

FIVE STAR HOTEL

A THESIS

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

By

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

SATHYABAMA

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

With Grade “A” by NAAC

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BONAFIDE CERTIFICATE

This is to certify that Thesis Report is the bonafide work of **JOEL JM SINGH (39210032)** who carried out the Thesis entitled "**FIVE STAR HOTEL**" under our supervision from December 2023 to May 2024

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THESIS SYNOPSIS

This thesis embarks on an exploration of the dynamics surrounding the development of a five-star hotel in Injambakkam, Chennai, a locale renowned for its picturesque coastline, cultural vibrancy, and burgeoning tourism potential. With the aim of contributing to the understanding of luxury hospitality within the specific context of Chennai, this research delves into the multifaceted aspects of hotel development, operations, and guest experiences in the Injambakkam region.

The study commences with an in-depth review of literature encompassing scholarly articles, industry reports, and case studies related to luxury hospitality, urban development, and tourism trends in Chennai. By synthesizing existing knowledge, the literature review lays the groundwork for identifying key themes and research gaps pertinent to the proposed five-star hotel development in Injambakkam.

Subsequently, primary research is conducted to gather empirical data and firsthand insights from stakeholders involved in the hotel project, including developers, architects, hospitality professionals, and potential guests. Through interviews, surveys, and site visits, the research aims to elucidate the motivations, challenges, and aspirations shaping the planning and execution of the five-star hotel venture in Injambakkam.

The findings from both the literature review and primary research are analyzed using qualitative and quantitative research methods, facilitating a comprehensive understanding of the socio-cultural, economic, and environmental factors influencing luxury hospitality in the Injambakkam locale. Special attention is given to the integration of sustainable practices, local heritage, and authentic experiences in the design and operation of the proposed five-star hotel, reflecting a commitment to responsible tourism and community engagement.

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

This thesis explores the dynamics surrounding the development of a five-star hotel in Injambakkam, Chennai, a locale known for its stunning coastline, vibrant culture, and growing tourism appeal. With a focus on understanding luxury hospitality within Chennai's context, the research delves into hotel development, operations, and guest experiences in the Injambakkam region.

Beginning with an extensive literature review on luxury hospitality, urban development, and tourism trends in Chennai, the study identifies key themes and research gaps relevant to the proposed hotel development.

Primary research involves gathering empirical data and insights from stakeholders such as developers, architects, hospitality professionals, and potential guests through interviews, surveys, and site visits. This aims to uncover motivations, challenges, and aspirations guiding the hotel venture in Injambakkam.

Analysis of both literature review findings and primary research data, using qualitative and quantitative methods, provides a comprehensive understanding of socio-cultural, economic, and environmental factors influencing luxury hospitality in Injambakkam. Special emphasis is placed on integrating sustainable practices, local heritage, and authentic experiences in the hotel's design and operation, reflecting a commitment to responsible tourism and community engagement.

1.2 NEED OF THE PROJECT

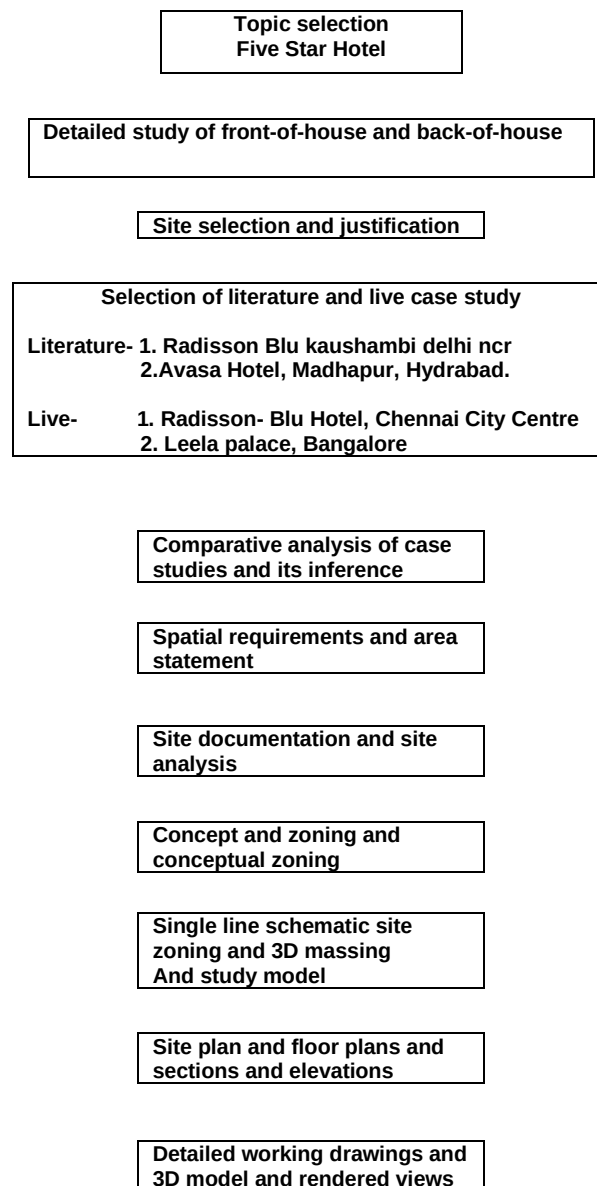
Injambakkam, nestled along Chennai's captivating coastline, boasts of natural beauty, cultural heritage, and a burgeoning tourism potential. However, despite its charm, the locality currently lacks a five-star hotel, presenting a significant gap in its hospitality offerings. The need for a five-star hotel in Injambakkam is evident for several compelling reasons like Business and Corporate Travelers, destination Weddings and Events, Meeting Consumer Expectations.

1.3 AIM AND OBJECTIVE

(a) The aim of this thesis is to explore the development, operations, and guest experiences of a five-star hotel in Injambakkam, Chennai, with a focus on contributing to the understanding of luxury hospitality within the specific context of the locale.

(b) To assess the operational strategies and management practices adopted by the five-star hotel in Injambakkam, with a focus on service quality, guest satisfaction, revenue management, and sustainable practices.

1.4 METHODOLOGY



CHAPTER 2

LITERATURE CASE STUDIES

2.1 RADISSON BLU KAUSHAMBI DELHI NCR

Located 15 km from IGI Airport.

Predominant Use - Commercial Residential

Period of Completion - 2010

Architects - Anil Sharma Architects, New Delhi

Radisson Blu - Paschim Vihar is the third hotel from Carlson Group in Delhi.

Based on Neo-Gothic style of architecture, the building is a typical business hotel with deep rooted commercial values.

The ground floor of the hotel not only contains the lobby and coffee shop but also consists of a shopping mall whose services are inside the 3rd basement level.

The ground floor also contains the entrance to the banquet lobby which is in turn on the 1st floor of the building.



Fig 2.1: Radisson Blu Kaushambi Delhi NYC

2.1.1 OBJECTIVE OF CASE STUDY

As opposed to WESTIN, which is a form-based development; the design of Radisson Blu concentrates on efficient mechanical and civil services. It has more than 200 guest rooms and every facility to augment the business class customers.

2.1.2 LAND USE AND URBAN CHARACTER

It can be seen from the surrounding land use that it is surrounded by residential land use.

The location of the hotel is not quite good and it also is in contrast with surrounding urban character which is predominantly mid-rise and surrounded by vacant land.

The immediate urban land use and the context of the building; and it can be seen clearly that it is contrast to its surroundings in one way or another.



Fig 2.2: Land Use and Urban Character

2.1.3 LOCAL BYLAWS

FAR Allowed-4.5

Site Area-3.78Acres

Allowed Built-up Area- 61,188sqm

Total Built-up Area- 81, 800sqm

Height Restriction- 60 mtrs.

Overall Building Height- 37.5 mtrs.

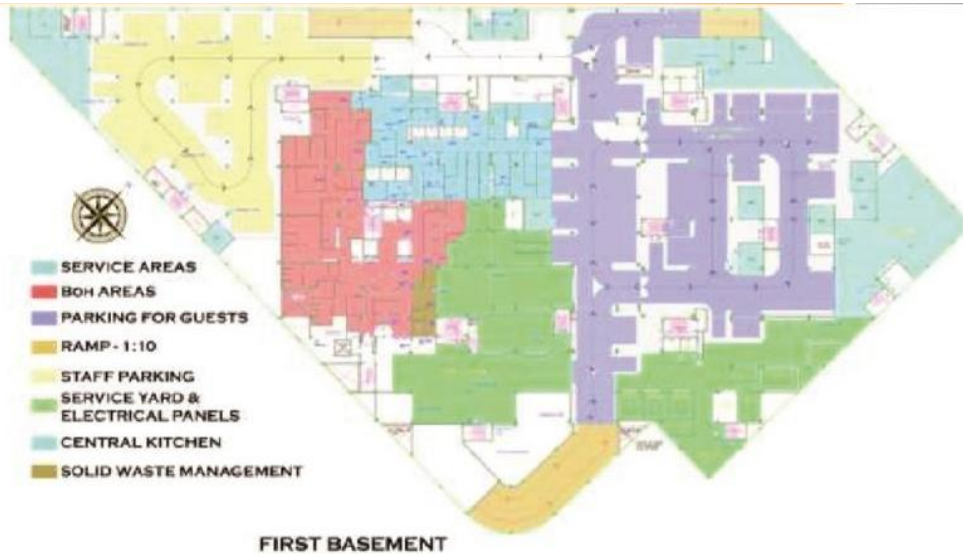
Allowed Ground Coverage- 30%

Ground Coverage-6480sqm

2.1.4 CIRCULATION

The internal planning of Radisson Blu is very efficient in terms of segregation of served and servants, and robust service planning.

The guest facilities are accessible to all the guests from every floor. Shown below are the plans of the hotel floors showing the horizontal distribution of functional space.



F2.3: first basement



Source:- Author

Fig 2.4: second basement



Source:- Author

Fig 2.5: ground floor plan



Fig 2.6: Third floor plan and seventh floor plan

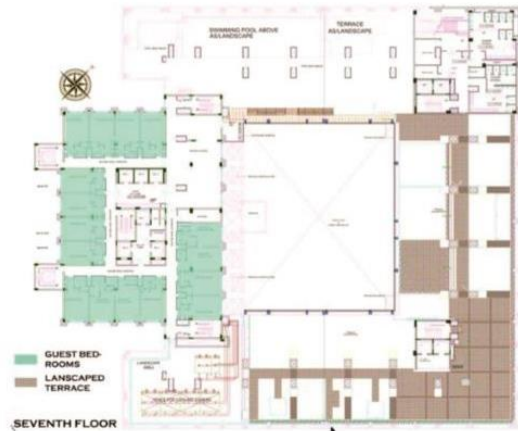
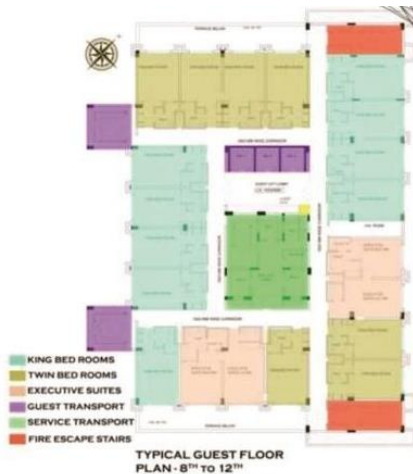


Fig 2.7: seventh floor plan



Source:- Author

Fig 2.8: ground floor plan

The lobby has to rely on artificial lighting solutions for proper visual comfort, as there is an evident lack of day lighting.

Mirrors are also used in abundance, so as to create a sense of vastness and also to reflect the minimal amount of sunlight available.

The lobby here is connected to the 'Tea Lounge' and the guest lift lobbies. There is no separate luggage elevator present.

Guest lift lobbies are very illustriously decorated with black patterned wall tiles and contrasting white patterned tiles. For lighting there are chandeliers.

The swimming pool is on the terrace of 6th floor. From the pool, the guest room stacking from 6th till 12th floor could be seen.

It can be safely concluded that, design of Radisson Blu is governed by commercial values, thus the shape of building respond to the site constraints.

2.1.5 FUNCTIONS

On entering the building the first thing to show up is the Grand Lobby. Based on Neo-Gothic style of architecture, the materials and textures used give a very grand atmosphere.

