ARCHITECTURE THESIS REPORT 2019-20

SUSTAINABLE CONVENTION CENTRE ,GAUTAM BUDDHA NAGAR, UTTAR PRADESH

A THESIS SUBMITTED
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF

BACHELOR OF ARCHITECTURE

IN

ARCHITECTURE

by

SWADHA SRIVASTAVA
(Enrollment No.- 1150101078)

Under the Supervision of
AR. PUJA VERMA

to the
School of Architecture

BABU BANARASI DAS UNIVERSITY
LUCKNOW

May, 2020

SCHOOL OF ARCHITECTURE AND PLANNING
BABU BANARASI DAS UNIVERSITY,
LUCKNOW (U.P.).

CERTIFICATE

I hereby recommend that the thesis entitled, " **SUSTAINABLE CONVENTION CENTRE, GAUTAM BUDDHA NAAGAR , UTTAR PRADESH** " under the supervision, is the bonafide work of the student and can be accepted as partial fulfillment of the requirement for the degree of Bachelor's degree in architecture, School of Architecture and Planning, BBDU, Lucknow.

Prof. Mohit Kumar Agarwal
Dean of Department

Prof. Sangeeta Sharma
Head of Department

Recommendation Accepted

Not Accepted

External Examiner

External Examiner

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CERTIFICATE OF THESIS SUBMISSION FOR EVALUATION

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6. Thesis Preparation Guide was referred to for preparing the thesis. YES☐ NO☐

7. Specifications regarding thesis format have been closely followed. YES☐ NO☐

8. The contents of the thesis have been organized based on the guidelines. YES☐ NO☐

9. The thesis has been prepared without resorting to plagiarism. YES☐ NO☐

10. All sources used have been cited appropriately. YES☐ NO☐

11. The thesis has not been submitted elsewhere for a degree. YES☐ NO☐

12. Submitted 3 spiral bound copies plus one CD. YES☐ NO☐

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ACKNOWLEDGEMENT

First and foremost gratitude towards the almighty "**GOD**" for his blessings.

I am thankful to **Prof. Keshav Kumar, Prof. Arvind Kumar and prof. Sangeeta Sharma** and all my faculty members who have been extremely co-operative since the very beginning and who helped me to utilize my skills and creativity to the utmost.

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At last but not the least, I have no words to express my gratitude for the love and affection of my parents and my elder brother who gave me support at every step of my life. So, this thesis is dedicated to them.

THANK YOU
SWADHA SRIVASTAVA

BABU BANARASI DAS UNIVERSITY, LUCKNOW

B.ARCH THESIS 2019-20

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S.NO. CONTENT

INTRODUCTION
SUSTAINABLE CONVENTION CENTRE

(NOIDA, UTTAR PRADESH)

WHAT IS CONVENTION CENTRE ??

- A convention is a gathering of individuals who meet at an arranged place and time to discuss or engage in some common interest.
- Conventions are often planned and coordinated by professional meeting and convention planners, generally by staff of the convention's hosting company.
- Most large cities will have a convention centre dedicated to hosting such events. The term **MICE - Meetings Incentives Conventions and Exhibitions** is widely used in Asia as a description of the industry.
- There are various types of conventions; the most common conventions are based upon industry, profession and fandom. They can be typically described as –

- TRADE CONVENTION - It typically lays focus on a particular industry or industry segment, and feature keynote speakers, vendor displays, and other information and activities of interest to the event organizers and attendees.
- PROFESSIONAL CONVENTIONS - They focus on issue of concern to the profession and advancements in the profession. Such conventions are generally organized by societies dedicated to promotion of the topic of interest.
- FAN CONVENTIONS - They usually feature displays, shows, and sales based on pop cultures and guest celebrities.
- SEMINARS - They are meetings organized to celebrate major events and religious ceremonies. Common social events include - anniversaries, weddings and birthdays.
- TRADE SHOWS / EXHIBITIONS - They are an opportunity for companies to exhibit some of their latest products.

HISTORY AND BACKGROUND -

- The first CONVENTION CENTRES can be traced back to **mid-19th century Britain**. Commonly known as exhibition halls, the centers were designed to bring together people to discuss and explore their mutual interest of a subject.

- These imposing Victorian buildings often covered several acres and were multi-functional incorporating **lecture halls, libraries, galleries, theatres and exhibition areas.**

- EXAMPLE – 1.**The Crystal Palace, Hyde Park**

  Among the first historical convention centers constructed was The Crystal Palace in London's Hyde Park. Providing **92,000 sq.mt.** of exhibition space, the building was erected in 1851 to house The Great Exhibition a grand show case of modern industrial technology and design.

- **Organized by Prince Albert and inventor Henry Cole**, the Great Exhibition was an international platform for world powers to demonstrate their technological and cultural achievements.

- Although countries all around the world could contribute, British exhibits - from working machinery to scientific and surgical instruments - took center stage, promoting Britain's position as a great industrial power.

- **In 1854** the Crystal Palace was dismantled and re-built in **Sydenham**, an area of south London which by association became known as Crystal Palace. Ravaged by fire in 1936, the building was eventually pulled down.

- EXAMPLE – **2. Bingley Hall, Birmingham.**

- Constructed in 1850 from surplus steels used to build Euston Station, the exhibition hall boasted over an acre of exhibition space and was serviced by ten entrances.

AIMS AND OBJECTIVES OF THE PROJECT -

Following are the objectives which is required in the designing of the convention centre –

1. To create a place for social and cultural gathering.
2. To create a venue for exhibition and interaction
3. To design a eco- friendly and ecomically sustainable building
4. To create interactive spaces and landscaping to generate public interest.
5. To create a landmark through evolving sustainable architectural features.
6. To design in a manner to reduce carbon footprint in an environment
7. To explore how it proves beneficial for urban growth

SCOPE OF THE PROJECT -

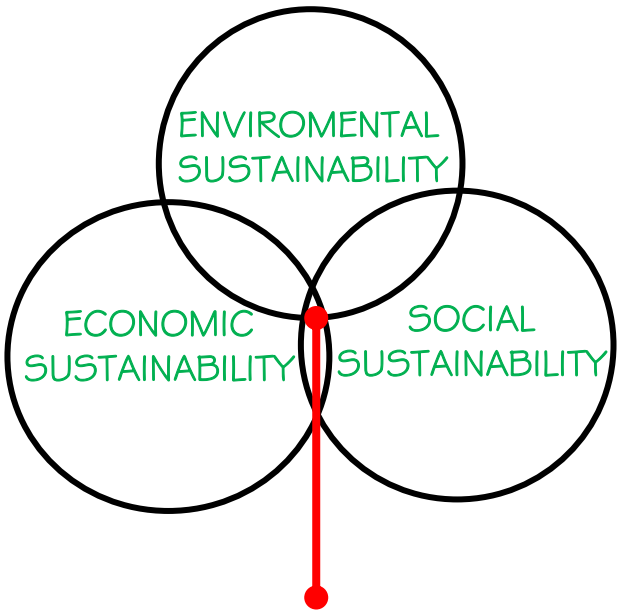
- To evolve a design with forms and spaces with distinct architectural characteristics.
- To mainly focus on **space utilization and functions and sustainability**
- The project deals with the design which is well adoptable in terms of typology, function and climatic conditions.

LIMITATIONS OF THE PROJECT -

1. Financial aspect of the project will not be considered, however a rough estimate be provided .
2. Work mainly focuses on design, functionality and services.
3. Thesis will provide architectural solutions and not other aspects like management and economics .
4. The project will be design oriented and detail structural elements and services detailing comes under limitations.

WHAT IS SUSTAINABILITY ??
(concept of the project)

- Sustainability can be defined as continued ability of the society, an ecosystem or any such interactive system to function without exhausting key resources and without adversely affecting the environment .
- Sustainable development has been defined by the Brundtland commission (1987) as the development that meets the needs of the present without compromising the ability of the future generations to meet their own needs.



This building serves as the core of sustainability by satisfying economical , social and environmental conditions

HOW THIS BUILDING IS SUSTAINABLE ?

- The designing of the building is based on method of energy efficient manners of designing such as to optimize the resources to be used by future generation .
- The focus has been done on each aspect of designing and simplifying the movement of people and resources .
- There are many methods which has been involved , various passive technologies , use of materials having high thermal mass and various others attempts have been made to make

- The building energy efficient .

Few measures include –

1. The building is oriented in such a manner that it takes ample use of wind direction and sunlight .
2. It has a central courtyard in the north east direction as to trap maximum wind which is essential for ventilation and maintenance of optimum atmosphere.
3. cool air shaft is provided in each block which is connec ted to earth air tunnel so as to maintain the comfortable temperature inside .
4. Use of exposed brickwork in the facade and exposed concrete , which requires very low maintenance .
5. Replacement of cement in concrete with FAL-G (fli ash lime –gypsum) which reduces carbon footprint by 30%
6. These material have high thermal mass which can absorb lot of heat without heating the internal space .
7. Use of solar chimney is provided which act as a cool air shaft to cool the interior space and maintaining the optimum temperature of 24-27ºc .
8. Hybrid system of mechanical ventilation is used . which involve cooling the space through earth air tunnel and absorption chiller plant
9. Power production is done through a hybrid system which use 70% biogas and 30% diesel
10. Waste water management is done through root zone system, also wetland has been provided on the site in the direction of the natural slope .
11. Storm water collection is done by providing gutter on the roof and letting the water in rain water recharge pit and also water seeps down the soil to recharge ground water level .
12. Wet land is created on the side with reed beds for purification of waste water .
13. Solid waste management plant is provided on the site which produces biomass which helps to produce manure and facilitate manuring in landscape around the building .
14. Care has been taken to maintain the inside temperature of 25-27ºc so as to reduce the cooling load on the chillar plant

SITE STUDY

SITE INTRODUCTION-

PROJECT:	NOIDA CONVENTION CENTRE
CLIENT:	NEW OKHLA INDUSTRIAL DEVELOPMENT AUTHO--RITY
LOCATION:	SECTOR 94, NOIDA
TYPOLOGY:	ASSEMBLY BUILDINGS
COORDINATES:	28°32'55.66"N, 77°19'21.05"E
ELEVATION:	199 MTS.
SEISMIC ZONE :	ZONE IV
SHAPE:	IRREGULAR SHAPE
AREA :	10.23 ACRES (41407.05 SQ.MT)
SOIL CONDITI -ON :	RICH AND LOAMY SOIL
TOPOGRAPHY:	PLAIN LAND WITH SLIGHT SLOPE TOWRDS SOUTH
GREEN COVER:	APPROX 60% OF THE SITE IS COVERED WITH GRASS ETC.
SOIL BEARING CAPACITY:	12.5 KN /M²
HYDROLOGY:	24 MT BELOW GR. LVL.
SITE SECURITY :	THE SITE IS SURROUNDED BY FENCES ON ALL SIDES
NEAREST NH:	GR.NOIDA- NOIDA EXPRESSWAY

SITE LOCATION -

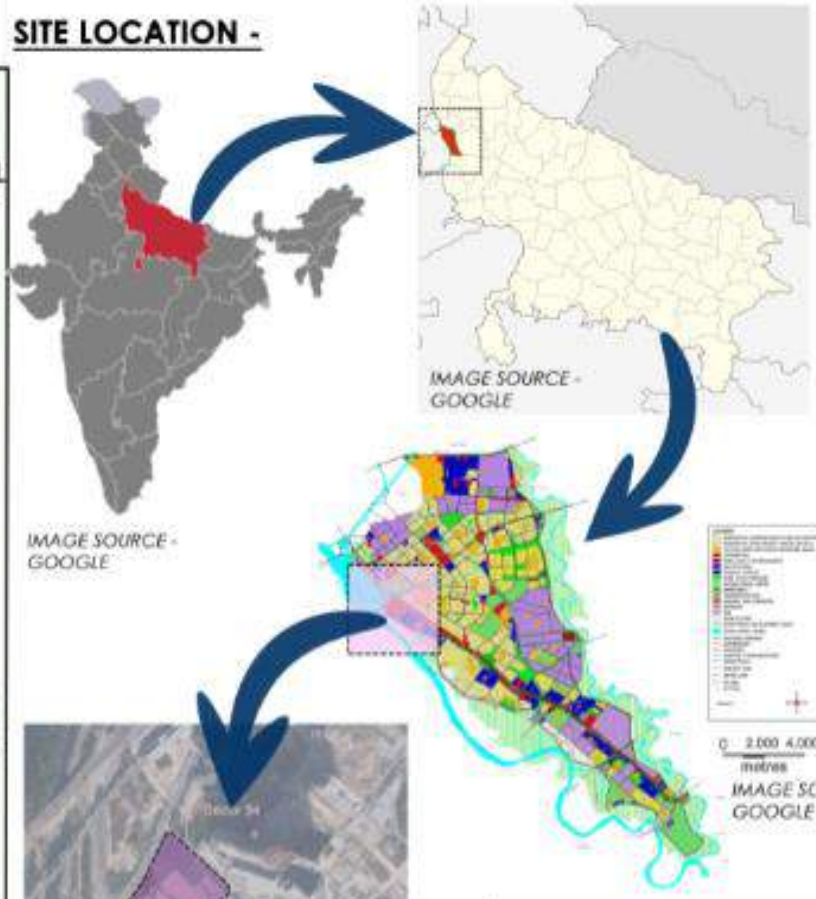


IMAGE SOURCE -GOOGLE EARTH

GOOGLE EARTH IMAGE OF A PROPOSED SITE

SITE WITH DIMENSIONS (ALL DIMENSION IN METRES)

ABOUT THE SITE -

>SITE HAS CLOSE PROXIMITY TO THE OKHLA BIRD SANTUARY METRO STATION AND IS VERY WISELY CONNECTED TO THE PUBLIC TRANSPORT FACILITIES .
>SITE LIES JUST NEXT TO SUPERNOVA BUIL--DING (MIXED - USE SKY SCRAPPER) WHICH IS A HIGH RISE BUILDING .
> SITE HAS UNDERGROUND ELECTRIC SUPPY WIRES WHICH IS PROVIDED TO IT BY TATA COMMUNICATIONS.
> SITE HAS UNDERGROUND DRAINAGE PIPE .
> SITE SURROUNDINGS INCLUDE CREMA-TORIUM, FORENSIC DEPT AND COWSHED.

APROACH TO SITE -

NEAREST RAILWAY STATION -

IMAGE SOURCE -GOOGLE MAPS

HAZRAT NIZAMUDDIN RAILWAY STATION

SITE — 26 MINS / 10.7 KM — HNRS

NEAREST METRO STATION -

IMAGE SOURCE -GOOGLE MAPS

OKHLA BIRD SANTUARY METRO STATION

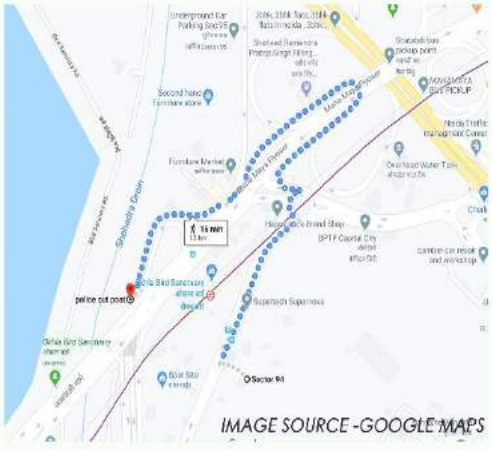
SITE — 7MINS / 550 MTS. — METR ST.

NEAREST AIRPORT -

INDIRA GANDHI INTERNATIONAL AIRPORT

SITE — 58 MINS / 26 KM — IGIA

NEAREST POST OFFICE -



POST OUT POST

SITE — 16 MINS / 1.3 KM — POST OFFICE

NEAREST HOSPITAL-

FARAZ HOSPITAL

SITE — 32 MINS / 9 KM — FARAZ HOSPITAL

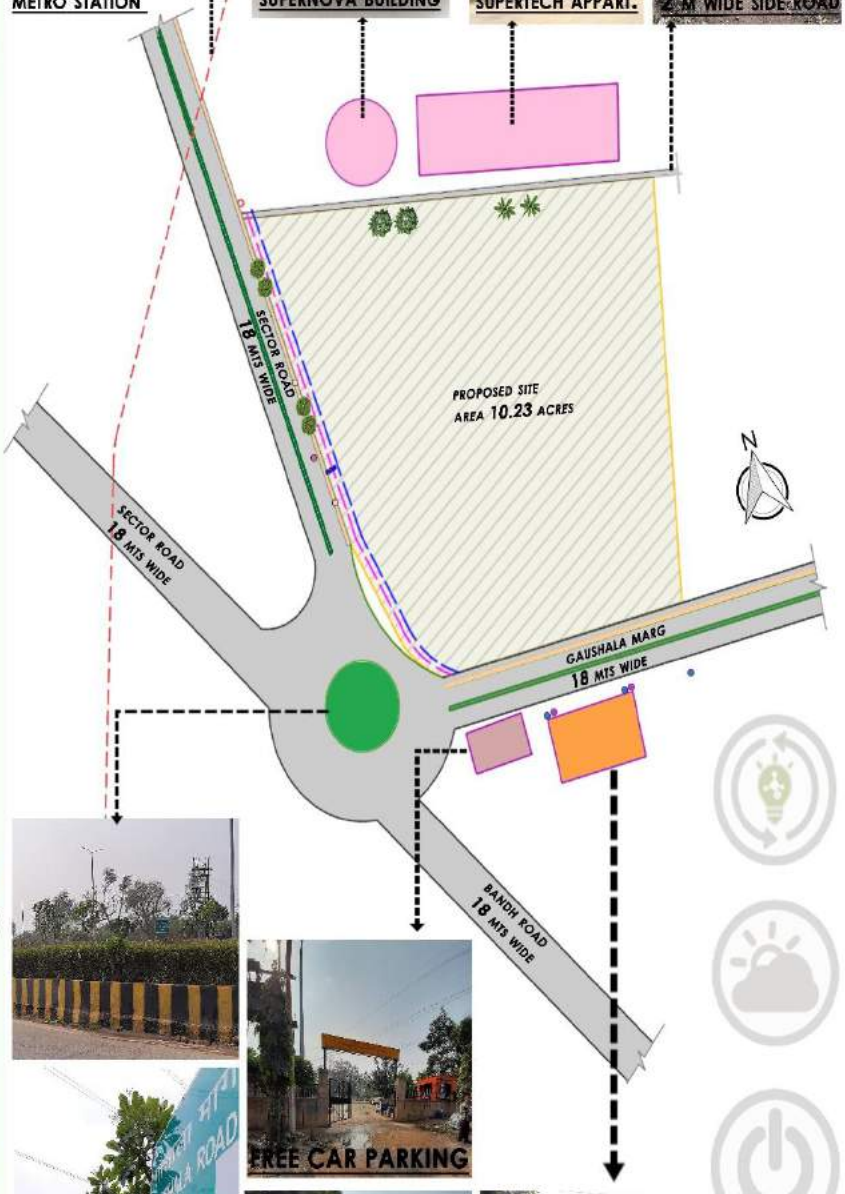
EXISTING SITE CONDITIONS -

OKHLA BIRD SANTUARY METRO STATION

SUPERNOVA BUILDING

SUPERTECH APPART.

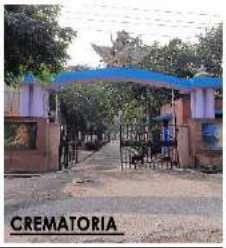
2 M WIDE SIDE ROAD



FREE CAR PARKING

GAUSHALA MARG

CREMATORIA



CREMATORIA

LEGENDS -

- UG DRAIN LINE
- UG ELECTRIC WIRE
- DRAIN PIPE
- UG ELECT. LINE OUTPUT UNIT
- FIRE HAZARD SIGNAGE
- DRINKING WATER UNITS
- DUSTBINS
- FOOT PATH 1.5M WIDE
- DIVIDER 1.9 M WIDE
- MAN HOLE

ON SITE AND OFF SITE CONSIDERATIONS -

1. VEGETATION AT SITE -

AS THE SITE IS LOCATED IN NOIDA AND ON THE BANKS OF RIVER YAMUNA, IT HAS SANDY SOIL AND FAVOURABLE FOR THE GROWTH OF DECIDUOUS TREES

IMAGE SOURCE SURVEY

BANANA TREE

EUCALYPTUS TREE

THE SITE IS GREEN AND PLAIN ALSO THE GROWTH OF WHEAT AND RICE WERE AVAILABE AT VARIOUS PARTS

SERVICES AT SITE-

(IMAGE SOURCE SURVEY)

(IMAGE SOURCE SURVEY)

(IMAGE SOURCE SURVEY)

UNDERGROUND ELECTRIC WIRE FACILITIES

(IMAGE SOURCE SURVEY)

(IMAGE SOURCE SURVEY)

UNDERGROUND DRAINAGE PIPES

(IMAGE SOURCE SURVEY)

SINCE NO CONSTRUCTION HAS BEEN STARTED AT SITE. IT IS LUSH GREEN

SITE CONDITIONS-

(IMAGE SOURCE SURVEY)

(IMAGE SOURCE SURVEY)

(IMAGE SOURCE SURVEY)

GAS PIPELINE SIGNAGE

SITE IS SOURROUNDED BY FENCES FROM ALL SIDES

LOCAL BUILDING MATERIALS -

MOST OFTEN USED BUILDING MATERIALS WERE REINFORCED STEEL BARS CONCRETE, MASONARY BRICKS, GLASS, STONES , CERAMIC TILES, ETC.

BUILDING BYE LAWS -

TYPE OF BUILDING -	ASSEMBLY BUILDING
F.A.R. -	1.30
PERMISSIBLE GROUND COVERAGE-	30 %
SETBACKS - (FRONT)	15.0 MT.
(REAR)	9.0 MT.
(SIDES)	9.0 MT.
PERMISSIBLE HEIGHT -	NO LIMIT
PARKING -	1 PARKING SPACE FOR 20 SEATS
LANDSCAPING -	PROVISION FOR RAIN WATER HARVESTING IN ALL CATE -GORIES OF PLOTS EXCEEDING 300 SQUARE METRES IN AREA SHALL HAVE TO BE PROVIDED.

TENTATIVE REQUIREMENTS -

1. CONFERENCE & MEETINGS
2. GENERAL PREFUNCTION AREA
3. MULTIPURPOSE HALL
4. VIP PRE FUNCTION AREA
5.. VIP LOUNGE
6..F&B
7 BUISNESS CENTRE
8. EXHIBITION AREAS
9.. ART GALLERIES
10. ADMINISTRATION
11. SERVICES
12. LIBRARY
13. LIBRARY LOUNGE
14. OPEN EXHIBITION AREA
15. AUDITORIUMS
16. SEMINAR HALLS
17.BANQUET HALLS & STORE

SWOT ANALYSIS -

STRENGTH-	SITE IS LOCATED ONLY AT 500 MTS FROM METRO STATION WHICH ENCOURAGES PUBLIC TRANSPORT .
WEAKNESS	THE SITE IS HIGHLY VEGETATED , HENCE IT SHOULD BE LEVELLED FOR THE CONS--TION
OPPORTUNITY	SITE WILL CREATE PLATFORM FOR NATI--ONAL AND INTERNATIONAL CONVENTI--ONS.
THREAT	SOIL IS LOAMY , SO GOOD CONSTRUCT--ION PRACTICE NEEDS TO BE EMPLOYED

CLIMATE ANALYSIS -

CLIMATE : COMPOSITE CLIMATE

COORDINATES : 28°31'29.9"N , 77°24'40" E

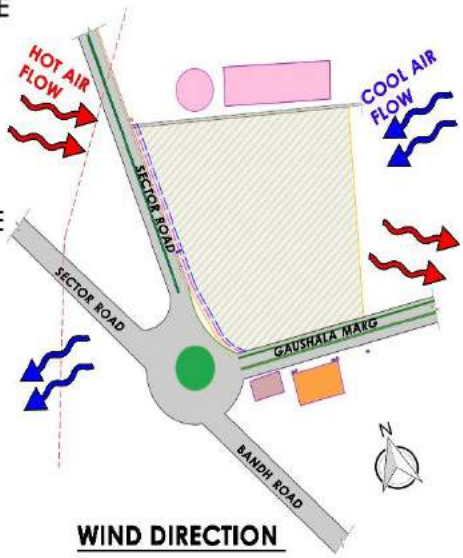
ALTITUDE : 199 MTS

WIND DIRECTION : JAN- MAY : NW- SE
JAN - AUG : S-N
SEP: N-S
NOV- DEC : E-W

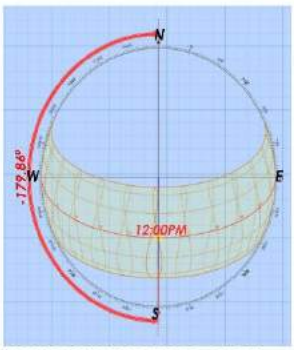
MAX. AVG. TEMPERATURE : 43°C(MAY)

MIN. AVG. TEMPERATURE : 6°C (JAN)

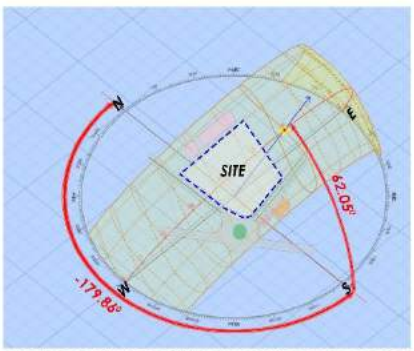
RELATIVE HUMIDITY : 75% AUG- (MAX)
30% APR - (MIN)



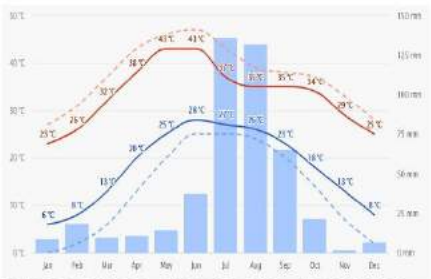
WIND DIRECTION



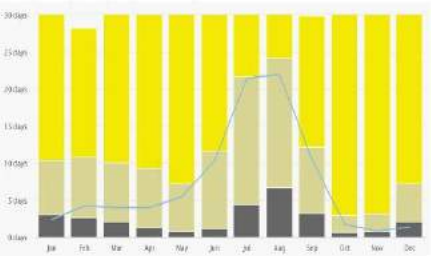
NOIDA SUN PATH DIAGRAM AT 12:00 PM ON 14/02/20
(IMAGE SOURCE - 3D SUNPATH.COM)

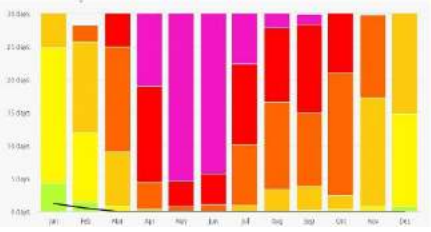


ALLOCATION OF SITE ON SUN PATH DIAGRAM AT 12:00 PM ON 14/02/20
(IMAGE SOURCE - 3D SUNPATH.COM)



(IMAGE SOURCE - CLIMATE NOIDA METEOBLUE)





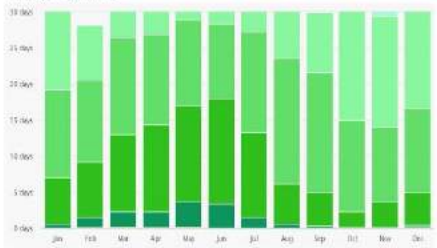
LEGEND -

AVG. TEMP. & PRECIPITATION
- PRECIPITATION
- MEAN DAILY MIN TEMP.
- AVG. TEMP IN COLD NIGHTS
- MEAN DAILY MAX. TEMP.
- AVG. TEMP IN HOT DAYS

CLOUDY, SUNNY , PRECIPITATION DAYS
- SUNNY
- PARTLY CLOUDY
- OVERCAST
- PRECIPITATION DAYS

MAX. TEMPERATURES
- >40°C
- >35°C
- >30°C
- >25°C
- >20°C
- >15°C
- FROST DAYS

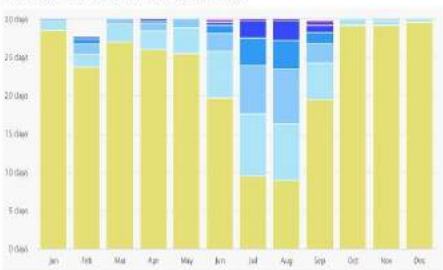
WIND SPEED



(IMAGE SOURCE - CLIMATE NOIDA METEOBLUE)

- > 5 KM/HR
- > 12 KM/HR
- >19 KM/HR
- > 28 KM/HR

PRECIPITATION AMOUNTS



(IMAGE SOURCE - CLIMATE NOIDA METEOBLUE)

- 50-100 MM
- 20-50 MM
- 10-20 MM
- 5-10 MM
- 2-5 MM
- < 2MM
- DRY DAYS

CASE STUDY - 1
INDIAN HABITAT CENTRE ,
NEW DELHI

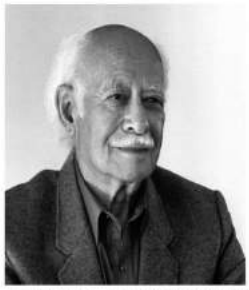
INDIAN HABITAT CENTER , NEWDELHI

LOCATION :	LODHI ROAD NEAR AIR FORCE ,BAL BHARATI SCHOOL, NEW DELHI
ARCHITECT OF PROJECT :	AR. JOESPH ALLEN STEIN
COORDINATES:	28° 35'22.5"N 77°13'32.3"E
ELEVATION :	210 MTS
SEISMIC ZONE :	ZONE IV
SITE AREA :	9 ACRES (36414 SQ.MT)
TOTAL BUILTUP AREA	22.9 ACRES (92903.0 SQ.MT.)
ACHIEVED F.A.R	2.54
YEAR OF COMPLETION :	1993
PROGRAMMES OF IHC :	CONVENTION CENTER, AUDITORIUM, CONFER--ENCE, HABITAT FILM CLUB, GUEST ROOM/ SUITS, GYMNASIUM, SPAS EXHIBITION, RESTAURANT, DINING HALLS AND FOOD COURT
BUILDING HEIGHT :	30 MTS

OBJECTIVES OF CASE STUDY -

- TO STUDY VARIOUS FUNCTIONS AND THEIR RELATIONSHIPS.
- TO STUDY THE CRITERIA OF THE CONVENTION CENTRE.
- TO STUDY THE EFFICIENCY OF SPACES
- TO KNOW ACTUAL DIMENSION OF SPACES
- TO TAKE RIGHT PATH FROM INFERENCES THROUGH CASE STUDIES

ABOUT THE ARCHITECT :



JOESPH ALLEN STEIN
10 APRIL 1912 -
6 OCTOBER 2001

HIS PHILOSOPHY -

■MR. STEIN BROUGHT A CALIFORNIA MODERNISM SENSITIVITY TO THE COUNTRY. HIS APPROACH IS CALLED **MODERN REGIONALISM.**
■ACCORDING TO HIM ***"REGIONAL WITHOUT MODERN IS REACTIONARY, AND MODERN WITHOUT REGIONAL IS INSENSITIVE, INAPPROPRIATE."*** WHICH MEANS BUILDING SHOULD REFLECT THE CULTURE AND TRADITION OF ITS REGION THROUGH ITS DESIGN AND MATERIALS.

IIM KOZHIKODE CAMPUS

TRIVENI KALA SANGAM , N.DELHI

HIS DESIGN FEATURES -

INTERRELATIONSHIPS OF SITE WITH LANDSCAPE, STRUCTURE AND MATERI--ALS; SUN AND SHADE.

