



[015243475] PORTFOLIO

Second Year Architecture, Cal Poly Pomona. Winter 2022 - Spring 2023

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ARC 2011A Second Year Design I (Fall 2022)

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ARC 2021A Second Year Design II (Spring 2023)

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- xx Exercise 03: Title

37 Credits



ARC 2011A Second Year Design I

Coordinators: Associate Professor Katrin Terstegen (Cohort 1) + Garet Amerman, Lecturer (Cohort 2)

Exercise 01: Case Study

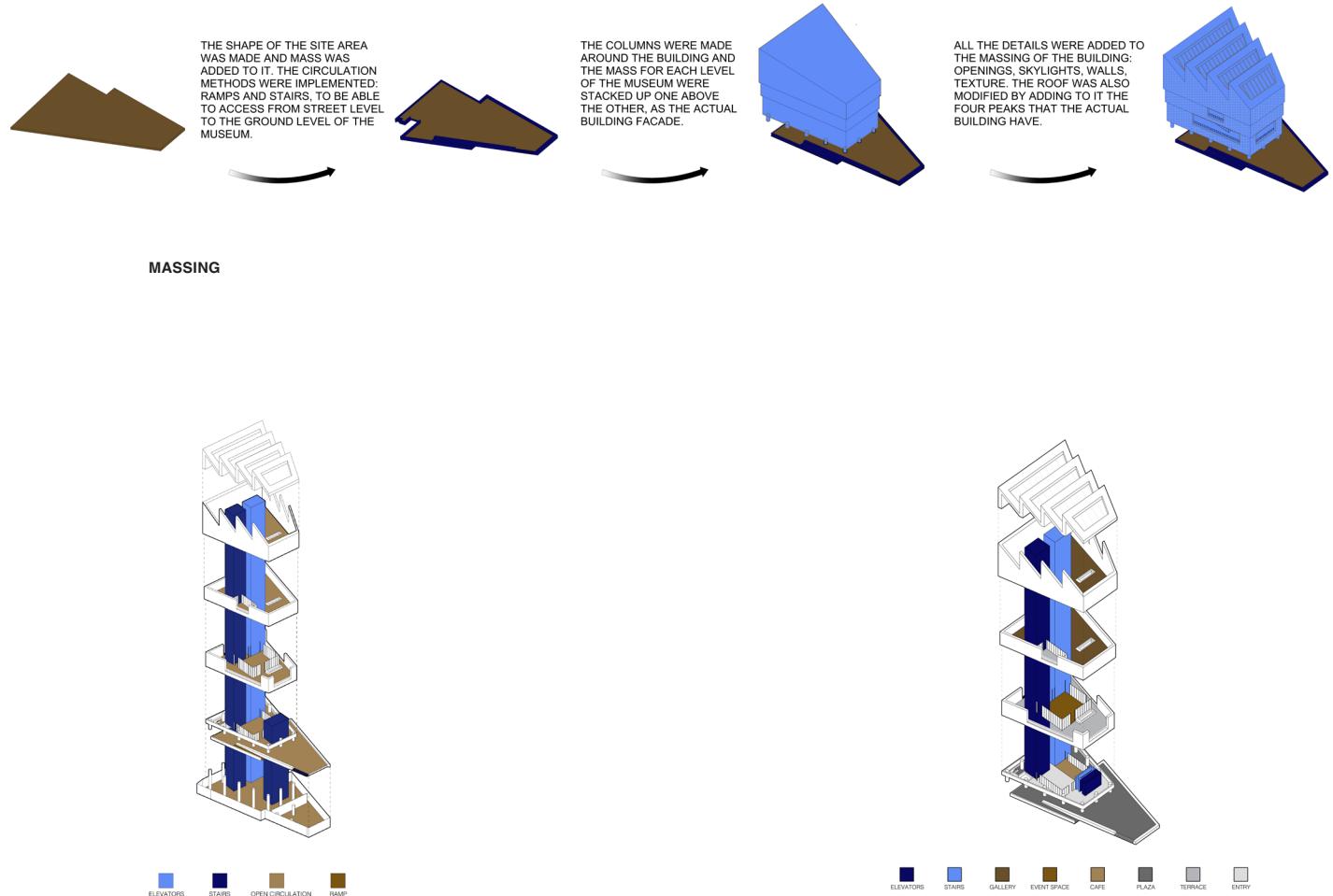
Group Project



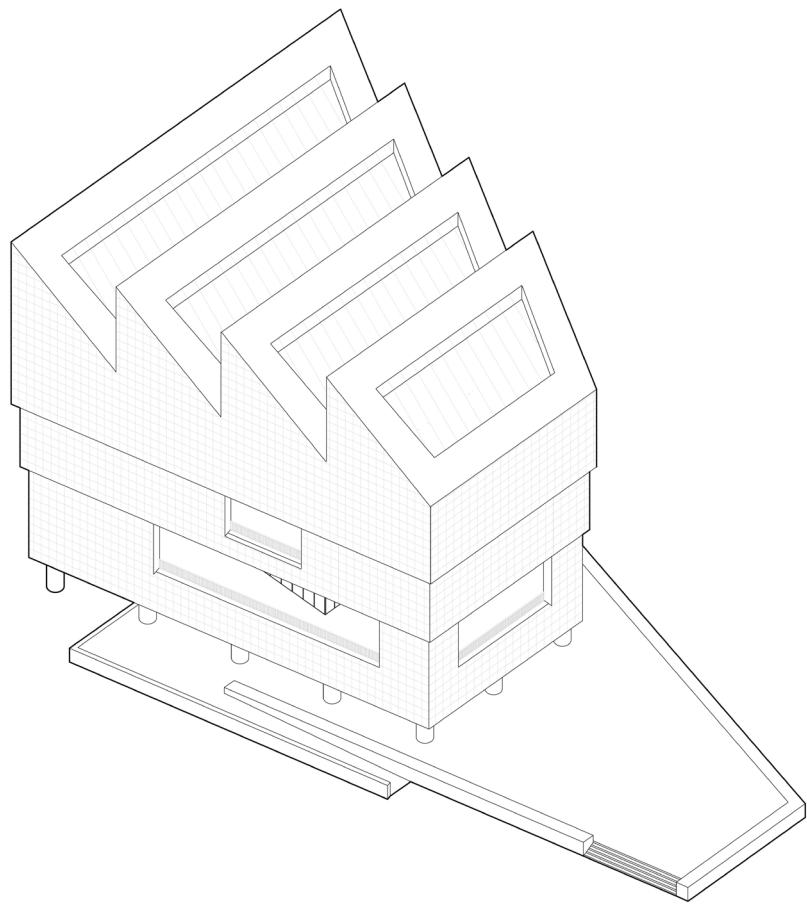
David Chipperfield: Mexico City, Mexico, 2013

