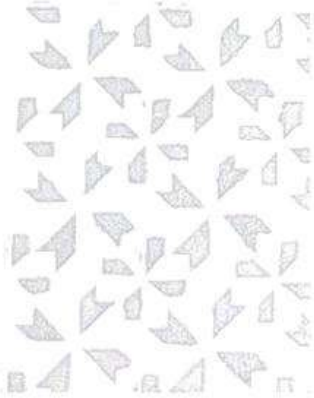




DSCA YEAR BOOK

2022-2023



1st Semester

ARCHITECTURAL DESIGN I 21 ARC 11

Studio Coordinators

Semester 1: Bistro Design

The sites chosen for the bistro are:

Site A – Building Frontage

Architecture Block, Dayananda Sagar
Institutions, Bengaluru

Site area: 358 +81 sqm (including landscape)

Total capacity: 53 persons

Total Built-up-area (B.U.A): 165 sqm

Site B – Rock Garden

Dayananda Sagar Institutions, Bengaluru

Site area: 347 sqm

Total capacity: 65 persons

Total Built-up-area (B.U.A): 190 sqm

Schedule of progress

- Briefing with regard to site and design requirements.
- Visit to site; necessary analysis and inferences.
- Live Case study – Group work
- Literature Case study – Group work
- Assimilation of literature/case study into maps and graphics
- Bubble diagram
- Zoning
- Concept / Theme – Exploring forms
- Single line plan
- Block Model
- Masterplan (+Roof plan), all floor plans with furniture layout
- Sections (2#)
- Elevations (4#)
- Detailed model
- 3D views and details



Ar. Chetan S
Garalapur



Ar. Surabhi
Moharir

Studio Faculty



Ar. Nikhil
Ravindra



Ar. Shruthi A
Murthy



Ar. Vani
Krishnamurthy



Ar. Gopi
Krishna KV



Ar. Chaitali
Babar

TILE DESIGN

TOP TO BOTTOM: FROM THE LEFT: SQUARE, TRIANGLE, DIAMOND, AND THE OTHER SHAPES. THESE PATTERNS ARE USED TO CREATE A RHYTHM OF SHAPES AND COLORS. THE PATTERNS ARE USED TO CREATE A RHYTHM OF SHAPES AND COLORS. THE PATTERNS ARE USED TO CREATE A RHYTHM OF SHAPES AND COLORS.

THE PATTERNS ARE USED TO CREATE A RHYTHM OF SHAPES AND COLORS. THE PATTERNS ARE USED TO CREATE A RHYTHM OF SHAPES AND COLORS. THE PATTERNS ARE USED TO CREATE A RHYTHM OF SHAPES AND COLORS.

ABSTRACTION - TILE DESIGN

DATE: 10/10/2022

SCALE: 1:1

8

ANTHROPOLOGY - DRESSING

ANTHROPOLOGY - DRESSING

DATE: 10/10/2022

SCALE: 1:1

9

ANTHROPOLOGY - STRAPLESS

ANTHROPOLOGY - STRAPLESS

DATE: 10/10/2022

SCALE: 1:1

10

ANTHROPOLOGY - CASE STUDY KITCHEN AND DINING AT HPI

ANTHROPOLOGY - CASE STUDY KITCHEN AND DINING AT HPI

DATE: 10/10/2022

SCALE: 1:1

11

ANTHROPOLOGY - FOOD TOWER AT CAMPUS

ANTHROPOLOGY - FOOD TOWER AT CAMPUS

DATE: 10/10/2022

SCALE: 1:1

12

ING CASE STUDY IKEA

ING CASE STUDY IKEA

DATE: 10/10/2022

SCALE: 1:1

13

DESIGN PRINCIPLES

DESIGN PRINCIPLES

DATE: 10/10/2022

SCALE: 1:1

14

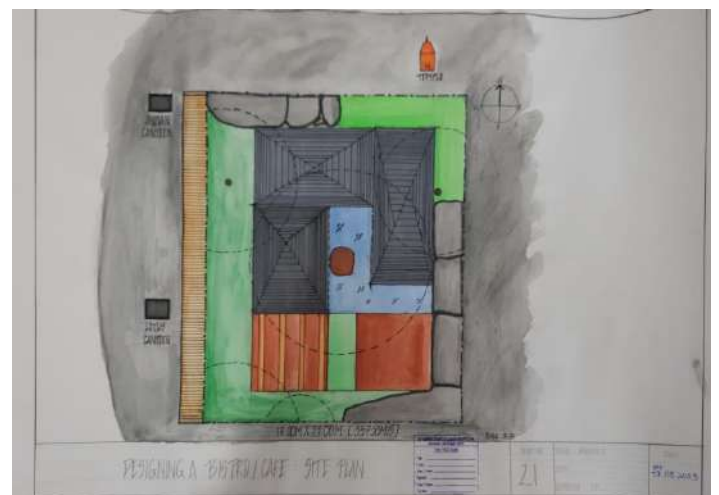
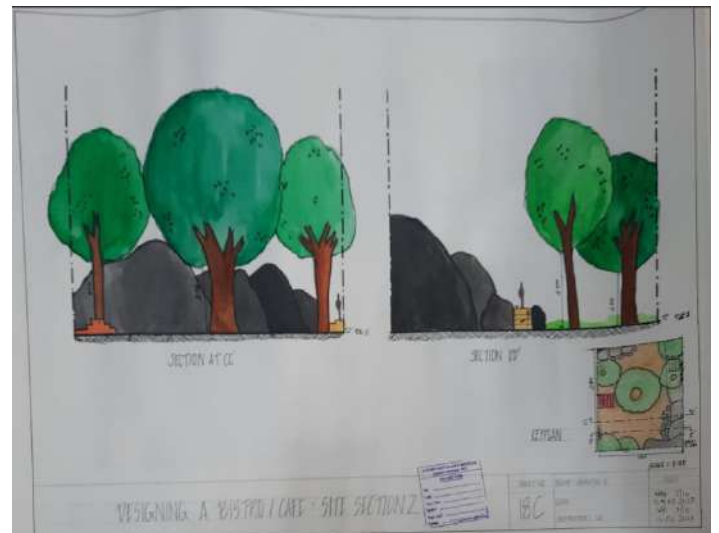
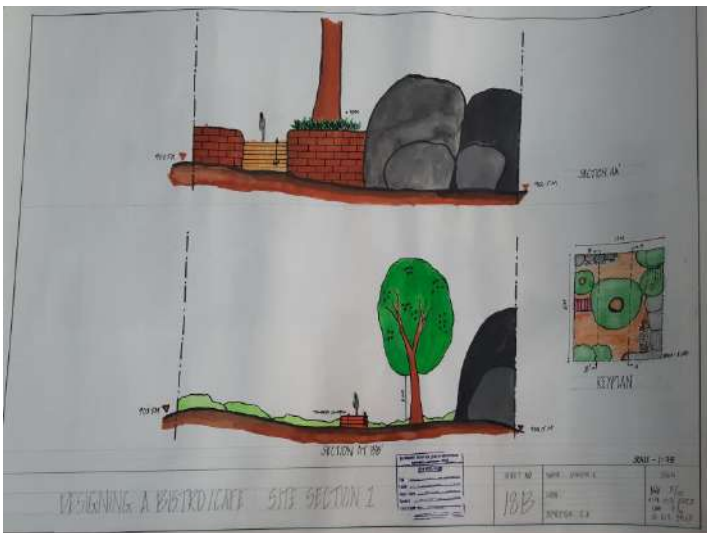
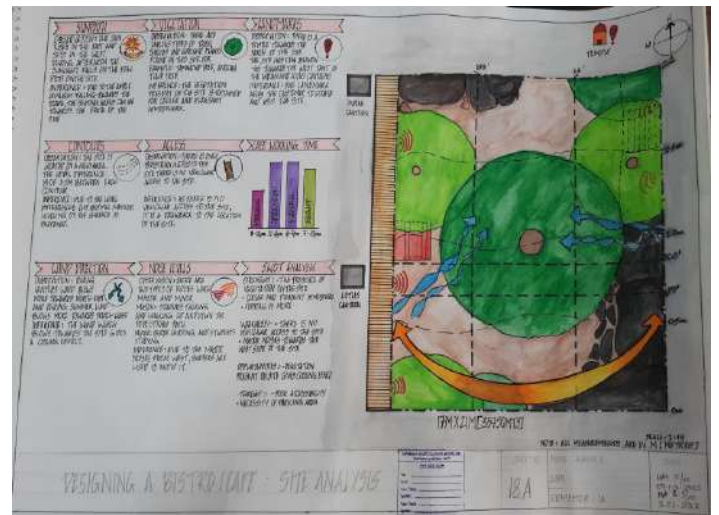
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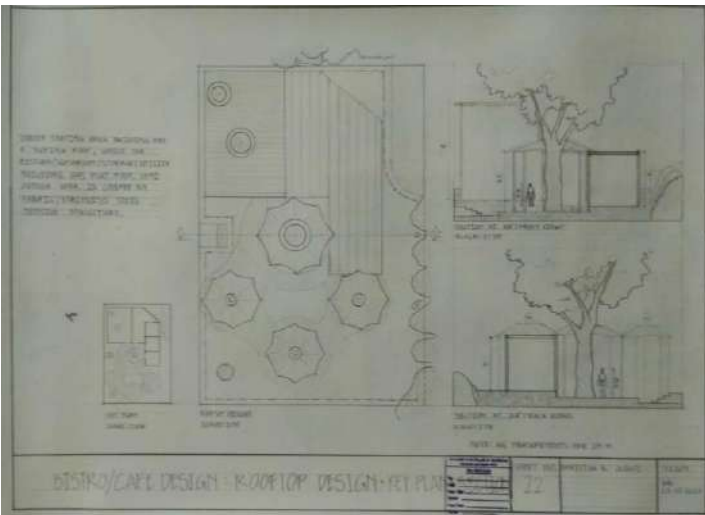
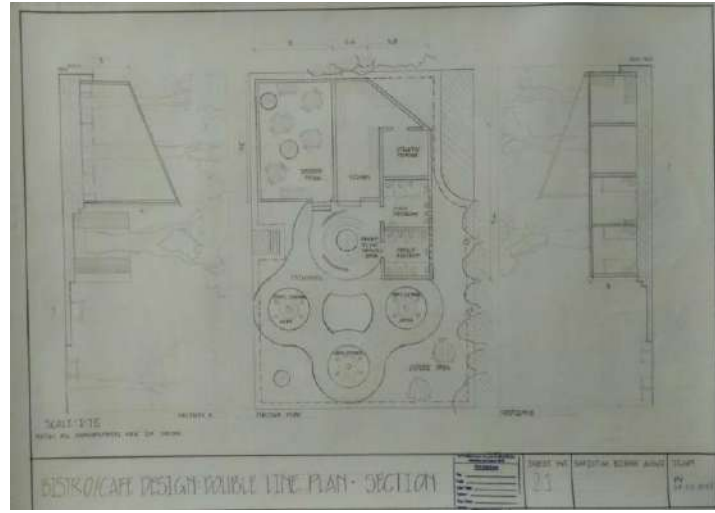
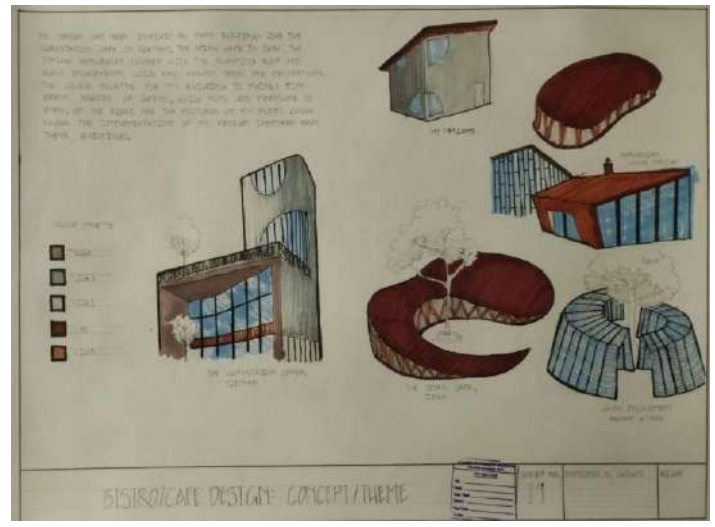
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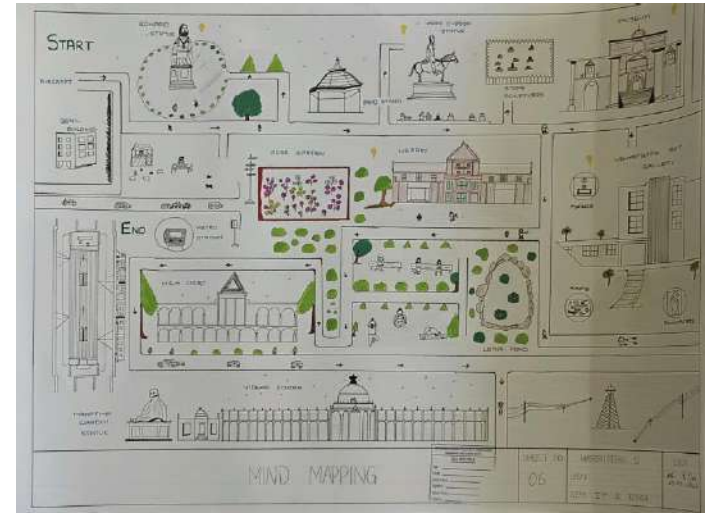
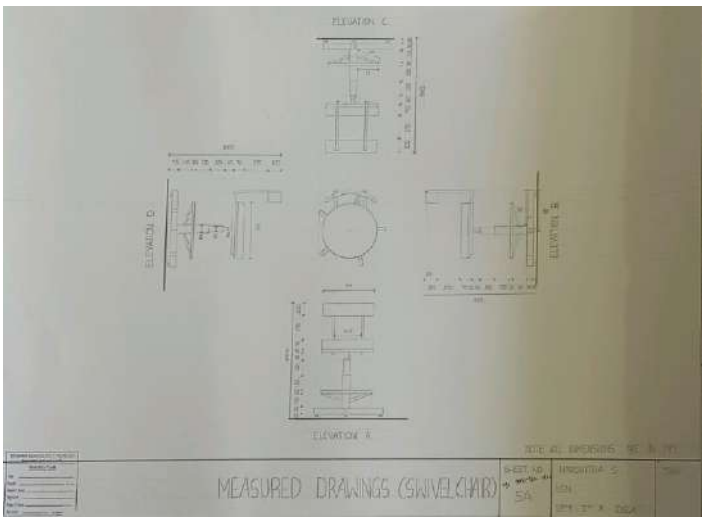
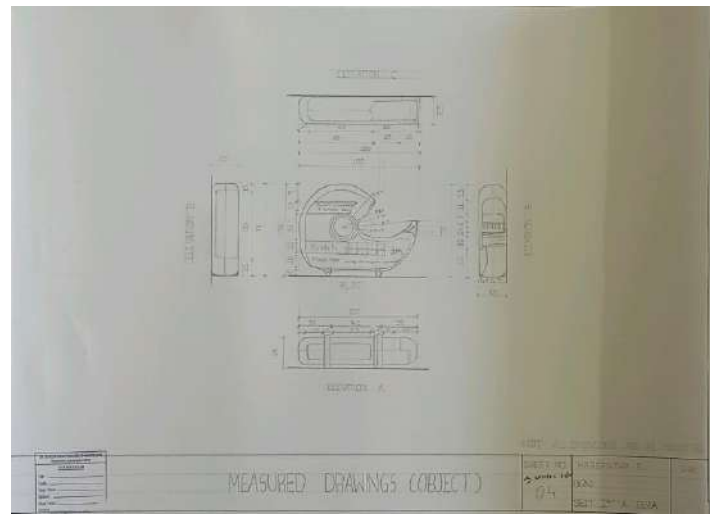
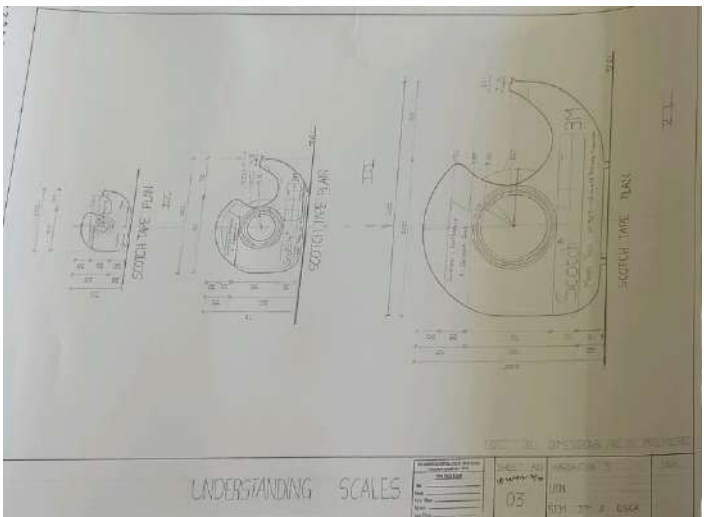
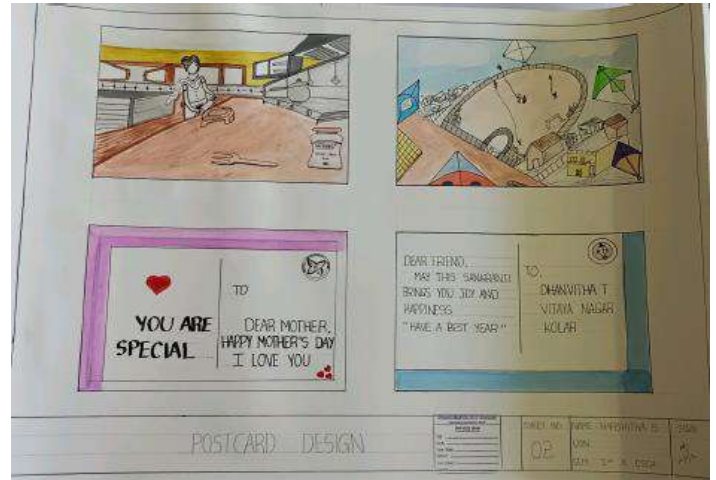
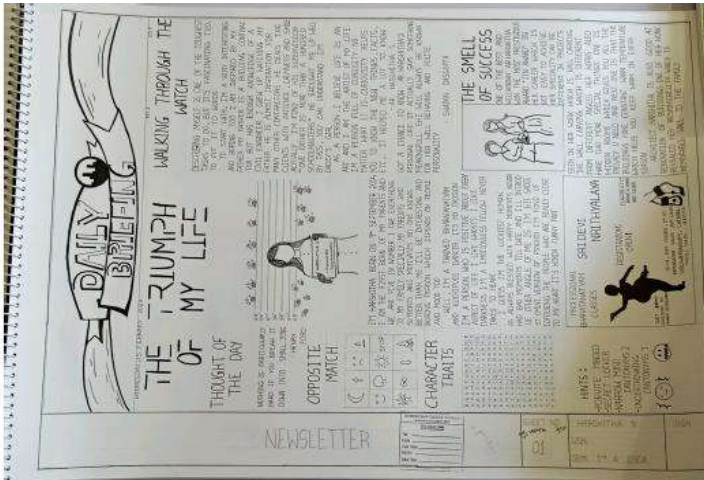
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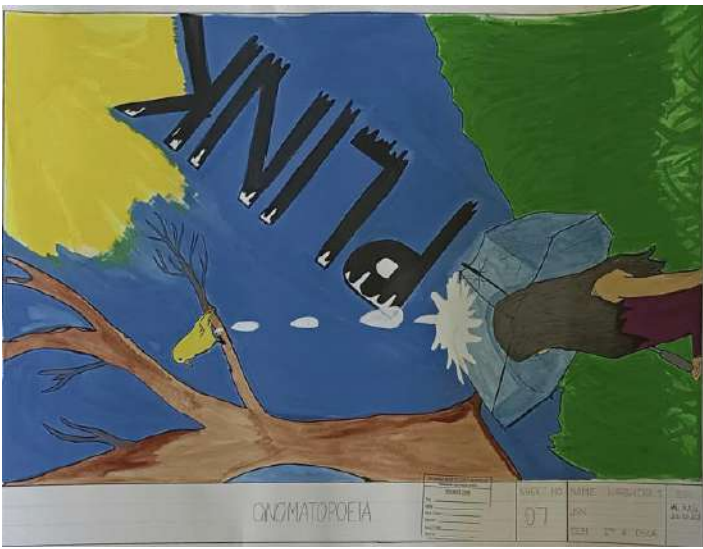
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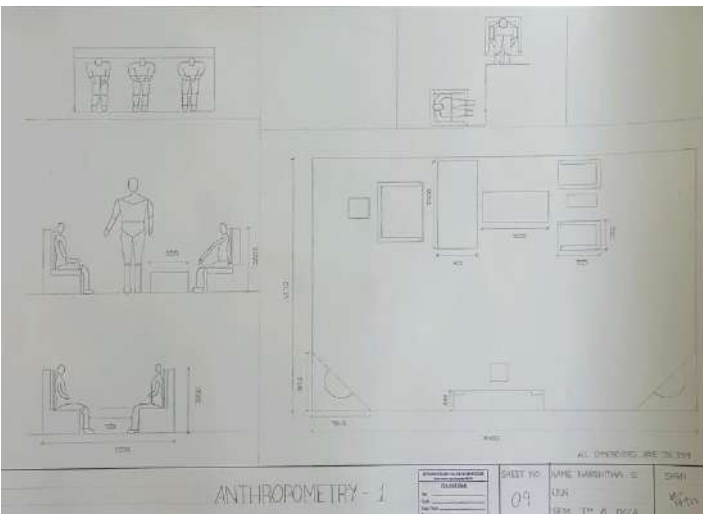
CINEMATOPROEIA

DATE	07
NAME	ANNA
CLASS	11
TEACHER	MR. A. DOKA



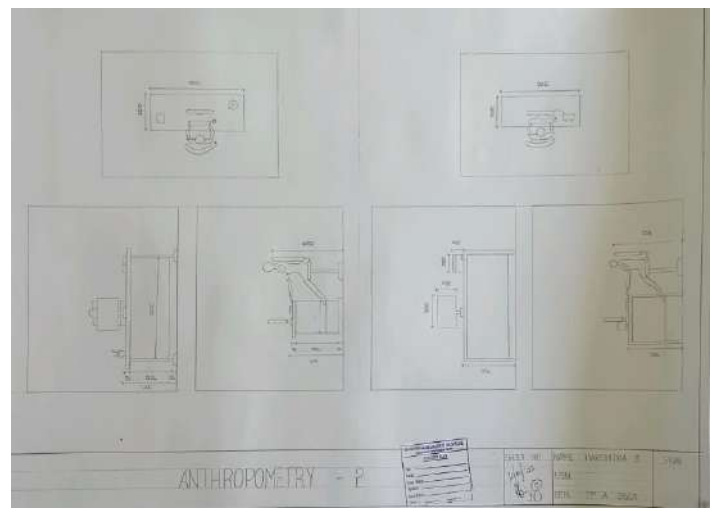
TILE DESIGN (ABSTRACTION)

DATE	08
NAME	ANNA
CLASS	11
TEACHER	MR. A. DOKA



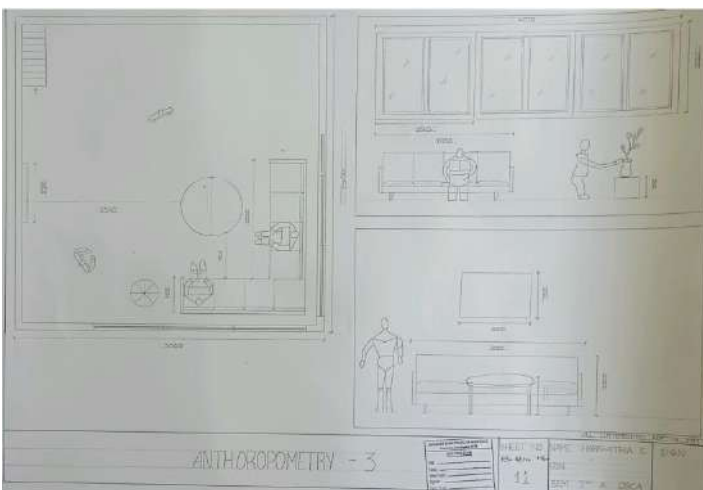
ANTHROPOMETRY - 1

DATE	09
NAME	ANNA
CLASS	11
TEACHER	MR. A. DOKA



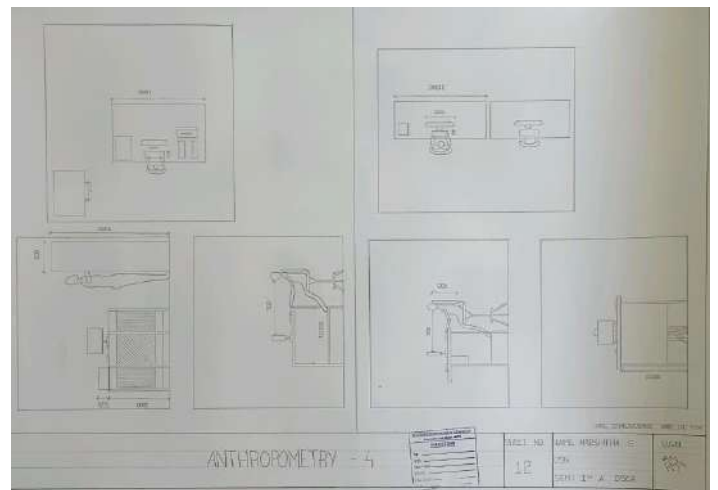
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DATE	10
NAME	ANNA
CLASS	11
TEACHER	MR. A. DOKA



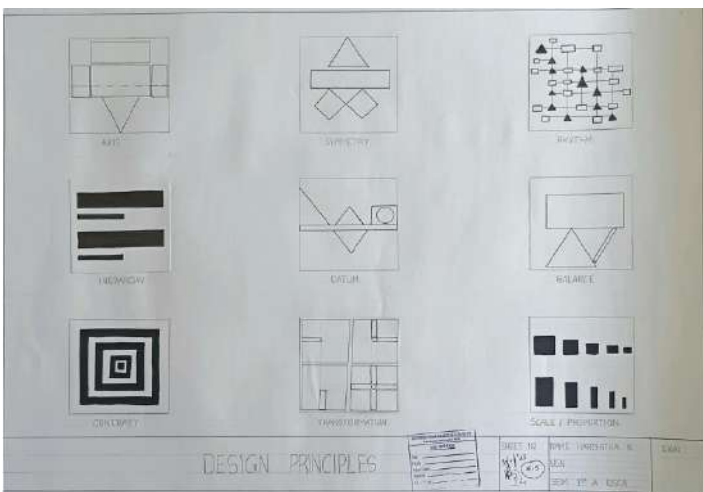
ANTHROPOMETRY - 3

DATE	11
NAME	ANNA
CLASS	11
TEACHER	MR. A. DOKA



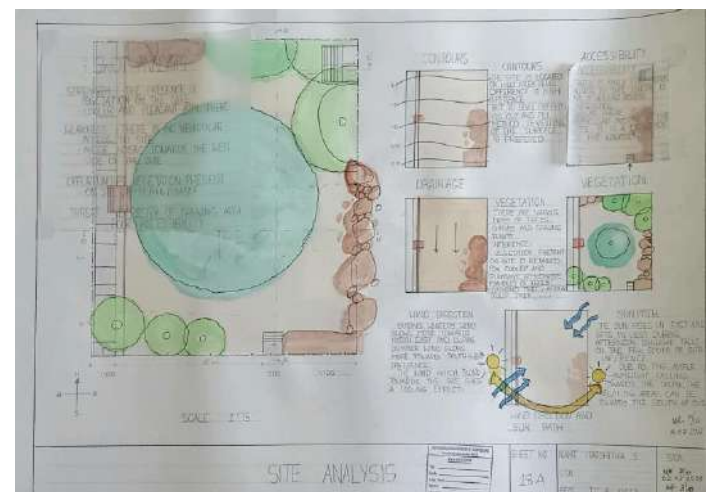
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DATE	12
NAME	ANNA
CLASS	11
TEACHER	MR. A. DOKA



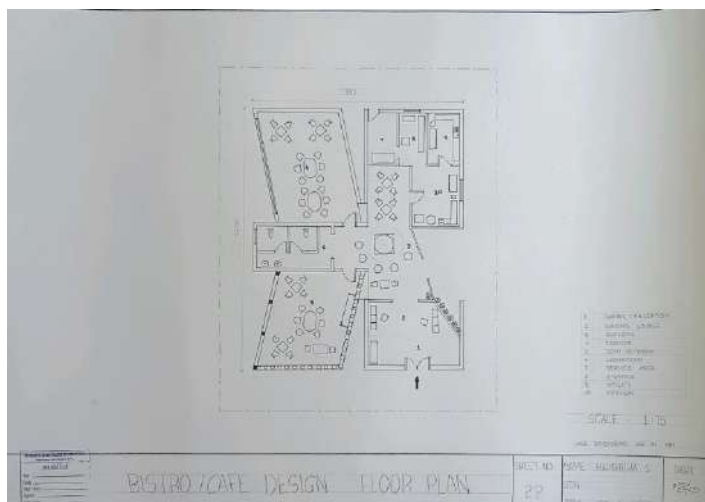
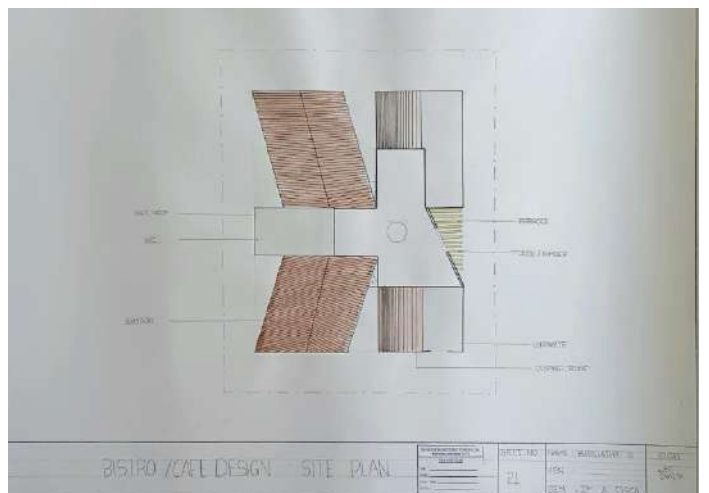
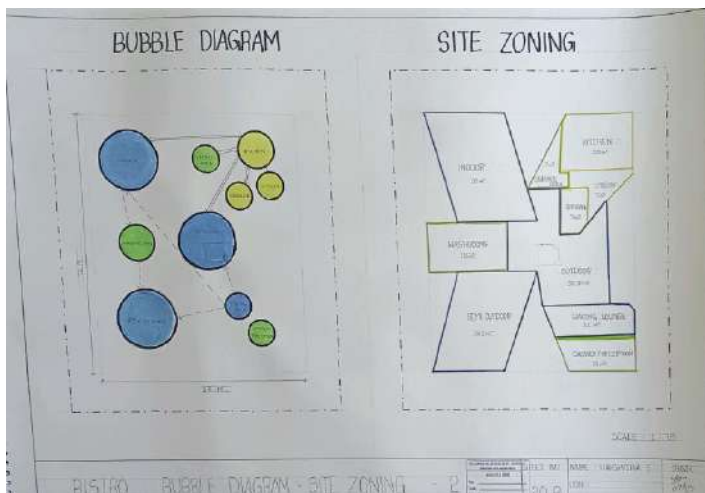
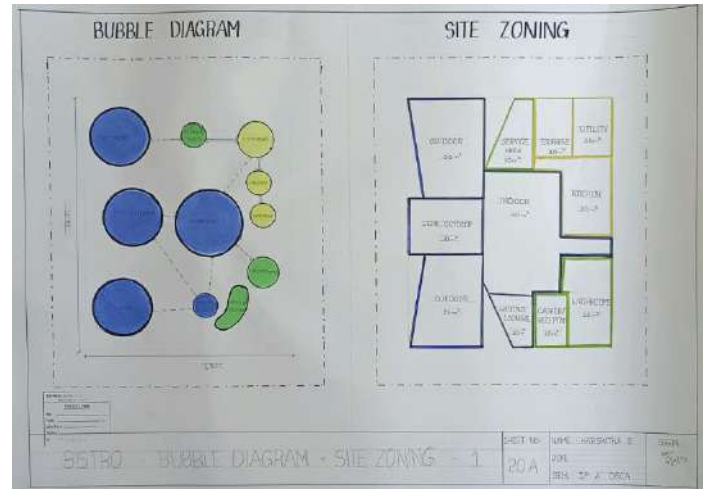
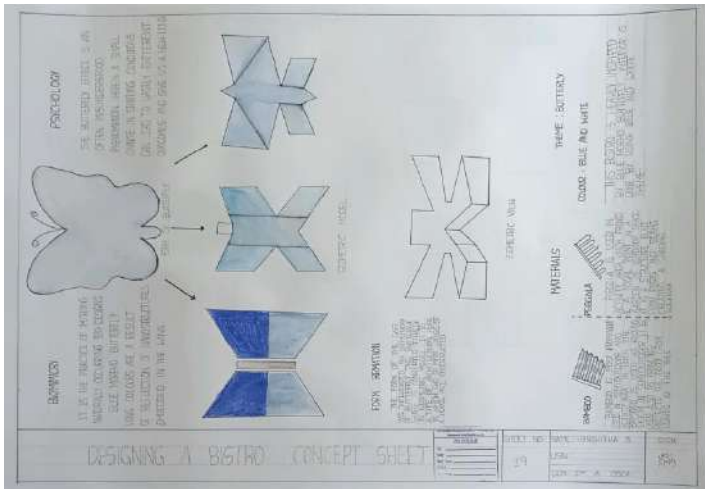
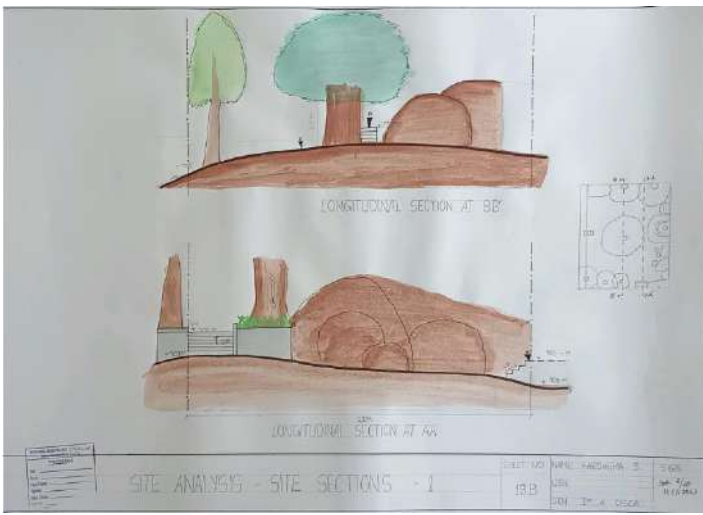
DESIGN PRINCIPLES

DATE	13
NAME	ANNA
CLASS	11
TEACHER	MR. A. DOKA



SITE ANALYSIS

DATE	14
NAME	ANNA
CLASS	11
TEACHER	MR. A. DOKA



BASIC DESIGN AND VISUAL ARTS 21 ARC 15

Subject Faculty

Course objectives:

- To encourage a critical orientation to design thinking and action.
- Develop observation skill in students towards design in various fields
- Appreciate art in various forms.
- Develop curiosity as how elements of design manifested in nature.

Definition of Art and role of Art in Society:

- Role and meaning of art, various types of arts-fine arts, performing arts, commercial arts, industrial arts, folk arts, abstract art, visual arts, spatial arts, temporal arts, pop art etc.
- Relationship of architecture with other arts like Painting and Sculpture.

Principles of Composition:

- Elements of Design & Principles of Design.
- Principles of Aesthetics and Architectural Composition -1 – Unity, Balance, Proportion, Scale in Architectural composition.
- Illustrations and its application to the practice of design with historical as well as contemporary buildings.

Patterns

- Study of pattern: Natural, Manmade and Geometric patterns
- Recognizing patterns, analyzing ideas, synthesizing information, solving problems, and creating things involving the process of abstraction.
- Appreciation of use of patterns in design



Umesh Kumar



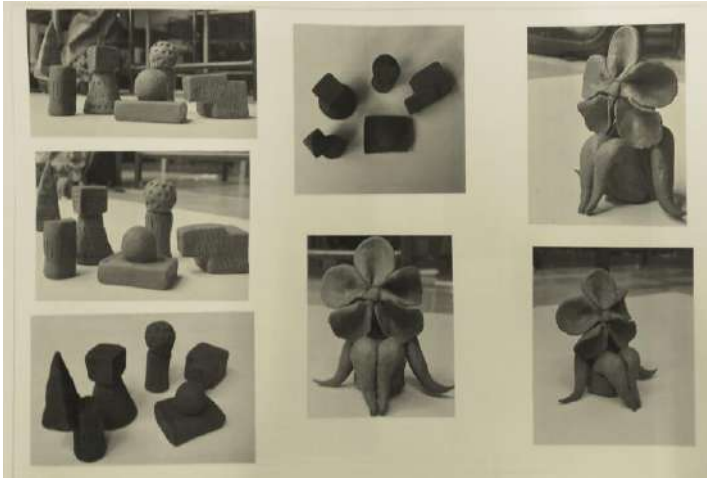
Promod
Stephen



Bhartesh GD

Basic Design and Visual Arts

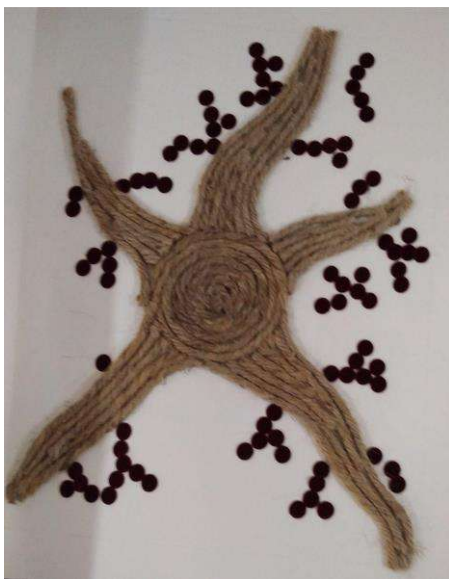
Faculty: Artists Umesh K, Pramod Stephen, Bhartesh GD



Disha Konkankar
1DC22AT022



Kolagani Rajeshwari
1DC22AT030



Disha Konkankar
1DC22AT022



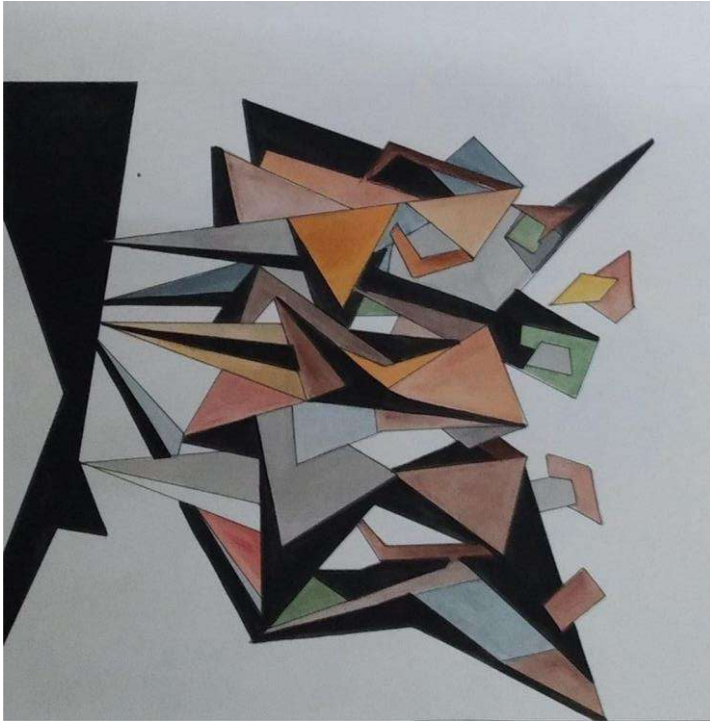
Disha Konkankar
1DC22AT022



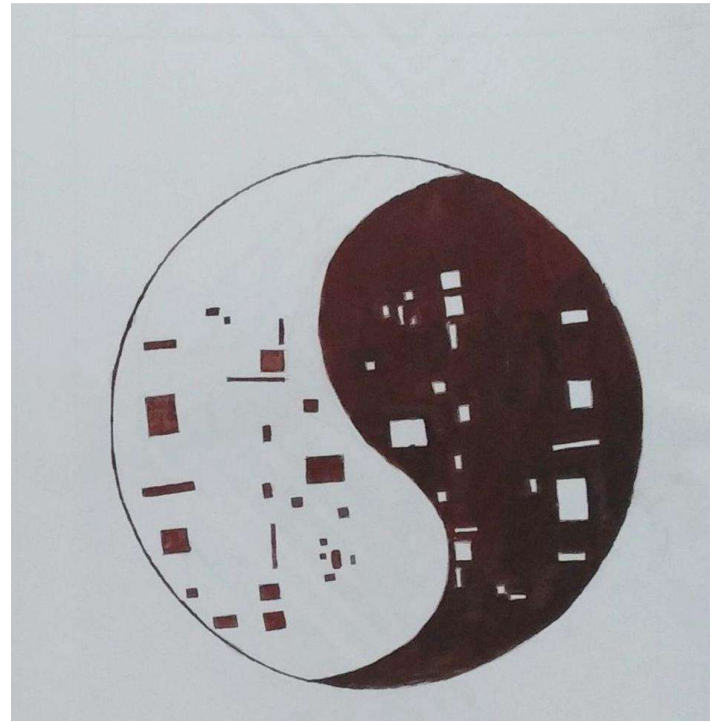
Wall Art by students of 1st semester

Basic Design and Visual Arts

Faculty: Artists Umesh K, Pramod Stephen, Bhartesh GD



Nishchaya S. 1DC22AT044



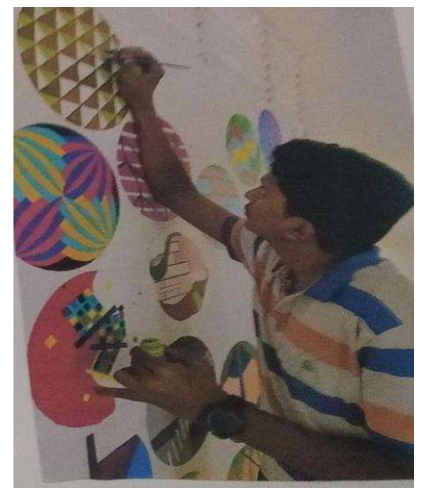
Satwik S M 1DC22AT057



Ullas A H 1DC22AT077



Chaithra G 1DC22AT016



Materials and Methods in Building Construction

21 ARC 12

Subject Faculty

Course objectives:

To introduce students to primary building materials and simple construction techniques as applicable to a low-rise building- three to four-storied contemporary building.

To develop an understanding of brick bonding, foundation details, external wall section with flat roof and parapet.



Ar. Vani
Krishnamurthy



Ar. B.B. Prakash



Ar. Srimathi
Raja



Ar. Pragathi
Prasad S



Ar. Ravindra
Avinash



Ar. Chanchal
Modi

BRICK CLOSURES AND BATS

BRICK CLOSURES AND BATS

SHEET NO: NAME: ANJANA D SIGN: DATE: 07 USN: 10/22/2022 SEM: 2, A

RAT TRAP AND STRETCHER BOND

RAT TRAP BOND

STRETCHER BOND

T JOINT

RAT TRAP AND STRETCHER BOND

SHEET NO: NAME: ANJANA D SIGN: DATE: 03 USN: 10/22/2022 SEM: 2, A

ARCHES OF SEGMENTAL AND EQUILATERAL ARCH

SEGMENTAL ARCH

EQUILATERAL ARCH

ARCHES OF SEGMENTAL AND EQUILATERAL ARCH

SHEET NO: NAME: ANJANA D SIGN: DATE: 11 USN: 10/22/2022 SEM: 2, A

PAPER BOARD TUBE

MANUFACTURING PROCESS

PROPERTIES

DISADVANTAGES

USES OF CMU

PAPER BOARD TUBE

SHEET NO: NAME: ANJANA D SIGN: DATE: 13 USN: 10/22/2022 SEM: 2, A

ENGLISH AND FLEMISH BOND

ENGLISH BOND

FLEMISH BOND

ENGLISH AND FLEMISH BOND

SHEET NO: NAME: ANJANA D SIGN: DATE: 08 USN: 10/22/2022 SEM: 2, A

ARCHES OF FLAT AND SEMI-CIRCULAR ARCH

FLAT ARCH

SEMICIRCULAR ARCH

ARCHES OF FLAT AND SEMI-CIRCULAR ARCH

SHEET NO: NAME: ANJANA D SIGN: DATE: 10 USN: 10/22/2022 SEM: 2, A

ALTERNATIVE BUILDING MATERIAL

FLY ASH BRICK

GLASS BLOCKS

BAMBOO

STABILIZED MUD BRICKS

PAPER BOARD TUBES

HOLLOW FLAY BRICKS

REINFORCED CONCRETE BLOCK

ALTERNATIVE BUILDING MATERIAL

SHEET NO: NAME: ANJANA D SIGN: DATE: 12 USN: 10/22/2022 SEM: 2, A

CONCRETE MASONRY UNIT (CMU)

ADVANTAGES

DISADVANTAGES

PROPERTIES

CMU BUILDINGS

USES OF CMU

CONCRETE MASONRY UNIT (CMU)

SHEET NO: NAME: ANJANA D SIGN: DATE: 14 USN: 10/22/2022 SEM: 2, A

STONE AND ITS CLASSIFICATION

1-BASALT

- SANGUOUS ROCK
- HARD AND DURABLE
- DIFFICULT TO WORK
- HIGHLY ROAD RESISTANT

5-CHALK

- SEDIMENTARY
- PURE WHITE
- STREET LIGHTING BRICKS
- WORK

7-LATERITE

- METAMORPHIC
- MOIST AND SOFTEN EASILY
- SLUMBERED
- 10% BLOCKS WITH PERCENTAGE OF OXIDE
- CLASS: REDDISH STONE, REDDY PICAL

2-QUARTZITE

- METAMORPHIC
- HARD, BEUTLE CRYSTALLINE
- HARD COMPACT
- DIFFICULT TO WORK AND DRESS
- USES: RESERVING WALLS, ROAD PAVEMENTS

8-GNEISS

- METAMORPHIC
- SPLITS INTO SLABS EASY TO WORK
- COMPRESSIVE STRENGTH 200MPA
- USES: STREET LIGHTING MASONRY WORK

9-GRANITE

- SANGUOUS ROCK
- HARD, DURABLE
- RESISTANT TO WEATHER, FROST
- USES: STREET LIGHTING, WALLS

3-SLATE

- METAMORPHIC
- BLACK COLOR WITH ABUNDANT
- COMPRESSIVE STRENGTH 70 TO 200 MPAS
- USES: ROOFING WORKS, WALLS

6-SAND STONE

- SEDIMENTARY
- HARDNESS QUARTZ AND EASY TO WORK
- COMPRESSIVE STRENGTH 40-60 MPAS
- USES: ROAD METAL STRUCTURAL MEMBERS

10-MARBLE

- METAMORPHIC
- CAN TAKE GOOD POLISH
- AVAILABLE IN DIFFERENT COLORS
- COMPRESSIVE STRENGTH IS 70 MPAS
- USES: FLOORING, ARCHITECTURAL STEPS

SHEET NO: 15 NAME: ANSHIKA D. SHEET NO: 16 USN: 102241004 SEM: I, A

STONE MASONRY

RANDOM RUBBLE COURSED MASONRY

SQUARE RUBBLE UN-COURSED MASONRY

ASHLAR TIME MASONRY

RANDOM RUBBLE UN-COURSED MASONRY

POLYGON RUBBLE MASONRY

ASHLAR CHAMFERED MASONRY

SQUARE RUBBLE COURSED MASONRY

FLINT RUBBLE MASONRY

FLINT RUBBLE MASONRY

SHEET NO: 16 NAME: ANSHIKA D. SHEET NO: 17 USN: 102241004 SEM: I, A

BRICK AND STONE FOUNDATION

ISOMETRIC VIEW OF BRICK FOUNDATION 1:10

PLAN AT 1:10

SECTION AT 1:10

PLAN AT 1:10

SECTION AT 1:10

SHEET NO: 17 NAME: ANSHIKA D. SHEET NO: 18 USN: 102241004 SEM: I, A

TIMBER AND TIMBER JOINTS

STRUCTURE OF TREES

WOOD: THE ORGANIC MATTER OBTAINED FROM TREES

MACRO STRUCTURE

1. BARK
2. HEART WOOD
3. SAP WOOD
4. CAMBIUM LAYER
5. INNER BARK
6. OUTER BARK
7. MEDULLARY RAYS

CHARACTERISTICS OF A GOOD TIMBER

- APPEARANCE: A FREELY GROWN TREE SHOULD EXHIBIT WIND AND OF SHINING APPEARANCE.
- COLOR: A GOOD WOOD SHOULD BE DARK.
- DEFECTS: A GOOD TIMBER SHOULD BE FREE FROM DEFECTS SUCH AS KNOTS, STAIN, SHAKES, ETC.
- DURABILITY: A GOOD TIMBER SHOULD BE DURABLE AND CAPABLE OF RESISTING THE ACTION OF FUNGI AND OTHER

SEASONING OF TIMBER

ALL THREE METHODS WHICH ARE USED FOR REMOVING SAP FROM TIMBER ARE COLLECTIVELY TERMED AS SEASONING OF TIMBER.

ADVANTAGES OF SEASONING TIMBER

- IT IS REQUIRED WEIGHT
- IT'S STRENGTH AND DURABLE
- IT'S RESISTANT TO ROT AND INSECT
- IT TAKES LESS WEIGHT
- IT'S EASIER TO WORK
- IT'S LIFE TIME OF WORK

TYPES OF WOOD JOINTS

USES OF TIMBER

1. BUILDING CONSTRUCTION
2. CONSTRUCTION OF BRIDGES
3. CONSTRUCTION OF ROADS
4. CONSTRUCTION OF DAMS
5. CONSTRUCTION OF PILLARS AND BRILLIANT BRIDGES
7. FOR FURNITURE MAKING
8. FOR LIGHT WEIGHT CASES
9. FOR MANUFACTURING OF AERONAUTICAL INSTRUMENTS
10. FOR MAKING TOYS, ETC.

DEFECTS IN TIMBER

PRESERVATION OF TIMBER

- PRESERVATION OF TIMBER PRESERVATIVES
- PRESERVATION OF TIMBER PRESERVATIVES
- PRESERVATION OF TIMBER PRESERVATIVES
- PRESERVATION OF TIMBER PRESERVATIVES
- PRESERVATION OF TIMBER PRESERVATIVES

BY-PRODUCTS OF TIMBER

SHEET NO: 18 NAME: ANSHIKA D. SHEET NO: 19 USN: 102241004 SEM: I, A

DIFFERENT TYPE OF WOODEN DOORS

ELEVATION SECTION

ELEVATION SECTION

ELEVATION SECTION

SHEET NO: 19 NAME: ANSHIKA D. SHEET NO: 20 USN: 102241004 SEM: I, A

GLAZED TIMBER DOORS

ELEVATION SECTION

ISOMETRIC VIEW OF GLAZED TIMBER DOOR 1:10

SHEET NO: 20 NAME: ANSHIKA D. SHEET NO: 21 USN: 102241004 SEM: I, A

BRICK BATS AND CLOSURES

SALT CLOSURE
RING CLOSURE
GABLE CLOSURE
CROWN BATT
SPALLED CLOSURE
HALF BAT
MITERED CLOSURE
THREE QUARTER BAT
BEVELED BAT

ALL MEASUREMENTS IN MM

SHEET NO.	DATE	DESIGNER	SECTION	SCALE
101	10/10/2022	ANANTH	1-A	1:1

ENGLISH BOND AND FLEMISH BOND

ENGLISH BOND
FLEMISH BOND

ALL MEASUREMENTS IN MM

SHEET NO.	DATE	DESIGNER	SECTION	SCALE
102	10/10/2022	ANANTH	1-A	1:1

RATRIP AND STRETCHER BONDS

RATRIP BOND
STRETCHER BOND

ALL MEASUREMENTS IN MM

SHEET NO.	DATE	DESIGNER	SECTION	SCALE
103	10/10/2022	ANANTH	1-A	1:1

ARCHES-1 - FLAT AND SEMI-CIRCULAR ARCH

FLAT ARCH
SEMI-CIRCULAR ARCH

ALL MEASUREMENTS IN MM

SHEET NO.	DATE	DESIGNER	SECTION	SCALE
104	10/10/2022	ANANTH	1-A	1:1

ARCHES-02 - SEGMENTAL AND EQUILATERAL ARCH

SEGMENTAL ARCH
EQUILATERAL ARCH

ALL MEASUREMENTS IN MM

SHEET NO.	DATE	DESIGNER	SECTION	SCALE
105	10/10/2022	ANANTH	1-A	1:1

ALTERNATIVE BUILDING MATERIALS

FLY ASH BRICKS

MANUFACTURING PROCESS
Fly ash bricks are made from fly ash, a byproduct of coal combustion, and other materials. They are fired in a kiln to produce a brick that is strong and durable.

USES
They are used in the construction of walls, floors, and roofs.

ADVANTAGES
- They are lightweight.
- They are strong and durable.
- They are fire resistant.

DISADVANTAGES
- They are expensive.
- They are not available in all areas.

GLASS BRICKS

MANUFACTURING PROCESS
Glass bricks are made from recycled glass and other materials. They are fired in a kiln to produce a brick that is strong and durable.

USES
They are used in the construction of walls, floors, and roofs.

ADVANTAGES
- They are lightweight.
- They are strong and durable.
- They are fire resistant.

DISADVANTAGES
- They are expensive.
- They are not available in all areas.

BAMBOO

USES
Bamboo is used in the construction of walls, floors, and roofs.

ADVANTAGES
- It is lightweight.
- It is strong and durable.
- It is fire resistant.

DISADVANTAGES
- It is expensive.
- It is not available in all areas.

STABILIZED MUD BRICKS

MANUFACTURING PROCESS
Stabilized mud bricks are made from mud and other materials. They are fired in a kiln to produce a brick that is strong and durable.

USES
They are used in the construction of walls, floors, and roofs.

ADVANTAGES
- They are lightweight.
- They are strong and durable.
- They are fire resistant.

DISADVANTAGES
- They are expensive.
- They are not available in all areas.

PAPER BOARD BRICKS

MANUFACTURING PROCESS
Paper board bricks are made from paper and other materials. They are fired in a kiln to produce a brick that is strong and durable.

USES
They are used in the construction of walls, floors, and roofs.

ADVANTAGES
- They are lightweight.
- They are strong and durable.
- They are fire resistant.

DISADVANTAGES
- They are expensive.
- They are not available in all areas.

HOLLOW CLAY BRICKS

MANUFACTURING PROCESS
Hollow clay bricks are made from clay and other materials. They are fired in a kiln to produce a brick that is strong and durable.

USES
They are used in the construction of walls, floors, and roofs.

ADVANTAGES
- They are lightweight.
- They are strong and durable.
- They are fire resistant.

DISADVANTAGES
- They are expensive.
- They are not available in all areas.

ALL MEASUREMENTS IN MM

SHEET NO.	DATE	DESIGNER	SECTION	SCALE
106	10/10/2022	ANANTH	1-A	1:1

BAMBOO

INTRODUCTION
Bamboo is a natural building material that is strong, durable, and sustainable. It is used in the construction of walls, floors, and roofs.

MANUFACTURING PROCESS
Bamboo is processed into various products, including bamboo charcoal, bamboo fiber, and bamboo powder.

USES
Bamboo is used in the construction of walls, floors, and roofs.

ADVANTAGES
- It is lightweight.
- It is strong and durable.
- It is fire resistant.

DISADVANTAGES
- It is expensive.
- It is not available in all areas.

CHEMICAL COMPOSITION
Bamboo is composed of cellulose, hemicellulose, and lignin.

ALL MEASUREMENTS IN MM

SHEET NO.	DATE	DESIGNER	SECTION	SCALE
107	10/10/2022	ANANTH	1-A	1:1

CONCRETE MASONRY UNIT (CMU)

PRECAST UNIT
HOLLOW CORE UNIT
SOLID UNIT
OPEN END / A-SHAPED UNIT
WAVE UNIT
DOUBLE BEAM UNIT

MANUFACTURING PROCESS
Concrete masonry units are made from concrete and other materials. They are fired in a kiln to produce a unit that is strong and durable.

USES
They are used in the construction of walls, floors, and roofs.

ADVANTAGES
- They are lightweight.
- They are strong and durable.
- They are fire resistant.

DISADVANTAGES
- They are expensive.
- They are not available in all areas.

ALL MEASUREMENTS IN MM

SHEET NO.	DATE	DESIGNER	SECTION	SCALE
108	10/10/2022	ANANTH	1-A	1:1

TYPES OF STONES

SASALT

- BANDUP ROCK
- HARD AND SOFT
- DIFFICULT TO WORK
- USED FOR FOUNDATION

QUARTZITE

- METAMORPHIC
- HARD BRITTLE
- CORROSIVE AND COMB
- SUITABLE TO WORK AND DRESS
- USED FOR BUILDING MATERIALS

SLATE

- METAMORPHIC
- BLACK COLOR
- VERY DURABLE
- USED FOR ROOFING
- WALLS

LAMPSHONE

- SEDIMENTARY ROCKS
- COLORS OF COLOURS
- BEST TO WORK
- USED FOR FLOORS
- STEPS
- WALLS

CHALK

- SEDIMENTARY
- PURE WHITE
- SOFT AND EASY TO WORK

MARBLE

- METAMORPHIC
- CAN TAKE GOOD POLISH
- AVAILABLE IN DIFFERENT COLOURS
- USED FOR FLOORING
- FACING WORK
- STEPS

DIABASE

- METAMORPHIC
- HARD AND SOFT
- EASY TO WORK
- USED FOR ROOFING
- WALLS

ORISSA

- METAMORPHIC
- CAN TAKE GOOD POLISH
- AVAILABLE IN DIFFERENT COLOURS
- USED FOR FLOORING
- FACING WORK
- STEPS

DIABASE

- METAMORPHIC
- HARD AND SOFT
- EASY TO WORK
- USED FOR ROOFING
- WALLS

SHEET NO.	DATE	SCALE	MARKS
SEM 1	1-4-2024		

STONE MASONRY WALL TYPES

RANDOM RUBBLE COURSE MASONRY

SQUARE RUBBLE UNIFORM MASONRY

RANDOM RUBBLE UNIFORM MASONRY

REGULAR RUBBLE MASONRY

SQUARE RUBBLE COURSE MASONRY

PLANT RUBBLE MASONRY

ASHLAR FINISH MASONRY

ASHLAR CHAMFERED MASONRY

SHEET NO.	DATE	SCALE	MARKS
SEM 1	1-4-2024		

BRICK AND STONE FOUNDATION

SECTION I-10 STONE FOUNDATION

SECTION I-10 BRICK FOUNDATION

LAYOUT PLAN I-10

EXPANDED PLAN I-10

STEPPED SECTION BRICK

SHEET NO.	DATE	SCALE	MARKS
SEM 1	1-4-2024		

TIMBER AND TIMBER JOINTS

CHARACTERISTICS OF A GOOD TIMBER

- STRENGTH
- DURABILITY
- STABILITY
- WORKABILITY
- ECONOMY
- BEAUTY
- RESISTANCE TO INSECTS
- RESISTANCE TO FIRE
- RESISTANCE TO WEATHERING

DEFECTS IN TIMBER

- KNOTS
- WOOD CRACKS
- WOOD ROT
- WOOD BORING INSECTS
- WOOD CHECKS
- WOOD SPLITTING
- WOOD SWELLING
- WOOD SHRINKING
- WOOD DISCOLORATION
- WOOD CHECKS
- WOOD SPLITTING
- WOOD SWELLING
- WOOD SHRINKING
- WOOD DISCOLORATION

MANUFACTURING PROCESS

- LOGGING
- BARKING
- SKIDDING
- BOILING
- DRYING
- GRADING
- PACKAGING

SHEET NO.	DATE	SCALE	MARKS
SEM 1	1-4-2024		

DIFFERENT TYPES OF WOODEN DOORS

BATTERED LAGED & BECKED DOOR

DOUBLE LEAF PAINTED DOOR

PUSH DOOR

DETAIL AT A

DETAIL AT B

DETAIL AT C

SHEET NO.	DATE	SCALE	MARKS
SEM 1	1-4-2024		

GLAZED PANELLED DOOR

DETAIL OF FRAME AND SHUTTER IN SECTION

DETAIL AT THE PANELS

DETAIL AT A

SHEET NO.	DATE	SCALE	MARKS
SEM 1	1-4-2024		

Methods and Materials in Building Construction - II
 Faculty: Ar. Vani Krishnamurthy, Ar. Srimathi Raja,
 Ar. Ravindra Avinash

Baristha Bibhav Gogoi
 IDC22AT013

RELEVANCE OF MMBC

SWISS LANDSCAPE
 NOTES:
 - DESIGN & SHOWING ARCHITECTS
 - CONSTRUCTION WITH NO EXTERIOR CONVICTION
 - EACH ROOM IS SCATTERED THROUGHOUT THE TERRACE OF UNDERGROUND BY AN INDIVIDUAL HOUSE.

ANTILLA
 OPERATED & BUILT 1930-1935
 ESTABLISHED WELL KNOWN
 STAGES OF CONCRETE STEEL FRAMING
 ALSO FRAMES, ONE STORIES WITH ONE FRAM, LANE USED, LATER WERE BUILT IN THE INTERIOR FOR LATER ON PARTIALS OF B FRAMING

LA SAGHERA
 PARTIAL FRAMES
 LATER ON FRAMES WERE BUILT ALONG ALL THE BUILDING SIDES IN STEEL & CONCRETE
 QUOTE: "TOP CHOP FRAMING AND INTERIOR AND EXTERIOR WALLS WERE BUILT INVERTED HANGING SAND BRICKS & WERE BUILT UNDER CONTINUOUS FRAMING"

THE SHARD
 "FRANK GEHRY"
 - 2012
 - LONDON, ENGLAND
 IS
 - THE STEEL & CONCRETE BUILDING THE SHARD IS THE MOST TOWERING SKYRAPER IN LONDON
 - THE SHARD IS THE MOST TOWERING SKYRAPER IN LONDON
 - THE SHARD IS THE MOST TOWERING SKYRAPER IN LONDON

120 NORTH WHEAT
 "GUSTAV GRIEBNER"
 - 1927
 - CHICAGO, ILLINOIS, USA
 - STAGE OF CONCRETE & STEEL FRAMING
 - THE SHARD IS THE MOST TOWERING SKYRAPER IN LONDON

100 NORTH WHEAT
 "GUSTAV GRIEBNER"
 - 1927
 - CHICAGO, ILLINOIS, USA
 - STAGE OF CONCRETE & STEEL FRAMING
 - THE SHARD IS THE MOST TOWERING SKYRAPER IN LONDON

100 NORTH WHEAT
 "GUSTAV GRIEBNER"
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 - STAGE OF CONCRETE & STEEL FRAMING
 - THE SHARD IS THE MOST TOWERING SKYRAPER IN LONDON

DRAFTING CONVENTIONS

CONSTRUCTION LINES

SECTION

PLAN & ELEVATION

HIDDEN LINES

CENTRE LINES

DIMENSION & EXTENSION LINES

CUTTING PLAN & SITE LINES

BROKEN LINES

DIFFERENT LINE AND TONAL VALUES

BRICK MASONRY

CONCRETE

WOOD WORK

GLASS

STONE

PLASTER

SOIL

SECTIONAL HATCHING TO INDICATE DIFFERENT MATERIALS

NOTE: ALL DIMENSIONS ARE IN MILLIMETERS.

SHEET NO. BARISTHA B. GOGOI

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MANUFACTURING OF BRICKS

PREPARATION OF CLAY:
 The soil is left for 20 days from the day it is removed and is spread in the layers, known to be covered completely. The soil is then exposed to atmosphere for softening for few weeks. To increase the quality of the soil, sandy soil, calcareous clays, shales, etc. are added along with lime, etc. and kneaded upon the feet of a pair of cattle.

MOLDING OF BRICKS:
 HAND MOLDING
 POWER MOLDING
 PLASTIC METHOD
 ETC.

DRYING OF BRICKS:
 BRICKS ARE DRYED IN KILNS TO IMPART STRENGTH, STABILITY AND DURABILITY. THE BRICKS ARE HEATED UP TO 100-150°C.

BURNING OF BRICKS:
 BRICKS ARE BURNED IN KILNS TO IMPART STRENGTH, STABILITY AND DURABILITY. THE BRICKS ARE HEATED UP TO 100-150°C.

TYPES OF KILNS

INTERMITTENT KILNS

CLAMP KILN:
 A BRICK CLAMP IS A TEMPORARY STRUCTURE BUILT UP OF BRICKS OR STONES, USED FOR BURNING BRICKS. IT IS A TEMPORARY STRUCTURE BUILT UP OF BRICKS OR STONES, USED FOR BURNING BRICKS. IT IS A TEMPORARY STRUCTURE BUILT UP OF BRICKS OR STONES, USED FOR BURNING BRICKS.

CONTINUOUS KILNS

ROTARY KILN:
 A ROTARY KILN IS A CONTINUOUS FURNACE IN WHICH THE BRICKS ARE BURNED. IT IS A CONTINUOUS FURNACE IN WHICH THE BRICKS ARE BURNED. IT IS A CONTINUOUS FURNACE IN WHICH THE BRICKS ARE BURNED.

STEPS TO CREATE CLAY BRICKS

STEP I:
 THE CLAY IS EXCAVATED AND REMOVED FROM A MOUND WITH THE HELP OF SPECIAL TOOLS, PRIMARILY, SHOVELS, AND OTHER APPROPRIATE TOOLS. THE CLAY IS THEN TRANSPORTED TO A PLACE NEAR THE APPROXIMATE SITE FOR BURNING.

STEP II:
 THE CLAY IS EXCAVATED AND REMOVED FROM A MOUND WITH THE HELP OF SPECIAL TOOLS, PRIMARILY, SHOVELS, AND OTHER APPROPRIATE TOOLS. THE CLAY IS THEN TRANSPORTED TO A PLACE NEAR THE APPROXIMATE SITE FOR BURNING.

STEP III:
 THE CLAY IS EXCAVATED AND REMOVED FROM A MOUND WITH THE HELP OF SPECIAL TOOLS, PRIMARILY, SHOVELS, AND OTHER APPROPRIATE TOOLS. THE CLAY IS THEN TRANSPORTED TO A PLACE NEAR THE APPROXIMATE SITE FOR BURNING.

STEP IV:
 THE CLAY IS EXCAVATED AND REMOVED FROM A MOUND WITH THE HELP OF SPECIAL TOOLS, PRIMARILY, SHOVELS, AND OTHER APPROPRIATE TOOLS. THE CLAY IS THEN TRANSPORTED TO A PLACE NEAR THE APPROXIMATE SITE FOR BURNING.

STEP V:
 THE CLAY IS EXCAVATED AND REMOVED FROM A MOUND WITH THE HELP OF SPECIAL TOOLS, PRIMARILY, SHOVELS, AND OTHER APPROPRIATE TOOLS. THE CLAY IS THEN TRANSPORTED TO A PLACE NEAR THE APPROXIMATE SITE FOR BURNING.

STEP VI:
 THE CLAY IS EXCAVATED AND REMOVED FROM A MOUND WITH THE HELP OF SPECIAL TOOLS, PRIMARILY, SHOVELS, AND OTHER APPROPRIATE TOOLS. THE CLAY IS THEN TRANSPORTED TO A PLACE NEAR THE APPROXIMATE SITE FOR BURNING.

MANUFACTURING PROCESS OF BRICKS

SHEET NO. BARISTHA B. GOGOI

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KILN VISIT REPORT

STEPS TO CREATE CLAY BRICKS

STEP I:
 THE CLAY IS EXCAVATED AND REMOVED FROM A MOUND WITH THE HELP OF SPECIAL TOOLS, PRIMARILY, SHOVELS, AND OTHER APPROPRIATE TOOLS. THE CLAY IS THEN TRANSPORTED TO A PLACE NEAR THE APPROXIMATE SITE FOR BURNING.

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BRICK BATS AND CLOSURE

SPLIT CLOSURE

KING'S CLOSURE

QUEEN'S CLOSURE

QUEEN'S CLOSURE (HALF)

BEVELLED CLOSURE

MITERED CLOSURE

HALF BAT

THREE QUARTER BAT

BEVELLED BAT

MANUFACTURING PROCESS OF BRICKS

SHEET NO. BARISTHA B. GOGOI

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MASON'S TOOL AND MASONRY JOINT

MEASURING TAPE

SCREW DRIVER

MASON'S HAMMER

SHOVEL

MASON TROWEL

METAL PLATE

MASON'S SIEVE

POINTING TROWEL

RUBBER BUCKET

PUMP BOW

CONCRETE SPREADER

RIGHT ANGLE SCALE

CONCRETE POINTING

VIBE POINTING

WEATHERED POINTING

SCAFFOLD POINTING

ENTRAINED POINTING

BEADED POINTING

STRUCK POINTING

RAVED POINTING

FLUSH POINTING

MANUFACTURING PROCESS OF BRICKS

SHEET NO. BARISTHA B. GOGOI

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MASONRY JOINTS

CONCRETE POINTING

VIBE POINTING

WEATHERED POINTING

SCAFFOLD POINTING

ENTRAINED POINTING

BEADED POINTING

STRUCK POINTING

RAVED POINTING

FLUSH POINTING

MANUFACTURING PROCESS OF BRICKS

SHEET NO. BARISTHA B. GOGOI

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RELEVANCE OF MMBC

DATE NO	NAME	T.R. NAME	SIGN	CLASS
02	10A	BB PRAKASH	[Signature]	I & B

MORTAR JOINTS AND MASON TOOLS

DATE NO	NAME	T.R. NAME	SIGN	CLASS
04	10A	BB PRAKASH	[Signature]	I & B

BATS AND CLOSURES

DATE NO	NAME	T.R. NAME	SIGN	CLASS
06	10A	BB PRAKASH	[Signature]	I & B

RUBBLE MASONRY

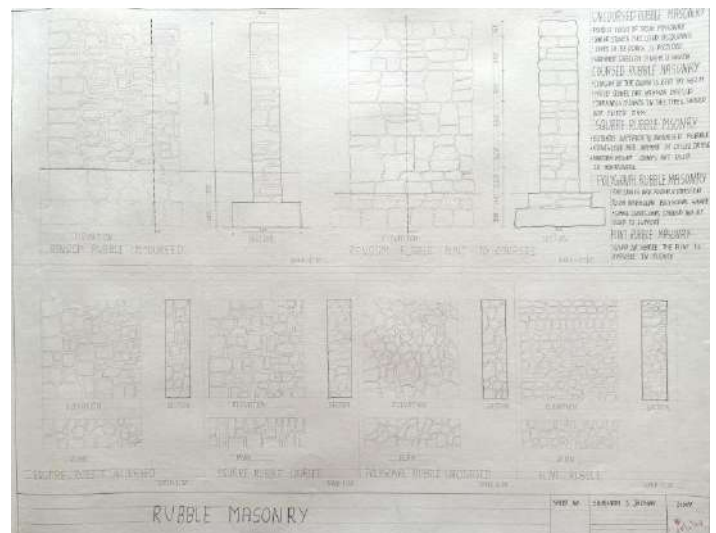
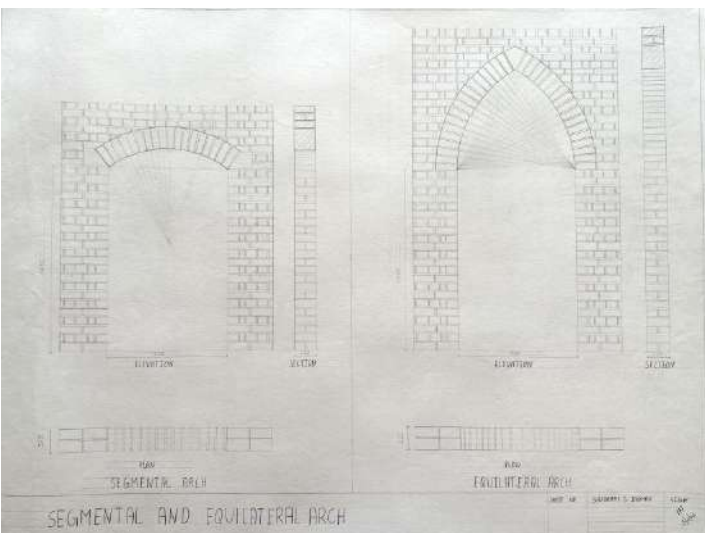
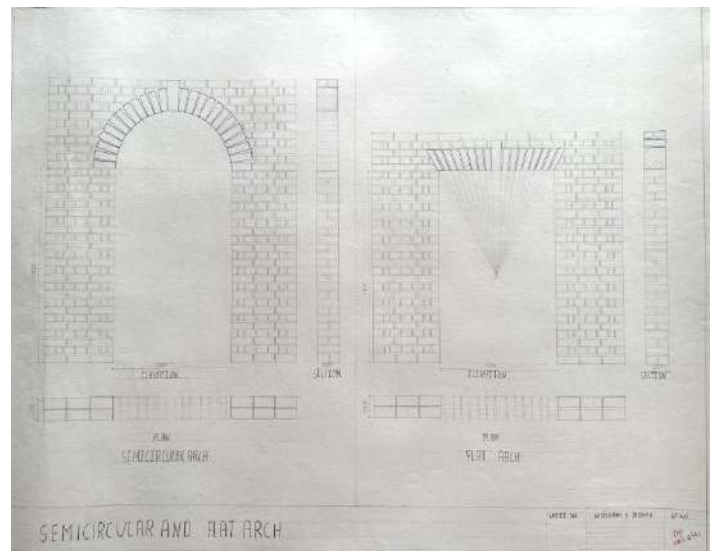
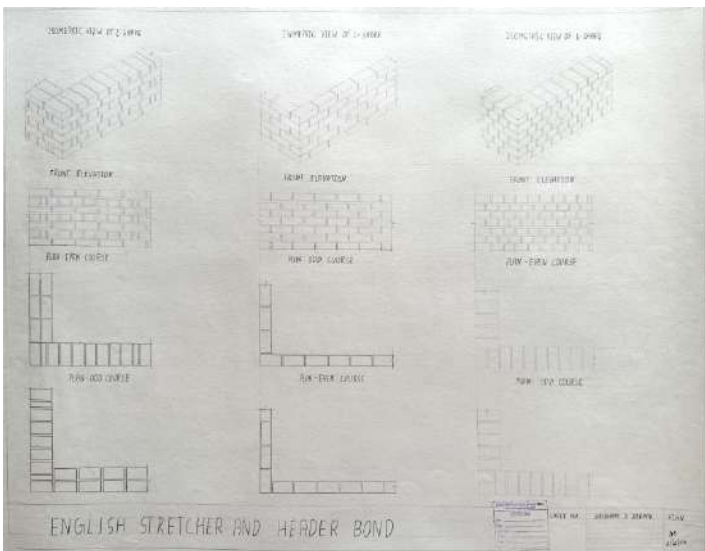
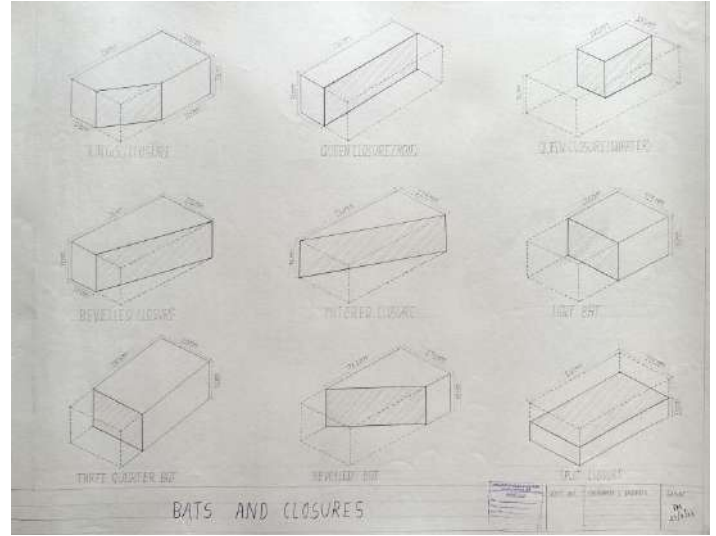
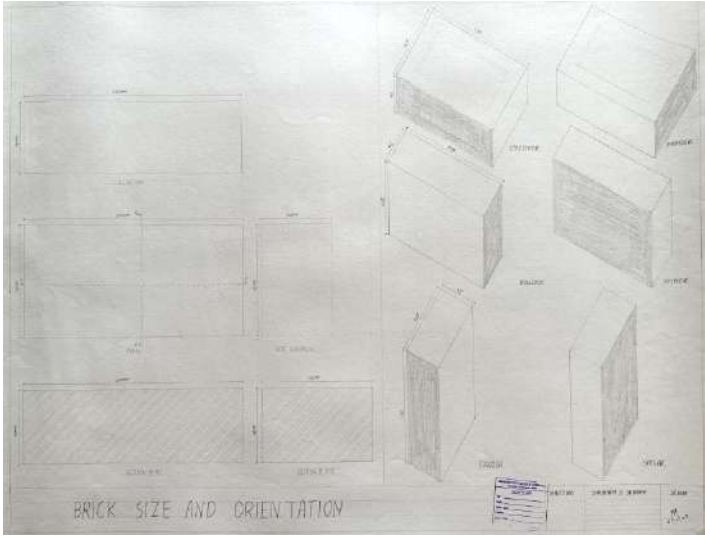
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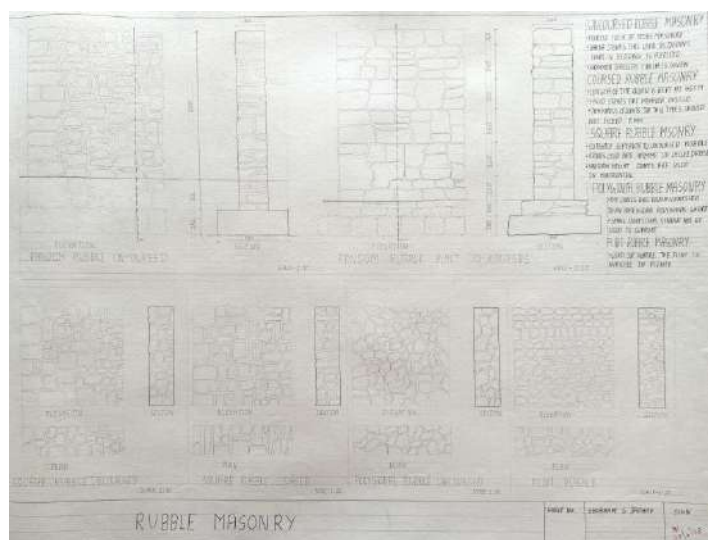
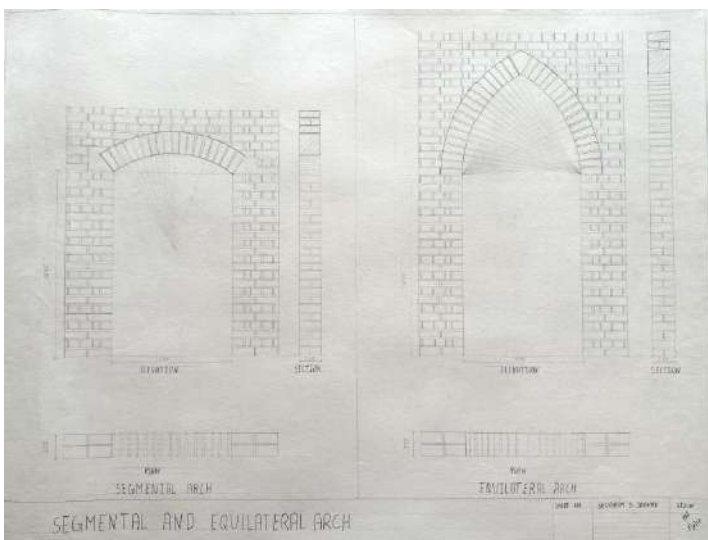
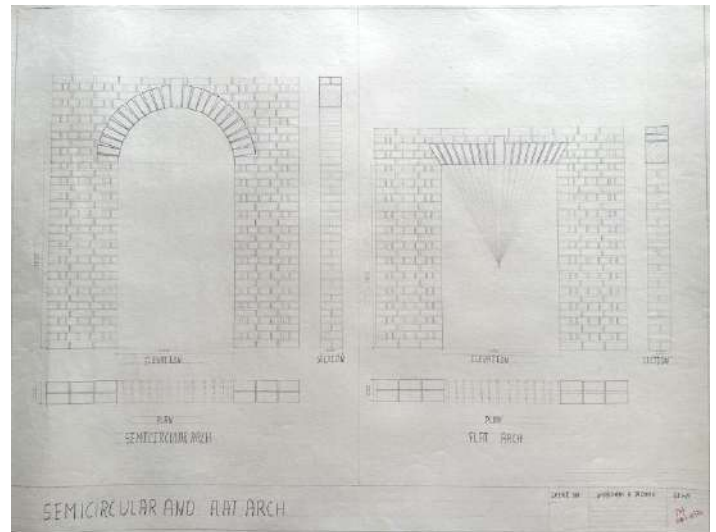
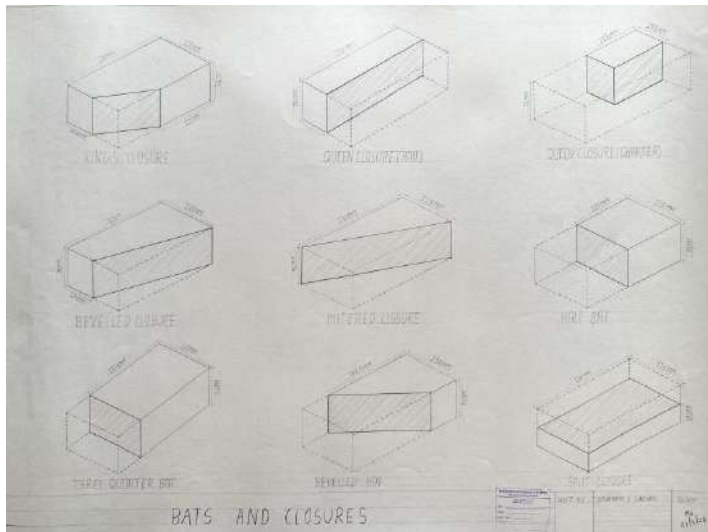
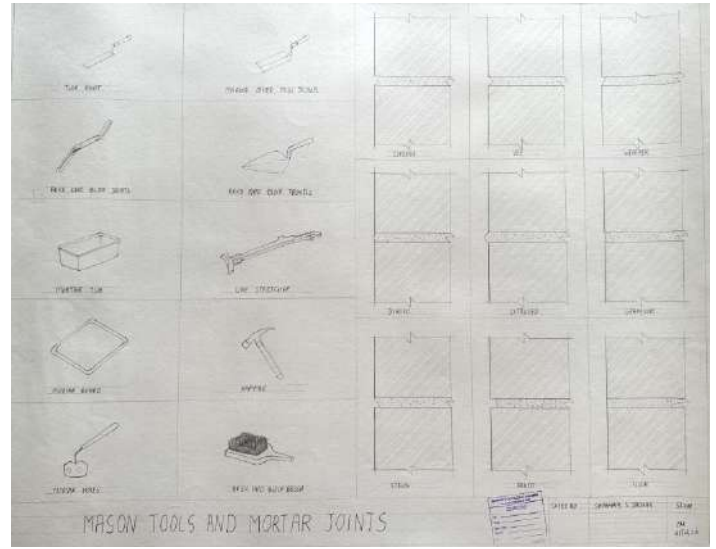
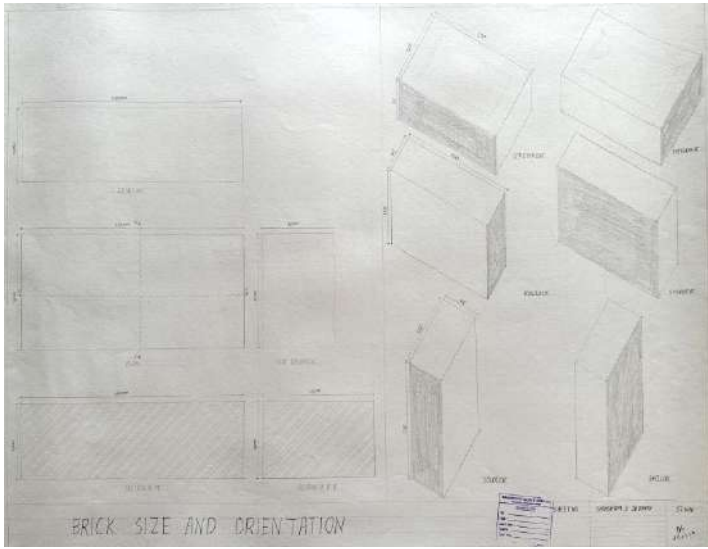
TIMBER REPORT

DATE NO	NAME	T.R. NAME	SIGN	CLASS
14	10A	BB PRAKASH	[Signature]	I & B

TYPES OF DOORS

DATE NO	NAME	T.R. NAME	SIGN	CLASS
15	10A	BB PRAKASH	[Signature]	I & B





Model Making Workshop 21 ARC 16

Subject Faculty

Course objectives:

To train the students to experiment and manipulate materials leading to creative exploration of forms.

Module 1:

- Generation of basic forms-cube, cone, dome and arch.
- Generating of organic and geometrical forms/objects

Module 2:

- Generation of forms & material exploration: hands on skill by using wood, bamboo, metal wire, thread, balsa wood, clothe, paper board etc

Module 3:

- Composite forms: Experimental form generation by combining various materials and shapes.(rods, pipes, slabs, etc.)
- Free Forms: Tensile structures, Funicular Shells using wood, fabric, plastic etc.

Module 4:

- Architectural forms: making of windows, wall doors, roofs, trees, shrubs, roads, vehicles etc.

Module 5:

- Introduction to digital modelling like 3D printing and laser cutting.



