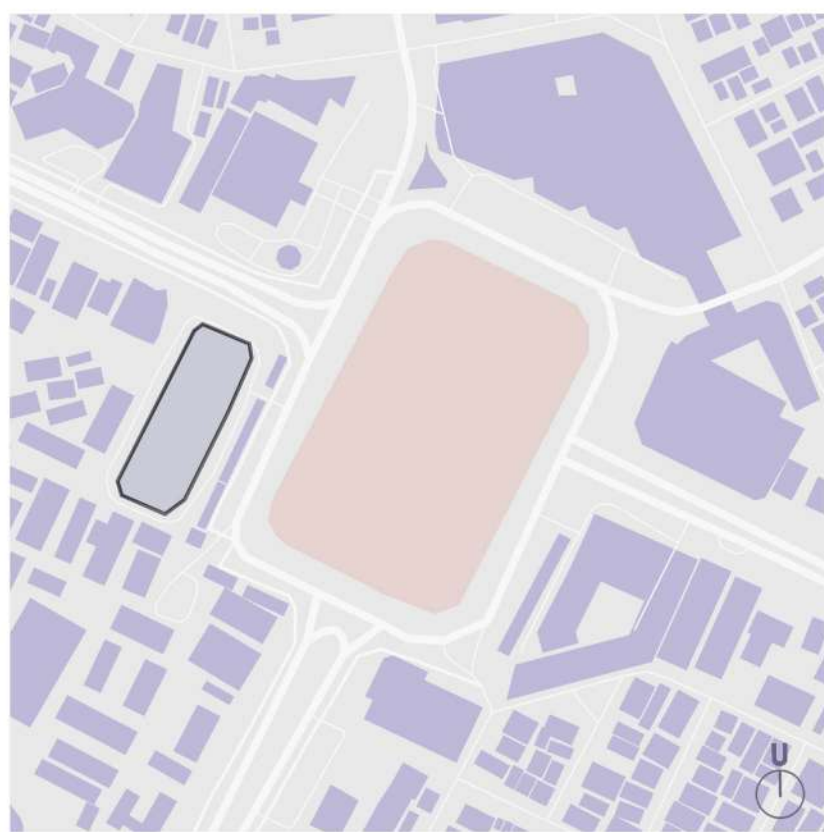




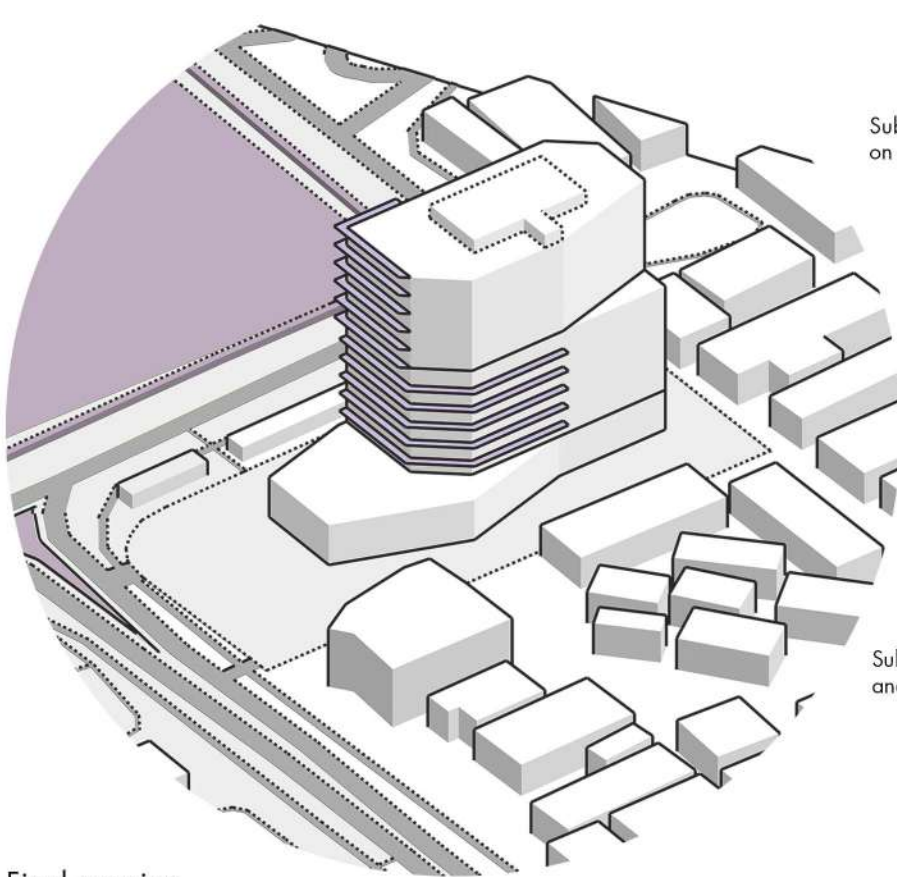
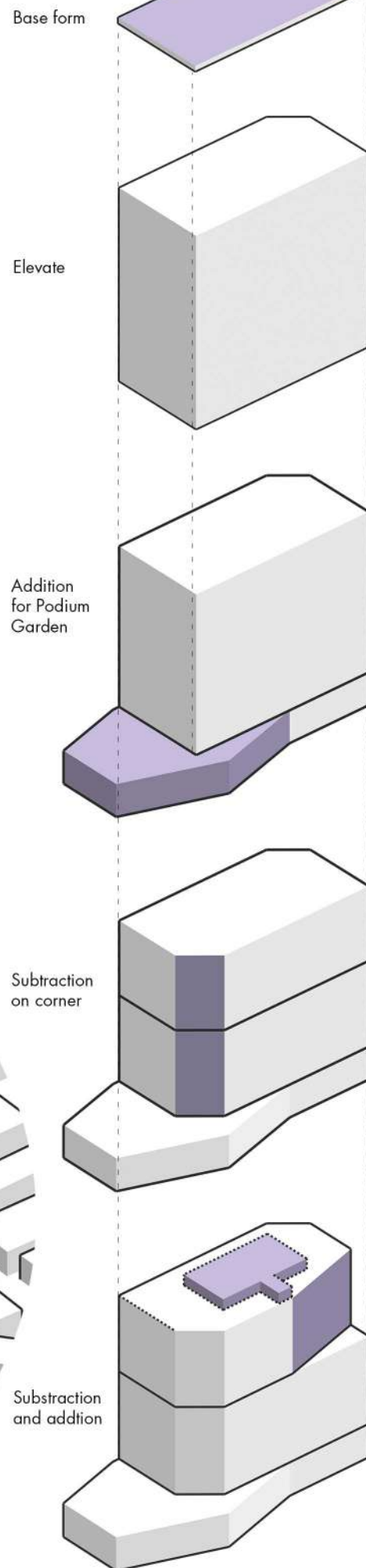
OASTRIC TOWER

RENTABLE COLLABORATIVE AND WORKSPACE



OASTRIC TOWER is a rentable office space building located at Simpang Lima, Semarang. This building has a 13 floor, contains of office area, public co-working space, roof - podium garden, convention room, retail space, and parking lot in ground and basement level.

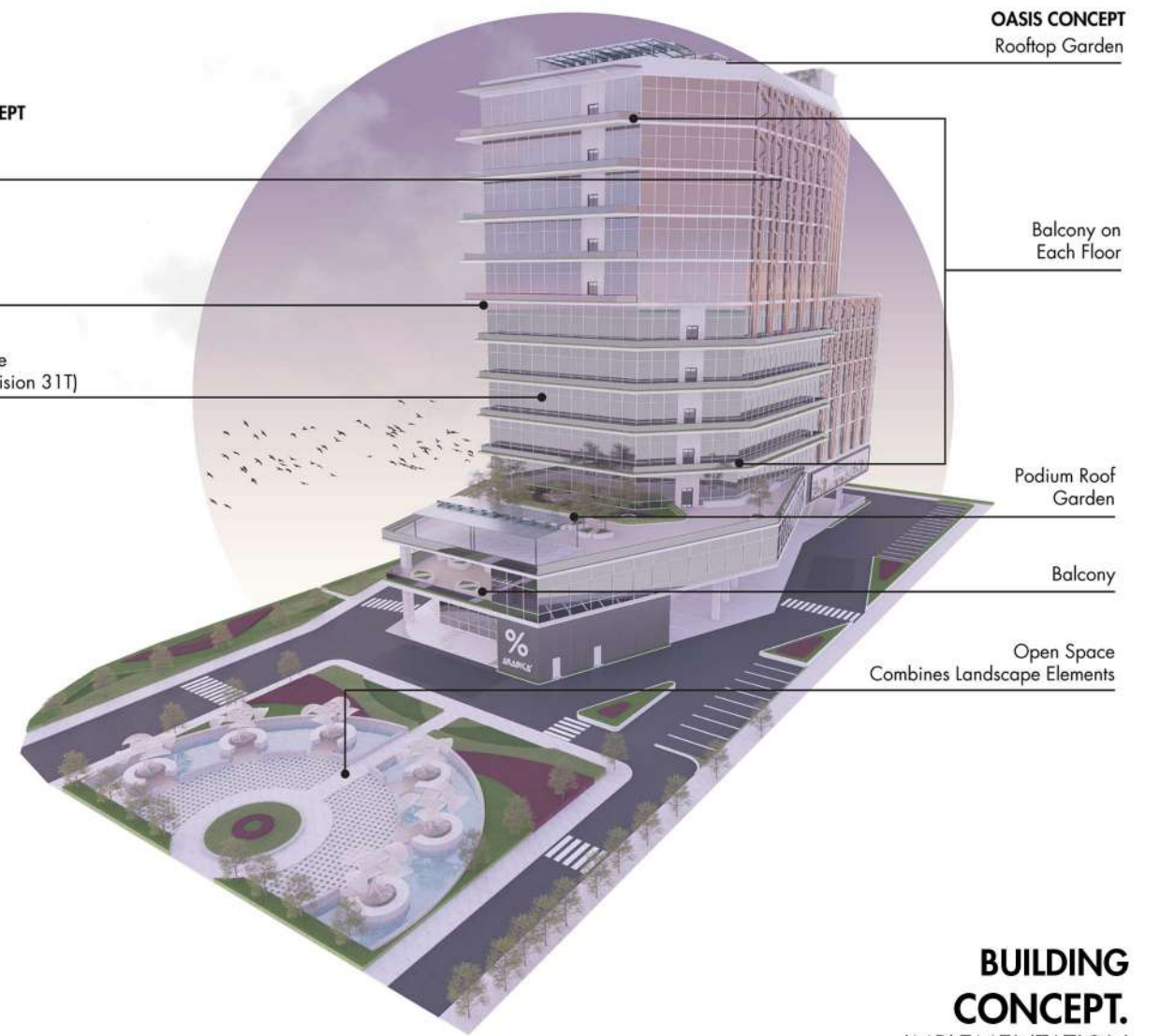
MASSING.



