

GSAPP  
**Graduation Portfolio**

Shengyang He  
M.S.AAD 2019-2020



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**01**

# Havana Mirco-X

Tropical Healthcare Assemblage  
| Adv Studio VI |

2020 Spring  
Instructor: Olga Aleksakova & Julia Burdova  
Cooperator: So Jin Kim

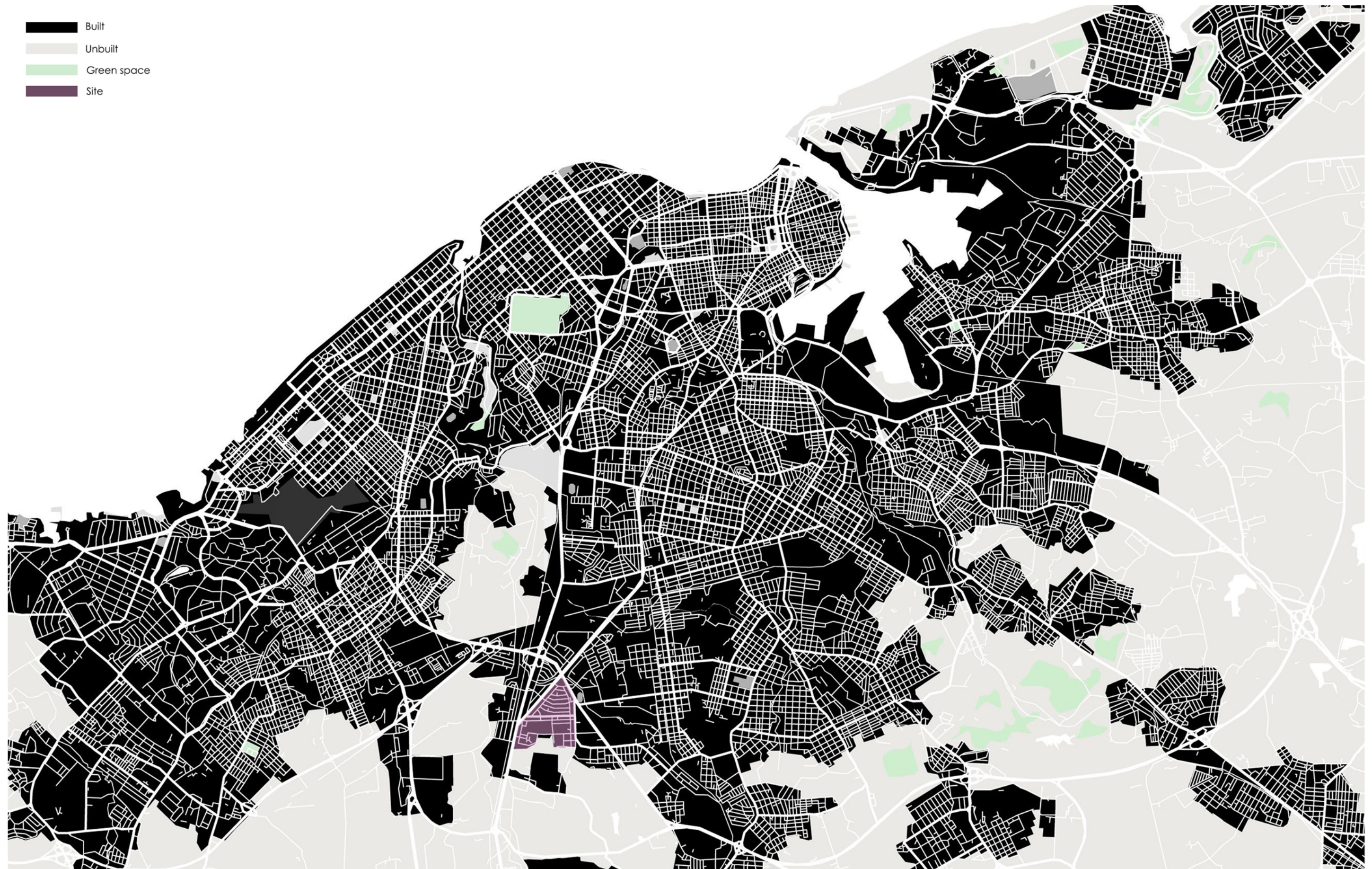


Figure-Ground Map of Havana



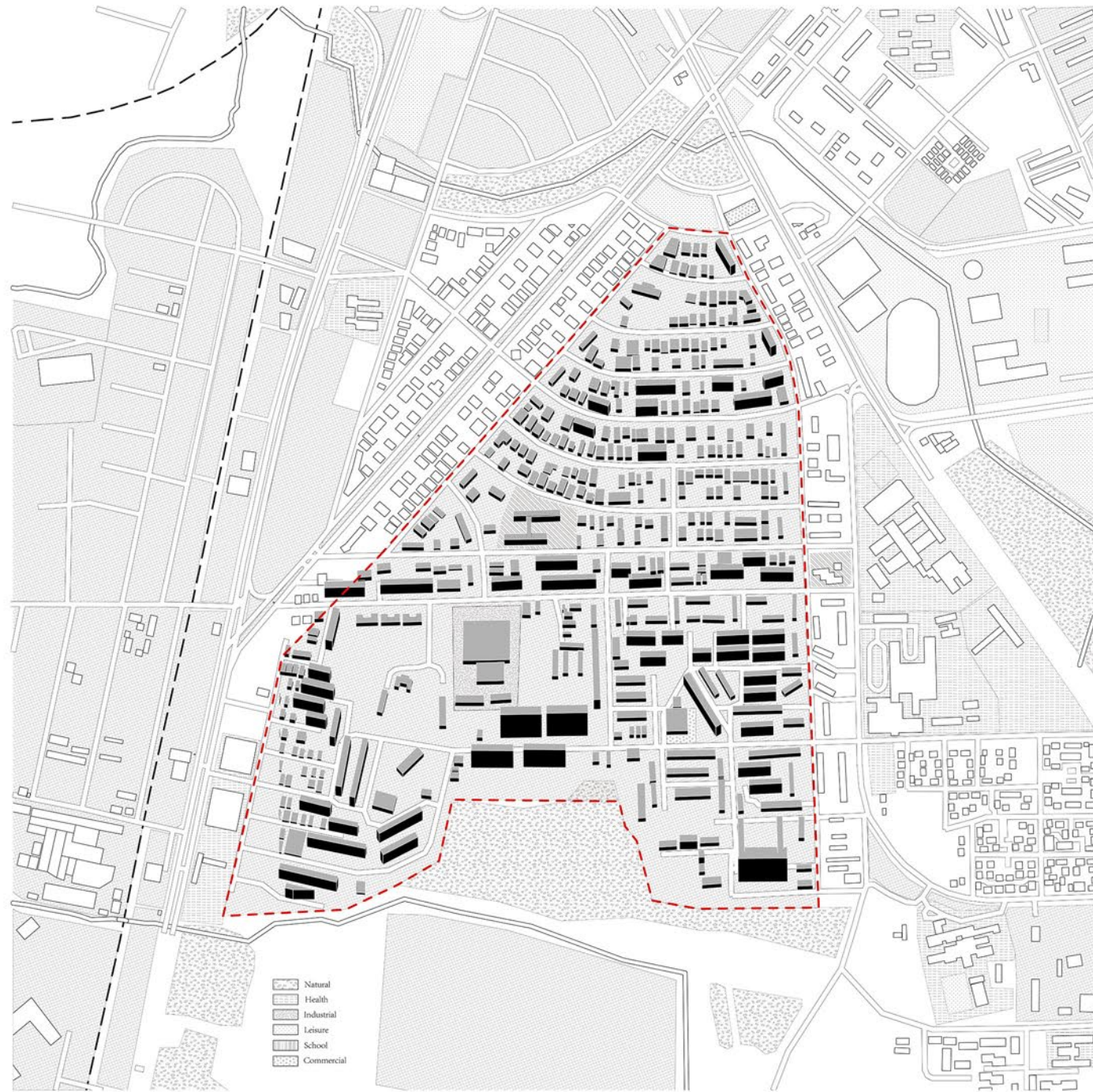
City Mapping: Green Space



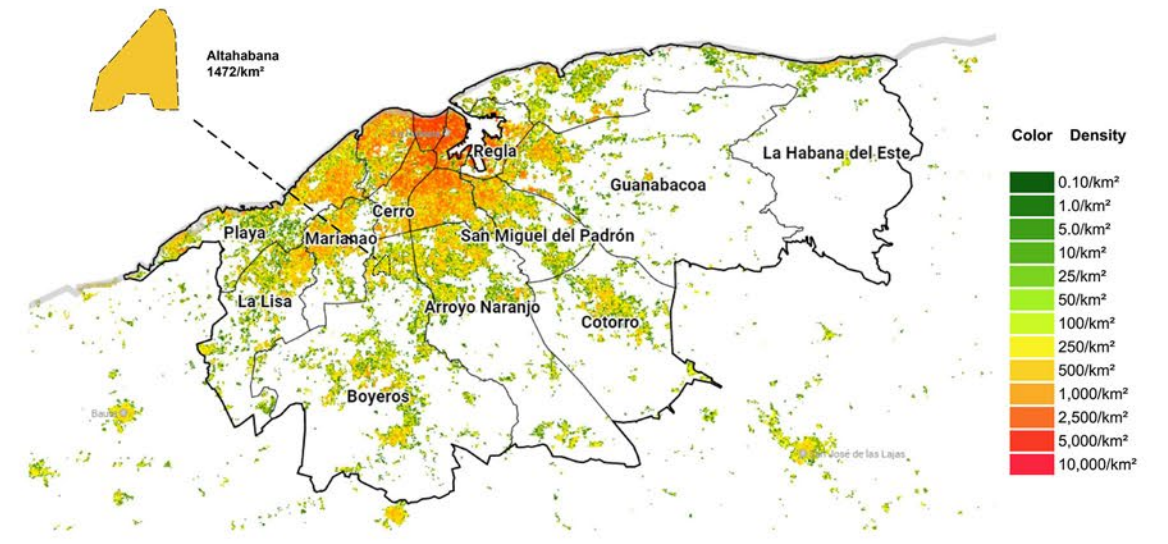
City Mapping: Transportation



Plot Area: 717507 m<sup>2</sup>=0.717k m<sup>2</sup>  
 Total Area of built: 213923 m<sup>2</sup>  
 FAR: 0.745



Site Axon



Density Analysis

Private Housing  
Low-rise Residence



Doctor's Community  
Multi-story Public Housing



Mixture  
Urban Insertions



Strategy



Healthcare related program on site

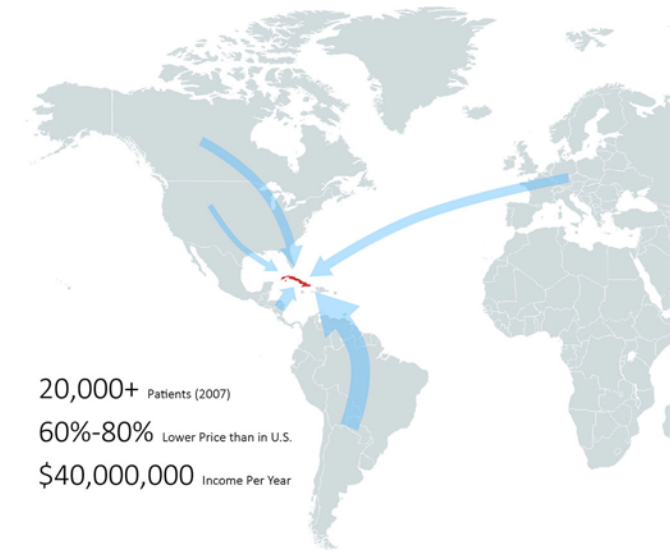


Hospital Infantil William Soler



Hospital Nacional

## HOUSING NEED?



### Patient Profile

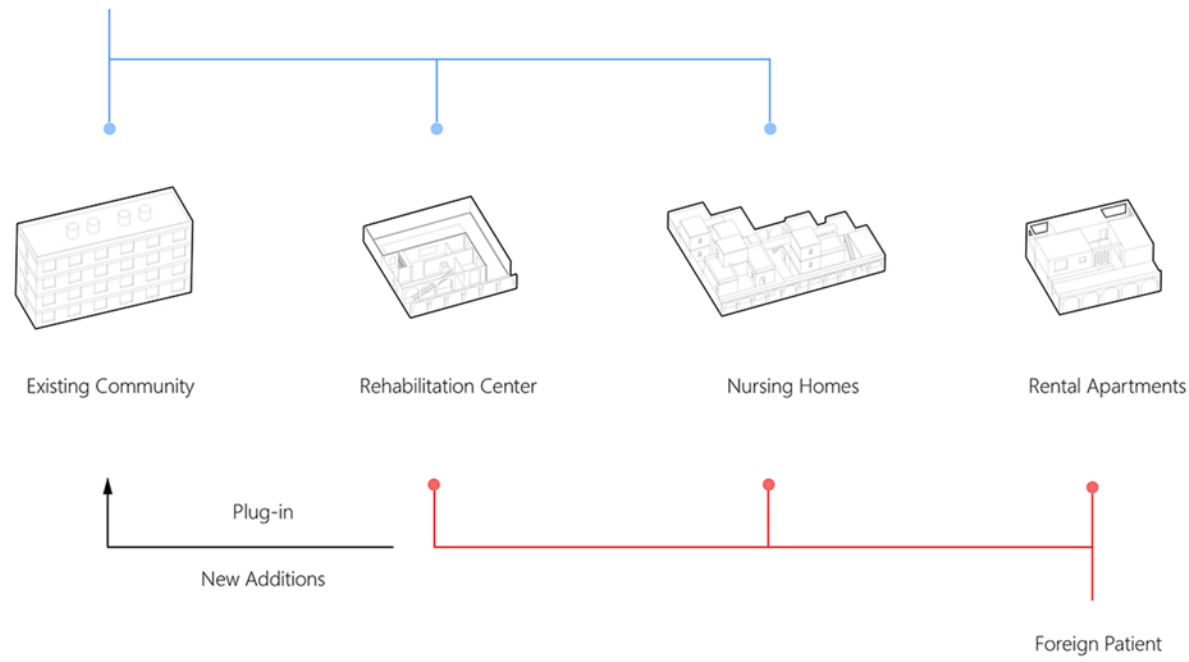
**Nationality:** Latin American / European / Canadian  
**Financial situation:** Middle / Low income  
**Treatment:** Eye illness / Addictions treatment / Neurological disorder / Oncology / Cosmetic surgery



Alta-Habana has a complete medical industry around the site, and the local residents mostly work for the industry. Medical tourism is also an important source of income for Cuba, which attracts about 20,000 paying health tourists. Foreign patients travel to Cuba for a wide range of treatments, and there is an increasing housing need as medical tourism continues to grow.



Locals  
(Doctors, Medical Workers, Nurses)



### Healthcrae Assemblage



Portico



Terrace

### Local Tropical Features



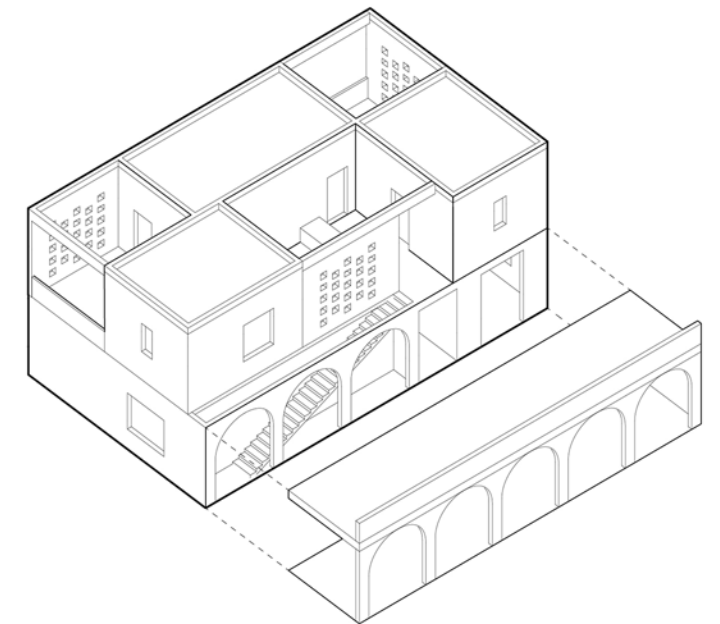
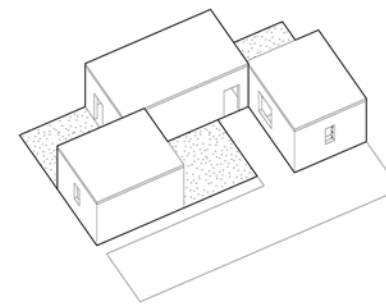
Single Stay