- HORIZONTAL AND VERTICAL GARDEN.
- USE OF LOCAL MATERIAL.
- USE OF JALI.
- USE OF COURTYARD. BLEND OF BUILT AND GARDEN THAT MAKES THE SPACE EXTENDED.
- USE OF MODERN CONSTRUCTION TECHNIQUES.
- SHELL GEOMETRIES – DOME, VAULT AND FACTORY ROOF SYSTEM.

ARCHITECT'S MISSION FOR INDIAN HABITAT CENTRE :

PROBLEM SOLVING IN AREAS OF REGIONAL AND ENVIRONMENTAL PLANNING , ENERGY EFFICIENCY, APPROPRIATE TECHNOLOGY, OPTIONS ,TRANSPORT AND COMMUNICATION,LIFE STYLE CHOILRS SOCIO CULTURAL LINKAGES AND I.T.

ABOUT INDIAN HABITAT CENTRE -

■INDIA HABITAT CENTRE (IHC) WAS CONCEIVED TO PROVIDE A PHYSICAL ENVIRONMENT, WHICH WOULD SERVE AS A CATALYST FOR A SYNERGETIC RELATIONSHIP BETWEEN INDIVIDUALS AND INSTITUTIONS WORKING IN DIVERSE HABITAT RELATED AREAS AND WOULD THEREFORE MAXIMIZE THEIR TOTAL EFFECTIVENESS.
■SPREAD OVER AN AREA OF NINE ACRES THE IHC CAMPUS HAS BEEN DESIGNED AND BUILT BY JOSEPH STEIN, DOSHI AND BHALLA WHO HAVE CREATED AN ISLAND OF ARCHITECTURAL EXCELLENCE IN THE BUSY METROPOLIS OF INDIA'S CAPITAL, DELHI. THE CAMPUS WEAVES IN A UNIQUE INTERPLAY OF INSTITUTIONS, SUPPORTING INFRASTRUCTURE AND FACILITIES SUCH AS CONFERENCE VENUES,

AUDITORIA, HOSPITALITY AREAS, THE LIBRARY AND RESOUR -CE CENTRE, AND ART GALLERIES. ELEGANTLY DESIGNED, THE CAMPUS IS A HUB OF ACTIVITY WHILE SIMULTANEOUSLY BEING SERENE.

PURPOSE OF CONSTRUCTION OF INDIAN HABITAT CENTRE-

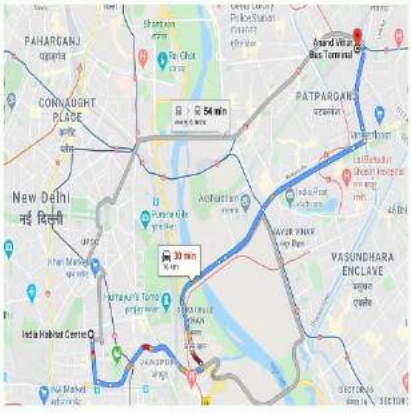
- COMMERCIAL PURPOSES
- SOCIAL, CULTURAL, AND ECONOMIC ACTIVITIES
- DRAMAS, PLAYS ARE ORGANIZED AT THE CENTRE
- BANQUET , PARTY LAWNS AND RESTRAUNTS
- THE CENTRE PROVIDES RANGE OF FACILITIES LIKE CONFERENCE VENUES, SEMINAR HALLS, RESTRAUNTS, LIBRARY AND PERFORM -ANCE VENUES FOR CULTURAL ACTIVITIES

APPROACH TO INDIAN HABITAT CENTRE -

NEAREST RAILWAY STATION -

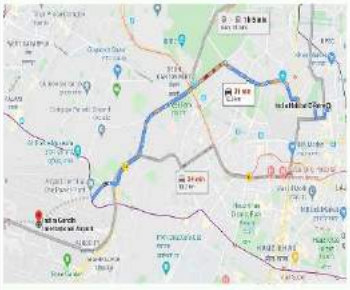
IHC — 29 MINS / 7.6 KM — NDRS

NEAREST BUS STATION -



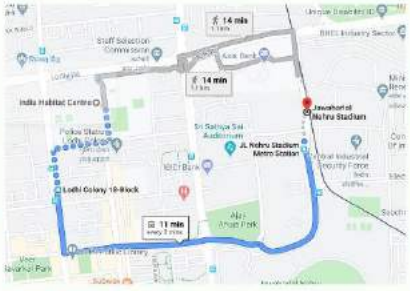
IHC — 30 MINS / 16 KM — ANVH ISBT

NEAREST AIRPORT-



IHC — 31 MIN / 13.5 KM — IGIA

NEAREST METRO STATION-



IHC — 11 MIN / 1.1 KM — JLN MS

SYMBOL OF INDIAN HABITAT CENTRE - CONCEPT-

- THE SYMBOL HAS THREE BASIC ELEM ENTS. THE DOWNWARD POINTING TRIANGLE WITHIN THE MALE FIGURE ENCIRCLED BY THE WORDS "INDIA HABITAT CENTRE".

- THE FIGURE OF THE MAN, DEVELO -PED FROM A PROTOTYPE OF A ROCK PAINTING FROM BHIMBETKA IN MADHYA PRADESH, REPRESENTS THE ANTHROPOMORPHIC PERSONI -FICATION OF SHIVA, THE CREATOR DEMIURGE, AS THE DIVINE ARCHER.

- THE BOW IN HIS LEFT HAND HAS BEEN DELETED FOR PURPOSE OF DESIGN. THE FIGURE DEPICTS THE PHENOMENON OF THE EXPANDING FORM, QUINTESSENTIAL TO THE ETE- -RNAL REPOSE,PEACE AND ORDER IN THE UNIVERSE.

- THE DOWNWARD POINTING TRIANGLE IS A FEMALE SYMBOL REPRESENTING "SHAKTI". IT IS BASED ON "SHRI YANTRA"A GENERALTERM FOR INSTRUMENTS OF WORSHIP WHICH INCLUDE GEOMETRIC FORMS. AN AMALGAMATION OF THE TWO FORMS SYMBOLIZE THE CREATIVE ACTIVITY OF THE COSMIC MALE AND FEMALE ENERGIES IN SUCCESSIVE STAGES OF EVOLUTION

- ENCIRCLING THEM IS THE UNIVERSE, SHOWN BY THE TYPOGRAPHICAL USE OF THE WORDS "INDIA HABITAT CENTRE" PLACED IN A PERFECT CIRCLE.

- THE SYMBOL IN ITS ENTIRETY WOULD REPRESENT THE AIM OF THE INDIA HABITAT CENTRE TO RESOLVE AND RESTORE AT EVERY LEVEL - ENVIRONMENTAL AND ECOLOG- -ICAL, A BALANCED, HARMONIOUS AND IMPROVED WAY OF LIFE.

INDIAN HABITAT CENTER , NEWDELHI

DESIGN FEATURES OF INDIAN HABITAT CENTRE -

■CREATION OF HEALTHY AND GREEN ENVIRONMENT CREATES THE BACKBONE OF THE COMPLEX.

■**FACADE** - CLADDED WITH RED BRICKS WHICH GIVES MAJESTIC LOOK TO THE STRUCTURE.
VERTICAL AND HORIZONTAL RIBBON WINDOWS HAVE BEEN USED WITH THE SPECIAL GLASS THAT RESTRICTS THE RAYS OF SUNLIGHT.

■ **ATRIUM** - IT IS BEAUTIFULLY DESIGNED WITH THE LANDSCAPE FEATURES SUCH AS SCULPTURES, GREEN AREAS IN CENTRE RESULTING IN THE FORMATION OF ROUND-ABOUT IN THE ATRIUM.

♦ ATRIUM IS **RECTANGULAR** IN SHAPE

■ **SHADING DEVICES** - REFLECTORS ARE INSTALLED ABOVE THE BUILDING TO PROV--IDE SHADE AND PREVENT SUN FROM ENTERING THE BUILDING.

♦ THE REEFLECTORS ARE ALIGNED AT AN ANGLE WHICH REFLECTS BACK 70% OF SUNLIGHT AND CHANGE THEIR ANGLE DURING WINTER TO ALLOW SUNLIGHT TO FALL ON THE WINDOW.

■ **CONSTRUCTION TECHNIQUE** -

♦ MASSIVE STEEL GIRDERS HAVE BEEN USED FOR THE CONSTRUCTION PURPOSE

♦THE ENTIRE OFFICE BLOCK RESTS ON THE STEEL GIRDERS WITHOUT ANY SUPPORT OF THE COLUMN IN BETWEEN THE LONGITUDNAL PLAN ,

♦MOST OF THE RIBBON WINDOWS HAVE SLOTS FOR PLANTATION WHICH ADD TO THE BEAUTY OF THE ENTIRE CAMPUS .

SITE PLAN

CONVENTION CENTRE HAS 3 FLOORS WHICH CONSISTS OF-

HALLS AT BASEMENT , GROUND AND FIRST FLOOR

LIBRARY - SECOND FLOOR

LIBRARY LOUNGE- THIRD FLOOR

LEGENDS

- OFFICE BUILDING
- CONVENTION AREA
- SERVICE AREA
- PLANTERS
- LAWNS
- CIRCULATION
- WATER BODIES
- PARKING

IMAGE SOURCE - SURVEY

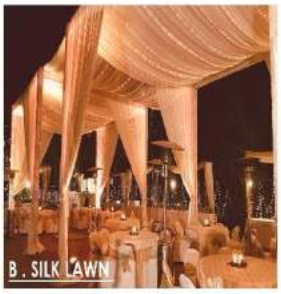


IMAGE SOURCE - HABITAT WORLD

IMAGE SOURCE - SURVEY

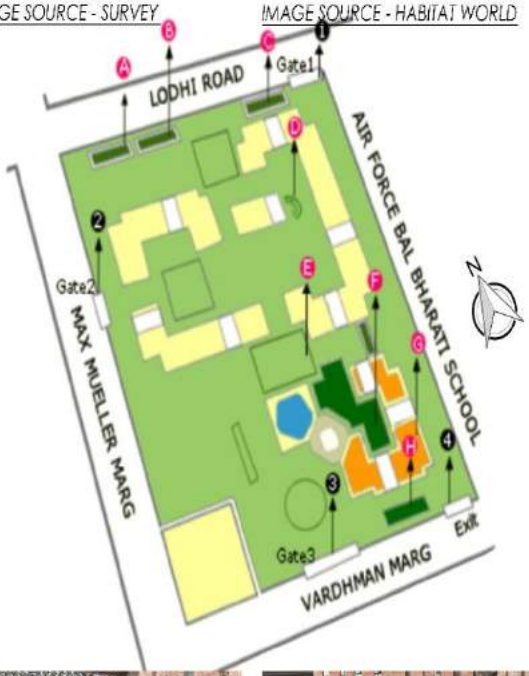


IMAGE SOURCE - SURVEY

IMAGE SOURCE - SURVEY

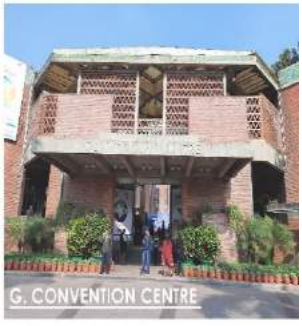
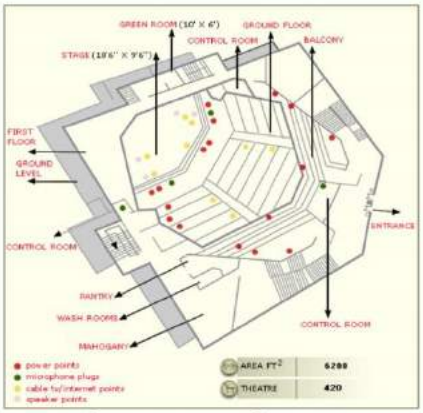


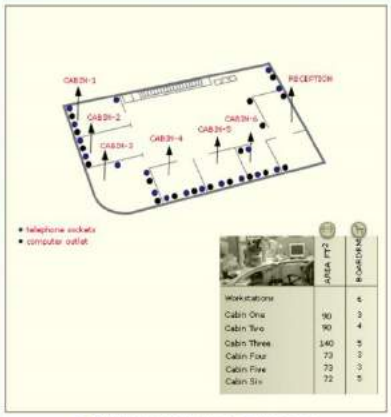
IMAGE SOURCE - SURVEY

LAYOUT PLANS OF CONVENTION CENTRE AREA :



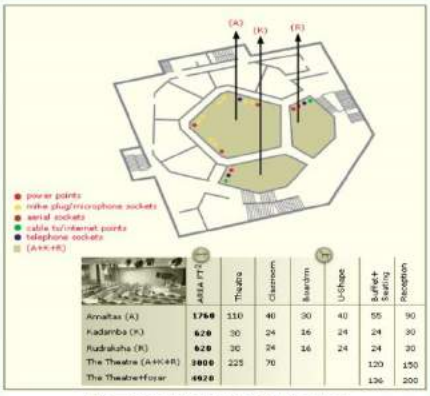
(h) = Seating capacity or arrangement (sq) = Area in sq. feet

THE STEIN AUDITORIUM (AREA 576 SQ.M)



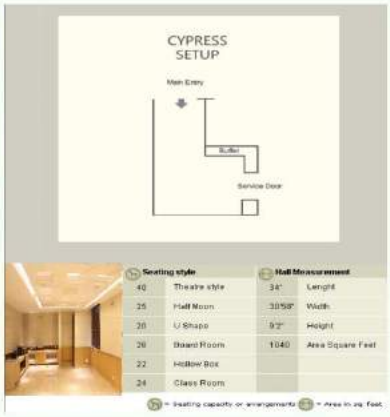
(h) = Seating capacity or arrangement (sq) = Area in sq. feet

BUISNES CENTRE (50 SQ.MT)



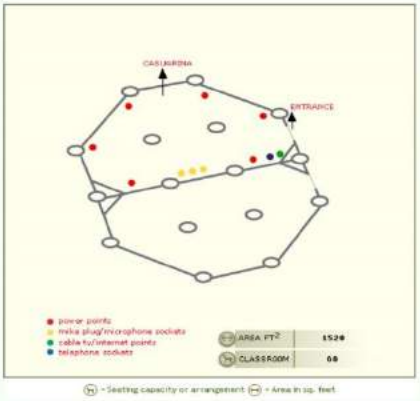
(h) = Seating capacity or arrangement (sq) = Area in sq. feet

THE THEATRES (AREA 457 M²)



(h) = Seating capacity or arrangement (sq) = Area in sq. feet

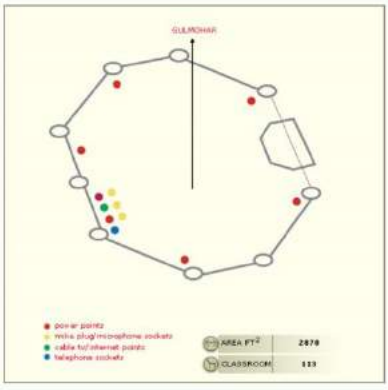
CYPRESS (AREA 97 M²)



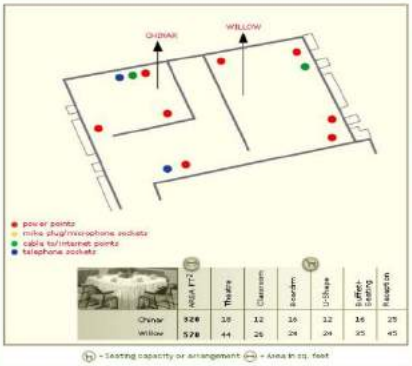
(h) = Seating capacity or arrangement (sq) = Area in sq. feet

CASAURINA CONF. HALL (AREA 141.2 M²)

CASAURINA HALL



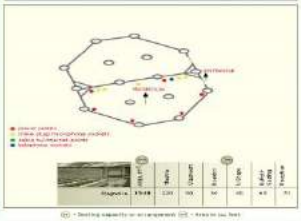
GULMOHAR CONF. HALL (AREA 267 M²)



(h) = Seating capacity or arrangement (sq) = Area in sq. feet

CHINAR & WILLOW SEMINAR HALL (AREA 82.6 SQ.MT)

IMAGE SOURCE - SURVEY



MAHOGANY HALL 44 SQ.MT

MAGNOLIA HALL 143 SQ.MT

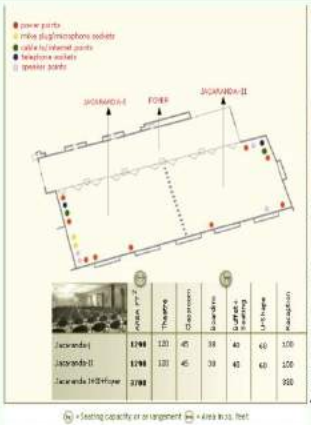
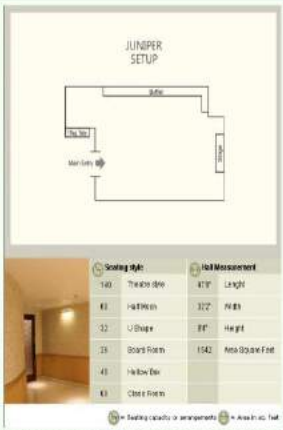


IMAGE SOURCE - SURVEY



JACRANDA HALL (343.3 SQ.MT)

JUNIPER HALL (143.2 SQ.MT)

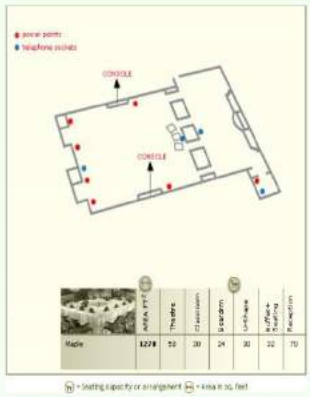
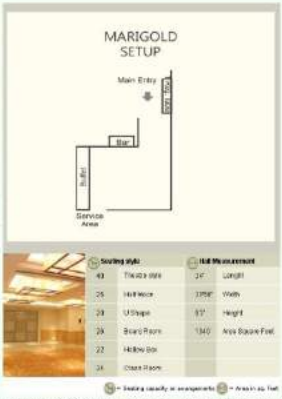


IMAGE SOURCE - SURVEY

IMAGE SOURCE - SURVEY



MAPLE HALL (118 SQ.MT)

MARIGOLD HALL (97 SQ.MT)

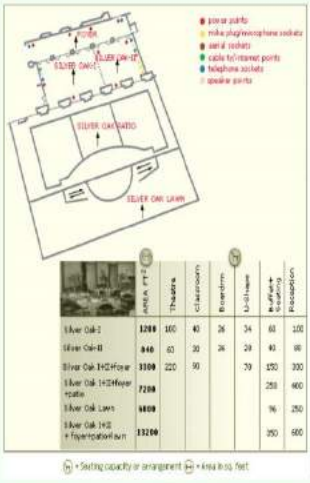
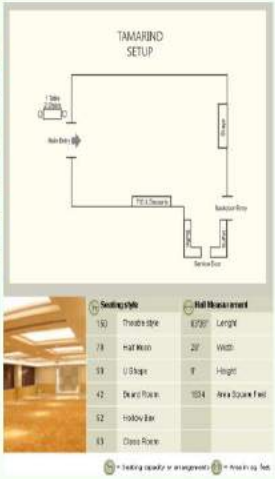


IMAGE SOURCE - SURVEY



SILVER OAK HALL (1226.3 SQ.MT)

TAMARIND HALL (170.3 SQ.MT)

■THE CONVENTION CENTRE HAS TOTAL OF 15 HALLS WHICH ARE USED FOR DIFFERENT PURPOSES AND A STEIN AUDITORIUM.

■OUTDOOR CONVENTION AREAS LIKE THE HUB , MARGOSA LAWN, SILK LAWN 1000-1500 CAPACITY, SILVER OAK LAWN, PLAZA STEP ARE THERE FOR OPEN EXHIBITIONS .

LANDSCAPE FEATURES-

FISH POND

EUREKA PALM TREE

EAST COURT YARD

MONEY PLANT

ARCHITECTURAL FEATURES-

SHADED BY OVERHEAD SUNSCREENS AND ENLI--VENED BY VERTICAL GARDENS

THE ENTIRE FACADE IS CLADDED WITH RED BRICKS WHICH GIVE A MAJESTIC LOOK TO THE STRUCTURE.

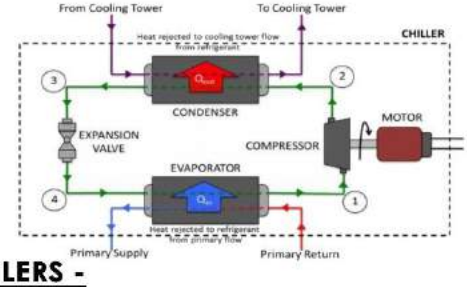
THE COURTYARDS ARE PLANTED WITH A PLEAS--ING ARRAY OF GREENERY LARGE POTS AMONGST THE CONCRETE MONUMENTALITY.

VERTICAL AND HORIZO--NTAL RIBBON WINDOWS HAVE BEEN USED WITH A SPECIALGLASS THAT RESTRICTS THE ENTRY OF SUNLIGHT.

SERVICES -

1. AIR CONDITIONING (HVAC)

HVAC PLANT WAS PLACED AT MINUS 2 LEVEL
COMPANY - TRANE INDIA
NO. OF AC PLANTS - 5 PLANTS
CEILIENG HEIGHT - 4.8 MTS
NO. OF PLANTS
IN WORKING CONDITON- 4 PLANTS
PLANTS ON STANDBY - 1 PLANT
THERE ARE 5 CHILLER PLANT
MODEL TYPE- SCREW CHILLER -300 TR
CENTRIFUGAL CHILLER 600 TR
WORKING - THERE ARE 2 KINDS OF PIPE GREEN AND BLUE PIPE IN CHILLER PLANT
AREA PROVIDED - 600 SQ.MT.
DIA OF PIPE - 450 MM (APPROX.)

2. BOILERS -

BOILERS ARE PLACED AT MINUS 2 LEVEL
COMPANY - RAPID COOL
NO. OF BOILERS - 3 BOILERS
CAPACITIES - 405 KW
810KW X 2
WORKING- BOILER CONTAINS IMMERSION HEATER TO HEAT WATER


3. EXPANSION TANK-

WORKING -

- IT CONTAINS AIR PRESSURE
- IT BUILDS AIR PRESSURE AND TRANSFERS WATER TO PIPE IN CASE OF DEFECIT OF WATER

4. FIRE SERVICES-

CAPACITY OF WATER TANK - 3.5 L LTR.
TYPES OF PUMP -

1. JOCKEY PUMP - IT MAINTAINS PRESSURE FOR ALL OTHER PUMPS

2.HYDRANT PUMP - IT IS A MAIN PUMP

3. DG PUMP - IT IS STAND BY PUMP, USED IN THE ABSENCE OF ELECTRICITY

4. SPRINKLER PUMP - IT IS USED TO EXTINGUISH FIRE

SATURATION TEMPERATURE - 68^{0}C

WORKING- RED LINE HAVING SPRINKLERS BREAKS IF THE TEMP OF THE ROOM EXCEEDS 68^{0}C AND WATER IS SPRINKLED TO EXTINGUISH THE FIRE

FIRE PUMP ROOM SIZE - 9.5X13.5 MTS
CEILING HEIGHT - 3.8 MTS

S.NO	DESCRIPTION	AUTO STARTING PRESSURE	CUT OFF PRESSURE
01	JOCKEY PUMP	5KG / CM. SQ	7KG
02	HYDRANT PUMP	4KG/CM.SQ.	MANUALLY CUTOFF
03	SPRINKLER PUMP	3KG/CM. SQ.	MANUALLY CUTOFF
04	DG DRIVEN PUMP	2.5KG/CM SQ.	MANUALLY CUTOFF

5. RO PURIFIER - INSTALLED AT EVERY FLOOR

CAPACITY- 200-250 LTRS.

CASE STUDY -2
INDIA INTERNATIONAL CENTRE (I.I.C.) , NEW DELHI

INDIA INTERNATIONAL CENTRE , NEW DELHI

LOCATION :	40, MAX MUELLER MARG NEW DELHI
ARCHITECT OF PROJECT :	AR. JOESPH ALLEN STEIN
COORDINATES:	28°35'35.71" N 77°13'21.3" E
ELEVATION:	211 M
SEISMIC ZONE :	ZONE 4
SITE AREA :	4.6 ACRES (18611 SQ.MTS)
YEAR OF COMPLETION	1962
AREA LEFT FOR ROAD WIDEING:	544.7SQ.MT (5864 SQ.FT)
PERMISSIBLE GROUND COVERAGE :	25% (49608 SQ.FT.) 4608.7 SQ.MT
ACHIEVED GROUND COVERAGE :	24.9% (49548.6 SQ.FT.) 4603.7 SQ.MT
PERMISSIBLE COVERED AREA :	75% (148824.3 SQ.FT.) 13826 SQ.MT
ACHIEVED FAR:	63.03% (11620 SQ.MT.)
PROGRAMMES OF IIC:	AUDITORIUM , ART GALLERIES , CONFERENCE HALL, MULTI PURPOSE HALL, SEMINAR HALL, GUEST BLOCK, HOSTEL BLOCKS, GARDEN , RESTRAUNTS, ETC.

LOCATION-

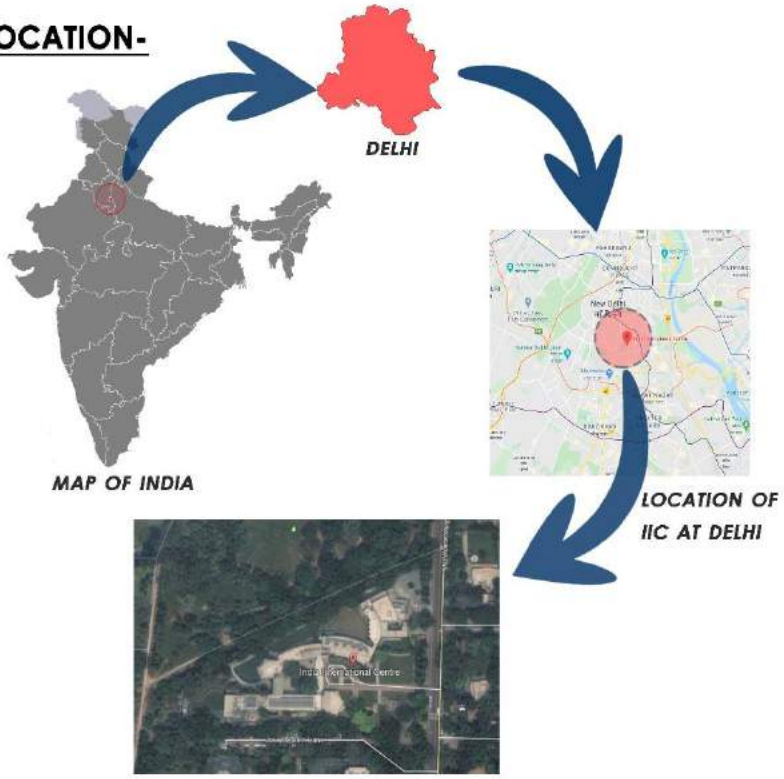


IMAGE SOURCE -GOOGLE MAPS

INDIA INTERNATIONAL CENTRE , DELHI

OBJECTIVES OF CASE STUDY -

- TO STUDY VARIOUS FUNCTIONS AND THEIR RELATIONSHIPS.
- TO STUDY THE CRITERIA OF THE CONVENTION CENTRE.
- TO STUDY THE EFFICIENCY OF SPACES
- TO KNOW ACTUAL DIMENSION OF SPACES
- TO TAKE RIGHT PATH FROM INFERENCES THROUGH CASE STUDIES

ARCHITECT'S MISSION FOR INDIA INTERNATIONAL CENTRE:

■STEIN SPENT FIFTY YEARS LIVING AND BUILDING IN INDIA AND HIS AFFINITY FOR NATURE IS MARVELLOUSLY EXPRESSED HERE IN THE SYMBIOTIC RELATIONSHIP HE CREATED BETWEEN THE CENTRE AND THE LODI GARDENS.

■A STRIKING FEATURE OF THE CENTRE IS ITS AUSTERE BEAUTY AND CONSCIOUS LACK OF OSTENTATION. THE LOW SWEEP OF ITS BUILDINGS IS DESIGNED TO RELATE TO THE HUMAN SCALE, FOR STEIN BELIEVED THAT 'MAN COMES INTO RELATIONSHIP WITH NATURE WHEN THIS HAPPENS.

■TO CERTAIN KIND OF RELATIONSHIP – BETWEEN THE GARDEN AND THE BUILDING AND THE WATER AND THE EARTH AND THE SKY, AND THE LEARNING AND ACTIVITIES THAT TAKE PLACE AND THE THINGS THAT HAPPEN .

ABOUT INDIA INTERNATIONAL CENTRE :

■THE INDIA INTERNATIONAL CENTRE (IIC), FOR MORE THAN THE LAST FIVE DECADES HAS BEEN THE INTELLECTUAL FOUNTAINHEAD OF THE COUNTRY. SITUATED IN THE HEART OF NEW DELHI, THE CENTRE LIES NEXT TO THE FAMOUS LODI GARDENS, WHERE TOUR -ISTS ARE OFTEN SEEN TAKING HERITAGE WALKS AMIDST THE PICTURESQUE SCENERY.

■COMPLETED IN 1962, THIS IS A WORLD OF GRASSY OPEN SPACES, PLACID POOLS, PAVED WALKWAYS, JAALIS, PORTICOS AND CANOPIES .

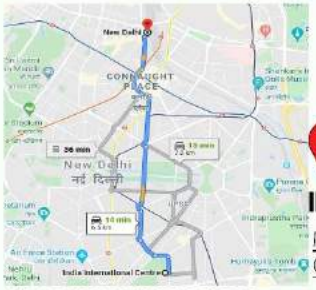
■THE BUILDINGS, INSTEAD OF SOARING HIGH, GIVE A FEELING OF COMING DOWN TO MEET THE EARTH. BOUGAINVILLEA CRAWLS UP THE STONE WALLS, MYNAHS NIBBLE ON THE GRASS, AND LOTUS LEAVES FLOAT IN THE WATER.
■THE DAYLIGHT FALLS SOFT, AND SHADED SPACES ARE CLOSE BY.

PURPOSE OF CONSTRUCTION OF INDIA INTERNATIONAL CENTRE-

■TO FACILITIES FOR A VARIETY OF ARTISTIC AND SCHOLARLY ACTIVITIES, CONFERENCE AND SYMPOSIA ORGANIZED BY NATION AND INTER--NATIONAL GROUPS.

APPROACH TO INDIA INTERNATIONAL CENTRE :

NEAREST RAILWAY STATION -



IIC — 14 MINS — 6.5 KM — NDRS

IMAGE SOURCE - GOOGLE MAPS

NEAREST BUS STATION -

IIC — 25 MINS — 16.8 KM — ANVH ISBT

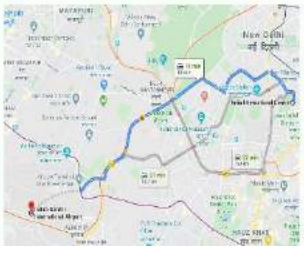
IMAGE SOURCE - GOOGLE MAPS

NEAREST METRO STATION -

IIC — 6 MIN — 2.4 KM — JLN MS

IMAGE SOURCE - GOOGLE MAPS

NEAREST AIRPORT -



IIC — 19 MIN — 13.4 KM — IGIA

IMAGE SOURCE - GOOGLE MAPS

DESIGN FEATURES OF INDIA INTERNATIONAL CENTRE -

■ **FACADE-** USE OF EXPOSED BRICKWORK IN THE FORM OF JALI , WHICH GIVES EXTRA ORRDINARY LOOK TO THE BUILDING

■ ADJUSTABLE LOUVERS ON THE GLAZED WALL

■ PRE CAST CONCRETE BLOCKS ON THE FACADE

■ USE OF STONES AND CERAMIC TILES ON THE WALLS OF KAMLA DEVI COMPLEX

■ **ROOF MATERIALS -** MODERN USE OF EXPOSED CONCR--ETE AND EXPOSED ROOF PATTERNS

■ **CONSTRUCTION TECHNIQUE-**

■THE CONSTRUCTION METHODS AND PROCE--DURES EMPLOYED IN THE BUILDING OF THE INDIA INTERNATIONAL CENTRE WERE TYPICAL OF THE METHODS AND SKILL LEVELS AVAILABLE IN INDIA AT THE TIME OF CONSTRUCTION(1958-62).

