

ARCHITECTURE PORTFOLIO

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# TABLE OF CONTENTS

## I. RIVERBEND TRAIN STATION

Train Station in Pueblo, CO

## II. MONUMENTALLY DIMINISHING

NCMA Competition; Neue Galerie expansion

## III. MAKING MODELS

Physical models of designed and existing buildings

## IV. LIGHT IN LINES

Lamps inspired by Frank Lloyd Wright

## V. EVOLUTION OF MASS

Residential housing variations of same form

## VI. CONNECTING THE ENVIRONMENT

Park Forest Middle School extension in State College, PA



**RIGHT:** Superimposed drawing of the section, perspective, and site plan for the Uffizi in Florence, Italy.

# RIVERBEND TRAIN STATION

**TYPE:** Transportation Facility, Exhibition, Cafe Bar, Retail

**LOCATION:** Pueblo, Colorado

**TIMELINE:** 3rd-Year, Spring Semester

The Great Pueblo Flood of 1921 brought disaster upon the people of Pueblo, Colorado, where the economic effects can still be felt today. Inadequate water retention strategies failed to withhold the rising levels of the Arkansas River and Fountain Creek, which meet within the city limits. Riverbend Train Station serves as a memorial to the tragedy and a reminder of a river's power, just as capable of shaping its landscape as its landscape is of shaping it.

Riverbend Train Station embodies a river carving across and into its landscape. The river curves between four "rocks", each of which holds its own spaces, positioned around the building, while terraced levels are reminiscent of a river carving into the landscape. Two rocks contain waiting spaces, one holds retail and "On the Rocks" Bar and Coffee, and one holds exhibition, storage/mechanical, and office space. A stream runs across the site and through the building, providing evaporative cooling and representing the Fountain Creek meeting with the Arkansas River. A gray brick veneer on the "rocks" of the building complements adjacent brick structures, while maintaining a unique appearance. A raised platform connects to the station via a basement, where mechanical and additional waiting is also located.

**RIGHT:** View in the entrance hall looking up into the bridges.

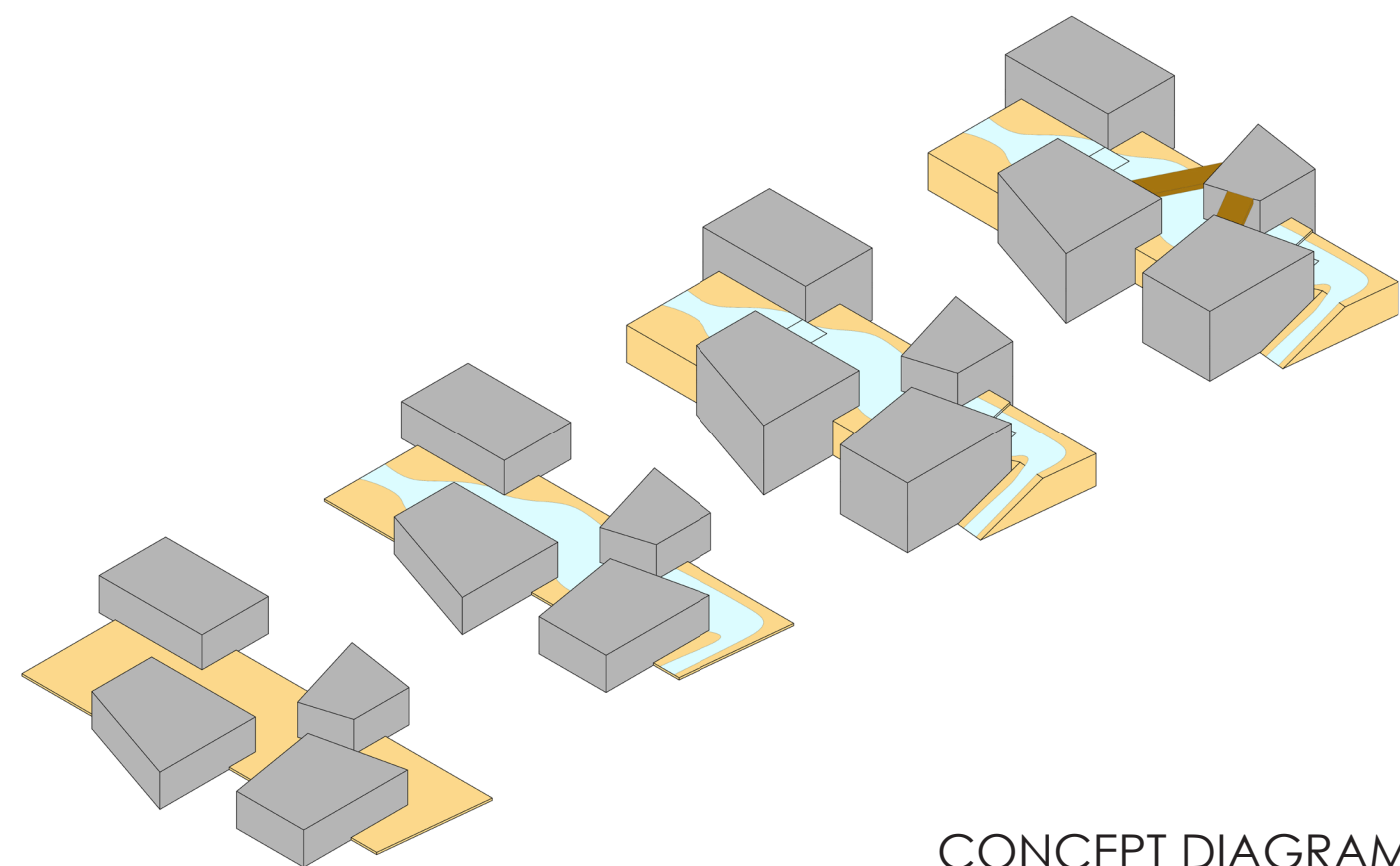




SITE PLAN

**ABOVE:** A stream cuts across the site before cutting across the building, and continuing along the tracks.

- LEFT:** Diagram of a landscape over time:
1. Rocks sit in a landscape
  2. A river carves across the landscape
  3. A river carves into the landscape
  4. Humans build bridges to cross river

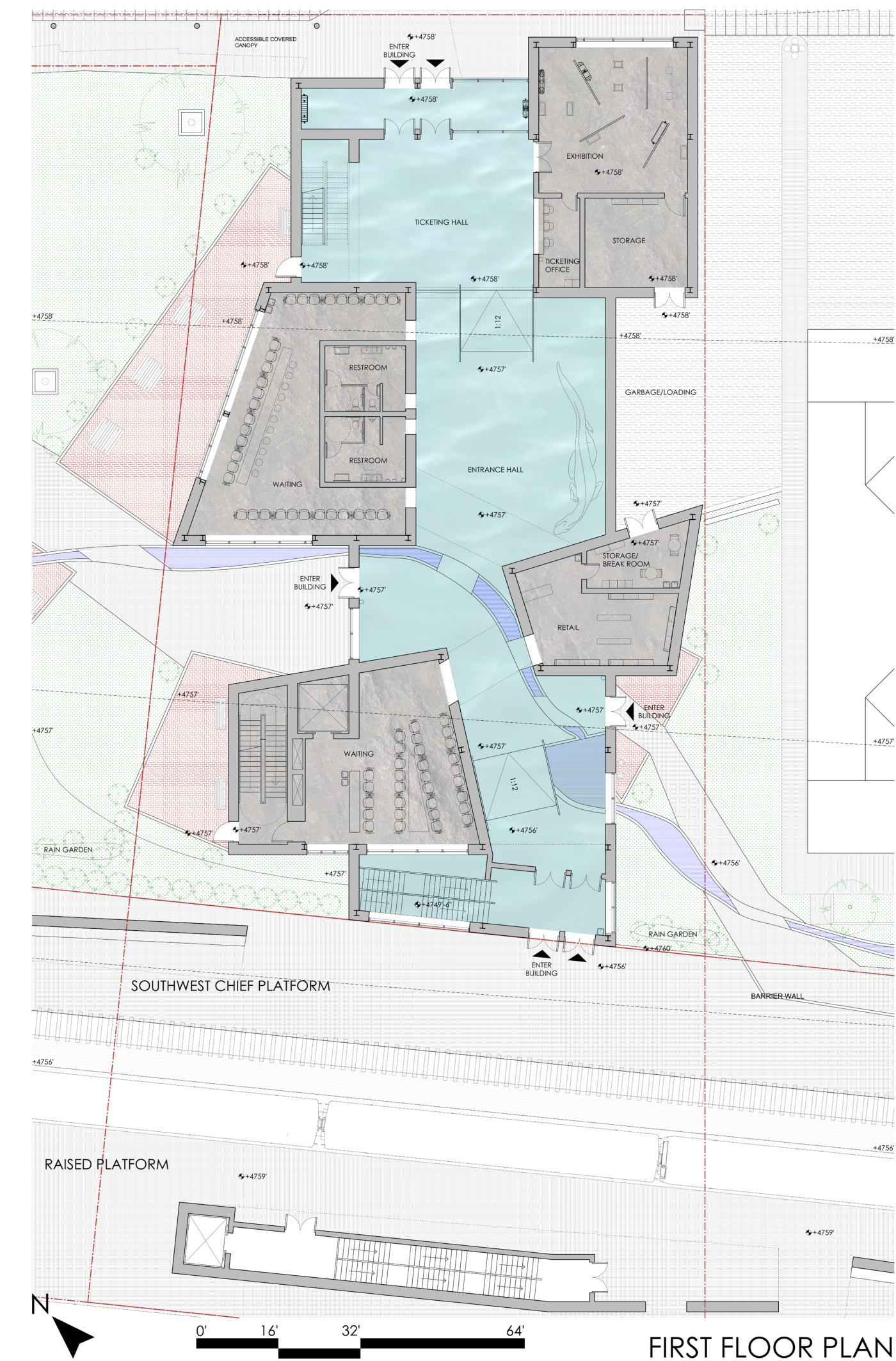


CONCEPT DIAGRAM



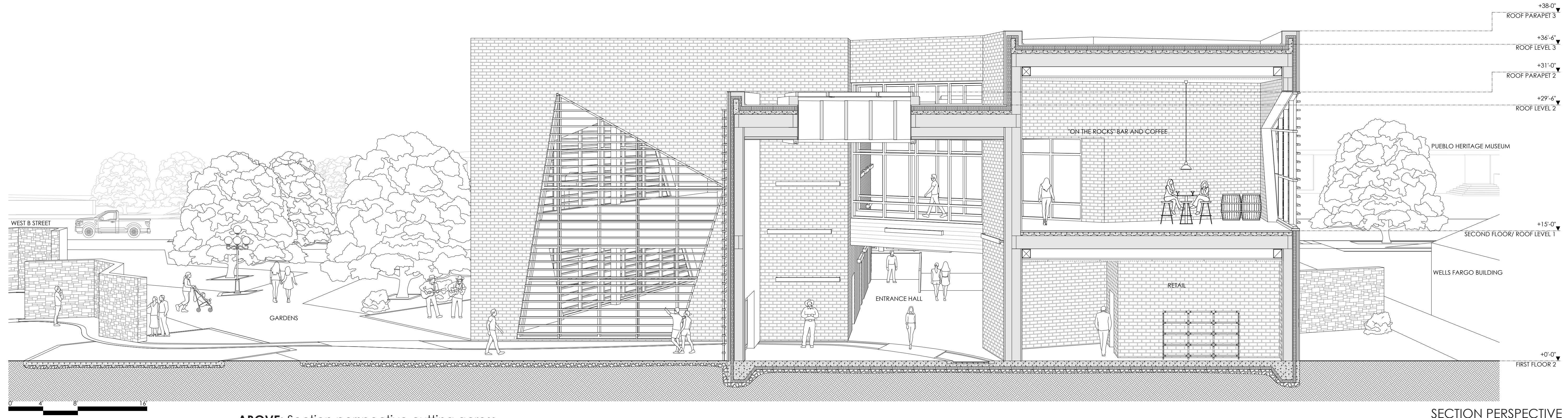
SECOND FLOOR PLAN

**RIGHT:** The first floor's entrance hall flows between rock cores of the building.



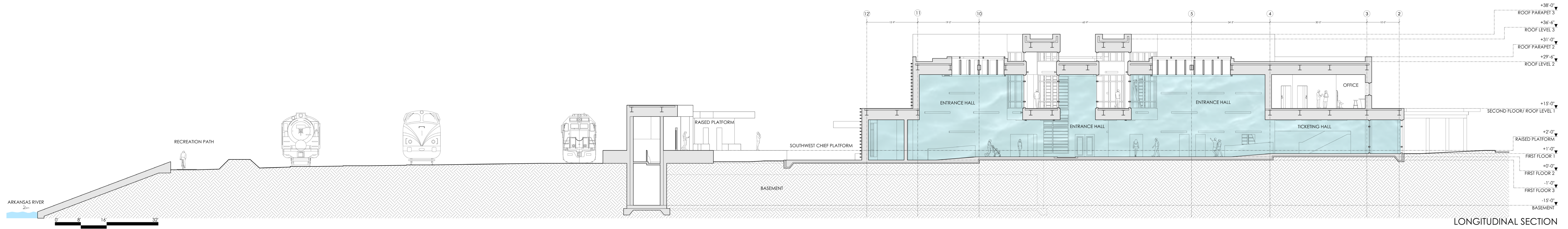
FIRST FLOOR PLAN

**LEFT:** The second floor consists of public spaces connected by bridges over the entrance hall.



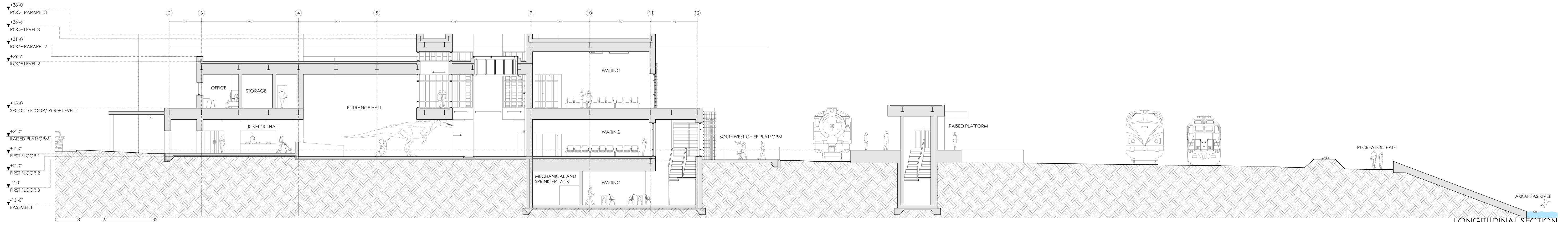
**ABOVE:** Section perspective cutting across public spaces and designed site.

SECTION PERSPECTIVE



**ABOVE:** Section facing west. The compress and release of ceiling heights is illustrative of a river with changing depths.