Final massing on site

TROPICAL CONCEPT

Secondary Skin (West & East)
Horizontal Shading
High Performance Glass (Stopray Vision 31T)



BUILDING CONCEPT IMPLEMENTATION



OASTRIC TOWER has a concept **Oasis Central Tropic**. Oasis concept applied in the landscape area which **combining a different landscape elements and provides balcony on each floor**. Tropical concept applied in **building facade and high performance glass** (Stopray Vision 31T 8 mm Glass). Because the site location is in the center of Semarang, the concept becomes an Oasis Central Tropic.

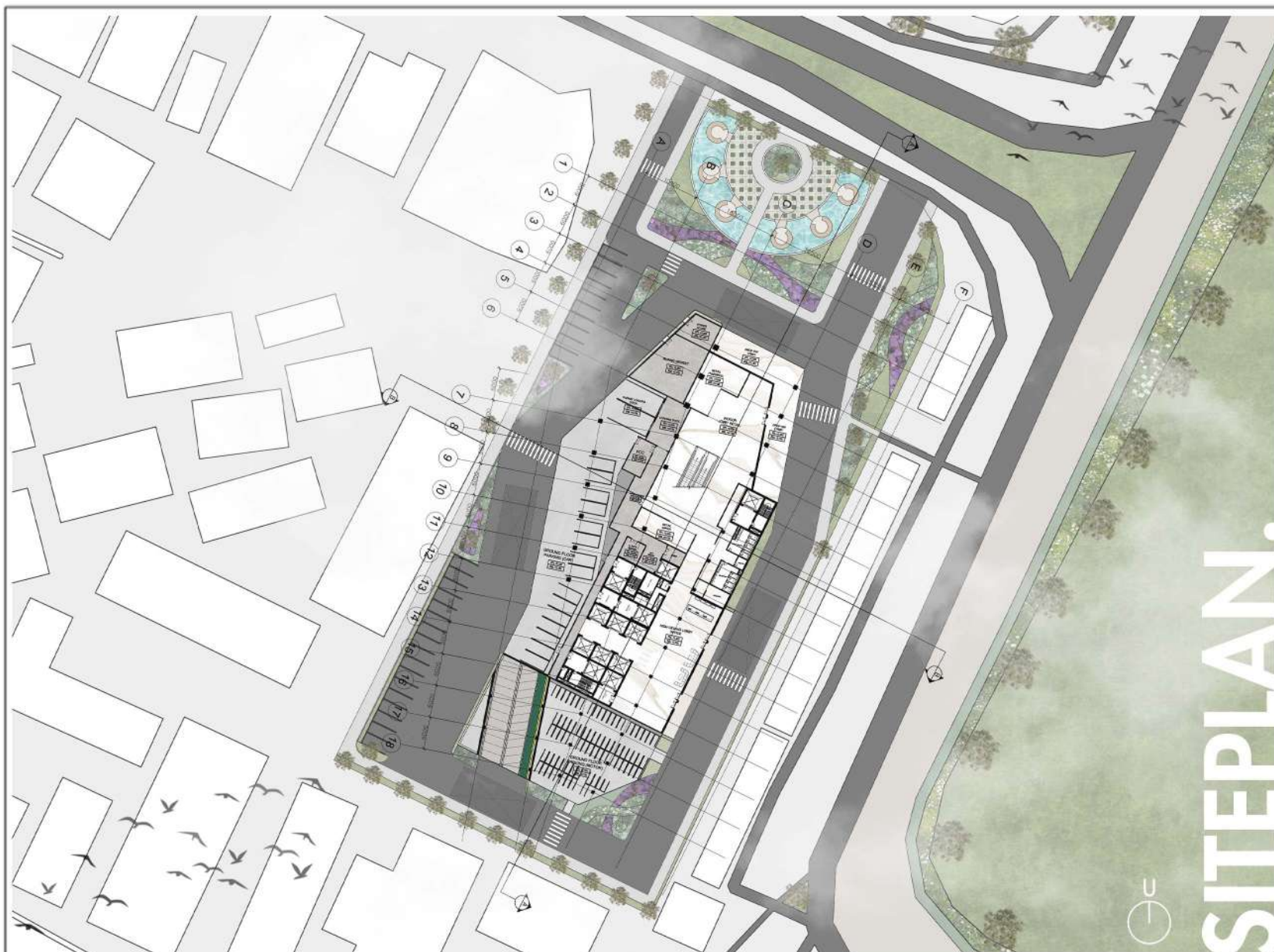


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OASTRIC TOWER

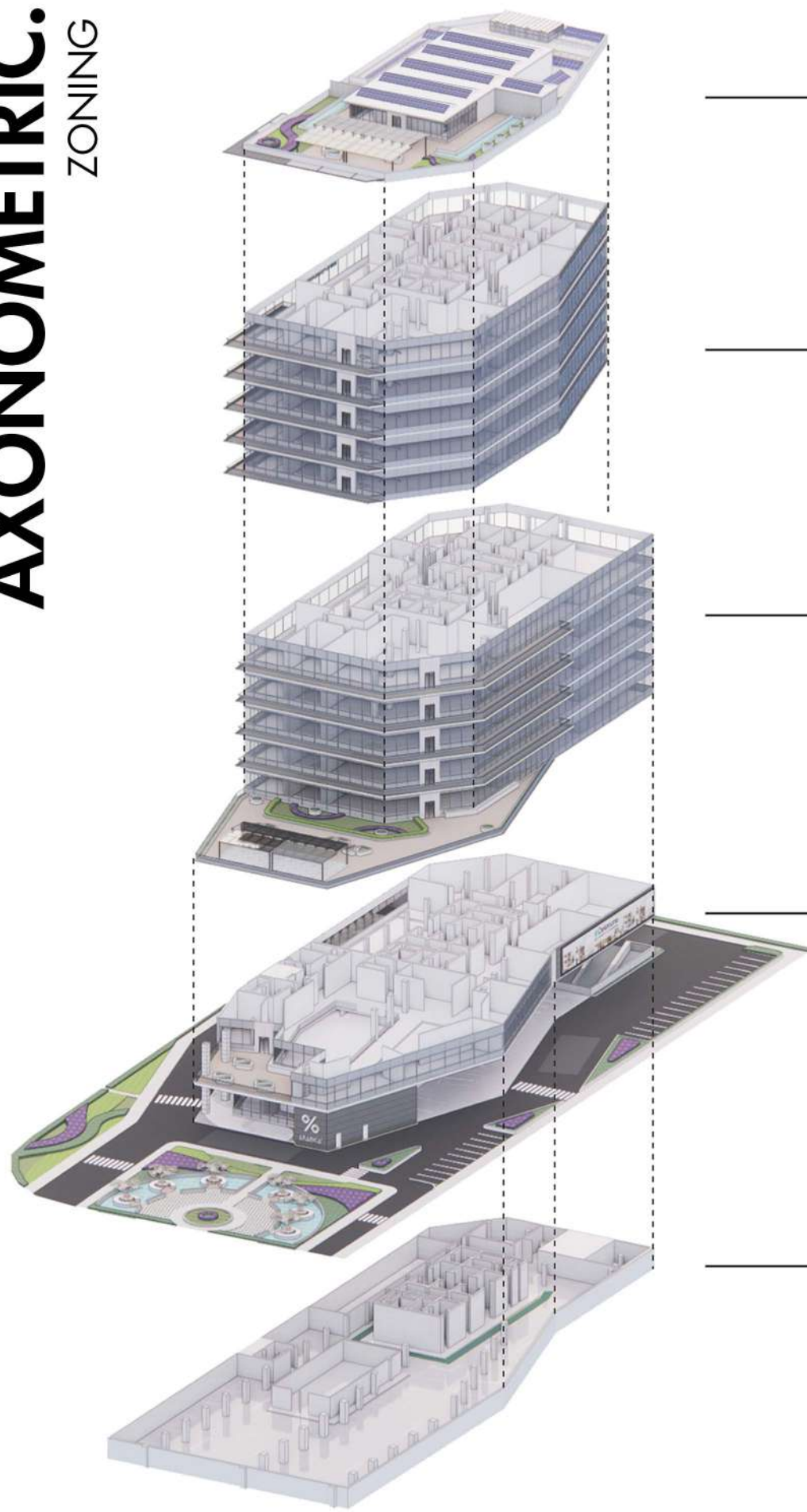
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SITE PLAN

