

NATIONAL INSTITUTE OF DESIGN

THESIS

Submitted in partial fulfillment of the requirements for the award of
Bachelor of Architecture degree

By

**ABISHEK PAULRAJ R
(3621003)**



**DEPARTMENT OF ARCHITECTURE
SCHOOL OF BUILDING AND ENVIRONMENT**

SATHYABAMA

**INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)**

**Accredited with Grade "A" by NAAC
JEPPIAAR NAGAR, RAJIV GANDHI SALAI,
CHENNAI - 600 119**

MAY- 2021



SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY) Accredited with
—All grade by NAAC
Jeppiaar Nagar, Rajiv Gandhi Salai,
Chennai – 600 119 www.sathyabama.ac.in



DEPARTMENT OF ARCHITECTURE

BONAFIDE CERTIFICATE

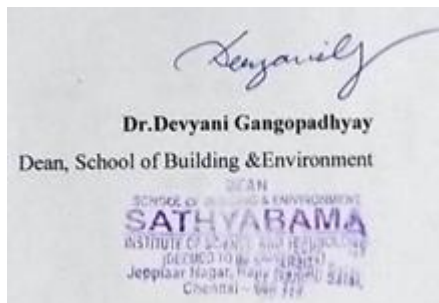
This is to certify that this Thesis Report is the bonafide work of
ABISHEK PAULRAJ R (3621003) who carried out the Thesis entitled “**National Institute of Design**” under our supervision from January 2021 to May 2021.

Internal Guide
(Dr.Arulmalar)

Internal Review Member
(Ar. Catherine)

External Guide
(Ar. Balaji Srinivasan)

Dean and Head of the Department
Dr. DEVYANI GANGOPADHYAY



Submitted for Viva voce Examination held on _____

Internal Examiner

External Examiner

1.

2.

DECLARATION

I, **Shanu Johnson** hereby declare that the Thesis Report entitled “**NATIONAL INSTITUTE OF DESIGN** done by me under the guidance of **Dr. Arulmalar** Internal Guide), **Ar. Catherine** (Internal Review member) and **Ar. Balaji Srinivasan** (External Guide), Sathyabama Institute of Science and Technology is submitted in partial fulfillment of the requirements for the award of Bachelor of Architecture Degree.

DATE:

PLACE: Chennai
ACKNOWLEDGEMENT

SIGNATURE OF THE CANDIDATE

I am pleased to acknowledge my sincere thanks to Board of Management of **Sathyabama** for their kind encouragement in doing this dissertation and for completing it successfully. I am grateful to them.

I convey my thanks to **Dr. Devyani Gangopadhyay**, Dean and Head of the Department, **Dr.Suresh Kuppuswamy**, Design Chair of School of Building and Environment, Department of Architecture and providing me necessary support and details at the right time during the progressive reviews.

I would like to express my sincere and deep sense of gratitude to my Thesis Internal Guide **Dr. Arulmalar**, Internal Review member **Ar. Catherine** and External Guide **Ar. Balaji Srinivasan** their guidance, suggestions and constant

encouragement which paved the way for the successful completion of my dissertation works.

I wish to express my thanks to all Teaching and Non-teaching staff members of the **Department of Architecture** who were helpful in many ways for the completion of the Thesis.

TABLE OF CONTENT

CHAPTER TITLE		PAGE
	NO.	NO
	LIST OF TABLE	vii
	LIST OF FIGURES	viii
	LIST OF PLATES	x
1	INTRODUCTION	1
1.1	INTRODUCTION	1
1.2	AIM	1
1.3	OBJECTIVE	1
1.4	SCOPE OF THE PROJECT	2
1.5	METHODOLOGY	2
2	LITERATURE STUDY	3
2.1	DESIGN	3
2.1.1	Origin Of Design	3
2.1.2	Who is a Designer?	3

2.1.3 Design Thinking 4

2.1.4 Courses in the field of Design 4

2.1.5 Design in Developing countries 5

3 SPECIAL STUDY 6

3.1 MUSEUM 6

3.1.1 Planning Of Galleries 6

3.1.2 Gallery design 7

3.2 LIGHTINGS 9

3.2.1 Natural Lighting 9

3.2.2 Artificial Lighting 11

3.3 LIBRARY STANDARDS 12

3.4 CAFETARIA STANDARDS 13

3.5 SHADING DEVICE 14

3.5.1 Vertical Shading 14 3.5.2 Horizontal Shading 14 3.5.2 Egg Crate 15

4	LITERATURE CASE STUDY	16
APPROACH	36	5 ARCHITECTURAL DESIGN
	5.1 SITE ANALYSIS AND STUDIES	36
6	CONCEPT	30
	6.1 CONCEPT	30
7	ARCHITECTURAL DRAWING	33

LIST OF TABLES

Table No	TITLE	Page No
5.1	AREA STATEMENT	24

LIST OF FIGURE

Fig No	TITLE	Page No
3.1	Circulation in gallery space	8
3.2	Planning of galleries	9
3.3	Standard height and view point	9
3.4	Viewing distance should increase with size of the object	9
3.5	Angle and positioning of object	9
3.6	Possible gallery arrangements	10
3.7	Different ways of dividing exhibition space	10
3.8	Various types of overhead light	12
3.9	Overhead light – skylight	12

3.10	Natural lighting	12
3.11	Illumination of objects	13
3.12	Indirect lights	12
3.13	Artificial lighting	12
3.14	Library standards	13
3.15	Special arrangements in cafeteria	13
3.16	Vertical shading	14
3.17	Horizontal shading device	15
3.18	Egg crate	15
4.1	Zoning and circulation	18
4.2	Spatial arrangement and grid	19

LIST OF PLATES

Plate No	TITLE	Page No
6.1	Site plan	33
6.2	floor plan – Admin block	34
6.3	floor plan - Museum	35
6.4	Auditorium plan	36
6.5	Auditorium section	37
6.6	Workshop plan	38
6.7	Workshop view	39
6.8	Academic block	40
6.9	Classroom in detail	41
6.10	Visualization	42
6.11	First floor – Staff Quarters	43
6.12	Mess floor plan	44

CHAPTER 1 - INTRODUCTION

1.1 INTRODUCTION:

Design education is a somewhat neglected in the field of education India. It offers tremendous scope for growth in the current state of economy. The institutes established have been successful and are rated amongst the top design schools all the around world. But design has however failed to secure a strong foothold in the eyes of the average Indian as a viable career choice.

This is reflected in the scant dispersal of such institutes, especially when viewed in comparison to other fields of education particularly in India. Even from the point of view of the economy, the design industry contributes in a great way to the overall output of the country. It also improves the efficiency in overall functioning of the society.

The design industry provides a better platform to all the entrepreneurs, so that they can create products and services that will benefited to all sections of the society. An advanced design industry has to become an identity to a successful economy, and has driven businesses and improved lives for people for better cause. Despite the immense contributions by design practices, they often go unnoticed.

This project aims to address this problem and propose an institute providing not just quality education, but also important design and community services, in the urban area of south Indian province. The site which is in Bangalore provides an ideal situation of being a hub for education and also a heaven for design industries. The project also takes note of the existing design industry - its structure, scale and components.

The study also undertakes a detailed study and analysis of existing design schools. A suitable program for the planned institute is arrived from the analysis. The design shall also consider the dynamic nature of design practices and try to create and inspiring and motivating spaces for design education and propagation. After understanding the basic needs of the design schools from existing examples, the design aspires to be a practical, viable and benchmark setting program.

1.2 AIM:

The aim of this thesis is to propose a design institute which is sensitive towards unconventional education and incorporating concepts of interactivity not only among focused user group but as a social (public) space.

1.3 OBJECTIVE:

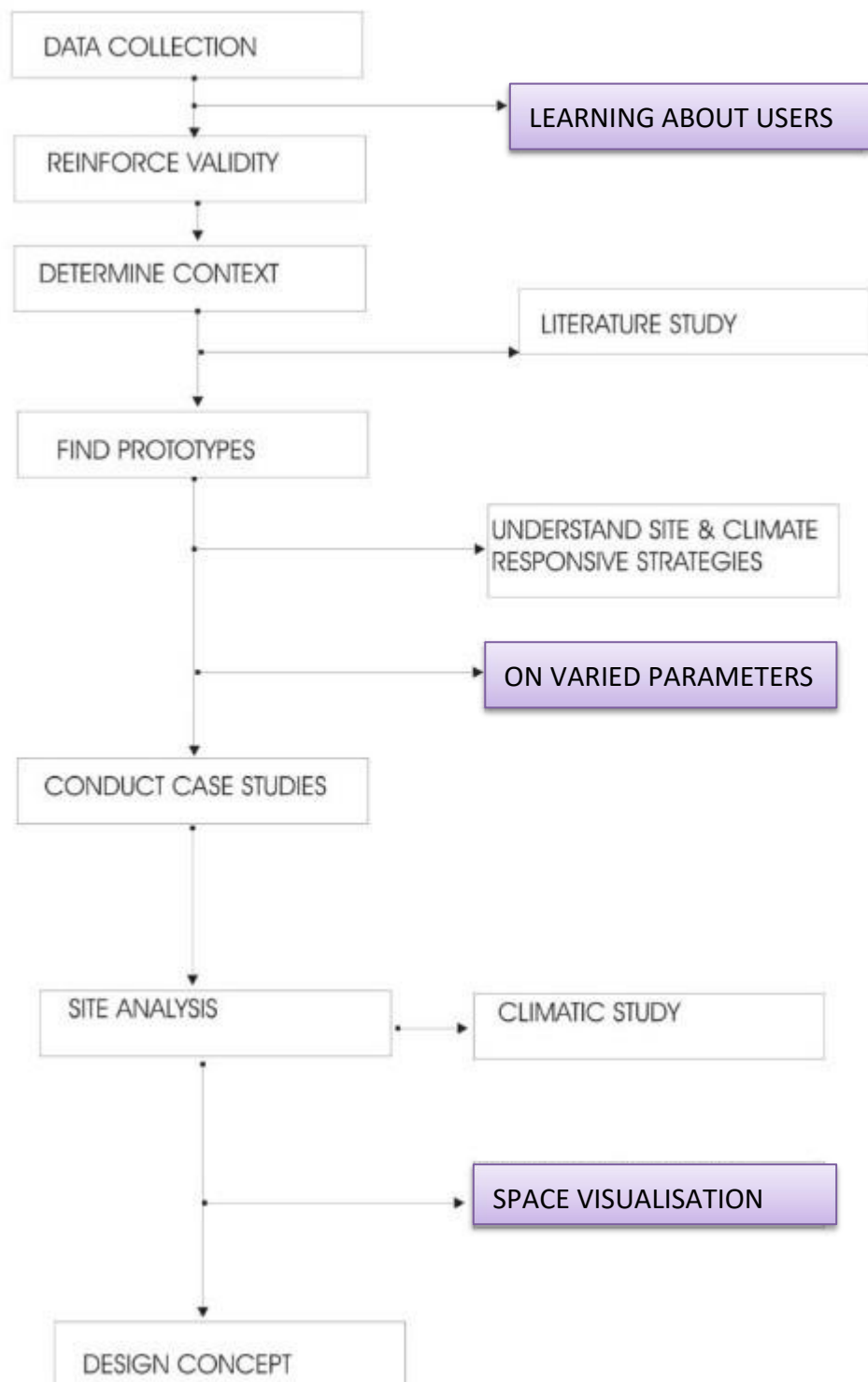
- Understanding the ideology of an institute and translating it into a built form.
- Understanding the ideology of an institute and translating it into a built form.
- Co relating dissertation topic into thesis project to achieve greater result.
- To achieve an integrated built form that performs at its best as an institutional space.

1.4 SCOPE OF THE PROJECT:

- This project will focus on institute, museum and research centre.
- Foreseeing the necessity/demand in the future for similar setup (design institutes).
- Lack of precedents for campuses with similar unconventional approach to education.

1.5 METHODOLOGY:

- Requirement, function and services of a design institute is analysed from various case studies.
- A complete study and analysis of the site with location, accessibility, scope of the site and surrounding areas are documented.
- General conditions of an institutional building such as integration, interactive space making and circulation are obtained from case studies.
- Basic requirements and standards for the institute, museum and research centre are analysed from varied standards.



CHAPTER 2 – LITERATURE STUDY

2.1 DESIGN

It is the process of envisioning and planning the creation/making of objects, interactive systems, buildings, vehicles and so on. It is majorly user-centered, i.e. users are the heart of the design thinking approach. It is about creating solutions for people, physical items or more abstract systems to address a need or a problem.

2.1.1 Origin of Design:

It's said that the word —designll comes from the Latin word —designarell. Designare is said to have meant to draw a plan. For this reason, it is thought that the word design initially was used in the sense of a plan on paper ancient times.

But the meanings of words change gradually with the times and the word —designll is no exception. It's said that the word first came into widespread use at the start of the great 20th century. Over roughly hundred years since then, the meaning of the word has evolved gradually. Another characteristic of the word —designll is the fact that it has different meanings to different people depending on whose using it.

2.1.2 Who is a Designer?

A person who devises or executes the designs, especially the one who creates forms, structures, and patterns, as for works of art or machines .In direct a designer is the one directly engages in the process of design.