**BELOW:** Section facing east. The drawing extends to the Arkansas River to show the relation between the two.





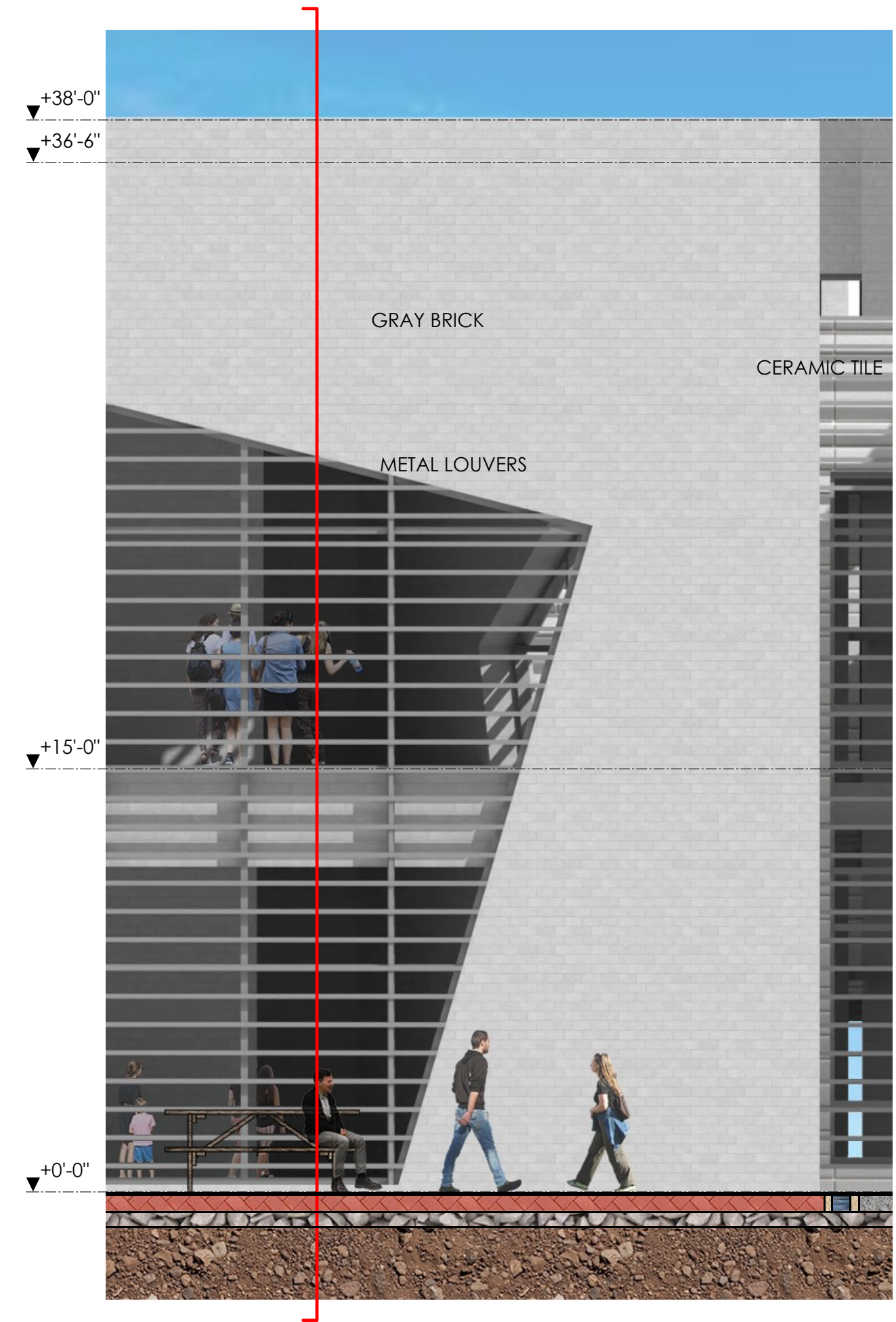
INTERIOR VIEW



INTERIOR VIEW

**ABOVE:** View of "On the Rocks" Bar and Coffee shows the lighting effects..

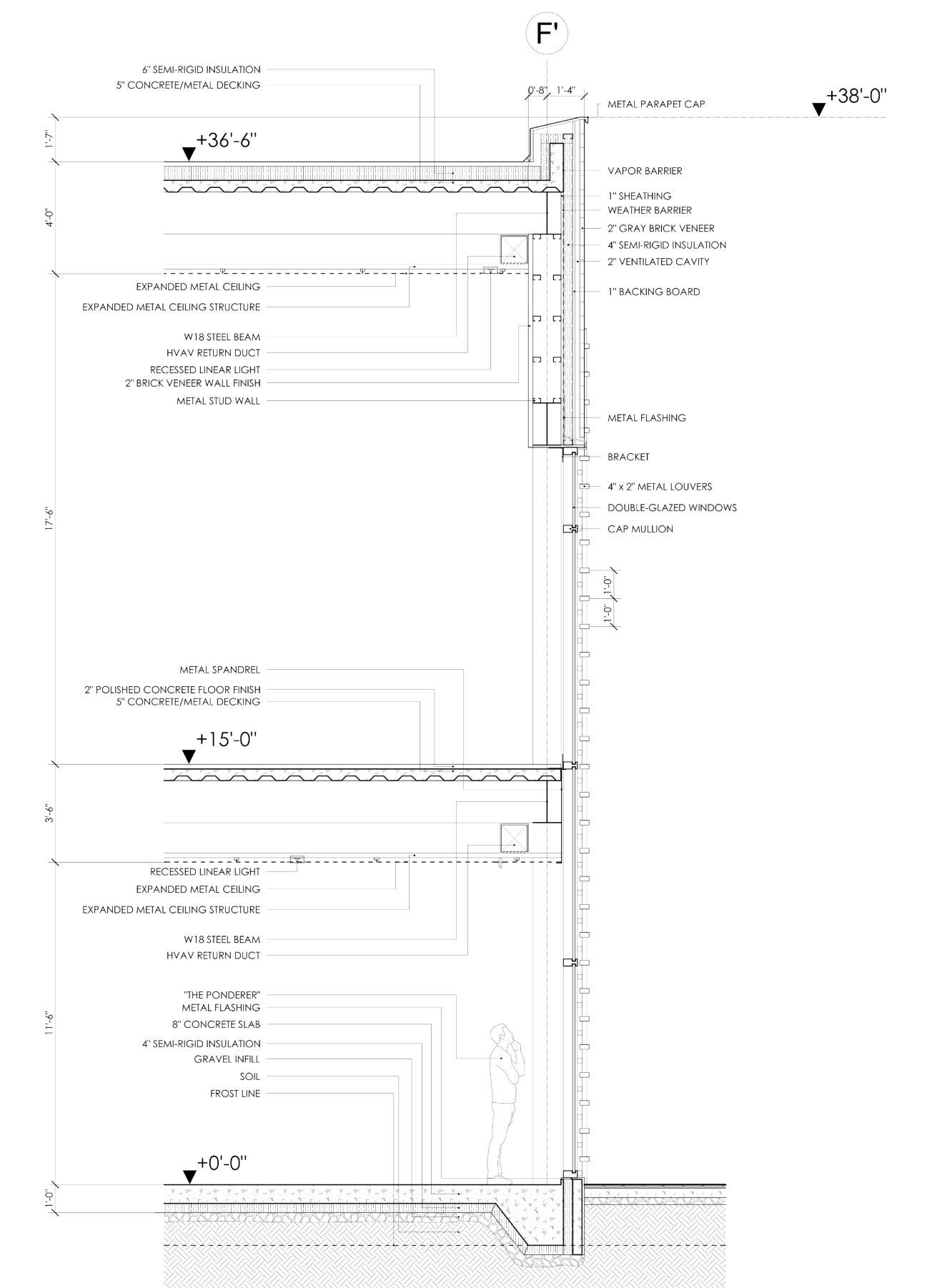
**LEFT:** View across the entrance hall from the track side.



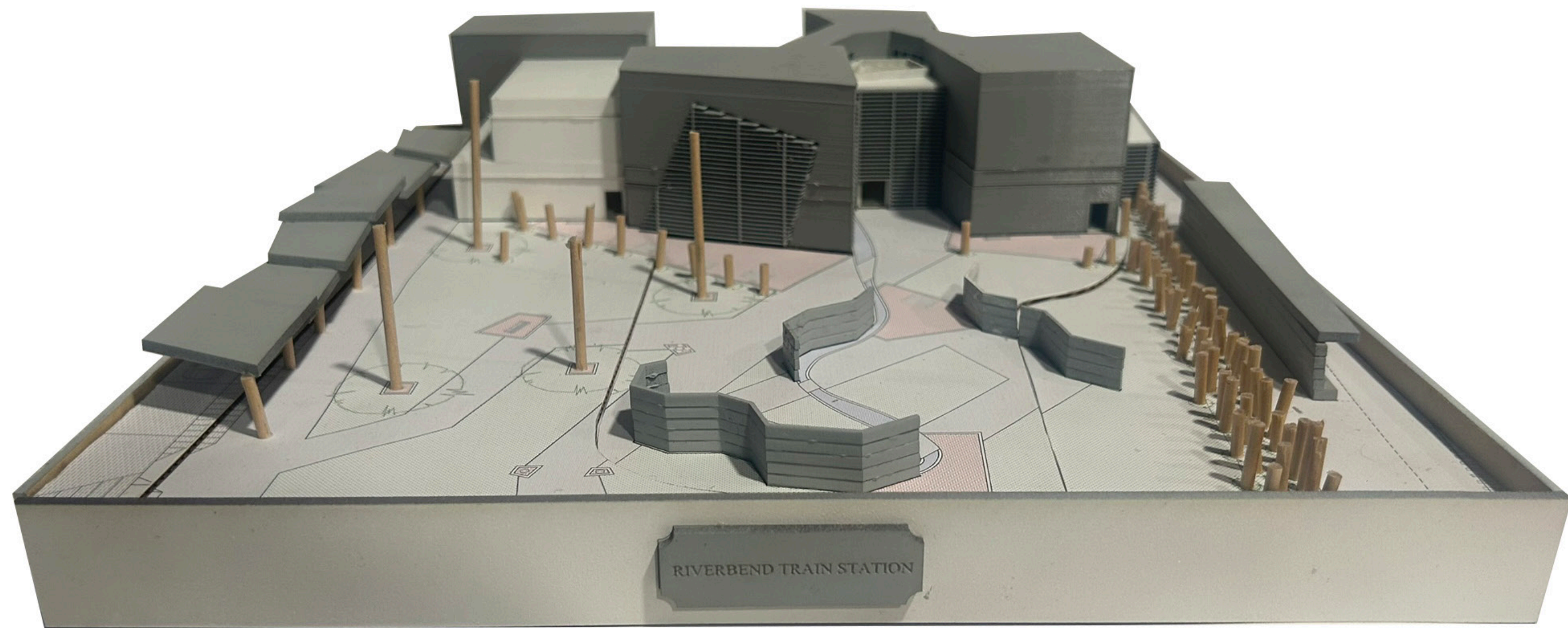
PARTIAL ELEVATION

**RIGHT:** Detail cutting through partial elevation facade showing wall and roof buildup.

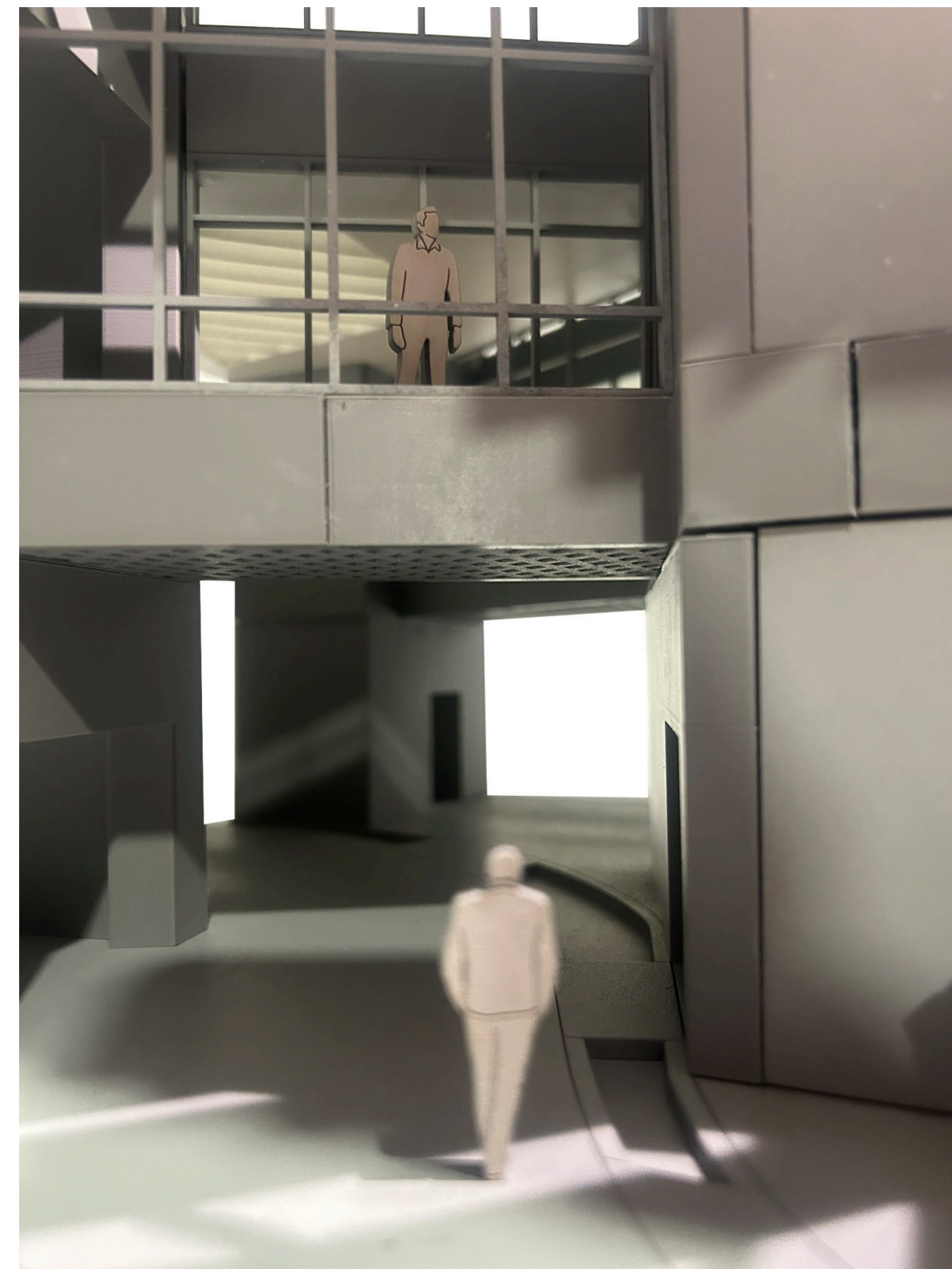
**LEFT:** Partial elevation on west facade. Metal louvers over windows help continue the illusion of solid rock core.



FACADE DETAIL

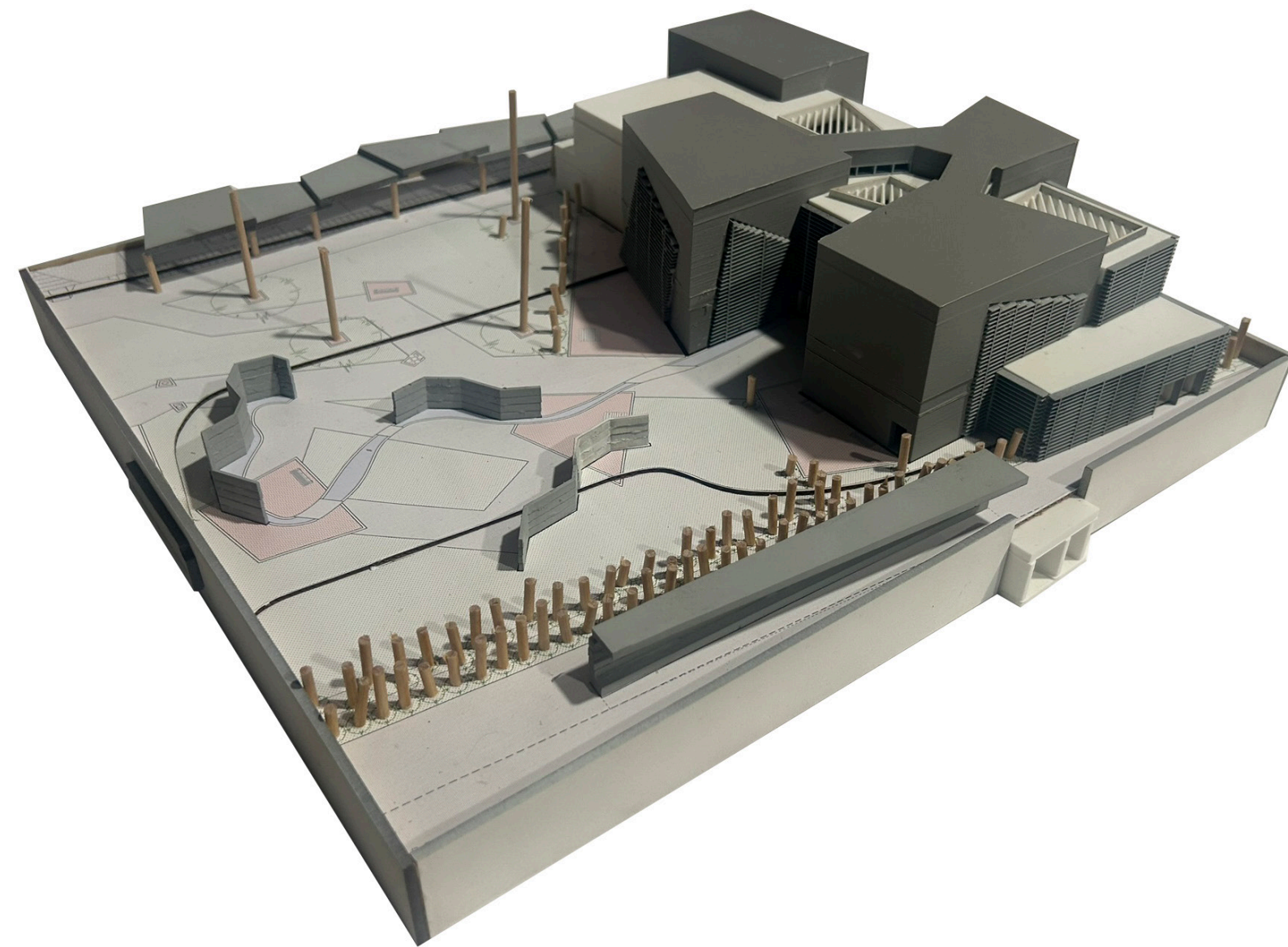


SITE MODEL - WEST SIDE



SECTION MODEL - LIGHTING EFFECTS

**LEFT:** A view walking through the entrance hall beneath bridges connecting the rocks.

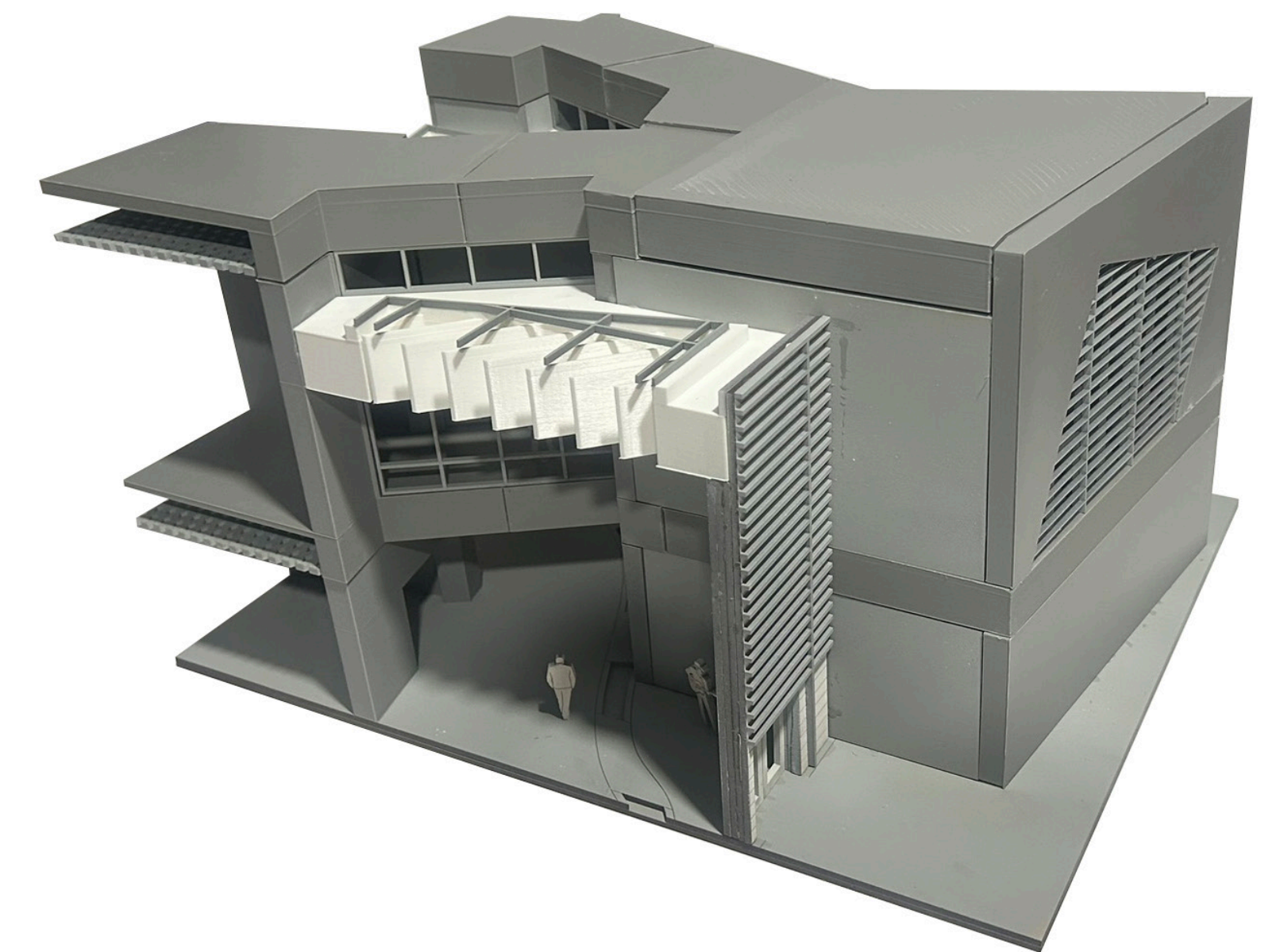


SITE MODEL

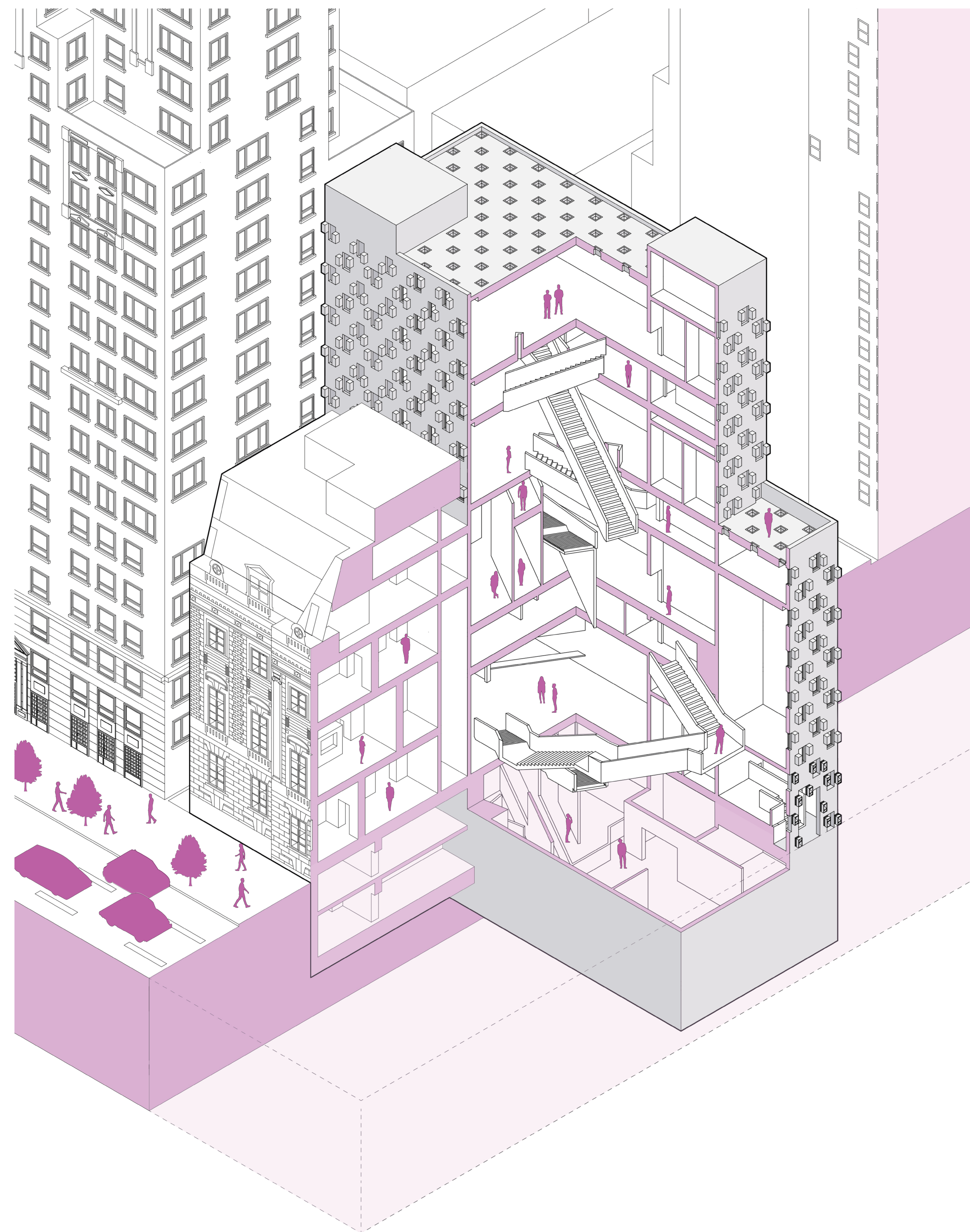
**ABOVE:** Gray represents rock cores, while white represents ceramic tile.