AXONOMETRIC.
ZONING



ROOFTOP
Garden
13th Floor

Garden
Communal Space
MEP Area

TOWER
Typical 2
8 - 12th Floor

Rentable Office Space
Collaborative Space (Co Working)
Quiet Spaces

Typical 1
3rd - 7th Floor

Rentable Office Space
Collaborative Space (Co Working)
Quiet Spaces

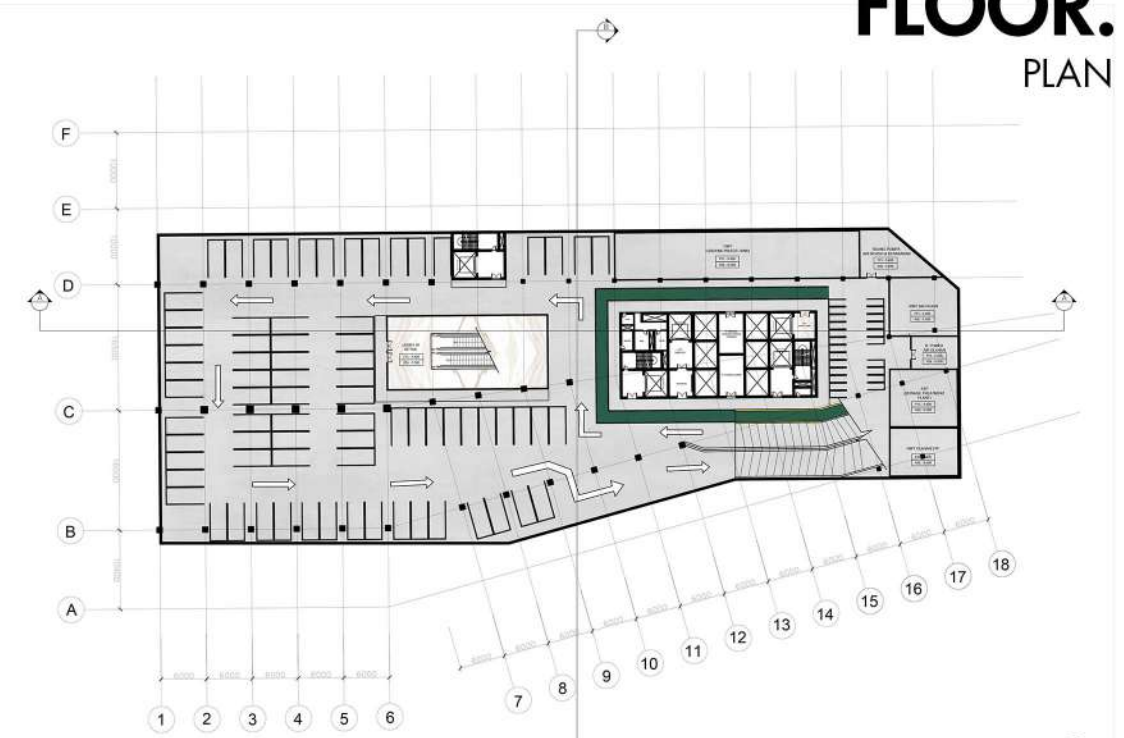
PODIUM
GF - 1st Floor

Office Lobby
Convention Hall
Retail Space

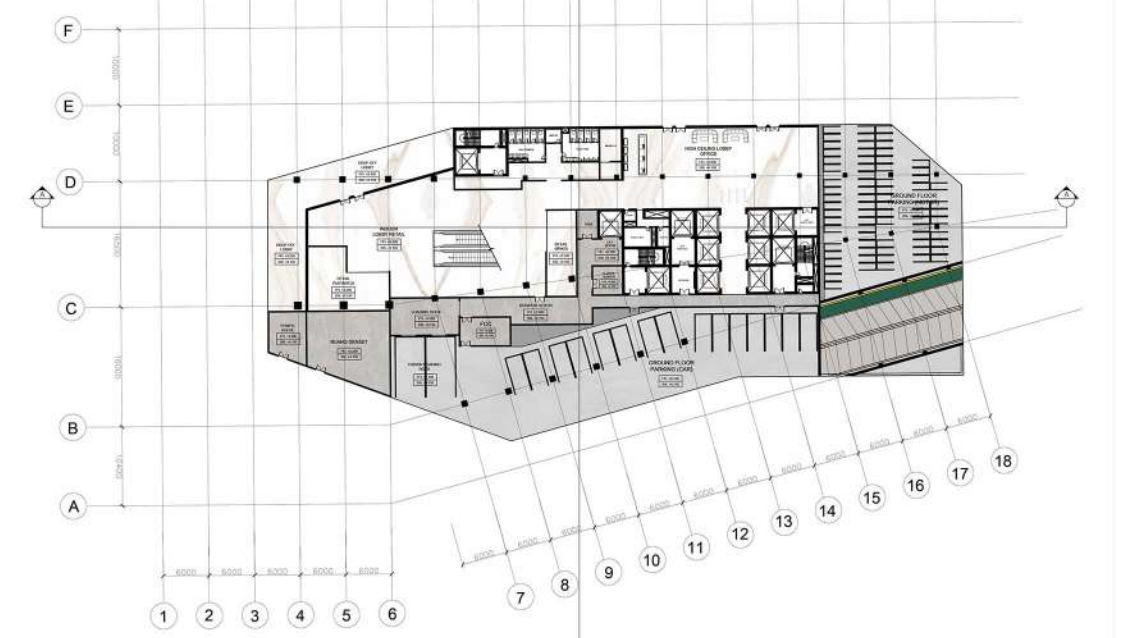
B1
Basement

Parking
MEP Area
Water Tank

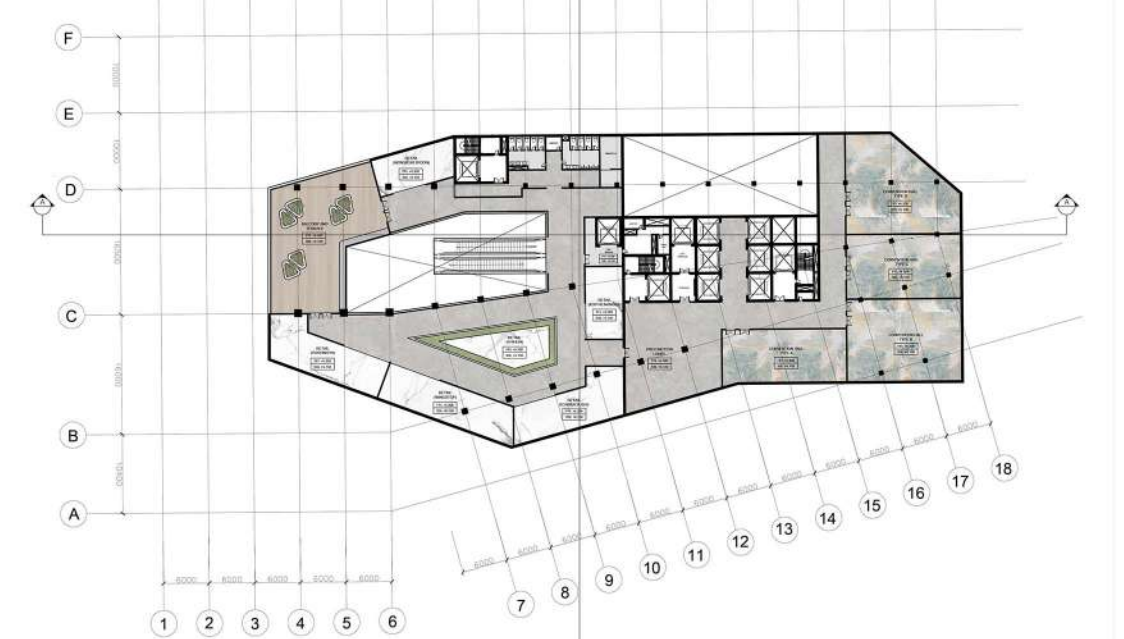
FLOOR.
PLAN



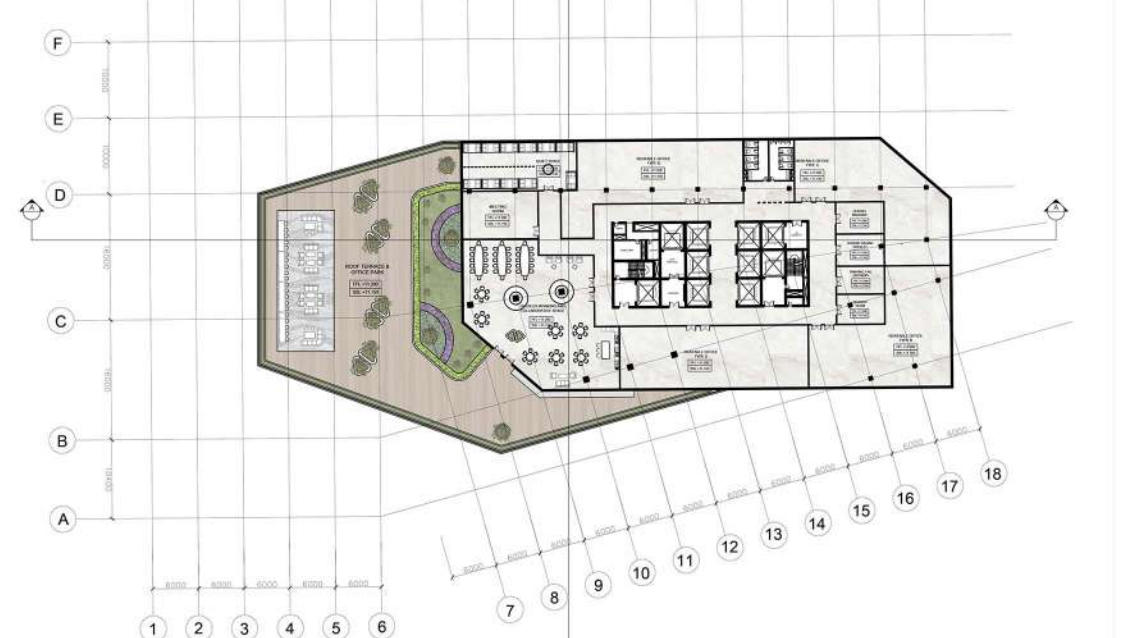
BASEMENT (B1)



GROUND FLOOR (GF)