Family Stay

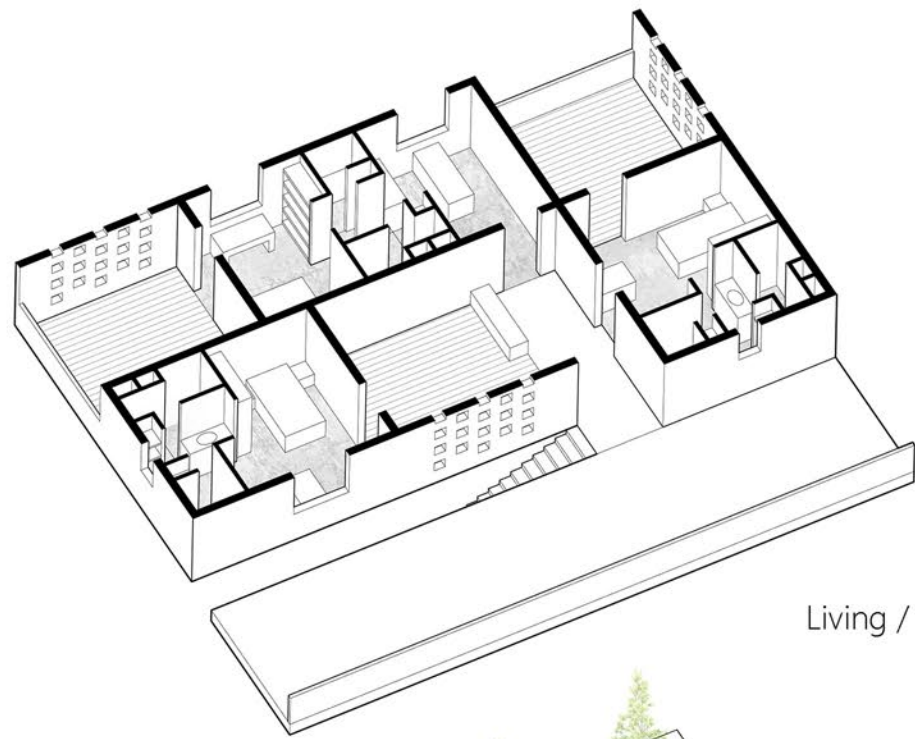


Combinations

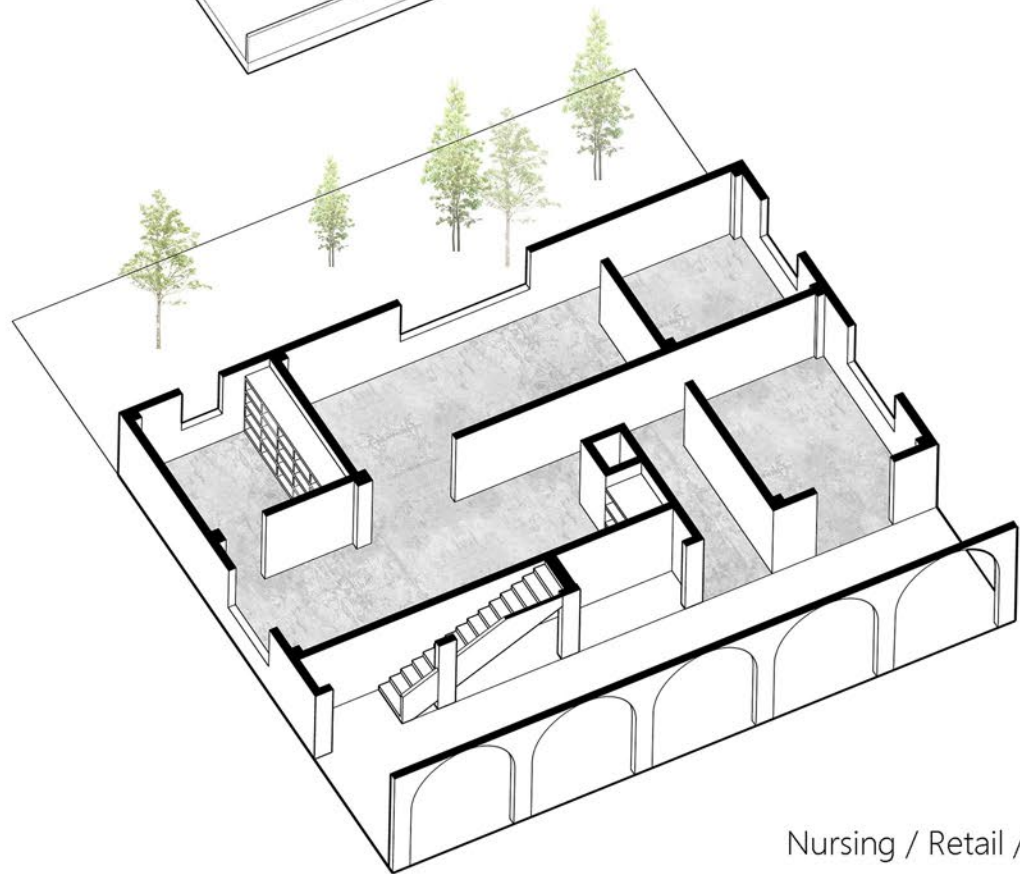


### Housing Prototype

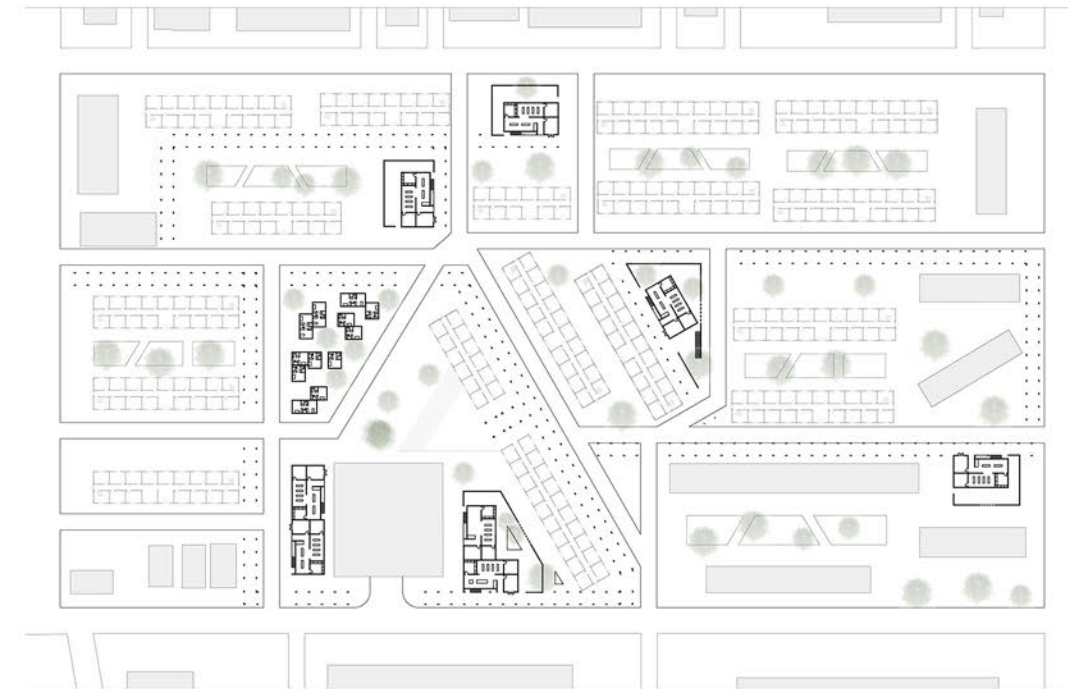




Living / Rental Apartments



Nursing / Retail / Public



Ground Floor Plan



Second Floor Plan



Park

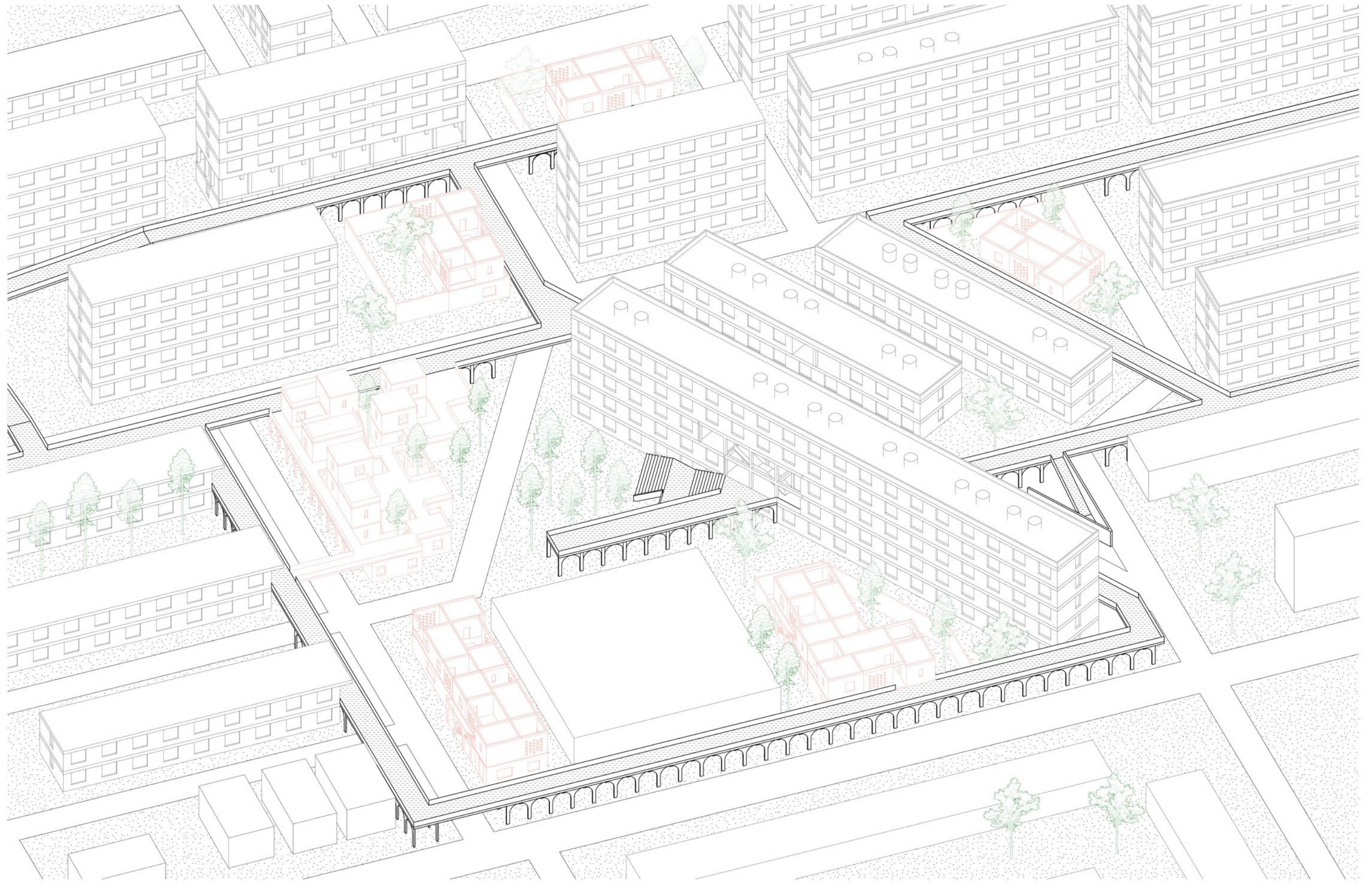
Nursing

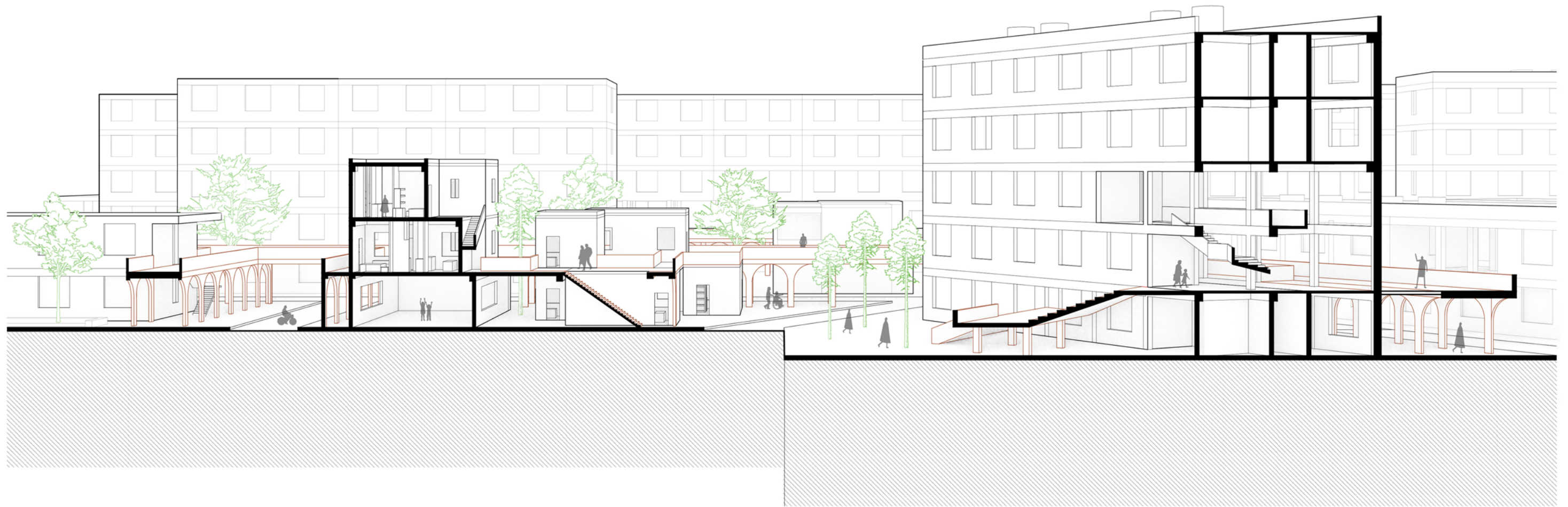
Rehabilitation

Housing

Housing

Hospital





Section



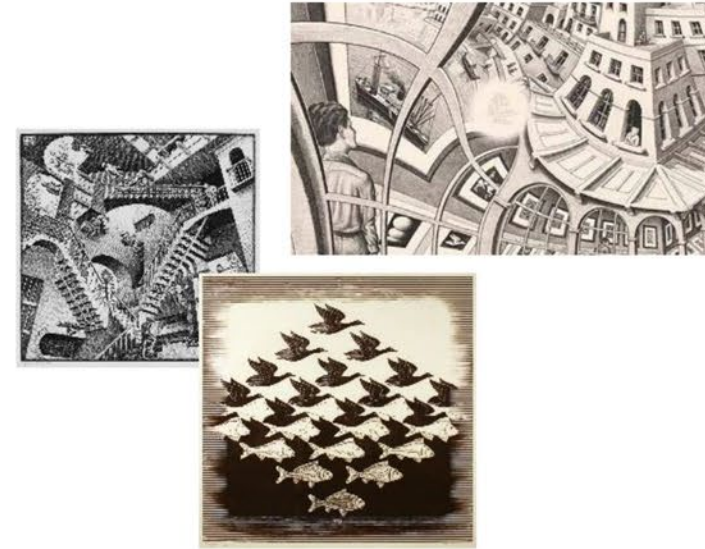
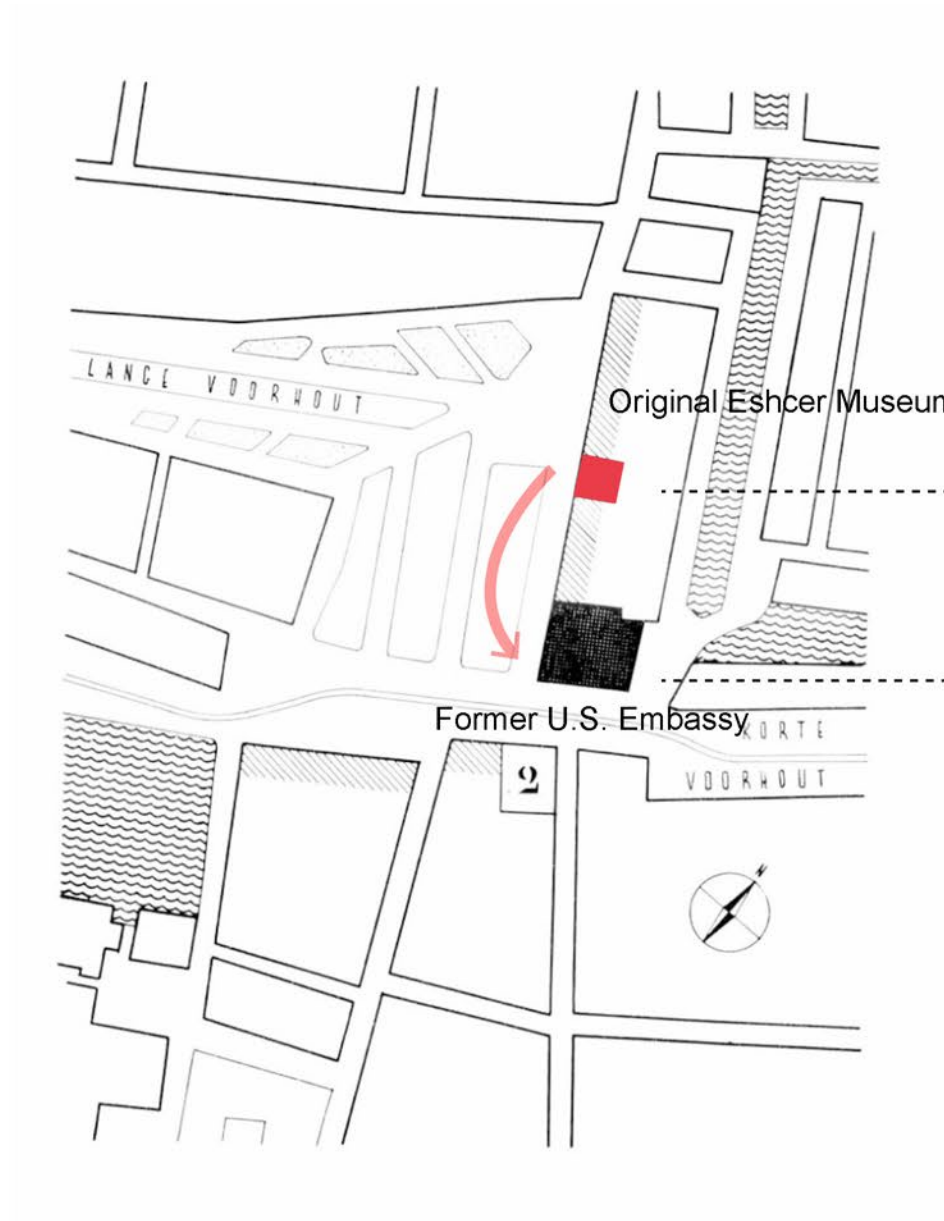


**02**

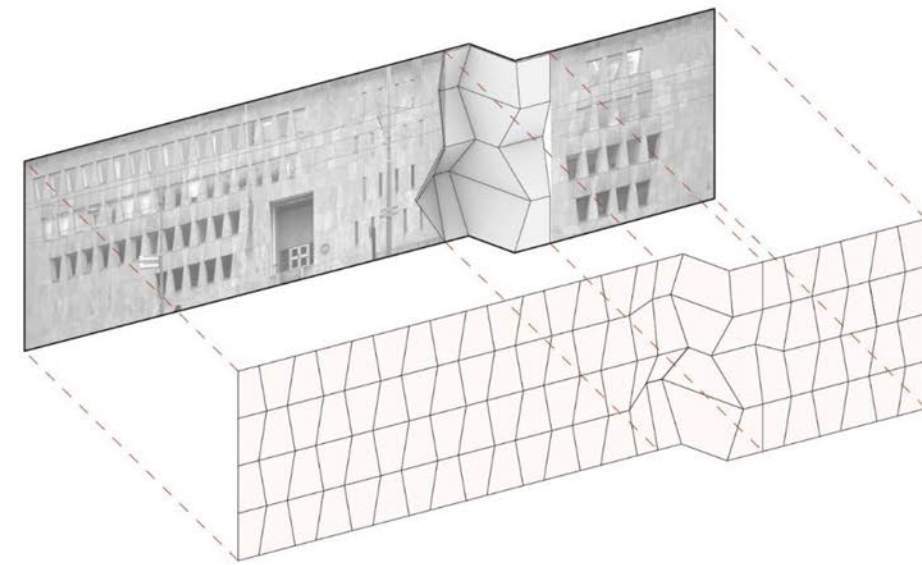
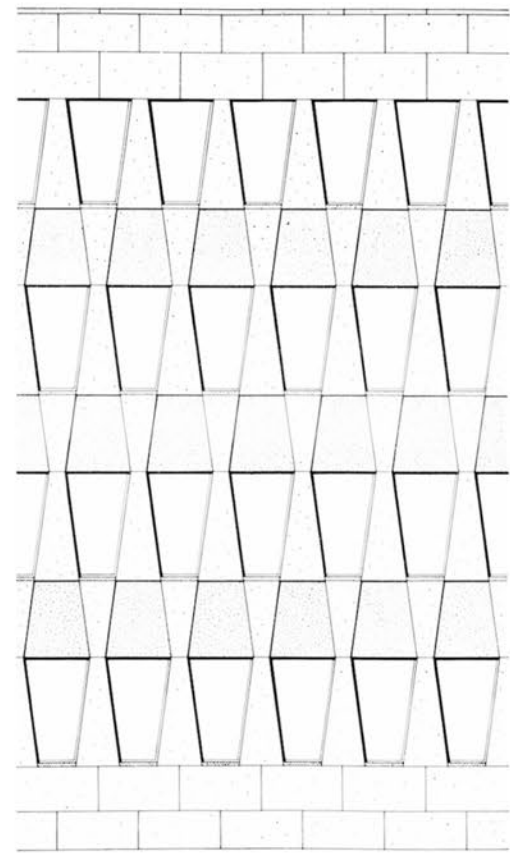
# Adaptive Re-Modulation