The Museo Jumex sits on a constrained triangular site, defined by a major street, a railway line, and an adjacent property to the east. The building's mass responds to its non-orthogonal site plan. Due to the individual quality of the surrounding buildings, the museum appears freestanding and detached from its urban context. This provided the opportunity to create a building that is noticeably distinct yet contributes to its larger context. The museum struggles to compete with its neighbors, though it strikes a subtle yet assertive presence among them. The museum's distinctive saw-tooth roof and travertine cladding provide a sharp contrast to the organic metal form of the Museo Soumaya to the northwest.

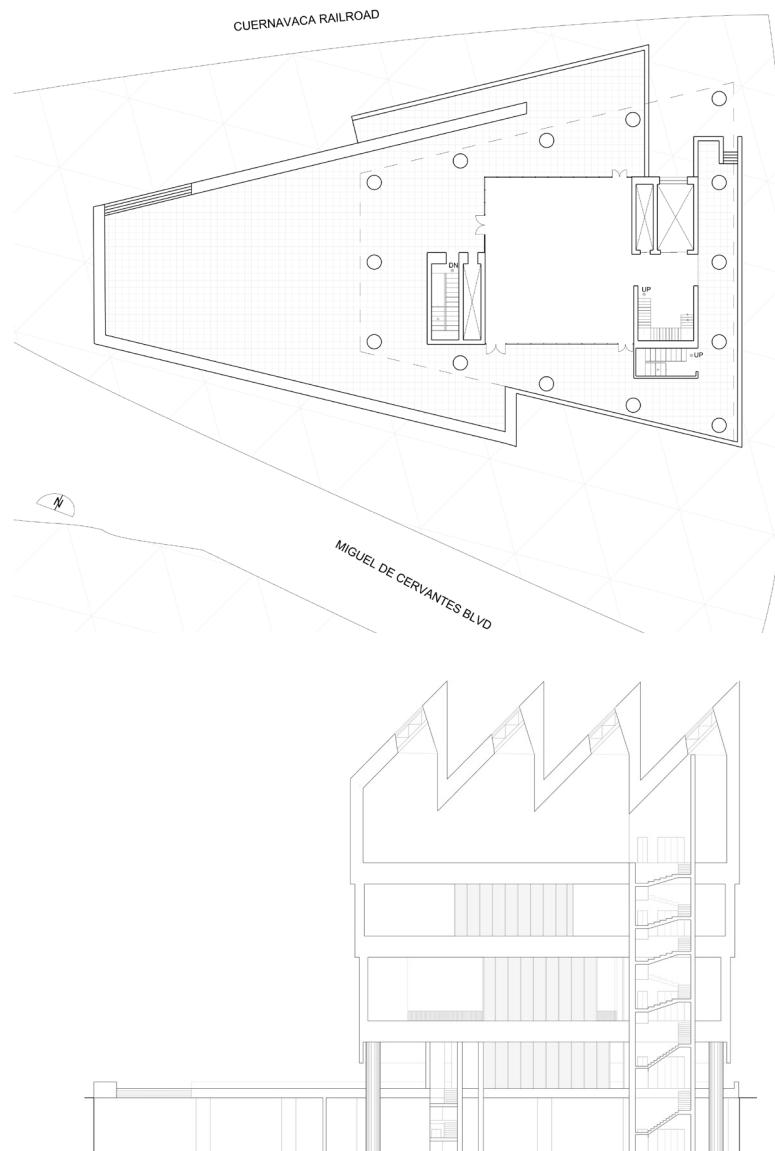
Above: Exterior perspective collage of the case study, set in a new context



Above: Diagrams



Above: Axonometric View

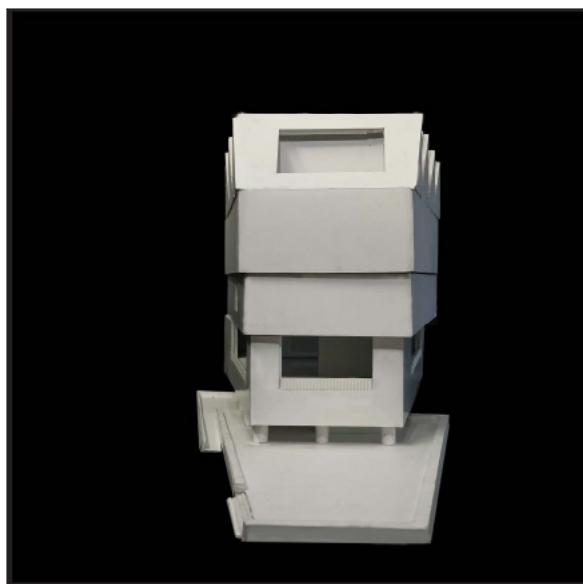


Top: Floor Plan

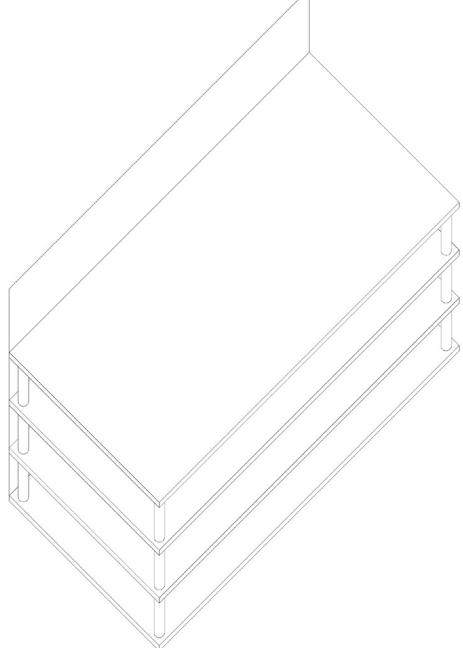
Bottom: Section



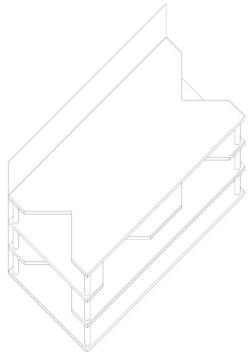
Above and right: Photos of the Physical Model



