SITE ANALYSIS

PROJECT BRIEF

Development of 3 ★ Resort at Chorwad, Gujarat

- **Tender Authority** - Tourism Corporation of Gujarat Limited (TCGL)
- **Proposed Year** - 2025
- **Estimated Project Cost** - 10.00 Crores (5 Crores rose old for the restoration of the Chorwad Palace)
- **Objective** - Promote tourism in Chorwad with restoration and adaptive reuse of Chorwad Palace with the development of a luxury beach resort.
- **Expected Impact** - Eco-Cultural revitalization, economic boost, tourism, heritage revival

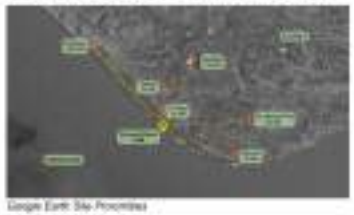


Google Earth Site Demarcation in Yellow

LOCATION DETAILS

Site Description

- **Site Location** - Chorwad, Gujarat
- **Site Coordinates** - 21.0004188483736 ,70.2074383443388
- **Site Area** - 48,100 sqm / 11.88 acres
- **Site Context** - Coastal Heritage site on Arabian Sea, featuring a historic palace, rocky shoreline, and open beachfront.
- **Administrative Region** - Chorwad, Mallya Hatina, Junagadh District



Google Earth Site Proximities

Site Connectivity

Chorwad Village Center	-	Approx. 4.2 KM
Airport - Keshod Airport	-	Approx. 50 KM
Railway - Chorwad Road Veraval Junction	-	Approx. 11 KM Approx. 29 KM
Bus - G.S.R.T.C. Chorwad	-	Approx. 4 KM

Landmarks and Tourist Spots

Dashavatar Mahadev	-	Approx. 0.1 KM
Somnath Temple	-	Approx. 32 KM
Prabhas Patan Museum	-	Approx. 31 KM
Triveni Sangam, Somnath	-	Approx. 31 KM
Bhalka Tirth	-	Approx. 25 KM
Veraval Fishing Harbour	-	Approx. 18 KM
Gir National Park	-	Approx. 67 KM
Junagadh	-	Approx. 71 KM
Girnar Hill	-	Approx. 77 KM

BYE-LAWS DATA

Gujarat Comprehensive Development Control Regulations - 2017

Zone	Permissible FAR	Maximum Permissible Height
Residential / Commercial	1.8	16.5 M

Use	Plot Area/Dwelling Unit/Bed	Floor	Side
Residential or Hotel	Not Specified	0.45	0.3

- **FAR and Ground Coverage** - Chorwad Category for development - C1
  Site Area - 11.88 Acres / 48,100 SQM
  For building Units with area more than 4500 SQM, G.C. = 45%
- **Total Permissible Built up Area** -
  - Site Area x FAR
  - = 48,100 x 1.8
  - = 86,580 SQM
- **Ground Coverage - 60%**
  Site Area x 60% = 48,100 x 0.60
  = 37,386 SQM
- **Parking Requirements**

Use Area	Medium Mining	Metal Mining
Shopping Mall	1 per 4 persons	1 per 4 persons

SITE INVENTORY

1. Physical and Spatial Analysis

Topography	• Central flat plateau at ~12 M where existing structures are present. • Steep seaward descends to 3.4 M with a small drainage channel. • The NE and NW having gentler undulating slopes with access road.
Contours	• Highest Contour - 12 M Height • Lowest Contour - 8 M Height
Accessibility	• A single 6 M wide Approach Road. • Accessible by G.S.R.T.C. Chorwad as well as by private vehicles. • Absence of existing pedestrian circulation and footpaths.
Surrounding Landmarks and Views	• Uncobstructed views from all directions (Sectorwise) • N, NE - Chorwad Village • E, SE - Chorwad Creek • S, SW, W - Arabian Sea • NW - Dadhesvar Mahadev Temple
Existing Structures and Boundaries	• Heritage Chorwad Palace(s) • Royal Dining Hall (later additions)(s) • Rajvilas Building (later additions)(s) • Cottages (may be demolished)(s) • Existing boundary wall in some places

2. Environmental Analysis

Flora	• Neem, Coconut, Mango, Casuarina, Acacia, Banyan, Peepal, Pandanus, Kunanja, Alexandra Laurel, Beach Morning Glory, Bougainvillea, Cirrium Seaside, Plumeria
Hydrology	• Site overlooking the Arabian Sea
Adjacent Water Life	• Gangta (Indian Mackerel), Paplet (Pomfret), Bhakhi (Catfish), Bunga (Flying Fish), Hasava (Indian Salmon)
Migratory Birds	• Most likely (Greater Flamingo), Dhongla (Ibis), Ramesh Pavan, Samanda Tuvan (Common Sandpiper), Rath Pet Kinkadiyo (Egrets)
Soil Type	• Calcareous white sand soil with sandy-clay loam
Noise and Air Quality	• AQI - 37, Good • Sea Breeze carrying mixed during high tides during monsoon season • Steady, rhythmic roars of water breaking against sand and rocks

3. Cultural & Social Analysis

Community Engagement	• Visited by the local villagers and adjacent towns for leisure. • People spending time with their families in the shaded areas with their children asleep on hammocks.
Ethnic and Demographic Profiles	• Population of 21,186 in village • About 1200-1500 people visit on weekends (as per the maintenance staff)
Languages and Dialects spoken	• Gujrati (widely spoken), Kathiawadi, Hindi, Sindhi

4. Infrastructure & Utilities Analysis

Water Supply	• Water is supplied from the storage at the Meghal Tidal Regular Check Dam, located on the Hiran River
Electrical Supply	• 66kV sub (GETCO) (5.0 KM)
Wastewater Management	• No existing facilities

5. Legal & Regulatory Analysis

Zoning and Land use	• Site is not under municipal limits.
Regulatory Guidelines Followed	• Gujarat Bye-Laws - DGDCR-2017, GCZMA-Junagadh -2023, CRZ-2011
Ownership and Rights	• Owned by the Tourism Corporation of Gujarat Limited (TCGL)

CLIMATE ANALYSIS

Type of Climate - Composite (hot-dry in summer, warm-humid in monsoon, mild-winter)

Latitude: 21.0004
Longitude: 70.2074

Temperature

- Summers - Average Range: 25°C - 31°C
- Winters - Average Range: 20°C - 29°C
- Maximum Temperature: 42.1°C
- Minimum Temperature: 11.9°C

Month	Hours	Avg. Evaporation (mm)	Typical outdoor mode
January	9.0 – 9.5	3.5 – 4.0	Mostly comfortable; minimal heating or cooling necessary.
February	9.5 – 10.0	4.0 – 4.5	Pleasant mornings and evenings; slight warmth during midday.
March	10.0 – 10.5	4.5 – 5.0	Warm days; fans or light cooling needed.
April	10.5 – 11.0	5.0 – 5.5	Hot; cooling systems required for comfort.
May	11.0 – 11.5	5.5 – 6.0	Peak heat; intensive cooling and shading essential.
June	11.5 – 12.0	6.0 – 6.5	Hot and humid; cooling and ventilation critical.
July	11.0 – 11.5	5.0 – 5.5	Monsoon season; high humidity, reduced cooling needs.
August	10.5 – 11.0	4.5 – 5.0	Humid; ventilation and dehumidification important.
September	10.0 – 10.5	4.0 – 4.5	Warm and humid; cooling and ventilation needed.
October	9.5 – 10.0	3.5 – 4.0	Pleasant; minimal heating or cooling required.
November	9.0 – 9.5	3.0 – 3.5	Cool mornings and evenings; light heating may be needed.
December	8.5 – 9.0	2.5 – 3.0	Cold; heating systems essential for comfort.

Wind Analysis

- Summer: Predominantly SW
- Winter: NE, clear and cooler



Wind Rose Diagram



Monthly Hourly Wind

Rainfall

- Annual - 1130 mm (July-Sept)
- Peak Rainfall -July (528 mm)

Humidity

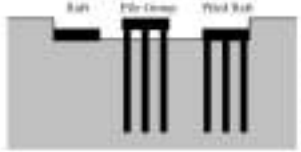
- Highest: 89.7% (Aug)
- Lowest: 28% (April)
- Humidity rises from May
- Peaks in July-Sept



Soil Analysis

Piled Raft Foundations

- Reclaimed Land: Here land has been reclaimed from the sea, soils tend to be very soft and unstable.
- Piled raft foundations are necessary to ensure stability and prevent excessive settlement





Key Plan

SLOPE ANALYSIS



Low Tide and High Tide





HERITAGE BUILDING ANALYSIS

HISTORICAL BACKGROUND

- Year of construction: 1930

- Original use: A summer retreat / seaside palace for royal leisure

- Architectural style: Blend of Muslim/Islamic and Italian/colonial elements

- Adaptive reuse / later history: Taken over by the Tourism Corporation of Gujarat (TCGL) in the 1970s and operated as a government "holiday camp" / beach resort from about 1974–79 onward; gradually fell into disrepair thereafter. There are no records of any heritage restoration/conservation tender specifically for Chorvad Palace prior to 2025.

BYLAWS & RESTRICTIONS

Heritage status: Grade-II

(AMASR) Act, 1958 defines 100 m 'prohibited zones' and 200 m 'regulated zones' around protected monuments. Restoration or construction within these zones requires approval from the Competent Authority and potentially, expert review by the National Monuments Authority.

Aspect	Guidelines for Grade II Heritage (Gujarat)
Permitted Changes	Interior changes, adaptive reuse, sensitive extensions/additions (Grade II-B), structural strengthening, removable installations, etc.
Prohibited Actions	Demolition, reconstruction, façade alteration, removal of original artwork (unless cleared by HCC)
Approval Process	Must obtain clearance from HCC (or Vice-Chairman) based on HCC advice; decisions usually within 30 days.
Surroundings	Development nearby must preserve views and not diminish building's grandeur
Zone-specific rules	No basements, limited height (max 9m), no road widening, line-against (use compound walls), maintain FSI limits

CONDITION REPORT

Location	Condition	Image	Defect	Severity	Urgency
Foundation	Masonry/stone, partially buried; some base erosion		Moisture rising, salt crystallization, loss of stone at base	Moderate	Medium term
Plinth	Stone and brick, good overall, some erosion		Erosion, missing, crumbling stones, gaps	Moderate	Medium term
Wall material	External façades and internal load-bearing walls		Efflorescence, cracks, loss of plaster, broken stones	Moderate	Short term
Flooring	Ground floor, mixed tiles, cement and stone		Cracks & debris, some tiles damaged/lost, uneven in places	High	Immediate, but not without major effort, structure stabilized
Roof	Roof slabs and beams, terrace and sloping portions		Water marks, plaster falling	High, widely found	Immediate — damage of surface
Columns	Tall standing columns, plastered, stone, framed		Vertical cracks, some bulging, loss of plaster, exposed reinforcement, staining, undercuts, spalling	Moderate–high	Short term, but also & weakening/spalling
Arches	Stone arch & external arch surfaces		Water soaked & missing, salt stains and visible growth	High	Short term
Interiors	Internal façade, plastered & stained, historic finishes like murals		Loss of plaster, stains, mould, peeling finishes, loss of RC, wood rot, stone, stained finishes & stone	Medium–high	Medium term, considerations after structural
Drainage	Internal & external drainage, channels, openings, basement		Non-visible functioning, debris, blocked channels, surface ponding, vegetation, against walls, encroaching, stains & organic dirt	High	Short term — urgent, but could benefit

DOCUMENTATION- PLANS/ELEVATIONS

FLOOR PLAN- GUEST HOUSE

SCALE- 1:200



ELEVATION 1



ELEVATION 2



ELEVATION 3



FLOOR PLAN- CHORWAD PALACE



FLOOR PLAN- DINING HALL



CRACK MAPPING

SEVERITY LEVELS





LEGEND

- HIGH
- MODERATE
- LOW

COMMON STRUCTURAL PROBLEMS NOTICED

1) **Sah Air Garage (Session location):** Lime mortar joints between stones are wearing away.
2) **Cracks and Collapses:** Arches and walls show cracks due to missing stones, no side support, or movement in foundation.
3) **Corroded Iron:** Metal rods and beams are rusting badly, especially in RCC slabs.
4) **Plant Growth:** Vegetation is growing through cracks, breaking the structure more.
5) **Plaster Damage:** Decorative plaster is peeling, falling, or missing.
6) **Foundation Issues:** Some parts are sinking—cracks due to bad drainage or soil erosion.
7) **Rainwater Problems:** No visible rainwater pipes, so water might be collecting and damaging the walls.

