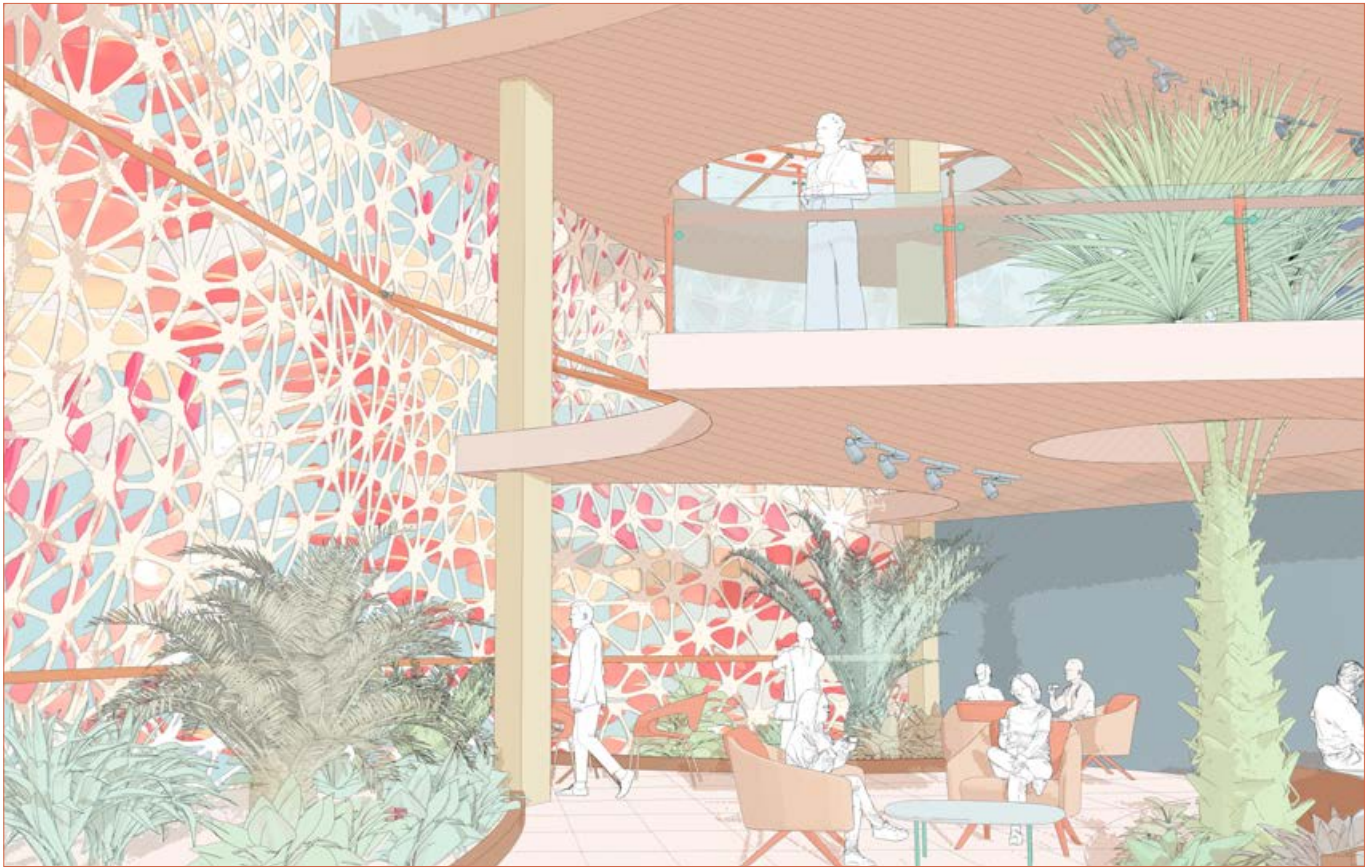
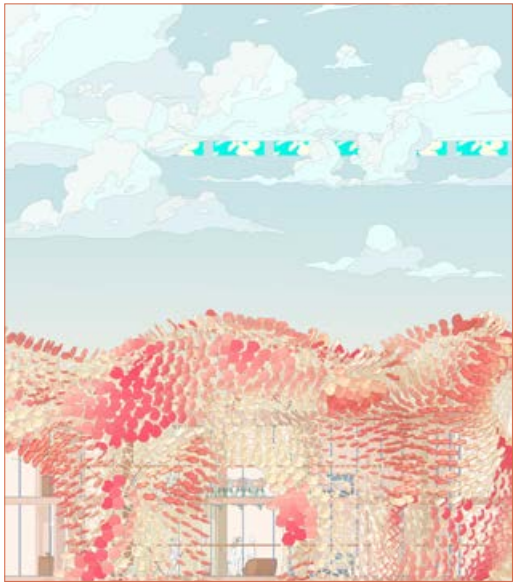
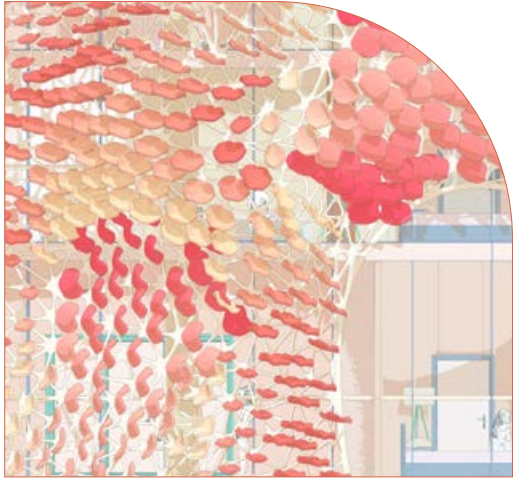
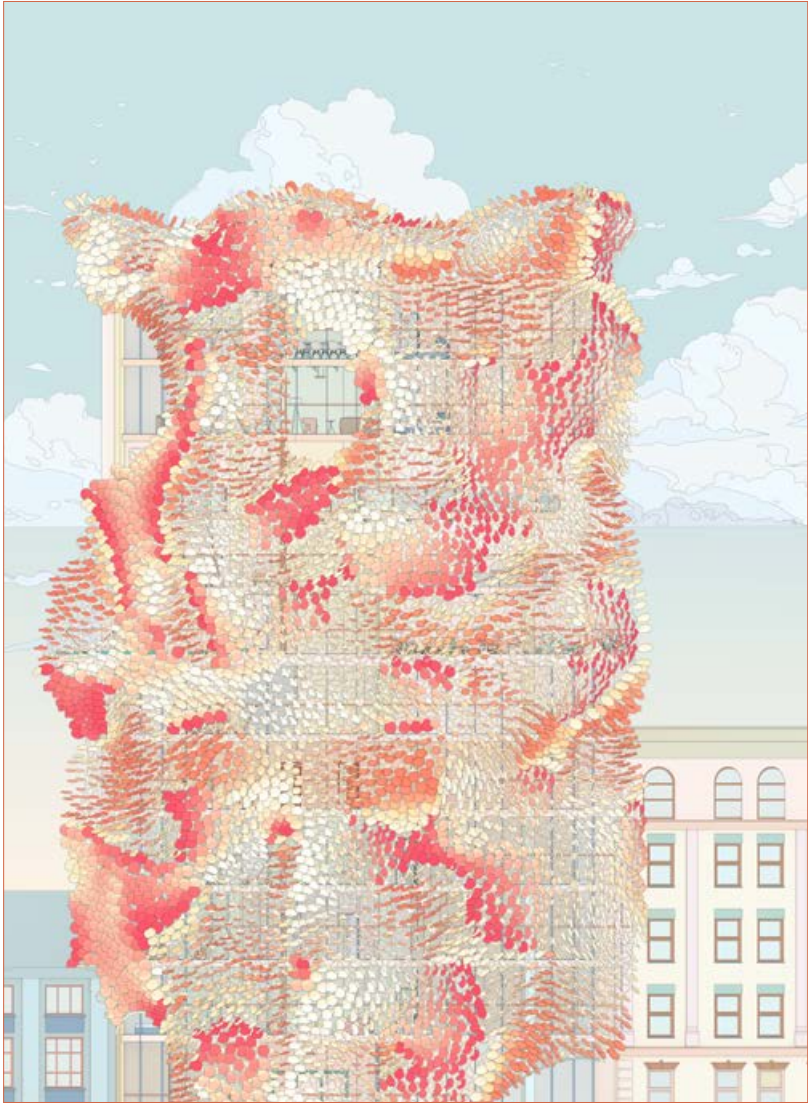
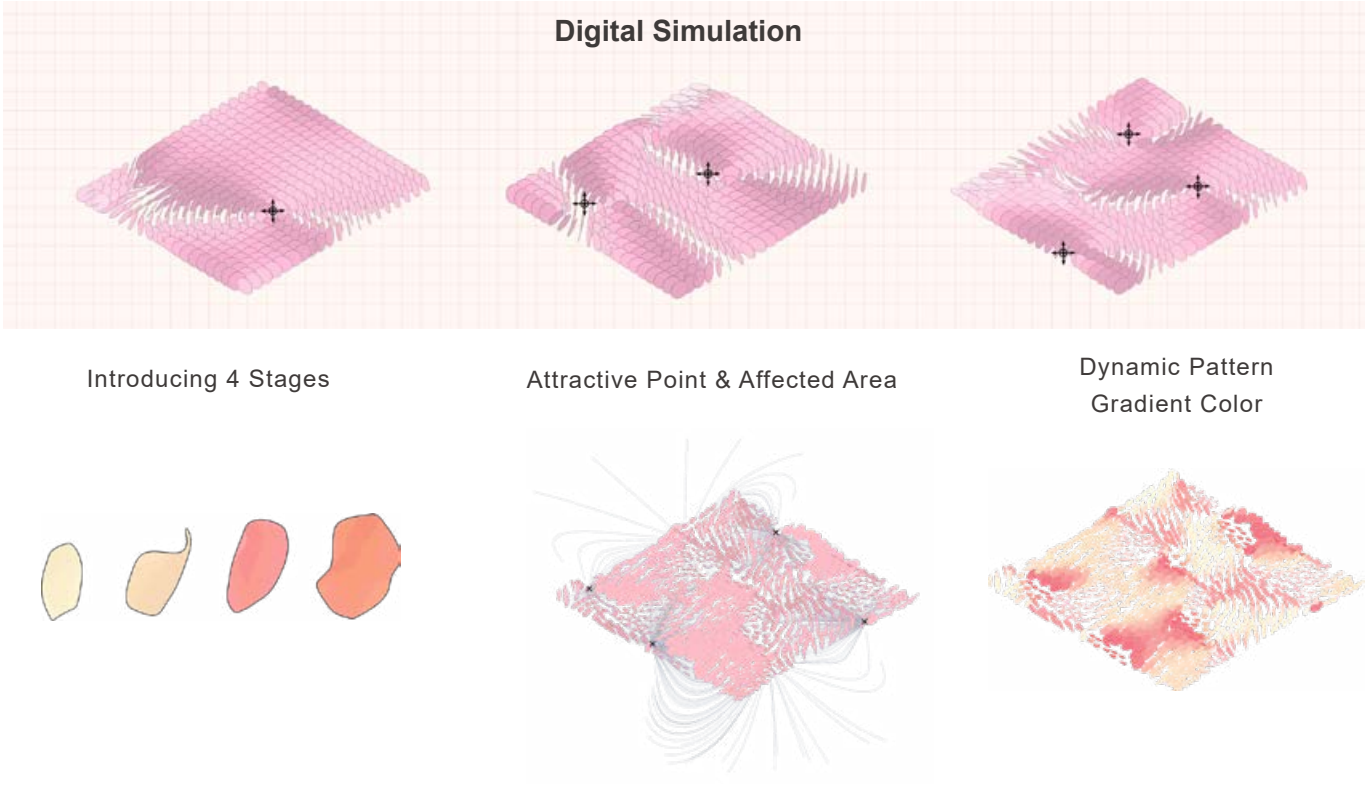
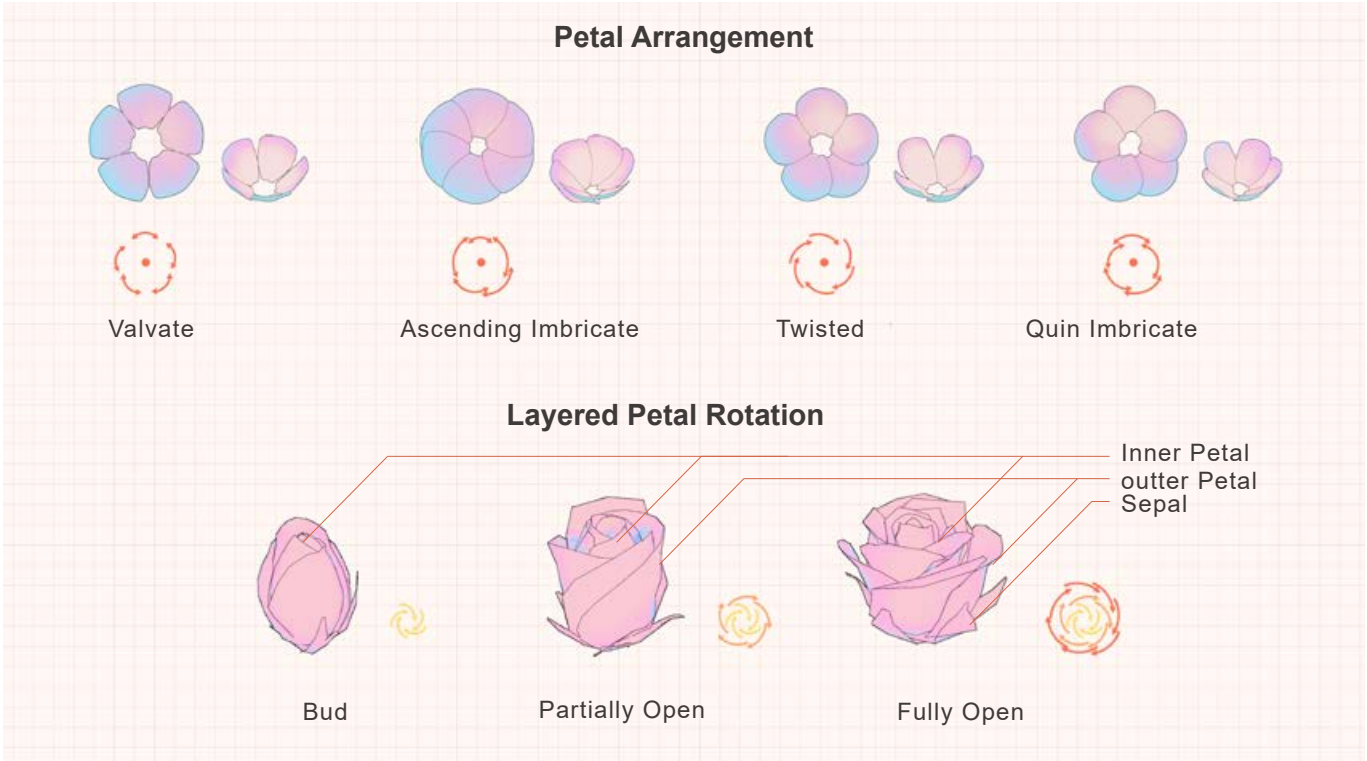
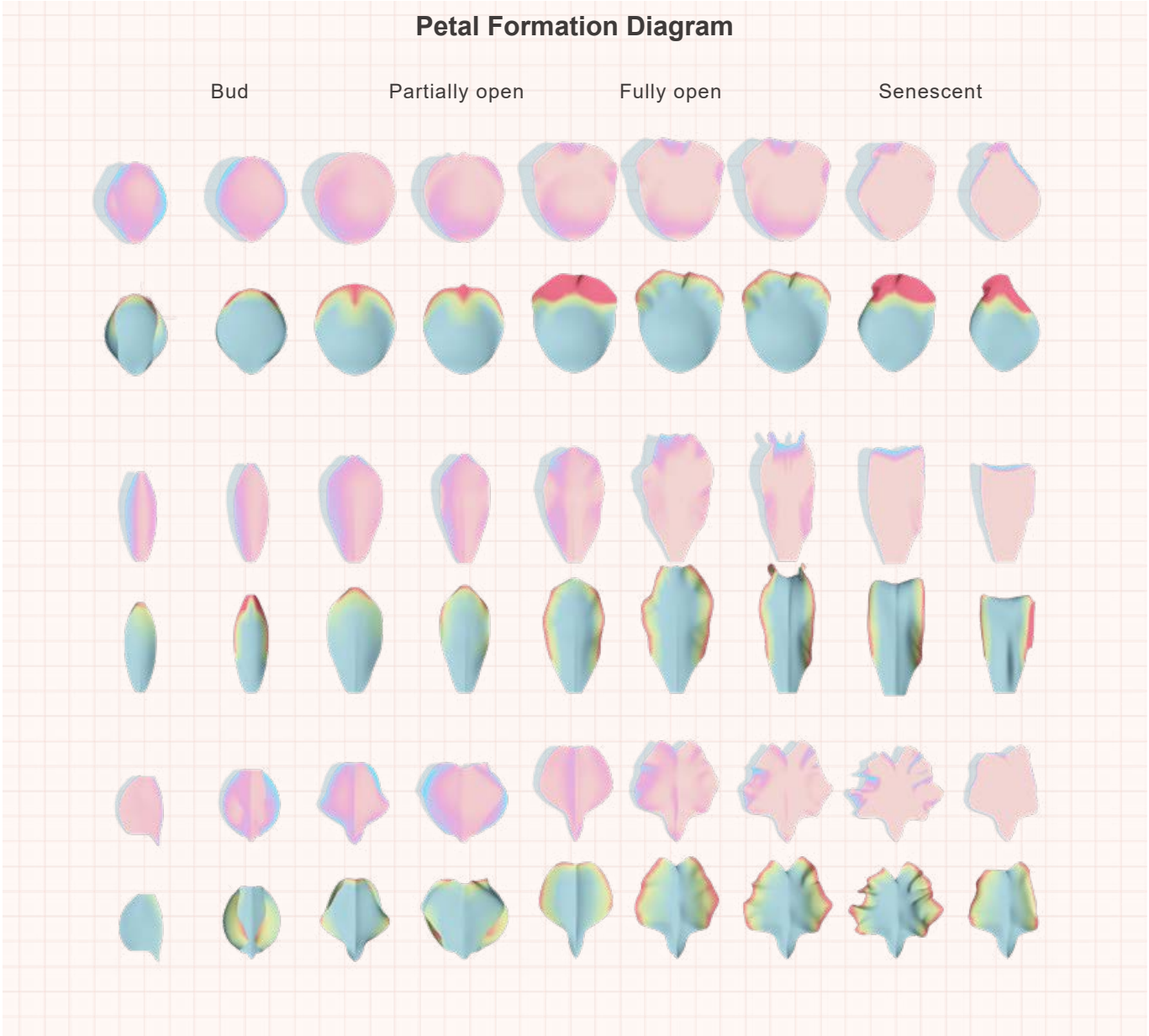