U.S Embassy to Escher Museum  
| Adv Studio V |

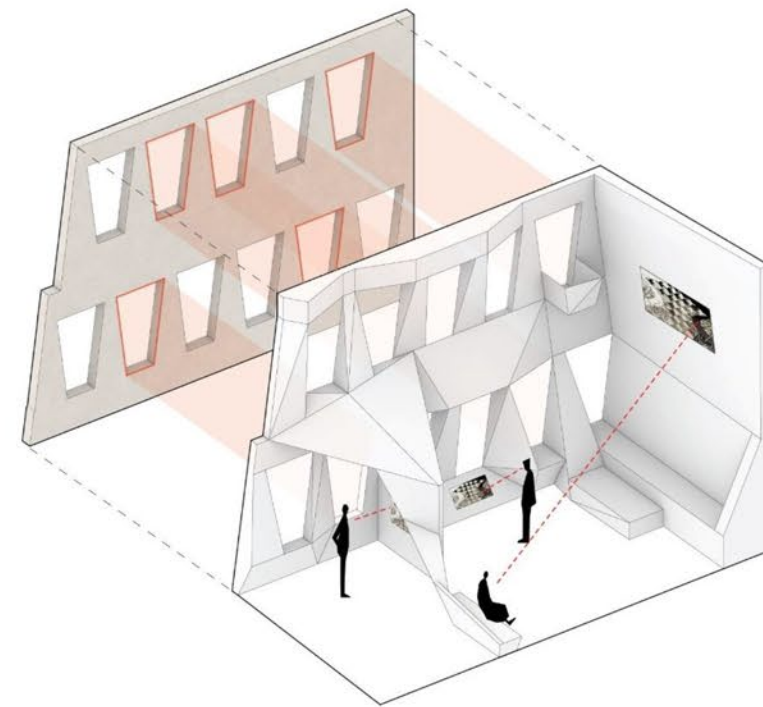
2019 Fall  
Instructor: Kim Yao & Mark Rakatansky  
Cooperator: Xueqi Hu



From Former U.S Embassy in Hague to M.C. Escher Museum and Hotel



Outside

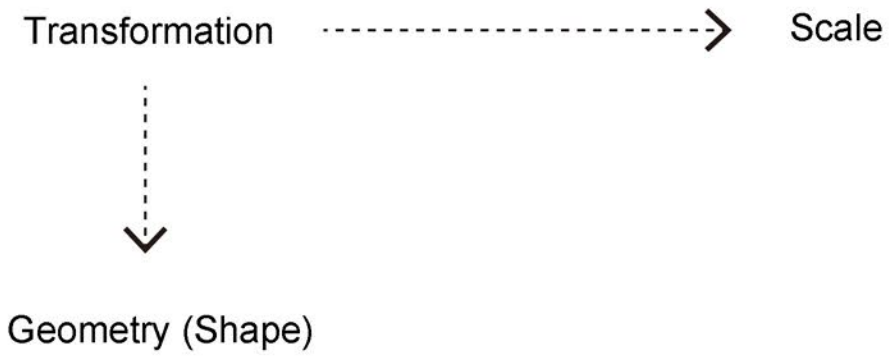


Inside

Transformation

Scale

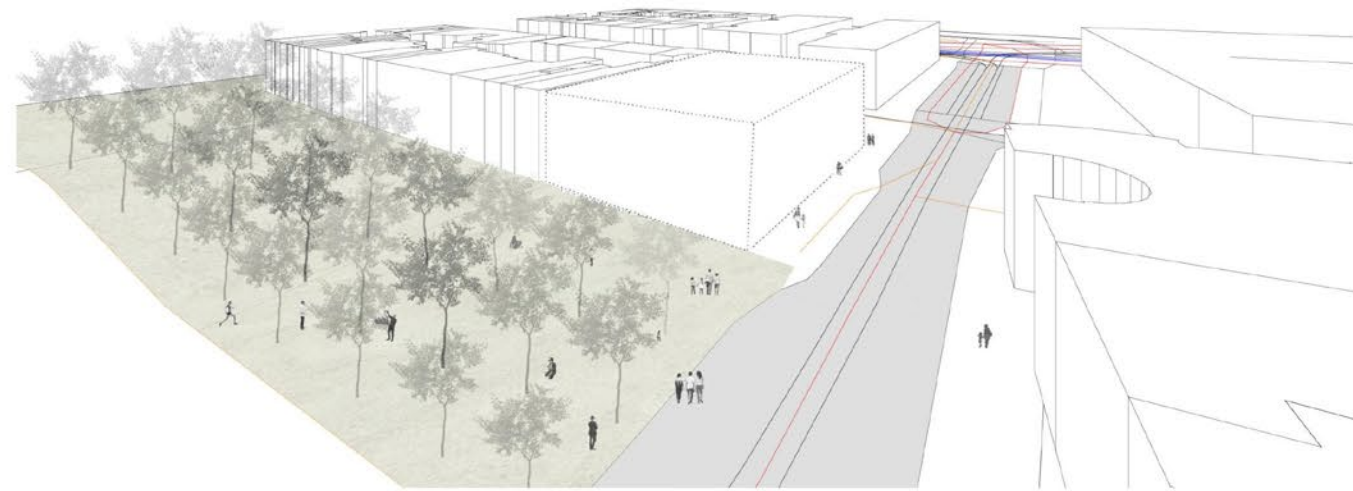
Geometry (Shape)



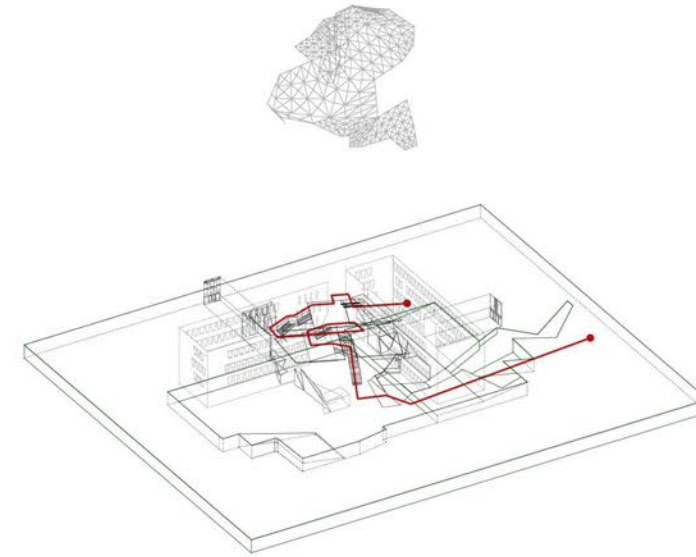




Re-modulated south facade: Museum Entrance



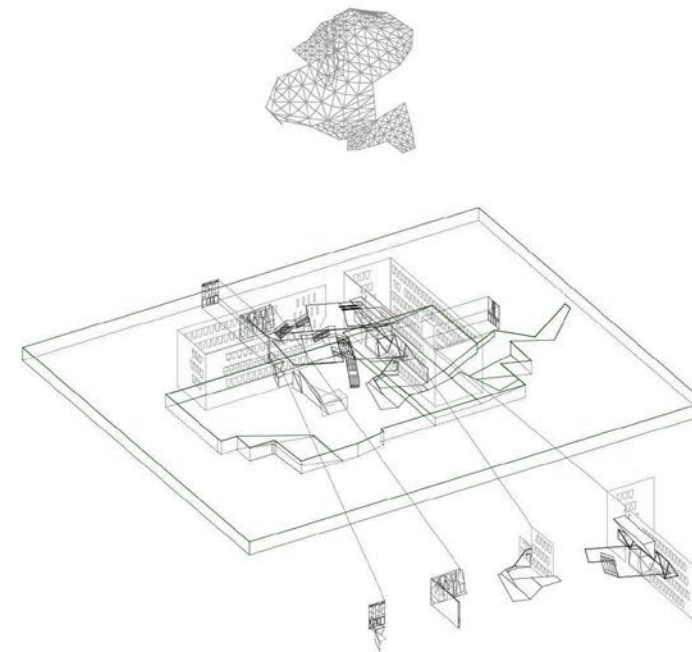
CONTEXT



Circulation



Surroundings



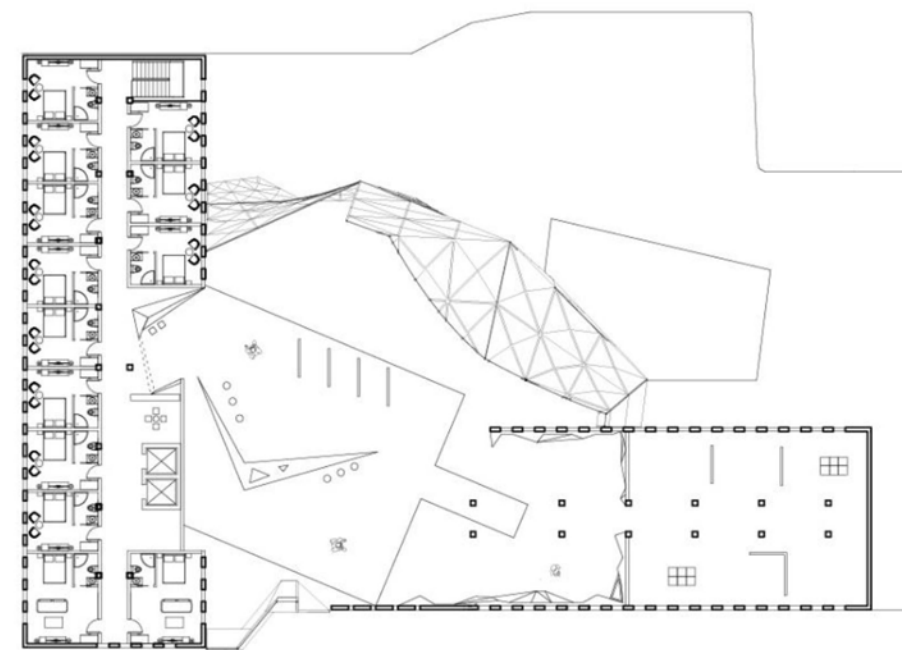
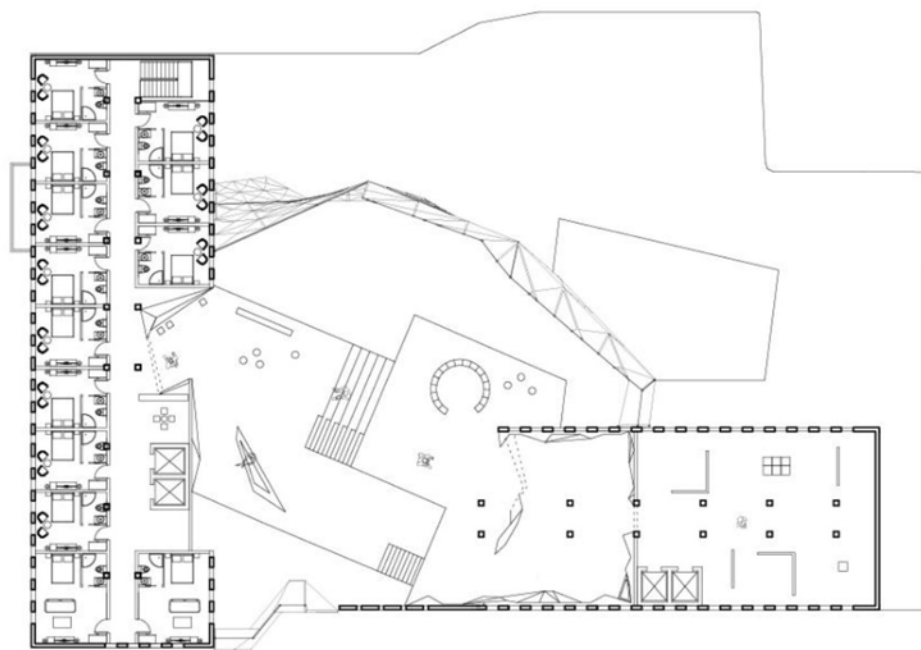
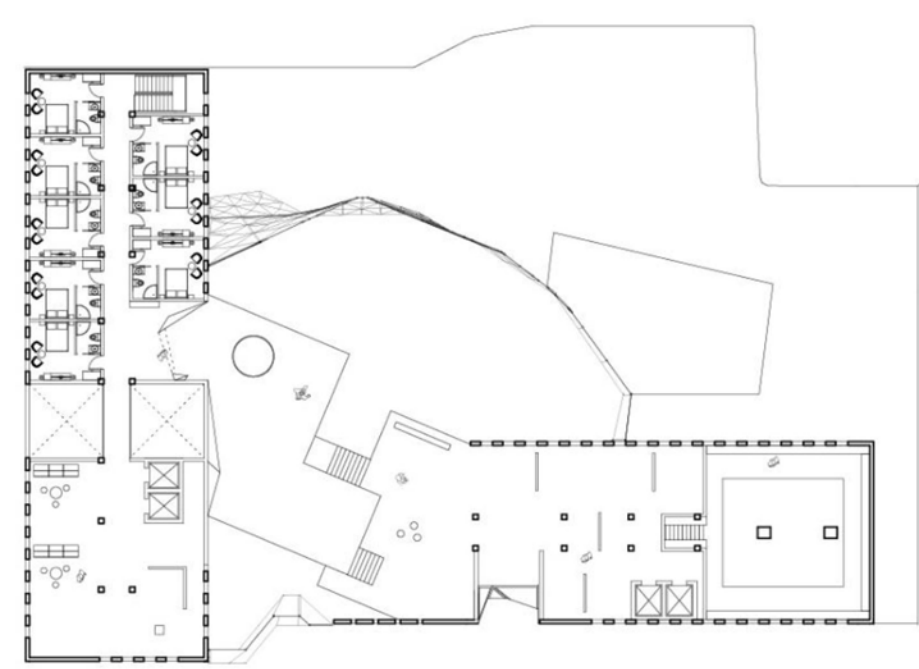
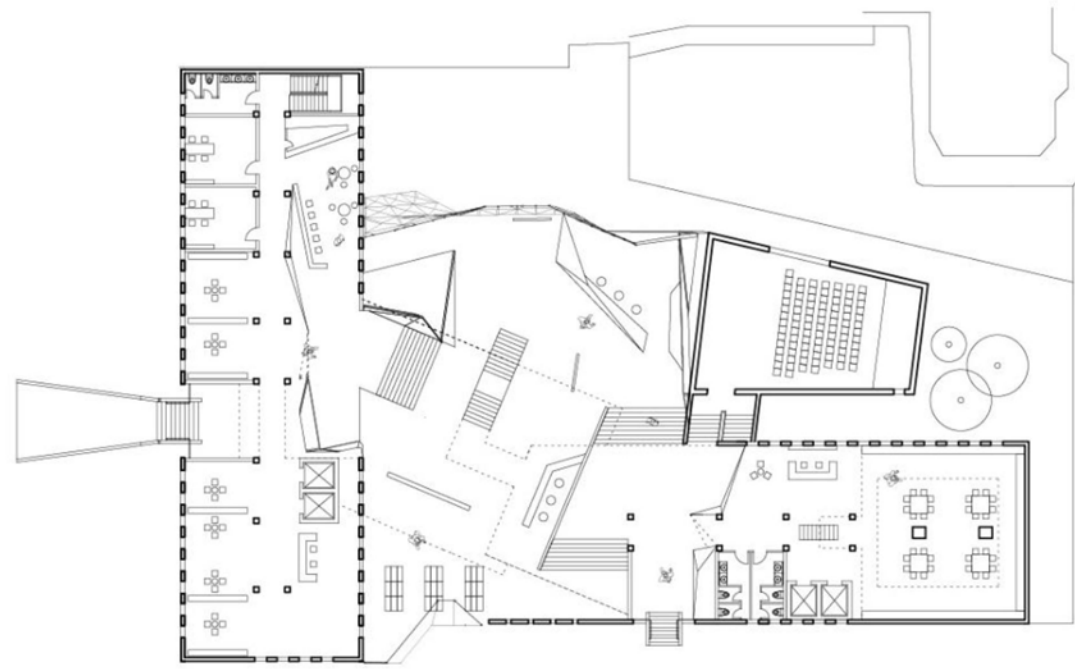
Programs



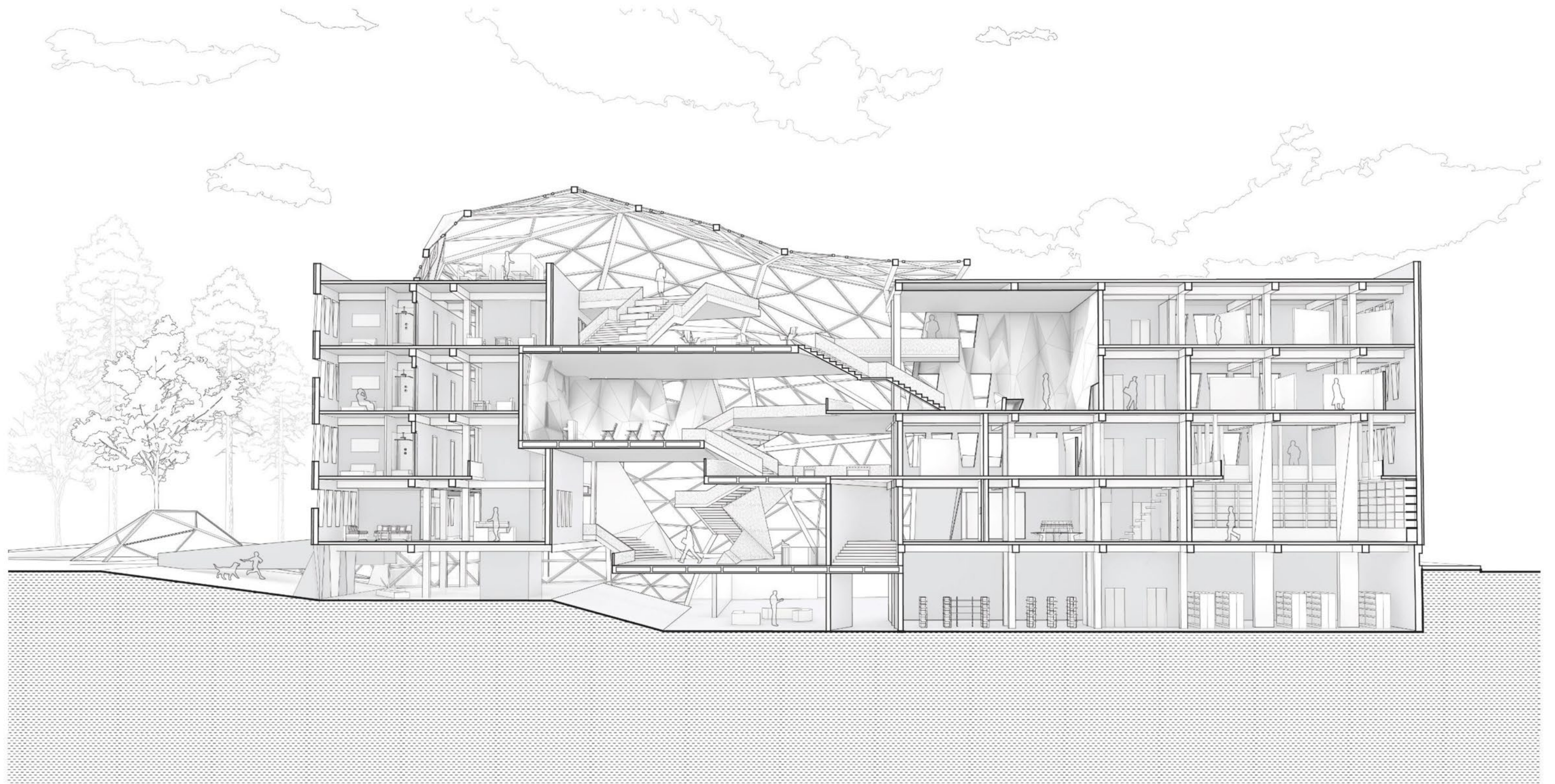
Re-modulated west facade: Hotel Entrance



