

Saiham

T O W E R



GREEN

Buildings are a hallmark of

economically sound
BUSINESS
decisions.

thoughtful
ENVIRONMENTAL
decisions

and smart
HUMAN IMPACT
decisions.

RICK FEDRIZZI

CEO & Founding Chairman
US Green Building Council





Saiham

T O W E R

Saiham Tower located at Gulshan, Dhaka, Bangladesh has achieved the Pre-certified Platinum level of LEED rating under Core & Shell Category of USGBC. The ample 105,134 square feet area facility incorporates optimization measures such as water use reduction, energy savings through efficient HVAC design, lighting design and environmentally friendly materials and finishes. Saiham Tower is a very balanced and unique combination of aesthetics and functionality

Location:

House 34, Road 136, Block SE(C) - 1
Gulshan - 1, Dhaka -1212

Land Area:

20 Katha

Total Floors:

14 Floors + 3 Basements

Rajuk Approval No:

4/1 R TAU MI 2 B 283/13/456 STHA

LEED Certification ID:

Project ID 1000037187

L E E D F A C T S

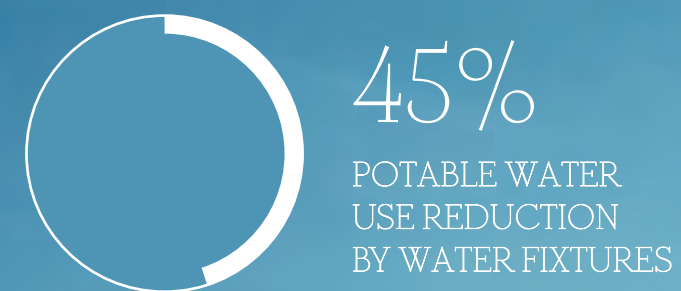


PLATINUM 85*

LEED, or Leadership in Energy & Environmental Design, is a green building certification program that recognizes best-in-class building strategies and practices. LEED certified buildings save money and resources and have a positive impact on the health of occupants, while promoting renewable, clean energy.

LEED Platinum Pre-certified
Certification awarded July, 2014

Sustainable Sites	25/28
Water Efficiency	10/10
Energy & Atmosphere	22/37
Material & Resources	7/13
Indoor Environmental Quality	11/12
Innovation & Design	6/6
Regional Priority	4/4
Out of possible	110 points





GENERAL SPECIFICATIONS

CIVIL CONSTRUCTION

- Mat Foundation of **1200 mm** thickness
- **BUET** (Bangladesh University of Engineering Technology) was the full time consultant from the foundation to the Finish of the Superstructure
- The Building has been built to withstand Earthquake as per **BNBC Code**
- Steel Reinforcement is used of **BSRM**, best local brand
- Cement brand is **Scan Cement**
- Concrete used is high quality **Ready Mix Concrete**

CURTAIN WALL GLASS

- Manufacturer: **Pittsburgh Plate Glass (PPG)** of USA
- **Curtain Wall Glass** has several attributes including **aesthetics**, right amount of **day light**, **reducing power consumption** in lighting and **aid in comfort cooling** for **human comfort**
- The Curtain Wall Glass can sustain wind loading up to **210 km/hr**

MAJOR FEATURES

- There is Diesel Generator for **full Power backup** system when city power fails
- The Diesel Generator Room is **Fully Acoustically Treated** so that Engine noise is contained within the room thus the outside environment remains free from any noise
- This Building has a built-in **Lightning Protection System** to protect against damages from High Voltage Thunder Lightning
- Our CCTV has **Video Analytic Solution** which sends **SMS** and **E-mail** notification of various threats in real time. It is used by US Army, Navy and National Security Intelligence
- This building is managed by **Fully Computerized BMS (Building Management System)** System
- This Building has sophisticated **Access Control System** considering the general safety and security concerns, 100% Waste Water Recycled through **STP, WWTP** with Tertiary Water Treatment suitable for Central Air Conditioning, Toilet Flush & Gardening
- Rainwater is utilized in the above systems to supplement water consumption with due processing and also Rain Water collected in drain pits within the land perimeter is used for recharging ground water and Deep Tube Well as part of the Green Building concept
- **AHU (Air Handling Unit)** as part of our Central Air Conditioning System has a special Air Filter which provides quality air within the conditioned space that will be monitored from time to time by a system called **IAQ (Indoor Air Quality)** measurement. An AHU is a means of handling chilled air for a large space for very efficient comfort cooling.
The Elevators are high speed elevators i.e, **2.5 m/sec**, there are 4 Elevators of which 3 for Passengers and one for Service
- **High Quality Drinking Water** produced in-house and is distributed to each floor through Dispensers (both Hot & Cold) to the comfort of the inmates in a most sterile condition.
- **Intelligent Lighting Control System** in place for saving Electricity
- Power is distributed throughout Building by **BBT (Bus Bar Trunking)**
- There is **AVR (Automatic Voltage Regulator)** of **11 KV** for keeping the supply voltage stable at all time
- There are **Smoke Detectors** to detect fire at any point in the building for efficient extinguishing of Fire on time.
- Efficient **Fire Alarm System** is in place throughout the building for warning the occupants in case of Fire
- There is **Sprinkler System** for fighting fire throughout the building
- **Fire Barriers** in each floor to prevent smoke getting to the upper floors so that smoke does not spread causing inhalation by occupants
- **Solar Power** for efficient Hot Water System
- **High Quality Parking Management** is in place
- **Electric Vehicle Battery Charging** system in place for future application
- Typical Floor height is **3600 mm** and Ground Floor height is **4200 mm**
- Ramp main entrance height to Basement is **2900 mm**
- False Ceiling height is **2.7 m**