1st FLOOR



2nd FLOOR



THE INTERIOR, 1) Office High Ceiling Lobby, 2) Open Co Working & Collaborative Space, 3) Rentable Office Space

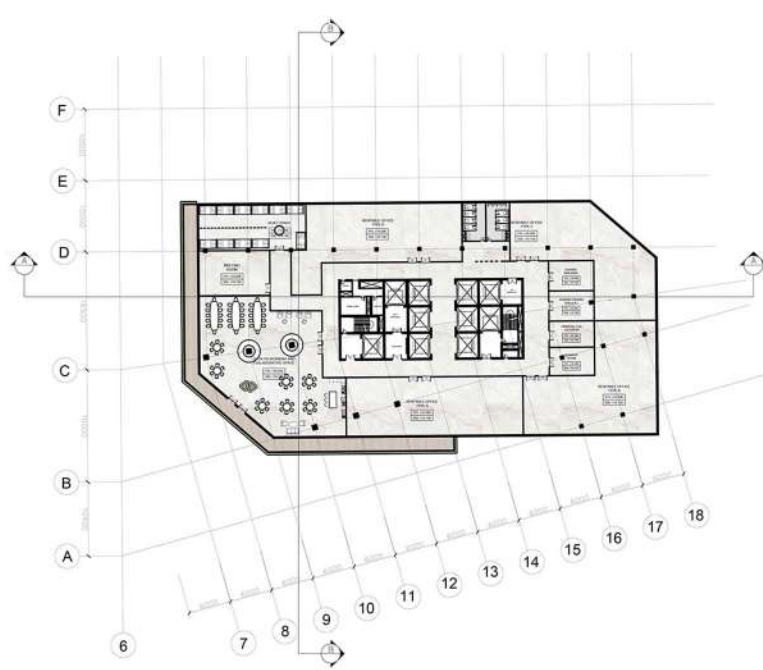


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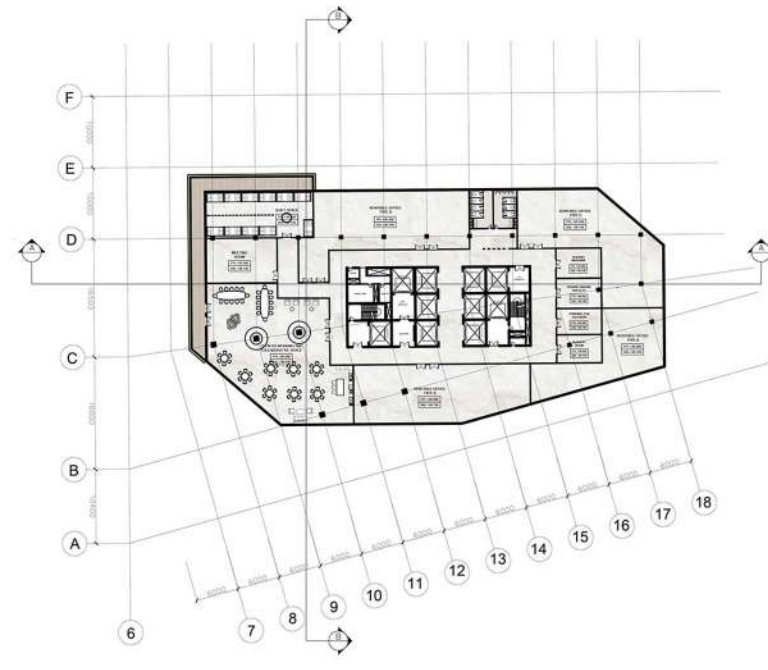
OASTRIC TOWER

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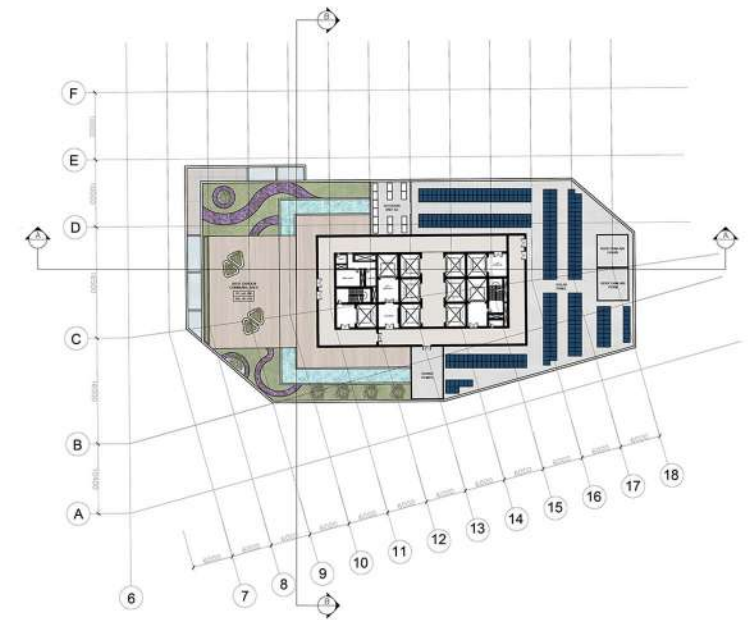
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3 - 6th FLOOR

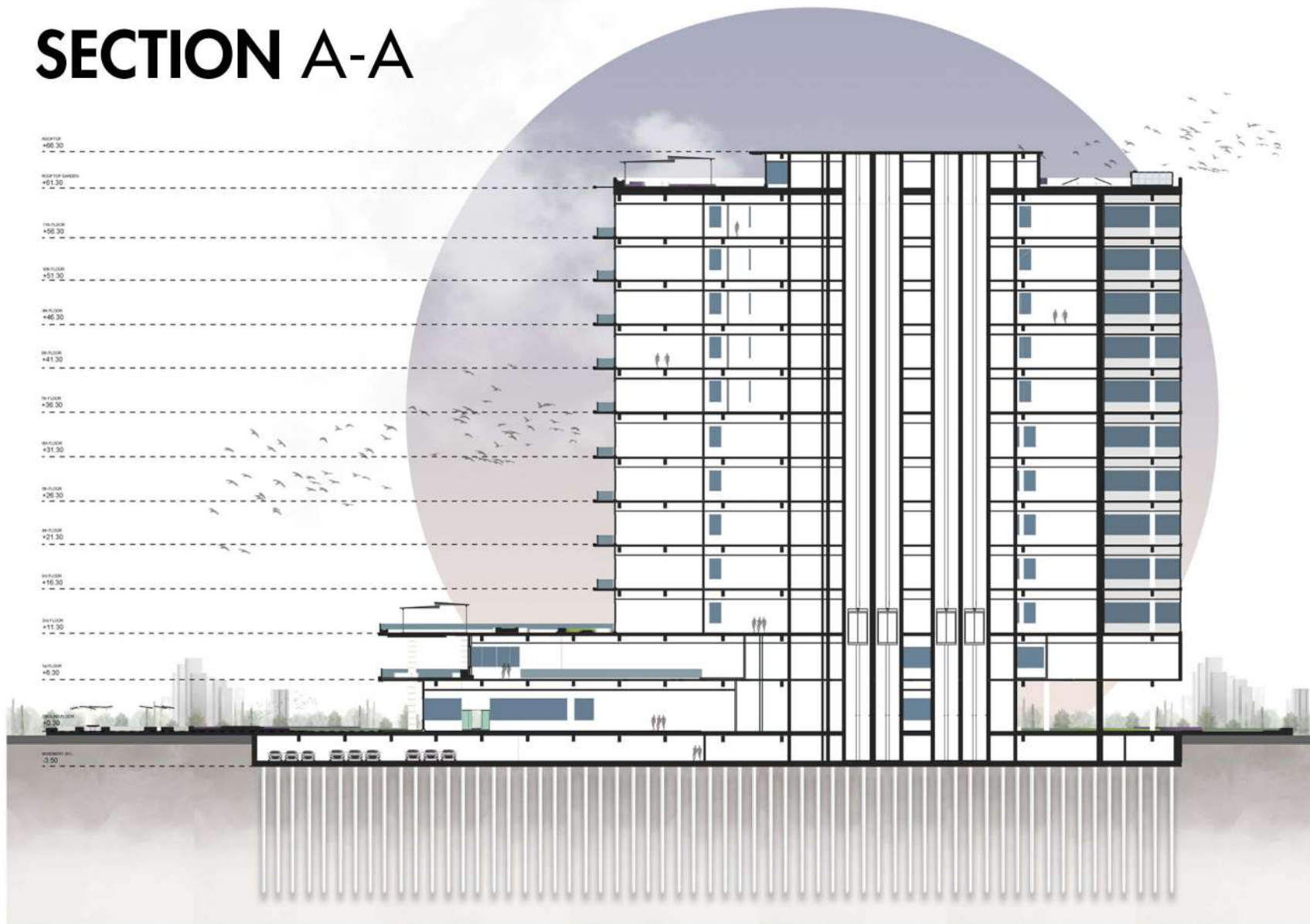


7 - 11th FLOOR



12th FLOOR

SECTION A-A



RIGHT ELEVATION



FRONT ELEVATION

SUSTAINABLE DESIGN. APPROACHMENT



English | Homepage | I Made Iwa...

Offices

OASTRIC TOWER | Rentable & Collaborative Workspace

DASHBOARD

PRELIMINARY

VERSION 2.1.5

FILE

SAVE

Total Subproject Floor Area
31,700.00 m²

Final Energy Use
144,019.74 kWh/Month

Final Water Use
2,257.81 m³/Month

Base Case Utility Cost
467,400.29 Thousand Rp/Month

Utility Cost Reduction
241,429.22 Thousand Rp/Month

Incremental Cost
7,480,480.15 Thousand Rp

Design | Energy 50.85% | Water 60.17% | Materials 47.08% | Operations

Offices

OASTRIC TOWER | Rentable & Collaborative Workspace

DASHBOARD

PRELIMINARY

VERSION 2.1.5

FILE

SAVE

Payback in Years
2.58 Yrs.

