5 Star Hotel

Sanand, Gujarat, India

BACHELOR OF ARCHITECTURE

BY

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DEPARTMENT OF ARCHITECTURE AND PLANNING

MAULANA AZAD NATIONAL INSTITUTE OF TECHNOLOGY, BHOPAL

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5 Star Hotel

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5 Star Hotel

Sanand, Gujarat, India

Submitted by:

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DEPARTMENT OF ARCHITECTURE AND PLANNING

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CANDIDATE DECLARATION

The Thesis Project in the subject ARC 511, entitled "**5 Star Hotel, Sanand, Gujarat, India"**, is being submitted in partial fulfilment of the requirement for the award of degree of Bachelor of Architecture by the undersigned for evaluation.

The matter embodied in this project is a record of my own work. If, in future, it is found that the above statement is false, then I have no objection in withdrawal of Bachelor of Architecture Degree awarded to me by the Institute.

Date: 1st – 2nd Dec, 2025

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RECOMMENDATION

Based on the above declaration of the student, the undersigned recommends that the work submitted by the candidate may be considered for the final end term examination of the subject ARC-511, Thesis Project.

Date: 1st – 2nd Dec, 2025

Dr. Arshi Parashar
Thesis Guide

CERTIFICATION OF EXAMINATION

The Bachelor of Architecture Thesis Viva-Voce examination of Ms Ann Mary K Moni Scholar No.211110---, was held on 1/12/2025 to 2/12/25.

Dr. Nakul Dhagat
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Thesis Coordinator

ABSTRACT

This thesis report presents a comprehensive site study and literature study for a 5-star hotel, aiming to create a luxurious and captivating hospitality experience for discerning guests. The report explores various aspects of hotel architecture, including spatial planning, sustainability, interior design, and contextual integration. It understands the technical function of a hotel complex. Its relationship of the surrounding with emphasis on exterior setting in conjunction with interior. Hotel provides regarding tourism, recreation etc.

The design proposal focuses on seamlessly blending functionality, aesthetics, and sustainability. The spatial planning emphasizes a fluid circulation system, ensuring intuitive navigation and optimizing guest experiences. The integration of advanced technology is explored to enhance guest comfort, convenience, and efficiency while maintaining a human-centered approach.

The concerned design proposal here aims at creating an iconic luxury 5 Star Hotel for Sanad, Gujarat. The 5-star hotel in Sanand aims to showcase architectural brilliance and innovative design, becoming an iconic landmark that enhances the city's skyline. The hotel aspires to attract and cater to affluent travelers, business professionals, and prominent individuals visiting Sanand for business or leisure purposes. It aims to provide a premium experience that meets the discerning needs and expectations of this target market. The 5-star hotel aims to contribute to the growth of tourism in Sanand by attracting domestic and international visitors. By offering exceptional accommodations, dining, and recreational facilities, it strives to position Sanand as a desirable destination for luxury travelers.

ACKNOWLEDGMENT

The completion of this thesis report has been one of the most significant parts of our thesis study. We would like to acknowledge everyone who has helped us throughout in the completion of this Thesis Report, directly or indirectly.

At this moment of accomplishment, first of all we would like to thank our Thesis Coordinator ***Prof. Vicky Lalramsangi*** *and Thesis Guide* ***Dr. Arshi Parashar****. This work would not have been possible without their guidance, support and encouragement. Their insightful leadership and knowledge benefited us to successfully overcome many difficulties through the process and taught us a lot. Their valuable suggestions helped us make our work better. Thank you so much for your continuous support and presence whenever needed.*

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CHAPTER 1:

DESIGN BRIEF

1. INTRODUCTION
2. AIM
3. OBJECTIVES
4. SITE LOCATION
5. SITE AREA
6. SITE PLAN
7. PROPOSING AGENCY
8. SITE LOCATION ON MASTERPLAN
9. SITE CONTEXT
10. DESIGN BRIEF

1.1 INTRODUCTION:

A business hotel is an establishment primarily designed to cater to the needs of corporate travelers, offering lodging and services that support work-related activities. Traditionally focused on providing a functional room with essentials such as a comfortable bed, desk, and connectivity options, business hotels have evolved to incorporate modern amenities like high-speed internet, ergonomic workspaces, and soundproof environments that ensure productivity and comfort. Typical features found in business hotel rooms include a work desk with task lighting, multiple charging ports, a digital safe, coffee-making facilities, and a flat-screen television. Enhanced business-class offerings may include express check-in/check-out services, complimentary breakfast, meeting rooms, and executive lounges. Larger business hotels also offer amenities such as fitness centers, airport shuttle services, co-working spaces, and 24-hour business centers.

1.2 AIM:

The main aim is to achieve a fully functional Hotel design without any compromise to aesthetics and services.

1.3 OBJECTIVES:

- To design a hotel responding to the site conditions.
- To follow the immediate urban context and design accordingly.
- To reflect the economic dynamism and industrial identity of Sanand.
- To design the hotel as a high-functioning node within Sanand's growing industrial ecosystem
- To use the site views to the fullest and follow every bye-law that the site commands.
- To create efficient service networks keeping in mind the highest standards of hospitality industry.

1.4 SITE LOCATION:

Name of the Project: Proposed 5 Star Hotel

Location: GIDC Sanand-II (Plot SM-39/5),
Sanand-II Industrial Estate,
District - Ahmedabad
State - Gujarat

Site Coordinates : 23°00'21.5"N, 72°14'59.6"E



Figure 1. Site location

1.5 SITE AREA

Total Land Area: 20,168.54 sq.m

1.6 SITE PLAN

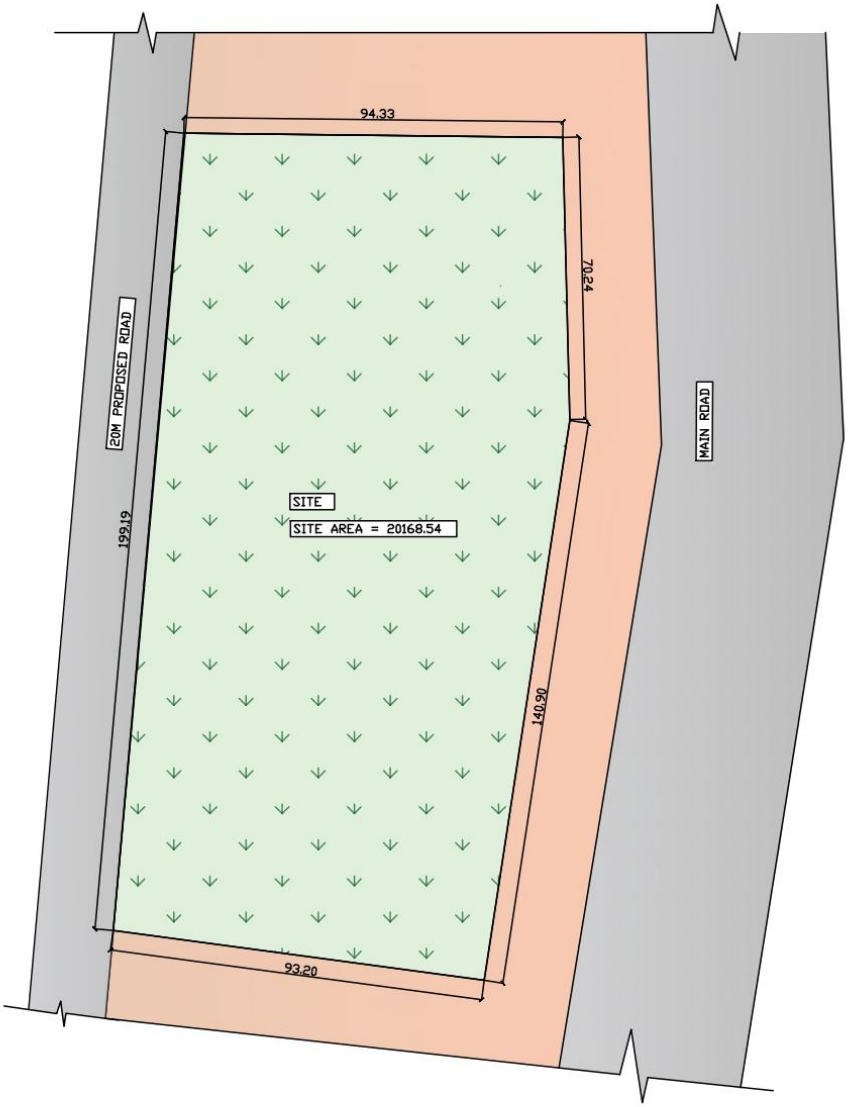


Figure 2. Site plan with dimensions

1.7 PROPOSING AGENCY:

Name of the Proponent: M/s. Bloom Inn Private Limited

1.8 SITE LOCATION ON MASTERPLAN:

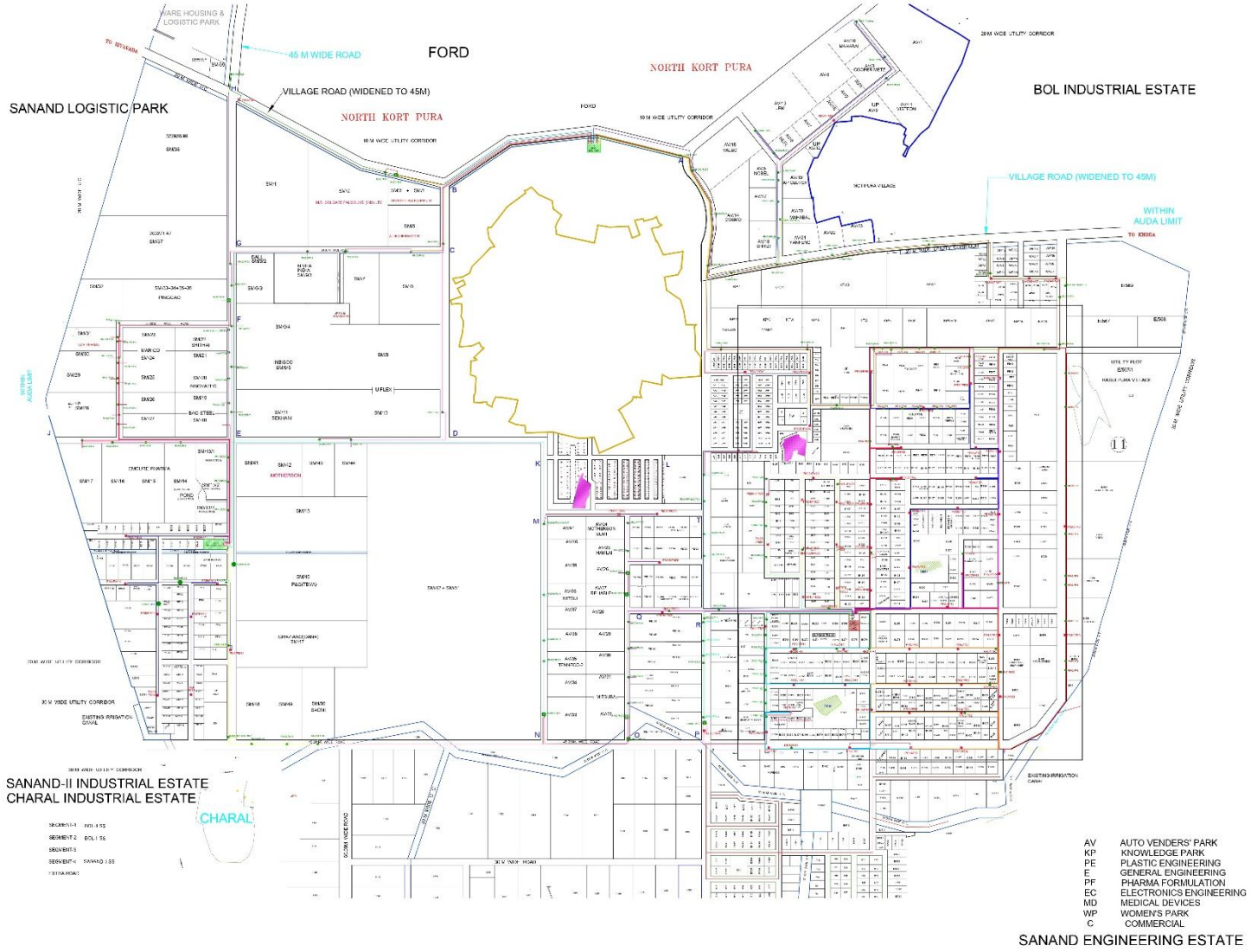


Figure 3. Site location on master plan

1.9 SITE CONTEXT

The proposed site for the 5-star hotel is strategically located within the industrial zone of Sanand, Gujarat, offering both accessibility and potential for high footfall from business and industrial visitors. The location is well-connected by various modes of transport, albeit with a preference for private or industrial commuting methods due to the distance from major public transit hubs.

Connectivity & Transportation Access:

- **Bus Access:**
  The nearest bus stop is **Sanand ST Stand**, located approximately **17 km** from the site. For intercity and long-distance travel, the **Ahmedabad Central Bus Station** at **Gita Mandir**, approximately **40 km** away, offers comprehensive connectivity.
- **Railway Access:**
  The **Chharodi Railway Station**, located **5 km** from the site, serves as the closest railway link and caters primarily to local trains. For broader national rail access, **Ahmedabad Junction**, a major railhead, is located **43 km** away.
- **Air Connectivity:**
  The nearest airport is the **Sardar Vallabhbhai Patel International Airport**, situated about **50 km** from the site. While not immediately adjacent, the airport provides direct flights to major cities across India and select international destinations. Additionally, **helipads located within nearby industrial areas** offer a high-speed commute alternative, particularly for corporate or VIP guests.

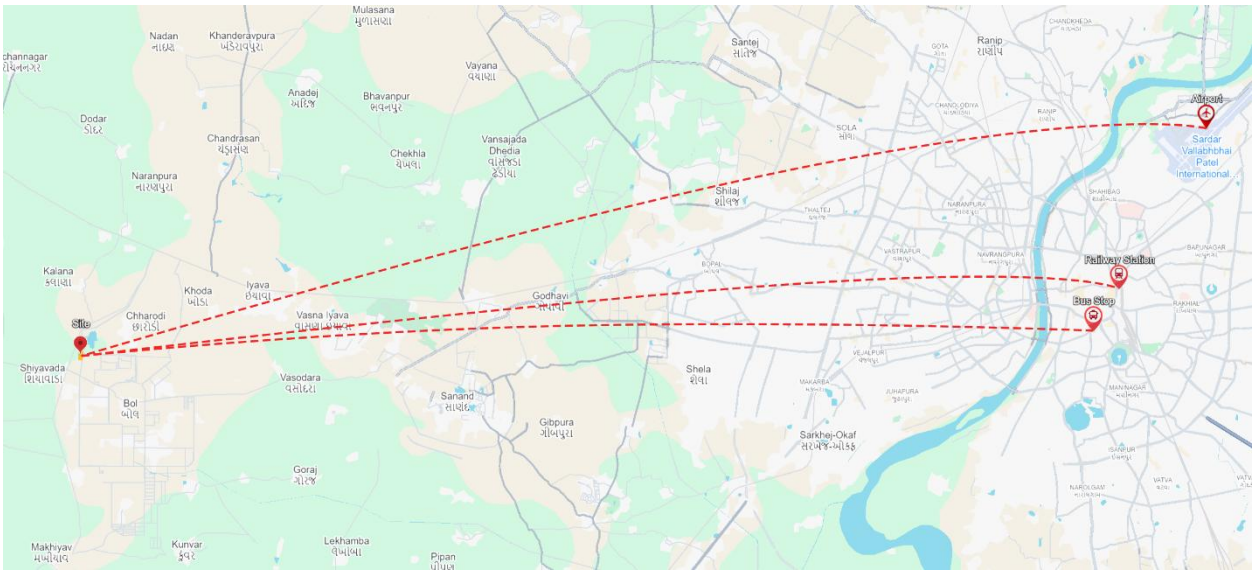


Figure 4. Site connectivity

Site Proximity & Surroundings:

The site is enveloped by a thriving **industrial ecosystem**, contributing to a consistent demand for premium hospitality services from domestic and international business travelers, consultants, and corporate delegates. The presence of large-scale manufacturing units and tech parks nearby underscores the need for high-end accommodations and business conferencing facilities.

Social Infrastructure

- **Educational Institutions Nearby:**
  - Northkotpura Primary School
  - Charal Primary School
  - College of Safety and Fire Technology – an institute that brings in students, faculty, and visiting professionals regularly.
  -
- **Healthcare Facilities Nearby:**
  - Sub Centre Bol
  - Doctor House Bol
  - Occupational Health Centre – serving primarily industrial workers and local residents.

1.10 DESIGN BRIEF:

- **Project Title: Development of a 5-star hotel in Sanand, Ahmedabad, Gujarat.**

- **Proposing Authority: Industrial zone under GIDC (Gujarat Industrial Development Corporation)**

- **Surrounding Features:** The proposed project site is located in the industrial-commercial zone of Sanand, Ahmedabad, a rapidly developing hub within Gujarat's manufacturing corridor. The site is surrounded by major industrial establishments and benefits from excellent regional connectivity. It is located approximately 35 km from Sardar Vallabhbhai Patel International Airport and around 25 km from Ahmedabad Junction Railway Station, ensuring convenient access for national and international business travelers. The site is also well connected via S.G. Highway and the Ahmedabad–Dholera Expressway, making it highly accessible for corporate visitors and industrial delegates frequenting the region.

- **Target Audience:** Corporate travelers, visiting consultants, technical experts, business delegations

- **Key Industries Nearby:** Tata Motors, Ford India, Nestlé, Hitachi, Colgate-Palmolive, and other major MNCs.

- Sanand has emerged as a crucial industrial corridor in Gujarat, experiencing rapid growth in infrastructure, employment, and industrial investments. However, there is a **distinct lack of premium hospitality infrastructure** within this industrial zone, creating a prime opportunity for the development of a dedicated business hotel.

- **Broad Scope of Work:**
  - **The scope of work includes but is not limited to:**
  - Development of the 5 Star Hotel at Sanand shall have:
    - Rooms

- Conference Hall / Convention Hall
- Restaurant and bar
- Health club
- Banquet Hall
- 24/7 Café
- Spa
- Swimming Pool
- Admin Block, Entrance Foyer and lobby
- Commercial Space
- Ballroom
- Basement for parking and services

WHAT MAKES THE BUILDING DIFFERENT

This Business Class Hotel in Sanand, Ahmedabad, is strategically designed to cater specifically to the unique demands of corporate travelers and industrial professionals, unlike standard leisure or tourist-oriented hotels. While most hotels focus on general hospitality, this property is tailor-made for productivity, convenience, and professional engagement, offering a seamless blend of work and comfort.

Key Differentiators:

1. Strategic Location Within an Industrial Hub
    - Located at the heart of Sanand's GIDC industrial area, the hotel eliminates the need for long travel from city hotels.
    - Direct proximity to major industrial players (Tata Motors, Ford, Hitachi, etc.) gives business guests faster access to their destinations.
2. Business-First Design Philosophy
    - Layouts, circulation, and services are designed around a corporate lifestyle—from express check-ins to flexible meeting schedules.
    - A dedicated Business Lounge supports informal meetings, interviews, and quick networking.
3. Smart Room Technology
    - Rooms are equipped with high-speed Wi-Fi, ergonomic workstations, soundproofing, and digital automation—ideal for working professionals.
    - Long-stay suites with kitchenettes cater to consultants or project-based guests staying for extended durations.
4. Purpose-Built Meeting & Conference Spaces
    - Unlike general banquet halls found in typical hotels, this property includes:

- Modular boardrooms with video conferencing
- Seminar rooms for training sessions
- A business center with private work pods and printing/scanning facilities
- A 200+ pax conference hall designed for corporate product launches, industry meetups, or investor presentations

5. Efficient Service Networks
    - Back-of-house (BOH) services are zoned for minimal disturbance, ensuring quiet, focused environments.
    - 24/7 concierge and business support (IT, logistics, courier, etc.) tailored to business schedules.
6. Quick Access & Transit Connectivity
    - Located just 35 km from SVP International Airport and 25 km from Ahmedabad Railway Station, the hotel is highly accessible for national and international executives.
7. Work-Life Balance Amenities
    - Rooftop café for after-hours relaxation or informal networking
    - Fitness center and wellness zone to maintain well-being during tight schedules
    - Sound-insulated rooms and smart lighting to improve rest quality for peak productivity

How It Enhances Meeting & Accommodation Experiences

Features	**Meeting Experience**	**Accommodation Experience**
Location	Near factories & industrial zones for on-time meetings	Less commuting means more time for rest/work
Technology Integration	High-end AV systems, video conferencing	Smart room control, VPN-ready high-speed Wi-Fi
Space Flexibility	Modular halls & convertible spaces	Room layouts designed for both work and relaxation
24/7 Business Support	On-demand admin, tech, and logistic support	Round-the-clock room service and concierge
Professional Ambience	Formal, modern décor suited for business discussions	Calming, minimalist interiors to reduce travel stress
Extended Stay Comfort	Meeting spaces connected to lounge zones	Suites with kitchenettes for long-stay professionals

1.11 SITE IMAGES:











CHAPTER - 2

LITERATURE REVIEW

2.1 REGULATIONS FOR HOTELS AND MIXED USE DEVELOPMENT (2016) OF GOVERNMENT OF GUJRAT

6. PLANNING PROVISIONS

6.1 The Mixed use building having minimum area of 3500 sqmtr. abutting on road width 30 mts or more: (Except in the case of heritage hotel)

6.2 For the purpose of these regulations, irrespective of the Floor Space Index (FSI) prescribed in any zone, it shall be regulated as under:

Total FSI permitted on any plot shall be the sum of the Global FSI and Premium FSI where....

- Global FSI (GFSI) shall be.....
  - 0.6 in any area or
  - permissible FSI in a particular zone;
- Premium Floor Space Index (PFSI) shall be permitted at rate of 40% of the jantry.

6.3 The built up area of following shall be excluded from the computation of the FSI:

- Basement and other floors used for the parking;
- Refuge area as required as per NBC;
- Entrance Porch /Guest Drop Off Canopy area;
- Atrium;
- Fire escape stairways;
- Service floor;
- Ramps leading to parking spaces;
- Swimming pool on any floor
- Control room for security and Fire Control
- Sewerage Treatment Plant/ Effluent Treatment Plant
- Equipment /Air Handling Rooms (AHU) for air conditioning and ventilation requirements.

6.3.1 Guest Drop Off Canopy, Porch and Lift for the access to parking, at the ground level shall be permitted.

6.3.2 For safety and emergency exit, provide escape routes and refuge areas, on locations as required in the design.

The refuge and the escape area shall be regulated as under:

- to hold occupants during a fire or terror attack or any other emergency until rescued;

- Refuge Area shall be shall be regulated as under:
  - one or more refuge spaces, not necessarily be contiguous but connected with escape routes;
  - minimum area of 15 sq.mts and a minimum width of 3.0 mts
  - at least one refuge space be provided for every 6 floors or part thereof;
  - the refuge and the escape area shall be designed for safety of the occupants;
  - design of refuge area should comply with the provisions of NBC

6.3.3 Margins and Built-up area:

6.3.4 Notwithstanding anything contained in GDCR, margins shall be regulated as under:

a. Minimum clear margin of 9.0 mts in all sides shall be provided.

b. Nothing except cabin and structures related to security may be permitted in the margins;

6.3.5 Height of building:

Height higher than that permitted under the GDCR shall be known as additional height. The Additional height (AH) shall be regulated as under:

a. Up to 70 mts height shall be permitted on road width 30 mtr or more

b. more than 70 mtr height shall be permitted on road width 40 mtr or more

Provided that, in case of heritage hotel road width shall not be considered.

6.3.6 Parking:

a. Parking shall be permitted on any floor/ basements at any levels;

b. Parking in shall be allowed in one or more levels of basement;

c. Space for services which may include electric cabin, substation, a.c. plant room, Generator room, boiler room, hotel laundry, housekeeping, stores, lockers and rest room for the reserve staff. However such services shall only be permitted on one level of basement. Such uses shall strictly be ancillary to the principal use.

d. Mechanical parking shall be allowed at any level.

e. Minimum parking equivalent to 50 % of the consumed FSI shall be provided;

f. The parking can be provided in one or more lots. However it shall have to be provided within the same building unit;

6.3.7 Access for private cars, cyclists, pedestrians, service vehicles, emergency vehicles, physically challenged people, and public utility vehicles shall be designed for safety and convenience;

6.3.8 Access Points onto public roads should be located and designed in such a way as to minimise traffic hazards, queuing on public roads.

6.3.9 On each floor minimum of one service corridor of minimum 2.5 mts width, having access from each floor and is connected to the lift shall be provided;

6.3.10 Lifts – planning and design

The planning and design of lifts shall be in accordance with National Building Code of India.

2.2 GENERAL DEVELOPMENT CONTROLREGULATION OF GUJRAT INDUSTRIAL DEVELOPMENT CORPORATION

For Industrial and commercial Development :

Road length	Width of roads
Up to 150 mtrs.	9.0 mtrs.
Above 150 mtrs. & uptot 300 mtrs.	12.0 mtrs.
Above 300 mtrs. & upto 1000 mtrs.	14.0 mtrs.
Above 1000 mtrs.	20.0 mtrs.

9. Floor Space Index (FSI) :

9(1) For residetial and industrial development, the maximum permissible floor space index (FSI) of a building unit shall be 1.6 for law rise building. Maximum built up area on any floor for law rise building shall be 50% of the area of building unit for industrial and 40% for residential and commercial purpose. For commercial development, the maximum permissible floor space index for low rise buiding shall be 1.6.

9(2) Height of Building :- The maximum height shall not be more than 13. mtrs, for building with solid plinth and 15 mtrs. for building on stilts clear from the plot level to the top of the building. In case of building for mdustrial purpose, height of more than 13 meters may be permitted of required for industrial purpose and approved by Factory Inspector.

Industrial Development and Commercial Development :

Plot Size	Front margin (In Mtrs.)
50 sq. mtr. to 100 sq. mtr.	3.0
101 sq. mtr. to 200 sq. mtr.	4.5
201 sq. mtr. to 300 sq. mtr.	4.5
301 sq. mtr. to 500 sq. mtr.	4.5
501 sq. mtr. to 10,000 sq. mtr.	6.0
10,001 sq. mtr. to 50,000 sq. mtr.	7.5
50,001 sq. mtr. and Above	9.0

12. Marginal distance between two detached structures.

12(1) There shall be provided minimum marginal distance between two detached structures as under :

For residential development	4.5 mtr.
For industrial development	4.5 mtr.
For commercial development	6.0 mtr.

14(2) In case of industries and commercial development the minimum width of approach to building shall be 3.5 mtr.

15 Plinth

No building shall have plinth less than 45 Cm. measured from the crown of the road in front of the building provided that the ground floor of the building be permited on pillars subject to the conditions that at no pointits clear height over the ground level shall be less than 2 mtrs. and further that this space shall at all times be kept free from any enclosures except for genuine stair case and sanitary block.

17. Height of floors :

17(1) The minimum height of floors in a building measured from floor finish to bottom of the lowest structural member at any point shall be 2.8 mtrs. for residential development and 3 mtrs. for commercial development.

17(2) For dining space, verandah, bath room, corridor, puja room, coal room, passage, stair cabin and pump room the minimum height shall be 2 mtrs.

17(3) The maximum floor height shall not exceed 3.6 mtr.s for residential development, 4 mtrs. for industrial development and 3.60 mtrs. for commercial development. Also refer section 22. But this limit on height may be relaxed for industrial structures if required by industrial process subject to the fire fighting provision being made as per

case of Industrial Development Commercial and in public buildings the left at minimum height of 2.5 mtrs. for sloping room and 2 mtrs for flat roof not exceeding 1/4 the area of the room may be allowed.

18. Stair, Lobbies & corridors.

In case residential commercial and in public building the width of lobbies or crorridors in a building unit shall be as under.

(i) Minimum clear width corridors shall be 1 mtr. up to 3 mtr. length and for every additional length of 3 mtrs or part thereof, the width of corridors shall be increased by 15 cms. and upto a maximum of 2.5 mtrs.

(ii) The clear width of common stair shall not be less than 1.2 mtrs. Stair case upto 0.9 mtr. minimum width may be permited in single occupational residential bunglow/ apartment.

(iii) Minimum Stair width for more than six units tenaments on each floor shall be 1.5 mtrs.

(iv) The stair case shall be so located that it shall he within accessible distance of not more than 15 mtr. from any entrance of unit.

(v) Cantilever staircase of width upto 0.9 meters may be permitted in minimum 3 meters width margins in residential building.

19. Sanitary Accommodation :

19(1) In case of residential development minimum sanitary facilities provided shall be one toilet per unit or house. In case of industrial building sanitary accommodation as per the requirements of Factory Act shall be provided.

In case of commercial development minimum one W.C. for each sex on each floor shall be provided.

In case of use of building of a public nature minimum one w.c. for each sex, one urinal for 25 males and one urinal for 25 femals shall be provided.

20. Ventilation :

20(1) Every room in residential building should be constructed such that the same shall have for the purpose of ventilation.

A window or windows and/or ventilators clear of such frames, opening directly into an interior or exterior open air space or into an open verandah or gallery abutting on such open air spaces having an opening of not less than 1/10th of floor area of the room or an aggregate opening of door opening on outside open space. windows and ventilations of not less than 1/7th of the floor area of the room or kitchen.

- In case of factories, industries and building of werehouses, every room in such building shall be lighted and ventilated by sufficient number of windows. ventilators and sky lighting inclusive of doors opening on outside open having clear opening of not less than 1/7 of the floor area abutting on open air space of width not less than 1/3 of the height of the part of the building abutting such open space.
- Providied these requirement may be relaxed if artificial lighting and ventilations are installed to the satisfaction of the GIDC
- The ventilation so provided under the above regulation shall be subject to the satisfaction requirements of Factory Act if applicable.
- Every stair case provided under foregoing clauses shall be lighted and ventilated to the of GIDC from an open air space not less than 1 sq. mtr.
- There shall be provided window or windows on an aggregate area of atleast 1.2 sq. mtr. on each storey in such of the wall of the stair case which abuts on such 1 sq. mtr. open air space to light and ventilate such stair case.
- In case of commercial buildings & public buildings, the ventifilation in each room shall be 1/7the of the floor area including door opening on outside open space. windows & ventilators

22(1) Compound Wall : The height of compound wall shall not exceed 2 mtrs. from road level and where height exceeding the above is provided spacial approval of Managing Director GIDC shall be obtained.

In the said regulations, the sub-regulation(9) of - regulation 5 shall be substituted by the following; "5(9) - "Floor Space Index (FSI)" shall, subject to the provisions of sub-clause (2), mean quotient of the ratio of the combined gross floor area of all floors including areas of all walls except areas specifically exempted under these Regulations, to the total area of plot or building unit.

$$\text{Floor Space Index} = \frac{\text{Total floor area including walls of all floors}}{\text{plot area or building unit.}}$$

In computation of FSI, the following shall not be taken into account, namely;

1.1 Parking spaces not having any enclosures and partitions of any kind, with clear height of 2.4 mtr. and in case of slabs with beams, having height not exceeding 2.8 mts.,

1.2 Spaces of hollow plinth with maximum clear height of 2.8 mts. including beams in residential buildings only (not even in mixed development) at ground level not having any enclosures, walls or partitions in any forms;

2. Ramps leading to any area exclusively used for parking;

3. Interior open spaces and ducts required to be kept under these Regulations,

4. Weather shed upto 0.60 mt. width;

5. Staircase with maximum intermediate landing width equal to the width of stair, and the maximum landing width at floor level up to twice the width of stair;

6. Basement exclusively used for requisite parking having maximum clear height of 2.6 mts, excluding beams,

7. Security cabin up to 4 sq.mts.,

8. Electric room as specified by an Electricity Distribution company/Electricity Transmission company.".

9. In the said regulation after sub-regulation (1) of regulation 19, the following sub-regulation shall be inserted viz;

"19 (2)- control of storm water:

(a) Definitions: "storm sewer" shall mean sewer drainage but excludes sewage and industrial wastes, other than unpolluted cooling water.

(b) Regulations:

1. No person shall discharge or cause to be discharged any storm water, surface water ground water, roof run off, or sub surface - drainage to any sanitary sewer, uncontaminated cooling water or unpolluted industrial process water may be permitted to be discharged to any sanitary sewer by the Engineer if storm sewer is not available.

2. Storm water and all other unpolluted drainage shall be discharged to such sewer as are specifically designated as storm sewers or to a natural outlet approved by the Engineer. Industrial cooling water or unpolluted process water may be discharged with the prior approval of the Engineer to a storm sewer or natural outlet.

"21. Parking:

21(1) Minimum Parking Space: off street parking spaces for vehicles shall be provided for every building constructed for the first use or when the use of old building is changed to any of the uses mentioned in the table below: -

TABLE FOR MINIMUM OFF STREET PARKING SPACES

3.	Commercial and business establishments including business office, bank, hostel, guest house, restaurant, institutional building and health facilities including hospital and nursing homes etc.	30% of maximum permissible FSI. Note: I) The parking space so required shall be provided excluding required marginal space and built up area with solid plinth subject to other regulation, 2)20% of the parking space required at the ground level shall be exclusively earmarked for visitors.	50% of the total parking space requirements shall be reserved for cars.

3. Marginal space of 4.5 mtr. or more may be allowed for parking if it forms part of parking layout as required under clause 21(2).

7. Parking reserved to the visitors shall be provided on ground level only.

21(2) The parking layout shall fulfill the following conditions, namely:-

(i) The minimum width of access to the street from parking space shall be 3.0 meters.

(ii) The car parking space shall have two independent accesses leading to street if its area capacity excees 300 sq.mtrs.

(iii) If the parking space is not provide at street level, the gradient of ram pleading to parking space shall not be more than 1 meter over a horizontal distance of 7 meters.

(iv) Clear heading of 2.8 mts shall be provided on every access leading to parking space and at any point in parking.

Provided that:-

(1) The total area of cellar (basement) shall be allowed excluding the margins. It may be one or two level.

(ii) clear height of cellar shall not be less than 2.40 mts. and upto 2.8 mts.;

(iii) Uses permitted, Parking, Safe deposit vault, A.C. Plant, storage other than inflammable material.

Provided further that the area used for parking only shall be deducted in computing FSI.

"29. Tree Plantation:

(i) Building unit having 1000 sq. mtrs. and more area at the rate of 3 trees for every 200 sq. mtrs. of building unit, for all uses, shall have to be planted on the site plan/layout plan and also has to be maintained the same.

32. Percolating well and Rainwater Harvesting System:

For the area of building unit above 500 sq.mtr. and up to 1500 sq.mtr., the owner/developer shall carryout water harvesting system as specified by the authority.

In case where the area of building unit exceeds 1500 sq.mtr. and upto 4000 sq.mtr. owner/developer has to provide/construct percolating well with rain water harvesting system in building unit and at the rate of one percolating well for every 4000 sq.mtr. or part thereof building unit.

(I) Conservation and Harvesting of Rain Water in Building:

Having Plinth built up area of 750 sq. mtrs. or more, every such building shall be provided with required facilities and infrastructure for conservation and harvesting of rain water viz;

(ii) Percolation Pits:

The ground surface around the building shall have percolation pit or bore as recommended by competent authority within the building site, or bore recharge. Such pits shall be filled with small pebbles or brick jelly or river sand and covered with perforated concrete slabs.

(iii) Terrace Water Collection:

The terrace may be connected to a sump or well bore through a filtering tank by PVC pipe as recommended by Competent Authority. A valve system shall be incorporated to enable the first part of the rain water collected to be discharged out to the solid if it is dirty.

(iv) Open ground:

(i) whenever there is open ground a portion of top solid should be removed and replaced with river sand to allow slow percolation of rain water.

(ii) Any other methods proved to be effective in conservation and harvesting of rain water may be adopted in each and every construction taken up.

2.3 MINISTRY OF TOURISM GUIDELINES:

FACILITIES & SERVICES	1*	2*	3*	4*	5*/ 5*D	Yes/ No	COMMENTS
Health – Fitness and Barber's Shop	D	D	D	D	N		Indian system of treatments should preferably be offered
Beauty Salon and Barber's Shop	D	D	D	D	D		

FACILITIES & SERVICES	1*	2*	3*	4*	5*/ 5*D	Yes/ No	COMMENTS
Health – Fitness	D	D	D	D	N		Indian system of treatments should preferably be offered
Beauty Salon and Barber's Shop	D	D	D	D	D		

ANNEXURE – III

CHECKLIST OF FACILITIES FOR CLASSIFICATION / RE-CLASSIFICATION OF OPERATIONAL HOTELS

FACILITIES & SERVICES	1*	2*	3*	4*	5*/ 5*D	Yes/ No	COMMENTS
GENERAL							
Full time operation 7 days a week in season	N	N	N	N	N		
Establishment to have all necessary trading licenses / Permissions	N	N	N	N	N		
Establishment to have public liability insurance	D	D	D	D	D		
24hr. lifts for buildings higher than ground plus two floors	N	N	N	N	N		Mandatory for all hotels. Local laws may require a relaxation of this condition. Easy access for the differently abled guests.
Bedrooms, Bathrooms, Public areas and kitchen fully services daily	N	N	N	N	N		
All floor surfaces clean and in good shape	N	N	N	N	N		Floor may be of any type.
GUEST ROOM							
Minimum 10 lettable rooms, all rooms with outside windows / ventilation.	N	N	N	N	N		
Minimum size of bedroom excluding bathroom in sq.ft.	120	120	130	140	200		Rooms should not be less than the specified size. The area may include the vestibule and other covered area within the room but exclude outdoor verandah/ balcony. Single occupancy rooms may be 20 sq.ft. less.
Air – conditioning - % of Rooms	25%	25%	50%	100%	100%		Air –conditioning / heating depends on climatic conditions and architecture. Room Temperature should be between 20 to 28 degree Celsius.
A clean change of bed and bath linen daily and between check –in	N	N	N	N	N		Definitely required between each check – in. On alternate days for 1 & 2 Star category hotels.
Guest linen							Good quality linen to be provided.
Minimum bed width for single 90 cm and double180 cm.	D	N	N	N	N		
Mattress thickness minimum 10 cm	D	D	N	N	N		Coir, foam or spring foam

Minimum bedding 2 sheets, pillow and case, blanket, mattress protector / bed cover	N	N	N	N	N		Blankets available in air conditioned room as per seasonal requirement in non A/C rooms. Mattress protector is 'desirable' in 1 Star and 2 Star category hotels and 'necessary' for the other categories.
Suite *(2 rooms or 2 room-bays having a bedroom and separate sitting area, having one bathroom and one powder room.)*	D	D	D	N	N		Minimum 1 suite. A suite must be sold as one room.
Hairdryers	D	D	N	N	N		Where not provided in bathroom, must be available on request. 3 Star, 4 Star, 5 Star and 5 Star Deluxe category hotels shall provide hair dryer facility in the room on complimentary basis. In 1 Star and 2 Star hotels, this facility will be made available on request on complimentary basis.
Safe keeping / in room safe	D	D	D	N	N		1,2, and 3 Star hotels to have facilities for safe keeping in the reception. All 4 Star, 5 Star and 5 Star Deluxe hotels shall provide a safe in the room.
Mini bar / Fridge All 3 Star hotels shall have facility of a mini fridge and all 4 Star, 5 Star, and 5 Star Deluxe hotels shall have a the facility of mini bar.	D	D	N	N	N		Contents must conform to local laws.
Drinking water with minimum one glass per guest.	N	N	N	N	N		All star category hotels to provide 2 sealed bottles of branded packaged drinking water of minimum 500 ml per person per day on complimentary basis. Ultra violet treated water will not be acceptable.
Guest Linen							Good quality linen to be provided.
Shelves / drawer space	N	N	N	N	N		Necessary for hotels of 1,2 and 3 Star category to have a wardrobe.
Wardrobe with minimum 4 clothes hangers per bedding	N	N	N	N	N		In one star or two star hotels, this may be without doors.
Sufficient lighting (1 lamp per bed)	N	N	N	N	N		

A 5 amp earthed power socket	N	N	N	N	N		
A bedside table and drawer	N	N	N	N	N		1 per twin bed and two for a double bed.
TV Cable if available	D	D	N	N	N		TV must have a remote. Exception: for eco and nature resorts TV cable is not mandatory for 3 Star to 5 Star Deluxe category hotels. However, it is mandatory that they provide a television with cable in the lobby or other common area.
A writing surface with sufficient lighting	D	D	N	N	N		
Chairs	N	N	N	N	N		Preferably one per bed
Waste paper basket	N	N	N	N	N		
Opaque curtains or screening at all windows	N	N	N	N	N		All 4 Star, 5 Star, and 5 Star Deluxe hotels shall have blackout curtains
A mirror at least half length (3 ft.)	N	N	N	N	N		
A stationary folder containing stationary	D	D	N	N	N		
A 'do not disturb' notice	N	N	N	N	N		
Night spread / bed cover	N	N	N	N	N		
Energy saving lighting	N	N	N	N	N		
Linen Room	N	N	N	N	N		Should be well ventilated
BATHROOM							
Number of rooms with attached bathrooms	All	All	All	All	All		All bathrooms to have a sanitary bin with lid.
Minimum size of bathroom in square feet	30	30	36	36	45		25% of bathrooms in 1 &2 Star hotels to have western style WC. For hotels built before 1.1.2012, the Minimum bathroom size may be relaxed by 10% (to be rounded off to the next integer) provided the total size of the room and the bathroom taken together are as follows: 1 Star & 2 Star – 150 sq. ft., 3 Star-166 sq. ft., 4 Star – 176 sq. ft., 5 Star & 5 Star Deluxe – 245 sq. ft.

1 bath towel and 1 hand towel to be provided per guest	N	N	N	N	N		
Bath Mat	D	D	N	N	N		
Guest toiletries to be provided. Minimum 1 new soap per guest.	N	N	N	N	N		Quality products depending on Star category.
Bottled toiletry products to be provided.	D	D	D	N	N		
Clothes – hooks in each bath / shower room	N	N	N	N	N		All star category hotels shall provide two (2) clothes hooks in the bath / shower room
Sanitary bin	N	N	N	N	N		These must be covered
Each western WC toilet to have a seat with lid and toilet paper.	N	N	N	N	N		
All Star hotels shall provide water sprays or bidets or washlets or other modern water based post- toilet – paper hygiene facilities.	N	N	N	N	N		
Floors and walls to have non – porous surfaces	N	N	N	N	N		
Hot and Cold running water available 24 hours	N	N	N	N	N		
Shower cabin	N	N	N	N	N		A shower with shower curtain will suffice where shower cabin is not available.
Bath tubs				D	D		
Water saving taps and showers	N	N	N	N	N		
Energy saving lighting	N	N	N	N	N		
PUBLIC AREA							
Lounge or seating area in the lobby	N	N	N	N	N		Lobby shall have furniture and fixtures which shall include chairs / arm chairs, sofa, tables and fresh floral display. Door man on duty for 4 star categories and below 4 star categories, the presence of a door man on duty in the lounge or sitting area in the lobby shall not be mandatory. However, in such areas, the presence of staff on duty shall be obligatory around the clock 24/7

Reception facility	N	N	N	N	N		Manned minimum 16 hours. Call service 24 hours. Local directions to hotel including city street maps to be available.
Valet (parking) services to be available	D	D	N	N	N		
Availability of Room, F&B and other tariff	N	N	N	N	N		
Heating and cooling to be provided in public areas	-	-	-	N	N		Temperatures to be between 20 degrees Celsius to 28 degrees Celsius. Air – conditioning in common areas like lobby, restaurants, verandahs, bar where they are open to nature on one or more sides, shall not be mandatory for beach, lake, backwater, river, hill, mountain, forest or nature hotels & Resorts.
Public rest rooms for ladies and gents, a wash basin with running hot and cold water, a mirror, a sanitary bin with lid in unisex 7 ladies toilet.	N	N	N	N	N		
ROOM AND FACILITIES FOR THE DIFFERENTLY ABLED GUEST							
At least one room for the differently abled guest	N	N	N	N	N		The room shall have low height furniture, low peep hole, cupboard with low clothe hangers, audible and visible (blinking light) alarm system and doorbell. The almirah / cupboard doors in the differently abled room should be sliding to enable opening the same by the differently abled person. Blinking light in the room and bathroom should also be connected with the door bell for the hearing impaired. Cordless telephone in the room. Direct calling facility to the front desk or operator.
Bathroom	N	N	N	N	N		Door width for room of the differently abled persons and bathroom of such rooms should allow easy accessibility of wheel chair made available by the hotel).

							For new hotels coming up after 01.04.2017, the minimum door width of such rooms and their bathroom shall be minimum 90 cm. The door width of the room and bathroom for differently abled persons in existing hotels shall be 90 cm. with effect from 01.04.2023 Bathroom for the differently abled guest shall have suitable fixtures like low wash basin with wheel chair accessibility, low vanity unit, Wall mounted seat in shower area, hand shower, Grab bars net to the WC and shower area.
Ramps with anti-slip floors at the entrance. Minimum door width should be one meter to allow wheel chair access	N	N	N	N	N		Fixed and anti – slip ramp to be provided in all public areas. Free accessibility in all public areas, and to at least one restaurant in 5 star and 5 star deluxe hotel.
Public Restrooms	N	N	N	N	N		All star category hotels should have a public restroom for differently abled guests (unisex) with minimum door width which allows easy accessibility of wheel chair (made available by the hotel). Low height urinal with grab bars. For new hotels coming up after 01.04.2017, the minimum door width of such public rest room (unisex) shall be minimum 90 cm. For existing hotels, the minimum door width of public restroom (unisex) shall be mandatory after 01.04.2023

FOOD & BEVERAGE OUTLETS							
1 Star & 2 Star							1 & 2 Star categories should have minimum one dining room serving all meals.
3 Star Category							One Multi – cuisine Restaurant cum Coffee Shop open from 07.00 am. To 11.00 pm. And 24 hr. Room Service.
4 Star category (with alcohol service or with no alcohol service)							**Grade A cities:** One Multi – cuisine Restaurant cum Coffee Shop open from 07.00 am. To 11.00 pm., one specialty Restaurant and 24 hr. Room Service. The specialty Restaurant may either be indoors with air-conditioning, or outdoors. The Specialty Restaurant must serve specific form of cuisine. The Specialty Restaurant may be open for lunch / dinner. **Cities other than grade A cities:** One Multi – cuisine Restaurant cum Coffee Shop open from 07.00 am. To 11.00 pm. and 24 hr. Room Service.
5 Star category (with alcohol service or with no alcohol service) and 5 Star Deluxe							**Grade A cities:** One 24 hour Multi Cuisine Restaurant cum Coffee Shop, one Specialty Restaurant and 24 hr. Room Service. The Specialty Restaurant may either be indoors with air – conditioning, or outdoors. The Specialty restaurant must serve specific form of cuisine. The Specialty Restaurant may be open for lunch / dinner. **Cities other than Grade A cities:** One 24 hour Multi Cuisine Restaurant cum Coffee Shop and 24 hr. Room Service. One Specialty Restaurant would be desirable.