EXPLORE

Saihnam

T O W E R

MOST PRESTIGIOUS
LOCATION IN
THE HEART OF
THE CITY
AT GULSHAN

V I S U A L S
A N D
F L O O R P L A N S



HK Sail

A
GRAND
APPROACH

A
LOFTY
ENTRANCE

HK Sa

HK Sa



SPACIOUS
LIFT LOBBY

4 LIFTS

LIFTS

Brand: **Mitsubishi**

No. of Lifts: **3 Passenger & 1 Service Lift**

Speed: High Speed Lift **2.5 m/sec.**

Interior Finish :

Hairline Stainless Steel Wall Finish with a large Mirror and 3 side SS continuous handle

Safety Features:

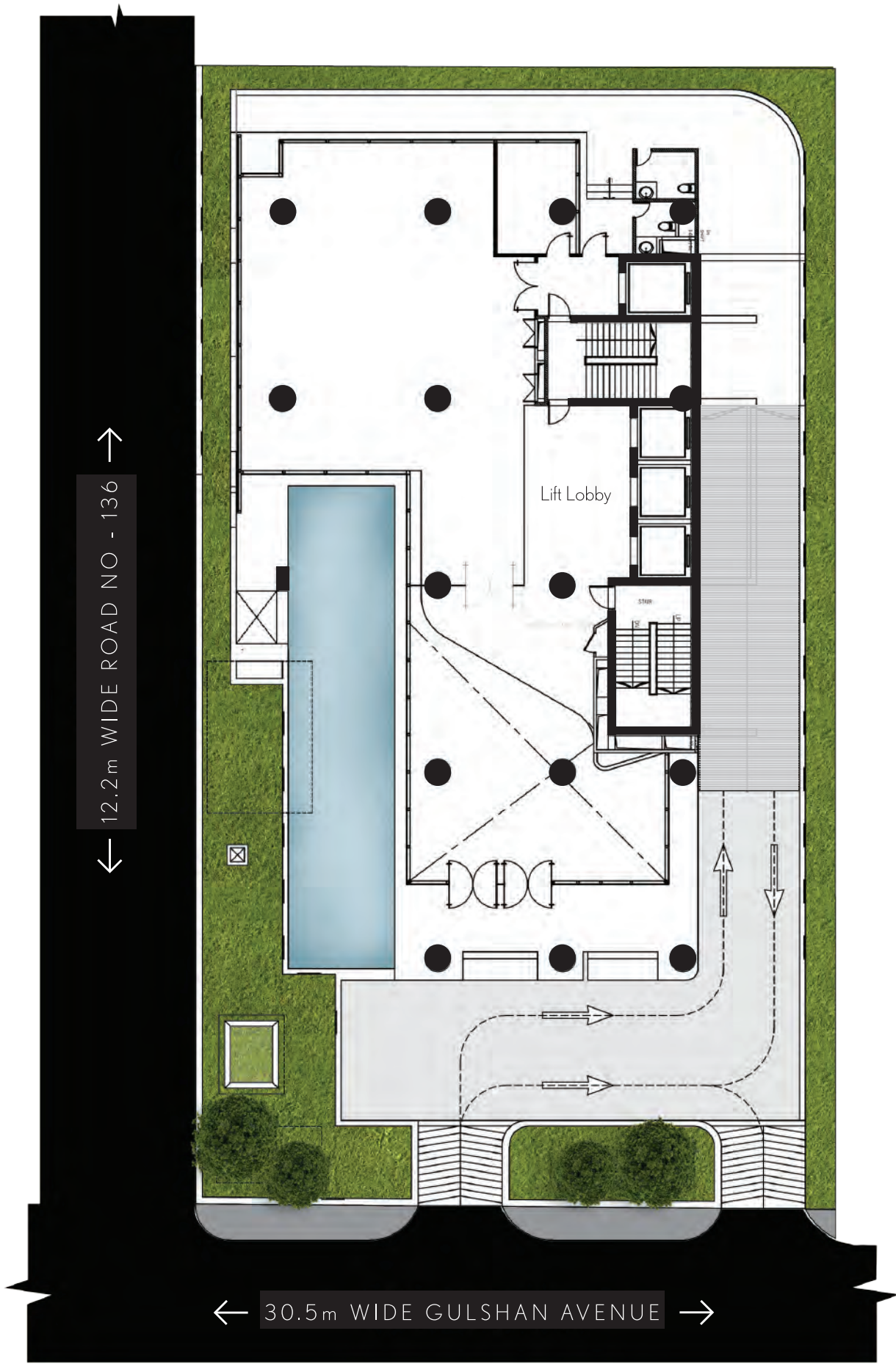
There are at least **20 safety features** to protect and evacuate the passengers from the cabin