3D Printed Sustainable Building Skin

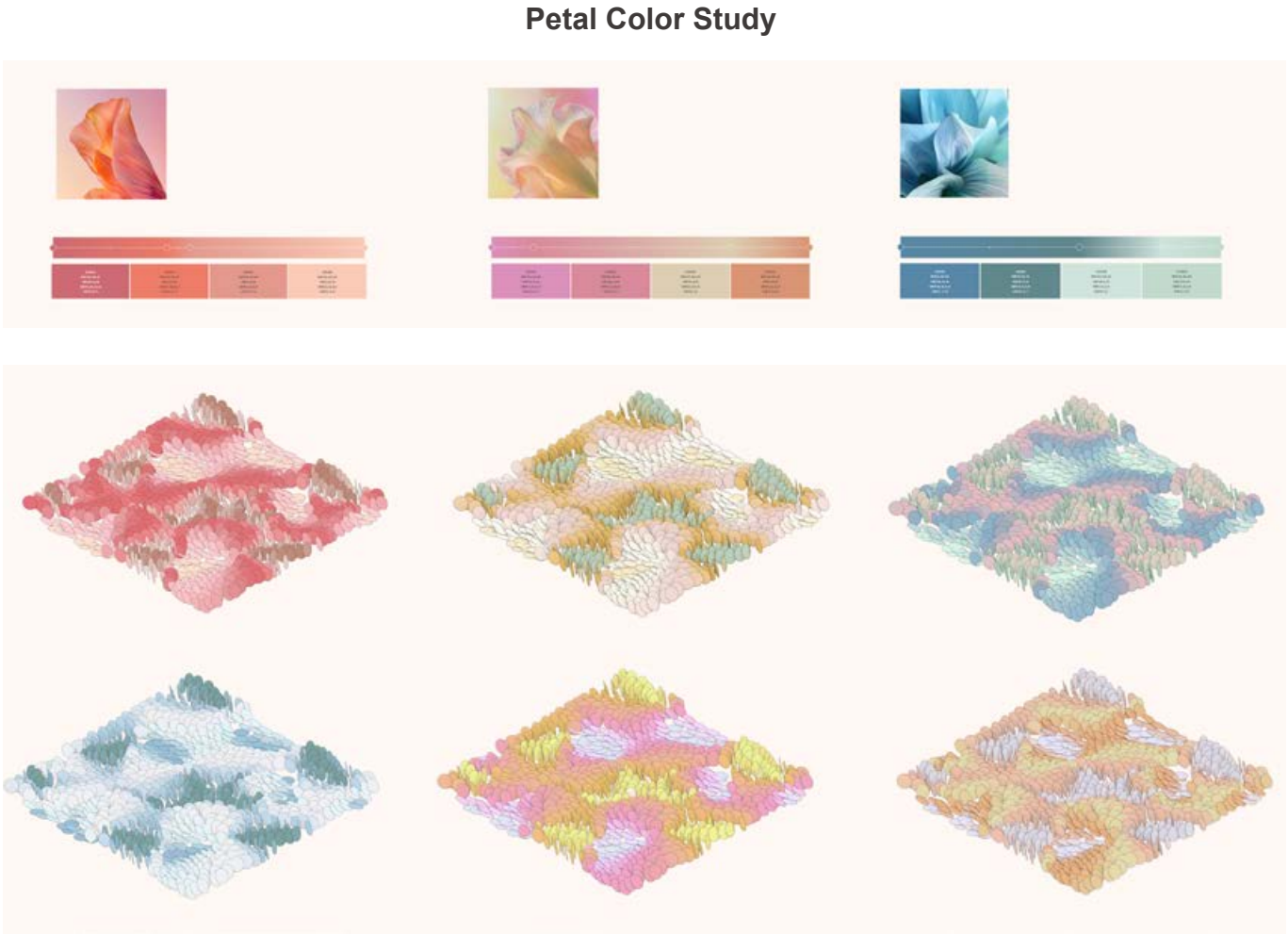
Blooming Facades: Integrating Petals into Architectural Design for Solar Adaptation

Project Tutor: Julia Koerner
Date: 2024 Research Studio(2024 fall)
Individual Work



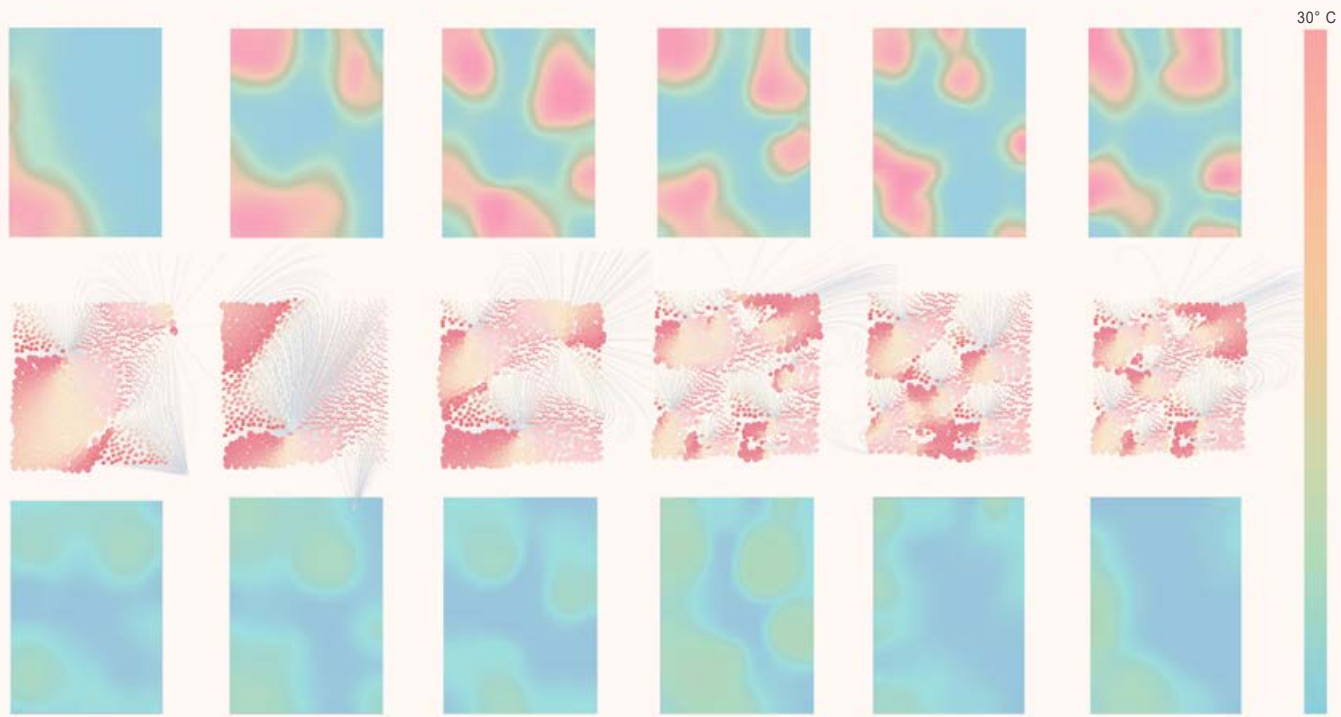


The logic of the entire group is to twist and rotate around the core point, decaying from the center to the surroundings. This design incorporates four growth states of petals, reflecting the dynamic changes in shape and color as they respond to light and heat. By utilizing a script to control the twisting and rotation of these units, the building skin mimics the natural movements of petals, adjusting to provide optimal shading and light management.



