

ISLAMIC CENTER

THESIS

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

By

**Ijaz
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**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



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DEPARTMENT OF ARCHITECTURE

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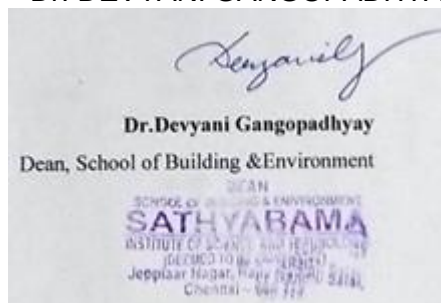
This is to certify that this Thesis Report is the bonafide work of **Ijaz Ahamed. J (3621031)** who carried out the Thesis entitled **"Islamic Center"** under our supervision from January 2021 to May 2021.

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Submitted for Viva voce Examination held on _____

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DECLARATION

I, **Ijaz Ahamed. J** hereby declare that the Thesis Report entitled “**ISLAMIC CENTRE**” done by me under the guidance of Thesis Internal guide **Ar.Arun** and **Ar. PALANIAPPAN**, at Sathyabama Institute of Science and Technology is submitted in partial fulfilment of the requirements for the award of Bachelor of Architecture Degree.

DATE:

PLACE: Chennai

SIGNATURE OF THE CANDIDATE

ACKNOWLEDGEMENT

I am pleased to acknowledge my sincere thanks to the 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 for providing me necessary support and details at the right time during the progressive reviews.

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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 Dissertation.

ABSTRACT

To propose a contemporary Islamic centre (i.e. the elements of Islamic architecture practiced in a contemporary style) but still serving the same purpose in the modern world. To analysis and understand the role and application of forms in Islamic style of architecture. It is a centre which houses a place of worship for the Muslims and also which caters to the social and community activities for the society. It also acts as an information centre for people in both religious laws and the way of living.

The Islamic university aims at bringing up a younger generation of Islamic scholars well-equipped with modern tools of knowledge.

Architecture developed in response to the functional needs of human beings. The Islamic faith produced a way of life and a set of belief and a major unifying factor in Islamic Architecture. Regarding form, materials or scale, the concept of art, rest on a basic foundation of calligraphy, geometry repetition and multiplication of elements. Water and light are also of paramount importance in Islamic architectural decoration as they generate additional layers of patterns.

Decoration in Islamic architecture is not limited to the covering of surface; it also helps in transformation of space.

TABLE OF CONTENTS

Title	Page No.
Bonafide Certificate	ii
Declaration	iii
Acknowledgement	iv
Abstract	v
List of Figures	xi
List of Tables	xii
Abbreviation and Notation	xiii
1. INTRODUCTION	5
1.1 What is an Islamic Centre	5
1.2 Why an Islamic Centre	5
1.3 Scope	5
1.4 Objective	6
1.5 Site Justification	6
1.6 Methodology	7
2. LITERATURE CASE STUDY	8
2.1 INDIAN CONTEXT	
2.1.1 National Institute Of Faith Leadership	8
2.1.2 Islamic Cultural Centre	14
2.1.3 India Islamic Cultural Centre	20
2.2 INTERNATIONAL CONTEXT	
2.2.1 Marmara University Faculty Of Theology Mosque	28
2.2.2 Qatar Faculty Of Islamic Studies	32
3. AREA ANALYSIS	35
4.1 Area Standards	35
4.2 Area Requirements	44

5.SITE ANALYSIS	51
5.1 Site analysis	51
 6. CONCEPT	
6.1 Concept	54

CHAPTER 1

1. INTRODUCTION

1.1 WHAT IS AN ISLAMIC CENTER?

It is a Centre which houses a Place of worship for the muslims and it is also a centre which caters to the Social and Community Activities for the Society.

1.2 WHY AN ISLAMIC CENTER?

1. In the Present state of affairs involving the misunderstanding between Islam and the west is the need of the hour.
2. This Centre is not only place of worship but also a social an community centre for the Society.
3. It also acts as an Information Centre for people in both religious laws and the way of living
4. Undertake, organize and facilitate studies, symposia, lecture and research on a comparative basis, of the arts, culture, and traditional life styles of Islamic peoples in other parts of the world and spread a knowledge and appreciation thereof among the people of India as a whole;
 - (i) Promote the development of knowledge and skills in the contemporary arts, sciences, technology by offering career guidance and instruction of young minds and reorganize cultural and educational exchanges of scholars and students
 - (ii) Promote economic, educational, cultural and social advancement of Muslim community in India, so that they with their fellow countrymen contribute effectively in making India into a great society.
5. Undertake and promote the publication of newsletters, journals, books and research papers for the exposition of cultural patterns and values prevailing in different parts of the world.
6. Establish and maintain a library and information service, research centers to promote the objectives of the Society.
7. Constitute or cause to constitute regional center in India and abroad to promote the objectives of the Society.
8. Co-operate with other institutions and interested bodies for the purposes of helping the cause of promoting greater understanding among peoples of different cultures in India and abroad

1.3 SCOPE

- The scope of this topic enable to learn about both the Islamic Architecture and sustainable architecture.
- To learn about how to incorporate the modern architecture in Islamic Architecture

1.4 OBJECTIVE

- To run the Mosque, provide religious services and religious instructions and guidance to the Muslim Community for their moral development and to meet their religious requirements.
☐
- To provide education for all sections of the community in order to lead life in the current multi-cultural Society as a muslim.
☐
- To develop and provide social and cultural services in order to preserve the community identity and to create social and cultural awareness amongst the Muslims and wider Society.
☐
- To provide guidance and resource service, particularly to educational insitutions and generally to all communities irrespective of their religion.
- To provide advisory services to solve educational, cultural and social problems of the community.
- ☐ To provide social welfare services to the various groups of the community and to provide the humanitarian aid and support in all levels of the society.

1.5 SITE JUSTIFICATION

- ☐ ILAYANGUDI, SIVAGANGAI DISTRICT, TN

Ilayangudi is an Islamic Community located in sivagangai district.

NEAREST ISLAMIC COMMUNITIES:

- Pudhur (2kms from ilayangudi)
- Keelayur (2.5kms from ilayangudi)

Ilayangudi has a population of 24,767.

MUSLIMS - 69.96 %

HINDUS - 26.71 %

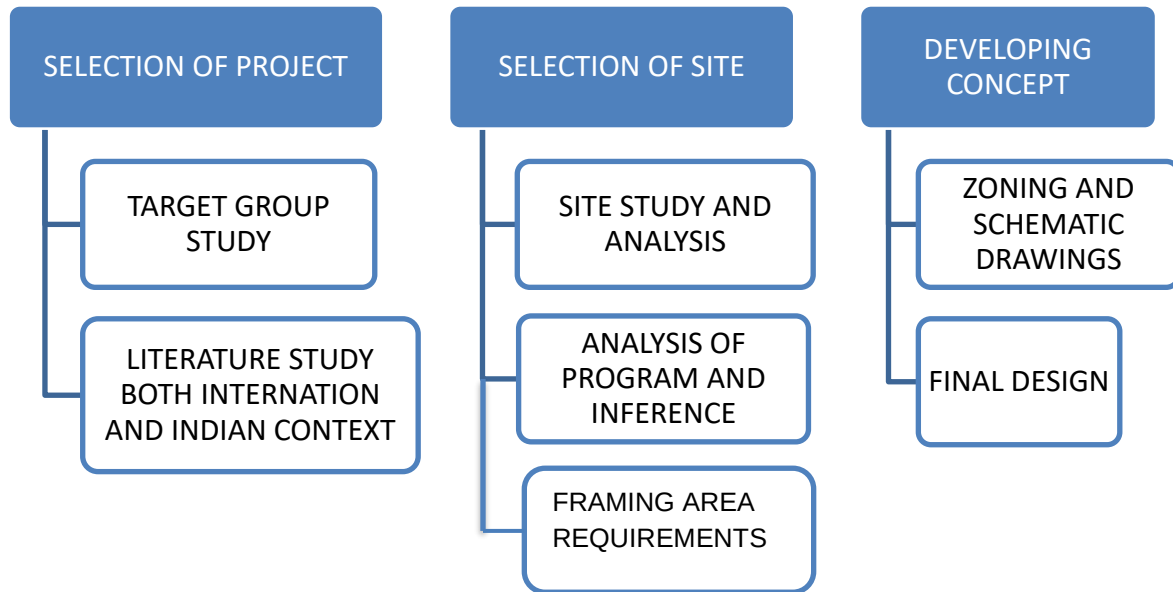
CHRISTIANS - 3.20 %

Serving radius - 2kms from the nearest Islamic Communities.

Centrally located among 4 islamic communities - Pudur, Keelayur, Salai and Sothukudi.

Ilayangudi has **NO ISLAMIC CENTER** with Madrassa residing facility.

1.6 METHODOLOGY



CHAPTER 2

LITERATURE STUDY

2.1 INDIAN CONTEXT

2.1.1 National Institute Of Faith Leadership

Location: Ravalli , Uttar Pradesh

Architect: Archolm Consultants

Year of completion: 2014

Site area: 16,000sq.m

Built up area:4950 sq.m

Topography: flat land

Climate: extreme climatic
conditions with hot summer and cold winter

Developed and maintained by: The national institute of faith leadership dar ul
Uloom.

About the school:

No of students:70+50 madrassa attending students

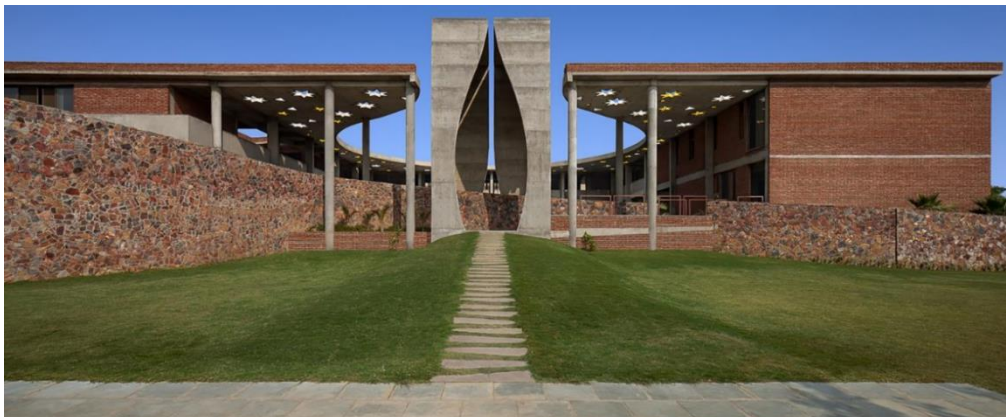
Courses offered: 2 years diploma course

English language preparatory course

Islam and contemporary world

Mathematics, social studies and science.

Computer application



Access to the site:

The site can be accessed by delhi – meerut highway ,uppper ganga canal road.

Nearest railway station:

Gaziabad railway station (20kms from the site)

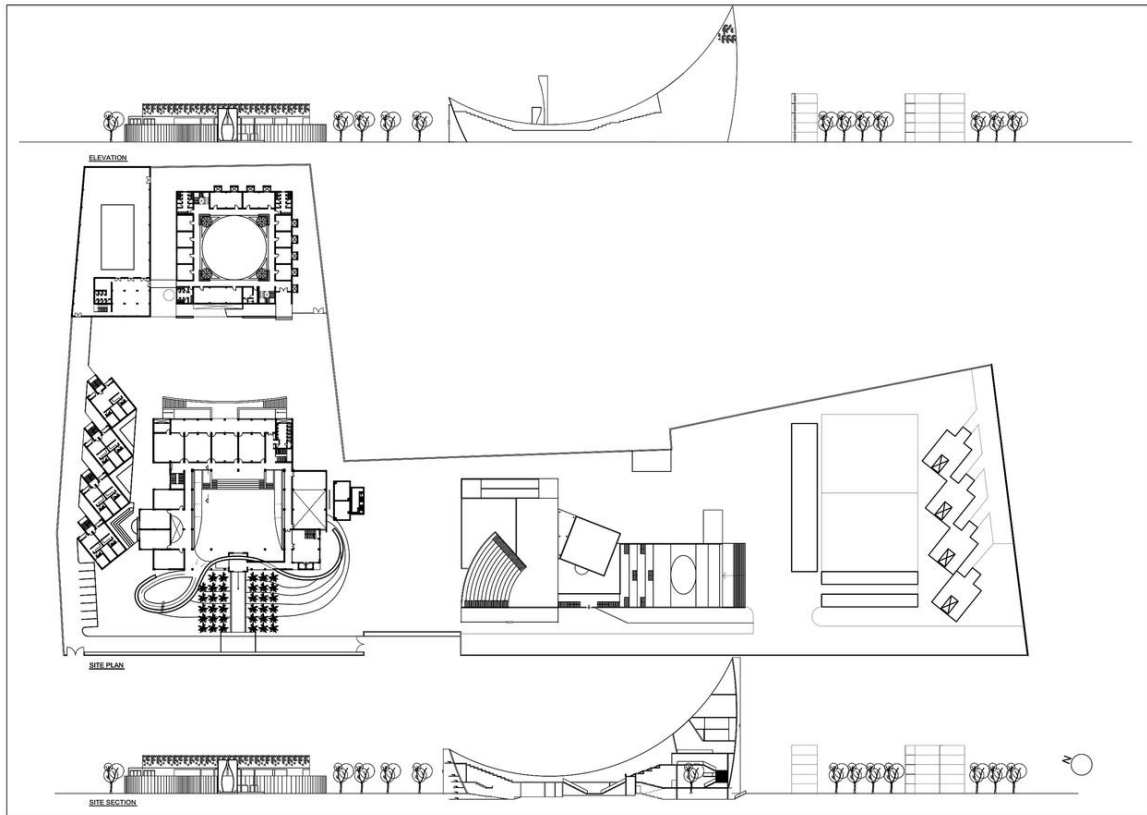
Neighbourhood context:

Isolated campus in the middle of a vast backdrop of serene green fields.

