



# Detailed Project Report

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**Project Name:**

URBANCO NEW OFFICE BUILDING

**Created by:**

Design & Development Department, Department

**Created on:**

6<sup>th</sup> March 2022

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# 1. INTRODUCTION

## 1. Introduction

HDC undertakes and manages the overall planning and building of the reclaimed city of Hulhumalé the Maldives' biggest and most ambitious urban development project. Currently working towards creating Hulhumalé to become the nation's first sustainable city, the corporation undertakes hospitality, industrial, recreational, commercial, and residential projects while introducing new opportunities on a scale previously never seen before in the country.

One of the main obstacles currently facing HDC is the lack of office space available for its growing workforce. HDC management has decided to build a brand-new office building to solve this issue. This office building will bring all the units of HDC under one roof and will cater to all the latest technologies. Moreover, this new office building will be an example of a sustainable and host state-of-the-art environmental control system.

## 1.2 Project Description

### 1.2.1 General

The new office building shall be comparable in all respects with international standards and meet the requirements of all applicable National Building Codes and Standards as well as the UK standards for office buildings.

The new office building is designed to host different activities and cater to modern office facilities as well. This building should serve both HDC and other government / private office requirements. However, it will have commercial & public spaces on the ground & first level which will attract the general public.

### 1.2.2 Objectives

The State objectives and goals of the new office building are:

1. To provide much-needed office spaces for HDC
2. To provide office spaces for other entities
3. To provide meeting and exhibition areas
4. To provide green sustainable office spaces
5. To provide a modern working environment
6. To integrate Private & Public space at podium level

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### 1.2.3: Development information

Plot area: 2,416.31 sqm (26,008.92 sqft)

Buildable area: 1,807.25 sqm (19,453.06 sqft)

Above 2<sup>nd</sup> floor: 75% of the buildable area can be used.

Total building height. 43.2 meters (an additional 4m can be used for the lift machine room)

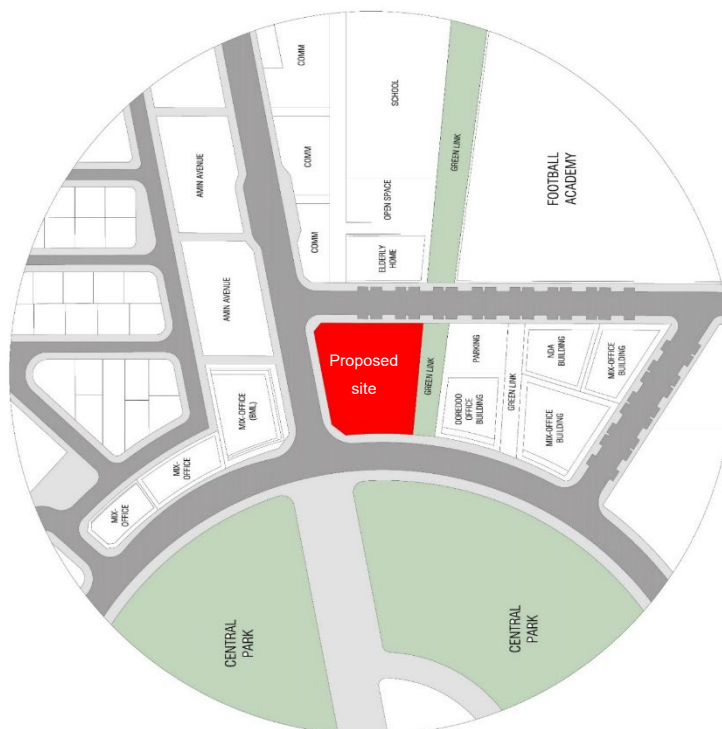
Total number of the floor:

- North tower: 9 floors
- South tower: 12 floors

(excluding basement)

### 1.2.4 The Project Site

The Proposed office site is located in the Hulhumale phase-1 adjacent to the Ooredoo building facing Reethigas Magu & Central Park.



## 2. SITE ANALYSIS

### 1. LOCATION

#### 1.1 Introduction of Hulhumalé

Hulhumalé is the first fully reclaimed, pre-planned city of Maldives with 188 hectares. Located 4 km off the North East coast of Malé, the capital city of Maldives, and 3 km from the Velana International Airport.

People from all over the country began to populate Hulhumalé in 2004. Major developments in terms of economy and infrastructure have been seen in the past few years. One of the other developments was the addition of Phase 2 which was reclaimed with an additional 244 hectares. Additionally, the connection of Malé, Hulhulé, and Hulhumalé with one of the biggest infrastructure projects, the bridge has brought significant changes to the greater Malé region and it has diverse development opportunities.

Hulhumalé Phase 1 currently houses 50,000 people with a target population of 80,000 people. With the new developments, Phase II plans a population of 160,000 people.

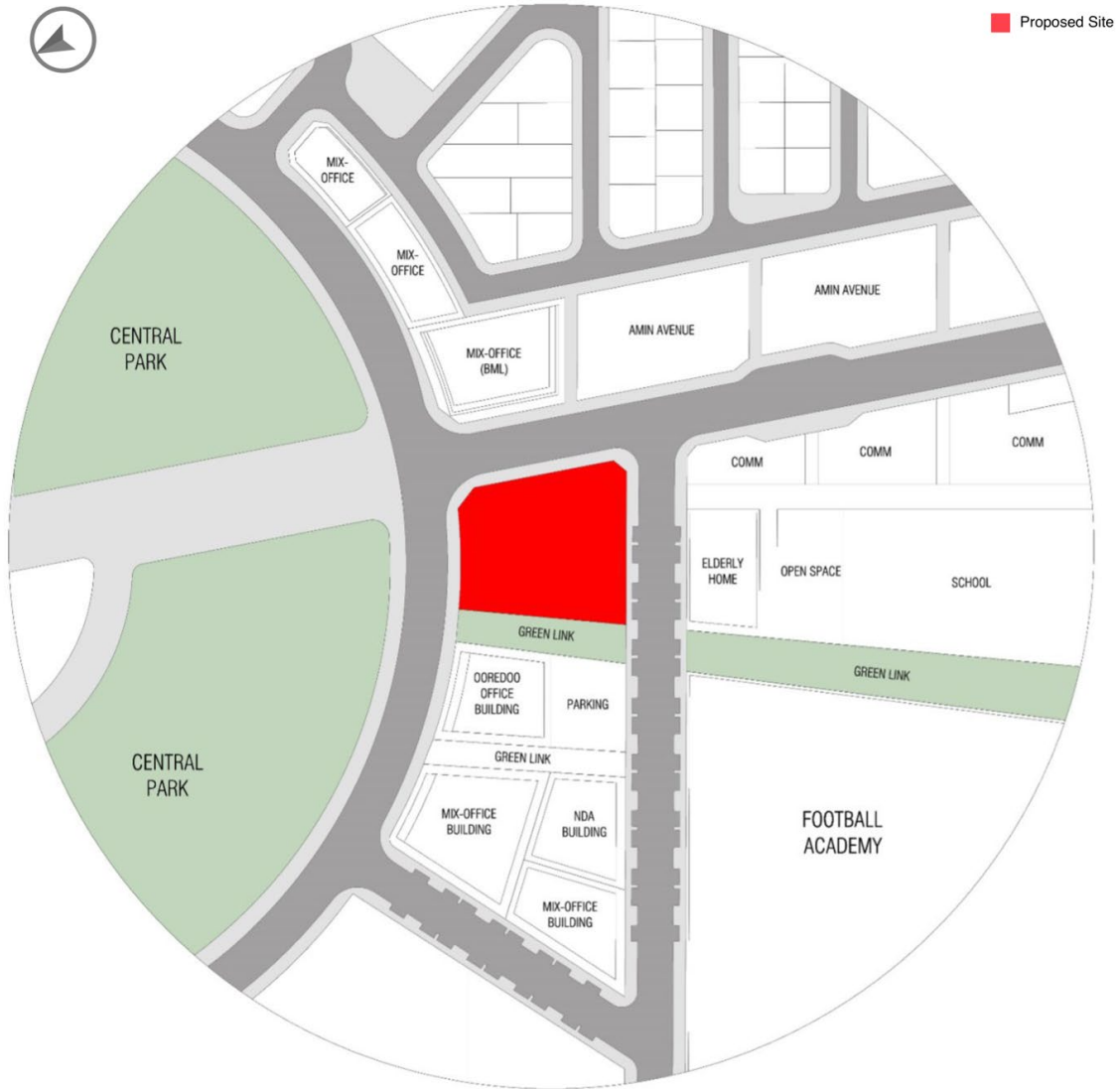




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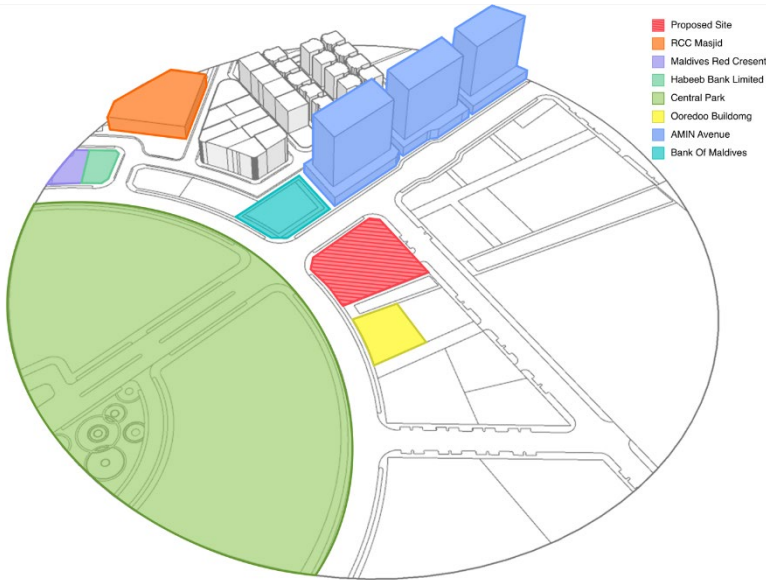
## 1.2 Location Map

The proposed Location for the HDC Office building is located nearby of the most prominent landmark of Hulhumalé, Central Park. This site sits on one of the busiest roads of Hulhumalé since the addition of The Bridge where all the vehicular movements take place.

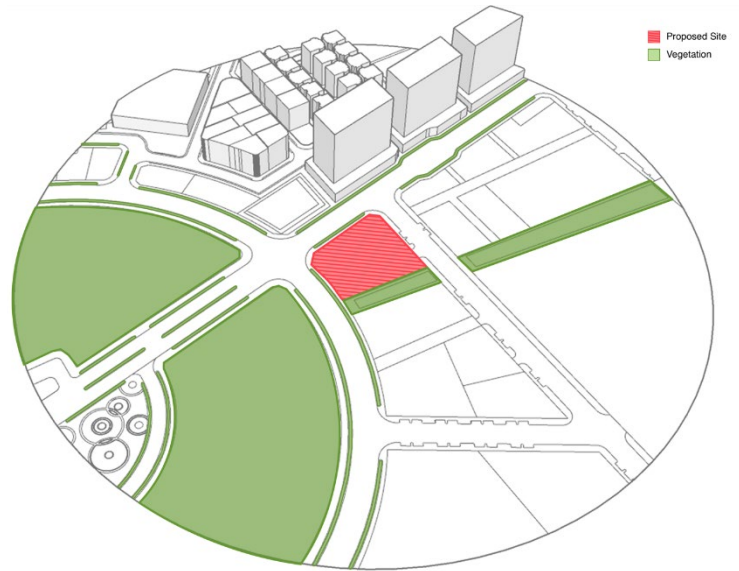


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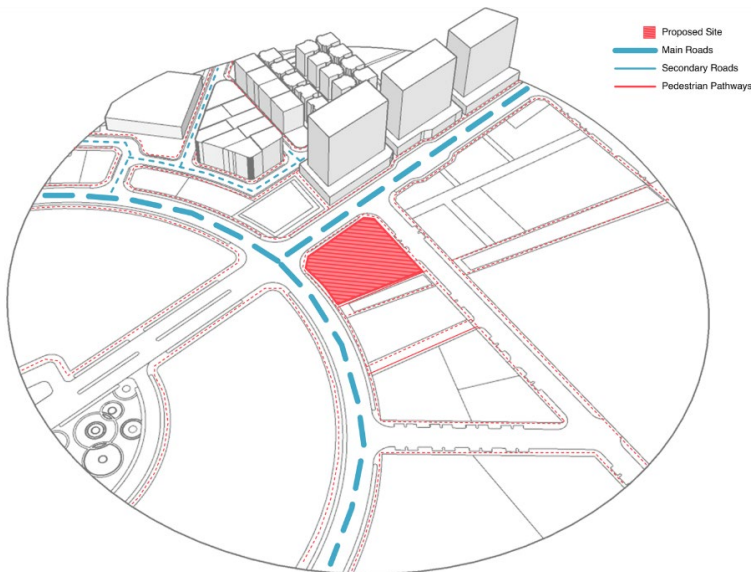
## SITE CONTENT



