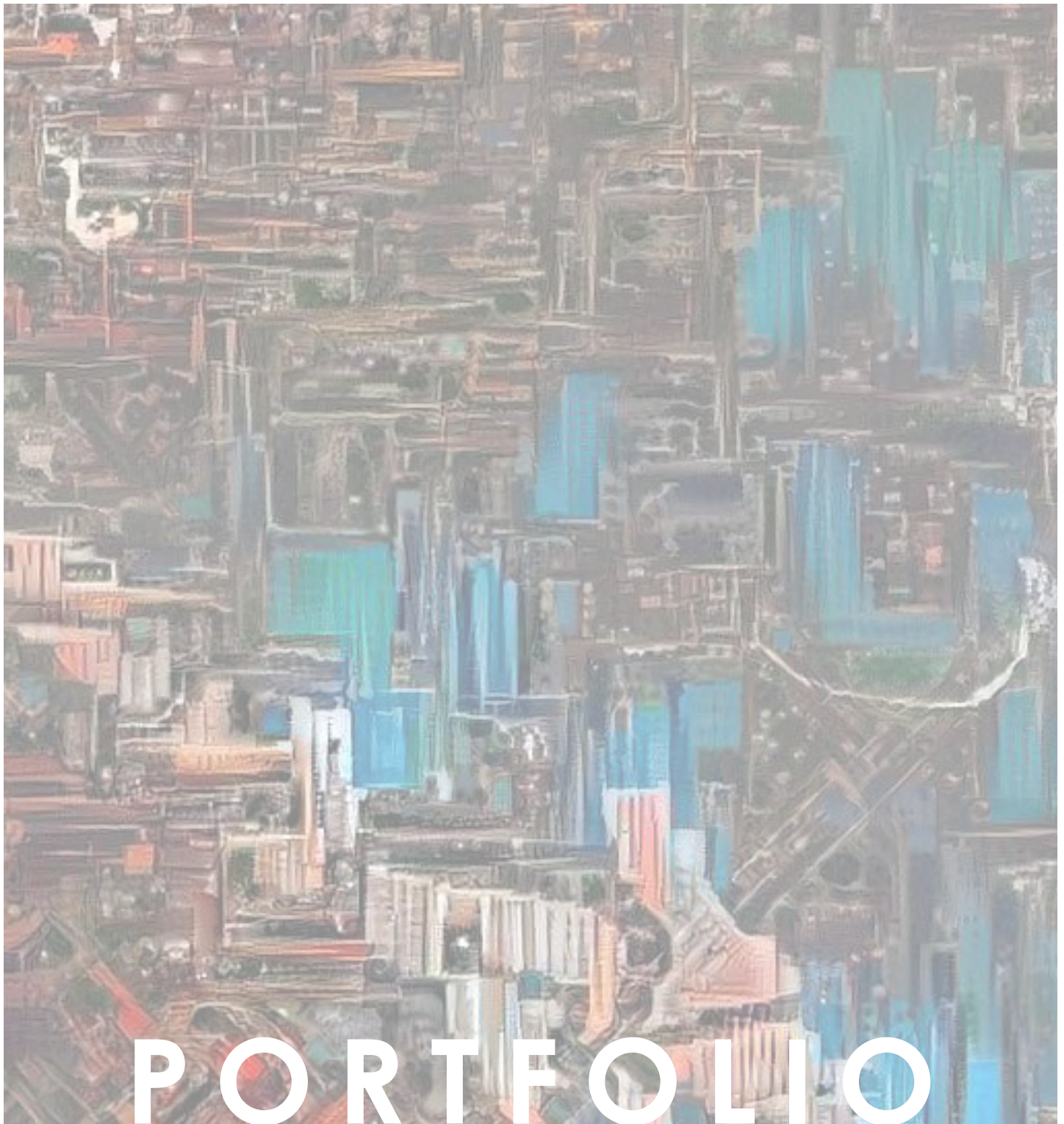




Shilpa Pandey // Master of Architecture

*Taubman College of Architecture and Urban Planning
University of Michigan*

Selected works: 2017 - 2022

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Systems Detroit(Pri) Passive Design
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Academic

04

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Institutional Architecture Kashmir Gov.
Vernacular

06

Extra Curricular work



HI- DEN

A Diverse and inclusive solution

HI- DEN

A Diverse and inclusive housing complex

Systems Studio : Fall 2022

Site Location: Brush Park, Detroit

Instructors: Lars Graebner & Christina Hansen

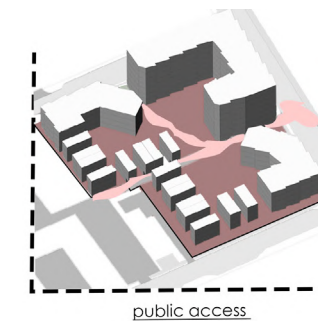
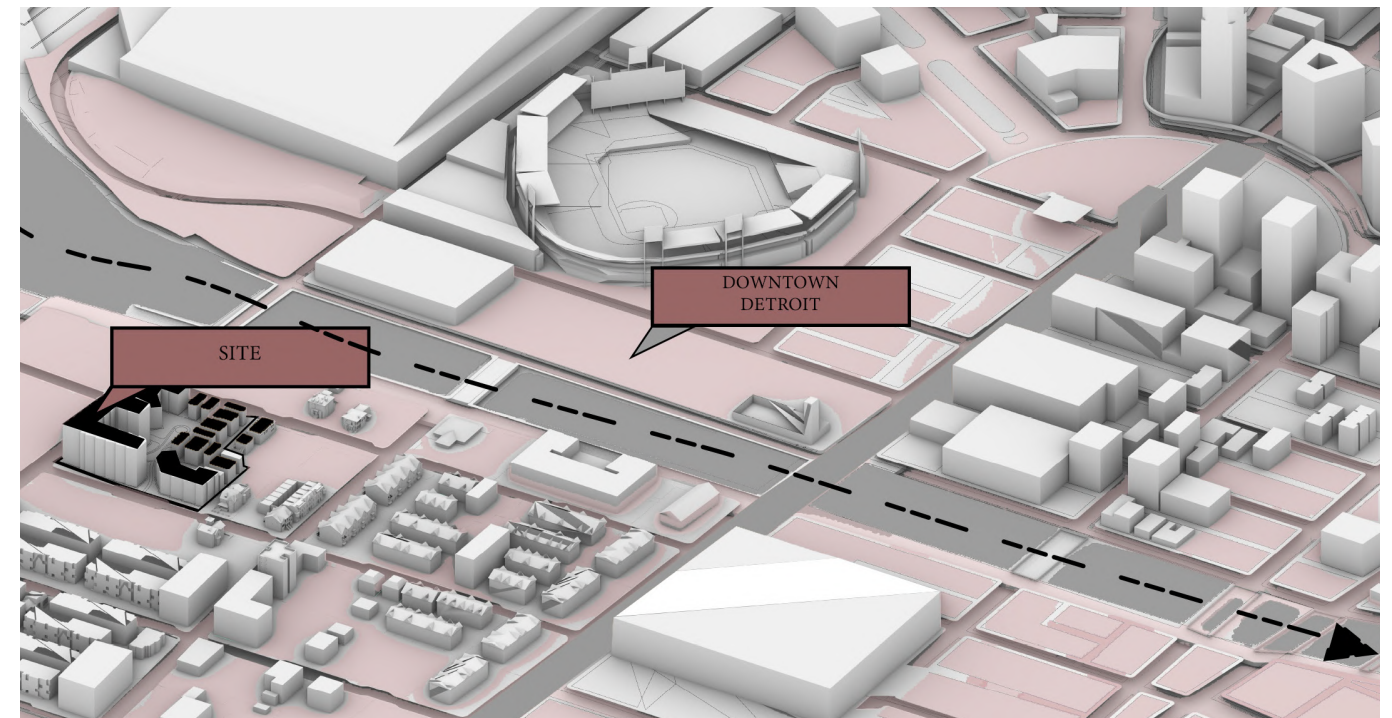
Team Members: Ryan Dowdle, Shilpa Pandey, Raunak Desai.

PROJECT NARRATIVE

HI-DEN is a mixed use housing proposal targeted at retaining existing Brush Park residents as the neighborhood continues to develop and gentrify. The goals of this project are to foster a sense of community among residents, maintain a consistent and historically influenced formal aesthetic, and to be programmatically malleable in the face of changing design needs of the surrounding neighborhood. HI-DEN was designed to maximize residents, while providing unrivaled access to community greenspaces.

Site Context

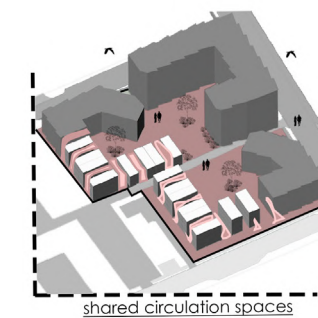
The nearby Little Caesars Arena development has been fraught with controversy. Wealthy investors have purposefully hoarded and under-developed the area in a process of intentional dereliction with the goal of encouraging the city of Detroit to pay large sums to redevelop the area in a bid for urban renewal. This scandal has revealed several undercurrents in the makeup of the Midtown, Cass Corridor, and Brush Park. Despite the valuable downtown adjacent real estate, this area has been squandered by artificial means. The current state of sparsity, as well as the economic landscape of property ownership will likely jump as a flurry of developments get underway. HI-DEN is designed to target existing Brush Park residents that will likely find themselves priced out of the area in the ensuing redevelopment and densification projected in the coming years. Data of the neighborhood pulled from CoStar indicates that current residents are predominantly employed by health-care and educational institutions, and despite a higher rate of advanced degrees, residents receive a far lower average salary than comparable Detroit residents of equal background.



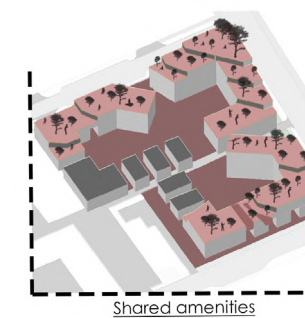
public access



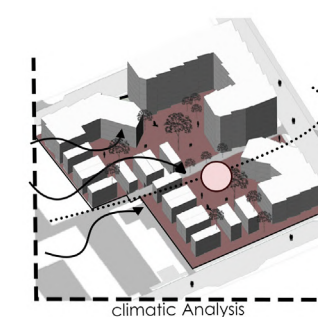
Ground Gardens



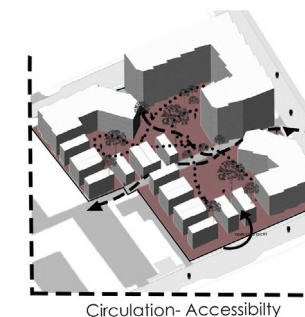
shared circulation spaces



Shared amenities



climatic Analysis



Circulation- Accessibility

Public Access

- Public circulation allows permeability
- Creates Social aspect
- To keep the existing urban flow

Ground Gardens

- semi public spaces
- for outdoor activities
- circulation space
- natural vegetation

Shared Circulation Spaces

- shared courtyards for light and ventilation
- shared circulation spaces helps in social aspect whilst promoting affordability

Shared Amenities

- Roof top gardens
- Winter gardens
- Community
- Affordability

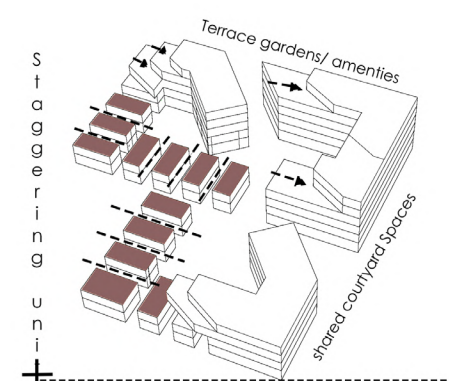
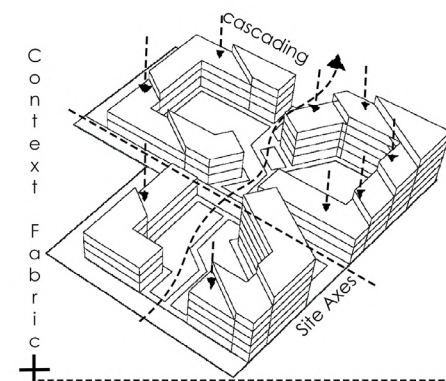
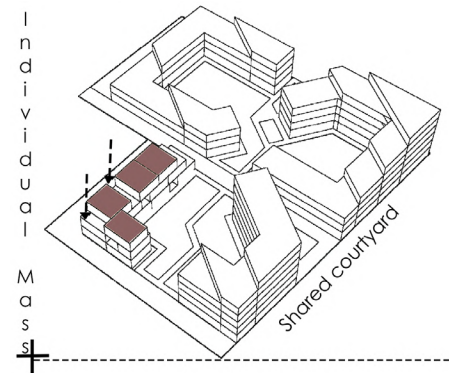
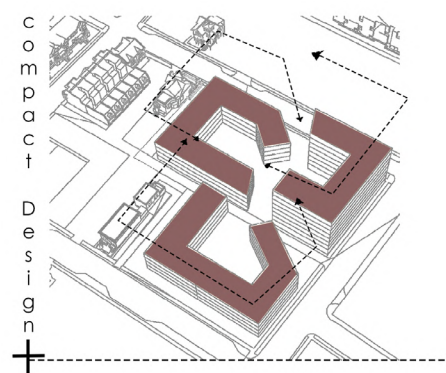
Climatic Analysis

- Maximum daylight intake
- Cross ventilation
- Natural vegetation
- Shared Courtyard spaces