Grade A: Delhi, ** Mumbai, Kolkata, Chennai, Bangalore, Pune, Hyderabad, Secunderabad. Note: The Ministry of Tourism may review and revise the cities falling under the Grande 'A' from the time to time. ** Delhi would include the hotels falling Gurgaon, Faridabad, Ghaziabad, Noida, And Greater Noida"							
Crockery and glassware	N	N	N	N	N		Plastic ware acceptable in pool area.
Cutlery to be at least stainless steel	N	N	N	N	N		All category hotel should see good quality metal cutlery. Aluminum cutlery is prohibited.
Bar	D	D	D	N	N		Bar will not be mandatory wherever bar licence is prohibited as per local law. Wherever bar is allowed as per local law, the hotel will have to first obtain bar license before applying to the Ministry of Tourism for Classification of the hotel. Liquor shops/ liquor stores will not be considered while granting classification under 'with alcohol' category.
KITCHEN / FOOD PRODUCTION AREA							
Refrigerator with deep freezer	N	N	N	N	N		Capacity based on quantum of F&B Operations.
Segregated storage of meat, fish and vegetables	N	N	N	N	N		Meat, fish and vegetables to be kept in separate freezers
Tiled walls, non slip floors	N	N	N	N	N		
Colour coded synthetic chopping boards	N	N	N	N	N		Wooden chopping boards
Head covering for production staff	N	N	N	N	N		
Daily germicidal cleaning of floors	N	N	N	N	N		
Good quality cooking vessels / utensils	N	N	N	N	N		Use of aluminum vessels is prohibited except for bakery
All food grade equipment containers.	N	N	N	N	N		
Drinking water	N	N	N	N	N		Water treated with UV+ filtration
Ventilation system	N	N	N	N	N		
Garbage to be segregated – wet and dry	N	N	N	N	N		To encourage recycling
Wet garbage area to be air-conditioned.	D	D	N	N	N		
Receiving areas and stores distinct from garbage area.	N	N	N	N	N		Should have sink with table surface, weighing machine

							quality control and pre wash area.
Six monthly medical check ups for production staff	N	N	N	N	N		Records to be submitted along with pathological records to HRACC during inspection of the hotel
First aid training for all kitchen staff	N	N	N	N	N		
Pest control	N	N	N	N	N		Record to be shown to the HRACC during inspection of the hotel
STAFF							
Staff uniforms for front of the house.	N	N	N	N	N		Uniforms to be clean and in good condition.
English speaking front office staff	D	D	N	N	N		This may be relaxed outside the metros / sub-metros for 1 Star and 2 Star category hotels.
Percentage of Supervisory staff	20%	20%	40%	40%	80%		Hotels of 4 Star category and above should have qualified Heads of Departments. The supervisory or the skilled staff may have training or skill certification as follows: Degree / Diploma from Central or Star IHMs/ FCIs or from NCHMCT affiliated IHMs or from other reputed Hospitality Schools.
Percentage of skilled staff	20%	20%	30%	30%	60%		The supervisory or the skilled staff may have t raining or skill certification as follows: Degree / Diploma from Central or Star IHMs/ FCIs or from NCHMCT affiliated IHMs or from other reputed Hospitality Schools. Skill training certificate issued under the guidelines and scheme of the Ministry of Tourism
STAFF WELFARE FACILITIES							
Staff Rest Rooms	D	D	N	N	N		Separate for male and female employees, with bunk beds. Rooms should be well lighted and ventilated
Staff locker Rooms	D	D	N	N	N		
Toilet facilities	N	N	N	N	N		Full length mirror, hand dryer with liquid soap dispenser
Separate Dining area & Facility	D	D	N	N	N		

CODE OF CONDUCT FOR SAFE & HONOURABLE TOURISM							
Display of pledge	N	N	N	N	N		Pledge to be displayed prominently in the staff/ back areas / office premises of all the Heads of Departments (HODs)
Training for 'Code of Conduct for safe & Honourable Tourism'	N	N	N	N	N		At time of Joining (orientation programme and subsequent in – house training)
Maintenance of Action Taken Report with regards to compliance of the provisions of the Code.	N	N	N	N	N		Signatories of the 'Code of Conduct' to maintain record of action taken in compliance of the provisions of the code.
Focal points / Nodal officers	N	N	N	N	N		Two nodal officers to be nominated (from HRD and Security side etc.) for hotel with more than 25 personnel and one focal point for hotel with less than 25 personnel.
GUEST SERVICES							
Provision for wheelchair for the differently abled guest	N	N	N	N	N		Wheel chair to be made available on complimentary basis in hotels of all categories.
Valet (parking) services to be available	D	D	N	N	N		
Dry cleaning / laundry	D	D	D	N	N		In house for 5 Star Deluxe hotels. For 5 Star category and below, may be outsourced.
Tea / coffee making facility in the room	D	D	D	N	N		Tea / coffee making facilities in the room to be made available on complimentary basis in all 4 Star, 5 Star and 5 Star Deluxe hotels.
Iron and Iron Board facility	N	N	N	N	N		Each hotel up to the level of 4 star to have a number of irons and ironing board equal to 20% of the number of lettable rooms, to be provided to a resident guest on request. 5 star and 5 star deluxe hotels to have iron and ironing board in every lettable room.
Paid transportation on call	D	D	N	N	N		Guest should be able to travel from hotel
Shoe cleaning shoe horn & slippers	D	D	D	N	N		Free facility to be provided for in house guest
Ice (from drinking water) on demand	D	D	N	N	N		Complimentary on request
Acceptance of common credit cards and facility/ infrastructure for accepting/ making payments by digital transactions	N	N	N	N	N		
Assistance with luggage on request	N	N	N	N	N		

A public telephone on premises. Unit charges made known	D	D	N	N	N		There should be at least one telephone no higher than 24" from floor level in 5 and 5 Star Deluxe (to also cater to differently abled guest)
Wake – up call service on request	N	N	N	N	N		
Messages for guests to be recorded and delivered	N	N	N	N	N		A prominently displayed message board will suffice for 1 & 2 Star Categories
Name address and telephone number of doctors with front desk	N	N	N	N	N		Doctor on call in 3,4,5 & 5 Star Deluxe
Stamps and mailing facilities	D	D	D	D	D		
Newspapers available	D	D	D	N	N		This may be placed in the lounge for 1,2,& 3 Star hotels
Access to travel desk facilities	N	N	N	N	N		This need not be on the premise for 1,2&3 Star categories
Left luggage facilities	D	D	N	N	N		This must be in a well secured room / 24 hours manned area. All 4 Star, 5 Star and 5 Star Deluxe hotels shall provide luggage racks, portable or fixed, for two large suitcases. This will be stated on the hotel's website under the head 'Facilities and Amenities provided on complimentary basis' and mentioned to guest while checking in.
Provision for emergency supplies toiletries / first aid kit	D	D	N	N	N		
Health – Fitness and Barber's Shop	D	D	D	D	N		Indian system of treatments should preferably be offered
Beauty Salon and Barber's Shop	D	D	D	D	D		
Florist	D	D	D	D	D		
Utility shop / kiosk	D	D	D	D	D		The presence of a utility kiosk / shop will not be a mandatory condition for classification under 1 to 5 Star Deluxe categories. NO separate book shop shall be necessary.
Money changing facilities	D	D	D	D	D		Money changing facility to be made available.
SAFETY & SECURITY							
Metal detectors (door frame or hand held)	D	D	N	N	N		
CCTV at strategic location	N	N	N	N	N		

X-Ray Machine	D	D	D	D	N		For 5 Star Deluxe category, it would be 'Necessary' to have an x-ray machine at the guest entrance for screening of baggage Manual check may be conducted for staff and suppliers at designated entry points.
Under belly scanners to screen vehicles.	D	D	D	N	N		
Verification	N	N	N	N	N		All hotels should conduct antecedent verification of their staff and suppliers by the Police / private security.
Staff trained in firefighting Drill	N	N	N	N	N		All hotels to conduct periodic fire drills and maintain 'Manuals' for disaster management, First Aid and Fire Safety
Security arrangements for all hotels entrances.	N	N	N	N	N		
Each bedroom door to be fitted with lock and key, viewport / peephole & internal securing device.	D	D	N	N	N		A safety chain / wishbone latch is acceptable in place of viewport / peephole.
Smoke Detectors	N	N	N	N	N		These can be battery operated.
Fire and Emergency alarms should have visual & audible signals.	N	N	N	N	N		
First aid kit with over the counter medicines at the front desk	N	N	N	N	N		
Fire Exit Signs on guest floors with emergency / backup power.	N	N	N	N	N		
COMMUNICATION FACILITIES							
Telephone facility within arm's reach of the toilet seat	D	D	D	N	N		
Provide at least two multi – purpose sockets	N	N	N	N	N		All Star hotels shall provide at least two multi-purpose sockets capable of handling US, European Community and Japanese plugs at or just above the table level. It should be possible for guest to charge a laptop and cell phone simultaneously. This condition shall be applicable to all new hotels that will start operating from 01.04.2016. For the hotels which have come into operation before 31.03.2016 this parameter will be applicable from 01.04.2022. However, till such time as this facility is

							provided on a permanent basis, it will be mandatory for all Star hotels to provide multi-socket adapter plugs on request.
A telephone for incoming & outgoing calls in the room	D	N	N	N	N		4 star and above should have direct dialing and STD / ISD facilities. 1,2 and 3 Star category hotels may go through a telephone exchange.
PC available for guest use with internet access	D	D	N	N	N		This can be a paid service. Upto 3 Star, PC can be in the executive offices, Internet subject to local access being available.
E-mail service	D	D	N	N	N		Subject to local internet access being available.
Fax, photocopy and printing Services.	N	N	N	N	N		
In room Internet / wi-fi connection	D	D	D	N	N		Subject to local internet access being available. Wi-Fi wherever possible.
Business Centre	D	D	D	N	N		This should be a dedicated area. (This provision may be relaxed for resort destinations, tourist and pilgrimage centers).
Swimming Pool	D	D	D	D	N		This can be relaxed for hill destinations. Mandatory to have trained Life Guard, Board containing Do's and Don'ts, No Diving sign, pool depth etc. should be displayed at a strategic location in the pool area. All 4 Star, 5 Star and 5 Star Deluxe hotels shall provide a luminous LED wall clock with numerals of three inches or more on display near their swimming pools
Parking Facilities	D	D	N	N	N		Should be adequate in relation to the number of rooms & banquet / convention hall capacity. Exclusively earmarked accessible parking nearest to the entrance for differently abled guest.
Conference Facilities.	D	D	D	D	N		
ECO FRIENDLY PRACTICES							
Sewage Treatment Plant	N	N	N	N	N		A Sewage Treatment Plant will not be a mandatory condition for hotels which have obtained completion certificate for construction before 01.04.2012.

Rain Water Harvesting	N	N	N	N	N		
Waste management	N	N	N	N	N		
Pollution control methods for air, water and light	N	N	N	N	N		
Introduction of non CFC equipment for refrigeration and air conditioning and other Eco-friendly measures / initiatives.	N	N	N	N	N		
Checklist of Services and Facilities (Annexure III) **D** Desirable **N** Necessary There is no relaxation in the **'Necessary'** criteria of the Checklist of Services and Facilities (Annexure II), except as specified in the comments column of said checklist.							

GUIDELINES FOR SECURITY MEASURES IN HOTELS:

EXTERNAL ACCESS OF CONTROL:

I. LIMITING ACCESS POINTS

The number of access points needs to be reduced to a minimum of two or three and entry of persons regulated and monitored through CCTV cameras placed at such points.

II. PERIMETER SECURITY SYSTEM

A three-tier security system should be put in place-

(a) At the perimeter, on the outside of the hotel itself, cars must be stopped, boots checked and mirrors put under the car chassis to detect explosives.

(b) Vehicles driving up to the hotel door should be discouraged. Vehicles should not be allowed to go right up to the door. Guests must alight at some distance away and walk-up.

(c) There should be closed circuit TVs installed in all public areas of the hotel, especially at the alighting point and entrance door for scanning people coming into the hotel.

III. ROAD BARRIERS

Premium hotels could consider installing devices like hydraulically operated road barriers or retractable bollards that can stop vehicles coming at high speed. Short humps can be raised from ground level to slow down/stop vehicles.

IV. SHRUBS AND VINES

Heavy shrubs and vines should preferably be kept away from the hotel building and trimmed close to the ground to reduce their potential to conceal criminals or bombs.

V. PATROLLING

Increasing the number of Security Guards and stepping up patrolling can be an effective deterrent to criminals.

VI. MATERIAL ACCESS CONTROL:

GUEST BAGGAGE CHECK

(a) Baggage should be taken to a drop point, away from the lobby and passed through baggage scanners which can detect the shape and density of the objects with a high degree of clarity

(b) Handheld bags must be checked at the entry point.

·VII. PEOPLE ACCESS CONTROL:

I. WALK-IN GUESTS

Hotels should not entertain Walk-in guests' (without reference or pre-bookings)

II. GUEST PROFILING

Hotels should put in place a computer linked guest profiling system to zero in on persons of suspicious antecedents whose names figure in the Ministry of Home Affairs' Watch List. The information would include details such as full name of the guest, date of birth; nationality, sex; passport number, country issuing the passport; country of residence; visa number, date and place of issue.

III. EMPLOYEE VERIFICATION

Internal security must be ensured through background checks and antecedent verification of employees and service providers. Temporary staff should be hired from reputed contractors who maintain up-to-date database.

IV. VISITOR MANAGEMENT SYSTEM

A visitor management system is essential. All visitors must be given a 'Visitor Pass'.

VIII. INTERNAL ACCESS CONTROL:

I. Within the hotel there should be restriction on access to different parts of the hotel.

II. Access of staff to various departments in the hotel can also be regulated through proximity cards with magnetic inter locks.

III. Entrances to areas such as Boiler Rooms, Mal Rooms, Computer Rooms, Switch Boards and Control Rooms should remain locked when not in use.

IV It is also necessary to establish a procedure for the accountability of their keys.

V LIFT USAGE

(a) The practice of people entering the lobby and taking the lift to any floor must be stopped.

(b) Lifts should be programmed so that Guests staying in hotels are able to go only to the guest floor they are on by swiping their room card in the lift and it should only let them get out on the guest floor they are on.

·OTHER SECURITY MEASURES:

I. ROOM KEY SCANNERS

The US Department of Energy, through its Oak Ridge National Labs, has developed Mass Spectrometry Scanners which can analyze up to 1000 guest room access cards per hour. These can detect even a billionth of a gram of explosives such as Nitroglycerine or TNT. Even if a tinge of explosive has been touched by the guest it would alert the staff immediately and information flashed to security agencies.

II. SNIFEX

Snifex is a small handheld device with an ariel. The ariel starts V pointing to the direction where explosive is kept from a distance of a few meters.

III. TRASH MANAGEMENT

An explosive device can easily be hidden in the trash. Trash cans need to be managed by trustworthy personnel

· CRISIS MANAGEMENT PLAN

I. Hotels must have a plan of action ready in case of an emergency Staff should be trained by mock drills in evacuations to help people in terror situations.

II. Hotels need to build strong in-house systems to prevent or deal with a crisis; train and motivate staff to respond to an emergency and evacuate guests if there is shooting or a bomb goes off. There should be a designated nodal executive in-charge of the crisis management team.

III. During crisis, calls start pouring from all over the world for news of the welfare and safety of guests and from the media persons who file reports on TV channels and in newspapers. There should be a nodal point and a designated person for information dissemination and to respond to al enquiries during a crisis.

2.4 TIME SAVER STANDARDS (BUILDING TYPES)- HOTEL:

- It must be borne in mind that, as far as planned circulation is concerned, there must never be a mingling of the front-of-the-house services with those of the back of the house.
- The two functions must be kept separate and yet so interrelated that both functions smoothly and efficiently.
- The physical environment becomes an important part of the guest's creature comfort. These factors include color and decor, lighting, proper air temperature, comfortable furnishings and, above all, a pleasant and relaxed atmosphere.
- This involves the economics of a new hotel, which will center upon the cost of construction and furnishing. These costs represent, together with the cost of the land, the amount of money that is to be invested.

1. BACK OF THE HOUSE:

- Though rarely seen by a guest, the back of the house is the most crucial part of the plan. It must be laid out with two paramount objectives: control and efficiency. Foodstuffs, housekeeping supplies, and a great many other items must be received out of sight of the hotel guests. Such receiving is usually done at a loading dock, which should be covered so that deliveries can be made regardless of the weather.
- This is usually the function of a receiving department that should be located directly on or adjacent to the loading dock. Tight control must be exercised in two directions. In one direction, it is not uncommon for material to be delivered and, within a short time of its having been left on the dock unchecked, for the management to find that this material has disappeared or that some parts of the shipment have gone astray. The second part of the control is to make sure that, once these shipments have arrived, they go directly to their destination without a chance- of becoming lost on the way.
- A good back-of the- house plan will be worked out in such a way that the flow of supplies is tightly controlled by the security that the architect works into his plan
- Tight, well-planned back of the house will have circulation patterns that will provide the utmost in control.
- In the larger hotels, garbage destructors or compressors may be used, in which case tight surveillance is necessary only in the garbage receiving area. Where garbage is shipped out, it is wise to have the garbage rooms so placed (and, incidentally, refrigerated) that the receiving office has this space in full view.
- A tight control at the point of entry and egress of all employees is highly desirable and can easily be accomplished if it is the same point as that at which food and other hotel supplies are brought in. Once again, the architect's careful planning will make it possible for employees to reach their various dressing and locker areas with a minimum of travel time lost. It must be borne in mind that there is class distinction in hotels and, as an example, that dishwashers and porters are not placed in the same locker rooms as head waiters and reception clerks.

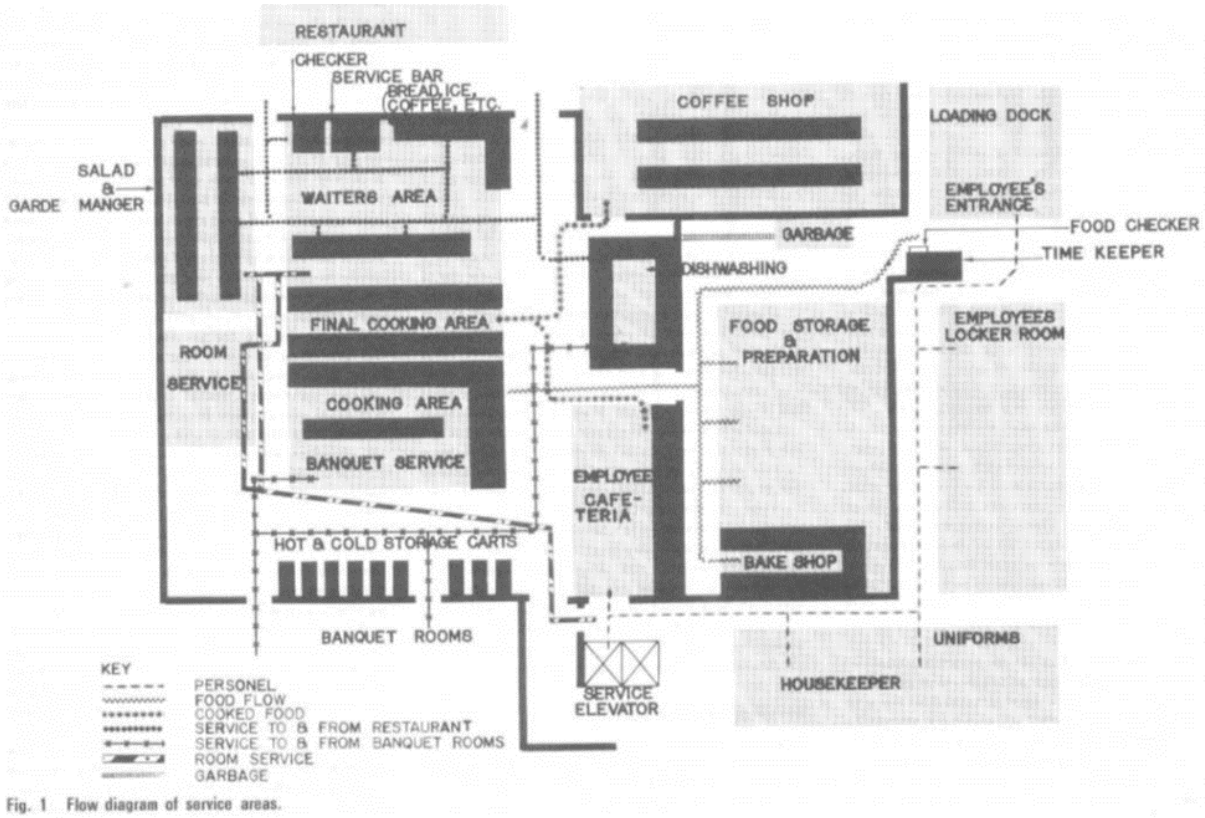


Figure 5. Flow diagram of service areas

- Locker rooms should be provided with ample toilet facilities and showers. Once the personnel have changed into their uniforms, the plan of the back of the house will make it possible for the people to get to their work stations with little time lost.
- Uniform issue is related to the housekeeper, the housekeeper to the laundry room, and the laundry room to the soiled linen room. The soiled linen room connects by vertical linen chute to the service room on every typical floor, and every typical floor is connected by a service elevator that opens to the lower-floor service area convenient to the scrutinizing gaze of the steward and the timekeeper. For convenience, a trash chute (Fig. 2), going from every typical floor service area, should be located next to the linen chute.

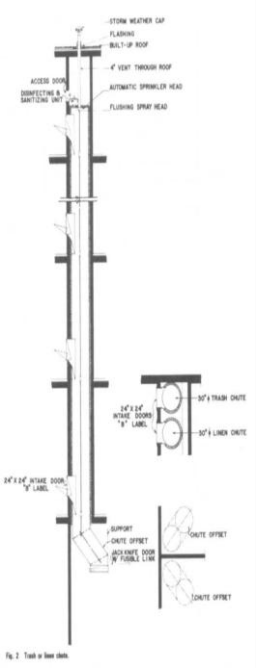


Figure 6. Trash or linen chute

2. LAUNDARY FACILITIES:

A laundry is a usual adjunct of most good-sized hotels.

A hotel laundry that does its own uniforms and flatwork (sheets, pillowcases, linens, etc.) requires a good-sized space for washers, dryers, drum ironers, and various pressing machines-each suitable for its own type of flatwork, uniforms and guests' laundry, and men's and women's wearing apparel.

Larger hotels will maintain their own cleaning department for dry cleaning and pressing of woolens and similar garments. Such a cleaning and valet service is usually a part of or close to the laundry area, and it is definitely under the supervision of the laundry manager.

3. HOUSEKEEPING DEPARTMENT:

- The housekeeping department, having several functions, is the province of the chief housekeeper, who will usually have assistant floor housekeepers. Under the housekeeper's strict control and supervision will be all the maids and porters
- The porters will deliver to the service areas on the guest-room floors all linen and soap as well as facial tissue, toilet paper, matches, room service menus, and ashtrays.
- The housekeeper's area is also a storage area, for here are kept all the supplies that become a part of housekeeping.

- It might be useful for the architect to know how many rooms a maid can make up during her daily tour
- It rarely goes beyond 15. One porter is usually assigned to each maid. In addition to the regular daytime maid, there will be, in most hotels, a night maid who will make up beds for guests ready to go to sleep.

4. FOOD AND BEVERAGE SERVICES:

- The flow of the raw food from the time it is delivered to the steward until it is finally cooked and ready to be picked up by the waiters or the waitresses.
- After the comestibles have been weighed in, checked, and signed for, they are sent to either dry storage or liquor storage (a room with a big lock on it) or to one of the various cold holding rooms or boxes. Canned food and other bottled or packaged food which does not need refrigeration will be sent to dry-storage rooms. In this storage space will also be kept the various condiments that the chef will need in the preparation of his food. Vegetables will be sent to an area where they will be stored ready for preparation. A refrigerator box of the proper temperature will be needed, as well as work space, sinks, and cutting boards where vegetables will be prepared for the chefs as needed. Vegetable preparation area is needed.
- Dairy products will go to their own cold-storage boxes. Fish, fowl, and meat will go to a separate area
- Freezer, refrigerator, and cold storage boxes require heavy insulation. Slab sinkage in these areas should be provided for.
- The bakery shop should be a separate entity, having its own refrigerator boxes as well as all the pertinent equipment that a baker will use in his art---and an art it is, indeed.
- Here again, one should be reminded that the bakery should be close to the actual food service area so that not too many of these goodies find their way into the locker rooms or out of the hotel entirely.

KITCHEN- The food from the prep area is brought to the various points where it is to be used. One of the first areas to which a good part of the prepared food will go is the rough cooking area. Here we find the big soup kettles, the vegetable steamers, the ovens, and the hot tops where most of the bulk foods will be prepared.

Pot washing area close to the rough or preliminary food cooking area. Rough cooking is usually backed up to the finished cooking area.

Between the chefs' ovens, broilers, and fry- errs, which are aligned in a straight line, there will be an aisle for the chefs. On the other side of this aisle will be the serving tables from which the waiters will pick up the finished food. At the bottom of these tables will be plate. warmers which the waiter picks up and sets on the table so the chef can place the order of the specific dish that is required.

This entire area is for self-service by the waiters, who will pick up the items they need on their way to the guest waiting for the delivery of his food.

DINING ROOM- The dishwasher is usually placed close to the Dining room area so that the dishes can be disposed of as soon as the waiter or busboy enters the kitchen. The dishwashing area is, of necessity, not only noisy but also a rather untidy operation, SO it must be kept fairly isolated from the actual cooking and serving area.

- Then, before entering tire. dining room, Ire will usually go by a checker's desk where he presents a check indicating the items that he is taking out of the kitchen to the diner.

One other space will usually occur in our ideal kitchen--a service bar with a bartender who will prepare tire drinks that the waiter has ordered.

There will be a chef's office, which is set where the chef can observe all the activities in tire kitchen. His office is usually enclosed with glass to give him aural privacy but complete visual control. Here the chef will prepare and plan menus.

Room-service area- Here there must be sufficient space for a fairly large number of room service rolling tables, which are set and ready to carry the dishes that have been ordered by the guest via telephone.

The room-service area is always close to tire cooking and garde manger area.

The room service area should, of necessity, be as close to the service elevators as possible.

COOKING AREA- The cooking area, consisting mainly of griddles, will be manned by short-order chefs who are ready to prepare various hot breakfast dishes, and the garde manger section will be manned by a crew who are expert in the preparation of breakfast menus.

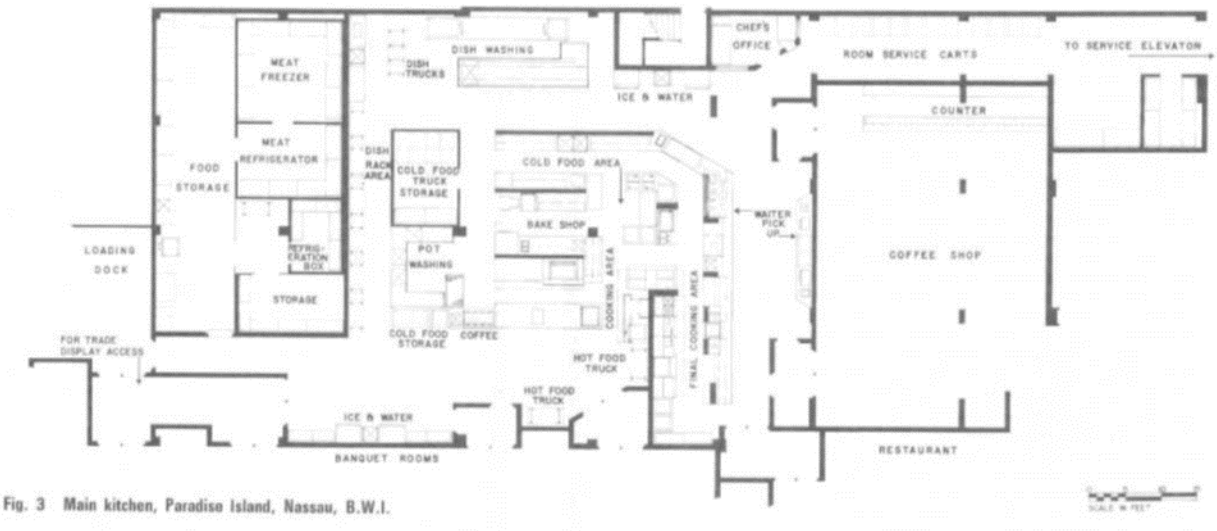


Fig. 3 Main kitchen, Paradise Island, Nassau, B.W.I.

Figure 7. Main Kitchen ,paradise island, nassau, BWI

BANQUET HALLS- In the banquet area there will be mobile cabinets that take trays. These are electrified cabinets arranged to keep dishes either hot or cold. Those banquet cabinets can be stocked before a banquet for certain types of manes.

A large banquet area in a hotel will require a separate banquet kitchen with its own cooking facilities as well as its own dishwashing area.

One last observation: it is an excellent idea to have toilets and washrooms for kitchen help, so that it isn't necessary for them to return to their locker rooms, which may be at some distance. It is always advisable to keep the kitchen help within the kitchen during their stint of duty. Doors to dining rooms, and there may be several dining rooms serviced by the one kitchen, should be strategically placed and baffled so that the diners do not have a view of what goes on in the kitchen, and, what is more important, do not hear what is going on.

The ideal plan would be to place the coffee shop backed up to the kitchen, so that certain finished dishes and prepared foods can be delivered to the coffee shop work area directly from the main kitchen under complete control and it passes from prep areas to kitchen to coffee shop.

At the counter we will usually find a pickup area where the waiters can pick up the food prepared for them without disturbing the diners who are sitting at counters. Dirty dishes will be sent back to the dishwashing area through a pass-through, or they will be carried to the dishwashing area in the main kitchen.

Employees' cafeteria- This space is usually planned to be close to the help's locker rooms and yet contiguous to the main kitchen.

Beverage service area- This may be a bar room or a cocktail lounge. In any case, there will be a bar with stools (if local codes permit) and an area for cocktail tables and chairs. A cocktail lounge must be serviced just as the kitchen is serviced. To the bar must be brought not only liquor and bottled goods but also the usual crunchies.

Ideally, the delivery should be made directly to the back bar through pass-throughs from the kitchen, so that we find once again another unit backed up to the ideal kitchen.

5. MECHANICAL SPACES:

Another area that should be considered in designing the back-of-the-house spaces will be the boiler or mechanical room. In this area will be found the various pieces of equipment for heating and cooling as well as all the tanks and pumps to keep all the mechanical systems in operation.

In this area will also be found all central switch gear that controls electric current for every purpose in the hotel complex. This domain belongs to the house engineer and, naturally, there should be provision for an engineer's office, with a mechanical repair shop close by.

These would include a carpentry shop, an upholstery shop, and definitely an area for a locksmith. Somewhere in the area, where they are easily accessible, will be storage rooms in which will be kept a multitude of spare parts to service the hotel. be occupied by personnel that very often come in contact with the guests, and the strategic location of these back-of-the-house facilities will be controlled entirely by what happens in the front of the house.

Included in these areas you will find accounting and bookkeeping offices (which back up the front cashiers); reservations offices (which back up to the front registration desk); and offices for management, which will include a reception area, a manager's office, and an assistant manager's office.

There is also a mail sorting room.

6. FRONT OF THE HOUSE:

The guest or the paying customer sees only the front of the house, and this must be all that he desires.

The front of the house comprises every area that the guest will see; lobbies, dining spaces, rest rooms, passenger elevators, corridors, hotel rooms, etc. These spaces must be handled and planned with one thought in mind: the convenience and continued approbation of the guests.

The registration desk and the elevators should and must be immediately apparent. The registration area consists of a front desk, behind which is a registration clerk, behind whom is the key and mail rack, and behind that the various administration spaces.

7. GUEST REGISTRATION:

A hotel registration desk must be located so that it is immediately visible as one enters the hotel lobby. The size of the desk will be determined by the size of the hotel.

2,000 rooms might have anywhere from four to six registration clerks, while a hotel of 100 to 200 rooms will have one or at roost two spaces at which guests may register.

The simplest arrangement will call for a suitable file containing advance reservation cards requesting space, so that the clerk can quickly check what room has been reserved for what particular guest.

Advance registration counter

8. MAIL AND KEYS:

There are two other services that the front or registration desk must perform. The first and obvious one is to serve as the place where the room keys are kept.

If the registration clerk handles the key, then obviously the key rack is directly behind the desk, easily accessible to the registration clerk. If the hotel is large enough to require separate area and separate personnel for handling of keys, this function will usually be alongside the actual registration desk.

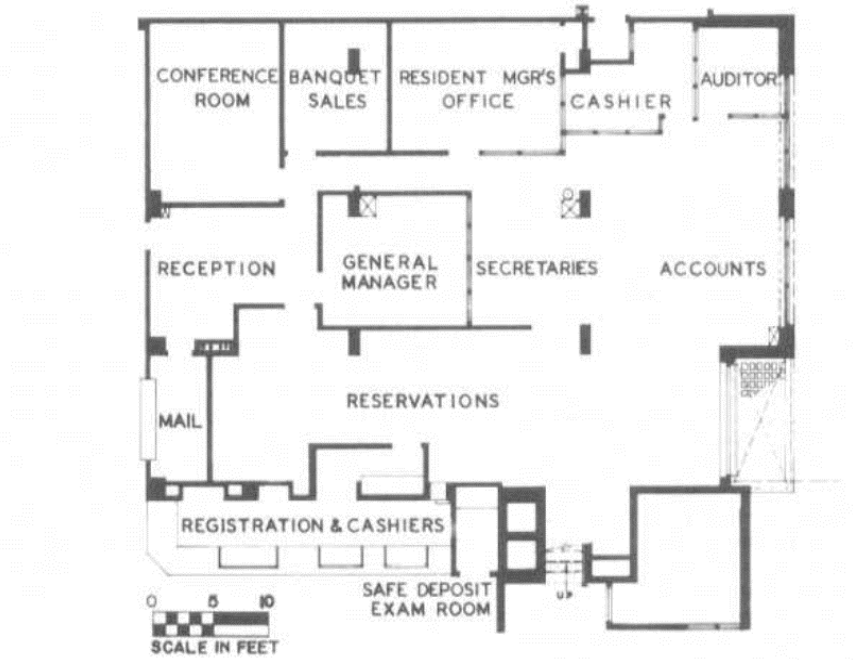


Fig. 4 The Churchill Hotel, London.

Figure 8. Front of house

9. CASHIOR:

The average hotel usually has the cashier's counter located adjacent to the registration desk.

The larger hotels may place cashiers in the so-called "front desk" area but somewhat remote from the actual registration desk. There are times in large hotels, especially those catering to conventions, where one convention is checking out while another is checking in. This will make for traffic congestion and some confusion. Such a situation can be avoided by planning the registration and cashier facilities so that lines forming in front of the registration desk do not conflict with lines forming at the cashier's counter.

Larger hotels will have a complete bookkeeping department. This will require more than just the actual cashiers, who remain at their stations, while the bookkeeping department handles all entries and bookkeeping for the guests. It is obvious that this bookkeeping department should be close to if not backed up to tire front desk cashiers, so that any questions of charges can be quickly checked and adjusted by the cashier, who will contact the bookkeeping department for clarification or corrections in the guests' bills.

Therefore, a small closed room is normally provided. The guest enters this room and gives the valuables to the cashier through a pass-through window. This pass-through window should have a view of the vault or the safe so that the guest can watch his valuables being deposited properly.

In large hotels, where there are a number of restaurants and other facilities which entail cash payment, special arrangements should be made for the handling of this cash and, in some instances, safety deposit boxes or vaults are provided so that the money can be stored when it is brought to the cashier space at off hours.

10. ADMINISTRATIVE AREA:

The administration of a hotel operation depends entirely upon its size.

A larger, medium-sized hotel will have a manager and an assistant manager and, as a rule, there will be e reception office where one or two typist receptionists will be acting as a buffer between the public and the manager.

Aside from the manager and the assistant manager, there may be an office for a food and beverage manager and a banquet manager. A larger hotel, with sizable convention facilities, will also have an office for the convention manager and his assistants.

11. RESTAURANT FACILITIES:

Under normal situations there will be a cocktail lounge or beverage bar even in the smallest dining facility. The larger hotel will have a pleasant coffee shop for quick service and for simpler meals, whereas a restaurant, with its appropriate decor for more leisurely dining, will offer a more varied menu with probably higher cost per meal than in the coffee shop. The cocktail lounge will usually be found close to the dining room so that hotel guests can pause for a cocktail before lunch or dinner, or while waiting, before going to the dining room", to meet friends or other guests. Where convention facilities are offered within a hotel, it is wise to have a bar placed close to the convention facilities.

Large convention and banquet facilities usually provide a fixed or portable bar arrangement in the pre-assembly or foyer areas to take care of pauses between meetings and seminars and to fill those pauses with a facility that will provide a "pause that refresh." There is no special requirement for the design of hotel restaurants, bars, cocktail lounges, and coffee shops which are in any way different from the standard requirements for any such facility.

Wherever a rooftop restaurant is created, the architect must bear in mind that there will be increased traffic in the elevators taking diners from both in and outside the hotel to this specialized rooftop facility. And don't forget that, because of public assembly requirements, the stairs must be sized larger. Supper clubs or nightclubs will also be found in the larger hotels with this type of dining and entertainment area along with orchestra dressing rooms.

12. LOBBIES:

Every hotel, regardless of its size, must have a public lobby. The size of the lobby is largely determined by the number of guest rooms as well as by the type of hotel that is on the architect's drawing boards.

Furnishings, color, finishing materials, lighting, and decor must create the proper ambience regardless of whether the hotel is large or small, in a city or a resort, moderately priced or expensive.

13. ELEVATORS:

Except for one- and two-story motels, every hotel and motel will use elevators to take guests from the point at which they have checked in up to the floor where the guest's room is located. Elevators should be located so that they are immediately visible, either from the entrance of the hotel or from the check-in or registration area. Another consideration in the planning of elevators is that of their location on the guest-room floors. It is advisable to place them centrally so that the distance walked by a guest in any direction is reduced to a minimum.

The number, size, and speed of the required elevators is best determined by the elevator companies themselves.

Service elevators are separate and apart.

Each bank of elevators should be strategically located to best service the front of the house (guests) or the back of the house.

The bell captain's station should be located so there is a commanding view of the hotel entrance, the registration desk, the cashier, and the elevators.

Somewhere in the lobby there should be a rather large storage spare for luggage which may be left by guests after checking out but prior to departing.

14. GUEST FLOOR CORRIDORS:

It is wise to remember that no guest-room doors should be placed opposite the elevators. Guests coming or going late at night, coming out or getting into the elevators, may talk loudly or may be too noisy, in which case they would be disturbing guests whose doors open off this area. The foyer should be further demarked from the guest-room corridor by its decor and lighting.

One of these appurtenances would be a small bench or some type of seat for guests who may want to wait in the foyer for the elevator or who may be waiting to meet someone else on the floor. It is also a thoughtful gesture to have a full-length mirror in this area; men as well as women guests appreciate the chance to have a look at themselves before descending to the main lobby floor. There should obviously be a good-sized ash receiver for cigarettes, cigars, and other trash nuisances that the guest may want to get rid of before getting into the elevator.

Good practice indicates that a corridor should, if at all possible, not be over 100 ft in length.

There is very little choice in the width of a corridor. Normally, 6 ft is considered an adequate width, although some hotels have made do with only 5 ft.

Another expedient, which may be used either in a narrow corridor (under 6 ft) or a standard-width corridor, would be the device of recessing the bedroom or guest-room doors. Setting doors back from the corridor wall 1 ft or even as much as 2 ft gives an apparent width to the corridor and, what is more important, it gives each room entrance its own sense of privacy and individuality.

A flush panel door is the least expensive but also the least desirable type of door for a guest room. If only a flush door is used, strong color might be helpful,

The lower portion of the wall, therefore, might well be designed as a dado made of a bruise- and shock-resistant material or merely marked off with a contrasting color or wall covering.

15. GUEST ROOMS:

The length and width are determined by the amount of furniture that is to go into the room and by the degree of luxury that the hotel operator wishes to achieve.

The most common room in the hotel field today is the twin-bedded room. Then we have the possibility of a single occupancy room, and, lastly, studio rooms or suites.

The next consideration is the size of the beds themselves. There are single beds which are 3 ft 6 in. wide, a full-sized bed which is 4 ft 6 in., a queen-sized bed which is 5 ft wide, end a king-sized bed which is 6 ft wide. Presently, all beds are still being made in a 6-ft 6-in. length dimension.

If at all possible, there should be a3-ft aisle and, if no furniture is placed opposite the bed (a very unlikely arrangement), then the width of the room would be a minimum of 10 ft 6 in.

Where furniture will be placed on the wall opposite the bed, such furniture will most likely consist of a dresser or cupboard with drawers. Such a piece of furniture requires a minimum of 18 in. in width and most likely an optimum width of 24 in.

The most common arrangement found in most hotels consists of two comfortable armchairs with a cocktail table between them. A comfortable chair will require a depth of least 30 in. and another 30 in. of leg space in front of it, which means that we need at least 5 ft from the wall before we encounter the first piece of furniture, which will probably be a bed.

In talking of lighting, we must bear in mind that we want not only a lamp or a ceiling fixture over the sitting area but also adequate reading lights for the beds. The most often used arrangement is a twin-headed lamp sitting on the night table between the two beds.

Another piece of fixed furniture that is desirable is a luggage stand.

This could be a straight-backed chair or a stool placed in front of the writing-makeup table.

Between a pair of twin beds, the ubiquitous nightstand with its small storage space below is standard.

SUITES: Another popular arrangement in hotels is that of the so-called "studio room." Dual sleep pieces have been developed which are comfortable sofas during the day and perfectly comfortable beds at night.

The purpose of a studio arrangement is to enable the guest to use his room as a true sitting room.

Another reason for having these studio rooms is that they may double as sitting rooms for suites by having one room, which is a normal bedroom or guest room, adjoin another room which is furnished as a studio room. Thus, the hotel can provide a two-room suite (obviously, connecting doors must be provided between these two accommodations).

Every hotel should have arrangements for suites of a permanent nature as opposed to a combination of a studio room with a typical guest room. Suites will be furnished like fine sitting rooms. They are used not only by the affluent traveler because he can afford it but also by travelers who do a good deal of entertaining, especially business travelers who entertain clients and customers on their arrival in any given city.

These suites are also often used by two couples or by a large family, in which case the sitting room of the suite may be used for sleeping at night. In this case, dual sleep pieces will be required, but they will usually be the type that is referred to as a "davenport," or the type of sofa which opens out to become a comfortable double bed (never as comfortable as a true bed). These suites should have a good-sized dining table with a sufficient number of chairs, provision for an adequate desk (since some business may be carried on in that room), a sufficient number of comfortable lounge chairs, and an accessory table.

It is a good practice to arrange the sitting room of a suite so that it connects with at least two bedrooms and, if at all possible, three and sometimes even four bedrooms.

Suites will usually be found in the corner of a building, which makes it possible for the planner to join up several bedrooms.

+ There are times when suites are not used, and the hotel should be able to rent each of the rooms in the suite separately.

A foyer which connects the bedrooms and the sitting area makes this separate keying of rooms possible.

- A complete bathroom should be planned for each of the sitting rooms of a suite to make it possible to rent the rooms out singly.

- Since this room will be used for entertaining (either business or private), a bar with water connection becomes a pleasant adjunct.
- Obviously, these rooms will be placed on the lowest floors so they can be close to the public spaces for the convenience of those who are going to use them for meetings or seminars in connection with a larger convention or meeting taking place in the hotel.

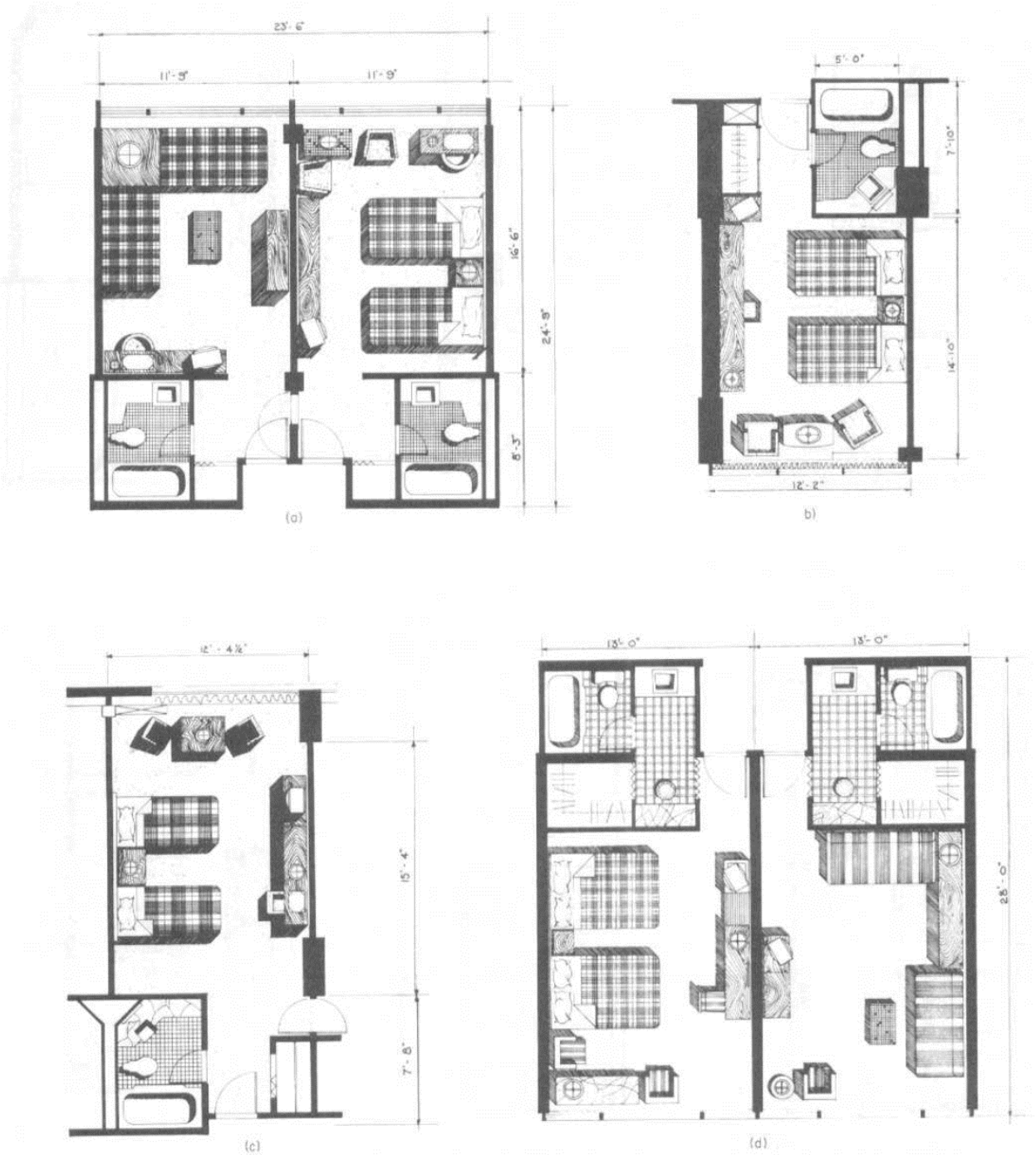


Fig. 5 (a) Uris Brothers Hotel, New York. (b) Americana Hotel, New York, typical tower room. (c) Loews N.Y. Motel, typical room. (d) Causeway Inn, Tampa, Florida.

Figure 9. Room layouts

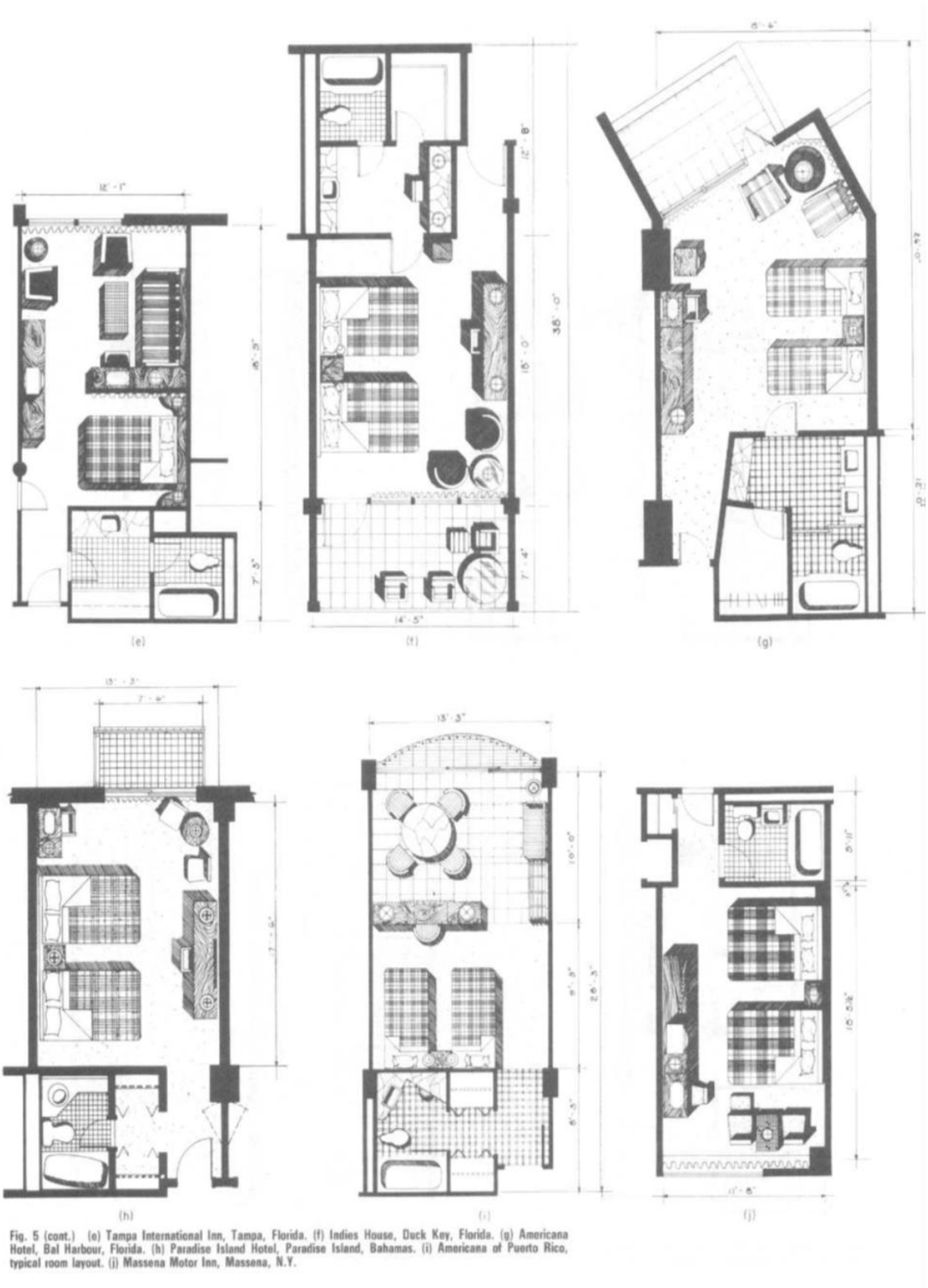


Fig. 5 (cont.) (e) Tampa International Inn, Tampa, Florida. (f) Indies House, Duck Key, Florida. (g) Americana Hotel, Bal Harbour, Florida. (h) Paradise Island Hotel, Paradise Island, Bahamas. (i) Americana of Puerto Rico, typical room layout. (j) Massena Motor Inn, Massena, N.Y.

Figure 10. Room Layouts



Fig. 5 (cont.) (k) Chicopee Motor Inn, Chicopee, Massachusetts. (l) and (m) Thomas Circle Motor Hotel, Washington, D.C. (n) Riverview Motor Hotel, New York.

Figure 11. Room layouts

16. GUEST BATHROOMS:

The minimum bathroom will have a combination tub-shower, a lavatory, and a water closet.

An innovation devised by the writer's firm was the introduction of two lavatories in the bathroom facilities. These two lavatories may be right in the bathroom itself, they may be pulled out into a dressing area, or one lavatory may be placed in the bathroom and another outside the bathroom.

Bidet is being introduced. Obviously, this additional feature is found only in the most luxurious hotels.

A wall-hung unit makes cleaning of hotel bathrooms easier for the maid, but again, its economics will determine whether this fairly expensive type of installation is warranted. The tub in a guest room is normally a 5-ft tub.

The normal shower head becomes standard in all hotels, although there is a growing tendency to using the so-called "telephone shower head."

The normal wall shower head, and by using two movable shower-head supports, one at the normal hand level and one at the higher level where a fixed shower head normally would occur, the guest has the option of allowing the hand type shower head to remain in a standard position or to remove it and use it as he pleases.

It is preferable to have a ledge on which toiletries may be placed, where they are conveniently reached, and where, obviously, they will not be left when the guest checks out.

If a ledge is used, the toilet tissue holder can be placed within the recess of the ledge, es can be the tumbler holders and the toothbrush holders. Obviously, an electrical convenience outlet must be placed in this area for electric shavers, electric toothbrushes, and other electrical gadgets that today's traveler takes with him. A slot receptacle for used razor blades should not be forgotten. Towel bars must be strategically placed so that the guest can reach for a towel regardless of whether he is stepping out of the tub or whether he is washing or shaving et the lavatory.

Another nicety which might be provided is some form of clothesline. With today's wash-and-wear apparel, many guests, especially women, like to do their washing at night and hang their garments in the bathroom.

A number of hotels are installing a wall-hung mirror which is an enlarging mirror on one side and a normal mirror on the other, a very nice touch for both men and women guests.

17. GUEST CLOSETS:

- The size of a closet will be determined by the type of hotel.
- Having the open hanging arrangements obviates this possibility. The longer the guest-room stay that is anticipated, then the larger the closet.
- It should be possible to store the luggage out of sight in the closet without diminishing the available hanging space, the shoe-rack space, or shelf space for hats and other apparel and paraphernalia. Whether the closet is a flat reach-in type or a walk-in type, the door should be such that, when the closet is opened, there are no hidden recesses where clothing may be forgotten because it cannot be readily seen by the departing guest.

- A good closet will have a hang rod with sufficient space to comfortably hold men's and women's clothes, a shelf for packages, hats, etc., and a shoe ledge or rack for placing shoes.

18. GUEST FLOOR SERVICE SPACES:

- Every guest-room floor will have a service area.
- Primarily, it is a place where linen is stored and where the maids' carts are kept. We must bear in mind that each maid will handle anywhere from 12 to 15 rooms and that each maid will need a cart. The number of rooms on the floor will, therefore, determine the number of maids and, in turn, the number of carts.
- A closed storage area should be provided for the storage of linens. In addition to the maids', porters', and linen supplies, sufficient space should be left for the storage of room-service carts.
- They may have to remain on the floor for some time waiting for the service elevator or elevators. Obviously, the service elevators will open out to this service area, so that all this activity takes place out of the sight and hearing of the hotel guests.