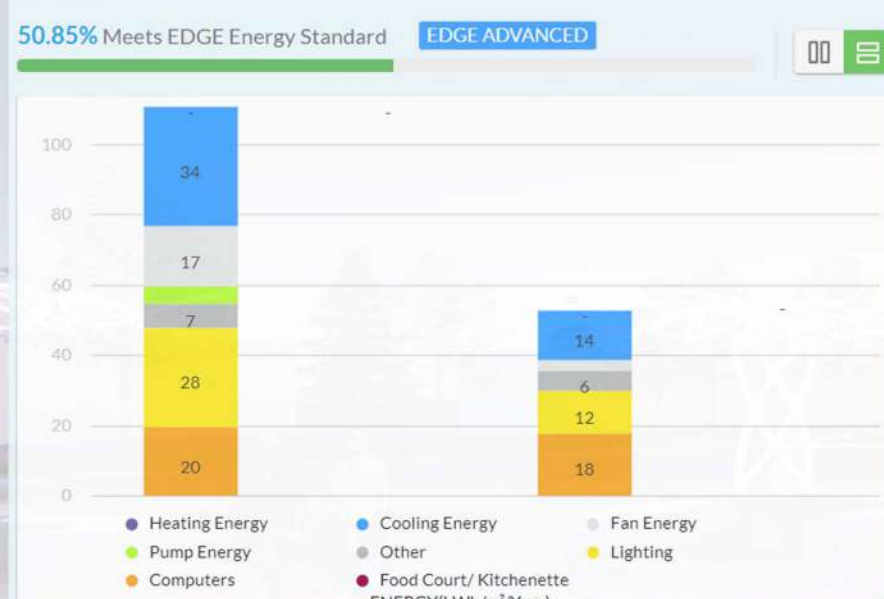
Operational CO₂ Savings
1,570.51 tCO₂/Year

Embodied Energy Savings
992.06 MJ/m²

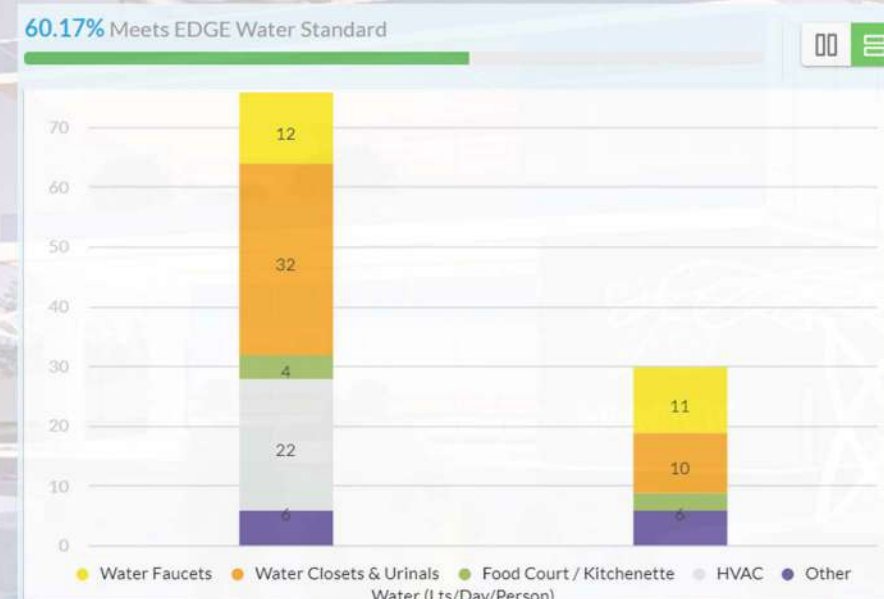
Energy Savings
1,787.85 MWh/Year

Water Savings
28,691.81 m³/Year

Carbon Emissions
1,518.20 tCO₂/Year



50.85% ENERGY EFFICIENCY



60.17% WATER CONSERVATION



47.08% EMBODIED MATERIAL



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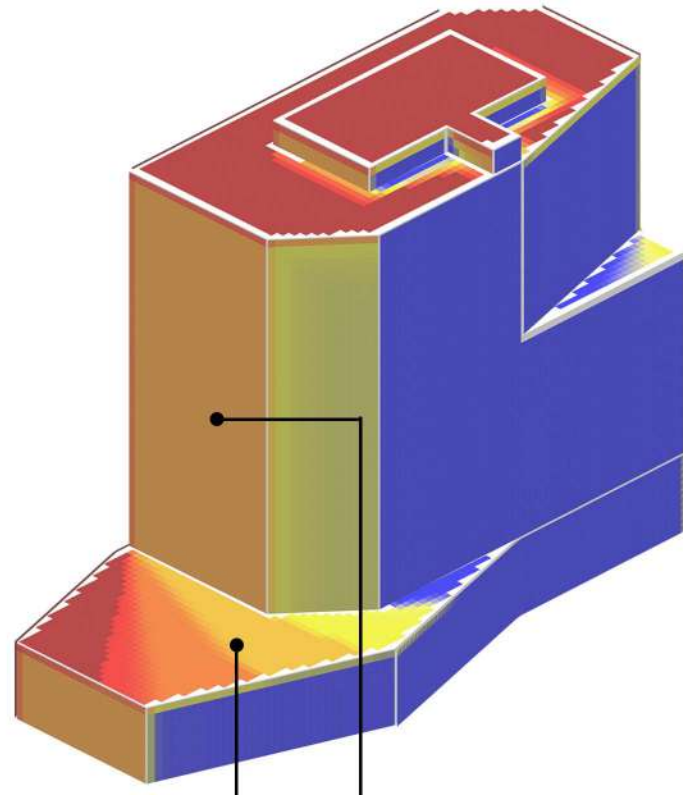
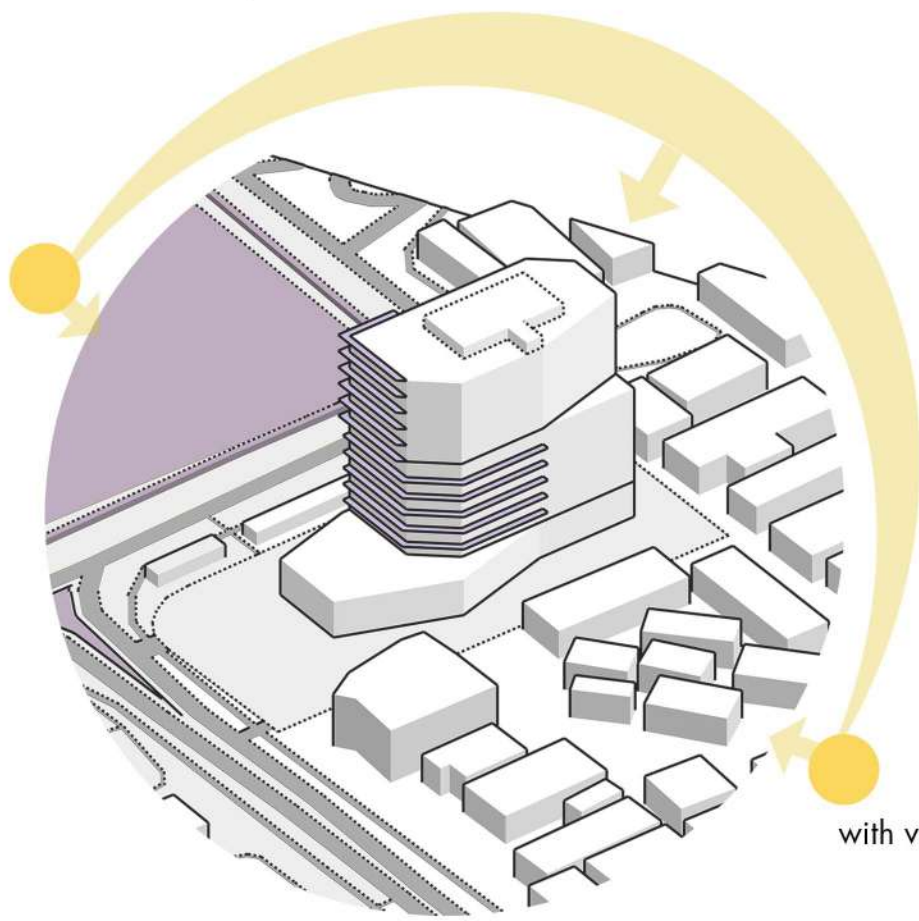
OASTRIC TOWER

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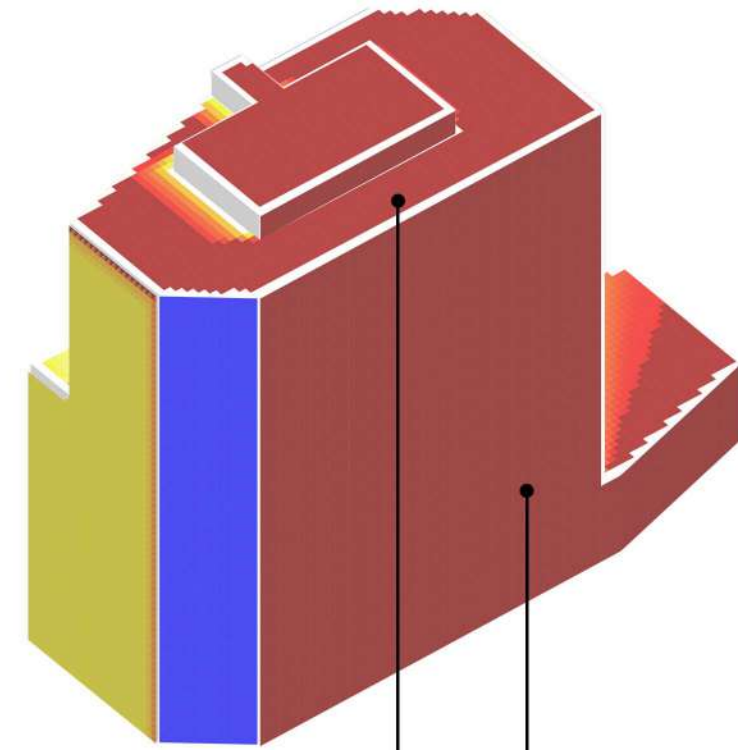
SUN.

