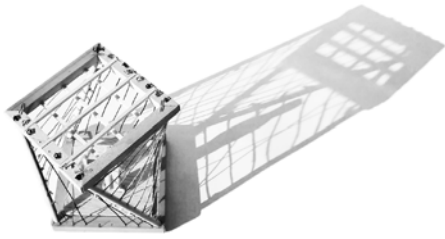


Architecture
Portfolio
66

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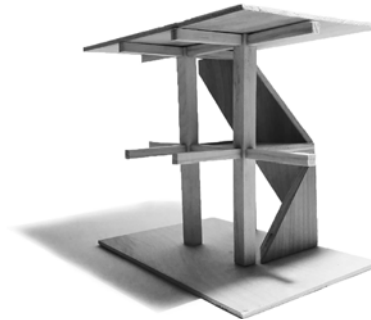
Studio I

15



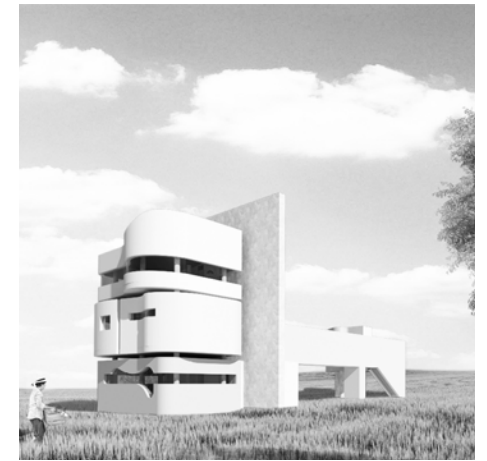
Decom I

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Studio II

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Decom II

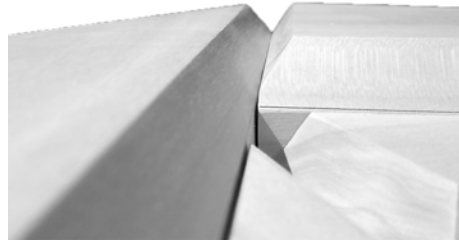
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33



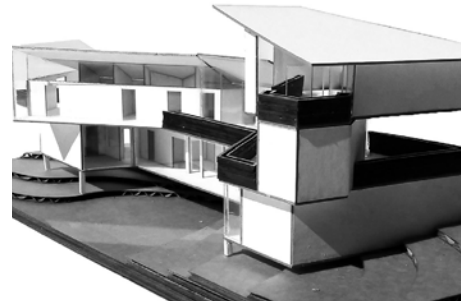
Studio III

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Etec I

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Studio IV

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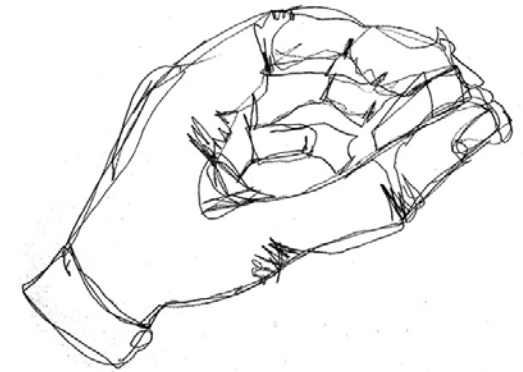


Before Architecture

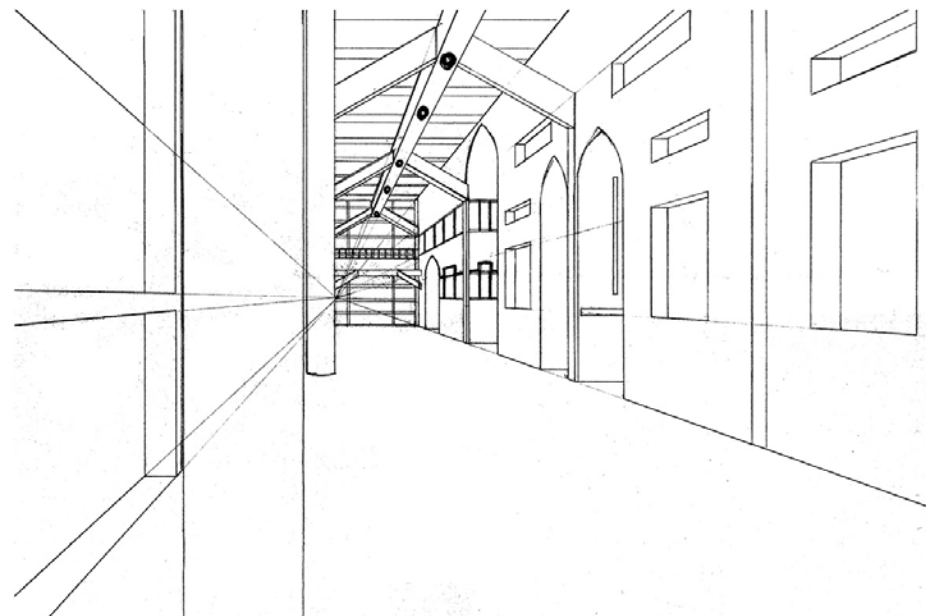
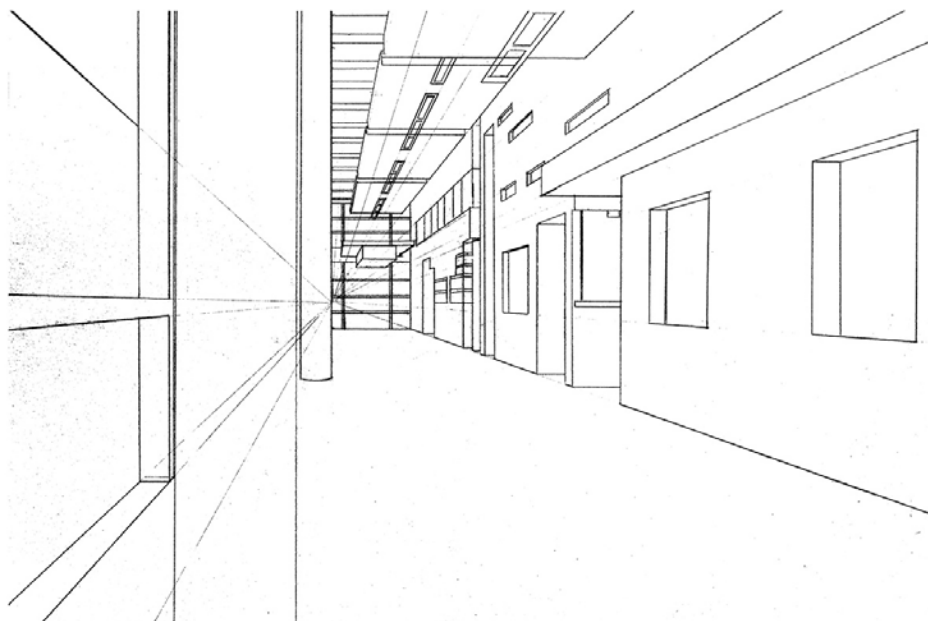
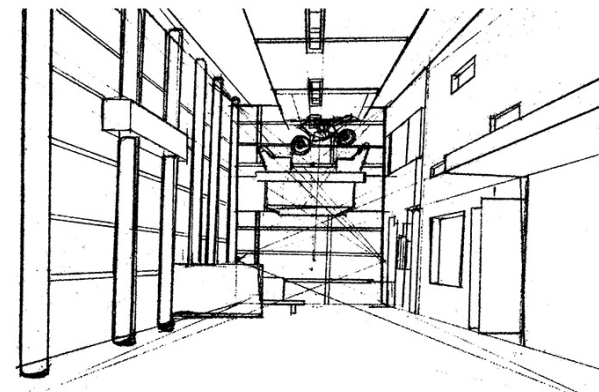
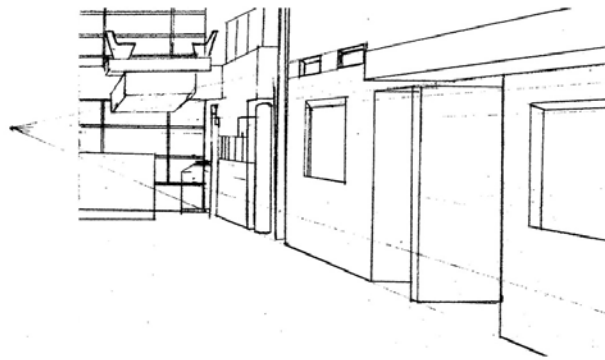
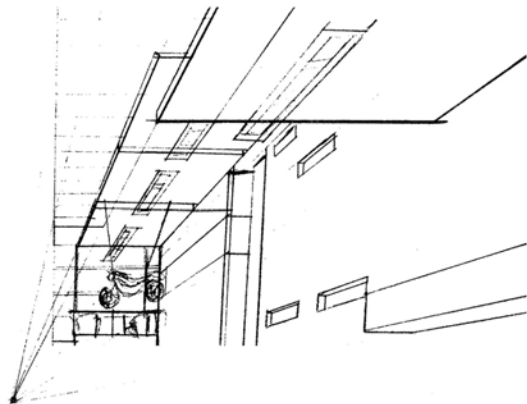
Studio I

Contour Line Drawing

Drawing in contour line style helped to emphasize the form and mass of objects. This technique also helped to get used to sketching in a more efficient and natural way and to train my eye to see nature and man-made lines more easily.



Model of Contour line tree.



Engineering Technology Building at Marietta Campus

Perspective Drawing

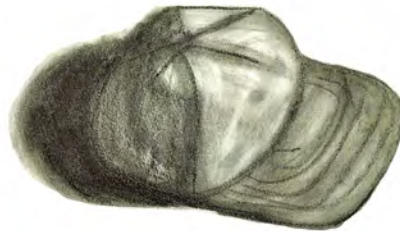
These perspective drawings represent the experience of an interior space. Using this technique, helped to create realistic visual representations of space and form. The upper thumbnails helped to find the better location to draw a perspective with only one vanishing point.

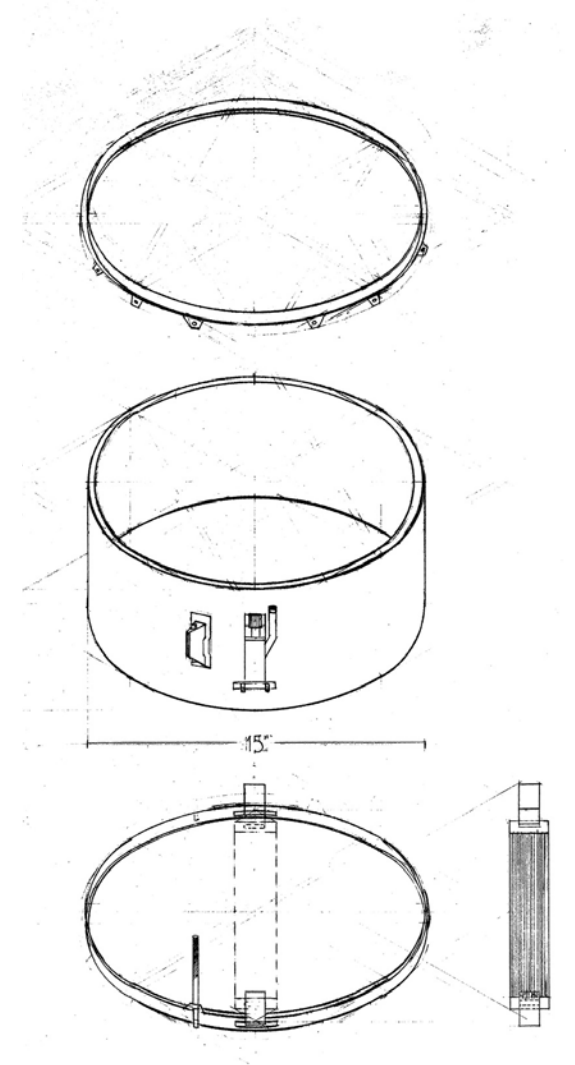
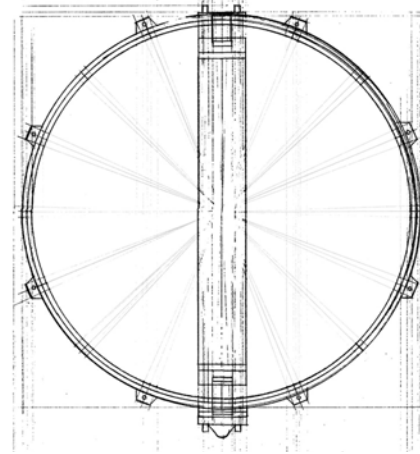
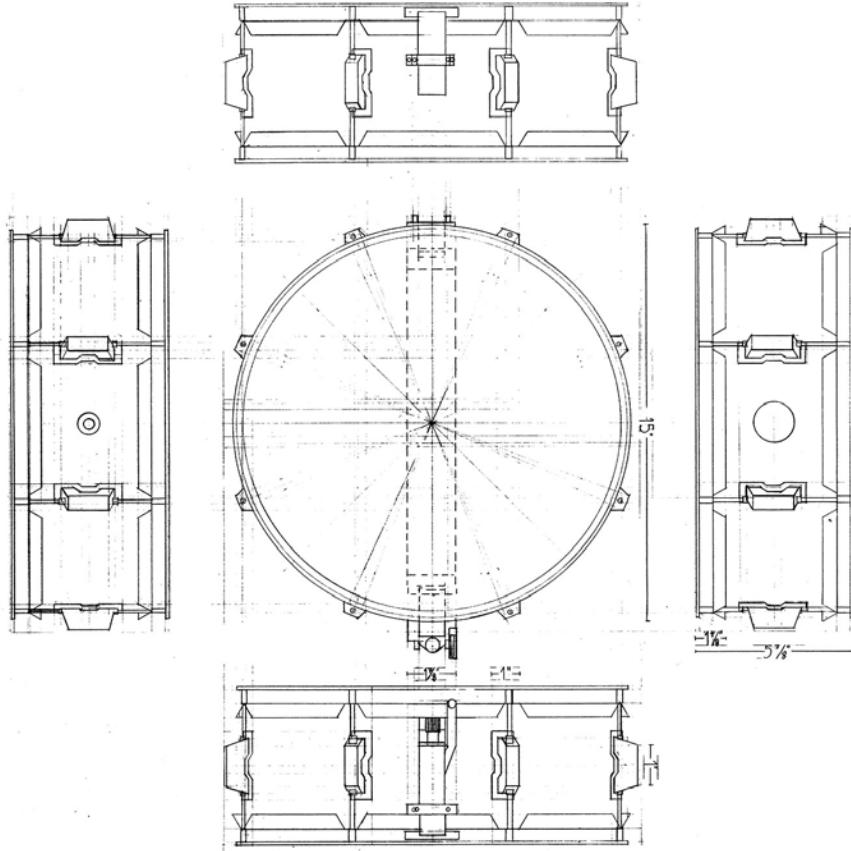
Tonal Drawing

Charcoal is a great media used to represent mass and lighting. These sketches helped to understand the behavior and interaction of light on masses and its impact on spacial experience. Two objects were also studied in this exercise.



Charcoal quick sketch.