■THE PRE-CASTING OF SOME OF THE ELEMENTS ON THE GROUND WAS UNDERTAKEN IN ORDER TO ENSURE HIGH –QUALITY CONSTRUCTION, BOTH IN TERMS OF STRUCTURAL INTEGRITY AND FINISH.

■THE IIC IS VIRTUALLY A HANDMADE BUILDING.

■ LANDSCAPE FEATURES -

FOUNTAIN LAWN

MIMOSA TREE
(ALBIZZIA JULIBRISSIN)

SEASONAL FLOWERS

ROSE GARDEN

PSEUDOBOMBAX ELLIPTICUM

GOLDEN DUANTA

PLUMERIA ALBA

POND

HARD SCAPE

SMALL POND

IMAGE SOURCE -SURVEY

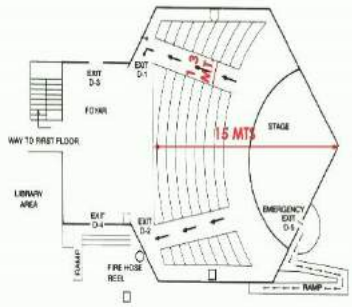
IMAGE SOURCE SURVEY

IMAGE SOURCE -SURVEY

IMAGE SOURCE -SURVEY

IMAGE SOURCE -SURVEY

AUDITORIUM-



Details of Exit Doors Dimension- Auditorium

S. no	Particular	Width (MM)	Height (MM)
1	Exit Door D-1	1650	2380
2	Exit Door D-2	1650	2380
3	Exit Door D-3	1800	1970
4	Exit Door D-4	1800	2000
5	Exit Door D-5 (Emergency)	1140	1880

IMAGE SOURCE -SURVEY

LOCATION - PROGRAM BLOCK (GR. FLR)

CAPACITY - 240

TOTAL AREA- 3369 SQ.FT.(313 SQ.MT.)

STAGE AREA - 33 SQ.MT

CEILING HEIGHT- 8 MTS

WALL MATERIALS - GREY QUARTZITE STONE

SEATING LAYOUT - SETTING IN FORM OF 12 SEMICIRCULAR ROWS AND APPROACHED BY TWO AISLES.

ARCHITECTURAL FEATURES - WOODEN PANEL IS PROVID-ED AT THE REAR WALL

■THE ROOF OF THE AUDITORIUM IS COMPOSED OF PRE CAST Y- SHAPED ELEMENTS , COMBINED TO FORM A SIX SIDED DOMICAL SURFACE BASE ON HEXAGONS AND QUADRILATERAL, THE LATERAL LOAD FROM THE ROOF IS CONTAINED BY A TENSION RING.

COVENTION AREAS -

1. KAMLADEVI BLOCK

FLOOR WISE DISTRIBUTION

LOWER BASEMENT

- MAINTAINANCE STORE
- STATIONERY STORE
- UPHOISTER'S ROOM
- BANQUET STORE
- CROCKERY /LIQUOR STORE
- STAFF TOILET

UPPER BASEMENT

- CENTRALISED BOOKING OFFICE
- CATERING MANAGER OFFICE
- MEMBERSHIP OFFICE
- MEMBER'S RETIRING ROOM
- BANQUET PANTRY
- PUBLIC TOILETS

GROUND FLOOR

- MULTI PURPOSE HALL

FIRST FLOOR

- SEMINAR HALL 1,2,3
- PUBLIC TOILETS

SECOND FLOOR

- ART GALLERY
- PUBLIC TOILETS

IMAGE SOURCE -SURVEY

ZONING

UPPER BASEMENT

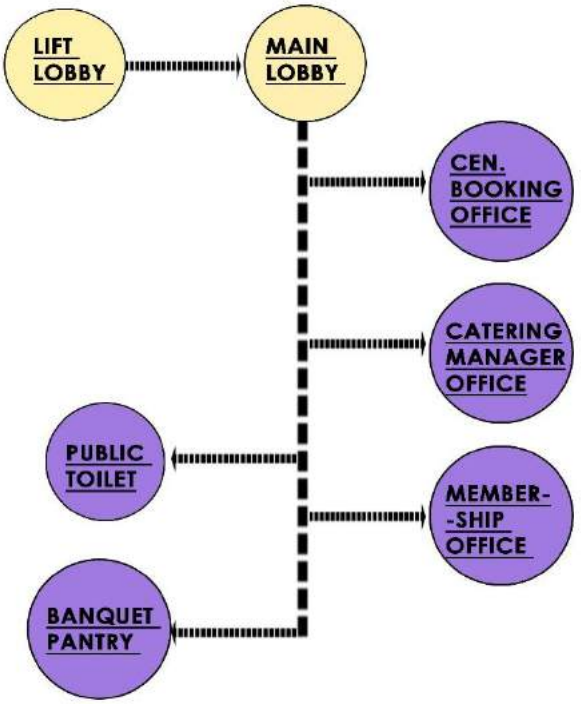


IMAGE SOURCE -SURVEY

CENTRAL BOOKING OFFICE

IMAGE SOURCE -SURVEY

MEMBER SHIP OFFICE

IMAGE SOURCE -SURVEY

PUBLIC TOILET

GROUND FLOOR

TOTAL AREA - 3630 SQ.FT (337 SQ.MT.)
CAPACITY - 300-325
STAGE AREA (INCLUDED)- 750 SQ.FT (69.6 SQ.MT.)

PRE - FUNCTION AREA 1&2 - 113 SQ.MT.. & 120 SQ.MT.

IMAGE SOURCE -SURVEY

IMAGE SOURCE -SURVEY

MULTIPURPOSE HALL

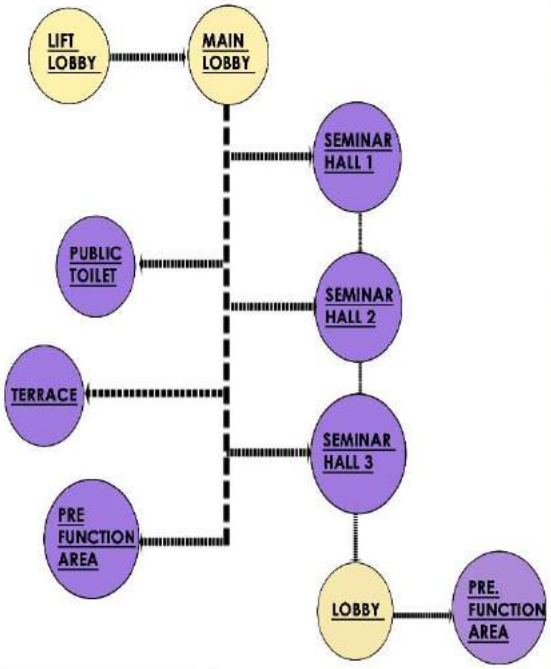
FIRST FLOOR

■ SEMINAR HALL 1
AREA 500 SQ.FT. (46.4 SQ.MT.)
CAPACITY - 40

■ SEMINAR HALL 2
AREA 1100 SQ.FT. (102 SQ.MT.)

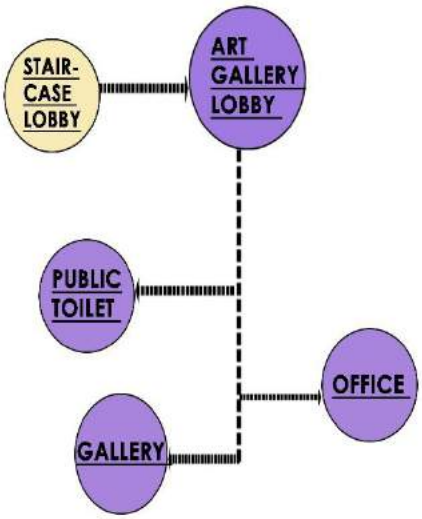
■ SEMINAR HALL 3
AREA 500 SQ.FT. (46.4 SQ.MT.)
CAPACITY - 40

■ PRE FUNCTION AREA 1&2
AREA 2152 SQ.FT. (200 SQ.MT.)



SECOND FLOOR

ART GALLERY WITH PREFUNCTION AREA - 3400 SQ.FT (316 SQ.MT)



CONFERENCE HALL

CONFERENCE HALL 1

LOCATION - PROGRAM BLOCK (FIRST FLOOR)

AREA - 5.2X18 MTS (93.6 SQ.MTS)

CAPACITY - 70

CONFERENCE HALL 2

LOCATION - DINING HALL BLOCK (SECOND FLOOR)

AREA - 113.8 SQ.MT.

CAPACITY- 50

LIBRARY

LOCATION - PROGRAM BLOCK (GROUND FLOOR)

AREA - 464.5 SQ.MTS

CAPACITY - 50

PROGRAM BLOCK

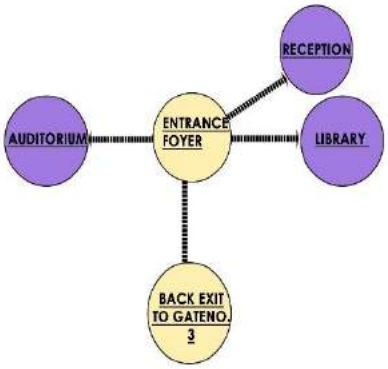
GROUND FLOOR - AUDITORIUM, LIBRARY

FIRST FLOOR - PRESIDENT OFFICE , CONFERENCE ROOM 1 , ADMIN OFFICE , PURCHASE OFFICE , DOCTOR'S ROOM,ROOM SERVICE

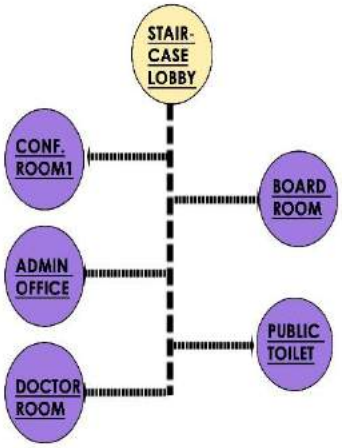
SECOND FLOOR - ACCOUNT'S DEPT, PROGRAMME DEPT., PUBLICATION DEPT. PUBLIC TOILETS

ZONING-

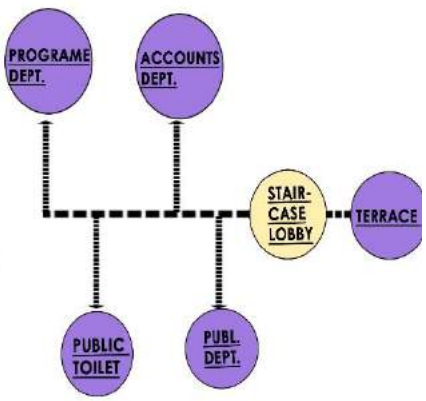
GROUND FLOOR



FIRST FLOOR



SECOND FLOOR



OPEN EXHIBITION AREAS-

GANDHI KING PLAZA GARDEN

SERVICES -

UTILITY BASEMENT -

1. HVAC PLANT -

HVAC PLANT WAS PLACED AT MINUS 2 LEVEL
COMPANY - TRANE INDIA
NO. OF AC PLANTS - 4 PLANTS
IN WORKING CONDITON- 3 PLANTS
PLANTS ON STANDBY - 1 PLANT
CAPACITY - 300TR X 2, 150TR X2

2. SEWAGE TREATMENT PLANT -

AN UNDERGROUD SEWAGE TREAT--MENT SYSTEM IS PROVIDED CAPABLE OF TREATING 100 KL OF WATER PER DAY.

TYPES OF TANK PROVIDED -

SCREENING CHAMBER,EQUALIZA--TION TANK, AERATION TANK, AERATION CUM MBR , MEMBRANE BIO REACTOR MODULE,TREATED WATER CUM CHLORINE CONTACT TANK

3. FIRE PUMP ROOM -

FIRE PUMP ROOM IS PROVIDED NEAR SEWAGE TREATMENT PLANT AND GANDHI PLAZA GARDEN

4. SLUDGE DRAIMAD SYSTEM-

MANURES ARE PREPARED BY TREATING SEWAGE WHICH ARE USED FOR LANDSCAPING

5. COOLING TOWERS - 3 nos.

6. LIFTS -2 NOS. (1275 KG) 18 PERSONS

7. DG SET FOR BUILDING (LIGHT& POWER)-

CAPACITY - 300 KV A

IT HAS ITS OWN SUB-STATION

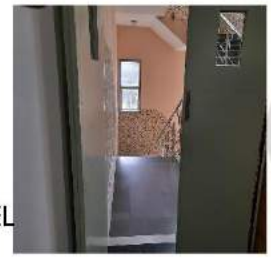
8.PARKING -

PROVIDED
GATE NO. 1
30CARS
GATE NO 2
12 CARS
GATE NO 4
40 TWO WHEEL-ERS

9. RAIN WATER RECHARGING PIT

AN UNDERGROUND TANK OF CAPACITY 10000 LTRS IS ALSO PROVIDED FOR DOMESTIC PURPOSE

10.FIRE STAIRCASE-



LITERATURE STUDY – 1
HYDERABAD INTERNATIONAL CONVENTION CENTRE (H.I.C.C.)

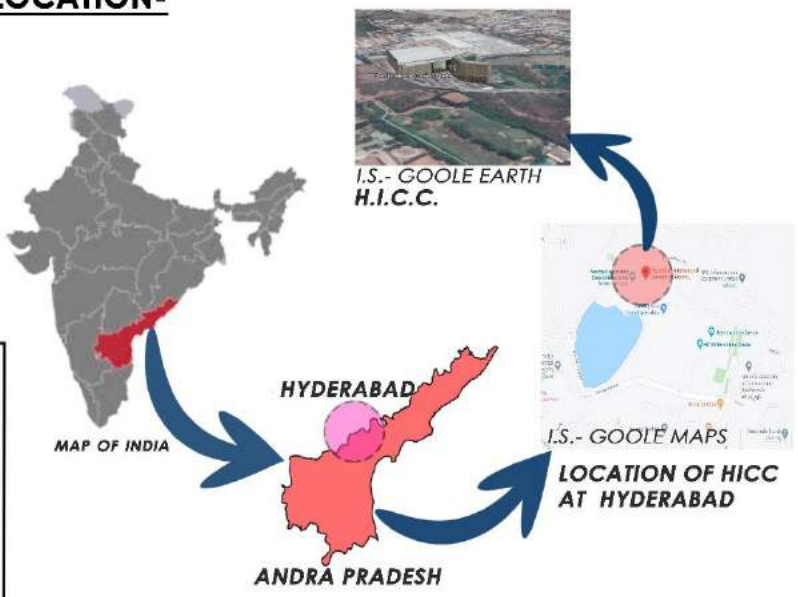
HYDERABAD INTERNATIONAL CONVENTION CENTRE -

LOCATION :	NOVOTEL AND HICC COMPLEX , HYDERABAD
ARCHITECT OF PROJECT :	UK BASED RMJM(PRIMARY ARCHITECTS
COORDINATES:	17°28'13.78"N 78°22'33.71"E
ELEVATION:	581 M
SEISMIC ZONE :	ZONE 2
SITE AREA :	60690 SQ.MT (15 ACRES)
YEAR OF COMPLETION	2005
PROGRAMMES OF IIC:	CONVENTION HALL, COFERENCE HALL , MEETING HALL, SEMINAR HALLS, F&B, CLASSROOM, LOUNGE ,FITNESS CENTRE, ETC.
AWARDS :	AWARDED GREEN GLOBE AWARD

OBJECTIVES OF LIETRATURE STUDY:

- TO STUDY VARIOUS FUNCTIONS AND THEIR RELATIONSHIPS
- TO STUDY THE CRITERIA OF THE CONVENTION CENTRE
- TO STUDY THE EFFICIENCY OF SPACES
- TO DRAW INFERENCES FOR THE DESIGN

LOCATION-



ABOUT HYDERABAD INTERNATIONAL CONVENTION CENTRE -

- HICC IS THE ONLY GREEN GLOBE CERTIFIED CONVENTION CENTRE IN INDIA.
- HICC IN EVERY ASPECT, BE IT INFRASTRUCTURE, SERVICE OR TECHNOLOGY, COMPARES WITH THE BEST IN THE WORLD. IT HAS BEEN CONCEIVED AND DESIGNED TO ASSIST IN EXECUTING WORLD CLASS EVENTS, WHETHER THEY ARE CONVENTIONS FOR 5000 DELEGATES, SEMINARS FOR 500 OR MEETING FOR JUST 50. THIS AIR-CONDITIONED CENTRE CAN BE CONFIGURED TO INCREASE SEATING CAPACITY TO ABOU 6500.
- HICC IS PROUD WINNER OF THE 'BEST CONVENTION CENTR NATIONAL TOURISM AWARD BY INCREDIBLE INDIA FOR THRE YEARS IN A ROW, 2007, 2008 & 2009.
- NOVOTEL HYDERABAD CONVENTION CENTRE, ADJACENT TO HICC, IS A 5-STAR 287 ROOM HOTEL, BUILT TO SUITE THE REQUIREMENTS OF THE DISCEMING BUSINESS TRAVELLER.

APPROACH TO H.I.C.C.-

NEAREST RAILWAY STATION-

H.I.C.C. — 20 KM — 51 MINS — SECURANDABAD RAILWAY STATION

NEAREST METRO STATION-

H.I.C.C. — 8.3 KM — 21 MINS — MIYAPUR METRO STATION

NEAREST AIRPORT-

H.I.C.C. — 40 KM — 51 MINS — MIYAPUR METRO

NEAREST BUSTATION-

H.I.C.C. — 1.5 KM — 18 MINS — KHANAMET

■ AN IDEAL VENUE FOR CONVENTIONS, CONFERENCES, SEMINARS, SHOWS, MEETINGS OR PARTIES

■ A 15- ACRE LANDSCAPE CAMPUS, LEADING EDGE DESIGN FEATURES INCLUDING ENVIRO--NMENTAL SUSTAINABLE PRACTICES.

■ 1000+ CAR PARKING AT BASEMENT

■ 12.5 M HIGH FREE CEILING HEIGHT WITH CATWALKS AND MOBILE OPERABLE WALLS LOADING DOCKS, SHOPS, ATMS, POOL, RESTAURANT, BARS.



■ 12.5 M HIGH FREE CEILING HEIGHT WITH CATWALKS AND MOBILE OPERABLE WALLS LOADING DOCKS, SHOPS, ATMS, POOL, RESTAURANT, BARS.

BUILDING EXTERIORS -

■ THE BALANCE IN USE OF GLASS AND STONE HAS BEEN JUST PERFECT.

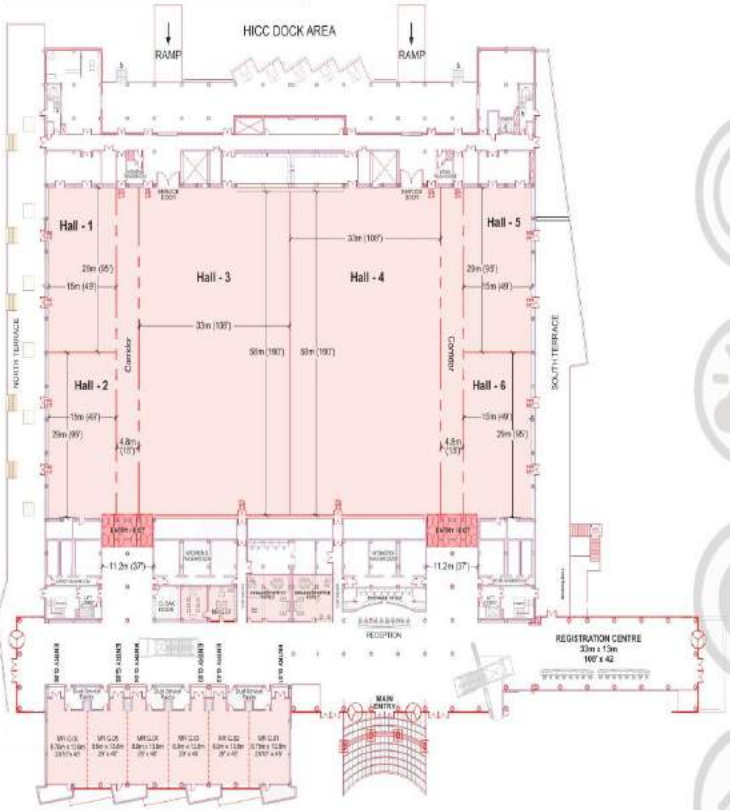
■ IN FRONT FACADE GLASS HAS BEEN USED WHICH HELPS IN IMPARTING A LARGE SCALE TO THE BUILDING AND BEHIND IT WE CAN SEE SIX ELONGATED COLUMNS WHICH ACTS AS AN ADDITIONAL FEATURE TO THE FRONT VIEW.


BUILDING INTERIORS -

■ LOBBY IS STRETCHED TO FULL HEIGHT OF 3 FLOORS

■ THE GROUND LEVEL AT FRONT OF THE BUILD--ING IS A 500 PERSON RECEPTION AREA WITH 16 TERMINALS FOR REGISTRATION.


COVENTION CENTRE-



GROUND FLOOR PLAN

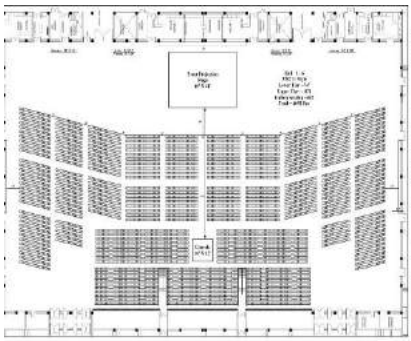
FEATURES -

■PILLAR-FREE INTERNAL HALL OF NET 6,480 SQ. METRES (CEILING HT. OF 12.5 MTS. THAT CAN HOLD A 5,000-DELEGATE PLENARY AND CAN BE PARTITIONED INTO 6 HALLS.

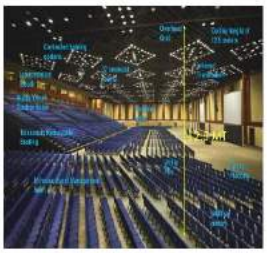
■ SIX MEETING ROOM EACH OF AREA (8.75X13.8 MTS)

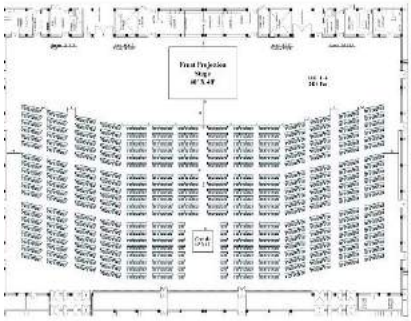
■ REGISTRATION CENTRE -35X13 MTS.

■ RECEPTION IS DESIGNED FOR 500 PERSONS.

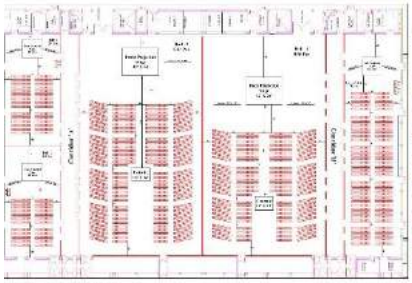


- **HALL** 1-6
- **THEATRE STYLE:** T-TYPE (AREA-6480 SQ.MT)
- **LOWER TIER** -747
- **UPPER TIER**- 871
- **GALLERY SEATING**- 692
- **TOTAL** -6092 Pax
- **FRONT PROJECTION STAGE** -60'X40'
- **CONSOLE**- 16'X12'





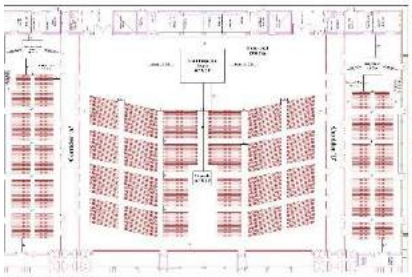
- **HALLS** -1-6
- **THEATRE STYLE** -CLASS-ROOM (AREA-6480 SQ.MT)
- **TOTAL** -2424 Pax
- **FRONT PROJECTION STAGE** - 60'X40'
- **CONSOLE**- 16'X12'



THEATRE STYLE - 3

HALLS	CAPACITY	WIDTH OF AISLES	WIDTH OF GANGWAY	SIZE OF STAGE
HALL 1	300 Pax	4',6'	5'	18'X16'
HALL 2	240 Pax	4',6'	5'	18'X16'
HALL 3	1344 Pax	5',8',10'	5'	32'X24'
HALL 4	1056 Pax	5',8',10'	5'	32'X24'
HALL 5 / HALL 6	716 Pax	4',6'	5',6'	

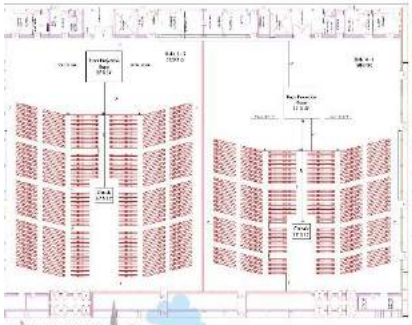
- CONSOLE SIZE FOR HALL 3&4 - 16'X12'
- NO CONSOLE PROVIDED FOR HALL 1,2,5,6



THEATRE STYLE - 4

HALLS	CAPACITY	WIDTH OF AISLES	WIDTH OF GANGWAY	SIZE OF STAGE
HALL 1 / HALL 2	716 Pax	4',6'	5',6'	18'X16'
HALL 3 / HALL 4	2956PAX	6',9',10'	6'	40'X30'
HALL 5 / HALL 6	716 PAX	4',6'	5',6'	18'X16'

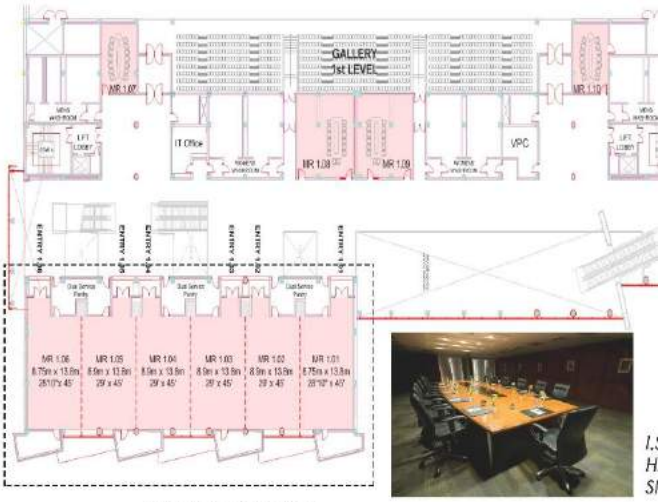
- CONSOLE SIZE FOR HALL 3&4 - 16'X12'



THEATRE STYLE - 5

HALLS	CAPACITY	WIDTH OF AISLES	WIDTH OF GANGWAY	SIZE OF STAGE
HALL 1 / HALL 2 / HALL 3	2520 PAX	5',9',10'	5'	32' X 24'
HALL 4 / HALL 5 / HALL 6	1908 PAX	5',10'	5'	32' X 24'

- CONSOLE SIZE FOR HALL 1-3&4-6: 16'X12'

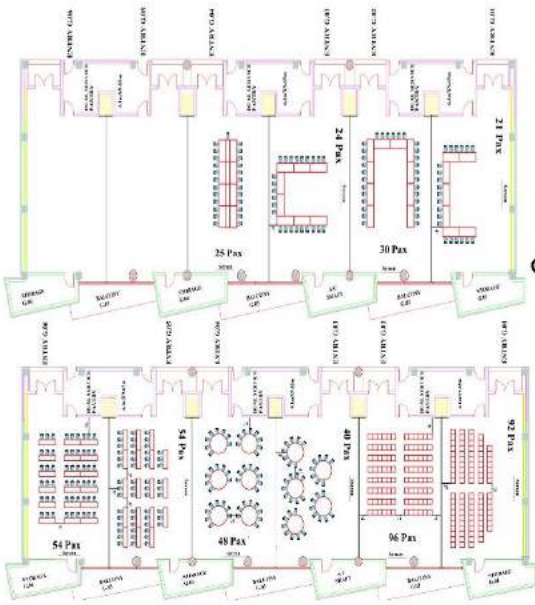


FIRST FLOOR PLAN

FEATURES -

- CONSISTS OF 10 MEETING ROOM EACH OF 8.75MX13.8M

LAYOUT OF MEETING ROOMS -



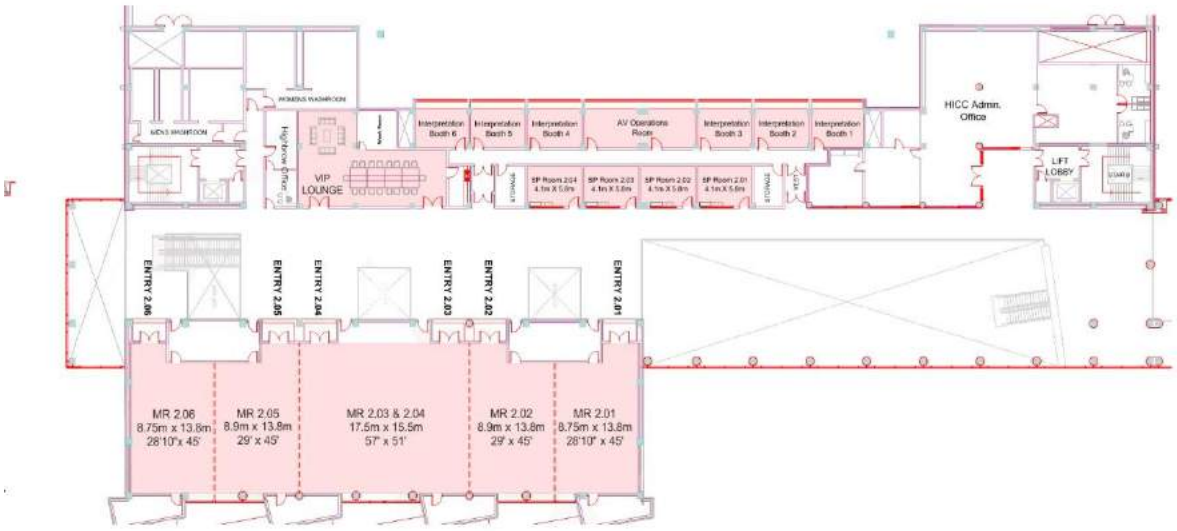
OPTION 1

OPTION 2

DESIGN ELEMENTS OF CONVENTION HALL-

- MAIN HALL ROOF IS DESIGNED IN SUCH A WAY THAT IT PROVI -DES FOLLOWING FACILITIES -

1. DIMMABLE HALOGEN LIGHTS ALONG ENTIRE FACILITY .
2. CAT WALKING FACILITY AT 6MT AND 18MTS EACH.
3. IT HAS THREE LEVELS WITH FIXED SEATINGS OF 650 ON LEVEL 1 AND 8 INTERPRETER/ CORPORATE LOUNGES AND TWO AUDIO/ VISUAL CONTROL ROOMS WHICH OVERLOOK THE MAIN STAGE
4. THE ROOF IS FITTED WITH CATWALKS AND TRUSSES TO WITH--HOLD HEAVY WEIGHTS FOR SUSPENSION OF LARGE PHYSICAL ITEMS
5. TO ENABLE EXHIBITION MODE AT THE MAIN HALL , THE FLOOR HAS BEEN PROVIDED WITH PITS WITH FACILITY OF POWER , WATER WASTE ,CABLES ETC. ACROSS 6400 SQ.MTS.
6. WHILE THE CEILING HEIGHT IS 12.5 MTS , THE OVER ALL HEIGHT IS 14.1 MTS.