19. BANQUETING FACILITIES:

- Larger hotels will have a more diversified arrangement for meetings, luncheons, dinners, and banquets. The largest hotels are usually designed with a full banqueting and convention facility.
- The normal meeting room requirements are rather simple. The rooms will vary in size to accommodate anywhere from 10 to as many as 100 people. In most instances, wherever it is feasible, the meeting rooms will be arranged in a straight line, so that the walls separating one room from the other can be made movable.
- Thus, if two meeting rooms which normally might seat 25 people are thrown open to one, we would have a meeting room to take 50 people; and if another wall is opened, we would be able to seat 75 people, and so on.
- In larger rooms, which normally qualify for conventions or large banquets, it is also possible to subdivide the space by the use of movable walls to create smaller rooms when a large room is not required. A large space which might seat 1,000 people when all folding wells have been moved back can be cut up into anywhere from four to six spaces, allowing for meeting rooms that can accommodate 150 to 250 people.
- Of course, in the really large convention halls, it will not be unusual to seat 3,000 or more people in one large convention banquet hell. Realizing that food must be brought to all these rooms, their juxtaposition to serving kitchens is highly important in arranging the plan.
- For the most part, food should be brought directly from banquet kitchens to the banquet spaces. In subdividing these spaces, the subdivision must be so planned that each space is contiguous to the kitchen and has its own doors to enable waiters to come and go between the banquet spaces and the banquet kitchen.
- Sound isolation is of the greatest importance, and this applies not only to the decibel rating of the panels themselves but also the arrangement of the joints between the sections or panels of the movable wall.
- In fairly large meeting, banquet, and convention facilities, space must be provided which is normally called "preconvention assembly space.'

Since most of the people who are standing are those who will eventually be seated, the proportions of the preconvention foyer space will be determined by the number of people who will be eventually seated. As a rule of thumb, a person standing in fairly close quarters will take up approximately 5 sq ft. A person seated at a table will take up anywhere from 10 to 15 sq ft. A person seated for a seminar or a meeting will require 8 or 9 sq ft. It thus becomes apparent that the ideal preconvention, pre-banquet, or assembly space should be at least one-third of the area of tire actual dining and meeting spaces.

SPACE ALLOTMENTS

Hotel has six main space divisions, classified according to function :

(1) Public space

(2) Concession space

(3) Subrental space

(4) Food and beverage service space

(5) Guest-room space

(6) General-service space

at least 50 per cent of the total area should be productive space .

Guest-floor area –

Typical guest-floor area usually covers about 55 per cent of the ground-floor area. Usually, each maid is assigned to about 16 rooms. If feasible, the number of guest rooms on the typical floor should be a multiple of 16 or quite close to it. On the graph, the horizontal bands indicate that one maid would handle from 14 to 18 rooms.

Guest-floor stairways –

Guest-floor stairways tend to increase in number with the number of guest rooms on the typical floor. guest-room door to the nearest stairway entrance usually require a minimum of two stairways on the typical floor. two stairways are usually enough if there are no more than 40 guest rooms per floor In general, there are about 15 to 20 rooms per stairways.

Elevators-

Elevators are provided according to the number of guest rooms, also influenced by other factors such as the height of the building, the speed of the elevators, and the desired average frequency of service. 60 per cent of the elevators are guest cars and about 40 per cent are service cars.

PUBLIC SPACE

Public space comprises those areas that are open to the public as necessary auxiliaries. Promoting guest convenience ore, the lobby, lounge, public toilets, and entertainment rooms.

Lobby –The lobby including front office is usually assigned about 11 sq ft per guest room. now 9 sq it is often considered ample.

Front office

The front office, or front desk, has guest-contact stations for the registry, cashier, information, and mail the average allotment is 1 sq it per guest room. A straight-line counter is generally preferred, with a length of 10 ft for a 50-room hotel, 15 ft for 100 rooms, 20 ft for 200 rooms, and 26 ft for 400 rooms.

Lounge-

The lounge is usually allotted about 6 sq 1t per guest room. half the hotels studied use only 4 sq ft and a few even cut this area to 2 sq ft per guest room.

Public corridors adjoining the lobby-

The combined lobby, lounge, and adjoining corridors-

The combined lobby, lounge, and adjoining corridors are quite flexible in the allotment of space. average allotment of about 16 sq ft per guest room. Some hotels, however, have reduced this nonproductive area to 12 sq ft per guest room.

The combined allotment for the women's toilet and restroom is typically 1 sq ft per guest room.

CONCESSION AND SUBRENTAL SPACE

include a barber shop, beauty parlor, cigar and news stand, and valet shop. Subrental space is for services that are not normally provided under hotel operation, such as stores, permanent exhibits, travel agencies, offices, and club quarters.

Barber shop-

the allotment area for barber is about 1 .5 sq ft per guest room. Typically, the barber shop requires 90 sq ft per chair and a minimum of 4 chairs. beauty parlor if provided, usually has about half as many chairs as the barber shop in some hotel. The required area, including space for manicure tables and lockers and toilet for employees, is about 200 sq ft per chair.

Telegraph office-

telegraph office, requiring 40 to 60 sq ft, may be desirable in the larger hotels.

Valet shop-

The valet shop is generally located adjacent to the laundry in the larger hotels and is allotted about 1 sq ft per guest room.

Number of rented stores-one store for every 35 guest rooms

Rented stores area-

Rented stores are well advised to have a direct entrance from the street. stores are provided, 20 sq ft of store area per guest room is the average allotment. Some designers increase the income potential by raising this figure to 30 sq it of store area per guest room.

Storage space-

FOOD AND BEVERAGE SERVICE SPACE

Used for the receiving, storage, preparation, and service of food and beverages for guests, the general public, and employees. It includes the receiving area, storerooms for food and beverage supplies, China glassware, and silver, and also the kitchen, restaurants, banquet hall, private dining rooms, employees' dining area, food service pantries bar, cocktail lounge, and garbage room (sometimes with an incinerator).

· Dining room-

About 16 sq it per seat is required for the dining room. The allotment varies from 18 sq ft for de luxe dining rooms to 14 sq ft for popular priced places.

· Main kitchen-

kitchen is is customarily 40 to 45 per cent of the dining room area.

· Bake shop

The typical allotment is 2 sq ft per guest room. If a separate bake shop is provided, its area is usually equal to 20 per cent of the kitchen area.

· Coffee shop-

Coffee shop provides quick food service at moderate prices. 7 sq ft per guest room is the usual allotment. area required per seat in coffee shops is about 18 sq ft per seat for counter service only, (this area includes the counter), 16 sq ft per seat for both counter and table service, and 14 sq ft per seat for table service only.

· Auxiliary kitchen-

The auxiliary kitchen may be "backed-up" by the main kitchen, which prepares such heavy-duty items as roast meats. The auxiliary kitchen is generally from 20 to 25 per cent of the area of the coffee shop.

· Bar and cocktail lounge-

The bar and cocktail lounge may be separated, adjoining, or combined. The area is provided, 7 .5 sq ft per guest room is the typical allotment.

· Number of private dining room-

private dining rooms, with an average of one room for 80 guest rooms.

· Area of private dining rooms-

area of private dining rooms is typically 7 sq ft per guest room, but variations are extremely wide .

· Banquet-bathroom-

the allotment is usually from 10 to 20 sq ft per guest room.

· Banquet-ballroom storage-

Storage area is typically about one-tenth of the size of the banquet hall.

· Banquet-ballroom serving pantry-

A separate room is provided adjacent to the banquet hall, with plate warmers, hot-top serving tables, refrigerators, serving counters, coffee urns, and sometimes dishwashing facilities. the requisite space allotment per 100 banquet seats varies with the function of the pantry. the requisite space allotment per 100 banquet seats varies with the function of the pantry.

· Employees' dining room-

An employees' dining room is provided for the bellmen, maids, elevator operators, and the like other employees such as the staff from the front office and the accounting department usually eat in the coffee shop. the basis of 18 sq ft per sent and the number of employees to be seated at one time.

· Beverage storeroom-

Beverage storeroom(s) should be provided separately from general food store-room. Beer and soft drinks are desirably, but not necessarily, stored in separate rooms. The typical allotment is 1 .4 sq it of beverage storage area per guest room was only for wine and liquor . Probably 2 sq ft of total beverage storage should normally be allotted per guest room.

· Receiving room-

receiving room is provided for food, beverages, linen, and other supplies which, upon arrival, are customarily checked against delivery slips, weighed, counted, and inspected. The typical allotment for the receiving room is 1.6 sq ft per guest room.

· garbage room-

The typical allotment for the garbage room of 0 .75 sq ft per guest room is generally satisfactory.

GUEST-ROOM SPACE

This division includes the guest rooms together with guest bathrooms, clothes closets, and entrance vestibules, the sum of which is the area that the guest rents. Also included are the necessary auxiliary areas found on the typical floor, such as guest corridors, stair wells, elevator shafts, and maid's closets.

GENERAL SERVICE SPACE

Non-productive space, includes those areas for general administration, operation, maintenance, and storage that are not otherwise classified. They include executive and administrative offices; areas devoted to the handling and storage of linen; help's quarters; maintenance shops; rooms for housing the mechanical equipment for heat, light, power, ventilation, and refrigeration; and also certain storerooms

· Manager’s office-

manager's office requires a minimum area of about 100 sq ft. The activities in this office seldom justify more than 200 sq ft About 140 sq ft is the most common space allotment, regardless of the size of the hotel.

- accounting office-

The accounting office should have a minimum area of about 100 sq ft to accommodate one person at a desk with appropriate record-keeping and filing equipment. typical area of the accounting office for a 200-room hotel is shown on the graph as 200 sq ft, whereas for a 400-room hotel it is 300 sq ft.

- linen room-

A linen room is necessary to accommodate the housekeeper's office and the shelves of neatly stacked linens, together with the counter over which the maids receive their supplies. allotment for the main linen room is usually from 2 to 4.5 sq ft per guest room.

- laundry-

A laundry is sometimes operated by the hotel. allotted 7 sq ft per guest room. In a few cases, the allotment is only 4 sq ft per guest room.

- men's & women toilet and locker room-

assume that they will be employed in approximately equal number. toilet and locker room in the employees' quarters is generally allotted 2.4 sq ft per guest room. Thoughtful planning justifies 3.6 sq ft per guest room. About 35 per cent of the area is allotted for the toilet facilities and 65 per cent for the locker room.

- Maintenance shops

Maintenance shops are necessary to keep the hotel running There should generally be a minimum of three separate rooms:

(1) Plumbing-and-electric shop

(2) Carpentry-and-upholstering shop

(3) Paint and varnish room

The typical allotment for maintenance shops is 4 sq ft per guest room.

Furniture storage-

Furniture storage is required for extra items of furniture and broken pieces awaiting repair. They should not be placed in basement corridors. The typical allotment for furniture storage is 2.5 sq ft per guest room.

- boiler room-

boiler room space allotment is determined by many factors, such as the climate, the various uses of steam, the type of boilers, and the capacity of the, standby boiler. the typical allotment for the boiler room of 6 sq ft per guest room.

- Fuel storage-

Fuel storage is not required if gas or district steam is used exclusively. If coal or oil is the only fuel or reserve fuel used, however, then storage space is needed. The typical value for fuel storage is about 2 .2 sq ft per guest room.

· transformer vault-

A transformer vault is a necessary part of the hotel's electrical system. The electric energy used goes through a bank of transformers, which are sometimes located outside the hotel but more frequently in the basement in a specially constructed vault. An allotment for the transformer vault of 1 sq ft per guest room.

SPACE ALLOTMENTS AND FLOOR ASSIGNMENTS FOR TYPICAL HOTEL OF 100 ROOMS

General data and approximations

Height of building above ground (ground floor plus 6 typical guest floors)	7 stories
Ground-floor area	10,000 sq ft
Typical guest-floor area	6,000 sq ft
Guest rooms per typical floor,	17 rooms
Stairways on the typical floor,	2 stairways
Elevators (1 guest and 1 service car)	2 elevators

The first four factors listed above are of course all interrelated and must be organized as a compatible group.

	Productive area, sq ft	*Nonproductive area, sq ft*
Public space		
Lobby and front office		1,100(G)
Lounge		600(G)
Corridors adjoining (total of above, 1,900 sq ft)		200(G)
Men's toilet for guests		150(G)
Women's toilet for guests		100(G)
Women's restroom for guests		100(G)
*Coat checkroom		120(G)
*Bellman's checkroom		40(G)

	Productive area, sq ft	*Nonproductive area, sq ft*
Concession space		
Barber shop	180(B)	
*Valet shop	100(B)	
Subrental space		
3 rented stores, (each 800 sq ft)	2,400(G)	
3 storage rooms (each 200 sq ft)	600(B)	
Food and beverage service space		
Main dining room (90 seats)	1,500(G)	
Main kitchen		1,100(G)
Bake shop		200(G)
?Coffee shop (50 seats)	800(G)	
Bar and cocktail lounge	750(G)	
Private dining rooms (250 + 500 sq ft)	750(G)	
?Banquet-ballroom	1,400(B)	
?Banquet-ballroom foyer		450(B)
?Banquet-ballroom storage		140(B)
?Banquet serving pantry		350(B)
Employees' dining room		220(B)
Steward's storeroom		400(G)
Beverage storerooms		180(B)
*China, glass, and silver storage		300(B)
Receiving room		180(G)
Garbage room		80(G)

	Productive area sq ft	Nonproductive area sq ft
Guest-room space		
102 rooms (each 250 sq ft; including bath, closet and vestibule)	25,500(T)	
Auxiliary space (add 40 per cent of above for corridors, stairs, elevators, maid's closets, walls, and partitions)		10,200(T)
General service space		
Manager's office		140(G)
*Secretary's office		100(G)
Accounting office		150(G)
?*Sales and reservations office		140(G)
*Mimeograph room		40(G)
Linen room		350(B)
?Laundry (700 sq ft; omitted)		
Men's toilet and locker room		360(B)
Women's toilet and locker room		360(B)
Maintenance shops		400(B)
Furniture storage		250(B)
*Records storeroom		250(B)
*General storeroom		200(B)
Boiler room		600(B)
*Water-heater tank space		150(B)
Fuel storage		200(B)
Transformer vault		100(B)
*Refrigeration compressor room		400(B)
*Fan rooms, ventilation equipment		400(B)
Total productive area	33,980 sq ft	
Listed nonproductive area		20,800 sq ft
Add for basement corridors, walls, stairways, and elevators		2,500 sq ft
Add for ground-floor stairways and elevators		500 sq ft
Total nonproductive area		23,800 sq ft
Grand total of areas	57,780 sq ft	

6 typical guest floors, each 6,000 sq ft	36,000 sq ft
Ground floor, figured at 10,590 sq ft	10,500 sq ft
Basement, figured at 10,440 sq ft	10,500 sq ft
Total approximate floor area	57,000 sq ft

2.5 INDIAN STANDARD CODE FOR HOTELS AND RESTAURANTS:

BUILDING

In addition to the recommendations in the code the building in which food service establishment is located shall also conform to the local building byelaws in force. The building should be of a permanent nature and maintained in a proper stateof repair and cleanliness.

FLOORS

The floors of all rooms in which food or drink is stored, prepared or served and of all washing placed shall be of such construction as to be impervious, easily cleansed, smooth and in good repair. All floors shall be kept clean and free from litter. Dustless method of floor cleaning shall be used, ail except emergency floor cleaning shall be done during the period when least amount of food and drink is exposed.

WALLS

The walls shall have a smooth, non-absorbent surface, free from cracks and crevices to facilitate their efficient cleaning.

The walls of all rooms in which food or drink is prepared or utensils are washed shall have a smooth washable surface up to a minimum height of 2-O m from the floor.

CEILING

Ceiling shall be clean, leak-proof and have a smooth non-absorbent surface free from cracks and crevices to facilitate their efficient cleaning. These should be such that they do not harbour vermin.

DOOR AND WINDOWS

In the absence of air-conditioning all openings to the outer air includingdoors, windows, sky lights shall be effectively screened with tight fitting screens free from holes with wire gauge conforming to IS: 1568-1960*. The doors when not in use shall be kept in closed position. Selfclosingscreened doors to the outer

air shall open outwards. Other methods approved by the authority shall be employed to ensure the absence of flies

LIGHTING

TABLE 1 RECOMMENDED VALUES OF ILLUMINATION

The lighting of some of these locations will be determined primarily by aesthetic considerations and the recommended illumination values as given in IS : 3646 (Part II)-1966* may be taken as a guide only.

Sl No.	Areas	Illumination, Lux
(1)	(2)	(3)
i)	Entrance halls	150
ii)	Reception and accounts	300
iii)	Dining rooms (tables)	100
iv)	Lounges	150
v)	Bedrooms:	
	a) General	100
	b) Dressing tables, bed heads, etc	200
vi)	Writing rooms (tables)	300
vii)	Corridors	70
viii)	Stairs	100
ix)	Laundries	200
x)	Kitchens	†200
xi)	Goods and passenger lifts	70
xii)	Clockrooms and toilets	†200
xiii)	Dining rooms:	
	a) Tables	100
	b) Cash desks	300
xiv)	Self service-counters	300

*Code of practice for interior illumination: Part II Schedule for values of illumination and glare index.

†Supplementary local lighting should be provided over kitchen equipment and mirrors.

VENTILATION

In case of ran-air-conditioned buildings the minimum standards of mechanica ventilation shall be maintained as given

TABLE 2 VENTILATION REQUIREMENTS FOR NON-AIRCONDITIONED BUILDINGS

Sl No.	Area	Air Changes per Hour
(1)	(2)	(3)
i)	Living rooms	3
ii)	Dining and lounge	2-3
iii)	Big kitchen	12
iv)	Small kitchen	6
v)	Toilets	6

WATER SUPPLY

There shall be adequate supply of safe and potable water. Running water shall be easily accessible to all rooms in which food is prepared or utensils are washed. Requirements for water supply for hotels and restaurants shall be as given

TABLE 3 WATER SUPPLY REQUIREMENTS FOR HOTELS AND RESTAURANTS

Sl No.	Description	Non-Airconditioned (Litres per Day)	Air Conditioned (Litres per Day)
(1)	(2)	(3)	(4)
i)	Hotels (per bed)	180	275
ii)	Restaurants (per seat)	70	97

Note — In hotels where laundry is provided arrangement for an extra quantity of 120 litres per bed should be made.

Storage of Water-

For the storage of water, proper receptacles made of galvanized iron or other suitable material shall be used. Such receptacles shall he kept covered with tight fitting lids and shall have screw caps at the bottom for draining out residual water. The receptacles shall be placed on a stand or a platform rasily accessible for the purpose of maintenance and cleaning, The receptacles shall be examined and cleaned regularly.

DRAINAGE

Adequate arrangements shall be made for satisfactory drainage of all sewage and waste water. Harmful waste water, such as water containing kitchen waste, &all be saticfactorily disposed of. The drainage shall be so designed as to cause no stagnation at the maximum discharge rate fur which the different units are designed. The requirements for firments for drainage and sanitation shall conform to the requirements given

TABLE 4 REQUIREMENTS OF DRAINAGE AND SANITATION FITMENTS IN HOTELS

(*Clause* 14.1.1)

Sl No.	Fitments	For Residential Public and Staff	For Public Rooms		For Non-Residential Staff	
			For Males	For Females	For Males	For Females
(1)	(2)	(3)	(4)	(5)	(6)	(7)
i)	Water-closets	1 per 8 persons omitting occupants of the room with attached water-closets; minimum of 2 if both sexes are lodged	1 per 100 persons up to 400 persons; and for over 400, add at the rate of 1 per 250 persons or part thereof	2 per 100 persons up to 200 persons; and for over 200, add at the rate of 1 per 100 persons or part thereof	1 for 1-15 persons 2 for 16-35 persons 3 for 36-65 persons 4 for 66-100 persons	1 for 1-12 persons 2 for 13-25 persons 3 for 26-40 persons 4 for 41-57 persons 5 for 58-77 persons 6 for 78-100 persons
ii)	Ablution taps	1 in each water-closet	1 in each water-closet	1 in each water-closet	1 in each water-closet	1 in each water-closet
		1 water tap with draining arrangements shall be provided for every 50 persons or part thereof in the vicinity of water-closets and urinals				
iii)	Urinals	—	1 per 50 persons or part thereof	—	Nil up to 6 persons 1 for 7-20 persons 2 for 21-45 persons 3 for 46-70 persons 4 for 71-100 persons	—
iv)	Wash basins	1 per 10 persons omitting the wash basins installed in the room suite	1 per water-closet and urinal provided	1 per water-closet provided	1 for 1-15 persons 2 for 16-35 persons 3 for 36-65 persons 4 for 66-100 persons	1 for 1-12 persons 2 for 13-25 persons 3 for 26-40 persons 4 for 41-57 persons 5 for 58-77 persons 6 for 78-100 persons
v)	Baths	1 per 10 persons omitting occupants of the room with bath *en suite*	—	—	—	—
vi)	Slop sinks	1 per 30 bedrooms, minimum 1 per floor	—	—	—	—
vii)	Kitchen sinks and dish washers	← 1 in each kitchen →				

Note 1 — Some of the water closets may be of European style if desired.

Note 2 — It may be assumed that two-thirds of the number are males and one-third females.

Septic tanks conforming to I**S: 2470 (Part I)- 1963* or IS: 2470 (Part II)**-l964 shall be provided if required by the authority. The gradient of the drains should be such that no water stagnates any where within the premises. Where no sewerage is provided for the final outfall, soak pits or cess pools to the satisfaction of the Authority should be provided.

TABLE 5 REQUIREMENTS OF DRAINAGE AND SANITATION FITMENTS IN RESTAURANTS

(Clause 14.1.1)

Sl No.	Fitments	For Male Public	For Female Public	For Male Staff	For Female Staff
(1)	(2)	(3)	(4)	(5)	(6)
i)	Water-closets	1 for 50 seats up to 200 seats; and for over 200 seats, add at the rate of 1 per 100 seats or part thereof	1 for 50 seats up to 200 seats; and for over 200 seats, add at the rate of 1 per 100 seats or part thereof	1 for 1-15 persons 2 for 16-35 persons 3 for 36-65 persons 4 for 66-100 persons	1 for 1-12 persons 2 for 13-25 persons 3 for 26-40 persons 4 for 41-57 persons 5 for 58-77 persons 6 for 78-100 persons
ii)	Ablution taps	1 in each water-closet	1 in each water-closet	1 in each water-closet	1 in each water-closet
		1 water tap with draining arrangements shall be provided for every 50 persons or part thereof in the vicinity of water-closets and urinals.			
iii)	Urinals	1 per 50 seats	—	Nil up to 6 persons 1 for 7-20 persons 2 for 21-45 persons 3 for 46-70 persons 4 for 71-100 persons	—
iv)	Wash basins	← 1 for every water-closet provided →			
v)	Kitchen sinks and dish washers	← 1 in each kitchen →			
vi)	Slop or service sinks	← 1 in the restaurant →			

Note 1 — Some of the water closets may be of European style, if desired.

Note 2 — It may be assumed that two-thirds of the number are males and one-third females.

KITCHEN

Kitchen shalt be sufficiently spacious and should be of a size in proportionto the average number of diners catered for at one meal, The floor spice in the kitchen shall be calculated at the rate of0.5 me Min per diner. In case of snack bars, soda fountains, etc, the service-cumdispensing area shall be treated as part of the kitchen.

The minimum size of the kitchen should not be less thnn 10 rnp and none of the sides less than 2.4 meter. Exhaust fans should have provisions of grease filters for collecting grease.

STORAGE AND HANDLING EQUIPMENT

All containers and utensils shall be stored at a height of not less than. 430 mm above the floor in a clean, dry place protected from flies, splash, dust, overhead leakage, and other contamination.

STORAGE OF FOOD STUFF

All perishable food shall be stored at the temperatures as given in

TABLE 6 STORAGE TEMPERATURES FOR FOODSTUFF

Sl No.	Names of Articles	Storage Temperature °C
(1)	(2)	(3)
i)	Meat, meat products, poultry	0·00 to 1·50
ii)	Fresh fish and sea food	−2·00 ,, −0·50
iii)	Dairy products and eggs	0·50 ,, 2·50
iv)	Fresh fruit and vegetables	2·00 ,, 4·50
v)	Ice-creams	−14·50 ,, −12·00

Note 1 — Potatoes need no refrigeration, but should be stored away from light.

Note 2 — Fish and sea foods shall be stored in separate compartments so as not to affect other materials.

ACOUSTICS

Food service establishments (hotels, restaurants, etc) shall adopt suitable noise control measures to provide adequate sound insulation against various noise sources which would cause disturbance to human comfort and efficiency.

FIRE SAFETY REQUIREMENTS

All buildings and particularly buildings having more than one storey shall be provided with liberally desigl:cd safe-fire-resistant exists or escapes.

The exits shall be so placed that they are always immediately accessible and each is capable of taking all the persons on that floor as alternative escape routes may be rendered unsuitable and/or unsafe due to
fire.

Escape route shall be well-ventilated as persons using the escapes are likely to be overcome by smoke and/or fumes which may enter from floor.

Basements- It is essential that the fire resistance of the basement conforms to the highest order and all columns for separating the upper structure shall have grading not less than the standards laid down for Grade 3.

CHAPTER 3:

SITE INVENTORY

1.1 DEMOGRAPHIC OF SANAND DIST. AHMEDABAD

With a 2025 estimated population of about **8.16 million** in the city and **9.31 million** in its metro region, Ahmedabad stands as Gujarat's most populous urban center. According to the 2011 Census, the city had **5.58 million** residents. The **sex ratio** in the municipal limits was **898 females per 1,000 males** (child sex ratio: 848 girls per 1,000 boys), while the broader district recorded a sex ratio of **904 per 1,000** (child ratio: 857). Literacy rates are strong: the city averaged **88.29%** literacy (male 92.30%, female 83.85%), with district-wide literacy at **85.31%** (male 90.74%, female 79.35%)

Religions in Ahmedabad

Religion	Percent
Hindu	81.56%
Muslim	13.51%
Not Stated	0.12%
Jain	3.62%
Sikh	0.24%
Christian	0.85%
Buddhist	0.08%
Other	0.04%

Religiously, Ahmedabad is predominantly **Hindu (≈ 81.6%)**, followed by **Muslims (≈ 13.5%)**, **Jains (≈ 3.6%)**, **Christians (≈ 0.85%)**, **Sikhs (≈ 0.24%)**, **Buddhists (≈ 0.08%)**, with small shares of "other religions" (≈ 0.04%) and "not stated" (≈ 0.12%).

1.2 TOPOGRAPHY

For the purposes of this report, the geographical coordinates of **SANAND** are:

- **Latitude**: ~ 23.0° N
- **Longitude**: ~ 72.38° E (Sanand taluka area)
- **Elevation at town center**: ~ 38 m (≈ 124 ft.) above sea level.

Sanand town is part of the vast **Gujarat Plains** region, with flat terrain forming part of the Sabarmati river basin

From elevation models (~10-30 m resolution elevation data):

- **Within ~2 miles (~3 km)**
  - **Min elevation**: ~10 m (~33 ft.)
  - **Max elevation**: ~65 m (~213 ft.)
  - Average **~31 m (≈ 102 ft.)**
- **Within ~10 miles (~16 km)**

- Elevation range in surrounding taluka: **10 m – 65 m** (~33 ft. – 213 ft.), so variation up to ~**185 ft**.

- **Within ~50 miles (~80 km)**
  - Larger Ahmedabad-Gujarat plains remain largely flat; typical elevation ~30–40 m, max occasional rises near gentle uplands, so **variation under ~200 ft**.



Figure 12. Topograpphical contours of Sanand

1.3 SEISMIC ACTIVITY:

Zone III: This zone corresponds to a **Moderate Damage Risk Zone**, liable to **MSK VII** levels.
The **IS code assigns a zone factor (Z)** of **0.16** for Zone III.
Major cities in this zone include Chennai, Mumbai, Kolkata, Bhubaneswar, Ahmedabad, Vadodara, Pune, Lucknow, and Sanand (in the Ahmedabad region).

CITY	STATE	ZONE
SANAND	GUJRAT	III

1. SOIL TYPE:

The soils around Sanand belong to the **deep, alluvial loam-clay** category characteristic of Central Gujarat plains (Quaternary deposits). They are **very deep**, **well to moderately drained**, and slightly saline and sodic in parts of the taluka. The terrain is nearly **level** (< 2 % slope), unlike the interfluvial hill slopes seen in Agra soils.

The local climate has a **mean annual temperature of ~27 °C (80.6 °F)** and **mean annual rainfall of ~757 mm (~30 inches)**, supporting moderate moisture retention soils under arable and industrial usage.

1.4 CLIMATE-

In Sanand, the **wet season (mid-June to mid-September)** is **hot, humid, and mostly cloudy**, while the **dry season** (October through May) is **sweltering and predominantly clear**, with hot temperatures year-round. Over the course of the year, daily high temperatures typically range from **82 °F (28 °C)** in January up to about **106 °F (41 °C)** in May, and rarely dip below **55 °F (13 °C)** or exceed **109 °F (43 °C)**

Based on the **beach/pool score** (which favours clear, rainless days with perceived temperatures between 75–90 °F), the **best times for hot-weather activities in Sanand** are from **mid-November to early March**, peaking in **early February**

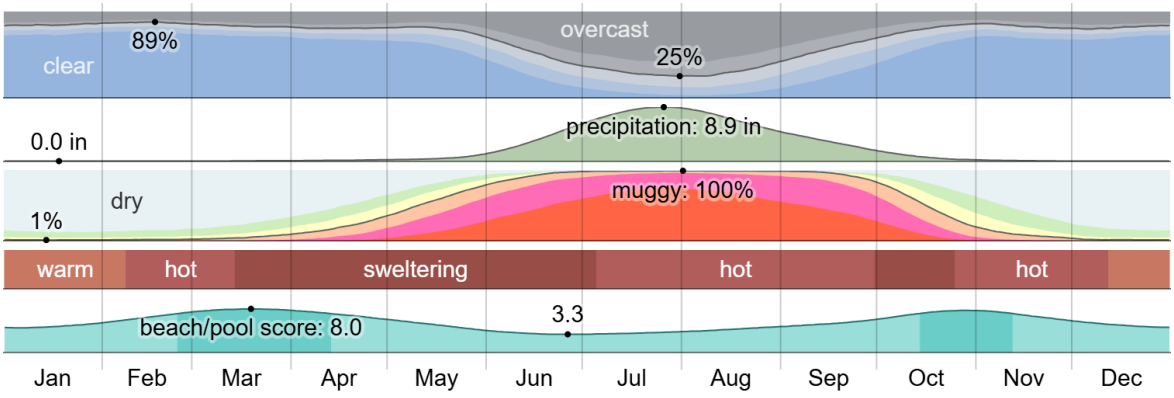


Figure 13. Climatic Experience inSanand around the year

Average Temperature in Agra

The hot season in Sanand lasts for about 2.2 months, from April 9 to June 15, with **average daily highs remaining above 38 °C (100 °F)**. The **hottest month is May**, featuring typical temperatures of **41 °C (105.8 °F)** during the day and **28 °C (82 °F)** at night.
The cool season spans around 2.1 months, from December 7 to February 12, characterized by **average daily highs below 30 °C (86 °F)**. **January is the coldest month**, with daily temperatures ranging from approximately **13 °C (55 °F)** to **28 °C (82 °F)**.

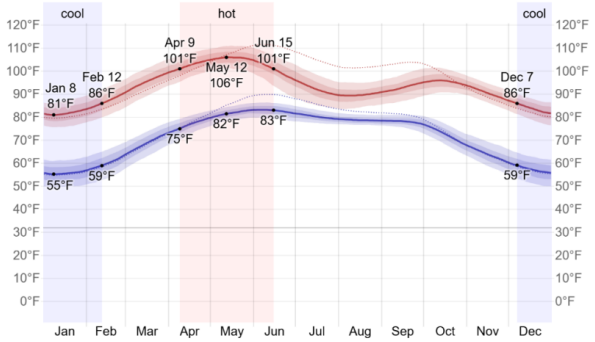


Figure 14. Temperature in Sanand anually

Precipitation

A wet day in Sanand is defined as one with at least **0.04 in (1 mm)** of precipitation. The **wetter season** extends for approximately **2.8 months**, from **June 20 to September 13**, during which a given day has a **greater than 23% chance** of rainfall. **July is the wettest month**, averaging about **12.5 rainy days**, while the **driest month is December**, with only **~0.2 wet days**. Notably, **rain alone** is the only form of precipitation, with its probability peaking at **46% around July 29**

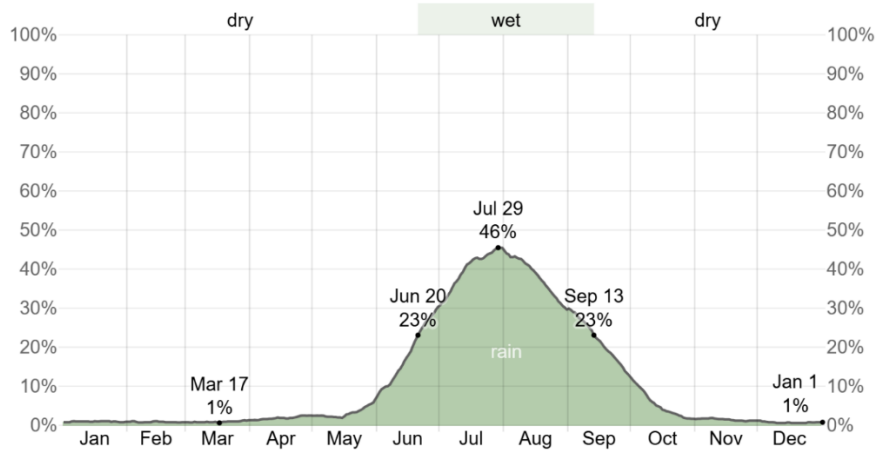


Figure 15. Average precipitation in Sanand

Rainfall

To illustrate intra-month variation, Sanand's **rainy period** lasts approximately **5.1 months**, spanning **May 18 to October 20**, during which any **rolling 31-day total rainfall** stays **at or above 0.5 inches**. Rainfall peaks in **July**, registering up to **8.4 inches** in a sliding monthly average. From **October 20 to May 18**, forming the **rainless period** of about **6.9 months**, 31-day rainfall falls below 0.5 inches, with **January** recording the **least rainfall** (~0.0 inches).

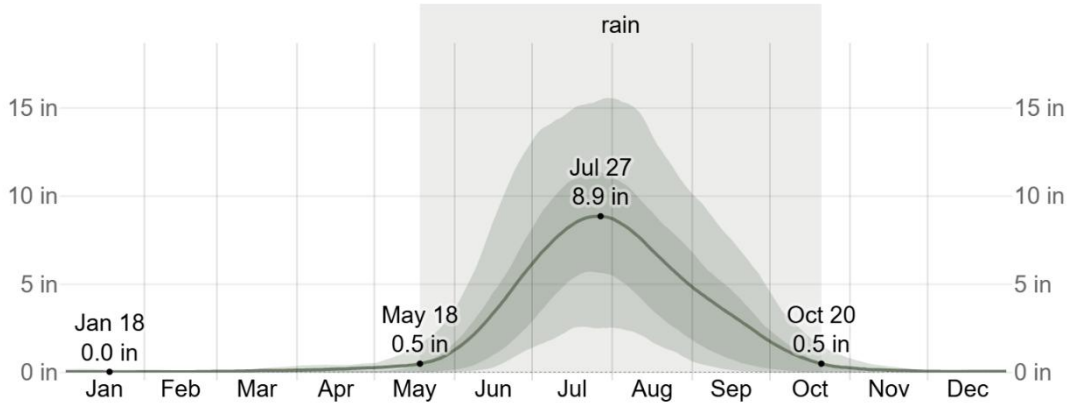


Figure 16. Average rainfall in Sanand

Humidity

The muggier period in Sanand extends over approximately 6.1 months, from April 23 to October 27. During this time, the dew point rises enough to make conditions feel muggy, oppressive, or even miserable on at least 26% of the days. This means that for nearly half the year, outdoor conditions may feel uncomfortably humid, especially during the daytime. **The peak of this discomfort occurs in August**, which records the highest average number of muggy days—**around 30.9 days**, essentially the entire month. Such levels of humidity can significantly impact thermal comfort, especially when combined with high temperatures. In contrast, **the least humid part of the year is January**, with an average of only **0.3 days** experiencing similar muggy conditions, offering a brief respite of dry, more comfortable air. This stark seasonal variation makes it crucial to consider humidity control in architectural and planning decisions, especially for ventilation, cooling, and material selection.

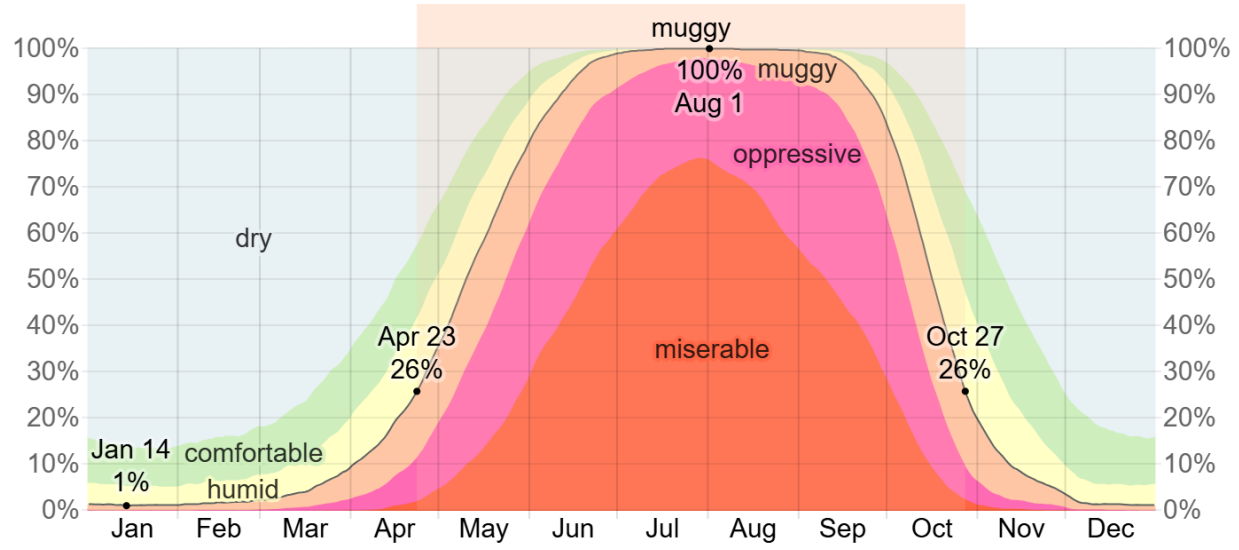


Figure 17. Average humidity in Sanand

Wind

The **windiest span in Sanand lasts about four months**, stretching from **April 22 to August 22**, when the **hourly average wind speed consistently exceeds ~13.6 km/h (~8.5 mph)**. **June** is the **peak wind month**, with an average speed close to **18.9 km/h (~11.8 mph)**, while **October** offers the calmest air—mean speeds dipping to **8.4 km/h (~5.2 mph)**.

Wind direction shifts dramatically with the seasons: from **March 9 through October 10**, winds predominantly blow from the **west**, reaching a seasonal high of **86% on May 14**. Then, between **October 10 and December 4**, **easterly winds** take over—peaking at **53% on November 8**. From **December 4 to March 9**, **northerly winds** dominate, with **52% frequency recorded on January 1**.

These patterns suggest a pronounced seasonal wind regime—useful for everything from natural ventilation design to planning outdoor structures and shading in architectural projects.

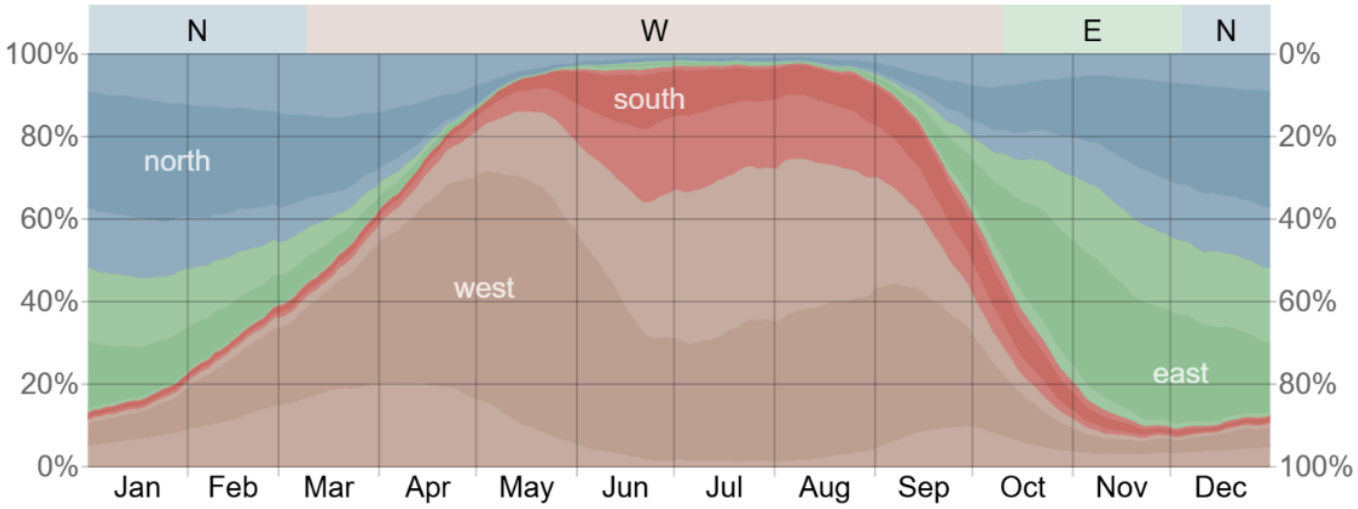


Figure 18. Average wind speed in Sanand

Sunpath-The sun path diagram for Sanand (Latitude 23.0019°N, Longitude 72.2491°E) reveals critical solar movement data essential for climate-responsive architectural design. The site experiences a sunrise at 06:44 and sunset at 18:53, resulting in approximately 12.08 hours of daylight. At the time of analysis, the solar azimuth and altitude are 119.09° and 49.46°, respectively—indicating the sun's southeast position in the morning with a moderately high altitude in the sky. The solar envelope indicates that maximum solar gain occurs from the southeast to southwest arc, especially during summer months when the sun travels a higher and longer path.

This data supports strategic orientation of built forms and fenestrations. North-facing façades remain shaded most of the day, making them ideal for minimal heat gain, while south and southwest exposures require adequate shading devices such as vertical fins or overhangs to mitigate harsh afternoon sun. Open green zones and public areas are best located on the eastern and northern edges, benefiting from softer morning sunlight and avoiding peak afternoon heat. Overall, this sun path analysis informs passive design strategies to optimize thermal comfort and energy efficiency in the Sanand climate context.

2. Climate Analysis in Building-To ensure the proposed **5-star hotel** design is contextually responsive and environmentally efficient, a series of detailed climatic simulations were conducted using **Adobe Forma**. These simulations—covering solar path, wind direction, and temperature analysis—were run on a representative building mass placed at the actual site location in **Sanand.** The objective was to study how natural elements interact with the built form throughout the year. The sunlight analysis provided insight into optimal orientation and shading strategies, while wind simulations informed natural ventilation potential and facade articulation. Temperature mapping further helped identify thermal hotspots and areas requiring passive cooling solutions. These simulations form the backbone of the project's sustainable design intent, ensuring a comfortable and **energy-efficient** environment for future occupants.

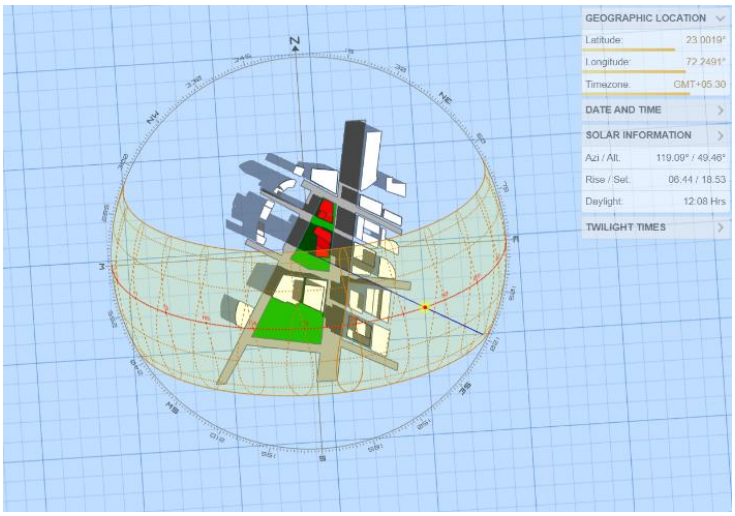


Figure 19. Sunpath analysis

1.5 SUN HOURS ANALYSIS

A detailed **sun hours** analysis was carried out for four representative months of the year—covering both summer and winter extremes—to understand the site's **solar exposure** and inform passive design strategies. The simulation, conducted using **Adobe Forma**, revealed the daily duration and intensity of sunlight received across various parts of the building mass. This helped identify zones with prolonged exposure, which are ideal for placing solar panels or sunlit public areas, as well as areas needing shading elements to prevent overheating. The data serves as a crucial tool in optimizing natural daylight while minimizing glare and solar gain, enhancing both energy efficiency and **occupant comfort** in the proposed hotel.

FEBRUARY-

To understand the solar exposure across different facades of the proposed hotel design, a sun hours analysis was conducted for the month of February using Adobe Forma. The simulation, performed on a massing model located on the exact project site, revealed significant variations in sunlight exposure due to orientation and surrounding topography. The southern and western facades received maximum solar gain, with sun exposure reaching up to **11 hours per day**, indicating ideal zones for passive solar strategies and solar energy integration. In contrast, the northern façade exhibited minimal sunlight, with areas showing as low as **0 hours of direct sun**, suggesting potential zones for service areas or thermal insulation focus. Intermediate zones showed moderate exposure, such as **5.2 to 5.9 hours**, indicating a balance of shading and daylighting potential. This analysis plays a critical role in optimizing façade design, spatial planning, and energy efficiency strategies for the hotel in alignment with climate-responsive architecture.

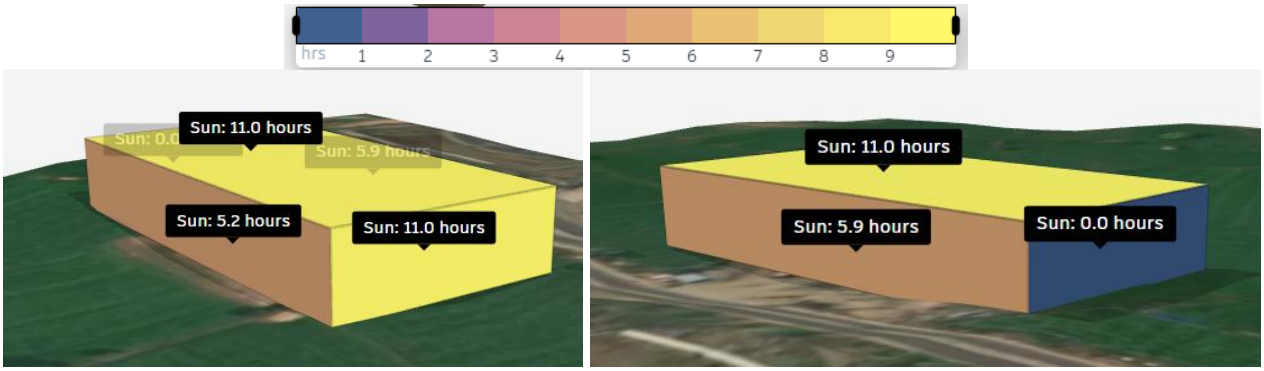


Figure 20. Sun hour analysis of February month

MAY-

A peak summer month, show that the building receives abundant sunlight with certain roof areas achieving up to **13 hours** of sun exposure, while other facades receive between **6 to 7 hours** depending on orientation and shadow impact. This variation provides vital insights for optimizing **rooftop amenities**, **solar panel** placements, shading devices, and thermal **comfort zones**. The analysis further aids in refining the building's massing and facade articulation to reduce heat gain in summer while ensuring adequate daylight throughout the year. This data-driven approach strengthens the sustainable intent of the design by aligning architectural decisions with the site's climatic potential.

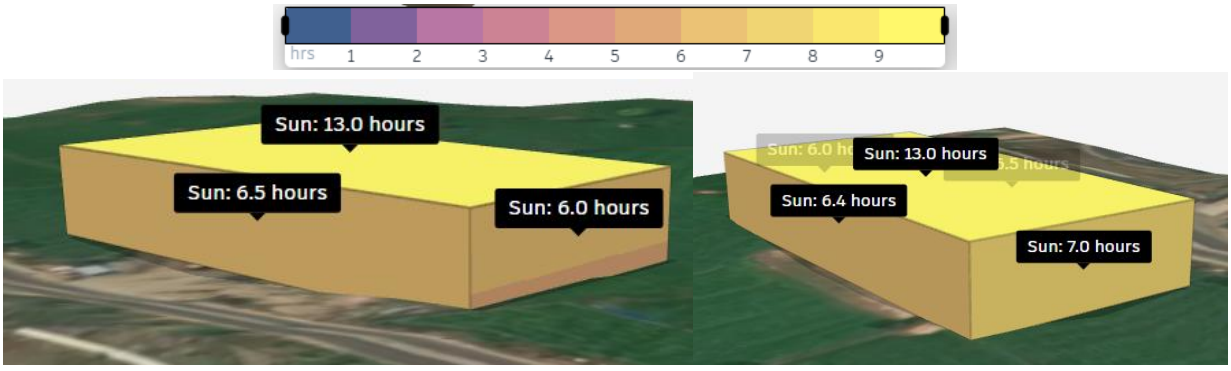


Figure 21. Sun hour analysis of May month

AUGUST-

The analysis revealed that the rooftop receives maximum solar exposure, with peak values reaching up to **13.1 hours** per day, making it a suitable zone for solar panel installations or recreational spaces that benefit from direct sunlight. Vertical surfaces showed moderate sun exposure, with some façades receiving as low as **5.7 hours** and others up to **7.3 hours** of sunlight daily. This variation in exposure will play a critical role in informing the building's façade design, passive cooling strategies, and placement of fenestrations to balance natural lighting and thermal gain. The results reinforce the importance of climate-responsive design in maximizing user comfort while optimizing energy performance.

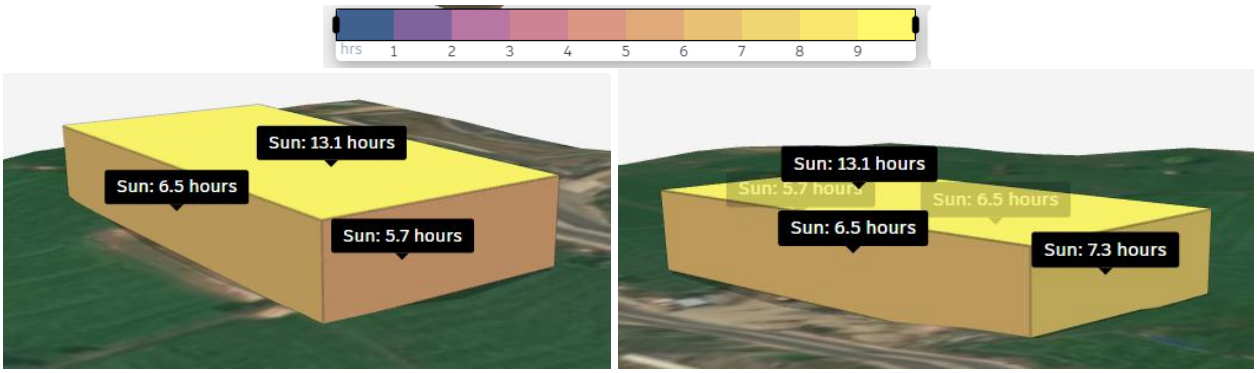


Figure 22. Sun hour analysis of May month

DECEMBER-

The **south and southeast-facing** facades receive the highest sunlight, with values peaking around **10.6** hours per day, while certain **north-facing zones remain in full shade with zero sun exposure**. This distribution highlights the need for strategic space planning—placing public or solar-dependent functions such as lobbies, lounges, or **energy-harvesting** systems in high-exposure zones, while reserving shaded areas for back-of-house or utility services. The insights from this simulation will guide passive design interventions like facade articulation, fenestration placement, and shading devices to optimize thermal comfort and energy efficiency during **winter months**.