Site Development Diagrams with key Design Aim

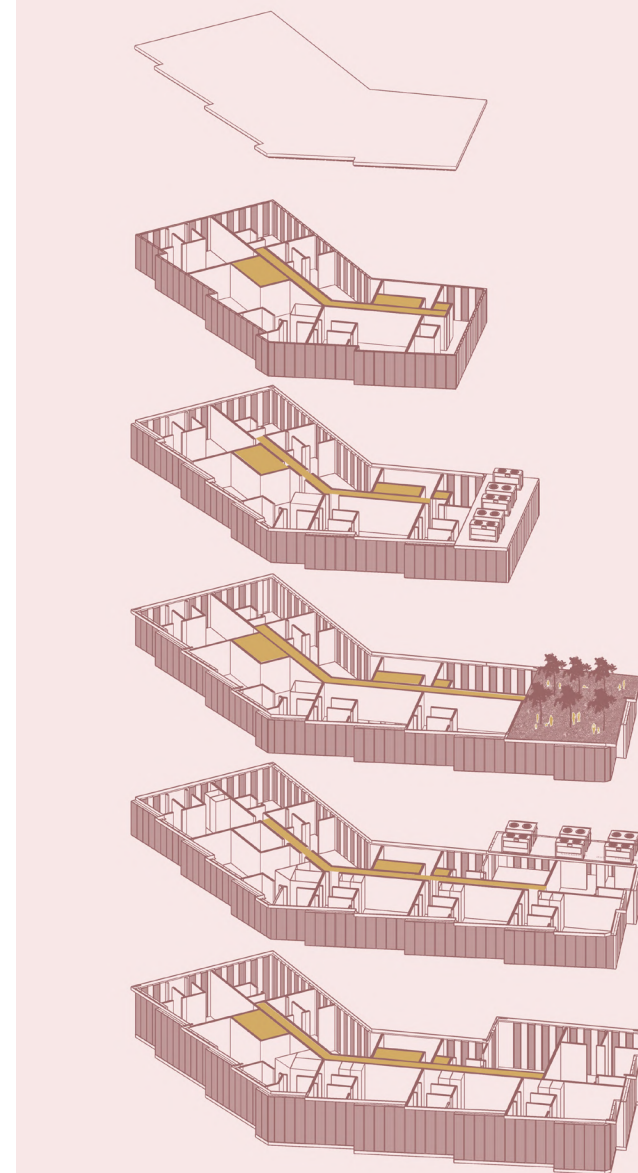


Site Plan with Immediate context

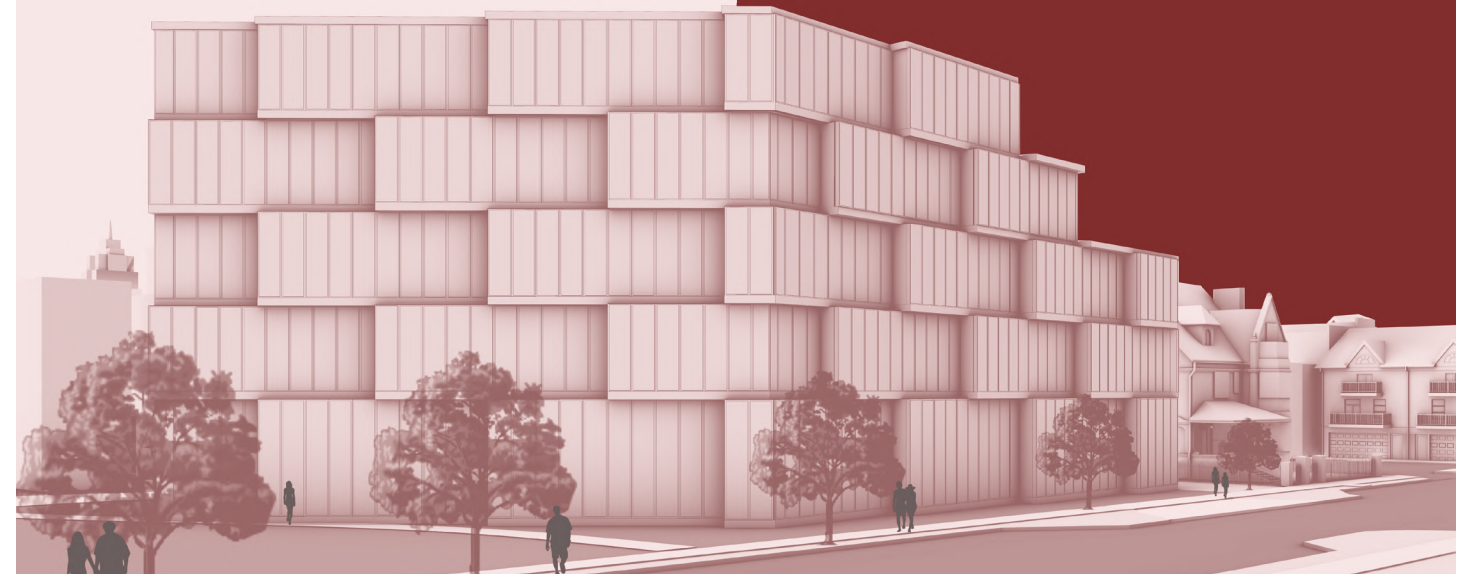
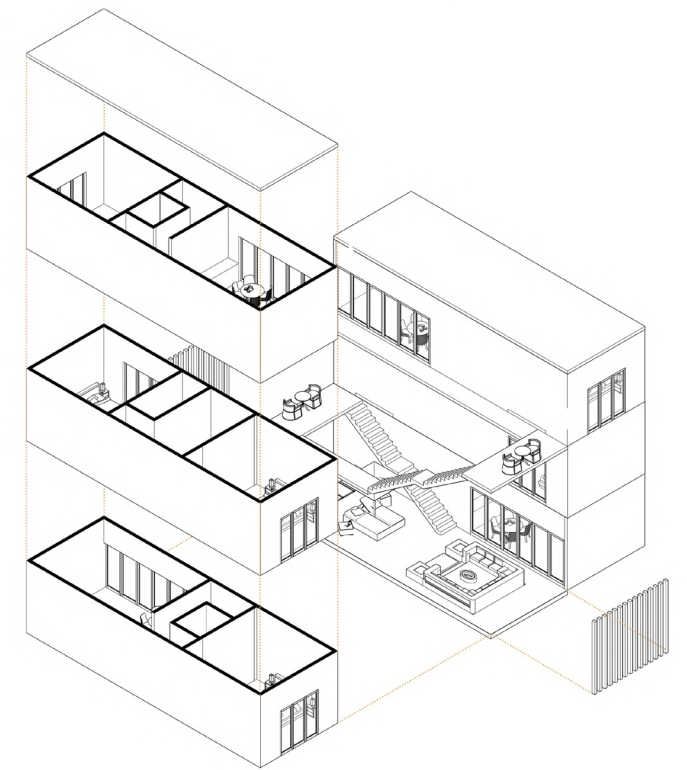


Site Development Diagrams with key Design Aim

MID-RISE



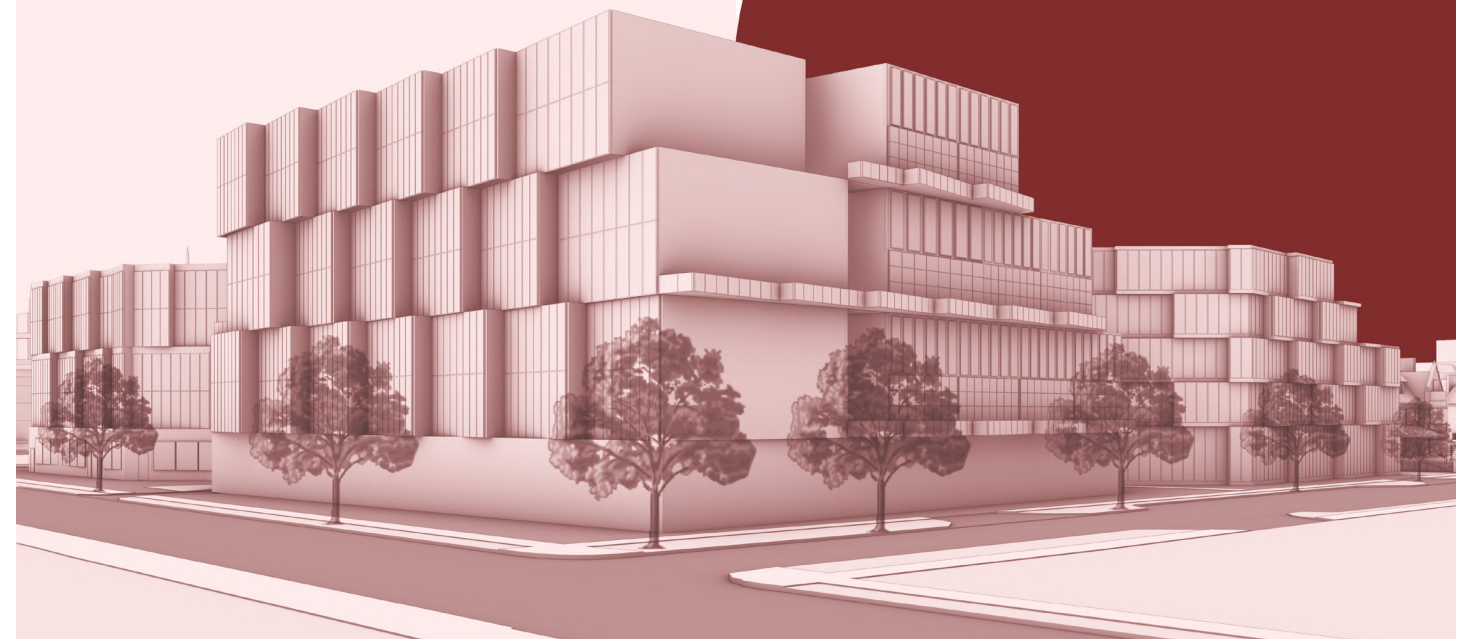
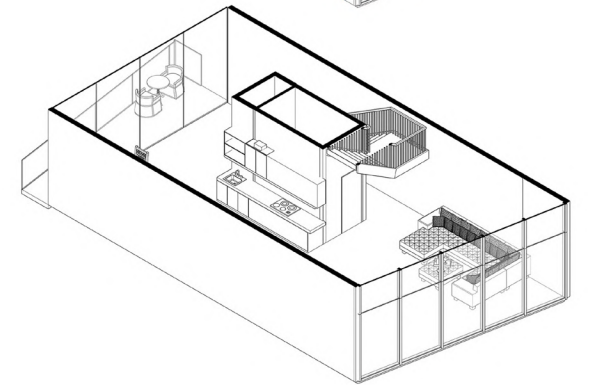
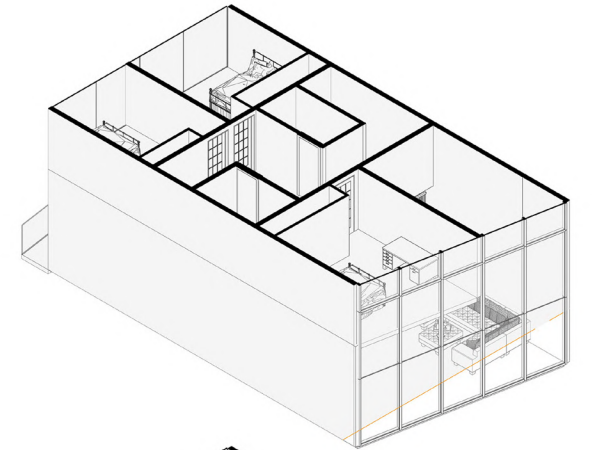
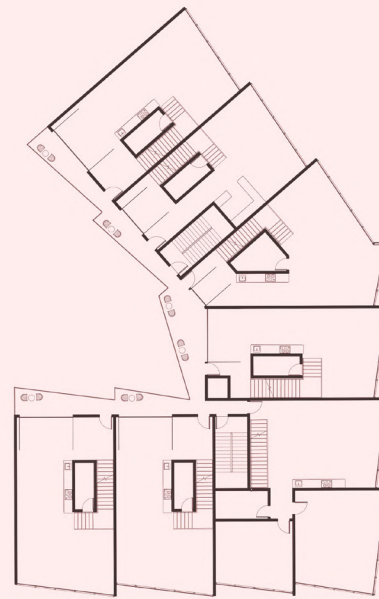
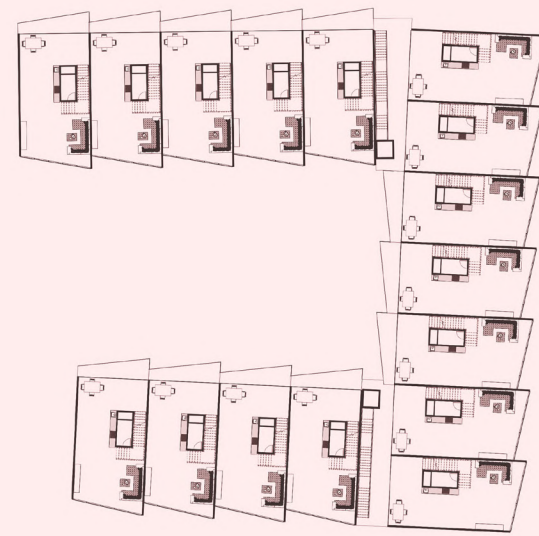
LOW-RISE



DOWNTOWN DETROIT



HIGH -RISE







 LUMION

Savoyard

Adaptive Reuse & Revival of Ancient River

Preposition Studio : Winter 2022

Site Location: Lafayette Park, Detroit

Instructors: Kevin Daye

Project Type: Individual, Academic

PROJECT NARRATIVE

Savoyard river is one of the oldest rivers in Detroit that played a major part in the settlement of Detroit city it was used for transportation of goods, farming and other household needs. It bordered the western edge of the fort and could be paddled by canoe almost to its end. Later, its banks were used to picnic and had always set a pretty picture of serenity, a little river that fed the land and nourished its people. A French artisan pulled water from it to make pottery by its banks. His name was Savoy, for which the river is named.

It originates in the swamps near the boundaries of Detroit city in 1700s and runs through city and merges in Detroit River.

In course of time, and increasingly as the years went on, the people living near the border of this stream used it as a drain, and after Fort Shelby was demolished, the bottom and sides, for some distance, were planked with lumber from that fortification.

It then became practically an open sewer; and, as such, lost all its primeval charms, and grew so offensive and malodorous that in 1836 the city was compelled, at a great expense, to convert it into a deep and covered sewer by enclosing it in stone.

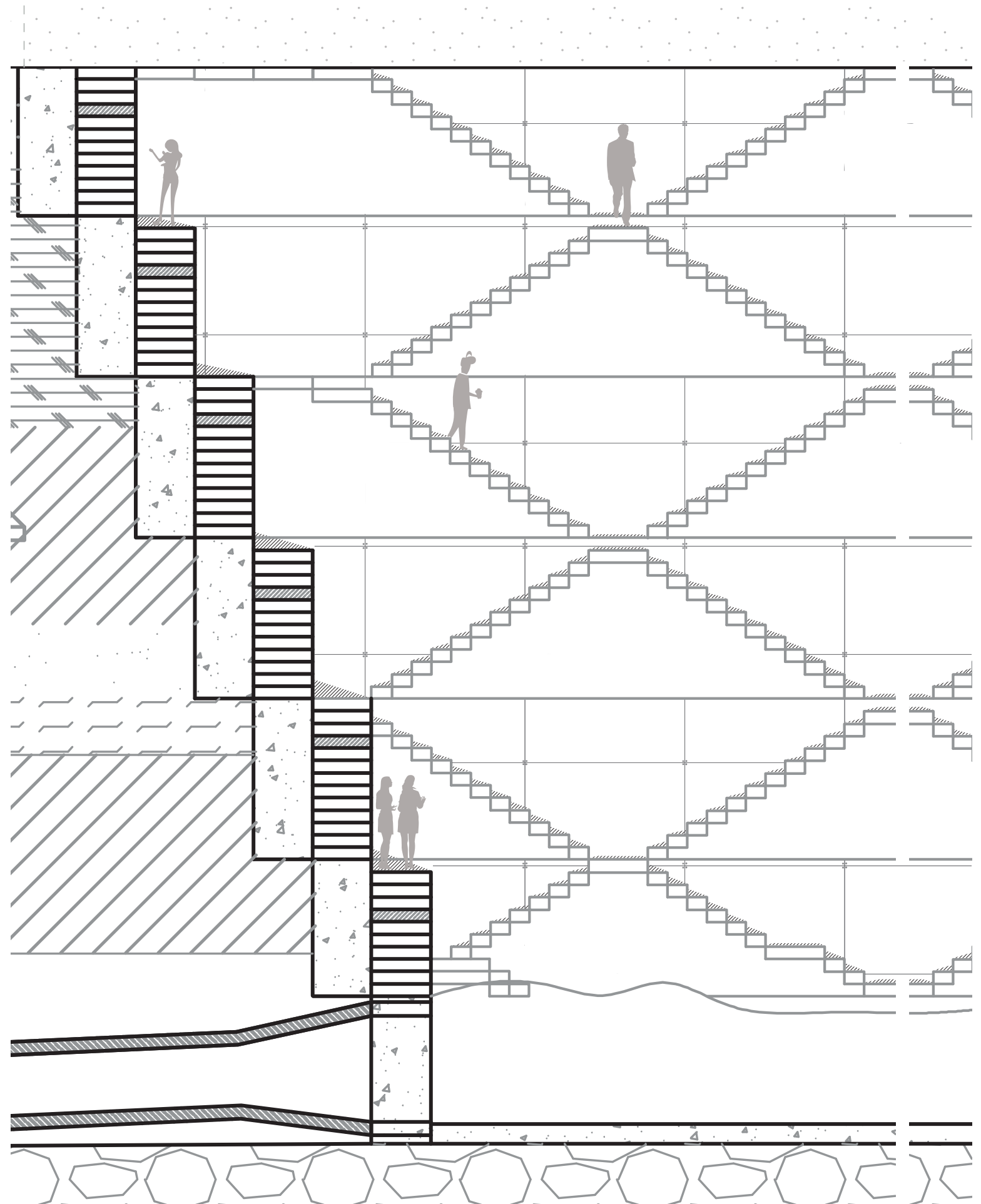
In 1925, The Buhl Building was completed, a great building of quality and taste. Oddly, the Buhl is 26 ½ stories high. Technically, to get to the 27th floor one must walk up a Terrazzo tile stairway to the top, where one will find, what was, a semi-private club called the Savoyard.