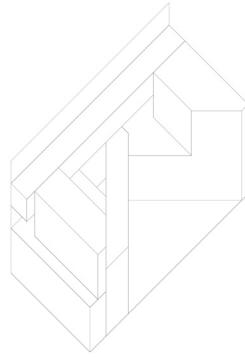
Exercise 02: Section Typologies & Spatial Concepts - Steps A+B



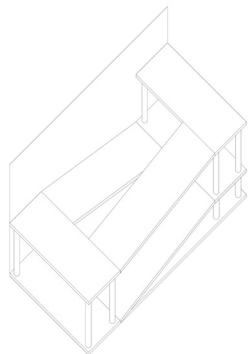
STACK



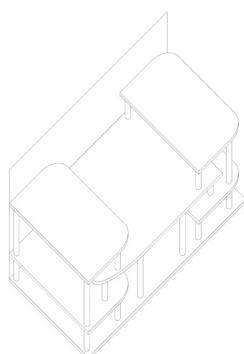
HOLE



NEST



RAMP



SHEAR

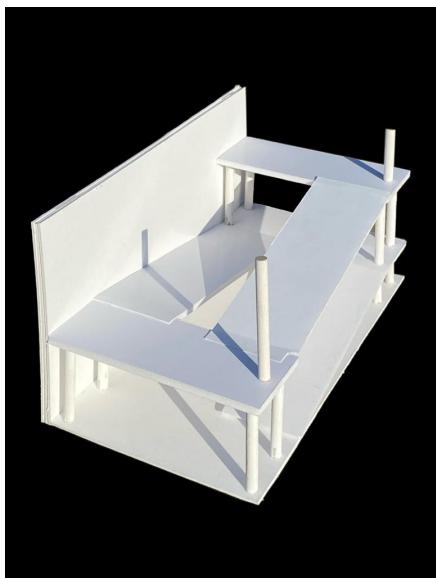
Above: Axonometric Drawings of Section Types



HOLE



NEST

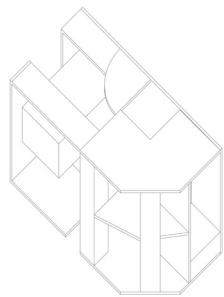


RAMP



SHEAR

Above: Section Types, Study Models



New Scheme

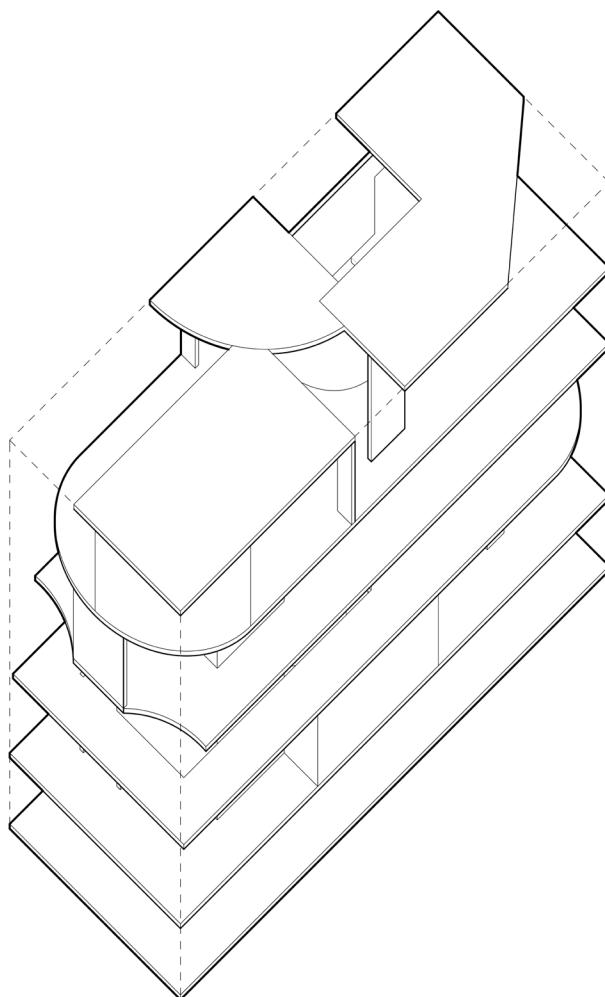
The sectional and spatial strategy for the scheme 1 was created with the idea of having several open spaces and also open areas to have fluid ventilation. It also contains some of the section types shown previously, and those section types are: hole, shear, and nest. Hole is one very efficient section type because it could create amazing openings in the space, while Nest could provide interesting spaces for the future programming of the structure, Shear is used to differentiate the spaces into each area or level created.

Above: Diagram of the new scheme

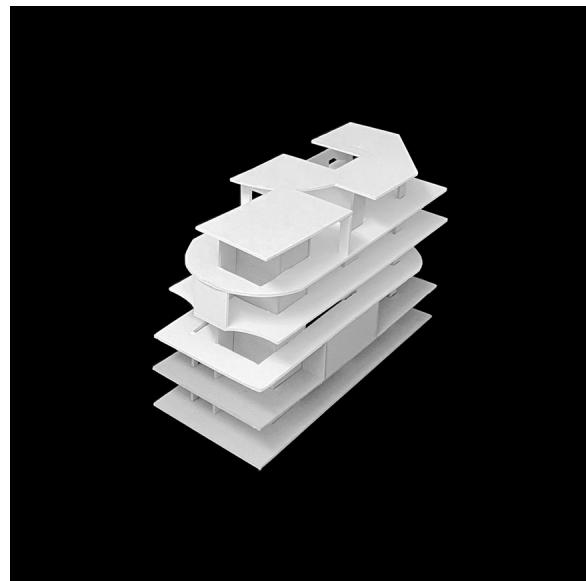
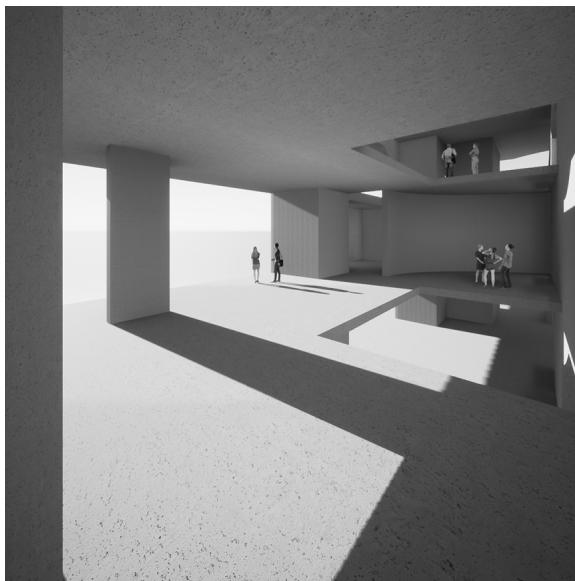


