AITC-046.

Syed Muhammad Danish
University of Karachi
5th year Architecture

Bahawalpur located in Punjab, is the 11th largest city in Pakistan. In 2007, the city's population was recorded to have risen to 798,509 from 403,408 in 1998. The city is capital of Bahawalpur District. The city was once the capital of the former princely state and later the province of Bahawalpur.

The city was home to various Nawabs (rulers) and counted as part of the Rajputana states (now Rajasthan, India). The city is known for its famous palaces such as the Noor Mahal, Sadiq Ghar Palace, and Darbar Mahal, as well as the ancient fort of Derawar in the Cholistan Desert bordering India.

The city is located near the historical and ancient cities of Uch and Harappa, which were once a stronghold of the Delhi Sultanate and Indus Valley Civilisation.

The city is home to one of the few natural safari parks in Pakistan, Lal Suhanra National Park.
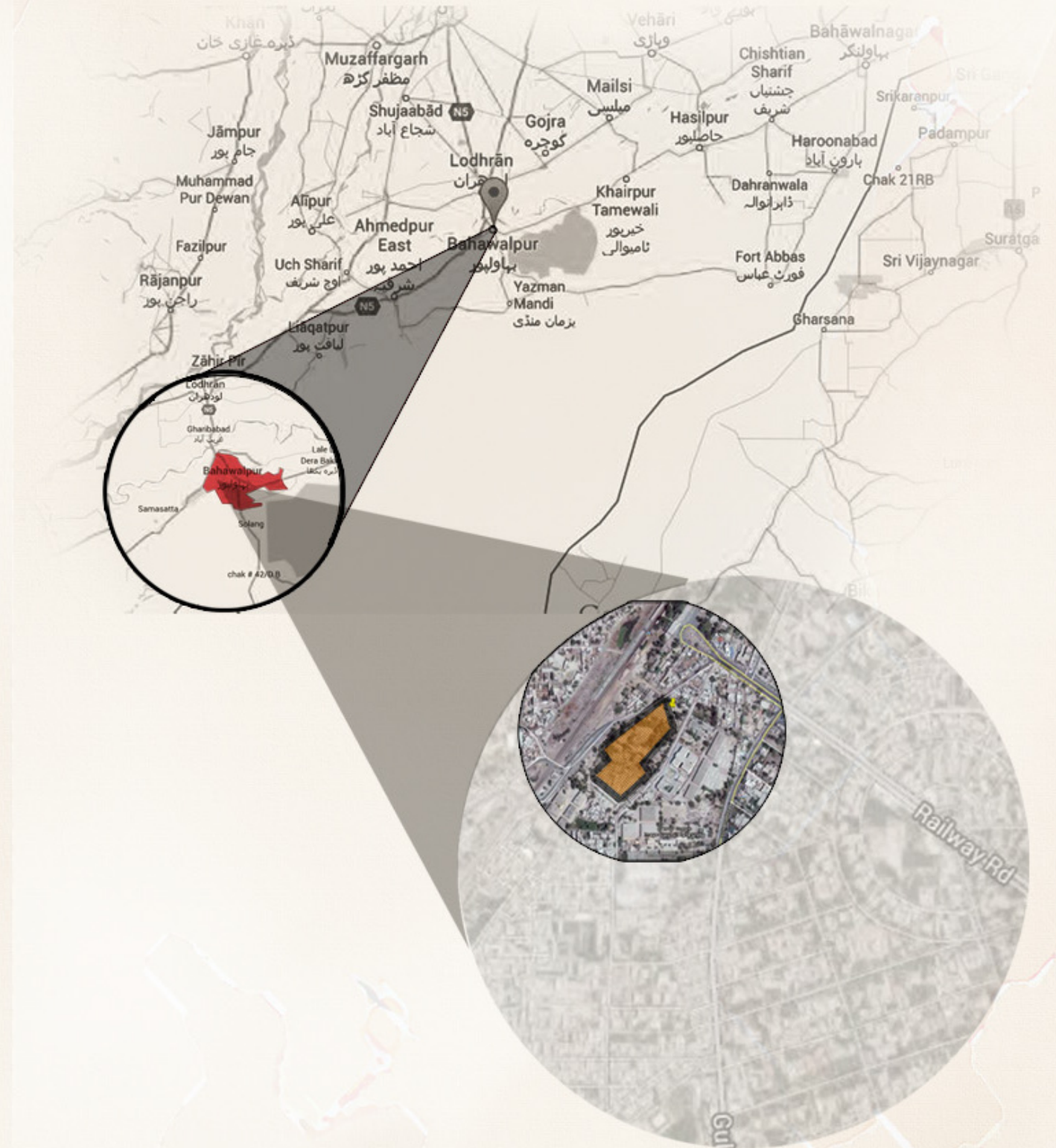
Darbar Mahal

Noor Mahal

Sadiq Dane High School

Sheikh Rashid Air Terminal

Derawar Fort Cholistan Desert

Bahawal Canal

CLIMATE

The climate is mainly hot and dry.

In the summer the temperature reaches the high forties (Celsius) during the day and the nights are slightly cooler.

Since the city is located in a desert environment there is little rainfall. Weather conditions reach extremes in both summer and winter.

The average temperature in summer is 33 °C (91 °F) and 18 °C (64 °F) in winter.The average rainfall is 20 to 25 cm annually.

Following are the demographics of the Bahwalpur district, by spoken language:

Punjab province local people different dialects: 96%
Other: 4%
Inhabitants of District speak a great variety of Punjabi dialects, although few of these dialects are called as separate language "Saraiki", but because of good and loving nature of people there is no distinction or hate among different dialects and have a mix culture of Great Bahawalpur State, Punjab and Choolistan.