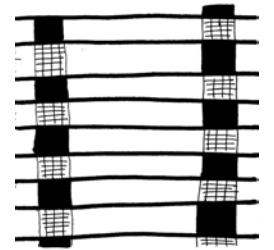
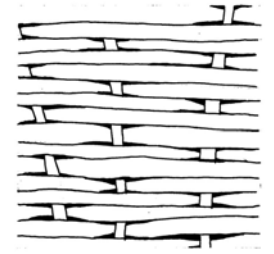
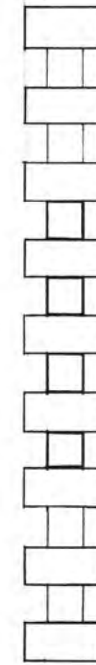
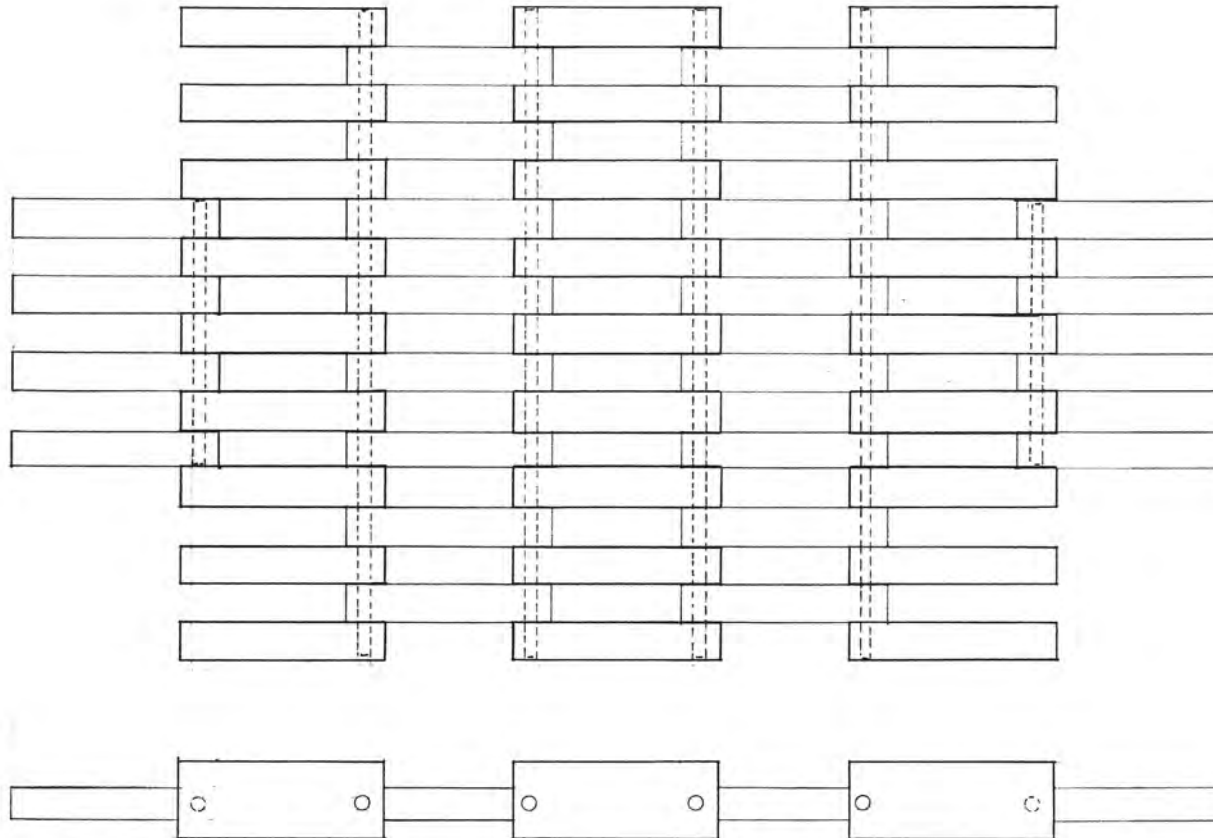


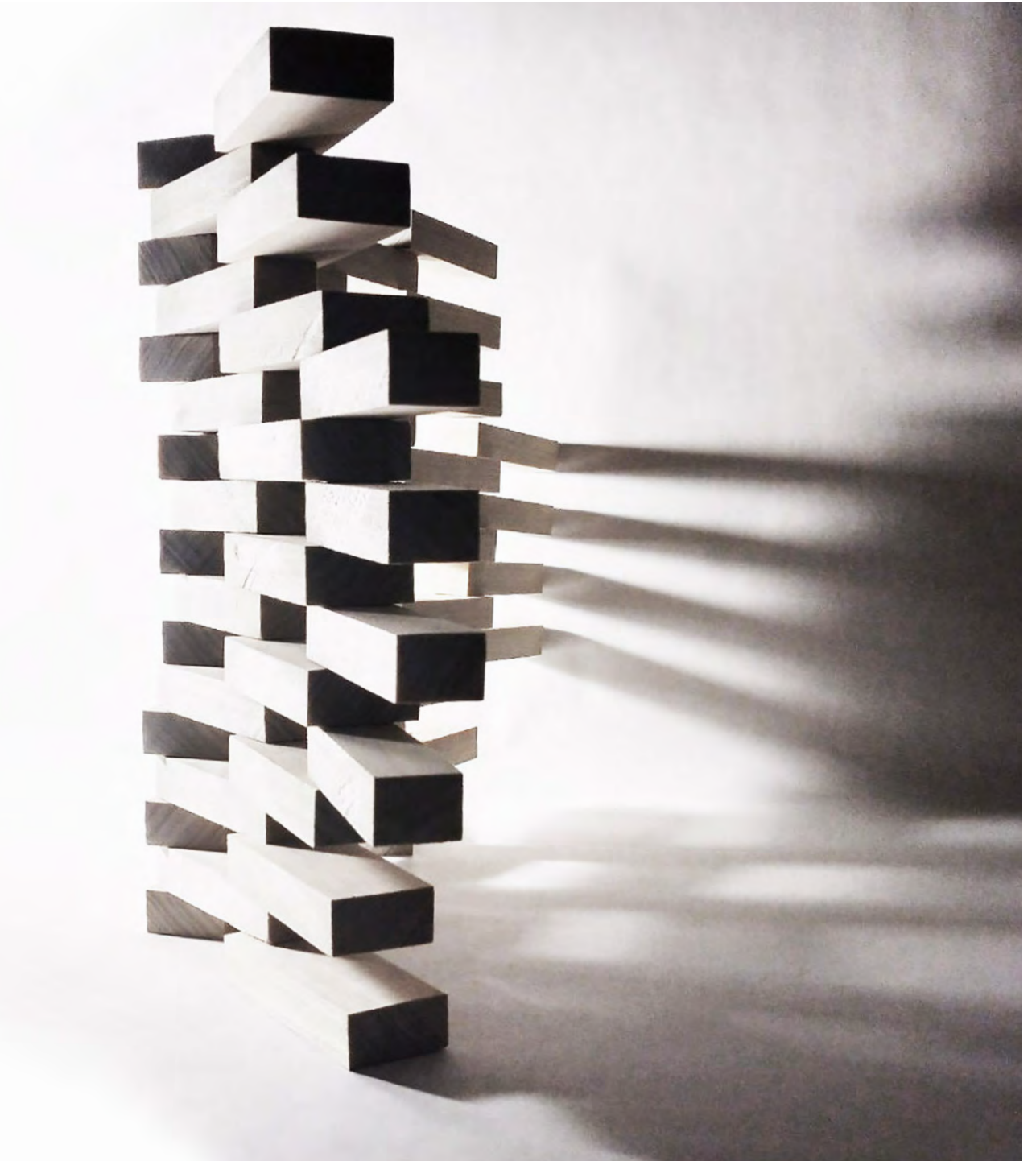
Orthographic and Isometric Drawings

A snare drum was the object chosen to practice Orthographic projections and an exploded isometric drawing. The geometry is simple but drawing this object in detail represented a challenge due to of all the details at different angles.

Texture and Material Study

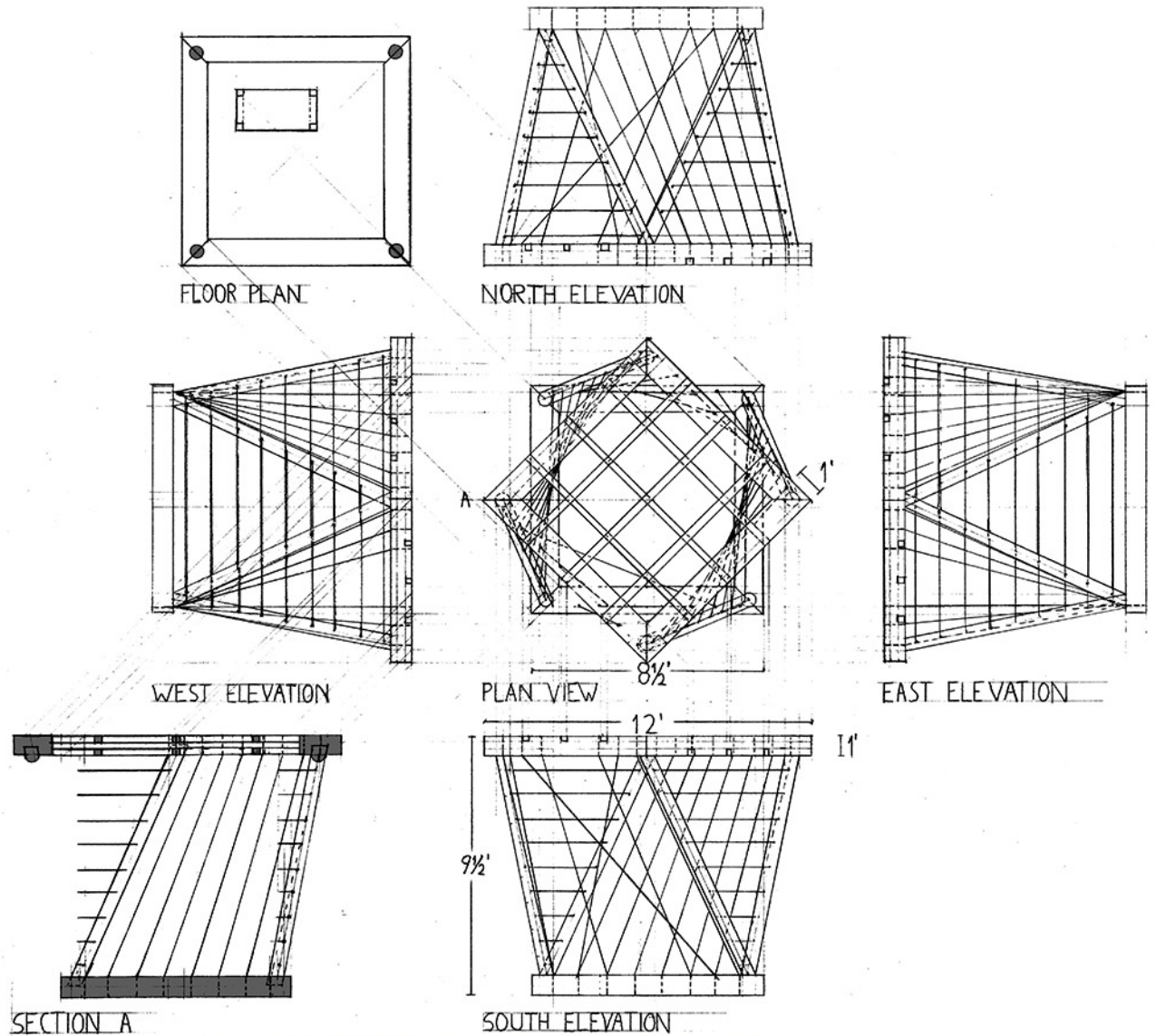
This project was inspired on the exterior texture of a basket. The iteration process of the geometry led to its simplification. Then, this design was translated into wood. This exercise is critical in teaching strengths and weaknesses of this material. All the pieces are put together with a set of dowels that also allow mobility and the possibility to reorganize the artifact.



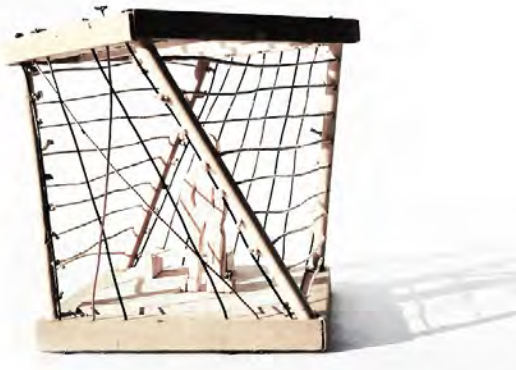
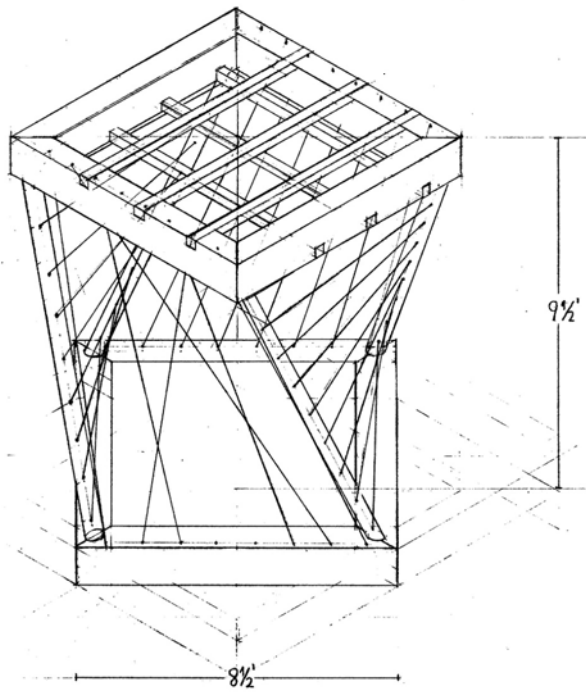


Meditation Space

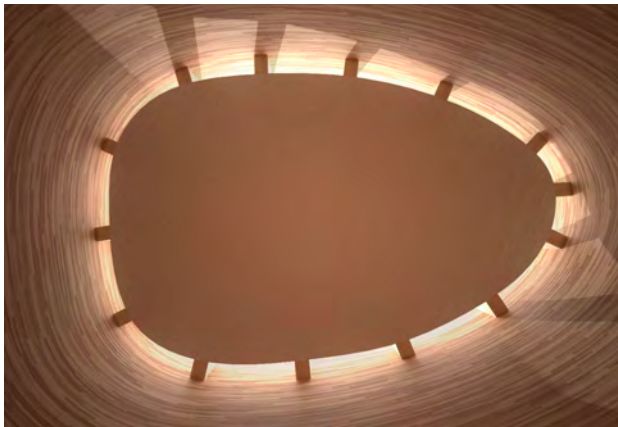
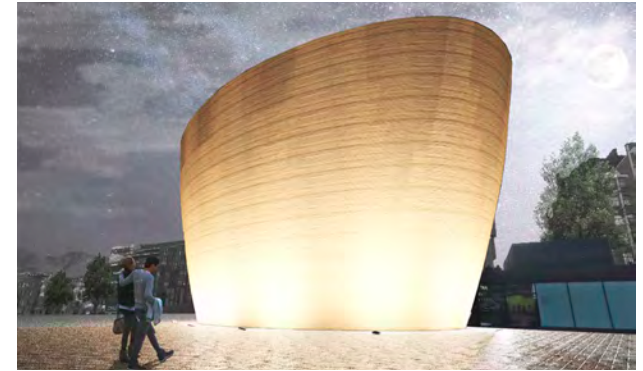
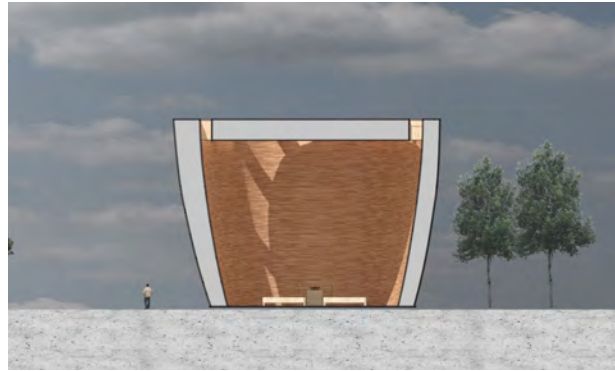
This is the final project of studio I. It was inspired on the axial symmetry of the snare drum and the sound experience created by the interaction between air and its facade. If looked from site plan view, the space forms an octagonal shape that refers back to the drum. The strings and wires that envelope this space are inspired on an altered snare shown in the study model.



Snare study model.

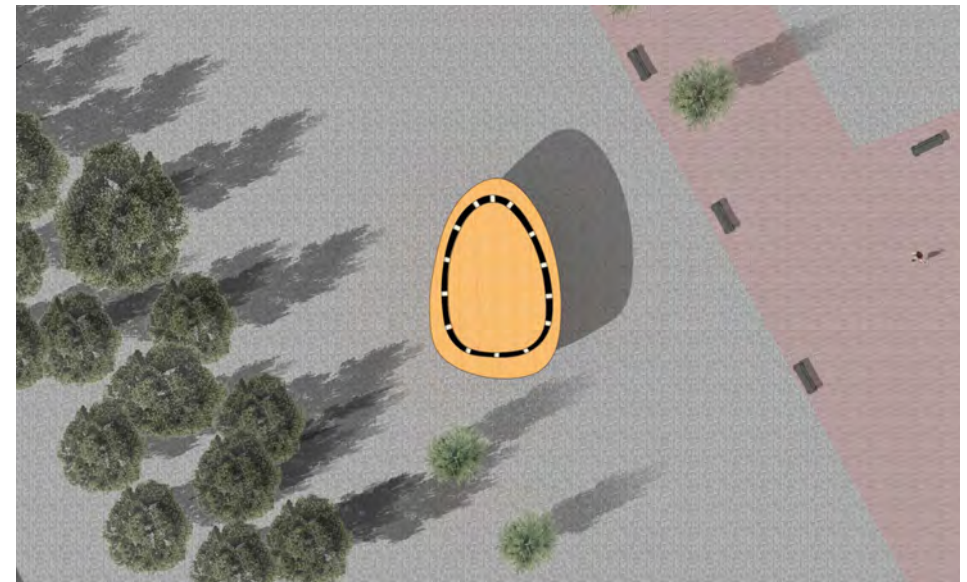


Design Communication I



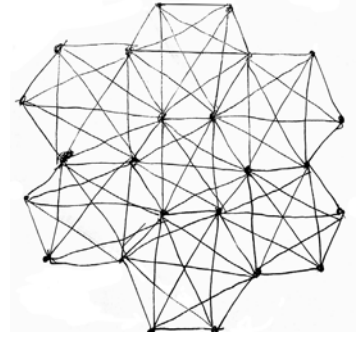
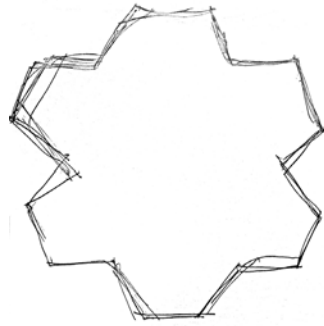
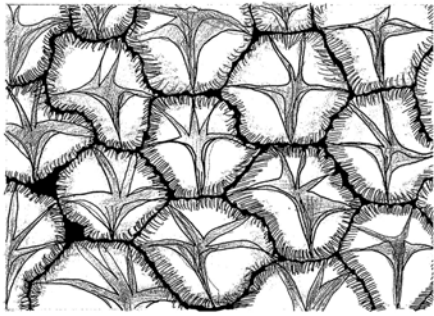
Chapel Case Study

The Kamppi Chapel, also known as Silence Chapel, is located on the south side of the busy Narinkka square in central Helsinki. Completed in 2012 and designed by Kimmo Lintula, Niko Sirola and Mikko Summanen, the building offers a quiet place to meditate in one of Finland's most lively urban spaces. With its curved wood facade, the small sacral building flows uniquely into the city's landscape. Also, the interior environment created by the exterior illumination avoids the use of artificial light. Simultaneously, the chapel's gently shaped interior space invites visitors to come in and have a break from the exterior bustling city life.