Above: Physical Model

Exercise 02: Section Typologies & Spatial Concepts - Step C



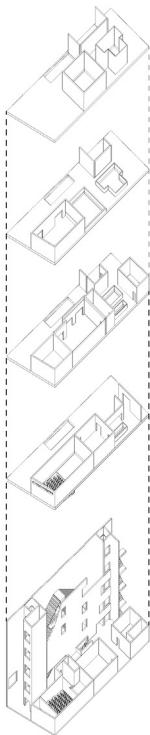
Above: Axonometric View



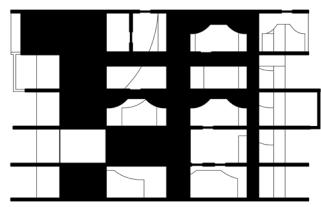
Sectional and Spatial Strategy

The project contains some of the section types discussed previously in class, the composition of the building uses Nest section type to create spaces that might be used in the future for circulation methods and also to create structural support of the building. Hole section type was used to generate interesting openings in each level of the building, with the intention of having nice views to the inside and outside of the building. The building also uses the Stack section type since each level of the building is stacked one on top of another. The building contains a basement that is 16 feet underground, and four levels having a height of 15 feet except for the last level that has 16 feet. The building uses the exterior walls and three other interior walls as structural support that goes from the basement, all the way to the roof. The design of this building was made with the intention of having natural light, therefore some openings were made in the roof and also in the exterior walls.

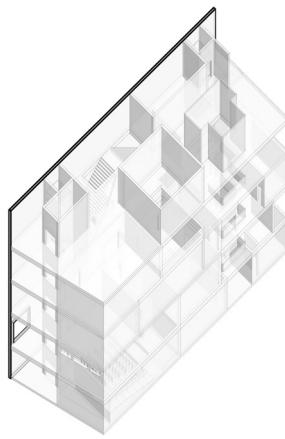
Above: Interior View (left); Photo of Study Model (right)