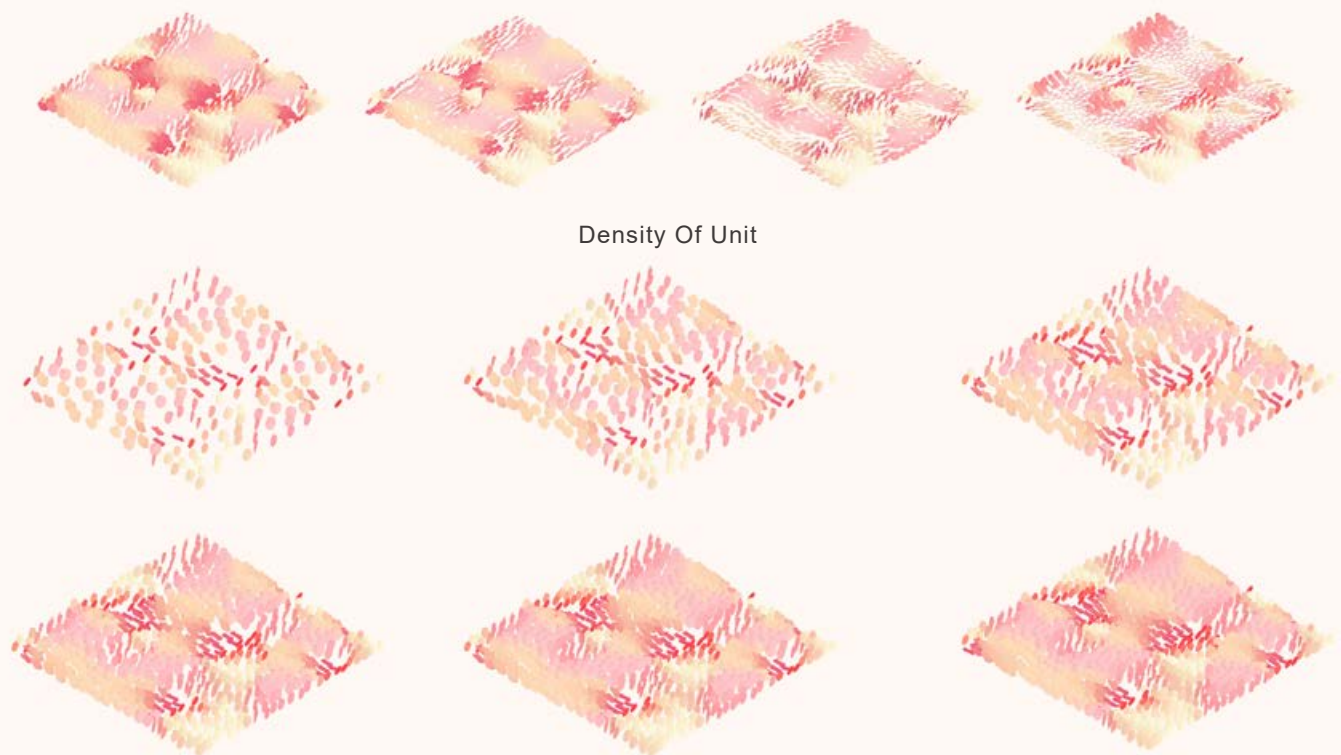
Respond To The Sun Radiation

Heatmap: Before Facade Attached



Heatmap: After Facade Attached

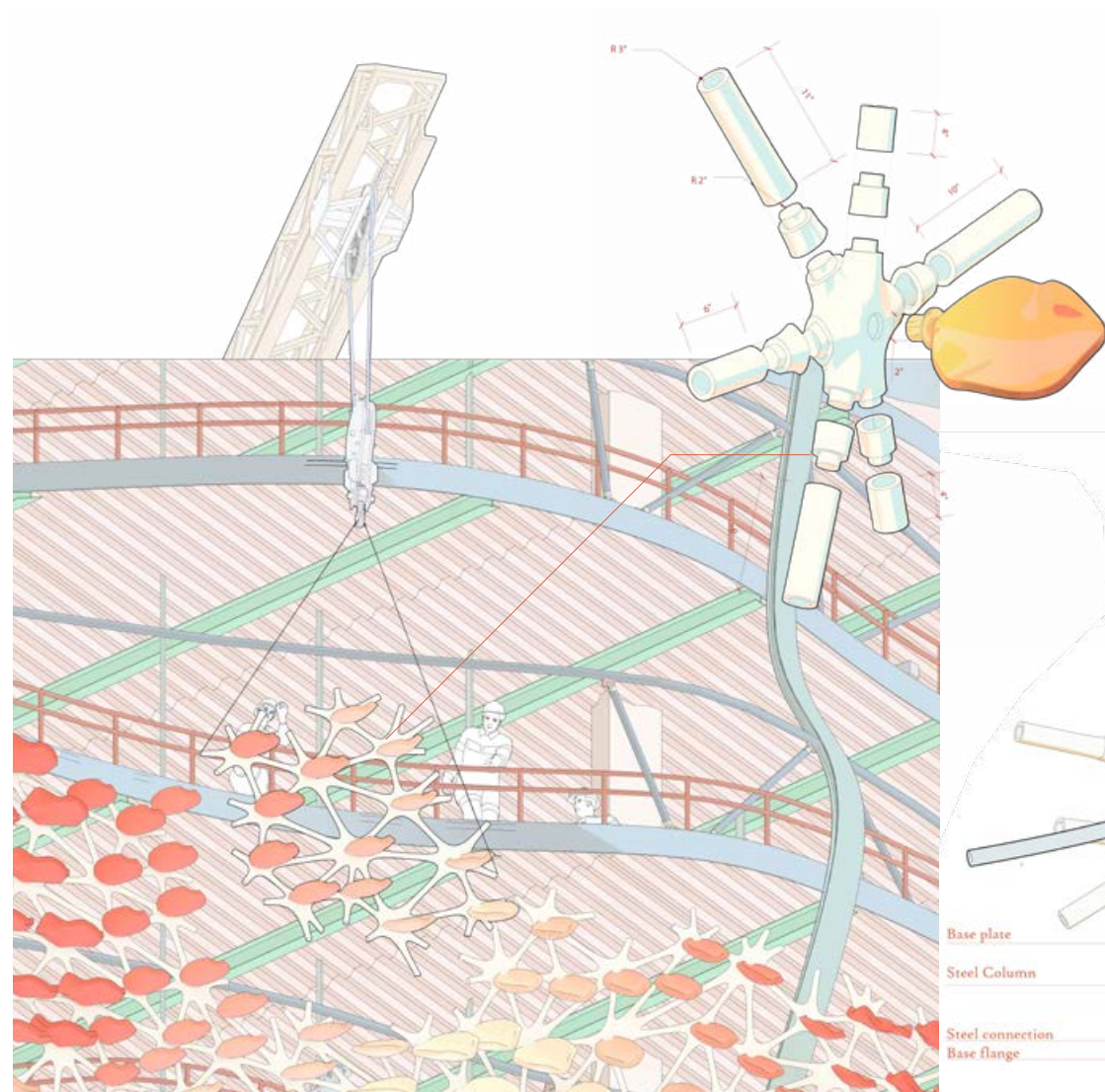
Differentiation Rotation Diagram



Density Of Unit

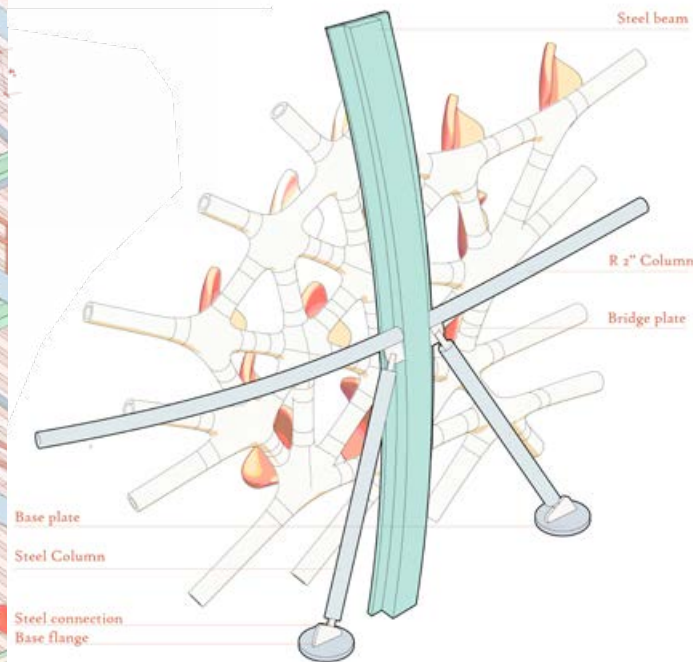
----The characteristics of this system is that the closer to the attractive point, the greater the unit density and the greater the unit shielding range. So when we strategically place different numbers and locations of attractive points to respond to different levels of solar radiation, we can effectively reduce the level of solar radiation.



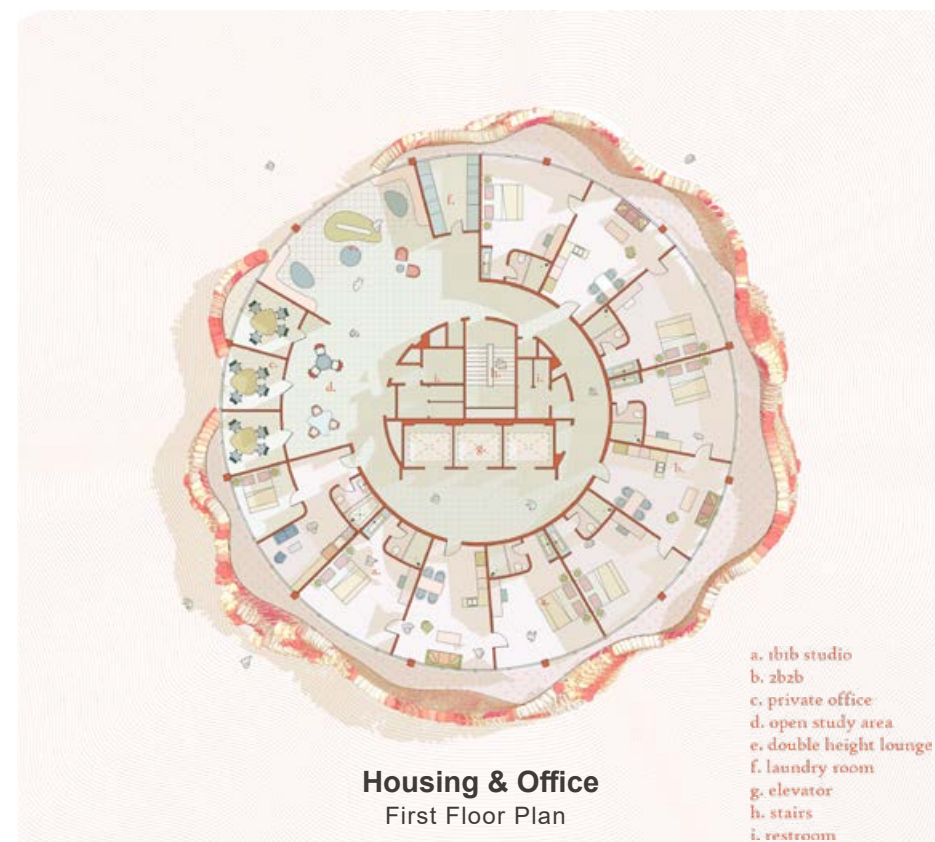


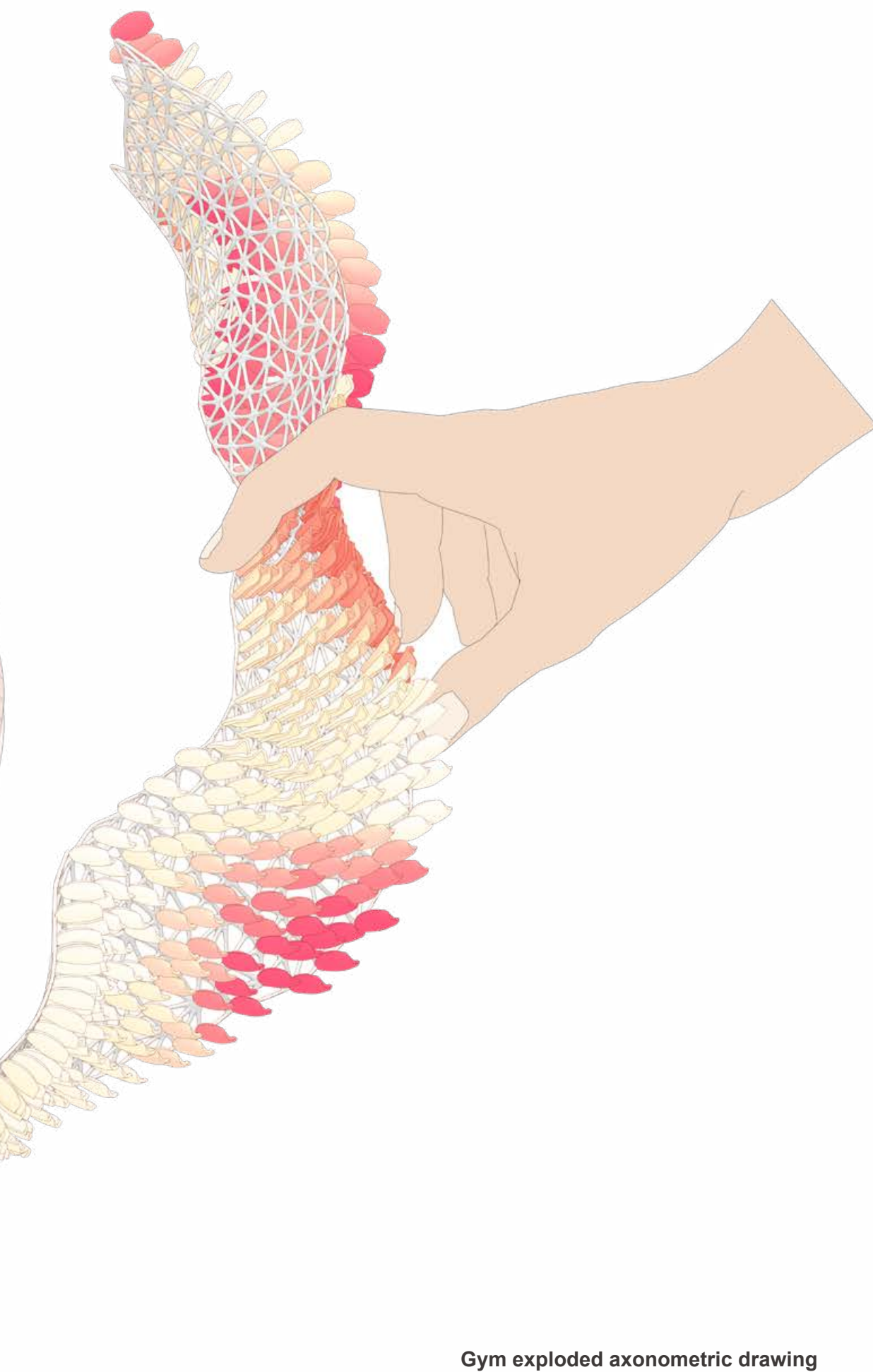
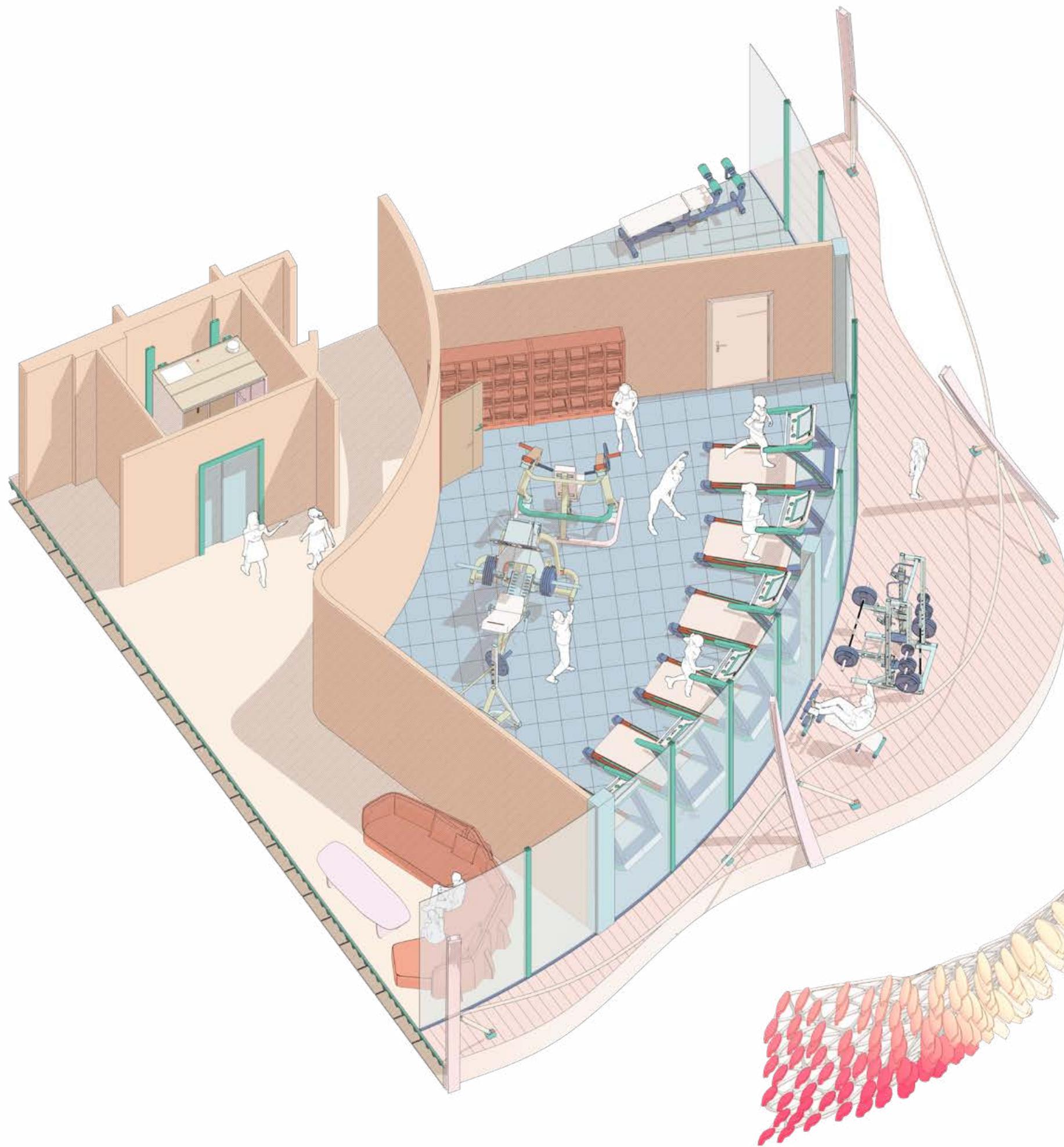
Hybrid Printing