Nearest town is ravalli, industrial town with most of muslim community.

About the campus:

The campus houses the entire set of activities as classrooms, library,prayer hall,staff rooms,dinning area and dormitory.



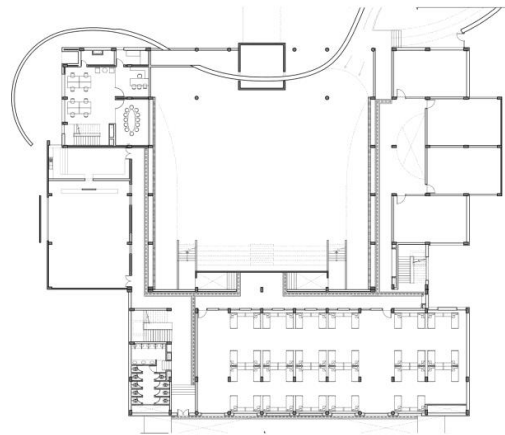
Academic block:

The academic block has 3-levels.

There is a total of 15 classrooms.

Each classroom can accommodate 20 students.

4-classrooms are used for regular madrassa classes.



Lower ground level:

This level houses the academic office, madrassa, classrooms, dining area and dormitory for students.

The site is raised for 1.8m from ground level, to create this level.

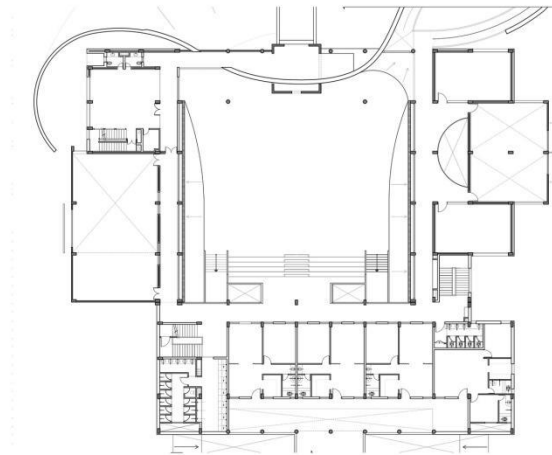
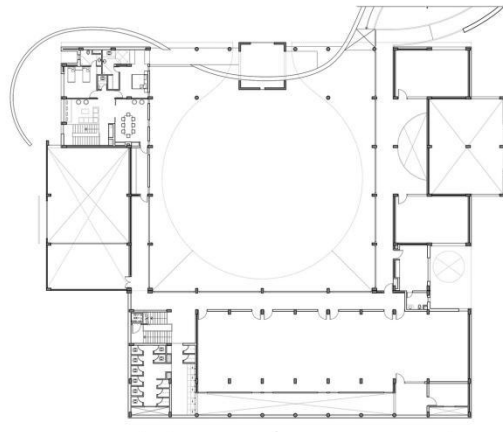
Upper ground level:

This level houses the lobby, prayer hall, library, regular classrooms and the courtyard. There are five classrooms at this level for 1st year diploma students.

First floor level:

This level houses the computer lab, mezzanine level of prayer hall and the classrooms for 2nd year diploma students.

Each level is connected through a ramp. Restrooms are located at the rear end of the campus.



Library:

The library is located on the ground floor.

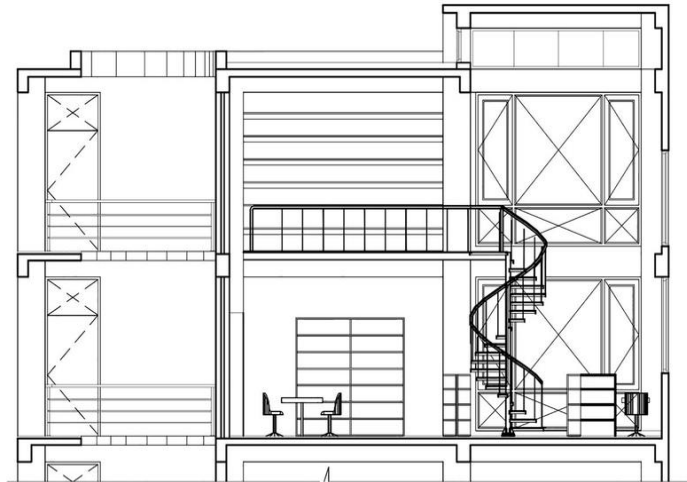
It is a double height space. reading area and racks are on lower level. The mezzanine floor

can be accessed by a spiral staircase. the mezzanine

floor has book racks. the library

contains total of 7,000 books in english, arabic

and urdu. The reading area is naturally lit and ventilated. O.T.S is provided , which channelise air flow through the space.

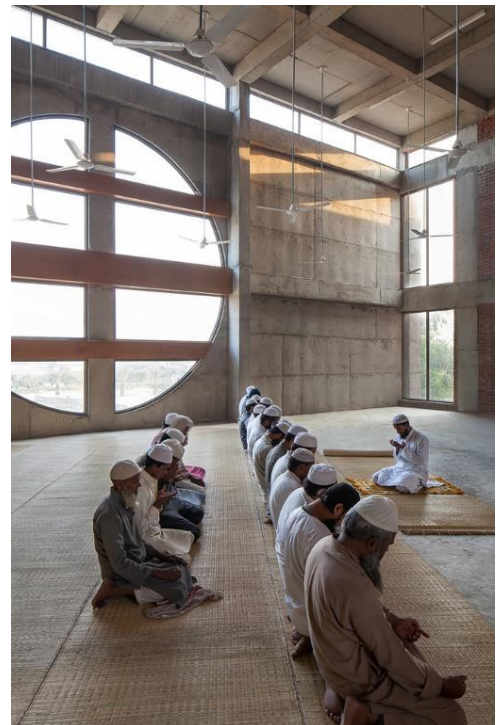


Prayer hall:

The prayer hall is located on the ground floor and it is a double height space. The prayer hall can accomodate 100 worshippers at a time both at the ground floor and mezzanine combined . the prayer hall is naturally lit and ventilated.

The materials inside the prayer hall are also exposed

And the floor is covered with mats.



Dormitory and dining hall:

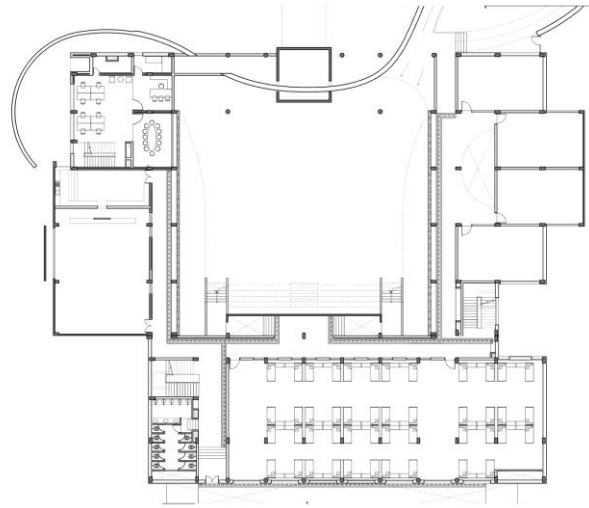
he dormitory and the dining hall are located on the lower ground level.

Food is prepared outside the campus and transported here.

The dinnig area has a pantry.

Students have their meal by sitting on the floor as it is a religious practise.

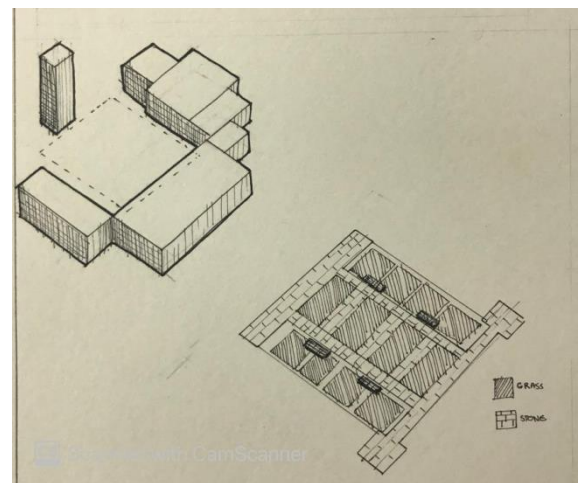
The dormitory can accommodate 50 students. Storage facilities are provided near the bed. The dormitory is well lit and naturally ventilated, 6 baths and 8 toilets are provided in lower ground floor level.



Zoning and planning:

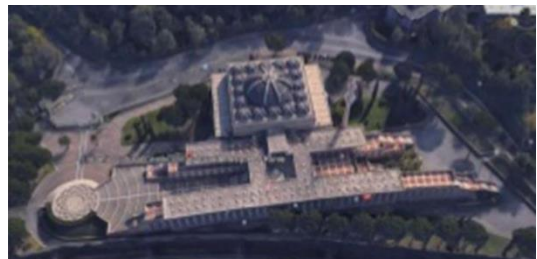
The main academic block is mass with a void(courtyard). It is planned symetrically, axially oriented with rectilinear landscape in courtyard.

The lower ground floor houses the accomodation facilities. The lobby and reception are in the ground floor. The classrooms, prayerhall, library are planned in the ground and first floor.the form employed is a basic geometry of interlocking cuboids as containers . the introverted design seems to have NO LOOKING OUT but LETTING IN. contemporary design with visual reference of traditional islamic elements like cutout shapes of stars and moon.



2.1.2 Islamic Cultural Centre, Rome

- Architects- Paolo Portoghesi, Sami Mousawi, Vittorio Gigliotti.
- Client- Islamic Cultural Centre of Italy.
- Location- Rome, Italy.
- Design- 1976
- Completed- 1992-1995
- Site- 29,915 m²
- Total floor area- 19708 m²
- Built up area- 20%
- Open space- 80%.



Introduction:

The Mosque and Islamic centre of Rome was officially inaugurated in 1995 after 20 years of design and construction when the idea of its establishment was envisioned as an international competition in 1976.

Objectives:

- To provide an architectural setting where Muslims can perform the prayers and to accommodate a wide spectrum of educational and cultural activities such as lectures, seminars and exhibitions.
- To provide the Italian community with a clear and better understanding of Islam.
- To provide social and socio-religious services to the Muslim community.

Climate and Site:

Climatic conditions: Generally, Rome enjoys a mild weather.

Relative Humidity: 50% to 60%

Winter Temp: 4 to 5 degree C

summer Temp: 28 to 35 degree C

Annual precipitation: 84cm

Site Context:

- The Mosque and Islamic Cultural Centre of Rome is located to the north, approx. 5 km from the historic core of the city.
- It is situated in the Parioli district.
- The site of the project is considered a historically significant area although it is relatively far from the historic centre.

Site Topography:

- The area was a dump site at the foothills of Villa Ada Park
- The site of the project is nearly triangular with very slight slope toward the

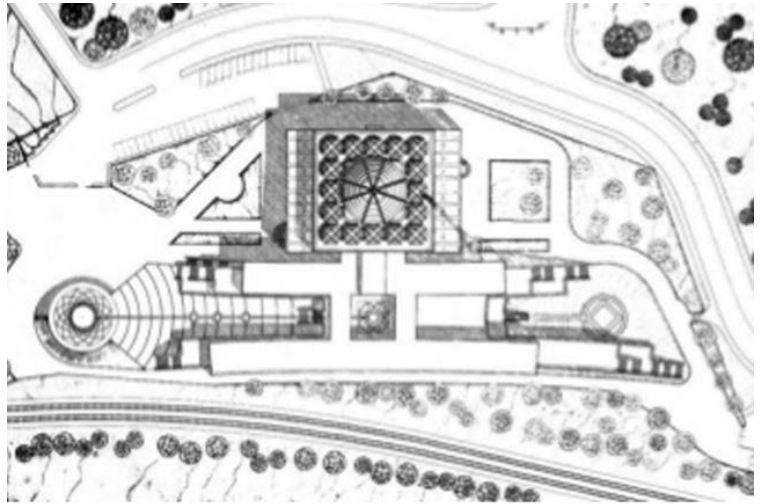
southeast

with an area of 30,000sq.m

- Via della Moschea is the road that leads to the centre
- It was especially paved for accessibility purposes based on the request of the authorities of Rome.