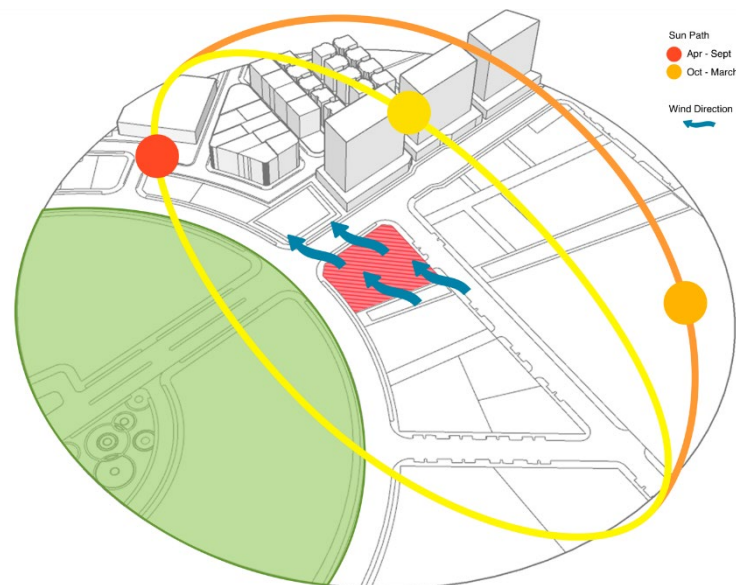
## VEGETATION



## CIRCULATION



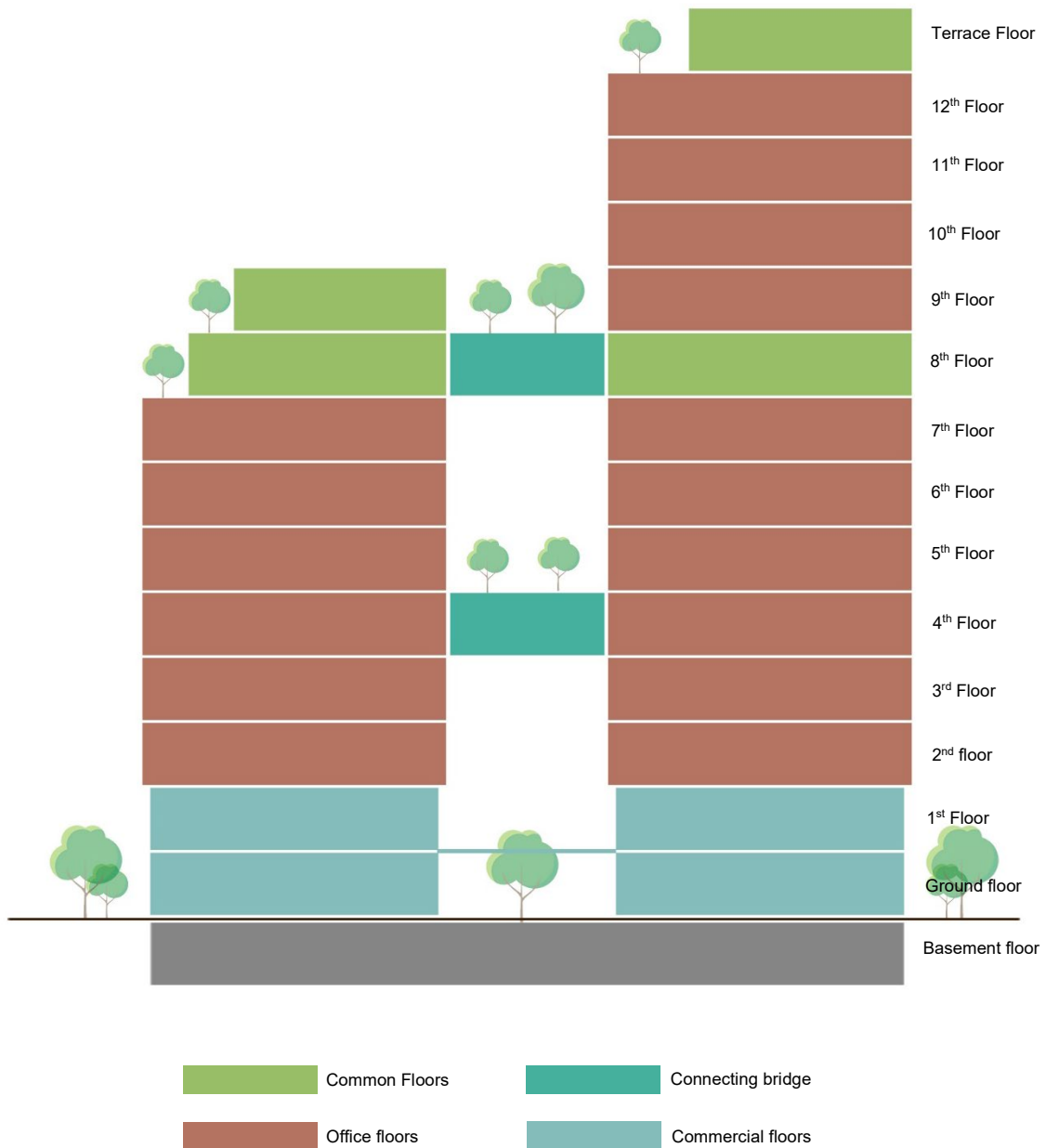
## SUN PATH AND WIND DIRECTION



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### 3. BUILDING PROGRAM

Schematic diagram of the building.



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## 1. BASEMENT FLOOR

### 1.1 basement parking

All parking must be accommodated within the plot area. This includes the basement and ground floor of the building.

Parking shall be provided as per the following:

Non-Operational:

Controlled/structured parking and surface can be located at the perimeter of the lot adjacent to the access roads.

Demarcate with signage and markings and provide appropriate lighting on pedestrian routes.

Separate parking aisles from primary vehicle circulation routes and entry drives whenever possible.

Use design elements that are visually interesting and consistent with other streetscape materials used in the overall development.

Utilize Universal Design techniques where feasible to provide a separation between driveway curbs and drop-off areas to minimize turning conflicts; provide a clear separation of vehicular traffic between drop-off zones and access to either a parking lot or parking structure, and design drop-off lanes so as not to obstruct traffic flow when motorists are stopped to discharge passengers.

Use scored, coloured, textured, and/or similar paving that is distinguishable from the travel lane at the drop-off area.

Exterior lighting is to be considered in all areas including landscaping, parking area, and building exterior lighting.

Wherever parking is provided appropriate floor paint markings and signage must be given.



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### 1.2 Lobby area

The basement should have a lobby area with access from two sides with fire-rated doors. This lobby should be access controlled. All the passenger elevators will start from this lobby.



### 1.3 Loading and unloading room

There will be a dedicated loading and unloading area in the basement followed by a room to unload the items. The Services elevator will have direct access to this room. This room should have fire-rated doors and a firefighting system.

### 1.4 Waste collection room

There will be a separate waste room for the building in the basement. All the wastes generated by the building will be kept in this room till the waste disposal team collects them. Since its dealing with waste there should be mechanical ventilation. Moreover, a water connection and drainage system also should be there. Wall and floor finishing should be done with a material that can be easily washable.

### 1.5 Services room

There will be two dedicated services rooms for each tower in the basement. All the services-related works will be carried out in this room. These spaces should be airconditioned and should have a firefighting system.



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## 2. GROUND FLOOR

### 2.1 Main office lobby

There will be two separate lobbies for both towers with double floor heights. Each lobby will have arm gates for access control and a reception counter.



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## 2.2 Commercial area

Part of the ground floor and first floor will be dedicated to commercial usage. These commercial spaces should be easily accessible and should user-friendly. All the units should have more than one entrance and should dedicate one entrance for services and other operational use.

Ground & first-floor level (podium level) should be finishing & esthetics should comply (design language & feel) with the concept design provided by the client.

Both tower's commercial areas shall be connected with a footbridge on the first floor. Users should be able to access the first floor from either escalators or a dedicated lift for the commercial area. Two escalators shall be provided to integrate public & private spaces of the development (ground to the first floor). Moreover, there should be a separate passenger lift for PWD and the general public. The lift should accommodate a minimum of one person with a wheelchair and a helper. (lift spec. to be decided during the design stage).

All the common areas such as corridors, footbridge & toilets, etc. of the commercial floors shall be well lit & proper signage to be established.



## 2.3. Services room

There should be two dedicated services rooms for each tower. All the services-related works shall be carried through this room. These spaces should be airconditioned and should have a firefighting system installed.

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## 2.4 Common & Public Spaces

All the policies of HDC are centered around making Hulhumale a user-friendly and communal space for the people living and Hulhumale and for the visitors. Therefore, it is should reflect the company's core principles. To achieve this, an integrated communal space should be designed on the ground floor which is common for both towers. Internal pedestrian ways, Seating, gathering & meeting spaces are considered public spaces.

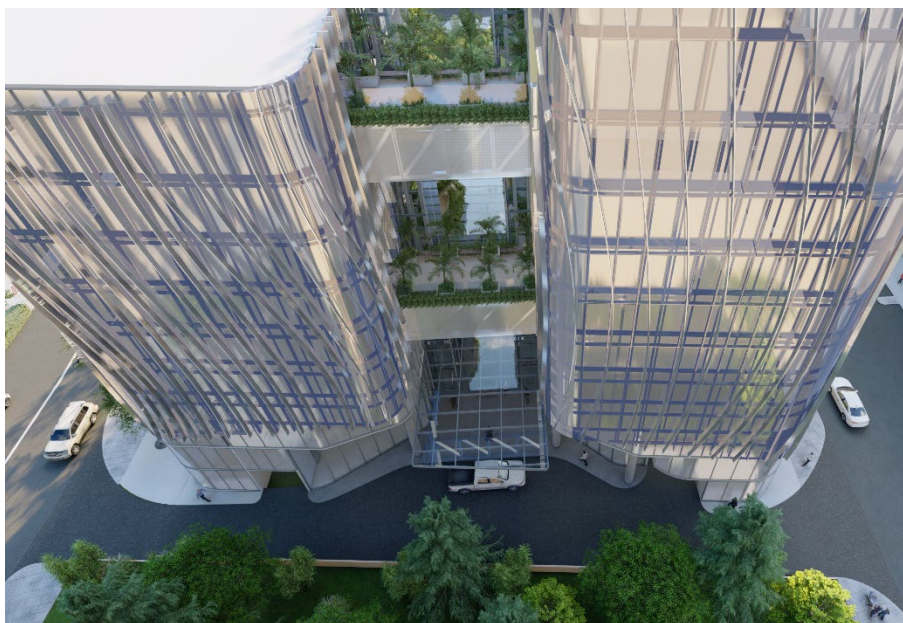




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## 2.5 Internal Road and drop off

There should be an internal road which will be used only for drop off and pick up from the office. This shall reduce the traffic on the surrounding roads and create a safe place for drop-off. This road should be able to accommodate the staff bus and it should have a dedicated shaded drop-off and pick-up zone.



### 3. FIRST FLOOR

#### 3.1 Commercial area

Refer to the 2.4 point

#### 3.2 Common toilet

The commercial area should have fully equipped common toilet facilities on the first floor and it should be open for the staff and the general public who are occupying the commercial facilities in the building. Furthermore, a separate PWD toilet (for all categories of use) is also to be provided with adequate circulation space.



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### 3.3 Connecting bridge

There should be a connecting bridge connecting two towers on the first floor. Escalators will be connected to this bridge and will act as the main pedestrian pathway between the two towers.





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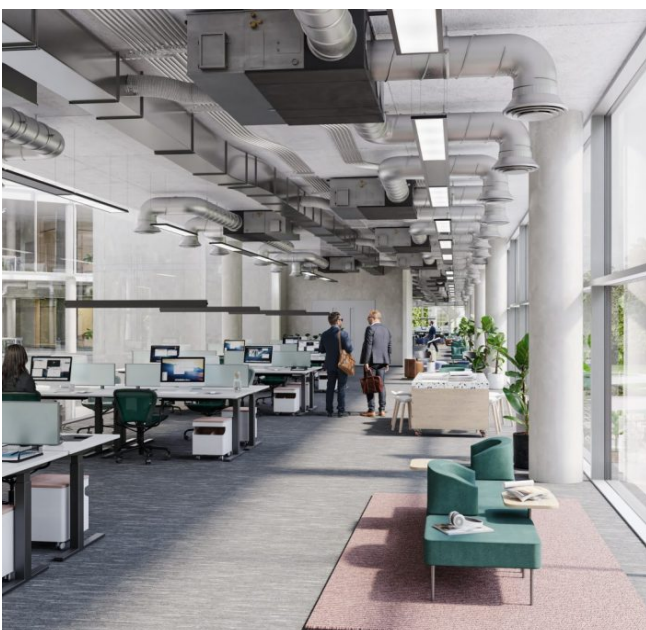
### 3.4 Services room

There should be two dedicated services rooms for each tower. All the services-related works shall be carried through this room. These spaces should be airconditioned and should have a firefighting system installed.