Ar. Gopi
Krishna KV



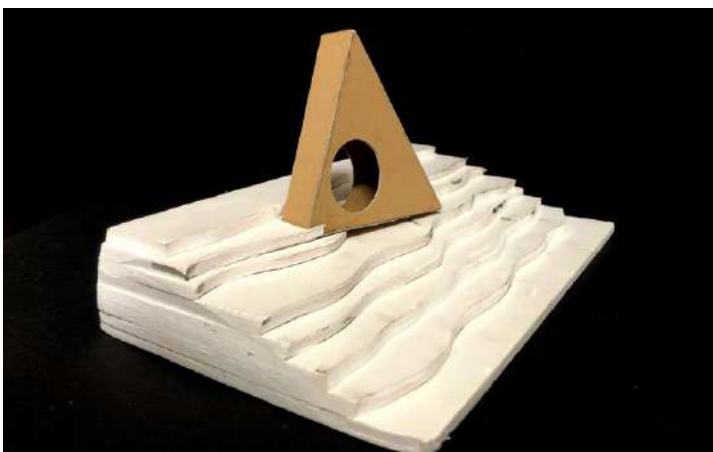
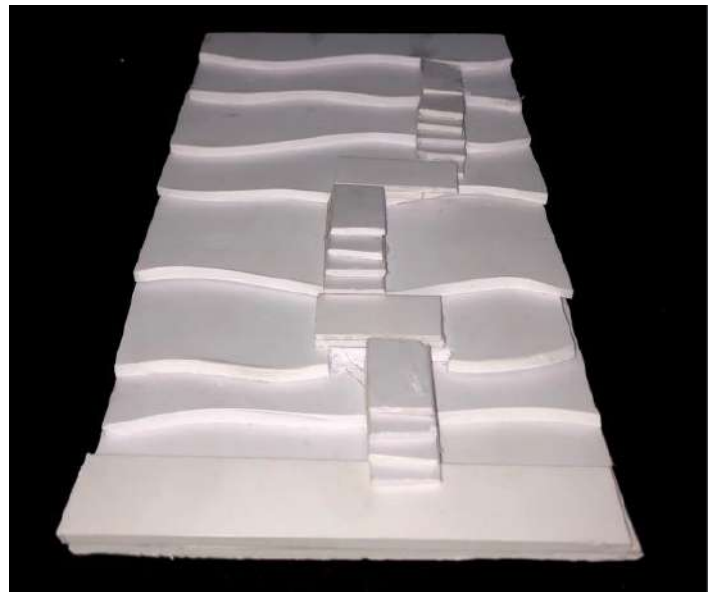
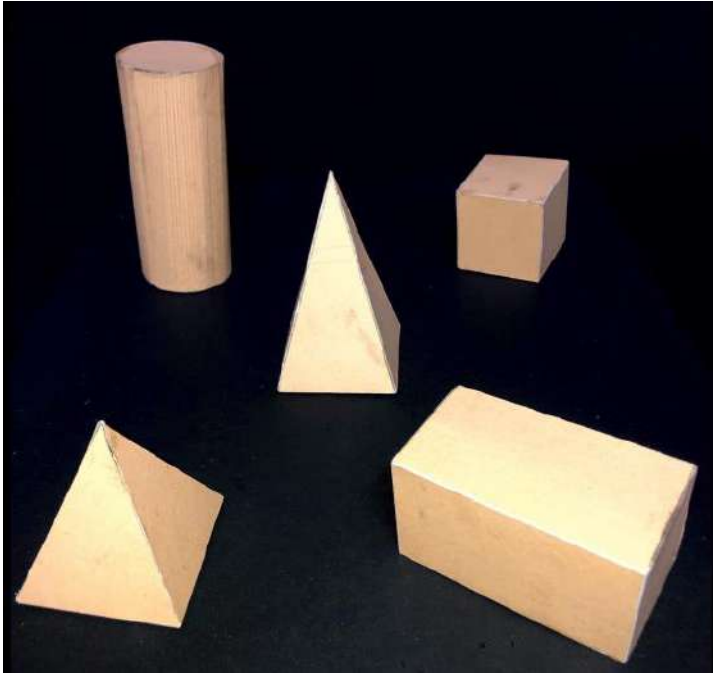
SJ Bhaskar



Ar. N Arun
Chandran



Ar. BB Prakash

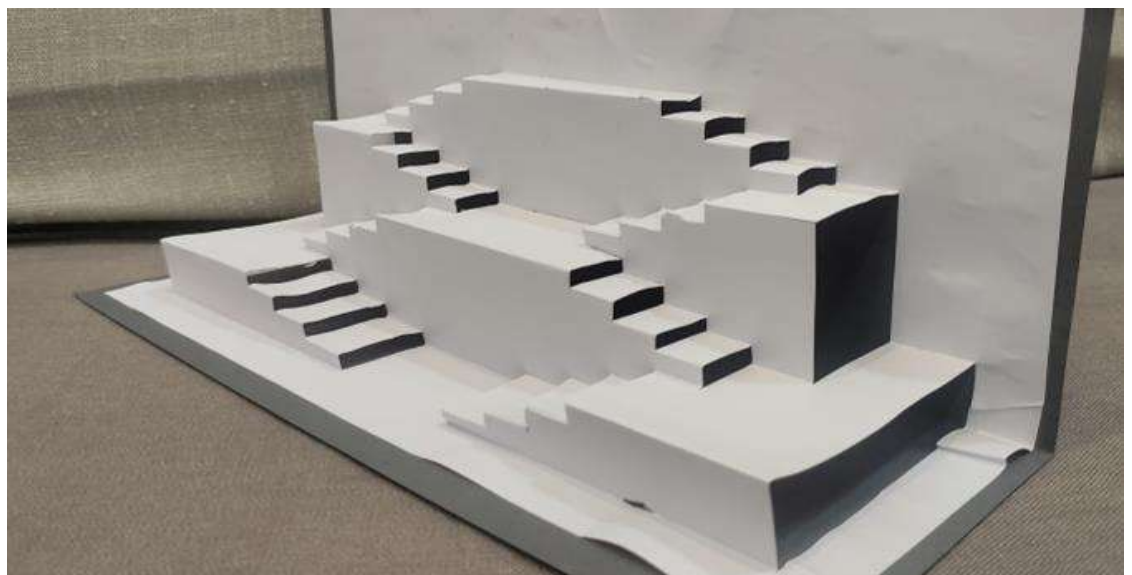
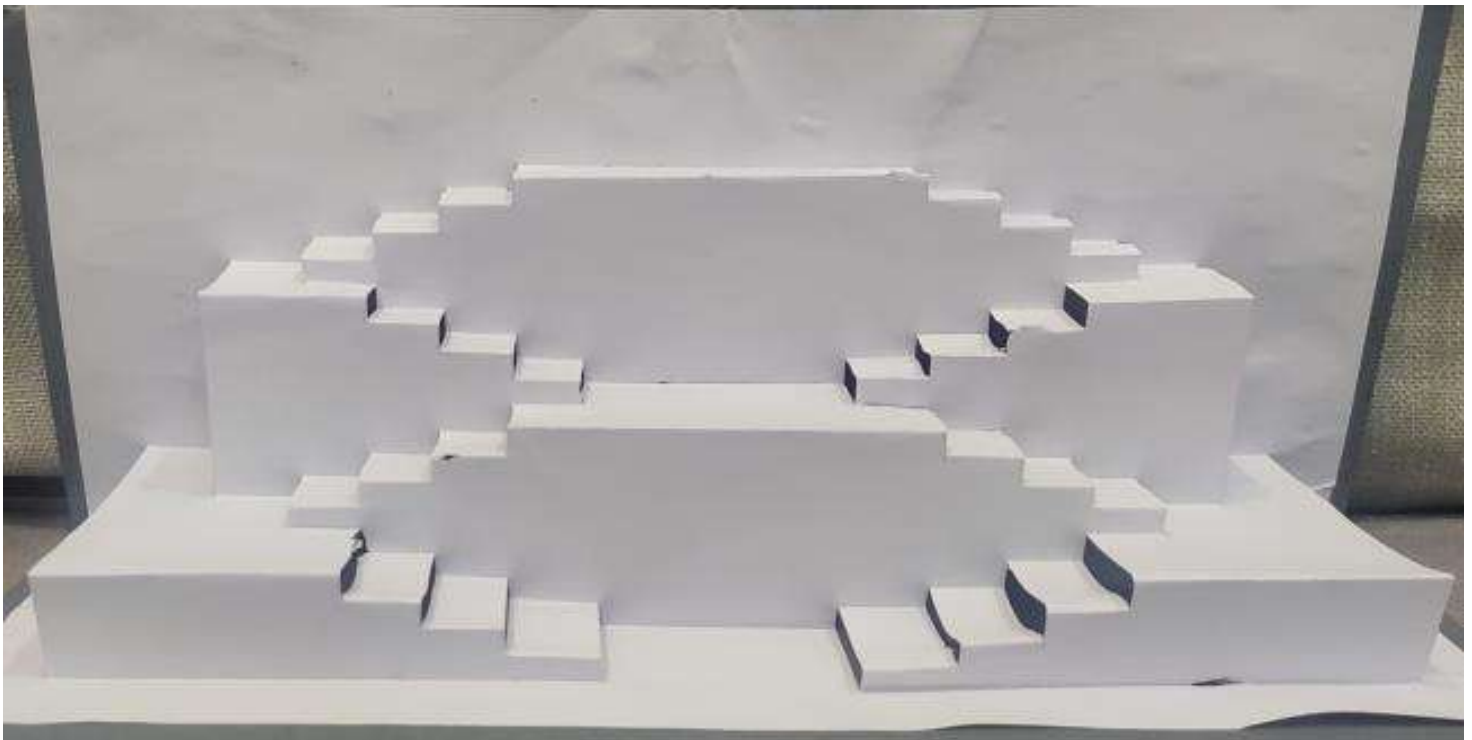


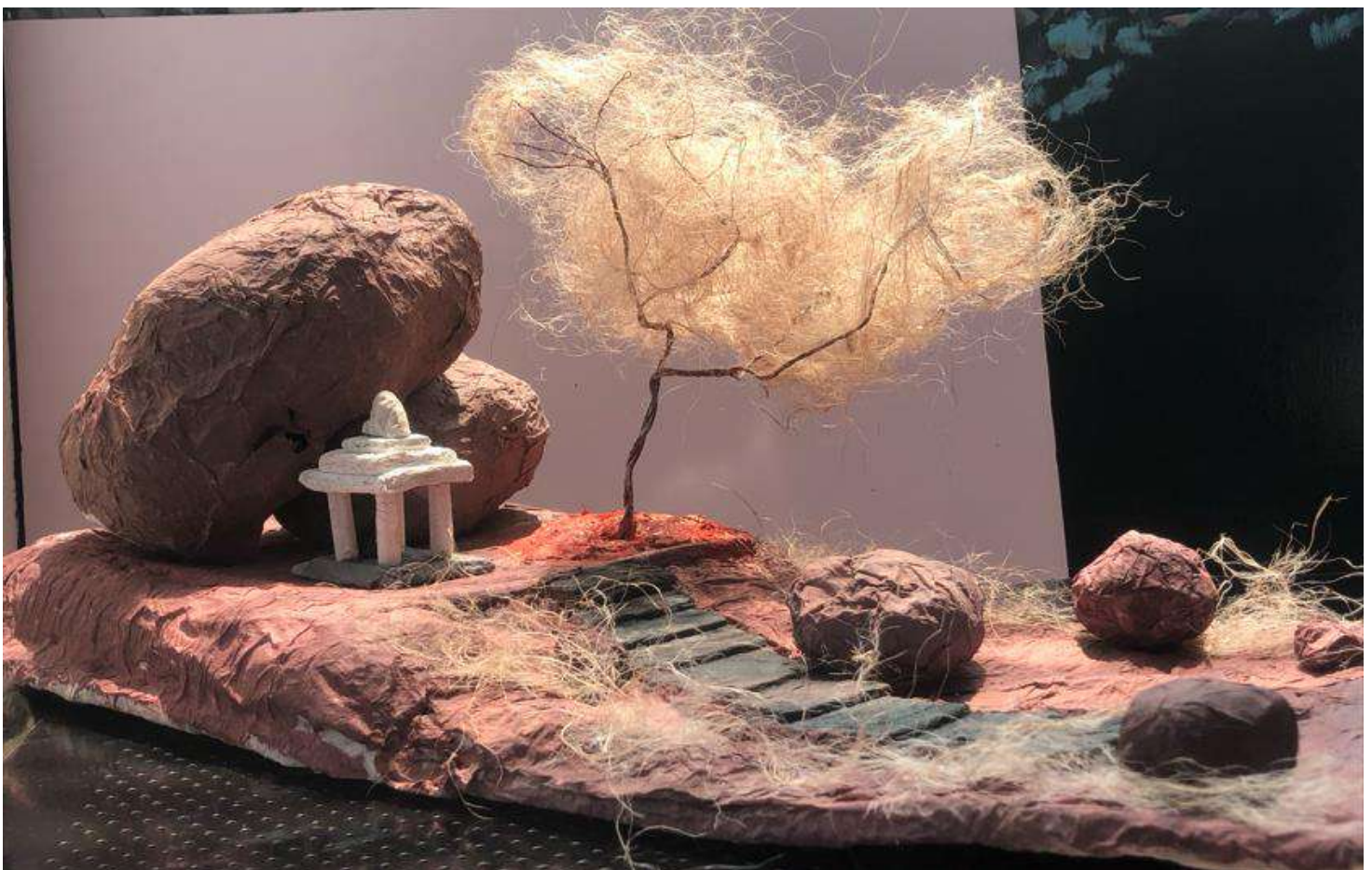
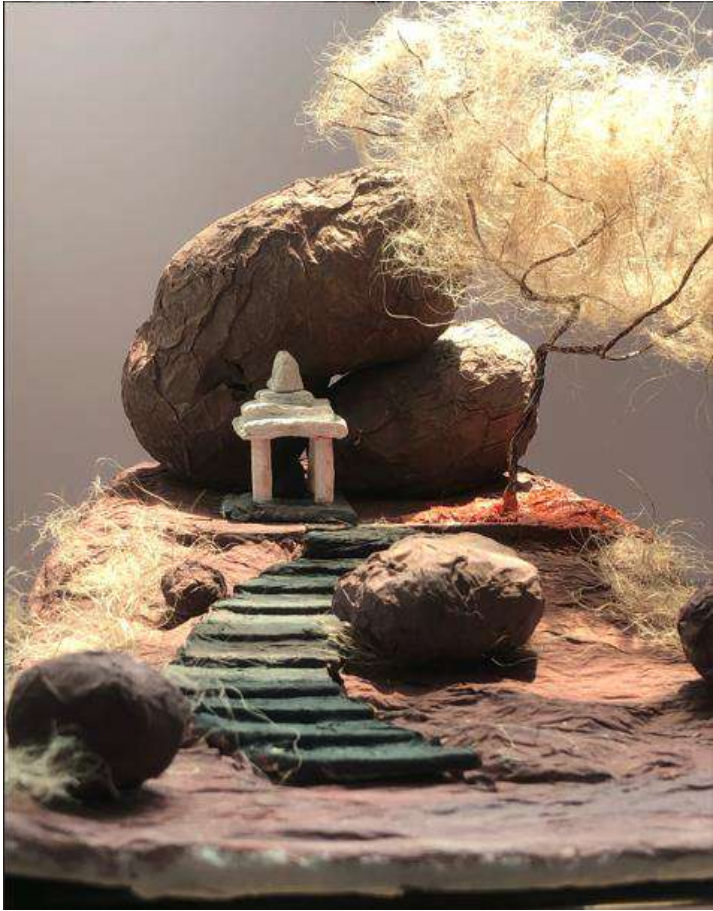
Model Making Workshop II

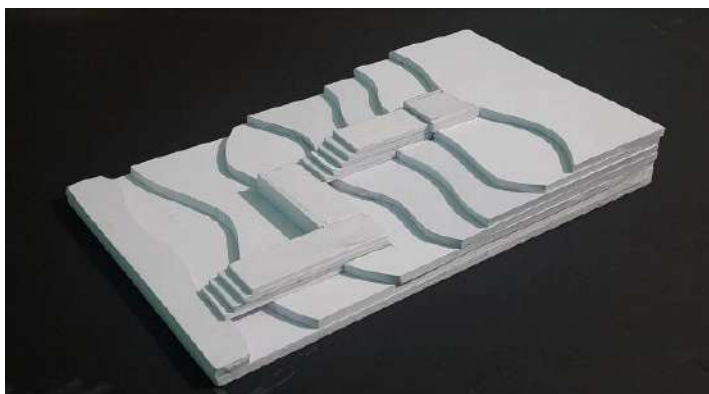
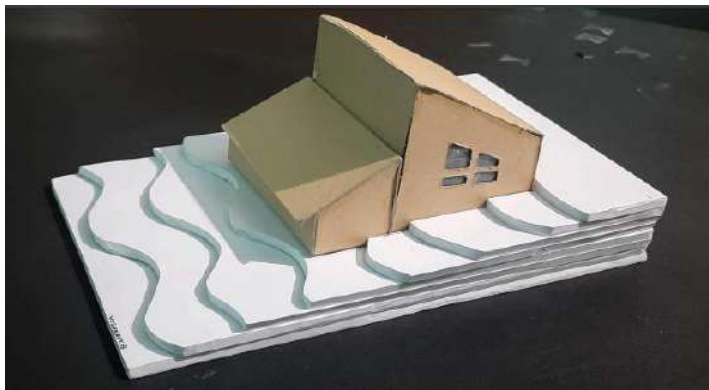
Faculty: Ar. Gopi Krishna KV, Ar. BB Prakash, SJ Bhaskar

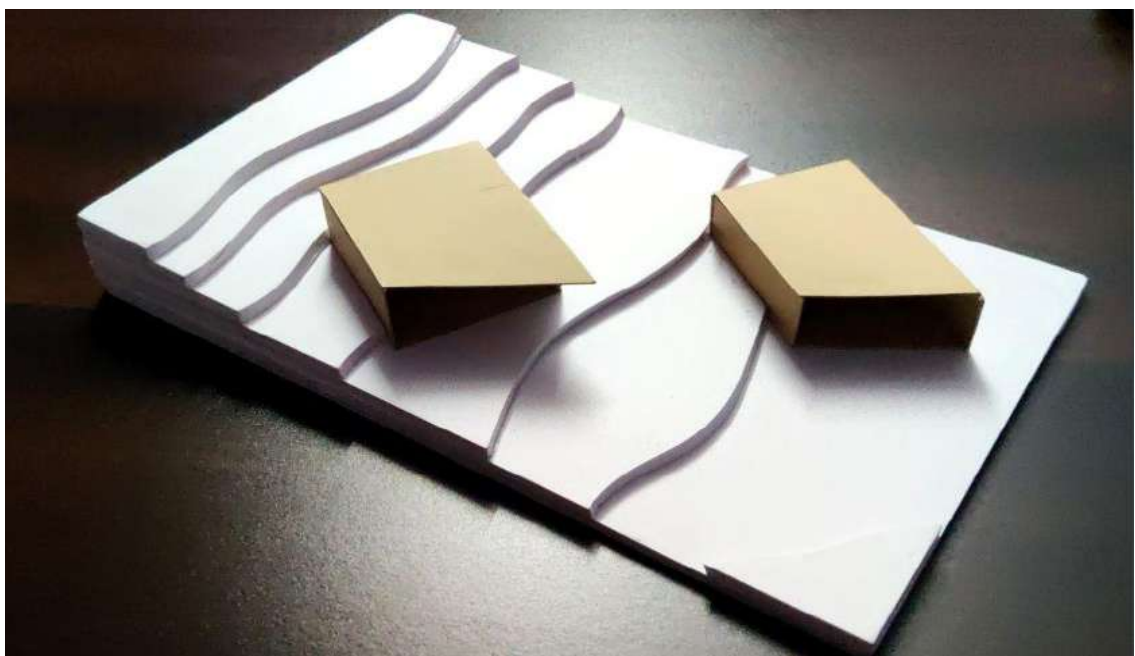
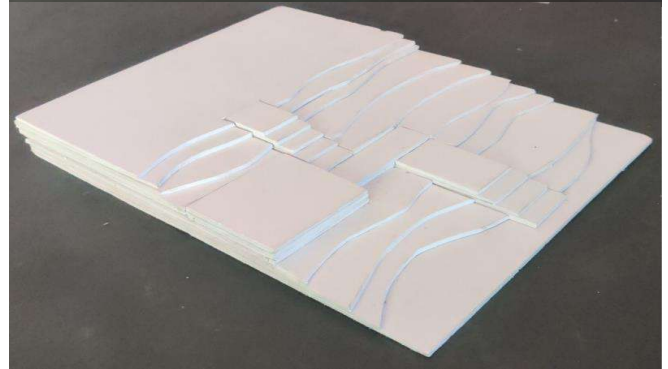
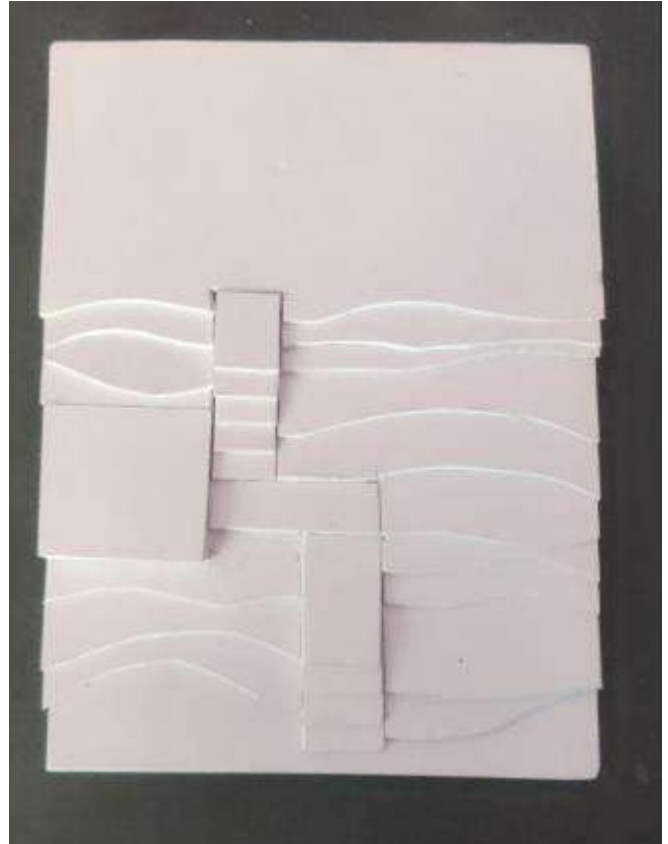
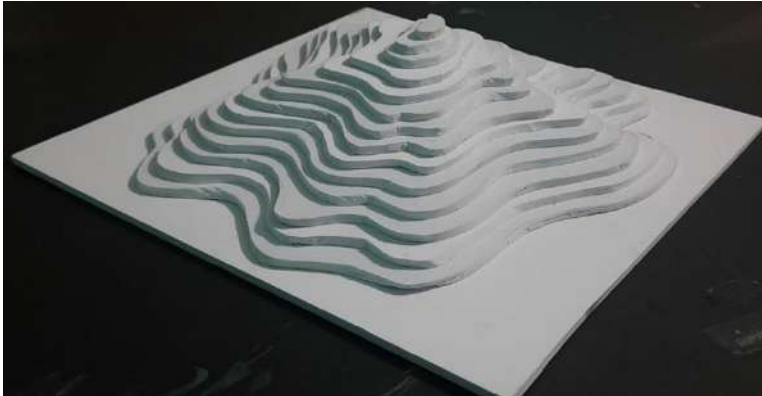
Pranav Arakere

1DC22AT049











2nd Semester

Home is a place filled with coziness, affection, and warmth. A house will always have a special place in our hearts, and for Indians in particular, it is linked to family and close ties. A home is made up of places where individuals gather with their families and are at their most at ease. Despite the fact that people's lives are always changing, their homes store memories and give insight into the kind of people that reside there. Indians typically lived in joint families. Since there were many people living in the house, distinct rooms for various activities were required. Although there are various cultural, linguistic, climatic, and regional differences; there were few common things in the aesthetics of the homes. The central area of most homes was a courtyard; whereas gardens and study halls were a few other common spaces. These homes were built in a very sustainable manner using local building materials, Vaastu principles, and climate considerations. As they serve as the greatest guides for the construction customs of the era, our heritage and history offer a variety of types of architectural forms to interpret. A traditional Indian house also plays a significant role in family, festivals, and celebrations and unites everyone.

The sites chosen for the house design are:

Site A – ITI Employees Layout, Near Mallathahalli Lake, Bengaluru Family type : NRIs (2 adults, 2 children, 1 pet) Total Site Area: 800 sqm Total Built-up-area (B.U.A): 300 sqm

Site B – Mathias Nilaya, Rest House Road, Bengaluru Family type : Localities (Grandmother, 2 adults, 2 children, 1 pet) Total Site Area: 1000 sqm Total Built-up-area (B.U.A): 350 sqm

Note:

- Ground coverage : Maximum 30% of site area
- Must be a G+1 floors building
- Visit to site; necessary analysis and inferences.
- Concept / Theme – Exploring forms
- Block Model
- Bubble diagram
- Zoning
- Single line plan
- Masterplan (+Roof plan),
- All floor plans with furniture layout
- Sections (2#)
- Elevations (4#)
- Detailed model & 3D views

Architectural Design II 21 ARC 21

Studio Coordinators



Ar. Nikhil
Ravindra



Ar. Surabhi
Moharir

Studio Faculties



Ar. Chaitali M
Babar



Ar. Mythrayi
Harshavardhan



Ar. Vani Krishnamurthy



Umesh K.



Ar. Pooja R Srinivas



Ar. Gopi Krishna

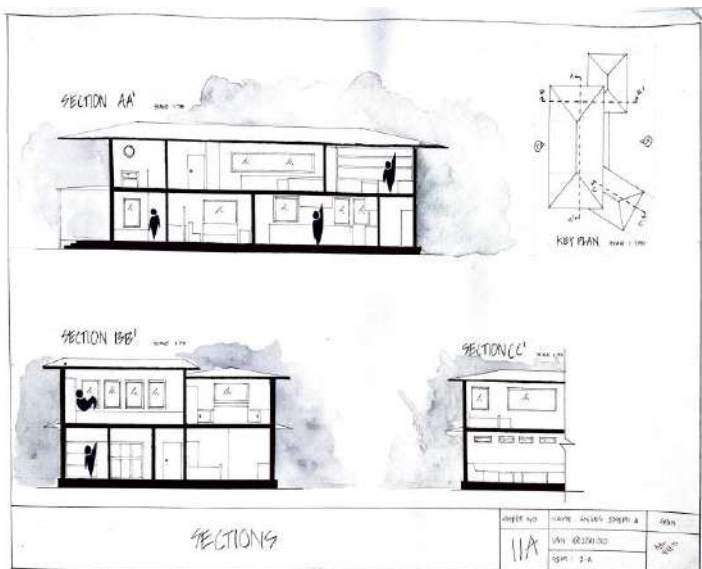
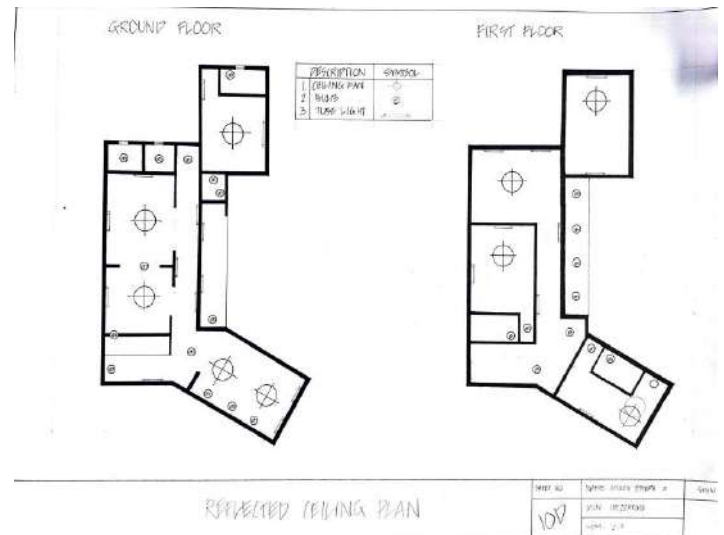
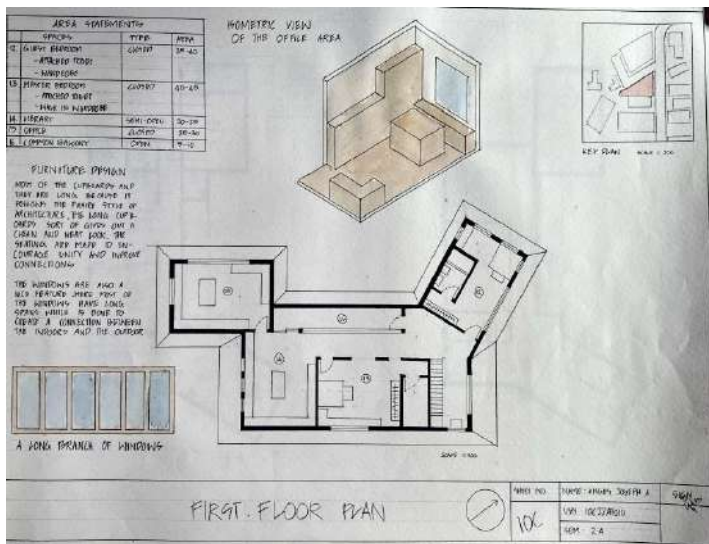
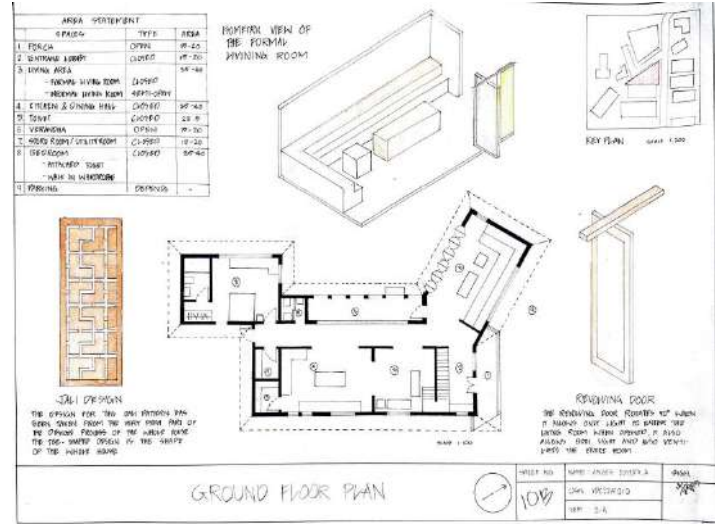


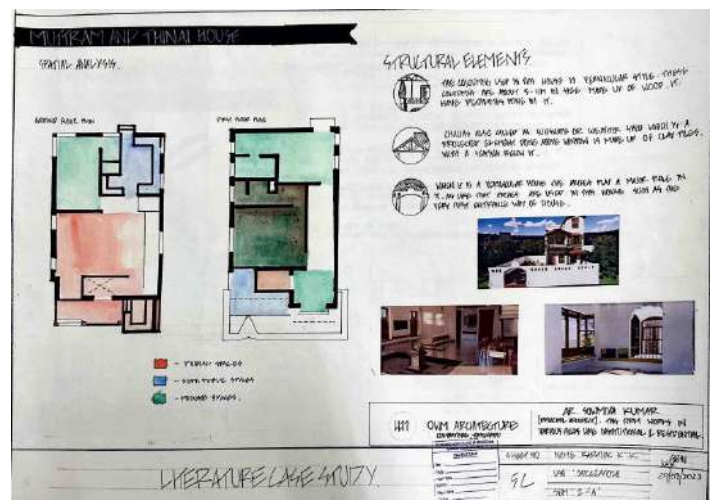
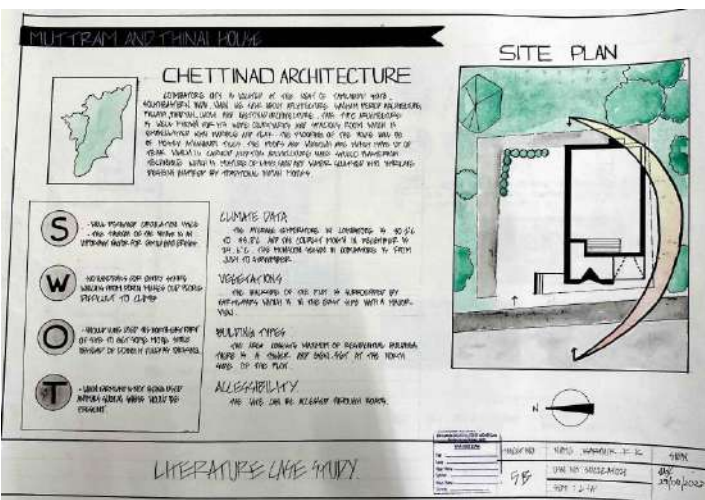
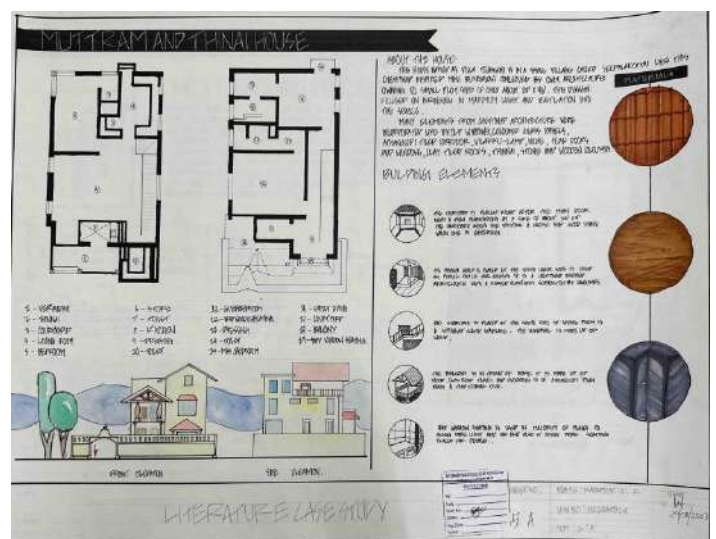
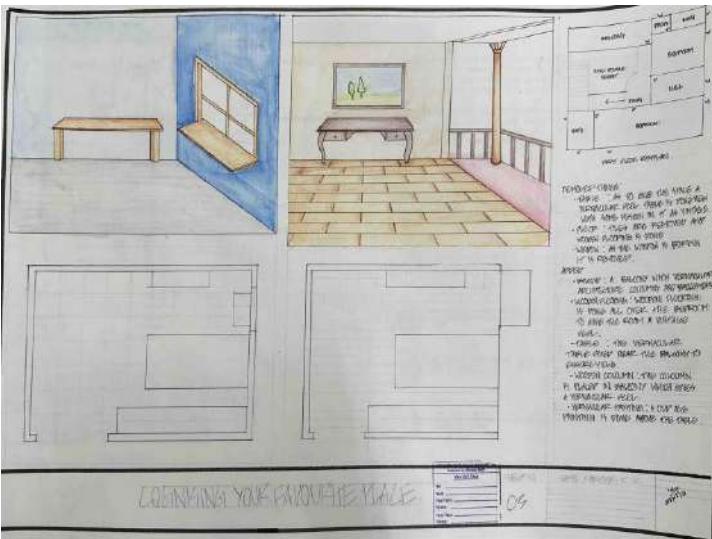
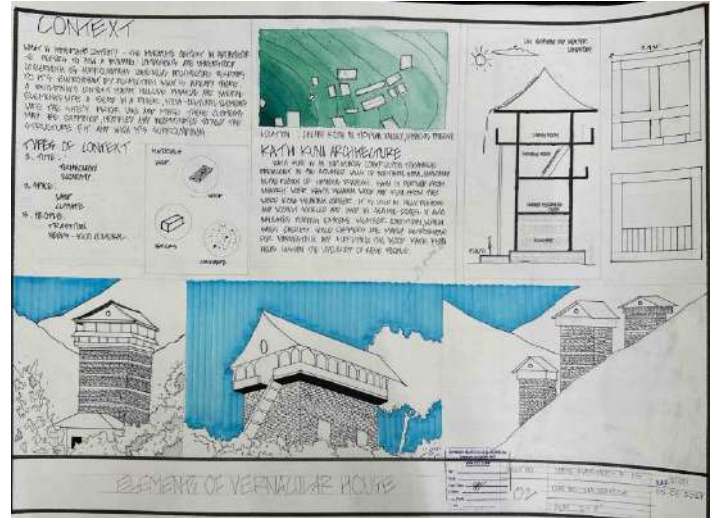
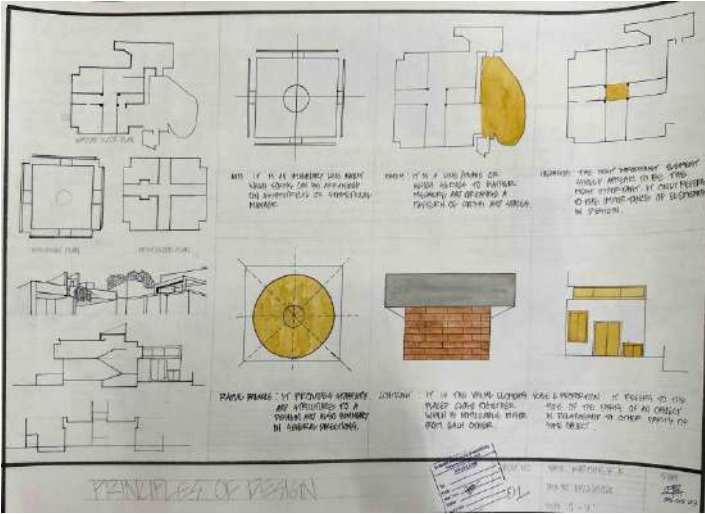
Pramod
Stephen

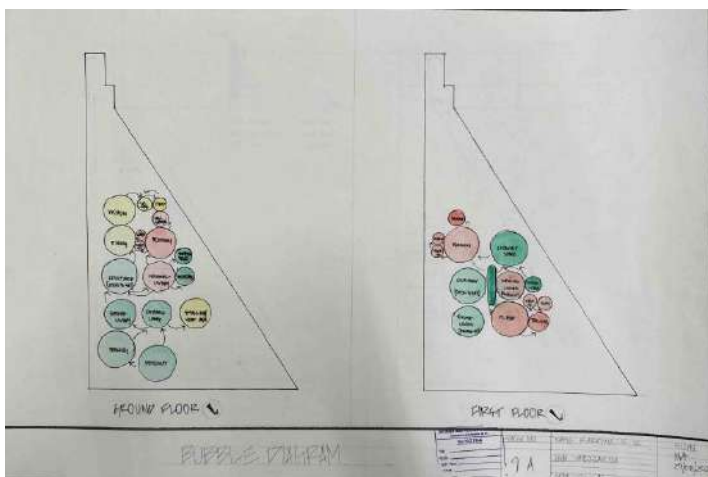
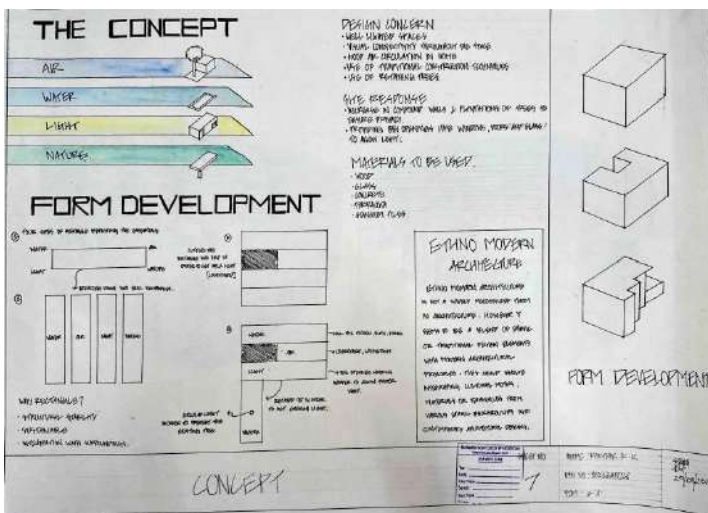
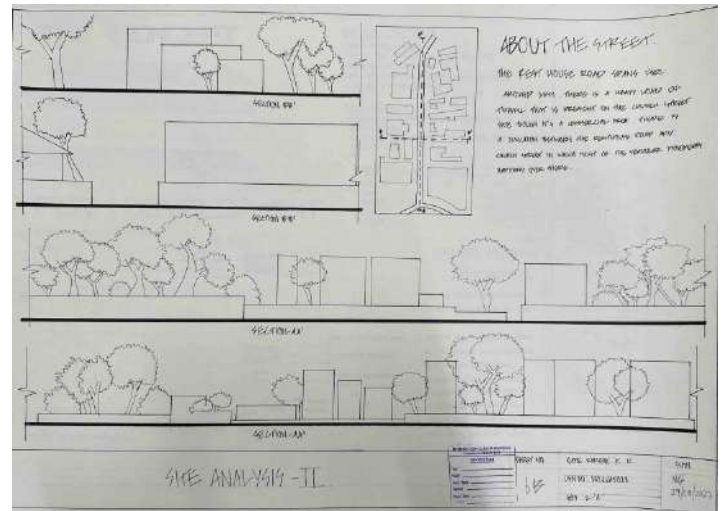
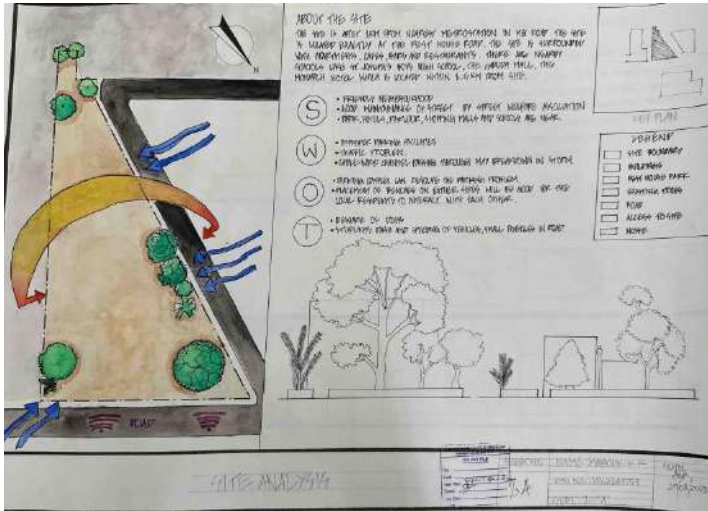
Architectural Design II

Faculty: Ar. Nikhil Ravindra, Ar. Chaitali M Babar,
Ar. Mythrayi Harshavardhan, Artist Pramod Stephen

Anges Joseph A
1DC22AT010







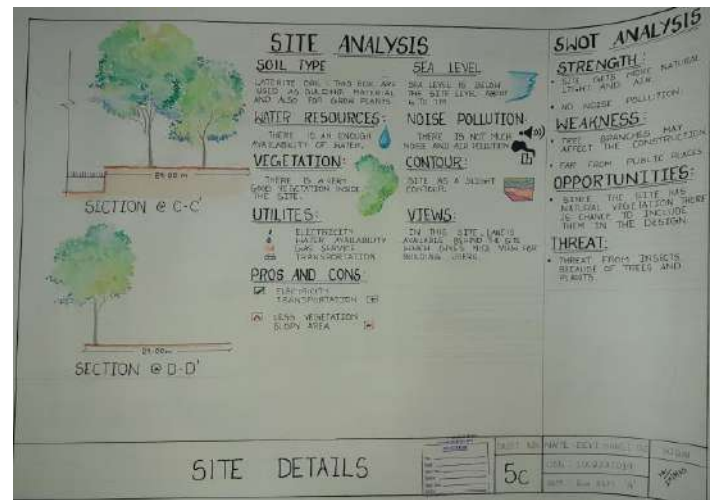
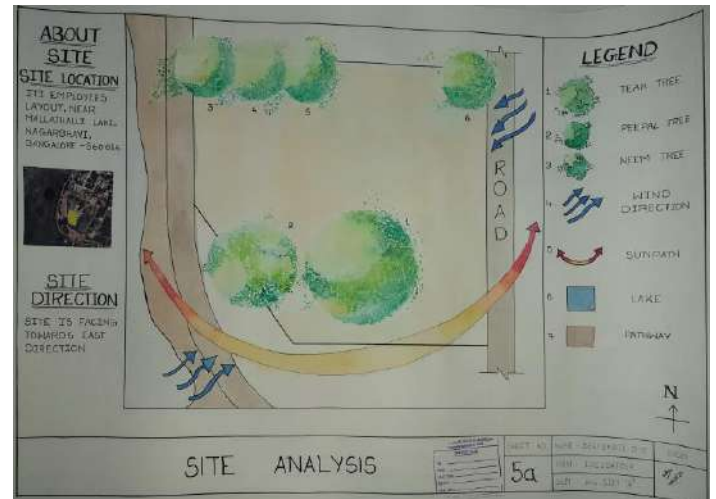
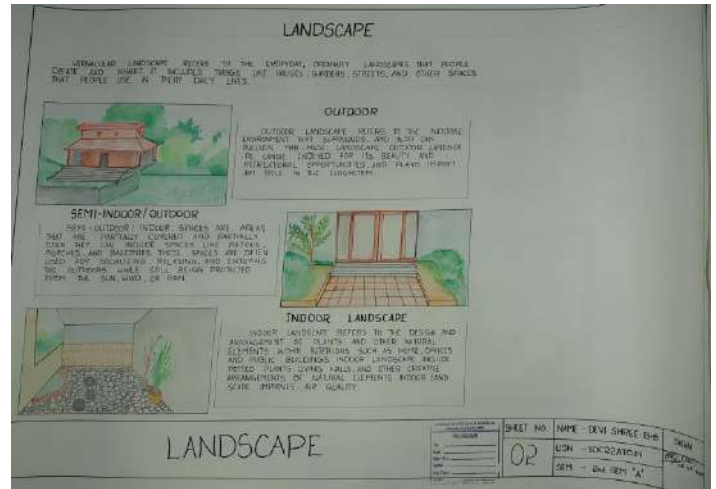
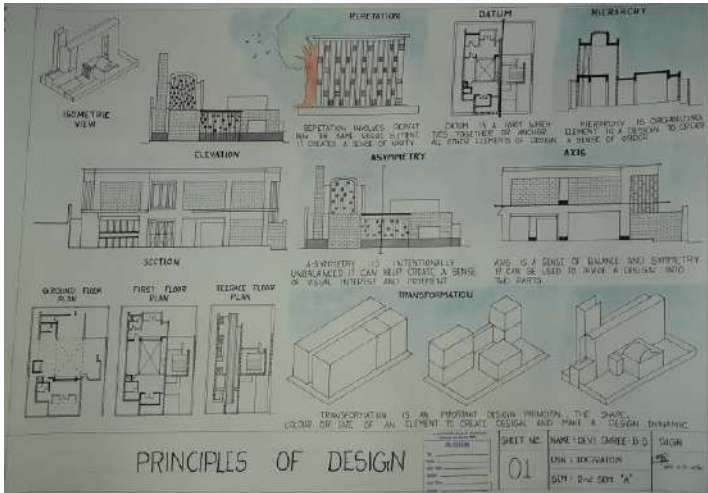
Architectural Design II

Faculty: Ar. Nikhil Ravindra, Ar. Chaitali M Babar,

Ar. Mythrayi Harshavardhan, Artist Pramod Stephen

Devishree B.S.

1DC22AT019



Architectural Design II

Faculty: Ar. Nikhil Ravindra, Ar. Chaitali M Babar,
Ar. Mythrayi Harshavardhan, Artist Pramod Stephen

Devishree B.S.
1DC22AT019

DESIGN CONCEPT ANALYSIS
CONCEPT: CUBISM WITH LEVELS **FINAL FORM OF THE DESIGN**

1. ADDING ANY SHAPES TO ANOTHER SHAPE
 2. SHOWING LEVEL DIFFERENCE
 3. ADDING ANY SHAPES TO ANOTHER SHAPE
 4. ADDING ANY SHAPES TO ANOTHER SHAPE
 5. ADDING ANY SHAPES TO ANOTHER SHAPE

PROGRAM
 • LAWN GARDEN
 • ROOFED
 • PARKING
 • BALCONY
 • BACKYARD
 • MOTION
 • ROOFS
 • BATHROOMS
 • UTILITY
 • TERRACE
 • VERANDAH

RESPONSE TO SITE
 • TERRACE - MADE OF GALL
 • VERANDAH - MADE OF GLASS
 • ENTRANCE - TOWARDS NORTHEAST
 • BALCONY - TRACED DIAGONALLY IN NORTH EAST TO SOUTH EAST
 • HANGING - MAXIMUM COOL
 • SCREEN LOWERS FROM EAST (SCREEN PLACED IN EAST)
 • HALLS - BRICK WALLS
 • TERRACE - OPEN TERRACE

DESIGN CONCEPT
 • CONCEPT - CUBISM WITH LEVELS
 • FORM - CUBISM WITH LEVELS
 • BUILDING TYPE/NO. RESIDENCE
 • FAMILY TYPE - NO. 3 (2 ADULTS, 2 CHILDREN, PET)

DESIGN CONCERN
 • VERNACULARITY
 • LIGHT
 • VENTILATION
 • PRIVACY

BY USING THE PHILOSOPHY OF CHARLES GERRARD USE OF CUBES AND LEVELS AS A BASIC DESIGN CONCEPT WITH INCLUDES THE VERNACULARITY.

CONCEPT

SHEET NO.	NAME (DEV. SHEET ID)	DESIGN
6	USN - 1DC22AT019	
SEM - 2nd SEM '24'		

GROUND FLOOR **FIRST FLOOR**

ZONING DIAGRAM

1. PARKING 2. ENTRANCE 3. KITCHEN 4. BREAK ROOM 5. LIVING & COURT YARD 6. ST-OUT 7. UTILITY 8. STORE ROOM 9. LIVING & COURT YARD 10. SW-CLASE 11. P. BED ROOM 12. BALCONY 13. BATH N. EAST 14. A. TOILET 15. P. BATH 16. BED ROOM-2 17. BATH N. WEST 18. BALCONY 19. BALCONY CLOSET 20. A-CLOSET 21. OPEN TERRACE 22. BED ROOM-2 23. BALCONY 24. BALCONY CLOSET 25. A-CLOSET 26. SOLY AREA 27. VERANDAH 28. FAMILY LOUNGE 29. BALCONY CLOSET 30. A-CLOSET

LEGEND:
 [Red] PRIVATE
 [Green] SEM - PRIVATE
 [Blue] PUBLIC

CONCEPT

SHEET NO.	NAME (DEV. SHEET ID)	DESIGN
8b	USN - 1DC22AT019	
SEM - 2nd SEM '24'		

SITE PLAN

SITE DETAILS:
 LOCATION - ITI EMPLOYEES COLONY NEAR CHALLATHALLI LAKE, BANGALORE
 SITE AREA - 1000 sqm
 COVERAGE AREA - 33 sqm
 BUILTUP AREA - 320.5 sqm

LEGEND
 - - - - - PEDESTRIAN ACCESS
 ○ ○ ○ ○ ○ VEHICLE ACCESS
 △ VEHICLE / CAR
 ▭ PATHWAY
 ▭ PARKING AREA
 ▭ ROOF COVERING
 ▭ OPEN TERRACE

SCALE - 1:125

CONCEPT

SHEET NO.	NAME (DEV. SHEET ID)	DESIGN
9a	USN - 1DC22AT019	
SEM - 2nd SEM '24'		

SECTION - B-B

CONCEPT

SHEET NO.	NAME (DEV. SHEET ID)	DESIGN
10b	USN - 1DC22AT019	
SEM - 2nd SEM '24'		

ELEVATION

CONCEPT

SHEET NO.	NAME (DEV. SHEET ID)	DESIGN
10c	USN - 1DC22AT019	
SEM - 2nd SEM '24'		

TIME PROBLEM - HIDDEN CITIES

CONCEPT

SHEET NO.	NAME (DEV. SHEET ID)	DESIGN
11	USN - 1DC22AT019	
SEM - 2nd SEM '24'		

Subject Faculty

MMBC – II

OBJECTIVES

- To understand Roofing systems using Timber, Steel Truss and Concrete. Cement, Steel and Reinforced Concrete.

MODULES

1. Timber Roof – Lean to roof, Collared Roof, King post roof, Queen Post Roof; details of joinery.
2. Steel Roof – Types of Steel Truss Roofs and method of construction.
3. Cement: Types, applications, Tests - laboratory and field.
4. Steel: Properties and uses of reinforced steel.
5. Concrete: Ingredients, grades, admixtures, properties, production, mix, proportioning and placing of concrete.
6. Reinforced Cement Concrete: Form work, placing, and compaction, curing of concrete, sampling and testing of concrete. Construction joints, expansion joints, finish in concrete, chemical admixtures.
7. RCC Foundations (Isolated footing) and Columns (Square and Round). Raft foundations, Grillage foundations and combined footing
8. Staircase: Anthropometry of stairs, types of Staircases.
9. Timber Stairs: Single and Double Stringer stairs: construction methods and joinery.
10. RCC Stairs: Waist slab, folded plate, stringer beam stairs, precast stairs: construction methods and joinery
11. Steel Stairs: Stringer stairs, Folded Type, Spiral stairs, Fire escape stairs: construction methods and joinery.
12. Composite Stairs: Brick/stone, Steel/Timber, Concrete/wood, steel/ glass: construction methods and joinery.



Ar. Chanchal
Modi



Ar. Pragathi
Prasad S



Ar. BB Prakash



Ar Ravindra
Avinash



Ar. Vani Krishnamurthy



Ar. Srimathi
Raja

DETAIL OF FIXING SS BALLUSTER TO SIDE OF STAIRS - SECTION
SCALE - 1:10

DETAIL OF FIXING SS BALLUSTER TO THE SIDE OF THE STAIRS - ELEVATION
SCALE - 1:10

SS HANDRAIL FIXED TO WALL
SCALE - 1:10

SS BALLUSTER FIXED TO WALL
SCALE - 1:10

DETAIL OF FIXING SS BALLUSTER TO TOP OF TREAD - SECTION
SCALE - 1:10

DETAIL OF FIXING SS BALLUSTER TO TOP OF TREAD - PLAN
SCALE - 1:5

ADVANTAGES OF RCC CONSTRUCTION STAIRS

1. THE STAIRS ARE NOT SLIPPERY.
2. THEY CAN BE CLEANED EASILY.
3. RCC STAIRS CAN BE PRECAST OR CAST IN SITU.
4. THEY ARE EASY TO MAINTAIN AND ALMOST HAVE NO COST OF MAINTENANCE.
5. WITH THE LACKS OF FINISHING MATERIALS, THEY LOOK BETTER AND MORE PLEASANT APPEARANCE.

DISADVANTAGES OF RCC STAIRS

1. RCC STRUCTURES ARE HEAVIER THAN STRUCTURES OF OTHER MATERIALS, NAMELY STEEL, WOOD, GLASS ETC.
2. RCC NEEDS A LOT OF FORM WORK CENTERING AND SHUTTLING TO BE FIXED. THIS PROCURE LOT OF SITE SPACE AND SKILLED LABOUR.
3. CONCRETE TAKES TIME TO ATTAIN ITS FULL STRENGTH. THIS RCC STRUCTURES CANNOT BE USED IMMEDIATELY AFTER CONSTRUCTION UNLIKE STEEL STRUCTURES.
4. THE COST OF THE FORMS USED FOR CASTING IS RELATIVELY HIGHER.

SHEET NO.	PRAGNA G	SIGN
USER :	1DC22AT047	
CLASS :	II "B"	

RCC STAIRCASE - FINISHES AND FIXTURES

ELEVATION
SCALE - 1:50

PLAN - LANDING
SCALE - 1:50

TYPICAL SECTION : STEP

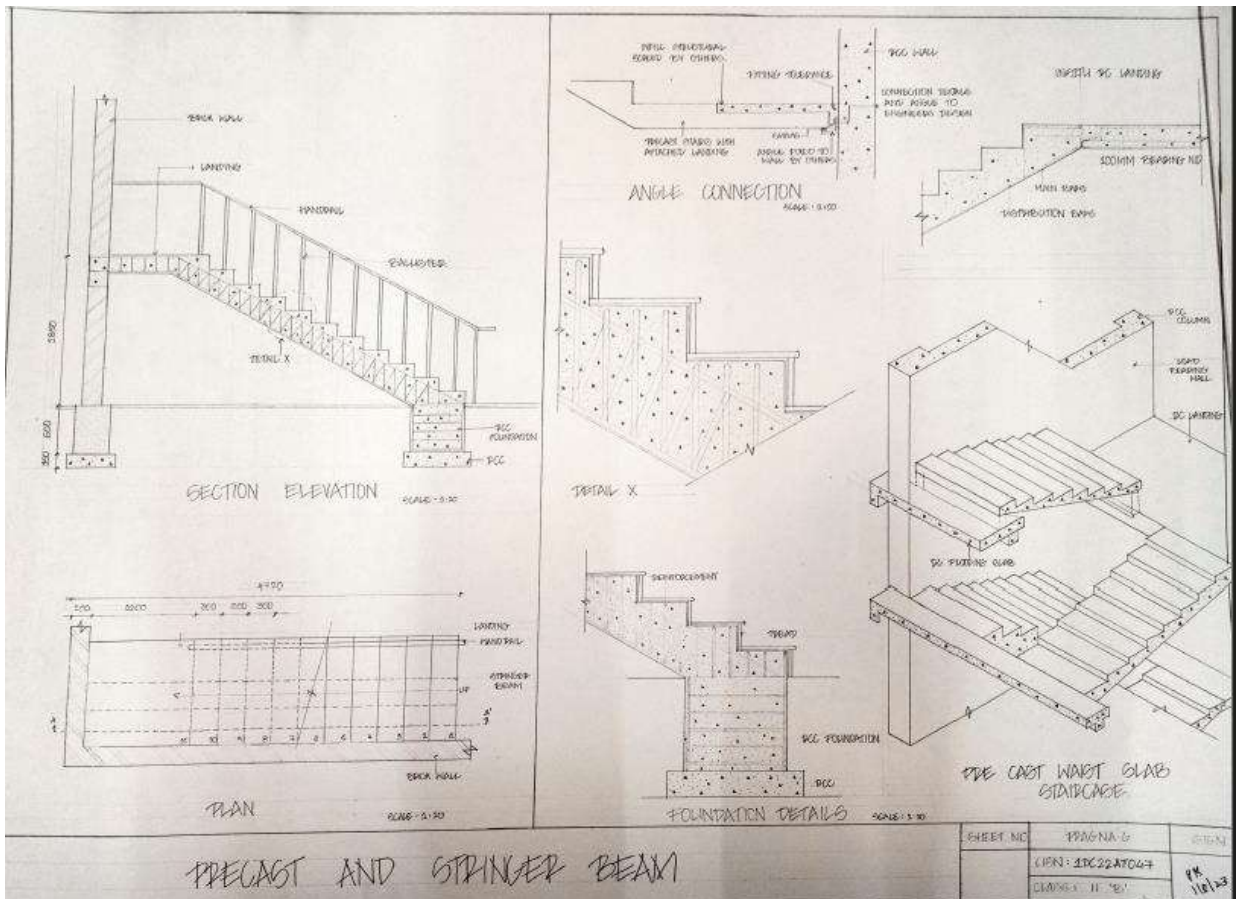
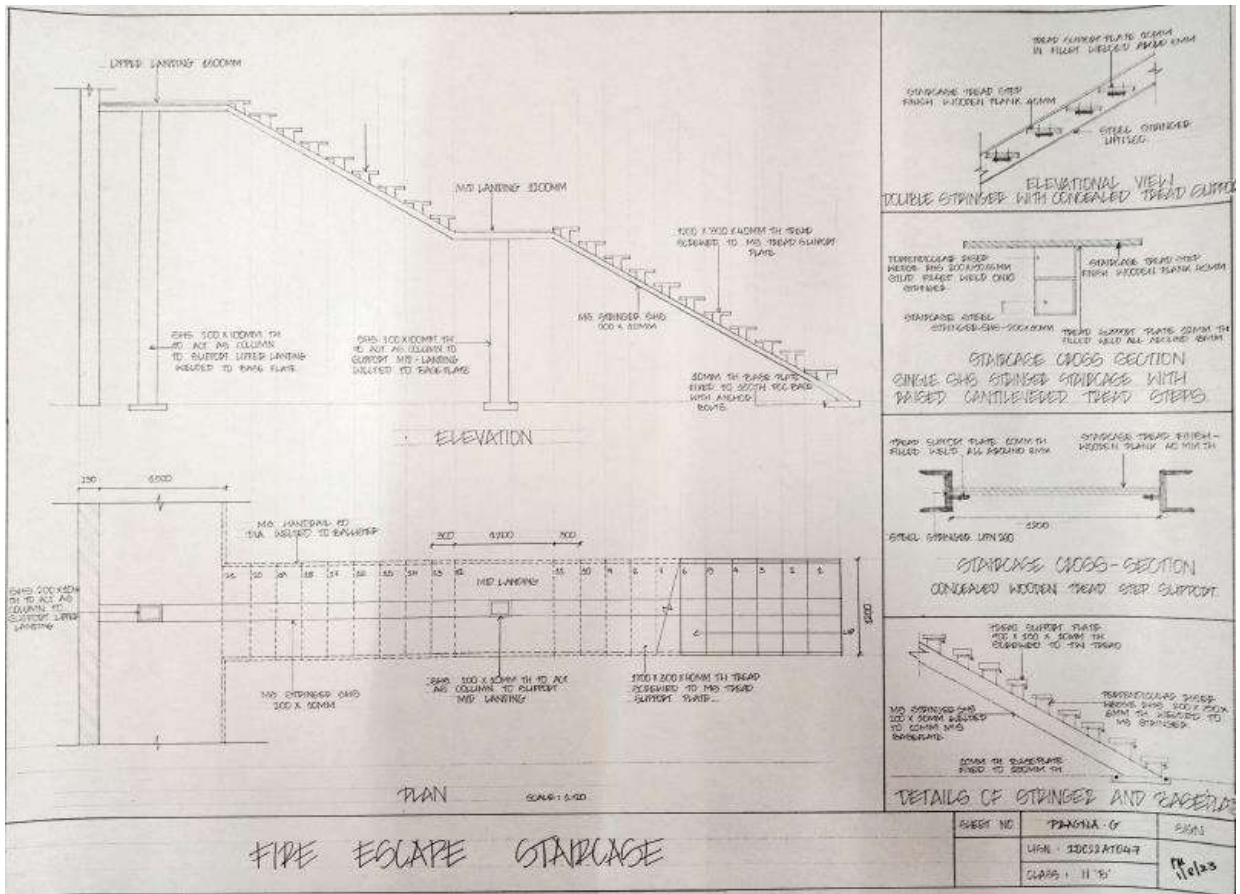
FIXING DETAILS - COLUMN + BASE PLATE

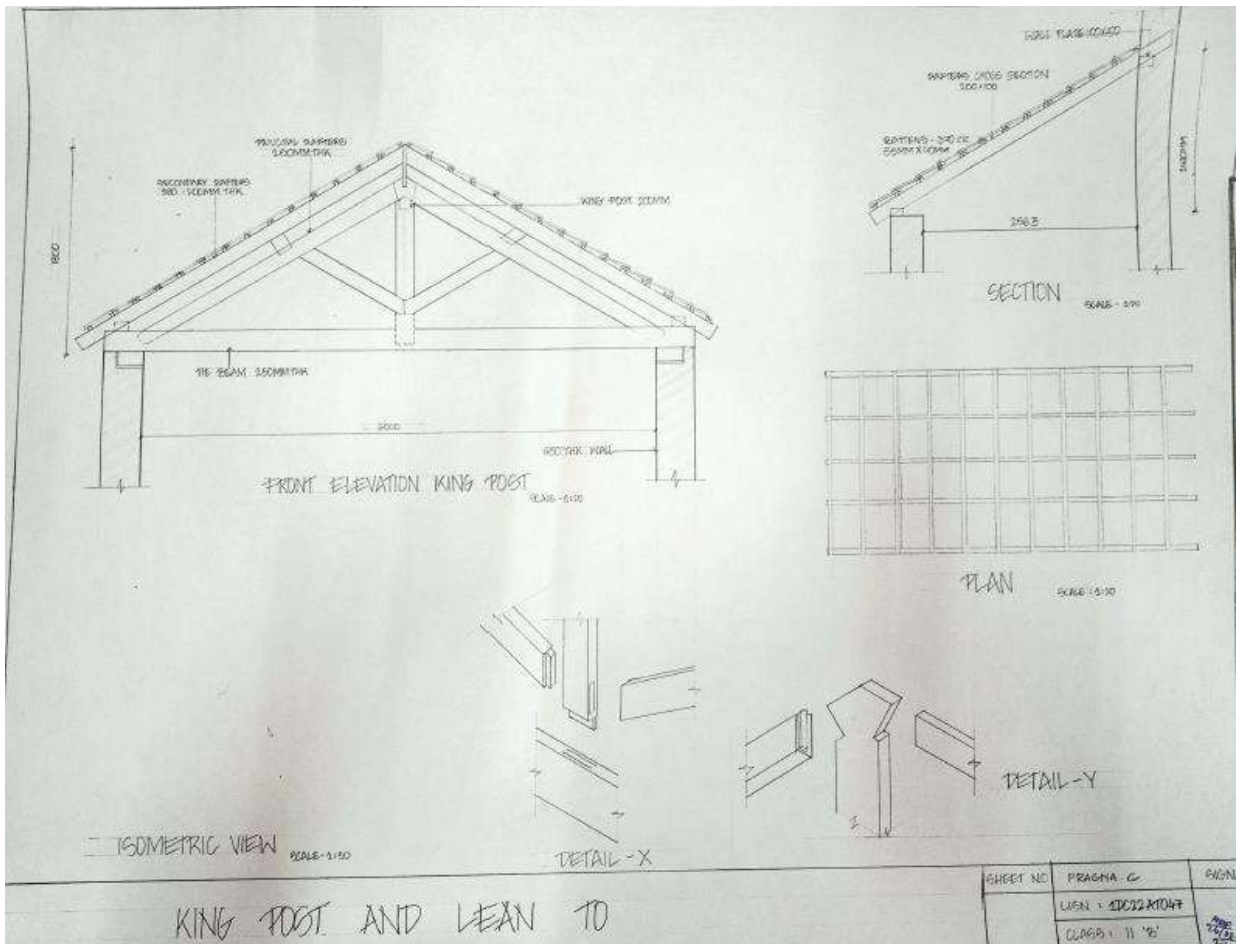
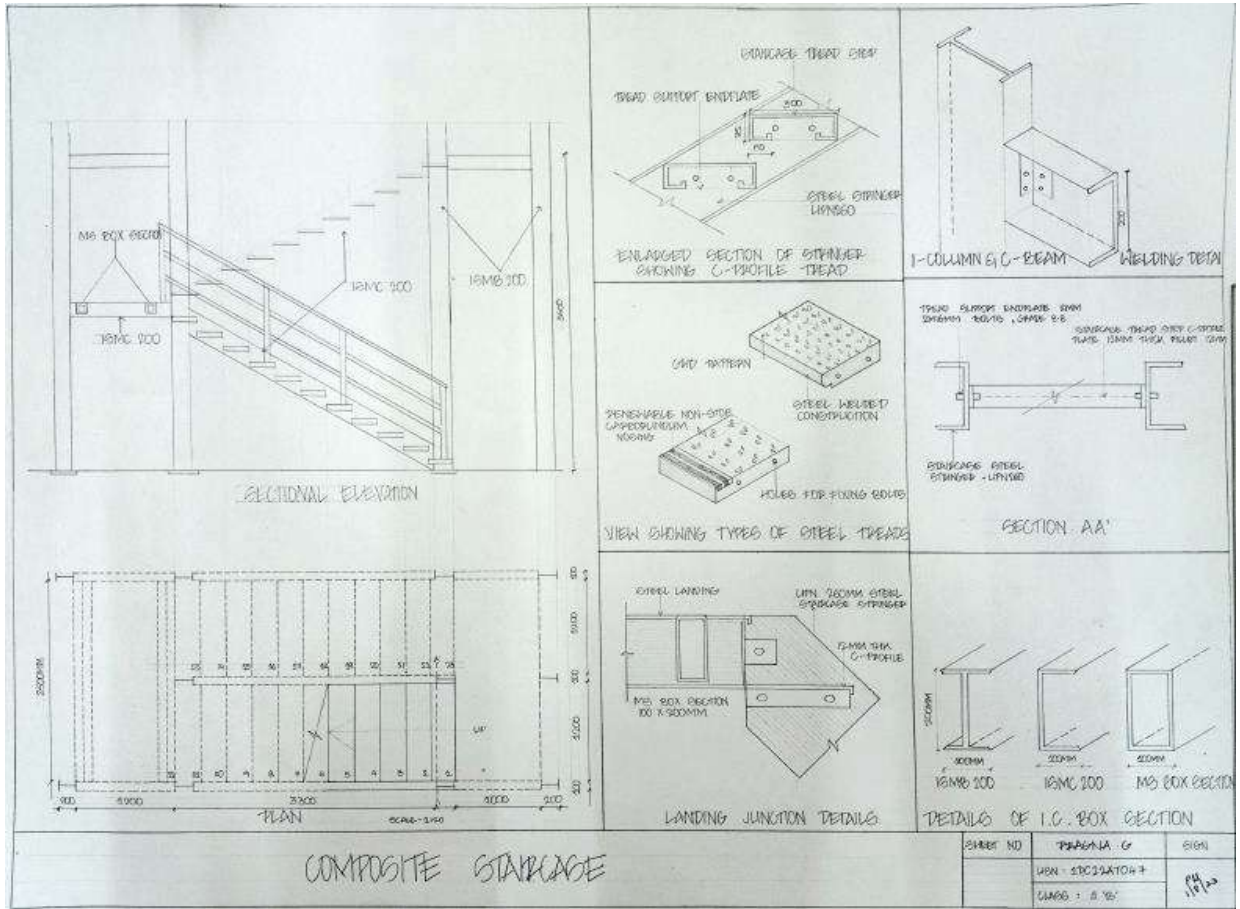
FIXING DETAILS - WINDER

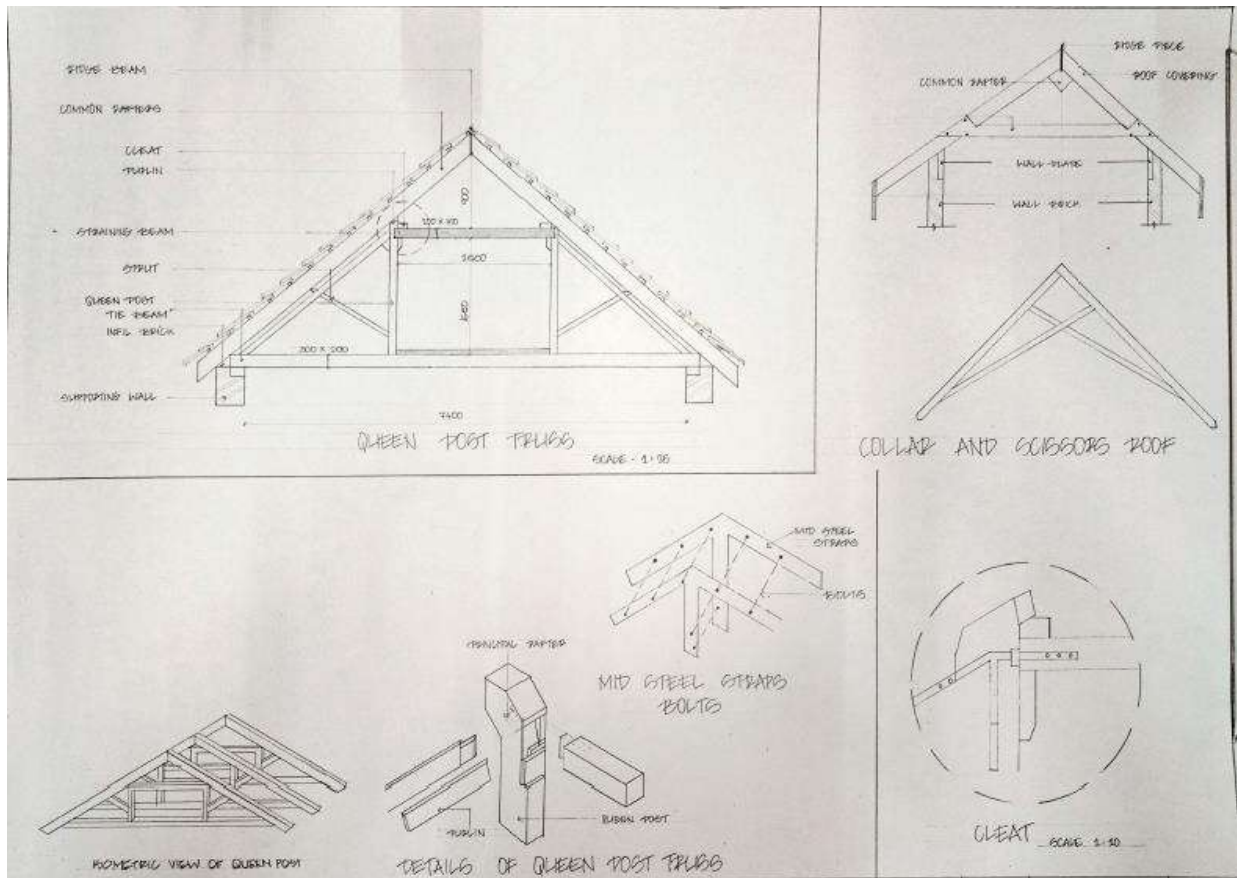
PLAN : WINDER

SPIRAL STAIRCASE

SHEET NO.	PRAGNA G	SIGN
USER :	1DC22AT047	
CLASS :	II "B"	

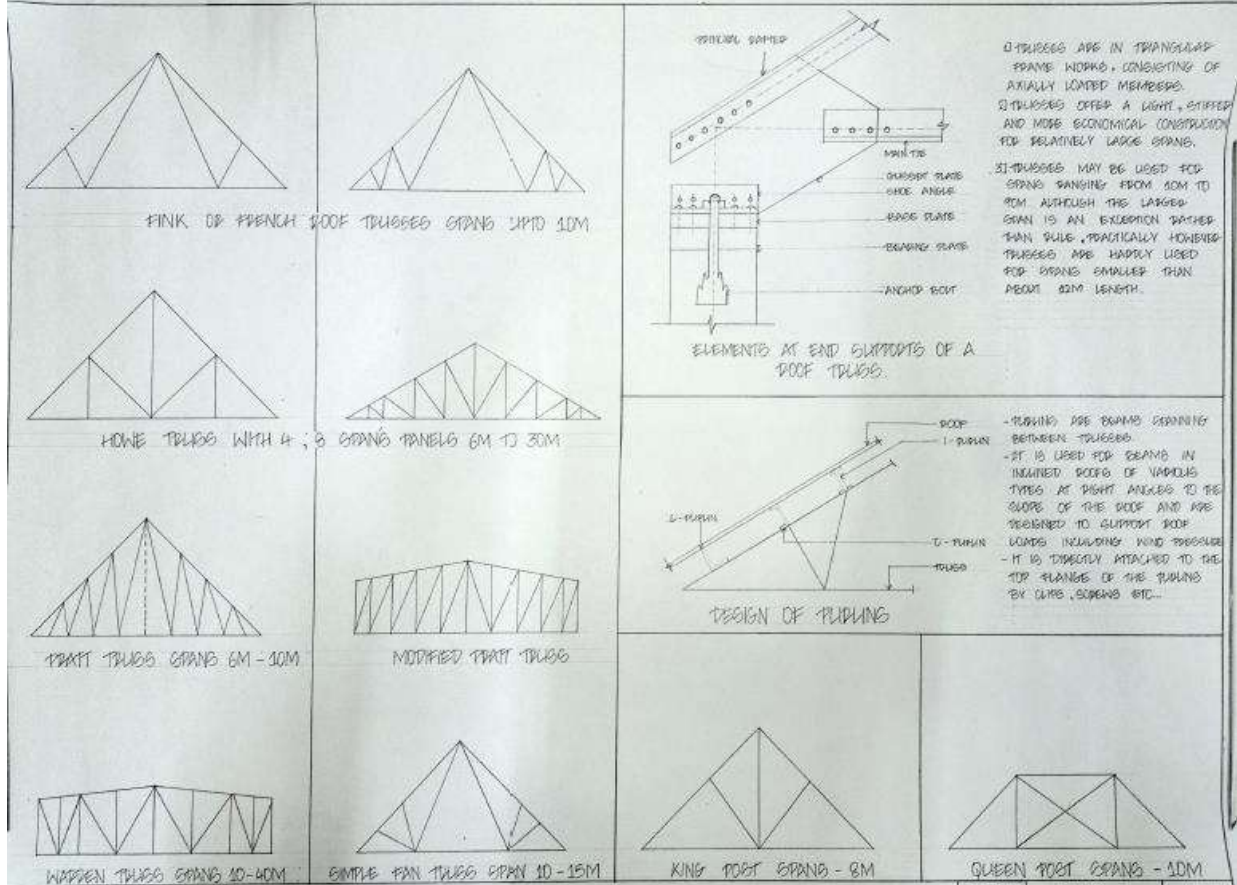






QUEEN POST AND COLLAR

SHEET NO	PRAGNA G	21/51
UNN	1DC22AT047	



TYPES OF STEEL TRUSSES

SHEET NO	PRAGNA G	21/51
UNN	1DC22AT047	
CLASS	11 'B'	

Subject Faculty

Course objectives:

To develop visual communication and representation skills and methods of presentation of spatial design through 3D drawing techniques.

MODULES:

1. 3D-Projections: exercises in 3D representation of exploded isometric and axonometric views of objects, furniture and built forms.
2. Development of surfaces for architectural roof forms, built enclosures and envelopes
3. Section of geometrical solids and construction of true shapes.
4. Interpenetration of geometric solids, combination of different forms in architectural compositions.
5. Introduction to perspective drawing: Its importance in architectural drawings, principles of perspective drawing, visual perceptions and its limitations.
6. Studies in perspective drawing: Understanding the importance and purpose of picture plane, station point, vanishing point, ground level, eye level, cone of vision and central line of vision - their variations and resultant effects
7. One - point perspective drawings: Exercises of perspective drawings of simple built forms, interior views of a room with furniture.
8. Two-point perspective drawings: exercises of perspective drawings of simple built forms, architectural elements. Interior views of a room with furniture.
9. Free-hand perspective drawings of architectural elements, built forms. Exercises of rendering techniques showing light, shade and shadow on built forms.
10. Introduction to Sciography: Principles of shade and shadow constructions for geometrical solids, architectural elements and built forms.



Ar. Pallavi
Mukopadhyay



Ar. Nirzari
Mehta



Ar. Gopi Krishna
KV



Ar. Pragathi
Prasad S



Ar. Chanchal
Modi

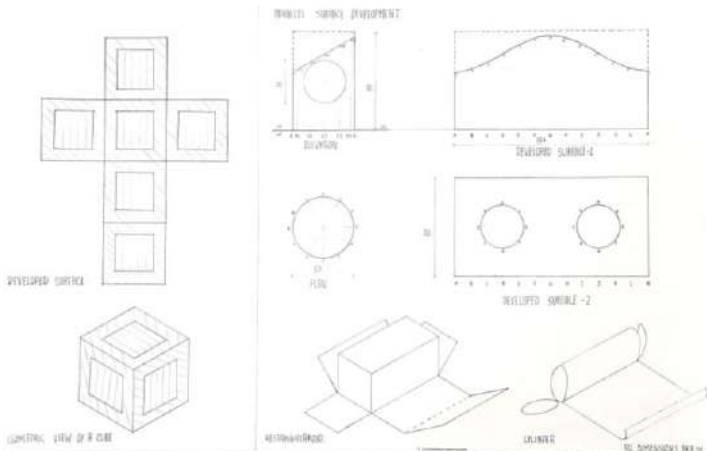


Ar. Shubham
Kaushal

Architectural Graphics II

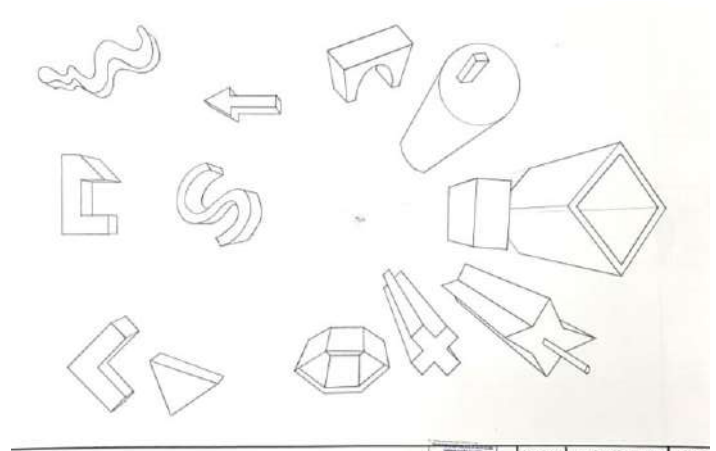
Faculty: Ar. Nirzari Mehta, Ar. Pragathi Prasad S,
Ar. Shubham Kaushal.

Shubham S Jadhav
1DC22AT062



SURFACE DEVELOPMENT - I

SHEET NO	SHUBHAM S JADHAV	SIGN
USN	1DC22AT062	
CLASS	2B	



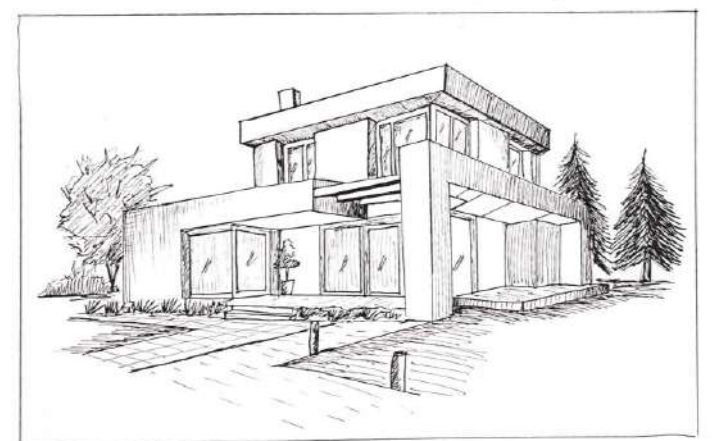
ONE POINT PERSPECTIVE-II

SHEET NO	SHUBHAM S JADHAV	SIGN
USN	1DC22AT062	
CLASS	2B	



RENDERING - I

SHEET NO	SHUBHAM S JADHAV	SIGN
USN	1DC22AT062	
CLASS	2B	



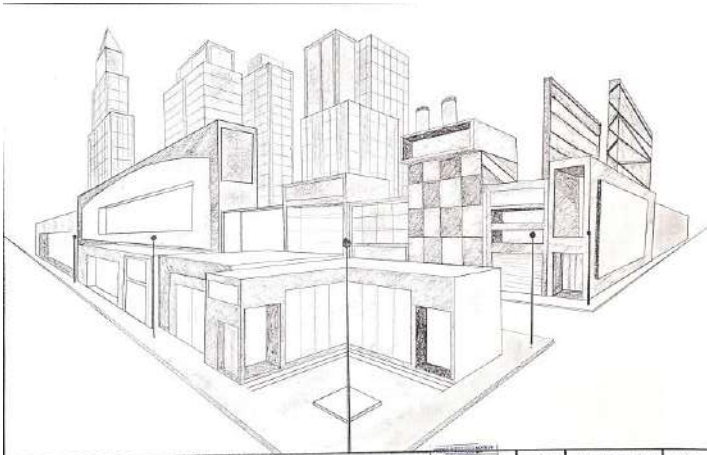
RENDERING - III

SHEET NO	SHUBHAM S JADHAV	SIGN
USN	1DC22AT062	
CLASS	2B	

Architectural Graphics II

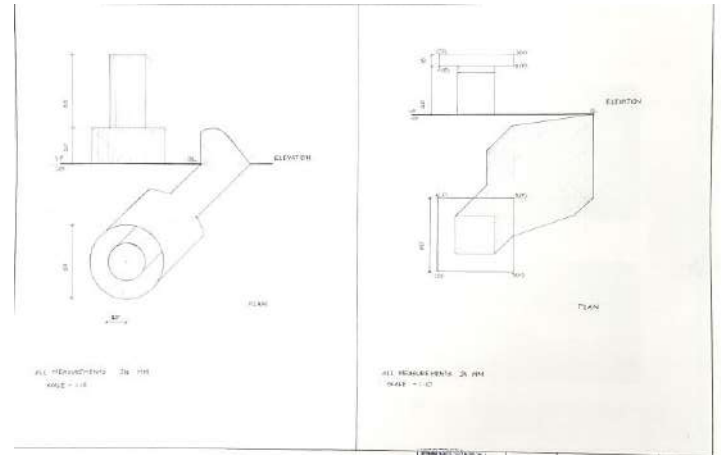
Faculty: Ar. Nirzari Mehta, Ar. Pragathi Prasad S,
Ar. Shubham Kaushal.