Material: Bio-based Resin; Steel
Stereolithography & FDM



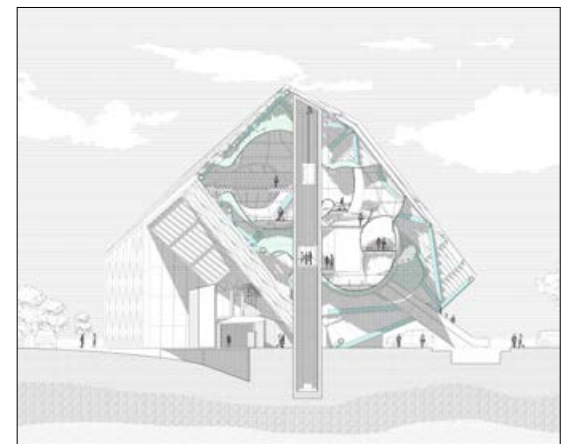
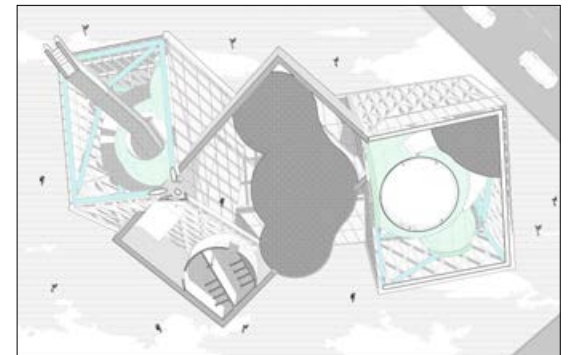
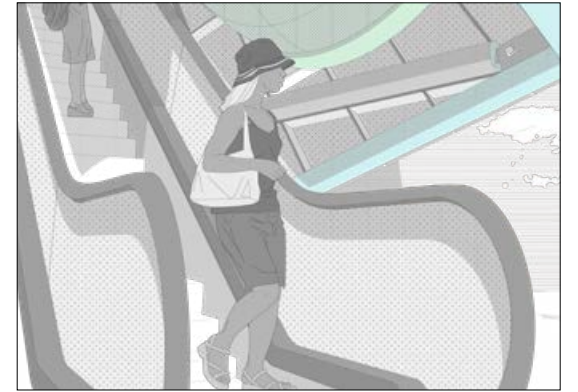
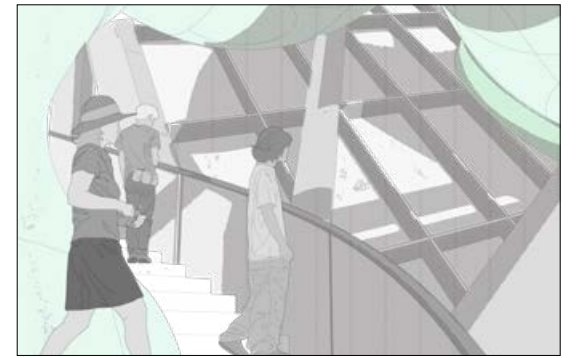
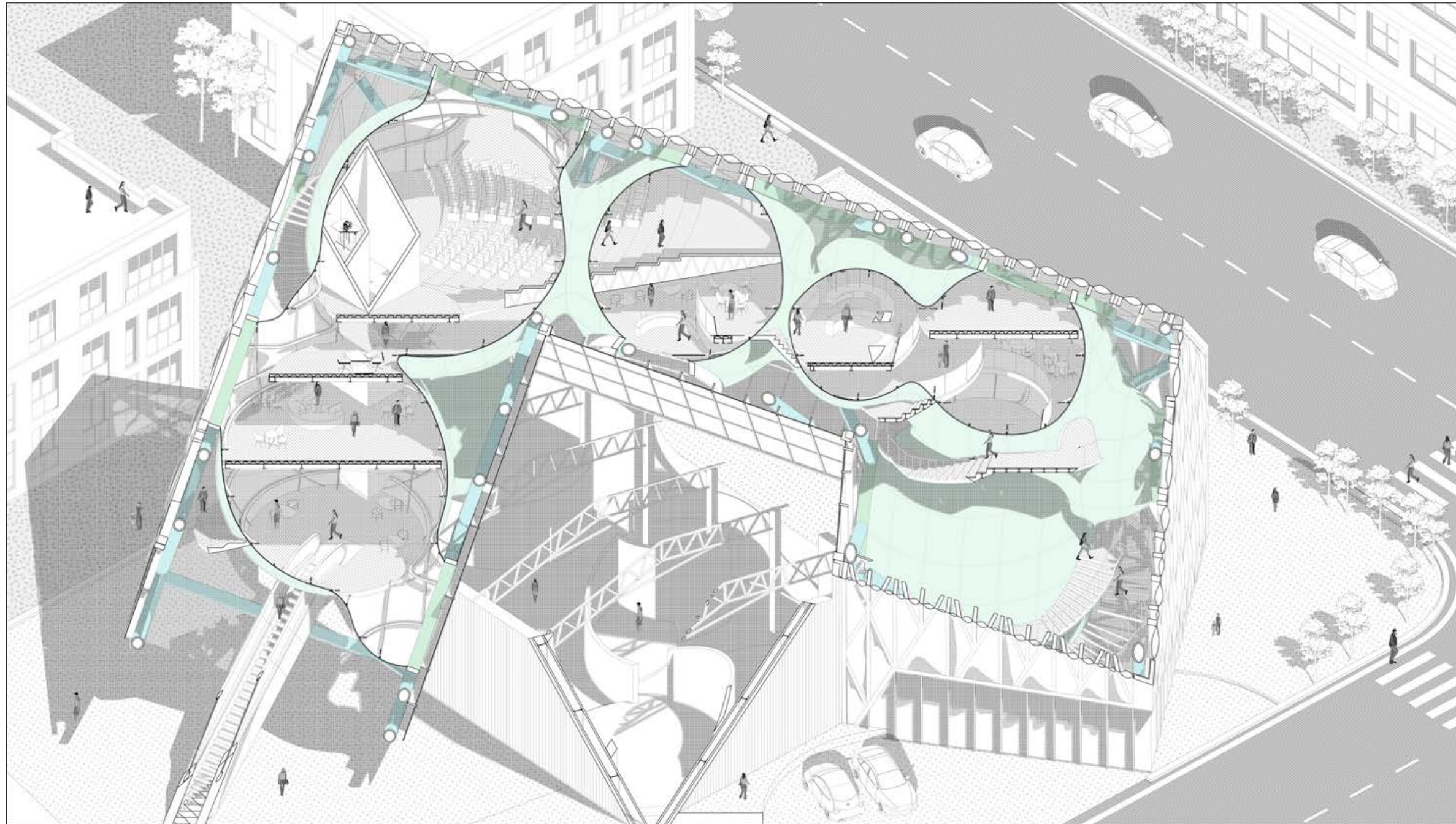
Vertical Garden Axonometric





Gym exploded axonometric drawing





The Material Research Center Santa Monica Warehouse Renovation

Project Tutor: Georgina Huljich

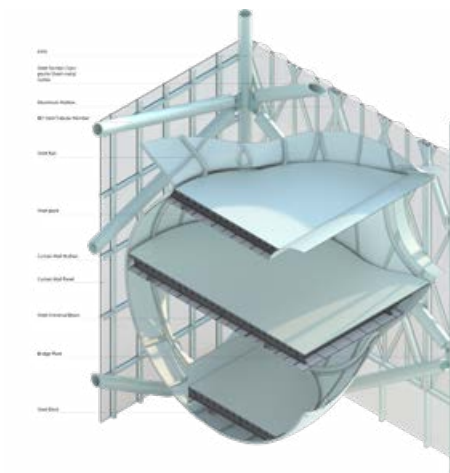
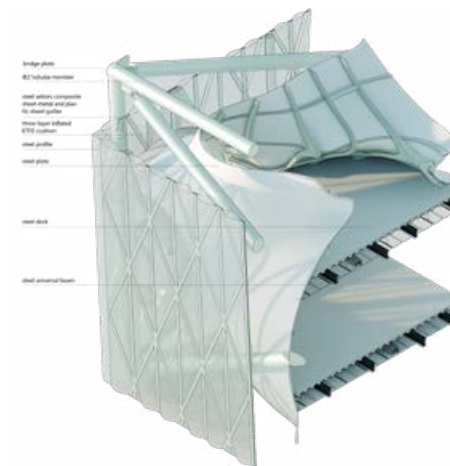
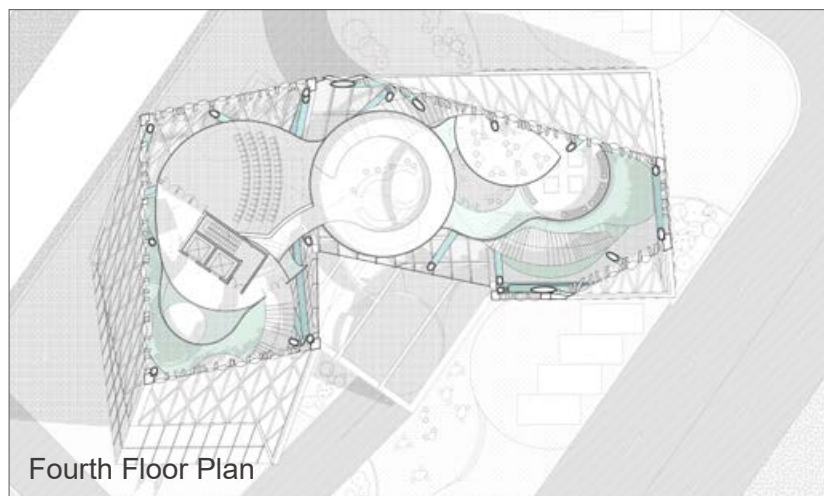
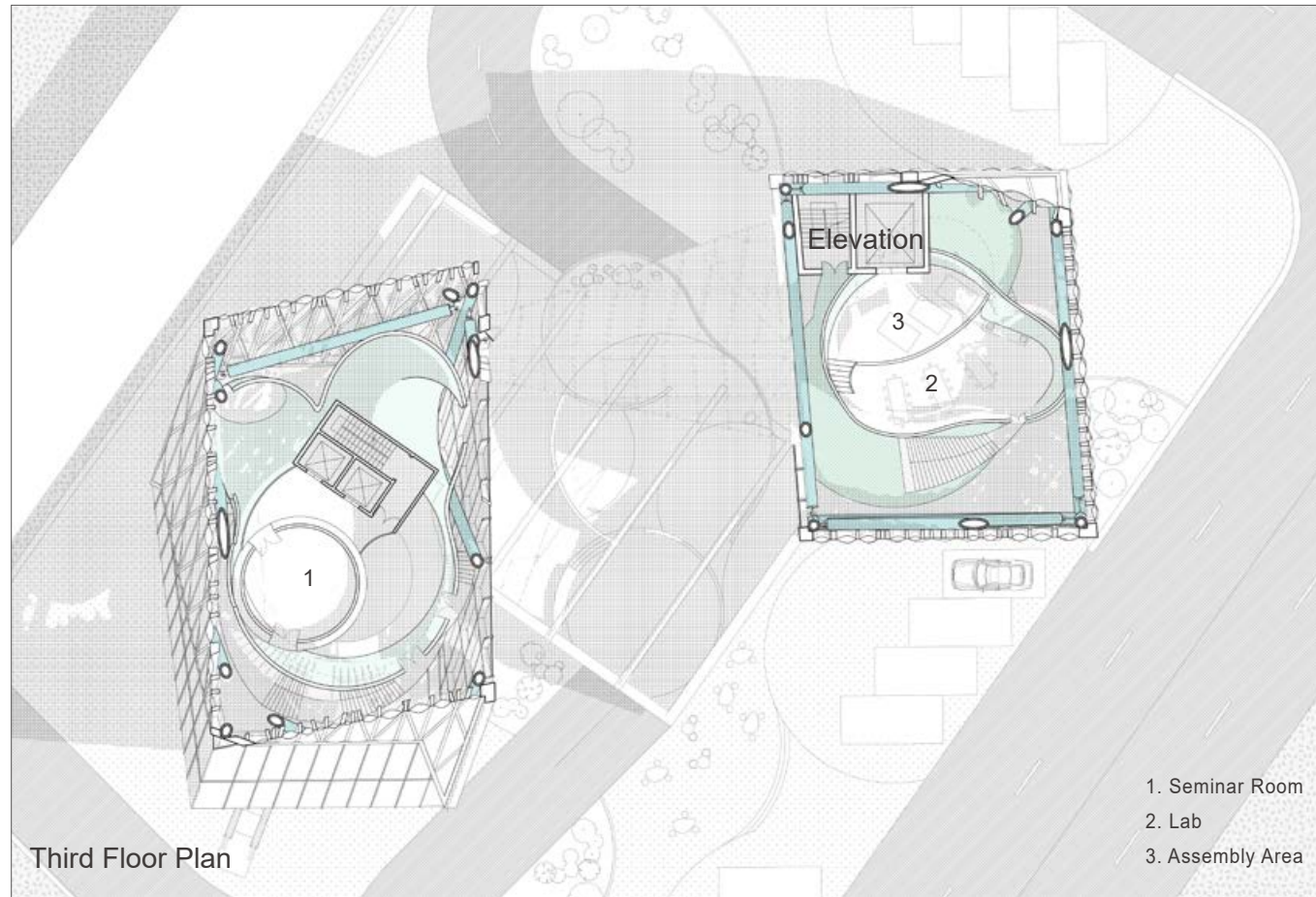
Date: 2023 Fall(UCLA school work)

Group Work

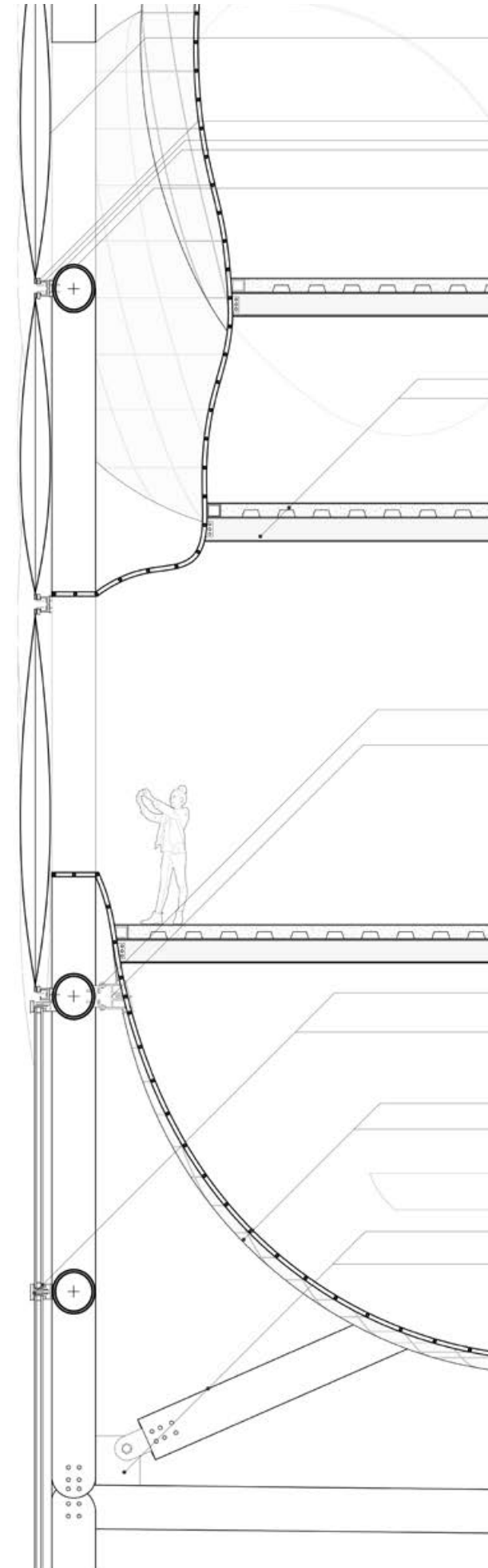
Group Member: Qing Yin & Mingxi Cao

The material research center focuses on the exploration and implementation of lightweight construction materials, and showcases cutting-edge materials such as ETFE and bendable steel plates. This was also expressed through the building's double facade: elegant translucent ETFE covered by light steel bubbles. Situated on the existing site, the design seamlessly integrates the original warehouse structure, repurposing it as a public exhibition space. This preserved section acts as a focal point, around which the newly constructed research center wraps, offering panoramic views of the material exhibitions.