Riyasti (Local state dialect spoken by 51% population which is a Mix of Rajhastani, Punjabi and Multani(Saraiki) spoken in Tehsils Bahawalpur and Ahmedpur sharqia)
Majhi & Malwi (Standard Punjabi dialect spoken by 35% specially in majority in Tehsils Hasilpur, Yazman, Khairpur Tamiwali and sizeable population in cities)
Bagri/Choolistani (9% Population speaks a Punjabi Rajhastani mix specially in Desert area)
Haryanvi (1% population speaks A mixture of Punjabi and Urdu. sizeable population in cities)
Other Languages include:

Urdu is mother tongue of few people but being national language is spoken and understood by the sizeable population.
English is also understood and spoken by the educated elite.
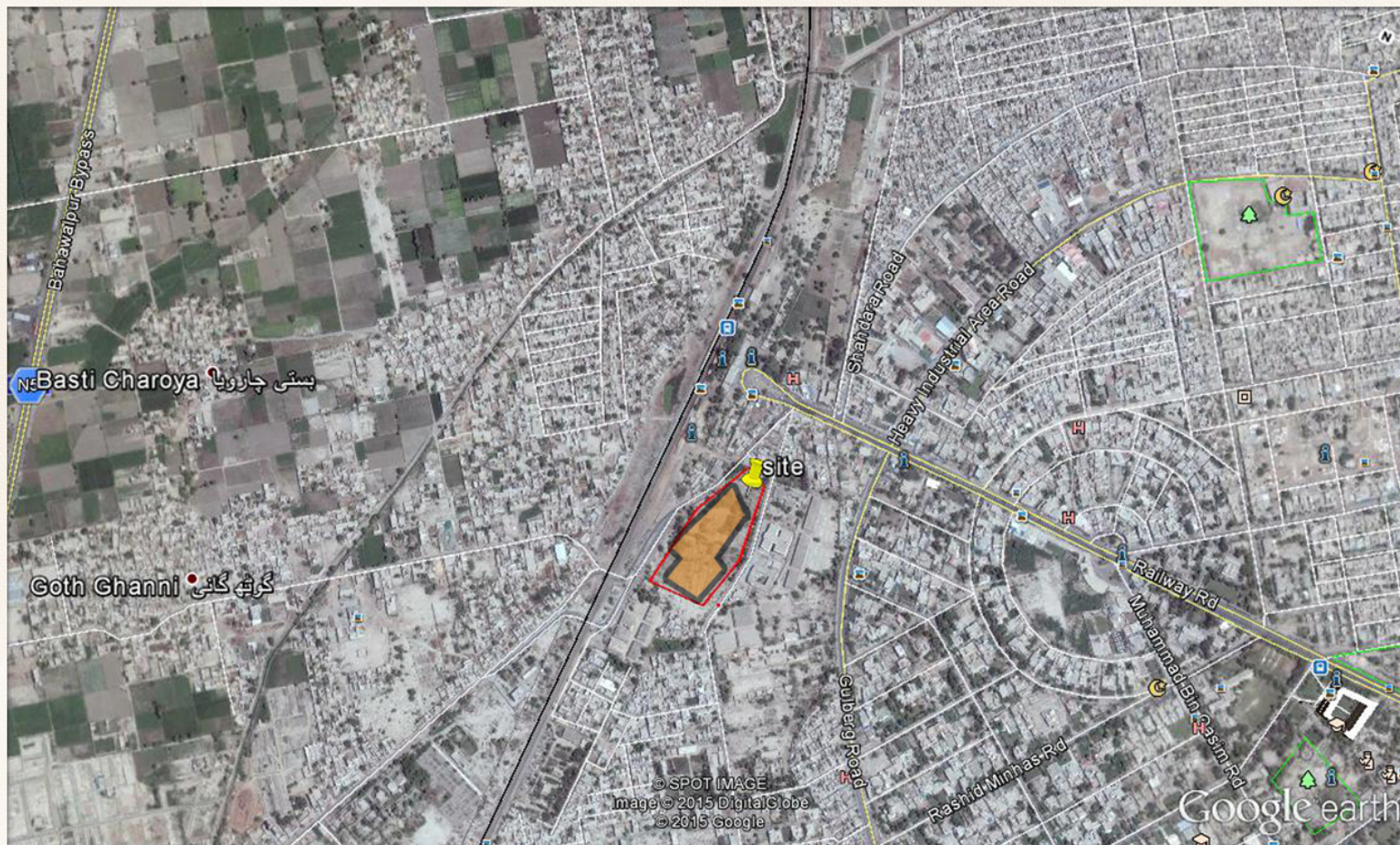Balochi is also spoken by small population.