## 4. SECOND FLOOR TO SEVENTH FLOOR AND TENTH FLOOR TO TWELFTH FLOOR

### 4.1 Office area

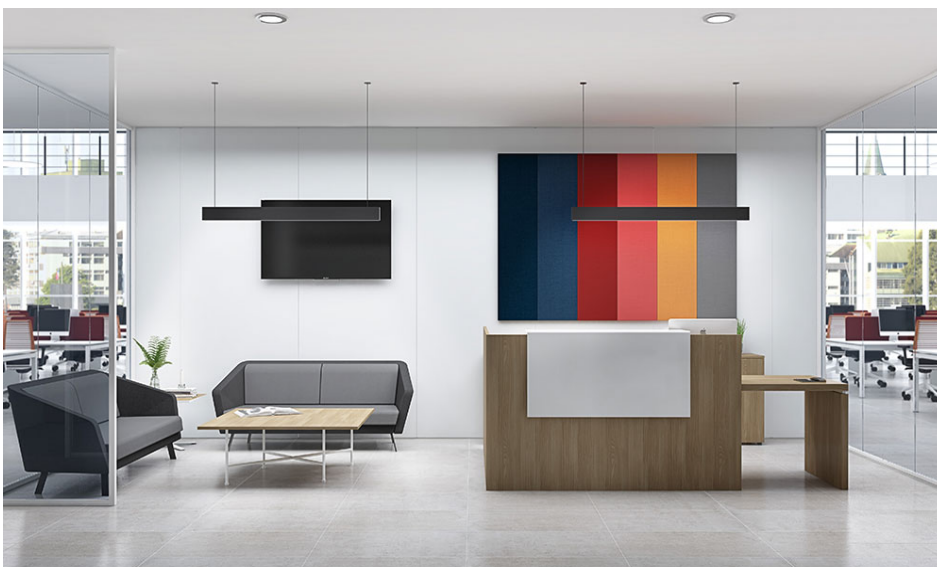
Main working space of the building: The idea of the working area is that it should be an open plan working environment. However, partitions should be provided wherever necessary (meeting rooms, directors' rooms &, etc.) by the design. All the partitions should be from floor to ceiling tempered glass (glass spec. & fixing details to be selected during the technical design stage). The general office area Should have exposed ceilings and only specific areas such as meeting rooms should have ceilings. A raised floor system is to be provided for the general office area. All the required services are to be intergraded on the floor (floor-mounted network, electrical &, etc) to be carried under raised floor system.



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#### 4.2 Lobby and waiting area

All the office floors should have a small waiting area in front of the office entrance. The purpose of this area is to create a buffer before entering the office space. This space should have a raised floor system & finished at the same level as the main office space. Two ramps shall be placed transition to the corridor and outdoor area. There should be a drop ceiling connected to the ceiling of the outdoor area and corridor.





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### 4.3 Outdoor area

There should be an outdoor area (corridor and cantilevered balcony) on all the office floors. The purpose of these spaces is to give staff the outdoor area where they can hang around when they need a break or privacy. These spaces should have sitting areas and will be planted with tropical plants along the full length of them. The floor finishing of this space should be an outdoor material with non-skid properties. A ceiling system (out-door) is to be provided, which should be flushed with beam soffit level.



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#### 4.4 Common services corner

The Westside of the two towers should be dedicated to the common services of the buildings. These include toilets, pantry, storage, fire staircase, and services room.

##### 4.4.1 Storage room

Each floor should have its own dedicated storage area with appropriate services installed.

##### 4.4.2 Pantry

Each office level should have a pantry space. Each pantry should have a dining table with a minimum of 4 chairs, and amenities such as a sink, fridge, and provision for a microwave oven. The exposed wall surface area should be finished with glossy paint.

##### 4.4.3 Toilets

All the office floors should have fully equipped common toilet facilities on the first floor and it should be open for the staff and the general public who are occupying the commercial facilities in the building. Furthermore, a separate PWD toilet (for all categories of use) is also to be provided with adequate circulation space.

##### 4.4.4 Fire staircase

There should be 02nos. of fire staircases in each tower, one will be located in the common service corner. All the fire staircases should be designed in accordance with local or international fire standards.

##### 4.4.5 Services room

There should be two dedicated services rooms for each tower. All the services-related works shall be carried through this room. These spaces should be airconditioned and should have a firefighting system installed.

## 5. EIGHTH FLOOR

This floor will be used as a common floor which accommodates mostly common facilities such as canteen, meeting room, classrooms, and other meeting areas.

### 5.1 Restaurant

#### 5.1.1 Indoor dining area

This floor of the north tower will be used as a restaurant which will serve as a canteen for the staff using the building and it can give dining services to people from outside. There will be co-working spaces and a buffet area in this space. The indoor dining area should be air-conditioned with an exposed ceiling and floor-to-ceiling height glass wall. Co-working tables should have provisions for charging laptops and mobile phones.

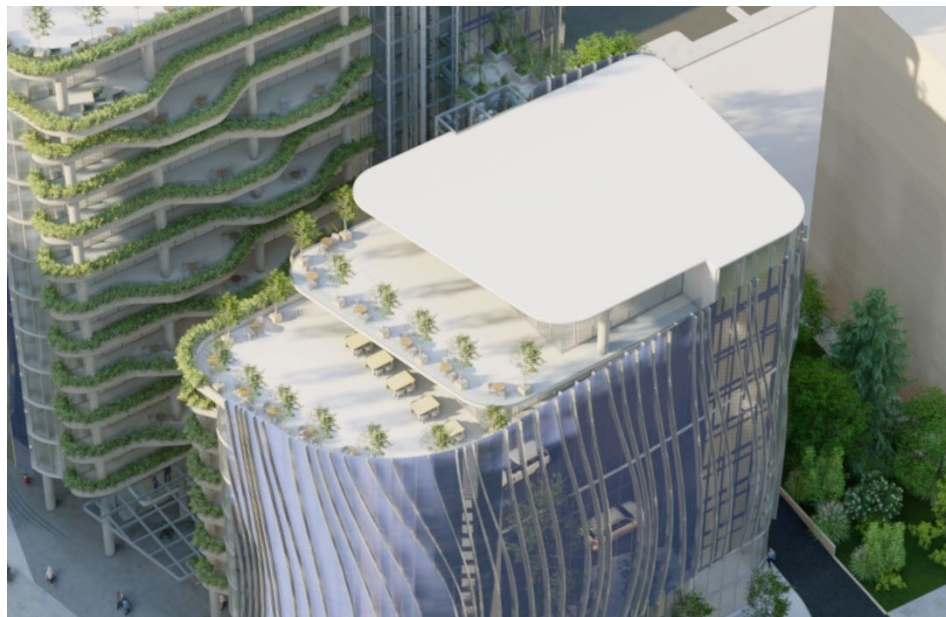




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### 5.1.2 Outdoor dining area

The outdoor dining area should have outdoor gardens and seating. This space can be used as an event space if required. A handwashing area should be incorporated into this area.



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### 5.1.3 Kitchen

The canteen should have a full-fledged kitchen by the Maldivian regulatory authority.

## 5.2 Common meeting room and classrooms

The 8<sup>th</sup> Floor of the south tower should be dedicated to classrooms, meeting rooms, and other event spaces. There should be a minimum of three dedicated rooms where high-level meetings can be held. These rooms should have the latest meeting room tech installed. Another facility on this floor is the classrooms. There should be a minimum of 2 classrooms with a capacity of 25 to 30 seats. These rooms should be able to convert into one room if necessary. There should be provision for the projector from the ceiling and other necessary electrical and internet connections should be provided.

Furthermore, there should be a conference room with a capacity of 30 people minimum. This space can be converted into an event space if needed. All the necessary electrical and internet connections.

Catering services for the events held on this floor will be provided from the restaurant on the opposite tower. Therefore, there should be a preparation space on this floor to keep the food items before it served.



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### 5.3 Toilets

All the office floors should have fully equipped common toilet facilities on the first floor and it should be open for the staff and the general public who are occupying the commercial facilities in the building. Furthermore, a separate PWD toilet (for all categories of use) is also to be provided with adequate circulation space.

### 5.4 Storage space

Each floor should have its own dedicated storage area with appropriate services installed.

## 6. NINTH FLOOR

South tower's ninth floor should be used as:

### 6.1 Seminar Hall

The 9<sup>th</sup> floor of the north tower will be dedicated to a seminar hall with a minimum of 150 seats.

This space should be easily accessible and should have a column-free hall for an unobstructed view. There will be an outdoor area that will be used by the people who use the hall. Lead Screen, Sound & lighting, and other required services to be installed on this space. All the services required for this space should be controlled by a separate control room.



## 7. TERRACE FLOOR

### 7.1 Staff lounge

The terrace level of the south tower should be used as a staff lounge area for HDC staff. This space should be designed for staff as a relaxation area. There should be gaming facilities & a reasonable area for staff to enjoy a movie with all required equipment installed. Moreover, separate napping areas(pods) for both female and male staff should be provided and a booking system to be established. The outdoor terrace of this floor should be designed as an outdoor garden with proper landscaping.



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## 4. BUILDING DESIGN ELEMENTS

### 1. Roof structure for the drop-off and pedestrian pathway

There should be a flat roof with a separate structure spanning from the drop-off area to the pedestrian entrance. This should cover the whole pedestrian pathway on the ground floor. This structure will be made from steel and glass which should be attached to the building below the second-floor beam level. There should be no support from below for it to create an obstacle-free pathway for the users. (if required, It should be attached to both buildings from below the second floor and there can be a support cable attached to it from the third floor. The cable should be only on the two ends of the structure.)



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## 2. Connecting Bridges

There should be two connecting bridges at the office levels of this building. One on the 4<sup>th</sup> floor and another on the 8<sup>th</sup> floor. These bridges should design in such a way that both the hosting floor and the floor above could use the bridge. All the bridges will be made from steel and covered with cladding and should be the same material as the building exterior. Furthermore, the roof level of the bridge should be used as an outdoor landscape area. There should be a 1.2M high glass railing on both sides of the bridge.



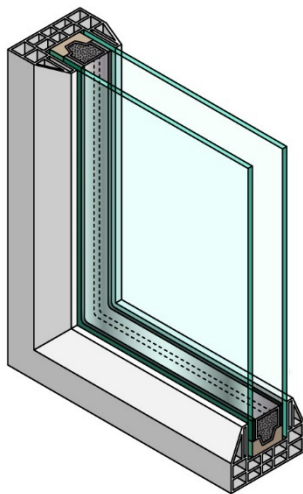


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### 3. Exterior – Façade

There will be main three elements in the exterior of this building. The main exterior element of the building shall be of unitized façade system, except for the internal corridor area. The glass on the façade shall be of double glazing with a min. of 10mm air gap and exterior layer to be treated with heat reflective coating. It should have a blue tint, (colour code and level of tint to be decided during the procurement stage) which symbolizes the infinite blue oceans of the Maldives. To reduce the heat gain on the façade a decorative design element (curved vertical fins) has been incorporated as a part of the façade.

The glass wall on the corridor also shall be double glazed with a thermal break aluminium frame system with heat reflective properties on glass.