SECOND FLOOR PLAN

FEATURES -

- CONSISTS OF 4 MEETING ROOM EACH OF SIZE 8.9 X 13.8 M AND ONE OF A SIZE 17.5 X 15.5M.
- IT HAS 6 INTERPRETATION BOOTHS

SERVICES AND FACILITIES AT HICC -

1. AUDIO VISUAL FACILITIES -

- SOUND REINFORCEMRNT SYSTEM SUITABLE FOR SPEECH / LIGHT MUSIC, SEMINARS , LECTURES AND PRESENTATION
- REAR PROJECTION SCREEN &LCD PROJECTOR FOR DETAILED PRESENTATION FOR ALL FORMATS OF VIDEOS FROM PRESENT--ATION TO MOTION PICTURES.
- UP TO 6 LANGUAGUE INTERPRETATION BOOTHS WITH 1000 NO. OF WIRELESS HEADPHONES FOR RECEPTION OF SIMULT--ANEOUS LANGUAGUE INTERPRETATION .
- DVD RECORDERS ENABLING RECORDING & STORAGE.

2. WASTE MINIMIZATION -

- WASTE IS SEGREGATED AT PROPER SOURCE OF PROPER DISPOSAL / RECYCLING
- ITEMS FOR DISCARD WILL BE PUT TO SECOND BEST USE AND WHICH ARE NOT REQUIRED WIL BE DISCARDED IN AN APPRO--PRIATE MANNER
- WASTE THAT CONTAINS ELEMENTS WHICH CAN BE RECLAIMED FOR FUTURE USE WILL BE RECYCLED .

3. SECURITY -

- THE H.I.C.C. SECURITY SERVICES SPECIALISE IN PROVIDING EXPERIENCED PROFESSIONAL SECURITY PERSONAL IN THE FOLLOWING AREAS:
RISK MINIMIZATION, RISK MANAGEMENT , BUILDING SECURITY, ACCESS CONTROL , BUILDING EVACUATION CONTROL , TRAFFIC CONTROL-LOADING DOCKS AND FRONT DRIVE

4. PARKING -

- THE CENTRE CAR PARK IS LOCATED OUTSIDE THE CONVENTION CENTRE AND CAN ACCOMODATE TOTAL OF 1000+ CARS
- PARKING IS GUIDED BY SIGNANGE AND SPECIAL GUARDS
- A SEPARATE PARKING AREA IS PROVIDED FOR HEAVY VEHICLES CLOSE TO NORTH ENTRANCE OF TH CENTRE.

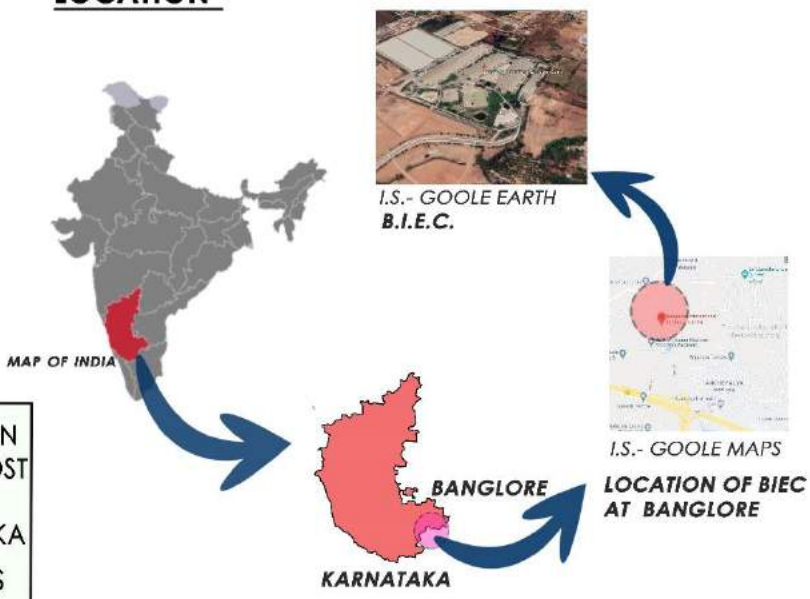
5.FIRE ESCAPE -

- THERE ARE TOTAL 32 FIRE EXIS .

LITERATURE STUDY –2
BANGLORE INTERNATIONAL EXHIBITION CENTRE
(B.I.E.C.)

BANGLORE INTERNATIONAL EXHIBITION CENTRE -

LOCATION-



LOCATION :	10TH MILE, TUMKUR MAIN ROAD , MADAVARA POST DASANAPURA, HOBLI, BENGALURU, KARNATAKA
ARCHITECT:	THE MISTRY ARCHITECTS
COORDINATES:	13°03'44.75"N 77°28'34.33"E
ELEVATION:	863 M
SEISMIC ZONE :	ZONE 2
SITE AREA :	34 ACRES(1,37,564 SQ.MT)
YEAR OF COMPLETION :	2010
PROGRAMMES OF IIC:	EXHIBITION HALL , CONVENTION CENTRE , CONFERENCE CENTRE , FOOD COURTS ETC.
AWARDS :	LEED CERTIFIED EXHIBITION AND CONFE--RENCE CENTRE

ABOUT BANGLORE INTERNATIONAL EXHIBITION CENTRE -

- EXHIBITION AND CONFERENCE FACILITIES AT BIEC ARE FIRST OF ITS KIND IN INDIA WHICH OFFER SERVICES AND AMENITIES OF THE HIGHEST QUALITY AT PAR WITH INTERNATIONAL STANDARDS.
- THIS COMPLEX, CREATED WITH ONLY ONE PURPOSE – **TO MAKE IT A PREFERRED DESTINATION FOR INTERNATIONAL BUSINESS EXHIBITIONS, TRADE FAIRS, CONGRESSES, INTERNATIONAL CONF -ERENCES, SEMINARS AND TRAINING PROGRAMMES IN INDIA.**
- THIS MULTIPURPOSE **34 ACRES** BEAUTIFULLY LANDSCAPED COMPLEX HAS **40,000 SQM OF COVERED COLUMN-LESS AIR-CONDITIONED EXHIBITION SPACE** (THREE EXHIBITION HALLS), A MULTI-FACILITY CONFERENCE CENTRE SPREAD OVER **5,600 SQM INCLUDING 4 CONFERENCE HALLS,** A HELIPAD, AN AMPHITHEATER, VIP LOUNGE, **FOOD COURT OF 7500 SQM,**
- RAIN WATER HARVESTING, OZONE FRIENDLY AC SYSTEM , ADEQUATE FRESH AIR CIRCULATION, WATER BASED AIR COOLING IN THE EXHIBITION HALL , USAGE OF WASTE MATERIAL LIKE FLYASH TO THE TUNE OF 50% IN CONCRETE MIX IN SELECT AREAS , RECYC-LING OF WASTE WATER THROUGH A TREATMENT PROCESS , MAIN-TAINANCE OF NATURAL CONTOUR OF LAND , TRANSPLANTATION OF TREES TOGETHER WITH EXTENSIVE GREENING OF AREAS.

OBJECTIVES OF LIETRATURE STUDY:

- TO STUDY VARIOUS FUNCTIONS AND THEIR RELATIONSHIPS
- TO STUDY THE CRITERIA OF THE CON-VENTION CENTRE
- TO STUDY THE EFFICIENCY OF SPACES
- TO DRAW INFERENCES FOR THE DESIGN

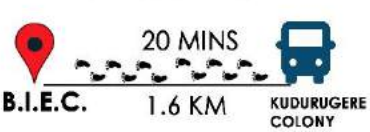
APPROACH TO SITE -

NEAREST RAILWAY STATION-

NEAREST METRO STATION-

NEAREST AIRPORT -

NEAREST BUS STATION-



SITE PLAN -

LEGENDS -

- EXHIBITION HALL 3
- EXHIBITION HALL 2
- FOOD COURT
- EXHIBITION HALL 1
- OPEN AREA
- PARKING
- TRAINING CENTRE
- HELIPAD
- CONFERENCE CENTRE
- LAGOON
- STATE OF ART ENTRY PLAZA FOR REGISTRATION

N

SITE SECTIONS -

HALL 3 + 60.50 LVL | HALL 2 + 59.50 LVL | FOOD COURT + 59.50 LVL | HALL 1 + 59.50 LVL

SECTION THROUGH HALLS

LAGOON | CONFERENCE CENTRE + 54.50 LVL

SECTION THROUGH CONFERENCE CENTRE

CONFERENCE HALL

ENTRANCE PLAZA

CONFERENCE CENTRE

FOOD COURT

I.S.- GOOGLE

EXHIBITION HALL

DESIGN PHILOSOPHY -

BIEC IS THE STORY OF THE LAND ETERNAL AND TRANSIENT. IT IS AN ATTEMPT TO UNDERSTAND THE CONNECTION OF SITE, SIGHT AND INSIGHT.

1. **THE LAGOON**, IS THE RETENTION POND AT THE SOUTH- EAST CORNER OF THE SITE DUE TO LAND PROFILE WITH THE CONTOUR OF 11 M DOWN FALL FROM NORTH TO SOUTH THIS HAS PROVIDED AN ADVANTAGE OF COLLECTING **6 LAKH GALLONS OF WATER** AT AN AVERAGE RAINFALL, THIS WATER IS UTILIZED FOR WATERING THE PLANTS IN SITE AND TO REJUVENATE THE UNDERGROUND WATER TABLE IN THE SITE.

THIS LAGOON ALSO CREATES A ***MICRO CLIMATIC ELEMENT*** IN THE SITE REDUCING THE ENERGY LOAD ON THE BUILDING.

2. ***INCREASING THE GREEN PLOT RATION*** BY PLANTING TREES IN GROVE AND SOME OF THE EXISTING TREES PRESENT IN THE BUILT UP AREAS WAS TRANSPLANTED IN THE GROVES TOWARDS SOUTH PART OF THE SITE.

DESIGN CONCEPT -

TO OVERCOME THE CHALLENGE OF HAVING LARGEST SPAN ROOF COVER WITH MINIMUM COST. THIS WAS THE DESIGNED INSPIRED BY THE CROSSING FIGURES AMONG HANDS .THIS IDEA WAS EXPLORED AND DEVELOPED FOR THE ROOF OF THE BUILDING AS WELL AS GAVE AN OPPORTU -NITY TO SPAN THE ROOF FOR 60 M AT A GIVEN BUDGET. THE ROOF TOOK THE SHAPE OF CONCAVE SURFACE WAS ABLE TO MAXIMUM THE REFLECTION OF DAY LIGHTING RAYS INCIDENT ON THE ROOF PLANE, THIS PROPERTY INCREASED THE DAY LIGHTING FACTOR TO THE INTERIORS OF THE BUILDING.

1.

2.

THE ATTEMPT WAS TO EXECUTE THE SUSTAINABLE BUILDING

3.

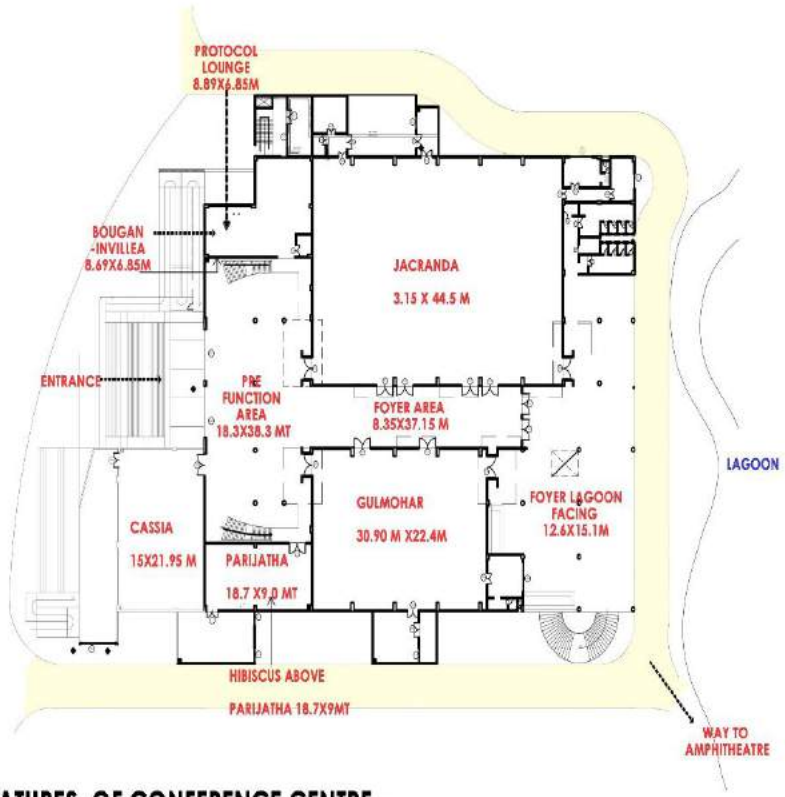
4.

TAPERED TRUSS COLUMN 5.

MAXIMISING SPAN AND PROVIDING DAYLIGHTING

AMPHITHEATRE 7.

FLOOR PLAN OF CONFERENCE CENTER-



FEATURES OF CONFERENCE CENTRE -

■ CONSISTS OF HALLS AND PREFUNCTION AREAS , THE NOMENCLATURE ARE DONE ON THE NAMES OF THE FLOWERS . **THE NAMES AREA AS FOLLOWS - CASSIA , BOUGANVILLEA, JACRANDA, GULMOHAR, PARIJATHA , HIBISCUS**

CONFERENCE CENTRE HALLS AREA CHART -

HALLS	AREA (SQ.MTS)	THEATRE STYLE	CLASS ROOM	ROUND TABLE
JACRANDA	1368	1400	700	350
GULMOHAR	679	700	350	300
CASSIA	330	250	125	100
PARIJATHA	168	100	50	70
HIBISCUS (BOARD ROOM)	164	CAPACITY OF 45 FIXED TABLE&CHAIRS		
BOUHAINYILLIA	60	MEDIA RM. WITH CAP. 20 PPL		
LAGOON	191	-	-	-
AMPHTHEATRE		250	-	-

CLASSROOM STYLE

THEATRE STYLE SEATING

ROUND TABLE STYLE

DESIGN FEATURES OF EXHIBITION HALLS -

■40,000 SQ.MT OF COVERED AREA IN THREE EXHIBITION HALL.

■ HALL 1&2 : 10000 SQ.MT. EACH (AIR - COOLED AND AIR CONDITIONED)

■ HALL 3: 20000 SQ.MT AIR CONDITIONED

■ FLOOR LOADING CAPACITY 0.75 TO 30 MT/ SQ.MT

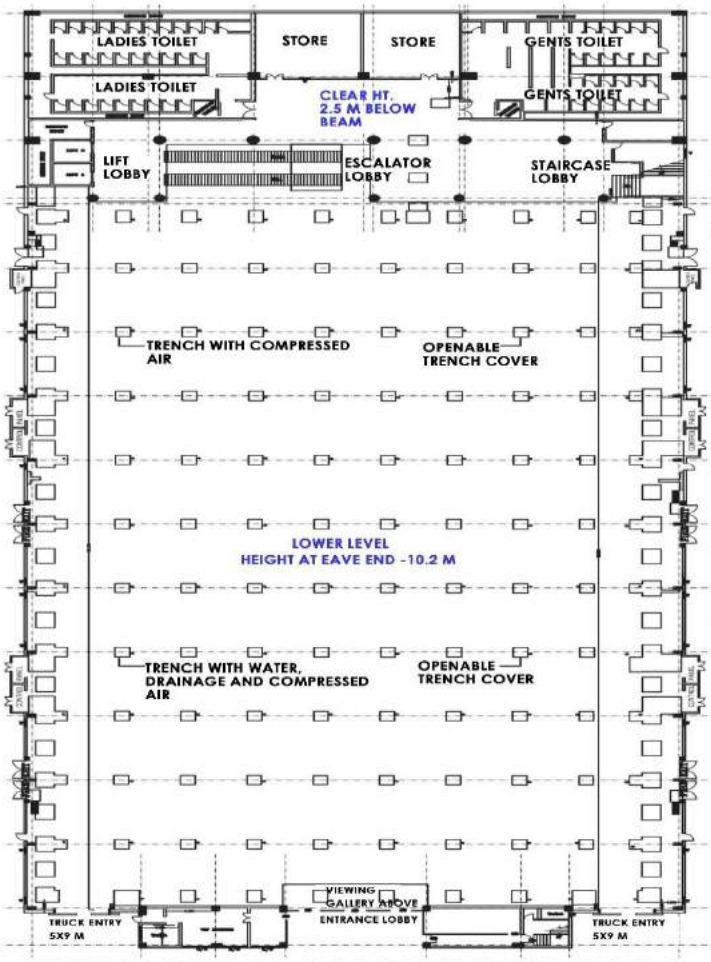
■VACCUM DEWATERED RCC FLOORING
■ UNDER FLOOR DUCTS FOR POWER, WATER , COMPRESSED AIR AND TELE-COM FACILITY .

■ COLUMN LESS STRUCTURE SPANNING 60M

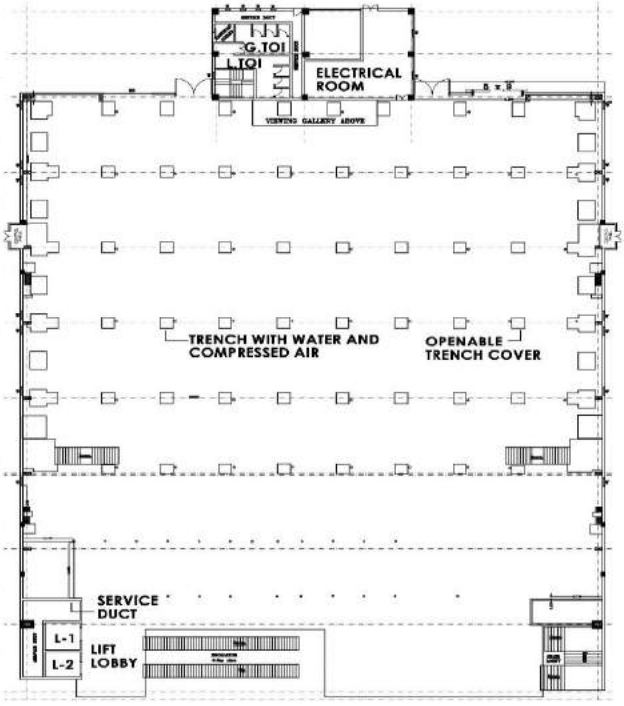
■ CEILING HEIGHT IS 18 MT AT THE CENTRE AND 9 MTS AT THE EAVES

■ ROOF DESIGN PROVIDE ADEQUATE LIGHTING

FLOOR PLAN OF EXHIBITION HALLS -



EXHIBITION HALL 1 (LOWER LEVEL PLAN)

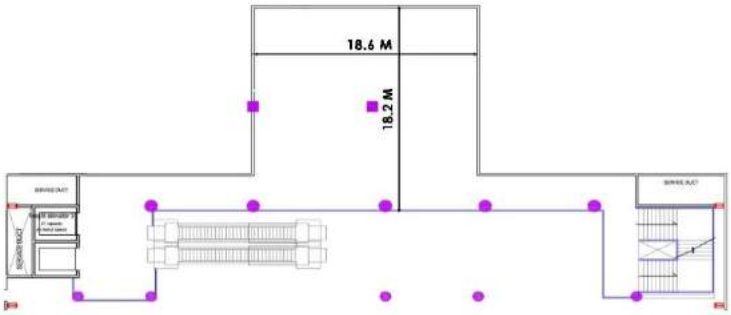


HALL 1 (UPPER LEVEL PLAN)

IMAGE SOURCE - GOOGLE

IMAGE SOURCE - GOOGLE

IMAGE SOURCE - GOOGLE



MEZZANINE LEVEL PLAN

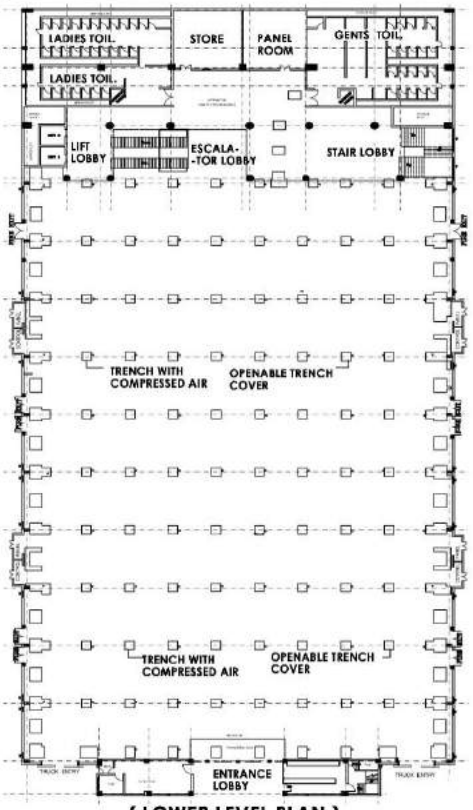
IMAGE SOURCE - GOOGLE

AREA ANALYSIS OF HALL 1

LOWER LVL FLOOR AREA: 6638.4 SQ.M (EXCLUDING STAIRCASE, LIFT, ESCALATOR, TOILETS)
TOTAL GROSS FLOOR AREA = 7705.80 SQM

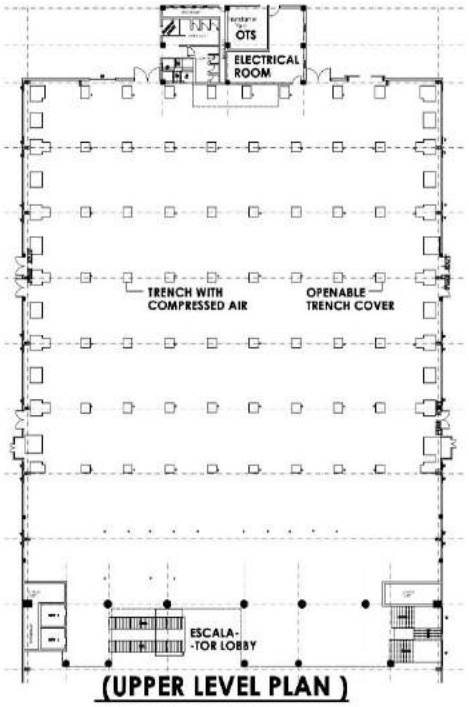
UPPER LVL FLOOR AREA: 3892.90 SQ.M (EXCLUDING STAIRCASE, LIFT, ESCALATOR TOILETS)
TOTAL GROSS FLOOR AREA = 4307.48 SQM

FLOOR PLAN OF EXHIBITION HALLS 2 -



(LOWER LEVEL PLAN)

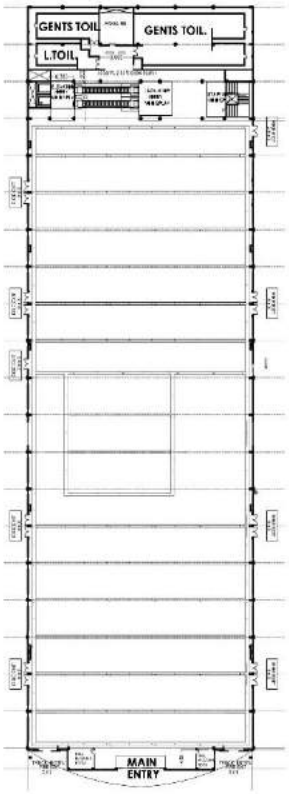
AREA DETAILS: LOWER LVL FLOOR AREA: 6091.43 SQ.M (EXCLUDING STAIRCASE, LIFT, ESCALATOR, TOILETS) TOTAL GROSS FLOOR AREA = 7170.60 SQM



(UPPER LEVEL PLAN)

AREA DETAILS: UPPER LVL FLOOR AREA: 4480.43 SQ.M (EXCLUDING STAIRCASE, LIFT, ESCALATOR, TOILETS) TOTAL GROSS FLOOR AREA = 4848.43 SQM

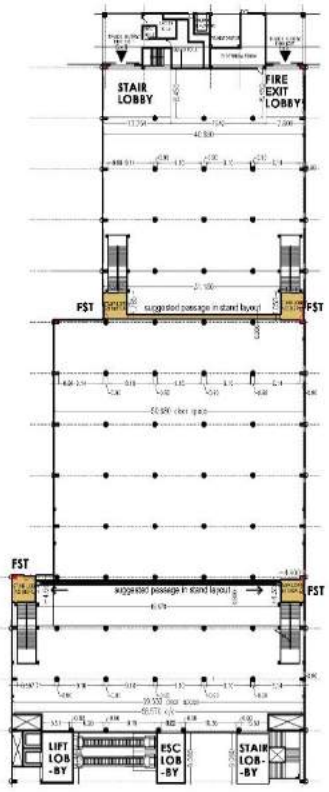
FLOOR PLAN OF EXHIBITION HALLS 3 -



(LOWER LEVEL PLAN)

AREA DETAILS:

LOWER LVL FLOOR AREA: 9800.68 SQ.M (EXCLUDING STAIRCASE, LIFT, ESCALATOR, TOILETS) TOTAL GROSS FLOOR AREA = 10921.43SQM



(MIDDLE LEVEL PLAN)

AREA DETAILS:

MIDDLE LVL FLOOR AREA: 5679.49 SQ.M (EXCLUDING STAIRCASE, LIFT ESCALATOR, TOILETS) TOTAL GROSS FLOOR AREA = 6261.83SQM

AREA DETAILS:

UPPER LVL FLOOR AREA: 5619.65 SQ.M

(EXCLUDING STAIRCASE, LIFT

BUILDING MATERIALS AND DESIGN -

♦ TO OBTAIN THE SPAN OF 60 METERS FOR HALL 1,2&3 AND A CLEAR HEIGHT OF 18 METERS AT THE CENTER AND 9 METERS AT THE SIDE. THE CURVED PROFILE WAS ABLE TO ACHIEVE IN THE ROOF HELP OF PEB.

♦ IT WAS MADE POSSIBLE TO BRING IN MAXI--MUM AMOUNT OF INTERIOR LIGHTING. THE USE OF STEEL MADE THE WORK COST EFFICI-ENT BY 30% THAN CONCRETE, WAS FABRICA-TED AND ERECTED ON-SITE.

♦ THE STEEL WAS TREATED FOR CORROSION RESISTANCE TO MEET THE STANDARDS.

♦ TRENCHES WERE DESIGNED BELOW FLOOR SLABS OF THE HALL TO TAKE THE CABLES AND OTHER SERVICES TO ENSURE FLEXIBILITY FOR DIFFERENT LAYOUT DESIGN.

♦THE WALLS AND ROOFS ARE INSULATED TO REDUCE THE HEAT TRANSFER INTO THE INTERI--OR SPACE. THE MECHANICAL CENSORS ARE USED TO HAVE A CHECKON THE INTERIOR TEMPERATURE TO MONITOR THE CHILLER PLA--NTS FOR AIR COOLING SYSTEM.

♦ STEEL AND PRE ENGINEERED COMPONENTS WERE FABRICATED AT HYDERABAD AND TRA--NSPORTED TO SITE FOR ERECTION.

♦ THE HEAVY ROOF STRUCTURE AND THE COLUMNS STRUCTURE WERE KEPT INDEPENDENT TO AVOID THE CONFUSION.

♦ THE RAIN WATER HARVESTED IN THE LAGO--ON WAS USED FOR ALL WATER REQUIREMENTS AND ALSO FOR THE IRRIGATION PURPOSE.

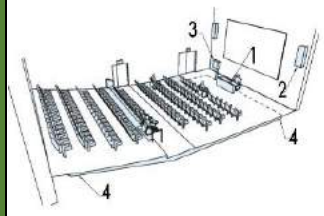
NORMS , STANDARDS AND DESIGN GUIDE LINES

NORMS- BUILDING BYELAWS

TOTAL SITE AREA – 10.23 ACRES
PERMISSIBLE FLOOR AREA RATIO – 1.30
PERMISSIBLE GROUND COVERAGE- 30%
SETBACKS – 15 MTS FRONT SETBACK
9 MTS SIDE AND REAR SETBACK

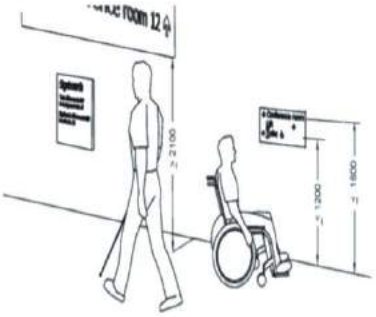
STANDARDS AND DESIGN GUIDELINES

1. STANDARDS FOR INDUCTION LOOP SYSTEMS IN CONFERENCE ROOM



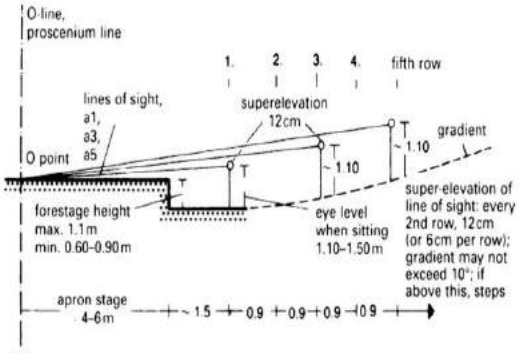
KEY
1. microphone
2. loud speakers
3. induction loop amplifiers
4. induction loop

2. STANDARDS FOR IHEIGHT OF SIGNS IN CONFERENCE ROOM



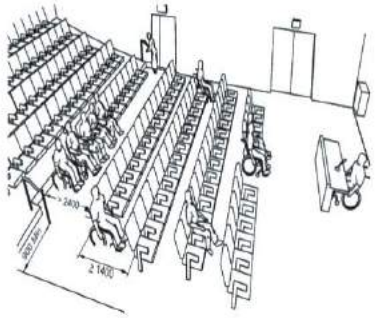
All dimensions in millimetres.

3. SUPER ELEVATION OF SEATING



(1) **Super elevation of seating (gradient)**

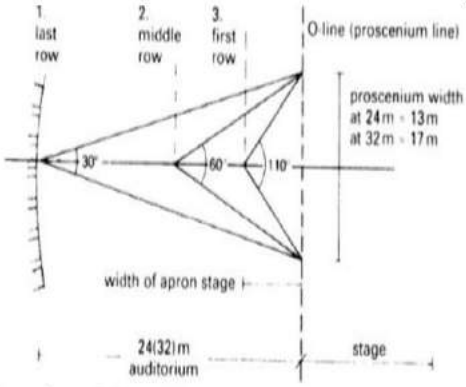
4. STANDARDS FOR VIEWING SPACES FOR WHEELCHAIR USERS



All dimensions in millimetres.

