## ARCHITECTURAL DESIGN - IV

18ARC4

SECTION 'A'

YEAR 2022

HOUSING DESIGN

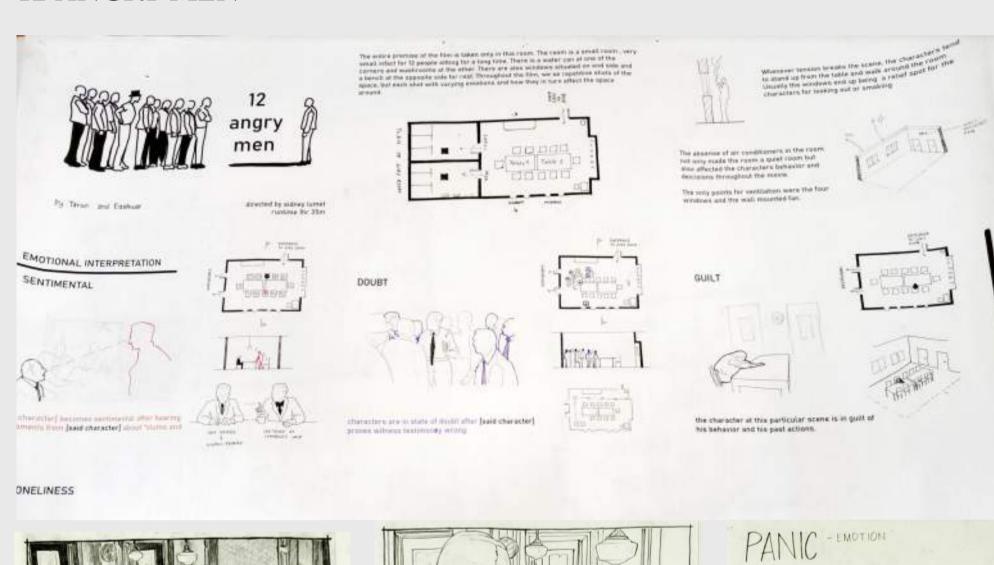
**TEAM** 

WEEK - 2 WEEK - 3 WEEK - 1 WEEK - 6 WEEK - 8 WEEK - 9 WEEK - 10 - 13 WEEK - 5 OBSERVATIONS ON MOVIE INTERPRETATION CASE STUDIES - UN-FRAZER TOWN MINOR PROJECT-DESIGN AND PLAN-CONCEPTS, IDEA, DESIGN PROCESS, 'IDEAS OF HOME' - UNDERSTANDING THE DERSTANDING DIF-SITE VISIT AND SITE EXPLORING NING OF THE 2 SITES POSITIONING. DISCUSSIONS AND , HOUSE, HOUSING CONTEXT OF ANY SPACE FERENT HOUSING TY-IDEA OF THIRD IN FRAZER TOWN DEVELOPMENT. ANALYSIS AND FACTORS AF-AND THE SENSE OF POLOGIES THROUGH SPACE. REFINEMENT OF FECTING THEM WITH PLACE, CULTURAL AND HOME, WORK AND CONCEPTS AND ONLINE AND OFFLINE MASTERPLAN AND BEHAVIOURAL INFLU-LEARNING SPACE THE CONTEXT OF CASE STUDIES. DESIGN ITERATIONS. ELEVATION DESIGN. STUDY TOUR. ENCES ON THE HOUSE.

#### ABOUT THE EXERCISE

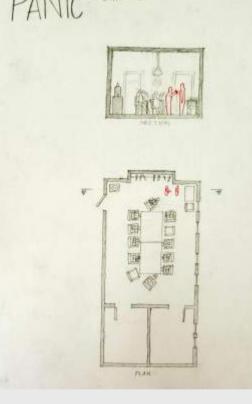
Movies are a powerful tool of communication. It is a complete experience of storytelling of a place, people that inhabit, build and associate with it and the way they interact with each other is articulated. A place chosen as a context, the designed set of the film and the relationship between the characters that you see on screen in a particular shot have an oscillating impact on each other. The agenda of this exercise is to understand this 'designed space' and how it impacts that particular activity, function, emotion, interaction, etc. which is set in it. The first exercise is intended as a provocation for the students to study various ideas of a 'home', 'house' and 'housing' communicated in the selected movie for the given context (location, city, place, built environment and timeline which may be real or imaginary), social character (i.e. representation of age groups, genders groups, social cohesion or disparity, etc.) and power dynamics (through gender, sociological, economic or administrative norms, etc.). Students in a group of four or five are to select a movie from the given list of 10-15 titles. Each group selects a different title. The model and the poster shall be the interpretation by the student/s which shall be true to the core idea of the given space (context, materials, textures,

#### 12 ANGRY MEN









#### THE LUNCHBOX



#### CHARULATA





#### NOMADLAND

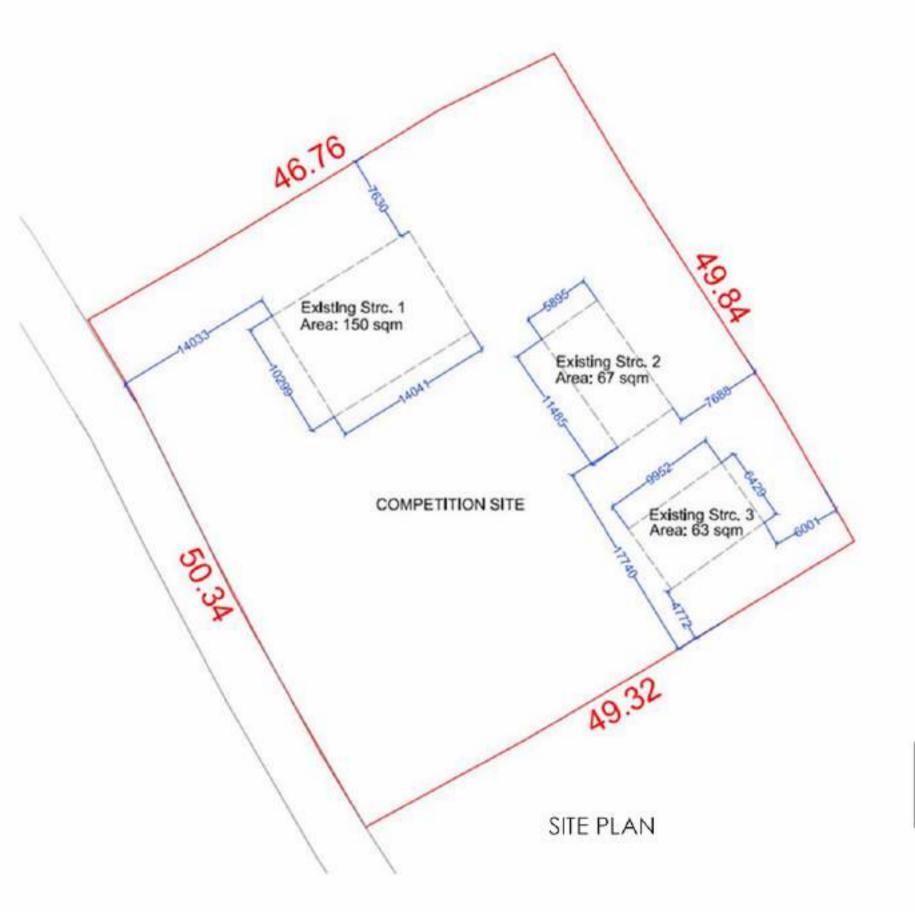


#### PEEPLI LIVE











0m 5m 10m N^

06038 Spello, Province of Perugia, Italy 43°00'17.8"N 12°37'50.8"E

Source: Google maps

The requirement of 'the Third space' is beyond the idea of place residence (first space) and place of work/learning (Second space). Competition Brief of 'Tili Wine Italy Guest Homes'.

#### INTENT

The intent of this exercise is to understand and explore the design possibilities emerging from having three distinct users residential spaces together at one site, within a given context of location, climatic condition and activity.

Housing Typologies to be planned:

- 1. House of the owner.
- 2. Quarters of the workers at vineyard (6 people)
- 3. Quarters of the visitors -5 no. of 2 occupancy capacity [Max 70sqm per quarter]

Dimension shown in the plan are approximate. Site boundary is fixed and design shall be accommodated within the site boundary.

Students can readjust the dimension keeping the tentative area some (+/-5sqm) for both site and existing structures.

Existing structures can be used as it is or it can be retrofited with housing typology 1 and 2. One of the blocks can also be used as a common kitchen.

Housing typology 3 is to be designed separately.

Apart from the Housing quarters for aforementioned user groups, a gathering/common activity interaction/leisure space as 'THE THIRD SPACE' is to be designed which is inclusive of all user groups.

#### DELIVERABLES:

- 1. Finalized Site Plan (1:200) showing location of existing structures in red dotted line, reconfigured design plans with landscape (hardscape and softscape)
- 2. Block level plans (1:100) showing residential quarters of each user with furniture layout
- 3. Sections (1:200)- Two site sections cutting through buildings and the third space
- 4. Design model (1:200)

#### SITE IMAGES:

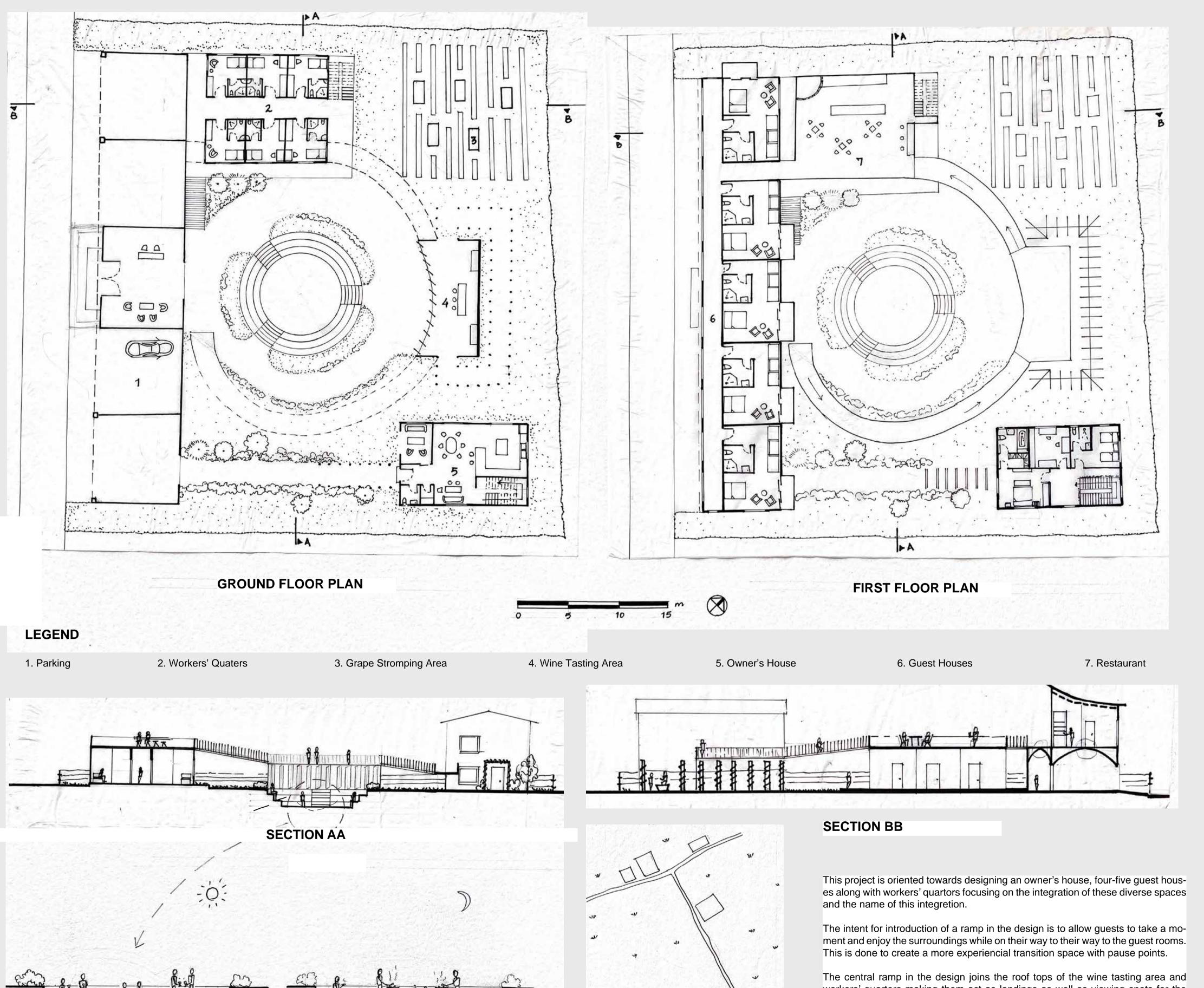














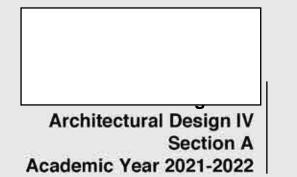






The central ramp in the design joins the roof tops of the wine tasting area and workers' quarters making them act as landings as well as viewing spots for the surrounding wineyards.

Introduction of a common roof top restaurant is to cultivate conversation among guests and allow interaction among the guests, the owners and



During day timw, the space can be uti-

lised as an extension of the win tastiong

area.

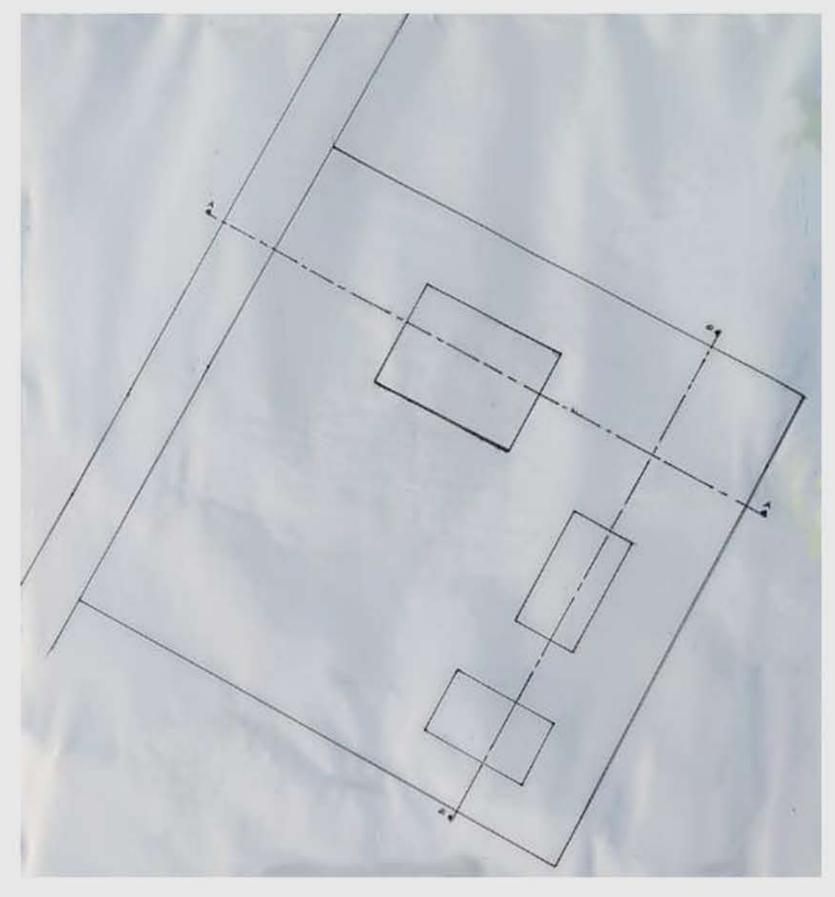


SITE CONTEXT

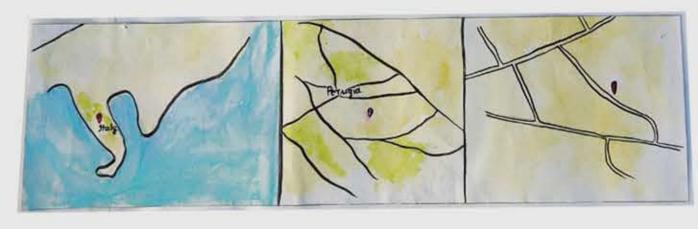
At night, the space can be used to host barbeque for the guests.