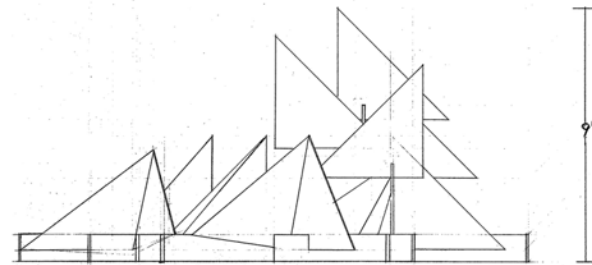
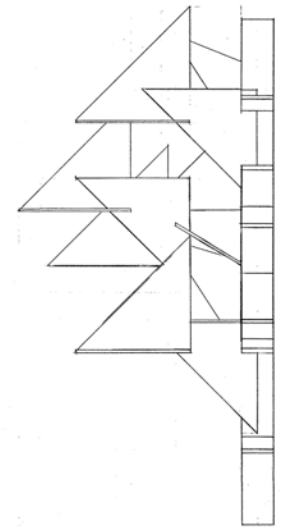
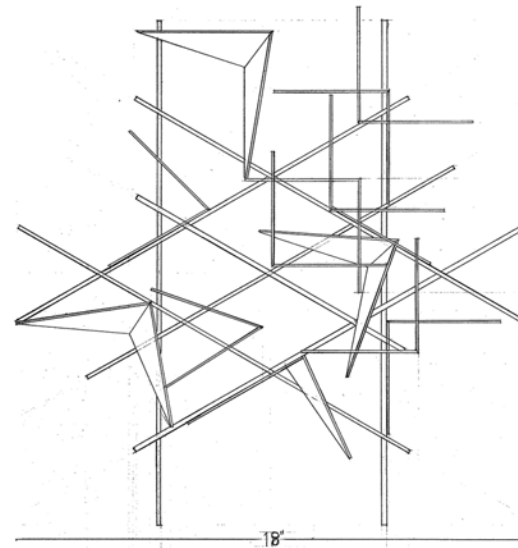
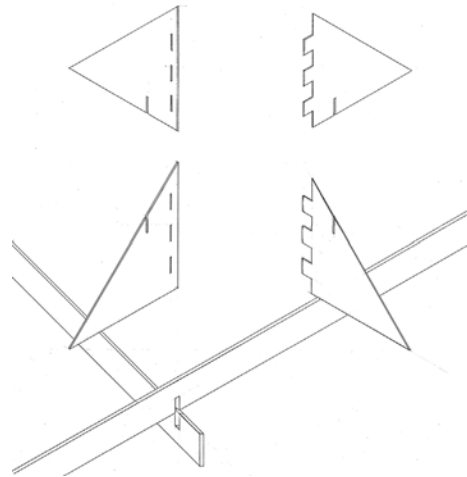


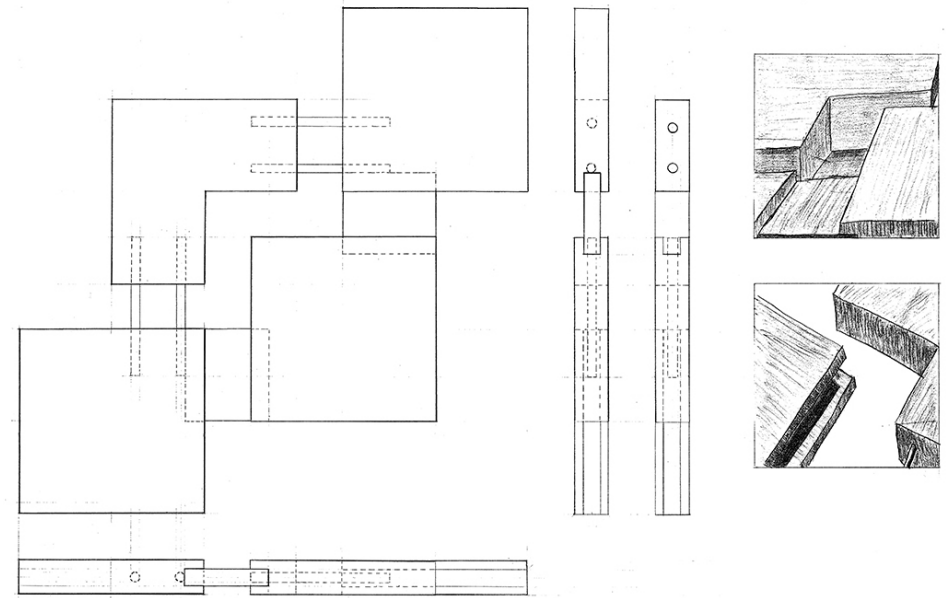
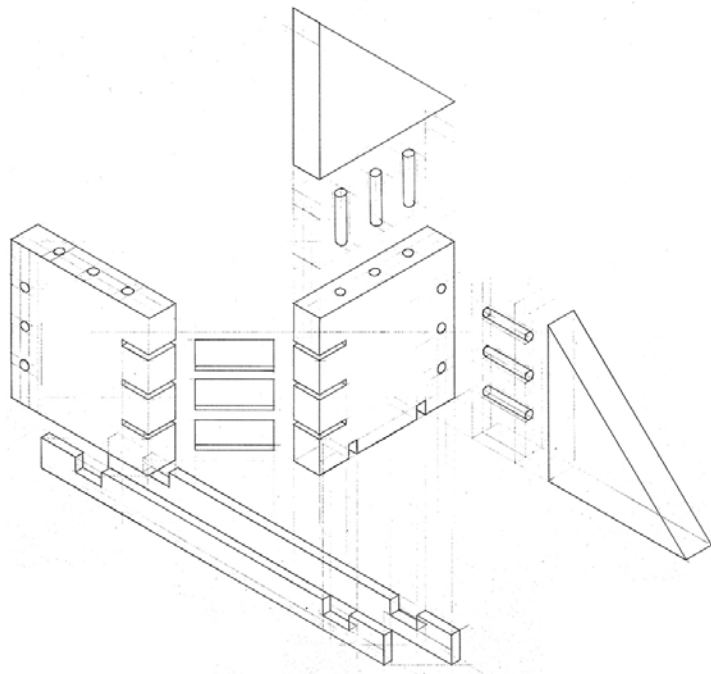
Studio II



Joint Exploration: Clipboard

The inspiration for this project is based on the geometry of the texture found in a pineapple. It was later simplified into more symmetrical hexagons. The geometrical possibilities found through this study were translated into chipboard. This material's qualities were tested during this exercise.





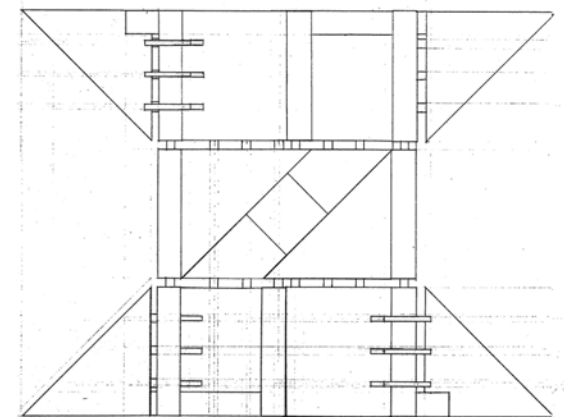
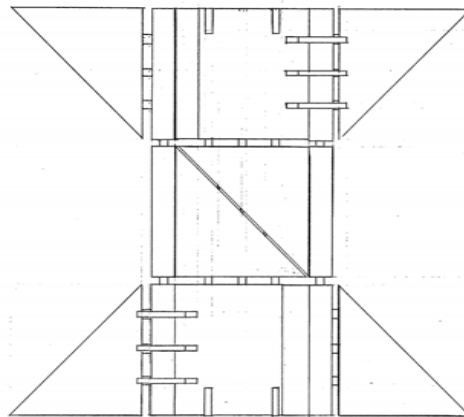
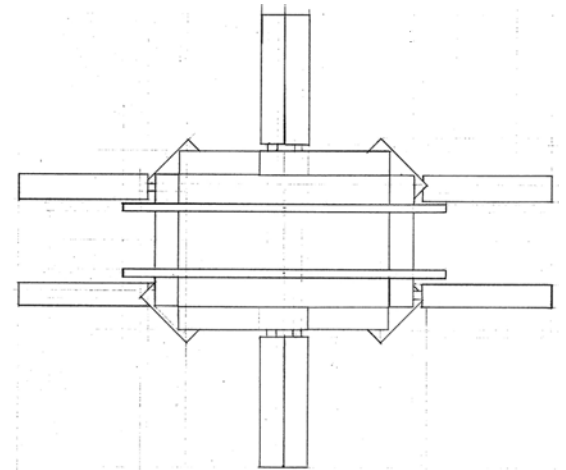
Joint Exploration: **Wood**

Material experimentations were also conducted on wood, four square blocks for each iteration. One model was assembled in 2D and the other on 3D. In each of these artifacts, two types of joints were used to keep the design together: splines and dowels. The combination of these two joint methods created a strong bond.



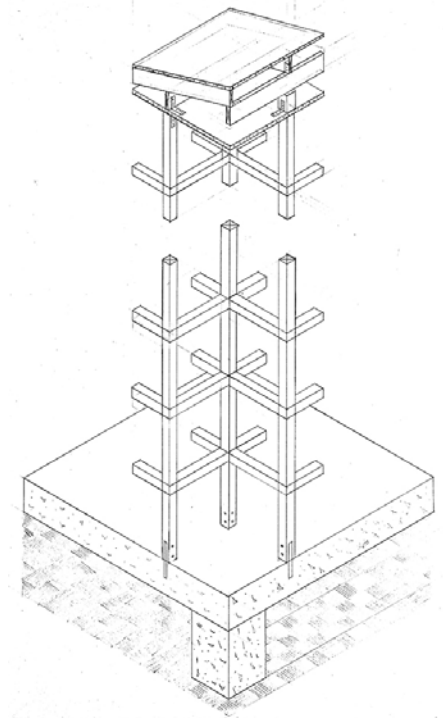
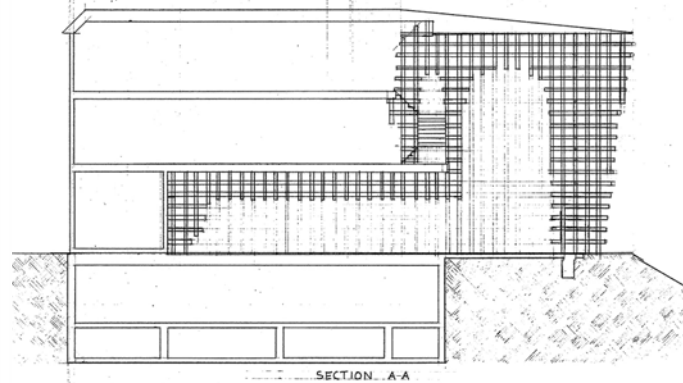
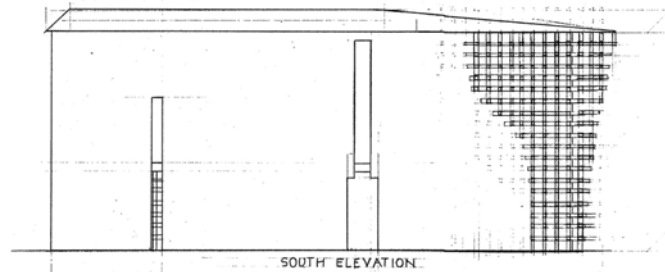
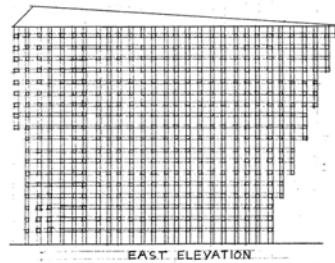
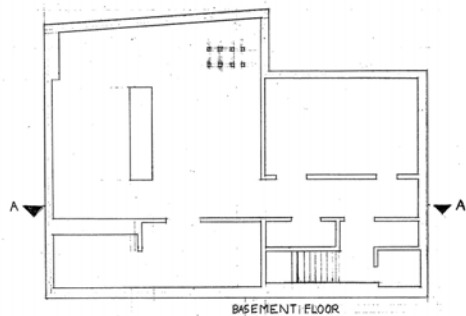
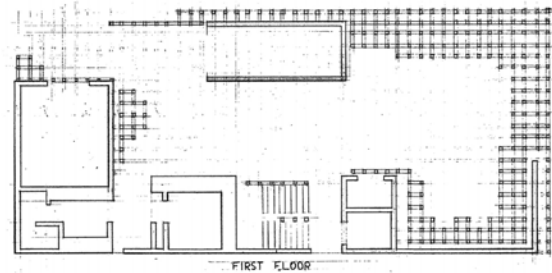
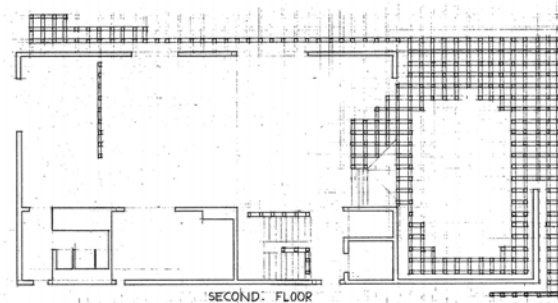
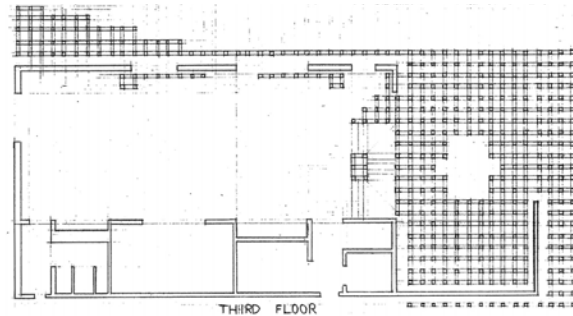
Wood Artifact Expansion

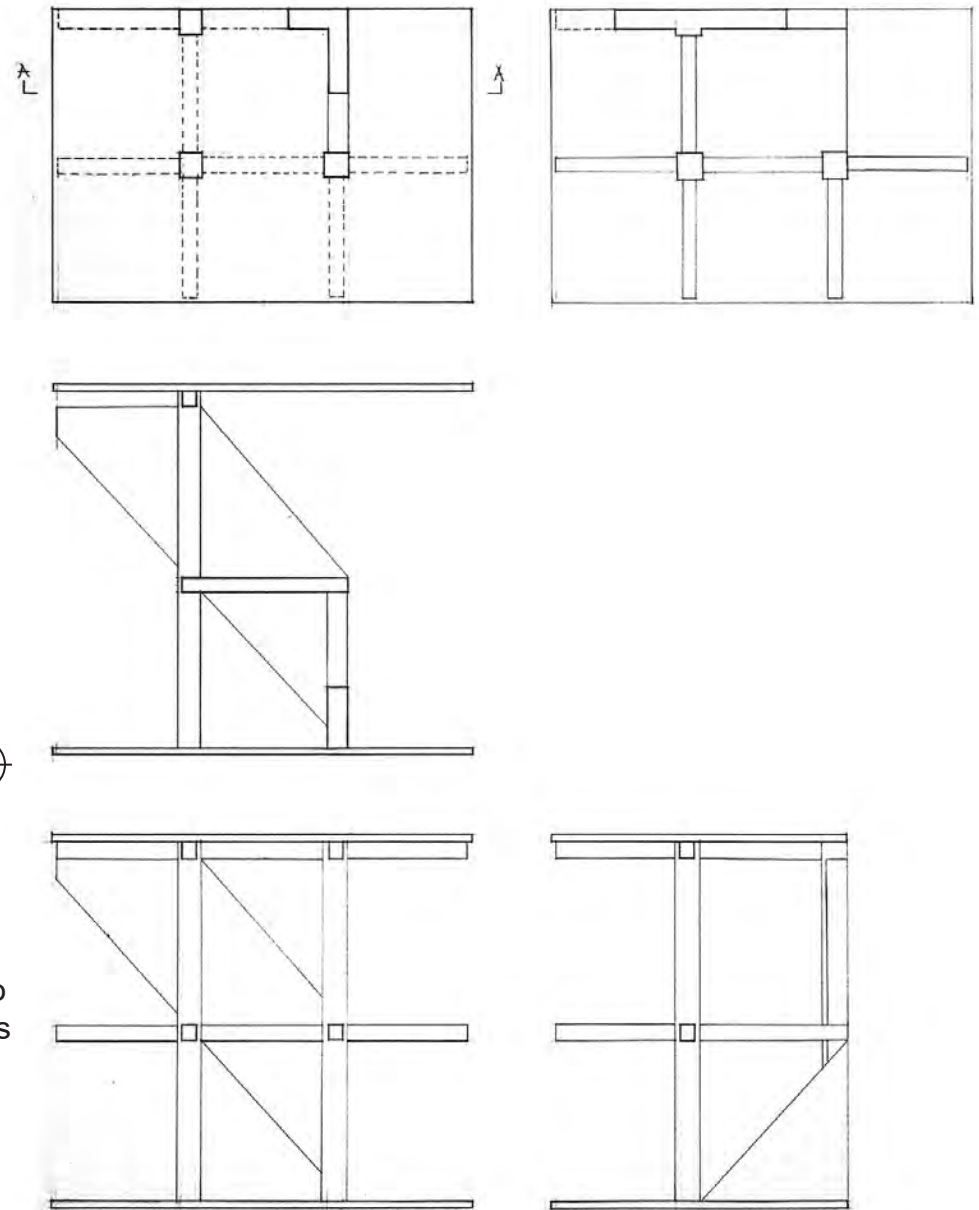
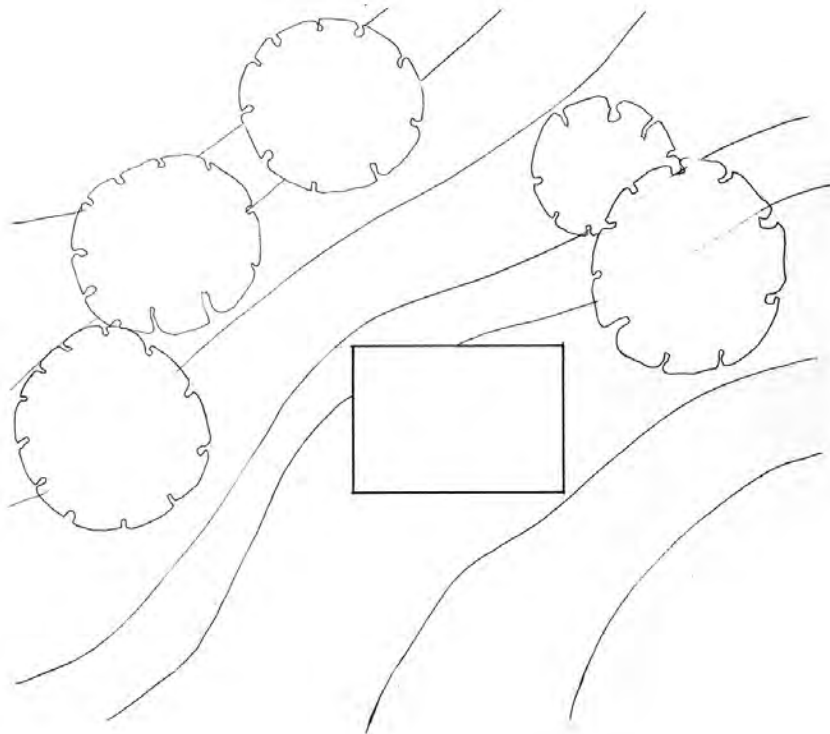
The joint methods learned in the previous exercise were applied in the design of the expansion of the 3D artifact. The 3D component was replicated three additional times and put together to create a tower-like composition. This exercise opened the possibilities to play with the patterns portrayed within the artifact.