This is done in order to create a sense of vastness. Materials used in the lobby are white patterned tiles to create a Gothic Motif. The walls are clad with wall tiles of black color.

Services

All the service areas placed in the 1st and 2nd basement of the hotel.

The hotel has an installed capacity of 2000 tons of refrigeration and 750 tons for the diesel generators.

Fire hydrant cabinets (FHCs) are provided besides every fire escape staircase. Automatic sprinklers linked to smoke detectors

2.1.6 OVERALL ANALYSIS

The building is in contrast with the surrounding built character.

As can be easily observed neither the buildings height nor form developed are in harmony.

Being a 5-star property, the hotel has to have a certain standard of design but, in this case, the hotel's design is so misplaced that it does not respond to either of the climatic or site conditions.

The building is a standalone facility which could have been successful even if it were to be placed someplace else.

Overall Radisson Blu is a well-designed hotel, adhering to the brand standards of Radisson group.

It fulfills all the prerequisites to be a 5 star facility, the service design is impeccable, but the only place where there is an issue would be the overall design of the built structure

2.2 AVASA HOTEL, MADHAPUR, HYDRABAD.

2.2.1 Introduction

As you drive towards Hi tech city, looking at block after block of built FAR, there is a break from the concrete boxes of commercial and apartment buildings.

You see the 9 floor frame with stepped terrace gardens, "The Avasa. The irregular shaped site was the biggest design challenge.

The site is wide towards the road and narrows down towards the back.

The building follows the site and looks like the letter 'A' in plan.



Fig 2.9: AVASA HOTEL, MADHAPUR, HYDRABAD

Location- Madhapur, Hyderabad

Designed by- Nandu Associates

Architects- B. Nandu Kumar

Completed in- 2012

2.2.2 OBJECTIVE OF CASE STUDY

This Hotel was chosen for study because of the shape of the site and the design solution to it.

It was also selected because of the elevation which breaks in to a multi-level landscape pockets.

. It was also chosen because of the planning of the functions which are in a proper flow based on the requirement of the space in such an odd shape.

2.2.3 LAND USE AND URBAN CHARACTER

The site is directly connected to Hi-tech city main road.

The site is surrounded by the commercial structures.

There are no residential or Public Structures around or near the site to the hotel, except Image gardens.



Fig 2.10: land use and urban characteristic

2.2.4 DEVELOPMENT OF FORM

One of the aims of the design was to respect the given site.

Thus, the design of the hotel responds to its context with a highly site-specific scheme.

Due to limited open space on site and in the vicinity, a continuous green space has been conceived in the form of stepped terraces.

These terraces are visually connected from the third level to the top floor.

Thus, the rooms are arranged along the two arms of the 'A' and the connecting slab between the two arms acts as terrace space which step back as one goes to the higher levels

2.2.5 SPACE PLANNING

The building sections were the most important diagrams in the design process.

The final section is still the most important drawing which explains the building the best.

Vertical transport through this stepped section is achieved through 3 separate banks of lifts.

One set in the west wing commutes between basements and Ground floor.

One set in the East wing commute between ground and 11th level.

The bank of lifts off the central lobby operates through all the levels.



Fig 2.11: ground floor plan

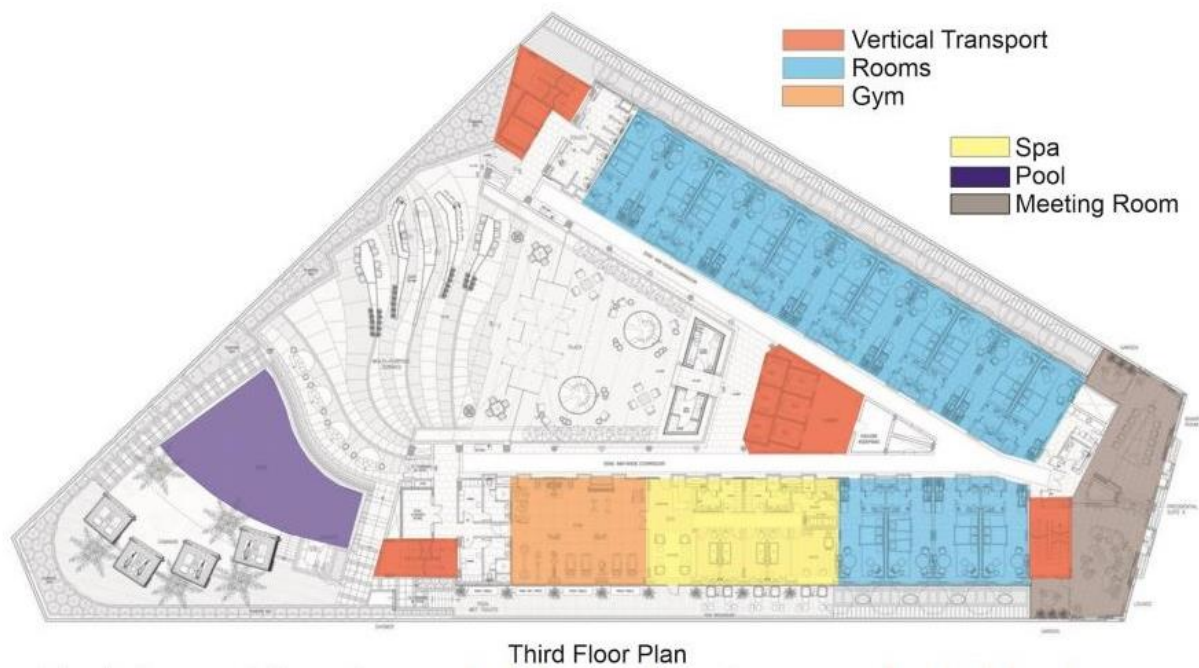


Fig 2.12: Third floor plan

The Atrium could have been a single large volume from ground to 11th level.

It has been split into two -

The Lobby atrium at the ground level, connecting the Grand lobby and the Banquet Halls.

O The central atrium at the third level which has been created under the stepped terraces. O This has been in order to control sound echoes and also to maintain a sense of scale.



Fig 2.13: fourth floor plan

There are two bridges between two room blocks; one on the fifth floor which is the business club "THE BRIDGE" and the other bridge is the double-level Sky-Bar connecting the room blocks on the tenth and eleventh level.

The Sky- bar has its own set of lifts.



Fig 2.14: fifth floor plan

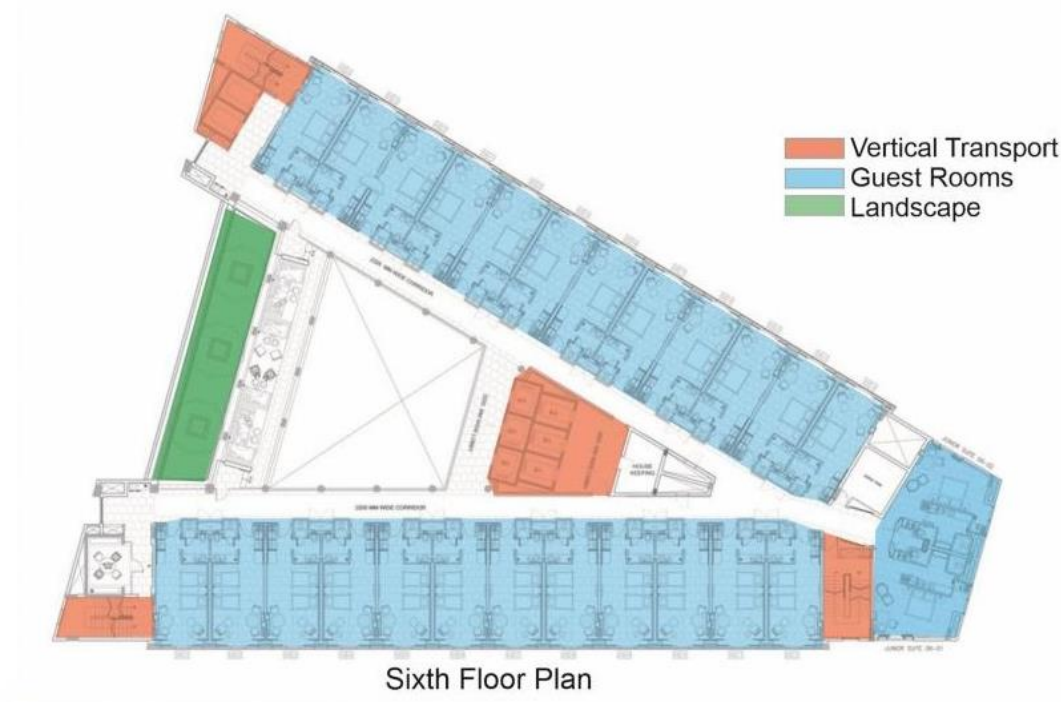


Fig 2.15: sixth floor plan



Fig 2.16: eight floor plan

The nine room floors sit on a podium containing the arrival porte-cochere, the reception lobby, the specialty restaurants and the all-day dining.

The first level contains the banqueting facilities including the Grand Ballroom which is connected directly to the ground level porte-cochere by the Grand staircase.

The second level is the service floor over the banquet corridors.



Fig 2.17: section AA'

The third level has the first room floor with a spa and gym.

The central atrium space opens out to the pool deck and terrace party space.

The stepped terraces at each higher floor have been given a different character.

The room corridor on each floor is a different experience.

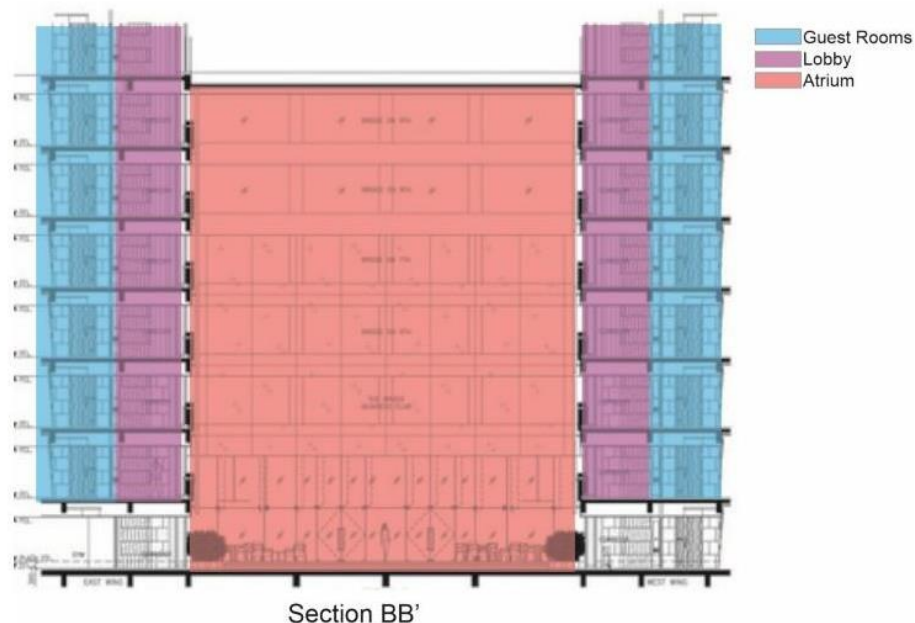


Fig 2.18: section BB'

2.2.6 OVERALL ANALYSIS

Hotel's planning is an inspiration for planning in a restricted site conditions and surrounding.

The Atrium is a central focus in the overall planning; it works as a courtyard and re-defines the corridors.

The form of the hotels is very unique and well thought of with proper space allocations.

Multi-Level landscape adds a unique feature to its elevation as compared to its neighborhood's structures.

2.2.7 COMPARISON OF RADISSON BLU KAUSHAMBI DELHI NCR AND AVASA HOTEL, MADHAPUR, Hyderabad

Site and Design Approach:-

Radisson Blu: Located in a predominantly residential area, the design takes little consideration of the surrounding context. Its Neo-Gothic style

and focus on maximizing commercial space stand out amidst the mid-rise buildings. Avasa Hotel: Built on an irregularly shaped plot in a commercial district, the design cleverly adapts to the site constraints. The "A" shaped plan

and stepped terraces maximize open space and create a unique visual identity.