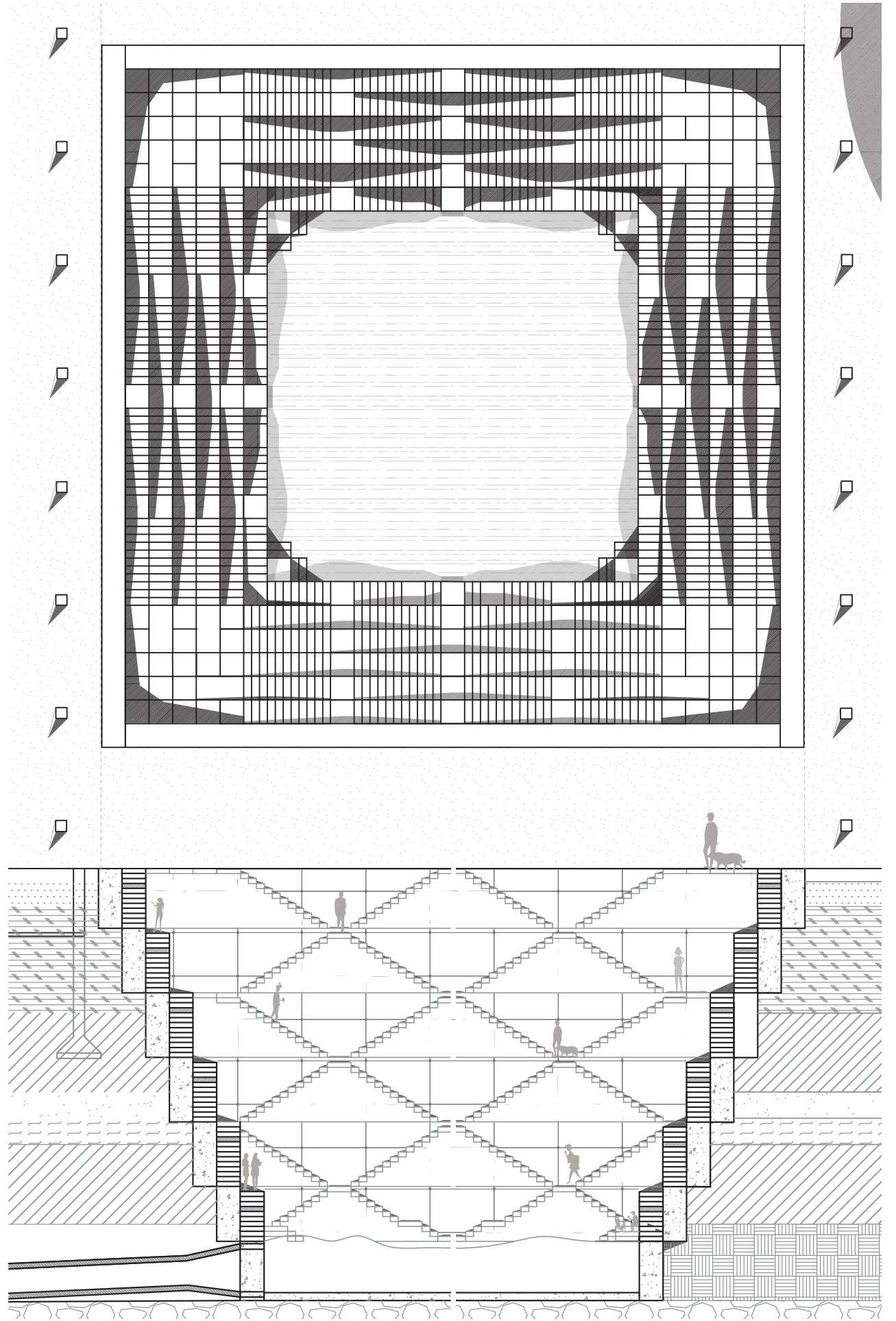
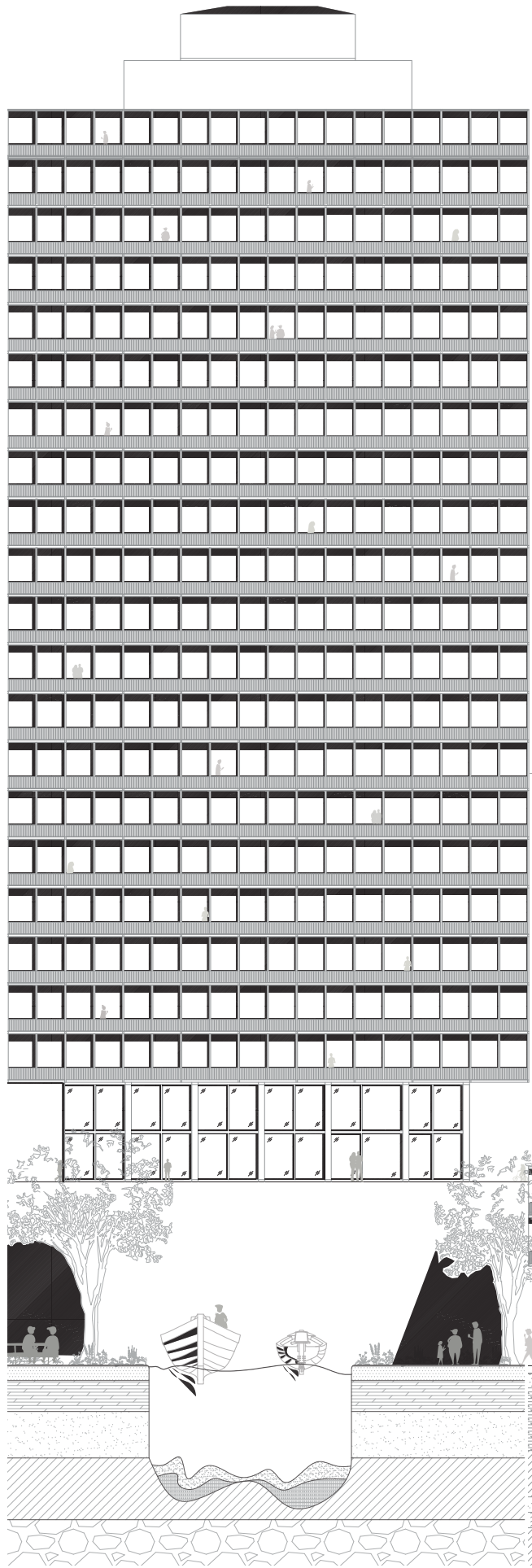
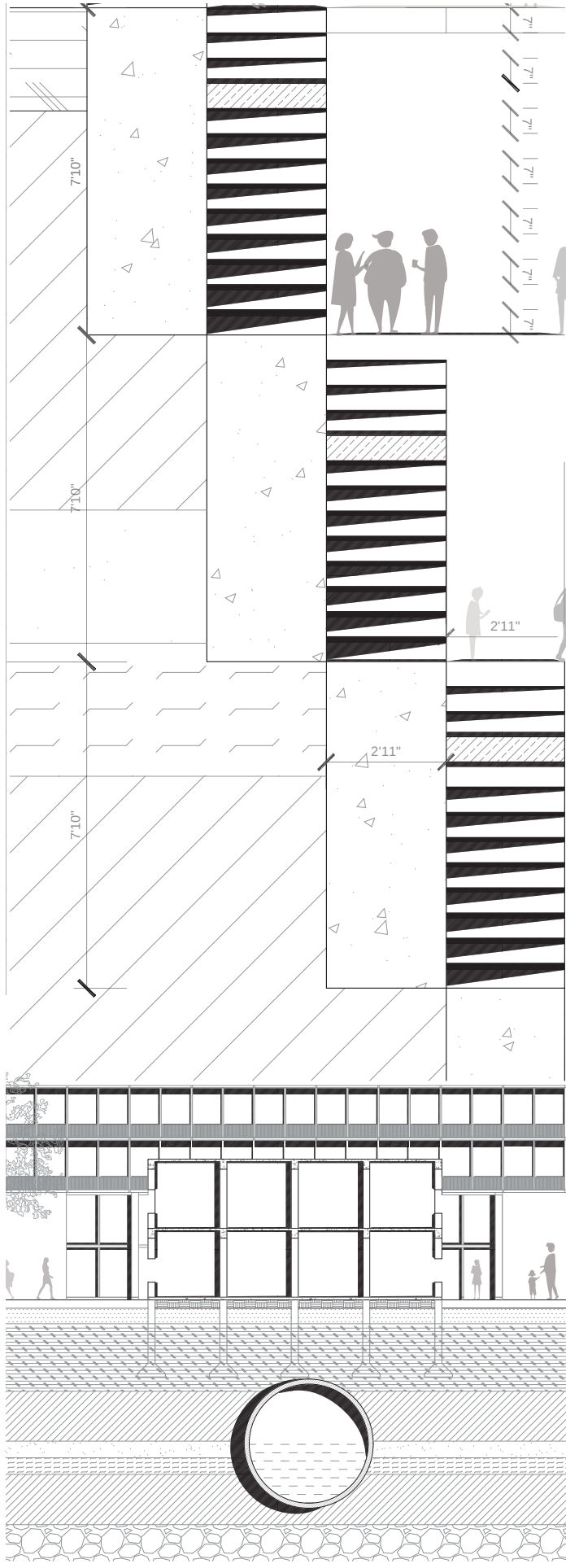
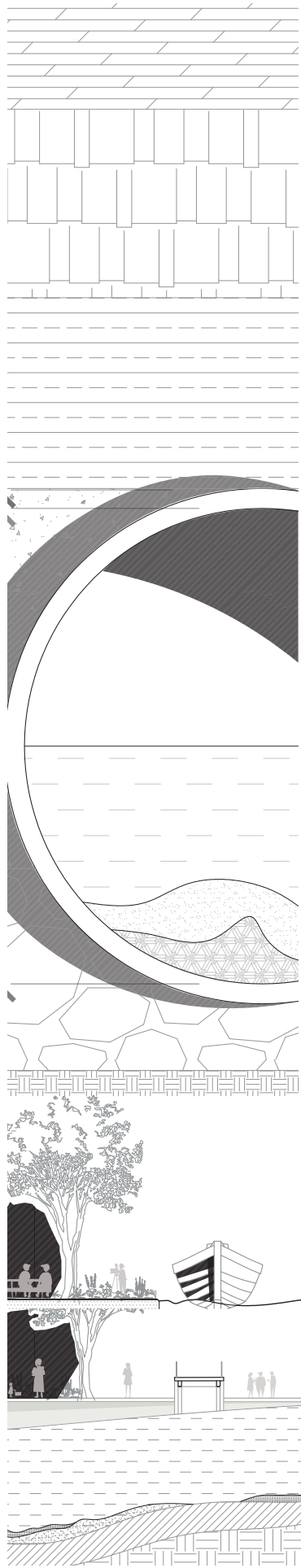
The Savoyard club has been vacant for about 30 years, sitting empty, lifeless, and rarely used. Perhaps, it stands as a sentinel, quietly saluting that which has outlived it, the little river that runs beneath.

In spite of huge granite and steel, the Savoyard still flows, deep within and beneath the dark recesses of a city.

This project aims at bringing back a part of Savoyard River to people to experience one of the oldest and important rivers in Detroit.

Savoyard river has a clean earthly source which is located today in Lafayette Park. By opening up the source of the river we can bring back a part of this river to tell its story.







MINUMENTAL

A Paradox of Scale

MINUMENTAL

A Paradox Of Scale

Institution Studio : Fall 2021

Site Location: Geneva, Switzerland

Instructors: Matias Del Campo

Team: Shilpa Pandey, Ali, Abdul

PROJECT NARRATIVE

Concept

We saw that Cern represents a paradox of scale; to detect the most minute particle; it had to construct the largest machine humanity has ever built. So large that its scale became unfathomable. This is why from the beginning, our goal was to create a library that was an integral part of CERN and FCC themselves. To create a library that would offer an immersive experience that attracts the public and takes them through a journey that tangibly represents CERN.

This is why we decided to sculpt and carve the library in the adjacent mountain, to immerse the user in a state of tension between the natural and the man-made. To create a library that is so large yet so hidden.

Process

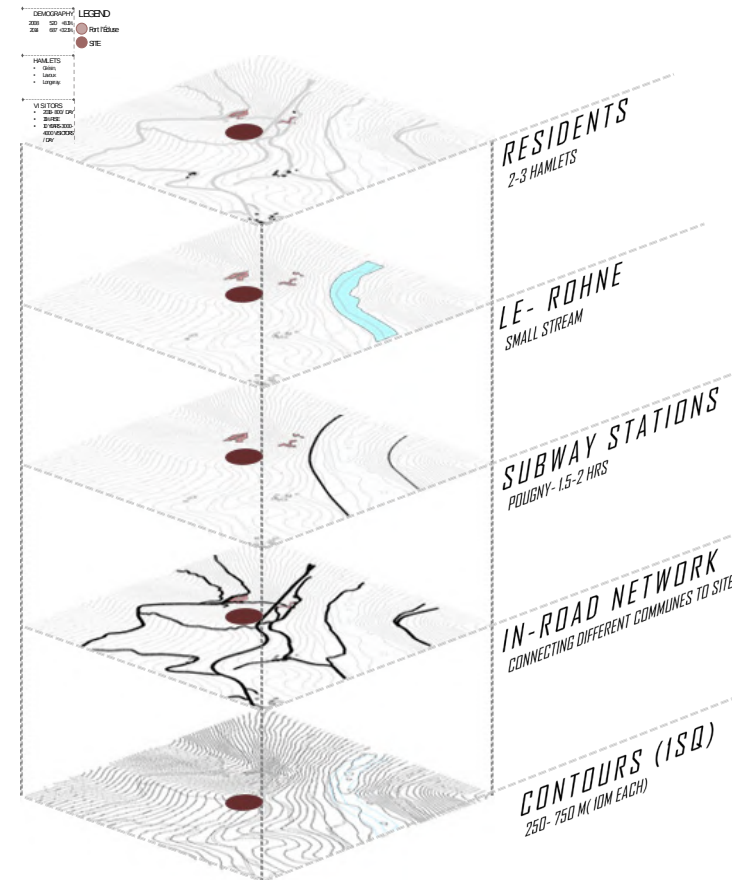
We started the design process of the library by building a data set of more than 7,000 section drawings. Then we trained a style GAN model and generated hundreds of new sections. The majority of these sections were very realistic and similar to conventional buildings, but we were looking for unconventional sections with interesting features that would help us achieve our goals in the library. We narrowed the results down to three sections and collaged them into one to create a single section. Then we ran the collaged section into style transfer with the same style as used in the campus to unify the architectural language of the interior with the exterior, which is already the most suitable for the library due to its straight lines and sharp edges. We transformed this result into linework that we used as a basis for the massing. We started the massing process with the program and functionality in mind.

3D Zoning

These volumes that are created are divided into two types, usable and nonusable spaces. Those that are nonusable

Material + Structure

For the users to fully experience nature's sheer scale and balance, these volumes had to have a sense of monumentality. In order to achieve that, we opted to expose the ceiling, walls with their raw stone material. For the volumes and spaces, we wanted most of them to be hanging and supported from above to complement the experience.



1 INTRODUCTION

CERN: It Is The European Organization for Nuclear Research.

- Established 1954,
- Location: Geneva
- A European research organization
- largest particle physics laboratory
- The Large Hadron Collider (LHC), the world's largest and highest-energy particle collider.