Exploded

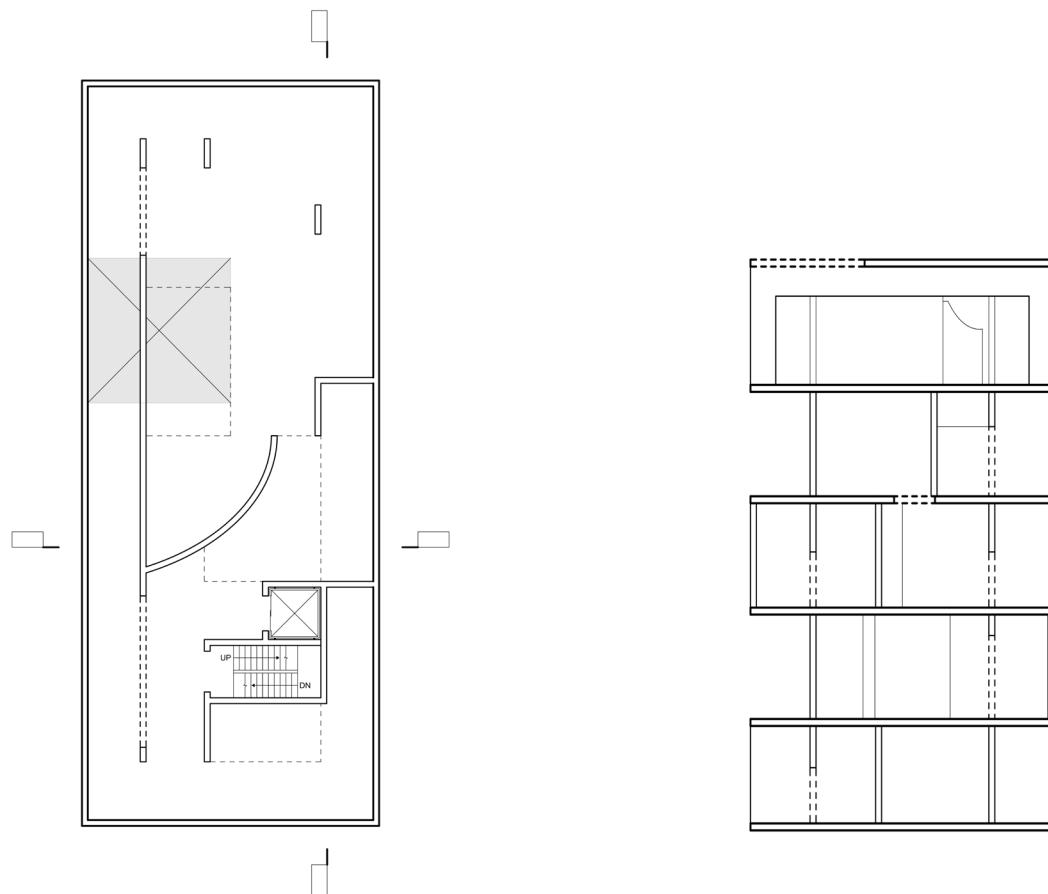


Parti



Final

Above: Diagrams

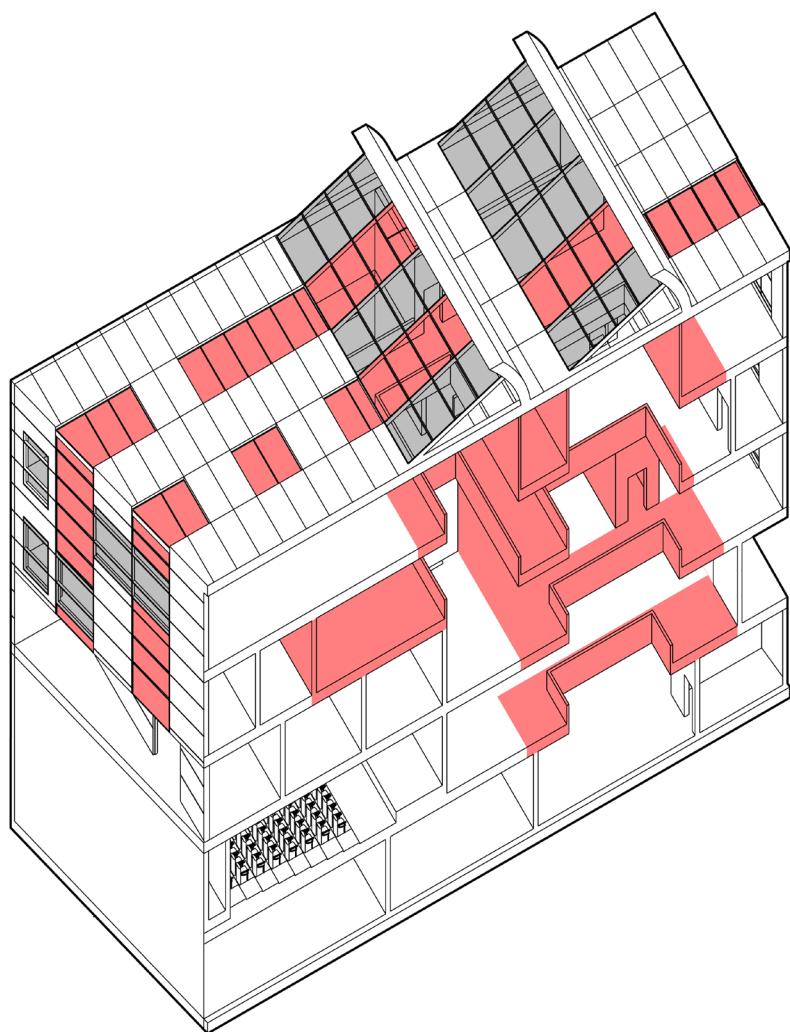


Above: Floor Plan (left), Cross section (right)

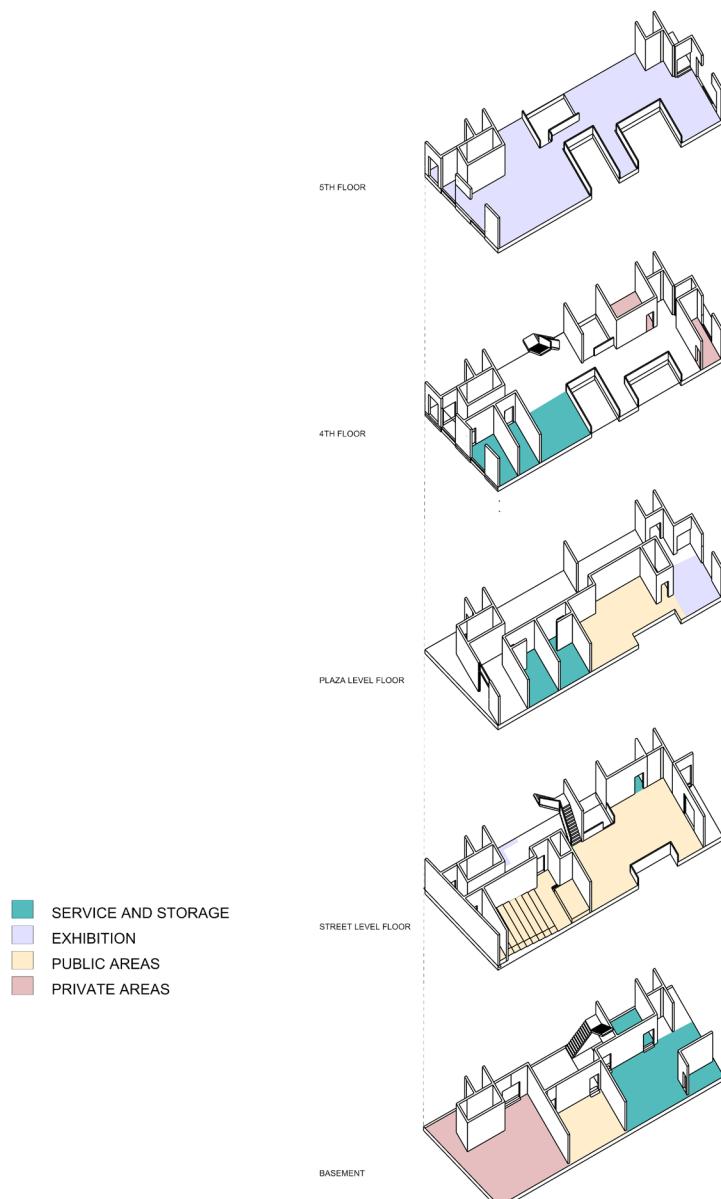
Exercise 03: Museum of Contemporary Japanese Art