Ground Floor Plan



Major Floor Plans



Section



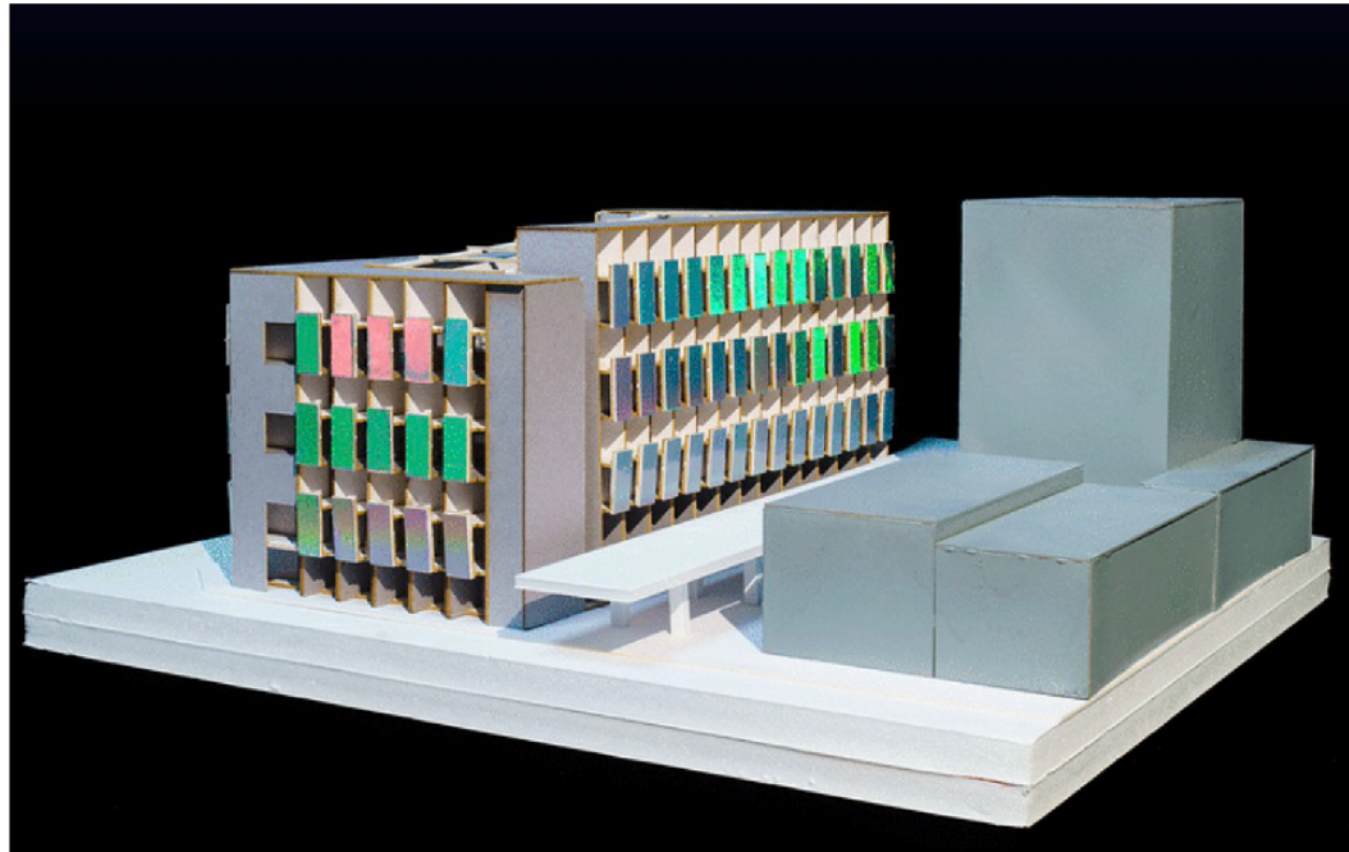
Gallery Area



Hotel Lobby



Model photo



**03**

# Towards A Newer Brutalism

Mixed-Use Building by the Highline  
| Adv Arch Studio |

2019 Summer  
Instructor: Emmett Zeifman  
Cooperator: Ruo Chen Ji



## Site



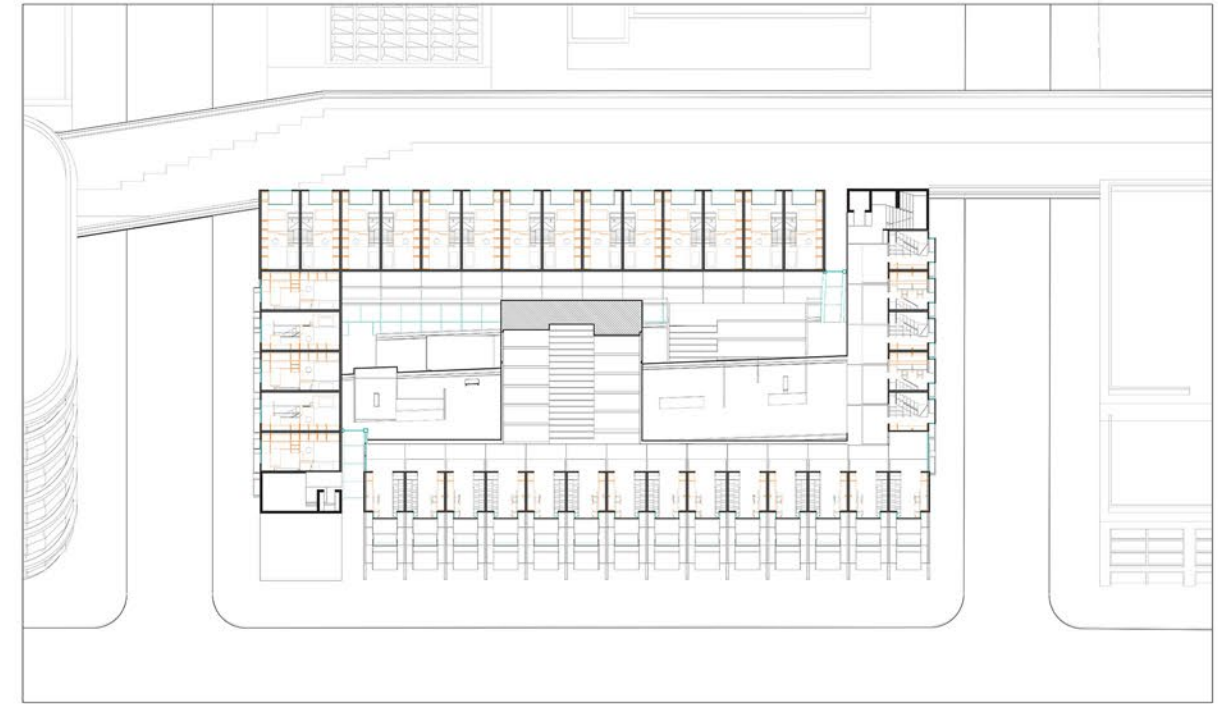
Integrated mixture of approximately 50%  
“work” space and 50% “living” space.

# A NEWER BRUTALISM

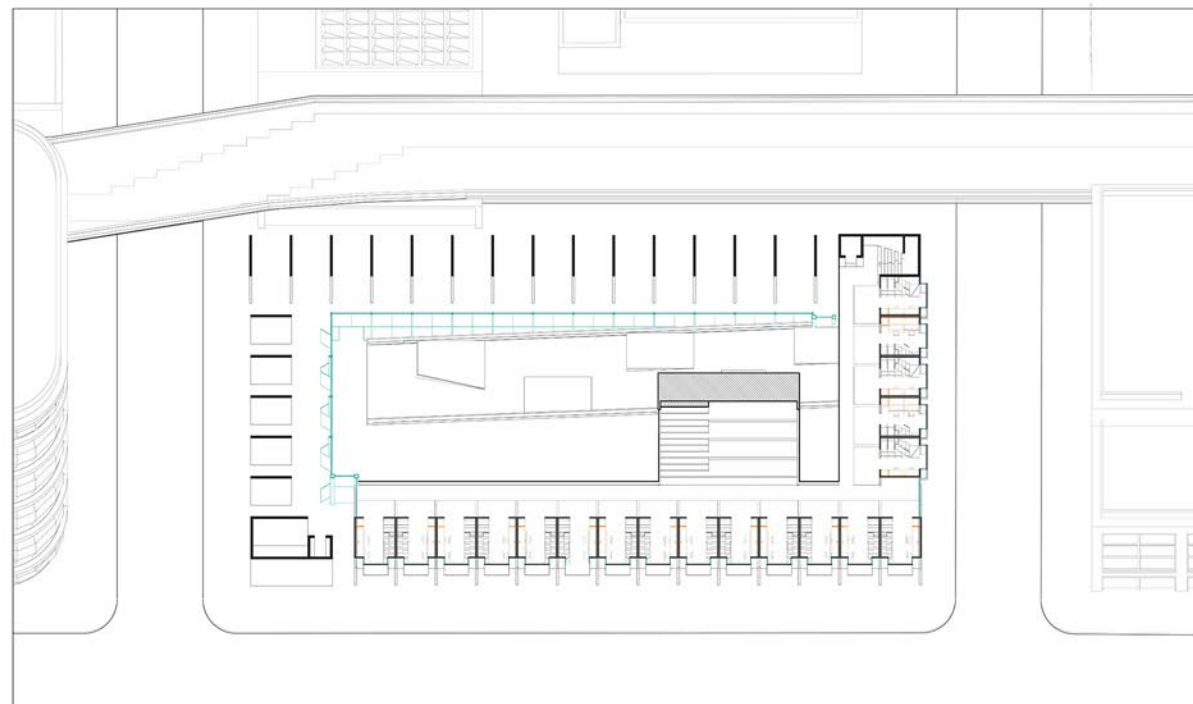
DIGRAMATIC CLEAR,  
DEFAULT,  
LITERAL,  
STRAIGHTFOWARD,  
GENERIC



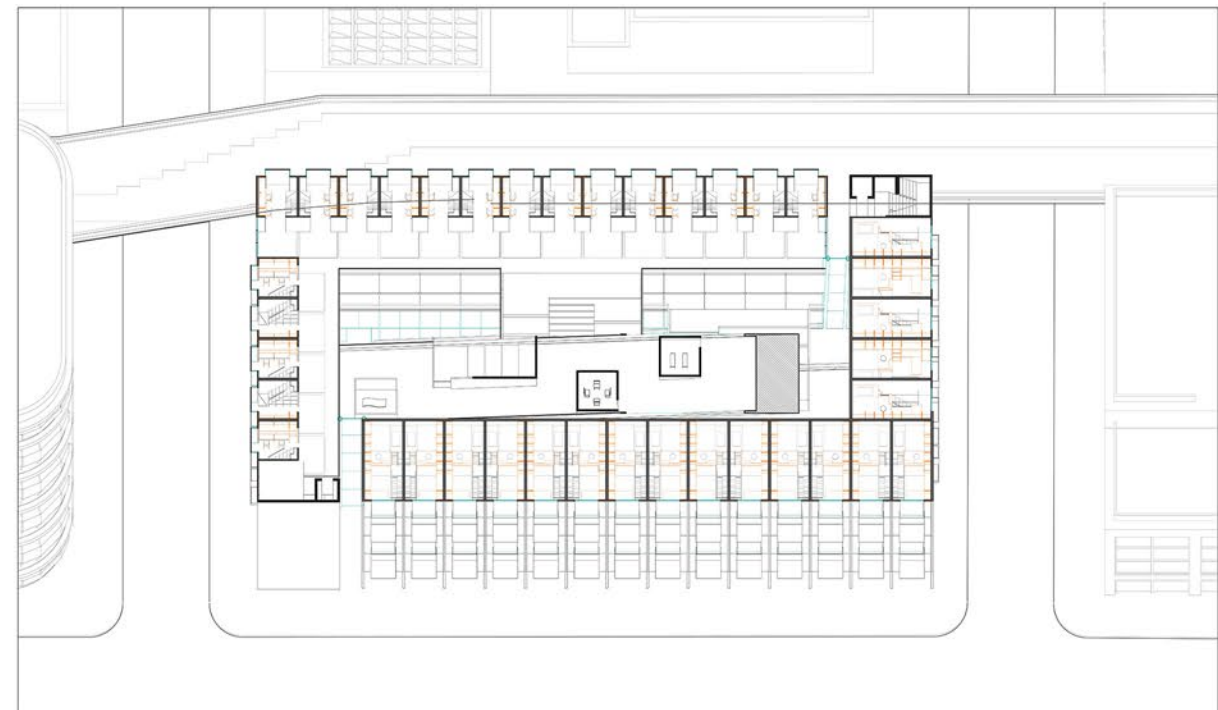
Initial plan studies - collage



4th Floor Plan



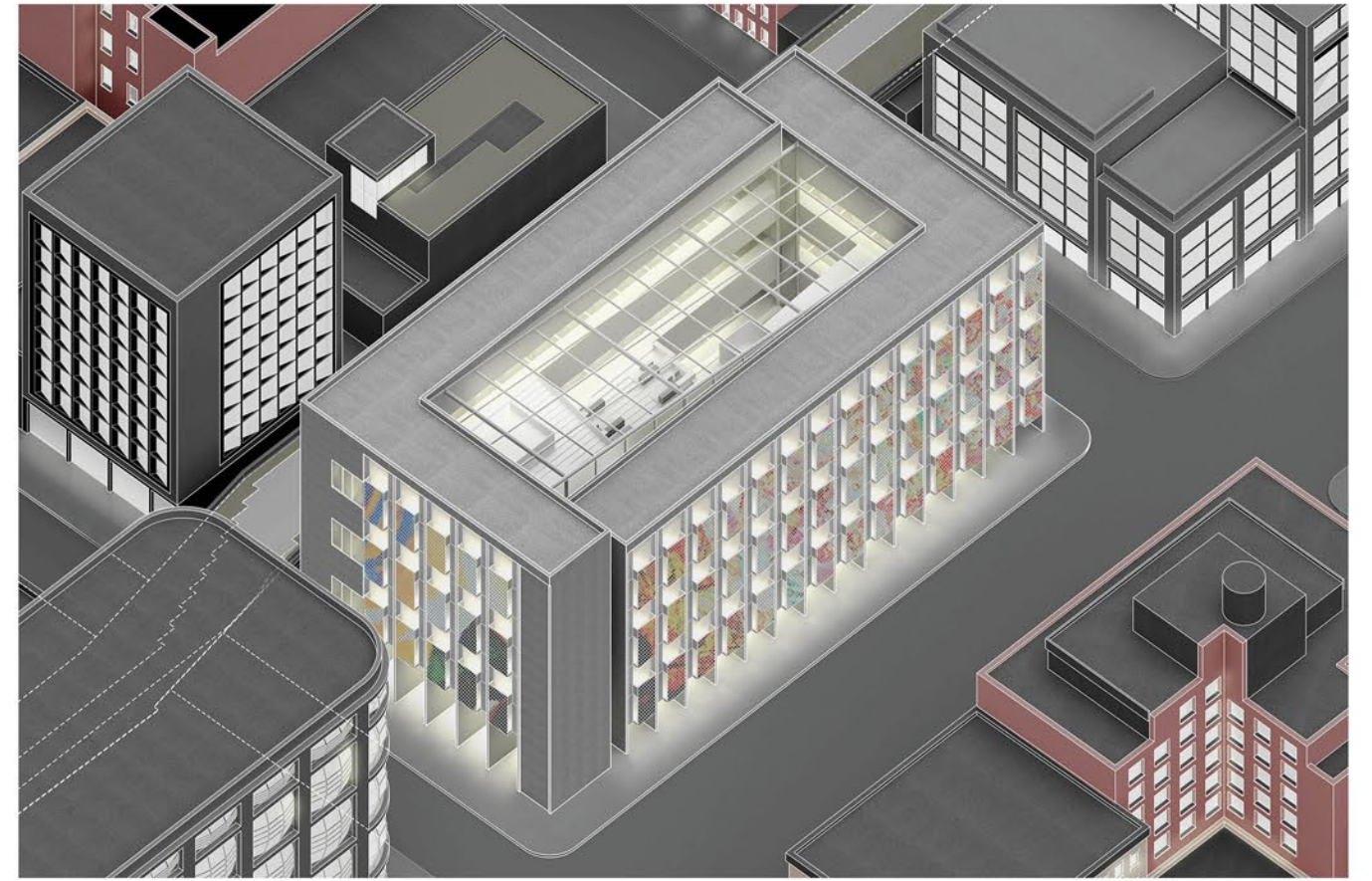
2nd Floor Plan



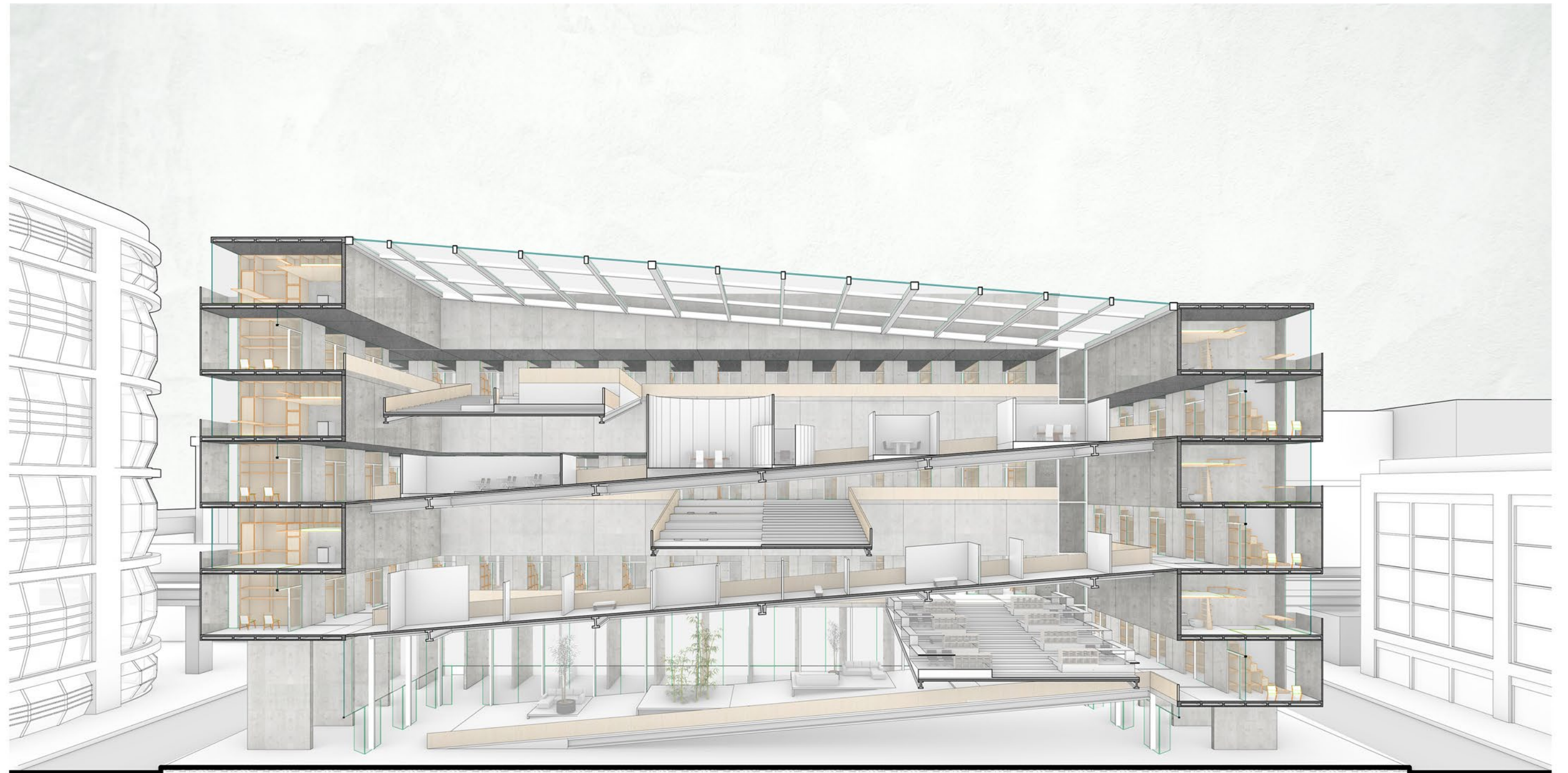
5th Floor Plan



Unit Cropped View



Exterior View



Architectural section drawing showing a multi-story building with a central atrium, multiple levels of office space, and a glass-roofed upper section. The drawing includes structural elements like columns, beams, and stairs, as well as interior furniture and lighting. The drawing is a technical representation of a building's internal structure and layout.