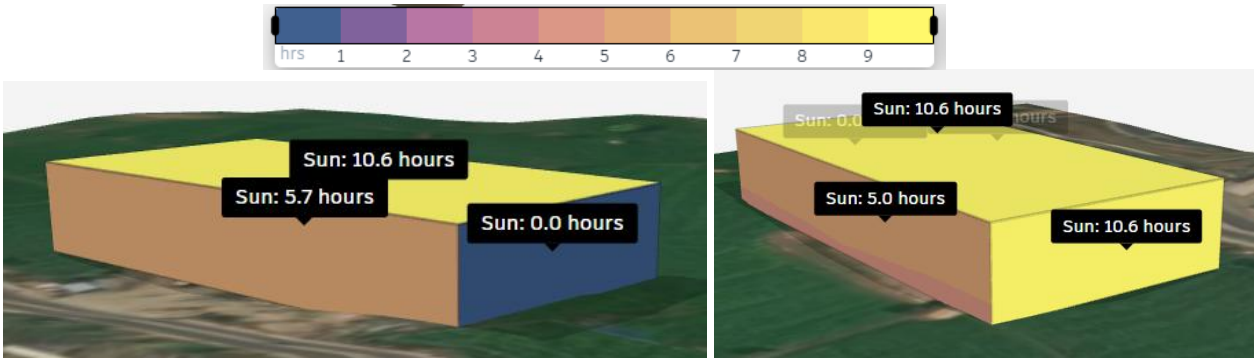
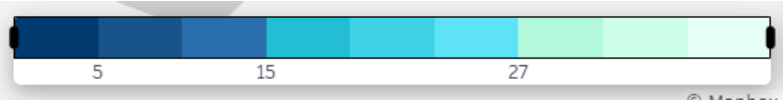


Figure 23. Sun hour analysis of December month

1.6 DAY LIGHT POTENCIAL

The daylight potential analysis for the proposed building site in GIDC Sanand, Gujarat, reveals significant variations in light exposure across the structure. The analysis indicates that the top surface of the building



achieves a **maximum score of 100%,** reflecting optimal daylight penetration, while the middle and lower sections **score 40% and 40%** respectively, suggesting moderate to **limited natural light** availability. This data underscores the need for **strategic design** considerations, such as incorporating additional glazing or light wells, to enhance **interior illumination**, particularly in **the lower levels**, ensuring a balance between **natural lighting** and **energy efficiency** in the final construction plan.

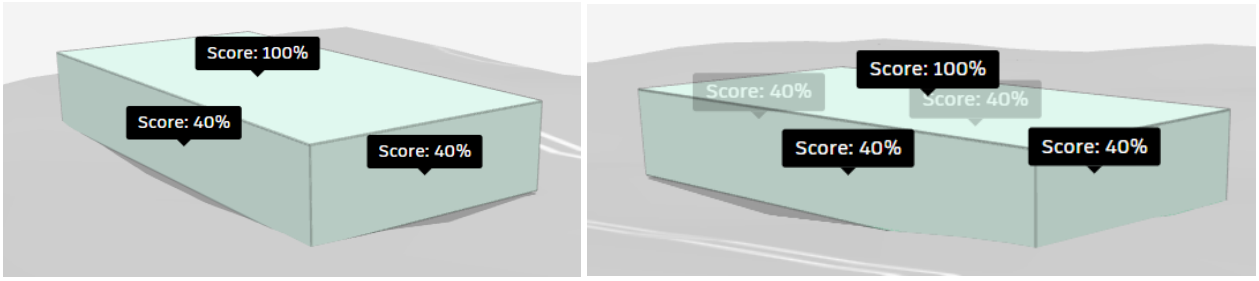


Figure 24. Daylight potential

1.7 WIND ANALYSIS

The wind analysis simulation conducted on the proposed building in **GIDC Sanand**, Gujarat, at 11:14 AM IST on Sunday, July 27, 2025, using the advanced **Autodesk Forma** software, provides comprehensive insights into the **building's aerodynamic performance**. The simulation reveals significant variations in **wind pressures**, with the upper facade experiencing peak **velocities** due to prevailing winds, while the lower levels exhibit reduced exposure, indicating potential stagnation zones that could affect ventilation. These findings emphasize the necessity of incorporating **aerodynamic shaping**, such as **windbreaks** or **streamlined contours**, into the design to mitigate pressure imbalances, enhance structural stability, and optimize **natural ventilation** across all levels of the building, ensuring a resilient **and efficient architectural** solution.

1.8 WIND COMFORT ANALYSIS-

The **Global Wind Atlas 3.0** with a roughness of **0.27** and a measurement **height of 1.75m**, provides valuable insights into pedestrian comfort levels. The analysis indicates that **76%** of the surrounding area falls within the **comfortable "Standing" range**, while **21%** is suitable for **"Strolling**" and **3%** for **"Sitting,"** with no significant areas classified as **"Uncomfortable."** The color-coded wind rose overlay highlights that the majority of the site experiences moderate **wind speeds**, with localized zones of higher activity, suggesting that the building's design effectively mitigates excessive **wind exposure**. These

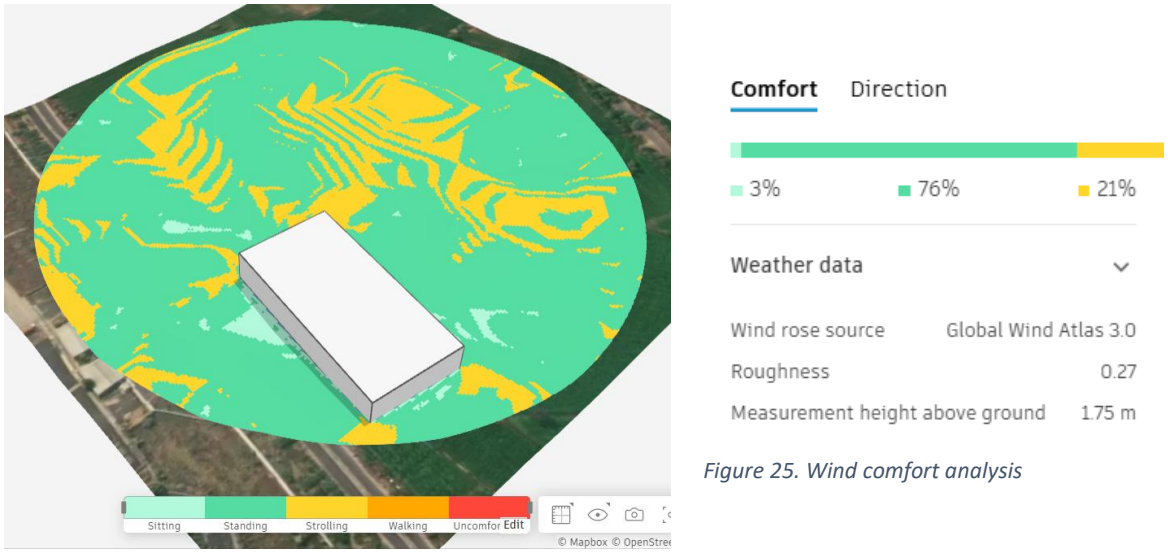


Figure 25. Wind comfort analysis

findings support the integration of minor adjustments, such as **windbreaks or landscaping**, to further enhance **pedestrian comfort** across the sit

1.9 WIND DIRECTION ANALYSIS-

The Global Wind Atlas 3.0 with a **roughness of 0.27** and a measurement **height of 1.75m**, highlights the predominant wind patterns affecting the site. The wind rose diagram indicates that **86% of winds originate from the north (N 0°),** with **8% from the west and 2% from the east**, while the wind speed distribution peaks at **approximately 2 m/s**, with a **maximum of 3 m/s**. The spatial analysis overlay shows a consistent **north-to-south wind flow across the site**, with **velocities ranging from 1 to 3 m/s**, suggesting that the building's orientation should align with this **dominant northerly** wind to optimize **natural ventilation** and **minimize wind load** on the structure.

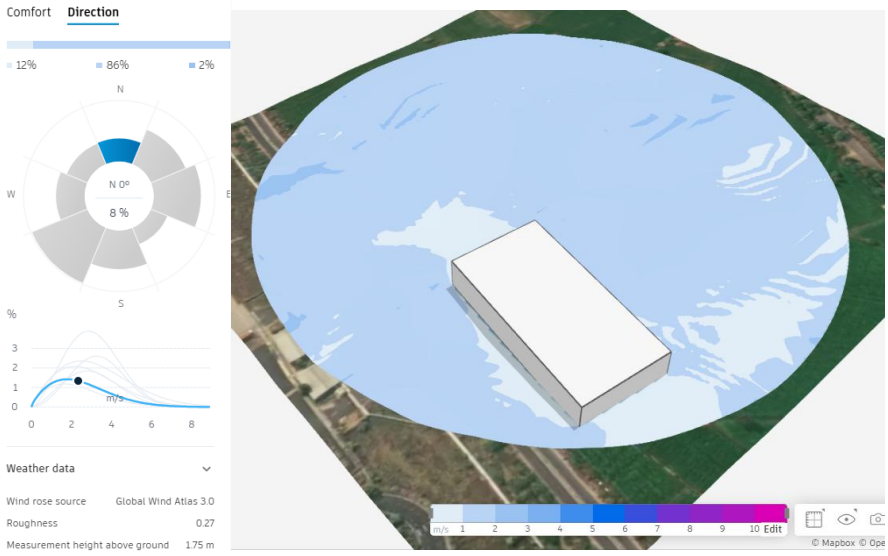


Figure 26. Wind direction analysis

1.10 SUN PATH ANALYSIS

Based on the **geographic location** at **latitude 23.005972° N** and **longitude 72.249801° E**, within the GMT+05:30 timezone. The sun path diagram illustrates that on this date, the sun rises at 06:11 AM and sets at 18:24 PM, offering a **daylight duration of 12 hours and 12 minutes**, with the **solar azimuth** and **altitude peaking at 131.08° and 59.26°** respectively around midday. The analysis reveals that the building's orientation and height result in **significant shadowing**, particularly from the **northeast to the southwest**, with the **sun's trajectory** indicating prolonged exposure on the **eastern facade in the morning and western facade in the afternoon**. The **day-length** graph further confirms that July, being near the summer solstice, provides the longest daylight hours, suggesting a need for strategic shading devices or glazing on the east and west elevations to mitigate overheating, while the **northern facade remains relatively shaded**, offering potential for **passive cooling design strategies**. These insights are crucial for optimizing the building's energy performance and ensuring **occupant comfort** throughout the year.

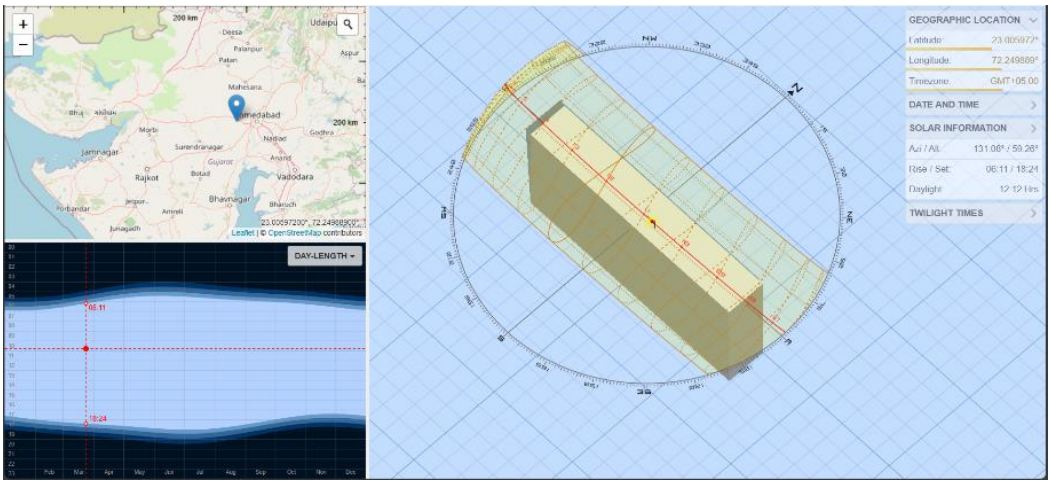


Figure 27. Sun path analysis

CHAPTER 4 :

CASE STUDIES

1. LIVE CASE STUDY I: HILTON GARDEN INN, PUNE
2. LIVE CASE STUDY II: TAJ LAKE FRONT, BHOPAL
3. DESK APPRAISAL CASE STUDY: TAJ VIVANATA, BANGALORE
4. DESK APPRAISAL CASE STUDY: AVASA, HYDERABAD

4.1. HILLTON GARDEN INN , PUNE

The Hilton Garden Inn, Pune Hinjawadi is a modern upscale business hotel that epitomises functional luxury and contemporary elegance. Strategically located in the heart of Pune's vibrant IT and corporate hub, the hotel caters to discerning business and leisure travellers seeking comfort, convenience, and global hospitality standards. Just 45 minutes from Pune International Airport, this dynamic property offers seamless connectivity to Rajiv Gandhi Infotech Park, MIDC, and the Mumbai–Pune Expressway.

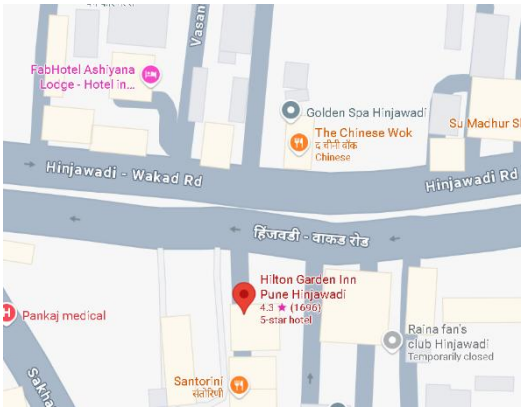


Figure 28 Hilton Building

PROJECT	HILLTON GARDEN INN
LOCATION	PUNE
CLIMATE	Humid Subtropical
TOPOGRAPHY	PLAIN LAND
ARCHITECT	JOI DESIGN
COMPLITION YEAR	2021
NO. OF ROOMS	144
SITE AREA	4.77 ACRE
FAR	2

4.1.1 LOCATION

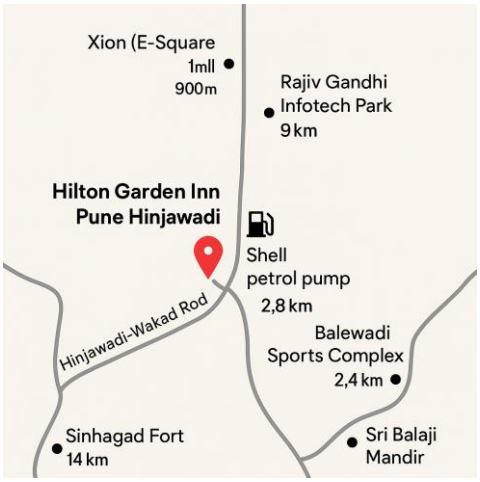
Address: Survey No. 40/3, Hinjawadi-Wakad Road, Hinjawadi Phase I, Pune – 411057, Maharashtra



- Landmark: Located next to Shell petrol pump and close to XION Mall
- Strategic Position:
  - In the heart of Rajiv Gandhi Infotech Park
  - Near International Biotech Park
  - Proximity to major IT companies like Infosys, TCS, Accenture, Cognizant, etc.

4.1.2 PROXIMITY

- Road Network:
  - Excellent connectivity via Mumbai–Pune Expressway
  - Easy access to Pimpri-Chinchwad industrial zones
- Approach: Direct access from Hinjawadi–Wakad Road



4.1.3 SITE LOCATION

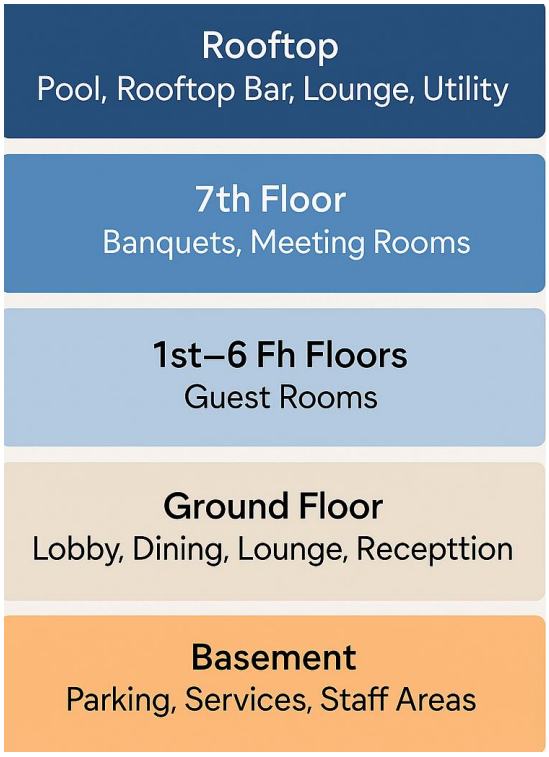


Figure 29 Site Location

4.1.4 FACILITIES

Connecting Rooms	Free parking	Free WiFi
Non-smoking rooms	Digital Key	EV charging
On-site restaurant	Outdoor pool	Fitness center
Room service	Meeting rooms	Pets not allowed

4.1.5 VERTICAL ZONING



4.1.6 AREA STATEMENT

Category: 5-Star Business Hotel
Total Guest Rooms: 144
Total Built-Up Area (BUA): ~9,069 m² (≈ 97,600 sq. ft)
Structure: G + 6 Upper Floors + Rooftop Deck + Basement

Guest Accommodation Zone

Sub-Zone	Qty / Notes	Area (m²)
King Rooms	70 units @ 28 m²	1,960
Twin Rooms	40 units @ 28 m²	1,120
Family Rooms / Suites	34 units @ avg. 32 m²	1,088
Room Corridors	Carpeted, 1.8–2m wide (all floors)	~500
Service Rooms	Housekeeping, janitor closet per floor	~60
Total – Zone 1		~4,728 m²

2. F&B (Food & Beverage)

Outlet	Capacity / Design Details	Area (m²)
Garden Grille	All-day dining, open kitchen concept, buffet + à la carte	220
Garden Bar / Lounge	Lounge-style seating, bar counter, bar-back wall, TV units	80
Pavilion Pantry	24/7 grab & go retail, chillers, snacks	25
Total – Zone 2		~325 m²

3. Meeting & Event Spaces

Component	Capacity / Fit-Outs	Area (m²)
Ballroom	Max 400 pax theatre style; divisible partitions	414
Meeting Room	U-shape/boardroom layouts, projector, AV panels	80
Pre-function Area	Waiting zone, buffet service counters	70
Total – Zone 3		~564 m²

4. Recreation & Wellness

Facility	Fit-Out / Equipment	Area (m²)
Fitness Center	Cardio machines, weights, changing room	80

Facility	Fit-Out / Equipment	Area (m²)
Rooftop Pool Deck	Lounge seating, wooden deck, safety barriers	180
Outdoor Lounge	Bar stools, partial pergola, planter beds	50
Total – Zone 4		~310 m²

5. Lobby & Public Interface

Sub-Zone	Details	Area (m²)
Main Lobby	Double-height, feature lighting, art wall	200
Reception + Concierge	Front desk, check-in kiosk, concierge desk	60
Business Center	3–4 work pods, Wi-Fi, printers, teleconferencing	60
Total – Zone 5		~320 m²

6. Back-of-House (BOH) & Services

Functional Areas	Description	Area (m²)
Main Kitchen + Pantry	Receiving, cooking line, cold storage	~400
Laundry & Linen Room	Washing, drying, sorting zones	~300
Staff Dining & Lockers	Seating for 40, change rooms, WC	~200
Engineering Room	UPS, HVAC, panel boards	~250
Admin Offices & HR	GM cabin, staff meeting room, HR, security	~200
Waste & Garbage Segregation	Organic + Inorganic zones, pest-proofing	~100
Stores (General + F&B)	Dry store, liquor store, chemical room	~200
Total – Zone 6		~1,800–2,200 m²

7. Circulation, Lifts, Vertical Cores

Component	Features	Area (m²)
Elevators (3 total)	2 guest + 1 service lift, SS finish	~90
Fire Staircases	2 shafts, fire-rated doors	~120
Guest Corridors	On all floors; 1.8–2m wide	~500–600
MEP Duct Shafts	Plumbing, HVAC risers, electrical shafts	~300

Component	Features	Area (m²)
Total – Zone 7		~1,050 m²

4.1.7 GUEST ROOM TYPOLOGY

Total there are 152 rooms which are majorly classified into 4 categories:

- King Room: Standard double bed configuration.
- King Guest Room with Hill View: Same as King but with scenic views.
- Family Room: Larger layout for families or groups.
- Twin Room: Two separate single beds

KING ROOM

The signature feature of the King Room at Hilton Garden Inn Pune Hinjawadi is its perfect blend of comfort, functionality, and scenic views, tailored for modern travelers. The room offers a spacious king-size bed with ergonomic design, a dedicated work area with an adjustable chair, and floor-to-ceiling windows in select rooms that provide panoramic views of the Pune skyline or Mhatoba Hills.

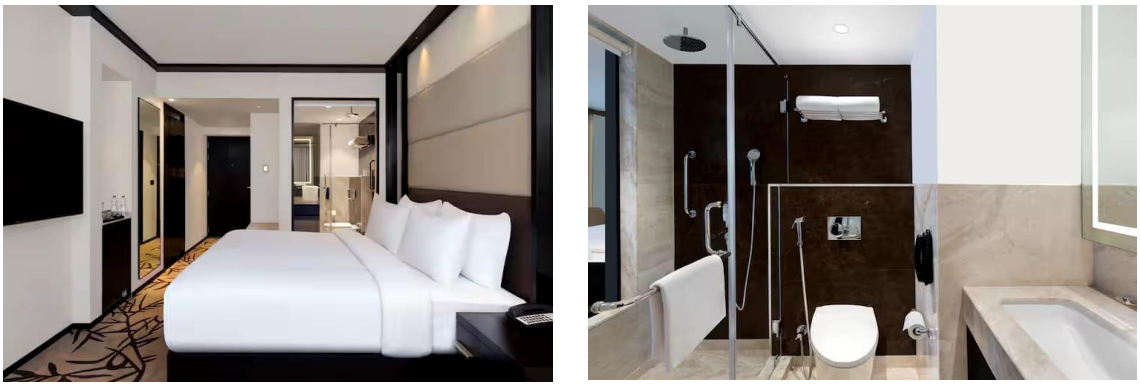


Figure 30 King Room

- Area: Approx. 27–30 sq. m (290–325 sq. ft)
- Occupancy: 2 Adults (1 Child with crib/rollaway bed on request)
- Bed Type: 1 King-size bed
- Amenities:

- 40” HD TV with satellite channels
- Free Wi-Fi
- Work desk with ergonomic chair
- Tea/coffee maker, minibar (on request)
- Digital Key access (via Hilton Honors app)
- Blackout curtains, iron & board, wardrobe

 Bathroom: Walk-in shower, premium toiletries, hairdryer

 Signature Feature: Balanced business-leisure layout with ergonomic furniture and tech conveniences, ideal for solo or couple stays.

King Guest Room with Hill View

This premium variant of the King Room offers a more scenic and tranquil experience, thanks to its floor-to-ceiling windows that frame sweeping views of the Mhatoba Hills and Pune’s western skyline. Sized at about 30 square meters (~325 sq ft), it features a luxurious king-size bed, a dedicated work area, blackout curtains, and soundproofing for maximum privacy. Along with standard amenities like Wi-Fi, smart HDTV, and mini-fridge, this room enhances the stay with enhanced lighting, elevated positioning, and premium linens for a serene retreat.




Figure 31 King Guest Room with Hill View

- Area: Approx. 30 sq. m (325 sq. ft)
- Occupancy: 2 Adults
- Bed Type: 1 King-size bed
- Amenities:
    - Large window with hill or skyline views
    - All core room amenities: Wi-Fi, TV, tea/coffee, digital key

    - Desk with scenic view, plush chair
    - Soundproofing and blackout curtains
- Bathroom: Stylish bath with walk-in shower and premium toiletries
- Signature Feature: Panoramic views of Mhatoba Hills, offering a serene, elevated atmosphere perfect for relaxation.

3. Twin Room

The Twin Room is ideal for friends, colleagues, or travelers seeking separate sleeping arrangements without compromising on comfort. Spanning approximately 27 to 30 square meters (~290 to 325 sq ft), the room features two single beds, ergonomically spaced with plush bedding. It comes with all the core Hilton amenities: a functional work desk, tea/coffee maker, mini-fridge, 40-inch flat-screen TV, and free Wi-Fi. The private bathroom includes a walk-in shower and signature Hilton toiletries. Guests can enjoy natural lighting from large windows and full blackout curtains for privacy and sleep quality.

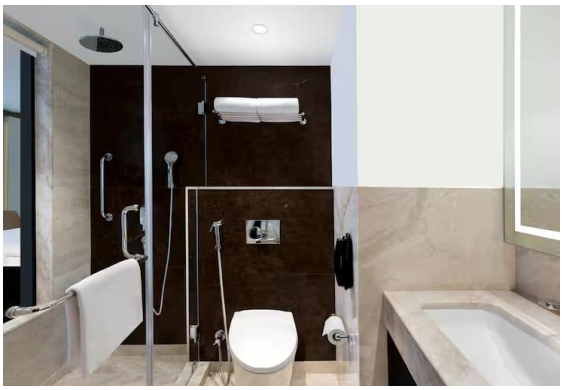



Figure 32 Twin Room

- Area: Approx. 27–30 sq. m (290–325 sq. ft)
- Occupancy: 2 Adults (separate beds)
- Bed Type: 2 Single beds
- Amenities:
    - Same core offerings as King Room
    - Individual beds with plush linen
    - Workstation, blackout curtains
    - Tea/coffee maker, minibar (on request)
    - 40” TV, free Wi-Fi
- Bathroom: Walk-in shower with toiletries
- Signature Feature: Ideal for colleagues or friends—offering privacy and shared comfort with separate bedding.

Family Room

The Family Room at Hilton Garden Inn Pune is designed with extra space and comfort in mind, catering especially to families or small groups. Covering around 30–32 square meters (~325–345 sq ft), this room includes a king-size bed with plush bedding and can easily accommodate 2 adults and 1–2 children with the option of an extra bed or crib. It includes a comfortable seating area, a generous work desk, and large windows offering a bright, airy ambiance. Like other rooms, it features individual air-conditioning, a 40-inch HD TV, free high-speed Wi-Fi, and a tea/coffee station. The bathroom is equipped with a walk-in shower, premium toiletries, and fresh towels.

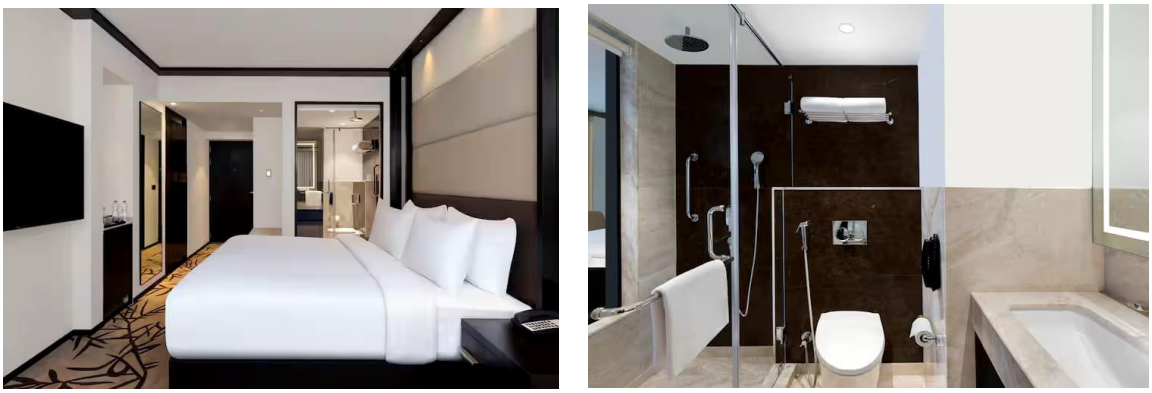


Figure 33 Family Room

Area: Approx. 30–32 sq. m (325–345 sq. ft)

Occupancy: 2 Adults + 1–2 Children

Bed Type: 1 King-size bed + space for crib/rollaway

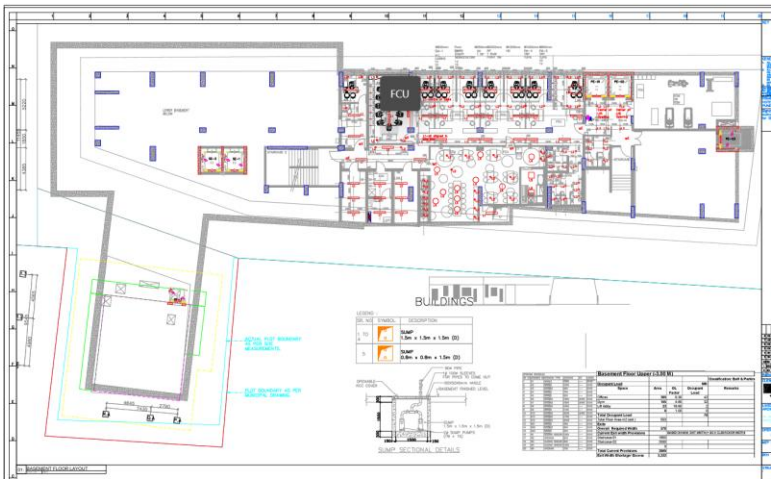
Amenities:

- Larger floor space and seating area
- 40” HD TV, free Wi-Fi
- Tea/coffee setup, mini-fridge
- Work desk, wardrobe, blackout curtains
- Iron & board, extra storage

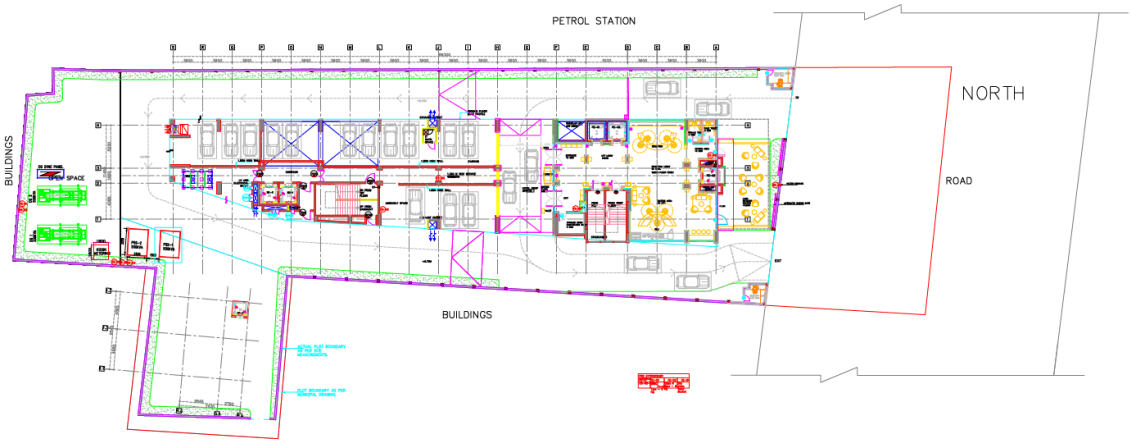
- Bathroom: Spacious layout with walk-in shower, toiletries
- Signature Feature: Extra space for families or longer stays, with flexibility for additional sleeping arrangements.

4.1.8 FLOOR PLANS

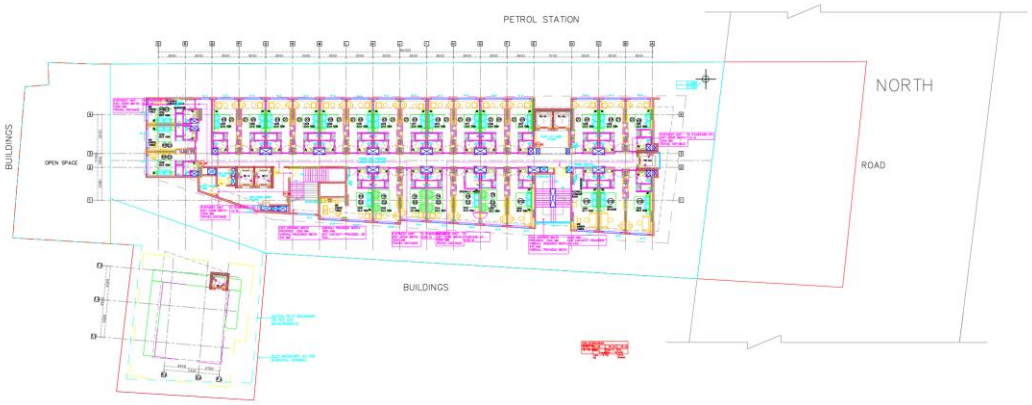
Basement Floor Plan



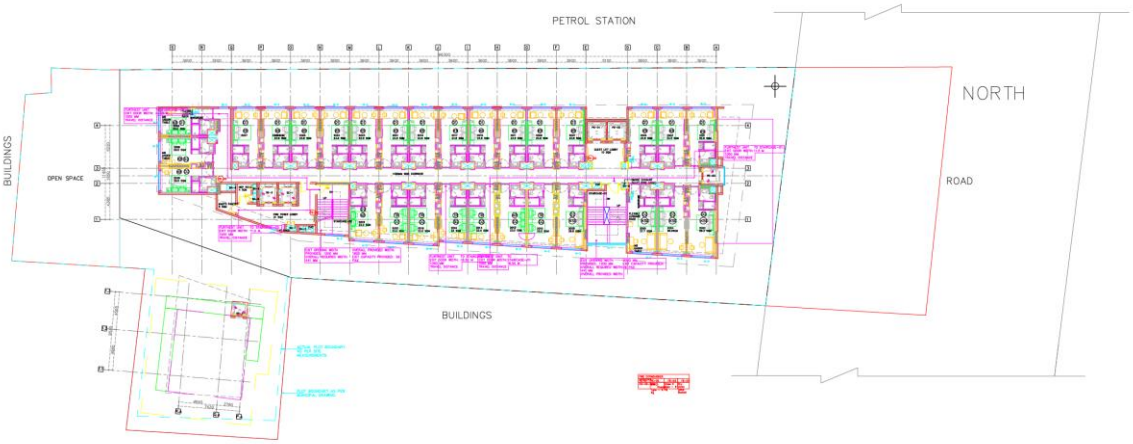
Ground Floor Plan



First Floor



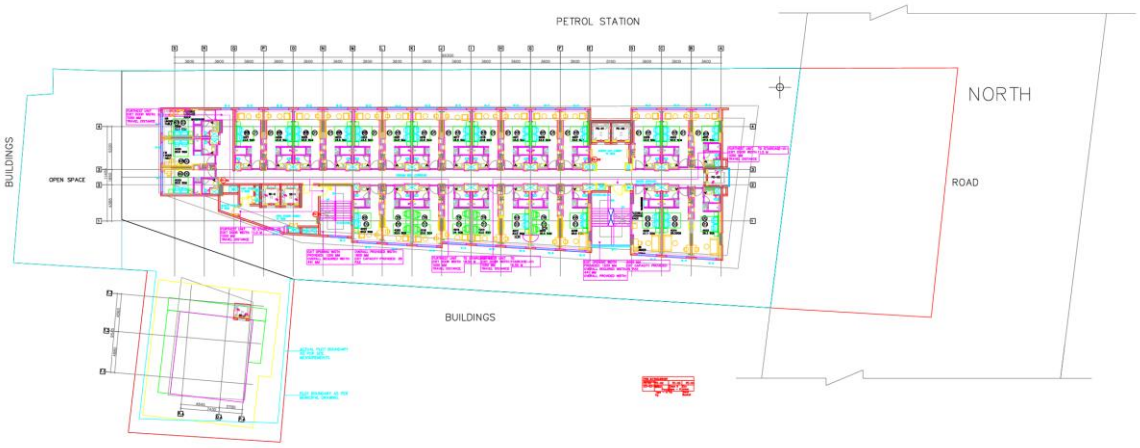
Second Floor



Third Floor



Fourth Floor



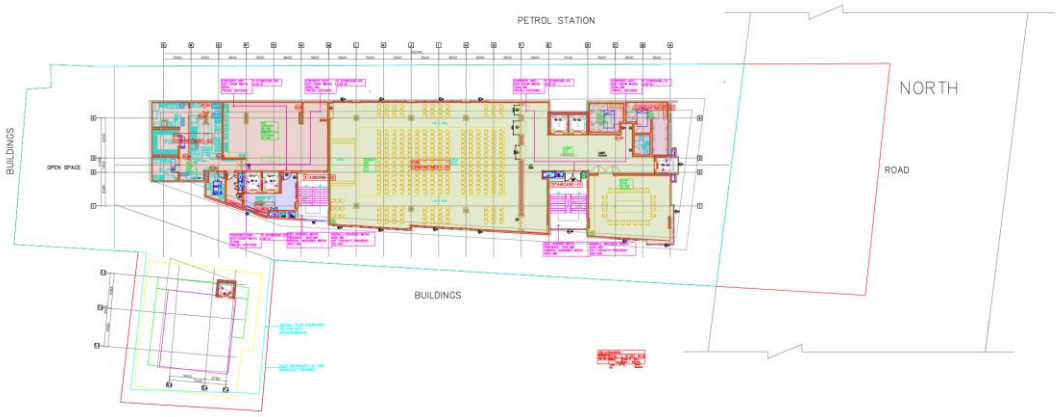
Fifth Floor



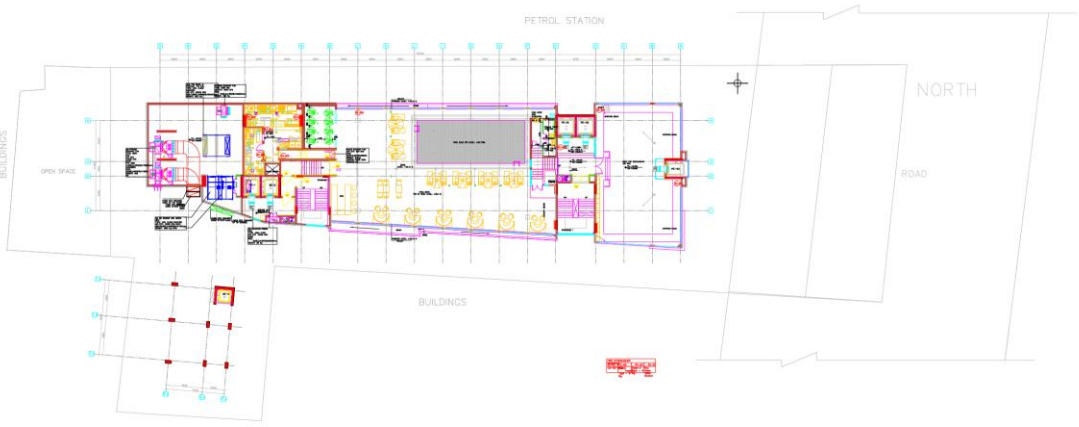
Sixth Floor



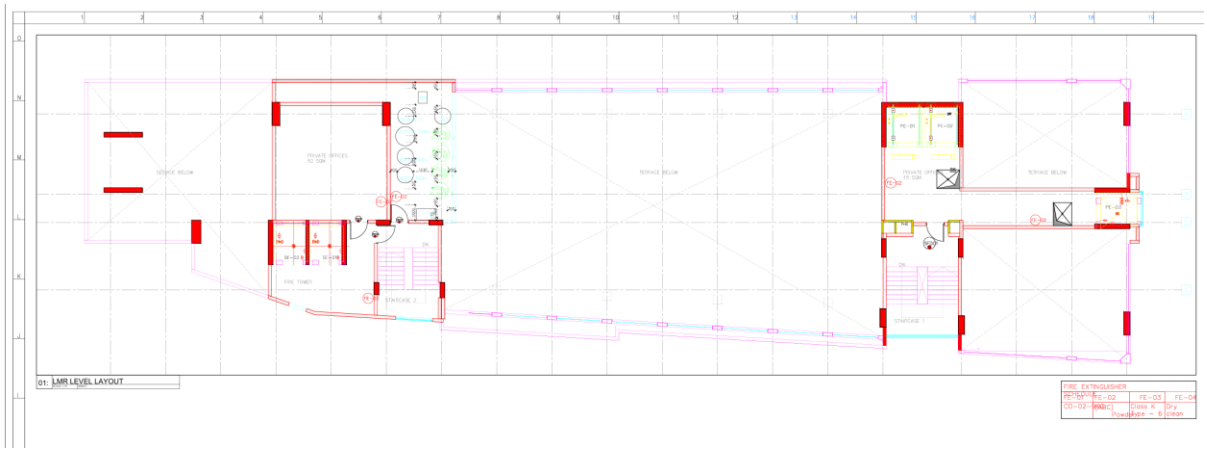
Seventh Floor



Terrace Floor Plan



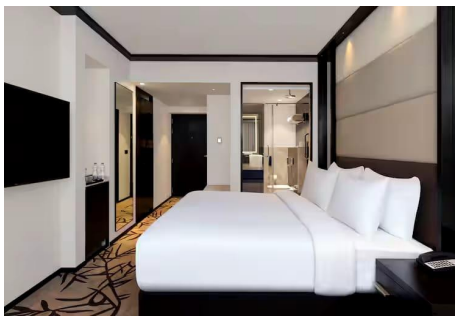
LMR Layout

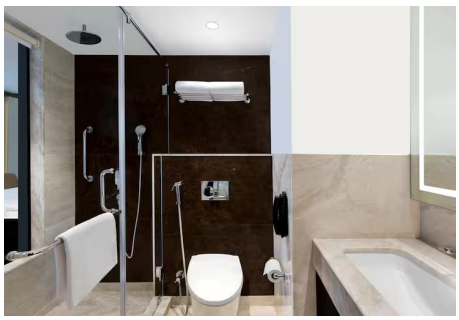


4.1.9 VIWES / INTERIOR SPACES

1. Guest Room Interiors

- King Room / Twin Room / Family Room / Hill View Room
    - Modern, neutral colou.r palettes (beige, grey, soft wood tones)
    - Ergonomic furniture with built-in lighting
    - Soft carpets or wooden flooring
    - Minimalist wall decor with local art accents
    - Floor-to-ceiling windows (in select rooms)
    - Compact bathrooms with walk-in glass showers and premium fittings





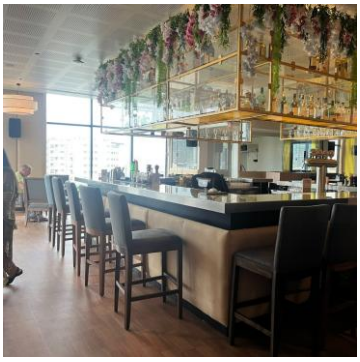
2. Food & Beverage Areas

The Garden Grille (All-Day Dining Restaurant)

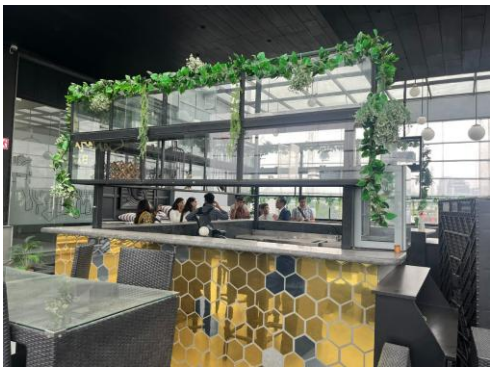
- Seating capacity: ~80–100 guests
- Contemporary design with soft lighting and open kitchen
- Buffet and à la carte services
- Indoor + semi-outdoor seating areas

The Garden Bar

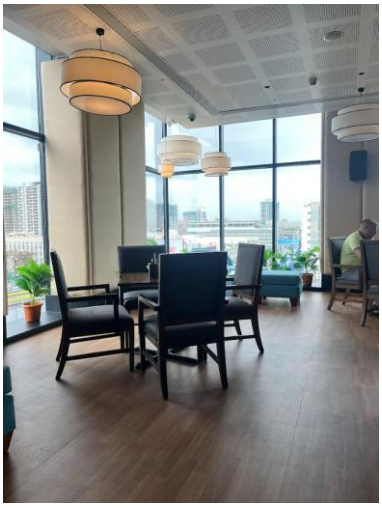
- Lounge-style seating with a chic bar counter
- Cocktail menu and light snacks
- Ambient lighting with casual café-style furniture



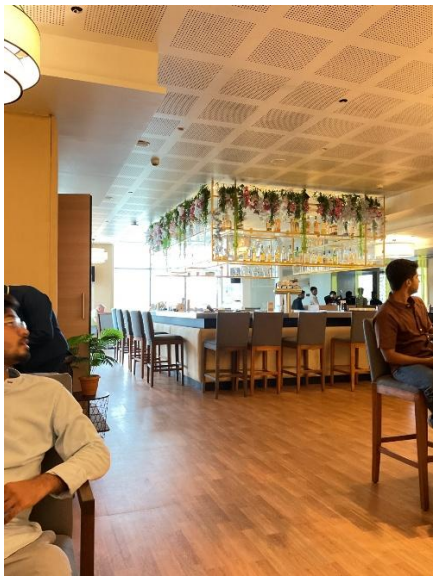
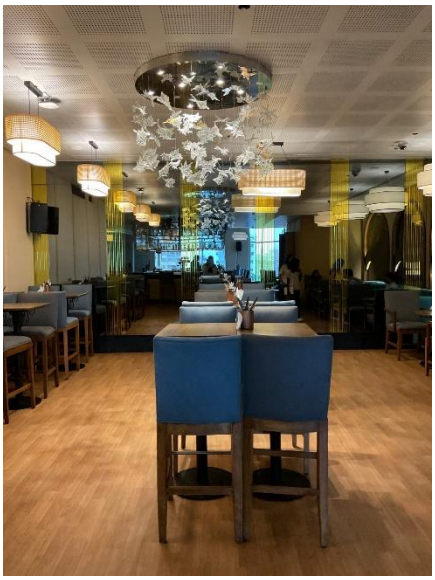






24/7 Pavilion Pantry

- Grab-and-go setup near the lobby
- Compact retail-style layout with beverages, snacks and essentials.

3. Business & Meeting Spaces

Meeting Rooms / Boardrooms

- Multiple meeting rooms (flexible partitioning)
- Capacity: 10 to 150 guests
- Sleek interiors with foldable seating, projection setup, and acoustic walls

- Neutral walls, wood-finish accents, and integrated A/V equipment

Business Center

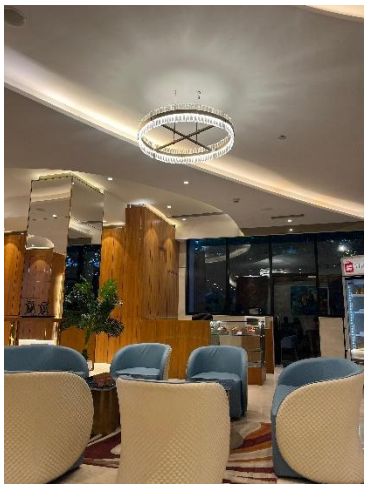
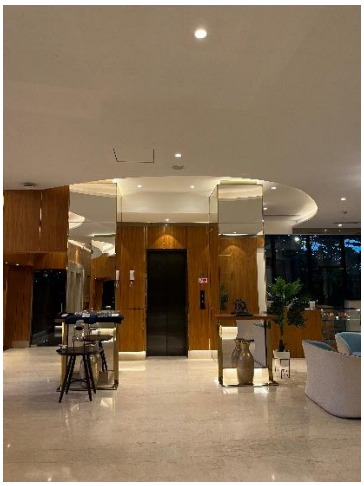
- 24/7 access for guests
- Workstations, printing/scanning stations
- Minimalist layout with enclosed cubicles

4. Lobby & Reception

- Spacious double-height lobby with natural lighting
- Marble/tile flooring with modern chandeliers
- Soft-toned furniture with lounge seating
- Digital check-in kiosks and Hilton Honors Desk
- Art walls featuring local Pune-inspired design





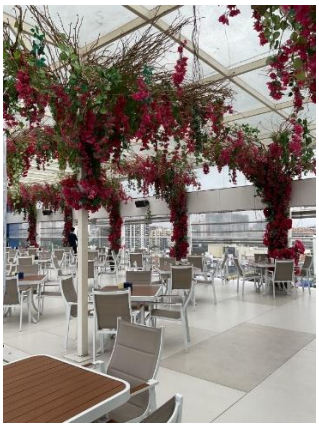
5. Wellness & Fitness

Fitness Center (Gym)

- Open 24/7
- Modern cardio and strength-training equipment
- Mirrors, rubber flooring, and water station
- TV screens and music system

6. Rooftop Pool & Lounge

- Rooftop swimming pool with wooden deck and loungers
- Cityscape and hill views from the terrace
- Adjacent outdoor seating for sunbathing or cocktails
- Poolside bar service available in the evenings









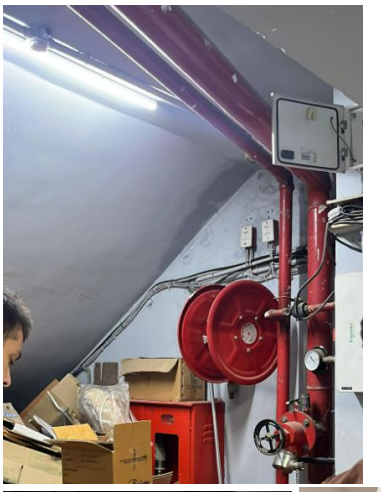
4.1.10 SERVICES

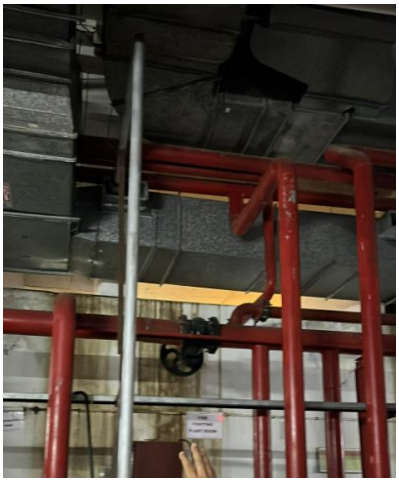
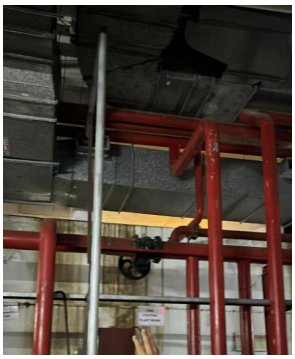
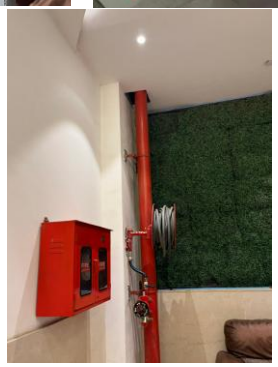
Electrical Services






FIRE FIGHTING






Water Supply



STP



RO Plant





HVAC







4.4.2. TAJ LAKEFRONT, BHOPAL

2.1 INTRODUCTION

- The Taj Lakefront, Bhopal epitomises true luxury. Overlooking the upper lake and just 25 minutes from the international airport, this iconic landmark symbolises the soul of Bhopal and its vision for tomorrow. The magnificent structure by the lakefront redefines fine living with its modern interiors, ornate and luxurious finishes. The design is intuitive to the region and inspired by the bell metal craft of Tikamgarh, the lakes and Zari work of Bhopal, the paisley prints of Bagh, the Durries of Sironj, and the Terracotta art of the state's tribal areas.