2 LARGE HADRON COLLIDER

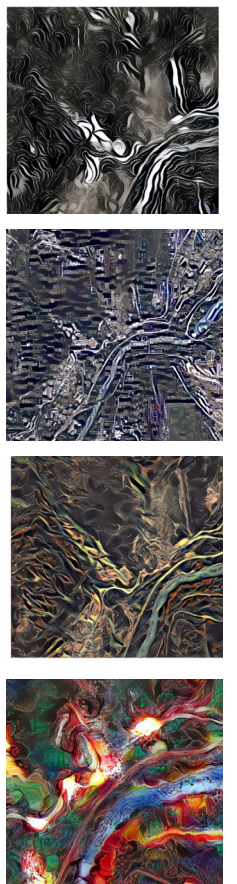
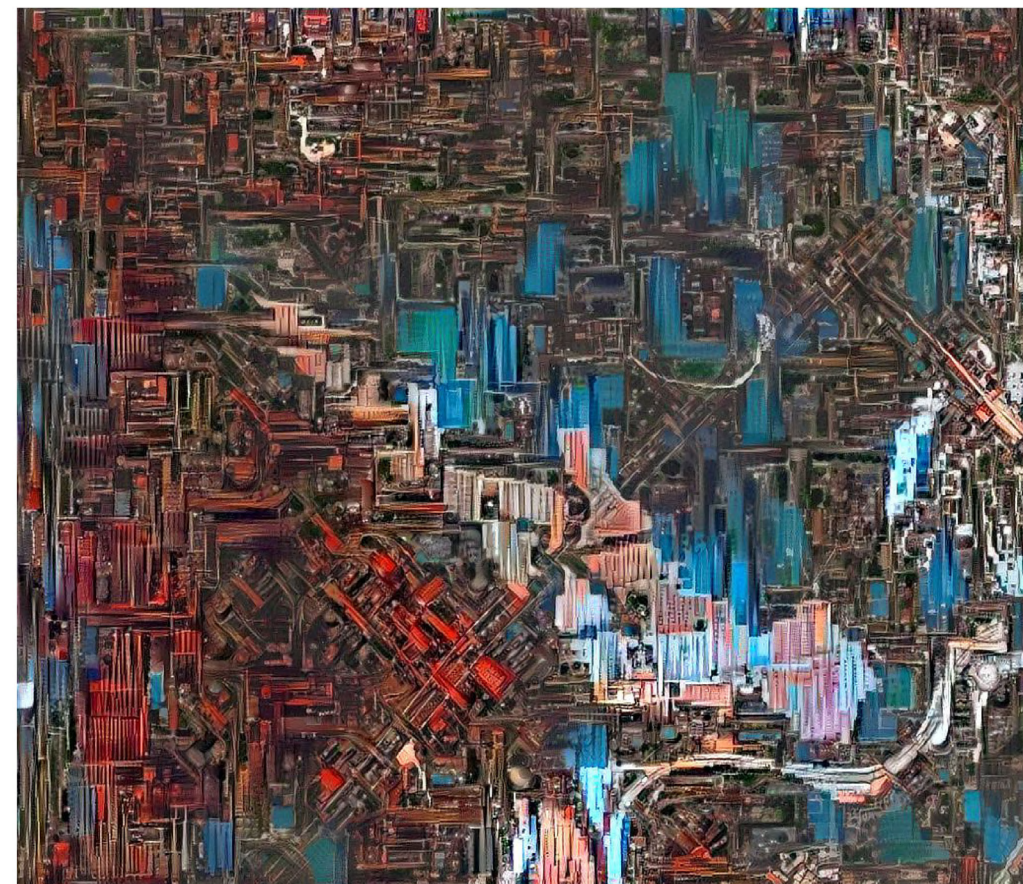
- Lies in a tunnel 27 kilometers (17 mi)
- Deep as 175 meters (574 ft)
- Beneath the Fra-Swizz border near Geneva.

3 FUTURE CIRCULAR COLLIDER

- The Future Circular Collider (FCC) is to extend the research currently being conducted at the LHC. construction: 100-kilometre tunnel.

4 RESEARCH STATION

- Six different detecting subsystems arranged in layers around the collision point record the paths, momentum, and energy of the particles,
- Similarly the FCC is gonna require such substations to detect and record the collision.



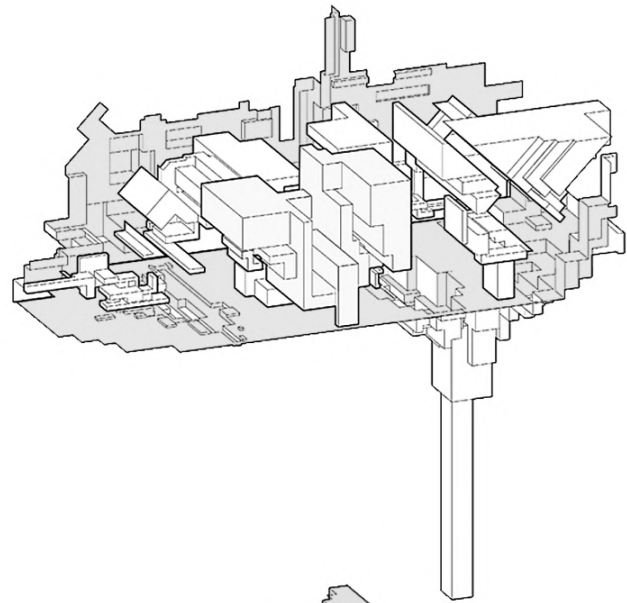
STYLE TRANSFER: Its an algorithm can combine two content images and create a new image with the features of parent images.



MASTER PLAN : zoning was done based on different area that are required for the research station such as parking, admin block etc,

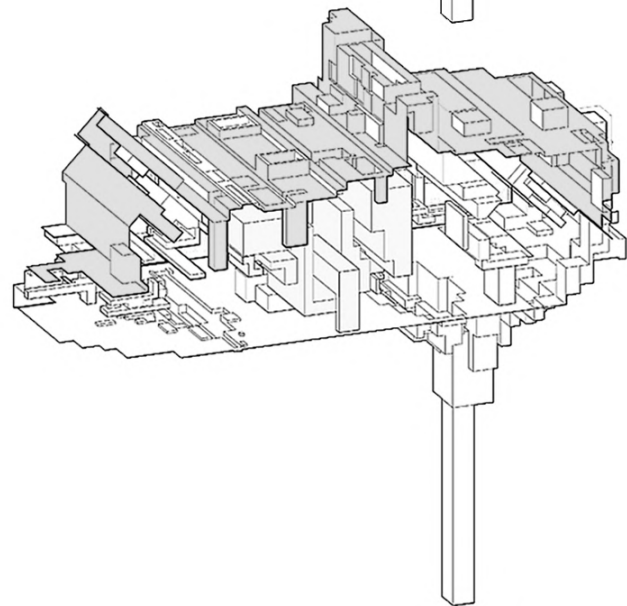


Master Plan Development Diagram



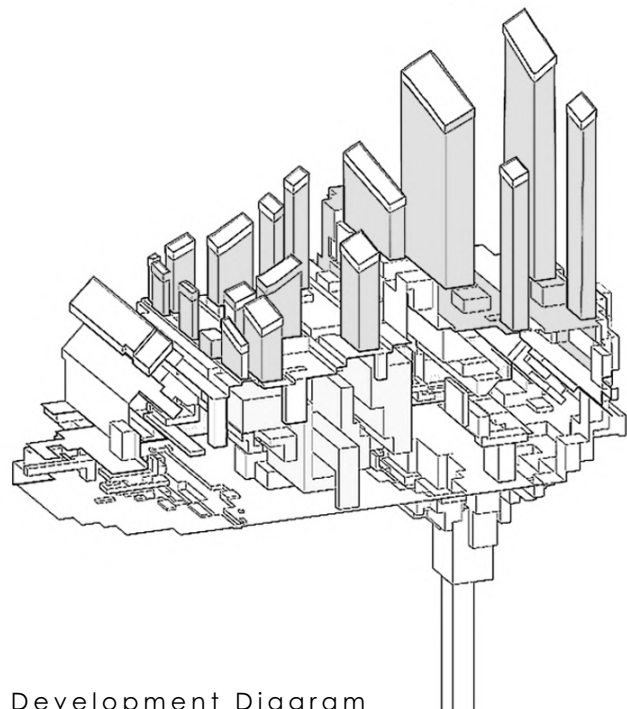
01

The Carving Coming Out From The Roof And The Walls Are The Stalactites Features That Were Consciously Designed To Make And Give A Feel Of The Cave



02

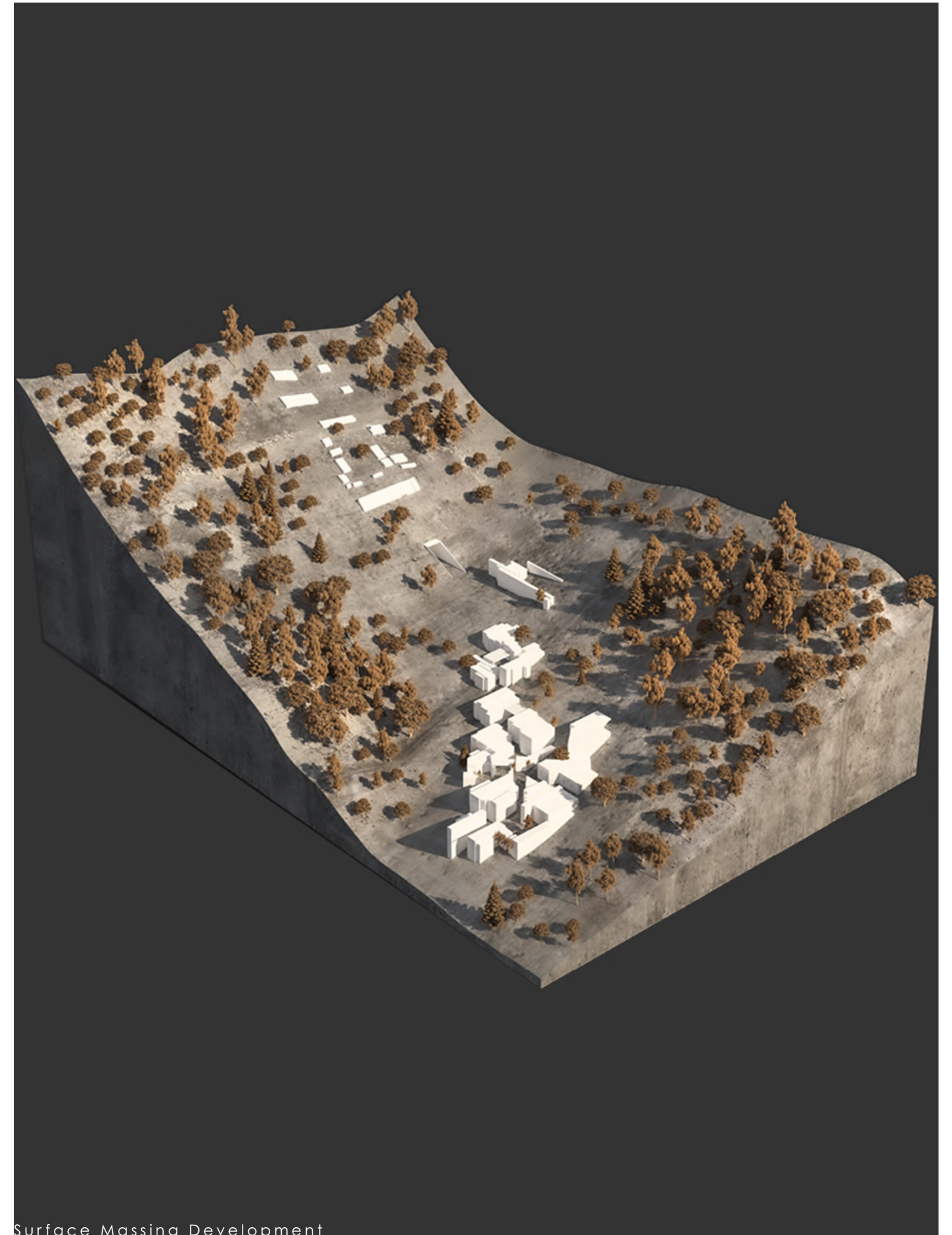
Making These Designs Have Mixed Function Such As These Feature Are Use As Ornaments, Sitting Spaces, Some Are Structural Elements



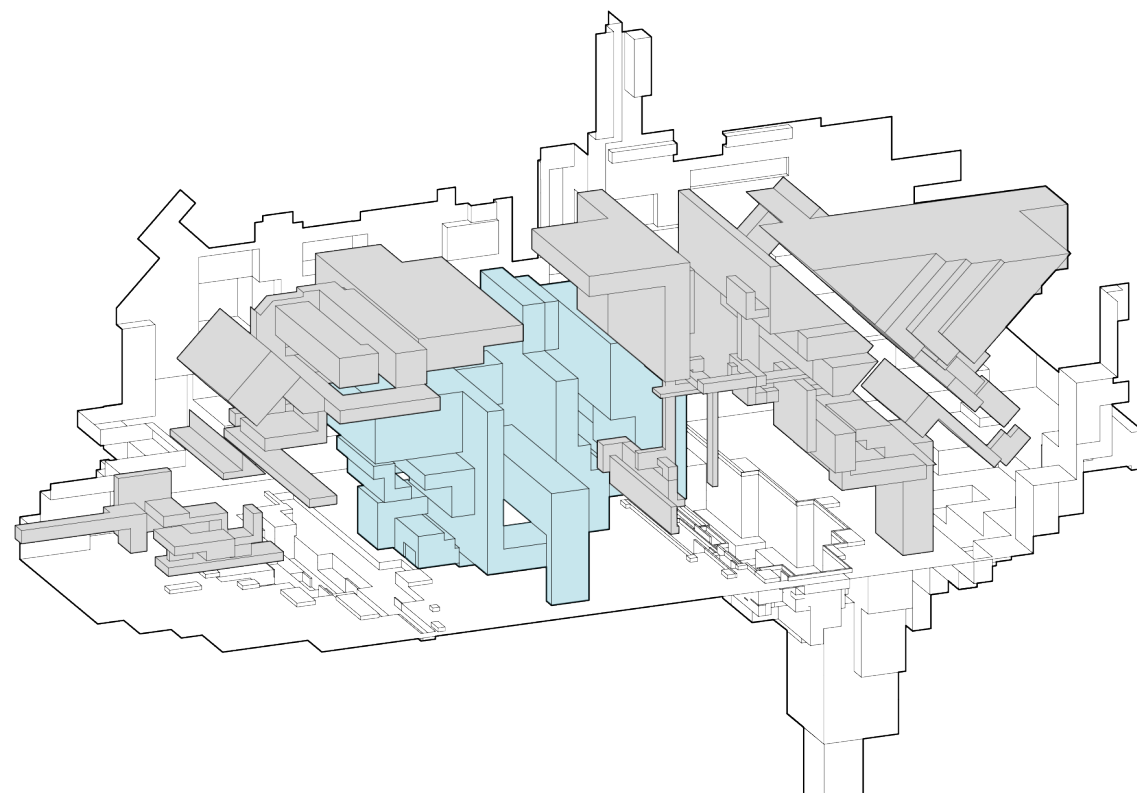
03

The Back End of The Library Is Also Designed Keeping Mind the Future Expansion.