Above: View of the Exterior

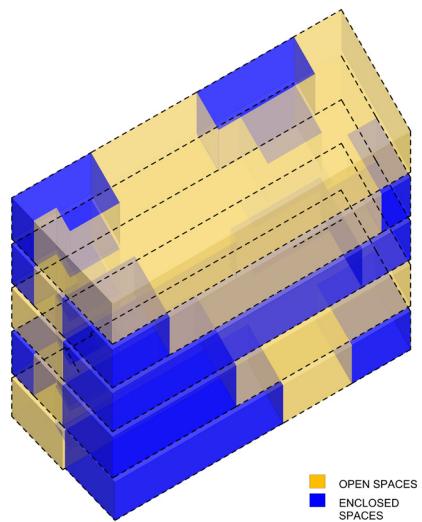


Above: Axonometric View

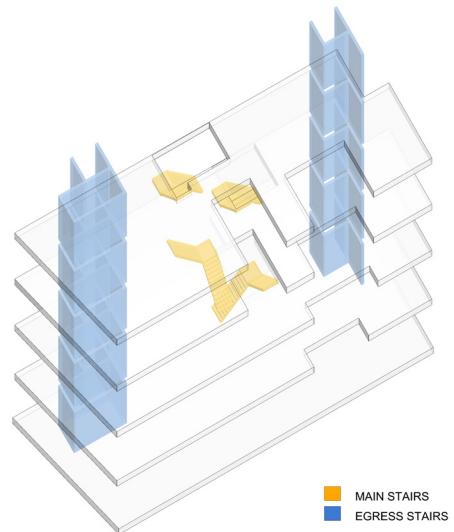


Program Diagram

Above: Diagrams



Spatial Diagram



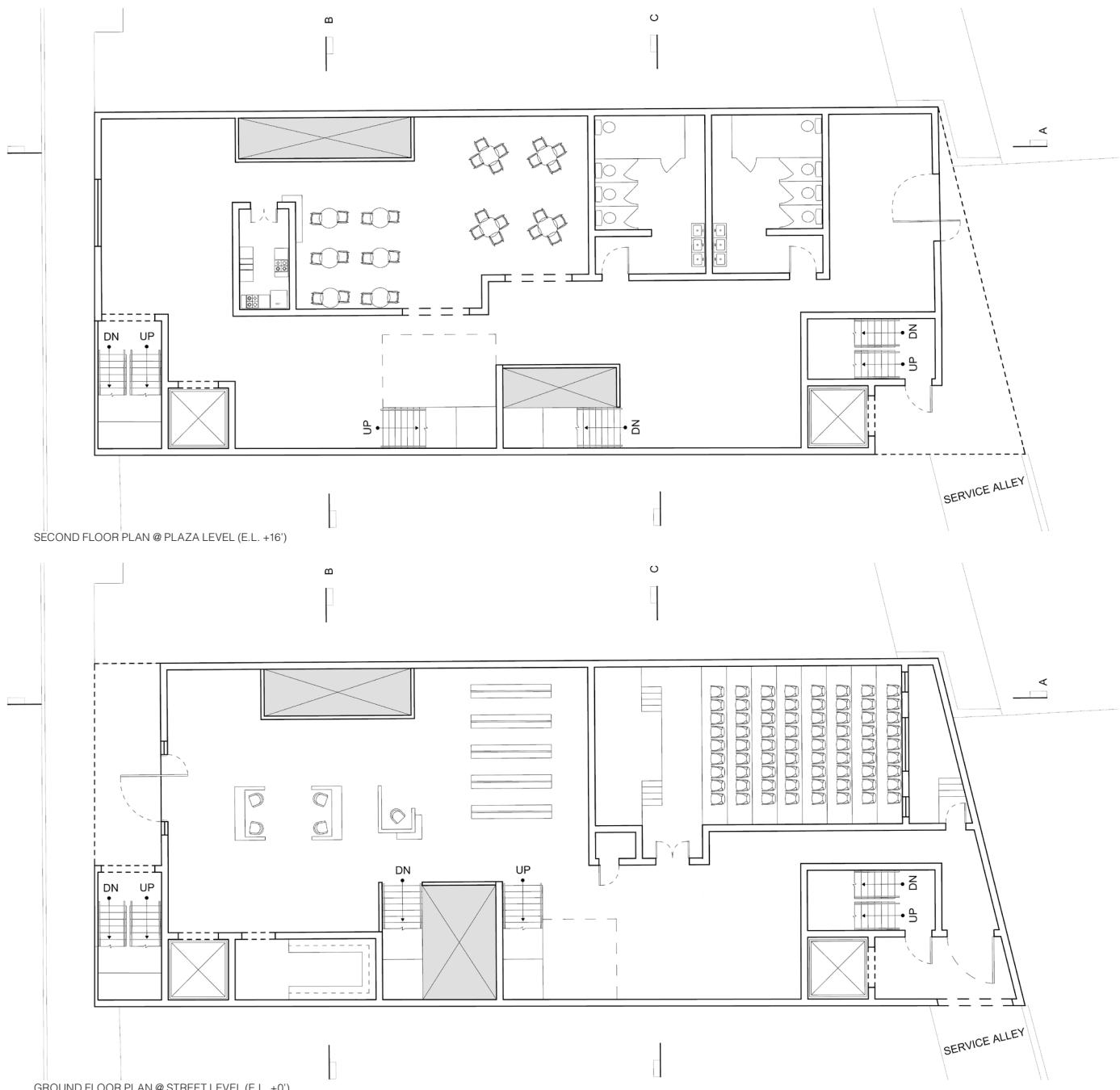
Circulation Diagram

Project Description

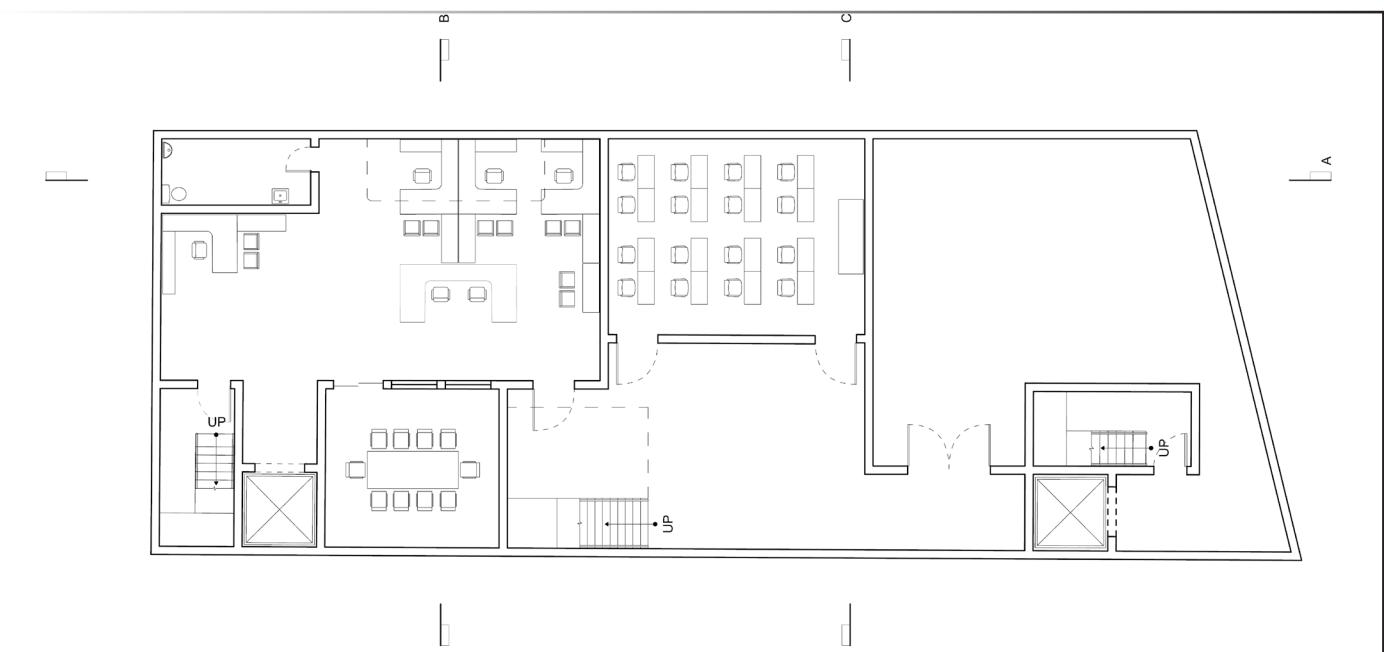
The concept of this museum was to create a fluid circulation from the plaza located right in the back of this site to the main street creating a pathway from San Pedro Street to East 1st Street, and while people travels or passby this museum, they might admire the artworks or design of this building. The building has a front and back entrance and they are at different levels, the main entrance, which is in front of 1st Street has a 0 degree from street level but the back entrance which will be close to San Pedro Street, surpassing the plaza, has a +16 degree from street level, meaning that if you enter from the back entrance you might need to go downstairs or use an elevator that takes you to the level below to be able to access the sidewalk of East 1st Street.

One of the main elements of this building was to spread the natural light that comes in from the skylights around the whole building. There are two massive skylights in the

roof which you might actually be able to see from even the basement of the building because of the openings designed, so sunlight enters from those skylights and spread down to each level by the openings, and something that helps to infiltrate the light in each level is the use of translucent materials in each floor, not to mention how helpful the windows are to obtain this goal as well. The desire to have sunlight spread throughout the building was mainly to use the light for the exhibition and galleries of the museum.