Floor Plan



Structure Details

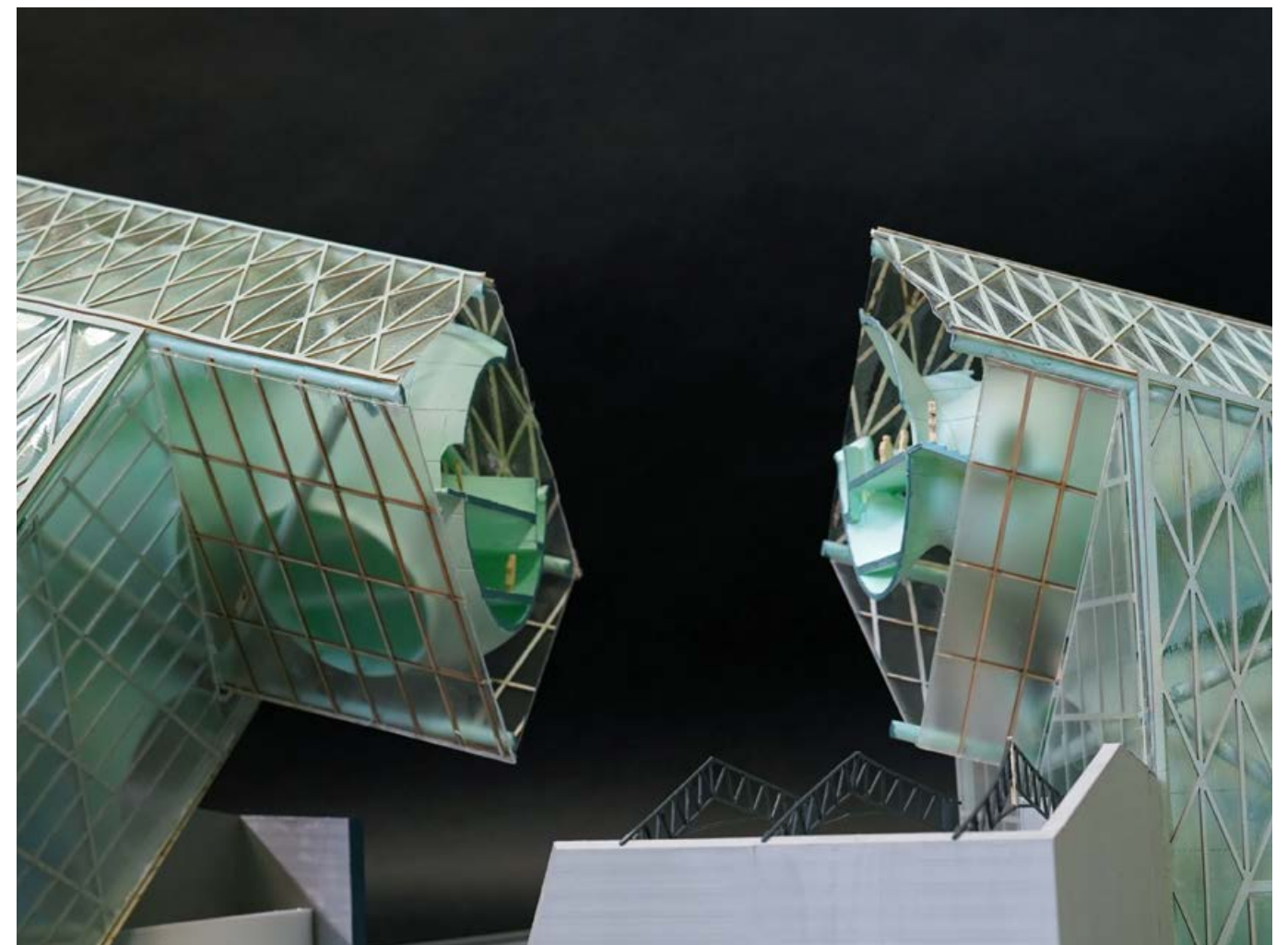
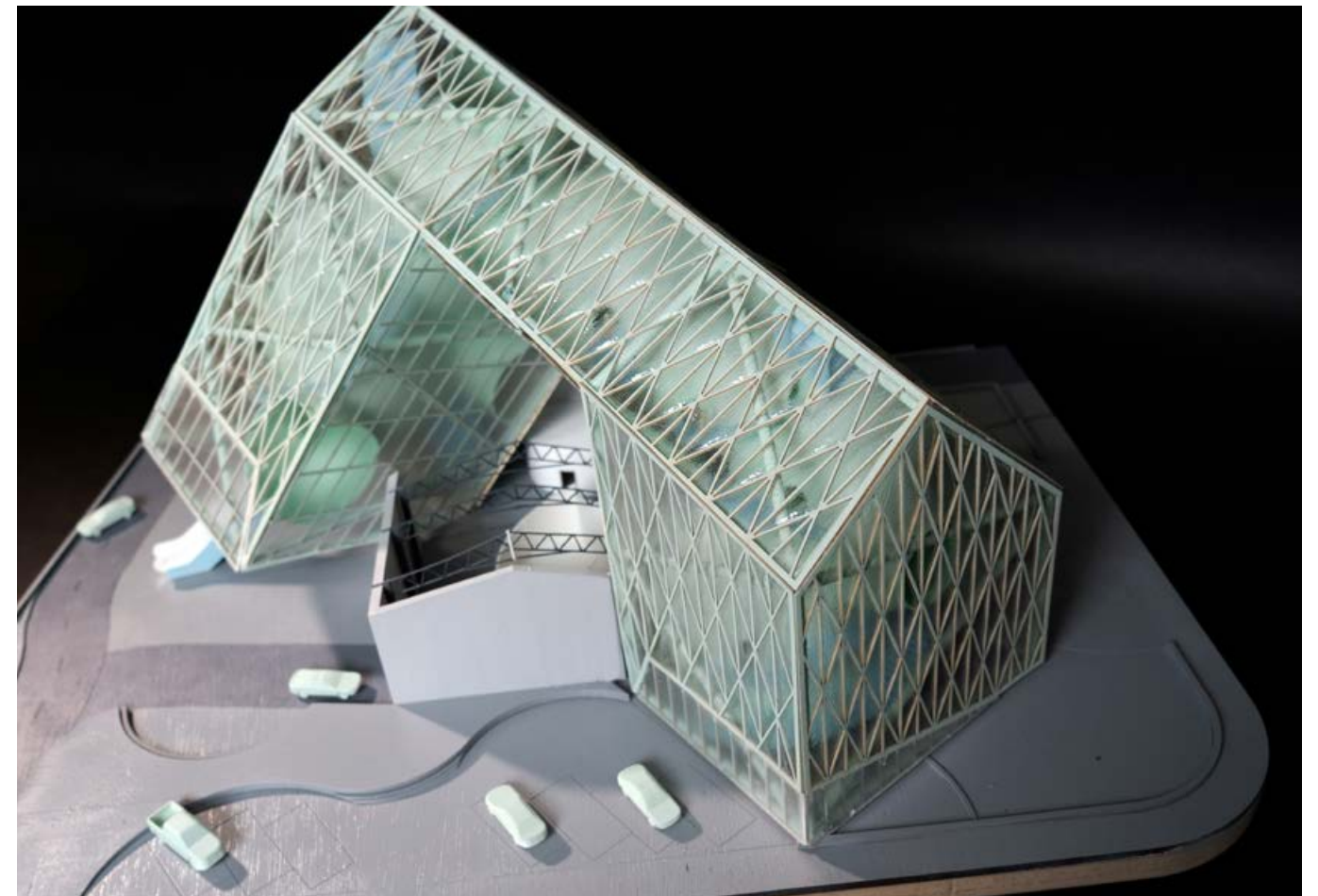


1. three-layer inflated ETFE cushion
2. extruded-aluminium frame to opening flap
3. steel section; composite sheet-metal and plastic-sheet gutter
4. high-pressure-air tube for operating flap
5. $\Phi 2'$ tubular member
6. steel deck
7. steel universal beam
8. hanger rod
9. aluminum rail
10. 10' x 16' curtain wall panel
11. aluminum frame
12. steel plate
13. steel rods
14. $\Phi 2'$ tubular member
15. bridge plate

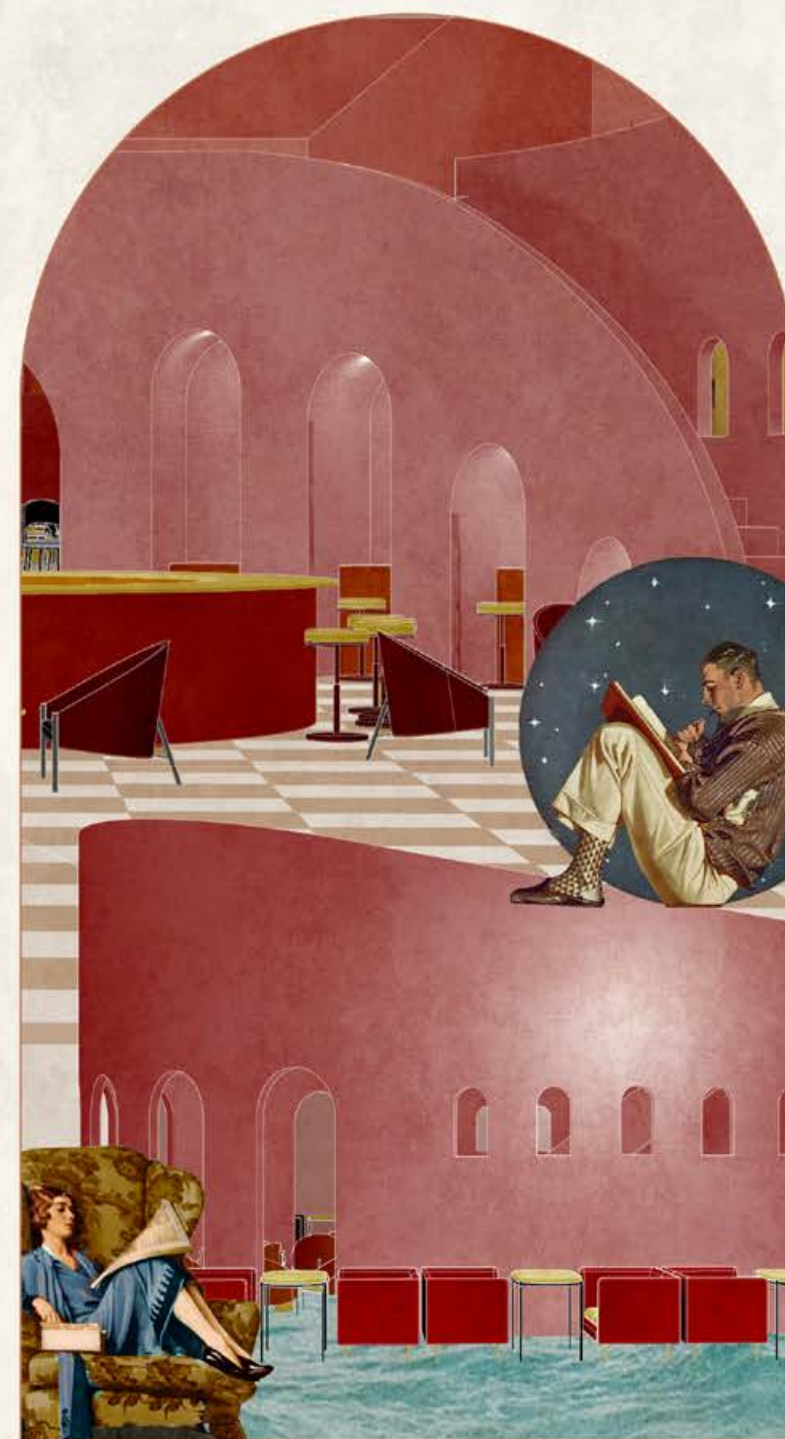


LIGHTWEIGHT FUTURES

Innovating with ETFE
and Flexible Steel at the
Material Research Center



Piano Tour

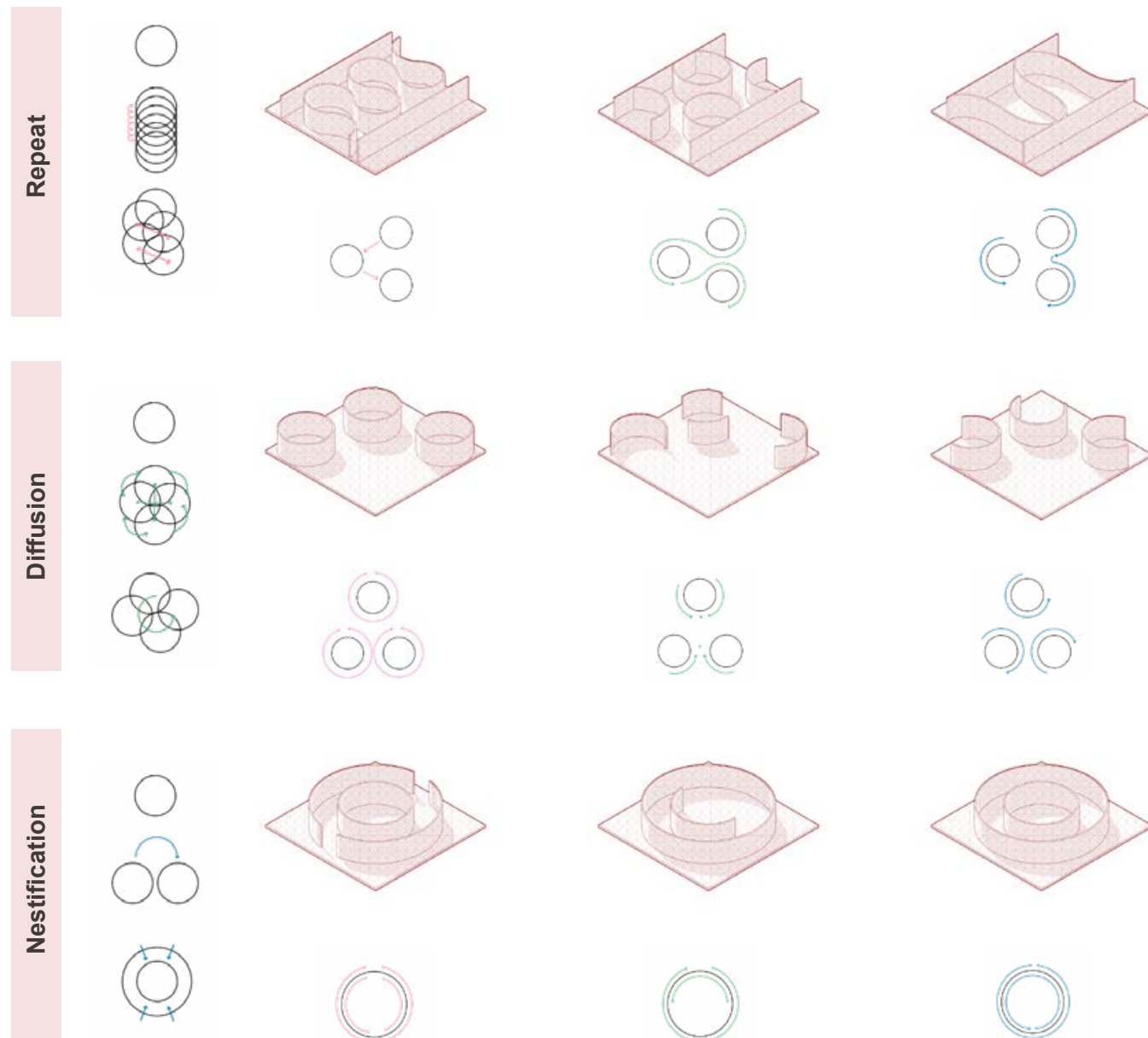


A PIANO PIECE ON THE SEA Cruise Ship Space Design Based on Piano Music

Project Tutor: Liu Tiejun
Date: 10.2019-12.2019
Individual Work

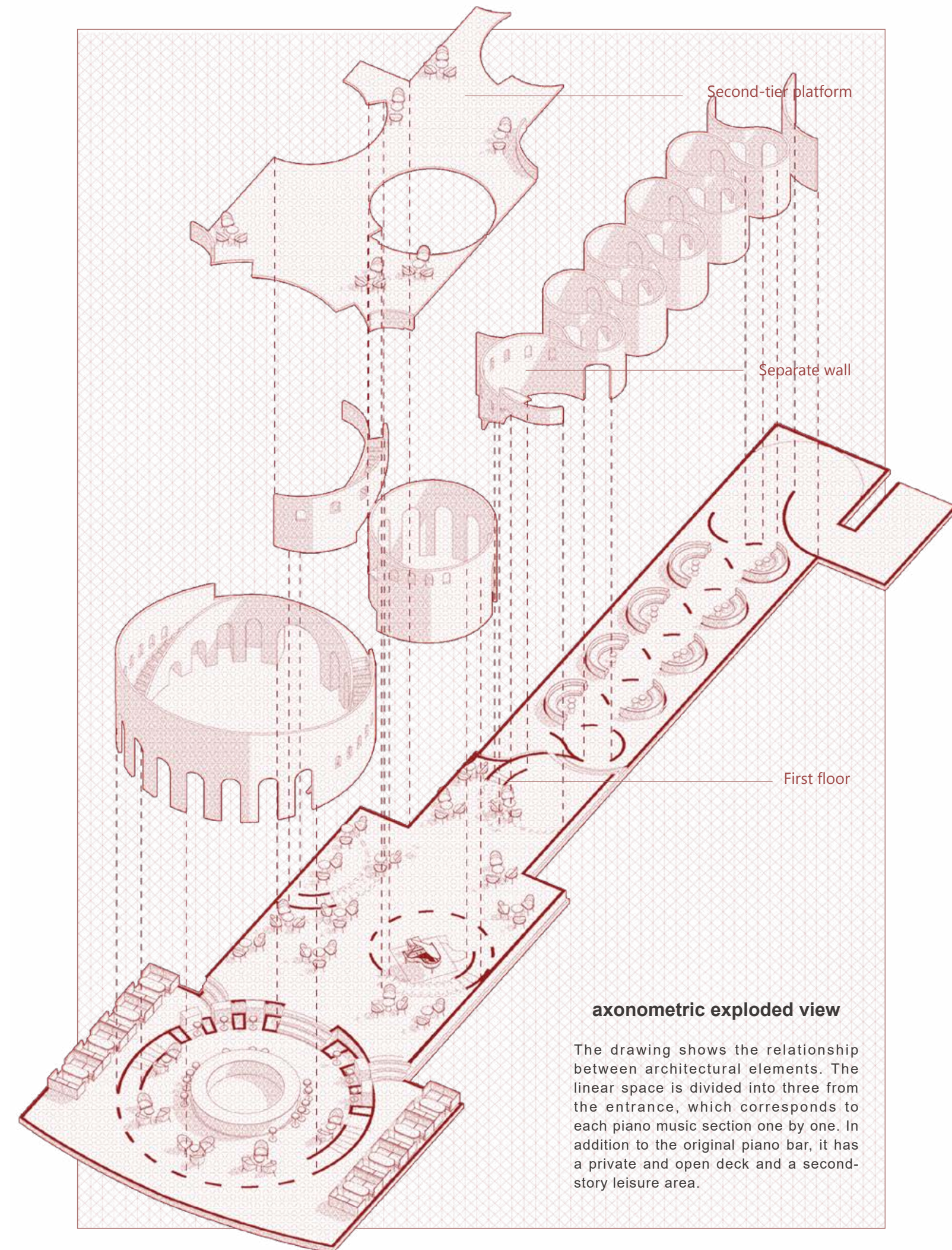
Piano piece translation cruise ship this work is based on Chopin's Nocturne in C-sharp minor. The rhythm, mood, and order of the piano music itself seeks the correlation of various elements and spaces and gives the musical elements a spatial form. This design hopes that the cruise space will be endowed with the rhythm of piano music and full of emotions, showing the continuity of music and the circulation of breath.