2.1.3 Design Thinking:

Design Thinking is not an exclusive property of designers themselves—all great innovators in terms of literature, art, music, science, engineering, and business have practiced it. So, why call it Design Thinking? What's special about Design Thinking is that designers' work processes can help us systematically extract, teach, learn and apply these human-centered techniques to solve problems in a creative and innovative way – in our designs, in our businesses, in our countries, in our lives.

2.1.4 Courses in the field of design:

- Furniture Design
- Ceramic Design
- Animation Film Design
- Exhibition Design
- Film and Video Design

- Furniture and Interior Design
- Graphic and Design
- Product Design
- Textile Design and so on.

2.1.5 Design in developing countries:

The standard of 'Design' in every society reflects its intellectual, technological and organizational capabilities. Thus, India 300 years ago exhibited its own excellence through its high quality traditional products such as 'textiles and other products like craft ware' which attracted the Western trade.

Now countries like Japan, Germany or France reflect through their products the sound industrial structures they have built. India has been building its industrial structure rapidly since the independence.

Import of technical know-how is imperative to catch up with the latest advancements in Science and Technology happening in other countries. The technological transfer has also led to the design transfer as well resulting in low development in design capabilities. As a big picture the 'design dependency' has made our products less competitive in the world market.

CHAPTER 3 – SPECIAL STUDY

3.1 MUSEUM AND GALLERIES:

3.1.1 Planning of galleries:

The planning of galleries is mainly depends on types of collection and lighting needed for the same. The size of the rooms and the height of the ceiling will be determined by the nature of the objects. A relief area should be provided within galleries so that the visitors do not lose interest. Either the colour tone can be changed within two galleries so that they look attractive and interesting.

The circulation space identifies area of a building that is used for pedestrian travel, such as a hallway, stair way, and area in a room lead to another room. It is generally not good to have a home with a high percentage of circulation space. Developed exhibitions with these visitors circulation patterns in mind, so that the visitors doesn't have to take extra steps. Minimize the number of steps by not requiring backtracking. Do not design a space with multiple exits that makes the

visitors to make choices where they will exit the exhibition without giving attention at all of the exhibit elements.

Designing circulation space should be widen corridors beyond the typical 2.5 to 3m currently in use. Corridors should be able to easily handle two way traffic. Breakup corridor lengths, This will reduce travel and also discourage kids from running through the hall ways. Keep corridors a consistent width. Consider rounding or angling corners so there is a sight line to the intersecting corridor. Blind corners can be a hazard. People who walk at a fast space or turn corners quickly does not see the traffic in the intersecting hallway.

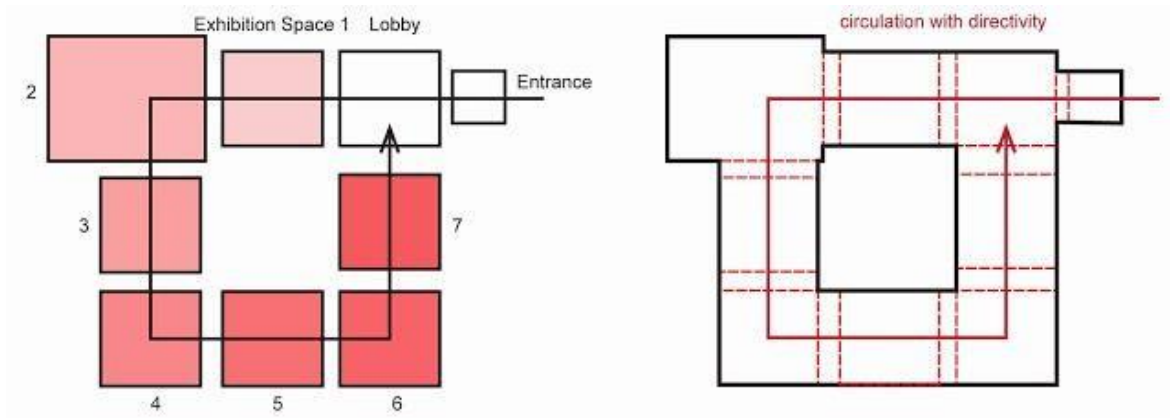


Fig 3.1 Circulation in gallery space

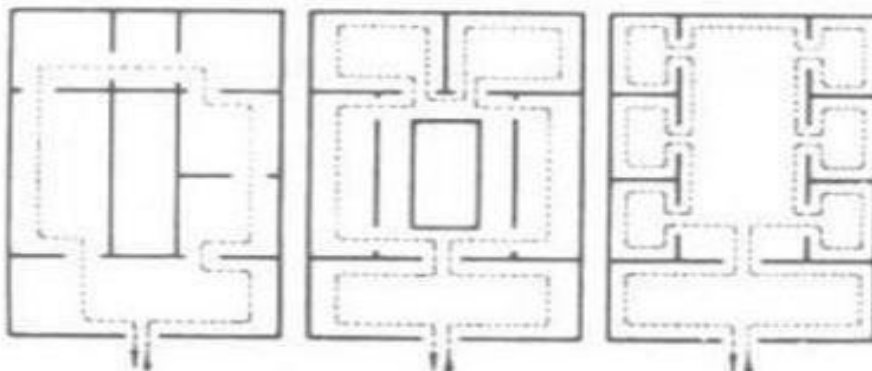


Fig 3.2 Planning of galleries 3.1.2

Gallery design:

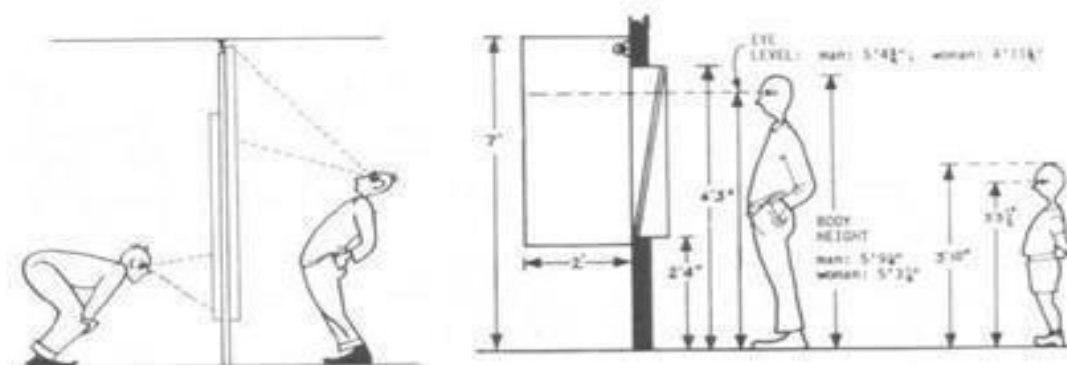


Fig 3.3 Standard height and view point

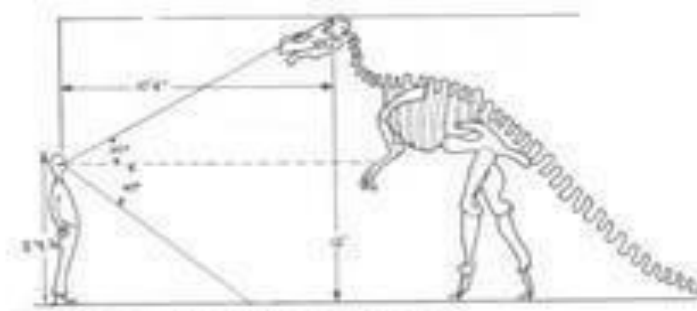


Fig 3.4 Viewing distance should increase with size of the object

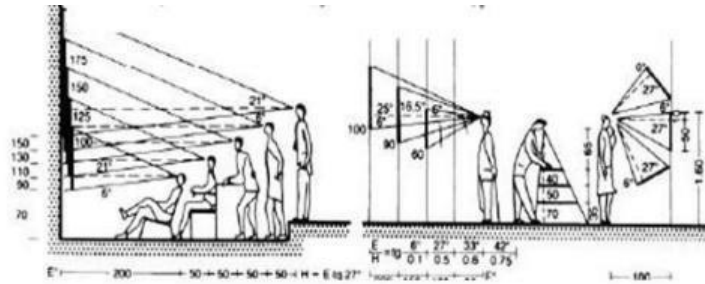


Fig 3.5 Angle and positioning of object

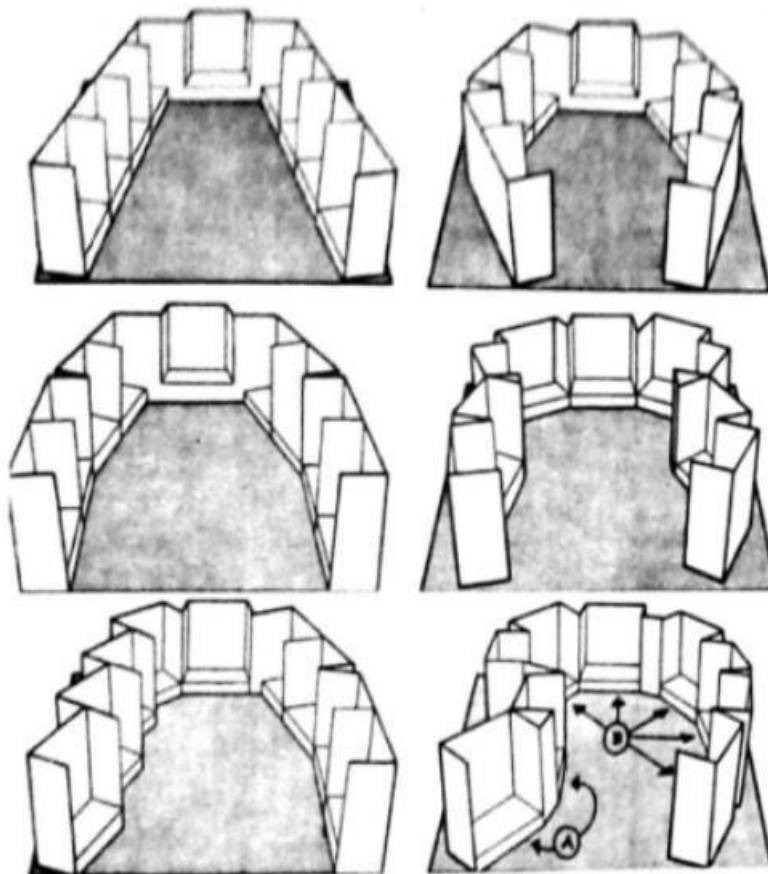


Fig 3.6 Possible gallery arrangements

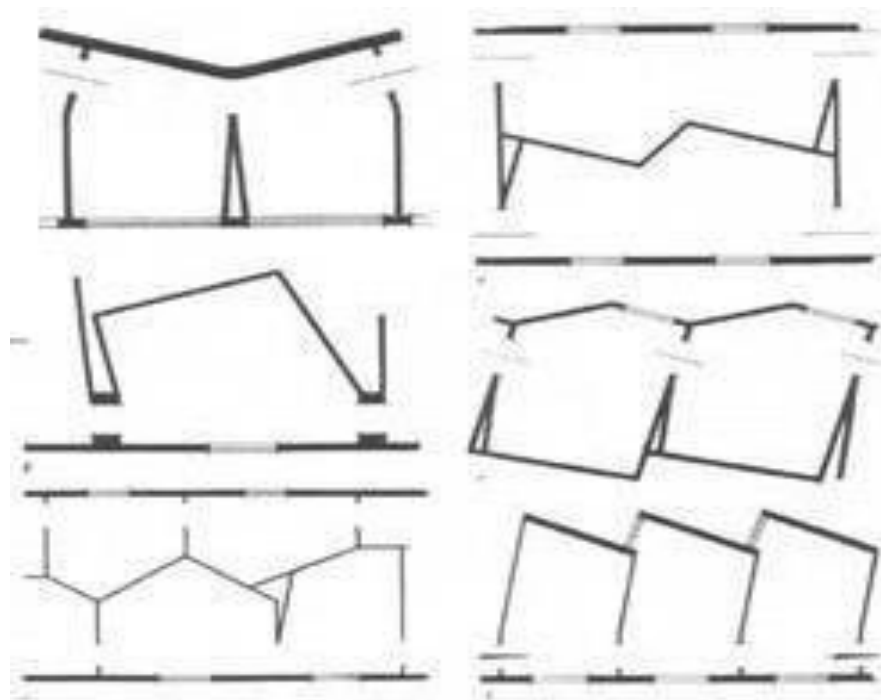


Fig 3.7 Different ways of dividing exhibition space

3.2 LIGHTINGS:

Lighting is one of the most important aspects in a museum space. A clear arrangement of both artificial and natural lighting in the museum allows the visitors to have a good visibility. The lighting arrangements in a museum has a great impact on the mind of visitors as such great care should be taken during selecting the type of light either naturally or artificially. Using a natural light needed much control to prevent glare and reflection. The artificial light are set to focus on an object where the object withstands by itself when an artificial light falls on the object.

3.2.1 Natural lighting:

Daylight is rarely satisfactory for exhibits as it is too far temperature in cold countries and far too brilliant in tropical countries. Daylight has daily and seasonal changes with unpredictable patterns depending on cloud cover, atmospheric pollution and other climatic variation. Daylight can also be successful in illuminating large areas to stimulate natural external conditions. However some exhibits need natural daylight like plants, large engineering exhibits and most sculptures. Natural lighting is provided by the windows. Overhead light is mostly used in museums.

Overhead lighting provides a steady source of light which least liable to be affected by lateral obstacles. Wall spaces are as a result left free for display and exhibits.

