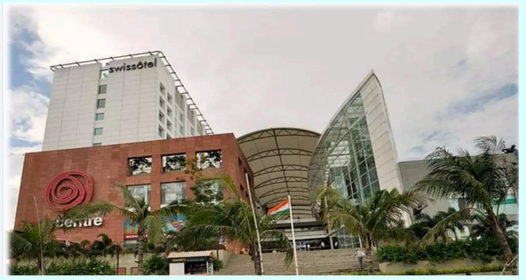
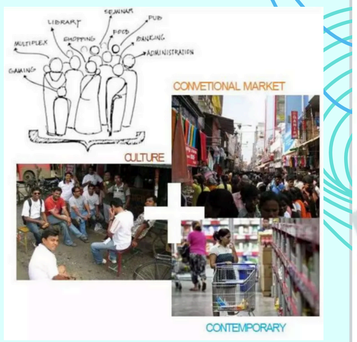
META ARCHITECTURE

CITY CENTRE, KOLKATA





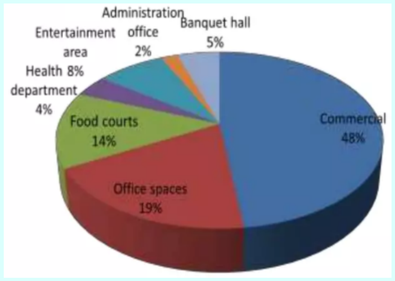
. To create a space which can form the node for holding and experiencing commercial,
cultural and social activities.

SITE SPECIFICATION:
ARCHITECT : CHARLES CORREA
CLIENT - KOKATA MUNICIPAL CORPORATION
LOCATION - DC BLOCK, SECTOR -1, SALT LAKE CITY
AREA - 10700M
VEGETATION - SHRUB COVER + TROPICAL TREES
TOPOGRAPHY - 45mASL / NO CONTOURS
CLIMATE - HOT AND HUMID

WHY KOLKATA ??
· Mixed use
· Essence of conventional Indian shopping markets
· Open, clustered planning
· Commercial + cultural + social aura
· Built form
· Public spaces and interrelationship of diverse activities.

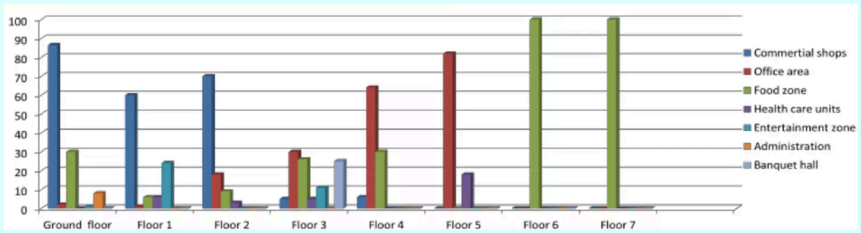
completion year : 2004
site area : 6.5 acre
builtup area : 50,400sqm

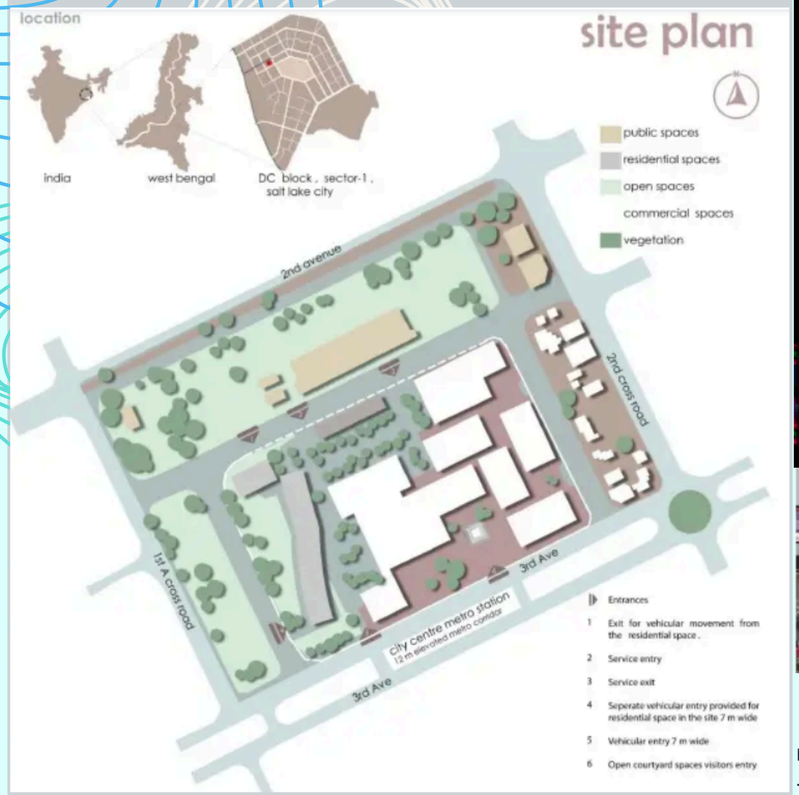
PROJECT COMPONENTS
· Retail(small store,kiosk and anchor shops)
. Foodcourt
. Specialty restaurants
. Banquets
· Residences
· Cineplex