The selected site is located adjacent to the
Bahawalpur Railway station at distance of 0.46 km.
Along with Gulberg road which is at 0.65km ,
Railway road at 0.20 km.
The site is surrounded by industrial and residential
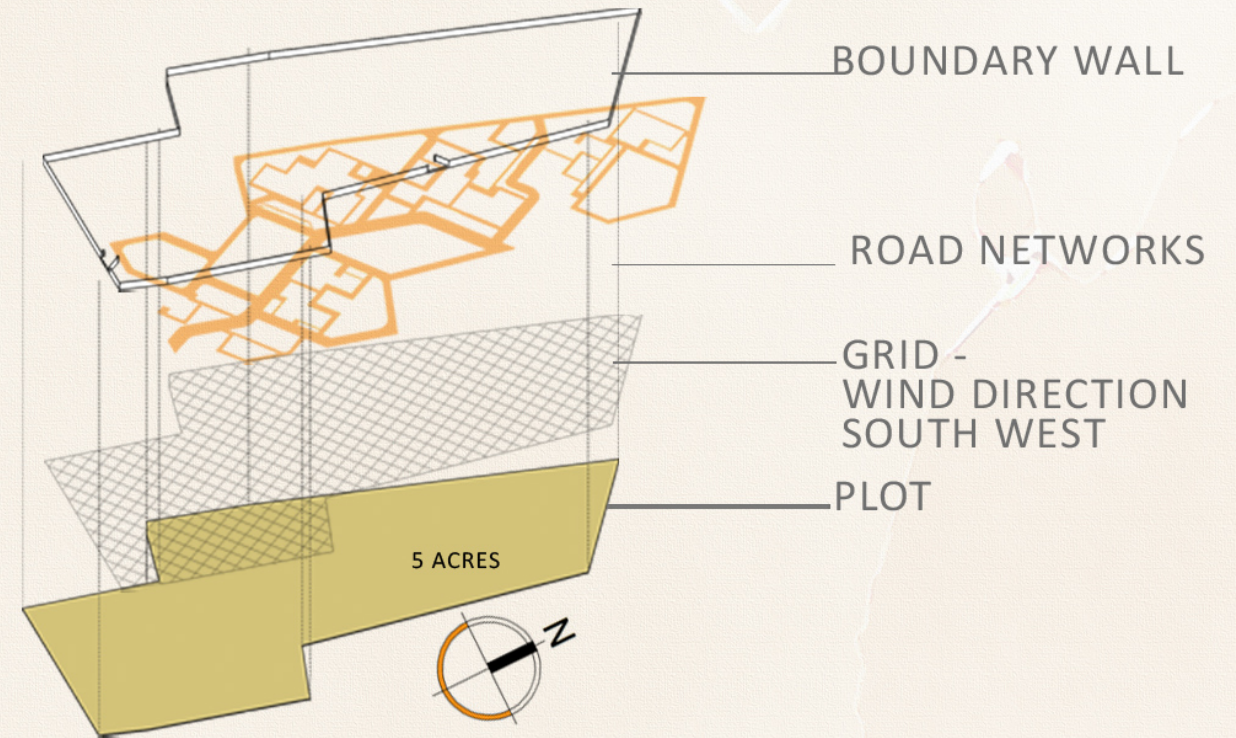zone.
Islamia University at 1.31 km.
Sial chowk at 0.86 km

- PRIMARY ROAD   20' WIDE
- SECONDARY ROAD   15' - 7'
- TERTIARY ROAD   7' - 4'
- SCARED SPACE   2695 Sq.ft
- COMMERCIAL SPACE 7380 Sq.ft

40' WIDE ROAD

MAIN ENTRANCE

BOUNDARY WALL

ROAD NETWORKS

GRID -
WIND DIRECTION
SOUTH WEST

PLOT

5 ACRES

CONCEPT.

Humans act as a Molecule to form a society.
Society is made up of group of people where individual socialize with other another individual form a group. These groups are dependent upon each other to socialize to form a family then these groups of families combine together to socialize to form a community and then these groups of community combine together to form a society and then district, city etc.

40' WIDE ROAD

MAIN ENTRANCE

ARCHITECTURAL PHILOSOPHY

To provides opportunities of interaction and socialization through architecture.

DESIGN ELEMENTS.

Dalaan (Baithak)
clusters
Bamboo screening
Bamboo shades

Molecular arrangement or phenomena is a natural growth. If we talk about natural growth, it is haphazard and has no particular dimension to grow. In architecture if we talk about natural growth it can be directed in any specify direction or it will be haphazard and will form clusters of cluster.

In proposed master plan, arrangement of clusters has been specified along with a grid i.e. south west and has been arranged by using Fibonacci series i.e.

1,2,3,5,8,13,21,34,55,89 etc .

1,2,3,5,8

$1+2+3+5+8 = 19$ (F5)

1,2,3,5

$1+2+3+5 = 11$ (F4)

$F5 + F4 = 30$

Growth has been shown from both direction.
From upward to bottom and from bottom to upward.
There are maximum 5 clusters , which consist of maximum 8 unit.

FIBONACCI SERIES

1,2,3,5,8,13,21........

$F_5 = 1+2+3+5+8 = 19$
$F_4 = 1+2+3+5 = 11$

$F_4 + F_5 = 11 + 19 = 30$
$(F_4 + F_5) \times 2 = 30 \times 2 = 60$

Clusters can be a combination of different module Or
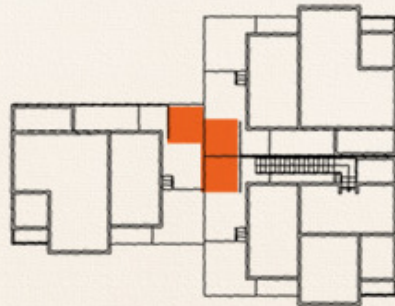It can be combination of single module.
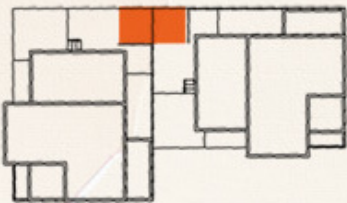
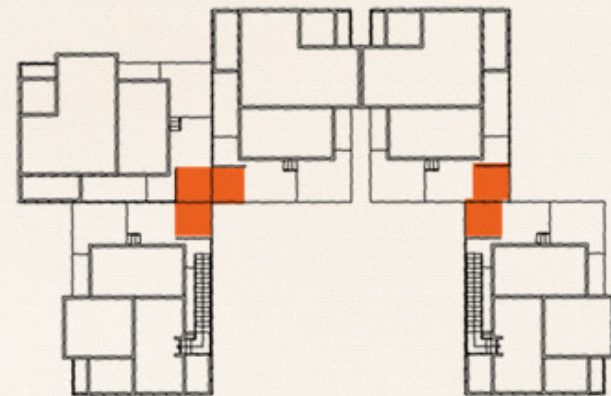## 5 DIFFERENT CLUSTERS - F_4
$F_4 = 1+2+3+5 = 11$ UNITS

1

2

3

4

8 DIFFERENT CLUSTERS - F_5
$F_4 = 1+2+3+5+8 = 19$ UNITS

1

2

3

4

5

DALAAN (BAITHAK)

DALAAN IS AN OUTDOOR
SITTING SPACE COVERED WITH
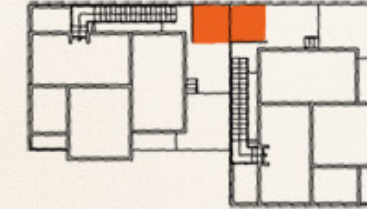SHADE .