Wood Building Case Study

I selected the Prothro Museum Research Center as case study for this semester. By drawing the floor plans, elevations, section and speculative wall section, I learned the simplicity of this building and the spacial qualities that the timbers form.





Study Space

A study space was designed using the spacial qualities of the composed timbers learned from the case study. . The decision to keep this space simple was inspired on the simplicity of the joints that define the spaces in Kengo Kuma's museum. The back wall pattern refers back to the void space created by the composed expansion of the first wood artifact.



Design Communication II

Wall House II

By John Hejduk

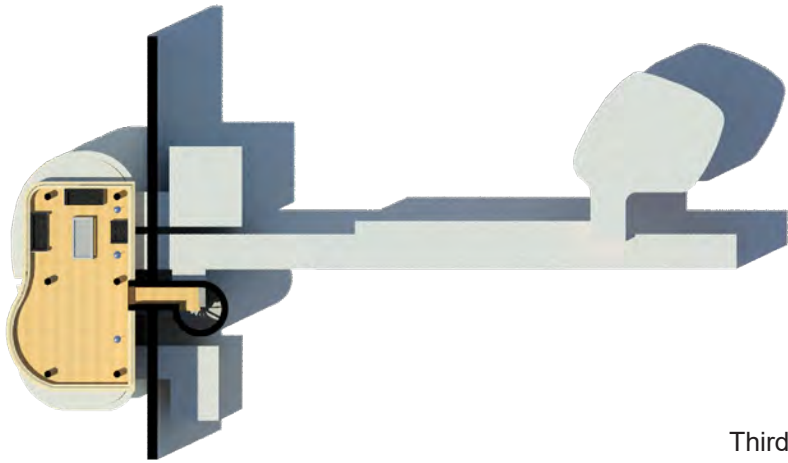
Located in Groningen, Netherlands, this house was initially designed in 1973 by the American architect John Hejduk but its construction began shortly after Hejduk's death in 2000. The rooms are separated from each other dividing them through the implementation of walls. It has a wall that creates a visual boundary between the west and east elevations.

Individuals can access through the east elevation but they need to go up the stairs into the second floor to enter the building. The cir-

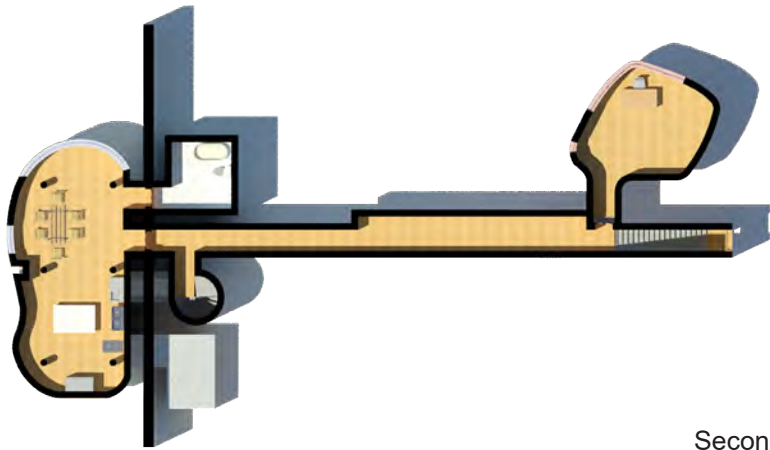
ulation was designed this way to increase the privacy inside the master bedroom, which is located on the ground level. The master bedroom also has its own bathroom.

The second floor is where the social interaction is more evident. The kitchen and the dining room lie on the west side of the building while a studio lies on the north side. A second bathroom is located on the north-west side of this house. The living room occupies the third floor.





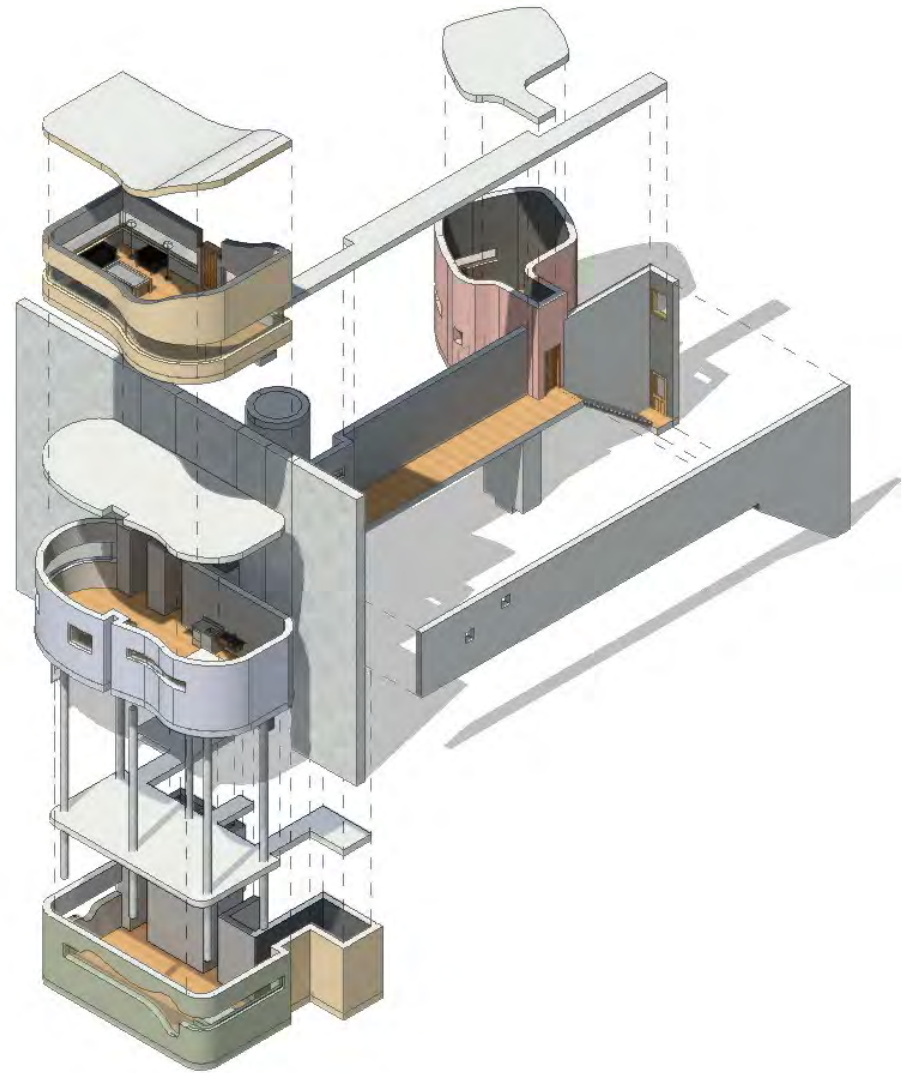
Third Level

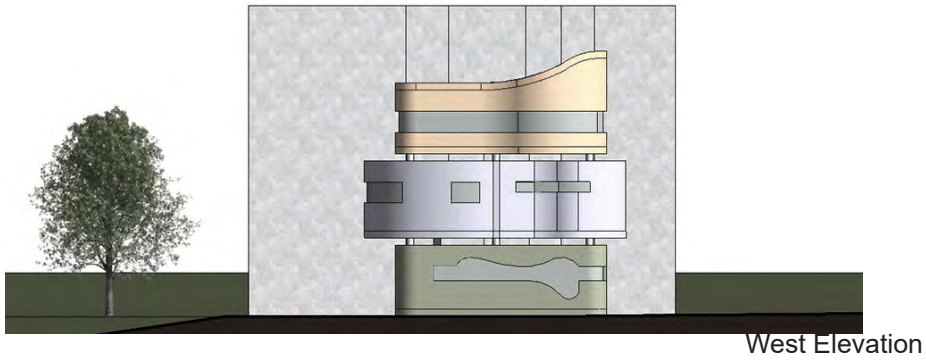
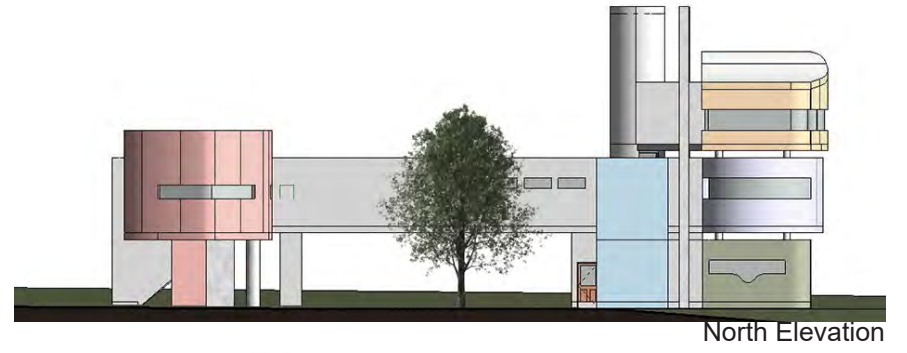
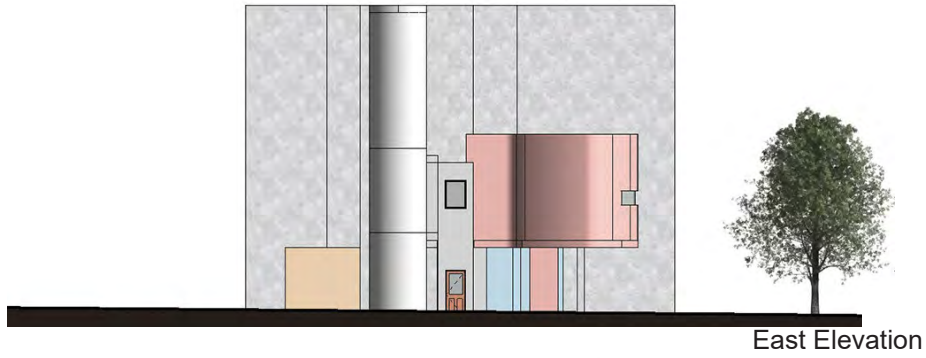


