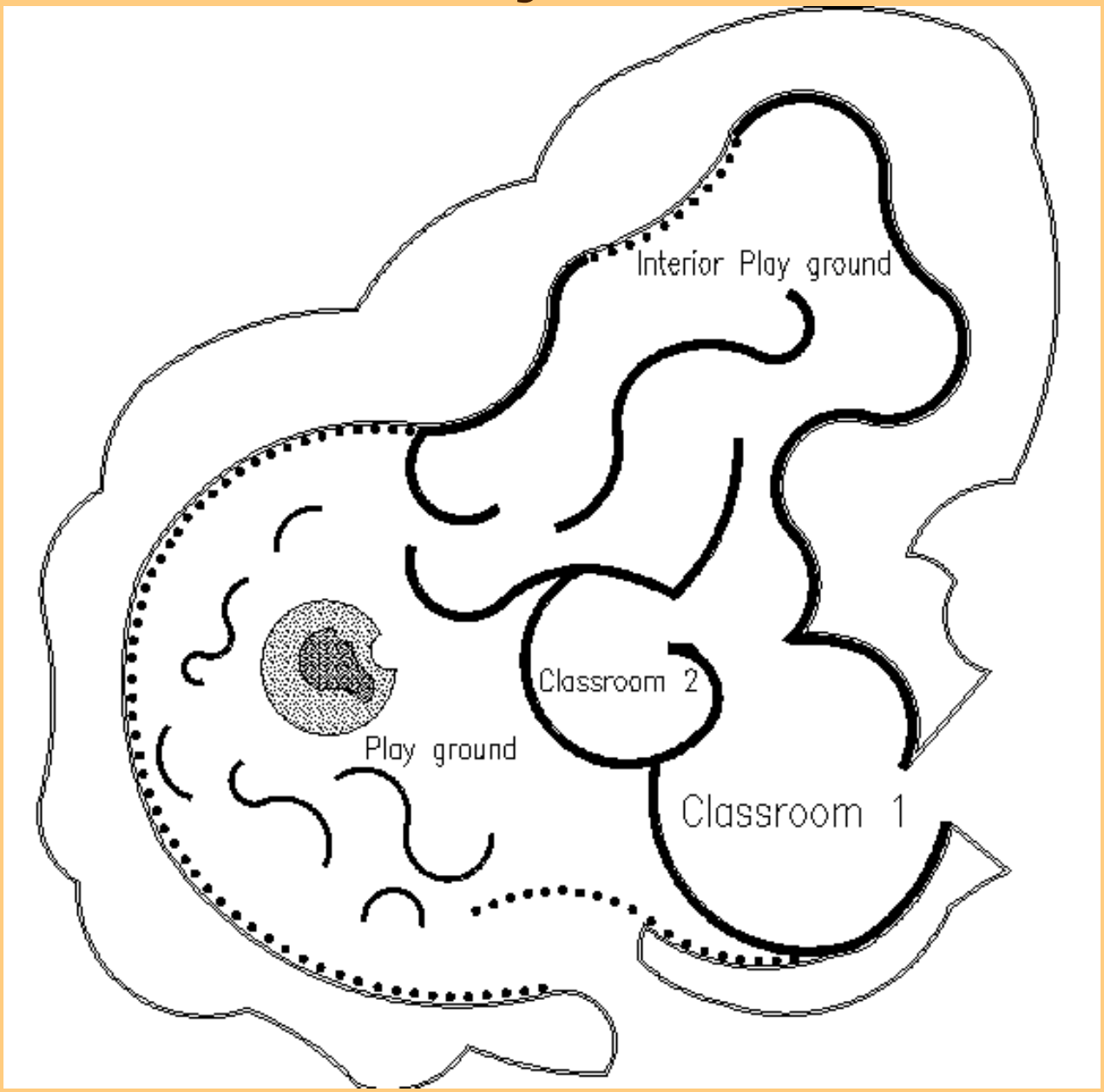
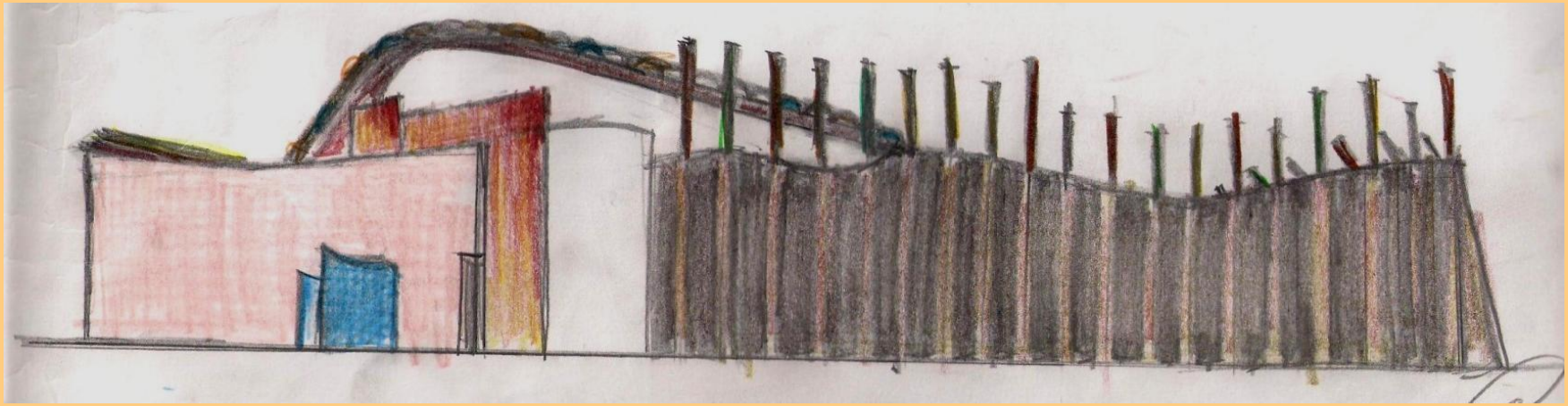
Rola Haroun

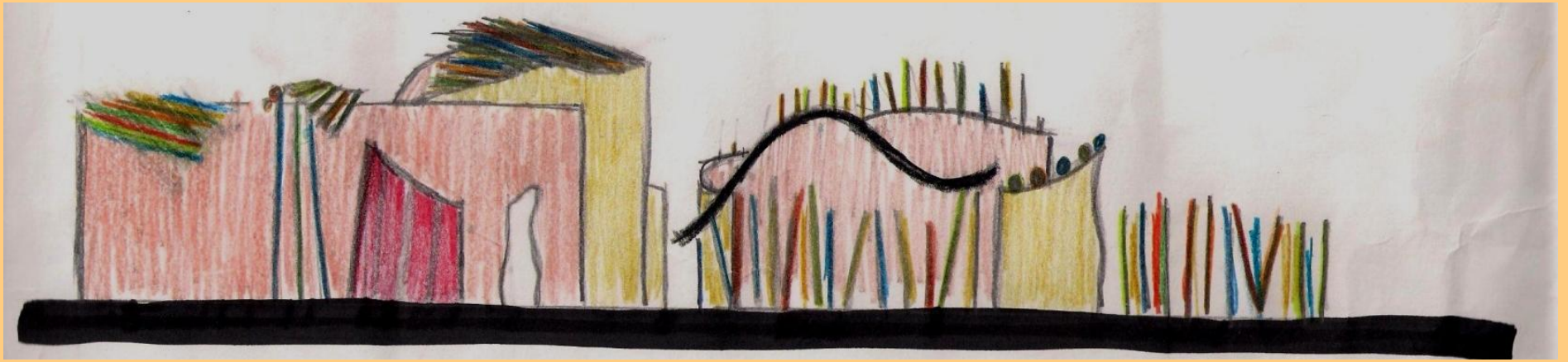
CHILDREN LEARNING PAVILION

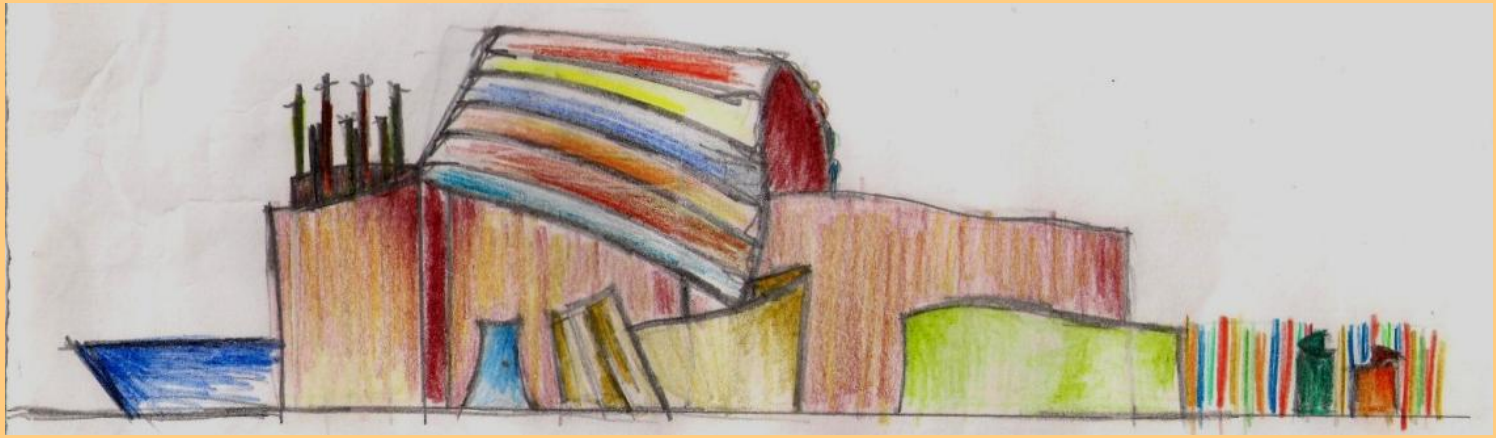
- Children's Pavilion aging 0-4.
- Location: AUC new campus.
- Concept: Having well defined circulation that ensures that the children encounter a useful journey.
- Geometry: Based on intersecting circles, where the intersection parts were the enclosed classrooms.
- The design is naturally ventilated and lighted to help in the children's learning experience.