Envelope Development Diagram

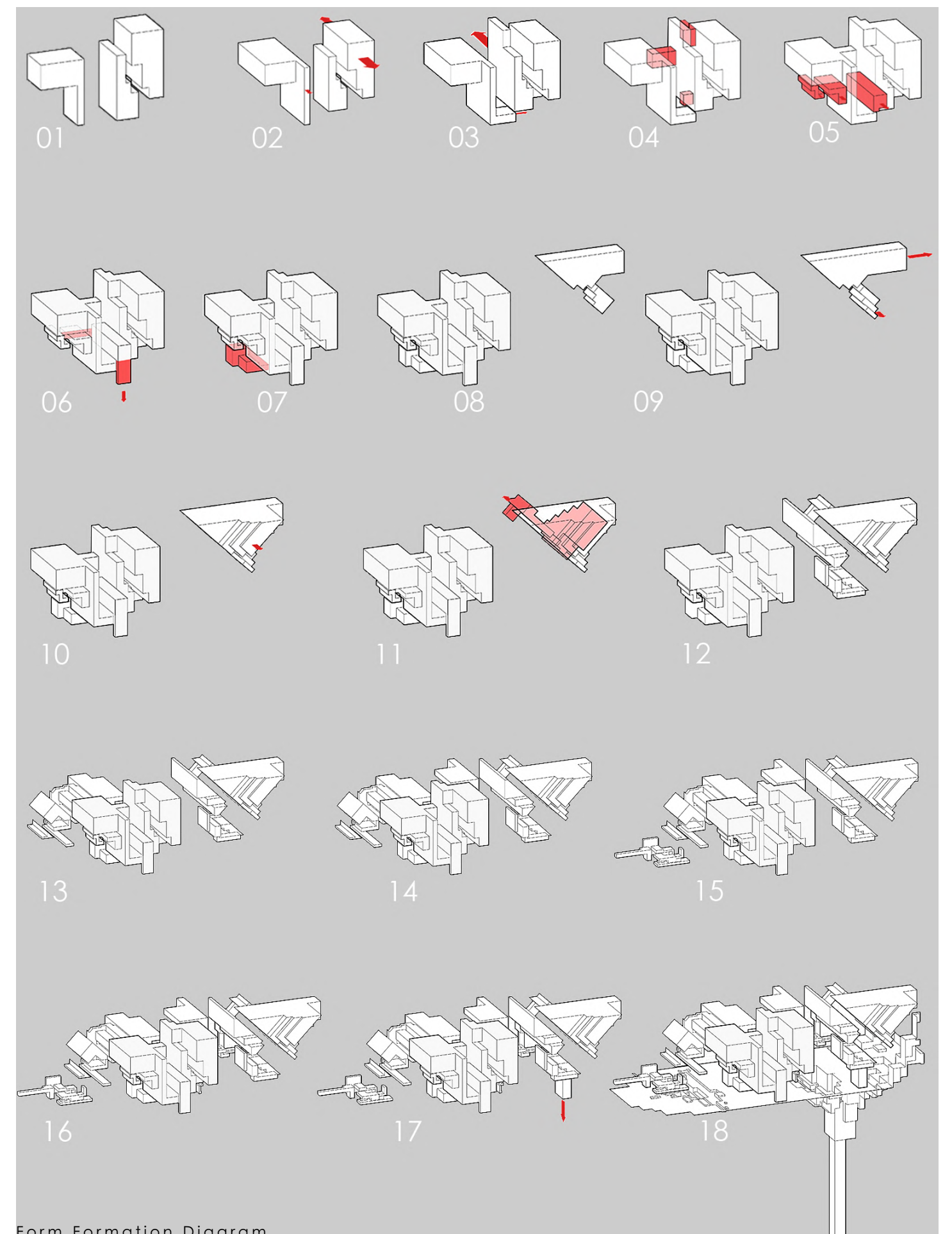


Surface Massing Development

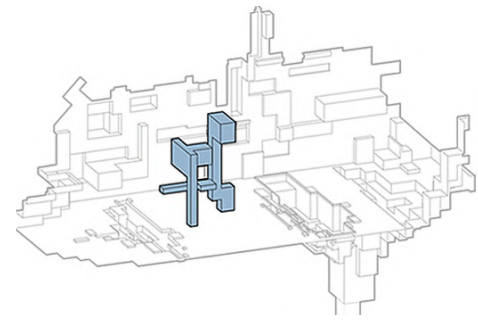


StyleGan Video
Prepared by 5000 sections data set

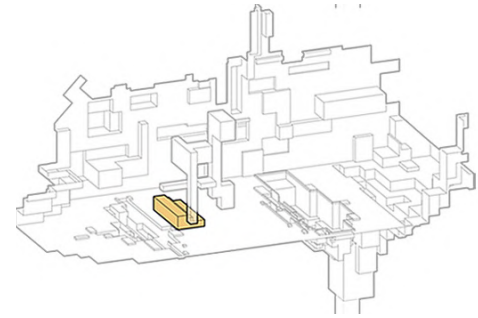
Zoning Diagram



Form Formation Diagram



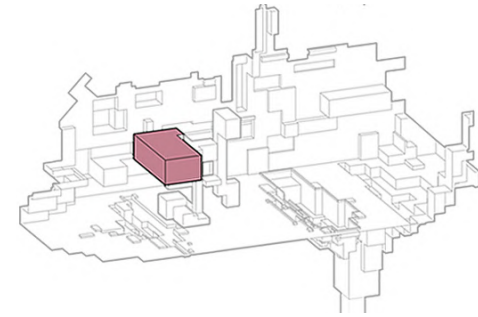
01. CIRCULATION



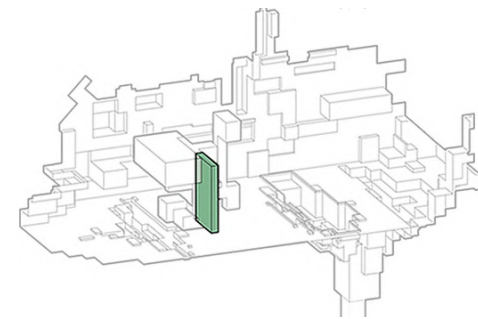
02. ENTRANCE



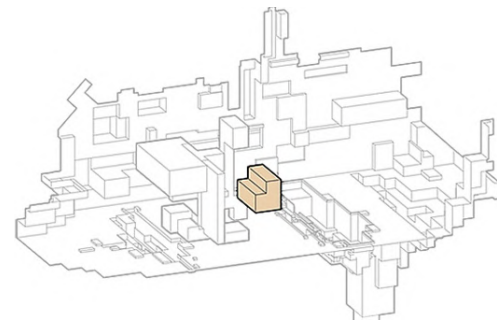
03. GIFT SHOP AND CAFETERIA



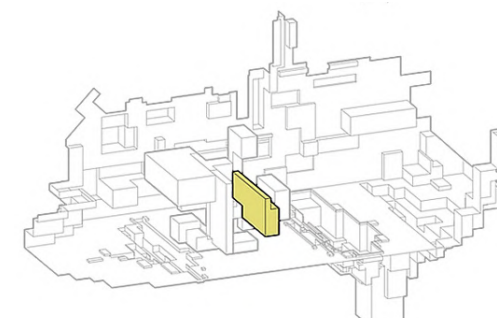
04. RARE BOOK LIBRARY



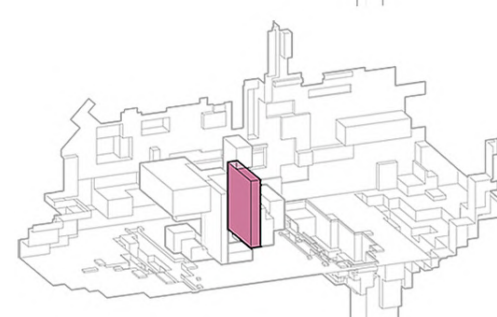
05. VAULT



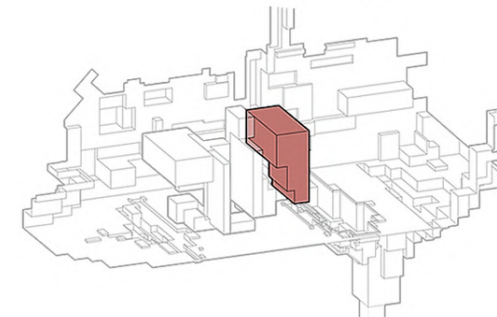
06. LOBBY



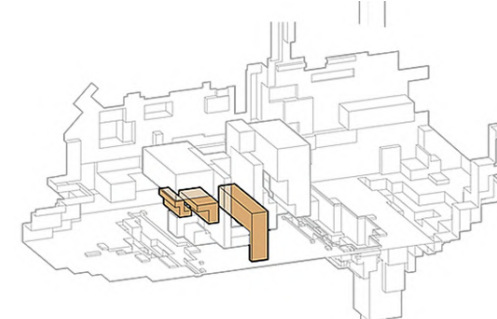
07. EXIHIBITION



08. RESEARCHER'S LIBRARY

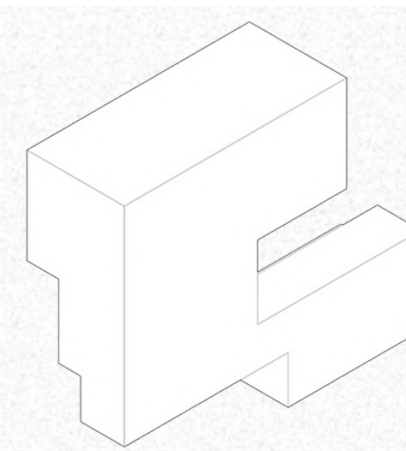


09. MAIN READING HALL

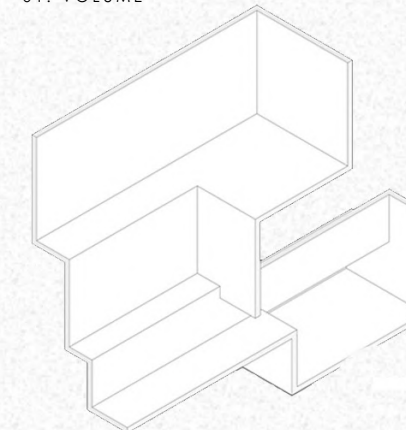


10. CHILDREN'S LIBRARY

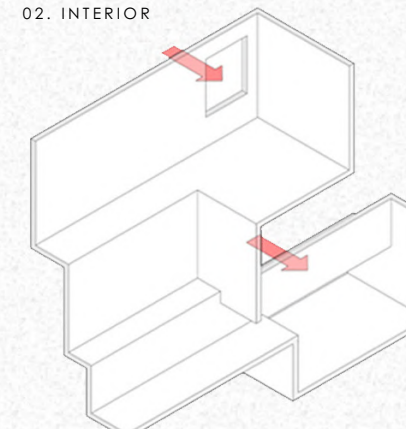
INTERNAL SPACES DEVELOPMENT DIAGRAMS



01. VOLUME



02. INTERIOR

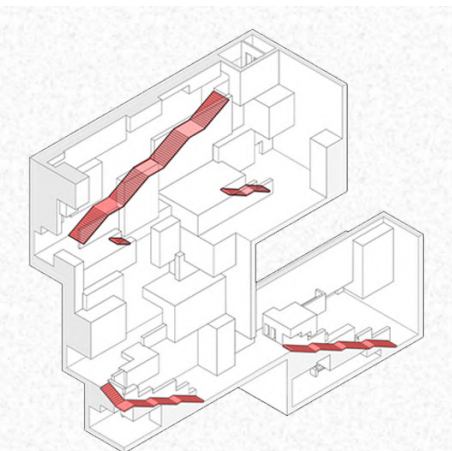


03. ACCESS

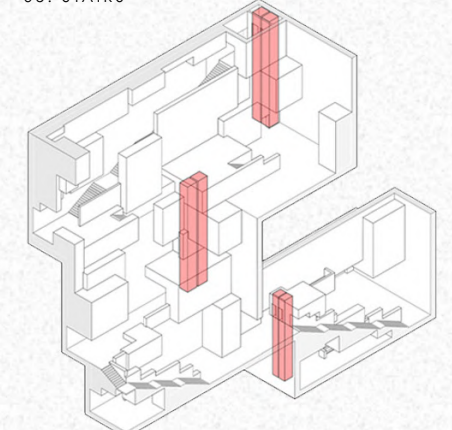


04. SPACES

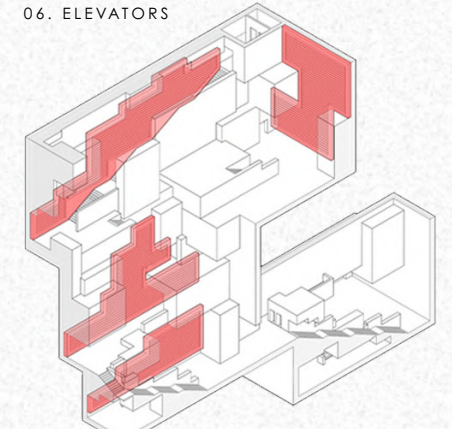
MAIN READING HALL DEVELOPMENT DIAGRAMS



05. STAIRS



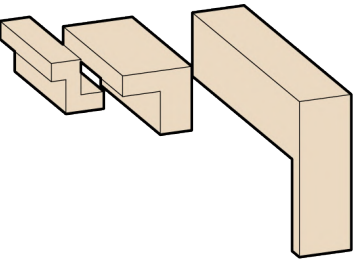
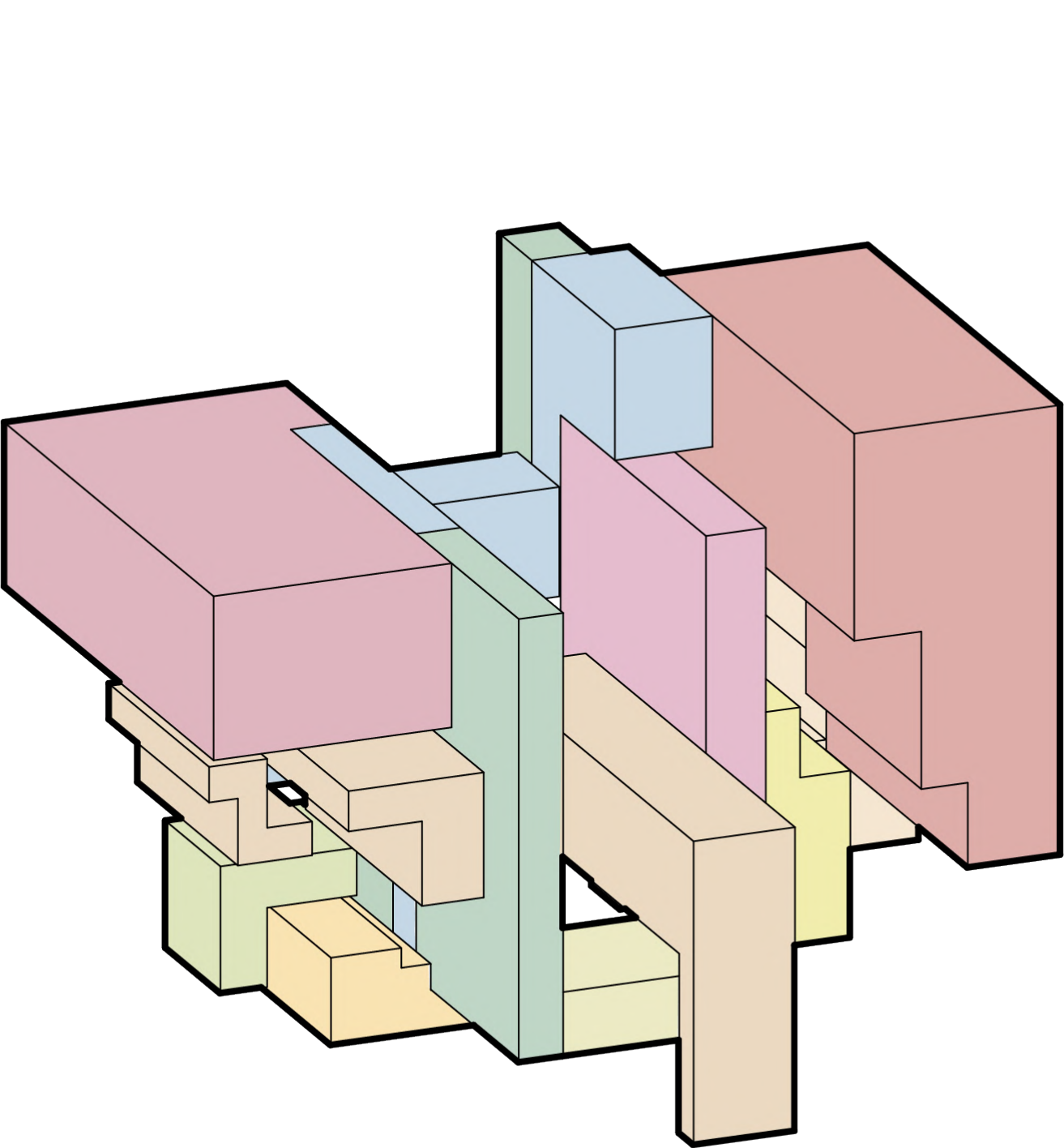
06. ELEVATORS



