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5 Star Hotel

Vishakhapatnam, Andhra Pradesh, India

Dec, 2025

5 Star Hotel

Vishakhapatnam, Andhra Pradesh, 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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ARC 511 – Thesis Project

5 Star Hotel

Vishakhapatnam, Andhra Pradesh, India

Submitted by:

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B. ARCH

9th Semester, 5th Year

UNDER THE GUIDANCE OF

Dr. Anupama Sharma



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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, Vishakhapatnam, Andhra Pradesh, 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 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 Dec, 2025

Dr. Anupama Sharma
Thesis Guide

CERTIFICATION OF EXAMINATION

The Bachelor of Architecture Thesis Viva-Voce examination of Mr. Devansh Katiyar, Scholar No.211110050, was held on 1/12/2025.

Dr. Nakul Dhagat
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Thesis Coordinator

ABSTRACT

This thesis explores the design and development of a 5-star hotel and convention centre as part of a landmark waterfront project in Visakhapatnam, Andhra Pradesh, under a Public Private Partnership (PPP) framework. The project, initiated by the Visakhapatnam Metropolitan Region Development Authority (VMRDA), aims to create a premier hospitality destination integrating a luxury hotel, a multipurpose convention hall with a 2,500+ seating capacity, and recreational waterfront amenities within a site of approximately 7.97 acres along Beach Road. The design approach prioritizes sustainability, universal accessibility, and compliance with Coastal Regulation Zone (CRZ) guidelines and local development norms.

The research methodology involves a comprehensive literature review of national and international hotel design standards, including Ministry of Tourism guidelines, NBC 2016, URDPFI 2015, and references from Neufert's Architect's Data and Time-Saver Standards. Site analysis includes climatic, topographical, and environmental factors influencing spatial planning and architectural form. Case studies of prominent 5-star hotels—Novotel Varun Beach (Visakhapatnam), Taj Lakefront (Bhopal), Aria Hotel (Nashik), and Westin Gurgaon—inform functional zoning, circulation, and service efficiency strategies.

The proposed design synthesizes coastal vernacular aesthetics with contemporary luxury, incorporating passive cooling strategies, landscape buffers, and energy-efficient systems. The outcome is a hospitality complex that enhances regional tourism potential while ensuring environmental responsibility and operational excellence.

ACKNOWLEDGMENT

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Date: 01-12-2025 *Devansh Katiyar*

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CHAPTER 1 – DESIGN BRIEF

1. PROJECT INTRODUCTION

The Visakhapatnam Metropolitan Regional Development Authority (VMRDA) is initiating the development of a **Convention Centre**, a **5-Star Hotel/Resort**, and associated waterfront entertainment facilities along Beach Road, Visakhapatnam, Andhra Pradesh, India. This prestigious project will be implemented on a Public Private Partnership (PPP) basis under the Design, Finance, Build, Operate, and Transfer (DFBOT) model.

Spanning approximately 10.7 acres, the project aims to transform the identified prime land into a landmark destination featuring:

- A multi-purpose convention hall for at least 2,500 persons,
- A 5-star category hotel/resort with no less than 200 rooms,
- Waterfront entertainment facilities such as cafés, party lawns, flea markets, and exhibition venues.

The estimated project cost is ₹240 crore, and the concession period is 33 years (excluding a 3-year construction period). The project emphasizes sustainability, accessibility, and tourism development in compliance with CRZ and local development regulations.

2. SITE LOCATION AND FEATURES

Parameter	Details
Project Title	Development of Convention Centre & 5-Star Hotel/Resort with Waterfront Entertainment
City	Visakhapatnam
State	Andhra Pradesh, India
Specific Location	Along Beach Road, Visakhapatnam
Land Area	Approximately 7.97 acres
Land Ownership	Visakhapatnam Metropolitan Regional Development Authority (VMRDA)
Access Road	Internal road from Beach Road (existing 11 m, to be widened to 18 m)
Adjacent Features	Near lighthouse, beach deck, and VMRDA's waterfront developments

Topography	Coastal, flat terrain with high tourism value
Current Zoning/Use	Designated for tourism and hospitality under VMRDA plans
Environmental Regulations	Falls under CRZ; subject to CRZ 2011 (CRZ 2019 once notified)
Connectivity	Easily accessible via airport, railway, and major city roads



Figure 1 Site Location

Key Features of the Site

a) Prime Waterfront Location:

- The site is strategically located on the scenic Beach Road, offering sea-facing frontage ideal for tourism and hospitality development.
- Positioned near existing urban infrastructure, cultural hubs, and tourist attractions.

b) Connectivity:

- Well-connected to the rest of Visakhapatnam via major roads.
- Easy accessibility from railway station, airport, and city center, making it viable for national and international events.

c) Surrounding Landmarks:

- Close to existing public attractions like beaches, parks, and the lighthouse.
- Common access road shared with the existing lighthouse and VMRDA's beachfront development.

d) Planned Infrastructure Augmentation:

- The existing internal access road from Beach Road to the project site (currently 11 meters wide) is to be widened to 18 meters.
- VMRDA will facilitate permissions and tree cutting, but the developer is responsible for road widening before commencing site work.

e) CRZ Compliance:

- The site falls under the Coastal Regulation Zone (CRZ).
- Development must align with CRZ 2011 guidelines, and later with CRZ 2019 once applicable.

f) Utilities and Environment:

- Emphasis on rainwater harvesting, zero wastewater discharge, and energy-efficient systems.
- Must be designed to be accessible to differently-abled persons as per national and UN standards.

3. SCOPE OF WORK

The developer will design, finance, build, operate, and maintain a Convention Centre, 5-star hotel/resort, and waterfront entertainment facilities on a 7.97-acre site in Visakhapatnam. The project must be completed within 36 months and operated for 33 years under a Public Private Partnership (PPP) model.

Key responsibilities include:

- Constructing a multipurpose convention hall (2,500+ capacity)
- Building a 5-star hotel/resort with at least 200 rooms
- Developing amenities like cafés, party lawns, flea markets, and exhibition areas
- Ensuring compliance with CRZ norms, tourism policy, and sustainability standards
- Obtaining all approvals and transferring the project to VMRDA after the concession period

4. LEGAL BOUNDARIES OF SITE

The site comprises government land under the ownership of VMRDA (Visakhapatnam Metropolitan Regional Development Authority). The total site area is approximately 7.97 acres. The land parcel is clearly defined and free from any encroachments or legal

disputes. The boundaries are legally demarcated and included in the draft Concession Agreement and RFP appendices, with final details provided to the selected bidder after Letter of Award (LoA).

Surrounding of the Site:

- **East:** Facing the Bay of Bengal; beachfront development area.
- **West:** Connected to the Beach Road via an internal access road (to be widened).
- **North:** Proximity to the VMRDA's lighthouse project and recreational promenade.
- **South:** Likely adjacent to public open spaces or low-rise development within the tourism zone.

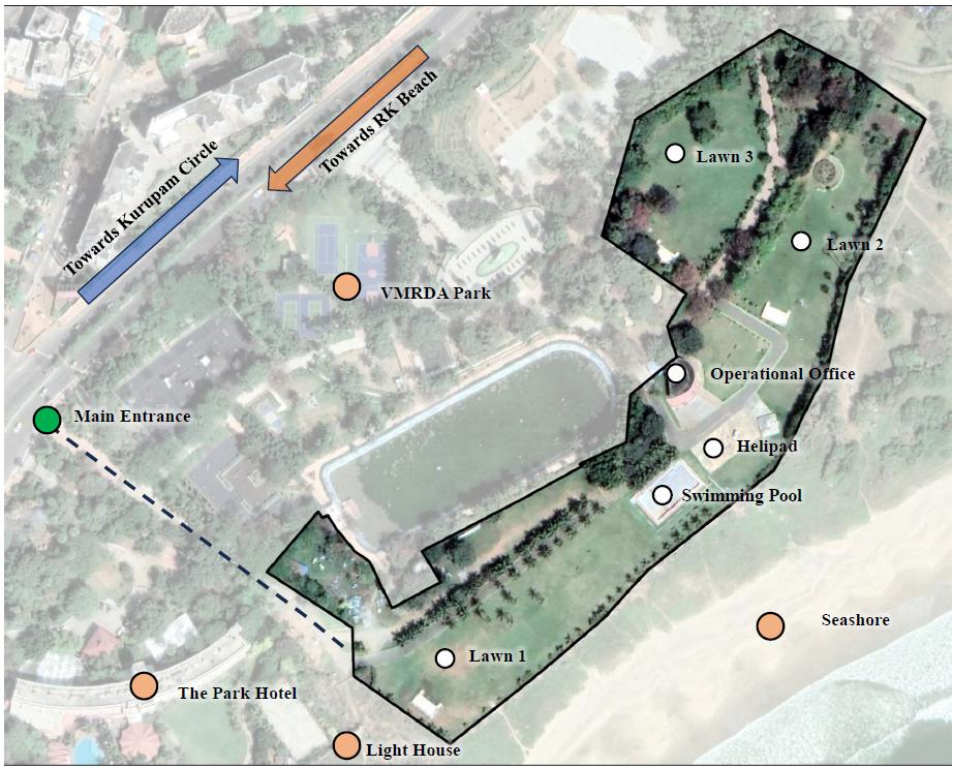


Figure 2 Site

5. PROJECT REQUIREMENTS

Minimum Development Obligations (MDOs) - Must be completed within 36 months from the agreement date:

- Convention Centre:
  - Multipurpose air-conditioned hall
  - Minimum 2,500 capacity (theatre-style)
  - Flexible partitions for events and exhibitions
- 5-Star Hotel / Resort:

    - Minimum 200 rooms
    - Certified as 5-Star by HRACC (Ministry of Tourism) within 180 days of operation
- Waterfront Entertainment Facilities:
    - Shack restaurants, cafés
    - Party lawns, amphitheatre, flea markets, and exhibition space
    - All within CRZ norms

Sustainability & Accessibility

- Must include rainwater harvesting, zero wastewater discharge, energy-efficient systems
- Ensure universal access (for differently-abled) as per legal norms

Statutory Requirements

- Obtain all approvals, licenses, and clearances
- Follow CRZ norms, VMRDA Master Plan, Tourism Policy, and development control regulations

CHAPTER 2 – LITERATURE SURVEY

1. STANDARDS AND GUIDELINES

The design development for this hospitality project draws heavily from a detailed study of architectural guidelines, spatial standards, environmental regulations, and academic literature on hotel and convention center planning. Multiple sources have been referred in order to frame a contextually responsive and regulation-compliant design approach.

1.1. MINISTRY OF TOURISM GUIDELINES

With the aim of providing contemporary standards of facilities and services available in the hotels, the Ministry of Tourism has formulated a voluntary scheme for classification of operational hotels which will be applicable to the following categories:

I. Star Category Hotels: - 5 Star Deluxe, 5 Star, 4 Star, 3 Star, 2 Star & 1 Star
II. Heritage Category Hotels: - Heritage Grand, Heritage Classic & Heritage Basic

FOR APPROVAL-

Application Form should have the following details:

I. Proposed name of the Hotel
II. Name of the promoters with a note on the business antecedents in not more than 60 words
III. Complete postal address of the promoter with Telephone, Fax, and Email address
IV. Status of the owner/promoter
V. If Public/private limited company with copies of Memorandum and Articles of Association
VI. If Partnership, a copy of Partnership Deed and Certificate of Registration
VII. If proprietary concern, name, and address of proprietor/certificate of Registration
VIII. Location of hotel site with postal address
IX. Details of the site
X. Area (in sq. meters)
XI. Title – owned / leased with copies of sale / lease deed
XII. Copy of Land Use Permit to construct Hotel from local authorities
XIII. Distance (in Kms) from (a) Railway station (b) airport (c) main shopping centre.

Details of the project:

I. Copy of Feasibility Report
II. Star category planned
III. Number of rooms (with attached bathrooms) and size for each type of room (in sq. ft.)

IV. Size of bathrooms (in sq. ft.)

V. Details of public areas with size in sq. ft. – Lobby / lounge; restaurants; bar; shopping; banquet/conference halls; business center; health club; swimming pool; parking facilities (no. of vehicles)

VI. Facilities for the differently abled guests (room with attached bathroom earmarked for this purpose, designated parking, ramps for free accessibility in public areas and to at least one restaurant, designated toilet (unisex) at the lobby level etc.). All hotels at project stage will require to conform to the requirements by 01.10.2010.

VII. Eco-friendly Practices (a) Sewage Treatment Plant (b) rain water harvesting (c) waste management (d) pollution control method for air, water, and light (e) introduction of non-CFC equipment for refrigeration and air conditioning. All hotels at project stage will require to conform to the requirements by 01.09.2010.

VIII. Energy / water conservation (use of CFL lamps, solar energy, water saving devices / taps)

IX. Details of Fire Fighting Measures/ Hydrants etc.

X. Date by which project is expected to be completed and become operational

XI. Any other additional facilities

XII. Security related features

XIII. The architecture of the hotel building in hilly and ecologically fragile areas should incorporate creative architecture keeping in mind sustainability and energy efficiency and as far as possible in conformity with local art and architecture with use of local materials.

1.2. CHECKLIST OF FACILITIES FOR CLASSIFICATION/RE-CLASSIFICATION OF 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.

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.

have to be recorded in the inspection marks sheet by the committee. However, if a hotel is found to evoke the grounds for debarment mentioned hereinabove, at any point of time subsequent to the one-time revocation, it shall be declassified (if classified earlier) and debarred from applying for classification under any category for a minimum period of two years from the date of debarment by the competent authority i.e. the Chairman, HRACC.

Amount of Penalty to be paid for one time revocation of debarment:

- 1 Star – Rs. 25,000.00
- 2 Star – Rs. 50,000.00
- 3 Star – Rs. 1.00 lakh
- 4 Star – Rs. 2.00 lakh
- 5 Star & 5 Star Deluxe – 3.00 lakh

Hotels that have been debarred from applying for classification prior to these guidelines coming into force, will also be extended a one-time opportunity for revocation of the debarment by paying a penalty as prescribed above. However, the conditions specified under this Note shall be applicable to such hotels.

d. However, this Note shall not be applicable to hotels that have successfully applied online for "RE-CLASSIFICATION", for the interim period between the date of expiry of the period of the previous classification and date of final decision on their application for re-classification.

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.

Note1.

All hotels should clearly indicate on their websites the facilities and amenities provided to guests "free of cost" like complimentary breakfast (indicating broad classification like Indian breakfast, Continental breakfast or American breakfast), iron and iron board facility, shoe cleaning facility, shoe horn and slippers, other "free" facilities like dental kit, shaving kit etc.

If any facility is provided only 'on request' but is included in the room rent, this should be mentioned on the hotel's website under the head **'Facilities and Amenities Provided on complimentary basis'** and also be mentioned to the guest when the hotel staff introduce the room to him / her on arrival. In case the 'complimentary breakfast' is not a buffet, the guest must be shown a list stating in English the name of all complimentary items.

(All hotels shall submit a compliance of Note 1 in the form of a screen shot of their website showing the "Facilities & Amentias provided on complimentary basis")

Note 2.

It will be mandatory for all the hotels classified under all category to display their classification status prominently on their websites under a separate icon on the opening page, which on the click will display the order of classification issued by the Ministry of Tourism, Government of India, and at the reception.

Note 3.

All the hotels shall be required to submit an affidavit with respect to clearances along with their applications for approval of Hotel at the Project Stage and for Classification / Re-classification of Operational Hotels, as given in **Annexure V and VI respectively**.

Note 4:

a. If any hotel is found to obtain classification on a false pretext or on the basis of misrepresentation of facts, or is found to display wrong classification status, or found to promote / market the hotel on the basis of wrongful claims pertaining to hotel classification, then the unit / hotel will stand declassified with immediate effect and it shall be debarred from applying for classification under any category for a minimum period of two years from the date of debarment by the competent authority i.e. the Chairman, HRACC.

b. If a hotel which has applied for classification under any category to the Ministry of Tourism is found to display false classification status, or found promote / market the hotel on the basis of wrongful claims pertaining to hotel classification, then the application for classification of the unit / hotel will stand summarily rejected and it shall be debarred from applying for classification under any category for a minimum period of two years from the date of debarment by the competent authority i.e. the Chairman, HRACC.

c. In case of debarment, a hotel, which is found to otherwise fulfil to the satisfaction of the inspection committee, all criteria pertaining to the classification parameters of the star / heritage category under which it was found to wrongfully promote itself, will have the one-time opportunity for revocation of the debarment by paying a penalty prescribed below. Such observation of the committee, if any, will

1.2.1 EXTERNAL ACCESS OF CONTROL:

1. 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.

2. 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.

3. 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.

4. 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.

5. Patrolling

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

1.2.2 MATERIAL ACCESS CONTROL:

1. 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.

1.2.3 PEOPLE ACCESS CONTROL:

1. Walk-In Guests

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

2. 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.

3. 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-todate database.

4. Visitor Management System

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

1.2.4 INTERNAL ACCESS CONTROL:

1. Within the hotel there should be restriction on access to different parts of the hotel.
2. Access of staff to various departments in the hotel can also be regulated through proximity cards with magnetic inter locks.
3. Entrances to areas such as Boiler Rooms, Mal Rooms, Computer Rooms, Switch Boards and Control Rooms should remain locked when not in use.
4. It is also necessary to establish a procedure for the accountability of their keys.
5. 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.

1.2.5 OTHER SECURITY MEASURES:

1. 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.

2. 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.

3. Trash Management

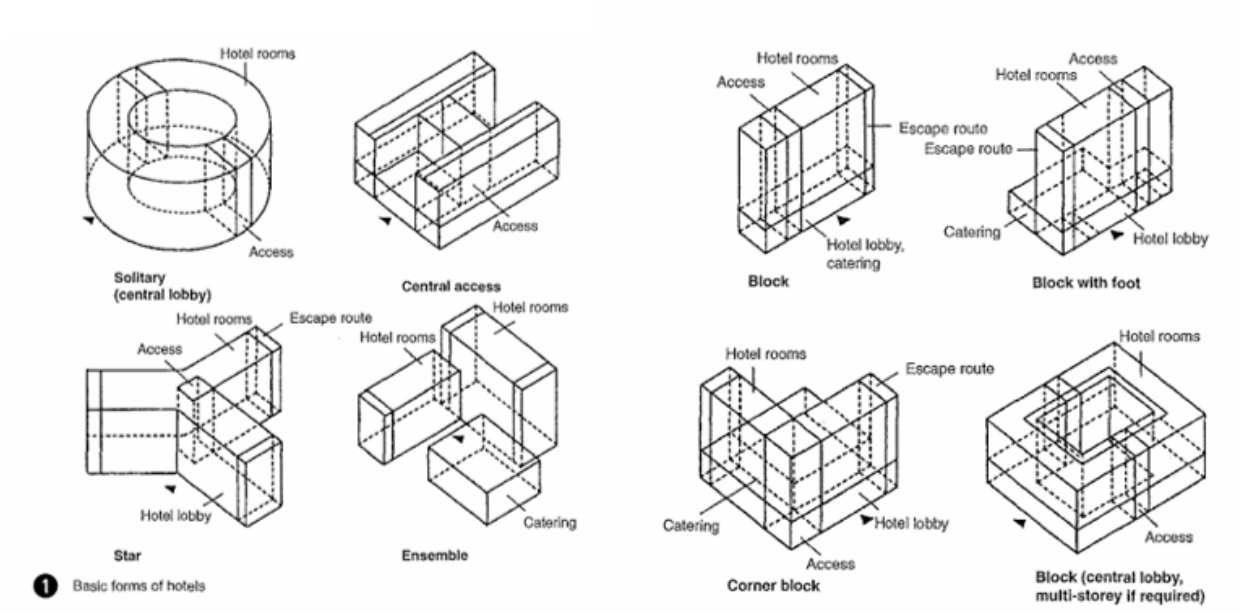
An explosive device can easily be hidden in the trash. Trash cans need to be managed by trustworthy personnel.

1.2.6 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 all enquiries



1 Basic forms of hotels

during a crisis.

1.3. NBC GUIDELINES 2016

The National Building Code of India (2016) especially concerning fire safety norms, vertical circulation, barrier-free access, and structural systems for high-rise hospitality buildings. These codes help in defining room configurations, minimum corridor widths, exit staircases, fire zone divisions, and building height restrictions. The NBC also provided insights into standards for mechanical systems, ventilation, and energy conservation within the hotel premises.

1.4. URDPFI GUIDELINES 2015

The URDPFI Guidelines (2015) by the Ministry of Urban Development were used to understand broader urban planning principles applicable to tourism infrastructure. These guidelines recommend open space requirements, integration with public transport, mixed-use zoning, and community interaction, key aspects considered in the waterfront entertainment planning of this project.

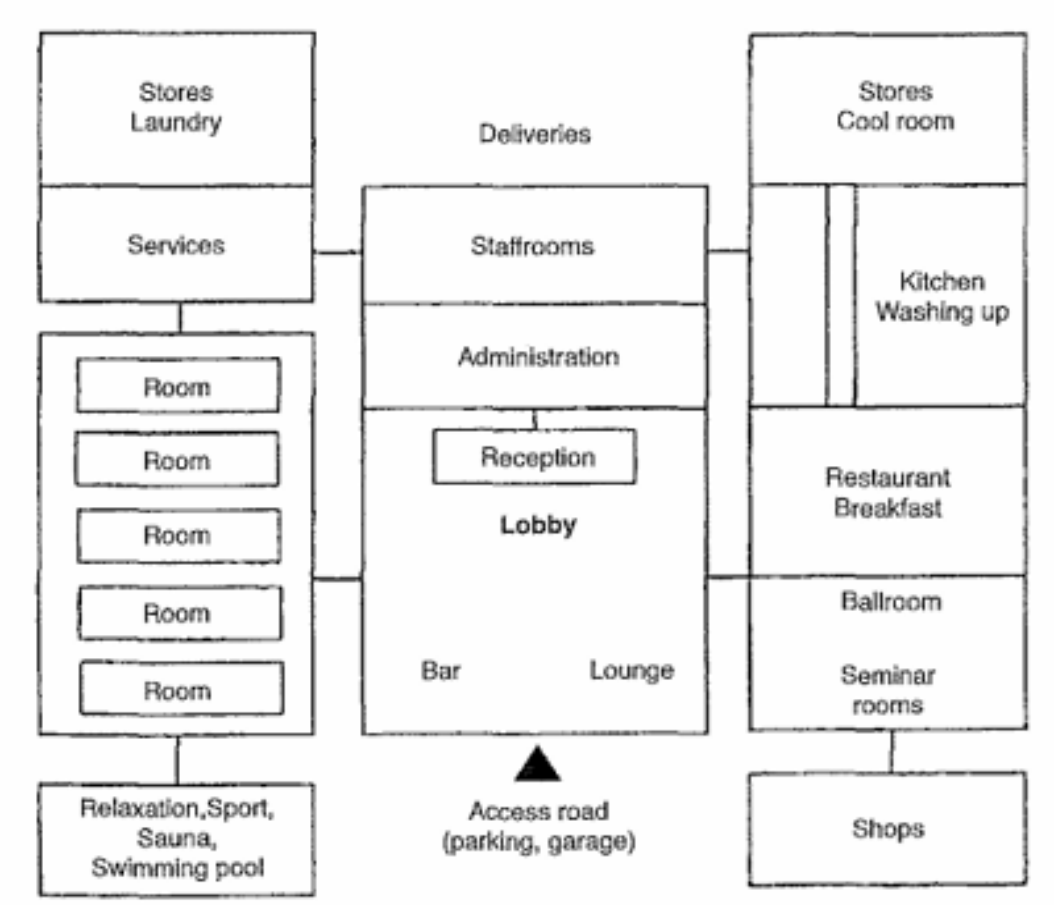
1.5. NEUFERT'S ARCHITECT'S DATA

Neufert's Architect's Data is a widely used reference in architectural design, offering clear standards for the layout and dimensions of various spaces within a hotel. It

Figure 3 Basic Forms of Hotel (Ref.- Neufert's Architect Data)

provides practical guidance on planning key areas such as guest rooms, banquet halls, kitchens, service corridors, and staff zones, ensuring that each space functions efficiently while meeting comfort and safety requirements.

1. **Form** – In addition to dimensional standards, Neufert also explores different spatial arrangements that suit the needs of hotel design. It suggests a variety of building forms such as linear layouts, courtyard arrangements, atrium-centred designs, and vertical towers that can be adapted depending on the site context, scale, and operational goals. These suggested forms help designers create hotels that not only look impressive but also support smooth circulation, service efficiency, and a high-quality guest experience, the key aspects of any successful 5-star hotel.
2. **Access Scheme of Hotel -** A well-planned access scheme is essential for the smooth functioning of any hotel, especially in the case of a 5-star facility where guest experience and operational efficiency go hand in hand. The diagram below presents a thoughtful layout that separates public, private, and service zones while keeping them all efficiently connected.



2 Room and access scheme of a hotel

At the center of the layout is the lobby, serving as the main arrival and circulation space. From here, guests can easily access the reception desk, bar, and lounge area, setting the tone for a comfortable and welcoming experience. The guest rooms are positioned in a quiet zone, away from the hustle of public areas, ensuring privacy and relaxation. Nearby, leisure amenities such as the spa, gym, swimming pool, and wellness facilities are placed conveniently for guest use.

The service areas, including laundry, stores, and staffrooms, are tucked away from guest zones to maintain discretion, yet are directly connected to key back-of-house functions like the kitchen and delivery access points. This ensures efficient operations without interfering with the guest experience.

Public facilities like restaurants, conference and seminar halls, ballrooms, and shops are placed on the other side of the lobby, making them easily accessible to both guests and external visitors. These are also placed near food preparation areas and cool rooms for ease of service.

Figure 4 Room and Access Scheme of Hotel (Ref. - Neufert's Architect Data)

Finally, the main access road leads directly to the hotel's entrance, with connections to parking and garage areas, ensuring smooth vehicular movement and guest drop-offs.

This access scheme reflects a well-balanced design approach—maintaining a clear distinction between guest, service, and operational areas, while allowing each to function efficiently in relation to the other.

3. **Percentages of Hotels' Surface Areas Required for The Various Functions -** Hotel rooms typically occupy the largest portion of a hotel's total built-up area, and for good reason. For most guests, the room defines their overall experience, as it serves not just as a place to sleep, but also as a space to relax, work, and unwind. Because of this, the design of hotel rooms plays a crucial role in shaping the identity and perceived quality of the hotel.

Over time, floor plans for hotel rooms have become more standardised to balance functionality with construction efficiency. However, modern hotel design goes beyond just layout efficiency. Architects today strive to create rooms that feel both comfortable and unique. While they must still meet technical and economic constraints, they aim to provide thoughtful spatial zoning—separating sleeping, working, and relaxing areas within a single room. This approach allows for personalisation and enhances the guest's sense of comfort, helping the hotel stand out in terms of quality and character.

1.	guest rooms, bathrooms, corridors, room service	50–60%
2.	public areas, lobby, reception etc.	4–7%
3.	catering	4–8%
4.	events, ballroom, seminar rooms	4–12%
5.	wellness/ fitness area	5–10%
6.	other areas, cosmetics, hairdresser	1–2%
7.	management, administration	1–2%
8.	service area, kitchen, staff rooms, stores	9–14%
9.	building services	5–10%

Parking and garage areas and special areas (e.g. wellness and bathing area) are also to be taken into account (and can vary widely according to the range of services)

	Hotel type	m^2/room
1.	luxury	90–110
2.	first class	60–70
3.	comfort	50–60
4.	standard (holiday hotel, motel)	40–60
5.	tourist (low-budget)	15–20

Guideline values for (above) shares of hotel surface area taken by each function and (below) gross areas per room in various categories of hotel

Figure 5 Space Division on Percentage Basis (Ref. - Neufert's Architect's Data)

1.6. TIME SAVING STANDARDS

- It must be borne in mind that, as far as planned circulation is concerned, there must never be aming ling 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, 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.

1.6.1 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.
- 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.

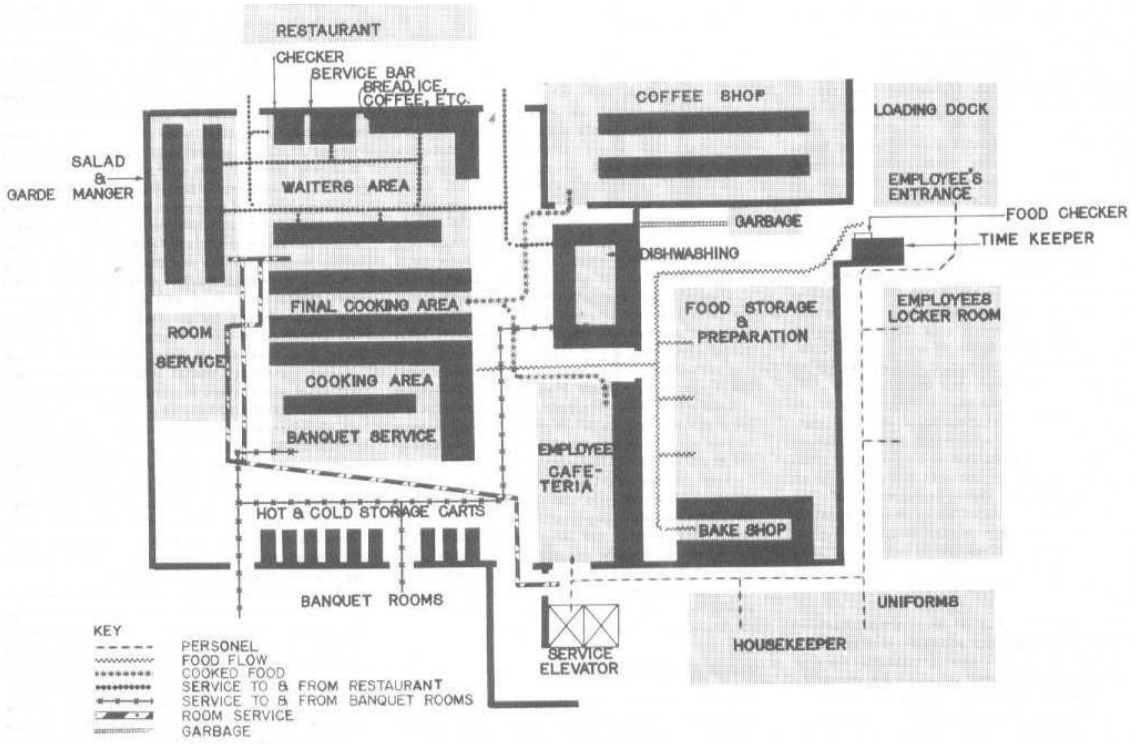


Fig. 1 Flow diagram of service areas.

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 lowerfloor service area convenient to the scrutinizing gaze of the steward and the timekeeper. For convenience, a trash chute, going from every typical floor service area, should be located next to the linen chute

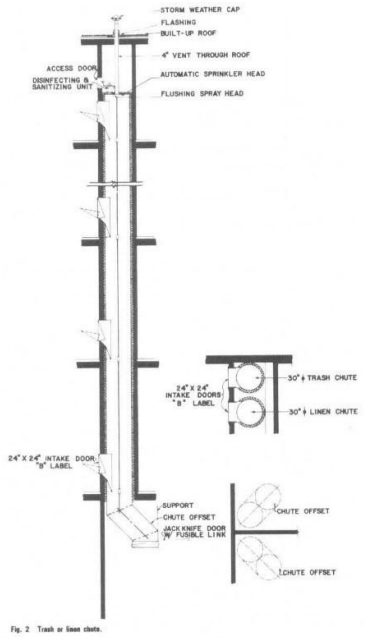


Fig. 2 Trash or linen chute.

1.6.2 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 machineseach 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.

1.6.3 HOUSE KEEPING 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 of duty.
- 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.

1.6.4 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 where boxes must be arranged with proper temperatures for their storage.
- 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.

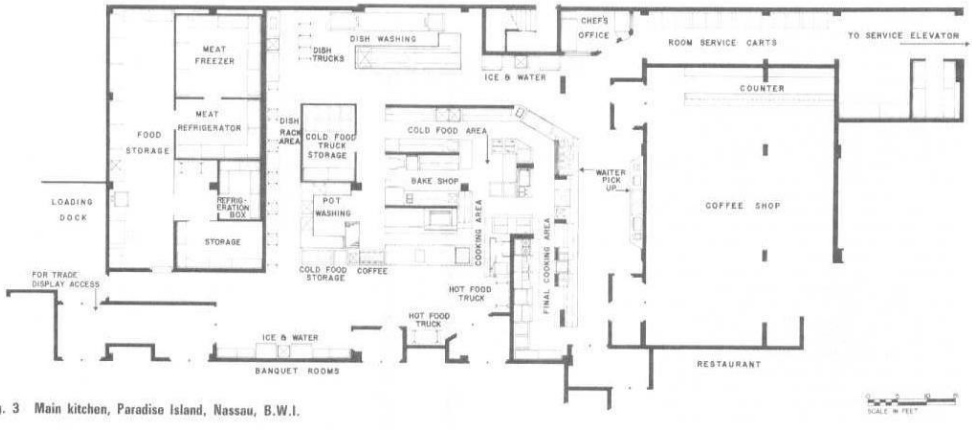


Fig. 3 Main kitchen, Paradise Island, Nassau, B.W.I.

- 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.
- 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.

1.6.5 MECHANICAL SERVICES:

- 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.

1.6.6. 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.

1.6.7. 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

1.6.8. 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

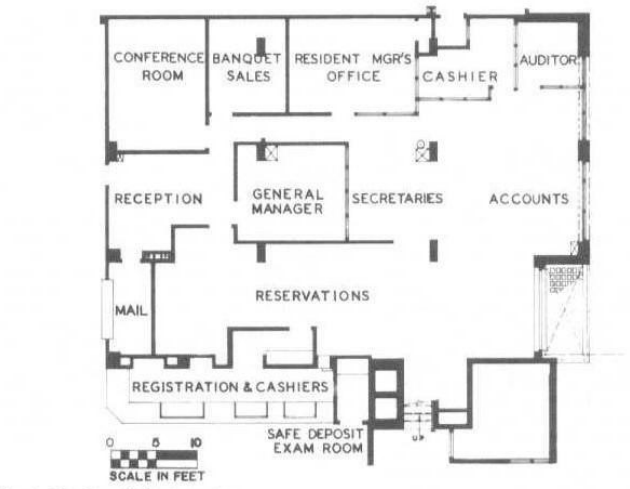


Fig. 4 The Churchill Hotel, London.

1.6.9. 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.

1.6.10 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.

1.6.11. RESTAURANTFACILITIES:

- 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.

1.6.12. 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.

1.6.13 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.

1.6.14. 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 standardwidth 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.

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1.6.15. GUESTROOMS:

- 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 kingsized 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.
- 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.

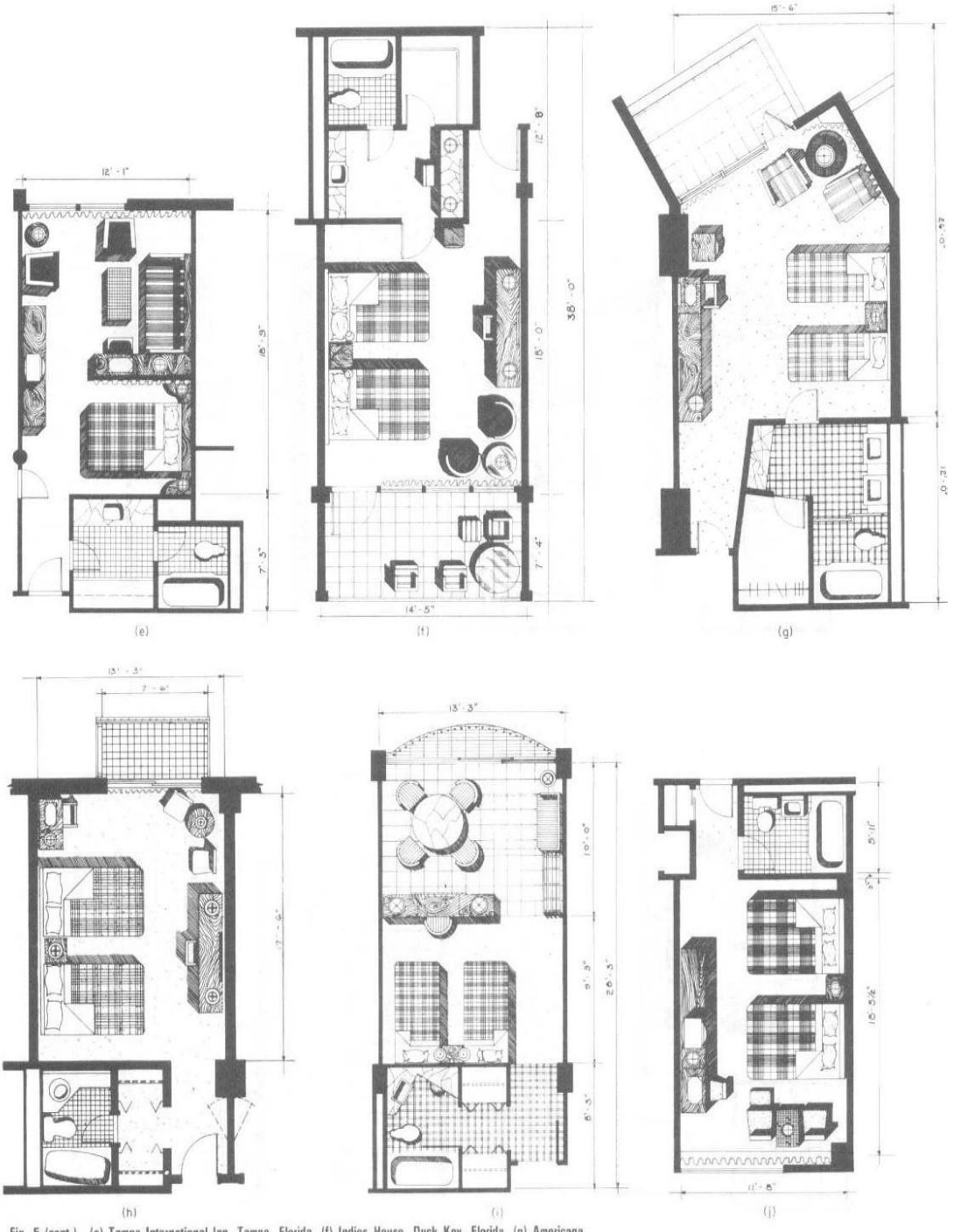


Fig. 5 (cont.) (e) Tampa International Inn, Tampa, Florida. (f) Indies House, Duck Key, Florida. (g) Americana Hotel, Bal Harbour, Florida. (h) Paradise Island Hotel, Paradise Island, Bahamas. (i) Americana of Puerto Rico, typical room layout. (j) Massena Motor Inn, Massena, N.Y.