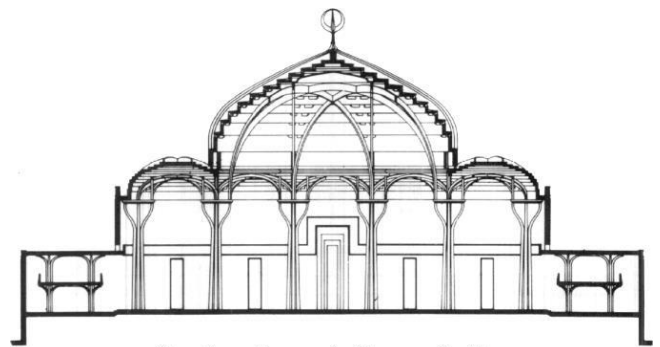
Site plan:

- Prayer hall-2500 worshippers of which 500 is for females.

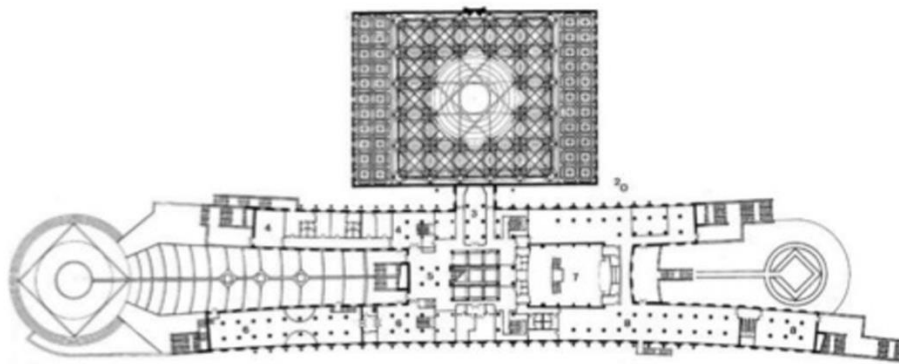


Site plan

- Smaller prayer hall- 150 worshippers.
- Educational sections.
- Library
- Classrooms
- Conference
- Auditorium-400 people
- Exhibition area
- Two residence for Imam and Visitors.



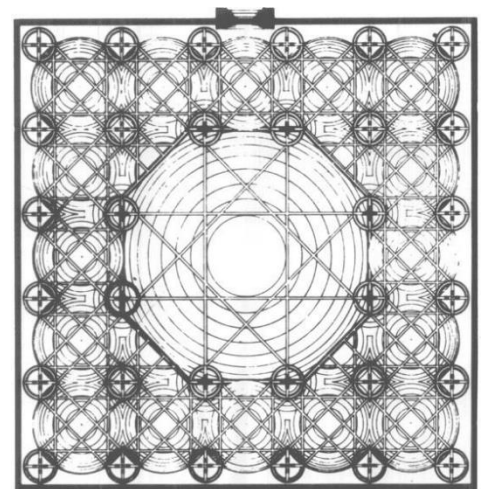
Section through Prayer hall



1. Main prayer hall
2. Minaret
3. Daily prayer hall
4. Islamic cultural centre
5. Reception hall
6. Islamic Library
7. Conference
8. Meeting rooms and museums
9. Fountain

Planning:

- A square or rectangular hall directly connected to a courtyard with its roof sustained by pillars subdividing the space into blocks.
- The central part of the Rome Mosque , reserved for men's prayers is formed by a large central cupola and sixteen smaller cupolas.
- As regards to the Architectural elements adopted, the intention was to create with specific means of modern



Prayer hall ceiling plan

architecture an effect of lightness, dematerialisation and paradox.

- Pillars and arches prefabricated in white concrete, are built with special mixtures of white cement and crushed stone and white marble sand from carra.
- The concept of columns is a hand risen to Summon.

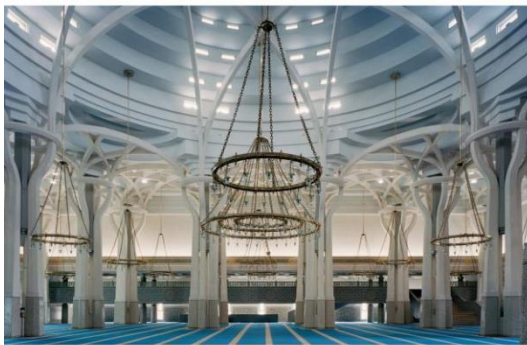
1. Sahan
2. Multi purpose hall
3. Conference hall
4. Parking



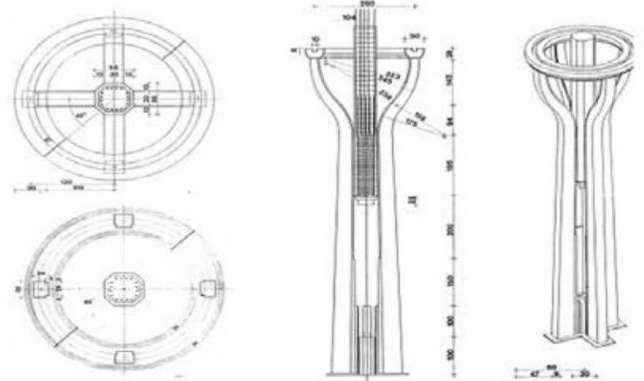
Section



West Elevation



The centre Dome



Column Detailing

Planning:

- The piazza of the Islamic centre is along the main approach from the north.
- The domed volume of the prayer hall is seen on the left..
- To the right, steps lead to the cultural centre.
- There are 44 steps that leads to the Mosque.
- The Mosque is open to all public and thats why the entry to the mosque is separated.
- The main entrance is through one of the three courtyard spaces formed between the two, two storey rectangular wings which makes up the H-block.
- The staircase leads to the Reception hall.



Structure:

The interior and exterior structural components throughout the complex also serve as decorative elements. In the Prayer

hall, four branches of the main concrete columns shoot out to form a web of arches and ribs that articulate the area beneath the domes

The web like rib which highlights the underside of the central dome during the construction. It was built using both pre-cast and cast-in-site elements.

Unlike the columns which support , the ribs are purely decorative.



Materials:

- A wide variety of materials have been used in the complex.
- For the rendering of facades and exterior finishes Travertine and Peperino Romano were used with classic Roman brickwork.
- Exterior spaces are either tiled with typical Roman Stone and Marbles.
- Roads in the premises of the centre are paved.
- For the flooring of Interior spaces Marble finishes were used.

- The Sahan and Riwaq floors are finished with strips of Travertine based on the modular design 3.60 x 3.60 m. with brick paving in between.
- Lead was used as a sheathing material for the Domes.
- Interior finishes of the Domes of the main Prayer hall were made of particular coating of Encaustic stucco.
- Mosaic Stucco decorative panels in the main Prayer halls were made by Moroccan and Turkish craftsmen.
- Office spaces, classrooms are light colour painted that breaks monotony, while Marble finishes are used for the floors.

Analysis:

- The landscape express the diversity inherent in the unity of Islam. Thirty two columns do exist in the main Prayer hall, these branches are surprisingly decorative rather than structural. Another symbolic reference appears in the central 20m dia Dome. It rests on seven step concentric circles which are intended to represent the seven Sacred Hills.
- Prayer hall is on the raised area and below with ablution area thus separating from disturbance.
- The project is a synthesis of elements that are derived from the historic references of Islamic, Roman and baroque architecture. The incorporation of these elements into unified whole results in a unique landmark that speaks to the Islamic and Western worlds.
- It has vast open area by through we are entering gives whole view of the building.
- Entries are to the first floor while main entry is the middle one via courtyard reaches reception
- Gallery space is used by female worshippers during the pray time.
- Library space and Museum is placed away from Prayer hall thus preventing the noise

2.1.3 India Islamic Cultural Centre

Why IICC was started?

The community people thought that there should be a centre

- To promote mutual understanding and tolerance among the diverse citizens of India.
- To remove misunderstanding about Islam and its teaching.
- To promote an awareness among Muslims.
- Delhi being the capital acts as a showcase to the foreigners about Islam in India.



Layout of IICC:

- In 1980, Government of India allocated a land to the Islamic community for construction of Islamic centre.
- The site had a bungalow that belonged to the British region, it was demolished and the foundation was laid by former Prime minister Mrs. Sonia Gandhi on 24th August 1984.
- The construction took place slowly for a period of 22 year, completed and was inaugurated by Mrs. Sonia Gandhi on 12th June 2006.

Location : Lodhi road, New Delhi

Project : India Islamic Cultural Centre.

Architect : SKDAS Associated Architects

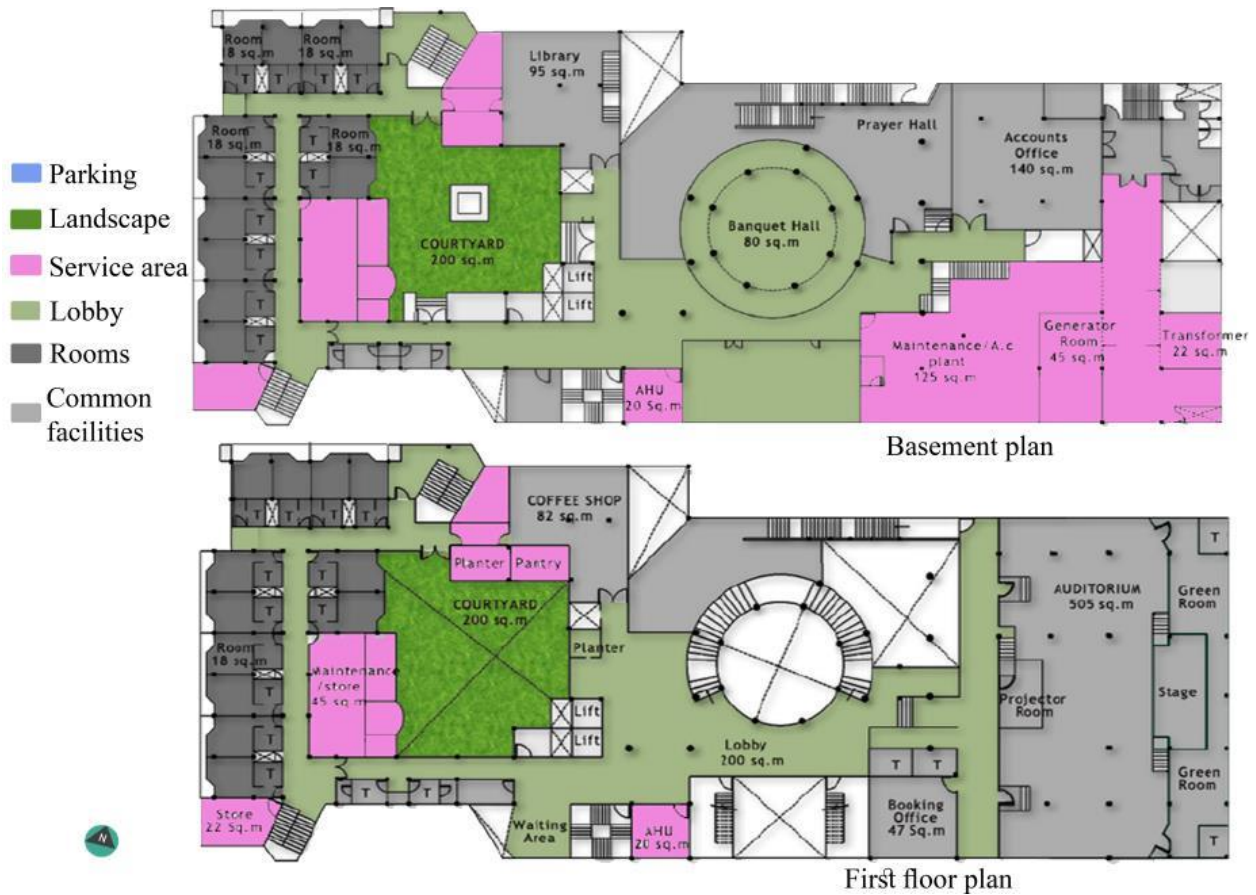
Total area : 7120 sq.m

Built up area : 5430 sq.m

Built up space : 24%

Open space : 76%





Access to the site:

- The accessed road to the site is Lodhi road.
- The nearest bus stand is Lodhi stop which is 100m away and it can be accessed through Metro. The nearest metro is Jor bagh and Rajiv chowk which is 2 and 3.2 kms respectively.
- Nizamuddin Railway station is 9.5 kms far.
- Auto facility is also available.

Site Surroundings:

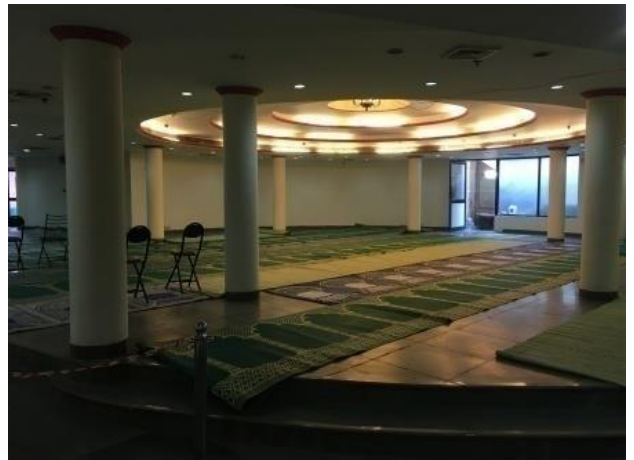
- The Lodhi road is the main road and traffic flow is heavy.
- The site is located in a Institution area, it is surrounded by Government and private Institutions like Indian International centre, Lodhi Garden, Indian Habitat centre, Indian Social Institue etc
- To the adjacent side there is a Garden view from the site.