Music Mhythm and Spatial Transformation



According to the emotions extracted from each section of the piano music, they are translated into architectural language and organized in space. That is to say, the first part of contemplative and morbid emotions are translated into space, and space is characterized by continuous and repetitive, and there is a process of constant change to openness in the space; the second part of the emotions becomes clear, and space is characterized by openness and strong interaction; The third part of the emotions is back to the main tone, and the wandering emotions can be spatially embodied as a closed loop of occlusion and flow of the line of sight.

Space Model Display



axonometric exploded view

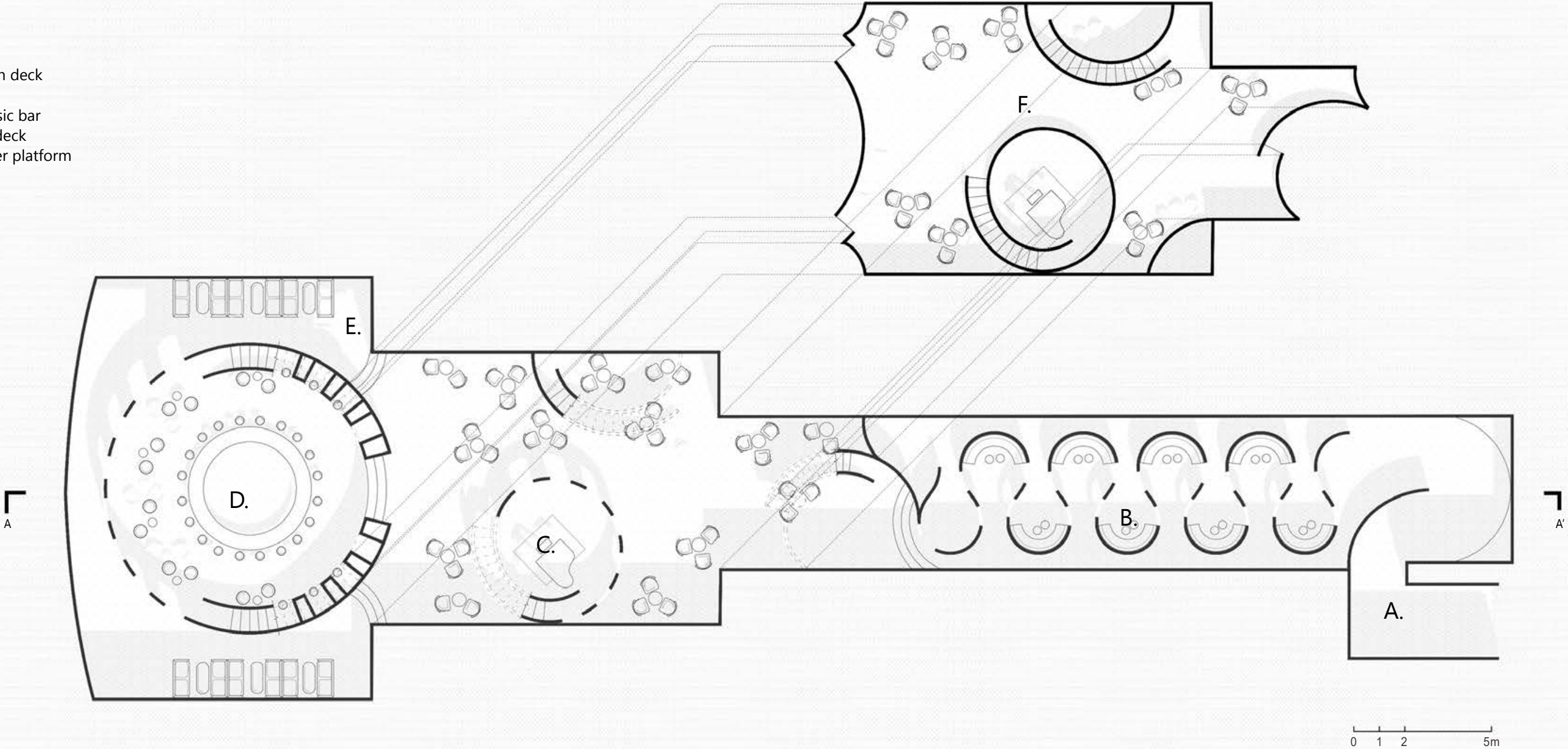
The drawing shows the relationship between architectural elements. The linear space is divided into three from the entrance, which corresponds to each piano music section one by one. In addition to the original piano bar, it has a private and open deck and a second-story leisure area.

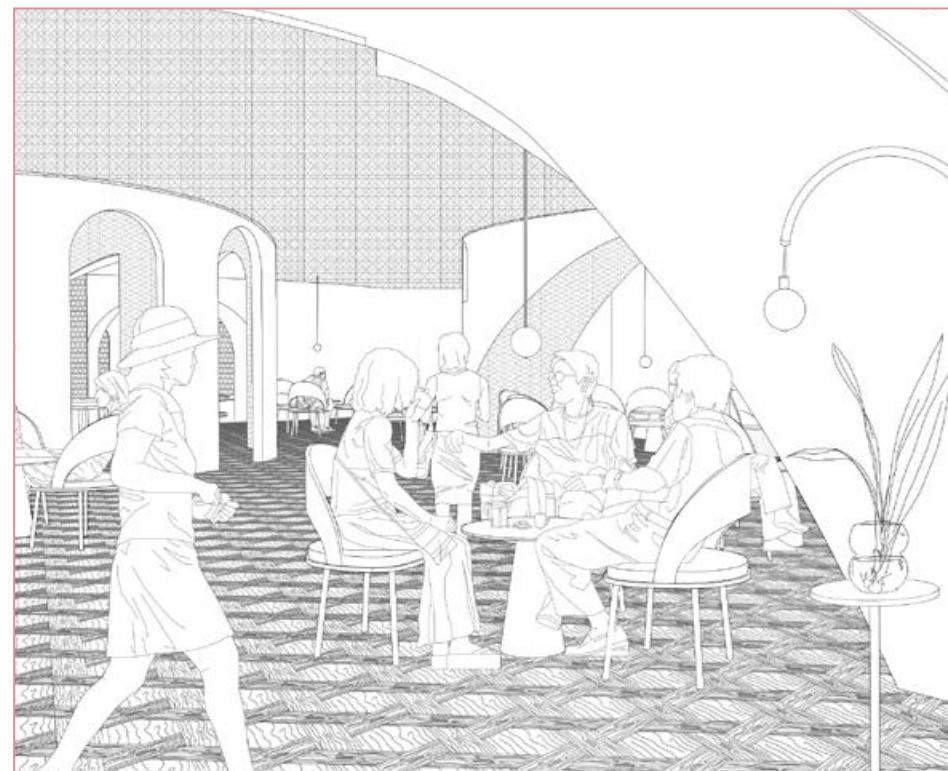
A-A' Section View



Second Floor Plan

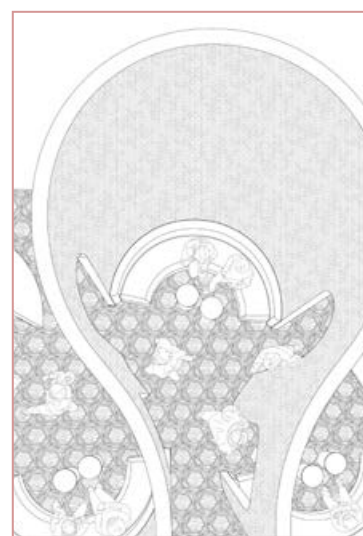
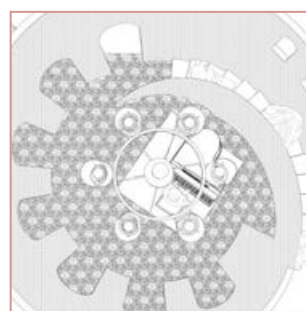
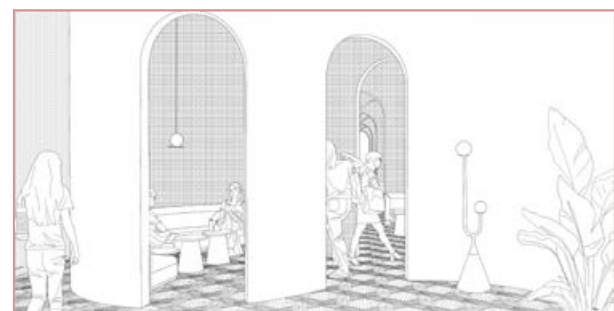
- A. Entrance
- B. Semi-open deck
- C. Piano bar
- D. Open music bar
- E. Separate deck
- F. Second-tier platform





SPACE SPLIT DISPLAY

A journey through the
soul of 1870



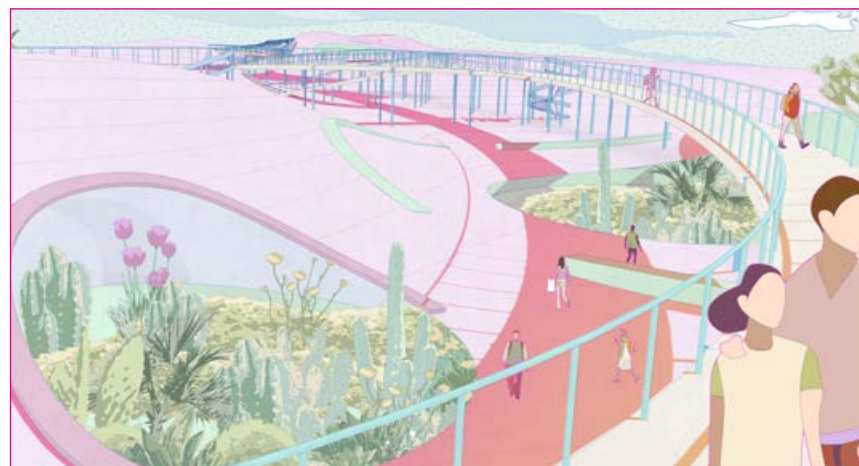
Rhythm and Space



Piano Bar



Open Bar Deck



Hide And Seek

Building Sustainable Landscapes

Project Tutor: Yara Feghali
 Date: 2023 Fall(UCLA school work)
 Group Work
 Group Member: Qing Yin & Qinyi Wu

Our project embodies a whimsical landscape that is a delight to navigate. It features a smoothly reimagined terrain with undulating and intersecting pathways, complemented by shaded indoor gardens. The selection of native plants requires minimal water, underscoring our commitment to sustainability while ensuring an engaging and playful environment.

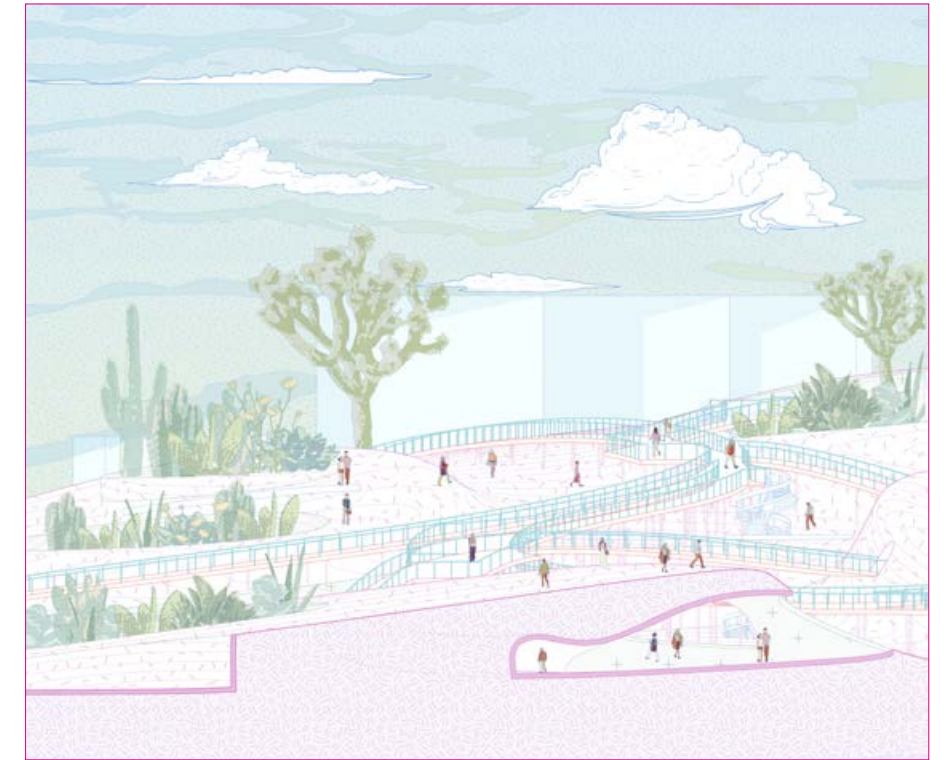
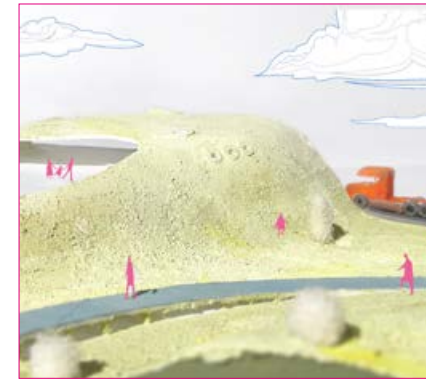
Diagram