Capacity : **1150Kgs. (17 persons)** For Passengers
: **1275Kgs. (17 persons)** For Service

Drive Control System : **AC – Variable Voltage Variable Frequency (VVVF)** Control Gearless Drive System.

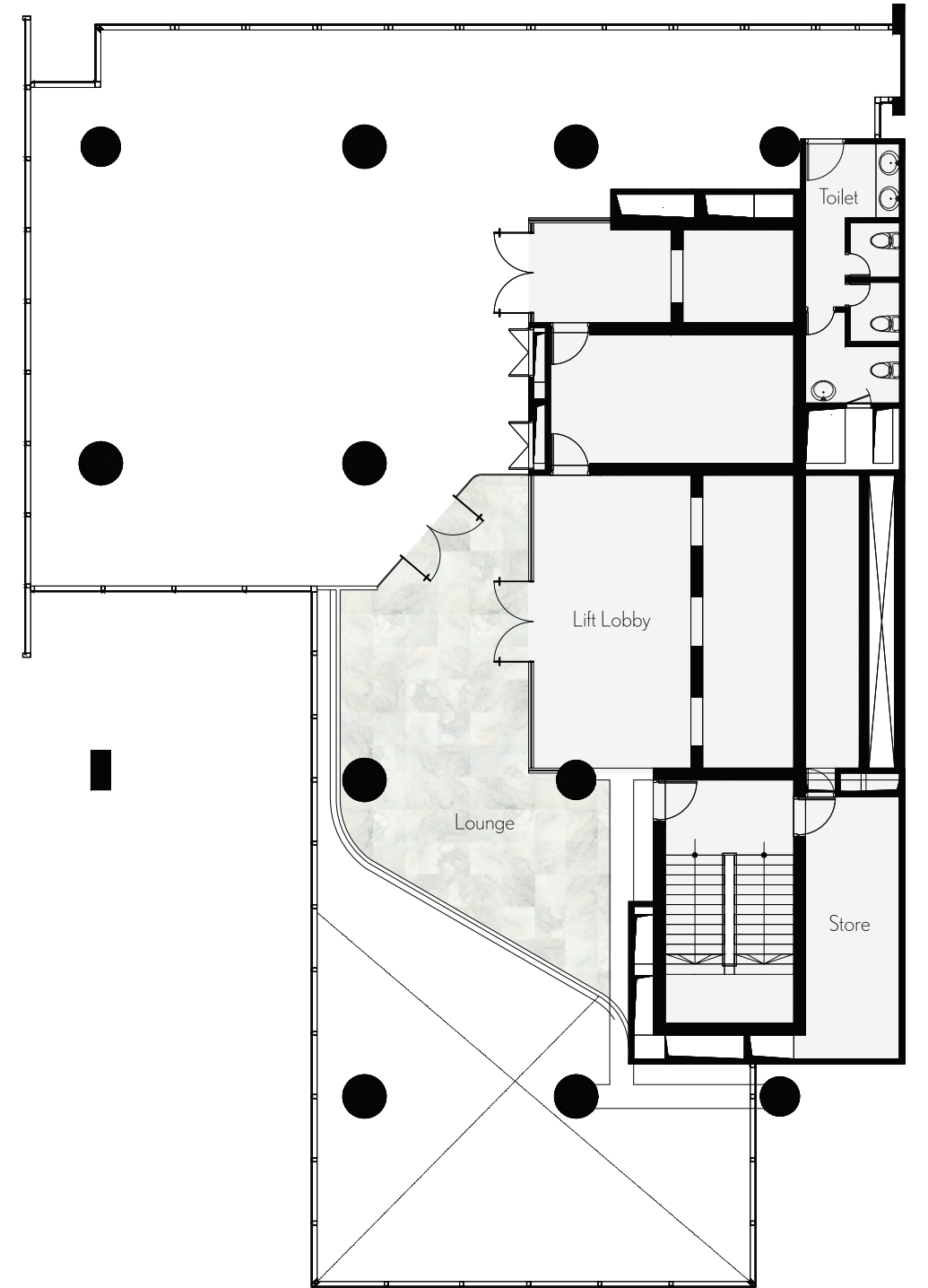
Operation : Three Car Group Control
: Single Car Selective Collective Control System for Service Lift.