Site entry:

- The entry to the Site is from south side.
- There are 3 main entries in the south side which can be accessed by the public.
- Also there are 2 service entries in the north side which can't be accessed by the public for security reasons.

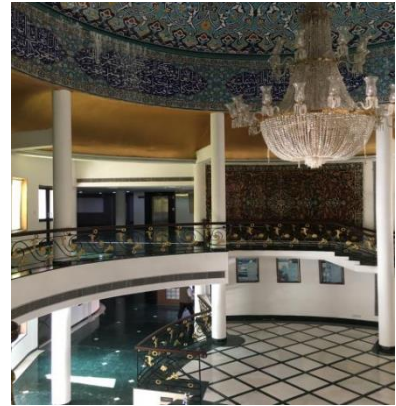
Zoning and Planning:

- The Lounge/ Banquet Hall is the central emphasis around which the other typologies are planned.
- Segregation of spaces are done based on their use.
- The concept is to bring mixture of Contemporary with Islamic style
- Use of Dome and arches facade represents Islamic style.
- The lobby also acts as a space divider means to the left there are Rooms and administrative spaces which is a privacy zones and to right is Auditorium and Restaurant which is semi-privacy zones.
- There is a courtyard to the right which allows more lighting to the rooms and the Administrative



Banquet hall and Lounge:

- The banquet hall is present in the basement above which lobby or pedestal of Double height is present in upper two floors.
- Its a circular hall supported with 8 circular columns of size 400 mm dia.
- There is a small prayer hall adjacent to the banquet hall which can accommodate 50 people and used for daily prayer's.
- The Banquet hall is used for friday prayers due to insufficient space and can accommodate 120 persons.
- There is no proper lighting in the hall and its air conditioned.
- The pedestal or lobby is properly ventilated.
- A large Glass panels are used to which allows the natural light to enter and also resemblance the contemporary style.



Auditorium:

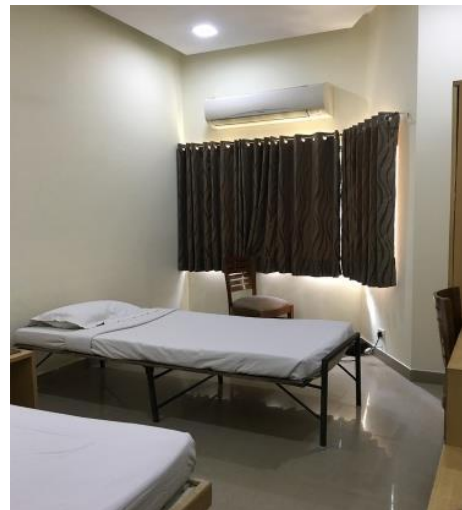
- The Auditorium is in first floor and its 505 sq.m in area
- The capacity of the auditorium is 300
- Its air conditioned with 2 green rooms of all facilities.
- The auditorium is mostly used by the school, Institution etc and also used to screen film, speech by religious scholars , during large meeting, cultural activities etc.
- Fibre board has been used to minimize the echo.
- The seating layout is curved shaped and is 0.15m diff to another layout.

Library:

- The Library is in 1st floor and is 95sq.m in area.
- It contains Religious books as well as Academic books also.
- There are approx. 1000 books.
- There are two columns running in between the circulation space which they have converted it to book racks.
- Its fully air conditioned and has only 16 seating arrangements.
- The library can be accessed by the public also on issue of membership card.

**Conference Hall:**

- The Conference hall is generally used for meetings and there are 2 conference halls with a common lobby and a small pantry.
- The 2 conference halls area are 90 and 50 sq.m.
- The bigger conference hall can accommodate 85 persons while the smaller one can accommodate 45 persons.
- Both are fully air conditioned rooms with LCD projector and the bigger hall also has a small stage.

**Restaurant:**

- The Restaurant is in Ground floor and mainly service for the people who stay in the rooms.
- It can occupy 90 persons in which 12 seating's are private space.
- It is fully air conditioned and the kitchen is in the basement to the right of
- There is also a separate coffee shop in the first floor which can accommodate 50 persons.

Rooms:

- There are 36 double bed rooms of 18 sq.m each.
- 12 rooms in the basement ,12 rooms in the ground floor and 12 in the first floor.
- Each room gets proper lighting due to the courtyard and the amphitheatre.

**Amphitheatres:**

- Amphitheatre is situated on the west side of the site.
- It is used Banquet parties, reception, dining, outdoor activities, birthday parties etc.
- The capacity of amphitheatre is 200-250 persons.

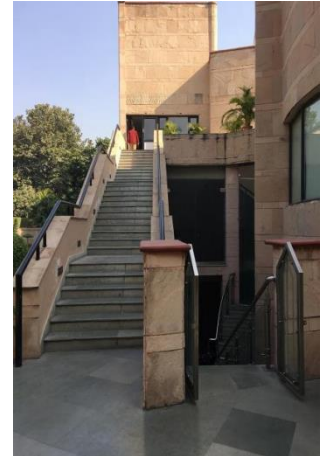
**Parking:**

- Inside the site there is only parking for 8 cars.
- No bike parking inside the site.
- During meetings, functions etc people their vehicle outside the site in the pavement or in the lane on the back side of the site.



Other services:

- Service ducts runs through the building and space provided is 800m for a man to go in.
- Fire extinguisher is placed in every spaces and also fire water sparkle is placed near the rooms and also near auditorium.
- Fire detector sensor is also placed in every space.
- Toilets are placed for men and women in every floor.



A small ablution space of 4 seating is given.

- Landscape and planters are used to keep the micro climate cool.
- AHU, back up facilities, are in the basement.
- The building has separate entry to services like kitchen utility, etc

Analysis:

- Dome, a single element dominant the entire building and also represent it as Islamic structure.
- Large windows have been used instead of arches opening or jaali work to break monotony of the structure and also to have a contemporary style.
- Segregate the spaces according to the use of the spaces.
- Services provided should be easily accessible while repairing.
- Each and every space should be interacted with each other by means of function.
- Open space should be generous.
- Natural light should be allowed to enter the building wherever possible.

2.2 INTERNATIONAL CONTEXT

2.2.1 Marmara University Faculty Of Theology Mosque

Architects: Hassa Architecture Engineering Co.

Area: 30000 sq.m Year: 2015



The Project has a 30.000 sqm built area consisting of an urban square, a mosque, which can accommodate 4500 worshippers, and a cultural centre under the mosque and square.

The culture centre including classrooms, conference hall, exhibition spaces, book cafe and cinevision rooms, was considered as an attraction centre of social life. With all these functions, the project constitutes the concept of “complex”, group of buildings gathered together in the urban scale with its urban square.

Therefore, this mosque was designed in a convenient way in relation to its precedents and as a reaction to “classical mosque-modern mosque” contradiction, in order to create a new style with new materials. The mosque, dodecagon plan, was built as steel construction above a reinforced concrete base. The central dome, 35 m in diameter and 35 m high, forms by joining 12 steel columns, ascending step-by-step.

Qibla Wall:

Qibla wall which facing the west side. expect the qibla walls all the western walls inside the prayer space are design fully with pointed arch design with jalli works which in focus to allows the natural lights inside the prayer and also the jalli works pattern creates the pattern shadows inside the mosque.



STAIRCASE AND DOORS:



Staircase design fully designed in traditional style. The jalli works in the side of the railing. All the doors are wooden doors with islamic calligraphy in the doors and in the opening arches and they set lighting inside the calligraphy panels to highlight the words in the panel.

Minaret:

Minaret is one of the identification structural symbol of mosque which is used to call for prayer.

The design of minaret was based on modern concept. They converted the islamic element into model structure.

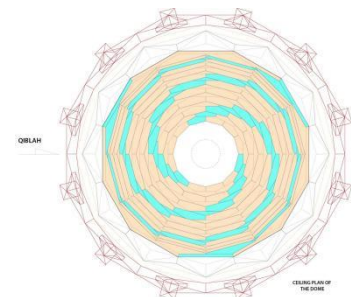


Entrance:

They have wide opening entrance with pointed arch design concept and also they have don jalli works in the wall which also allows the lights to entered inside the mosque. Jalli works in the ceiling which create the shadow pattern in the floor and also act as an decorative elements.

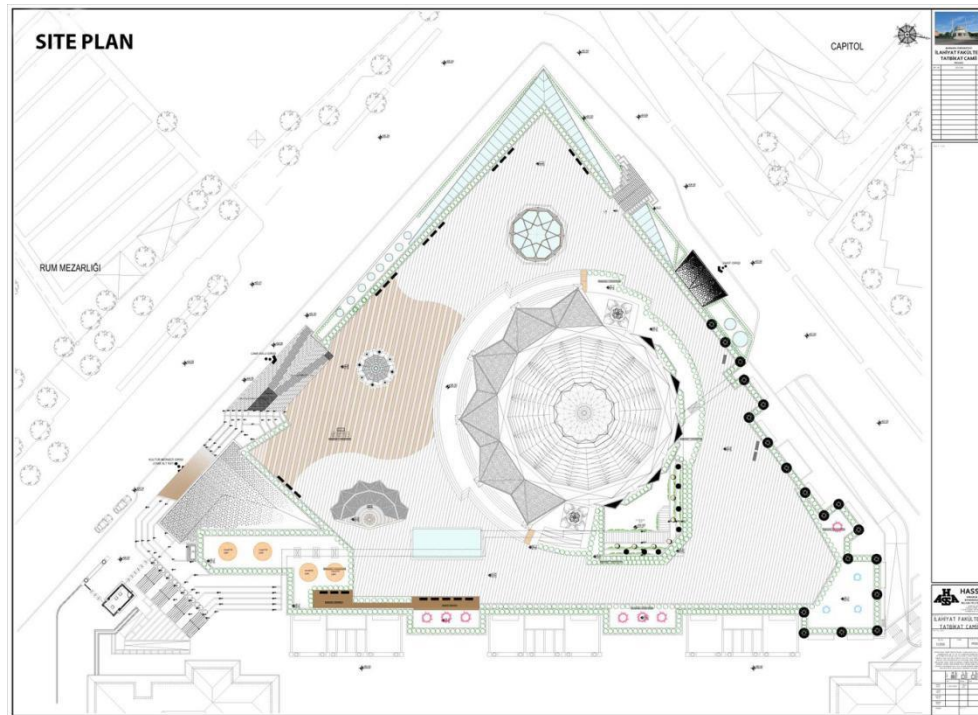
Dome Structure:

Dome structure are the main elements of the mosque. The dome structure contains the atrium in the top of the dome which allow to light to passes in the center of the prayer hall. Interior of the dome designed likes as the brick pattern arranged in circular form and also they provide some glass opening in the side to allows light and also to glow the entire dome structure.



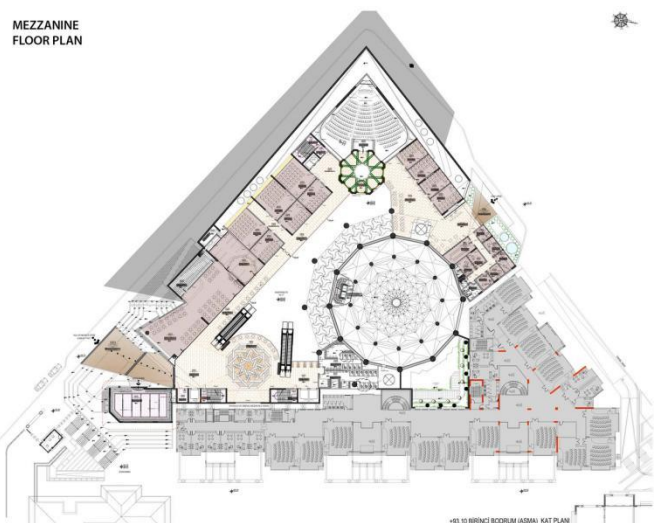
Prayer Hall:

Prayer hall can accommodate 4000 worshippers. The flooring is fully furnished with matt which is suitable material for putting your head on the floor during salah and it is provided with seven pointed arch openings which represent the seven gates of heaven. The ceiling design is a 3D triangular pattern.