MATERIAL STUDY & INFERENCES

MATERIALS USED IN THE PALACE

1) **WALLS:** MADE OF STONE BLOCKS, HELD TOGETHER WITH LIME MORTAR (A TRADITIONAL MIX THAT LETS WALLS "BREATHE").
2) **PLASTER WORK:** THIN LAYER OF LIME PLASTER OR STUCCO, ESPECIALLY AROUND ARCHES AND DECORATIVE AREAS.
3) **ARCHES & OPENINGS:** BUILT USING STONE PIECES ARRANGED IN CURVES (CALLED VOUSSOIRS).
4) **ROOF/CEILINGS:** SOME PARTS HAVE OLD WOODEN BEAMS, BUT OTHERS WERE LATER REPLACED WITH RCC (REINFORCED CEMENT CONCRETE) SLABS.
5) **DECORATION:** INCLUDES JHAROKHAS, BATTLEMENT-STYLE RAILINGS, CORNICES, AND STONE BANDS.
6) **OTHER:** IRON OR WOODEN JOISTS FOR ROOF SUPPORT (MANY ARE MISSING NOW).

CONSERVATION APPROACHES

I. **"HERITAGE PRECINCTS"** MEANS AND INCLUDES ANY SPACE THAT REQUIRES CONSERVATION AND/OR PRESERVATION FOR HISTORICAL AND / OR ARCHITECTURAL AND/OR AESTHETIC AND/OR CULTURAL AND/OR ENVIRONMENTAL AND/OR ECOLOGICAL PURPOSE. WALLS OR OTHER BOUNDARIES OF A PARTICULAR AREA OR PLACE OR BUILDING OR MAY ENCLOSE SUCH SPACE BY AN IMAGINARY LINE DRAWN AROUND IT.

II. **"CONSERVATION"** MEANS ALL THE PROCESSES OF LOOKING AFTER A PLACE SO AS TO RETAIN ITS HISTORICAL AND/OR ARCHITECTURAL AND/OR AESTHETIC AND/OR CULTURAL SIGNIFICANCE AND INCLUDES MAINTENANCE, PRESERVATION, RESTORATION, RECONSTRUCTION AND ADOPTION OR A COMBINATION OF MORE THAN ONE OF THESE.D

III. **"PRESERVATION"** MEANS AND INCLUDES MAINTAINING THE FABRIC OF A PLACE IN ITS EXISTING STATE AND RETARDING DETERIORATION.

IV. **"RESTORATION"** MEANS AND INCLUDES RETURNING THE EXISTING FABRIC OF A PLACE TO A KNOWN EARLIER STATE BY REMOVING ACCRETIONS OR BY REASSEMBLING EXISTING COMPONENTS WITHOUT INTRODUCING NEW MATERIALS.

V. **"RECONSTRUCTION"** MEANS AND INCLUDES RETURNING A PLACE AS NEARLY AS POSSIBLE TO A KNOWN EARLIER STATE AND DISTINGUISHED BY THE INTRODUCTION OF MATERIALS (NEW OR OLD) INTO THE FABRIC. THIS SHALL NOT INCLUDE EITHER RECREATION OR CONJECTURAL RECONSTRUCTION.

(THE EXACT MEASURES AND APPROACHES TO BE TAKEN CAN BE DETERMINED BY LABORATORY TESTS SUCH AS: MORTAR ANALYSIS / PETROGRAPHY / SALT ANALYSIS / PAINT ANALYSIS)

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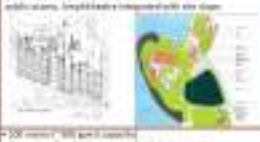
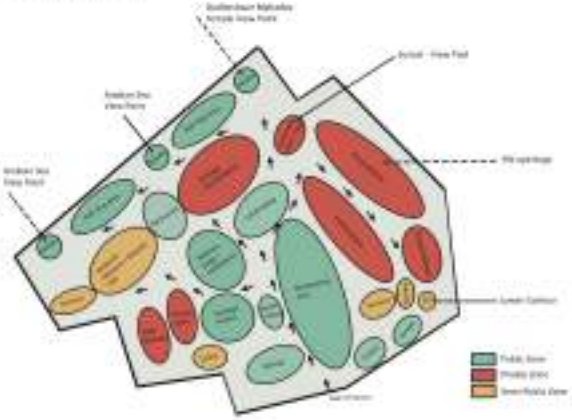
CASE STUDIES COMPARATIVE - ANALYSIS