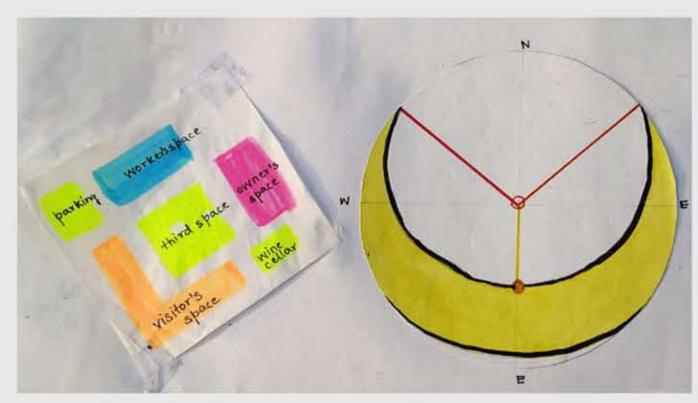
#### SITE CONTEXT



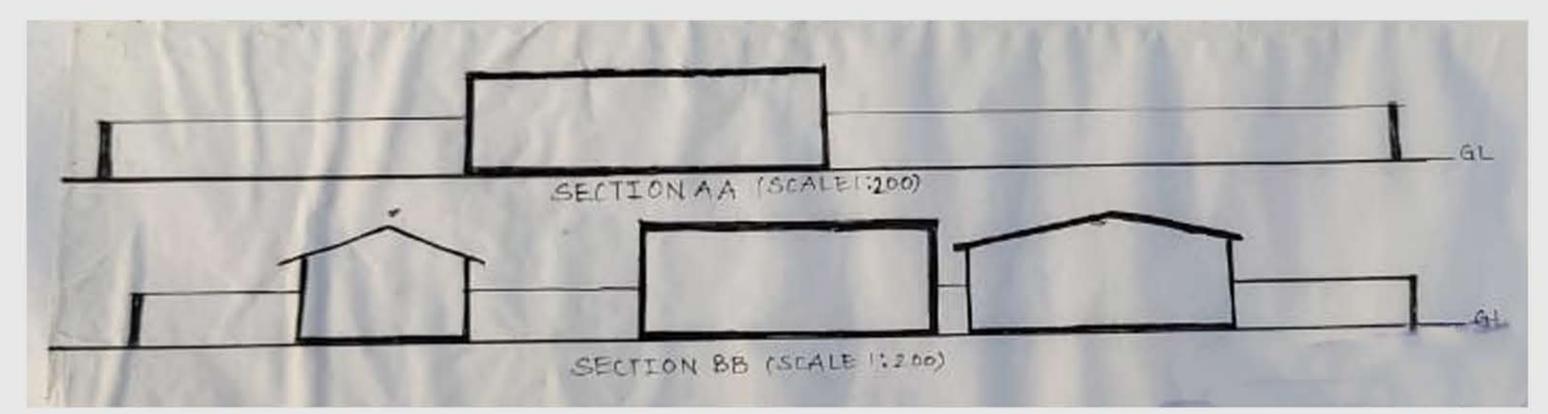
LOCATION



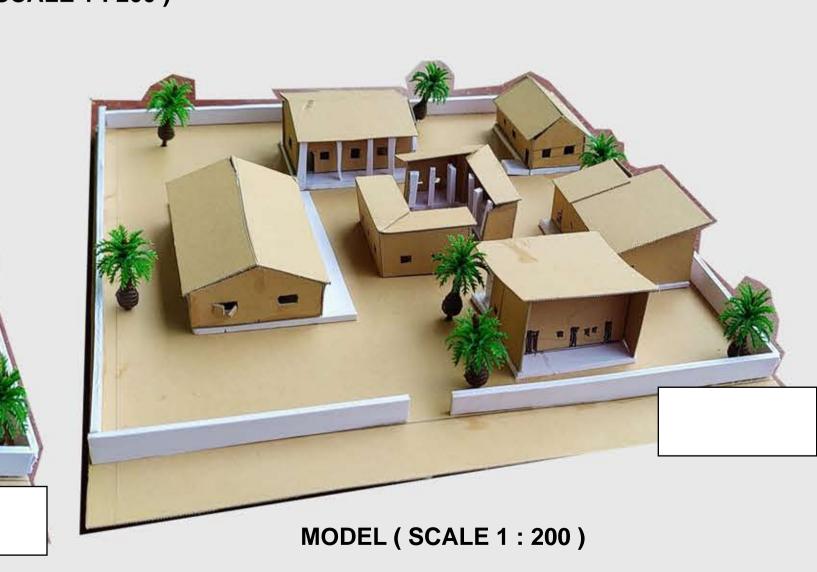
**INTERNAL ZONING & SUNPATH** 



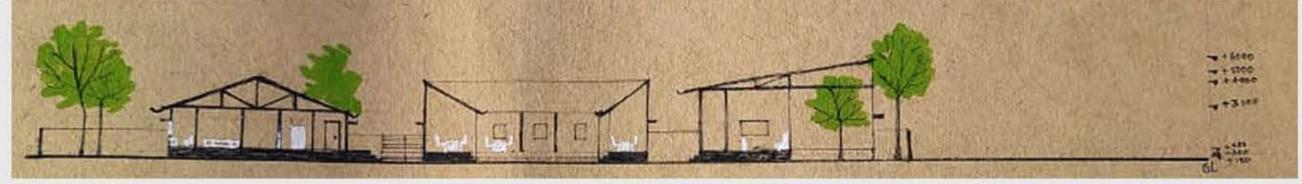
EXISTING SITE PLAN ( SCALE 1 : 200 )



SITE SECTIONS (SCALE 1: 200)





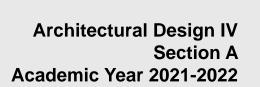


SECTION AA ( SCALE 1 : 200 )









# COMPARITIVE

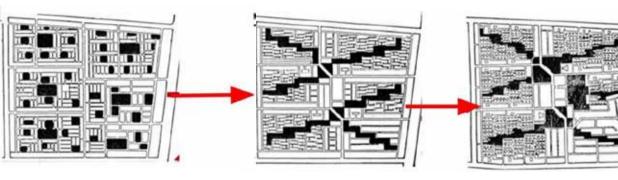
#### Most similar – Quinta Monroy

- Similar climatic zones Tropical Hot & Dry
- People had the freedom to design their home
- Distribution of plots are very similar









site plan of original colf-built corriement site plan as built. 2005 site plan. 2017	
QUINTA MONROY	ARANYA HOUSING
30 plots, 72 sq.m area	6500 plots, 35 sq.m area
Concrete and cement as material	Bricks and concrete as material
<ul> <li>Climatic features</li> <li>Houses facing inwards- more ventilation – courtyards</li> <li>Low rise, ground+ first floor</li> </ul>	<ul> <li>Climatic features</li> <li>Small sized, clustered and low rise</li> <li>Bricks cool down the houses</li> </ul>

#### Definition of spaces Courtyards. Linear organization of houses, inward forming courtyards that defines spaces.



• Slum – government gave them provision for





Definition of spaces



## People

• LIG (maids or workers), MIG, HIG all live

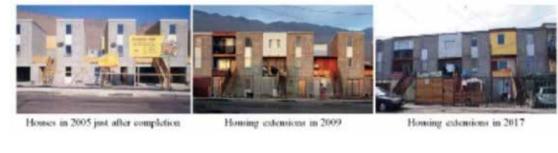
Hierarchy given by roads. House layouts based

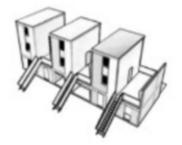
#### Services provided

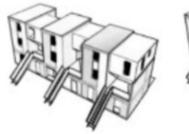
People

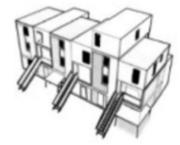
housing

• 50% of the house is built and given to people. Freedom to extend the house is given









#### Services Provided

Plinth, toilet and services are provided and the freedom to build the house is given.





#### Most dissimilar - Golconde Dormitory

- Similar climatic zones Tropical Hot & Dry
- Pre designed rooms for people

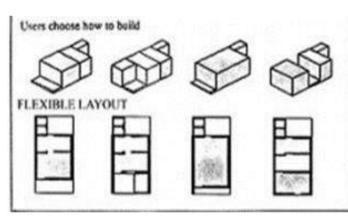
#### COLCONDE

GOLCONDE	ARANYA HOUSING
A private residence for the Sri Aurobindo Ashram	Housing for families
Temporary residence	Permanent residence
Already constructed spaces, people settle in	Individuality given to spaces as they are built by each family    The code   November   November
Spaces distributed equally and for all	Spaces are located, designated according income groups and their occupation being considered too  Low income and weaker sections  Middle income group  High income group

The units have their area maintained throughout all the rooms



Spaces provided for each house is same for each plot, usage of this space varies individually



51 units in total

Climate – Strictly facing North for the wind, hence the louvres in Climate – Streets aligned such that building itself provides natural the façade.

6500 plots in total

shading for its surroundings. Buildings are small and clustered

#### **INFERENCE**

- Spaces are provided according to
- a. Occupation and living status (finances)
- Climatic conditions
- c. Function of the housing (dormitories, housing)
- Spaces are organized in grid or linear for housing like dormitories for easy circulation and planning out of space for similar layouts to make it user friendly.
- Functionality of building or site determines the extra provisions that are to be provided. Like common spaces for living quarters or meditative spaces for an ashram etc.
- Climate impacts the design largely. The space organization, direction of the facing of building, shading devices or techniques, wind directions plays a major role.
- No. of people is important to decide the area to be decided for an individual on a plot.
- Material is decided based on finances, the climatic conditions and the functionality of the spaces.



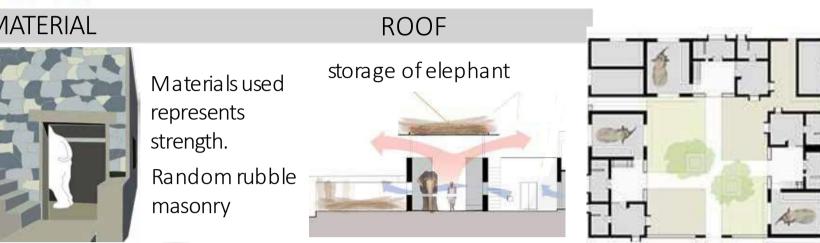
# COMPARITIVE

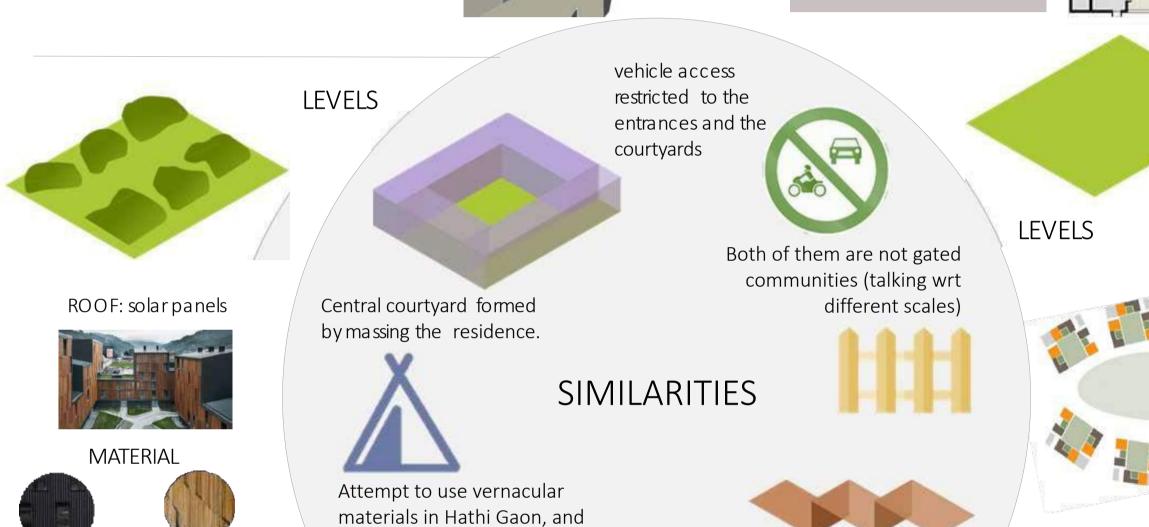
## HATHI GAON



LO CATION: JAIPUR, INDIA CLIMATE: Hotand dry TYPOLOGY: Housing for Elephants and their keepers

#### **ENTRANCE AND AXES** ANTHROPOMETRY 3 Entrances:2 minor for people, 1 large entrance for elephants Ergonomic for humans and elephants MATERIAL





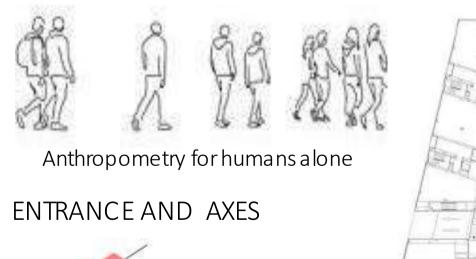
usage of wood to resemble the

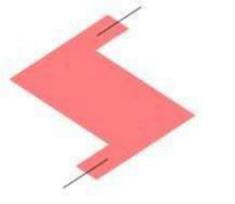
Asturian traditional porch

(vernacular references)

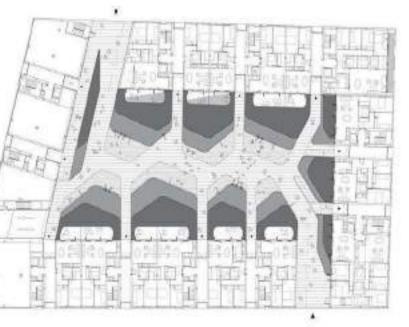
The use of wood, which reminds us, through its vertical rhythms, of the forests of the nearby mountains. The steel symbolizes the industrial and mining past of Mieres

## **ANTHROPOMETRY**



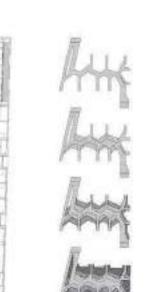


only 2 entrances into the courtyard



negotiated spaces in the

courtyards / multifunctionality.



the structures are of

(but in this case

functionality is

different)

different levels/storeys

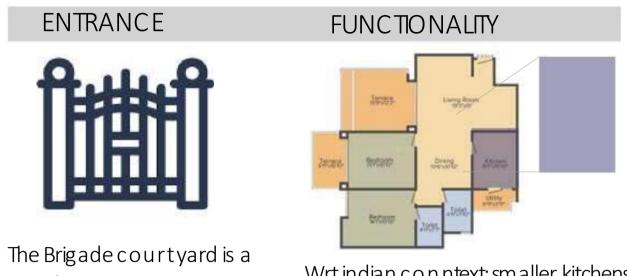
VIVAZZ MIERES

LOCATION: MIERES, SPAIN CLIMATE: moderate TYPOLOGY: collective housing

#### BRIDAGE COURTYARD



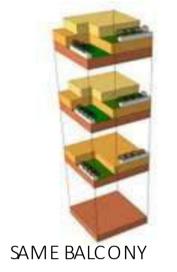
LOCATION: VAJARAHALLI, BANGLORE CLIMATE: moderate TYPOLOGY: community housing



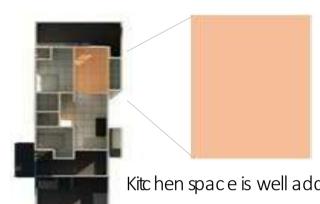
Wrt indian conntext: smaller kitchensare gated community Provided in each house of brigade courtyard.



THERE IS A COMMON PARKING FOR THE PEO PLE

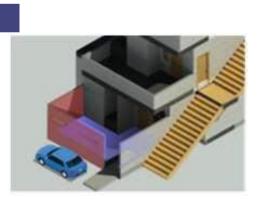


#### **FUNCTIONALITY**



Kitchen space is well addressed in LIChousing.

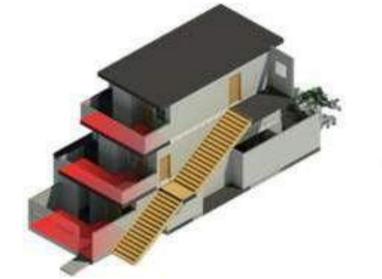
#### PARKING



Vehicular parking is focused only Ground floor

#### BALCONIES

#### **ENTRANCES**



Balconies are open to sky

NON-GATED community

The areas of the levels keep reducing as elevate

#### SIMILARITIES

The houses are made jus opposite to the community street facing it



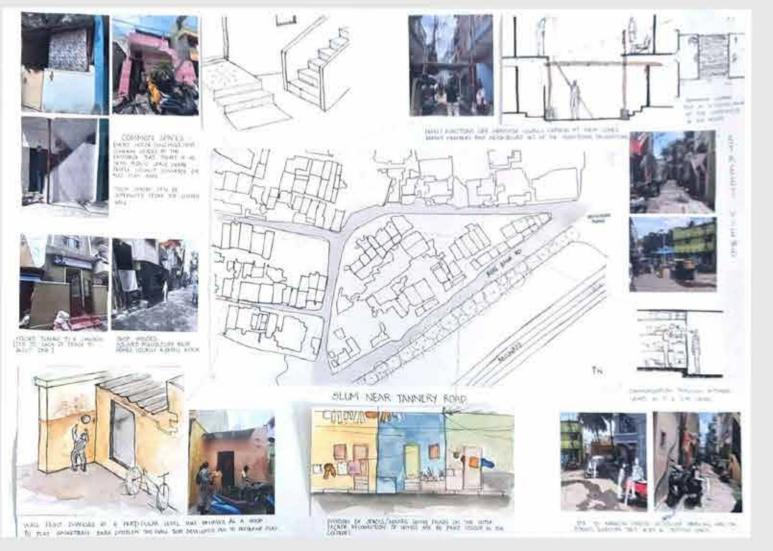
Balconies have terreace gardens and means of vegitation

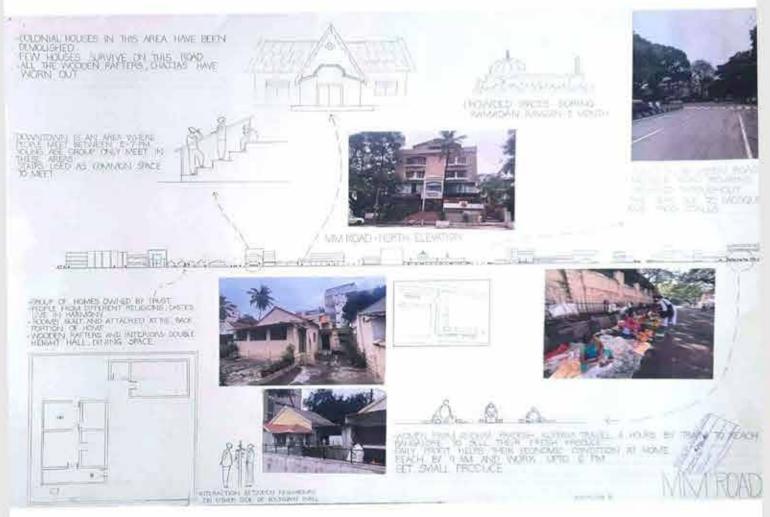
#### LIC HOUSING

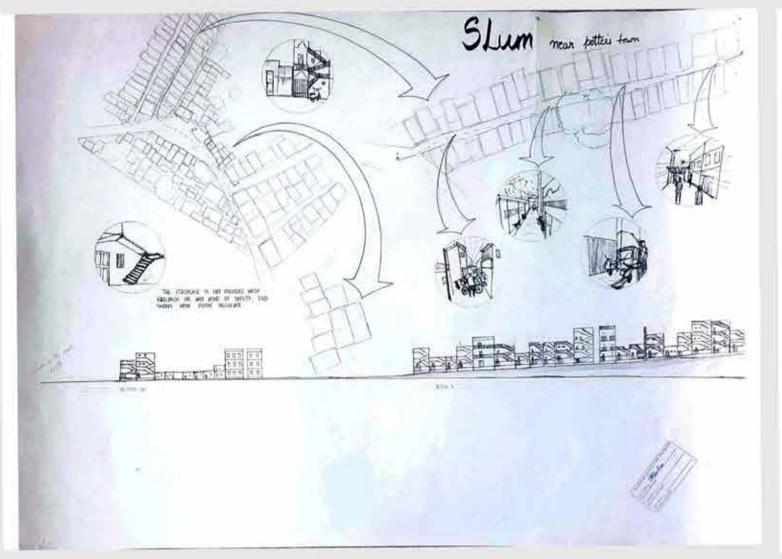


LOCATION: JEEVAN BHEEMANAGAR, BANGLORE CLIMATE:moderate TYPOLOGY: collective housing