Layout









SUSTAINABLE OFFICE BUILDING& RETAIL AREA

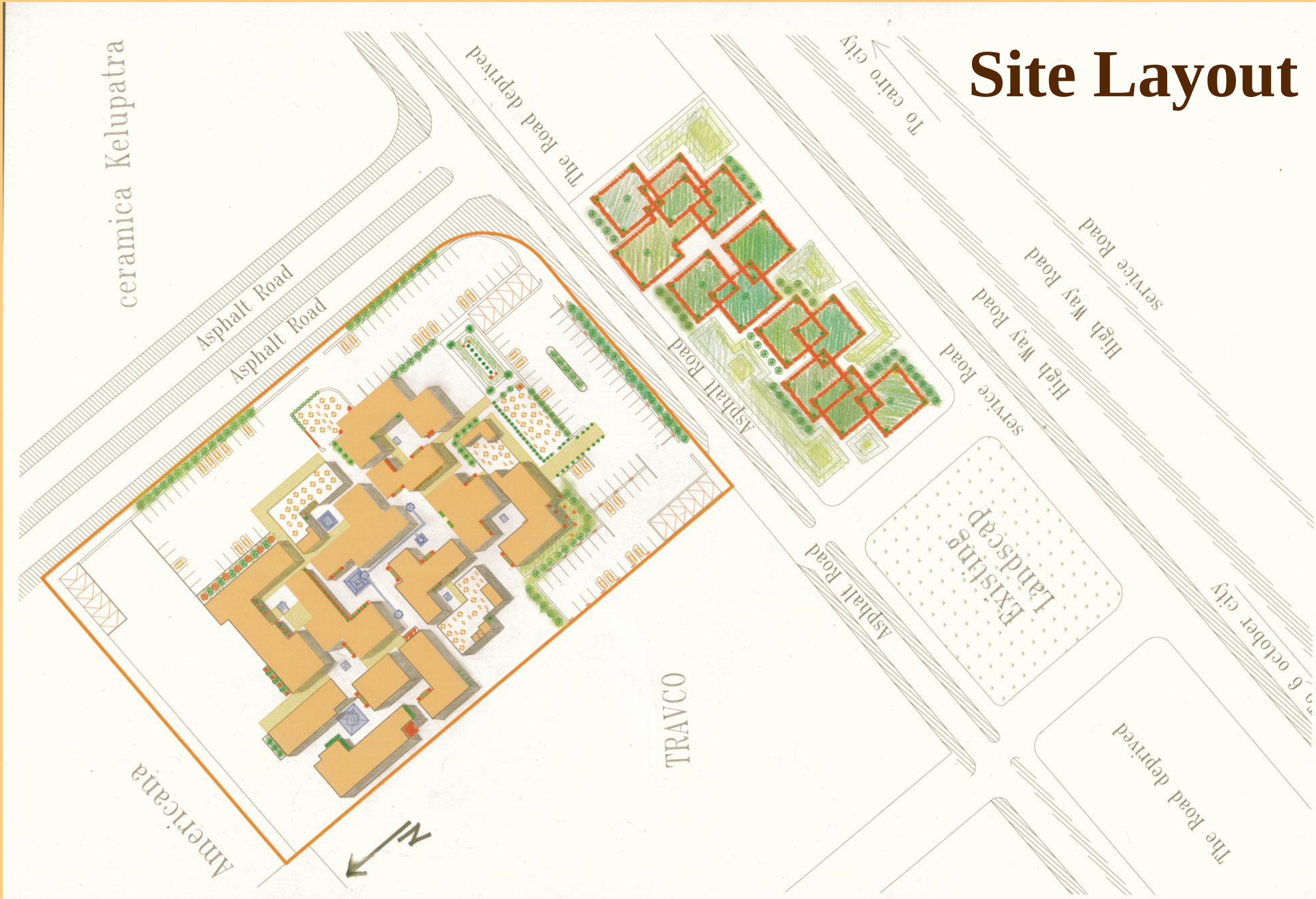
- Project location :6th of October city.
- Project consists of 15 buildings of varying levels from 1-4 floors.
- All buildings have solar panels that are used to heat water inside the buildings& provide electricity during power outages.
- An Islamic architecture inspiration shown in the project through:

-Solidity& open courtyards with fountains.

-Compaction of buildings.

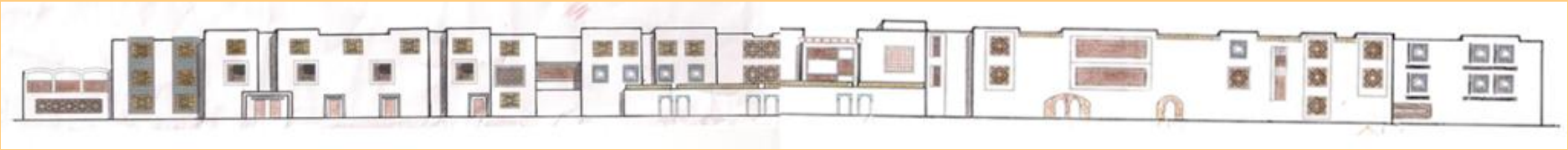
-Sharp angles created by a grid.

Site Layout

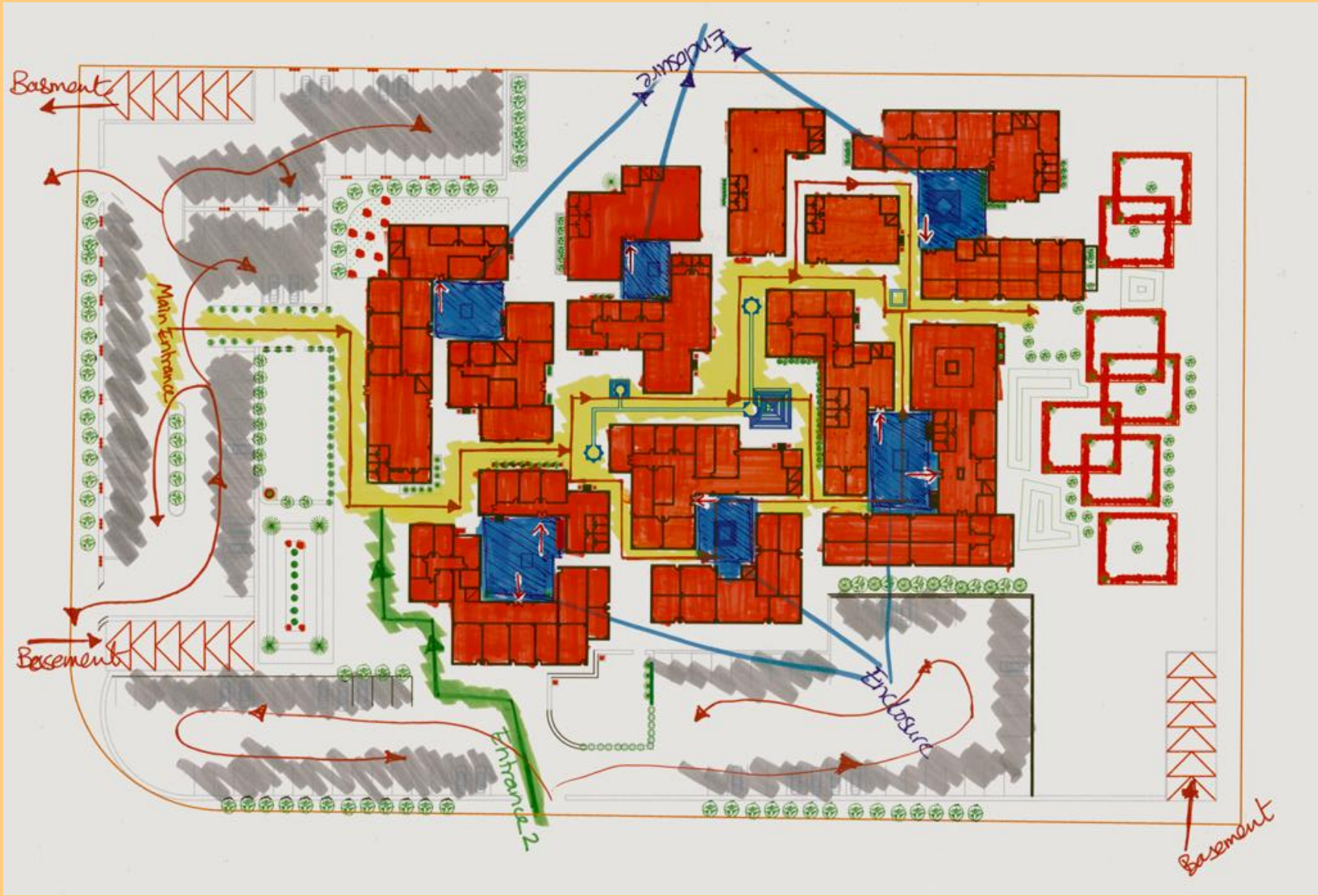


ceramica Kelupatra
Asphalt Road
Asphalt Road
The Road deprived
To cairo city
service Road
High Way Road
High Way Road
service Road
Asphalt Road
Existing Landscap
Asphalt Road
To 6 october city
TRAVCO
The Road deprived
Americana
N

Project Elevations



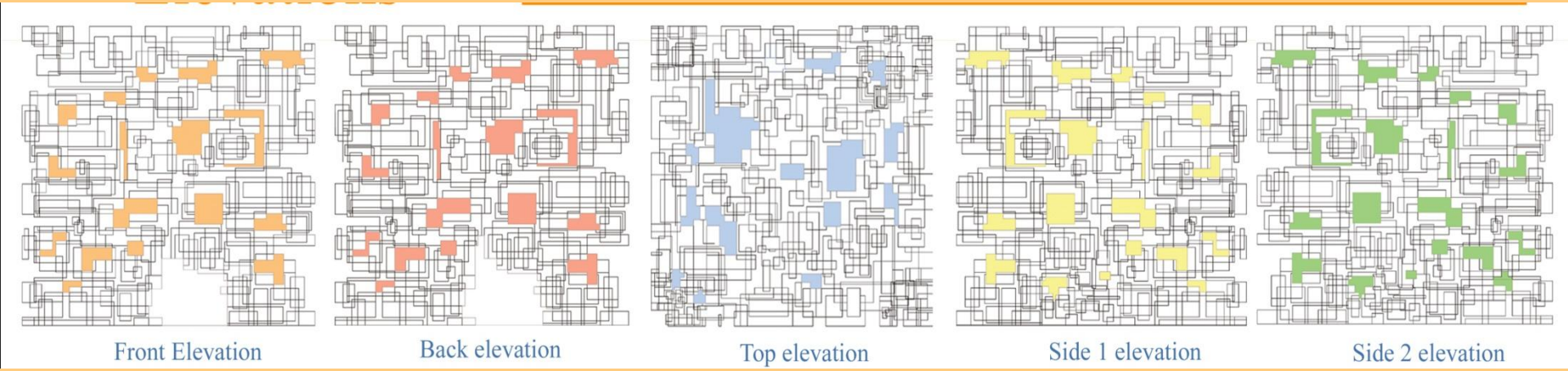
Accessibility Diagram



Student Pavilion

- Location: AUC new campus.
- Dimensions: a cube,10 m high and has 2 entrances on.
- Design: The façade was designed based on an irregular rectilinear intersecting pattern. The pavilion has120 varying sized glass openings that allow natural sunlight inside the space.