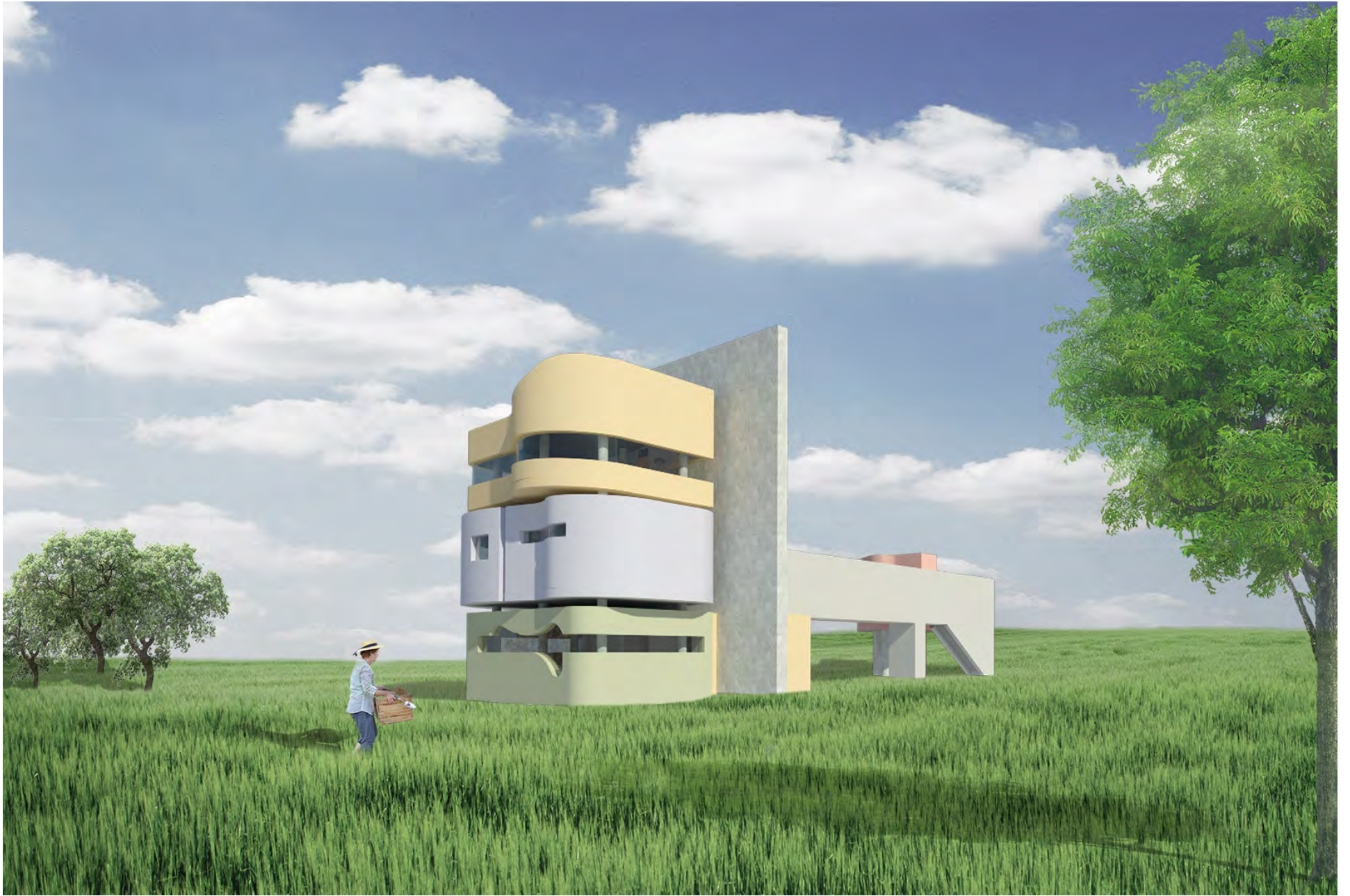
Second Level



Ground Level





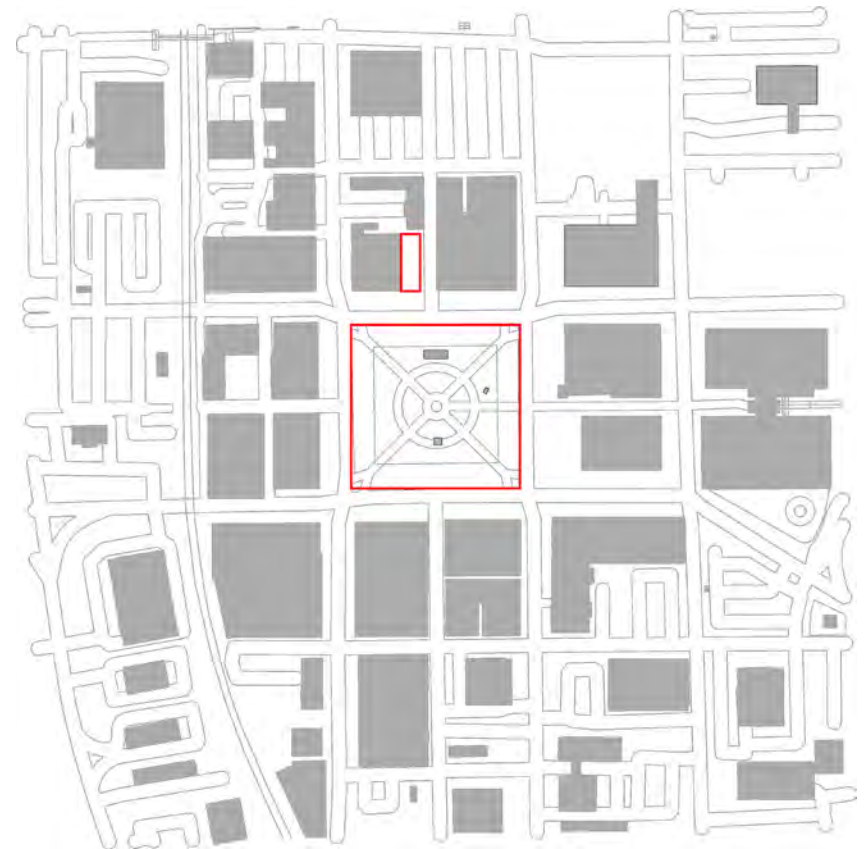
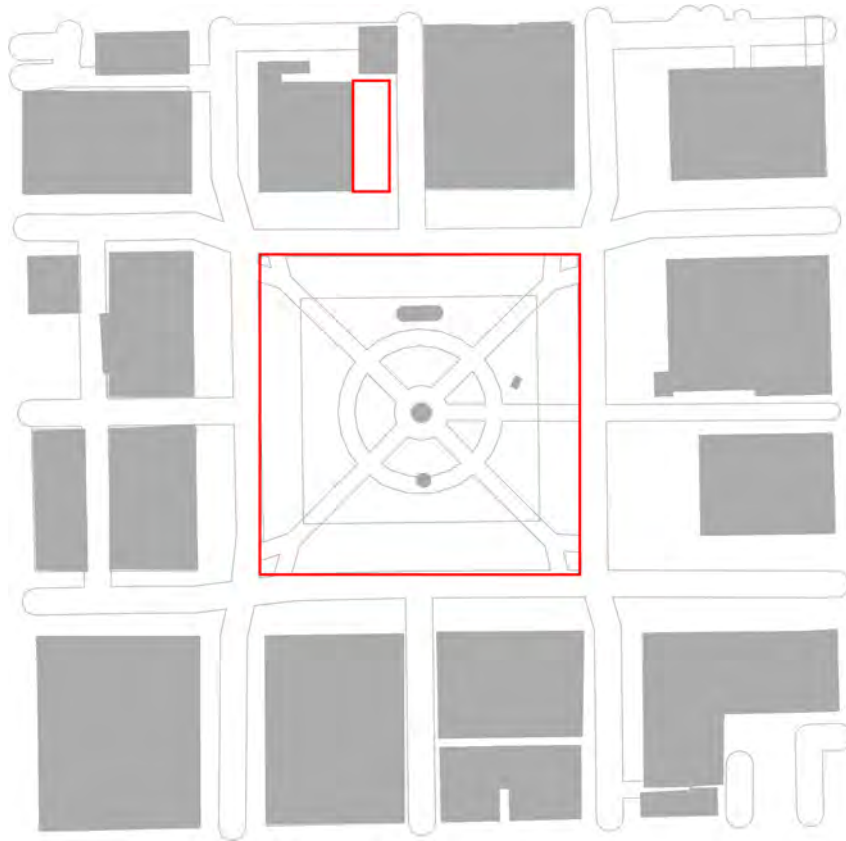


Studio III

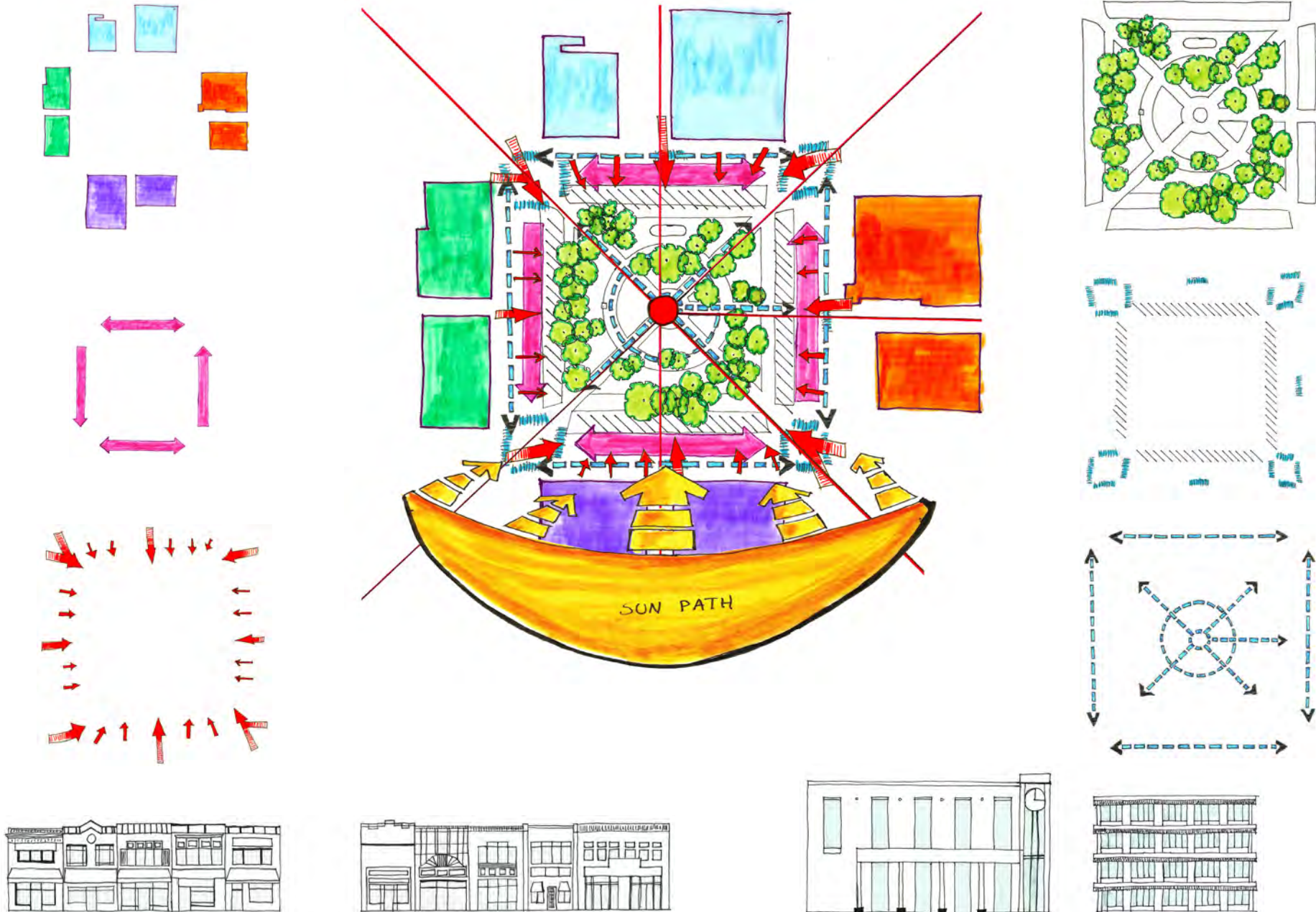
Marietta Squares Pavilion

Marietta squares consists of a pavilion with a stage. It is located at the north section of Marietta Square. Its design is based on the exaggeration of the geometry of its components as well as it is based on creating visual hierarchy. The goal with this design is to create a bond between the buildings that surround the square and

the landscape proposal. Also, the repeating pieces in the middle section of the pavilion have gaps that reduce the visual weight and to provide transparency. The possibilities of the different geometrical compositions were studied through study models and hand renderings as shown in the subsequent pages.

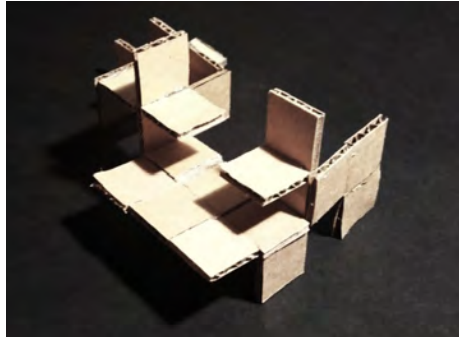


Site Analysis

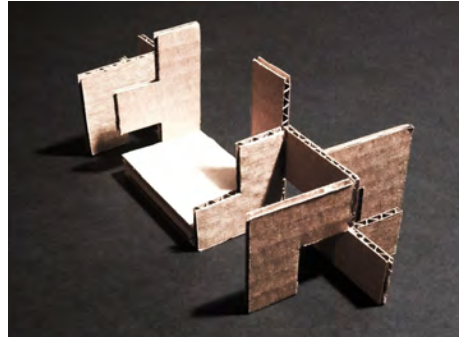




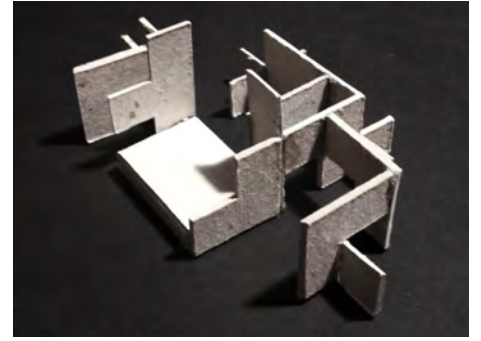
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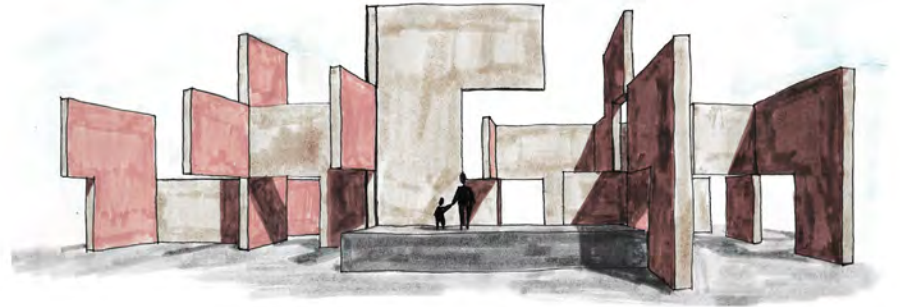
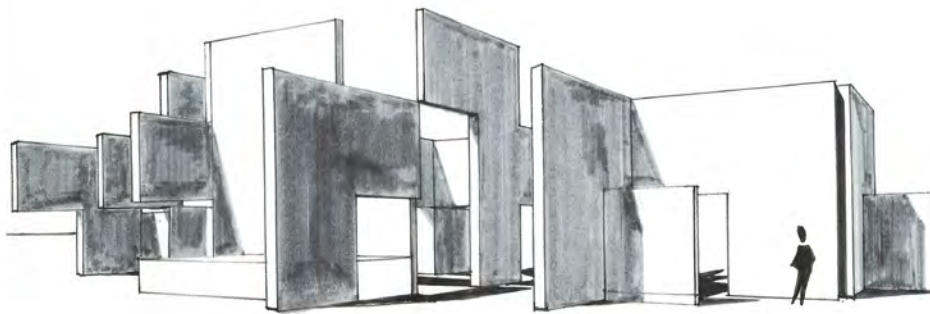
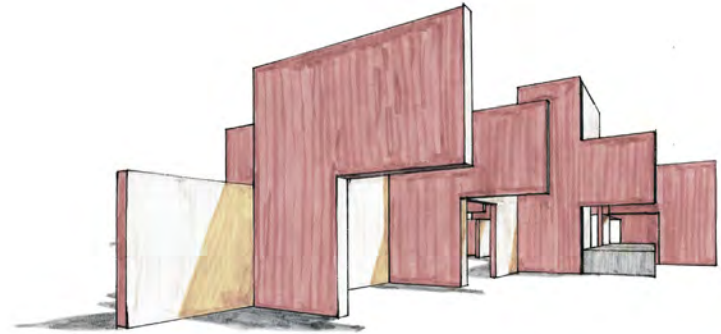
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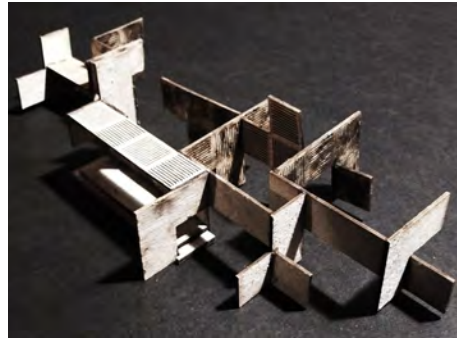




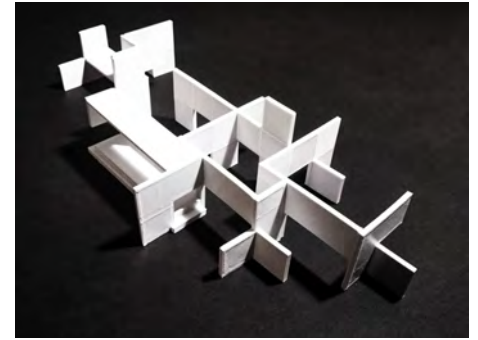
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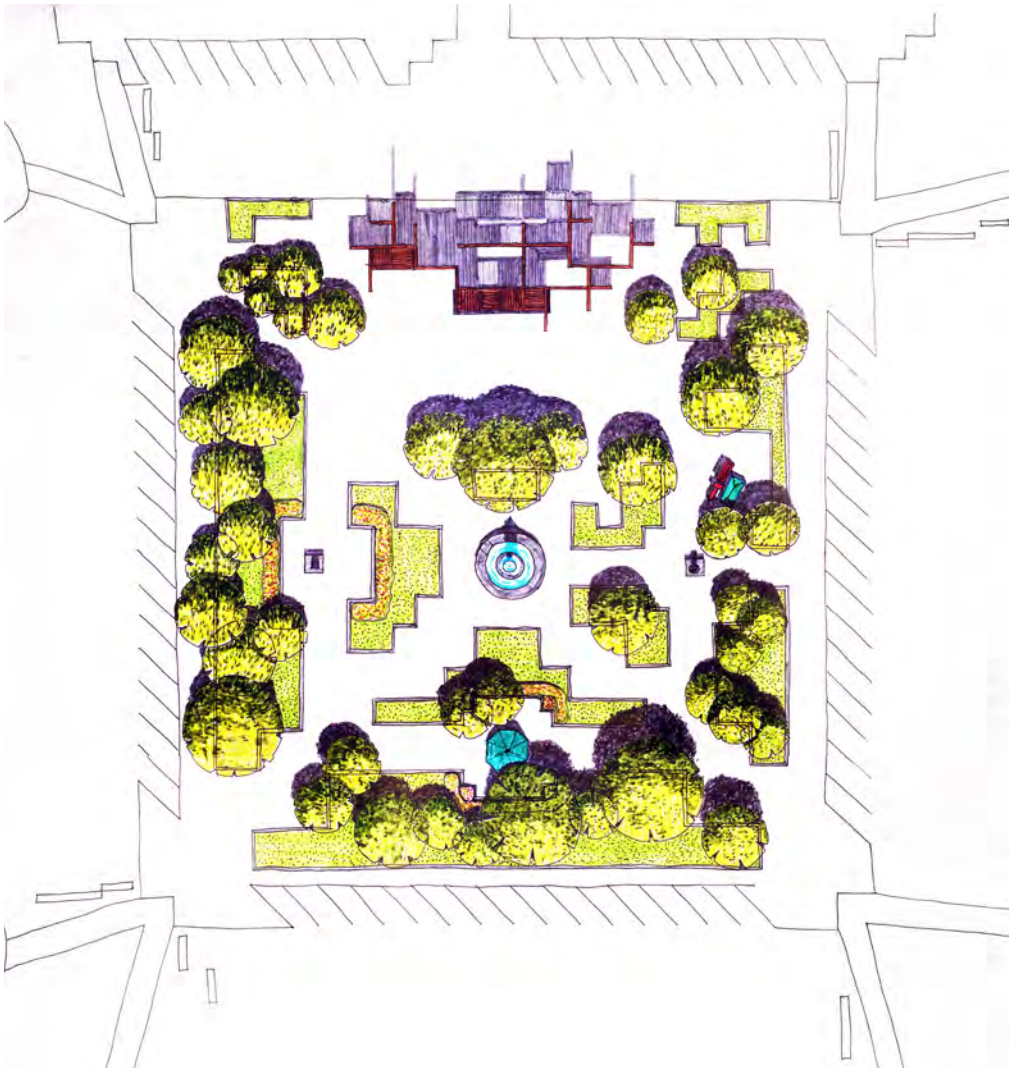
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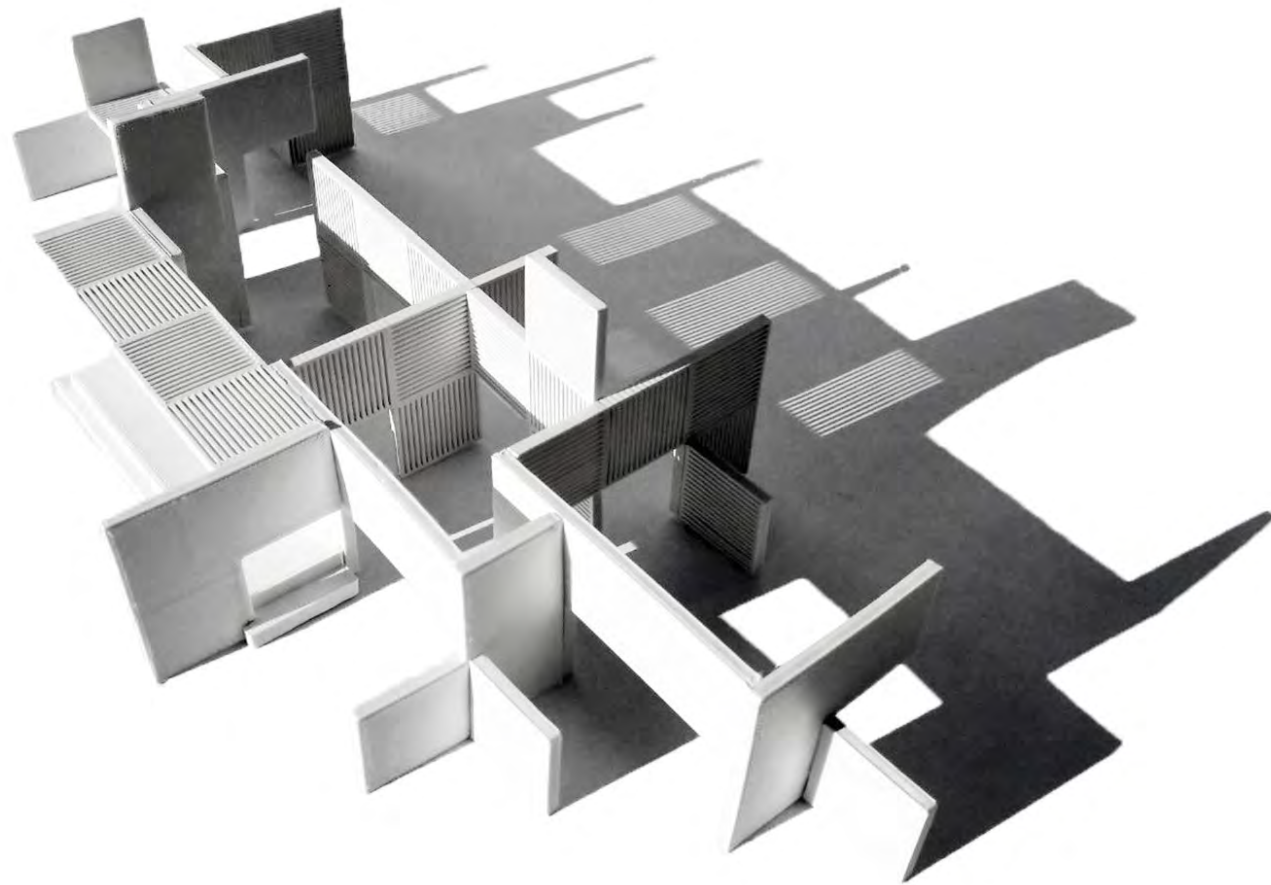
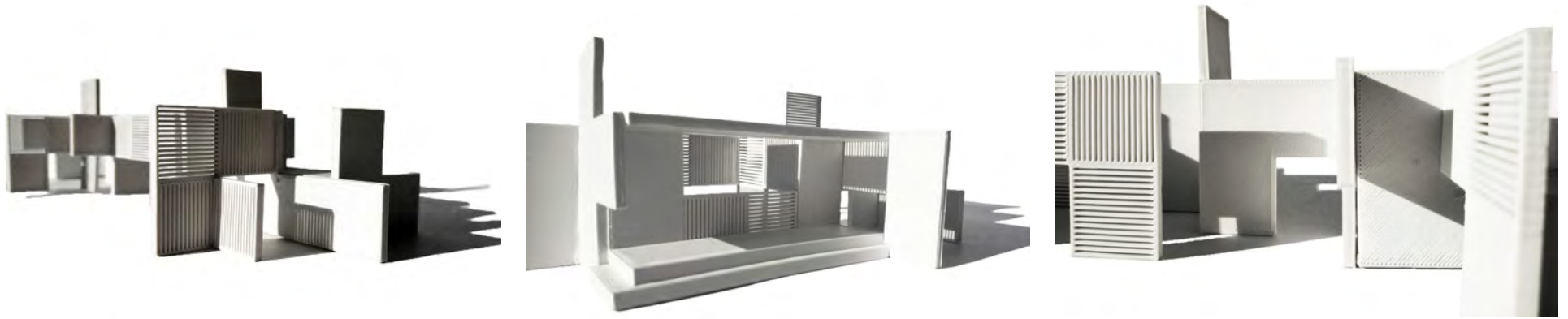