- Ready to be the new landmark of the city, it opens its doors to the world with 152 guest rooms, multi-cuisine and award-winning restaurants, recreation facilities, Jiva spa, modern meeting spaces, well-equipped conference rooms, and the city's largest banqueting facilities.



Figure 34 Taj Bhopal View

Details:

PROJECT	TAJ LAKEFRONT
LOCATION	BHOPAL
CLIMATE	Humid Subtropical
TOPOGRAPHY	PLAIN LAND
ARCHITECT	JOI DESIGN
COMPLITION YEAR	2021
NO. OF ROOMS	152
SITE AREA	4.77 ACRE
FAR	2

4.2.2 LOCATION

It is close to the Van Vihar National Park, Sanchi Stupa, National Museum of Mankind, Taj-ul-Masajid, and many such wonders of the city. Located near Bhadbhada Road Chauraha, Link Rd Number 3, Bhopal, Madhya Pradesh Overlooking the upper lake.

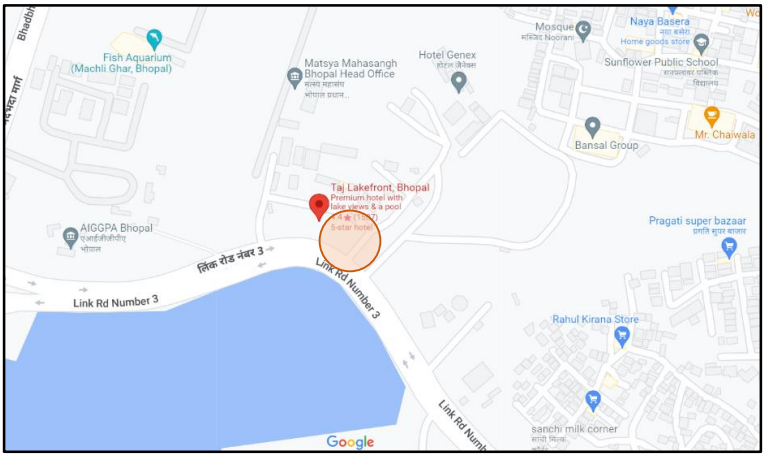


Figure 35 Location

4.2.3 SITE



Figure 36 Site Location

Site Boundary
Circulation within the Site

Site Characteristics:

- The site has kind of trapezium shape having curved edge in front.
- As we look into the site planning of taj the front part is designed with pleasing landscape by which guests can connect with its lush greenery.
- Back part of the site is used for the services.
- The building shape is evolved by the curved front edge of the site.
- Circulation of the site is designed in that way so that no congestion will occur.

4.2.4 FACILITIES

These are the following facilities and amenities that Hotel Taj is providing to their guests.

Outdoors
- ✓ Outdoor furniture
- ✓ Sun terrace
- ✓ Terrace
- ✓ Garden

Activities
- ✓ Evening entertainment
- ✓ Games room

Food & Drink
- ✓ Bar
- ✓ Restaurant

Internet

WiFi is available in all areas and is free of charge.

Parking

Free private parking is possible on site (reservation is not needed).
- ✓ Electric vehicle charging station

Reception services
- ✓ Invoice provided
- ✓ Concierge service
- ✓ Currency exchange
- ✓ Express check-in/check-out
- ✓ 24-hour front desk

Cleaning services
- ✓ Daily housekeeping
- ✓ Trouser press Additional charge
- ✓ Ironing service Additional charge
- ✓ Dry cleaning Additional charge
- ✓ Laundry Additional charge

Business facilities
- ✓ Business centre
- ✓ Meeting/banquet facilities

Safety & security
- ✓ Fire extinguishers
- ✓ CCTV outside property
- ✓ CCTV in common areas
- ✓ Smoke alarms
- ✓ Security alarm
- ✓ Key card access
- ✓ 24-hour security

General
- ✓ Air conditioning
- ✓ Lift
- ✓ Family rooms
- ✓ Non-smoking rooms
- ✓ Room service

Outdoor swimming pool

Free! All pools are free of charge
- ✓ Open all year
- ✓ Opening times
- ✓ All ages welcome
- ✓ Pool/beach towels
- ✓ Pool bar
- ✓ Infinity pool
- ✓ Pool is on rooftop

Wellness
- ✓ Fitness
- ✓ Full body massage
- ✓ Hand massage
- ✓ Head massage
- ✓ Couples massage
- ✓ Foot massage
- ✓ Neck massage
- ✓ Back massage
- ✓ Spa/wellness packages
- ✓ Spa lounge/relaxation area
- ✓ Spa facilities
- ✓ Pool/beach towels
- ✓ Massage
- ✓ Spa and wellness centre Additional charge
- ✓ Fitness centre

4.2.5 APPROACH ROAD

- 18 m wide arterial road named Link RD number 3 is connecting the Taj hotel to the various locations of the city.
- 12 m wide service lane is given in the right side of the site.

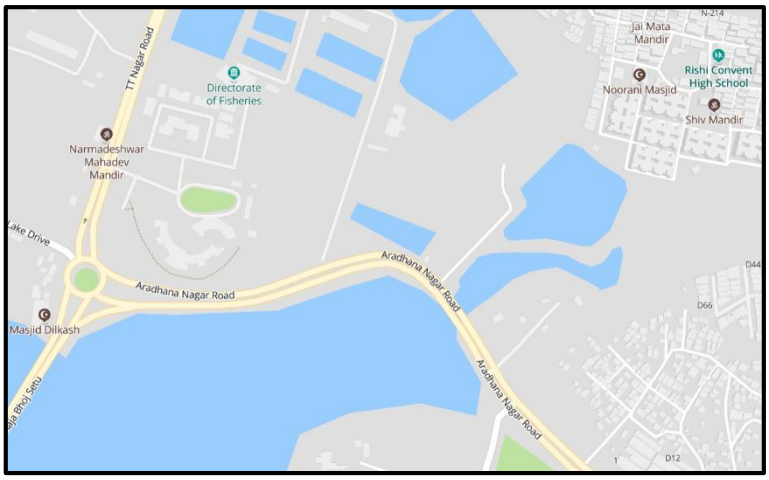


Figure 37 Approach Roads

4.2.6 VERTICAL ZONING

Here is the conceptual section of the taj hotel to explain the vertical zoning.

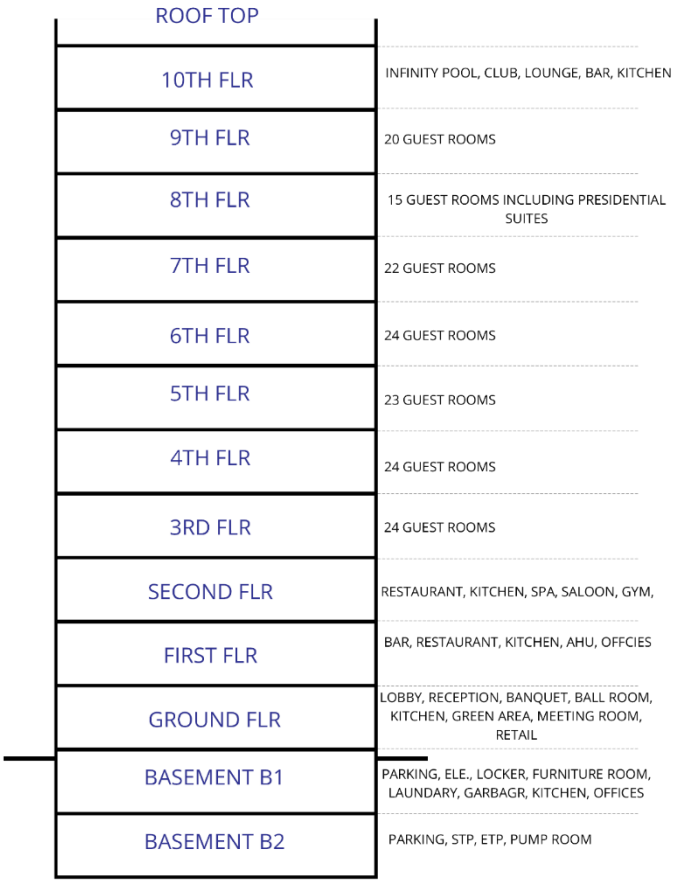


FIGURE 4: VERTICAL ZONING

4.2.7 AREA STATEMENT

Name		No. of Units	Area (sq.m.)	Total Area	%
	Total No. of Keys	152			
	No. of Floors	10			
A.	**Guest Room Mix**				
	Executive Suite	141	66	9306	80
	Twin Bedroom	5	33	165	10
	King bedroom	5	33	165	10
	Presidential Suite	1	152	152	
	Total Area (Sum)			**9788**	
B.	**Guest Floor Services**				
I	**Corridor Area**				
	Type Floor Corridor	1	180	**180**	30
II	**Housekeeping Static or Typical Floors**				
	Housekeeping Static or Typical Floors	1	185	**185**	32
III	**Lifts**				
	Guest Elevators	2	55	**110**	19
	Service Lift Lobby	2	55	**110**	19
IV	**Fire Protection**				
	Fire Escape Stairs	2	30	**60**	10
	Total Area (Sum)			**585**	
C.	**Public Areas**				
I	**Entrance Lobby**				
	Port Cochere	1	40	**40**	15
	Entrance Lobby Waiting Areas Front Desk	1	100	**100**	38
	Front Desk	1	40	**40**	14
	Luggage Store	1	15	**15**	6
	Bell Man	1	4	**4**	8
II	**Business Centre**				
	Store	1	36	**36**	13
			5	**5**	2
III	**Public Utilities**				
	Public Toilet	1	30	**30**	10

	Total Area (Sum)			**270**	
D.	**F&B Outlets**				
	Bar (Special) - 30 Covers	1	100	**100**	25
	Multi-Cuisine Restaurant - 120 Covers	1	300	**300**	75
	Total Area (Sum)			**400**	

E.	**Banquets**				
	Banquet Hall	2	225	**450**	62
	Pre-Function Area	2	80	**160**	22
	Conference Room	1	50	**50**	6
	Banquet Toilets	1	60	**60**	10
	Total Area (Sum)			**720**	

F.	**Recreation Facilities**				
	Swimming Pool	1	100	**100**	32
	Pool Change Room	1	50	**50**	16
	Gym	1	100	**100**	32
	Massage Room	1	6	**6**	10
	Saloon	1	50	**50**	10
	Total Area (Sum)			**306**	

G.	**Retail Archade**				
	Retail Shops	1	25	**25**	
	Total Area (Sum)			**25**	
BOH					

A.	**Material Management**				
	Truck Dock	2	20	**40**	34
	Holding Area	1	38	**38**	34
	Veg Wash	1	2.5	**2.5**	2
	Purchase & Reciving Off	1	20	**20**	15
	Purchase Office Manager	1	18	**18**	15
	Total Area (Sum)			**118.5**	

B.	**Main Store**				
	General Store	1	120	**120**	75
	Linen	1	10	**10**	6

	Unassign Store	1	10	**10**	6
	Liquor	1	10	**10**	6
	Crockery	1	6	**6**	3
	Mis	1	2	**2**	2
	Fuel	1	2	**2**	2
	Total Area (Sum)			**160**	

C.	**Garbage**				
	Loading	1	20	**20**	30
	Trash Garbage(Dry)	1	8	**8**	12
	Trash Garbage Refrigerator (wet)	1	15	**15**	24
	Garbage Truck	1	12	**12**	18
	Coal Room	1	5	**5**	8
	Circulation Space	1	5	**5**	8
	Total Area (Sum)			**65**	

D.	**Front Office : Admi/Acc/IT**				
	GM	1	151	**151**	44
	Sec to GM	1	9	**9**	2
	FO Mgr Couples as duty manager)	1	5	**5**	1
	Revenue Manager	1	8	**8**	2
	Reservation Office	1	8	**8**	2
	Work Station	1	25	**25**	8
	Discussion Room (Commom Meeting)	1	4	**4**	1
	Chief Accountant- Refer Staff Reqmnt	1	15	**15**	5
	Credit Manager	1	8	**8**	2
	Cashier	1	5	**5**	1
	Controller	1	8	**8**	2
	Payroll Manager	1	5	**5**	1
	Account Record Room	1	10	**10**	2
	Meeting room	1	10	**10**	2
	Computer Room	1	17	**17**	8
	UPS	1	35	**35**	12
	Recorde	1	10	**10**	2
	Storage and Copy8ing	1	9	**9**	2
	Total Area (Sum)			**347**	

E.	**Sales**				
	Rooms Mgr	1	8	**8**	18

	Banquet Mgr	1	8	**8**	18
	Workstation	2	5	**10**	22
	Discussion Room	1	10	**10**	22
	Storage and Copying	1	8	**8**	20
	Total Area (Sum)			**44**	

F.	**F&B**				
	Multi Cuisine Main Kitchen	1	85	**85**	**20**
	Room Services Main Kitchen	1	20	**20**	5
	Pastery	1	32	**32**	7
	Bakery	1	20	**20**	4
	Commissary prep Kitchen	1	40	**40**	9
	Common Dishwash	1	20	**20**	5
	Central Potwash	1	12	**12**	2
	Pot Store	1	8	**8**	3
	Banquet BOH & Store	1	130	**130**	30
	Cold Kitchen	1	18	**18**	4
	Café Kitchen	1	12	**12**	2
	Show Kitchen\Back Pantry Area for bar	1	8	**8**	2
	Bar Counter	1	15	**15**	3
	Chief Counter	1	5	**5**	2
	Chief Office	1	8	**8**	2
	Total Area (Sum)			**433**	

G.	**House Keeping**				
	Issue / Trailer / Dirties Collection	1	5	**5**	4
	House Keeper Executive	1	10	**10**	10
	House Keeping Assistant	1	8	**8**	8
	Hsk Office + House Keeper (as per Ap.)	1	16	**16**	15
	Dead Store	1	30	**30**	28
	F&B Circulatipon	1	5	**5**	5
	Guest Supply Store	1	10	**10**	10
	Bulk Lenin Store	1	5	**5**	5
	Tailor	1	10	**10**	10
	Upholestry Store	1	5	**5**	5
	Lost & Found	1	5	**5**	5
	Total Area (Sum)			**104**	

H.	**Human Resources**				

	HR Mgr	1	8	**8**	14
	Sec	1	4	**4**	7
	Traing Room	1	20	**20**	35
	Training Mgr	1	4	**4**	7
	Discussion	1	20	**20**	35
	Total Area (Sum)			**56**	

K	**Security & Time Office**				
	Staff Entry & Time Keeper/cctv	1	10	**10**	
	Security Mgr	1	8	**8**	
	Total Area (Sum)			**18**	

L	**Repair and Maintenance**				
	Head of Engg	1	8	**8**	
	Asst Engg	1	8	**8**	
	Secured Store	1	10	**10**	
	Paint Shope	1	10	**10**	
	Engg Store	1	10	**10**	
	Carpentry	1	10	**10**	
	Spare Parts	1	5	**5**	
	Total Area (Sum)			**61**	

J.	**Staff Facility**				
	Male Toilets & Lockers	1	100	**100**	
	Male Executive Toilets and Lockers	0	0	**0**	
	Female Toilets and Lockers	1	70	**70**	
	Kitchen	1	25	**25**	
	Staff Cafeteria	1	90	**90**	
	Staff Recreation Area	1	15	**15**	
	Total Area (Sum)			**300**	

I.	**Miscelienouis**				
	Divers Rest Room	1	15	**15**	
	Drivers Toilet	1	22	**22**	
	Microbiologist	1	8	**8**	
	Total Area (Sum)			**45**	

M.	Other BOH (exer mech)				
I	**Mechanical Areas**				
	LV Room	1	56	**56**	
	Indoor Transformers	2	22	**44**	
	LT Panel	1	74	**74**	
	DG Generator Room	1	97	**97**	
	Chiller Plant Room	1	125	**125**	
	Rainwater Tank	105 Cubic Meter			
	Municipal Tank	123 Cubic Meter			
	Raw Water Tank	123 Cubic Meter			
	Fire Tank	105 Cubic Meter			
	Treated Water Tank	123 Cubic Meter			
	Salt Storage	1	12	**12**	
	Pump Room (Fire)	1	20	**20**	
	Pump Room (Raw + Soft + WTP)	1	60	**60**	
	Boiler Room with Pump and Heat	1	58	**58**	
	STP with Pump and Equipment's	1	80	**80**	
	Work Shop	1	22	**22**	
	Engineering Office	1	8	**8**	
	Engineering Store	1	10	**10**	
	Control Room	1	15	**15**	
	Underground Oil Storage Tank	1	190	**190**	
	Swimming Pool Filtration Plant	1	12	**12**	
	Total Area (Sum)			**487**	
II	**Mechanical; Areas on Terrace**				
	Cooling Towers	1	135	**135**	
	Overhead Tank	1	12	**12**	
	Ventilation/Exhaust Fans	14	12	**168**	
	Flushing Tanks/ Cooling Tower Tanks	3	9	**27**	
	Staircase Pressurisation Fans	3	11	**33**	
	Lift Pressurisation Fans	2	2.2	**4.4**	
	Sorubber for Kitchen Exhaust	1	5	**5**	
	Total Area (Sum)		186.4	**384.4**	

N.	Parking				
	Basement 2			1700	
	Basement 1			1420	
	Total Wall Thiockness and Circulation			**3120**	

4.

4.2.8 FLOOR PLANS

- **Basement 2 Plan:**

  - Basement 2 is comprised with services amenities like STP, ETP WTP, Fire Tank, Domestic Water Tank etc. and parking spaces.

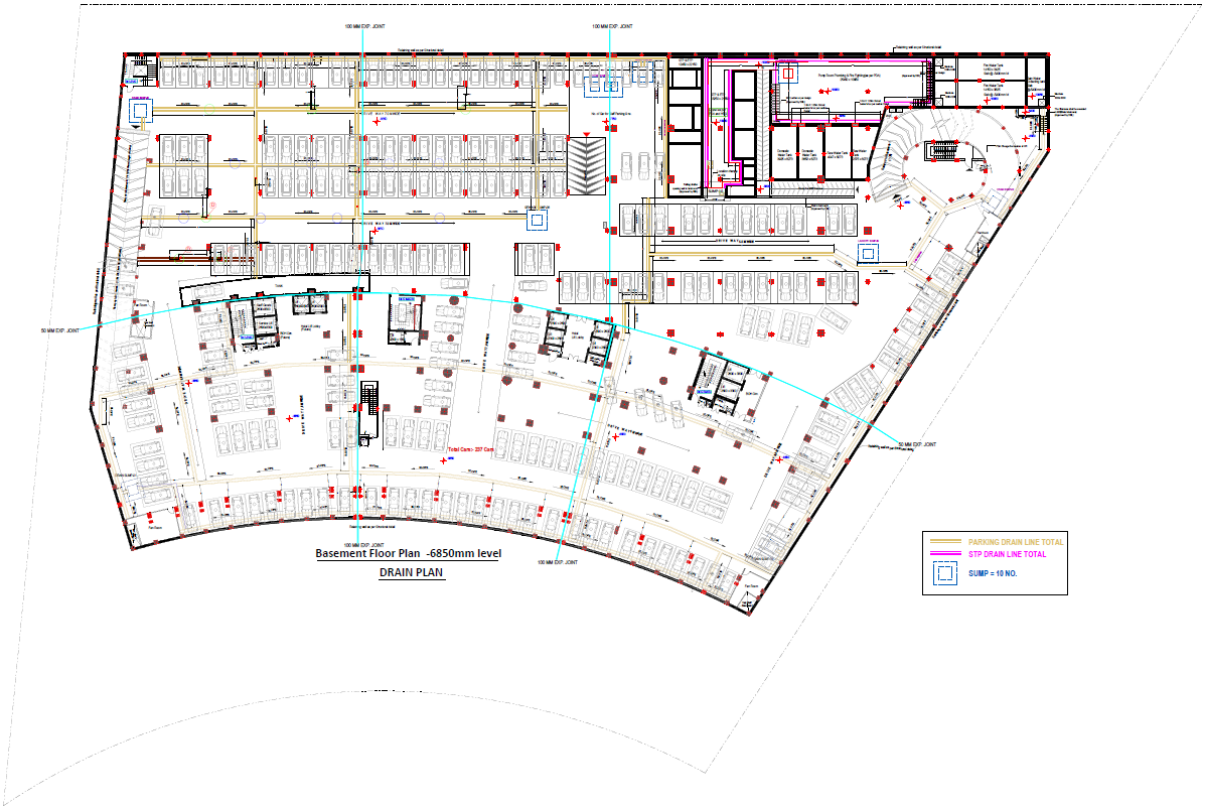


FIGURE 5: BASEMENT 2 PLAN

- **Basement 1 Plan:**

  - Basement 1 mainly consist of different types of Offices spaces like Housekeeping office , Finance Office, Sales office, Engg office and Canteen, Storage, Laundry spaces etc.
  - It also has parking spaces and services outlet.
  - All the staff of taj lakefront uses basement 1 as an entrance and parking space respectively.



FIGURE 6: BASEMENT 1 PLAN

- **Ground Floor Plan:**

  - The entrance lobby of the hotel has grand luxury feel as it has triple heighted spaces with very attractive false ceiling consist of cove lighting.
  - There is a separate entrance has been provided including Banquet Hall, Meeting room, conference rooms.
  - A Banquet Hall can be divided as 3 halls by automatic temporary panels.
  - Washroom for Banquet guests is accessible from Pre-Function Area which act as a buffer space for guest.

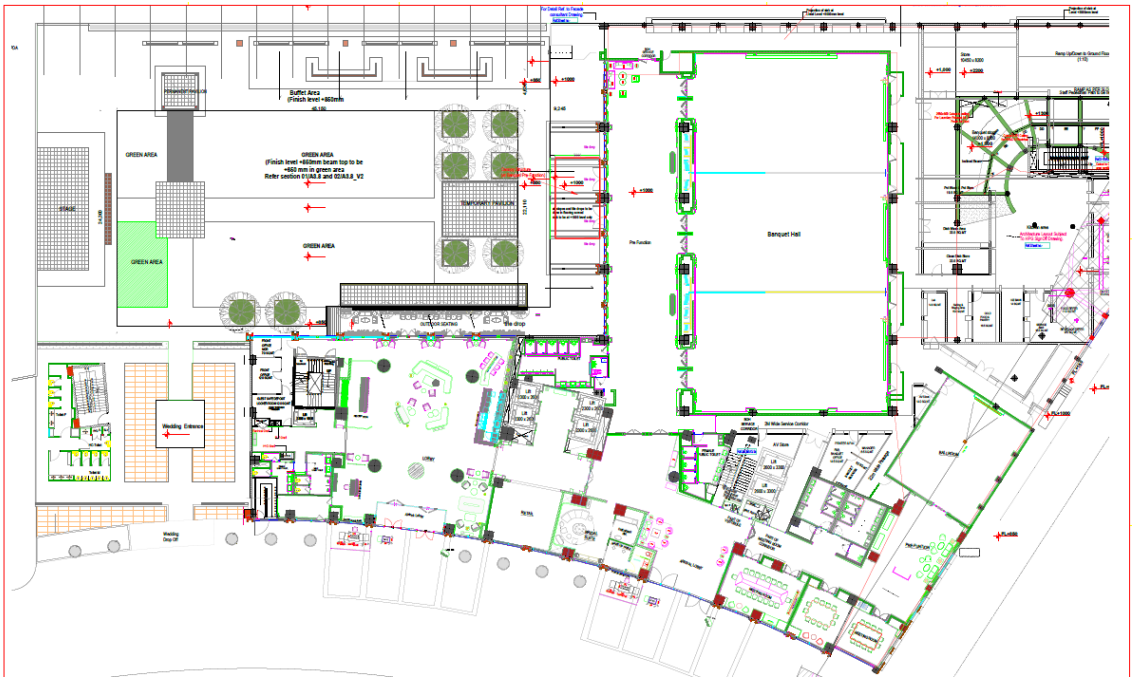


FIGURE 7: GROUND FLOOR PLAN

- **First Floor Plan:**

  - This floor has a Chinese Restaurant with a wonderful Chinese theme based interiors.
  - Private Dining Restaurants are also provided in this floor.

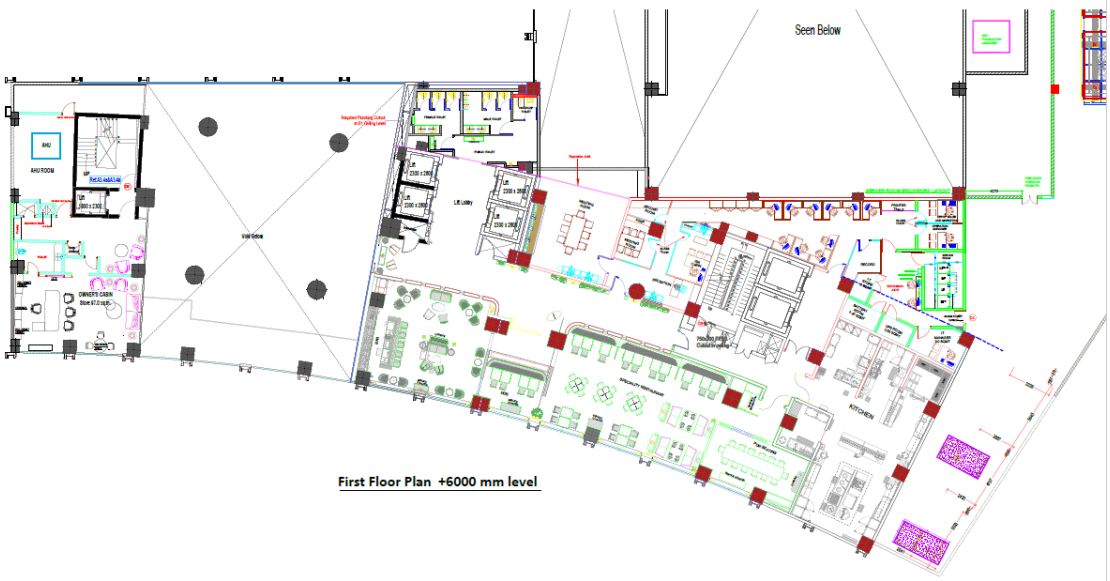


FIGURE 8: FIRST FLOOR PLAN

- **Second Floor Plan:**

  - Restaurant Seating's are provided in this floor.
  - Kitchen including cooking, store, washing space has been provided.
  - Live kitchen is also there.
  - Amenities like Gym, Spa & sauna, Saloon etc. are provided with top class facilities.



FIGURE 9: SECOND FLOOR PLAN

- **Typical Floor Plan (3rd to 7th) Floor :**

  - 24 guest rooms including Executive Suites, Twin Bedrooms are there in this floor.
  - Housekeeping Room are also there in this room for room services.
  - Specialty of these typical floor is that interior of lobby and corridors are fully different which gives different types of feeling at each different floor.



FIGURE 10: TYPICAL FLOOR PLAN (3RD TO 7TH FLOOR)

- **8th Floor Plan :**

  - 15 guest rooms including Executive Suites, King Bedrooms and 1 presidential suite are there in this floor.

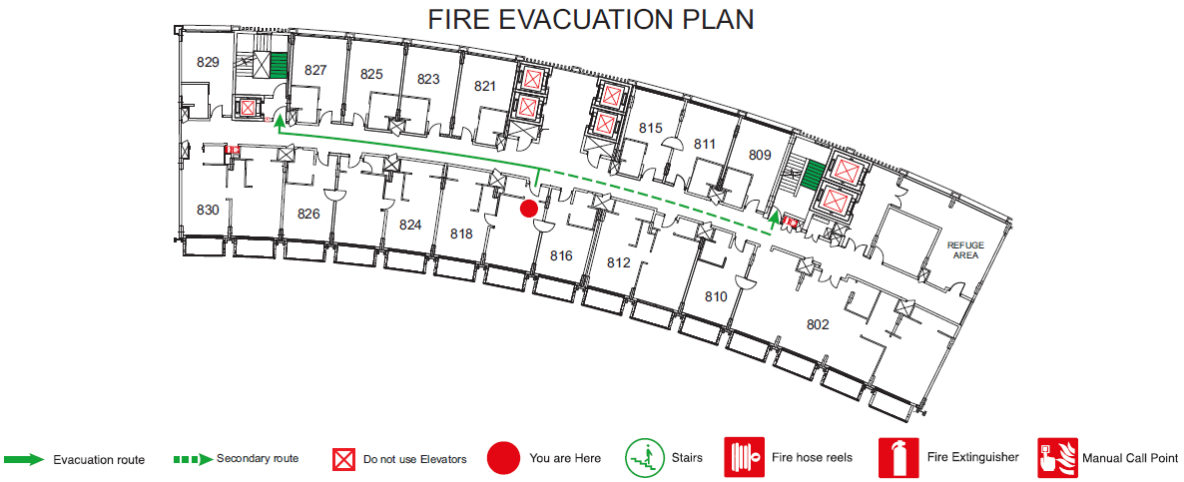


FIGURE 11: EIGTH FLOOR PLAN

- **9th Floor Plan :**

  - 20 guest rooms including Executive Suites, Twin Bedrooms are there in this floor.

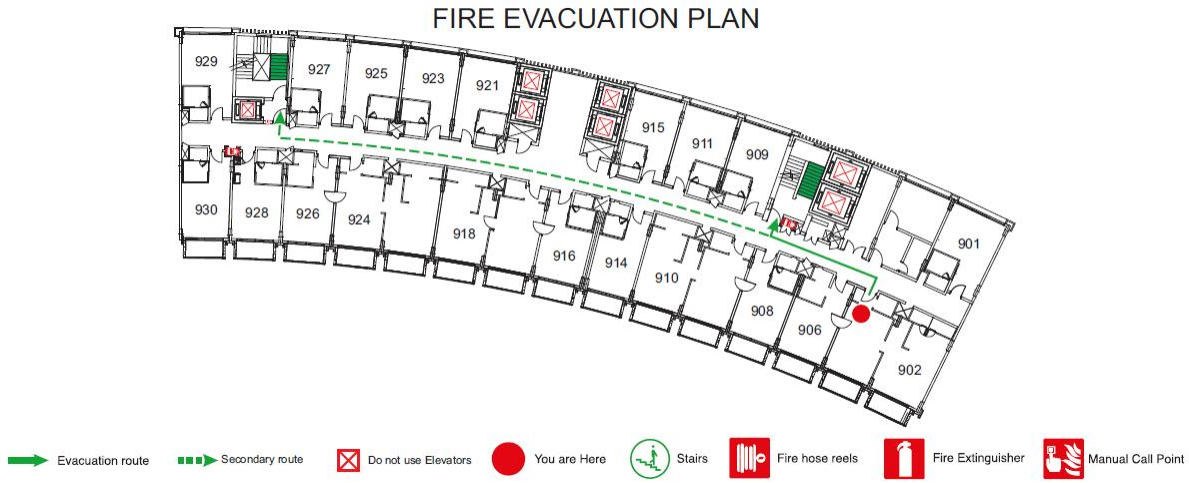


FIGURE 12: NINTH FLOOR PLAN

- **10th Floor Plan:**

  - Open terrace lounge, club area with the view of swimming pool is provided in the top floor of this Hotel.



FIGURE 13: TENTH FLOOR PLAN

4.2.9 GUEST ROOMS TYPOLOGY

Total there are 152 rooms which are majorly classified into 4 categories:

- Executive Suite
- Twin Room
- King Room
- Presidential Suite

- **Executive Suite**

Tranquility and luxury unite in the Executive Suites at the Taj Lakefront, Bhopal. Extravagant and spacious, these suites, with the option of interconnecting rooms, are ideal for vacationing with family and friends. The breakfast table, the plush seating, a dressing area and state-of-the-art bathrooms are the perfect setting that your memories deserve. Indulge in the breath-taking views of the lake and Taj's signature service for a truly luxurious retreat.





Size: 66 sq.m
Signature Feature: Spacious two-room suites overlooking the lake
Occupancy Details: Up to 3 guests. Max Adults: 3, Max Children: 2

OTHER CONVENIENCES

- Tea-coffee maker
- Forest Essentials bath amenities
- Air conditioning
- Separate living area
- Electronic safe.
- WiFi
- Iron & ironing board
- In-room bottled water
- Minibar
- Newspaper
- Full-length mirror, hair dryer, weighing scale
- 49-inch Smart LED TV



FIGURE 14: PLAN OF EXECUTIVE SUITE ROOM

- **Twin Room**

Framed by the picturesque backdrop of the hills, the Deluxe Rooms are the epitome of tranquillity and relaxation. The decor seamlessly merges the aesthetic philosophy of Madhya Pradesh with a European flair. Fully-equipped with quality amenities, including digital connectivity with smart TV and Taj's signature service, the Deluxe Rooms offer an unmatched experience of comfort. Includes complimentary access to the hotel gym and wet areas.





SIZE: 33 sq.m
SIGNATURE FEATURE: Spectacular vistas of the hills
Occupancy Details: Up to 3 guests. Max Adults: 3, Max Children: 2

OTHER CONVENIENCES

- Tea-coffee maker
- Forest Essentials bath amenities
- Choice of smoking & non-smoking accommodation
- Air conditioning
- WiFi
- Iron & ironing board
- In-room bottled water
- Minibar
- Newspaper
- Full-length mirror, hair dryer, weighing scale
- 49-inch Smart LED TV
- Shower Cubicle

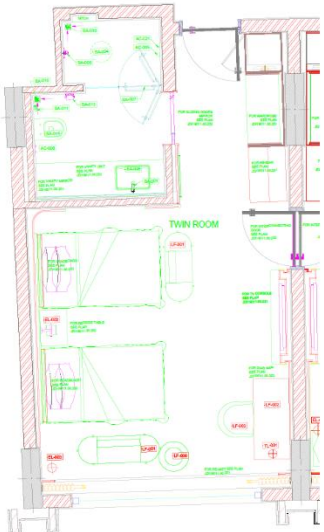


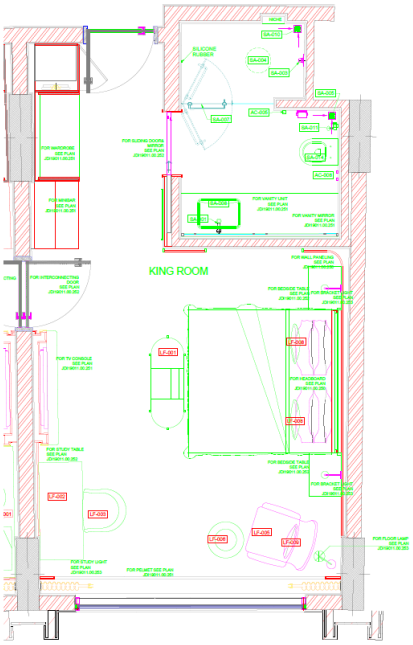
FIGURE 15: PLAN OF DELUXE TWIN BEDROOM

- **King Room**

Framed by the picturesque backdrop of the hills, the Deluxe Rooms are the epitome of tranquillity and relaxation. The decor seamlessly merges the aesthetic philosophy of Madhya Pradesh with a European flair. Fully equipped with quality amenities, including digital connectivity with smart TV and Taj's signature service, the Deluxe Rooms offer an unmatched experience of comfort. Includes complimentary access to the hotel gym and wet areas.



SIZE: 33 sq.m
SIGNATURE FEATURE: Spectacular vistas of the hills
Occupancy Details: Up to 3 guests. Max Adults: 3, Max Children: 2



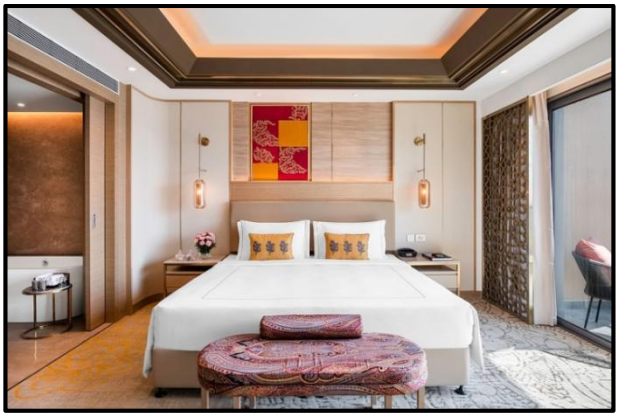
OTHER CONVENIENCES

- Tea-coffee maker
- Forest Essentials bath amenities
- Choice of smoking & non-smoking accommodation
- Air conditioning
- WiFi
- Iron & ironing board
- In-room bottled water
- Minibar
- Newspaper
- Full-length mirror, hair dryer, weighing scale
- 49-inch Smart LED TV
- Shower Cubicle

FIGURE 16: PLAN OF DELUXE ROOM KING BED

- **Presidential Suite**

Bhopal is the land of the Nawabs and Begums, and epitomizing this rich culture is the Presidential Suite of the Taj Lakefront, Bhopal. With interiors that give an ethereal glimpse into the bygone era and a private balcony in every room overlooking the glorious city, the Presidential Suite is a perfect union of the multitude of generations. A lavish experience, embodied by an elegant living room, a plush dining area and a palatial master bedroom, await your presence in the opulence of the Presidential Suite at the Taj Lakefront, Bhopal.



SIZE: 152 sq.m
SIGNATURE FEATURE: A regal experience in the heart of the country
Occupancy Details: Up to 3 guests. Max Adults: 3, Max Children: 2

OTHER CONVENIENCES

- Forest Essentials bath amenities
- Air conditioning
- Bedroom with private balcony or verandah & bathroom
- Living room with dining area, bedroom & bathroom
- Electronic safe.
- Tea coffee maker
- WiFi
- Iron & ironing board
- In-room bottled water

- Minibar
- Newspaper
- Full-length mirror, hair dryer, weighing scale
- 49-inch Smart LED TV
- Lake View
- Private Pantry

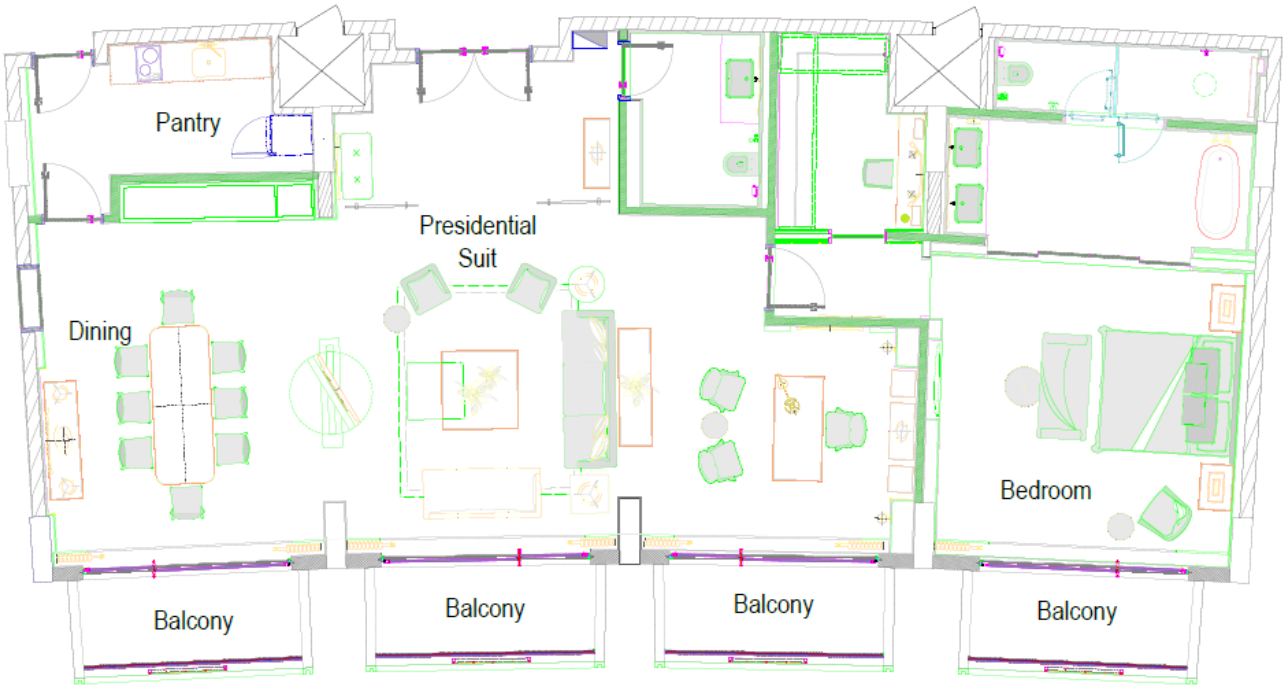


FIGURE 17: PLAN OF PRESEDENTIAL SUITE ROOM

4.2.10 VIEW/INTERIOR OF SPACES



Spa & Sauna



PDR



Banquet Hall



Swimming pool



Restaurant Seating



Lounge/Bar

4.2.11 SERVICES

- **ELECTRICAL SERVICES**



L.T. panel room-60 sqm
Access width -4m



H.T. panel room-20 sqm



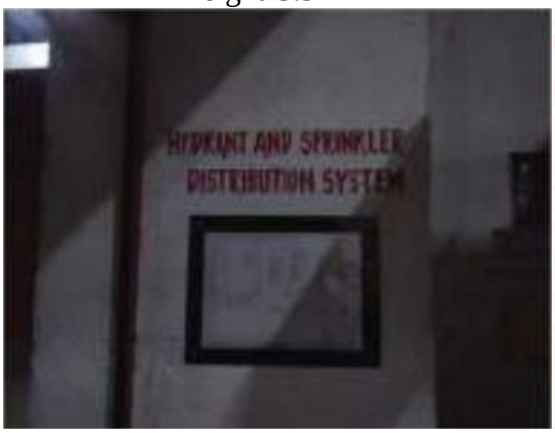
L.T. and H.T. panel room



L.T. and H.T. panel room
Height-3.9 m



Fire Fighting



Fire Fighting



Electrical Tray

- **CHILLER PLANT**



AREA –150 sqm



Access width –1.8 m



Access for machinery Width –6

- **FIRE PUMP**



Control Panel for Fire Room 70 sqm Tank Volume –72 cum



Water Storage 20,00,000

- **WATER TREATMENT**





Water Storage Tank Raw 90 sqm



Tank for swimming Pool (area-12 sqm)



Boiler room with pump and Heat exchange



Overhead tank

- **STP**



- **COOLING TOWERS**



- **KITCHEN**





GARBAGE DISPOSAL AREA





GENERATOR PLACED AT MOS

- **DISPOSAL AREA**



BIO-DEGREDABLE WASTE RECYCLING PLANT



OIL & ELECTRICAL WASTE



METAL, GLASS, PAPER DISPOSAL

- **LAUNDARY**



WASHING MACHINE



IRONING MACHINES



RECEIVING AND DISPATCHING AREA



STORE & CHECKING

4.3 DOUBLE TREE HILTON, AHMEDABAD

4.3.1 INTRODUCTION

Designed as an iconic building in Ahmedabad, the hotel proposal by **Studio Symbiosis** focuses on interweaving the concepts of waves in nature. Using fold lines as movement trajectories and perception along with programmatic requirements, the project's form demonstrates a sense of elegance with soft, subtle touches. Seamless waves flowing on the landscape and flowing on the façade are the focal point for this full service five star property. More images and architects' description after the break.

The different functions in the building with different programmatic requirements are blending together thus resulting in this iconic building. The building comprises of three waves which are very carefully translated into dramatic key spaces on the lower floors and on the upper floors they translate into room grids with focus on standardized room sizes. These waves emerge effortlessly from the landscape creating a sense of harmonic relationship with the ground. The profile of the building has been designed with keen emphasis given both to the smooth transition from the horizontal landscape to the vertical building and to the standardization and repetition of the façade components.

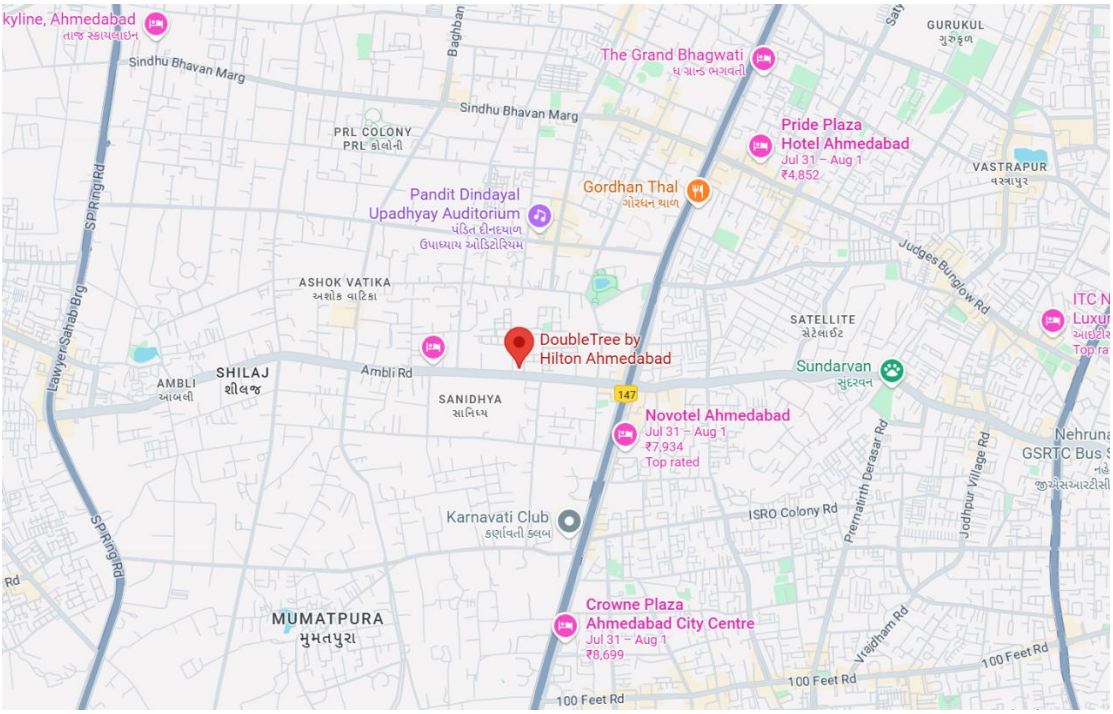




PROJECT	DOUBLE TREE HOTEL
LOCATION	AHMEDABAD
ARCHITECTS	STUDIO SYMBIOSIS
COMPLITION YEAR	2014
NO OF STOREY	G+14
BUILUP AREA	6860 SQM
NO. OF ROOMS	173
SITE AREA	2.8 ACRE

4.3.2 LOCATION

Site is situated at the main road which makes the access easy for the guest. Site is surrounded by the residential buildings with high skyline which creates the necessity of unique design to make it stand out from the other tall structure. Proximity of the nearby airport is 20km and the railway station is 5kmWithin 5km radius there are 5malls, zoo, national parks ,gardens.



What's nearby

Kirtan Public Park	1.3 km
Auda Park	1.4 km
Unique Park	2 km
Heaven Park	2.2 km
Auda Garden Bodekdev	2.4 km
Prahlad Nagar Garden	2.4 km
Ashok Nagar Recreation Activity	2.7 km
Utsav Public Park	3.1 km
AMC PUBLIC PARK	3.1 km
Sagardhara Farms	3.3 km

Restaurants & cafes

Restaurant · Baba Ande Ka Funda	150 m
Restaurant · Chabook Cafe	300 m
Restaurant · Ocean	500 m

Top attractions

Nehru Bridge	8 km
Manek Chowk	9 km
Sabarmati Riverfront	9 km

Natural beauty

Lake · Vastrapur Lake	3.7 km

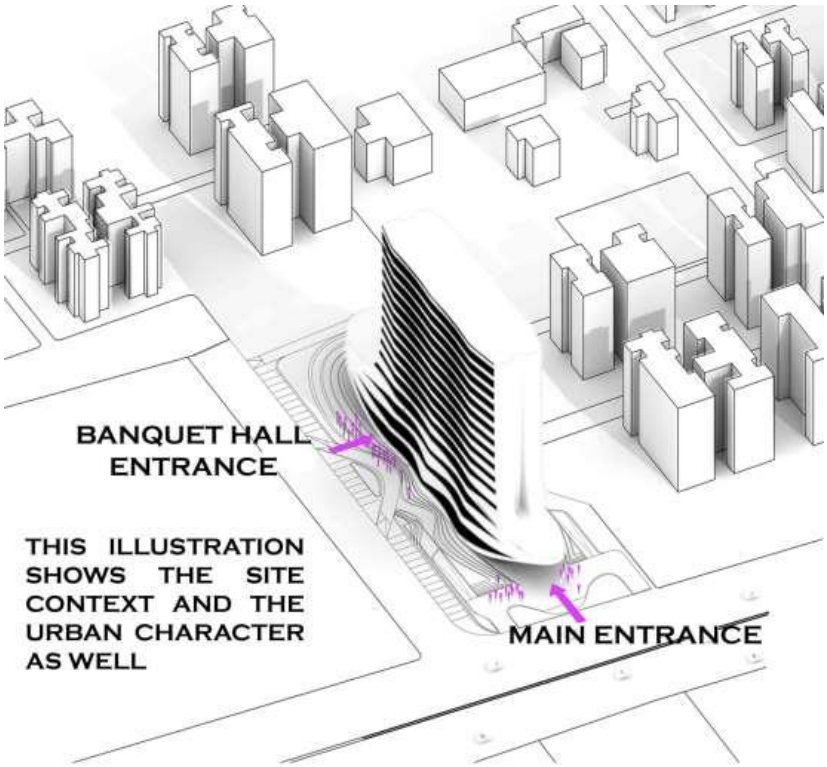
Public transport

Train · Vastrapur	3.9 km
Train · Ambli Road	4.3 km

Closest airports

Sardar Vallabhbhai Patel International Airport	19 km

4.3.3 SITE





A luxurious and excellently serviced five-star property, the focal point around which the design has been oriented is the elemental fluidity observed in the structural faÃ§ade as well as the surrounding landscape. The intent was to design a building which is symbolically iconic, and asserts its identity in the skyline through its form and stature. The conceptual ideal speaks of interweaving the form of waves observed in nature, with folded lines deeming movement trajectories, and with perception, added to the requirements expressed in the design programme.

The entry to the building has been marked with a column less cantilever that creates a dramatic entrance space. The guests are welcomed by the architecture of the canopy that follows the seamless nature of the design proposal, emerging from the ground and morphing back into it. On the lower three floors the proposal consists of reception lobby, shopping area, banquet hall, meeting rooms, restaurants, lounge space and service areas. All these elements are tied with a coherent design language of natural canyon like formations. The spaces are carved out using the same design principles with which a wave carves out a canyon. This helps in connecting the various public functions into one space visually which still have the capability of functioning independently.

4.3.4 FACILITIES

These are the following facilities and amenities that The Double Tree Hotel is providing to their guests.