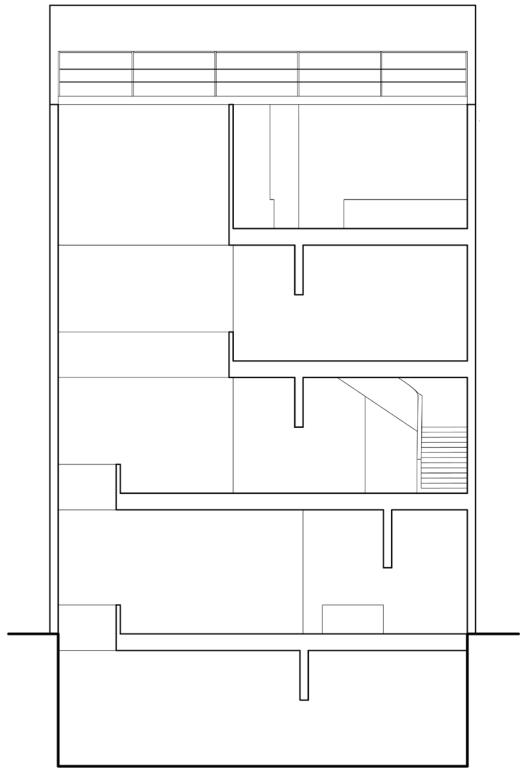


Above: Floor Plans

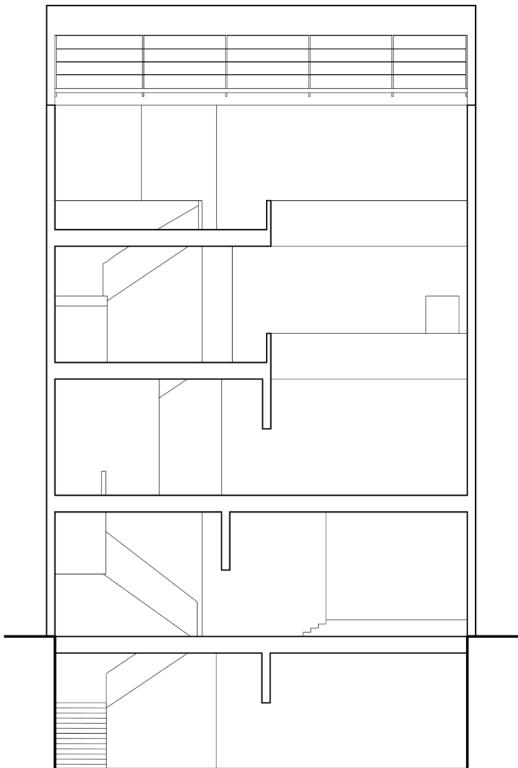


BASEMENT FLOOR PLAN

Above: Basement Floor Plan

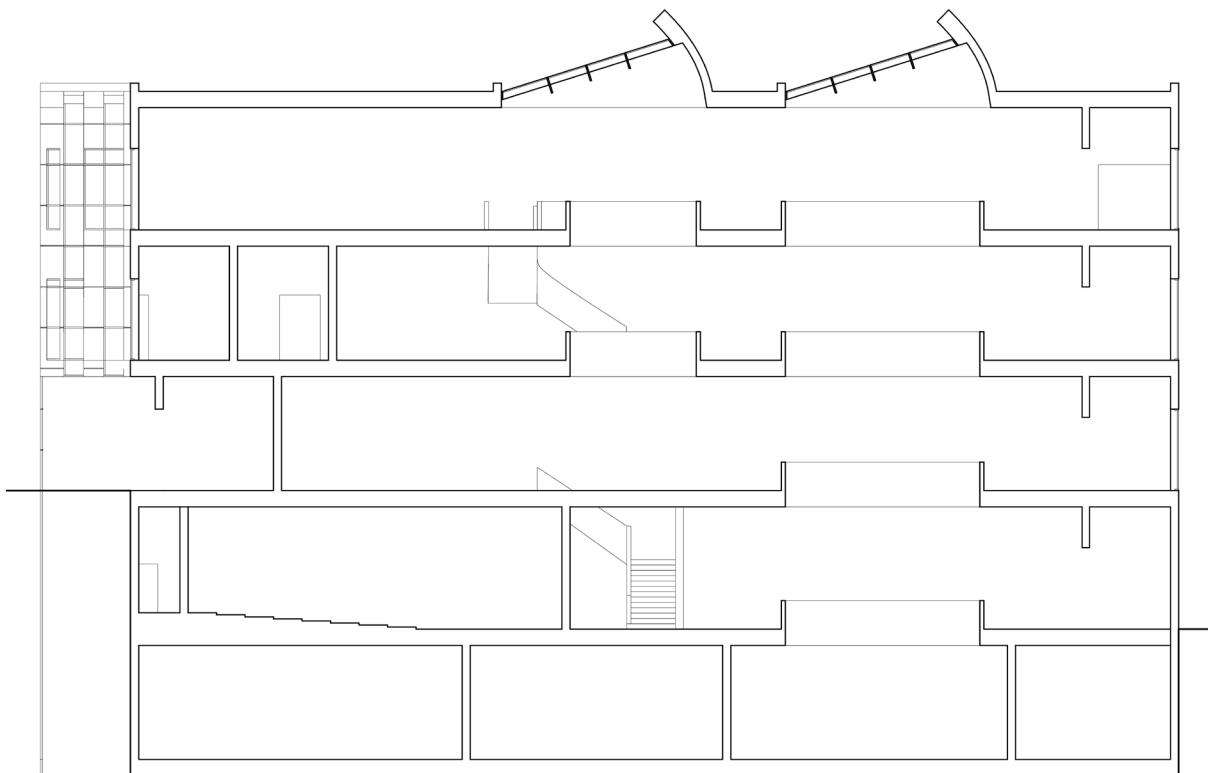


SECTION B



SECTION C

Above: Cross sections



SECTION A

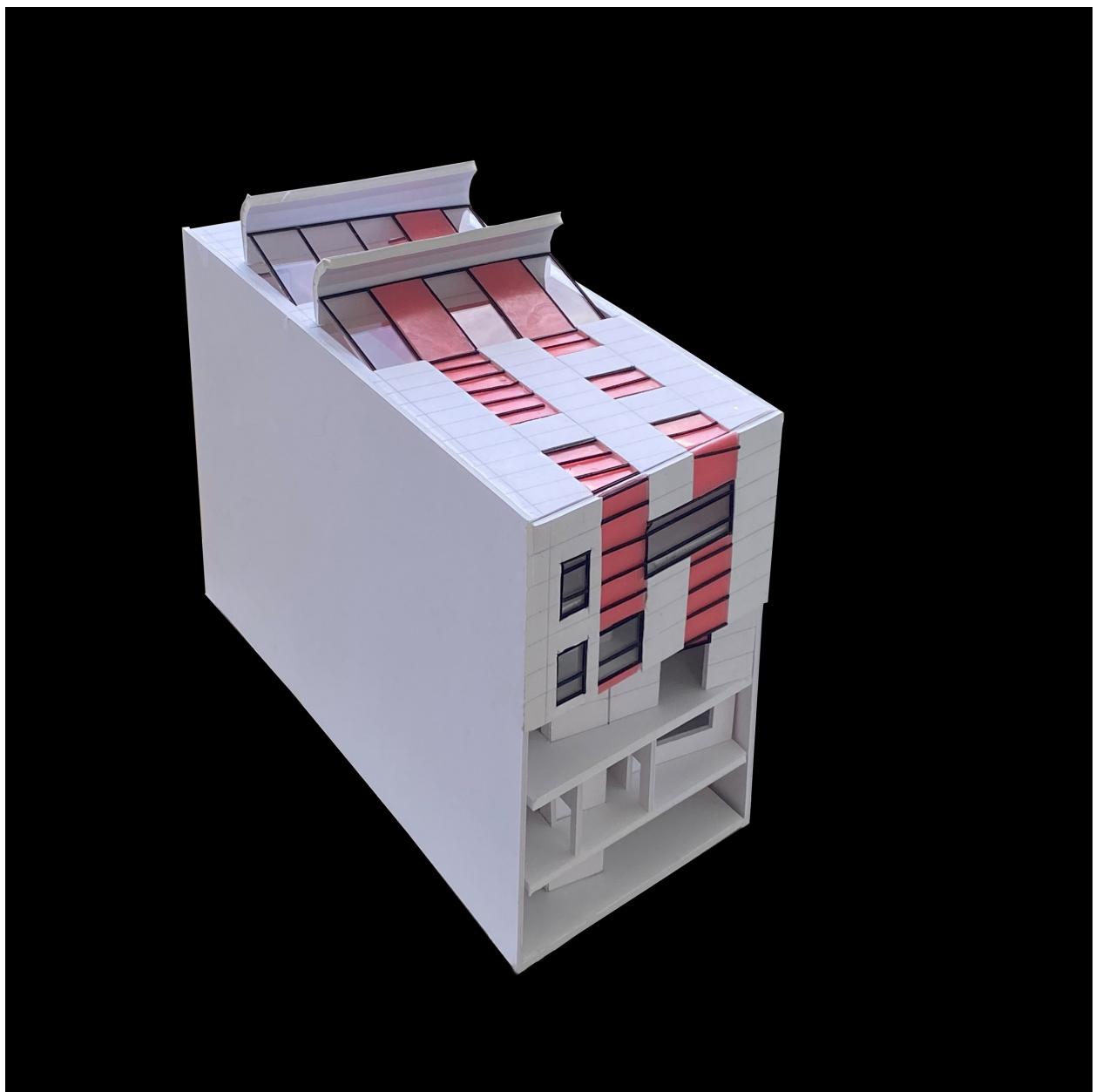
Above: Longitudinal Section



Above: Interior View



Above: Interior view
Below: Exterior view



Above and right: Photos of the Physical Model





ARC 2021A Second Year Design II

Coordinators: Professor Axel Schmitzberger (Cohort 1) + Assistant Professor Robert Clarke

/ Credits

Student Information

Name Dany Reyes
Bronco ID 015243475

Instructors

ARC 2011A (Fall 2022): Mitchell DeJarnett
ARC 2021A (Spring 2023): Jeehye Kim