**LEFT :** Model extends to site with rock walls and stream cutting across the site.

**RIGHT:** Materiality is indicated through color. Cut-through shows some layers.



SECTION MODEL - FACADE AND CUT-THROUGH SKYLIGHT



# MONUMENTALLY DIMINISHING

**TYPE:** Exhibition, Dining, Assembly Hall

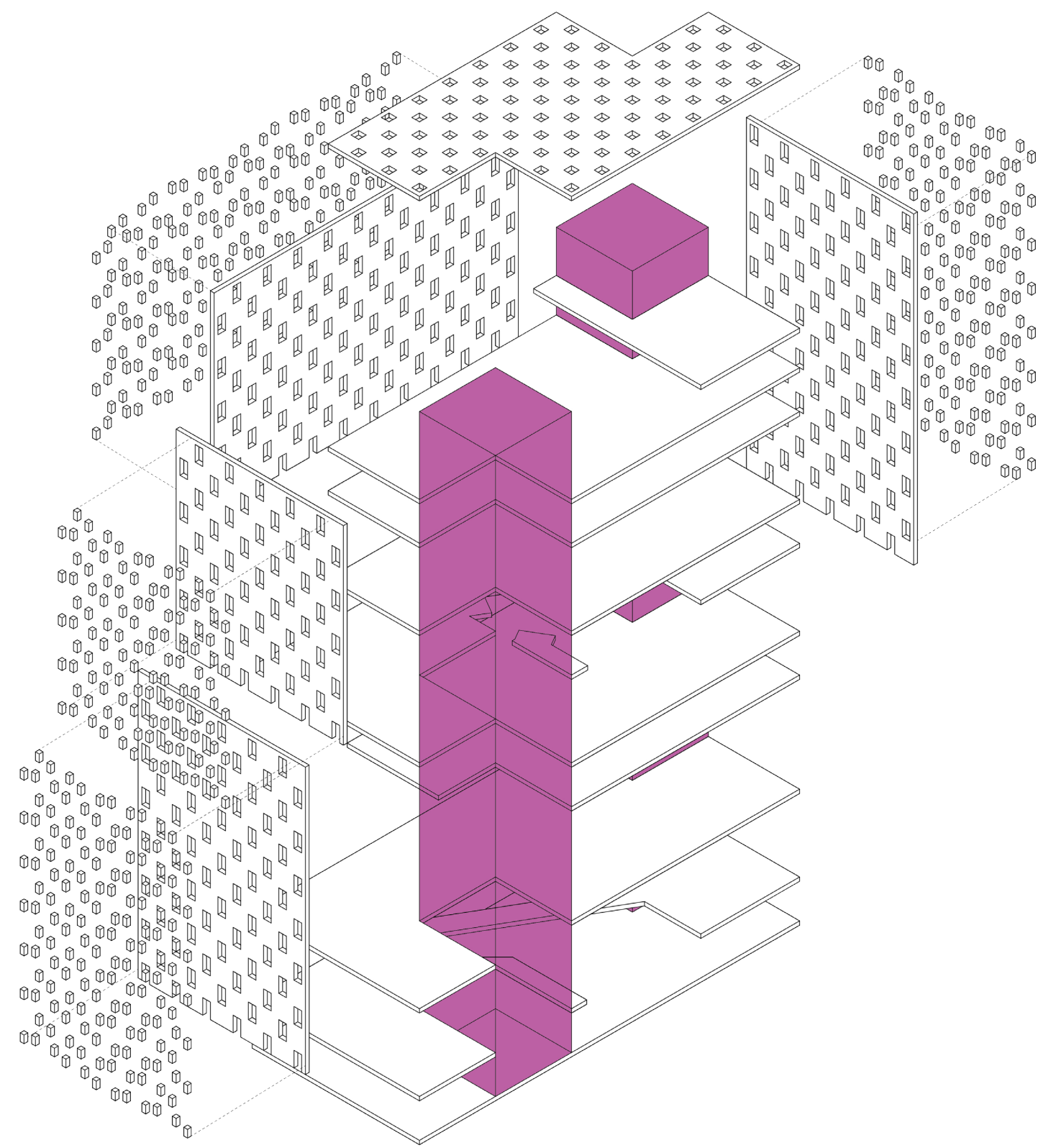
**LOCATION:** New York, New York

**TIMELINE:** 2nd-Year, Spring Semester

The program concentrated on designing an extension to the Neue Galerie in New York City. Featured spaces include galleries, indoor and outdoor event spaces, storage, and workshops.

This NCMA-honored design focused around two structural cores running through the entire building. Carved into the cores are gallery and circulation spaces. The facade screen takes inspiration from museum artifacts adapted to connect with the urban setting. The window placement allows the building to change the human scale and appear more monumental. Designed blocks extruded from the facade create shading effects from the sunlight. Feature staircases connect each floor, influencing floor circulation and paving patterns. A purple color scheme was influenced by artifacts and associates its history with this symbol of power and grandness.

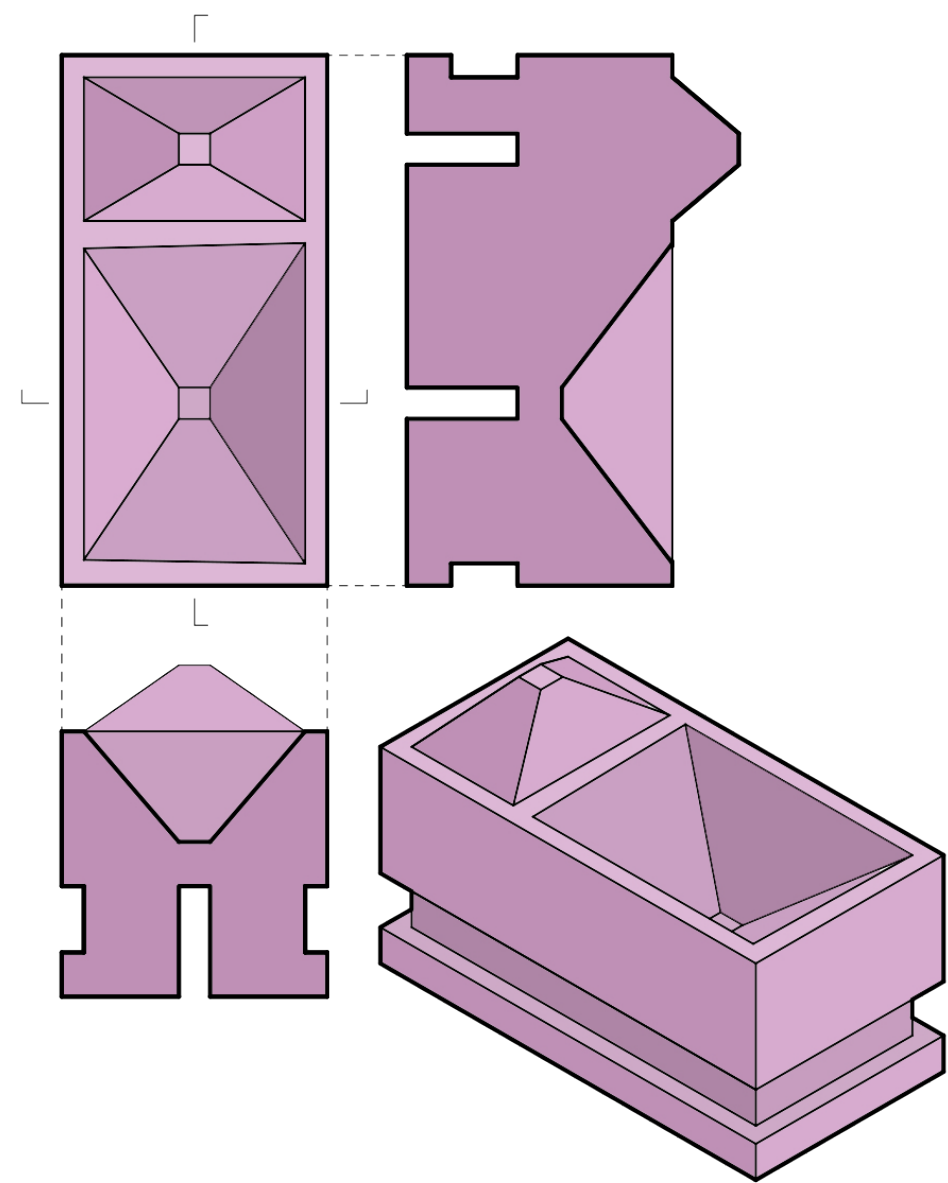
**LEFT:** An exploded isometric of the Neue Galerie with feature staircase.



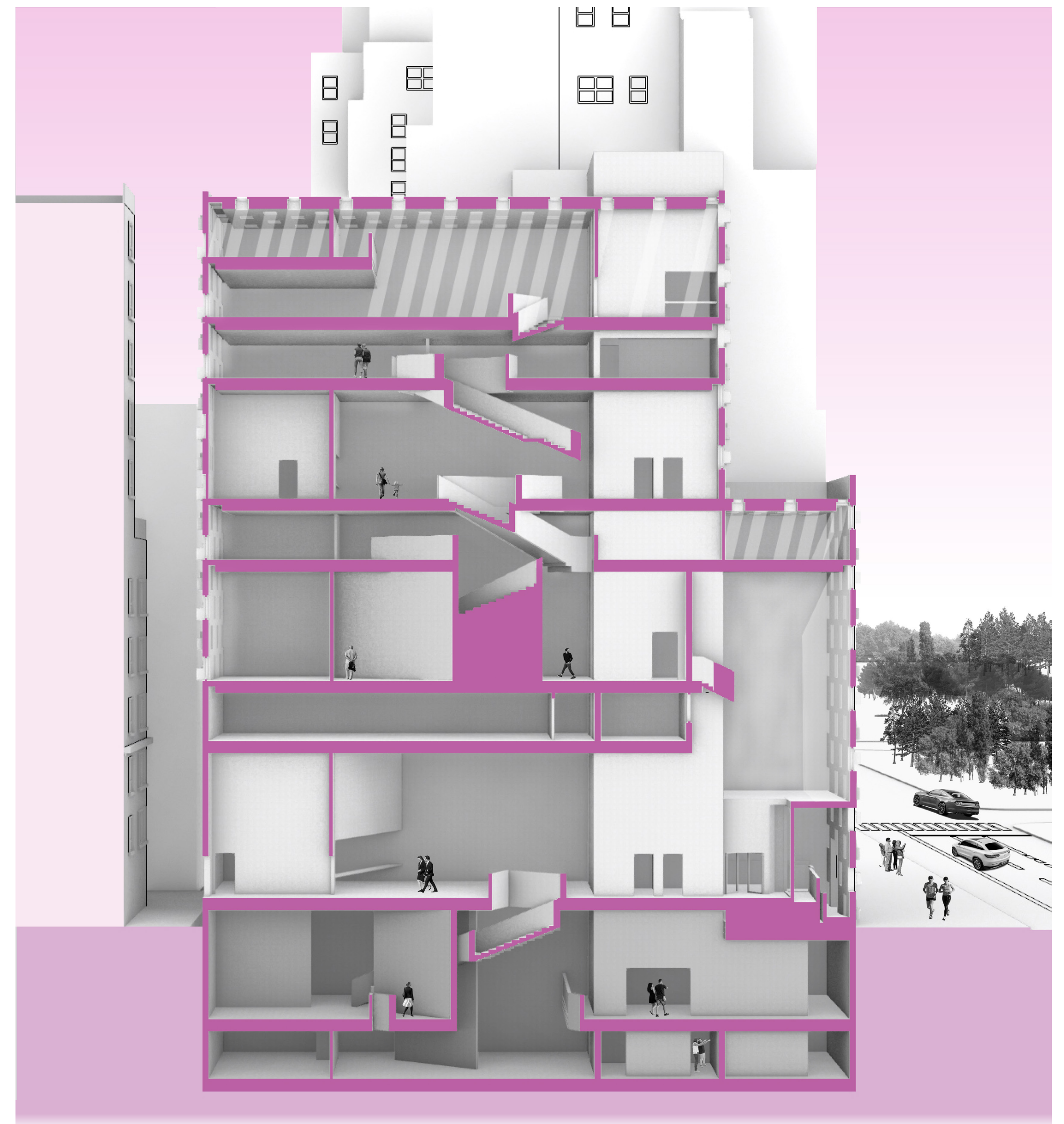
**LEFT:** The cores run through each floor, while the screen is pulled away from the interior. The extruded blocks, with a pattern based on artifacts and a sine/cosine wave, are pulled off the screen.