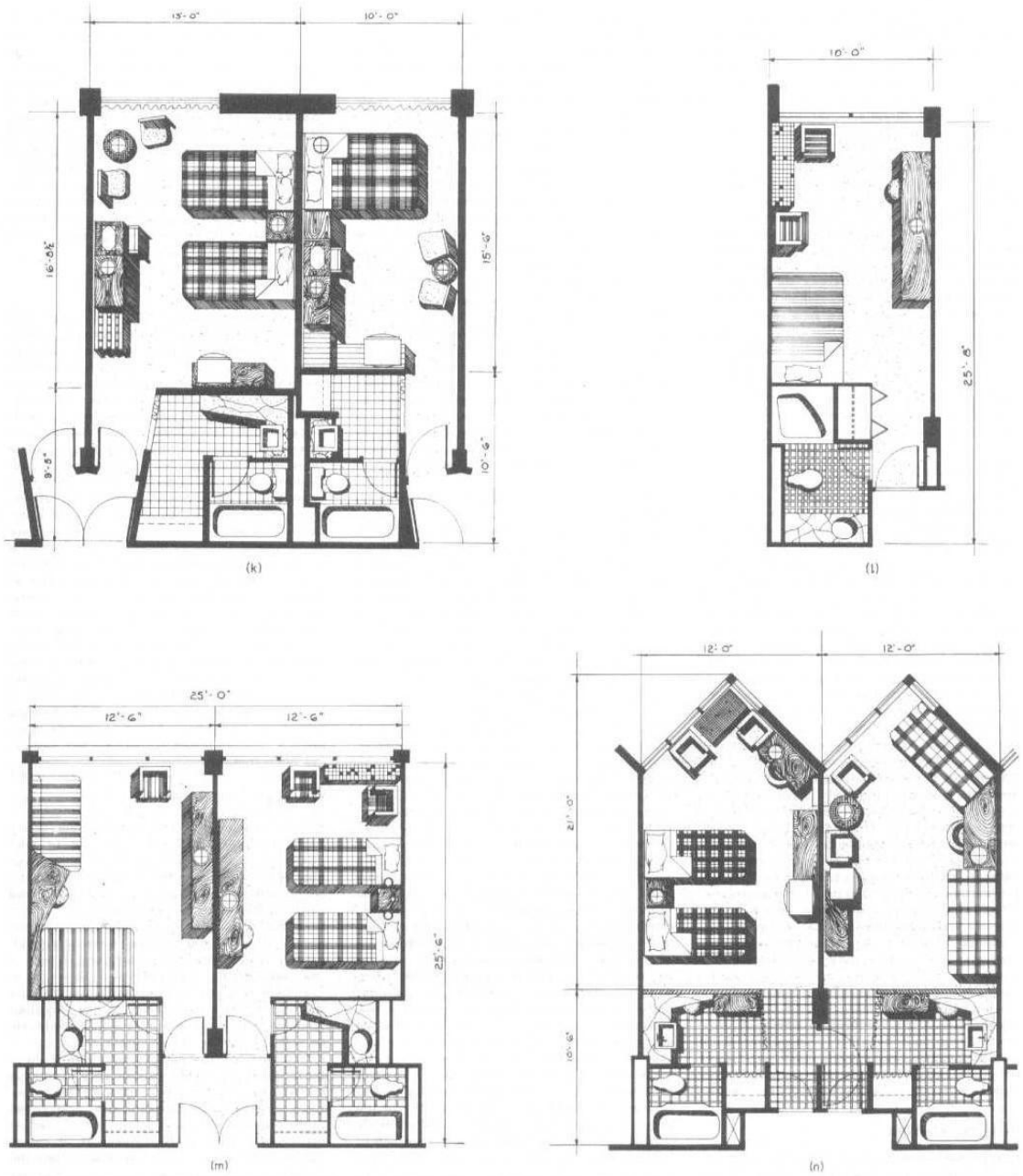


Fig. 5 (cont.) (k) Chicopee Motor Inn, Chicopee, Massachusetts. (l) and (m) Thomas Circle Motor Hotel, Washington, D.C. (n) Riverview Motor Hotel, New York.

Figure 6 GUEST ROOM DETAILS

2.3.16. GUEST BATH ROOMS:

- 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-andwear 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.

1.6.16. 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.

1.6.17. GUEST FLOOR SERVICESPACES:

- 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.

1.6.18. 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.
- 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.

1.7 TIME SAVER STANDARDS (BUILDING TYPES)-RESTAURANTS:

SPACE REQUIREMENTS

- Adequacy of space will influence building and operating costs and efficiency. When space is too small, labor time end effort is likely to increase end the volume and quality of output decrease. When itis too large, building and maintenance costs are excessive.
- Calculate area requirements in terms of: (1) volume and type of service, (2) amount and size of equipment to be used, (3) number of workers required, (4) space for needed supplies, and (5) suitable traffic area. The dining area location and space allowance.

DINING ROOMS:

- Space for dining areas is usually based on the number of square feet per person seated times. Space requirements:
- The patron's size and the type and quality of service should be considered.
- A banquet seating allowance might be as little as 10sqft per seat and that for a deluxe restaurant as much as 20 sqft.

TABLE 1 Square Feet per Seat Used for Various Types of Food Operations

Type of operation	*Square feet per seat*
Cafeteria, commercial	16-18
Cafeteria, college and industrial	12-15
Cafeteria, school lunchroom	9-12
College residence, table service	12-15
Counter service	18-20
Table service, hotel, club restaurant	15-18
Table service, minimum eating	11-14
Banquet, minimum	10-11

- Table 1 square feet pwe seat used for various types of food operations
- All of the areas in a dining room used for purposes other than seating are a part of square footage allowed for seating.
- Service stations may be estimated in the proportion of one small one for every 20 seats or a large central one for every 50 to 60 places. The advisability of having a central serving station will be influenced by the distance of the dining area from the serving area.
- Small substations for silver, dishes, napery, beverages ice, butter, and condiments may measure20 to 24 in. square and 36 to 38 in. high. The size of central stations varies from that for a small enclosed room to that of a screened section measuring approximately 8 to 10 ft long by 27 to 30 in. wide by 6 to 7 ft. high. Table size will influence patron comfort and efficient utilization of spaces. Smell tables, such as24 or 30in. square, are economical for seating but are uncomfortable for large people.
- The width of booths including seats and table is commonly 5h ft. A lunch counter will have a minimum width of 16 in. and a maximum width of 24 to 30 in. The linear feet are calculated

on the basis of 20 to 24 in. per seat. The maximum area best served by one waitress is generally 16 U-shaped counters make maximum use of space and reduce travel. Space in depth of 8'/r to 11 ft will be required for every linear foot of counter. This will provide 3 to 4 ft of public aisle, 2j&ft for aisle space for employees. A width of 41h ft is desirable where employees must pass.

- A minimum passage area is 18 in. between chairs and, including chair area, tables should be spaced 4 to 5 ft apart. Aisles on which bus carts or other mobile equipment is to be moved should be sized according to the width of such equipment.
- Diagonal arrangement of square tables utilizes space better then square arrangement and yields a more trouble-free traffic lane.

Number of Persons Allowance:

- The number of persons to be seated at one time is the second point of information needed for calculation of the dining room size. The total number of seats required at one time, multiplied by the space required for each seat, will give the total number of square feet needed in the dining area.
- The number of times a seat is occupied during a given period is commonly referred to as "turnover."
- The turnover per hour, times the number of seats available, gives the total number of patrons who can be served in an hour. If peak loads, or number to be served at one time, are known, the number of seats required can be estimated.
- The table sizes used in the dining room will affect occupancy. It is often desirable to provide for groups varying from two to eight, with a predominance in most dining rooms of those for two people.
- Chairs with a "tablet arm" that will fold at ray have been used for fast turnover in crowded areas.
- One cafeteria line can serve four to eight patrons per minute depending on (1) the speed of the servers, (2) the elaborateness of food selection, (3) convenience of the layout, and (4) the type of patrons.
- Banquet seating requires planning because maximum seating potential means maximum profits. Folding tables 30 in. wide are popular. These are obtained in varying lengths, but 72 and 96 in. are commonly used. The spacing for the legs should be such as to allow for comfortable seating when the tables are joined end to end and place settings are laid on 24in.centers.
- Separate rooms, folding doors, screens, or other attractive devices can be used to reduce size of an area during slack periods. Sections left open should be those easiest to serve. Balconies, backrooms, or other less desirable space can often be used for overflow numbers that occasionally require service.

Production areas:

- A frequently used rule for allotting a space for the kitchen is that it should be one-third to one-half the area of the dining room.
- An analysis of specific needs is required. Many factors in fluence space requirements, such as:

1. Type of preparation and service
2. Amount of the total production done in the unit
3. Volume in terms of the number of meals serve
4. Variety of foods offered in the menu
5. Elaborateness of preparation and service
6. Amount of individual service given, as in a hospital ltrey service
7. Seating and service plan, whether on one floor or many

TABLE 2 Variation in Space Needs in Relation to Numbers Served

Meal load	Square feet per meal	Variation in square feet
100-200	5.00	500-1,000
200-400	4.00	800-1,600
400-800	3.50	1,400-2,800
800-1,300	3.00	2,400-3,900
1,300-2,000	2.50	3,250-5,000
2,000-3,000	2.00	4,000-6,000
3,000-5,000	1.85	5,500-9,250

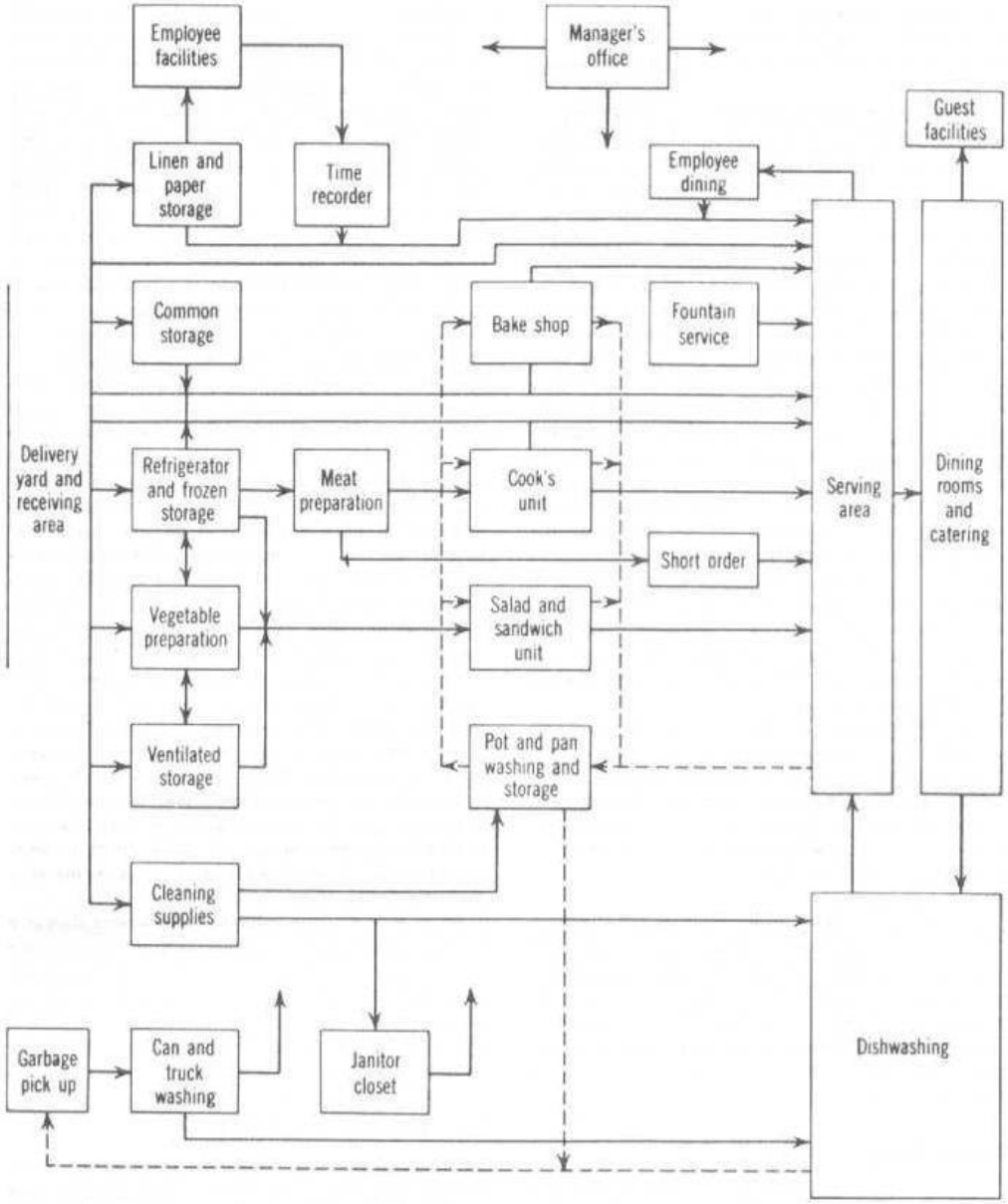


Fig. 1 Flow diagram showing functional relationships.

- The equipment provided will affect the space needs. Garbage and refuse, for example, may require a sizable area for storage awaiting pickup. Disposal units for food garbage, incinerator for

burnable refuse, and a crusher for tin cans will greatly reduce the amount to be held. Frequency of garbage collection will minimize the space needs.

- The shape of the kitchen, location of ventilation and elevator shafts, support columns and partitions should be considered in relation to an efficient layout for work. The location of entrances and exits for a good flow of traffic, window placement, suitable space, and relationship of sections need consideration. Eliminate partitions whenever possible; this will reduce space needs and also permit easier supervision of production areas.
- The square footage given is to be multiplied by the maximum number of meals estimated per hour of service.
- The width of the table may be 24 to 30 in. unless dishes or food containers are to rest at the back of the table. Tables 36 in. wide are preferable when the back of the area is used for such storage. Where two workers work opposite each other, a table 42in. wide may be used. A work area of 4 to 6 in ft will be within convenient reach of the average person. Tables 8 to 10 ft. long are used if two people are working side by side. A height of 34 in., commonly used as a working height, be evaluated in terms of specific work done and equipment used.
- The minimum width for a lane between equipment where one person works alone is 36 and 42 in. where more than one is employed and where workers must pass each other in the progress of work. Where mobile equipment is used, 48 to 54 in. are recommended. At least 60 in. are needed for main traffic lanes where workers regularly pass each other with mobile equipment.
- Work centers at right angles to traffic lanes are efficient.
- A satisfactory layout may claim less than 30 percent of total space for equipment while work areas, traffic lanes, and space around equipment for easy operating.

TABLE 3 Square Feet of Kitchen Space per Meal for Food Facilities of Different Type and Size

Type of facility	Estimated maximum meals per hour				
	200 or less	200-400	400-800	800-1,300	1,300-7,500
Cafeterias	7.5-5.0	5.0-4.0	4.0-3.5	3.5-3.0	3.0-1.8
Hospitals	18.0-4.5	12.0-4.5	11.0-4.5	10.0-4.0	8.0-4.0
Hotels	18.0-4.0	7.5-3.0	6.0-3.0	4.0-3.0	4.0-3.0
Industrial lunchrooms	7.5-5.0	4.0-3.2	3.5-2.0	3.0-2.0	2.5-1.7
Lunch counters	7.5-2.0	2.0-1.5			
Railroad dining car	1.6				
Restaurants (service)	7.0-4.0	5.0-3.6	5.0-3.6	5.0-3.0	5.0-3.0
School lunchrooms	4.0-3.3	3.3-2.2	3.0-2.0	2.5-1.6	2.0-1.6

Table 2 square feet of kitchen space per meal for food facilities of different type and size

Servingareas:

- In cafeterias the counter length should be regulated by the variety and volume.
- An estimate that may be used for allotting width is 14 ft. This allows for 4 ft as patron lane space,1ft treyelide,2ft counter width, 4'/r ft for workers, and 2'/r ft for back bar.
- Some commercial cafeteria counters may be 70 to 80 ft long, but counters over 50 ft long are frequently considered inefficient. Twenty feet is usually thought of as a minimum but, under special conditions and where a limited menuis served,6 to8 ft may be sufficient.
- Some planners use, as a rough guide, one counter or line for every 250 to 300 patrons served, but arrival rate, speed of service, and turnover are more reliable factors to consider in establishing the number of lines required.

Receiving and storage areas:

- Although the average operation may find a dock 8 ft deep and 12 ft long sufficient for receiving items, this would not be sufficient for a large one. The space requirement in square feet for food storage for 30 days has been calculated by some as approximately one half the total served or, if 1,000 are served,500 sq ft may be used as atentative figure for total food storage needs.
- COMMON STORAGE- The volume of canned food needed to serve 100 persona three meals daily for one month is estimated at approximately 45 cases of 6/10's or equivalent. The maximum stack height will be 8 or 9 cases or approximately72 in.
- Store room aisles may be as narrow as 36 in., but 42 or 48 approximal. are preferred. Wider aisles maybe required if trucks are used.
- Allow 1'/ to 2 in. as free space for ease of positioning. Add thickness of shelving to inter space when stating measurements between centers.

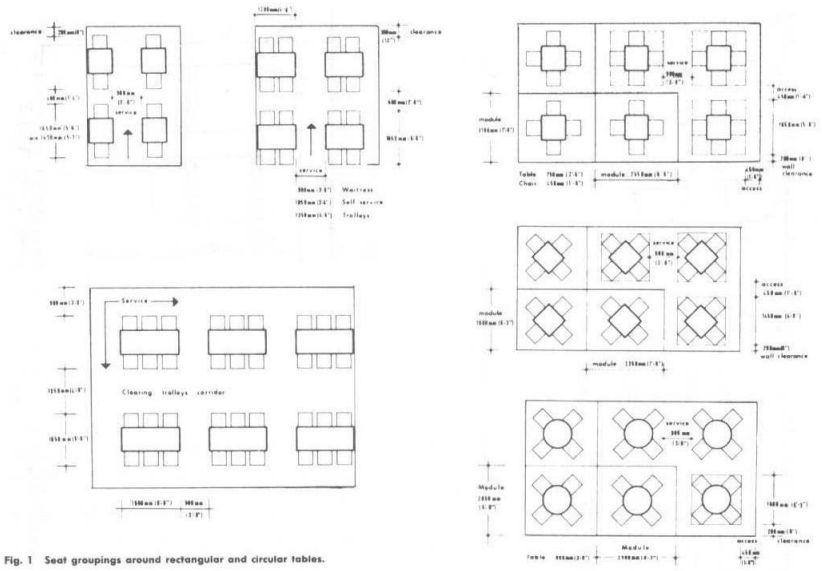


Fig. 1 Seat groupings around rectangular and circular tables.

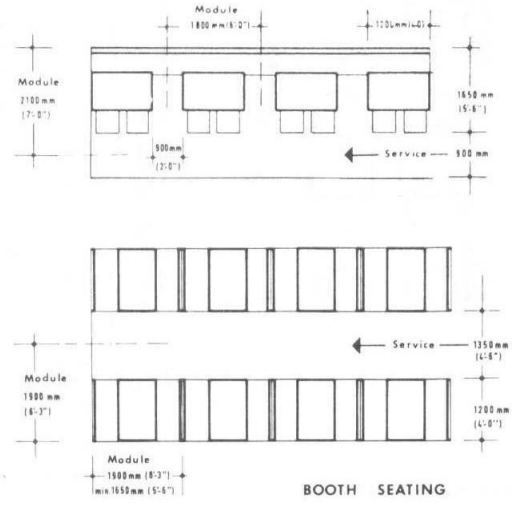
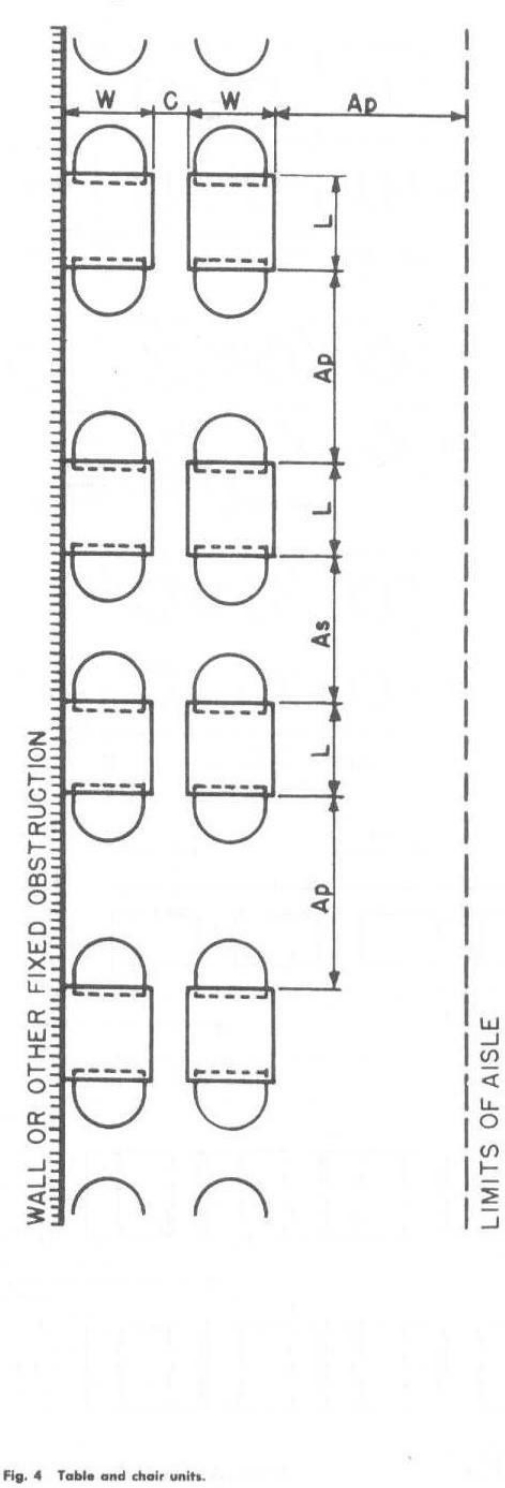
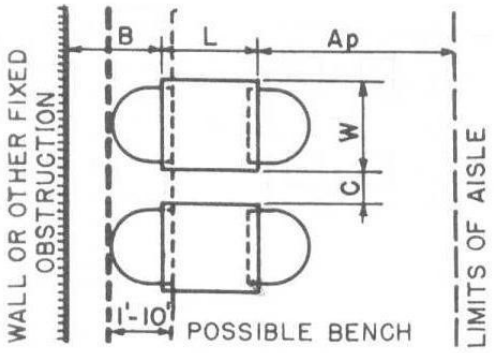


Fig. 2 Banquette seating arrangements and limiting dimensions including space for access and service.

Fred Lawson, *Restaurant Planning and Design*, The Architectural Press, Ltd., London, 1973.





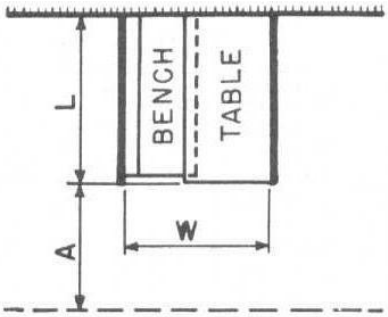
	Abs. Min.	Des. Min.	Comfort-able
Ap Public circ'n	3–0 to 4–6	3–6 to 5–0	3–9 to 5–0
As Service aisle	3–6 to 4–6	4–0 to 5–0	4–0 to 5–6
B To wall	1–8 to 2–0	2–0 to 2–6	2–0 to 3–0
C Between units	0 to 8	6 to 1–0	1–0
Length	1–8 to 2–0	2–3 to 2–4	2–4 to 2–6
Width	1–8 to 2–0	2–2 to 2–3	2–4 to 2–6

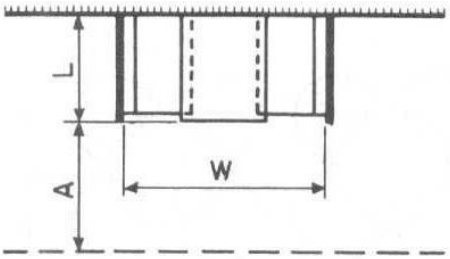
all dimensions in feet and inches

	Abs. Min.	Des. Min.	Comfort-able
Ap Public circ'n	*1–10 to 4–6	2–3 to 5–0	3–0 to 5–0
As Service aisle	3–0 to 3–6	3–6 to 4–0	3–9 to 4–0
C Between units	0 to 3	4 to 6	6
Length	1–8 to 2–0	2–3 to 2–4	2–4 to 2–6
Width	1–8 to 2–0	2–2 to 2–3	2–4 to 2–6

*Lower range only if chairs, etc., do not project into aisle

Fig. 4 Table and chair units.





2 PERSONS SIDE BY SIDE

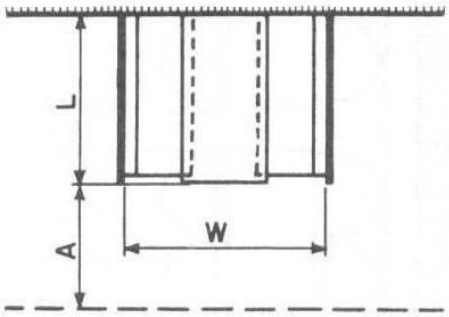
	Abs. Min.	Des. Min.	Comfortable
Service A and pub. circ'n	2–6	3–0	3–6
Length	3–6	3–9	4–0
Width	3–0	3–3	3–6

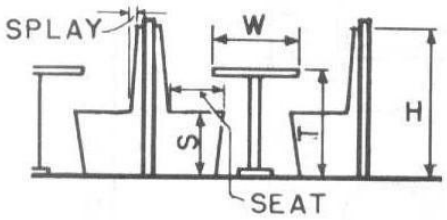
Note: This type not ordinarily recommended.

2 PERSONS FACE TO FACE

	Abs. Min.	Des. Min.	Comfortable
Service A and pub. circ'n	2–6 to 3–0	3–0 to 4–0	3–6 to 5–0
Length	2–0	2–2 to 2–6	2–6
Width	4–10 to 5–6	5–2 to 5–6	5–8 to 5–10

dimensions in feet and inches





4 PERSONS

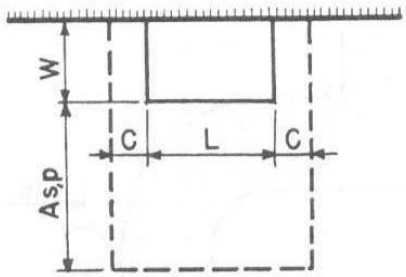
	Abs. Min.	Des. Min.	Comfortable
Service A and pub. circ'n	2–6 to 3–0	3–0 to 4–0	3–6 to 5–0
Length	3–6	3–9 to 4–0	4–0 to 4–2
Width	4–10 to 5–6	5–2 to 5–6	5–8 to 5–10

BOOTH FURNITURE HEIGHTS

	Abs. Min.	Des. Min.	Comfortable
H	3–0 to 3–6	3–6	4–0
S	1–5 to 1–6	1–5 to 1–6	1–6
T	2–5	2–5 to 2–6	2–6
W	1–8 to 2–0	2–0 to 2–2	2–4 to 2–6
Seat	1–4 to 1–5	1–5 to 1–6	1–6 to 1–8
Splay	0 to 0–3	0–2 to 0–3	0–3½ to 0–4

Fig. 5 Booths.

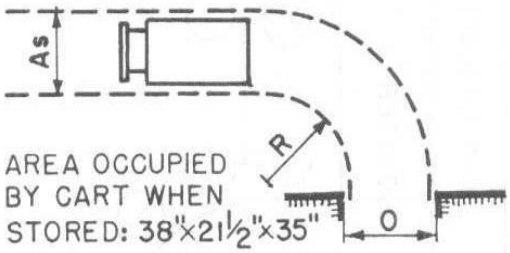
Serving Units



SERVING TABLE (& sideboard)

		Abs. Min.	Des. Min.	Comfortable
As	Service only	2-6	3-0	3-6
Ap	Public circ'n	2-0	2-6	3-0
C	Clearance to adjacent units	2-0	2-3	2-6
Length / Width	30" x 20" x 42" is average.			

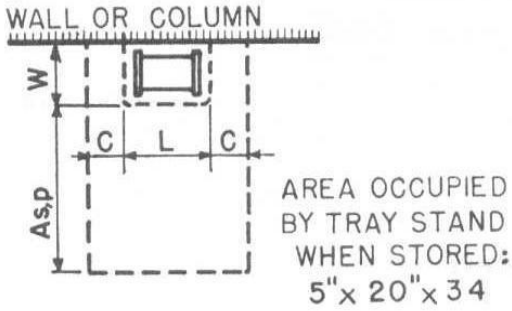
Display tables (hors d'oeuvres, etc.) usually 5' 0" x 2' 0"; (wines), 3' 0" round



SERVING CART

		Abs. Min.	Des. Min.
As	Service only	2-0	2-6
R	Turn radius	3-0	3-6
O	Door, opening width	2-0	2-6

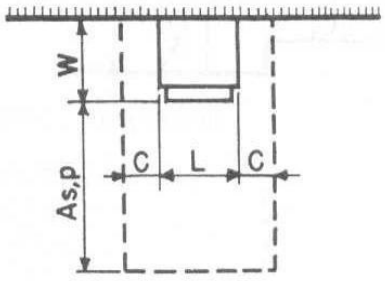
Approx. area when stored: 38" x 21½" x 35"



TRAY STAND

		Abs. Min.	Des. Min.	Comfortable
As	Service only	2-6	3-0	3-6
Ap	Public circ'n	2-0	2-6	3-0
C	Clearance to adjacent units	2-0	2-3	2-6
Length (tray) / Width (tray)	Depends on type of restaurant.			

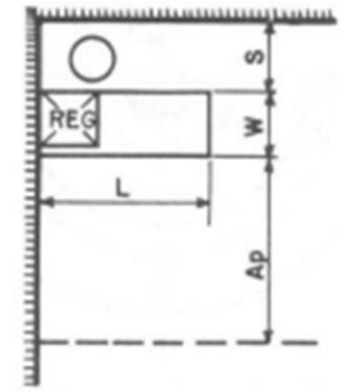
Approx. area of stand, stored: 5" x 20" x 34"



WATER COOLER

		Abs. Min.	Des. Min.	Comfortable
As	Service only	2-6	3-0	3-6
Ap	Public circ'n	2-0	2-6	3-0
C	Clearance to adjacent units	Can arrange on top or front		
Length / Width	Depends on capacity and if glass storage included.			

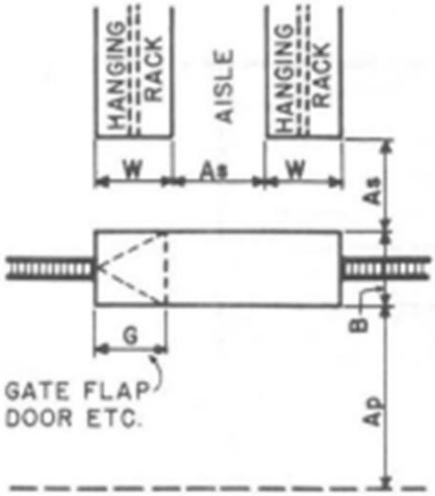
Fig. 7 Serving units.



CASHIER'S DESK and COUNTER

		Usual Minimum
S	Cashier's Aisle	2-0 to 2-6
Ap	Public Aisle	3-6 to 5-0
Length		4-0 to 8-0
Width		2-0 to 2-4

Fig. 9 Vending spaces.



dimensions in feet and inches

CHECK ROOM

	Abs. Min.	Des. Min.	Comfortable
Ap	3-0	4-0	5-0
As	2-6	2-9	3-3
S	1-0	1-6	1-9
C	2-0	3-0	5-0
G	1-6	1-9	2-0
W	1-10	2-0	2-0

Refrigerated and low temperature storage:

- Allocation in preliminary planning may be as follows: 20 to 35 percent for meat (portion ready meats require '/ to '/, less space than carcass or wholesale cuts); 30 to 35 percent for fruits and vegetables; 20 to 25 percent for dairy products, including those in serving areas; 10 to 25 percent for frozen foods; and 5 to 10 percent for carry-over foods, salads, sandwich material, and bakery products. A requirement of 15 to 20 cu ft of refrigeration per 100 complete meals has also been used by some planners.
- Approximately 0.25 to 0.50 cu ft of refrigerated walk-in space was provided per meal served, and frozen walk-in space.
- A walk-in becomes feasible for an operation serving 300 to 400 meals per day, and refrigerated pass-throughs can be added when from 400 to500 meals are served per day
- Aisles of 30 in. are usually too narrow; 42 in. are desirable. If mobile equipment is moved in and out, aisles may have to be wider. Walk-ins that are 8 to 9 ft wide and about 10 ft long are minimum size. This allows for two storage are as30 in wide with a 3 to4 ft aisle.
- Doors should be a minimum of 42 in. wide to admit large crates and containers or be sized to suit mobile equipment.

Sanitation areas:

- Dishwashing areas: The dimensions may be only 30 to 36 in. for a single tank machine, 60 to 72in.for sinks, or7 toover30 ft for a conveyor-type machine.

- Pot and pan section: When allowing space for the pot and pan section, 40 sqft is generally regarded as a minimum for the smallest unit. The free work aisle between the sinks and other equipment should be 4ftwide.The space allowance above the minimum will vary widely depending upon the type equipment used and the volume of pots and pans handled.

Employee facilities:

- Facilities for employees may include locker and lounge area, toilets, showers, time-recording equipment, hand basins near work areas, and dining rooms. An employee entrance should be so located that the employees may go directly to the dressing rooms without passing through the dining room or production area.
- Locker and lounge area: Whether individual lockers or common cupboard, sufficient space should be allowed for personal clothing to hang without crowding or wrinkling.
- The depth from front to back should be a minimum of 20in.
- Suitable size for an employee lounge depends largely on scheduling of workers and the policies of individual establishments.
- A cotor day bed, 36in. by 6ft, should be provided in the women's room.
- Toilets and showers: They should be separated from food areas by a hallway or double entrance. Supply one wash bowl for every 8 to 10 workers, one toilet stool for every 12 to 15 women, and one urinal and one toilet stool for every15men.Toilet compartments measure approximately3by 41/ ,to 5 ft.
- Time recording management: Provide space for a recorder near and within view of the office. Wall hung card racks of sufficient capacity are recommended for the number of workers, both full and part time, who are likely to be employed during an accounting period. Estimated space for a clock recorder is approximately 18in.wideby12y.in.deepand18in.high, and a rack of 50 cards approximately1 1/2, by 2 1/2 by 34 ½ in.

Guest facilities:

- The size of the area should be based on probable need for waiting, type of service, and number of persons likely to congregate at one time. If there is a lounge or hallway adjacent to the dining room, this may provide some waiting space.

Cashier:

- Preferred location for the cashier's desk or counter, is on the right-hand side of the door when leaving, in order to avoid cross-traffic and resulting congestion.

Coat-checking:

- Use of coat trees in dining areas is formed "necessary but never desirable. "These occupy approximately 20 by 20 in., are 72 in. high, and can accommodate 8 garments per costumer.
  Overshoe racks are considered undesirable; umbrella racks, desirable in check rooms

1.8 TIME SAVER STANDARDS (BUILDING TYPES)-KITCHENS:



Fig. 2 Movement through traffic aisle at the cafe/bar kitchen facilities, Hotel Commodore.

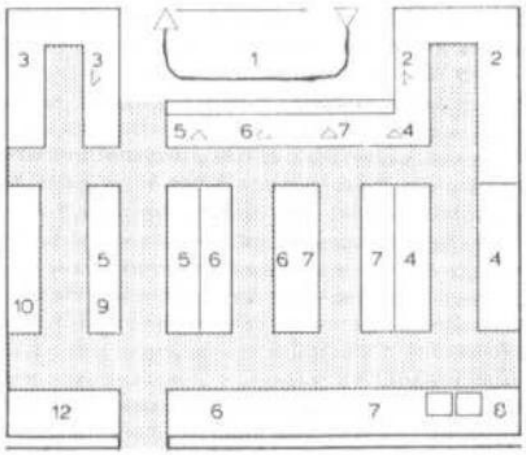


Fig. 1 Hotel or restaurant kitchen or French restaurant of high standard. Capacity for main meals: Hotel—100–200 persons / menu, 100 persons / à la carte. Restaurant—200–300 persons / mealtime from 11:30 to 1:30. Waiters' passageway: tangential. Kitchen: Linear arrangement with large installations in the rear. See Legend for explanation of numbers.

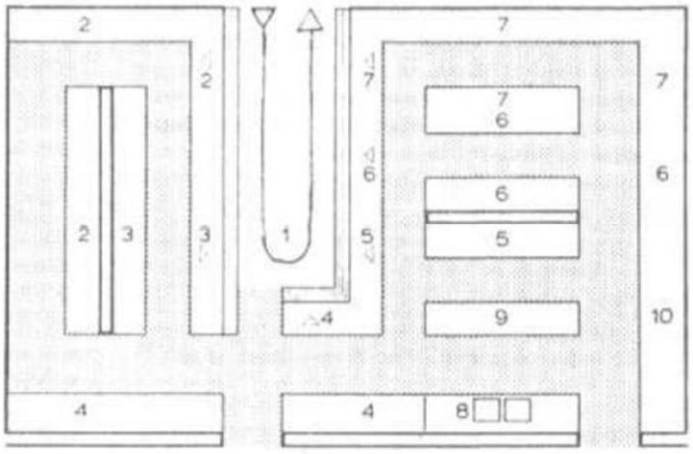


Fig. 2 Hotel or restaurant kitchen. Capacity: With this layout, a 200-seat restaurant will be able to handle three full sittings. This layout can also take care of a hotel with 100 guests and can also accommodate a restaurant open to the general public, an outdoor restaurant, and a private dining area for parties and conferences (altogether, 400 guests). Waiters' passageway: in the center. Kitchen: Linear arrangement with large installations in the rear. See Legend for explanation of numbers.

