

SCHOOL OF ARCHITECTURE AND INTERIOR DESIGN



STUDENTS ACADEMIC

PORTFOLIO

2023

B.ARCH (ARCHITECTURE)
M.ARCH (ARCHITECTURAL DESIGN)



SCHOOL OF ARCHITECTURE AND INTERIOR DESIGN

MESSAGE

STUDENTS ARCHITECTURE ACADEMIC PORTFOLIO 2023 takes our students journey of learning and discoveries of their academic path in the year 2023. Our faculty is a Community of dedicated Scholars and Teachers whose research expands the boundaries of our knowledge and Imagination and their teaching prepare students for wide ranging careers and lifelong learning. Our goal is to equip learners with usual skills and knowledge they need to succeed though. The portfolio follows the pedagogical approach Includes both comprehensive in class Instructions and the field experiential learning providing students with ample hands on practical experience and skills.

I Invite you to explore the Student's Portfolio 2023 to learn more about the brilliant learning environment at **The School of Architecture and Interior Design**.



Dr.PRADEEPA C
HOD, SCHOOL OF ARCHITECTURE AND
INTERIOR DESIGN

MESSAGE

STUDENTS ARCHITECTURE PORTFOLIO is the Academic collection of the students - 2023, This is a collection of work on the qualitative and quantitative analysis and research with the guidance of the faculties attained in the previous semester.

Students Architecture Portfolio - 2023 also focuses on the research, Innovation, Sustainable solutions of design problems presented to students with direction and encouragement from HoD and Faculties - School of Architecture and Interior Design.

We wish to present you to take you on an aspiring journey of the Architectural works of our brilliant minds.



Ar.KARTHIK RAJ M
STUDENTS PORTFOLIO COORDINATOR

SCHOOL OF ARCHITECTURE AND INTERIOR DESIGN

UNDERGRADUATE

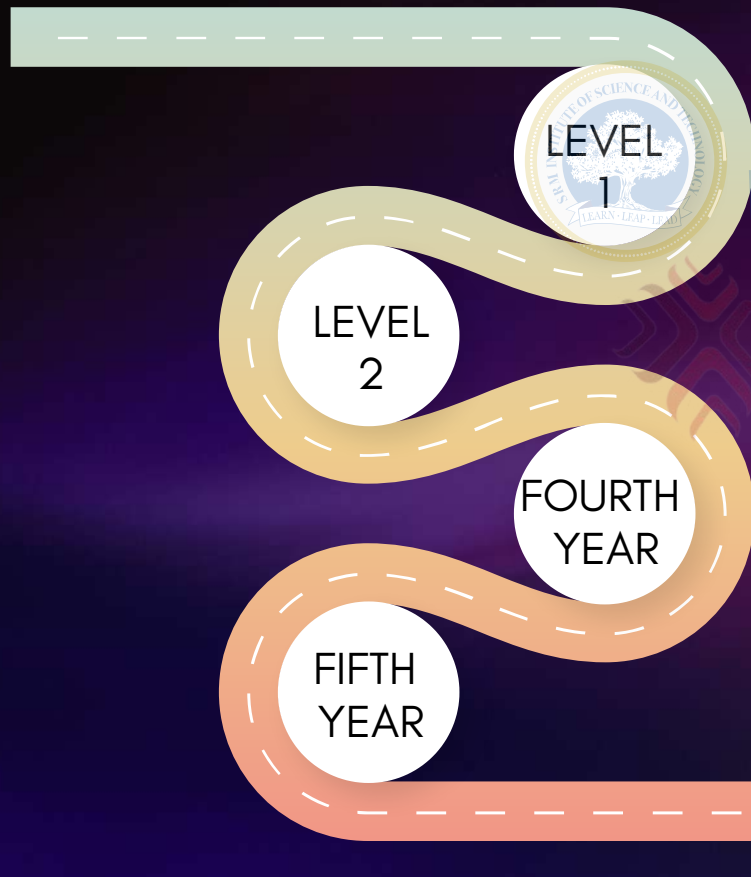
The school offers the Bachelor of Architecture (B.Arch.) program of 10 semester duration. The B.Arch. degree program at SRM is recognized as one of the India's Premier and the most comprehensive programs in Architecture due to the thrust on contemporary issues such as Sustainability, Urban Redevelopment etc. and continuous interaction with practicing architects of repute. It also offers a large number of elective studies, ensuring flexibility and a choice based education tailored to their areas of special interest which may be Urban Design, Landscape, Architecture, Housing, Project Management, Urban Planning etc. The program is approved by the Council of Architecture, New Delhi and was the first one in South India to be accredited by the National Board of Accreditation (AICTE) in 2001.

POSTGRADUATE

The 4 semester course of M.Arch (Architectural Design) degree is one of the most innovative programs in India and it prepares graduates to meet the challenges thrown up by the ever changing needs of contemporary society. This professional degree is structured to educate those who aspire to create masterpieces of complex Architecture including large scale infrastructure projects and Metro level Urban facilities. It aims to train scholars specifically in the Design & Construction of Tall buildings, Airports, Mass Rapid Transportation terminal, Stadiums and Environmental Planning.

CONTENTS - B.ARCH

FSDS PROGRAMME - FOUNDATION SKILLS DEVELOPMENT STUDIO LEVEL 1 & LEVEL 2



LEVEL 1 STUDIO - SEM 02

Architectural Design & Foundation skills

LEVEL 2 STUDIO - SEM 04 & SEM 06

Made into Six Modules

FOURTH YEAR - SEM 08

Urban Design & Housing

FIFTH YEAR - SEM 10

Thesis

CONTENTS - M.ARCH



SEM 02

SEM 04

INSTITUTE OF SCIENCE & TECHNOLOGY
(Deemed to be University u/s 3 of UGC Act, 1956)

FIRST YEAR - SEM 02

Urban Infra Structure Projects

SECOND YEAR - SEM 04

Thesis

B.Arch

LEVEL 1 - FIRST YEAR - SEM 02

Semester 02 in collaboration with CEPT University aims at Students to gain knowledge in Architectural Design, Measured Drawings and Building Material Construction, Students will be able to Gauge sizes using their body that will help them to measure building components without use of any tapes, Will learn about the different kinds of Materials through hands on Workshop Tackling a Design problem deals with real life encounters in a contour site

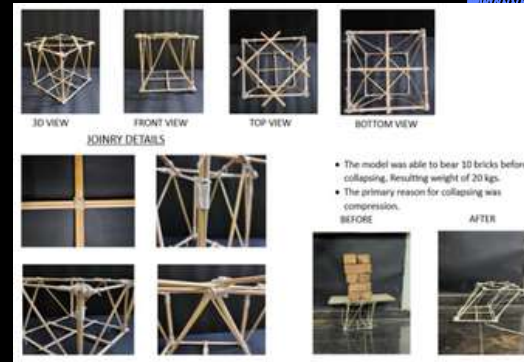
FACULTY TEAM

1. Prof. TR Kamalakannan
2. Ar. Grace Ansica
3. Ar. R. Nivetha Devi
4. Ar. Shanmuga Priya
5. Ar. R. Krithika
6. Ar. Balamaheshwaran R
7. Ar. Prashanthini
8. Ar. Aishwarya R
9. Dr.P.Karuppusamy
10. Ar. Karthik Raj M

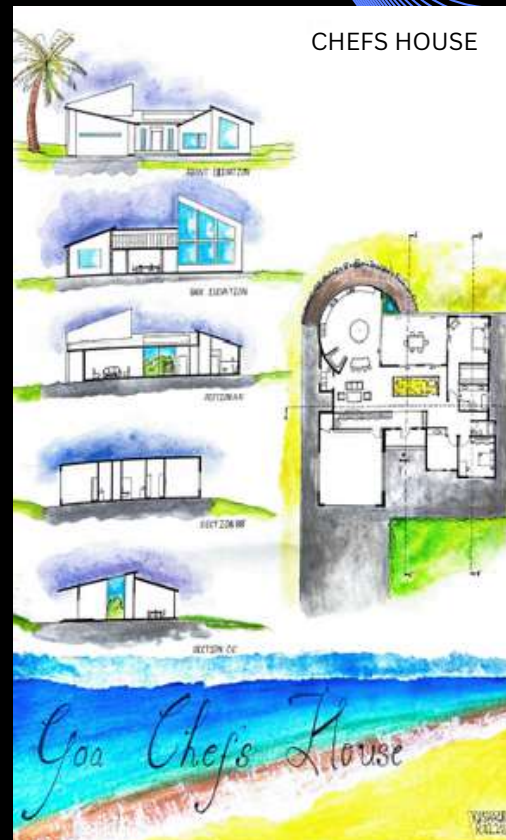
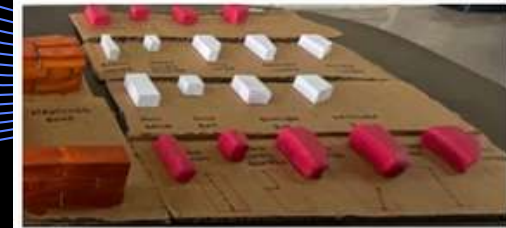
L1

STUDIO

STRUCTURAL CUBE USING REED STICKS

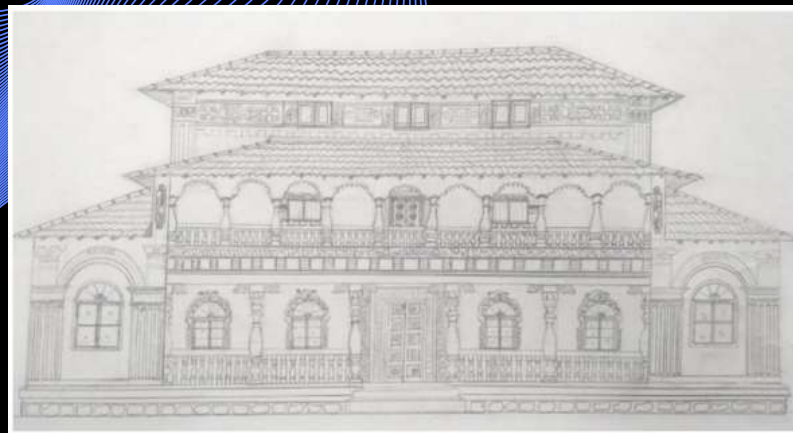
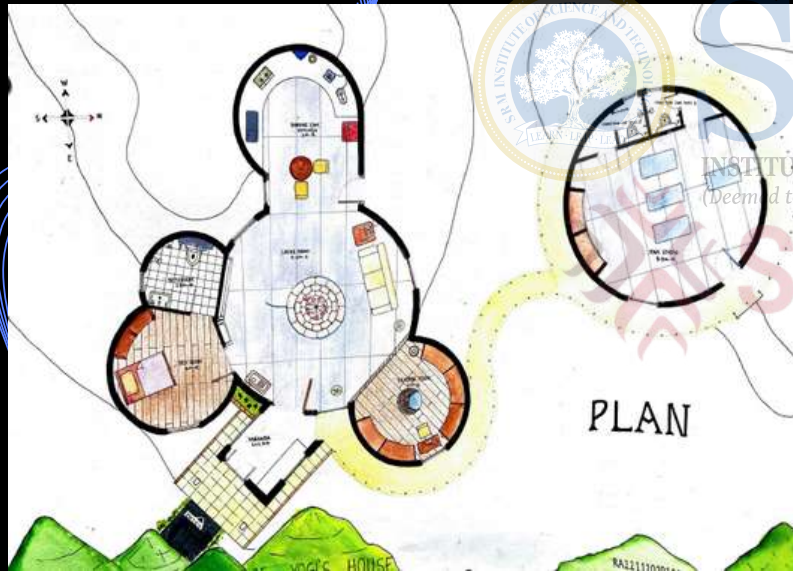
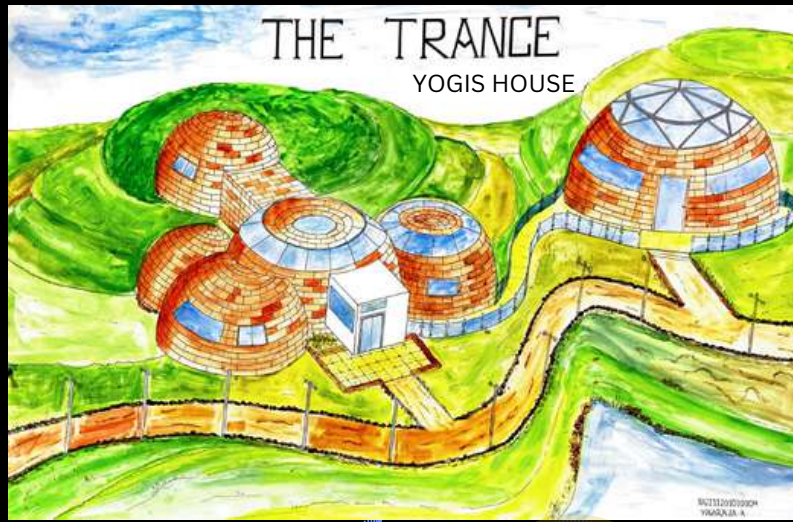


BRICK BONDING



B.Arch

LEVEL
01
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02



L1
STUDIO

LEVEL 2 - SECOND & THIRD YEAR SEM 04 & SEM 06

Semester 04 & Semester 06 in collaboration with CEPT University aims at Students to gain knowledge in Architectural Design through combined Vertical Studio and divided into Six Modules.