Building Form and Function: Radisson Blu: The high-rise structure prioritizes efficient internal planning and service provision for business travelers. Despite its impressive

facilities, the design clashes with the surrounding low-rise buildings. Avasa Hotel: The stepped form integrates landscaped terraces into the room layout, providing guests with green spaces and outdoor experiences. The split-level atrium and bridges between room blocks add visual interest and facilitate movement.

Strengths and Weaknesses: Radisson Blu: Strengths: Well-designed interior spaces, efficient service planning, adherence to brand standards. Weaknesses: Design

incongruity with surroundings, lack of daylight in the lobby, reliance on artificial lighting. Avasa Hotel: Strengths: Site-responsive design, unique form with multi-level landscaping, well-planned functions. Weaknesses: Limited open

space on the ground level, dependence on multiple lift banks due to the stepped form.

2.3 LIVE CASE STUDY 1 - RADISSON- BLU HOTEL, CHENNAI CITY CENTRE



Plate 2.1: live case study - radisson- blu hotel, chennai city centre

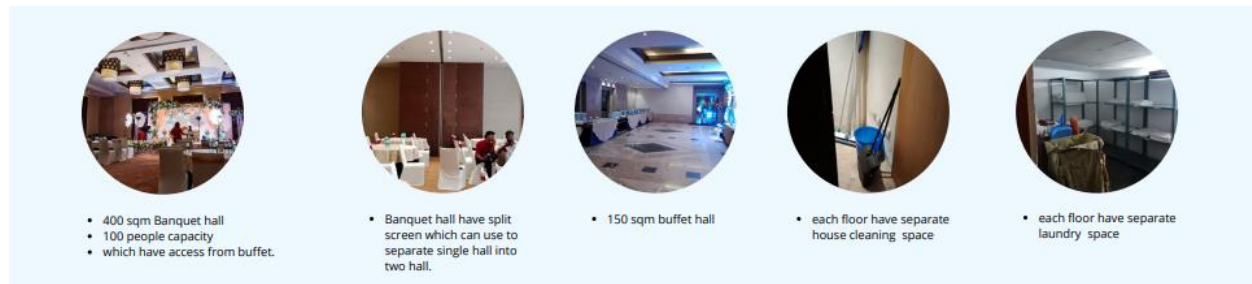


Plate 2.2: live case study - radisson- blu hotel, chennai city centre

2.4 LIVE CASE STUDY – LEELA PALACE, BANGALORE

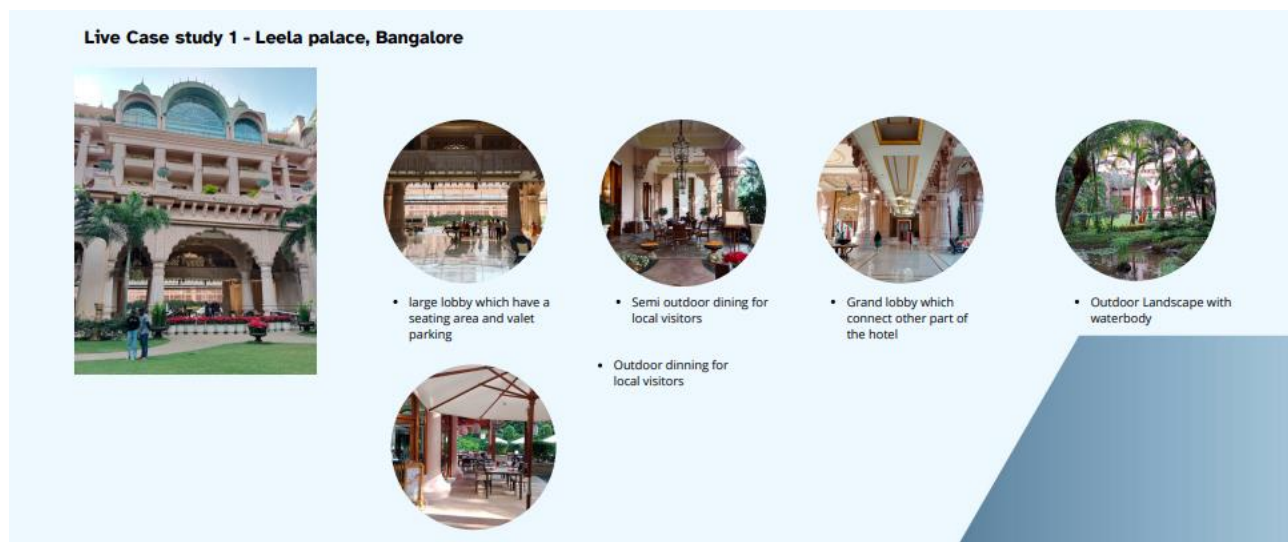


Plate 2.3: LIVE CASE STUDY – LEELA PALACE, BANGALORE

3.2 STANDARDS:

ANNEXURE – III CHECKLIST OF FACILITIES FOR CLASSIFICATION / RE-CLASSIFICATION OF OPERATIONAL HOTELS							
FACILITIES & SERVICES	1*	2*	3*	4*	5*/5*D	Yes/No	COMMENTS
GENERAL							
Full time operation 7 days a week in season	N	N	N	N	N		
Establishment to have all necessary trading licenses / Permissions	N	N	N	N	N		
Establishment to have public liability insurance	D	D	D	D	D		
24hr. lifts for buildings higher than ground plus two floors	N	N	N	N	N		Mandatory for all hotels. Local laws may require a relaxation of this condition. Easy access for the differently abled guests.
Bedrooms, Bathrooms, Public areas and kitchen fully services daily	N	N	N	N	N		
All floor surfaces clean and in good shape	N	N	N	N	N		Floor may be of any type.
GUEST ROOM							
Minimum 10 lettable rooms, all rooms with outside windows / ventilation.	N	N	N	N	N		
Minimum size of bedroom excluding bathroom in sq.ft.	120	120	130	140	200		Rooms should not be less than the specified size. The area may include the vestibule and other covered area within the room but exclude outdoor verandah/ balcony. Single occupancy rooms may be 20 sq.ft. less.
Air – conditioning - % of Rooms	25%	25%	50%	100%	100%		Air –conditioning / heating depends on climatic conditions and architecture. Room Temperature should be between 20 to 28 degree Celsius.
A clean change of bed and bath linen daily and between check –in	N	N	N	N	N		Definitely required between each check – in. On alternate days for 1 & 2 Star category hotels.
Guest linen							Good quality linen to be provided.
Minimum bed width for single 90 cm and double 180 cm.	D	N	N	N	N		
Mattress thickness minimum 10 cm	D	D	N	N	N		Coir, foam or spring foam

Fig 3.1: general standards

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	

Fig 3.2: general standards

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

Fig 3.3: safety and standard

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.

Fig 3.4: bathroom standards

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

Fig 3.5: public area standar

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

Fig 3.6: differently abled guest

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

Fig 3.7: differently abled guest

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

Fig 3.8: food and beverage

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

Fig 3.9: food and beverage outlet

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

Fig 3.10: kitchen

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

Fig 3.11: staff

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

Fig 3.12: guest service

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

Fig 3.13: guest service

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

Fig 3.14: communication cell

							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.

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Fig 2.15: eco friendly practice

ANNEXURE - XIII

Parking Standards

(See Rule 20 of Development Control Rules)

Sl. No. (1)	Building Use (2)	No. of Parking Spaces (3)								
1.	Residential For building with dwelling unit or units of floor area exceeding 75 square metres each	One car space for 75 square metres of floor area or part thereof excluding the first 75 square metres in other words <table><tr><td>Dwelling area</td><td>No. of cars.</td></tr><tr><td>Upto 150 square metres</td><td>1 car space</td></tr><tr><td>above 150 square metres but below 225 square metres</td><td>2 car space</td></tr><tr><td>above 225 square metres but below 300 square metres</td><td>3 car space</td></tr></table> Two wheeler parking - One two wheeler parking space for every dwelling unit with floor area of 40-75 square metres. The dimension of two wheeler parking lot shall be minimum 1.5 metres x 2 metres with a driveway of minimum 1.5 metres. Note :- In such cases where the number of car parking space required does not exceed 3 in number, separate driveway need not be insisted.	Dwelling area	No. of cars.	Upto 150 square metres	1 car space	above 150 square metres but below 225 square metres	2 car space	above 225 square metres but below 300 square metres	3 car space
Dwelling area	No. of cars.									
Upto 150 square metres	1 car space									
above 150 square metres but below 225 square metres	2 car space									
above 225 square metres but below 300 square metres	3 car space									
2.	Commercial (a) Shop and (b) Shopping centre	(i) Floor area upto 50 square metres - Nil (ii) Floor area above 50 square metres but below 100 square metres - 1 car space. (iii) For every additional 50 square metres or part thereof exceeding 100 square metres - 1 car space.								
(c)	Office and firm (including public and Semi public offices)	One car space for every 100 square metres of floor area or part thereof.								
(d)	Restaurants	One car space for every 100 square metres of floor area or part thereof.								
(e)	Hotels and Lodges	1. In starred and major hotels with more than 50 rooms one space for every 4 guest rooms. 2. In unstarred and other hotels - One space for every 10 guest rooms.								
(f)	Assembly Halls, Cinema and Public Halls including Community Centres.	One space for every 20 square metre of auditorium area								
(g)	Kalyanamandapams	One space for every 20 square metre of marriage hall area.								

Fig 3.16: parking

ANNEXURE - XIII

Parking Standards

(See Rule 20 of Development Control Rules)

Sl. No. (1)	Building Use (2)	No. of Parking Spaces (3)								
1.	Residential For building with dwelling unit or units of floor area exceeding 75 square metres each	One car space for 75 square metres of floor area or part thereof excluding the first 75 square metres in other words <table><tr><td>Dwelling area</td><td>No. of cars.</td></tr><tr><td>Upto 150 square metres</td><td>1 car space</td></tr><tr><td>above 150 square metres but below 225 square metres</td><td>2 car space</td></tr><tr><td>above 225 square metres but below 300 square metres</td><td>3 car space</td></tr></table> Two wheeler parking - One two wheeler parking space for every dwelling unit with floor area of 40-75 square metres. The dimension of two wheeler parking lot shall be minimum 1.5 metres x 2 metres with a driveway of minimum 1.5 metres. Note :- In such cases where the number of car parking space required does not exceed 3 in number, separate driveway need not be insisted.	Dwelling area	No. of cars.	Upto 150 square metres	1 car space	above 150 square metres but below 225 square metres	2 car space	above 225 square metres but below 300 square metres	3 car space
Dwelling area	No. of cars.									
Upto 150 square metres	1 car space									
above 150 square metres but below 225 square metres	2 car space									
above 225 square metres but below 300 square metres	3 car space									
2.	Commercial (a) Shop and (b) Shopping centre	(i) Floor area upto 50 square metres - Nil (ii) Floor area above 50 square metres but below 100 square metres - 1 car space. (iii) For every additional 50 square metres or part thereof exceeding 100 square metres - 1 car space.								
(c)	Office and firm (including public and Semi public offices)	One car space for every 100 square metres of floor area or part thereof.								
(d)	Restaurants	One car space for every 100 square metres of floor area or part thereof.								
(e)	Hotels and Lodges	1. In starred and major hotels with more than 50 rooms one space for every 4 guest rooms. 2. In unstarred and other hotels - One space for every 10 guest rooms.								
(f)	Assembly Halls, Cinema and Public Halls including Community Centres.	One space for every 20 square metre of auditorium area								
(g)	Kalyanamandapams	One space for every 20 square metre of marriage hall area.								