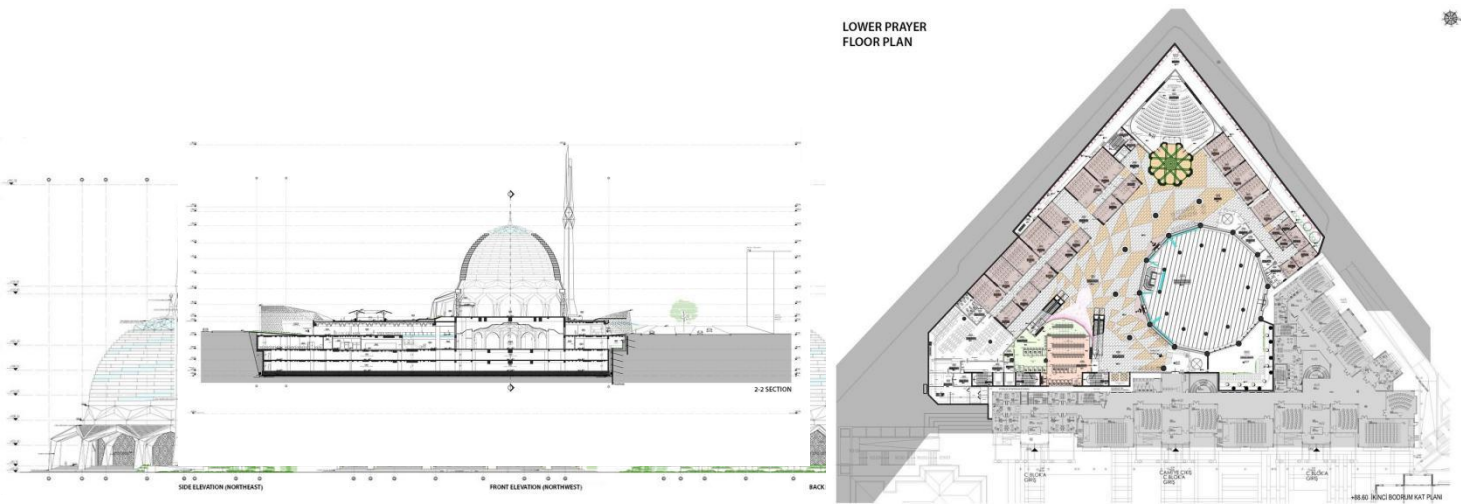


Lobby Space:

Lobby space contains two escalators which lead to the mezzanine floor level. The corridor in the mezzanine floor is provided with glass railing. Small sitout space is provided near the escalator which allows people to sit and relax.



Ceiling are designed in the triangular pattern in which the gaps are filled with glasses in which it helps to allow maximum lights inside the building.



2.2.2 Qatar Faculty Of Islamic Studies

Introduction:

The Qatar Faculty of Islamic Studies (QFIS) provides a world class teaching and faculty space, a research center and the education city campus mosque.

‘The QFIS conveys an unmistakably urban quality, manifested in the synergetic alternation of massing and landscape’

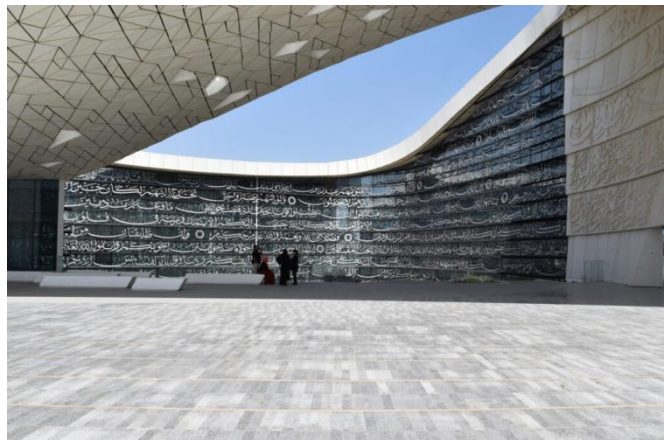
The scriptural relevance of knowledge and faith underpinned the many advance of Islamic civilization where faith supported scholarly endeavours in areas such as mathematics, philosophy, astronomy and the arts. The brief led to developing the scheme where faith and knowledge are wrapped around one another, physically, formally and programmatically.

‘The holistic interplay of pure surfaces, morphed patterns and natural elements achieve a condition of spirituality and contemplation, rather than formalism’



Entrance:

Qatar Faculty Of Islamic Studies invites with calligraphy, massing structure and wider space and steps for walkway.



Courtyard:

Organised space for informal space.

It helps sunlight to enter the space.

They used cluster space for courtyard.

Facilities:

Classroom

Faculty Space

Library and Reading Space

Informal Organised Area

Ablution Area

Mosque

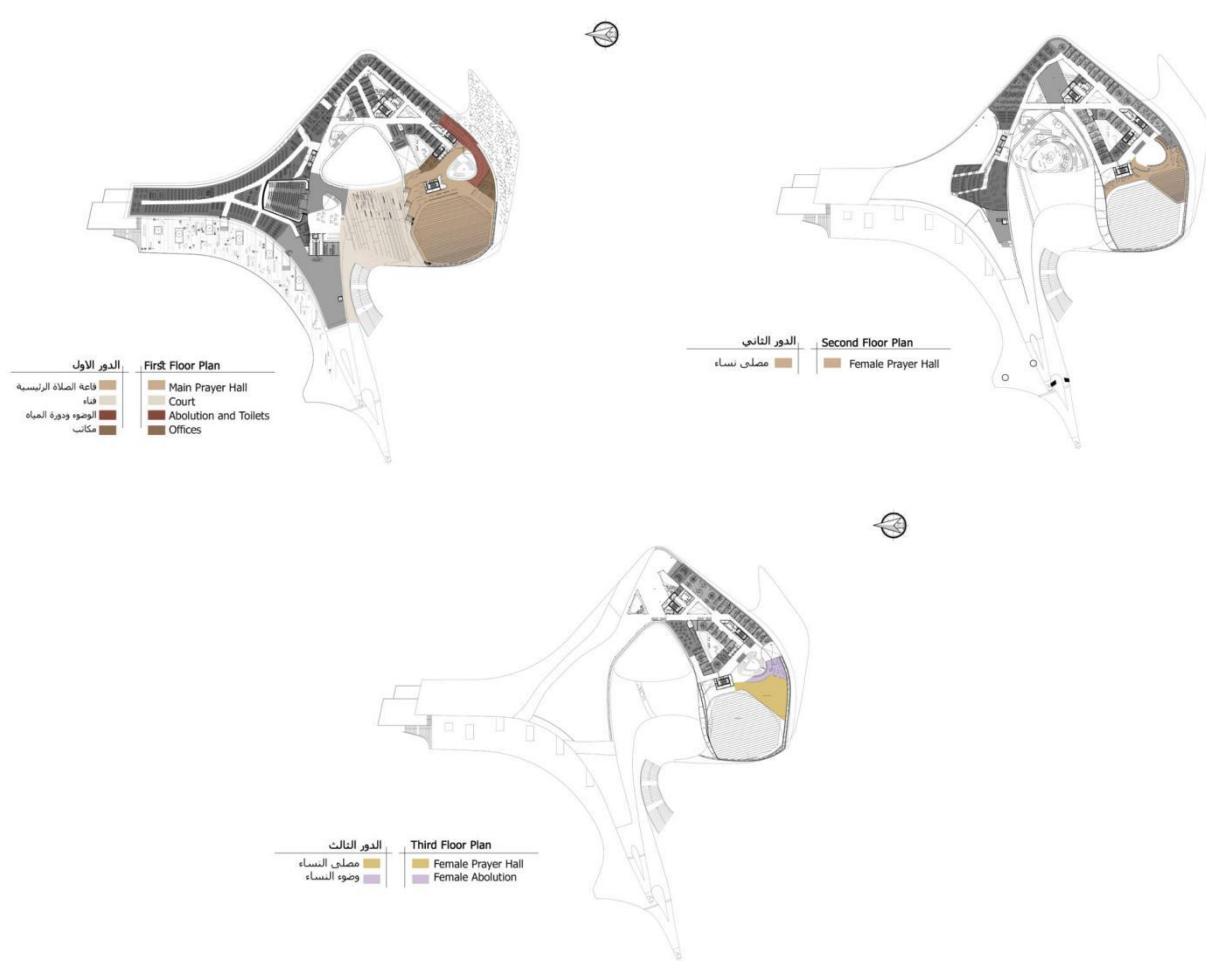
Auditorium

Fluid form Landscape

Parking

Toilet

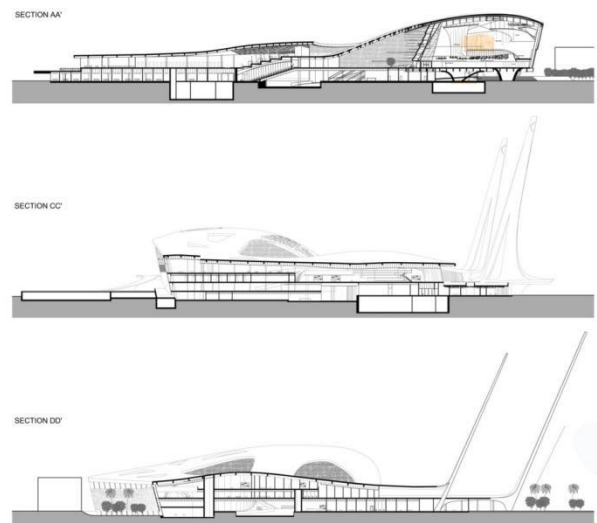




The mosque was stand by the five pillar which represent the five pillars of Islam.

1800 - indoor prayer halls and 500 more in the outdoor.

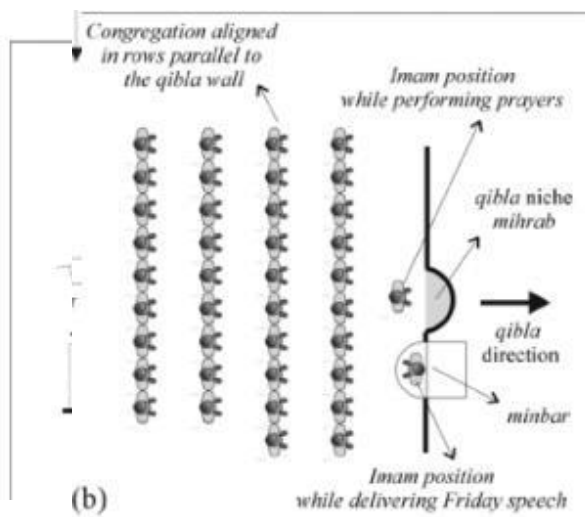
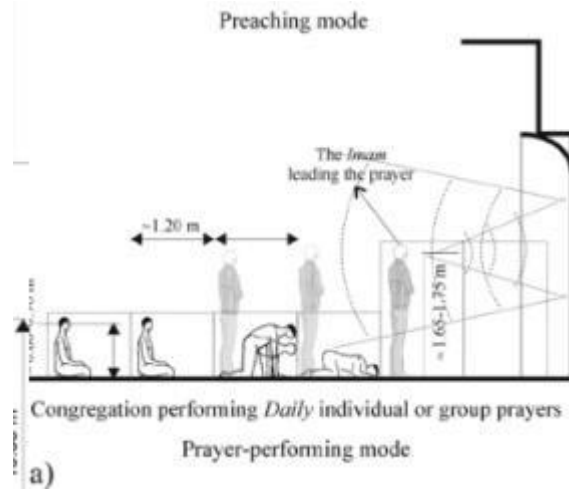
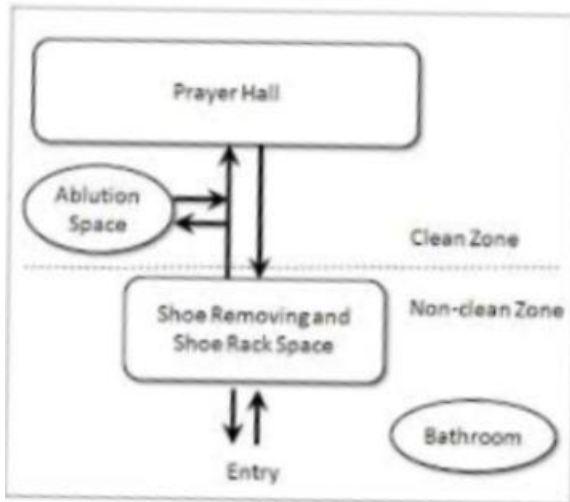
The roof glittering like a star, and also it helps to emitting hot temperature.