Shubham S Jadhav
1DC22AT062



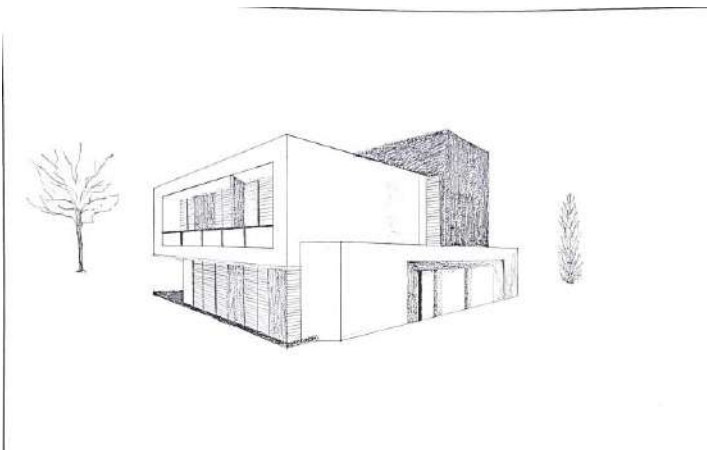
TWO POINT PERSPECTIVE - SKETCH

DATE	18/08/22
ROLL NO.	1DC22AT062
NAME	SHUBHAM S JADHAV
SEM	2 ND
BRANCH	ARCHITECTURE
INSTITUTE	SRMIST
PROJECT TITLE	
DATE	18/08/22
ROLL NO.	1DC22AT062
NAME	SHUBHAM S JADHAV
SEM	2 ND
BRANCH	ARCHITECTURE
INSTITUTE	SRMIST
PROJECT TITLE	

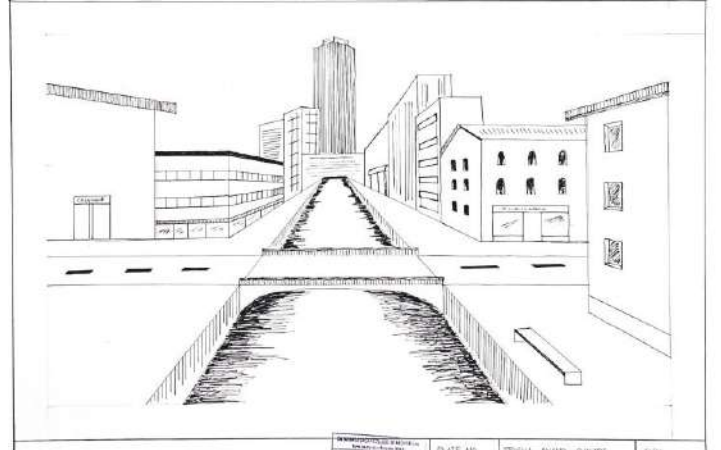
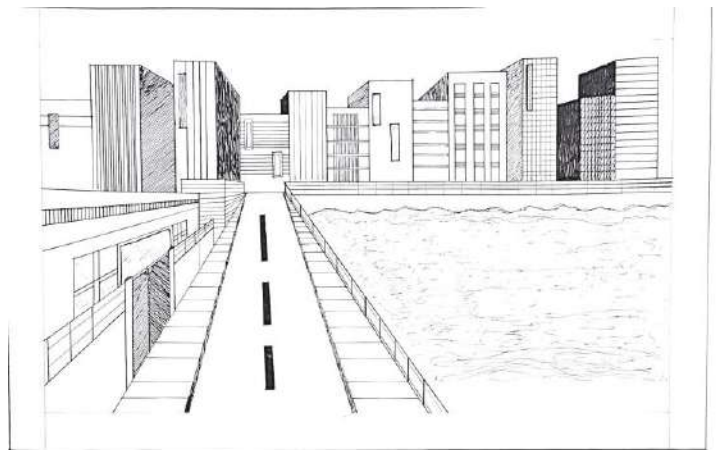


SCOTOPHANY - II

DATE	18/08/22
ROLL NO.	1DC22AT062
NAME	SHUBHAM S JADHAV
SEM	2 ND
BRANCH	ARCHITECTURE
INSTITUTE	SRMIST
PROJECT TITLE	
DATE	18/08/22
ROLL NO.	1DC22AT062
NAME	SHUBHAM S JADHAV
SEM	2 ND
BRANCH	ARCHITECTURE
INSTITUTE	SRMIST
PROJECT TITLE	



DATE	18/08/22
ROLL NO.	1DC22AT062
NAME	SHUBHAM S JADHAV
SEM	2 ND
BRANCH	ARCHITECTURE
INSTITUTE	SRMIST
PROJECT TITLE	
DATE	18/08/22
ROLL NO.	1DC22AT062
NAME	SHUBHAM S JADHAV
SEM	2 ND
BRANCH	ARCHITECTURE
INSTITUTE	SRMIST
PROJECT TITLE	



DATE	18/08/22
ROLL NO.	1DC22AT062
NAME	SHUBHAM S JADHAV
SEM	2 ND
BRANCH	ARCHITECTURE
INSTITUTE	SRMIST
PROJECT TITLE	
DATE	18/08/22
ROLL NO.	1DC22AT062
NAME	SHUBHAM S JADHAV
SEM	2 ND
BRANCH	ARCHITECTURE
INSTITUTE	SRMIST
PROJECT TITLE	



3rd Semester

ARCHITECTURAL DESIGN III
SUBJECT CODE 18ARC31

Studio Coordinators

Course Objectives:

- 1) To understand the different climatic zones.
- 2) To understand the different types of roofing systems
- 3) To understand how to tackle different types of topography and contours
- 4) To further develop various presentation skills



Ar. Arun
Chandhran



Ar. Nirzari
Mehta

Studio Faculty



Ar. Sankara
Sadhashivam



Ar. Ekta
idnani

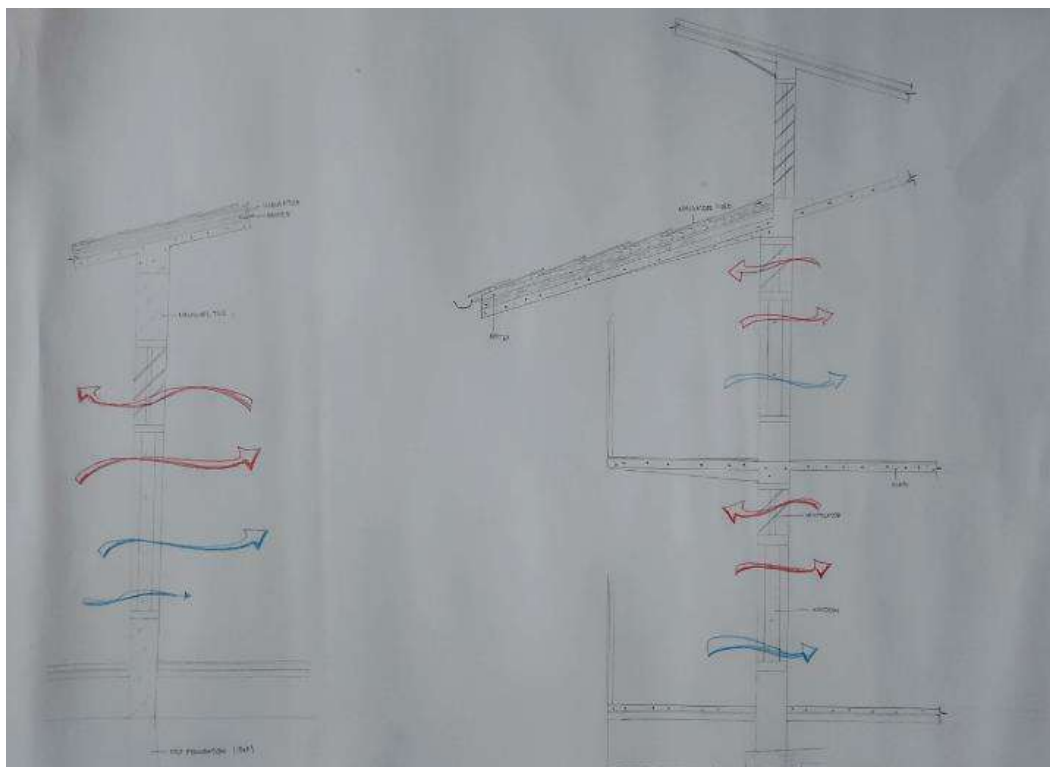


Ar. Preethi
Revankar



Ar. Kavita
Pole

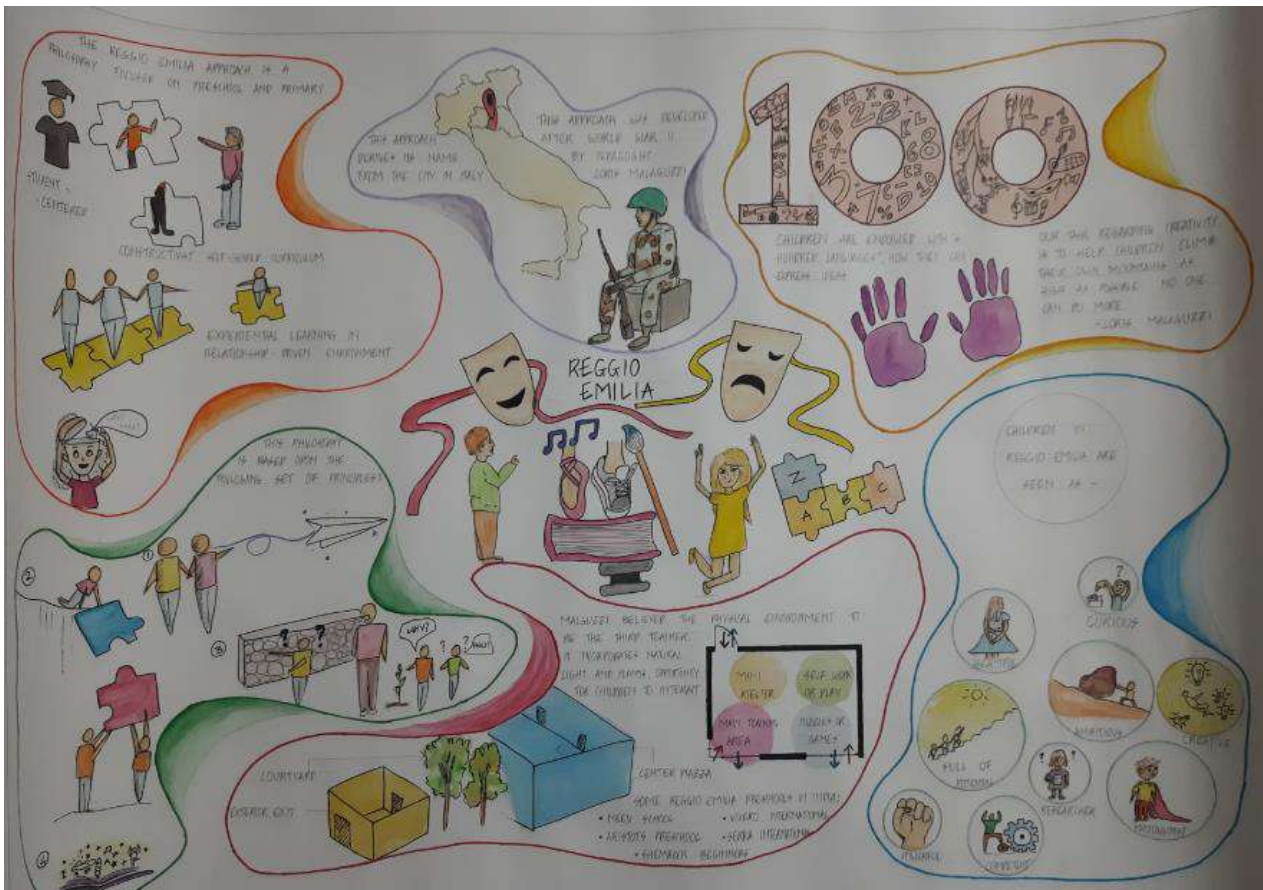




Architectural Design III

Faculty: Ar. N Arun Chandran, Ar. Banu Chandrika
Ar. Kiran Baikidy

Diya Bijoor
1DC20AT027



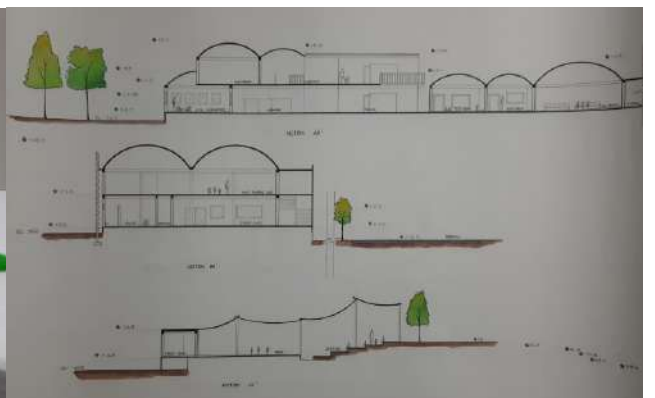
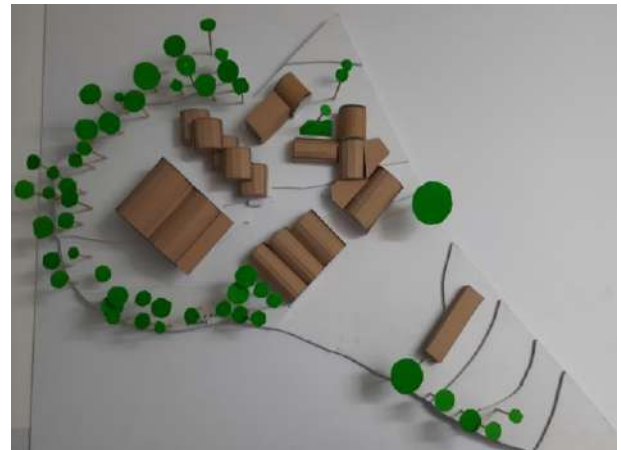
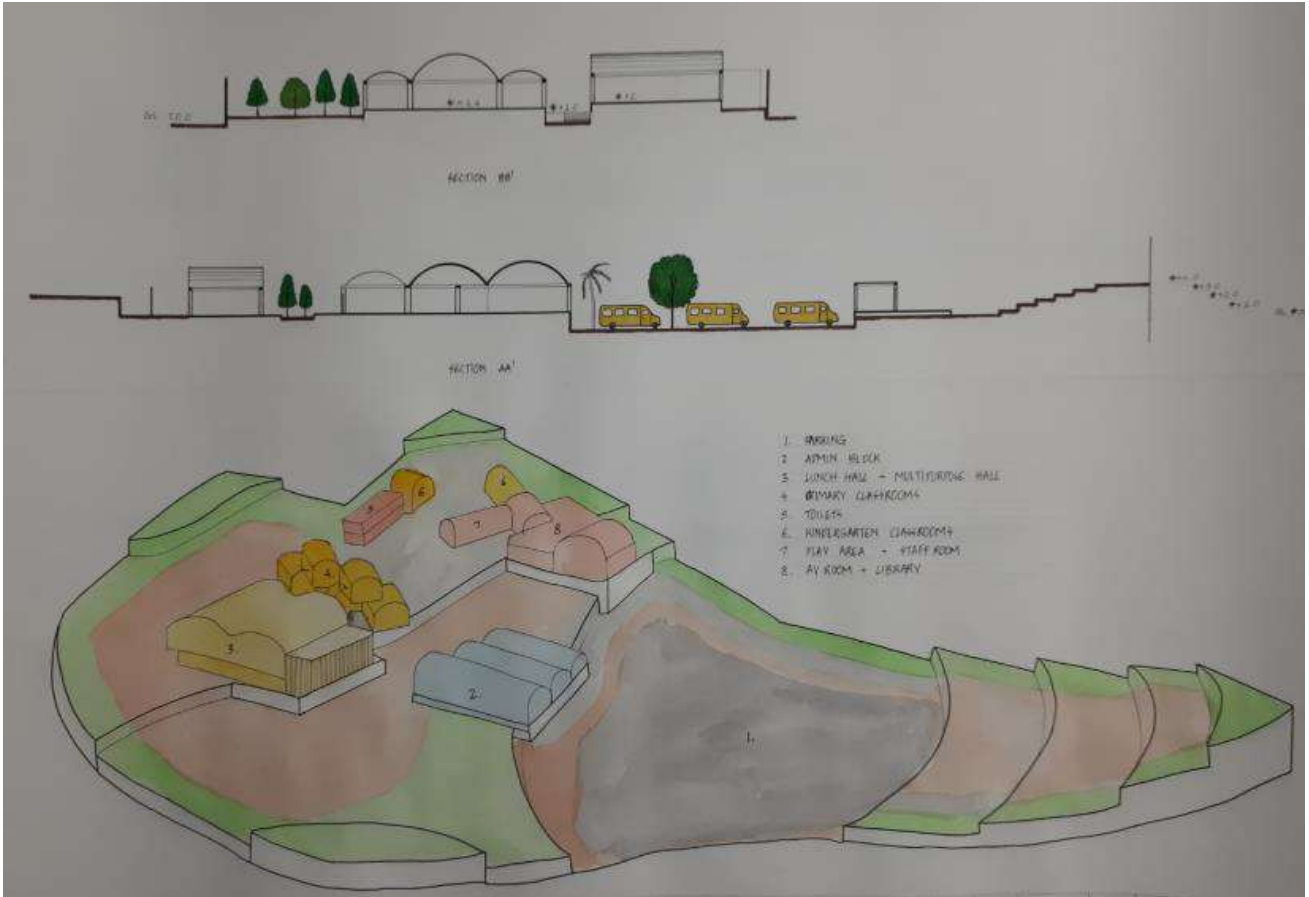


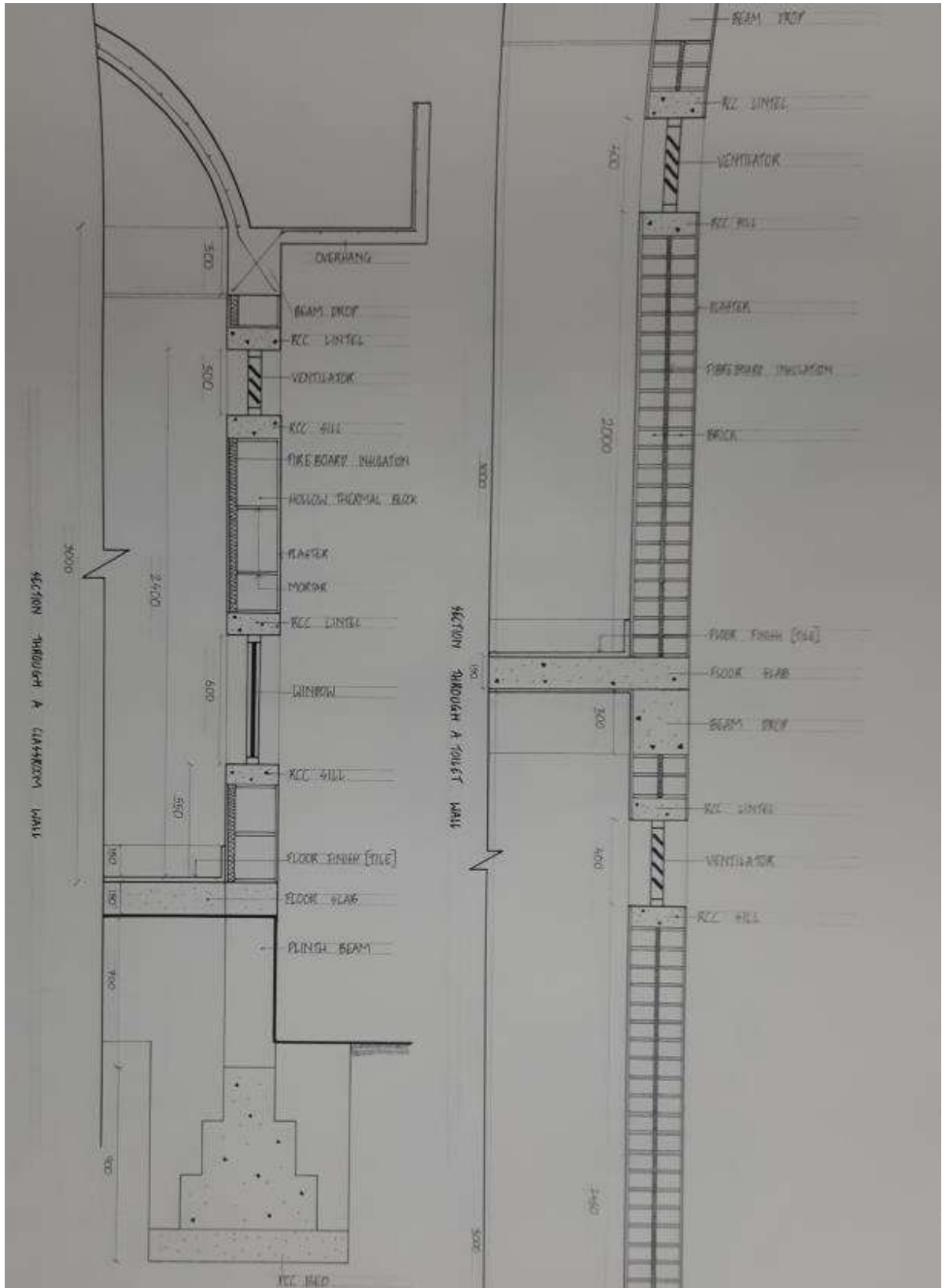
Architectural Design III

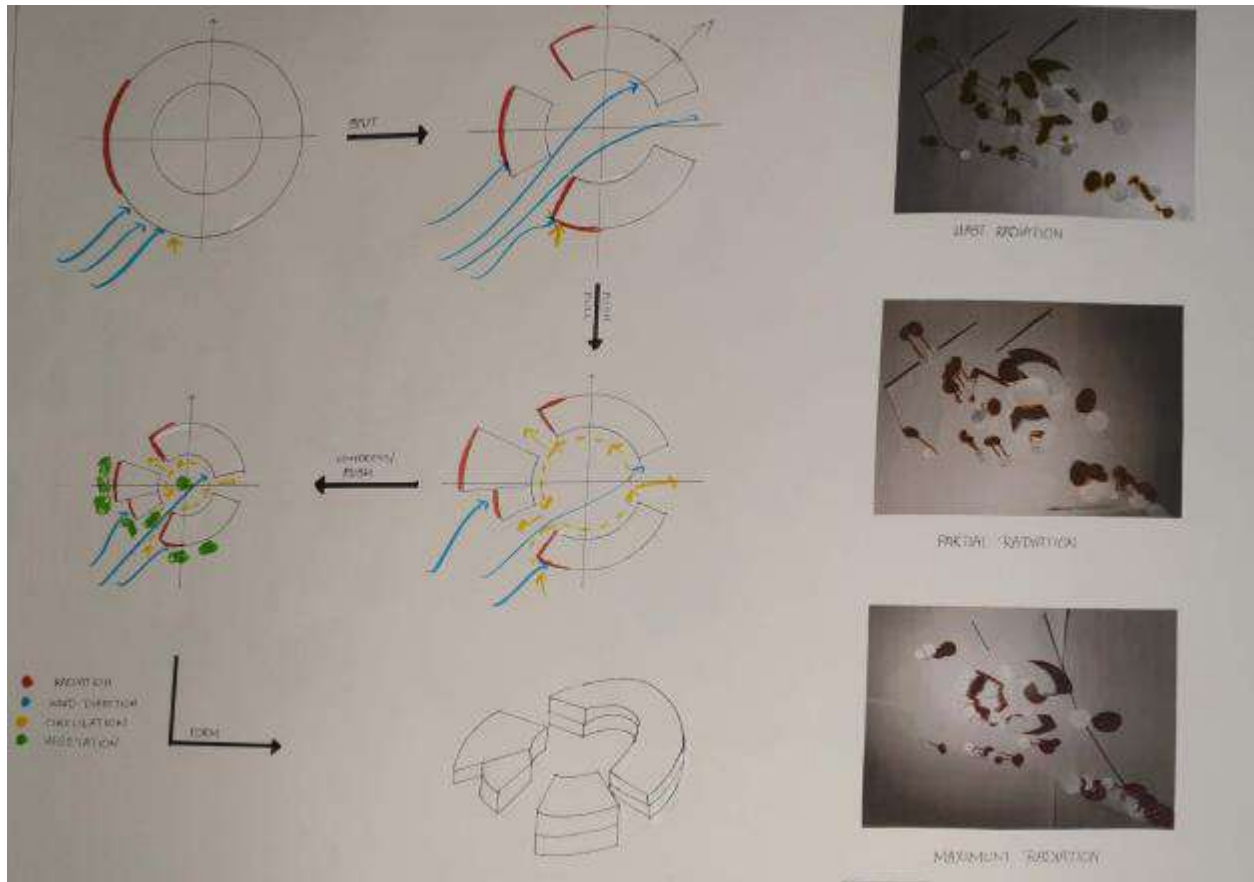
Faculty: Ar. N Arun Chandhran, Ar. Banu Chandrika

Ar. Kiran Baikidy

Diya Bijoor
1DC20AT027









**MATERIALS AND METHODS OF
BUILDING CONSTRUCTION V
SUBJECT CODE 18ARC32**

Studio Faculty

3 rd Semester MMBC is largely about RCC structures, one way slab and two way slabs

The syllabus also deals with RCC domes and Vaults

Additionally toilet details and specifications Of materials are taught to the students

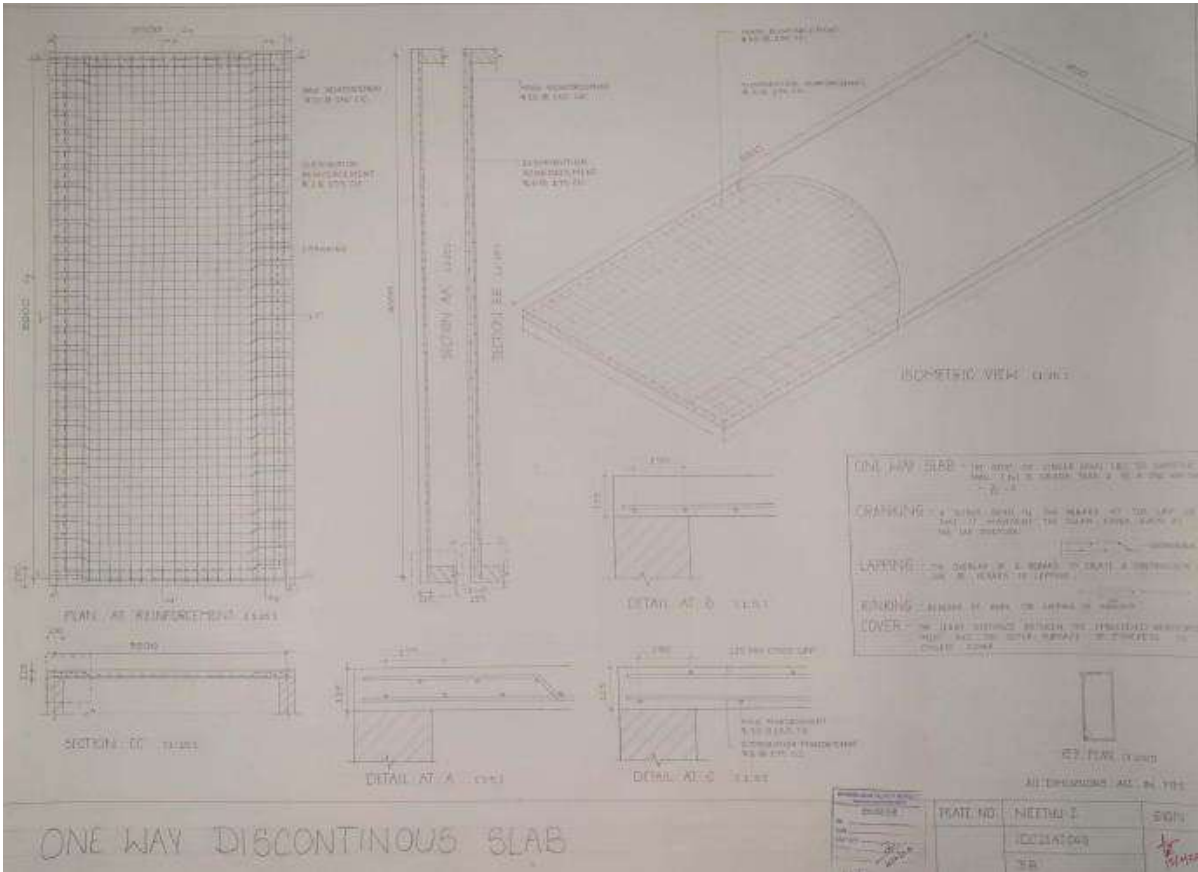
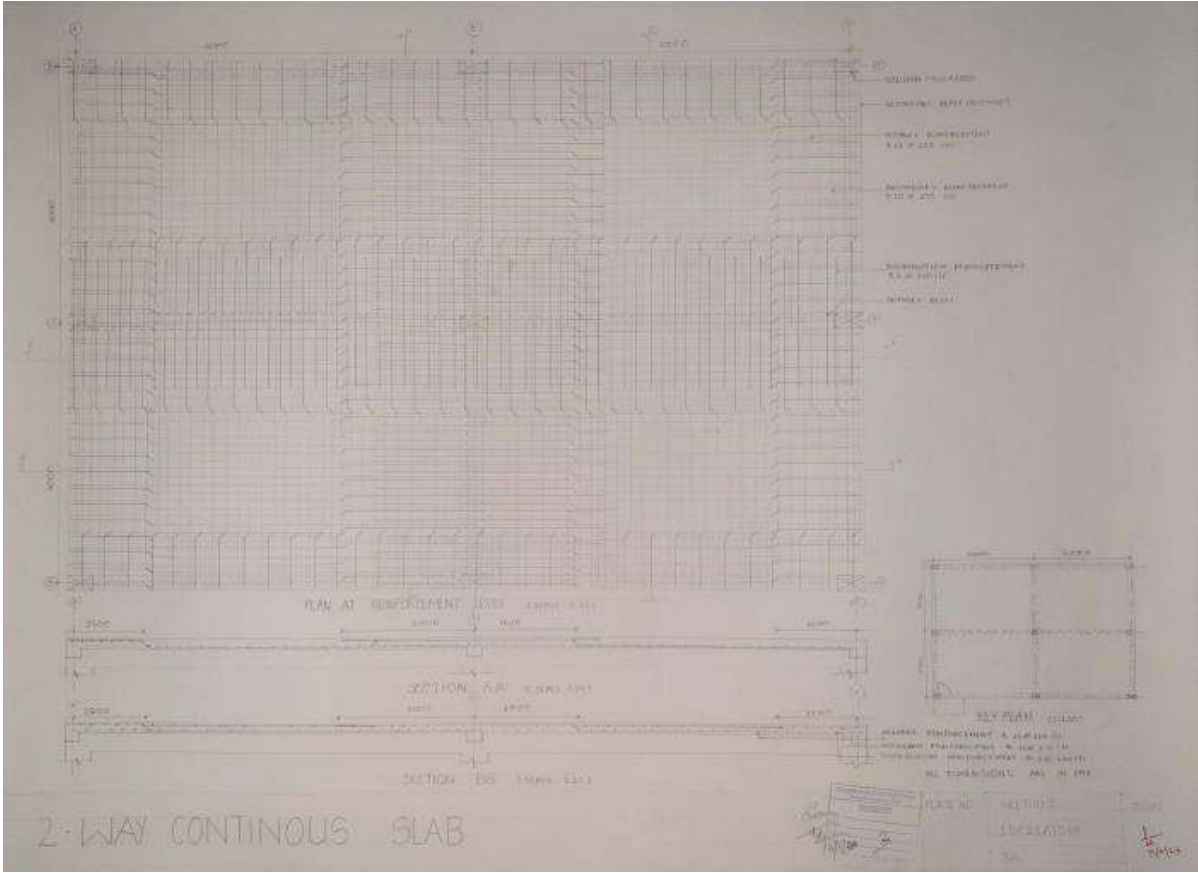
Site Visits are an essential part of learning in the third semester

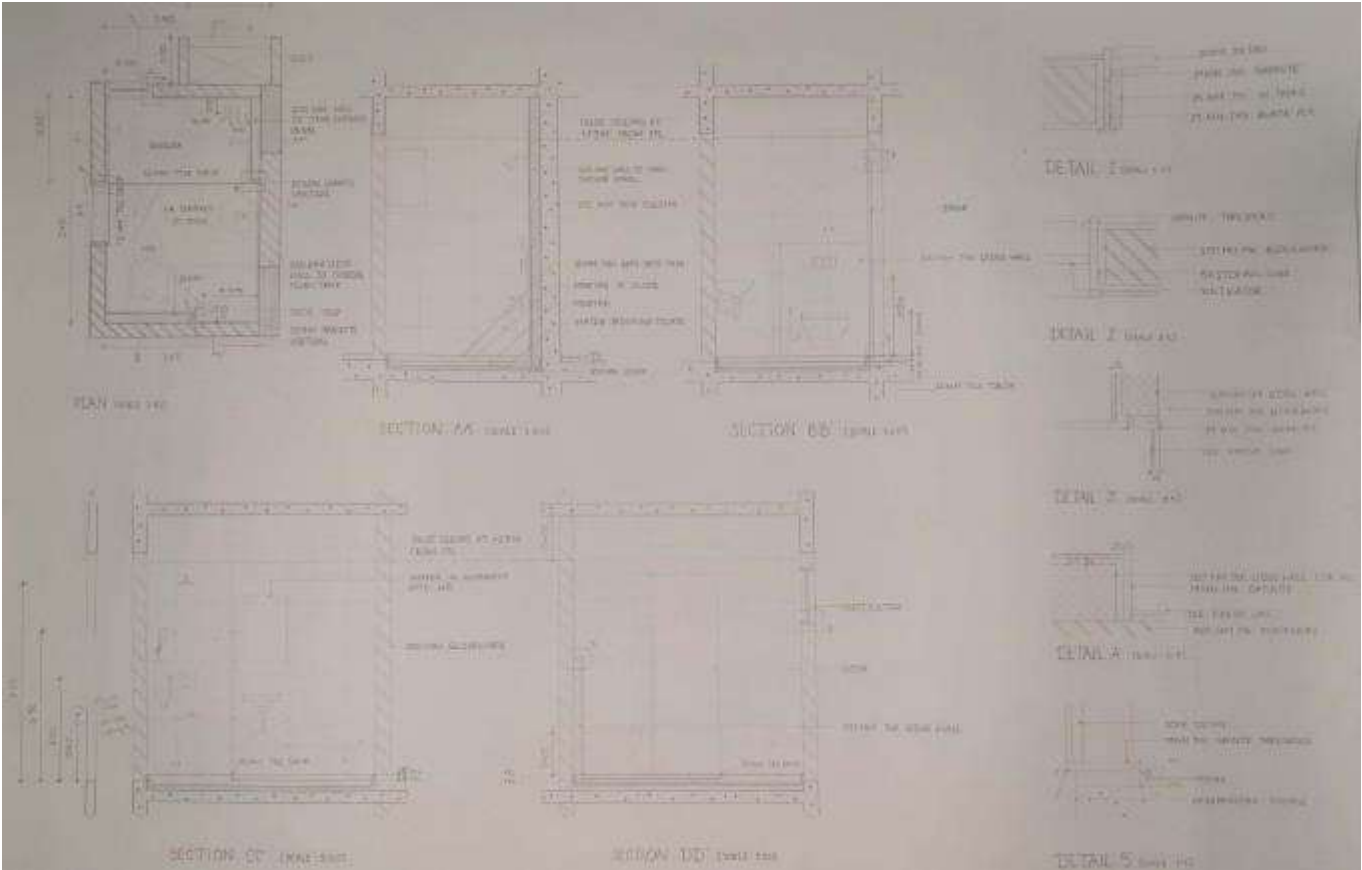
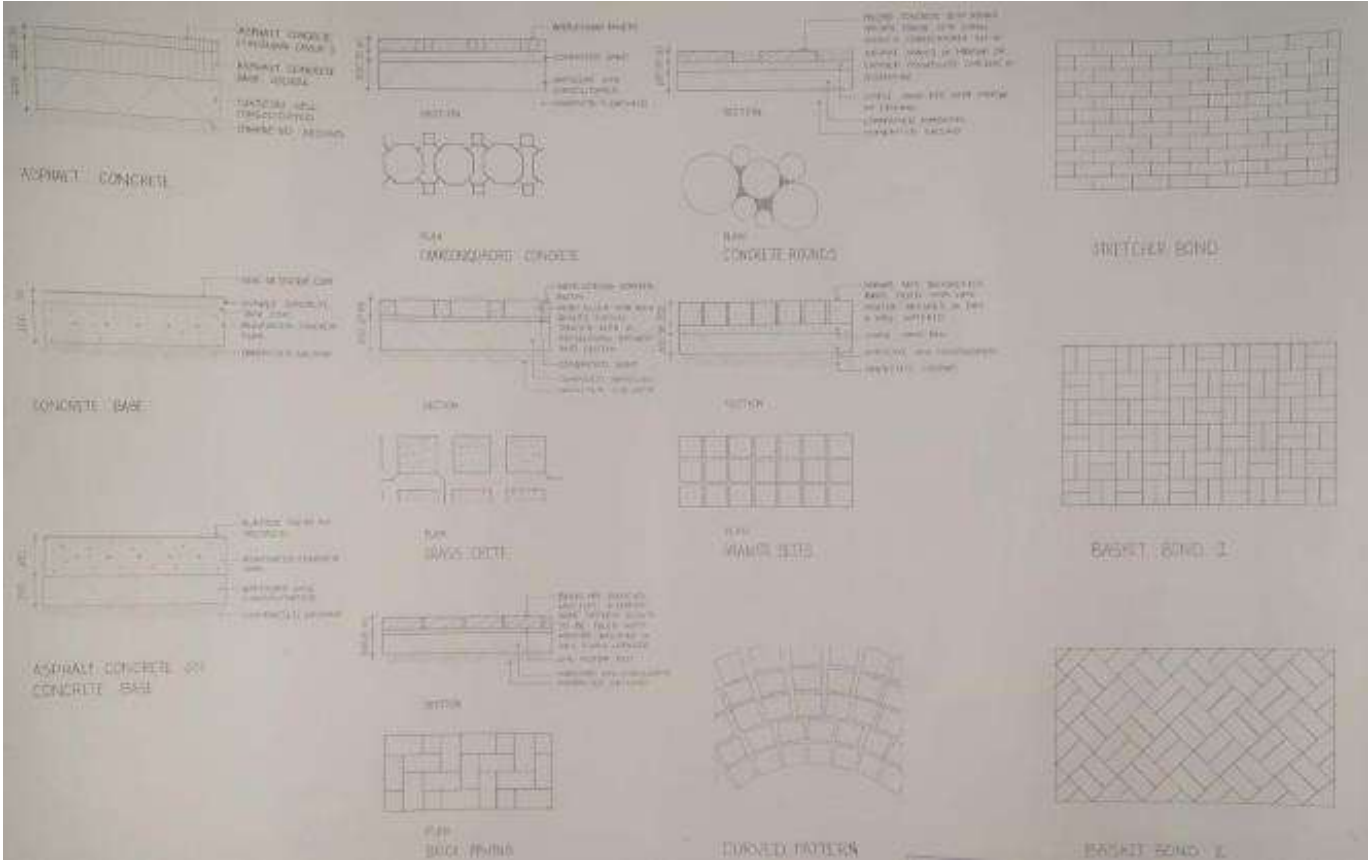


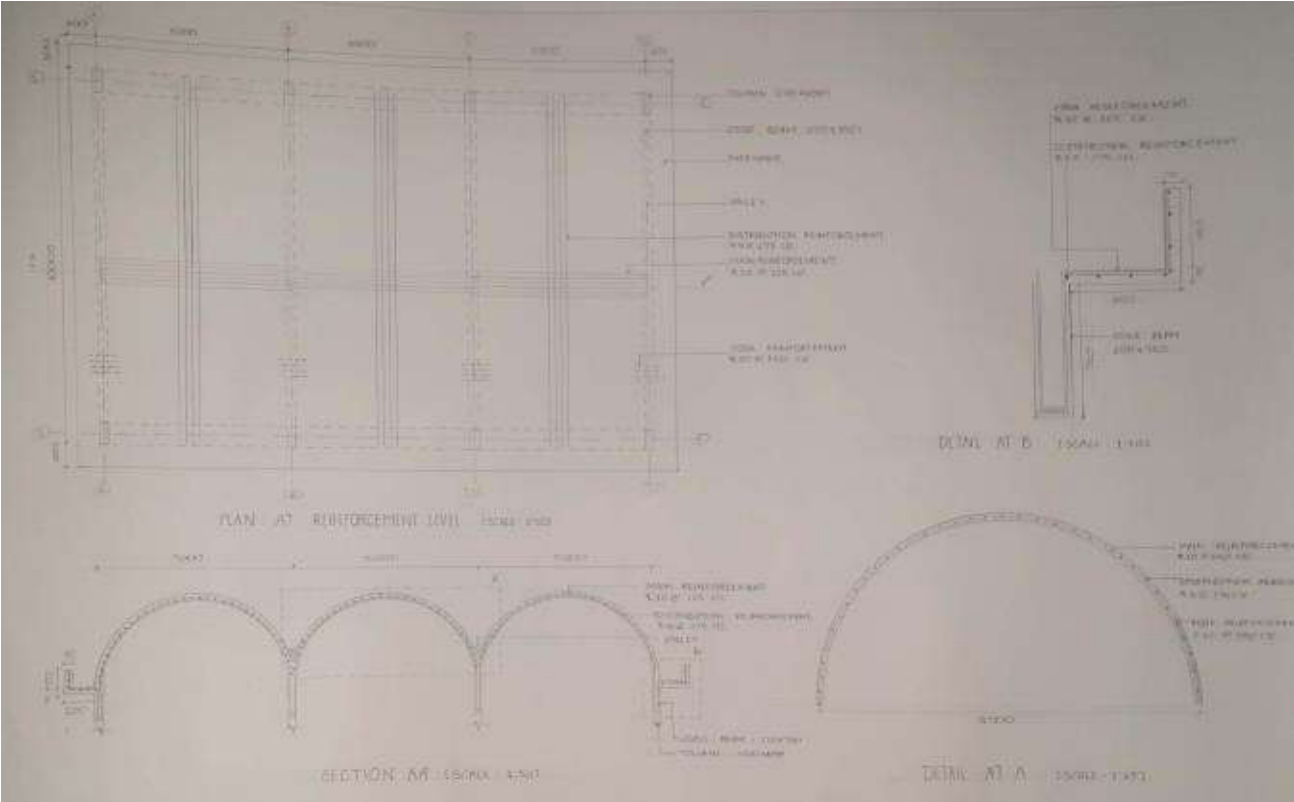
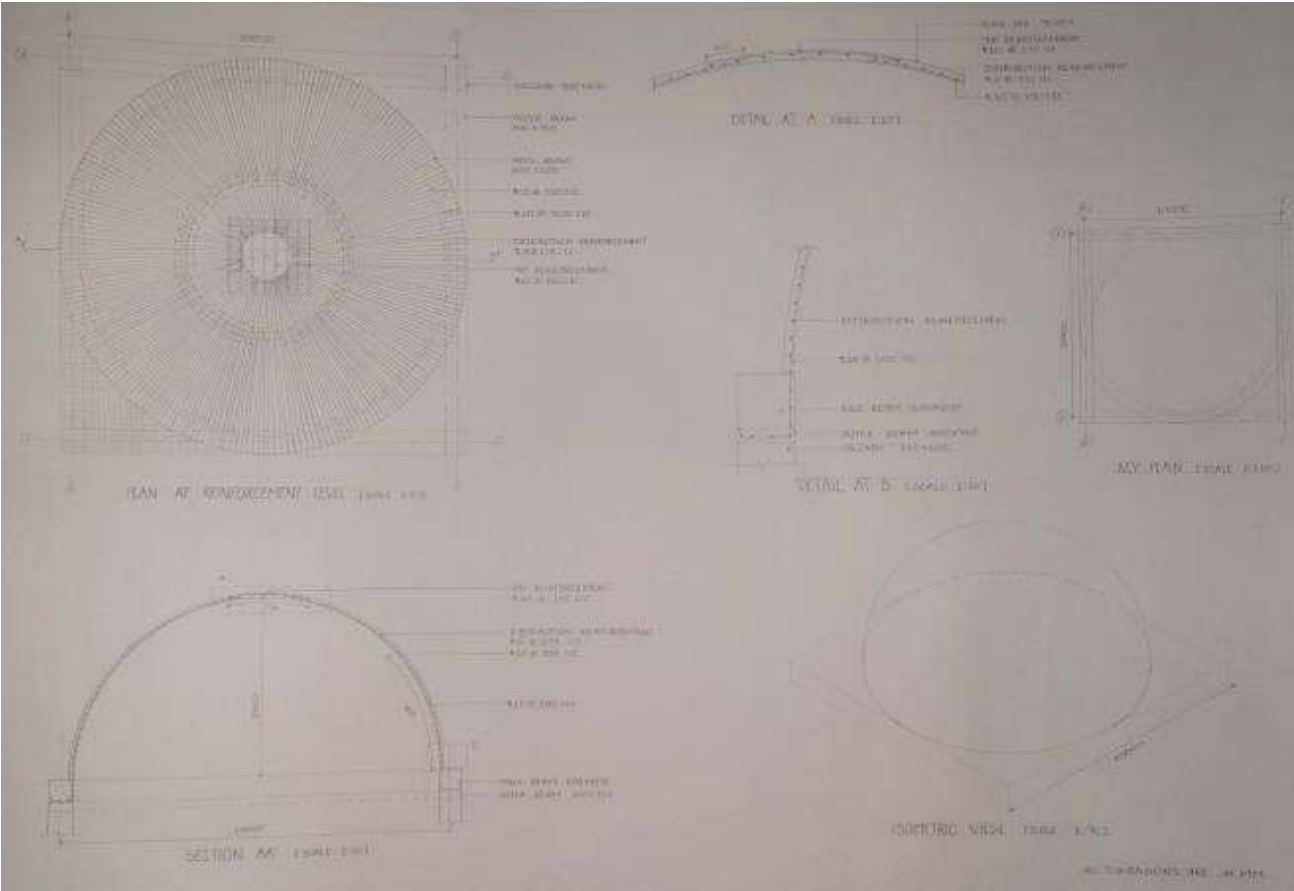
Ar. Tejas
Karay

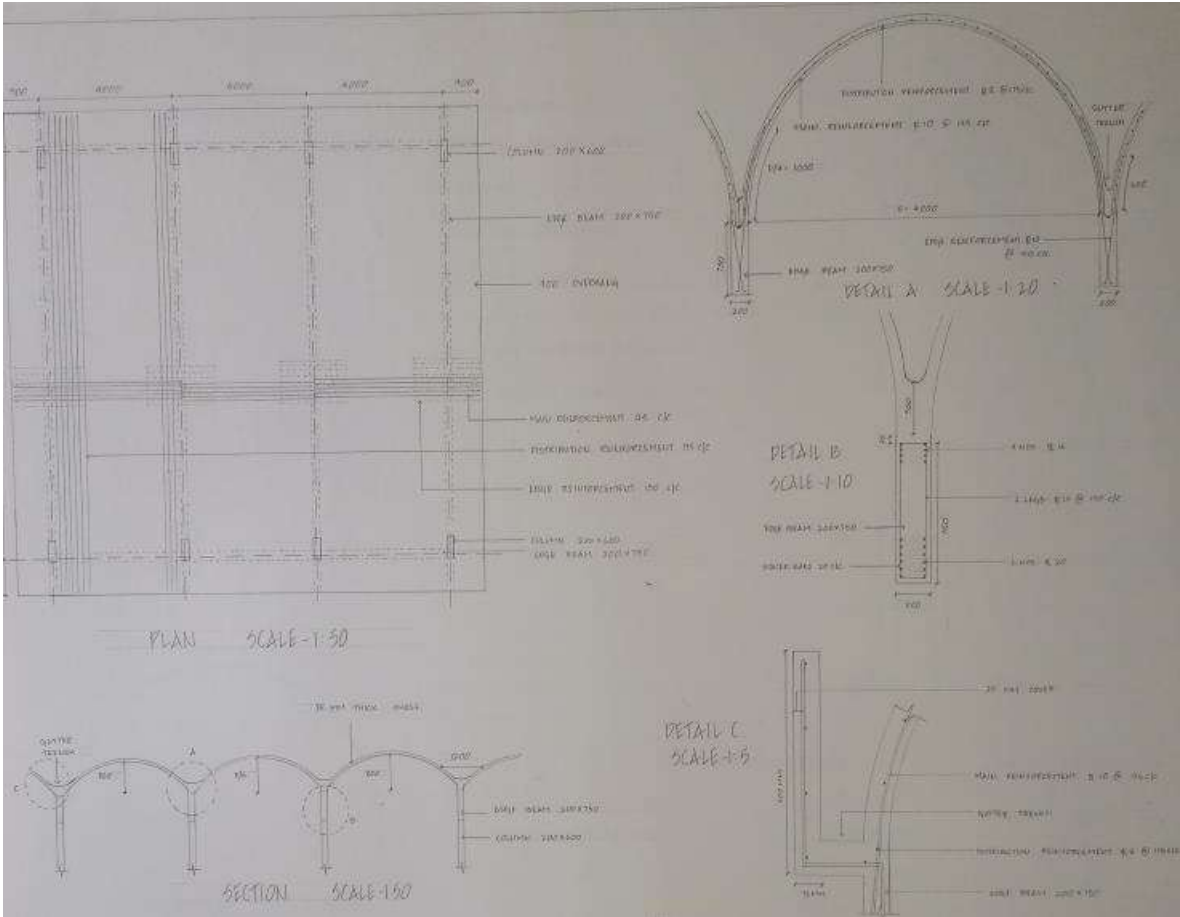
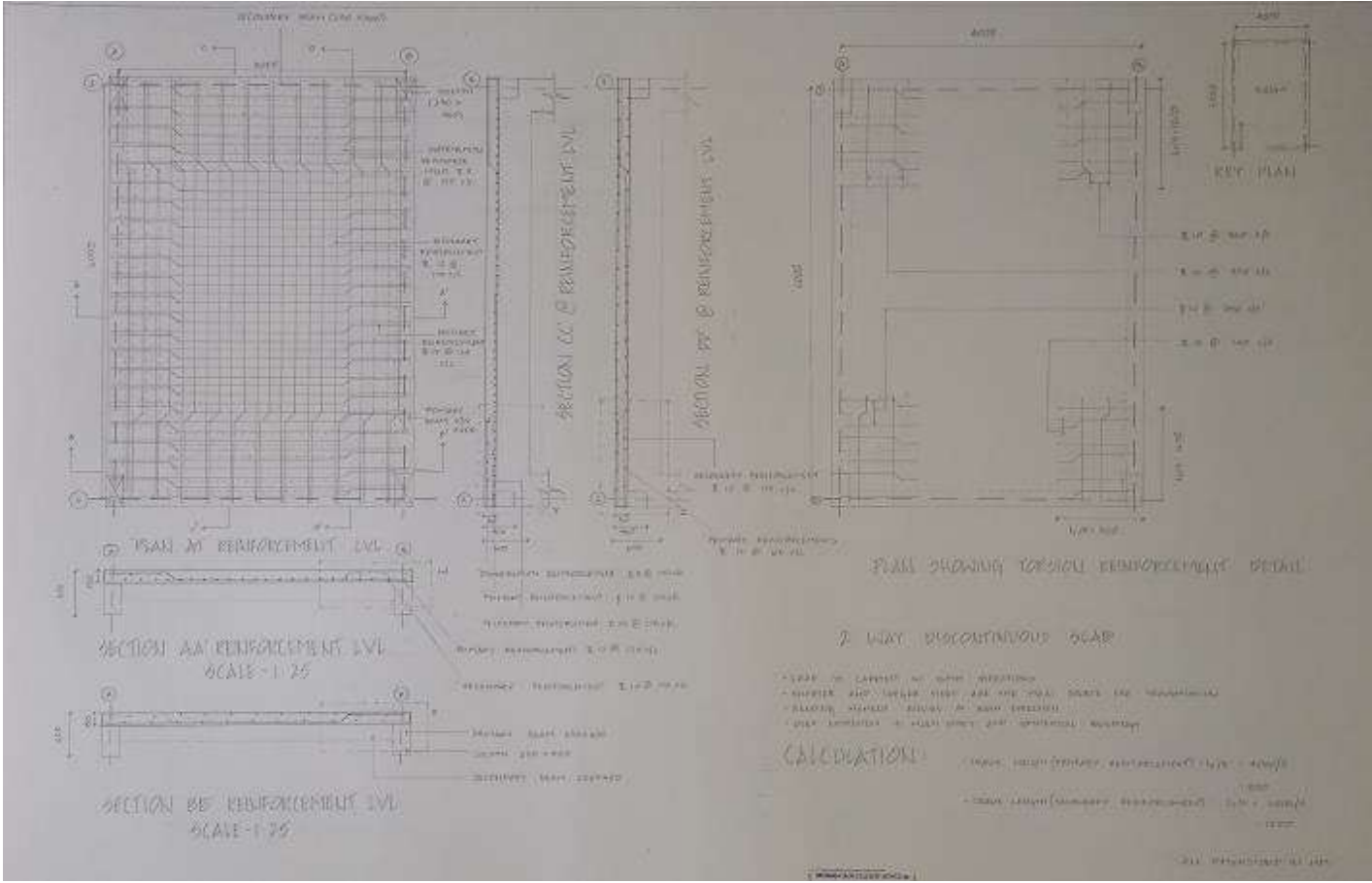


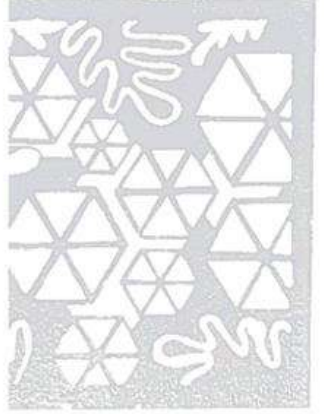
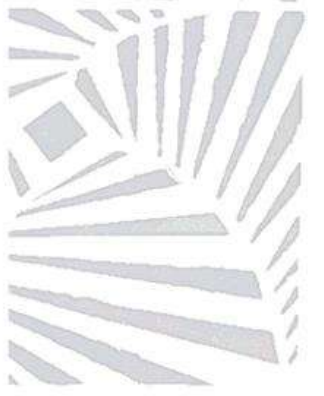
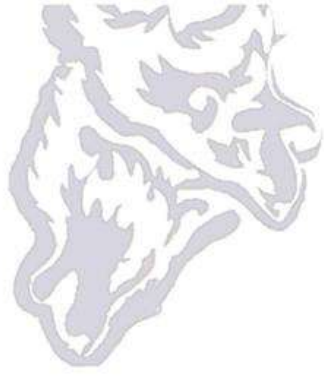
Ar. Dominic L
Harper











4th Semester

ARCHITECTURAL DESIGN V SUBJECT CODE 18ARC41

Studio Coordinators

Course Objectives:

- 1) To understand the need for creating a sustainable living space which responds to a specific climatic context.
- 2) To understand the different typologies within the spectrum of housing
- 3) To identify and understand the role of services in the design of buildings; significance of material and construction techniques; climatic factors.
- 4) Introduction to bye laws and site planning.
- 5) To explore Computer Aided Design techniques (CAD) to generate drawings to better understand the overlay of different floor plan configuration
- 6) To understand the influence of socio-cultural, economic aspects such as LIG and MIG



Ar. Arun
Chandhran



Ar. Nirzari
Mehta

Studio Faculty



Ar. Sankara
Sadhashivam



Ar. Banu
Chandrika



Ar. Kiran
Baikidy



Ar. Jaypakash

ZONING AND
CONCEPT

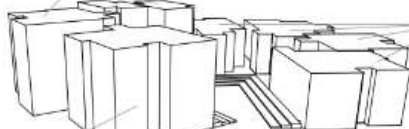
CONCEPT:

1. HIERARCHY

PLINTH LEVEL BUILDING
450+3100+3100+3100MM HIGH

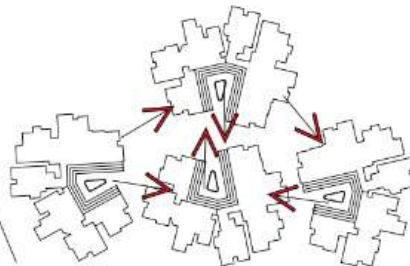


STILT LEVEL BUILDING
2700+3100MM HIGH



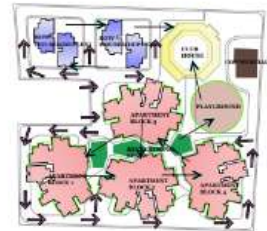
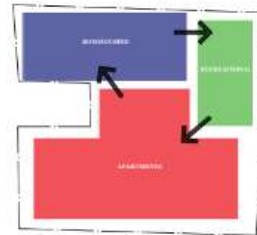
STILT LEVEL BUILDING
2700+3100+3100MM HIGH

2. JOURNEY, MOVEMENT AND CONNECTIVITY



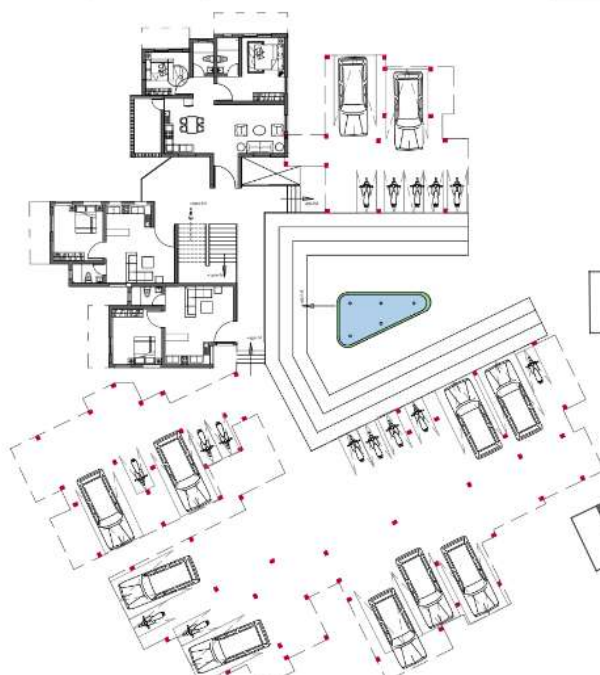
1. HIERARCHY: BY PLAYING WITH HEIGHTS AND MAKING EACH BLOCK HAVE THREE DIFFERENT LEVELS.
2. JOURNEY: A JOURNEY FROM ENCLOSED SPACE TO AN OPEN SPACE AND THEN TO A LARGER OPENING, THERE IS A CHANGE IN THE SURROUNDINGS, THE AIR MOVEMENT, THE FUNCTIONALITY.
3. MOVEMENT: A LARGER OPEN SPACE TO A COMPACTED OPENING AND THEN TO THE RECREATIONAL SPACES. ALSO FROM A DECK TO GREEN SPACES AND THEN TO ROADS. MOVEMENT IS NOT OBSTRUCTED AND IS CONTINUOUS.
4. CONNECTIVITY: ALL THE SPACES ARE CONNECTED BY MEANS OF ROADS OR PATHWAYS OR GREEN SPACES OR VISUALLY. MAKING IT SAFER AND A COMMUNITY BASED LIVING

ZONING:



NAME: DIVYA Y BLOOR	SIGN
USN: 1DC21AT016	
CLASS: 4A	

STILT LEVEL



NAME: DIVYA Y BLOOR	SIGN
USN: 1DC21AT016	
CLASS: 4A	

FIRST FLOOR LEVEL



CLUSTER PLAN

SCALE- 1:100

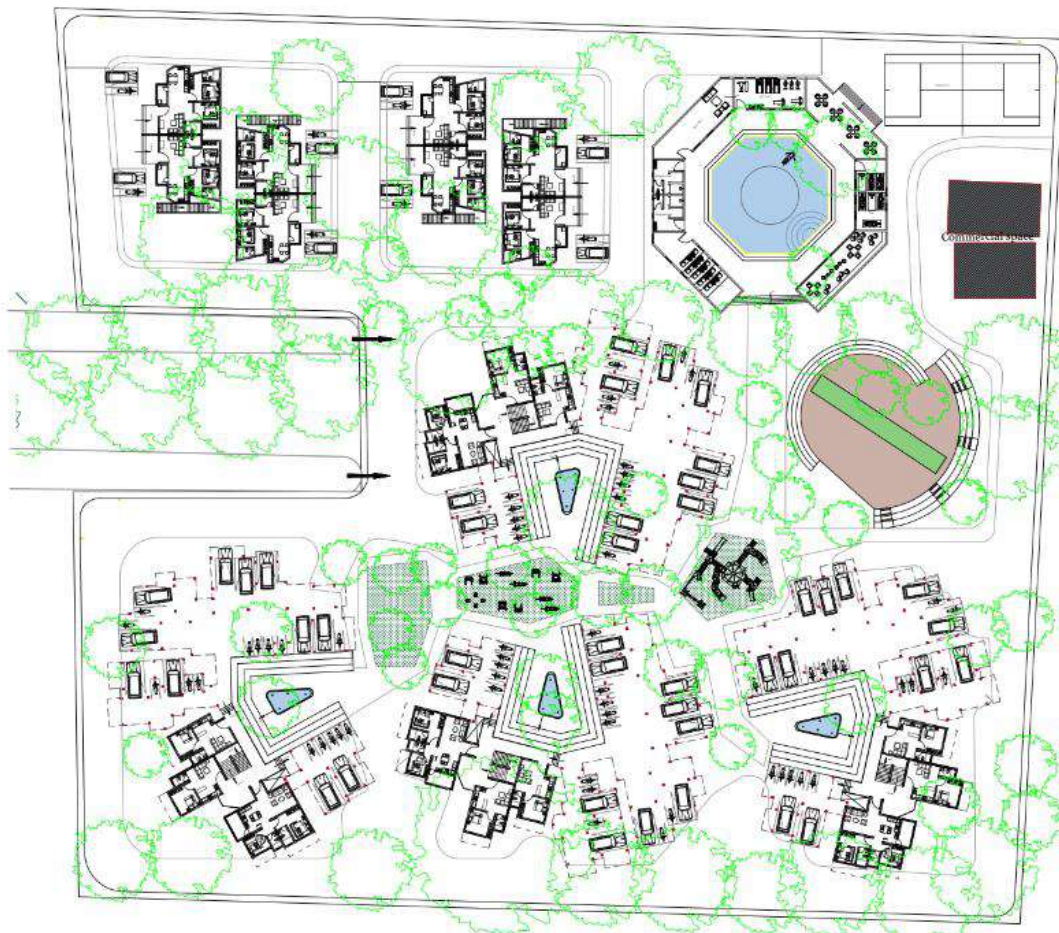
Architectural Design IV

Faculty: Ar. N Arun Chandran, Ar. Banu Chandrika

Ar. Kiran Baikidy

Diya Bijoor

1DC20AT027

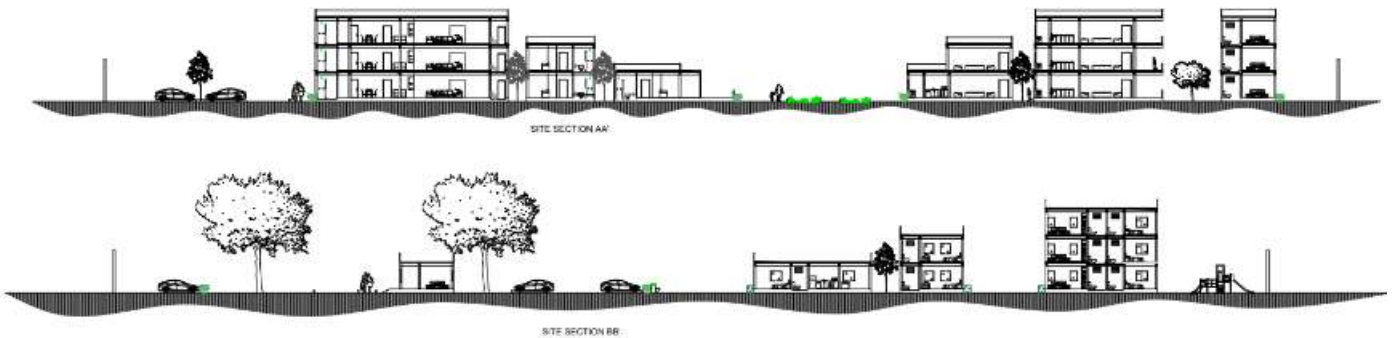
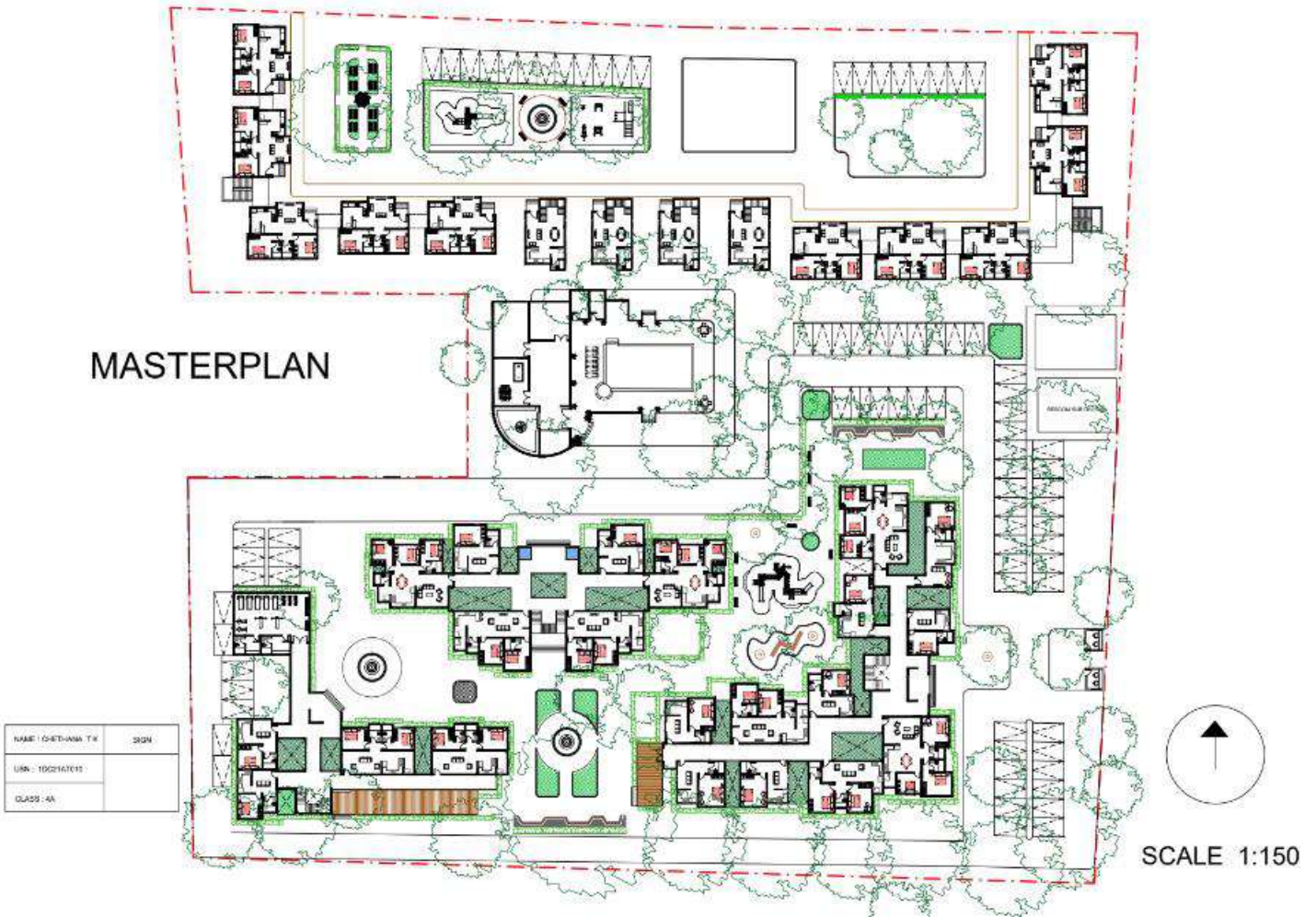


MASTER PLAN
SCALE- 1:250



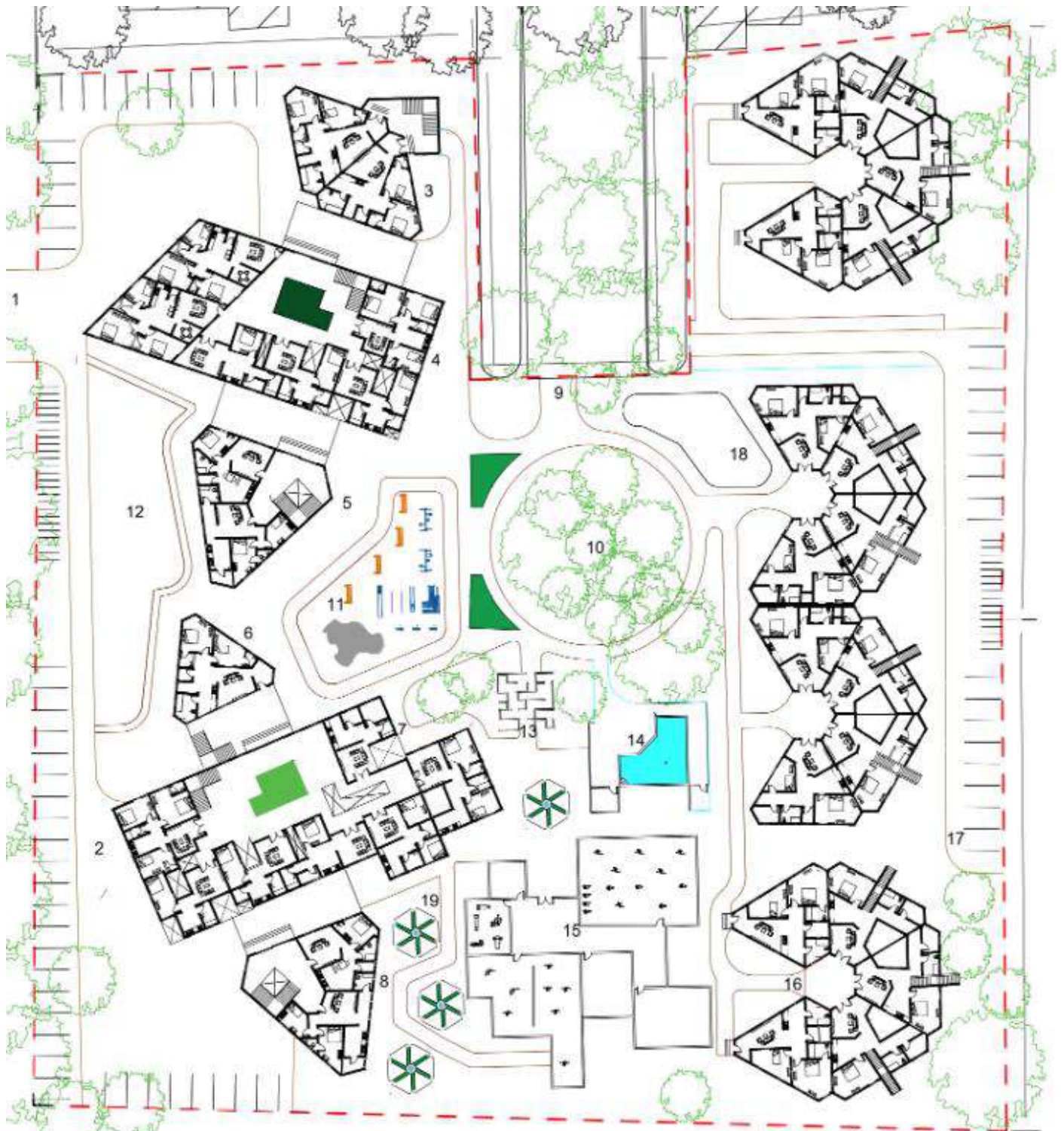
NAME: DIYAA Y BLOOR
USN: 1DC21AT016
CLASS: 4A
SEGN

MASTERPLAN



SITE SECTIONS
SCALE 1:200

NAME : CHETHANA T.K	SIGN
URN : 10021A1010	
CLASS : AA	



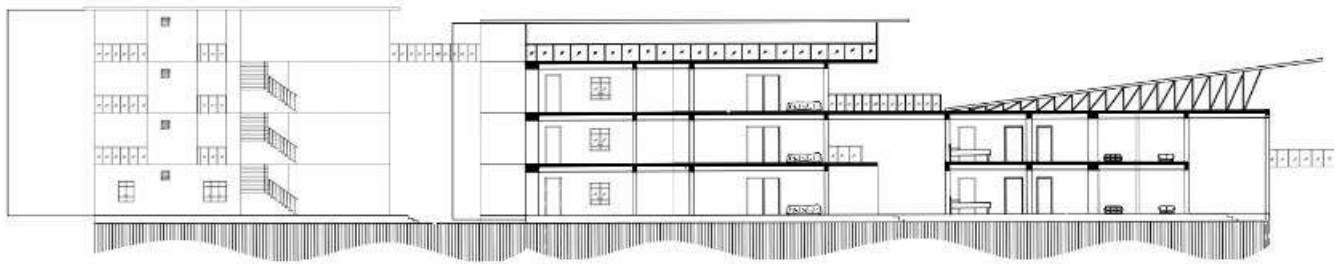
MASTER PLAN



FLOOR PLANS

SCALE
1:100

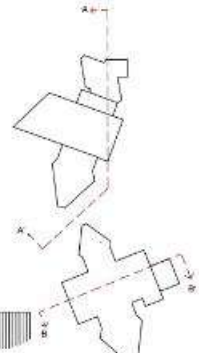
NAME : ISRATH K
CLASS : 4 A
USN : 1DC21AT028



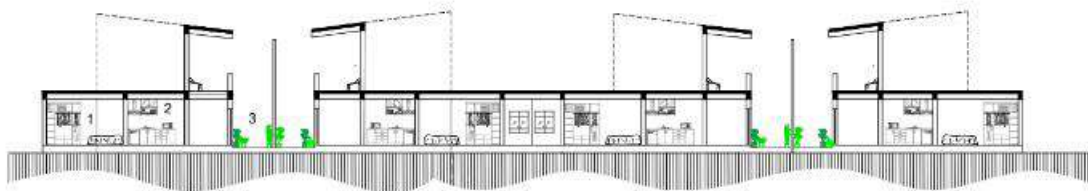
SECTION AA'



SECTION BB'



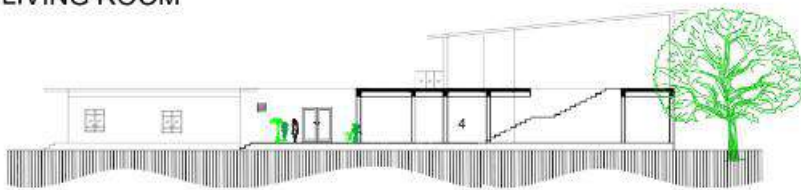
KEY PLAN



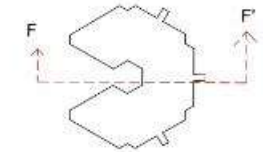
SECTION EE'

LEGEND

- 1. BEDROOM
- 2. KITCHEN
- 3. OPEN COURTYARD
- 4. LIVING ROOM



SECTION FF'



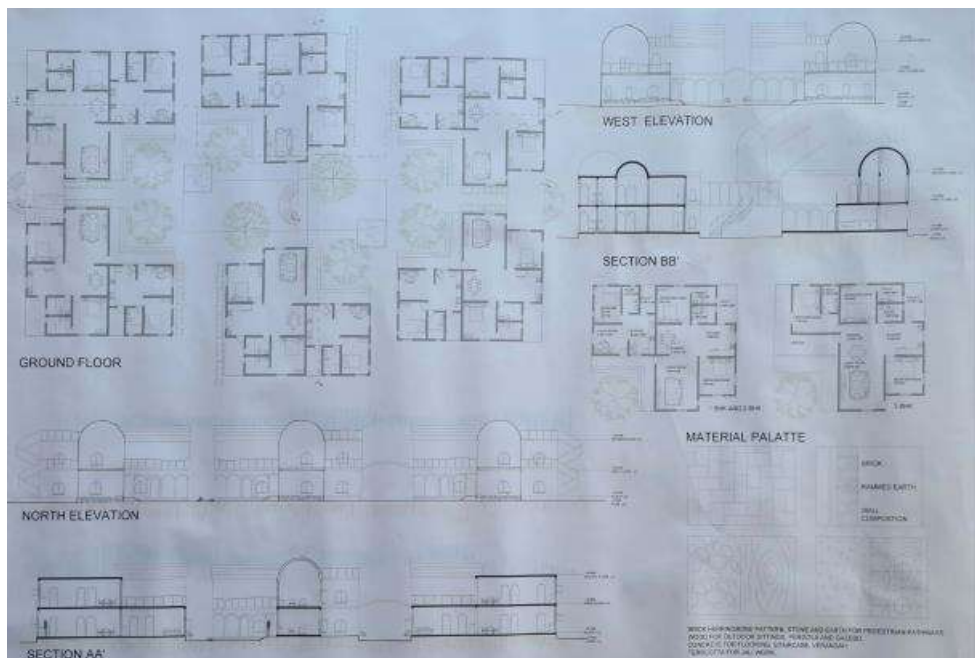
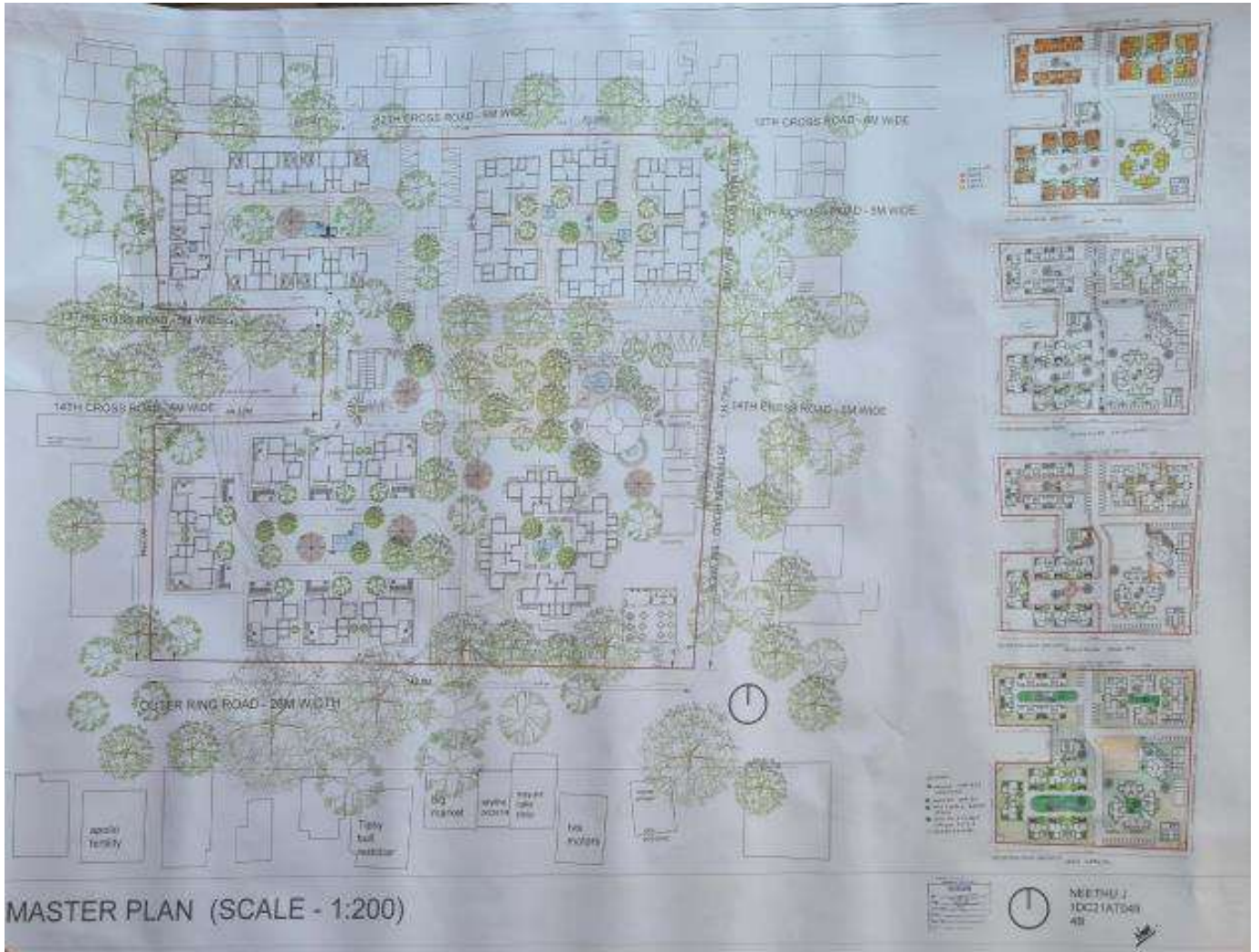
KEY PLAN

Architectural Design IV

Faculty: Ar. N Arun Chandhran, Ar. Banu Chandrika

Ar. Kiran Baikidy

Neethu
1DC20AT027



**MATERIALS AND METHODS OF
BUILDING CONSTRUCTION V
SUBJECT CODE 18ARC42**

Studio Faculty

4th Semester MMBC is largely about RCC structures

The studio was based on a practical/hands on or experiential learning approach by encouraging the students to build models for all the topics under the large RCC structures such as flat slab, waffle slab and two way slab.

The syllabus also deals with collapsible gate, rolling shutters and aluminium partitions

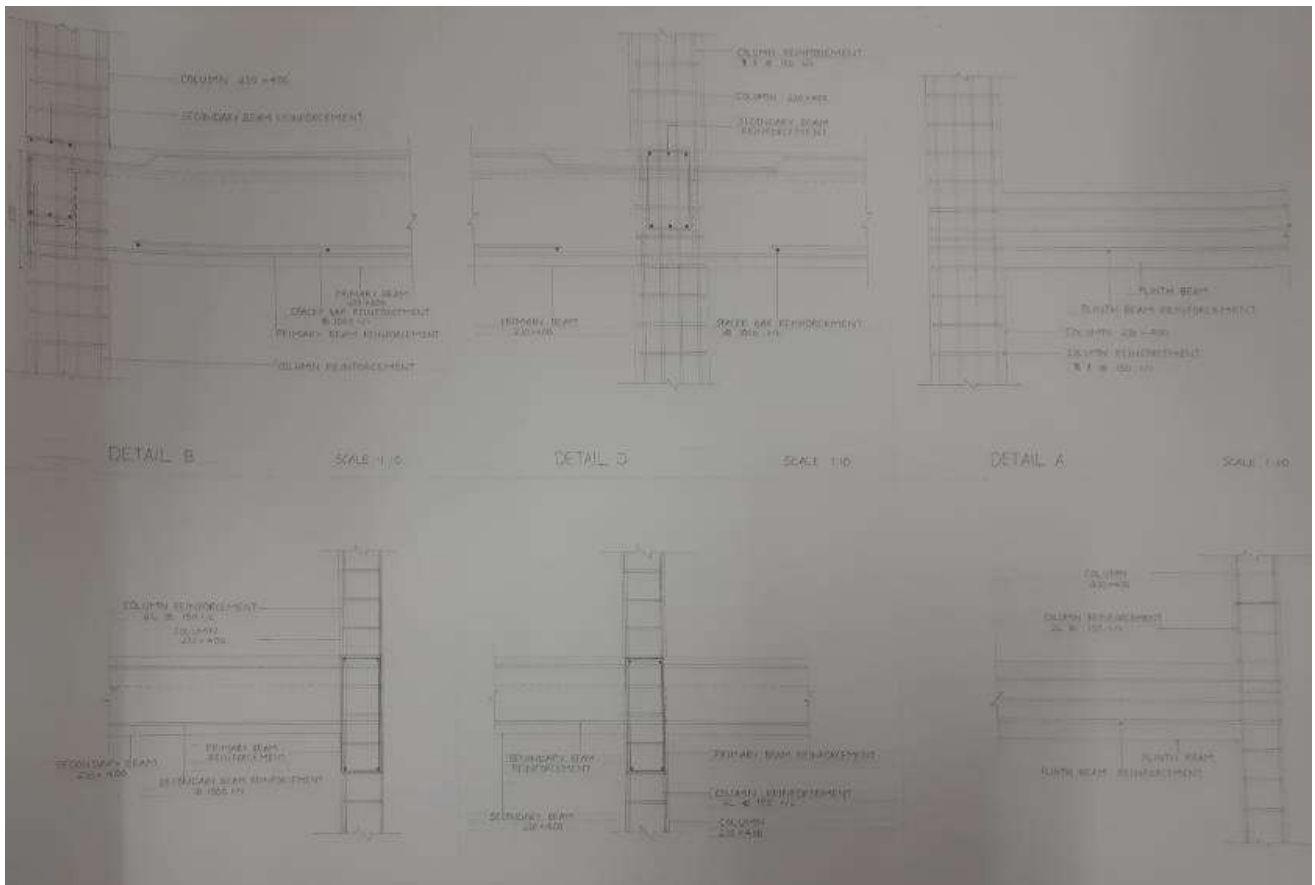
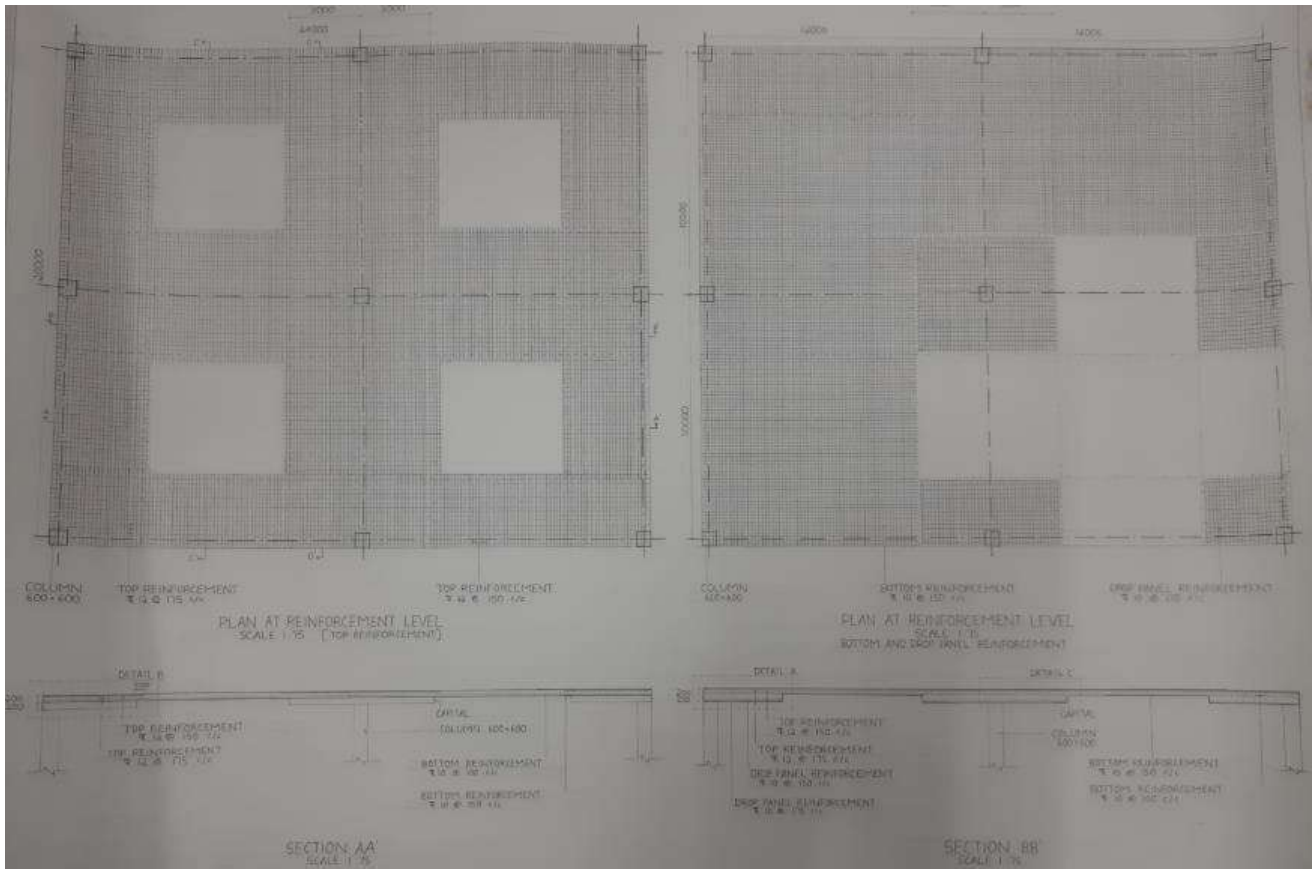
Large scale live models were constructed by the students using different materials and joinery detailing.

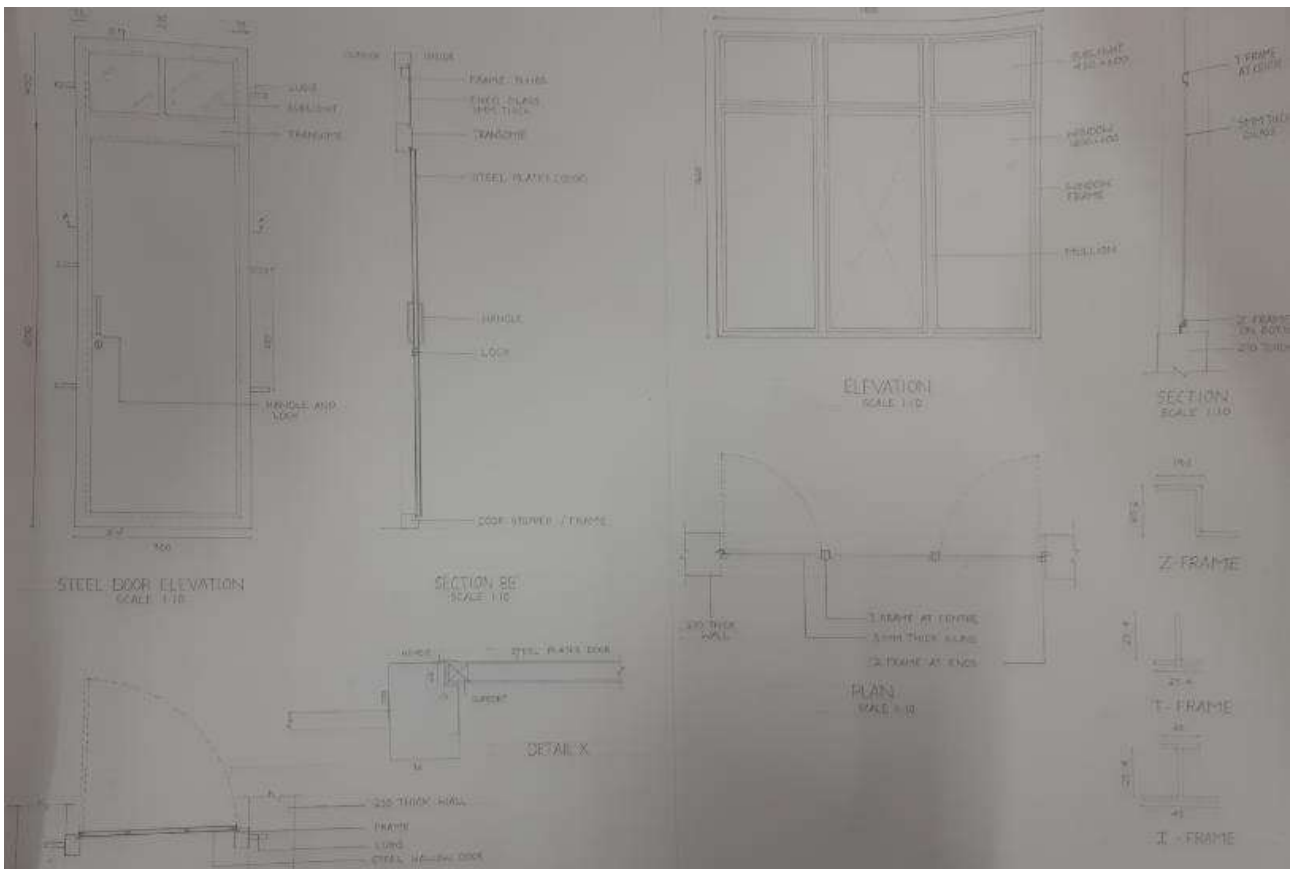
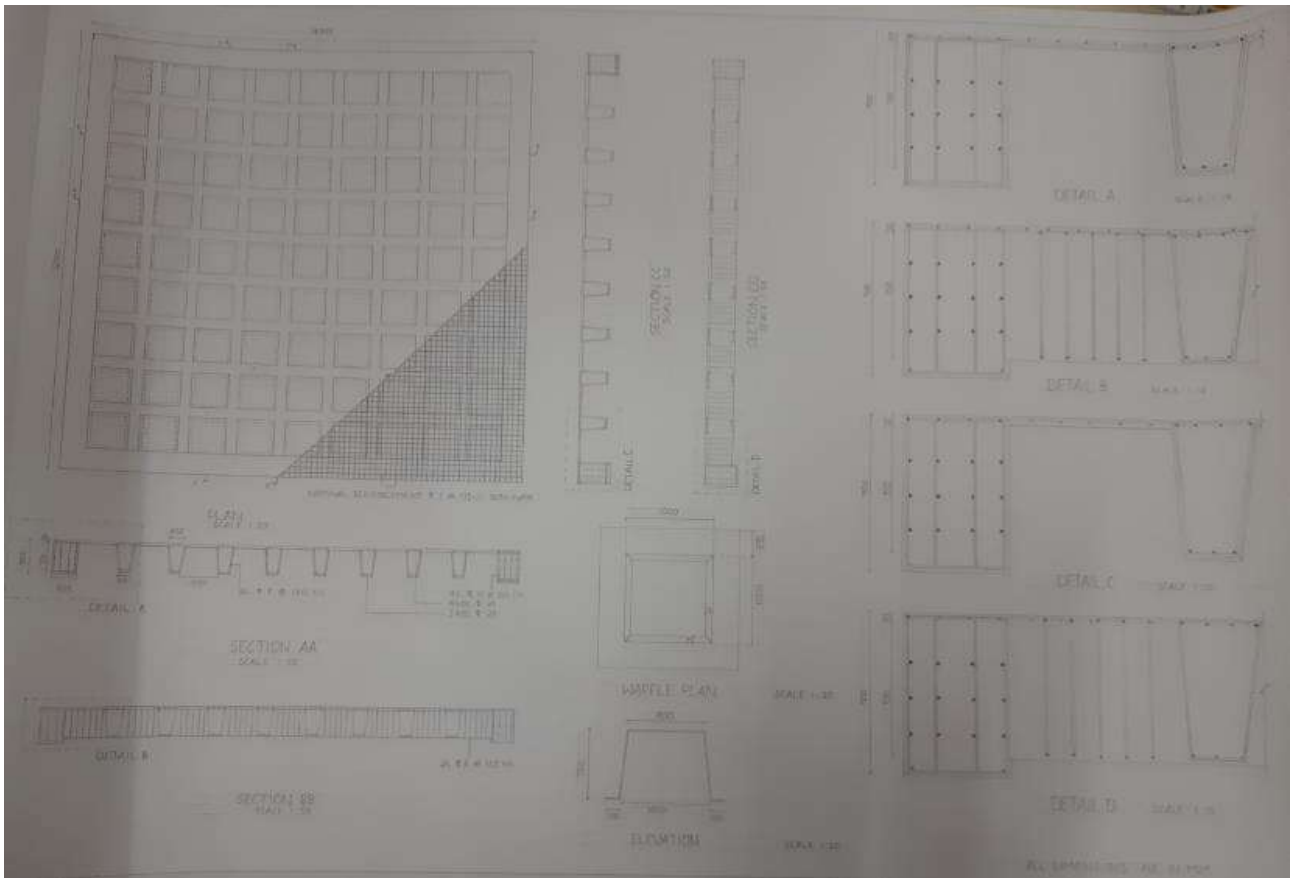


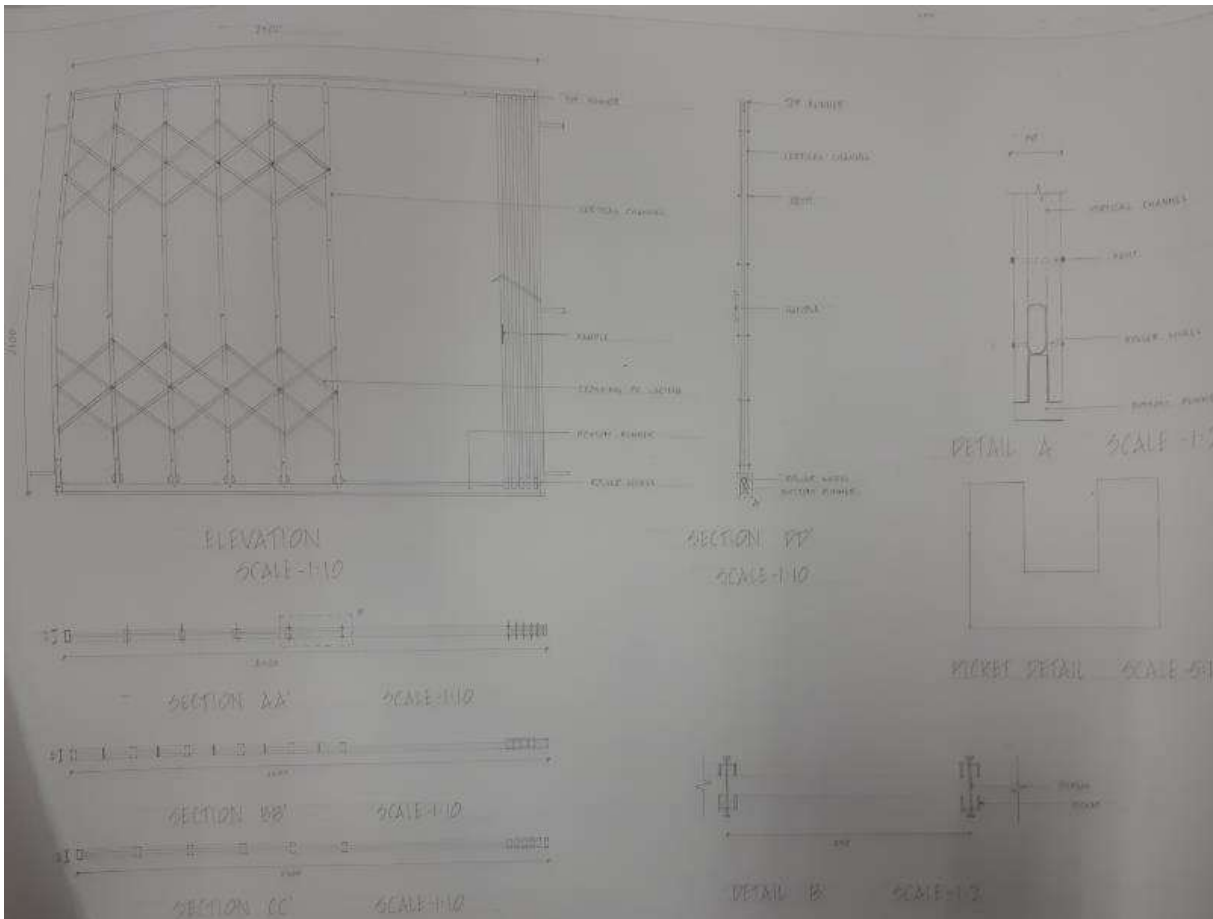
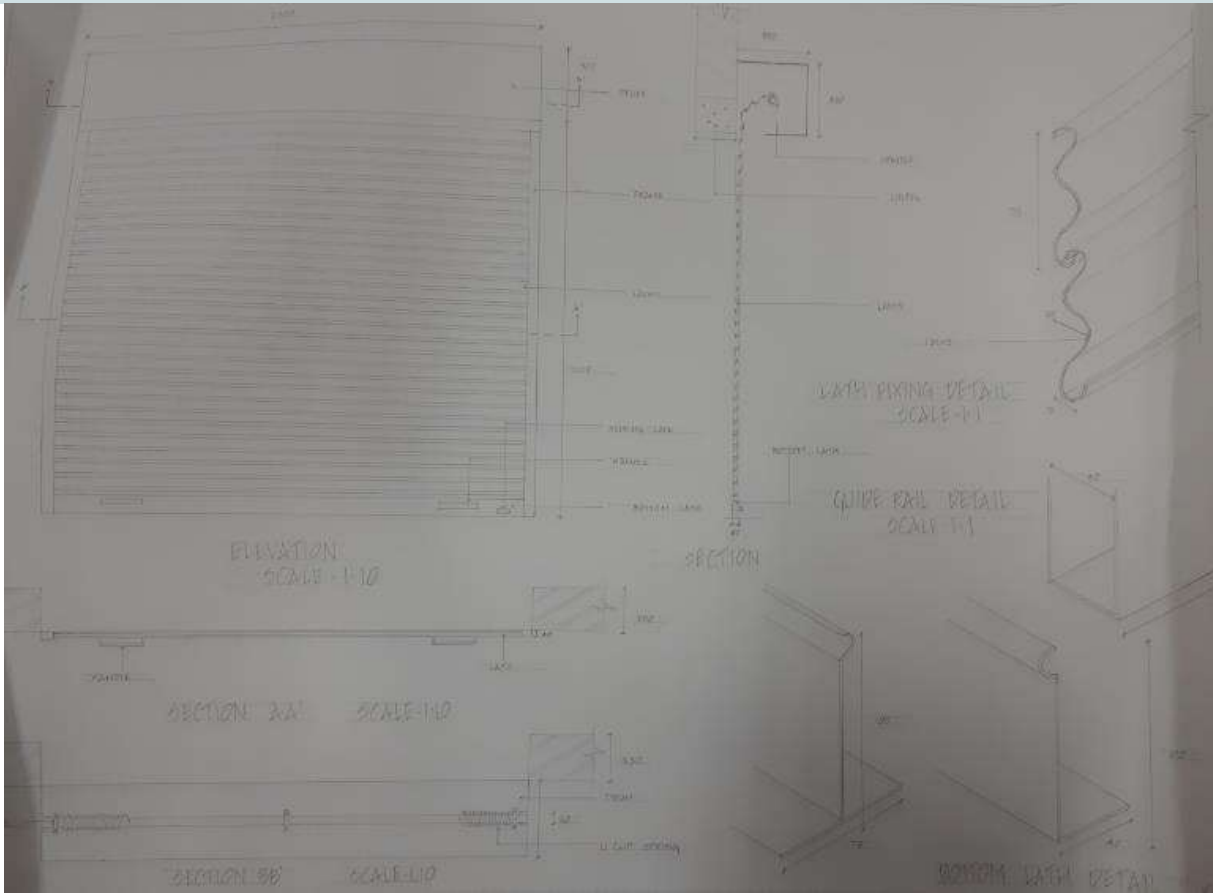
Ar. Tejas
Karay

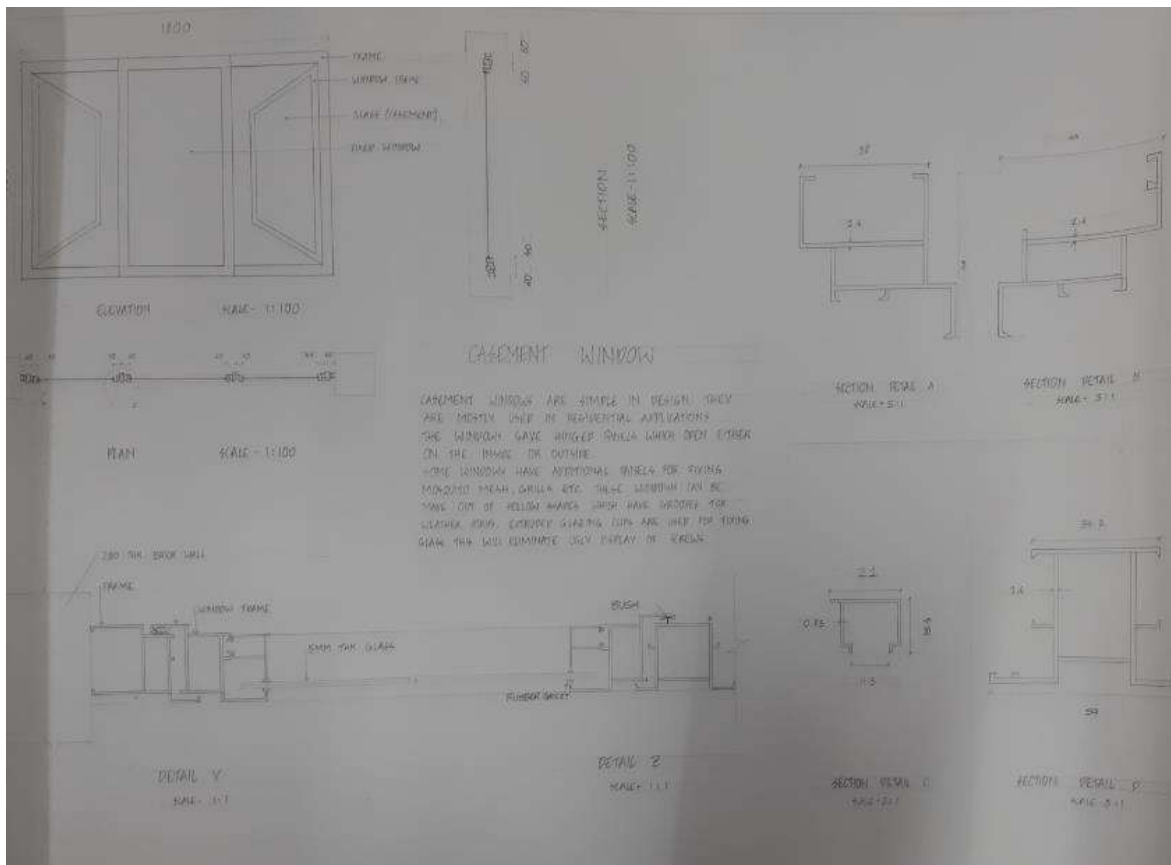
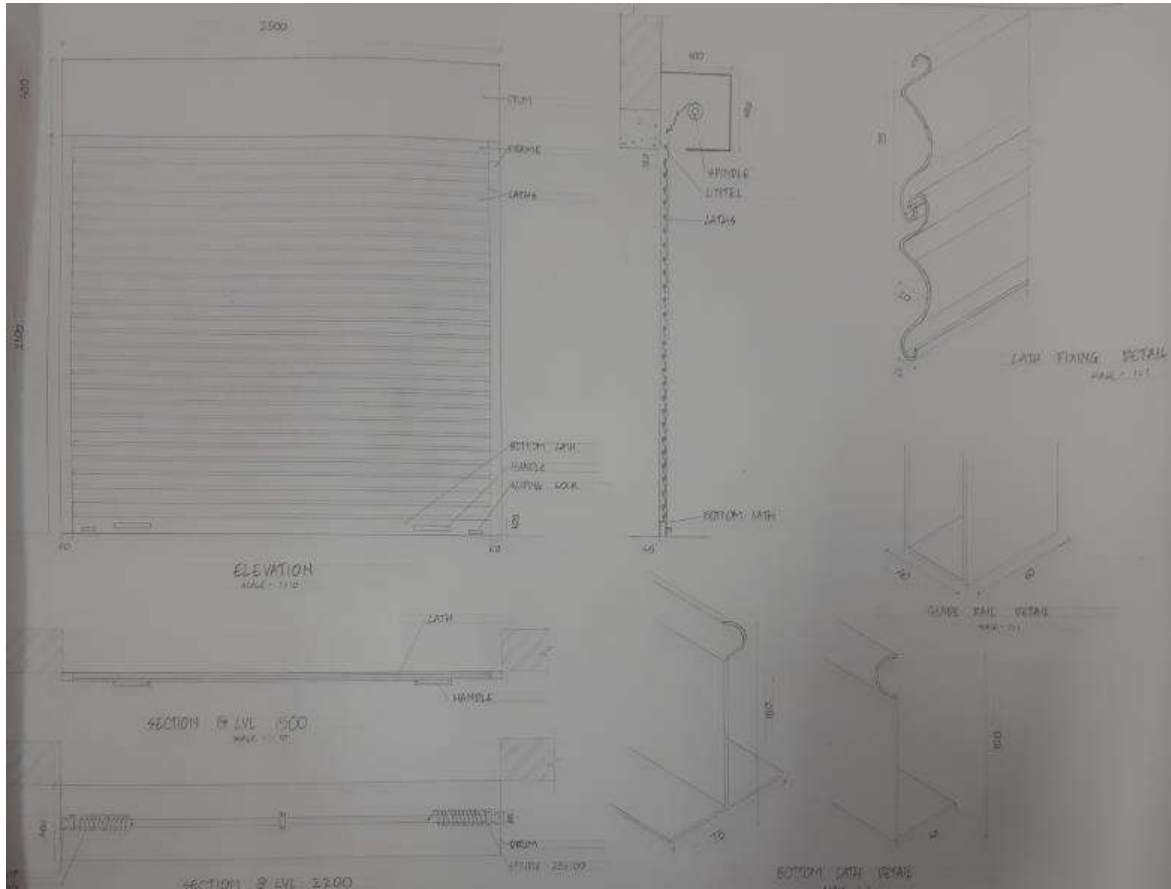


Ar. Dominic L
Harper









ELECTIVE
Product design
Graphic design

Studio Faculty

Course Objective

To familiarize students with the basic concepts of typography and layout design

To understand the different materials available in the market for product design

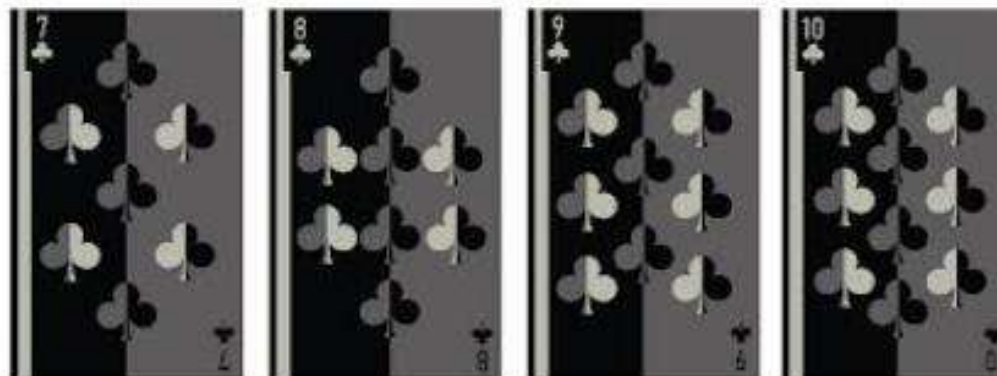
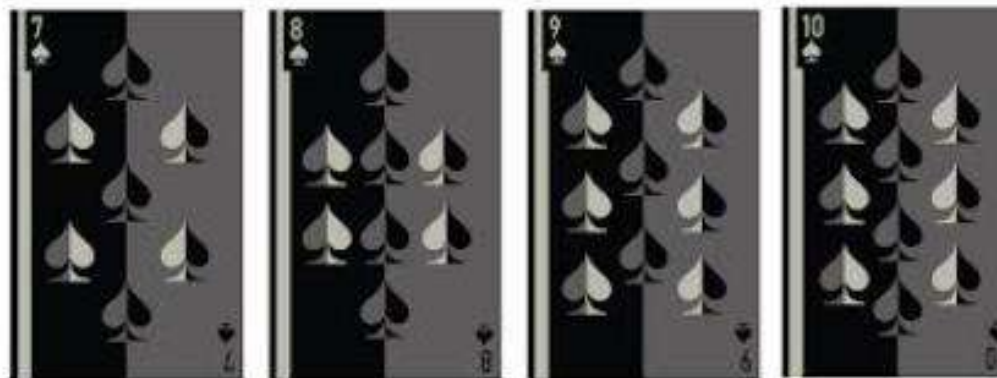
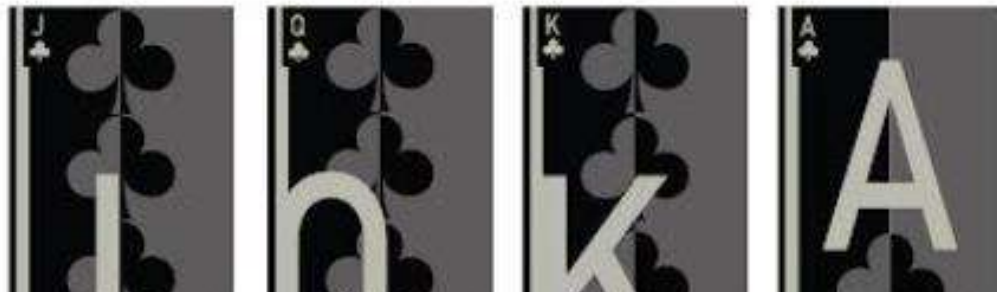
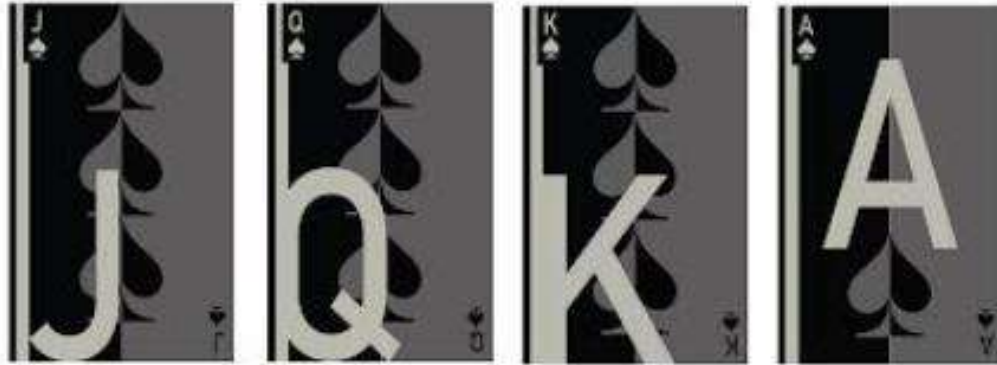
Introduction to 3d printing

Understanding the role of a theme, concept in developing once own unique style of design in the field of graphic/product design



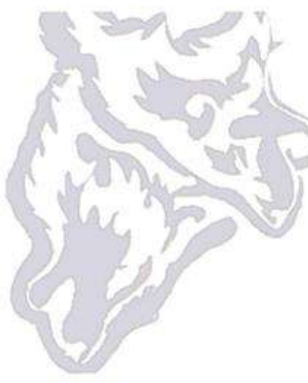
Ar. Arun
Chandhran

Elective: Product design
Faculty: Ar. Arun Chandran



Elective: Product design
Faculty: Ar. Arun Chandran





5th Semester

ARCHITECTURAL DESIGN V SUBJECT CODE 18ARC51

Studio Coordinators

Course Objectives:

- 1) To understand the need for creating architecture as an envelope to system dependent program.
- 2) To understand the use of technologies developed in other fields as a precursor to creating architecture.
- 3) To identify and understand the role of services in the design of buildings; significance of material and construction techniques; climatic factors.
- 4) Introduction to development Regulations (building byelaws and rules); circulation networks (people, vehicular access), site planning.
- 5) To explore Computer Aided Design techniques to generate drawings and models to better understand envelopes and systems in architecture.
- 6) To understand the (thematic) abstract character of architecture (symbolism, aesthetics, identity) in the public domain; influence of socio-cultural, economic dimensions; user perception.