MODULE 1 - ENVIRONMENTAL PERFORMANCE - A
Design driver in early stages of Architectural Design Process

MODULE 2 - Documenting and Decoding the
Vernacular language of Market spaces

MODULE 3 - Decipher & Construe - Regional
Architecture of Chengalpattu + Shopping Center

MODULE 4 - The Unveiled Obscure of Bommakaara
Veedhi, Kanchipuram

MODULE 5 - Detailing Vernacular Language I Public
building

MODULE 6 - Rethinking the visual elements of street
style shopping in conventional shopping malls.

FACULTY TEAM

MODULE 1 - Ar. G. Sudha, Ar. K. Kalaimathy

MODULE 2 - Ar. Dharani S Dharan, Ar. V. Aruna

MODULE 3 - Ar. Gajendran T, Ar. Prasanna S

MODULE 4 - Ar. Arun.S.K, Ar. Manjari.K

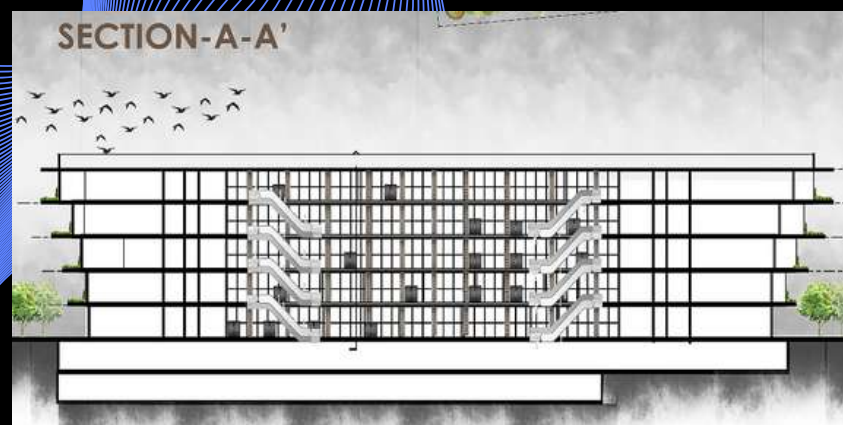
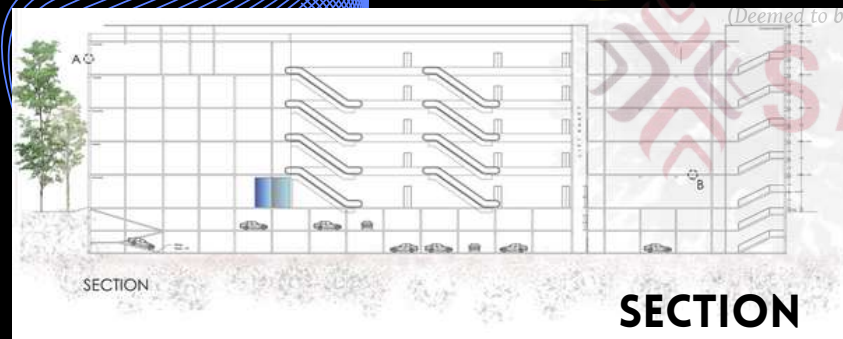
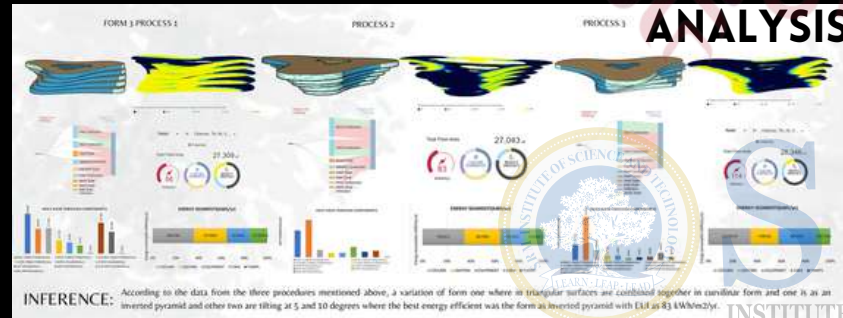
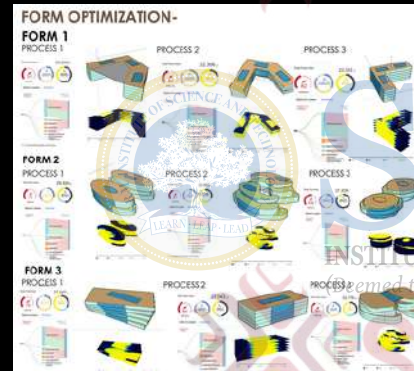
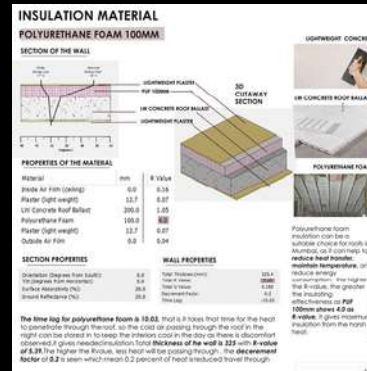
MODULE 5 - Ar. Praveen N, Ar. Rengarajan N

MODULE 6 - Ar.D.Sukheshini, Ar. Vishva Dharani V M

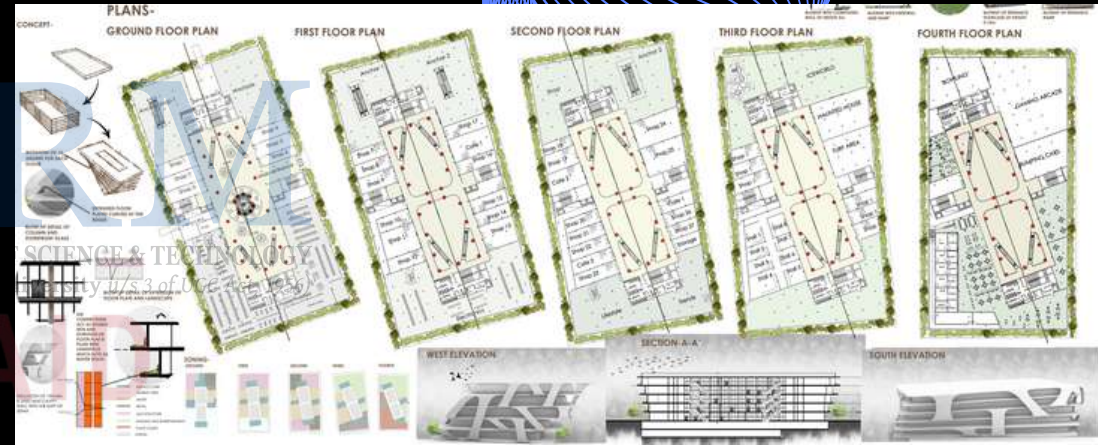
SRM
INSTITUTE OF TECHNOLOGY
(Deemed to be University)
(Act, 1956)

L2

STUDIO

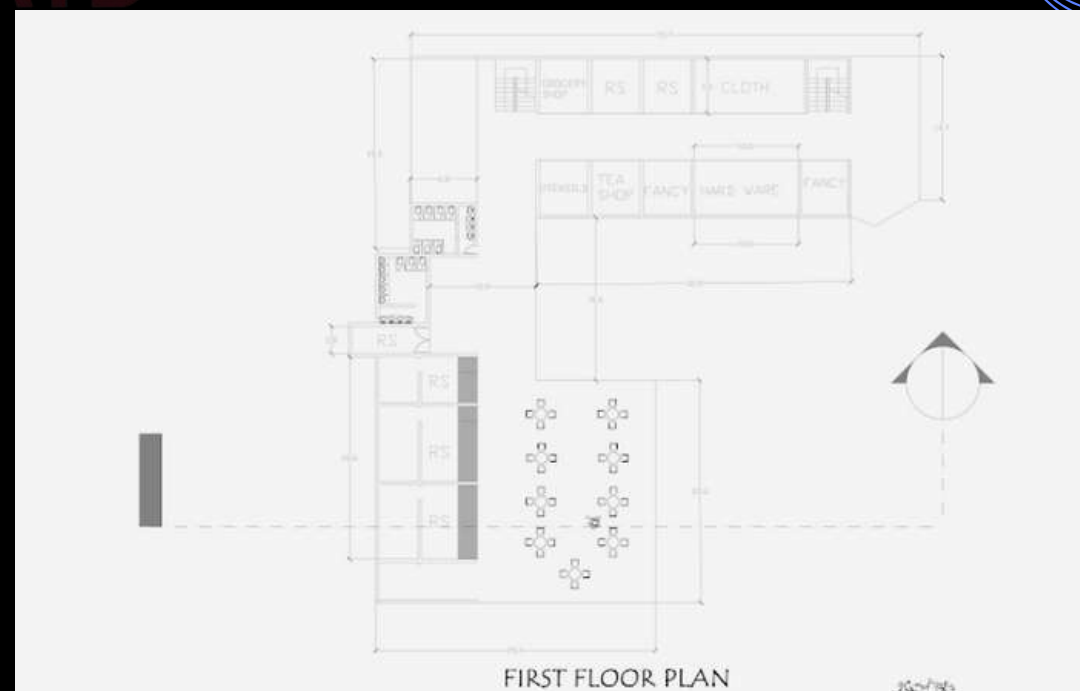
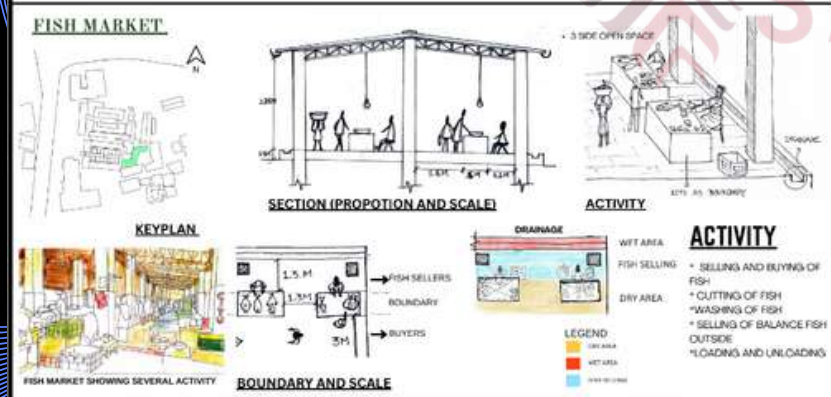
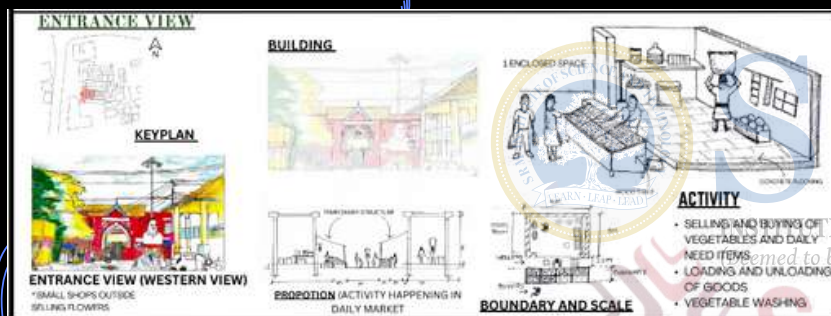
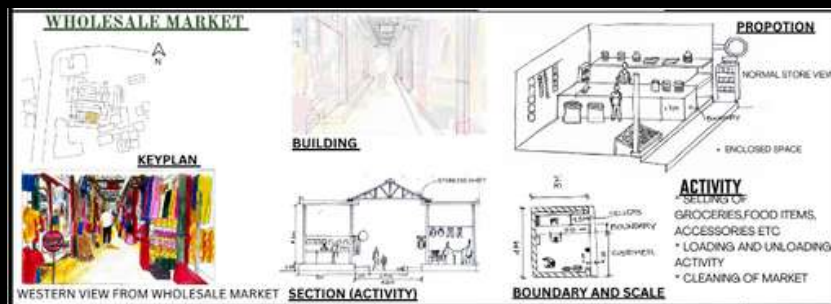