## 5. AREA STATEMENT

MALDIVES INTERNATIONAL HDC OFFICE BUILDING			
SR.NO	DESCRIPTION	ROOM AREAS (CARPET, SQM)	TOTAL AREA
<b>A</b>	<b>BASEMENT FLOOR</b>		
	PARKING		
	CIRCULATION		
	SERVICES		
	LOADING AND UNLOADING		
	STORAGE		
	OTHER (WALLS, DUCTS, ETC)		
<b>B</b>	<b>GROUND FLOOR</b>		
	OPEN AREA		
	CIRCULATION		
	SERVICES		
	LOBBY		
	COMMERCIAL		
	OTHER (WALLS, DUCTS, ETC)		
<b>C</b>	<b>FIRST FLOOR</b>		
	COMMON AREA		
	CIRCULATION		
	SERVICES		
	WASHROOM		
	COMMERCIAL		
	OTHER (WALLS, DUCTS, ETC)		
<b>D</b>	<b>SECOND FLOOR</b>		
	COMMON AREA		
	CIRCULATION		
	SERVICES		
	WASHROOM		
	OFFICE		
	PANTRY		
	OPEN AREA		
	OTHER (WALLS, DUCTS, ETC)		

<b>E</b>	<b>THIRD FLOOR</b>		
	COMMON AREA		
	CIRCULATION		
	SERVICES		
	WASHROOM		
	OFFICE		
	PANTRY		
	OPEN AREA		
	STORAGE		
	OTHER (WALLS, DUCTS, ETC)		
<b>F</b>	<b>FOURTH FLOOR</b>		
	COMMON AREA		
	CIRCULATION		
	SERVICES		
	WASHROOM		
	OFFICE		
	PANTRY		
	OPEN AREA		
	OTHER (WALLS, DUCTS, ETC)		
<b>G</b>	<b>FIFTH FLOOR</b>		
	COMMON AREA		
	CIRCULATION		
	SERVICES		
	WASHROOM		
	OFFICE		
	PANTRY		
	OPEN AREA		
	OTHER (WALLS, DUCTS, ETC)		
<b>H</b>	<b>SIXTH FLOOR</b>		
	COMMON AREA		
	CIRCULATION		
	SERVICES		
	WASHROOM		
	OFFICE		
	PANTRY		
	OPEN AREA		

	OTHER (WALLS, DUCTS, ETC)		
<b>I</b>	<b>SEVENTH FLOOR</b>		
	COMMON AREA		
	CIRCULATION		
	SERVICES		
	WASHROOM		
	OFFICE		
	PANTRY		
	OPEN AREA		
	OTHER (WALLS, DUCTS, ETC)		
<b>J</b>	<b>EIGHTH FLOOR</b>		
	COMMON AREA		
	CIRCULATION		
	SERVICES		
	WASHROOM		
	OFFICE		
	PANTRY		
	OUTDOOR CAFÉ		
	INDOOR CAFÉ'		
	KITCHEN		
	OPEN AREA		
	OTHER (WALLS, DUCTS, ETC)		
<b>K</b>	<b>NINTH FLOOR</b>		
	COMMON AREA		
	CIRCULATION		
	SERVICES		
	WASHROOM		
	OFFICE		
	PANTRY		
	OUTDOOR CAFÉ		
	INDOOR CAFÉ'		
	OPEN AREA		
	OTHER (WALLS, DUCTS, ETC)		
<b>L</b>	<b>TENTH FLOOR</b>		
	COMMON AREA		
	CIRCULATION		

	SERVICES		
	WASHROOM		
	OFFICE		
	PANTRY		
	OPEN AREA		
	OTHER (WALLS, DUCTS, ETC)		
<b>M</b>	<b>ELEVENTH FLOOR</b>		
	COMMON AREA		
	CIRCULATION		
	SERVICES		
	WASHROOM		
	OFFICE		
	PANTRY		
	OPEN AREA		
	OTHER (WALLS, DUCTS, ETC)		
<b>N</b>	<b>TWELFTH FLOOR</b>		
	COMMON AREA		
	CIRCULATION		
	SERVICES		
	WASHROOM		
	OFFICE		
	PANTRY		
	OPEN AREA		
	OTHER (WALLS, DUCTS, ETC)		
<b>N</b>	<b>TERRACE FLOOR</b>		
	COMMON AREA		
	CIRCULATION		
	SERVICES		
	WASHROOM		
	STAFF LOUNGE		
	PANTRY		
	OPEN AREA		
	OTHER (WALLS, DUCTS, ETC)		

**TOTAL**

## 6. STRUCTURAL SCOPE

### 1. DESIGN SCOPE

The scale of the project and the fact that it has two towers interconnected with bridges to all its floors, including the roof terraces meant that from the outset, light-weight construction was crucial for a cost-effective solution. In this regard, the building structure is based on a steel frame and curtain wall system including the floor structure which will be based on steel beams and composite deck flooring. This also will contribute to the easing of construction as much of the assembly will be dry construction. Some parts of the structure such as the stairwells and lift shafts shall be of concrete, partly for ease of fire protection and partly to contribute to the bracing of the structural frame.

The foundation shall be a concrete raft foundation, appropriately waterproofed. As basement parking is a crucial requirement of the building, the foundation structure shall cater to the drainage system including in-built sump pits, gradients, etc.

The design will consist of the aforementioned components, from conceptual design to construction documentation.

### 2. DESIGN STANDARDS AND CODES OF PRACTICE:

The design should follow the following standards.

- A. BS 8110: Part 1: 1997 – Structural Use of Concrete
- B. BS EN 1992 -1-1:2004 – Structural Design of Concrete
- C. BS 5950: Part 1: 2000 – Structural Use of Steelwork in Building
- D. BS 6399: Part 1: 1996 – Loading for Buildings: Code of Practice for Dead and Imposed Loads
- E. BS 6399-2: 1997 Part 2: Code of Practice for Wind Loads
- F. BS6093:1993 – Design of Joints and Jointing in Building Construction
- G. BS 8004: 1986 – Code of Practice for Foundations
- H. BS1881:1983: Testing Concrete
- I. BS 8002 - Code of Practice for Earth Retaining Structures
- J. BS5606:1990: Guide to accuracy in building
- K. BS 5628 – Structural use of unreinforced masonry
- L. BS 8118: Part 1: 1991 – Structural use of aluminum
- M. BS 8000: Part 4: 1989 – Code of practice for waterproofing
- N. BS 8102 – Protection against groundwater
- O. BS 5328 - Guide to specifying concrete.
- P. BS 4449 - Reinforcing steel bars for the reinforcement of concrete.
- Q. BS 4443 – Specification for hot rolled steel
- R. BS 4483 – Steel fabric for reinforcement of concrete
- S. BS 12: 1991 – Specification for cement
- T. BS 8102:2009 - Protection of Below Ground Structures Against Water
- U. EN ISO 12944: Part 1 – Corrosion Protection of steel structures by protective paint systems
- V. EN ISO 12944: Part 2 – Corrosion Protection of steel structures by protective paint systems
- W. BS EN 1993-1-2:2005 Part 1-2 General Rules – Structural Fire Design

And any other relevant British Standards, International Codes, Guidelines, etc.

Number of floors	Basement + 12 floors + Roof
Footprint area	1,607.51 m <sup>2</sup>
Construction type	Reinforced concrete foundation and substructure as well as concrete lift and stairwell core. Steel column and beam frame and steel-concrete composite floors.
Loads considered	Dead, Live, and Wind
Regional wind speed (assumed)	ULS = 22 m/s SLS = 22 m/s
Environmental conditions	Classified as XD3 and XS1 according to Eurocode (Corrosive environment)
Basic wind pressure (kPa)	Pr Ultimate = 0.68kPa Pr Serviceability = 0.46kPa
Wind pressure coefficients (general)	Cpe (windward) = +0.7, Cpi = -0.1 Cpe (Leeward) = -0.5, Cpi = +0.2  Cpe (Crosswind); (windward) = +0.7, Cpi = - 0.1 (Leeward) = -0.5, Cpi = +0.2  Cpe (Roof) = -0.9, Cpi = +0.2 (only for the stair roof, if recommended)  Cpe (Side) = -0.65, Cpi = +0.2
Building deflection limits	Column at top / 500, frame spacing / 200, floors beams and joists /300

### 3. DESIGN PARAMETER

Unit weight of concrete	24 kN/m <sup>3</sup>
Unit weight of block works	19 kN/m <sup>3</sup>
Compressive strength of concrete (FC)	For Land: 35 N/mm <sup>2</sup> At sea or nearby: 40 N/mm <sup>2</sup>
High yield steel	415 N/mm <sup>2</sup>
Mild steel	250 N/mm <sup>2</sup>
Concrete covers	Slab = 30 mm, beam = 35mm, column = 40mm,
Foundation soil	Loose to medium gravel
Soil bearing capacities	SBC = 150 kPa
Live load on typical floors	5 kN/m <sup>2</sup>
Live load on the roof terrace	3 kN/m <sup>2</sup>
Dead load (including screed and tiling)	2 kN/m <sup>2</sup>
Dead load from block walls	10 kN/m
Load combinations	1.4G+1.6Q 1.4G+1.4 ΨI 1.2G+1.2Q+1.2 ΨI



## 4. STRUCTURAL COMPONENT

**MAIN BUILDING:** The main building structure consists of a steel frame and curtain wall system including the floor structure which will consist of steel beams and composite deck flooring.

**BASEMENT:** The basement structure consists of a concrete structure with retaining walls, with sufficient waterproofing. The retaining walls should be terminated at a height of a minimum of 400–500mm from NGL.

**CIRCULATION:** The circulation spaces consisting of, lifts, staircase, and ramp have concrete structures. The concrete lift and staircase are to contribute to the structural bracing of the system.

**FOUNDATION:** The foundation shall be a concrete raft foundation, with provisions for a drainage system including in-built sump pits, gradients, etc. Additionally, the foundation will consist of stump columns that are used to connect the steel structure.

**STEEL TO CONCRETE CONNECTIONS:** The connection of the concrete structures such as the foundation, ramp, lift, and staircase to the steel frame should be considered.

**THERMAL EXPANSION JOINT:** Expansion/movement joints are to be provided across the building where applicable. Pre-engineered building suppliers will need to verify and technically justify expansion joint locations and provide sufficient details to ensure structural integrity in terms of movement allowances. The joints should consider the temperature changes, differential settlement, variation in soil properties, and variation in loading. The joints should conform to the BS6093:1993.

## 5. DURABILITY

To achieve the required design life of the structure, durability consideration should be given to all components of the building. For the concrete structure, the cover for each member should consider the exposure class of XD3 and XS1 as specified in the BSEN1992-1-1:2004.

Steel structure should consider a minimum of the high durability of more than 15years, as stated in ENISO12944:Part1. The corrosivity category of C5-M should be considered when proposing corrosion protection paint for structural steel.

## 6. FIRE PROTECTION

As the main structural framing, this steel structure shall be fire protected with an intumescent paint system that will give a fire rating of 120minutes. The design of the steel structure should conform to the BSEN1993-1-2:2005Part12. Additionally, to achieve the fire rating of 120minutes for the concrete structure, sufficient cover should be given as derived from BS8110:Part1:1997–Table3.4.

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## 7. BUILDING SERVICES SCOPE

### 1. Drainage System

The soil and waste will be through individual pipes and will be carried to the MWSC sewer line. The drainage system will be a “Two pipe system “. Two pipe systems as per ANSI standards shall be connected to soil and waste fixtures separately to have redundancy during maintenance. It shall also allow trapping the waste at bottom of the stack from the kitchen/washing basin/shower, which is likely to prevent proper flow in horizontal runs. The soil, waste, and vent system shall be watertight and gas-tight designed to prevent the escape of foul gas and odor from various fixtures. All vertical soil and waste stacks for toilets will be upvc pipes. The drainage system shall be designed according to Uniform Plumbing Code or any relevant standards.

### 2. Water Supply System

The primary source of water supply is the MWSC. The main water supply pipe shall enter the building from the side lane of the building. Water meters and booster pumps are housed in the designated room on the basement floor. A separate water meter should be installed for every outlet in the water meter room. Each outlet will be provided with one direct water pipe from the water meter and a lockable tap will be fixed on every outlet. The concept is that the tenants will have to do their internal plumbing if required. The pipe water supply system shall be designed according to Uniform Plumbing Code or any relevant standards.

### 3. Rain Water Supply System

It is proposed to harvest the rainwater from the building roof terrace. The harvested rainwater is to be stored in the basement rainwater storage stand. The stored rainwater is pumped to all the toilet water closet flush tanks after a sand filtration and disinfection process. Two variable frequency drive pumps and two filtration systems shall be provided for the rainwater flushing system. One pump shall be on standby mode while the other pump shall be on duty mode and each pump shall be designed to run 12 hours per day and shall have an automatic change over system built into the pump control system

## 4. Fire Alarm and Fire Fighting System

### 4.1 Fire Detection and Alarm system

The fire detection and alarm system shall be designed to give a warning to the occupants and visitors of the building to vacate the building when a fire occurs. It should be a fully addressable type of intelligent fire detection and alarm system with an automatic battery charger of 24 volts sealed lead acid batteries sufficient for 48 hours of normal working and capable of operating the system for 30 minutes during an emergency condition as per NFPA-72 guidelines and shall consist of the following items.

- Analogue addressable fire alarm control panel
- Smoke detector
- Heat detector
- Manual call point (Resettable)
- Electronic sounder with flasher
- Interface unit
- 48 hours' standby battery
- Fire-resistant cable

The fire detection and alarm system shall be designed to comply with the Maldives National Defence Force (MNDF) or to an equivalent approved standard. All the detailed design drawings shall be approved by the fire department of MNDF before any work is carried out at the site.

### 4.2 Fire Fighting system

The firefighting system shall be designed to fight fire by the tenants of the building by the automatic sprinkler system and by the firefighters. The type of firefighting to be proposed for the building are:

- Sprinkler system
- Hose reel system
- Dry riser system
- Portable Fire extinguisher H<sub>2</sub>O
- Portable Fire extinguisher CO<sub>2</sub>
- Fire pump

All the design drawings shall be approved by the fire department of MNDF before any work is carried out at the site.