	LIVE CASE STUDIES		DESK APPRAISALS				
	BOMBOOM RESORT, DIU	**AZZARO RESORT, DIU**	**HERITAGE RESORT, MAMALLAN**	**LEELA KOVALAM, KERALA**	**RAAS CHANTRAMAGAN, JODHPUR**	**GIR VANAS ECO-RESORT**	
SITE AREA	1.5 acres	10 acres	11 acres	30 acres	Overall at 9 hectares, 5 acres plot	20 acres	
SITE LOCATION	Fudam vaso, Nagoa Beach Road, Diu Jalandhar Gandhi, ~4 km new Nagoa Beach and Time from Diu Airport)	Nagoa Bich Road, Fudam Diu – Zawade travel Software 4 km from Nagoa Beach, ~1km from Diu Airport	Located on NH8, Mamallan – a developing suburb on the periphery of Greh. ECR, ~ 50–55 km from Old Airport, Tambaram ~35 minutes away	Kovalam, Thiruvananthapuram, Kerala — perched on a cliff top insulated between two crescent shaped sandy bay, Another lies south	Between main drilling road, Mining Rajasthan on a 100 year old dilapidated building estate	Village of Gir National Park, along Talala-Gir Highway, connected to a tourism zone	
CLIMATE	Tropical, coastal – hot & humid, calmer air, heavy monsoon rainfall	Coastal, tropical – hot summers, humid monsoons, mild winters	Coastal tropical climate – hot & humid summers, heavy southwest monsoons, mild winters	Coastal tropical climate – hot & humid summers, heavy southwest monsoons, mild winters	Hot, dry summers (up to 45°C), cold winters (down to 0°C), Relatively stable annual rainfall under 400 mm/year	Semi-arid tropical climate – hot summers, short monsoons, mild winters	
SITE PLANNING	• Low-rise bungalow-style layout • Central swimming pool & landscaped lawns • Courtyard-oriented planning to maximize ventilation • Buildings arranged in clusters for privacy + community spaces 	• Low-rise horizontal development • Pool-centric planning with courtyards & shaded walkways • Circulation designed around lawns and central pool 	• Flat site, oriented North–East to coral flats • Courtyard-based planning with value gradients  • Zone setting: • Public – lobby, banquets, restaurant (front) • Semi-public – lawns, pool, bar (behind main block) • Private – guest rooms (cluster) • Service – kitchen, back of house (rear)	• Resort terraced down natural contours • Irregular, angled building fits to maximize sea views • Planned, tiered cotton linen single-connected block, considering modular growth pattern. • Ayurvedic treatment block placed more intimate for public access, Amphitheatre integrated with site slope 	• Linear layout, arrival path → courtyard → pool 20 luxury dome pool 4 villas clamp re-waged along the dome main exit views, meanwhile • Gallery for outdoor bike views 	• Courtyard & cluster-based planning, keeping buildings low-rise • Axial and radial pathways weaving through orchards • Clear four-fold zoning: —Public – lobby, reception, dining, banquet halls —Semi-public – taverns, pool, ice summer courts —Private – cottages, villas, limited suites —Service – kitchens, staff quarters, organic room rates 	
ACCOMMODATION (TYPES AND NO. OF CUSTOMIZE/ ROOMS)	**No. of Rooms** – 50+ rooms **Types** – 01 – (Max) - 25-30 (two rooms) 02 – Two, 24 deluxe, 3 suite 03 – Queen, Executive, Deluxe Rooms 04 – Best Premium, Private Villa(s) 	**Total Rooms: 32** • Individual Rooms – 28 (133 sqft, king bed, pool view) Suites – 2 luxury suites 	72 guest rooms, divided into two clusters (36+36) • Room Size – 500 sq ft each • Room Typology: Mahabalis villa rooms/cottages, close to courtyard with shaded lobby • Features: Bamboo slate openings, domes, carved parapets 	• 106 rooms + 900 sqm of capacities • Categories: Double view rooms, Garden view rooms, SAS suites • Each one facing pool and private balconies • Traditional Kerala style cottages incorporated with Ghoor & tiled roofs 	**Total Rooms:** 30 luxury tents / bungalow & cottage **Types:** en-suite bathrooms, skylights, private courtyard **Facilities:** 12 conference/event tents (personnel dining restrooms) **Usage (pool + restaurants):** 10 cot wooden tented pool, bazar (Room + glass) 	**Total Rooms:** 25+ (proj.) **Types:** • Forest cottages (8 villas) • Luxury tents & suites • Standard rooms & dorms 	
AMENITIES & SERVICES	• Swimming pool with sun deck • Water sports & Jacuzzi/spa • Spa & Fitness Centre (steam, sauna, massage) • Multi-cuisine restaurant (Classic, Cafe Coffee), bar (Tropical) • Banquet Hall & Conference Hall • Kid's club and play • Luxury tax 200-400 people	• 1 swimming Pools with sun loungers • Spa & Wellness Centre (steam, sauna, massage) • Multi-cuisine restaurant (Classic, Cafe Coffee), bar (Tropical) • Various events, indoor games, salon • Library, tea breakout, private party space • Free Wi-Fi, parking, concierge, airport shuttle, business centre	4 room Hotel (~10,231 sq ft) reception, banquet halls, restaurant • Guest Room Blocks (~12,228 sq ft each) - 2 blocks, 36 rooms each • Heritage Block: Guest room/ auditorium • Swimming pool, Conference Facilities & Halls • Spa & wellness centre, Games & recreation areas	• Two hotels, one & wellness centre in Ayurvedic steps maintenance baths) • Swimming pool & sun decks • Multi-cuisine restaurants & lounges with sea views • Conference & convention centre • Amphitheatre for cultural programs • Water sports, beach access, landscaped gardens	• Infinity pool, swimming pool • Elevated dining platform • Spa, Restaurant, bar, swimming pool • Multi-cuisine dining using on-site organic gourmet • Outdoor decks, landscaping, trails, campfire spaces	• Swimming pool • Open decks & banquet lawns • Multi-cuisine restaurant & cafe • Spa & wellness centre • Safari desk, activity areas	• Multiple hilltop retreats, eco-experiential programs (events, garden/courtyards), trails' and others, remote wellness/relaxation centres • Heritage – event's with a central courtyard/open decks to command spaces. • Swimming pool, sports, restaurants, banquet, and kids' facilities
ARCHITECTURAL FEATURES	• Portuguese colonial style • Sloping red-tiled roofs • Arched windows & balconies (balcony) • Pastel / colonial façades • Shaded walkways & courtyards 	• Low-rise tropical coastal buildings connecting pools and gardens • Pool-centric orientation with landscaped courtyards • Sympathetic modern architectural styling – white façades, shaded balconies inspired by colonial-resort aesthetics • RCC frame with local stone, tiles, plaster finishes • Mixed tiled roofs (Mangalore tile) 	Rustic-inspired design: arches, thatched, domes, carved sandstone, pale-hue structures integrated with courtyards Local, symmetrical layout for stone 	• Mimicking the Western Ghats — planted walls, sloping rounded roofs, coordinate • Blends seamlessly with traditional Kerala architecture • Sloping tiled roofs (Mangalore tiles) • Building blends into the irregular, angled shapes as it naturally varies. • Deep terraces reducing reduce visual impact from outside 	• Contemporary yet rustic – earthy in stone • Teak furniture, locally crafted furniture • Tile, wooden textures flooring in varying • Out of natural fabrics, muted colors, and traditional textiles • Harmony with lake views, skylights 	• Rustic, vernacular theme with eco-friendly planning • Shaping Wood Blocks/Materials for durability/ergonomic • Use of courtyards, climatic, sustainable to enhance sustainability/climate comfort • Built environment subtly merges with/merges on to with & forest edge 	• Low horizontal profiles, maximum or planted roofs in tropical style, carved doors and verandahs, extensive use of timber detailing and screens. • Organic, vernacular, traditions and elevated gardens. • Local style – modern comfort • Blend of courtyards • Arches
INTERIOR DESIGN	Spacious seven-cable large windows Warm lighting & wooden furniture Blend of heritage style with comfort 	• Chic Royal Vanity finishes, pool-view bedrooms, king beds • modern decor, impressive furnishings • Warm ambient lighting + balcony/daylight • Flexible, mixed functions, stone flooring • Locally crafted wooden furniture 	traditional king/queen-size beds decorated with murals Handloom comforters, Courtyard & facing rooms, verandahs & balconies Pathway to covered wood-traditional decking 	• Natural, airy interiors – wood, bamboo and sun-drenched • Kerala handicrafts and traditional furniture • Open verandahs and large glazing for cross-ventilation • Ayurvedic therapy rooms designed as healing spaces with garden views 	Sun-soak with lightweight steel framing, translucent roofing, and stone plinths Handmade daylights energy-efficient, large glass façades for uninterrupted lake views Shades on sills/courtyards door integrity & allow outer flow, local stone, timber, bamboo screens Reclaimed Mandor pavilions, roof to Rajputana tradition Modern verandahs + double roof system for passive cooling 	Earth-inspired palette: dense color range, warm grey- red and woods Eco-Certified Furniture: coir rugs, woven bamboo Large openings, verandahs & balconies facing forest views Local crafts & artefact: motifs integrated in soft furnishings 	Handmade furniture, local textiles and handicrafts, earthy palettes, large openings to link indoors/outdoors Heritage interiors, artisan hubs & detailing remain with modern luxury comforts. Blend of local materials and motifs with modern luxury, any comfortable rooms
BUILDING MATERIALS & TECHNIQUES	Local stone & lime finishes, red clay roof tiles, tiled roofing to cool, courtyard design for ventilation, Ground concrete tiles laser- for durability in coastal climate.	– Passive cooling, courtyards, verandahs, shaded pathways – Natural cross-ventilation & daylighting, native landscaping – Rainwater harvesting, Vehicle Management, Solar Panels – LED lighting & low-flow, energy-efficient plumbing	• RCC frame structure • Masonry walls with cross-ventilation & passive finishes, • Locally sourced stone in facades & pathways • Energy-efficient roofing roof	• Locally sourced timber, stone, laterite, clay, and bamboo • Vernacular Kerala roof systems (pitched, tiled to withstand monsoons) • Traditional load-bearing cross-vaulted with reinforced concrete • Structures oriented along contours to reduce earth cutting/filling	– Low-impact dry construction with load-bearing – Local stone and timber, preference for green – Low-impact foundations – Semi-permanent or hybrid lightweight structures —rubble + bamboo frame + glass – Insulated composite roofs for thermal comfort	– Local stone masonry (load-bearing walls) – Clay-tiled pitched roofs for local insulation – Exposed timber/bamboo purlins & rafters – Courtyard orientation allows cross-ventilation – Combination of traditional craftsmanship with modern structural reinforcements	– Materials: Environment friendly sourced timber, earth/mud, natural stone (for footings), bioenvironment mixes for masonry and facade/equipment materials volume variation Passive cooling, natural ventilation, conserving and local water processing, hybrid renewable energy systems Introduction of recycling/reuse/upcycled with RCC or modern systems durable and climate-friendly facilities
SUSTAINABILITY FEATURES	– Natural ventilation & daylighting through courtyards – Rainwater harvesting – Landscape cool air thermal buffer – Low-rise, energy-efficient building form	– RCC frame with stone & tile masonry Local water walls – Terracotta & Mangalore tiled roofing roof – Modern interior fittings & services	• Courtyard planning for passive cooling, • Shaded verandahs & natural ventilation • On-site water recycling for irrigation • Landscape with native trees species, • Rainwater harvesting network taken for water supply • Service core modern laundry, AC plant, cold storage service room,	– Site-responsive planning preserves natural slope & drainage – Use of local building materials reduces embodied energy – Passive cooling with courtyards, cross-ventilation, and shading – Rainwater harvesting patterned to traditional basics – Landscape preserved with native vegetation	– Rainwater harvesting + greywater recycling – Solar energy integration for hot water + lighting – Minimal excavation to preserve terrain and natural drainage – Low-energy cross-ventilation & LED-based MEP – Recycled-use plastics – Reselling initiatives – turning to sustainable natural packaging, creating wildlife habitat	– Planted cooling through courtyards & shaded walkways – Use of local low-energy materials – Rainwater harvesting & storage pits – Greywater recycling for landscape irrigation Energy-efficient lighting & solar heaters – Landscaping with native, drought-resistant plants to reduce water demand.	• Rainwater harvesting • Rainwater harvesting • Solar energy • Native landscaping
INFERENCE FROM RESORT'S DESIGN	–Blends heritage character with modern hospitality – Climate-responsive through courtyards, ventilation & shading Multifunctional stay + recreation + events Needs improved maintenance & cottages vs upgrades	–Diverse experience design – Natural ventilation, shaded pools, and lawns Good comfort – Focus on relaxation with room, breezy spaces Compact scale – Small room program (28 keys) ensures exclusivity, Landscape integration – Rich cool outdoor areas form the core guest experience. Privacy & leisure – Limited keys enhance, personalized service. Resort that's not – romantic, comfortable, and nature-focused rather than large-scale luxury.	– Interpretive ceremonious based planning on an east-central – linear axial layout and courtyards for natural cooling – Incorporation of cenotes, domes, and parapets as cultural symbols – Prioritises sustainability through zoning and water management	– Recent interventions (clamps ice roof, entrances, – completed, climate-sensitive, people-centric architecture – Immersive integration with seaside hill slopes creates a natural retreat atmosphere. – Design balances modern luxury with lifestyle principles in wellness – Positive relationship between shared growth without damaging landscape.	– An exploration of a hybrid model – from communal living for a semi-nomadic eco-luxury model – Combines the Islands' heritage, sensitive plans, practices with modern sustainability. – Design demonstrates new approaches and support ecology – Tourism, and community, livelihood – A benchmark for sustainable adaptive reuse and resulting hotel hospitality	– Resorts in Gir demonstrates eco-sensitive hospitality planning Architectural modularity blends the natural aesthetics with modern luxury Courtyard clusters & shaded passages respond realistic sense with climate. Meaningful between nature, culture, and tourism – enhancing guest and eco-ethic.	• Resorts adapt form, materials and programs to local climate, culture and site ecology rather than imposing a single generic luxury formula. • Resorts balance comfort, privacy, and ecology can be enhancing local culture and ensuring smooth guest circulation.

ZONING DIAGRAM



SPACE ALLOCATION



AREA CALCULATIONS

S.no	Program	Area (Sqm)	No. of Units	Total Area (Sq.m)
1	Parking	12.5	100	1250
2	Admin + Reception	180	1	180
3	Restaurant + Bar	250	1	250
4	Local Art and Craft Workshops	100	1	400
5	Spa	150	1	150
6	Private Swimming Pool	200	1	200
7	Wellness Center (Meditation+Yoga)	600	1	600
8	Heritage Pavilion	400	1	400
9	Staff Quarters	600	1	600
10	Gazebo	40	1	40
11	Guard	30	1	30
12	Temple	80	1	50
13	Kids Play Area	400	1	400
14	Private Walkways	200	1	200
15	Accomodation (Cottages)	20	20	613
16	Heritage Accomodation	45	16	720
17	Services (Utility / Kitchen)	600	1	600
				5,177

SITE INFERENCES

Parameter	Site Observation	Design Inference	Impact on Form Evolution	
Location	Coastal site on Arabian sea, Chorwad Beach, Gujarat	Orient structure to sea breeze, salt air, and ocean views	Create main façades to capture views & treasure while protecting from harsh sun	
Wind Direction	SW monsoon breeze (June-Sept) and NE land breeze (Oct-May nights)	Maximize openings on SW & NE sides for cross ventilation	Elongated L-at form, wind corridors, verandahs.	
Sun Path	High sun from south, low-angle glare from west	Narrow west openings, use shading devices	Vertical fins/jali, deep overhangs on SW & W.	
Rainfall	Heavy SW monsoon with strong winds	Quick water runoff, sheltered entries	Steep sloping roof (SW + NE), extended eaves	
Temperature	Hot summers, mild winters	Passive cooling priority	Shaded courtyards, ventilated roof spaces	
Soil Condition	Sandy, loose	Use lightweight, corrosion-resistant materials	Timber, treated bamboo, local stone with lime mortar	
Vegetation	Coconut palms, cork tolerant shrubs	Integrate landscape for shade & wind buffering	Tree-lined paths, green buffers	

CONCEPT (Tribute to the Fisherman)

The concept pays homage to the life, struggles, and spirit of fishermen—the guardians of the sea who provide sustenance yet live with uncertainty and risk. It symbolizes their courage, versatility, and deep bond with the ocean, while creating a space for visitors to experience, learn, and reflect on this way of life.

1) Symbolism of the Sea & Nets
Spaces and forms inspired by waves, boats, nets, and anchors.
Architectural elements echo the triangular silhouette of sails or fishing nets, representing both livelihood and resilience.

2) Journey of a Fisherman
Spatial sequence reflects the fisherman's life: setting out to sea (deck/Crow decks), facing challenges (rough textures, water features), returning home (community courtyard), and legacy (memorial spaces).

3) Integration with Nature
Design respects the coastal ecosystem—using natural materials, shaded pavilions, and eco-sensitive landscaping.
Recreation merges with education—visitors learn about fishing traditions, marine ecology, and cultural heritage.

Message to Convey
A fisherman is more than a provider of food—he is a symbol of perseverance, patience, and harmony with nature. This space is not just for recreation, but also to educate, honor, and inspire future generations about the values of courage, community, and sustainability that fishermen embody.

FORM GENERATION: BOAT

Form-Based + Context-of Concept

Form-based: Draws the primary shape, proportions, and detailing from the physical form of a boat (hull curves, pointed bow, streamlined profile/ triangular silhouette).
Contextual: Driven by inspired by the coastal site, local fishing traditions, and maritime culture.



Traditional Gujarat Dhow

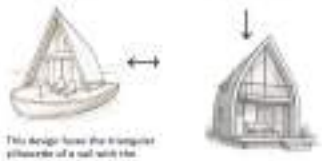
FORM EVOLUTION



Primary Shape: The A-frame looks like the triangle shape of sails on traditional Gujarati fishing boats (like the dhows in Saurashtra), making it feel like a sail catching the sea breeze.