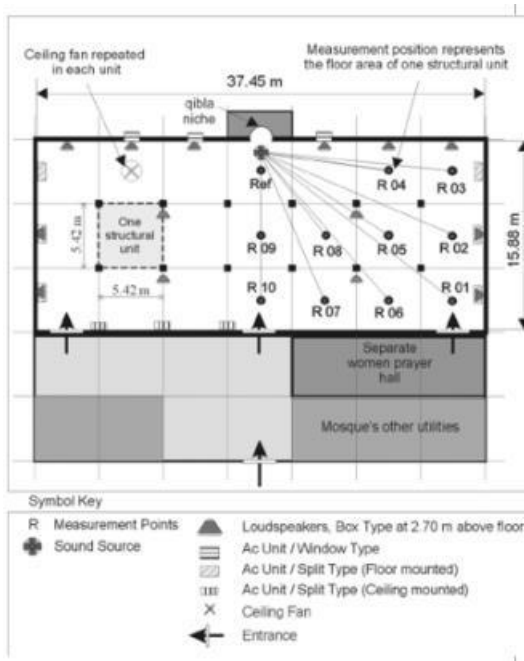


3. AREA ANALYSIS

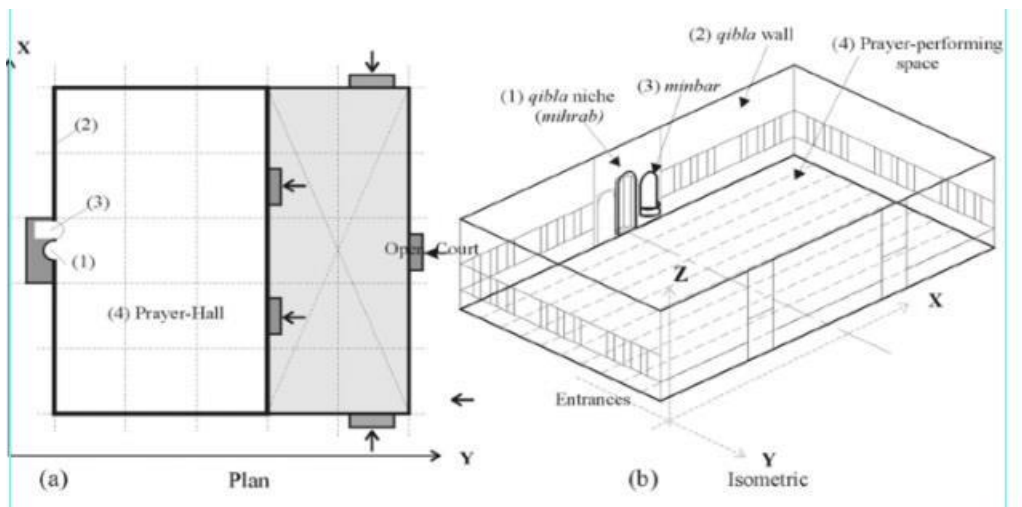
3.1 AREA STANDARDS

MASJID





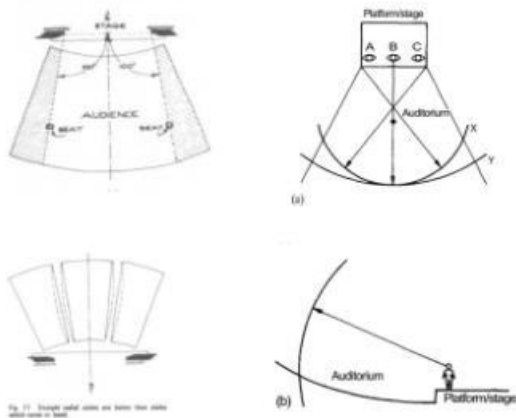
The four main features that most mosques have are a mihrab (niche), minaret (tower), qubba (dome) and sahn (courtyard). The mosque, masjid in Arabic, is the Muslim gathering place for prayer. Masjid simply means “place of prostration.” Though most of the five daily prayers prescribed in Islam can take place anywhere, all men are required to gather together at the mosque for the Friday noon pray.



AUDITORIUM

1. Form/shape

Shape corrects the defects of sound in auditorium hall i.e. echo's, excessive reverberation, sound foci's, dead spots etc. fan shape < 100 degree is ideally best shape for auditorium

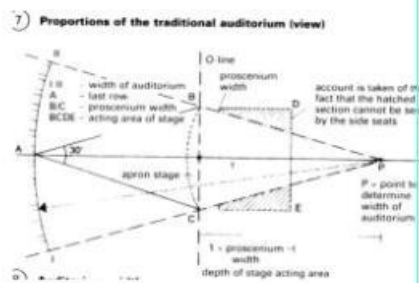


Audience Requirements

Every member of the audience should be able to see and hear clearly

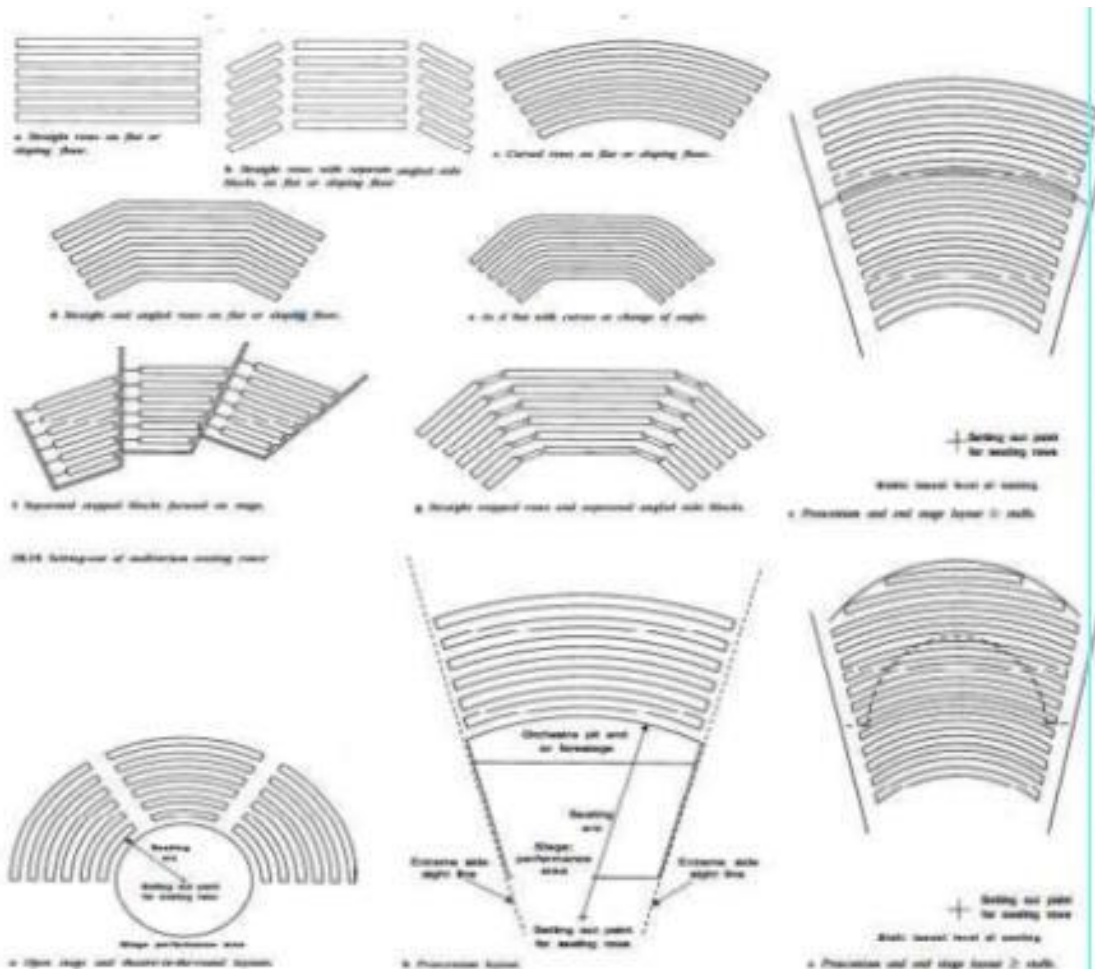
Visual Limitations

- For drama = 20m
- For Opera = 30m
- For dance = 20m
- For conference = 20m



2. Seating Planning

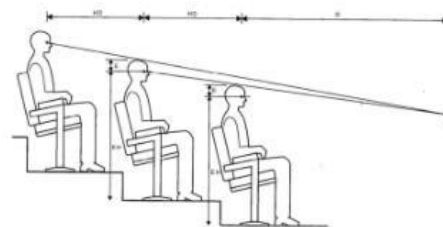
The first row > 3.6 m from the stage. The first row > 3.6 m from the stage.



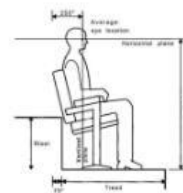
Sightlines

Seating Capacity

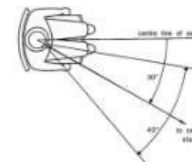
- minimum Dimension of seating with arms =500mm Without arms =450mm
- Seat height = 430-450 mm
- Angle of inclination= 7-9 degree with horizontal
- Back Height = 800-850mm



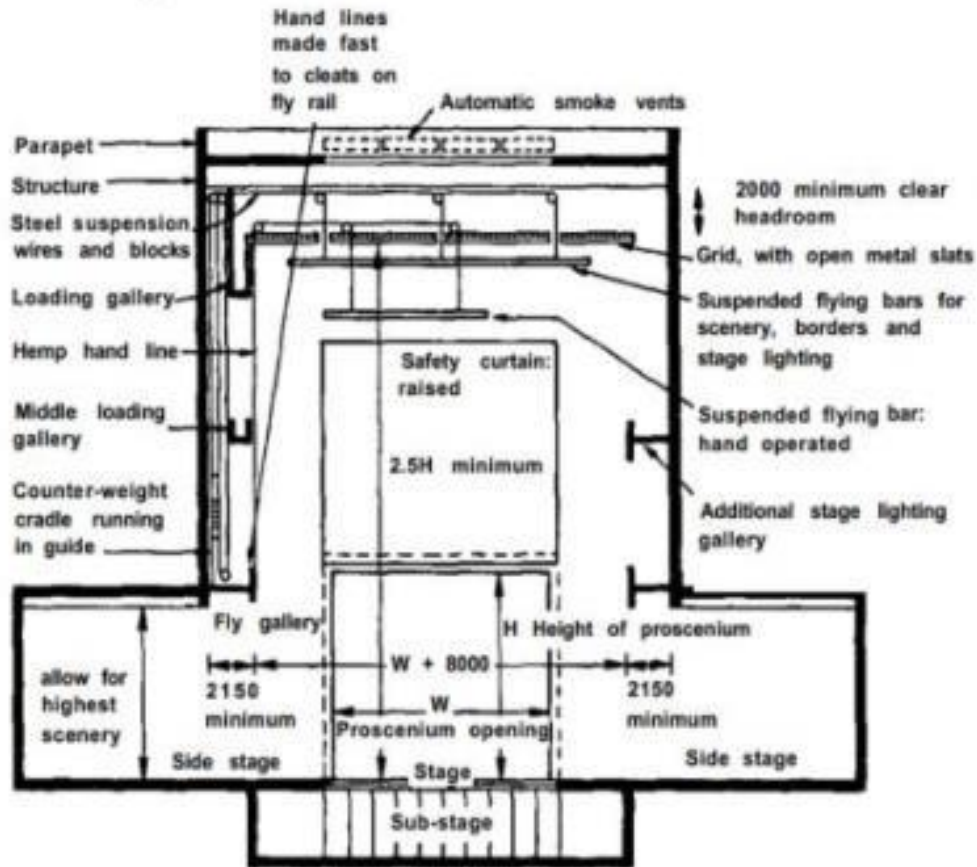
28.20 Graphic representation of vertical sightlines. P: lowest and nearest point on stage clearly visible to audience. H: horizontal distance between eyes in successive audience rows. E: average audience eye height above floor. S: height between eye and top of head. D: distance from eye of person in front row to P.



28.21 Position of eye in relation to seat and support floor. Dimensions vary according to upholstery thickness, and inclination of back seat and back. Working dimensions are shown.



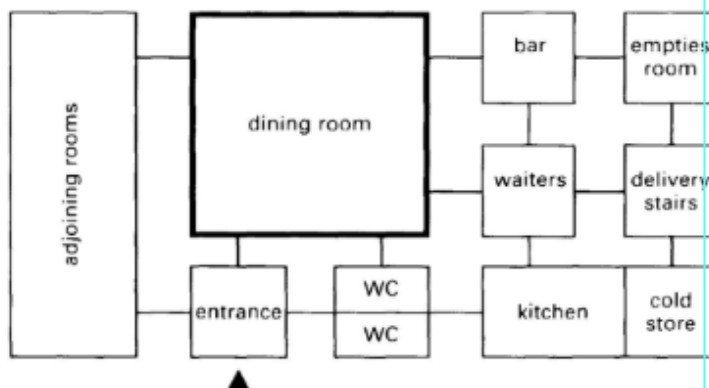
28.22 The maximum comfortable amount the head can be turned from the rest position is 30°.



20.50 Section showing double-purchase flying system and side

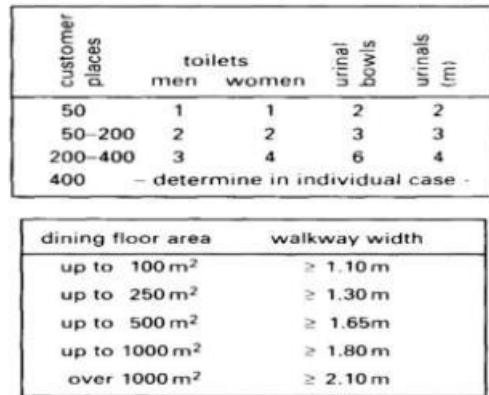
RESTAURANTS AND FOOD COURTS

General Functional Layout of Restaurants:

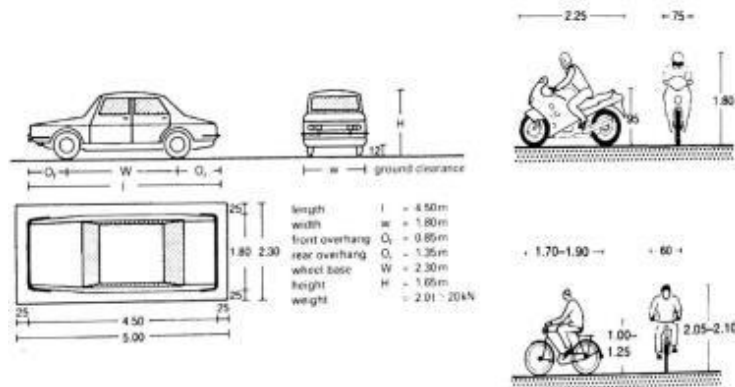


Dining Areas:

► Calculating the space requirements for dining areas can be difficult because of the many choices available.