Ramp View



Interior Collage



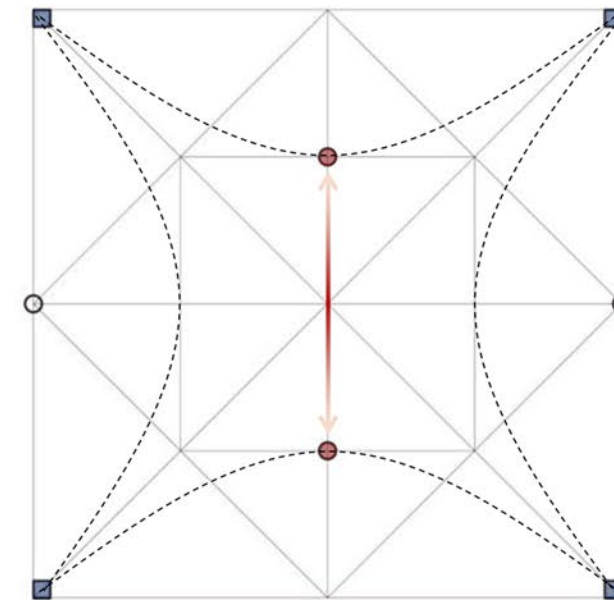
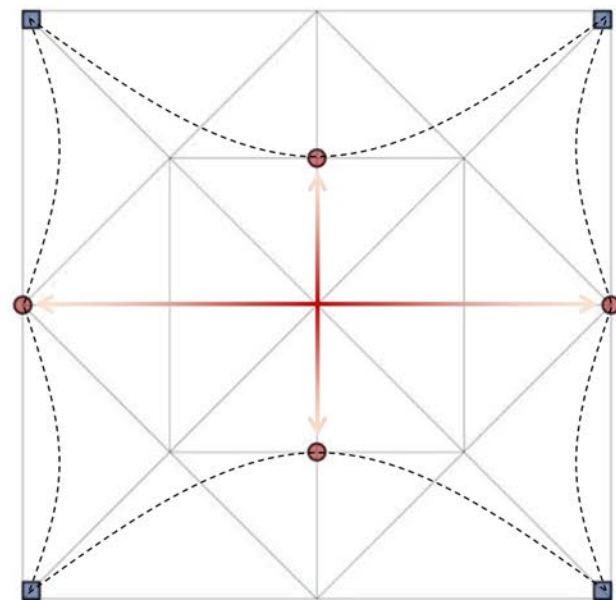
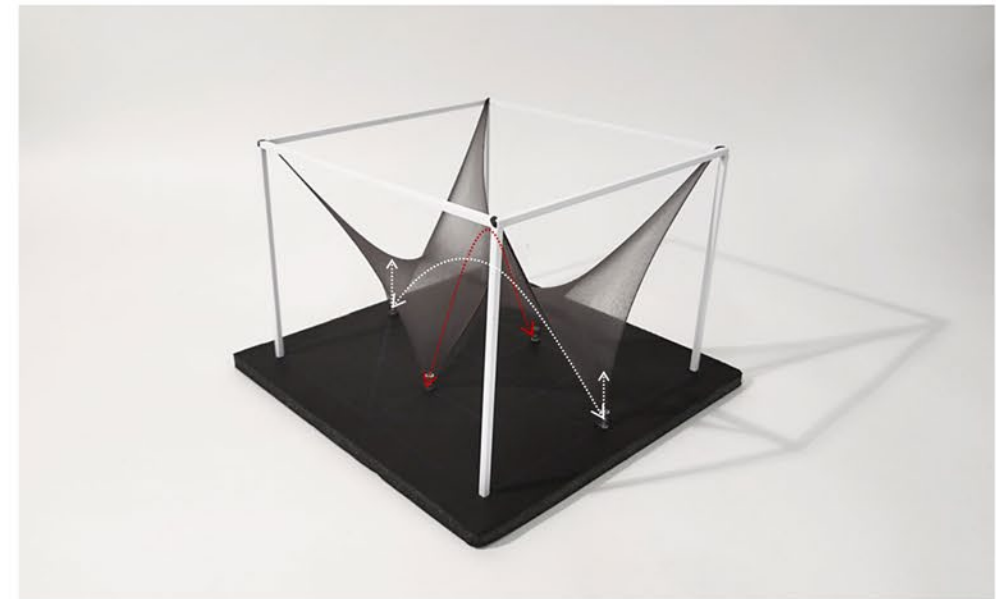
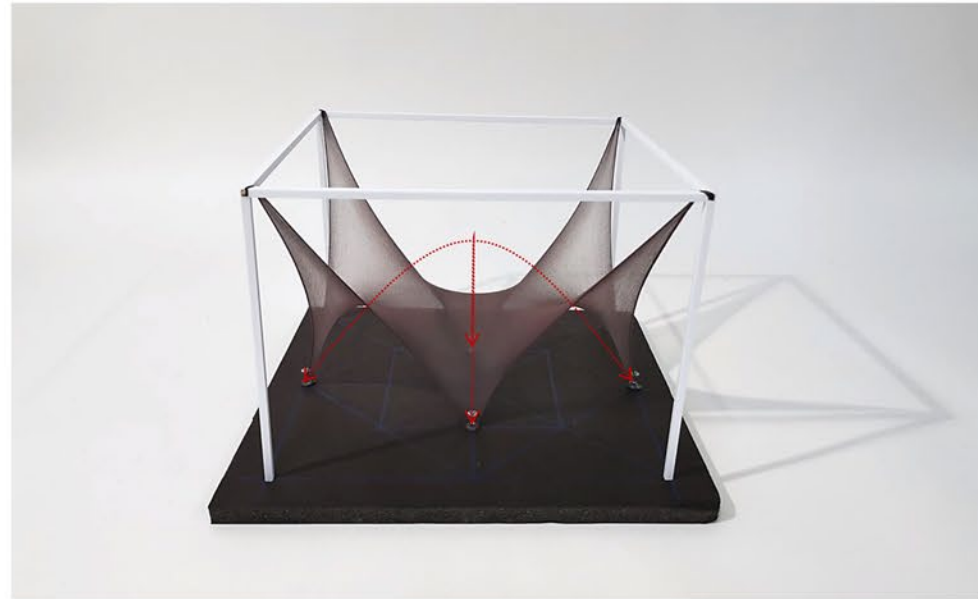


**04**

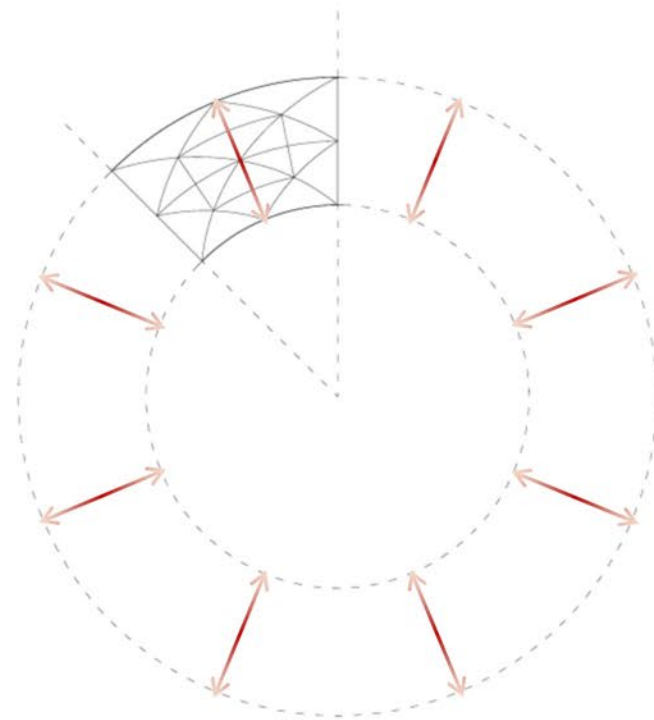
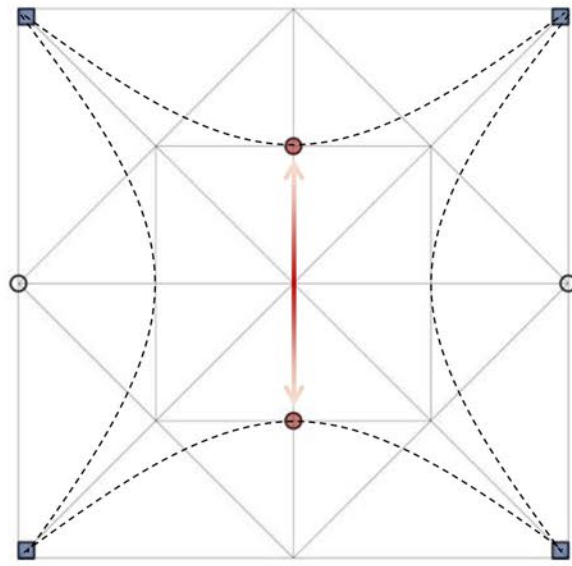
# Tensile & Compression Surface | Arcade Loop |

2019 Fall  
Instructor: Robert Marino  
Cooperator: Qifeng Gao, Miles Mao

**Form finding** : Pure tensile surface by stocking fabric.







From Tensile to Compression:  
From Single Structure to Arcade



**Iteration 1:** Pour cement  
into double-layered plastic film



**Iteration 2: Linear Foot**  
Finger-paint cement on fabric



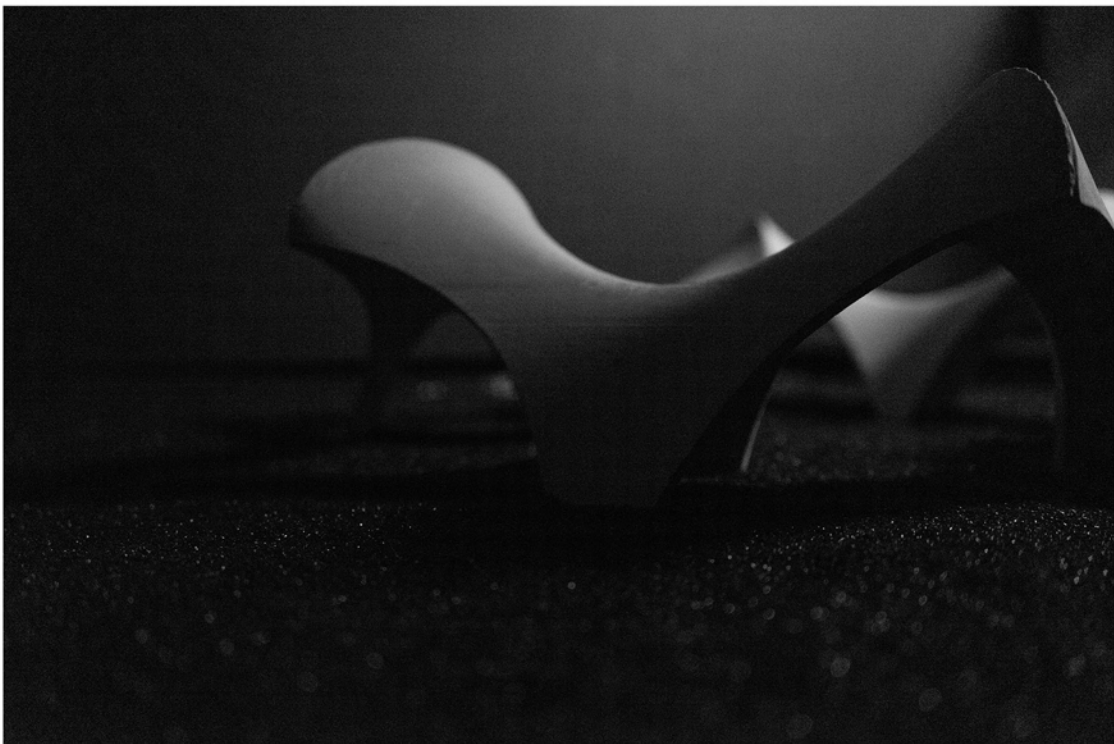
**Casting Process**



Model Photo



Model Photo

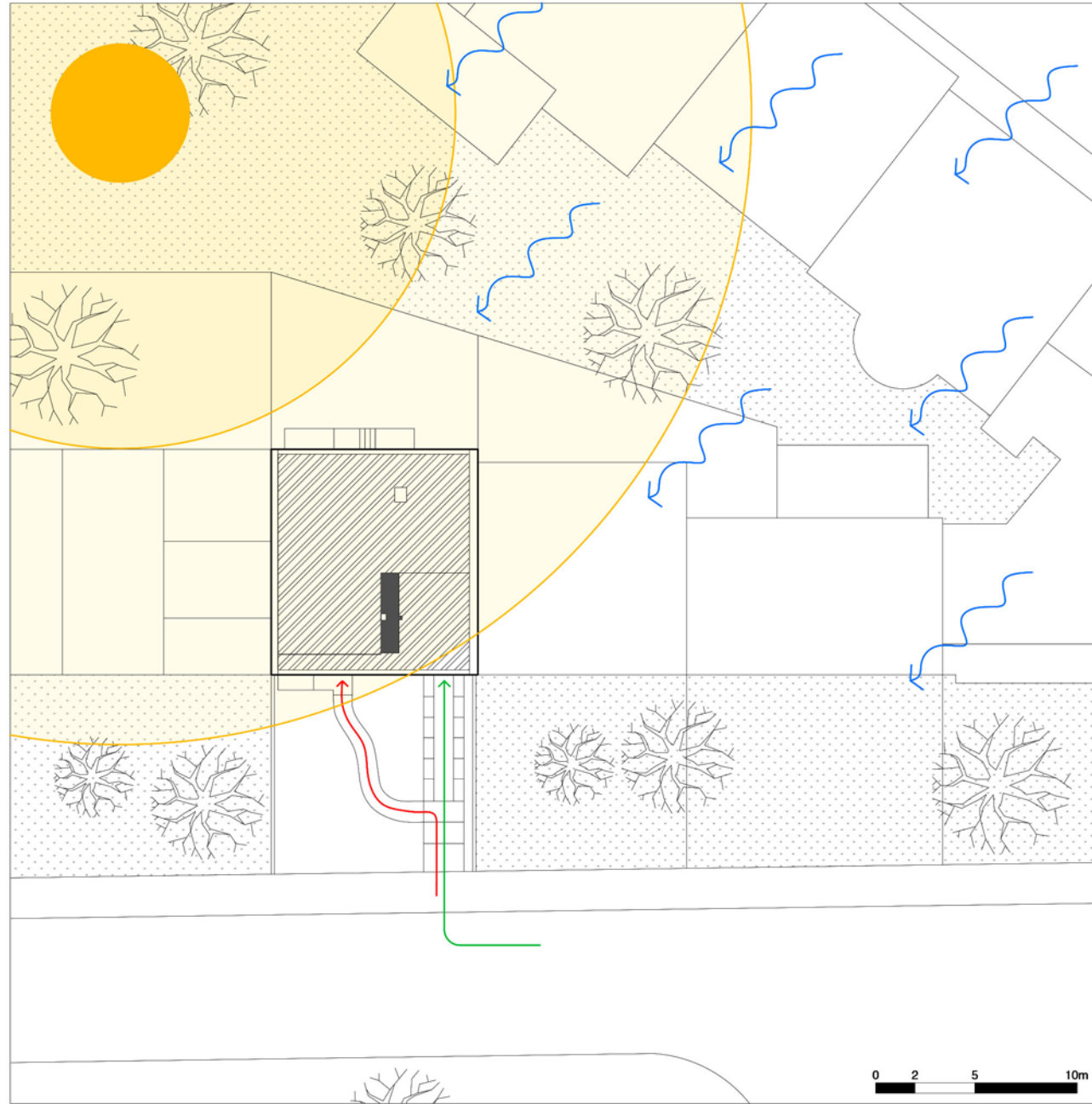




**05**

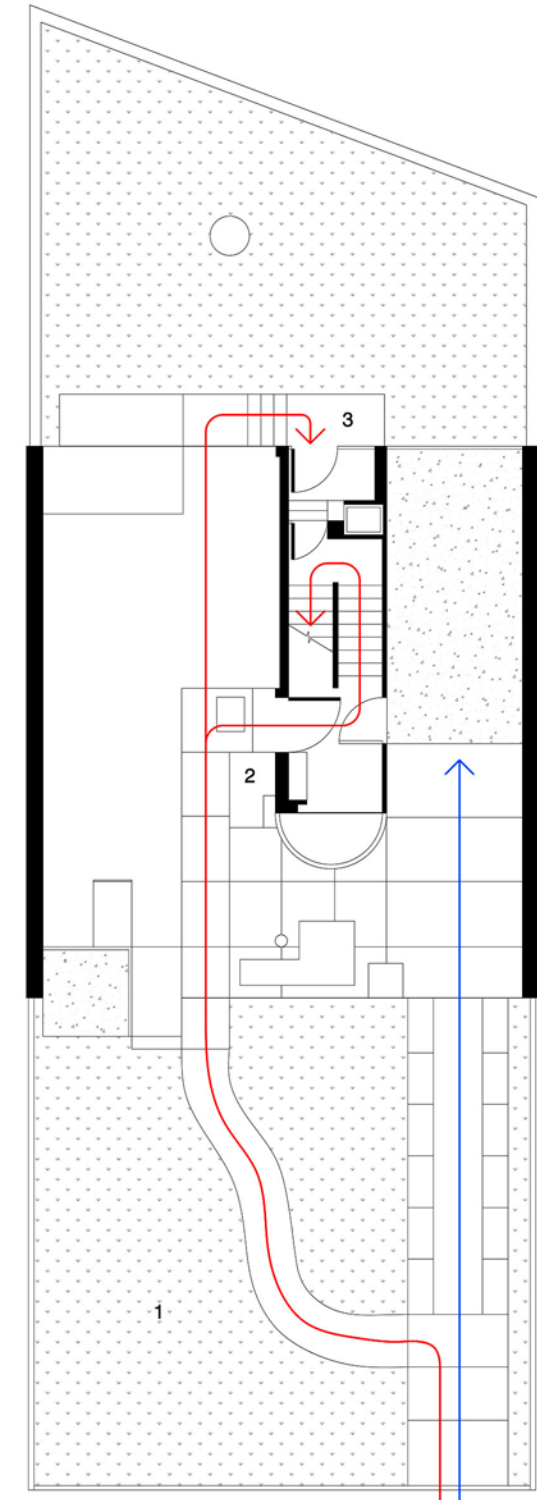
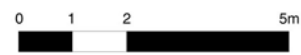
# Le Corbusier Re-visit | Masion Cook |