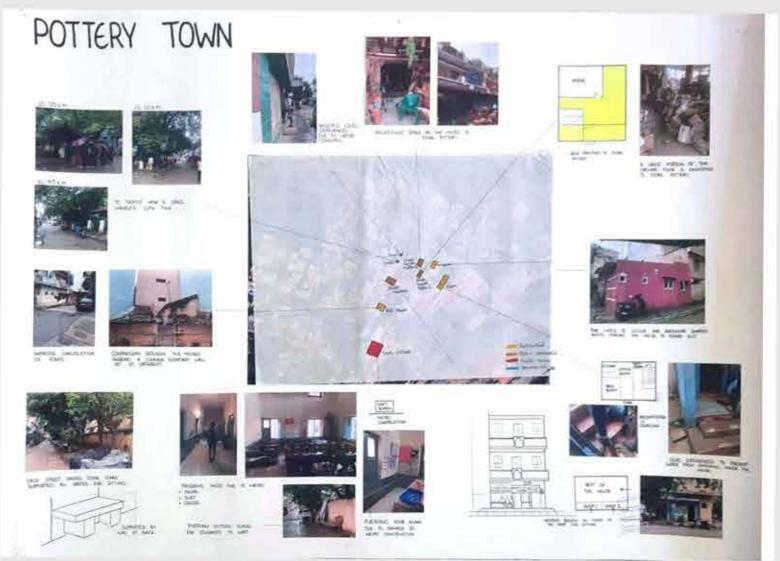




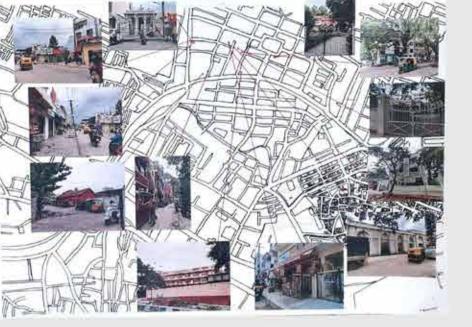


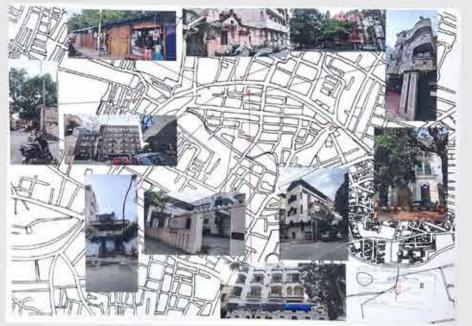




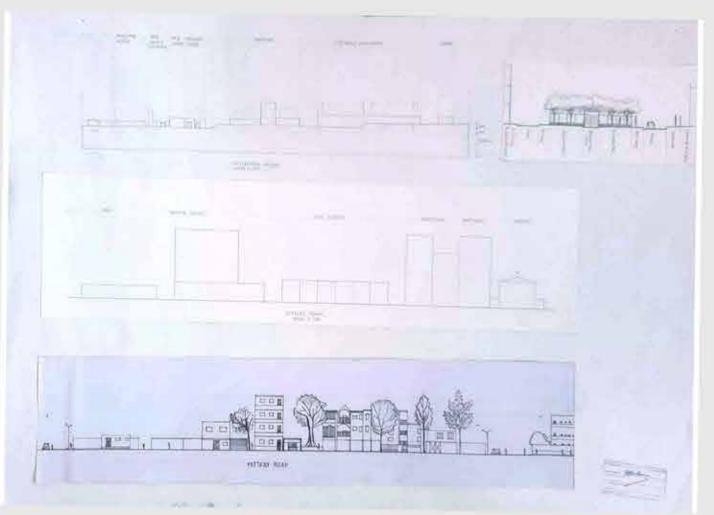


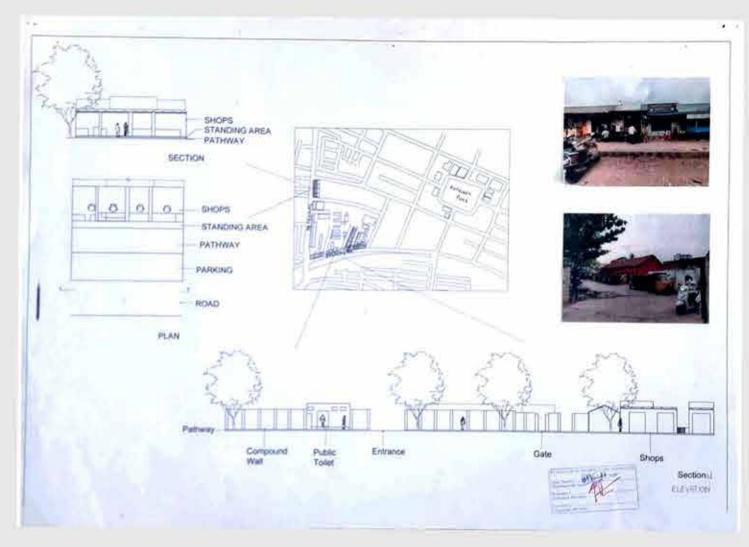


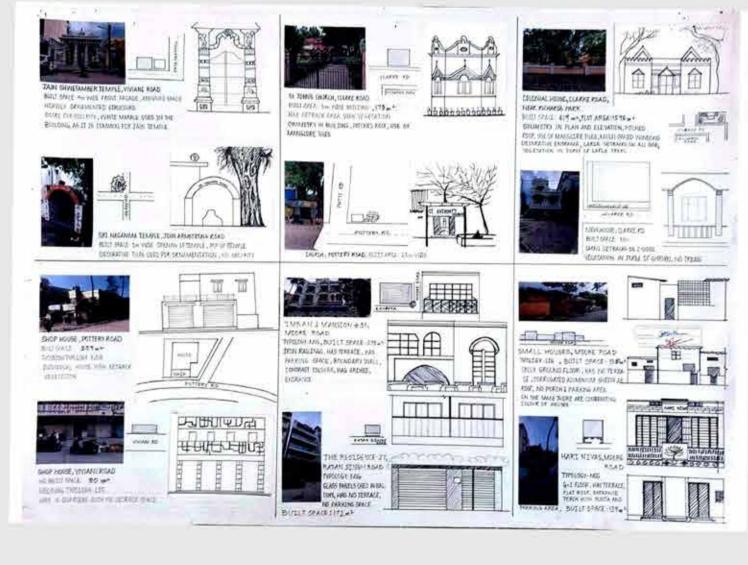








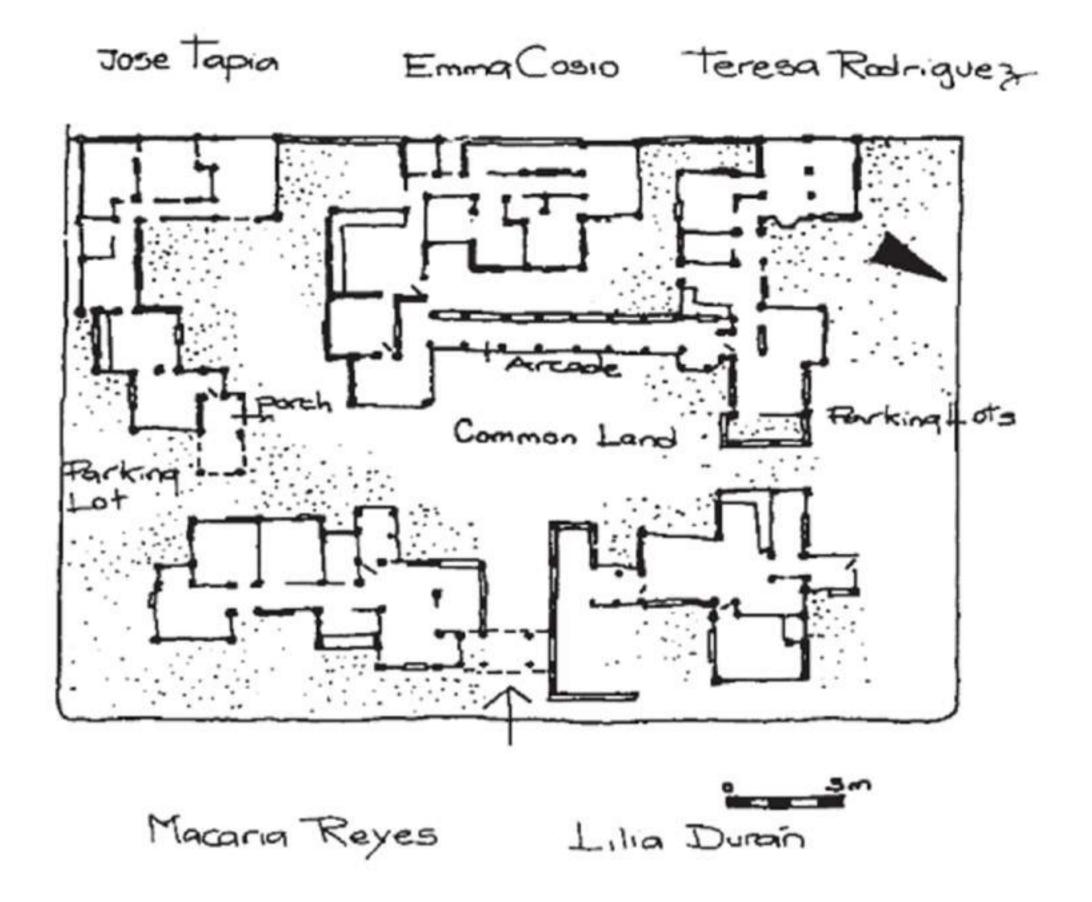










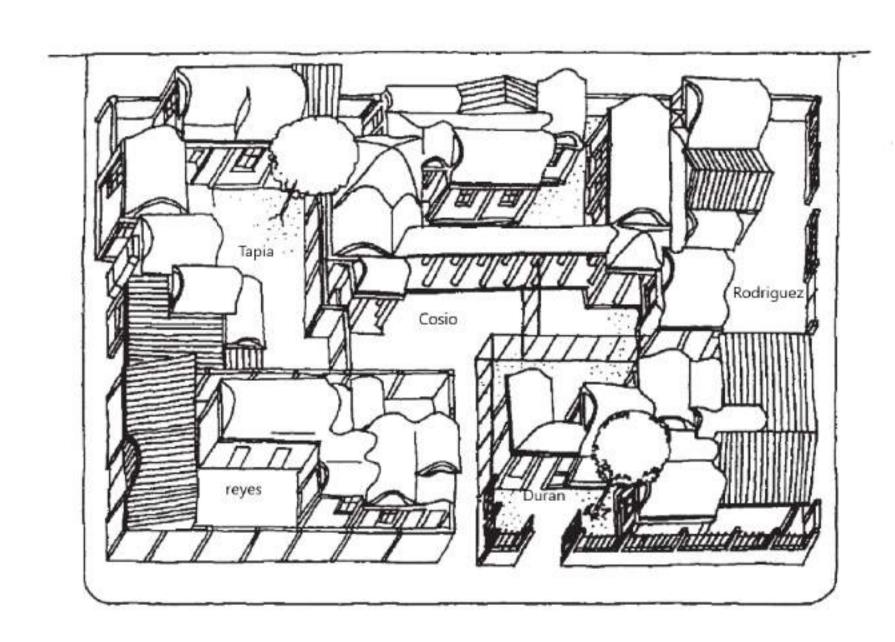


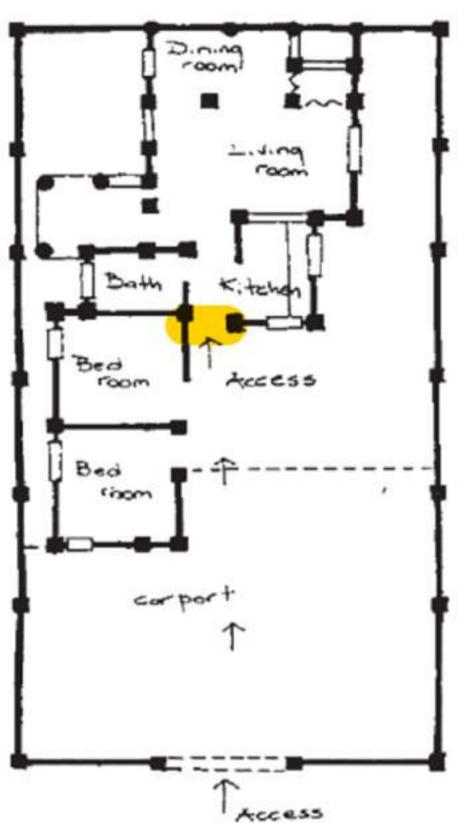
Low Cost Housing at Mexicali project by Christopher Alexander is chosen as first part of your 'Third space' time task exercise. This is a drafting exercise, to understand and improve your skill to produce set of drawings in appropriate scale. This project consists of 5 housing units designed by the architect that come together as one cluster woven by series of outdoor spaces between them.

#### Submission requirement:

Draw a grid of 1mx1m in 1:50 scale and assuming ACCESS 'DOOR' (highlighted in yellow at plans) where one enters each home as 1m, draft the CLUSTER plan. Plan should indicate room names and tentative areas as per your grids.

One section (long or transverse) in 1:50 scale cutting through built and open spaces at position of your choice. Section should highlight materials, construction details where section plane is cutting





NOTE: Yellow mark denotes 1000 mm Doorway.