Elevations


Front Elevation
Back elevation
Top elevation
Side 1 elevation
Side 2 elevation

Location: In front of the university's main library.
It's a student pavilion where students work or spend their leisure time.
Design: The façade has an engraved rectangular pattern.

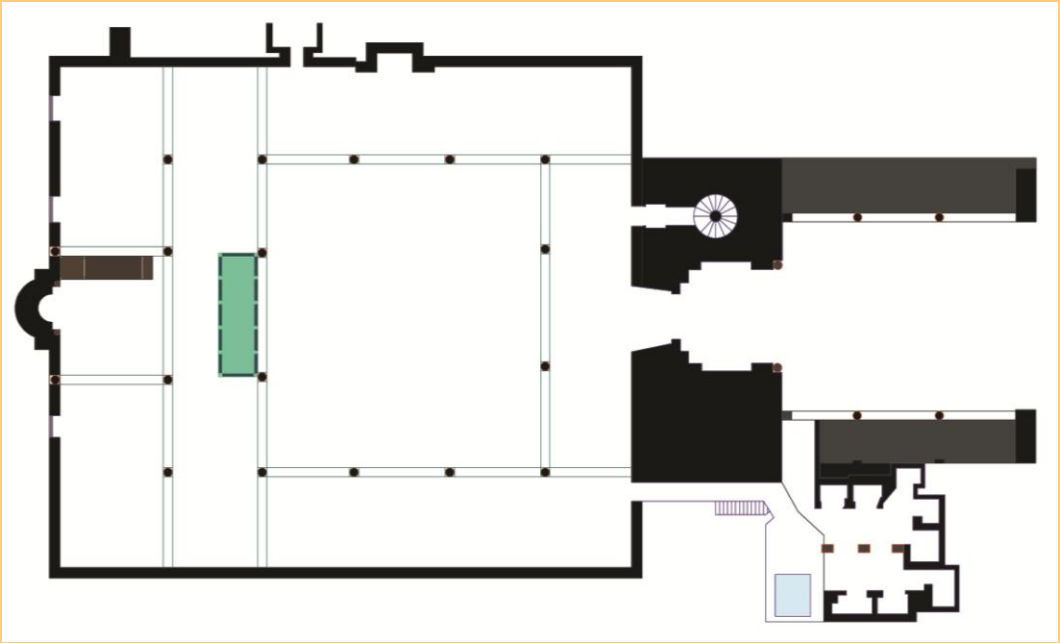
-Some of the rectangular patterns were subtracted from the facades allowing sunlight into the space.

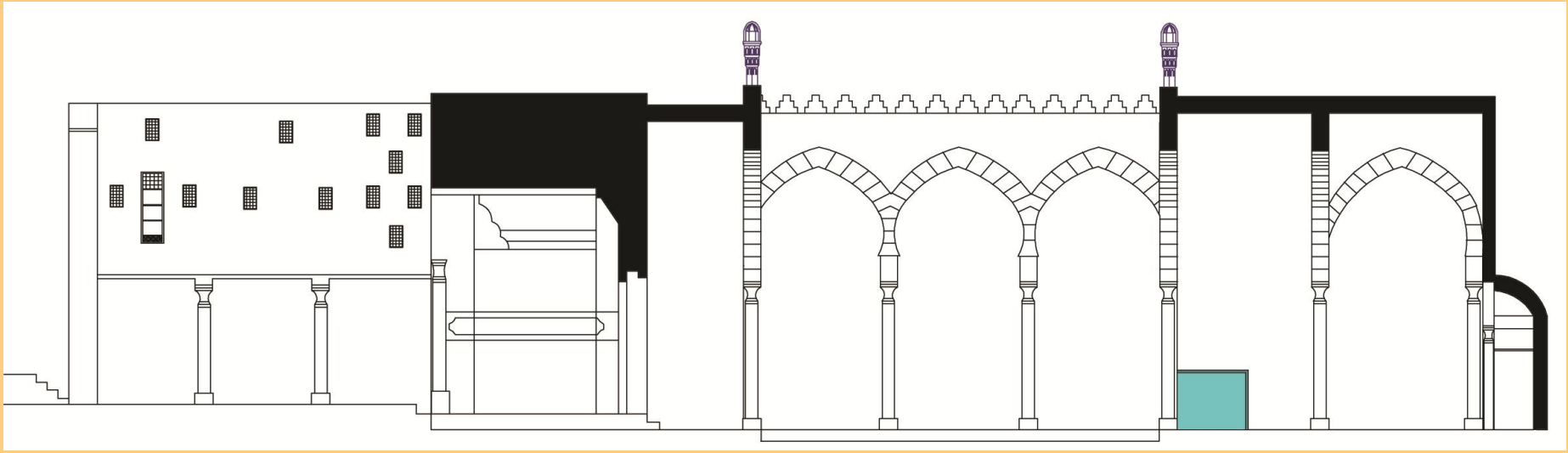
-Colored glass is used for the openings to allow different colors to diffuse into the space at the same time.

Reconstruction drawings of Bashtaq Mosque

Plan and main elevation of Bashtaq mosque built in the Fatimid era.

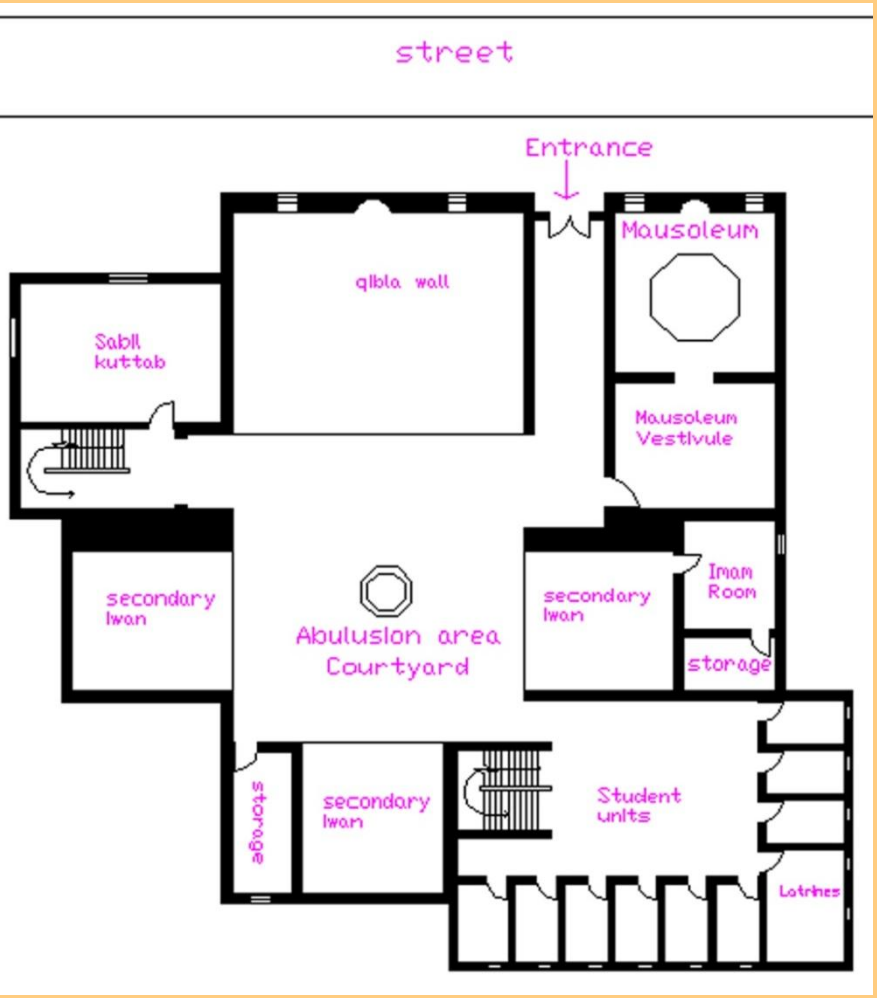
A project done with Dr. Bernard O’Kane.