PARTI DIAGRAM

**RIGHT:** Design block playing with light and shadows placed among extruded blocks on facade.

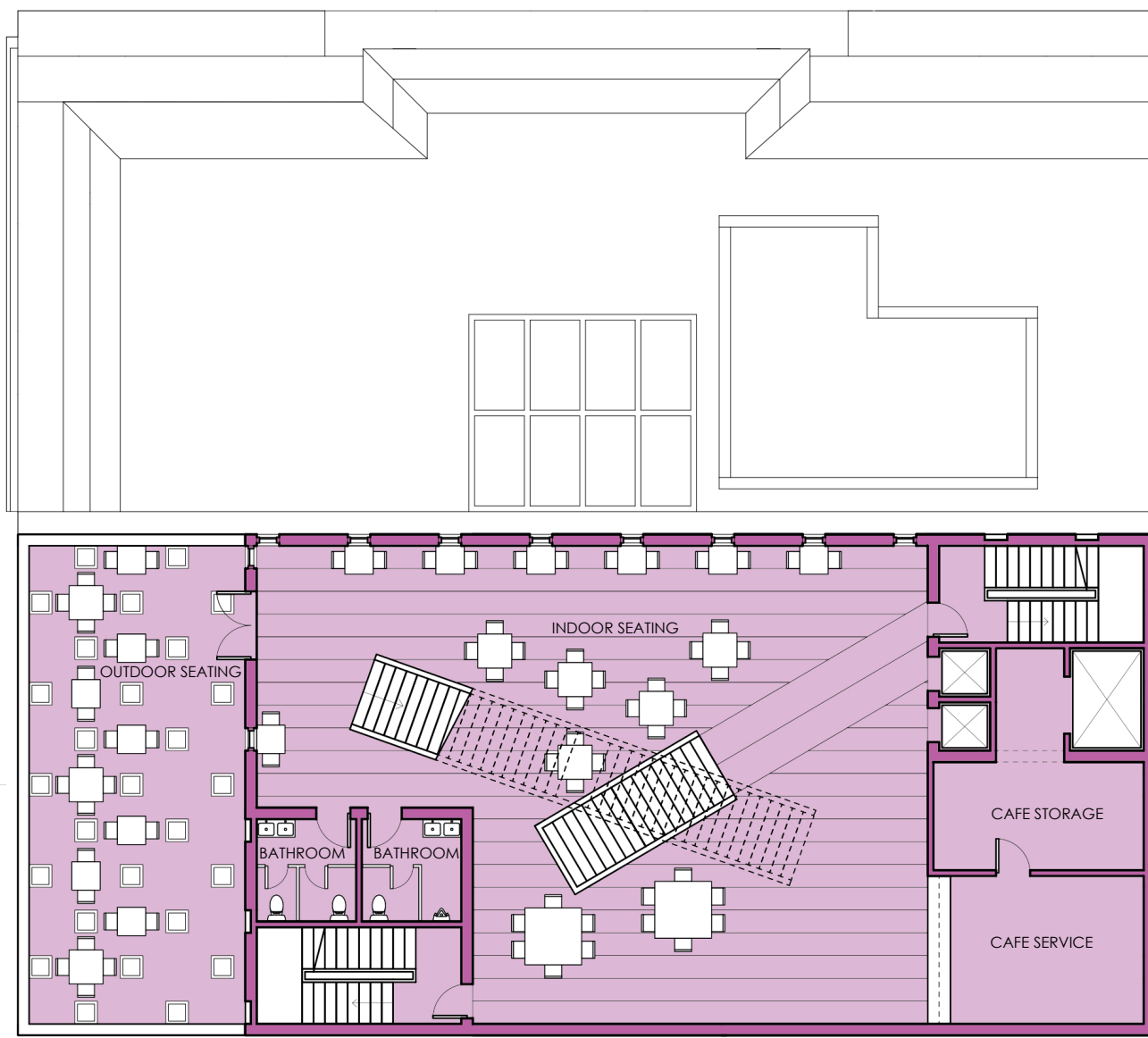


BLOCK DESIGN DIAGRAMS



LONGITUDINAL SECTION

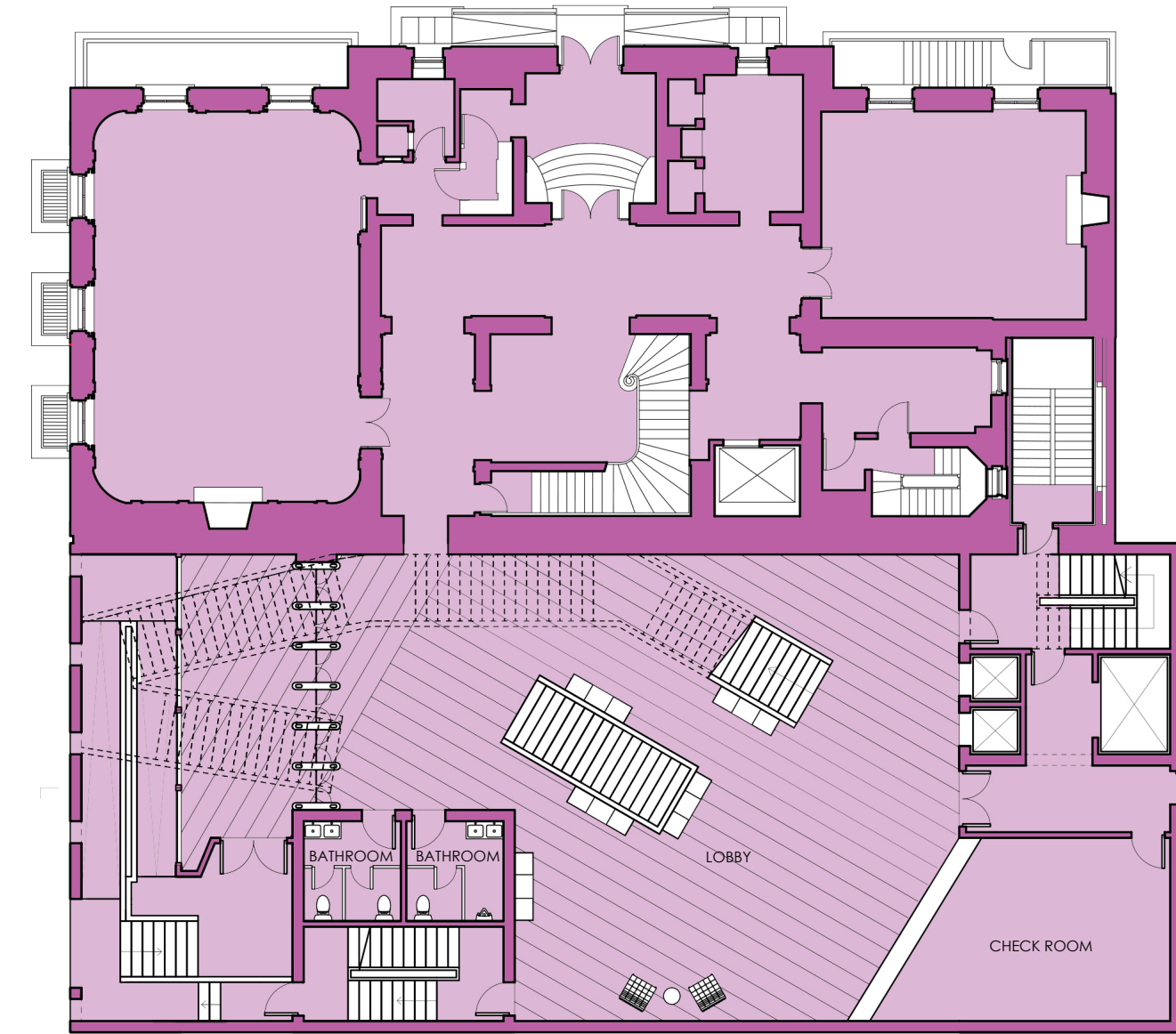
**ABOVE:** Longitudinal section runs through the museum extension. Lighting effects from the windows are shown.



SEVENTH FLOOR PLAN



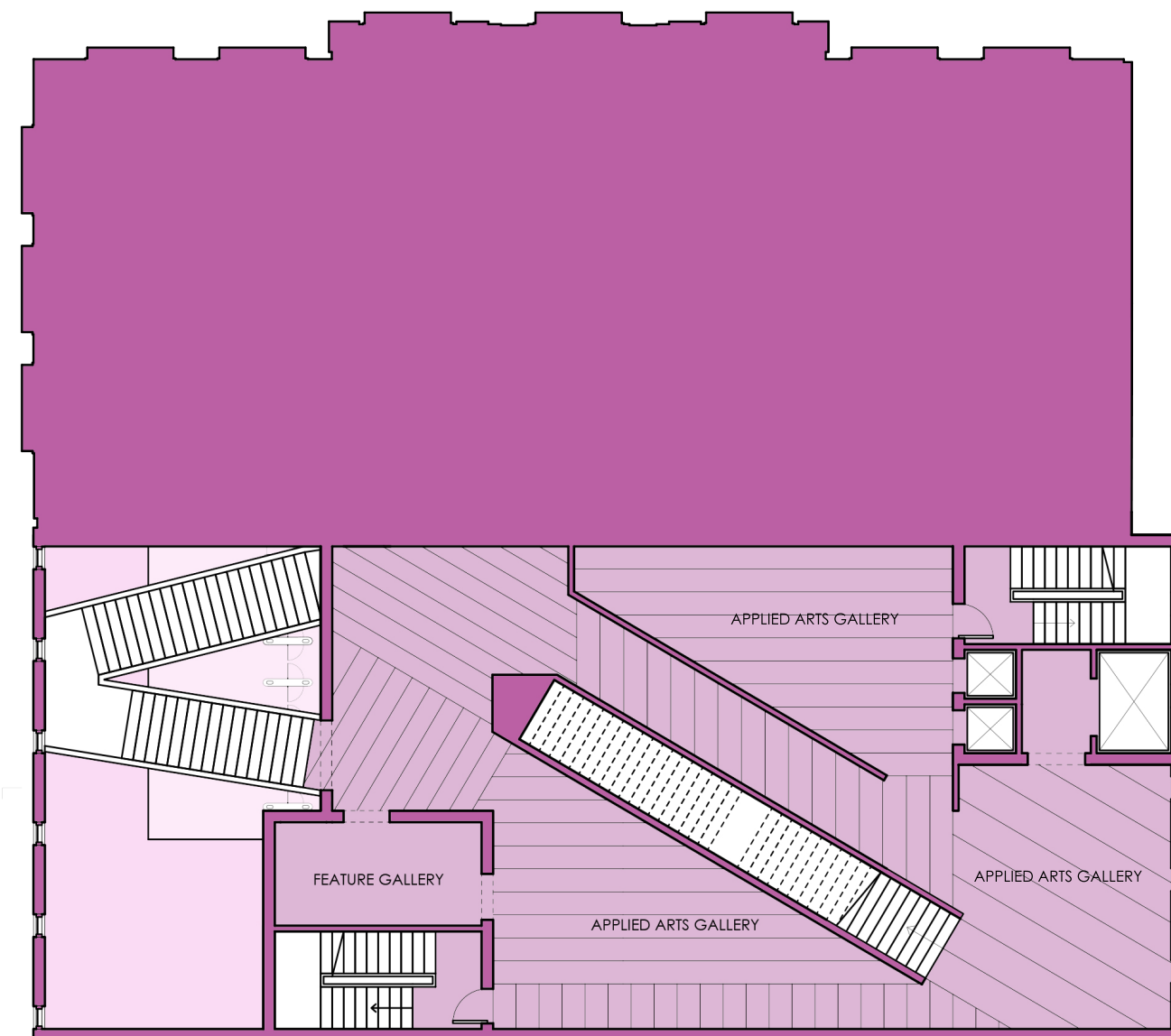
SIXTH FLOOR PLAN



THIRD FLOOR PLAN



SECOND FLOOR PLAN



FIFTH FLOOR PLAN



FIRST FLOOR PLAN

**ABOVE:** The seventh floor offers a cafe for museum patrons with indoor and outdoor seating.

**ABOVE, RIGHT:** The sixth floor is the upper level of the applied arts gallery.

**RIGHT:** The fifth floor houses applied arts artifacts.

**ABOVE:** The third floor is at ground level and holds supporting spaces for lobby.

**ABOVE, RIGHT:** The second floor features fine arts pieces from Germany.

**RIGHT:** The first floor features fine arts pieces from Austria. *Portrait of Adele Bloch-Bauer 1 (1907)* can be found in a featured space.



INTERIOR VIEW



INTERIOR VIEW

**ABOVE:** Rendering of the lobby. Lightly colored finishes and gold mullions relate to the Portrait of Adele Bloch-Bauer 1 (1907).

**LEFT:** Rendering of the fine arts gallery space.

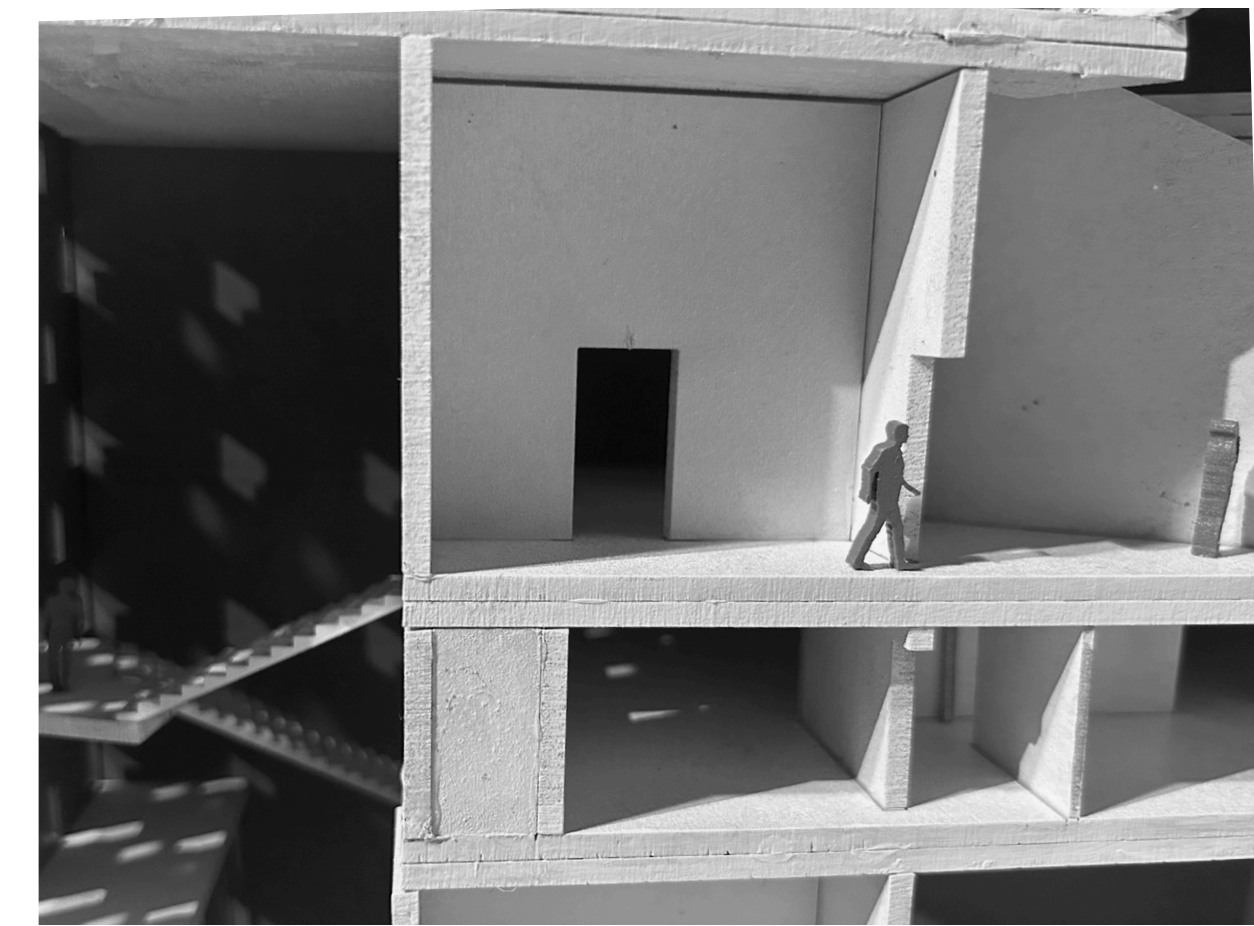


FULL SECTION MODEL IN SITE

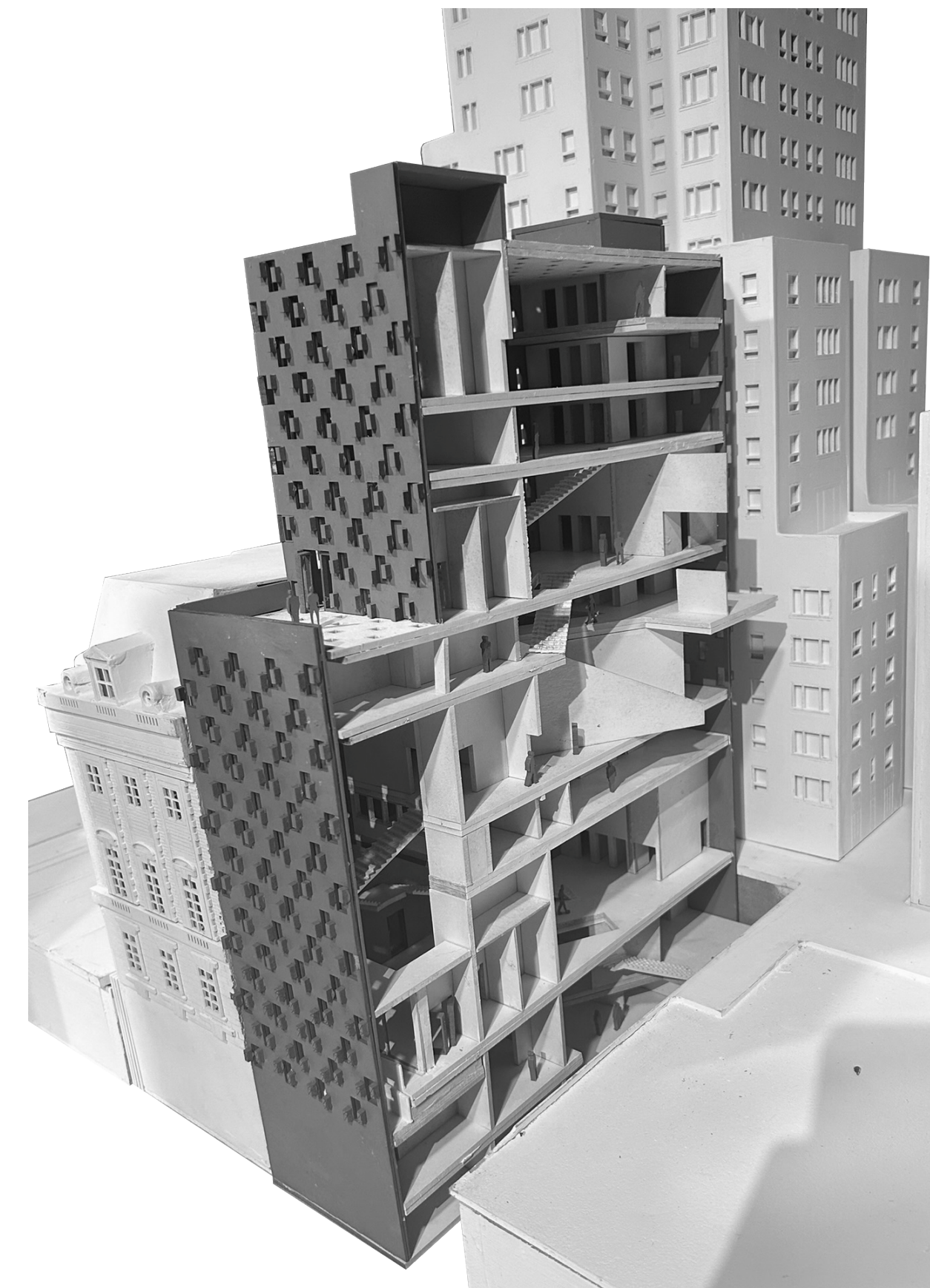
**ABOVE:** Model from point in Central Park.

**ABOVE, RIGHT:** Lighting conditions for a feature staircase are visible.

**RIGHT:** Sectional model showing all floors of the building within site context.



PARTIAL SECTION MODEL- LARGE SIDE



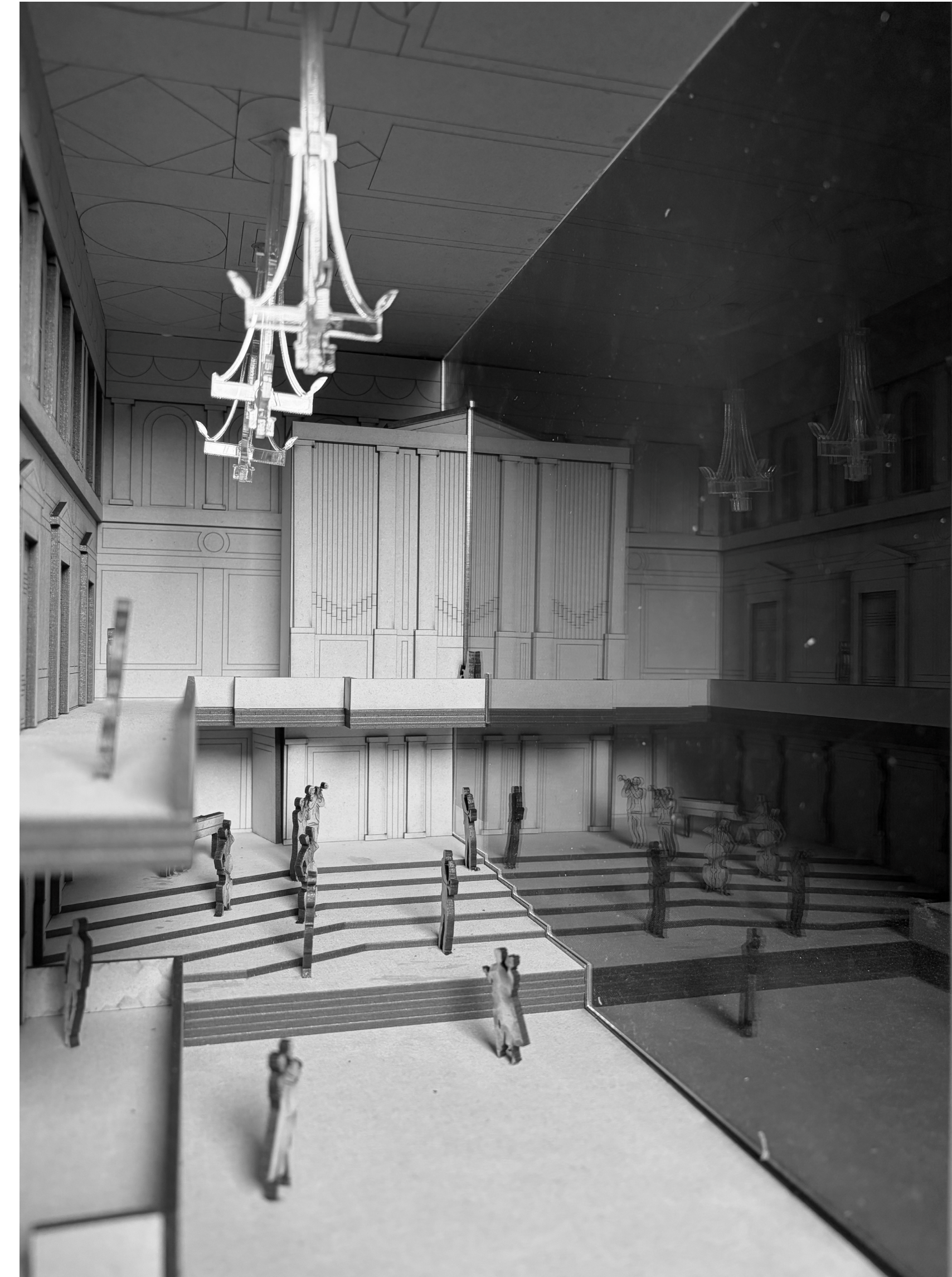
PARTIAL SECTION MODEL IN SITE - LARGE SIDE