8



Marietta Square Design Proposal

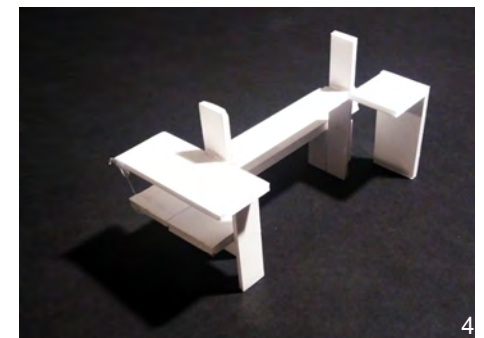
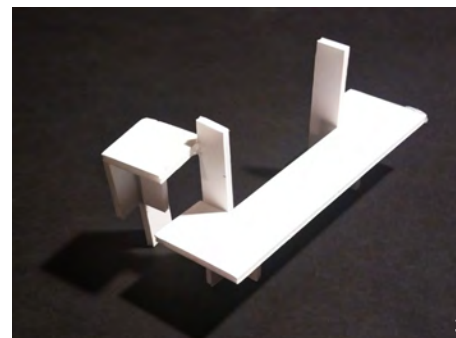
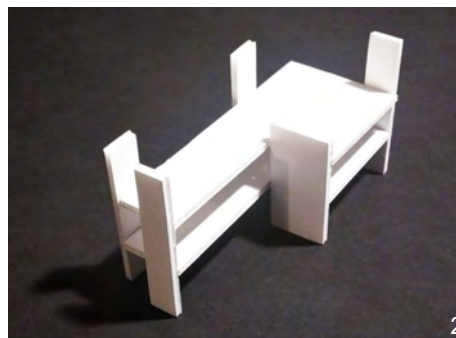
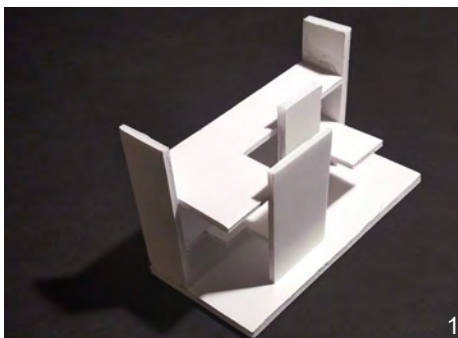
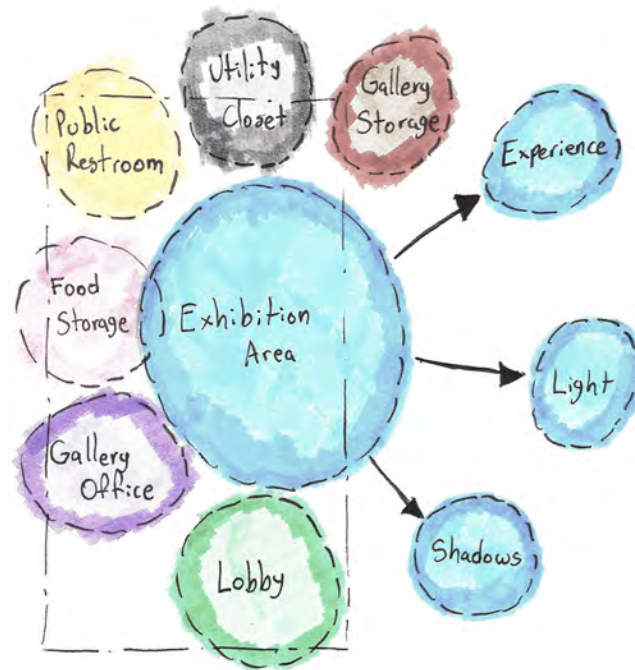
Part of this project was the redesign of the Marietta Square landscape. In this proposal, the shape of the gardens was altered to create a more defined geometry. This design is inspired on the geometrical possibilities found on the iterative process of the pavilion. This move also created small and private pockets of space that aim to trigger the curiosity of people who come here to spend time with their families.

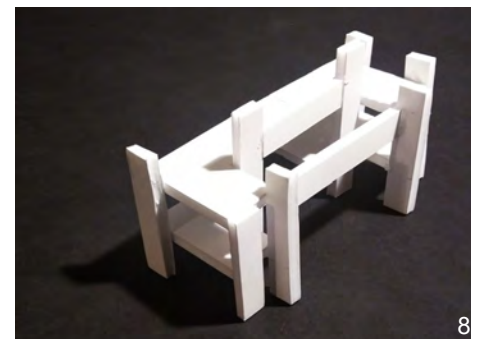
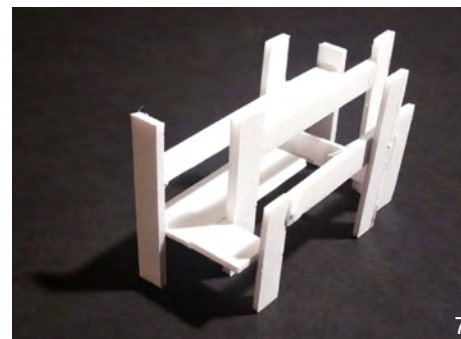
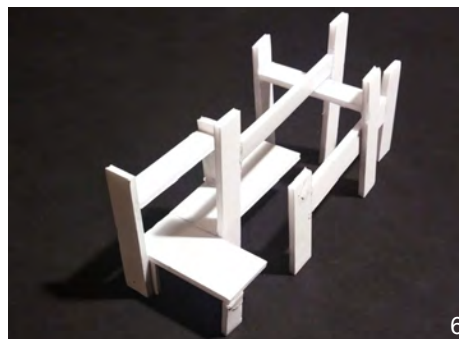
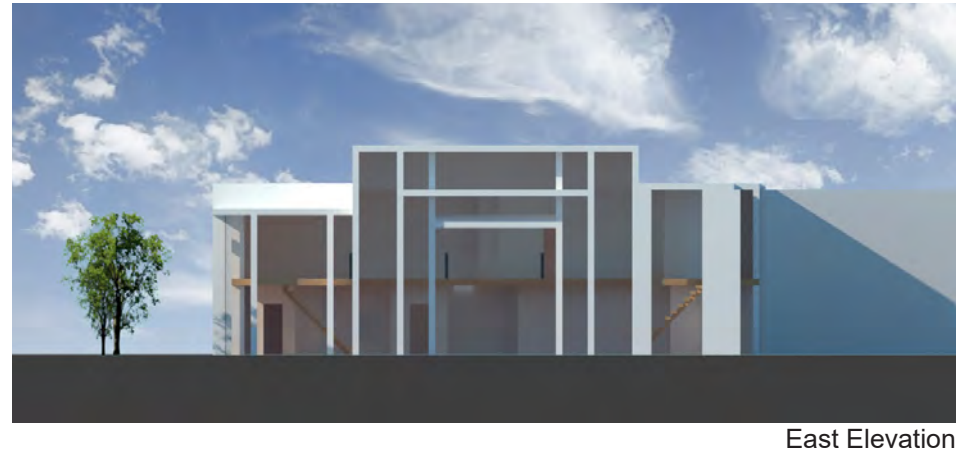
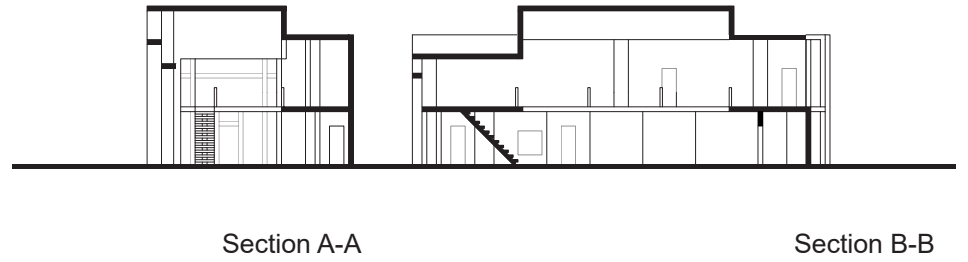
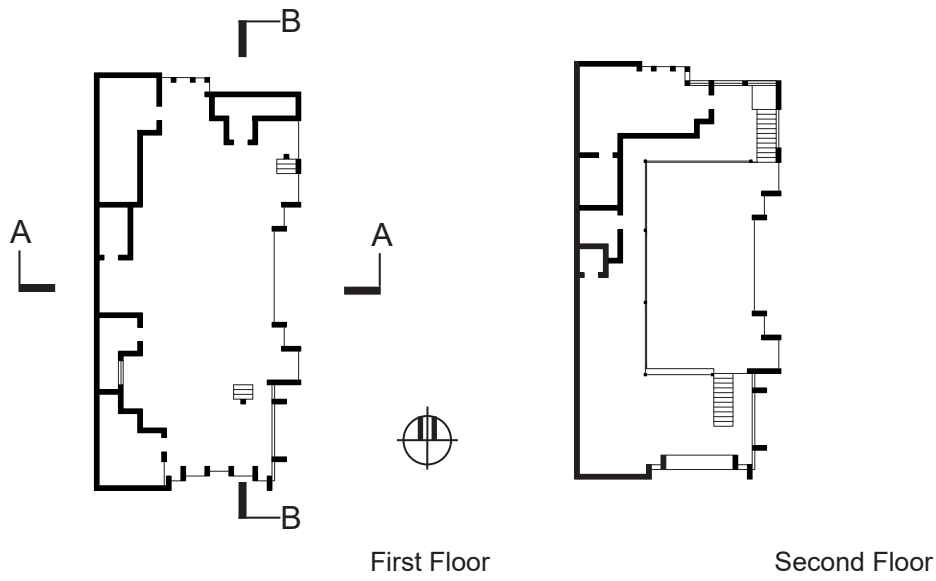


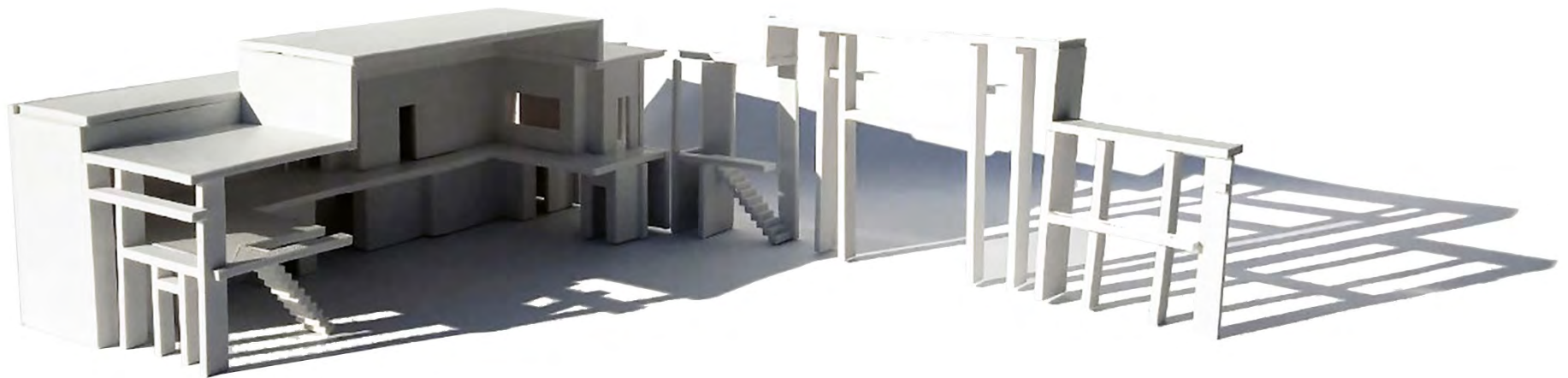


Marietta-rchy

The name “Marierarchy” consists of a word game that combines the two words: “Marietta” and “Hierarchy”. The site where this gallery is located is at the north of Marietta Square. The design of this art gallery is also inspired by the difference of heights portrayed by the buildings around the square and the buildings that border the site of the gallery. In every study model, this rule was respected to create a stronger connection between the pavilion and the landscape design developed in the previous exercises.







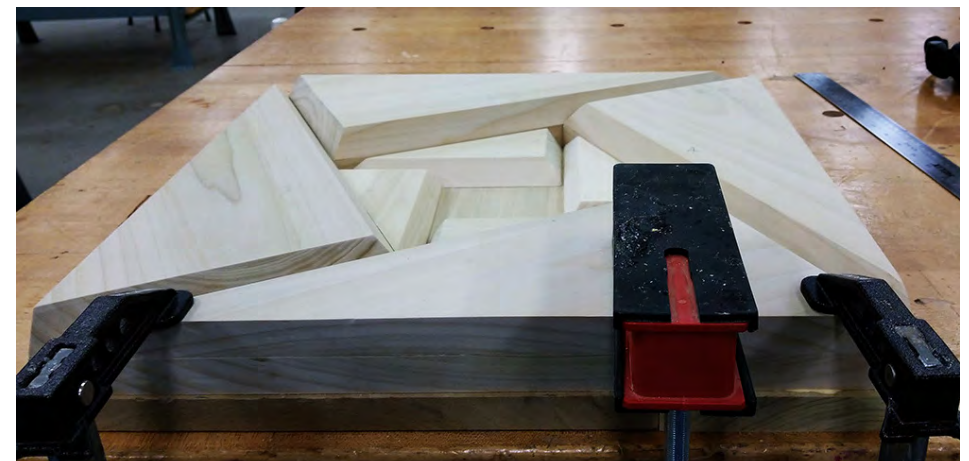


Environmental Technology I

Material Exploration

This project was completed as a team task for Etec I. My exclusive contribution to this project include the initial design of the tile, design and construction of wood artifact and inverse artifact used for vacuum and concrete forming.