Most popular facilities

Outdoor swimming pool · Free parking · Spa and wellness centre · Non-smoking rooms · Airport shuttle · Room service · 2 restaurants · Free WiFi · Tea/coffee maker in all rooms · Very good breakfast

Great for your stay

- ✓ 2 restaurants
- ✓ Parking
- ✓ Air conditioning
- ✓ Spa and wellness centre
- ✓ Free WiFi
- ✓ Fitness centre
- ✓ Family rooms
- ✓ Room service
- ✓ Airport shuttle
- ✓ Free parking

Bathroom

- ✓ Slippers
- ✓ Free toiletries
- ✓ Bathrobe
- ✓ Hairdryer
- ✓ Shower

Bedroom

- ✓ Alarm clock

Outdoors

- ✓ Outdoor furniture
- ✓ Sun terrace

Living Area

- ✓ Seating Area
- ✓ Desk

Media & Technology

- ✓ Radio
- ✓ Telephone
- ✓ TV

Food & Drink

- ✓ Coffee house on site
- ✓ Fruits Additional charge
- ✓ Kid-friendly buffet
- ✓ Kid meals Additional charge
- ✓ Special diet menus (on request)
- ✓ Snack bar
- ✓ Breakfast in the room
- ✓ Minibar
- ✓ Restaurant
- ✓ Tea/Coffee maker

Internet

WiFi is available in all areas and is free of charge.

Parking

Free private parking is possible on site (reservation is not needed).

- ✓ Valet parking
- ✓ Parking garage

Reception services

- ✓ Lockers
- ✓ Private check-in/check-out
- ✓ Concierge service
- ✓ Luggage storage
- ✓ Tour desk
- ✓ Express check-in/check-out
- ✓ 24-hour front desk

Entertainment and family services

- ✓ Board games/puzzles

Cleaning services

- ✓ Daily housekeeping
- ✓ Trouser press
- ✓ Ironing service
- ✓ Dry cleaning
- ✓ Laundry

Business facilities

- ✓ Fax/photocopying
- ✓ Business centre
- ✓ Meeting/banquet facilities

Safety & security

- ✓ Fire extinguishers
- ✓ CCTV outside property
- ✓ CCTV in common areas
- ✓ Smoke alarms
- ✓ Security alarm
- ✓ Key card access
- ✓ Key access
- ✓ 24-hour security
- ✓ Safety deposit box

General

- ✓ Shared lounge/TV area
- ✓ Designated smoking area
- ✓ Air conditioning
- ✓ Non-smoking throughout
- ✓ Car hire
- ✓ Packed lunches
- ✓ Soundproof rooms
- ✓ Lift
- ✓ Family rooms
- ✓ Facilities for disabled guests
- ✓ Airport shuttle Additional charge
- ✓ Non-smoking rooms
- ✓ Room service

Accessibility

- ✓ Wheelchair accessible

Outdoor swimming pool

- ✓ Open all year
- ✓ All ages welcome
- ✓ Pool is on rooftop
- ✓ Pool/beach towels
- ✓ Sun loungers or beach chairs

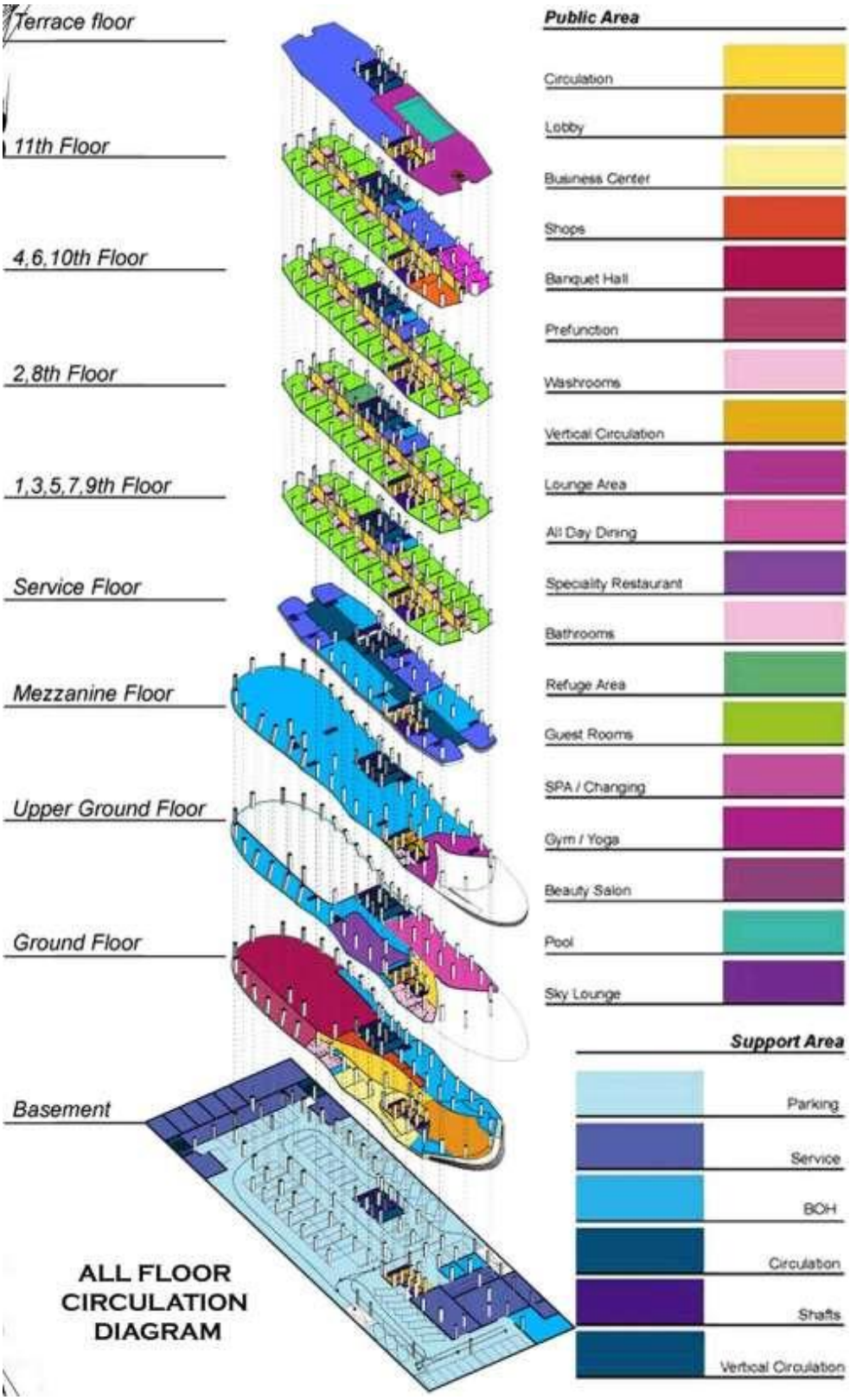
Wellness

- ✓ Fitness
- ✓ Spa/wellness packages
- ✓ Spa facilities
- ✓ Sun loungers or beach chairs
- ✓ Spa and wellness centre
- ✓ Fitness centre

Available features include:

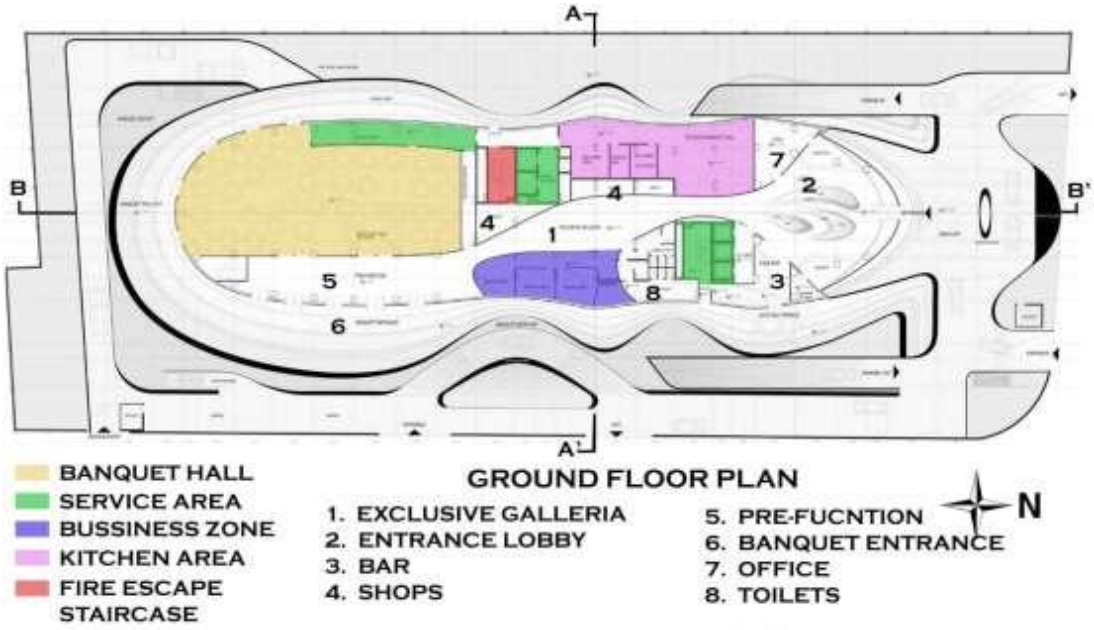
- Accessible business center
- Accessible concierge desk
- Accessible elevators
- Accessible exercise facility
- Accessible guest rooms with mobility features with entry or passage doors that provide 32" of clear width
- Accessible hotel restaurant
- Accessible meeting rooms
- Accessible parking spaces for cars in the self-parking facility
- Accessible public entrance
- Accessible registration desk
- Accessible route from the accessible public entrance to the accessible guestrooms
- Accessible route from the accessible public entrance to the registration area
- Accessible route from the hotel's accessible public entrance to the business center
- Accessible route from the hotel's accessible public entrance to the exercise facilities
- Assistive listening devices for meetings upon request
- Audible alarms
- Audible alerts in elevators
- Bathroom doors at least 32 inches wide
- Bedroom doors at least 32 inches wide (812 mm)
- Closed captioning on televisions or closed captioning decoders
- Doorbell w/Audio/Strobe Alert
- Grab bars in bathroom
- Large Print Menus
- Lower or Adjustable Closet Rod
- Lowered bed
- Lowered emergency evacuation instructions
- Lowered peep hole in door
- Lowered thermostat controls
- Phone Audio/Vibrate/Strobe
- Valet only parking
- Van-accessible parking in the self-parking facility
- Visual alarm for hearing impaired
- Visual alarms for hearing impaired in hallways
- Visual alarms for hearing impaired in public areas

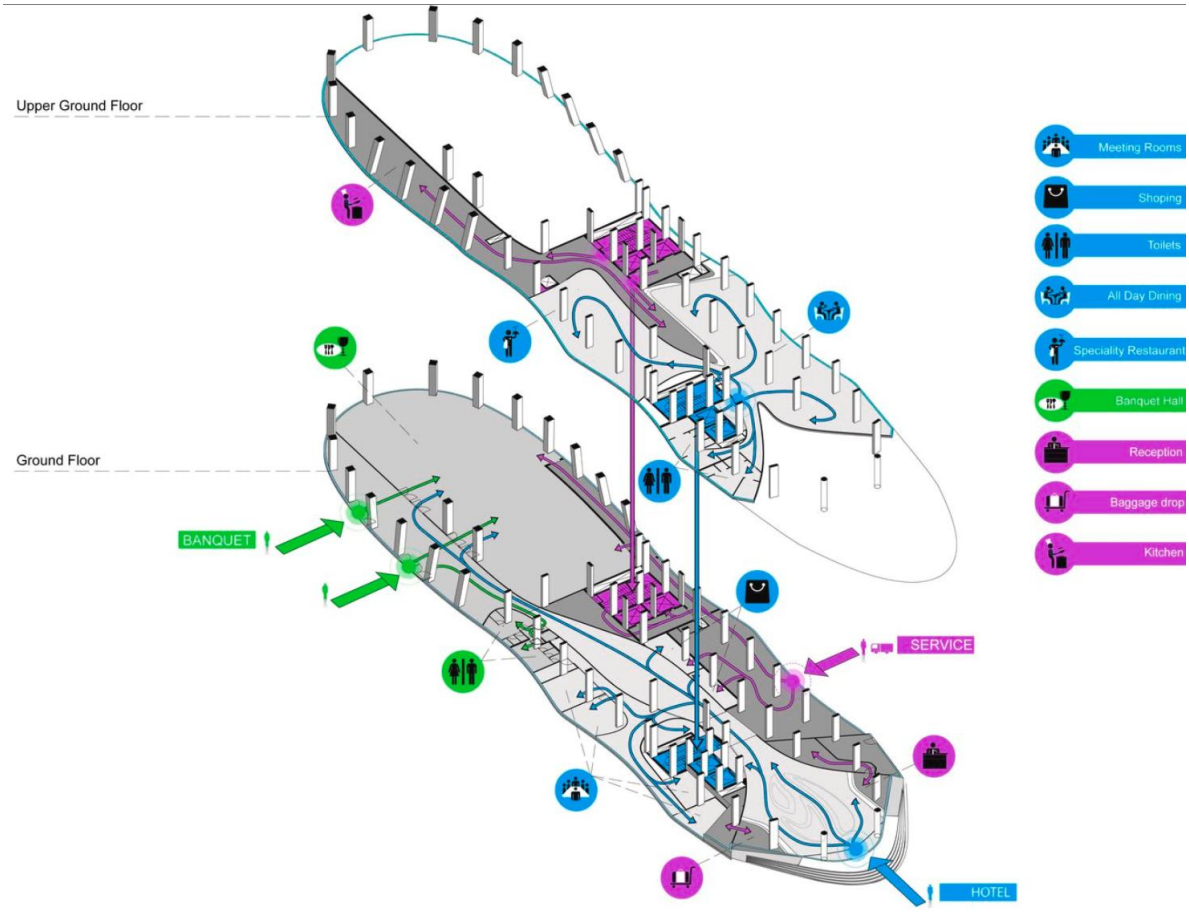
4.3.5 VERTICAL ZONING



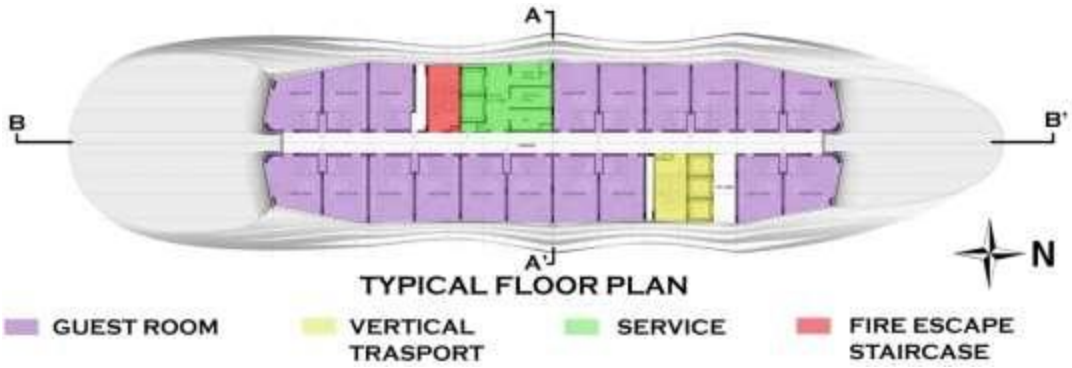
4.3.6 FLOOR PLANS

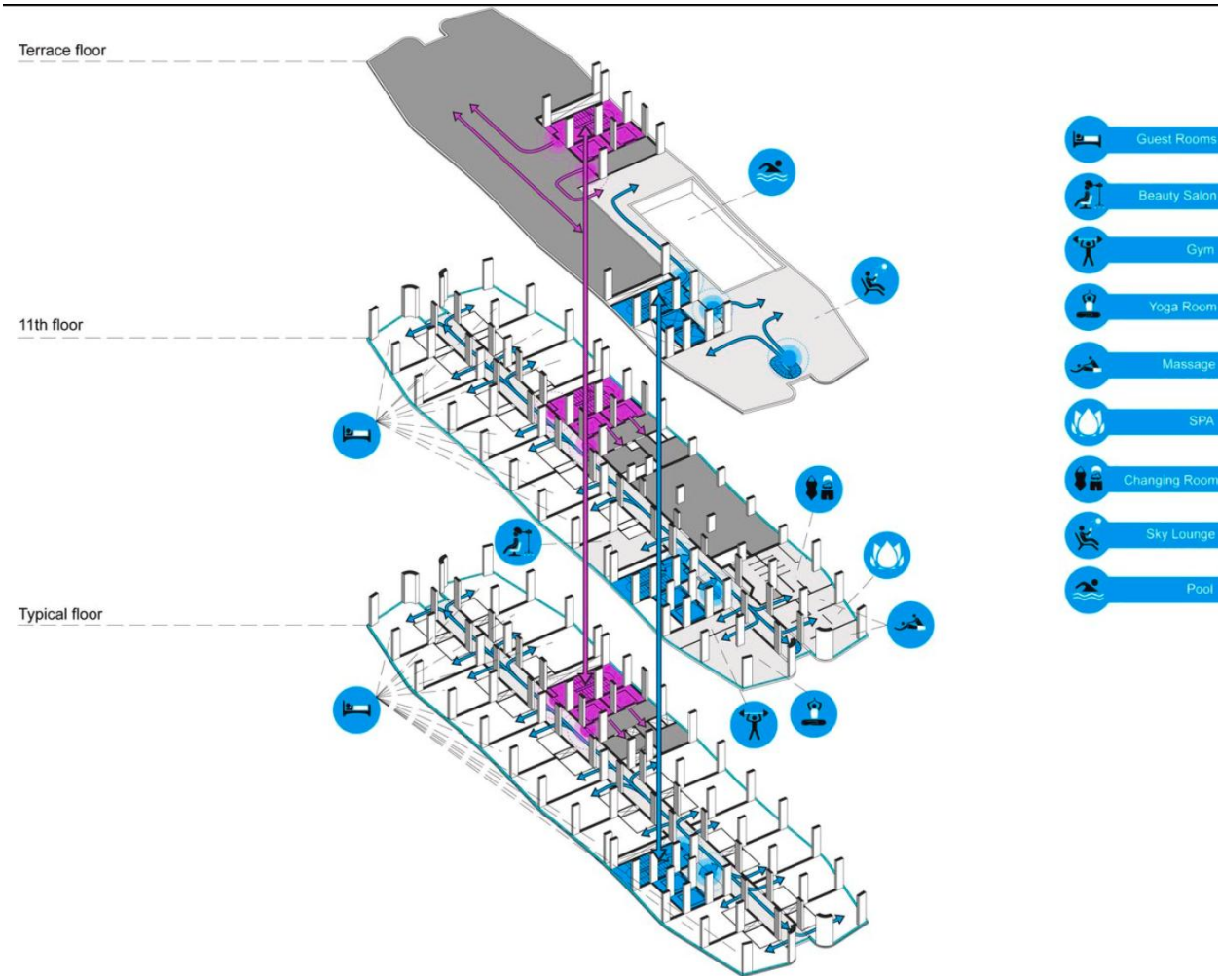
Ground Floor



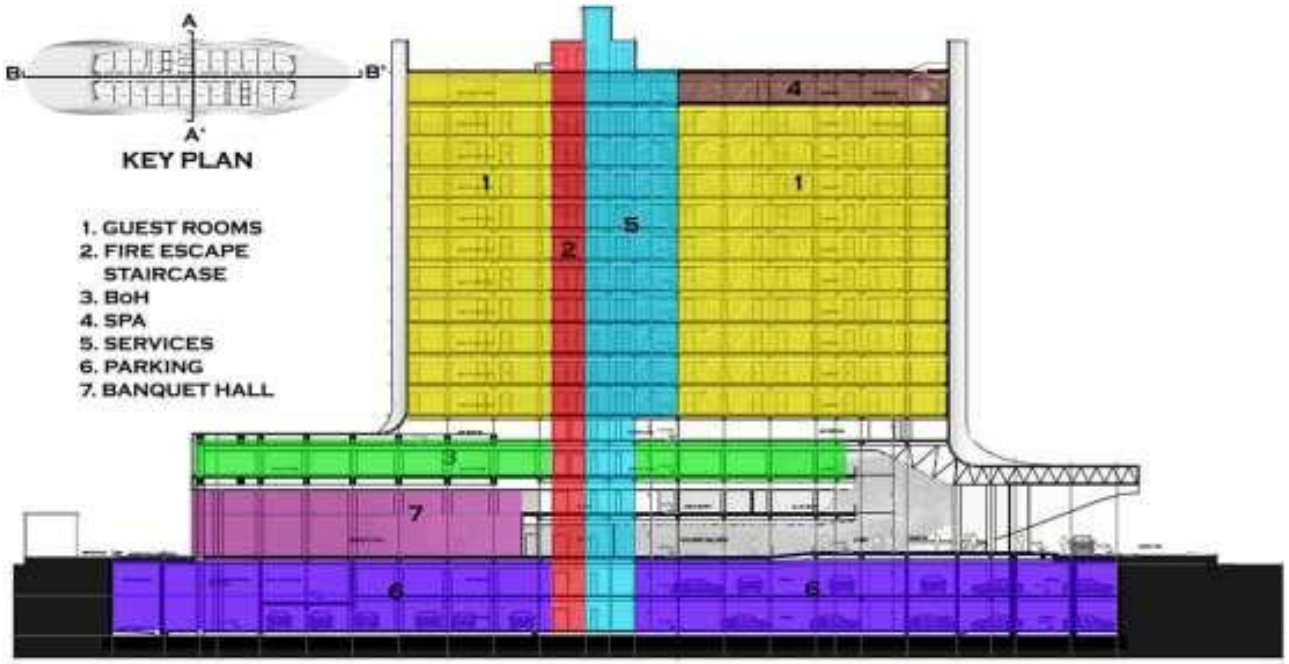


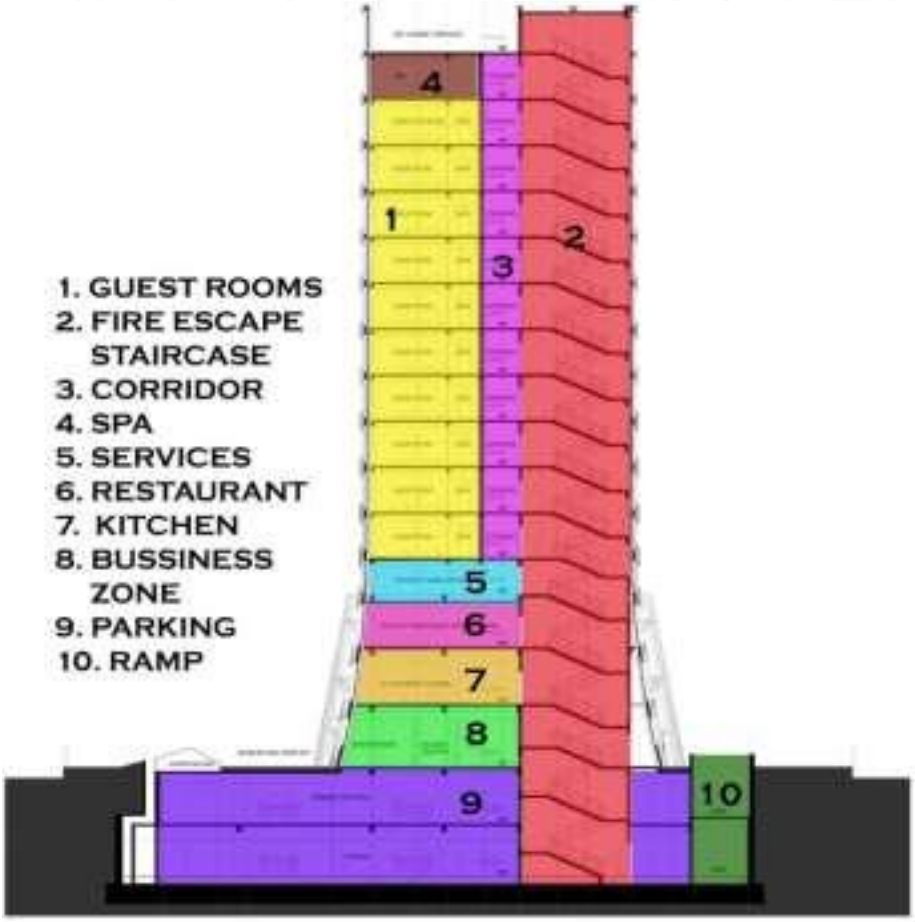
Typical Floor Plan





4.3.7 SECTION


A
A'
B
B'
KEY PLAN
1. GUEST ROOMS
2. FIRE ESCAPE STAIRCASE
3. BoH
4. SPA
5. SERVICES
6. PARKING
7. BANQUET HALL


1. GUEST ROOMS
2. FIRE ESCAPE STAIRCASE
3. CORRIDOR
4. SPA
5. SERVICES
6. RESTAURANT
7. KITCHEN
8. BUSSINESS ZONE
9. PARKING
10. RAMP

4.3.8 GUEST ROOMS

Deluxe King Room:





One Bedroom Executive King Suite:









Deluxe Twin Room:





4.3.9 PUBLIC SPACES







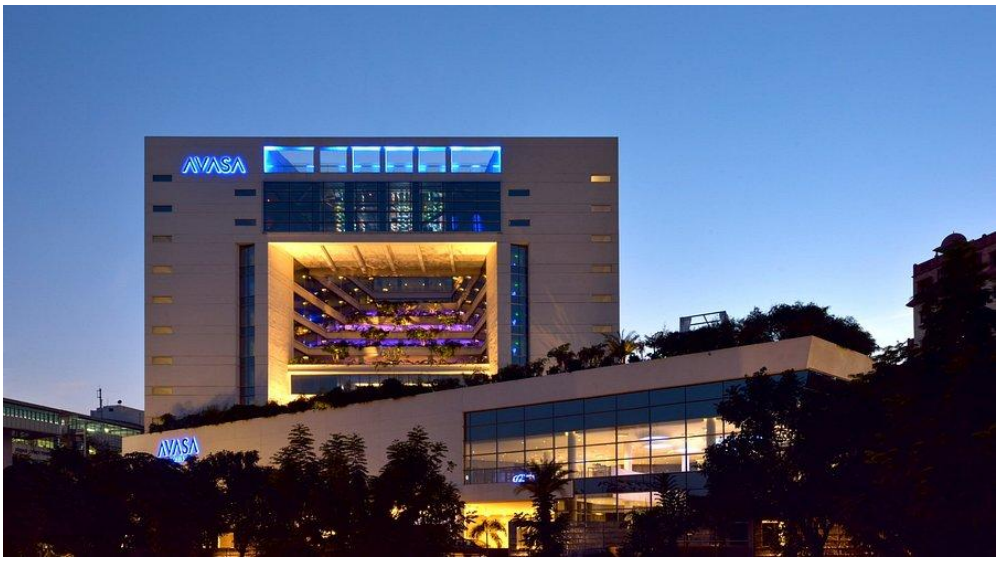








4.4. AVASA,HYDERABAD



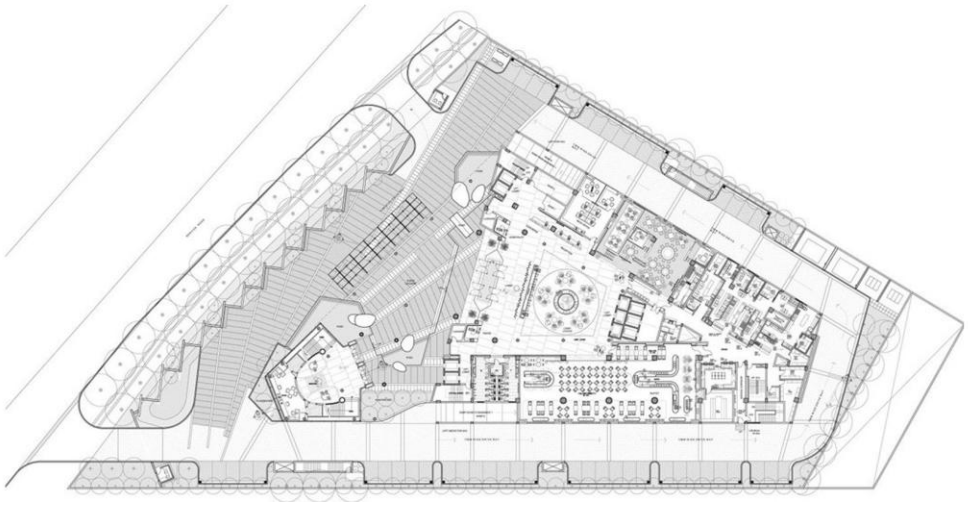
4.4.1 INTRODUCTION

Nestled in the heart of the it and pharmacy hub of Hyderabad, avasa embodies the bold and modern face of the bustling metropolis, while offering a quick getaway to the streets of heritage Hyderabad. A confluence of contemporary styles and time tested service, avasa hotels offers tasteful luxury for the discerning globetrotter.

DETAILS:

PROJECT	AVASA
LOCATION	HYDERABAD
CLIMATE	TROPICAL WET AND DRY
BUILT-UP	ND
COMPLITION YEAR	2012
NO. OF ROOMS	217
SITE AREA	2.02 ACRE
FAR	ND

4.4.2 SITE PLAN



- The site is wide towards the front road and narrows Down towards the back.
- The building follows the site, forming the letter 'A',
- Due to limited open space on site, continuous green space has been conceived in the form of stepped terraces third level to the top floor.





4.4.3 DESIGN CONCEPT:

- 1. it was designed with stepped terrace gardens with respect to the site.
- 2. It intimate interlude for relaxation, business & convention.
- 3. With 98% of the lighting being led, Avasa is a highly environment friendly.

4.4.4 AMENTIES:

It is a 11-floor frame structure with stepped terrace gardens.

It consists of:

• 217 rooms

• 3 banquet halls

• 3 F&B restaurants Sky lounge

• Business lounge

• SPA

• Swimming pool









LOUNGE :

- Two atriums have been created to characterize the areas that they represent
- The lobby atrium at the ground level connects the grand lobby and the banquet halls.
- The central atrium is conceived at the third level and has been created under the stepped terraces, creating a sense of openness and a distinct scale
- This adds to the feeling of grandeur as one stands in the atrium



ELEVATORS:

- There is total 14 floors including 3 basements
- 3 guest lifts with 8 people capacity are present at entrance lobby
- And 2 guest lifts are present at the entrance which Leads directly to sky bar in 10th&11th floors
- And 2 guest lifts are present at the entrance which leads directly to banquet halls in third floor 3 service lifts of capacity 13persons [1000kg] are present At service area from lower basement to 11 floor
- Total there are 7 guest lifts and 3 service lifts
    - Size of 3 guest lifts 2x2.Sm
    - Size of 4 guest lifts 3x2.Sm
    - Size of 3 service lifts 3x2.5



BANQUET HALL

- CONSTELLATION : It has a separate entrance and a pre function area. It can accommodate 250 seating and it had common area for buffet this hall can be divided if required, by a sound proof partition giving two halls.

- VEGA: It had a capacity of seating of 100 people.
- NOVA: It had a capacity of seating of 100 people.





BARS AND RESTAURANT :

1.Indian restaurant of capacity 250

2.Ohm-chinese restaurant capacity -70 3.bridge lounge coffee shop for guests

BAR Sky lounge is a bar designed as a bridge between 10th & 11th floors.





RECREATION:

•Gym,- 12x9m

•Spa - 12x9m

• Swimming pool — 200sqm depth varies from 34feet capacity — 1Iakh 50 thousand liters.







CONFERENCE BANQUET HALLS :

There are five conference halls which can accommodate all types of conferences, meetings, seminars, workshops & product

• 145.8 sq.m.

• 100 seat well equipped and well manned.

ROOM FACILITIES:

•Individually controlled air conditioning,

•Sound proof rooms,

•Telephone-two per room

•International and national dialing

•Broad band internet access

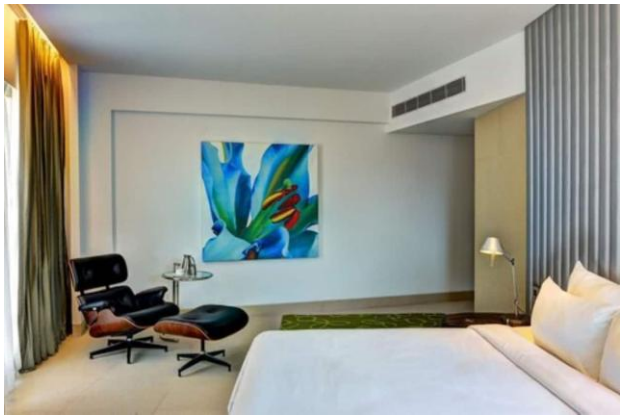
•Tea /coffee makers

•sprinklers and smoke detectors

•fax machine available on request

•Electric current 220v SO cycles





4.4.5 DWELLING ROOM TYPES

- AVASA SILVER:

  Room —35 sqm

  Toilet —7 sqm

  LCD TV iPod docking station Wired & wireless broadband, internet Electronic safe Personal bar, Iron Board Complimentary Buffet Breakfast

- AVASA PLATINUM CLUB:

  Room — 35 sqm

  Toilet —7 sqm

  LCD TV ,iPod docking station Wired & wireless broadband internet access Electronic safe , 1 Personal bar, Iron Board Complimentary Buffet Breakfast One Way Airport Convenience Media Hub, Happy Hour cocktails at Bridge Business Club.

- AVASA JUNIOE SUITE:

  Room —40 sqm,

  Toilet —12 sqm

  LCD TV , iPod docking station Wired & wireless broadband internet Electronic safe , Personal bar, Iron Board Complimentary Buffet Breakfast An hours' use of the Meeting room Two way Airport conveyance

- AVASA GALLERY SUITE:

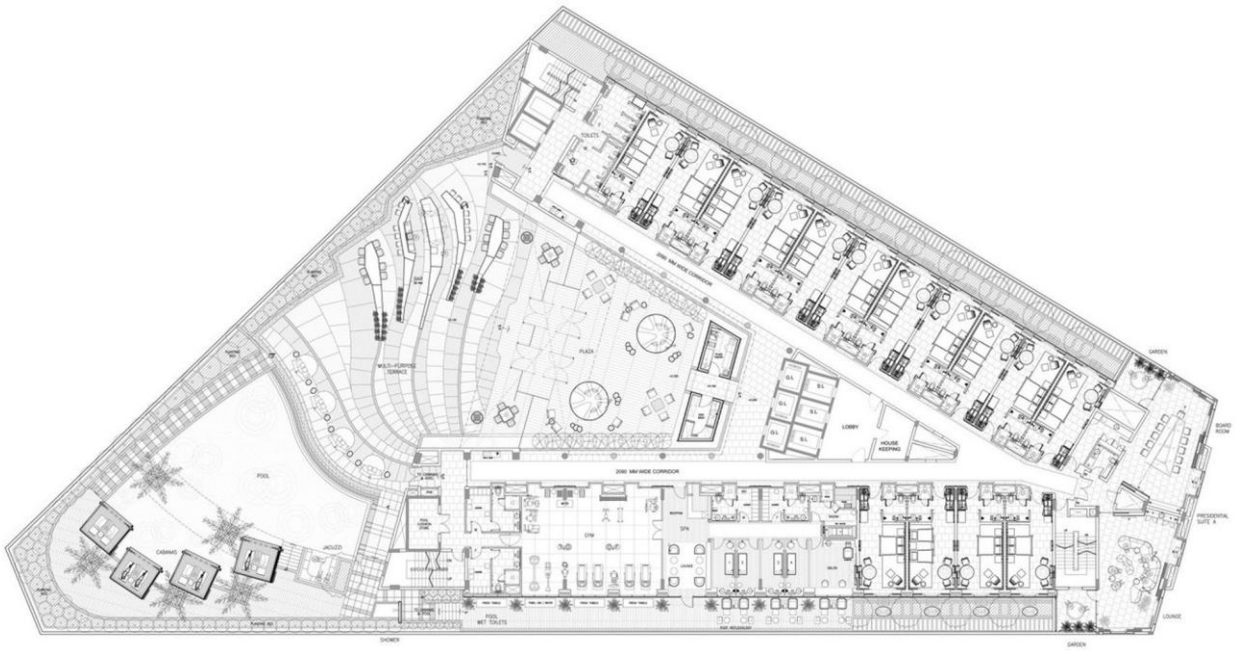
  Room -70sqm,

  Toilet —l2sqm

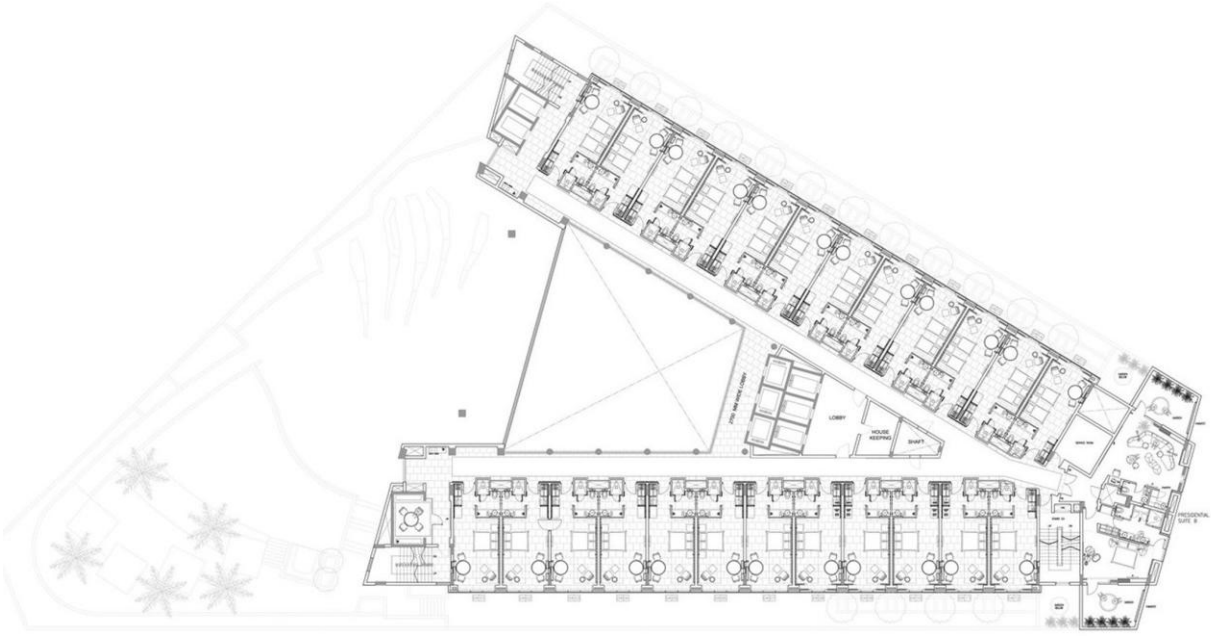
LCD TV, iPod docking station, Wired & wireless broadband internet Electronic safe , Personal bar , Iron Board Complimentary Buffet Breakfast 2 hours use of the Meeting room Two way Airport conveyance Complimentary Cocktails at Bridge Business Club

4.4.6 FLOOR PLANS:

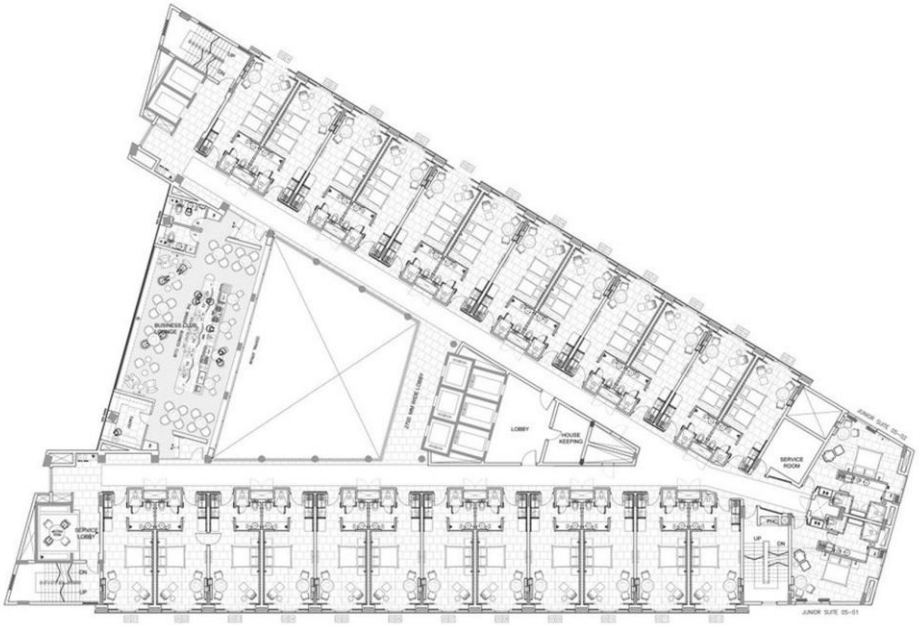
THIRD FLOOR PLAN:



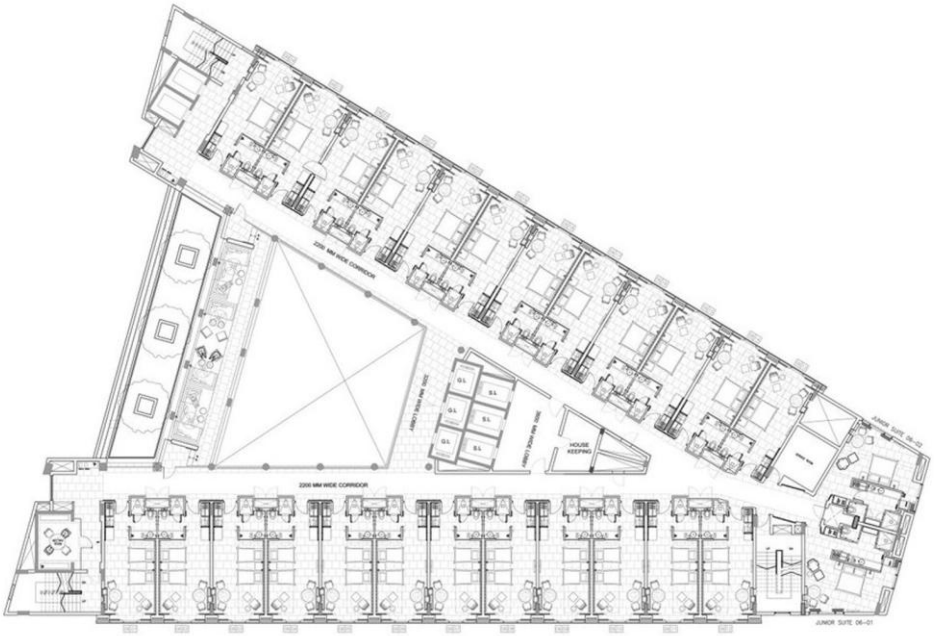
FOURTH FLOOR PLAN:



FIFTH FLOOR PLAN:



SIXTH FLOOR PLAN:



SEVENTH FLOOR PLAN:



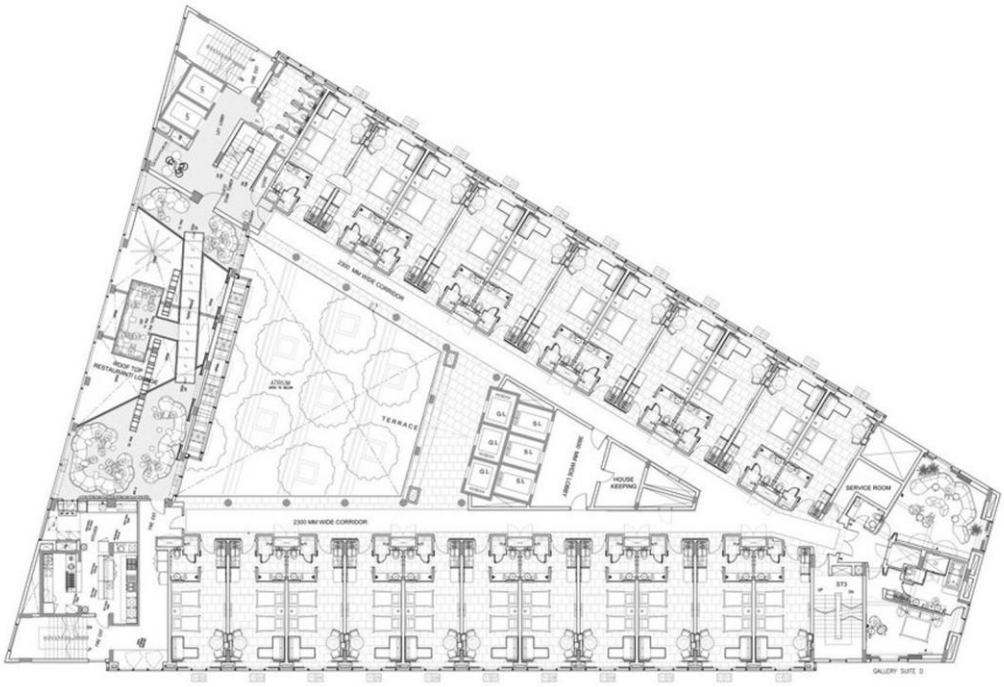
EIGTH FLOOR PLAN:



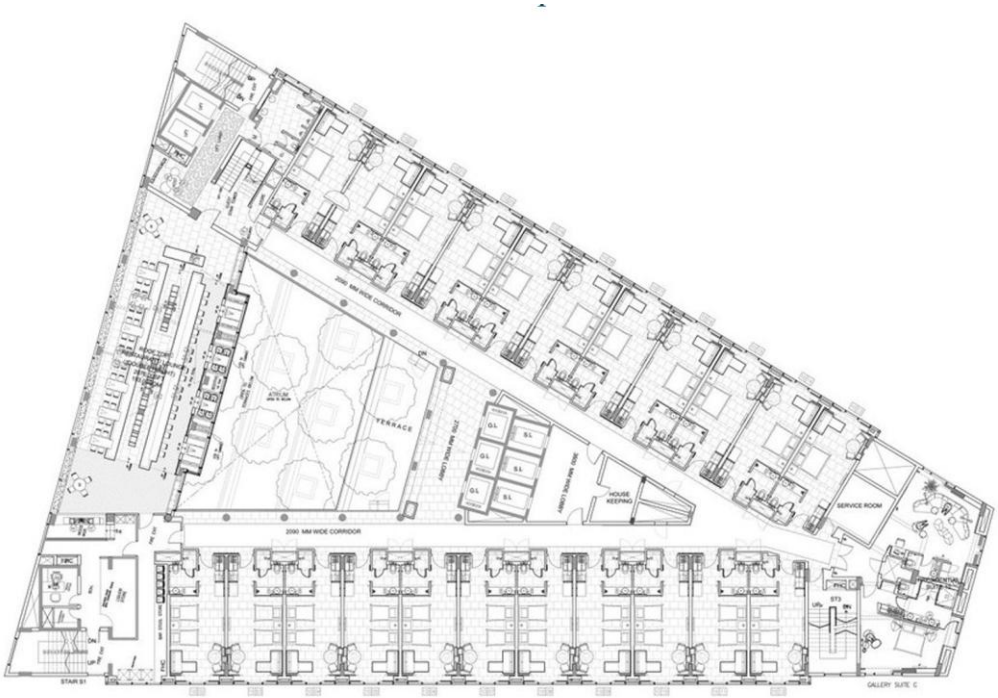
NINTH FLOOR PLAN:



TENTH FLOOR PLAN:



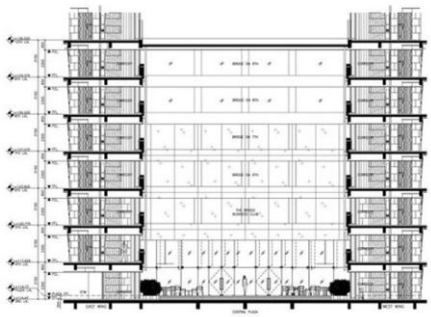
ELEVENTH FLOOR PLAN:

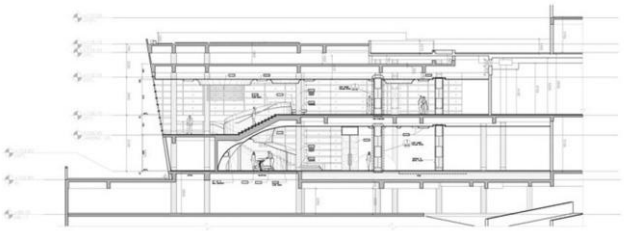


4.4.7 SECTIONS:









4.4.8 SERVICES

WATER SUPPLY AND TREATMENT:

- Source: Bore well & Municipal water
- 2no.Of raw water tanks: 60kI.Each
- 1no.Of Ro-water tank 20kl Water tank: 120kI.Each FIRE WATER TANK MOTORS
- 2no.Of treated water tank.
- 2no .Of fire water tank: 100kl.Each-the hotel has its own system of filtration , chlorination and changing of water. There is a continuous purification of swimming pool water in swimming pool tank is changed every 3months.

WATER PLANT IN LOWER BASEMENTFIRE WATER TANK MOTORS SWIMMING POOL WATER TANK

1.Water purification is done in 3 tanks sedimentation tank, carbon tank filter, sharpen tank filter

2.Hydro pneumatic system is used for pumping water from ground to upper floors Sewage: include both liquid and solid waste. Vertical shafts are provided for sewage

GUEST FLOOR---SERVICE FLOOR---LOWER FLOOR---TO UNDERGROUND PIPES--MASTER PIT---TO MAIN SEWER.

To have working space and to have easy access vertical shafts are provided at each floor. Wet wells and sumps are provided where the sewage is allowed to settle for sometime before it is pumped to the Next pipe for final disposal. For maintenance of the sewage disposal system pumps and ejectors are used Sewage: include both liquid and solid waste. Vertical shafts are provided for sewage.