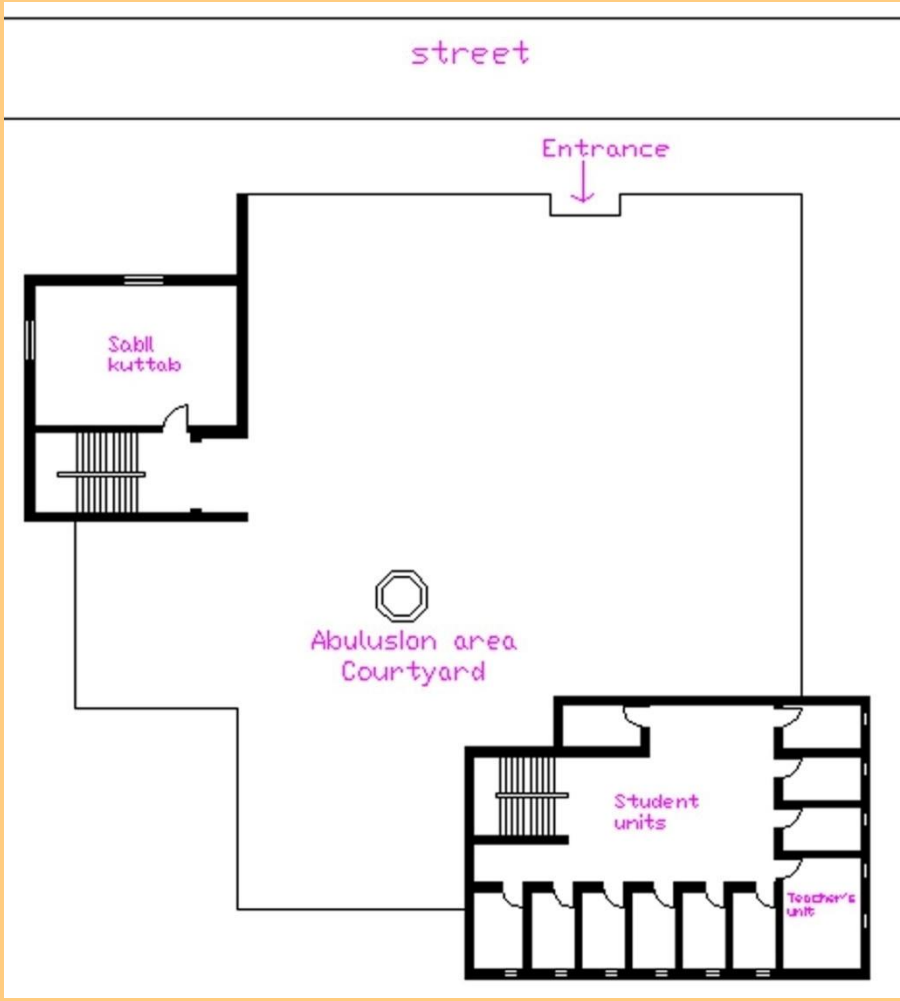


JAQMAQ MOSQUE

Ground Floor Plan



First Floor Plan



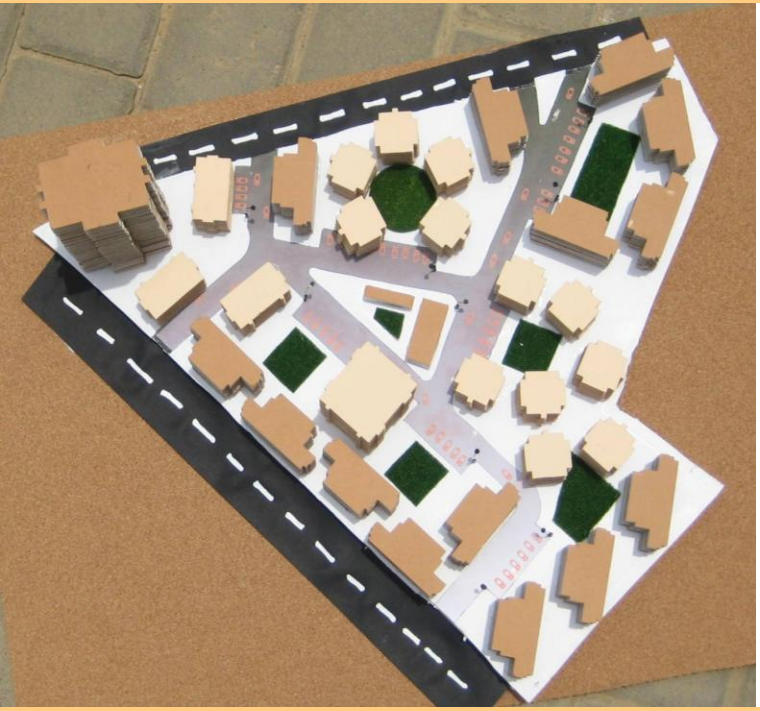
The project was to design an Islamic complex.

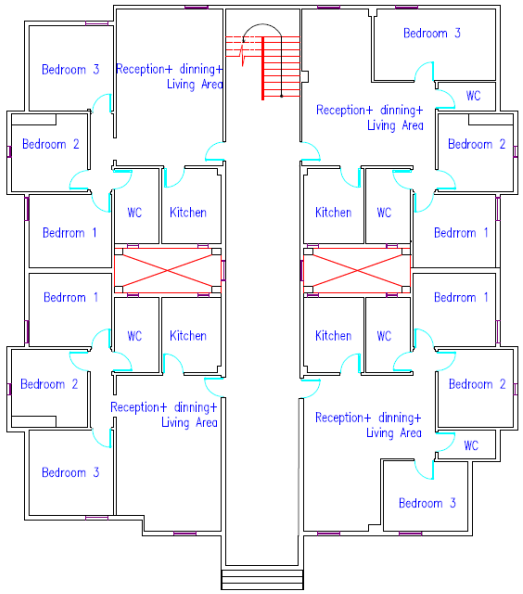
The complex consisted of two floors; Ground and first.

The structure includes a madrasa (school), a mosque, a mausoleum and a sabil kuttab (exterior drinking fountain& a Quran centre for young boys), ablutions area, storage rooms and student cells.