Typical Vehicular Dimensions:



► Parking can be done in various ways: inclined with various angles or perpendicular.

► Parking can also be done in basement or on surface outside the complex.

► Surface parking requires less space than the basement parking due to absence of columns.

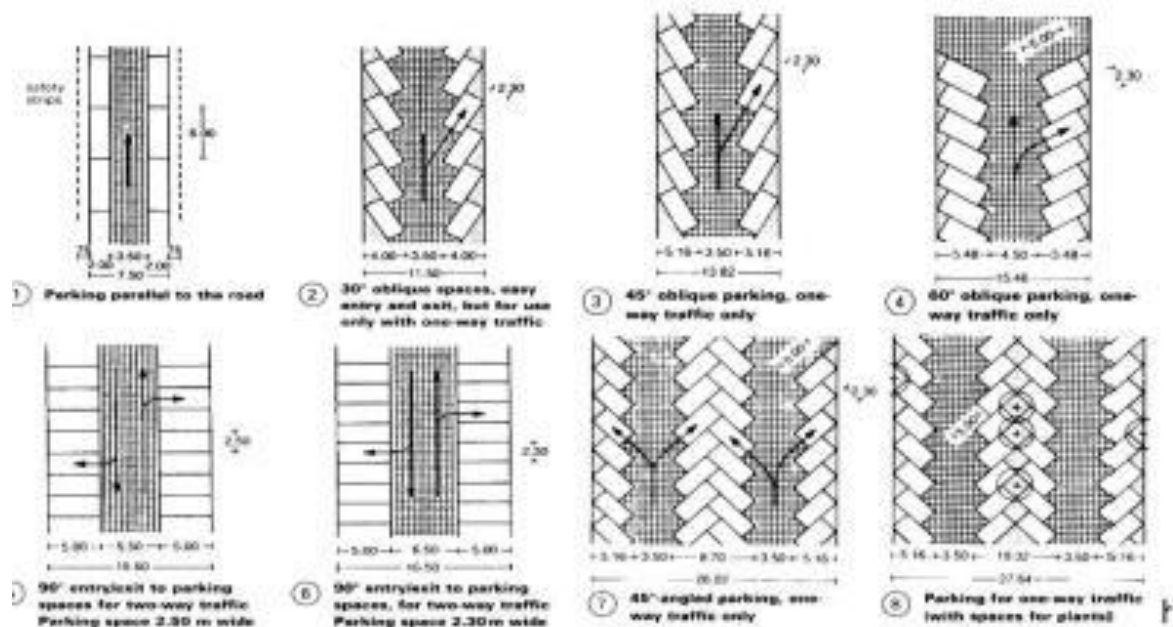
► In case of basement parking, there should be enough provision

to be economical in this view but for highly commercialized areas where the land value is very high, this can be feasible.

► In case of basement parking, a relatively narrow column grid pattern can be used, with careful planning and design, reduce building cost and height without any loss of function.

Typical Parking Standards

Typical Parking Layouts



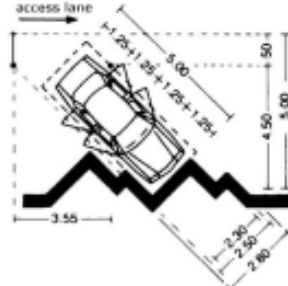
(070/BA

Car Orientation:

Car Orientation:



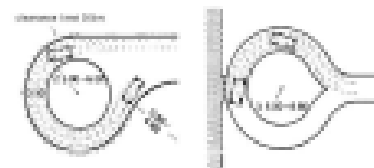
arking at 90° to access lanes



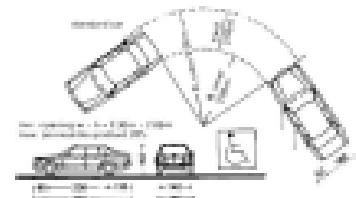
Parking at 45° to access lanes

Automobile Dimensions and Turning Radius:

type of vehicle	length (m)	width (m)	height (m)	turning circle radius (m)
motorcycle	2.20	0.70	1.80 ¹⁾	1.80
car				
- standard	4.70	1.75	1.50	5.75
- small	3.60	1.60	1.50	5.00
- large	5.00	1.90	1.50	6.00
truck				
- standard	6.00	2.10	2.20 ¹⁾	6.10
- 7.5t	7.00	2.50	2.40 ¹⁾	7.00
- 16 t	8.00	2.50	3.00 ¹⁾	8.00
- 22t (+16 t trailer)	10.00	2.50	3.00 ¹⁾	9.30
refuse collection vehicle				
- standard 3-axle vehicle (4 x 2)	7.64	2.50	3.30 ¹⁾	7.80
- standard 3-axle vehicle (6 x 2 or 6 x 4)	1.45	2.50	3.30 ¹⁾	9.25
fire engine	6.80	2.50	2.80 ¹⁾	9.25
furniture van (with trailer)	9.50 (18.00)	2.50	2.80 ¹⁾	9.25



Turning Circle Radius



Car Dimensions & Turning Radius

CLASSROOMS

TEACHING AREA INCLUDES

STANDARD CLASS ROOM

65-70 SQ M

SUPPLEMENTARY ROOM

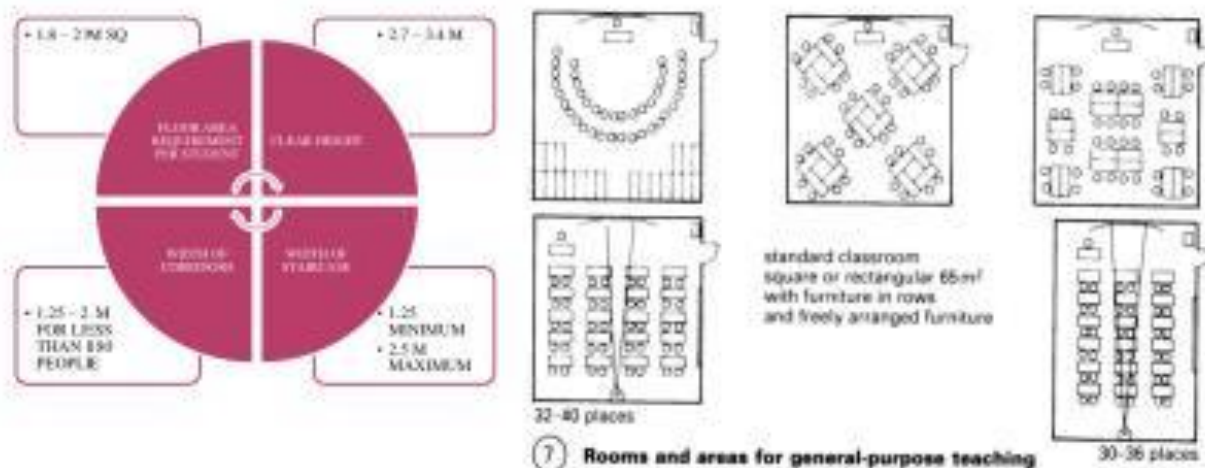
65-70 SQ M

EXTRA LARGE ROOMS (FOR HISTORY / GEOGRAPHY)

85 SQ M

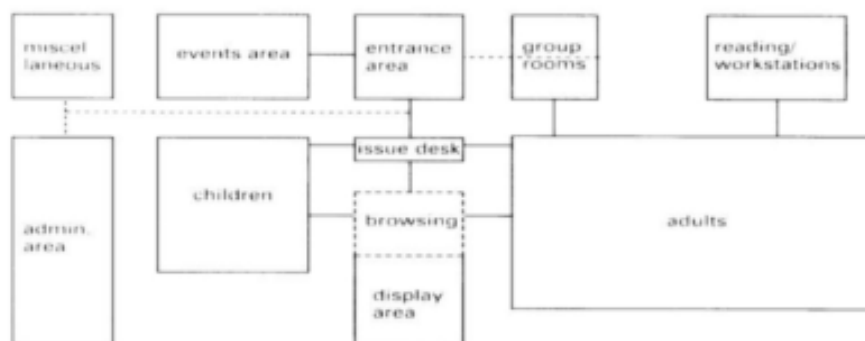
ROOMS FOR SPECIAL COURSES

40-45 SQ M



Library:

- Purpose: information centre for classwork, further education and leisure and may be used by pupils, teachers and non-school users.
- Library includes a conventional school library for pupils and teachers with books and magazines, lending facilities, reading and workplaces.



Standard space requirement overall: 0.35 to 0.55 sq m per pupil.

Book issues and return, 5 sq m per workplace and catalogue space of 20 to 40 sq m.

Information: librarian 10 to 20 sq m.

3.2 Area Statement

1. MOSQUE (1500 MEN + 500 WOMEN)					
FACILITIES	REQUIREMENT	STANDARDS	AREA (sq.mt)	NO.OF.UNITS	TOTAL AREA (sq.mt)
Prayer Hall (Men)	1500 people	0.9sq.mt per person (0.6 x 15 m)	0.9	1500	1350
Prayer Hall (Women)	500 people	0.9sq.mt per person (0.6 x 15 m)	0.9	500	450
Muezzin Room	2 person		25	2	50
Imam Room	1 person		30	1	30
Counselling Room			25	1	25
Admin Office			30	1	30
Ablution Pool			150	1	150
Mens's Ablution Area		25 persons/tap	1.5	30	45
Women's Ablution Area		25 persons/tap	1.5	15	22.5
Men's Toilet	12 W.C and 6 Baths	25 persons/WC	110	1	110
Women's Toilet	6 W.C	25 persons/WC	30	1	30
Store Room			30	1	30
Shoe Rack			50	1	50

Circulation		Circulation space for religious building (15%)	15%		355
				TOTAL	2727.5

2. COMMUNITY CENTRE					
FACILITIES	REQUIREMENT	STANDARDS	AREA (sq.mt)	NO.OF.UNITS	TOTAL AREA (sq.mt)
Lobby And Waiting Area			300	1	300
Office Room			50	1	50
Conference Room	50	1.5 sq.mt per person	75	1	75
Workshop/Exhibition Space			100	2	200
Community Clinic			50	1	50
Food Kiosk			30	10	300
Multipurpose Hall	1000 people	1.2 sq.mt per person	1200	1	1200
Dining Area	500 people at a time	1.5 sq.mt per person	750	1	750
Kitchen Area			150	1	150

Men's Toilet			80	1	80
Women's Toilet			80	1	80
LIBRARY					
Entrance Lobby			20	1	20
Office Room			20	1	20
Reception/Help Desk			10	1	10
Librarian Cabin			15	1	15
AV-Room			50	1	50
Journals (Reading + Stack)			100	1	100
E-Library		1.5 sq.mt per person	1.5	20	30
Reading Area		2.5 sq.mt per person	2.5	100	250
Stack Area	10,000 Volumes	100 Volumes per sq.mt	100	1	100
Circulation			15%		575
				TOTAL	4405

3. MADRASSA (380 students)					
FACILITIES	REQUIREMENT	STANDARDS	AREA (sq.mt)	NO.OF.UNITS	TOTAL AREA (sq.mt)
Aalim Course	8 Classroom (25 students per classroom)	2 sq.mt per student	50	8	400
Hafiz Course	4 Classroom (25 students per classroom)	2 sq.mt per student	50	4	200
Arabic Literature	4 Classroom (20 students per classroom)	2 sq.mt per student	40	4	160
Lobby			100	1	100
Principal's Room			25	1	25
Staff Room	16 Persons (8 persons per staffroom)	2.5 sq.mt per Person	20	2	40
Prayer Training Room	30 Persons	1 sq.mt per Person	30	1	30
Ablution Space			1.5	20	30
Library	2000 Volumes and 50 Seats	100 volumes per sq.mt and 2.5 sqmt per person	145	1	145

Computer Lab	50 Students	1.5 sq.mt per Person	75	1	75
Student's Toilet	380 Students	1 w.c for 40 students	30	4	120
Staff's Toilet			15	2	30
Admin Office			50	1	50
Circulation		Circulation space for institutional building (25%)	25%		351
				TOTAL	1756