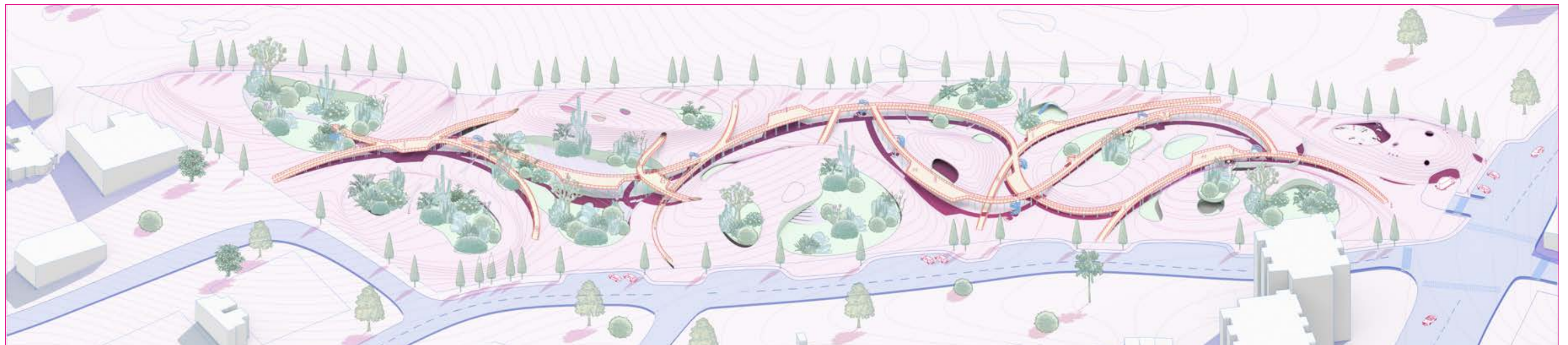
Master Plan



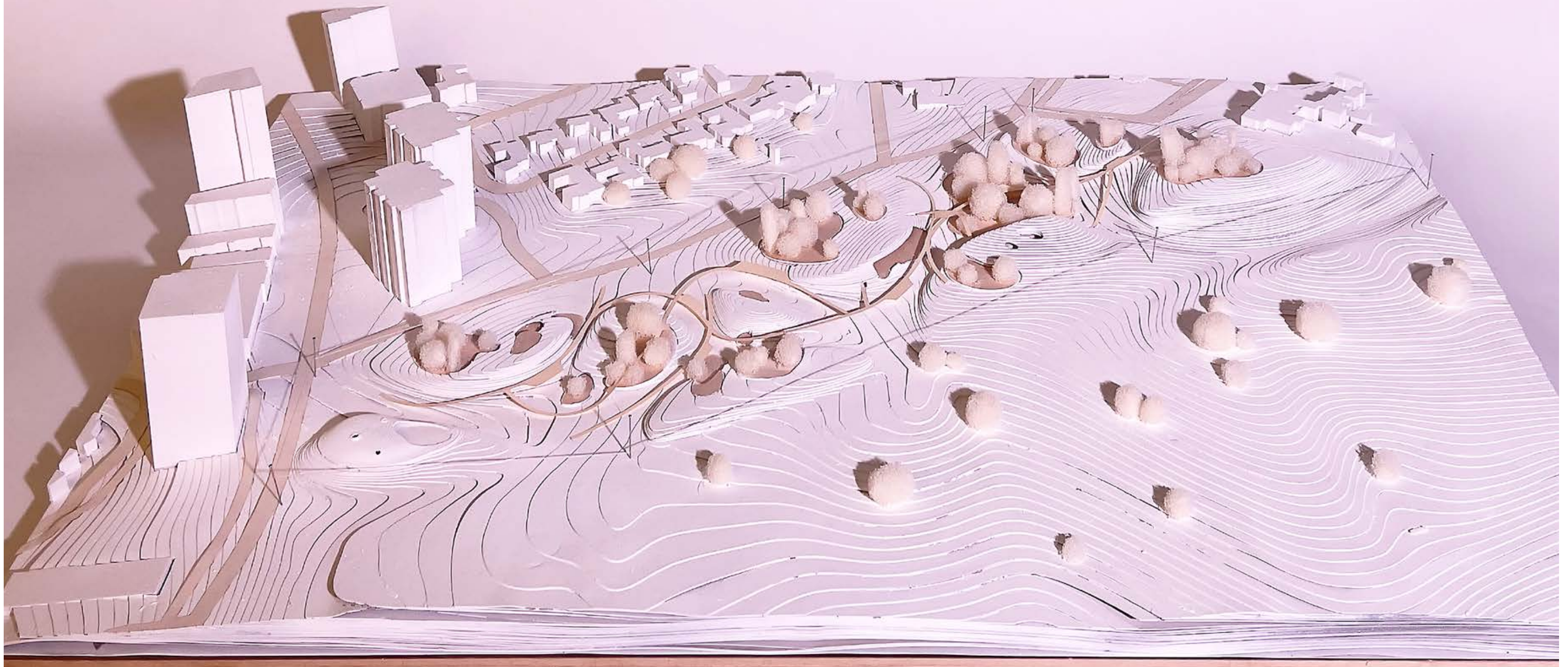
Section & Model Display



Axonometric View



Model Display





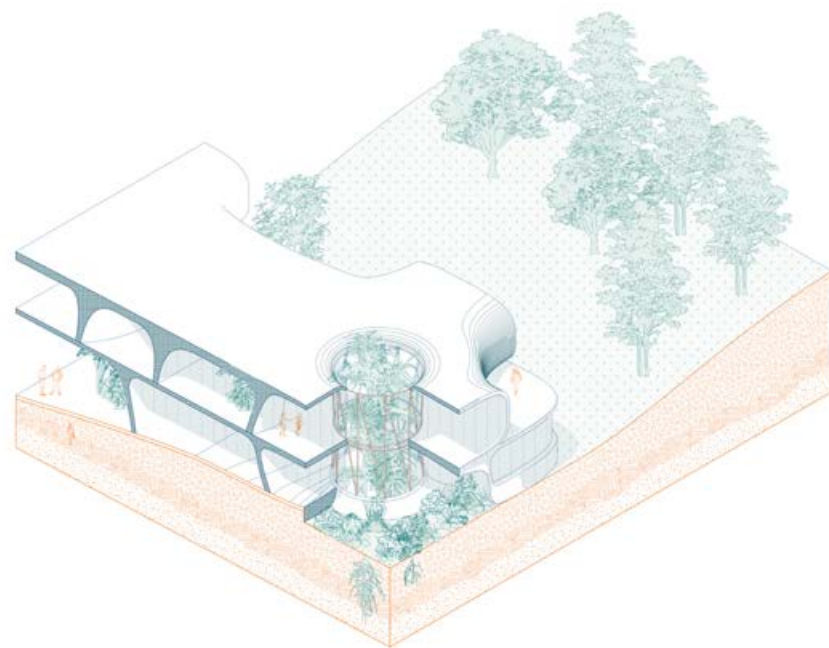
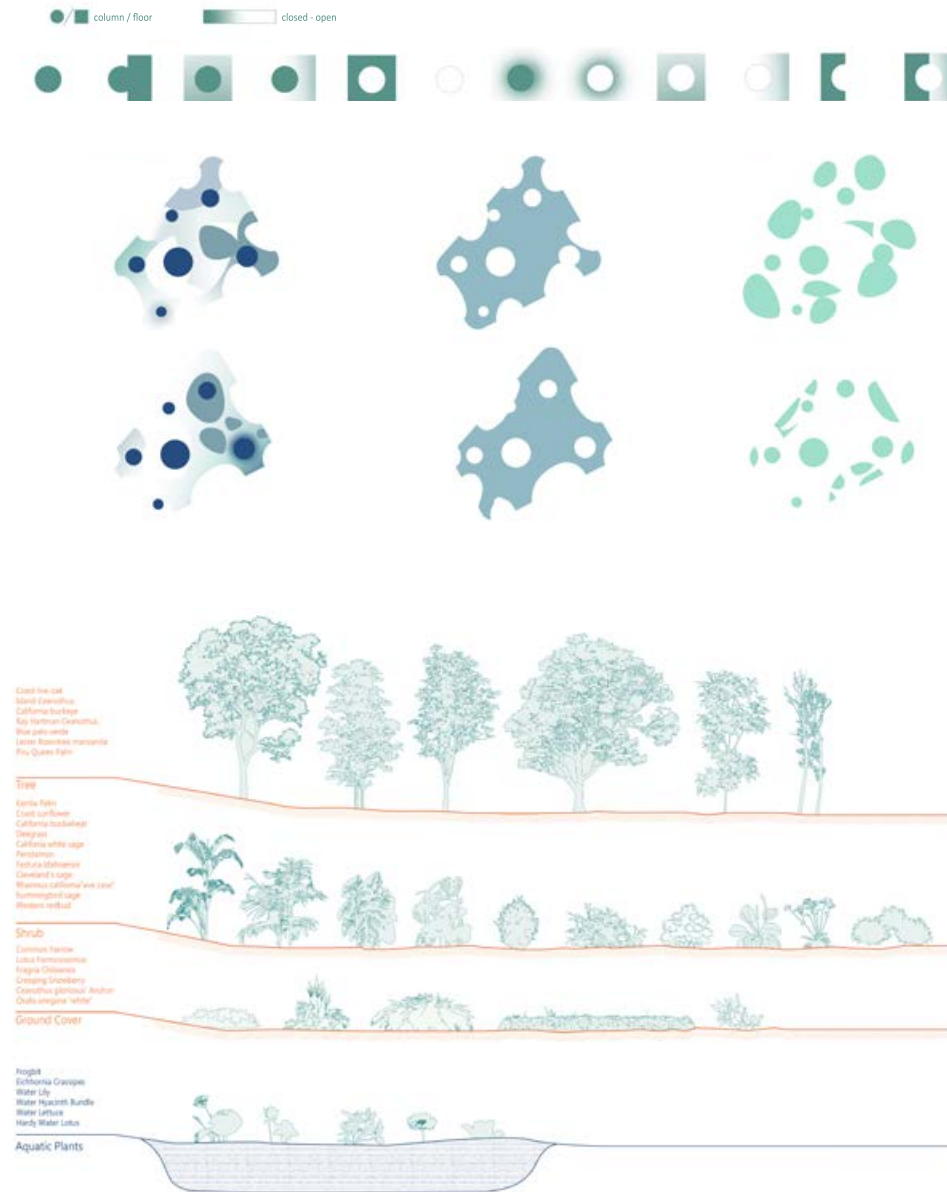
Botanical Garden Design

botanical program design based on column+

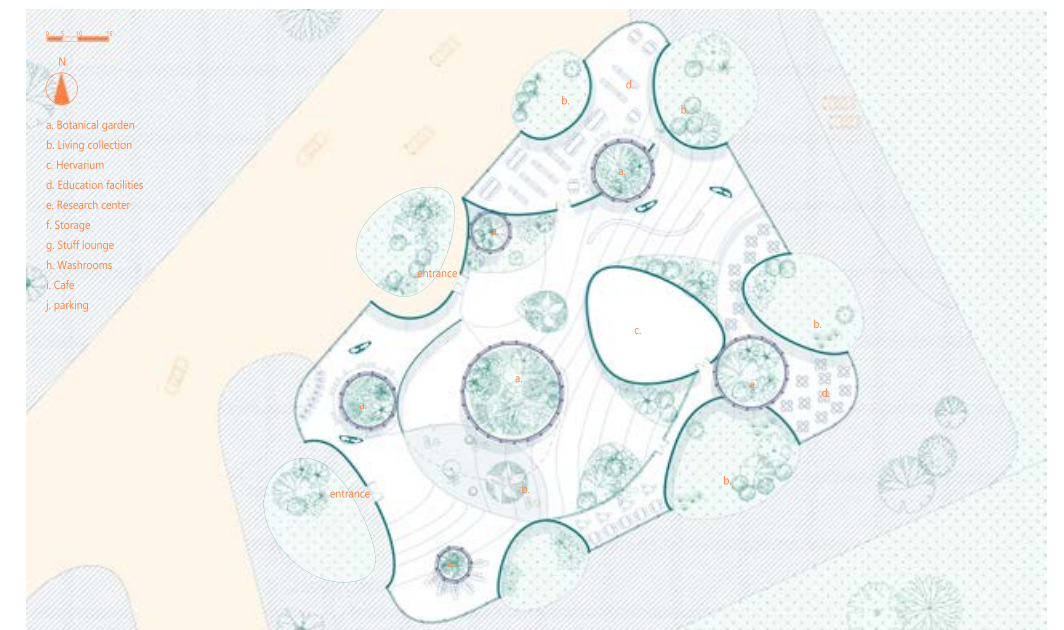
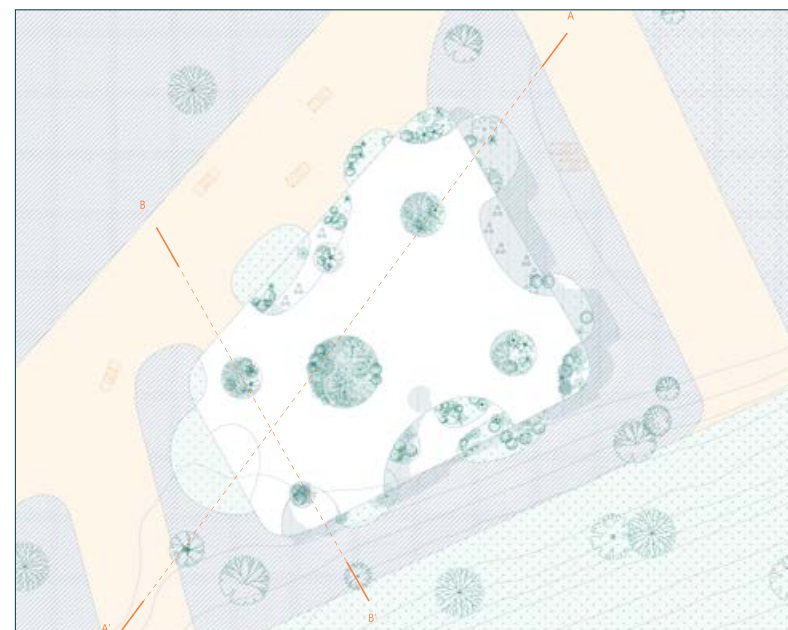
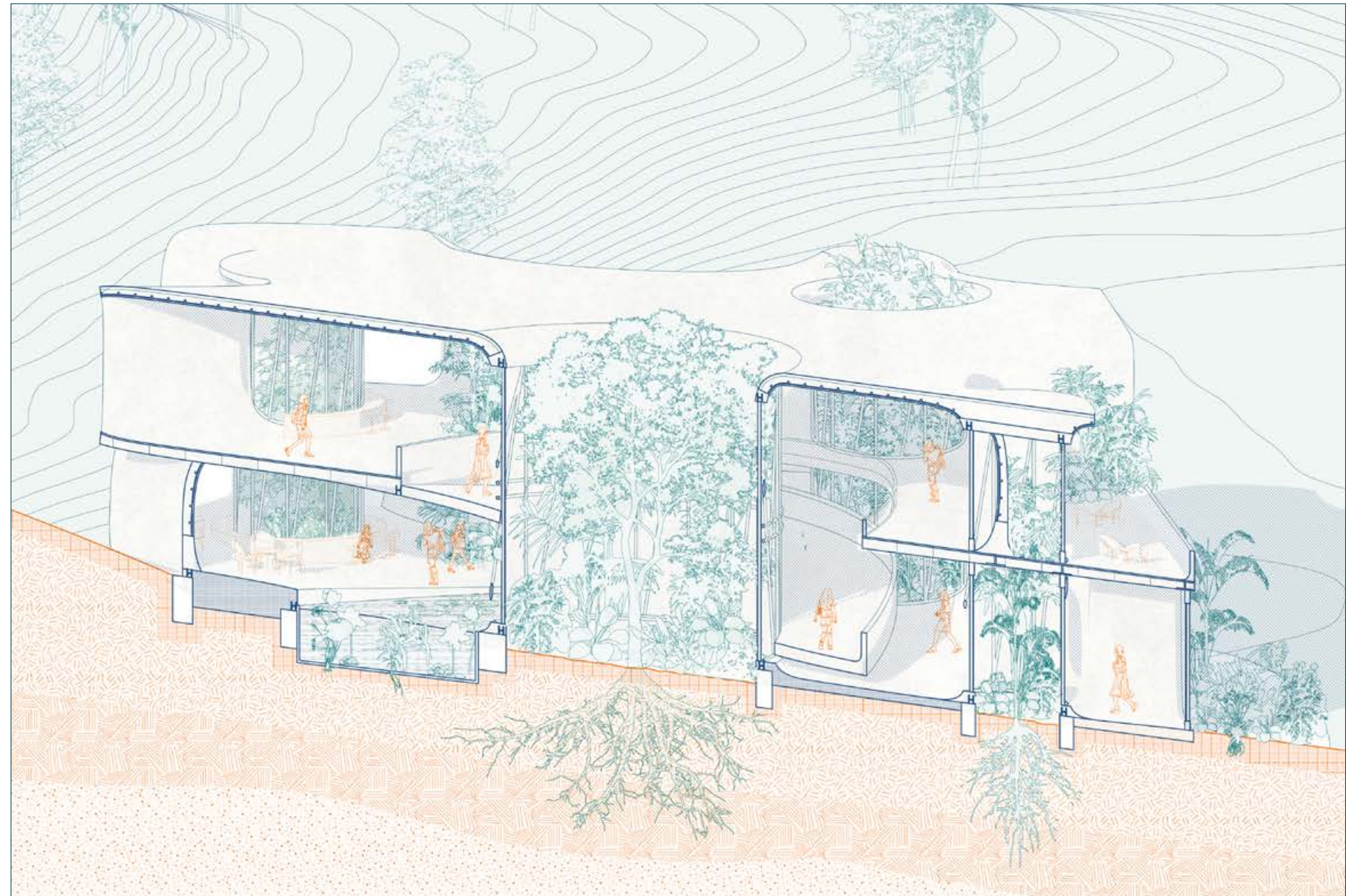
Project Tutor: Max Kuo
Date: 2022 Spring (UCLA school work)
Individual Work

The whole project revolves around the column. In columns plus, I used minimal surfaces, which create rooms, inside and outside. I combine them with the columns, try to make these columns different from each others. Some plants are placed inside the column, so they turn to have a shape, some are placed in other places inside the building, they are more free. I think the contrast would be interesting.