# MAKING MODELS

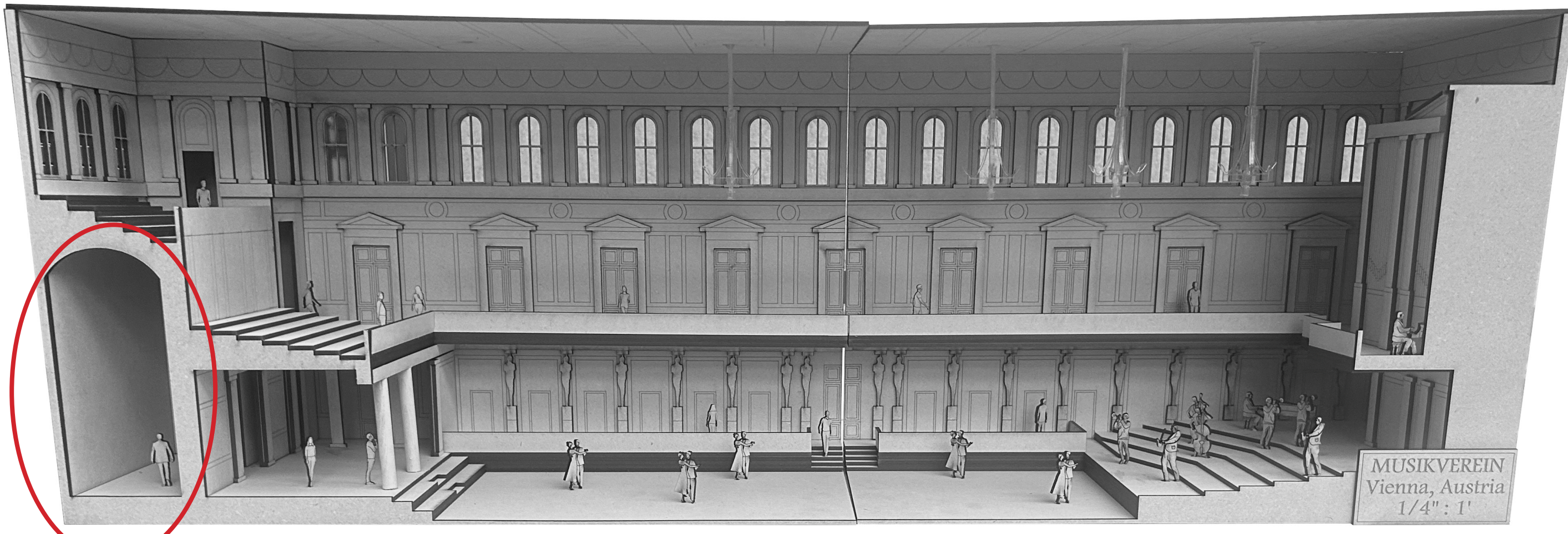
**TYPE:** Physical models of designs and existing buildings

**TIMELINE:** 1st-Year - Present

Models are essential to understanding a building's properties three-dimensionally. Using found plans and sections, models of existing buildings were developed in precedent analysis stages of design. Some models were developed to support studio projects not shown.

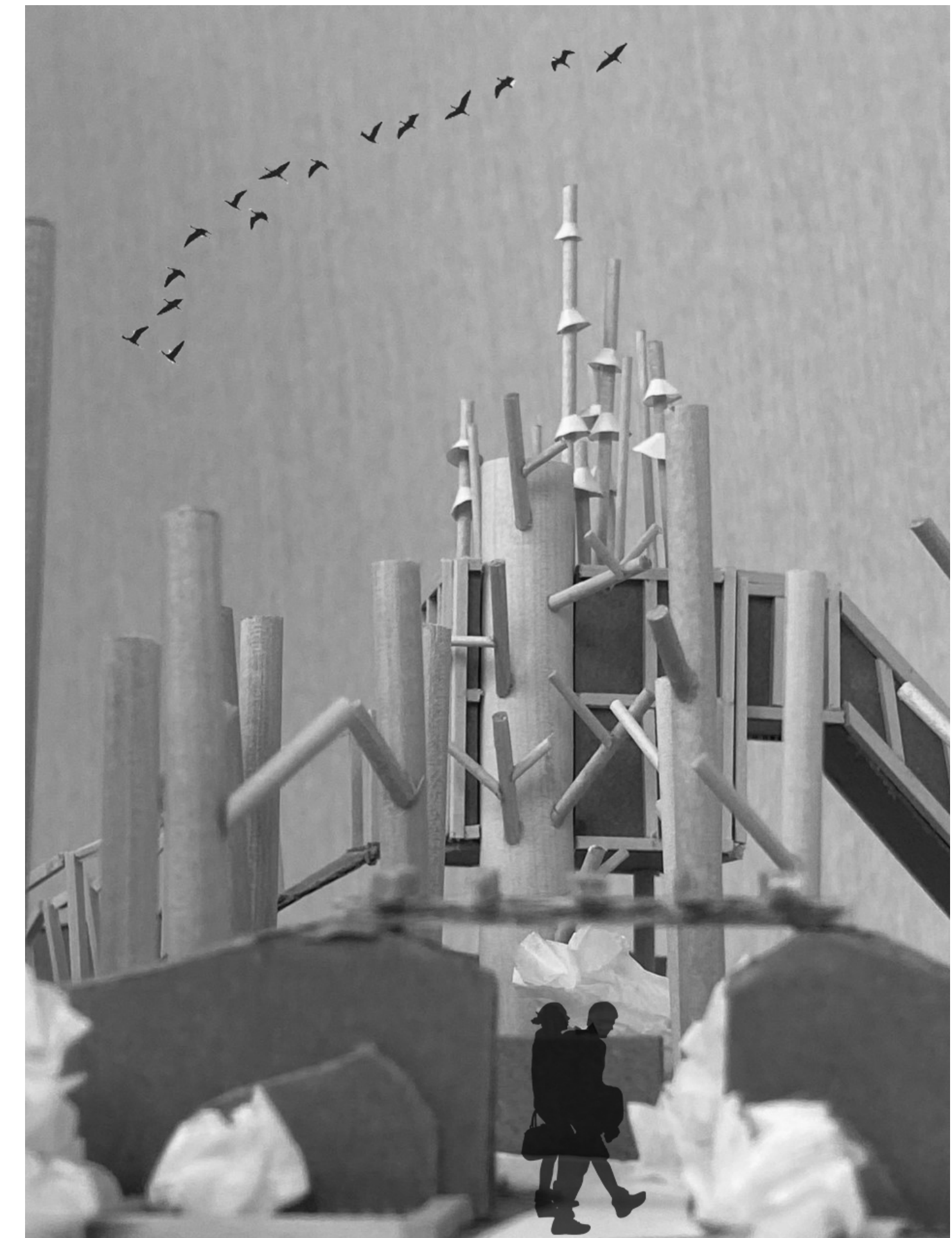


**RIGHT:** Partial section model of the Musikverein. An acrylic sheet mirrors the model to emphasize symmetry.



MUSIKVEREIN PARTIAL SECTION MODEL

**RIGHT:** Model featuring designed playground in the Penn State's Arboretum.



ARBORETUM PLAYGROUND MODEL



MUSIKVEREIN MODEL VIEW

**ABOVE:** Partial section model of the Musikverein in Vienna, Austria.

**LEFT:** View inside the Musikverein partial section model.



NMAAHC PARTIAL SECTION MODEL

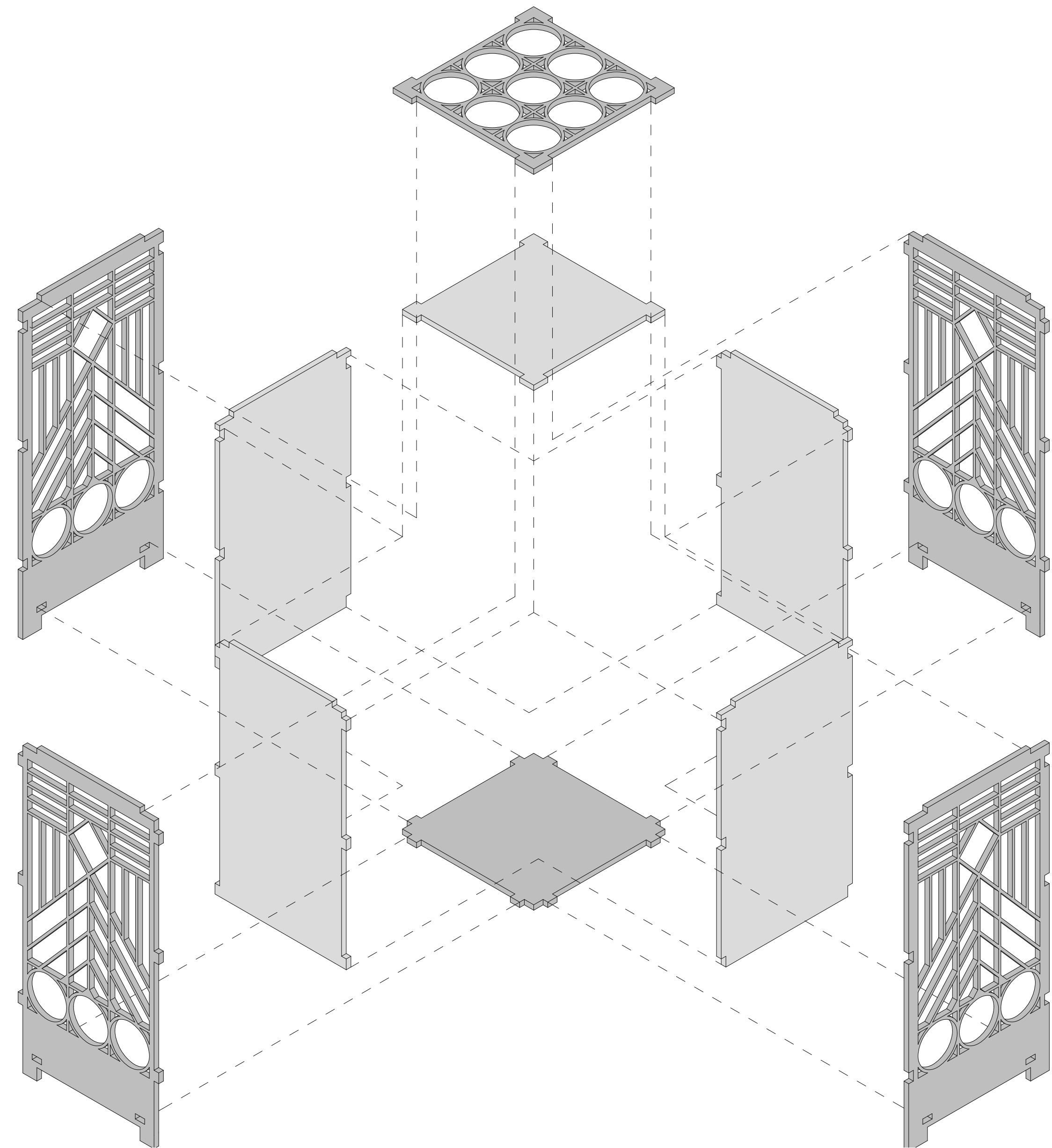
**LEFT:** Partial section model, studying structure and facade of the National Museum of African American History and Culture in Washington, D.C.

# LIGHT IN LINES

**TYPE:** Light tower lamps  
**TIMELINE:** 2025, Summer - Present

Using a Frank Lloyd Wright lamp as inspiration, the designs for these lamps draw inspiration from real life and Wright's stained-glass windows. After initially studying consistent patterns and shapes found in his stained glass, these forms were then reflected into new designs.

The lamps use lines to create shapes in the lamp. The outer layer of the lamps is constructed of MDF, with a frosted acrylic interior helping to diffuse the light from a light source in the middle. The lamps vary in scale and pattern.



**LEFT:** Diagram depicting basic assemblage rules of lamps.



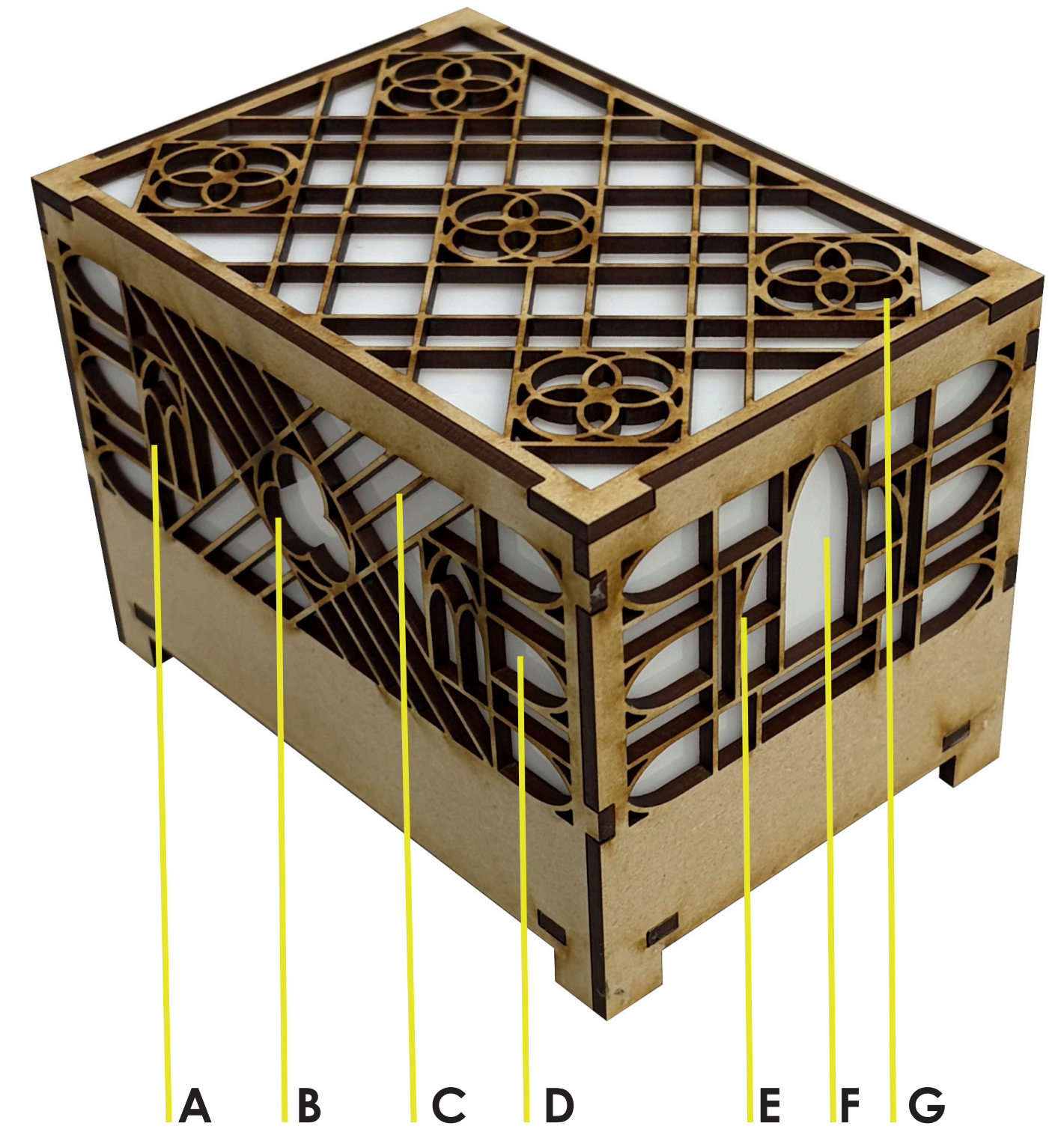
LAMP RENDITION 1



LAMP RENDITION 2



LAMP RENDITION 3



LAMP RENDITION 4



LIT LAMP RENDITION 1

**ABOVE, LEFT:** Lamp draws inspiration from Wright's stained glass windows using diamonds, lines, and circles.

**ABOVE:** Lamp uses Christian iconography starting with a cross surrounded by halo ring that is used to inform the rest of design.

**LEFT:** Lamp design as it appears when lit up.



LIT LAMP RENDITION 3

**ABOVE, LEFT:** Lamp draws inspiration from Wright's stained glass windows in which circles overlap orthogonal windows and patterns.