STEPPED TERRACE:

- The non-air-conditioned market is in the form of a series of stepped-back terraces, so as to increase cross-ventilation.
- The air-conditioned shopping centre is organized around a central atrium- and anchored by the presence of two large Department Stores at either end.



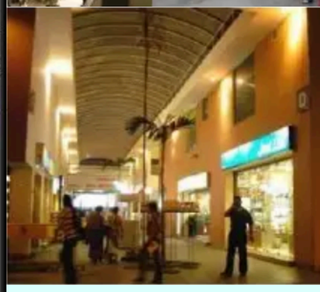


Orientation:
Southwest because the building is oriented in northeast drection predominant wind direction is from south side.
The kundspace is provided on the longer axis of the site to have maximum exposure to the road side.

BUILDING FACADE
The building facade is simple with not much ornamentation. Stepped terrace planning gives a sense of traditional Indian architecture.

MATERIAL STUDY
Commonly used materials such as concrete and steel are mostly used. Material of the pavement of mall resemble that of a street and is covered by polycarbonate sheet.

Openings on southwest and southeast direction is created to facilitate tunnel effect between blocks.

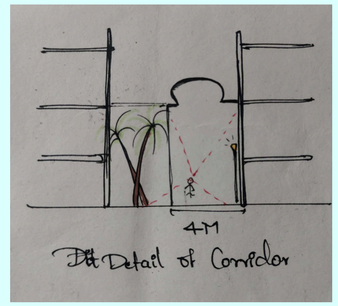


STREET SHOPPING

PUBLIC PLAZA

MINIMALIST APPROACH
. Clean and clear façade without any omamentation + Simple square opening deplctsfunction
. Implication of mild colors breaks monotony

KUND:
.Accessible from major intensity public region
.Provides physiological relief
.Breaks continues traffic movement
.Breaks monotony of heighted built space
Air gets reflected within the kund region from heighted built forms.



NAME : KRUPA T S
USN NO : 1AA21AT023
SEMESTER : 07 A
SUBJECT : AD 7
COLLEGE : ANRVSA

PERFORMATIVE ARCHITECTURE

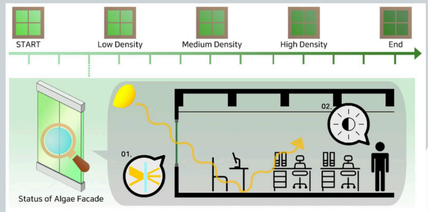
BIQ HOUSE, HAMBURG GERMANY

The “BIQ” is a cubic, five-storey passive house.

First algae bioreactor façade world-wide was realised in the frame of the International Building Exhibition (IBA) in Hamburg in 2012 and 2013.

This multi-storey residential building produces energy and regulating light and sun-shading.

- Architects: SPLITTERWERK
- Project: BIQ – Das Algenhaus – The Clever Treefrog
- Location: Am Inselpark 17, 21109 Hamburg, Germany
- Built-up Area: ca. 1600 sqm
- Start of construction: 2012
- Completion: 2013



This building combines various processes of regenerative energy production to create a sustainable circulation system:

- Solar heat
- Geothermal energy
- Biomass and a fuel cell

Together form three storable energy sources in the form of heat, electricity and biogas.
Moreover, the façade fulfils all functions expected of a conventional building cladding
It not only acts as a thermal and sound insulation, but also as a sun shield.

Using bio-chemical processes in the façade of a building to create shade and energy is a really innovative concept.