IT IS BEING USED AS AN
INTERACTIVE SPACE IN CLUSTERS.
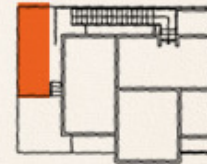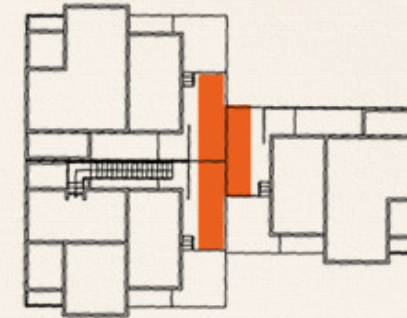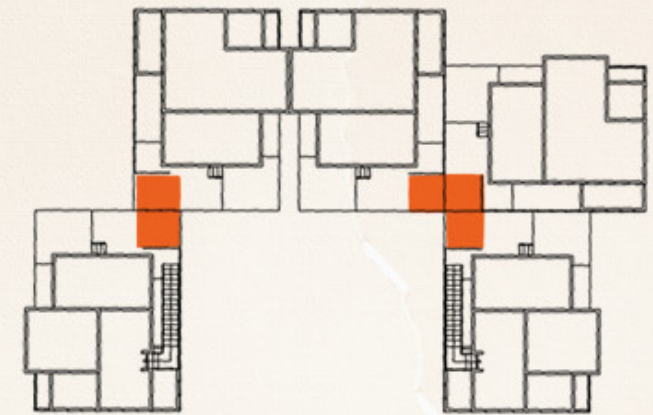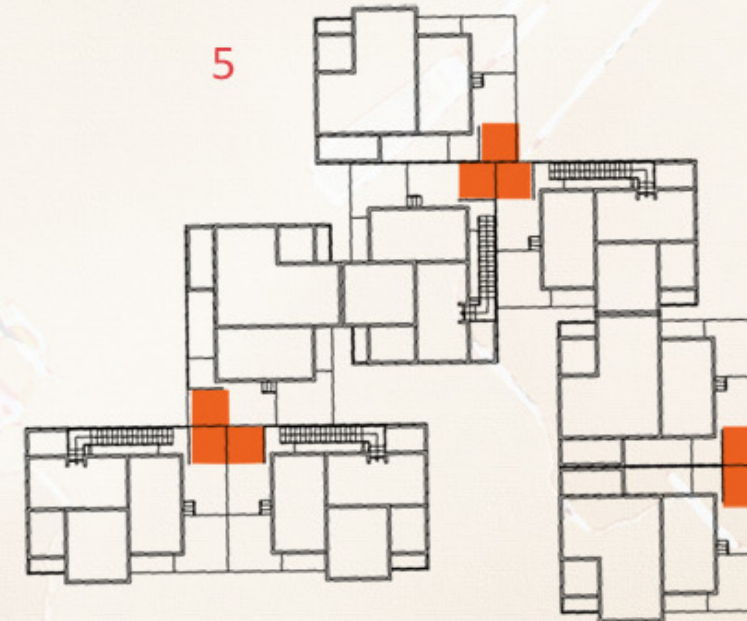
AITC-046   07- MODULE 1 , ONE STORY BUILDING

GROUND FLOOR PLAN   SCALE 3/16"

RARE

SEC- BB'

LEFT

RIGHT

UP

ENTRANCE

SEC- AA'