Structure: The strong, elongated form resembles both the bow of a boat cutting through waves and the pointed shelter of coastal fishing huts.

Symbolism -
- The building looks like a sailboat resting on the shore, waiting to sail again—showing how coastal communities live between the land and the sea, always connected to both.
- The building is a modern version of Chorwad's old sea traditions, keeping the heritage alive while adding modern comfort and style.



This design honor the triangular silhouette of a sail with the curved hull form of a boat.

THEME

"Crafted by Culture" – Celebration of Seashores

INFERENCES FROM CASE STUDY

A. Incorporation of Local Activities

1. Fisherman Life & Boat Experience
Why: Fishing is the primary livelihood at Chorwad, deeply rooted in its cultural identity.
Features: Boat-making workshops, traditional fishing demonstrations, interactive storytelling by local fishermen, evening boat rides.

2. Heritage Pavilion Coastal Crafts & Community Studio
Why: To showcase and preserve fishing-related crafts and local coastal artistry.
Features: Workshops (net weaving, seashell crafts, miniature boats), artisan markets, fisher community exhibition.

3. Seafood & Coastal Cuisine Hub
Why: Food is central to the fishing culture and provides authentic coastal experiences.
Features: Live seafood cooking, open-air kitchens with local chefs, fish drying displays, fish & sea-inspired dining.

4. Marine & Coastal Ecology Caves
Why: To link fishing livelihood with ecological awareness and sustainability.
Features: Guided walks on coastal biodiversity (mangroves/reef preservation workshops, kids' activity zones (recorded sets, fish ponds).

B) SUSTAINABILITY MEASURES
1. INTEGRATION OF SOLAR PANELS
Solar Panels installed on south-facing sloping roofs for maximum efficiency.



2. RAIN-WATER HARVESTING
Collected from cottages clusters, stored in a water pit, and reused for cottage supply



C) USE OF MATERIAL & COLOUR PALETTE
1. COTTAGES - Exterior: Sand stone, Lime Mortar and interior with treated bamboo and rattling



2. RECREATIONAL SPACES
Use of Kadeliya Beach Side/ Relaxation Zone, Boat Ride / Canoeing Zone



D. ACCOMMODATION DESIGN
1. CLUSTER BASED APPROACH: Cottages spread across the private zone for minimal visual impact and enhance privacy.
2. COTTAGES TYPOLOGIES: Designed based on view, area and available facilities.



PASSIVE STRATIGIES



1) It should be carried out with large cane spaces for unrestricted air movement.
2) Sills can promote ventilation and cause cooling at the ground level.
3) A room on southeast can be provided with vents at higher levels to drive away the rising hot air.



Baffle walls, both inside and outside the building can help to divert the flow of wind inside.



The buildings could be long and narrow to allow cross-ventilation.



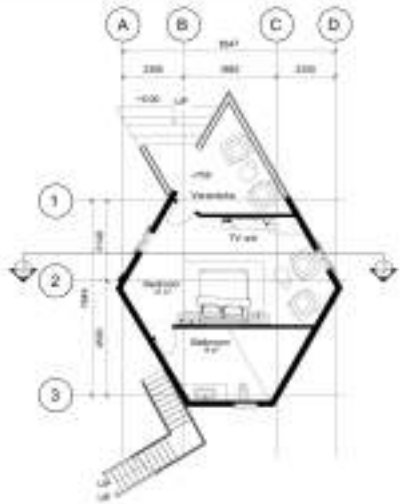


Doors & windows as large as possible. Positioned to encourage air movement & Covered by shading devices

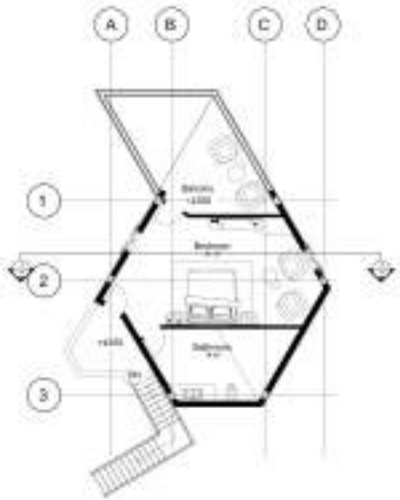


STANDARD COTTAGES

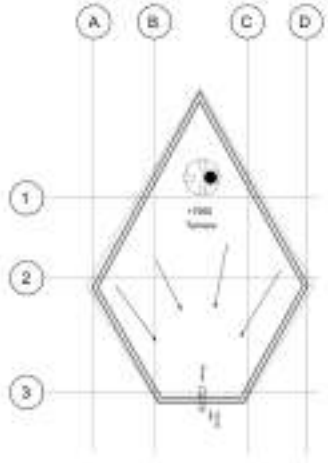
SCALE 1: 100



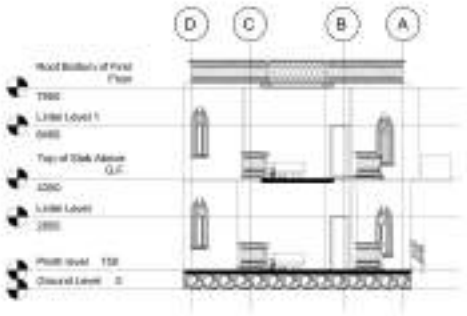
GROUND FLOOR PLAN



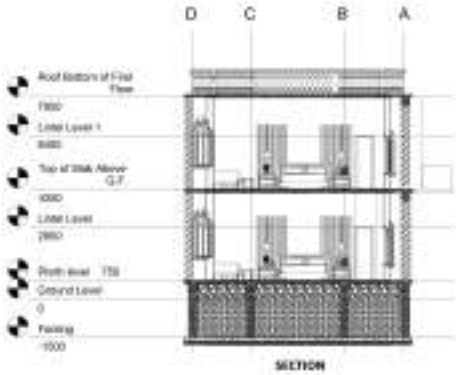
FIRST FLOOR PLAN



MUMTY PLAN



FRONT ELEVATION



SECTION



VIEW

01 **3-STAR RESORT**
Chorwad , Gujarat

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DUPLEX ROOMS

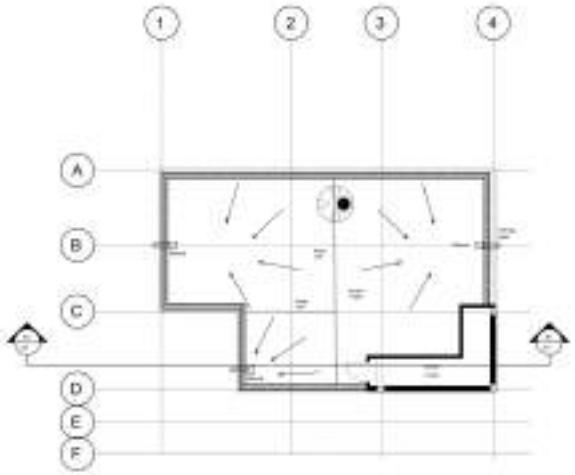
SCALE 1: 100



GROUND FLOOR PLAN



FIRST FLOOR PLAN



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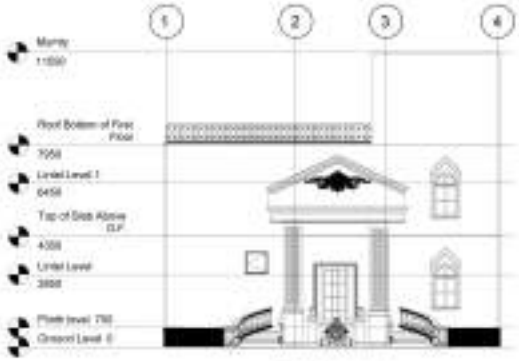

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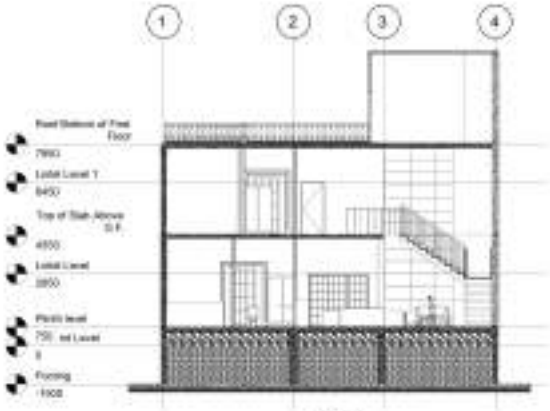

SECTION



VIEW

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THESIS GUIDE : DR. ALKA BHARAT

