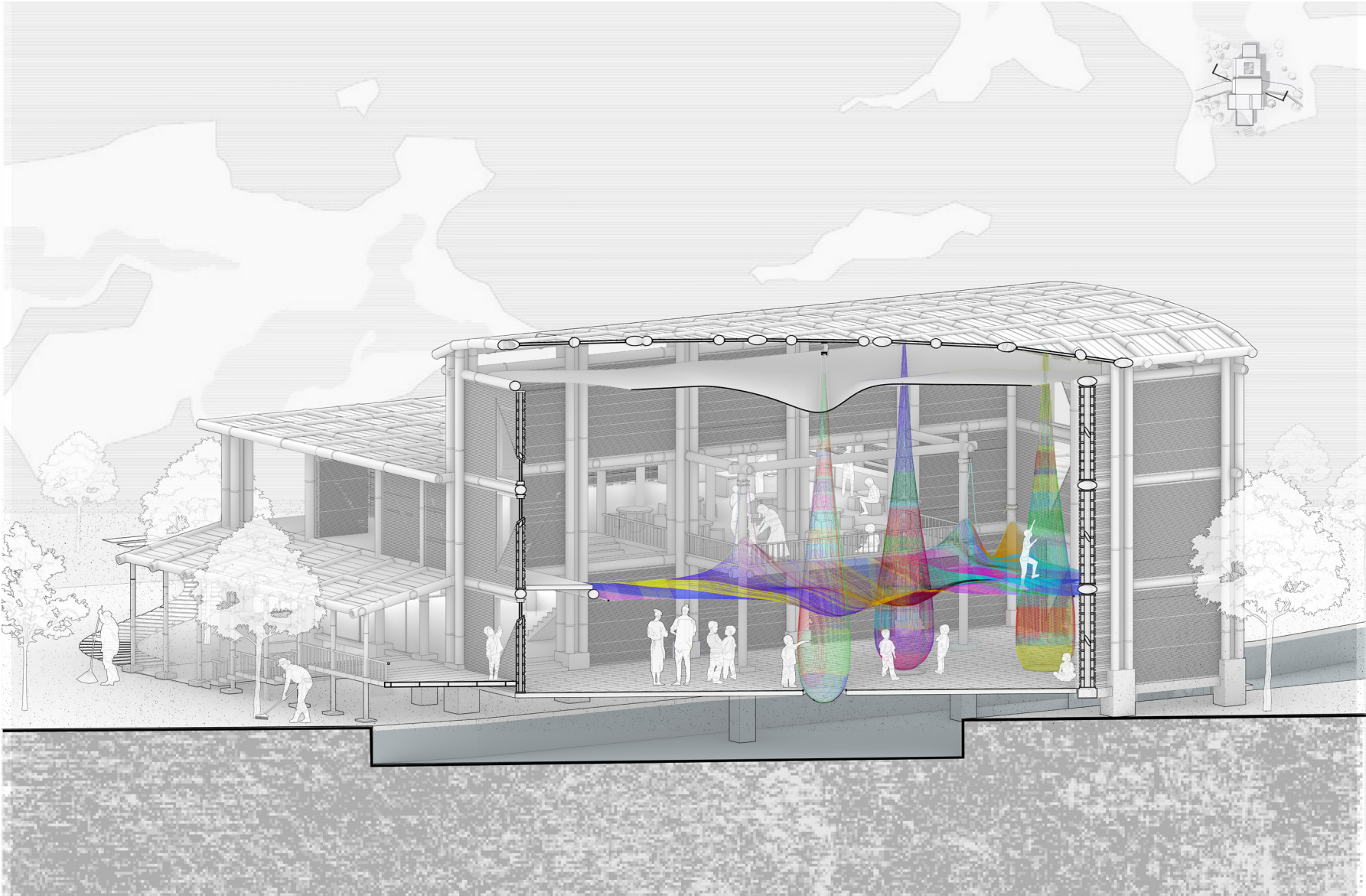


Course:
Designing Spaces for Children

Term:
Spring 2026

Instructor:
Anna Knoell

School Network



A school proposal in El Salvador that bridges across a small river, using play and movement as the central organizing elements of the design. At the heart of the project is a rope-based playground where children can climb, crawl, jump, and gather while remaining visually connected to the flowing water below. The suspended play space transforms circulation into an interactive experience, encouraging exploration, physical activity, and social engagement throughout the school.