REFERENCES

Books and Manuals

- Callender, J. H. (2012). Time-Saver Standards for Building Types. New York: McGraw-
- Hill.
- Ministry of Tourism, Government of India. (2018). Guidelines for Classification/Re-
- classification of Hotels. Ministry of Tourism, India.
- Neufert, E., & Neufert, P. (2012). Architects' Data (4th ed.). Wiley-Blackwell.
- Hotels Association of India. (2019). Handbook of Hospitality Standards and Guidelines.
- ITC Hotels. (2018). ITC Hotel Manual: Design, Layout, and Operational Standards. ITC

SITE ANALYSIS

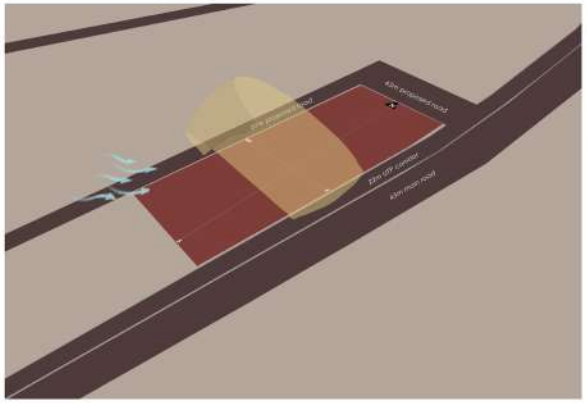
PROJECT BRIEF

Proposed Use of Plot	: 5 Star Category Hotel along with ancillary uses for the same
Location	: Plot no SM-39/5, Sanand Industrial Estate, Gujarat
Coordinates	: 23°00'21.5"N 72°14'59.6"E
Area	: 20,168.54 sq.mt, 4.98 acres



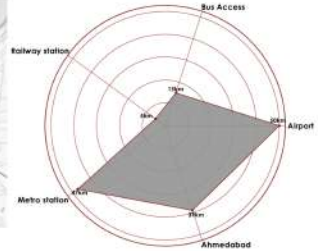
BYE-LAWS DATA

Ground coverage	: 40% of plot area
FAR	: 1.8
Front setbacks	: 9m
Rear and side setbacks	: 9m
Building height	: NA
Parking requirement	: 50% of consumed FSI, 20% of the required parking shall be provided as visitors parking
Width of internal road	: 9m for road length upto 150m 12m for road length >150m and <=450m 18m for road lenth >450m
Termination of internal road	: 13.5m dia turning circle or 12m turning T
Clear distance between detached structures	: min 6m
Common plot	: 10% of building unit or 300sqm whichever is more
Max builtup area on any floor	: 40% of area of building unit
Trees plantation	: 3 trees for every 200sqm of building unit



PROXIMITY

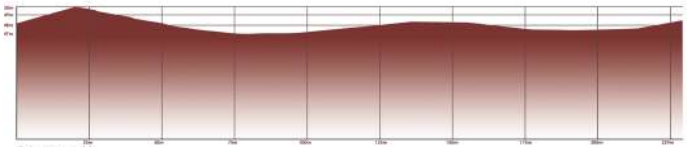




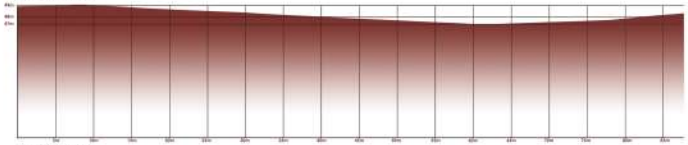
SLOPE ANALYSIS



Key site plan

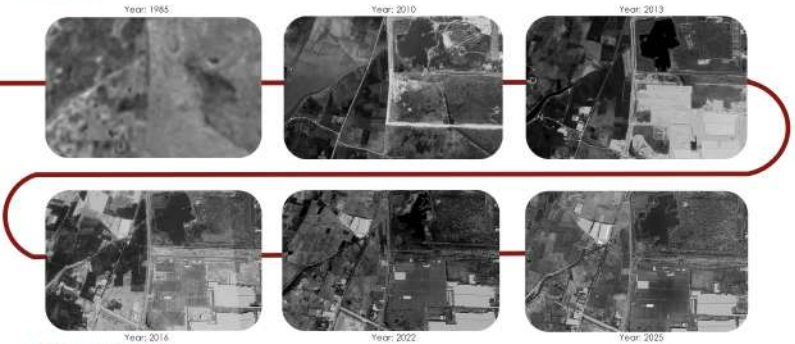


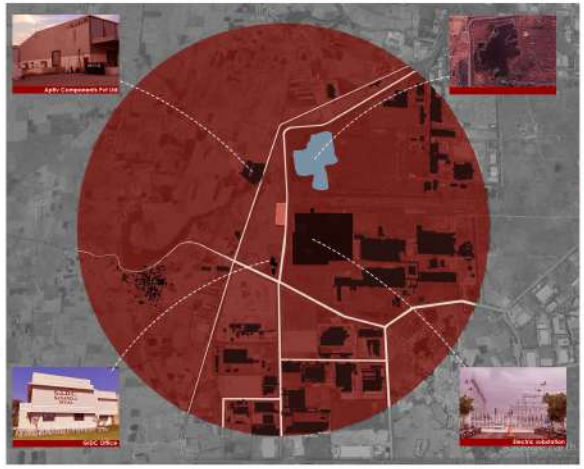
Section AA'



Section BB'

TIMELINE





VIEWS FROM SITE



EXISTING VEGETATION



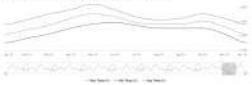
Azadirachta indica(Neem)
- Type: Evergreen, drought tolerant tree, native to the Indian subcontinent.
- Height & Growth: Fast-growing; can reach 15–20 m in height.
- Ecological Role: Improves soil fertility, provides shade, and supports biodiversity.



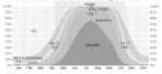
Prosopis cineraria (Khejri tree)
- Type: Deciduous tree, native to arid and semi-arid regions of India.
- Height & Growth: Medium-sized tree, typically 4–10 m tall.
- Ecological Role: Prevents soil erosion, enriches soil fertility through nitrogen fixation, and provides shade in dry landscapes.

CLIMATE ANALYSIS

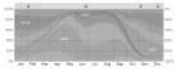
Temperature
- Highest temperature -41°C
- Lowest temperature - 13°C
- Mean temperature - 34°C



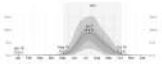
Humidity
- The muggier period extends over 6.1 months
- Highest in July - 100%
- Lowest in January - 15%



Wind
- Prevailing winds are from south-west to north-east



Rainfall
- Highest rainfall in July month 8.9in
- Annual rainfall 757mm

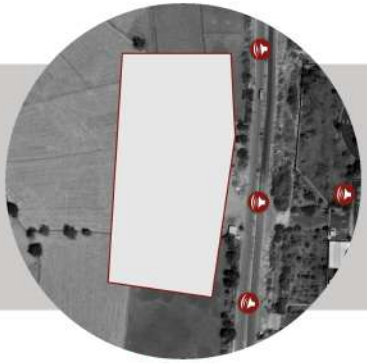




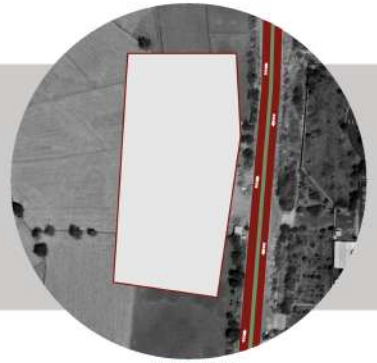
Existing Vegetation



Setback and Dimensions



Noise Zone



Existing Road



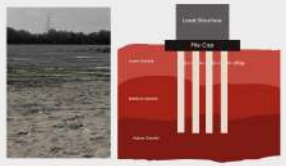
Drainage Flow



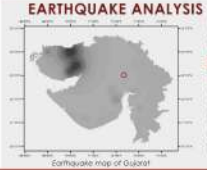
Slope% Calculation

SOIL ANALYSIS

- Deep, alluvial loamy soil.
- Slope is gentle on site.
- Pile foundation is preferred.



EARTHQUAKE ANALYSIS



Earthquake map of Gujarat

- Sanand is located in a region of moderate seismic hazard, falling under Seismic Zone III on the Indian seismic zoning map.
- Since 2001, Sanand has had 16 quakes of magnitudes above 2 and up to 5.1 within up to 100 km distance.

INFERENCE FROM SITE ANALYSIS



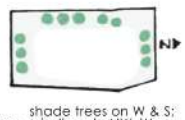




Changed drainage pattern by cut and fill



Protection of openings



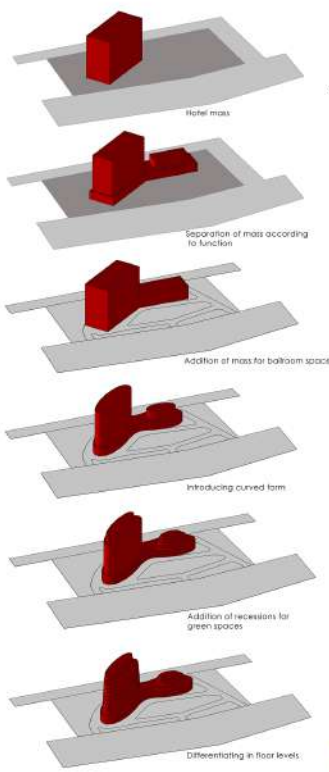
shade trees on W & S; windbreaks NW–W

5 STAR HOTEL

SITE ANALYSIS

Name : Ann Mary K Moni
Scholar no : 211110034

FORM EVOLUTION

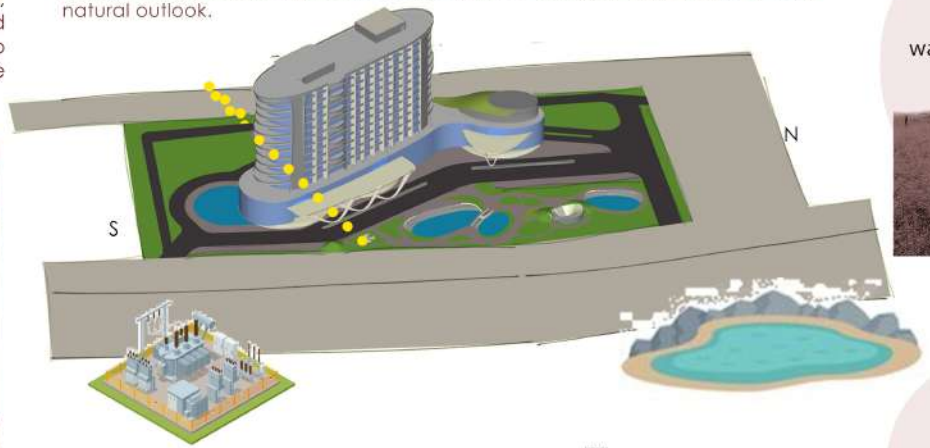


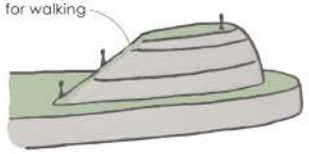
DESIGN CONCEPT

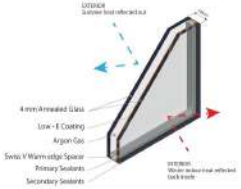
The design concept is anchored in the idea of an Oasis—a serene refuge that brings coolness, greenery, and calm to the hot and dry climate of Gujarat. The hotel is envisioned as a green escape, where landscape, water, and architecture come together to create a naturistic, restorative environment for guests.



The hotel is oriented along its long axis in the southeast–northwest direction to strategically respond to site conditions. This orientation helps block and avoid direct views toward the electrical substation on the southwest side, ensuring guest rooms and public areas face away from visual clutter. At the same time, aligning the building in this direction allows the design to maximize the open, scenic views toward the lake on the northeast, enhancing the overall guest experience by capturing cooler breezes, softer daylight, and a more serene natural outlook.





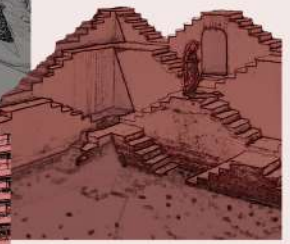


FREE FORM STRUCTURE

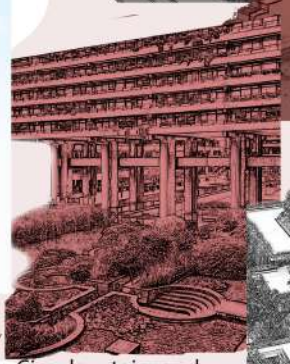




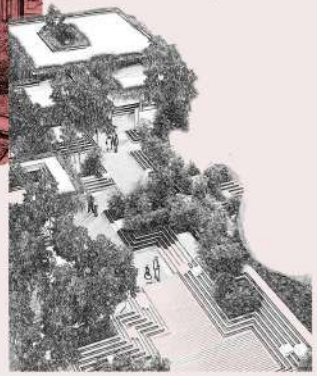




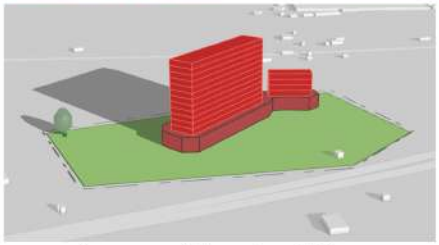
Landscapes inspired from stepwells of Gujarat



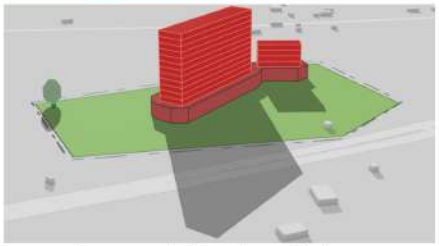
Circular stairs and mounts



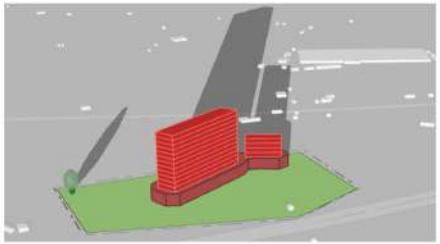
SHADOW ANALYSIS



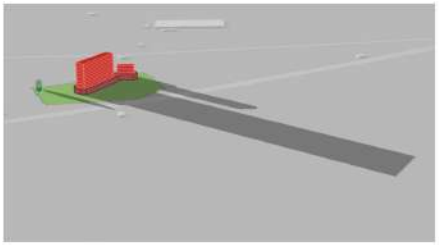
Summer solstice - June 21,8am



Summer solstice - June 21,6pm

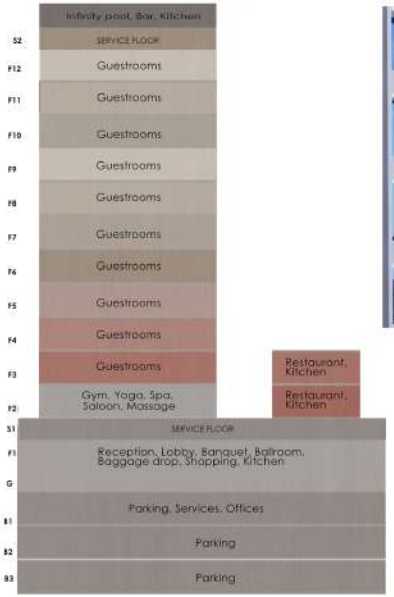


Winter solstice - December 21,8am



Winter solstice - December 21,6pm

VERTICAL ZONING



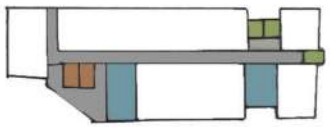
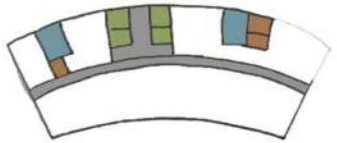
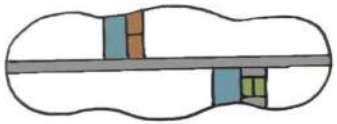
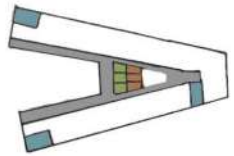
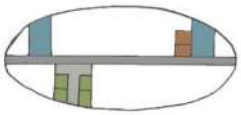
RECESSED BALCONY



Recessed balconies help reduce heat gain by being set back into the façade, allowing the surrounding walls and slab edges to act as natural shading devices. This creates deep shadows that block direct sunlight during peak hot hours, especially important in Gujarat's harsh climate. The recessed depth forms a cooler microclimate, buffers the interior from harsh external temperatures, and allows soft, indirect daylight to enter without glare. As a result, indoor spaces remain more comfortable, energy consumption decreases, and the balcony itself becomes a usable, shaded outdoor space throughout the day.

5 STAR HOTEL CONCEPT

Name : Ann Mary K Moni
Scholar no : 211110034

PARAMETER	LIVE CASE STUDIES		DESK APPRAISAL		INFERENCE FROM CASE STUDIES
	HILTON GARDEN INN, PUNE	TAJ LAKEFRONT, BHOPAL	DOUBLE TREE, AHMEDABAD	AVASA, HYDERABAD	
CASE STUDY					--
SITE AREA	2.02 Acres	4.77 Acres	2.8 Acres	2.02 Acres	--
BUILTUP AREA			6860 sqm	21120 sqm	--
SITE LOCATION	Pune, Maharashtra (IT Hub, near Mumbai–Pune Expressway)	Bhopal, Madhya Pradesh (Lakefront, near Van Vihar National Park)	Ahmedabad, Gujarat (Near IIM Ahmedabad and its position along the S.G. Highway)	Hyderabad, Telangana (Hitec City area of Hyderabad, a major technology hub,)	Sanand Insdustrial Estate, Gujarat
CLIMATE	Tropical Wet and Dry	Humid subtropical	Hot semi-arid	Tropical Wet Dry	Dry and humid
KEYS	144	152	173	217	200
NO OF STOREYS	G+7(+1 basement)	G+10(+2 basements)	G+14(+2 basements)	G+11(+3 basements)	G+10(+2 basements)
SITE PLANNING					Spatial allocation: Organized by views and zoning. Site planning features: Open event spaces, gardens, water features, stepwell integrated landscapes
VERTICAL ZONING					
TYPICAL FLOOR PLAN Rooms Corridor Stair Service Lift Passenger Lift					
ACCOMODATION TYPES	 King Room 28 sqm Twin Room 28 sqm King Family Room 30 sqm King Accessible Room 28 sqm	 Executive Suite 66 sqm Twin Room 33 sqm King Room 33 sqm Presidential Suite 152 sqm	 Deluxe King Room 32 sqm Deluxe Twin Room 32 sqm Executive King Suite 67 sqm	 Silver 35 sqm Studio Suite 40 sqm Gallery Suite 70 sqm	Typology of rooms: •King room •Twin room •Executive suite •Accessible room
DINING FACILITIES	Ruhmani(Indian restaurant) Santorini(Continental Rooftop restaurant) Santorini Black(Global cuisine Rooftop restaurant) Xia(Pan Asiain) Crafted Beer and Cocktail Café	House of Ming(Chinese) Infinity(Indian ,Asian & Continental) Emperor Lounge(Fresh Brews and Bakes) Machan(Multi-Cuisine)	HOP (All Day Dining) Wave (Indian, Asian and Western)	Pi (All Day Dining) - 468.8 sqm, 100 people Ohm (Asian Culinary) - 240 sqm, 70 people Bridge Business Club(Formal) - 180 sqm, 45 people Sky Lounge(Informal) - 332.1, 120 people	Typology of dining facilities •Asian Restaurant •Multi-cuisine Restaurant •Bar and Cafe •Rooftop Restaurant
RECREATIONAL FACILITIES	Spa and salon, Fitness center, Pool, Dining	Gym, Spa, Sauna, Saloon, Pool, Dining	Spa, Fitness Center, Outdoor pool, Dining	Spa, Gymasium, Swimming pool, Shopping, Dining	Gym, Spa, Saloon, Pool, Shopping
EVENT/MEETING FACILITIES	The Ballroom - 414 sqm, 400 guests The Meeting Room - 80 sqm, 80 guests	Narmada - 56 sqm, 40 people Raj Mahal - 880 sqm, 800 people Satpura - 746 sqm, 250 guests Sheesh Mahal - 141 sqm, 100 guests Tapti - 44 sqm, 14 guests Vindhya(Lawn) - 2000sqm, 1000 people	Grand Ball Room - 465 sqm, 600 people Ballroom 2 - 302 sqm, 350 people Ballroom 1 - 163 sqm, 200people Studios - 21 sqm-86 sqm, 8-20 people	Constellation Ball Room - 532.3 sqm, 550 people Vega Ball Room - 186.27 sqm, 140 seater Nova Conference Hall - 145.8, 100seater Orion Boardroom - 74 sqm, 25 seater Omni Board room - 70 sqm, 25 seater	Typology of event/meeting facilities: Grand Ball Room - 500 guests Orion Hall -150 guests Coral Hall- 100 guests Pearl Room - 30 guests Board room - 20 guests

5 STAR HOTEL

COMPARATIVE ANALYSIS

Name : Ann Mary K Moni
Scholar no : 211110034



Area statement

1	SITE AREA	20168.54 m² (4.98 Acres)
2	SET BACKS	9 m
3	GROUND COVERAGE	3200 m²
4	NO. OF FLOORS	13
5	TOTAL BUILT-UP AREA	30000 m²
6	MOS FRONT	9 m
7	MOS BACK	9 m
8	MOS SIDLS	9 m
9	ABUTTING ROAD WIDTH	45 m

ARCHITECTURE AND PLANNING DEPARTMENT MANIT BHOPAL

THESIS 2024-2025

TOPIC

5 STAR HOTEL DESIGN

LOCATION

SANAND, GUJARAT

SHEET TITLE

SITE PLAN

GUIDED BY

DR. ARSHI PARASHAR MA'AM

DESIGNED BY

ANN MARY K MONI
SCH NO : 211110034

SCALE

1:400

NOTE : ALL DIMENSIONS ARE IN METER

SHEET No.



BASEMENT 1
198 CARS

ARCHITECTURE
AND PLANNING
DEPARTMENT
MANIT BHOPAL

THESIS 2024-2025

TOPIC

5 STAR HOTEL DESIGN

LOCATION
SANAND,
GUJARAT

SHEET TITLE

BASEMENT

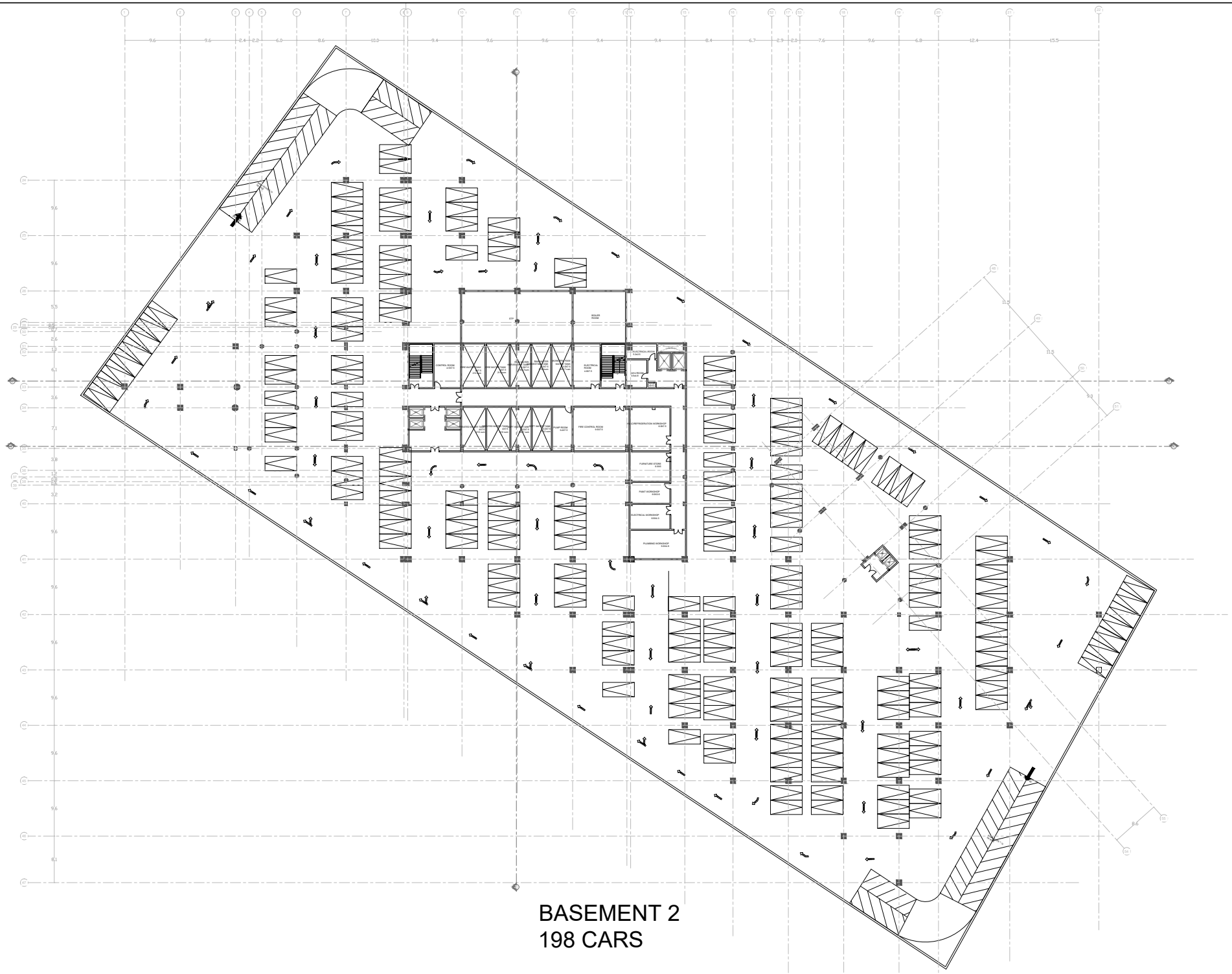
GUIDED BY
DR. ARSHI PARASHAR MA'AM

DESIGNED BY
ANN MARY K MONI
SCH NO : 211110034

SCALE
1:300

NOTE : ALL DIMENSIONS ARE IN METER

SHEET No.



BASEMENT 2
198 CARS

ARCHITECTURE
AND PLANNING
DEPARTMENT
MANIT BHOPAL

THESIS 2024-2025

TOPIC

5 STAR HOTEL DESIGN

LOCATION

SANAND,
GUJARAT

SHEET TITLE

BASEMENT

GUIDED BY

DR. ARSHI PARASHAR MA'AM

DESIGNED BY

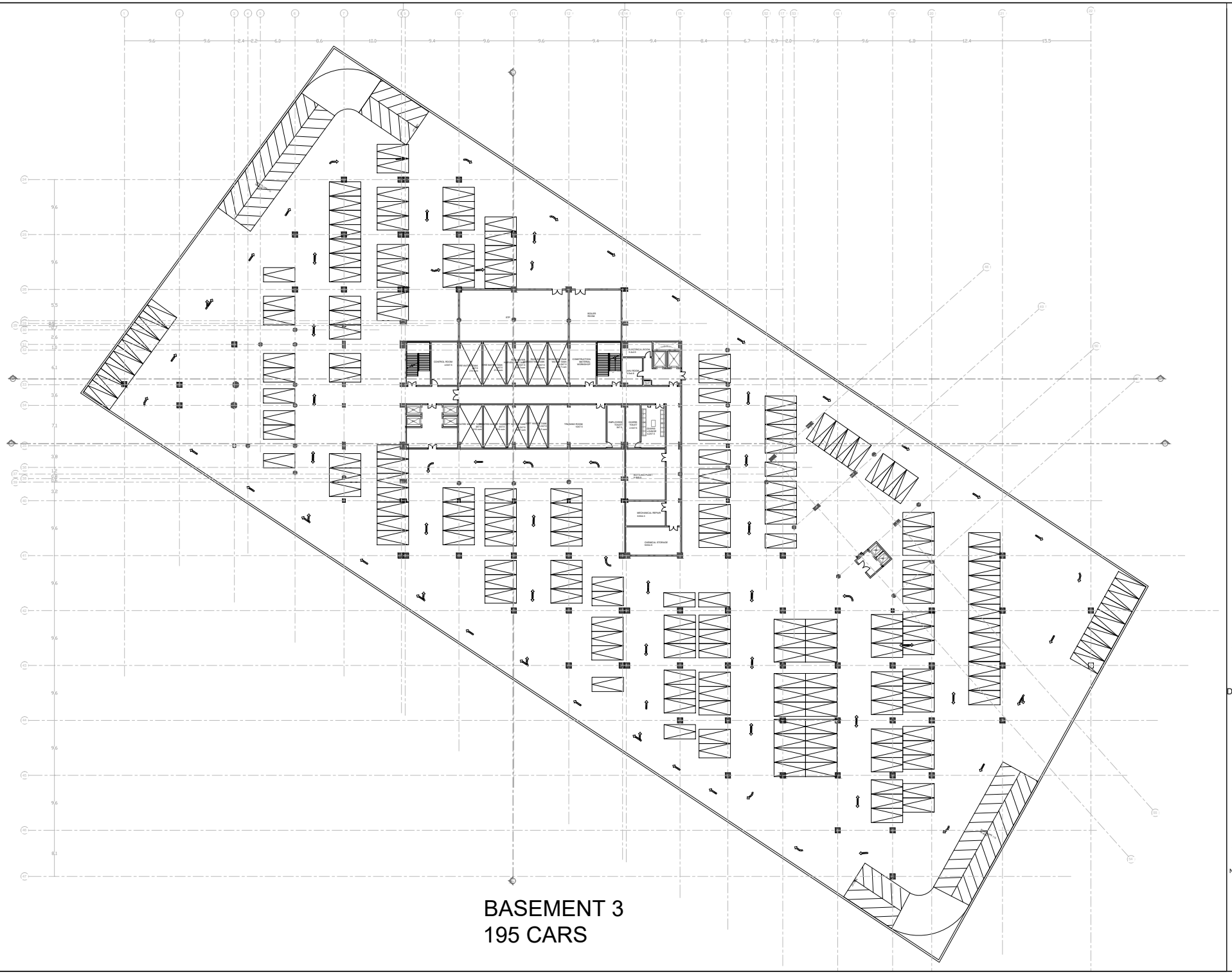
ANN MARY K MONI
SCH NO : 211110034

SCALE

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NOTE : ALL DIMENSIONS ARE IN METER

SHEET No.



BASEMENT 3
195 CARS

ARCHITECTURE
AND PLANNING
DEPARTMENT
MANIT BHOPAL

THESIS 2024-2025

TOPIC

5 STAR HOTEL DESIGN

LOCATION

SANAND,
GUJARAT

SHEET TITLE

BASEMENT

GUIDED BY

DR. ARSHI PARASHAR MA'AM

DESIGNED BY

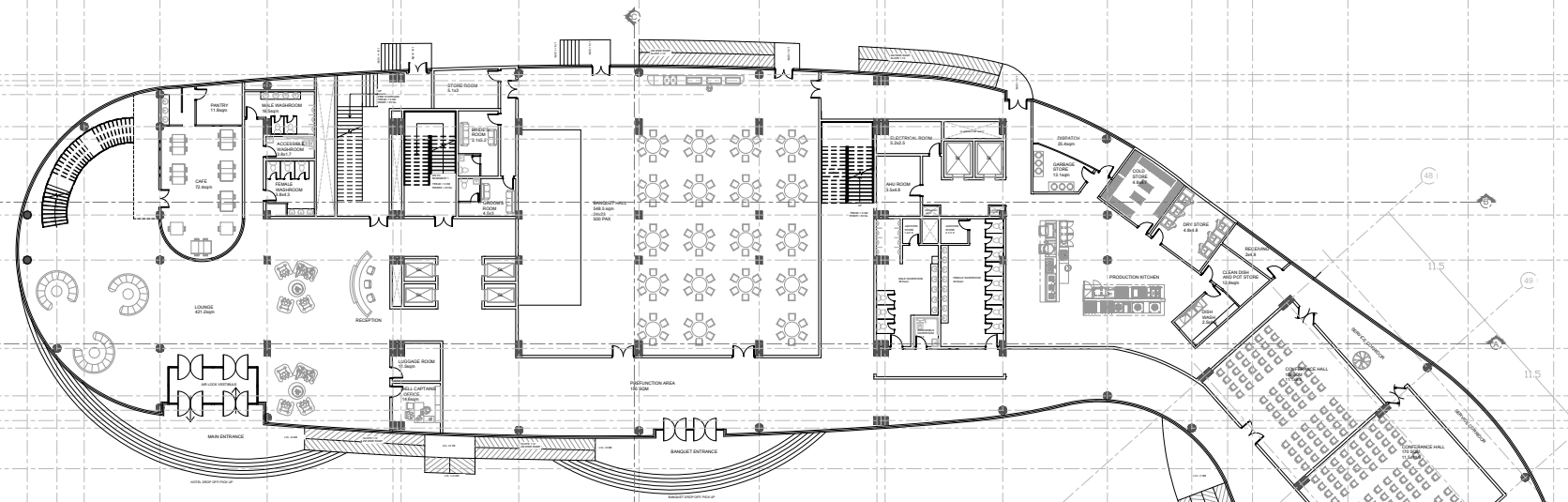
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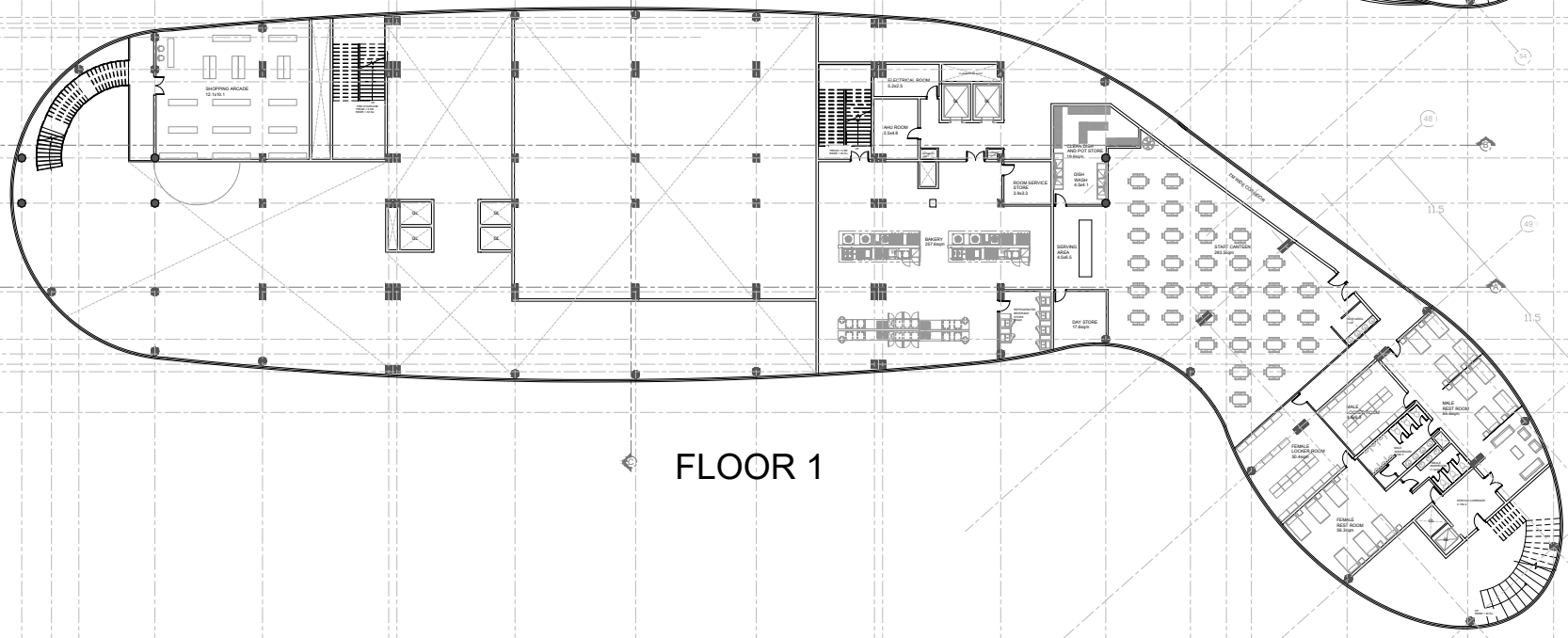
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NOTE : ALL DIMENSIONS ARE IN METER

SHEET No.



GROUND FLOOR



FLOOR 1

ARCHITECTURE AND PLANNING DEPARTMENT MANIT BHOPAL

THESIS 2024-2025

TOPIC

5 STAR HOTEL DESIGN

LOCATION

SANAND, GUJARAT

SHEET TITLE

FLOOR PLAN

GUIDED BY

DR. ARSHI PARASHAR MA'AM

DESIGNED BY

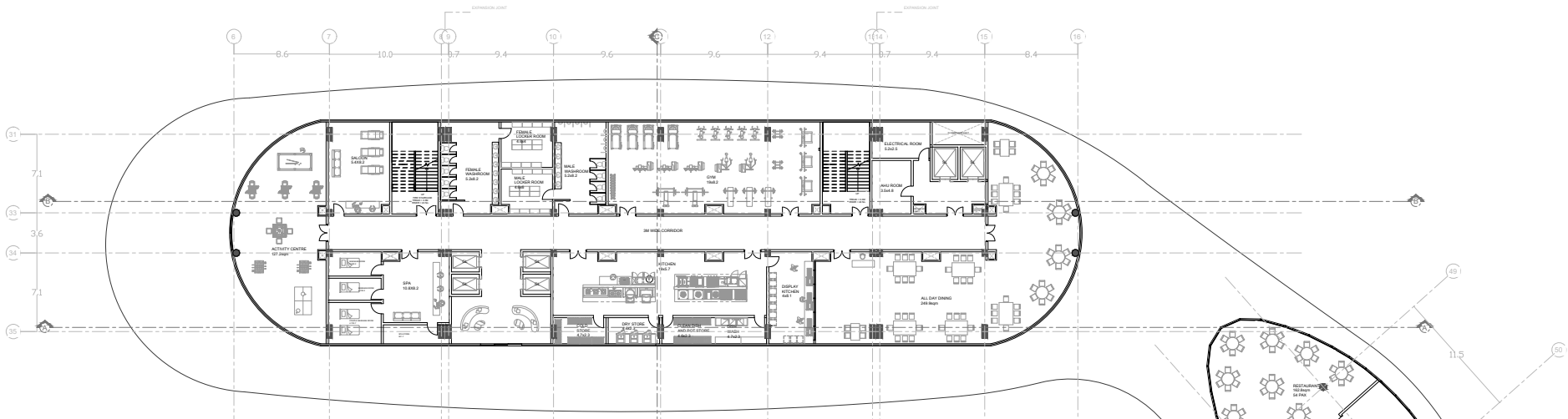
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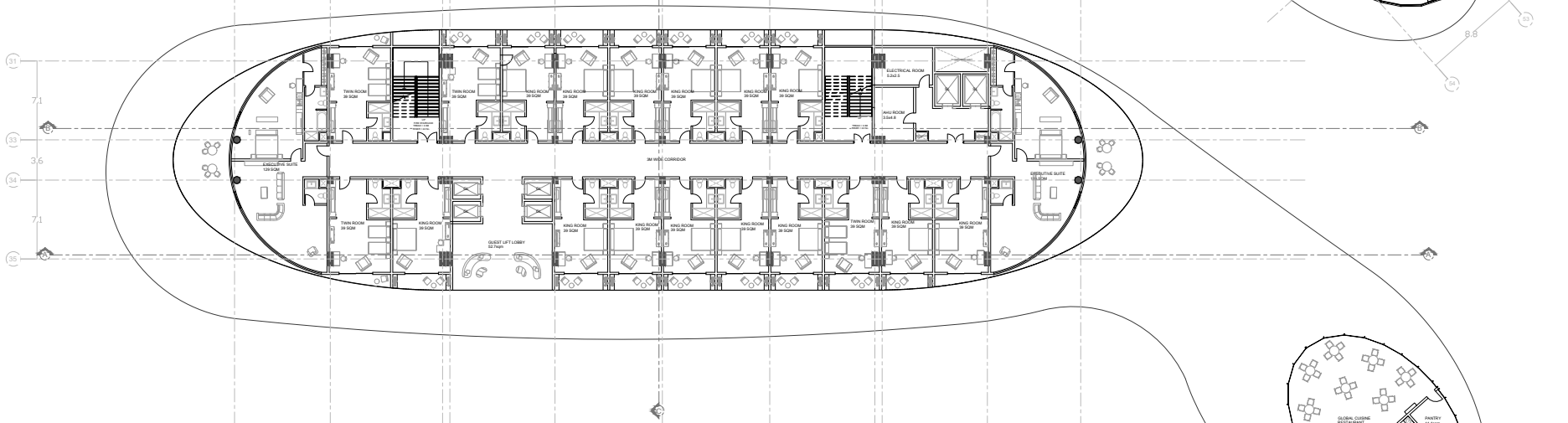
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NOTE : ALL DIMENSIONS ARE IN METER

SHEET No.



FLOOR 2



FLOOR 3,8,9

FLOOR 3,8,9	
ROOM TYPOLOGY	**NO**
KING ROOM	14
TWIN ROOM	4
EXECUTIVE SUITE	2
TOTAL ROOMS	**20**

ARCHITECTURE AND PLANNING DEPARTMENT MANIT BHOPAL

THESIS 2024-2025

TOPIC

5 STAR HOTEL DESIGN

LOCATION

SANAND, GUJARAT

SHEET TITLE

FLOOR PLAN

GUIDED BY

DR. ARSHI PARASHAR MA'AM

DESIGNED BY

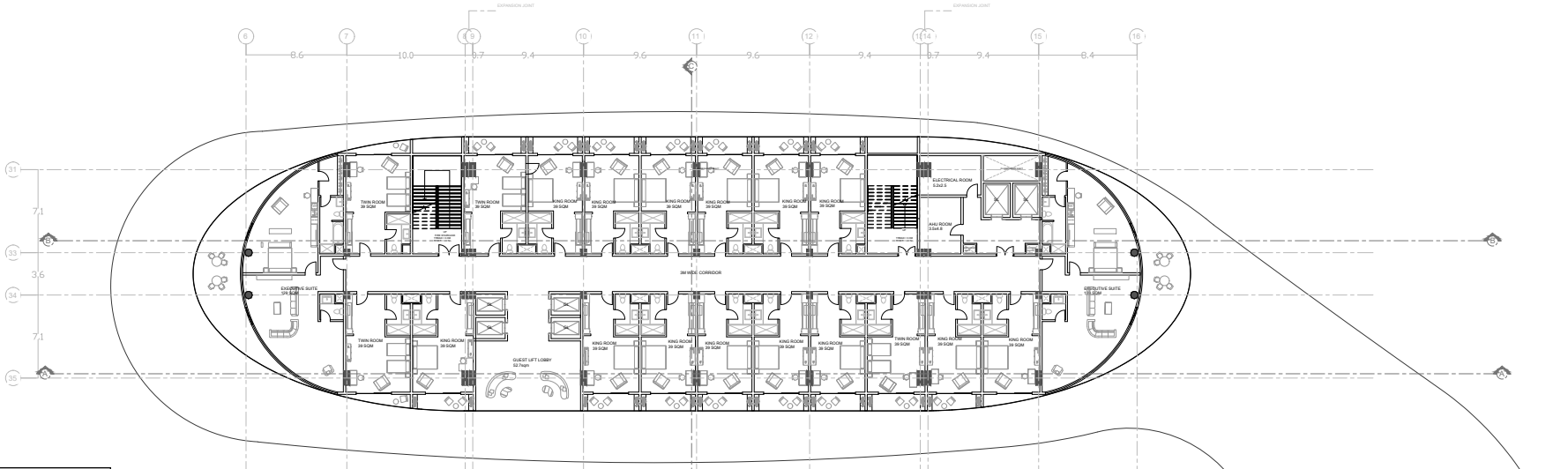
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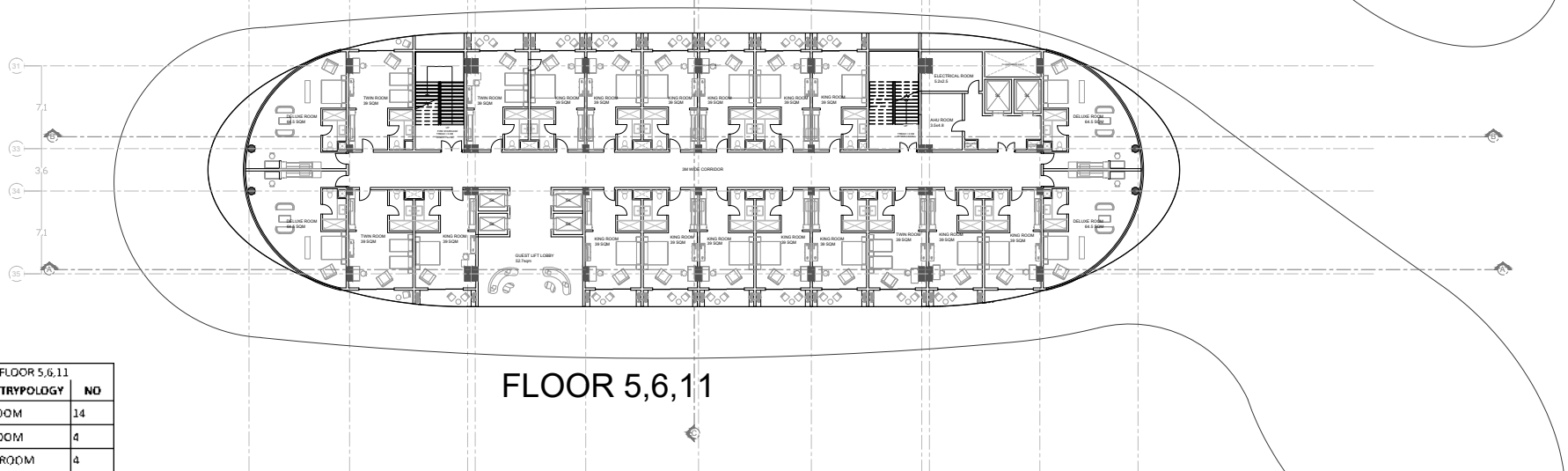
NOTE : ALL DIMENSIONS ARE IN METER

SHEET No.



FLOOR 4,7,10

FLOOR 4,7,10	
ROOM TRYPOLOGY	**NO**
KING ROOM	14
TWIN ROOM	4
EXECUTIVE SUITE	2
TOTAL ROOMS	**20**



FLOOR 5,6,11

FLOOR 5,6,11	
ROOM TRYPOLOGY	**NO**
KING ROOM	14
TWIN ROOM	4
DELUXE ROOM	4
TOTAL ROOMS	**22**

ARCHITECTURE AND PLANNING DEPARTMENT MANIT BHOPAL

THESIS 2024-2025

TOPIC

5 STAR HOTEL DESIGN

LOCATION

SANAND, GUJARAT

SHEET TITLE

FLOOR PLAN

GUIDED BY

DR. ARSHI PARASHAR MA'AM

DESIGNED BY

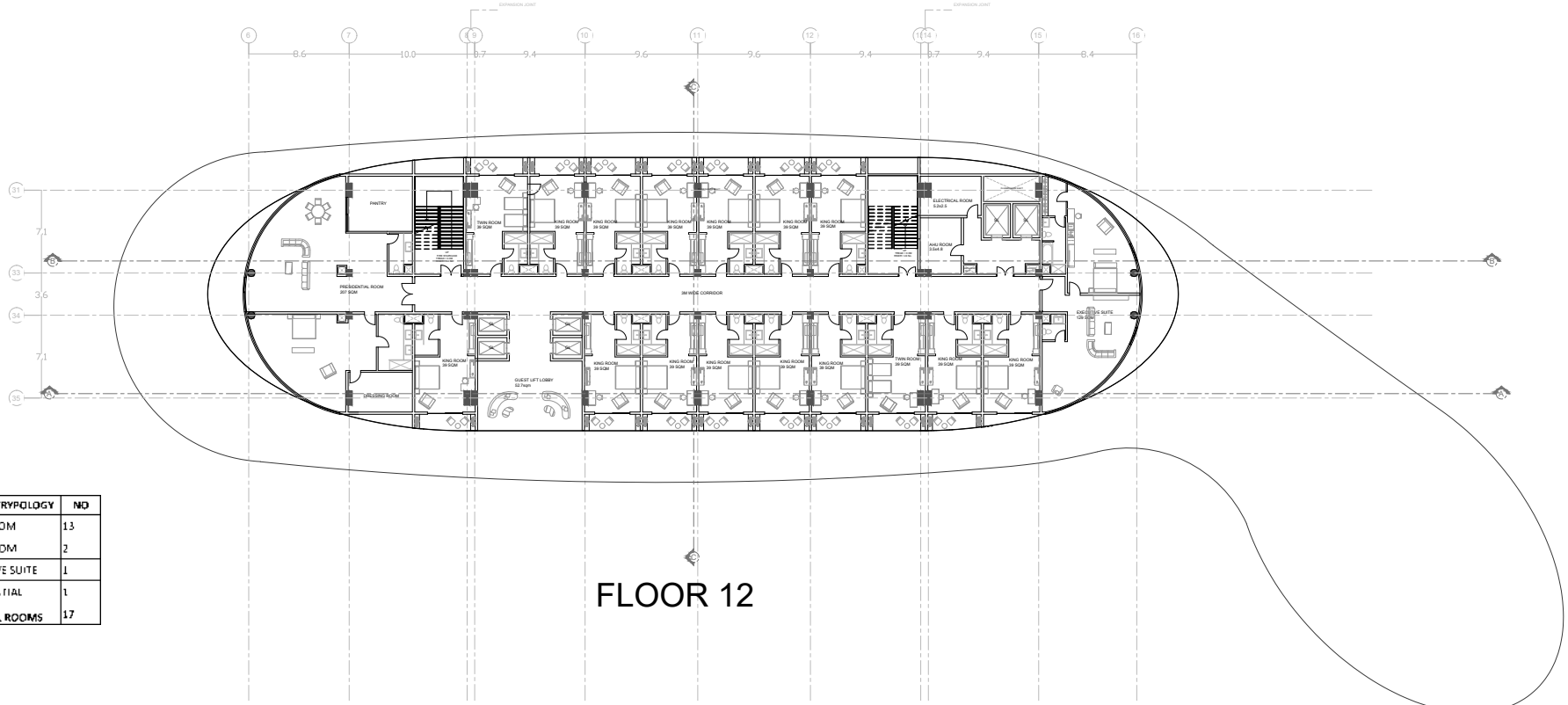
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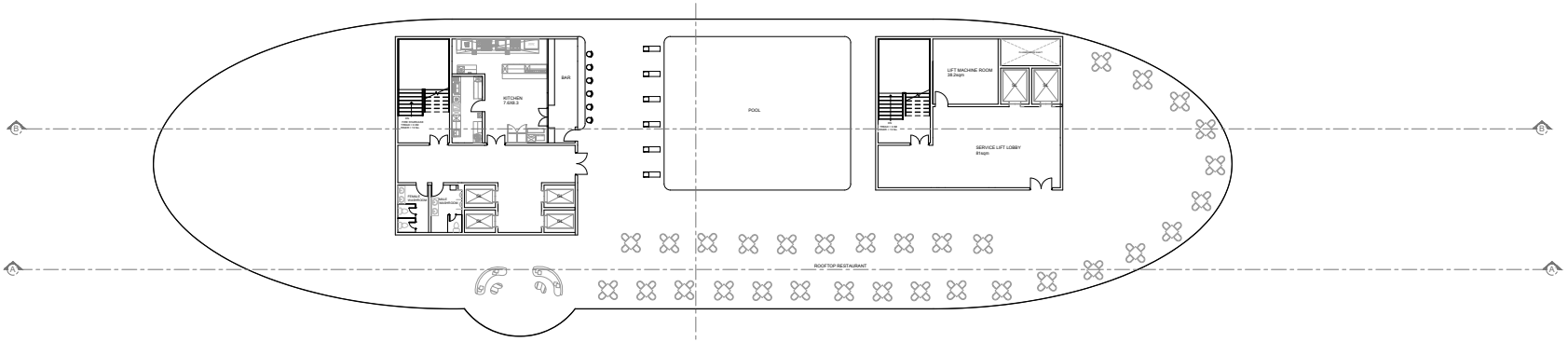
NOTE : ALL DIMENSIONS ARE IN METER

SHEET No.