Fig 3.16: parking

Sl. No. (1)	Building Use (2)	No. of Parking Spaces (3)																		
2.	i) Radius	Minimum inside radius of lane 4.5m.																		
	ii) Gradient	1. Preferred gradient 4% (1 in 25). 2. Absolute maximum gradient 5% (1 in 20)																		
3.	Head Room	In those parts of a building (above or below ground floor level) used or intended to be used for the parking of wheeled vehicles, the minimum clear height to such part of the building shall be not less than 2.4m. For lorry parking the minimum head room shall be 3.5m.																		
4.	Conditions :	1. The area of each stall shall be flat and free from kerbs and other encumbrances. 2. The angled parking, where a stall is adjacent to a large element such as a wall, minimum stall width shall be 2.7m for parallel parking, where cars cannot be parked by reversing, minimum stall length shall be 7.2m. 3. <table> <tr> <th>Type of Parking</th><th>Stall size Minimum</th><th>Aisle width</th></tr> <tr> <td>(i) Parallel parking</td><td>2.5 x 6.0m Rectangular</td><td>3.5m</td></tr> <tr> <td>30 degree</td><td>2.5 x 5.0m Rectangular</td><td>3.5m</td></tr> <tr> <td>45 degree</td><td>2.5 x 5.0m Rectangular</td><td>3.5m</td></tr> <tr> <td>60 degree</td><td>2.5 x 5.0m Rectangular</td><td>3.5m</td></tr> <tr> <td>90 degree</td><td>2.5 x 5.0m Rectangular</td><td>6.0m</td></tr> </table> 4. The width of aisles and ramps shall be free from kerbs and other encumbrances. 5. Adequate blending of ramp grades at floor levels shall be provided. This can be satisfactorily achieved by the provision of straight slope 3.0m to 3.6m long at half the grade of the ramps. 6. The surface of long spiral ramps shall be super elevated to facilitate movement of vehicles or other adopted. 7. The slope of a curved ramp shall be that of the centreline of its path.	Type of Parking	Stall size Minimum	Aisle width	(i) Parallel parking	2.5 x 6.0m Rectangular	3.5m	30 degree	2.5 x 5.0m Rectangular	3.5m	45 degree	2.5 x 5.0m Rectangular	3.5m	60 degree	2.5 x 5.0m Rectangular	3.5m	90 degree	2.5 x 5.0m Rectangular	6.0m
Type of Parking	Stall size Minimum	Aisle width																		
(i) Parallel parking	2.5 x 6.0m Rectangular	3.5m																		
30 degree	2.5 x 5.0m Rectangular	3.5m																		
45 degree	2.5 x 5.0m Rectangular	3.5m																		
60 degree	2.5 x 5.0m Rectangular	3.5m																		
90 degree	2.5 x 5.0m Rectangular	6.0m																		

Fig 3.17: parking

Sl. No. (1)	Building Use (2)	No. of Parking Spaces (3)	
3.	Wherehouse and Wholesale stores	One lorry space for every 500 square metre of plot area or less.	
4.	Educational Institutions	1. Floor area less than 100 square metre	Nil
		2. Floor area above 100 square metre but less than 1000 square metre	One car space for every 200 square metre of floor area or part thereof.
		3. For every additional 100 square metre of Floor Area or part thereof over 1000 sq.m.	One car space
		Note : Atleast 25% of the total parking space shall be provided in the part of the site abutting the road for parking / stopping of vehicles.	
5.	Hospitals and Nursing Home	One space for every 15 beds of part thereof. One extra area for every 100 square metre of non-bed space in the Hospitals and Nursing Homes.	
6.	Industries	i) Floor Area upto 100 square metre	Nil
		ii) Floor Area upto 500 square metre	One lorry space
		iii) Floor area exceeding 500 square metre	One lorry space for every 500 square metre of total floor area or part thereof.
7.	Other uses (Institutions , Transport and Communications Centre etc.)	As may be specified by the Authority.	
PART - II			
Dimension :		The dimension of parking stall shall be 5.0m x 2.5m with a minimum width of driveway of 3.5m for one way movement and 7.2m width for two way movement. In the case of ware house and godowns and industries the dimension of parking stall shall be 10m x 3.75m with a minimum width of driveway of 3.75m. The number of car spaces required will be calculated on 75% of the total floor area of the building.	

Fig 3.18: parking

- (ix) Hostels and dormitories not exceeding 500 sq.m. in floor area and G+1 floors in height
 - (x) Working women's hostel / old age homes with G+1 floors in height
 - (xi) Assembly halls, welfare institutions not exceeding 300sq.m. in floor area and 18.30m in height (upto crown level in case of leaned roofs).
 - (xii) Govt./Semi Govt. Offices, Banks, Pay Offices, Post Office, Offices of Electricity Board, Tamil Nadu Cooperative Milk Producers Federation Limited, etc. occupying a floor area not exceeding 300 sq.m. and G+1 floors in height
 - (xiii) Daily or weekly markets serving local needs not exceeding G+1 floors.
 - (xiv) Transport depots, bus terminals and railway stations.
 - (xv) Service industries serving the local needs such as flourmills, repair shops, service workshops with installations not exceeding 15 HP, 300sq.m. in floor area and G+1 floor in height.
 - (xvi) Public Utility Buildings like sewage-pumping stations, water works, Fire stations, Telephone exchanges not exceeding 18.30m in height.
 - (xvii) Restaurants not exceeding 300 sq.m. in floor area with G+1 floors in height provided the width of the abutting road is minimum 10 metres
 - (xviii) Clinics, Nursing Homes, Dispensaries and other Health facilities not exceeding 300 sq.m. in floor area with G+1 floors in height provided the width of the abutting road is minimum 10 metres
 - (xix) Departmental stores with a floor area not exceeding 100 Sq.m and with G+1 floors in height provided the width of the abutting road is minimum 10 metres
 - (xx) Fuel filling stations and service stations with installations not exceeding 5 HP and with G+1 floors in height provided the width of the abutting road is minimum 10 metres
 - (xxi) Swimming Pools attached to residential activity in a plot.
 - (xxii) Air-conditioned Cinema Theatres and open-air theatres not exceeding 18.30m in height abutting min. 12 m wide road.
 - (xxiii) Burning burial grounds, crematoria and cemeteries.
 - (xxiv) Religious buildings not exceeding 300 sq.m. in floor area
 - (xxv) On plots/sites not less than 1 Hect. in extent:
 - (a) Beach cottages, hotels and tourism-based developments as may be decided by the Authority not exceeding 18.30m in height.
 - (b) Recreational activities not exceeding 18.30m. in height
 - (c) Educational, technical and research institutions not exceeding 18.30m in height
 - (4)
 - (a) In the Natham sites, and the sites shown as EWS Area in the Master Plan Map the activities listed as A(i) to (viii) and B(i) to (xii) are only permissible.
 - (b) In other areas, all the activities listed in (3)A and (3)B are permissible.
 - (c) Permissible non-residential activity shall be limited to one in a subdivision / plot in cases where it is a residential plot in an approved layout.
 - (5) The extent of the site, plot coverage, FSI, Set back, etc. for the developments shall be regulated as given below:
- (i) Non High Rise Buildings upto 9m height Residential / Commercial Buildings and Other Small developments:**

Fig 3.19: maximum height of the building

- Non High Rise building upto 9m height residential / predominantly residential, clinics, Dispensaries, Nursing homes stated above
- Working women hostels stated above
- Service apartments stated above
- Cottage industries (with number of workers not exceeding 8 and electric machineries not exceeding 5 H.P.) stated above
- Nursery schools, primary schools not exceeding 300 sq.m.
- Reading rooms, libraries, post office, EB office, telegraphic office, Local body maintenance offices not exceeding 300 sq.m.
- Govt., semi Govt. office stated above
- Religious building stated above

	Natham/declared EWS areas / EWS plots	Other Areas
Minimum plot extent	80 sq.m.	220 sq.m.
Minimum frontage	4.5m	12 m
Maximum FSI	1.00	0.80
Maximum Plot coverage	50%	40%
Maximum height	9.0m (G+1 or stilt +2 floors)	9.0m (G+1 or stilt +2 floors)
Minimum set back: In accordance with the Rule 8 where street alignment and building lines have not been specified, it shall be as given below.		
Minimum Front Set Back	1.5m	Abutting road Width
		Min. FSB
		Upto 9m
		Above 9m but less than 18m
		Above 18m but less than 30.5m
SSB	Nil	2m on either side
RSB	Nil	2m

Note:

- Other parameters such as Parking, width of corridor etc shall be regulated as provided elsewhere in these rules.
- For New Sub-divisions and layouts, plot extent and frontage shall be minimum as prescribed above.
- In cases of earlier approved layout plots or approved sites, it shall be as per the approved layout plan or approved site plan and no further sub division shall be allowed or recognised after the date of coming into force of these rule unless it satisfies the regulations applicable for development in Restricted Development Zone. Further even in such approved layout plots or approved sites construction for which permissions sought shall comply with these rules applicable for developments in RDZ.
- In the rear set back of residential premises structures like lavatory, lumber room, garage, etc. not intended for human habitation and servant quarters may be permitted provided that such structures do not occupy more than one-third of

Fig 3.20: setback

(iv) Beach cottages, **hotels**, tourism based developments and recreational activities stated in sub rule (3) B (xvii) (a) and (b) and also daily or weekly markets and other commercial activities stated above shall be regulated with reference to the DR.25 [Tables 7,8, & 9]/ DR 26/ DR 27 as the case may be, subject to a maximum FSI of 0.80 and maximum plot coverage of 40%.

the rear width of the site and 6 m from the rear boundary; provided further that the height of such structures do not exceed 4 m measured from the ground level of the site.

(ii) Other large institutional developments such as Religious Buildings, Higher Educational, Technical and Research Institutions shall be regulated with reference to the planning parameters given in rule 37 subject to a maximum FSI of 0.80 and maximum plot coverage of 40%. Assembly halls and other assembly buildings /places of public assembly shall have minimum set back of 6m all around.

(iii) Service industries stated in (3) (xiv) above shall be regulated with reference to the planning parameters given in rule 36 subject to maximum FSI of 0.80 and maximum plot coverage of 40 %.

(iv) Beach cottages, hotels, tourism based developments and recreational activities stated in sub rule (3) (xxv) (a) and (b) and also daily or weekly markets and other commercial activities stated above shall be regulated with reference to planning parameters given in rule 35, subject to a maximum FSI of 0.80 and maximum plot coverage of 40%.

(6) The laying out and sub division / amalgamation/reconstitution of land for building purposes shall be carried out in accordance with the provisions specified in rule 47 subject to minimum plot extent and frontage as specified above. No new subdivision or layout shall obstruct the access to beach by general public and the developers shall provide access of adequate width to beach when such developments are made

(7) **Rain water harvesting** – (a) Within the site major part of the area which is not covered by the buildings / structures shall not be paved and it shall be maintained as green space with proper rain water harvesting provisions allowing the storm water collected during precipitation percolates below and recharge the aquifer.

(b) Any direction / instruction given by the approving authority in the matter of preservation of the aquifer recharge shall be carried out by the applicant, land owners, buyers, developers. If any direction / instruction is not carried out, action may be taken by the approving authorities to carry out the work and the expenditure incurred for that work shall be collected from those who failed to carry out the direction / instruction as if it is an arrear of land revenue by the authority concerned or by the Taluk Tahsildar.

(c) Any failure to carry out the direction / instruction or fulfill the condition shall be the sufficient ground for ordering for discontinuance of the activity in the premises.

[8] The sewage disposal system within the premises shall be so designed not to pollute the aquifer

Fig 3.21: rain water harvesting

(10) Restaurants and Hotels

(a) Restaurants, Fast Food outlets	
(A) Corporation Limit, Municipalities, IT Corridor	(B) Panchayat Areas
1 car space for every 50sqm of floor area or part thereof and 1 two wheeler space for every 25sqm of floor area or part thereof	1 car space for every 100sqm of floor area or part thereof and 1 two wheeler space for every 50sqm of floor area or part thereof
(b) Starred Hotels, Major Hotels and Lodges with more than 50 rooms in CMA	
1 car space for every 4-guest rooms and for the non-room area, 1 car space for every 100sqm of floor area or part thereof and 1 two wheeler space for every 50sqm of floor area or part thereof. For restaurants in these hotels – same as that specified for restaurants specified above.	
(c) UnStarred Hotels, other Hotels & Lodges in CMA	
1 car space for every 10-guest rooms and for the non-room area, 1 car space for every 100sqm of floor area or part thereof and 1 two wheeler space for every 50sqm of floor area or part thereof. For restaurants in these hotels – same as that specified for restaurants specified above.	