DELUXE ROOMS

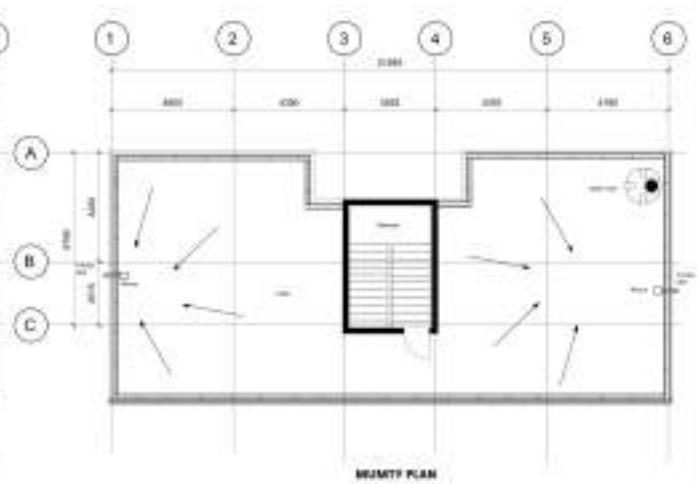
SCALE 1: 100



GROUND FLOOR PLAN

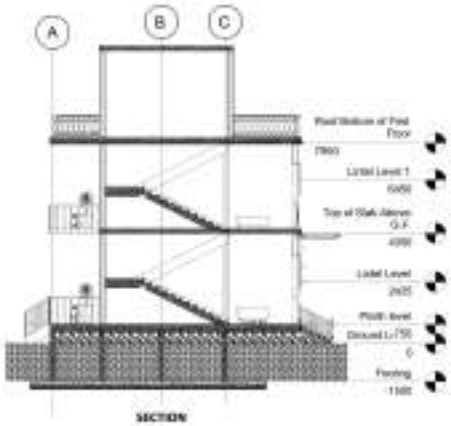


FIRST FLOOR PLAN

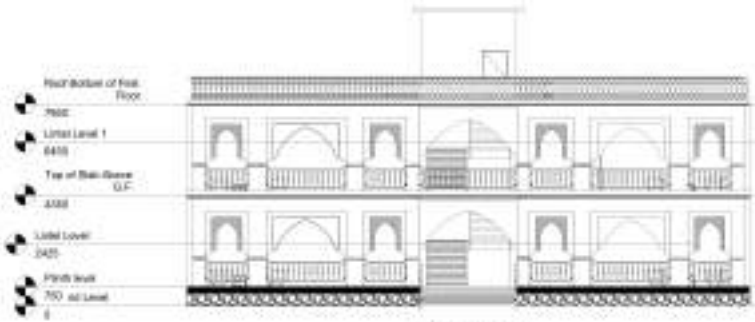


MUMTY PLAN

FRONT ELEVATION



SECTION



FRONT ELEVATION



VIEW

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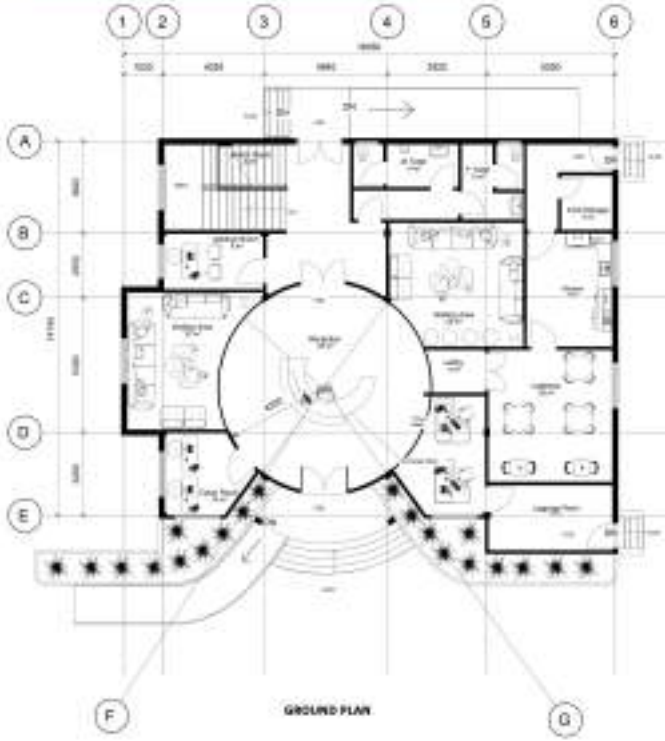
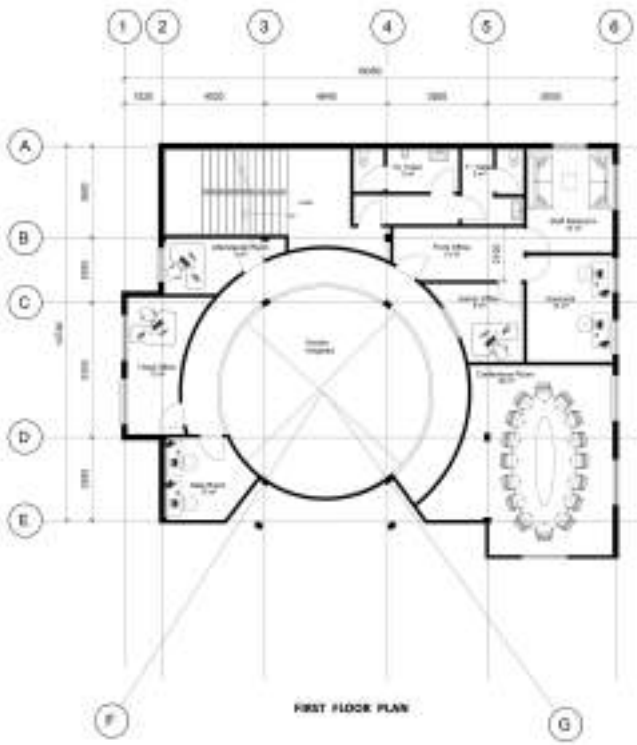
ADMIN PLAN

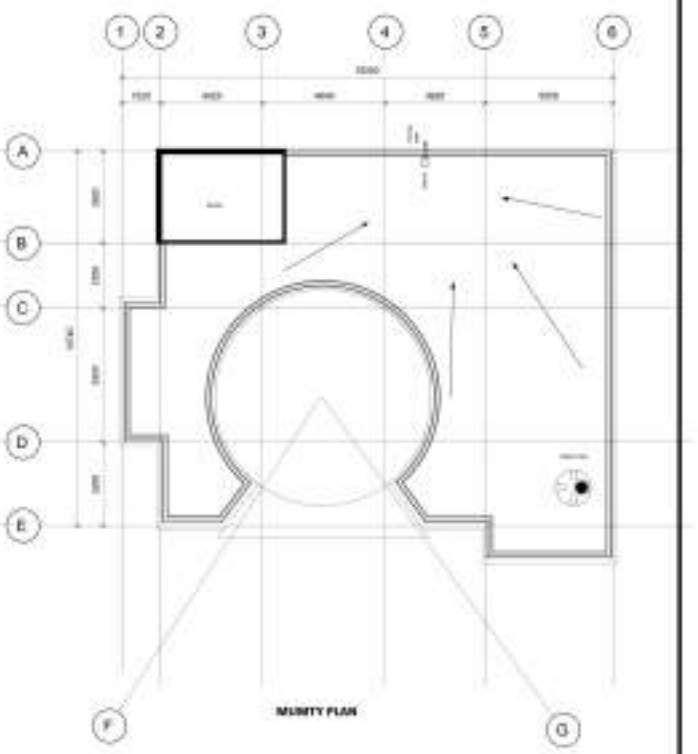
SCALE 1: 150



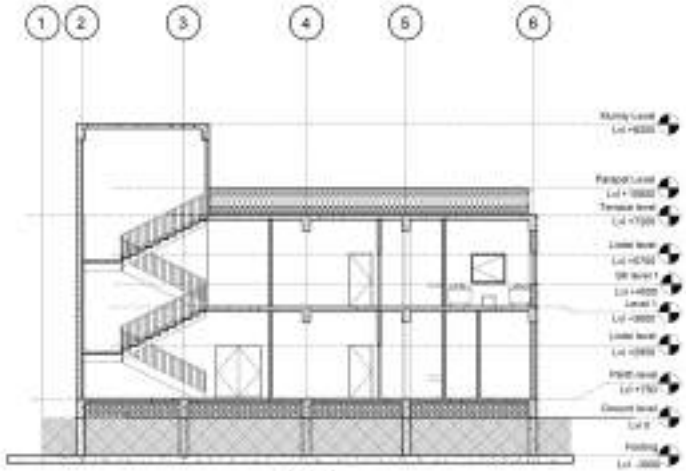
GROUND PLAN



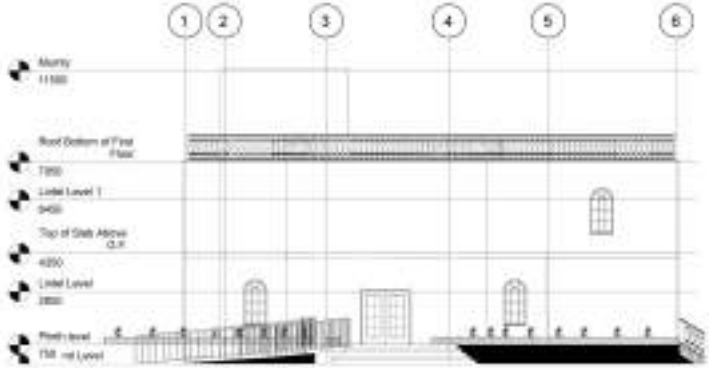
FIRST FLOOR PLAN



MUMTY PLAN



SECTION



FRONT ELEVATION

SIDE ELEVATION

01 **3-STAR RESORT**

Chorwad , Gujarat

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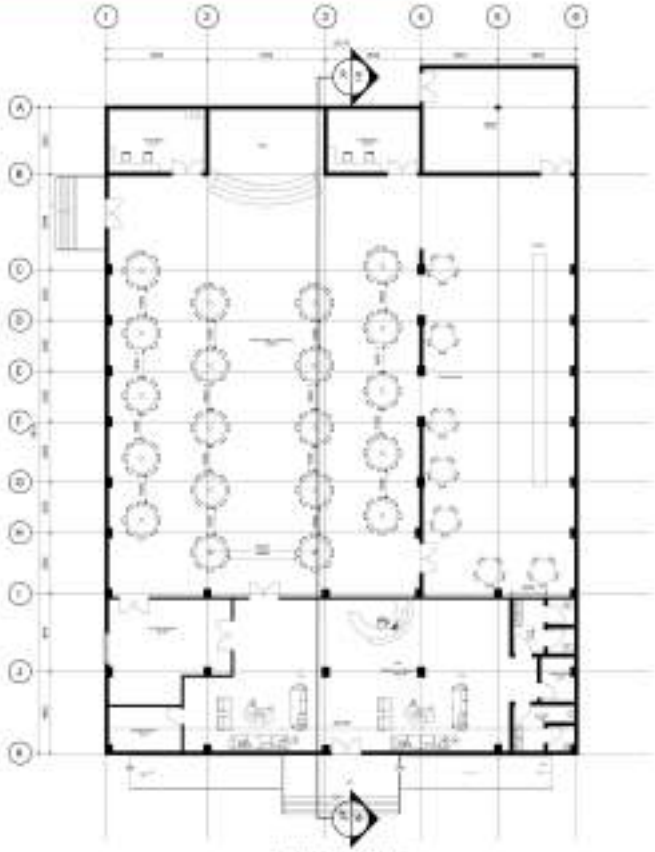
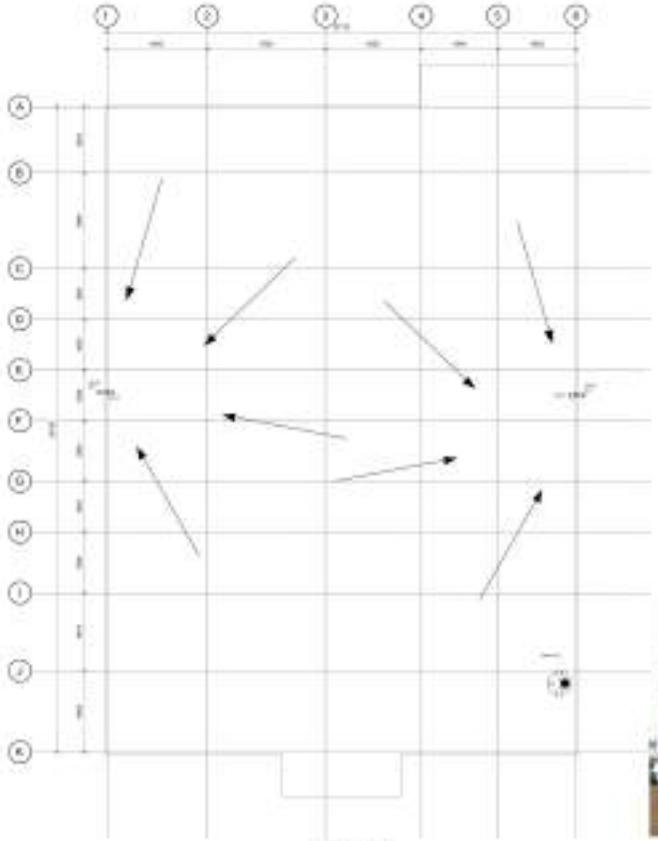
BANQUET HALL

SCALE 1: 150



GROUND FLOOR PLAN

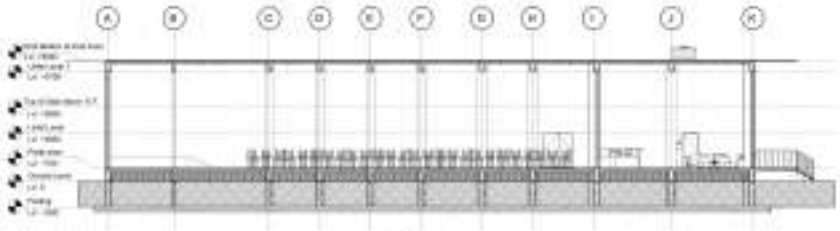


MUMTY PLAN

Meetings and Events	Area (m^2)	Remarks
Main Banquet Hall (150	295	Main Hall = ~295 m^2
Pre-function Lobby	95	30–35% of hall area
Stage	35	
Restrooms (M+F)	20	
Service / Pantry	30	
Total	**~475 m^2**	