FRONT
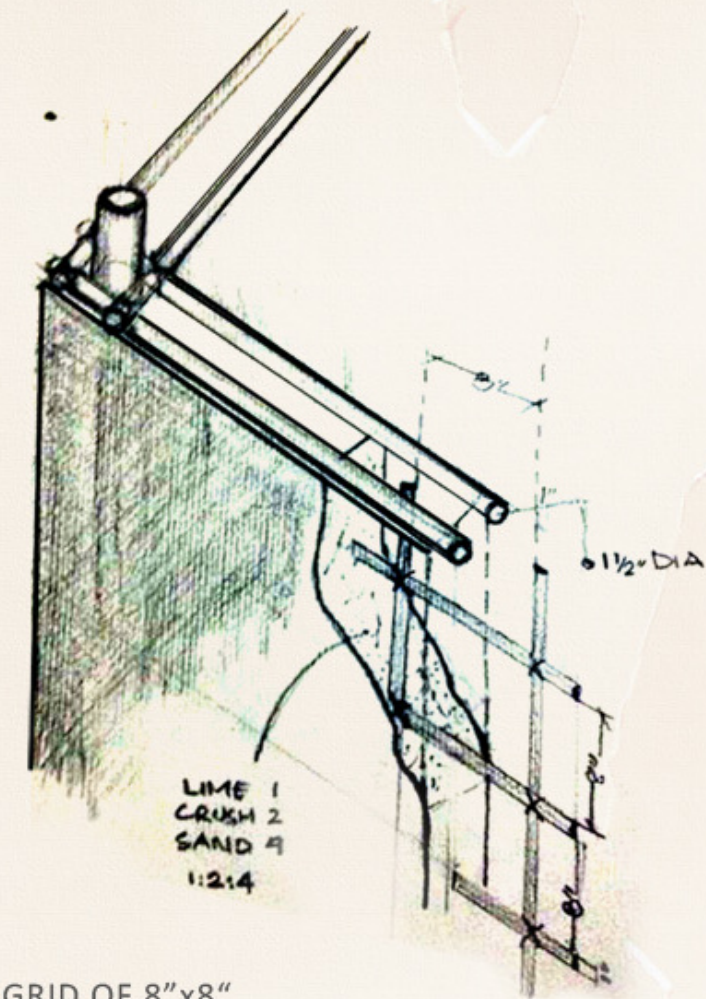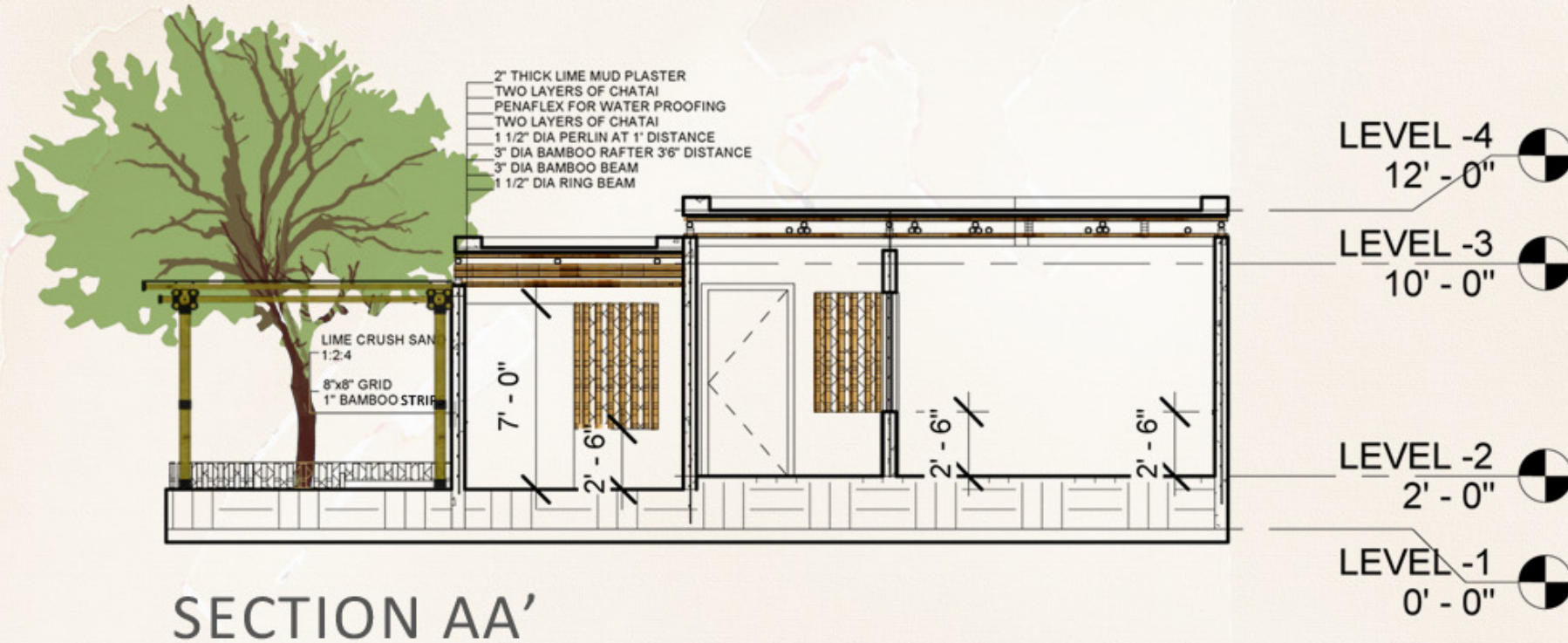
1- ENTRANCE
2- DAHLAAN   133.76 Sq.ft
3- COURTYARD   103.36 Sq.ft , 38 Sq.ft
4- POWDER ROOM   22 Sq.ft
5- FOYER   70 Sq.ft
6- KITCHEN   80 Sq.ft
7- STORE   40 Sq.ft
8- BED ROOM   120 Sq.ft
9- BATHROOM   35 Sq.ft
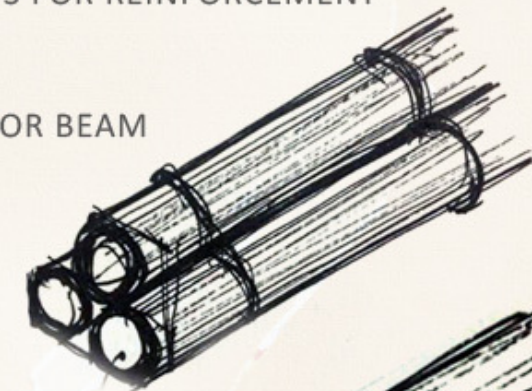
Plot area 1160 Sq.ft   (29' x 40')
Built area 522 sq.ft

SECTIONS

SCALE 3/16"

2" THICK LIME MUD PLASTER
TWO LAYERS OF CHATAI
PENAFLEX FOR WATER PROOFING
TWO LAYERS OF CHATAI
1 1/2" DIA PERLIN AT 1' DISTANCE
3" DIA BAMBOO RAFTER 3'6" DISTANCE
3" DIA BAMBOO BEAM
1 1/2" DIA RING BEAM

LIME CRUSH SAN
1:2:4

8"x8" GRID
1" BAMBOO STRIP

LEVEL -4
12' - 0"

LEVEL -3
10' - 0"

LEVEL -2
2' - 0"

LEVEL -1
0' - 0"

7' - 0"
2' - 6"
2' - 6"
2' - 6"

SECTION AA'

LEVEL -4
12' - 0"

LEVEL -3
10' - 0"

LEVEL -2
2' - 0"

LEVEL -1
0' - 0"

10' - 0"
9' - 0"

SECTION BB'