Fig 3.22: restaurant and hotels

- **Executive housekeeper:** 1 for a 300-room property
- **Secretary to the Executive Housekeeper:** 1 normally only in a very large full-service hotel.
- **Assistant housekeepers:** 2 (1 per morning and evening shift)
- **Floor supervisors:** 1 per 60 rooms for the morning shift; 1 for the evening shift; 1 for the night shift.
- **Public area supervisors:** 1 for each shift
- **Linen/Uniform room supervisors:** 1 for each shift
- **Room attendants:** 1 per 16 rooms for the morning shift; 1 per 30 rooms for the evening shift (if turn-down service is provided)
- **Linen and uniform room attendants:** 2
- **Housemen:** depends on the size of public areas and functions expected, but on average, 1 per 60 rooms
- **Desk attendants:** 1 per shift
- **Tailors/upholsterers:** 2 (may differ depending on the size of the hotel)
- **Horticulturist:** 1 or more depending upon the size of the hotel.
- **Head gardeners:** 1 per 20 horticulturists
- **Gardeners:** 1 per 4500 sq. ft of landscaped area

Eligibility to apply in hotel classification

Hotels must fulfill the basic requirements to be eligible to apply. The hotels should adhere to the following instructions such as the carpet area of the following rooms and the area of the bathrooms should be following units.

Hotels classification on the basis of carpet area.	Single AC room	Double AC room	Bathroom
5-star Deluxe & 5-star hotels	180sq. ft	200 sq ft.	45 sq. ft
4-star hotel & 3-star hotel	120 sq. ft	140 sq ft	36 sq. ft
2 star & 1-star hotel	100 sq. ft	120 sq. ft	30 sq. ft (or subject to local by-laws)

Fig 3.24: room size

Table 18 Restaurants (Clause 5.2.5.1)					
Sl No.	Fixtures	Public Rooms		Non-Residential Staff	
		Male	Female	Male	Female
(1)	(2)	(3)	(4)	(5)	(6)
i)	Water-closets	1 per 50 seats up to 200 Over 200 add at 1 per 100 or part thereof	2 per 50 seats up to 200 Over 200 add at 1 per 100 or part thereof	1 for up to 15 2 for 16-35 3 for 36-65 4 for 66-100	1 for up to 12 2 for 13-25 3 for 26-40 4 for 41-57 5 for 58-77 6 for 78-100
ii)	Ablution tap	One in each water-closet 1 water tap with draining arrangements shall be provided for every 50 persons or part thereof in the vicinity of water-closets and urinals	One in each water-closet	One in each water-closet	One in each water-closet
iii)	Urinals	1 per 50 persons or part thereof	—	Nil up to 6 1 for 7 to 20 2 for 21-45 3 for 46-70 4 for 71-100	—
iv)	Washbasins	1 per WC	1 per WC	1 per WC	1 per WC
v)	Cleaner's sink			1 per each restaurant	
vi)	Kitchen sink/Dish washer			1 per kitchen	
NOTES					
1 Some WC's may be European style if desired.					
2 Male population may be assumed as two-third and female population as one-third.					
3 Provision for additional and special fittings where required shall be made.					

Fig 3.26: restaurant toilets

Sl No.	Fixtures	Public Rooms		Non-Residential Staff	
		Male	Female	Male	Female
(1)	(2)	(3)	(4)	(5)	(6)
i)	Toilet suite comprising one WC, Washbasin with Shower or a Bath tub	Individual guest rooms with attached toilets		—	
Guest Rooms with Common Facilities					
ii)	Water-closets	1 per 100 persons up to 400 Over 400 add at 1 per 250 or part thereof	2 per 100 persons up to 200 Over 200 add at 1 per 100 or part thereof	1 for up to 15 2 for 16-35 3 for 36-65 4 for 66-100	1 for up to 12 2 for 13-25 3 for 26-40 4 for 41-57 5 for 58-77 6 for 78-100
iii)	Ablution tap	One in each water-closet 1 water tap with draining arrangements shall be provided for every 50 persons or part thereof in the vicinity of water-closets and urinals	One in each water-closet	One in each water-closet	One in each water-closet
iv)	Urinals	1 per 50 persons or part thereof	—	Nil up to 6 1 for 7 to 20 2 for 21-45 3 for 46-70 4 for 71-100	—
v)	Washbasins	1 per WC/Urinal	1 per WC	1 for up to 15 2 for 16-35 3 for 36-65 4 for 66-100	1 for up to 12 2 for 13-25 3 for 26-40 4 for 41-57
vi)	Bath (Showers)	1 per 10 persons or part thereof		—	—
vii)	Cleaner's sink	1 per 30 rooms, minimum 1 per floor			
viii)	Kitchen sink	1 per kitchen			
NOTES					
1 Some WC's may be European style if desired.					
2 Male population may be assumed as two-third and female population as one-third.					
3 Provision for additional and special fittings where required shall be made.					

Fig 3.27: public toilets

xvii) On plots/sites not less than 1 Hect. in extent:

- (a) Beach cottages, hotels and tourism-based developments as may be decided by the Authority not exceeding 15.25m in height.
 - (b) Recreational activities not exceeding 15.25m. in height
 - (c) Educational, technical and research institutions not exceeding 15.25m in height
- (vii) For public buildings such as Kalyana mandapam assembly halls, exhibition halls, hospitals, nursing homes, hotels, lodging houses, cinema theatres, multiplex or malls etc. set back all around shall not be less than 6m.

(10) Restaurants and Hotels

(a) Restaurants, Fast Food outlets	
(A) Corporation Limit, Municipalities, IT Corridor	(B) Panchayat Areas
1 car space for every 50sqm of floor area or part thereof and 1 two wheeler space for every 25sqm of floor area or part thereof	1 car space for every 100sqm of floor area or part thereof and 1 two wheeler space for every 50sqm of floor area or part thereof
(b) Starred Hotels, Major Hotels and Lodges with more than 50 rooms in CMA	
1 car space for every 4-guest rooms and for the non-room area, 1 car space for every 100sqm of floor area or part thereof and 1 two wheeler space for every 50sqm of floor area or part thereof. For restaurants in these hotels – same as that specified for restaurants specified above.	
(c) UnStarred Hotels, other Hotels & Lodges in CMA	
1 car space for every 10-guest rooms and for the non-room area, 1 car space for every 100sqm of floor area or part thereof and 1 two wheeler space for every 50sqm of floor area or part thereof. For restaurants in these hotels – same as that specified for restaurants specified above.	

Fig 3.28: restaurant and hotels

1. HOTEL ADMINISTRATION

- Can range between 01 to 02 % of the total floor area of the hotel
- It includes the Executive Offices as well as Sales, Accounting Personnel and any other admin support offices.
- A total of 10 sq ft./ guest room is allocated for this category.

Fig 3.29: admin

1. Food Preparation

- Telephone switch board and equipment- 1.3 to 02 sq ft./ guest room
- Computer room (Main server along with battery backup)- 01 to 1.5 sq ft./ guest room
- Mechanical, Electrical and Air handling rooms and systems- 13 to 18 sq ft./ guest room .
- Maintenance workshop- 05 sq ft./ guest room
- Security- 0.3 to 0.6 sq ft./ guest room
- Circulation- 10% of the total area for support facilities and services

fig 3.30: food preparation

1. Other storage areas, Maintenance and MISCELLANEOUS
 - Hotel general storage- 03 to 07 sq ft./ guest room
 - Meeting room storage- 01 to 1.5 sq ft./ seat OR 10 to 20% of meeting room area
 - Miscellaneous storage (Garbage, empty bottles, cans etc.)- 01 to 1.8 sq ft./ guest room

1. SUPPORT FACILITIES & SERVICES

These are required to run the public facilities-

Ex Swimming Pool- Filtration Plant and Pump house is support facility

Restaurant- Kitchen is support

The amount of space allocated here varies between 10 to 15 % of the total floor area of the hotel which depends upon the public facilities provided by the hotel.

Fig 3.31 storage

fig 3.32: services

Sl. No. (1)	Building Use (2)	No. of Parking Spaces (3)
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PART - III

Multi Level Parking :

1. No. of storeys permissible
2. Gradient and ramps
 - 1 in 10 generally
 - 1 in 8 minimum
3. Clear height between floors
 - 2.10m minimum
4. Parking stall dimension
 - 2.5m x 5.0m
5. Inside radius of curve
 - 7m minimum
6. Width of traffic lane, ramps and entrance
 - 7.5m minimum
7. Gradient of slopping floors
 - Not steeper than 1 in 20
8. Loading standards
 - 400kg / sq.m. maximum
9. Ramps if two way, shall be separated.

Fig 3.33: parking space

42. Corridor / Verandah Width.— The minimum width of corridor or verandah within buildings shall be as given below.

Sl. No.	Building use or type	Minimum width of corridor or verandah
(i)	Residential buildings	1.0 m
(ii)	Assembly buildings such as Auditoriums, Kalyanamandapams, cinema theatres, Religious buildings, temples, mosques or churches and other buildings of public assembly	2.0 m
(iii)	Institutional buildings	
a)	Government offices	2.0 m
b)	Hospitals	2.4 m
c)	Educational Buildings such as schools, colleges, Research Institutions	2.0 m
d)	Commercial buildings such as private offices, Nursing Homes, etc.	2.0 m
e)	All other buildings including hotels	1.5m

Fig 3.34: corridor

(a) Restaurants, Fast Food outlets	
(A) Corporation or Municipal Areas	(B) Panchayat Areas
1 car space for every 50sq.m of floor area or part thereof and 1 two wheeler space for every 25sq.m of floor area or part thereof	1 car space for every 100sq.m of floor area or part thereof and 1 two wheeler space for every 50sq.m of floor area or part thereof
(b) Starred Hotels, Major Hotels and Lodges with more than 50 rooms in CMA	
1 car space for every 4-guest rooms and for the non-room area, 1 car space for every 100sq.m of floor area or part thereof and 1 two wheeler space for every 50sq.m of floor area or part thereof. For restaurants in these hotels – same as that specified for restaurants specified above.	
(c) Unstarred Hotels, other Hotels & Lodges	
1 car space for every 10-guest rooms and for the non-room area, 1 car space for every 100sq.m of floor area or part thereof and 1 two wheeler space for every 50sq.m of floor area or part thereof. For restaurants in these hotels – same as that specified for restaurants specified above.	

Fig 3.35: fast food outlet

Table:2 Sanitation Requirements for Hotels

Individual guest rooms shall have attached toilets. In addition, the following shall also be provided.

Sl. No.	Sanitary Unit	For Residential Public staff	For non residential Staff	
			For male	For female
1.	Water Closet (W.C.)	One per 8 Persons omitting occupants of the attached water closet minimum of 2 if both sexes are lodged	1 for 1-15 persons 2 for 16-35 persons 3 for 36-65 persons 4 for 66-100 persons	1 for 1-12 persons 2 for 13-25 persons 3 for 26-40 persons 4 for 41-57 persons 5 for 58-77 persons 6 for 78-100 persons Add 1 for every 6 persons or part thereof

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2.	Ablution Taps	One in each W.C	One in each W.C	One in each W.C.
3.	Urinals	Nil	Nil up to 6 persons 1 for 7-20 persons 2 for 21-45 persons 3 for 40-70 persons 4 for 71-100 persons	Nil
4.	Wash Basins	One per 10 persons	1 for 15 persons 2 for 16-35 persons 3 for 36-65 persons 4 for 66-100 persons	1 for 1-12 persons 2 for 13-25 persons 3 for 26-40 persons 4 for 41-57 persons 5 for 58-77 persons 6 for 78-100 persons
5.	Baths	One per 10 persons	Nil	Nil
6.	Cleaner's sinks	One per 10 persons. Less occupants of room with bath in suite	Nil	Nil
7.	Kitchen Sink	One in each Kitchen	One in each Kitchen	One in each Kitchen

Fig 3.36: sanitation requirement

(xxv) On plots/sites not less than 1 Hect. in extent:

- (a) Beach cottages, hotels and tourism-based developments as may be decided by the Authority not exceeding 18.30m in height.
- (b) Recreational activities not exceeding 18.30m. in height
- (c) Educational, technical and research institutions not exceeding 18.30m in height

e). Recreational Facility
-Can range from none to extensive depending on market requirement
* Swimming pool- 10 -20 sq ft./ guest room.
* Locker/Shower/Toilet Area- 02 sq ft./ guest room
* Health Club- 02 sq ft./ guest room
*Greenery required- 1500 sq. ft. lump sum
* Circulation Area- It varies from 15 to 20 % of the total public area (excluding meeting room area as it is already considered under pre function area)

c). Dining Room and lawn.
Varies between 4 to 6% of the total floor area of the hotel
• Coffee shop- 15 to 18 sq. ft./ seat • Specialty Restaurant-18 to 20 sq. ft./ seat • Formal dining- 20 to 22 sq. ft./ seat • Cocktail lawn- 15 to 18 sq. ft./ seat
d). Function space
- can range from none to substantial depending on market requirement.
-When meeting space included it varies between 1 to 2 meeting seat/ guestroom,
-Function space could be of various nature
* Ball room- 10 to 12 sq. ft./ seat

fig 3.37:recreational area

fig 3.38: functional space

1. <u>Hotel Employee facilities</u>
• Locker/ restrooms- 06 to 10 sq. ft/ guestroom
• Cafeteria- 04 sq ft/ employee
• Lounge- 01 sq ft/ guestroom
1. <u>Housekeeping</u>
• Laundry- 07 sq ft./ guest room
• Linen storage(not on the guest floor) – 03 sq ft./ guest room
• Guest Laundry (receive and dispatch area) – 0.8 to 1.5 sq ft./ guest room
• Uniform Issuing- 01 sq ft./ guest room

1. PUBLIC FACILITIES
(Restaurants, Spa, Lobby, Washrooms, Banquets, Conference Halls, Lounge etc.)
The amount of space allocated to the various public facilities will fluctuate.
It varies between 10 to 20% of the total floor area of the entire hotel
a).Lobby
It varies between 2 to 6 % of the total floor area of the hotel
Main lobby (for the circulation and movement of guest) is 7 to 10sq. ft. /guestroom
*Seating area- 0.7 to 1 sq. ft. / guestroom
* Front Desk- 3 to 4 sq. ft. / guestroom

Fig 3.39: housekeeping

Fig 3.40: public facility

**Requirements of Fire Safety Arrangements and Life Safety Measures for
Various Uses of Buildings**
Group A: Residential - (15 meter and above but not exceeding 30 meter)

Sub Division A5 - <i>Hotels</i>		
Sl. No.	Types of Fire Protection (Active Defense)	Requirements
1.	Fire Extinguishers	Minimum 2 per floor, depending upon the area and travel distance.
2.	Hose Reel Assembly	Provided at each floor (Per 1000 m2.)
3.	Wet-riser	Covering all the floors (Per 1000 m2).
4.	Yard Hydrant	All around the building at 30mts Interval
6.	Fire Service Inlet	To be provided at the ground floor.
5.	Automatic Sprinkler System	Provided for the entire building including basement.
7.	Manually operated fire alarm (MCP) Call points	To provided in each floor near exit door
8.	Automatic Detection and Alarm system	Provided covering all the floors.
9.	Underground water tank	1,50,000 liters.
10.	Terrace level over head tank	20,000 liters.
11.	Fire Pumps at ground level	1 electric and 1 diesel pump of each capacity 2280 LPM and 1 electric pump 180 LPM (Jockey Pump)
Life Safety (Passive Defense)		
12.	Staircase (2 meters width)	2 nos. remote from each other (pressurization of staircases (Protected escape routes)
13.	Fire lift	1 No. per 1200 m2
14.	Side Set Back Area	7 meters all round the building
15.	"Exit" signage	With alternate source of power supply or battery back-up with glow type
16.	Emergency Lights	At staircase landing and exit routes.
17.	Fire Control Room	Should be provided
18.	Fire drill and fire order	Fire drill to be conducted once in a year, fire order should be prepared and kept ready.
19.	Refuge Area	Refuge Area to be provided at 24 th meters, if balcony is not provided.
20.	House keeping	Entire building should be maintained neat and clean.
21.	Cable and other ducts	Sealed at each floor level to check the spread of smoke, heat and flame.
22.	Fire Damper	Located at air conditioned ducts for check the spread of heat, flame smoke and gases.

Fig 3.41: fire safety

Regulation for developments in the Aquifer Recharge Area

(1) In the interest of maintaining the aquifers in the area and to realise the full benefits of recharge into this aquifer during precipitation, this aquifer recharge area that serve as one of the major sources for city water supply has been declared as aquifer recharge area restricted for development. Details of villages covered in the aquifer recharge area are given in MapNo.MP-II/CMDA.10/2008 and it is bounded by city limits in the north, CMA limits in the south, B'canal in the west and coastal line in the east falling in the following villages:

- (i) Kottivakkam
- (ii) Palavakkam
- (iii) Neelankarai
- (iv) Okkiamthuraipakkam
- (v) Injambakkam
- (vi) Karapakkam
- (vii) Sholinganallur
- (viii) Uthandi

(2) Parts of the Restricted Development Zone area to a depth of 500 m from the High Tide Line of the sea and 100 m from the Buckingham canal lie in the Coastal Regulation Zone as per the Coastal Zone Management Plan. Developments there in shall also be subject to the Coastal Zone Regulation notified by Government of India under the Environment (Protection) Act, 1986 and the amendments made from time to time.

(3) In the Restricted Development Zone, Non High Rise upto 9m height with 6 dwelling units residential and commercial buildings, institutional and other non High rise building shall be permitted only for the following purposes and accessory uses.

Permissible Developments.

- (i) Any Non High Rise upto 9m height with 6 dwelling units residential building including dwelling, detached, semi-detached, tenements or flats and service apartments.
- (ii) Professional consulting offices and incidental uses thereto occupying a floor area not exceeding 40 sq.m. and G+1 floors in height
- (iii) Schools of Commerce including Tutorial Institutions not exceeding 100 sq.m. in floor area and G+1 floors in height
- (iv) Petty shops dealing with daily essentials like retail sale of provisions, soft drinks, etc., tea stalls, bakery, confectionary, retail shops, mutton stalls, milk kiosk, cycle repair shops, tailoring shops etc. occupying a floor area not exceeding 40 sq.m. and G+1 floors in height
- (v) Nursery schools, Primary Schools, High Schools, Higher Secondary Schools, Libraries and reading rooms.
- (vi) Parks, play grounds, farms, gardens, nurseries, including incidental buildings thereon
- (vii) Cottage industries listed in Annexure - V (with number of workers not exceeding 8 and electric machineries not exceeding 5 H.P.) with G+1 floors in height
- (viii) Storage of domestic cooking gas cylinders not exceeding 300 M² in floor area subject to the conditions prescribed in G.O.Ms.No.329 dated 24.2.1977 viz. necessary the Applicant should obtain clearance from the Director of Fire & Rescue Services and from the Dept. of Explosives of the Govt. of India.

Fig 4.42: aquifer recharging area

CHAPTER 4

SITE STUDY AND ANALYSIS

4.1 SITE STUDY:

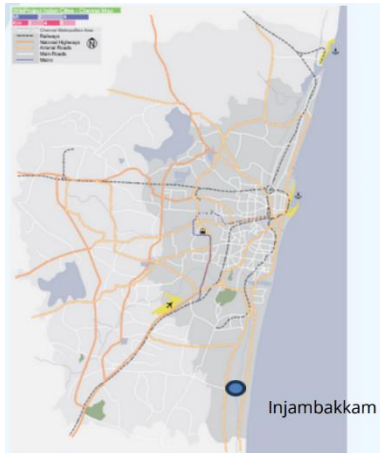


Fig 4.1: site location

CONNECTIVITY

- Airport – 19 km
- Tambaram Railway Station- 20 km
- Mahabalipuram- 36 km

Transportation

ECR is a vital route connecting various suburban areas, towns, and tourist destinations. ECR connects several residential neighborhoods, educational institutions, and commercial hubs, enhancing overall regional connectivity. ECR experiences heavy traffic, especially during weekends and peak tourist seasons, leading to congestion and delays. There is now a pedestrian path way.

4.2 SITE JUSTIFICATION AND FEASIBILITY:

In 2020, Tamil Nadu welcomed around 140 million domestic tourists, Uttar Pradesh saw around 86 million, Karnataka was visited by around 77 million, Andhra Pradesh

had around 70 million visitors,

and Telangana experienced a footfall of 40 million domestic tourists.

- Chennai has always been the central hub of all social, cultural,

economic, industrial and commercial

- development of South India. Having many interesting places like museums, temples, beaches, and
- parks, Chennai is one of the most visited tourist places in Tamil Nadu.



Fig 4.2: site selection

12°55'46.0"N 80°15'23.0"E (Injambakkam) Area – 12.5 Acre

Some other

consideration for the

site selection

Top Tourist Attraction in

Injambakkam,

- Vgp Marine Kingdom.
- Vgp Golden Beach.
- Vettuvankeni Olive Beach.
- Enchambakkam Beach.
- Akkarai Beach.
- Injambakkam Beach.

- Live Art Museum.
- Sea Shells Beach.
- Very premium location, as this part of the city is known for seaside experiences.
- Views and vistas are very important as part of the hotel. This site has view over Bay of Bengal.

4.3 SITE ANALYSIS:

4.3.1 Neighborhood Context:

Land use and urban character

Most of the buildings around the site are commercial buildings and empty grounds. There is no residential structures near the site.



Fig 4.3: land use map

soft/ hard landscape

many trees are on the site, which can be used as a recreational space in the design There is an some abandoned driven theatre in the site

Nodes

Their are two nodes in the edge of the site in one node has a bus

Activities

Mostly commercial activities are happening around the site evening time people gather on the nearby beach to chillout

Local Bylaws

- FSI Allowed -0.8
- Site Area – 50585 sq m
- Allowed Built-up Area -40,468 sq m
- Height Restriction -12 m
- Allowed Ground Coverage – 40%
- Ground Coverage –20234 sq. m
- Parking space – 1 car space for every 4-guest room.



Plate 4.1: site analysis

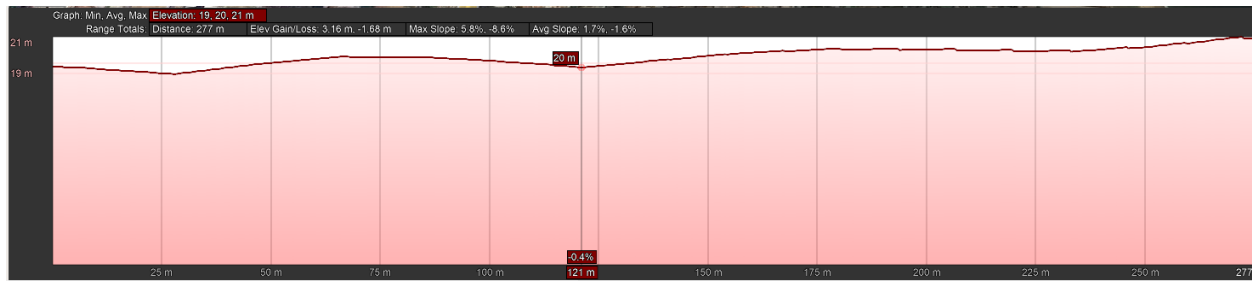


Fig 4.4: lowest point in site

SWOT Analysis

Strength

Travelers going to Mahabalipuram from Chennai will be passing through this site.

Site near Injambakkam Beach. Beach view

cool breeze from the beach Beachfront locations often attract tourists, leading to potential economic opportunities

for businesses.

Incorporating sustainable and environmentally friendly architectural practices can appeal to eco-conscious visitors.

Weakness

harsh weather conditions, including saltwater, strong winds, and storms. Coastal areas often experience high humidity levels.

saltwater can lead to accelerated corrosion of building materials. Maintaining the ecological balance and protecting the natural habitat can be challenging

in a beachside location. Coastal construction may involve additional expenses due to the need for materials

resistant to saltwater corrosion and stringent building standards.

Strict coastal building codes and regulations may limit the creative freedom of architects and add complexity to the design process.

Opportunities:

Emphasizing sustainable and eco-friendly tourism practices can attract environmentally conscious

travelers. Cultural Events: Hosting cultural events or festivals can enhance the site's appeal and attract a diverse range of visitors. Partnering with local businesses for services like restaurants, souvenir shops, and tours can create a more comprehensive visitor experience.