## 5. Emergency Voice Communication System

Emergency voice communication shall be designed and installed to be used in the event of a fire or any other emergency that requires the occupants and users of the building to communicate to the security room or to give announcements in case the building has to be evacuated. This system should cover the whole building including the basement floor and the roof terrace. This system

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shall comply with NFPA 72 Chapter 24 “Emergency Communications Systems” or any relevant standards. This system shall house next to the Automatic Fire Alarm Control Panel.

## 6. Emergency Power System

The emergency power system shall be designed to cater to the emergency uninterrupted power to the following area.

- Offices
- Fire Lifts
- Commercial Units
- Fire pump
- Booster pumps
- Sump pump
- BMS

An air-cooled emergency generator (3-phase, 400V, 50 Hertz) shall be sized to cater for the above areas plus to cater another 25 percent extra power. The generator shall be sound-proof (65Dba) with a built-in fuel tank. The generator starter panel should be designed to start the generator and load automatically (within 30 seconds) once there is a power interruption and power the above areas and systems through an automatic transfer switch. Once the mains power comes back, the generator should be stopped automatically and shall go back to standby mode.

## 7. Solar PV System

Solar PV panels shall be designed and installed on the rooftop of the building. The estimated space available on the roof for the installation of the PV panels is approximately 516 square meters. It is estimated that 240 Solar PV panels can be installed on the rooftop. The lithium-ion storage batteries shall be used for solar power storage with all the accessories. This system shall be designed with a battery bank that can store up to 5 days of continuous power.

The proposed usage of a standalone solar power system shall power the following equipment and areas.

- Rainwater pump (Toilet flushing)
- CCTV system
- Corridors and stairs lighting
- Toilets lighting
- Pantry lighting
- Storage lighting
- Common walkway lighting (Ground floor)
- Loading and Unloading lighting
- Basement parking lighting
- Lift lobby lighting

- Services room lighting (Electrical, Mechanical, Control room, and Storage)
- Entrances and Exits lighting
- The perimeter of the building lighting

## 8. Lighting System

The proposed lighting system levels for this building are as follows:

Description	Lux level
Offices	500 Lux
External parking	75 Lux
Restrooms	150 Lux
Lobby	200 Lux
Corridors and Stairs	100 Lux
Lifts	100 Lux
Entrances and Exits	200 Lux
Switchboards	300 Lux
Electrical rooms	100 Lux
Mechanical rooms	150 Lux
Pantry	200 Lux
Loading and Unloading area	150 Lux
Storage	100 Lux
Common walkway (Ground floor)	200 Lux

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The above areas shall be designed to give appropriated homogenous lighting levels with energy-efficient LED light, appropriate for designated areas. The lighting design shall comply with CIBSE or any equivalent standards.

## 9. Earthing System

The earthing system will be designed as per the guidelines laid down in the international standard to keep the earth's resistance as low as possible.

Distribution earthing shall be carried all along with the LT distribution system, or through local earth station and effectively bonding the cables/equipment i.e., Metallic enclosures of panels, DB, machinery, motors, metallic frames provided for different equipment supports. The entire network will be designed with a GI strip laid over the tray and connected to the provisions for enclosure earth connectivity will be detailed in the earthing schematic drawing.

Earthing for light and power points shall be carried out with insulated copper earth wire running throughout the length of circuits and shall be terminated at the boxes, fixtures, etc. with effective bonding to the main earth. The size of the earth wire shall be as per IEC standards.

Separate and distinct earth stations and electrodes shall be provided for telecommunications and other data systems. Resistance for clean earth and the electrical system earth shall be kept below one ohm. Dedicated earthing will be tapped from the earth pits which will be installed for clean earthing. The entire network is designed with PVC-insulated copper conductor wires laid over the tray and terminated at the copper earth bus.

## 10. Lightning Protection System

Lightning protection in this building shall be designed and installed according to BS EN/IEC 62305 lightning protection standard or the NFPA 780 latest edition. The system shall provide safety for the building and the occupants by preventing damage to the structure caused by lightning. The lighting design shall cover the entire building and shall protect all the roof terrace, all the equipment installed on the roof terrace, building structural, electrical, and all other major equipment installed in the building. The lightning protection system shall consist of grounding conductors, lightning arrestors, and bonding. All the components design shall be certified by Underwriter's Laboratory, Inc (UL) 96A standard, latest edition.

Main protection measures against injury to living beings due to touch and step voltages are intended to:

- Reduce the dangerous current flowing through bodies by insulating exposed conductive parts and/or by increasing the surface soil resistivity.
- Reduce the occurrence of dangerous touch and step voltages by physical restrictions and/or warning notices.

The vertical air terminal is located at the edge of the highest point of the building. Several earth pits considered is as per the Type B earthing system.

Ring earthing is to be installed at the depth of 1 meter from the protected structure and laid at the depth of 0.5 meters around the building perimeters.

Following are the parts of a conventional lightning protection system:

- Grid of horizontal conductors above the roof
- Down conductors
- Joints and connectors
- Testing joints
- Earth termination

## 11. Emergency Lighting System

Self-contained emergency lighting of 3 hours' duration must be designed to the local Fire Protection Authority's requirement. The self-contained emergency lights during mains healthy conditions would operate from the main supply while simultaneously charging the battery. During the main power failure and the gen-set supply failure, the same lamp while is utilized except that it would now operate from the battery. When the mains supply and or the gen-set supply resume, the lamp would revert to normal operations from the main supply and or the Gen Set supply.

Position the emergency and exit lights at points of emphasis on escape routes.

- At each exit door
- To illuminate exit and safety signs
- Near call points
- Near each staircase
- Change of direction
- Near firefighting equipment
- Change of floor level
- Near the intersection of escape routes
- Outside final exits

## 12. Heat Ventilation and Air conditioning

### 12.1 HVAC System - Purpose

The section outlines HVAC system design parameters, system selection, and the extent of provisions for the project. The air-conditioning will be designed to maintain specified temperature, humidity, and supply of outdoor air within occupied spaces. All conditioning and ventilation systems shall conform with the ASHRAE 62.1-2017 for the following purpose.

- Creating a comfortable and safe HVAC environment for development is a prime objective.
- To maintain a good indoor environment in terms of temperature, humidity & air movement, and air quality.
- To create a relatively quiet and low vibration control AC system
- To make the HVAC system energy efficient eco-friendly and easily maintainable.

### 12.2 Code of Standards

Relevant Standards:

- Indoor Air Quality as per ASHRAE 62.1 - 2016
- ANSI/ASHRAE/IESNA standards 90.1 – 2016: Energy Standards for buildings
- Air Filters as per ASHRAE 52.1 – 1992 and 52.2 – 2017
- ASHRAE Standard 55: Thermal Comfort.

### 12.3 Basis of Design

#### 12.3.1 Ambient Condition:

- Outside condition – 31.6 Degree Celsius dry bulb & 26.8 Degree Celsius wet bulb
- Inside condition – 23.33 Degree Celsius and 55 percent relative humidity (RH)

#### 12.3.2 Building Data Assumptions:

- All outer walls, U = 0.36 Btu / HrSq.ft Degree Fahrenheit
- Roof, U = 0.32 Btu / HrSq.ft Degree Fahrenheit
- Floor, U = 0.32 Btu / HrSq.ft Degree Fahrenheit
- Glass Specifications, SHGC 0.44 U Value = 0.56 Btu / HrSq.ft



## 13. Proposed HVAC System

### 13.1 Hybrid VRF / VRV System for Offices, Services rooms, and Commercial units.

Benefits:

- Provides simultaneous heating and cooling with full heat recovery
- Energy saving
- Use Less material and equipment
- Flexible design and modularity allow for a manageable phased installation
- Water instead of refrigerant is at the heart of the indoor units
- Reduce maintenance costs and maximize safety by minimizing the need for leak detection
- Quieter operation through water-based fan coils
- High sensible cooling and stable room temperatures
- Combat the rising cost of R410A refrigerant
- R32 minimal global warming impact with 66 percent less GWP than R410A

## 14. Mechanical Ventilation

### 14.1 Basement Floor

The basement of this building consists of a car and a motorcycle parking area and a rainwater circulation area. Car park ventilation shall be designed to extract air from floor level and ceiling level. The fresh air supply is taken from one side of the building and exhaust air is vented from the opposite side of the building. This concept is proposed to avoid any cross-contamination of fresh supply air and exhaust air.

The car park ventilation shall be designed according to 2015 ASHRAE Handbook Section 15.19 – Heating, Ventilating, and Air-conditioning (Enclosed Vehicular Facilities)

### 14.2 Staircase Pressurization

All staircases are to be compartmented and provided with fresh air fans once the fire detection system is triggered creating a positive pressure inside the staircase until building evacuation is completed. Staircase pressurization shall comply with NFPA 92 Standard for Smoke Control Systems 2018 Edition.

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### 14.3 The emergency generator room

It shall be mechanically ventilated by using a wall-mounted exhaust fan with rainproof flaps. The required ventilation rate shall be decided by the ventilation requirement of the emergency generator

### 14.4 Toilet

Toilet ventilation shall be provided with a mechanical ventilation system. It shall be designed as per 6-10 ACPH as per ASHRAE Standards.

## 15. IT System, Security Camera System, Building Access Control & Phone System

### 15.1 Design Criteria

1. Card Access System will be provided for building access and access to the office spaces
2. CCTV system must be using Dome/Bullet IP Camera capable to record HD Video and Audio
3. GPON fibre-optic cables must be provided to each unit & services stations wherever required.

### 15.2 System Description

#### 15.2.1 Building Access Control

1. All necessary systems including Card Readers, Pedestrian and Vehicular Barriers, Access control Management systems and software, and Card management systems including RFID-enabled cards and Card writers should be provided.
2. The access control system should use RFID Cards compatible with HDC Staff ID cards as a medium of access.
3. All authorized personnel must carry their RFID Card at all-time, otherwise will be treated as a visitor.
4. A visitor will be issued with a visitor card and entry should be accompanied by authorized personnel.
5. Any forced entry will be noticed with an alarm to access the control room/security room.
6. All the personnel/authorized persons should be able to access the common areas of the building by using an RFID card.
7. All the staff should be able to access their department/floors in the building by using an RFID card.
8. The Access system should be managed in such a way that the same card can be used to access the common areas and departments
9. A pedestrian barrier should be provided to ensure authorized access into the lift lobby.

### 15.2.2 CCTV System

1. Complete CCTV monitoring system including IP cameras (indoor/outdoor). Cable, NVR, Monitors, and any other equipment for the functioning of the CCTV monitoring system should be provided.
2. The CCTV system must be designed to provide 24 hours video recording facility in Security Control Room for individual cameras installed in the building.
3. Cameras must be provided at the entrance guardhouse and entrance lobby point, which will be connected to a DVR and TV monitor.
4. The CCTV system must be able to capture the surrounding area, perimeter, entrance elevator lobby, Walkways, common areas, staircases, and car parks.
5. All activities within the premises & perimeter surrounding to keep track and recorded for playback if necessary.

### 15.2.3 Carpark Barrier Gate System

1. The same card (Staff ID) used for the access control should be utilized for the carpark barrier gate system.
2. The contractor must propose a car park barrier gate system near the entrance to the car park consisting of:
  - a) Controller
  - b) Ingress/egress barriers
  - c) Access card reader
  - d) Manual switch

The same card (Staff ID) used for the access control should be utilized for the carpark barrier gate system.

### 15.2.4 GPON (Internet) and WIFI

1. GPON/Internet Device should be placed in the following areas.
  - a) All the departments/units/office spaces
  - b) Shops and commercial spaces
  - c) Cafeteria and restaurant

#### 2. Internal Telecommunication Network

The internal network of the office spaces, providing network points for all the required spaces should be designed and provided by the contractor based on the HDC Design.

The contractor shall provide

- a) All and any Network points necessary

b) POE Switches for the spaces as necessary

\*Consideration should be given to provide reasonable provision for any future expansion beyond the designed usage.

3. Wi-Fi should be provided for the following area through a Wi-Fi Mesh Network

- a) All the HDC occupied Floors
- b) Provision for non-HDC occupied floors
- c) Pantries and Recreational Spaces.

\*The Internal Telecommunication network can be utilized to provide Wi-Fi

## 16. Vertical Transport System

An efficient and effective vertical transportation system plays an important role in the successful operation of a building. The passenger handling requirements adopted will greatly influence the design and operation of the system.

### **Codes and Standards:**

The latest edition of the following statutory codes, regulations, and specifications will be complied with:

- BS 5655: Part 1 to Part 13 Safety rules for the construction and installation of electric lifts, hydraulic lifts published by the British Standards Institution (BSI)
- EN81: Part 1 to Part 13 Safety rules for the construction and installation of electric lifts, hydraulic lifts published by the European Committee for Standardization (CEN)
- BS 7255: BS Code of Practice for safe working on lifts, published by the British Standards Institution (BSI)
- CIBSE Guide D, Transportation Systems in Buildings



**Design Criteria:**

The design criteria to be adopted will be as follows:

Occupancy Rate	
Occupancy rate	Based on room Occupancy
5 minutes (Handling capacity - Minimum)	12 percent to 15 percent
Average Interval (Maximum)	40 seconds to 60 seconds

**Lifts:**

All lifts will have machine room less and will have voltage variable frequency drives with microprocessor-based control panels. All cars and door finishes will be as per the Architects. Two lifts shall be designated as fire lifts. All lifts are proposed with an Automatic Rescue Device (ARD). There will be centralized monitoring and display unit in the control room. The other feature with the lifts will be Overload Protective Device (OPD) which makes the car inoperative when overloaded. Emergency car lighting shall be through a maintenance-free battery complete with a rectifier/charger.