VIEW



SECTION



FRONT ELEVATION

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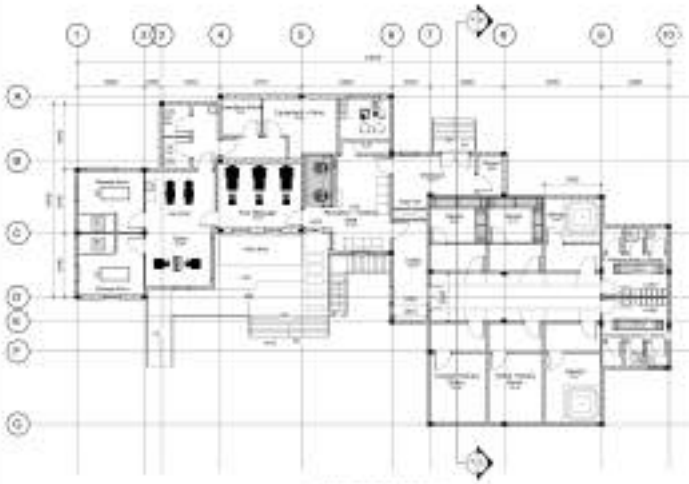
SPA AND GYM

SCALE 1: 150



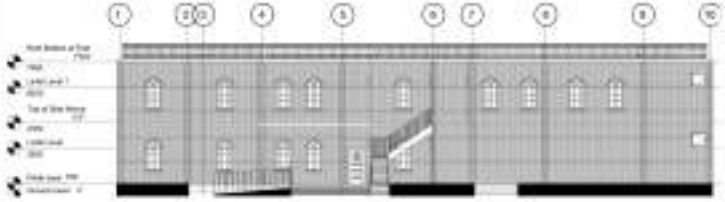
GROUND FLOOR PLAN



FIRST FLOOR PLAN

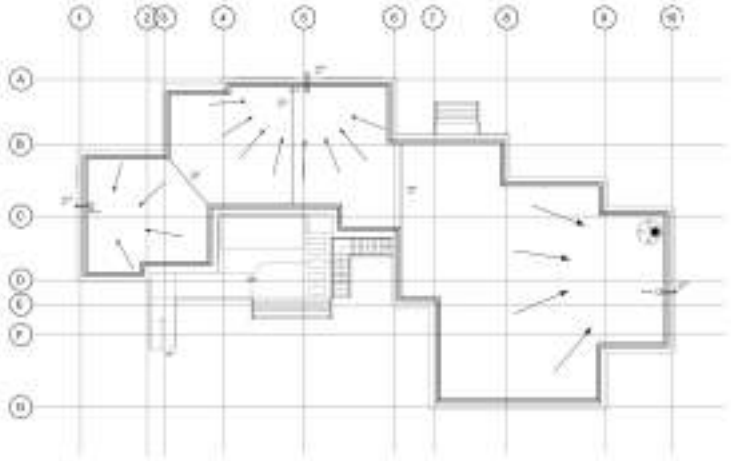


VIEW



FRONT ELEVATION





MUMTY PLAN

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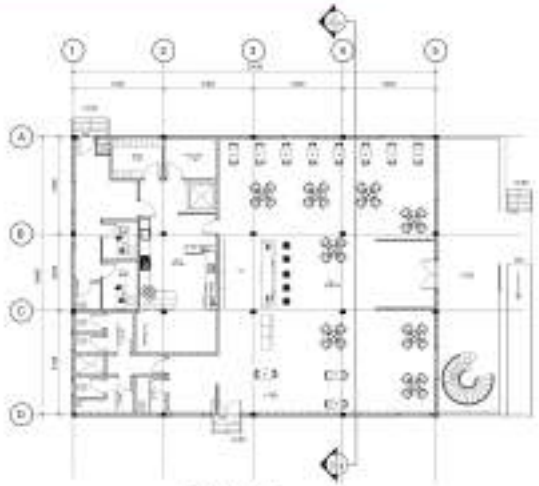
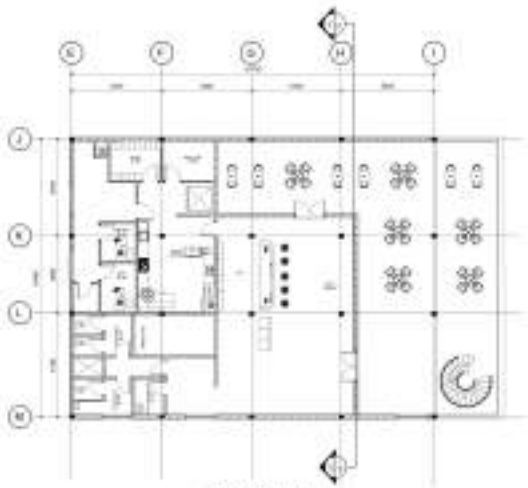
RESTURANT PLANS

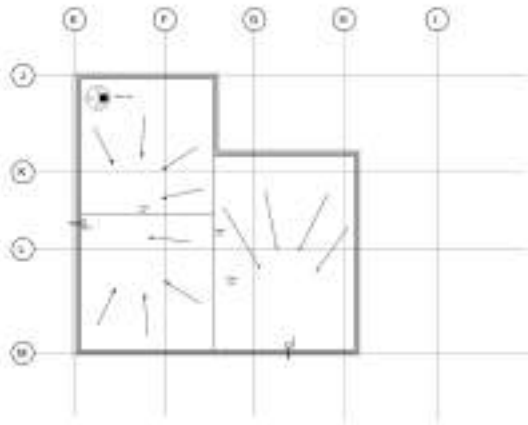
SCALE 1: 150



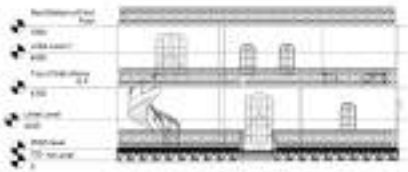
GROUND PLAN



FIRST FLOOR PLAN



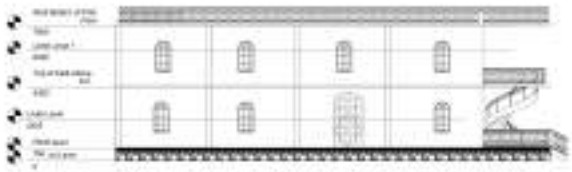
MUMTY PLAN



FRONT ELEVATION



SECTION



SIDE ELEVATION

60% (Assort typical seats)	90 Seats	90 × 1.4 = 126.0 m²			
Food And Beverages	Seafood (sqm)	Pantaunant + Bar (sqm)	Shared (sqm)	Total (sqm)	
Seats (NBC)	94	90	-	90	
Dining area	75.0	56.4	-	126	
Kitchen	55	50	-	50	
Storage / Pantry	20	15	-	15	
Bar & Lounge	-	20	-	20	
Circulation / Staff	20	10	-	10	
Terrace(Terrace Seaside)	-	-	20	20	
TOTAL	176.0	131.4	20	341	

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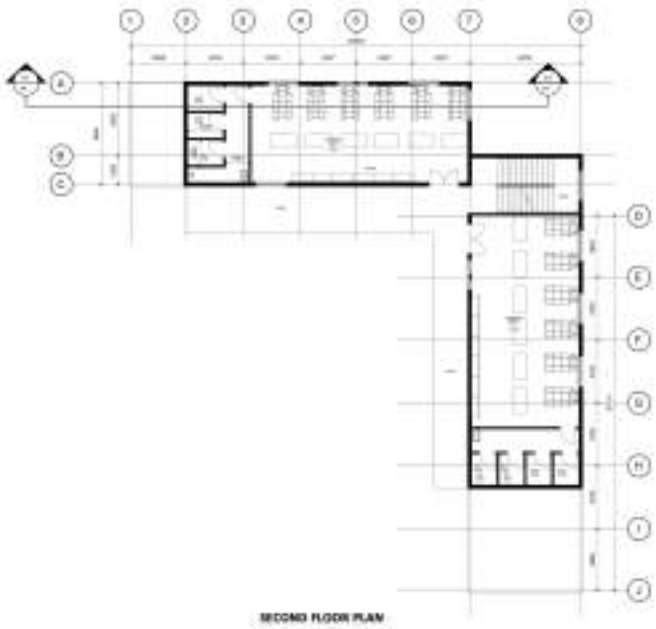
STAFF QUARTERS