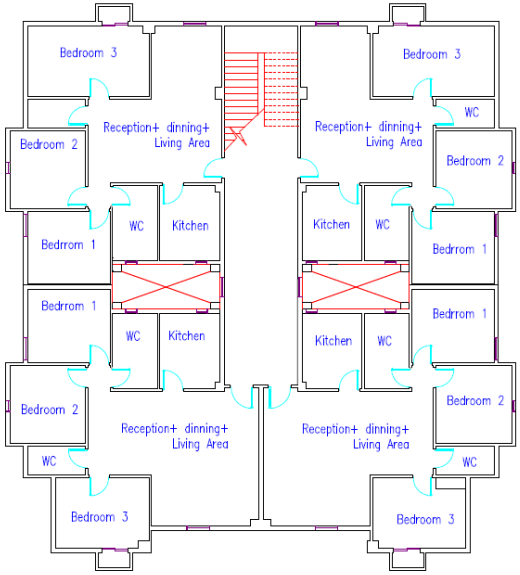
Public Housing Project

Economic housing compound layout

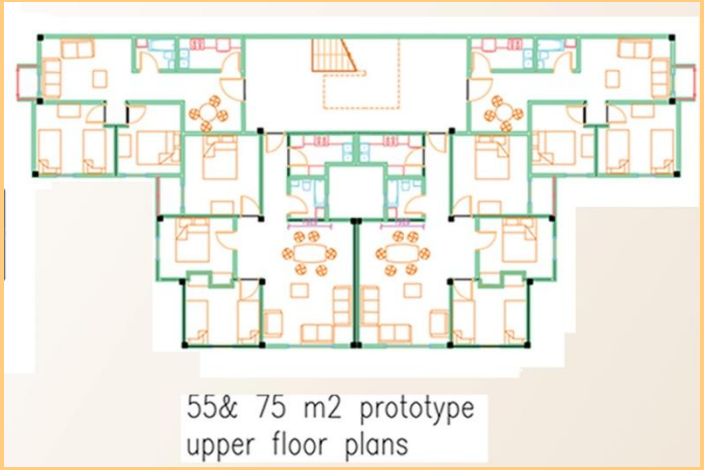




120 m2 prototype
Ground Floor Plan



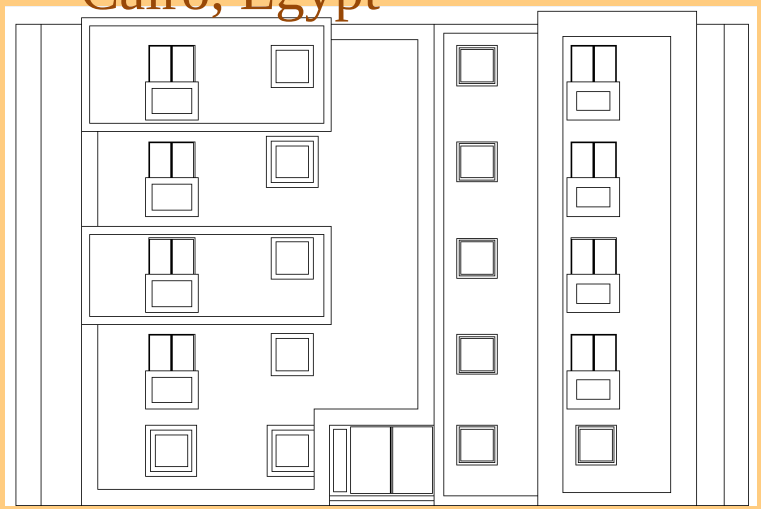
120 m2 prototype
Upper Floors

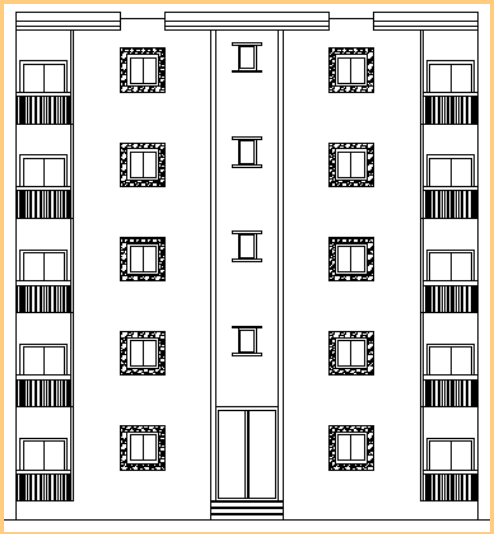


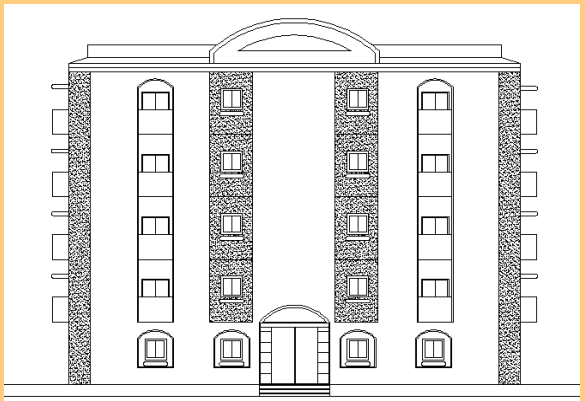
55& 75 m2 prototype
upper floor plans

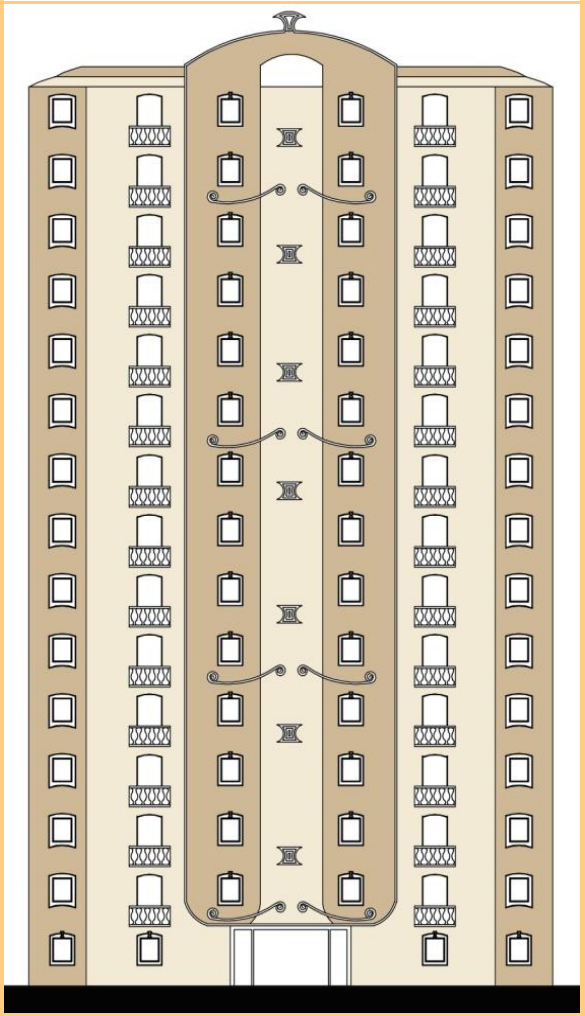
Building Elevations

- 30, 55, 75& 120 m2 prototypes were designed for the area of Tel el Akareb in Al Sayeda Aisha, Cairo, Egypt





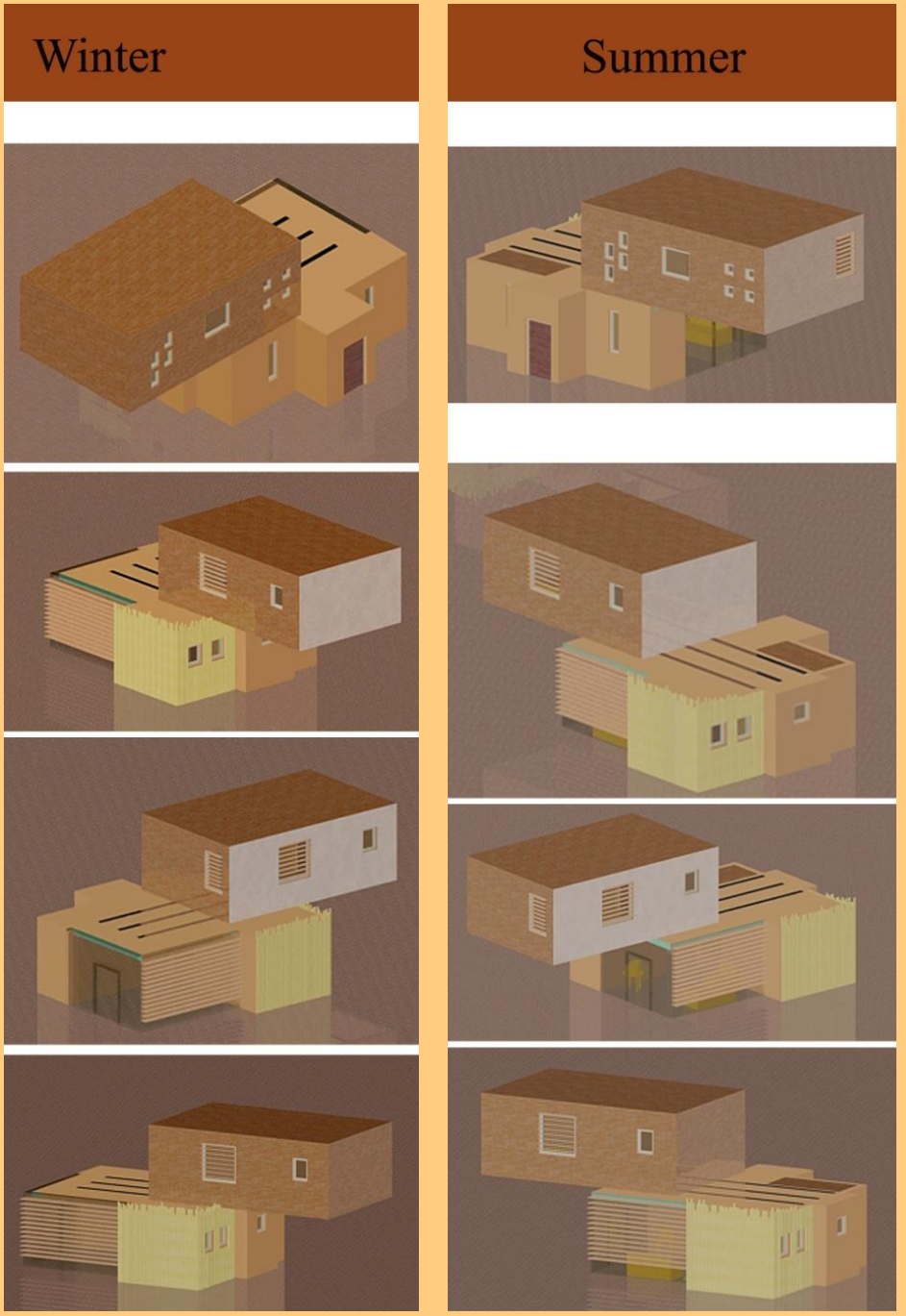




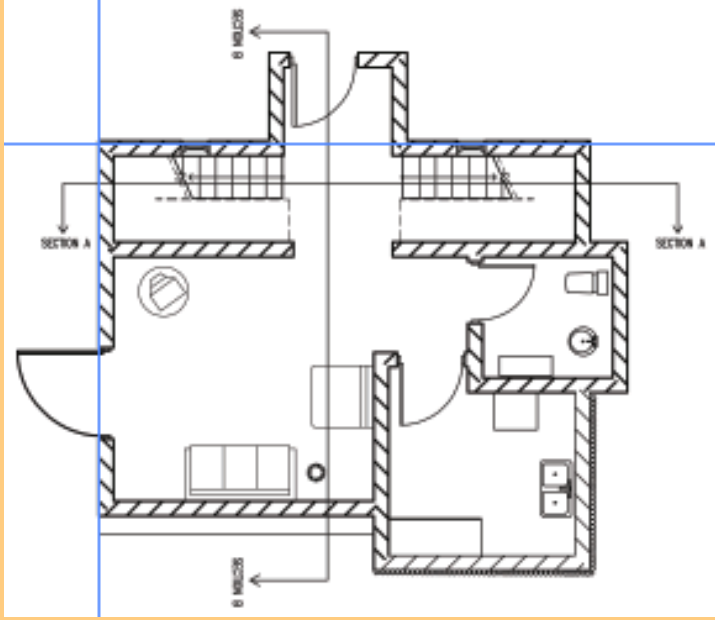
Sustainable house

•**Design**: The house is designed to be built in a hot country like Egypt.
It consists of two floors; Ground& first.
The 1st floor moves on a rail track. It moves horizontally after detecting the weather change& the angle of the sun.

Mechanism: In the summer it moves towards the southern direction to provide the maximum shade for the living room& the terrace.
In the winter it moves towards the northern direction to allow maximum sunlight to enter the living room.