Bed room

Barty

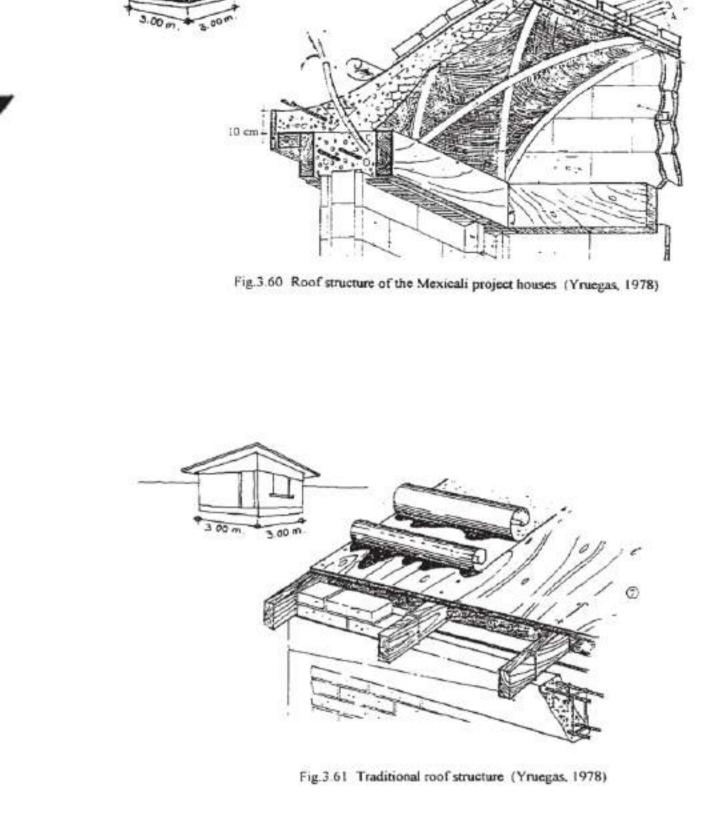
Bed room

Barty

Bed room

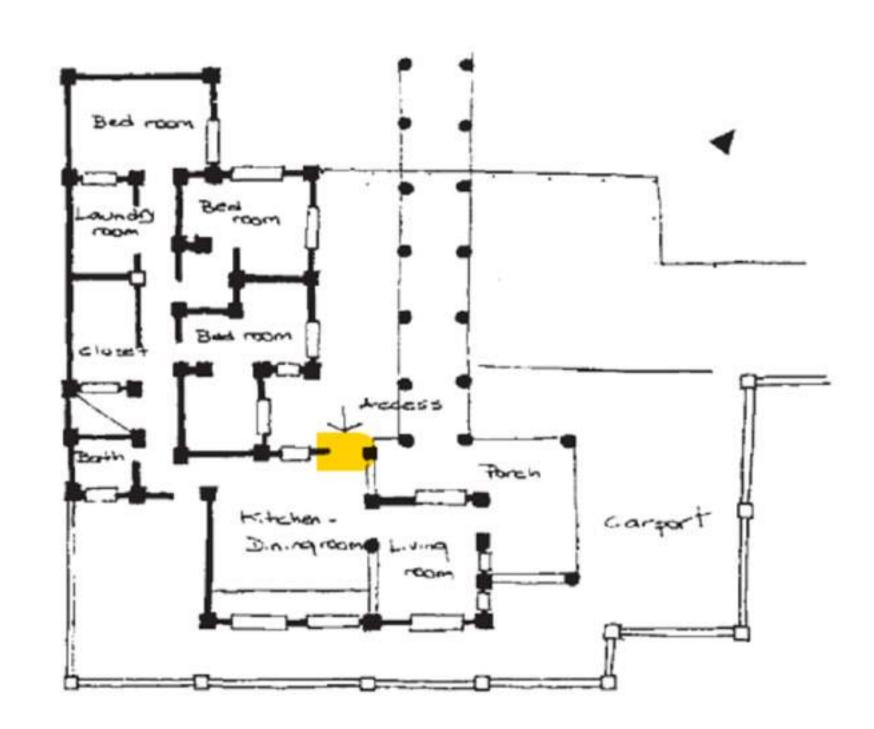
Bed room

Bed room

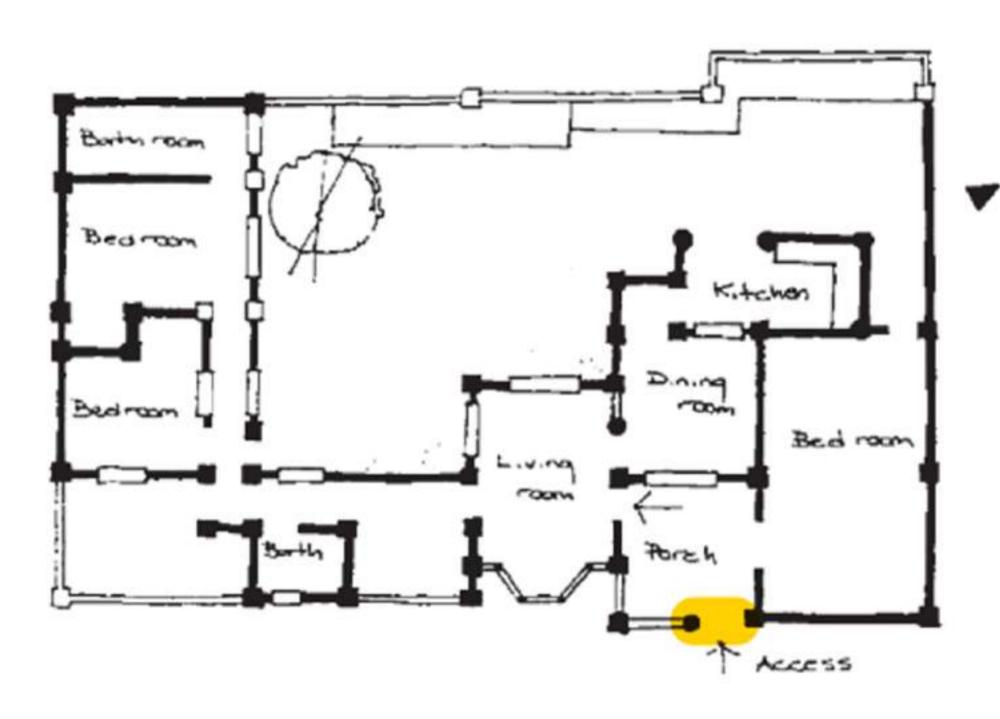


REYES HOUSE PLAN

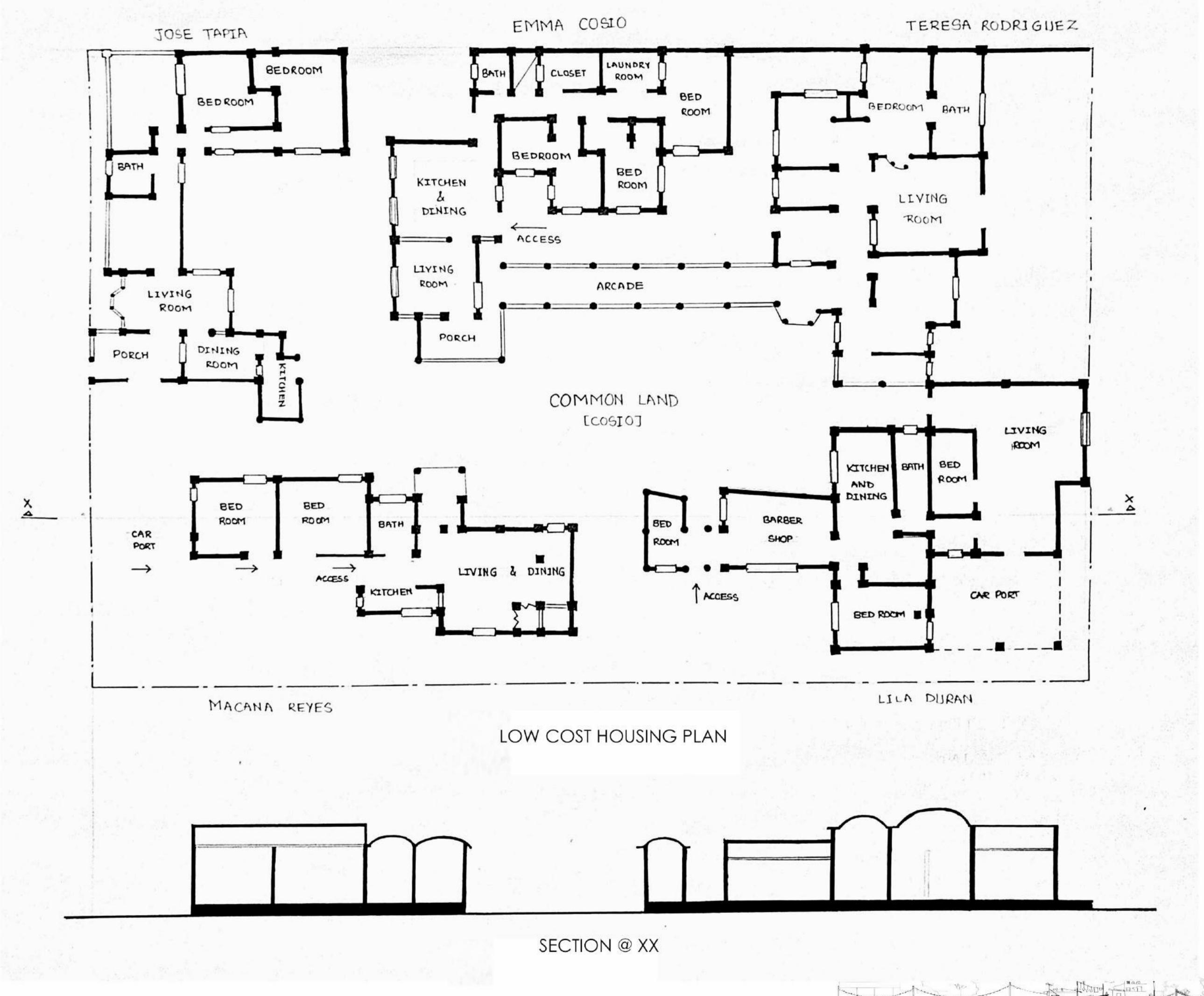
DURAN HOUSE PLAN







COSIO HOUSE PLAN





Appx. Site Area of both sites: 2 Acres (8093sqm) (Shared between group of 4 students) Ground Coverage permissible: 50% (Appx. 4000 sqm)

FAR considered- 2 (Appx. 16000 sqm) Permissible building height: 15m

Setbacks: 5m

Thus appx. built up area per student gets for design development is up to 4000 sqm on appx. 1000 sqm site subdivision

#### Design & Planning process -

- mixed typology achieved by grouping the students to work on a single site plan for which
  they will then generate their own modules of housing based on their position/idea/
  concept arrived individually through the studies done during exercise 1, 2 and 3
- The larger idea of the major project was to accommodate 1/3rd of the designed housing to relocate pottery town residents engaged in pottery making activity along with slum dwellers near Netaji road and MM road Junction. 2/3rd of the designed housing is to be treated as speculative housing.
- The program will be individualized by each group and also by each student.
- Each group prepared a master plan with parking spaces (Stilt or basement), circulation, services, common amenities/ shared spaces responding to each other's building cluster and larger site context.
- Each student in the group then designed individual buildings within the subdivisions of the master plan by clustering different dwelling units of size 30 sqm, 60 sqm, 90 sqm and 120 sqm.

#### Deliverables:

#### Group work:

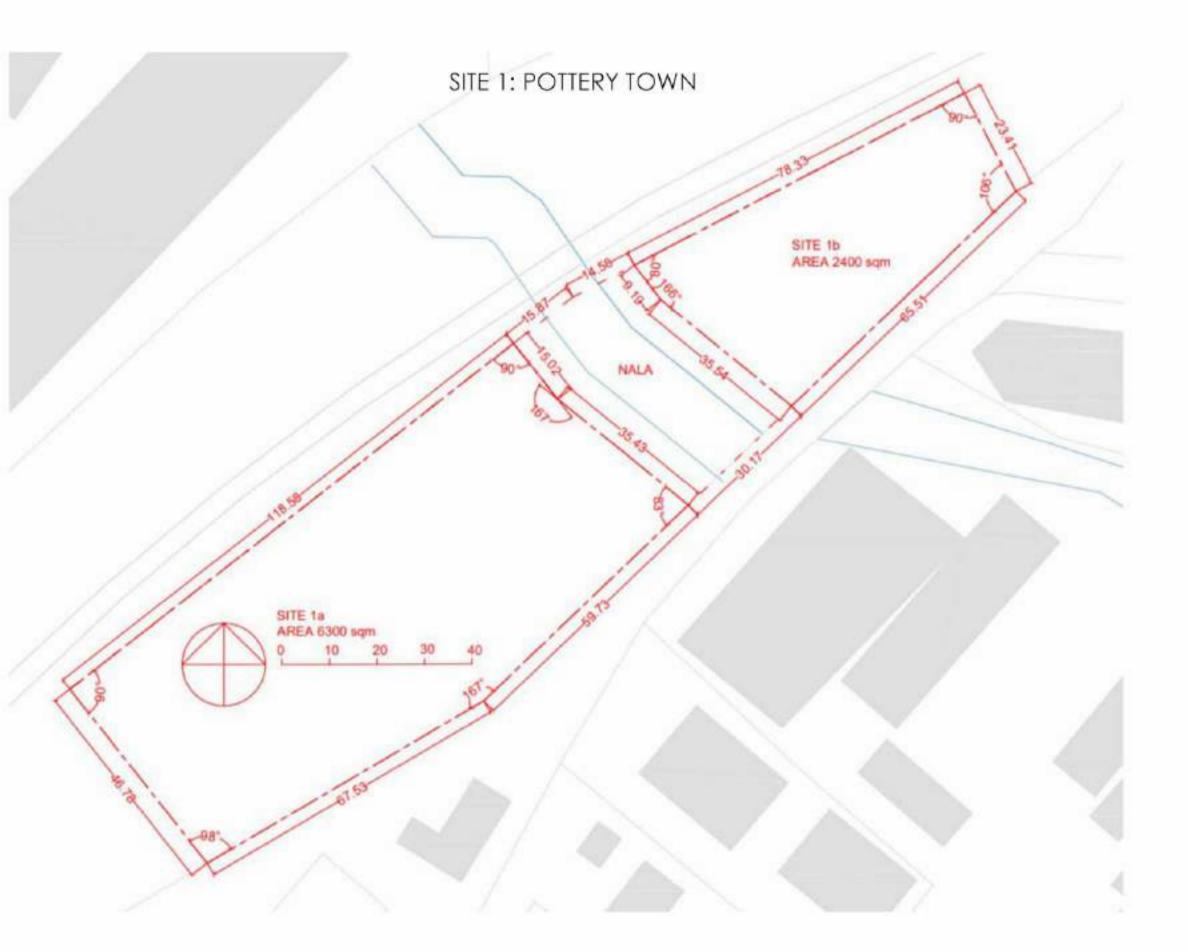
- 1. All sketches and schemes done till date (documentation of various trials and iterations)
  2. Finalized Site Plan (1:200) with basement/stilt parking, circulation, services areas
- 2. Finalized Site Plan (1:200) with basement/stilt parking, circulation, services areas demarcated and plan at 1st floor level
- 3. Sections (1:200)- Long site sections cutting through buildings and shared spaces
- 4. Elevations (1:200)- one road side elevation

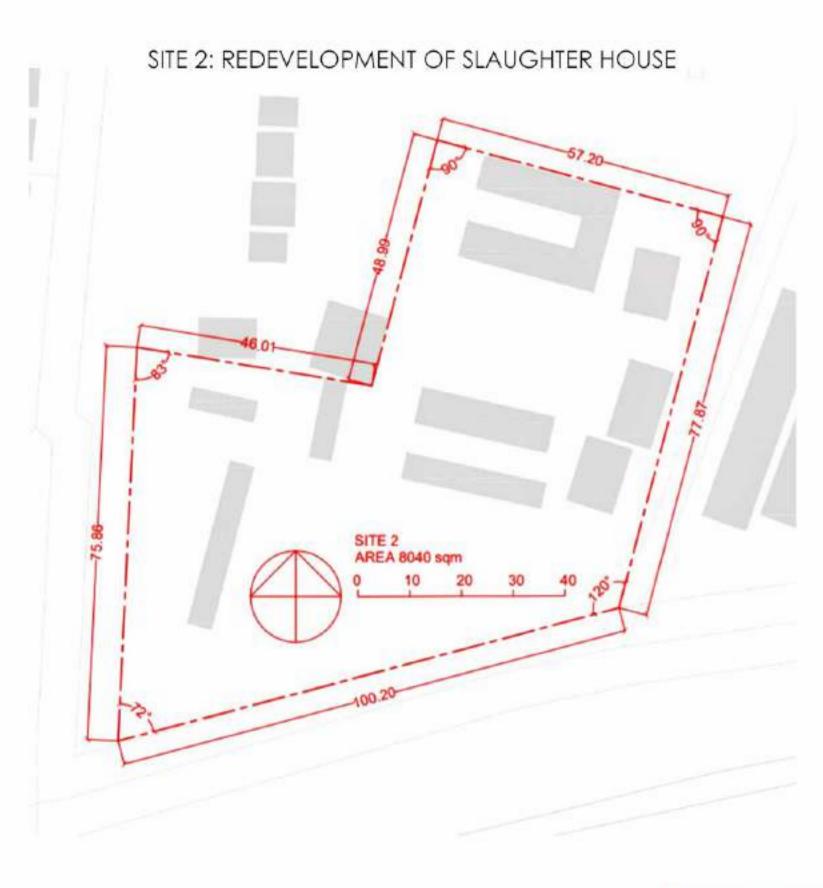
#### Individual Work:

- 1. Conceptual models/massing model (1:200)
- 2. Plan of typical floor or 2nd floor onwards (1:100) showing housing units inside the cluster with furniture layout
- 3. One section (1:200) cutting through external walls, toilet, staircase, etc.



Frazer Town, Bengaluru- Larger context study between upcoming Pottery Town metro station and Bangalore East Railway Station (Sites for Major project marked in yellow)

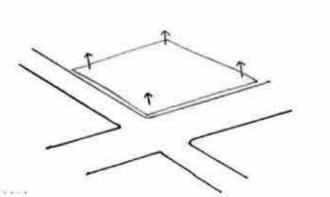




#### CONCEPT

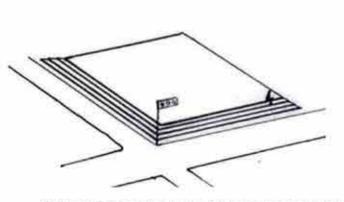


This site edge has the most exposure to the markets, vehicular and pedestrian traffic for interaction with the public. This area is opened up for the public as seen in the diagram the circulation is to be smooth and continued for a free flow movement. This area develops to be a landmark for the site.

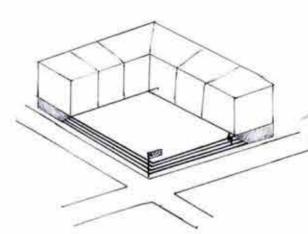


Since the site has a public edge, using that as an advantage, extending the public and therefore continuing the flow of spaces.

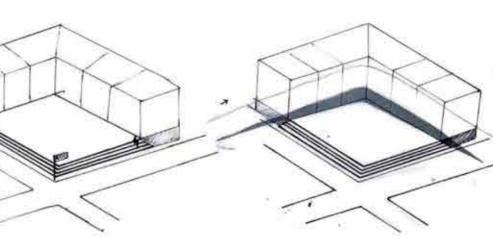
Area is lifted up by steps, seating transforms to a very interactive place with the public.



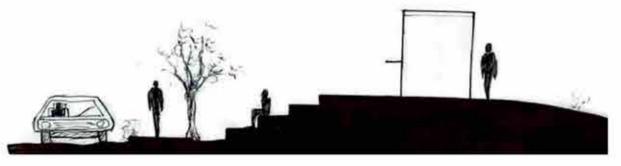
Sitting provides hierarchy of space and acts like a bus stop due to the traffic signal nearby.



Market space situated around the raised space that is open to public.



A ramp connecting the market space on the other side providing two entries.

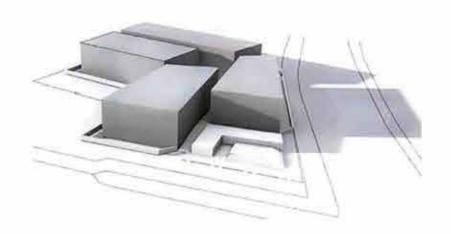


Since the site is shifted from a commercial (slaughter house) to a residential site (rehabilitation), keeping the essence of public areas especially market and street interaction.