ENVIRONMENTAL PERFORMANCE - MALL



PALAYAM MARKET

DOCUMENTING AND DECODING MARKET SPACES



B.Arch

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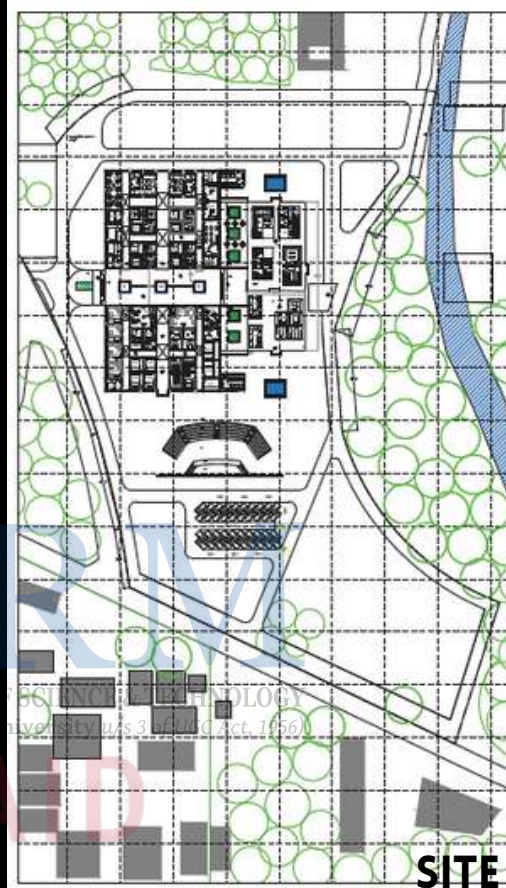
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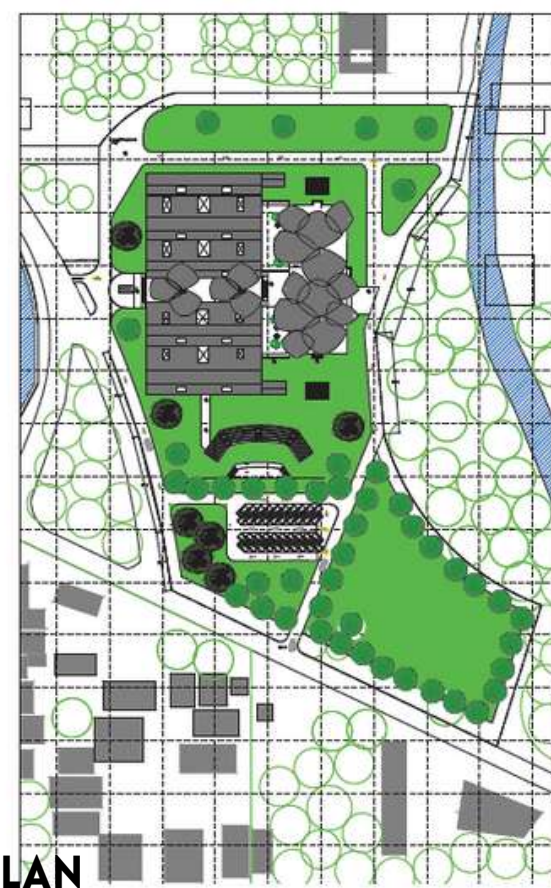
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VIEWS



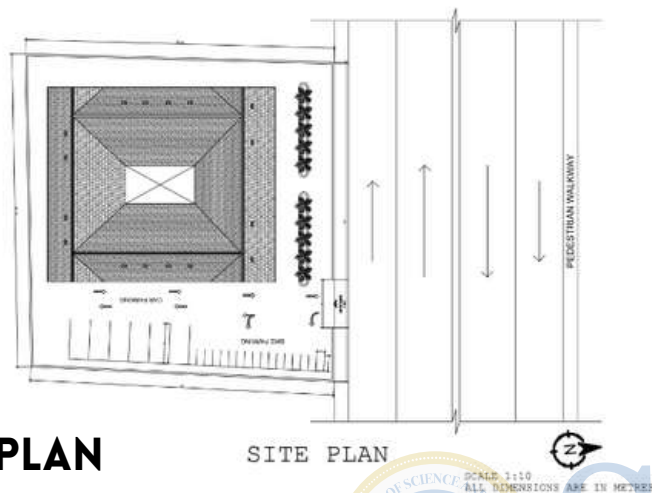
SITE PLAN



VIEWS

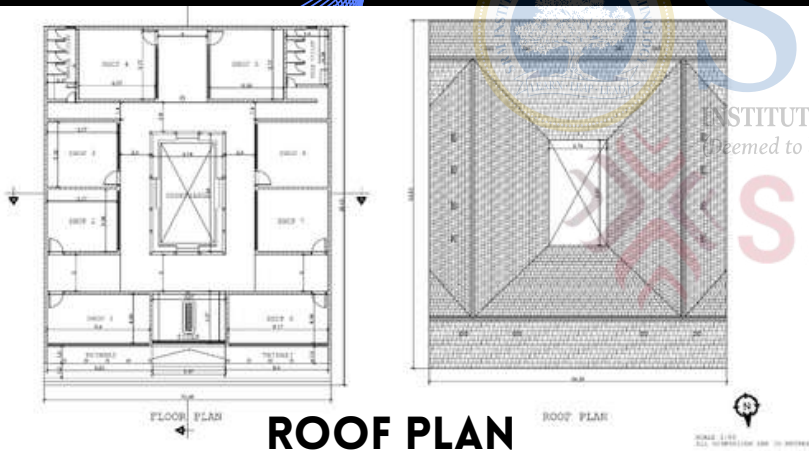
DOCUMENTING AND DECODING MARKET SPACES

SITE PLAN



SITE PLAN

SCALE: 1:100
ALL DIMENSIONS ARE IN METERS

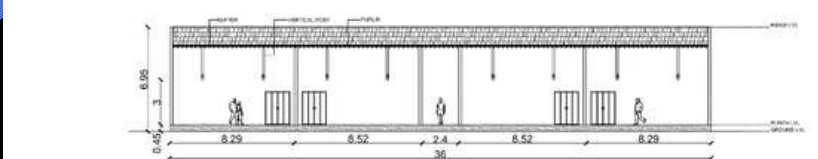


ROOF PLAN

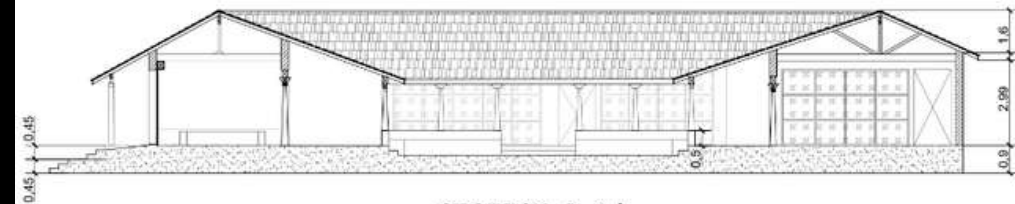
SECTION AT A-A'



SECTION AT B-B'



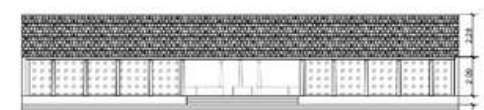
SECTION



SECTION A-A'



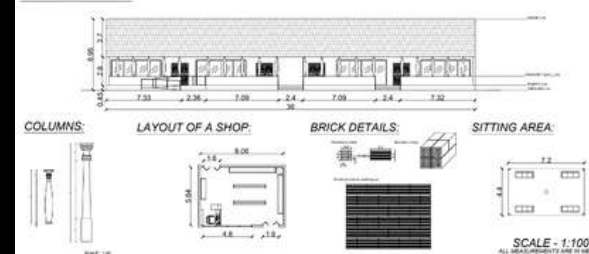
SECTION A-A'



ELEVATION



NORTH ELEVATION



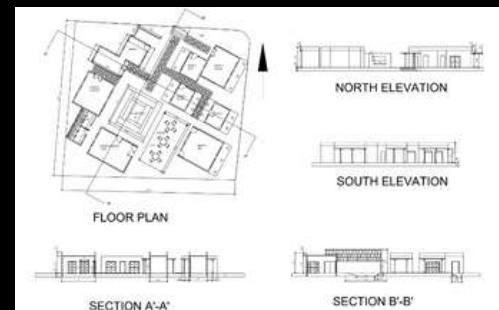
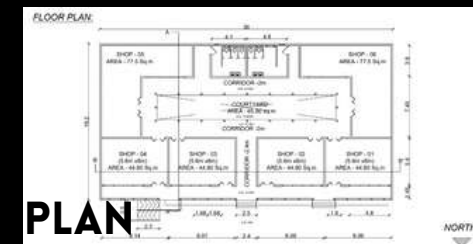
COLUMNS:

LAYOUT OF A SHOP:

BRICK DETAILS:

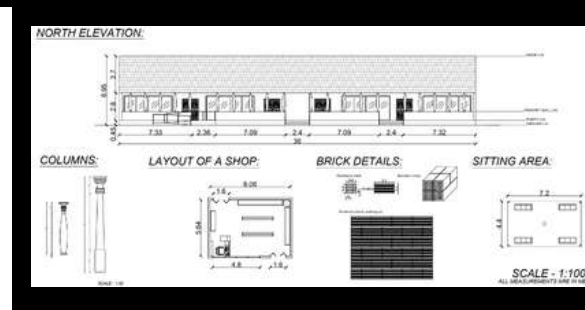
SITTING AREA:

PLAN



SECTION A-A'

SECTION B-B'



NORTH ELEVATION

COLUMNS:

LAYOUT OF A SHOP:

BRICK DETAILS:

SITTING AREA:

SCALE: 1:100

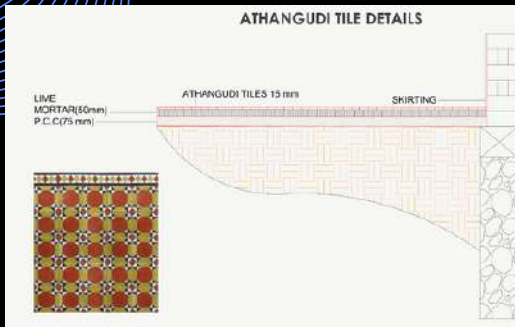
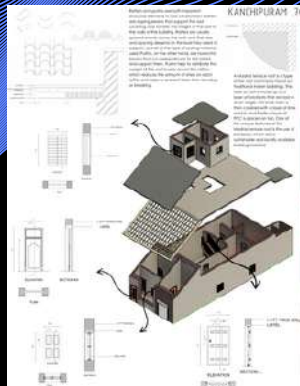
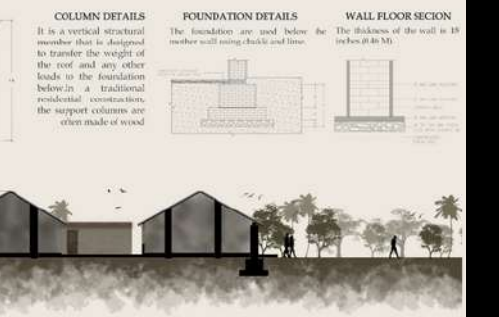
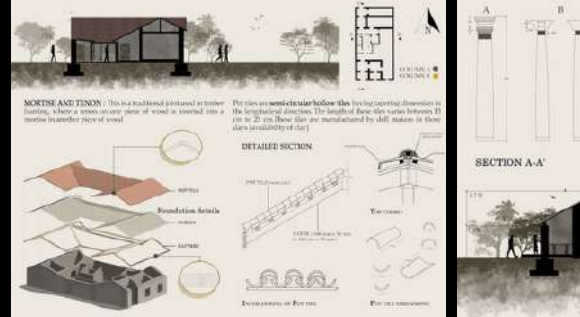
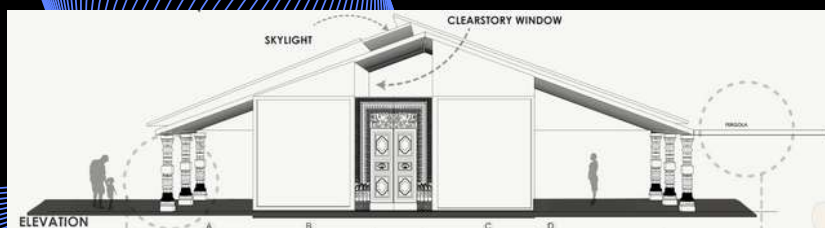
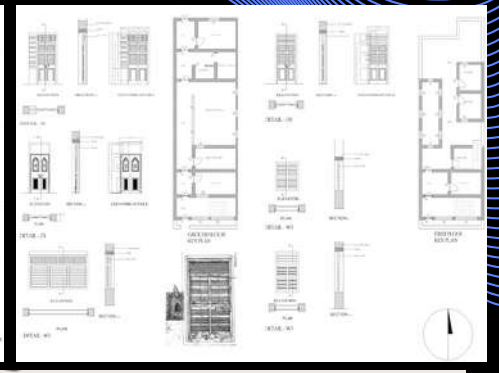
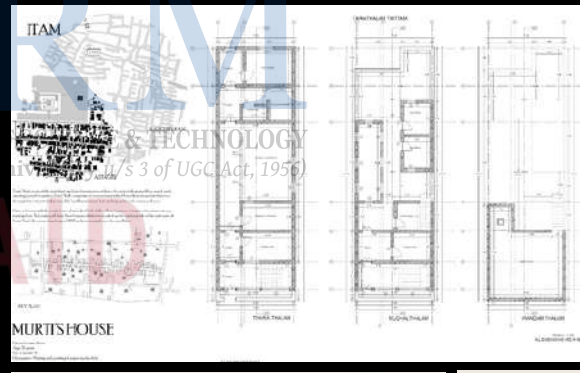
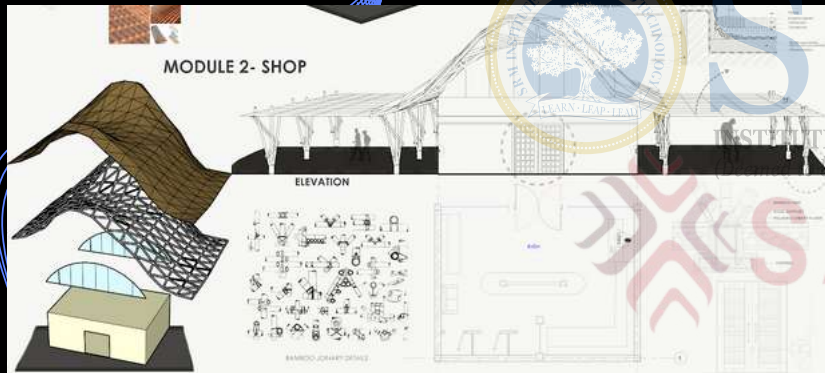
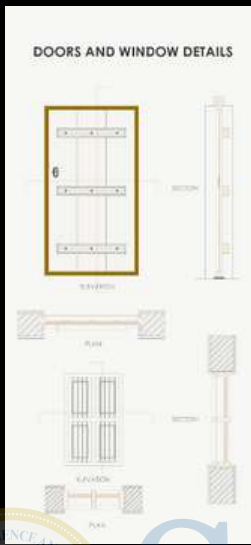
B.Arch