Incorporating local cultural elements into the architecture can provide a unique and authentic experience for visitors. Planning for mixed-use spaces, including retail, dining, and entertainment, can diversify offerings and attract a broader audience.

Threats:

Natural Disasters: Coastal areas are susceptible to natural disasters, posing a threat to architectural structures. High maintenance costs for coastal architecture may strain budgets, particularly during economic downturns. Nearby beach destinations or alternative tourist spots may pose competition, affecting visitor numbers.

Climate

The climate of Chennai (or Madras) is tropical, with a rainy season from July to December and a dry season from January to May. The wettest period is from mid-October to mid-December, due to the north-east monsoon or retreating monsoon. The city is the capital of the state of Tamil Nadu and is located in southeastern India, at 13 degrees north latitude, on the coast of the Bay of Bengal. In June, the summer monsoon begins on the south-west coast of India, but the south-east side is protected by the Western Ghats, so the rains are not abundant. However, the hottest time of the year is the one before the monsoon, from late May to early June. At the end of May 2003, the temperature reached 45 °C (113 °F). Instead, the coolest period (or the least hot) is from November to January. The best months to visit Chennai are January and February, as they are the least hot within the dry season. From March to May, it is still the dry season but it is very hot. The average temperature of the coldest month (January) is of 25.4 °C (77.7 °F), that of the warmest month (May) is of 33.0 °C (91.3 °F). Here are the average temperatures.

Chennai - Average temperatures (1991-2020)						
Month	Min (°C)	Max (°C)	Mean (°C)	Min (°F)	Max (°F)	Mean (°F)
January	20.7	30.1	25.4	69	86	77.7
February	21.6	31.8	26.7	71	89	80.1
March	23.6	34.2	28.9	74	93	84
April	26.1	36.1	31.1	79	97	88
May	27.5	38.4	33	81	101	91.3
June	27	37.7	32.3	81	100	90.2
July	26	36	31	79	97	87.8
August	25.4	35	30.2	78	95	86.4
September	25.1	34.6	29.9	77	94	85.7
October	24.4	32.8	28.6	76	91	83.4
November	23	30.6	26.8	73	87	80.3
December	21.5	29.6	25.6	71	85	78
Year	24.3	33.9	29.05	75.8	93.1	84.5

Fig 4.5: avg temperature

Chennai - Sunshine hours		
Month	Average	Total
January	7.5	230
February	8.5	240
March	9.5	290
April	10	295
May	9.5	300
June	8	235
July	4.5	145
August	6	190
September	6.5	195
October	8.5	255
November	8.5	260
December	7	210
Year	7.8	2850

Fig 4.6: sunshine hours

CHAPTER 5

ARCHITECTURAL DESIGN

5.1 SPATIAL REQUIREMENTS

No	Program	numbers	Total area
1	Communication cell	1	30 sq m
2	Account section	1	25 sq m
3	HR manager room	1	20 sq m
4	Admin Toilet	1	50 sq m
5	Housekeeping manager room	1	20 sq m
6	Legal department	1	17 sq m
7	Engineering department	1	17 sq m
8	General manager room	1	20 sq m
9	surveillance room	1	20 sq m
10	Meeting room	1	65 sq m
11	Meeting room	1	150 sq m
12	Conference Hall	1	270 sq m
13	Public Toilet	1	170 sq m
14	staff cafeteria	1	185 sq m
15	Staff Toilet	1	80 sq m
16	male locker room & Toilet	1	95 sq m
17	female locker room & Toilet	1	95 sq m
18	Banquet hall	1	1600 sq m
19	Kitchen	1	290 sq m
20	Flour	1	30 sq m
21	Cold kitchen	1	40 sq m
22	Dry store room	1	25 sq m
23	Butchery	1	23 sq m
24	Walk-in-chiller	1	15 sq m
25	Walk-in-Freezer	1	13 sq m
26	Electrical room	4	56sq m
27	AHU room	4	136 sq m
28	restaurant Toilet	1	25 sq m
29	Restaurant	1	225 sq m
30	Lobby	1	450 sq m

30	Lobby	1	450 sq m
31	Portico	1	325 sq m
32	Engineering & mechanical	1	450 sq m
33	Public parking	1	800 sq m
34	Guest parking	1	4500 sq m
35	meeting room	1	25 sq m
36	florist room	1	25 sq m
37	Linen room store	1	50 sq m
38	Staff Toilet	1	40 sq m
39	floor pantry room	1	25 sq
40	Horticulturist	1	10 sq m
41	Night supervisor	1	7 sq m
42	Line/uniform supervisor	1	7 sq m
43	laundry chutes	1	15 sq m
44	Desk control room	1	7 sq m
45	Executive Housekeeper secretary	1	9 sq m
46	Assistant Executive Housekeeper	1	9 sq m
47	Executive Housekeeper	1	9 sq m
48	Floor supervisor	1	9 sq m
49	Public area supervisor	1	9 sq m
50	Cleaning Equipment	1	43 sq m

51	Housekeeping cleaning Product	1	23 sq m
52	HK pantry room	1	5 sq m
53	Tailor's room	1	21 sq m
54	Uniform room	1	30 sq m
55	Lost and Found room	1	21 sq m
56	Linen room	1	30 sq m
57	Ironing room	1	60 sq m
58	laundry room	1	30 sq m
59	change room	1	40 sq m
60	Gym	1	250 sq m
61	Indoor swimming pool	1	225 sq m
62	Manicure pedicure	1	60 sq m
63	steam bath	1	25 sq m
64	sauna	1	25 sq m
65	Massage	1	18 sq m
66	Shower room	1	25 sq m
67	Salon	1	50 sq m
68	carrom room	1	50 sq m
69	snooker room	1	33 sq m
70	Karaoke nights	1	250 sq m
71	Pool	1	740 sq m
72	Cleaning Equipment	2	60 sq m
73	Housekeeping cleaning Product	2	60 sq m
74	Floor supervisor	2	16sq m
75	Cafeteria	2	280 sq m
76	Storage	3	61sq m
77	Mock tail Bar	1	180 sq m
78	Mini theatre	1	15 sq m
79	Single room	48	1344 sq m
80	Double room	51	1530 sq m
81	Twin room	19	855 sq m
82	Suite room	22	1320 sq m
83	Executive suite room	10	750 sq m

18113 sq m

Fig 4.7: area statement

5.2 CONCEPT

5.2.1 Strategies can be followed at site level:

(a) Orientation -

The built forms longer facades can be oriented facing the east to get the maximum view towards the beach.

The hotel's architectural design revolves around the use of circular and elliptical shapes, both in its exterior facade and interior spaces.

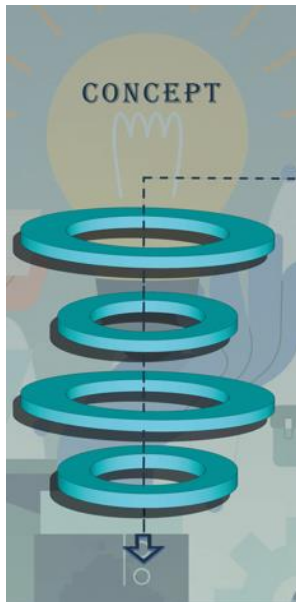


Fig 4.7: form

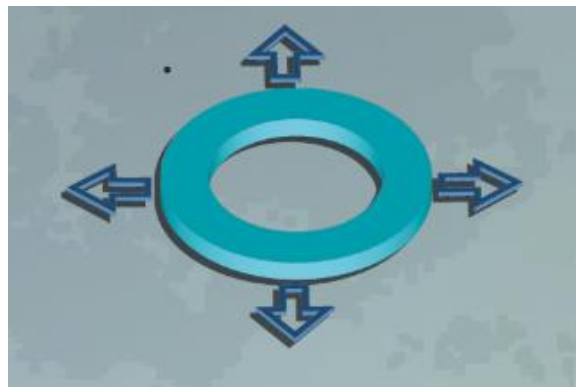


fig 4.8: concept

(b) Built form -

using circles and ellipses as my main geometry to create the overall shape of my building by overlapping circle and ellipse in alternative pattern.