2020 Spring  
Instructor: Kenneth Frampton  
Cooperator: Christian Ramon Pineda



THIRD FLOOR PLAN

■ CIRCULATION

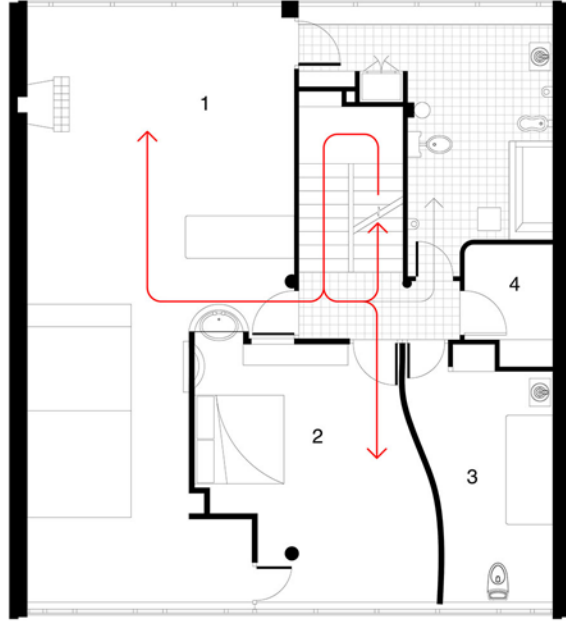


**KEY**  
 1 - FRONT GARDEN  
 2 - MAIN ENTRY  
 3 - SERVICE ENTRY

GROUND FLOOR PLAN

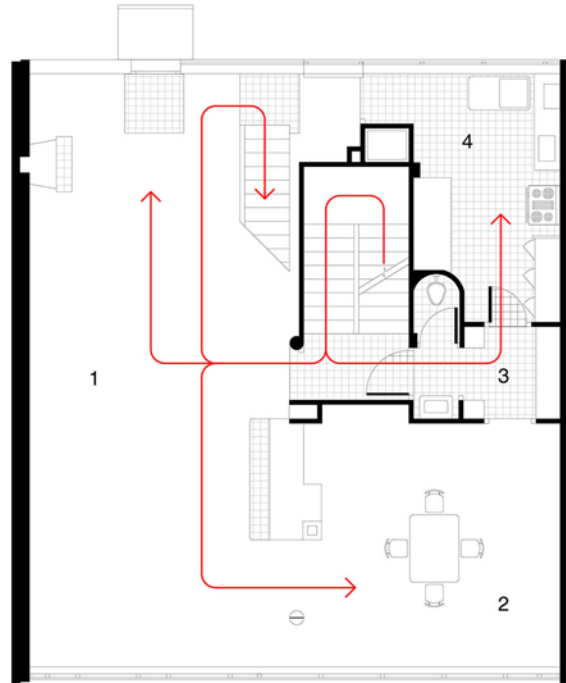
■ CIRCULATION  
 ■ CAR ENTRANCE





**KEY**

- 1 - BOUDOIR
- 2 - BEDROOM
- 3 - MAIDS'S ROOM
- 4 - STORAGE



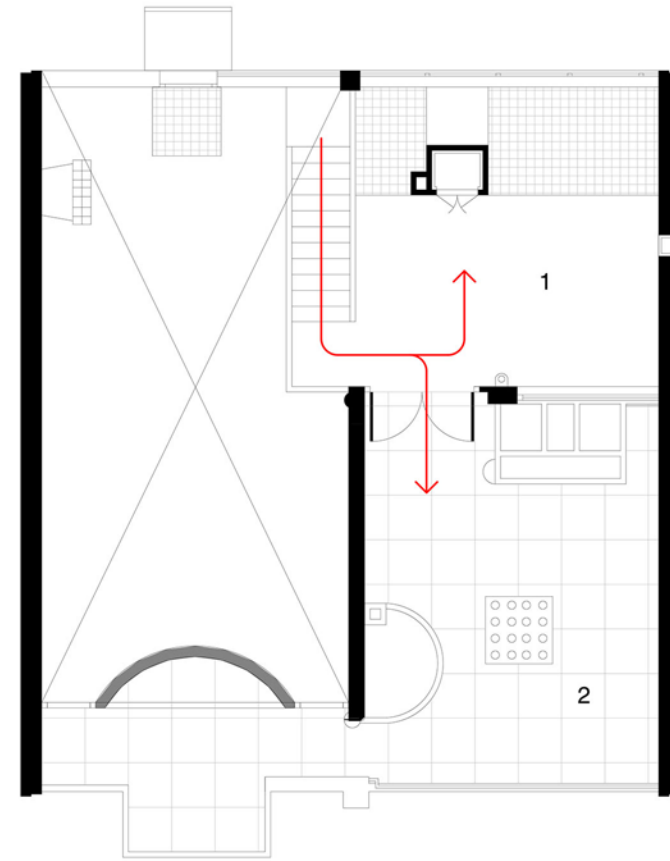
**KEY**

- 1 - LIVING
- 2 - DINNING
- 3 - SERVRY
- 4 - KITCHEN



FIRST FLOOR PLAN

■ CIRCULATION



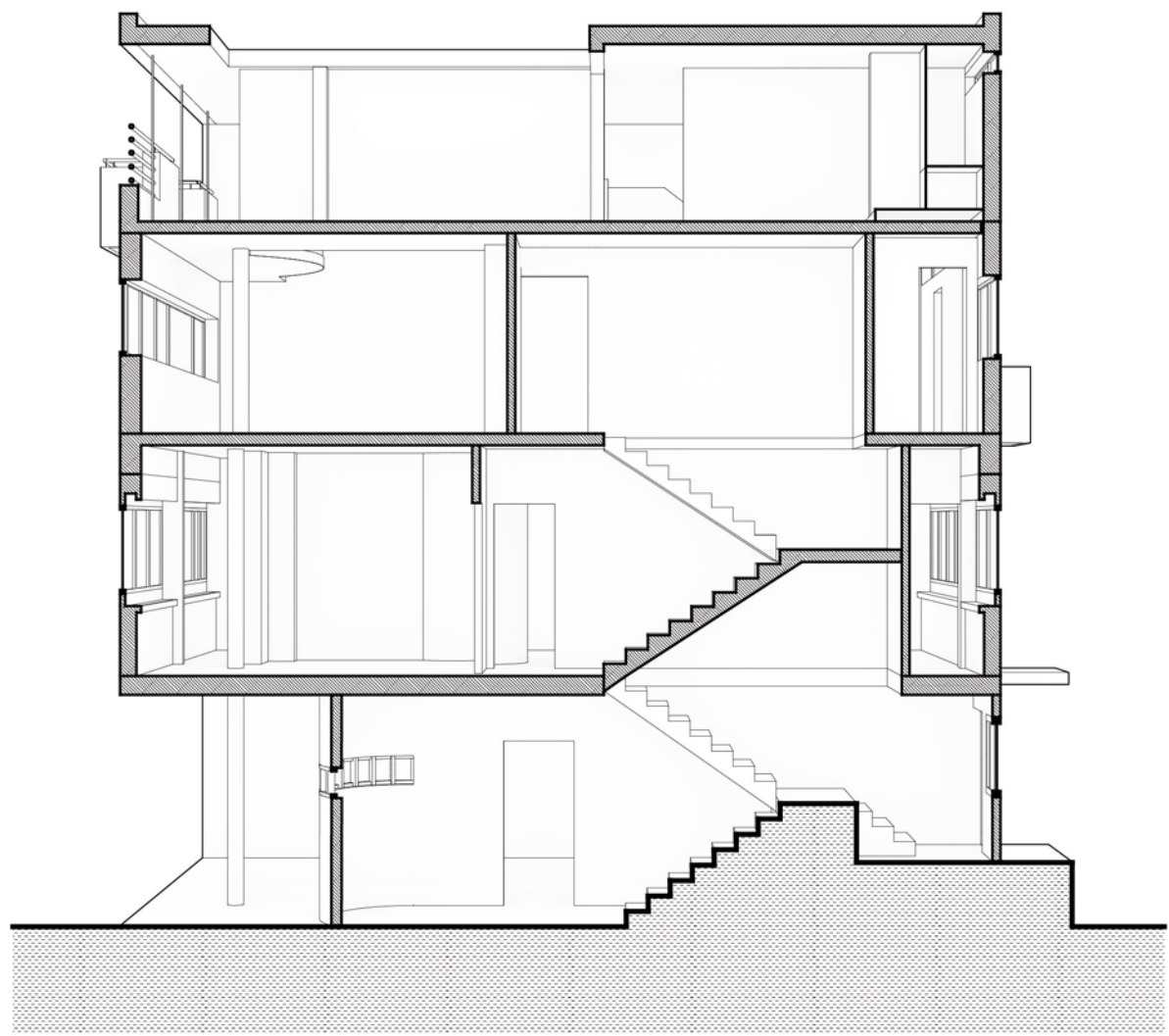
**KEY**

- 1 - LIBRARY
- 2 - TERRACE

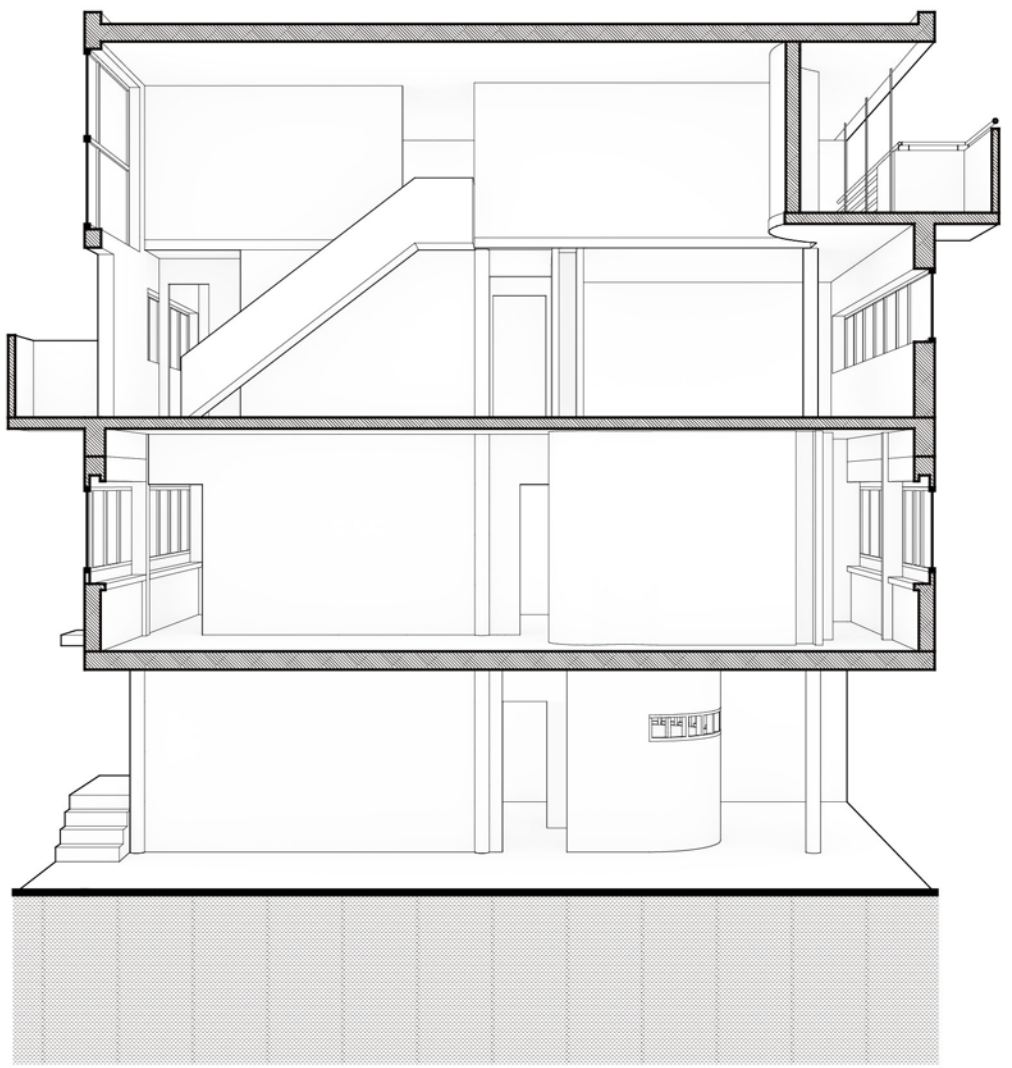
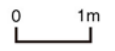


THIRD FLOOR PLAN

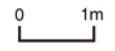
■ CIRCULATION

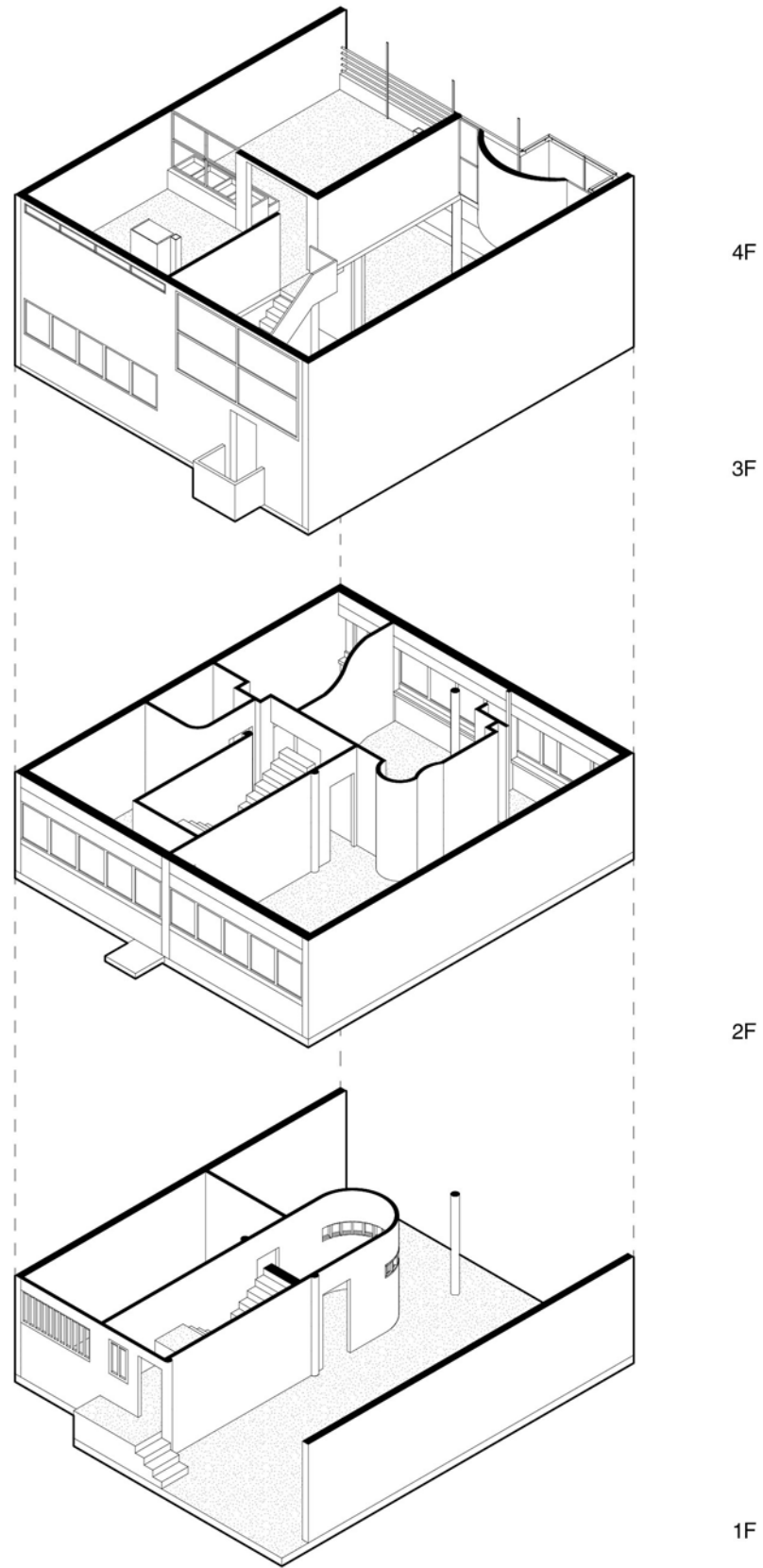


MAISON COOK - SECTION 1

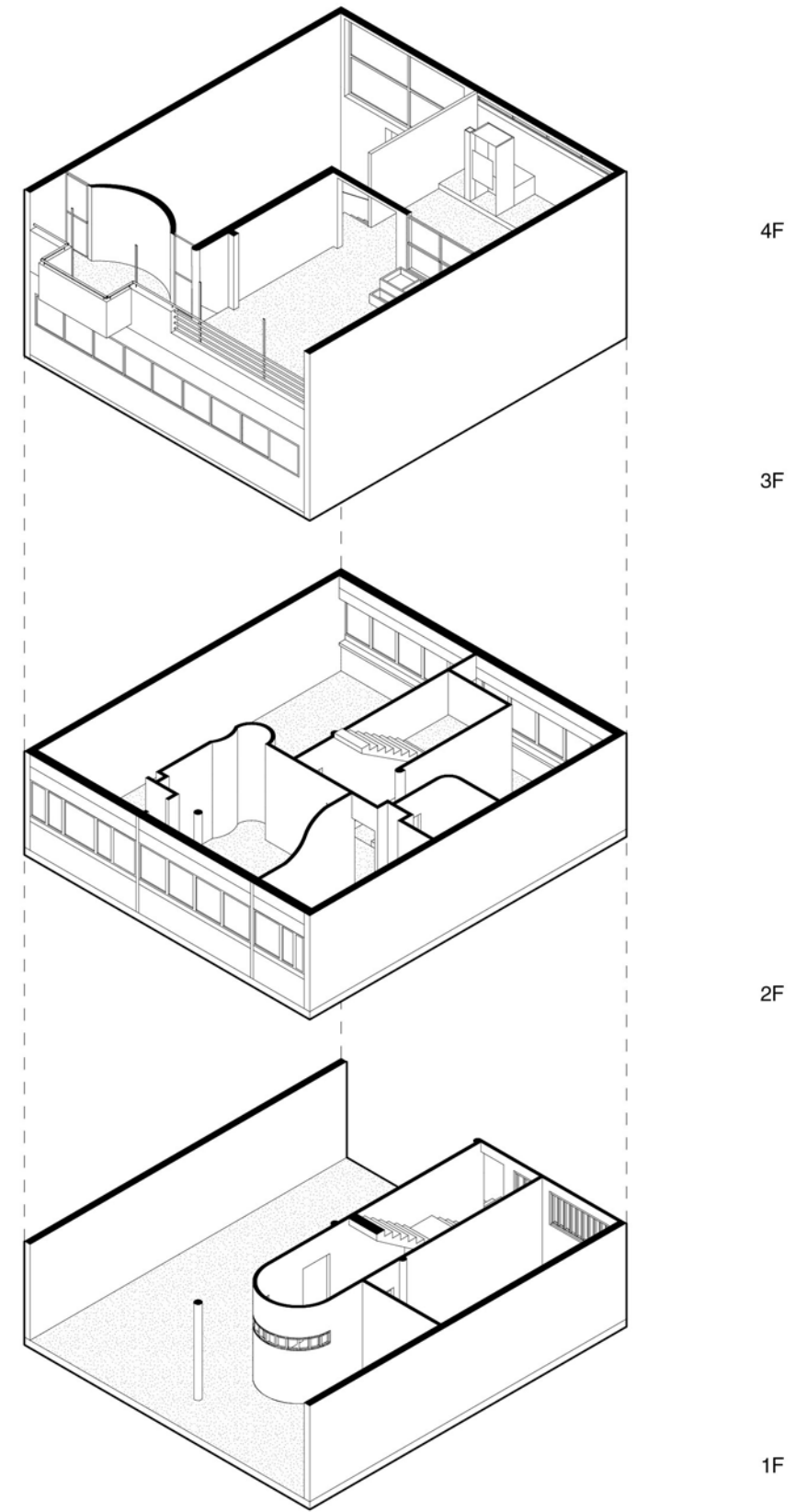


MAISON COOK - SECTION 2



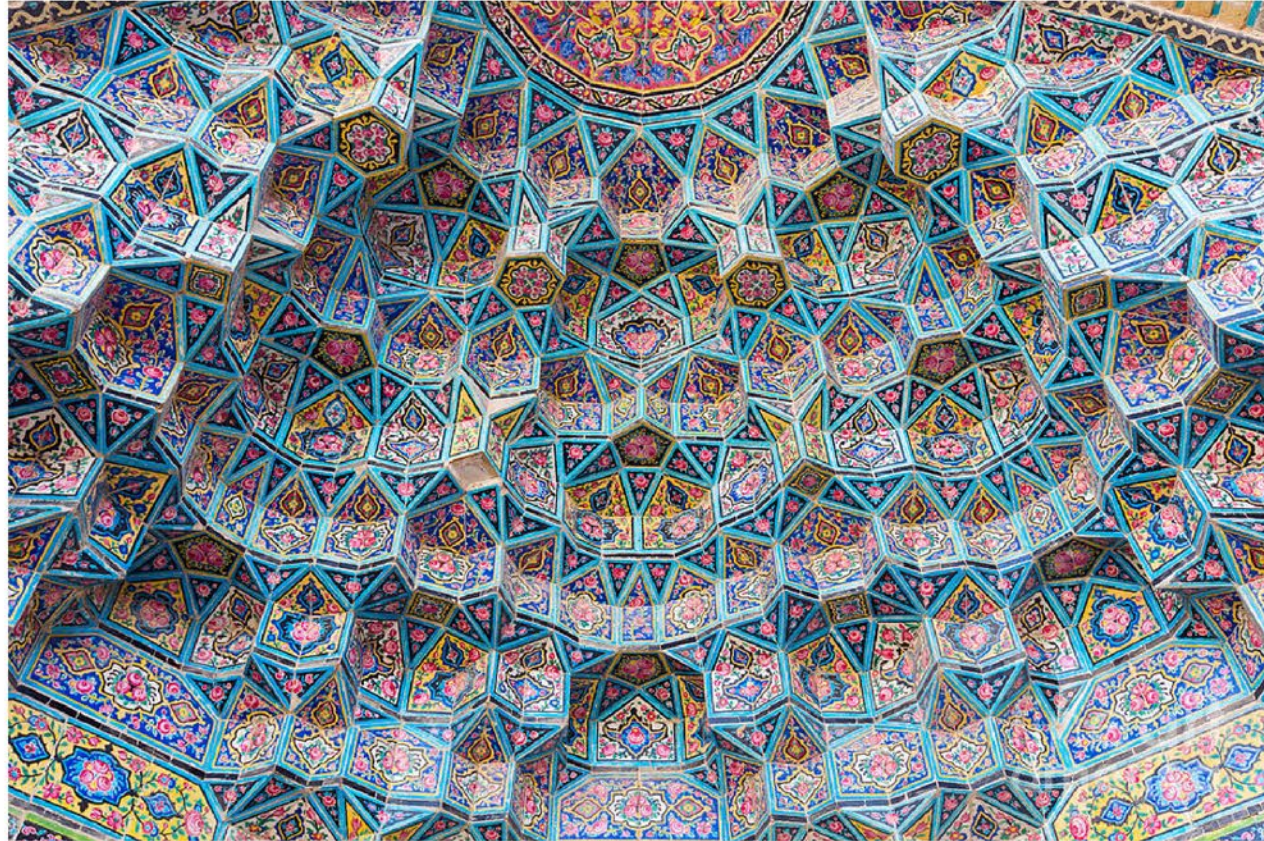


MAISON COOK - AXONOMETRIC DRAWING (NORTH)