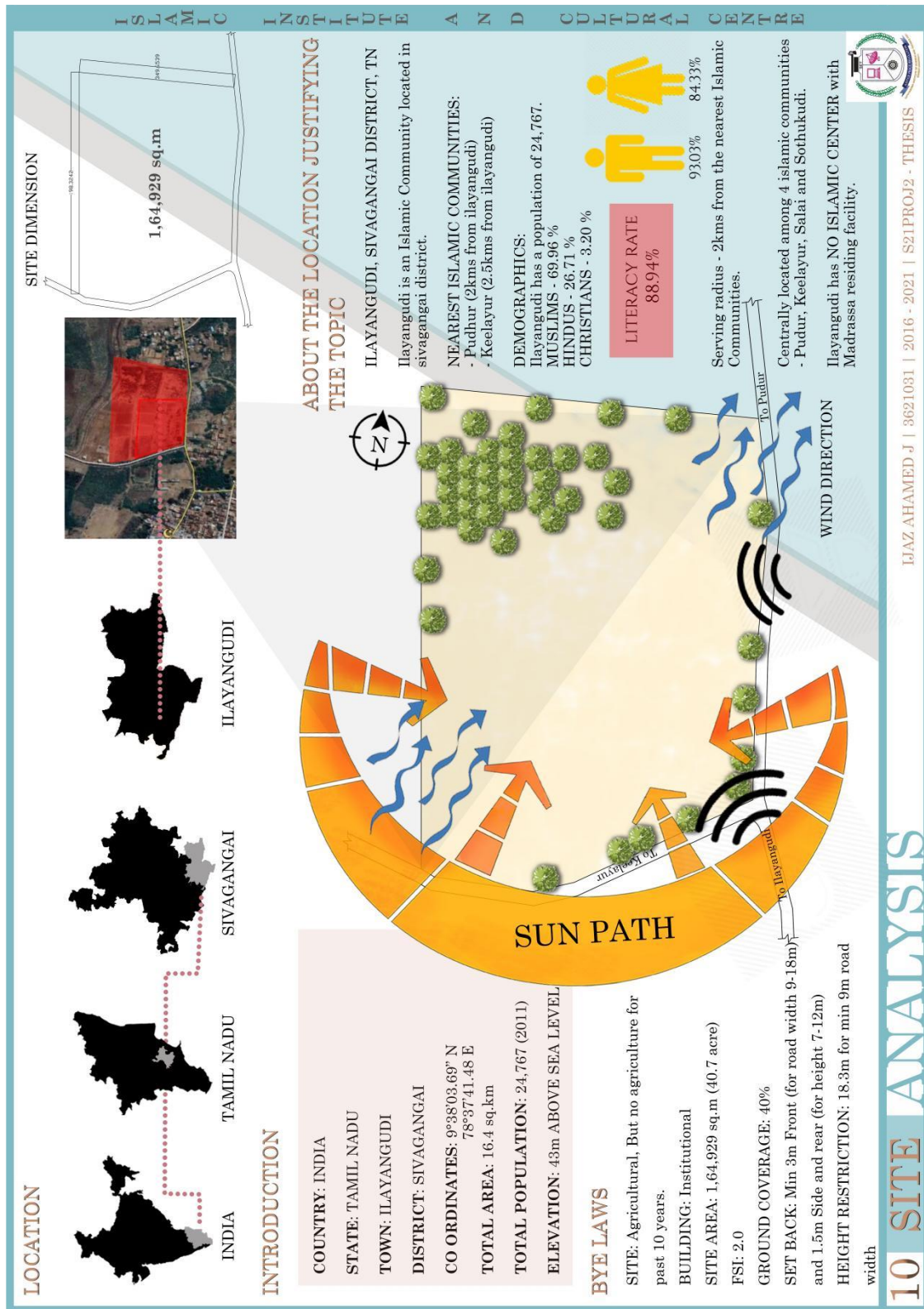
4. WOMEN SKILL DEVELOPMENT CENTRE					
FACILITIES	REQUIREMENT	STANDARDS	AREA (sq.mt)	NO.OF.UNITS	TOTAL AREA (sq.mt)
Lobby			100	1	100
Office			40	1	40
Store Room			20	1	20
Workshop For Abaya Stitiching	25 Students	3 sq.mt per student	75	1	75
Workshop For Organic Cosmetics	25 Students	3 sq.mt per student	75	1	75

Workshop For Handmade Arts And Crafts	25 Students	5 sq.mt per student	125	1	125
Workshop For Calligraphy Arts	25 Students	2 sq.mt per student	50	1	50
Shops			30	4	120
Kids Play Area			50	1	50
Regular Madrassa Classrooms	25 Students	2 sq.mt per student	50	2	100
Women Prayer Hall	300	0.9 sq.mt per student	270	1	270
Ablution Space		25 person/tap	1.5	20	30
Toilet			60	1	60
Circulation			15%		167
				TOTAL	1282

5. HOSTEL (380 STUDENTS)					
FACILITIES	REQUIREMENT	STANDARDS	AREA (sq.mt)	NO.OF.UNITS	TOTAL AREA (sq.mt)
Entrance Lobby			100	1	100
Warden Room			15	1	15
Guest Rooms With Attached Bath			25	4	100
Student Rooms Age Group (13-18)	6 students per room	5 sq.mt per student	30	35	1050
Student Dormitories Age Group (7-12)	25 students per dormitory	5 sq.mt per student	125	7	875
Staff Room (4 Staffs)			15	4	60
Laundry Room			80	1	80
Activity Room			150	1	150
Dining Hall	200 students at a time	1.5 sq.mt per student	300	1	300
Kitchen			100	1	100
Store Room			30	1	30
Utility			20	1	20

Toilet	380 students	8 students/W.C	145	2	290
Circulation		Circulation space for hostel (25%)	25%		793
				TOTAL	3963

4. Site Analysis



NEIGHBOURHOOD CONTEXT

Located on State Highway that connects Ilayangudi and Pudur.

Nearest Masjid - INPT Masjid (700m)
- PUDUR BIG MOSQUE (1.2km)

Distance from the centre of village:
- 850 meters from Ilayangudi
- 1.4 km from Pudur



CONNECTIVITY



Ilayangudi Bus stand - 850 meters
Pudur Bus Stand - 1.2 kilometers

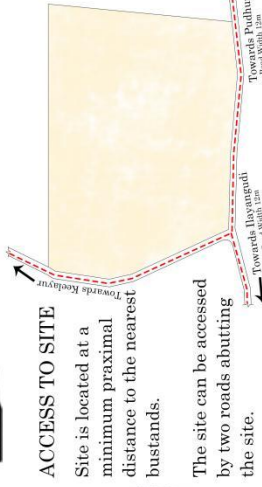


Paramakudi Railway Station - 13 kilometers

ACCESS TO SITE

Site is located at a minimum proximal distance to the nearest bustands.

The site can be accessed by two roads abutting the site.



SITE SURROUNDINGS

Has small residential settlements on the Northern and Eastern sides of the site.

Western side of the site has Agricultural Land.

The southern side opposite to the abutting road is an open space.

Located Centrally between two major Islamic Settlements.



CLIMATIC CONDITION

MACRO LEVEL - TAMIL NADU

Tropical Savanna Climate
Summer (March - May)
Monsoon (Oct - Nov)
Winter (Nov - Feb)

MESO AND MICRO LEVEL - ILAYANGUDI

The climate is almost dry and sultry, especially during summer months. During the winter season (i.e.) December to January the temperature is below the normal.

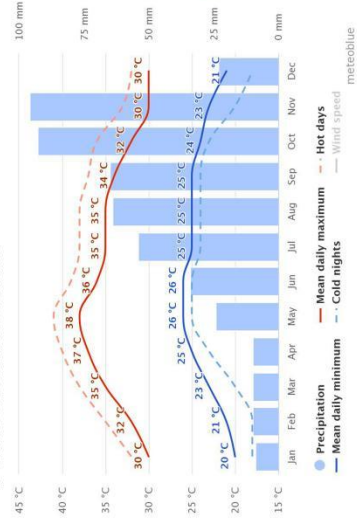
SEISMIC ZONE

ZONE - II

This region is liable to MSK VI or lower and is classified as the Low Damage Risk Zone. The IS code assigns a zone factor of 0.10 for Zone 2.

TEMPERATURE

Max Temperature: 38°
Min Temperature: 30°
Average Rainfall: 122mm
Warmest Month: May
Coolest Month: January
Wettest Month: November



HUMIDITY

Max Humidity - November 76%
Min Humidity - June 51%
Average annual percentage - 63.5% of humidity



SOIL TYPE

The predominant soils of Ilayangudi are black soil and it falls in the southern zone of agro-climatic zone of TamilNadu.



11 SITE ANALYSIS

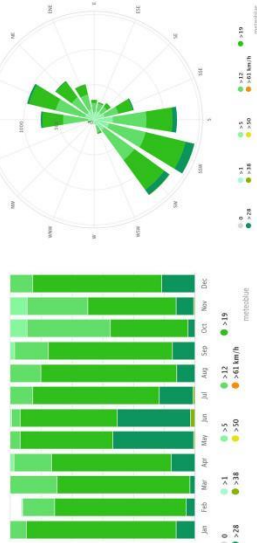


WIND SPEED AND DIRECTION

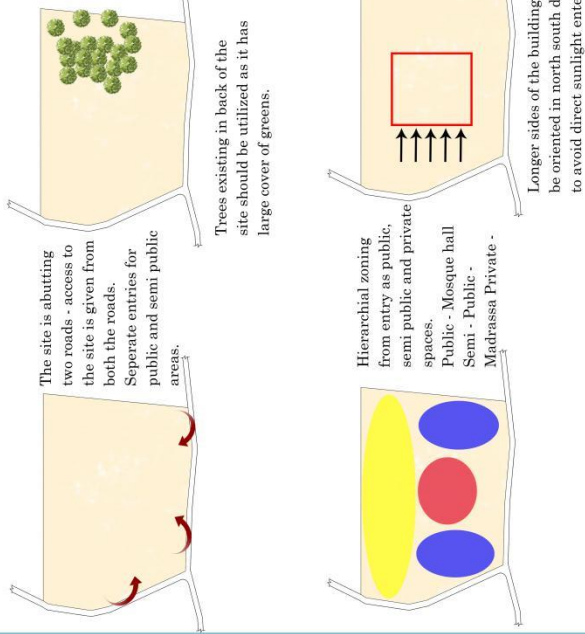
Max Wind Speed - 28 km/hr

Min Wind Speed - 5 km/hr

Predominant Wind Direction is from SSW to NNE



SITE CONTEXT



SERVICES

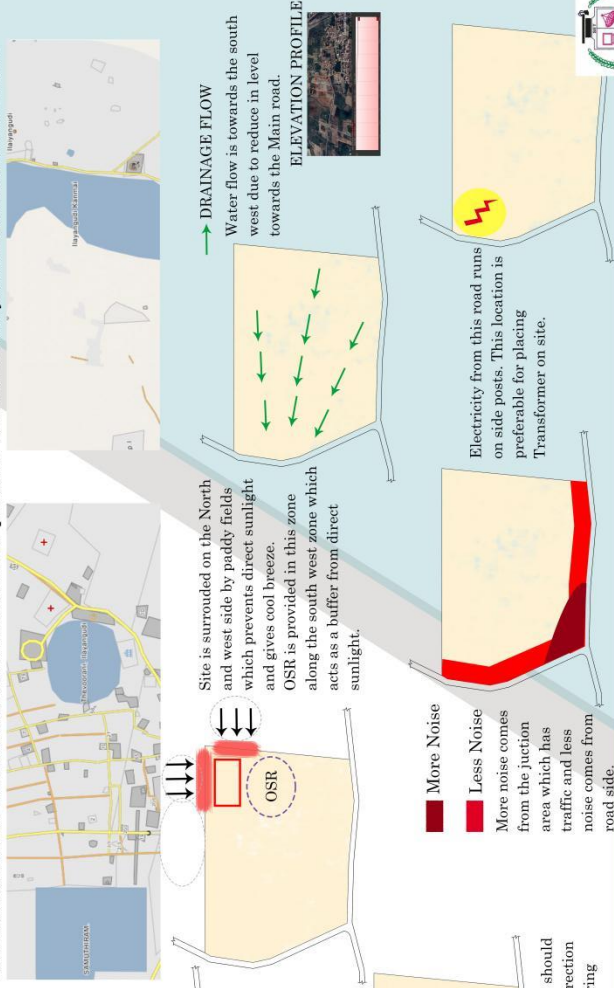
Nearest Electrical Sub-station - TNEB Ilayangudi (1.7 km away from the site)

Depth Of Ground Water - 5 to 10 m

The major water bearing formation is the sedimentary and hard rock formation.

Nearest Water Tank - Gopalapattanam (In 15kms)

A water reservoir is situated on the north-west side of the town known as "samuthram" having its source from a river passage known as "kanmaai" from vaigai. The "samuthram" is a major source of water for the town and is also used for other purposes like swimming, washing clothes, fishing etc. The "samuthram" and "kanmaai" adds to the beauty of the town and it is seen filled during monsoons. The ancient landmark of this town is Thevoorani which is located on the heart of the downtown and its banks are decorated with INP Thozhugai Medai Pallivasal and Rajendra Choolleswara Temple. The water channel from Kanmaai travels towards northwest and reaches to Thevoorani and proceeds towards Poochiyendal Kanmaai near Pudur.



12 SITE ANALYSIS

5. CONCEPT

[illegible]