Furthermore, during the fire alarm, all the lifts shall be programmed home to the ground floor. Two lifts shall be designated as fire lifts and lift operation buttons shall be provided outside the lift.

**17. Car Park Barrier Gate System**

A car park gate barrier system will be installed at all vehicular access and exit points. These include the vehicular entrance and exit at the back of the building for vehicles that come on the basement floor. The gate barriers for basement floor car park entry – exit with token system, etc. all as required will be designed and necessary power provisions will be made in the electrical design. At the main entrance the system with access through a smart card for security provisions.

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## 18. Building Management System

A building management system (BMS) has become an essential and vital means for good estate management of modern building developments. The system provides effective remote control of all building service systems and equipment. It also assists in essential tasks such as energy audit/consumption management, maintenance management of all mechanical and electrical services, failure and other important event records, etc.

Substantial operating cost savings can be possible from optimum energy usage, minimizing equipment failures, minimizing human resources for estate management, etc. All these are expected from the proper implementation and operation of the BMS.

The scope of the BMS installations works will generally consist of the following:

- Central equipment comprising a dual microcomputer-based server, CRT monitor, keyboard, mouse, backup tape drive, printer, ethernet switch, mimic panel, etc. located in the control room for central monitoring and control purposes.
- High-speed communication link and distributed intelligent field panels with complete integration of local communication loops and Direct Digital Control (DDC) to control and monitor mechanical and electrical systems. Status and fault monitoring, sequenced and scheduled starting and stopping, optimization of plant operation, duty cycling of standby/duty plants, runtime totalization, etc. are some of the typical functions.
- Interfacing between building mechanical/electrical systems inclusive of security systems, HVAC, mechanical ventilation fans, electrical high voltage, low voltage, generator, Solar PV system, lighting timing control, pump control, monitoring, etc.

By utilizing the BMS, the building manager will be able to gather operation information on all the equipment including total energy consumption, energy usage pattern, cyclical and seasonal factors, utility time of usage and occupant behaviours, CO2 levels, and air temperature of the basement car park. This information is important in saving energy, increasing sustainability, and better building energy management.

## 18. SOLID WASTE DISPOSAL

### General

The section covers the general requirements of the Solid Waste Disposal Services. Generally, the works for the Solid Waste Disposal Services must include the following

a) Commercial Garbage Collection Area

#### Regulations, Standards, and code

The following standards, codes of practice, and regulations, and any other subsequent revision or amendment must apply to all Solid waste management and disposal systems carried out in this contract.

1. Ministry of Environment, Climate Change, and Technology
2. Maldives Utilities Regulatory Authority
3. Waste Management Corporation Limited
4. Solid Waste disposal Acts, Regulations, and standards of Maldives
5. The relevant British Standard Specification (BS)
6. Local Fire Protection Authority
7. Maldives National Building Code
8. National Fire Protection Association. (NFPA)

### 18.1 Design Considerations

The garbage collection area should be located away from the common area and should be easily accessible by the servicing vehicle

#### 18.1.1 Garbage Collection Area

- a) Mechanical ventilation or equipment necessary for odor management should be provided for the Garbage collection areas.
- b) The Garbage collection area should be designed in such a way it deters the access of vermin and other scavengers
- c) Freshwater supply and Wastewater drainage should be provided for the garbage collection area
- d) Garbage Collection should be designed to fulfill the requirements under Solid Waste Management Guideline R-58/2013 and R-109/2021 and any relative or subsequent act, regulation, the standard by the relevant regulatory body.
- e) Waste Management / Garbage collection area on each floor should have enough space and equipment to segregate waste into the required categories. Namely the following
  - I. Compostable or Organic Waste
  - II. Plastic Bottles

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- III. Glass
  - IV. Metals/Tins/Cans
  - V. Paper
  - VI. Other Waste
- f) Necessary equipment such as dustbins for the garbage collection area for each floor shall be provided. These should adhere to the design requirements highlighted above. The garbage should be segregated by dedicated dustbins for the above requirements. The garbage dustbins should be colored as below
- I. Compostable or Organic Waste - Green
  - II. Plastic Bottles - Yellow
  - III. Glass - Black
  - IV. Metals/Tins/Cans - Brown
  - V. Paper - Red
  - VI. Other Waste – Gray
- g) It is the responsibility of the contractor to adequately design and size the garbage bins for the garbage collection areas on each floor.
- h) The garbage bins provided should be made of a material that is durable and easy to clean. At the same time, garbage bins should be able to be easily moved, on their own without the need for other equipment, to the ground floor
- i) Common garbage bins, adhering to the segregation categories above should be adequately provided for the common areas. These dustbins should be aesthetically pleasing and blend in with the interior design of the space.



## 8. SCHEDULE OF FINISHING

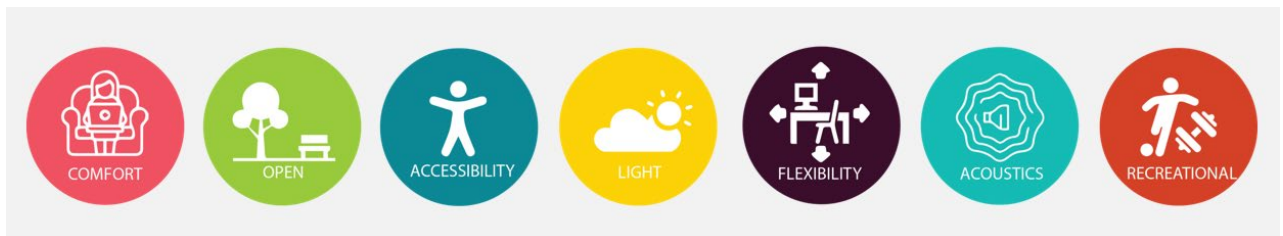
### 1. INTRODUCTION

The intent behind the new HDC Office Building Interior design is to create a safe and comfortable space that boosts productivity. This is to be achieved through careful research and implementation of materials, furniture, and technologies that improve the efficiency of the users.

Careful consideration should be given to reflect the company branding while selecting finishing materials and furniture.

### 2. KEY DESIGN FACTORS

A survey was done including the staff working in the current HDC Office building, where we received important feedback to identify key areas for improvement for the new office building. Through the survey, we identified key factors for improvement, to create a successful office building, which should be integrated into the finishing and interior design of this building.



#### 2.1 COMFORT

The comfort of space should be achieved by considering the following factors;

##### 2.1.1 Temperature

Temperature control should be regulated through one central control system, where smart sensors are used to identify when the temperature should be changed for maximum comfort. Central HVAC systems are connected to smart sensors and central control systems.

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### 2.1.2 Furniture

- The spaces should be furnished with high-quality, ergonomic chairs considering a diverse end-user.
- Height-adjustable tables, which offer a sit/stand option.
- Cabinets and storage should be available for all office space users.
- All furniture should be ensured to be free of any chemicals that may harm the users and the environment.
- All outdoor furniture should be weatherproof and durable.

The visual impact of the furniture should be taken into consideration; how it will affect the first impression of visitors and its user. Careful consideration in furniture selection should be given to maintaining the visual identity of the company-wide branding.

### 2.1.3 Lighting

Lighting design should be achieved with varying lighting options, (main overhead lights, ambient lights, desk lights, standing lights, etc), to provide maximum visual comfort.

All interior spaces should be laid out in a way where all its occupants can have the full benefit of natural lighting entering the building, provided that it is made comfortable through the use of interior light shading devices. These shading devices should ideally be connected to a smart automation system, which detects lighting conditions and adjusts accordingly.

All general lighting systems of the building should include smart sensors and be controlled through a central control point. Daylight sensors should be integrated to detect if the amount of natural lighting is sufficient or if artificial lighting is needed, which would provide a balance of natural and artificial lighting.

Additionally, a variety of lighting options such as desk lamps and dimmable office lighting should be provided to give employees control regarding the amount of lighting in their workspaces.

### 2.1.4 Scent

The spaces within the building, that generate any sort of smells should be laid out in a way that doesn't disrupt the workers. Spaces such as pantries, kitchens, and washrooms should be well enclosed and ventilated to contain and dispel any fumes.

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### 2.1.5 Noise

The office building is a place where a large number of employees will inhabit, loud noises like office chatter, a ringing phone can create distractions. To mitigate this, the space layout should create breakpoints in between worker desks with spaces such as meeting spaces, and lounges. Portable partition panels with acoustic values are also recommended within the spaces, to be placed where noise needs to be reduced.

All meeting spaces should be finished with materials with high acoustic values.

## 2.2 Open

Open spaces within the building should be usable spaces with seating, shades, and greenery. All the balcony spaces accessed from the main lobby and individual office spaces should have comfortable, weatherproof furniture of high quality.

Access to electrical sockets should also be provided. This is to ensure access to outdoor spaces where employees can work/ have individual meetings as required.

## 2.3 Accessibility

All spaces within the building should be PWD-friendly. Accessibility to all facilities within the building should be provided to all its occupants where applicable.

The circulation around the building should allow movement or interaction of people.

Common spaces should be furnished, where applicable and made usable.

## 2.4 Light

Refer point 2.1.3

## 2.5 Flexibility

One of the major issues faced in current office buildings is that the unit partitioning changes over time based on needs and requirements, hence we recommend the new office building to have retractable partition walls (sliding track system inbuilt: to accommodate partitioning where required).

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Through research, it is known that the current working environment having a hybrid work environment where the users get to choose where and how they work: has been proven to be more effective and boosts productivity. This should be taken into consideration while laying out the office spaces, providing this kind of flexibility for the employees.

## 2.6 Acoustics

Refer point 2.1.5

## 2.7 Recreational

Recreational spaces such as gym, gaming rooms, and nap rooms should be allocated within the building. These spaces should be away from the common workspaces and built with acoustic graded materials to minimize disruptions.

## 3. DESIGN CONCEPT

The key design factors rounded off; we intend to create an interior design comprising of;

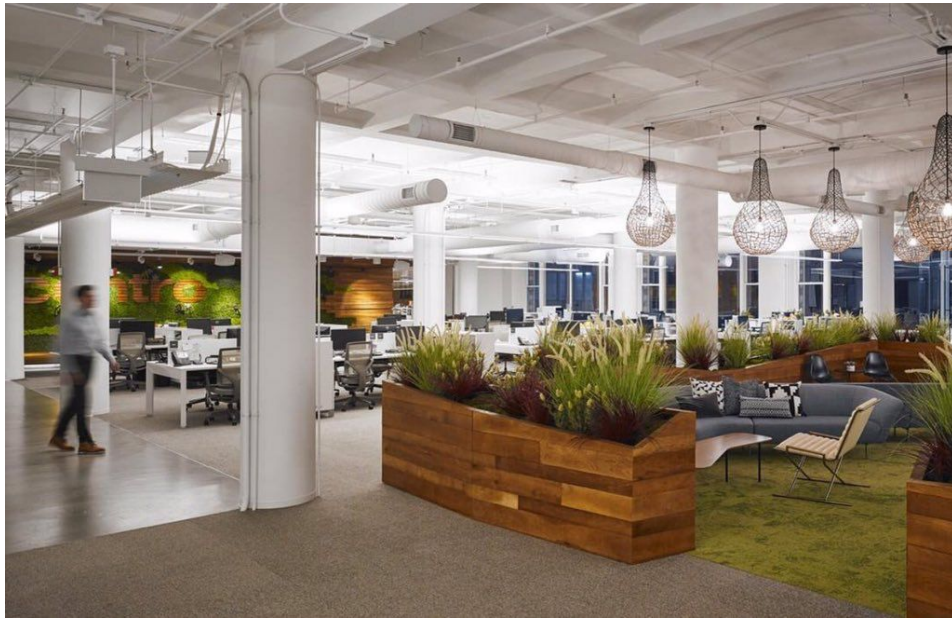
### 3.1 Biophilic design

The concept behind Biophilic design is bringing the outdoors inside, going beyond growing a lot of plants indoors into; providing access to natural light and views of the outside, utilizing the available outdoor spaces, embracing colors and their effects on mood and psyche, incorporating natural materials such as stones and wood. The Biophilic workspace ties together progressive office design trends that create a workspace that is enjoyable and functional for everyone, while boosting office morale, creativity, and productivity.