International Standards : Machine Room Less : EN 81-1
: Machine Room System : Mitsubishi Electric Standard



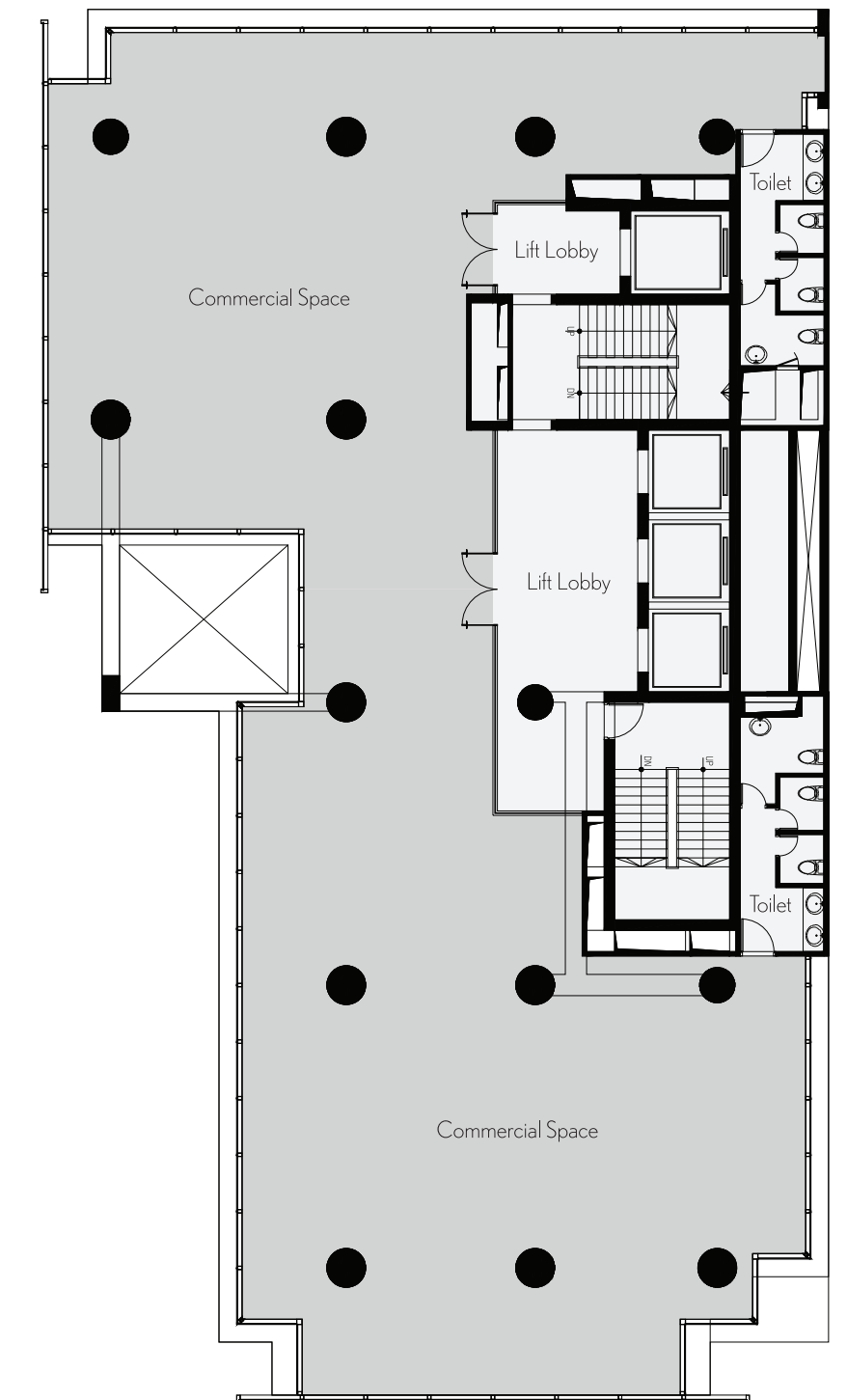
⊖ Ground Level Floor Plan

Piano shaped
mezzanine
floor



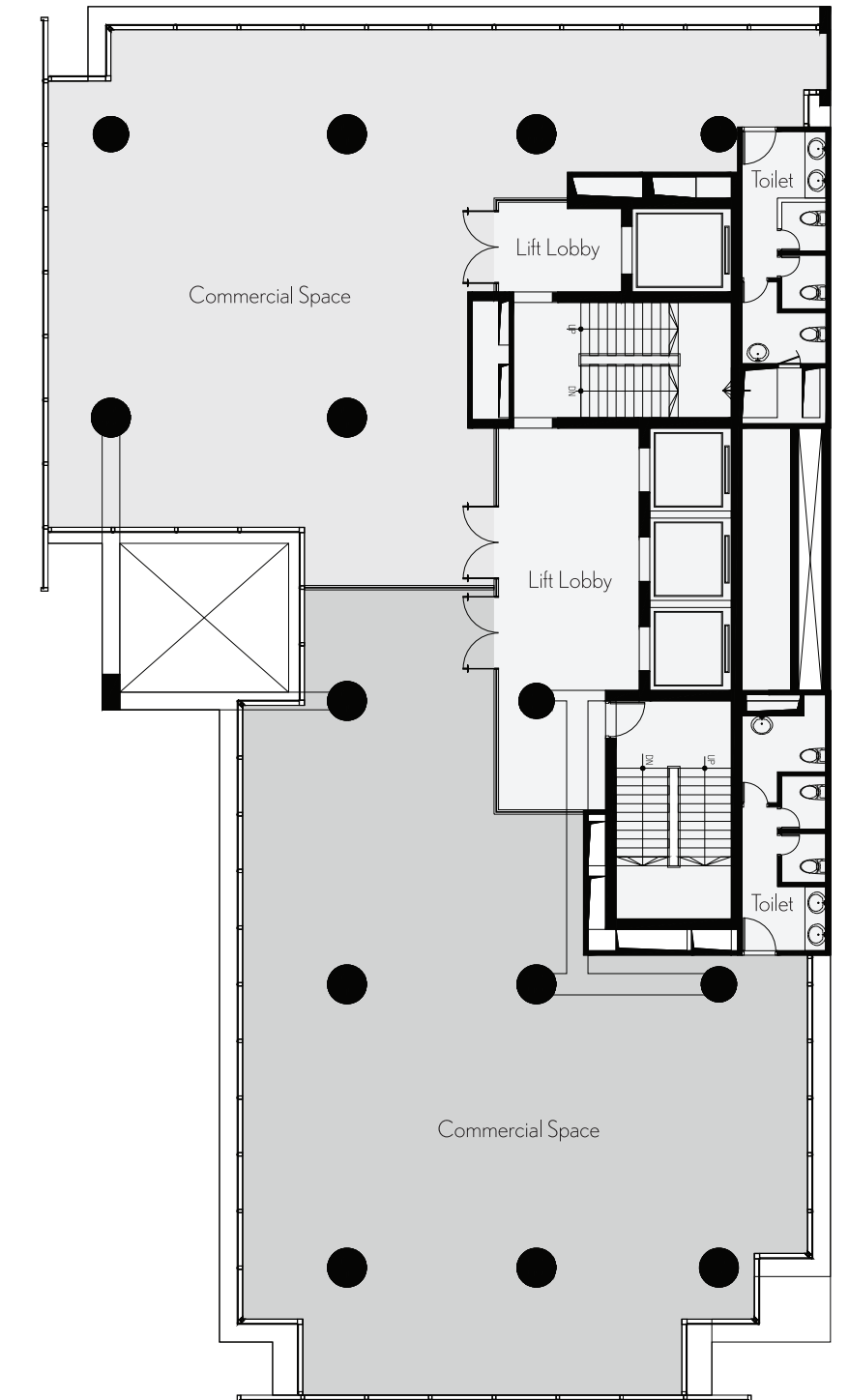
⊖ Level 01 Floor Plan