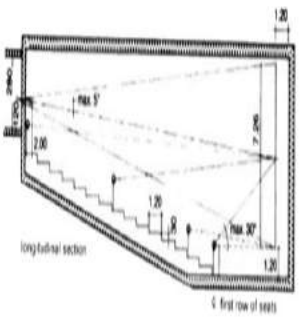
FIG. 92 EXAMPLES OF VIEWING SPACES FOR WHEELCHAIR USERS

5. PROPORTIONS OF THE TRADITIONAL AUDITORIUMS

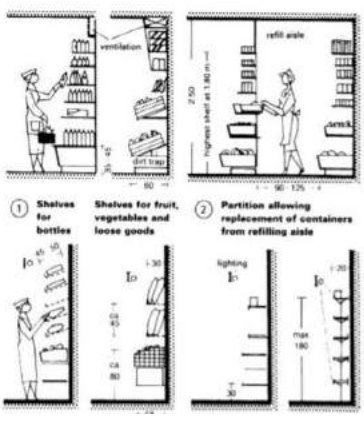


(7) **Proportions of the traditional auditorium (view)**

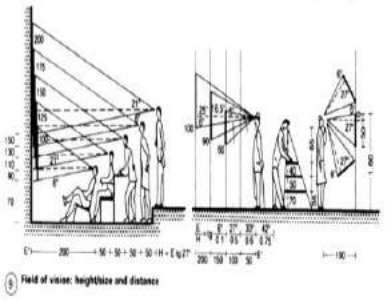
6. STANDARDS FOR HEIGHTS OF AUDITORIUM



7. STANDARDS FOR BOOK SHELVES

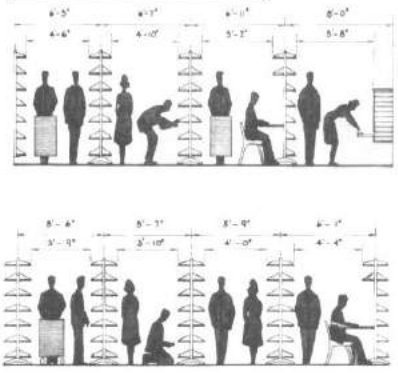


8. STANDARDS FOR HEIGHT OF LECTURE THEATRES



(5) Field of vision: heightsize and distance

9. STANDARDS FOR LIBRARY



1) Access and Entrance:

- Separate access is required for visitors, staff, goods and service vehicles and emergency requirements. It is usually desirable to provide alternative entry for public which is independent from that used by conference visitors. This not only facilitates management and security, but also enables two or congress events or exhibitions to be run independently in parallel.
- Easily identifiable entrance and exit, and clear external signage, which may need to be illuminated.
- Sufficient unloading/loading space to accommodate multiple events.
- Level ground floor with loading docks of sufficient size for all services including client vehicles.
- Large coach drops off and collection points adjacent to main entrance, with sufficient turning space and height, accessible under cover.
- Doors of sufficient width and height or demountable/retractable walls to permit truck access (trucks delivering exhibit and staging equipment pose particular problems).
- Floor loadings to permit truck access.
- Easily identifiable and weather protected entrance and reception area for attendees.
- Clearly identified disabled access.
- In larger venues, security systems and monitoring at loading docks.
- Separate entry for venue staff.

- Storage space (for several days) for pre-congress consignments including exhibitors' displays materials.

2) Access for the disabled:

- Specific provisions include allocation of parking spaces, identification of routes, provision of ramps, toilets and facilities designed for wheelchair and other disabled users in each main area.

3) Parking:

- Coach parking bays off street.
- Sufficient undercover parking for attendees.
- All parking, including venue staff parking, should be secure.
- Direct access to venue lobby.
- Clear directions for exiting car park.
- Parking requirements for cars and other vehicles will depend on some extent on the proximity and conditions for use of alternative facilities, such as municipal car parks, as well as on the availability of public transport.

  Typical provisions to allow flexibility in use are:

Use	Per Car Parking Space
Banquet Places	10 Sq. m.
Congress Hall Places	10 Sq. m.

4) Service Vehicles:

- Plenty of space for parking while unloading/loading goods and equipment with a dedicated car park for vehicles delivering goods or equipment.
- Parking for trucks with sufficient height and turning space where staging, audio visual or other equipment needs to be packed in or out within short period of time.
- Long-term parking for trucks used for transporting production equipment and exhibitors' displays.

5) Horizontal and Vertical Arrangements:

- The single floor organization provides easy access among the rooms and between the conference areas and other functional elements. This plan imposes few structural or mechanical constraints, permits total freedom in the planning of the rooms, allows for access from the refreshment break areas to outdoor terraces and patios.
- Vertical stacking of auditoria and/or main halls is more economical in the use of land, and enables space below tiered floors to be more efficiently used. Unit costs of construction are higher and vertical transportation of people and goods may present difficulties.

6) Circulation:

- Linear arrangement of spaces with beginning, middle and end.
- A loop where the essentially linear storyline leads naturally back to the beginning.
- An arrangement of core and satellites where each theme or detailed treatment of a subject leads back to a central introductory or orientational areas.
- A more complex scheme combining linear, loop and core-satellite arrangement of spaces.
- Comb which refers to a circulation pattern in which there is a main circulation path and optional alcoves which a visitor may enter or bypass.

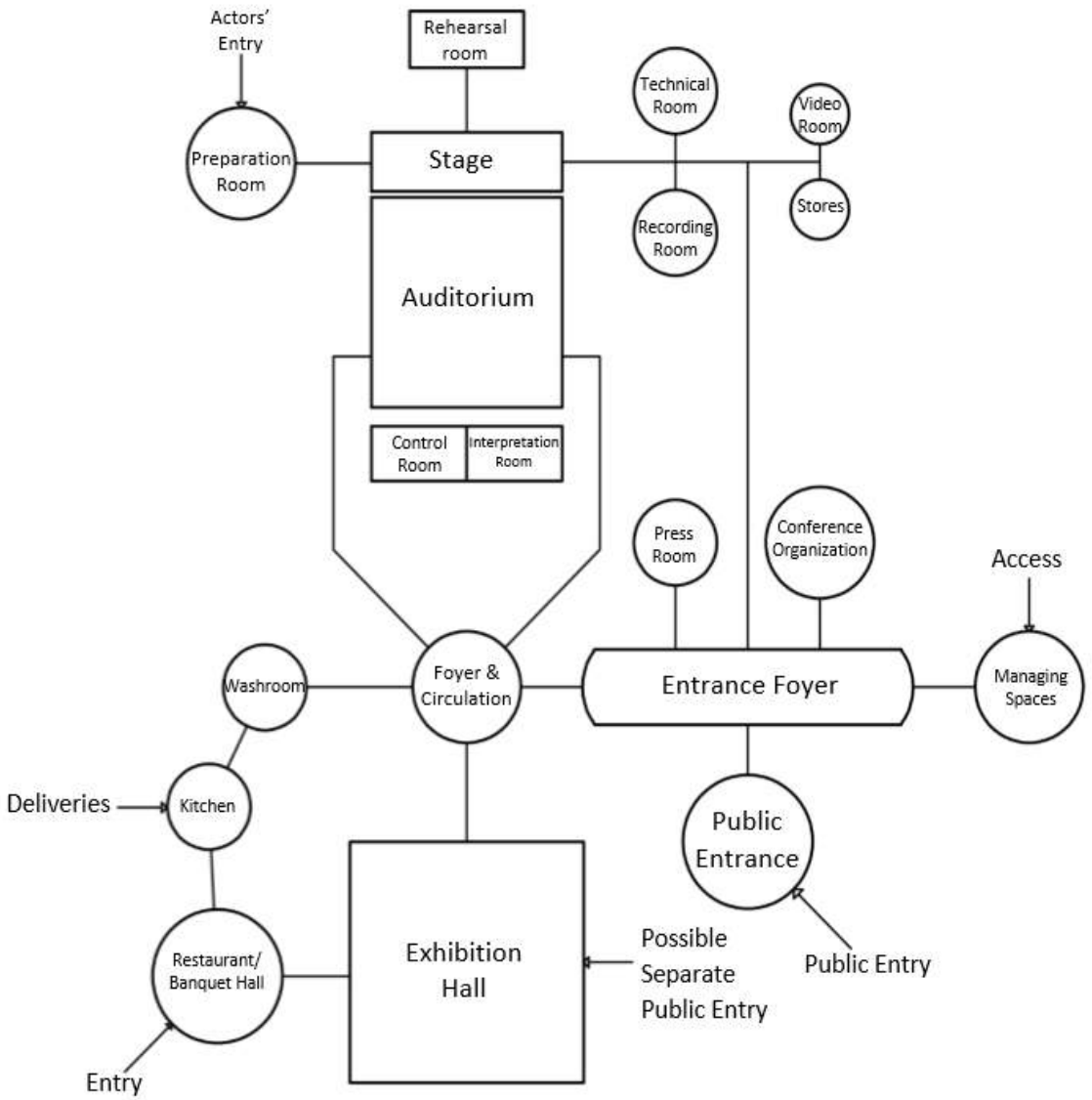


FIG: RELATIONSHIP IN A CONFERENCE HALL.

Exhibition hall

The Exhibition Spaces are intended as a combination of indoor and open-air exhibition space in order to create a strong relation between covered and green open spaces through thematic content. The goal is to create an integrated expositive landscape and a Visitor Experience that immediately establishes a positive relationship between humankind and nature, creating a bridge between the content of the Event and the nature of exhibition spaces.

The exhibition hall provides optimal conditions for

- trade fairs
- exhibits
- conventions
- events and galas

An exhibition hall can be

- Open-air exhibition space
- Covered exhibition space

OPEN-AIR EXHIBITION SPACE

The landscape design shall be developed in keeping with the Theme and with the Participant's approach to it. Like architecture, the landscape shall also help to tell intriguing stories about the pleasures of the table, delightful scents or strange and curious stories related to food cultivation and processing. The landscape has to document the most advanced research in the field of food production and the transformation of agricultural products. Countries will showcase their capabilities in food production, the biodiversity of their products, and their agricultural and food supply chains.

Open spaces

A minimum of 30% of each lot must be dedicated to open areas and greenery. Excluding lot setbacks the Open-air Exhibition Space represents around 50% of each lot, where it is possible to build:

- Structures used for plants ensuring soil permeability (e.g. trellises, pergolas, garden structures, planters).
- Landscaping structure (e.g. structures used to retain soil or other materials, pools, exhibition structures, art works).

COVERED EXHIBITION SPACE

Covered Exhibition Spaces are buildings or enclosed structures containing exhibition areas or other spaces, including all overhanging upper floors or balconies. Participants may decide to build more than one level within the Covered part of the Exhibition Space, based on their individual needs.

Height of Buildings

• The height of the Covered part of Exhibition Space (or Building Height) must be less than 12 meters.

• The height limit for any additional architectural elements (such as skylights, roof elements, vertical connections to the roof, sunscreens, signals, etc.) is 17 meters.

Building Setbacks

• The setback from the main boulevard must be no less than 10 meters, in order to create a small square.

• The distance between buildings and the side street shall be no less than 2 meters; there shall be no building concession directly to squares, greens, streets or public spaces, without the 2 meters' setback.

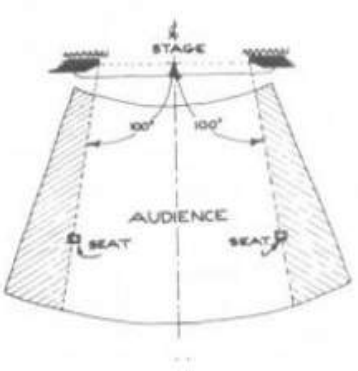
• The setback from the neighboring lot shall be no less than 3 meters.

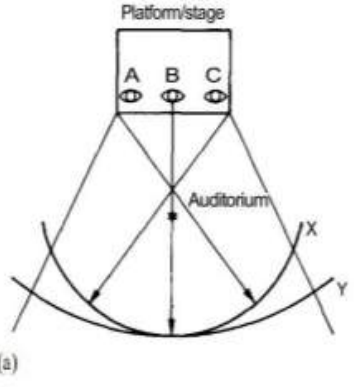
• The distance between buildings shall comply with fire control requirements.

AUDITORIUM

The auditorium is the heart of building, where the primary activity of experiencing and presenting performances take place. Audience seating is arranged to view the stage and the stage is a platform from which the performer can be communicate to the audience. The relationship between the two is very crucial for the success of convention centers. Mostly auditorium is designed to fulfill no of purposes. The objective of designer will be to use 100% usage of space. Auditorium should be designed in such a way that every member should be able to see and hear the performance of stage.

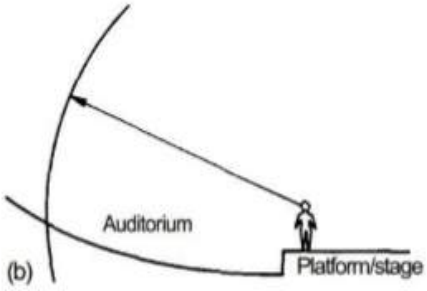
1. **Form/shape**
   Shape corrects the defects of sound in auditorium hall i.e. echo's, excessive reverberation, sound foci's, dead spots etc. fan shape <100 degree is ideally best shape for auditorium. In auditorium hall, the wall & ceiling is not perpendicular to each other as in other normal rooms. Mostly less curve Concave shape is also considered. The size of hall is governed by audience requirements, Visual & aural limitations.





(a)

Fig. 17 Straight radial aisles are better than aisles which curve or bend.



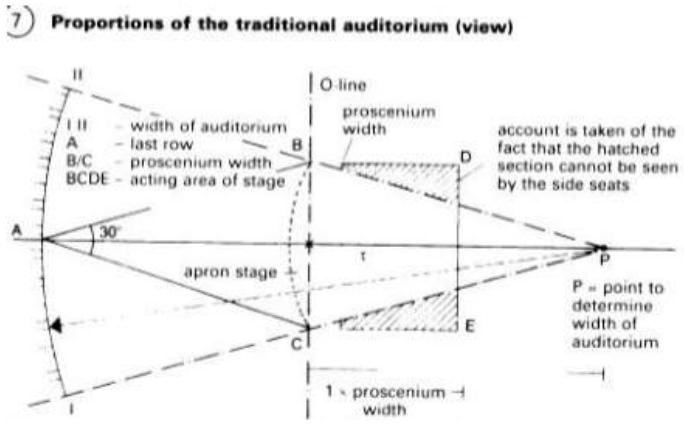
(b)

Audience Requirements

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

Visual Limitations

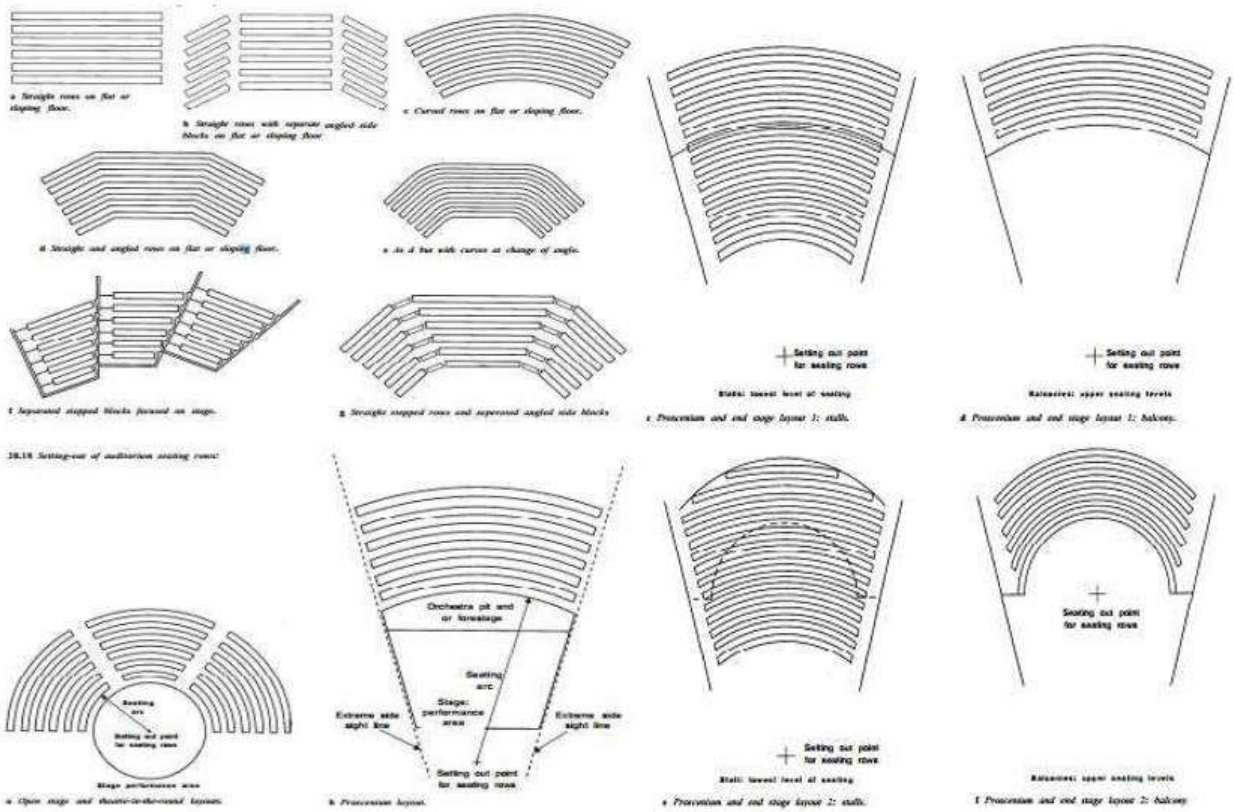
- For drama= 20m
- For Opera= 30m
- For dance= 20m
- For conference = 20m



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
- Angle of inclination = 15-20 degree
- Seat Depth= 600-720 mm, reduced to 425-500mm when the seat is tipped
- Other Factors affecting seating is,
- Acoustics: Upholstery to satisfy the acoustic requirements, usually the level of absorbency when unoccupied
- Ventilation & heating: Air supply or extract under a seat

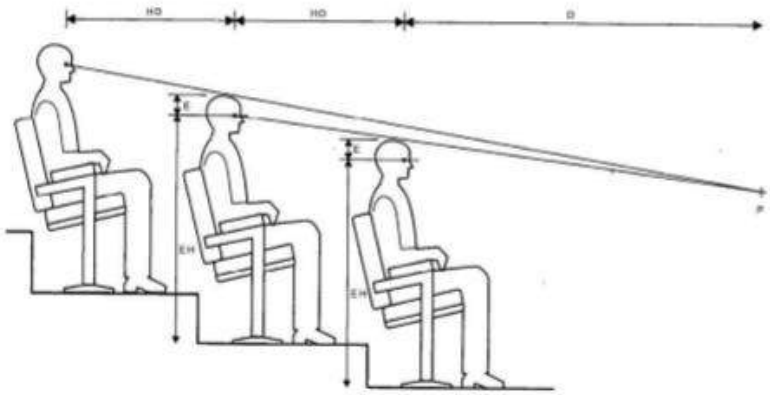
- Upholstery: Thickness of padding should provide comfort & avoid fatigue, material of padding and finish must satisfy fire regulations



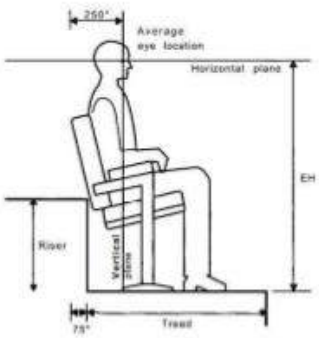
Vertical Sightlines

The longitudinal section is a parabolic stepped floor as a theoretical rake produced by the sightline calculation. This gives every member of the audience similar viewing conditions. This may be reduced to a single angle or series of angles when applied as described the rake will also be steep.

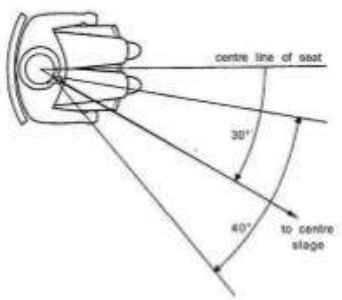
This is satisfactory for a single tier of seating with no balconies and is especially appropriate for open-stage formats.



20.21 *Graphic representation of vertical sightlines, P lowest and nearest point on stage clearly visible by audience, HD horizontal distance between eyes in successive audience rows, EH average audience eye height above floor, E height between eye and top of head, D distance from eye of person in front row to P*



20.22 *Position of eye in relation to seat and stepped floor. Dimensions vary according to upholstery thickness, and inclinations of both seat and back. Working dimensions are starred **



20.25 *The maximum comfortable amount the head can be turned from the seat centreline is 30°.*

Changing Room requirements

- It should have discrete access
- Be equipped with secure hanging space
- Have mirrors with good lighting over vanity tables
- Have separate toilets & showers
- Have audio/video feed from performance areas
- Be equipped with phones and power outlets

Rehearsal Rooms

- Enclosed space without natural light close to the dressing room
- Sound system, Lighting
- There should be at least one stage for the rehearsal of performances

Storage room

- 20-25% of playing area

Workshops for making scenery

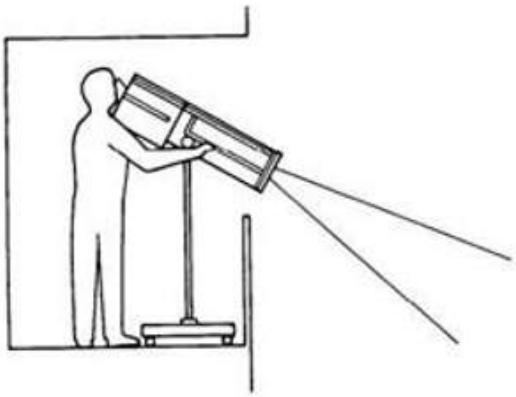
- Should be exclude from main hall due to fire & limited space options
- 4-5 times the area of main stage

Technical utilities

- Transformer room
- Medium & low voltage switch room
- Power batteries
- HVAC plants
- Fire sprinkler system

Cloakrooms

- Minimum 4m2 per 100 people

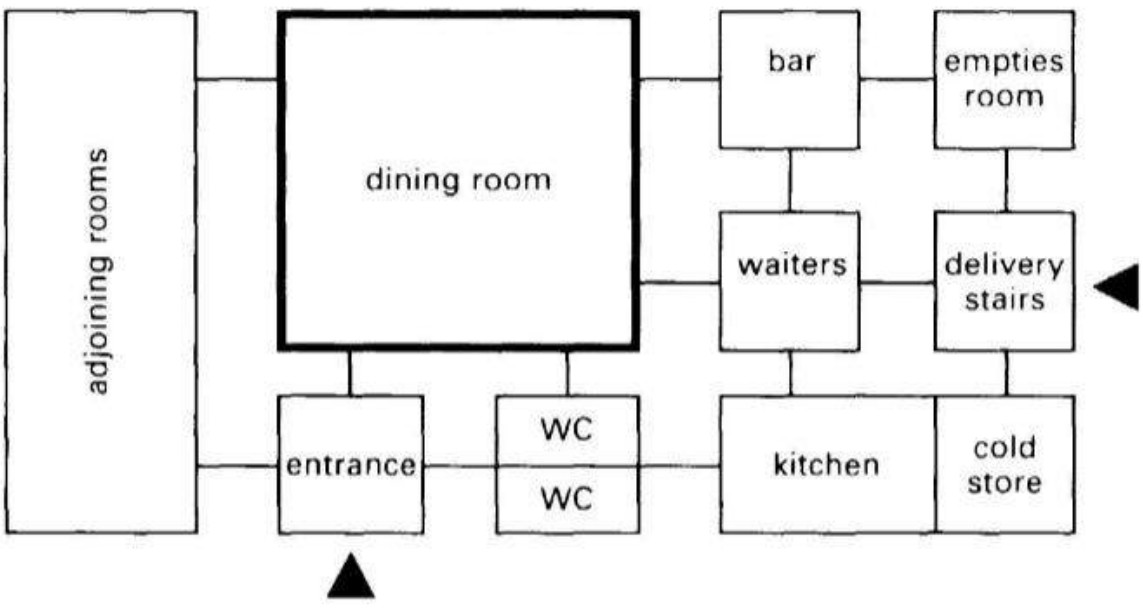


20.59 *Follow spot, minimum size for equipment and operator 1.5 m × 2 m*

RESTAURANTS AND FOOD COURTS

- Should be planned to achieve variety of seating arrangements.
- Provide acoustic lobby between restaurant and kitchen.
- Access should be planned for guest.
- The service aisle should not be less than 0.9-1.35m if it is to be used by both trolleys and guest.
- Waiter station should be located so as not to disturb guest.
- Ambience is an important factor in restaurant design: decoration, lighting should be an integral part.
- Large regular space should be broken up

General Functional Layout of Restaurants:



Spatial Requirements:

Functional areas	*Space allowed (%)*
Receiving	5
Food storage	20
Preparation	14
Cooking	8
Baking	10
Ware washing	5
Traffic aisles	16
Trash storage	5
Employee facilities	16
Miscellaneous	2

Area Required:

- Per seat 1.5 – 2.15 sq. m.
- Ratio of service area to total area 25-50%
- Net kitchen area 15-25%

Aisle Width:

- Main – min. 2.00m wide
- Intermediate – min. 0.9m wide
- Side – min. 1.2m wide

Ceiling height of Dining room with respect to Floor area:

≤50 sq. m.	2.5m
>50 sq. m.	2.75m
>100 sq. m.	3.00m
Above or below galleries	≥2.5m

Receiving Area:

- The main variables affecting the amount of space needed for the receiving functions are the number, type and type of the deliveries that are to be handled at one time.
- Ease of opening, checking, moving and stack ability all have a bearing on the space are required.

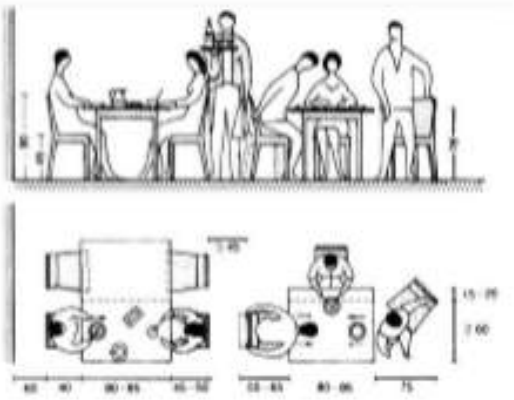
Serving Areas:

- Serving areas for most table facilities are planned as a part of the main cooking area and separate space determination are not usually needed.

Dining Areas:

- Calculating the space requirements for dining areas can be difficult because of the many choices available.
- For example, the final space for the dining space is dependent upon the following variables:

1. Types of seating to be provided
2. Tables sizes desired
3. Table shapes desired
4. Pattern of table arrangements
5. Number of service stations needed



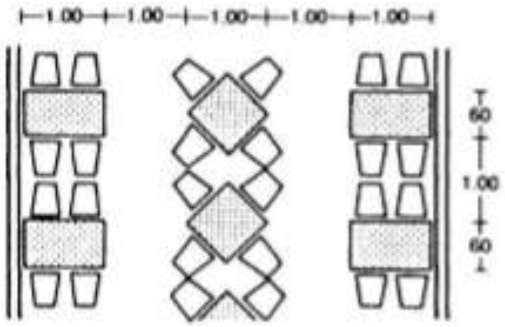
dining floor area	walkway width
up to 100 m²	≥ 1.10 m
up to 250 m²	≥ 1.30 m
up to 500 m²	≥ 1.65m
up to 1000 m²	≥ 1.80 m
over 1000 m²	≥ 2.10 m

Walkaway Width

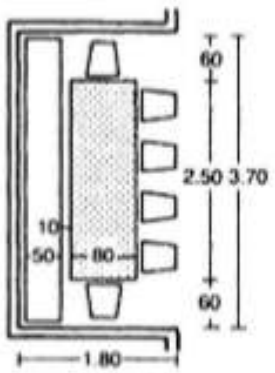
customer places	toilets men	toilets women	urinal bowls	urinals (m)
50	1	1	2	2
50–200	2	2	3	3
200–400	3	4	6	4
400	– determine in individual case –			

Toilet Facilities

Table Arrangement:



(1) **Minimal seating layout**

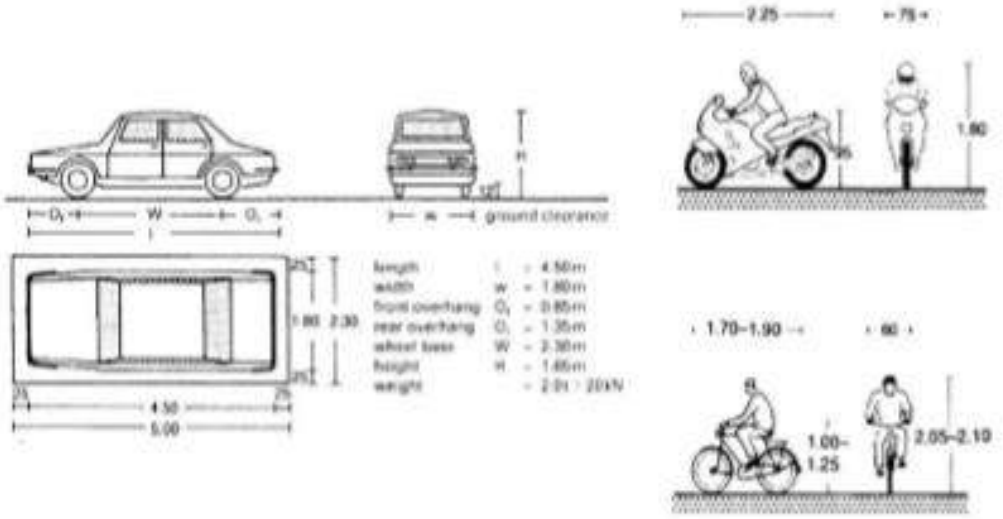


(2) **Alcoves arrangement**

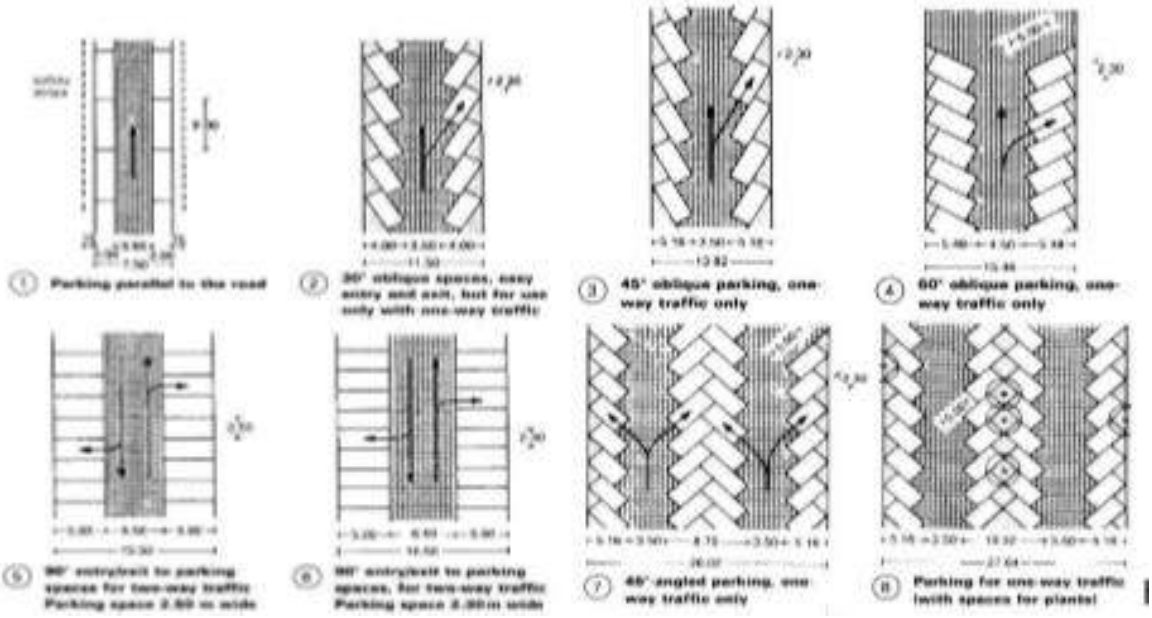
PARKING

General Design Considerations:

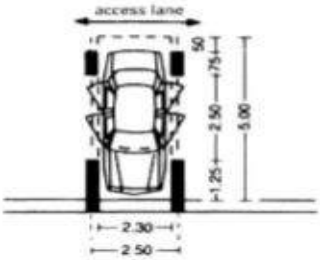
- The parking spaces acts as a place for the ceremonies of ***Arrival*** & ***Departure***.
- The basic requirements for parking spaces should be taken from the vehicle dimensions whilst driving in a linear path, cornering and entering into and driving out of the parking area.
- Parking can be done in various ways: ***inclined with various angles*** or ***perpendicular***.
- Parking can also be done in ***basement*** or ***on surface outside the complex***.