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### 3.2 A hybrid workspace




One of the major challenges faced in the current office space is the lack of flexibility to cater to the constantly changing environment. To tackle this, a flexible/ hybrid workspace would be the most ideal setup, in terms of the interior layouts. This could be inclusive of various seating options, open/partitioned work stations, collaborative workspaces, ergonomic furnishing (height-adjustable chairs, ergonomic chairs), etc.




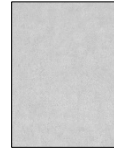
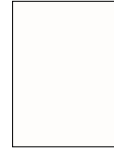

#### 4. Finishing schedule

SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Basement  Parking area	1	<b>WALL</b> All walls finished with wall paint		2400 MM minimum clearance
	2	<b>FLOORING</b> Heavy-duty vehicular epoxy resin paint finishing with thermos plastic reflective road marking. Skirting to be matched with the floor finishing.		
	3	<b>CEILING</b> soffit of the slab with smooth putty plaster and emulsion paint finish		





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SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Basement  Lift Lobby	1	<b>WALL</b> Exterior painted with white polished paint - Interior plastered smooth putty with white paint finish		2400 MM minimum clearance
	2	<b>TILE FLOORING</b> 600x600 Homogenous grey tile finish. Skirting to be matched with the floor finishing.		
	3	<b>CEILING</b> soffit of the slab with smooth putty plaster and emulsion paint finish		
	4	<b>DOOR</b> 1hr fire rated door with grey paint finish		

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SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Basement  Services rooms	1	<b>WALL</b> - Exterior painted with white polished paint - Interior plastered smooth putty with white paint finish		2800 MM minimum clearance
	2	<b>TILE FLOORING</b> 600x600 Homogenous grey tile finish		
	3	<b>CEILING</b> soffit of the slab with smooth putty plaster and emulsion paint finish		
	4	<b>DOOR</b> 1hr fire rated door with grey paint finish		

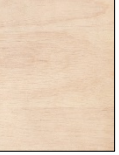


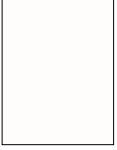

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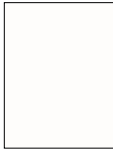


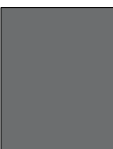

SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Ground floor  Services rooms	1	<b>WALL</b> - Interior plastered smooth putty with white paint finish		2800 MM minimum clearance
	2	<b>TILE FLOORING</b> 600x600 Homogenous grey tile finish. Skirting to be matched with the floor finishing		
	3	<b>CEILING</b> soffit of the slab with smooth putty plaster and emulsion paint finish		
	4	<b>DOOR</b> 1hr fire rated door with grey paint finish		





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SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Ground floor  COMMERCIAL AREAS	1	<b>WALL</b> - Interior plastered with putty finish		2800 MM minimum clearance
	2	<b>CURTAIN WALL</b> - Curtain wall with 12mm full height tempered laminated glass with only vertical frames. All glass needs to have a heat-reflective coating or film.		
	3	<b>CEILING</b> soffit of the slab with sealer		
	4	<b>DOOR</b> 2100x900mm Glassdoor		

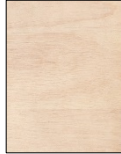
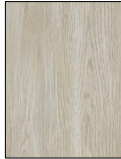

SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Ground floor  Office lobby	1	<b>WALL</b> - Interior walls with large laminate wall sheets		6000 MM minimum clearance
	2	<b>CURTAIN WALL</b> - Curtain wall with 12mm full height tempered laminated glass with only vertical frames. All glass needs to have a heat-reflective coating or film.		
	3	<b>TILE FLOORING</b> White polished granite flooring Skirting to be matched with the floor finishing		
	4	<b>CEILING</b> soffit of the slab with smooth putty plaster and emulsion paint finish		
	5	<b>DOOR</b> 12mm tempered laminated glass double door. Glass texture and colour should match with the curtain wall.		

SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
First floor  Services rooms	1	<b>WALL</b> - Interior plastered smooth putty with white paint finish		2800 MM minimum clearance
	2	<b>CURTAIN WALL</b> - Curtain wall with 12mm full height tempered laminated glass with only vertical frames. All glass needs to have a heat-reflective coating or film.		
	3	<b>TILE FLOORING</b> 600x600 Homogenous grey tile finish. Skirting to be matched with the floor finishing		
	4	<b>CEILING</b> soffit of the slab with smooth putty plaster and emulsion paint finish		
	5	<b>DOOR</b> 1hr fire rated door with grey paint finish		

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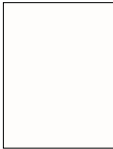



SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
First floor  COMMERCIAL AREAS	1	<b>WALL</b> - Interior plaster with putty finish		2800 MM minimum clearance
	2	<b>CURTAIN WALL</b> - Curtain wall with 12mm full height tempered laminated glass with only vertical frames. All glass needs to have a heat-reflective coating or film.		
	3	<b>CEILING</b> soffit of the slab with smooth putty plaster and emulsion paint finish		
	4	<b>DOOR</b> 2100x900mm Glasdoor		

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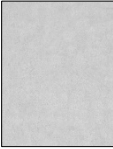


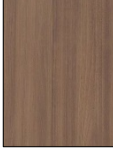
SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Second to Seventh floor LIFT LOBBY	1	<b>WALL - I</b> Interior walls with large laminate wall sheets		2600 MM minimum clearance
	2	<b>RAISED FLOOR SYSTEM.</b> 100MM raised from slab level to floor finished level. It should be topped with high durability scratch-resistant vinyl finishing. This system should be waterproof and should be fire-resistant. Skirting to be matched with the floor finishing		
	3	<b>EXPOSED CEILING.</b> The soffit of the slab with smooth putty plaster and emulsion paint finish		



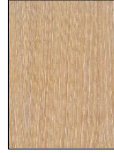



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SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Second to the Seventh floor SERVICES ROOM	1	<b>WALL</b> - Interior plastered smooth putty with white paint finish		2600 MM minimum clearance
	2	<b>TILE FLOORING</b> 600x600 Homogenous grey tile finish. Skirting to be matched with the floor finishing		
	3	<b>CEILING</b> soffit of the slab with smooth putty plaster and emulsion paint finish		
	4	<b>DOOR</b> 1hr fire rated door with wood texture finish		




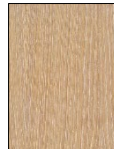
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SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
<b>Second to the Seventh floor TOILET</b>	1	<b>WALL</b> – polished white wall granite finishing 600x1200mm		2600 MM minimum clearance
	2	<b>TILE FLOORING</b> 600x600 Homogenous grey tile finish. Skirting to be matched with the floor finishing		
	3	<b>CEILING</b> Moisture-resistant suspended plasterboard ceiling. Fuller coordination of ceiling recessed services must be made, including final positions for light fittings, air supply, extract grilles, and sprinkler heads.		
	4	<b>DOOR</b> Main toilet entrance door finished with laminate		
	5	<b>DOOR</b> internal toilet door finished with laminate		





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SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
<b>Second to the Seventh floor PANTRY</b>	1	<b>WALL</b> - polished white wall granite finishing 600x1200mm		2600 MM minimum clearance
	2	<b>TILE FLOORING</b> 600x600 Homogenous grey tile finish. Skirting to be matched with the floor finishing		
	3	<b>CEILING</b> Moisture-resistant suspended plasterboard ceiling. Fuller coordination of ceiling recessed services must be made, including final positions for light fittings, air supply, extract grilles, and sprinkler heads.		
	4	<b>DOOR</b> 900x2100 Door finished with laminate		

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<b>Second to the Seventh floor SERVICES ROOM</b>	1	<b>WALL</b> - Interior plastered smooth putty with white paint finish		2600 MM minimum clearance
	2	<b>TILE FLOORING</b> 600x600 Homogenous grey tile finish. Skirting to be matched with the floor finishing		
	3	<b>CEILING</b> soffit of the slab with smooth putty plaster and emulsion paint finish		
	4	<b>DOOR</b> 1hr fire rated door with wood texture finish		

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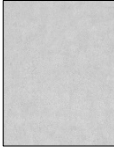


SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
<b>Second to the Seventh floor WASTE ROOM</b>	1	<b>WALL</b> - Interior plastered smooth putty with white paint finish		2600 MM minimum clearance
	2	<b>TILE FLOORING</b> 600x600 Homogenous grey tile finish. Skirting to be matched with the floor finishing		
	3	<b>CEILING</b> soffit of the slab with smooth putty plaster and emulsion paint finish		
	4	<b>DOOR</b> 1hr fire rated door with wood texture finish		






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SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
<b>Second to the Seventh floor</b> OFFICE SPACES	1	<b>WALL</b> - All Interior walls with large laminate wall sheets		2600 MM minimum clearance
	2	<b>RAISED FLOOR SYSTEM</b> - 100MM raised from slab level to floor finished level. It should be topped with high durability scratch-resistant vinyl finishing. This system should be waterproof and should be fire-resistant		
	3	<b>CEILING</b> - Soffit of the slab with smooth putty plaster and emulsion paint finish		
	4	<b>DOOR</b> 1hr fire rated door with wood texture finish		
	5	<b>INTERIOR PARTITIONS</b> – All interior partitions should be made from 12mm full height glass. All the walls should be frosted up to 1500mm.		

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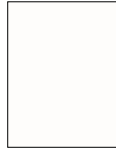



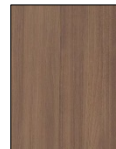
SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Second to the Seventh floor OUTDOOR AREA	1	<b>WALL</b> - Outdoor plastered smooth putty with white paint finish		2600 MM minimum clearance
	2	<b>TILE FLOORING</b> 600x600 Homogenous grey tile finish. Skirting to be matched with the floor finishing		
	3	<b>CEILING</b> soffit of the slab with smooth putty plaster and emulsion paint finish		
	4	<b>DOOR</b> Glassdoor with the access control system.		

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Eighth floor  LIFT LOBBY	1	<b>WALL</b> - Interior walls with large laminate wall sheets		2600 MM minimum clearance
	2	<b>RAISED FLOOR SYSTEM.</b> 100MM raised from slab level to floor finished level. It should be topped with high durability scratch-resistant vinyl finishing. This system should be waterproof and should be fire-resistant		
	3	<b>EXPOSED CEILING.</b> The soffit of the slab with smooth putty plaster and emulsion paint finish		

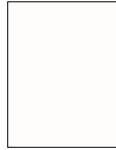



SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Eighth floor SERVICES ROOM	1	<b>WALL</b> - Interior plastered smooth putty with white paint finish		2600 MM minimum clearance
	2	<b>TILE FLOORING</b> 600x600 Homogenous grey tile finish. Skirting to be matched with the floor finishing		
	3	<b>CEILING</b> soffit of the slab with smooth putty plaster and emulsion paint finish		
	4	<b>DOOR</b> 1hr fire rated door with wood texture finish		

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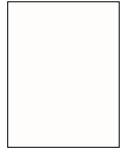
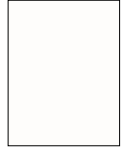

SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Eighth floor  TOILETS	1	<b>WALL</b> – polished white wall granite finishing 600x1200mm		2600 MM minimum clearance
	2	<b>TILE FLOORING</b> 600x600 Homogenous grey tile finish. Skirting to be matched with the floor finishing		
	3	<b>CEILING</b> Moisture-resistant suspended plasterboard ceiling. Fuller coordination of ceiling recessed services must be made, including final positions for light fittings, and sprinkler heads.		
	4	<b>DOOR</b> Main toilet entrance door finished with laminat		
	5	<b>DOOR</b> internal toilet door finished with laminate		








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SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
<b>Eighth floor</b>  STORAGE	1	<b>WALL</b> - Interior plastered smooth putty with white paint finish		2800 MM minimum clearance
	2	<b>TILE FLOORING</b> 600x600 Homogenous grey tile finish. Skirting to be matched with the floor finishing		
	3	<b>CEILING</b> soffit of the slab with smooth putty plaster and emulsion paint finish		
	4	<b>DOOR</b> 1hr fire rated door with wood texture finish		


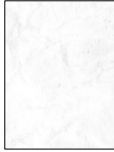

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SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Eighth floor KITCHEN	1	<b>WALL</b> – Interior plastered with putty finish		2600 MM minimum clearance
	2	<b>CEILING</b> - Soffit of the slab with sealer		
	3	<b>DOOR</b> - Door finished with laminate		






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SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Eighth floor  RESTAURANT	1	<b>WALL</b> – Interior walls with large laminate wall sheets		2600 MM minimum clearance
	2	<b>Aluminium framed glass wall</b> - 12mm full height tempered laminated glass with only vertical frames. All glass needs to have a heat-reflective coating or film		
	3	<b>FLOORING</b> – High durability scratch-resistant vinyl finishing. Skirting to be matched with the floor finishing		
	4	<b>CEILING</b> - Soffit of the slab with smooth putty plaster and emulsion paint finish		
	5	<b>DOOR</b> - 12mm tempered laminated glass door. Glass texture and colour should match with the curtain wall.		