#### **DESIGN**

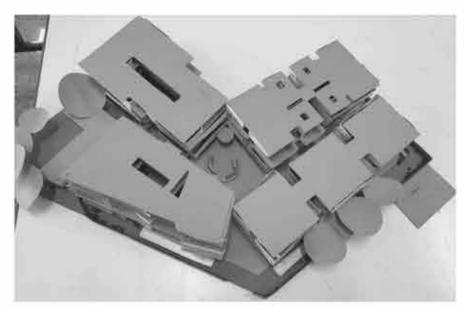


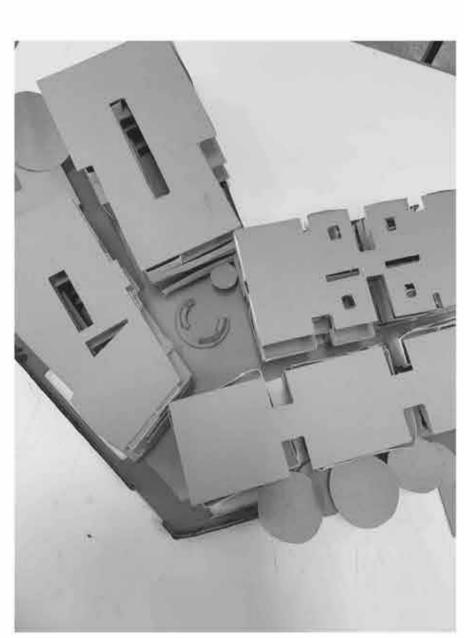
Key plan



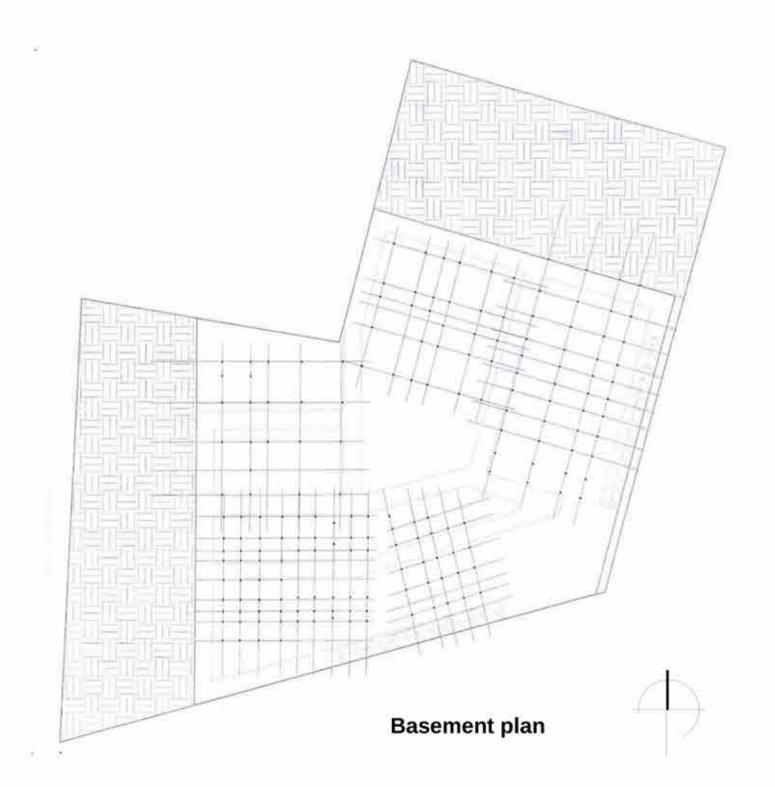
**Block Model** 



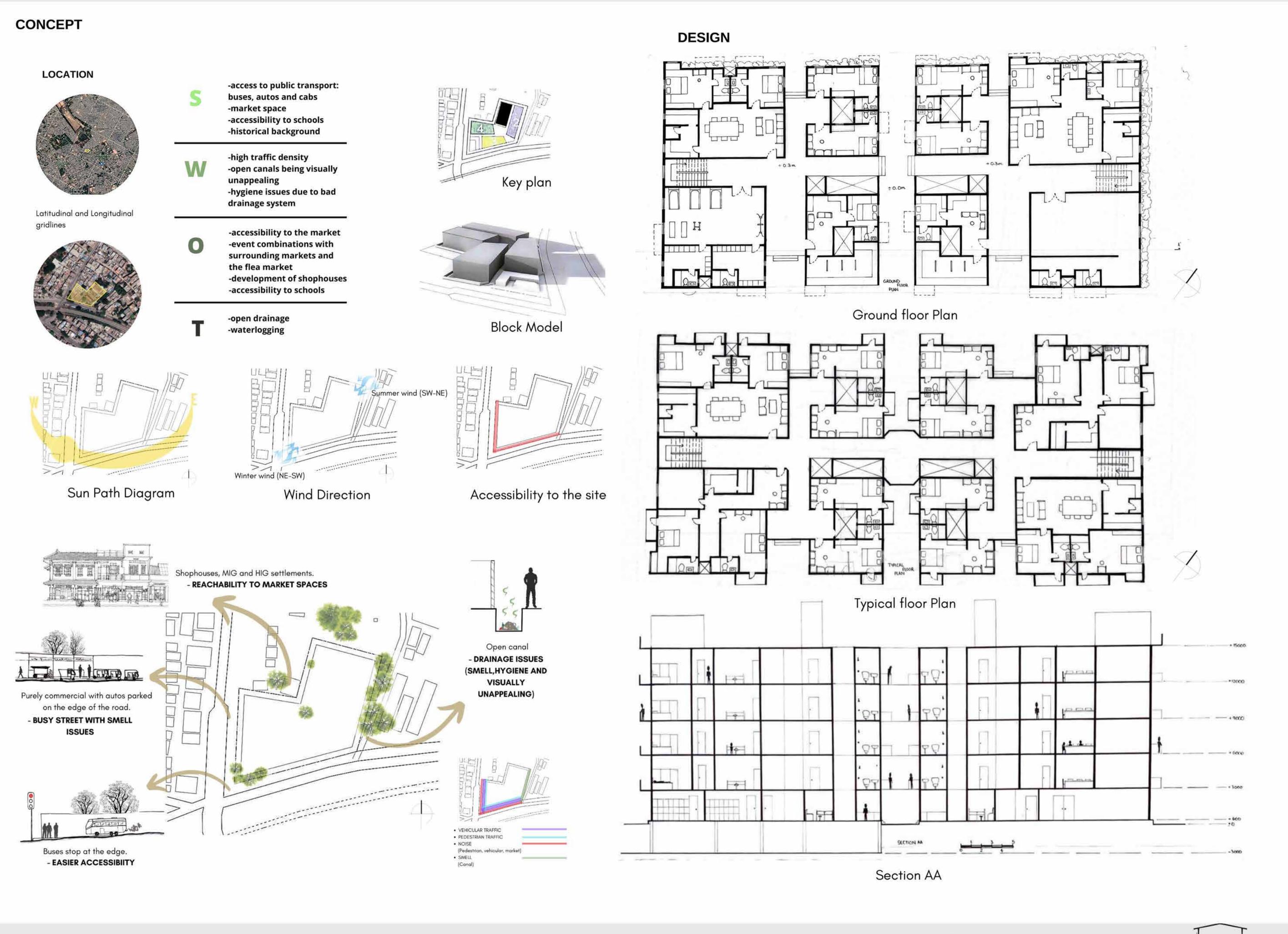




Physical detailed model

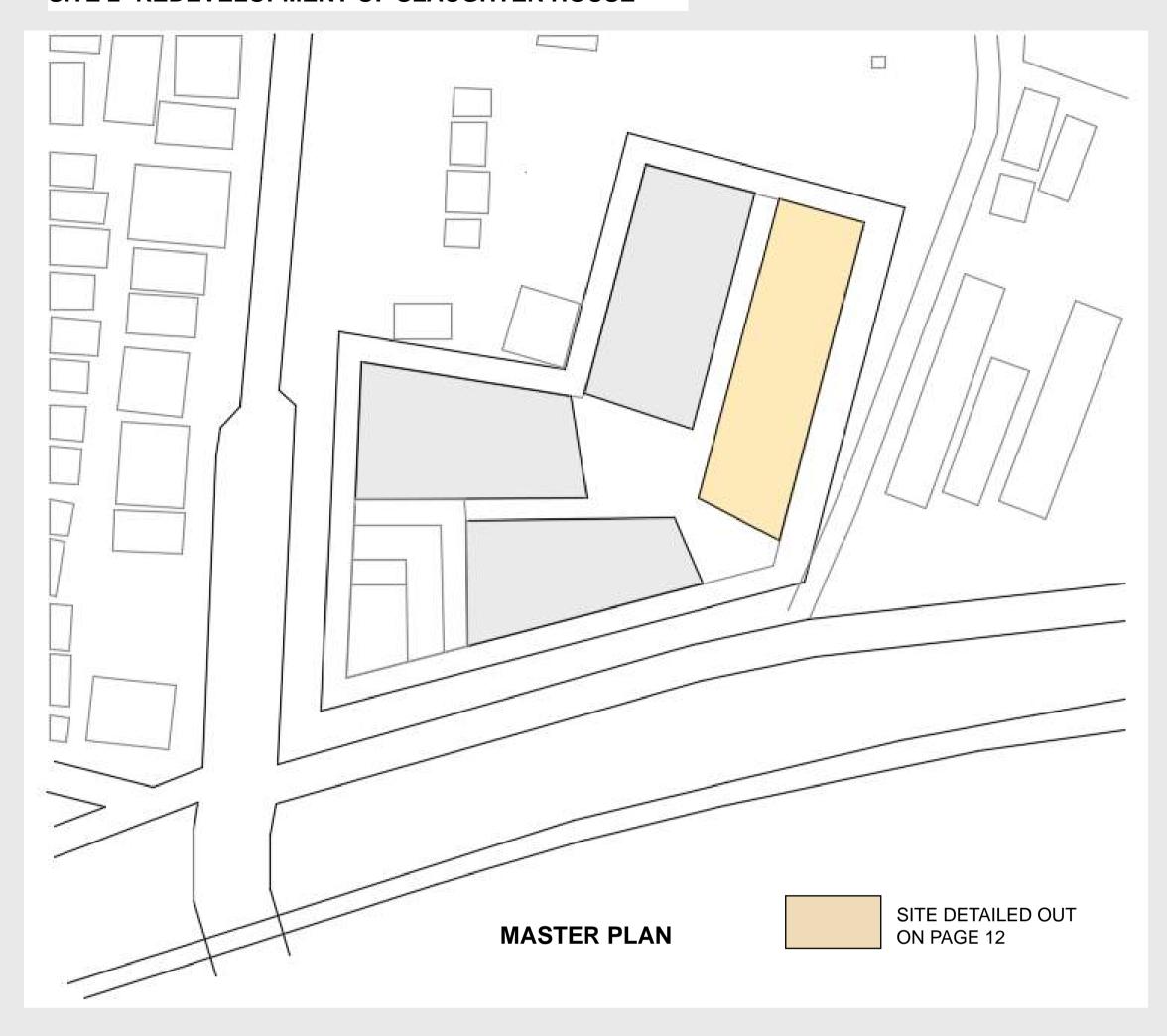


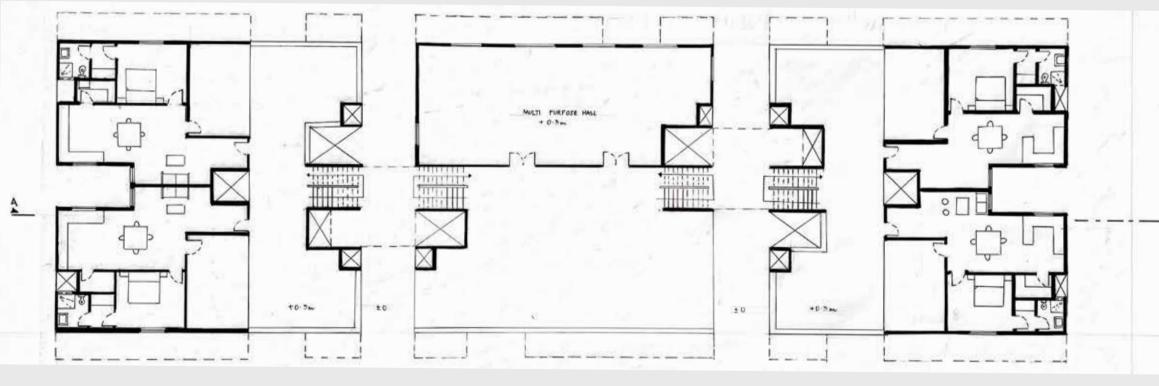


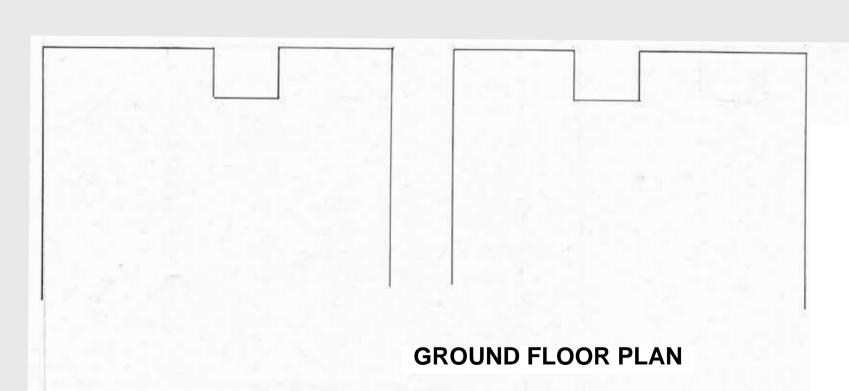


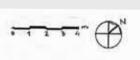
This project is oriented towards designing an residensital building where 1/3 of the designed housing to relocate pottery town residents engaged in pottery making activity along with slum dwellers near Netaji road and MM road Junction. 2/3rd of the designed housing is to be treated as speculative housing.

#### SITE 2- REDEVELOPMENT OF SLAUGHTER HOUSE

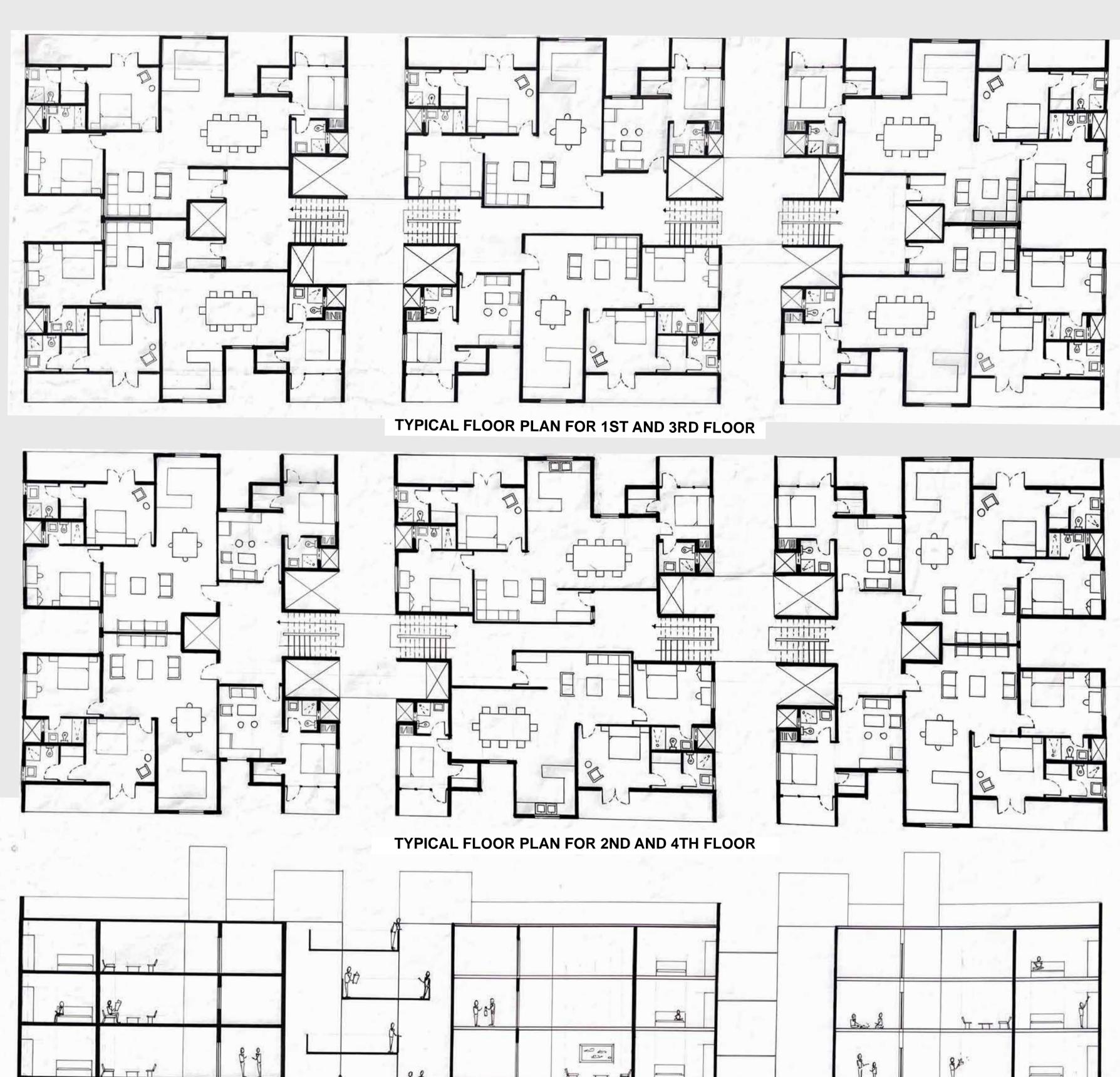


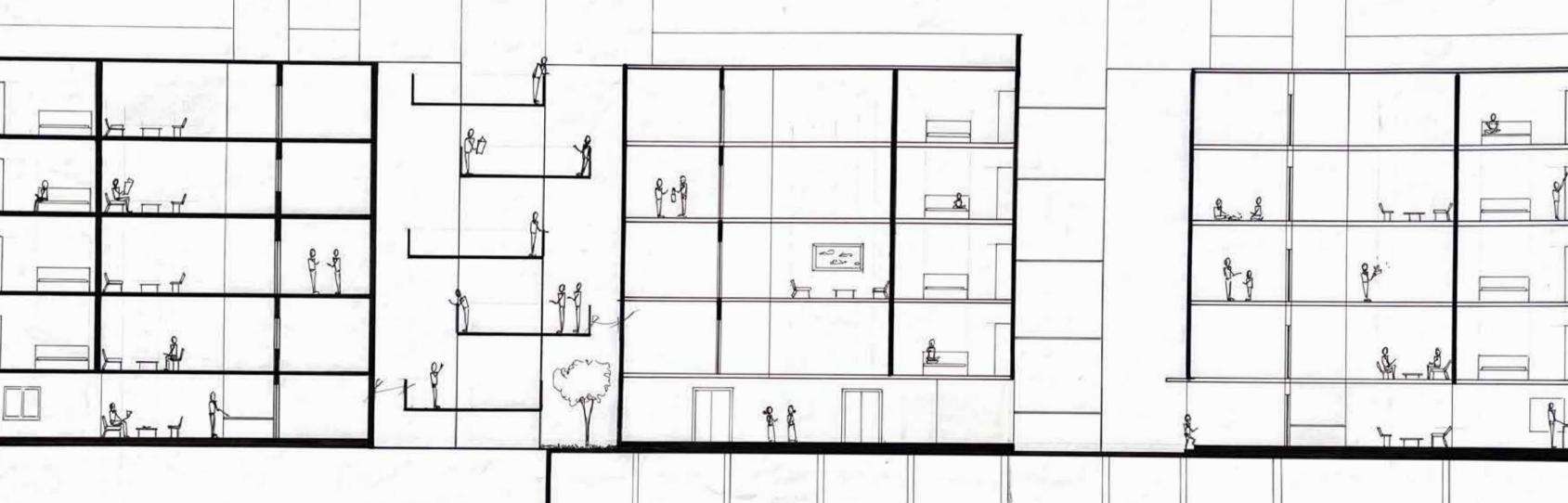






The intent of the design is to create social spaces within the design in order to increase interaction among the residents. This is done by introducing two sets of adjacant staircases with extended common landings which provides a midpoint for people on the diffirent floors to