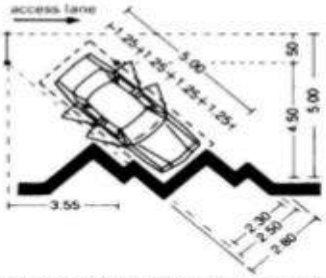
Typical Parking Layouts:



Car Orientation:



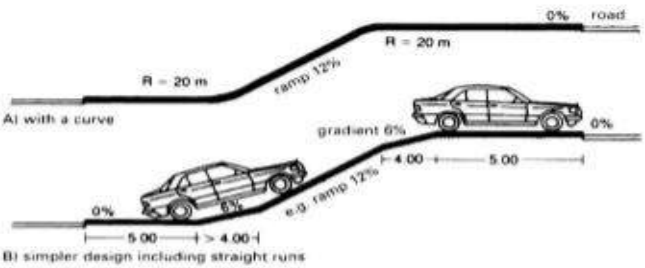
Parking at 90° to access lanes



Parking at 45° to access lanes

Ramps for Basement Parking:

- For each car ramp, the run must be more than 5m long, with ramps that can be up to 12% gradient.



COMPARATIVE ANALYSIS -

S.NO	TOPIC	CASE STUDY 1 (IHC)	CASE STUDY 2 (IIC)	LITERATURE STUDY 1 (HICC)	LITERATURE STUDY 2 (BIEC)	NORMS	REQUIRED AREA / PROPOSED SITE
01.	LOCATION	DELHI	DELHI	HYDERABAD, ANDRA PRADESH	BANGLORE KARNATAKA	-	NOIDA
02.	CONNECTIVITY	WELL CONNECTED BY METRO , ROAD & AIR	WELL CONNECTED BY METRO , ROAD & AIR	HAS QUITE CLOSE CONNECTIVIT WITH BUS ST. RATHER THAN RAILWAY AND AIRPORT	HAS QUITE CLOSE CONNECTIVIT WITH BUS ST. RATHER THAN RAILWAY AND AIRPORT	-	WELL CONNECTED WITH METRO STATION HAVE GOOD TRANSPORT FACILITY
03	ARCHITECT	AR. JOESPH ALLEN STEIN	AR. JOESPH ALLEN STEIN	UK BASED RMJM ARCHITECTS	THE MISHTRY ARCHITECTS	-	-
04	ARCHITECTURAL CHARACTERS	COURTYARD PLANNING AND EXPOSED BRICK	COURTYARD PLANNING AND USE OF EXPOSED CONCRETE, GLASS AND BRICKS	USE OF GLASS AND STONE	USE OF STEEL IN COMPLETE STRUCTURE	-	USING EXPOSED BRICKWORK, CONCRETE WITH FAL-G COMP., CENTRAL COURTYARD BUILDING IS ORIENTED ACCORDING TO SUN MOVEMENT AND WIND DIRECTION . ETC.
05	PUBLIC SPACES	AMPHITHEATRE, PLAZA STEPS, GARDENS, LAWNS , HUB AREA. ETC.	GARDENS , OPEN EXHIBITION SPACE	OPEN GARDEN	AMPHTHEATRE OPEN AREA	-	AMPHITHEATRE , OPEN EXHIBITION AREA , LANDSCAPED COURTS . ETC

S.NO	TOPIC	CASE STUDY 1 (IHC)	CASE STUDY 2 (IIC)	LITERATURE STUDY 1 (HICC)	LITERATURE STUDY 2 (BIEC)	NORMS	REQUIRED AREA
06.	VEHICULAR MOVEMENT	MOVEMENT ALONG PERIPHERY OF THE SITE AND TOWARDS THE PARKING	RESTRICTED VEHICULAR MOVEMENT ON THE S ITE	MOVEMENT ALONG THE PERIPHERY OF THE SITE	MOVEMENT ALONG THE PERPHERY OF THE SITE	-	MOVEMENT ALONG THE PERPHERY OF THE SITE .
07.	PADESTRIAN MOVEMENT	RANDOM MOVEMENT THROUGH SPINES CONNECTING VARIOUS BLOCKS	RANDOM MOVEMENT THROUGH SPINES CONNECTING VARIOUS BLOCKS	MOVEMENT ACROSS SITE THROGH THE SPINES	RANDOM MOVEMENT THROUGH SPINES CONNECTING VARIOUS BLOCKS	-	INTERNAL WALKWAYS ARE PROVIDED WITH TURF PAVERS OR GREEN PAVERS . USING GREEN PAVERS FOR PARKING
08.	PARKING	BASEMENT PARKING – 654	SURFACE PARKING – 42 CARS	BASEMENT PARKING- 1000 CARS	-	AUDI- 1PARKING SPACE /20SEATS	APPROX . 400 CARS AND 2 BUS PARKING
09.	SITE AREA	9 ACRES	4.6 ACRES	15 ACRES	34 ACRES	-	10.23 ACRES
PUBLIC AREAS							
10.	RECEPTION	-	-	890 SQ.MT.	-	0.5 SQ.MT/ PERSON	0.5 SQ.MT / PERSON OR SPECTATOR

COMPARATIVE ANALYSIS -

S.NO	TOPIC	CASE STUDY 1 (IHC)	CASE STUDY 2 (IIC)	LITERATURE STUDY 1 (HICC)	LITERATURE STUDY 2 (BIEC)	NORMS	REQUIRED AREA
11.	AUDITORIUMS	THE STEIN AUDITORIUM AREA -576 SQ.MT CAPACITY-420	SD AUDITORIUM AREA:313 SQMT CAPACITY- 240	AUDITORIUM AREA 6480 SQMT CAPA.- 6092	-	1.2 SQ.MT / PERSON	2442 SQ.MT
12.	EXHIBITION HALL	197 SQ.MT CAPACITY - 140	-	6480 SQ.MT CAPACITY – 5000	AREA – 40000SQ.MT	1.4 SQ.MT/ PERSON	5056 SQ.MT
13.	COVENTION HALL/CONFEREN-CE HALL	3186 SQ.MT CAPACITY – 1593	208 SQ.MT CAPACITY – 104	-	2769 SQ.MT CAPACITY- 1385	2 SQ.MT/ PERSON	676 SQ.MT
14.	LECTURE HALL	226 SQ.MT	204.3 SQ.MT	-	-	1.2 SQ.MT / PERSON	378 SQ.MT
16.	LIBRARY	312.5 SQ.MT	500 SQ.MT CAPACITY – 50	-	-	10 SQ.MT /PERSON	2010 SQ.MT
17.	BUISNESS CENTER	AREA – 50 SQ.MT CAPACITY -10	AREA – 1200 CAPACITY - 90	AREA-250 SQ.MT CAPACITY -25	-	1 SQ.MT / PERSON	830 SQ.MT
18.	SUSTAINABLE FEATURES	LOW MAINTENANCE MATERIALS , SLUGDE TREATMENT TO PROUCE MATERIALS , ENERGY EFFICIENT MEASURES FOR PLANNING	ECO – FRIENDLY MATERIALS , EXPOSED CONCRETE AND BRICKS ETC.	WASTE MINIMIZATION	USE OF LAGOON TO COLLECT 6 LAC GALLON OF WATER NATURALLY AND USING IT FOR WATERING PLANTS AND MAINTAINING UG WATER LEVEL.	-	USING ROOT ZONE SYSTEM FO WASTE WATER MANAGEMENT , USING DEGEN SYSTEM FOR POWER PRODUCTION , PROVISION OF WETLAND FOR RAIN WATER HARVESTING . SOLID WASTE MANAGENMEN T FOR MANURE PRODUCTION
S.NO	TOPIC	CASE STUDY 1 (IHC)	CASE STUDY 2 (IIC)	LITERATURE STUDY 1 (HICC)	LITERATURE STUDY 2 (BIEC)	NORMS	REQUIRED AREA
19.	SERVICES	COOLING TOWER, CHILLER PLANT , ELECTRICAL SUBSTATION, SEWAGE TREATMENT	COOLING TOWER, CHILLER PLANT , ELECTRICAL SUBSTATION, SEWAGE	-	LIFTS , STAIRCASE , SEWAGE TREATMENT ETC.	LIFTS , STAIRCASE , SEWAGE TREATMENT ETC.	ABSORPTION CHILLAR PLANT , LIFT AND STAIRCASE FOR VERTICAL

INFERENCES –

- APPROACH DEPENDS UPON THE SITE CONTEXT AND CLIENT'S DEMANDS .
- ART OF PUBLIC SPACES ACTS AS INTERCONNECTING NATURE BETWEEN SPACES
- MANDANTORY SERVICE ROUTE SHALL BE PROVIDED .

AREA STATEMENT

S.NO	FUNCTIONAL COMPONENT	STANDARDS (AREA IN SQ.MT.)	OCCUPANCY (PERSONS)	NO. OF MODULES	PROPOSED AREA (SQ.MT.)
PUBLIC SPACES –					
01.. EXHIBITION HALL -					
FRONT OF THE HOUSE					
(i)	FOYER	0.5 SQ.MT / PERSON	1500	1	750 SQ.MT
(ii)	PREFUNCTION AREA	20 % OF EXHIBITION AREA			420 SQ.MT
(iii)	MAIN EXHIBITION AREA	1.40 SQ.MT / PERSON	1500	1	2100 SQ.MT.
(IV)	SHOW'S MANAGER ROOM+TOIL.	-	-	2	50 SQ.MT
(V)	CONTROL PANEL ROOM	-	-	2	40 SQ.MT
(VI)	TICKETING COUNTER & REGISTRATION AREA			2NOS .(25+12)SQ.MT	37 SQ.MT.
(VII)	ADMIN AND ACCOUNT OFFICE	-	7-8 PAX	1	20 SQ.MT
(VIII)	CLOAKROOM + CONCRIEGE ROOM	4 SQ.MT /100 PERSONS	1500	2NOS.(40+20)SQ.MT	60 SQ.MT .
(IX)	SERVERIES	1 SERVERY POINT /300 PEOPLE	1500	5	100 SQ.MT
(x)	FOH OFFICE	-	-	1	70 SQ.MT
(xi)	MEDIA ROOM	-	-	1	15 SQ.MT
(xii)	MEETING ROOM	2 SQ.MT PER PERSON	24 PAX	1	48 SQ.MT
(Xiii)	ORGANISER'S ROOM + TOILET	-	1	1	20 SQ.MT
(Xiv)	MANAGER OFFICE + TOIL .	-	1	1	20 SQ.MT
(xv)	TOILET	MALE – WC (1.2 M²) -2/400 AND 1/250 PART THEREOF URINAL- (0.63 M²)- 1/100 WB- (0.92 SQ.MT)- 1/WC	900	WC – 4 WB –4 U-9	WC- 4.8 SQ.MT + WB- 3.68 SQ.MT + U- 5.67 SQ.MT = 14.15 SQ.MT
		FEMALE – WC –(1.2 M²)- 2/200 AND 1/150 PART THEREOF WB – 1/WC	600	WC – 4 WB- 4	WC -4.8 + WB – 3.68 = 8.48 SQ.MT.
(xvi)	CIRCULATION AREA	30% OF THE CARPET AREA	-	-	
					TOTAL AREA - 4372.63 SQ.MT
BACK OF THE HOUSE -					
(Xi)	STORAGE	20 % EXHIBITION HALL	-	1	420 SQ.MT
(Xii)	SECURITY ROOM	-	-	1	6 SQ.MT
(xv)	LOADING DOCKS	-	-	50 SQ.MR X2	100 SQ.MT
(Xvi)	CIRCULATION	30% OF CARPET AREA	-	-	158 SQ.MT

02 AUDITORIUM .1 (CAPACITY 500)

(i)	FOYER	0.5 SQ.MT / SPECTATOR	500	1	250 SQ.MT
(ii)	SEATING	1.2 SQ.MT / SPECTATOR	500	1	600 SQ.MT
(iii)	STAGE AREA (INCLUDES THE PLAY AREA AND WALKWAY AT THE BACK OF THE STAGE)	33.3% OF THE SEATING AREA	-		198 SQ.MT .
(iv)	PERFORMER'S / SPEAKER'S DRESSING ROOM + TOIL.	ATLEAST 16 SQ.MT	-	1	35 SQ.MT
(v)	STORE AREA (SAME AS PLAY AREA FOR OPEN STAGES)	30% OF WHOLE ROOM	-	1	100 SQ.MT
(vi)	GREEN ROOM + TOILET	-	3 MALES ,3 FEMALES	6	84 SQ.MT
(vii)	PROJECTOR ROOM	MIN. SIZE – 3M X4.5 M (13.5 SQ.MT)	-	1	13.5 SQ.MT
(viii)	LIGHT/ SOUND ROOM	MIN . SIZE - 3M X 4.5 M (13.5 SQ.MT)	-	1	13.5 SQ.MT
(ix)	TOILET	MALE – WC (1.2 M^2) -2/400 AND 1/250 PART THEREOF URINAL- (0.63 M^2)- 1/100 WB- (0.92 SQ.MT)- 1/WC	300	WC – 2 WB – 2 U- 5	WC- 2.4 SQ.MT + WB- 1.84 SQ.MT + U- 3.15 SQ.MT = 7.39 SQ.MT
		FEMALE – WC – (1.2 M^2)- 2/200 AND 1/150 PART THEREOF , WB -1/ WC	200	WC – 2 WB- 2	WC -2..4 + WB – 1.84 = 4.24 SQ.MT.
(x)	CIRCULATON AREA	30% OF HALL AREA	-	-	239.4SQ.MT
					TOTALAREA - 1611 SQ.MT

AUDITORIUM 2 (CAPACITY 200)

`(i)	FOYER	0.5 SQ.MT / SPECTATOR	200	1	100 SQ.MT
(II)	SEATING	1.2 SQ.MT / SPECTATOR	200	1	240 SQ.MT
(iii)	STAGE AREA (INCLUDES THE PLAY AREA AND WALKWAY AT THE BACK OF THE STAGE)	33.3% OF THE SEATING AREA	200	1	79.2 SQ.MT
(iv)	PERFORMER'S / SPEAKER'S DRESSING ROOM + TOIL.	ATLEAST 16 SQ.MT EACH	-		
(v)	STORE AREA (SAME AS PLAY AREA FOR OPEN STAGES)	30% OF THE WHOLE ROOM	-		95.76 SQ.MT
(vi)	GREEN ROOM + TOILET	-	2MALE , 2 FEMALE	4	54 SQ.MT

(vii)	PERFORMER/SPEAKER DRESSING ROOM+TOI.	ATLEAST 16 SQ.MT	-	1	33 SQ.MT
(viii)	PROJECTOR ROOM	MIN. SIZE – 3M X4.5 M (13.5 SQ.MT)			
(ix)	LIGHT/ SOUND ROOM	MIN . SIZE - 3M X 4.5 M (13.5 SQ.MT)			
	TOILET	MALE – WC (1.2 M²) 1/100 UP TO 400 PPL URINALS (0.63 M²)- -1/50 PPL WB- (0.92 SQ.MT)1/WC AND URINALS PROVIDED FEMALE - WC (1.2 SQ.MT) – TWO FOR 100 PERSONS WB (0.92 SQ.MT) -1/WC	ASSUMING 120 MALES , 80 FEMALES	MALE – 2 WC , 3URINAL, 2 WB FEMALE – WC-2 WB-2	MALE - WC- 1.2 SQ.MT URINAL – 1.89 SQ.MT WB- 3.68 SQ.MT FEMALE – WC - 2.4 SQ.MT WB – 1.84 SQ.MT
(x)	CIRCULATON AREA	30% OF THE CARPET AREA	-	-	196 SQ.MT
(xi)	FOOD & BEVERAGES 1- CAFÉ RESTRAUNT	1.6 SQ.MT/ SEAT FOR DINING AREA 60% OF TOTAL AREA = DINING AREA 30% OF TOTAL AREA = KITCHEN AREA 10% OF THE TOTAL AREA = STORAGE ,FOOD PREP, COOKING , DISHWASHING ADMIN ACTIVITIES ETC.	FOR CAFÉ RESTRAUNT 434.25 PAX (BY CAL.)	1	FOR CAFÉ RESTRAUNT – TOTAL AREA = 1158 SQ.MT DINING AREA = 694.8 SQ.MT KITCHEN AREA = 347.4 SQ.MT STORAGE N OTHER SER.= 115.8 SQ.MT
	1.1 TOILET	MALE – WC (1.2 M²) 1/100 UP TO 400 PPL URINALS (0.63 M²)- -1/50 PPL WB- (0.92 SQ.MT)1/WC AND URINALS PROVIDED FEMALE - WC (1.2 SQ.MT) – TWO FOR 100 PERSONS WB (0.92 SQ.MT) -1/WC	MALE 260 FEMALE 174	MALE – WC- 3 URINAL -6 WB – 3 FEMALE – WC 4 WB-4	MALE -18.6 SQ.MT FEMALE – 6 SQ.MT
	2- SNACK BAR	1.6 SQ.MT/ SEAT FOR DINING AREA 60% OF TOTAL AREA = DINING AREA 30% OF TOTAL AREA = KITCHEN AREA 10% OF THE TOTAL AREA = STORAGE ,FOOD PREP, COOKING , DISHWASHING ADMIN ACTIVITIES ETC	FOR SNACK BAR 100 PAX	1	FOR SNACK BAR – TOTAL AREA =448 SQ.MT DINING AREA =280 SQ.MT KITCHEN AREA =130 SQ.MT STORE AREA = 98 SQ.MT
				TOTAL AREA	9101 SQ.MTS
SEMI PUBLIC BLOCK -					
(i)	CONFERENCE & MEETING ROOMS TYPE 1	2 SQMT/ PERSON	22 PAX EACH	9	396 SQ.MT
(ii)	CONFERENCE & MEETING ROOM TYPE 2	2 SQMT/ PERSON	14 PAX EACH	10	280 SQ.MT
(iii)	BUISNESS CENTRE	2 SQMT /PERSON	200 PAX EACH	2	830 SQ.MT
(IV)	VIP LOUNGE	1.2 SQ.MT/ PERSON	300 PAX	1	500 SQ.MT
(V)	LECTURE THEATRES	1.5 SQ.MT /PERSON	42 PAX EACH	6	378 SQ.MT
(VI)	MULTI PURPOSE HALLS	1.2 SQ.MT / PERSON	1000 PAX EACH	2	2400 SQ.MT

(VII)	ART GALLERY A- STORE B- CURATOR'S ROOM	1.2 SQMT/ PERSON	625 PAX EACH	2	1500 SQ.MT STORE -100SQ.T CORATOR'S ROOM -6 SQ.MT
(VIII)	LIBRARY A- STORE	2.5 SQMT / PERSON (TABLE) 4 SQ.MT / PERSON (FOR STUDY CARRELS) 3.25 SQ.MT PERSON (FOR LOUNGE CHAIRS) 25% OF READING AREA	380 PAX	1	1600 SQ.MT STORE- 410 SQ.MT
(IX)	TOILET	MALE – WC (1.2 M^2) 1/100 UP TO 400 PPL URINALS (0.63 M^2)- -1/50 PPL WB- (0.92 SQ.MT)1/WC AND URINALS PROVIDED FEMALE - WC (1.2 SQ.MT) – TWO FOR 100 PERSONS WB (0.92 SQ.MT) -1/WC	MALE 2644 FEMALE 1763		
				TOTAL AREA	8400 SQ.MTS

GUEST BLOCK

(I)	RECEPTION +TOILET	0.5 SQ.. MT /PERSON MALE – WC (1.2 M^2) 1/100 UP TO 400 PPL URINALS (0.63 M^2)- -1/50 PPL WB- (0.92 SQ.MT)1/WC AND URINALS PROVIDED FEMALE - WC (1.2 SQ.MT) – TWO FOR 100 PERSONS WB (0.92 SQ.MT) -1/WC	86 GUESTS-TOTAL AT PEAK CAPACITY 52 MALES, 34 FEMALES	TOILET -MALES - WC-2 WB-2 U-3 FEMALES – WC- 2 WB- 2	RECEPTION AREA – 43 SQ.MT TOILET - MALE – WC:1.2 SQ.MT WB- 0.92 SQ.MT U- 1.26 SQ.MT FEMALE –WC 2.4 SQ.MT WB - 1.84 SQ.MT
(II)	FRONT OF THE HOUSE OFFICE	-	15 PAX	2	38 SQ.MT
(III)	RESTRAUNT	1.6 SQ.MT/ SEAT FOR DINING AREA 60% OF TOTAL AREA = DINING AREA 30% OF TOTAL AREA = KITCHEN AREA 10% OF THE TOTAL AREA = STORAGE ,FOOD PREP, COOKING , DISHWASHING ADMIN ACTIVITIES ETC.	86 GUESTS	1	TOTAL AREA =203 SQ.MT DINING AREA = 203 SQ.MT KITCHEN AREA= 51 SQ.MT STORE AREA =35 SQ.MT
(IV)	GUEST ROOMS +TOILETS	35 SQ.MT / EACH DWELLING UNIT	86 GUESTS	86	3010 SQ.MT
	CIRCULATION AREA	30% OF THE CARPET AREA			
					TOTAL AREA 3301 SQ.MTS

PARKING

(I)	CAR PARKING (FOR EXHIBITION AND AUDITORIUMS)	1 PARKING SPACE /20 SEATS 32 SQ.MT (BASEMENT PARKING) 23 SQ.MT (SURFACE PARKING)	-	172 CARS – BASEMENT PARKING 90 CARS – SURAFCE PARKING	5504 SQ.MT 2070 SQ.MT
(II)	CAR PARKING FOR SEMI PUBLIC AND GUEST BLOCK	2 ECS/100 SQ.MT	-	160 CARS – SEMI PUBLICK BLOCK GUESTS PARKING = 85 CARS TOTAL CAR PARKS = 530 CARS TWO WHEELER PARK= 87 NOS	5120 SQ.MT 990 SQ.MT
(III)	BUS PARKING	BUS SIZE = 12M X 2.50 M TURNING RADIUS = 11.05 MTS	-	3	90 SQ.MT
(IV)	SERVICES – AC PLANT ROOM FIRE PUMP ROOM WATER TANKS FIRE TANKS FAN ROOM FOR EATH AUR TUNNEL AIR EXTRACT ROOM FOR JET AIR VENT	-	-	-	1464 SQ.MT
(V)	TOILET AT BASEMENT	MALE – WC (1.2 M^2) 1/100 UP TO 400 PPL URINALS (0.63 M^2)- -1/50 PPL WB- (0.92 SQ.MT)1/WC AND URINALS PROVIDED	-	-	22.5 SQ.MT

SITE AREA = 10.23 ACRES
= 41390.58 SQ.MT
PERMISSIBLE F.A.R = 1.30
PERMISSIBLE GROUND COVERAGE = 30%
= 12417. 17 SQ.MT
PERMISSIBLE TOTAL BUILT UP AREA – 53807 SQ.MTS
ACHIEVED F.A.R = 1.0
ACHIVED GROUND COVERAGE = 10526 SQ.MTS
ACHIEVED TOTAL BUILTUP AREA = 40569 SQ.MTS

LEGENDS

S.NO	SYMBOL	DESCRIPTION
01	GR	GUARD ROOM
02	R	RAIN WATER RECHARGE PIT
03	ST	
04	FET	FLOW EQUALIZATION TANK
05	SFT	SEPTIC TANK
06	UGT	UNDERGROUND WATER TANK 13M X 6.5 MTS
07	MC	MAN HOLE FOR EARTH AIR TUNNEL
08	DG	DG SET FOR BUILDING L&P 3.9MX1.7M
09	SWP	SOLID WASTE MANAGEMENT PLANT
10	CT	COOLING TOWER
11	SFBV.	SHAFT FOR BASEMENT VENTILATION
12.	FAS .	FRESH AIR SHAFT
13.	WB.	WATER BODY
14.	RZWT	ROOT ZONE WASTE WATER TREATMENT PLANT

LANDSCAPE LEGENDS

S.NO	SYMBOL OF SPECIES	NAME OF THE SPECIES	DIAMETER OF THE SPECIES	HEIGHT OF SPECIES	REMARKS
01		ARJUN TREE *TERMINILIA ARJUNA*	TRUNK DIA - 2.5 MTS	25 MTS HIGH	PREFERABLE IN EAST - WEST DIRECTION
02		WILLOW *SALIX*	TRUNK DIA - 3"	2-4 HIGH	DECIDOUS TREE N-S DIREC. PREF.
03		NEEM TREE *AZADIRACHTA INDICA*	TRUNK DIA - 30-80 CMS	30 MTS HIGH	EVERGREEN TREE , SCENTED FLOWER
04		JACRANDA *MISOEFOLIA*	TRUNK DIA - 04-0.5 MTS	15 MTS HIGH	FERN LIKE LEAF SEMI EVER. OR DECIDOUS
05		ALSTONIA SCHOLARIS	TRUNK DIA - 1.2 MTS	40 MTS HIGH	EVERGREEN TR. PROTECT SOLAR RADIATION
06		KANAK CHAMPA *PTEROPERMUM*	TRUNK DIA - 1-1.2 MTS	45 MTS HIGH	EVERGREEN TREE
07		GULMOHAR *DELONIX REGIA*	TRUNK DIA -1 MT S	15 MTS HIGH	UMBRELLA SHAP ED, ORANGE - YELLOW FLOWER
08		BABUL *ACACIA ARABICA*	TRUNK DIA - 0.6 MTS	2.7-7MTS HIGH	EVERGREEN TREE
09		FRANGIPANI PLANT *PLUMERIA ACUTIFOLIA*	TRUNK DIA - 8-10 MTS	7-8 MTS HIGH	DECIDUOUS PLANT - FLOWER IN SUMMER
10		BIRCH *BETULA*	TRUNK DIA - 30"	20-40 MTS HIGH	DECIDUOUS TREE
11		OAK *SCARLET*	TRUNK DIA -30'	45 ' HIGH	DECIDUOUS TREE
12		JASMINE *JASMINUM PUBSCENS*	TRUNK DIA -3-3.5 MTS	5-10' HIGH	ODOUR CONTROL GREY APPEARAN
13		LILY *LILLIUM SPP.*	STEM DIA - 4-5"	2.4 MTS HIGH	FLOWERING STEMS ODOUR CONTROL
14		RAAT RANI *CESTRUM NCCTURMUM*	TRUNK DIA - 10-13' IN DIA	2-4 MTS HIGH	GREYISH WHITE FLOWER , ODOUR CONTROL
15		GUDDAIM *GREWIA TENAX*	STEM DIA -5-7 MM	3 MTS HIGH	ORANGE YELLOW FLOWERS R.R.-200-1000 MM
16		JHARBERI *ZIZIPHYUS NUMMULARIA*	FLOWERS - 3-4 MM IN DIA	3 MTS HIGH	BUSHY LEAVES AREA TINY R.R-100-1000 M M
17		FORYSTHIA FLOWERS	10-12' SPREAD AT MATURITY	8-10' HIGH	LARGEST FLOW -ER 2" DIA
18		JELLY BEAN TREE PARKINSONIA ACULAETIA	-	2-8 MTS HIGH	SPINY SHRUB
19		SEASONAL FLOWERS	-	-	-
20		COMMON REED *PHRAGMITES AUSTRALIS*	15-25 MM	2-4 MTS HIGH	VERY VIGROUS PERENNIAL GRAS
21		*PHARAGMITES KARKA*	15-25 MM	10 MTS HIGH	TALL REED
22		*ARUNDO DONAX*	STEM DIA - 2-3 CMS	2-10 MTS HIGH	GIANT REED
23		BULRUSH *TYPHA LALIFOLIA*	-	90-270 CM HIGH	-
24		*JUNCUS BULRUSH*	SPREAD 2-4 '	1.5 MTS	PERENNIAL SOFT RUSH

TOTAL SITE AREA - *10.23 ACRES* 41390 SQ.MTS
PERMISSIBLE F.A.R -1.30
PERMISSIBLE GROUND COVERAGE - 30% (12417 SQ.MTS)
ACHIEVED GROUND COVERAGE - 26% (10526 SQ.MTS)
PERMISSIBLE TOTAL BUILT UP AREA - 53807 SQ.MTS
ACHIEVED TOTAL BUILT UP AREA - 40569 SQ.MTS 75.3%
ACHIEVED F.A.R -1.0
SURFACE PARKING PROVIDED - 96 CARS (FOR VIP, PERFORMERS , AND GENERAL PUBLIC)
TWO WHEELER PARKING -87 NOS. IN BASEMENT
CAR PARKING IN BASEMENTS - 530 CARS INCLUDING PARKING FOR GUESTS
BUS PARKING FOR GUESTS - 3 NOS.

N

THESIS TOPIC: SUSTAINABLE CONVENTION CENTRE , NOIDA ,U.P.

SITE PLAN

SCALE 1:500

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B.ARCH THESIS 2019-20
AR 5-1 , ROLL NO -11501501078
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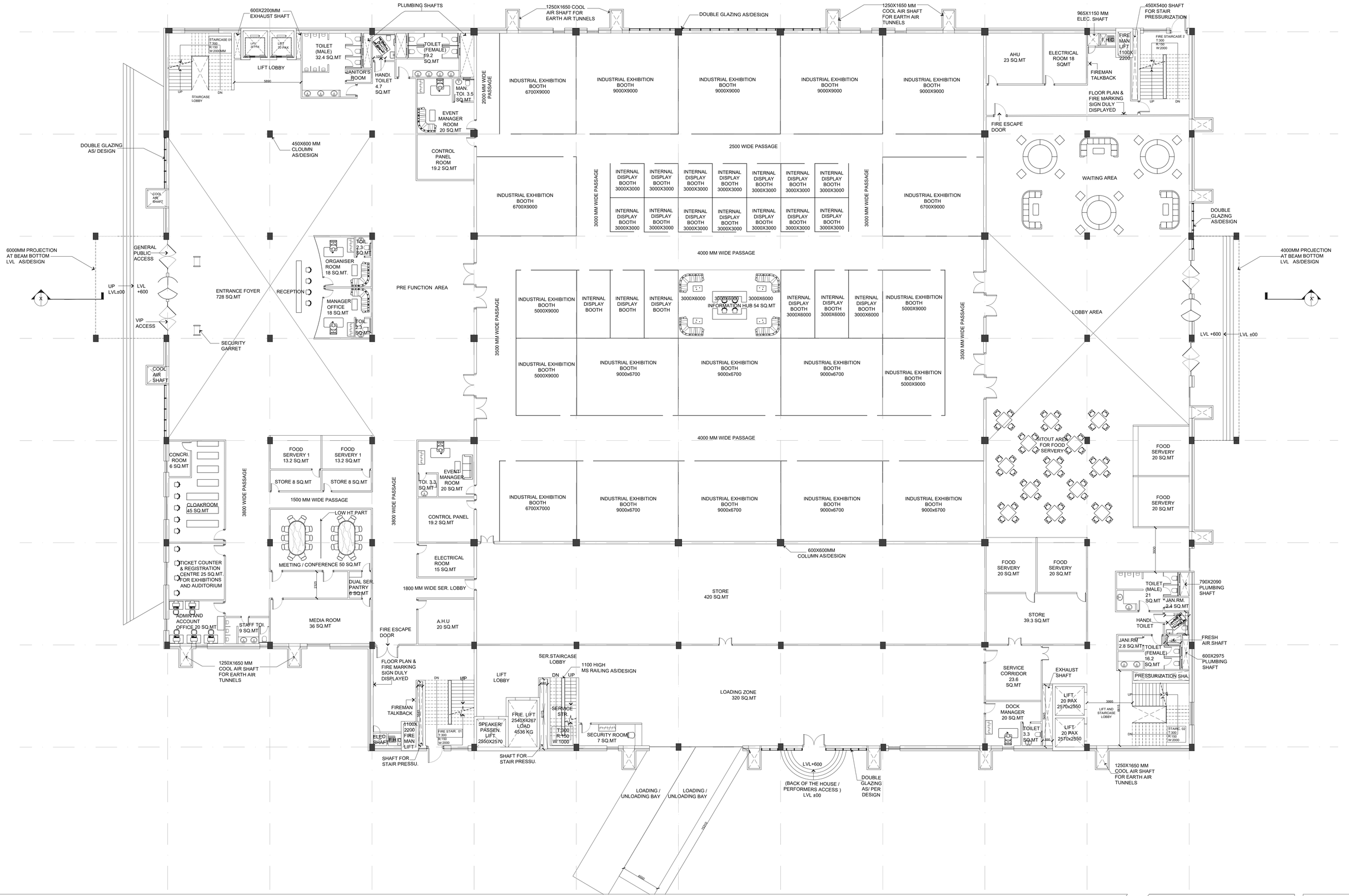

THESIS TOPIC: SUSTAINABLE CONVENTION CENTRE , NOIDA ,U.P.