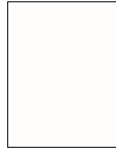
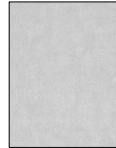
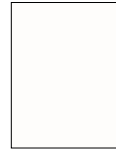

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SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Eighth floor  OUTDOOR DINING AREA	1	<b>RAILING</b> – 12mm Tempered Glass railing on top of 600mm wall (wall for planting area). Total railing height 1200mm from finished floor level.		
	2	<b>FLOORING</b> – White granite flooring (non-slippery). Skirting to be matched with the floor finishing		
	3	<b>DOOR</b> - 12mm tempered laminated glass door. Glass texture and colour should match with the curtain wall.		

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SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Eighth floor  CONNECTING FOOTBRIDGE	1	<b>RAILING</b> – 12mm Tempered Glass railing. Total railing height 1200mm from finished floor level.		2600 MM minimum clearance
	2	<b>Aluminium framed glass wall</b> - 12mm full height tempered laminated glass with only vertical frames. All glass needs to have a heat-reflective coating or film		
	3	<b>FLOORING</b> – High durability scratch-resistant vinyl finishing. Skirting to be matched with the floor finishing		
	4	<b>CEILING - Suspended Aluminium</b> ceiling. Fuller coordination of ceiling recessed services must be made, to include final positions for light fittings, air supply, extract grilles, and sprinkler heads.		
	5	<b>DOOR</b> - 12mm tempered laminated glass door. Glass texture and colour should match with the curtain wall.		

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SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Ninth floor SERVICES ROOM	1	<b>WALL</b> - Interior plastered smooth putty with white paint finish		2600 MM minimum clearance
	2	<b>TILE FLOORING</b> 600x600 Homogenous grey tile finish. Skirting to be matched with the floor finishing		
	3	<b>CEILING</b> soffit of the slab with smooth putty plaster and emulsion paint finish		
	4	<b>DOOR</b> 1hr fire rated door with wood texture finish		







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SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Ninth floor TOILET	1	<b>WALL</b> – polished white wall granite finishing 600x1200mm		2600 MM minimum clearance
	2	<b>TILE FLOORING</b> 600x600 Homogenous grey tile finish. Skirting to be matched with the floor finishing		
	3	<b>CEILING</b> Moisture-resistant suspended plasterboard ceiling. Fuller coordination of ceiling recessed services must be made, to include final positions for light fittings, air supply, extract grilles, and sprinkler heads.		
	4	<b>DOOR</b> Main toilet entrance door finished with laminate		
	5	<b>DOOR</b> internal toilet door finished with laminate		

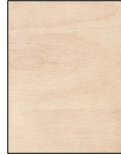




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SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Ninth floor PANTRY	1	<b>WALL</b> - polished white wall granite finishing 600x1200mm		2600 MM minimum clearance
	2	<b>TILE FLOORING</b> 600x600 Homogenous grey tile finish. Skirting to be matched with the floor finishing		
	3	<b>CEILING</b> Moisture-resistant suspended plasterboard ceiling. Fuller coordination of ceiling recessed services must be made, to include final positions for light fittings, air supply, and extract grilles and sprinkler heads.		
	4	<b>DOOR</b> 900x2100 Door finished with laminate		




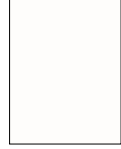

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SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Ninth floor WASTE ROOM	1	<b>WALL</b> - Interior plastered smooth putty with white paint finish		2600 MM minimum clearance
	2	<b>TILE FLOORING</b> 600x600 Homogenous grey tile finish. Skirting to be matched with the floor finishing		
	3	<b>CEILING</b> soffit of the slab with smooth putty plaster and emulsion paint finish		
	4	<b>DOOR</b> 1hr fire rated door with wood texture finish		




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SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Ninth floor OFFICE SPACES	1	<b>WALL</b> - All Interior walls with large laminate wall sheets		2600 MM minimum clearance
	2	<b>RAISED FLOOR SYSTEM</b> - 100MM raised from slab level to floor finished level. It should be topped with high durability scratch-resistant vinyl finishing. This system should be waterproof and should be fire-resistant		
	3	<b>CEILING</b> - Soffit of the slab with smooth putty plaster and emulsion paint finish		
	4	<b>DOOR</b> 1hr fire rated door with wood texture finish		
	5	<b>INTERIOR PARTITIONS</b> – All interior partitions should be made from 12mm full height glass. All the walls should be frosted up to 1500mm.		

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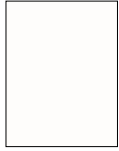

SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Ninth floor SEMINAR ROOM	1	<b>WALL</b> – Interior walls with large laminate wall sheets		2600 MM minimum clearance
	2	<b>Aluminium framed glass wall</b> - 12mm full height tempered laminated glass with only vertical frames. All glass needs to have a heat-reflective coating or film		
	3	<b>FLOORING</b> – High durability scratch-resistant vinyl finishing. Skirting to be matched with the floor finishing		
	4	<b>CEILING</b> - Soffit of the slab with smooth putty plaster and emulsion paint finish		
	5	<b>DOOR</b> - 12mm tempered laminated glass door. Glass texture and colour should match with the curtain wall.		

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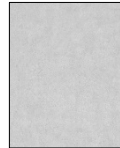


SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Ninth floor  OUTDOOR AREA	1	<b>RAILING</b> – 12mm Tempered Glass railing on top of 600mm wall (wall for planting area). Total railing height 1200mm from finished floor level.		
	2	<b>FLOORING</b> – White granite flooring (No slippery). Skirting to be matched with the floor finishing		
	3	<b>DOOR</b> - 12mm tempered laminated glass door. Glass texture and colour should match with the curtain wall.		







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SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Tenth to Twelfth floor PANTRY	1	<b>WALL</b> - polished white wall granite finishing 600x1200mm		2600 MM minimum clearance
	2	<b>TILE FLOORING</b> 600x600 Homogenous grey tile finish. Skirting to be matched with the floor finishing		
	3	<b>CEILING</b> Moisture-resistant suspended plasterboard ceiling. Fuller coordination of ceiling recessed services must be made, including final positions for light fittings, air supply extract grilles, and sprinkler heads		
	4	<b>DOOR</b> 900x2100 Door finished with laminate		

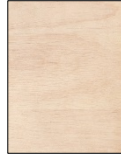

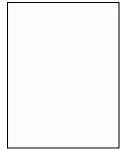


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SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Tenth to Twelfth floor SERVICES ROOM	1	<b>WALL</b> - Interior plastered smooth putty with white paint finish		2600 MM minimum clearance
	2	<b>TILE FLOORING</b> 600x600 Homogenous grey tile finish. Skirting to be matched with the floor finishing		
	3	<b>CEILING</b> soffit of the slab with smooth putty plaster and emulsion paint finish		
	4	<b>DOOR</b> 1hr fire rated door with wood texture finish		





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SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Tenth to Twelfth floor WASTE ROOM	1	<b>WALL</b> - Interior plastered smooth putty with white paint finish		2600 MM minimum clearance
	2	<b>TILE FLOORING</b> 600x600 Homogenous grey tile finish. Skirting to be matched with the floor finishing		
	3	<b>CEILING</b> soffit of the slab with smooth putty plaster and emulsion paint finish		
	4	<b>DOOR</b> 1hr fire rated door with wood texture finish		


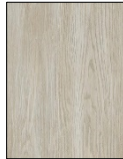
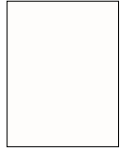
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SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Tenth to Twelfth floor OFFICE SPACES	1	<b>WALL</b> - All Interior walls with large laminate wall sheets		2600 MM minimum clearance
	2	<b>RAISED FLOOR SYSTEM</b> - 100MM raised from slab level to floor finished level. It should be topped with high durability scratch-resistant vinyl finishing. This system should be waterproof and should be fire-resistant		
	3	<b>CEILING</b> - Soffit of the slab with smooth putty plaster and emulsion paint finish		
	4	<b>DOOR</b> 1hr fire rated door with wood texture finish		
	5	<b>INTERIOR PARTITIONS</b> – All interior partitions should be made from 12mm full height glass. All the walls should be frosted up to 1500mm.		

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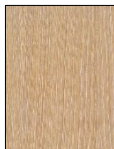
SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Tenth to Twelfth floor OUTDOOR AREA	1	<b>WALL</b> - Outdoor plastered smooth putty with white paint finish		2600 MM minimum clearance
	2	<b>TILE FLOORING</b> 600x600 Homogenous grey tile finish. Skirting to be matched with the floor finishing		
	3	<b>CEILING</b> soffit of the slab with smooth putty plaster and emulsion paint finish		
	4	<b>DOOR</b> Glassdoor with the access control system.		

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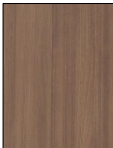
SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Terrace floor  LIFT LOBBY	1	<b>WALL</b> - Interior walls with large laminate wall sheets		2600 MM minimum clearance
	2	<b>RAISED FLOOR SYSTEM.</b> 100MM raised from slab level to floor finished level. It should be topped with high durability scratch-resistant vinyl finishing. This system should be waterproof and should be fire-resistant		
	3	<b>EXPOSED CEILING.</b> The soffit of the slab with smooth putty plaster and emulsion paint finish		







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SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Terrace floor  SERVICES ROOM	1	<b>WALL</b> - Interior plastered smooth putty with white paint finish		2600 MM minimum clearance
	2	<b>TILE FLOORING</b> 600x600 Homogenous grey tile finish. Skirting to be matched with the floor finishing		
	3	<b>CEILING</b> soffit of the slab with smooth putty plaster and emulsion paint finish		
	4	<b>DOOR</b> 1hr fire rated door with wood texture finish		

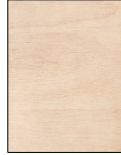

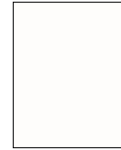


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SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Terrace floor  TOILETS	1	<b>WALL</b> – polished white wall granite finishing 600x1200mm		2600 MM minimum clearance
	2	<b>TILE FLOORING</b> 600x600 Homogenous grey tile finish. Skirting to be matched with the floor finishing		
	3	<b>CEILING</b> Moisture-resistant suspended plasterboard ceiling. Fuller coordination of ceiling recessed services must be made, including final positions for light fittings, air supply extract grilles, and sprinkler heads.		
	4	<b>DOOR</b> Main toilet entrance door finished with laminate		
	5	<b>DOOR</b> internal toilet door finished with laminate		


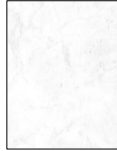

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SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Terrace floor  STORAGE	1	<b>WALL</b> - Interior plastered smooth putty with white paint finish		2600 MM minimum clearance
	2	<b>TILE FLOORING</b> 600x600 Homogenous grey tile finish. Skirting to be matched with the floor finishing		
	3	<b>CEILING</b> soffit of the slab with smooth putty plaster and emulsion paint finish		
	4	<b>DOOR</b> 1hr fire rated door with wood texture finish		

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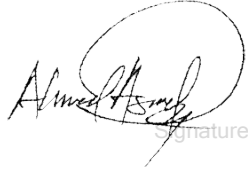
SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Ninth floor STAFF LOUNGE	1	<b>WALL</b> - All Interior walls with large laminate wall sheets		2600 MM minimum clearance
	2	<b>RAISED FLOOR SYSTEM</b> - 100MM raised from slab level to floor finished level. It should be topped with high durability scratch-resistant vinyl finishing. This system should be waterproof and should be fire-resistant		
	3	<b>CEILING</b> - Soffit of the slab with smooth putty plaster and emulsion paint finish		
	4	<b>DOOR</b> 1hr fire rated door with wood texture finish		
	5	<b>INTERIOR PARTITIONS</b> – All interior partitions should be made from 12mm full height glass. All the walls should be frosted up to 1500mm.		

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SPACE	SR.NO.	SPECIFICATION	IMAGE	CEILING HEIGHT
Terrace floor  OUTDOOR TERRACE AREA	1	<b>RAILING</b> – 12mm Tempered Glass railing on top of 600mm wall (wall for planting area). Total railing height 1200mm from finished floor level.		
	2	<b>FLOORING</b> – White granite flooring (No slippery). Skirting to be matched with the floor finishing		
	3	<b>DOOR</b> - 12mm tempered laminated glass door. Glass texture and colour should match with the curtain wall.		

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Prepared By

  
Signature

Name: Ahmed Asnadh

Designation: Architect

Date & Time: 06<sup>th</sup> March 2022

Checked By

Signature

Name: Fathimath Leena Jaleel

Designation: Senior Architect

Date & Time: 20<sup>th</sup> July 2023

HoD / HoS Approval

  
Signature

Name: Saeed Adam

Designation: Assistant director

Date & Time: 20<sup>th</sup> July 2023