LEVEL

02

MODULE

04



THE UNVEILED OBSCURE OF BOMMAKAARA VEEDHI, KANCHIPURAM

B.Arch

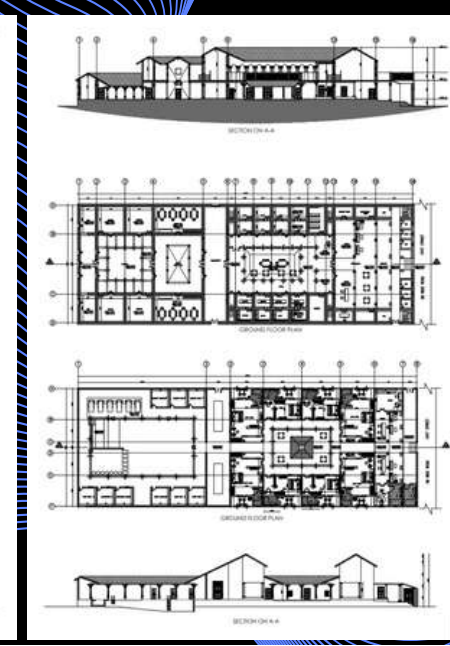
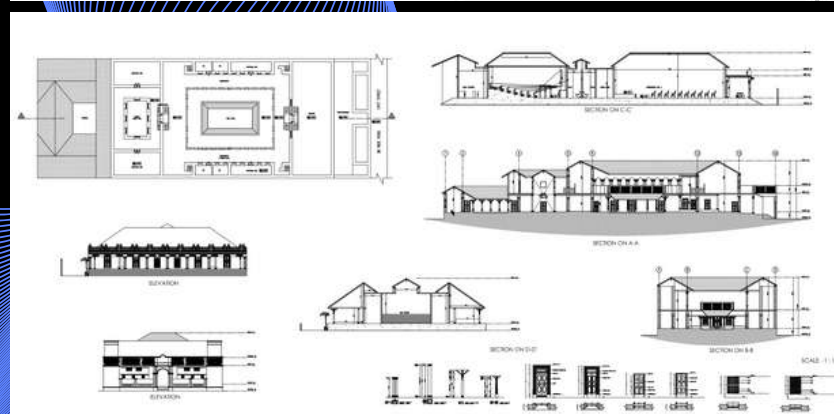
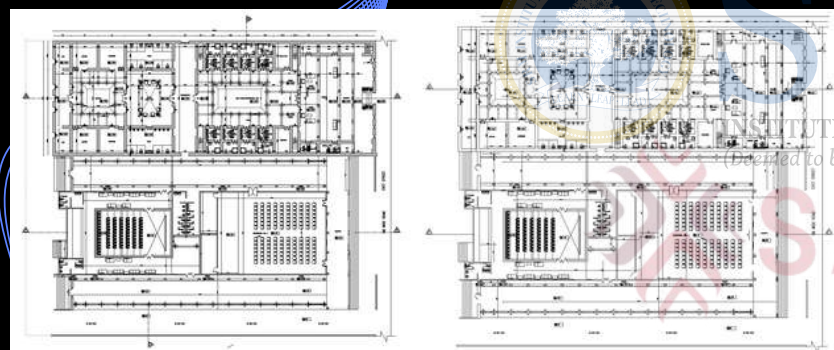
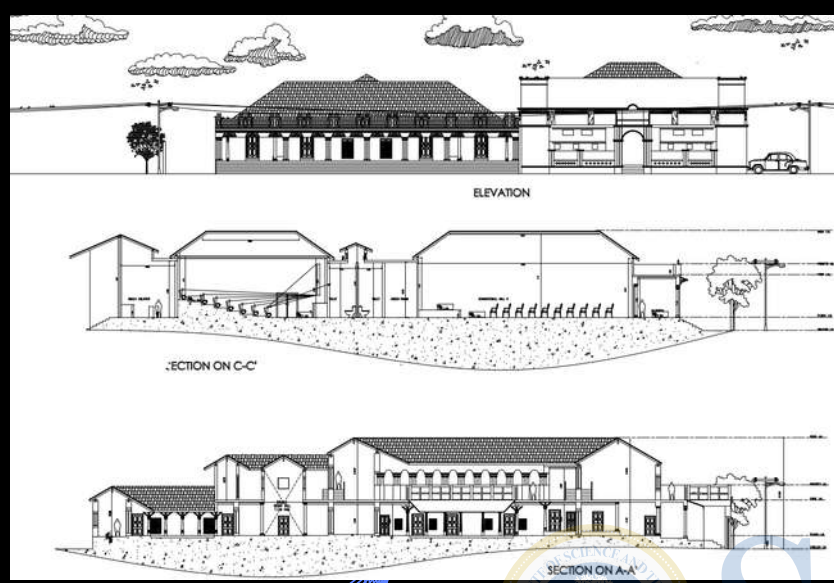
LEVEL

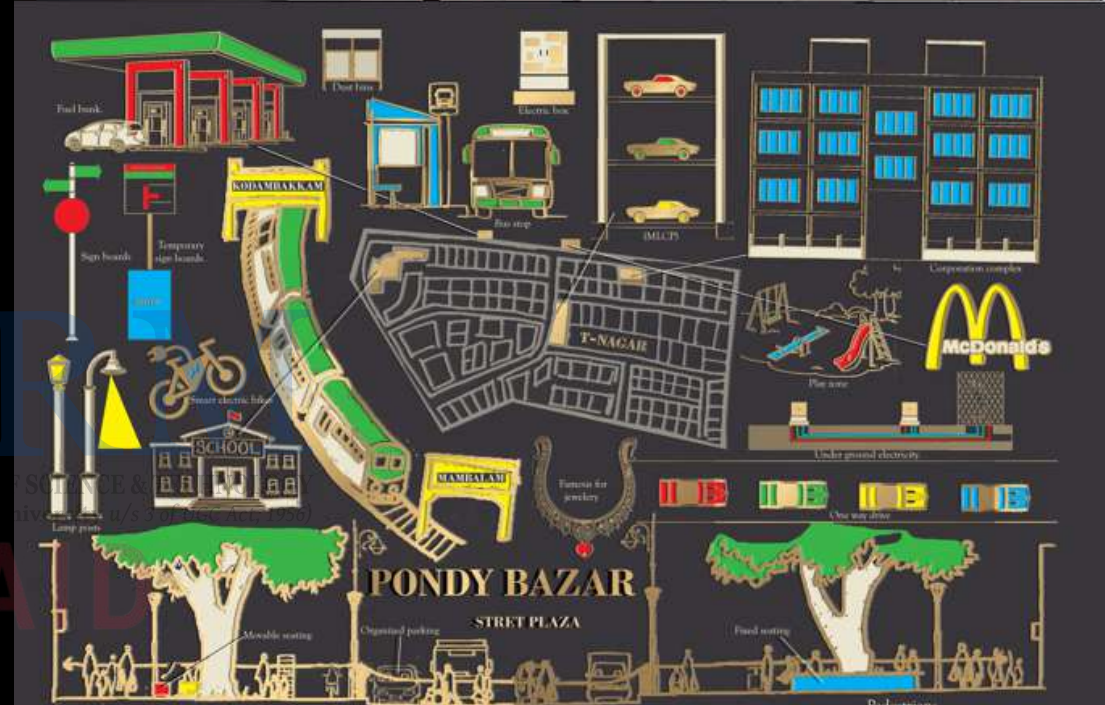
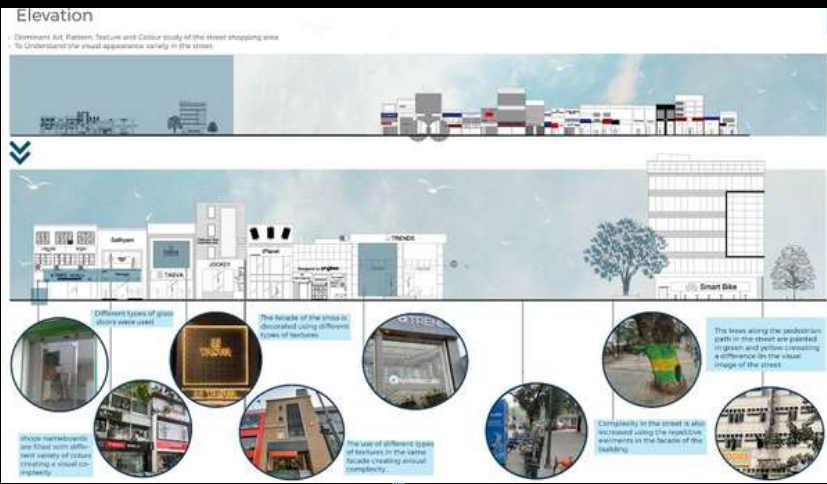
02