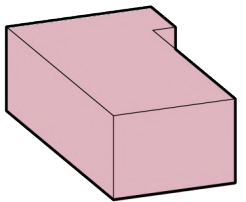
07. BOOK SHELVES



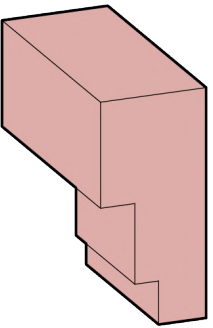
08. SITING AND HANDRAIL



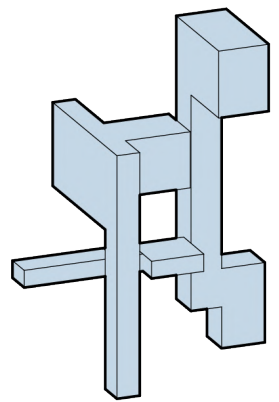
CHILDREN'S LIBRARY



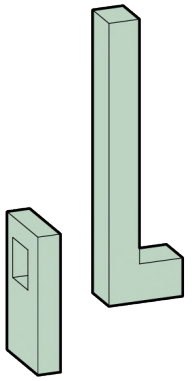
RARE BOOK LIBRARY



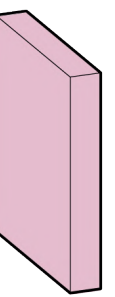
MAIN READING HALL



CIRCULATION



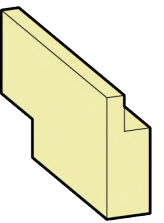
MECHANICAL AND SERVICES



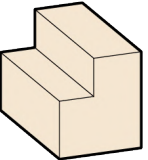
RESEARCHER'S LIBRARY



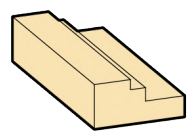
VAULTS



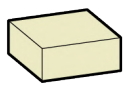
EXHIBITION



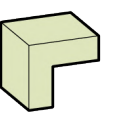
LOBBY



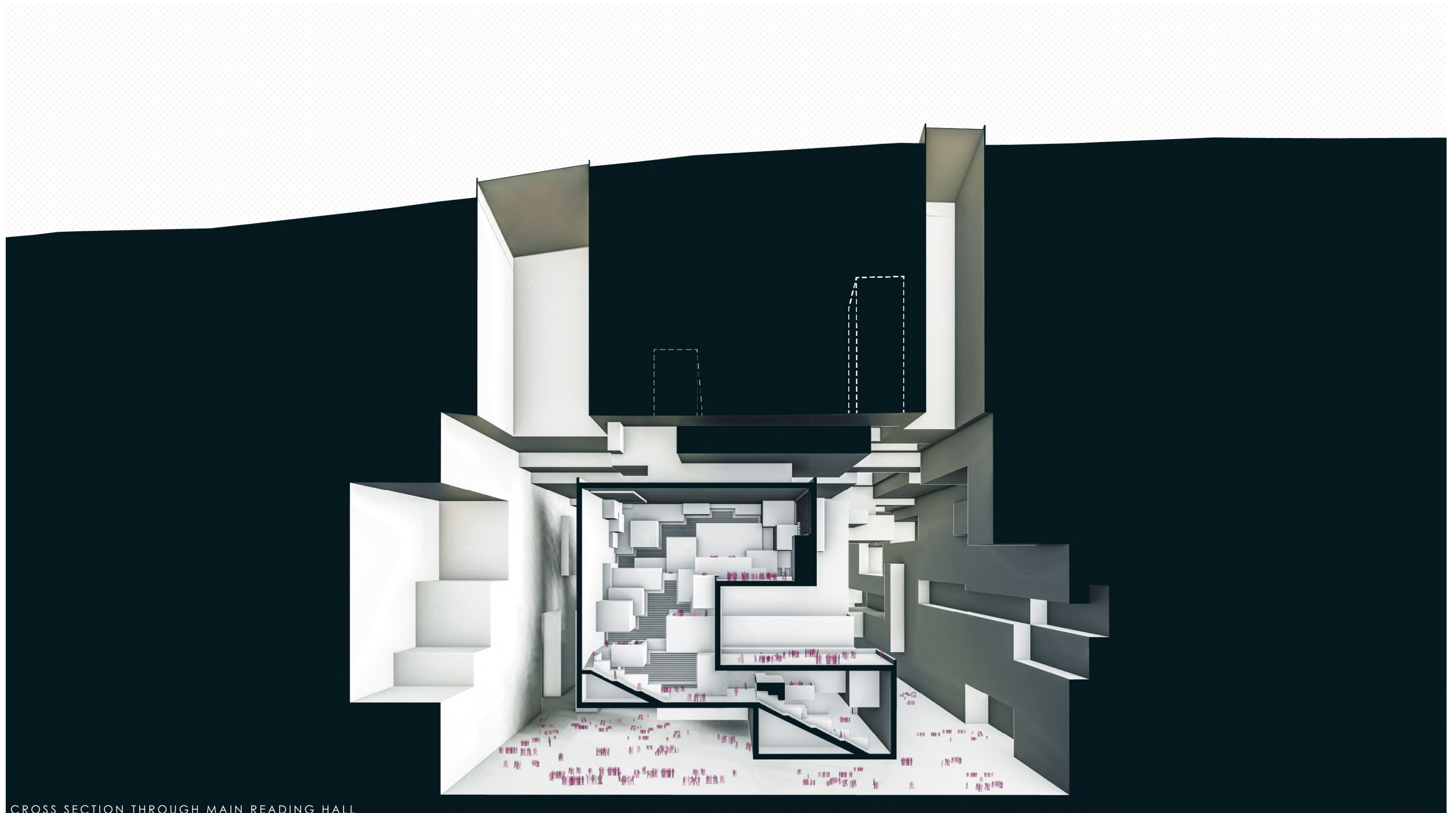
ENTRANCE



LOBBY



GIFT SHOP AND CAFETERIA



CROSS SECTION THROUGH MAIN READING HALL





REDEVELOPMENT OF TALEGAON RAILWAY STATION

Redesigning Transit connectivity in and around a developing town

RDTRS

Redevelopment of Railway Station

Urban Studio : Fall 2019

Site Location: Talegaon, Pune, India

Instructors: Seemantini

Individual : Academic work

PROJECT NARRATIVE

site is located in talegaon dabhade, pune. its a small town on the outskirts of pune city. this town is located near to a hill station (lonavala) and has all the features of a hill station such mountains, hill tops, lakes and beautiful scenic view with grassland all around.

in this small town with 13,864 household and The population is 56,435 that can be split between 29,033 males and 27,402 females out of which 60% of the population is working class population. hence mode of transportation and connectivity to major cities such as pune(38 km) and mumbai (120 km) plays a very important role and the mode of transportation in talegaon comprises of two ways 1st: road way that is travelling by public or one's own private vehicle and the other mode is railway connectivity with other towns and cities.

Talegaon railway station or Talegaon station is an important railway station on the Mumbai-Pune railway route. It has two platforms, five lines and one footbridge. This is a major halt for Pune Suburban Railway trains. This station serves as terminal for Pune-Talegaon suburban trains.

The land for the construction of the Talegaon railway station was given to the British government by the Sardar Dabhade family. Now it is owned by Indian Railways.

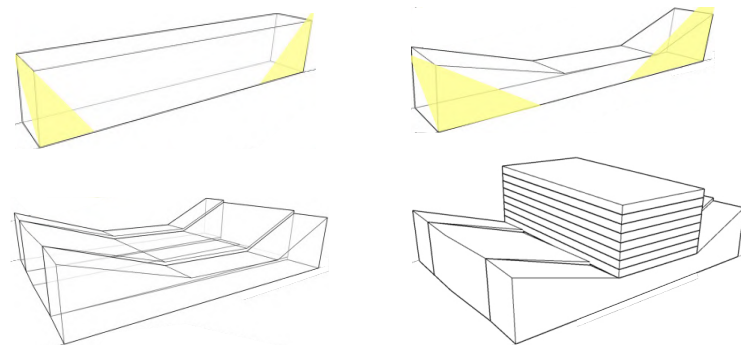
now as the population of talegaon is increasing due to growth of industrial area around and in the town government has proposed for the expansion of talegaon railway station into a junction between mumbai and pune.

Talegaon MIDC, an industrial area, is situated nearby this station. Hence the use and requirement for development of talegaon railway station has increased.

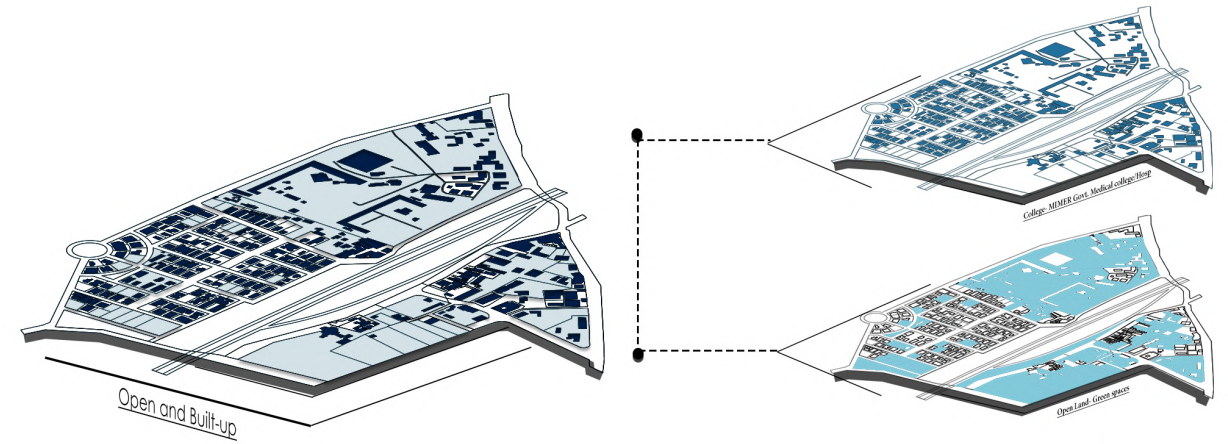
Ownership : Central Railway Authority

Site Area : 89000 Sqm

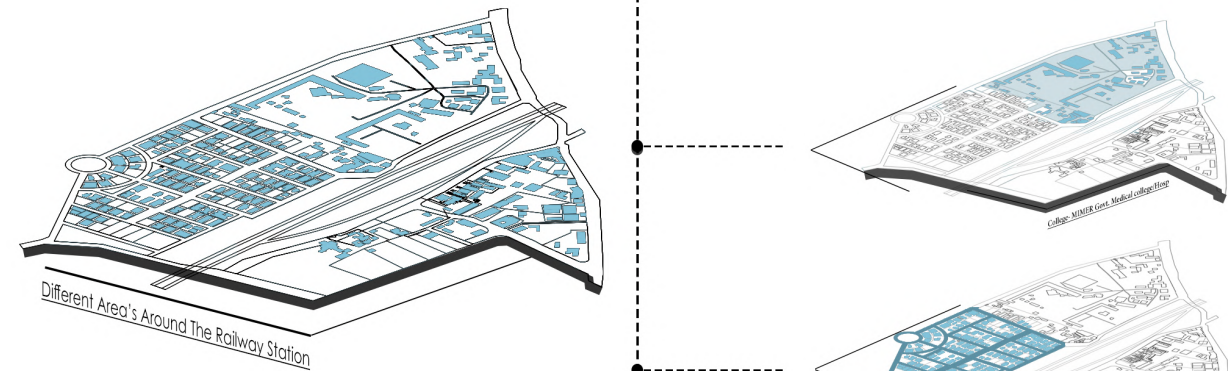
Built Up: 18000 Sqm



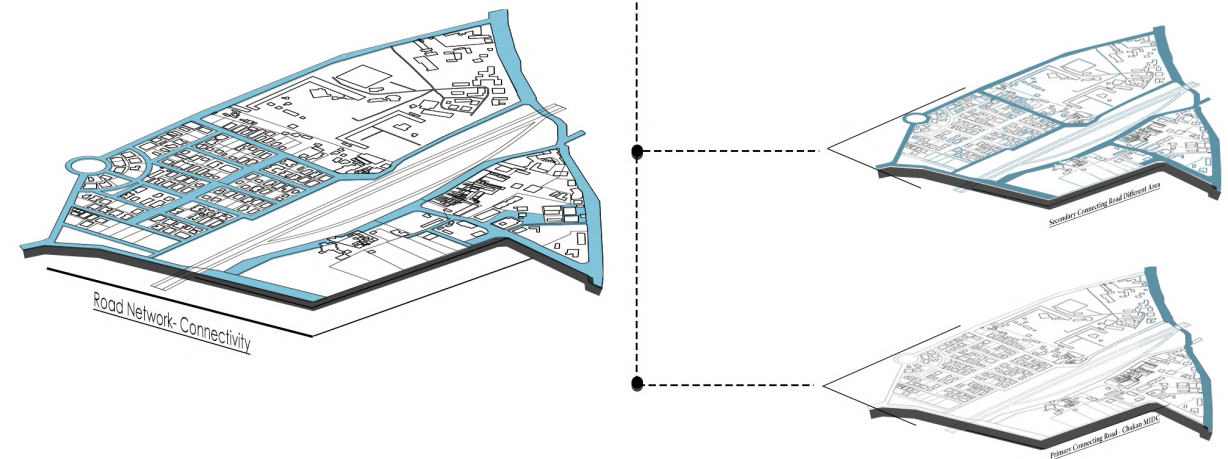
Conceptual Diagram



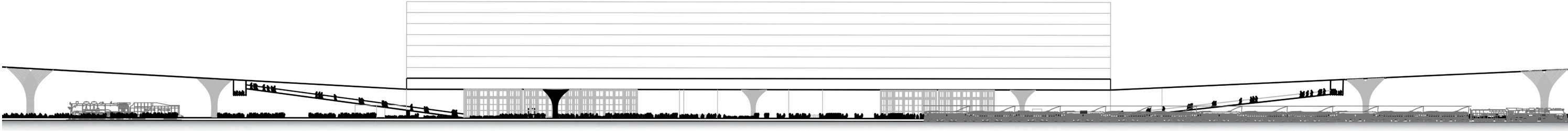
The residential zone near the station is very dense. But the same time the houses are very old and need to re-developed leave aside the densely populated residential zone there is abundant open and green spaces around the site area.



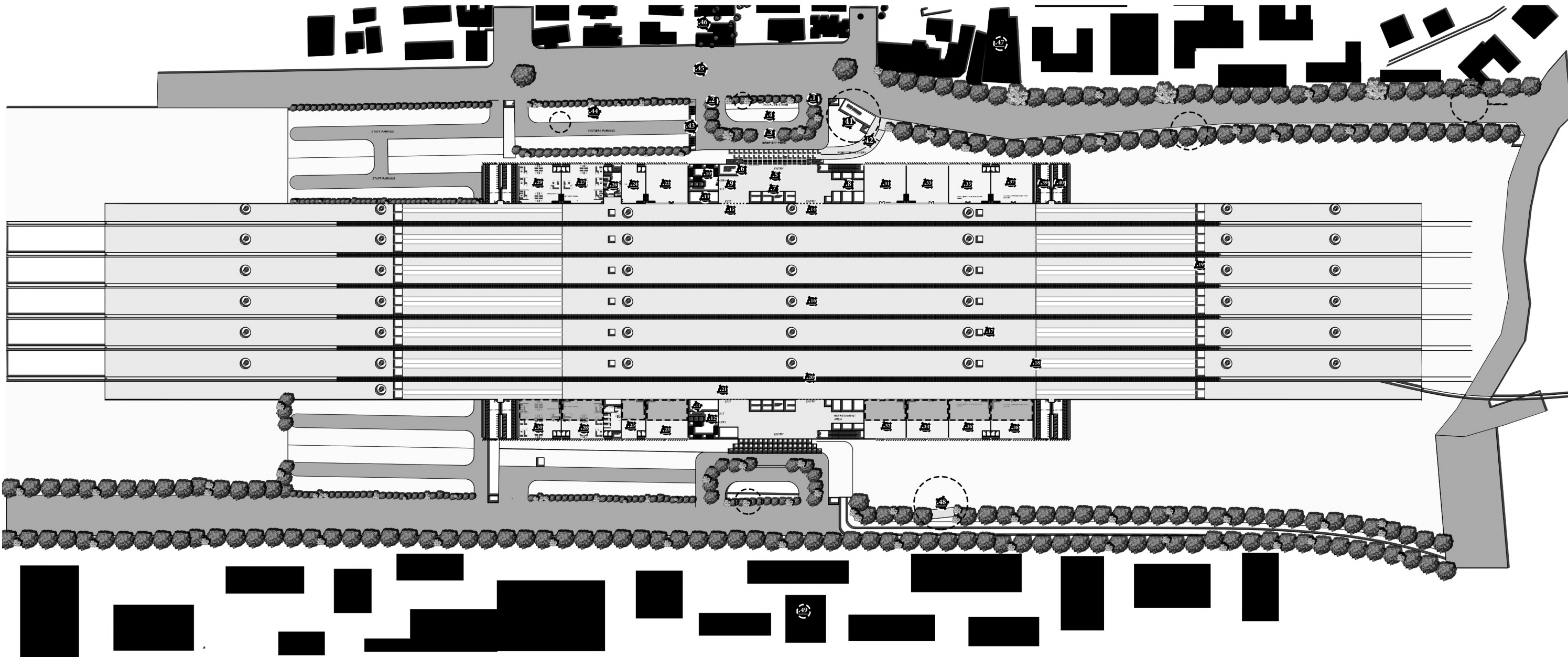
There are three types of zones around the station site:
1st is a densely populated residential zone.
2nd is a institutional zone ie MIMER government hospital and college
3rd is the slum area, illegal houses are built as the land is owned by the government of pune.