AN
EXQUISITE
LOUNGE
ON MEZZANINE FLOOR



Single Unit
Layout

Level **02** to **11** Floor Plan



Double Unit
Layout

Level **02** to **11** Floor Plan

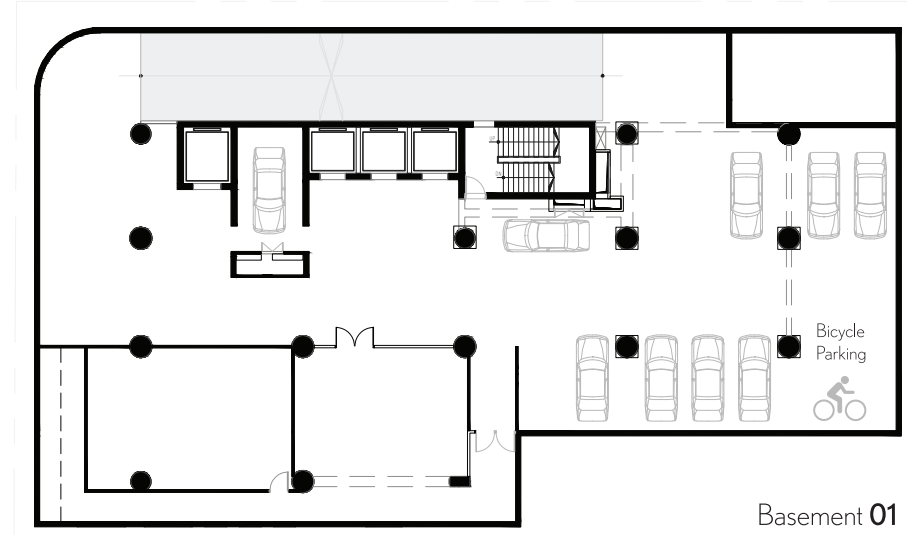
ENTICING ROOFTOP TERRACES



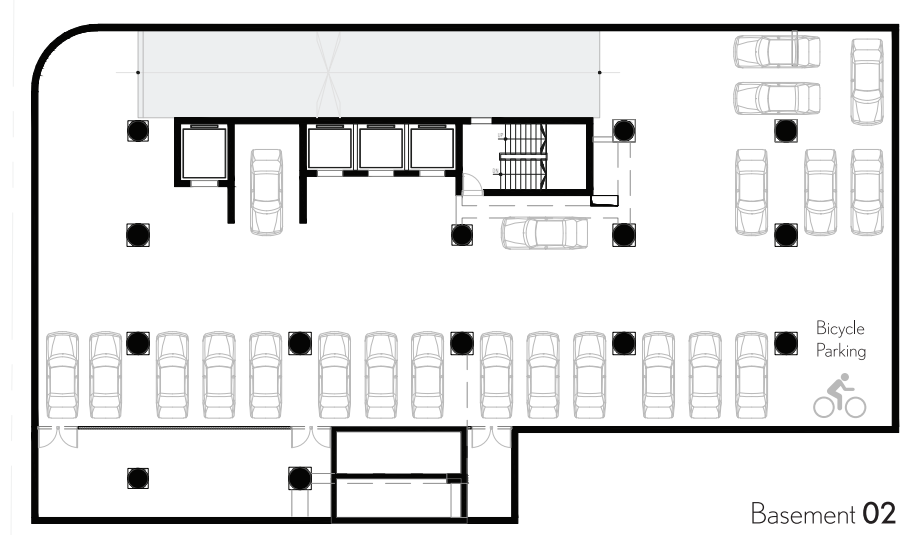