EXHIBITION BLOCK GR FLOOR PLAN

SCALE 1:150

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600X2200MM EXHAUST SHAFT
PLUMBING SHAFTS
1250X1650 COOL AIR SHAFT FOR EARTH AIR TUNNELS
DOUBLE GLAZING AS/DESIGN
1250X1650 MM COOL AIR SHAFT FOR EARTH AIR TUNNELS
965X1150 MM ELEC. SHAFT
450X5400 SHAFT FOR STAIR PRESSURIZATION
STAIRCASE 01 T:300 R:150 W:2000MM
LIFT 20 PAX
LIFT 20 PAX
LIFT LOBBY
TOILET (MALE) 32.4 SQ.MT
JANITOR'S ROOM
HANDI. TOILET 4.7 SQ.MT
TOILET (FEMALE) 19.2 SQ.MT
MAN. TOI. 3.5 SQ.MT
BILLING DESK
RESTRAUNT MANAGER ROOM 20 SQ.MT
UP
DN
STAIRCASE LOBBY
COMMUNITY SEATING
DOUBLE GLAZING AS/ DESIGN
COOL AIR SHAFT
CAFE RESTRAUNT DINING AREA 660 SQ.MT
VIP SEATING
LOW HT. WOODEN JALI PARTITION AS/ DESI.
GLAZING AS/PER DESIGN
EXHIBITION HALL BELOW
AHU 23 SQ.MT
ELECTRICAL ROOM 18 SQMT
FIREMAN TALKBACK
FIRE MAN LIFT 1100X 2200
FIRE STAIRCASE T:300 R:150 W:2000
FLOOR PLAN & FIRE MARKING SIGN DULY DISPLAYED
DRY STORAGE 45 SQ.MT
LIQOUR STORAGE 10 SQ.MT
1500 MM WIDE PASSAGE
DOUBLE GLAZING AS/DESIGN
COLD STORAGE 33 SQ.MT
WORKING AREA
SNACK BAR KITCHEN AREA 15 SQ.MT .
BOILER AND FRYER
WORKING AREA
WAITER'S ACCESS
DRINKS BAR WITH MIXER ,TOASTER ETC
GLAZING AS/DES.
FOOD /JUICE / SNACKS SERVERY
BAR
BILLING COUNTER
SNACK BAR 290 SQ.MT
DOUBLE GLAZING AS/DESIGN
INTERACTIVE KITCHEN
WORK SURFACE
WORK SURFACE
CROCKERY RETURNS SORTING TABLE
SINK
WASTE CLEARANCE
PREWASH AREA
DISCHARGE TABLE
CROCKERY STORE
VEG -PREPARATION KITCHEN 144 SQ.MT
CROCKERY RETURNS SORTING TABLE
SINK
WASTE CLEARANCE
PREWASH AREA DISCHARGE TABLE
CROCKERY STORE
NON- VEG PREPARATION KITCHEN 132 SQ.MT
WORK SURFACE
2000 MM WIDE PASSAGE
WORK SURFACE
WORK SURFACE
COLD STORAGE 27 SQ.MT
VEGETABLE STORE 18 SQ.MT
UTENSIL STORE 8 SQ.MT.
1000 MM WIDE SERVICE PASSAGE
BUTCHERY STORAGE 17 SQ.MT
DRY STORAGE 22 SQ.MT
1250X1650 MM COOL AIR SHAFT FOR EARTH AIR TUNNELS
3800 MM WIDE PASSAGE
FIRE ESCAPE DOOR
ELECTRICAL ROOM 12 SQ.MT
A.H.U 20 SQ.MT
STORE 82 SQ.MT
GREEN ROOM (MALE) 27 SQ.MT
TOI. 3.3 SQ.MT
TOI. 3.3 SQ.MT
GREEN ROOM (FEMALE) 27 SQ.MT
SERVICE LOBBY
REAR STAGE CORRIDOR 3000 MM LVL+4800
SIDE STAGE 40 SQ.MT
WOODEN PARTITION AS/DESIGN
AUDITORIUM 200 CAPACITY MAIN STAGE 79 SQ.MT LVL +4800
3000 MM WIDE PASSAGE
1200 MM WIDE AISLES
LVL +4200
LVL +5650
LVL +4800
UP lvl+4200
PROJECT. ROOM ABOVE
ENTRANCE FOYER FOR AUDITORIUM
SIDE STAGE 40 SQ.MT
1200 MM WIDE AISLES
UP LVL+4200
3000 MM WIDE PASSAGE
WAITING LOUNGE
LIFT, 20 PAX 2570x2550
LIFT, 20 PAX 2570x2550
LIFT AND STAIRCASE LOBBY
STAIRC. T:300 R:150 W:2000
DN
UP
DOUBLE GLAZING AS PER DESIGN
EXHAUST SHAFT
1250X1650 MM COOL AIR SHAFT FOR EARTH AIR TUNNELS
TOILET (MALE) 21 SQ.MT
JAN.RM. 2.4 SQ.MT
790X2090 PLUMBING SHAFT
HANDI. TOI. 4.2 SQ.MT
JANI.RM 2.8 SQ.MT
TOILET (FEMALE) 16.2 SQ.MT
FRESH AIR SHAFT
600X2975 PLUMBING SHAFT
PRESSURIZ. SHAFT
LIFT LOBBY
SPEAKER/ PASSEN. LIFT 2550X2570
FRIE. LIFT 2540X4267 LOAD 4536 KG
PERFORMER'S DRESSING ROOM 33 SQ.MT
FIRE STAIR. T:300 R:150 W:2000
FIRE MAN LIFT 1100 X2200
ELEC. SHAFT
SHAFT FOR STAIR PRESSU.
SHAFT FOR STAIR PRESSU.
X
X'

THESIS TOPIC: SUSTAINABLE CONVENTION CENTRE , NOIDA ,U.P.

EXHIBITION BLOCK FIRST FLOOR PLAN

SCALE 1:150

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SIGN &REM.

IBLE GLASS
DOW AS/
IGN
1500
SER. STR.
T:300
R:150
W:1000
DN
UP
MS RAILING
AS / DESIGN
3230
FRIEGHT LIFT
2540X4267
LOAD 4536 KG
SERVICE LOBBY
EXHAUST SHAFT
1230
1000
COOL
AIR
SHAFT
1165
PANTRY
15 SQ.MT
KITCHEN
48.3 SQ.MT
2000
AHU 20 SQMT
ELECTRICAL
ROOM 15SQMT
ELEC
SHAFT
F.H.C
FIRE
MAN
LIFT
1100
X2200
1500
FIRE STAIRCASE
T:300
R:150
W:2000
FIREMAN
TALKBACK
FIRE DOOR
UP
DN
3885
FLOOR PLAN &
FIRE MARKING
SIGN DULY
DISPLAYED
35770
MULTI PURPOSE HALL
560 SQ.MT
17530
1180
INTERNAL HALL FOLDABLE
PARTITION AS/DESIGN
PANTRY
15 SQ.MT
LOW HT.
PARTITION
AS/DESIGN
MEETINGS/
DICUSSION AREA
9000 MM WIDE PASSAGE
BUISNESS CENTRE
415 SQ.MT
26770
2310
1790
GREEN
TERRACE
1100 HIGH
BRICK RAILING
AS/DESIGN
35770
MULTI PURPOSE HALL
641 SQ.MT
17895
DRINKING WATER
TEA /COFFEE
DISPENSAR
PRINTING DEVICES
STAIRCASE LOBBY
8830
6085
DN
UP
STAIRS
FOR
PERFOR.
STAIR. 01
T:300
R:150
W:1500
EXHA
-UST
SHAFT
2550
2570
LIFT
20 PAX
TOILET
FEMALE
11 SQ.MT
HANDI
CAPP
TOILET
4.7 SQ.MT
1075
600X2000MM
SHAFT FOR
TOIL. VENTILATION
MALE 'S
TOILET
12 SQ.MT
DRINKING WATER
AREA
1515
600X1000 SHAFT FOR
TOIL. VENTILATION
6500 MM WIDE PASSAGE
GLAZING AS/ DESIGN
1790
GREEN TERRACE
8885
3950
STAIRCASE LOBBY
1100 HIGH MS RAILING
AS/DESIGN
LIFT LOBBY
1900
1500
LIFT
20 PAX
LIFT
20 PAX
STAIR. 02
T:300
R:150
W:1500
EXHAUST SHAFT

THESIS TOPIC: SUSTAINABLE CONVENTION CENTRE , NOIDA ,U.P.

SEMI PUBLIC BLOCK FOU. FLOOR PLAN

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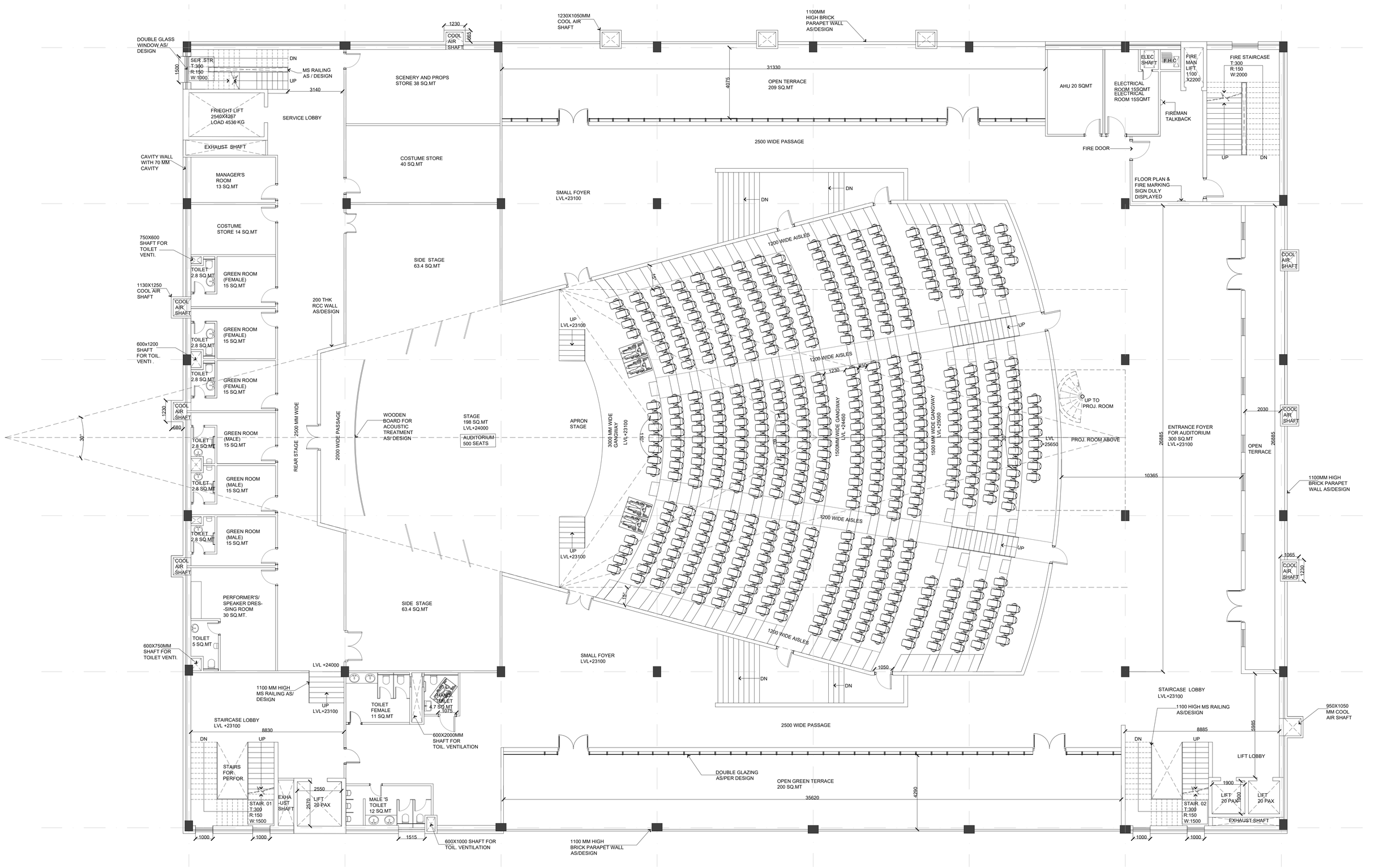

THESIS TOPIC: SUSTAINABLE CONVENTION CENTRE , NOIDA ,U.P.

SEMI PUBLIC BLOCK FIFTH. FLOOR PLAN

SWADHA SRIVASTAVA
B.ARCH THESIS 2019-20
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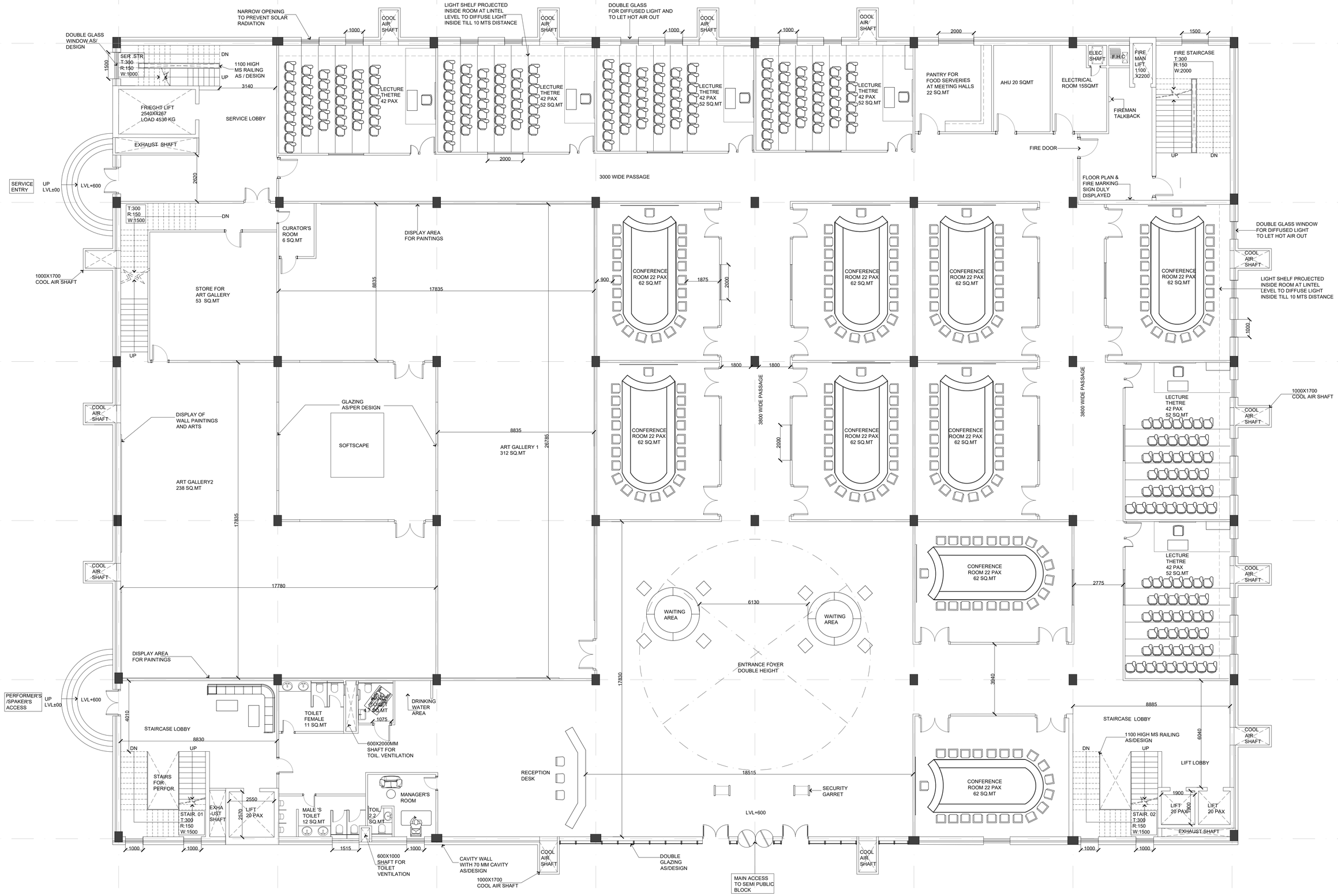

THESIS TOPIC: SUSTAINABLE CONVENTION CENTRE , NOIDA ,U.P.

SEMI PUBLIC BLOCK GR. FLOOR PLAN

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NARROW OPENING TO PREVENT SOLAR RADIATION

LIGHT SHELF PROJECTED INSIDE ROOM AT LINTEL LEVEL TO DIFFUSE LIGHT INSIDE TILL 10 MTS DISTANCE

DOUBLE GLASS FOR DIFFUSED LIGHT AND TO LET HOT AIR OUT

DOUBLE GLASS WINDOW AS/ DESIGN

SER. STR T:300 R:150 W:1000

DN

UP

1100 HIGH MS RAILING AS / DESIGN

1500

3140

FRIEGHT LIFT 2540X4267 LOAD 4536 KG

SERVICE LOBBY

EXHAUST SHAFT

6300

8830

COOL AIR SHAFT

1000

2000

MEETING ROOM 22 PAX 40 SQ.MT

MEETING ROOM 14 PAX 27 SQ.MT

MEETING ROOM 20 PAX 33 SQ.MT .

AHU 20 SQMT

ELECTRICAL ROOM 15SQMT

ELEC SHAFT

F.H.C

FIRE MAN LIFT 1100 X2200

FIRE STAIRCASE T:300 R:150 W:2000

FIREMAN TALKBACK

FIRE DOOR

UP

DN

3000 WIDE PASSAGE

FLOOR PLAN & FIRE MARKING SIGN DULY DISPLAYED

DISPLAY AREA FOR PAINTINGS

T:300 R:150 W:1500

1000X1700 COOL AIR SHAFT

STORE 50 SQ.MT

ART GALLERY 3

7320

CENTRAL DISPLAY AREA

7490

26885

3000 WIDE PASSAGE

MEETING ROOM 14 PAX 27 SQ.MT

MEETING ROOM 14 PAX

33100

VIP LOUNGE 500 SQ.MT .

8530

DOUBLE GLASS WINDOW FOR DIFFUSED LIGHT TO LET HOT AIR OUT

1100 HIGH BRICK PARAPET WALL

GREEN TERRACE

26770

5670

9415

2840

23720

DISPLAY AREA FOR PAINTINGS

1100 HIGH MS RAILING AS/DESIGN

ENTRENCE FOYER BELOW CUTOUT

5515

8095

1640

STAIRCASE LOBBY

8830

6080

TOILET FEMALE 11 SQ.MT

TOILET MALE 4.7 SQ.MT 1075

600X2000MM SHAFT FOR TOIL. VENTILATION

LIFT LOBBY

STAIRS FOR PERFOR.

STAIR. 01 T:300 R:150 W:1500

EXHA -UST SHAFT

LIFT 20 PAX

2550

2570

MALE 'S TOILET 12 SQ.MT

DRINKING WATER AREA

1515

600X1000 SHAFT FOR TOIL. VENTILATION

1100 HIGH BRICK RAILING AS PER DESIGN

GREEN TERRACE

DOUBLE GLAZING AS/DESIGN

STAIRCASE LOBBY

8885

1100 HIGH MS RAILING AS/DESIGN

5985

LIFT LOBBY

1900

LIFT 20 PAX

STAIR. 02 T:300 R:150 W:1500

EXHAUST SHAFT

THESIS TOPIC: SUSTAINABLE CONVENTION CENTRE , NOIDA ,U.P.

SEMI PUBLIC BLOCK FIRST. FLOOR PLAN

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THESIS TOPIC: SUSTAINABLE CONVENTION CENTRE , NOIDA ,U.P.

SEMI PUBLIC BLOCK SEC. FLOOR PLAN

SWADHA SRIVASTAVA
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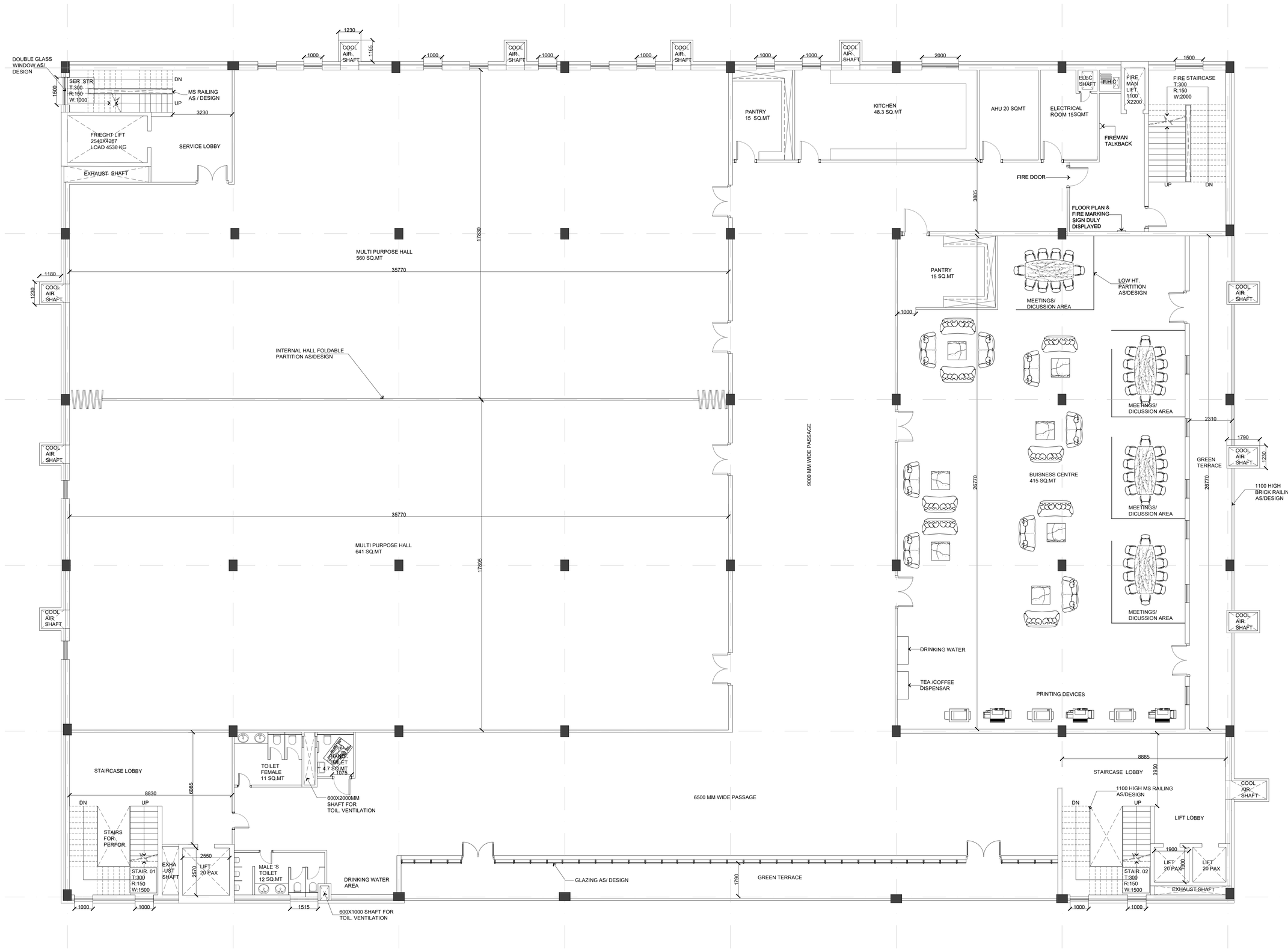

THESIS TOPIC: SUSTAINABLE CONVENTION CENTRE , NOIDA ,U.P.

SEMI PUBLIC BLOCK THIR. FLOOR PLAN

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THESIS TOPIC: SUSTAINABLE CONVENTION CENTRE , NOIDA ,U.P.

BASEMENT PLAN SCALE 1:250

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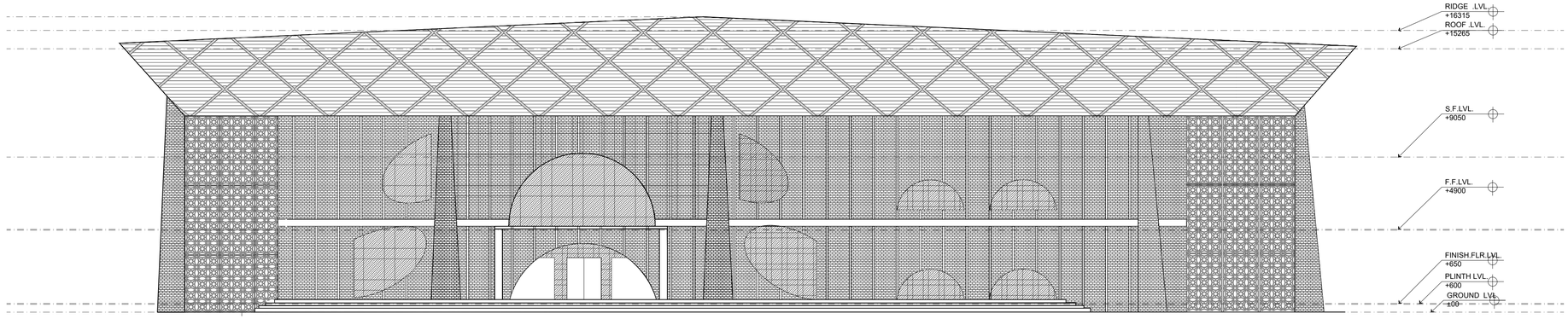
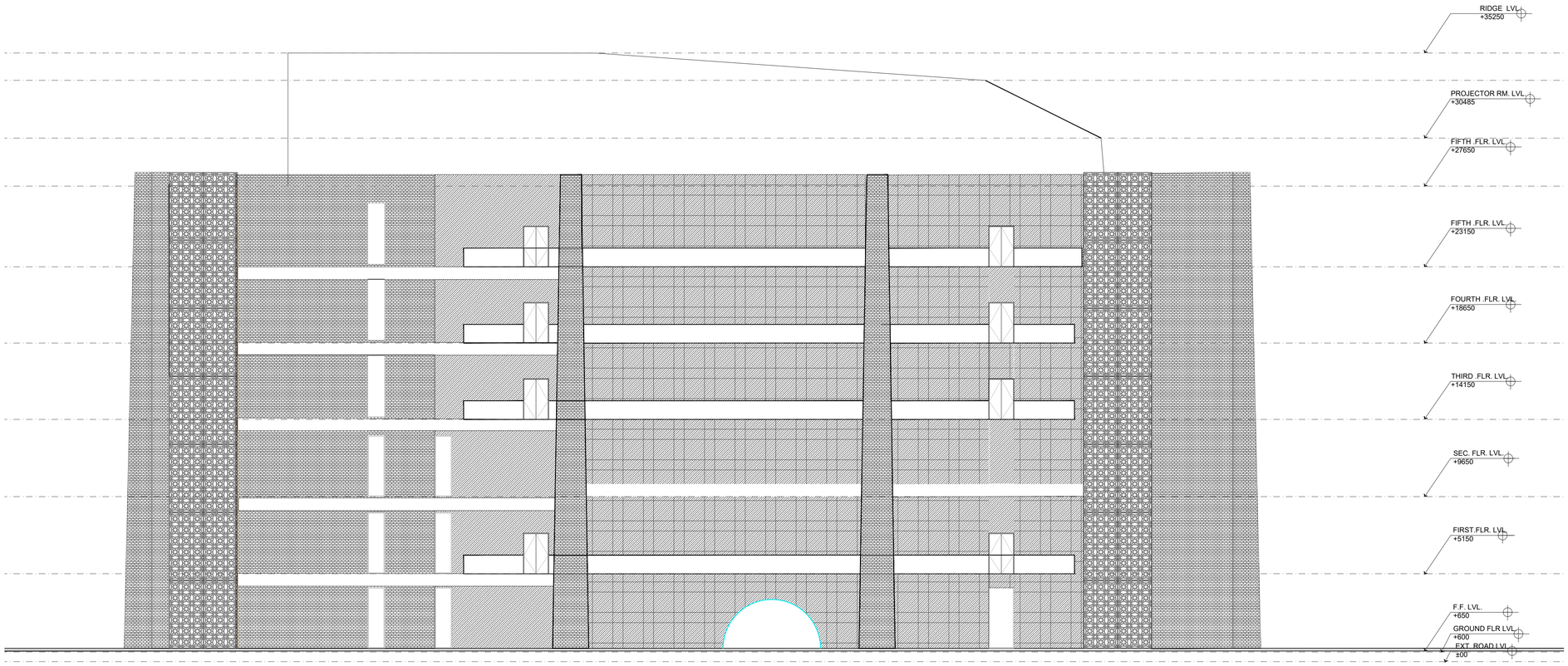


1
-

WEST SIDE ELEVATION EXHIBITION BLOCK

SCALE :- 1:150



SOUTH SIDE ELEVATION SEMI PUBLIC BLOCK

SCALE :- 1:150

THESIS TOPIC: SUSTAINABLE CONVENTION CENTRE , NOIDA ,U.P.

ELEVATIONS

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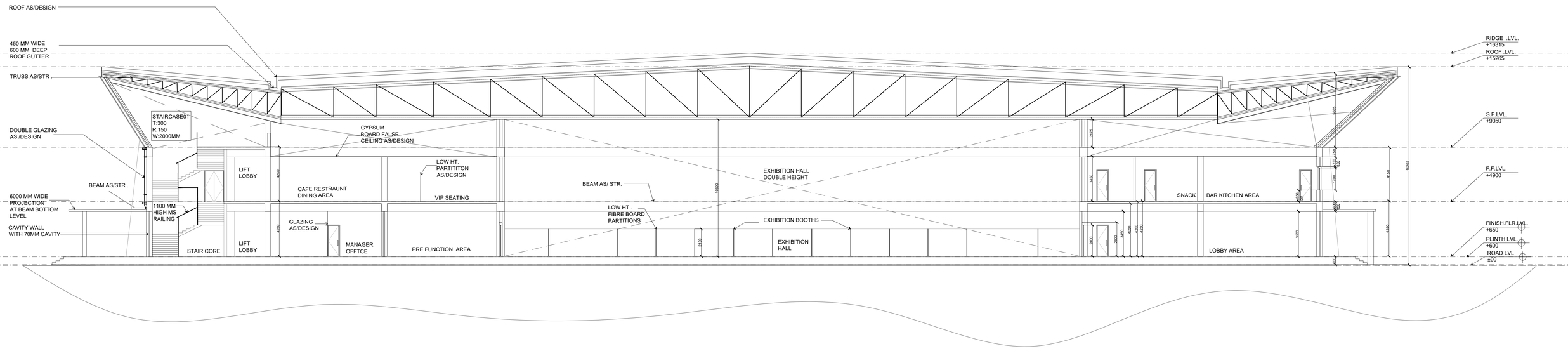

1 SECTION AT X-X'

SCALE :- 1:150

THESIS TOPIC: SUSTAINABLE CONVENTION CENTRE , NOIDA ,U.P.