A wood tile was built using triangles that were glued onto a 16x16 inch laminated square board. It was decided to include bevels on each triangle to avoid 90-degree sharp angles that would compromise the removal of the concrete tile from the form liner. During the design process, it was decided that the concrete tile would look exactly as the wood tile, thus, an inverse tile to use as form liner was built to achieve this goal. This inverse tile would also be used to make the plastic form; therefore, holes were drilled near the corners to facilitate the vacuum forming process. Vacuum forming consists of heating a plastic sheet and placing it on top of the artifact while a vacuum absorbs the air within.





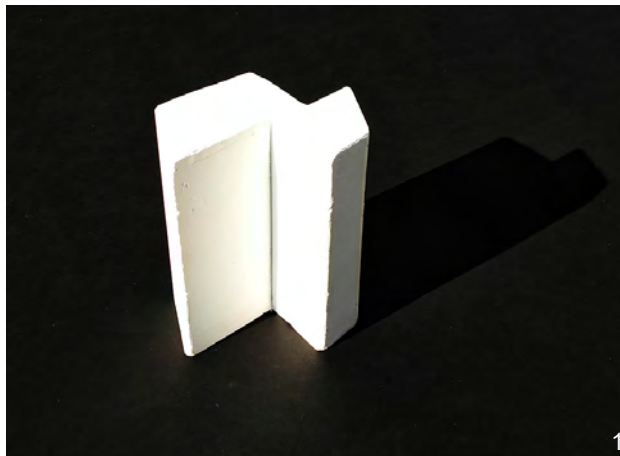
Studio IV

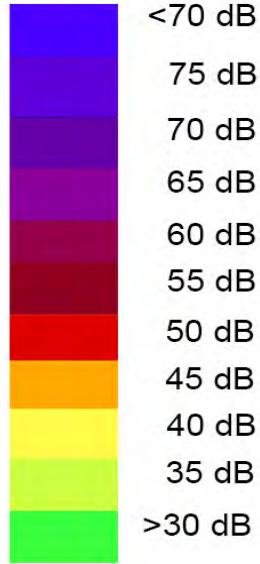
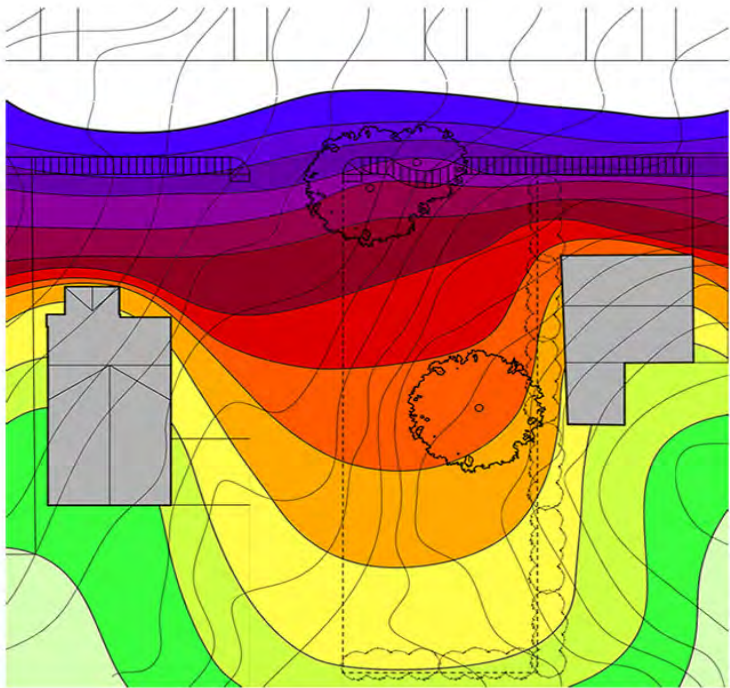
Seven Gardens

466 Deering Rd NW Atlanta, Ga.

Program Analysis

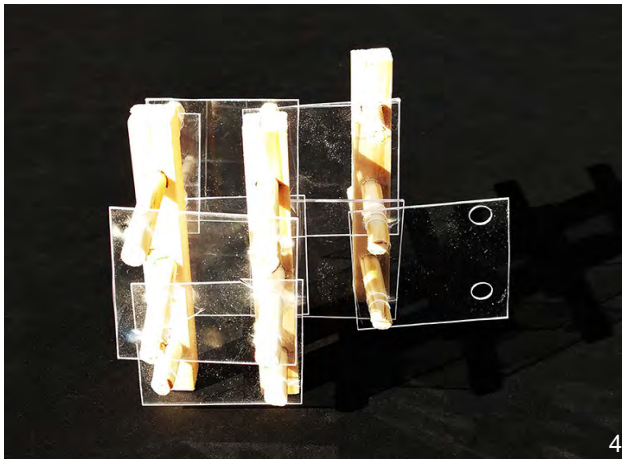
My clients are a Death Metal singer and his family. He wanted to design a house that embraces and respects nature. He gets inspiration from nature where he also writes his music and this was his major concern. He also practices gardening with his wife so this house was projected to include space for different types of gardening and plants. One major and unconventional aspect of this project was the addition of a recording studio for my client's Death Metal band. This issue brought more problems associated with the program of the house and the site aspects.





Site Analysis

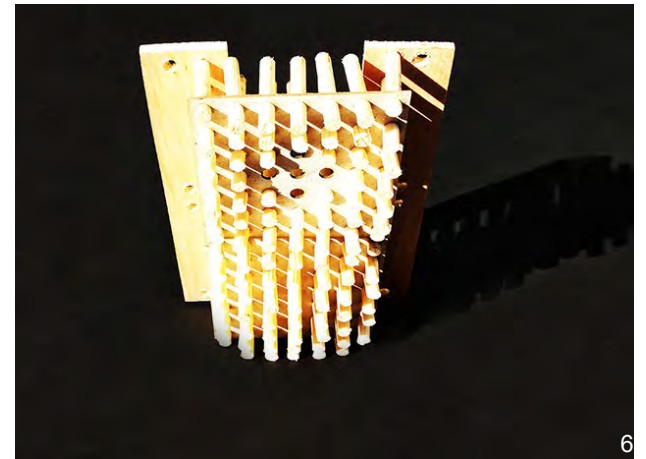
The major challenge encountered during the design of this house was the noise coming from Deering Rd (marked as purple in noise diagram). The quiet activities had to be separated from noisy activities and the noisy north of the site. During a site visit, it was discovered that the middle and back of the site were drastically more quiet because the birds singing counteracted the noise from the street. At this point, it was clear that the new material to be designed had to absorb sound waves and it was also clear that the house would be designed around this quiet space. Also, the highest point of the house provides a distant view of Midtown Atlanta so this opportunity had to be addressed in the design of the post-humanist house.



4



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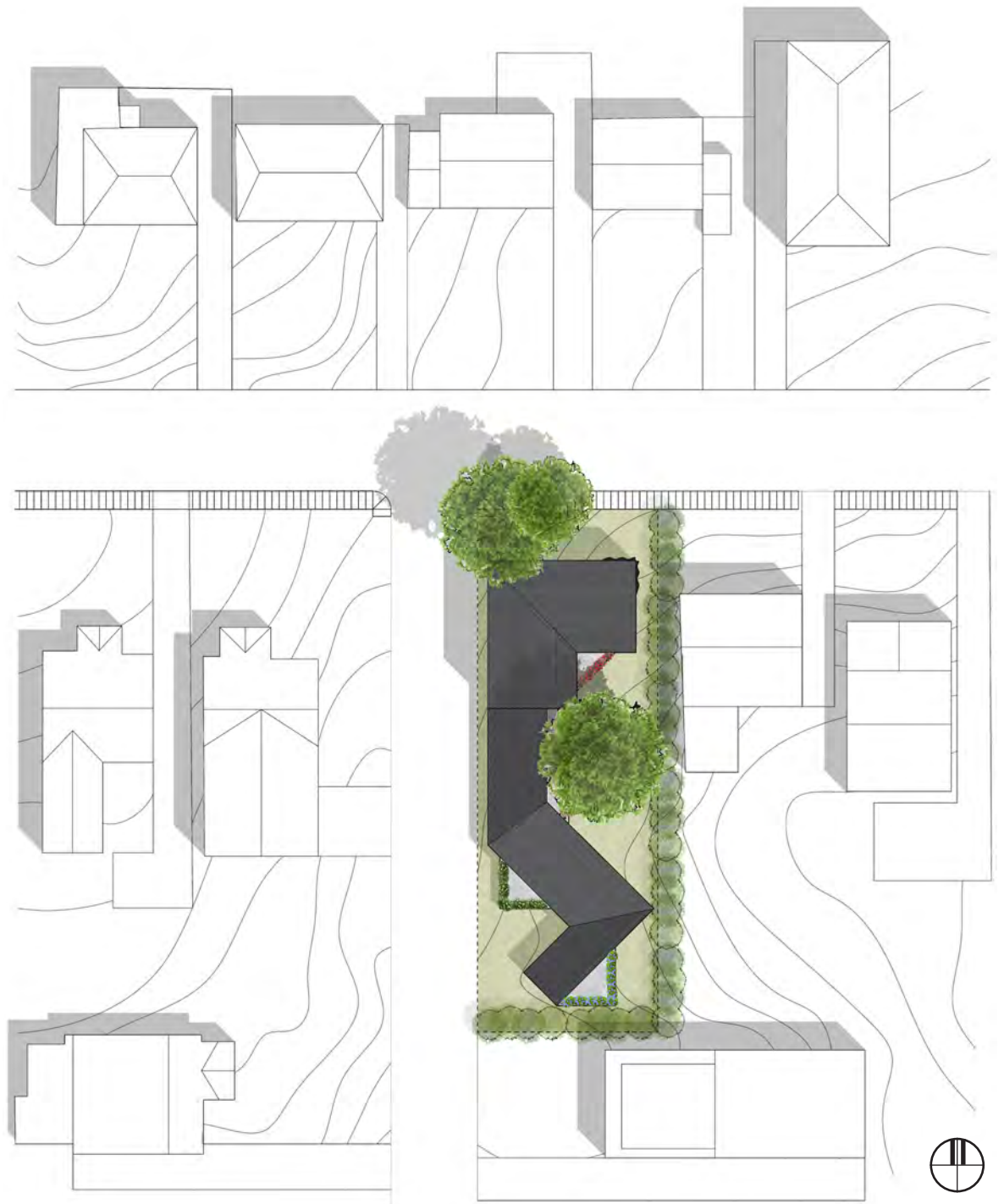


6

At the beginning of the design of the house, series of studies to find a material that would eliminate sound. The new material is inspired on the shape of the bushes that border the west end of the site. It was discovered that these bushes help to defuse the sound waves coming from the busy street. The front elevation was discovered to benefit the most from the new material.



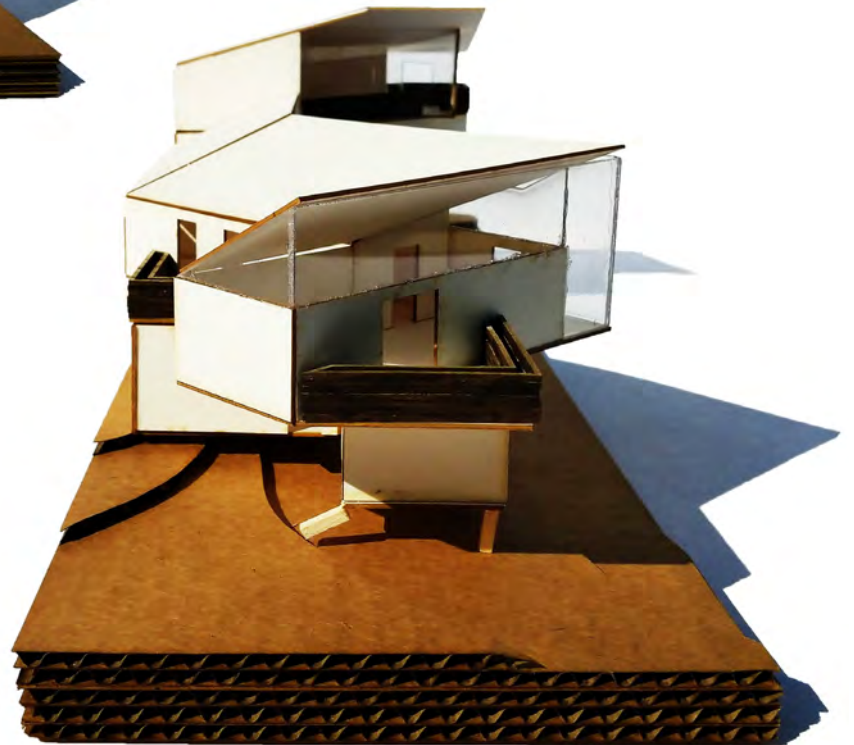
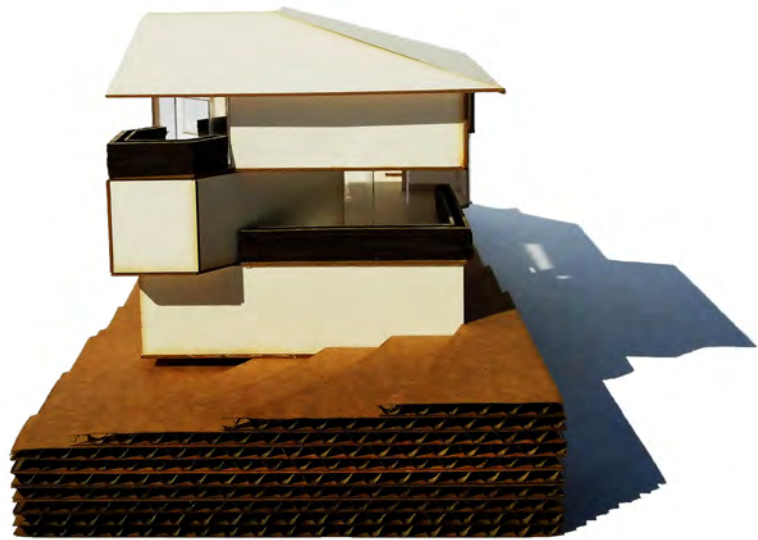
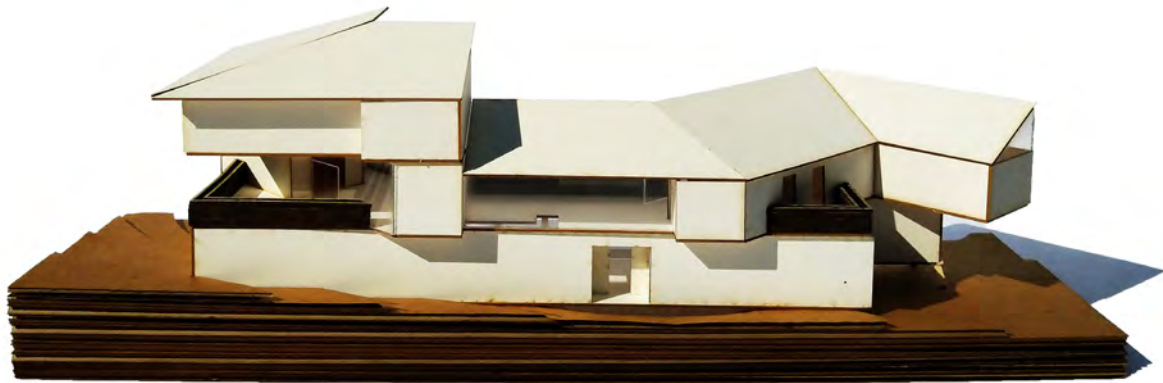
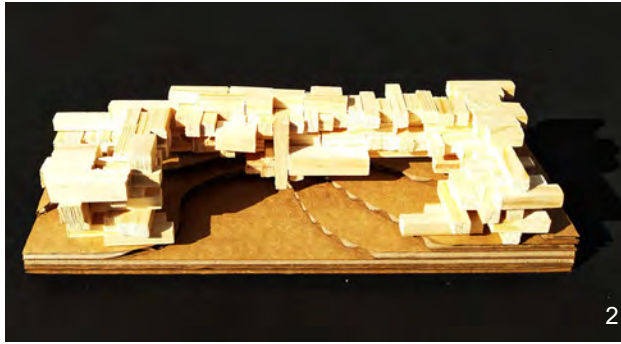
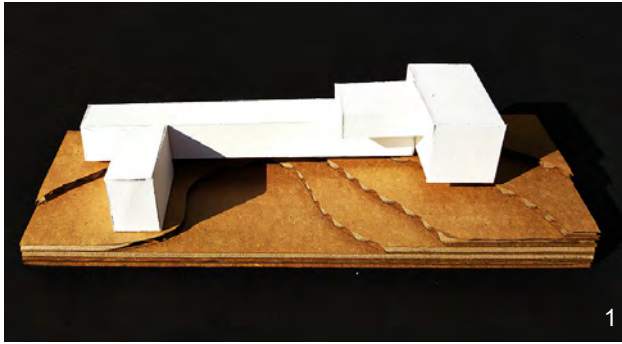
Section of final facade pattern.