The project incorporates traditional bahareque wall construction techniques, adapted from regional Latin American building practices and constructed using locally sourced guadua bamboo.

Course:
Making Senses

Term:
Spring 2026

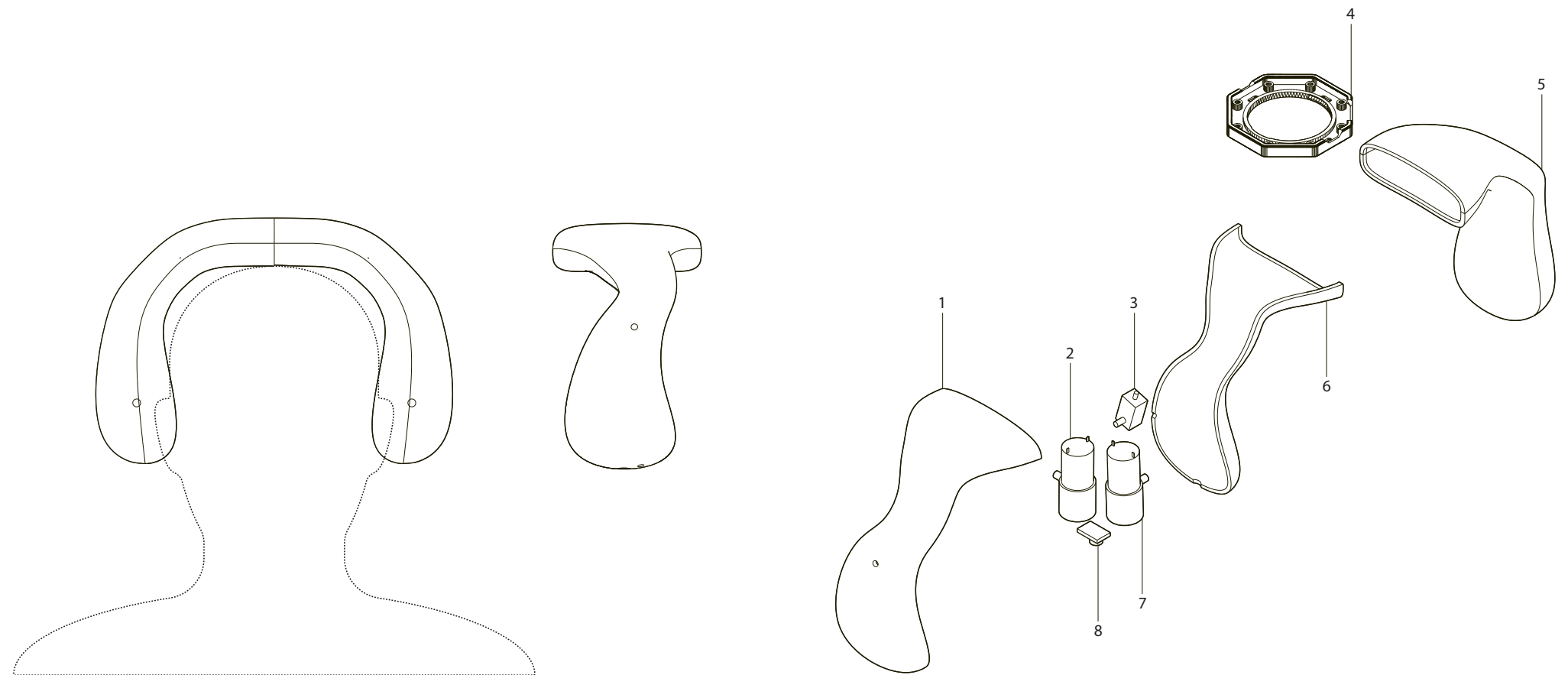
Instructor:
James Nanasca

AIR HEAD





AIR HEAD is an automaton that reacts to loud environments through inflation and movement. When surrounding noise exceeds a certain decibel threshold, the device begins to inflate as a physical response to sound. Depending on the direction of the noise source, either the left or right earpiece expands, allowing the automaton to spatially react to its acoustic environment.



A I R HEAD

AIR HEAD Patent

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