SIMULATION | IMPLEMENTATION



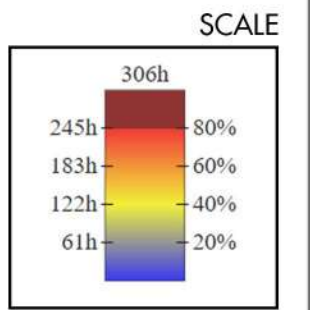
ROOF GARDEN
to reduce sun heat with vegetation coverage

SHADING
to avoid sunlight

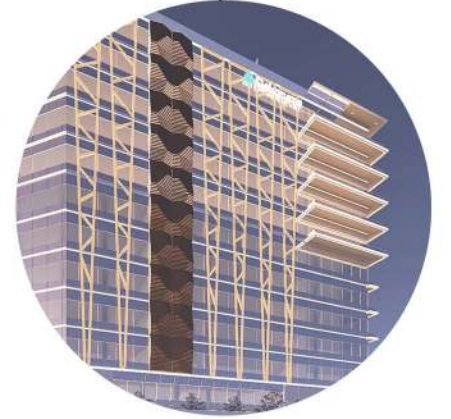


SOLAR PANEL
to provide renewable resources

SECONDARY SKIN
to filter sunlight



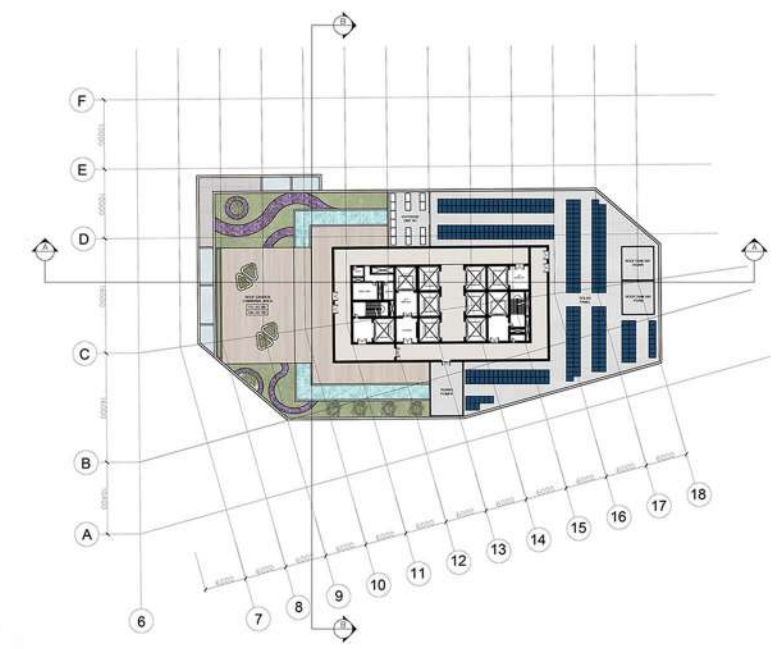
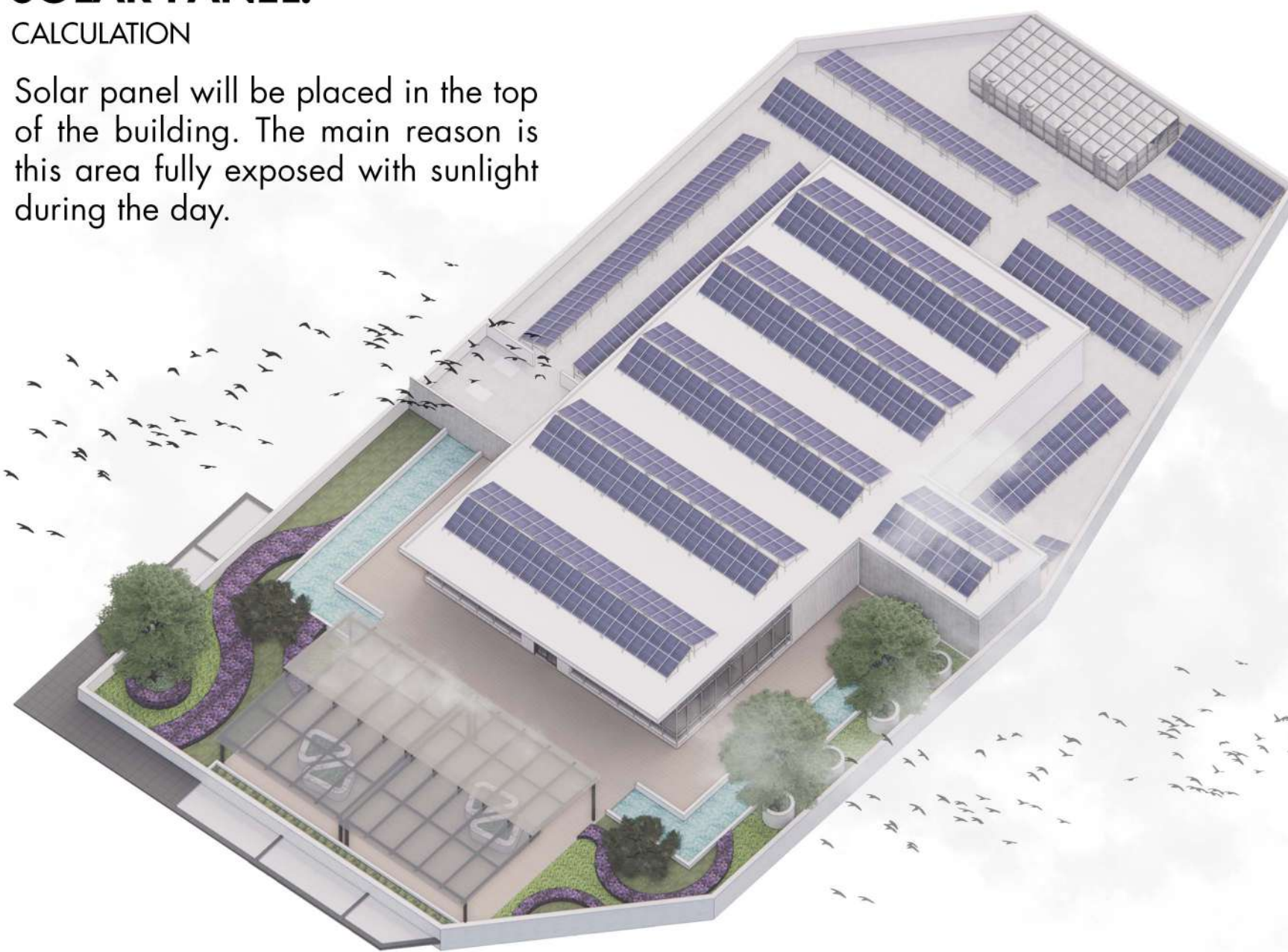
The site is in the tropic zone so it's provided by the sunlight all the time. Based on the sunlight simulation, **this building has two side that fully exposed by the sunlight** (rooftop and the east side of the building).



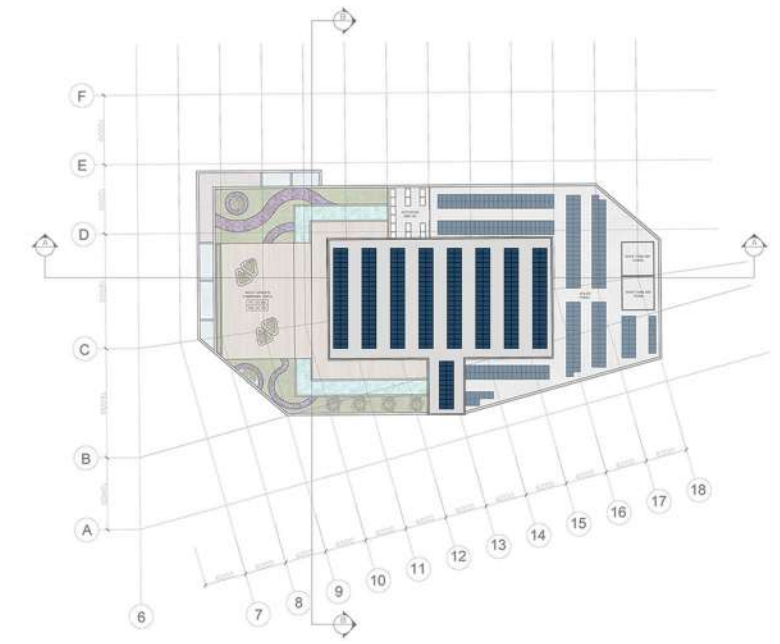
SOLAR PANEL.

CALCULATION

Solar panel will be placed in the top of the building. The main reason is this area fully exposed with sunlight during the day.