SECTIONS

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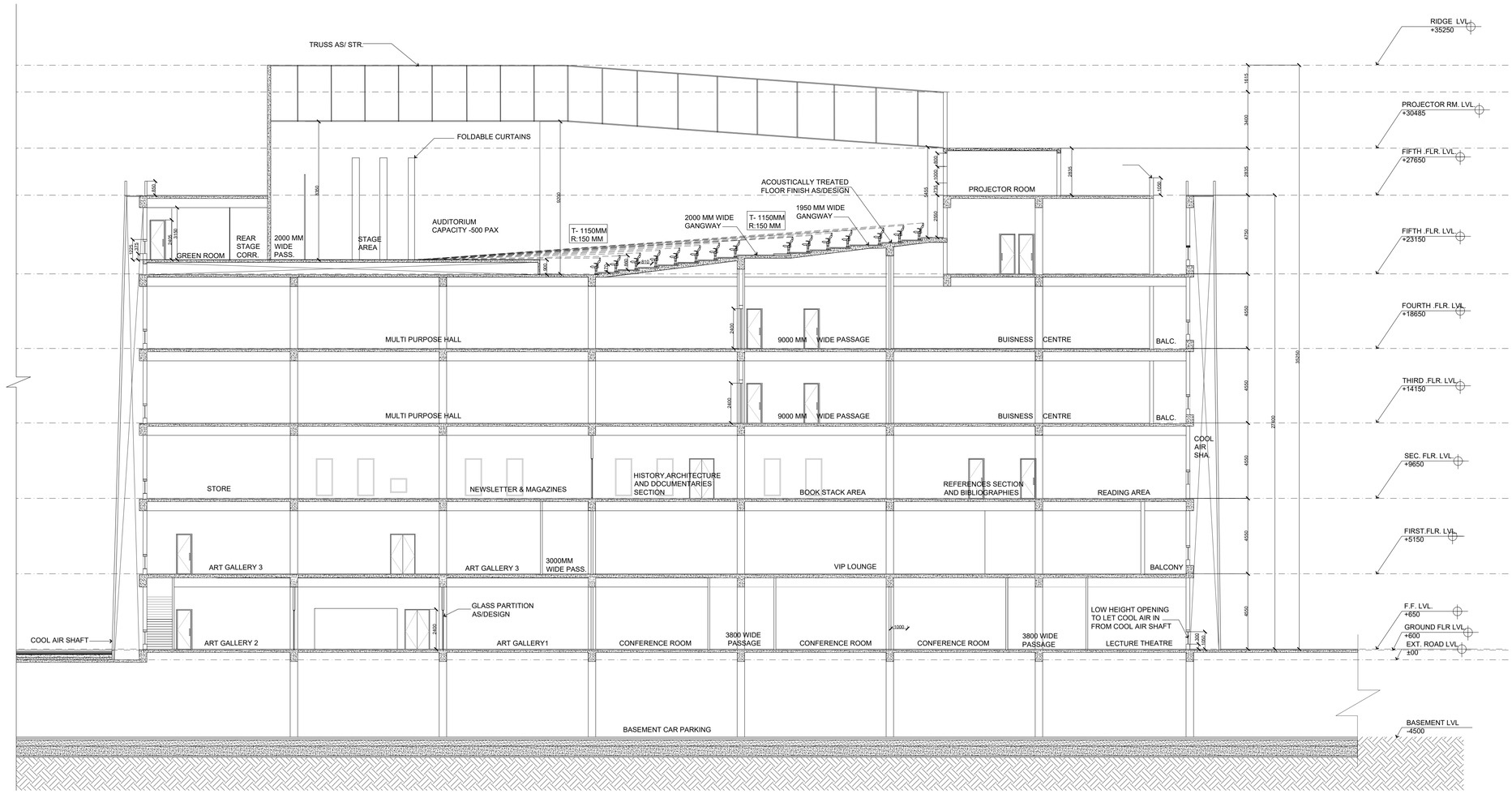
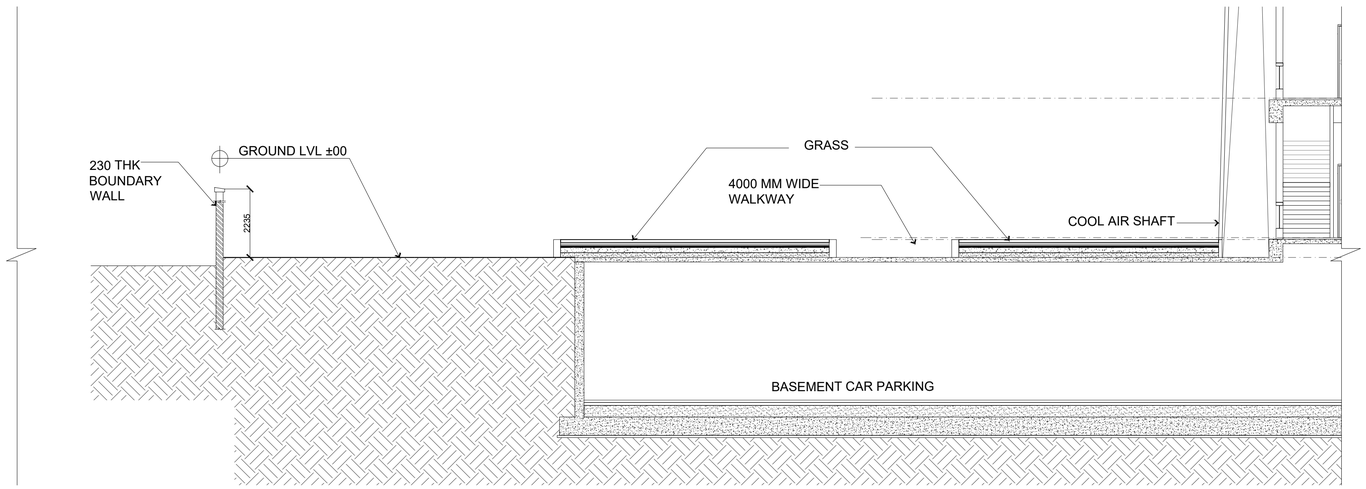


1 SECTION AT A-A'

SCALE :- 1:100



2 PART SSECTION

SCALE :- 1:100

THESIS TOPIC: SUSTAINABLE CONVENTION CENTRE , NOIDA ,U.P.

SECTIONS

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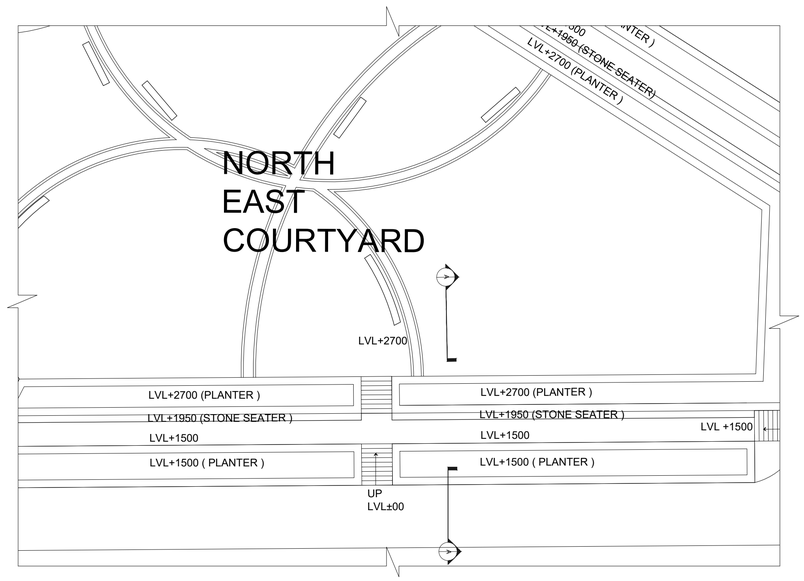
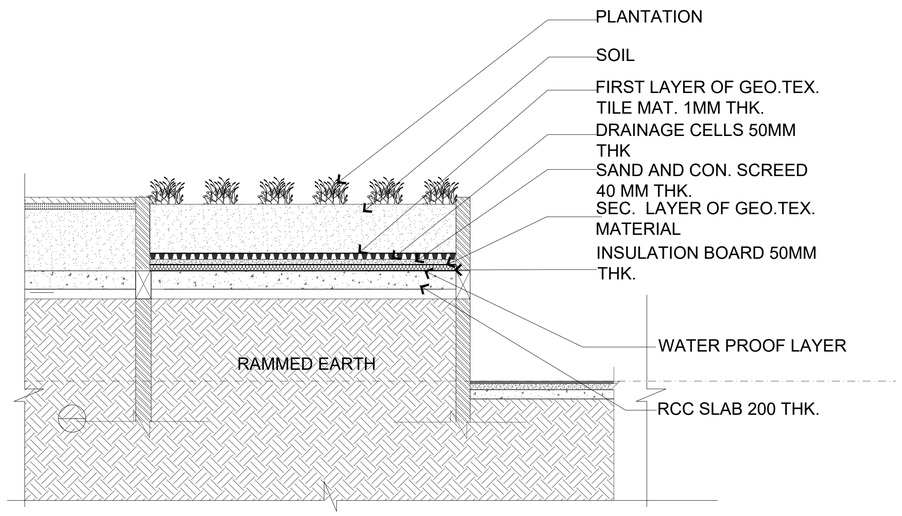
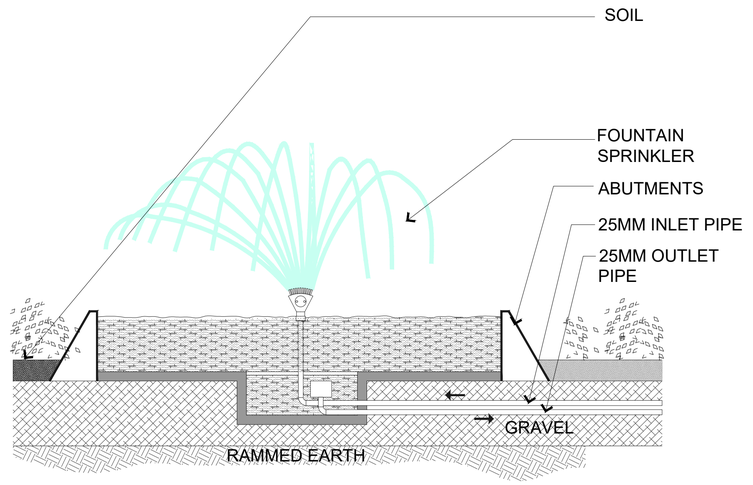


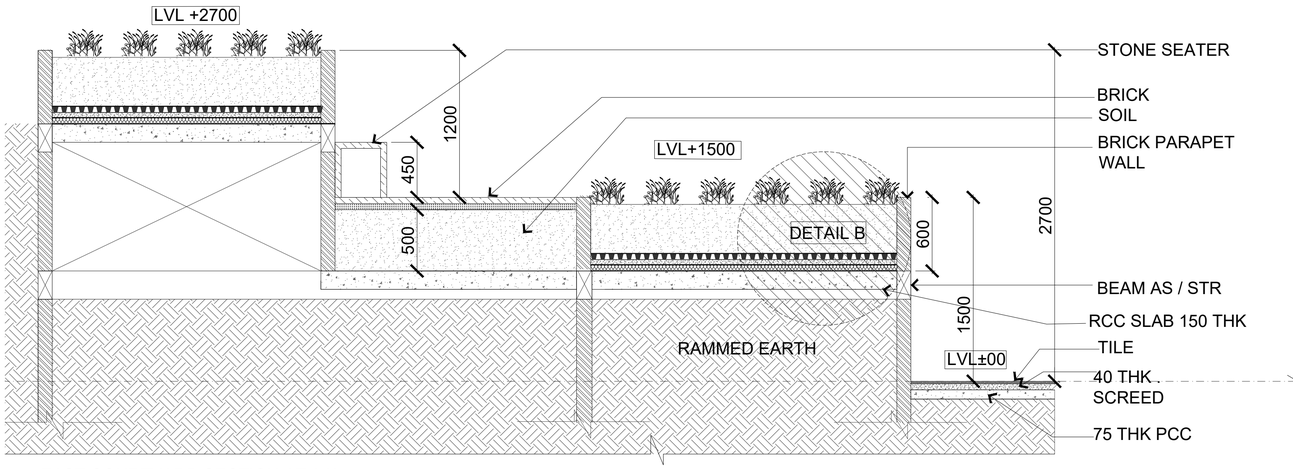
1 EAST COURTYARD PLAN
SCALE :- 1:200



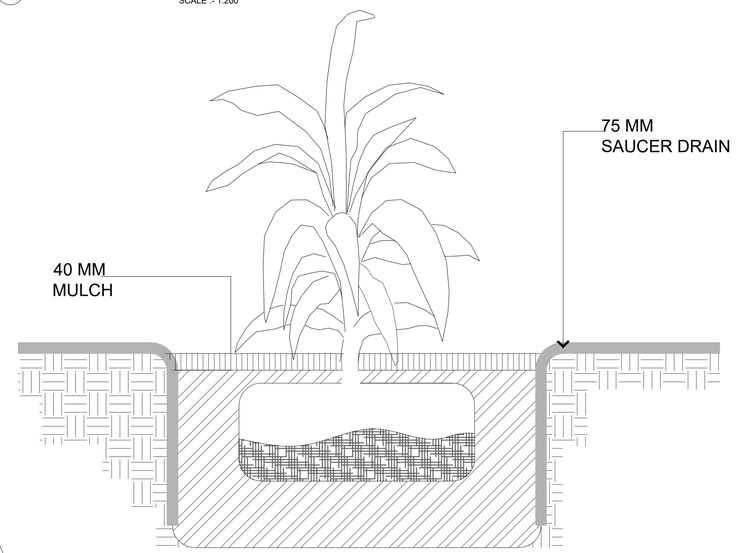
3 DETAIL B: TERRACE GARDEN DETAIL
SCALE :- 1:25



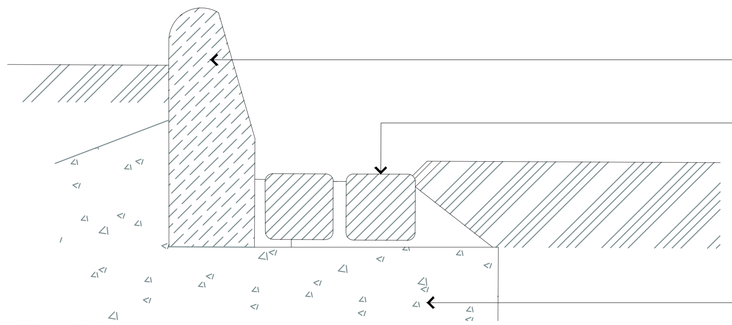
4 FOUNTAIN DETAIL
SCALE :- 1:200



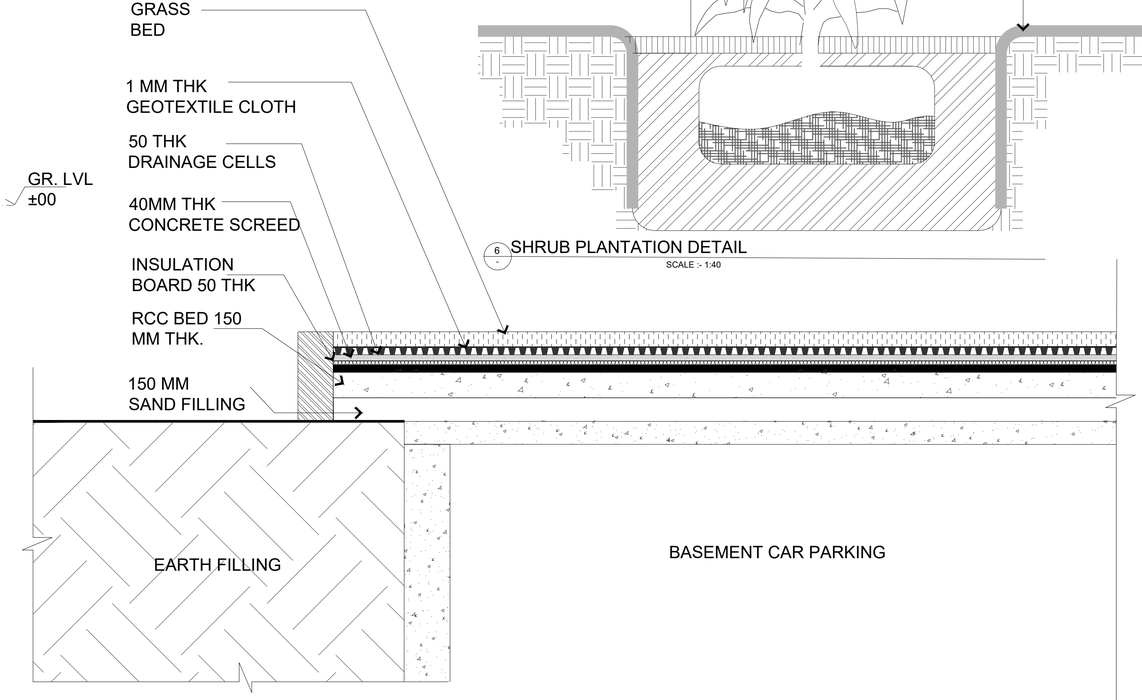
2 EAST COURTYARD SECTION AT AA'
SCALE :- 1:25



6 SHRUB PLANTATION DETAIL
SCALE :- 1:40



5 KERB DETAIL
SCALE :- 1:50



7 LANDSCAPE DETAIL 4: GRASS BED ON CONCRETE SLAB
SCALE :- 1:20

THESIS TOPIC: SUSTAINABLE CONVENTION CENTRE , NOIDA ,U.P.

ELECTIVE 1 - LANDSCAPE

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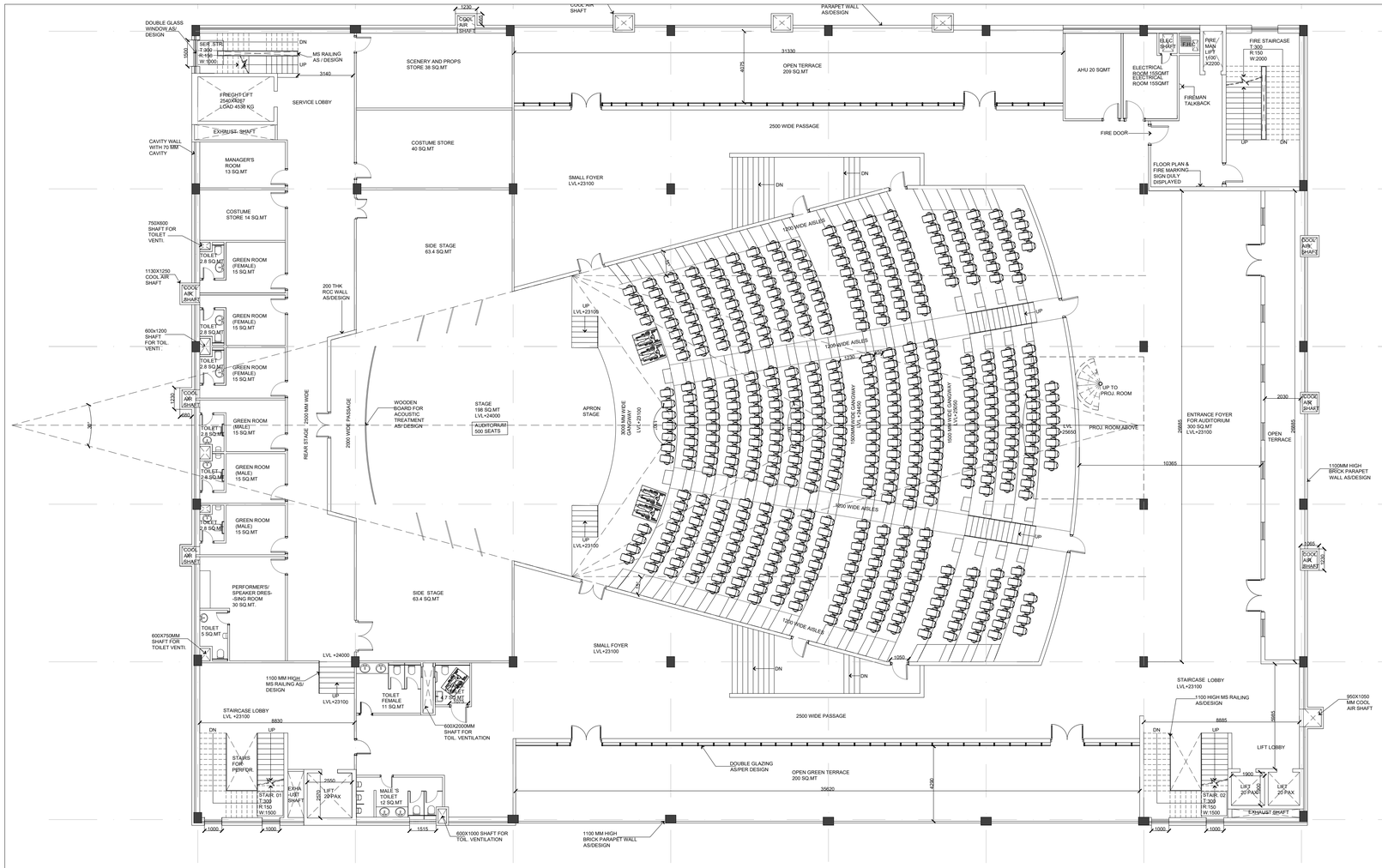
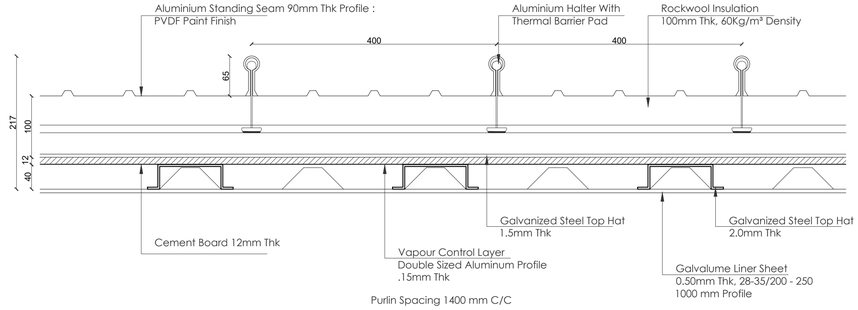


1 - AUDITORIUM PLAN

SCALE :- 1:150

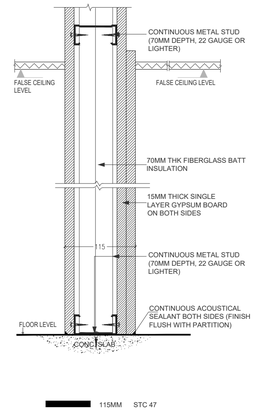
1 - AUDITORIUM SECTION

SCALE :- 1:150



3 - DETAIL AT A: TYPICAL ROOF DETAIL

SCALE :- 1:5

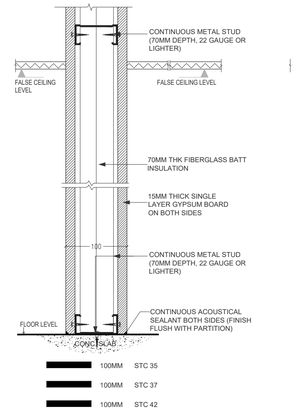


STC 47

115MM THK GYPSUM PARTITION WITH 15MM THK DOUBLE LAYER AND SINGLE LAYER OF 15MM THK GYPSUM BOARD ON BOTH SIDES & 65MM SINGLE STUD FILLED WITH FIBERGLASS BATT INSULATION.

4 - DETAIL AT B : INTERNAL WALL PARTITIONS OPTION 1

SCALE :- 1:5



3 - DETAIL AT B : INTERNAL WALL PARTITIONS OPTION2

SCALE :- 1:5

THESIS TOPIC: SUSTAINABLE CONVENTION CENTRE , NOIDA ,U.P.

ELECTIVE 2 - ACOUSTICS

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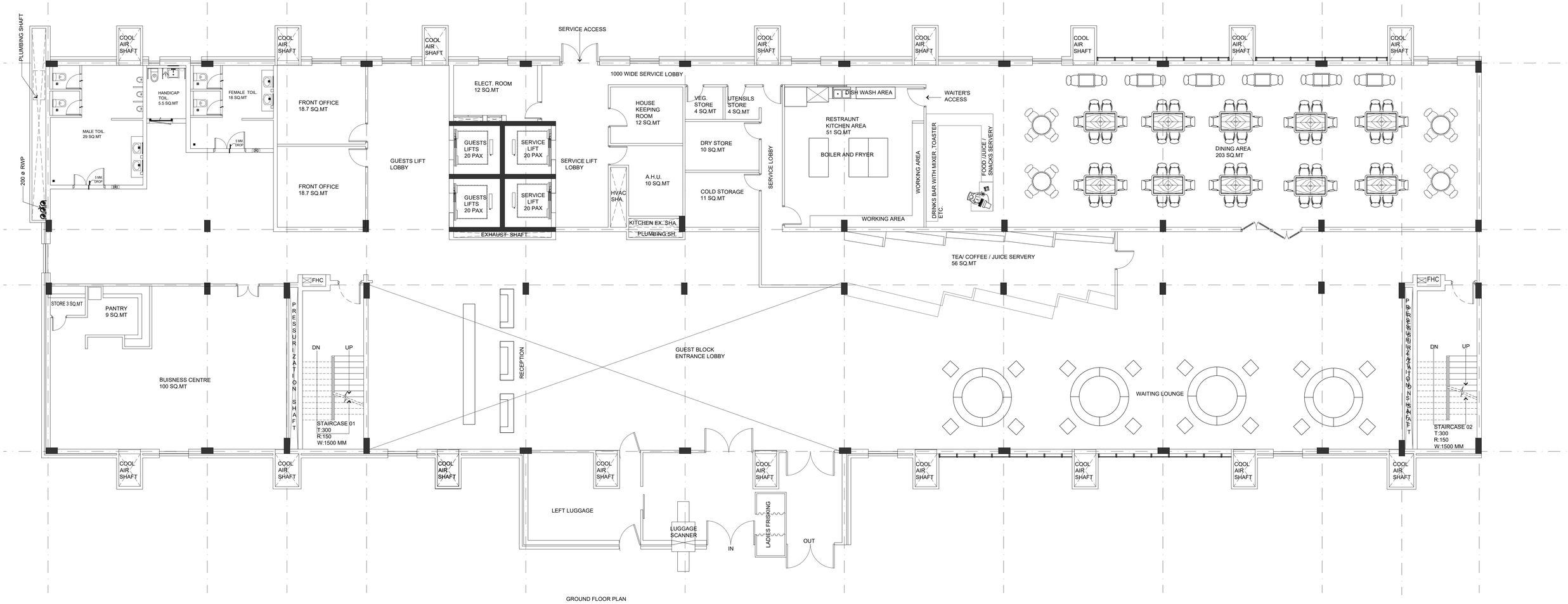

GROUND FLOOR PLAN

THESIS TOPIC: SUSTAINABLE CONVENTION CENTRE , NOIDA ,U.P.

GUSET BLOCK GROUND FLOOR PLAN

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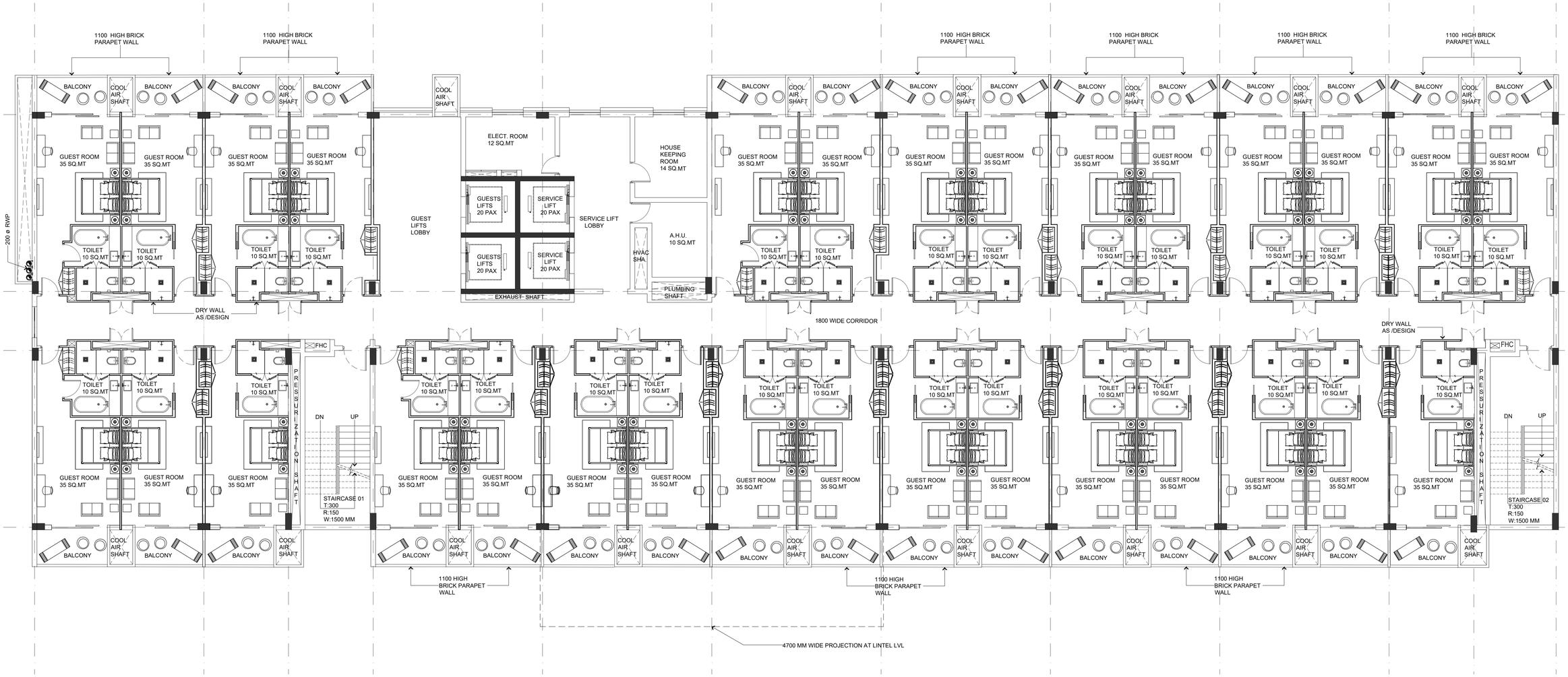

TYPICAL FIRST TO THIRD FLR PLANS

THESIS TOPIC: SUSTAINABLE CONVENTION CENTRE , NOIDA ,U.P.

GUEST BLOCK TYPICAL FLR PLAN

SCALE 1:100

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