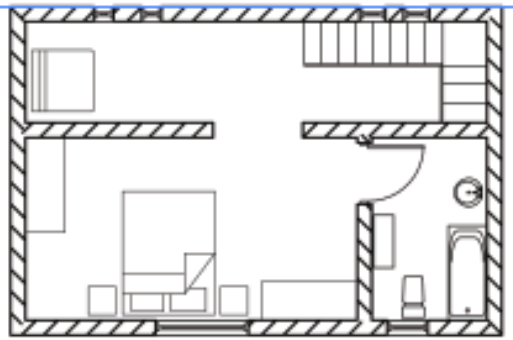


Ground Floor Plan

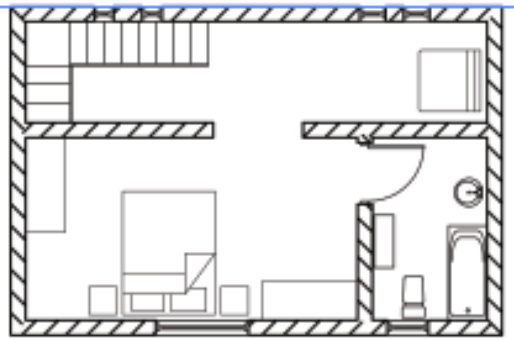


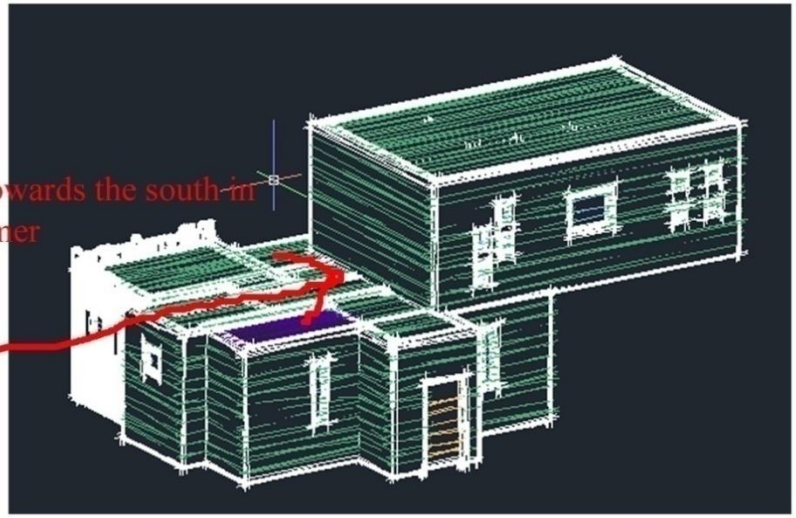
First Floor plan

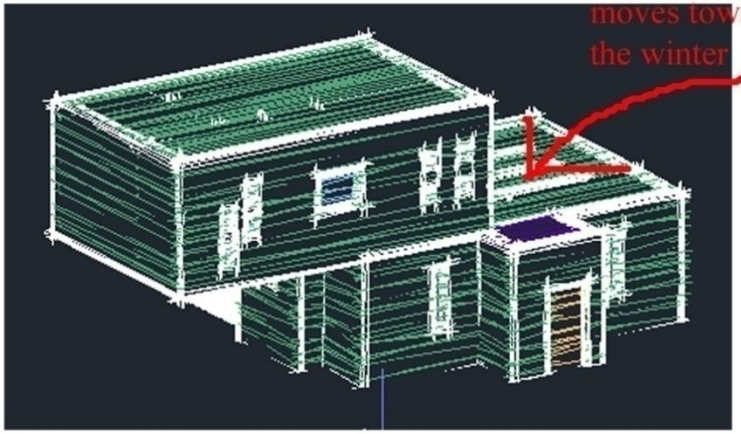
Summer



Winter

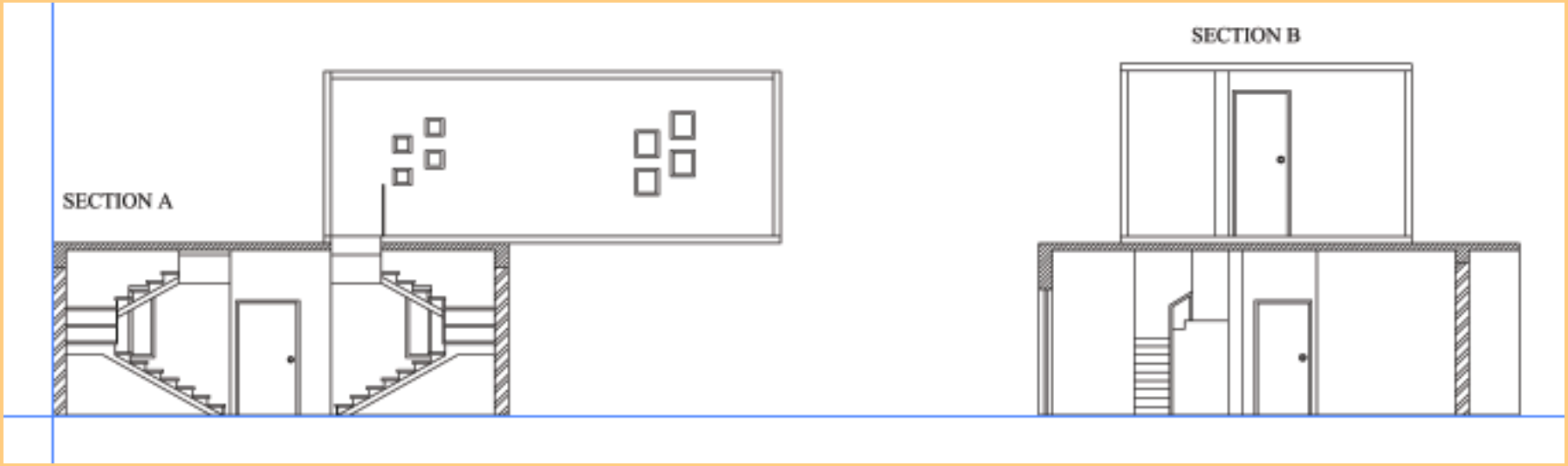






There are 2 stairs cases, each one is used in a different season to support the mechanism movement of the first floor twice a year. When each of the stairs are not used the other one is used as a library to store books and magazines.

SECTIONS



HAMMAM AL-TANBALI

Location: Bab el Shareya

Project design: creating a cultural center that offers a wide range of recreational, cultural, educational and social activities for children from the ages of 8-16.

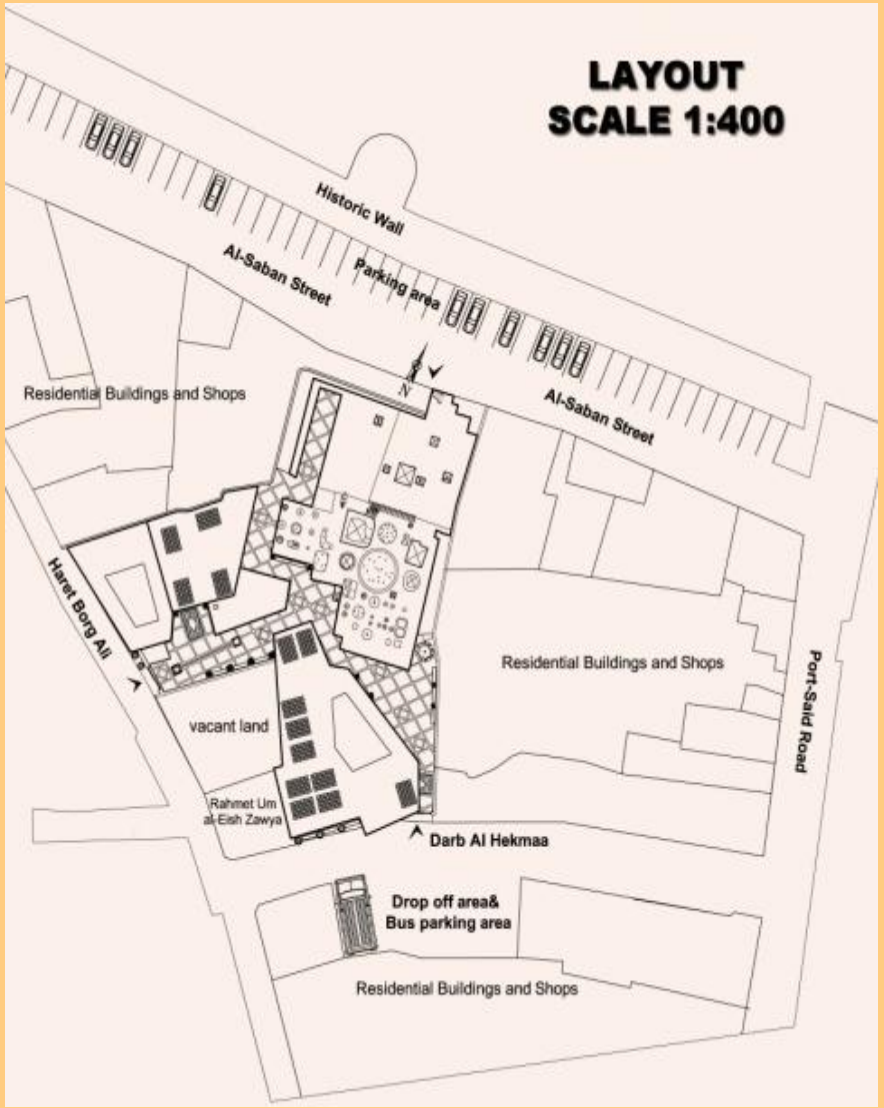
Purpose of the cultural centre: educating children about the history, culture& architecture of Islamic civilizations in Egypt. Thus provide creative experience to residents to enhance their quality of life and their knowledge about their history.

Project Components:

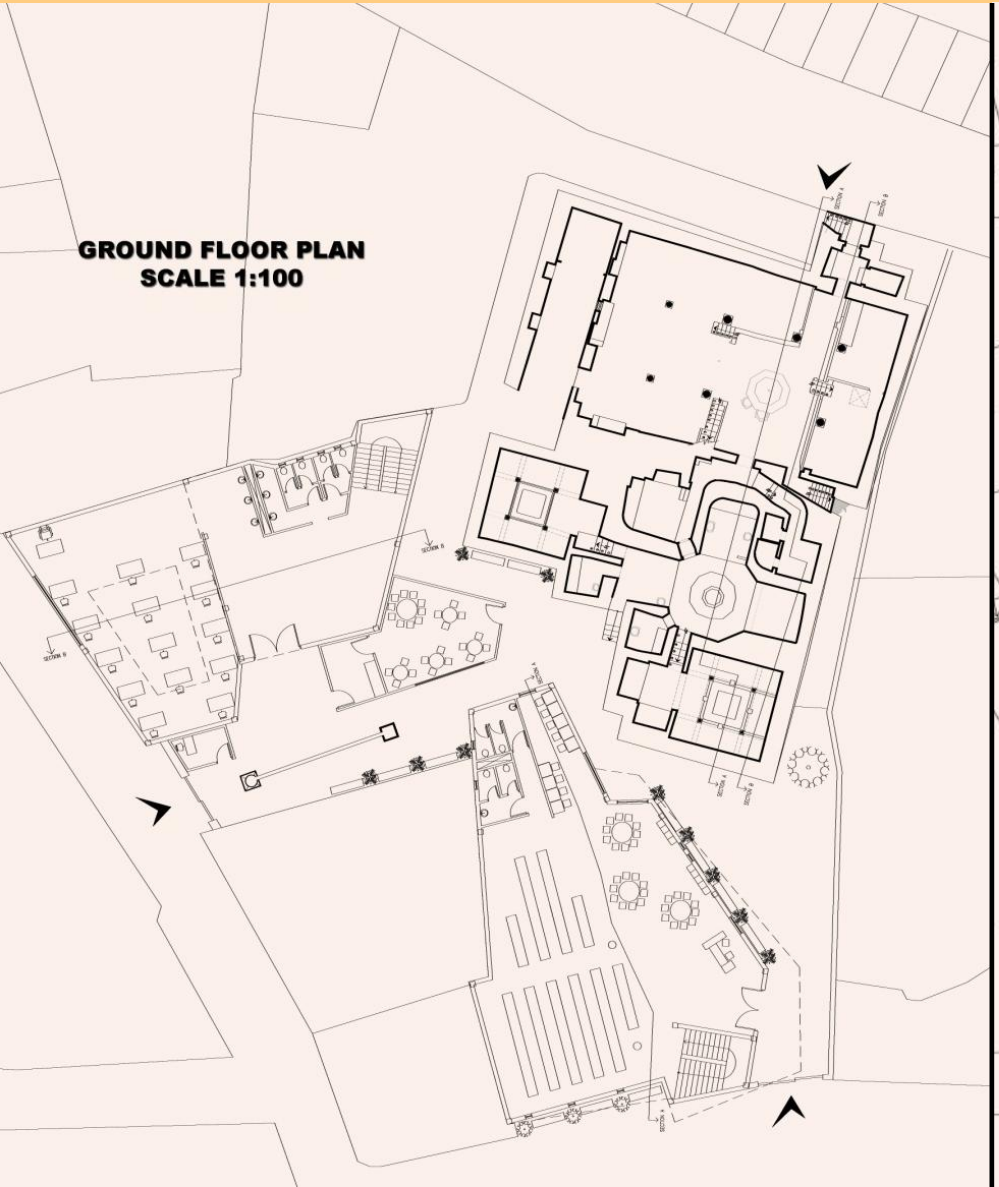
1. Playground (outdoor area) and Garden (Public Space)

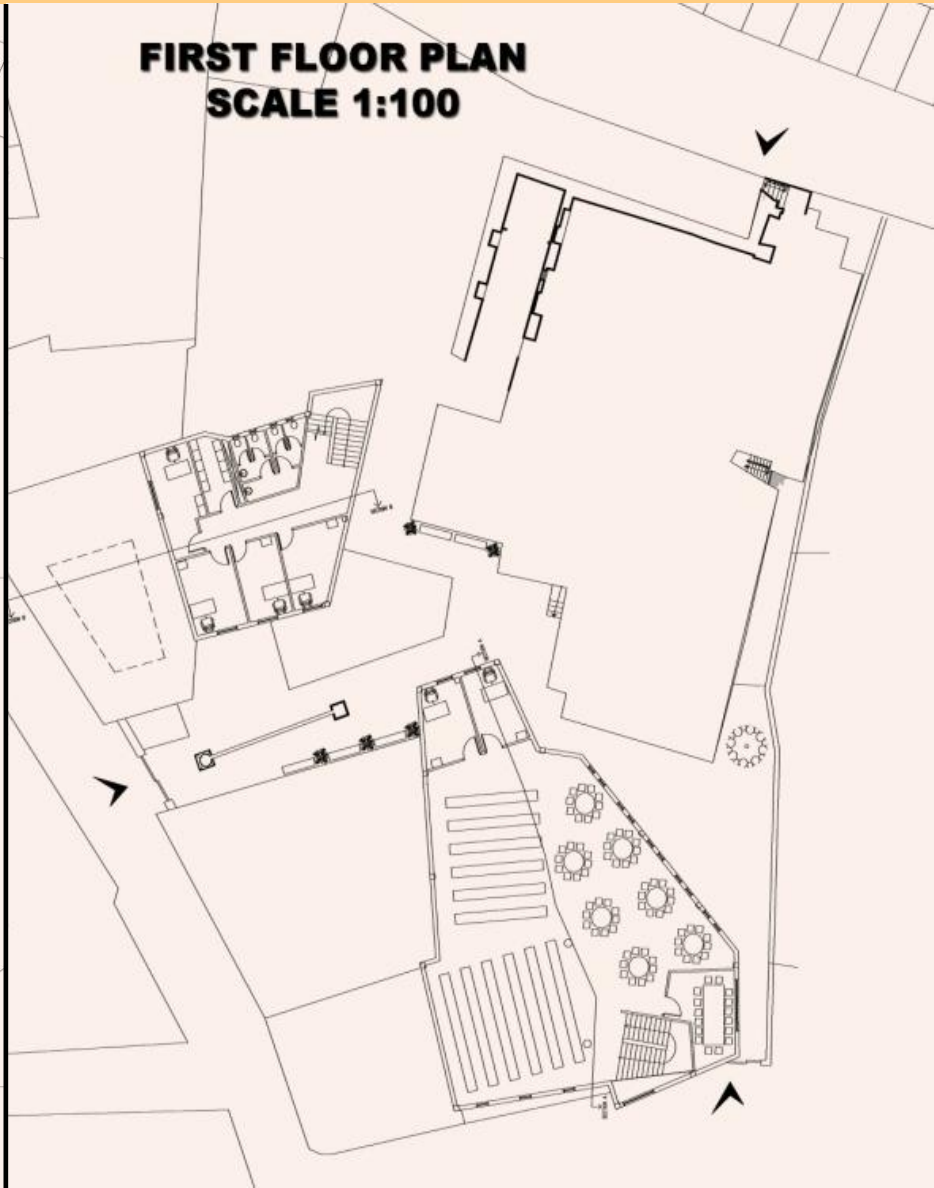
2. Public Library (additional building)