LIME 1
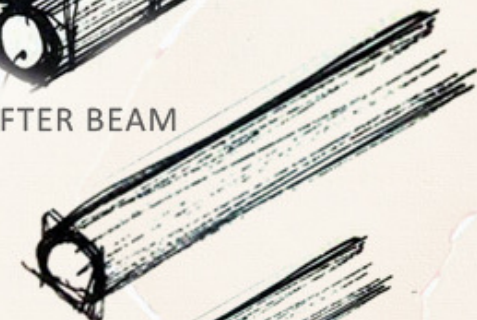CRUSH 2
SAND 4
1:2:4

Ø 1½" DIA

GRID OF 8"x8"
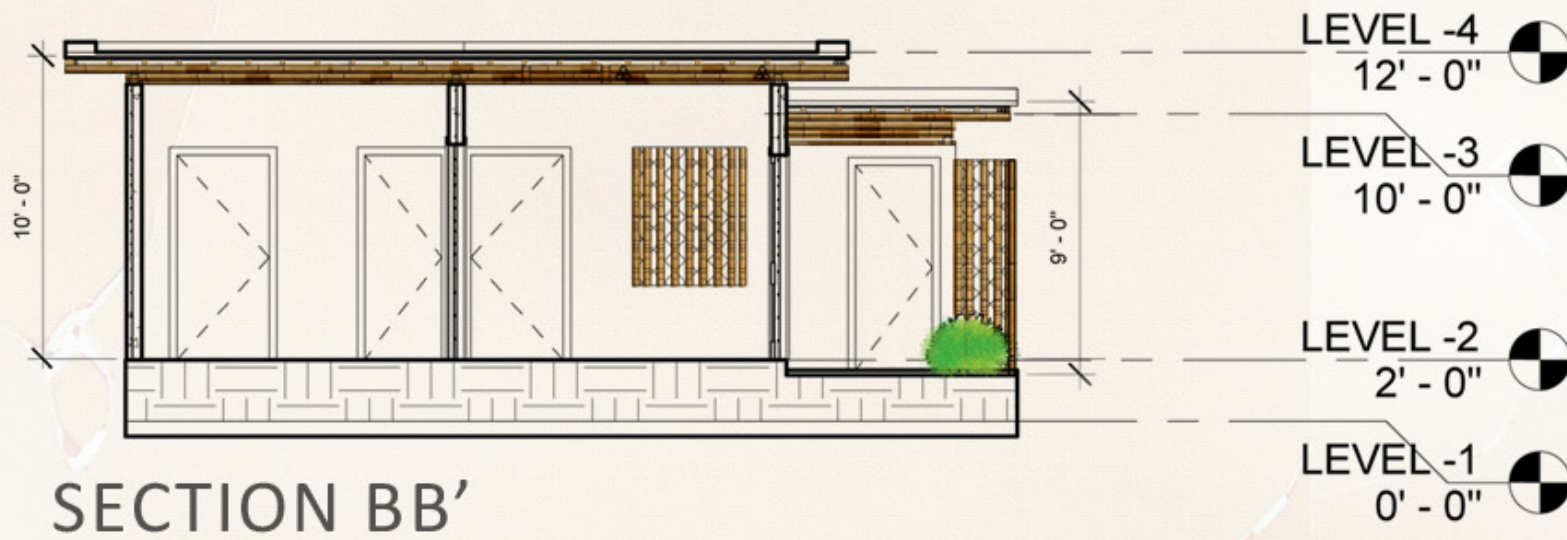1" BAMBOO STRIPS FOR REINFORCEMENT

3" DIA BAMBOO FOR BEAM

3" DIA BAMBOO FOR RAFTER BEAM

1 1/2" DIA BA,BOO FOR PERLIN
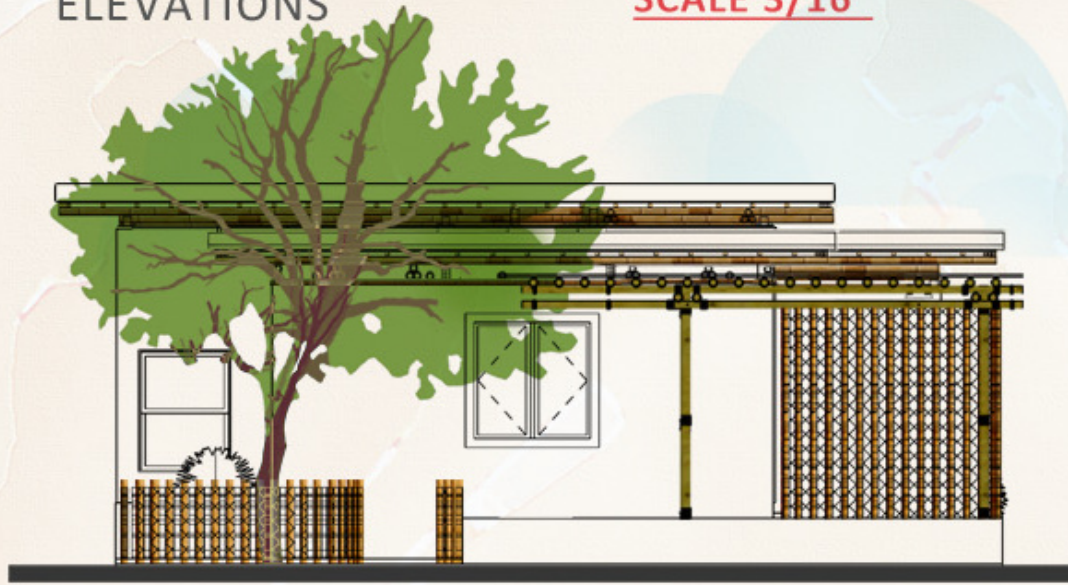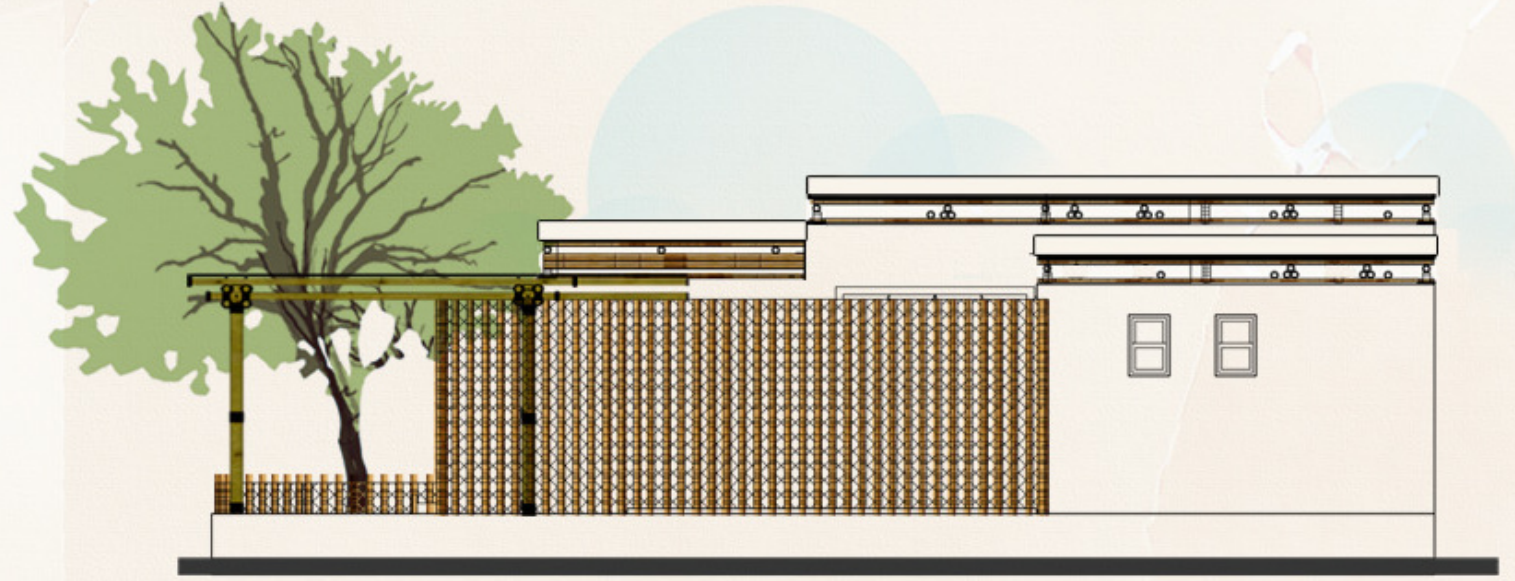
1 1/2" DIA BAMBOO FOR RING BEAM