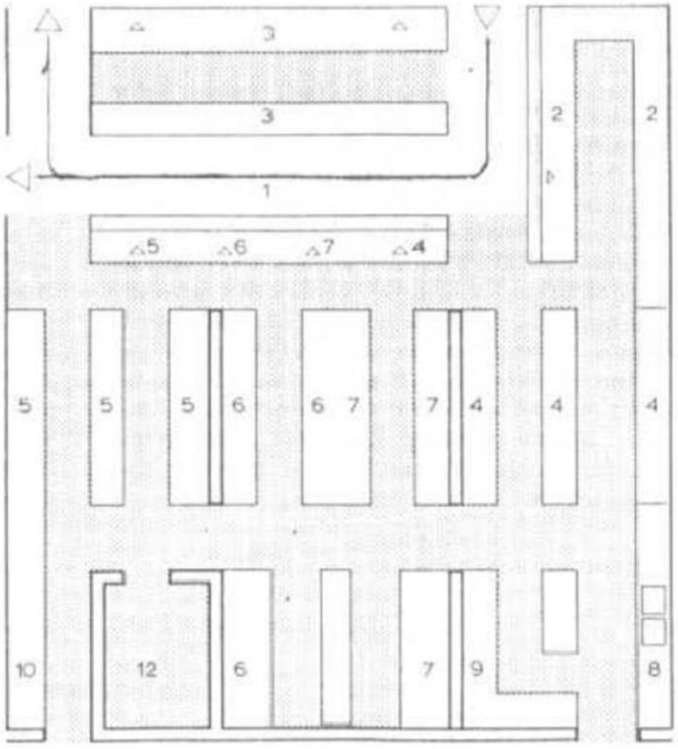
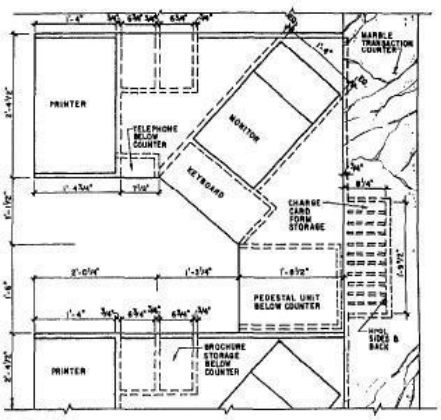


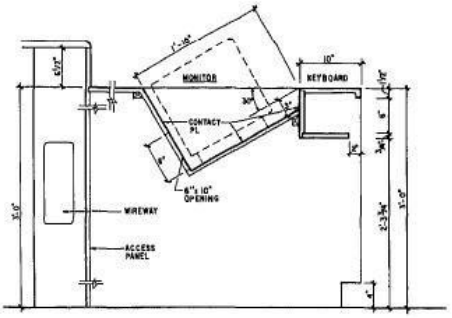
Fig. 3 Large restaurant kitchen for restaurants with many private party and conference facilities or with commissary and catering capacity for other businesses. Suitable also for large hotel with large restaurant for the general public. Capacity: 800–1,000 persons (e.g., 200 seats and fourfold reoccupancy). Waiters' passageway: tangential, with food buffet situated in front. The waiter has access to beverages and other items from the waiters' passageway in the kitchen and from the dining room side as well. The buffet looks over the dining rooms. Kitchen: Linear arrangement with fitted berths for large apparatus. See Legend for explanation of numbers.

Figure 12 KITCHEN DETAILS

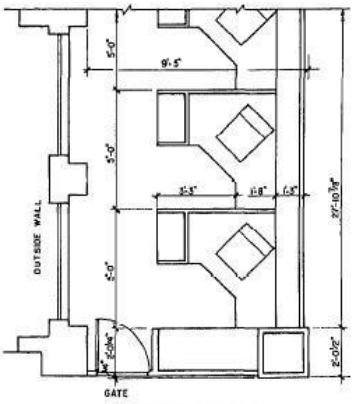
1. TIME SAVER STANDARDS (INTERIOR DESIGN):



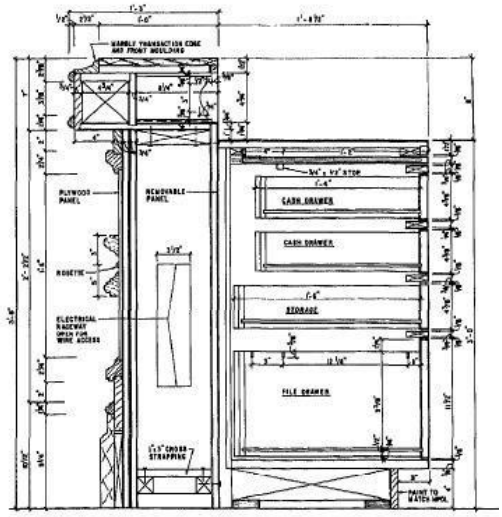
ENLARGED PARTIAL PLAN
REGISTRATION COUNTER
GRAND FLORIDIAN HOTEL



SECTION AT REGISTRATION DESK
GRAND FLORIDIAN HOTEL



PARTIAL PLAN
REGISTRATION COUNTER
GRAND FLORIDIAN HOTEL



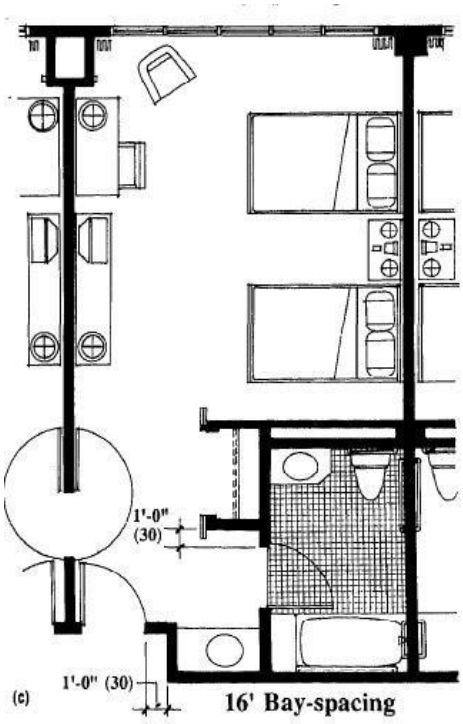
SECTION AT COUNTER
GRAND FLORIDIAN HOTEL

3. Elevators servicing the hotel guest rooms should be readily visible from the front desk. This is not always feasible in extremely large hotels.

4. The front desk should be designed in such a way as to take into consideration the various users it will accommodate. Special attention should be given to the fact that hotel guests may be physically challenged or chairbound. The overall height, writing surfaces, and overhangs should be designed to accommodate a hotel guest seated in a wheelchair.

5. The basic front desk design should avoid, wherever possible, visual obstructions that block sightlines or create blind spots. Accordingly, columns and high walls should be avoided.

6. Equipment and custom elements that are typically incorporated within the front desk include computer monitors/CRTs with keyboards and printer, room racks, reservation racks, information racks, room status displays, mail drawers, key drawers, alpha guest listings, message-waiting display, credit card imprinters, fax and telex, guest/employee paging system, automatic wake-up system, electric receptacles, cable chases, alarm systems, and file and cash drawers.



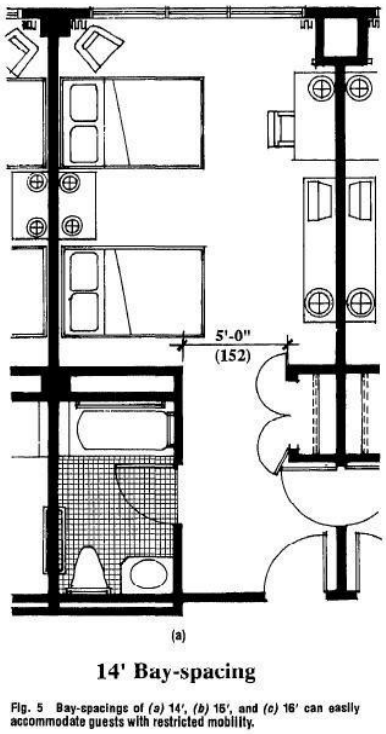
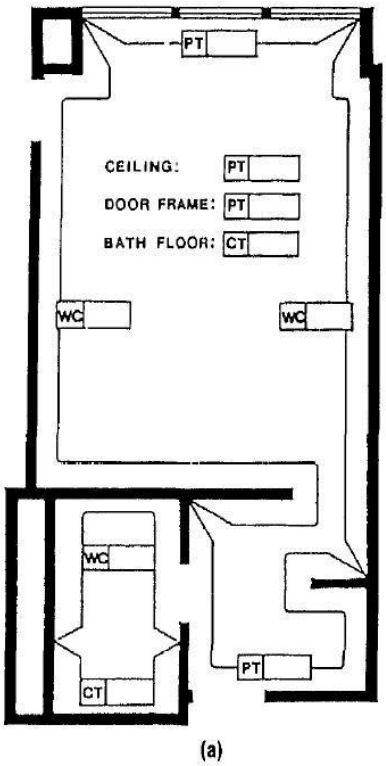


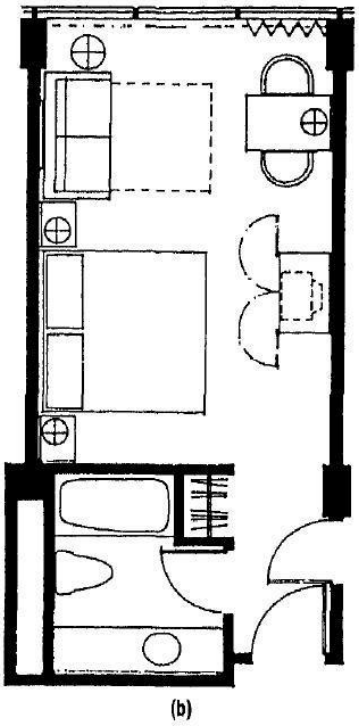
Fig. 5 Bay-spacings of *(a)* 14', *(b)* 15', and *(c)* 16' can easily accommodate guests with restricted mobility.

Snack Bar

at

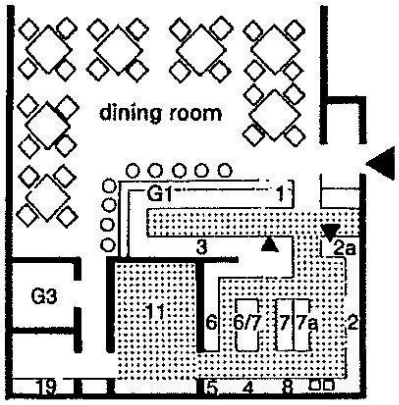
in





• Corner pub, cafe, restaurant: capacity 55-60 seats (2-4 place turnover lunch time, 2 evenings). Between lunch and evening meals: serving coffee, cakes and snacks. Kitchen: supplied predominantly with pre-prepared items.

Storeroom need not be particularly large if deliveries are daily.

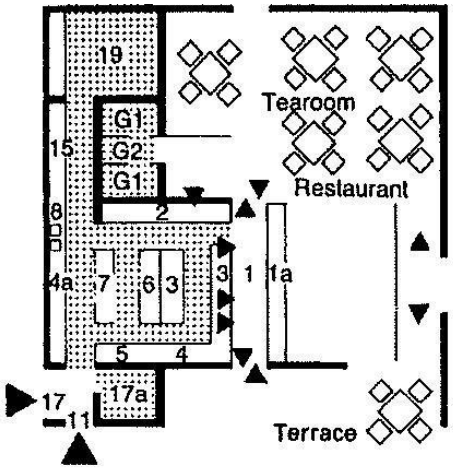


1 Snack bar

1 meals and drinks servery
2 dishwasher
2a crockery returns
3 drinks bar with mixer, toaster, food containers etc.
4 oven for small pastry items
5 food storage
6 rotisserie
6/7 cooker rings
7a water boiler and steam machine
8 pot and pan washer
11 stores/office; catering size refrigerators and freezers instead of cold store
19 staff toilets
G1 bar counter
G3 customer toilets

Cafe-restaurant-

- With tea room. Urban business in heavy traffic location.



2 Café-restaurant

1 waiters' walkway
1a service counter and cash tills
2 dishwasher
3 drinks bar with mixer, toaster, ice cream freezer etc.
4 pastry preparation
4a pastry oven
5 sandwich preparation
6 reheating equipment (e.g. soup)
7 cooker rings
8 pot and pan washer
11 empties
15 linen store
17 deliveries and (a) store
19 staff toilets and cloakroom
G1 toilets
G2 telephone cubicle

Cafe:

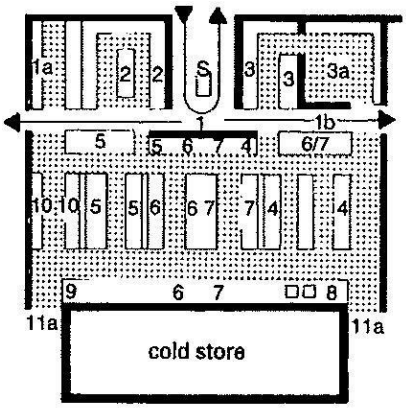
- Alcohol-free drinks, except bottled premium beer, liqueurs etc., patisserie and light food- cold and hot.

Tearoom:

- Alcohol-free drinks, patisserie, sandwiches. Capacity approx.150 seats, continuous operation 6.30-24.00. Kitchen: predominantly pre-prepared items, little storage.

Large hotel restaurant kitchen-

- Also, for large catering establishments with side rooms, external deliveries or production for outside companies. Capacity 800-1000 people. Waiters' walkway: in the center with special service in the garden or also bowling alley and direct access to the side rooms. Kitchen: cell system fronted by the backs of the large appliances.

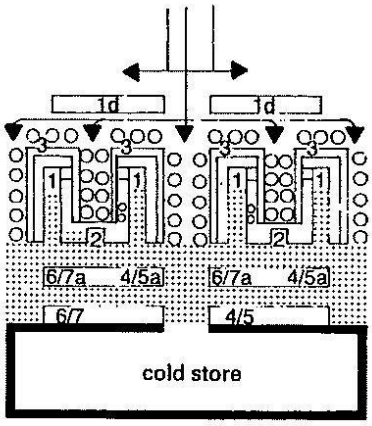


1 waiters' walkway
1a garden service counter
2 dish-washing area
3 drinks counter
3a drinks cellar
4 pastry counter
5 cold dishes
6 hot dishes and sauces
6/7 table with hot store
8 pot and pan washer
9 vegetable preparation
10 meat preparation
11a deliveries, and access to stores, offices, staff cloakrooms and toilets
S service accessories and tills

3 Large hotel restaurant kitchen

Restaurant with buffet and vending machines-

- For fast midday meals in canteens, department stores and motorway services. Capacity 500 people/h. Kitchen: only warming of preprepared food stuffs, except for salad sand soups.

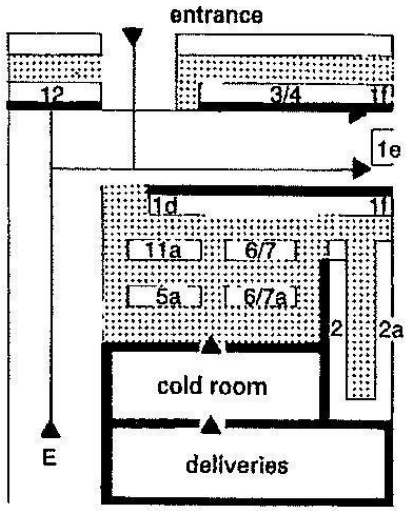


1 serving aisles in U-shaped counters
1d vending machines
2 link between two counters with covered dishwashers, operated from both sides, each with two rinsing basins
4/5 cold meal preparation
4/5a cold servery (salads, ices, desserts)
6/7 griddle, soup heater, water boiler etc.
6/7a hot servery (bain-marie, hotplates)

4 Restaurant with buffet and vending machines

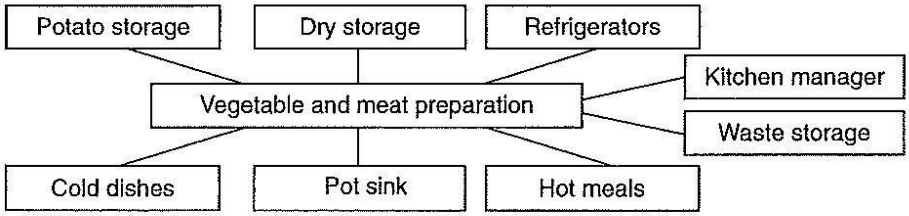
Self-service restaurant-

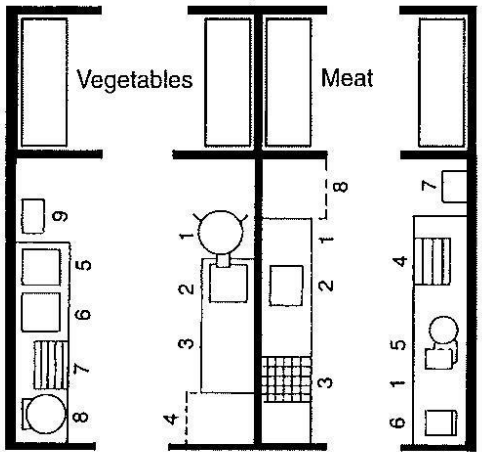
- Suitable for department stores or attached to offices. Kitchen: no in house production. Outside delivery and preparation using deep frozen process.



1d self-service buffet with grill and chip fryer
1e sauces, condiments, cutlery
1f cash till
2 dishwasher
2a crockery returns
3/4 food and drinks servery (service to street possible)
5a cold meal preparation table
6/7 heating units, used from both sides
6/7a hot meal preparation table
11a refrigerators, used from both sides
12 sales kiosk (serving inside and to street)
E entrance

5 Self-service restaurant



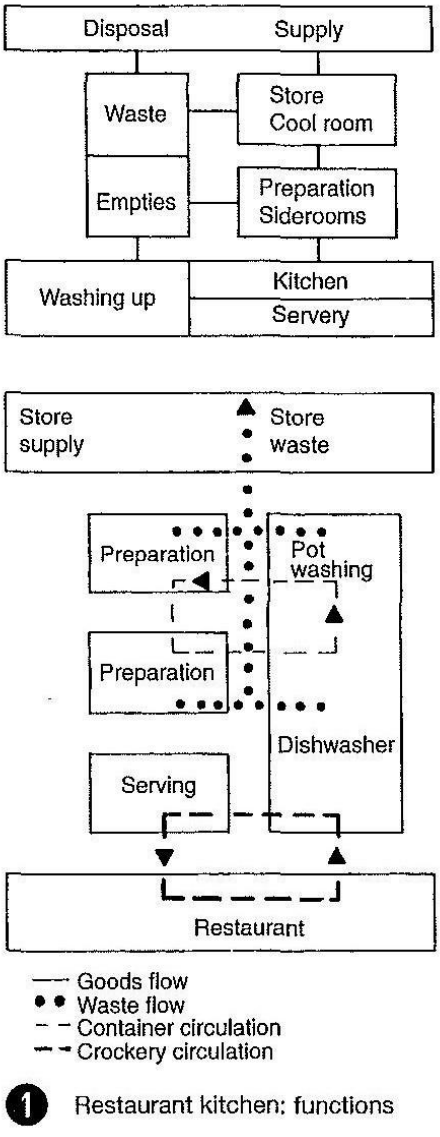


1 Peeling machine
2 Drip tray
3 Cleaning surface
4 Holding surface
5 Universal machine
6 Cutting board
7 Sink + Worktable
8 Hand wash basin
9 Worktable
10 Slicers
11 Freezer
12 Bench scale
13 Stir/beat machine

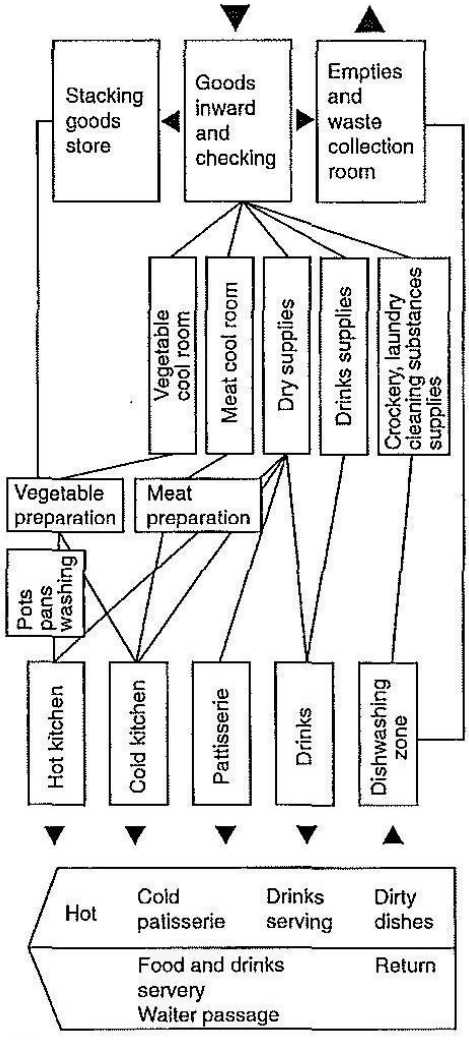
6 Separate preparation of vegetables and meat

Function and organization of the restaurant kitchen-

- The capacity of the kitchen is primarily dependent on the number of customer seats, customer expectations (type, extent and quality of the meals offered), the proportion of products freshly prepared from raw (in contrast to ready-prepared food) and the rate of customer turnover all day or at meal times (consumer frequency).
- In fast food restaurants the rule of thumb for seat changes is about1-3times per hour, in conventional restaurants about 2. In specialty and evening-based restaurants, the guests stay on average for1.3-2 hours.



1 Restaurant kitchen: functions



2 Restaurant kitchen: organisation

Percentage of total kitchen space requirement-

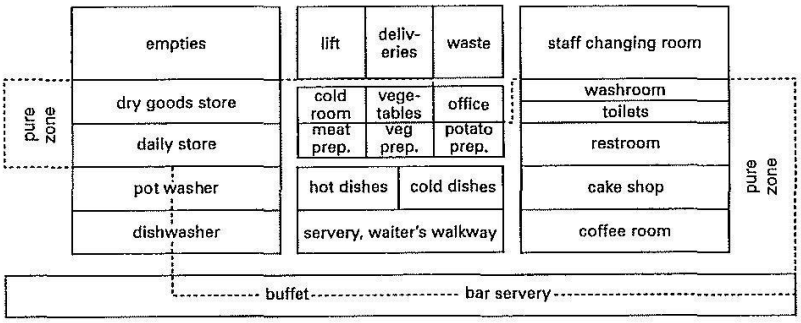
- Differentiated according to small, medium and large kitchens, floor area values for individual functions are be based on.
- Aisle widths in storage, preparation and production areas differ according to whether they are purely traffic routes or also overlap the service area. Working aisle widths should be 0.90-1.20 m, side traffic routes with (temporary) overlapping use 1.50-1.80 m and main traffic routes (transport and two-way through traffic) 2.10-3.30 m wide. For kitchen areas in small to medium restaurants, aisle widths of 1.00-1.50 m should be sufficient.
- Bistros, snack bars, small cafes - or specialty restaurants with 40-60 seats- are classified as small operations. Small to medium units (70-1 00 places) require on the other hand carefully zoned and fully equipped kitchen facilities. Large businesses (service areas, fast food restaurants, large hotel kitchens) achieve considerably higher place numbers, often with an integrated eating bar or self service areas.

Seats	80	120	200
goods inward	0.05–0.075	0.05–0.067	0.05–0.06
empties	0.05–0.075	0.05–0.067	0.05–0.06
waste/rubbish	0.05–0.075	0.03–0.050	0.03–0.04
delivery/disposal	0.15–0.225	0.13–0.183	0.13–0.16
cold room meat	0.05–0.075	0.05–0.067	0.04–0.05
cold room fruit and vegetables	0.05–0.075	0.05–0.067	0.04–0.05
cold room dairy products	fridge	0.03–0.05	0.03–0.05
cold room cold service	fridge	fridge	0.02–0.03
cool room drinks	fridge	fridge	0.05–0.07
freezer room	0.05–0.075	0.05–0.067	0.06–0.08
cooled goods delivery	0.15–0.225	0.183–0.25	0.24–0.32
store dry goods	0.15–0.175	0.117–0.13	0.09–0.1
store drinks	0.075–0.1	0.1–0.117	0.08–0.1
store non-food	0.075–0.1	0.067–0.083	0.07–0.08
cooled goods storage	0.3–0.375	0.283–0.33	0.24–0.28
vegetable preparation	0.075–0.1	0.067–0.083	0.04–0.05
meat preparation	0.075–0.1	0.05–0.067	0.04–0.05
fish/poultry preparation	0	0.03–0.05	0.03–0.04
hot kitchen	0.325–0.35	0.217–0.23	0.16–0.18
cold kitchen	0	0.05–0.067	0.04–0.05
patisserie	0	0	0.04–0.05
pot washing	0.05–0.075	0.05–0.067	0.03–0.04
office kitchen manager	0	0	0.03–0.04
kitchen facilities	0.525–0.625	0.47–0.567	0.41–0.5
dishwasher	0.1–0.125	0.1–0.117	0.09–0.1
service/waiter office	0.075–0.1	0.083–0.1	0.07–0.08
dishwasher/office	0.175–0.225	0.183–0.217	0.16–0.18
= Total	1.3–1.675	1.25–1.55	1.18–1.44

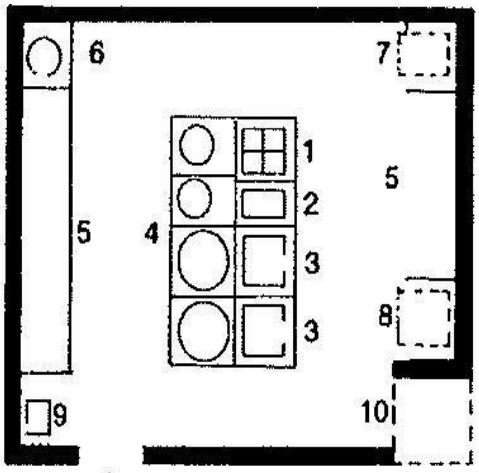
3 Kitchen areas: space required (m^2/seat)

Area	Proportion (%)
goods delivery including inspection and waste storage	10
storage in freezer, cold and dry rooms	20
daily store	
vegetable and salad preparation area	2
cold dishes, desserts	8
patisseries/cakes	8
meat preparation	2
cooking area	8
washing area	10
traffic area	17
staff rooms and office	15
Total	100

4 Basis for dimensions and space requirements

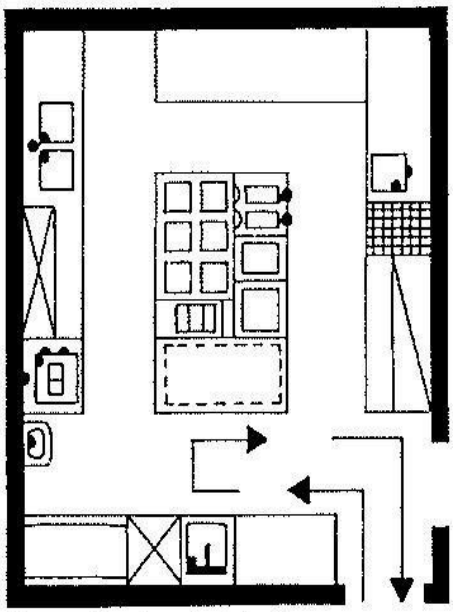


5 Kitchen areas: classification and relationships of functional areas in clean and unclean zones (if earth-covered vegetables are prepared, this must take place in a separate part of the unclean area!)



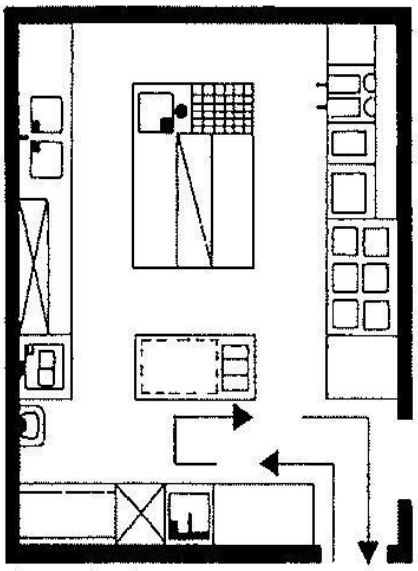
1 cooker
2 deep fat fryer
3 griddle
4 water boiler
5 work surface
6 cooker
7 double-deck oven
8 convectomat
9 hand basin
10 storage area

1 Basic organisation of the hot kitchen → **2** – **3**



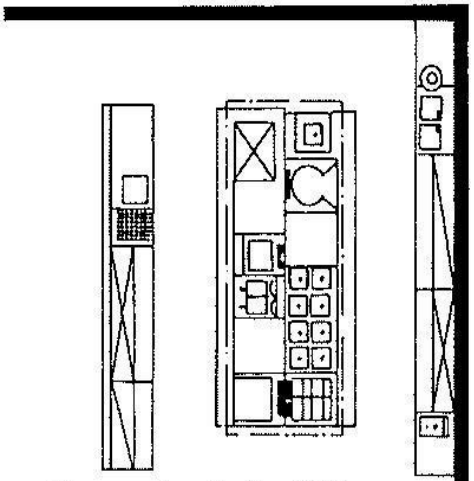
1. production in block

2 Kitchen for restaurant with 60–100 places



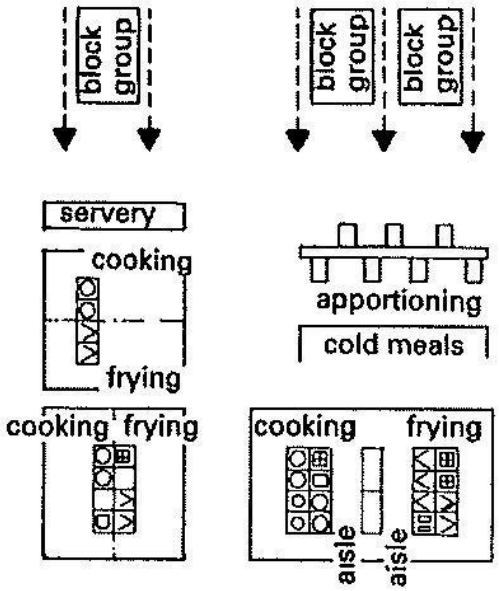
2. production in line

3 Kitchen for restaurant with 60–100 places

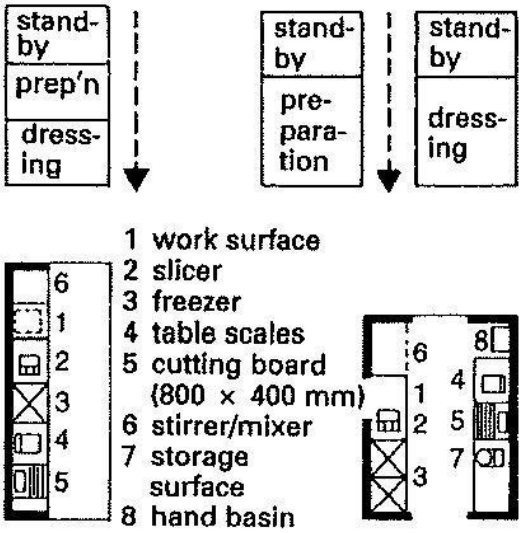


cooking: cooker, boiler (80 l), work surface, eight-ring hob, two ovens, bain-marie, hot cupboard
frying: griddle, work surface, twin deep fat fryer, frying pan, hot-air oven with table

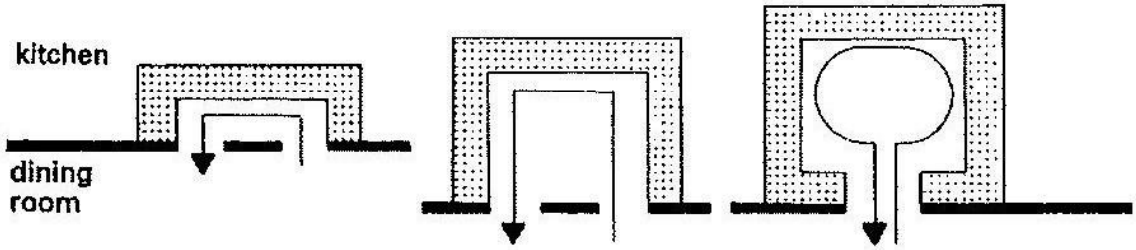
4 Restaurant kitchen for 150–200 meals



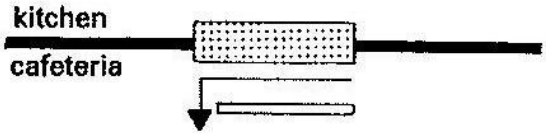
5 Functions and organisation of hot kitchen



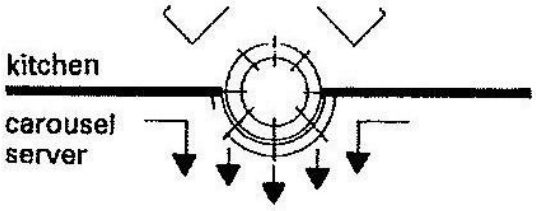
6 Organisation of cold kitchen



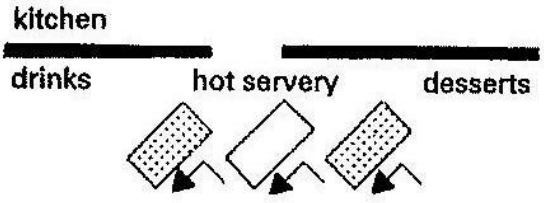
7 Servery, waiter walkway



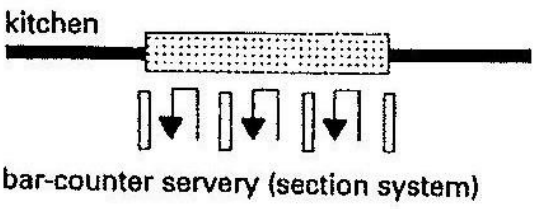
8 Self-service restaurant



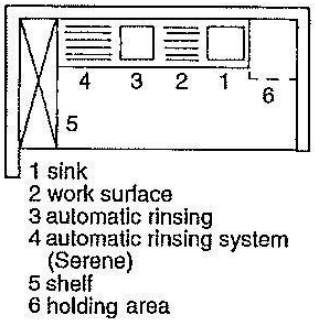
9 Self-service restaurant



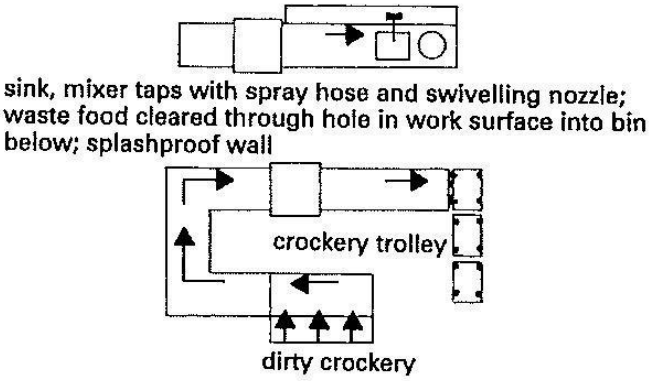
10 Free-flow restaurant



11 Self-service restaurant

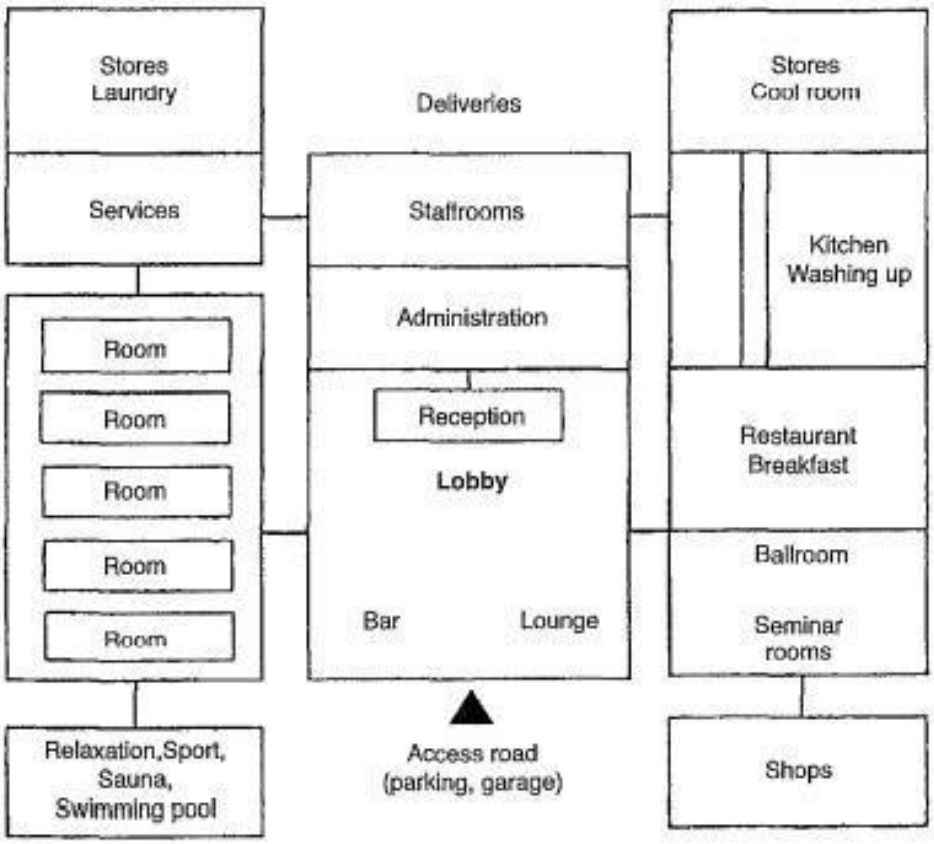


14 Basic solution: pot washing area



15 Functions and components of the dishwashing area

A scheme of the basic room and route relationships with in a hotel is shown below:



2 Room and access scheme of a hotel

The percentages of hotels' surface areas required for the various functions are shown below

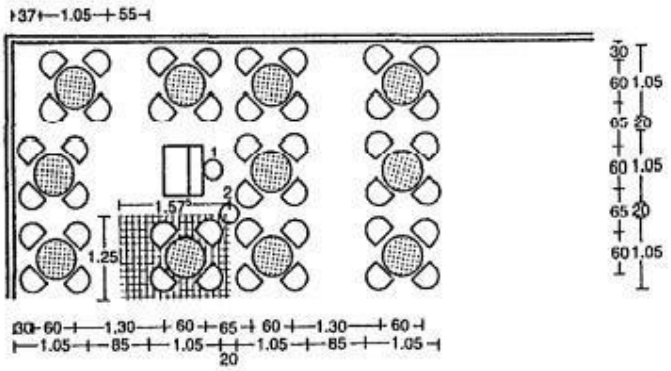
1.	guest rooms, bathrooms, corridors, room service	50–60%
2.	public areas, lobby, reception etc.	4–7%
3.	catering	4–8%
4.	events, ballroom, seminar rooms	4–12%
5.	wellness/ fitness area	5–10%
6.	other areas, cosmetics, hairdresser	1–2%
7.	management, administration	1–2%
8.	service area, kitchen, staff rooms, stores	9–14%
9.	building services	5–10%

Parking and garage areas and special areas (e.g. wellness and bathing area) are also to be taken into account (and can vary widely according to the range of services)

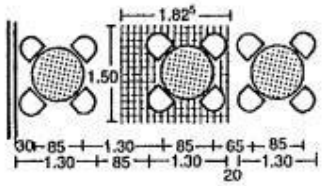
	Hotel type	m^2/room
1.	luxury	90–110
2.	first class	60–70
3.	comfort	50–60
4.	standard (holiday hotel, motel)	40–60
5.	tourist (low-budget)	15–20

4 Guideline values for (above) shares of hotel surface area taken by each function and (below) gross areas per room in various categories of hotel

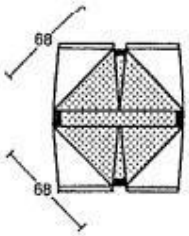
5 Stars (Luxury): as before, but single room 18m2 , double room 26m2, (minimum size, see above), 2% of the hotel rooms as suites (at least two), each with an armchair/sofa per bed, additional washbasin in double rooms and suites, additional colour television in suites, reception lobby.