**SECTION AA** 

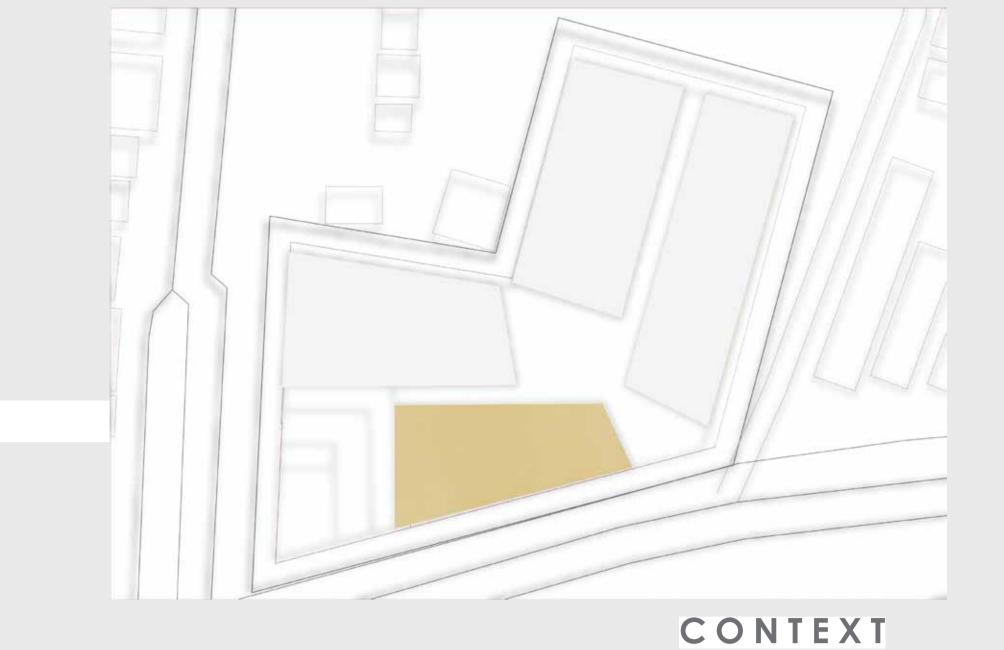
# MASSING OF THE UNITS GROUND FLOOR

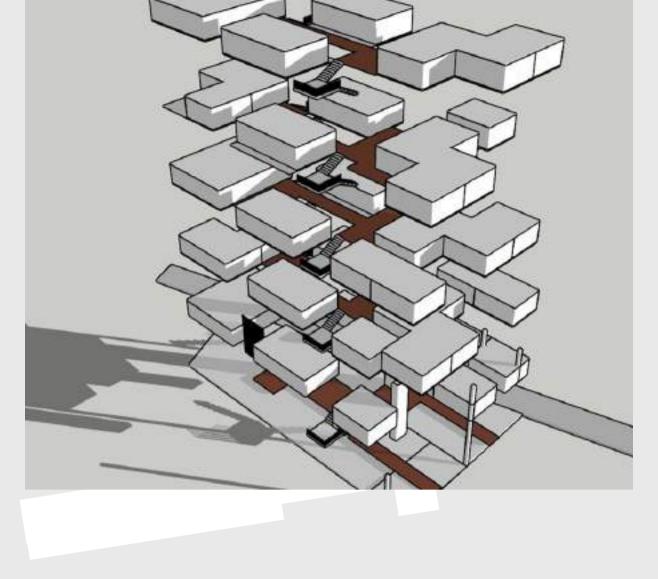
120 SQM UNITS

90 SQM UNITS

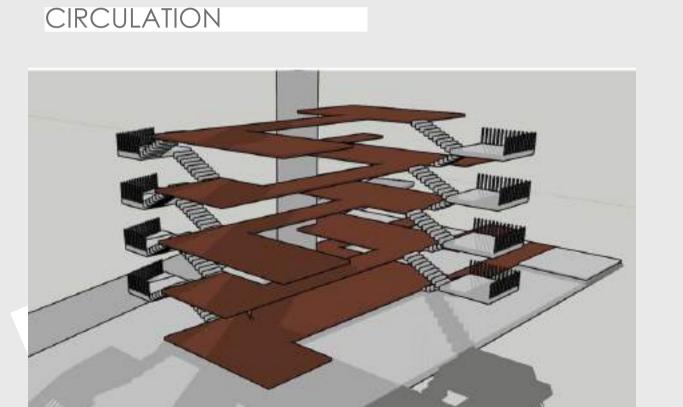
60 SQM UNITS

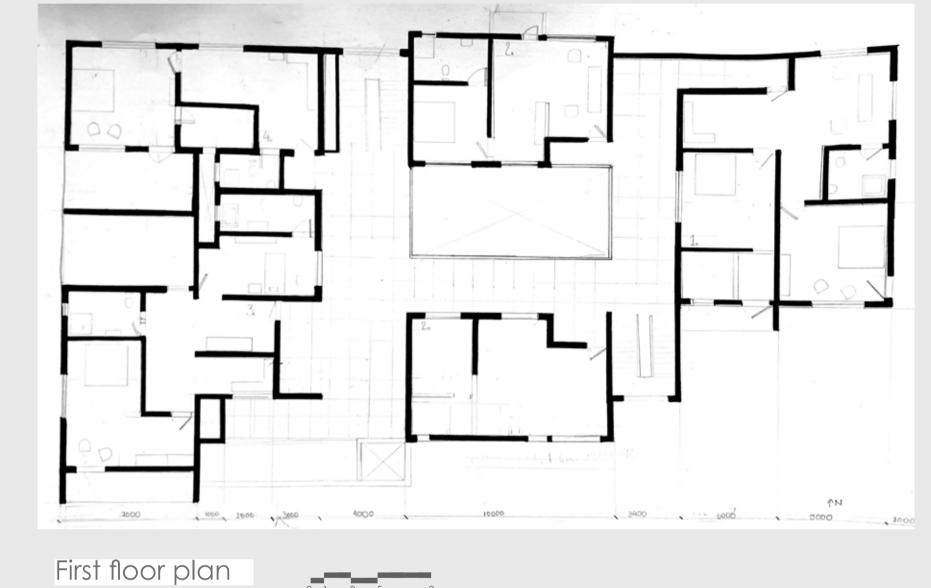
30 SQM UNITS

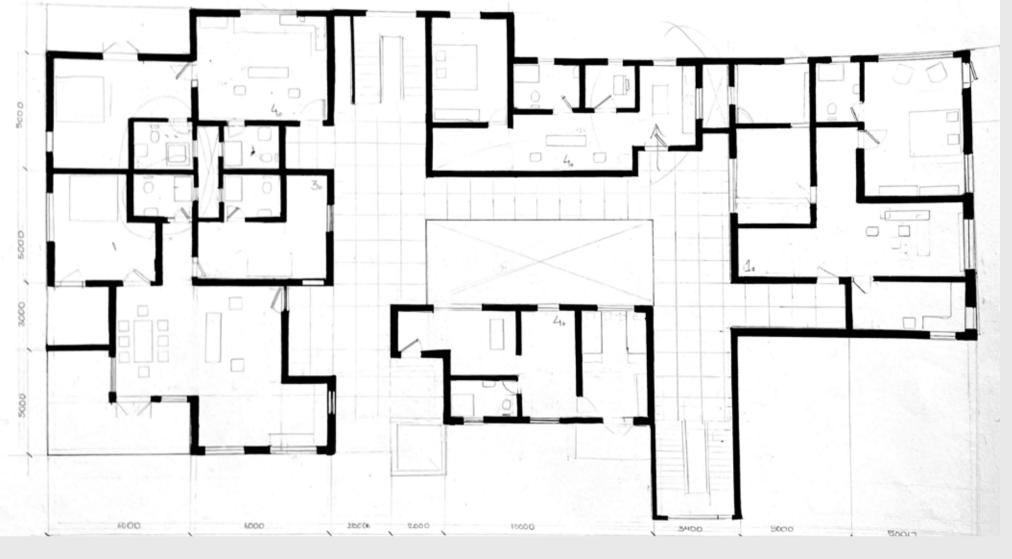


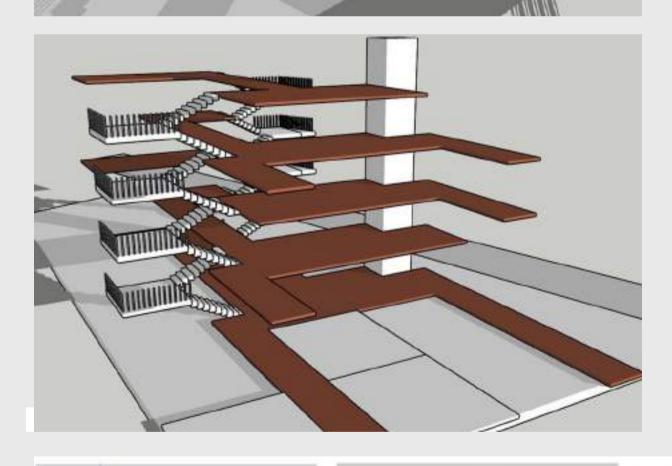


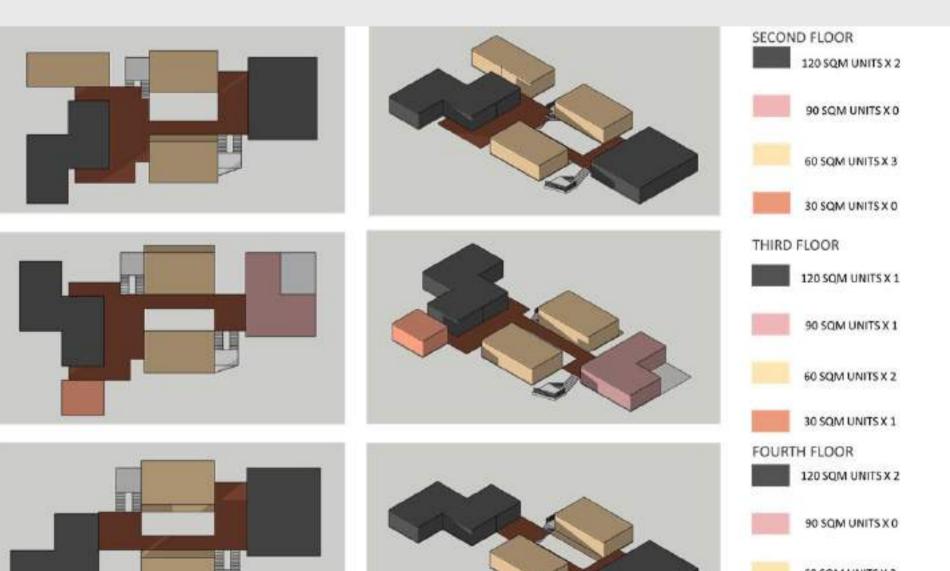
Ground floor plan Om 1 m 3 m 5 m 9 m













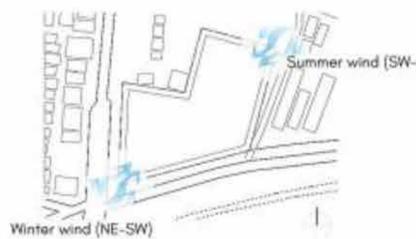


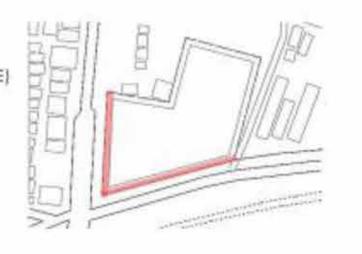
IN THE STATE OF THE SEASON STREET, STATE OF THE STATE OF











Sun Path Diagram

Wind Direction

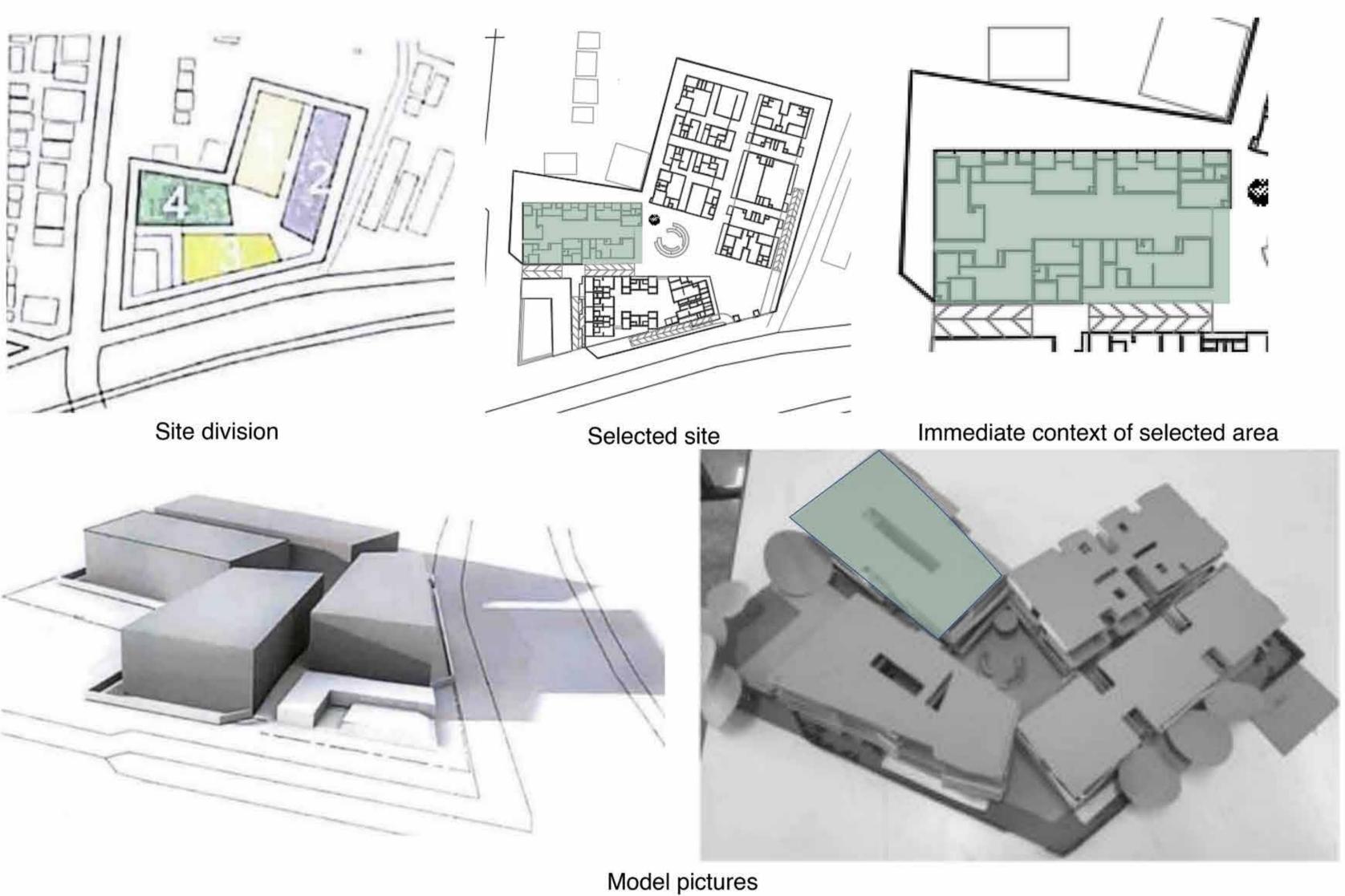
Accessibility to the site

-access to public transport: buses, autos and cabs -market space

- -accessibility to schools -historical background
- -accessibility to the market -event combinations with surrounding markets and the flea market -development of shophouses -accessibility to schools
- -high traffic density -open canals being visually unappealing -hygiene issues due to bad

drainage system

-open drainage -waterlogging







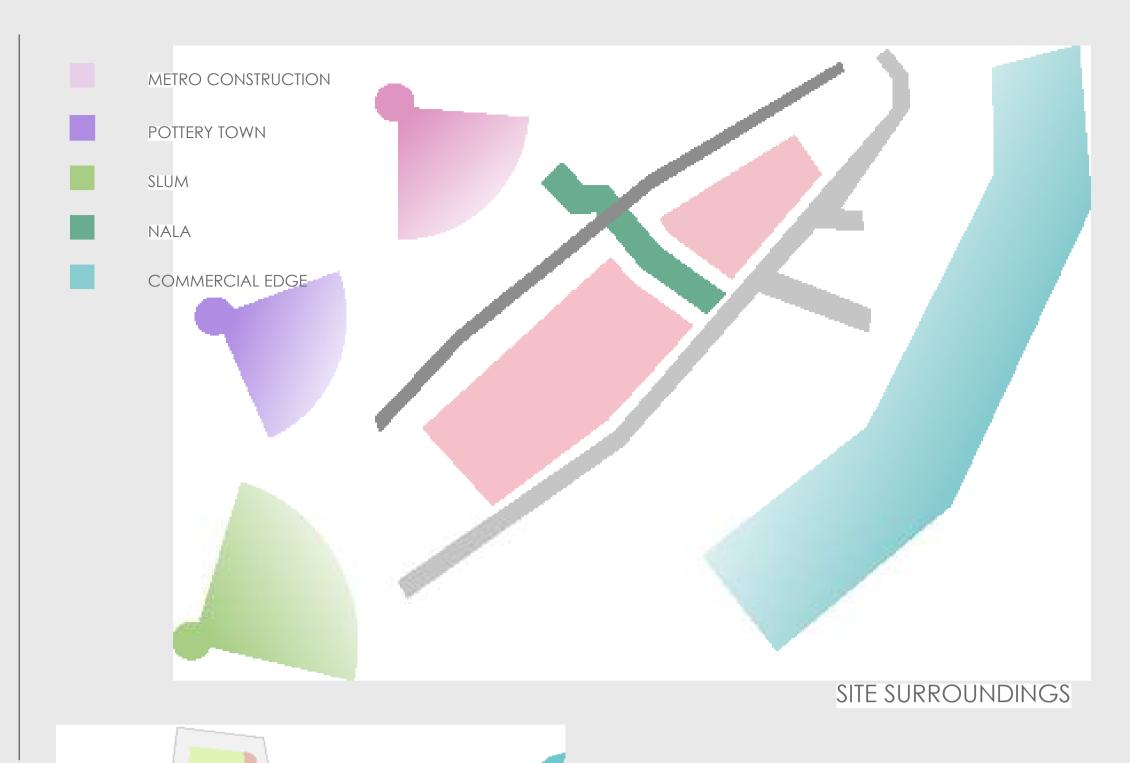
The site was located in frazer town, Bengaluru. It has a railway track along its northen edge, the site was split into to two areas by a stormwater drain that runs north-south.

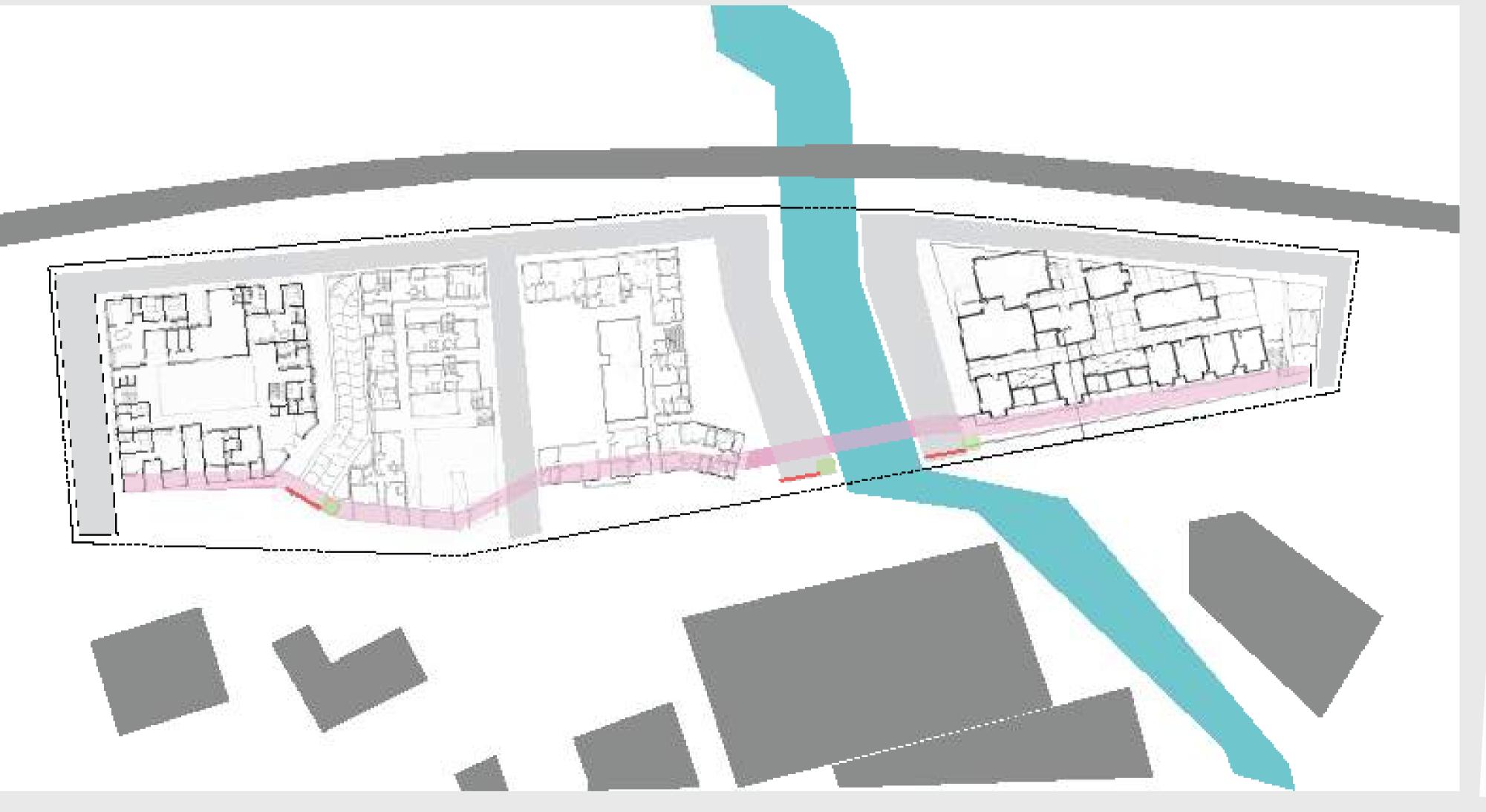
In the periphery , the metro construction work has been established. The site was also close to the pottery town and a slum.