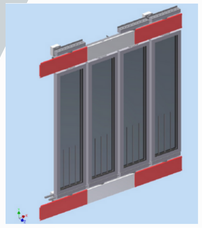
Property size: 839 sqm
Gross floor area: approx. 1,350 sqm
Sizes of units: 50 – 120 sqm

Four-storey residential building, which was launched as a part of the 2013 International Building Exhibition.

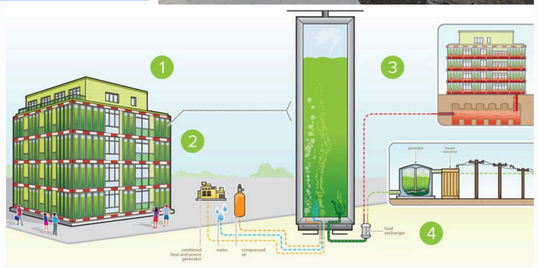
SolarLeaf-Louver Detail

The microalgae used in the facades are cultivated in flat panel glass bioreactors measuring 2,5m x 0,7m. In total, 129 bioreactors have been installed on the south west and south east faces of the four-storey residential building.

The heart of the system is the fully automated energy management centre where solar thermal heat and algae are harvested in a closed loop to be stored and used to generate hot water.

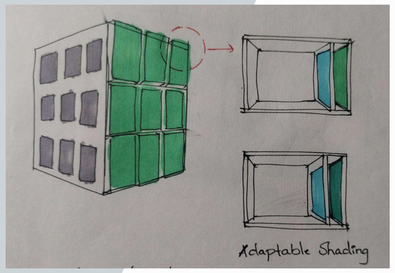


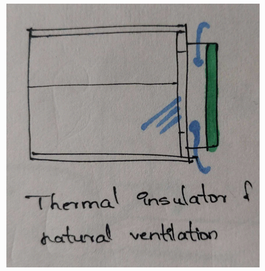
BIQ - The World´s first Solar Leaf-Building in Hamburg, Germany with 200 m2 of active SolarLeaf area; South-east elevation

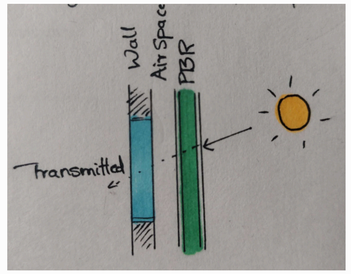


Bioreactor façades – are positioned on the southwest and southeast sides of the building. These are used for growing algae – for energy production, but also for controlling light and shade in the building.
Due to the steady growth of algae, each façade is constantly moving and changing its colour.

The greenness of the façade, called SolarLeaf, shows that the algae are breaking down the carbon dioxide and processing it through photosynthesis. This renewable form of energy production is thus, visible from outside the building, and is an intentional part of the architectural concept.



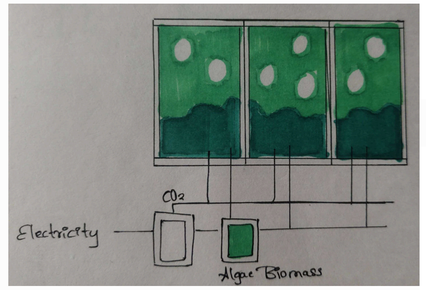


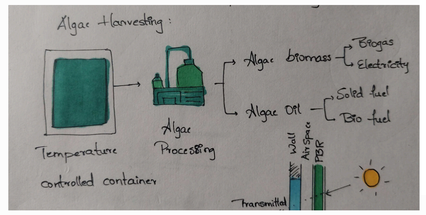


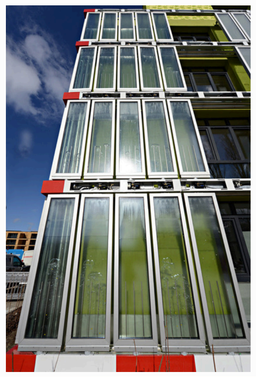
The two-layer façade system consists, in the first, inner layer, of a plaster-insulated heating system with greendyed mineral plaster.
The second, outer layer is positioned as an independent bioreactor façade, on the southeast and southwest sides of the first layer.
Due to the seasonally varying coloration of the bioreactors – depending on the activity, there are changes in the transparency and thus the incidence of light through the façade elements.

Opposite the two dynamic façades on the sun side stand the two shadow-side façades, with green-coloured plaster. These façades are uniform and are having small window openings

A bioreactor façade consists of 129 reactor modules, called photobioreactors (PBRs), 70 cm wide, 270 cm high and 8 cm thick, arranged in groups. The PBRs are mounted on a steel frame that is simultaneously used for wiring. The PBRs are filled with water (culture medium), in which microalgae are cultivated. As a nutrient, CO2 is added to the culture. The CO2 converts the growing algae to biomass.