However maintenance is a problem while using a overhead lighting. This type is also difficult in inculcate in multi-storey.

Lateral lighting provides either by windows of various shapes and size placed at suitable intervals in the walls or by continuous openings. They provide a convenient and economical methods of regulating ventilation and temperature. This acts as an excellent relief by providing pleasant views of the outside natural environment. It also cause glare and reflection which impedes the visibility and decrease flexibility of interior layout.

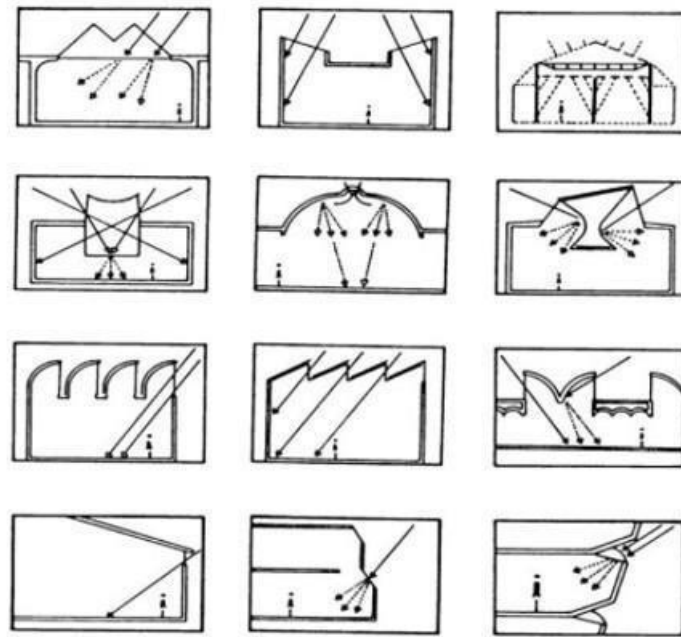


Fig 3.8 various types of overhead light

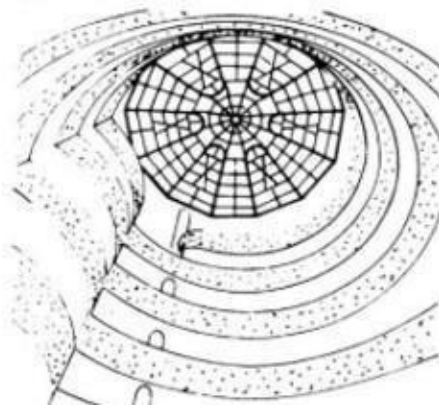


Fig 3.9 overhead light – skylight

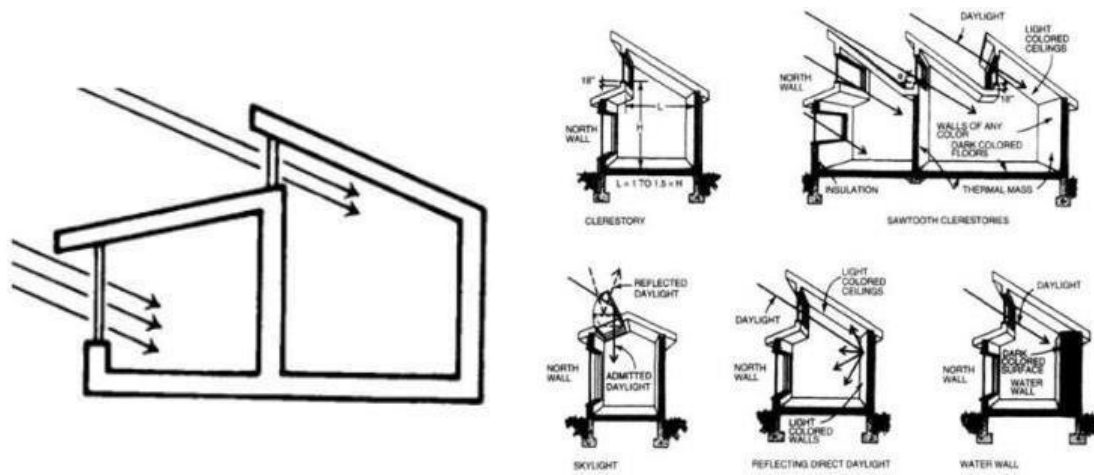


Fig 3.10 natural lighting

3.2.2 Artificial lighting:

Ideal exhibition conditions are attained where every aspect of the display is controllable and the light can be focused, moved, coloured and all remains independent of weather. Hence these aspects can be controlled to control interest, mood attention and even pleasure. It is described for an exhibition to have both light and dark area so that objects stand out. One should be able to achieve variation in illumination with moderate levels in brightness to connect spaces dramatic and thermal effects can be sought out by artificial light.

Direct light fixtures are recessed in ceiling or wall. They are surface mounted to ceiling or wall. The direct light fixtures are suspended from ceiling.

Indirect lighting fixtures are cove or valance lighting. Up light suspended from ceiling.

For display lighting, incandescent lamps often known as GLS lamp and halogen lamp are used.

There are two types of artificial light sources, they are fluorescent lamp and incandescent lamp. The fluorescent lamp are non-directional and cannot be focused or used to project a parallel beam. It reduce glare and used as general lighting. Incandescent lambs are directional and used to highlight on certain spot. They are more flexible in use and expensive. This also can be used in conjunctions with reflectors.

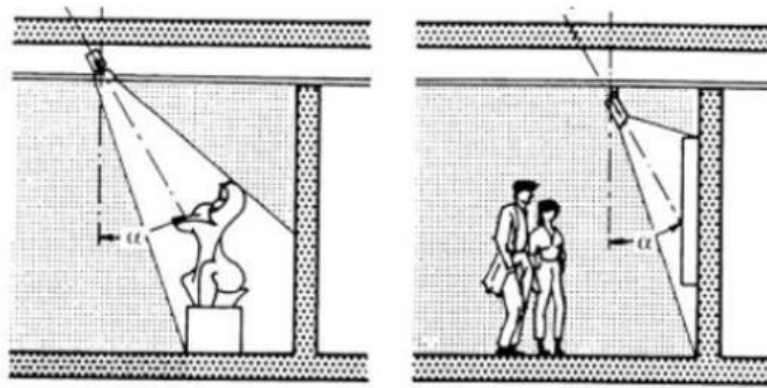


Fig 3.11 illumination of objects

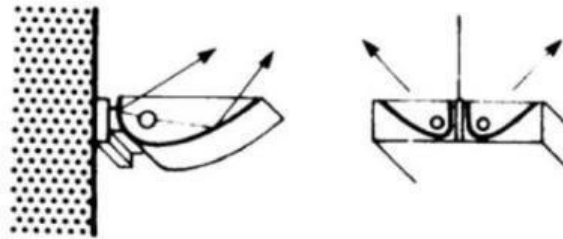


Fig 3.12 Indirect lights

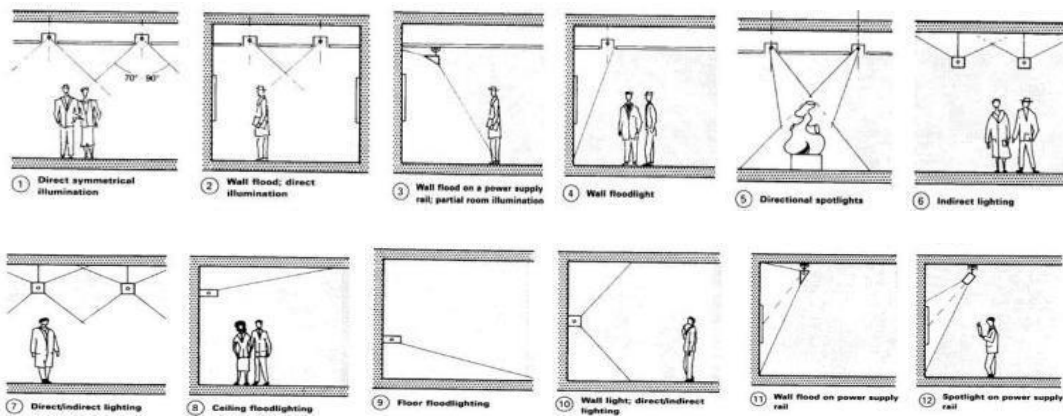


Fig 3.13 Artificial lighting

3.3 LIBRARY STANDARDS:

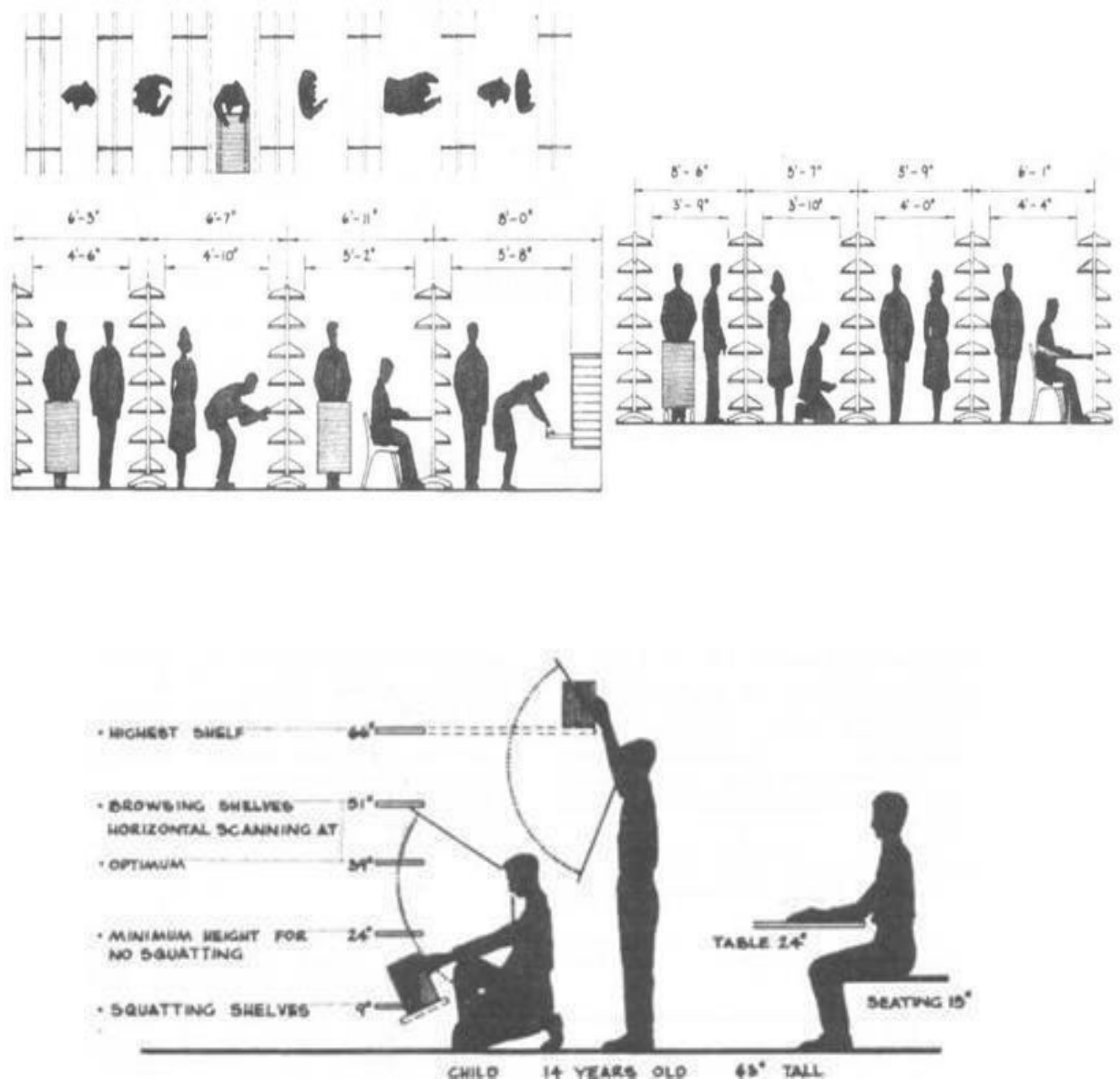


Fig 3.14 Library standards

3.4 CAFETERIA STANDARDS:

In a cafeteria a circulation of a space and the sitting arrangements are the most important part where there are lots of standards to be followed in these area. The space between each should be a minimum of one meter space that will allow a person to move out freely without disturbing other tables.

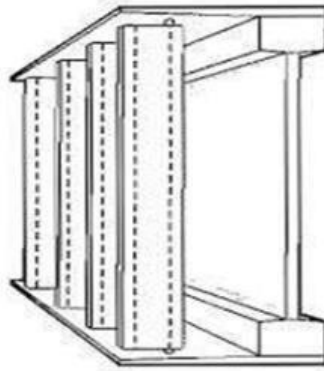


Fig 3.16 Vertical shading

3.5.2 Horizontal shading:

The horizontal shadings are to shade an opening during hot summer months i.e. from march to June, but to allow solar radiation through openings during winter months like October to December helps to warm a building. Horizontal shading doesn't work on East and West side of the building.