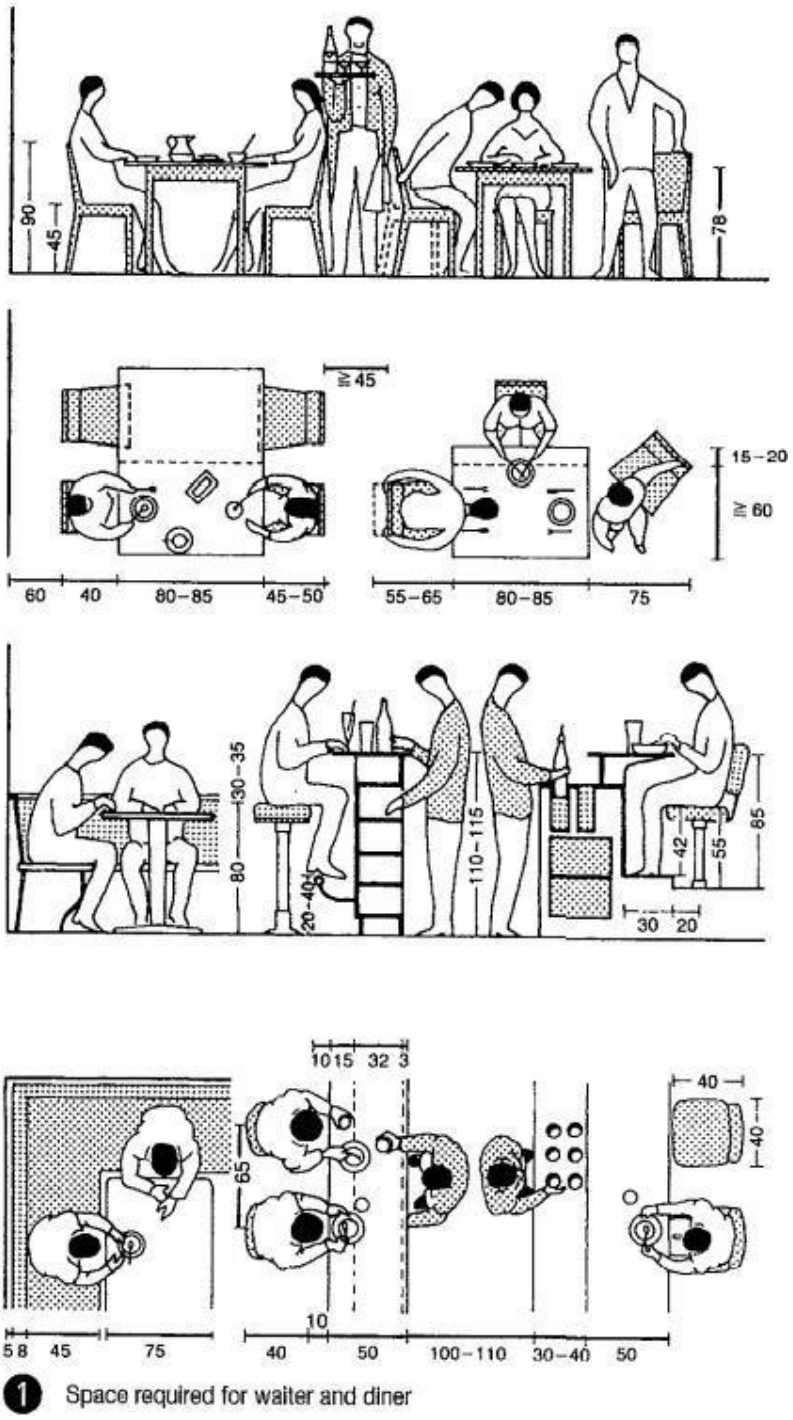
5 Closest table spacing



6 Tables in a café

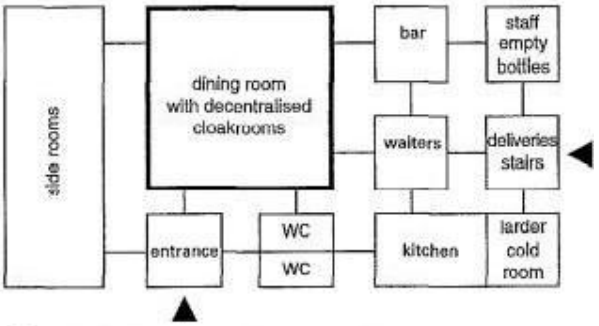


7 Zuntz table



1 Space required for waiter and diner

Larger dining rooms should be split into zones. Kitchen, side rooms, toilets and sanitary installations should be grouped around the dining room, also in the basement.

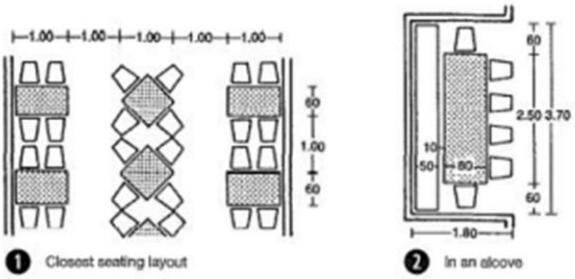


8 Functional scheme of a small restaurant

Type	Seat occupancy per meal	Kitchen floor area (m^2/cover)	Dining room floor area (m^2/seat)
exclusive restaurant	1	0.7	1.8–2.0
restaurant with rapid turnover, e.g. department store	2.5	0.5–0.6	1.4–1.6
standard restaurant	1.5	0.4–0.5	1.6–1.8
inn, guest house	1	0.3–0.4	1.6–1.8
for storerooms, personnel rooms etc., add approx. 80% cover = seat × seat turnover.			

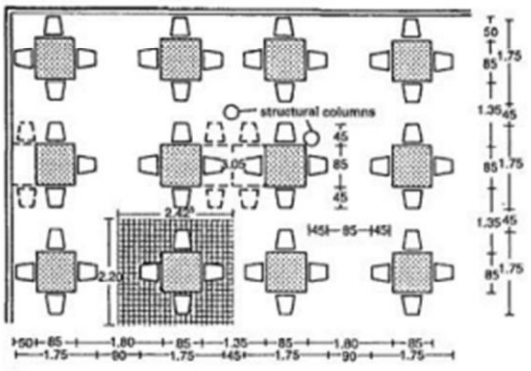
11 Space requirements

Columns in a dining room are best located in the centre of a group of tables or at the corners of the tables. The ceiling heights of dining areas with a floor area less than equal to 50m2=2.50m, > 50 m2 = 2.75 m and >100m2 greater than equal to 3.00 m; above or below galleries greater than equal to 2.50 m.

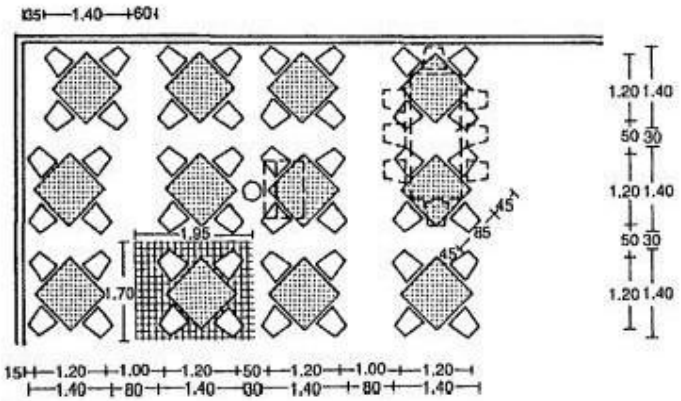


1 Closest seating layout

2 In an alcove



3 Parallel arrangement of tables



4 Diagonal arrangement of tables

Emergency exits1.0m wideper150 people using them. Minimum clear width of aisles in restaurants0.80 m, doors 0.90 m.

Toilets in public houses, bars or restaurants: Stairs to toilets, wash, staff and storage rooms, usable width less than equal to 1.1 0 m. Clear walkthrough height less than equal to 2.10 m measured vertically. Window area less than equal to 1/10 of the floor area of a restaurant.

Floor area of dining room	Usable walking width
≤100 m²	≥1.10 m
≤250 m²	≥1.30 m
≤500 m²	≥1.65 m
≤1000 m²	≥1.80 m
>1000 m²	≥2.10 m

9 Usable width of stairs

Dining places	WCs, gents	WCs, ladies	Urinals, no.	Channel (m)
≤50	1	1	2	2
≤50–200	2	2	4	3
≤200–400	3	4	6	4
≥400	– decision for each case –			

10 Toilet facilities

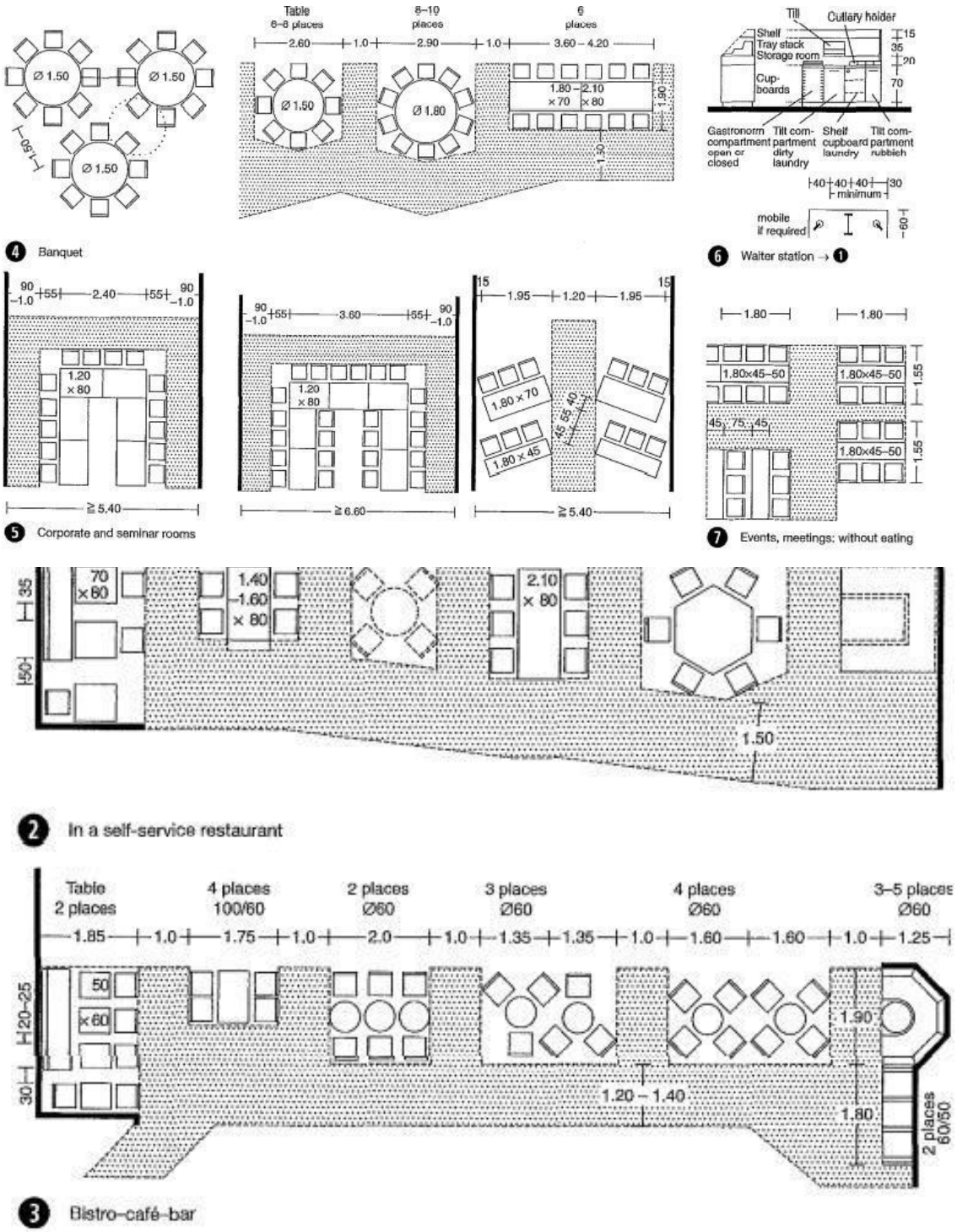
Furnishing (tables)	No. places	Waiter (m²/place)	Self-service (m²/place)
square	4	1.25	1.25
rectangular	4	1.10	1.25
rectangular	6	1.00	1.05
rectangular	8	1.10	1.10

12 Total space required for dining room: 1.4–1.6 m²/place

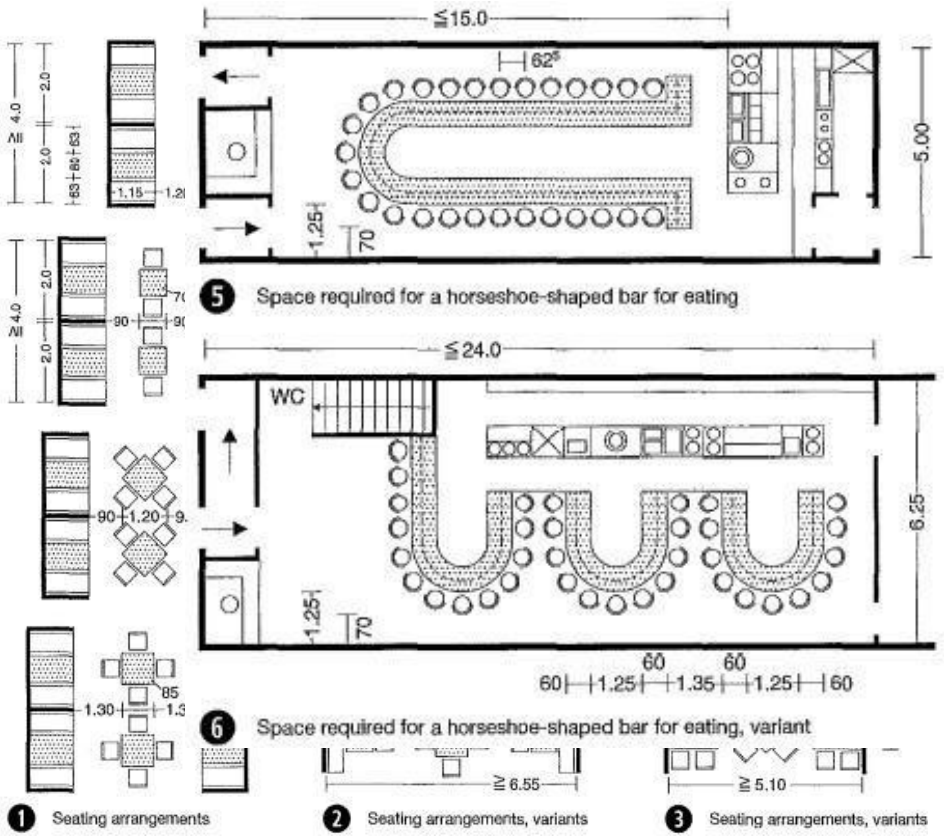
main aisles	min. 2.00 m wide
intermediate aisles	min. 0.90 m wide
side aisles	min. 1.20 m wide

13 Aisle widths

Diagonal arrangement of the tables generally takes up less space than an aligned pattern, with a space saving of up to 35%.



Tables and chairs are kept as small as possible and tightly grouped.



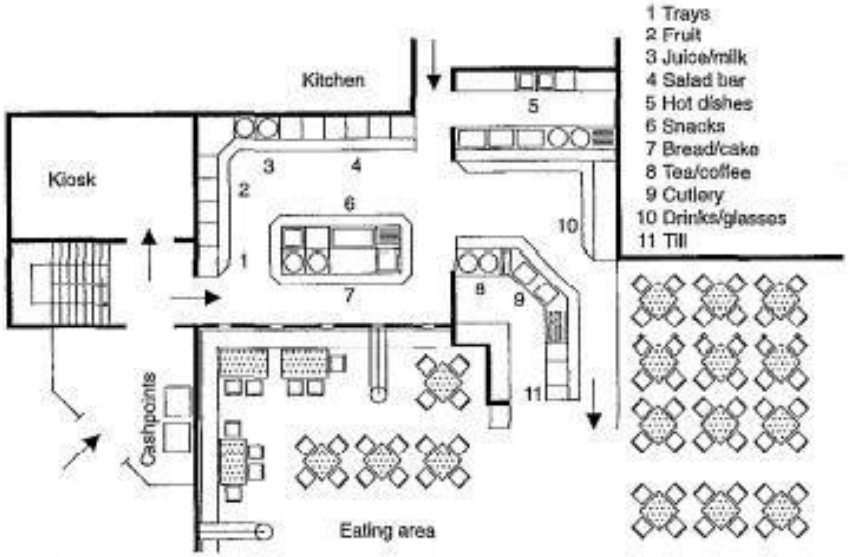
5 Space required for a horseshoe-shaped bar for eating

6 Space required for a horseshoe-shaped bar for eating, variant

1 Seating arrangements

2 Seating arrangements, variants

3 Seating arrangements, variants



7 Example of a fast food restaurant, self-service

2. RELEVANT PLANNING NORMS

To ensure that the design aligns with environmental regulations and local development control rules, the following norms were referred:

- **Coastal Regulation Zone (CRZ-II)**: Since the project is located within the Coastal Regulation Zone (CRZ-II), understanding the coastal ecology and relevant restrictions was critical. Construction setbacks from the High Tide Line (HTL), maximum permissible height, floor area ratio, and the preservation of public access to the beach were all studied from CRZ notification documents. These formed the foundation for zoning and massing decisions in the design.
- **Height Restrictions**: The site's proximity to a helipad and lighthouse imposes restrictions on vertical construction to maintain safe airspace and navigational visibility.
- **Building Setbacks and FAR**: As per VMRDA building rules, minimum setbacks, and Floor Area Ratios (FAR) are applied based on land use and site coverage percentages.
- **Open Space Requirements**: At least 15–20% of the site must be maintained as open greens or accessible public realm, ensuring environmental sustainability and community integration.

3. DESIGN IDEOLOGIES

The design approach merges **vernacular sensibilities** with a **contemporary tropical design aesthetic**. The architectural vocabulary borrows elements from coastal Andhra Pradesh such as shaded verandas, local stone masonry, and terracotta features, while introducing modern materiality and structural clarity.

Passive design principles are central to the proposal. The site's east-facing orientation allows for optimal solar access in the morning, while building massing is designed to channel sea breeze through corridors and courtyards for natural ventilation. Solar orientation, shaded walkways, and landscape buffers contribute to energy efficiency and thermal comfort. Landscape design incorporates native species and permeable paving to support rainwater percolation and reduce the heat island effect.

CHAPTER 3: CASE STUDY / DESK APPRAISAL

1. NOVOTEL – VISHAKAPATNAM, VARUN BEACH

Novotel is a contemporary 5-star business and leisure hotel located along the same coastal road as the proposed project site. Its sea-facing orientation, integration of business and recreational facilities, and operational planning provide valuable insights. The hotel includes banquet halls, a rooftop bar, restaurants, an infinity pool, and private suites, all optimized to



face the sea. The project showcases how a commercial hospitality facility can be adapted to coastal climatic conditions using glass façades, shaded verandas, and landscape buffers. Learnings from this study include efficient BOH management, layered public-private zoning, and use of materials resistant to marine corrosion.

1.1.PROJECT DETAILS

- **Architects/ Developer:** Developed by Varun Hospitality Pvt Ltd, part of the Varun Group. The company acquired approximately 1,236 sq. yds of government-granted land in 2019, though the hotel had opened earlier.
- **Project Typology:** A 5-star luxury seafront hotel featuring guest rooms and high-capacity convention/meeting facilities suitable for weddings, conferences, and large-scale events.

- **Location:** Beach Road (also known as RK/Varun Beach Road), Visakhapatnam, Andhra Pradesh, India
- **Status:** In Operation
- **Site Area:**
- **Built-up Area:**
- **No. of Keys:** 225 guest rooms across 10 floors
- **Year of Completion:** 2011 (hotel opened around then)

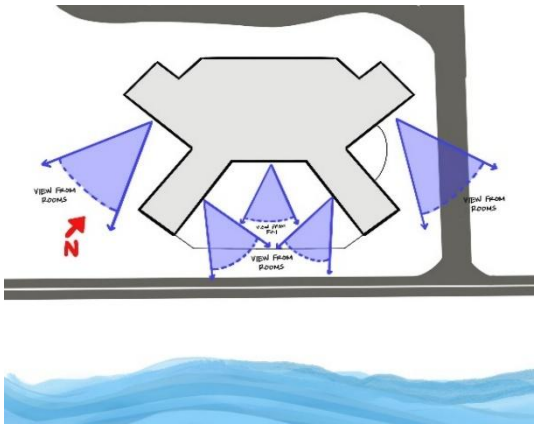
1.2.DESIGN PHILOSOPHY

Situated along the sweeping coastline of the Bay of Bengal, Novotel Varun Beach is not just a hotel, it is an experience shaped by its location, climate, and cultural roots. Its design reflects a conscious attempt to bring together the calming energy of the sea with the demands of a modern luxury destination, all while remaining grounded in its regional identity.

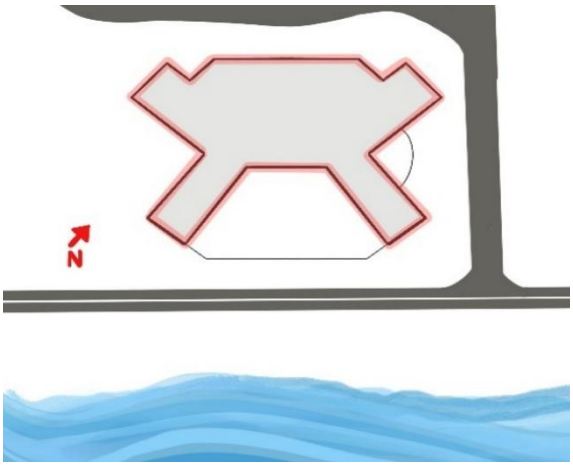
- **A Dialogue with the Sea**
  The very first impression of the hotel is shaped by its openness to the ocean. Almost every space, be it the rooms, the restaurants, or the banquet areas are designed to face the sea, drawing the outdoors in. This strong visual and spatial connection to the water forms the soul of the design. It allows guests to feel at ease and in sync with the rhythms of nature, something that is often lost in urban hospitality spaces.
- **Clean Lines, Local Touches**

Architecturally, the hotel follows a clean and modern language. There is a clarity in its forms, a sense of restraint in its material palette, and a balance between elegance and simplicity. But beyond this modern shell, subtle regional layers come through, whether in the curated artworks, local textures, or interior tones that quietly echo the natural hues of sand, sea, and stone. These elements help it feel rooted in place rather than just another generic luxury hotel.

- **Spaces That Flow**
  One of the key design intentions seems to be seamless flow between zones, between functions, and between the private and public. Despite being a large-scale hospitality project that accommodates both leisure guests and business travellers, the design does not feel overwhelming. Event spaces, lounges, dining areas, and guestrooms are carefully zoned to ensure ease of movement and a sense of calm. The layout supports both grand gatherings and quiet retreats under one roof.
- **Comfort Shaped by Climate**



Design choices also appear to respond thoughtfully to the coastal climate. Wide overhangs, shaded balconies, and large openings encourage natural ventilation while protecting against harsh sun. Materials and finishes are selected to withstand saline air, humidity, and changing weather ensuring not just comfort for users but also long-



term durability of the building.

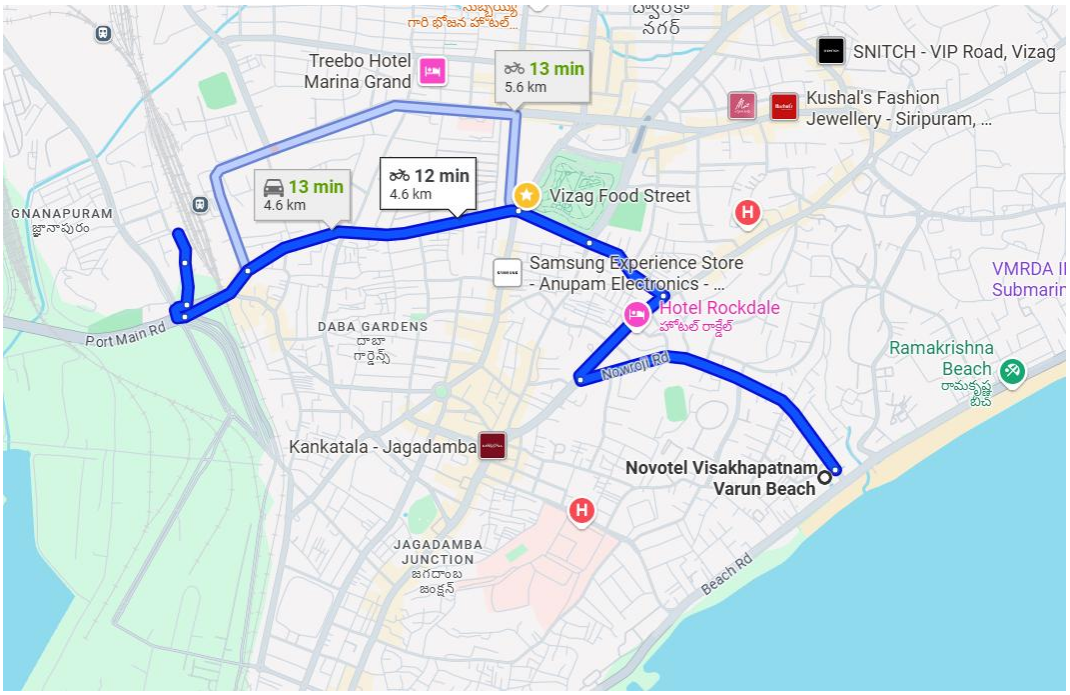
- **Luxury That Feels Personal**
  Despite being part of a global hospitality chain, the hotel does not lose its sense of place. The design philosophy values the idea of comfort that feels personal. Every sea-view window, every breezy corridor, and every open deck contributes to a hospitality experience that is less about extravagance and more about emotional connection, calm, peaceful, and memorable.



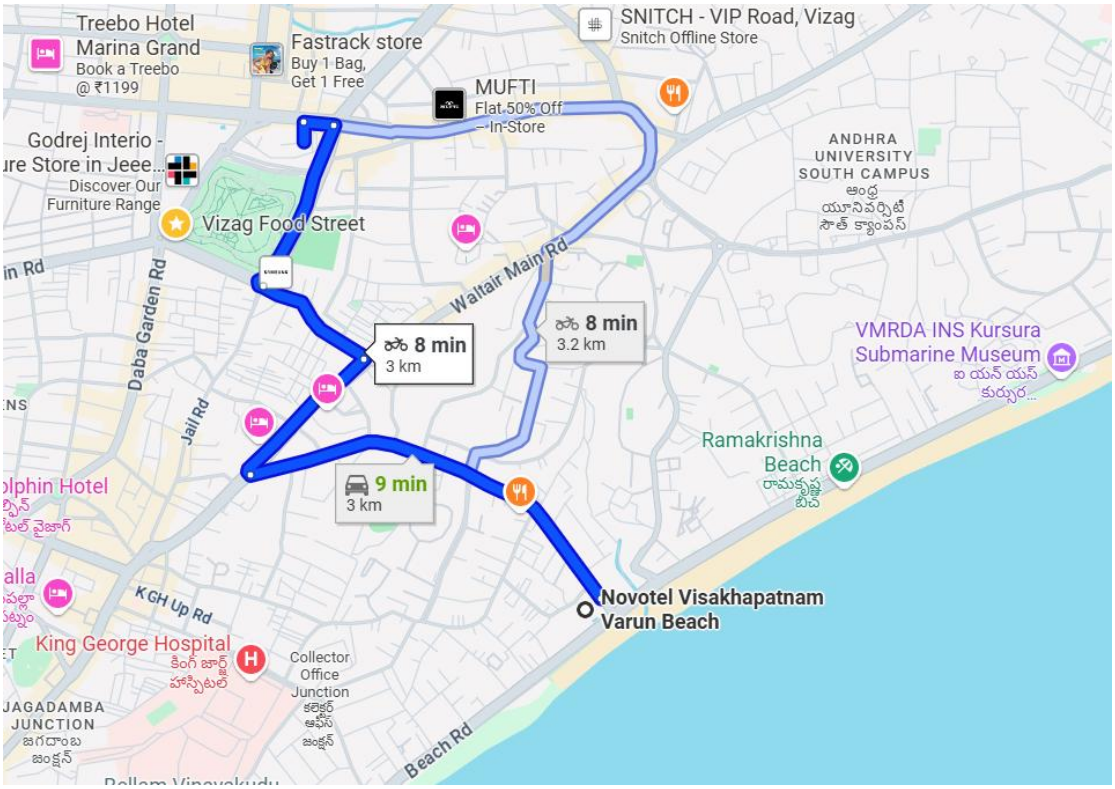
1.3.PROXIMITY

Distance from Transit Hubs & Landmarks

- **Visakhapatnam Junction (Railway Station) - 13 km** (~17 minutes by road) as per one estimate.

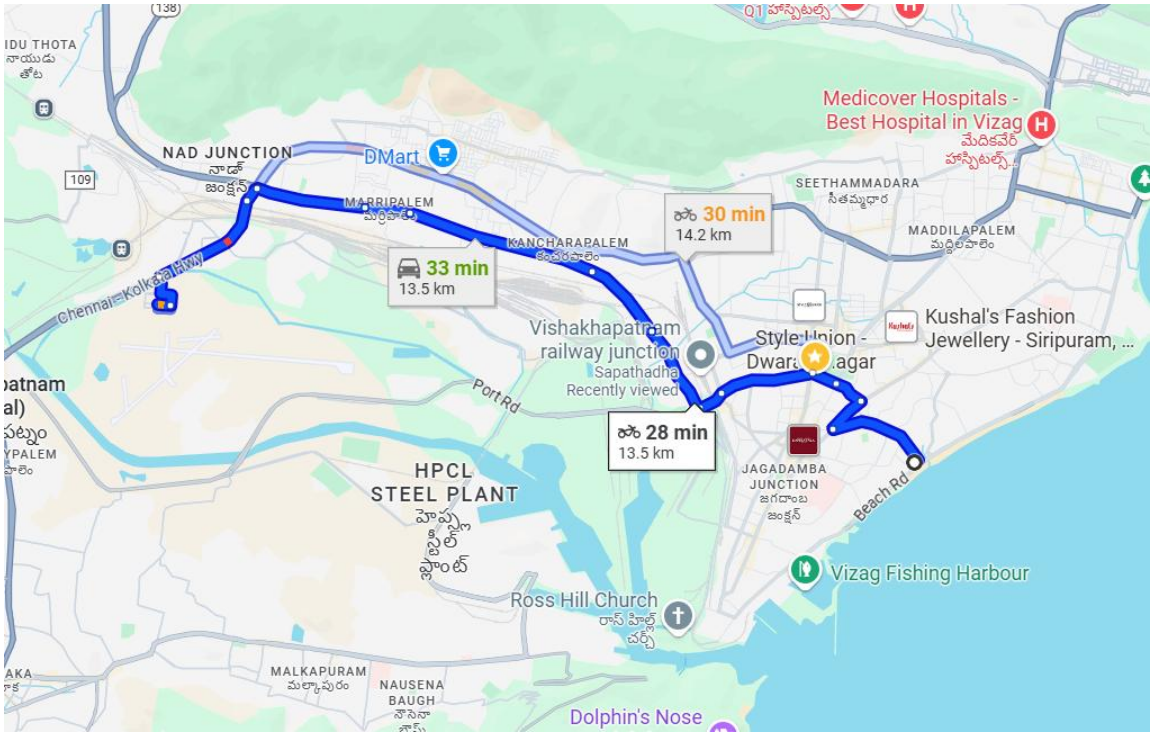


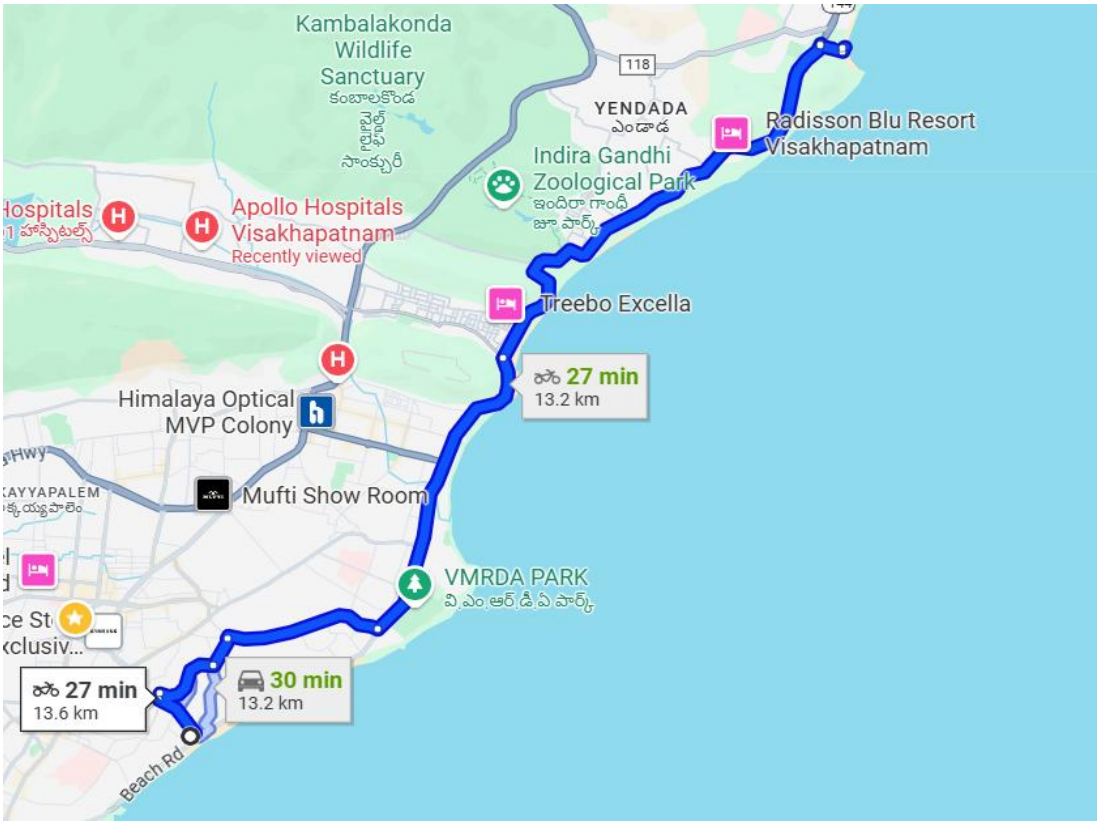
- **Visakhapatnam Airport (VTZ)-** Typically **13 – 14 km** (~30 minutes' drive) for most routes.



- **APSRTC Bus Complex (City Bus Stand) -** Approximately **2.5 km** (~5–10 minutes) from the hotel.

Distance to Popular Attractions & Beaches



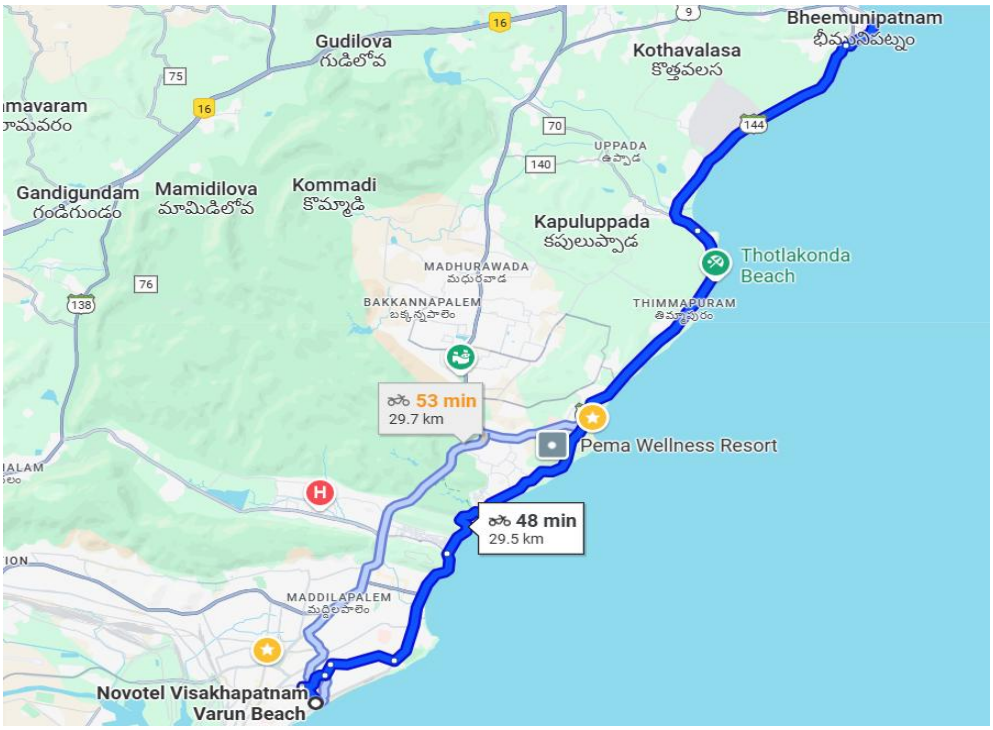


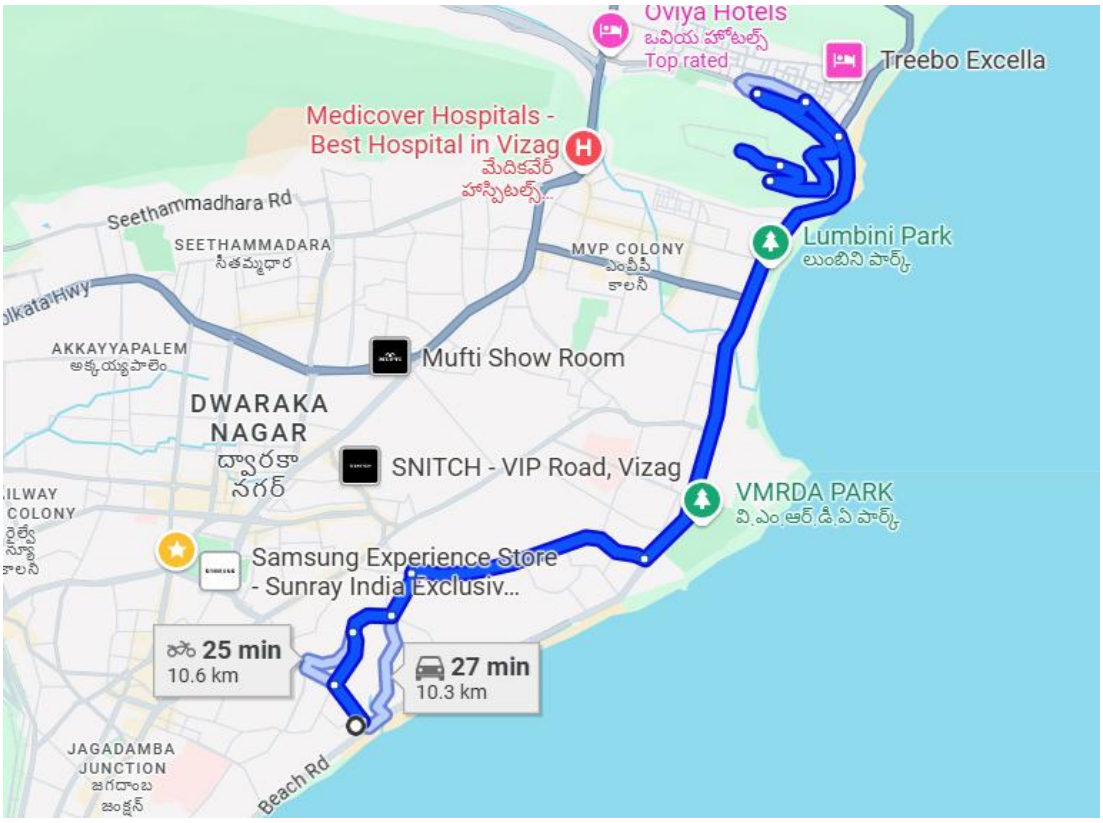
- **RK / Ramakrishna Beach**: Same beachfront as the hotel—**almost zero distance**, since the hotel sits on Beach Road itself.