ELEVATIONS

SCALE 3/16"

FRONT

RIGHT

RARE

LEFT

AITC-046   10- MODULE 2 , TWO STORY BUILDING

GROUND FLOOR PLAN   <u>SCALE 3/16"</u>

RARE
∨

1' - 8"   2' - 0"

SEC- BB'   [1 / A102]

LEFT
∨

RIGHT
∨

2' - 0"

0' - 0"

1' - 6"

UP

UP

ENTRANCE

1' - 6"

∧
FRONT

SEC- AA'

[1 / A103]
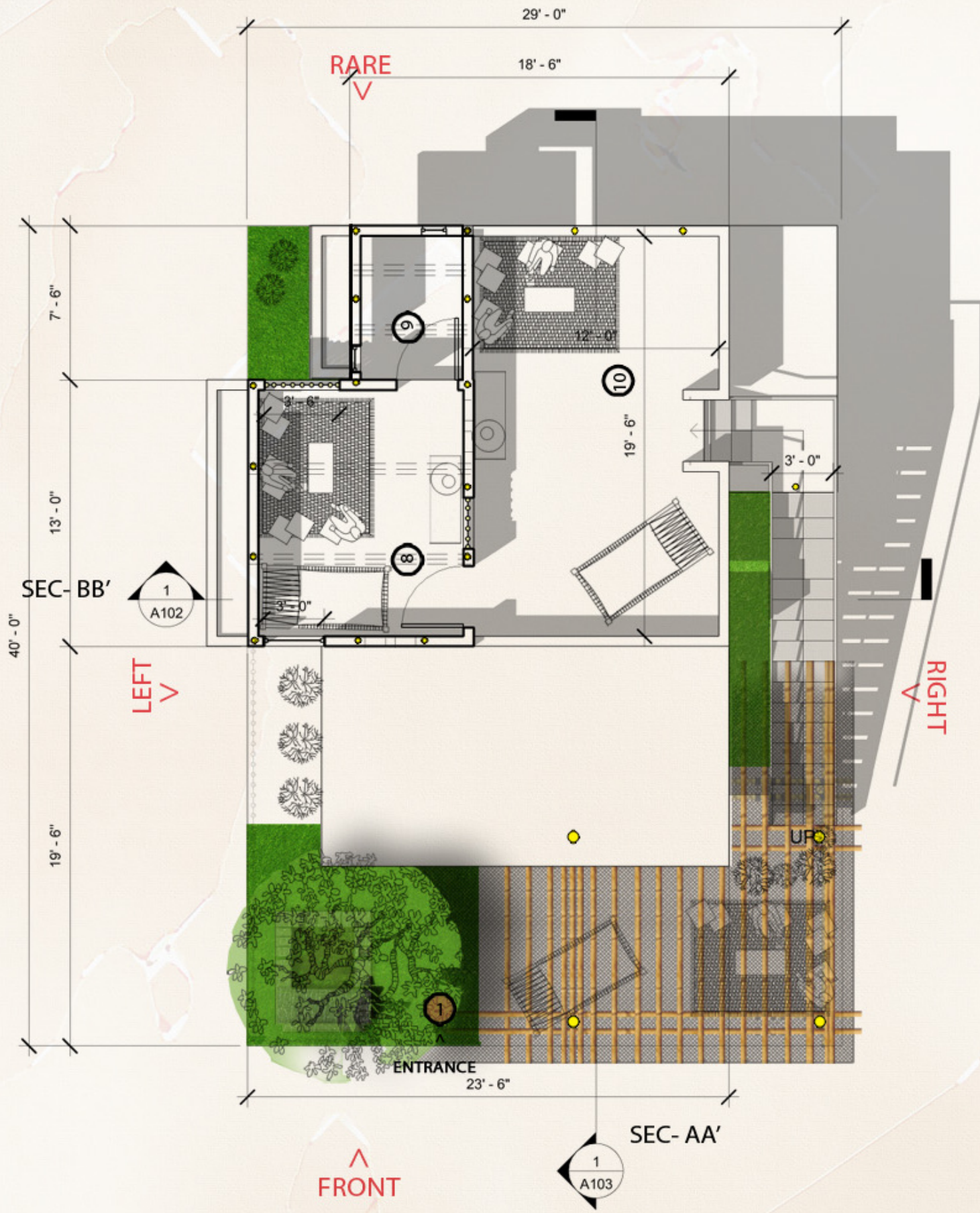
1- ENTRANCE
2- DALAAN   133.76 Sq.ft
3- COURTYARD   103.36 Sq.ft , 38 Sq.ft
4- POWDER ROOM   22 Sq.ft
5- FOYER   70 Sq.ft
6- KITCHEN   80 Sq.ft
7- STORE   40 Sq.ft
8- BED ROOM   120 Sq.ft
9- BATHROOM   35 Sq.ft
10- VERANDA   235 Sq.ft