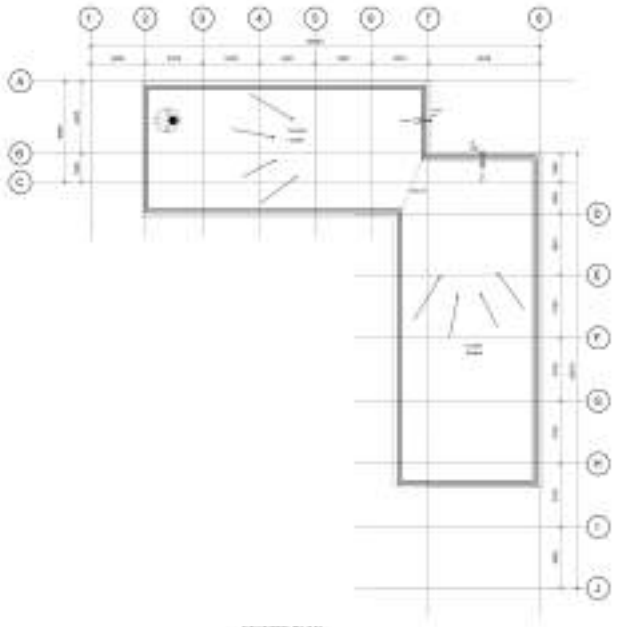
SCALE 1: 150



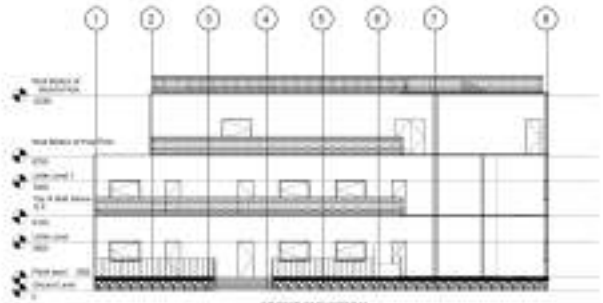
GROUND AND FIRST FLOOR PLAN



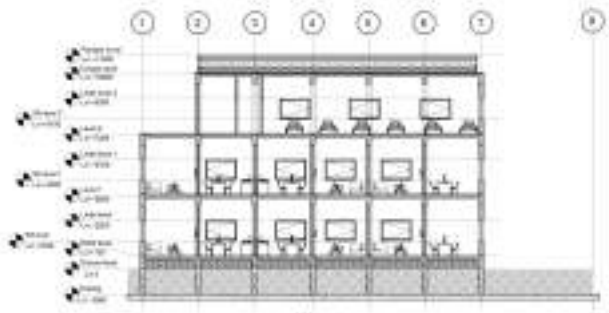
SECOND FLOOR PLAN



MUMTY PLAN



FRONT ELEVATION



SECTION



VIEW

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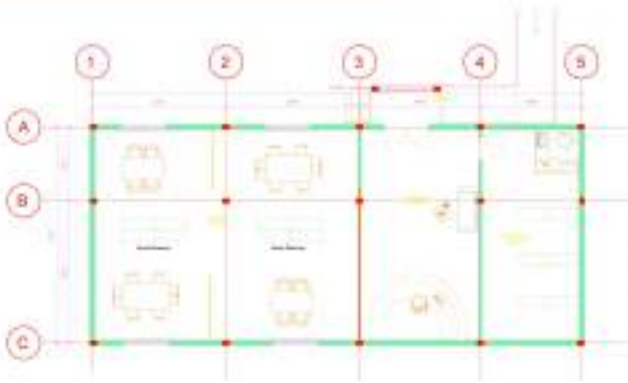
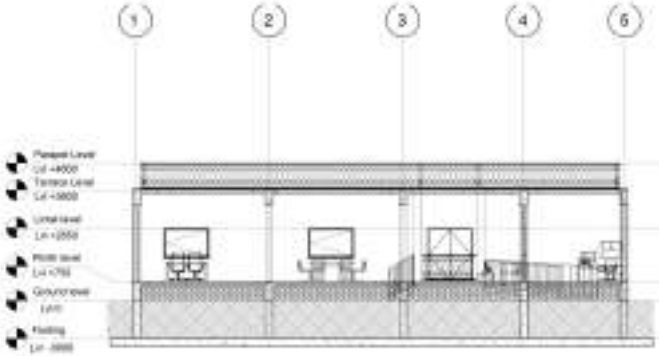
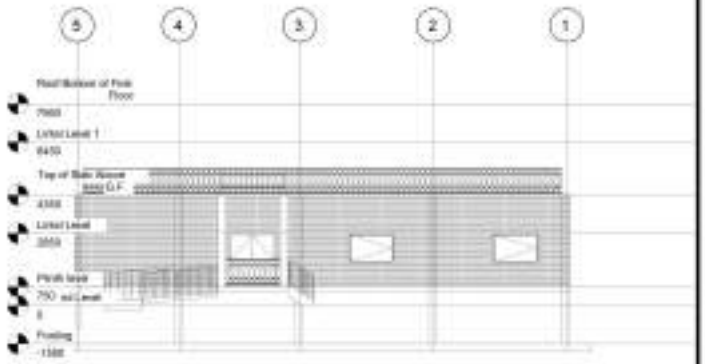
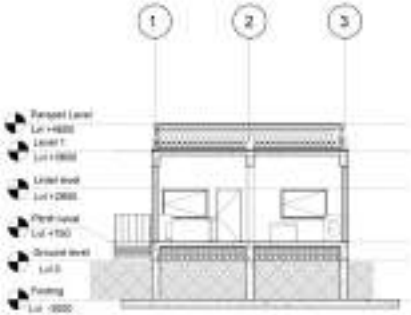
FLOOR PLANS

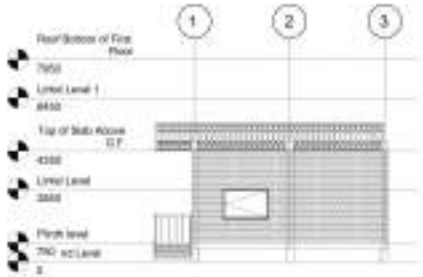




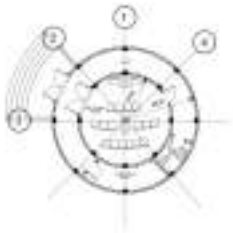














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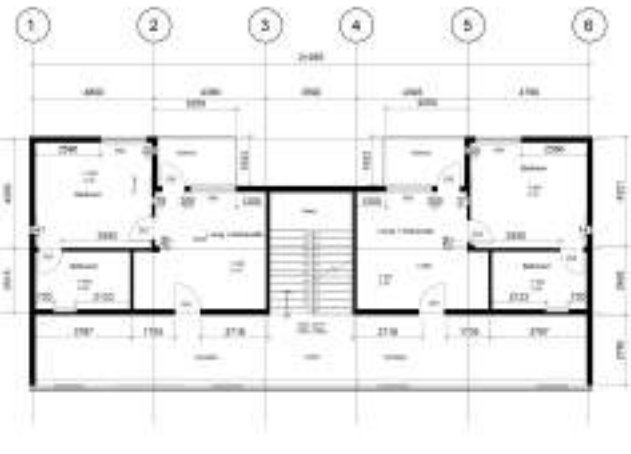
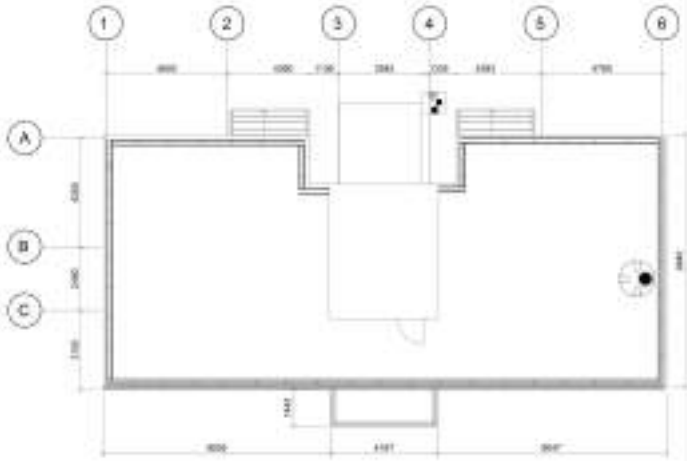
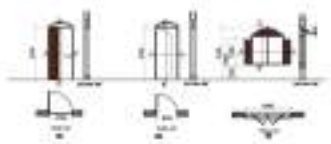
N

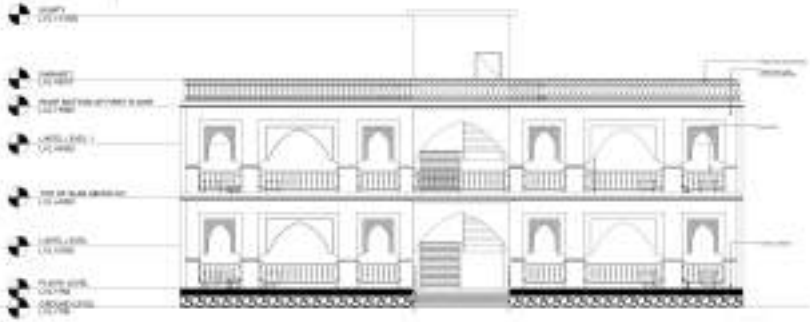
WORKING DRAWING

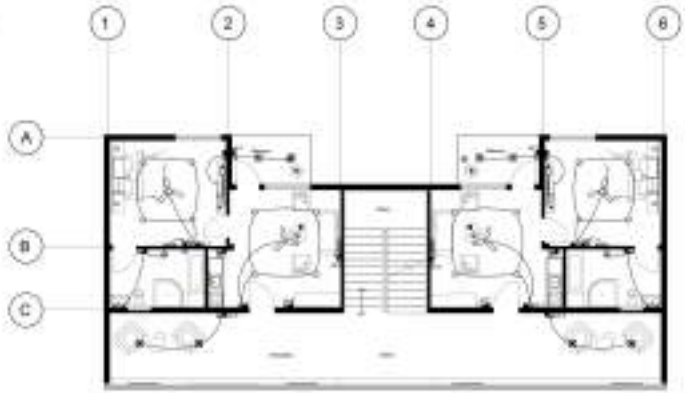


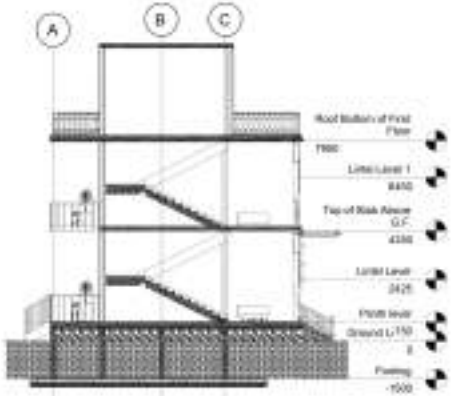
















ELECTRICAL LEGEND

SWITCH BOARD LEGEND FOR GROUND FLOOR

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BANQUET HALL

INTERIOR DESIGN STYLE

The interior concept for the banquet draws inspiration from the rich heritage of Chorwad, where royal grandeur meets the serene coastal charm of Gujarat. The Royal Colonial Coastal Theme blends the timeless elegance of colonial architecture with the intricate artistry of Islamic detailing, all harmonized with the natural freshness of the Arabian Sea coast.

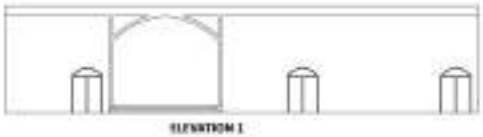
Design Features – Royal Colonial Coastal Theme

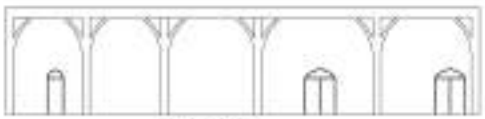
* White & pastel walls with blue highlights inspired by colonial seaside mansions.
* Vintage wooden accents adding warmth and heritage character.
* Arched openings and jaali panels reflecting Islamic detailing of the Junagadh Nawabi era.
* Ornate chandeliers enhancing royal elegance.
* Light fabrics & linen drapes for an airy, coastal feel.
  Indoor plants & seashell décor adding natural freshness and beach identity.