Fig 4.9: site plan

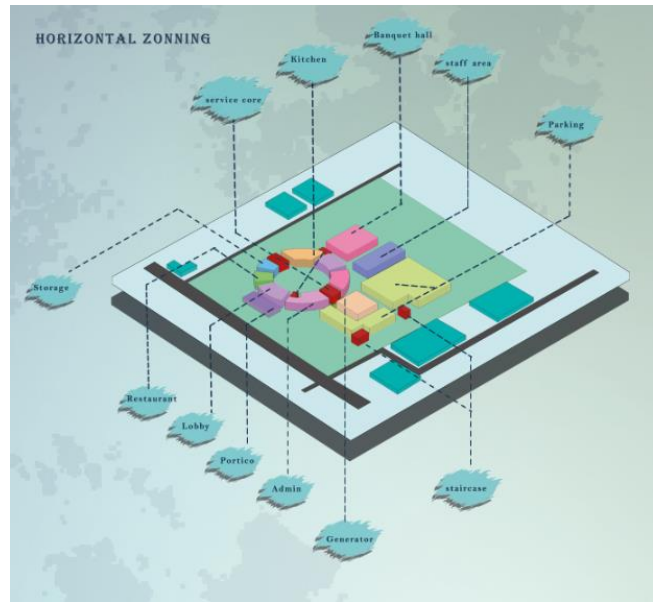


plate 4.2: site zoning

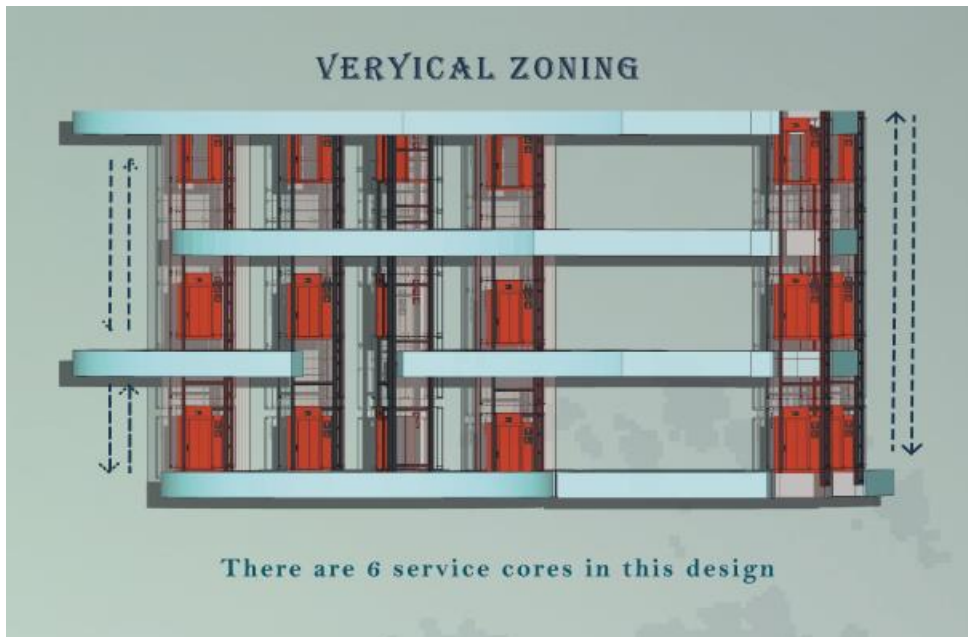


Fig 4.10: vertical zoning



Plate 4.3: vehicular circulation

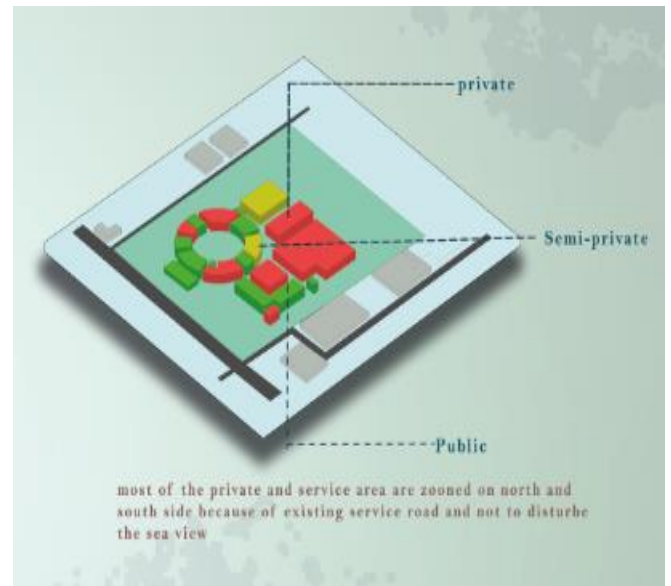


plate 4.4: privacy zoning



Plate 4.5: master plan

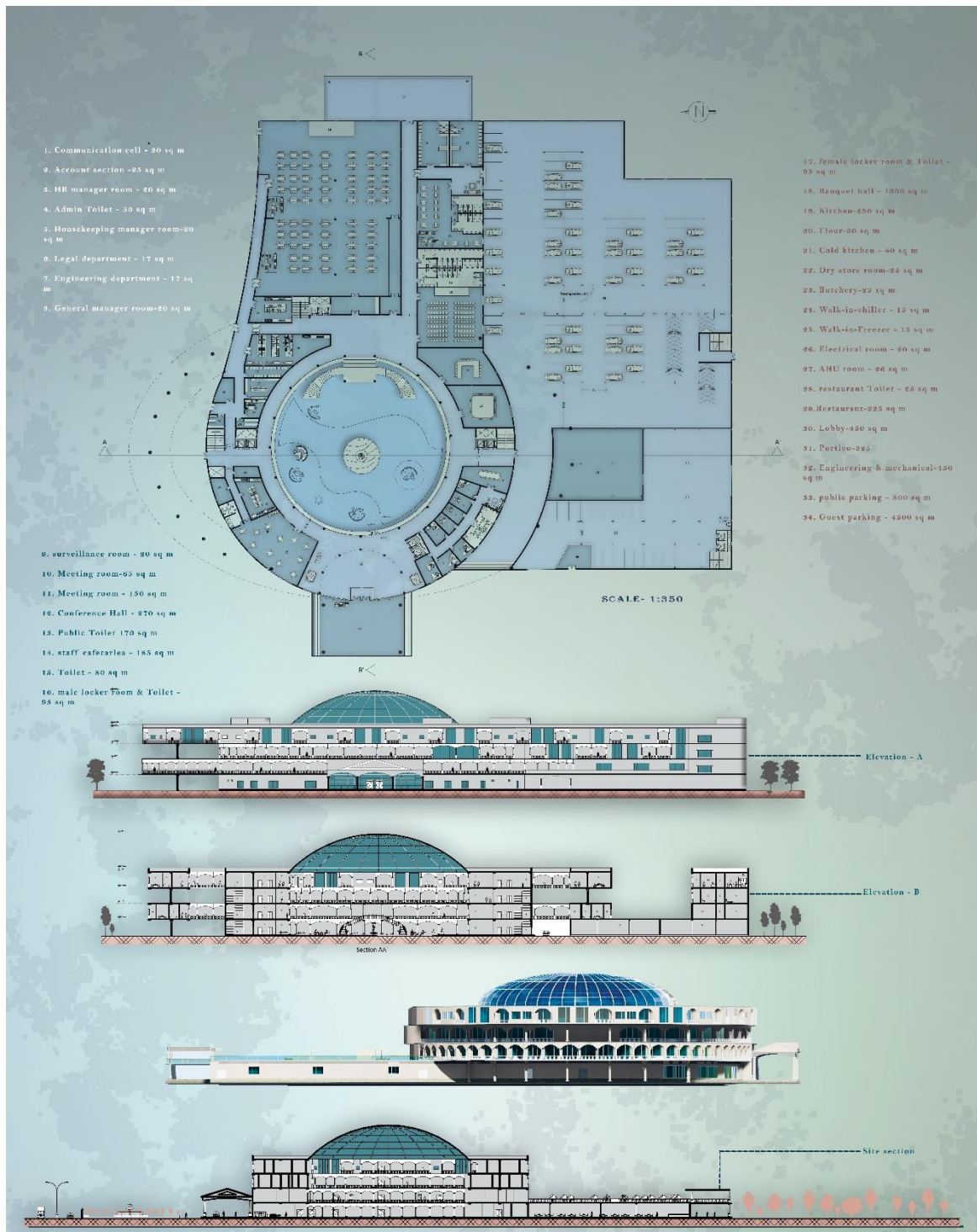


Plate 4.6: ground floor plan

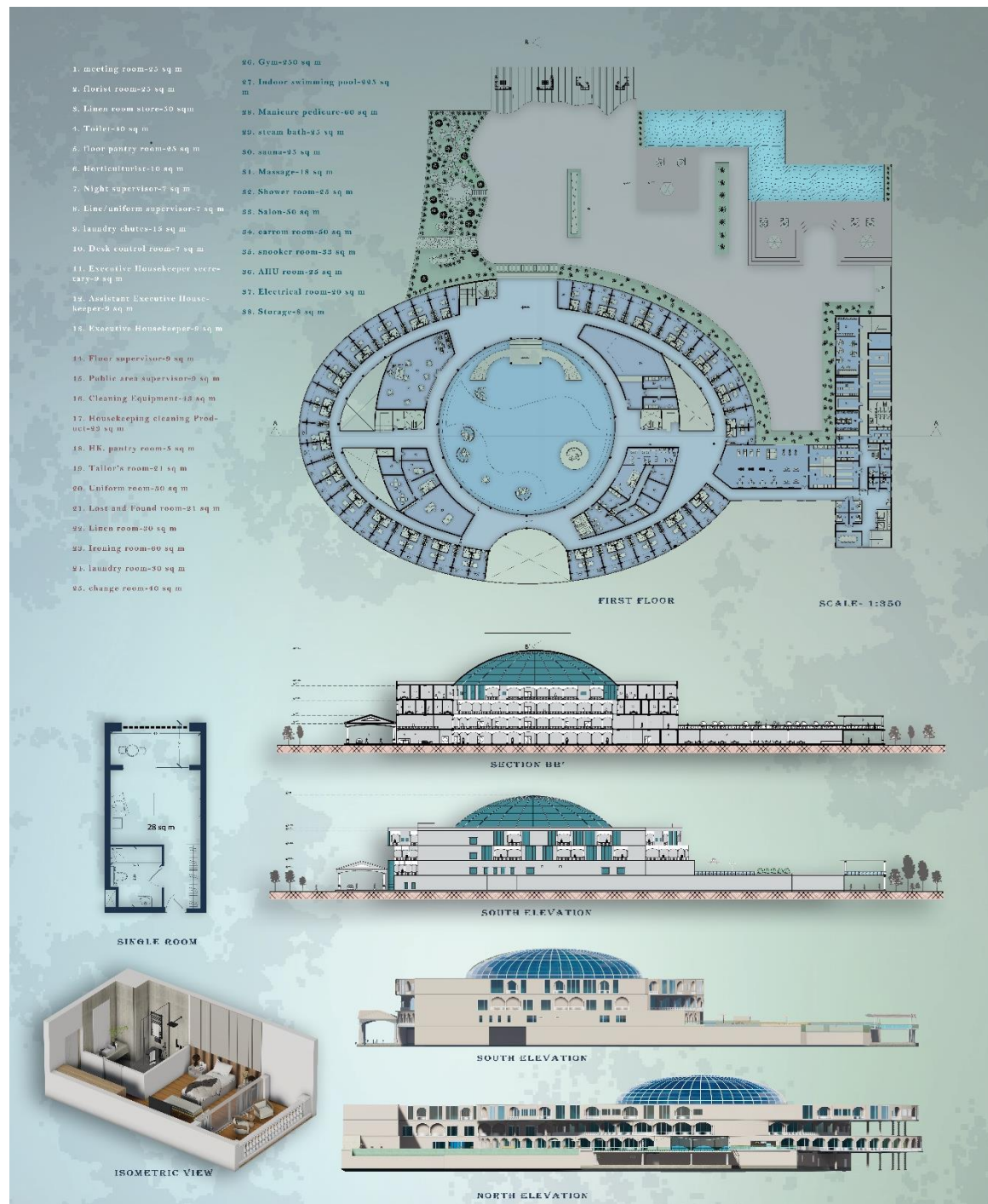


Plate 4.7: first floor plan

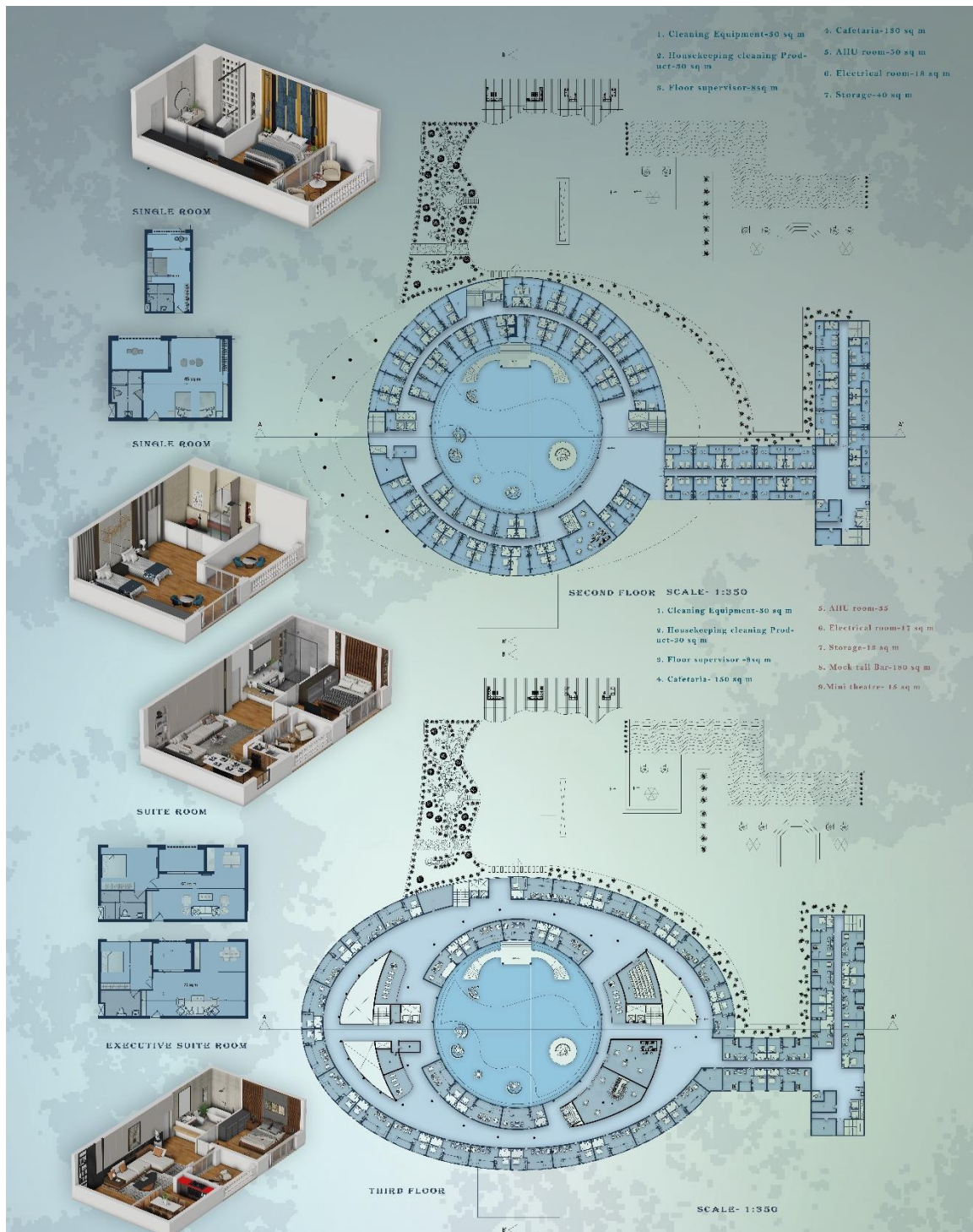


Plate 4.8: second floor and third floor plan

CHAPTER 6

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