12th FLOOR
309 Solar Panel



ROOFTOP
356 Unit Solar Panel

✓ OFE30 Solar Photovoltaics - 4.975% of Total Energy Use	% of Ann...	4.975	Capacity...	66.5
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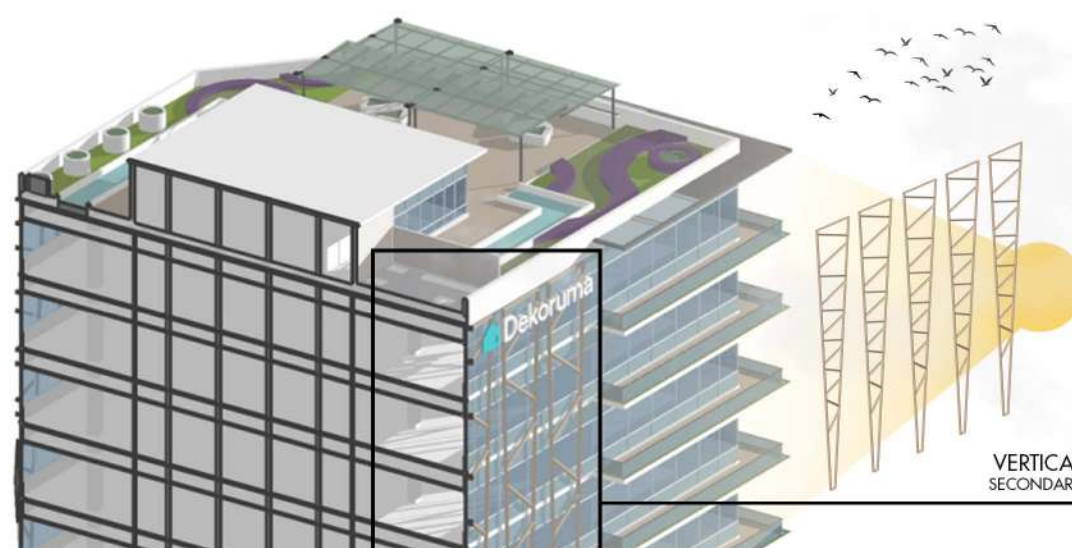
NO.	LOCATION	UNIT	CAPACITY (WP)	TOTAL (WP)	KWP
1	12th FLOOR	309	100	30900	30,9
2	ROOFTOP	356	100	35600	35,6
TOTAL		665	100	66500	66,5

The total amount of the solar panel that provided in this office is **665 Units** (each units has 100 WP capacity). The total capacity is **66.5 KWP** (covered **4,975% of total energy used** - based on the Edge Buildings Apps).

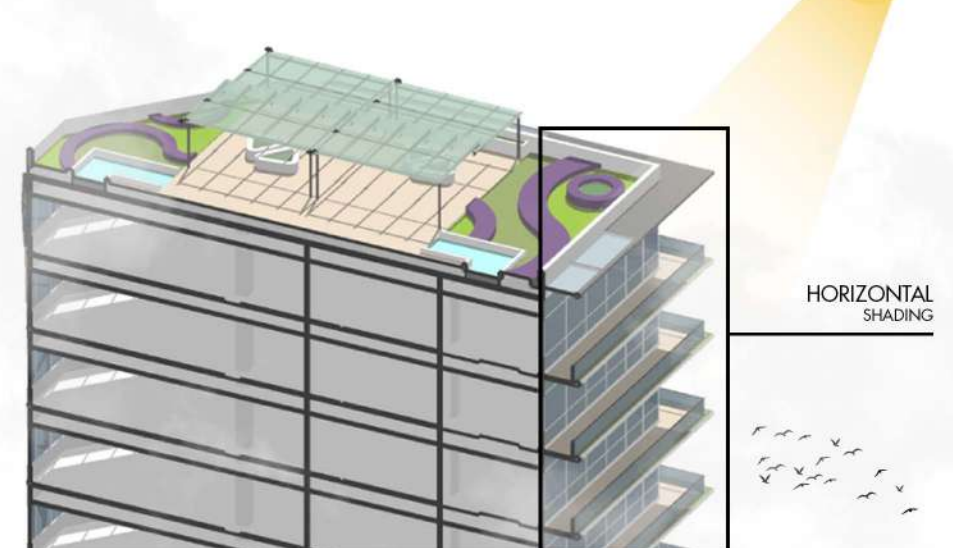
SHADING.

AND SECONDARY SKIN

This building has a two type of facade envelope, which vertical secondary skin and horizontal shading. Both of them is designed to filter and avoid sunlight.



VERTICAL SECONDARY



HORIZONTAL SHADING



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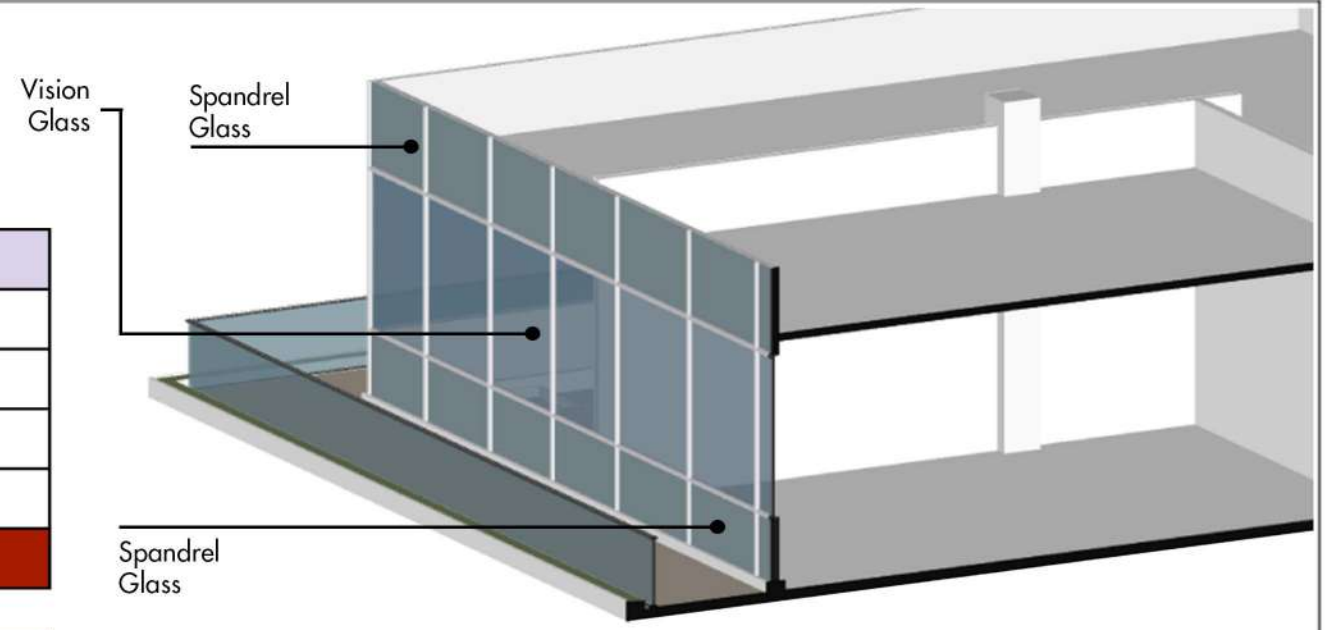
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WWR (Window to Wall Ratio)

CALCULATION

NO.	ORIENTATION	WINDOW AREA (m2)	WALL AREA (m2)	RATIO
1	Northeast	600,89	1397,22	43,01%
2	Northwest	1743,51	3744,6	46,56%
3	Southeast	1621,3	3374,5	48,05%
4	Southwest	501,15	1053,75	47,56%
TOTAL RATIO		4466,85	9570,07	46,68%

STOPRAY										
Type Of Stopray	Light Characteristic			Energy Characteristic				Solar Factor (%)	Shading Coefficient	U Value W/m ² K
	Transmittance (%)	Reflectance Out (%)	Reflectance In (%)	Transmittance (%)	Reflectance (%)	Absorption (%)	Ultra Violet Transmission (%)			
8mm Stopray (#2)+12mm AS+6mm Clear Glass										
VISION 31T	31	20	15	15	29	56	12	19	0.22	1.5



This building has a full glass facade look. However, there are 2 types of window that is used in the design:
 1. **Vision Glass** (for a building aperture)
 2. **Spandrel Glass** (for cover a solid material; wall panel).
 Both of the glass use Stopray Vision 31T 8 mm

LOW FLOW WATER

FIXTURE & SANITARY

Neo Modern

Single Hole Basin Mono
FFAS0706-1T1500BTO

Bathroom Sink : 3,5 L/min

American Standard

CS901KVT
Neorest
IDR 315,000,000

Neorest NX2
3.8/3 L Automatic Dual Flush
Remote Color: Brush Nickel
With Actilight