Ar. Dominic
Harper



Ar. Shubham
Kaushal

Studio Faculty



Ar. Vasavi
Ranganathan



Ar. Preethi
Revankar



Ar. Kiran
Baikidy



Ar. Kavitha
Pole



Ar. Sushmitha
Paul

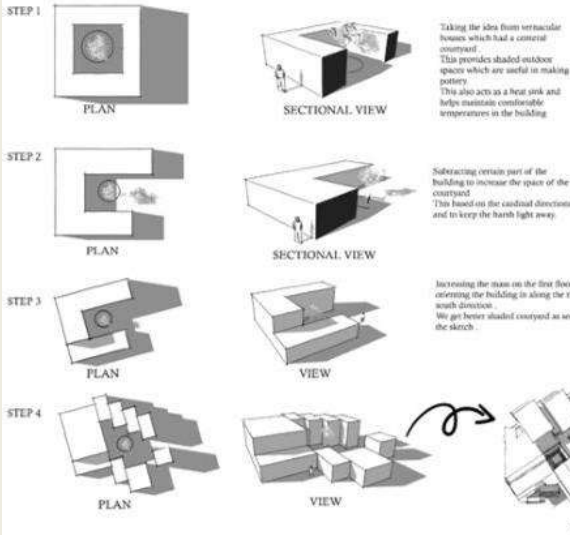
Architectural Design V

Faculty: Ar. Dominic L Harper, Ar. Kavitha Pole, Ar. Kiran Baikidy, Ar. Sushmitha Paul

Harsh S Kothari
1DC20AT027

CONCEPT

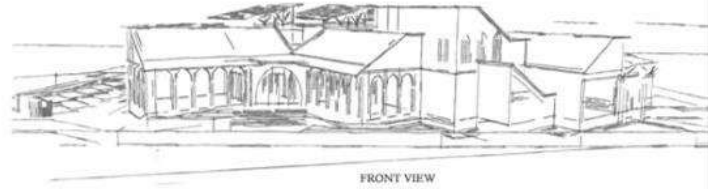
An inside-out approach to design since pottery has a major play in the outdoors I wanted to have a central courtyard which would form a strong interwoven design (inward looking). Transforming the space into a communal center, engaging the locals and reflecting their culture and promoting the knowledge is touched upon.



DESIGN PROGRAM

The objective will be to create an empowering space which will support POTTERY TOWN in their existing regional context, showcasing to the public with hands on workshops, imparting training to artisans, collaboration with designers bringing new design elements and creating market linkages for craftspeople. The public including tourists get to witness demos of the crafts, and participate in hands-on workshops in making their own art & craft items. They will get to meet the artisans and get to know their lives, witness first-hand the ethos, designs, tools, techniques, and materials that define the crafts. Each workshop participant will get an opportunity to take home rich and unique memories, and their own souvenirs.

SPACES





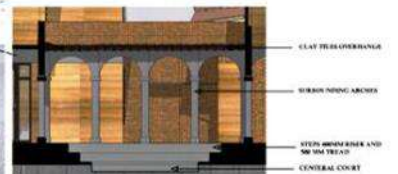
SECTION AA''



ARIAL VIEW



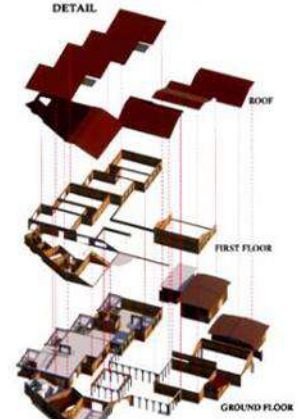
SECTION BB''



DETAIL



EAST ELEVATION



EXPLODED VIEW

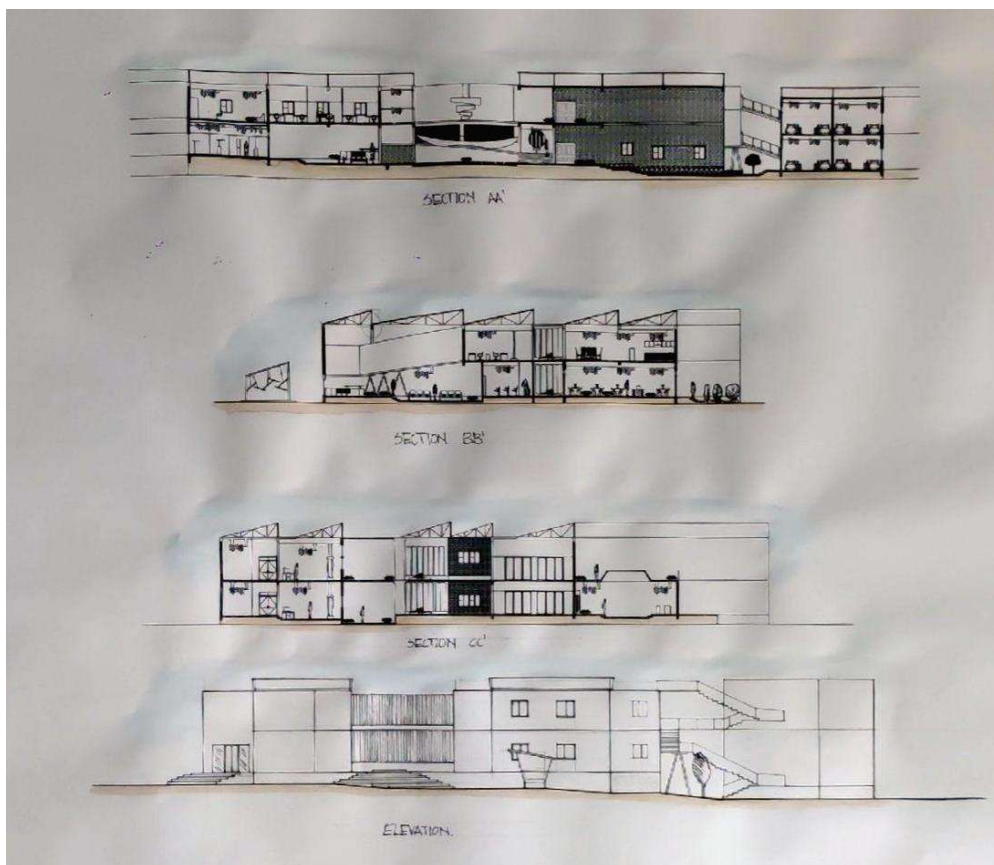
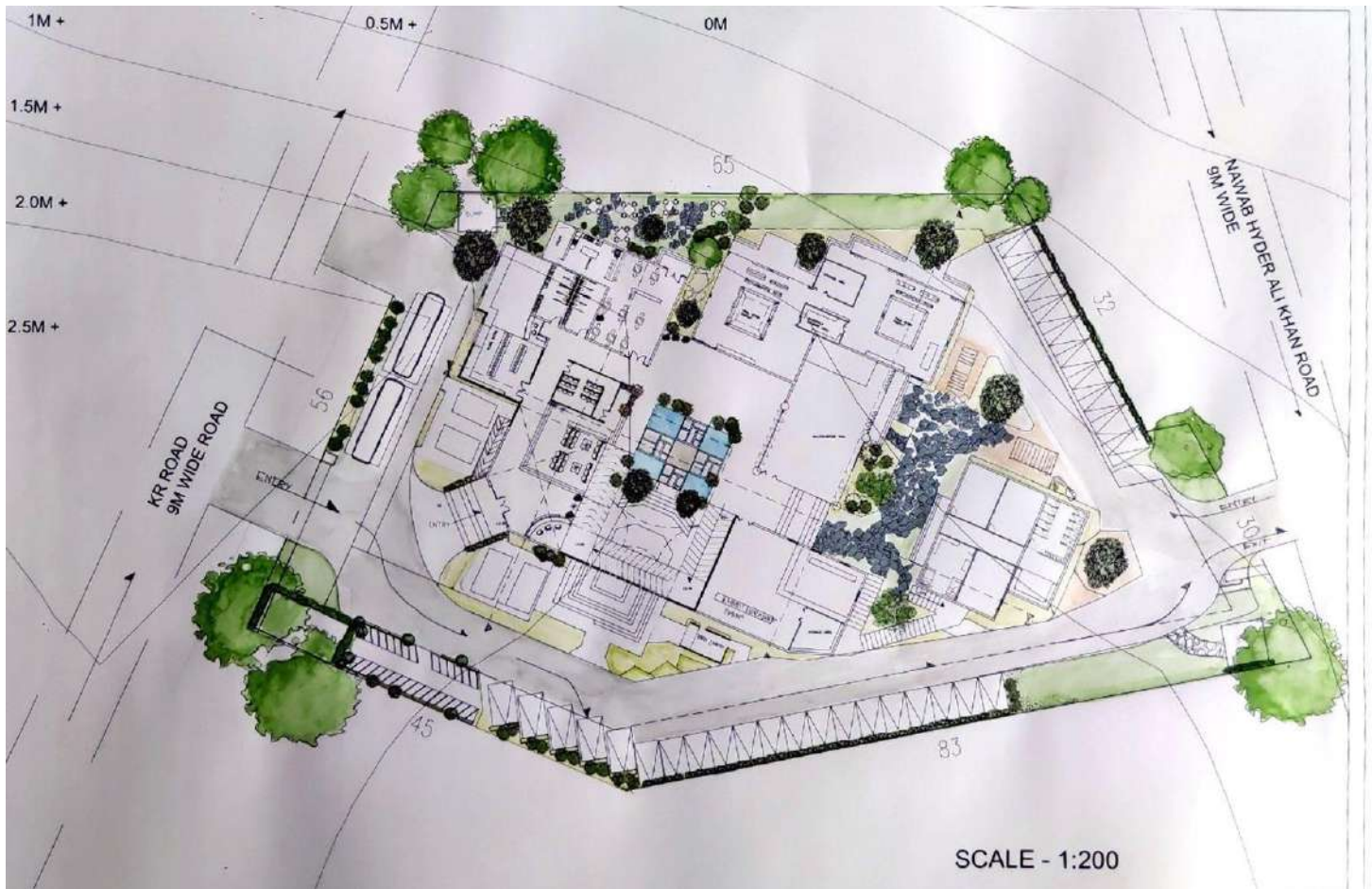


WEST ELEVATION

Architectural Design V

Faculty: Ar. Dominic L Harper, Ar. Kavitha Pole, Ar. Kiran Baikidy, Ar. Sushmitha Paul

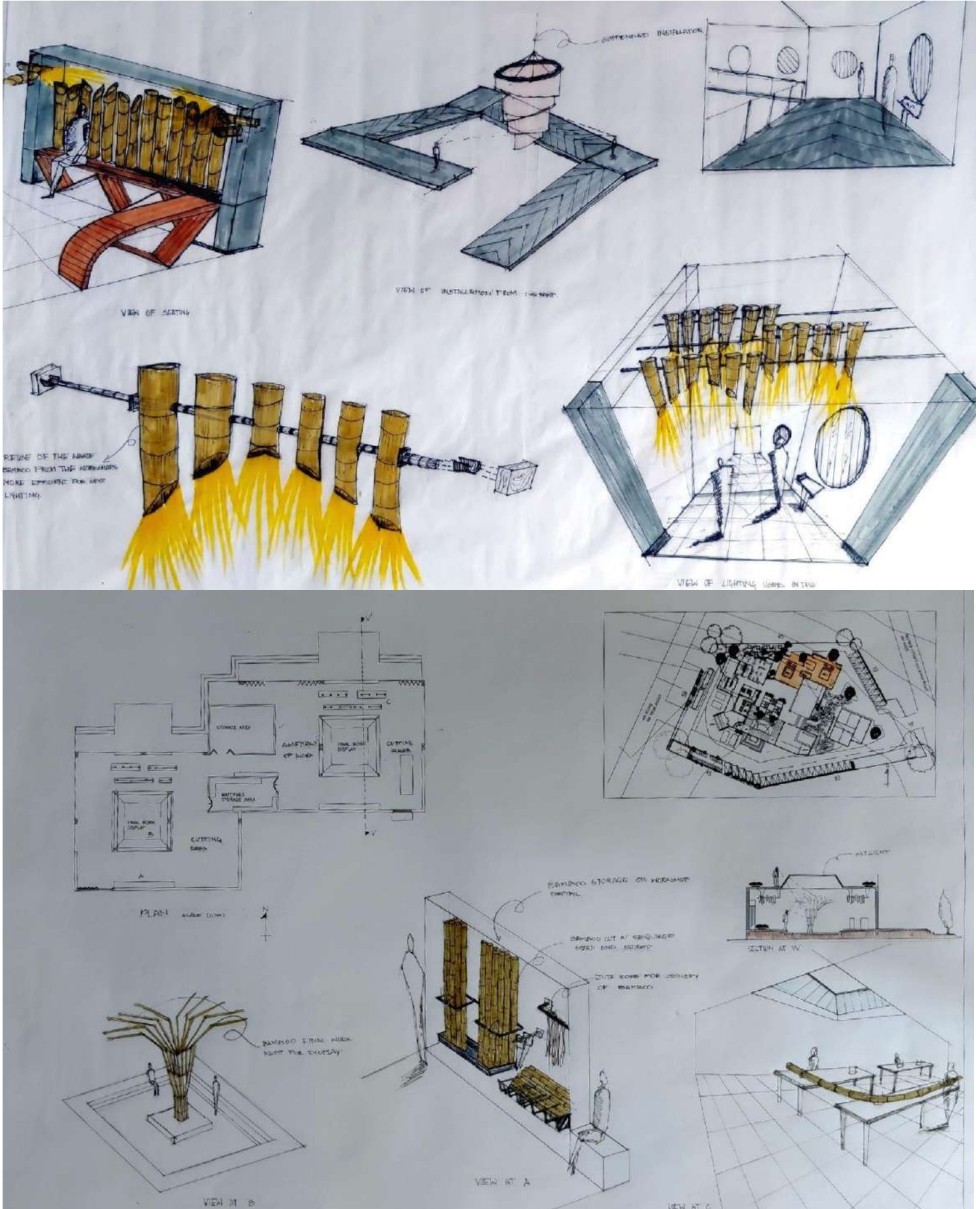
K B Lelith Aditya
1DC20AT030



Architectural Design V

Faculty: Ar. Dominic L Harper, Ar. Kavitha Pole, Ar. Kiran Baikidy, Ar. Sushmitha Paul

K B Lelith Aditya
1DC20AT030



POTTERY IN INDIA

POTTERY IN THE INDIAN SUBCONTINENT HAS AN ANCIENT HISTORY AND IS ONE OF THE MOST TANGIBLE AND ICONIC ELEMENTS OF INDIAN ART. TODAY IT IS A CULTURAL ART THAT IS STILL PRACTICED EXTENSIVELY IN INDIAN SUBCONTINENT.

TRADITIONAL NIZAMABAD BLACK POTTERY FROM UTTAR PRADESH

POTTERIES ON DISPLAY IN DELHI (JAI MARKET, NEW DELHI)

INDUS VALLEY CIVILIZATION

INDUS VALLEY CIVILIZATION HAS AN ANCIENT TRADITION OF POTTERY MAKING. THOUGH THE ORIGIN OF POTTERY IN INDIA CAN BE TRACED BACK TO THE MUCH EARLIER MESOLITHIC AGE, WITH COARSE HANDMADE POTTERY - BOWLS, JARS, VESSELS IN VARIOUS COLOURS SUCH AS RED, ORANGE, BROWN, BLACK AND CREAM. DURING THE INDUS VALLEY CIVILIZATION THERE IS PROOF OF POTTERY BEING CONSTRUCTED IN TWO WAYS, HANDMADE AND WHEEL-MADE (MOCAPPA). THERE ARE SEVERAL POTTERY TYPES SEEN AND HAVE BEEN DIVIDED INTO SEVERAL TYPES BASED ON REGIONS.

A STORAGE JAR FROM MATURE HARAPPAN PERIOD AT THE NATIONAL MUSEUM, NEW DELHI.

BIDRIWARE, KARNATAKA

BIDRIWARE IS AN ART OF METAL HANDICRAFT THAT ORIGINATED DURING 14TH CENTURY IN KARNATAKA, DURING THE RULE OF THE BAHMANI SULTANS. THE NAME BIDRIWARE ORIGINATED FROM THE REGION WHERE IT IS MOSTLY PRACTISED - BIDRI IN KARNATAKA. THE ARTISANS USE A BLEND OF ZINC, COPPER AND SILVER TO DEVELOP UNIQUE ARTIFACTS AND PRODUCTS. IT IS A FAMILY LEGACY THAT HAS BEEN TAUGHT AND HANDLED OVER TO GENERATIONS AS 'DINK' PAPER IN BIDRI. SHINY AND LUSTROUS HANDCRAFTED PRODUCTS ARE CONSIDERED A RICH SYMBOL OF WEALTH AND DECOR.

TERRACOTTA JEWELLERY

HUMAN BEINGS HAVE AN INHERENT LOVE OF BEAUTY. THE ART OF MAKING AND WEARING JEWELLERY DATES BACK TO ANCIENT CIVILIZATIONS EVEN IN PASTORAL SOCIETY. THE FOUR TREASURES WERE COW, STABLES OF HORSES, ELEPHANTS AND JEWELS. THE OLDEST JEWELLERY WAS MADE FROM NATURAL MATERIALS SUCH AS CLAY, WOOD, BONE ETC.

TERRACOTTA JEWELLERY IS ONE OF THE OLDEST FORMS OF JEWELLERY IN THE WORLD. TERRACOTTA IS AN ITALIAN WORD THAT MEANS "COOKED EARTH". ITS HISTORY DATES BACK TO THE HARAPPA AND MOHENJODARO CIVILIZATION. THERE HAVE BEEN SEVERAL ORNAMENTS LIKE EARRINGS, EAR STOPS, NECKLACES, PENDANTS, BANGLES AND BRACELETS FOUND BY ARCHAELOGISTS.

CLAY BANGLES FOUND IN HARAPPA WERE COLOURED AND WELL POLISHED. MANY TERRACOTTA FIGURINES ALSO HAVE BEEN UNEARTHED THAT HAD ELABORATE DEPICTIONS OF ARTISTIC JEWELLERY.

TERRACOTTA JEWELLERY MAKING PROCESS

PREPARATION OF CLAY

MAKE CLAY CUTTING DIE

CUT SQUARE SHAPE CLAY

MAKE DESIGNS ON CLAY + BAKE THE TERRACOTTA PIECES AFTER DRYING

THE PROCESS OF MAKING POTTERY

1. FORM CLAY - BASED ON FORM TYPE - (ON-FORM AND OFF-FORM) SLABS ARE AVAILABLE
2. SELECTION OF METHOD TO WORK - POTTER'S WHEEL / COILING / SCAB-MAKING
3. FORM MAKING - FORMATION OF DIFFERENT DOGS/BOWLS
4. FINISHING THE OBJECT - TRADITIONAL METHODS INVOLVE USE OF WOOD KILN. HE AN ELECTRIC KILN CAN ALSO BE USED
5. PAINT THE OBJECT
6. BURN TO SEAL THE COLOUR OF THE OBJECT
7. BURN THE BOTTOM OF OBJECT USING SAND PAPER

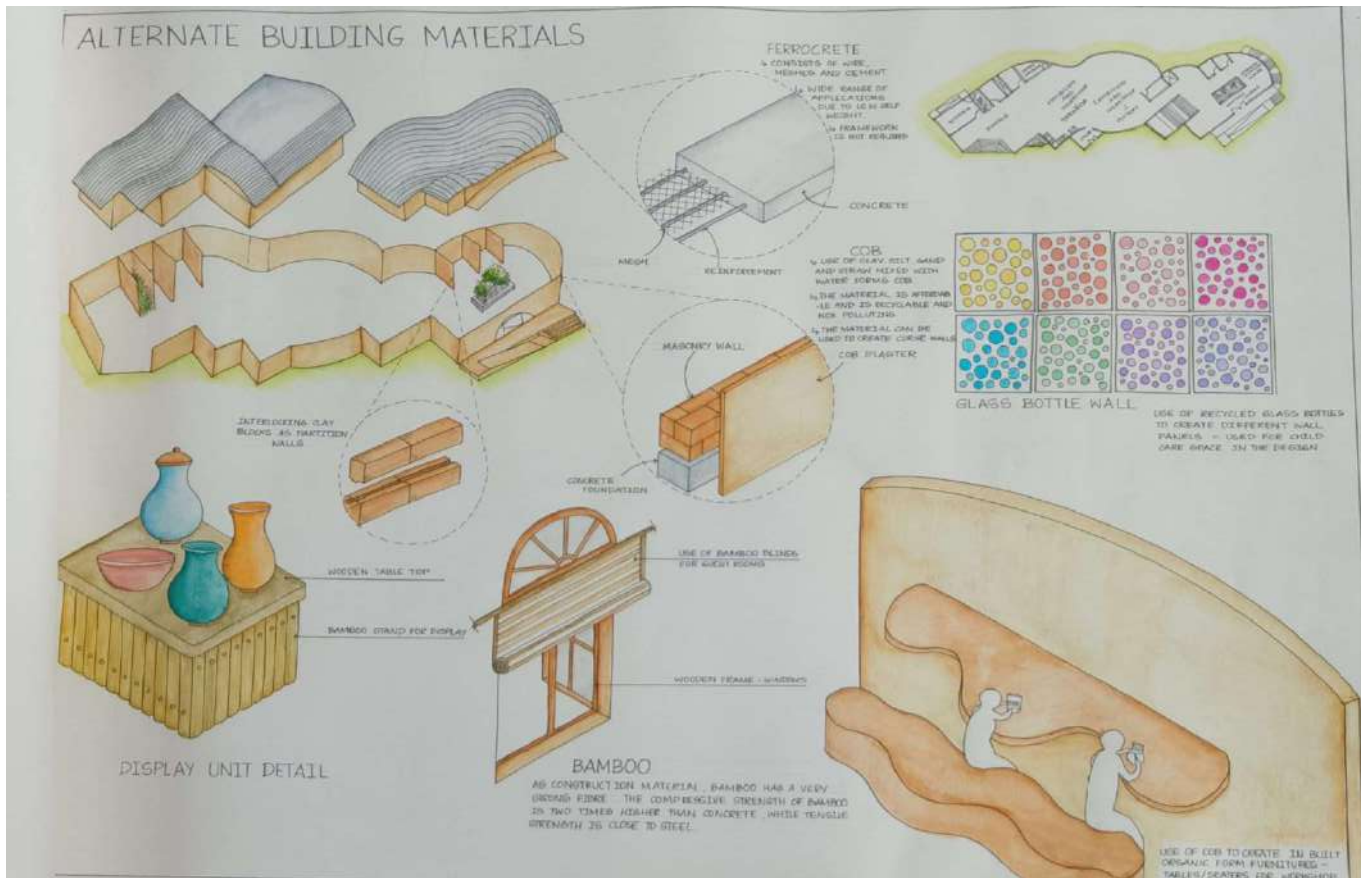
MASSING

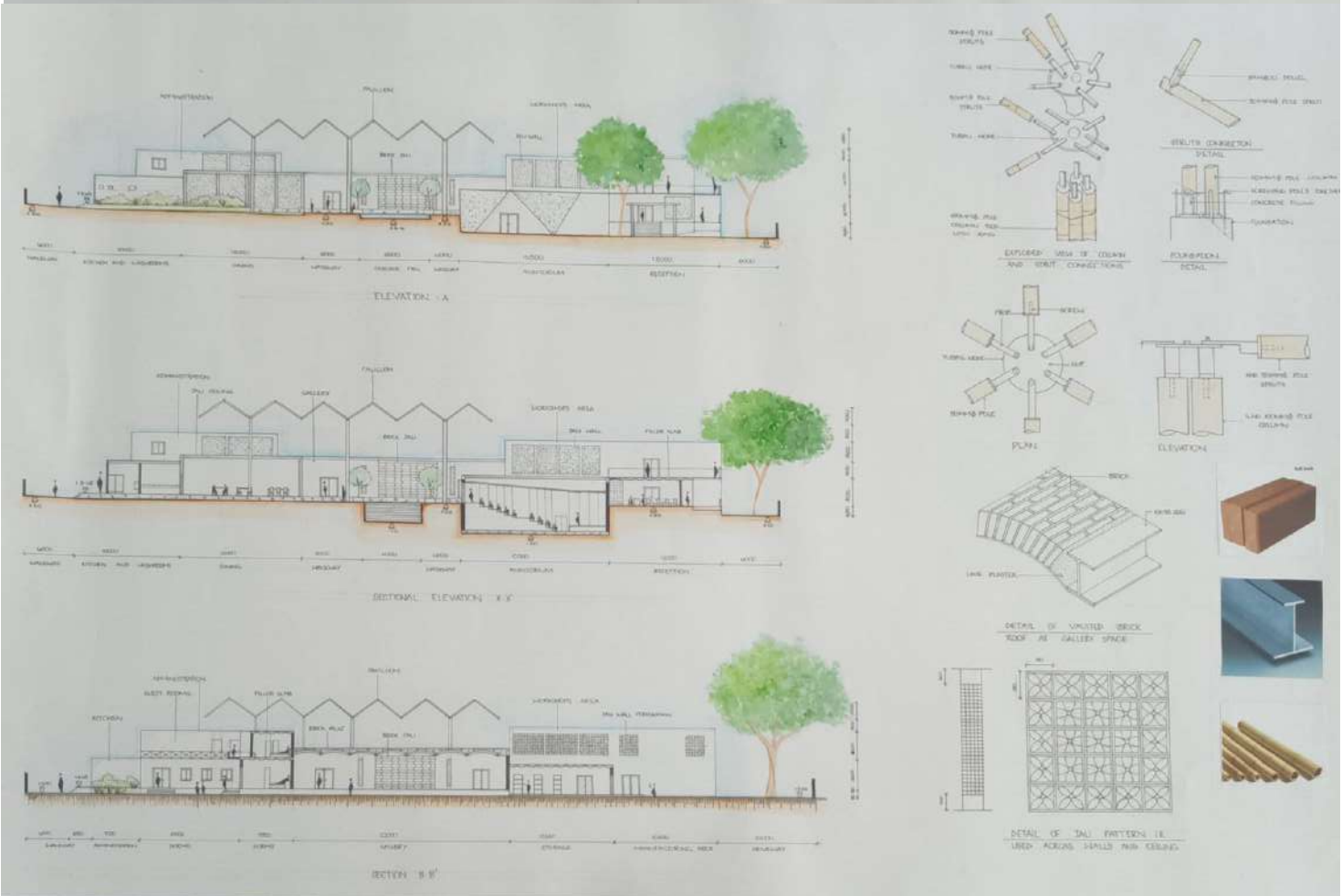
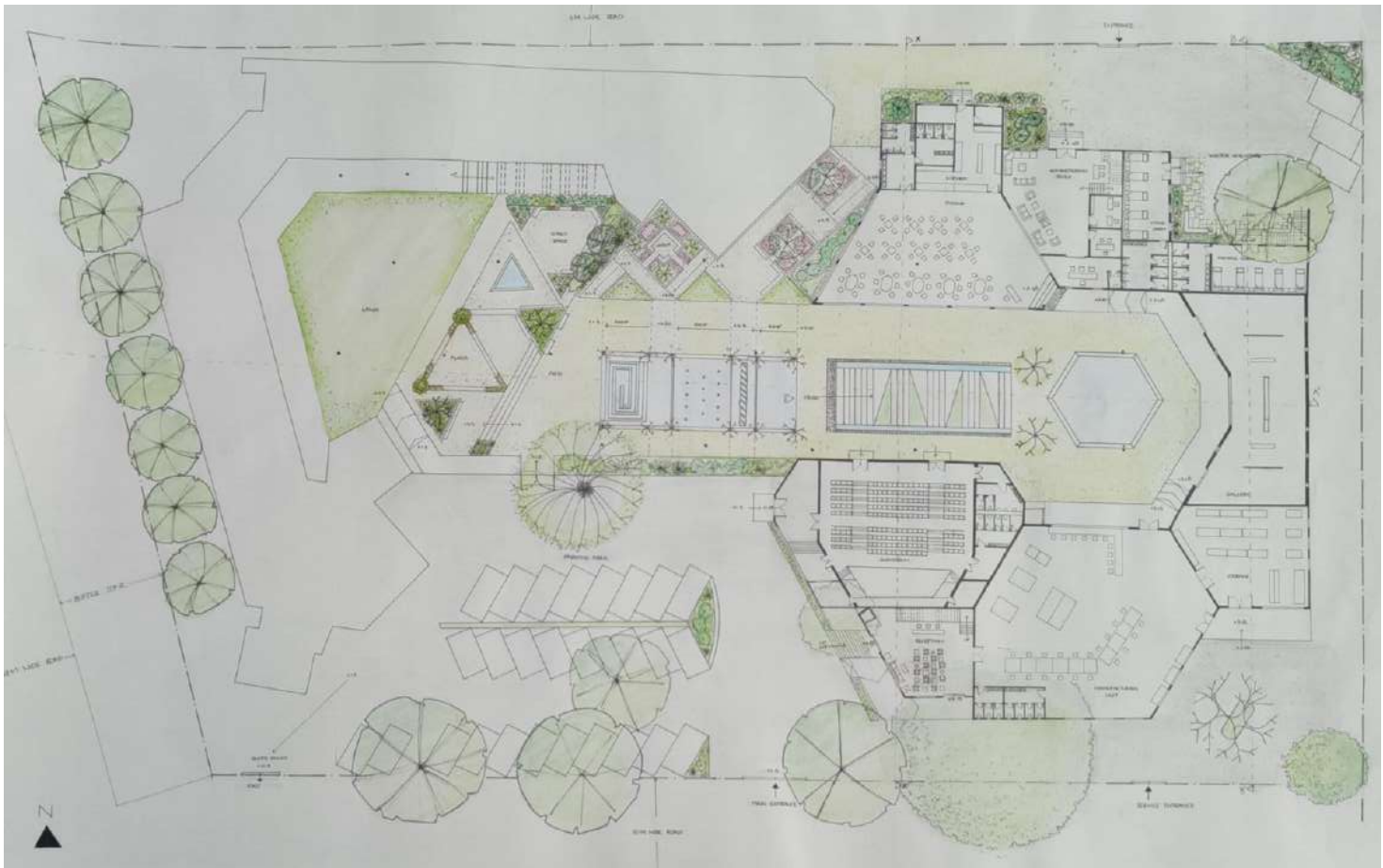
FROM POTTERY MAKING PROCESS, A SERIES OF CIRCLES OF DIFFERENT WIDTHS ARE OVERLAPPED ALONG THE X-Y DIRECTION / FORM.

COMBINATIONAL OF CIRCLES WITH GREY LEADS TO FORMATION OF AN ORGANIC FORM. WASH BLOCKS WITH THE GREY PATTERN.

MATERIAL PALLETTE

COB TERRACOTTA WOOD BRANCO TERRACOTTA





MATERIALS AND METHODS OF BUILDING CONSTRUCTION V

SUBJECT CODE 18ARC52

Studio Coordinators

5th Semester MMBC is largely about long span structures and plastic as a building material. The large span structures include, steel trusses, portal frames and pre engineered buildings, shell structures including barrel shells, hyperbolic paraboloids and folded plate structures and geodesic domes and space frames. The topic concludes with tensile and pneumatic structures.

Plastic as a building material is the second topic of the semester and has components like adhesives and additives in building construction, waterproofing is the third and last topic of the semester.

The studio was based on a practical/hands on or experiential learning approach by encouraging the students to build models for all the topics under the large span structures heading. Large scale live models were constructed by the students using different materials and joinery detailing. Thus models for each subtopic like steel trusses, shell structures, space frames and tensile structures were constructed by the students.

A long span workshop with bamboo was also conducted by Er Manjunath BL. The students were taken to site visits to the nearby Kumaraswamy temple campus and KAVIKA factory campus for Trusses and Portal frames. They also had an around the campus introductory visit to understand the long span structures within the campus.



Ar. Aparna
Shastri



Ar. Dominic L
Harper

Studio Faculty



Ar. Surabhi
Moharir

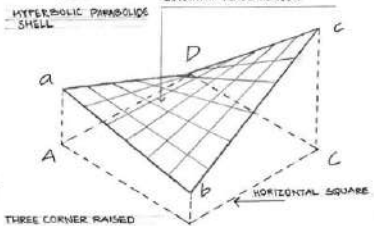
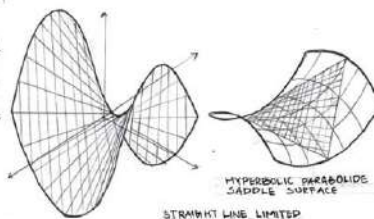
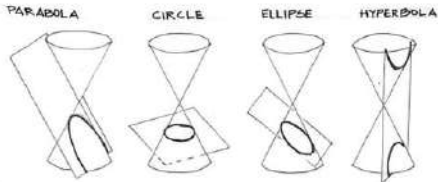


Ar. Divya S

HYPERBOLIC PARABOLOID

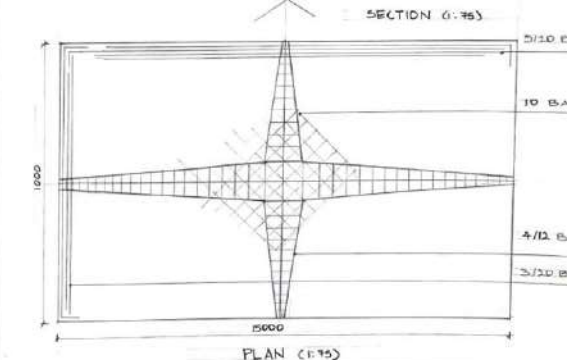
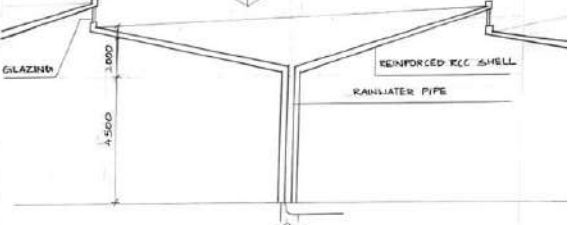
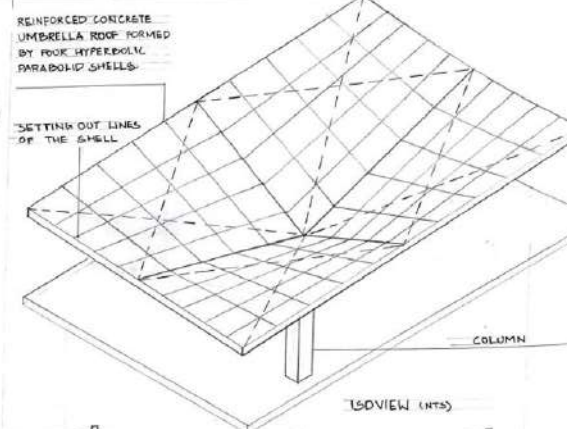
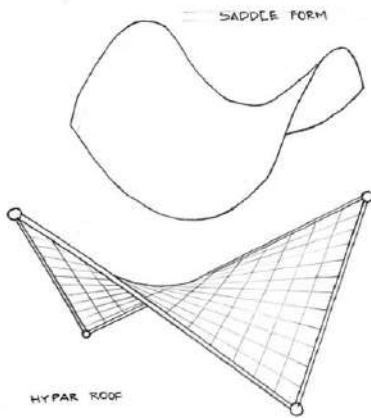
HYPERBOLA : IS A SYMMETRICAL OPEN CURVE FORMED BY INTERSECTION OF CIRCULAR CONES WITH A PLANE AT SMALL ANGLE WITH ITS AXIS THAN THE SIDE OF THE CONE

PARABOLA : A SYMMETRICAL OPEN PLANE CURVE FORMED BY THE INTERSECTION OF A CONE WITH A PLANE PARALLEL TO THE SIDE OF THE CONE. THE PATH OF PROJECTILE UNDER THE INFLUENCE OF GRAVITY FOLLOWS CURVE OF THIS SHAPE



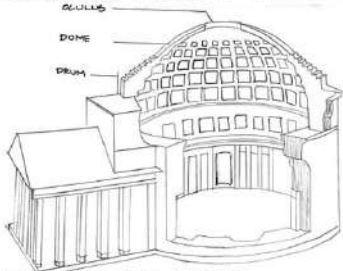
ROOF STRUCTURES : HYPERBOLIC PARABOLOID IS A DOUBLY CURVED SURFACE THAT RESEMBLES THE SHAPE OF A SADDLE. IT HAS CONVEX FORM ALONG ONE AXIS AND A CONCAVE FORM ALONG THE OTHER. THIS UNIQUE DESIGN GIVES ITS SHAPE. ITS NAME - HYPERBOLIC PARABOLOID COMES FROM THE FACT THAT THE HORIZONTAL CROSS-SECTIONS ARE HYPERBOLAS, WHILE VERTICAL C/S (PARALLEL TO THE OTHER TWO COORDINATE PLANES : YZ AND Y1 ARE PARABOLAS)

HYPARS : CAN ALSO BE FORMED BY TWO SETS OF STRAIGHT LINES CALLED GENERATIVES, OR RULING. THIS MEANS THAT DESPITE A CURVED SURFACE, A HYPAR CAN BE THUS CONSTRUCTED WITH STRAIGHT LINES.



DOMES

- A DOME IS A ROUNDED VAULT MADE OF EITHER CURVED SEGMENTS OR A SHELL OF REVOLUTION, MEANING AN ARCH ROTATED AROUND ITS CENTRAL AXIS
- A DOME IS A HOLLOW SEMI-HEMISPHERICAL STRUCTURAL ELEMENT. DOMES EVOLVED FROM ARCHES BY ROTATING AN ARCH 360 DEGREES
- THEY ARE SELF-SUPPORTING, STABILIZED BY THE FORCE OF GRAVITY ACTING ON THEIR HEIGHT TO HOLD THEM IN COMPRESSION



ZONE OF TRANSITION

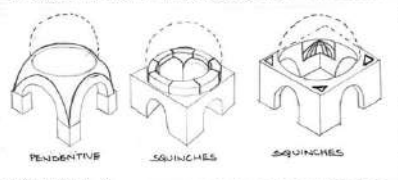
WHEN THE BASE OF THE DOME DOES NOT MATCH THE PLAN OF THE SUPPORTING WALLS BENEATH IT (FOR EXAMPLE, A DOME'S CIRCULAR BASE OVER A SQUARE BAY), TECHNIQUES ARE EMPLOYED TO BRIDGE THE TWO

THE SIMPLEST TECHNIQUE IS TO USE DIAGONAL LINTELS ACROSS THE CORNERS OF THE WALLS TO CREATE OCTAGONAL BAYS

ANOTHER IS TO USE ARCHES TO SPAN THE CORNERS, WHICH CAN SUPPORT MORE WEIGHT

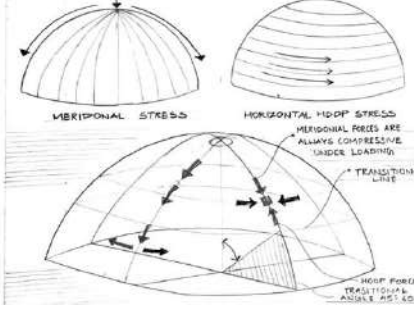
A VARIETY OF THESE TECHNIQUES USE WHAT ARE CALLED "SQUINCHES" - A SQUINCH CAN BE A SINGLE ARCH OR SET OF MULTIPLE ARCHES, PLACED DIAGONALLY OVER AN INTERNAL CORNER. SQUINCHES CAN TAKE A VARIETY OF OTHER FORMS, AS WELL INCLUDING TRUMPET ARCHES AND HIGH HEADS OR HALF DOMES

THE INVENTION OF PENDENTIVE SUPERSEDED THE SQUINCH TECHNIQUE. PENDENTIVES ARE TRIANGULAR SECTIONS OF A SPHERE



THRUSTS AND FORCES

- A MASONRY DOME PRODUCES THRUST UPWARD AND OUTWARDS
- FORCES ARE IN COMPRESSION ON TOP AND TENSION AT BASE
- EXTERNAL MEANS OR STRUCTURAL REINFORCEMENT MAY BE USED TO COUNTER THE THRUST CREATED BY A DOME
- DOMES ARE STABLE DURING CONSTRUCTION AS EACH LEVEL IS MADE A COMPLETE AND SELF-SUPPORTING RING. THE UPPER PORTION OF MASONRY DOME IS ALWAYS IN COMPRESSION AND SUPPORTED LATERALLY

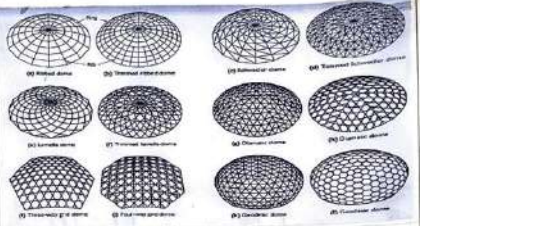


MATERIALS

- THE EARLIEST DOMES IN THE MIDDLE EAST WERE BUILT WITH MUD-BRICK AND EVENTUALLY WITH BAKED BRICK AND STONE
- DOMES OF WOOD ALLOWED FOR LIGHT SPACING DUE TO THE RELATIVELY LIGHT AND PLIABLE NATURE OF THE MATERIAL AND WERE NORMALLY THE THINNEST VERSIONS OF THE CONCEPT
- WOODEN DOMES WERE PROTECTED FROM THE WEATHER BY ROOFINGS, SUCH AS COPPER OR LEAD SHEETING
- DOMES OF CUT STONE WERE MORE EXPENSIVE AND NEVER AS LARGE AND THICK. WAS USED FOR LARGE SPANS WHERE BRICK WAS UNAVAILABLE
- DIFFERENT KINDS OF MASONRY AND GEODESIC DOME
- MASONRY DOMES USED STRONG SUPPORTS AT THE BASE, SOMETIMES THICKER THAN THE DOME
- GEODESIC DOMES ARE LITTLE STRUCTURES THAT ARE LIGHT AND ARE SELF-SUPPORTING
- DUE TO ITS SHAPE, THE GEODESIC DOME IS A STRONG CONSTRUCTION AS THE PRESSURE APPLIED ON IT IS DISTRIBUTED TO A CERTAIN DEGREE
- A MODERN CONCRETE DOME WEIGHS 200 KG/M³

TYPES OF DOMES

- ACCORDING TO CONSTRUCTION TECHNIQUE
- BEHIVE DOME OR CORBULED DOME
 - BRACED DOME (CATHEDRAL, TEMPLE, THREE BAY GRID, LAMHELLA OR KALITT, LATTICE, AND GEODESIC DOME)
 - CLUSTER VAULT
 - COMPOUND DOME
 - CRUSSED ARCH DOME
 - GEODESIC DOME
 - UMBRELLA DOME
- ACCORDING TO GEOMETRY
- HEMISPHERICAL
 - SEGMENTAL
 - CANTENARY
 - POINTED
 - FLACED



CLUSTER VAULT: CALLED DOMICAL VAULTS. THESE MAINTAIN POLYGON SHAPES IN THEIR HORIZONTAL C/S

COMPOUND DOME: ALSO CALLED PENDENTIVE DOMES. THEY HAVE PENDENTIVES AS SMALLER DOMES IS SUPPORTED ON THEM

HEMISPHERICAL DOME: THEY ARE HALF SPHERE ACCORDING TO E. BALDWIN SMITH IS A SHARP LIKELY RADIUS TO ANCHORS

ONION DOME: SIX BARS, DOMES, PEOPLE GREATER THAN HEMISPHERE

SAIL DOME: ALSO CALLED SAIL VAULTS, DOMICAL VAULTS. THIS TYPE CAN BE THOUGHT AS PENDENTIVE

SADDLE DOME: ALSO CALLED AS SEGMENTAL DOMES. THESE HAVE PROFILE LESS THAN A HALF CIRCLE

UMBRELLA DOME: THIS TYPE IS DIVIDED AT THE BASE INTO CURVED SEGMENTS WHICH FOLLOW CURVE OF ELEVATION

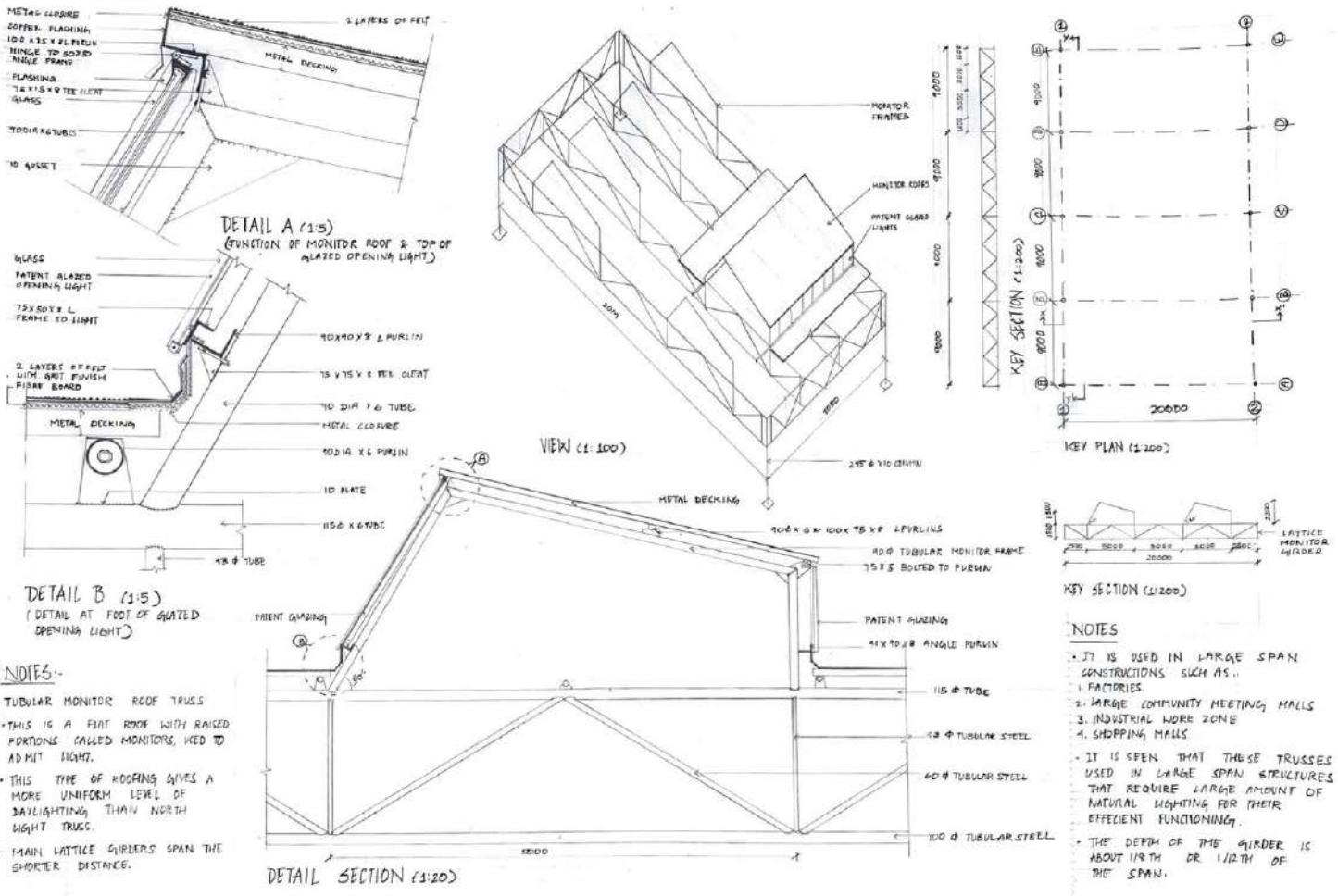
GEODESIC DOME: IS MADE UP OF TWO SETS OF STRUTS. SOME THAT SPAN FROM POLES THAT LOOK LIKE SPINES ON SHELL VIEWED FROM TOP

GEODESIC DOME: ARE THE UPPER PORTION OF GEODESIC SPHERES. THEY ARE COMPOSED OF A FRAME WORK OF TRIANGLES IN POLYHEDRON PATTERN

- THEY ARE BASED UPON GEOMETRIC SHAPES SUCH AS ICOSAHEDRON, OCTAHEDRON OR TETRAHEDRONS
- SUCH DOMES CAN BE CREATED USING A LIMITED NUMBER OF SIMPLE ELEMENTS

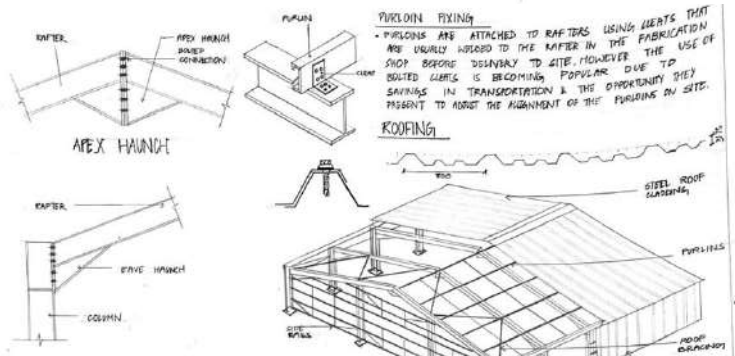
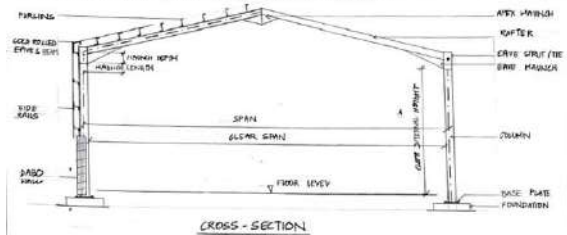
AND JOINTS AND EFFICIENTLY RESOLVE A DOME'S INTERNAL FORCES. THEIR EFFICIENCY IS SAID TO INCREASE WITH SIZE

ALTHOUGH NOT FIRST INVENTED BY BUCKMINSTER FULLER, THEY ARE ASSOCIATED WITH HIM BECAUSE HE DESIGNED MANY GEODESIC DOMES AND PLANTED THEM IN U.S.

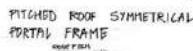


PORTAL FRAME

- A RIGID STRUCTURAL FRAME CONSISTING ESSENTIALLY OF TWO UPRIGHTS CONNECTED AT THE TOP BY A THIRD MEMBER.
- PORTAL FRAMES ARE GENERALLY LOW RISE STRUCTURES, COMPRISING COLUMNS AND HORIZONTAL MEMBER RAFTERS, CONNECTED BY MOMENT-RESISTING CONNECTIONS.



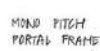
TYPES OF PORTAL FRAMES



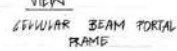
25M - TO 35M ARE THE MOST EFFICIENT SPANS.



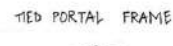
OFFICE ACCOMMODATION IS OFTEN PROVIDED WITHIN A PORTAL FRAME STRUCTURE USING A PARTIAL WIDTH MEZZANINE FLOOR.



USUALLY CHOSEN FOR SMALLER SPANS OR BECAUSE OF ITS PROXIMITY TO OTHER BUILDINGS.



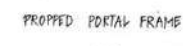
RAFTERS MAY BE FABRICATED FROM CELLULAR BEAMS FOR AESTHETIC REASONS OR WHEN PROVIDING LONG SPANS.



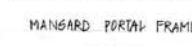
IN TIED PORTAL FRAME THE HORIZONTAL MOVEMENT OF BAYES & THE BRACING MOMENT IN COLUMNS & RAFTERS ARE REDUCED. A TIE MAY BE USEFUL TO LIMIT SPREAD IN A CRANE SUPPORTING STRUCTURE.



WHERE A TRAVELLING CRANE OF RELATIVELY LOW CAPACITY (UP TO 20 TONNAGE) IS REQUIRED, BRACKETS CAN BE FIXED TO THE COLUMNS TO SUPPORT THE CRANE RAILS.



WHERE THE SPAN OF A PORTAL FRAME IS LARGE & THERE IS NO REQUIREMENT TO PROVIDE A CLEAR SPAN, A PROPPED PF CAN BE USED TO REDUCE RAFTER SIZE & ALSO HORIZONTAL SHEAR AT FOUNDATIONS.



A MANSARD PF CAN BE USED WHERE A LARGE CLEAR HEIGHT AT MID SPAN IS REQUIRED BUT THE BAY'S HEIGHT OF BUILDING HAS TO BE MINIMIZED.

BRACING

- BRACING IS REQUIRED TO RESIST NON-UNIFORM ACTIONS DUE TO WIND & CRANES, & TO PROVIDE RESTRAINT TO MEMBERS.
- IT IS COMMON TO USE HOLLOW SECTIONS AS BRACING MEMBERS.
- TWO TYPES OF BRACING / LONGITUDINAL BRACING:
 - VERTICAL BRACING / LONGITUDINAL BRACING
 - PINE BRACING / ROOF BRACING

ADVANTAGES

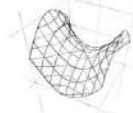
- SPEED & EASE OF ERECTION.
- BUILDING CAN BE QUICKLY CLOSED IN & MADE WATER TIGHT.
- FRAMEWORK PREFABRICATED IN A WORKSHOP AND AFFECTED BY WEATHER.
- NO WEATHER HOLD UP DURING PRELIMINARY THE FRAMEWORK.
- UNITED TOGETHER IN FACTORIES BY WELDING & SITE CONNECTIONS SHOULD BE BOLTED.

DISADVANTAGES

- ALTHOUGH STEEL IS INCOMBUSTIBLE IT HAS A POOR RESISTANCE TO FIRE AS IT BENDS FASTLY WHEN HOT.
- SUBJECT TO CORROSION.

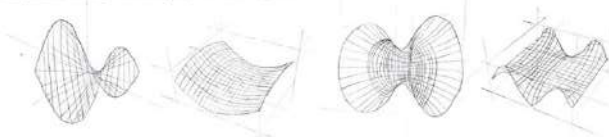
INTRODUCTION

- HYPERBOLIC PARABOLOID IS A DOUBLY CURVED SURFACE THAT RESEMBLES THE SHAPE OF A SADDLE. IT HAS A CONVEX FORM ALONG ONE AXIS AND A CONCAVE FORM ALONG THE OTHER. THIS UNIQUE DESIGN GIVES IT A SADDLE SHAPED SURFACE.
- THESE SHELL STRUCTURES WERE DESIGNED AND CONSTRUCTED BY FELIX CANDELA IN MEXICO DEMONSTRATING THAT DRAMATIC SHAPES AND STRUCTURAL POSSIBILITIES OF DOUBLY CURVED SHELLS.
- IN GEOMETRY, THE HYPERBOLIC PARABOLOID IS A SURFACE IN THREE DIMENSIONS FORMED BY TRANSLATING A CURVE (DISPLACEMENT) A DOWNWARD CURVING PARABOLA ALONG AN UPWARD CURVING PARABOLA, PRODUCING A SADDLE SURFACE. FOR THIS REASON, THE HYPER. COUNTS AS A TRANSLATIONAL SURFACE.
- ITS NAME - HYPERBOLIC PARABOLOID, ARISES FROM THE FACT THE HORIZONTAL CROSS SECTIONS ARE HYPERBOLAS, WHILE VERTICAL CROSS-SECTIONS PARALLEL TO THE OTHER TWO COORDINATE PLANES (XZ AND YZ PLANES) ARE PARABOLAS.
- THE TRACES, AS SHOWN IN THE IMAGE BELOW, ARE SIMPLY THE INTERSECTIONS OF A SURFACE WITH PLANES.
- WHEN A HYPERBOLIC PARABOLOID BEING SLICED BY HORIZONTAL PLANES WE GET HYPERBOLIC TRACES.
- THE HORIZONTAL CROSS SECTIONS ARE ALSO CALLED LEVEL CURVES.



- HYPER. IS BOTH A TRANSLATION AND A RULED SURFACE.
- HYPER. CAN ALSO BE FORMED BY TWO SETS OF STRAIGHT LINES CALLED GENERATRICES, OR RULINGS. THIS MEANS THAT DESPITE BEING A CURVED SURFACE, A HYPER. CAN BE THUS CONSTRUCTED WITH STRAIGHT LINES.
- A SURFACE THAT CONTAINS TWO SETS OF STRAIGHT LINES, OR RULINGS, IS CALLED A DOUBLY RULED SURFACE.
- AN IMPORTANT REASON FOR THE USE OF HYPER. IN CONSTRUCTION IS THAT THEY CAN BE FORMED USING STRAIGHT LINES. CONSEQUENTLY, THE HYPERBOLIC PARABOLOID IS AN IDEAL SHELL FORM, ALLOWING THE USE OF STRAIGHT BOARDS FOR FORMWORK.

HYPERBOLIC PARABOLOID SHELL

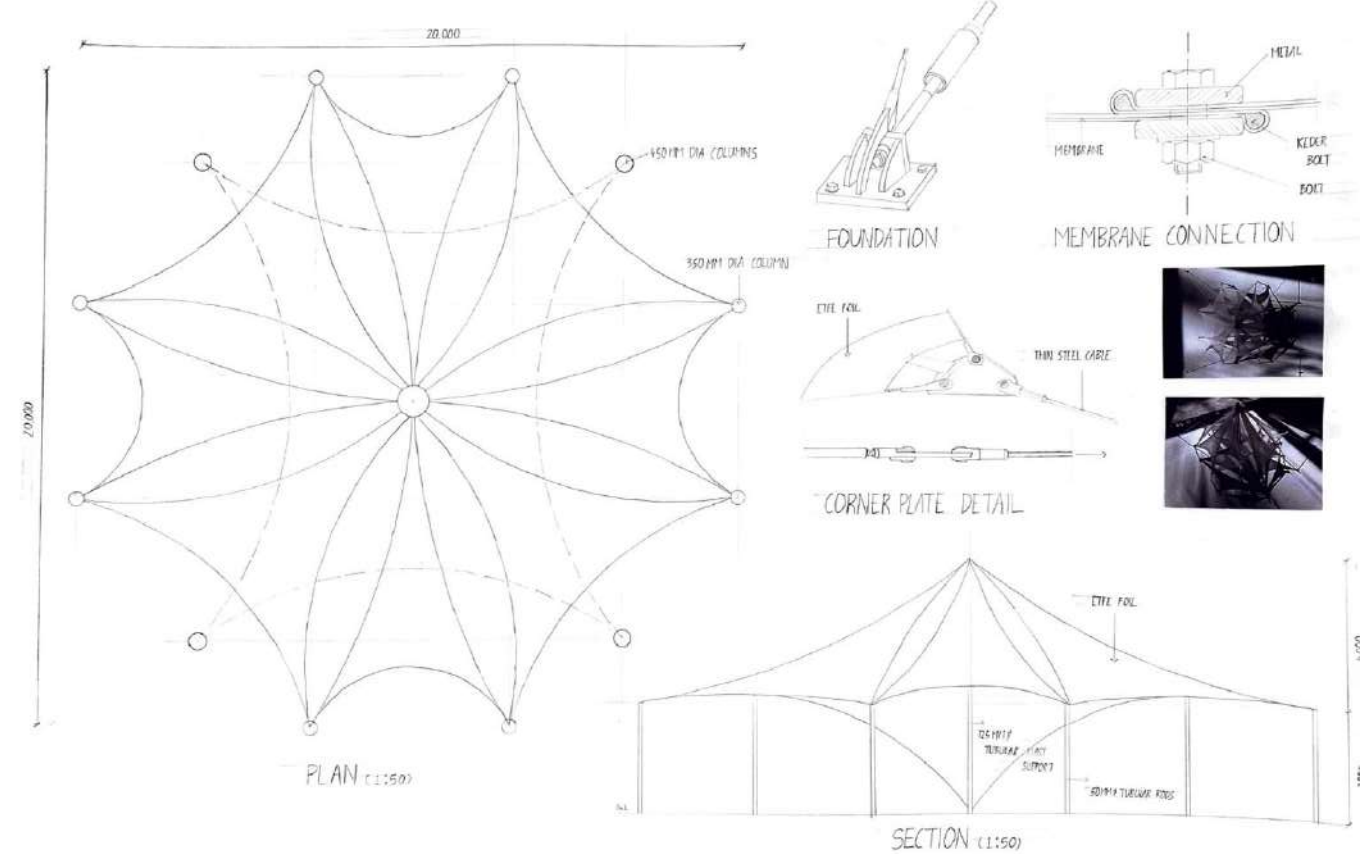
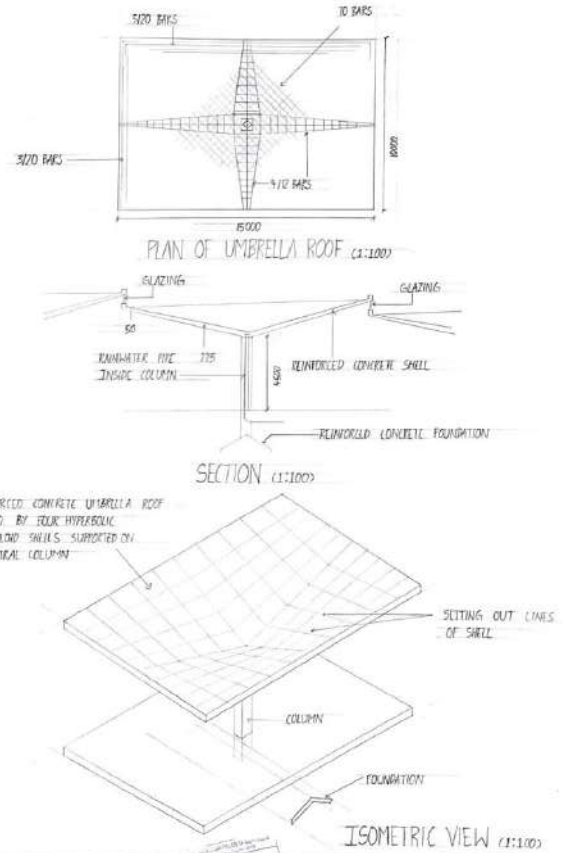


TYPES OF HYPERBOLIC PARABOLOID SHELL

- DOUBLY RULED MEANS THAT THEY ARE EASY TO CONSTRUCT USING A SERIES OF STRAIGHT STRUCTURAL MEMBERS.
- THIN SHELL ROOFS GAIN STRENGTH THROUGH THEIR SHAPE, THE CURVATURE OF THE SHAPE IMPARTS ITS TENDENCY TO BURSTLE IN COMPRESSION.
- HYPERBOLIC PARABOLOID SHELL ROOFS CAN BE CONSTRUCTED USING REINFORCED CONCRETE WITH A SHELL THICKNESS OF JUST 50MM FOR SPANS UP TO 35M.

LOS MANANTIALES / FELIX CANDELA

- CANDELA INVENTED THE UMBRELLA FORM FOR THE FOOTINGS, A METRIAL SAVING STRATEGY TO DISTRIBUTE THE WEIGHT OF THE STRUCTURE OVER THE POOR QUALITY SOIL OF MEXICO CITY.





**SOCIOLOGY & BUILDING
ECONOMICS
SUBJECT CODE 18HUM56**

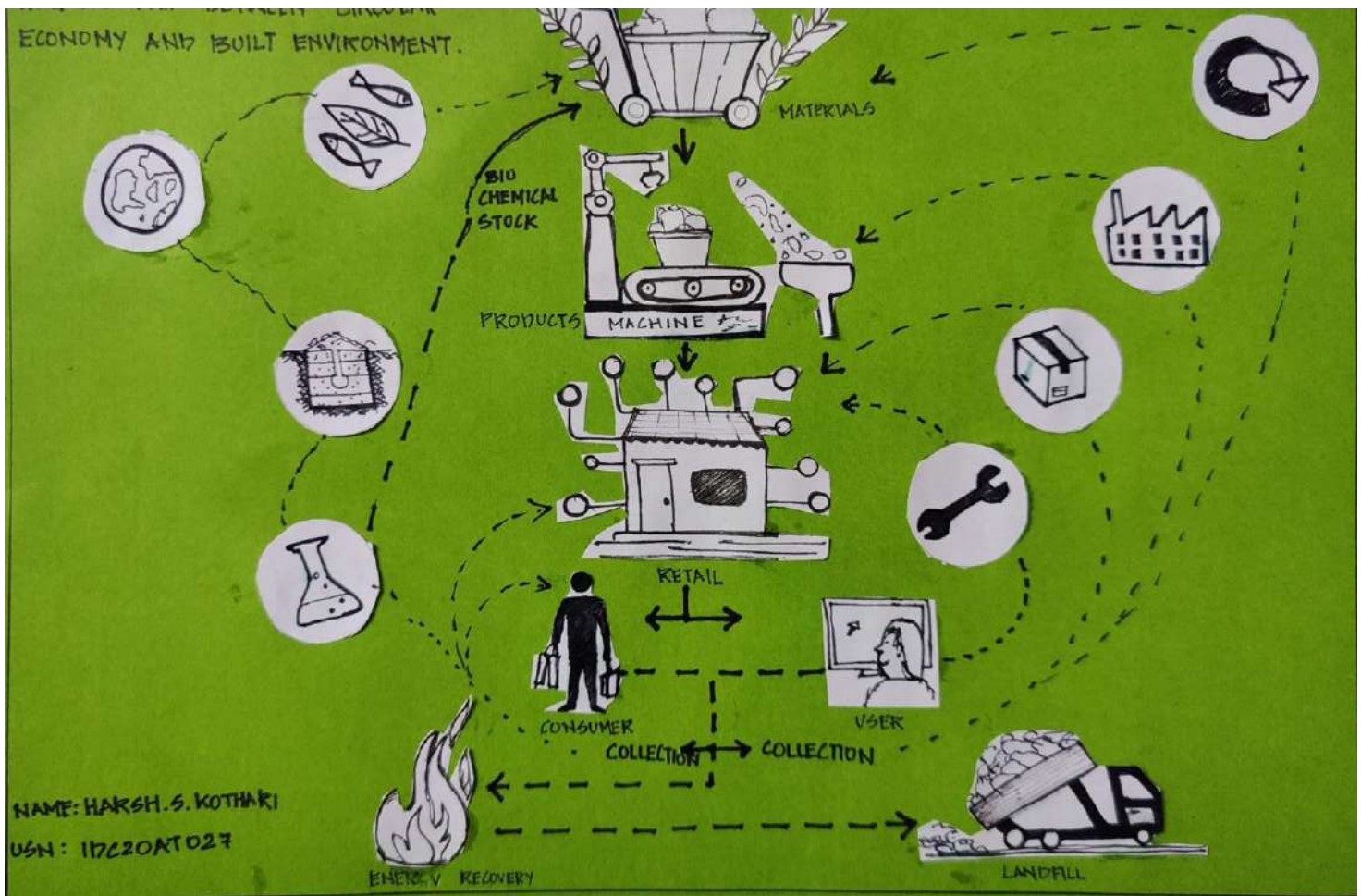
Studio Faculty

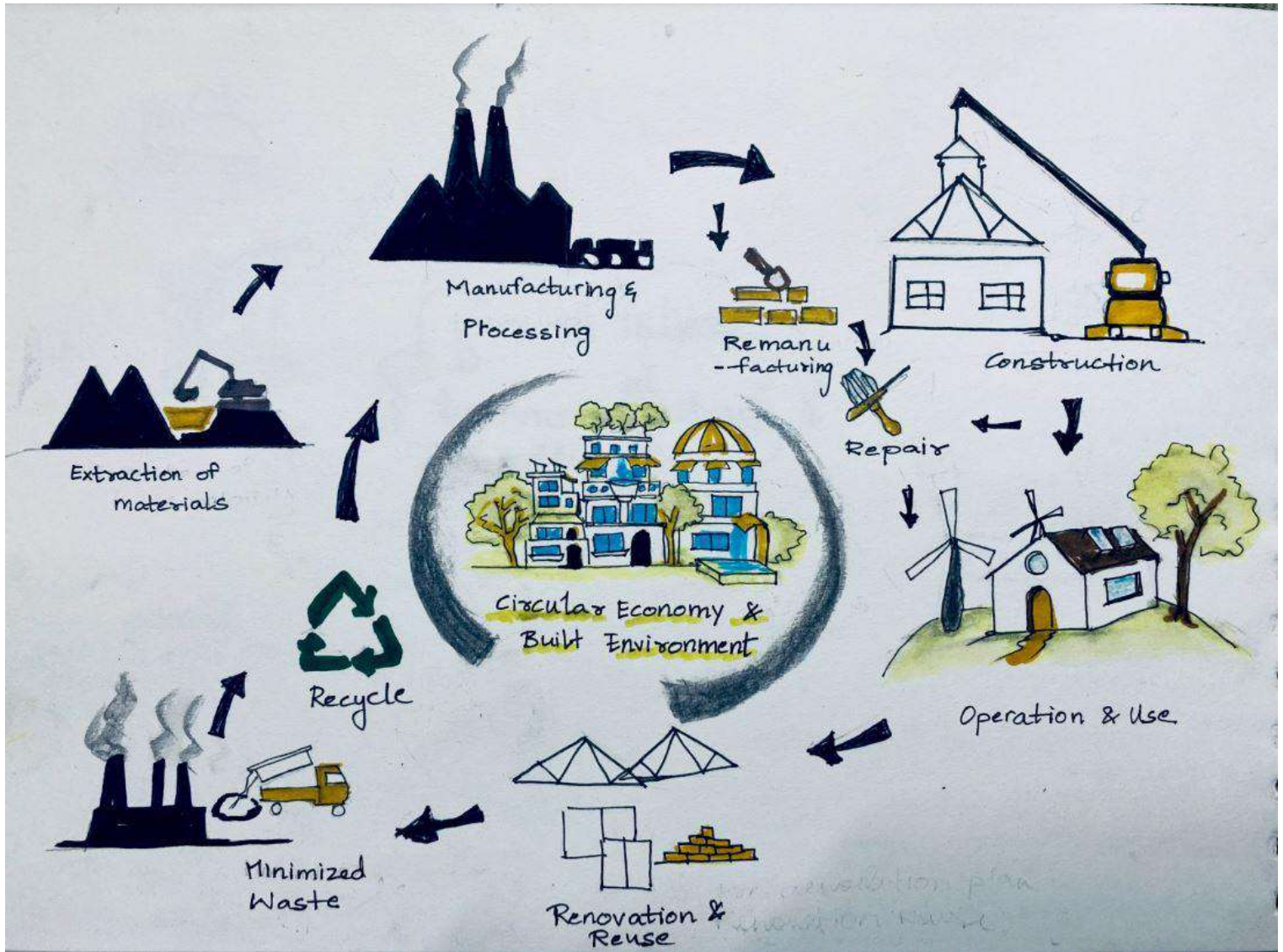


Ar. Nikhil
Ravindra

Course Objective:

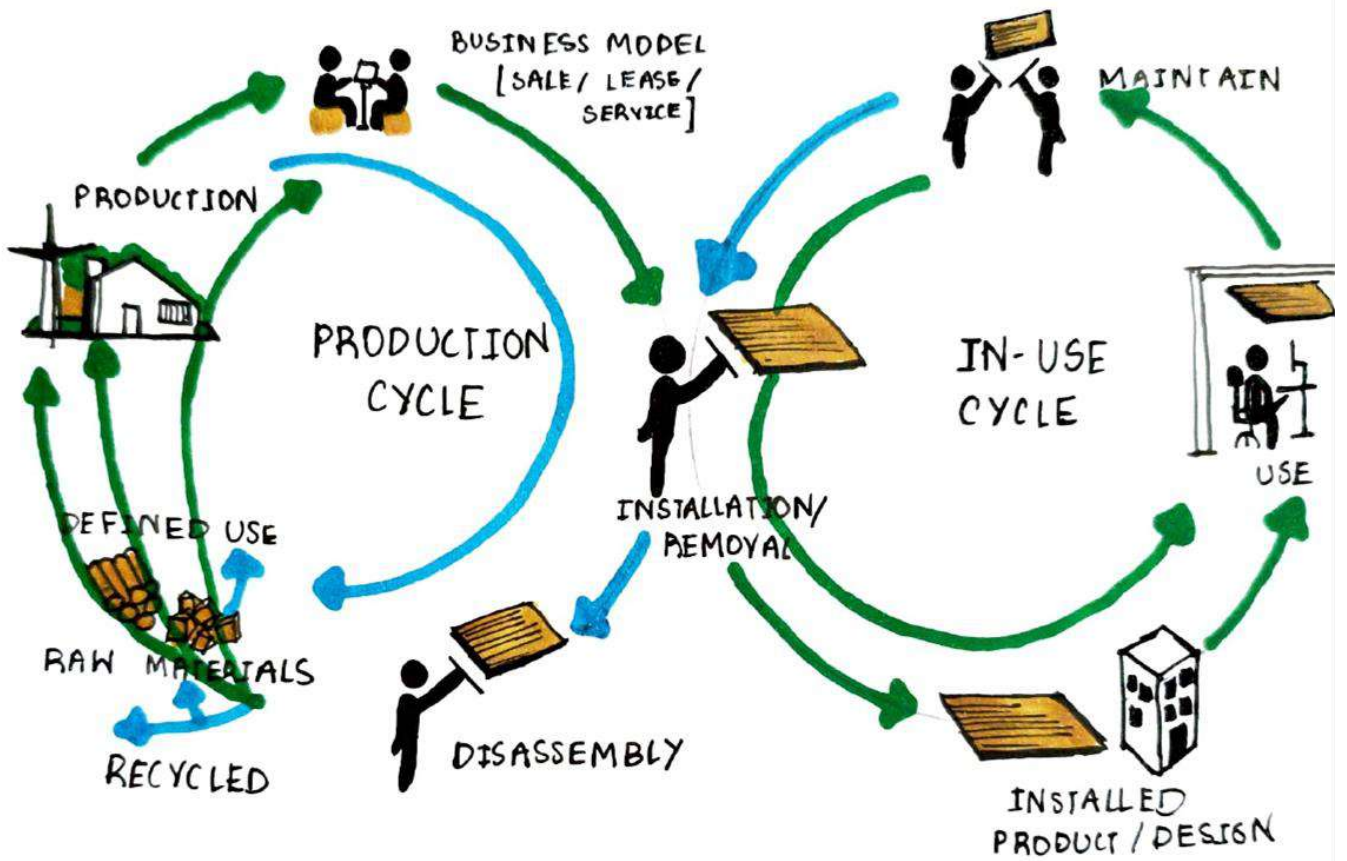
To familiarize students with the basic concepts of sociology and economics and their influence on architecture.



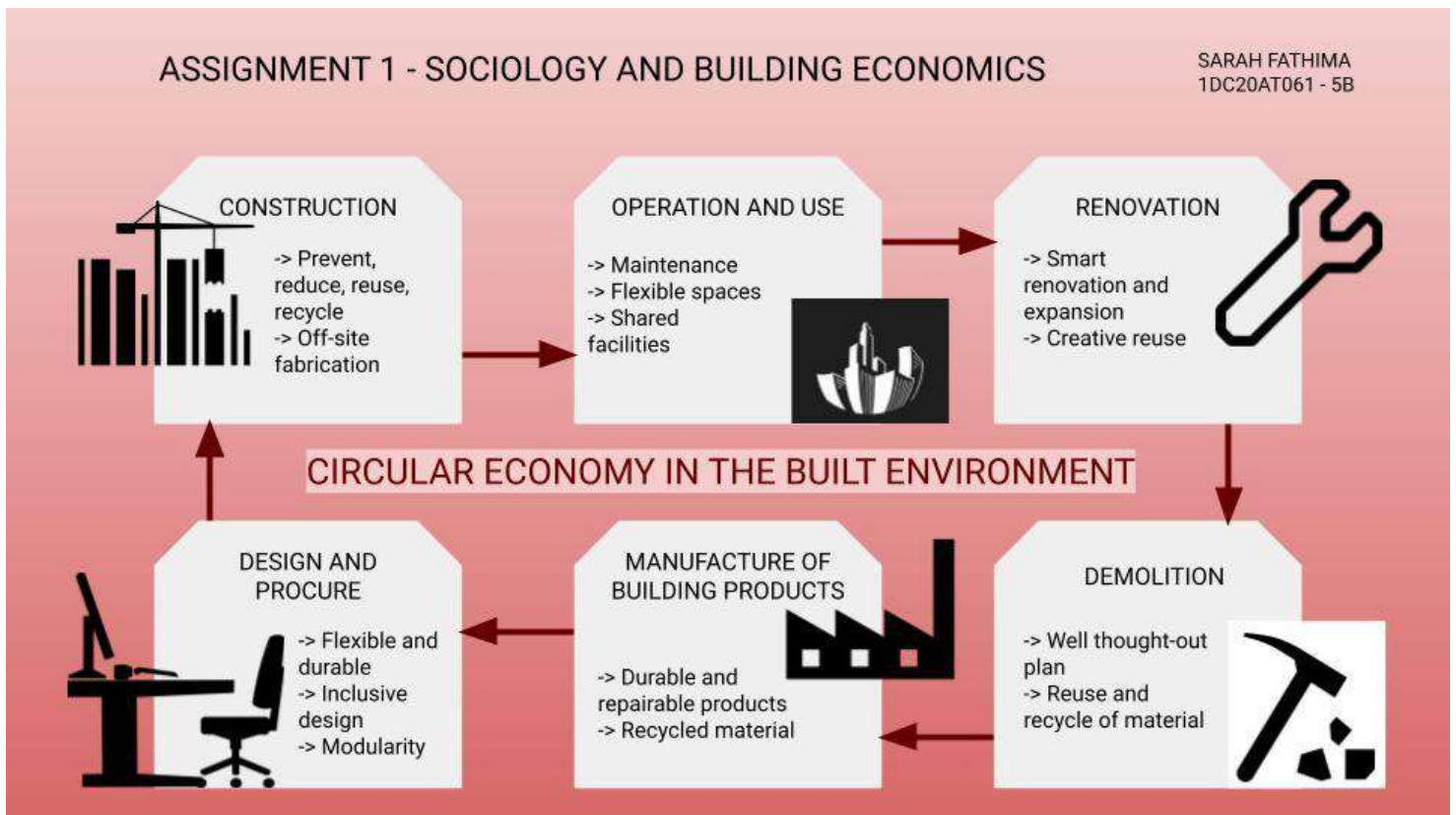


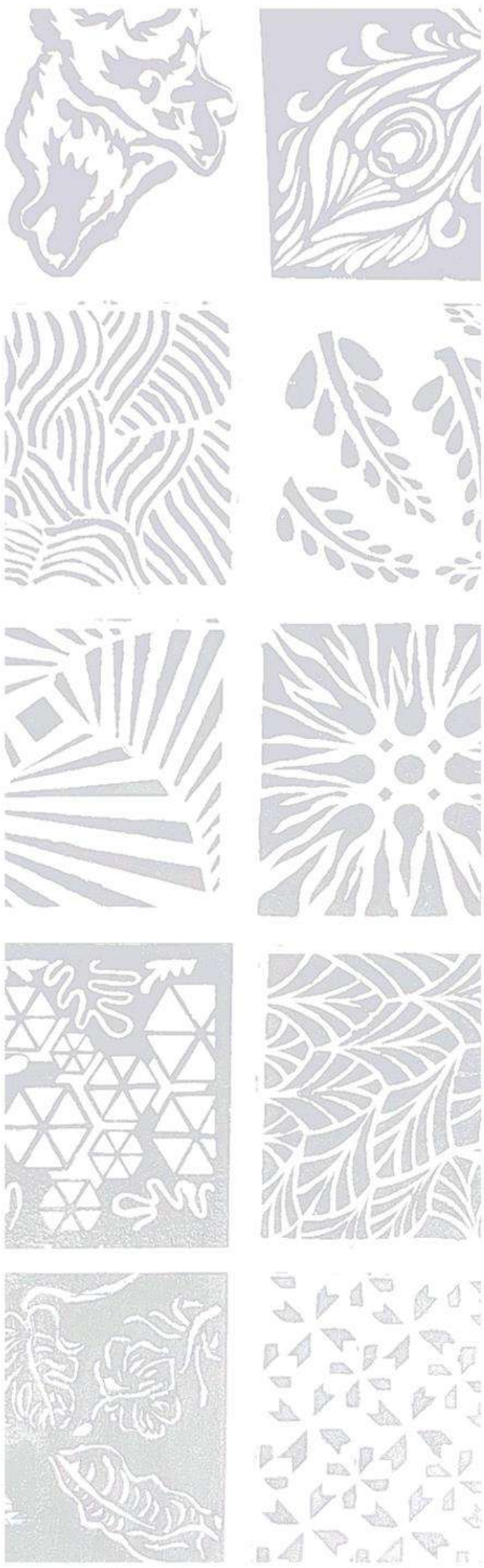
S&E ASSIGNMENT - 1

RELATIONSHIP BETWEEN CIRCULAR ECONOMY AND BUILT ENVIRONMENT



RITU KAIWAR
1DC20AT058
Y'B'





6th Semester

18 ARC 6.1 ARCHITECTURAL DESIGN VI
Even Semester Major Design Project
Institute of Integrated Urban Water Management
(IUWM), Bengaluru

Course objective (as per syllabus)

- To enable the students to integrate design with history, theory, building construction and material science in a more informed way.