Roof Level Floor Plan



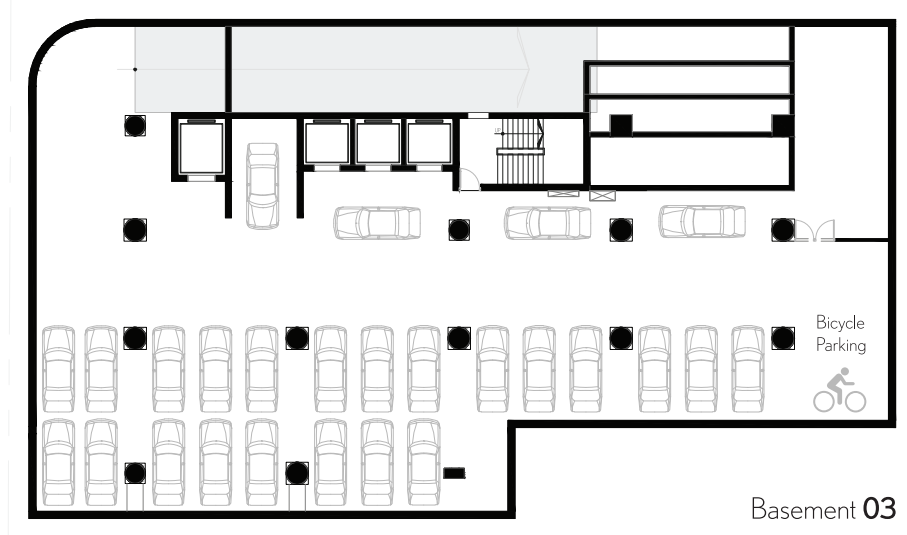
3 BASEMENT CAR PARKS



Basement 01



Basement 02



Basement 03





HVAC

Brand: **YORK - Johnson Controls**

Origin: **USA**

Type:

Water Cooled Screw Chillers with integrated **VSD** (Model: **YVWA**).