MODULE

05

DETAILING VERNACULAR LANGUAGE | PUBLIC BUILDING

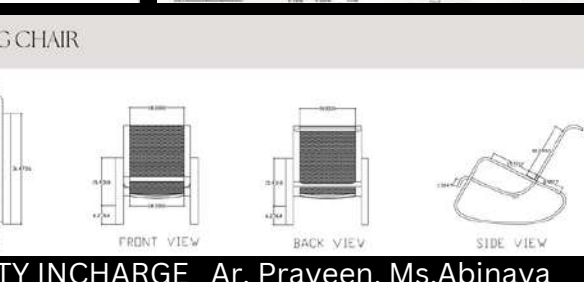
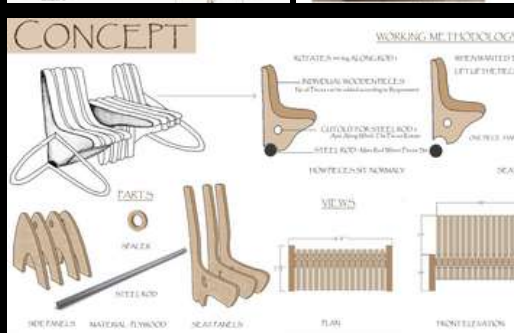
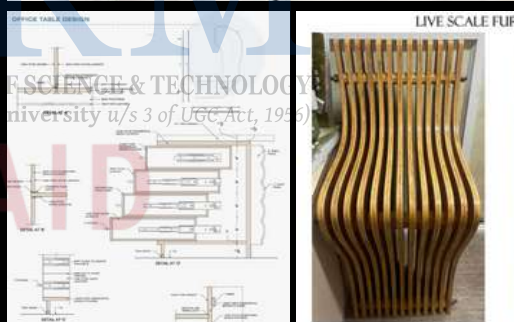
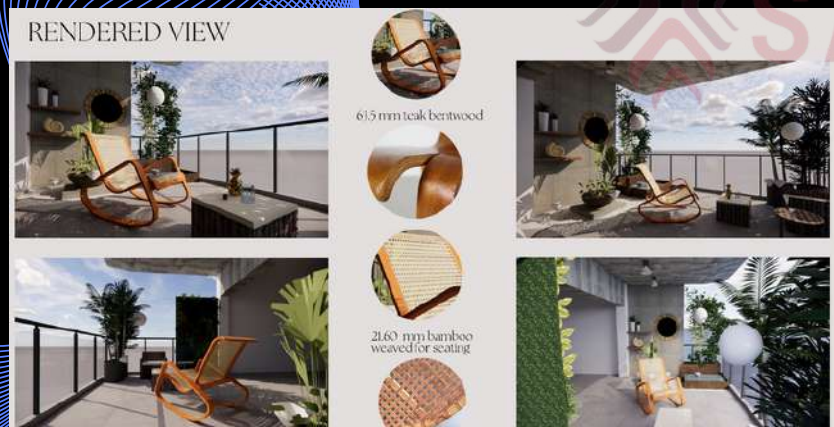




RETHINKING THE VISUAL ELEMENTS OF STREET STYLE SHOPPING IN CONVENTIONAL SHOPPING MALLS



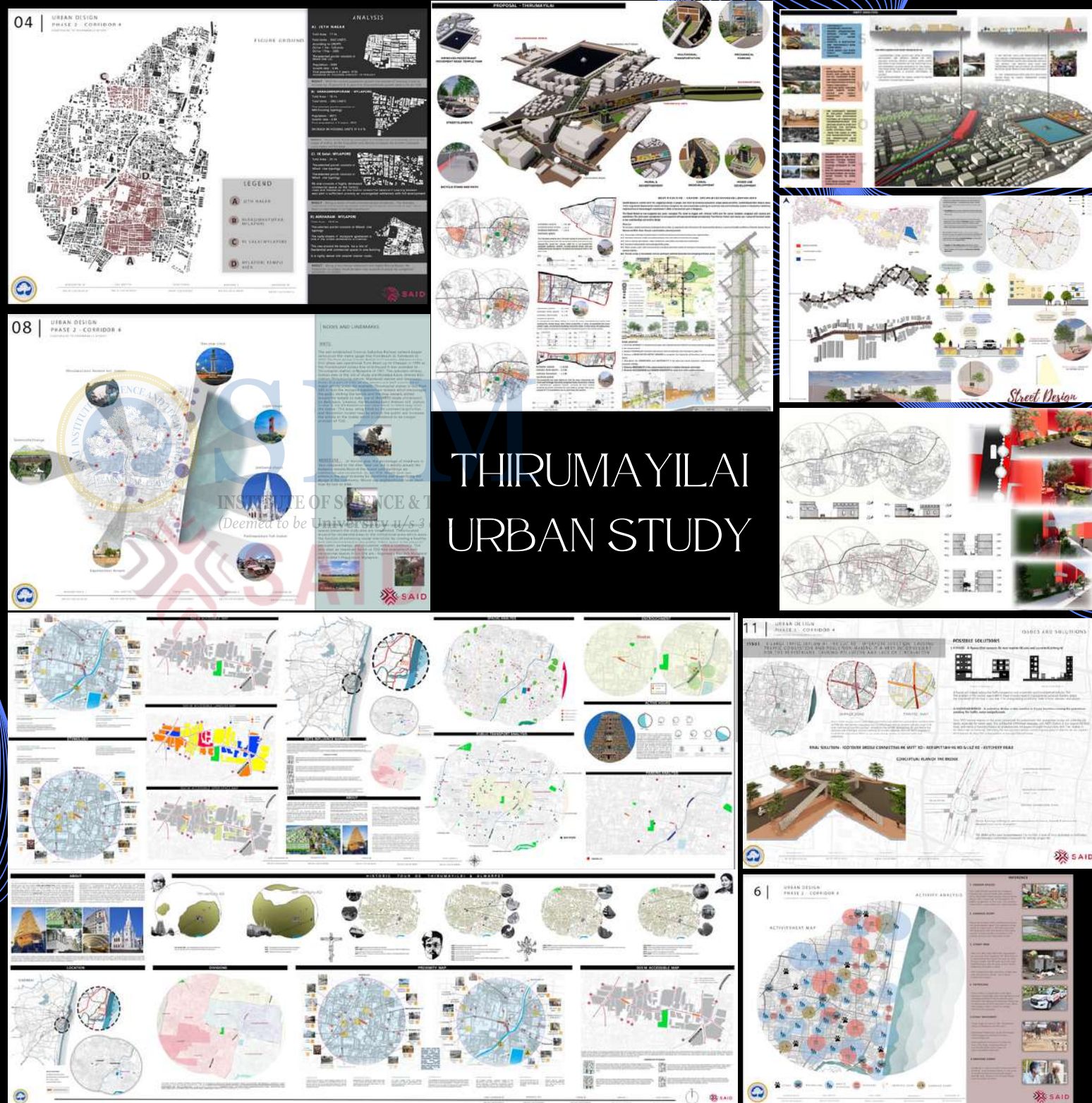
FURNITURE DESIGN STUDIO



B.A.R.C.H.

Semester 08 is Urban Design - study and interpretation of Urban land in Chennai through understanding published studies/ analysis. The focus will be on components/aspects including different types of maps/mapping, drawings, sketches, photo documentations, reading, data collection, analysis. Aspects to include topography, geology, hydrology, micro climate, vegetation, urban density, growth, city limits/boundaries, history, urban architecture, typologies, infrastructure, land parcels, public space, demographics, patterns of usage, land use. Housing is also the part of this semester.

- 1.Ar.Purnachander
- 2.Ar.Sathish L
- 3.Ar.Prashanth
- 4.Deepika
- 5.Pavithra
- 6.Akshadha



B.Arch FOURTH

HOUSING



BLOCK PLANS & VIEWS



H O U S I N G P R O J E C T

FIFTH YEAR - SEM 10

Thesis, the culmination of an architectural undergraduate program, is a test to exhibit the creative innovations and researcher qualities of an Architect in the making. Moreover, thesis will be the most prominent component of an architect's undergraduate portfolio, which will advocate for his/her prowess and seek acknowledgement in the world of practice.



THESIS COORDINATION COMMITTEE MEMBERS:

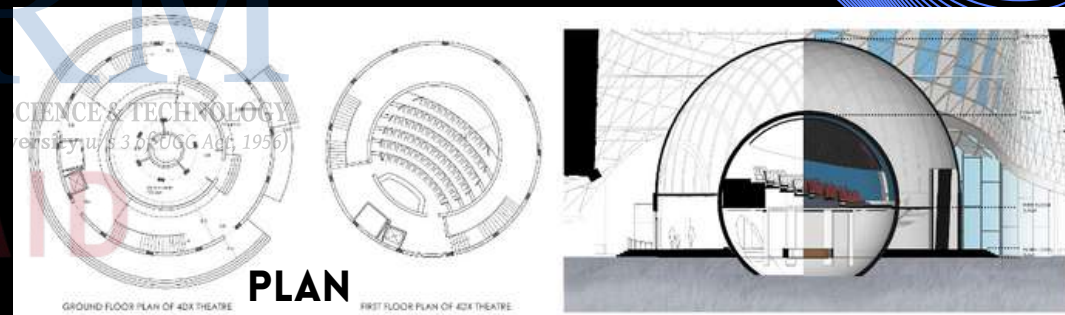
Dr. Pradeepa.C, HOD – SAID
Prof. T.R.Kamalakaran,
Prof. CT. Lakshmanan,
Dr.K.Geetha Ramesh
Dr.Narayana.K.A

THESIS COORDINATOR

Prof. T.R.Kamalakaran.

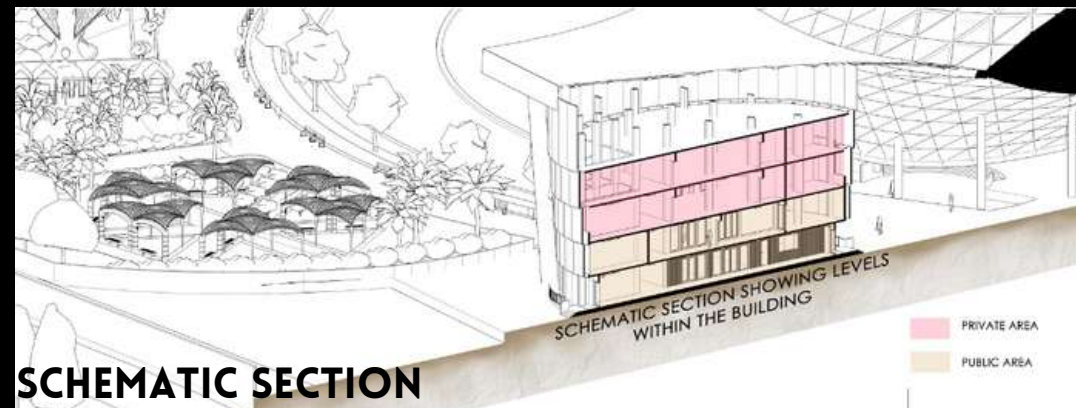
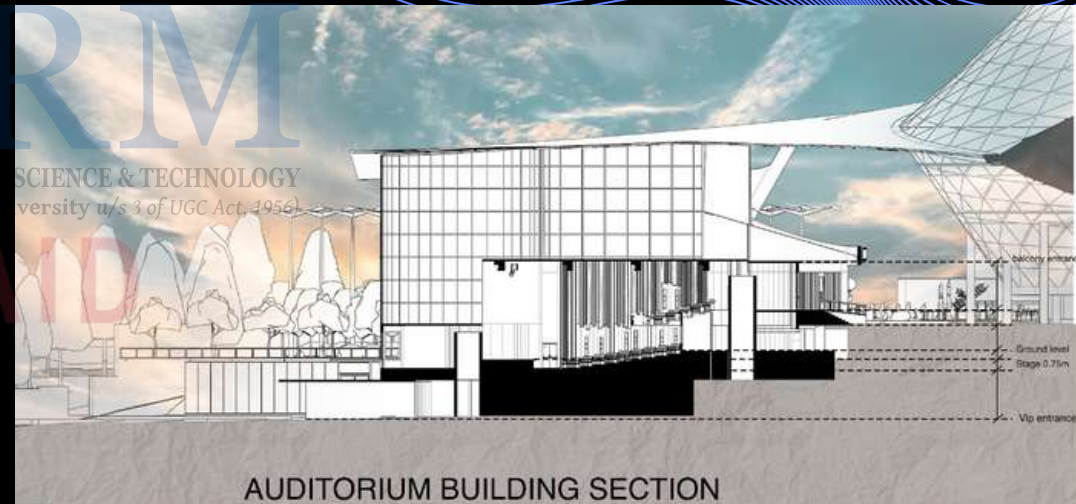
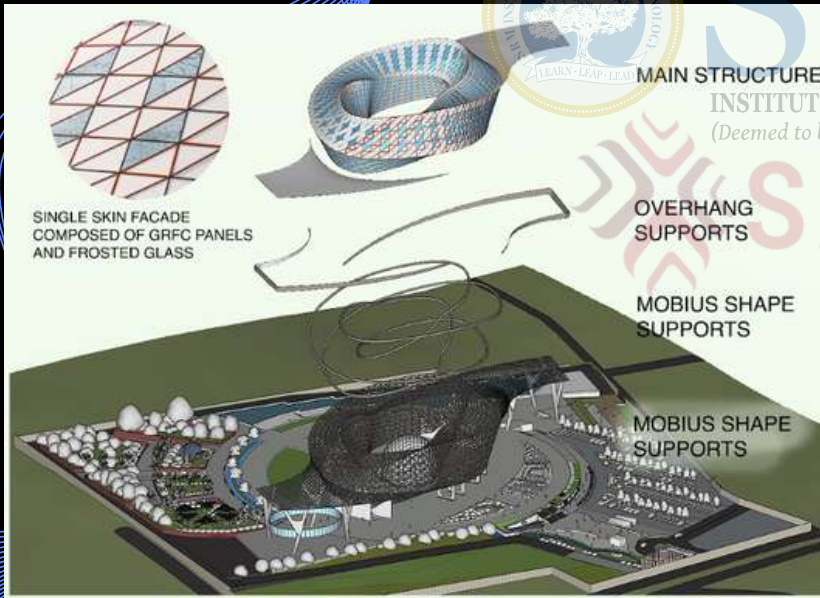
THESIS COORDINATION TEAM :