MAISON COOK - AXONOMETRIC DRAWING (SOUTH)

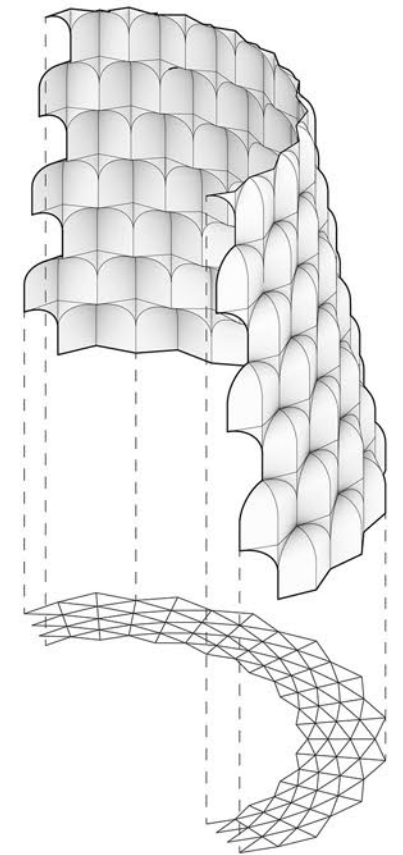
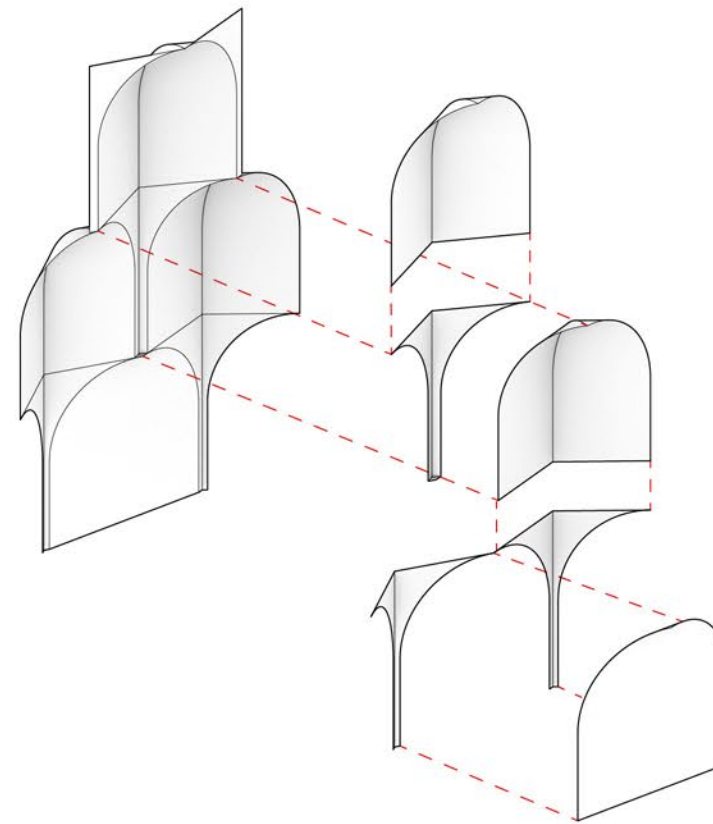
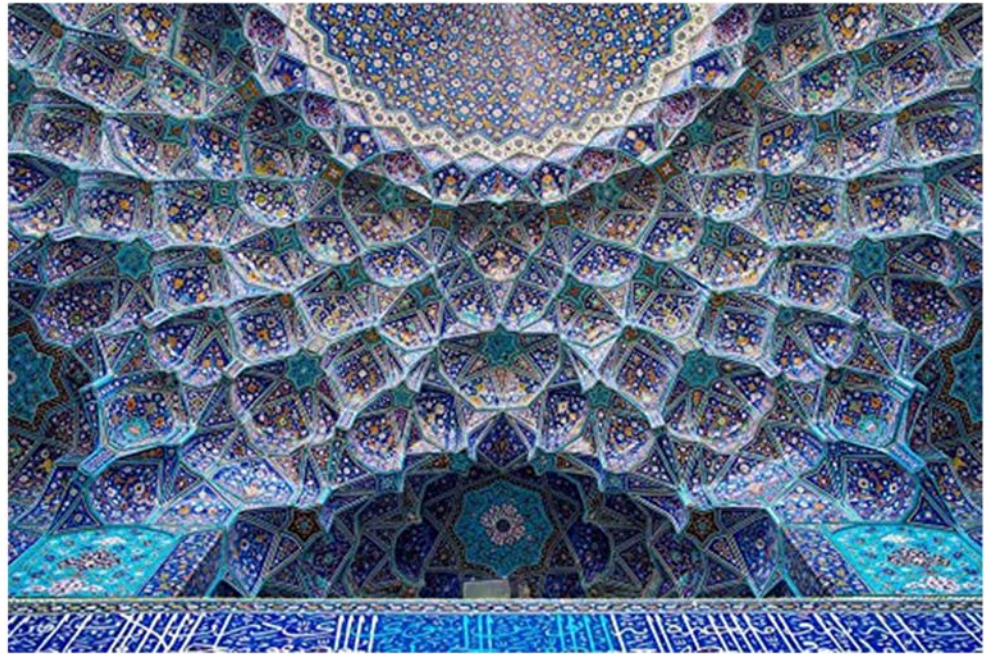
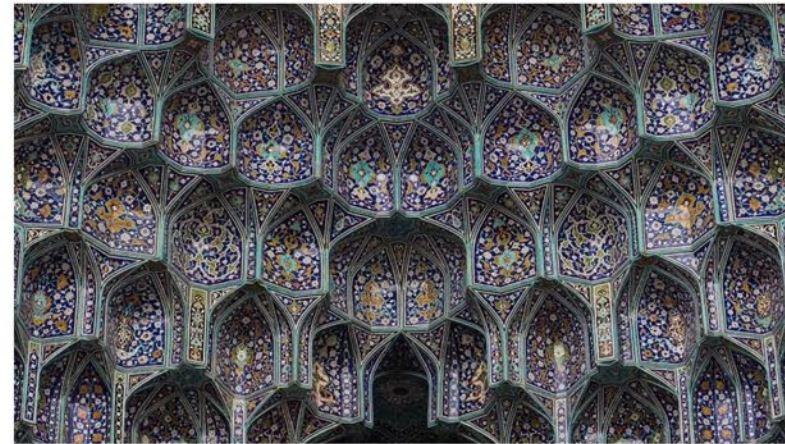




**06**

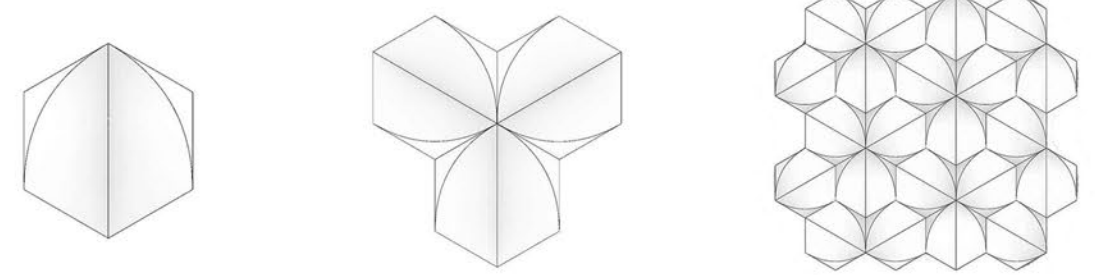
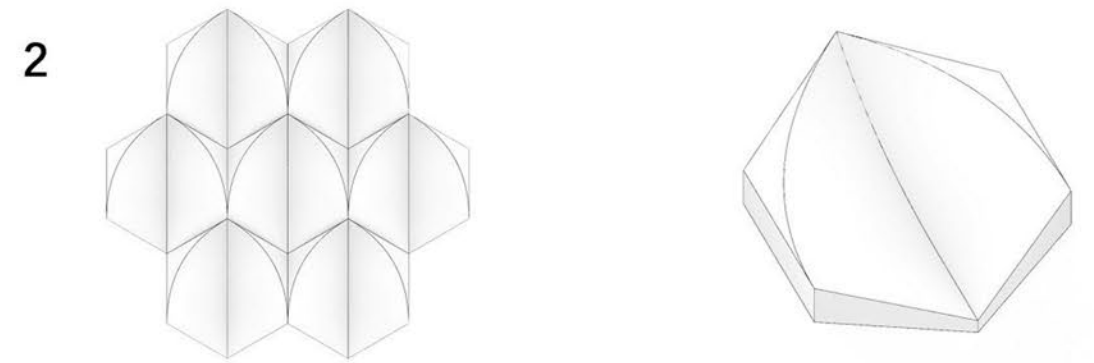
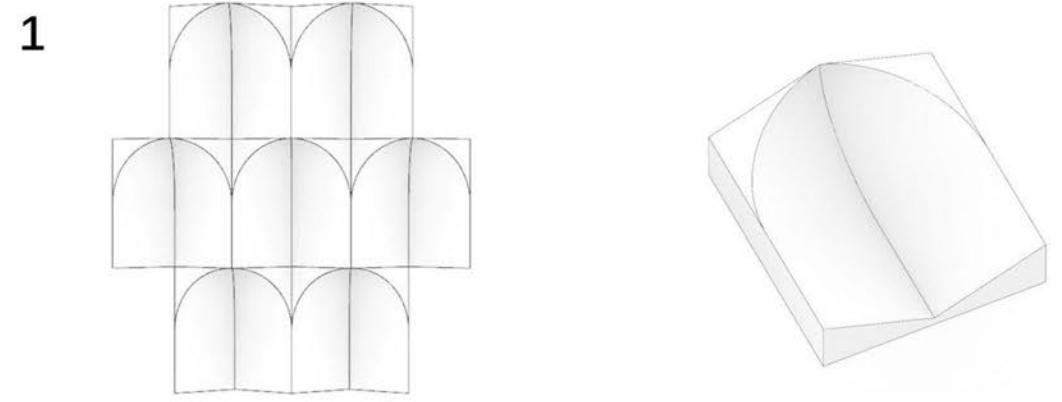
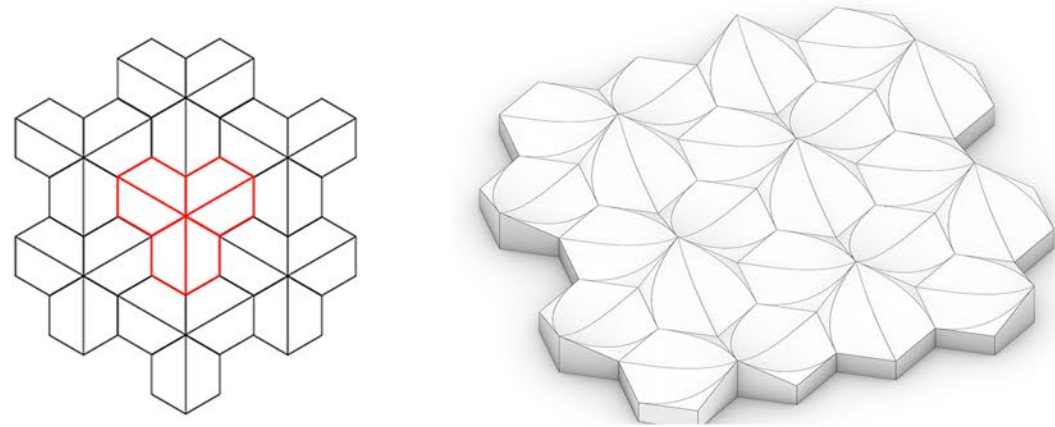
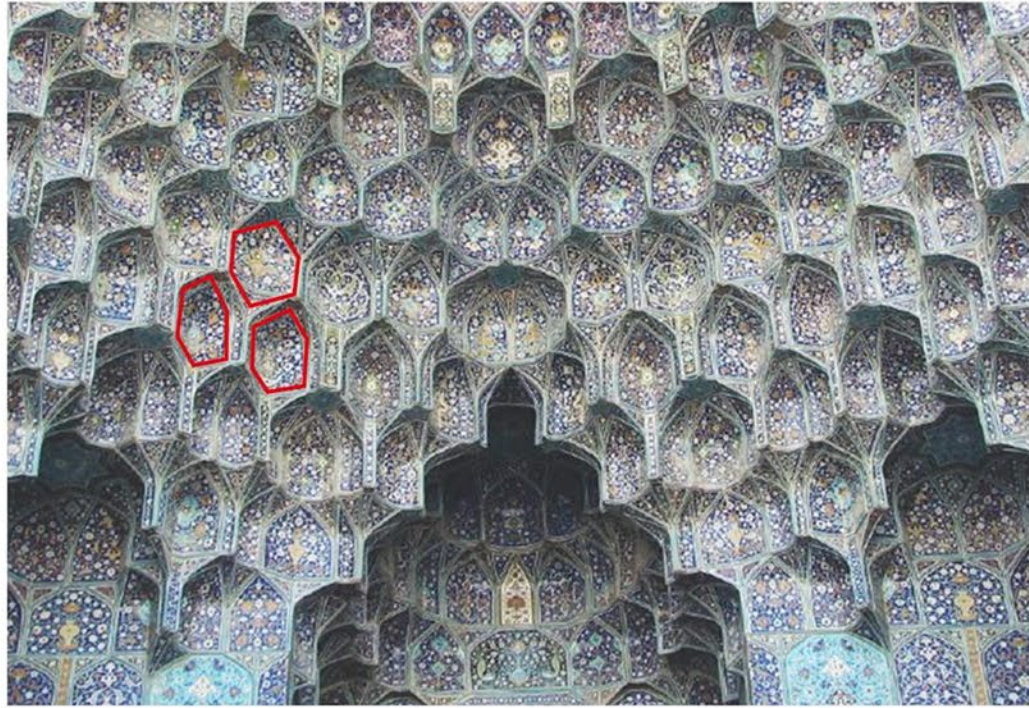
## History in the Making | Muqarnas Tile Design |

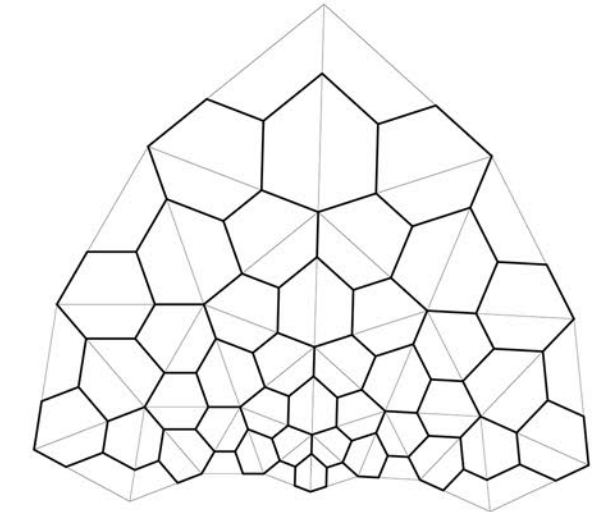
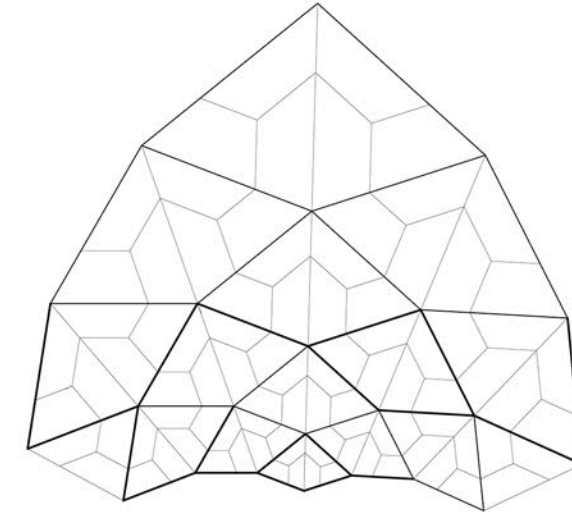
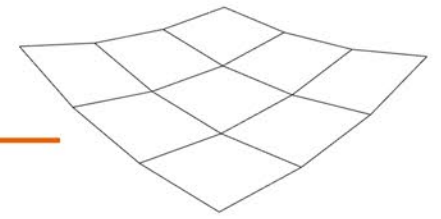
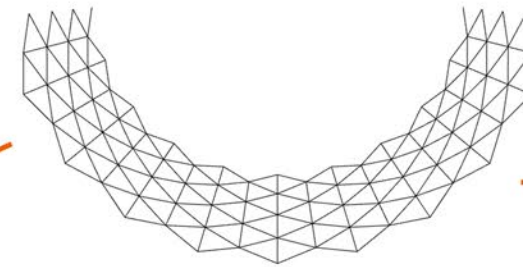
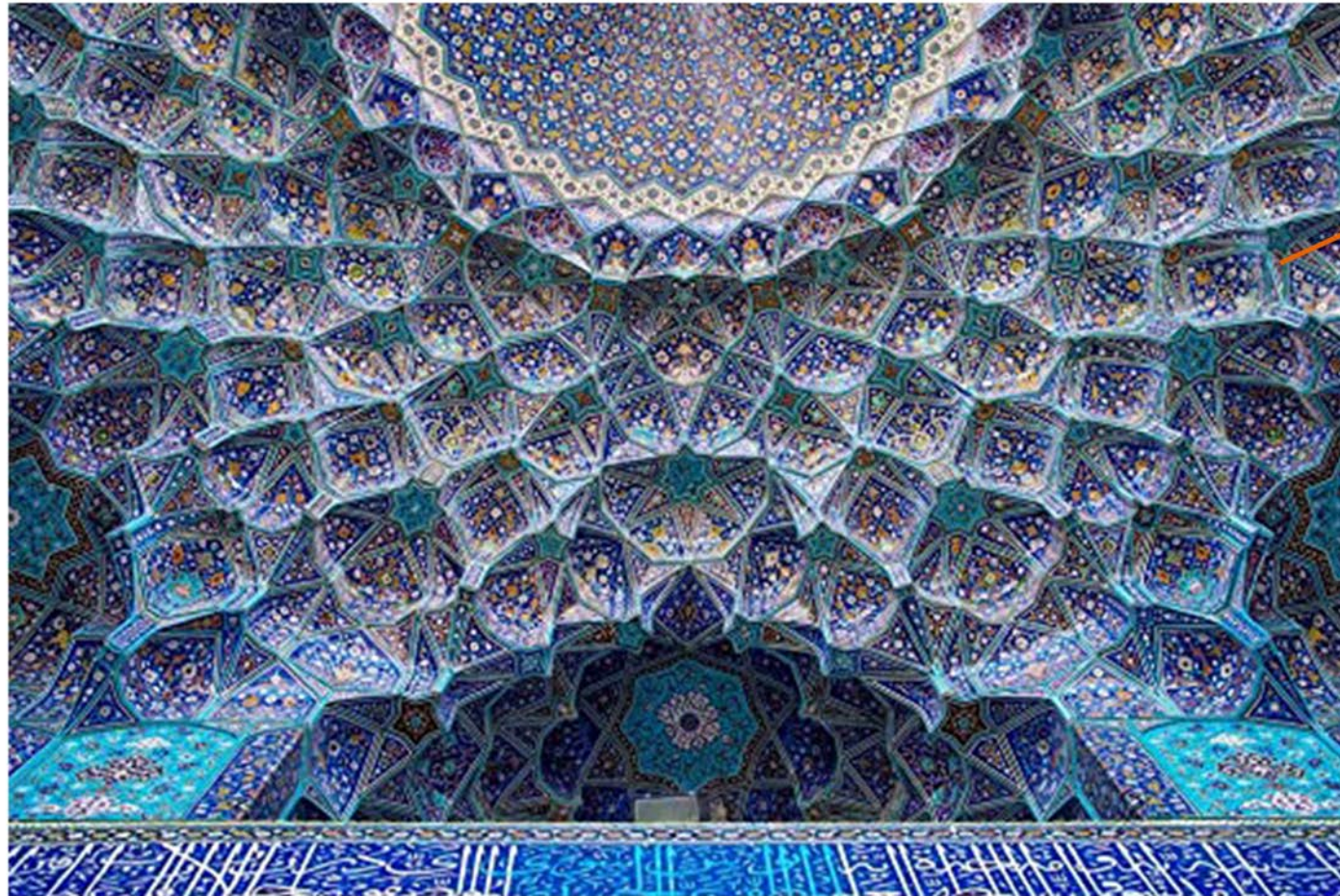
2020 Spring  
Instructor: Tal Schori & Rustam Mehta  
Cooperator: Aseel Salem Sahab  
Leon Esmaeel