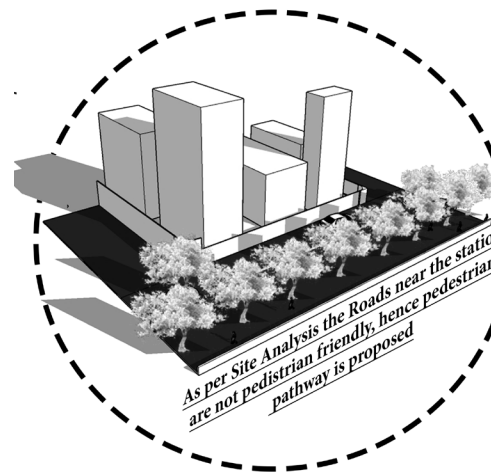
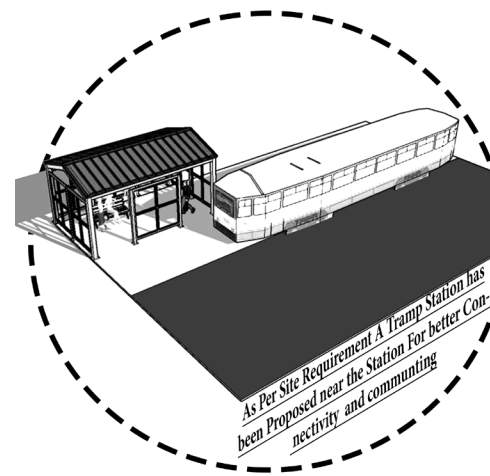
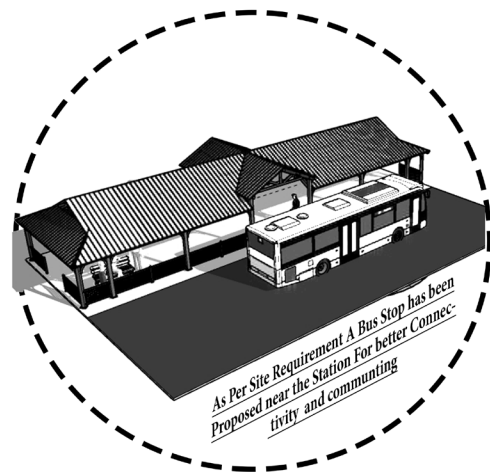
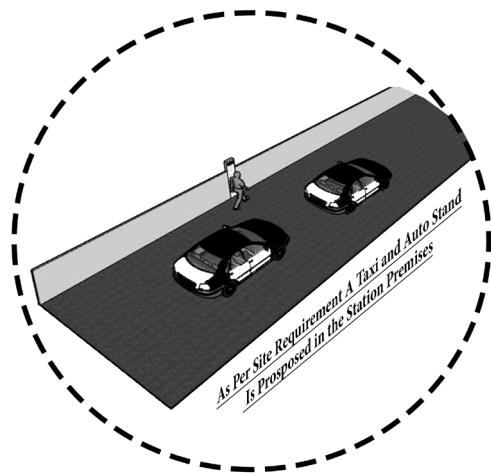
Site And Context Analysis



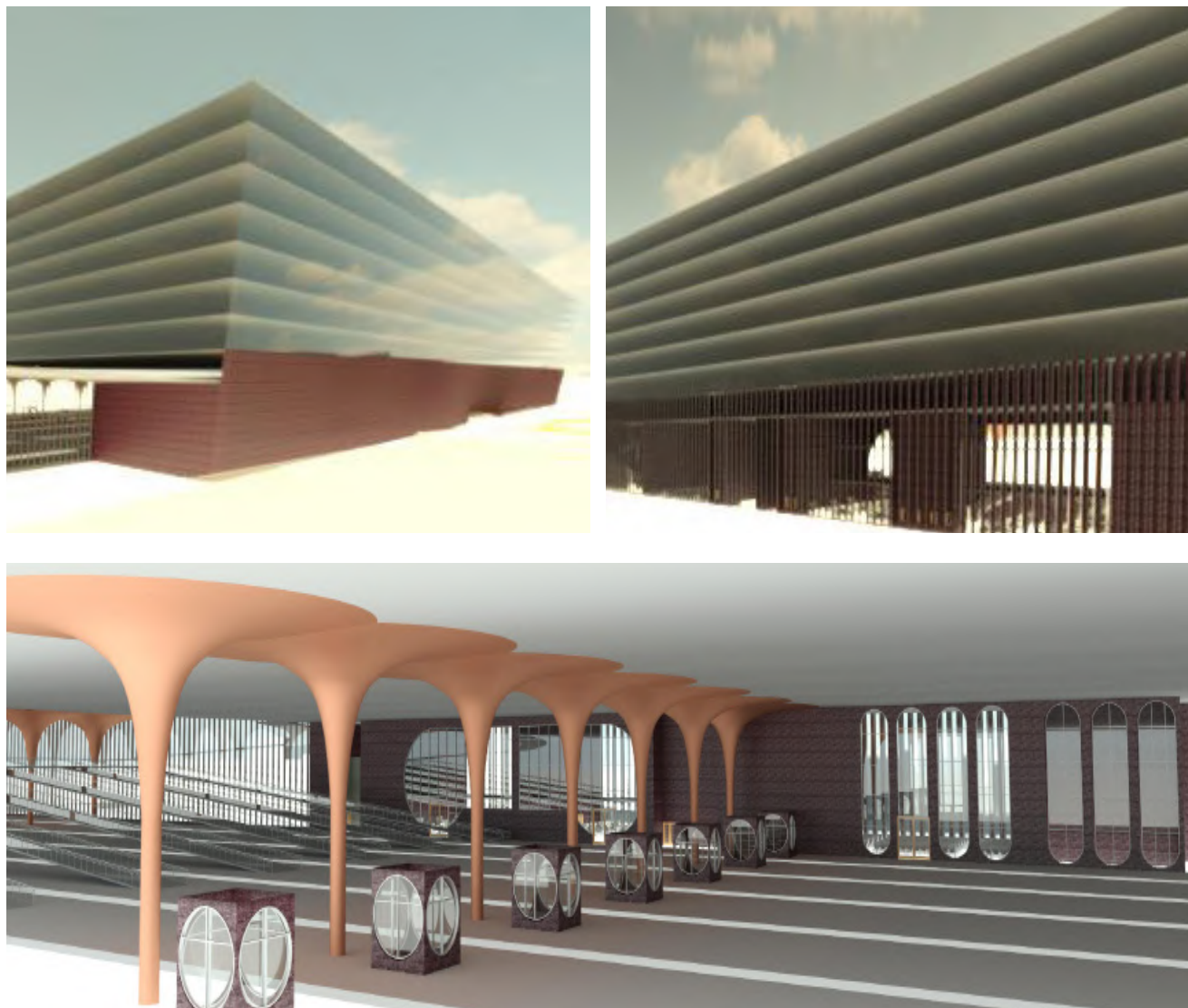
LONGITUDINAL SECTION OF RAILWAY STATION



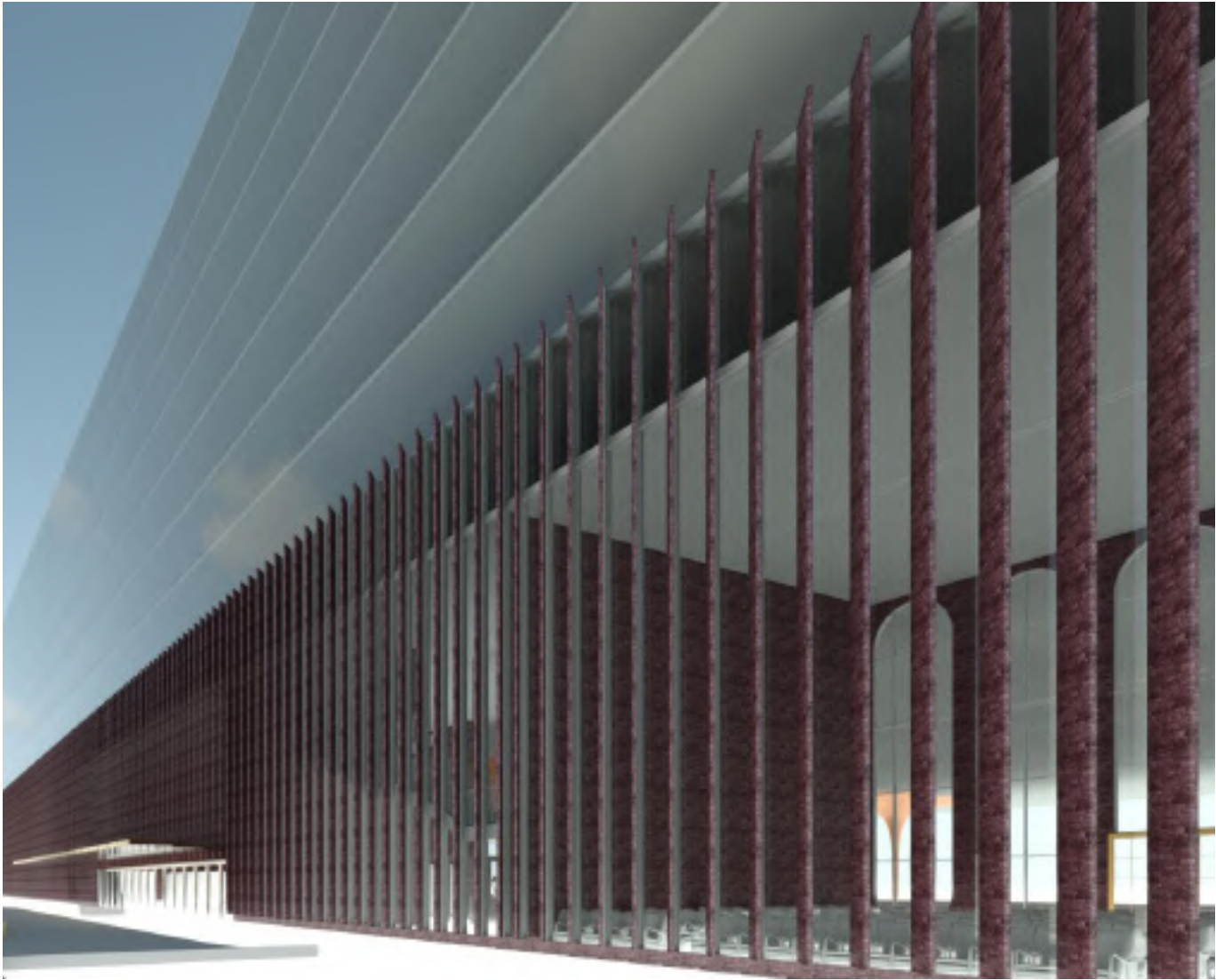
MASTER PLAN OF THE RAILWAY STATION



FEATURES OF MASTER PLAN



VIEWS



EXTERNAL VIEW



INTERIOR VIEW



KASHMIR UNIVERSITY

TYPE: PROFESSIONAL

PURPOSE: COLLEGE AND ADMINISTRATIVE BLOCK

*In This Project Ana Designs Was Given an Opportunity to Design Different Blocks Of Kashmir University Such As Its New Administrative Block, Law College Etc.,
It Was Development and Expansion Project This Project Gives An Opportunity To Learn And Understand Vernacular And Contextual Architecture In Real Life*

UNIVERSITY OF KASHMIR

NEW ADMINISTRATION BLOCK & LAW FACULTY

"Prefab construction to deal with the climatic and social challenges at the location"

01



NEW ADMINISTRATIVE BLOCK

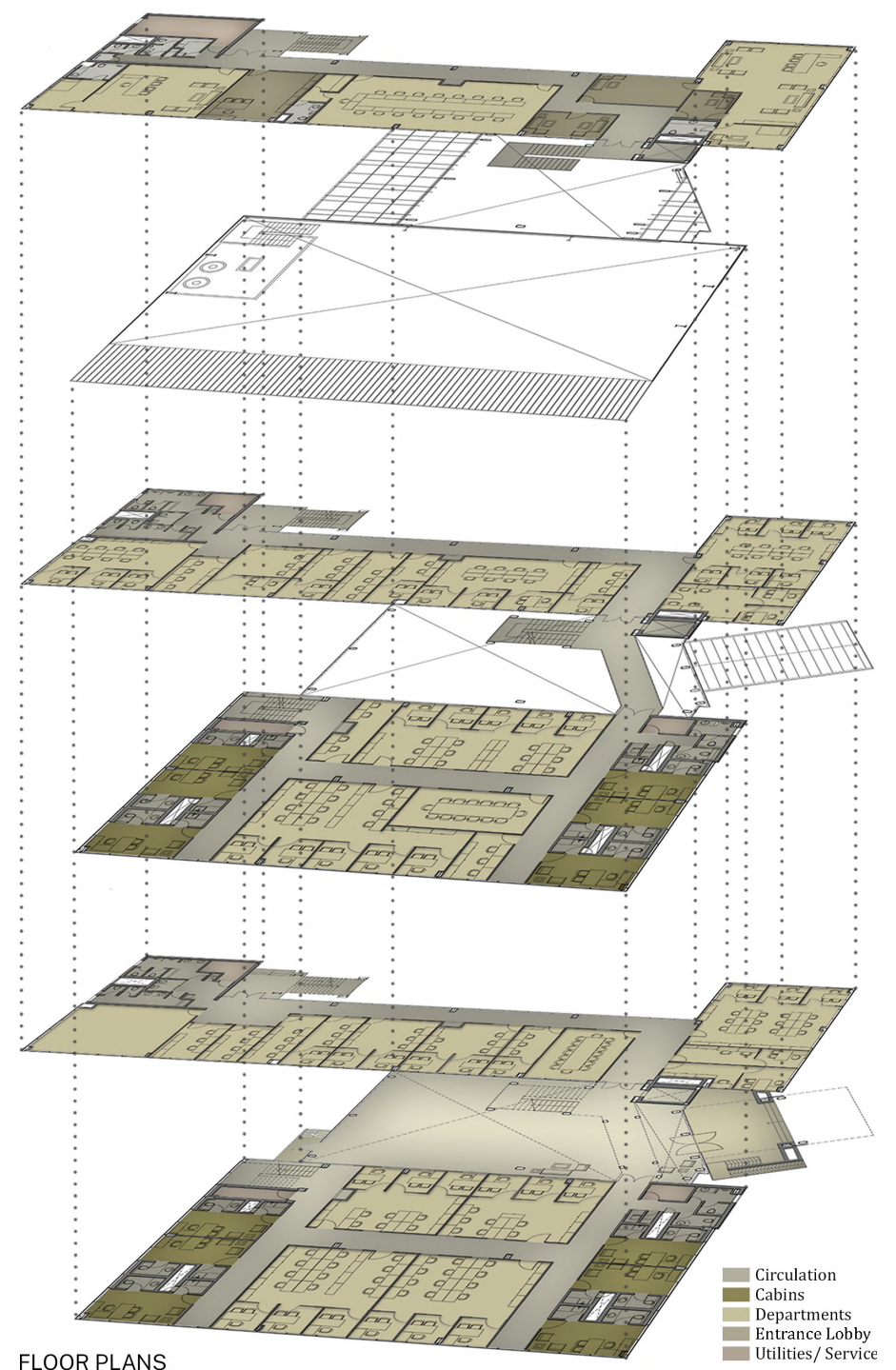
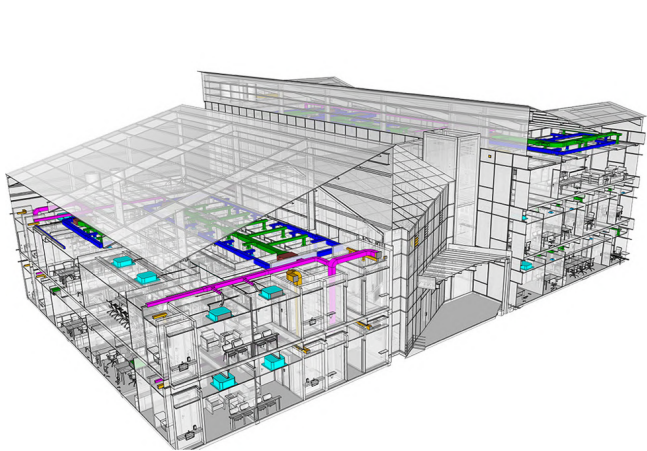


University of Kashmir in Srinagar is one of the oldest and most reputed institutions of higher learning in the valley.