ROOM TRYPOLOGY	NO
KING ROOM	13
TW N ROOM	2
EXECUTIVE SUITE	1
PRESIDE N TIAL	1
TOTAL ROOMS	17

FLOOR 12



TERRACE PLAN

ARCHITECTURE AND PLANNING DEPARTMENT MANIT BHOPAL

THESIS 2024-2025

TOPIC

5 STAR HOTEL DESIGN

LOCATION

SANAND, GUJARAT

SHEET TITLE

FLOOR PLAN

GUIDED BY

DR. ARSHI PARASHAR MA'AM

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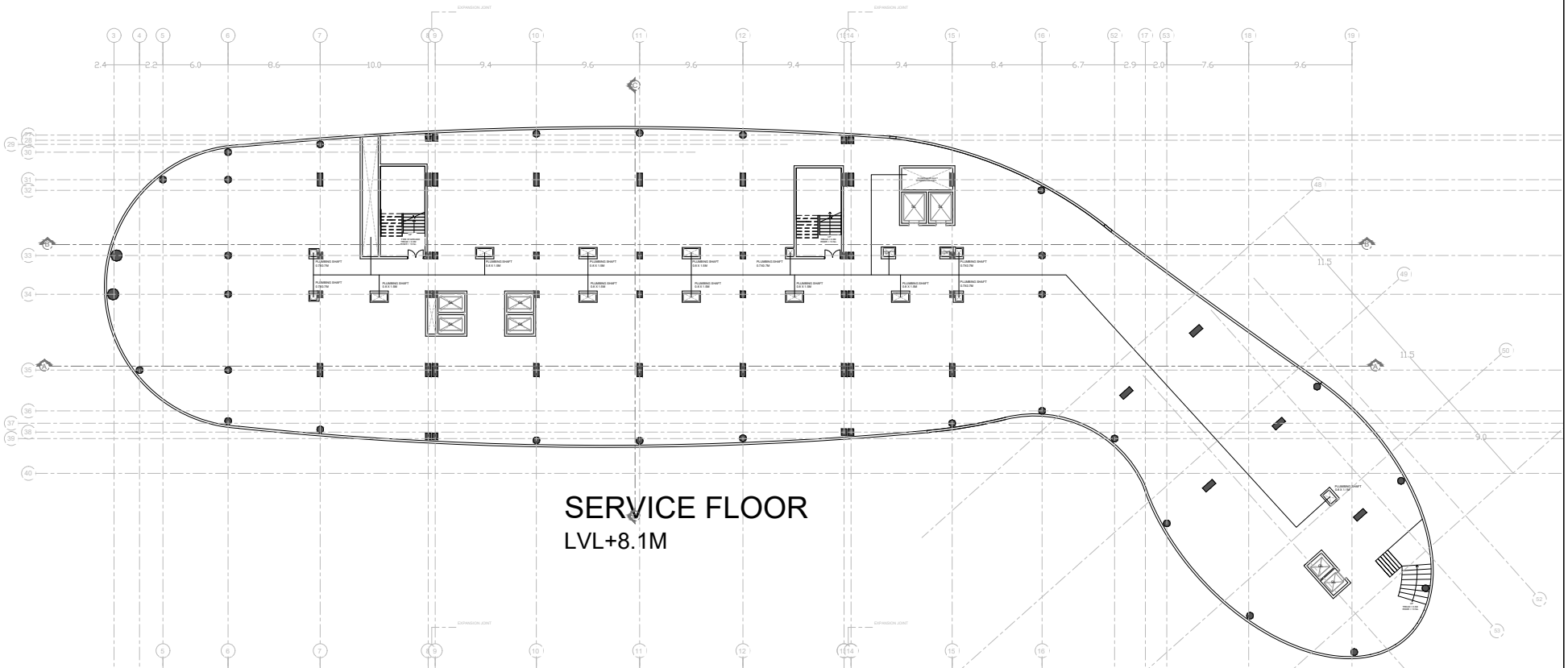
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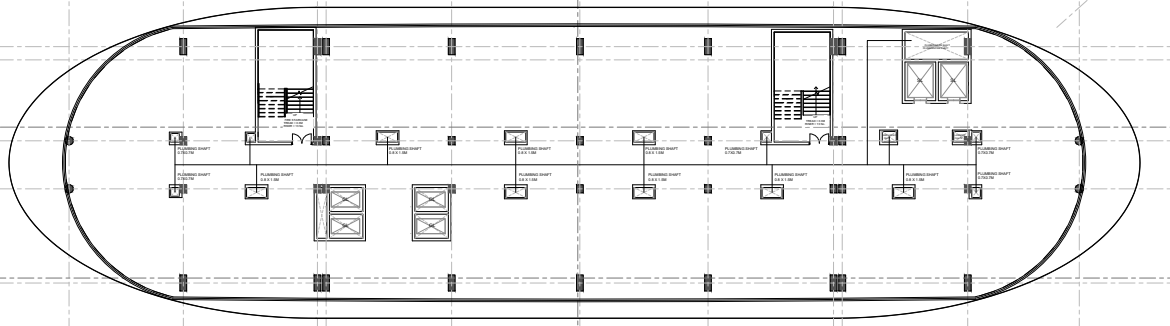
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NOTE : ALL DIMENSIONS ARE IN METER

SHEET No.



SERVICE FLOOR
LVL+8.1M



SERVICE FLOOR
LVL+50.1M

ARCHITECTURE AND PLANNING DEPARTMENT MANIT BHOPAL

THESIS 2024-2025

TOPIC

5 STAR HOTEL DESIGN

LOCATION

SANAND, GUJARAT

SHEET TITLE

FLOOR PLAN

GUIDED BY

DR. ARSHI PARASHAR MA'AM

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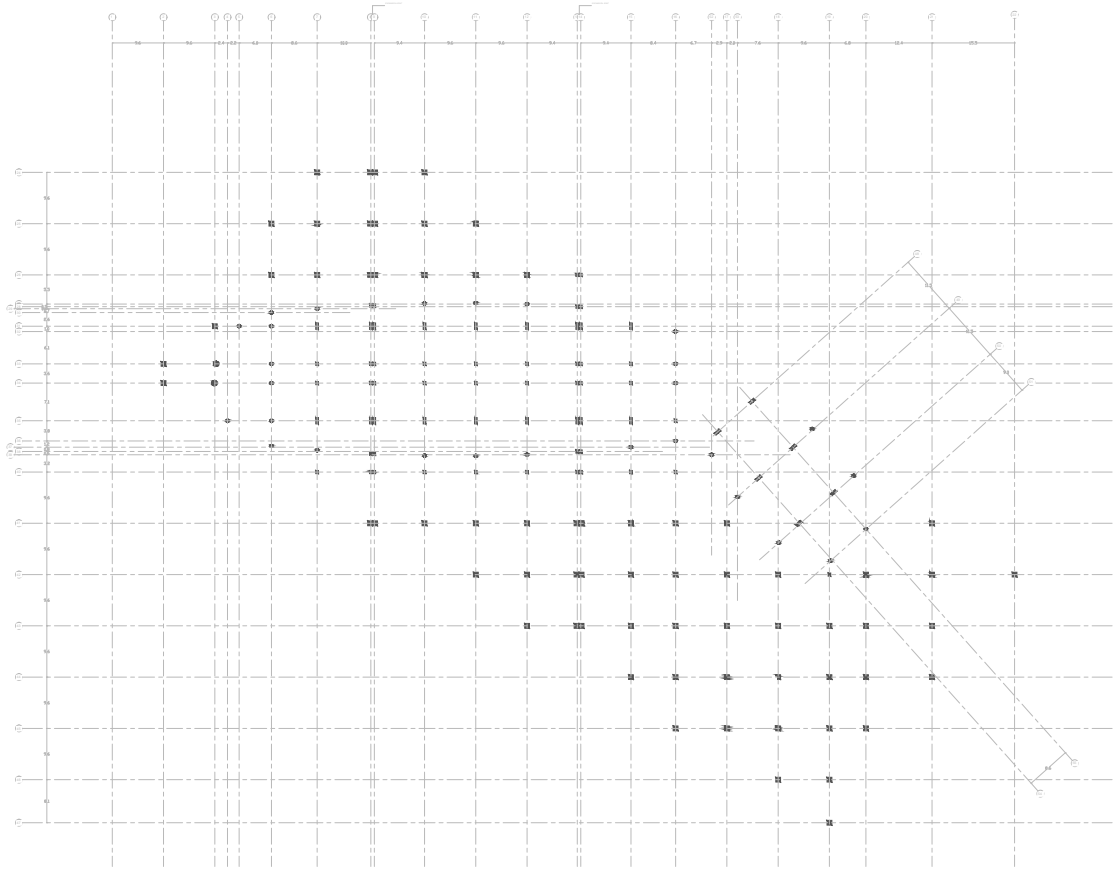
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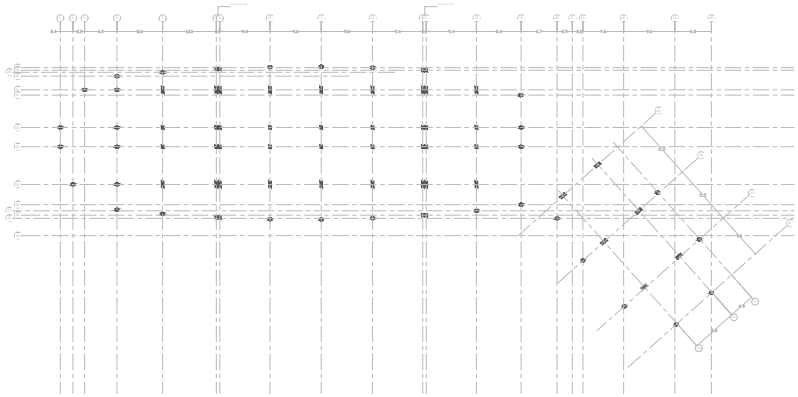
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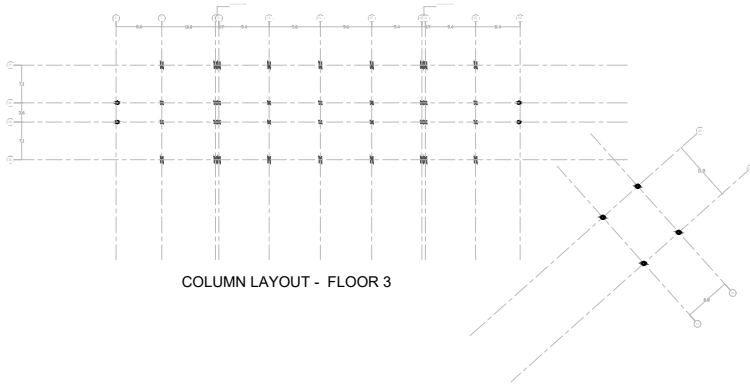
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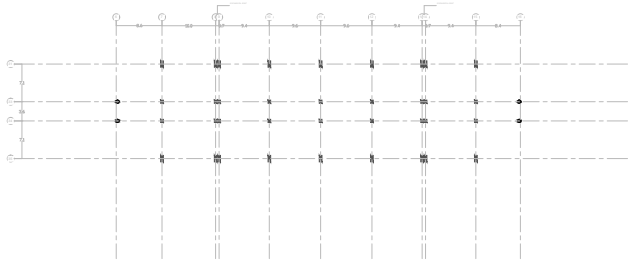
COLUMN LAYOUT - BASEMENT 1,2,3



COLUMN LAYOUT - GROUND FLOOR TO FLOOR 2



COLUMN LAYOUT - FLOOR 3



COLUMN LAYOUT - FLOOR 4 TO FLOOR 13

ARCHITECTURE AND PLANNING DEPARTMENT MANIT BHOPAL

THESIS 2024-2025

TOPIC

5 STAR HOTEL DESIGN

LOCATION

SANAND, GUJARAT

SHEET TITLE

COLUMN LAYOUT

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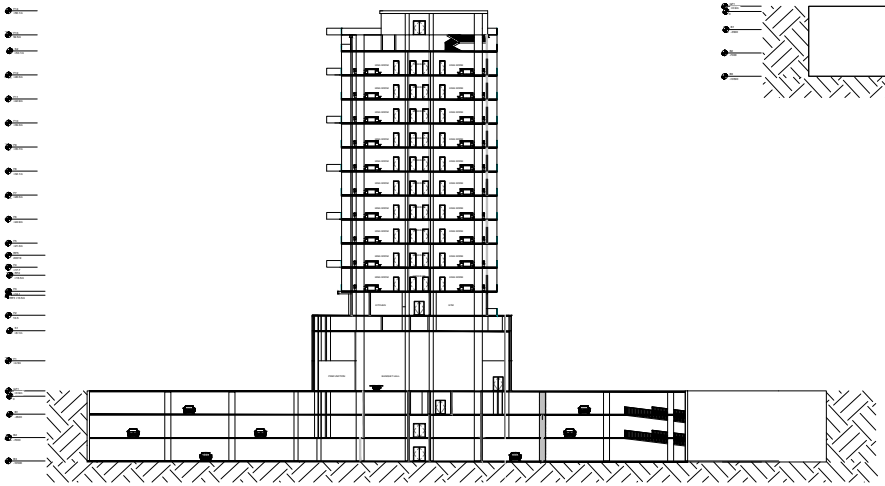
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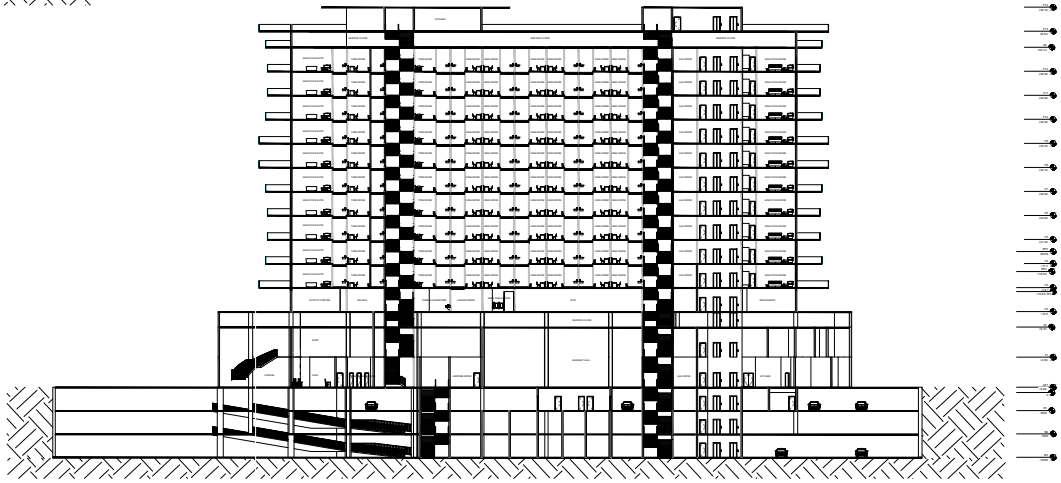
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SECTION AA



SECTION CC



SECTION BB

ARCHITECTURE AND PLANNING DEPARTMENT MANIT BHOPAL

THESIS 2024-2025

TOPIC

5 STAR HOTEL DESIGN

LOCATION

SANAND, GUJARAT

SHEET TITLE

SECTIONS

GUIDED BY

DR. ARSHI PARASHAR MA'AM

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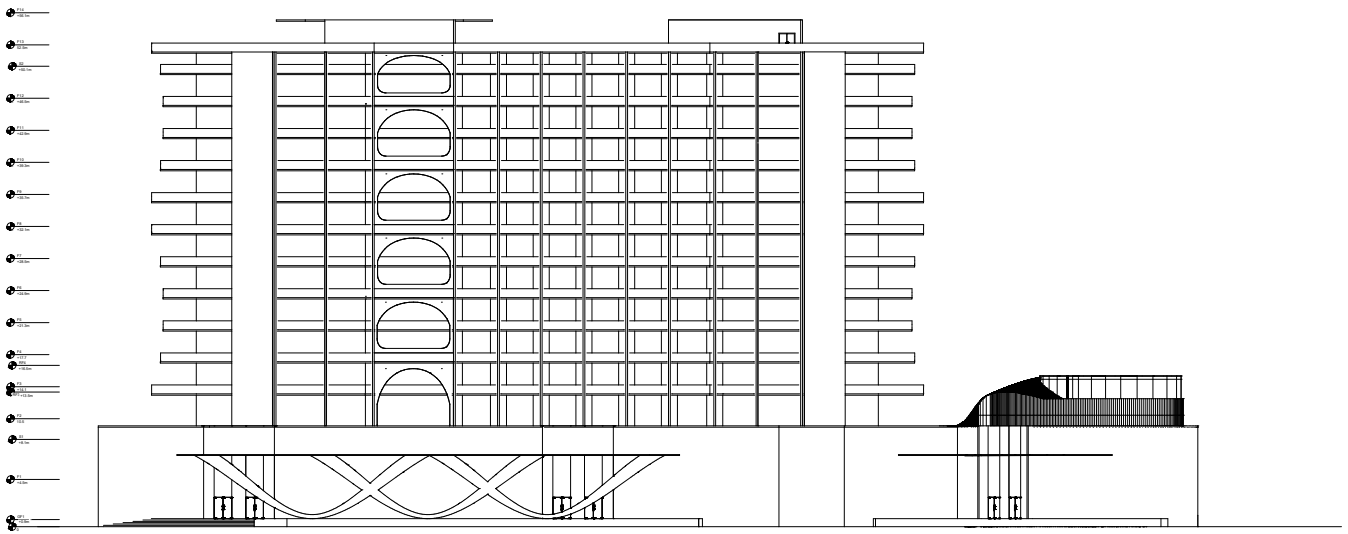
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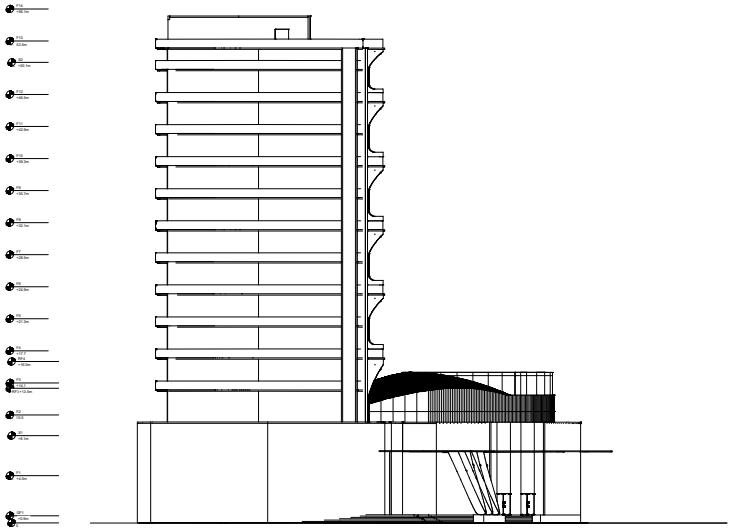
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NOTE : ALL DIMENSIONS ARE IN METER

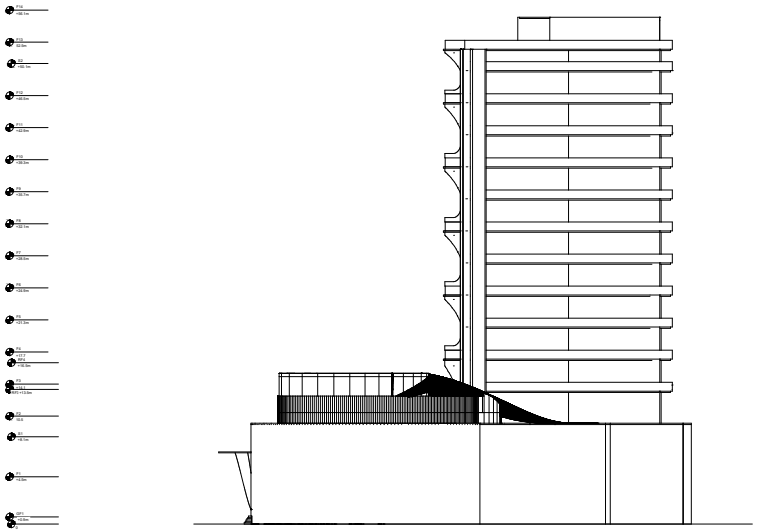
SHEET No.



FRONT ELEVATION



SOUTH SIDE ELEVATION



NORTH SIDE ELEVATION

ARCHITECTURE
AND PLANNING
DEPARTMENT
MANIT BHOPAL

THESIS 2024-2025

TOPIC

5 STAR HOTEL DESIGN

LOCATION

SANAND,
GUJARAT

SHEET TITLE

ELEVATION

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DR. ARSHI PARASHAR MA'AM

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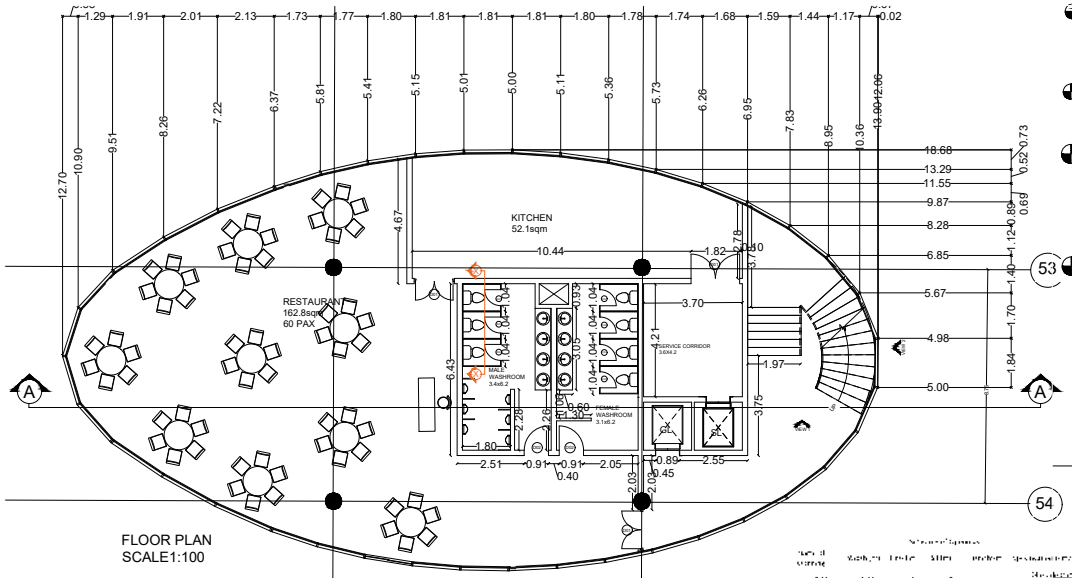
ANN MARY K MONI
SCH NO : 211110034

SCALE

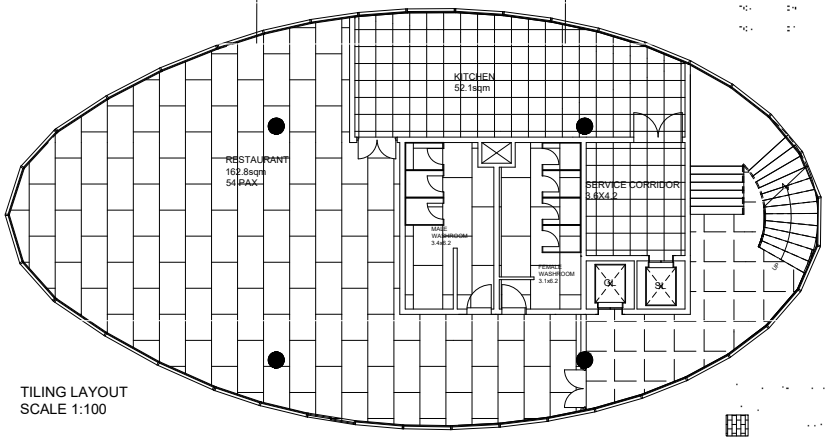
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NOTE : ALL DIMENSIONS ARE IN METER

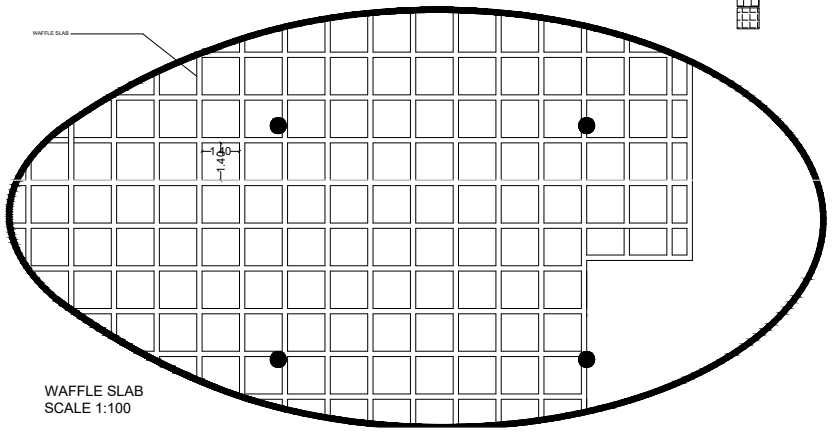
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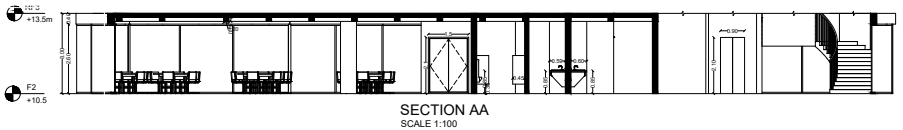
FLOOR PLAN
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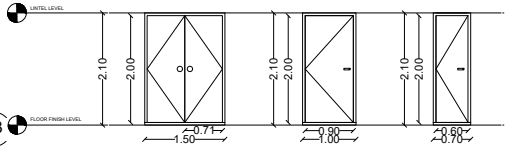
TILING LAYOUT
SCALE 1:100

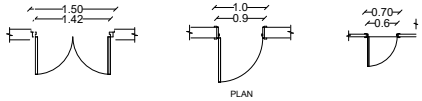


WAFFLE SLAB
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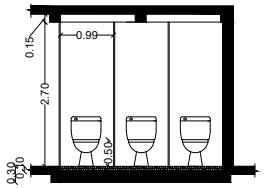


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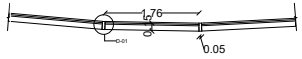


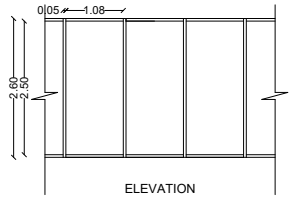


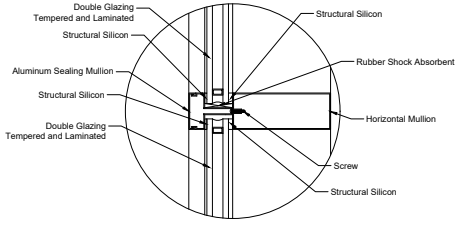
DOOR DETAILS
SCALE 1:50



SECTION XX
SCALE 1:50

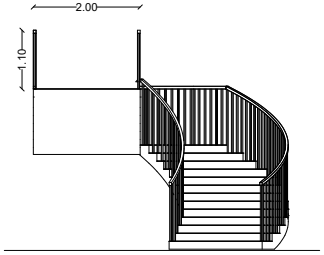


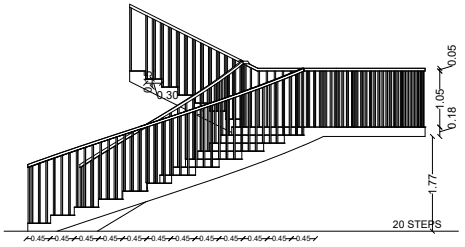


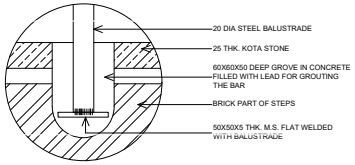


Detail - 01

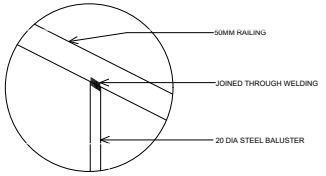
CURTAIN WALL DETAILS
SCALE 1:50





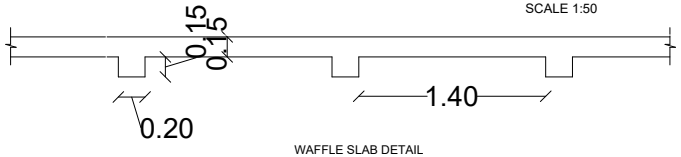


DETAIL OF BALUSTRADE



DETAILS OF RAILING AND BALUSTER

STAIR DETAILS
SCALE 1:50



WAFFLE SLAB DETAIL

ARCHITECTURE AND PLANNING DEPARTMENT MANIT BHOPAL

THESIS 2024-2025

TOPIC

5 STAR HOTEL DESIGN

LOCATION

SANAND, GUJARAT

SHEET TITLE

WORKING DRAWING

GUIDED BY

DR. ARSHI PARASHAR MA'AM

DESIGNED BY

ANN MARY K MONI
SCH NO : 211110034

SCALE

NOTE : ALL DIMENSIONS ARE IN METER

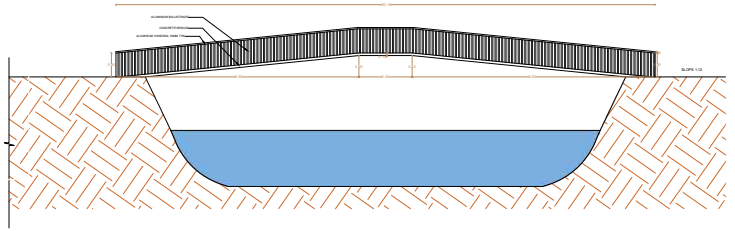
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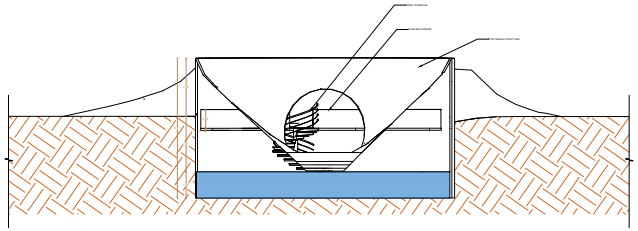




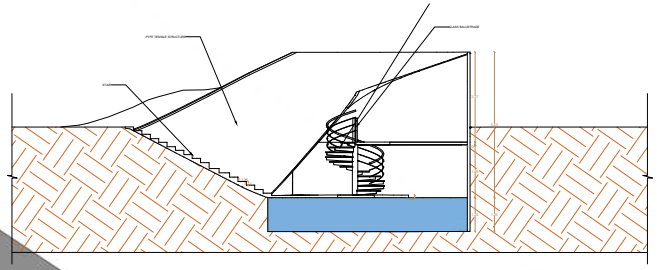
Section AA
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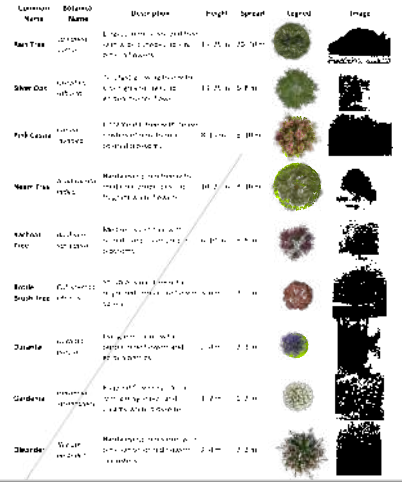
Section BB
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Section CC
SCALE 1:100



Section DD





ARCHITECTURE AND PLANNING DEPARTMENT MANIT BHOPAL

THESIS 2024-2025

TOPIC

5 STAR HOTEL DESIGN

LOCATION

SANAND, GUJARAT

SHEET TITLE

LANDSCAPE

GUIDED BY

DR. ARSHI PARASHAR MA'AM

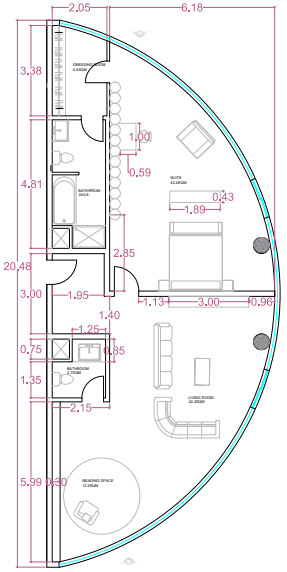
DESIGNED BY

ANN MARY K MONI
SCH NO : 211110034

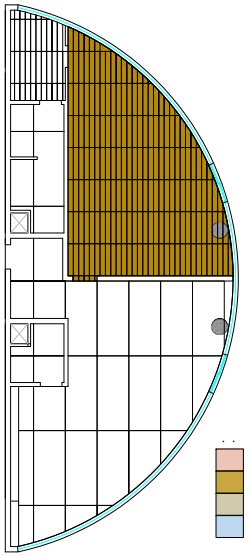
SCALE

NOTE : ALL DIMENSIONS ARE IN METER

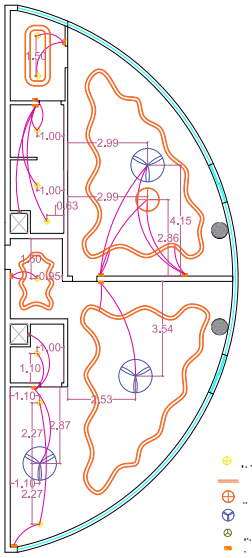
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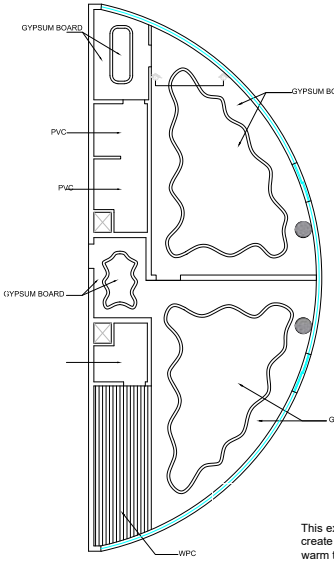
PLAN



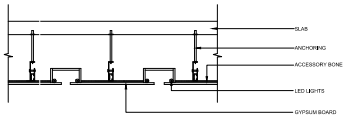
TILE LAYOUT



CEILING LIGHTS



CEILING PLAN



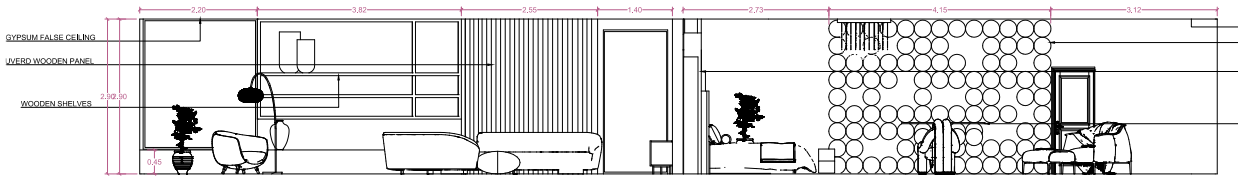
SECTION XX



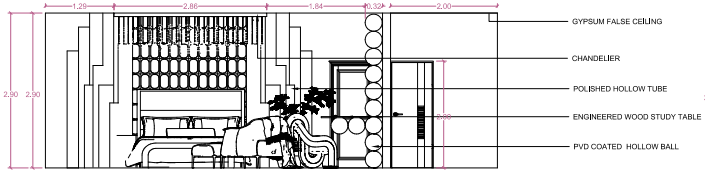
This executive suite blends warm earth tones, soft blush accents, and rich textures to create a calm yet luxurious atmosphere. A plush mocha-upholstered bed, set against warm timber paneling and a sculptural burgundy floral installation, forms the focal point of the room.

The palette combines wood slats, concrete textures, fabric finishes, and white marble with gold veining to balance modern warmth with refined elegance. Soft furnishings like the blush lounge chair and natural jute rug add comfort and subtle contrast, while curated décor pieces—ceramic vases and sculptural accessories—enhance the suite's artistic identity.

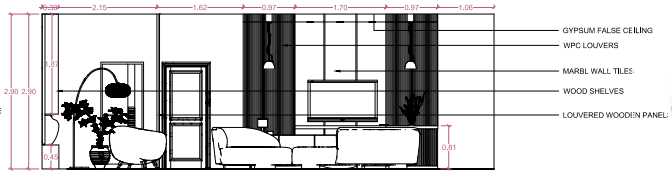
Overall, the materials come together to deliver a contemporary, elegant, and serene 5-star executive suite experience.



ELEVATION 1



ELEVATION 2



ELEVATION 3









ARCHITECTURE AND PLANNING DEPARTMENT MANIT BHOPAL

THESIS 2024-2025

TOPIC

5 STAR HOTEL DESIGN

LOCATION

SANAND, GUJARAT

SHEET TITLE

INTERIORS

GUIDED BY

DR. ARSHI PARASHAR MA'AM

DESIGNED BY

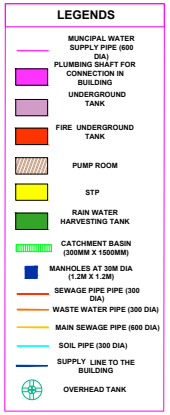
ANN MARY K MONI
SCH NO : 211110034

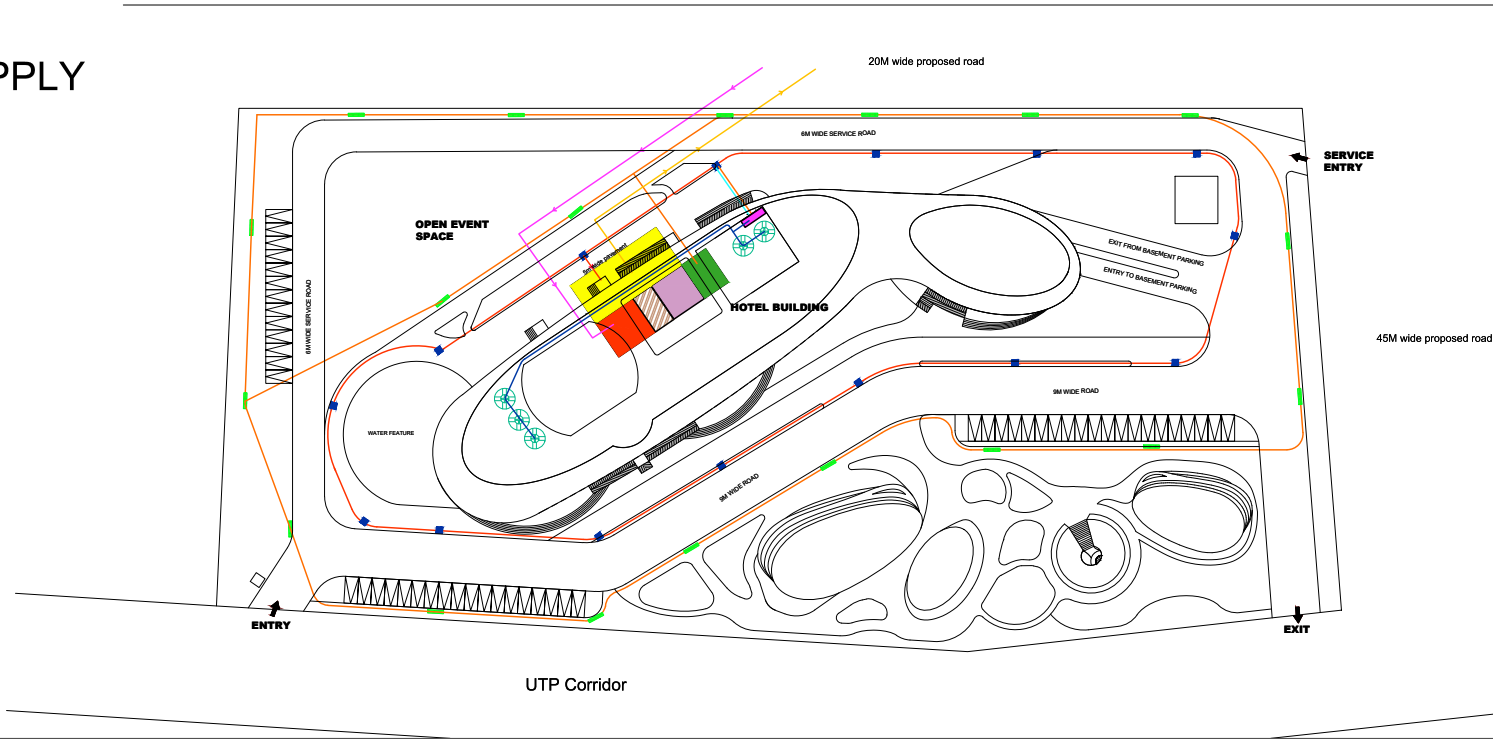
SCALE
1:100

NOTE : ALL DIMENSIONS ARE IN METER

SHEET No.

WATER SUPPLY

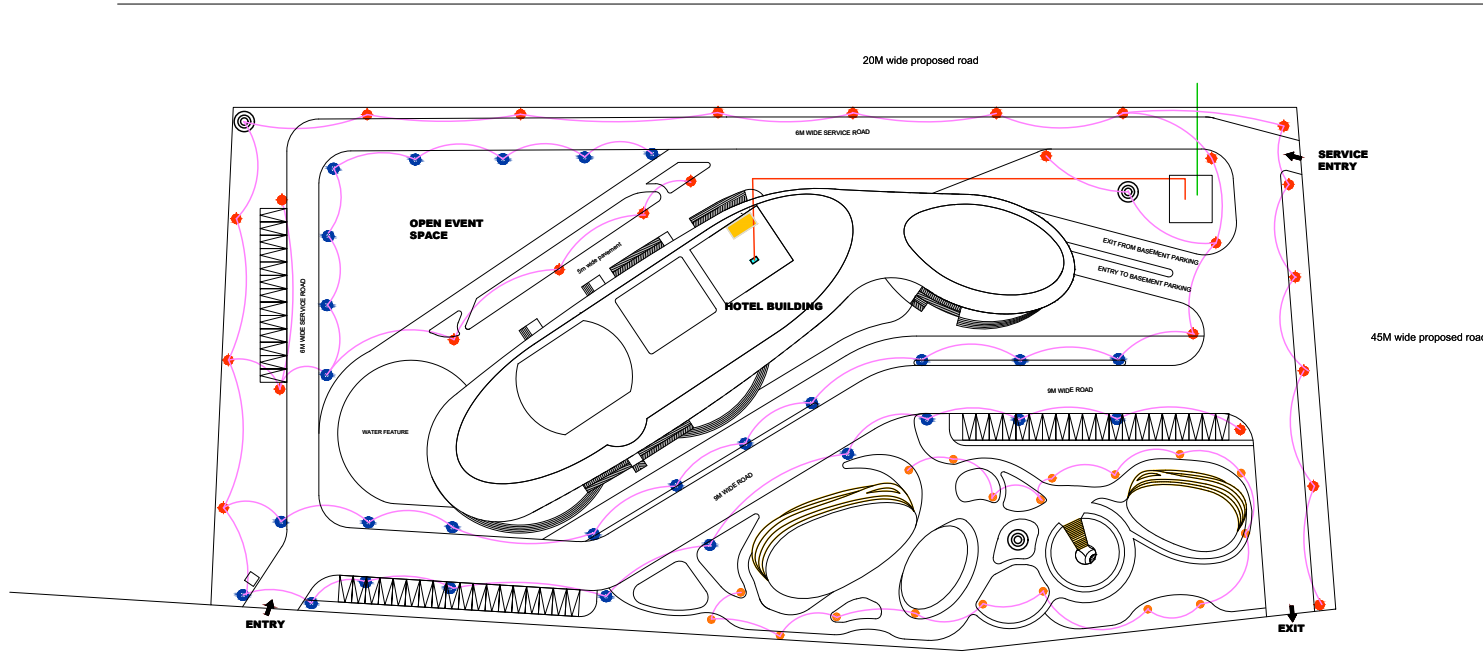




UTP Corridor

ELECTRICAL





UTP Corridor

ARCHITECTURE AND PLANNING DEPARTMENT MANIT BHOPAL

THESIS 2024-2025

TOPIC

5 STAR HOTEL DESIGN

LOCATION

SANAND, GUJARAT

SHEET TITLE

SERVICES

GUIDED BY

DR. ARSHI PARASHAR MA'AM

DESIGNED BY

ANN MARY K MONI
SCH NO : 211110034

SCALE

1:500

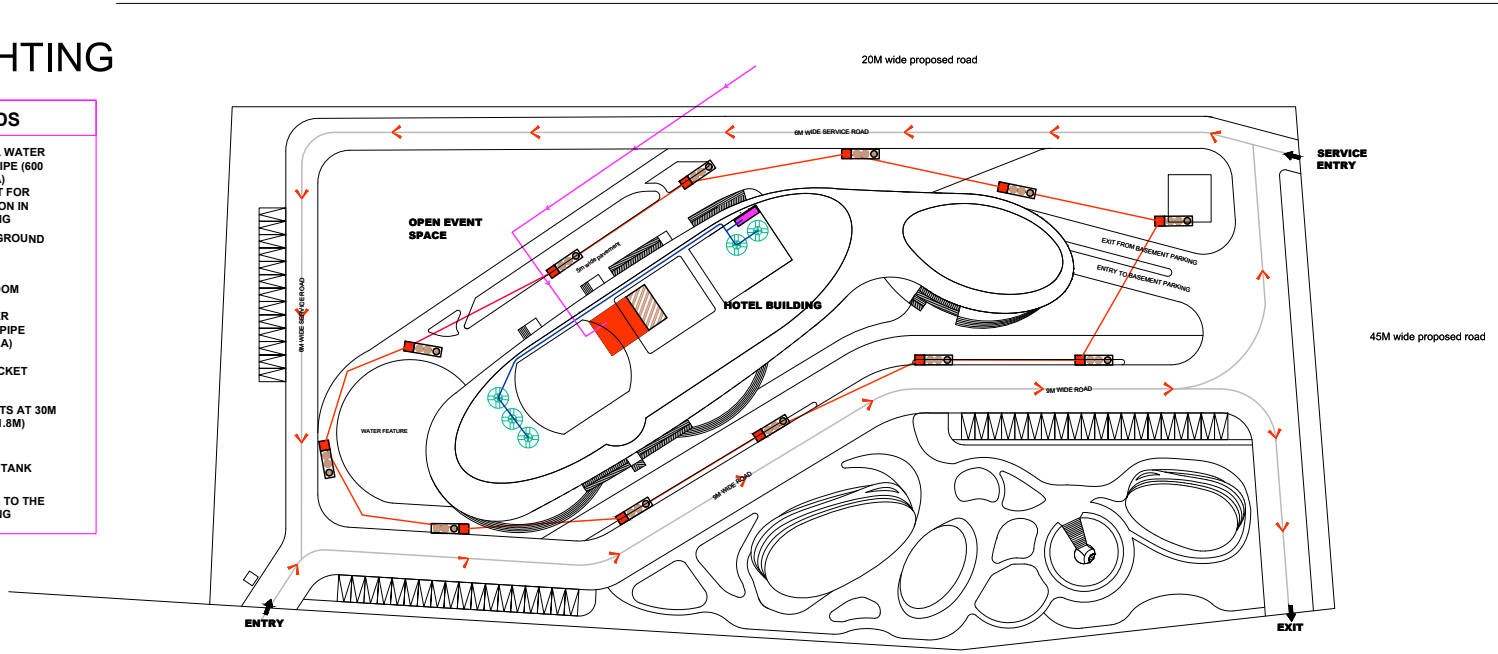
NOTE : ALL DIMENSIONS ARE IN METER

SHEET No.

FIRE FIGHTING

LEGENDS

- MUNCIPAL WATER SUPPLY PIPE (600 DIA)
- FIRE SHAFT FOR CONNECTION IN BUILDING
- FIRE UNDERGROUND TANK
- PUMP ROOM
- WATER SUPPLY PIPE (300 DIA)
- SAND BUCKET
- FIRE HYDRANTS AT 30M (1.8M X 1.8M)
- OVERHEAD TANK
- SUPPLY LINE TO THE BUILDING

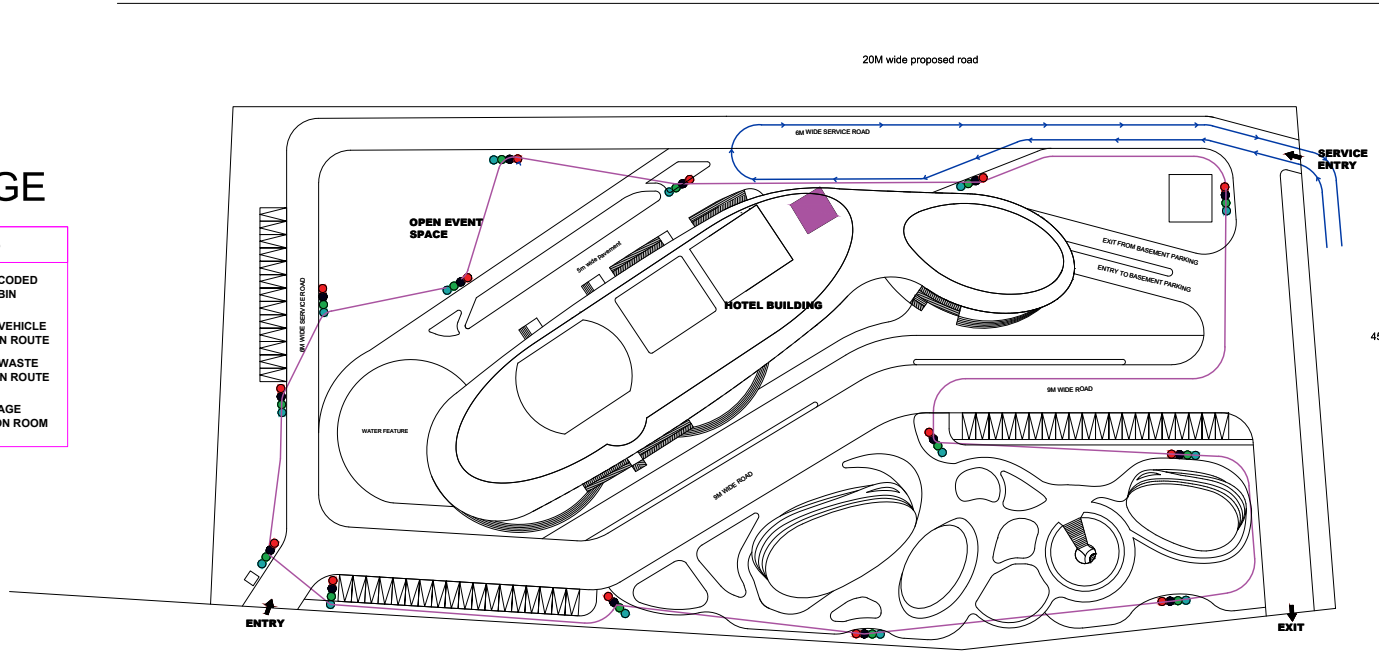


UTP Corridor

GARBAGE

LEGENDS

- COLOUR CODED DUSTBIN
- GARBAGE VEHICLE COLLECTION ROUTE
- DUSTBIN WASTE COLLECTION ROUTE
- GARBAGE COLLECTION ROOM



UTP Corridor

ARCHITECTURE AND PLANNING DEPARTMENT MANIT BHOPAL

THESIS 2024-2025

TOPIC

5 STAR HOTEL DESIGN

LOCATION

SANAND, GUJARAT

SHEET TITLE

SERVICES

GUIDED BY

DR. ARSHI PARASHAR MA'AM

DESIGNED BY

ANN MARY K MONI
SCH NO : 211110034

SCALE

1:500

NOTE : ALL DIMENSIONS ARE IN METER

SHEET No.









ARCHITECTURE AND PLANNING DEPARTMENT
MANIT BHOPAL

THESIS 2024-2025

TOPIC

5 STAR HOTEL DESIGN

LOCATION

SANAND, GUJARAT

SHEET TITLE

RENDER

GUIDED BY

DR. ARSHI PARASHAR MA'AM

DESIGNED BY

ANN MARY K MONI
SCH NO : 211110034

SCALE

NOTE : ALL DIMENSIONS ARE IN METER

SHEET No.