Ar. Prashant. P,
Ar. Geeva Chandana. B,
Ar. Aishwarya Raajkumar.
Ar.Karthik Raj M

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B.Arch F I Y F E T A H R

T H E S I S

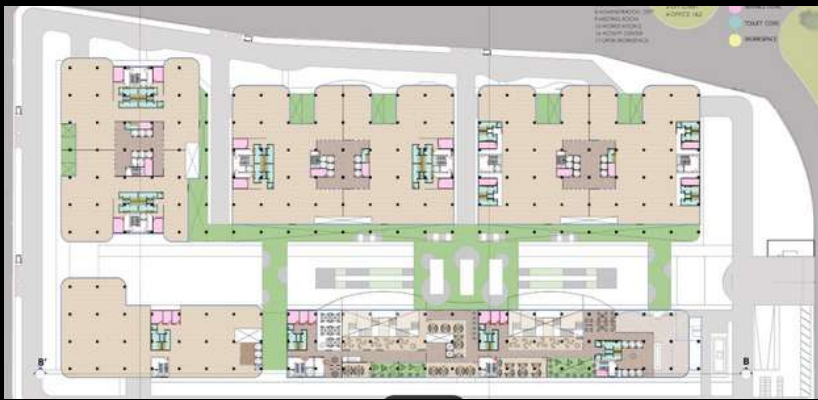


SCIENCE CENTRE, KANYAKUMARI

B.Arch

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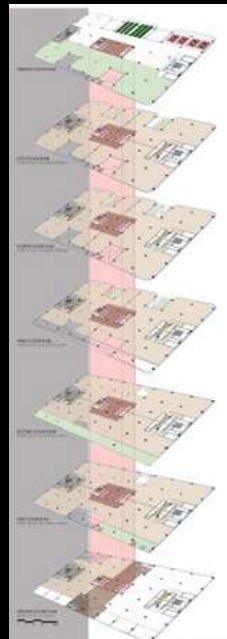
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SITE PLAN



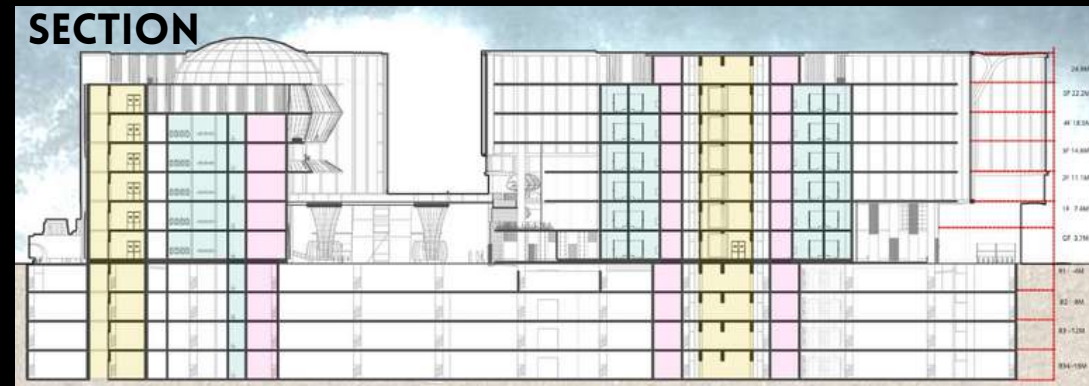
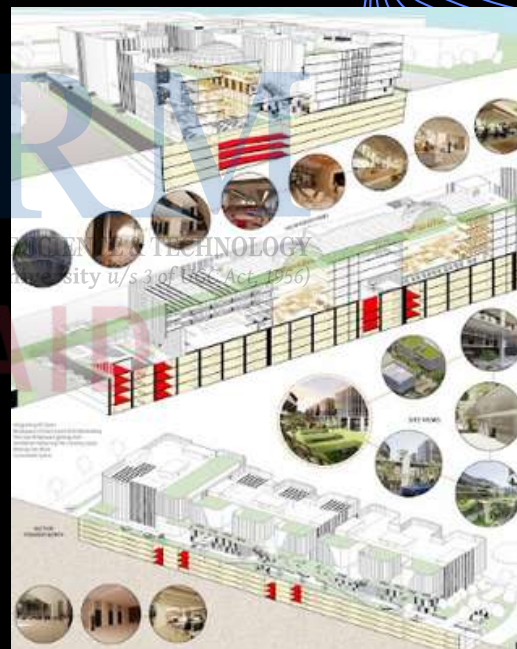
VIEWS



VIEWS



FLOOR PLANS



SECTION

CORPORATE OFFICE IN DEVANAHALLI

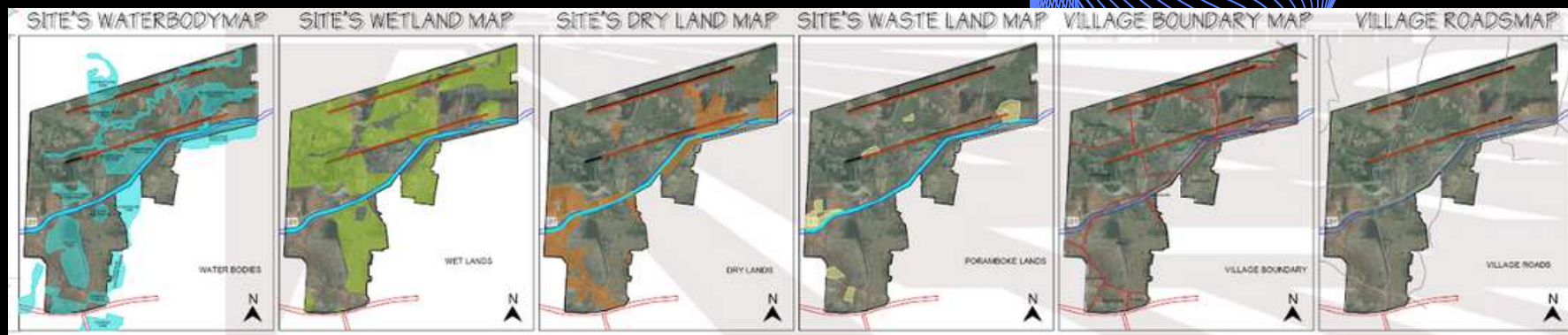
M.Arch

FIRST YEAR - SEM 02

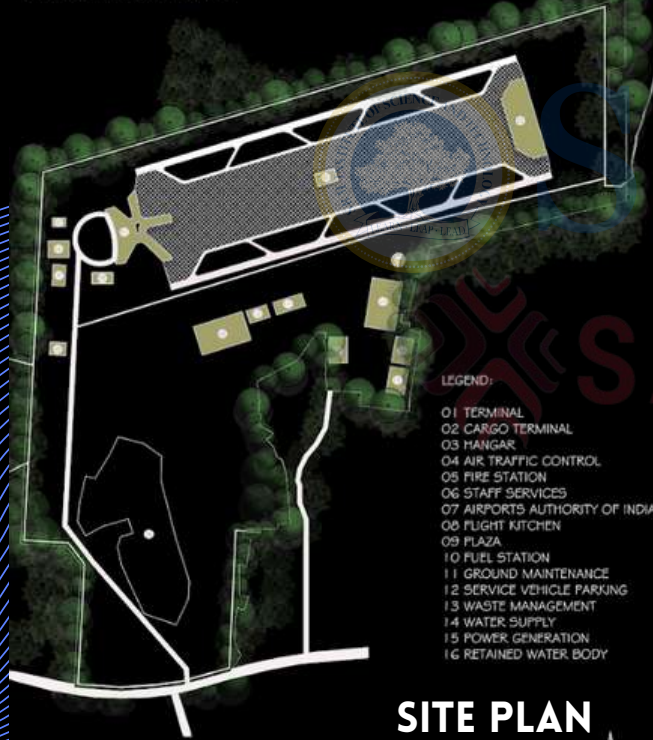
Sem 02 in Masters level focuses on Urban Infrastructure projects in specific about Airport Design.

FACULTY TEAM

1.Ar.Suryaprakash
2.Dr.Syed

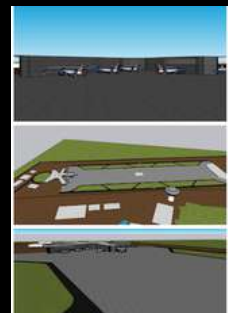


MASTER PLAN

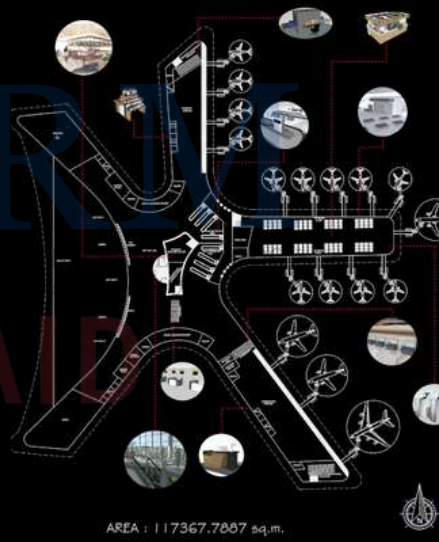


TOTAL SITE AREA: 5186.34 acres
TERMINAL AREA : 320567.1533 sq.m.