Drive System:

Variable Speed Drive (VSD) with energy saving with environment friendly refrigerant **R 134a**. Integrated VSD reduces compressor speed during the part loading to provide good efficiency as well as provides Soft start with no inrush of high current. Starting current never exceeds full load amps.

Efficiency: Reduces your consumption.

YVWA chillers are Johnson Controls' most efficient water-cooled screw chillers. The design includes the latest technology such as **hybrid falling-film evaporators** to give the customer maximum efficiency and reduced refrigerant charge compared to previous flooded evaporator designs. With up to a 30% improvement in real world efficiency versus current products, YVWA sets the new standards for lowering energy use. Optimize Energy Performance higher efficiency helps your building qualify for maximum points for the **Energy and Atmosphere Credit 1 (EAc1)**. Every YVWA model helps **LEED** projects earn the **Energy and Atmosphere Credit 4 (EAc4)**.

Energy saving:

YVWA chillers reduce the electricity usage, thereby contributing to **reducing greenhouse gases** and helping keep the planet cool. A chiller is the highest power hungry machine in a commercial building can deliver cooling load as low as **10% to 90%** saving a huge amount of energy as per the demand of the system by using VSD. Also reduces the Stand by generator size.

Microprocessor based 32bit processor direct digital controls are used to provide precise control and monitoring of HVAC system.

All Pumps, Cooling Towers, AHUs Ventilation fans are **VSD** driven meant for efficient operation and energy saving.

High Quality Indoor Air is maintained by special air filter known as medium filter as part of IAQ (Indoor Air Quality) which is continuously monitored. There is pre-set or adjustable **VAV diffuser** for all location for comfort cooling for individual areas.

International Certification: **AHRI Standard 550/590, ISO9001, U.S. Green Building Council member.**

SUB-STATION

Brand : **Siemens**

Origin : **Germany**

Transformer Capacity: **1600 KVA**

Automatic Voltage Regulator (AVR): This AVR will facilitate **Stable Voltage Supply** to the building thus this **would save all the electrical equipment from any damage / malfunction from the supply voltage fluctuation.**

Bus bar trunking system has significant advantages over cable, such as **improved electrical performance, Reliability of electricity distribution system, Speeds up installation, flexibility and transformability of the system, Various kinds of high degree of protection, Ease of maintenance and Energy savings in operation.**

Due to overall energy saving management of this building a tenant can save upto **30%** power compared to any other conventional buildings

International Certification / Standard: **DIN, IEEE STD C57.02.01, EN 60076-11, UL Listed, CSA & TUV**

DIESEL GENERATOR

Brand: **Caterpillar**

Origin: **USA**

Mains Backup : **Full Power Backup**

Auto Power Transfer

3 Nos of Generators **Auto Synchronized**

7-8 Hours continuous Duty Operation

Electronic Woodward Governor for better fuel economy.

The Diesel Generator Room is Acoustically Treated by World famous company **"Mason Acoustics"** for quiet operation

International Standard / Certification: **CE, NEMA, ISO**

BMS

Brand: **Honeywell**

Origin: **USA**

The Operating Software is **"Honeywell Enterprise Building Integrator"**
Microprocessor based controllers are True Standalone or Networked configurable features.

Multiple operator interface options.

Preserve the controller database for an unlimited period of time.

Integrated features: **Tenant Billing, Web Access, Lighting Control, Security/CC TV/Fire Protection & Detection**

The BMS System makes this Building **Energy Efficient** and **Intelligent** in so many ways

International Certification: **UL Listed and BackNet Listed**

FIRE DETECTION SYSTEM

Brand: **NOHMI**

Origin: **Japan**

Description : **Intelligent Addressable** Fire Detection System with Smoke & Heat detectors with **enunciator panel for pinpointing smoke or fire incident location.** Thus enabling swift action either to extinguish or fight fire.

FM200 Fire Suppression System:

FM-200 is a clean, colorless, and environmentally friendly fire suppression agent that is electrically non-conductive and safe for humans. It extinguishes flames primarily through heat absorption, leaving no residue, thus minimizing downtime after a fire and making FM-200 suppression systems accepted and respected worldwide with over one hundred thousand installations in more than seventy countries.