Colour palette and Material



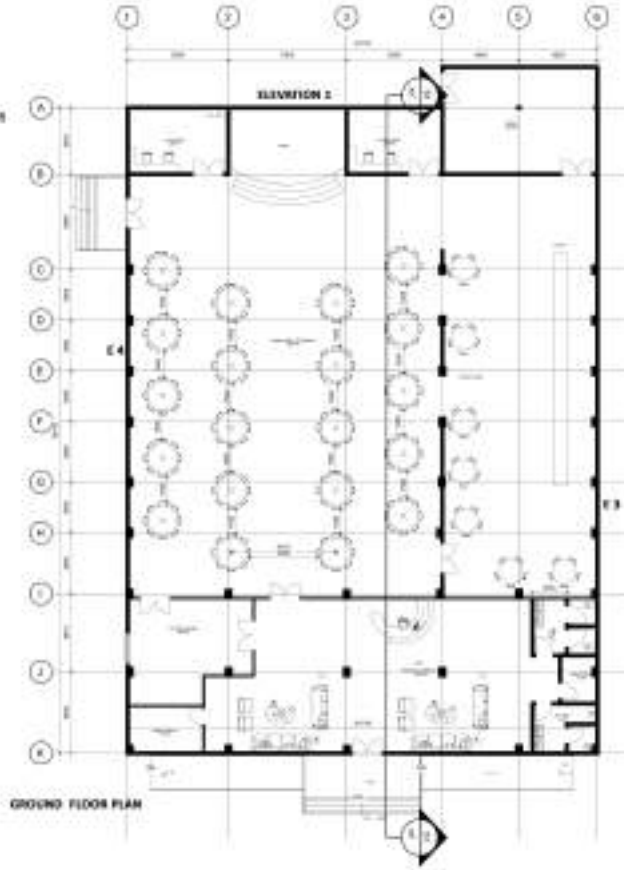


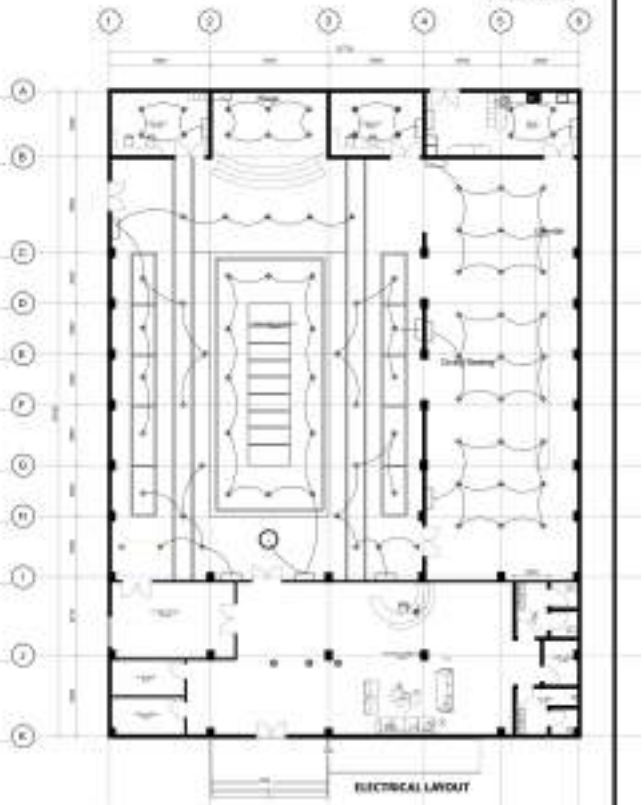


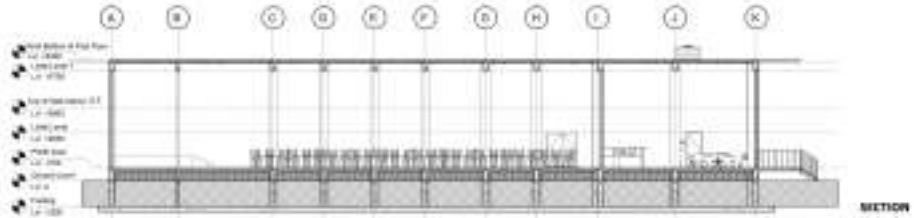




SCALE 1: 150









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LANDSCAPE



Pavement Material

S. No.	Location	Material Name	Material Description	Image
1	Roads	Cobblestone	✓ Durable, provides grip. ✓ Permeable, rustic look. ✓ Blends with hilly terrain.	
2	Parking	Interlocking Concrete Paving Blocks (ICPB) - Grey + pink	✓ Strong for heavy loads ✓ Aesthetically versatile ✓ Reduces stormwater runoff	
3	Pathways beside roads	Flagstone Pavers	✓ Durable ✓ Resistant to heavy rain ✓ Slip-resistant	
4	Pathways leading cottages	Flagstone Pavers with Grass	✓ Pedestrian-friendly ✓ Slip-resistant ✓ Natural weathering over time	
5	Garden Seating	Grass Pavers	✓ Eco-Friendly & Permeable ✓ Natural Aesthetic ✓ Durable & Low Maintenance	
6	Wooden Deck	Teak Wood	✓ Highly resistant to moisture, decay, and pests ✓ Requires minimal maintenance	
7	Paths for Pavilions and natural trails	Stepping Stones	✓ Blends with Nature ✓ Permeable & Eco-Friendly ✓ Low Maintenance & Durable ✓ Safe & Slip-Resistant	

Common Name	Botanical Name	Placement in Site Resort	Reason for Placement
Casuarina	Casuarina equisetifolia	Boundary boundary, entrance road	Acts as windbreak, very salt-tolerant, controls coastal erosion
Champa	Plumeria alba	Gardens, courtyard, garden	Soft fragrance, low maintenance, evergreen, good for large
Bougainvillea	Bougainvillea glabra	Boundary walls, entry arches, cottage edges	Highly drought & salt tolerant, adds striking colour, low maintenance
Hibiscus rosa-sinensis	Hibiscus rosa-sinensis	Cottage gardens, poolside, tropical beds	Tropical charm, colourful flowers, coastal hardy
Ixora (Dwarf & Medium)	Ixora coccinea	Pathway borders, cottage entrances, courtyard beds	Compact shrub, colourful clusters, near green lawns
Bottle Palm	Hyophorbe lagenicaulis	Entrance plaza, poolside, premium walkways	Premium look, near drops, does not block views
Areca Palm	Dypsis lutescens (syn.)	Courtyard entrance avenue, cluster near entry	Resilient and full, photogenic, avoid clutter
Indian Coral Tree	Erythrina variegata	Between cottages, feature tree	Light shade, sunflowers, attracts birds, good for privacy
Frangipani	Plumeria rubra	Near entrance/lobby, side lawn, cottage backdrops	Fragrant bell flowers, soft shade, best in evening
Ixora (Dwarf)	Ixora coccinea (dwarf)	Cottage pathways, hedges, formal borders	Very small & bloomy, easy to shape, excellent for pathways
Rudra	Rudra simplex	Pool edges, cottage garden beds	Coastal hardy, colourful, soft purple flowers
Neem	Azadirachta indica	Parking, service access, roads	Very low maintenance, shade, hardy & low maintenance
Kanji	Pongamia pinnata	Service road, cottage rear boundary	Coastal hardy, medium shade, improves air quality
Red Tree	Samanea saman	Green rooftop/gaps, large courtyards	Creates large shade canopy good for big spaces
Plumbago	Plumbago auriculata	Poolside beds, cottage borders	Soft blue flowers, coastal favourite, elegant look
Hibiscus	Hibiscus rosa-sinensis	Pathways, public open corridors	Yellow flowers create seasonal attraction & pollinator
Areca Palm	Dypsis lutescens	Courtyard entrances, small patios, all over pockets	Adds tropical atmosphere, easy to maintain, softens
Lagerstroemia (Dwarf)	Lagerstroemia indica (dwarf)	Cottage entrances, small patios, all over pockets	Adds fragrance, evergreen, suits resort ambience

CREEPERS

Local Name	Botanical Name	Description	Height	Spread	Soil Suitability
Bougainvillea	Bougainvillea glabra	Vigorous flowering climber	3–6 m	Variable	Well-drained
Jasmine Sambac (Dwarf)	Jasminum sambac (dwarf)	Fragrant white flowers	0.6–1.2 m	0.6–1.2 m	Well-drained

FLOWERING TREES

Local Name	Botanical Name	Description	Height	Spread	Soil Suitability
Indian Coral Tree	Erythrina variegata	Deciduous tree with red flowers	10–15 m	8–10 m	Sandy-loam
Kanji	Pongamia pinnata	Fragrant round yellow flowers	10–20 m	10–15 m	Moist to humid soil
Amaltas	Cassia fistula	Yellow cascading flowers	8–10 m	6–8 m	Sandy-loam
Rain Tree	Samanea saman	Large umbrella canopy	15–30 m	25–35 m	Well-drained

SHRUBS

Local Name	Botanical Name	Description	Height	Spread	Soil Suitability
Champi	Tabernaemontana divaricata	Fragrant white flowers	1–2 m	1–2 m	Well-drained
Ixora (Dwarf)	Ixora coccinea	Clustered flower heads	1–1.2 m	1–1.2 m	Slightly acidic
Hibiscus	Hibiscus rosa-sinensis	Large tropical flowers	1.5–2.5 m	1–2 m	Loamy
Plumbago	Plumbago auriculata	Sky-blue soft clusters	1–1.5 m	1–1.5 m	Sandy-loam
Rudra	Rudra simplex	Hardy purple flowers	0.6–1 m	0.6–1 m	Well-drained

PALM

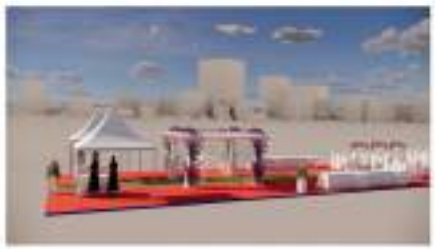
Local Name	Botanical Name	Description	Height	Spread	Soil Suitability
Bottle Palm	Hyophorbe lagenicaulis	Compact ornamental palm	4–6 m	2–3 m	Sandy well-drained
Date Palm	Phoenix dactylifera	Tall formal palm	10–15 m	4–6 m	Sandy

NATIVE TREES

Local Name	Botanical Name	Description	Height	Spread	Soil Suitability
Neem	Azadirachta indica	Medicinal evergreen shade tree	15–20 m	10–15 m	Sandy to loamy
Kanji	Pongamia pinnata	Semi-evergreen, nitrogen-fixing	15–18 m	8–10 m	Coastal sandy
Casuarina	Casuarina equisetifolia	Windbreak, salt-tolerant	15–18 m	5–7 m	Sandy coastal









01 3-STAR RESORT

Chorwad , Gujarat

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WATER SUPPLY SITE LAYOUT



SITE SEWERAGE LAYOUT









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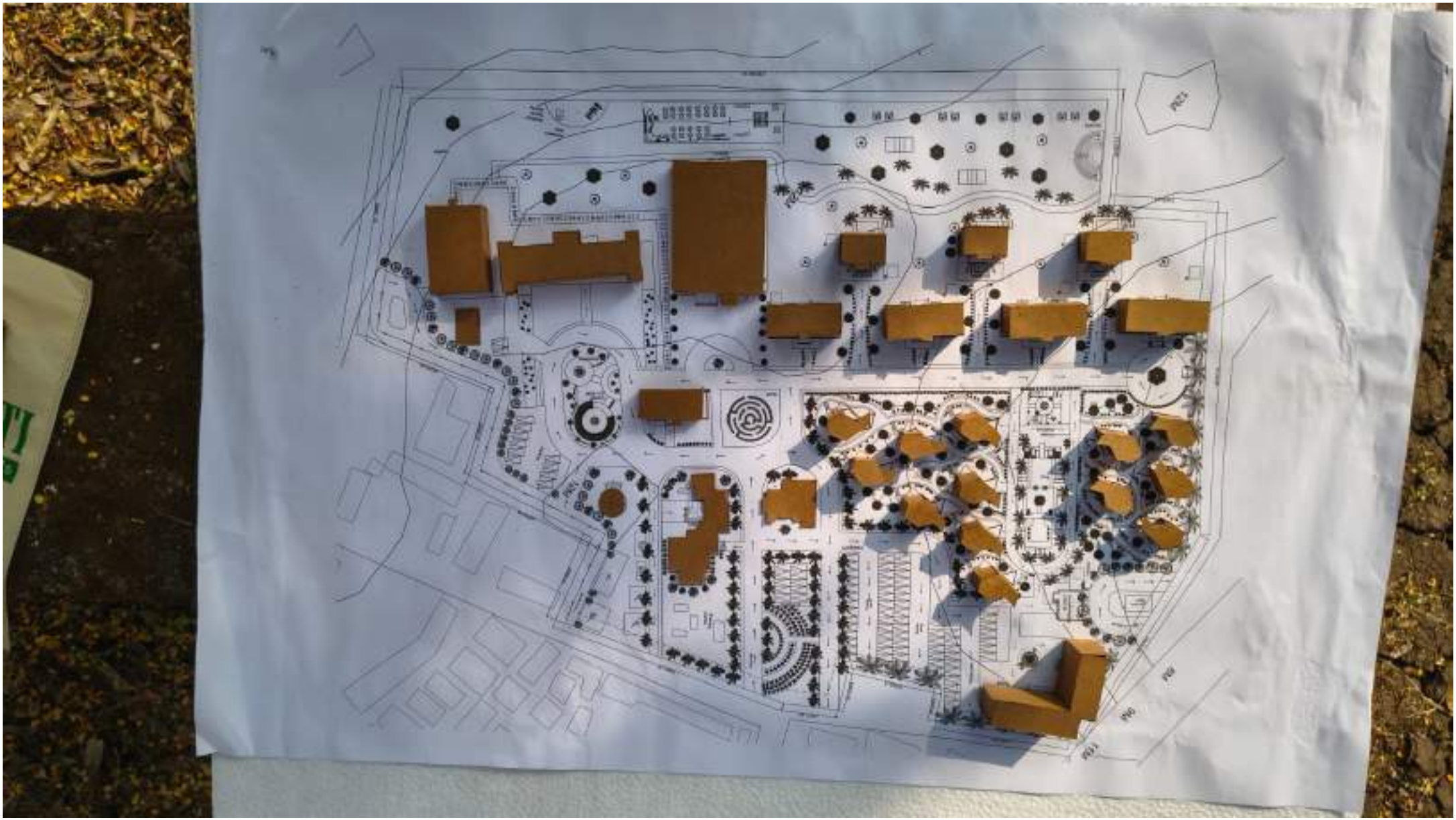


12M


12M