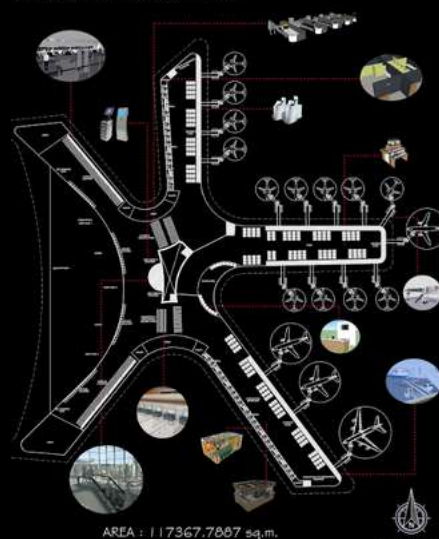
SITE PLAN



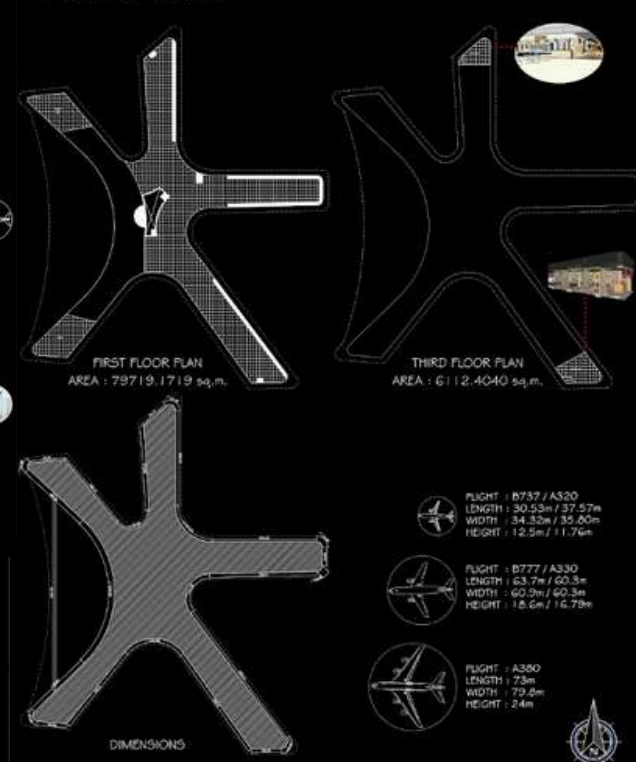
GROUND FLOOR PLAN



SECOND FLOOR PLAN

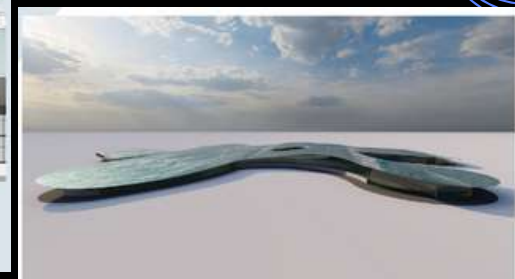
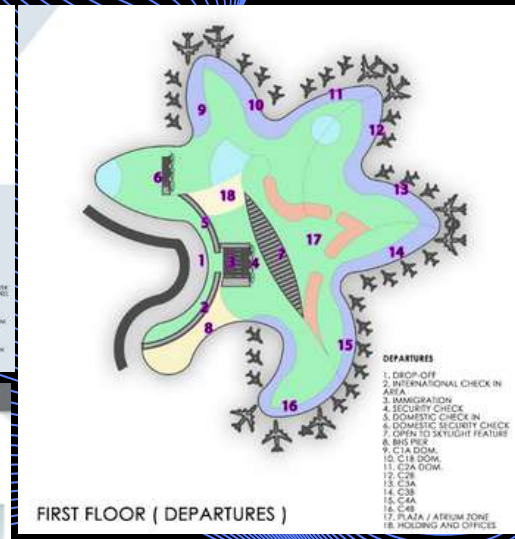
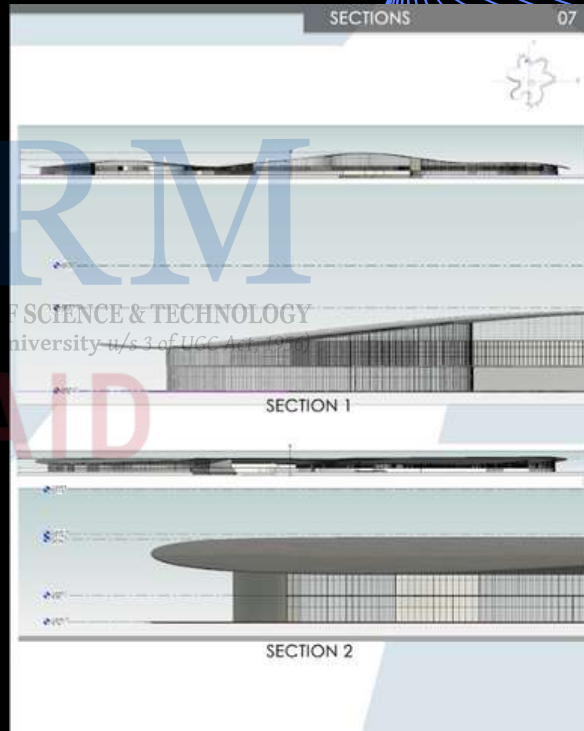
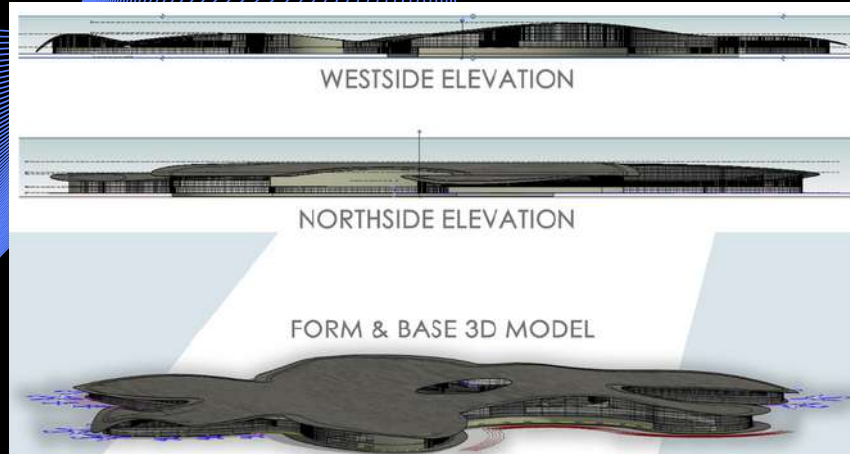
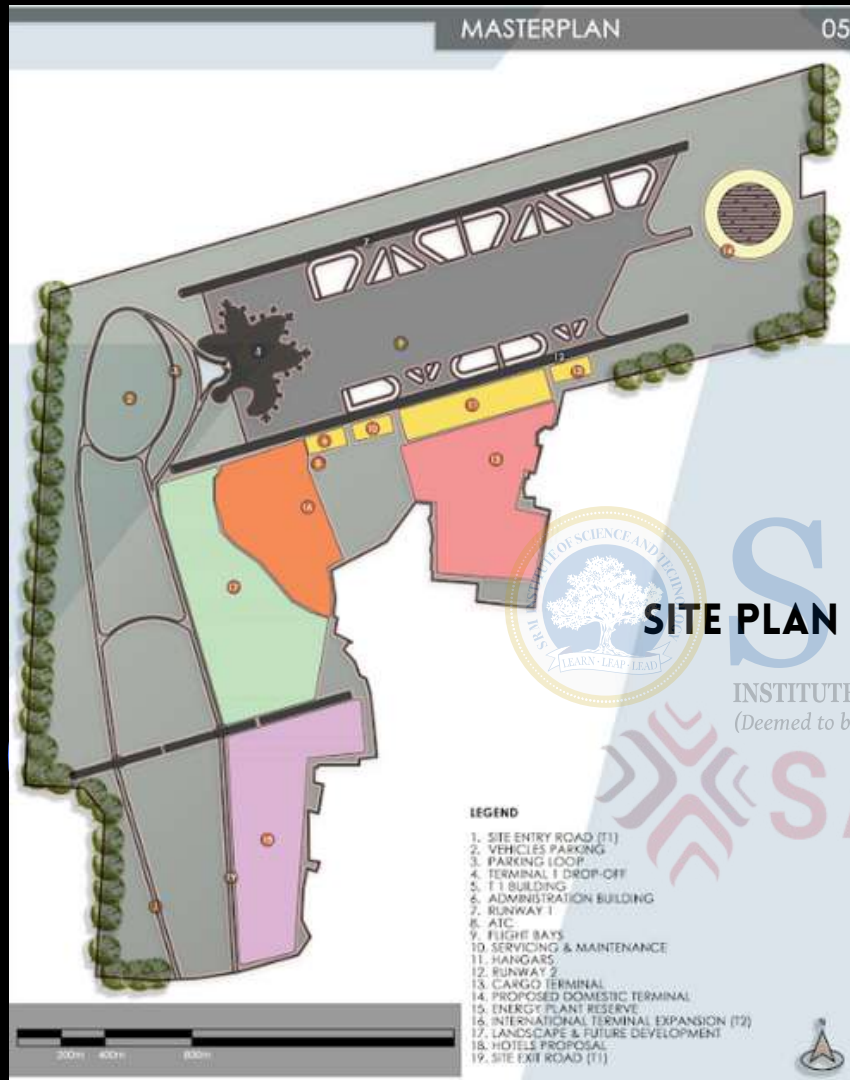


FLOOR PLANS



PARANDUR INTERNATIONAL AIRPORT

M.A.R.C.H F I Y R E S A T R U R B A N P R O J E C T I N F R A S T R U C T U R E



PARANDUR INTERNATIONAL AIRPORT

SECOND YEAR - SEM 04

Thesis, the culmination of a postgraduate program, is a test to exhibit the creative innovations and researcher qualities of a Designer in the making. Moreover, thesis will be the most prominent component of a Designer's postgraduate portfolio, which will advocate for his/her prowess and seek acknowledgement in the world of practice.

THESIS COORDINATION COMMITTEE MEMBERS:

Dr. Pradeepa.C, HOD – SAID
Prof. T.R.Kamalakaran,
Prof. CT. Lakshmanan,
Dr.K.Geetha Ramesh
Dr.Narayana.K.A

THESIS COORDINATOR

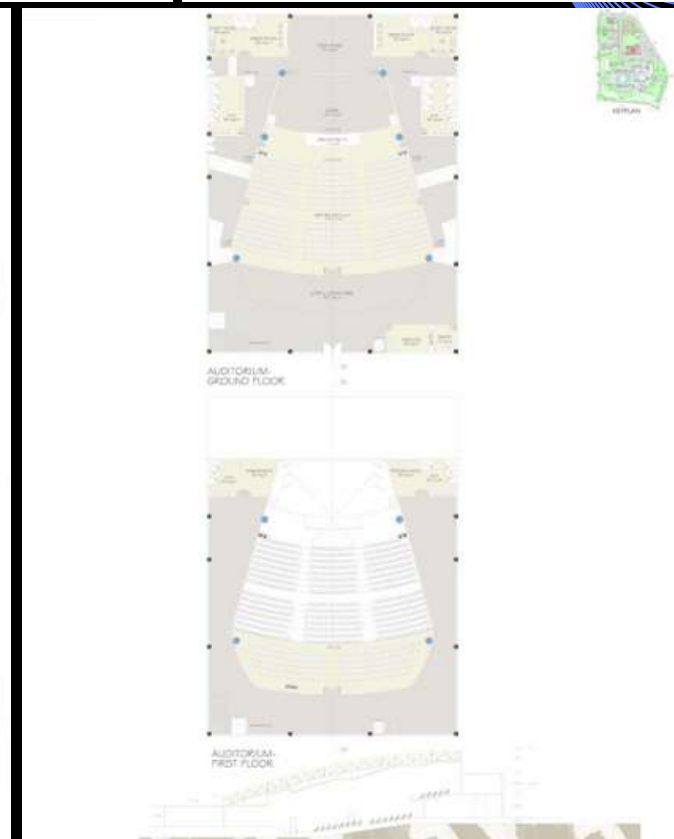
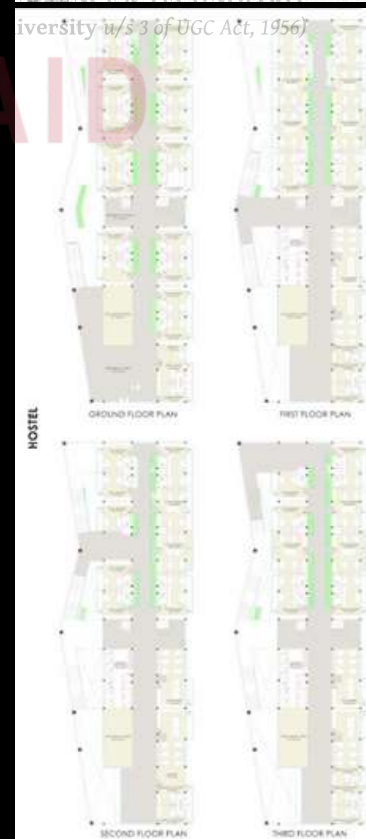
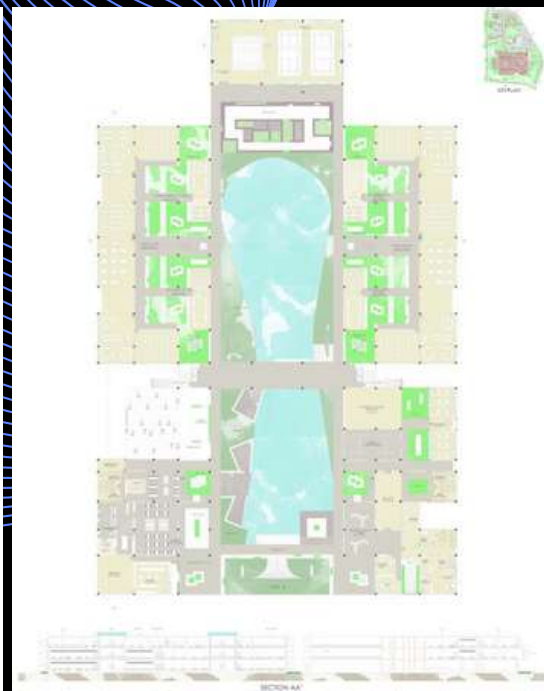
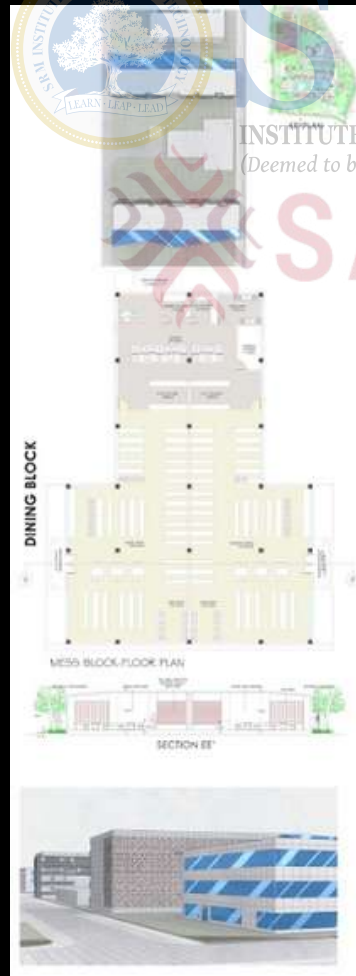
Prof. T.R.Kamalakaran.