Outline:

To understand the role of built environments of increasing complexity by:

- a) Intrinsic factors: Size, volume, levels, functional spaces or zones, structural possibilities
- b) External factors: site, approach, traffic, ecology, services
- c) Constraints: bye-laws, budget, ideology, attitudes
- d) Create an 'Identity' to the Campus through integration of the above.

Studio Aim :

To focus on Campus Design Principles and Key considerations like site studies, Landscape strategies to address the ecological issues, Architectural vocabulary - Buildings that promote Intellectual and social exchange, understanding and planning for site services, sustainable development strategies - response to and responsible use of energy and natural resources etc

Studio objective :

Understanding the importance of sites topography and context, to anticipate, propose and design appropriate functions based on the site understanding and analysis.

The design proposal would be a resultant understanding and the identification of the ecological issues that persist in the locality.

ARCHITECTURAL DESIGN I SUBJECT CODE 21 ARC 11 A Division

Studio Coordinators



Ar.Dominic
Harper

Studio Faculty



Ar.Steny John



Ar.Kavita Pole



Ar. Vasavi S R

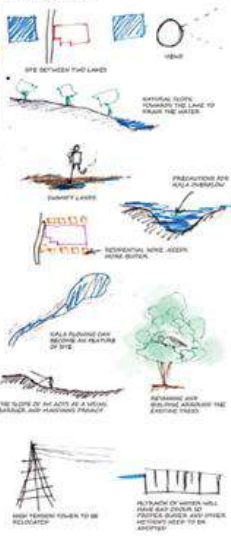
LOCATION



LOCATED NEAR VIDYAPEETH ROAD ON DODDABALLAPUR ROAD, TOTAL AREA 15 HECTARES (BY ACQUISITION) FOR THE INDIAN BIRD SOCIETY. RESEARCHED IN SEVERAL FOREIGN JOURNALS, UPSTREAM OF THE SITE MERGES WITH ATUR LANE AND COMES THROUGH YELAHANNA LAKE WHICH BETWEEN THE PUTTENAHALLI AND YELAHANNA ACTS AS A NATURAL PURIFIER FOR THE WATER THAT REACHES THE YELAHANNA LAKE.

THE SITE ADJOINS A GREEN CORRIDOR WHICH WAS ONCE UPON A TIME FARMS LANDS AND HAVING A ROADAGE VIA TUNNAGE ON THE SOUTH EAST CORNER WHICH REQUIRES TO BE DEVELOPED AS PART OF THE SITE PHYSICAL CHARACTERISTICS.

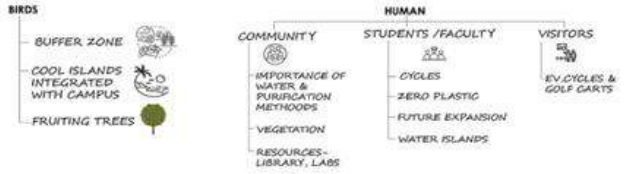
INFERENCE



CONCEPT

A CAMPUS BRINGS TOGETHER DIVERSE PEOPLE AND THEIR IDEAS IN AN ENVIRONMENT THAT CREATES POTENTIAL FOR INTELLECTUAL AND SOCIAL EXCHANGE. WHILE THE PHYSICAL CHARACTER AND QUALITY OF A CAMPUS IS DEFINED BY BOTH ITS ARCHITECTURAL FEATURES AND ITS OPEN SPACE, IT IS THE OPEN SPACE WHICH HAS THE GREATEST POTENTIAL FOR SHAPING AND EQUALIZING THE SHARED SPACE OF THE CAMPUS.

CO-HABITAT



SITE



FAUNA



FLORA

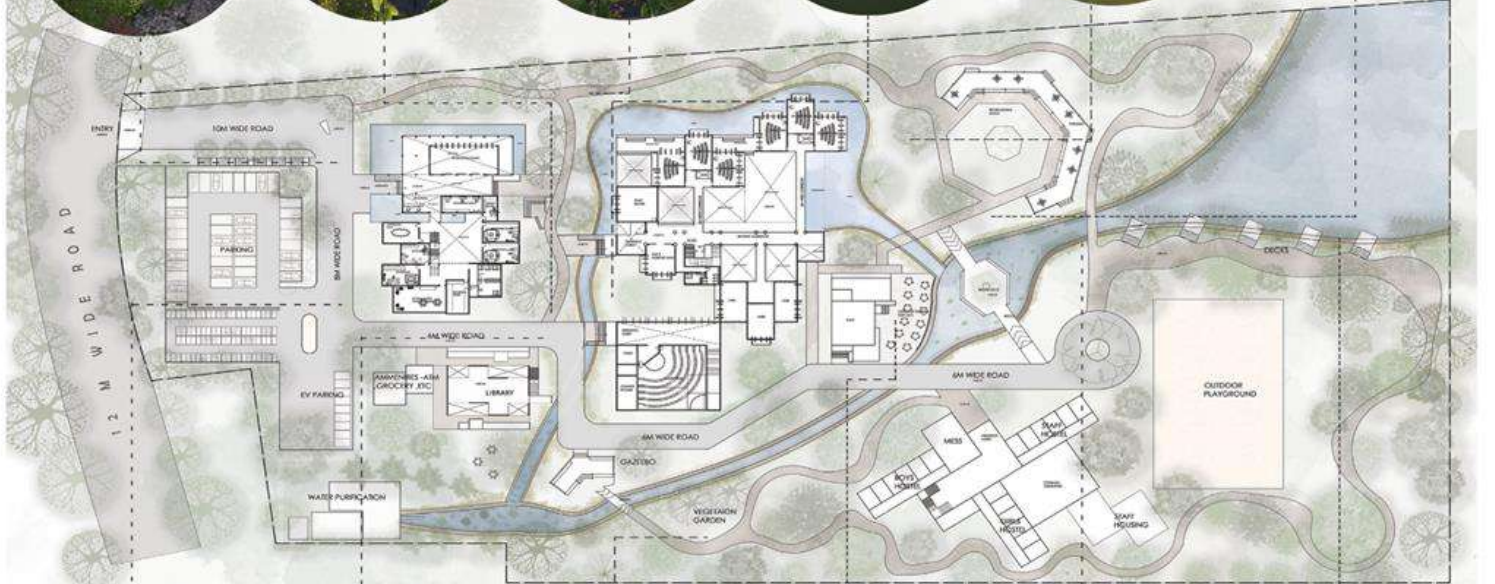
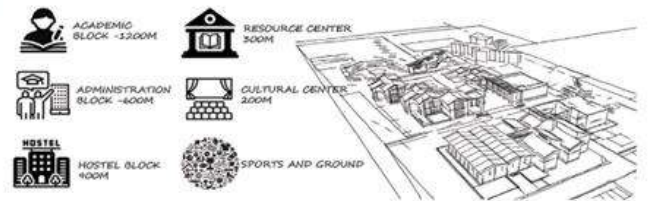


SITE PHOTOGRAPHS

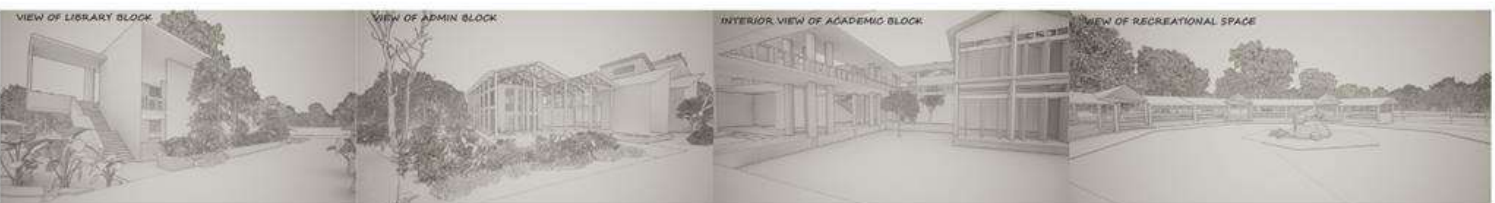


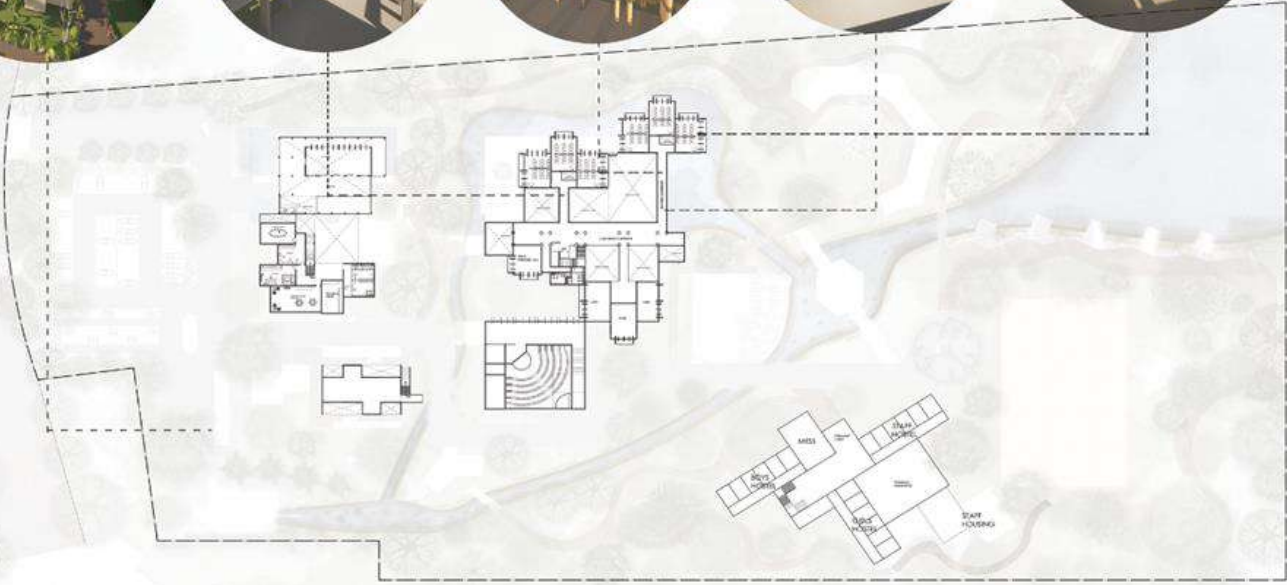
AREA PROGRAM

STUDENT STRENGTH - UG 2 COURSES OF 3 YEAR DURATION - 20 PER BATCH (E 40 X 3 = 120)
PG 2 COURSES OF 2 YEAR DURATION - 10 PER BATCH (E 20 X 2 = 40)
TOTAL STRENGTH FORMAL EDUCATION - 160 STUDENTS
DEVELOPMENT PROGRAMS LIKE SWACHH BHARAT MISSION GRAMIN ETC - 2 COURSES 20 PER BATCH = 40
TOTAL STRENGTH = 200
ADMIN + MAINTENANCE STAFF - 25. CAMPUS FOOT FALL (NUMBER OF STUDENTS + STAFF + VISITORS) = 250 - 275



MASTER PLAN (1:400)





FIRST FLOOR PLAN (1:400)



SITE SECTION AA' (1:400)



SITE SECTION BB' (1:400)



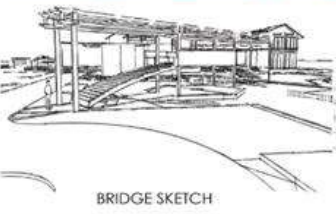
ARIAL VIEW SKETCH



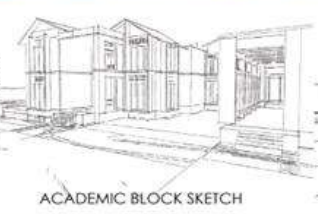
NORTH ELEVATION (1:400)



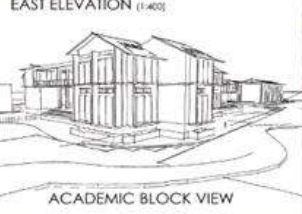
EAST ELEVATION (1:400)



BRIDGE SKETCH



ACADEMIC BLOCK SKETCH



ACADEMIC BLOCK VIEW



KEY PLAN



EXTERIOR VIEW OF ACADEMIC BLOCK



EXTERIOR VIEW OF ACADEMIC BLOCK



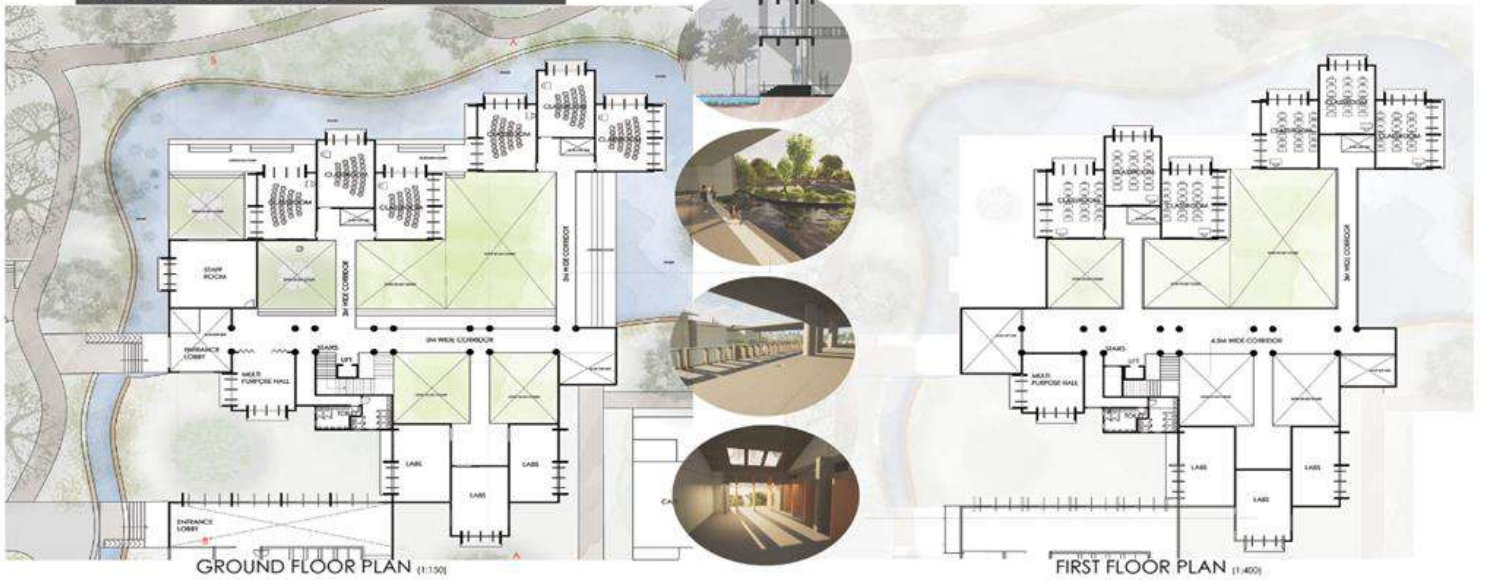
VIEW OF PATHWAY



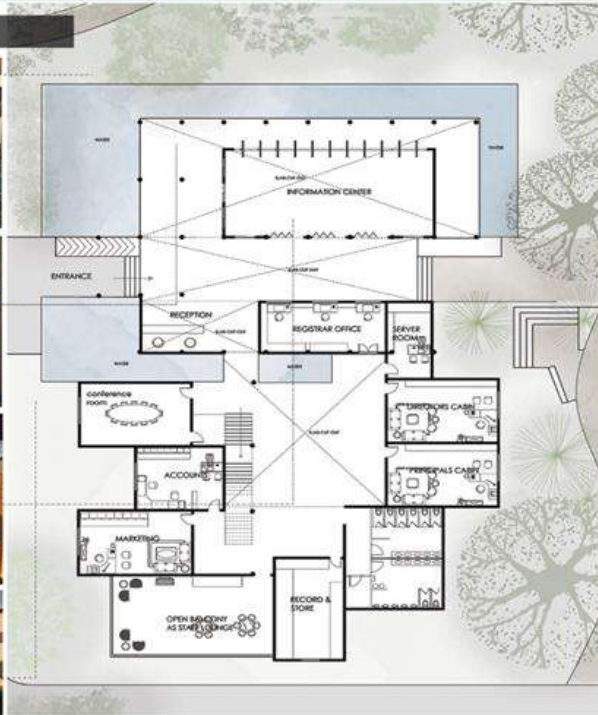
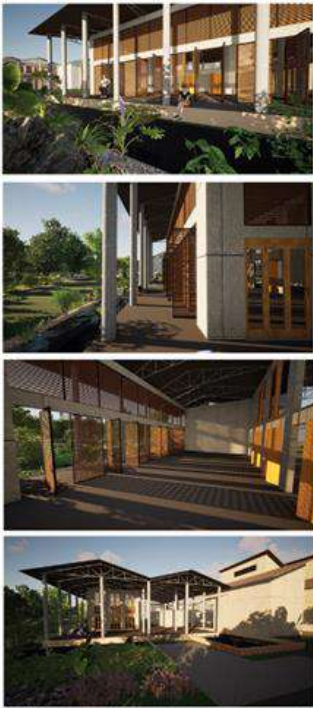
INTERIOR OF ACADEMIC BLOCK FROM FIRST FLOOR



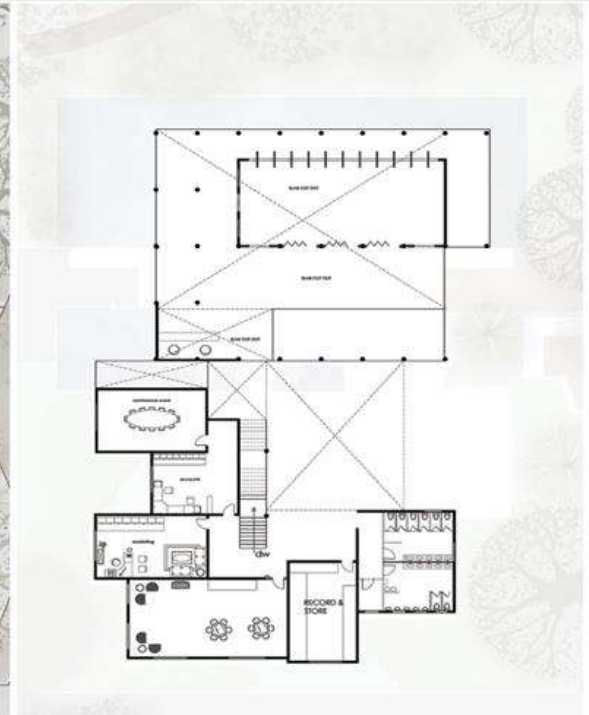
ACADEMIC BLOCK DETAILS



ADMIN BLOCK DETAILS



GROUND FLOOR PLAN (1:150)



FIRST FLOOR PLAN (1:150)

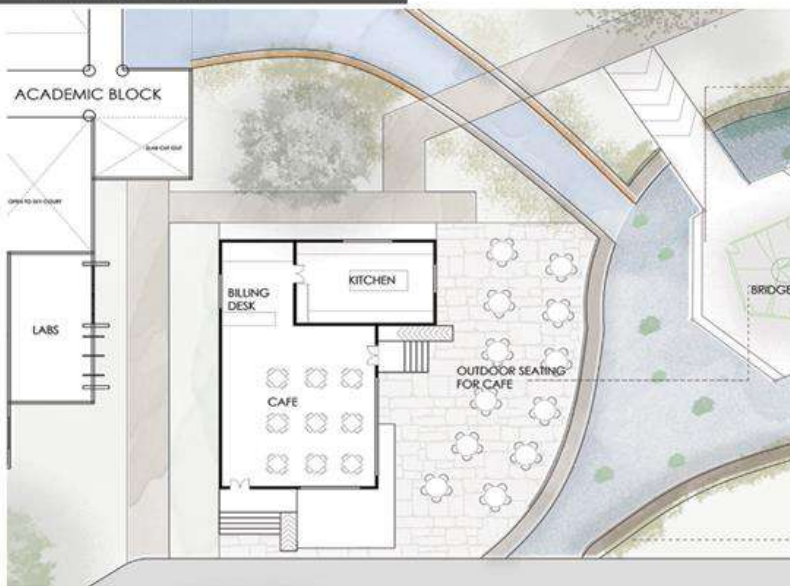


SECTION AA' (1:150)

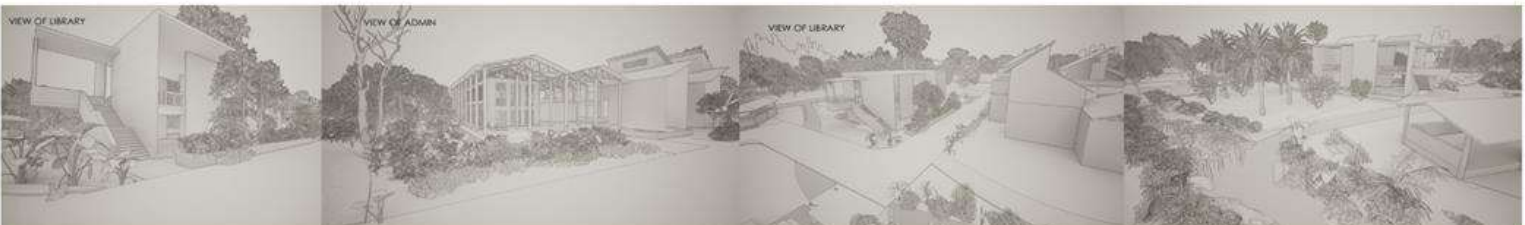


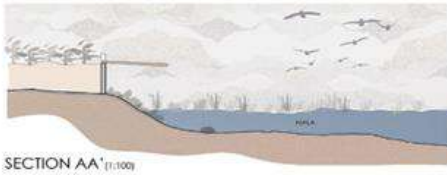
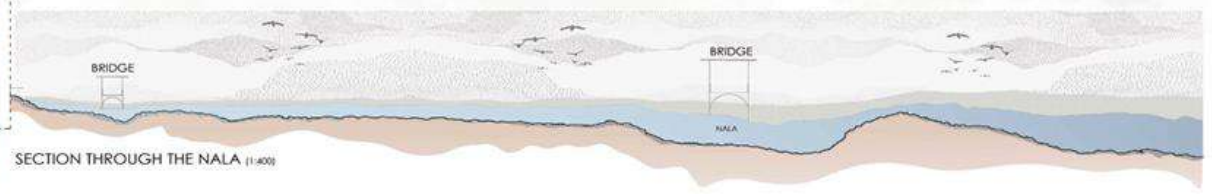
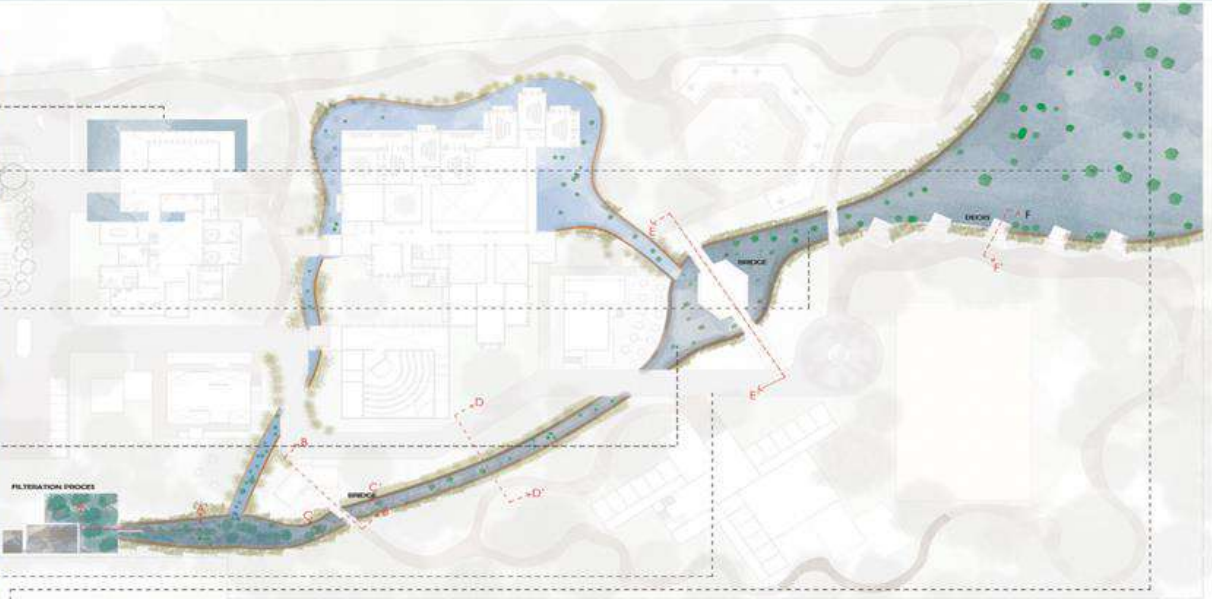
ADMIN VIEW SKETCH

CAFE BLOCK DETAILS

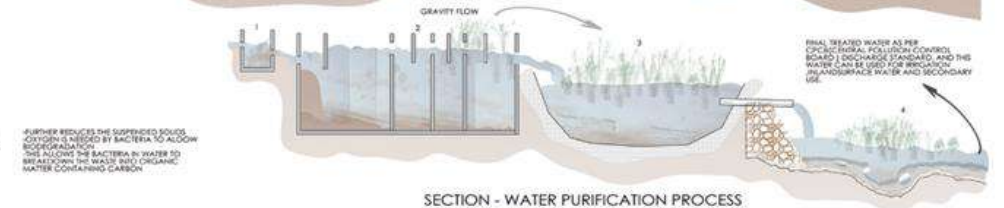
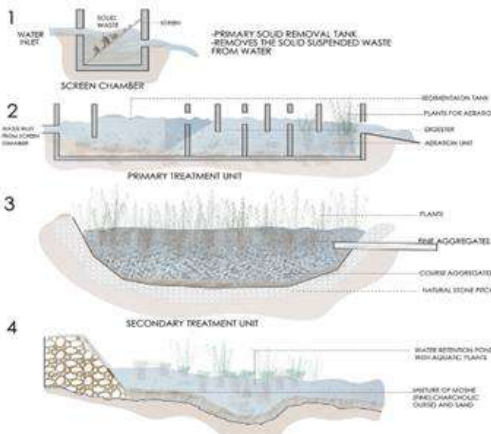


KEY PLAN





PURIFICATION OF WATER BY NATURAL PROCESS



CONCEPT DESIGN IDEAS

CONCEPT FORM DEVELOPMENT AND MASSING PATTERNS

Getting the Farm Back into Farmington

AQUA PONIES

ROOF

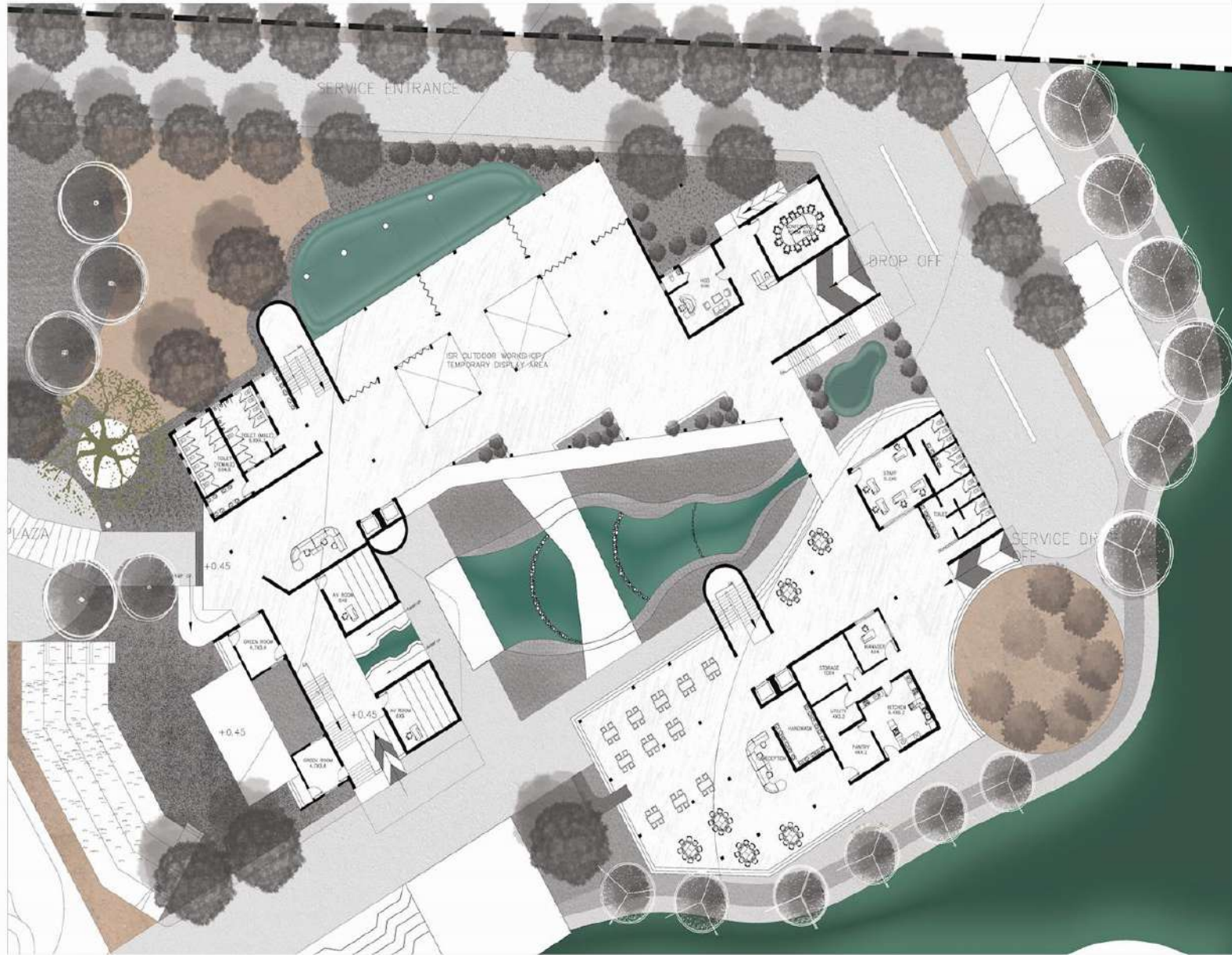
CONCEPT DESIGN IDEAS

CONCEPT FORM DEVELOPMENT AND MASSING PATTERNS

Getting the Farm Back into Farmington

AQUA PONIES

ROOF



ACADEMIC BLOCK GROUND FLOOR CLUSTER PLAN (1:150)

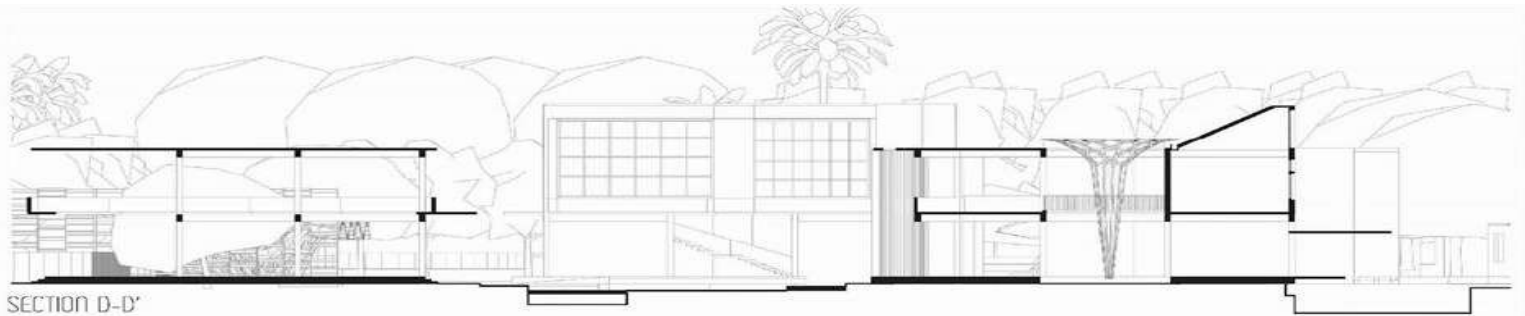


SECTION H-H' (1:150)



SECTION Y-Y' (1:150)





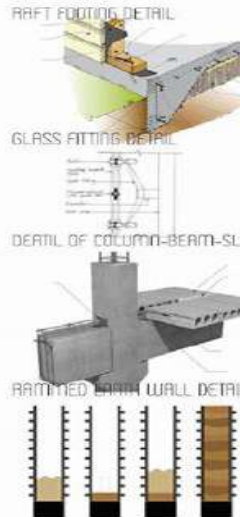
VEGETATIVE CHARACTER



GLASS HOUSE/BIRD VIEWING POINT



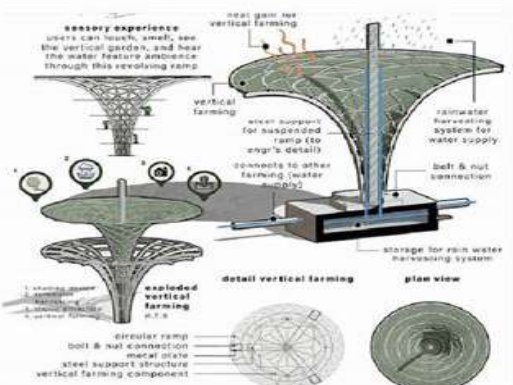
MATERIAL AND DETAIL



The following architectural project highlights the integration of sustainable strategies, specifically focusing on combined earth construction technology, solar panels for solar energy harvesting, and passive heating systems. By combining these innovative techniques, the project aims to create an environmentally friendly and energy-efficient building that minimizes its carbon footprint while maximizing resource efficiency.



To further enhance the project's sustainability, solar panels are incorporated as a primary solar energy for electricity generation. The architectural project also integrates various passive heating systems to maximize solar energy and minimize reliance on external energy sources.



Institute of Integrated Urban Water Management

Concept / Vision for the campus

Synchronic Architecture with Nature and existing surrounding. Here the Complementing is between built spaces with the context, Which is achieved by following :

Bird Friendly architecture by avoiding the use of transparent and reflective like glass and metal in order to not affect the migratory birds and other fauna.



Landscaping is a key element, repopulating the site with existing native species of plants.



Design elements like Louvers inspired by the wings of the birds. Louvers on the façade of the building complementing the flow of air As well as the design of the building.

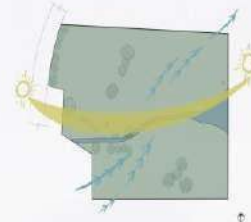


Green roofs not only effective for water conservation and cooling down the roofs, here it complements the bird friendly architecture by acting as a resting place.



Treating of nala through natural means and also plantation of wetland species for more effective treatment and complementing the existing species.

Site Analysis



Location:
North Bangalore, Yelahanka, Puttenahalli Lake.

Accessibility:

- Kempegowda International Airport – 25km
- Yelahanka Junction Railway Station – 3.4 km
- Ananthapur Bus Stop – 0.2km

S

- Wind movement is good on the site
- Good vies towards the wetlands due to presence of wetland and bird species
- Existing park in Attur Lake

W

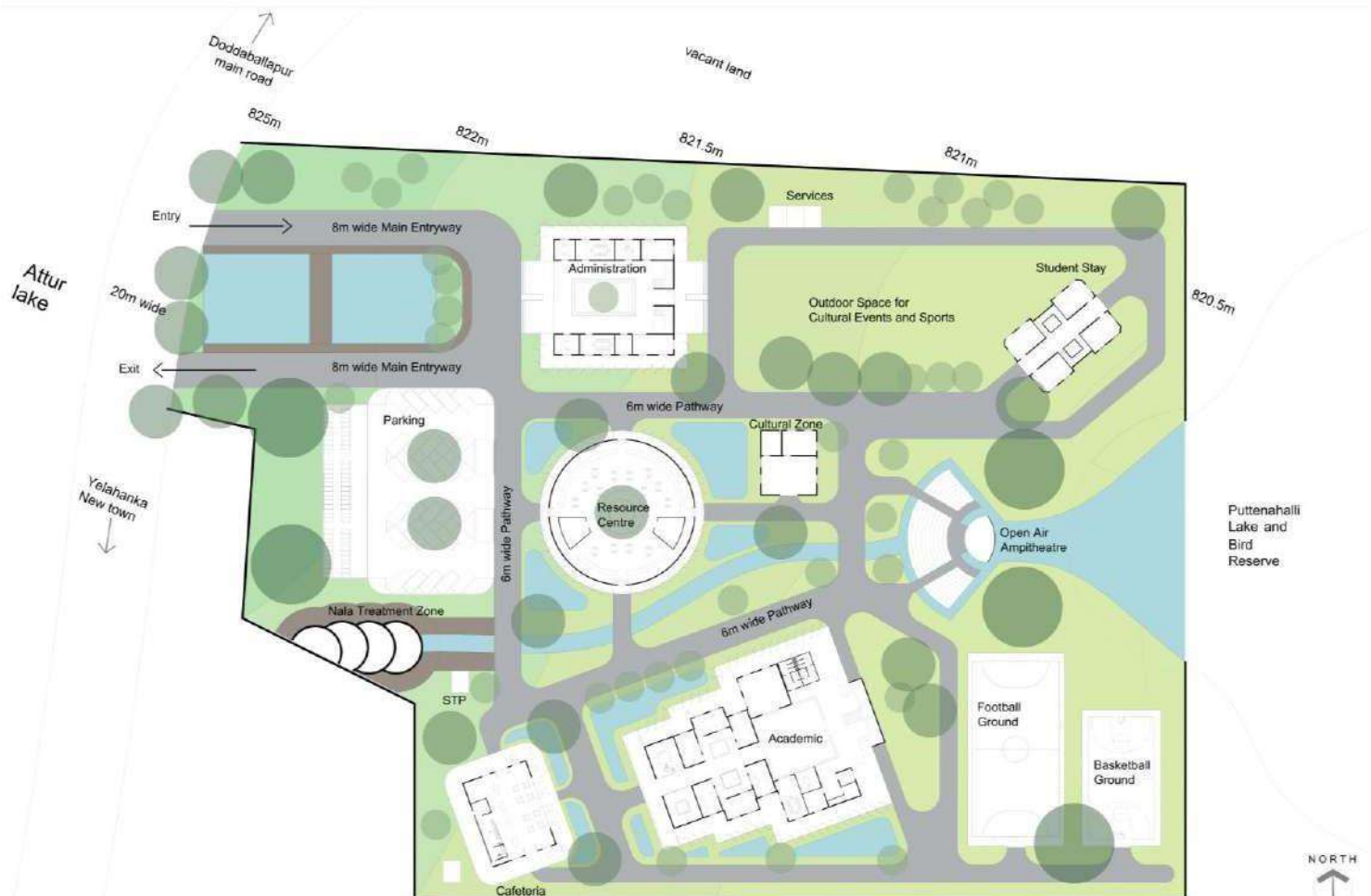
- Surface water run-off from road during rain
- Overflow of nala
- Sloppy soil around wetland.

O

- Presence of main road connecting to the site
- Home for many bird species due to wetland

T

- High Tension Transmission Line running on the site.
- Odour and ground for mosquito breeding around nala.

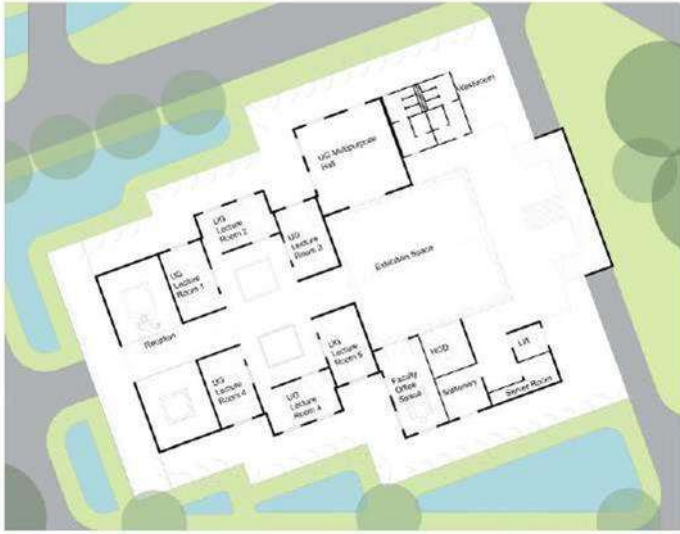


CAMPUS DESIGN

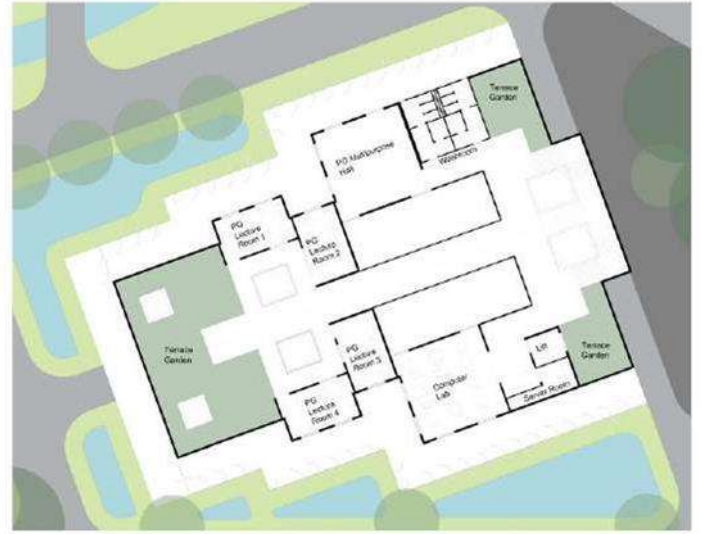
Architectural Design Studio
VI Faculty: Ar. Steny K John

AD VI

Tharun J
1DC20AT074



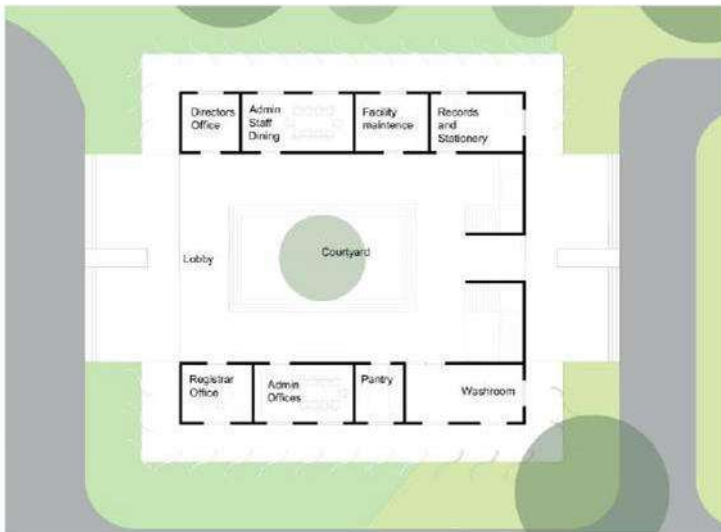
Academic Plan (Ground Level) (1:200)



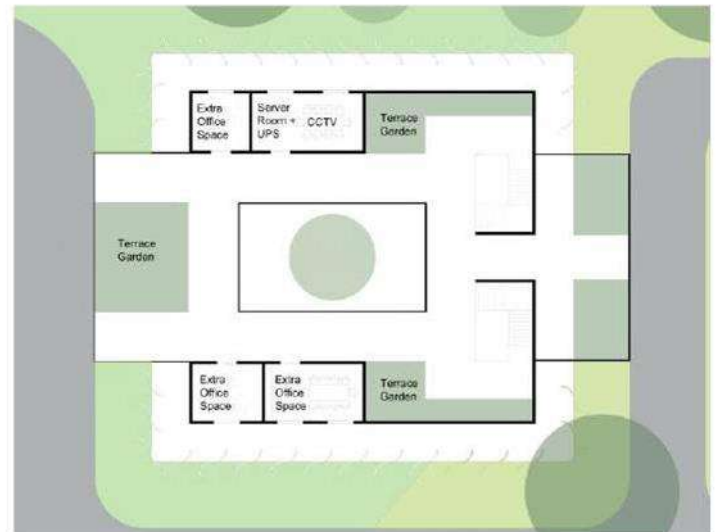
Academic Plan (First Level) (1:200)



Academic Section (1:200)



Admin Plan (Ground Level) (1:150)



Admin Plan (First Level) (1:150)

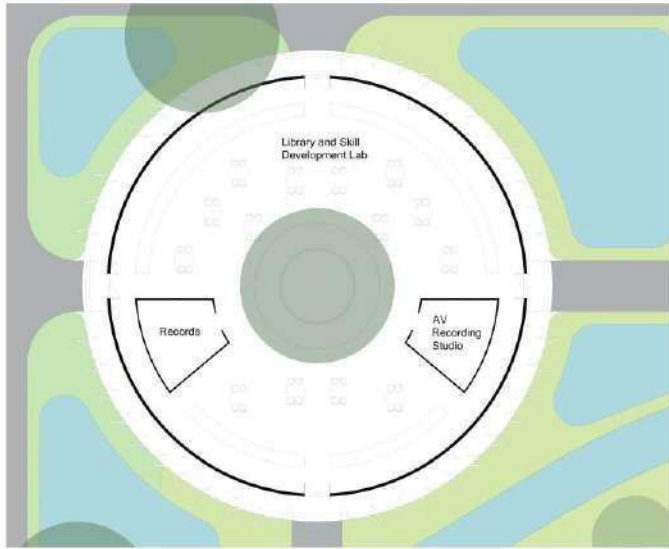


CAMPUS DESIGN

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John

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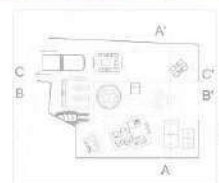
Tharun J
1DC20AT074



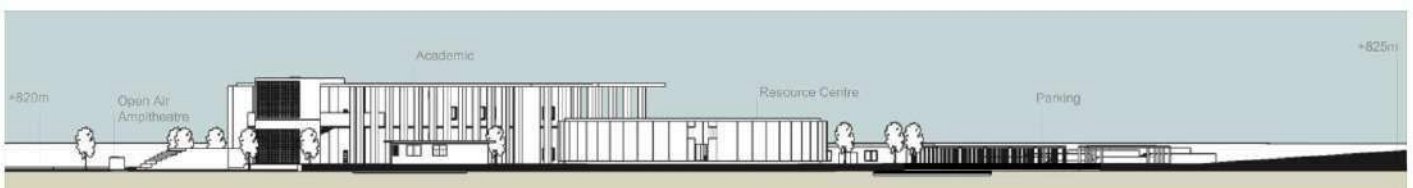
Resource Centre Plan (Ground Level) (1:150)



Section AA (1:250)



Key Plan



Section BB (1:250)



Section CC (1:250)

CAMPUS DESIGN

Architectural Design Studio
VI Faculty: Ar. Steny K
John

AD VI

Tharun J
1DC20AT074

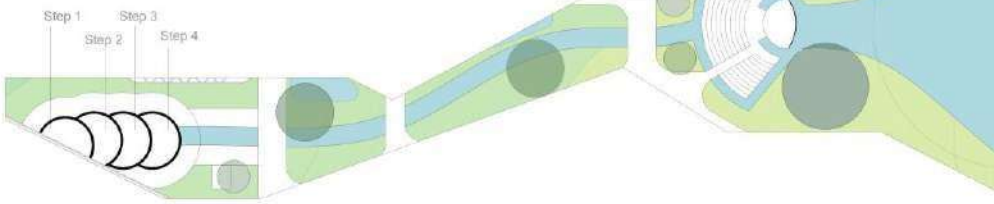
Nala Treatment Through Natural mean



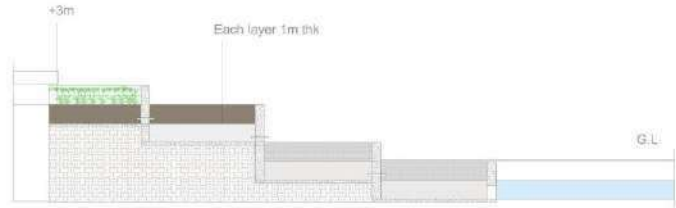
View of Nala Treatment



View along the Nala

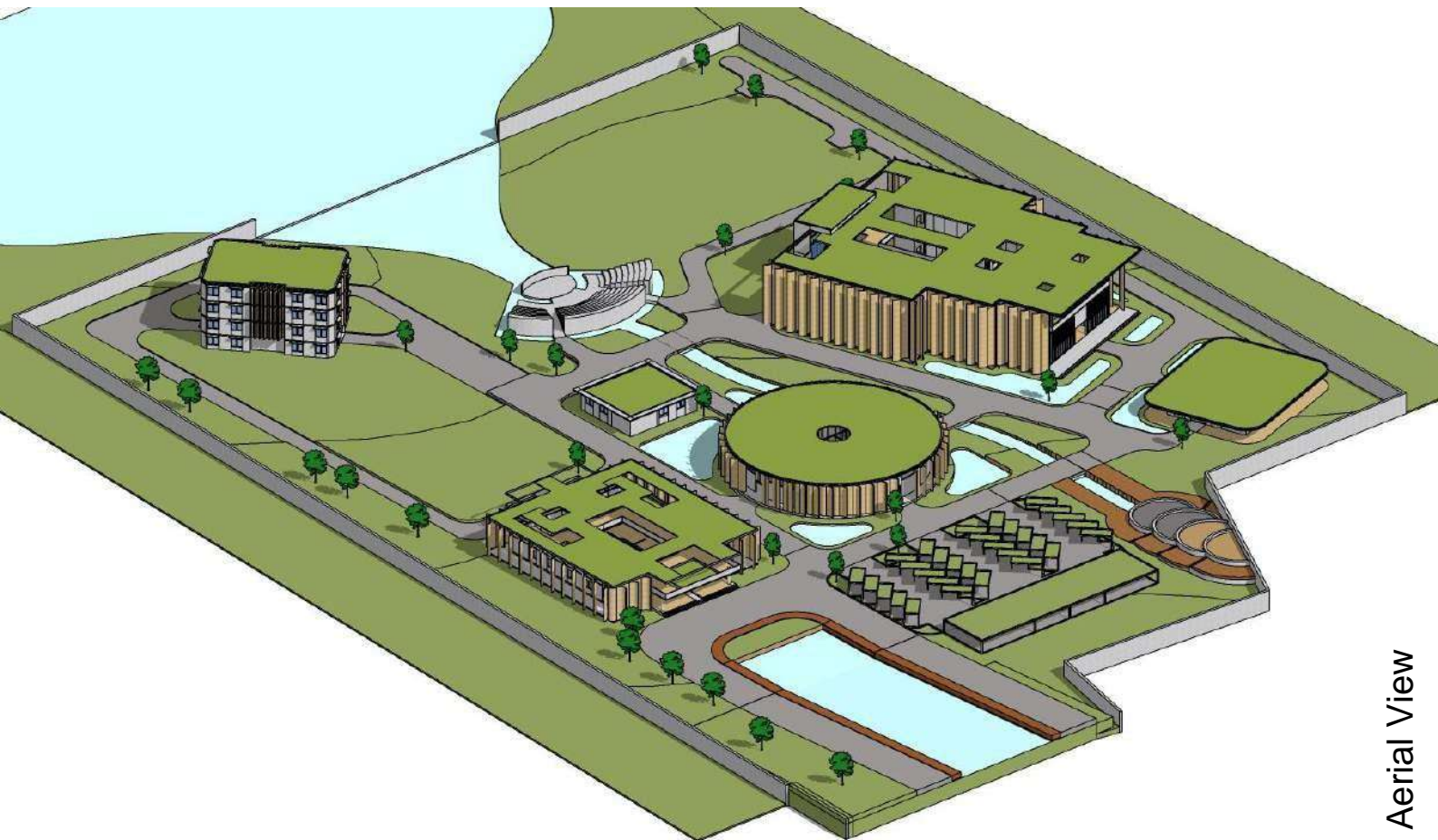
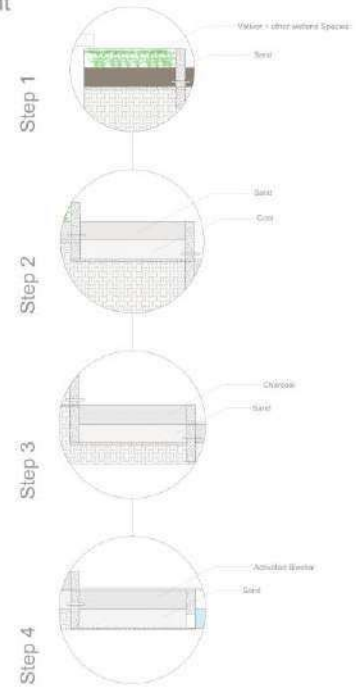


Nala Treatment Plan (1:400)



Section of Nala Treatment (1:100)

Step 5 :
The treated water is diverted towards wetland and can also be used for watering and other purposes.



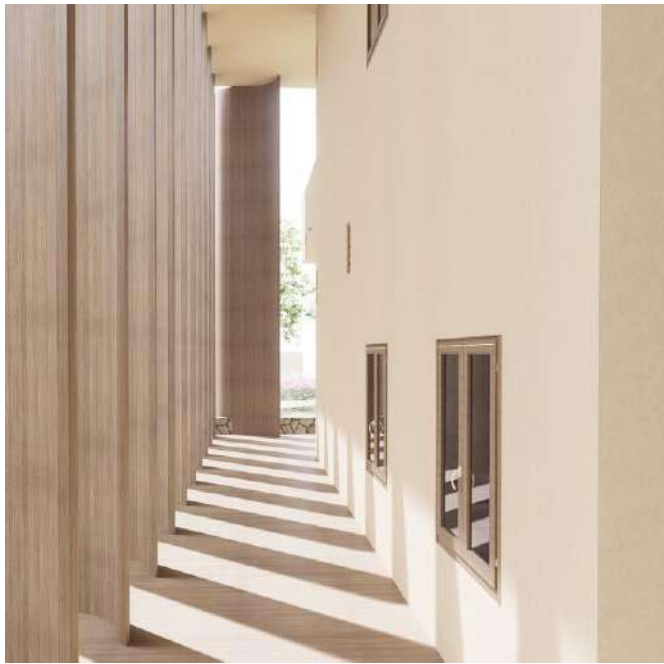
Aerial View

**CAMPUS
DESIGN**

Architectural Design Studio
VI Faculty: Ar. Steny K
John

AD VI

Tharun J
1DC20AT074



18 ARC 6.1 ARCHITECTURAL DESIGN VI
Even Semester Major Design Project
Design brief Architectural Design - 18 ARC 61

Studio Mentor- Dhruva Prasad Session: March-
July 23 (Even Sem) Studio Faculty-Ar. Ekta | Ar.
Kushi |Ar. Litty |Ar. Shubham Studio: 6th sem 'B'
Section

“Earth and sky, woods and fields, water bodies
and rivers, the mountain and the sea, are
excellent schoolmasters, and teach some of us
more than what we could learn from books.”

Introduction

India is likely to face a major challenge in the
management of freshwater in view of rapidly
rising population and increasing agricultural,
industrial and other requirements. As the
economy of the country is currently witnessing
rapid growth, management of freshwater
resources becomes all the more important. A
series of actions that are necessary for a long-term
solution of the problem are suggested with a view
that scarcity of freshwater does not become a
hindrance in national economic development and
food security.

The Methodology to be followed here is:

● Think and Understand

- 1) Understanding Site Study and the Process.
- 2) Site Study through primary and secondary
survey and analysis
- 3) In Depth understanding and site analysis
- 4) Analysis here talks about different layers and
aspects of the site and surrounding like the
physical aspects ie. Relief, Buildable slopes,
Hydrology, Demographics and social connections,
Flora Fauna, Morphology, Activity Mapping, etc.
This also talks about the tangible and intangible
aspects of all the aspects.

Site Area- Master Plan Level - approx 35 acres.

Campus -approx 6 Acres.

Built Up- 30-35% considering the eco sensitive
area and NGT Lake Buffer. - Hardscape and
transition area to be limited to 10%- various other
combinations of materials and techniques will be
appreciated which encourages water percolation
and reduces the need of the hardscape area.

ARCHITECTURAL DESIGN I SUBJECT CODE 21 ARC 11 A Division

Studio Coordinators



Ar. Shubham

Studio Faculty



Ar. Litty Salas



Ar. Shruti A Murty



Ar. Khusi Rai



Ar. Ekta Idnany

Subject Name

Faculty: Ar. Shubham Kaushal

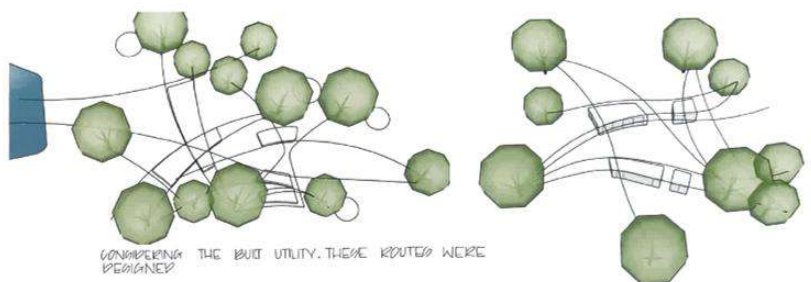
Pooja V
1DC20AT049



Subject Name

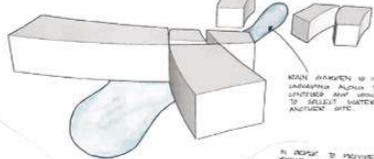
Faculty: Ar. Shubham Kaushal

Pooja V
1DC20AT049



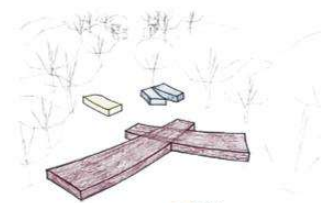
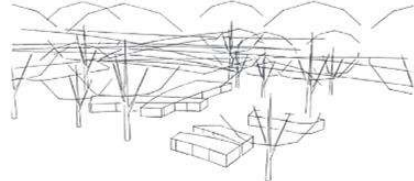
CONSIDERING THE BUILD UTILITY, THESE ROUTES WERE DESIGNED

PEOPLE HAVE BEEN MOVING BETWEEN DIFFERENT AREAS ON SITE SUCH AS FROM ONE TREE TO ANOTHER AND FROM WATER BODIES TO TREES etc IN SEARCH OF COOL REFUGE, AND RECEIVING OPPORTUNITIES SOME OF THESE ROUTES HAVE BEEN EMPLOYED

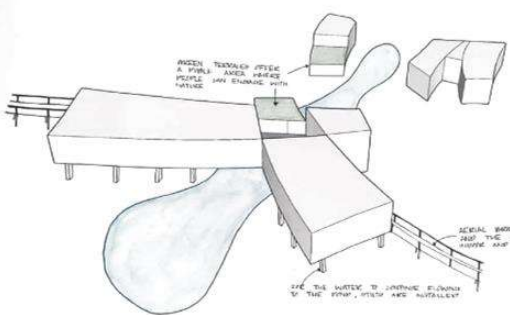


MAIN AVENUE IS INTENDED, SURROUNDING AROUND THE LAMPY UNDERSTAND HOW TO MOVE THROUGH TO SELECT WATER DESIGN ANOTHER SITE

IN ORDER TO PROVIDE A MORE BEHAVIOUR ENVIRONMENT FOR THE PEOPLE, THE AREA BETWEEN THE WATER BODIES AND THE LAND OF SURROUNDING IS A SUITABLE PLACE FOR THE PEOPLE



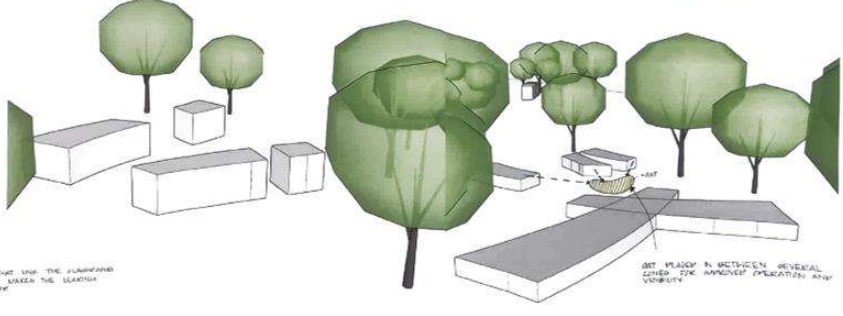
■ PUBLIC
■ SEMI PUBLIC
■ PRIVATE



WATER TOWER OFFICE & PARK AREA WHERE PEOPLE CAN ENJOY WITH NATURE

SPECIAL BRIDGE THAT LINK THE PLANNING AND THE DESIGN MARKS THE LANDSCAPE DESIGN AND STRUCTURE

USE THE WATER TO CONTRIBUTE ELEMENTS OF THE FORM, SPACE AND MATERIAL



GET PLACES IN BETWEEN SEVERAL SPACES FOR MOVEMENT, PUBLICATION AND VISIBILITY

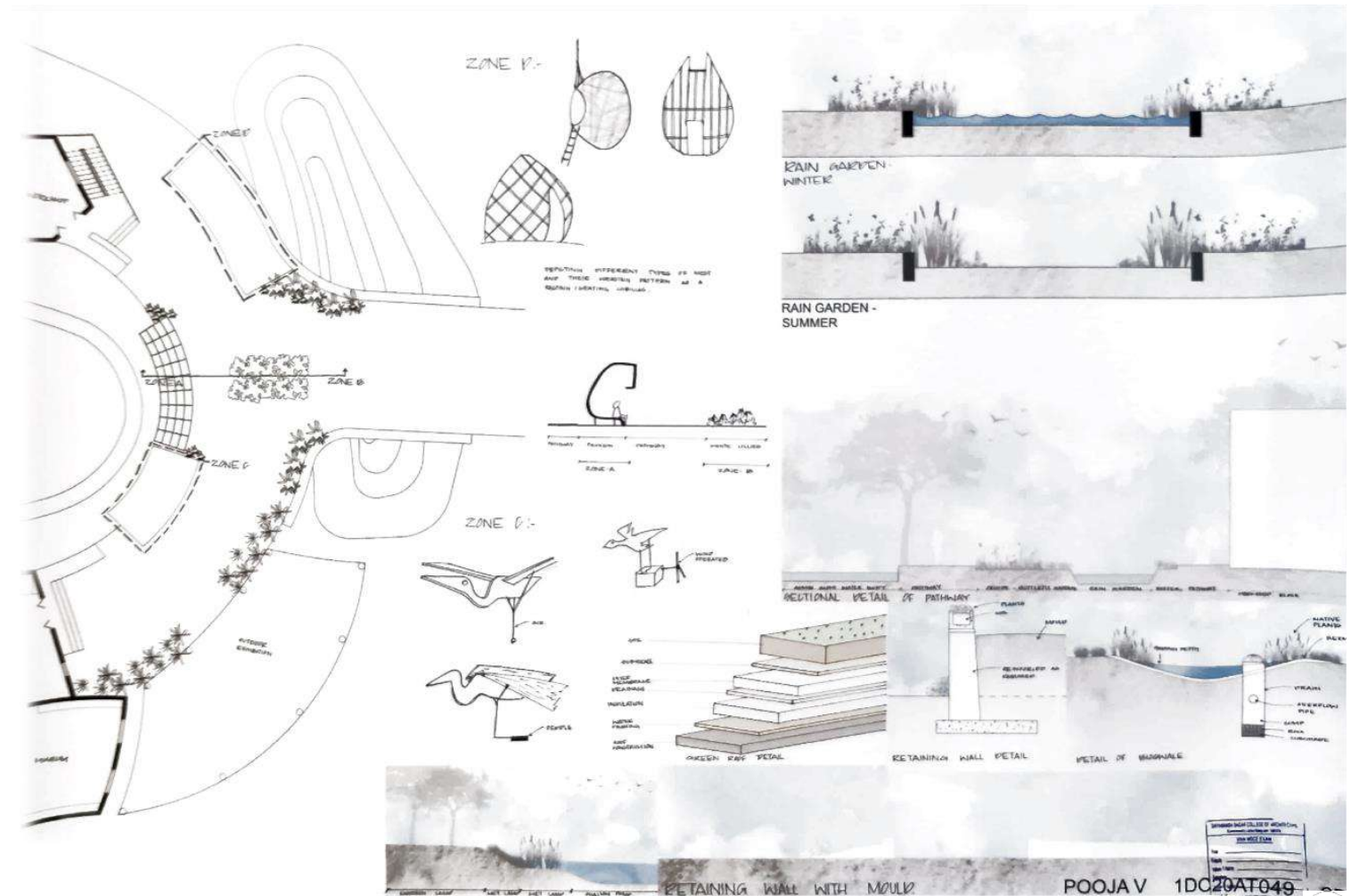
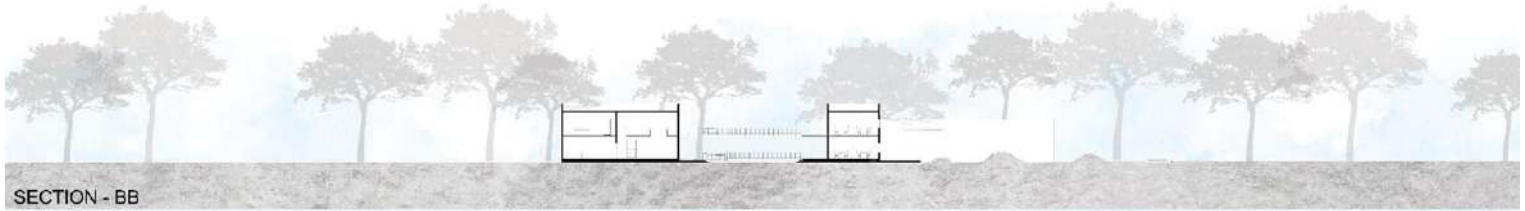
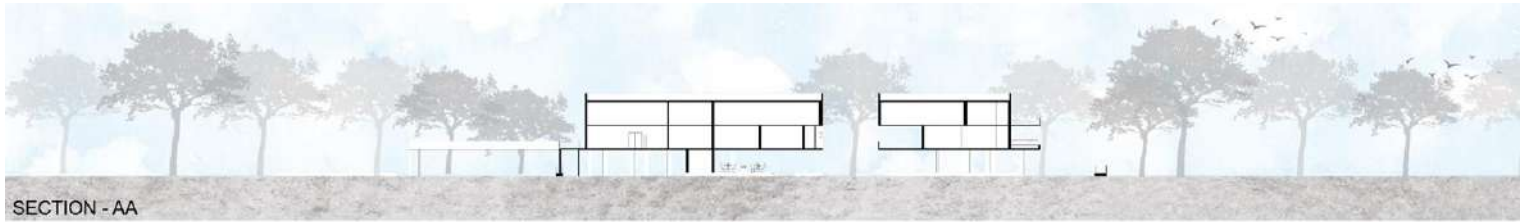
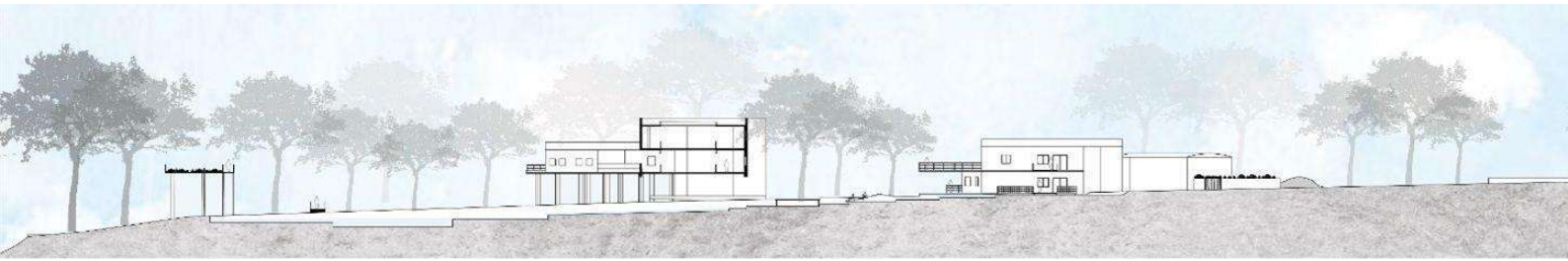


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Subject Name

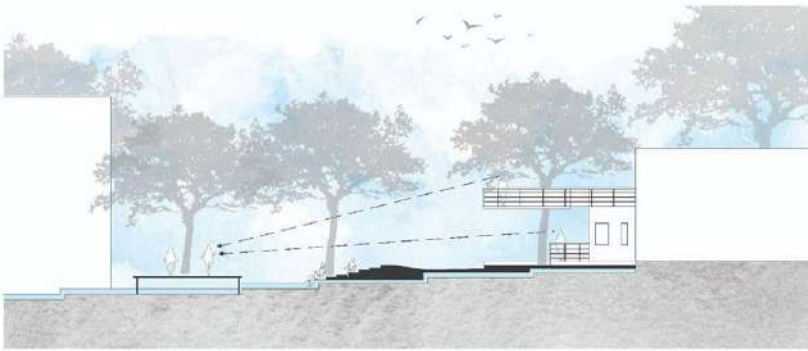
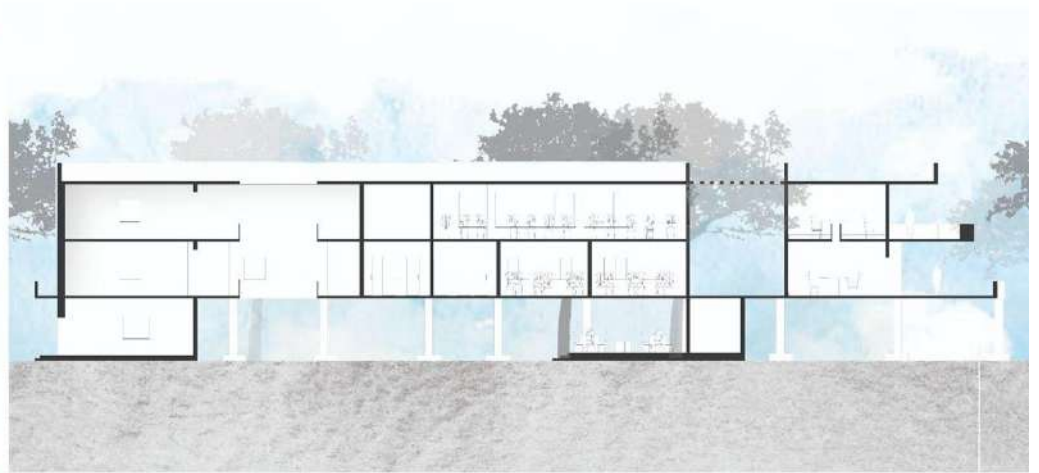
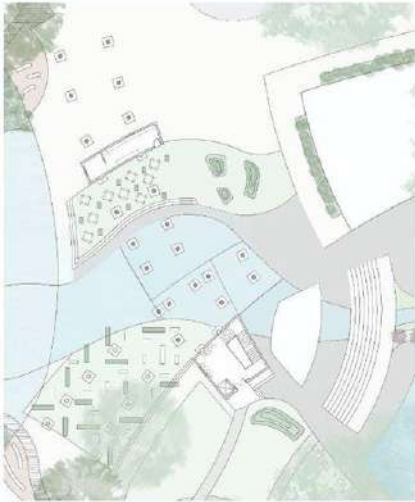
Faculty: Ar. Shubham Kaushal

Pooja V
1DC20AT049

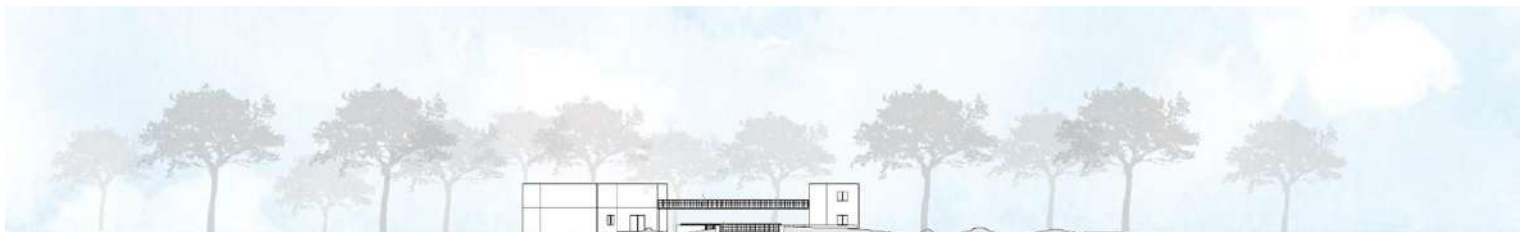


Subject Name
Faculty: Ar. Shubham Kaushal

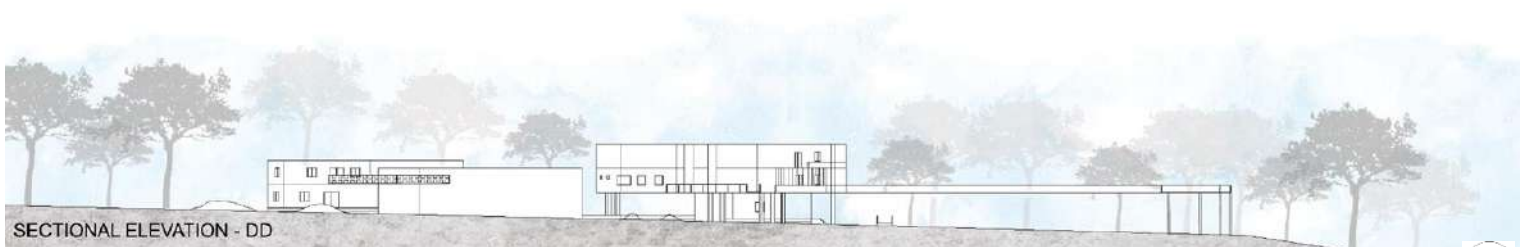
Pooja V
1DC20AT049



MAIN BLOCK



SECTIONAL ELEVATION - CC



SECTIONAL ELEVATION - DD



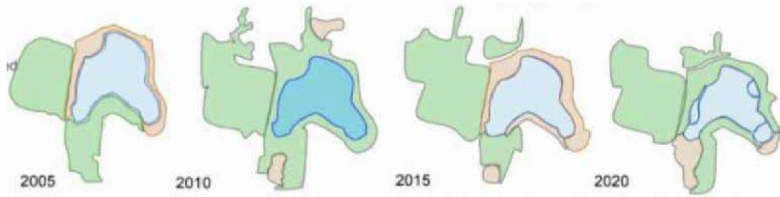
Subject Name
Faculty: Ar. Shubham Kaushal

Manasvi M Shetty
1DC20AT038

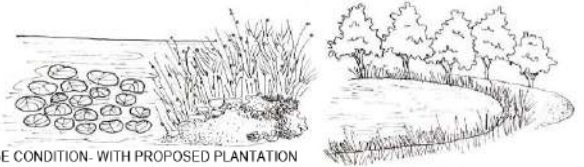
Strategies for lake development and restoration

Steps to treat and maintain the Lake :

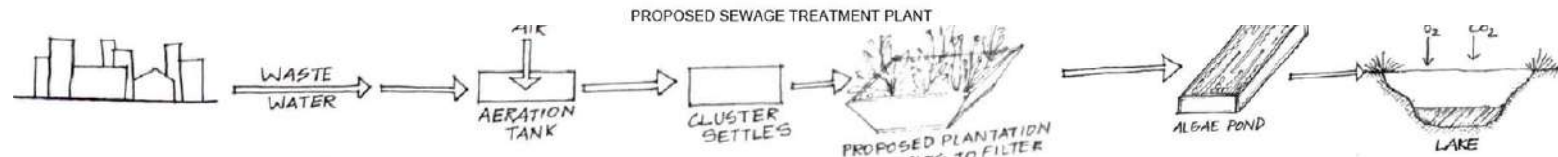
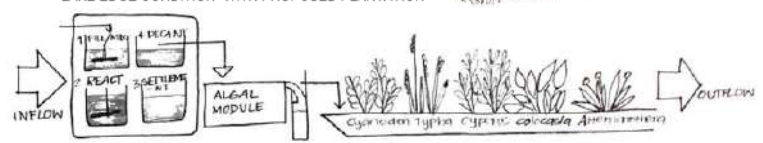
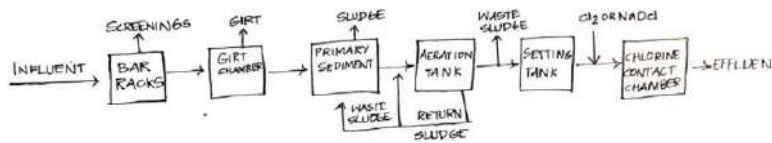
- ☒ Only treated sewage will enter the lake combined with wetlands and algae ponds
- ☒ Distillation to enhance storage capacity and also to remove contained sediment.
- ☒ Wet dredging to remove deposited sediments.
- ☒ Remove macrophytes (covered on the water surface) regularly.
- ☒ Vegetation, reeds and leaves of native species can be proposed at the lake edge- filters the lake along with crating pathways.
- ☒ No direct connection between people and lake.
- ☒ Plant species of various scales helps in regulation of water levels.



The lake was built by Kempegowda for his family deity Kempamma in 16th century, and Immadi Kempe Gowda established water supply network that connected lake and residential localities nearby. The lake became hotspot for swimming lesson in 1920s as it was the only deep water body in Bengaluru with clean water. However, 4 decades later, untreated sewage water started flowing into the lake. The lake has become a dump, choked with weeds, hyacinth, silt and sewage. Two gutters empty themselves into the lake. The sewage comes from Bull Temple Road, Hanumanthanagar, Chamarajpet and other areas in the vicinity. The sewage also comes from houses directly connected to the drains.



LAKE EDGE CONDITION- WITH PROPOSED PLANTATION

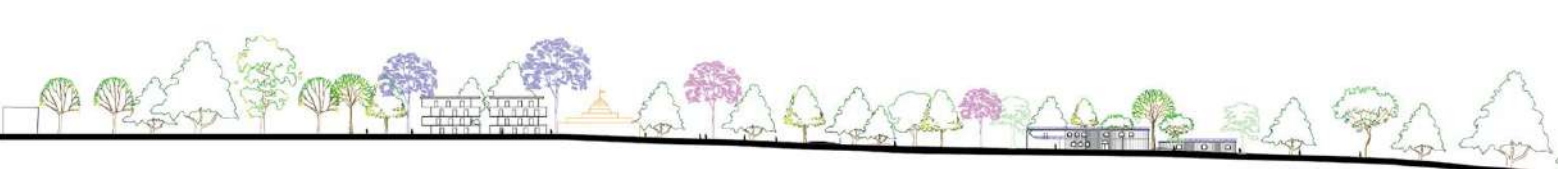


LEGEND:

- 1 RECEPTION & LOBBY AREA 119 m²
- 2 FACILITY & MAINTENANCE 18 m²
- 3 RECORDS & STATIONARY 21 m²
- 4 PANTRY 23 m²
- 5 SERVER ROOM 14 m²
- 6 DIRECTOR'S OFFICE 32 m²
- 7 WASHROOM 24 m²
- 8 ADMIN OFFICE 47 m²
- 9 CONFERENCE ROOM 50 m²
- 10 RECEPTION & WAITING AREA 202 m²
- 11 PRINCIPAL'S OFFICE 50 m²
- 12 MULTIPURPOSE HALL 194 m²
- 13 STAFF ROOM 42 m²
- 14 INDOOR WORKSHOP 75 m²
- 15 OUTDOOR WORKSHOP 95 m²
- 16 SEM OPEN READING SPACE 73 m²
- 17 LIBRARY 115 m²
- 18 SKILL DEVELOPMENT LAB 24 m²
- 19 LOBBY AREA 238 m²
- 20 HOD OFFICE 50 m²
- 21 PANTRY 1 24 m²
- 22 STORAGE AND STATIONARY 27 m²
- 23 CLASSROOM 1 50 m²
- 24 CLASSROOM 2 88 m²
- TOTAL BUILT UP AREA: 1823 m²



SITE SECTION XX'



SITE SECTION YY'

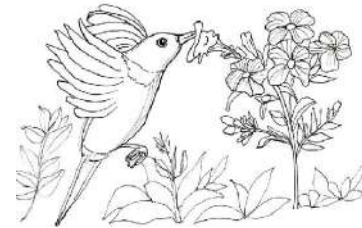
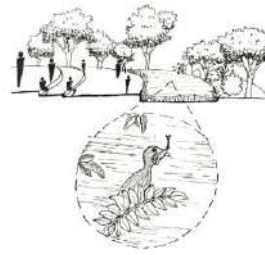
Subject Name

Faculty: Ar. Shubham Kaushal

Manasvi M Shetty
1DC20AT038

Urbanization has taken a heavy toll on many of Bengaluru's lakes and Kempambudhi here is no exception.

- ☒ Once serving as a lifeline that developed the city around it has seen a lot of changes throughout the decades
- ☒ Despite of all the changes that the lake has gone through, it still attracts birds, though the percentage of these birds is less in the city
- ☒ The following design strategies proposed is based on the types of birds that visit, their eating and nesting habitats, on a hope that more birds come to the lake.



BIRD SPECIES

ROOSTING FOOD NESTING

INSECTIVOROUS

- ☒ Purple Rumped Sunbird (nectar)
- ☒ Ashy Ptarmica
- ☒ Common Hawk Cuckoo
- ☒ Ashy Drongo
- ☒ Oriental magpie robin
- ☒ Wood sandpiper
- ☒ White browed wagtail
- ☒ Red wattle lapwing

FRUGIVOROUS

- ☒ Pale-Billed Flowerpecker(nectar)
- ☒ Indian white eye

AQUATIC

- ☒ Purple heron
- ☒ pond herons
- ☒ Great egret (M)
- ☒ Asian openbill (M)
- ☒ Eurasian spoonbill (M)
- ☒ Spot-billed
- ☒ Little grebe
- ☒ Little cormorant
- ☒ Indian spot billed duck
- ☒ Purple moorhen (M)
- ☒ Black winged stilt (M)
- ☒ Darters
- ☒ Indian pond heron

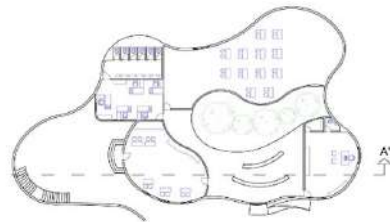
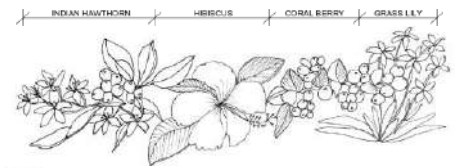
GRAIN EATING

- ☒ Sparrows
- ☒ Pigeons(berries)
- ☒ Spotted Dove

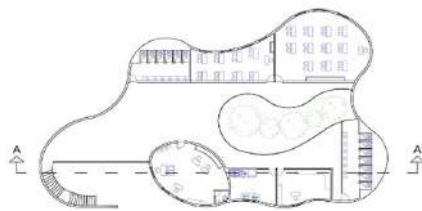
INSECTIVOROUS & FRUGIVOROUS

- ☒ Coppersmith Barbet
- ☒ Koels
- ☒ White checked barbet
- ☒ Greater coucal
- ☒ Indian golden oriole
- ☒ Greenish warbler
- ☒ Common myna

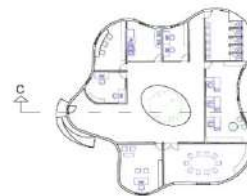
- ☒ Introducing native flowers and fruits on to the site benefits various bird species.
- ☒ Various types of flower gardens are provided to the site that attracts various insects on which several insectivorous birds feed on.
- ☒ A fish pond is added to the site that consists of native fish species such as mrigal and rohu which serves as food for various aquatic and migratory birds.



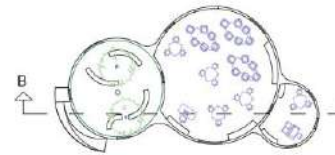
GROUND FLOOR- ACADEMIC BLOCK



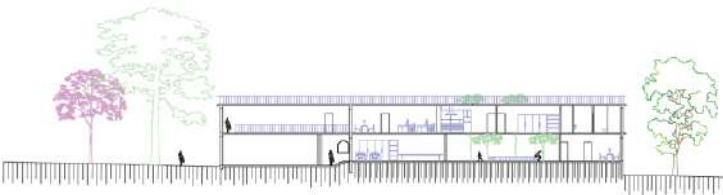
FIRST FLOOR- ACADEMIC BLOCK



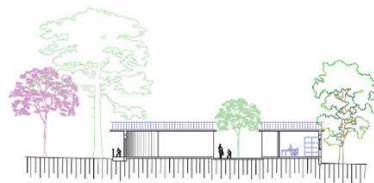
GROUND FLOOR- ADMIN BLOCK



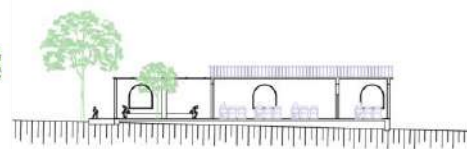
GROUND FLOOR- LIBRARY



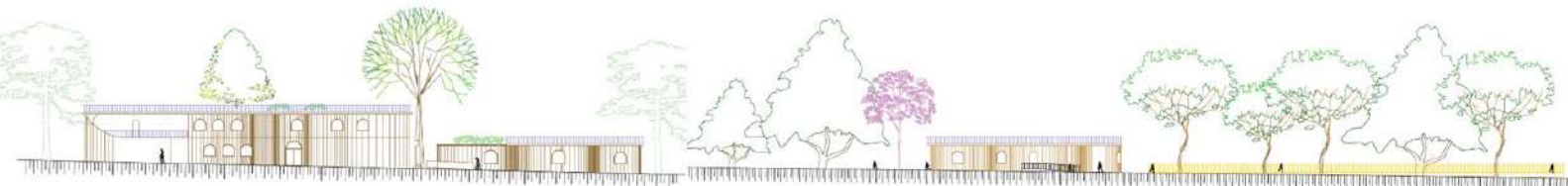
ACADEMIC BLOCK- SECTION AA'



ADMIN BLOCK- SECTION CC'

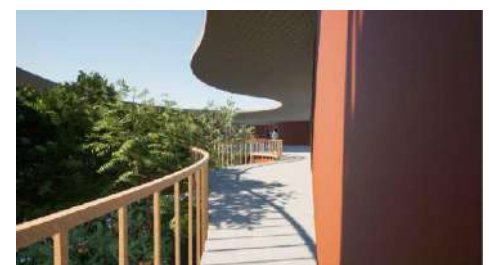


LIBRARY-SECTION BB'



ELEVATION- ACADEMIC BLOCK AND LIBRARY

ELEVATION- ADMIN BLOCK



TITLE :CAMPUS DESIGN

AD VI

Subject Name

Faculty: Ar. Shubham Kaushal

Manasvi M Shetty

1DC20AT038



OBJECTIVE: To acquaint the students with construction practices pertaining to structural glazing, Metal Cladding and roofing systems and to study constructional systems and detailing of alternative material doors, windows and partition.

OUTLINE:

- 1) Glass as a building material: Glass manufacturing in various types like plate, tinted, decorative, reinforced, laminated glass block, fiberglass, glass murals, partially colored glass, etching of glass and its applications in building industry for both exteriors and interiors. Glass fabrication techniques, fiber reinforced composite materials and products.
- 2) Frameless glass doors and windows and partitions: Fixing and fabrication details.
- 3) Structural Glazing and cladding: Fixing and fabrication details.
- 4) Point supported glazing: Fixing and fabrication details.
- 5) Introduction to metal cladding: ACP, Aluminum louvers; Fixing and fabrication details.
- 6) Metal cladding of facades and building envelopes: Fixing and fabrication details.
- 7) UPVC, PVC & FRP: Doors and windows and partitions (Detailing and study of joinery).
- 8) Wooden sliding and folding doors and partitions: Principles and methods of construction and detailing.
- 9) Steel sliding and folding doors and partitions: Principles and methods of construction and detailing.
- 10) Aluminum sliding and folding doors and partitions: Principles and methods of construction and detailing.
- 11) Skylight in steel and glass: Principles and methods of construction and detailing.
- 12) Alternative wall technologies: Sandwich panel walls, PUF panels etc.