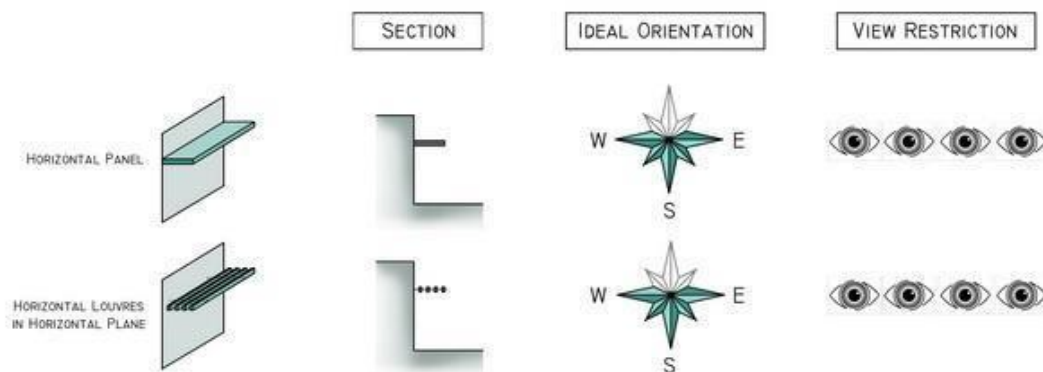


Fig 3.17 Horizontal shading device

3.5.3 Egg crate:

It is the combination of both vertical and horizontal shading elements and devices, that are commonly used in hot and humid climate regions because of their high shading efficiencies. The horizontal elements control ground glare from reflected solar rays. This device works well on walls.

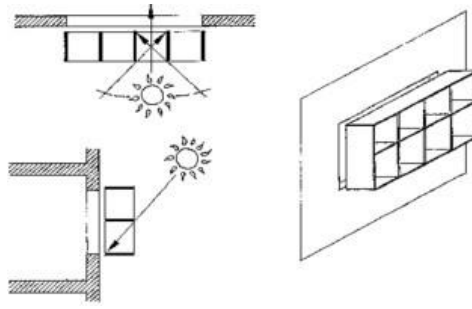


Fig 3.18 Egg crate

CHAPTER 4 –

CASESTUDY

LITERATURE

4.1 National Institute of Design, Ahmedabad

AREA : 15,000 sq.m
 ARCHITECT: Charles Eames
 YEAR : 1961

DISCIPLINES

- Product Design
- Ceramic and Glass Design
- Furniture and Interior Design
- Toy and Game Design
- Transportation and Automobile Design
- Textile Design
- Design for Retail Experience
- Strategic Design Management
- Apparel Design and Merchandising
- Lifestyle Accessory Design
- Graphic Design
- Animation Film Design
- Film and Video Communication
- Photography Design
- Exhibition Design
- Design for Digital Experience
- New Media Design
- Information and Interface Design

THE INSTITUTION

NID Ahmedabad was started at a time when there was a necessity for design intervention, as an important catalyst for expanding quality industrial production and enhancing communication was recognized.

Charles and Ray, were invited by the Government to suggest the philosophical, institutional and programmatic aspects of how design could be harnessed for public good and enhance the community. Both of their recommendations led to the setting up of the National Institute of Design (NID) at Ahmedabad in 1961.

ARCHITECTURAL OBSERVATIONS AND ANALYSIS

- The institute has been designed keeping in mind the need for the spaces that is constantly changing and adapt to its function.

- The floor plates were supported on a rectangular column grid, and permanent partitions are used only at places which have a permanent function assigned to them and are generally shared within the academic area.
- The classrooms and studio spaces are defined using modular aluminium partitions which are demarcated by the management and they change based on occasions.
- Often there is an intersection of the access paths, to the extent where the entrances for certain classes were through other classrooms. Certain corridors also pass through some dedicated functional areas. Such adaptations have been functional due to the informal nature of classroom spaces, workshops and studios themselves.
- But the management, faculty and resource labs are however well-defined with restrictions on access as well. Some professors will have their offices within their own departments, which was developed later on.
- Internal courtyards have been used to ensure natural light and ventilation to get into all the areas, however some of the areas lack both, which is probably a result of iterations/addition made later on.
- The surface of the rooms which faces exterior consists of large openable, transparent modular windows to allow the light and air to get inside those rooms.
- The ground floor is used to house the management offices and public areas, with the educational areas being restricted to the upper floors as it need to be. Certain workshops are however present at the ground level for the public to experience.
- The exhibition area is at the ground level for easy accessibility, with a welcoming entrance to the access road outside.
- The canteen is placed in an external structure.
- Certain non-institutional functions are housed in separate structures away from the main building block, and closer to the entrance for quick access.
- The hostel area is situated along the riverfront and can be accessed after passing through the institutional building or an alternative access path which is outside the campus area.

Fig 3.16 Zoning and Circulation

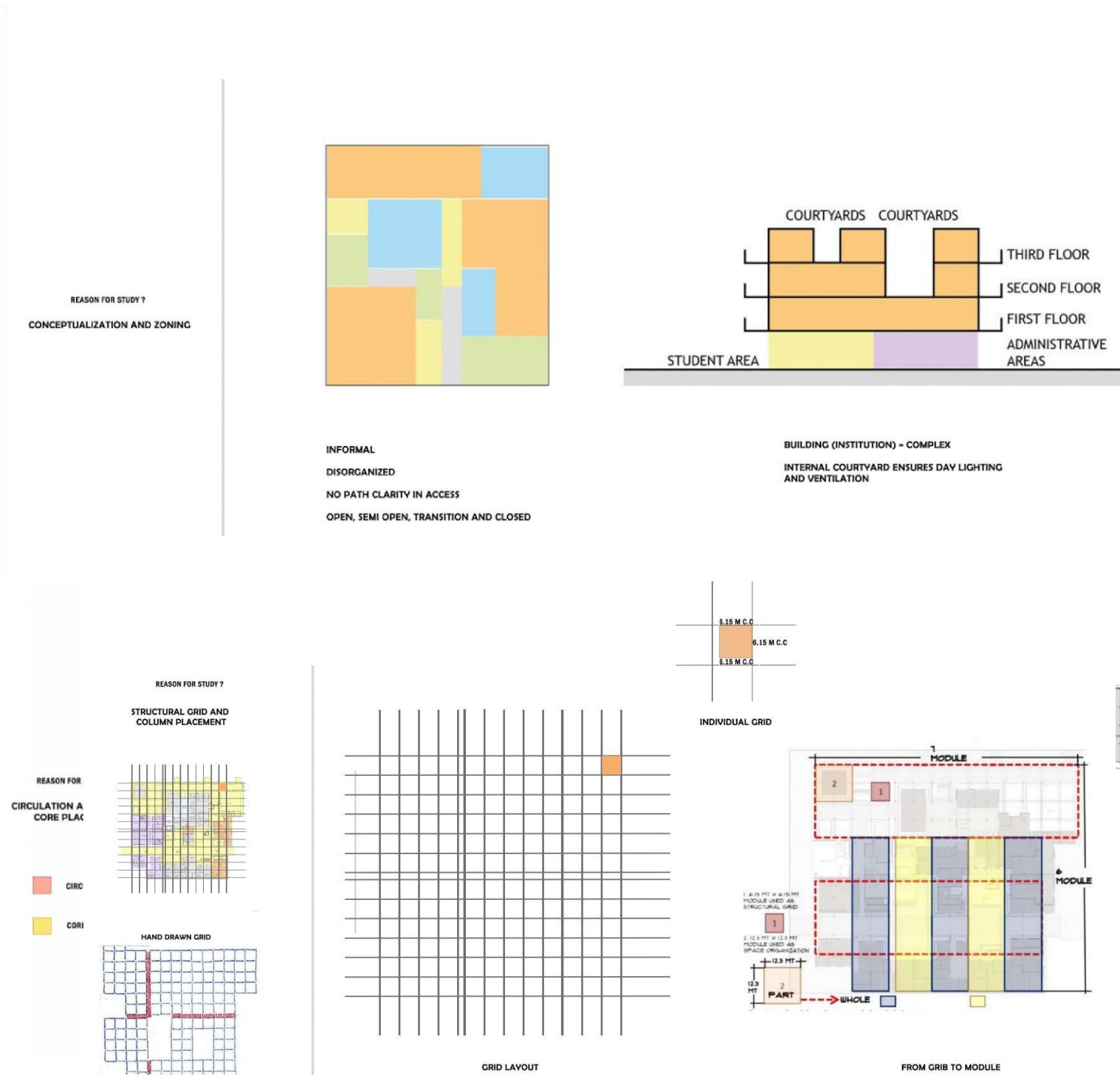


Fig 3.17 Spatial arrangement and grid

Pearl Academy, Jaipur

BUILT AREA: 10,500 sq.m

DISCIPLINES

- Textile Design for Fashion and Interiors
- Fashion Design
- Fashion Business Management
- Fashion Retail
- Jewellery Design

- Interior Architecture and Design

THE INSTITUTION

Pearl Academy of Fashion was started in 1993 by the Little People Education Society in Delhi. The academy was initially promoted by the House of Pearl Fashions Limited, an export house in India. Around 1995 Nottingham Trent University became the governing body for Pearl courses.

New campuses were set-up various spaces Jaipur (in 2005), Chennai and Noida. In 2011 Pearl academy entered into partnership with Laureate International Universities, and it is part of the LIU global network now.

The pearl institute encourages its faculty and its students to get global/pan-India exposure by affiliating/collaborating with other top educational institutions in the domain of Art, Fashion & Design in all around the world.

The infrastructure and the facility provided at this facility is also of an international level. The campus was designed by the Delhi based architecture international architectural firm called Morphogenesis. The campus has been well-designed and maintained, and it clearly represents the international face of the institute.

The institute has won several many number of awards and recognition for the quality of education that it provides at the institute. The institute has also managed to surpass the government backed NIFT in securing a position of excellence in fashion technology in India and all around the world.

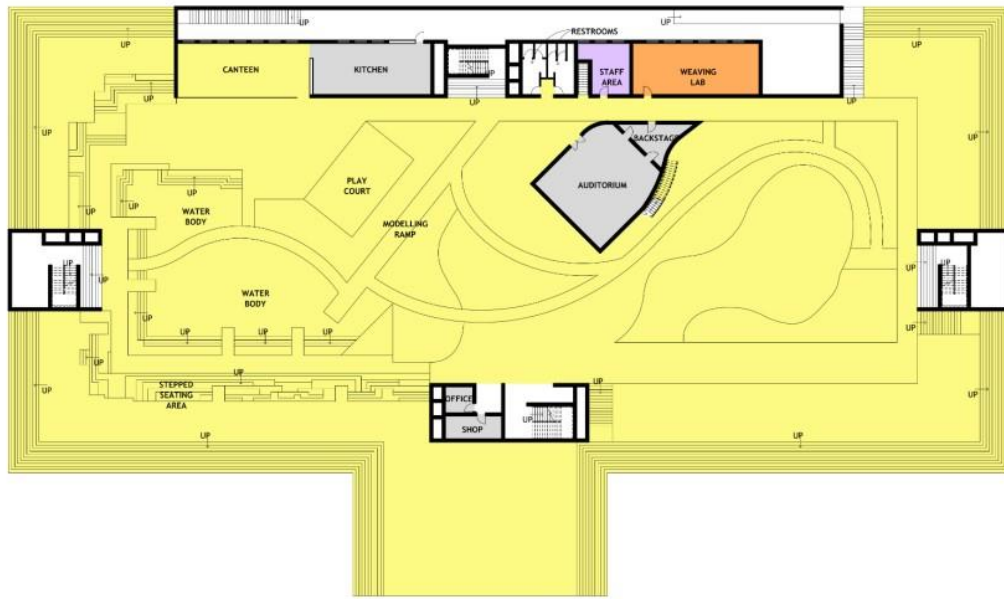
ARCHITECTURAL OBSERVATION AND ANALYSIS

- The institute is well-designed and maintained responding to climate and the environment.
- The entire building has jallis along its external wall at a distance of 4 feet from the main peripheral wall which drastically reduces the heat gain through fenestrations, yet allowing the diffused daylight. The space between the two external skins is also used for other requirements like installing outdoor units for ACs, laying services lines etc.
- The whole structure is supported on stilts on the ground level, and that space is used for informal activities such as recreation, exhibition and so on.
- The ground floor is an interactive space for the students as well as the faculties with multifunctional zones which blend into the indoors and with the outdoors seamlessly.
- The ground floor is already half a floor lower than the surrounding area (from the road level), which gives the visitors quick access to both the ground and the first floor from the entrance. This majorly helps in circulation segregation as the students can easily enter the informal areas and faculty and officials can directly enter the main building from the same entrance.
- There are water-bodies at the ground level, which helps cool the open ground area, which is shaded by the building above and around. This enables the ground level to be usable open area even in the harsh hot climate of the desert region.
- The building is evolved from a basic rectangular plan, with the rooms abutting the edges, and corridors facing the central courtyard. This gives a unified/enclosed feeling to the entire institute and separates the institute from its surroundings.
- The library and seminar hall directly interrupts the central courtyards, splitting it into two and adding drama to the courtyard. It also connects the two long sides of the building.

- Certain elements in the design are evolved from the local traditional architecture which have been implemented, which gives a sense of identity as per its location to the building (critical regionalism).
- The materials used for construction are a mixture of local stone, and other conventional materials such as steel, glass, and concrete which are chosen keeping in mind the climatic needs of the region while retaining the progressive design intent.