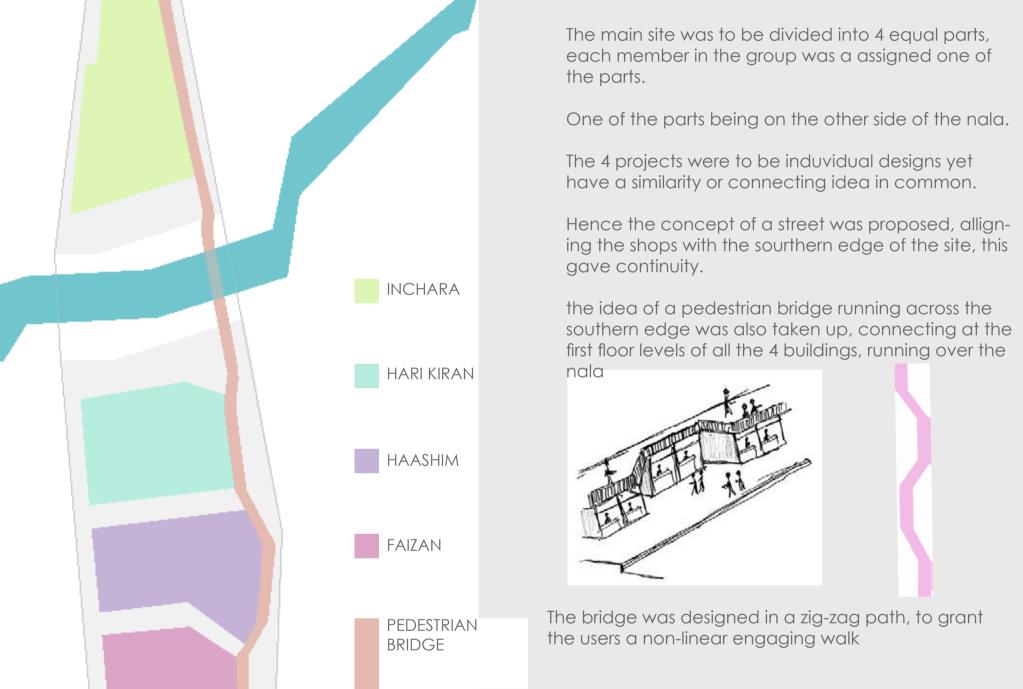
This project is based on the core idea of a rehabilitaion for the economically backward people of the the slum and pottery town.

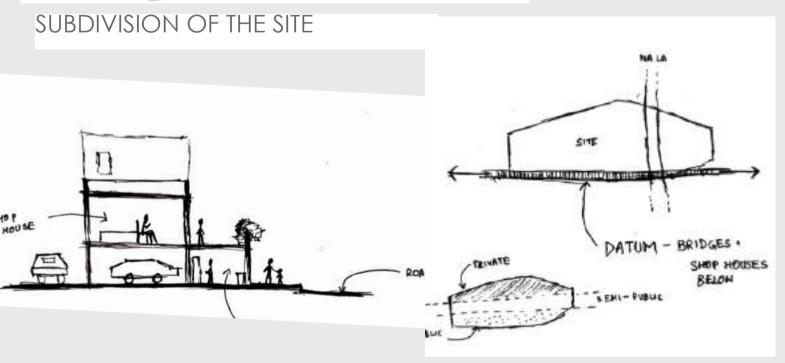
Another objective of this project was to understand shop houses, the balance between personal life and the work life of the economically backward class

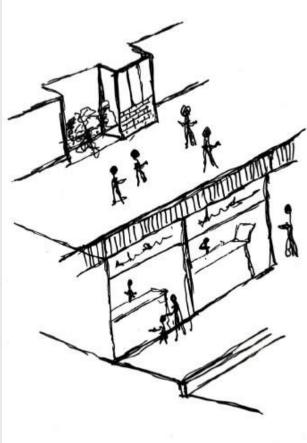
To design an apartment complex consisting of dwelling units - 30 sqm, 60 sqm,90 sqm & 120 sqm along with some shop houses, common areas, car parking.



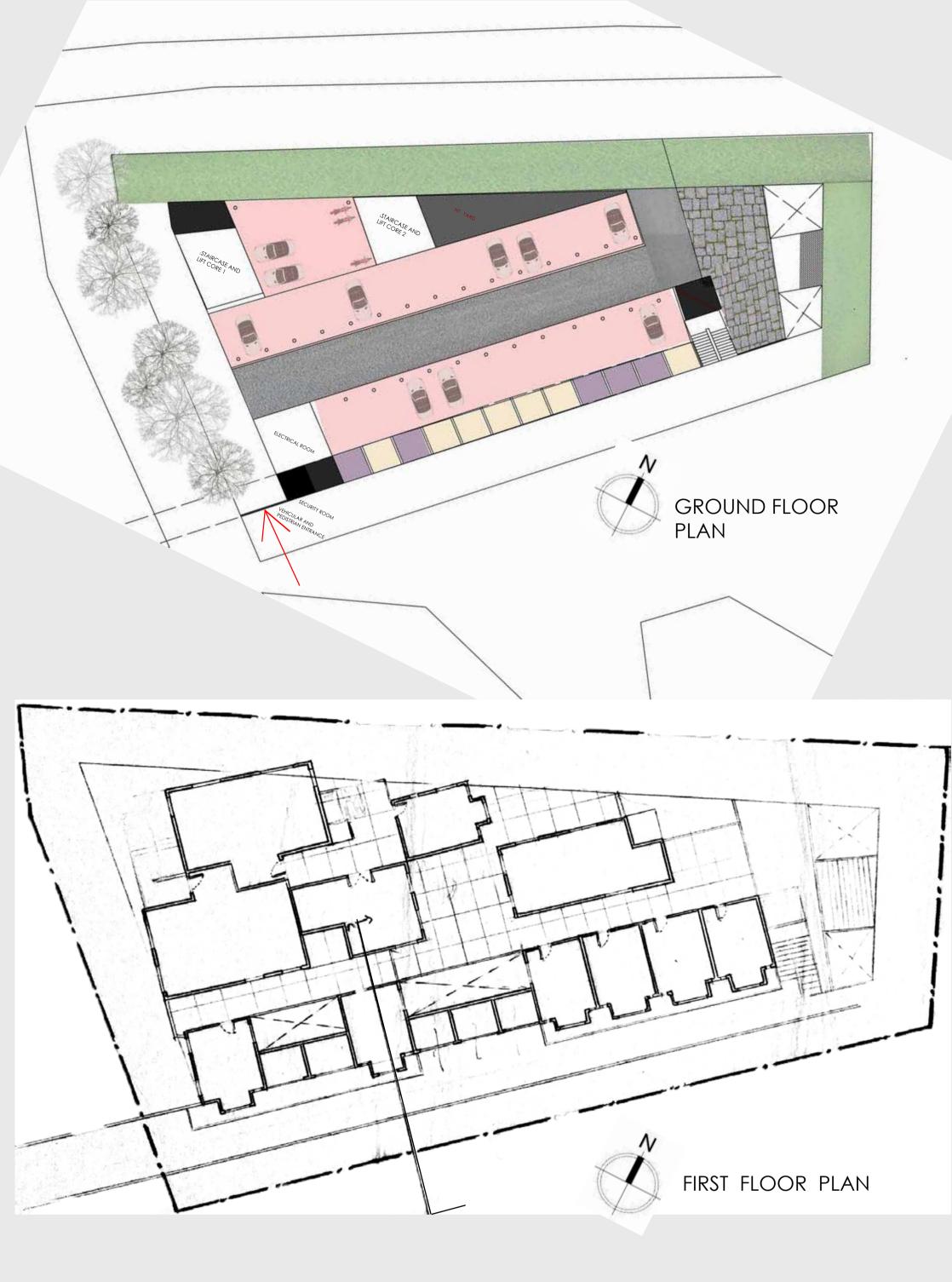


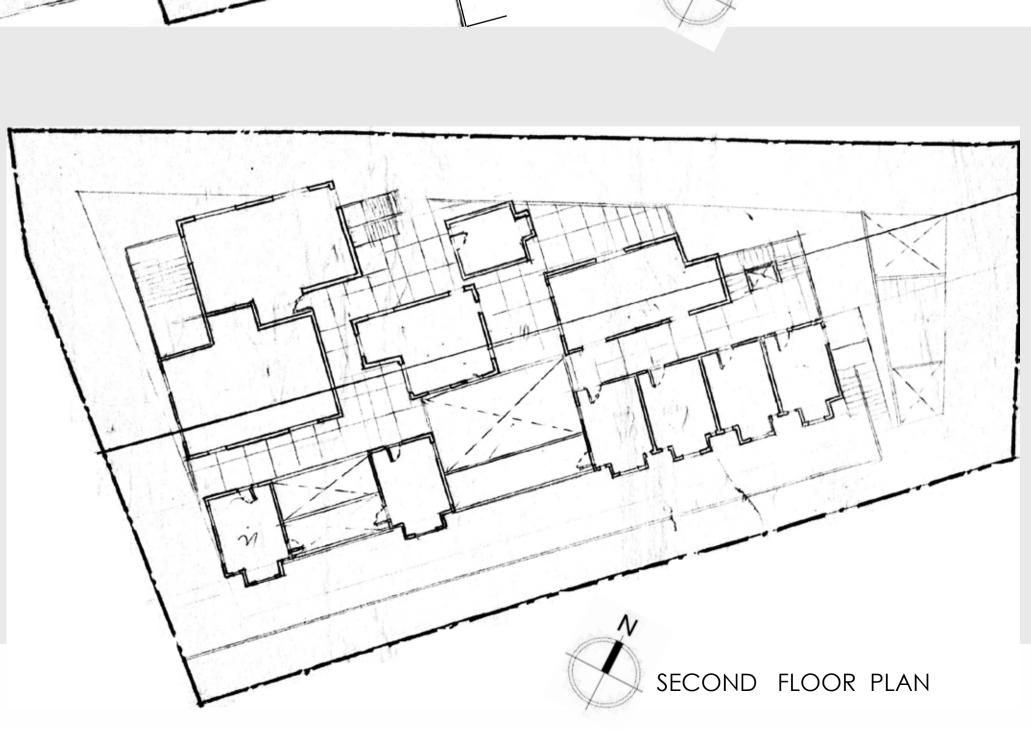


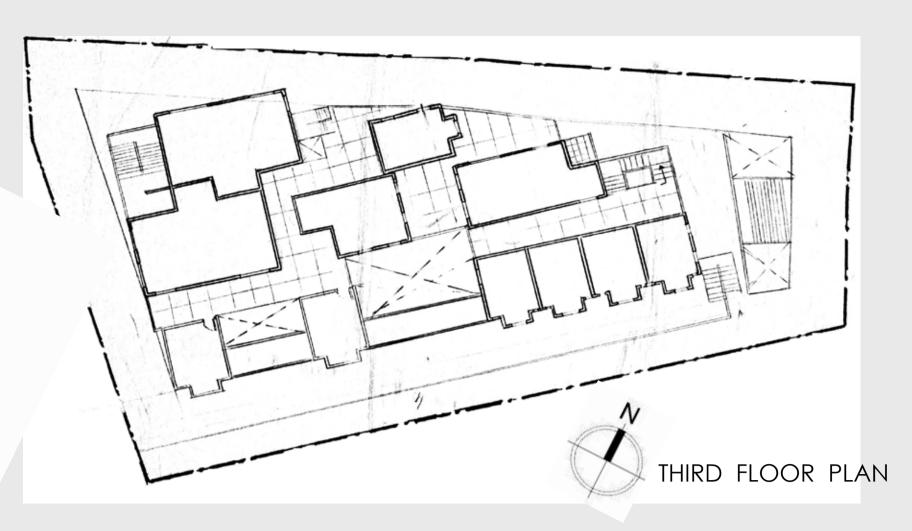


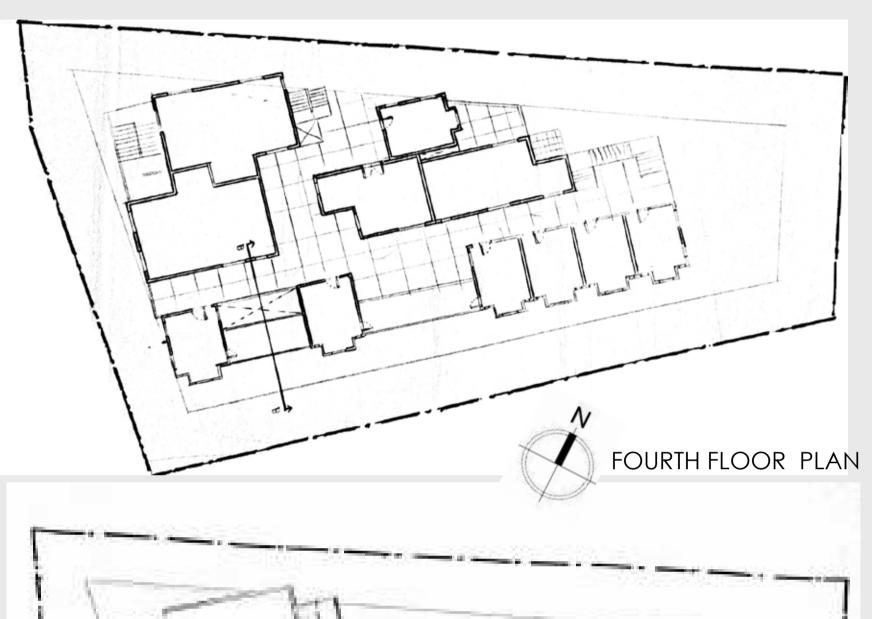


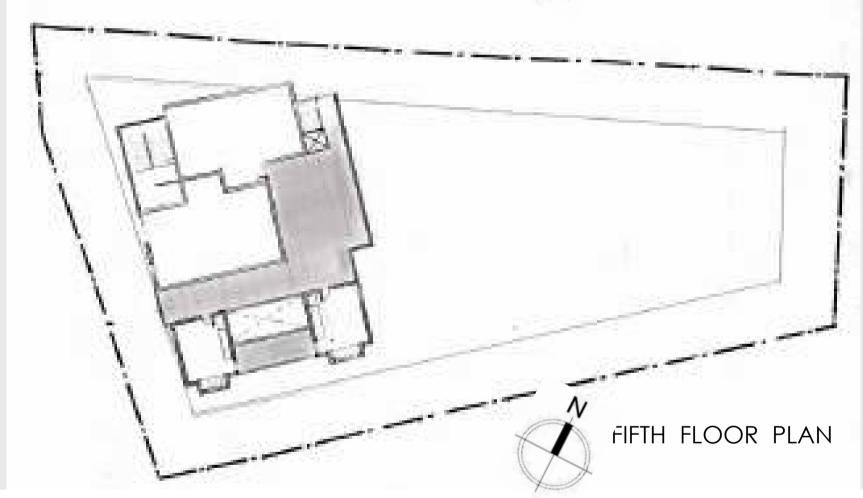
ENTRANCE/EXIT

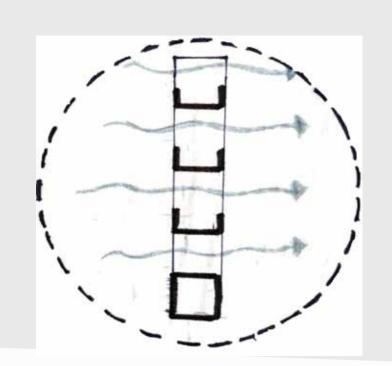












#### AREA STATEMENT

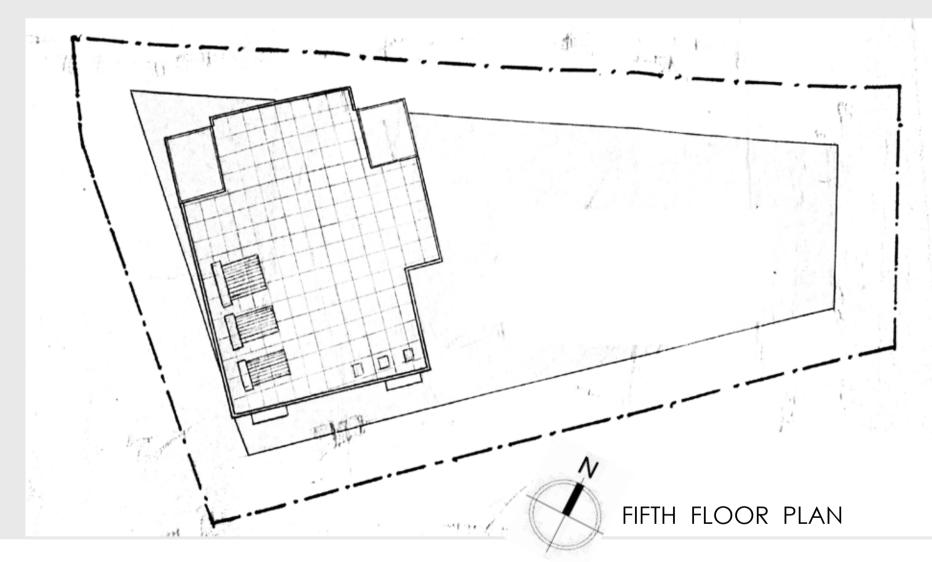
Tatal area of all housees and shops = 2240 sqm

Additional 15% for common spaces and ducts. = 350 sqm

Total area built = 2590 sqm



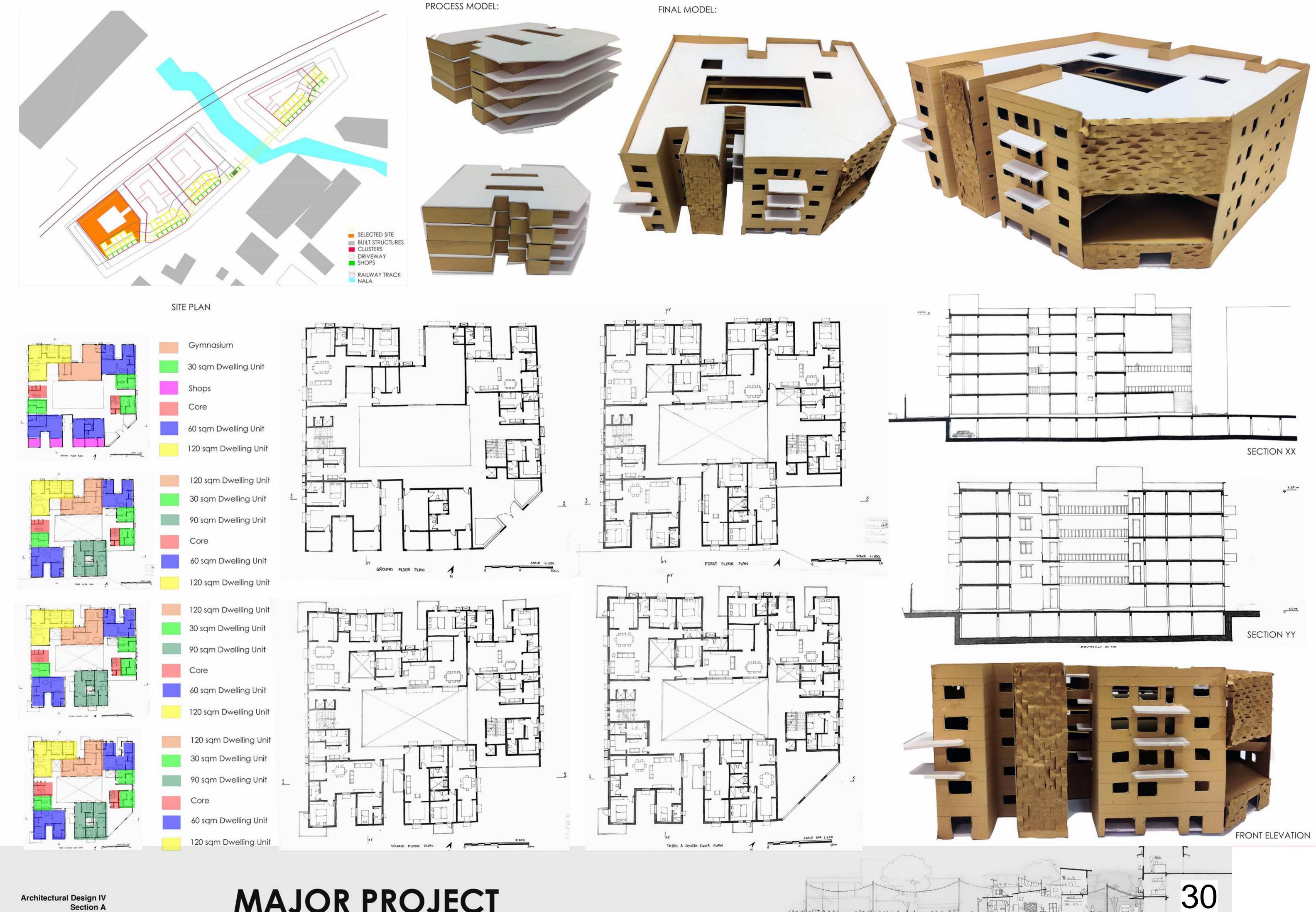
SECTION 'AA'











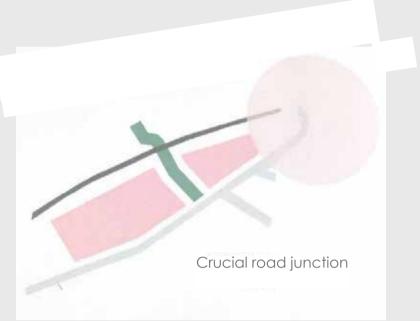
#### CONTEXT



The site is located in Frazer Town, Bangalore. The is divide into two parts by a stormwater drain. It has a railway track running by the northern edge.