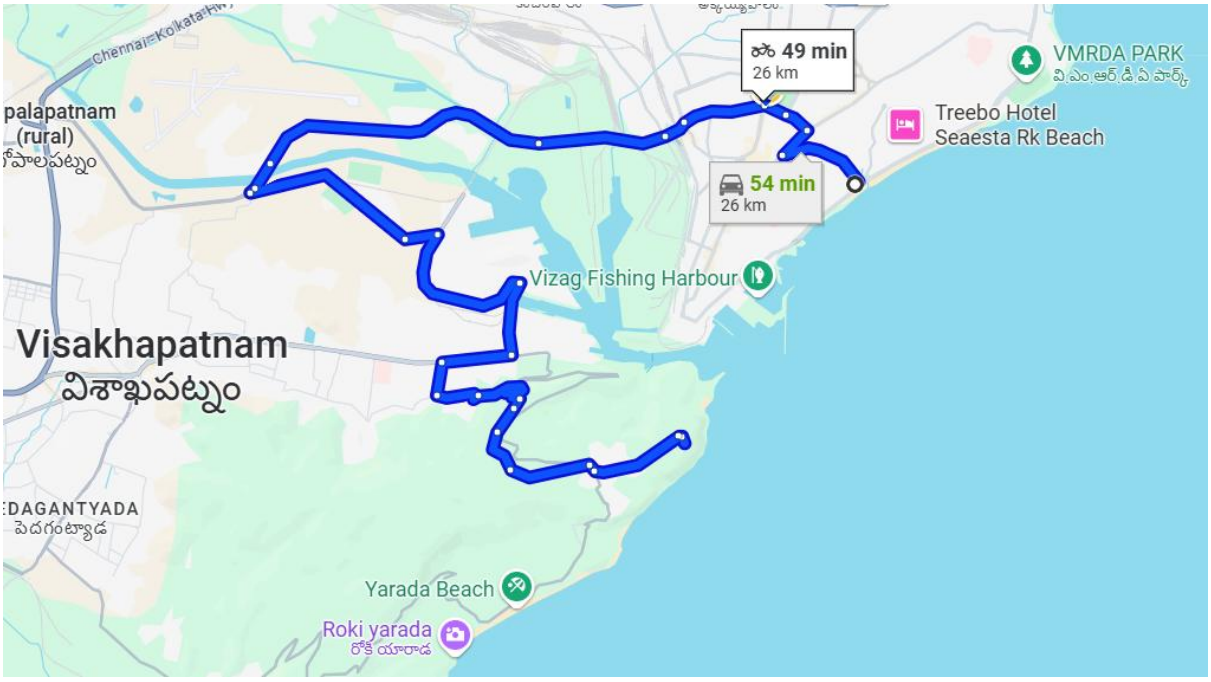
- **Rushikonda Beach**: Located further north; about **13.2 km** away (~30 minutes)

- **Bheemili Beach (Bheemunipatnam)**: A well-known coastal destination roughly **20 km** up the coast—depends on route





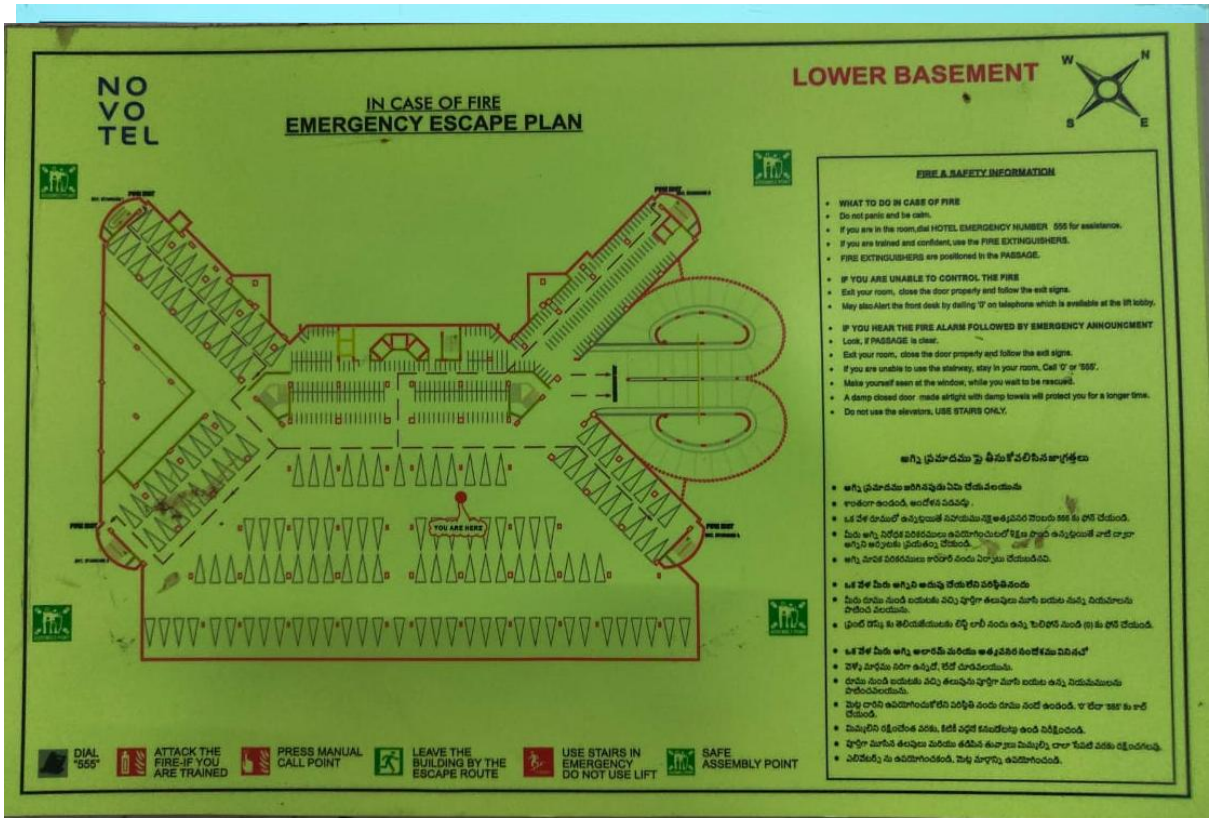
- **Kailasgiri Hill Park** and **VUDA Park**: Near RK Beach area, about **3–4 km**, ~5–10 minutes



- **Dolphin's Nose viewpoint**: Approximately **5–6 km**, **10–15 minutes** by car

Summary Table

Destination	Distance	Approx. Travel Time
Visakhapatnam Junction (Railway)	13–14 km	~17–26 min
Visakhapatnam Airport (VTZ)	13–14 km	~25 min
APSRTC Bus Complex	~2.5 km	~5–10 min
Andhra University Grounds	~3 km	~5–10 min
AS Raja Grounds	~5.5 km	~10–15 min
RK Beach	On Beach Road	Walkable / immediate
Rushikonda Beach	~13.2 km	~30 min
Kailasgiri & VUDA Park	~3–4 km	~5–10 min
Dolphin’s Nose	~5–6 km	~10–15 min



1.4.FLOOR PLANS

Figure 7 Lower Basement Floor Plan

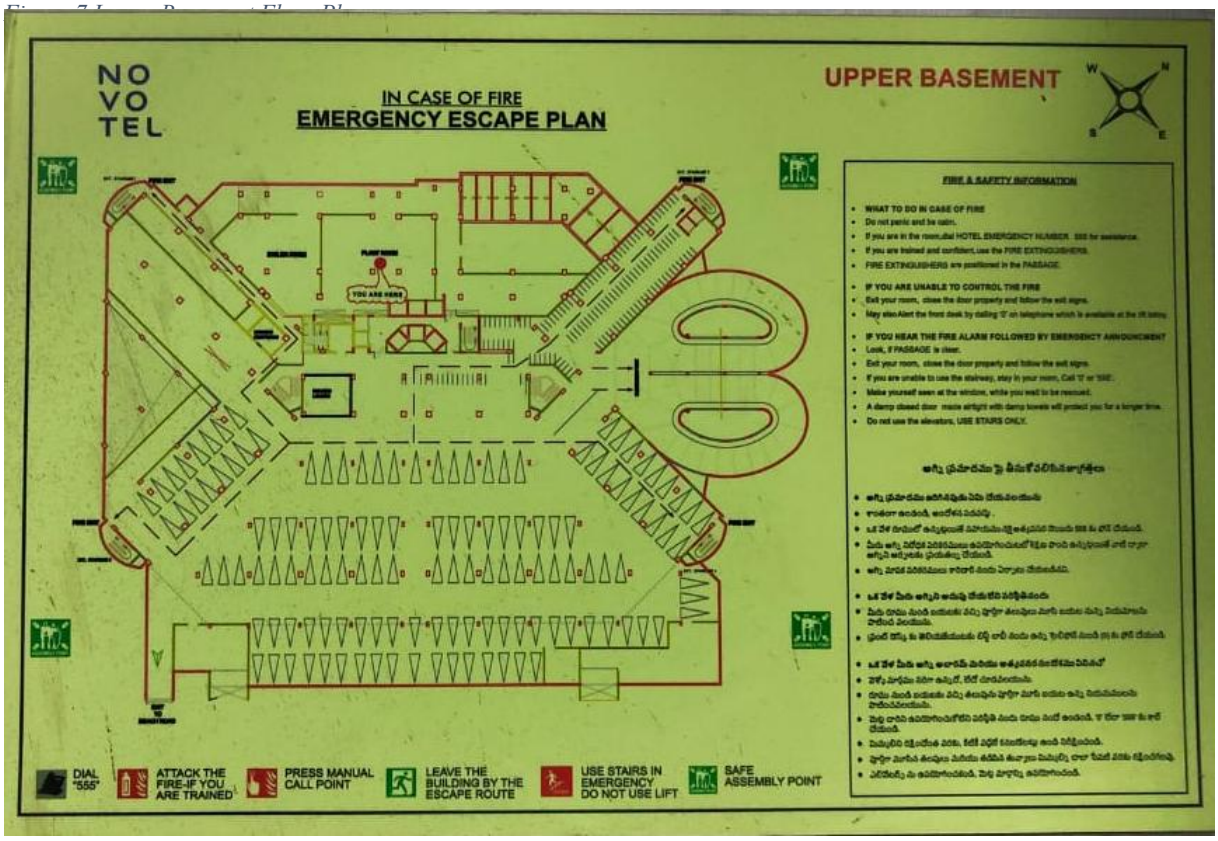


Figure 6 Upper Basement Floor Plan

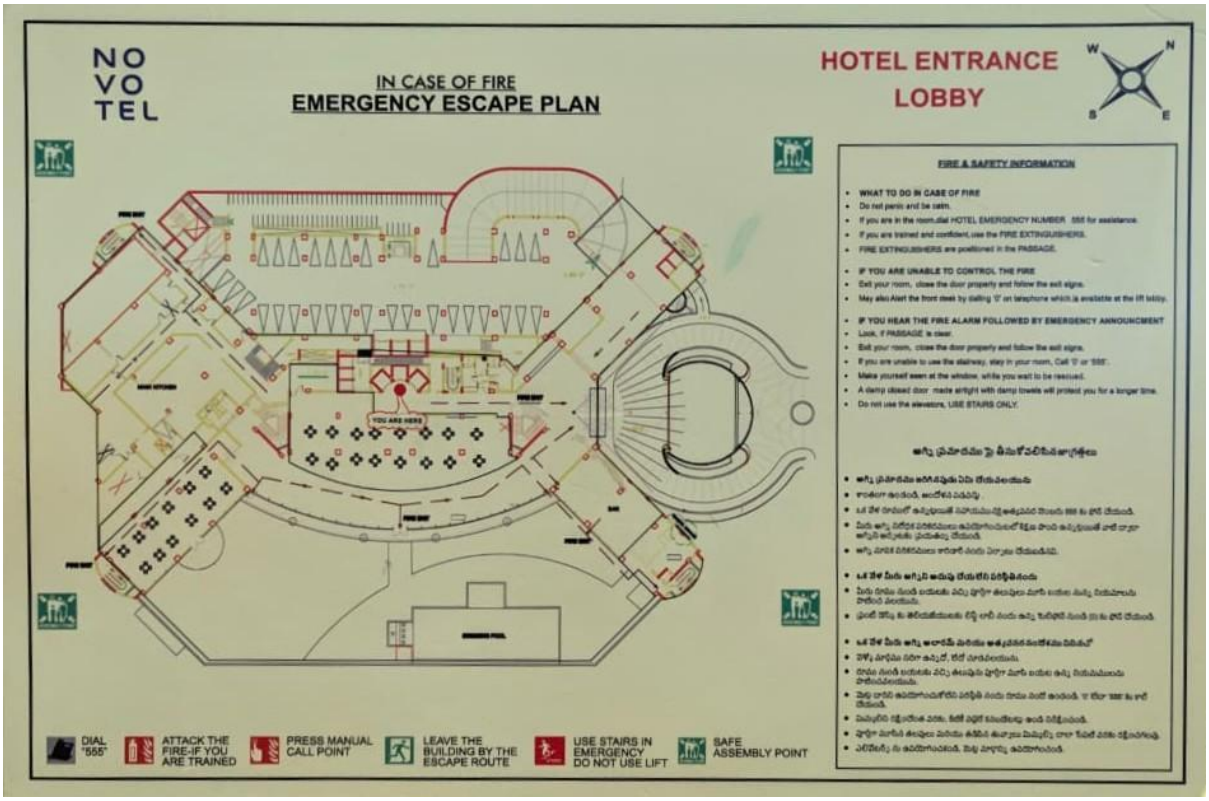


Figure 8 Ground Floor Plan Novotel Vizag

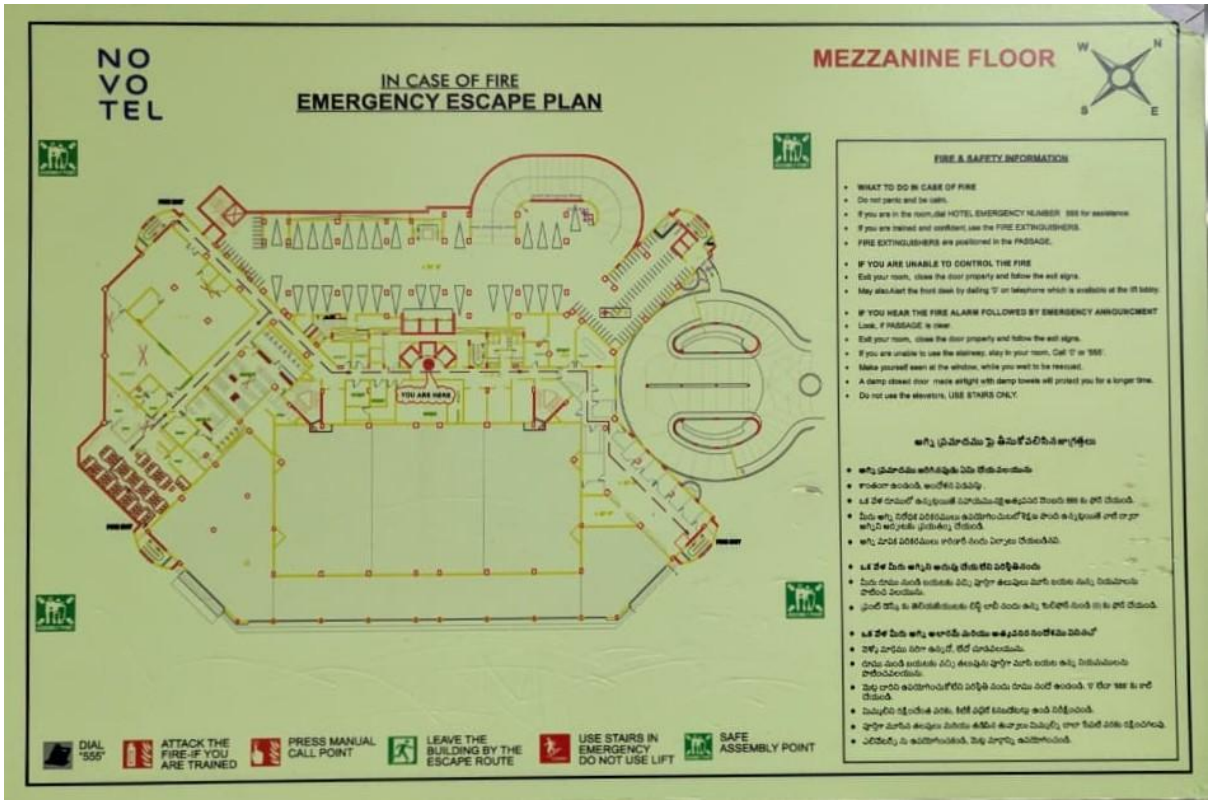


Figure 6 Mezzanine Floor Plan Novotel Vizag

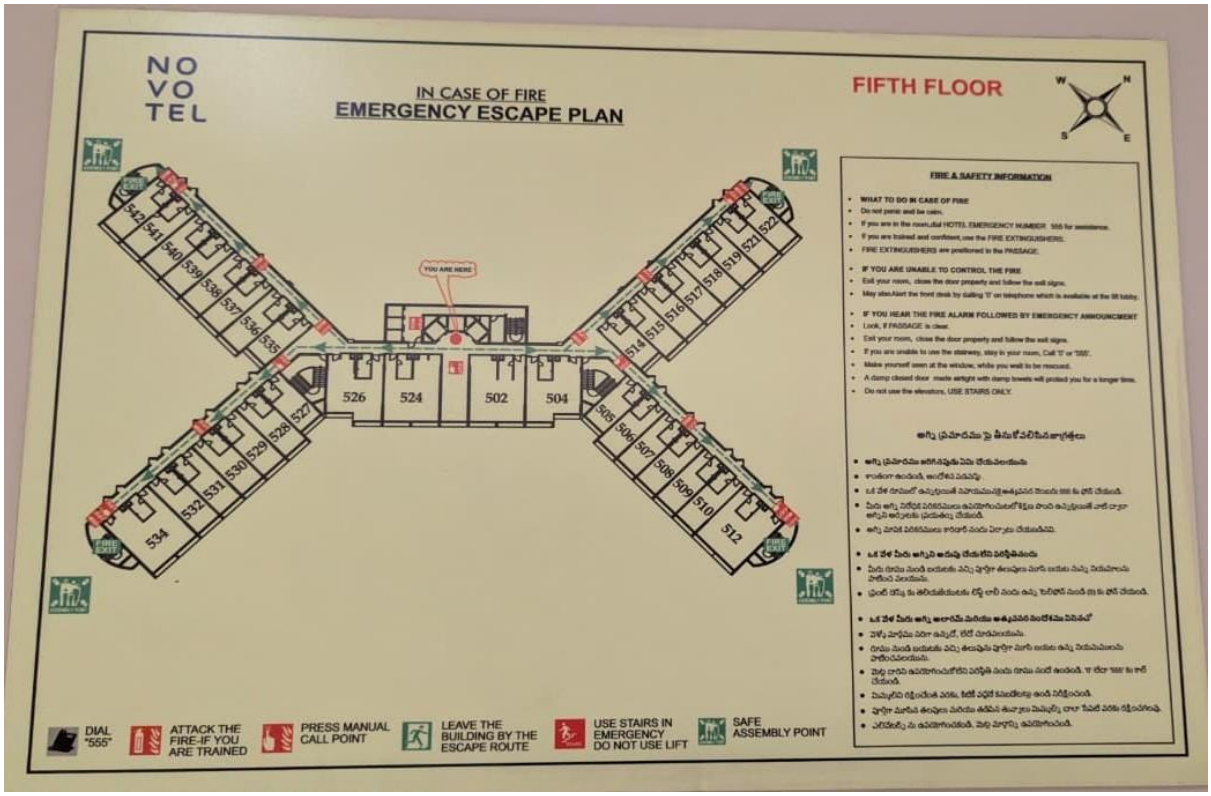


Figure 9 Fifth Floor Plan Novotel Vizag

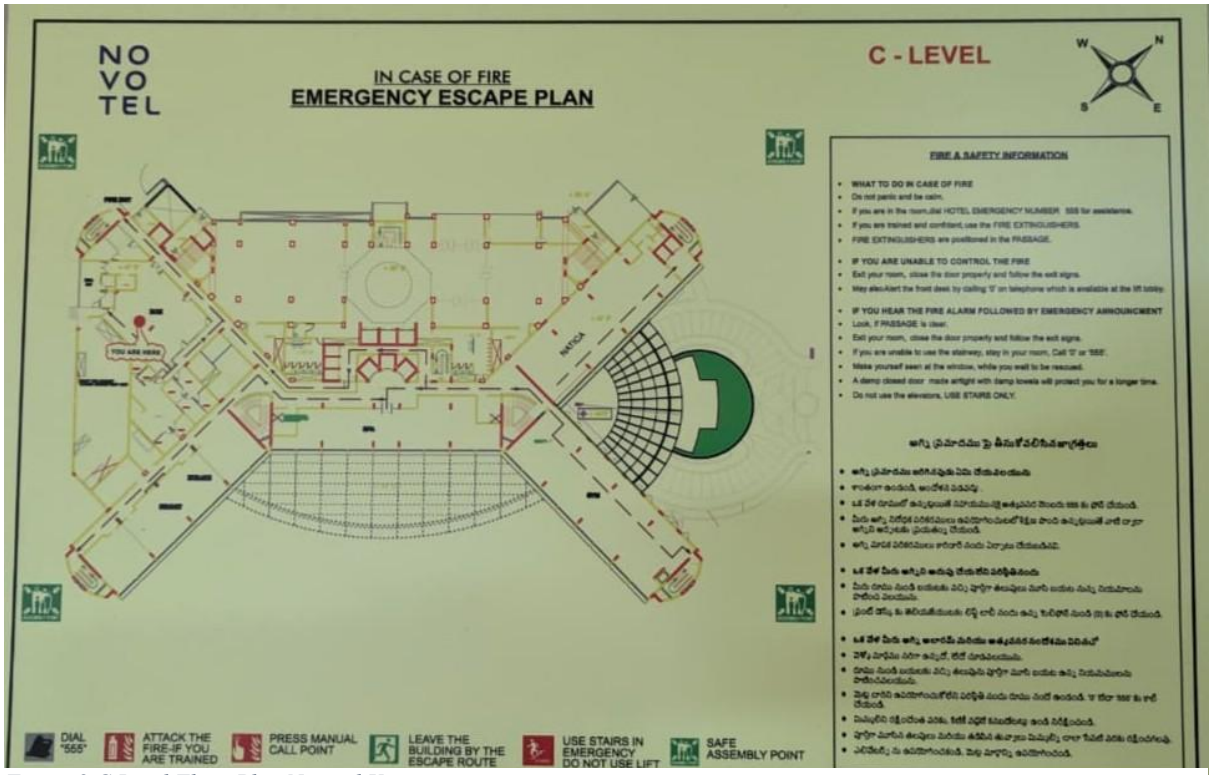


Figure 8 C Level Floor Plan Novotel Vizag

1.5.ROOM TYPOLOGY




Facilities: Excellent Banqueting Facilities and a Resto-Bar.

Total Rooms: 225 sea-facing rooms.

- **Room Breakdown:**
- 159 Superior Rooms -
- 23 Premier Rooms
- 32 Long Stay Rooms





- 9 Executive Suites
- 1 Presidential Suite (for special guests)

11 Banquet halls:

- V-Convention 1,2,3
- Coral 1,2,3
- Pearl 1.2
- Eureka
- Summit
- Board Rooms

2. TAJ LAKEFRONT, BHOPAL

Set along the serene banks of Bhopal's iconic Upper Lake, The Taj Lakefront brings together contemporary luxury and deep-rooted cultural inspiration. Just a short 25-minute drive from the city's international airport, this hotel has quickly become a defining feature of Bhopal's evolving skyline. It doesn't just offer a place to stay—it represents a vision of modern India interwoven with regional identity.

The architecture and interiors are a thoughtful blend of elegance and local craftsmanship. From the shimmering textures reminiscent of Tikamgarh's bell metal work to intricate patterns drawn from Bagh's paisley prints, every design detail pays homage to Madhya Pradesh's rich artistic legacy. The influence of Zari embroidery, Sironi's woven durries, and tribal terracotta art subtly flows through the material palette, creating an atmosphere that feels both rooted and refined.

With 152 spacious and tastefully designed rooms, the hotel caters to both business and leisure travellers. Guests can enjoy a wide variety of culinary experiences at its multi-cuisine and specialty restaurants, unwind at the Jiva Spa, or take in panoramic views of the lake. The Taj Lakefront also positions itself as Bhopal's premier destination for gatherings, offering state-of-the-art meeting spaces, modern conference rooms, and the largest banqueting facility in the city—making it an ideal venue for both intimate events and grand celebrations.



2.1.PROJECT DETAILS

Project	Taj lakefront

Location	Bhopal
Climate	Humid subtropical
Topography	Plain land
Architect	Joi design
Completion year	2021
No. Of rooms	152
Site area	4.77 acre
Far	2

2.2.LOCATION AND PROXIMITY

The Taj Lakefront is well-connected to the city's major transit nodes, enabling smooth access for both domestic and international travellers. Its proximity to Bhopal's core commercial and institutional areas enhances its potential as a premium hospitality and event destination.

Distance from Major Transit Hubs & Landmarks

Transit Hub / Landmark	**Approximate Distance**	**Estimated Travel Time**
Raja Bhoj International Airport	~18 km	~25–30 minutes
Bhopal Junction Railway Station	~9.5 km	~20–25 minutes
Habib Ganj Railway Station (Rani Kamlapati)	~7 km	~15–20 minutes
ISBT Bus Terminal	~6.5 km	~15 minutes
MP Nagar (Commercial Hub)	~5 km	~10–15 minutes

Distance to Popular Attractions & Cultural Sites

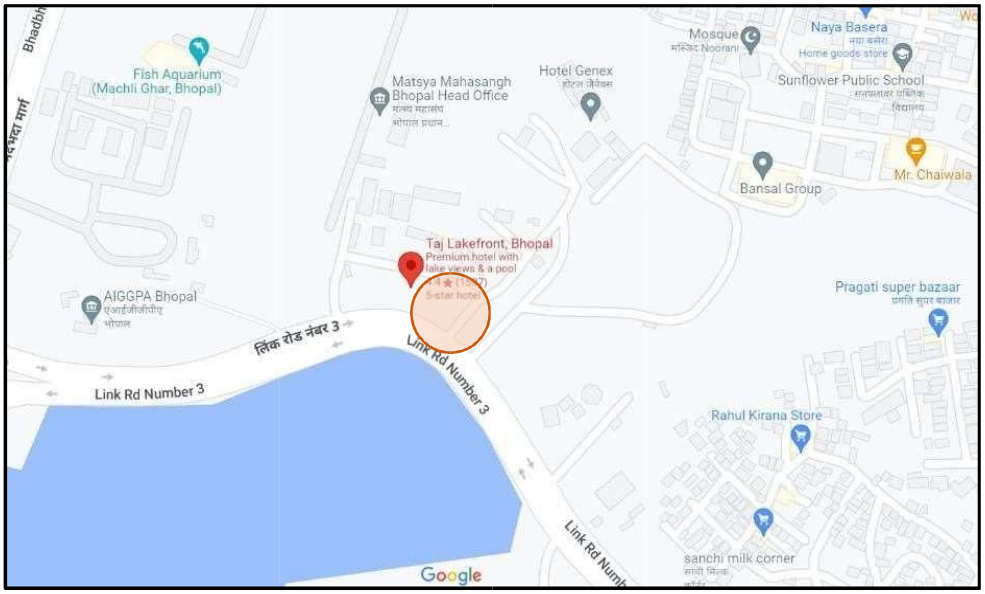
Attraction / Site	Approximate Distance	Estimated Travel Time
Upper Lake (Bhojtal)	Adjacent / Lakefront	Walkable
Van Vihar National Park	~1.2 km	~5 minutes
Taj-ul-Masjid	~10 km	~25–30 minutes
Sanchi Stupa (UNESCO World Heritage Site)	~50 km	~1 hour 15 minutes
National Museum of Mankind (IGRMS)	~2.5 km	~6–10 minutes
State Museum Bhopal	~3.5 km	~10–12 minutes
Bharat Bhavan	~4 km	~10 minutes
Vanijya Bhawan / Government Offices	~4 km	~10–12 minutes
Birla Mandir	~5.5 km	~15 minutes

The Taj Lakefront's proximity to ecological, cultural, and historical landmarks makes it not only a luxurious stay option but also a strategic base for both leisure and business travellers interested in exploring Bhopal's diverse offerings.

2.3.SITE BOUNDARY

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.

2.4.FACILITIES



Site Boundary
Circulation within the Site

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

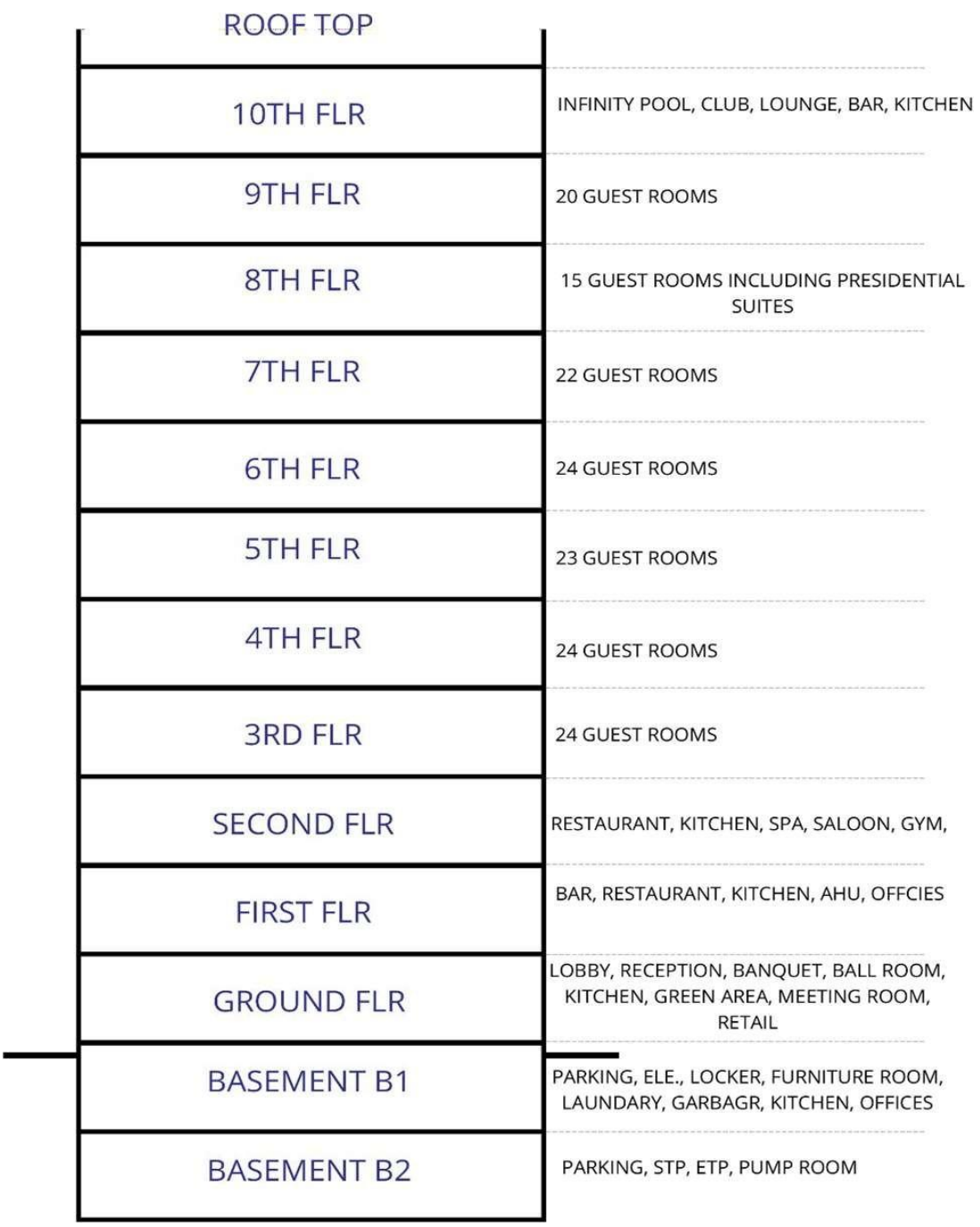
Outdoor swimming pool

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

2.5.VERTICAL PLATES ZONING

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



2.6.AREA STATEMENT

	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**				

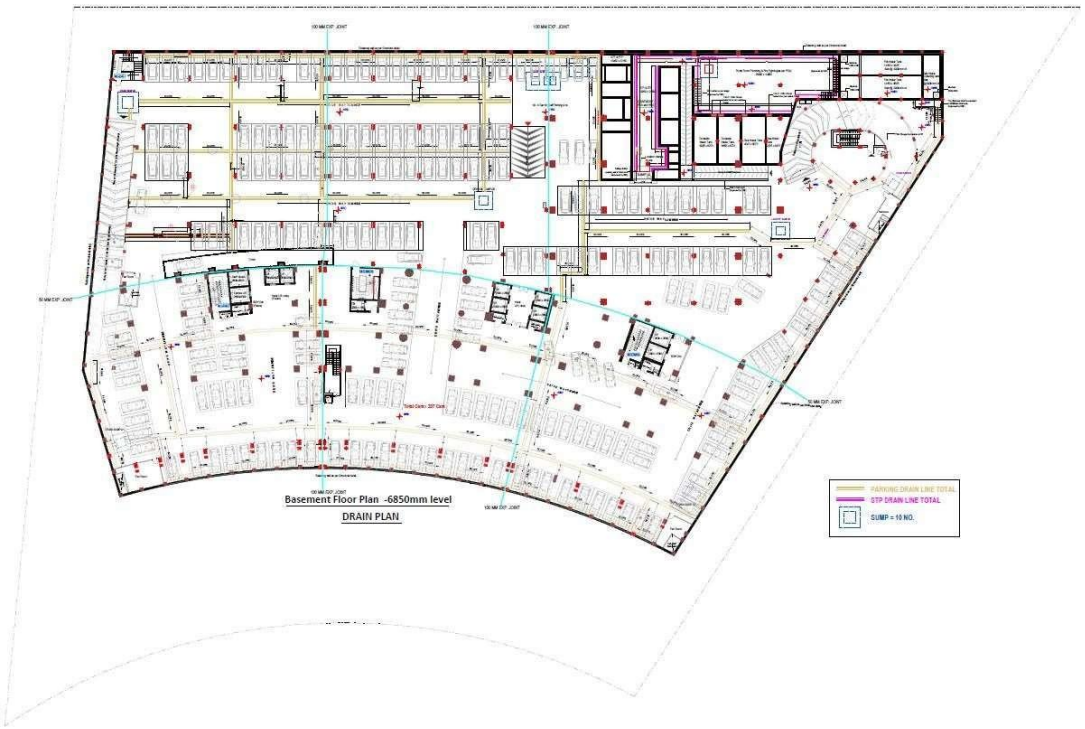
M.	Other BOH (exer mech)				
I	**Mechanical Areas**				
	LV Room	1	56	**56**	
	Indoor Transformers	2	22	**44**	
	LT Panel	1	74	**74**	
	DG Generator Room	1	97	**97**	
	Chiller Plant Room	1	125	**125**	
	Rainwater Tank	105 Cubic Meter			
	Municipal Tank	123 Cubic Meter			
	Raw Water Tank	123 Cubic Meter			
	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**	

2.7.FLOOR PLANS

Basement II Plan

- Basement 2 is comprised with services amenities like STP, ETP WTP, Fire Tank,



Domestic Water Tank etc. and parking spaces.