MATERIALS AND METHODS IN BUILDING CONSTRUCTION–VI SUBJECT CODE 18ARC62

Studio Coordinators



Ar. Dominic Harper

Studio Faculty



Ar. Surabhi Moharir

Subject Name: Materials and Methods in Building Construction
 Faculty: Ar. Dominic Harper , Ar. Surabhi Moharir

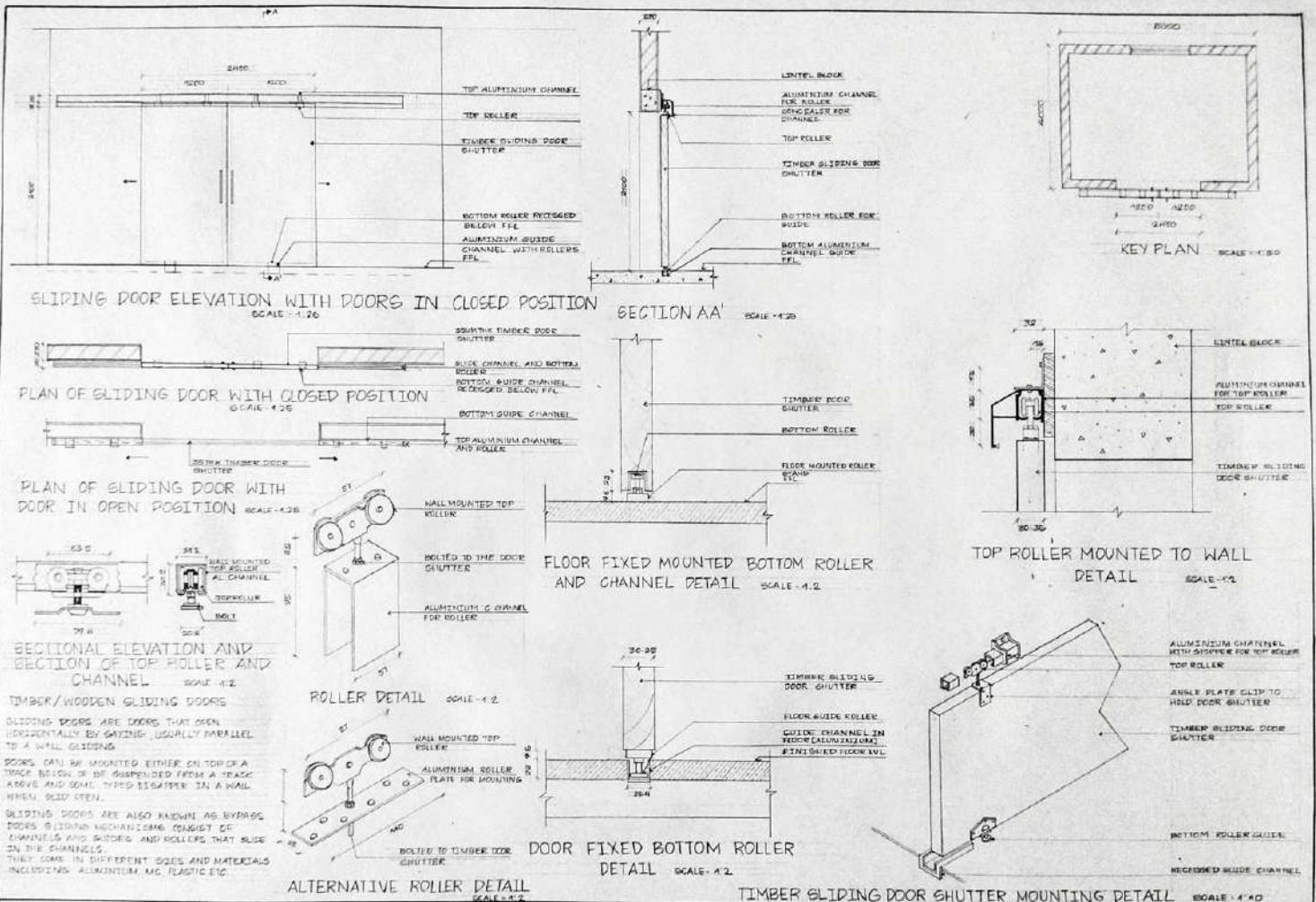
Manasvi M Shetty
 1DC20AT038

STEEL SLIDING AND FOLDING DOORS :
 STEEL SLIDING FOLDING DOORS IS A TYPE OF DOOR WHICH OPERATES BY FOLDING BACK IN SECTIONS OR SO CALLED PANELS THESE DOORS ARE ALSO CALLED AS BT FOLD DOORS IN SOME OF MOST OF THEM HAVING MORE THAN TWO PANELS.
 SOME DOORS OPEN AND CLOSE WITHOUT HINGERS BY SLIDING BACK AND FORTH WITHIN TRACKS AT HEAD AND ROLL OR HEAD AND FLOOR THE PARTS TRAVELS SLIDES ON THE SIDES WITH THE HELP OF ROLLERS AND GUIDE RAILS.
TYPES OF DOORS :
 1. RIFPASS SLIDING
 2. SURFACE SLIDING
 3. SPOCKET SLIDING
 4. BODIED DOORS

NAME: MANASVI M SHETTY	PLATE NUMBER	SIGNATURE 1	SIGNATURE 2
UGN: 1DC20AT038			
CLASS: CB			

REGULAR PVC (POLYVINYL CHLORIDE) IS A COMMON STYRENE BUT LIGHT WEIGHT PLASTIC USED IN CONSTRUCTION IT IS MADE SOFTER AND MORE FLEXIBLE BY THE ADDITION OF PLASTICIZERS.
IF NO PLASTICIZERS ARE ADDED IT COMES DOWN AS UPVC (UNPLASTICIZED POLYVINYL CHLORIDE) HARD PVC

NAME: MANASVI M SHETTY	PLATE NUMBER	SIGNATURE 1	SIGNATURE 2
UGN: 1DC20AT038			
CLASS: CB			



WOODEN SLIDING DOOR

NAME:	PLATE NUMBER	SIGNATURE 1	SIGNATURE 2
MANASVI M SHETTY	UGN-1DC20AT038	<i>[Signature]</i>	
CLASS: 6B			

1 OBJECTIVE:

1. To introduce the students to the discipline of Landscape Architecture.
2. To advance analytical and planning skills for Architectural project sites.
3. To develop design skills for small landscape projects.

Course Outline:

Introduction, design philosophies and contemporary approaches to landscape architecture and design are reviewed through various landscape design projects over time while modules on site analysis, site planning, elements of landscape architecture and landscape design process are supported with theoretical inputs.

Mode of study:

- i. Lecture component: Various landscape design projects to explain the design philosophies, theoretical aspects of site analysis and site planning, element of landscape architecture and design process will be delivered as lecture component.
- ii. Literature study: Exercise on 'relating architecture and landscape' may be undertaken as a literature study exercise.
- iii. Studio component:

18ARC66 – LANDSCAPE ARCHITECTURE

Studio Coordinators



Ar. Vasavi S R



Ar. Shubham
Kaushal

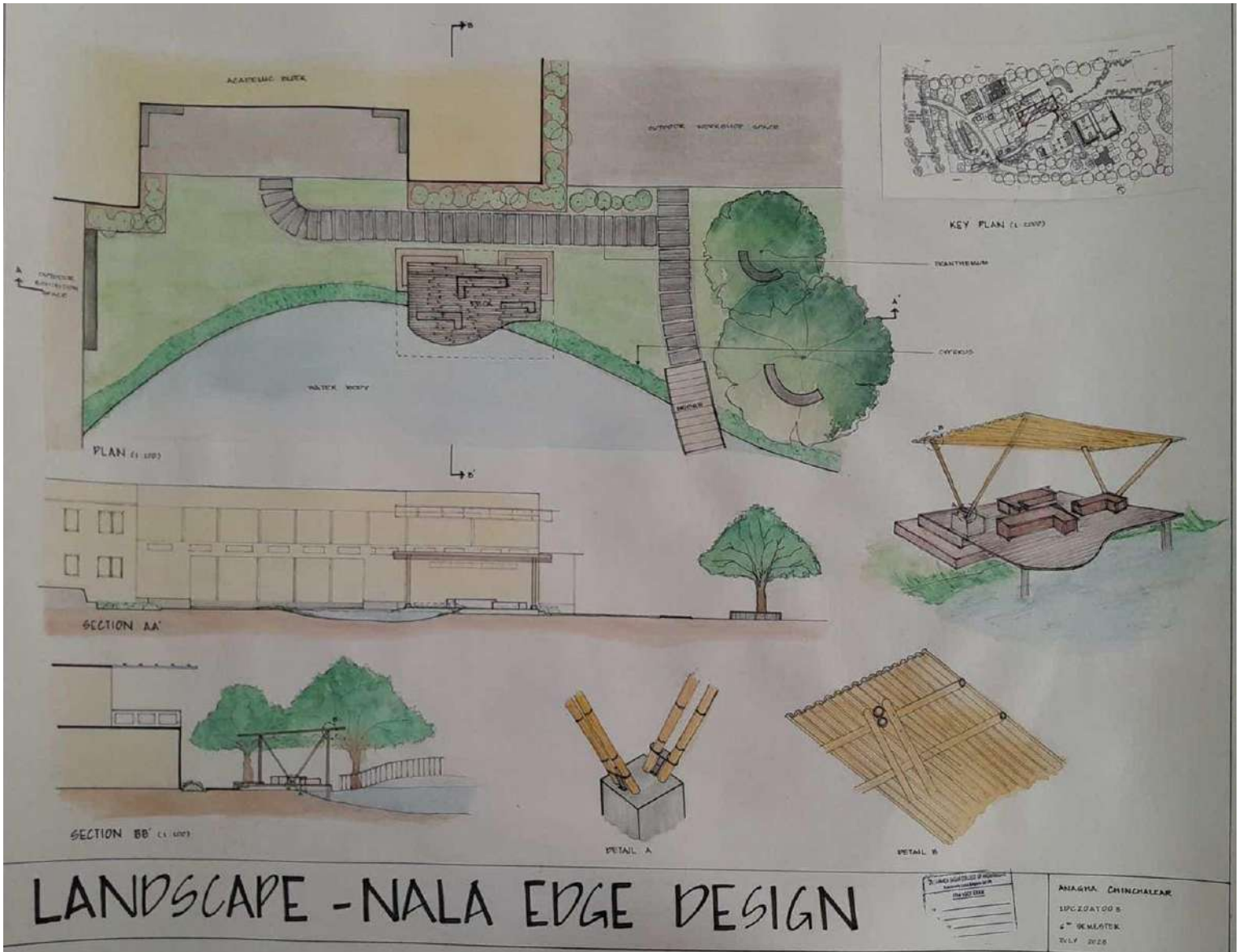
CAMPUS NALA EDGE

18ARC66 – LANDSCAPE ARCHITECTURE

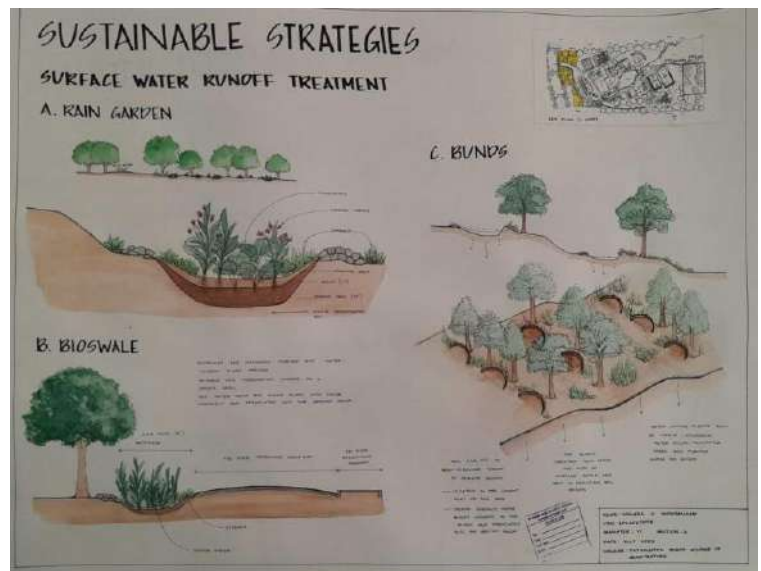
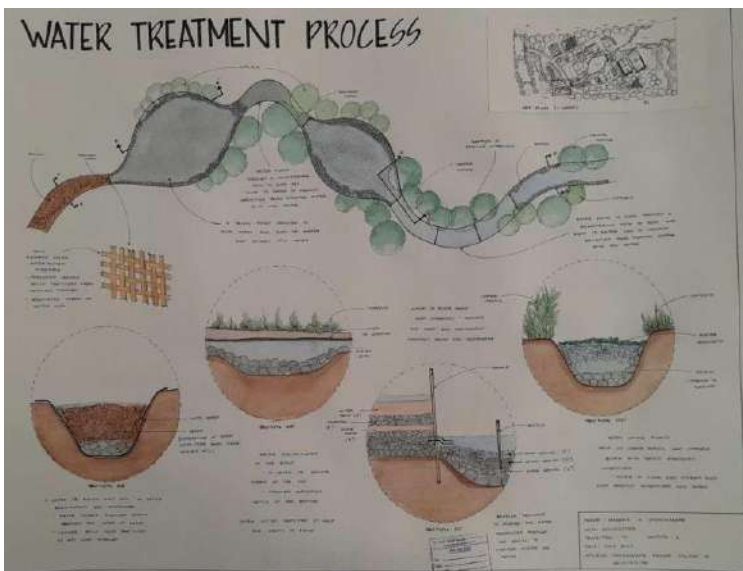
Faculty: Ar. Vasavi S R

Anagha Chinchalkar

1DC20AT003



LANDSCAPE - NALA EDGE DESIGN

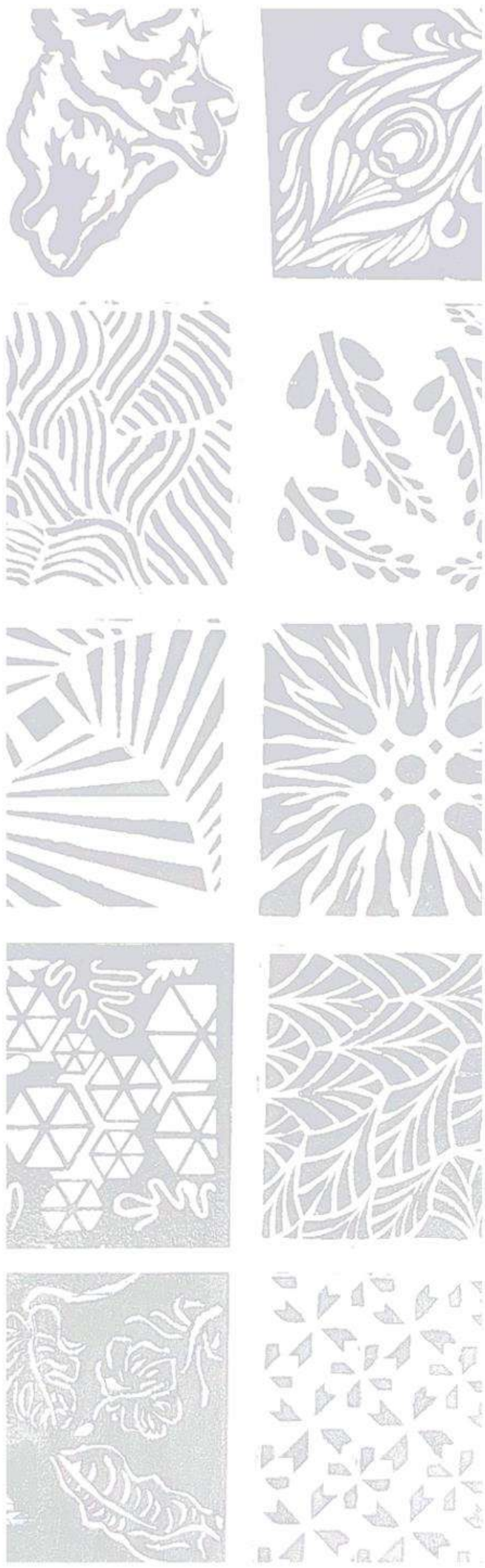


LANDSCAPE DESIGN

18ARC66 – LANDSCAPE ARCHITECTURE
Faculty: Ar.Shubham Kaushal

Nishath Mubeen
1DC20AT047





7th Semester

Ramanagara - The city and town

Ramanagara, the district was carved out of the erstwhile Bengaluru district in 2007, which comprises of Ramanagara, Channapatna, Kanakpura and Magadi taluks. a subdivision of a district; a group of several villages organized for revenue purposes. Ramanagara is a town and a city municipal council in Karnataka. It is also the headquarter of Ramanagara district. The town was known as Shamsabad at the ruling time of the Tippu Sultan. It was then called Closepet, after Sir Barry Close in pre-independence time period. It was renamed Ramanagara by the former chief minister of Karnataka state Mr Kanga Hanumanthayya. The district has a population of nearly 11 lakhs (10,82,739) according to Census 2011 and is about 50 km from Bengaluru and Bangalore-Mysore State Highway No.17. The average rainfall is 622.80 metres above sea level and 931.58 mm annually.

Economy

Ramanagara is well known for its sericulture and is nicknamed Silk Town and Silk City. The silk produced in this region forms the input for the famous Mysore Silk. Ramanagara is the largest market for silk cocoons in Asia. 50 tonnes of cocoons a day arrive at the town. Ramanagara also has extensive granite quarry sites. Ramanagar district is famous for traditional toys and cultural activities and is the largest market in Asia.

Ramanagara district can be reached by road from Karnataka and Karnataka State Road and Train within one hour. The nearest airports in Mysore and Kepegowda International Airport are about 85 km away. Ramanagar district has modern office buildings such as Panchayat Bhavan, Kandaya Bhavan, Mini Vidhana Soudha, Taluk Office, Deputy Commissioner's Office, Sub-Deputy Offices, Police Department and District Court, and Police Buildings.

Industrial Area

The Bidadi Industrial Area of Ramanagar District has manufacturing units for Toyota and Coca-Cola and includes a 1400 MW gas-based power plant.

Tourism

The famous Hindi film SHOLAY has been shot around these hills and so is the name Sholay hills. The magnificent stones of the pig-gundi reserve forest in Ramanagar are very old and famous for their landscape. Ramdevara Betta, Revanna Siddheswara Betta, Kanga Anjaneya Swami, Sri Brahmana Theertha Brindavan, Sri Ranganathaswamy Temple, Maganchanbele Dam, Harobele Dam Chunchi Falls, Kanakapura, Mekedatu, Savandurga, Thippagondanahalli Reservoir, Janapada Loka are famous.

ARCHITECTURAL DESIGN I

SUBJECT CODE 21 ARC 11

Studio Coordinators



Ar Anshu
Darbari



Prof Aurobindo
Gupta

Studio Faculty



Ar Sudeep
Bhoopalam



Ar Sindhu
Jagannath

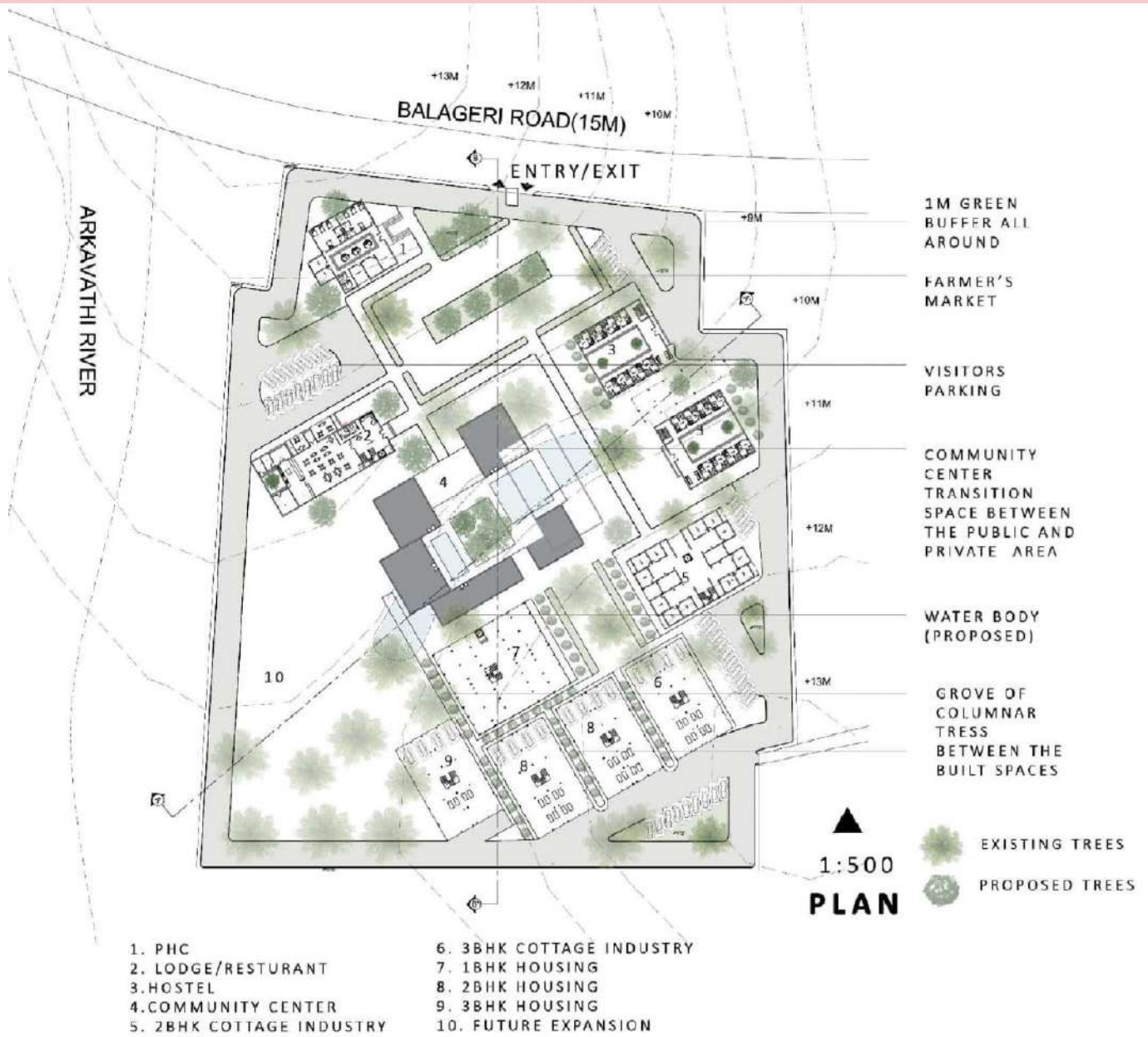
OBJECTIVES

1. To understand the subject of Architecture as an integrated field which works in tandem with Technology, Design, Economy, Ecology, Geography and Sociology etc.
2. To rethink architecture as a man-made ecosystem, which is self-contained and sustainable.
3. To be able to identify and augment the right set of knowledge kit (from the learnt courses and electives) that will steer the approach to the brief in a strong direction

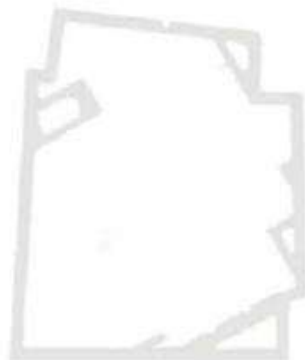
Architectural Design

Faculty: Ar Anshu Darbari, Prof Arobindo Gupta, Ar Sudeep Bhoopalam, Ar Sindhu Jagannath

YASHASWINI L GOWDA
IDC19AT101



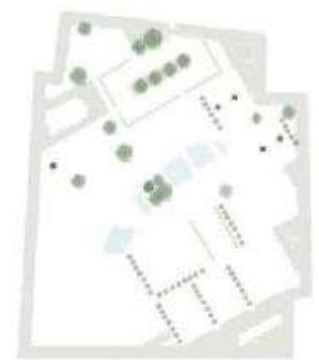
BUILTUP - GROUND COVER -



VEHICULAR PATHWAY - 6M WIDE



EXISTING VEGETATION - COCONUT TREE



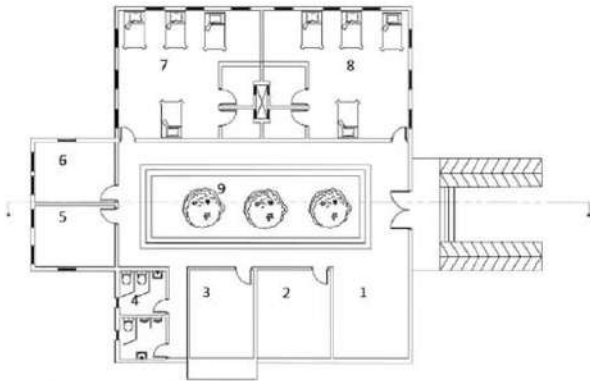
PROPOSED VEGETATION - EX. COLUMNAR TREES

Architectural Design

Faculty: Ar Anshu Darbari, Prof Arobindo Gupta, Ar Sudeep Bhoopalam, Ar Sindhu Jagannath

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PHC

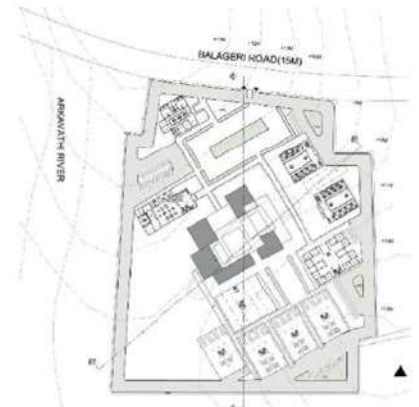


1. RECEPTION
2. UTILITY/STORAGE
3. PHARMACY
4. PUBLIC TOILET
5. DOCTOR'S ROOM
6. STAFF ROOM
7. GENERAL WARD - MALE
8. GENERAL WARD - FEMALE
9. OPEN TO SKY COURTYARD

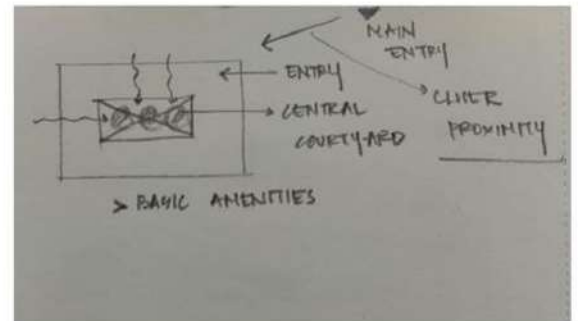
GROUND LVL PLAN



SECTION AA'

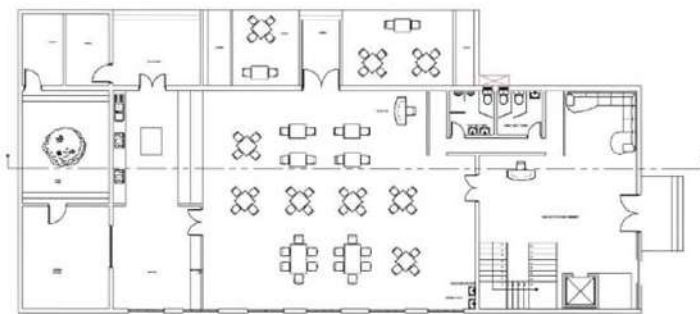


KEY PLAN

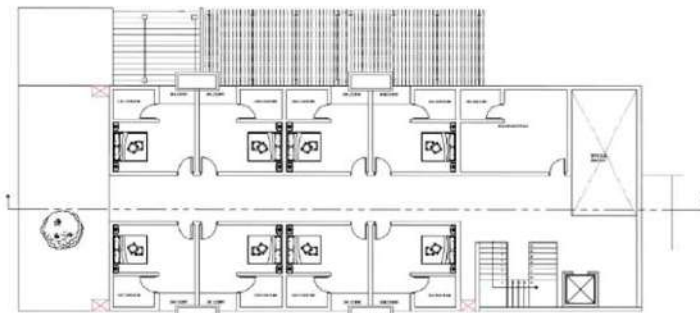


DESIGN ITERATION

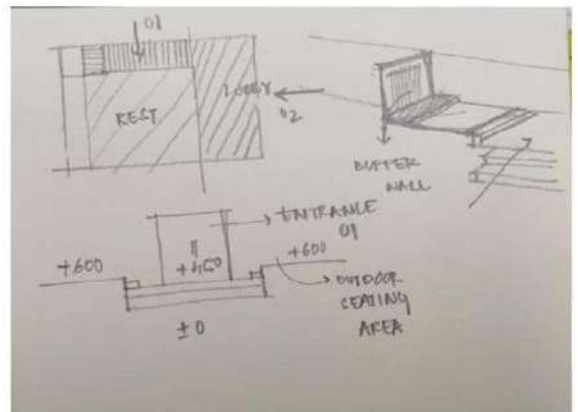
RESTAURANT / LODGE



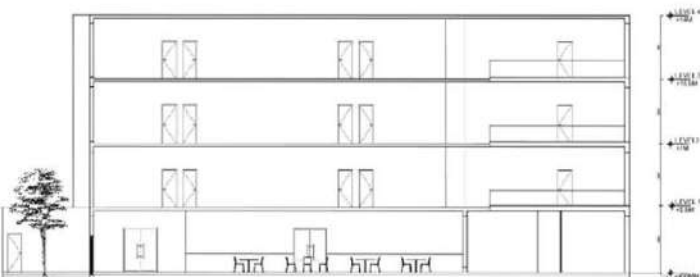
GROUND LVL PLAN - RESTAURANT AND LOBBY



SECOND, THIRD AND FOURTH LVL PLAN - LODGE



VIEW

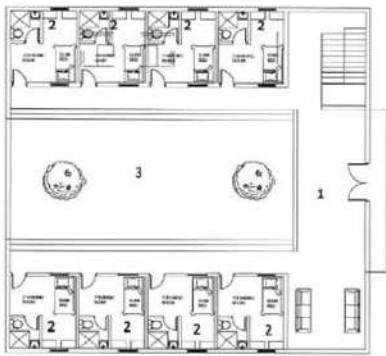


SECTION BB'

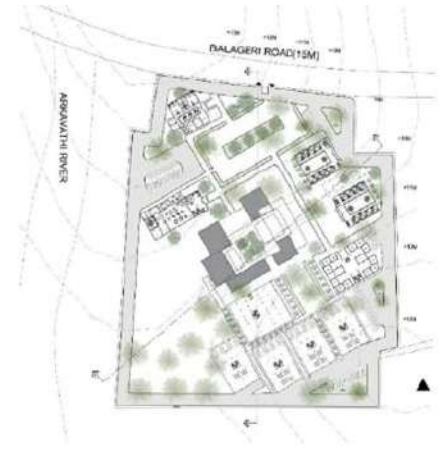
Architectural Design

Faculty: Ar Anshu Darbari, Prof Arobindo Gupta, Ar Sudeep Bhoopalam, Ar Sindhu Jagannath

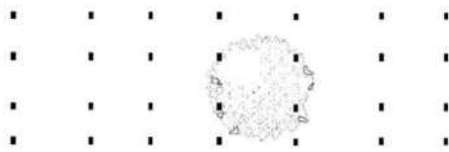
YASHASWINI L GOWDA
1DC19AT101



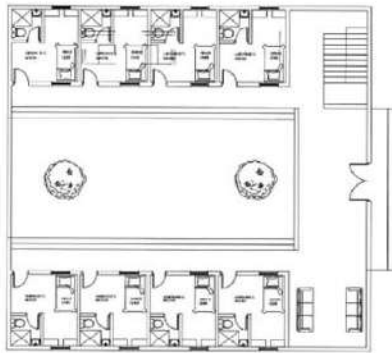
VIEWS



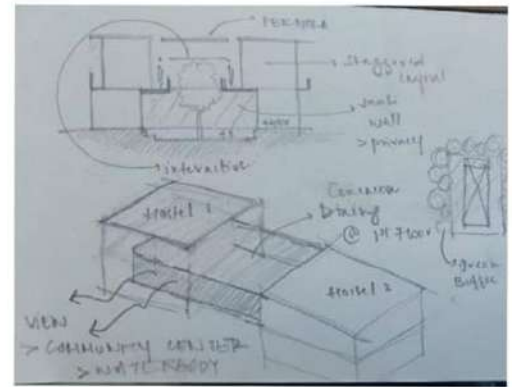
KEY PLAN



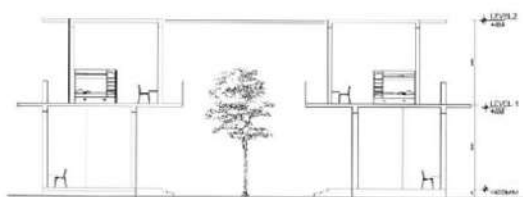
1. LOBBY
2. 2 SHARING ROOM
3. OPRN TO SKY COURTYARD
4. 4 SHARING ROOM
5. COMMON BATHROOM
6. WARDEN ROOM
7. COMMON DINING AREA
8. KITCHEN
9. BALCONY



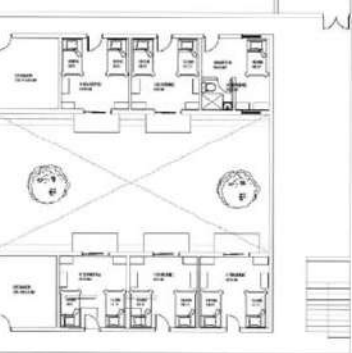
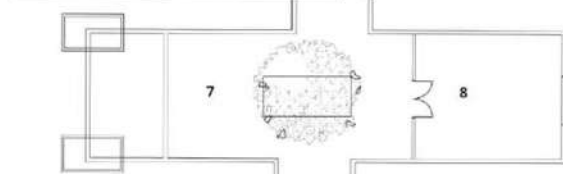
GROUND FLOOR PLAN



DESIGN ITERATION



SECTION AA'



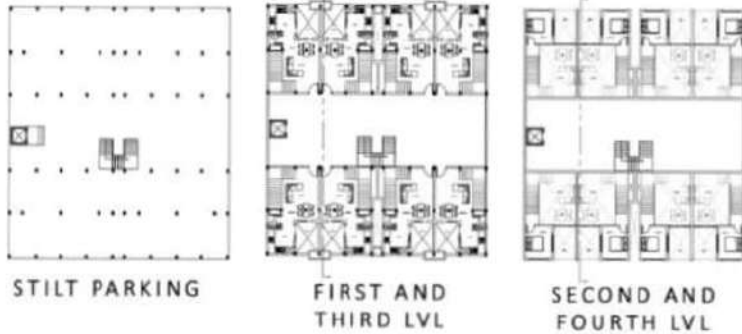
FIRST FLOOR PLAN

Architectural Design

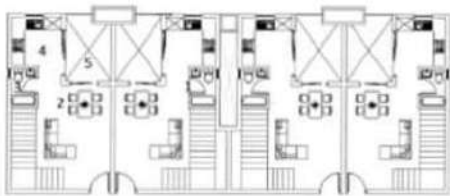
Faculty: Ar Anshu Darbari, Prof Arobindo Gupta, Ar Sudeep Bhoopalam, Ar Sindhu Jagannath

YASHASWINI L GOWDA
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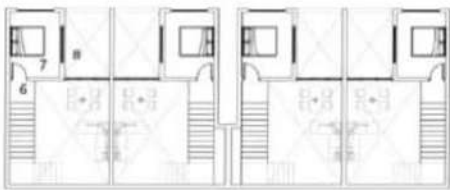
PLANS 1:200



KEY PLAN

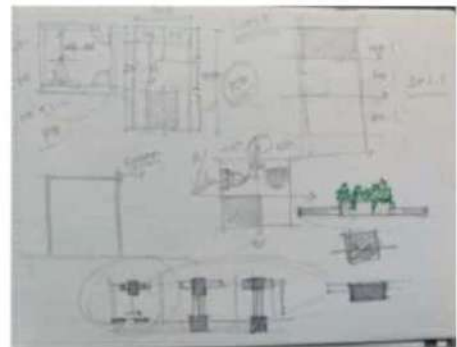
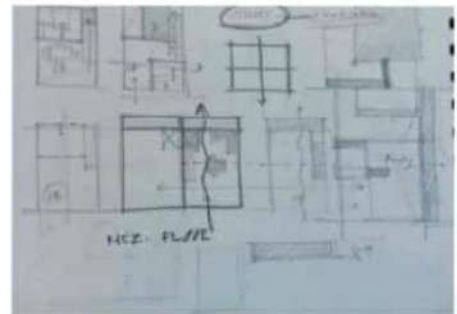


FIRST AND THIRD LVL FLOOR PLAN

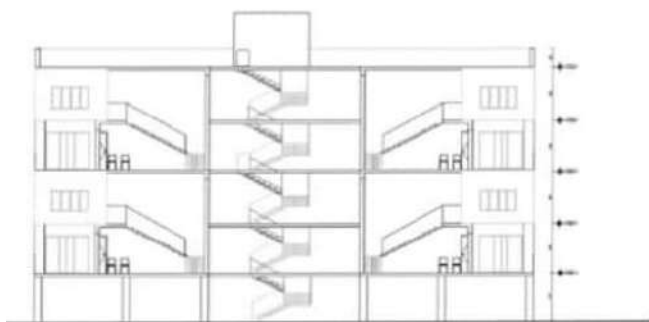


SECOND AND FOURTH LVL FLOOR PLAN

- 1. LIVING ROOM
- 2. DINING ROOM
- 3. COMMON BATHROOM
- 4. KITCHEN
- 5. DOUBLE HEIGHT SIT OUT
- 6. MEZZANINE FLOOR
- 7. BEDROOM 1
- 8. SIT OUT BELOW



DESIGN ITERATIONS



SECTION AA'



ELEVATION



VIEWS

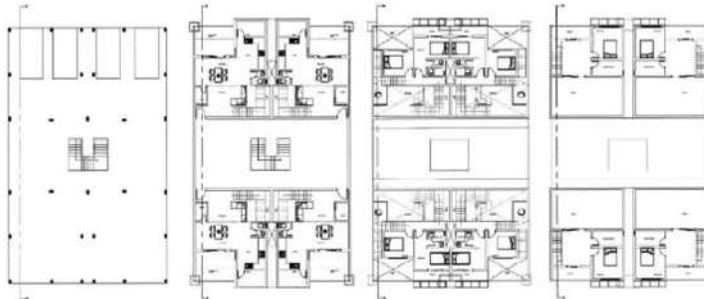
SCALE 1:100

Architectural Design

Faculty: Ar Anshu Darbari, Prof Arobindo Gupta, Ar Sudeep Bhoopalam, Ar Sindhu Jagannath

YASHASWINI L GOWDA
IDC19AT101

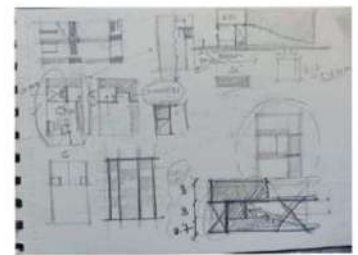
PLANS 1:200



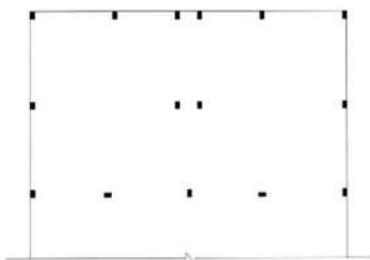
STILT PARKING FIRST FLOOR LVL SECOND FLOOR LVL THIRD FLOOR LVL



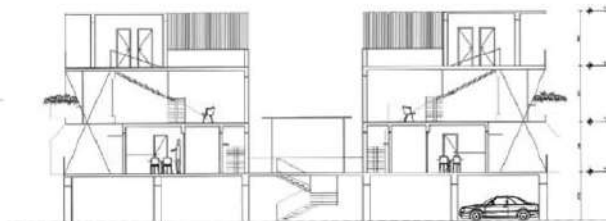
KEY PLAN



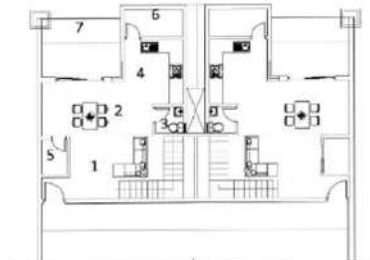
DESIGN ITERATION



GROUND FLOOR PLAN



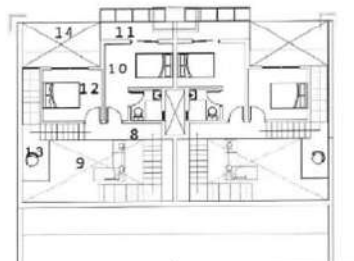
SECTION AA'



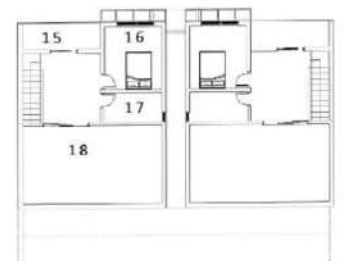
FIRST FLOOR PLAN



ELEVATION



SECOND FLOOR PLAN



THIRD FLOOR PLAN

- 1. LIVING ROOM
- 2. DINING ROOM
- 3. POWDER ROOM
- 4. KITCHEN
- 5. STORAGE
- 6. UTILITY
- 7. DOUBLE HEIGHT SIT OUT
- 8. MEZZANINE FLOOR
- 9. DOUBLE HEIGHT
- 10. BEDROOM 1 WITH BATH
- 11. BALCONY 1
- 12. BEDROM 2
- 13. STUDY
- 14. SIT OUT BELOW
- 15. BALCONY 2
- 16. BEDROOM3
- 17. COMMON BATHROOM
- 18. TERRACE



VIEWS

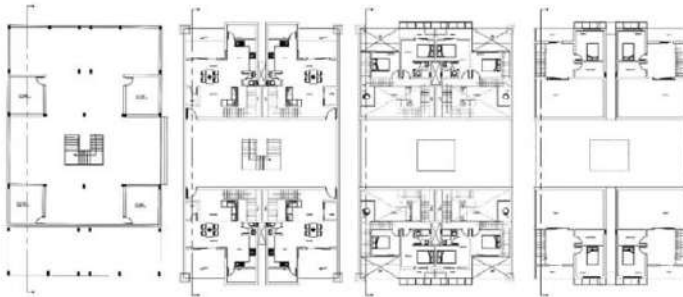
SACLE 1:100

Architectural Design

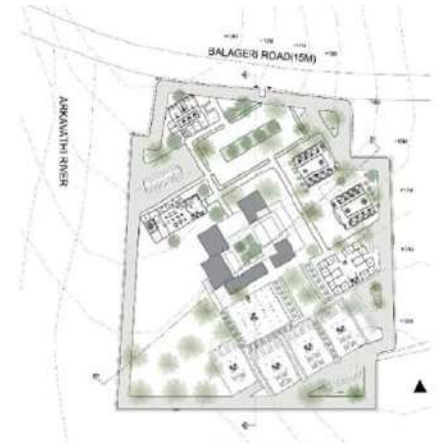
Faculty: Ar Anshu Darbari, Prof Arobindo Gupta, Ar Sudeep Bhoopalam, Ar Sindhu Jagannath

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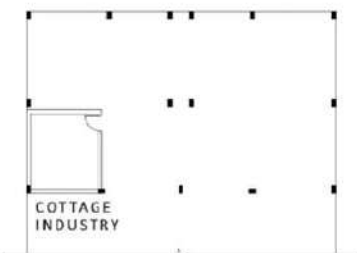
PLANS 1:200



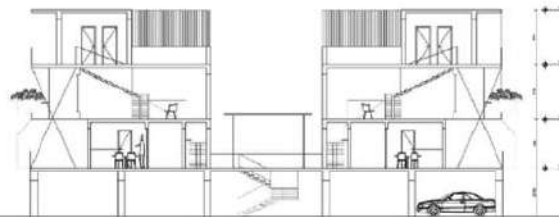
COTTAGE INDUSTRY FIRST FLOOR LVL SECOND FLOOR LVL THIRD FLOOR LVL



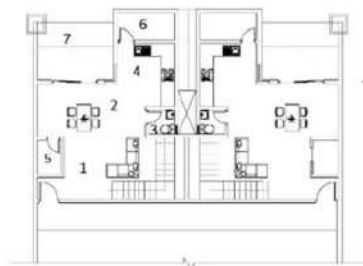
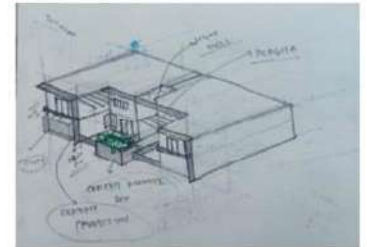
KEY PLAN



GROUND FLOOR PLAN



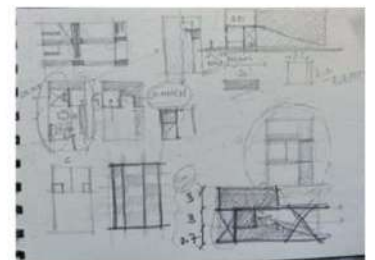
SECTION AA'



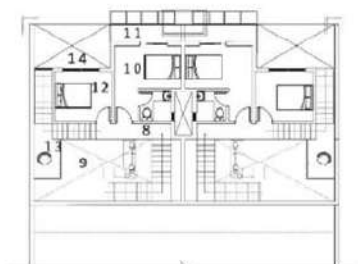
FIRST FLOOR PLAN



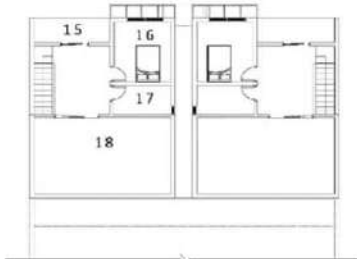
ELEVATION



DESIGN ITERATIONS



SECOND FLOOR PLAN



THIRD FLOOR PLAN

- | | |
|--------------------------|---------------------|
| 1. LIVING ROOM | 12. BEDROM 2 |
| 2. DINING ROOM | 13. STUDY |
| 3. POWDER ROOM | 14. SIT OUT BELOW |
| 4. KITCHEN | 15. BALCONY 2 |
| 5. STORAGE | 16. BEDROOM3 |
| 6. UTILITY | 17. COMMON BATHROOM |
| 7. DOUBLE HEIGHT SIT OUT | 18. TERRACE |
| 8. MEZZANINE FLOOR | |
| 9. DOUBLE HEIGHT | |
| 10. BEDROOM 1 WITH BATH | |
| 11. BALCONY 1 | |



VIEWS

SCALE 1:100

Architectural Design

Faculty: Ar Anshu Darbari, Prof Arobindo Gupta, Ar Sudeep Bhoopalam, Ar Sindhu Jagannath

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1DC19AT101

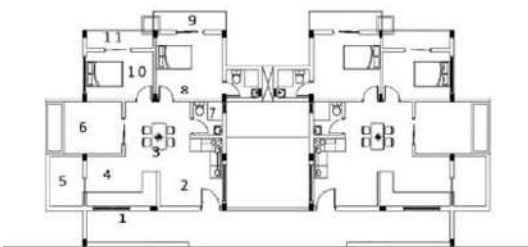


1:200

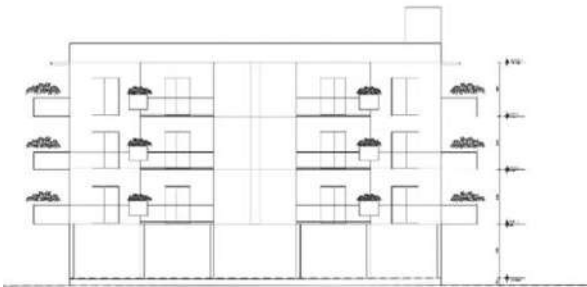


KEY PLAN

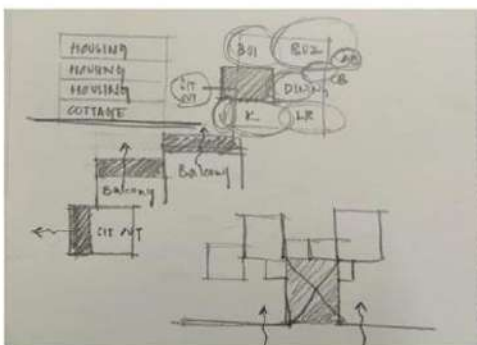
- 1. VERANDHA
- 2. LIVING ROOM
- 3. DINING ROOM
- 4. KITCHEN
- 5. UTILITY
- 6. SIT OUT
- 7. COMMON BATHROOM
- 8. BEDROOM 1 WITH BATH
- 9. BALCONY 1
- 10. BEDROOM 2
- 11. BALCONY 2



SIMILAR LAYOUT PLANS FOR FIRST, SECOND AND THIRD FLOORS



ELEVATION



DESIGN ITERATION



VIEWS

SCALE 1:100

Architectural Design

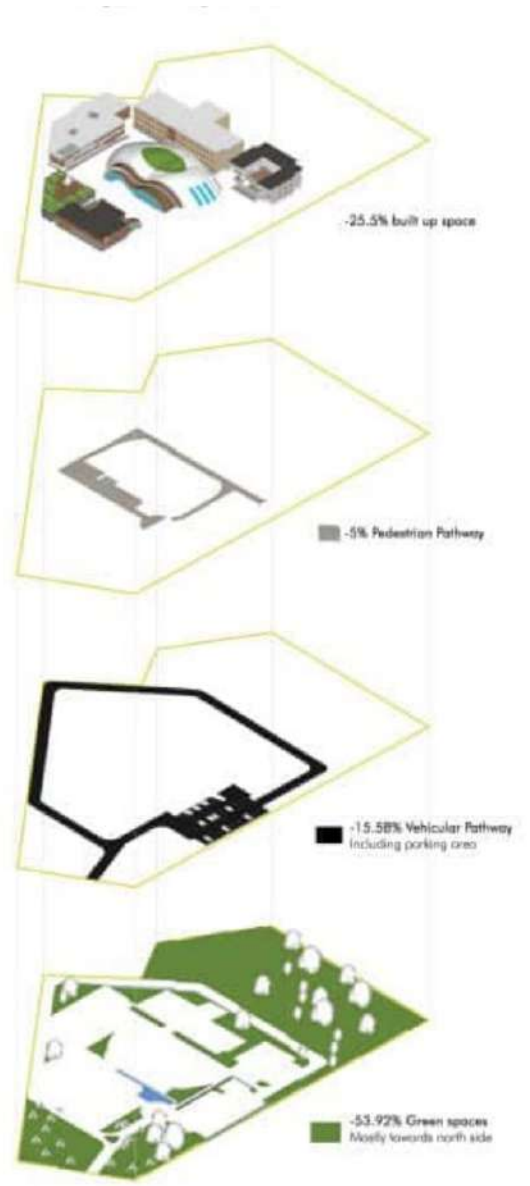
Faculty: Ar Anshu Darbari, Prof Arobindo Gupta, Ar Sudeep Bhoopalam, Ar Sindhu Jagannath

YASHASWINI L GOWDA
1DC19AT101



Architectural Design
Faculty:

Tushar Setiya
1DC19AT005



SITE SECTIONS AND ELEVATION SCALE-1:200



ELEVATION-AA'

50-out courtyard
space for people to
relax after shopping



Internal courtyard in
restaurant-encourages
natural ventilation and
light



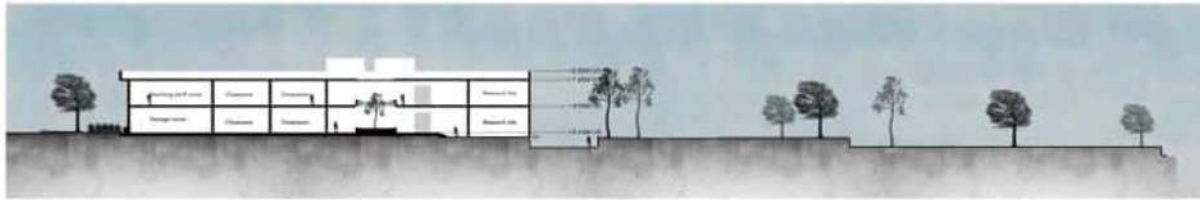
KEY PLAN SCALE-1:1000



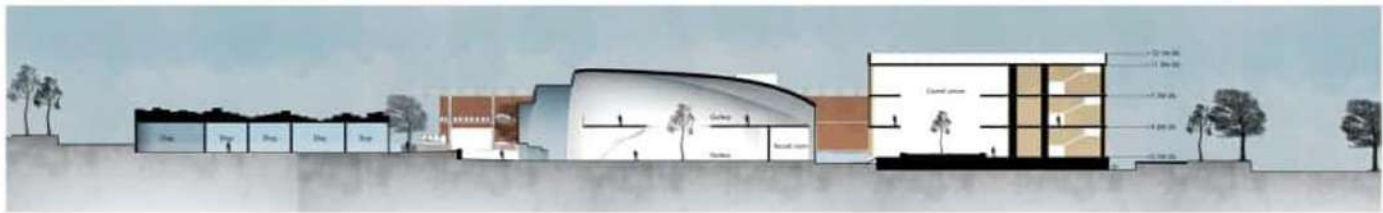
SECTION-AA'



ELEVATION-BB'



SECTION-BB'



SECTION-CC'



ELEVATION-DD'

Outdoor dining area
with the view of water
body



Pedestrian pathway
across the museum
with outdoor furniture



Pedestrian pathway
across the office



SECTION-DD'

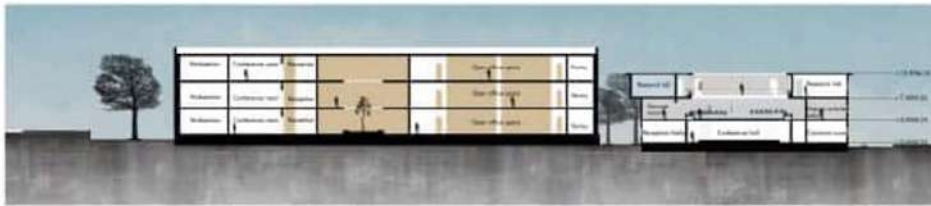
SITE SECTIONS AND ELEVATION SCALE-1:200



ELEVATION-EE'



KEY PLAN SCALE-1:1000



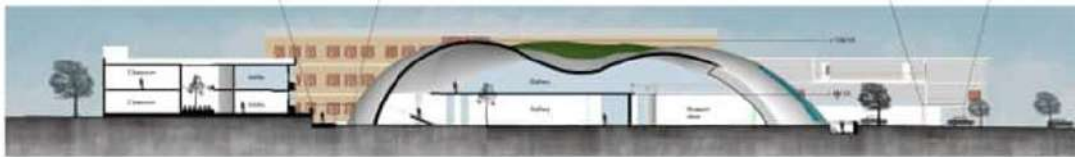
SECTION-EE'



Pedestrian pathway across the Research Institute



Parking area which can roughly accommodate 50 cars and 30+ bikes



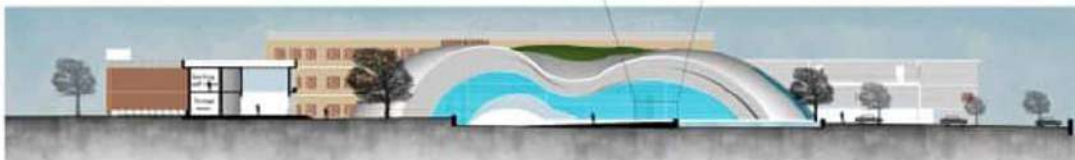
SECTION-FF'



ELEVATION-GG'



Entry to the museum with slope 1:1.5



SECTION-GG'



Pedestrian pathway across the museum

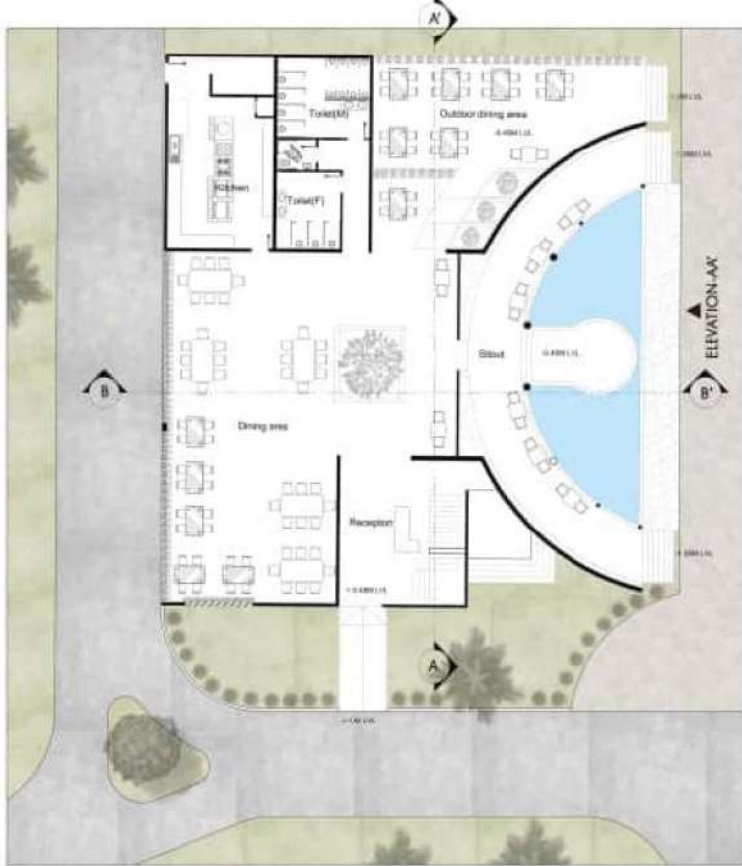


Balcony view from the silk board office



SECTION-HH'

Restaurant Floor plans SCALE-1:100



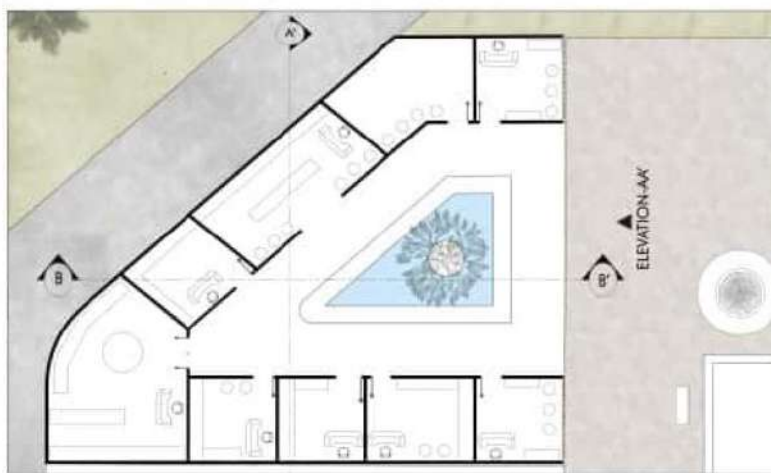
GROUND FLOOR PLAN



KEY PLAN SCALE-1:1000

FIRST FLOOR PLAN

Retail Shop Floor plan SCALE-1:100



GROUND FLOOR PLAN

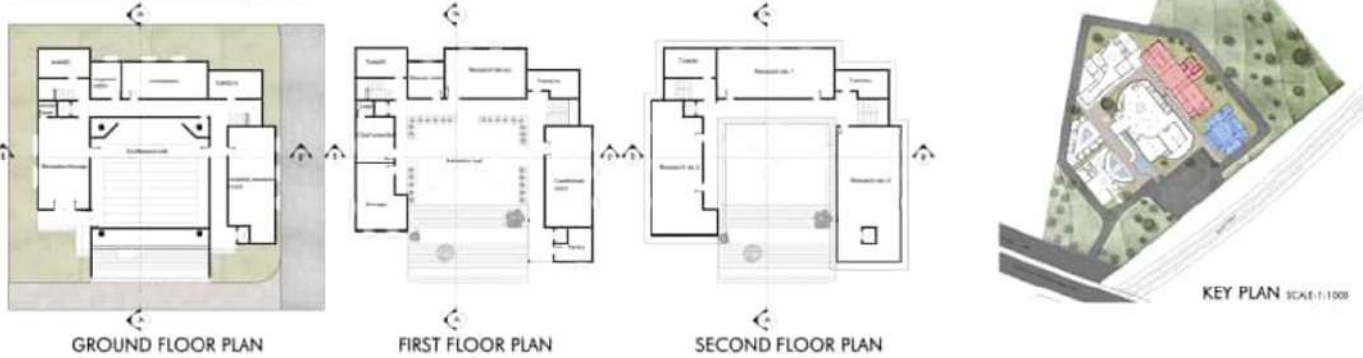


ELEVATION-AA'

Architectural Design
Faculty:

Tushar Setiya
1DC19AT005

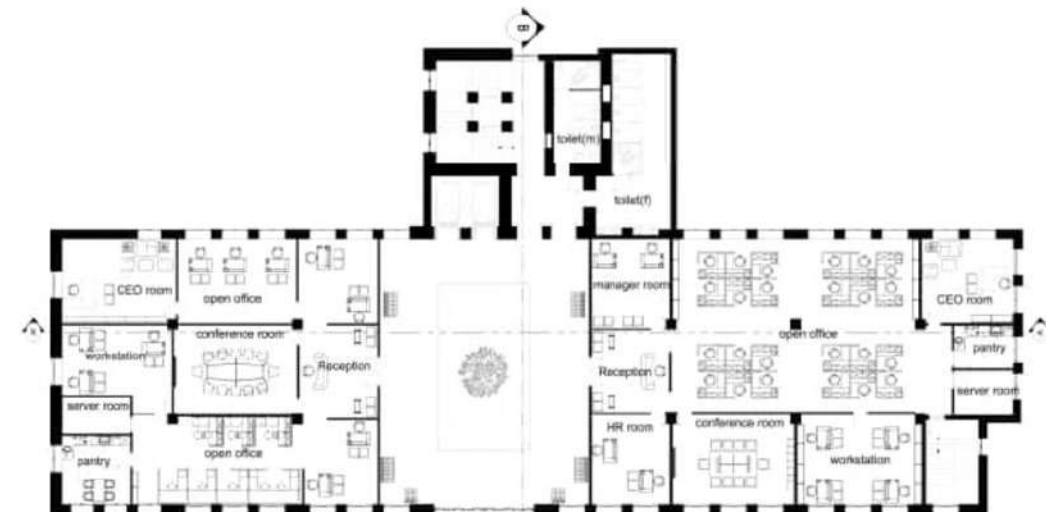
Silk board office Floor plans SCALE-1:200



Retail office Floor plans SCALE-1:100



GROUND FLOOR PLAN



TYPICAL FLOOR PLAN



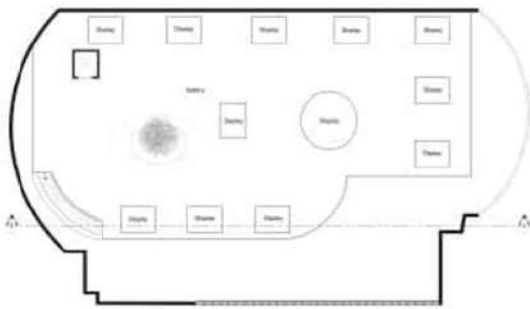
Entrance of the silk board office which acts as a stout space also



Museum Floor plans SCALE-1:200



GROUND FLOOR PLAN

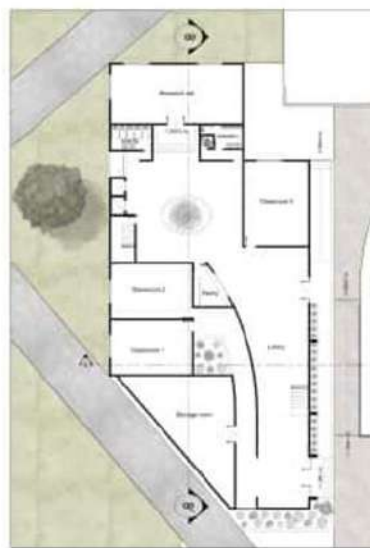


FIRST FLOOR PLAN



KEY PLAN SCALE-1:1000

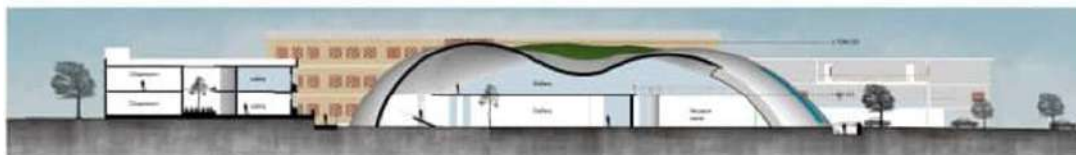
Research Institute Floor plans SCALE-1:200



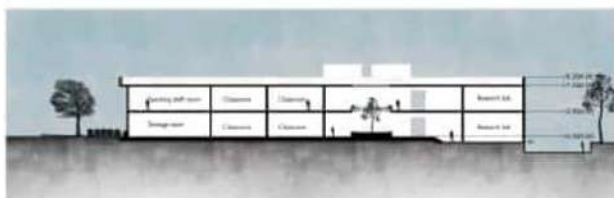
GROUND FLOOR PLAN



FIRST FLOOR PLAN



SECTION-AA'



SECTION-BB'



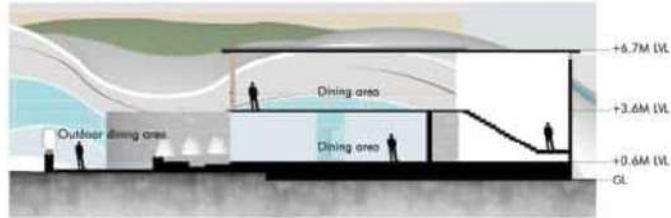
Site model
SCALE-1:500



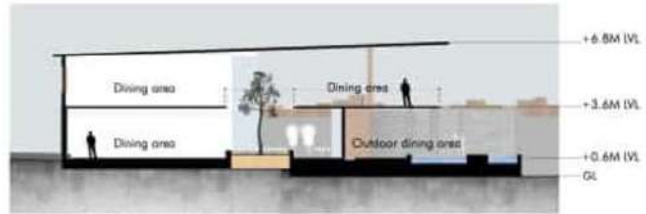
ROOF PLAN SCALE-1:500

Individual block sections

Restaurant SCALE: 1:100

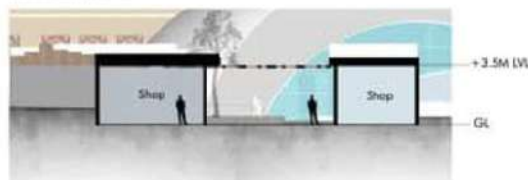


SECTION-AA'



SECTION-BB'

Retail shops SCALE: 1:100

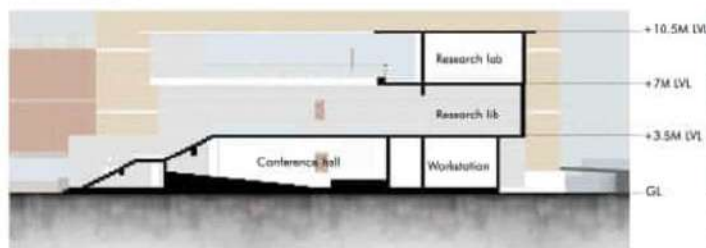


SECTION-AA'

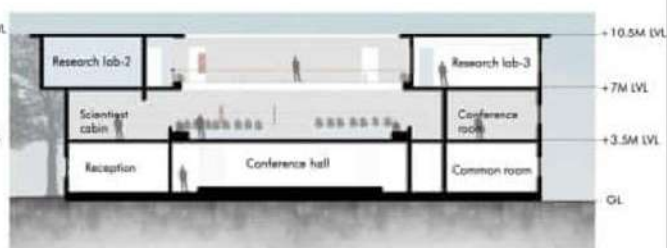


SECTION-BB'

Silk board office SCALE: 1:100

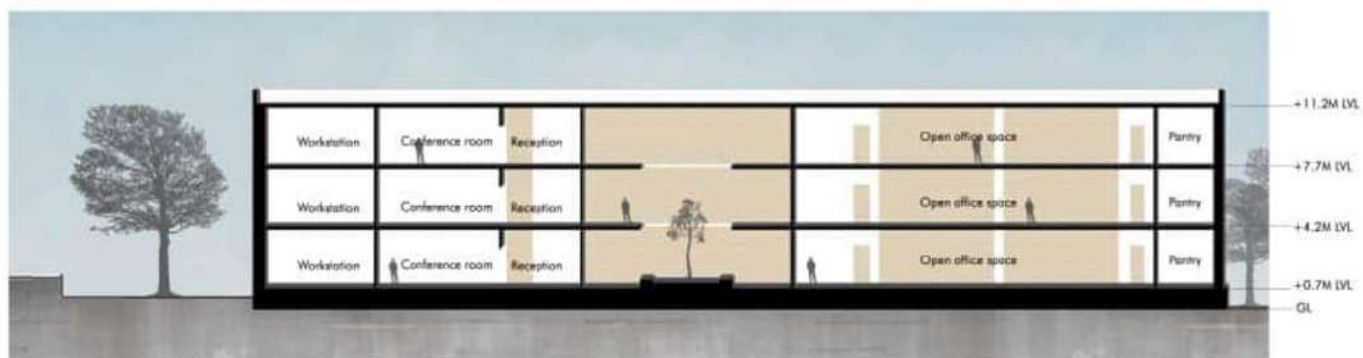


SECTION-AA'

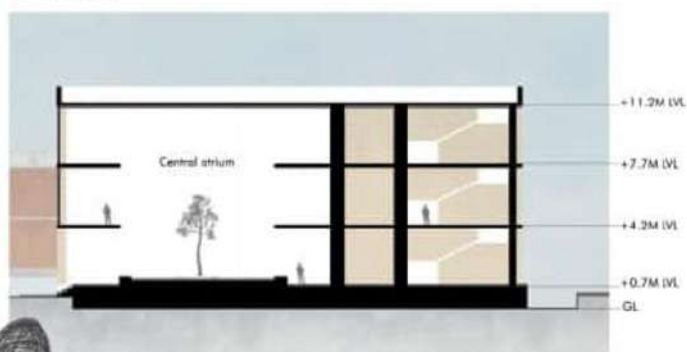


SECTION-BB'

Retail office SCALE: 1:100



SECTION-AA'



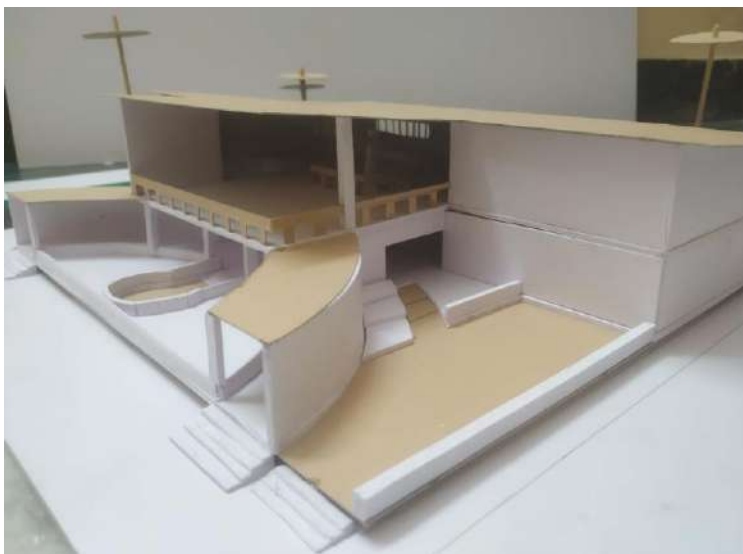
SECTION-BB'



Architectural Design

Faculty: Anshu Darbari, Arobindo Gupta, Sudeep Bhooplam,
Sindhu Jagannath

Tushar Setiya
1DC19AT005

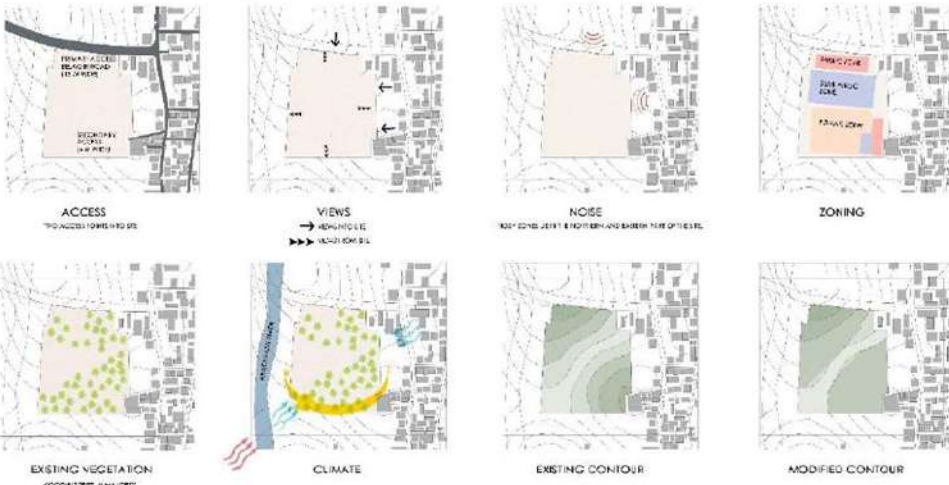


Architectural Design

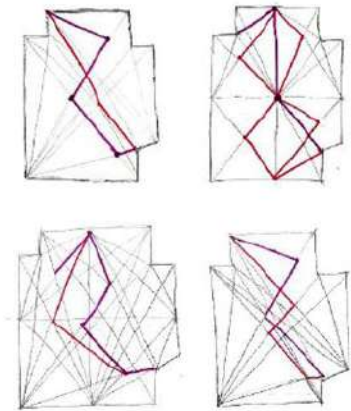
Faculty: Anshu Darbari, Arobindo Gupta, Sudeep Bhooplam, Sindhu Jagannath

Vindhya AH
IDC19AT101

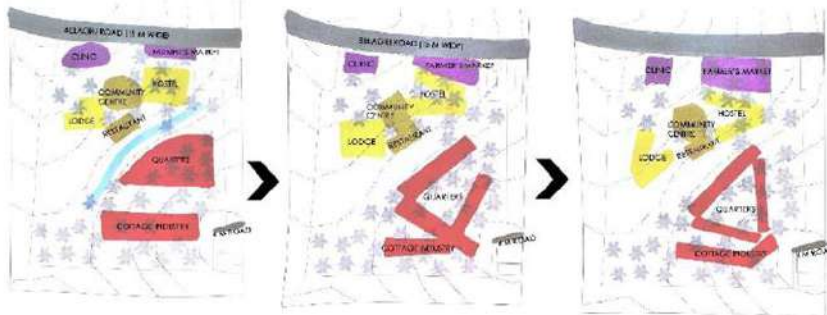
SITE ANALYSIS AND INFERENCE



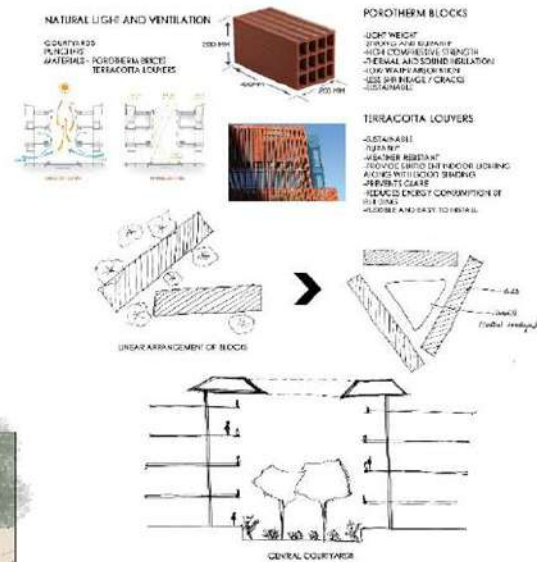
ACCESS DERIVATION



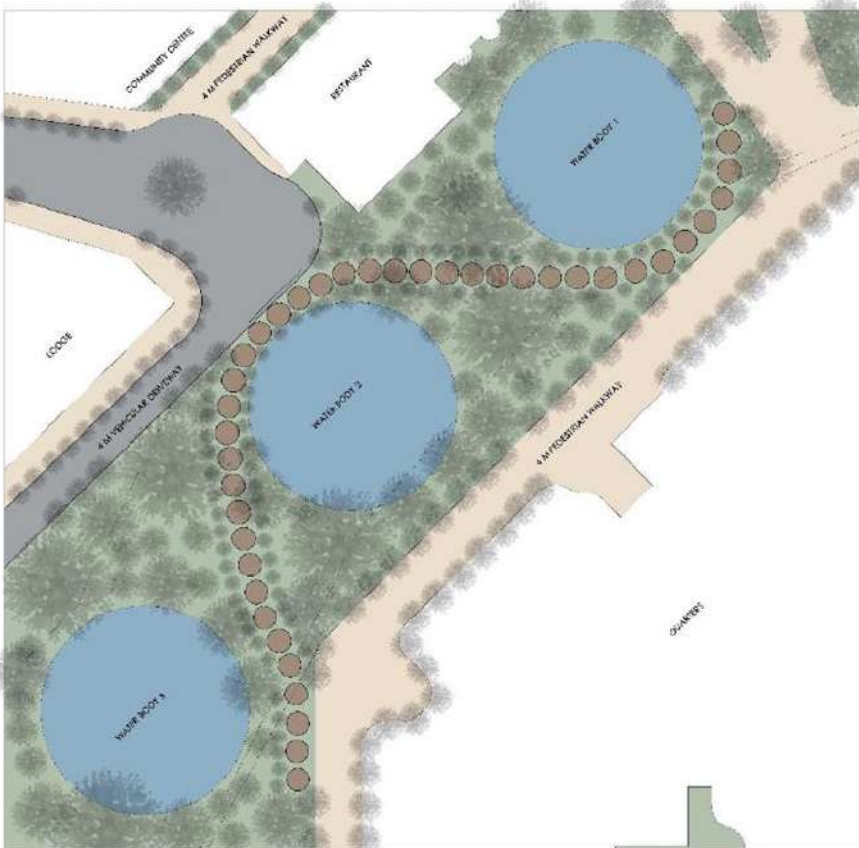
ZONING



DESIGN GUIDELINES



LIMINAL SPACE



LIMINAL SPACE PLAN
SCALE: 1:1150



Architectural Design

Faculty: Anshu Darbari, Arobindo Gupta, Sudeep Bhooplam, Sindhu Jagannath

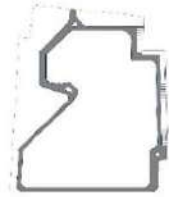
Vindhya AH
1DC19AT101



MASTERPLAN



SITE DIMENSIONS



VEHICULAR DRIVEWAY



BUILT - UNBUILT SPACES



PEDESTRIAN WALKWAY



SECTION AA'



SECTION BB'



SECTION CC'



SECTION DD'



SECTION EE'



SECTION FF'



ROOF PLAN

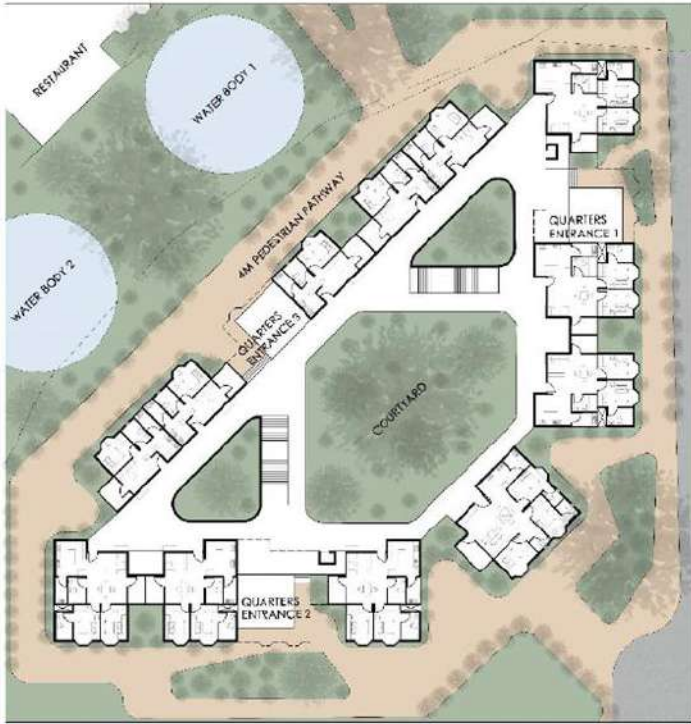


KEYPLAN

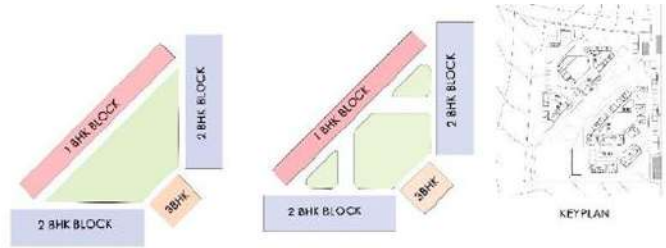
Architectural Design

Faculty: Anshu Darbari, Arobindo Gupta, Sudeep Bhooplam, Sindhu Jagannath

Vindhya AH
1DC19AT101



QUARTERS GROUND FLOOR PLAN



KEYPLAN



1 BHK HOUSE PLAN
SCALE: 1:100



2 BHK HOUSE PLAN
SCALE: 1:100



3 BHK HOUSE PLAN
SCALE: 1:100



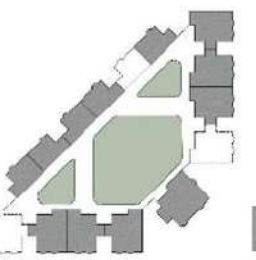
GROUND FLOOR ZONING



FIRST FLOOR ZONING



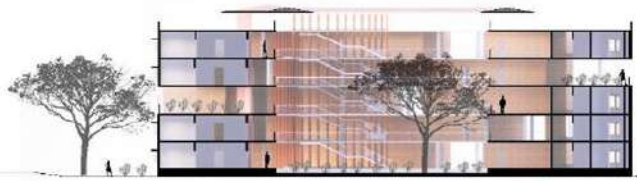
SECOND FLOOR ZONING



THIRD FLOOR ZONING



FOURTH FLOOR ZONING



SECTION AA'



KEYPLAN



SECTION BB'

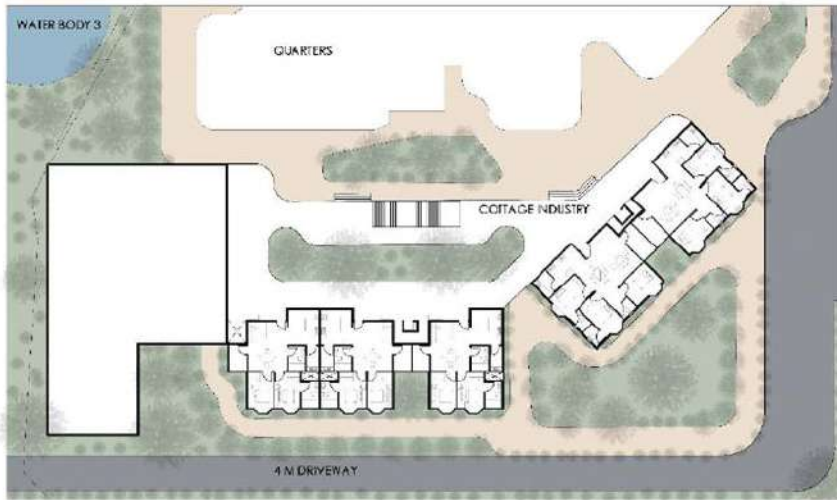


ELEVATION A

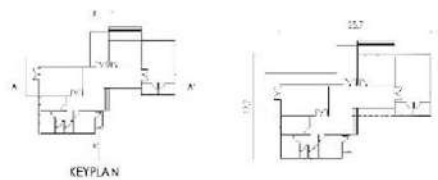
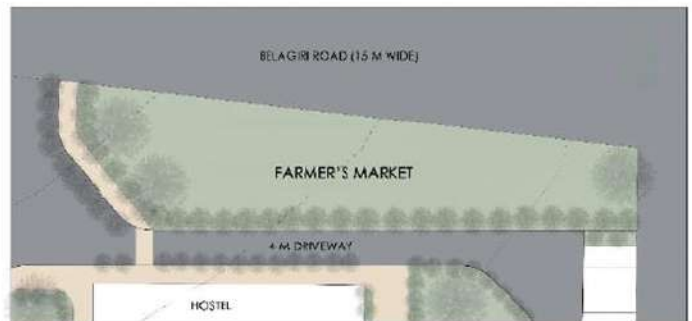
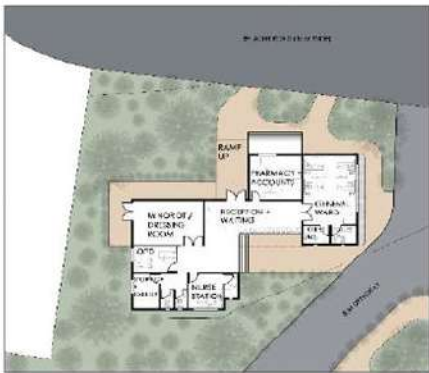
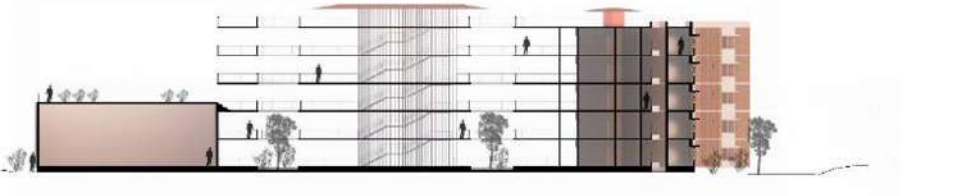
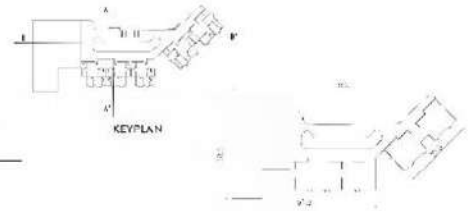
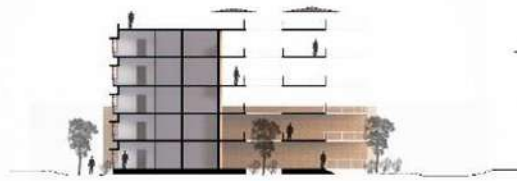
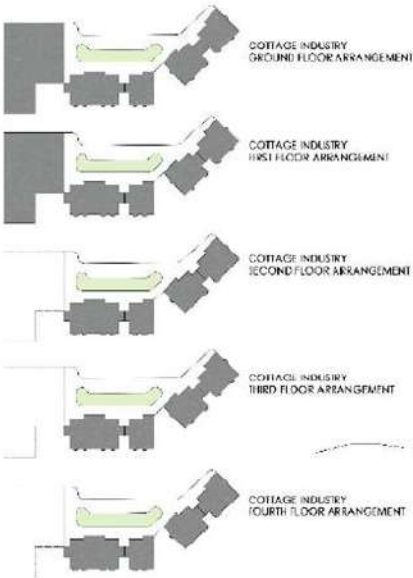
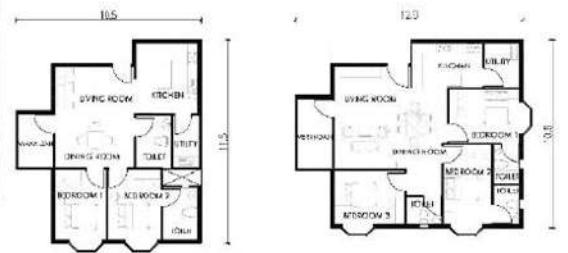
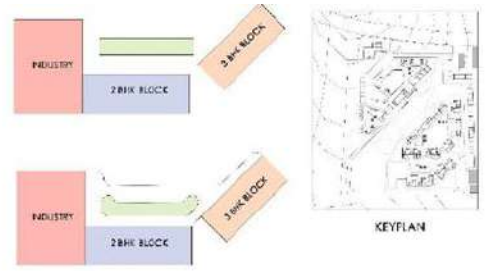
Architectural Design

Faculty: Anshu Darbari, Arobindo Gupta, Sudeep Bhooplam, Sindhu Jagannath

Vindhya AH
1DC19AT101



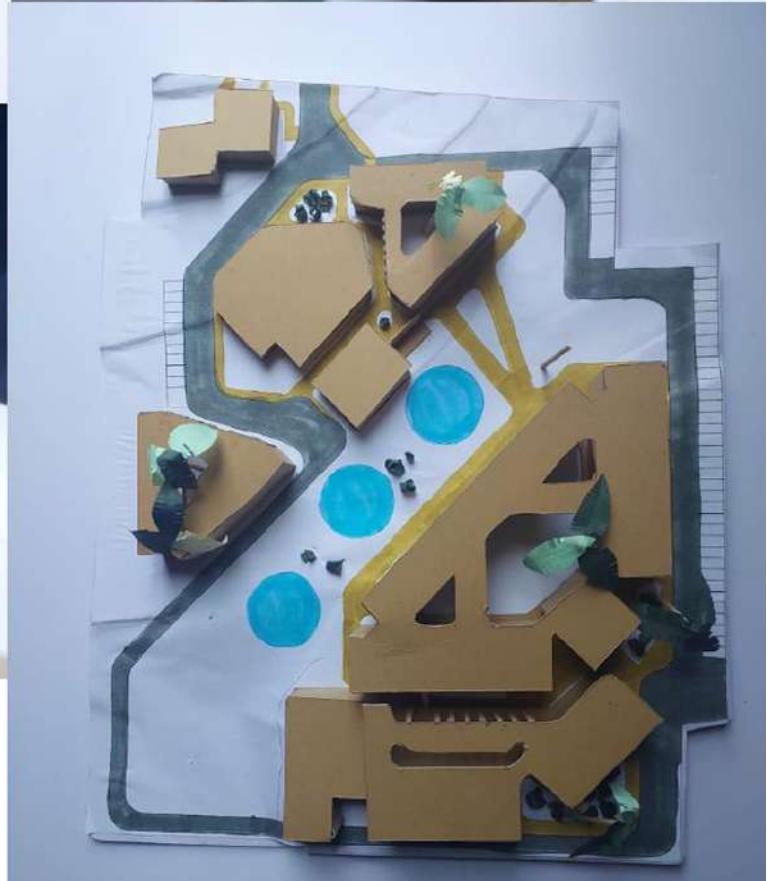
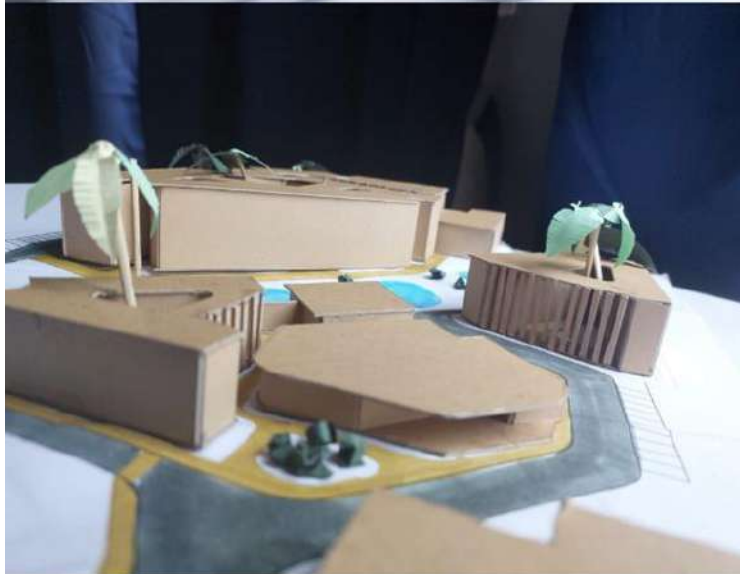
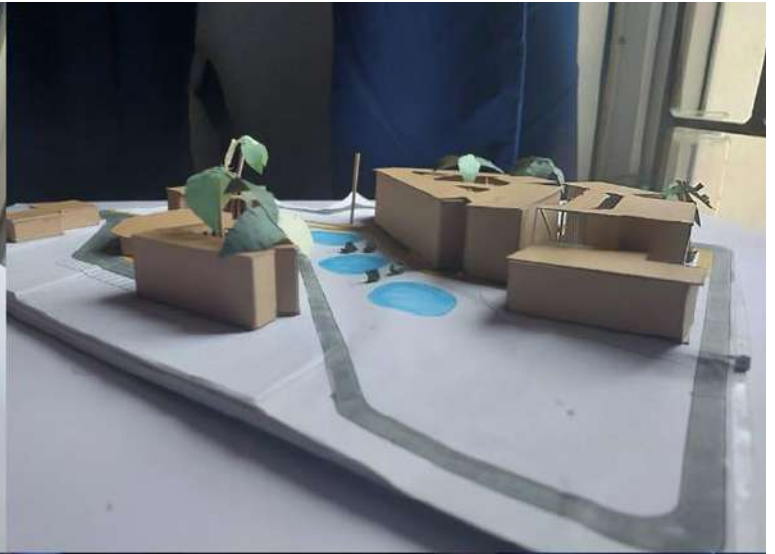
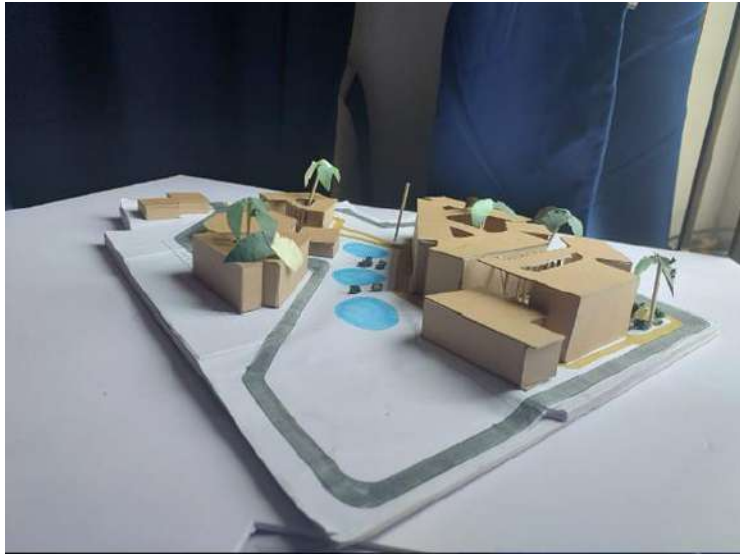
COTTAGE INDUSTRY GROUND FLOOR PLAN



Architectural Design

Faculty: Anshu Darbari, Arobindo Gupta, Sudeep Bhooplam,
Sindhu Jagannath

Vindhya AH
1DC19AT101



Design Brief

Enhance the experience of the users by adding Liminal spaces to existing identified cultural hubs

Integrate the performative aspects of architecture into the design

To generate and iconic architectural addition to enhance and boost the cultural identity of the city.