International Certification: **UL Listed & FM approved**

FIRE PROTECTION SYSTEM

Major Brands: Fire Pump: **Patterson**
Jockey Pump : **Patterson**
Automatic Sprinkler : **Tyco**

Origin: **USA**

Capacity : **750 GPM (FP) + 30 GPM (JP)**

Description:

Automatic Sprinkler & Fire Hydrant system run by Diesel Fire Pump supported with Electric Jockey Pump.

Have a **dedicated Fire Water Tank** Capacity of **1,45,000 Litre**

Stair Well Pressurization system for fire smoke protection for emergency evacuation so that people can exit unharmed without smoke inhalation through the stairs

Provision for **City Fire Brigade Connection**

Fire Rated Doors and **Fire Barriers** used so that in case of fire, Smoke cannot travel from one floor to the next

FM200 Fire Suppression System:

It is best suited for electrical systems rooms like Substations, Computer Server Rooms, All kinds of Control Rooms like MRI control room, Air Traffic control room, any Industrial process or manufacturing control room, Mobile Phone repeater stations etc.

Safety to occupants, Environmentally friendly system, Sustainable fire suppression technology, Quick and safe in extinguishing fire and leaves no residue and totally harmless to electric control panels and all kinds of electrical systems hardware.

International Certification: **UL Listed & FM approved**



RAIN WATER HARVESTING

Application of rainwater harvesting in urban water system provides a substantial benefit for both water supply and wastewater subsystems by reducing the need for clean water in water distribution system as well as less generated storm water in sewer system.

This harvested rainwater is used in **Cooling Tower makeup water of the Central Air-conditioning system** and also taken into the system of water recycling system for other applications like **Toilet Flush, Gardening** etc. where substantial water and energy for pumping water are saved.

STP, WWTP & WATER RE-CYCLING SYSTEM

We have **100% Waste Water Recycling Plant** thus conserving precious water. **Sewage Treatment Plant (STP), Waste Water Treatment Plant (WWTP), Tertiary Treatment Plan (TTP) and Water Re-cycling System** are the integral part of a Green Building and we have fully utilized the systems to optimize the use of water.

In Saiham Tower we continuously **Re-cycle Waste Water & Rain Harvested Water to full utilization in Toilet Flush, Cooling Tower Make up water for Central Air Conditioning System and gardening**. This way we save substantial amount of fresh water, electrical energy to pump fresh water from underground / WASA and to distribute to various points.

HOT WATER SYSTEM

We are using **Solar Power to heat water** for our efficient Water Heater for bathrooms and ablution round the year.

CENTRAL POTABLE WATER SYSTEM

We have **High Quality Mineral Water grade Drinking Water** from our own plant. This water serves **all the floors directly to the Dispensers 24 x 7 non-stop both Hot & Cold**. Thus this **eliminates the hassle** of transporting and handling dozens of water jars floor to floor each day costing additional energy bill and time of the service lift.

FAUCETS & BATHROOM FIXTURES

All the **Water Faucets are LEED Compliant Low Flow fixtures** making it measured water flow preventing any water wastage every time a faucet is used.

All the **Toilet Flush units (WC)** are as well **LEED Compliant Dual Flush system**.

CONTACT

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CREDITS

Consultants, Designers and Institutions

Building Designer

M & E Consultant

Interior & Exterior Architect

LEED Consultant

Building Structural Consultant

VOLUME ZERO, Bangladesh

WSP, Thailand

DWP, Malaysia

ECO3, USA

BUET, Bangladesh

Major Mechanical & Electrical Equipment

YORK

Water Cooled Screw Chiller for Central AC, USA

TECO

Variable Speed Drive for HVAC, Taiwan

SIEMENS

Sub-station of CRT & AVR, Germany

CATERPILLAR

Generator, USA

MITSUBISHI

Lifts, Thailand

HONEYWELL

Building Management System Control, USA

NOHMI

Fire Detection System, Japan

PATTERSON

Fire Pump, USA

CLARKE

Fire Engine, Ireland

VIKING

Sprinkler Head, USA

GRUNDFOS

Water Pumps, Denmark

MASON ACOUSTICS

Generator Noise Acoustic Treatment, Thailand

AMERICAN STANDARD

Bathroom fittings and fixtures

VIDEO ANALYTICS SYSTEM

CCTV, MATV, USA

EUROPEAN STANDARD

Lighting & Illumination

XI'AN HAOHAIJIA

STP, WWTP & Water Recycling System, China

MARSDEN

TV Antennas, Australia

ERICO

Lightning Arrester, Australia

3M/DU PONT

FM 200 Gas, USA

NOHMI

Control System, Japan