**ABOVE:** Lamp aims to abstract a Gothic cathedral through various features: A) Pointed arch windows, B) Trefoil icons, C) Colonettes, D) Three arched entrances, E) Flying buttresses, F) Large vaulted sanctuary, G) Rose window/ quatrefoil icons

**LEFT:** Lamp design as it appears when lit up.

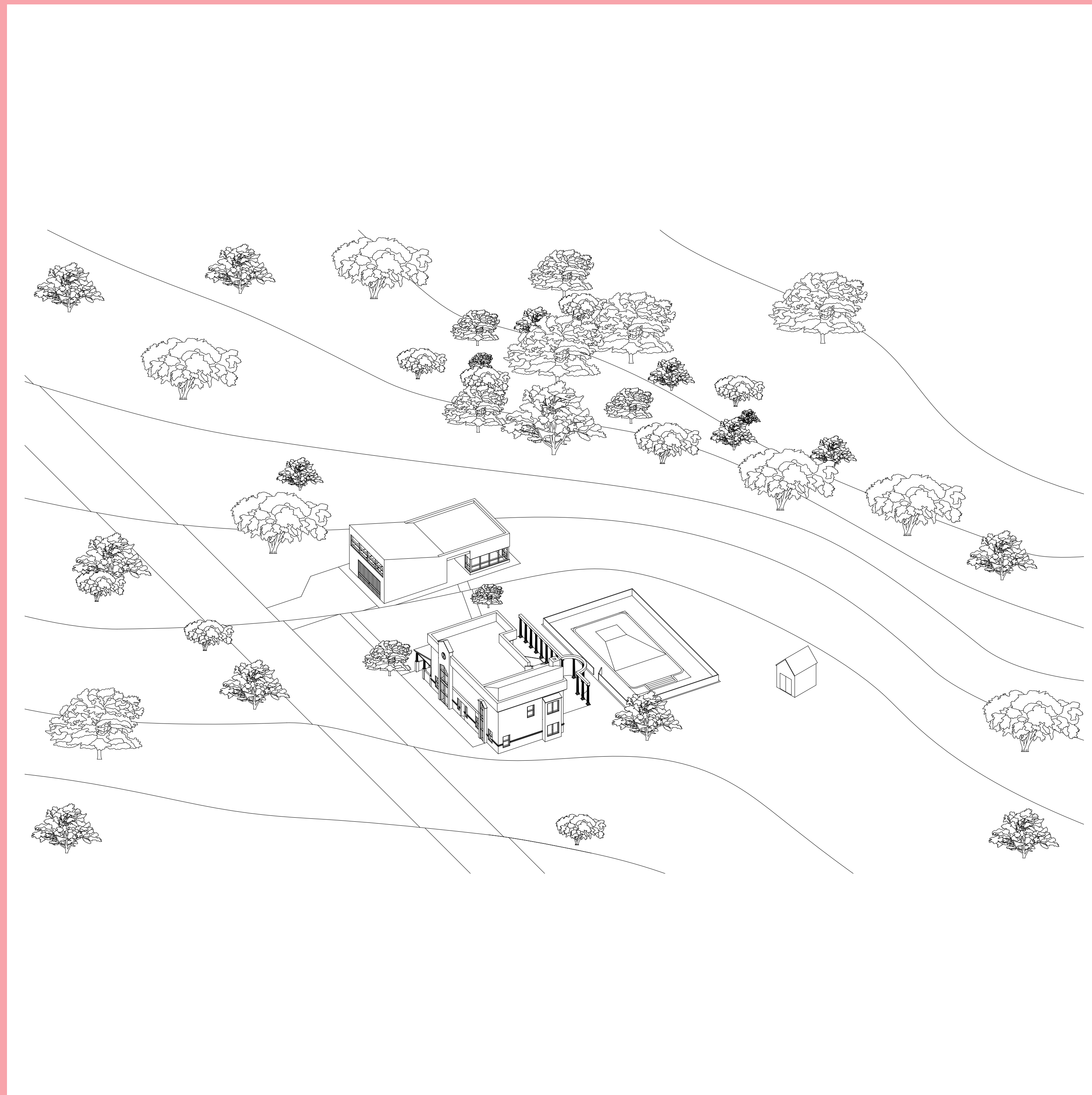
# EVOLUTION OF MASS

**TYPE:** Residential

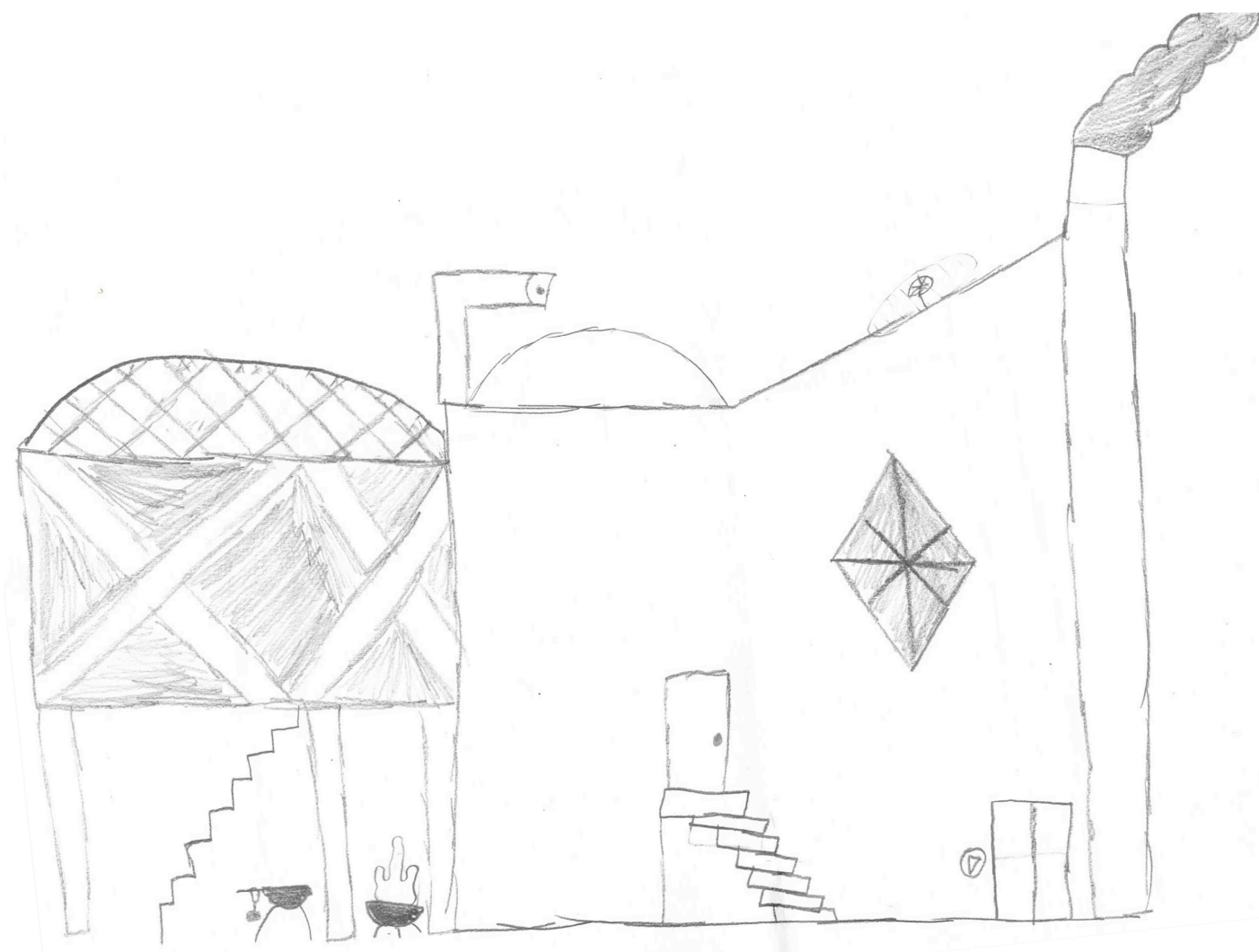
**TIMELINE:** 4th Grade - Present

The first rendition of this house was designed as a fourth-grader as a means of affordable housing. Over time, variations have been designed that evolve the same basic form.

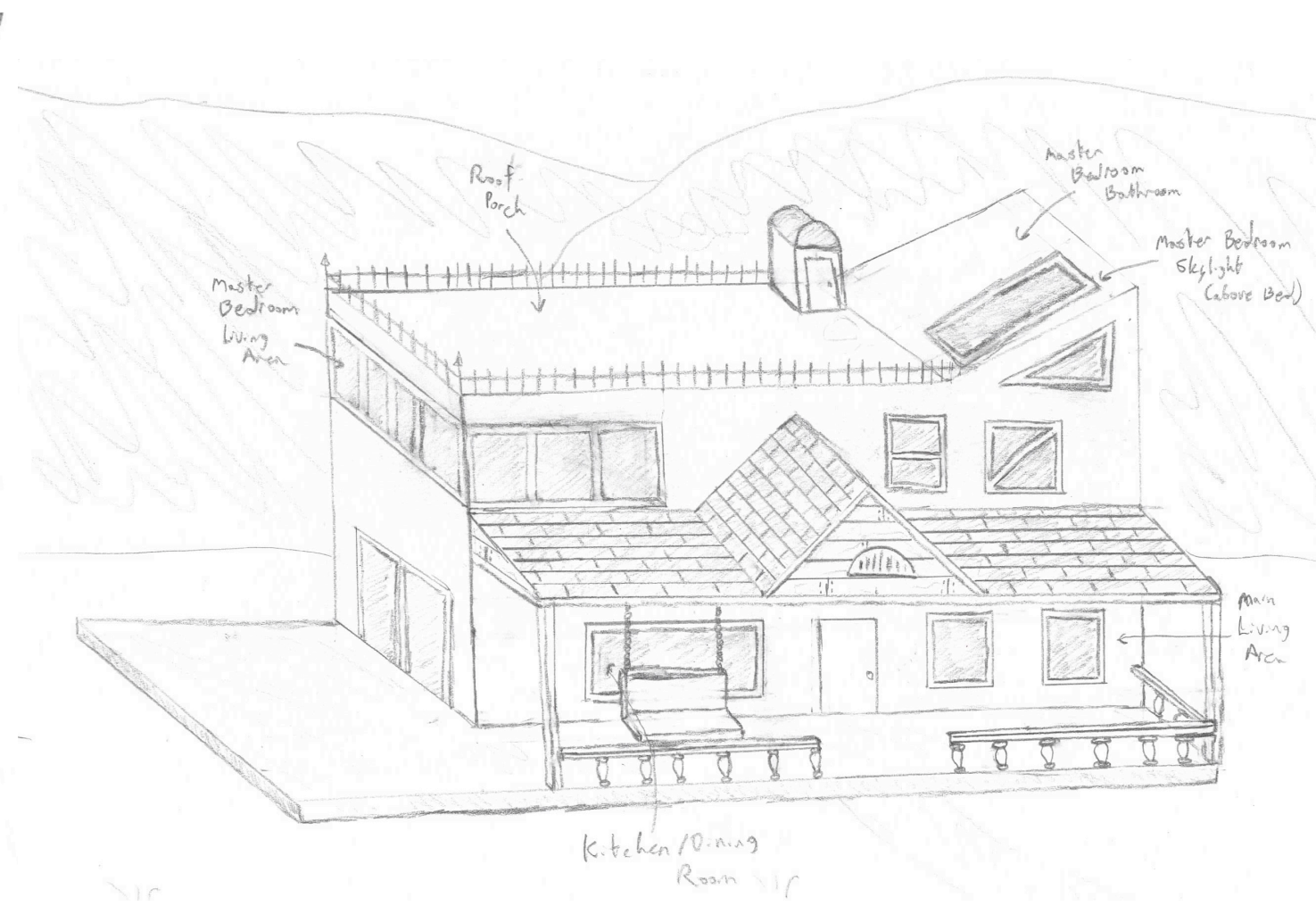
In the most recent rendition, a central staircase rises all three floors, forcing horizontal circulation to revolve around it. The ground floor contains spaces for gathering, while the upper floor has more intimate spaces. A roof deck allows for outdoor gathering. The garage is separated from the main house, reflecting the house's form. It includes a studio space and covered outdoor working area.



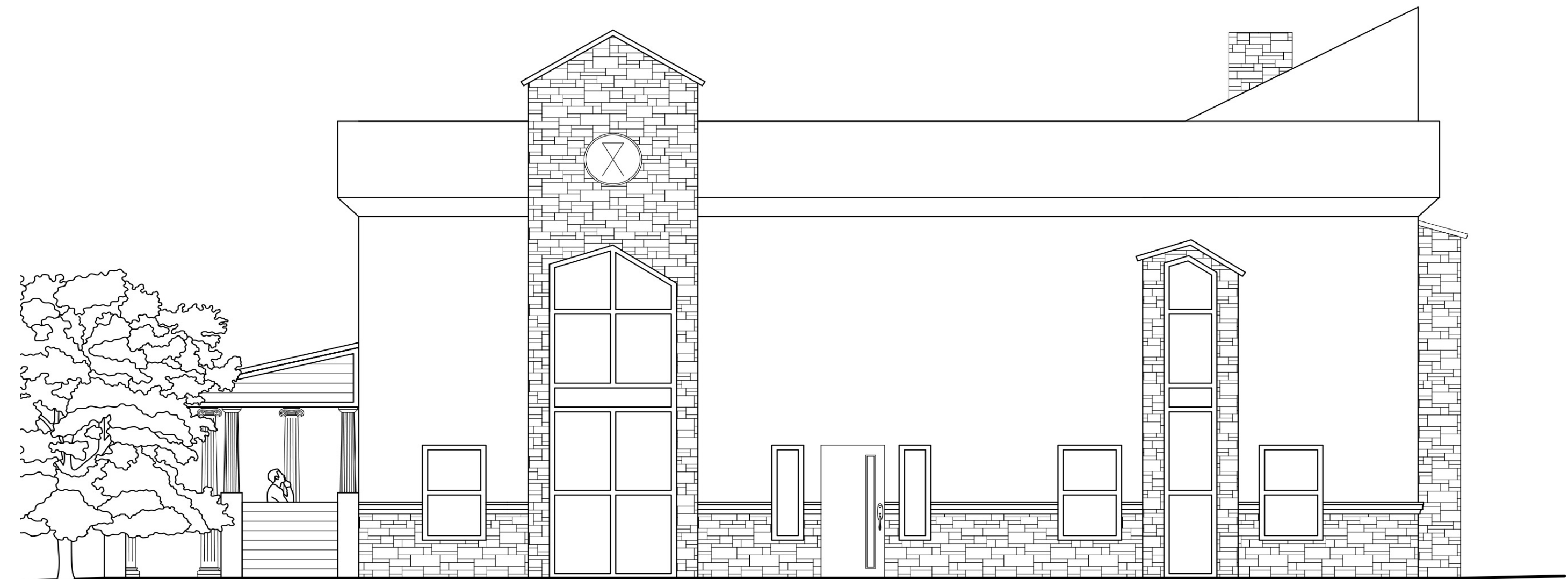
**RIGHT:** Axonometric drawing of site with house, garage, pool, and shed.



ORIGINAL ELEMENTARY HOUSE RENDITION



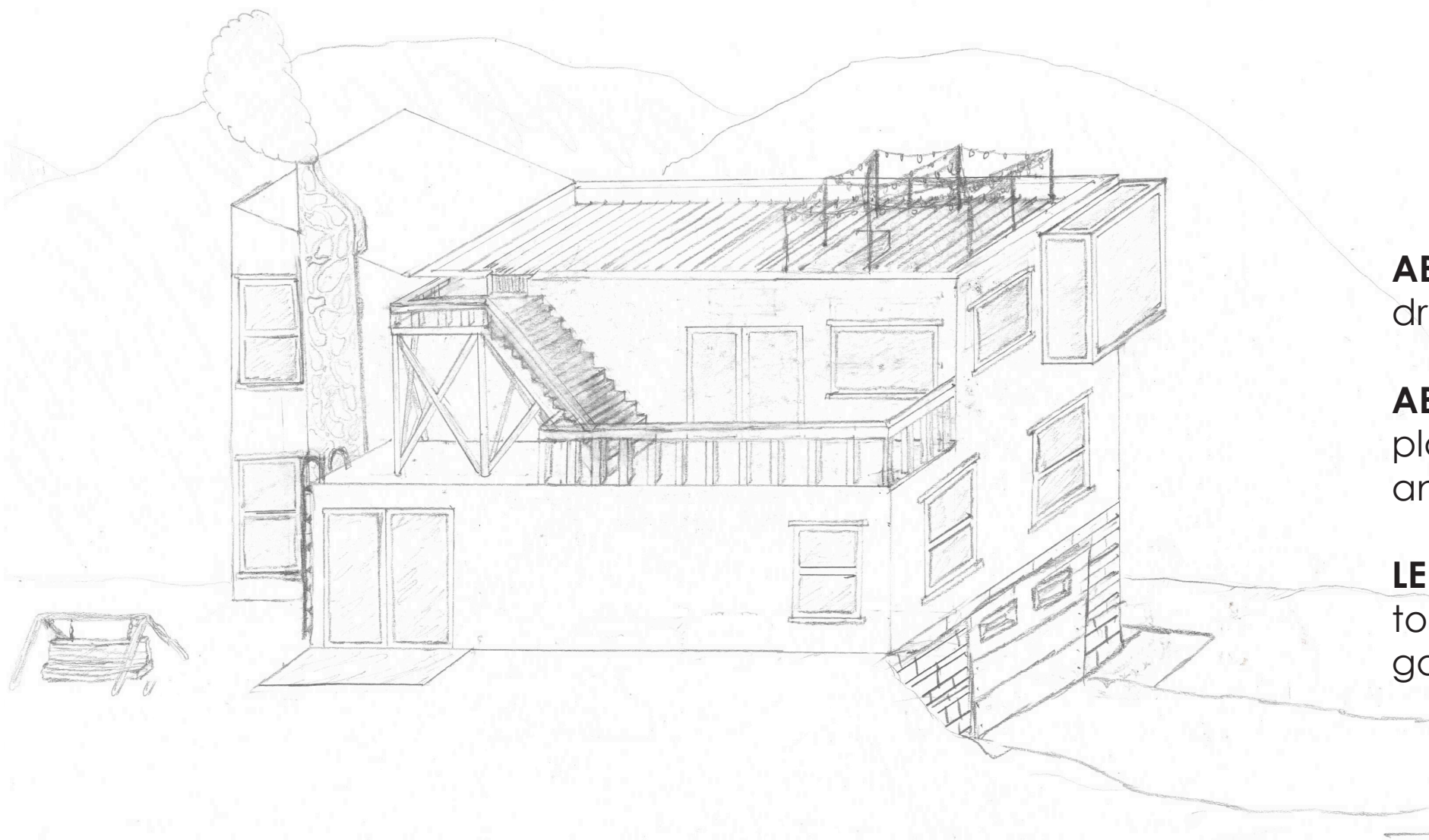
MIDDLE SCHOOL HOUSE RENDITION



FRONT ELEVATION

**ABOVE:** Front elevation of house variation.

**BELOW:** Back elevation of house variation.



HIGH SCHOOL HOUSE RENDITION

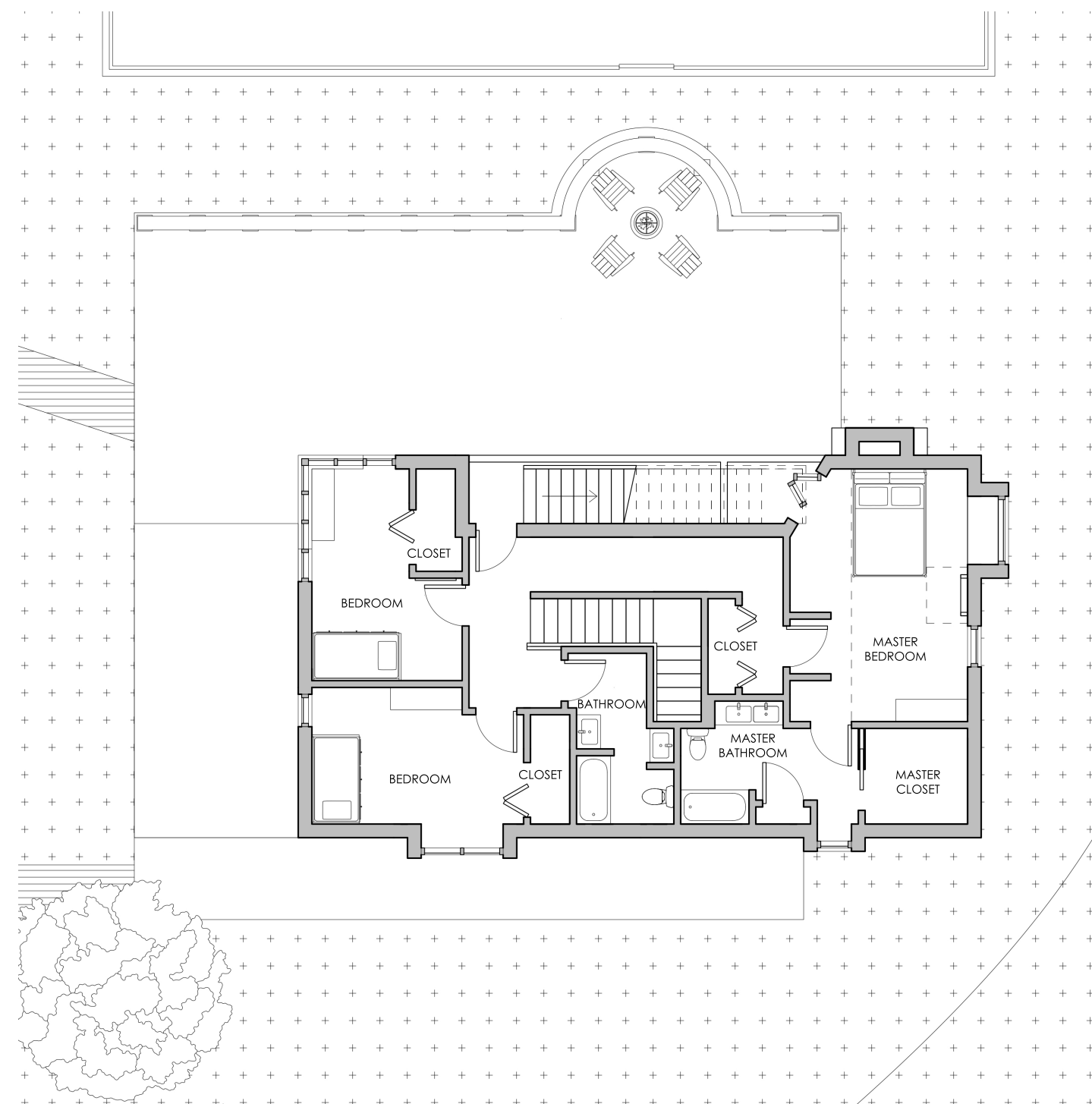
**ABOVE, LEFT:** Original 2014 variation of house drawing.