LEGEND

STUDENT INFORMAL	STUDENT FORMAL	ADMINISTRATION AREA	FACULTY AREA	INSTITUTE AREA	CLASSROOM AREA
---------------------	-------------------	------------------------	-----------------	-------------------	-------------------



Ground Floor Plan (N.T.S)



First Floor Plan (N.T.S)



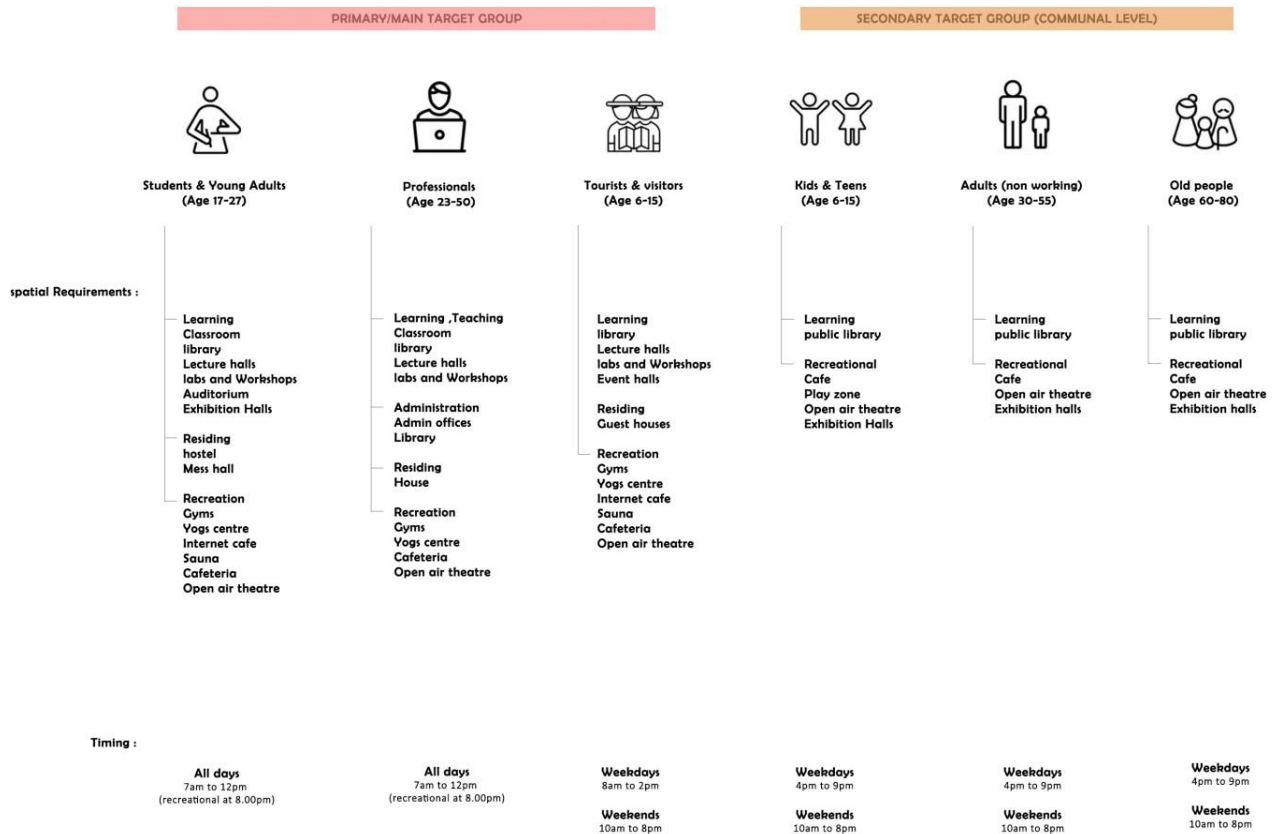
Second Floor Plan (N.T.S)

THE USER GROUP:

The institution design will be focusing on varied user group since the project is public in nature.

The user group is categorized based on age group, occupation and their relation to the community and their usage timing and the spatial requirement for each user group.

The user group analysis is majorly based on those following categories it will help in framing the area statement and give a clear of the scale of project



AREA REQUIREMENT:

FACILITY	UNIT AREA(Sq.m)	UNIT NO.	TOTAL CARPET AREA
ACADEMIC BLOCK (UNDER AND POST GRADUATE)			
Department of communication Design (20 per class)			
Animation Film Studio	100	4	400
Graphic Design Studio	100	4	400
Exhibition Design Studio	100	4	400
Film and Video Design Studio	100	4	400
Department of Industrial Design (20 per class)			
Product Design Studio	100	4	400
Furniture and Interior Design Studio	100	4	400
Ceramic and Glass Design	100	4	400
Department of Textile , Lifestyle, Accessory and Apparel Design (20 per class)			
Textile Design	100	4	400
Lifestyle Design	100	4	400
Apparel Design Studio	100	4	400
		Sub total	4000
		Circulation	1200
		TOTAL	5200
Laboratories			
Film and Video Lab	150	1	150
Graphics Lab	80	1	80
Model making Lab	150	1	150
Glass and Plaster Lab	100	1	100
Dyeing Lab	100	1	100
Textile Printing Lab	150	1	150
Computer Lab (for each dept)	80	3	240
seminar hall (capacity of 100 students)	200	1	200
stationery	50	2	100
Toilets (students f/m and staffs m/f) on each floor	25	12	300
Electrical Room	25	1	25
Server Room	30	1	30
Store Room	20	3	60
		Sub total	1685
		Circulation	505
		TOTAL	2190
WORKSHOP BLOCK			
Workshops			
Metal	150	1	150
Wood	150	1	150
Ceramic	150	1	150
Glass	150	1	150
Model Making	150	1	150
Printing	150	1	150
Painting	150	1	150
Weaving	150	1	150
Toilets (Stu)	30	2	60
Toilets (Sta)	20	2	60
Display Area (majorly corridor)	20	1	20
Pantry	10	1	10
Server Room	15	1	15
Electrical Room	20	1	20
		Sub total	1385
		Circulation	415
		TOTAL	1800

ADMINISTRATION BLOCK

Entrance Foyer	40	1	40
Reception	25	1	25
Waiting Area (merged)	20	1	20
Director's Office	30	1	30
Director's Board Room	25	1	25
Account Department	50	1	50
Pantry	20	2	40
Archive and Record Room	30	1	30
Server Room	20	2	40
Public Relation Office	15	1	15
Admission Office	30	2	60
Placement Office	15	1	15
Photocopying Room	20	1	20
Toilets	25	4	100
Electrical Room	25	1	25
		Sub total	550
		Circulation	165
		TOTAL	715

AMENITIES

Design Shop	100	1	100
Cafeteria (150 pupil x2)	300	2	600
Dispensary	50	1	50
A Bank and 3 ATM	100	1	100
		Sub total	850
		Circulation	255
		TOTAL	1105

RESIDENCE

Directors's Residence	200	1	200
Professors	150	8	1200
Assistant Professors	100	16	1600
Lecturer (Guest) and others	80	20	1600

Staff Quarters

Class I	40	8	320
Class II (cleaning and stuff)	40	8	320
		Sub total	4600
		Circulation	1380
		TOTAL	5980

AUDITORIUM

Seating Space (800 capacity), 1.5sq.m per person	1200	1	1200
Green Room	25	1	25
Reahearsal Room	80	1	80
Toilets	30	2	60
Projection ,Light and sound Room	20	1	20
Stage Area (less than 1/3 of seating area)	100	1	100
		Sub total	1485
		Circulation	445
		TOTAL	1930

HOSTEL BLOCK**Boys (50 percent of users)**

Twin sharing room (15 sq.m optimum+attached bath which is approx 20sq.m) 300/2 = 150 rooms needed (in doubt)	20	150	3000
Dining Area (1/3 of no. students 100) max capacity also 100	120	1	120
Kitchen Area (1/3 of Dinning)	40	1	40
Common Areas (150x1.4)	210	1	210
Server Area	20	1	20
Store Room	25	1	25
Electrical Room	25	1	25
Warden Room	15	1	15
		Sub total	3455
		Circulation	1033
			4490
		Girls (50 percent)	x2
		TOTAL	8980

SERVICES

STP, HVAC , Pump Room, Garbage Disposal,Back up Gen and service Mangt **approx 500 sq.m**

GRAND TOTAL 28400

COLLEGE AND PUBLIC LIBRARY (balance 1600 sq.m)
(INDIVIDUAL SPACES NOT SHOWN)

1600

30000 app.

CHAPTER 5 – ARCHITECTURAL DESIGN APPROACH

5.1 SITE ANALYSIS AND STUDIES

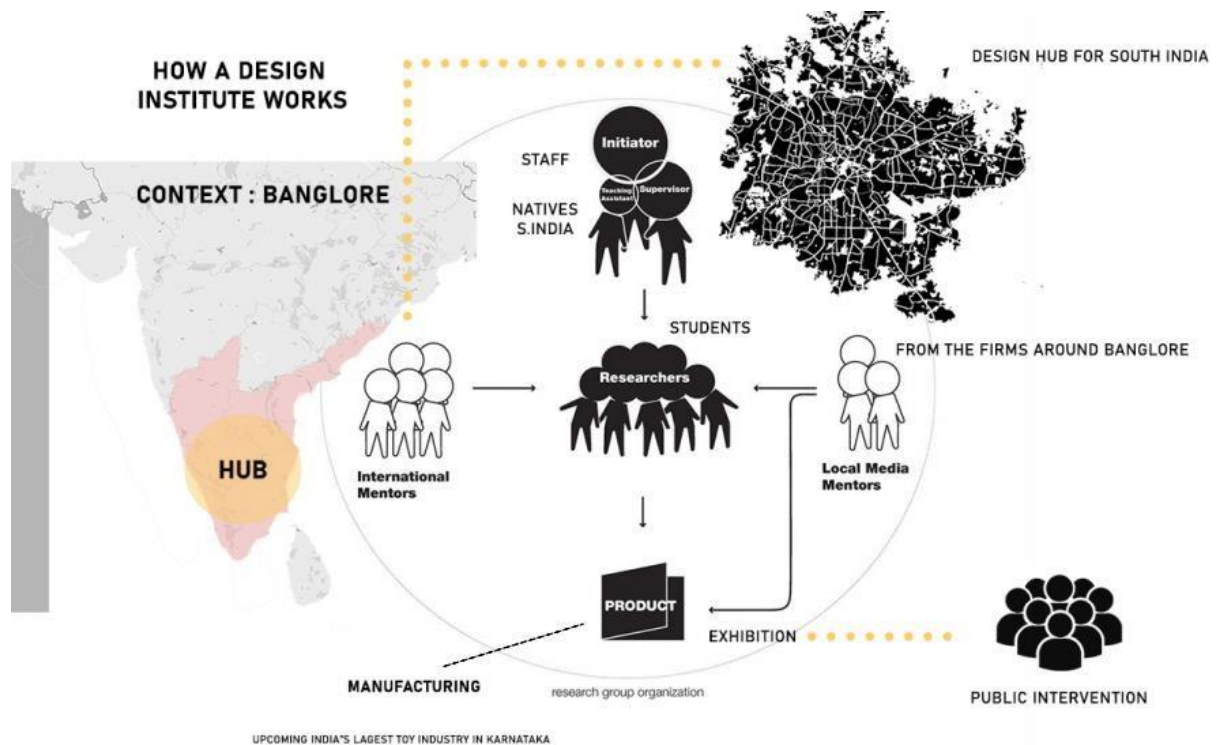
AREA ANALYSIS AND JUSTIFICATION:

The growth of economy in India for the recent years has been tremendous and it is beneficial to the common public and has given employment to many people, improved the quality of life and social security to millions. A direct relation can be seen between the economic growth and opportunity creation in the job sector. This has been further strengthened by observing the fact that the chief nodes of growth in the nation have witnessed huge population growth due to migration, as people started settling in these places for their respective jobs or the prospects for it.

The local administration in those urban areas also try and sought to improve the standards of living for the local populations, and have undertaken projects to improvise education, healthcare etc. and have meet with a pompous response from the locals.

The urban areas have also seen a parallel growth in higher education in these areas. It has been a phenomena witnessed throughout the country. Private institutions have been at the forefront in this sector and several have seen establish an identity for themselves on a national level.

But for a design institute to come into that place it should be having some proper infrastructure and certain characteristics to itself, the study also takes an analysis towards it. Bangalore is one of the places that satisfied the following conditions and it had more to offer too.