To generate the form that can link the past to the future.

The form generated to pay homage to the existing structure of while at the same time be compatible to the present context.

ARCHITECTURAL DESIGN 7 SUBJECT CODE 21 ARC 11

Studio Coordinators



Ar Aparna
Shastri

Studio Faculty



Ar Vinay
Shekhar



Ar Madan
Kumar

Architectural Design

Faculty: Ar Aparna Shastri, Ar Vinay Shekhar, Ar Madan Kumar

Kruthi Rasayam
1DC19AT039



- 1. VISHVESHWARAYA MUSEUM
- 2. GOVERNMENT MUSEUM
- 3. VENKATAPPA ART GALLERY
- 4. VEHICULAR ENTRY
- 5. PEDESTRIAL ENTRY
- 6. TEMPORARY SOUVENIR SHOP
- 7. PARKING
- 8. ENTRANCE 3
- 9. WATER ELEMENT
- 10. AMPHITHEATRE
- 11. SCULPTURE PARK
- 12. DIGITAL DISPLAY
- 13. SUPERTREES
- 14. LANDSCAPING
- 15. WORKSHOP
- 16. CLUBBON PARK ENTRY



D S

Architectural Design

Faculty: Ar Aparna Shastri, Ar Vinay Shekhar, Ar Madan Kumar

Kruthi Rasayam

IDC19AT039



Text to be written here, as less as possible, in Century Gothic - 12 point.

A geometrical intervention rooted in the contemporary

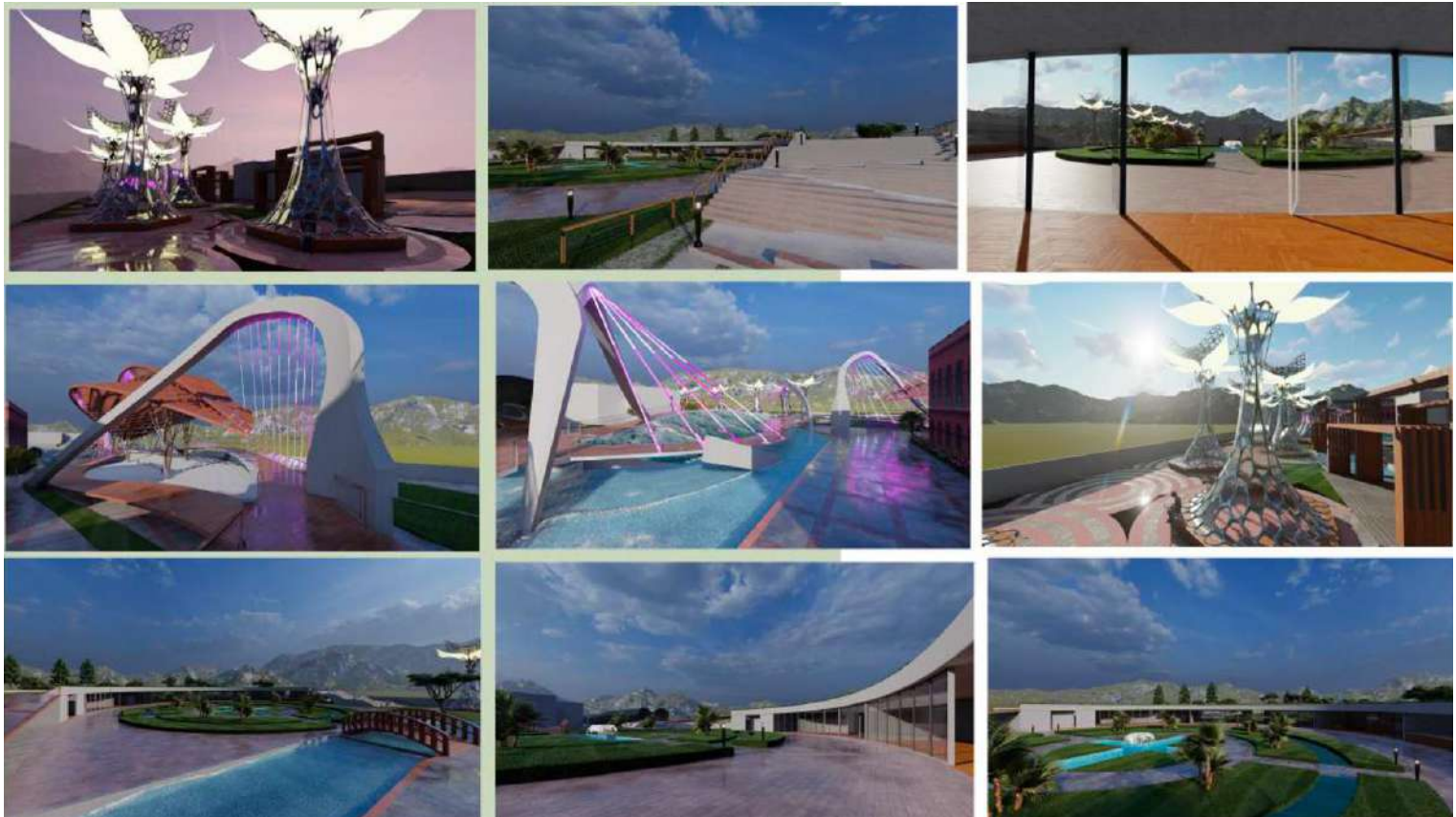
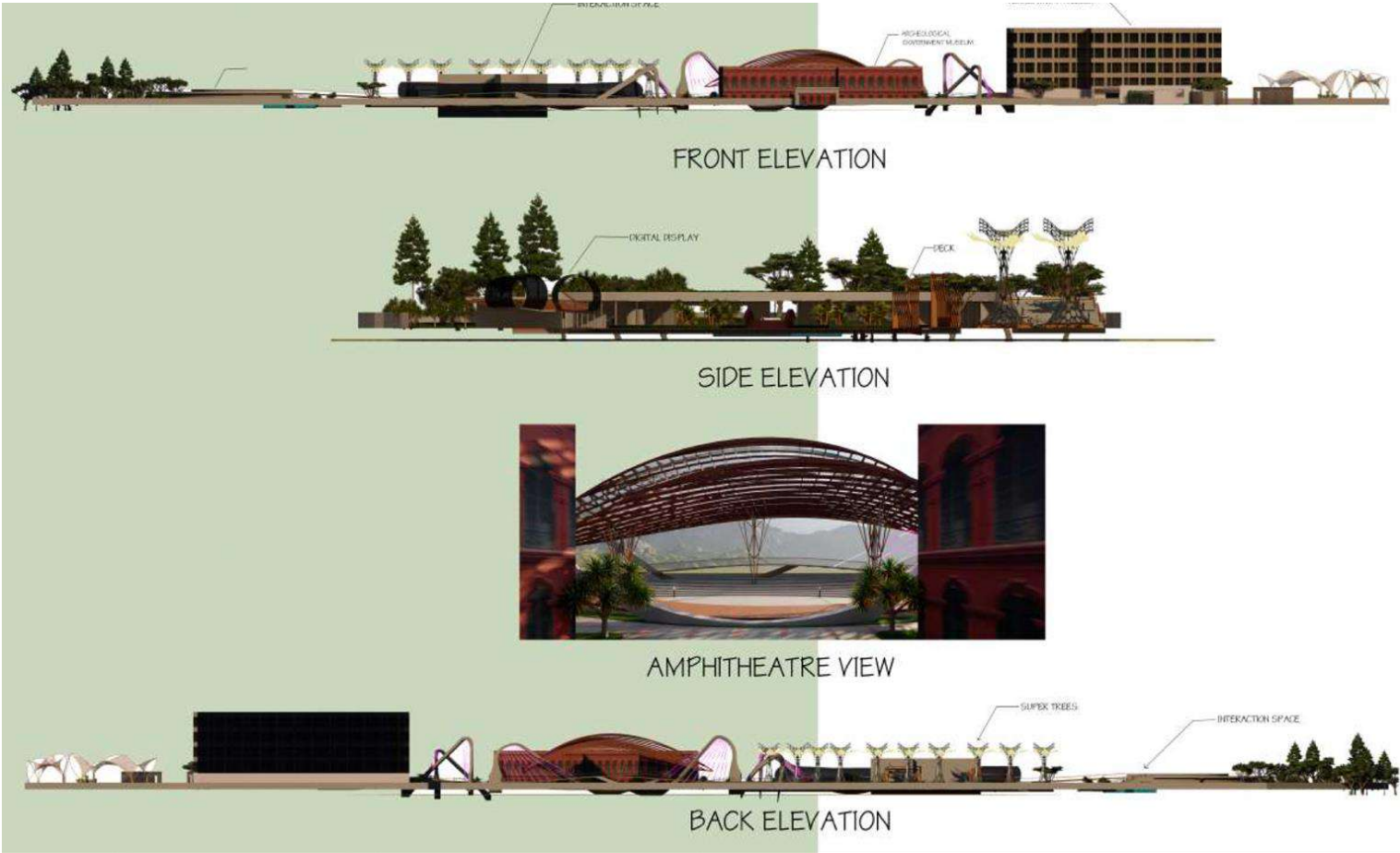
AD VII-SEC B

Architectural Design

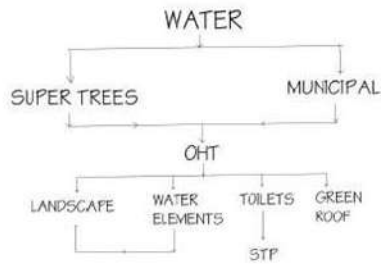
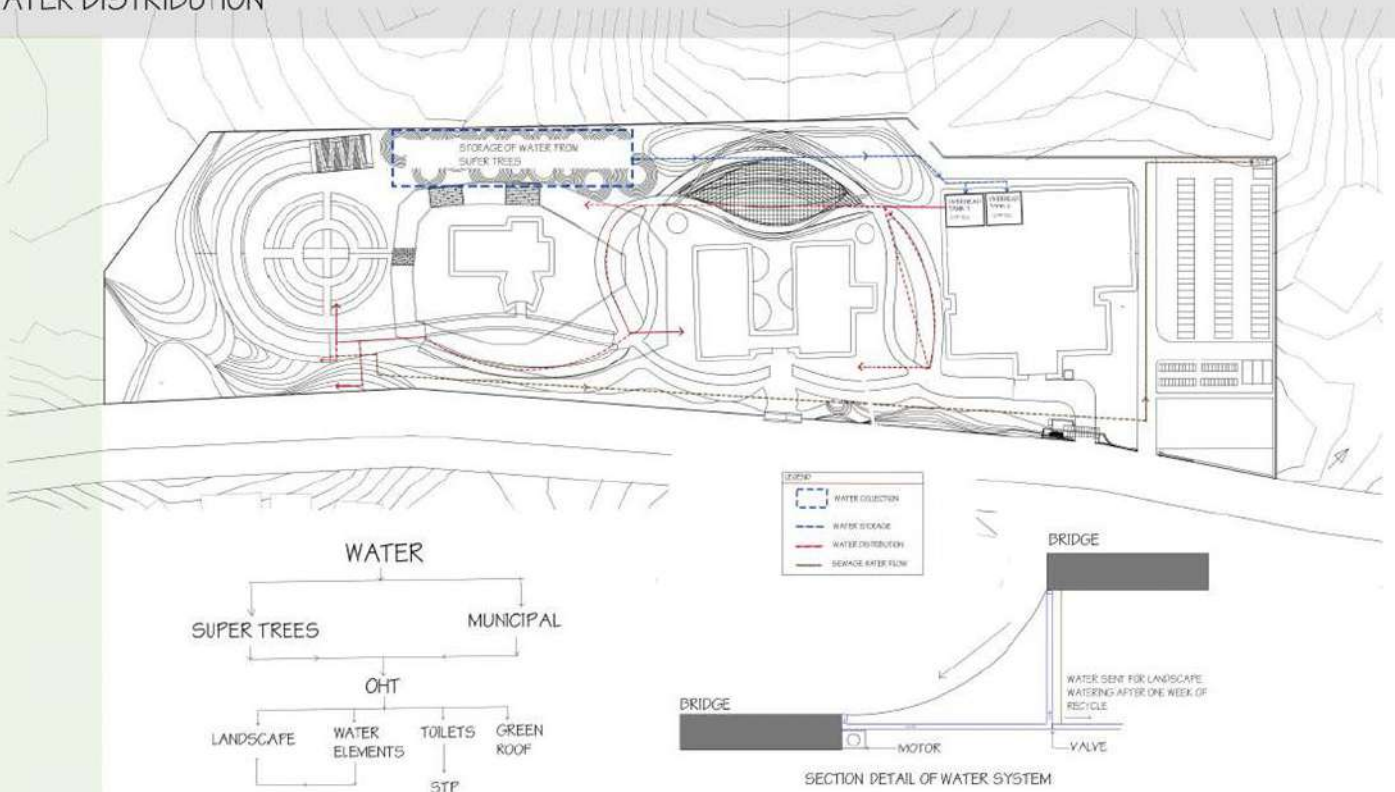
Faculty: Ar Aparna Shastri, Ar Vinay Shekhar, Ar Madan Kumar

Kruthi Rasayam

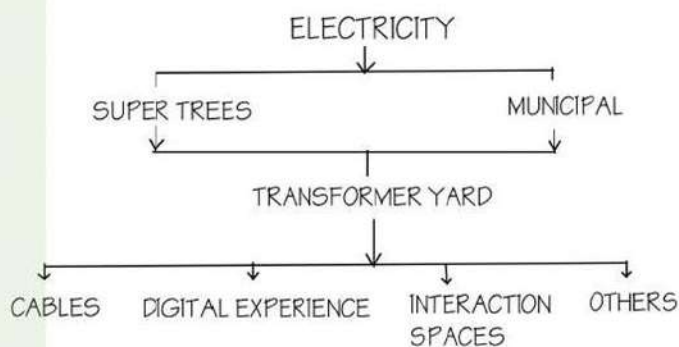
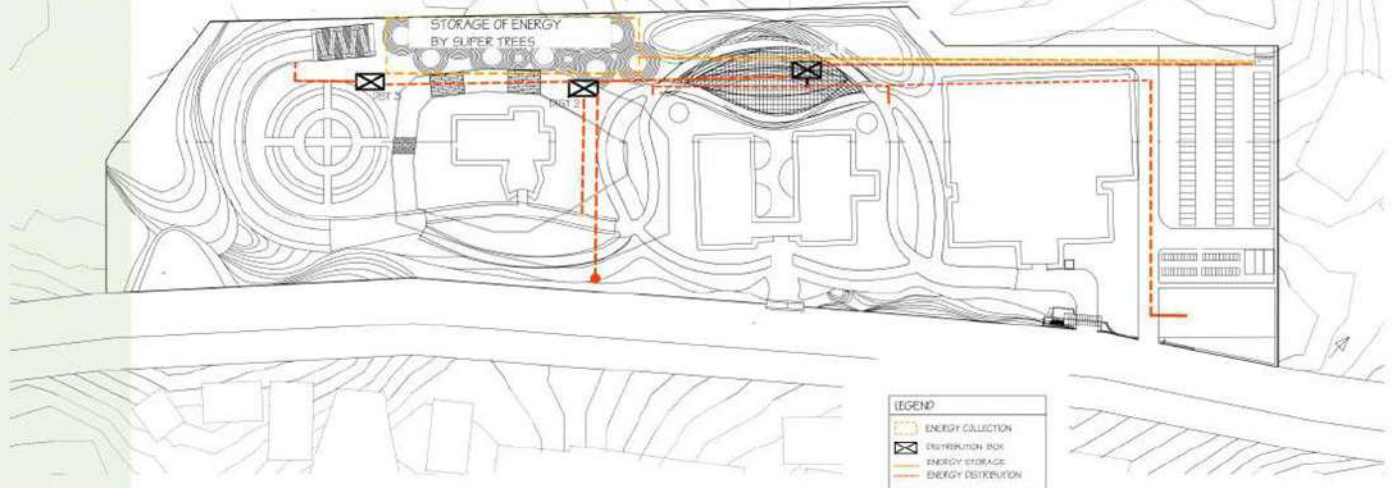
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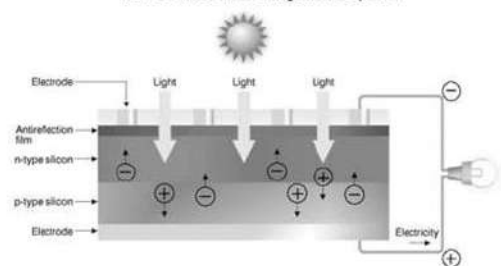
SERVICES
WATER DISTRIBUTION



ELECTRICITY DISTRIBUTION



How a Photovoltaic cell generates power



PERFORMATIVE ASPECTS

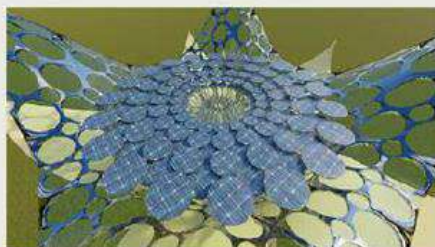


PVC PANELS/CELLS
FUNNEL-HELPS IN COLLECTING RAIN WATER
PETALS- LENGTH 4M,WIDTH 2M
TOP-OPV BOTTOM-LED
ALUMINIUM CYLINDER AND ACRYLIC STEM STORES HARVESTED WATER.

SUPER TREE HEIGHT-10M



CYLINDRICAL WATER STORAGE



PVC CELLS/PANELS

SUPERTREES ABSORB THE SUN'S RADIATION AND CAPTURES HEAT AND LIGHT IN ORDER TO PRODUCE SOLAR ENERGY REQUIRED TO CREATE AN ENVIRONMENT WHERE PEOPLE CAN PARTAKE IN VARIOUS ACTIVITIES TAKING PLACE ON SITE.

1. SUPER TREES

PETALS OF THE STRUCTURE FORM A SLOPE- ALLOWS FOR RAIN WATER TO FLOW INTO THE CYLINDRICAL STEM. THE STEM ACTS AS A STORAGE UNIT FOR THE RAIN WATER FROM WHICH IT CAN BE FILTERED AND USED.

BETWEEN THE PETALS ARE LONG THIN SEPIALS WHICH IN TURN ACT AS SPOTLIGHT WITH LED AT THE TIP.

THE BODY OF THE SEPAL IS COATED WITH ORGANIC PHOTOVOLTAIC SHEET. TOP-OPV OR OSC ABSORBS SUNLIGHT AND TRANSMIT ELECTRICAL CHARGES.

THE STAMEN OF THE FLOWER IS DEPICTED BY THE SOLAR CELLS PRESENT IN THE CENTER ON THE TREE WHICH ARE CONNECTED TO AN INNER CYLINDRICAL ROD WHICH TRANSPORTS THE SOLAR ENERGY UNDERGROUND FROM WHERE IT CAN BE STORED OR DISTRIBUTED.



PVC CELLS/PANELS CONVERTS SOLAR ENERGY TO ELECTRICAL ENERGY. SUNLIGHT IS ABSORBED, WHICH CHANGES ANGLES AS THEY FOLLOW THE SUN PATH.

OPV-TYPE OF SOLAR CELLS WHICH ABSORBS SUNLIGHT AND IN TURN CONVERT INTO ELECTRICAL CHARGES.

THE RAIN WATER COLLECTED IS STORED IN A PIT UNDERGROUND WITH A LAYER OF PLASTIC TRAMPOLIN SHEET WHICH PREVENTS IT FROM SEEPING INTO THE SOIL.

CALCULATIONS-

1. PHOTOVOLTAIC SOLAR CELLS - NUMBER OF PHOTOVOLTAIC CELLS IN ONE STRUCTURE=80
ENERGY PRODUCED BY 80 CELLS =7600 WATTS PER STRUCTURE.

EFFICIENCY IS CONSIDERED 40% BASED ON THE FIELD GUIDE -TOTAL ENERGY PRODUCED BY THE STRUCTURE =40% OF 7600= 3040 WATTS

TOTAL NUMBER OF STRUCTURES ON SITE=10

TOTAL ENERGY PRODUCED = 10X3040=30,400 WATTS= **30.4 KW**

2. ORGANIC PHOTOVOLTAIC (OPV)

AREA OF ONE PETAL=2X1=2 SQM

NUMBER OF PETALS IN ONE STRUCTURE=6

NUMBER OF PETALS IN 10 STRUCTURES=6X10=60

AREA OF 60 PETALS= 2X60= 120 SQM = 480 KW

EFFICIENCY IS 20% OF 480= 96KW

3. PHOTOVOLTAIC CELLS+OPV=96+30.4= **126.4 KILOWATT IS PRODUCED PER DAY**

TOTAL STORAGE CAPACITY OF SUPER TREES-

LOWER DIA OF CYLINDER-6M

UPPER DIA OF CYLINDER-2M

HEIGHT OF THE CYLINDER-7M

VOLUME PER TREE=95.3 M³

VOL FOR 10 TREES WITH EFFICIENCY=

60% OF TOTAL= 5.71800L



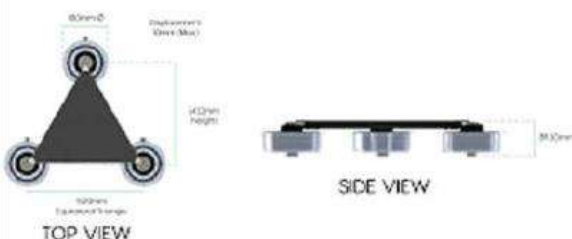
2.KINETIC PAVEMENTS/PANELS

TOTAL NUMBER OF PANELS PRESENT -2860

1 FOOT STEP= 15 JOULES OF ENERGY

CONSIDERING 350 STEPS PER PERSON, TOTAL ENERGY PRODUCED BY KINETIC PAVEMENTS PER DAY= 6.5 KW

TOTAL ENERGY PRODUCED ON SITE= **126+6.5=132.5 KW PER DAY**



liminal space

BRIEF

[*BRIDGING THE GAP*]

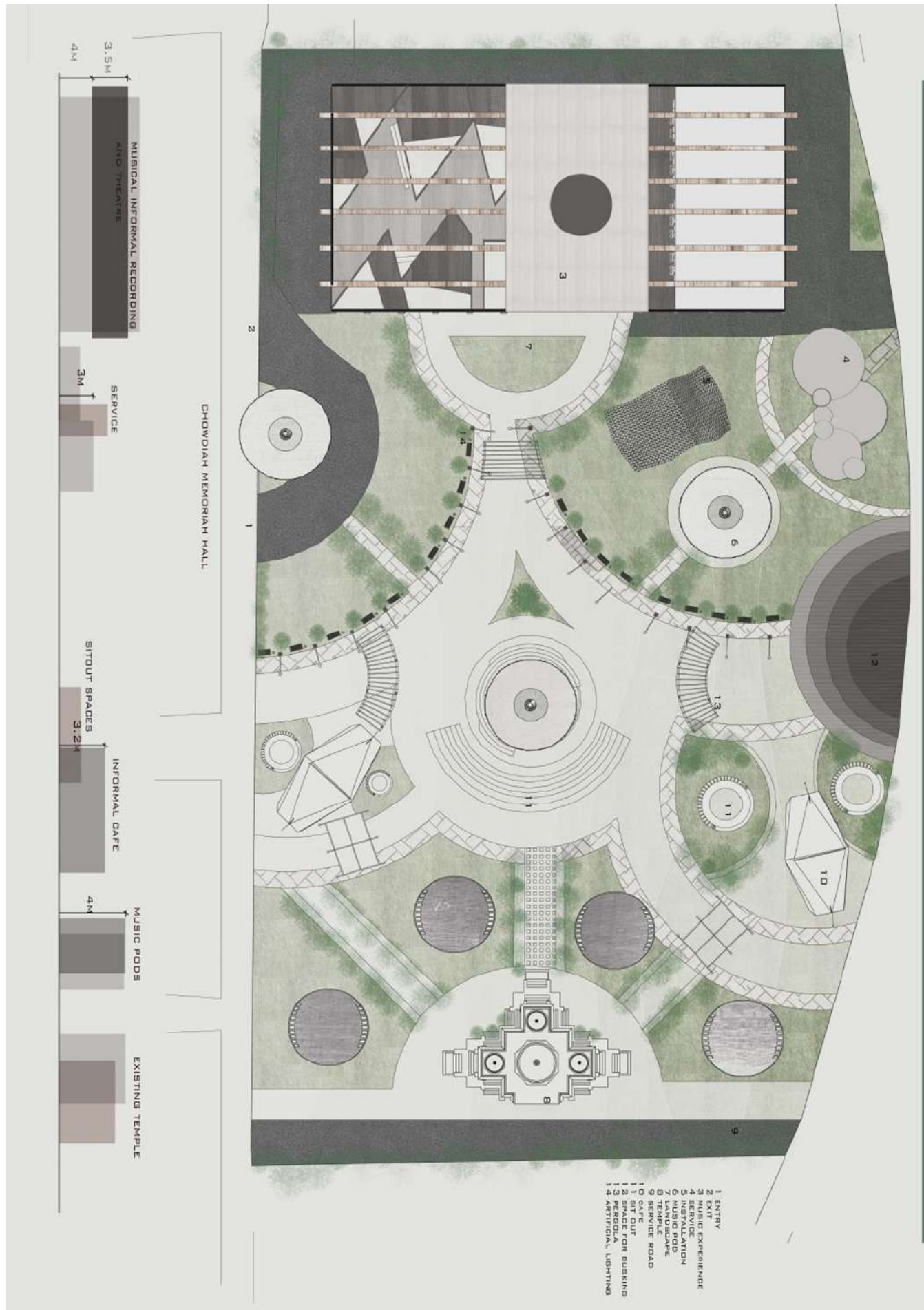
Enhance the experience of the users by adding liminal spaces to existing identified cultural hubs

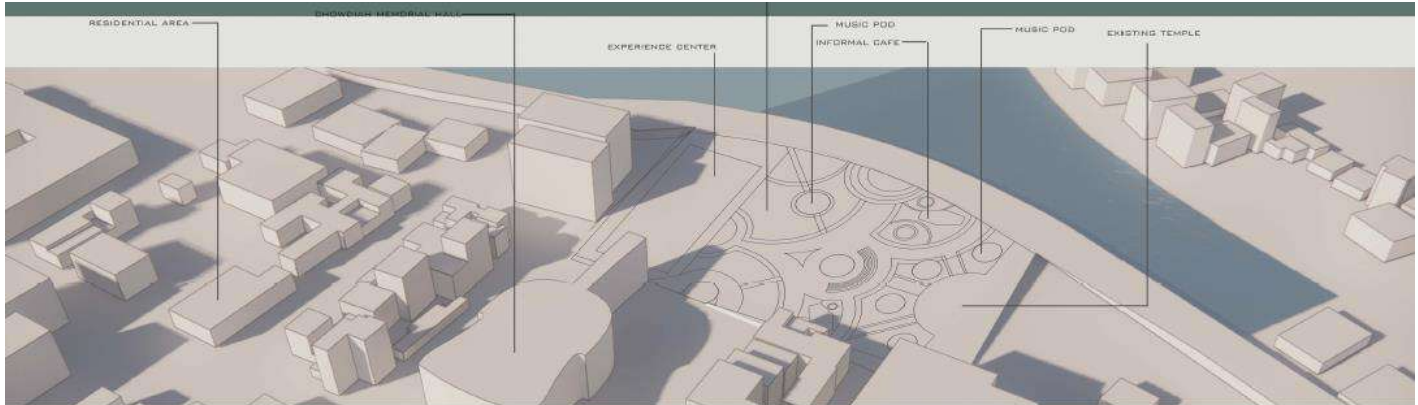
Integrate the performative aspects of architecture into the design

Generate an iconic architectural addition to enhance and boost the cultural identity of the city

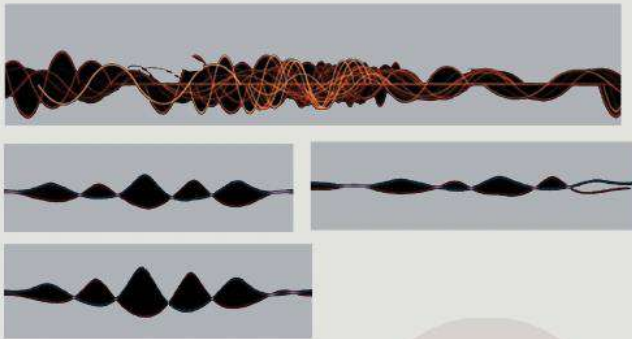
Have generated a form that can link the past to the future. the form generated will have to pay homage to the existing structure while at the same time be relevant to the present context.







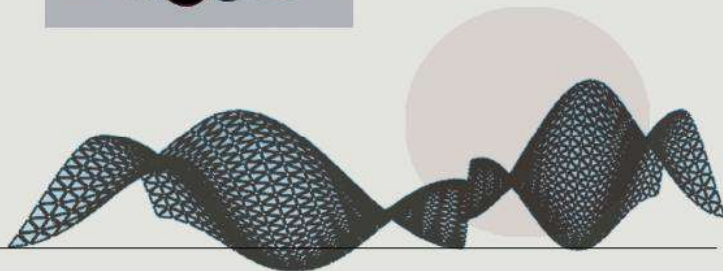
DERIVATION OF INSTALATION



MUSICAL WAVE DERIVED FROM ONE OF THE VERY EARLY MUSICS PLAYED IN THE MEMORIAL HALL.

INSPIRED FROM THE SHAPE PRODUCED IS AN INSTALLATION PLACED DURING THE START OF THE EXPERIENCE AREA, WHICH IS ALSO MULTIFUNCTIONAL, WHERE PEOPLE GET TO SIT BELOW IT TO ENJOY THE MUSIC IN OPEN SPACE.

CONCEPT

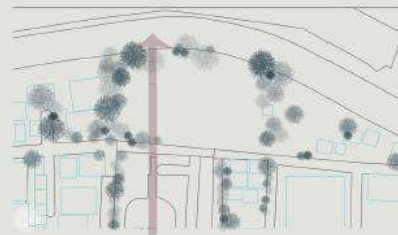
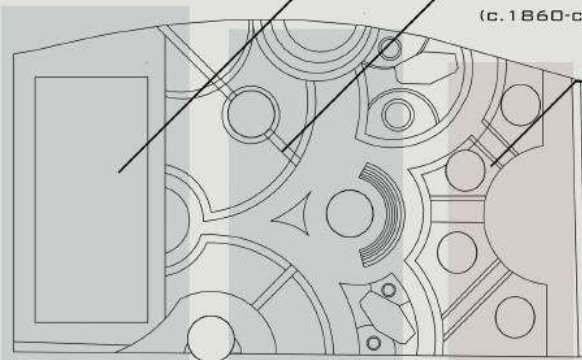


INSTALLATION

20TH AND 21ST CENTURY EXPERIENCE AND MUSIC

LATE ROMANTIC MUSIC (c.1860-c.1920)

CLASSICAL (c.1750-c.1830)



FOLLOWING THE AXIS ALONG THE CHOWDAH

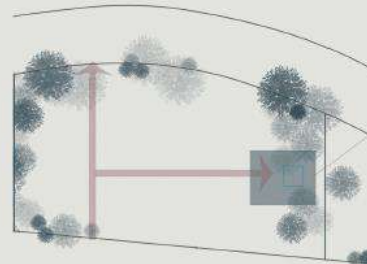
THE SKIN OF THEN STRUCTURE IS INSPIRED FROM THE MUSIC NOTES.



MAKING MAXIMUM USE OF THE BUILT SPACE USING KINETIC FEATURES

BUILT UP SPACE

EXAGGERATING THE SLOPE AND ALSO KEEPING THE GROUND EXTREMELY LIGHT WITHOUT ANY STRUCTURES AND MAKING IT AN INTERACTIVE SPACE FOR THE PUBLIC



EXISTING TEMPLE ON THE SITE

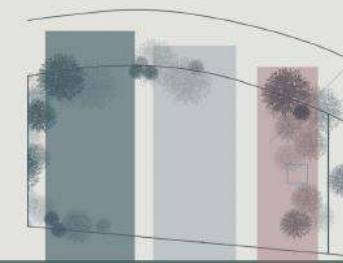
AN ARCHITECTURAL MARVEL DISCOVERED AROUND 7000 YEARS UNDER THE EARTH WITHOUT ANY MAJOR DAMAGE.

HENCE THIS BECAME THE SECOND AXIS OF GUIDANCE



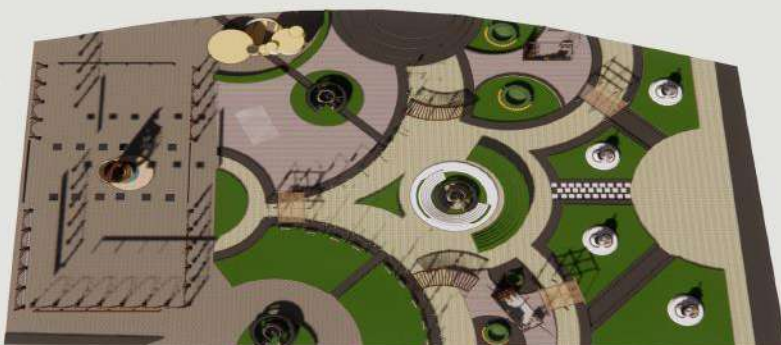
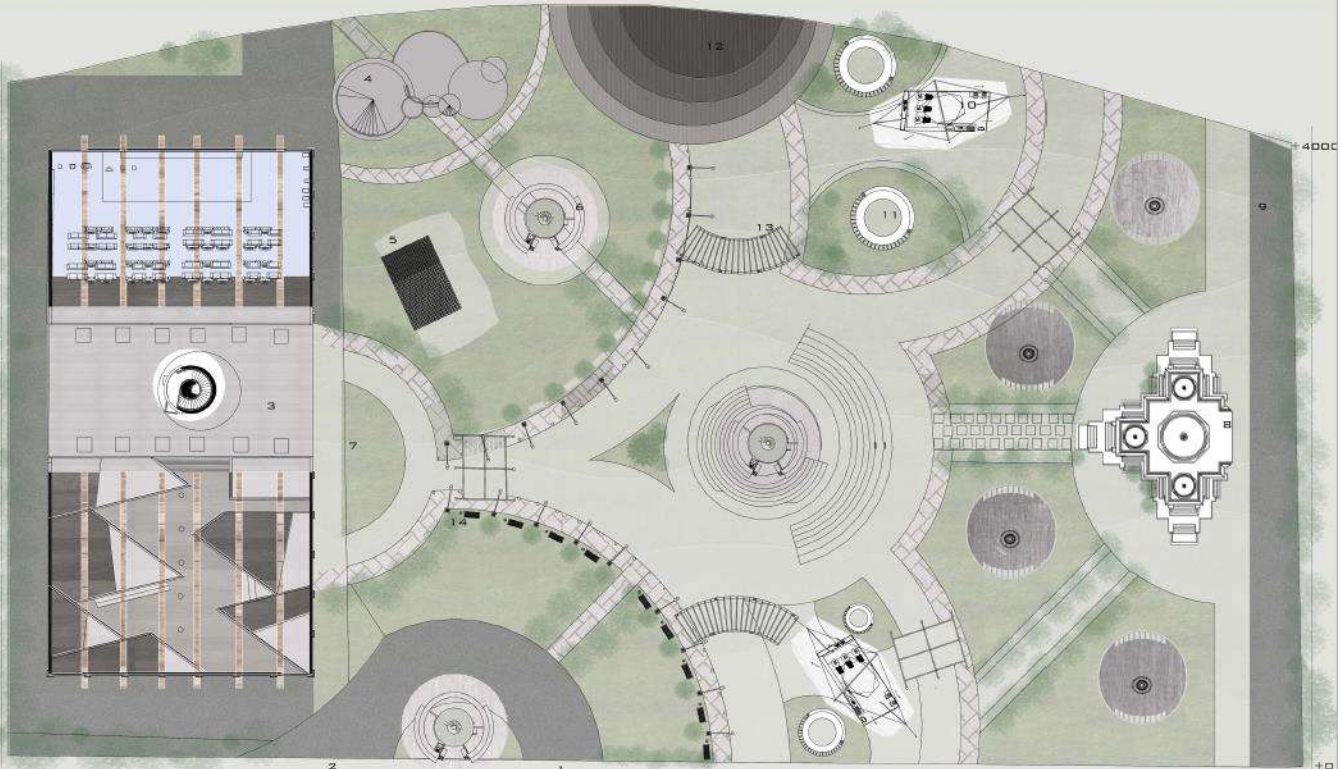
EACH SPACE ACTS AS AN EXPERIENCE. THE SCAN WILL LET THE PUBLIC EXPERIENCE HAVE A MUSICAL TREAT FROM THE START OF THE SITE TILL THE END WITH THE PERIODS OF MUSIC AT EVERY INTERVAL.

EXAMPLES OF MUSIC ERAS



THE ENTIRE SITE IS DIVIDED INTO ZONES WHICH WOULD LEAD TO THE TEMPLE BY PROVIDING A EXPERIENCE AT EVERY STAGE.

LIMINAL SPACE



VERTICAL STUDY



TO BUILD A FORM CONNECTING VARIOUS LEVELS

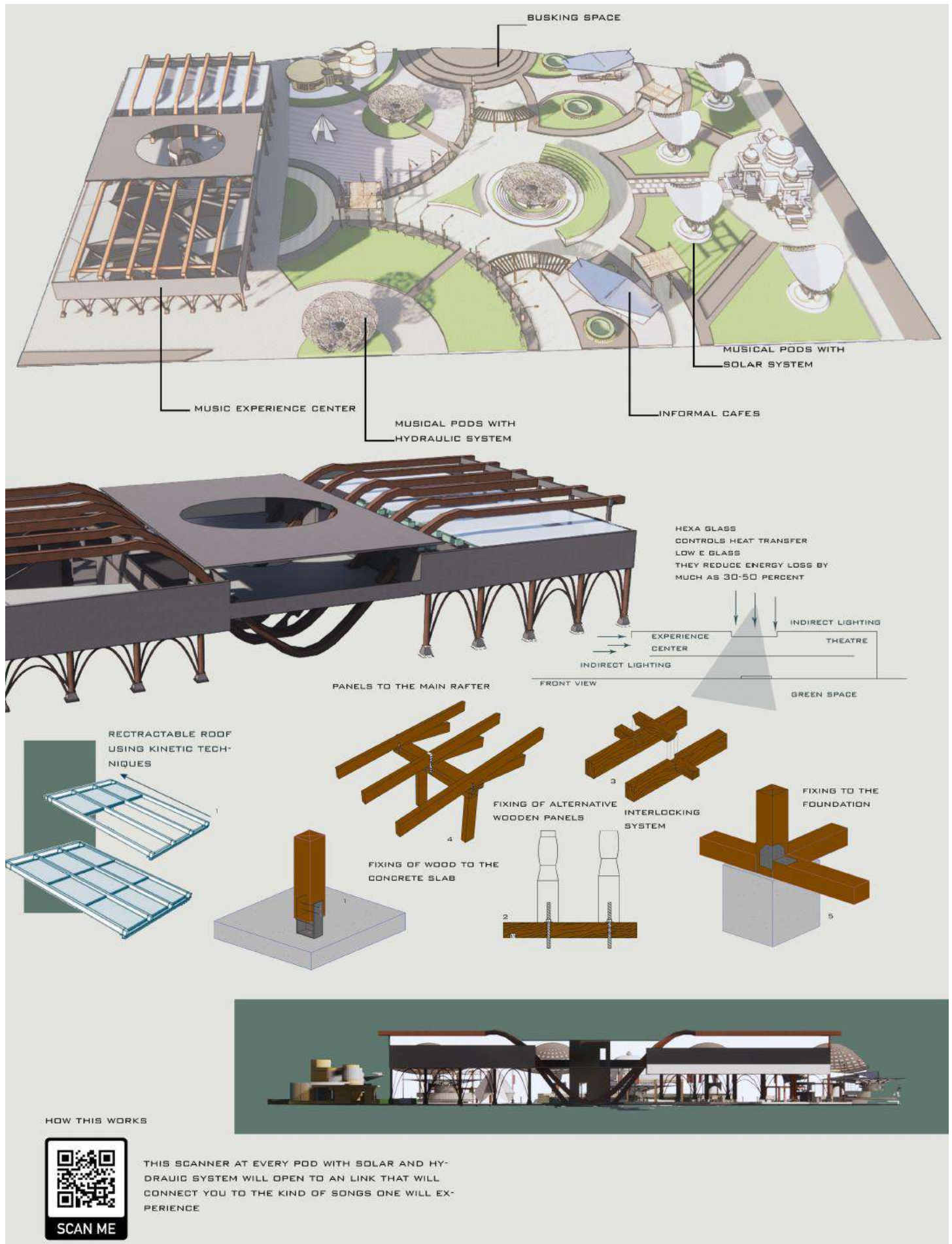


TO EITHER BREAK THE MONOTONY AND ALSO TO GET VIEWS FROM SANKEY TANK ROAD OR TO GO ALONG WITH THE SURROUNDING WITH THE SURROUNDING AND BLEND IN WITH THE STRUCTURES OF MALLESHWARAAN



WATER IS MOST LIKELY TO CLOG IN

CANCELS OUT SOME AMOUNT OF SOUND FROM THE SCHOOL ALSO HELPS IN GIVING VISUAL CONNECT



SOLAR PANEL

SERVICE BOX

CHARGE CONTROLLER

INVERTOR

BATTERY

SOLAR PANEL SIZE 1.7*1
~330w

ELECTRICITY GENERATION FROM SOLAR 314930
UNITS(12 MONTHS)

CO2 EMISSION 645 TONNES

SOLAR REQUIREMENTS
PLACES THAT REQUIRE ENERGY:

EXPO CENTER
LIGHTS
MUSIC PODS
ARTIFICIAL VENTILATION
POWER POINTS
KINETIC SURFACE TO MOVE LIFT
MUSIC PODS

CAFE:
MUSIC SYSTEM
BASIC REQUIREMENTS
LIGHT
FAN
LIGHTING
SPRINKLERS
BUFFER
WATER PUMP

MUSICAL PODS

PLACED IN THE CLOSE PROXIMITY

LISTING UNIT

AS THE ENERGY IS CONSUMED THE UNIT GRADUALLY LOSES ILLUMINATION
HENCE ALSO ACTS AS A LIGHT SOURCE

SOLYNRA
FRESH AIR FLOWS THROUGH THE RODS
ABSORBS SUNLIGHT FOR ENERGY GENERATION

ALSO WORKS AS WATER PURIFICATION AND VENTILATION TREE.

INTERCONNECTED TANKS

SECONDARY STORAGE TANKS

PRIMARY STORAGE TANK

INTAKE OF ARTIFICIAL SOURCE OF WATER

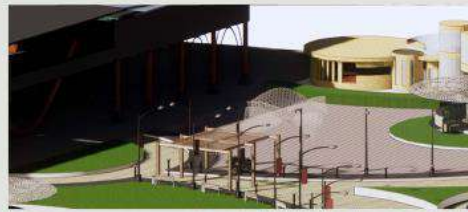
INTERNAL COOLING

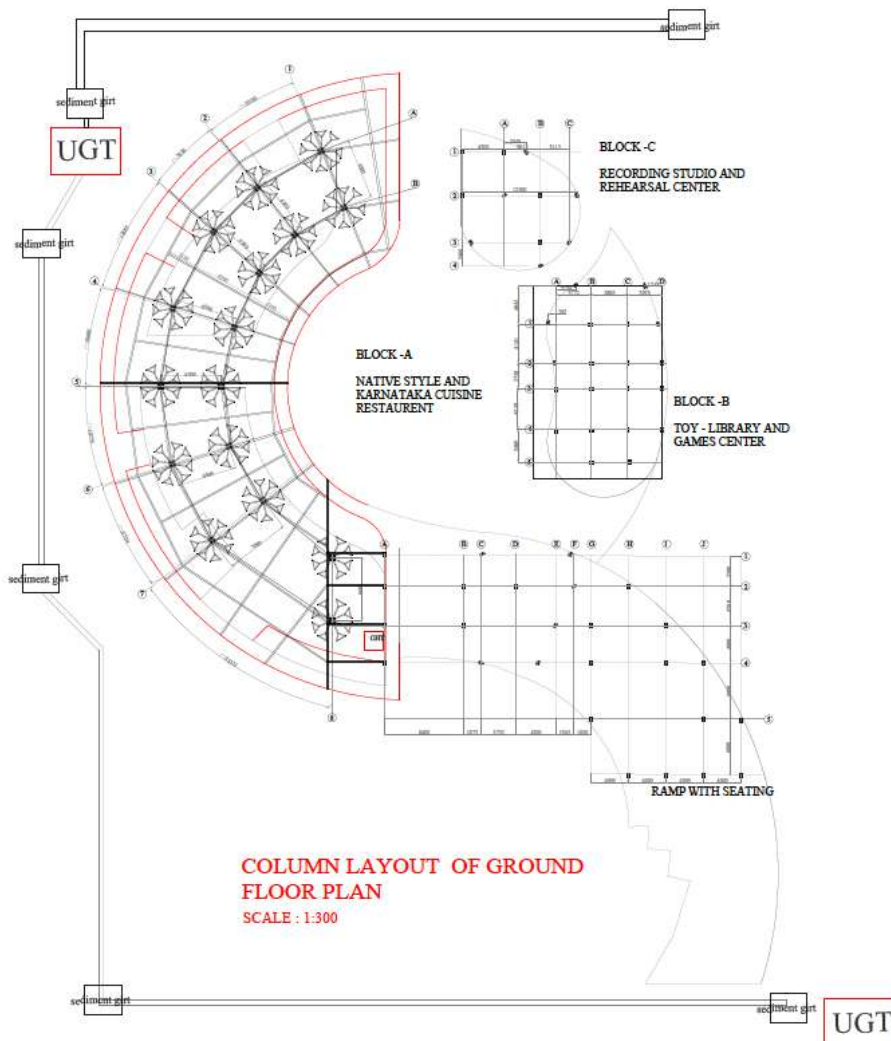
BERM OR MOUND

NATURAL VENTILATION COMPLETELY OPEN

FRENCH DRAIN

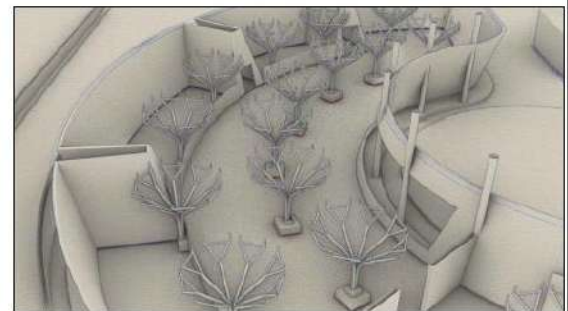
HELPS IN DIVERTING AND SLOWING DOWN THE FLOW OF WATER AVOIDING FLOODS





BLOCK - A

1. TREE COLUMN [4 x250 mm dia M.S Hollow cylindrical sections
2. secondary struts of 200 mm
3. BASE DIM. 600 X600
4. TOTAL SPREAD OF 4.35M Dia
5. TOTAL SPAN = 20M
6. NO. OF COLUMNS = 16



VIEW OF THE COLUMN LAYOUT

RAIN WATER HARVESTING

rain water harvesting tank and its capacity

the gradient of the site is 14 M.
formula to calculate the amount of water is

$A \times R \times C$ Co. efficient.

A =area of surface. R. amt. of water (Rain) in mm

Co. eff. of the material or reduction loss =20%
banglore rain fall per annual of 10 years. 970 MM.
Area. $1409 + 821 + 143.27 + 272.35. + 300 = 2,945.62 M^2$
 $970 \times 2,945.62 \times 80\% \times \frac{1}{96} = x. = 23810 \text{ liter} \approx 25,000 \text{ lit.} \approx 50,000 \text{ lit.}$
note : 20% of evaporation charges and 2 times a week is 96 divisions
2 U. G. T provided = $4m \times 4m \times 2$
= 32 cum = capacity of 30,000lit x 2
= 60,000 lit capacity for every 4-3days
O. H T = DIM. = $2M \times 2M \times 2M = 8 \text{ cum} = 8,000 \text{ lit of fresh water}$

CALCULATION

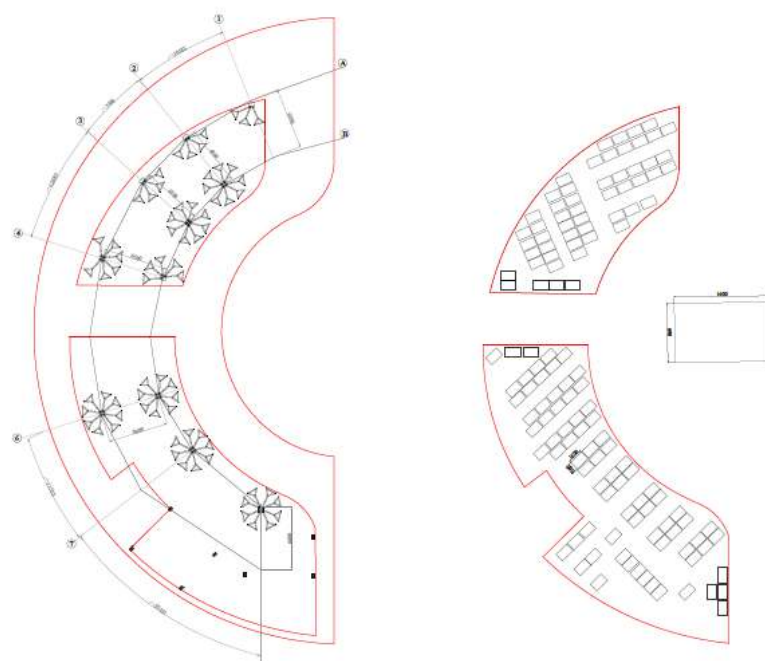
TOTAL ROOF AREA =600 Sqm

TOTAL NO. of PANELS = 135
each has the capacity to produce 900 watts per day (8-10 hrs of sunlight

= $900 \times 135 = 121,500 \text{ watts} = 121.5 \text{ kwh}$

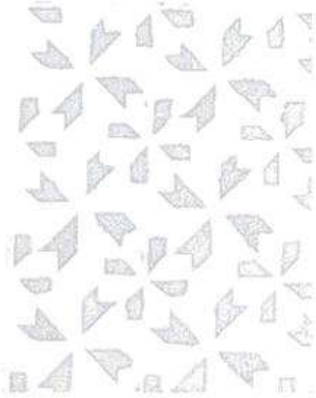
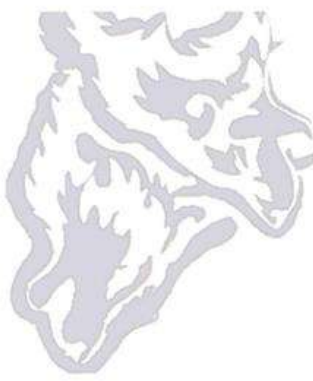
Proposed building being a restaurant uses 50 watts per Sqft.

TOTAL BUILT SPACE ~ 23000 Sqft
 $22000 \times 45 = 990,000 \text{ Watts} = 990 \text{ kwh}$



COLUMN LAYOUT OF FIRST FLOOR PLAN
SCALE : 1:300

SOLAR PANEL LAYOUT



8th Semester

Identity and the city

The notion of place and placelessness in urban intervention

INTRODUCTION

Edward Relph in his seminal book *place and placelessness* talks about how indispensable place is in the human life experience. In his pursuit of a better and deeper understanding of place, the geographer identified different modes of spatial experience, namely pragmatic space, perceptual space and existential space which he equates with instinctive, bodily and immediate experiences and another set of spatial experiences that are cerebral, ideal and tangible which he then equates with the planning space, cognitive space and abstract space. According to Relph all these modes of spatial experiences are not mutually exclusive but part of the holistic human experience of a place [Seamon & Sowers, 2008]

JOHNSON MARKET

Extensions to the old Bangalore Pete and the growing population mandated the formation of newer markets towards the end of the 19th Century. Named after a former British civil servant, Johnson Market was initially called Richmond Town Market since it served that locality. Close on the heels of the Russell Market, built in 1927 and City Market in 1928, Johnson Market was established in 1929. It was commonly referred to as Russell Market's "poor cousin".

The land where Johnson Market was formed is said to have been a huge horse shelter belonging to Aga Ali Asker, a rich businessman (from Persia) who owned large tracts of land around Richmond Town. Asker's home 'Arab Lines' was located right opposite Fatima Bakery. Situated at the junction of Hosur road and Leonard lane, Johnson market is now facing an existential crisis due to the upcoming metro line on Hosur road, and the metro station situated opposite to the market.

OBJECTIVES

Enhance the identity and legibility of the place through interventions

- Identify and address the needs of the informal city through socio-economic, socio-cultural interventions
- Identify lacunae in existing amenities and infrastructure and suggest solutions.

APPROACH

Studying the city through the lens of the various dimensions of urban design the students will collect and analyse the data with respect to these dimensions namely.

- Morphological Dimension
 - Social Dimension
 - Functional Dimension
 - Temporal Dimension
 - Environmental dimension
 - Perceptual or Visual Dimension
- The two verticals of the studio would be:
- To understand the various data collection, mapping, surveying techniques and using them rigorously to derive maps, sketches, graphs and other pictograms Info graphics to analyze and infer the spatial patterns, the socio-economic and socio-cultural aspects and the historical aspects.
 - The second aspect would be to propose interventions that could be under the verticals:, redevelopment proposals or adaptive reuse or urban inserts.

ARCHITECTURAL DESIGN VIII -SEC B SUBJECT CODE 21 ARC81

Studio Coordinators



Ar. Aparna
Shastri

Studio Faculty



Ar. Sheeraz
Zaidi



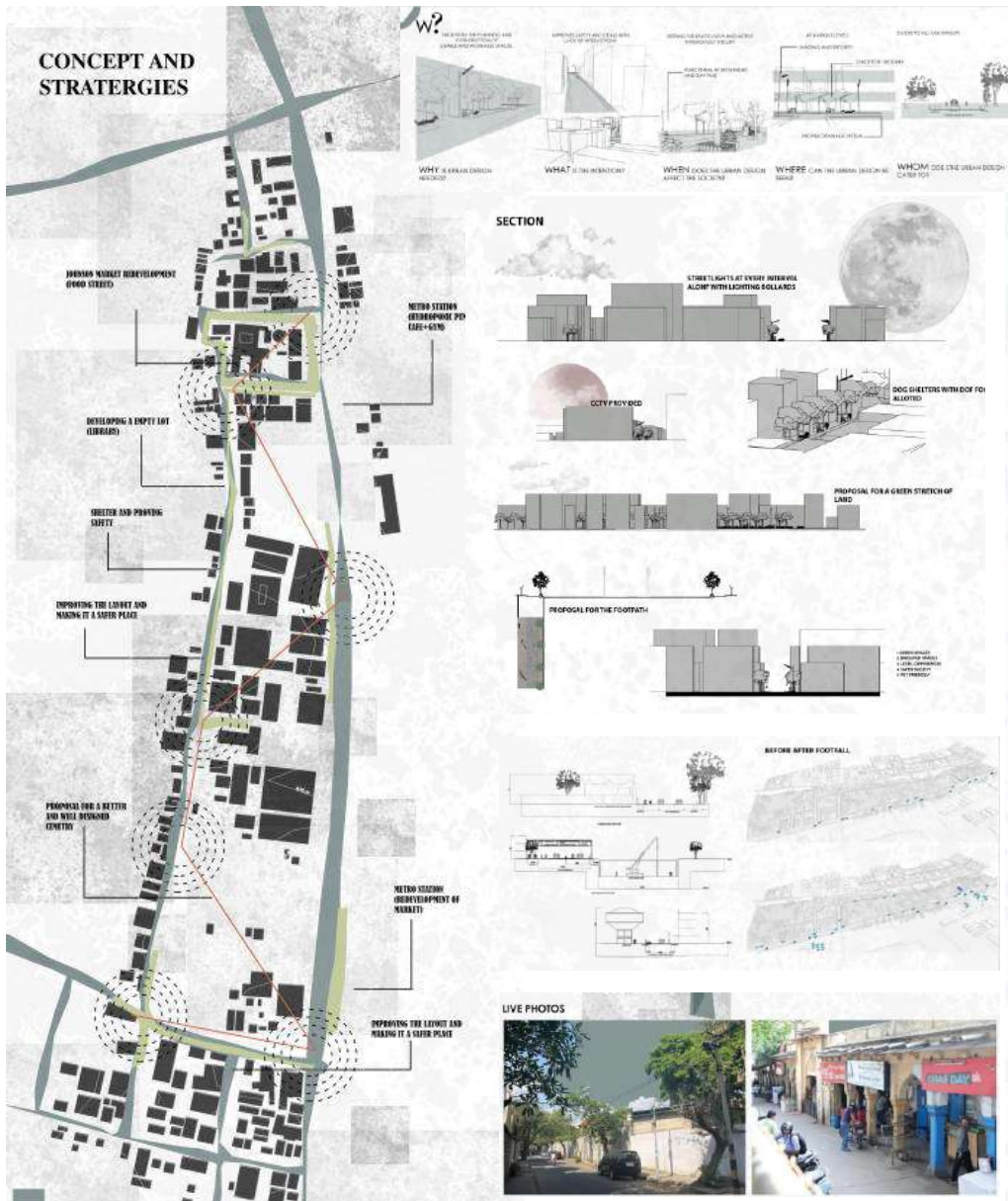
Ar. Madan
Kumar



Ar. Raveena
Nayar



Ar. Veena
Choudhary

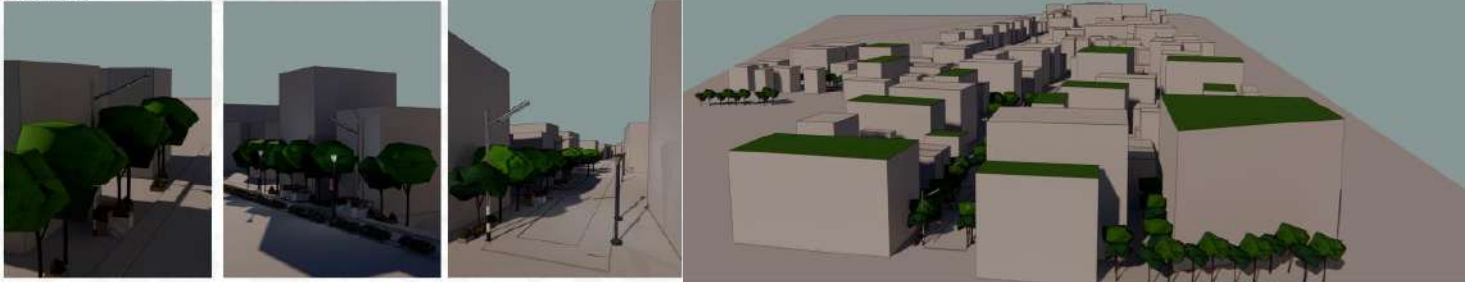


SITE - JOHNSON MARKET

CONCEPT JUSTIFICATION
RIPPLES
THEORY

- A THE MOST CROWDED AND CLUMPSY JUNCTION OF THEM ALL -
THE SPACE IS OPENED UP.
NOT MANY ENCLOSED GATHERING PUBLIC SPACES
RETAINING THE ESSENCE OF THE LOCATION
PUBLIC FRIENDLY
SENSE OF SAFETY AND HYGIENE
- B LACKS VISUAL CONNECTIVITY -
DUE TO THE TREATMENT OF JOHNSON MARKET THE SPACE IS OPENED UP AND VISUAL CONNECTIVITY IS MUCH GREATER ACTIVE AREA / MANY INTERACTIVE SPACES.
GREEN VISUALS
- C UNPLANNED STREETS -
THE CONNECTIVITY BETWEEN THE INNER AND OUTER ROADS ARE PROVIDED.
THE HEIGHTS OF PATHWAYS ARE TAKEN CARE OF.
PEDESTRIAN FRIENDLY.
- D UNNOTICED AND LEFTOUT LAND (NO INTERACTIONS MAKING IT UNSAFE)
DUE TO THE PREVIOUS TREATMENTS.
THIS LAND IS MORE ACCESSABLE AND SAFE.
INTERVENTION IS INTRODUCED TO KEEP THE LAND MORE INTERACTIVE WITH ANY AGE RESTRICTIONS.
LAYOUT RESPONSIVE
- E GIVES AN IMPRESSION OF UNSAFE ZONE
DUE TO THE INTERVENTION MUCH MORE FOOTFALL IS EXPECTED WHICH IN TURN HELPS TO INCREASE THE SAFETY OF THE NEIGHBOURHOOD.
GREEN VISUALS
- F STOPS VISUAL CONNECTIVITY AND IS ALMOST ISOLATED -
A PROPOSAL FOR THE DEVELOPMENT OF CEMETRY IS GIVEN TO HAVE AN ORGANISED AND GIVING EASY VISUAL CONNECT

STREET VIEWS



IDENTITY OF THE CITY - JOHNSON MARKET



GRID SYSTEM-
THROUGHOUT THE SITE
WITH MIXED USED WHICH
IS DEPENDANT ON EACHOTHER



HAVING SOME INFLUENCE OF
ISLAMIC ARCHITECTURE

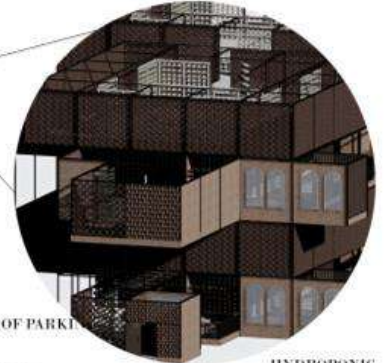


STRATEGIES IMPLEMENTED

- CYCLE STOPS
- CYCLE TRACK
- MULTIPLE SHADED AREAS ALONG WITH INTERACTIVE SPACES FOR SAFETY
- GREEN VISUALS
- STREET LIGHTS
- LAMPS
- WIDENED PATHWAYS
- DOG SHELTER
- CCTV INSTALLED
- SIGN BOARD AT INTERVALS
- MULTIPLE TENSILE ROOFS
- SPACE FOR ALL AGE GROUPS
- SPACE ALLOTTED FOR BIRDS TO CONSUME FOOD OR WATER



STREET FOOD



NUMBER OF PARKI

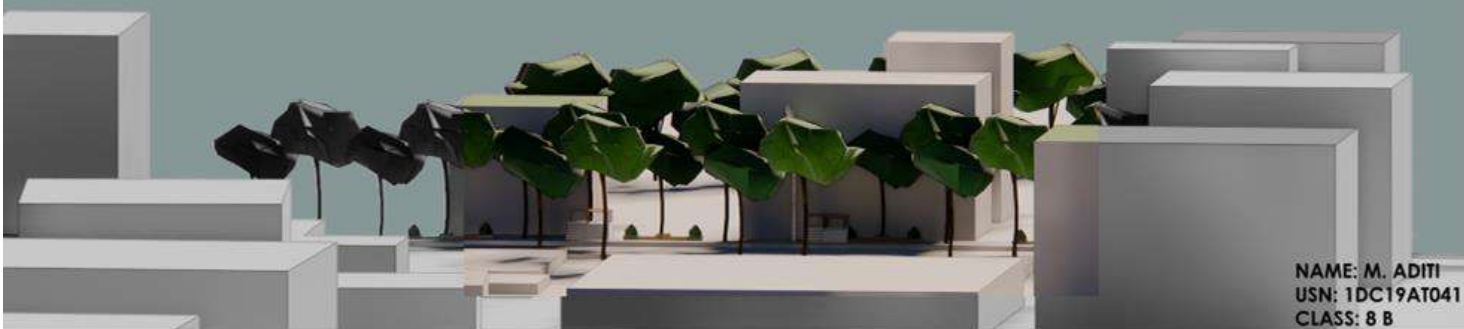
HYDROPONIC
STATION+GYM
+NURSERY



LIBRARY

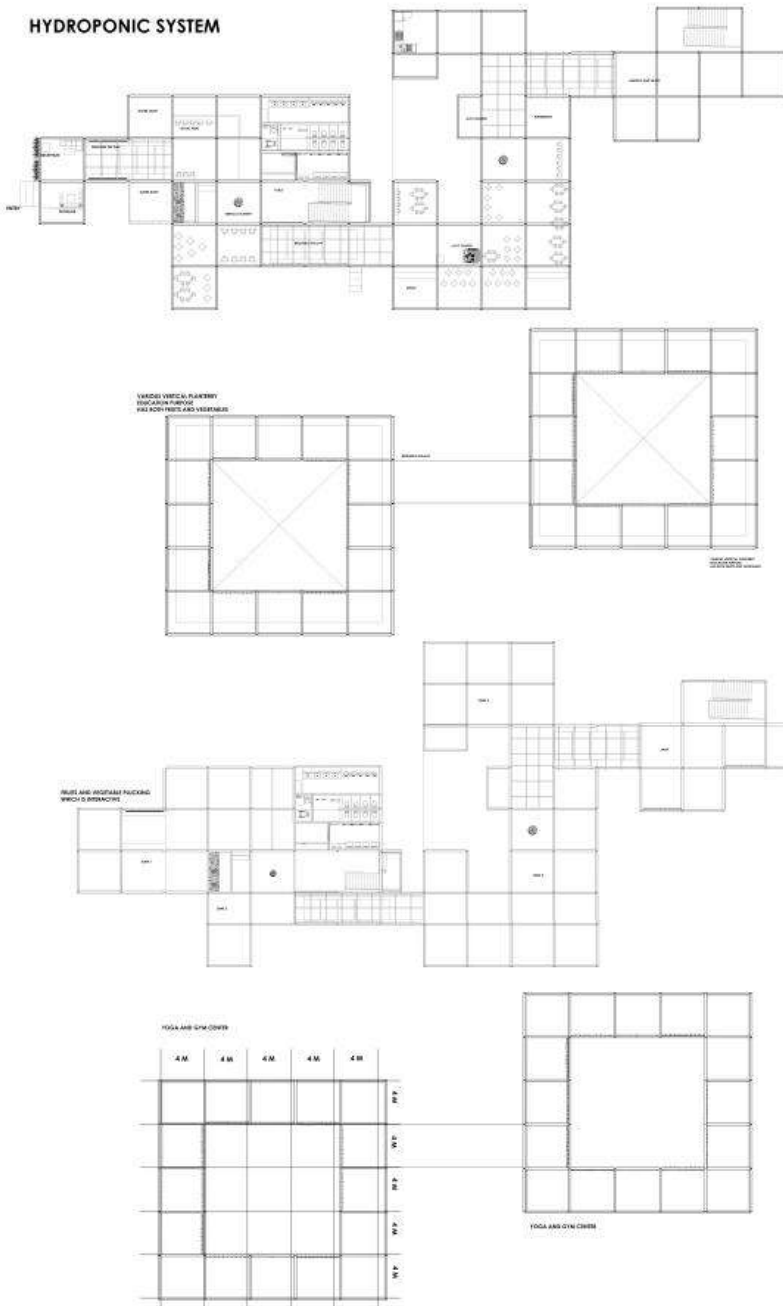


MARKET+
SHOPPING COMPLEX



NAME: M. ADITI
USN: 1DC19AT041
CLASS: 8 B

HYDROPONIC SYSTEM



HYDROPONIC SYSTEM

REQUIREMENT OF HYDROPONICS STRUCTURE

ADEQUATE PLACE -
8077.5 SQM (AVAILABLE LAND)
4205SQM OF LAND CAN PRODUCE 2600 PLANTS

TOTAL AREA FOR THE PLANTS ALLOCATED ARE 620 SQM
PLANT SPACING+ 0.3M

COMMONLY USED HYDROPONIC SYSTEM AREA
NUTRIENT FILM TECHNIQUE
VERTICAL TOWER

LIGHTENING -
PLACEMENT OF THE STRUCTURE
THIS METHOD REQUIRES A LOT OF ARTIFICIAL LIGHTING AS WELL
SUCH AS LED GROW LIGHTS FOR CONSISTANT AND UNIFORM ILLUMINATION

VENTILATION AND AIR CIRCULATION -
STRUCTURE SHOULD INCLUDE VENTILATION SYSTEM OF FANS FOR CONTINUOUS AIR

WATER SUPPLY -
HYDROPONICS SYSTEM USE LESS WATER
AS MUCH AS 10 PERCENT USAGE COMPARED TO NORMAL CULTIVATION

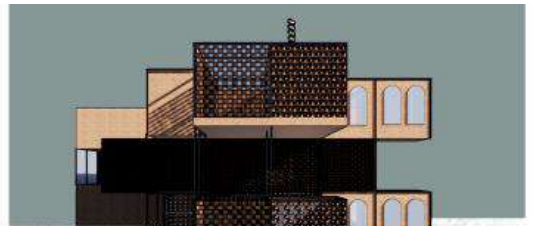
SPACE FOR FUTURE EXPANSION

WHAT PURPOSE WILL IT SERVE

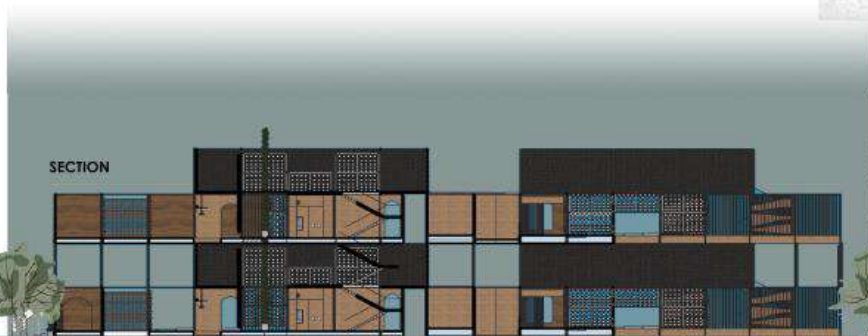
PLACE WHERE KIDS PLAY , LEARN AND EAT
WILL ACT AS A CENTER OF SCIENCE CONSISTING OF VEGETABLE AND PLANT BREEDING
NEW FORM OF CULTURE
SHOP FRESH AND EAT FRESH
SOCIAL GATHERING
SOCIAL ENTERTAINMENT



SIDE ELEVATION



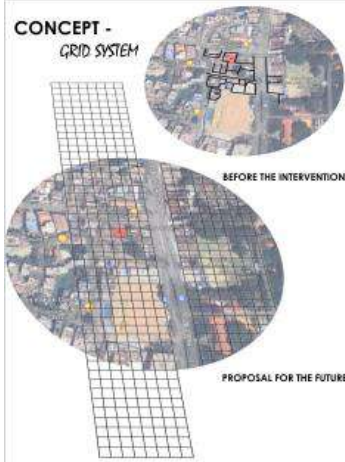
FRONT VIEW



SECTION

NAME: M. ADITI
USN: 1DC19AT041
CLASS: 8 B

CONCEPT - GRID SYSTEM



-LOCATION: METRO STATION
 BUILDING TYPOLOGY: CAFE +
 HYDROPONIC PUMPING STATION +
 GYM AND YOGA CENTER +
 NURSERY

WHY 4 BY 4 GRID

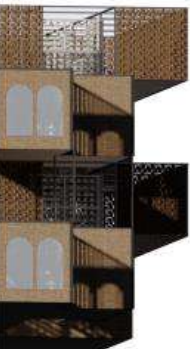
The 4 by 4 grid provides a balanced and visually pleasing structure. It helps architects establish a proportional relationship between different elements of the design.

The grid allows for flexibility in organizing the space. The 4 by 4 provides enough divisions to create distinct zones or areas within a larger space while maintaining a cohesive design.

The 4 by 4 grid aligns with modular construction systems, making it easier for construction teams to implement the design.

The 4 by 4 grid simplifies the visualization of the design concept. It provides a clear framework for arranging elements and helps architects and clients better understand the spatial relationships within the building.

VIEWS



MATERIAL

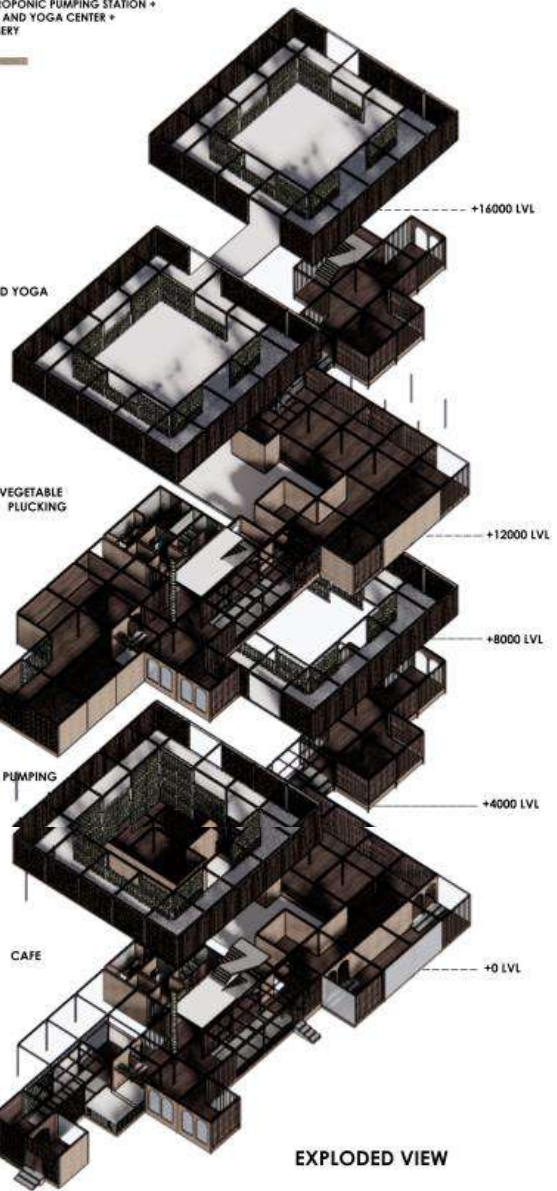


- 1 SECTION COLUMNS
- GREEN WALL
- TIMBER STRUTS
- BAMBOO ROOF
- STEEL COLUMNS
- BRICK CLADDING

GYM AND YOGA CENTER

FRUITS AND VEGETABLE PLUCKING

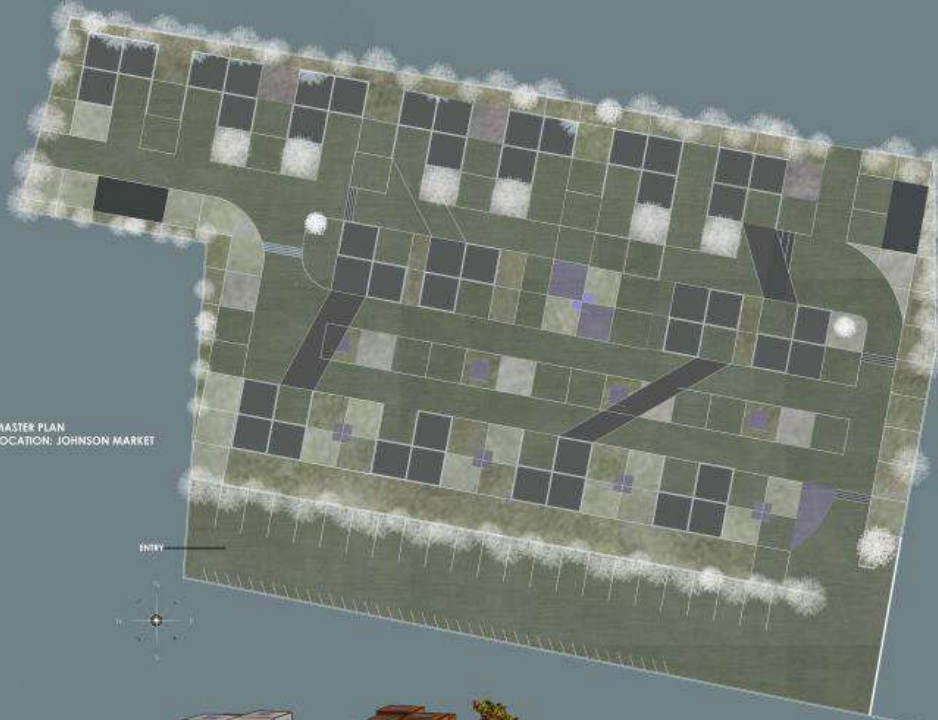
HYDROPONIC PUMPING STATION



EXPLODED VIEW



MASTER PLAN
 LOCATION: JOHNSON MARKET



TO MAKE THE TRANSPORTATION OF GOODS EASIER A CONNECTING BRIDGE IS PROVIDED FROM METRO STATION SITE TO JOHNSON MARKET SITE

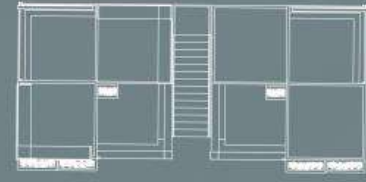
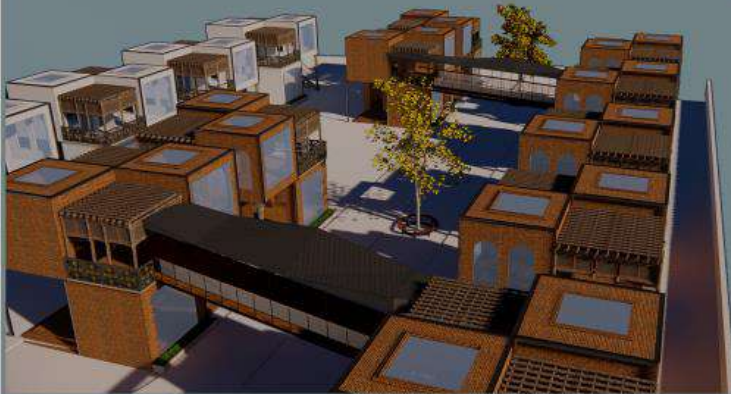
FOOD THAT IS PREPARED FROM THE HYDRO PONIC STATION IS SENT TO THE JOHNSON MARKET.

45 PERCENT OF THE SITE IS UNBUILT.

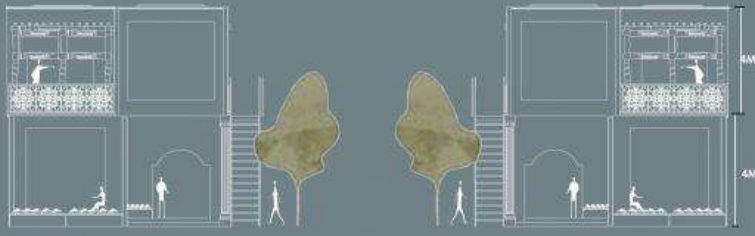
STREET FOOD TO RETAIN THE ESSENCE OF THE EXISTING JOHNSON MARKET ATMOSPHERE.

STYLE OF BUILDING- ISLAMIC ARCHITECTURE

4 BY 4 GRID STRUCTURE

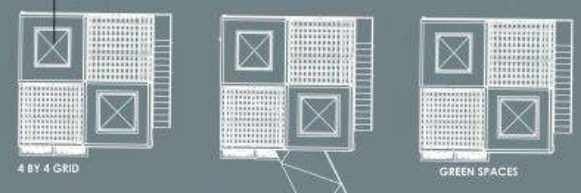


MATERIAL USED
 1 SECTION COLUMNS
 GLASS
 BAMBOO ROOF FOR SEMI OPEN SPACE
 BRICK CLADDING
 JAALI
 ACP CLADDING



FRONT ELEVATION

GROUND FLOOR PLAN



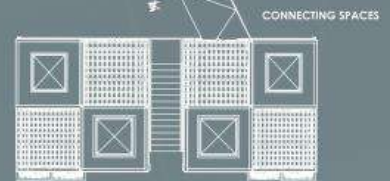
4 BY 4 GRID

GREEN SPACES



SITE SECTION

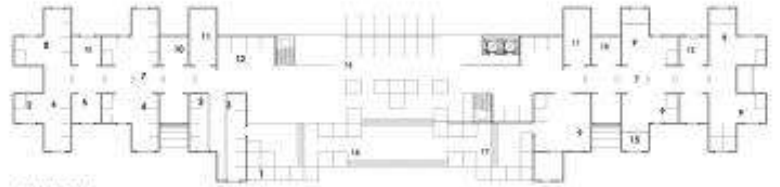
ROOF PLAN



CONNECTING SPACES



VIEW



GROUND FLOOR

- 1 FOOD AND GROCERIES
- 2 ICE CREAM
- 3 MEAT
- 4 VEGETABLE
- 5 SPICES
- 6 SEASONAL HERBS AND FRESH
- 7 DISPLAY CASE
- 8 BAKES
- 9 MEAT STORAGE
- 10 WALKWAY
- 11 TOILET
- 12 WARE HOUSE
- 13 SHOPPING CORRIDOR
- 14 OPEN AREA
- 15 STORAGE
- 16 FRAMOUNT STALL FOR FISH AND CHICKEN
- 17 KITCHEN
- 18 ENTRY
- 19 PARKING



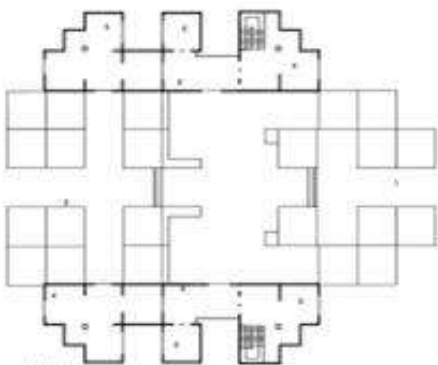
FIRST FLOOR



MARKET
TO BEHOLD THE VALUES AND THE PRESENCE OF MARKET IN THE LOCALITY. JOHNSON MARKET'S SITE IS OPENED UP AND IS SHIPPED TO A PLACE LESS THAN 1000 METERS WHICH MAKES IT EASIER FOR THE VENDORS TO COMPUTE FROM THE MICROCLIMATE CONSISTING OF HYDROPONIC SHELL TO SUPPLY VEGETABLES AND FRUITS WITHOUT ANY MEDICATION.



MARKET SPACE



FIRST FLOOR



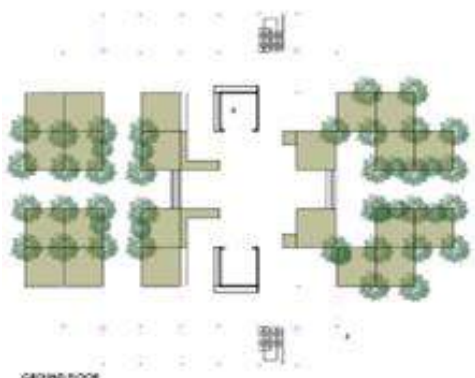
LIBRARY
THE SITE THAT WILL UPGRADE WHICHEVER ANY USAGE IS AT PRESENT ONE OF THE LEAST SAFE WITH IN THAT STREET OF LAHO. HENCE GIVING A PURPOSE WHICH IS STABLE FOR ALL AGE GROUPS AND GENDER THAT GOES ALONG WITH THE SOCIETY IMPROVES SAFETY AND ADDS VALUE.

- 1. NEW
- 2. EXISTING BUILDING
- 3. BUILT
- 4. OFFICE
- 5. BOOK SHED
- 6. GREEN AREA



LIBRARY

MARKET



GROUND FLOOR



ARCHITECTURE DESIGN STUDIO VIII

Faculty: Ar. Aparna Shastri, Ar. Ar. Sheeraz Zaidi, Ar. Madhan Kumar, Ar. Raveena Nayar, Ar. Veena Choudhary

Anikethan S J
1DC18AT005

3. SARAKKI MARKET

DESIGN CONSIDERATIONS

- Free Space available
- Adjacent to the main Road
- Close to the epicentres of the current market
- Space just adequate to accommodate the declining market



DESIGN PROGRAM

- Shall Accommodate 250 approximate Vendors
- Parking space
- Circulation space for people to move about

AREA PROGRAM

- Total area = 1800 sqm
- Area for shops = 800 sqm
- Area for circulation = 600 sqm
- Area for Parking = 400 sqm



SKYWALK VIEW



BANASHANKARI SIGNAL



BANASHANKARI SIGNAL REDESIGN SCALE: 1:150



REDESIGNED MARKET FOR BANASHANKARI STREET HAWKERS



BUS STOP ON THE WAY TO RV ROAD



URBAN INTERVENTION SHOWN IN COLOR



BANASHANKARI BUS STOP TOWARDS KADIRENAHALLI CROSS



SITE -BANASHANKARI MARKET

Banashankari Street Market:

The Banashankari street market is an informal market of vendors that stretches from the Kanakapura road and the Subramanyapura road junction just after the Banashankari TMC up to the Sarakki market. The market that initially came up to serve the temple needs is now a permanent feature along the stretch. One of the most chaotic street stretches of Bengaluru, this stretch houses a Bus terminus and TMC, a metro station, the entryway to the Banashankari temple, the designated Banashankari and Sarakki market areas. Owing to its proximity to the peri-urban areas in comparison to KR Market, a part of it also functions as a wholesale market for the surrounding neighbourhood vegetable vendors.



5. TEMPLE COMPLEX

DESIGN CONSIDERATIONS

- Temple is THE Identity of the place
- Mapazard Market place around is kills the 'Calm' a Temple is meant to have
- The Temple complex can be designed more effectively.
- Visibility in an issue , an attempt must be made to tackle it.



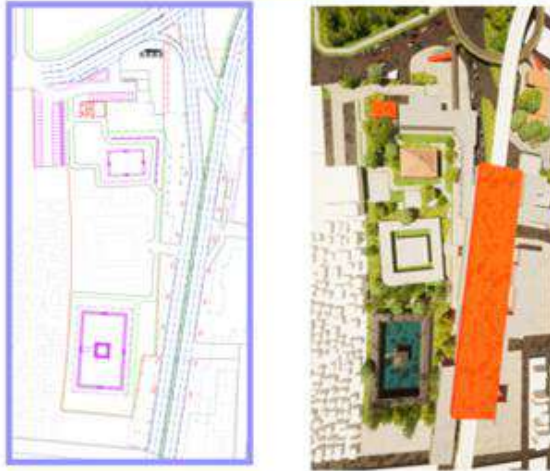
DESIGN PROGRAM

- Separate Entrance to the Temple
- Fence the Footpath
- Green Spaces at the Temple Complex
- Redesign the Temple complex
- Accommodate Market and Parking
- Try to bring a bit of calm in the otherwise bustling neighbourhood

AREA PROGRAM

- Area of Market = 900 sqm
- Area of Parking = 1800 sqm
- Area of complex = 18000 sqm
- Area of Temple building = 1660 sqm

TEMPLE COMPLEX PLAN AND TOP VIEW

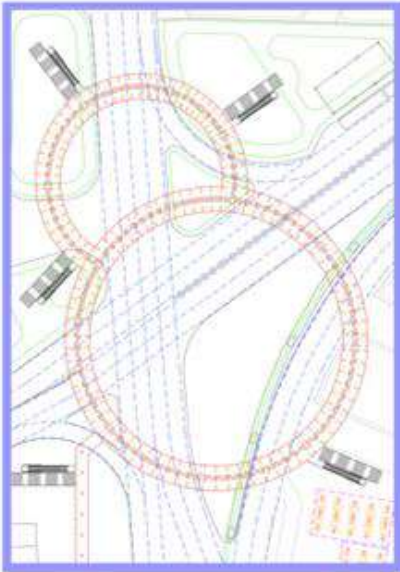


TEMPLE COMPLEX PLAN AND TOP VIEW

BASSE MAP :- SCALE - 1:3000



1. BANASHANKARI SIGNAL



1. BANASHANKARI SIGNAL

DESIGN CONSIDERATIONS

- Sarakki signal pushing the traffic north increasing the pressure on Sarakki market junction and the Banashankari signal.
- 2 signals in less than 100m wreck havoc.
- No right turn allowed from the Kadirenahalli cross road.
- Very unsafe for pedestrians.

DESIGN PROGRAM

- Skywalk shall connect all corners of the Junction
- Shall connect the bus stops & metro
- The skywalk shall have seating spaces
- Escalators to move up and down

DESIGN CONSIDERATIONS

- Design consideration
- Safety of pedestrians neglected currently
- The location is a fantastic place for people watching
- Metro and bus stop are gate disconnected currently



**Enhancing human experience of city
Place making in dense Urban Fabric
INTRODUCTION**

Cities are places, where people live, form communities, and establish their own identities. With urban growth and development most of the cities in India are experiencing chaos and bottle neck in few of the existing nodes and junctions due to unplanned and uncontrolled growth of both population and built density. For such junctions and nodes, the Identity with which it was conceived is lost. The new identity should enhance human experience, which is one of the contemporary theories of urban design. However, most of the Junctions and Nodes have reduced to just a chaotic traffic junction particularly Outer ring road and highway junctions in Bengaluru cities.

SILK BOARD JUNCTION - A STUDY , ANALYSIS AND ARCHITECTURAL PROPOSAL

Bangalore city that we now best known for the Information Technology industry and start-ups, and for gardens for ages can well be the Silk City of India. Bengaluru-Mysuru corridor is indeed dotted with the key players of the value chain of the silk industry. In 1948 Central Silk Board was established under the Ministry of textiles, it has its regional office working at Bangalore at this junction, and the junctions own its name from this building. The the Silk board junction is that it is an important road junction in Bengaluru City on the Outer Ring Road - Hosur Bengaluru highway junction. This place is also called Madiwala; a washer mans community settlement with one the biggest lake of Bangalore in its vicinity. It is an important landmark for travelers, cabs and those new to Bengaluru as they enter from Tamil Nadu and Kerala using Hosur Road. It is also a well-known bus stop to travel out of Karnataka. The Silk Board junction acts as a gateway to the two important IT clusters in Bangalore—the Outer Ring Road cluster (Marathahalli, Whitefield and Bellandur) towards the east and Electronic City to the south. This place and its surroundings have a rich historic cultural importance as described by many stone inscriptions found near the place.

The proximity to these two major hubs in the city, known as the "IT capital of India", has led to bottleneck of vehicular movement at the junction. In 2017 the Flyover was made operational near to ease the traffic, but it became futile as it intensified the bottleneck effect. Past two and half years the junction is experiencing the disturbance from the Metro-phase two construction activities too., **Enhancing human experience in such situation is a challenge. This studio aims to realise the placemaking opportunities in the neighbourhood area around this Junction and propose possible interventions which either aids the existing activities to perform better or new activities which could thrive here and bring considerable human experience into neighbourhood.**

OBJECTIVES

Architectural interventions, which have an ability to shape an apt Urban fabric through design solutions.

Place making elements, which aims to reintroduce the identity of this area through its contextualization.

Designed public spaces that can be used for various activities such as open-air markets, performance venue, and leisure space.

Re-aligning, re-imagining the existing transportation networks. All four of them together will enhance the Human experience.