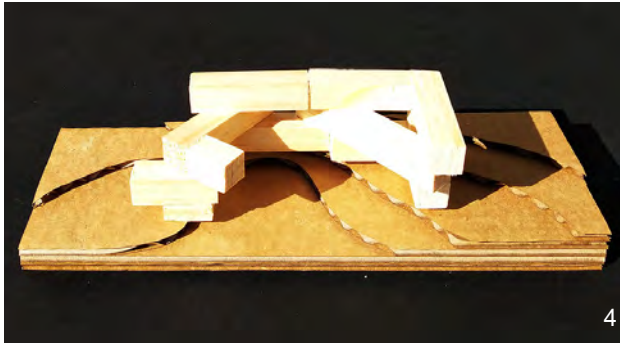




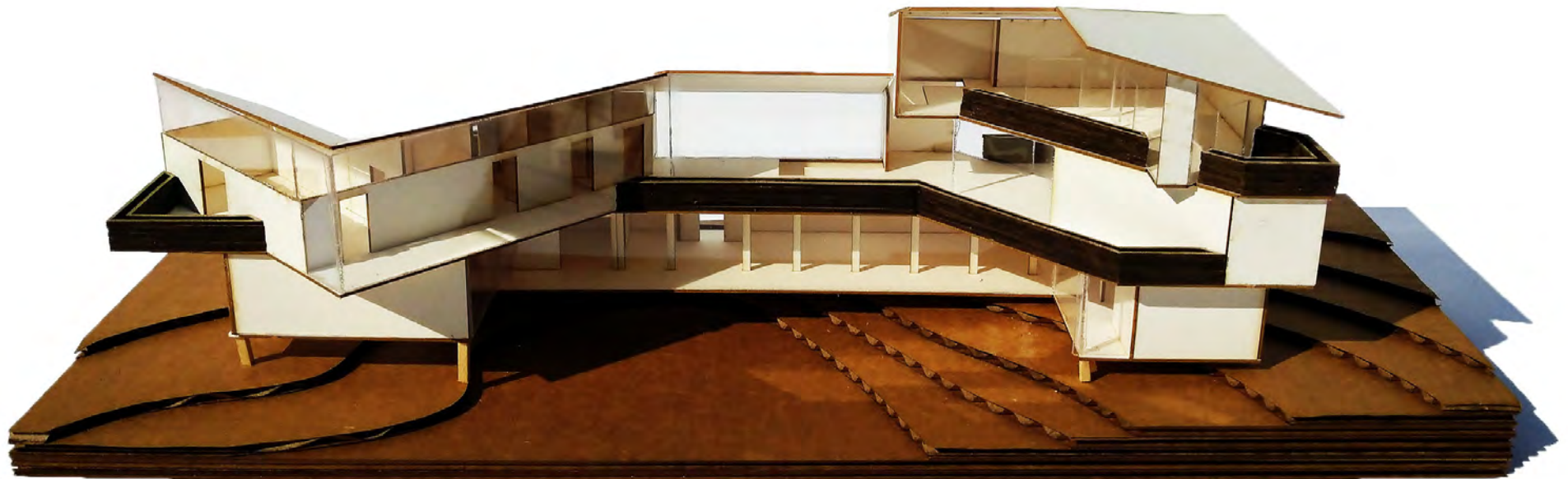
During the site analysis, it was discovered that the highest point of the site provides a distant view of Midtown Atlanta so this opportunity had to be addressed in the design of the post-humanist house. The social and communal spaces are located on this part of the site to maximize the connection with Atlanta. On the contrary, the private spaces emphasize a connection with the garden located on the flattest area of the site.







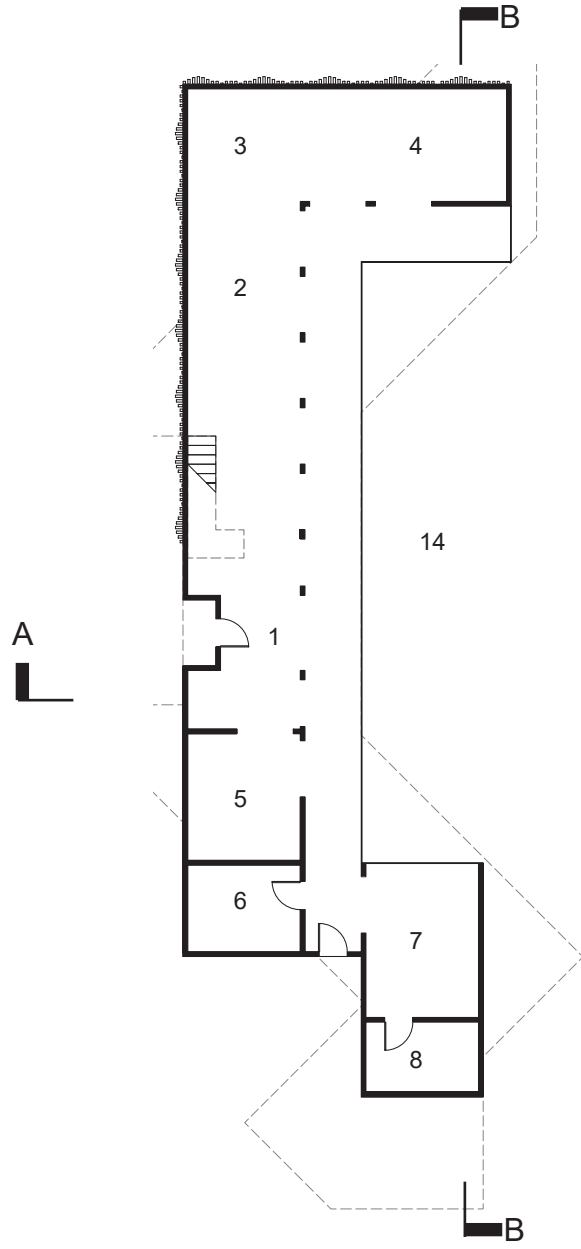
The design of the house was based upon the discoveries made during the site analysis and the program activities that would take place in this house. Social and noisy activities were placed in the front of the house while quiet activities were placed focusing on the birds singing in the middle and back of the site. A material was created to absorb the sound of Deering Rd located at the north of the site. Also, the front of the house is three floors tall to provide a better view from Midtown Atlanta.



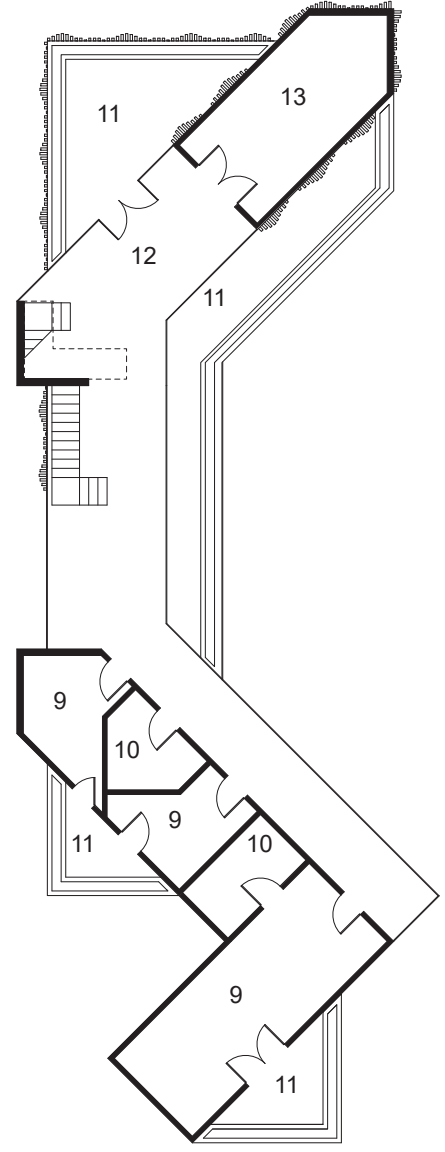
- 1. Entrance
- 2. Living Room
- 3. Dining Room
- 4. Kitchen
- 5. Office

- 6. Half Bathroom
- 7. Service Room
- 8. Storage Room
- 9. Bedroom
- 10. Bathroom

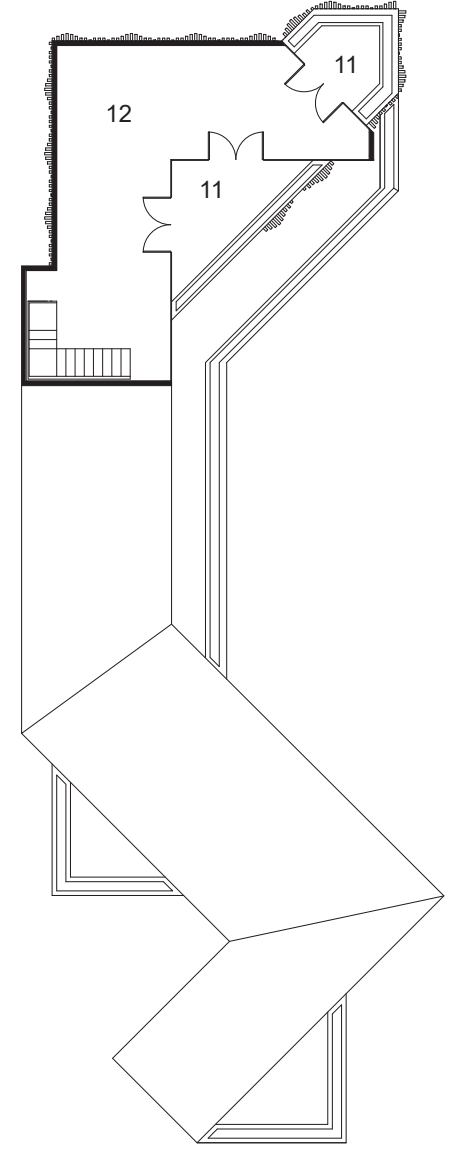
- 11. Balcony
- 12. Flexible Social Gathering Space
- 13. Recording Studio
- 14. Main Garden



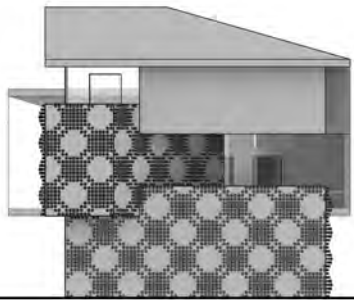
First Floor



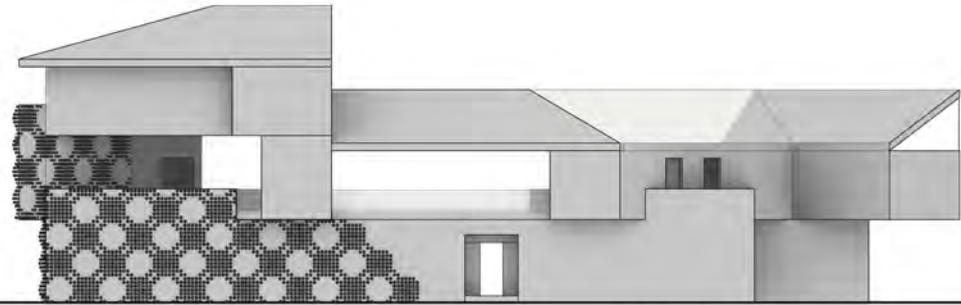
Second Floor



Third Floor



North Elevation



West Elevation



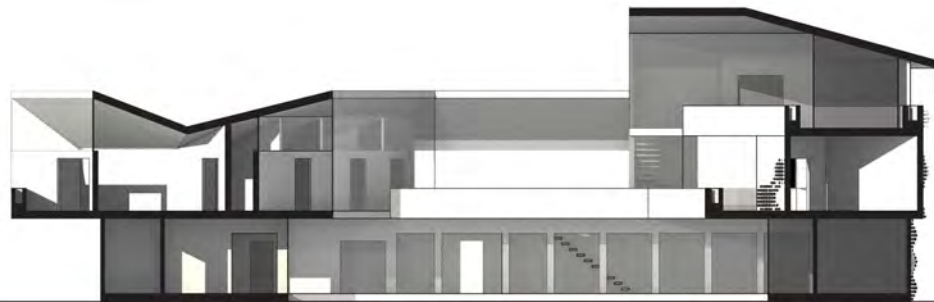
South Elevation



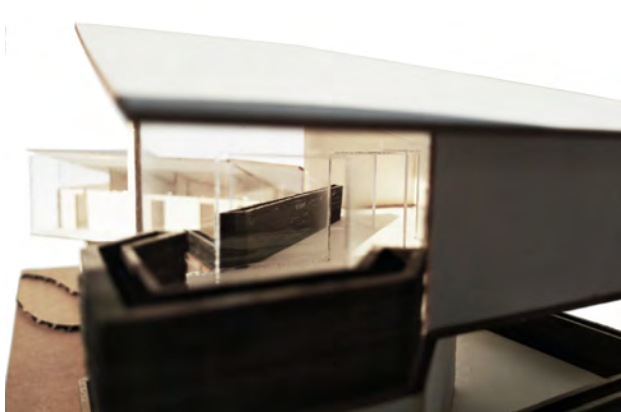
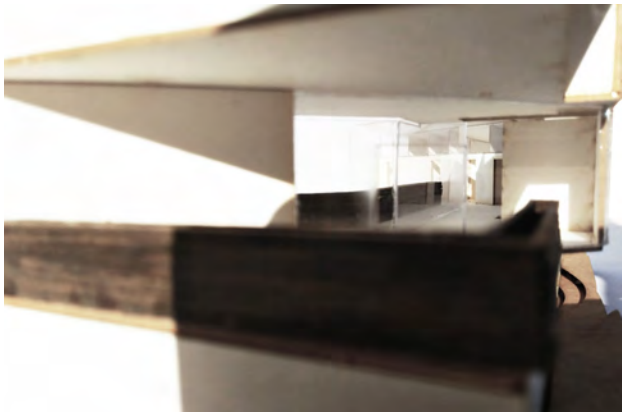
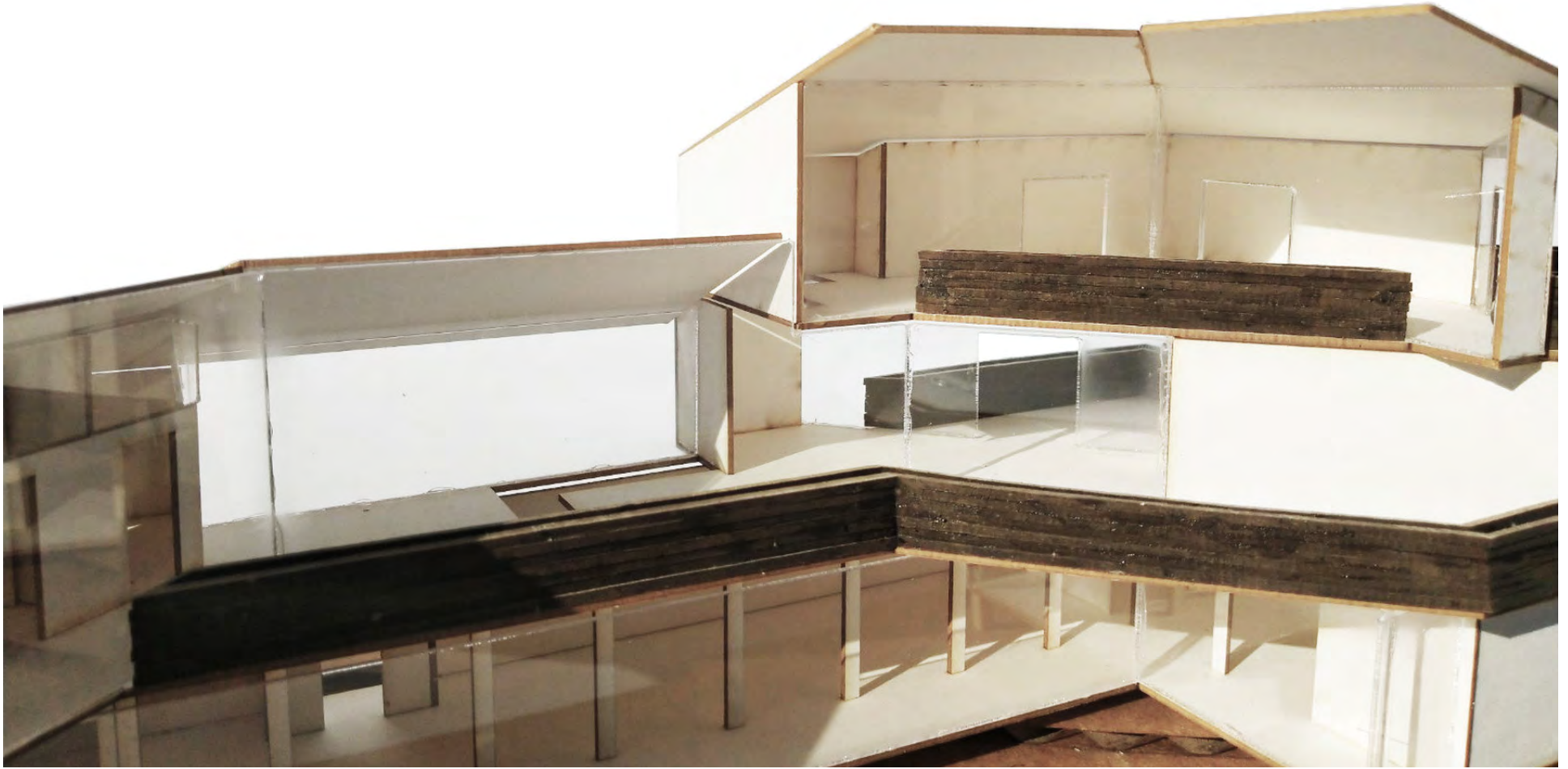
East Elevation



Section A-A



Section B-B







I made this drawing when I was in middle school. After completing it, I was inspired to become an architect and to designing buildings like Santiago de Compostela Cathedral.