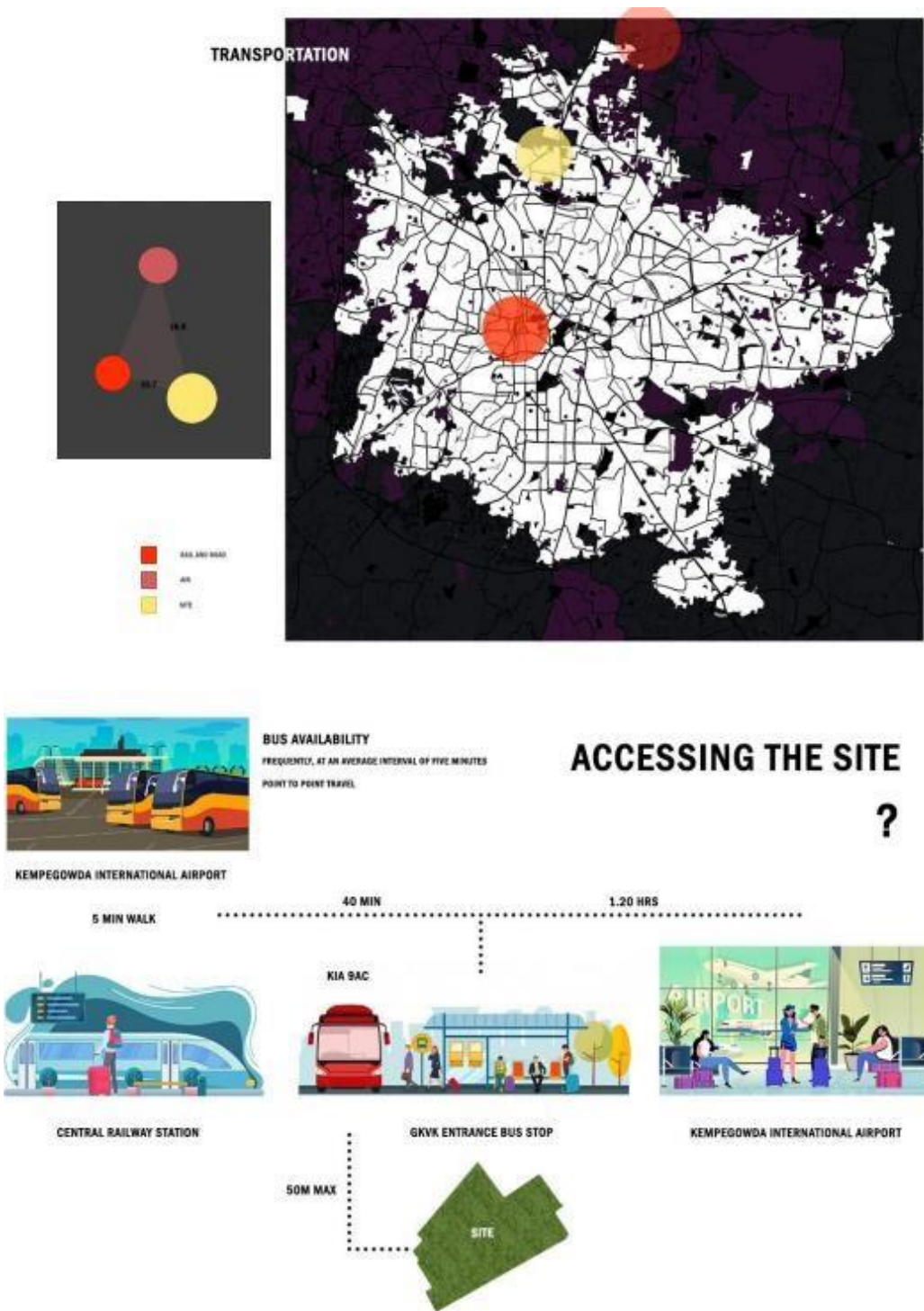


SITE SELECTION:

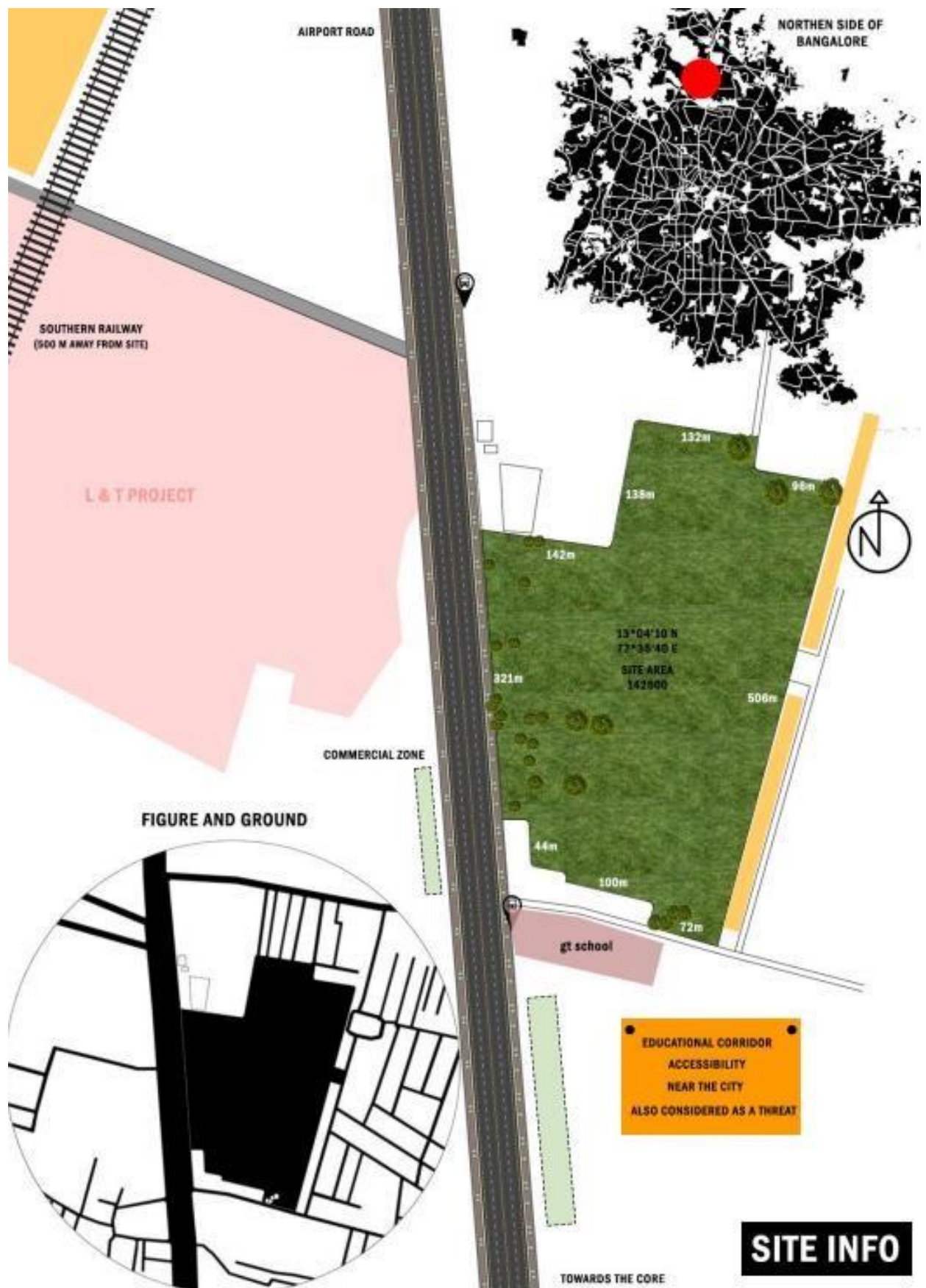
For building a design institution the site selection process should have to follow some criteria in terms of accessibility, amenities, public transportation facilities carrier opportunities and a strong communal background and it should in a city the

site was taken based on those criteria and analysis were done based on each and every one of those following criteria.

ACCESIBILITY AND TRANSPORTATION



SITE INFO AND LOCATION:

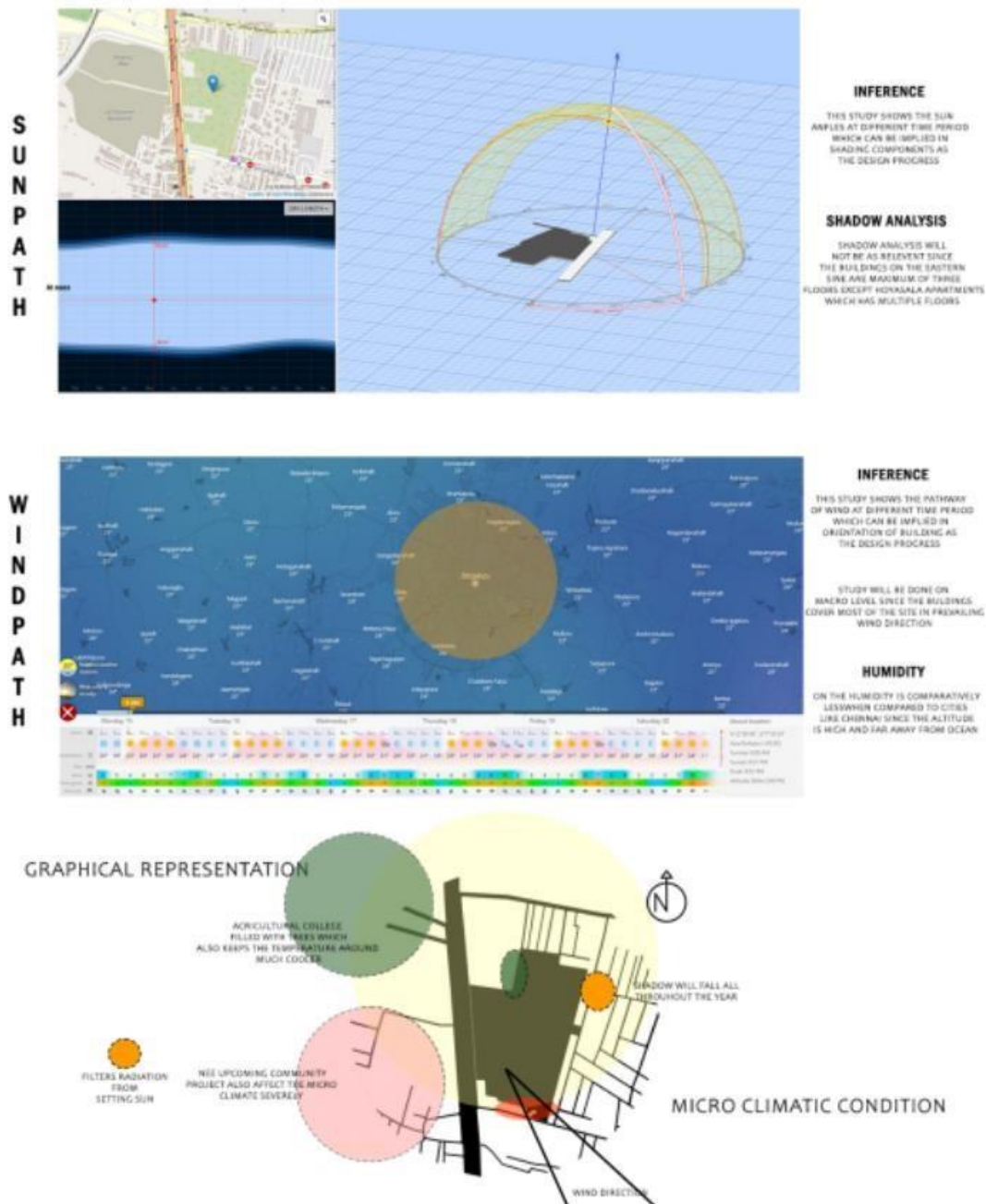


CLIMATE INFO AND ANALYSIS:

Bengaluru is 934m above sea level. The climate here is tropical less humid (moderate in India). The summers are much rainier than the winters in Bengaluru. This climate is considered to be Aw according to the Köppen-Geiger climate classification.

The temperature here averages mostly around 22.9 °C | 73.1 °F. In a year, the rainfall is 960 mm | 37.8 inch which is good and it has many lakes around it which makes the micro climate unique.

As a humanist point of view the climate is mostly cosy and comforting when compared to other climatic region in India and Bangalore does not have any coast it actually far away from the coastal line so the air is less humid when comared to Chennai and other coastal cities.