3. Culture and Heritage Center (renovation of the existing Hammam)

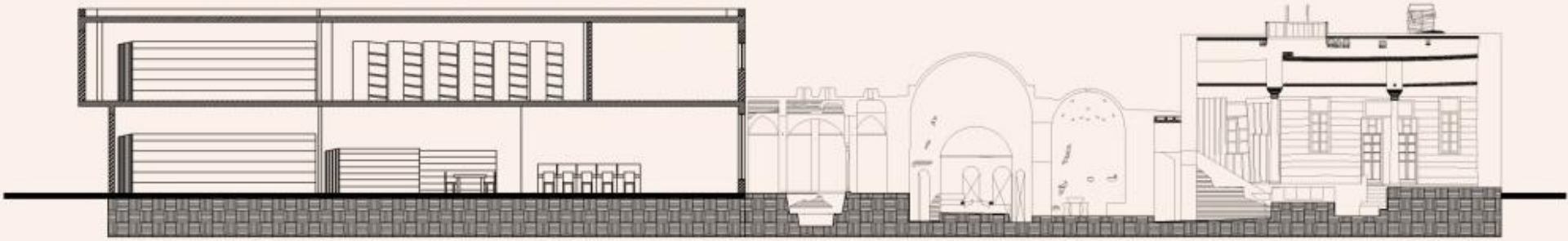


Floor Plans

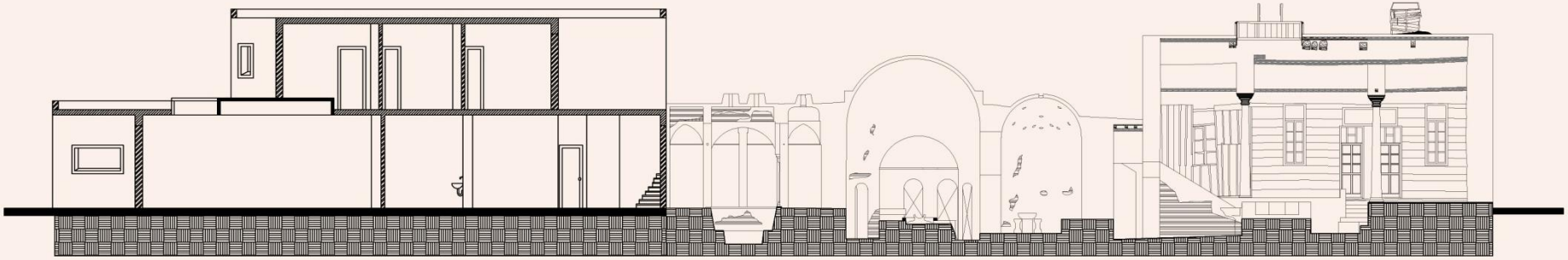




Sections

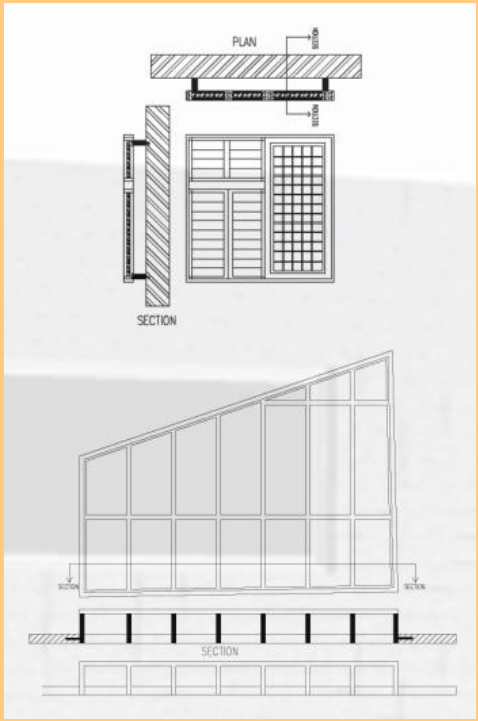


SECTION A
SCALE 1:100

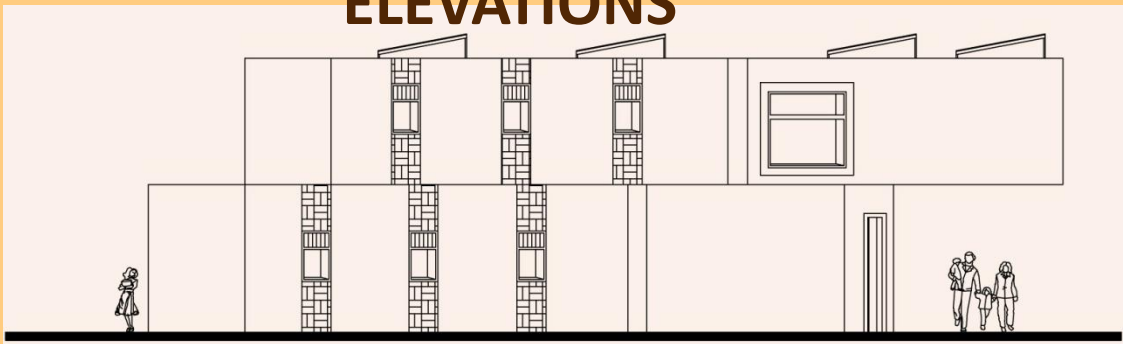


SECTION B
SCALE 1:100

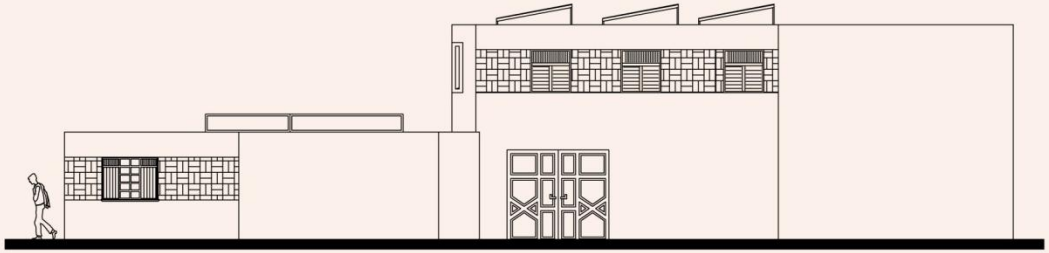
DETAIL



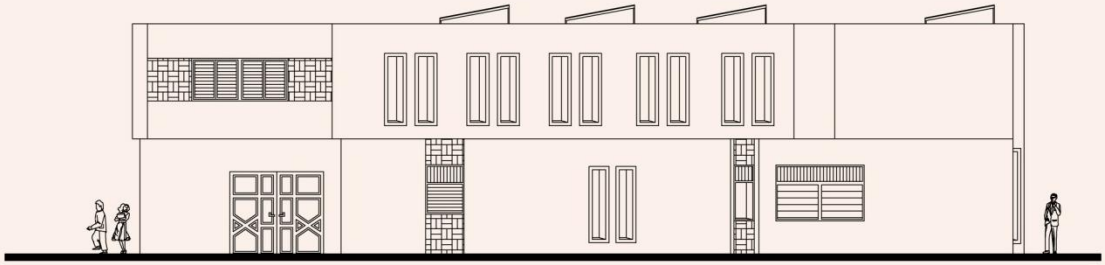
ELEVATIONS



LIBRARYSTREET FACADE ELEVATION



WORKSHOP& ADMINISTRATION MAIN ELEVATION



LIBRARY MAIN ELEVATION

ECONOMIC, SUSTAINABLE HOUSING

SUSTAINABILITY OF AN EMERGENT TRADITION
ECO-HOUSING PROJECT




CONCEPT

1-BETTER QUALITY OF LIFE DEPENDING ON THE VILLAGERS NEEDS THROUGH:

- Better ventilation and airflow.
- Organized housing plan taking environmental analysis, urban context & the existing grid into consideration.
- Including private and collective barns.
- Including Roof Gardens in the prototypes.

2-RECYCLING CENTRE

- Recycling waste from the housing units (the new & old village).
- Agricultural waste will be used in the Bio-digester to provide energy for the housing prototypes.
- Serves our Thesis Statement which entitles a Self Sustaining Village.
- The recycling process includes Collecting, Sorting and Recycling. So there will be collecting points in both villages.
- Sorting will take place in the land next to the recycling centre.
- The Recycling centre will help in Cleaning The Old Village as it has hygiene issues due to the garbage dumps.

3-ENVIROMENTAL ANALYSIS

- Prototypes Orientation
- Sun& Wind analysis
- Ecotect analysis

4-CONSTRUCTION MATERIALS USED

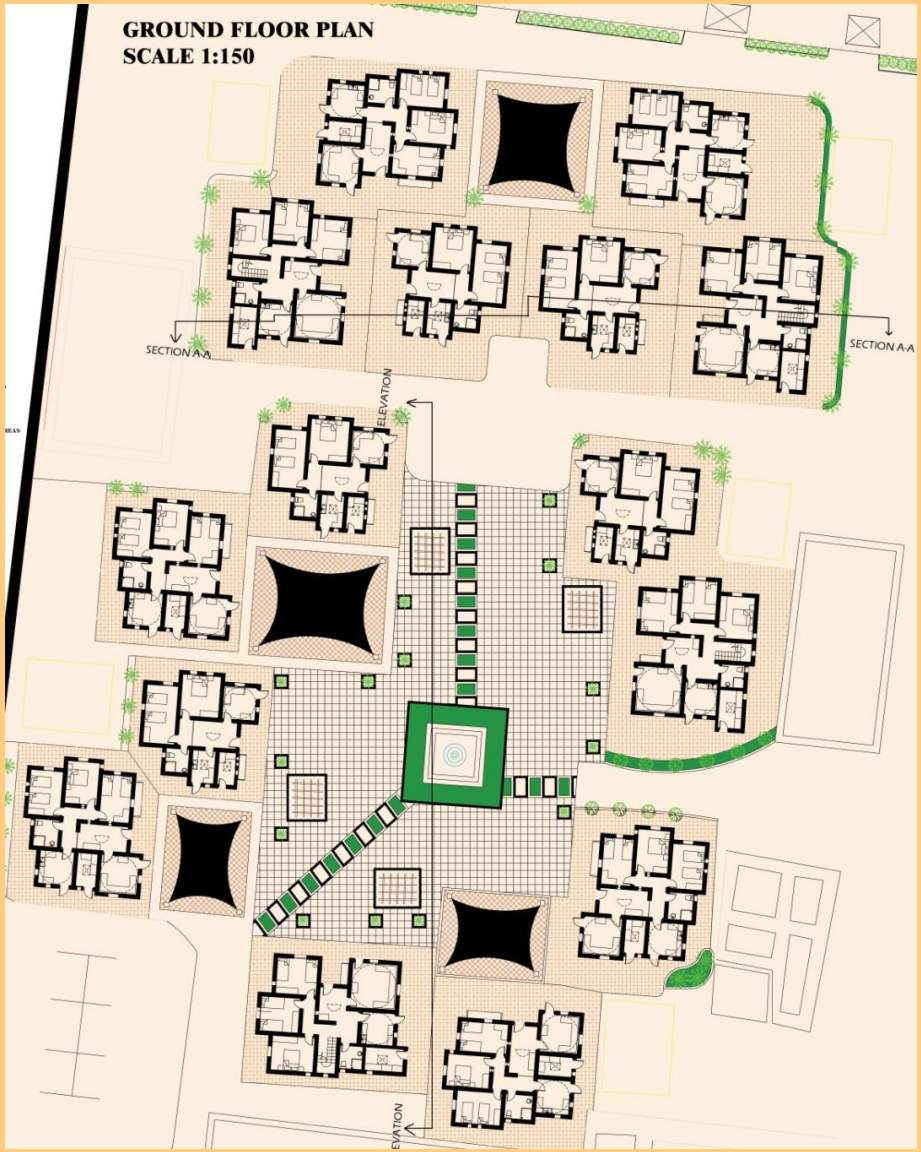
- The rammed earth mixture is compacted in layers that are balanced between clay, sand and aggregate, gravel, concrete and straw (to enhance the tensile strength of the retaining wall) forming 30cm thick walls.
- As each form is filled, another form is placed above it, and the process is continued until the desired wall height is achieved.
- Forms can be stripped off as soon as the form above is begun, as the compressed earth wall is self-supporting. There has to be a Plain concrete footing (foundation) to transfer the load from the walls to the soil.
- Rammed earth walls provide an excellent thermal insulating mass which stores the heat in the winter and blocks it in the summer & it's not affected by rain, wind and fire.

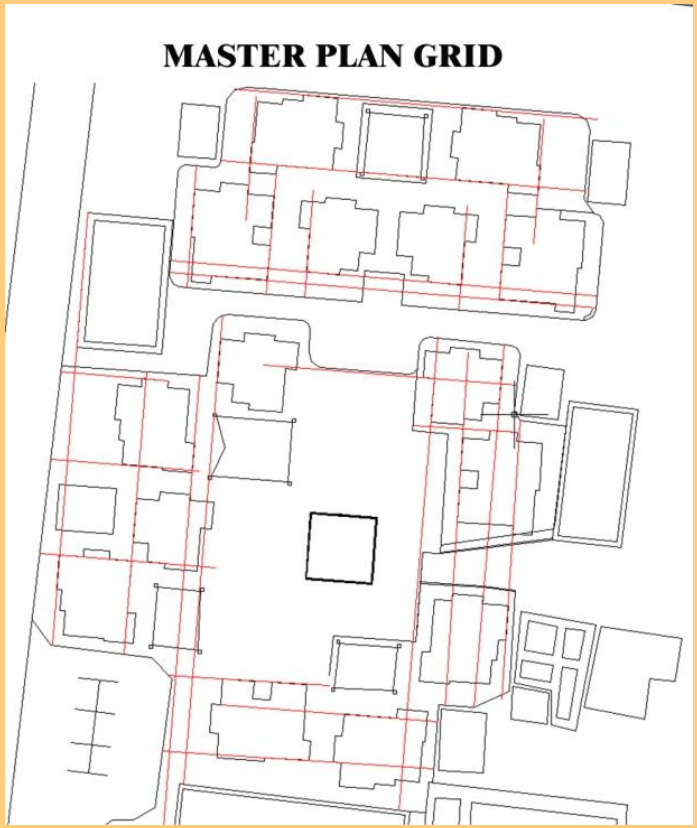

Unit for 4 members

Unit for 6 members

Unit for 10 members

Village Elevation





Interior Design project, Groppi Tea Salon

Mood Board