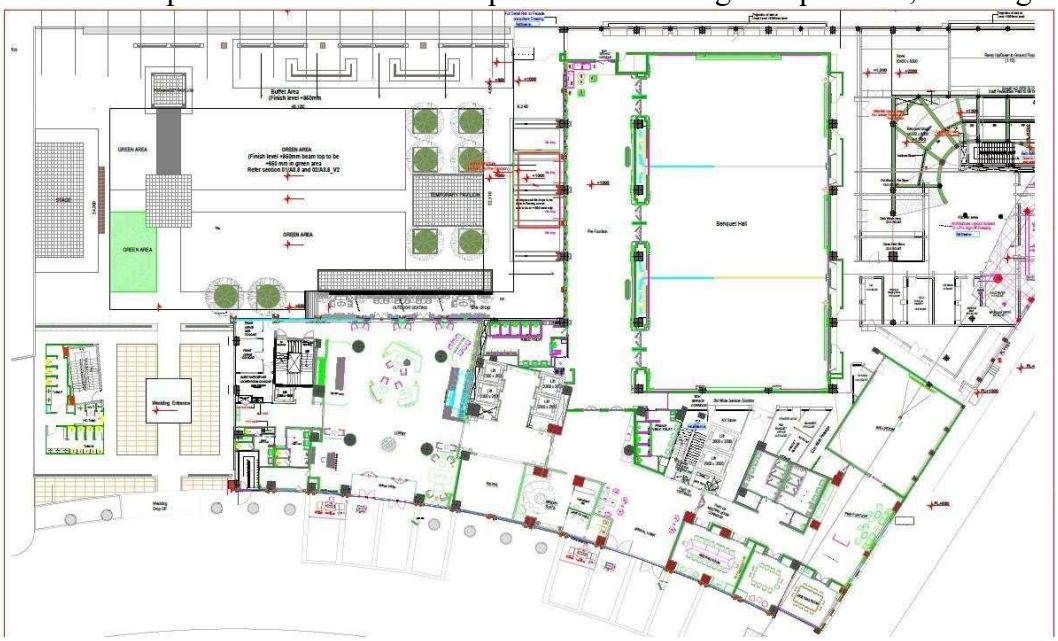
Basement I Plan

- 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.

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.



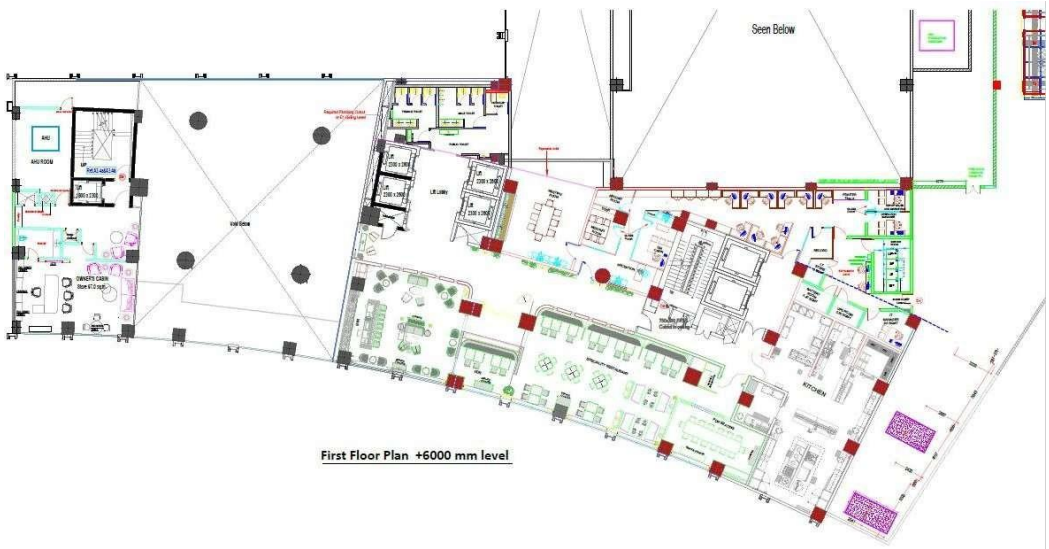
First Floor Plan

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



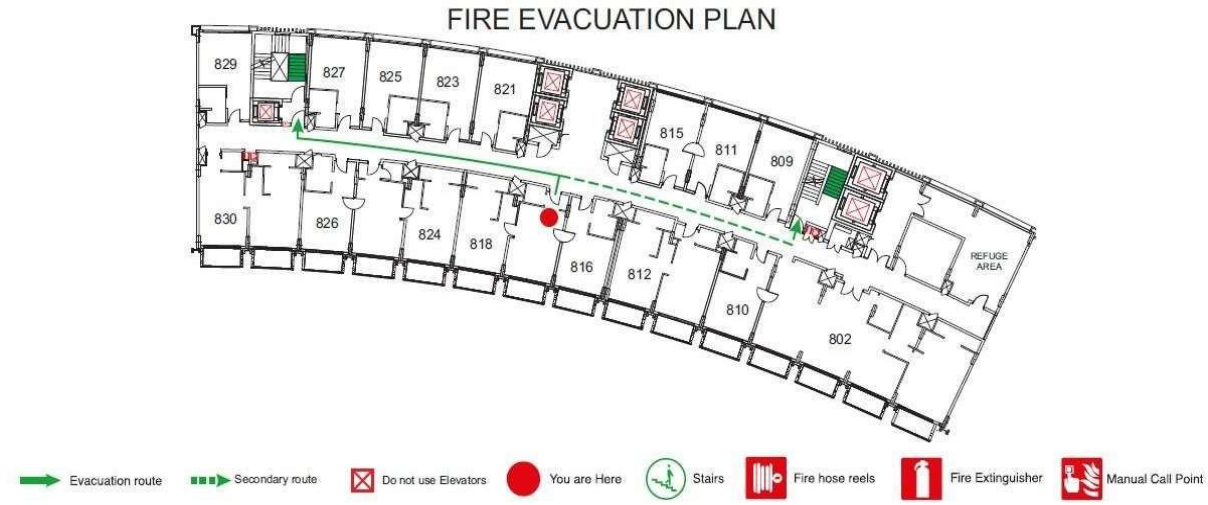
Second Floor Plan

- 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



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 this typical floor is that interior of lobby and corridors are fully different which gives different types of feeling at each different floor.

8th Floor Plan

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



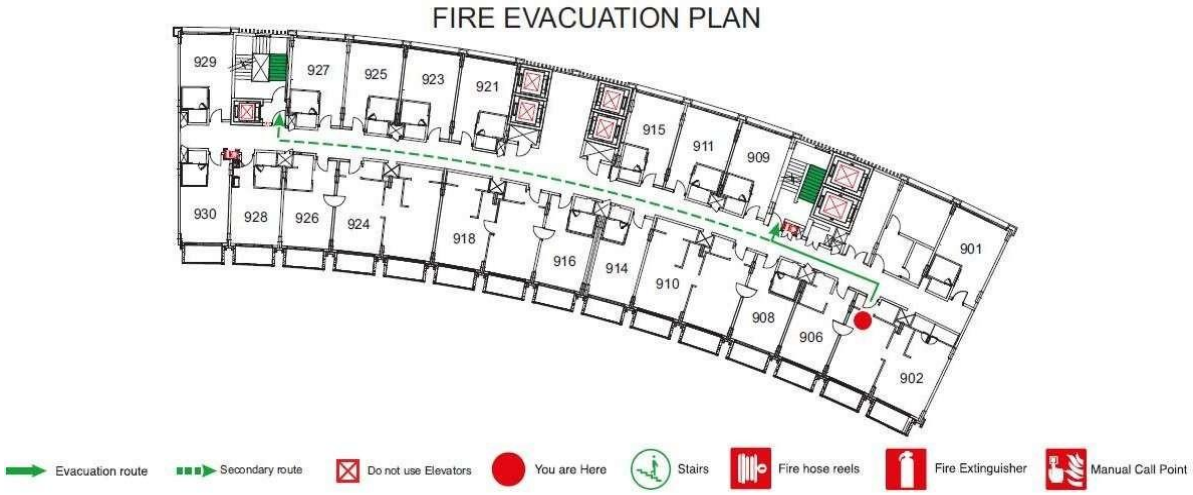
9th Floor Plan



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

10th Floor Plan

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



2.8.ROOM TYPOLOGY

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

- Executive Suite
- Twin Room
- King Room

- Presidential Suite

Executive Suite

Tranquillity 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



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.

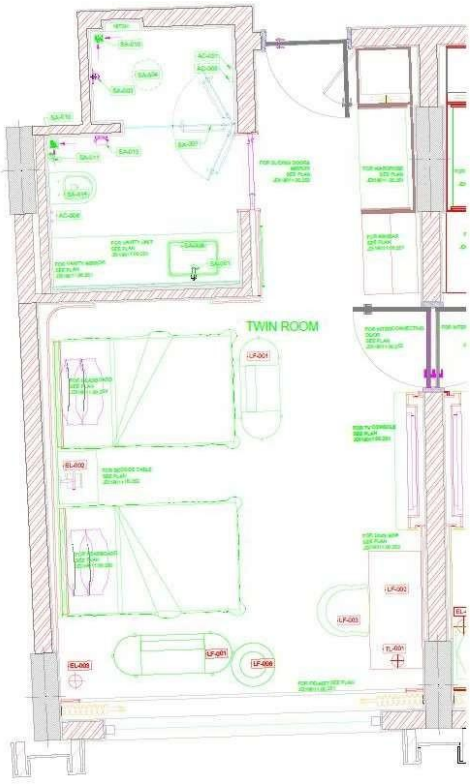




- **Size:** 33 sq.m
- **Signature feature:** Spectacular vistas of the hills
- **Occupancy Details**: Up to 3 guests. Max Adults: 3, Max Children: 2

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



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

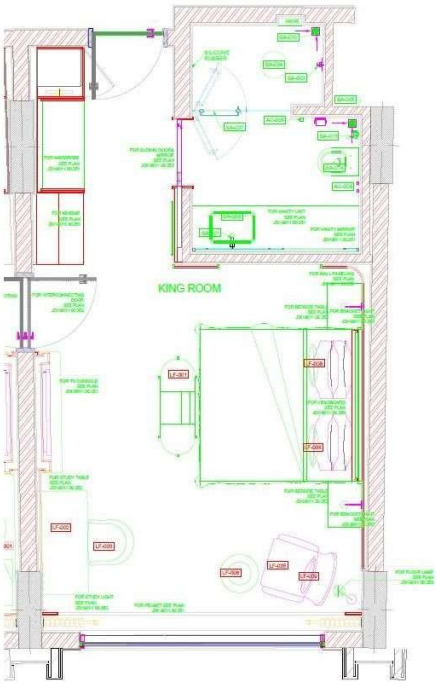


Rooms offer an unmatched experience of comfort. Includes complimentary access to the hotel gym and wet areas.

- **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

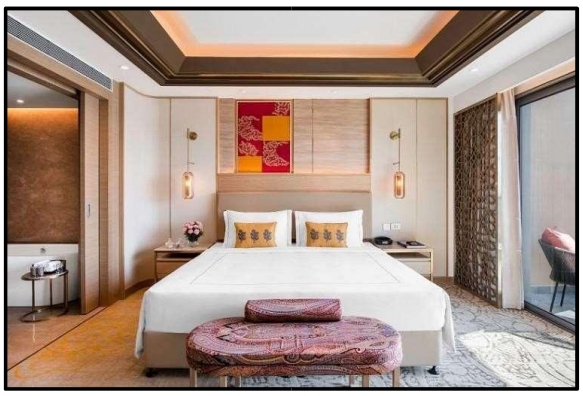
- Tea-coffee maker
- Forest Essentials bath amenities
- Choice of smoking & non-smoking accommodation
- Air conditioning
- WiFi
- Iron & ironing board
- In-room bottled water
- Minibar
- Newspaper
- Full-length mirror, hair dryer, weighing scale
- 49-inch Smart LED TV
- Shower Cubicle



Presidential Suite

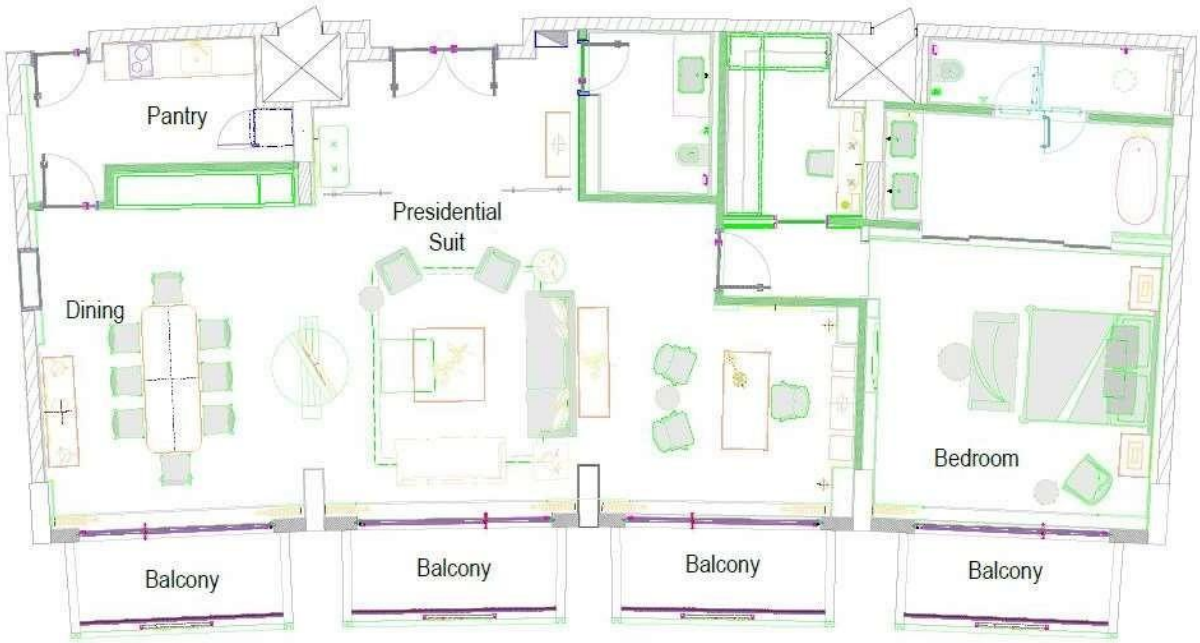
Bhopal is the land of the Nawabs and Begums, and epitomizing this rich culture is the Presidential Suite of the Taj Lakefront, Bhopal. With interiors that give an ethereal glimpse into the bygone era and a private balcony in every room overlooking the glorious city, the











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

3. DESK APPRAISAL: ARIAL HOTEL, NASHIK

3.1.INTRODUCTION

Aria Hotel is designed contextually, responding to the site contours, the views of the surroundings, the climate & the materials creating a web of experiences within its different volumes. This hotel building is contextual to the site's location, climate & the client's brief, amalgamating them cohesively.

The site for this hotel is gently contoured rising up 9M towards the south with the entry at the lowest level in the north. Situated in the wine growing region of India, the north faces a large river and a dam with hills beyond. The southern side rises up into hills in close proximity to the site.

The client's requirements included a large banquet hall of 15000 sq ft in addition to 60 rooms and other facilities. Since the banquet hall would have large gatherings its access is planned directly from the road frontage at the lowest level of the site. The public facilities including the hotel lobby, restaurant, bar, spa & business centre occupy a higher level 6 metres above the banquet hall entered directly from an ascending approach road.

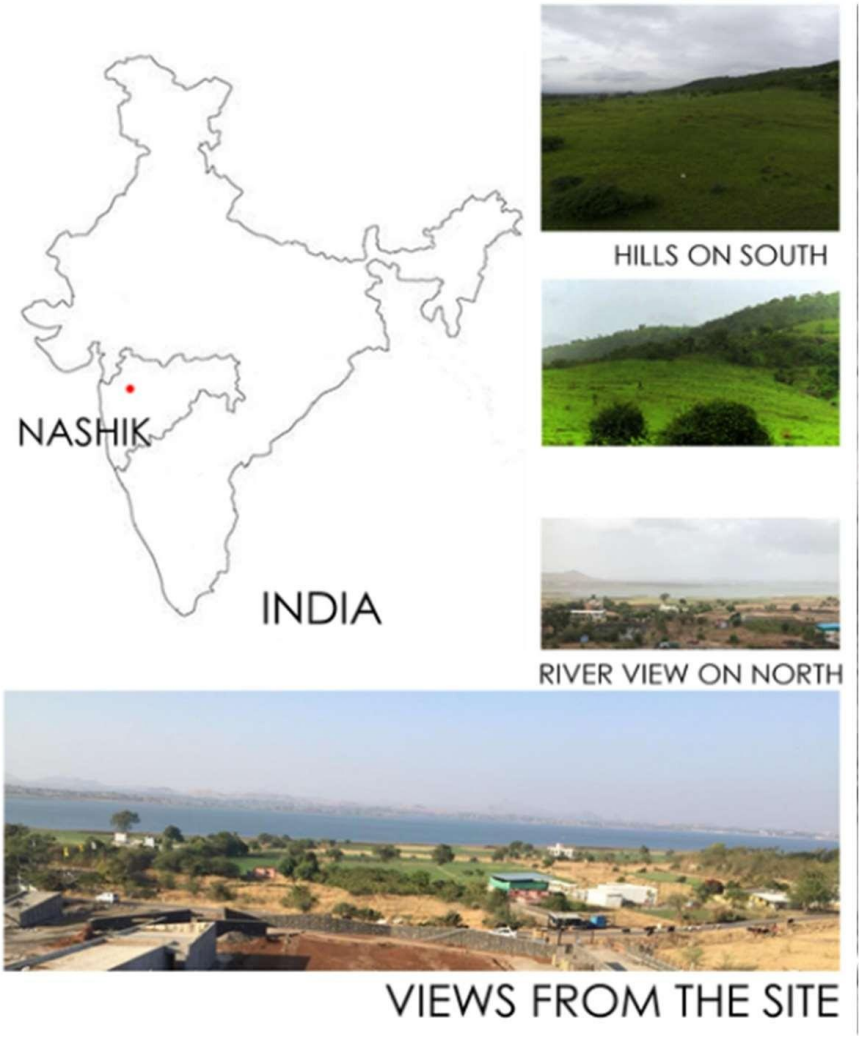
The rooms at the higher level are oriented to face the river in the north or the immediate hills in the south with open circulation spaces & naturally ventilated & skylit courtyards. Each level of the hotel is integrated with the natural contours of the site, minimizing land cutting & landfill. No soil was taken out of the site or brought into the site while constructing, making the construction both economical and sustainable.



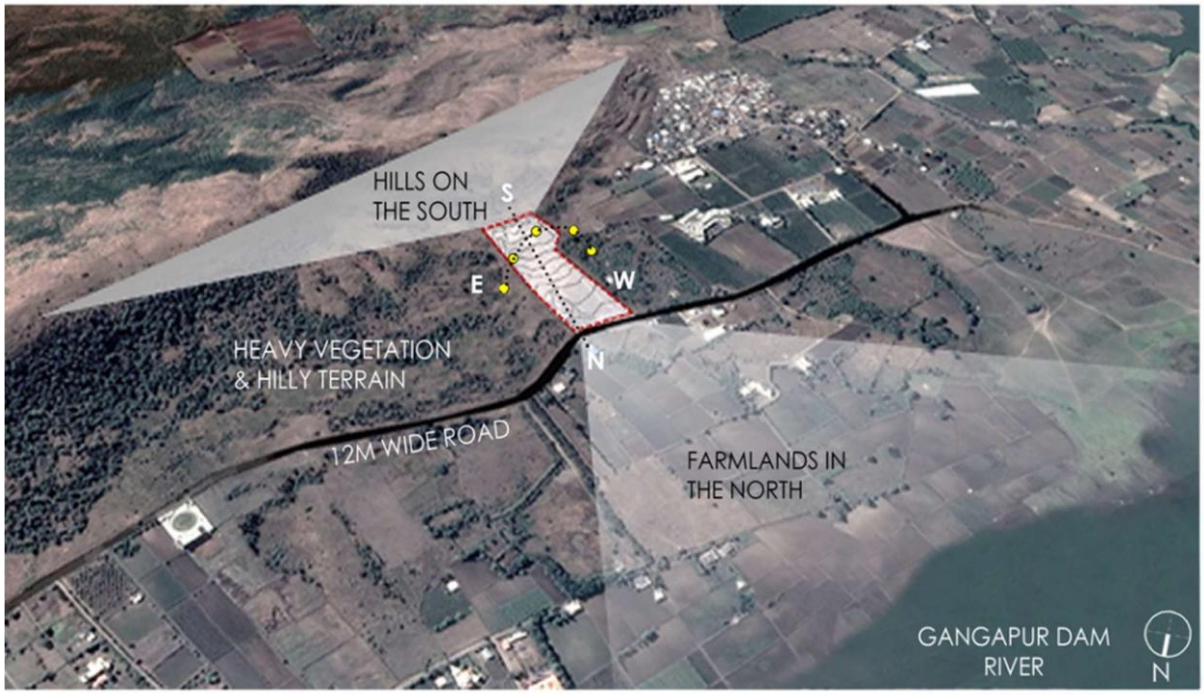
3.2. PROJECT DETAILS:

PROJECT	ARIAL HOTEL
LOCATION	NASHIK
CLIMATE	TROPICAL WET AND DRY CLIMATE
TOPOGRAPHY	PLAIN LAND
ARCHITECT	SANJAY PURI ARCHITECTS
COMPLITION YEAR	2019
NO. OF ROOMS	60
SITE AREA	3.5 acre
FAR	-

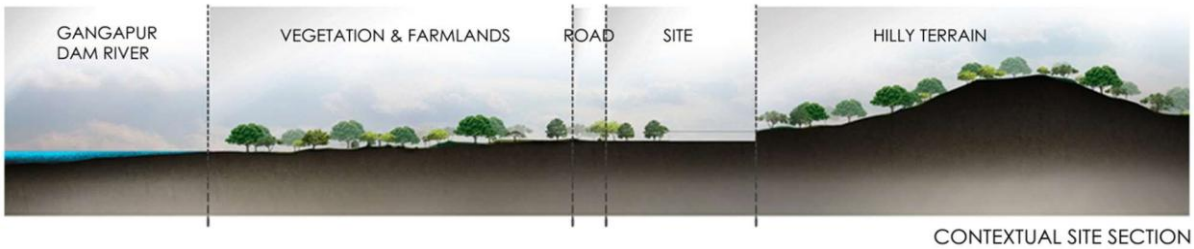
3.3.SITE LOCATION AND SURROUNDING



3.4. SITE ANALYSIS



SITE LOCATION



CONTEXTUAL SITE SECTION

The rooms at the higher level are oriented to face the river in the north or the immediate hills in the south with open circulation spaces & naturally ventilated & skylit courtyards. Each level of the hotel is integrated with the natural contours of the site, minimizing land cutting & landfill. No soil was taken out of the site or brought into the site while constructing, making the construction both economical and sustainable. Over fifty percent of the walls are built with natural black basalt stone available in close proximity of the site. All the circulation spaces are naturally lit & ventilated rendering the building energy efficient. Solar panels on the rooftop, over the banquet kitchen & parking areas generate fifty percent of the electrical energy required for the hotel.

3.5.CONCEPT

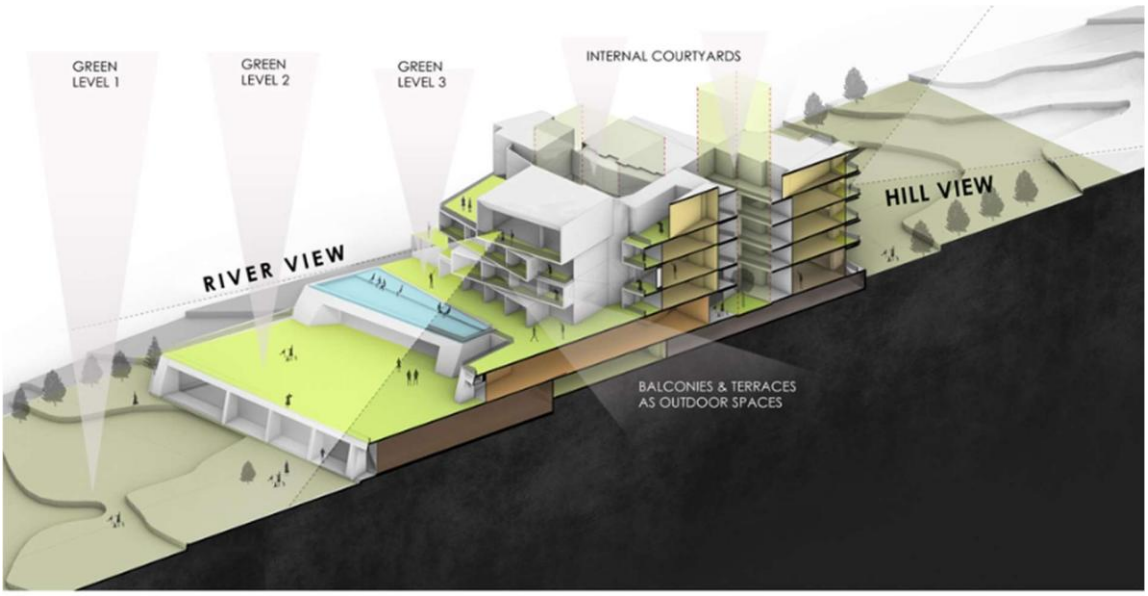


Figure 9 Concept of the Building

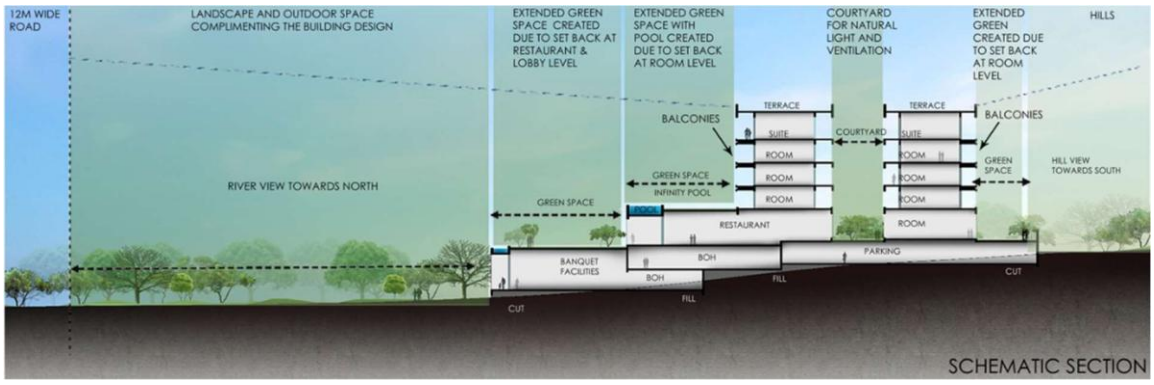
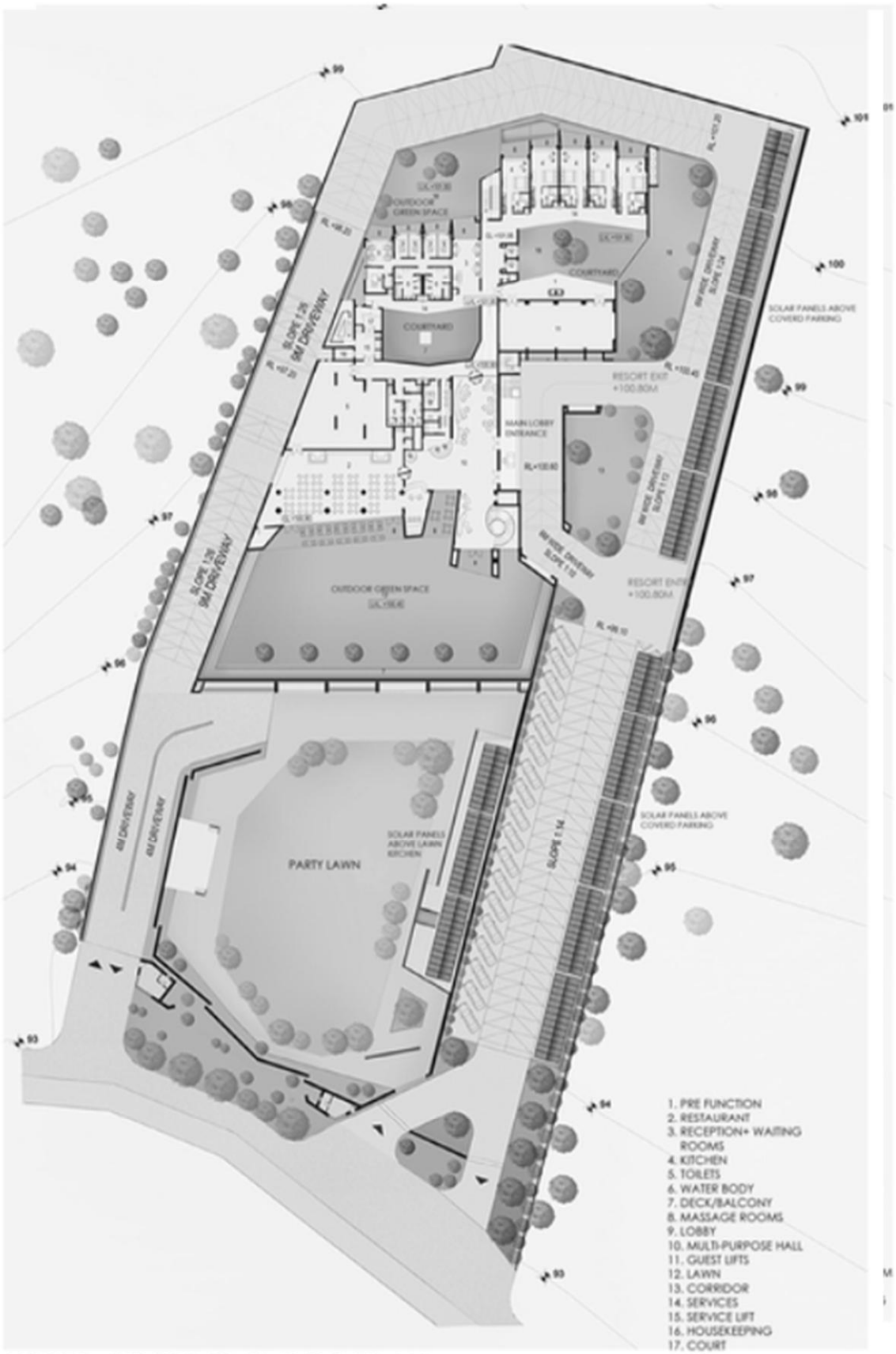
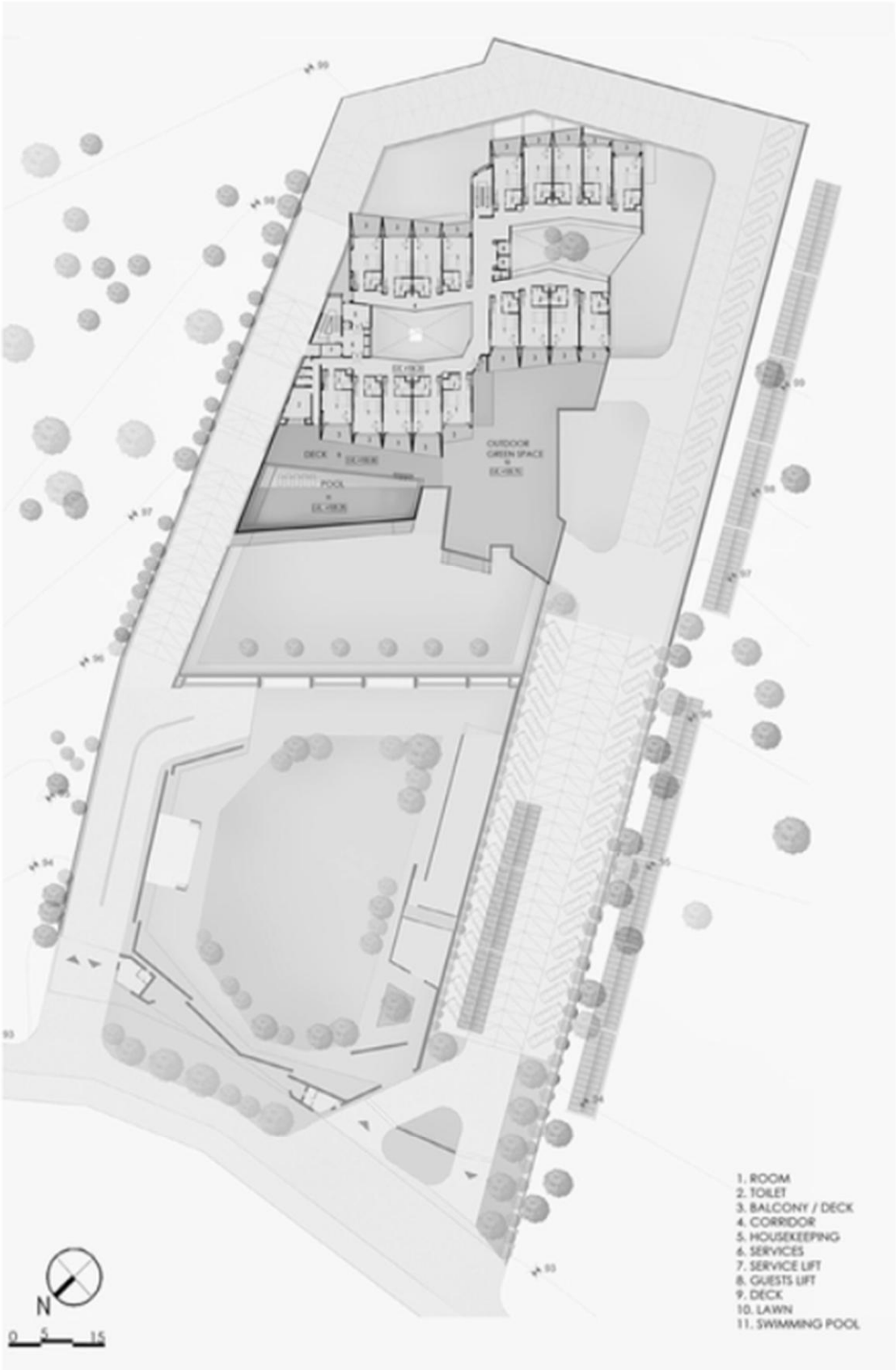


Figure 10 Schematic Section

3.6. FLOOR PLANS



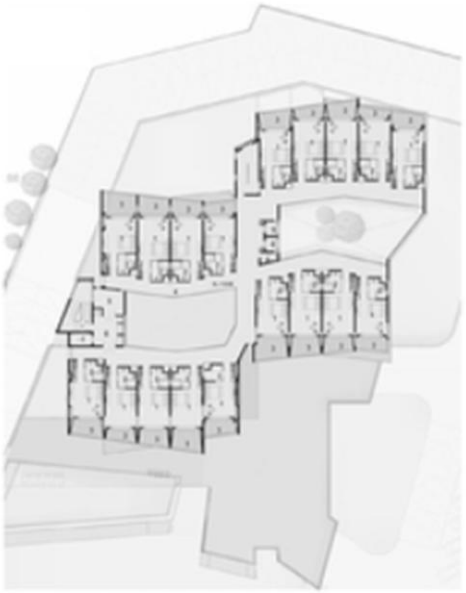
UPPER GROUND FLOOR PLAN



FIRST FLOOR PLAN



SECOND FLOOR PLAN



THIRD FLOOR PLAN



FOURTH FLOOR PLAN

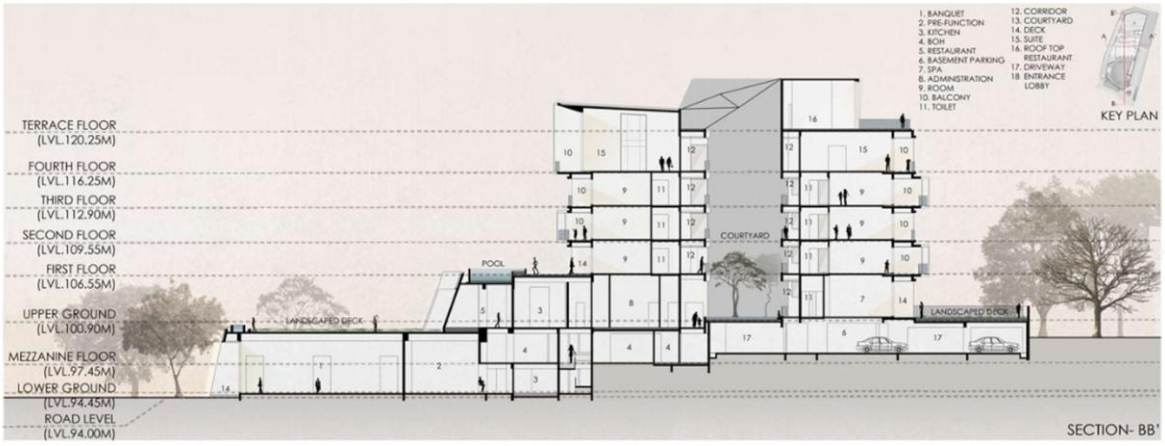


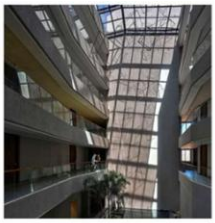
TERRACE PLAN

1. ROOM
2. TOILETS
3. BALCONY/DECK
4. CORRIDOR
5. HOUSEKEEPING
6. SERVICES
7. SERVICE LIFT
8. GUESTS LIFT
9. SUITE
10. TERRACE LAWN
11. JACUZZI