CHAPTER 6 – CONCEPT

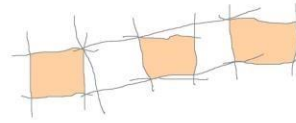
AUDITORIUM AND EXHIBITION HALL

CURIOSITY
COMFORT
GUIDENCE
ENTERTAINMENT
LEARNING

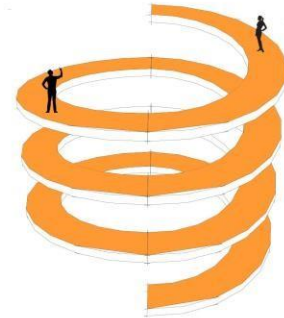
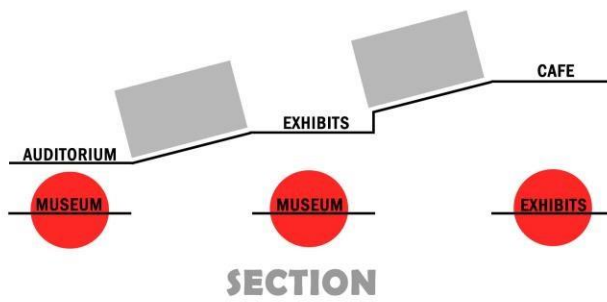
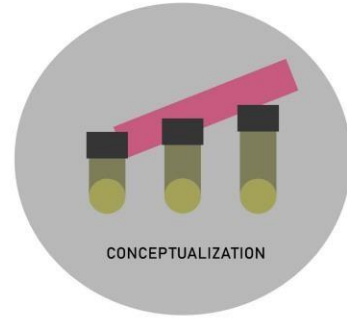
INTERMS OF SPACIALITY

GOOD LIGHTING
CONTROLLED ARTIFICIAL LIGHTING
FOR EXHIBITION SPACES
CONE OF VISION

MASSING
AND
SPACE
VISUALIZATION



HAND DRAWN SECTION



INSIDE THE CYLINDRICAL STRUCTURE



CLASSROOM CUM STUDIO

INTERACTION
COMFORT
INCLUSIVENESS
ENJOYMENT
LEARNING

INTERMS OF SPACIALITY

GOOD LIGHTING AND VENTILATION (IN SKETCH)
CONTROLLED ARTIFICIAL LIGHTING
FOR STUDIO SPACES
CONE OF VISION

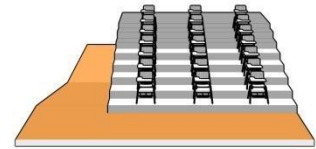
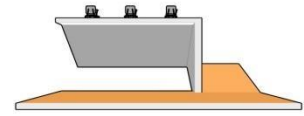
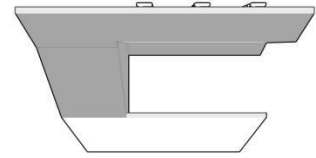
MASSING
AND
SPACE
VISUALIZATION