The University has grown in size and stature over the years, and a need was felt to create an administrative hub, which could accommodate the office of the Vice Chancellor, the Registrar and Deans, apart from the administrative heads such as Finance and Accounts, Estates and Development and various other administrative functions.

The University wanted a building that was respectful of the vernacular language, and yet a high fit and high performance contemporary building. They wanted a building that would utilise current trends in open work culture, natural light, informal interaction spaces and all weather comfort conditioning.

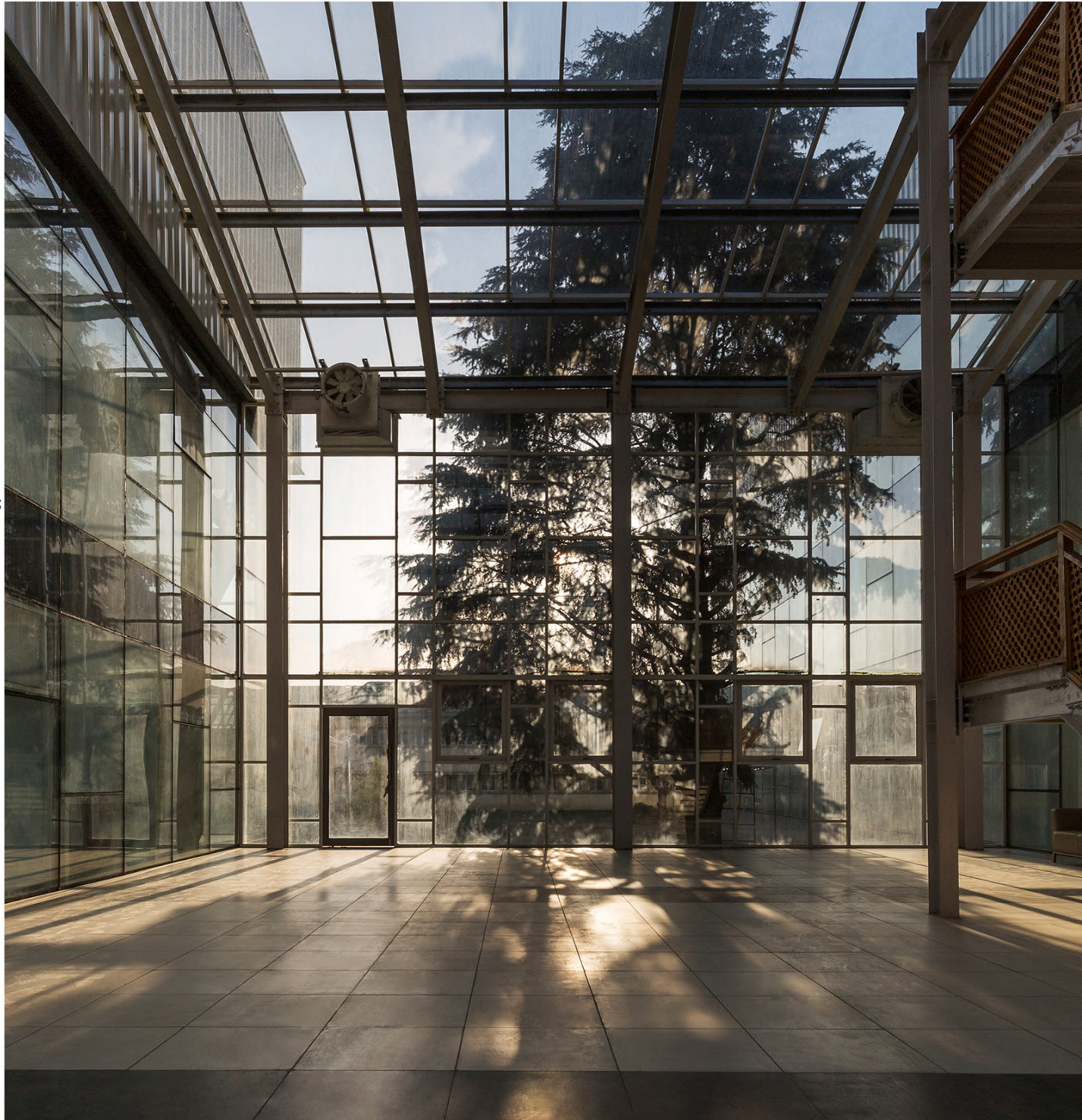
At the same time, the building needed to be secure, allowing for confidentiality and security in keeping with the environment.



The New Administration facility for the University of Kashmir in Hazratbal, Srinagar, is a showcase of the openness, inventiveness and contemporary nature of the University, while respecting the sense of place, culture and environment.

The building is designed for spatial and material optimization, energy efficiency, human interaction, comfort and the celebration of traditional timber design in a contemporary context.

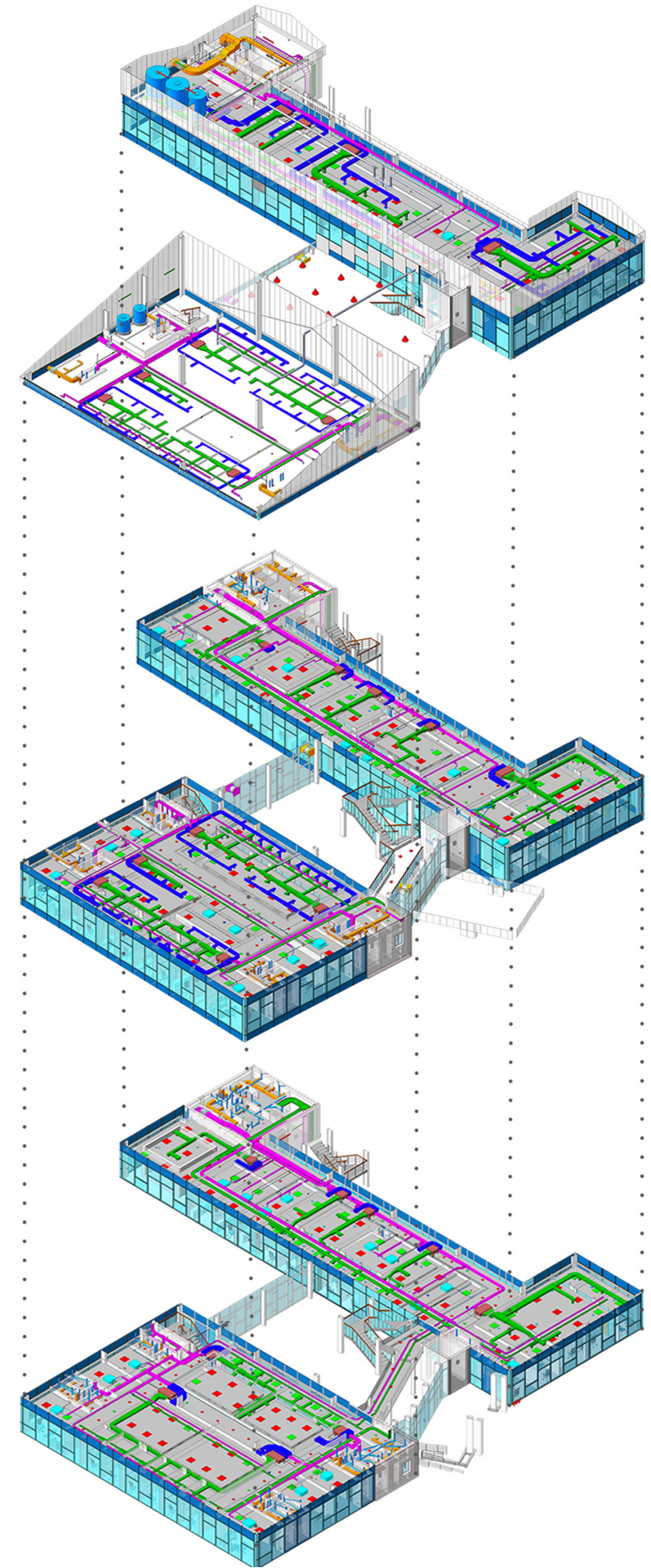
The building functions are developed in two distinct blocks, defined by the level of security, and a planned around a central atrium space. The tree forms a focal point from the entrance, through the atrium space, with interconnecting bridges flying through the atrium space.



Despite being a difficult to reach place, with its own peculiarities, the building was successfully built, using local contractor teams, by the use of BIM.

Since all the building design details, elements and components were modeled and coordinated using BIM, the contractors were able to prep fabricate and erect the components without running into fouling and difficulties. The 3D imagery and live models allowed them to “walk” though the building and understand each component, including the erection sequence for a well oiled project schedule.

The total built area of the building is 40,000 sq ft, and it was completed in a total construction time of 11 months.



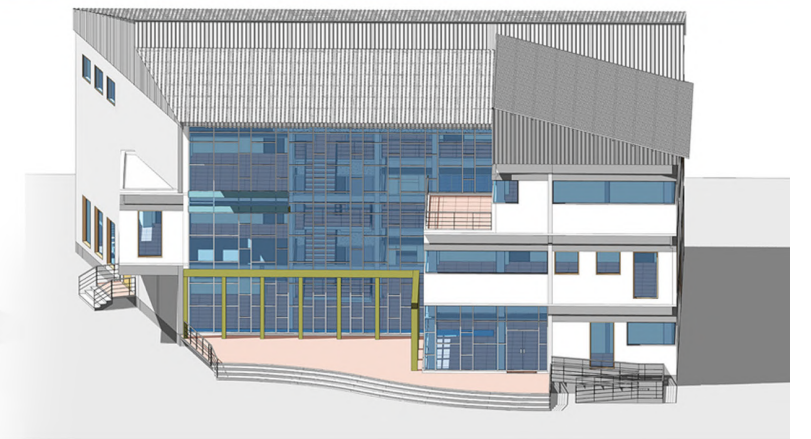
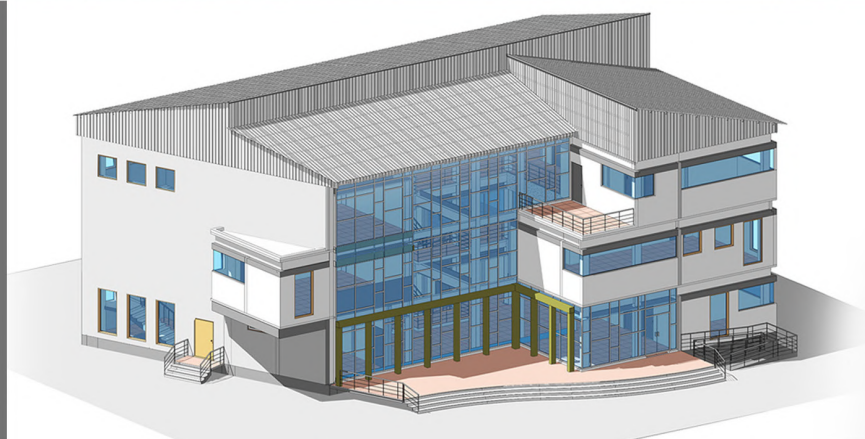


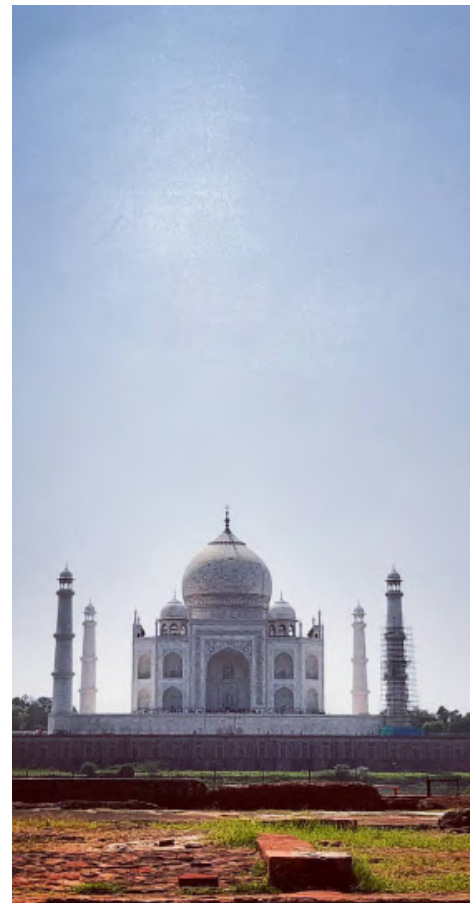
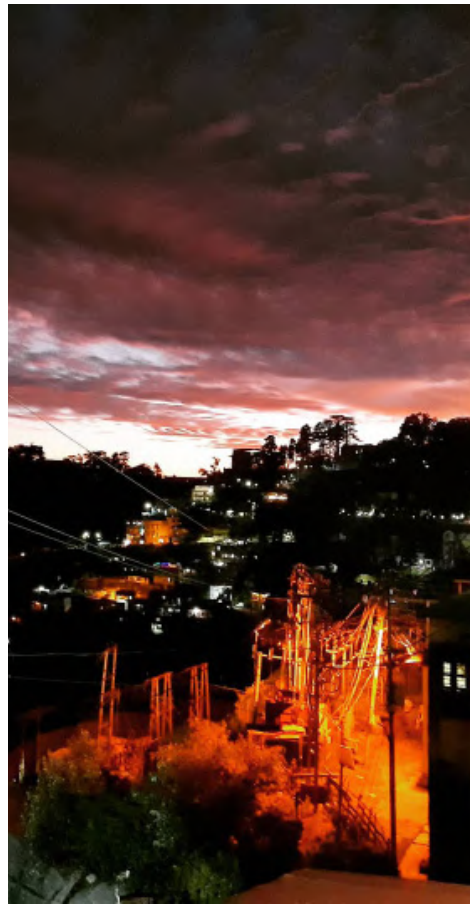
LAW FACULTY

An academic building for the Law Faculty of Kashmir University was designed & constructed in the main campus, Srinagar.

Total built-up area of the law faculty block is 1268.81 square meters.

04





SKETCHING & PHOTOGRAPHY
ACADEMIC SKETCH
YEAR : SECOND YEAR(2017)

THANK YOU

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