3.7. SECTIONS



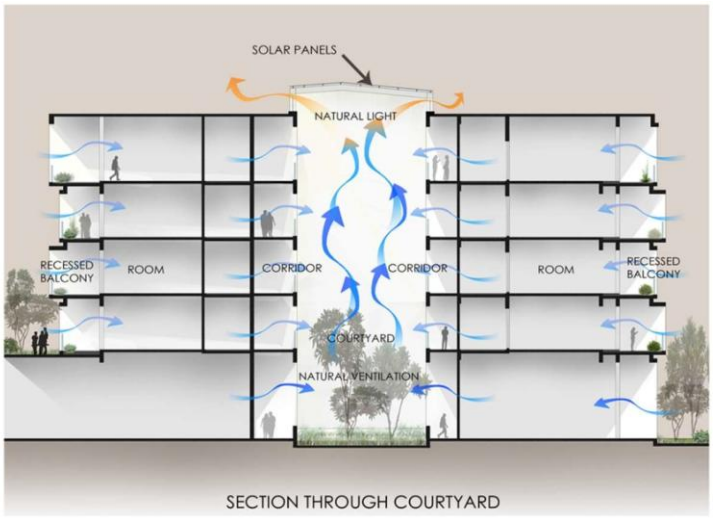




- COURTYARD COVERED WITH SOLAR PANELS
- SINGLE LOADED CORRIDOR WITH NATURAL LIGHT & VENTILATION



- JALI WALLS TO REDUCE HEAT GAIN & TO FACILITATE AIR MOVEMENT
- INTEGRATE LANDSCAPE & BUILT FORM





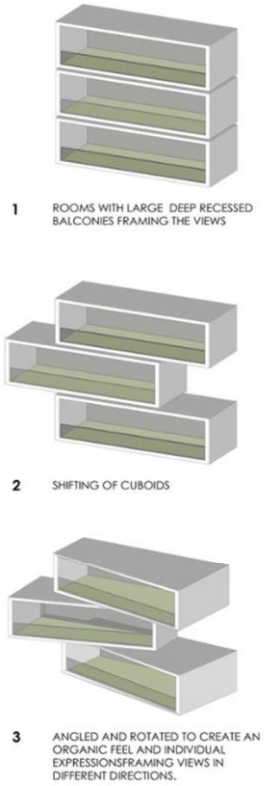
- DEEP RECESSED BALCONIES
- SHADED OUTDOOR SPACE FOR EVERY ROOM



3.8.TYPICAL ROOM LAYOUT



TYPICAL ROOM LAYOUT

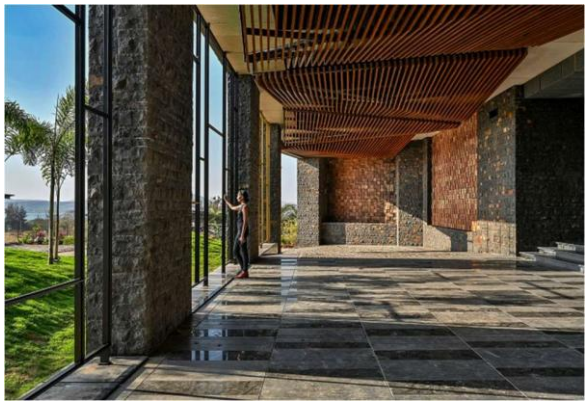


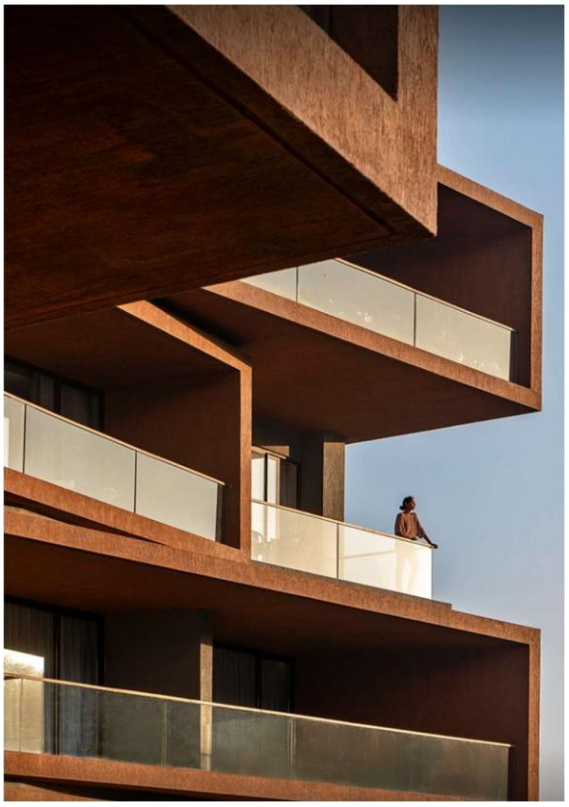
BALCONY CONCEPT

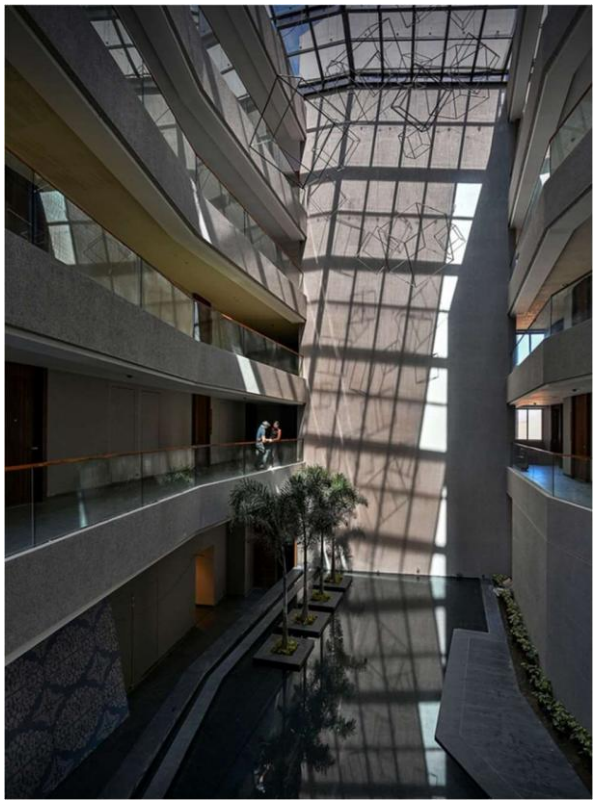




3.9.SITE PHOTOS













3.10 INFERENCES

ENTRANCE

- Entry to be divided in lanes each 3.3 m wide
- Lanes divided into 3 parts DROP OFF LANE, PICK UP LANE, BYPASS LANE.
- From drop off lane there is a 4m wide entrance plaza waiting + Security check + Space for tall console + Pick up Bags

SECURITY AND LUGGAGE

- Baggage scanner opens inside hotel (it is enclosed and air conditioned to reduce heat generation)
- Isolated service entry
- Temperature-22 -23 degree Celsius inside hotel and outside temperature is higher
- Air lock lobby (pressurized lobby) at entrance to maintain inside temperature and avoid heat waves entering hotel when door is opened
- Air lock lobby should be 3-4m wide with sliding doors +motion sensors
- Revolving door at entrance serves the same purpose as airlock lobby but is expensive.3 or 4 wing with 2.4 or 2.7m dia. revolving door
- Avoid multiple entrances to hotel
- No floating column

SERVICES

- STP-80lt from STP can be used inside hotel if requirement is 100lt.
- Pumprooms-500-600 mm down from water tank
- Ro plants
- Water tank-2 sq m per key
- Boilers, hot water/heat pumps-0.5 sqm per key
- HVAC- chiller (basement and enclosed and 1.5 sqm per key) and cooling tower (at higher lvl and open)
- Panel room-basement ,0.3 sq m per key
- Engineering workshop
- Gym area-4 keys

PUBLIC AREAS

- Reception-minimum 4 people on reception.4-5 kiosk for reception, front desk working 24x7, luggage room connected with luggage elevator
- Small space for luggage inside hotel after baggage check.
- Separate lifts for luggage, service and guests
- Min. 2 service (1 for garbage) and 2 guest lift and 1 luggage lift and structure elevator
- 25 passenger lift (guest and service) in luxury hotel
- Max. waiting time for lift-45 sec (speed 5km/hr)and for car is 3 min.
- Isolated hidden space for service vehicle
- Empoyee-2.25 per key
- Built up area -125 sqm per key (high luxury 5 star) and 100 sq m for normal 5 star

- Lobby lounge area-1 sqm per key
- Lobby lounge-also act as emergency assembly point and should have separate restrooms for 200 sq m of space max 40 seating.
- Reception, lobby, guest lift, banquet should be near each other.

DINING AND BANQUET

- All day dining 24x7-breakfast space (divide people in 3 shifts). For 200 key hotel 0.75-1 passenger per key. live counters for food preparation
- Buffet-length is 0.1m per key. Design max 2seater (60-70%) and 4seater (20-30%), Banquet sitting-sofa for families (5-10 %)
- Laundry-35 m sq. per key
- Banquet- ballroom style or theatre style
- For 200 key hotel-100-person banquet (B: L=1:1.8,1:1.2) with separate restrooms and kitchen.
- Pre function area -1/3 of banquet (social gathering and food serving)

OTHER DETAILS

- Major traffic /circulation-convention + hotel + retail + banquet (entry and exit of hotel and other components should be separate)
- Separate banquet from hotel to avoid crowd during functions.
- Staircase at every 45 m
- Doors should be 200-150mm inside from corridor (not to be seen from corridor)
- Corridor-carpeted floor-l.5-1.9m wide
- Shafts for toilets (shared by 2)- 1.35xO.75m
- Air-Conditioned Rooms
- Furniture - Table -750mm
- Bed -550 mm
- Side table/coffee table-450/550
- Toilet fixtures-
- fixture toilet-w.c, wash basin, shower, bathtub
- fixture toilet-w.c , 2 washbasins, shower, bathtub

4. DESK APPRAISAL: WESTIN GURUGRAM

The Westin Gurgaon, New Delhi, a sprawling 313 room hotel, is strategically located in the heart of the millennium city – MG Road, Gurgaon. It is located just 25 minutes from the New Delhi Indira Gandhi International Airport. The hotel brings a fresh, new lifestyle experience to the city, surrounded by upscale shopping malls, entertainment hubs, multiplexes and commercial offices making it an ideal choice for both business and leisure travellers. Its distinct architectural design reflects clutter free spaces laying strong emphasis on openness, natural lighting; reinforcing environmentally friendly practices. While retaining its impeccable services, it offers an array of eclectic and exciting food & beverage options at the onsite world-class restaurants. Embrace wellness at The Heavenly Spa by Westin known for



its rejuvenating treatments and therapies or re-gear energy at the signature Westin WORKOUT® Fitness Studio. Westin emphasizes on personal renewal and innovative signature services worldwide.

4.1.PROJECT DETAILS

PROJECT	WESTIN HOTEL
LOCATION	GURGAO
CLIMATE	SUBTROPICAL CLIMATE
TOPOGRAPHY	PLAIN LAND
ARCHITECT	STUDIO U+A NEW YORK/GURGAO

COMPLITION YEAR	2010
NO. OF ROOMS	310
SITE AREA	4.39 acre
FAR	1.5

4.2.LOCATION

Proximity

- Westin is located 17 km South-West of IGI Airport - T3.
- Situated in the IT hub of Gurgaon sector 29, it is well connected with all the modes of transportation.

Community

- Medanta Medicity - 2.0 km
- Lotus Temple (Bahai Temple) - 25.8 km

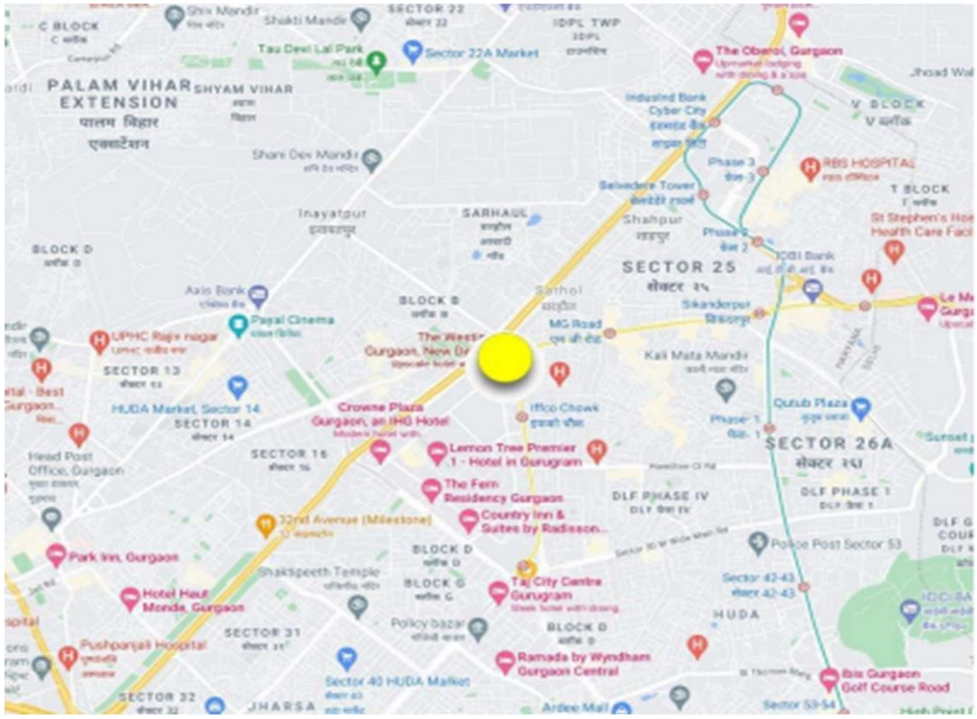
Recreation

- Kingdom of Dreams - 0.5 km
- Tennis Court - 3.2 km -Sultanpur Bird Sanctuary - 16.0 km

Shopping

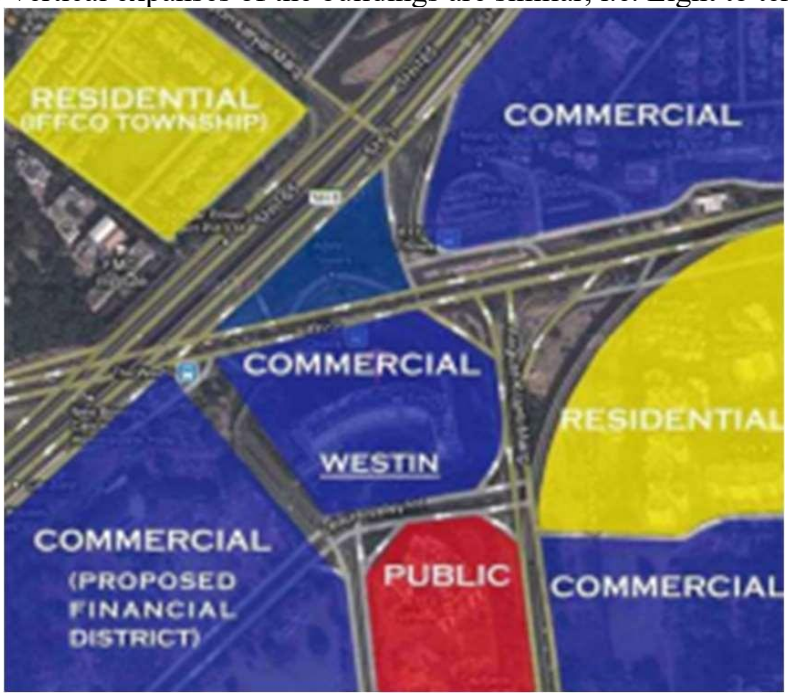
- Dilli Haat - 22.5 km

- Connaught Place - 27.4 km



4.3.SURROUNDING LANDUSE AND URBAN CHARACTER

- Materials used in skin cladding are different for all buildings.
- The color beige or earthen yellow can be seen in predominant use.
- Also, the vertical expanses of the buildings are similar, i.e. Eight to ten floors, which



is well within the mandatory height restriction of 30 meters as mentioned in the bye laws.

4.4.DEVELOPMENT OF FORM

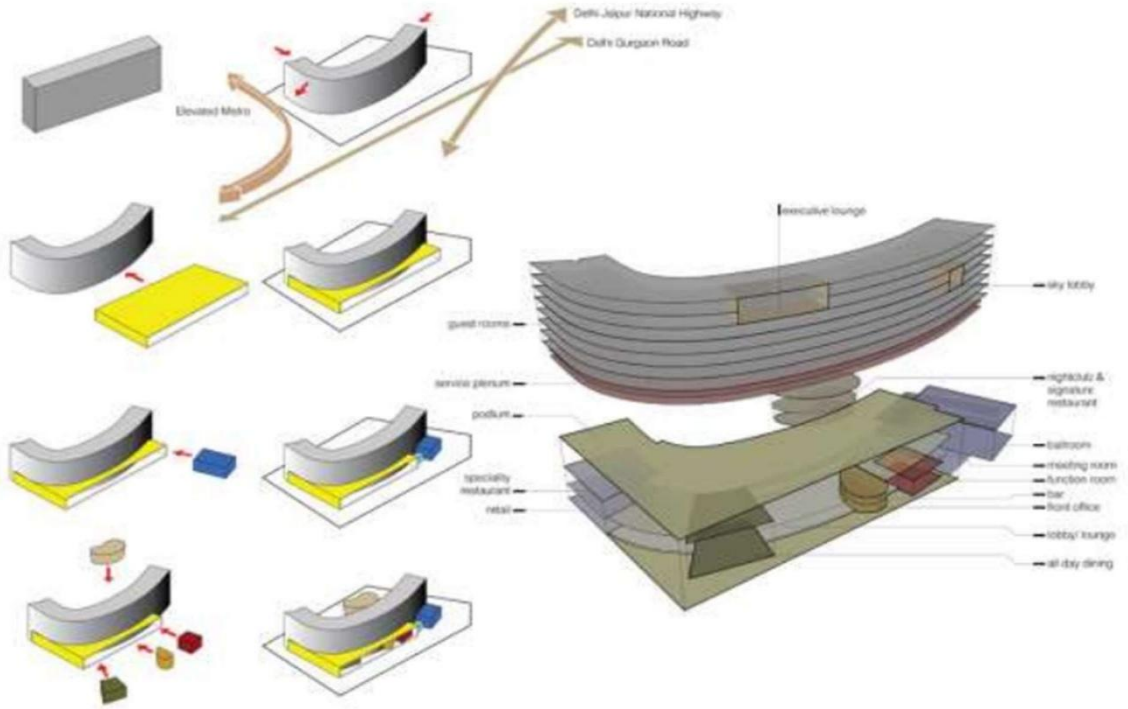
The shape of the building is governed by two major factors, i.e. the site constraints and form



of public spaces creating a rather eclectic mix of contemporary and minimalistic design.

4.5.TRANVERSE SECTION

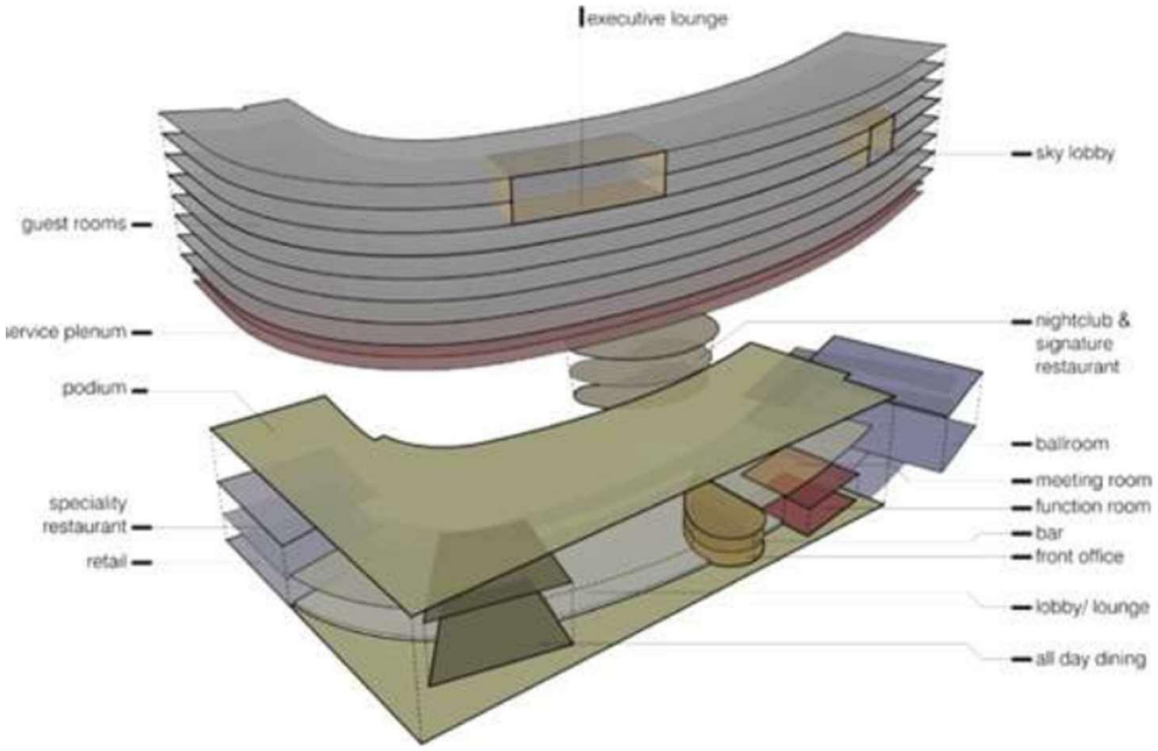
The north-south transverse section showing the vertical placement of services in the basements and the guest rooms in the curved mass in five.



4.6.DISTRIBUTION OF FUNTIONAL SPACE

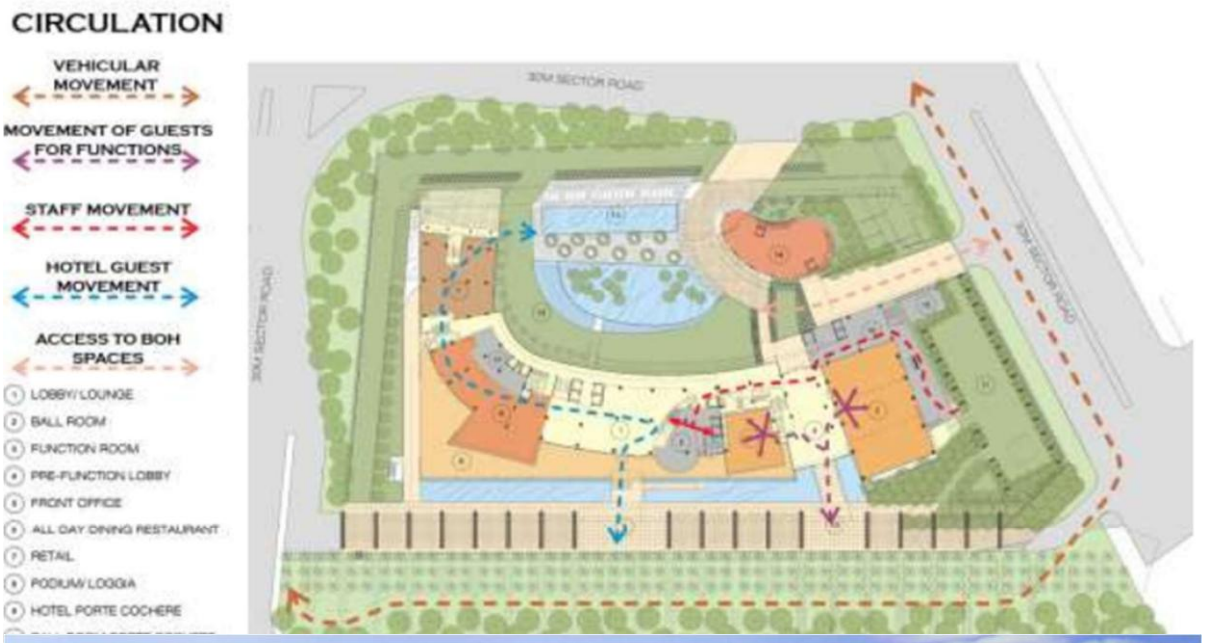
When we go inside the hotel, the first thing that comes into view is the quite spacious lobby. The lobby here overlooks the central water feature. The lobby is connected to the brasserie and the coffee shop.

The materials used in the interior complement the exterior environment and create a sense of expanse; the materials being white and beige Italian marbles for flooring, and textured white paint for wall coating.



4.7.CIRCULATION

The circulation network revolves around the main lobby of the hotel, as can be seen from the given plan of the ground floor. The lobby space connects several spaces, such as, the front office, banquet entrance, coffee shop and brasserie.

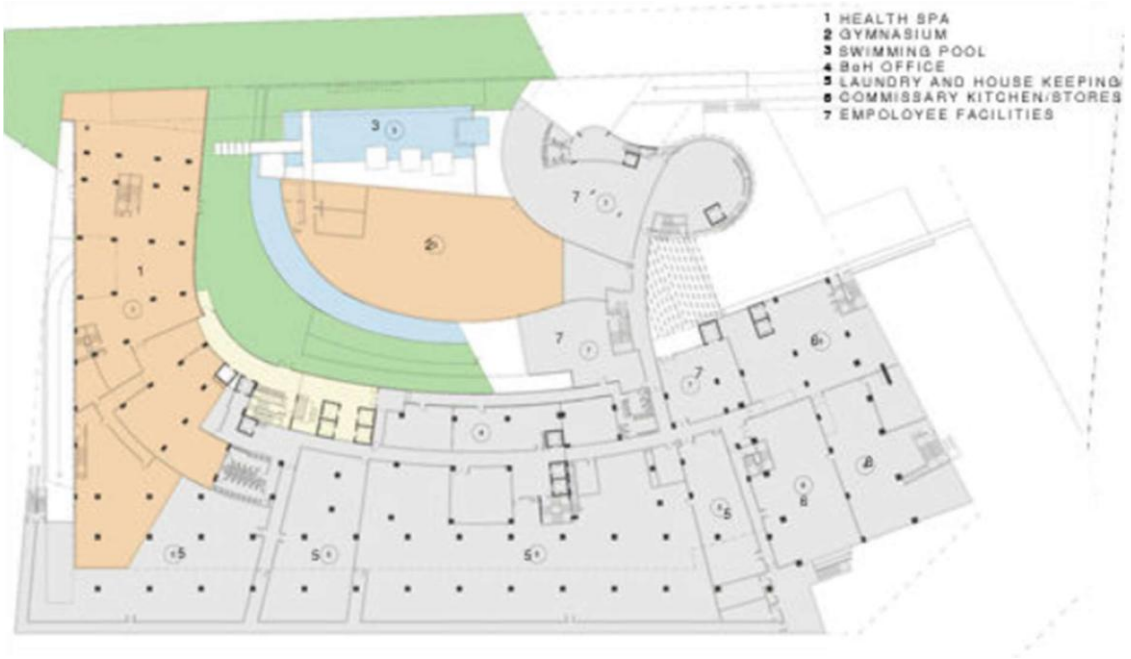




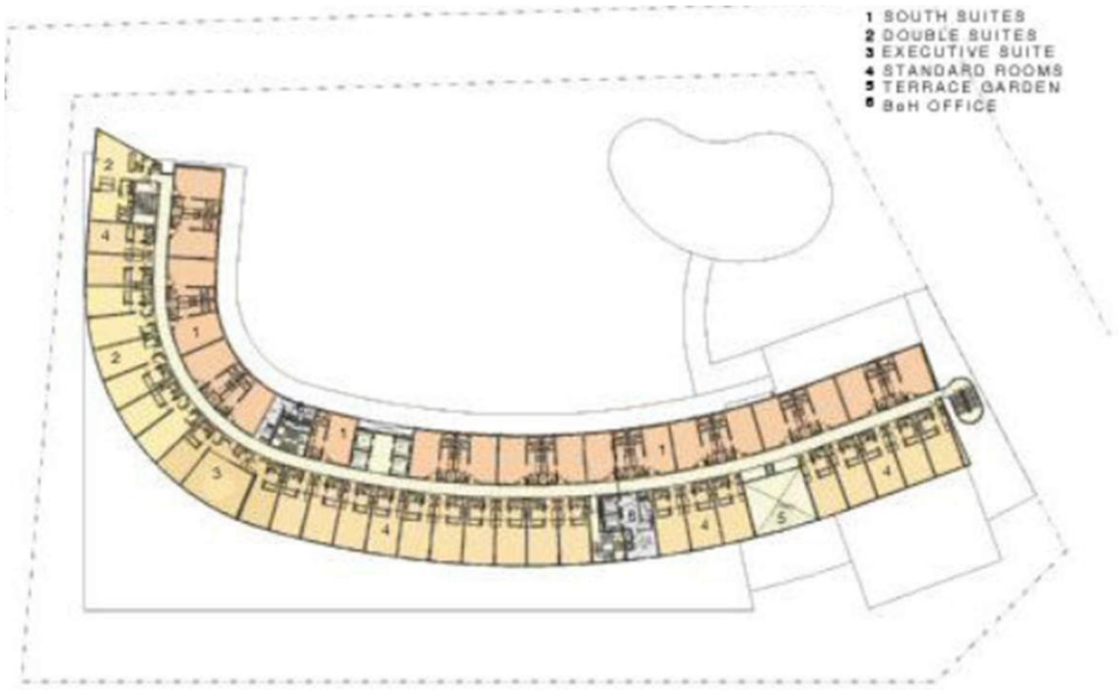
4.8.FLOOR PLANS

Site



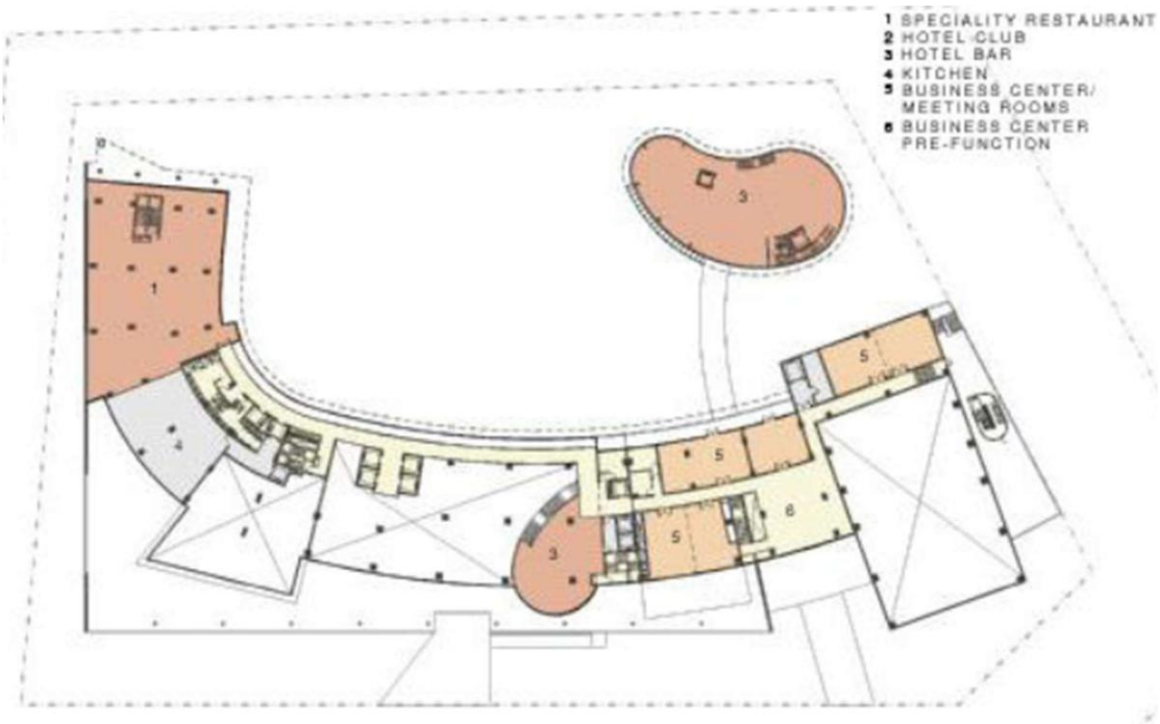


Lower Ground Floor Plan



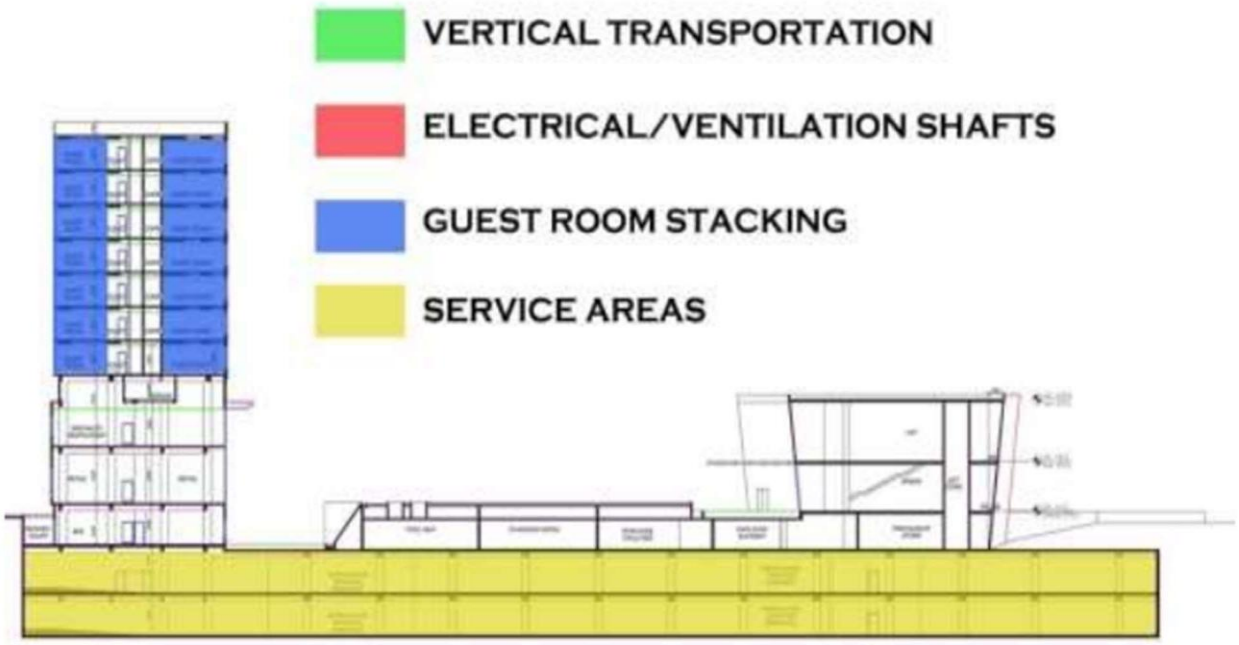
Ground Floor Plan

First Floor Plan



4.9.VERTICAL ZONING

The north elevation, the public face of the hotel, is an arrangement of distinct architectural elements, which have been layered both horizontally and vertically. An elevated two-story open-faced granite Loggia affords views from the street and from within, and contains a set of object buildings, housing the rhomboid All Day Restaurant in travertine, a cylindrical Front Office in hammered bronze, and rectilinear Function Room in green marble.



SECTION AT CC



4.10. SERVICES

- Air conditioning - Central A.C plant located in basement with AHUs for guest rooms on the respective floors and in plenum for banquet halls
- Electrical layout - Transformer is located beside Prego. Main panels are located in the basement with shafts running to serve all the floors.
- Fire protection - There is a fire escape staircase on the western corner of the hotel with every floor provided with four fire hydrant closets.

4.11. INTERIORS

- The corridors are constricted according to standards but, the quality of the space is improved by cladding the walls with wooden panels.
- Art installations are placed everywhere a corridor terminates. The sense of expanse is enhanced by providing both sides of the lobby with floor-to-floor curtain glazing.
- The lobby is flooded with diffused sunlight in the day and in the night the artificial lighting is done by hanging fixtures from the double heighted ceiling.





- It is made sure that the intensity of the lighting is kept at an optimal level to give a serene environment to the guests.

CHAPTER 4 – SITE INVENTORY

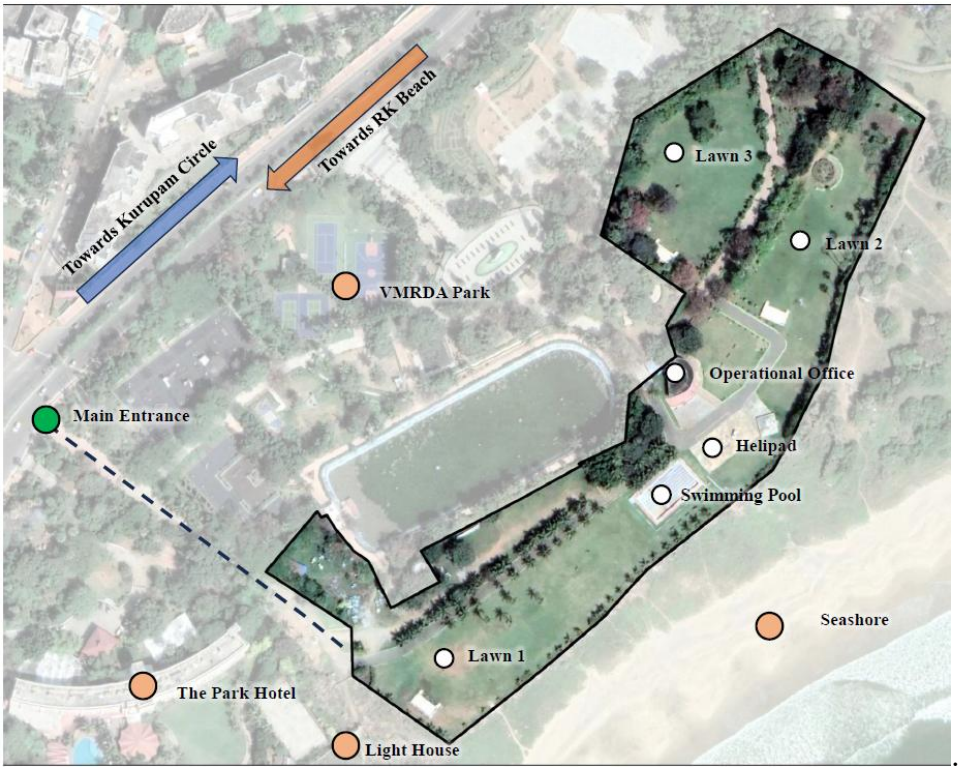
1. SITE VISIT OBSERVATIONS

The project site, located adjacent to **VMRDA Park**, was physically visited to collect spatial, visual, and environmental information. The boundary was confirmed using site maps, and various physical zones were identified.

The site is flanked by notable landmarks such as **The Park Hotel**, **Lighthouse**, and **Submarine Museum**, making it part of a highly visible and tourist-oriented urban spine. It enjoys panoramic views of the **Bay of Bengal** and maintains a gentle natural slope toward the coastline, aiding drainage and offering elevated view corridors for built forms.