**Closest : 3,8 L/min (High Vol)
3 L / min (Low Vol)**

KOHLER

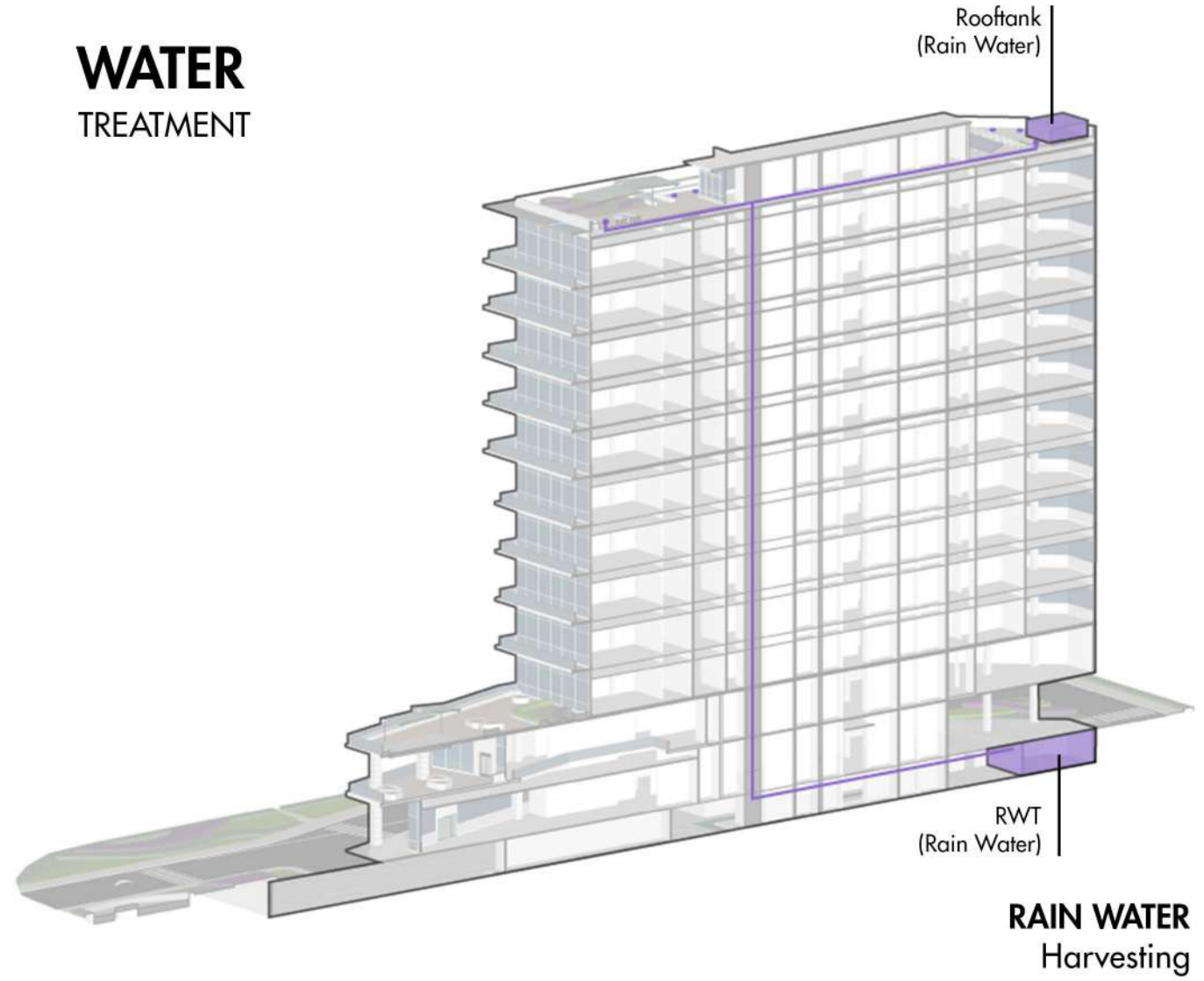
Winston Tap
Deck Mounted Kitchen Faucet
Mono (Cross Handle)
FFAST706-501500BFO

Kitchen Sink : 4,6 L/min

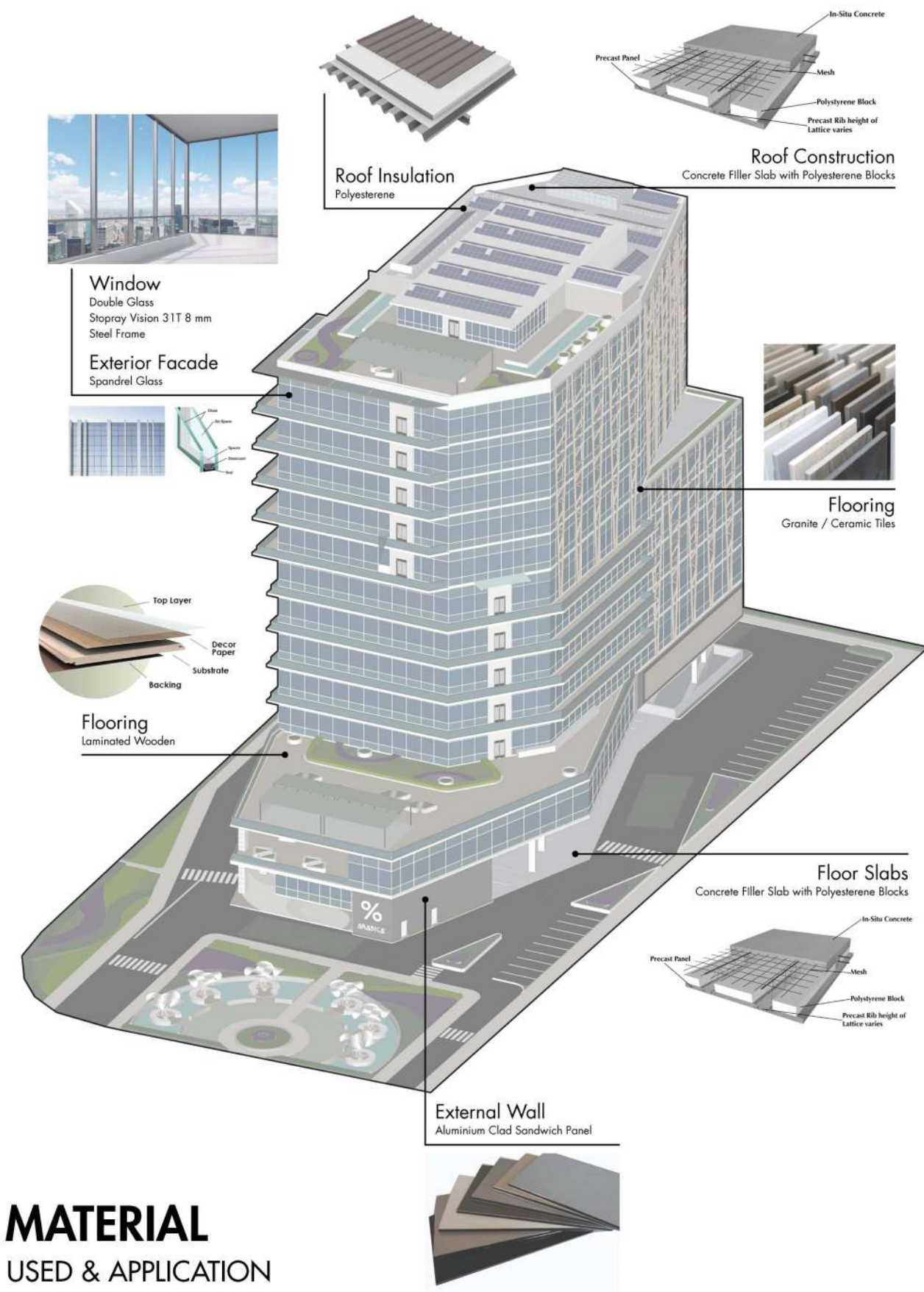
American Standard

Urinals : 3 L/min

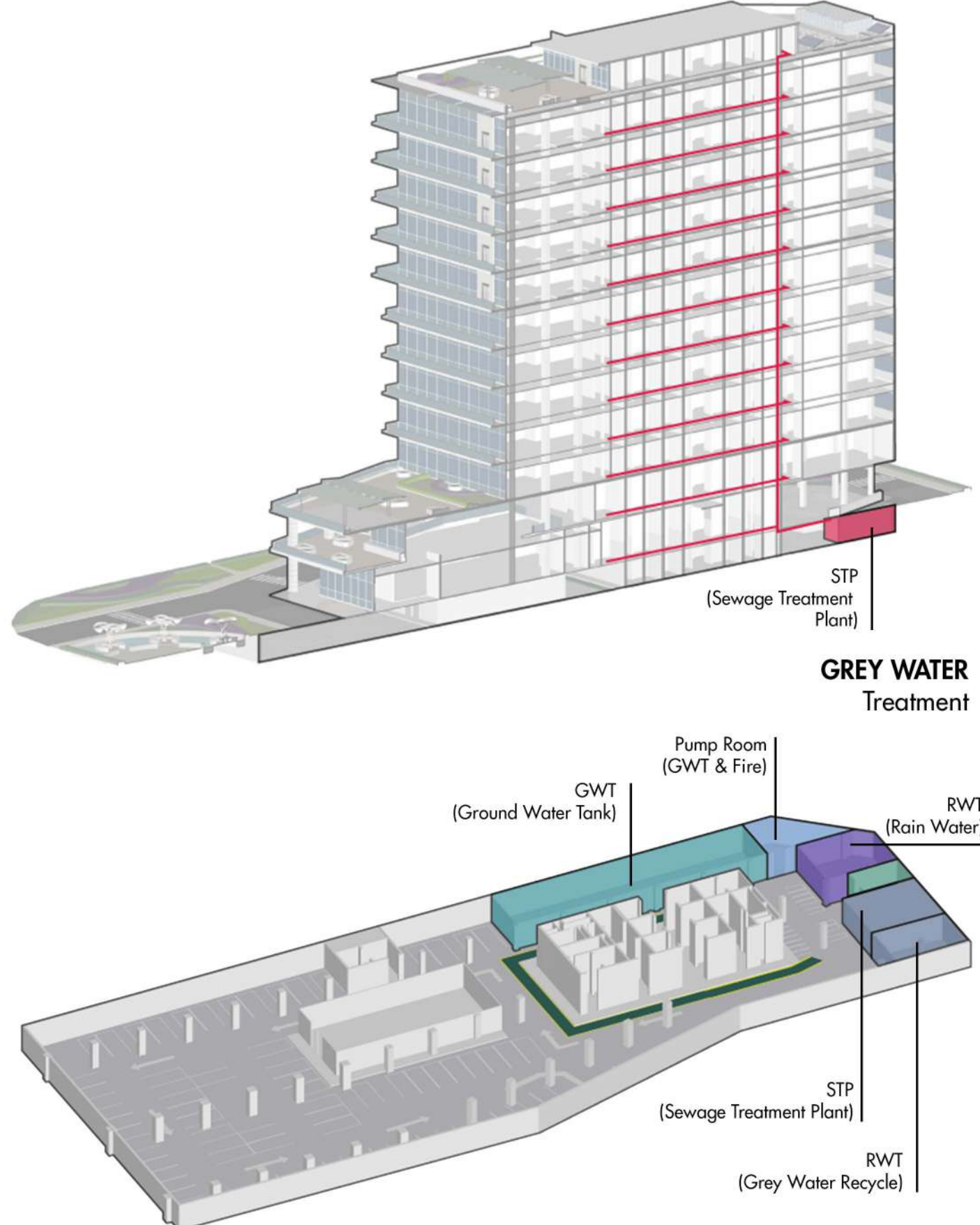
WATER TREATMENT



RAIN WATER Harvesting



MATERIAL USED & APPLICATION



GREY WATER Treatment



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