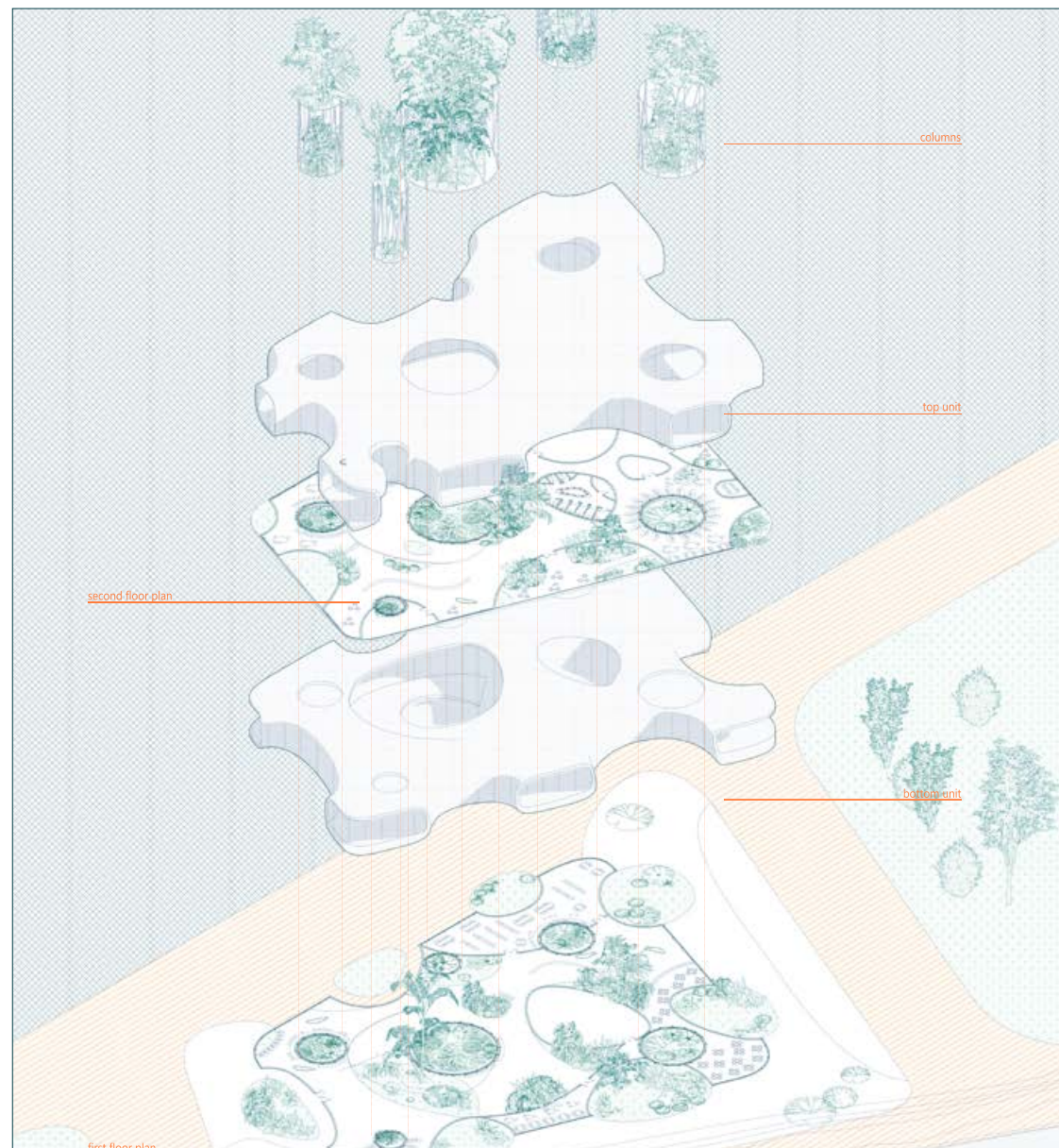
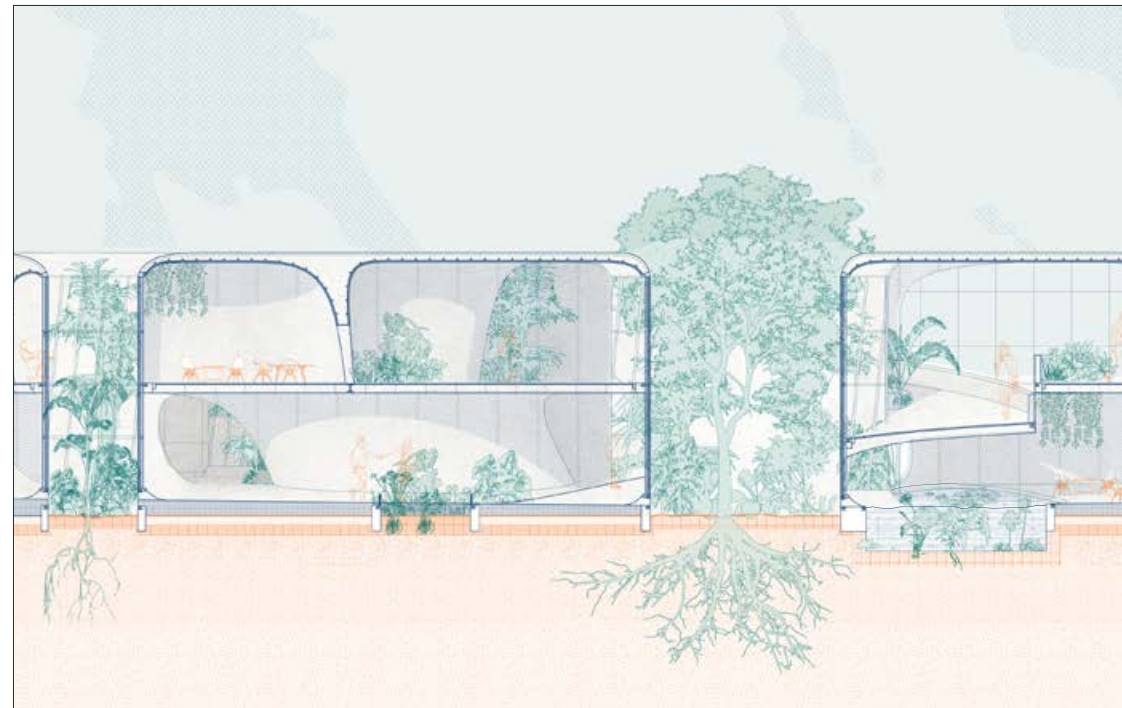
Plan & Fragment & Plants Diagram



Plan & Section



Section & Exploded View



Outdoor Front/ Back View





Affordable housing design

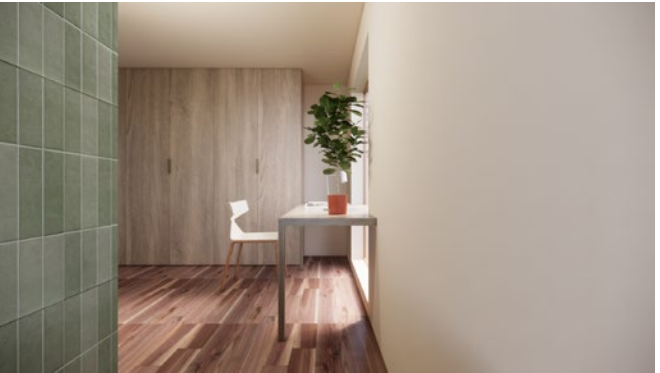
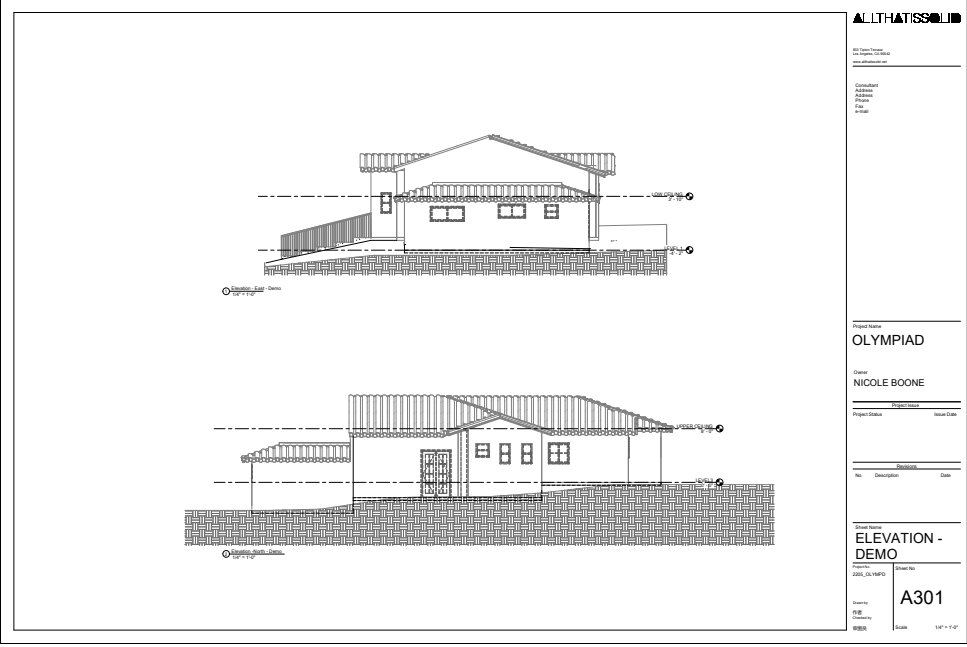
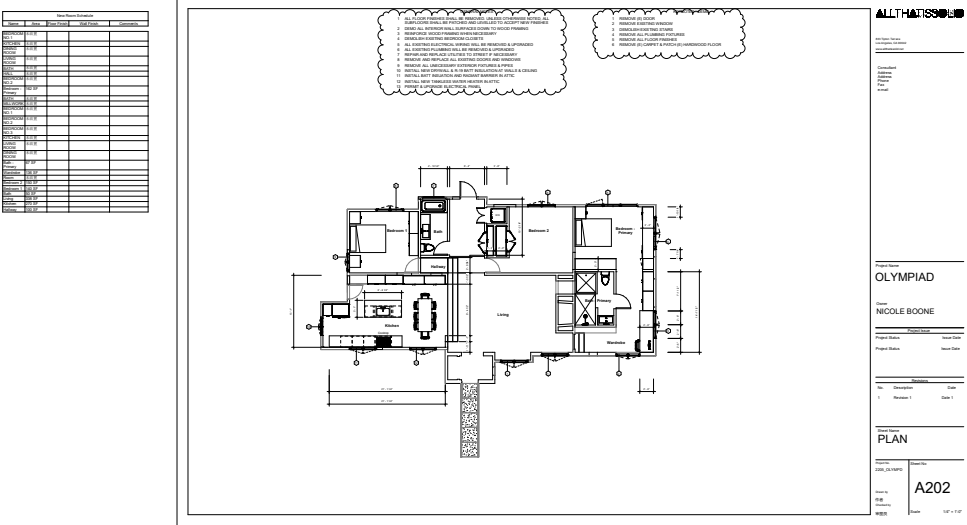
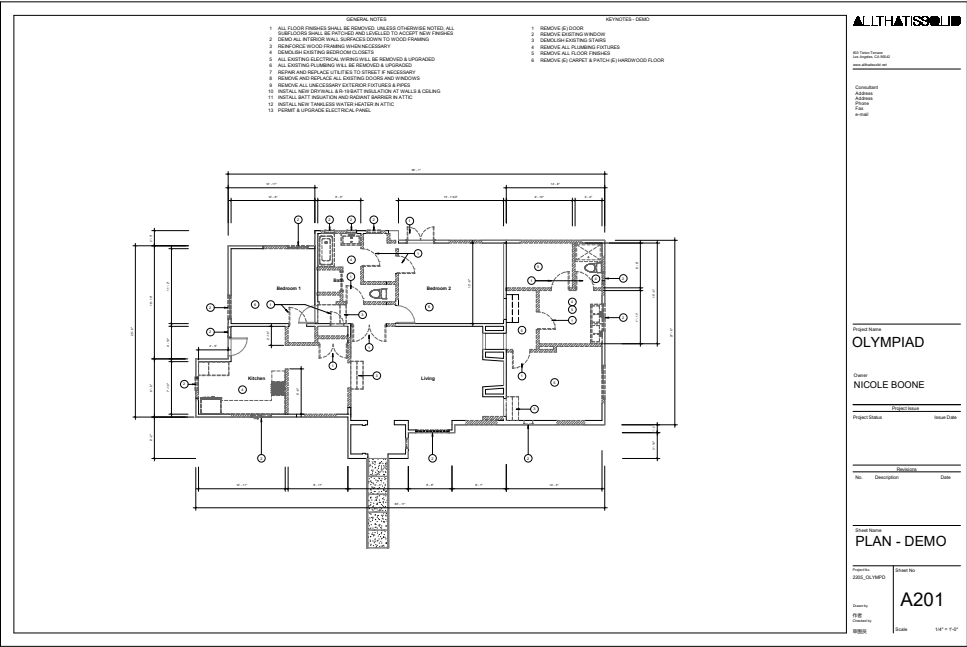
Long-term rental apartment design

Project Tutor: Garrett Ricciardi
 Date: 2022 spring (UCLA school work)
 Individual Work

My focus on the dingbat's identity centers on the overhang created for parking by staggering the units above and below. This design results in an overhang for parking spaces, with the first floor's roof serving as a public area. Another key concept is the concealment of cars; by altering the orientation of each unit and positioning them in a circular arrangement side by side, the vehicles are kept out of view. The first floor features four small clusters, allowing for pedestrian pathways between them and access to upper levels.

Work Samples (2022 summer internship)

OLYMP,Los Angeles, ALLTHATISSOLID



2ND HOME,Los Angeles, ALLTHATISSOLID



1917-Van Pelt,Los Angeles, ALLTHATISSOLID