TOTAL AREA= 6300sqm + 2400 sqm = 8700sqm

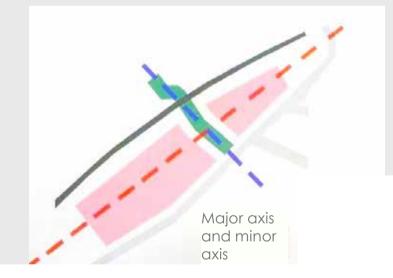


#### Requirements

Dwelling	Area(sqm)
D1	30
D2	60
D3	90
D4	120



- D1 units = 17 no.s = 510sqm • D2 units = 11no.s =660sqm
- D3 units = 9 no.s =810sqm
- D4 units = 2 no.s = 240sqm
- Common= =168 sqm spaces
- Shops = 7no.s =650sqm (Excluding houses)



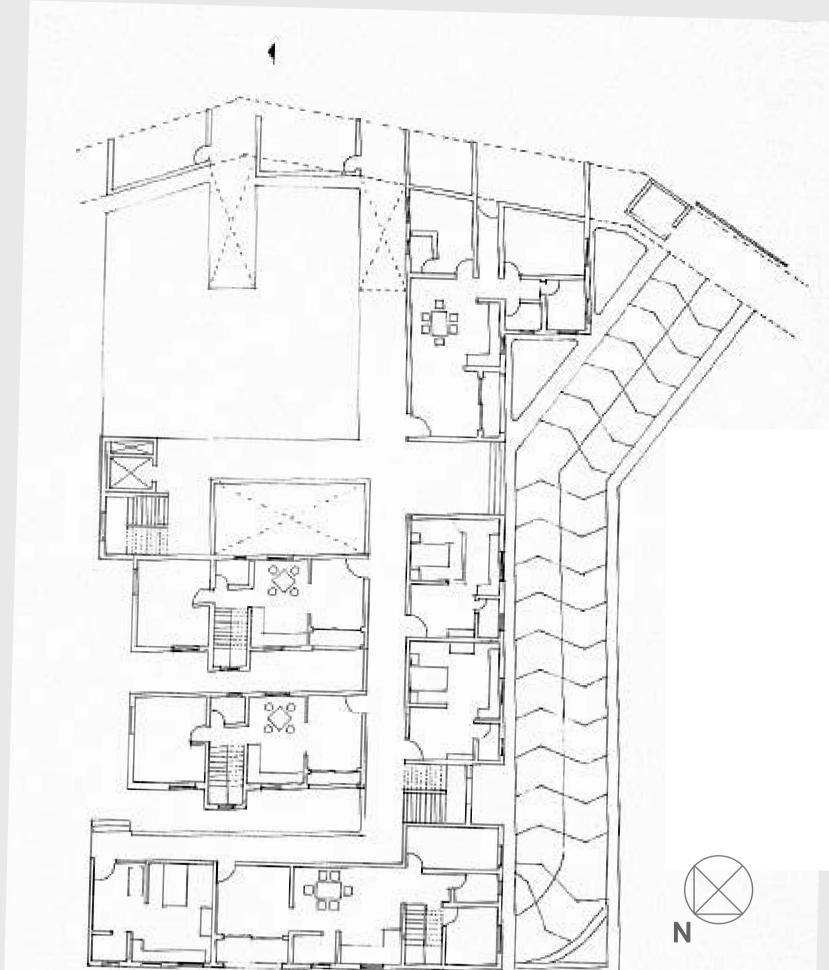
Toatal area of all units = 3038sqm +shops

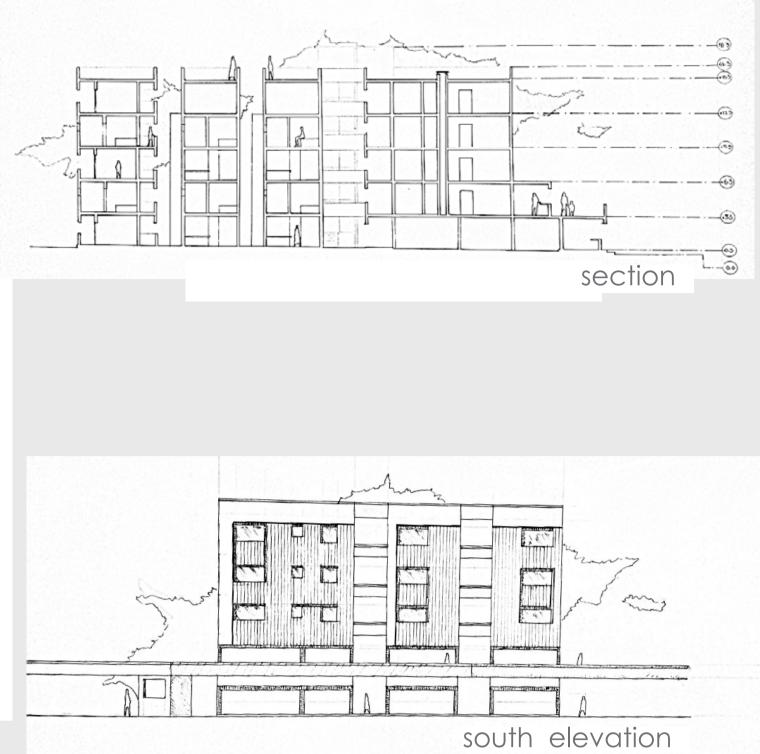
Addirional 15% for = 455,7 sqmcorridors & ducts

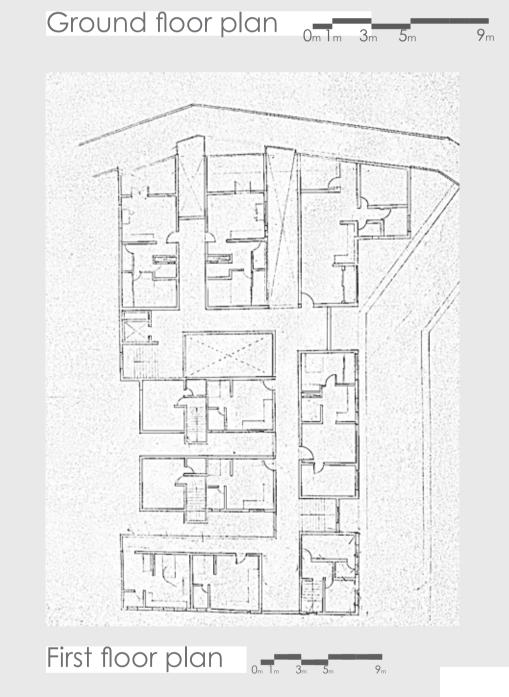
Total area built = 3493.7sqm

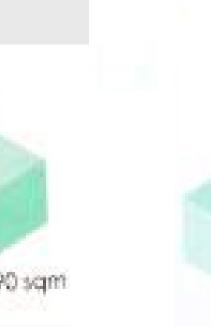


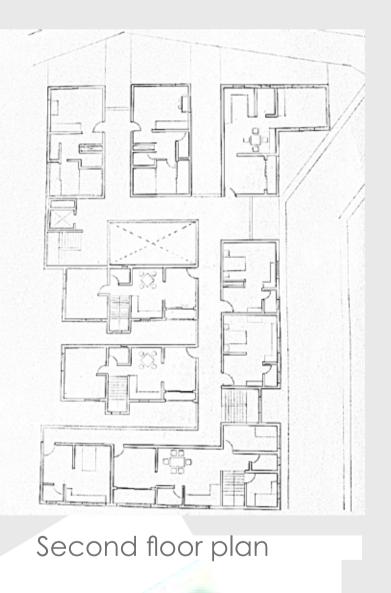




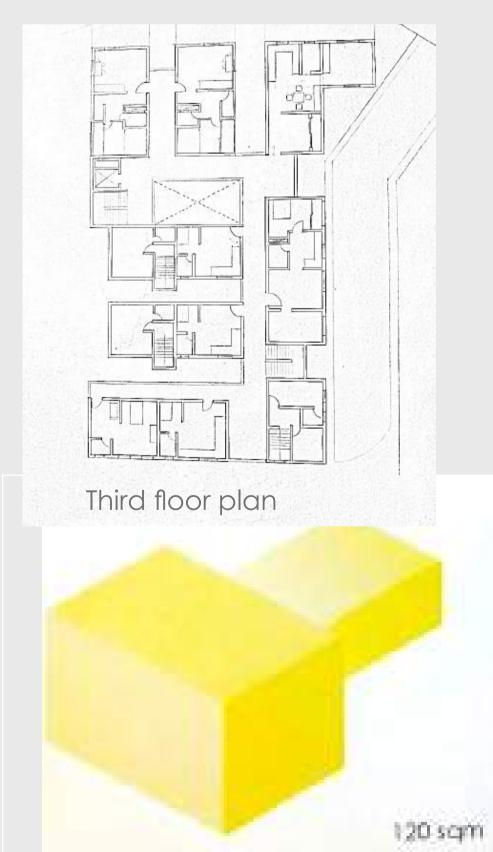


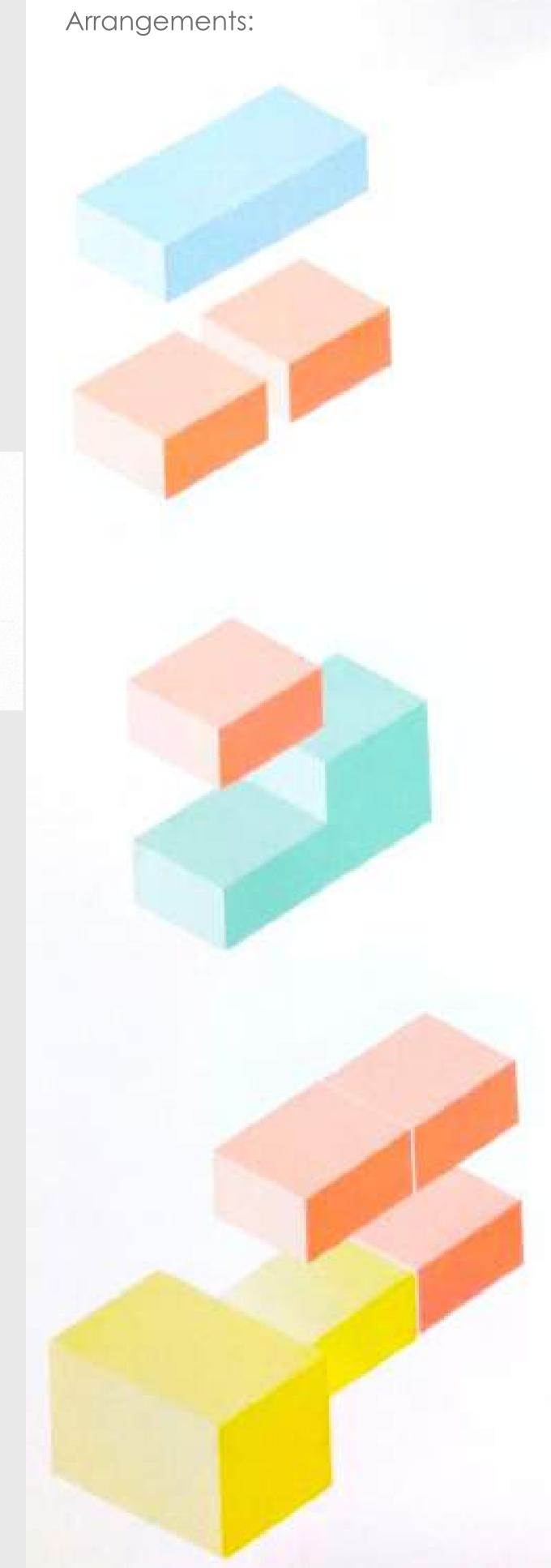


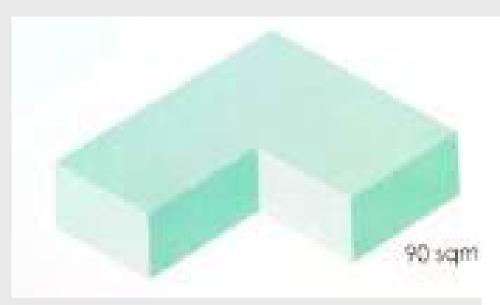


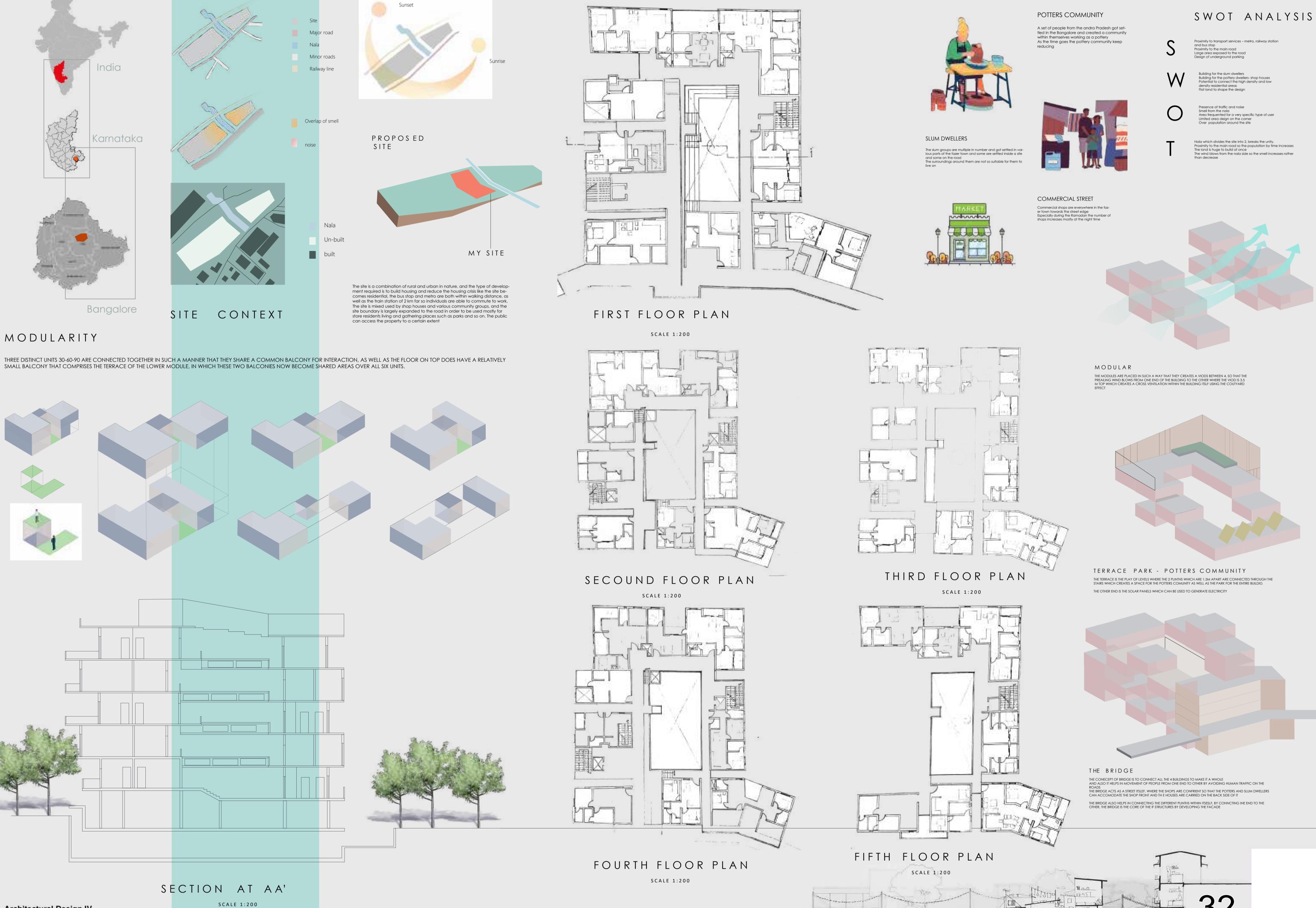












Building for the slum dwellers Building for the pottery dwellers-shop houses Potential to connect the high density and low density residential areas Flat land to shape the design

Presence of traffic and noise Smell from the nala Area frequented for a very specific type of user Limited area deign on the corner Over population around the site

Architectural Design IV Section A Academic Year 2021-2022