VISUAL CONNECTIVITY

STUDIO

STUDIO

STUDIO



FRONT VIEW

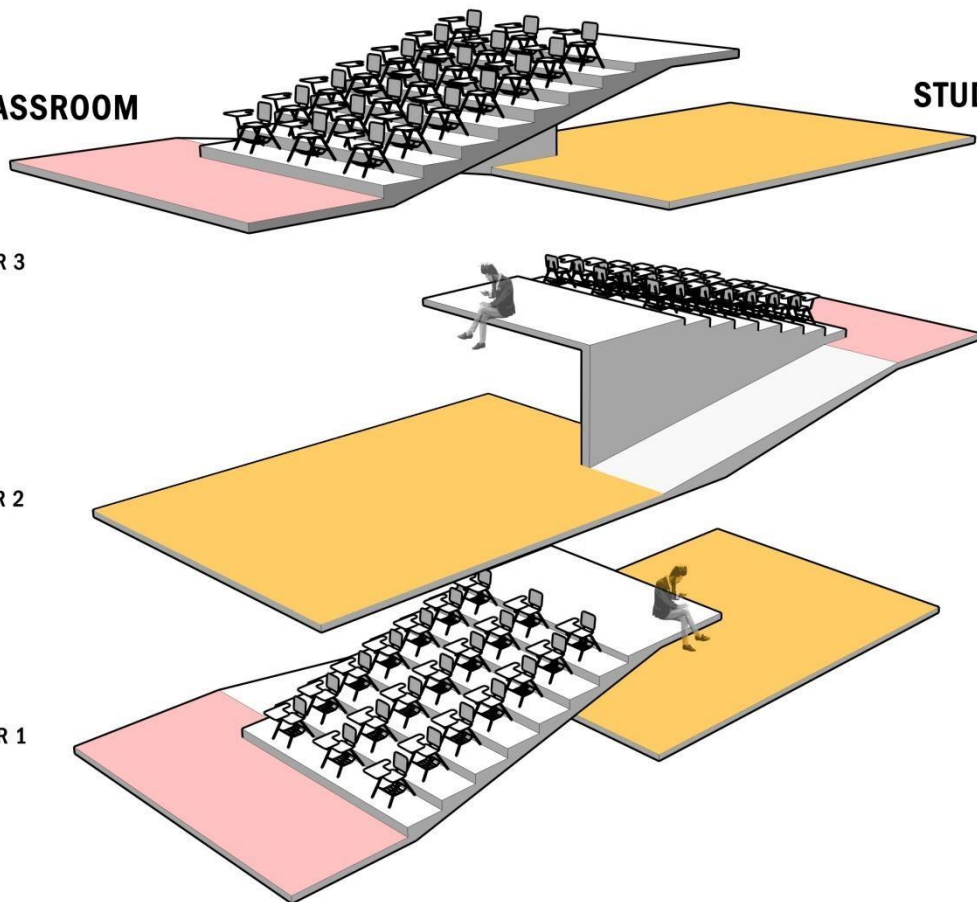
CLASSROOM

STUDIO

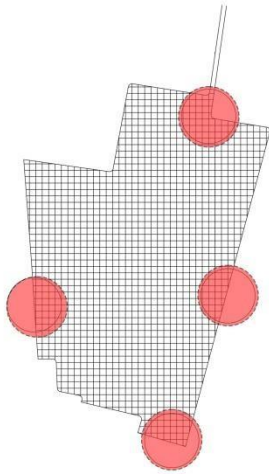
FLOOR 3

FLOOR 2

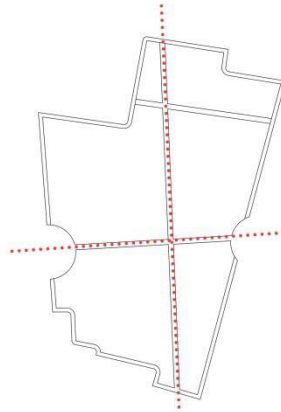
FLOOR 1



ENTRY AND ROADS

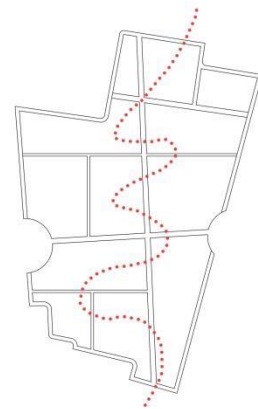


ENTRIES



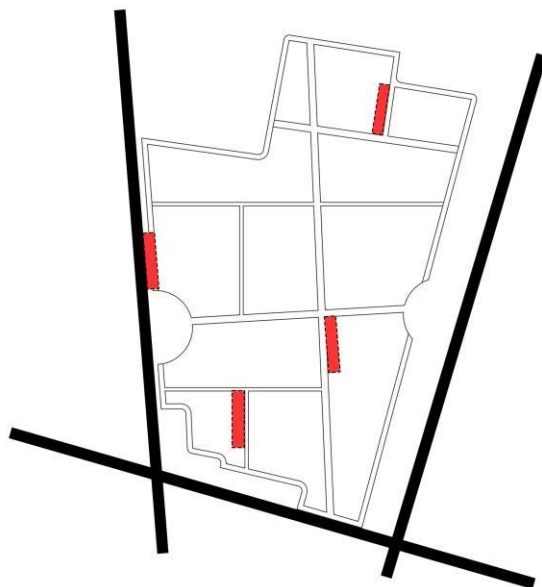
PRIMARY ROAD AND SPINE

INFORMAL PASSAGE PAVILLION LIKE

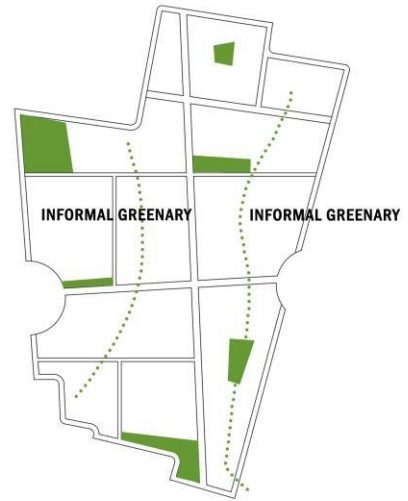


ROAD BRANCHES

ZONING STAGE 2



PARKING ZONES



GREEN ZONES

CHAPTER 6 – ARCHITECTURAL DRAWING

SITE PLAN



MAIN BLOCK, CAFÉ



ADMIN AND CAFE

ABISHEK PAULRAJ 3621003 2016-21 S21PROJ2-THESIS DEPARTMENT OF ARCHITECTURE

MUSEUM

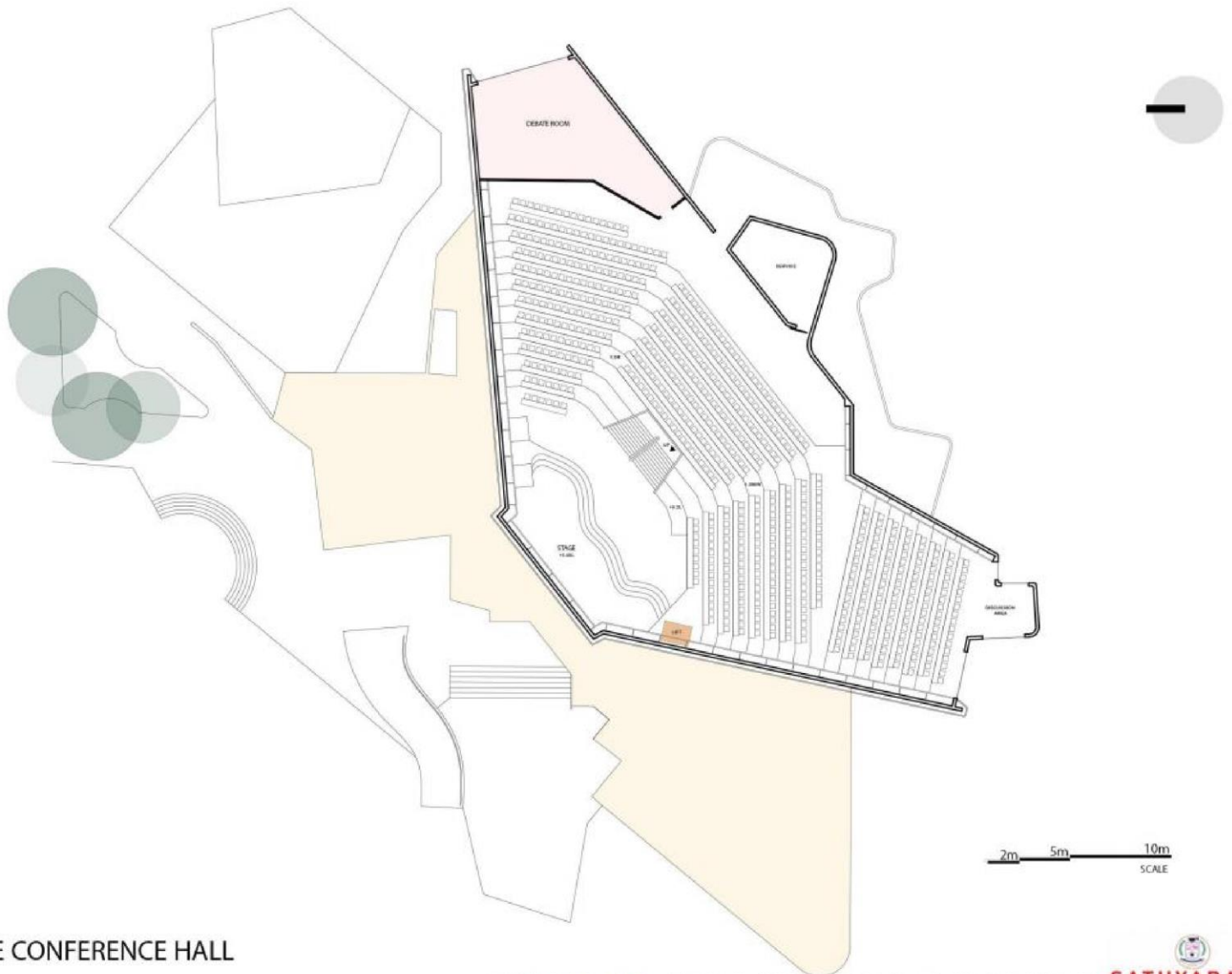


MUSEUM PLAN

NATIONAL INSTITUTE OF DESIGN ABISHEK PAULRAJ 3621003 2016-21 S21PROJ2-THESIS DEPARTMENT OF ARCHITECTURE



AUDITORIUM

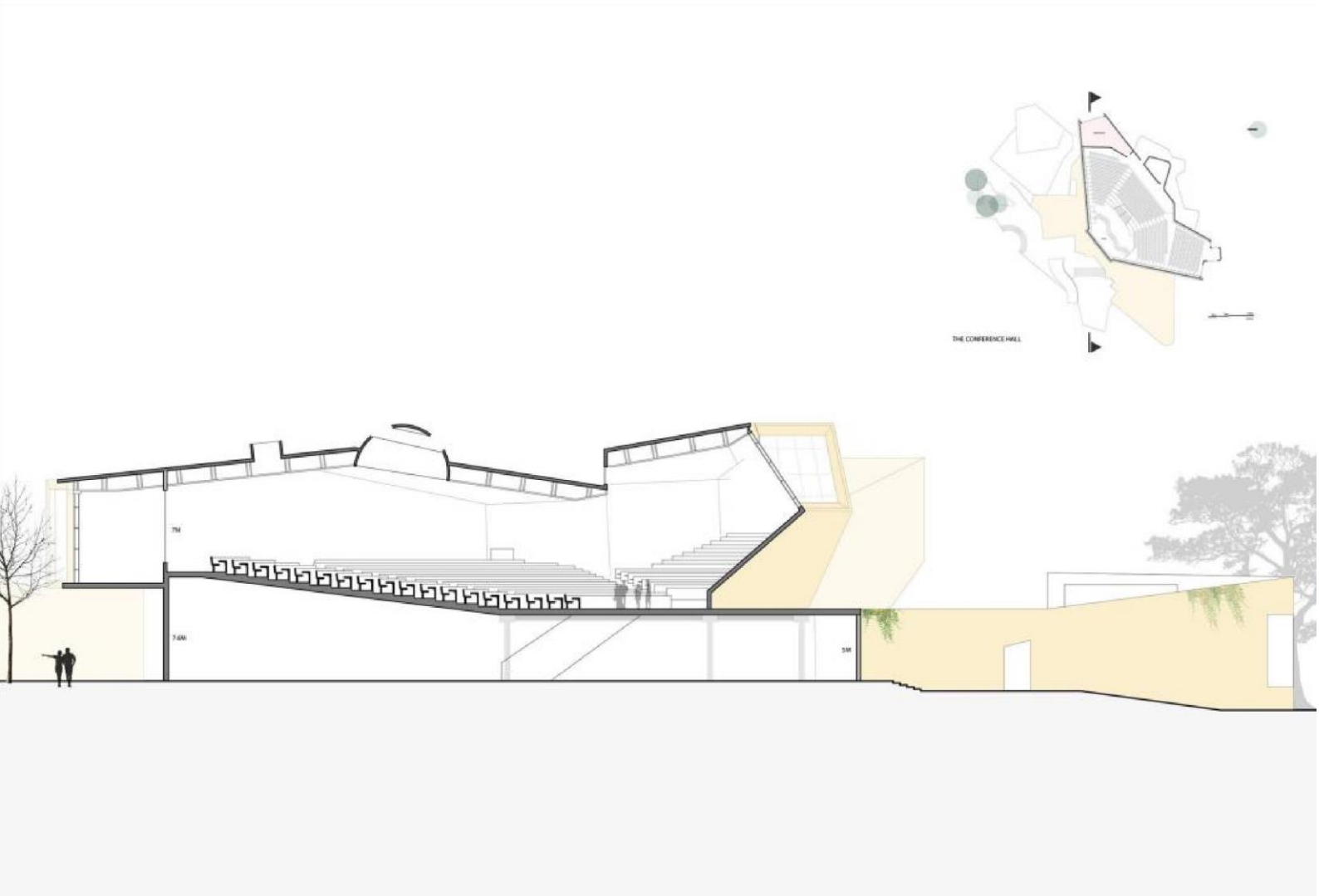


THE CONFERENCE HALL

NATIONAL INSTITUTE OF DESIGN ABISHEK PAULRAJ 3621003 2016-21 S21PROJ2-THESIS DEPARTMENT OF ARCHITECTURE

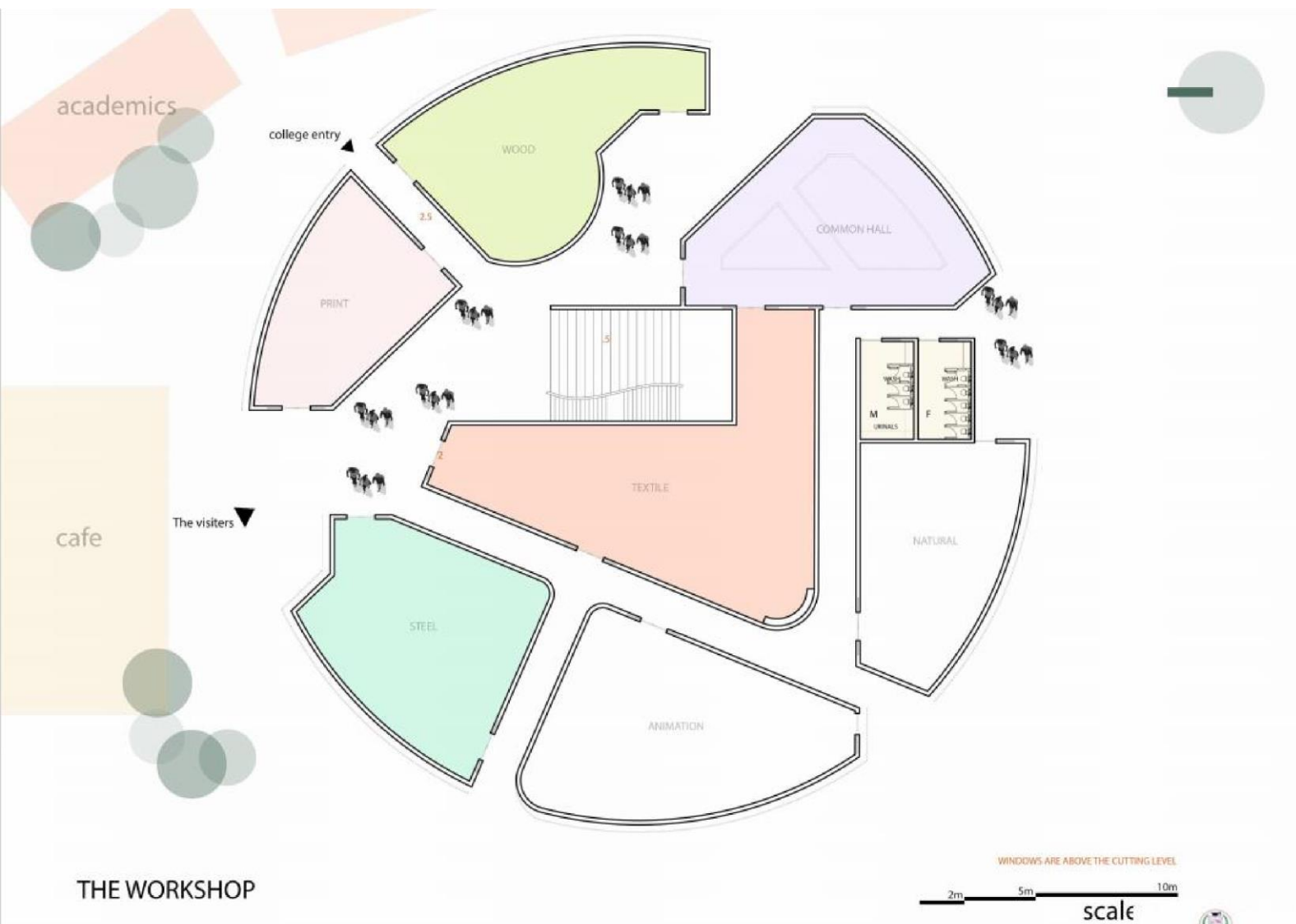


AUDITORIUM SECTION

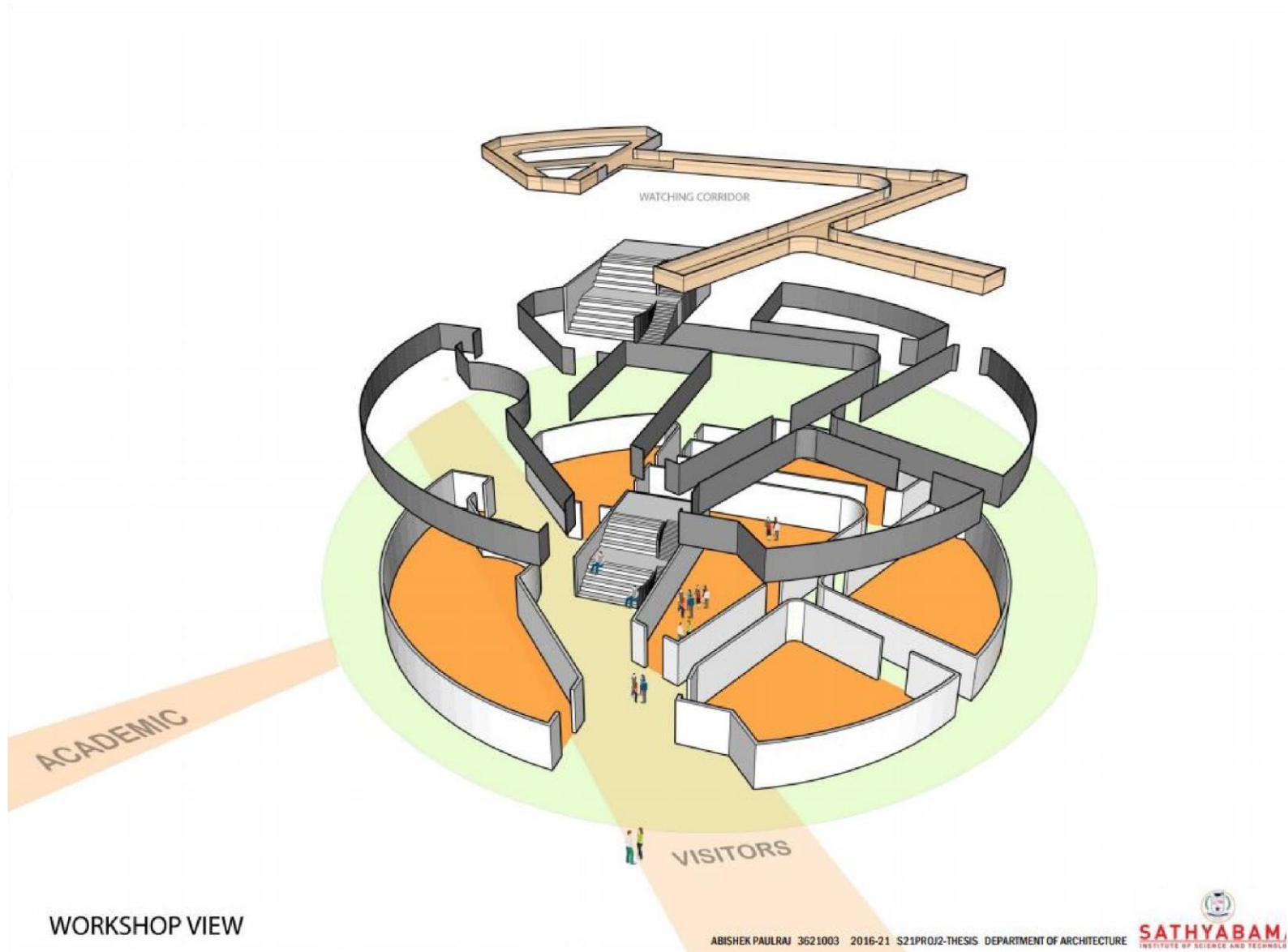


CONFERENCE HALL SECTION

WORKSHOP



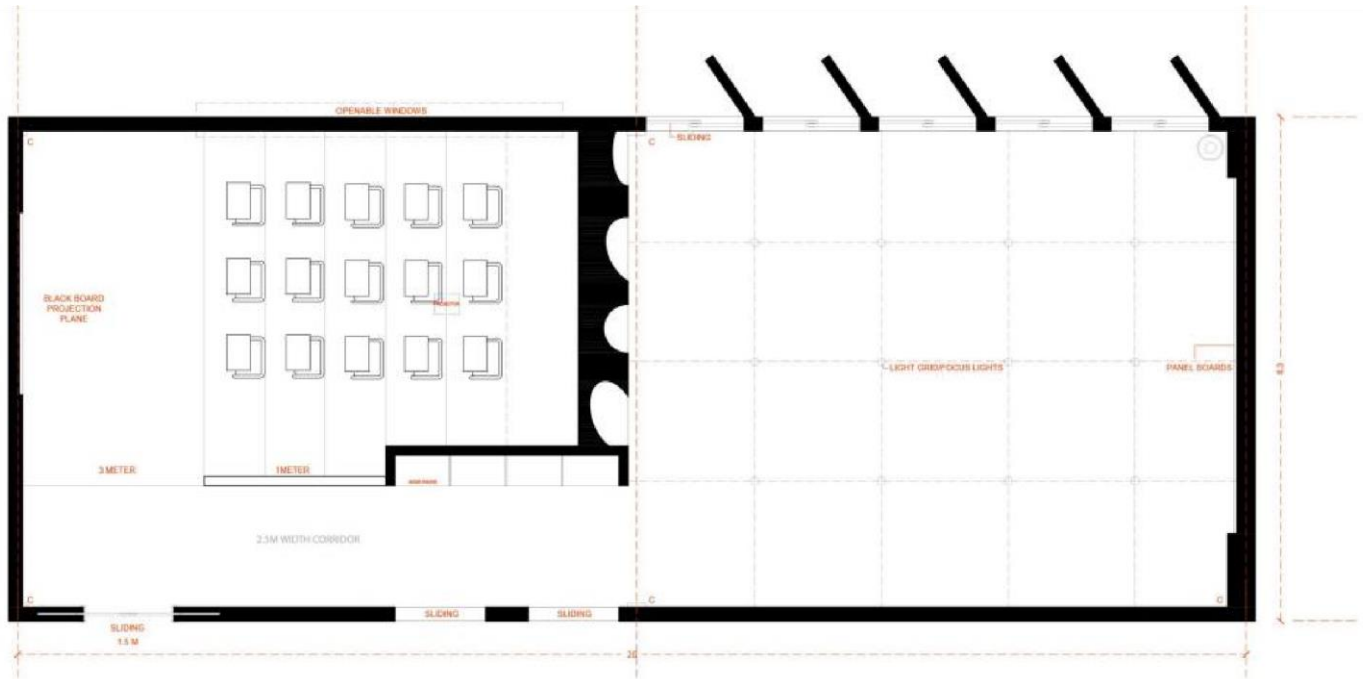
WORKSHOP ISOMETRIC



ACADEMIC BLOCK



CLASSROOM DETAIL



MATERIALITY



WOODEN VINYL FLOORING



GRID LIGHTING



RUGGED CONE CEILING



ALUMINIUM C COATED WINDOWS

CLASSROOM

NATIONAL INSTITUTE OF DESIGN ABISHEK PAULRAJ 3621003 2016-21 S21PROJ2-THESIS DEPARTMENT OF ARCHITECTURE



ACADEMIC BLOCK VISUALISATION