The Shah Mosque mosque,  
Isfahan, Iran

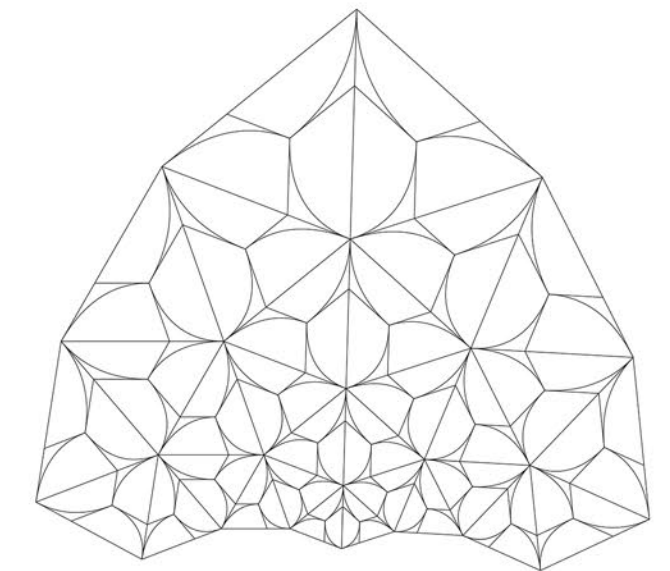
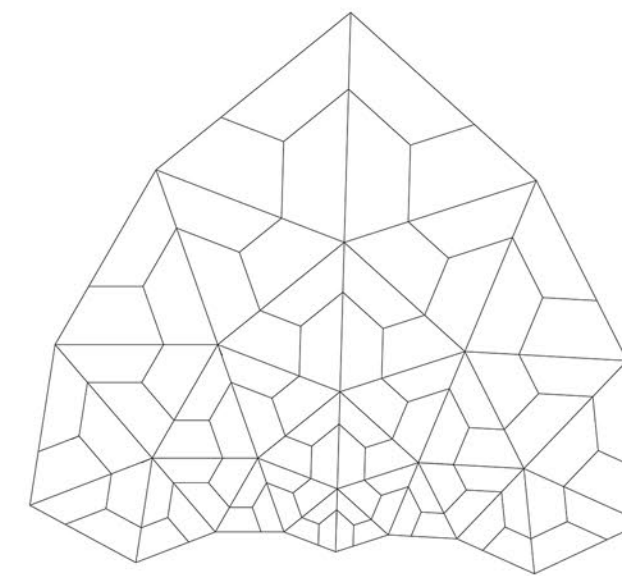
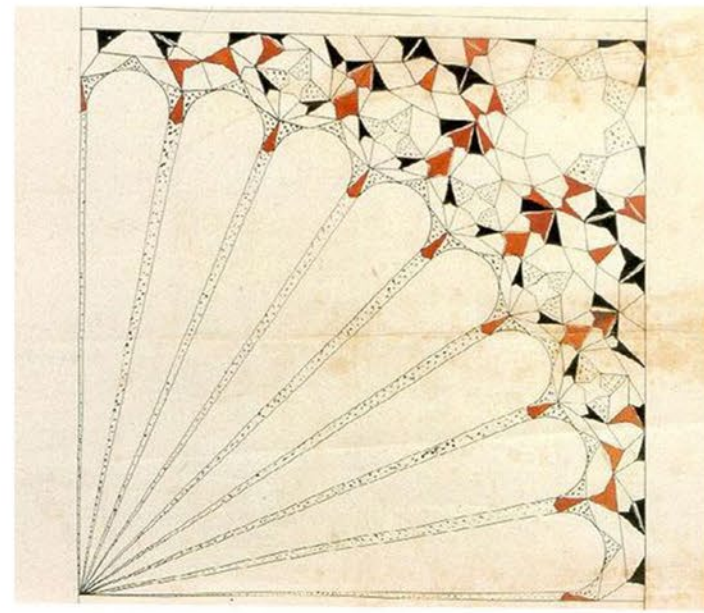
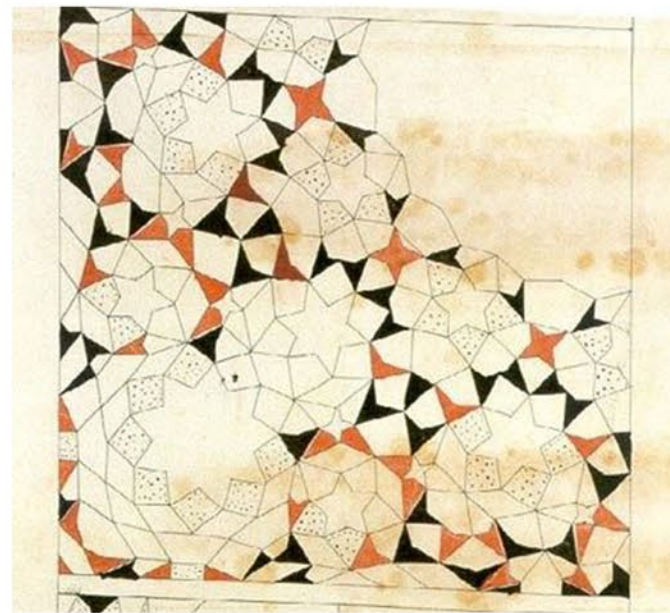
# Tile Translation





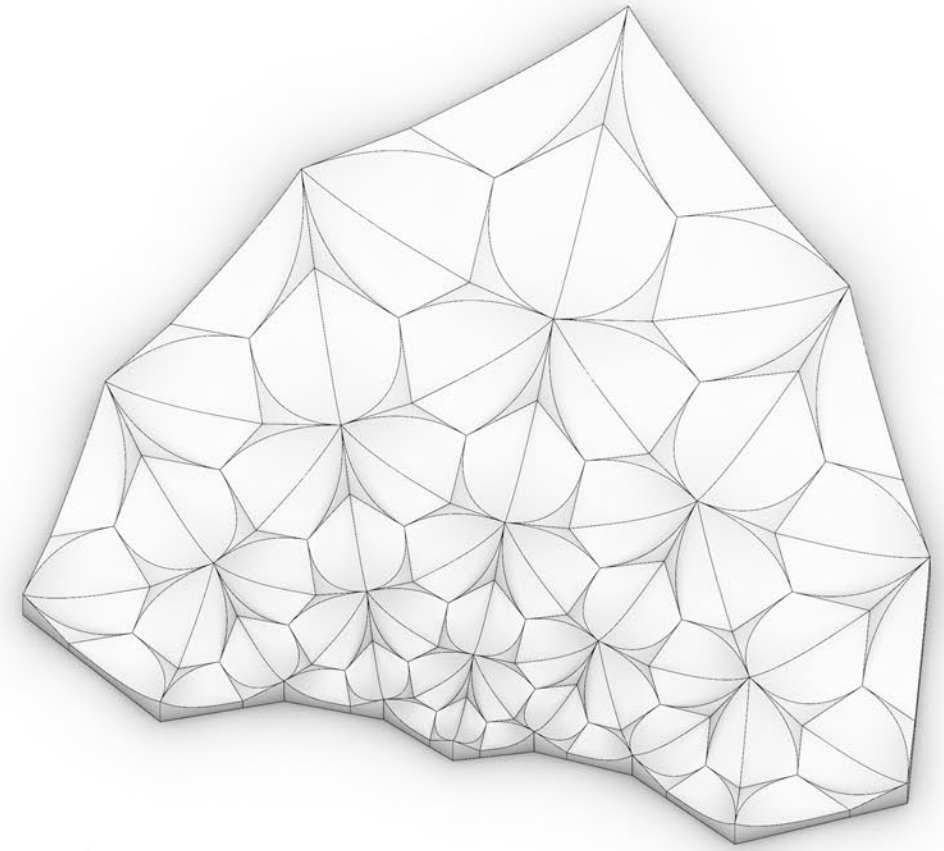
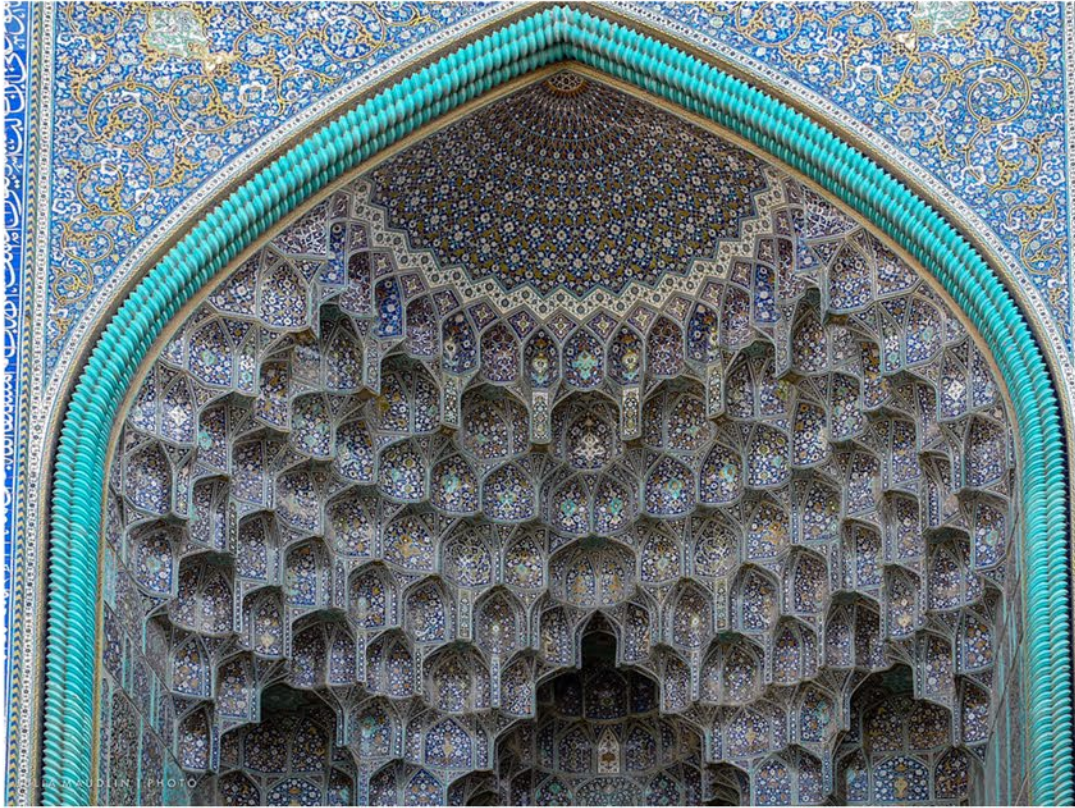
**Tessellation principle  
(from plan)**

**Tiles**

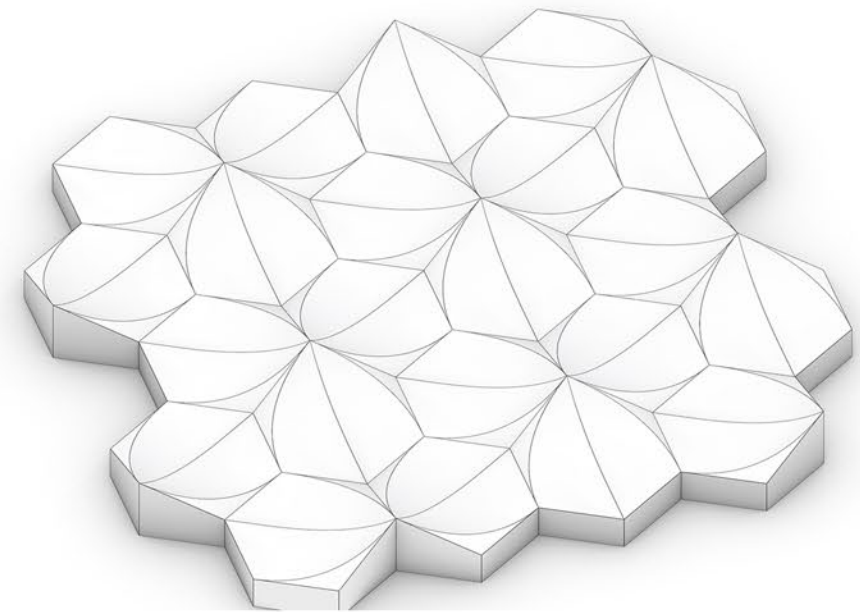
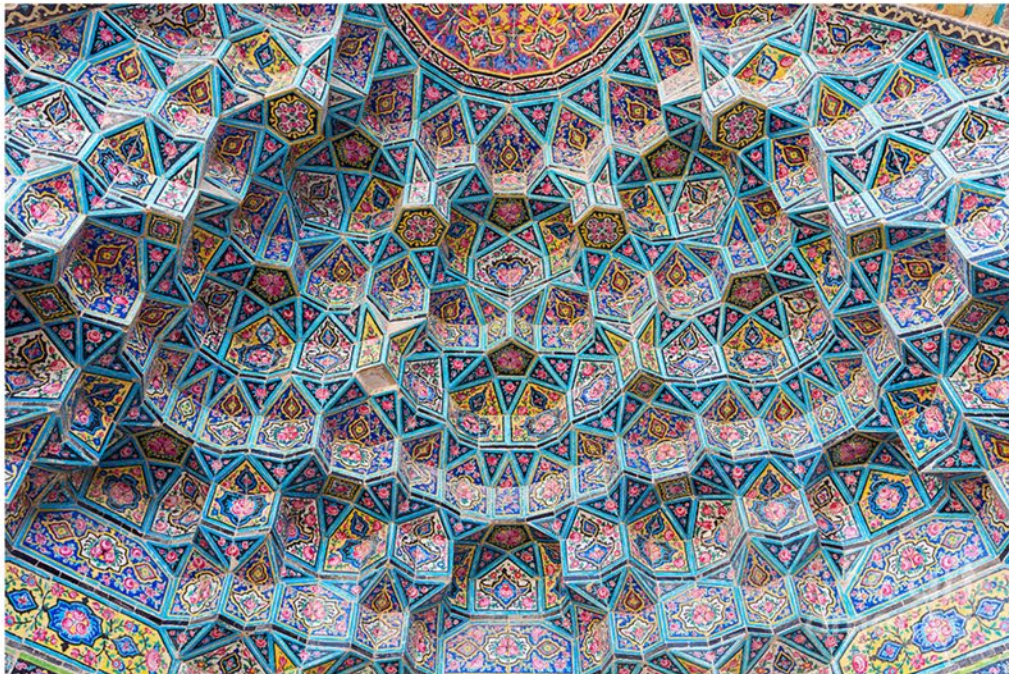


**Pattern**

**Depth  
Concave/Convex**



**Transformative  
(Scale, Shape)**



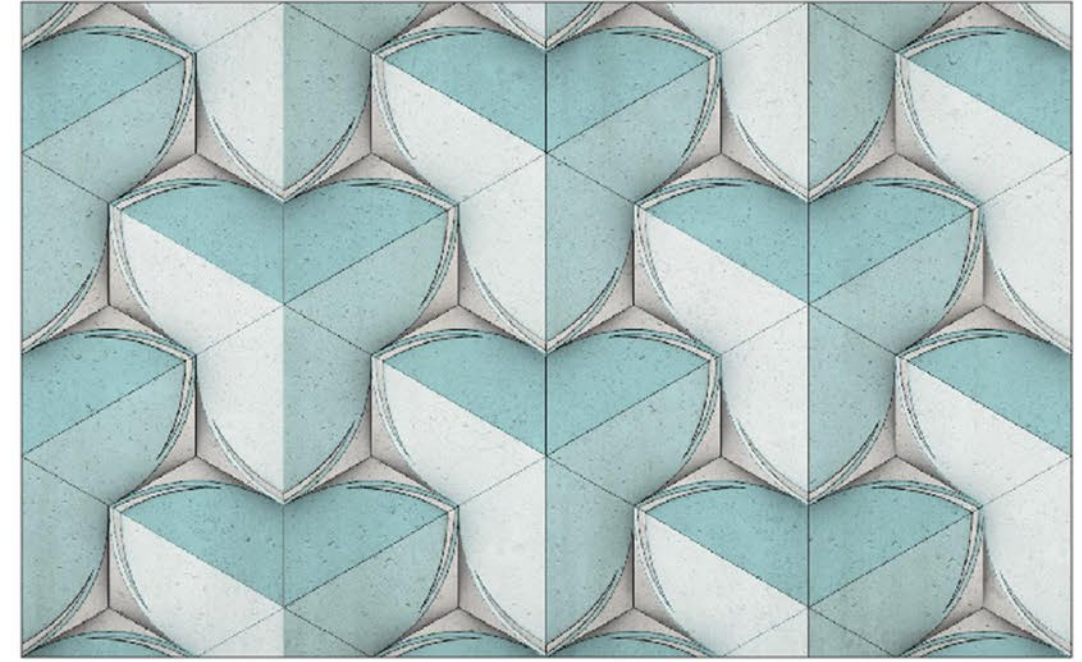
**Regular**



Tile Rendering



Pattern iterations



Pattern iterations