**ARCHITECTURAL DESIGN VIII SEC A
SUBJECT CODE 18ARC81**

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ARCHITECTURE DESIGN STUDIO VIII

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SITE ANALYSIS

LOCATION : Jayanagar, Bangalore

SOIL TYPE

- Silly sand with gravel: 0 - 1.7m
- Clayey sand: 1.7 - 3.5m

LAND SLOPE

- Flat land

LANDMARKS

- RV PG College - 450M
- National College - 500M

Accessibility

- S** The site is at a major node. Mixed user group
- W** Traffic congestion at peak hours. Stretches along portions of road lack adequate pedestrian circulation space.
- O** Introduction of landmark at the junction to give it an identity.
- T** Parking on main road mediates with the pedestrian movement

Parking

Land Use

Evolution of Form

AREA PROGRAM

SITE AREA: 5152.44 sqm

SPACES	Qty.	Area per unit (sqm)	Total Area(sq m)
COMMERCIAL ACTIVITIES			
CLOTHING STORE	4	150	600
JEWELRY STORE	2	250	500
FURNITURE STORE	1	500	500
ELECTRONIC GADGET STORE	2	200	400
TOTAL			2000
MULTIPURPOSE SPACE			
	1	800	800
HEALTH AND FITNESS			
MEDITATION CENTER	2	150	300
YOGA CENTER	2	150	300
AEROBIC CENTER	2	150	300
HEALTHY EATERY CENTER	1	300	300
GYMNASIUM	1	150	150
TOTAL			1350
EATERY/FOOD COURT			
TAKE AWAY	2	25	50
DINE IN	2	250	500
DESERT BAR	1	150	150
CHAT CENTER	3	150	450
KITCHEN + UTILITY + STORAGE	2	600	1200
COMMON SEATING AREA		600	600
TOTAL			2950
STUDIO'S			
PAINTING STUDIO	4	150	600
DANCE STUDIO	5	150	750
MUSIC STUDIO	4	200	800
CRAPT/ MOLDING	4	150	600
RENTAL STUDIO	7	150	1050
EO WORKING SPACE	3	150	450
TOTAL			4250
OTHER SPACES			
GAMING STATION	1	1500	1500
COMMUNAL SPACES	5	200	1000
ATM + PHARMACY	2+1	200	200
E-LIBRARY + CAFE	1	250	250
STAFF ROOM (100 sqm)	2	200	400
SERVICES		700	700
STORE ROOM	1	500	500
TOILETS			640
TOTAL			16540
Misc. 10%			1654
GRAND TOTAL			18194

	Area(Sqm)
TOTAL BUILT UP AREA	18194
SITE AREA	5152.44
ACHIEVED FAR	3.53114

CONCEPT MODULARITY

Design Considerations

- Flexibility
- Alternative Open Spaces
- Projections
- Repetition
- Indoor Outdoor

BBMP Byelaws

Evolution Of Form

5.2.3.2 Minimum width

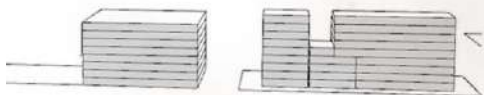
Table 5.2 The minimum width of staircase

Category	Minimum width
A (i) Residential buildings (dwellings)	1.0m
(ii) Apartment buildings	1.25m
B Hotel buildings/Lodging House	1.5m
C Assembly buildings like auditoria, theatres and cinemas	2.0m
D Educational building	1.5m
E Institutional buildings	2.0m
F All other buildings	1.5m

9.8.4 Different uses permitted in a given zone may be allowed in different floors of the building. In such cases, the regulations applicable to the use of the ground floor of the building shall apply to the entire building. When mixed land uses are permitted in the ground floor, the predominant use among them shall be considered as the use of the ground floor.

TABLE 9.8.4





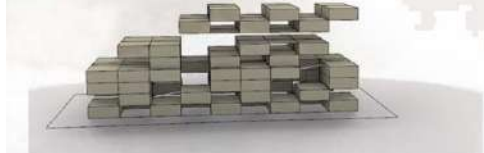
FAR – 4 : 5152.44 X 4 = 20609.76 sqm

- The massing becomes very dense. Very less porosity – thereby reducing daylight and natural ventilation.
- In order to provide porosity, the height needs to be varied. Increase in the height leads to increase in setback area according to byelaws. Thus , it becomes very difficult to achieve FAR 4 in the given site.



FAR – 3 : 5152.44 X 2.5 = 12881.1 sqm

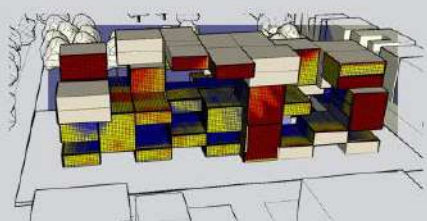
- It provides an ideal condition for providing more porosity to the structure at the same time help in mutual shading and regulating the direction of wind flow with the help of staggering of masses.
- Proportion of height and setback is appropriate in this case.



FAR – 2.5 : 5152.44 X 2.5 = 12881.1 sqm

- In this case, massing with better porosity can be achieved that help in receiving daylight and also help in natural ventilation.
- But more porosity leads to more terraces and less mutual shading since the availability of mass is less.

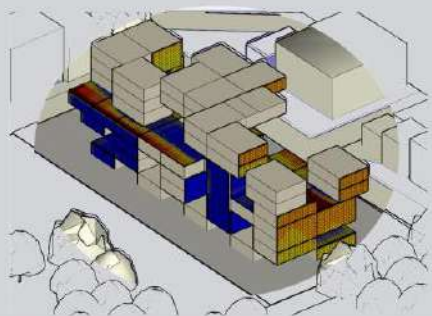
MARCH EQUINOX



These spaces can be used where the user activity is restricted to certain timings

Since this face is exposed to maximum daylight – service core can be provided in order to avoid heat gain into the space

SOUTH FACADE

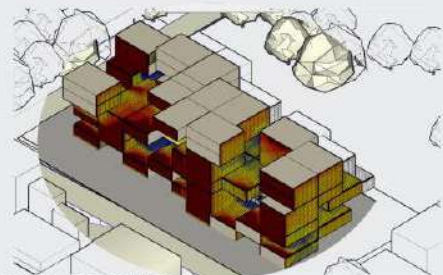


NORTH FACADE

Cut out needs to be provided in the upper blocks to allow daylight in since it's a terrace

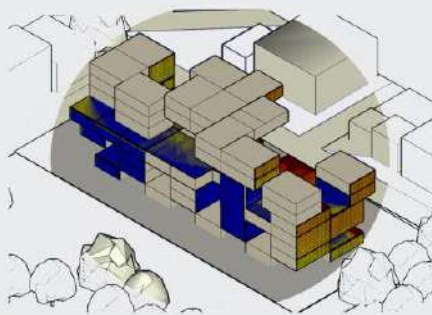
These dull lit spaces can be used for theatres or shops that require artificial lighting

DECEMBER SOLSTICE



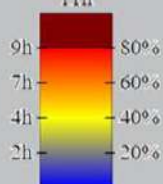
Daylight reaches into interiors during summer

SOUTH FACADE



NORTH FACADE

These voids needs to be covered



RADIATION ANALYSIS

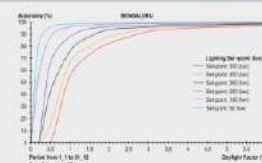
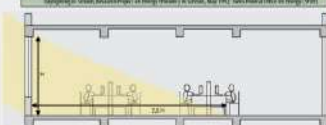
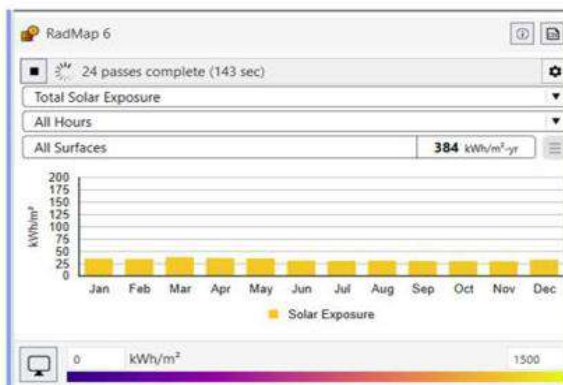


Table 4.4 Recommended maximum level and daylight factor (%) for different kinds of building spaces

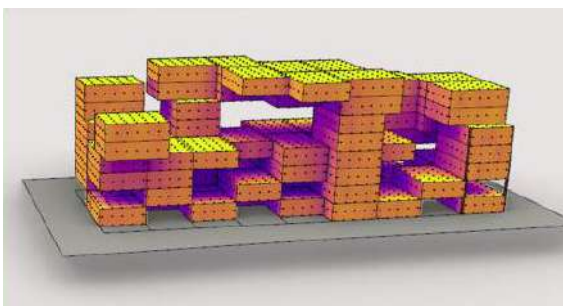
Building space	Recommended maximum level, foot-candle	Recommended daylight factor (%)
Office	300-500	2-3
Classroom	300-500	2-3
Open-plan office	300-500	2-3
Library	300-500	2-3
Hotel, Restaurant	300-500	2-3

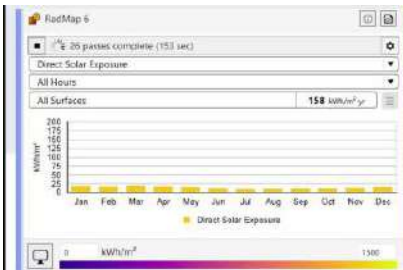


- Openings for daylight should be close to the ceiling as it ensures maximum penetration, limited heat gains, and glare control. The space depth should not generally exceed 2.5 times the floor to lintel height. Figure 4.4 illustrates this design principle.
 - Usually, daylight is available up to 6 or 8 metres from the window.
 - For good daylight, the visual light transmittance (VLT) of the glazing should be high. In most cases, the VLT of clear float glass is high. A balance has to be made in the daylight entering the building and the heat. This can be further controlled by the use of external movable shading (refer Section 4.6).
 - The room finishes, i.e., ceilings, walls, etc., should be white or in light shades as light shades reflects light.
- For achieving good daylight, the building should be linear-shaped (14-18 m width) in which the longer sides are oriented towards the north and south and the windows are provided only on the north and south façades.**

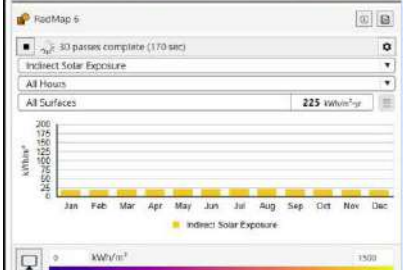
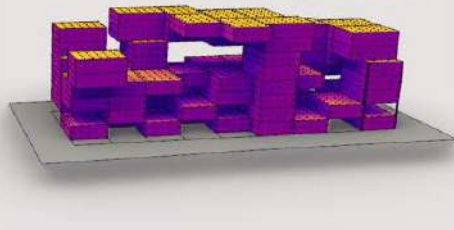


TOTAL SUN EXPOSURE , ALL HOURS

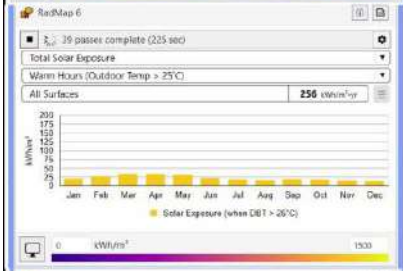
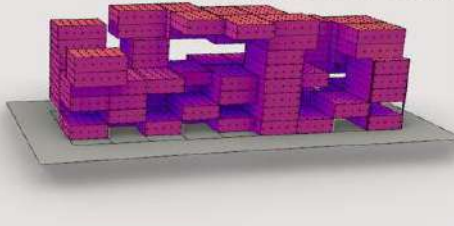




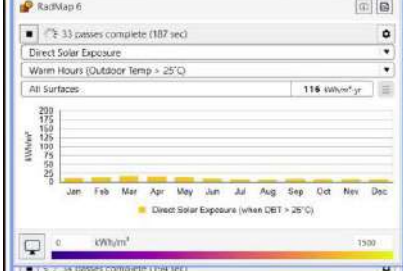
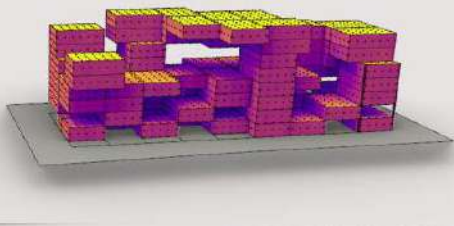
DIRECT SUN EXPOSURE



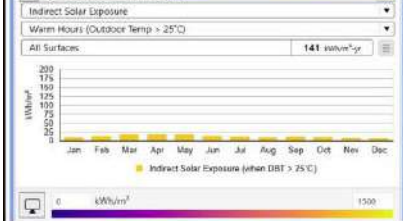
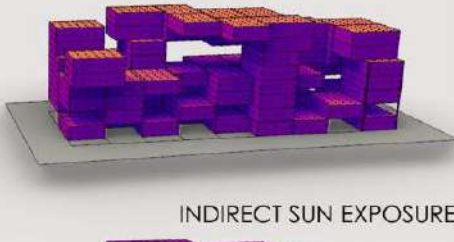
INDIRECT SUN EXPOSURE



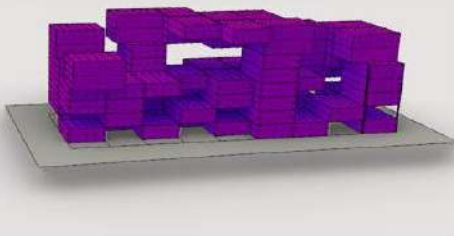
TOTAL SUN EXPOSURE



DIRECT SUN EXPOSURE



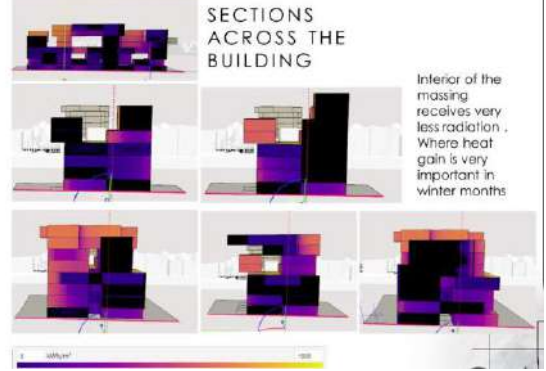
INDIRECT SUN EXPOSURE



- South façade receives maximum radiation.
- Thus, South façade need to be treated with shading devices or with the help of vertical vegetation in order to avoid excess heat gain into the building.

WARM HOURS | OUTDOOR TEMP. < 25 deg. C)

SECTIONS ACROSS THE BUILDING

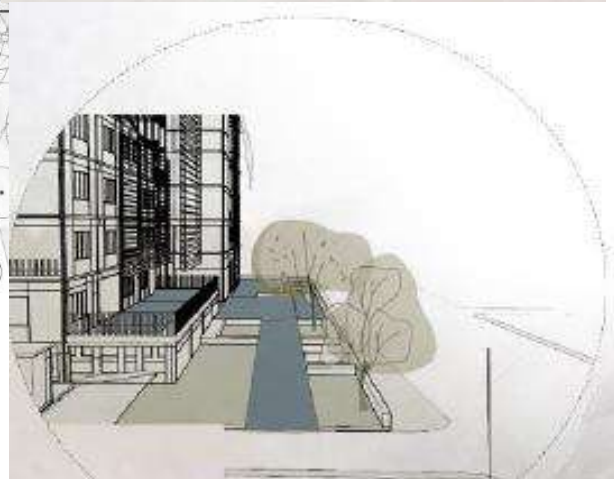
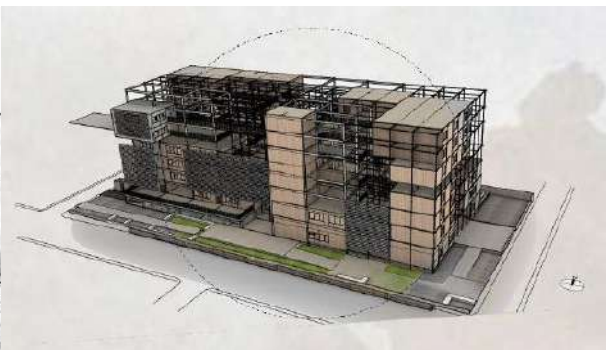


Interior of the massing receives very less radiation. Where heat gain is very important in winter months

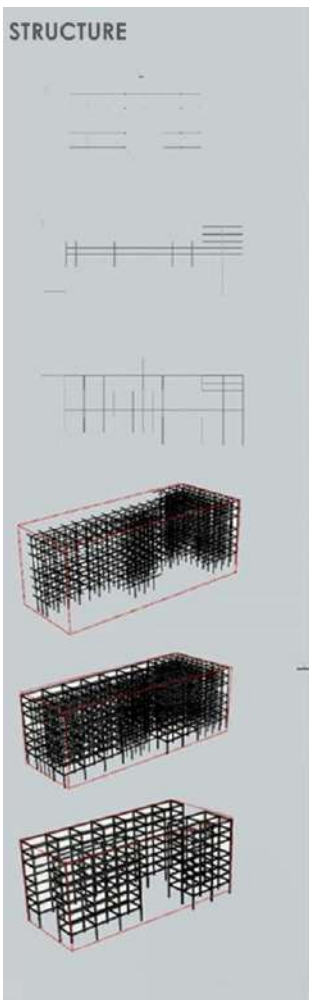
WALL ASSEMBLY

Materials	Thickness (m)	Resistivity (mK/W)	Resistance (m²K/W)
Cement Fiber Board	0.050	2.77	0.1385
Cavity	0.050	-	0.176
Wall Board	0.050	20	1
		R _o	0.076
		R _i	0.2175
		1.608	

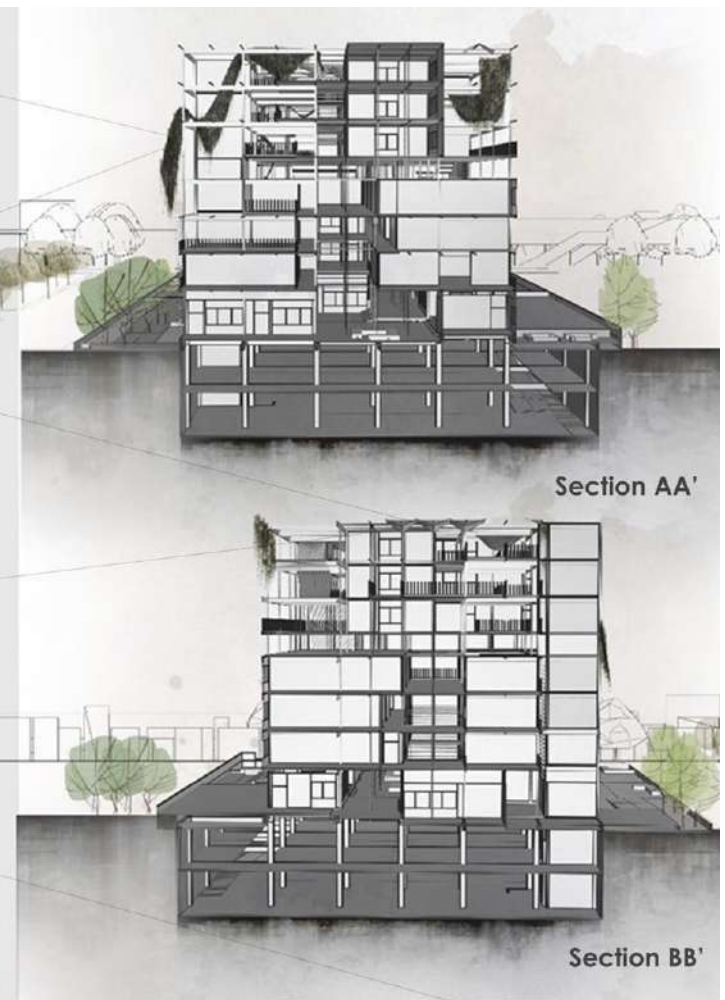
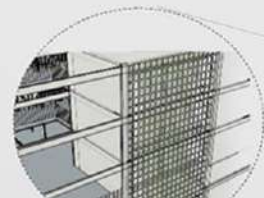
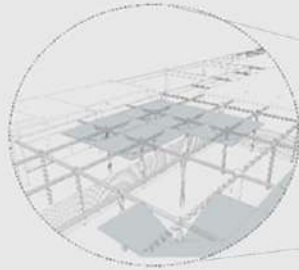
U value = 1/R = 1/1.608 = 0.62 (W/m²K)



STRUCTURE

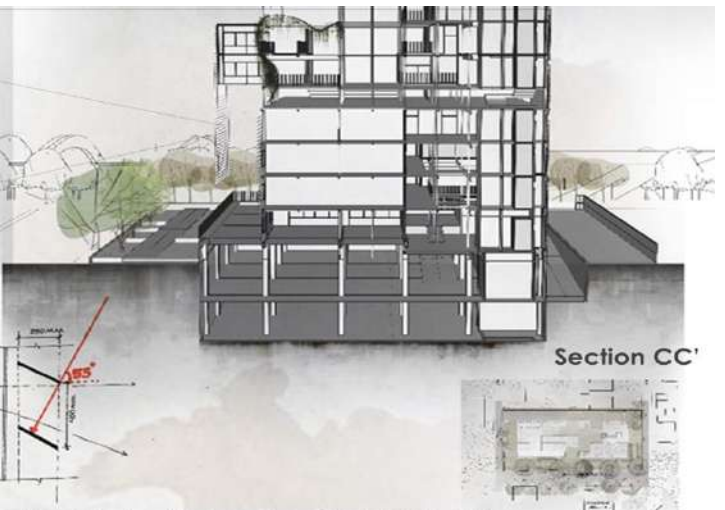
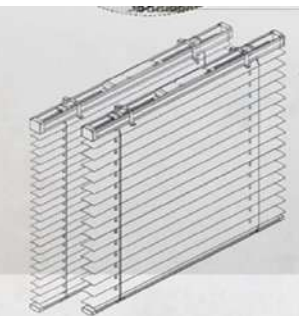
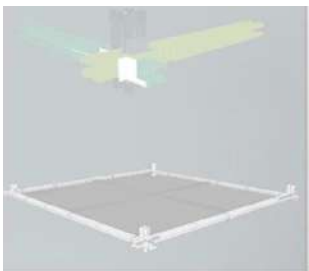


Creepers

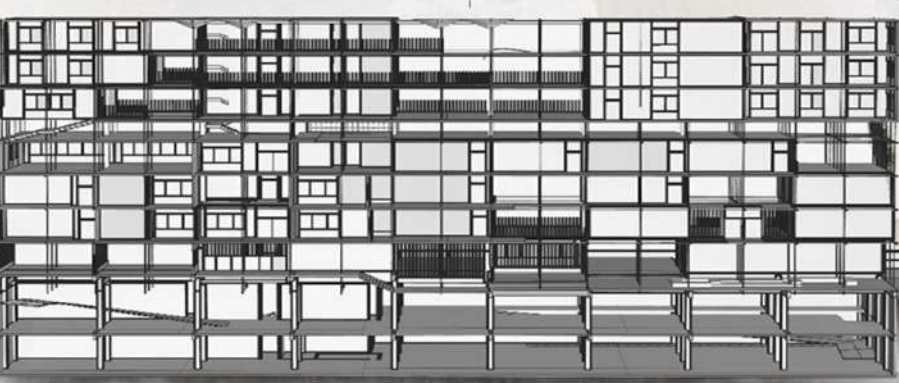
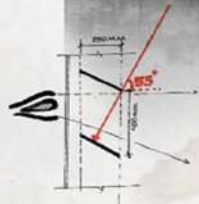
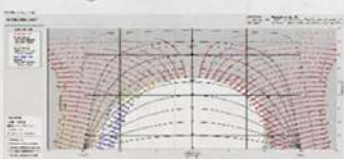
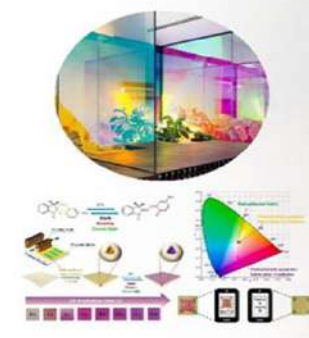


Section AA'

Section BB'



Section CC'



Section DD'

ARCHITECTURE DESIGN STUDIO VIII

Faculty: Prof Kalpana Manchali, Prof Bhavesh Mehta, Ar. Sindhu Jagannath

Bhoomika M Araga
1DC19AT015

SITE ANALYSIS AND CONCEPT

LOCATION
Jayanagar in the station, mayas junction

ELEVATIONS

SETBACKS

Side	Setback (m)
North	1.5
South	1.5
East	1.5
West	1.5

TABLE 01
HEIGHT OF BUILDING (m)

Floor No.	Height (m)
1	3.0
2	6.0
3	9.0
4	12.0
5	15.0
6	18.0
7	21.0
8	24.0
9	27.0
10	30.0

TABLE 02
EXTENSIVE OPEN SPACES (RESIDENTIAL, COMMERCIAL, PUBLIC AND RECREATIONAL) TRAFFIC & TRANSPORTATION, PUBLIC UTILITY BUILDINGS, GREEN SPACES

TABLE 03
VEGETATION

Tree No.	Height (m)	Species
1	10	ACACIA
2	12	ALGEE
3	15	ALGEE
4	18	ALGEE
5	20	ALGEE
6	22	ALGEE
7	25	ALGEE
8	28	ALGEE
9	30	ALGEE
10	32	ALGEE

TABLE 04
VEGETATION

Tree No.	Height (m)	Species
11	10	ALGEE
12	12	ALGEE
13	15	ALGEE
14	18	ALGEE
15	20	ALGEE
16	22	ALGEE
17	25	ALGEE
18	28	ALGEE
19	30	ALGEE
20	32	ALGEE

TABLE 05
VEGETATION

Tree No.	Height (m)	Species
21	10	ALGEE
22	12	ALGEE
23	15	ALGEE
24	18	ALGEE
25	20	ALGEE
26	22	ALGEE
27	25	ALGEE
28	28	ALGEE
29	30	ALGEE
30	32	ALGEE

TABLE 06
VEGETATION

Tree No.	Height (m)	Species
31	10	ALGEE
32	12	ALGEE
33	15	ALGEE
34	18	ALGEE
35	20	ALGEE
36	22	ALGEE
37	25	ALGEE
38	28	ALGEE
39	30	ALGEE
40	32	ALGEE

TABLE 07
VEGETATION

Tree No.	Height (m)	Species
41	10	ALGEE
42	12	ALGEE
43	15	ALGEE
44	18	ALGEE
45	20	ALGEE
46	22	ALGEE
47	25	ALGEE
48	28	ALGEE
49	30	ALGEE
50	32	ALGEE

TABLE 08
VEGETATION

Tree No.	Height (m)	Species
51	10	ALGEE
52	12	ALGEE
53	15	ALGEE
54	18	ALGEE
55	20	ALGEE
56	22	ALGEE
57	25	ALGEE
58	28	ALGEE
59	30	ALGEE
60	32	ALGEE

TABLE 09
VEGETATION

Tree No.	Height (m)	Species
61	10	ALGEE
62	12	ALGEE
63	15	ALGEE
64	18	ALGEE
65	20	ALGEE
66	22	ALGEE
67	25	ALGEE
68	28	ALGEE
69	30	ALGEE
70	32	ALGEE

TABLE 10
VEGETATION

Tree No.	Height (m)	Species
71	10	ALGEE
72	12	ALGEE
73	15	ALGEE
74	18	ALGEE
75	20	ALGEE
76	22	ALGEE
77	25	ALGEE
78	28	ALGEE
79	30	ALGEE
80	32	ALGEE

TABLE 11
VEGETATION

Tree No.	Height (m)	Species
81	10	ALGEE
82	12	ALGEE
83	15	ALGEE
84	18	ALGEE
85	20	ALGEE
86	22	ALGEE
87	25	ALGEE
88	28	ALGEE
89	30	ALGEE
90	32	ALGEE

TABLE 12
VEGETATION

Tree No.	Height (m)	Species
91	10	ALGEE
92	12	ALGEE
93	15	ALGEE
94	18	ALGEE
95	20	ALGEE
96	22	ALGEE
97	25	ALGEE
98	28	ALGEE
99	30	ALGEE
100	32	ALGEE

TABLE 13
VEGETATION

Tree No.	Height (m)	Species
101	10	ALGEE
102	12	ALGEE
103	15	ALGEE
104	18	ALGEE
105	20	ALGEE
106	22	ALGEE
107	25	ALGEE
108	28	ALGEE
109	30	ALGEE
110	32	ALGEE

TABLE 14
VEGETATION

Tree No.	Height (m)	Species
111	10	ALGEE
112	12	ALGEE
113	15	ALGEE
114	18	ALGEE
115	20	ALGEE
116	22	ALGEE
117	25	ALGEE
118	28	ALGEE
119	30	ALGEE
120	32	ALGEE

TABLE 15
VEGETATION

Tree No.	Height (m)	Species
121	10	ALGEE
122	12	ALGEE
123	15	ALGEE
124	18	ALGEE
125	20	ALGEE
126	22	ALGEE
127	25	ALGEE
128	28	ALGEE
129	30	ALGEE
130	32	ALGEE

TABLE 16
VEGETATION

Tree No.	Height (m)	Species
131	10	ALGEE
132	12	ALGEE
133	15	ALGEE
134	18	ALGEE
135	20	ALGEE
136	22	ALGEE
137	25	ALGEE
138	28	ALGEE
139	30	ALGEE
140	32	ALGEE

TABLE 17
VEGETATION

Tree No.	Height (m)	Species
141	10	ALGEE
142	12	ALGEE
143	15	ALGEE
144	18	ALGEE
145	20	ALGEE
146	22	ALGEE
147	25	ALGEE
148	28	ALGEE
149	30	ALGEE
150	32	ALGEE

TABLE 18
VEGETATION

Tree No.	Height (m)	Species
151	10	ALGEE
152	12	ALGEE
153	15	ALGEE
154	18	ALGEE
155	20	ALGEE
156	22	ALGEE
157	25	ALGEE
158	28	ALGEE
159	30	ALGEE
160	32	ALGEE

TABLE 19
VEGETATION

Tree No.	Height (m)	Species
161	10	ALGEE
162	12	ALGEE
163	15	ALGEE
164	18	ALGEE
165	20	ALGEE
166	22	ALGEE
167	25	ALGEE
168	28	ALGEE
169	30	ALGEE
170	32	ALGEE

TABLE 20
VEGETATION

Tree No.	Height (m)	Species
171	10	ALGEE
172	12	ALGEE
173	15	ALGEE
174	18	ALGEE
175	20	ALGEE
176	22	ALGEE
177	25	ALGEE
178	28	ALGEE
179	30	ALGEE
180	32	ALGEE

TABLE 21
VEGETATION

Tree No.	Height (m)	Species
181	10	ALGEE
182	12	ALGEE
183	15	ALGEE
184	18	ALGEE
185	20	ALGEE
186	22	ALGEE
187	25	ALGEE
188	28	ALGEE
189	30	ALGEE
190	32	ALGEE

TABLE 22
VEGETATION

Tree No.	Height (m)	Species
191	10	ALGEE
192	12	ALGEE
193	15	ALGEE
194	18	ALGEE
195	20	ALGEE
196	22	ALGEE
197	25	ALGEE
198	28	ALGEE
199	30	ALGEE
200	32	ALGEE

TABLE 23
VEGETATION

Tree No.	Height (m)	Species
201	10	ALGEE
202	12	ALGEE
203	15	ALGEE
204	18	ALGEE
205	20	ALGEE
206	22	ALGEE
207	25	ALGEE
208	28	ALGEE
209	30	ALGEE
210	32	ALGEE

TABLE 24
VEGETATION

Tree No.	Height (m)	Species
211	10	ALGEE
212	12	ALGEE
213	15	ALGEE
214	18	ALGEE
215	20	ALGEE
216	22	ALGEE
217	25	ALGEE
218	28	ALGEE
219	30	ALGEE
220	32	ALGEE

TABLE 25
VEGETATION

Tree No.	Height (m)	Species
221	10	ALGEE
222	12	ALGEE
223	15	ALGEE
224	18	ALGEE
225	20	ALGEE
226	22	ALGEE
227	25	ALGEE
228	28	ALGEE
229	30	ALGEE
230	32	ALGEE

TABLE 26
VEGETATION

Tree No.	Height (m)	Species
231	10	ALGEE
232	12	ALGEE
233	15	ALGEE
234	18	ALGEE
235	20	ALGEE
236	22	ALGEE
237	25	ALGEE
238	28	ALGEE
239	30	ALGEE
240	32	ALGEE

TABLE 27
VEGETATION

Tree No.	Height (m)	Species
241	10	ALGEE
242	12	ALGEE
243	15	ALGEE
244	18	ALGEE
245	20	ALGEE
246	22	ALGEE
247	25	ALGEE
248	28	ALGEE
249	30	ALGEE
250	32	ALGEE

TABLE 28
VEGETATION

Tree No.	Height (m)	Species
251	10	ALGEE
252	12	ALGEE
253	15	ALGEE
254	18	ALGEE
255	20	ALGEE
256	22	ALGEE
257	25	ALGEE
258	28	ALGEE
259	30	ALGEE
260	32	ALGEE

TABLE 29
VEGETATION

Tree No.	Height (m)	Species
261	10	ALGEE
262	12	ALGEE
263	15	ALGEE
264	18	ALGEE
265	20	ALGEE
266	22	ALGEE
267	25	ALGEE
268	28	ALGEE
269	30	ALGEE
270	32	ALGEE

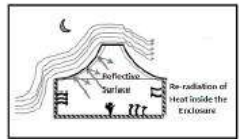
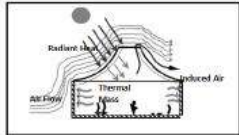
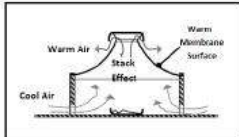
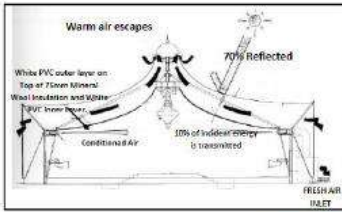
TABLE 30
VEGETATION

Tree No.	Height (m)	Species
271	10	ALGEE
272	12	ALGEE
273	15	ALGEE
274	18	ALGEE
275	20	ALGEE
276	22	ALGEE
277	25	ALGEE
278	28	ALGEE
279	30	ALGEE
280	32	ALGEE

TABLE 31
VEGETATION

Tree No.	Height (m)	Species
281	10	ALGEE
282	12	ALGEE
283	15	ALGEE
284	18	ALGEE
285	20	ALGEE
286	22	ALGEE

THERMAL BEHAVIOUR OF TENSILE FAÇADE AND ROOF



ECDC GUIDELINES

WALL ASSEMBLIES

W1 Concrete Composite Block Wall with internal insulation and plaster on both sides with bonded mineral wool

Layer	Material	Thickness (mm)	Conductivity (W/mK)	U-value (W/m²K)
1	Plaster	12.5	0.025	0.12
2	Concrete	200	1.75	0.36
3	Mineral wool	100	0.04	0.47
4	Plaster	12.5	0.025	0.51
U value of assembly: 0.50				

W2 Insulation over 100 Concrete Block cavity wall (Internal heavy masonry with plaster on both sides)

Layer	Material	Thickness (mm)	Conductivity (W/mK)	U-value (W/m²K)
1	Plaster	12.5	0.025	0.42
2	Concrete	100	1.75	0.43
3	Mineral wool	100	0.04	0.43
4	Plaster	12.5	0.025	0.43
U value of assembly: 0.43				

W3 Brick wall with internal insulation and plaster on both sides with Polyethylene

Layer	Material	Thickness (mm)	Conductivity (W/mK)	U-value (W/m²K)
1	Plaster	12.5	0.025	2.33
2	Brick	100	0.75	0.81
3	Mineral wool	100	0.04	0.81
4	Plaster	12.5	0.025	0.81
U value of assembly: 0.40				

W4 Overdeck Extruded Polystyrene (EPS) Insulation

Layer	Material	Thickness (mm)	Conductivity (W/mK)	U-value (W/m²K)
1	Plaster	12.5	0.025	0.07
2	Concrete	100	1.75	0.08
3	EPS	100	0.035	0.34
4	Mineral wool	100	0.04	0.04
5	Brick	100	0.75	0.13
6	Plaster	12.5	0.025	0.36
U value of assembly: 0.36				

W5 Underdeck Gypsum and Mineral fibre insulation

Layer	Material	Thickness (mm)	Conductivity (W/mK)	U-value (W/m²K)
1	Plaster	12.5	0.025	0.91
2	Brick	100	0.75	1.02
3	Mineral wool	100	0.04	0.91
4	Brick	100	0.75	0.91
5	Plaster	12.5	0.025	0.91
U value of assembly: 0.50				

ROOF ASSEMBLIES

R1 Overdeck Extruded Polystyrene (EPS) Insulation

Layer	Material	Thickness (mm)	Conductivity (W/mK)	U-value (W/m²K)
1	Plaster	12.5	0.025	0.07
2	Concrete	100	1.75	0.08
3	EPS	100	0.035	0.34
4	Mineral wool	100	0.04	0.04
5	Brick	100	0.75	0.13
6	Plaster	12.5	0.025	0.36
U value of assembly: 0.36				

R2 Underdeck Gypsum and Mineral fibre insulation

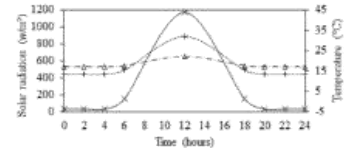
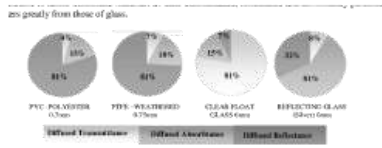
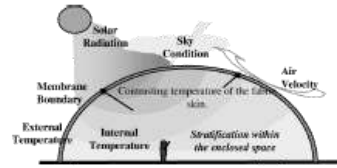
Layer	Material	Thickness (mm)	Conductivity (W/mK)	U-value (W/m²K)
1	Plaster	12.5	0.025	0.91
2	Brick	100	0.75	1.02
3	Mineral wool	100	0.04	0.91
4	Brick	100	0.75	0.91
5	Plaster	12.5	0.025	0.91
U value of assembly: 0.50				

WALL ASSEMBLY – AUTOCLAVED AERATED CONCRETE BLOCKS
ROOF ASSEMBLY – OVERDECK EXTRUDED POLYSTYRENE

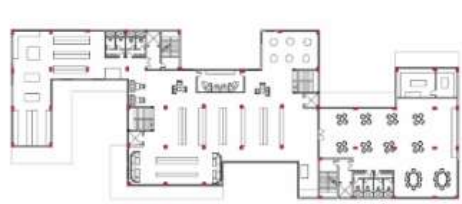
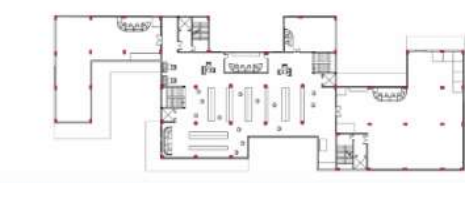
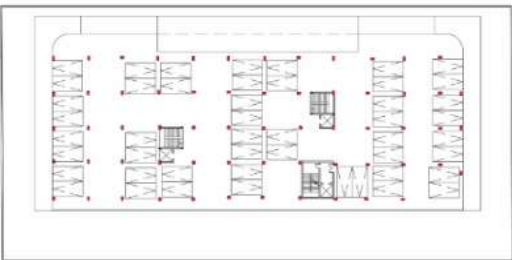


THERMAL BEHAVIOUR OF THE BUILDING

The thermal optical properties of a material distinguish its radiant behaviour within the thermal spectrum. The percentage of light transmittance in coated woven fabric typically ranges between 0 to 20%, with a transmittance of up to 50%, allowing daytime mechanical lighting to be dramatically reduced or eliminated. Glass tends to have much higher solar transmittance and lower reflectance than that of fabric membranes. This results in the tendency of fabric membrane properties to change more significantly at higher angles of solar incidence.



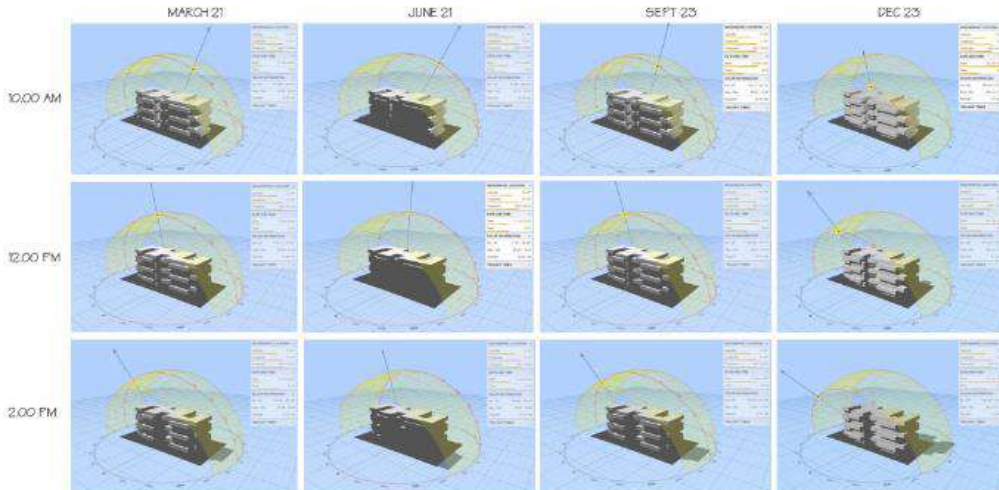
Tensile fabric external envelope can achieve U-Values up to 0.18 for virtually any building, overcoming the thermal limitations previously associated with tensile fabrics.



SITE - Silk board Junction - Neighbourhood

SIMULATIONS

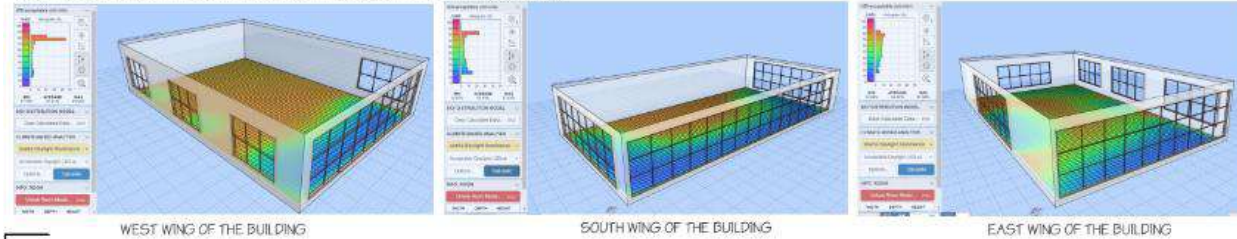
DAY LIGHTING – SHADOW MASK AND ORIENTATION



INFERENCES

- THE BUILDING ORIENTATION IS EAST – WEST.
- DURING SUMMER SOLSTICE THE ENTIRE SOUTH FACADE IS SHADED AND NORTH FACADE RECEIVES DIFFUSED SUNLIGHT.
- DURING THE AUTUMN EQUINOX THE PROJECTIONS IN THE SOUTH FACADE SHADE THE BUILDING UNDERNEATH IT AND THE EAST FACADE IS COMPLETELY SHADDED ALMOST THROUGHOUT THE DAY.
- DURING THE WINTER EQUINOX THE SOUTH AND WEST FACADE RECEIVES SUNLIGHT WHICH IS NECESSARY FOR BANGALORE IN WINTERS.
- IT IS IDEAL TO GIVE GREEN ROOFS ON THE PROJECTIONS SINCE IT CAPTURES MOST OF THE SUNLIGHT THROUGHOUT THE YEAR.
- KINETIC FACADE CAN BE GIVEN ON THE WEST FACADE MOSTLY RECEIVES HARSH SUNLIGHT FOR LONG HOURS.
- OFFICES AND WORKING SPACES CAN BE GIVEN ON THE NORTH AND EAST FOR COMFORT.

USEFUL DAYLIGHT ILLUMINANCE (DYNAMIC DAY LIGHTING INDEX)

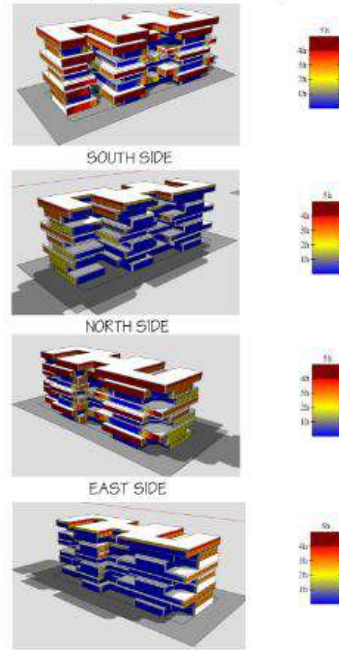


WEST WING OF THE BUILDING

SOUTH WING OF THE BUILDING

EAST WING OF THE BUILDING

SUN HOURS (RADIATION INTENSITY)



SOUTH SIDE

NORTH SIDE

EAST SIDE

WEST SIDE

INFERENCES

- THE MINIMUM DAY LIGHT INDEX ACCORDING TO ECBC GUIDELINES IS 40%.
- THE GLASS FACADE IN THE SOUTHERN FACADE OF THE BUILDING HELPS IN ACHIEVING THE REQUIRED UDI.
- THE MAXIMUM DAY LIGHT INDEX IS ACHIEVED MOSTLY ON THE SOUTHERN AND THE WESTERN SIDE OF THE BUILDING.

VIEWS OF THE BUILDING



SOUTH FACADE



NORTH FACADE



EAST FACADE



WEST FACADE



PARAMETRIC FACADE DESIGN



A 't-shirt' facade is a system of translucent fabric or flexible membrane material that acts as a second skin to a building's exterior. It's an innovative and cost-effective alternative to the traditional metal mesh facade systems. T-shirt facades come in custom shapes and sizes.



SITE - Silk board Junction - Neighbourhood

1 Self-shading

Shading the building north-south, creating alternate projections. Floor-to-toe self-shading. Terraces looking towards north.

2 Balconies

Regularly spaced horizontal projections with balconies. Cuts down direct sun rays entering the building.

3

Adding projects to the balconies. These cut down direct rays and allow only partial sun rays entering the building. Shades the balconies spaces partially.

4

Adding horizontal projects at the terraces to shade the space and make it usable. The balconies are placed at an angle allowing light only from north.

5

Adding vertical louvers for the west-facade turning down the radiation entering the building. The louvers are at an angle cutting the glare and allowing only diffused light.

Site analysis and Design Development

Site location: VET Ground, JP Nagar, 2nd Phase, Bangalore-560078
 Site area: 5000sq.M
 Site dimension: 50M X 100M
 Average temperature: 24.7 deg.C
 Average rainfall: 1200mm
 Average wind speed: 14 miles per hr

Demographic data

Chitra S
1DC19AT019
Sem 7 A

Views from site

North side- 9th cross road, 15M wide

East side- 8th main road, 12M wide

West side- 8th main road, 10M wide

South side- 11th cross road, 8.5M wide

Iteration 1

FAB-1G
Floors-6+8
Food plaza-640sq.M
Workshop-2205sq.M
Sports-7605sq.M
Office-5940sq.M
Total-14850sq.M

Iteration 2

FAB-2
Floors-6+8
Food plaza-760sq.M
Workshop-3385sq.M
Sports-8015sq.M
Office-7492sq.M
Total-16657sq.M

Iteration 3

FAB-2G
FLOORS-6+8
Food plaza-920sq.M
Workshop-3605sq.M
Sports-1105sq.M
Office-10100sq.M
Total-16630sq.M

Program

- Office:** IT Sector with densely populated area, Easy road networks, Lesser noise intensity.
- Sports:** Providing indoor sports facilities, Large no. of schools & colleges around, No sports centers in the surrounding.
- Workshop:** Different workshops for different age groups, Can be used for VET school.
- Food Plaza:** Food Plaza with recreational space, Suitable for a complex building with large number of people.

Concept

- Exchange between the built elements and the natural elements.
- More efficient for an office building.
- Creating outdoor usable spaces with views.
- Inside Out
- Biophilic
- Self-shading

Climate consultant

- Seeks to connect building occupants more closely to nature.
- Consistent with the environment.
- Adapting to the surrounding.
- Natural light and ventilation.
- Self-shading between the floors.
- Providing openings for wind movement.

Cumulative day light

Daylight-Illuminance

	TLOT AREA	RESIDENTIAL	COMMERCIAL	PUBLIC & SEMI PUBLIC	ROAD WIDTH
FAB OVER 1000SQ.M					Over 15M
HEIGHT OF BUILDING	15M-21M	21M-24M	24M-27M	27-30M	30M-39M
SETBACK	7M	8M	9M	10M	11M
					12M
					13M

Site is divided into three zones:

- Workshop zone
- Food square

Standards

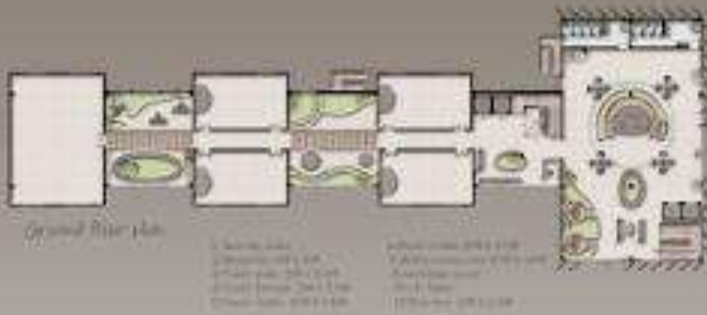
- Can park 10 cars (20sqm)
- Water pipes and sewers 2.5dia (12.5m x 2m)
- 2 or more buildings in a single site - the distance between the 2 buildings shall be minimum of half the height of the taller building.
- The first floor back shall be higher of the one prescribed for that particular use.



Exterior Elevation 1



Exterior Elevation 2



Ground floor plan

- 1. Lobby area
- 2. Reception area
- 3. Corridor
- 4. Office area
- 5. Conference room
- 6. Meeting room
- 7. Storage area
- 8. Restroom



Fourth floor plan

- 1. Office area
- 2. Conference room
- 3. Meeting room
- 4. Corridor
- 5. Restroom
- 6. Storage area



First floor plan

- 1. Office area
- 2. Conference room
- 3. Meeting room
- 4. Corridor
- 5. Restroom
- 6. Storage area



Fifth floor plan

- 1. Office area
- 2. Conference room
- 3. Meeting room
- 4. Corridor
- 5. Restroom
- 6. Storage area



Second floor plan

- 1. Office area
- 2. Conference room
- 3. Meeting room
- 4. Corridor
- 5. Restroom
- 6. Storage area



Sixth floor plan

- 1. Office area
- 2. Conference room
- 3. Meeting room
- 4. Corridor
- 5. Restroom
- 6. Storage area



Third floor plan

- 1. Office area
- 2. Conference room
- 3. Meeting room
- 4. Corridor
- 5. Restroom
- 6. Storage area



Seventh floor plan

- 1. Office area
- 2. Conference room
- 3. Meeting room
- 4. Corridor
- 5. Restroom
- 6. Storage area



INTRODUCTION

In an increasingly urbanised world, architecture plays a vital role in shaping and influencing the complex urban environment (the design of cities) and creating meaningful places that enrich the lives of people. It is important to understand the many scales at which architecture can engage with the urban context, from building on the unique local character/form to enhance public spaces to urban development projects (infrastructure/transport interchanges/terminals) that impact larger geographic regions beyond the city. The Studio intent is to introduce the discipline of urban design (interdisciplinary premise, scope, techniques and best practices) and understand architecture as a part of implementing urban design projects, from gathering insights into urban fabric to understanding how communities use spaces.

OBJECTIVES:

(a) To introduce the key components, terms, actors, processes and aspects of urban environment and their inter-relationships; to explore specific themes/issues such as public spaces, physical infrastructure, socio-cultural aspects (heritage, gender, urban growth, informality, place identity, collective memory, walkability, livability, zoning regulations) and the role of architecture in shaping the urban fabric

(b) To learn basic methods/techniques to read, analyse and interpret (mapping, diagramming and theoretical premise) the dynamics of the urban environment.

(c) To create/design architecture that responds to the specific demands of the urban context; understand the processes that impact architecture and the implications of design decisions on the larger context.

Stage 2:

Each group was asked to study urban areas with a river and facing similar challenges to Ramnagara. They studied one Indian and one international city each. They had to emphasise how these urban areas faced the challenges for their layer of study. They had to arrive at conclusions and inferences at a group level.

Stage 3:

The students were asked to arrive at individual conclusions and inferences based on their understanding of the urban context.

Stage 4:

The students were asked to develop a matrix at the macro, meso and the micro level interventions needed based on their individual conclusions and inferences.

Stage 5:

The students were allotted research articles to study and arrive at conclusions and inferences for riverfront development. The students were asked to form groups of four and conduct a riverfront development for a river length of 2 km and a depth on each side of about 100 mts on each side or as available. They were instructed that:

- Demolishing existing structures for riverfront development would not be allowed.
- Minimal built intervention.

Stage 6:

The students were asked to revisit the macro, meso and the micro level interventions proposed by them for Ramnagara town.

ARCHITECTURAL DESIGN VIII SEC C SUBJECT CODE 18ARC81

Studio Coordinator



Ar. Arobindo Gupta

Studio Faculty



Ar. Anshu
Darbari



Ar. Sudeep
Bhoopalam

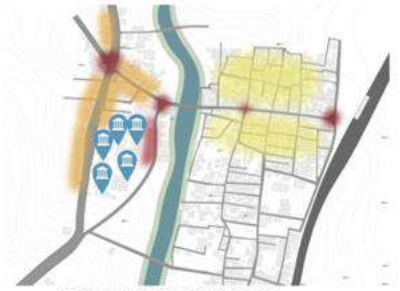
ARCHITECTURE DESIGN STUDIO VIII

Faculty: Ar. Arobindo Gupta, Ar. Anshu Darbari, Ar. Sudeep Bhoopalam

Tushar Sethiya
IDC19AT095

Matrix of Macro, Meso & Micro level

	Definition	Justification for site	Architectural intervention
Macro level	Macro-level are often used in fields which describe large-scale trends and patterns that affect entire societies or global systems.	The percentage of vegetation is relatively less across the city. It lacks social and cultural interaction at public spaces. Hence, intervention at multiple spots of the city will enhance the social and ecological dimension.	Social gathering or recreational space like parks, market place, etc. for the people.
Meso level	Meso level are intermediate or middle-range level of analysis, situated between macro and micro levels. It focuses on the interactions between individuals, groups, or organizations within a particular social context.	The old BM road has high inflow and outflow of crowd. The stretch is heavily crowded on peak days and lacks facilities like public toilets, seating area, recreational space, vegetation, etc.	Providing these interventions like public toilets, seating area, recreational space, vegetation, etc. at street level will bring awareness among the people and increase social interaction.
Micro level	Micro level refers to the detailed study and analysis of a site or location at a small scale, focusing on specific features, details, elements, and characteristics of the site alone.	The site is located at the junction of old bm road, where it has high inflow and outflow of people. It has existing vegetation on site. It is easy for people to locate and interact.	A park-bazaar hybrid which includes a market place, public toilet and park. This intervention serves people to interact, socialize and spend leisure time. This is to provide social gathering and recreational space at micro level scale.



Traffic zones based on land use



Traffic zones based on economic zones



Ramanagara city map -Macro level sites

Macro level intervention

There are multiple sites chosen around the city which are favorable for proposing social gathering or recreational spaces like parks and markets.

The city lacks public parks and vegetation which is a drawback both in social and ecological dimension of the city. Hence, proposing parks and markets around the city will increase chance of socio-cultural interaction and vegetation of the city.

The site locations are mostly surrounded by residential houses with major arterial roads connecting the site for ease of accessibility.



The Old BM Road, arterial road joins the bus stand and railway station on either end, making it the most value generative stretch, in terms of economy, religious movement and land use.

The Old BM Road bridge (B m), acts like the only commercial collector path to the other bank of river Arkavathi, the hawkers activity makes it insufficient for two-way movement, lacks better connectivity to distribute the concentration.

The pedestrian traffic is dependent on the commercial use of the space. Since the old BM road is a busy market place the footfall is higher than that of highway stretch.

The park-bazaar hybrid

Site Area - 1.05 acre (4250 sq.m)
Location- Near kengal hanumanthai junction
FAR - 1.50
Ground coverage - 647.55 sq.m
Total built-up area - 1389.2 sq.m

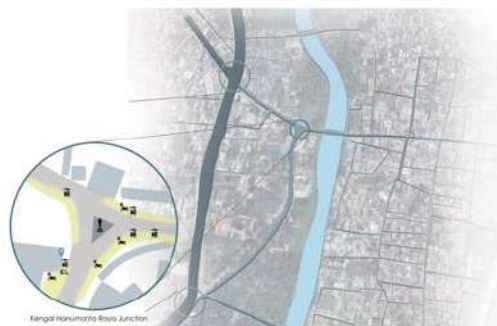
This intervention helps to revive the greenery of the city by providing park. It provides a space to spend leisure time by the side of the river. The market complex is built to relocate the enochchers from the bridge of old BM road and to relocate the temporary stores which are occupied on the pedestrian pathways which blocks the traffic and movement of the people.

The people can easily access the site as it is located on the junction of old BM road. The site is provided with minimal parking area, hence there is no blockage of traffic on the road. It provides space for social interaction and space to spend leisure time at the park.

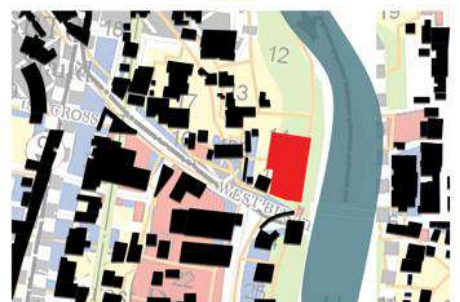
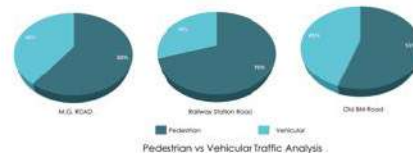
Area program

1 Market shops -1346.45 sq.m
2 Public toilet -42.55 sq.m
Total built-up -1389.2 sq.m

- Retail stores/Commercial activity
- Hawkers/Vegetable market
- Flower market



Kengal Hanumanthai Junction



Land-use map

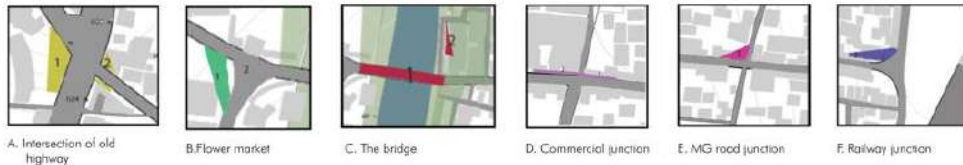
- Residential
- Commercial
- Industrial
- Public/Semipublic
- Utilities & Services
- Existing Road
- Proposed Roads
- Proposed Ring Road
- Water Bodies
- Park & Open Space

Analysis For Kengal Hanumanthai Circle

- The Statue at the Kengal Hanumanthai circle acts as a Round-about and also as one of the major landmarks in Ramanagara.
- Most of the shopfronts have encroached most part of the pedestrian path.
- The Kengal Hanumanthai circle is one of the busiest and crowded junctions of Ramanagara town because of the Trisection of Old-BM road, Bridge and station road.
- Total ROW-Right of way for Kengal Hanumanthai Circle is 31.4m.
- Due to the extended shopfronts, the vendors sit on the pedestrian pathway.
- Most of the commercial buildings have basements, which may be hazardous during overflow of river/ flood.



Major Hot-spots of old BM road



A. Intersection of old highway
 Since there is an intersection of old highway and the new highway it has a lot of potential for future development.

B. Flower market
 Lack of pedestrian-friendly features can create physical barriers that limit social interaction and impede walkability.

C. The bridge
 People use one side of it as vegetable market. The towers can be relocated so the bridge is less crowded to avoid traffic.

D. Commercial junction
 When designing a small commercial area, it's essential to create a functional and attractive space that meets the needs of businesses.

E. MG road junction
 The railway station road has buildings which are over 60-70 years, that can be restored or renovated. The buildings facing these two roads or in the closer proximity are informal spaces.

F. Railway junction
 This intersection point has a lot of potential for social engagement since it is near to the community and railway station.



Meso level intervention

It is a street intervention for old BM road as it is the centre market street of ramanagara city. It was initially the old bangalore-mysore highway but now it has become peoples market street where daily household items and other shopping commodities are sold. With multiple shops on the stretch there lies temples, small-scale silk factories, residential houses and complex buildings.

INFERENCE

By providing various street amenities like public toilets, pedestrian pathways, parking area, vegetation, dustbins and street lamps, will help develop the street and enhance the social and functional aspect of the street. This will help city develop at meso level.



INTERACTIVE SPACES
 Being a commercial, cultural and religious hub, there is an influx of pedestrian traffic which needs to be regulated at intervals. These intervals can improve the social aspect.



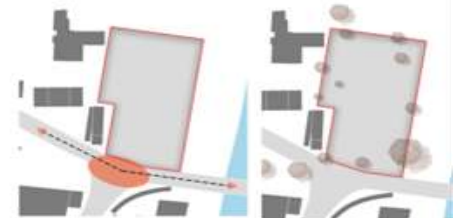
RECREATIONAL SPACES
 Lot of public means a lot of activities which includes various age groups and with designated spaces with landscape to conduct activities.



HAWKERS
 The hawkers can be provided with sheltered pods or can be relocated to complex.

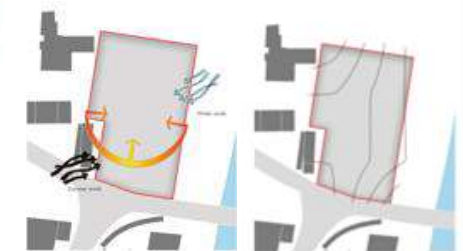


SEATERS & PATHWAYS
 As there is high influx of people public seaters are provided for resting with pedestrian pathways for easy movement.



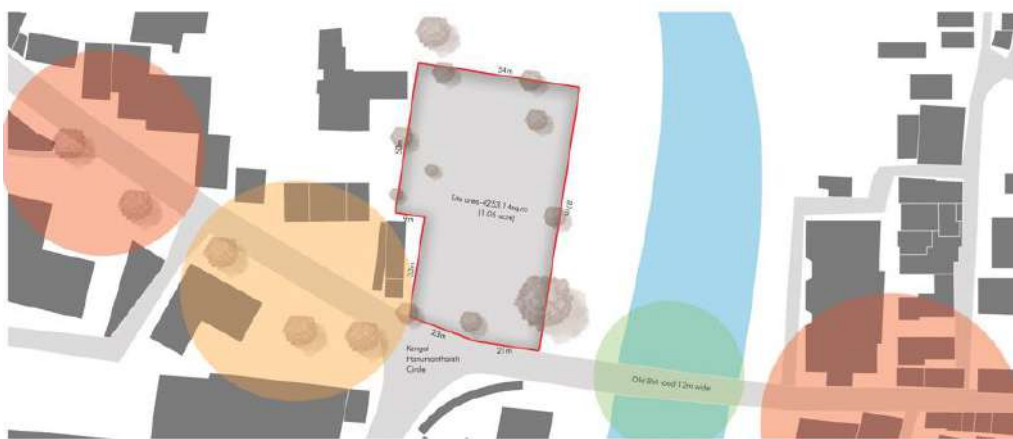
Traffic zone
 The site is around the traffic zone as it is the circle with maximum footfall.

Existing Vegetation
 Retaining the existing vegetation and building around it.

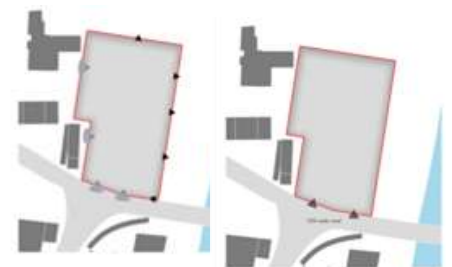


Climate analysis
 The maximum heat gain is towards the south with winter winds from the east and summer winds from south-west.

Topography
 The site is almost flat with gradual slope towards west with 0.5m drop.



SITE PLAN



Noise & view analysis
 Major noise is from the junction and the building adjacent to the site. Best view is towards the river.

Access & Road wide
 There is only one access to the site from the main junction with the road wide of 12m.

ARCHITECTURE DESIGN STUDIO VIII

Faculty: Ar. Arobindo Gupta, Ar. Anshu Darbari, Ar. Sudeep Bhoopalam

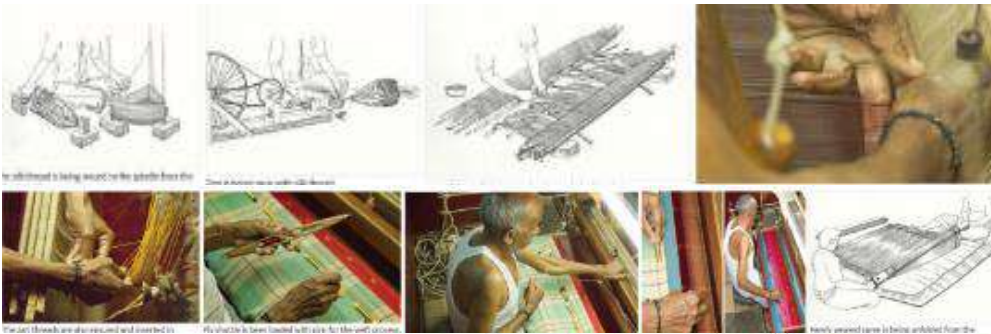
Samyabrato Dey
IDC19AT079

	DEFINITION	SITE	JUSTIFICATION	AREA STATEMENT
MACRO LEVEL	At a macro level the stretch chosen is on NH-275, Bangalore - Mysore highway which passes through Ramanagara. The stretch gives us a broad perspective of the town and its if connection in terms of network and access. It is one of the major roadway of Ramanagara.		NH-275 connects Bangalore to Mysore while passing through Ramanagara. It is the major spine that passes through the town and a healthy amount of traffic commutes on this road every day.	The chosen stretch is of 910m. We can see that important buildings are situated on the stretch because it has the ease of connectivity. Proposal: Modules of skill development centre and heritage trail to be incorporated on the stretch of NH-275.
MESO LEVEL	At a meso level the neighbourhood study gives us the idea of the existing programmes near the site and helps us to plan the proposal of a new programme. For any new project, site context is important since it will help to define the success of the proposed project. The neighbourhood has mixed programmes which include residential, commercial and administration.		The area already has a high land value and receives good amount of footfall since major administrative complexes are located here and also the frontage of NH-275 is lined with commercial activity and peddlars selling various items like spices, tender coconut, sugarcane juice, etc.	The chosen area (red circle) is of 95 acres and the radius is of 350m. At a neighbourhood level, more awareness about the rich silk heritage of the town needs to be spread among the people. Proposal- A heritage trail.
MICRO LEVEL	At a micro level, the site is nestled at the junction of NH-275 and Old BM Road. The parcel of land helps us to understand the hierarchy of the immediate context while keeping in mind the existence of an important node and the convergence of two major roads.		The chosen site is currently a barren land with one side adjacent to the administrative complex and the other being close to the junction. It has the potential to grow as a major spot of learning and commerce since the context has an ambience of discipline and decorum.	The chosen site is of 2 acres. Proposal- Skill Development Centre Ramanagara is rich in silk production but the silk harvesters are not skilled enough to weave silk products. Thus a centre where they can learn, train, attend workshops, sell and exhibit work is proposed.

Ramanagara Development Classification:



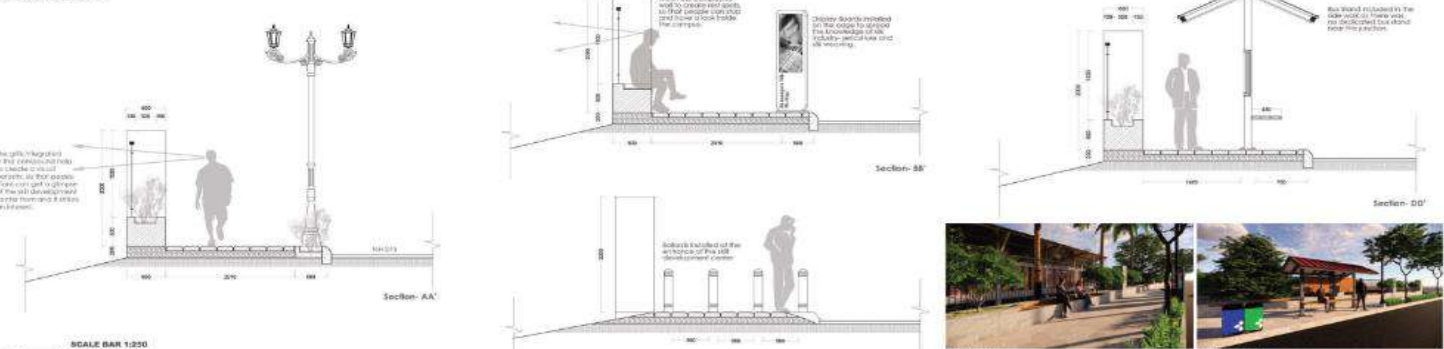
Macro Level Proposed Module Locations:

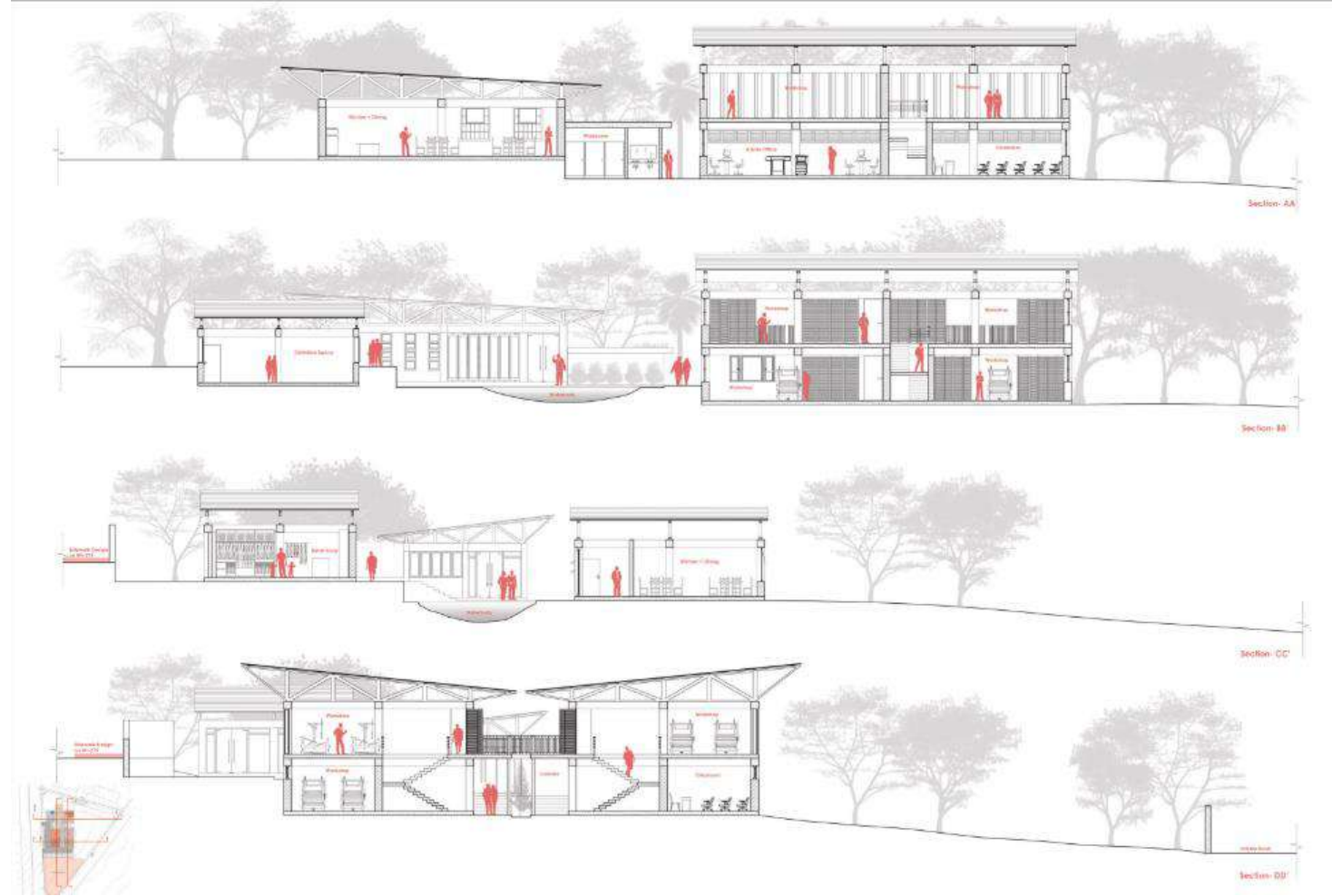
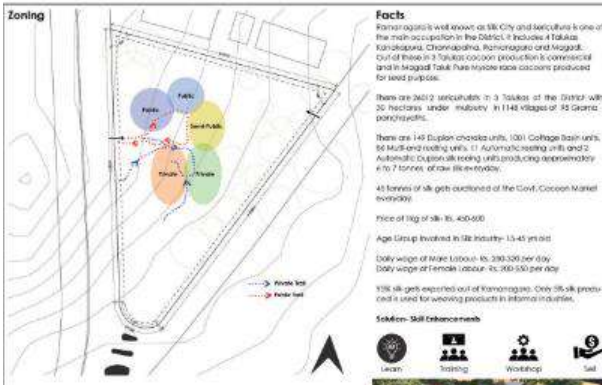


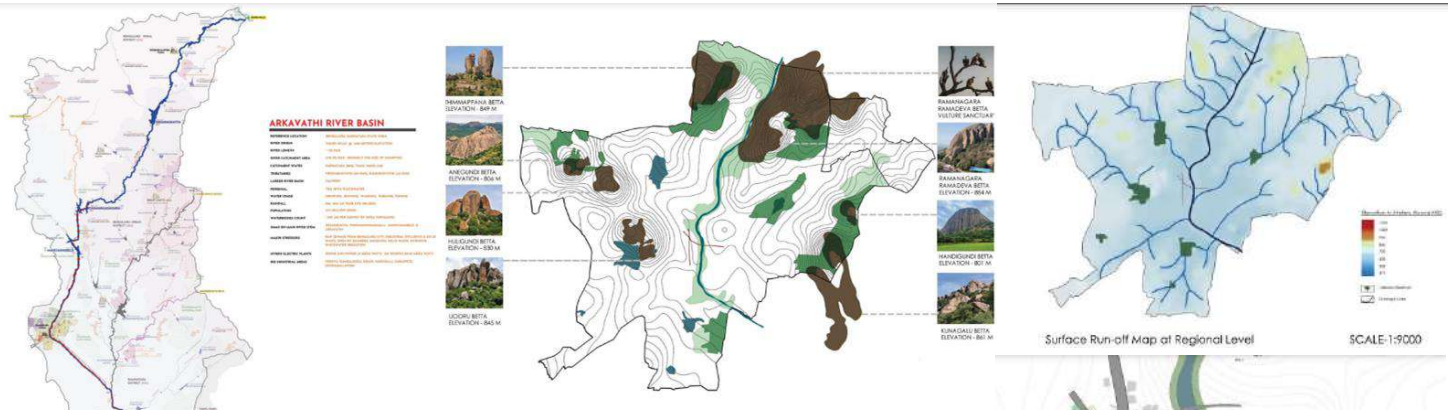
Existing Conditions
No proper footpath on NH-275
Begin Skills on NH
Major Junction where bus stops but lacks a proper bus stand



Sidewalk Sections







Hills and Hillocks along with Vegetation Cover at Regional Level SCALE:1:9000

From the iconic Ramadevara Betta to the rolling slopes of Shivaramagi, these hills create a backdrop for the region's charm. Ramanagara's hills, not only offer panoramic vistas but also a sanctuary for diverse flora and fauna.

Inference- Incorporate green spaces, trees and landscaping elements to enhance the aesthetics and create a pleasant environment. Development of public spaces should happen in close association with environmental restoration. Create open public space that allows for flexibility in program, porosity, density of users, and adaptability to different seasons.

Climate of Ramanagara

- Climate type - Semi-arid
- Average Temperature - 24°C
- Lowest average temperature in the year occur in December, when it is around 10°C.
- Highest average temperature in the year occur in May, when it is around 40°C.
- Summer wind - North West
- Winter wind - South East
- Annual rainfall - 1000mm to 1200mm
- Mostly receives the least amount of rainfall in a city month.
- October receives the most rainfall in a city month.
- The month with the highest relative humidity is August with 85%.
- The month with the lowest relative humidity is March with 45%.

ARKAVATHI RIVER FLOW



Encourage locals to clean up the solid/plastic waste and engage locals in landscape manipulation that act as bio-wastes, bio-filtration.

Micro transactions to macro change small changes in rethinking amenities and engaging micro-economics can lead to big impacts like clean water, waste reduction and revitalized ecologies of the city.

Transforming the riverfront to create a recreational and cultural platform saving the city with new meanings and a place to get together.

The hills and hillocks and the Arkavathi river are the major natural features that help define the characteristics of Ramanagara. The city is surrounded by hills on all sides, this can be used to advantage as it can provide great vantage points. The hills and hillocks provide a mesmerising view from multiple points throughout the city and the river has the potential for being a public gathering hub, if cleaned properly and provided with basic amenities.



The existing condition of the river is extremely poor and un-useable. Since it is a major element of the city, it's revival is self-justified. The phase one of it's revival can include water treatment methods that start from the pollution source, i.e, the industries and drainage lines that are directed towards the river. Phase two can include providing views and access to the Arkavathi river, making it a public space for the people of Ramanagara. Phase three can focus on making it into a public space that attracts tourists and help in increasing the economy of the place, by incorporating multiple functions along the riverfront.

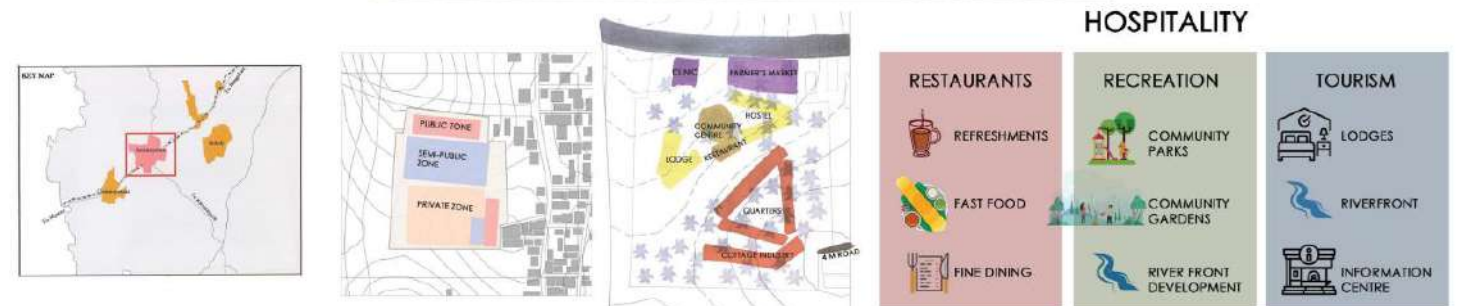
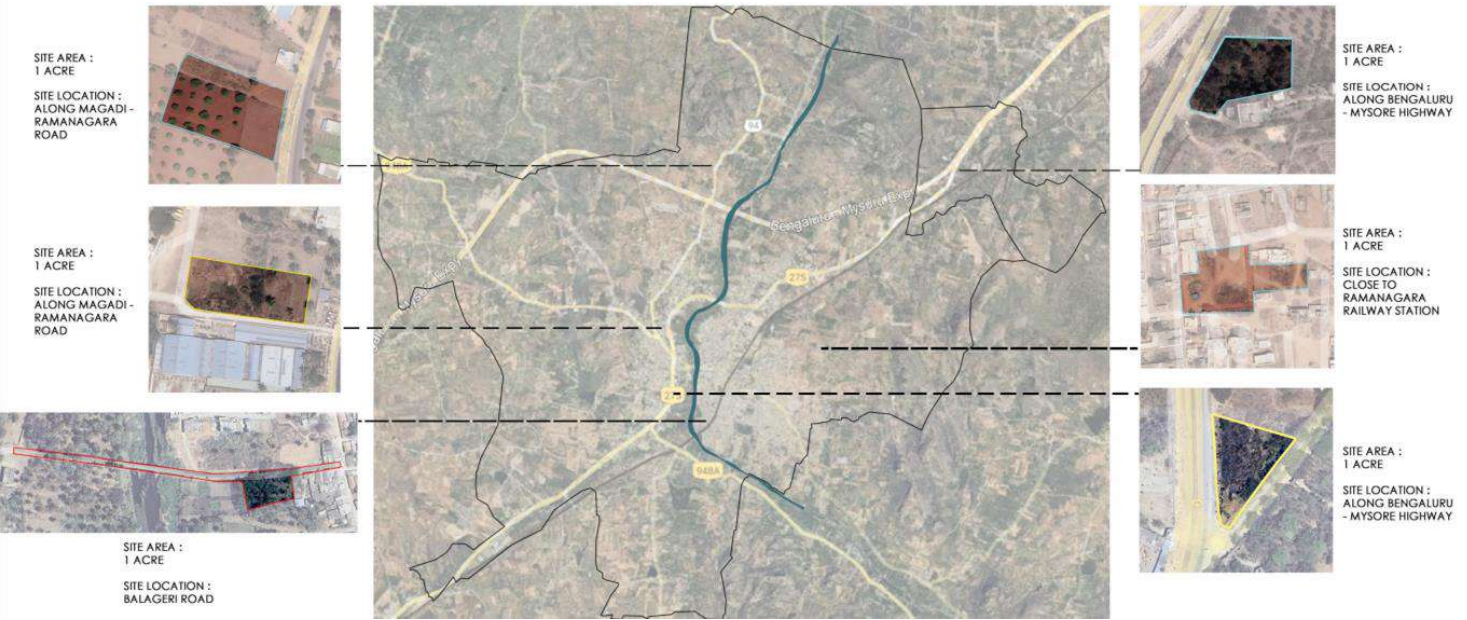
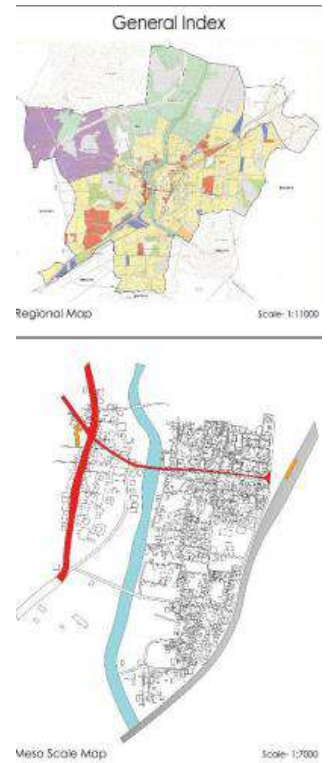


Ramanagara lacks public spaces and recreational spaces where communities can gather and interact. The neighborhoods are highly dense with a few or no open spaces within them. The city could have multiple green zones introduced to help improve the micro climate. The pedestrian networks can be improved by providing shaded pathways, this would help with the walkability factor.



Vantage Points at Meso Level

	DEFINITION	SITE SELECTED	JUSTIFICATION
M A C R O	Interventions at macro level aim to provide multiple public gathering spaces throughout the city. This can be done by providing hospitality based spaces that can include restaurants, recreational spaces, etc. Macro level interventions also improve the overall connectivity, both vehicular and pedestrian. This in return helps boost the economy by attracting tourists.		Providing multiple recreational spaces and green spaces throughout the city can help in increasing the micro-climate of the region. The neighborhoods being dense have a few or no open spaces for the citizens. This would be a good use of urban vacant spaces. The program proposed at the vacant sites can focus on : 1. Restaurants 2. Recreational spaces 3. Tourism
M E S O	Interventions at meso level aim to improve the different neighborhoods within the region. This can be done by identifying dense neighborhoods and providing them a public space for recreation. The street level intervention can be done at major roads that require pedestrian connectivity along with vehicular networks. These interventions help in controlling the micro-climate as they increase the green cover.		Providing multiple recreational spaces and green spaces help in controlling the micro-climate and provide a public space within a neighborhood. The Balageri Road requires an intervention as it connects to the site from the previous project that is in a residential neighborhood that could use a green public place. The site could use an intervention that also connects it to the riverfront development.
M I C R O	Interventions at micro level aim to provide for the localites as well as the tourists. The interventions can include: 1. Restaurants - Refreshments Fast Food Fine Dining 2. Recreation - Community parks Community gardens 3. Tourism - Lodges Information Centres		The proposal at this site of 1 acre would be a combination of a fast food restaurant with a fine dining area. Ramanagera has many small scale restaurants that only localites would go to, for a tourist, they'll have to travel to Channarayana for a good restaurant, providing a restaurant at this site is also beneficial for the public coming to the administrative zone. It would also be helpful for the officials in the administrative zone.



Existing condition of Arkavathi River



Encourage locals to clean up the solid/plastic waste and engaging locals in landscape manipulations that act as bio-swales, bio-filtration.

Micro transactions to macro change-small changes in rethinking externalities and enhancing micro economics can lead to big impacts like clean water, waste reduction and revitalized ecologies of the city.

Transforming the riverfront to create a recreational and cultural platform serving the city with new happiness and a place to get together.

AREA PROGRAM

Site area - 1 acre = 4045.86 m²
 Road width - 40m
 Allowable FAR - 2 | Semi-public utility
 Permissible Built-up - Site area x FAR = 4046.86 x 2 = 8093.72 m²
 Allowable Parking - 25 % of site area = 1012 m²
 Allowable Ground Coverage - 15% of site area = 607 m²
 No. of floors - G+2 = 4+4+5 = 13 m high
 Setback - 5 m on all sides

Restaurant Area Program

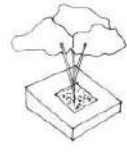
1. Kitchen - 250 m²
 2. Storage - 80 m²
 3. Dining - 800 m²
 4. Restrooms - 160 m²
 5. Circulation (built-15%) - 200 m²
 6. Park / Open Spaces - 1565 m² (2435-870)
 7. Circulation (unbuilt -10%) - 870 m²
 8. Parking (with circulation) - 1012 m²

Ground floor - 500 m²
 First floor - 650 m²
 Second floor - 400 m²
 TOTAL built with circulation = 1550 m²
 TOTAL unbuilt with circulation = 3447 m²



STREET SECTION

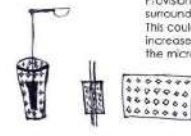
The streets of Ramnagar lack pedestrian pathways and vegetation. Provision of pathways wide enough and with proper lighting enables people to use it efficiently during the day and in the evening. Providing shaded walkways help in controlling the micro-climate of the immediate surroundings, and encourages people to use them. Trees must be planted at frequent intervals. Providing a Katta around the tree, enables people to rest and carry on. They act like benches, but traditional, is economically cheaper, and environment friendly. The streets of Ramnagar will slowly start becoming lively once these elements are incorporated and will have multiple activities which include having street vendors, play areas, etc., can take place. Provision of dustbins at frequent intervals helps keep the surroundings clean. This could create more public spaces within the city and increase the overall green cover, resulting in controlling the micro-climate.



KATTA FOR PEDESTRIANS TO REST



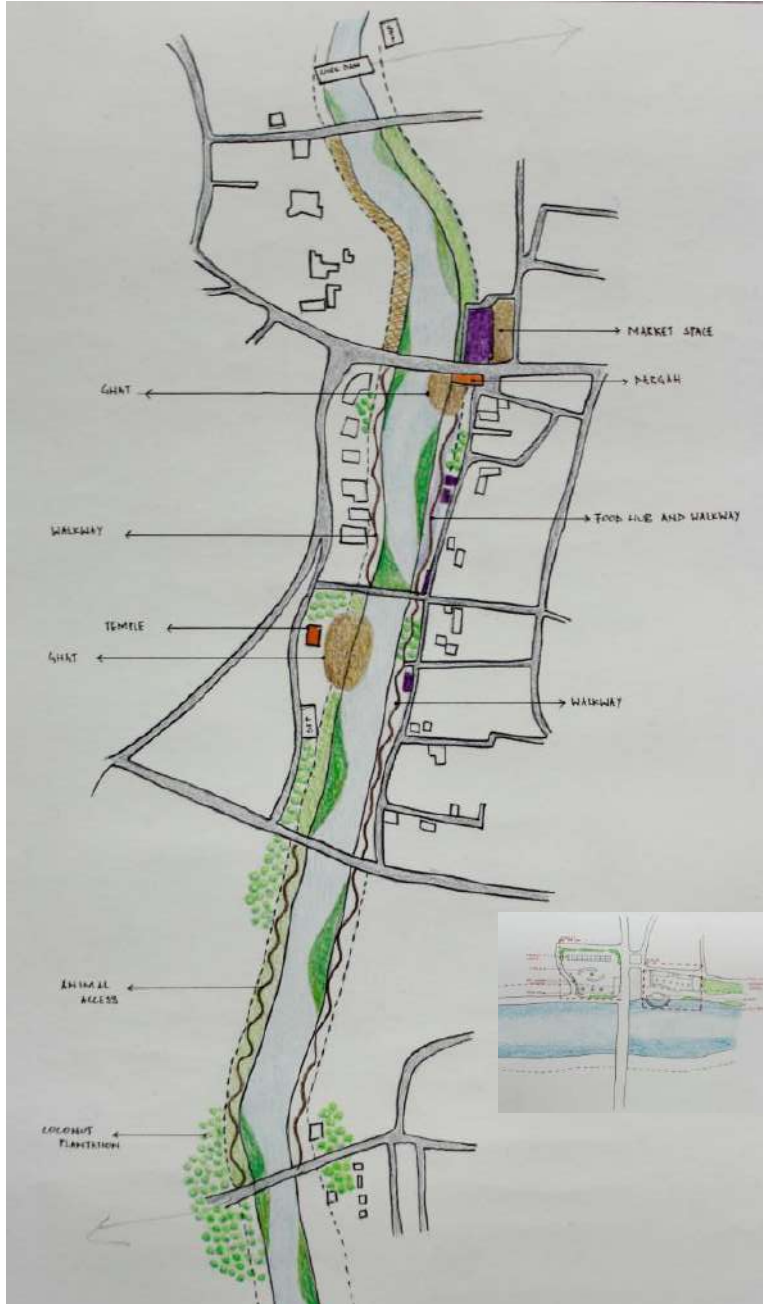
SHADED WALKWAYS WITH PERGOLA



LIGHTS ON WALKWAYS THAT SERVE BOTH PEDESTRIANS AND VEHICLES. LIGHT AROUND POLE WITH PERFORATED COVERING



DUSTBINS ON WALKWAYS TO KEEP THE SURROUNDINGS CLEAN



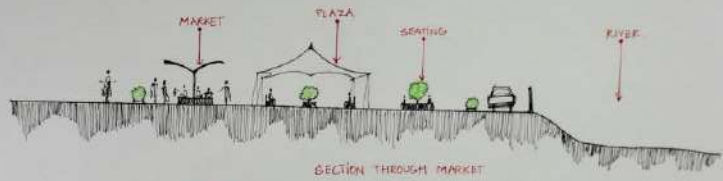
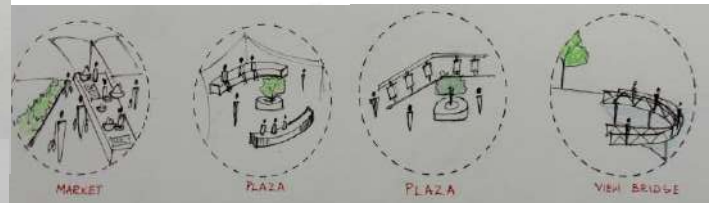
ROOF PLAN



VIEWS



SITE PLAN SCALE - 1:500



SECTION THROUGH MARKET



SECTION THROUGH PLAZA



SECTION AA' SCALE - 1:500



SECTION BB' SCALE - 1:500