**ABOVE:** A mid-high school variation begins playing with the idea of a covered porch and roof deck.

**LEFT:** A late-high school variation continues to develop the roof deck, with an attached garage and bay window.

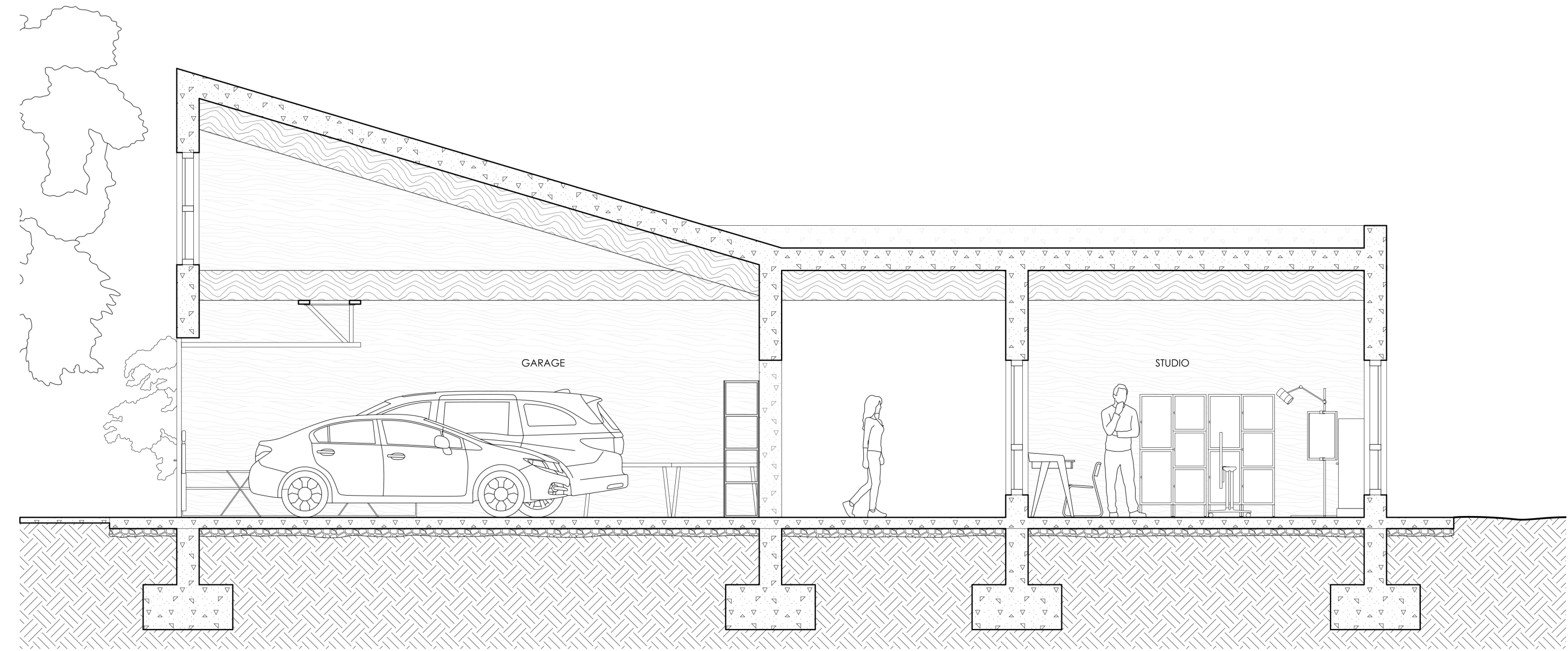


BACK ELEVATION



THIRD FLOOR PLAN

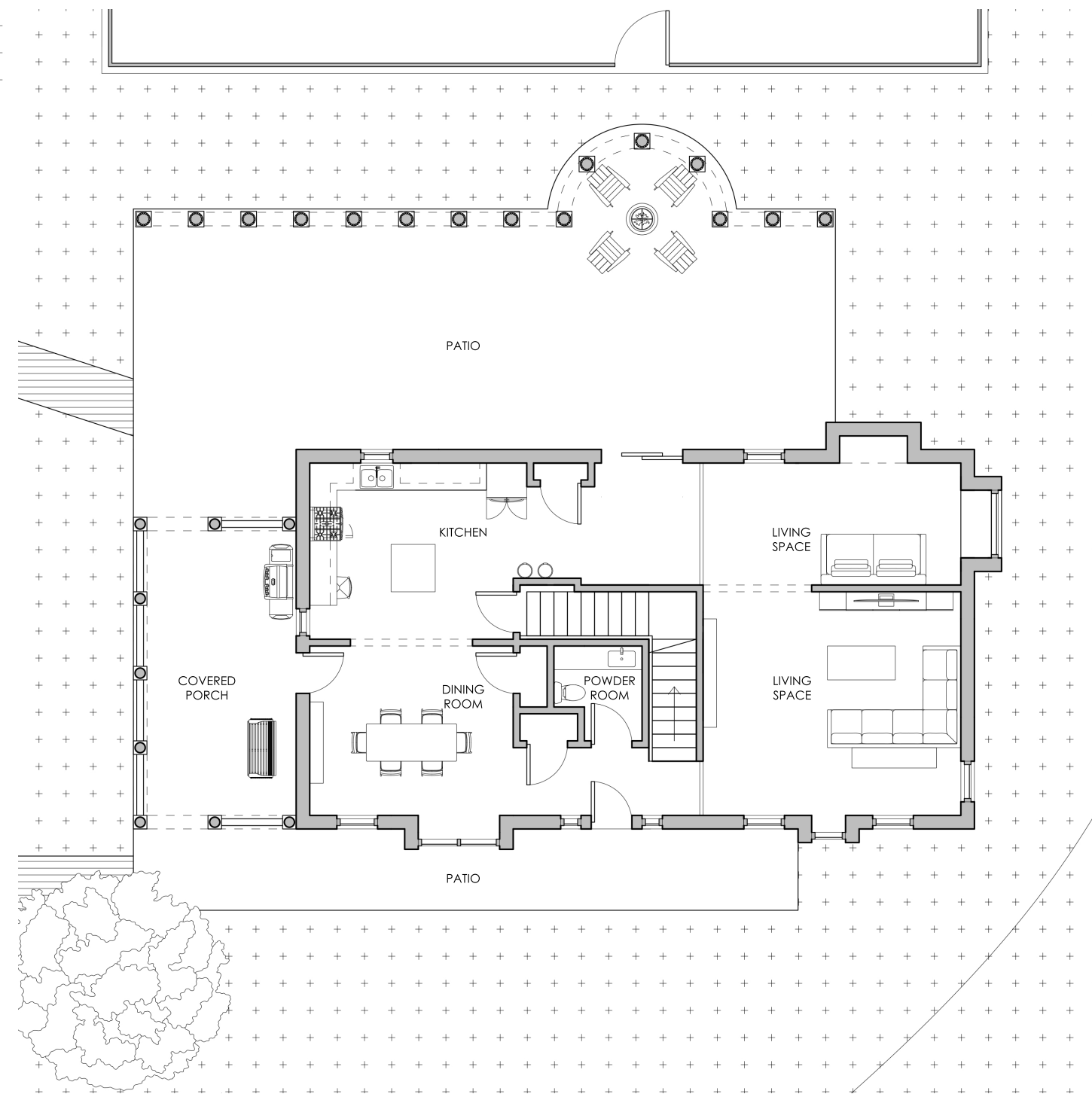
LEFT: Third floor plan of the house



LONGITUDINAL SECTION

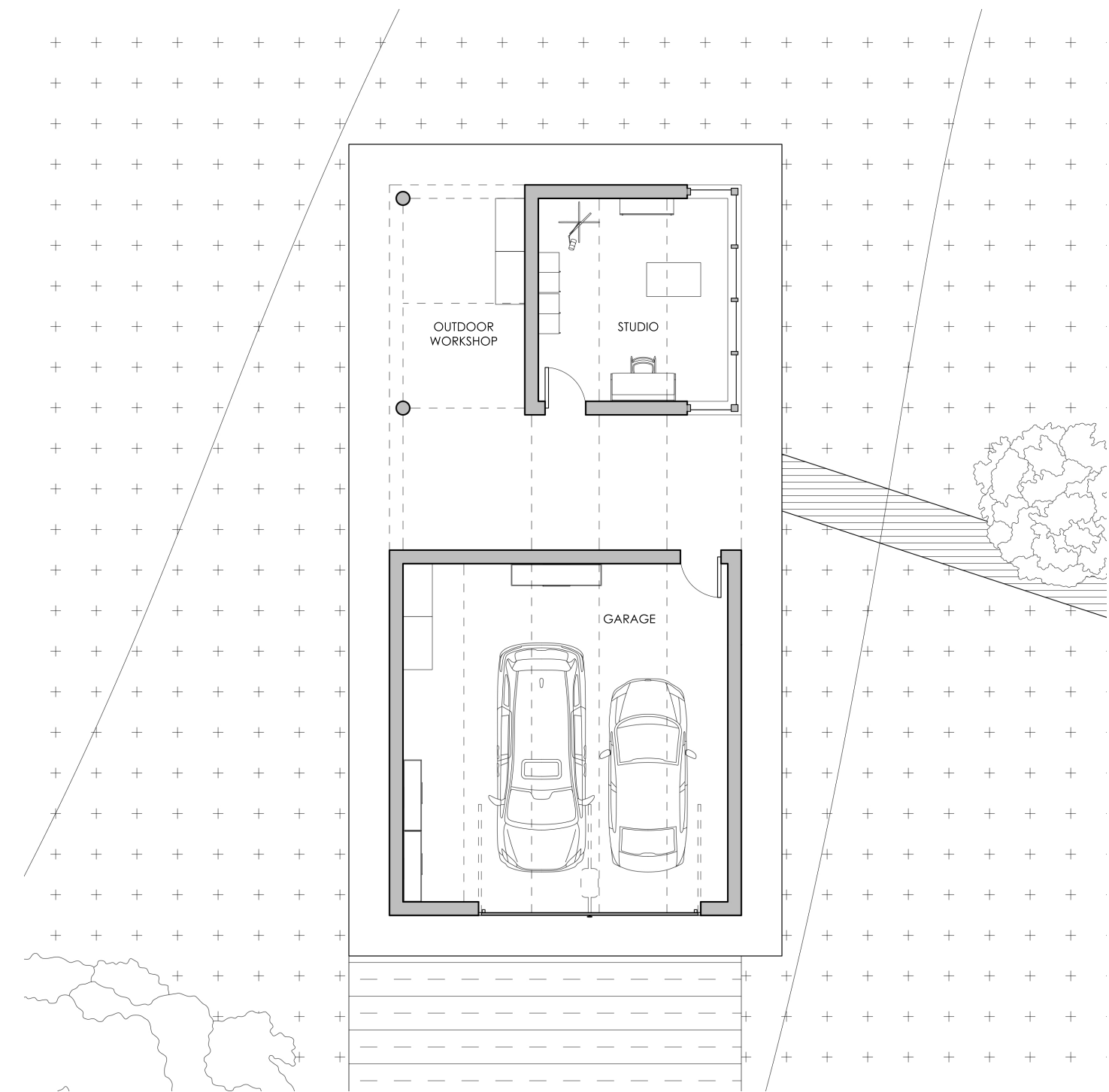
ABOVE: Section through garage/studio structure with construction materials.

RIGHT: Second floor plan of the house at grade level.



SECOND FLOOR PLAN

RIGHT: Plan of garage/studio structure.



GARAGE PLAN

# CONNECTING THE ENVIRONMENT

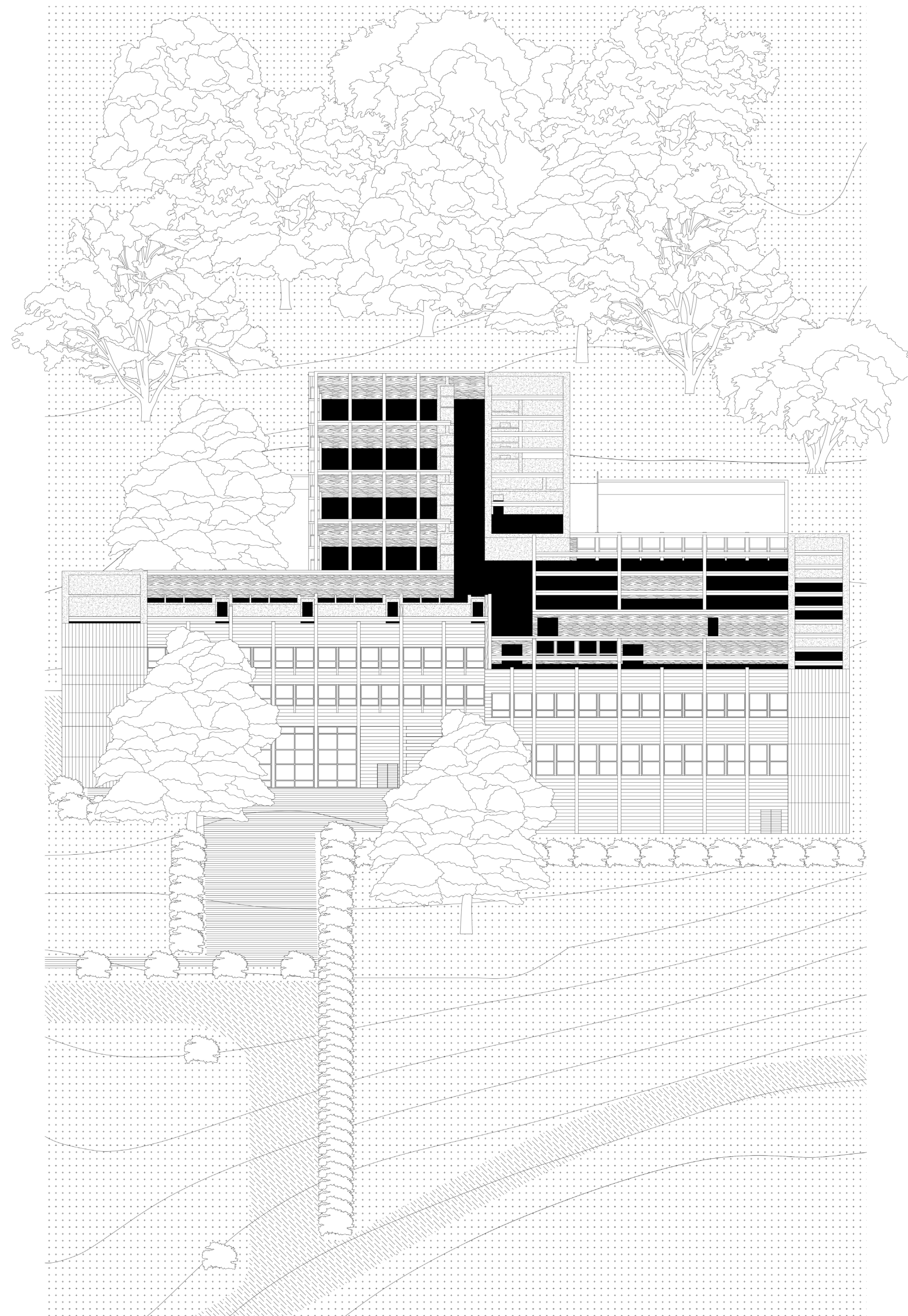
**TYPE:** Educational Facility, Gymnasium, Dining, Library

**LOCATION:** State College, Pennsylvania

**TIMELINE:** 3rd-Year, Fall Semester

Designed as an extension for the nearby Park Forest Middle School, the site sits on a slope of a nearby park. Sixth, seventh, and eighth graders have designated classrooms with an additional flex space for each grade. The school also includes a library, cafeteria, and gym for large gatherings. Specialty classrooms, administrative offices, and locker rooms are situated around the building.

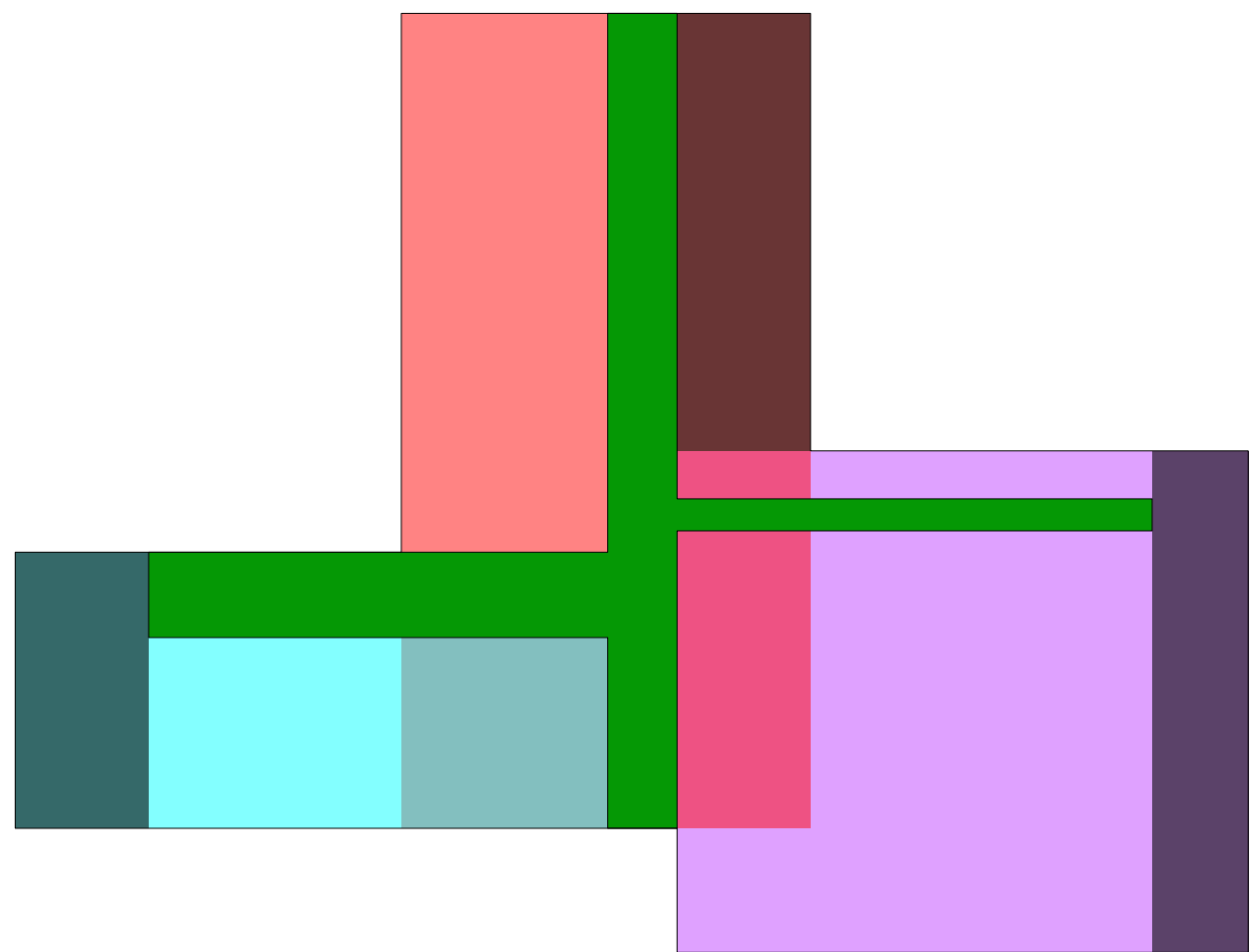
The design was focused around shaping the environment both socially and as a reflection of the surrounding site. South and east facing windows allow natural light into classrooms and assembly spaces and provide views down the slope. Concrete cores situated around the building add thermal mass and contain the private spaces. To optimize interaction spaces, each classroom has niches in the wall with seating and lockers. Due to a difference in social skills, the sixth graders are separated from the seventh and eighth graders by a floor. Each flex space is converted to special education classrooms. The 8th grade flex space extends to include a life skills space. Exterior terraces extend from the building, creating spaces for outside assembly. Vertical elements on the façade provide structure and mimic the surrounding trees.