Plot area 1160 Sq.ft   (29' x 40') = 107.7 SQ.MTR
BUILT AREA 671 Sq.ft = 62.33 SQ.MTR

FIRST FLOOR PLAN   <u>SCALE 3/16"</u>

29' - 0"

RARE
∨

18' - 6"

7' - 6"

9

12' - 0"

10

3' - 6"

13' - 0"

19' - 6"

40' - 0"

SEC- BB'   1 A102

8

3' - 0"

3' - 0"

LEFT
∨

RIGHT
∨

19' - 6"

UP

1

ENTRANCE
23' - 6"

SEC- AA'

∧
FRONT

1
A103

SECTIONS

SCALE 3/16"

2" THICK LIME MUD PLASTER
TWO LAYERS OF CHATAI
PENAFLEX FOR WATER PROOFING
TWO LAYERS OF CHATAI
1 1/2" DIA PERLIN AT 1' DISTANCE
3" DIA BAMBOO RAFTER 3'6" DISTANCE
3" DIA BAMBOO BEAM
1 1/2" DIA RING BEAM

LIME CRUSH SAND
1:2:4

8"x8" GRID
1" BAMBOO STRIPS

7' - 0"
2' - 6"
2' - 6"
2' - 6"

roof
22' - 6"

Level 8
21' - 0"

Level 9
20' - 0"

LEVEL -4
12' - 0"

LEVEL -3
10' - 0"

LEVEL -2
2' - 0"

LEVEL -1
0' - 0"

SECTION AA'

roof
22 Level 8
Level 9
20' - 0"

10' - 0"

LEVEL -4
12' - 0"

LEVEL -3
10' - 0"

LEVEL -2
2' - 0"

LEVEL -1
0' - 0"

SECTION BB'

ELEVATIONS

SCALE 3/16"

FRONT

RIGHT
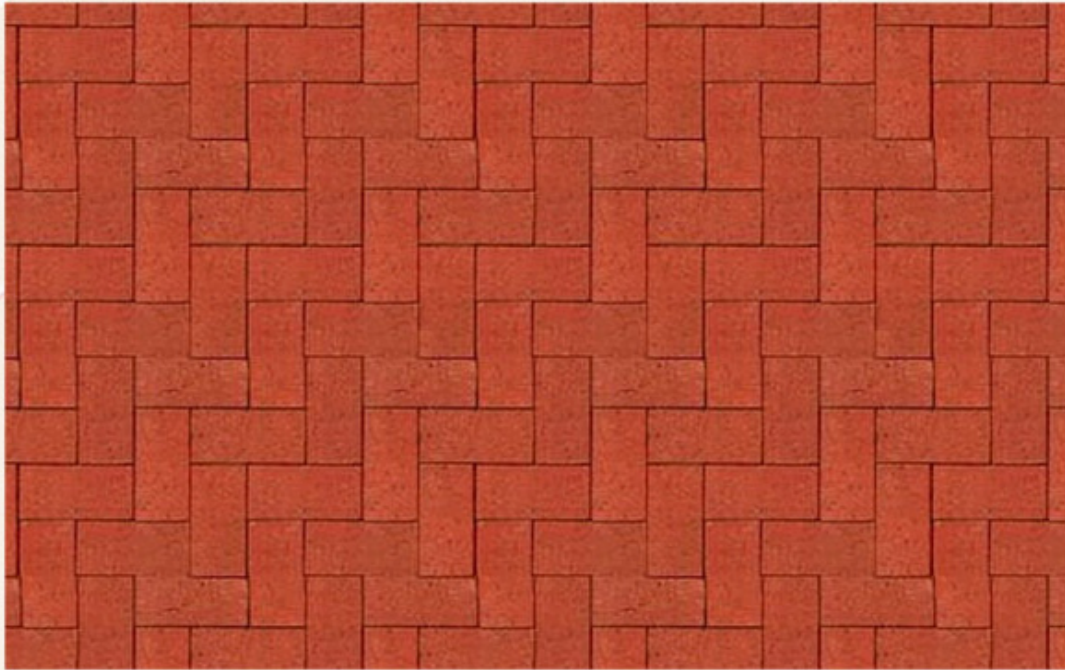
RARE

LEFT

PAVERS FOR SECONDARY ROADS/
PEDESTRIAN PATHWAYS

PAVERS GRASS FOR TERTIARY ROADS

1 1/2" DIA BAMBOO
FOR SCREEN AND BOUNDRY WALL

BAMBOO CHICKS FOR SHADING