Key identified zones within the site include:

- **Party Lawns**: Three large green zones currently serving as open-air event spaces
- **Entertainment Zone**: Positioned near the southern coastal edge for direct public interaction
- **Hotel Block**: Proposed on slightly elevated land to maximize sea views and create a landmark visual identity
- **Parking Zones**: Three distinct vehicular access and parking zones positioned for efficient guest and service access

The site presents a dynamic relationship between built form, landscape, and the sea. The spatial potential is reinforced by its openness, visibility, and adjacency to active urban and recreational areas 

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2. SOIL PROFILE

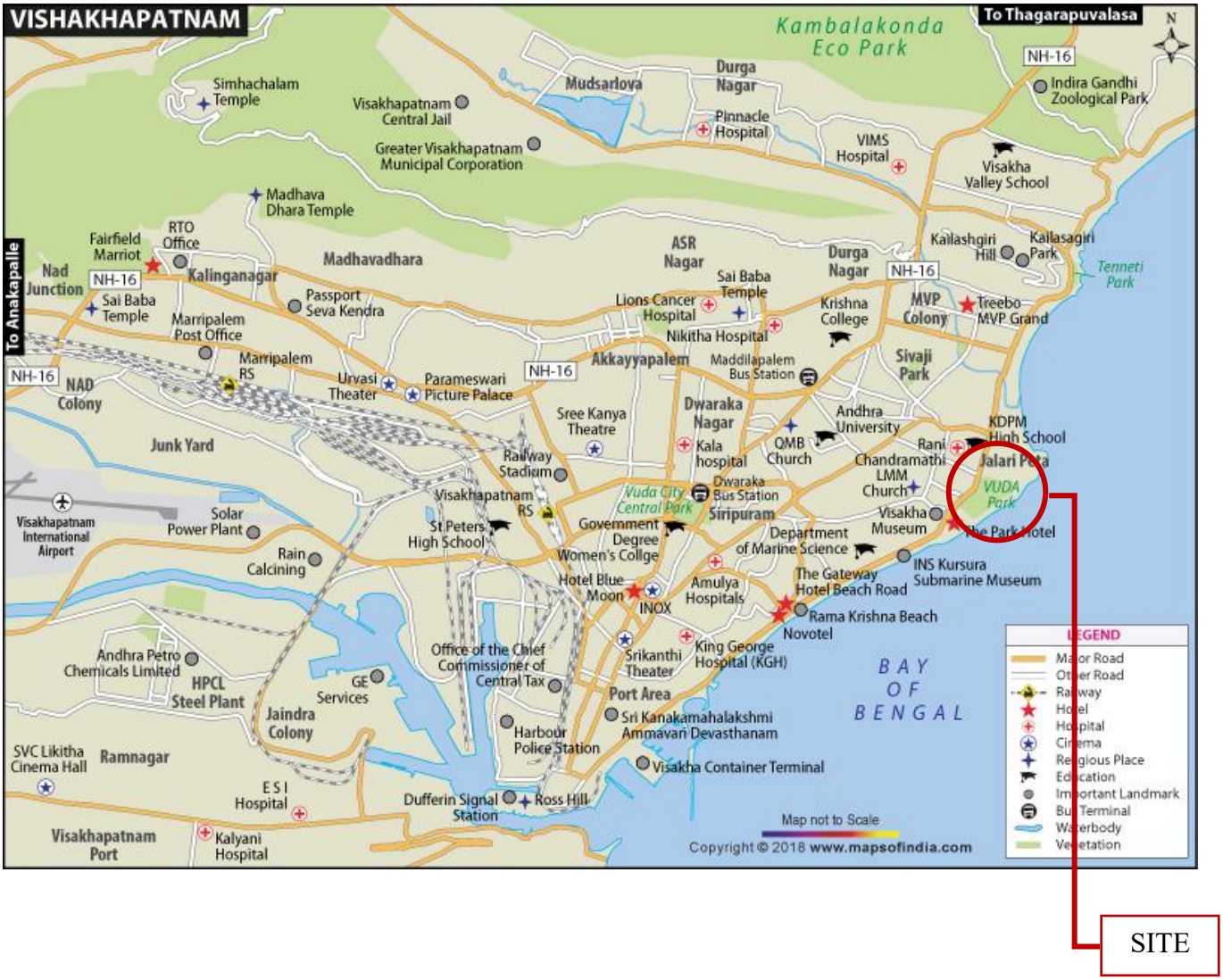
Multi-layered soil composition: The city between Gurudwara Junction and The Park Hotel (via Beach Road) exhibits a mix of **disintegrated soil, marine clay, loose sandy soil, and red soil.**

Predominant soil types: Sandy and rocky soils are common in Visakhapatnam coastal areas. These types are considered favorable for construction and reduce foundation costs compared to places with black cotton soils.

District-level soil distribution: In Visakhapatnam District, about **19% of land is sandy loam**, primarily along coastal stretches, while **69.9% is red loamy soil**; alluvial soils cover around **7%**.

3. ACCESSIBILITY

Destination	Distance from Site	Approx. Travel Time	Notes
VMRDA Park (Project Site)	0 km	—	Project site is within VMRDA Park
Ramakrishna (RK) Beach	0.5 km	~5 min	Adjacent coastal stretch
Visakhapatnam Railway Station	6 km	15–20 min	Major city railway junction
Visakhapatnam Airport (VTZ)	11 km	~30 min	International airport via NH16
Kailasagiri	10 km	~25 min	Hilltop viewpoint and tourist spot
Dwaraka Nagar / City Centre	3–4 km	10–15 min	Key commercial hub of the city
Visakhapatnam Bus Stand	3 km	~10 min	Main APSRTC bus terminal



4. LAND USE

The land is owned by the Visakhapatnam Metropolitan Regional Development Authority (VMRDA) and is located along Beach Road in Visakhapatnam. It is planned to be used for tourism and hospitality development under a Public Private Partnership (PPP) model. The land falls under a tourism and recreational use zone and must follow the applicable regulations from:

- VMRDA's Master Plan 2041,
- Coastal Regulation Zone (CRZ) norms (2011 currently, 2019 in future),
- Andhra Pradesh Tourism Policy 2020–25.

All development must ensure environmental sustainability, public accessibility, and compliance with zoning and building regulations.

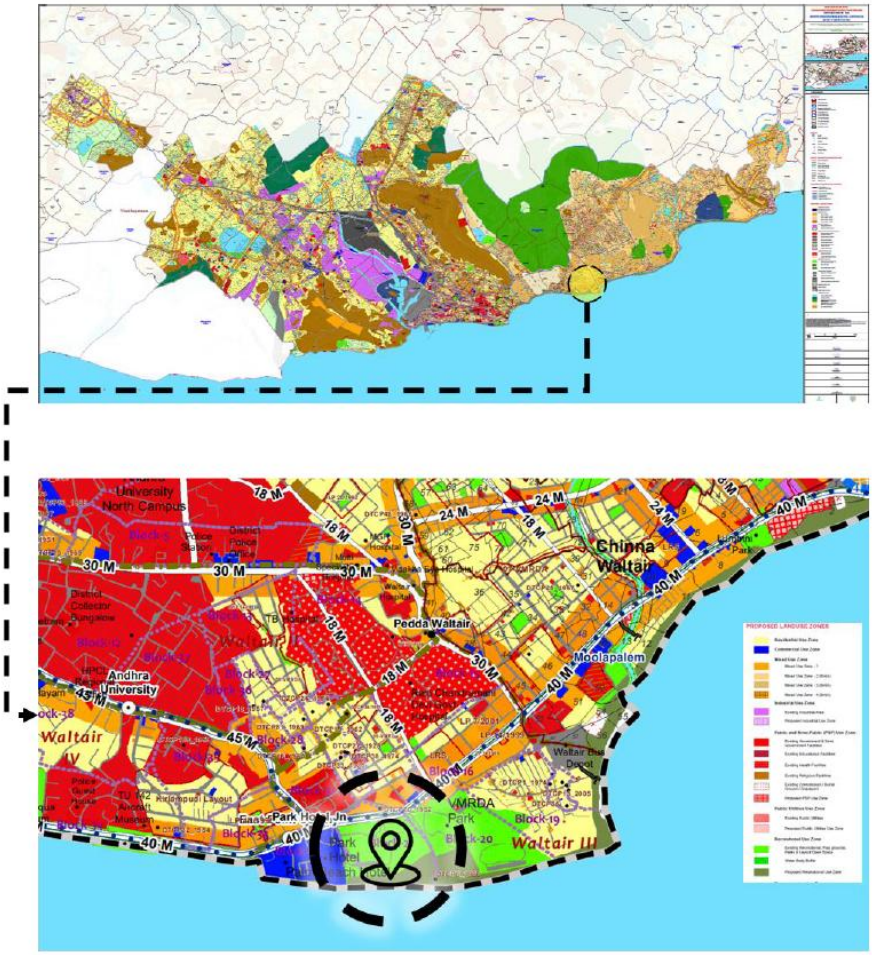


Figure 11 VRMDA Master Plan

5. CLIMATIC CONDITIONS

5.1. TEMPERATURE

- Hot and humid throughout the year
- Summer (Mar–Jun): 36–40 °C (max), ~28 °C (min)
- Winter (Oct–Feb): 28–30 °C (max), 16–20 °C (min)
- Average annual temperature: 26–28 °C

5.2. RAINFALL

- Annual rainfall: ~1000–1100 mm
- Peak rainfall: During Southwest monsoon (July to September)
- Occasional heavy downpours and coastal flooding risks

5.3. HUMIDITY

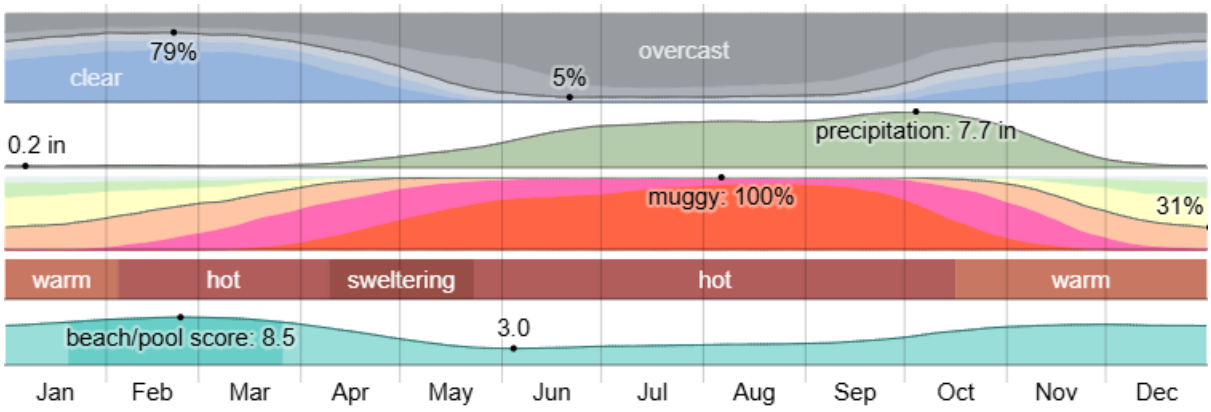
- Ranges from 50% to 90%
- High humidity during evenings, monsoons, and coastal breeze periods
- Leads to increased discomfort and material moisture exposure

5.4. WIND PATTERN

- Monsoon winds: From Southwest (July–Sept)
- Non-monsoon winds: From Northeast or East
- Average speed: 8–20 km/h
- Occasional strong winds or gusts during cyclonic storms

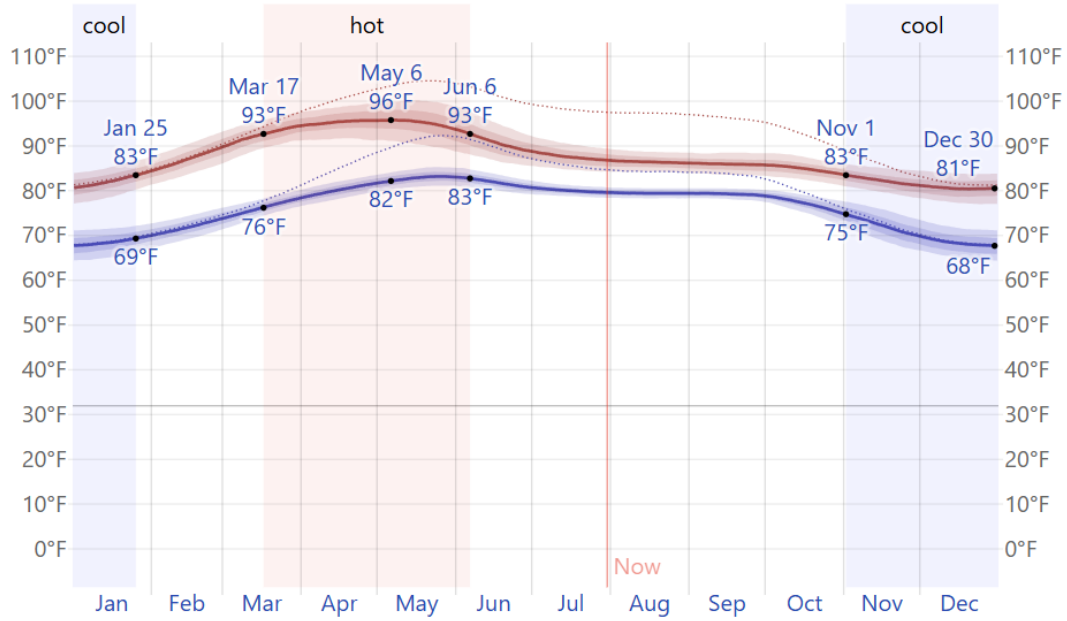
5.5. SOLAR RADIATION

- High solar exposure due to coastal openness
- Average radiation: 5.5–6.5 kWh/m²/day
- Strongest sun impact on south and southwest-facing façades



Average High and Low Temperature in Visakhapatnam

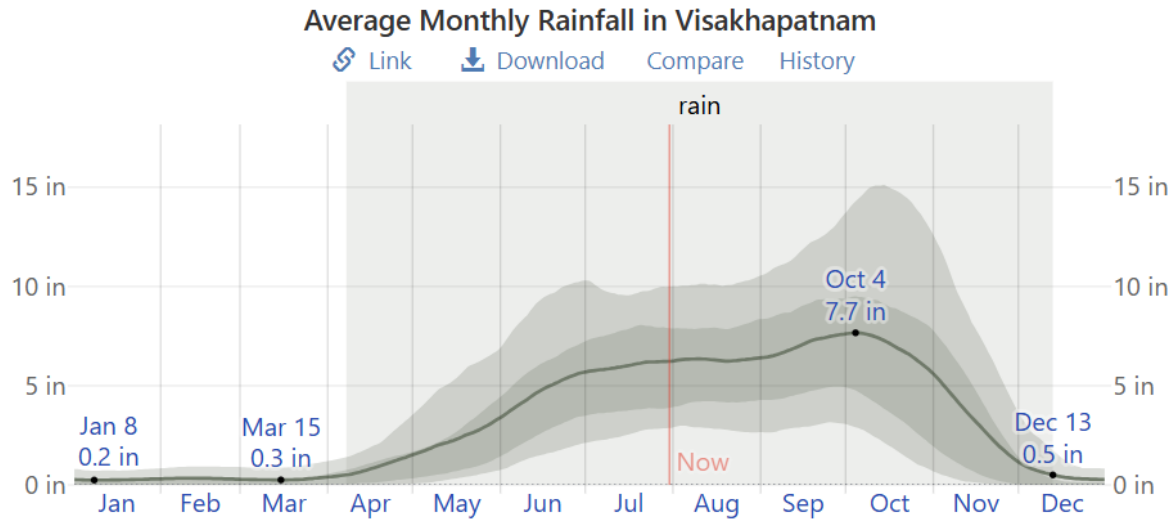
Link Download Compare History



The daily average high (red line) and low (blue line) temperature, with 25th to 75th and 10th to 90th percentile bands. The thin dotted lines are the corresponding average perceived temperatures.

Average	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
High	82°F	87°F	93°F	95°F	95°F	91°F	88°F	86°F	86°F	85°F	82°F	81°F
Temp.	75°F	79°F	84°F	87°F	88°F	86°F	83°F	83°F	82°F	81°F	77°F	74°F

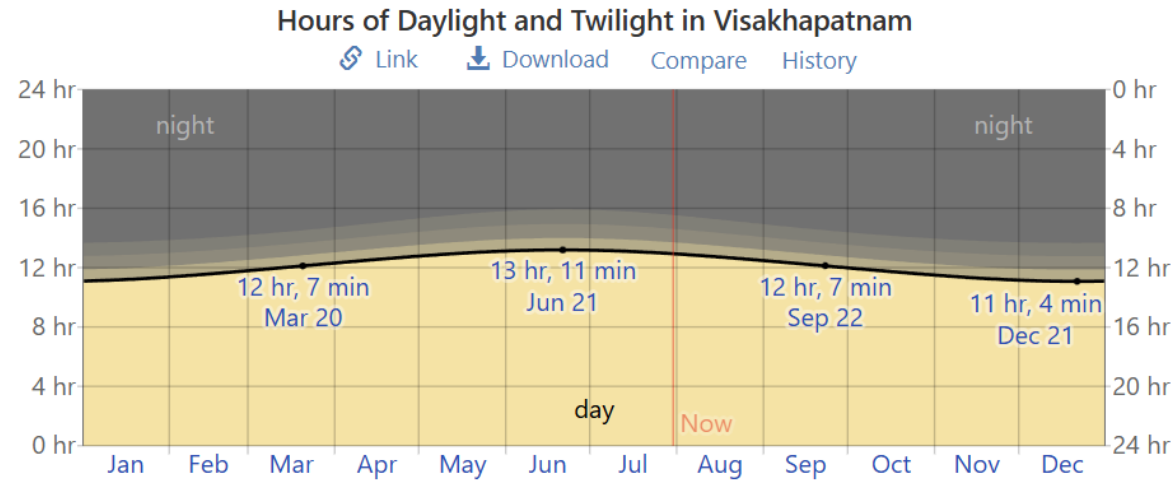
Figure 12 Average High and Low temperature in Vishakapatnam



The average rainfall (solid line) accumulated over the course of a sliding 31-day period centered on the day in question, with 25th to 75th and 10th to 90th percentile bands. The thin dotted line is the corresponding average snowfall.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rainfall	0.3″	0.3″	0.3″	0.8″	2.3″	4.8″	6.0″	6.3″	7.1″	7.1″	3.3″	0.4″

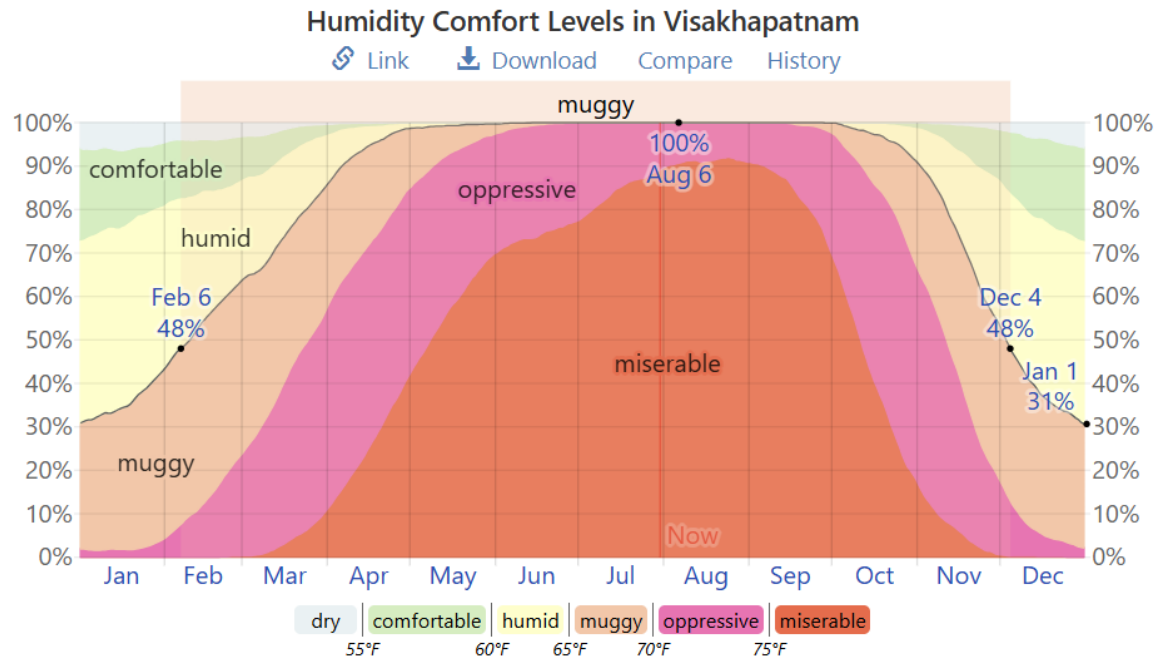
Figure 14 Average Monthly Rainfall in Vishakapatnam



The number of hours during which the Sun is visible (black line). From bottom (most yellow) to top (most gray), the color bands indicate: full daylight, twilight (civil, nautical, and astronomical), and full night.

Hours of	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Daylight	11.2h	11.6h	12.1h	12.6h	13.0h	13.2h	13.1h	12.7h	12.2h	11.7h	11.3h	11.1h

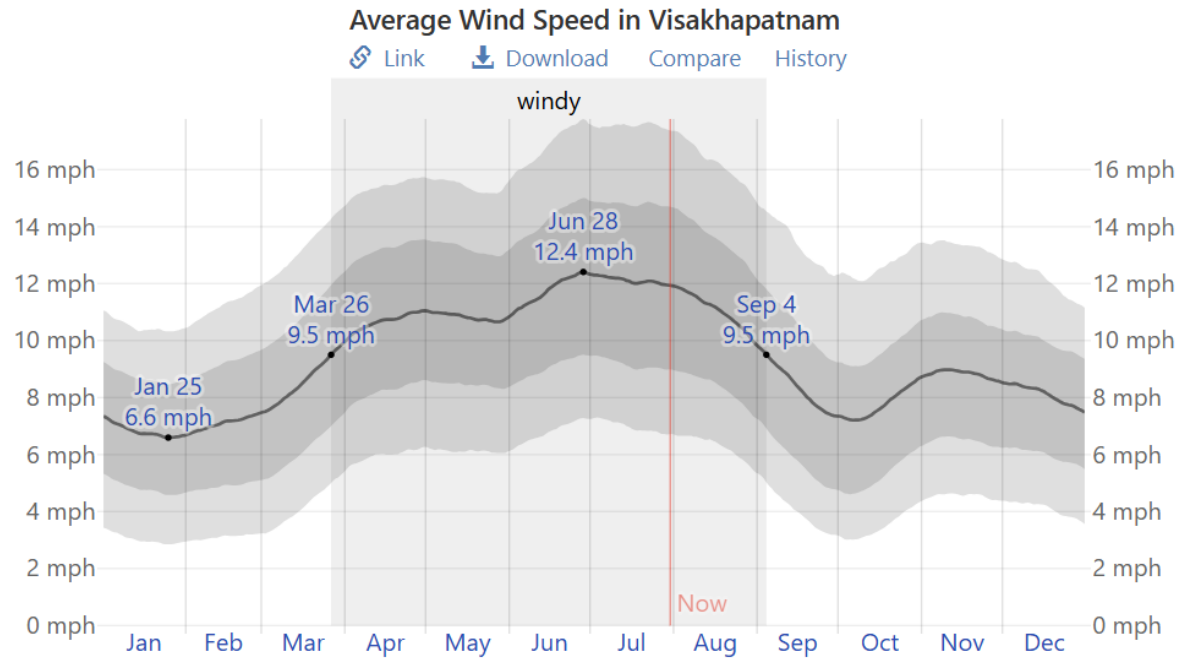
Figure 15 Hours of Daylight and Twilight in Vishakapatnam



The percentage of time spent at various humidity comfort levels, categorized by dew point.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Muggy days	11.0d	15.2d	23.1d	28.3d	30.8d	30.0d	31.0d	31.0d	30.0d	29.9d	21.6d	11.8d

Figure 16 Humidity Control Levels in Vishakapatnam



The average of mean hourly wind speeds (dark gray line), with 25th to 75th and 10th to 90th percentile bands.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Wind Speed (mph)	6.8	7.1	8.7	10.7	10.8	11.8	12.1	11.0	8.4	7.8	8.8	8.1

Figure 17 Average Wind Speed in Vishakapatnam

6. SITE SURROUNDINGS











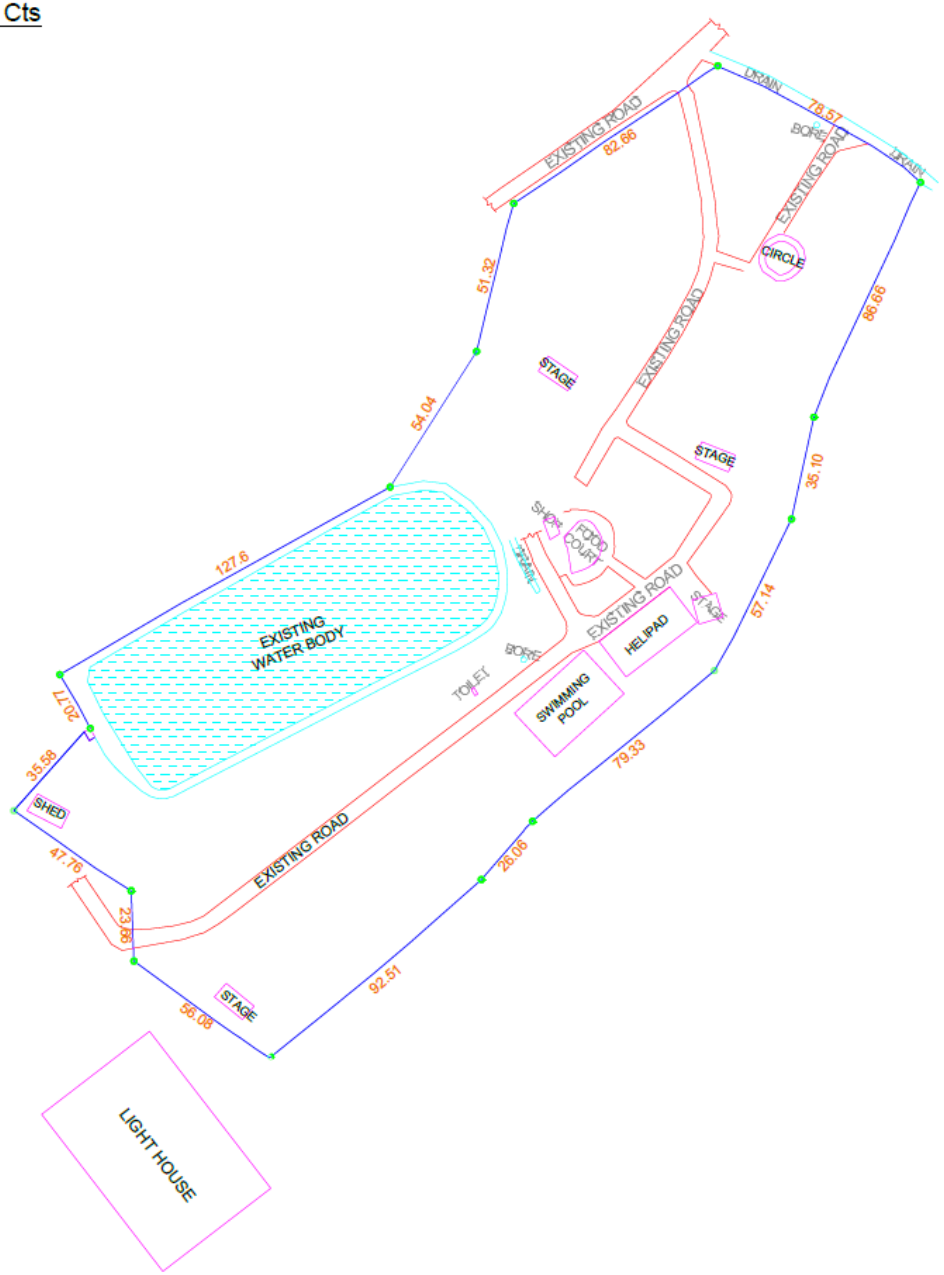






7. SITE DIMENSIONS

TOTAL AREA - Ac 10.7 Cts



TOTAL AREA - Ac 10.7 Cts

LEGEND:-

- M.G.M BOUNDARY LINE
- EXISTING ROADS
- ON GROUND FEATURES
- DRAINS

ALL DIMENSIONS ARE IN METERS

CLIENT		V.M.R.D.A
DATE	11.11.2022	TITLE: TOPO PLAN
DRAWN: MAHESH	LOCATION	M.G.M PARK(VUDA PARK). VISAKHAPATNAM
SURVEYED BY		D S C DHARANI SURVEY CONSULTANCY MURALINAGAR, VISAKHAPATNAM. Ph: 9603999928,8500096022
SCALE	1:1000	DRG NO. 01

CHAPTER 5 – DESIGN

The design theme of *Coastal Contemporary Luxury* emerges from the desire to create an architectural experience deeply rooted in the essence of the sea. The coastline is not treated as a backdrop but as a living, breathing element that shapes the built environment. The design aims to celebrate the peaceful vastness of the ocean, the openness of the horizon, and the clarity of coastal daylight, weaving them into an elevated and sophisticated spatial language. This approach seeks to create a harmonious interface where modern luxury seamlessly merges with the natural serenity of the waterfront.

1. INTERPRETATION OF THE COASTLINE

The architecture interprets the coastline as a generator of form and experience. Every aspect of the project is crafted to capture the presence of the sea—its breezes, its light, its textures, and its rhythms. Through framed views, open terraces, breezeways, and linear movement paths directed toward the horizon, the design reinforces a constant visual and sensory connection to the ocean. The calmness and fluidity of coastal landscapes inspire the spatial flow, allowing the design to embody the softness and expansiveness found at the water's edge.

2. CONTEMPORARY ARCHITECTURAL EXPRESSION

Contemporary design principles guide the massing and formal language of the project. Clean lines, bold horizontal forms, and precise geometry establish a sense of clarity and visual order. The X-shaped massing reinforces a distinct identity while maximizing natural light, ventilation, and sea-facing vistas. This form allows programmatic separation between hospitality, public, and recreational spaces, while also enabling fluid indoor–outdoor transitions. The architecture achieves elegance through minimalism, proportion, and lightness rather than decorative embellishments.

3. LUXURY AS AN EXPERIENTIAL QUALITY

Luxury within this theme is communicated through atmosphere rather than ornamentation. Spacious volumes, airy terraces, curated landscape courts, and calm interior palettes create an ambiance of refined simplicity. Natural elements such as sea breezes, shifting shadows, and filtered daylight become integral to the spatial experience. The design prioritizes comfort, intimacy, and a sense of escape, enabling users to engage with architecture that values tranquility and deliberate openness. The result is a form of luxury that feels honest, understated, and intrinsically connected to nature.

4. LANDSCAPE AS AN EXTENSION OF ARCHITECTURE

The landscape design is conceived as a continuation of the architectural form. Inspired by the ecology and visual patterns of the coast, it incorporates palm grids, reflective pools, dune-like planting mounds, and sculptural gardens. Layers of outdoor spaces—from public lawns to semi-private terraces and intimate pool decks—reflect varying degrees of openness and privacy. Organic pathways and water bodies soften the rectilinear massing, creating a balance

between geometry and natural expression. This integrated approach enhances the sensory richness of the outdoor environment.

5. MATERIALITY AND COASTAL PALETTE

Material choices are derived from the textures and colors of the shoreline. The exterior palette includes white plaster, sand-colored stone, warm timber-toned finishes, aqua-tinted glass, and corrosion-resistant metals. These materials not only evoke the hues of shells, sand, and sea foam but also ensure durability against humidity, salt exposure, and wind. The interiors continue this calm, natural palette through subtle fabric textures, light woods, and soft neutral tones, creating a warm yet sophisticated ambiance compatible with high-end coastal hospitality.

6. CLIMATE-RESPONSIVE DESIGN APPROACH

The project integrates luxury with environmental responsiveness. Deep overhangs, shaded verandas, courtyards, and breezeways allow for passive cooling and diffused natural light. Wind corridors channel sea breezes into the interior spaces, enhancing comfort without relying heavily on mechanical systems. The design considers coastal challenges such as corrosion, high humidity, and storm winds, employing resilient construction techniques and material specifications. This ensures that luxury is not only aesthetic but also functional, sustainable, and climate-adapted.

7. SPATIAL CHARACTER AND USER EXPERIENCE

Movement through the site is designed as a sequential reveal of spaces, guided by visual axes and shifts in light and openness. The arrival sequence transitions from the grand drop-off plaza into shaded open-air lobbies, landscaped courts, terrace decks, and poolside environments. Each space is choreographed to enhance the emotional connection to the sea, whether through glimpses of the horizon, the sound of waves, or the coolness of shaded corridors. The spatial character is calm, fluid, and uplifting, shaped by a sense of generosity and effortless flow.

8. INTEGRATION OF WATER AS A DESIGN ELEMENT

Water plays a central role in reinforcing the coastal identity of the project. Reflective pools mirror the sky and architecture, while shallow water courtyards and infinity-edge swimming pools establish continuity with the sea. These water elements add visual tranquility, enhance microclimates, and enrich the sensory experience. The interplay of light on water surfaces and the soft acoustics of flowing water contribute to a serene atmosphere consistent with modern coastal luxury environments.

9. AREA STATEMENT

S. NO.	Description	Area/Unit	Unit	Total Area SQM
	GROUND FLOOR			
	HOTEL RECEPTION			
1	Waiting Area			109.02
2	Currency Exchange			55.44
3	Double Height Hotel Lobby			307.56
4	Bell Boy			20.5
5	Front Office			19
6	Common Meeting Room			54
7	Toilet (F)			36.3
8	Toilet(M)			24.42
9	Toilet(PH)			3.6
	BANQUET			
1	Banquet's Manager			55.44
2	Meeting Room			28.8
3	Double Height Banquet lobby			307.56
4	Asst. Banquet's Manager			34.56
5	Store And Record			20.88
6	Banquet Hall 250 Capacity Double Height			511.94
7	Stage			44.94
8	Pre Function Area Double Height			201.64
9	Toilet (F)			28.8
10	Toilet (M)			21.6
11	Toilet (PH)			6
12	Junitor			7.8
13	Plumbing Shaft			6.4
14	Bride's Room			23.68
				23.68
	SERVICES			
1	Plumbing Shaft			3.3
2	Luggage Room			36
3	Mec.Duct			5.25
4	AHU			21
5	Electrical Room			13.68
6	Electrical Duct			2.7
7	Garbage Chute			2.7
8	Garbage Room			13.32
	STORAGE AREAS			
1	Room Linen Store			33.63
2	Guest Supply And Amenity Store			24.99
3	Upholstery Store			22.05
4	F&B Linen Store			30.38
5	Wash Area			63.84
6	Dish And Pot Wash			63.84

7	Dish And Pot store			91.96
8	Housekeeper Executive			26.46
9	Tailer			21.56
10	Dry Clean Area			50.82
11	Store Manager			26.46
12	Room Ilinen Store			21.56
13	storage			97.28
14	Furniture store			57
15	F&B store			83.25
	RESTAURANT & KITCHEN			
1	Lobby			115.92
2	Fine Dining Restaurant			468.93
3	Bar			170.8
4	Restaurant Kitchen			195.92
5	Room service kitchen			125.43
6	Kitchen storage			52.17
7	Banque kitchen			139.86
8	Refrigerated Beverage			17.15
9	Beverage Stoe			17.15
10	Bakery Area			19.11
11	Store Room			28.4
12	Chef's Office			42.3
	FIRST FLOOR			
	SWIMMING POOL			
1	Swimming pool filtration plant			98.58
2	swimming pool filtration plant			104.72
3	swimming pool support plant			69.75
4	Plumbiing Shaft			4.75
	OFFICES			
1	Discussion Room			33.55
2	Accounts Office			86.68
3	Executive Office			88.2
4	General manager			34.65
5	Discussion Room			34.65
6	Store & copying			27.9
7	IT Office			85.76
8	Battery /Ups Office			43.52
9	Sales & catering Office			214.2
10	Common Meeting Room			75.05
11	Pantry			26.07
	KITCHEN			
1	Staff kitchen			319.8

2	Kitchen store			64.78
3	staff Dinning			453.05
	TRAINING CELL			
1	E Learning			50.56
2	HR Manager			32.13
3	Training Manager			24.99
4	Ass. HR Manager			22.95
5	Training Room 1			49.28
6	Training Room 2			49.28
7	Female Staff Lockers			169.92
8	Female Staff Restroom			120.08
9	Male Staff Restroom			134.55
10	Male Staff Room			149.04
11	Female Staff Changing			40.28
12	Male Staff Changing			36
	SERVICES			
1	Electrical Room			13.68
2	Garbage Room			2.7
3	Elec Duct			2.7
4	Garbage Chute			13.32
5	AHU			21
6	MEC Duct			**5.25**
7	Banquet Hall storage			106.88
8	Plumbing shaft			6.4
9	Storage			44.8
10	Toilet (M)			
11	Toilet(F)			
12	Toilet(PH)			
	SECOND FLOOR			
	SPA / SALON / SWIMMING POOL			
1	Swimming Pool			222
2	Kids Swimming Pool			124.32
3	Male Changing Room			79.36
4	Female Changing Room			103.5
5	Steam Room Female			89.28
6	Steam Room Male			129.36
7	Steam Room Reception			37.8
8	SPA &Salon			504.51
9	Massage Room			15.04
10	Salon			73.92
11	Couple Massage Room			20.21
12	SPA Store & Pantry			52.5
13	Salon			90.52
14				
	CAFETERIA / SHOPPING AREA			

1	Cafeteria			229.08
2	Kitchen			53.9
3	Shopping Arcade			324.3
4	Activity Centre			278.76
5	Gymnasium Store			44.37
6	Gymnasium			530.7
7	Male Change Room			21.42
8	Female Change Room			22.95
9	Multisport Court			135
	MEETING ROOMS			
1	Meeting room 3			39.84
2	Conference Room			70.29
3	Business Center			550.14
4	Store			36
	SERVICES			
1	Toilet(M)			21.6
2	Toilet(F)			28.8
3	Toilet(PH)			6
4	Junitor			7.8
5	AHU			21
6	Garbage Room			13.32
	THIRD FLOOR			
	RESTAURANT AND KITCHEN			
1	Asian Fusion Restaurant			633.42
2	All Day Dining Restaurant			576
3	Outdoor Seating			1008
4	Activity Space			982.8
5	Kitchen			215.28
	SERVICES			
1	Toilet (M)			28.38
2	Toilet(PH)			3.6
3	Toilet(F)			18.9
4	AHU			21
5	Store Room			43.4
6	Electrical Room			13.68
	FIFTH FLOOR - NINTH FLOOR			
1	Executive Suite	32.68	22	718.96
2	Queen Suite	32.68	14	457.52
3	Library			67.94
4	House Keeping Room			38.7
5	AHU			21

6	Garbage Room			13.32
7	Electric Room			13.68
8	Elec Duct			2.7
9	Mec Duct			5.25
10	Garbage Chute			2.7
	TENTH - ELEVENTH FLOOR			
1	King Suite	66.22	12	794.64
2	Presidential Suite	134.16	3	402.48
3	Library			67.94
4	House Keeping Room			38.7
5	AHU			21
6	Garbage Room			13.32
7	Electric Room			13.68
8	Elec Duct			2.7
9	Mec Duct			5.25
10	Garbage Chute			2.7

10. DRAWINGS

Drawings are attached next

CHAPTER 6 – REFERENCES

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