**LEFT:** An exterior image of the building combining elevation and axonometric drawing.



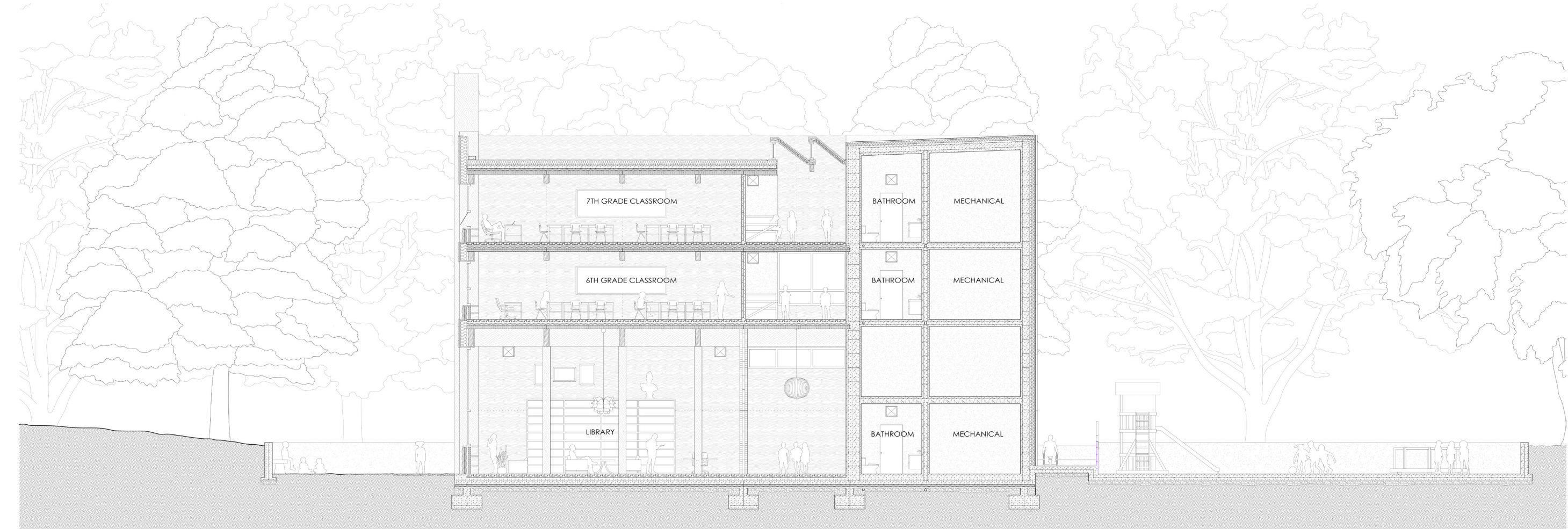
SITE PLAN



CONCEPT DIAGRAM

**ABOVE:** Site plan of building within its park context.

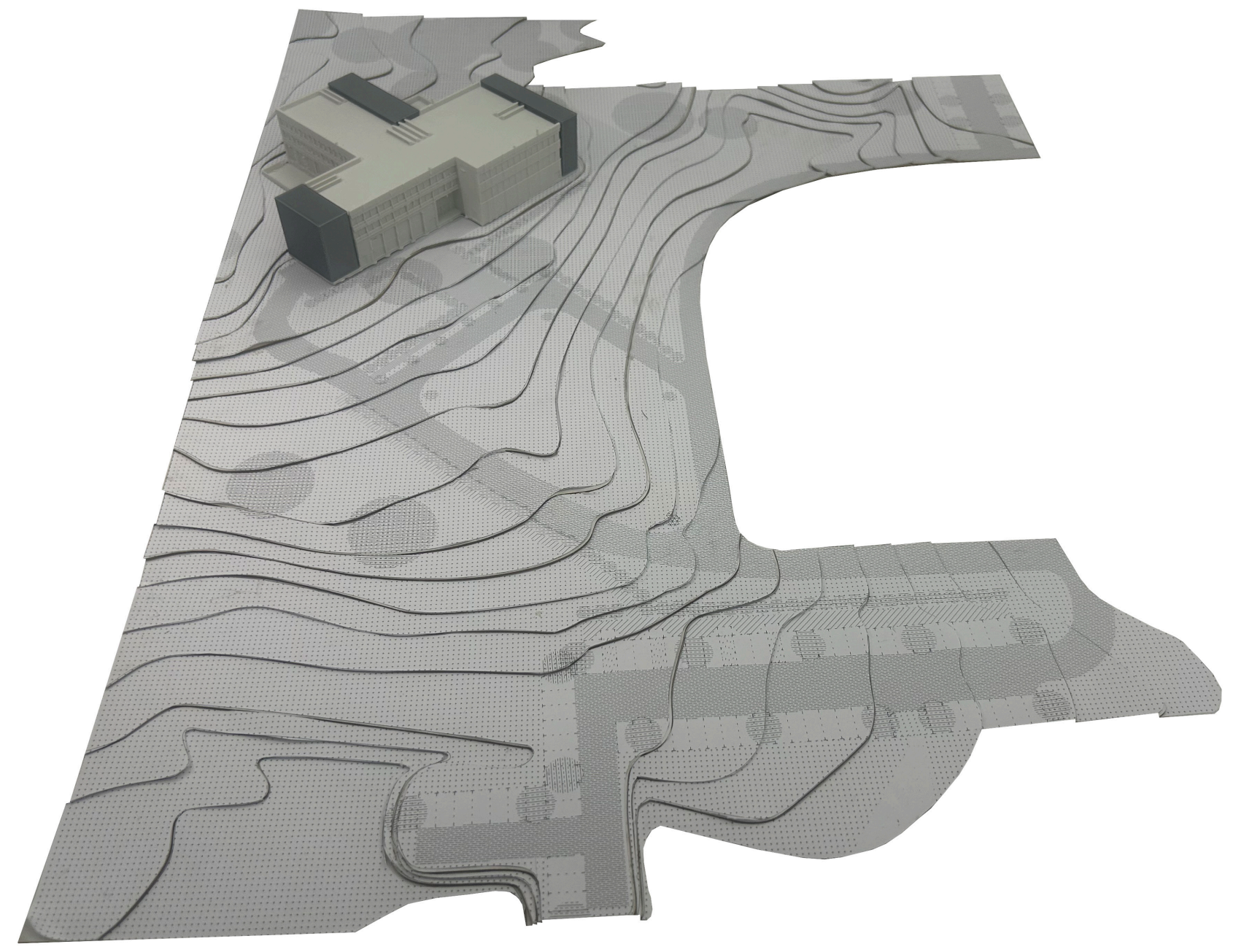
**LEFT:** Diagram showing the initial three volumes, informing the core placement and circulation that meets at various points.



TRANSVERSE SECTION

**ABOVE:** A section cutting through public spaces and a core.

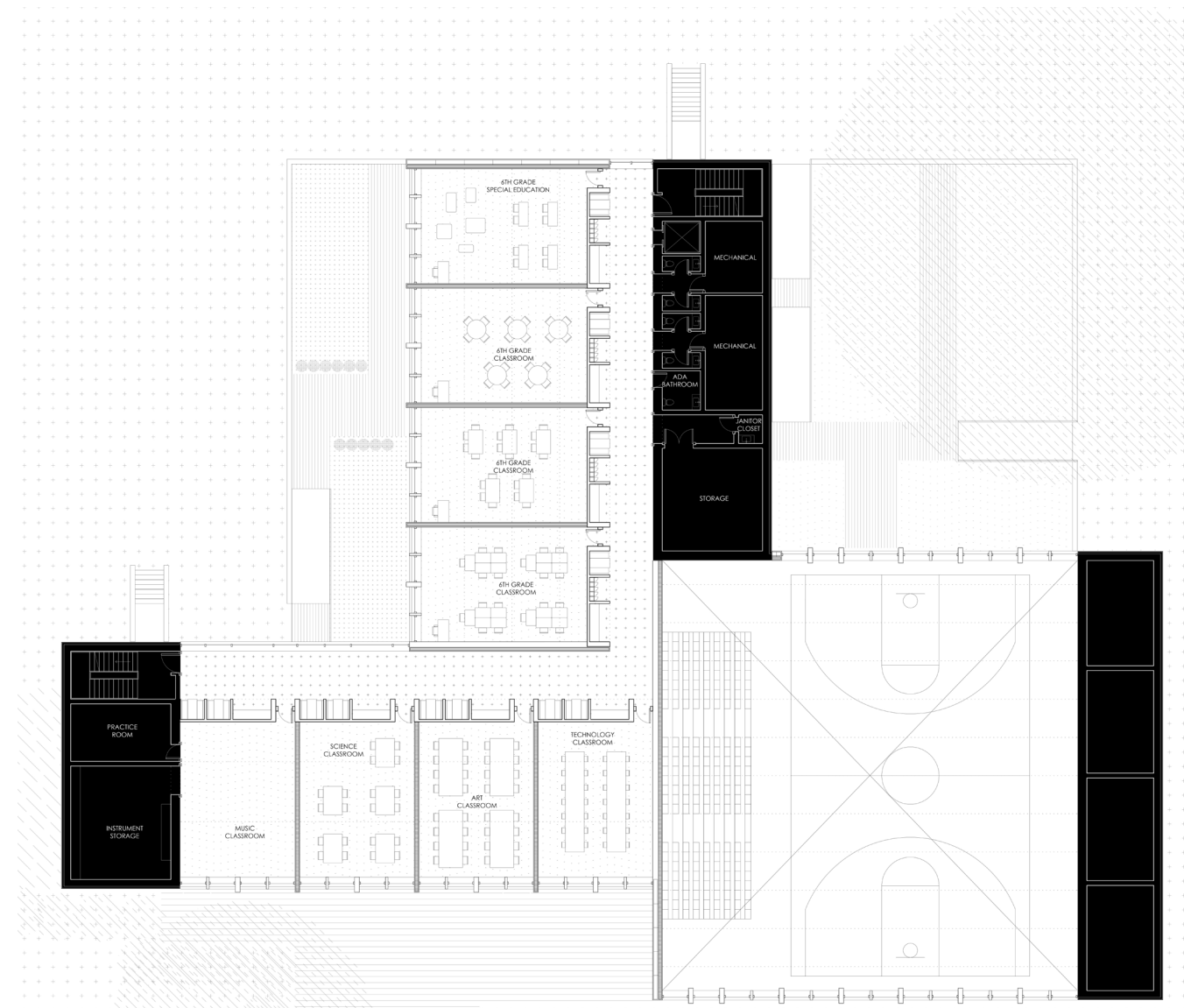
**LEFT:** Site model emphasizes how the building connects within its environment.



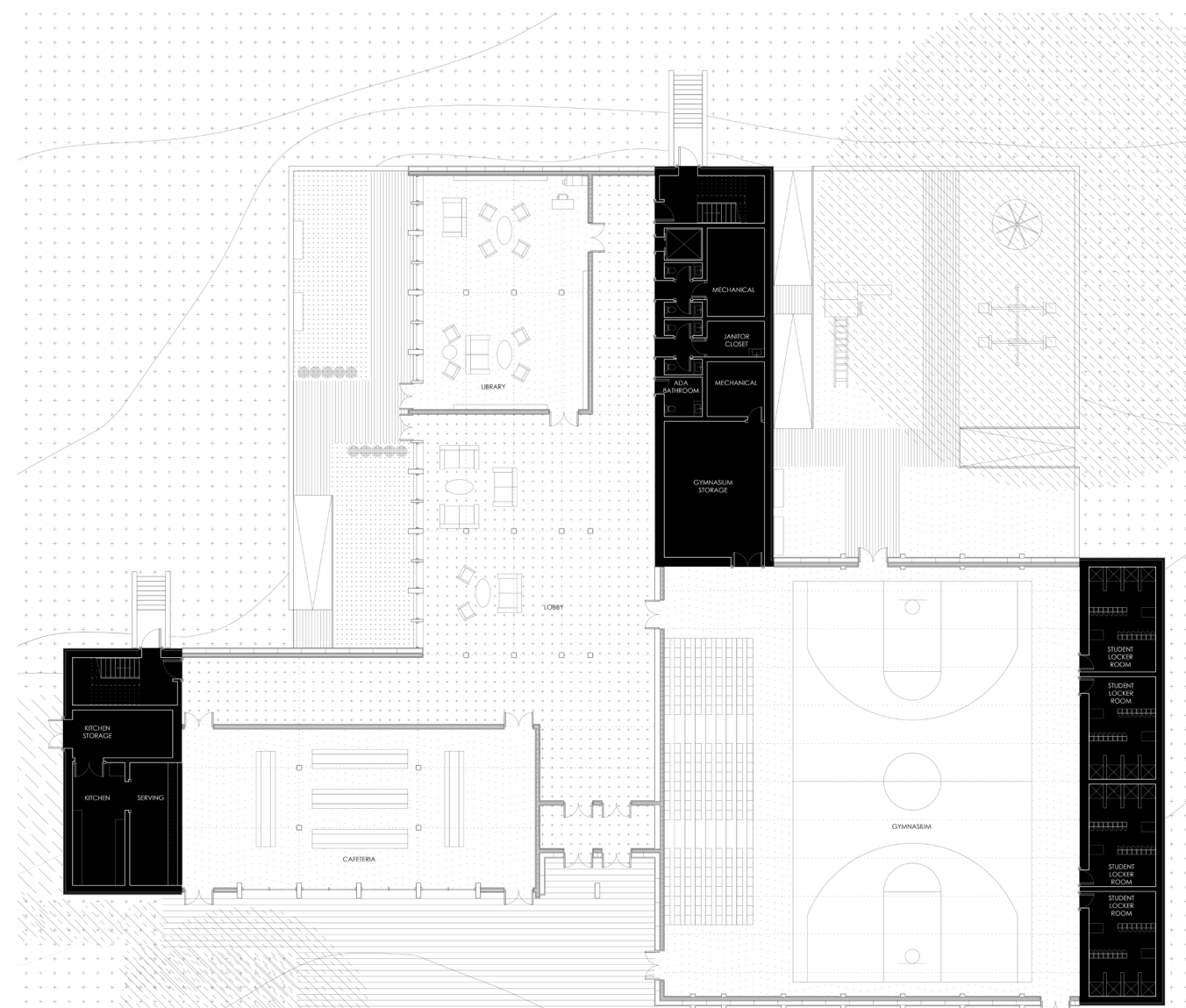
SITE MASSING MODEL



THIRD FLOOR PLAN



SECOND FLOOR PLAN



FIRST FLOOR PLAN

**ABOVE:** The third floor of the building includes the seventh and eighth grade classrooms, admin, and supporting spaces.

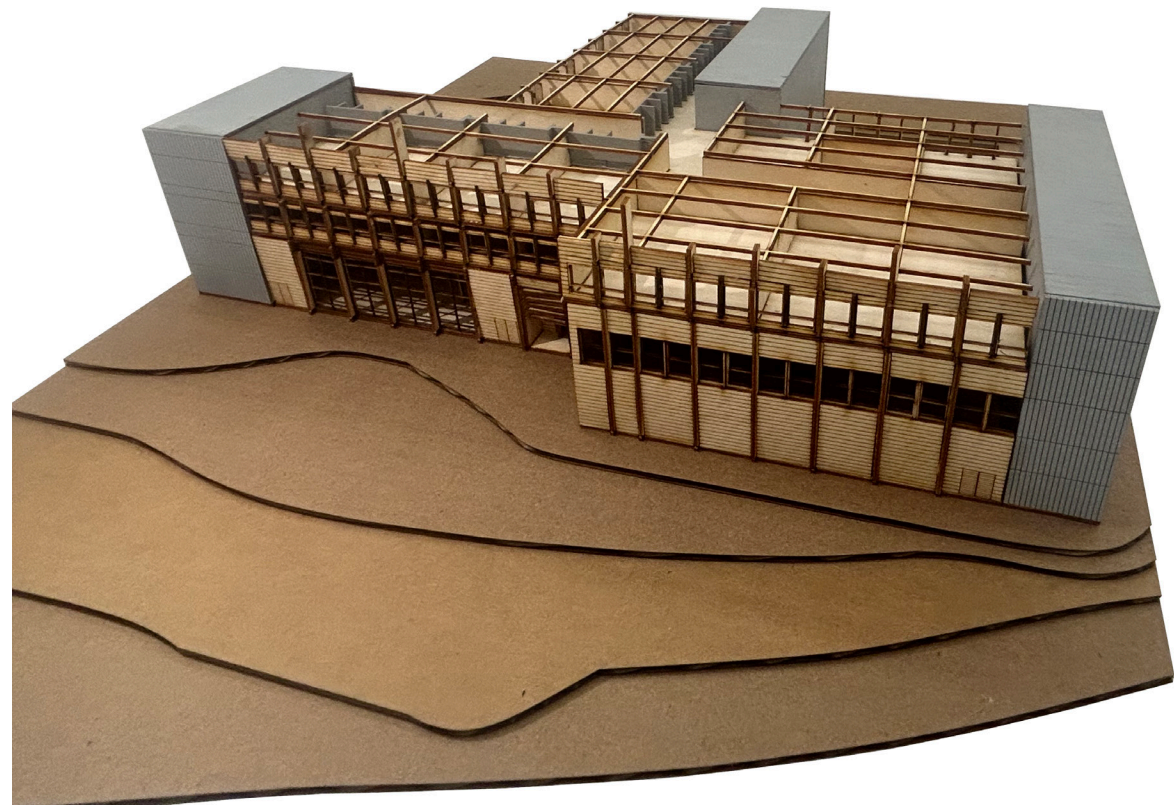
**ABOVE, RIGHT:** The second floor consists of the sixth grade classrooms and the specialty classrooms.

**RIGHT:** The first floor contains large spaces for public gatherings. Some spaces open onto terraces that access the site directly.



**ABOVE:** A view from the central intersection on the third floor.

INTERIOR VIEW



STRUCTURE/FACADE MODEL

**LEFT:** Model shows east facade and removes the roof to reveal third floor spaces.



SECTION MODEL

**RIGHT:** The section model shows both façade features and a section of the building.



SECTION MODEL - LIGHTING EFFECTS

**ABOVE:** Skylights at the end of building's hallways bring natural light in and encourage circulation.