THESIS COORDINATION TEAM :

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Ar. Geeva Chandana. B,
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Ar.Karthik Raj M

M.Arch

SCHOOL OF PLANNING AND ARCHITECTURE (SPA) DELHI



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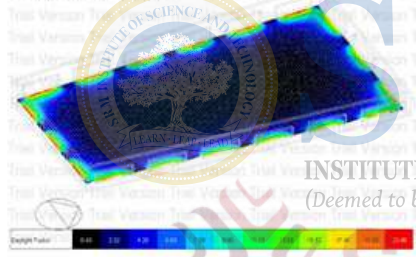
SCHOOL OF PLANNING AND ARCHITECTURE (SPA) DELHI

COMPUTATIONAL ANALYSIS

LIBRARY



BASE CASE

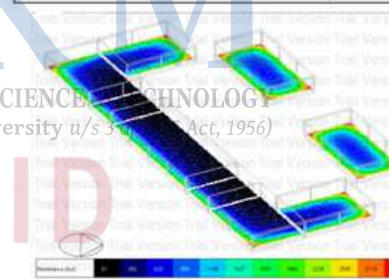


ACADEMIC- STUDIO

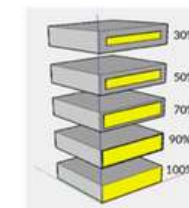
MODULE 1 BASECASE- NORTHWEST ORIENTATION



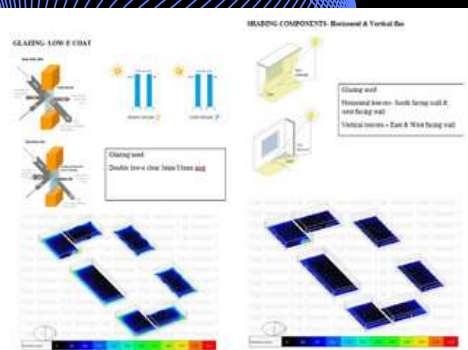
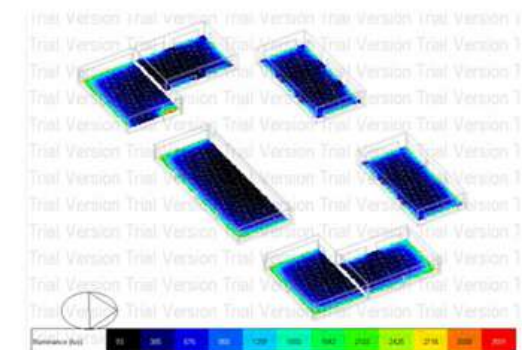
WWR- 100%
NO SHADING COMPONENTS ADDED- Horizontal, Vertical & Light shelves



WINDOW PLACEMENT & WWR



WWR-
70%- North & North east
30%- South & South west



Design & WWR

Glazed wall on the exterior portion for aesthetic purpose.

WWR- NORTH & SOUTH-90%
EAST & WEST- 30%

USE OF GLASS

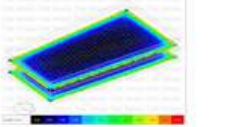
Double low e wall
w2=1, Tint 6mm/13mm air

SHADING COMPONENT

Horizontal fins- North & South facing wall
Vertical fins- East & West facing wall

PASSIVE HEATING THERMAL MASS

To withstand the cold in November



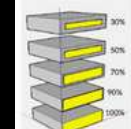
SOFTWARE USED- DESIGN BUILDER 7.0V

Optimizing floor plan depth for daylighting



In a building design like this, that is 11m from both sides with an average room height of 3 metres, a floor depth of 12-15 metres is ideal.

WINDOW - WALL - RATIO



The graph above shows that a building with high-performance glazing but a high WWR of 75% uses the same amount of energy as a building with single-pane glass but a lower WWR of 30%. Therefore, designing with a lower WWR is an effective strategy for managing heat gain.

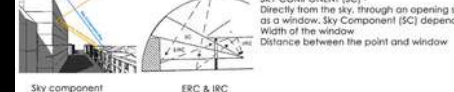
DAYLIGHT IN BUILDINGS

Daylight in buildings is composed of a mix - direct sunlight, diffuse skylight & light reflected from the ground & surrounding elements



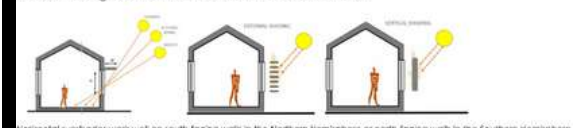
DAYLIGHT FACTOR

$$DF = SC + ERC + IRC$$



SHADING DEVICES

The sun follows a fixed path in the sky for any location depending on the time of the year. External shading devices can be designed to take advantage of these predictable paths to cut out the higher summer sun but let in the lower winter sun.

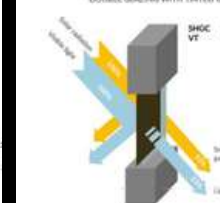


HORIZONTAL & VERTICAL SHADOW ANGLE

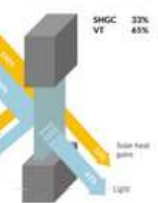
HAS + wall azimuth - Solar azimuth



DOUBLE GLAZING WITH TINTED GLASS



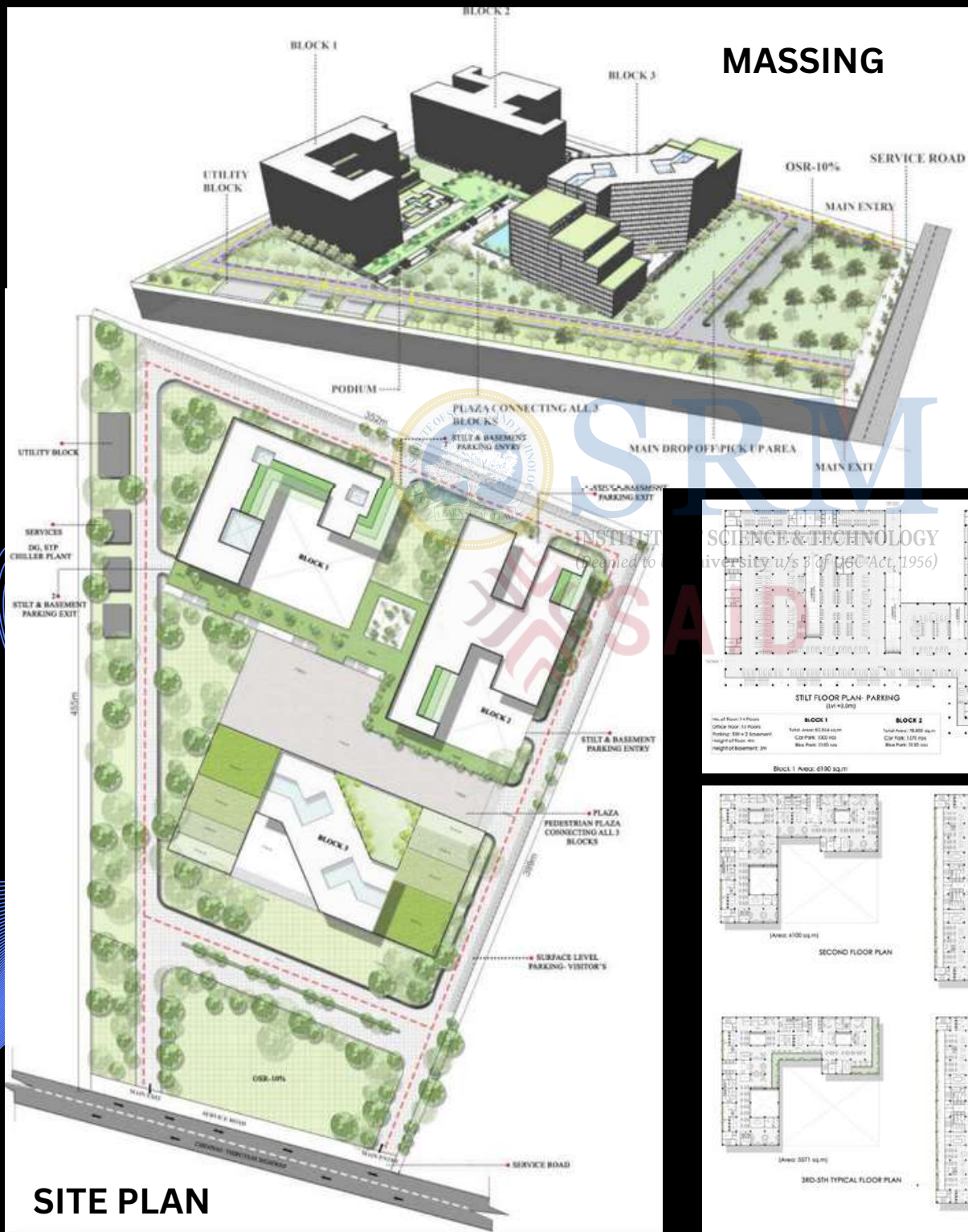
DOUBLE GLAZING WITH LOW E



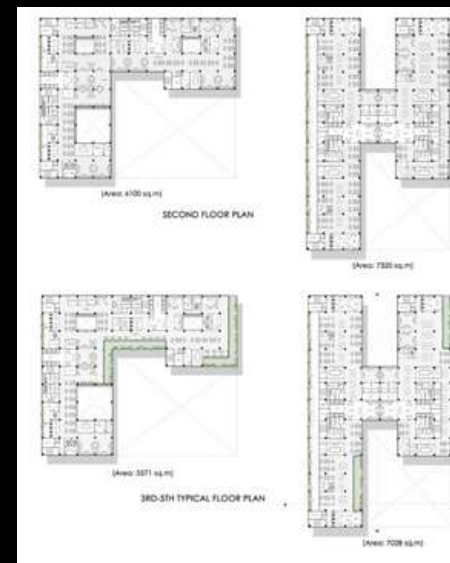
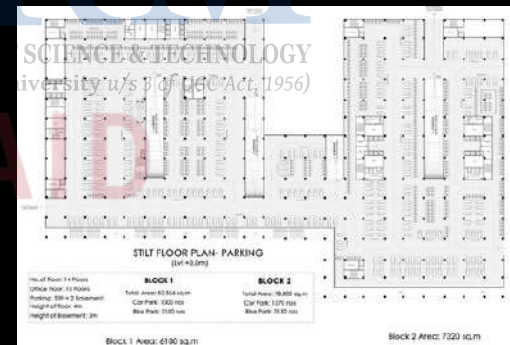
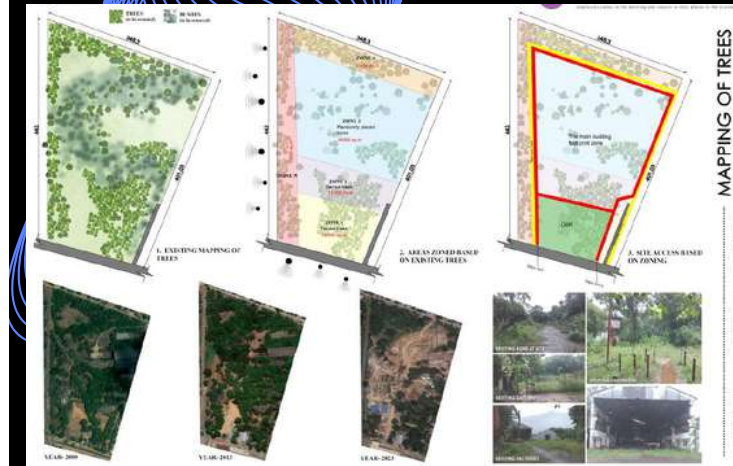
M.A.R.C.H

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IMPACT OF GREEN ENVELOPE IN A OFFICE BUILDING



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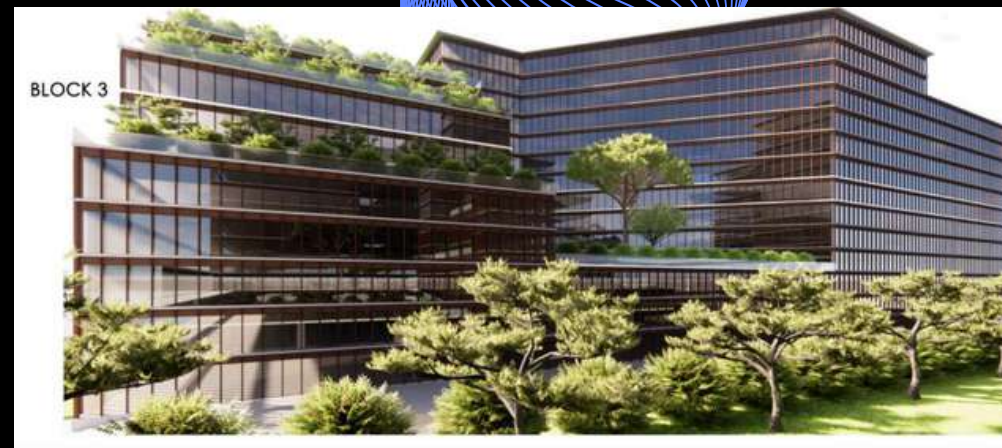
M.Arch

SECOND

THESIS



VIEWS



COMPUTATIONAL ANALYSIS