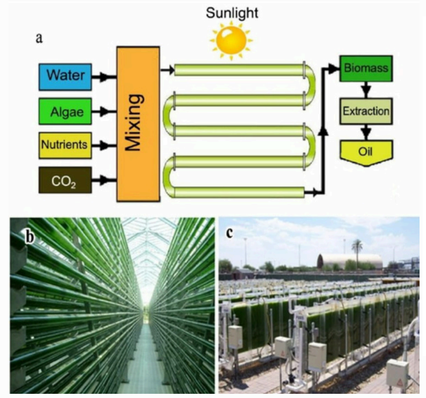


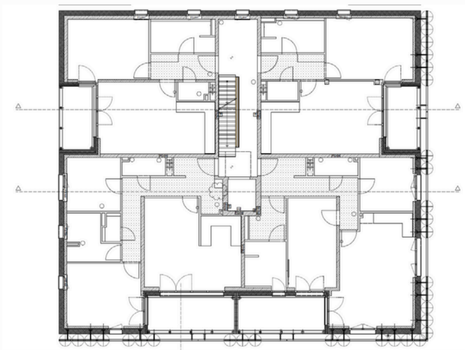


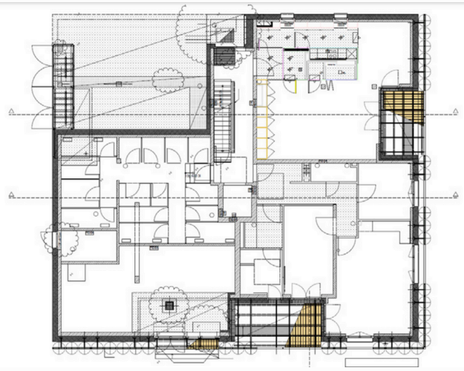
AirLift-System bubbles rising in the Solar Leaf Louvers"

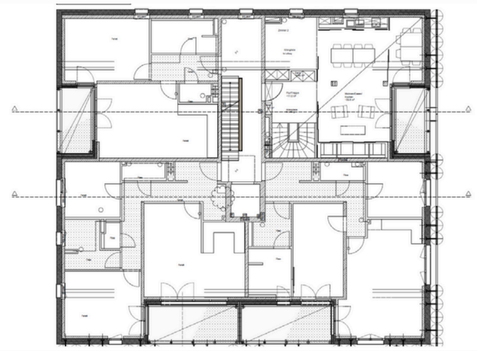
A balconies on the south side of the building offer residents an unobstructed view of greenery and the opportunity

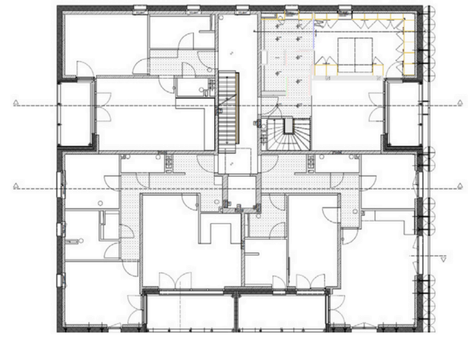
SolarLeaf-Louver viewed from Backside with hidden Horizontal Support System











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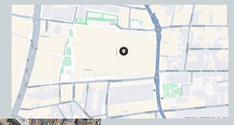
INTERNATIONAL CASE STUDY ON RETAIL PLACEMAKING

BISHOP SQUARE, LONDON

Bishops Square is a versatile, open-air public space set at the entrance to the bustling Spitalfields Market



Bishops Square, Spitalfields, E1 6AD

- Year: 2007
- Program: Public spaces
- Client: Corporation of London
- Project Team:Foster and Partners,
- Area: 10 ha (24,7 acres)

- Bishops Square is part of a regeneration programme for Spitalfields in London.
- The site comprises 1.6 hectares of public open space that includes two new squares, restored historic streets, pedestrian routes and Spitalfields Market.
- The aim was to create a place that met the aspirations of the local residential and business communities allowing the market and retail elements to develop and provide a new city destination.

- Bishops Square development transforms Lamb Street into a new public space with retail and food kiosks.
- Reimagines Market Street as a vibrant new shopping street, and creates Bishops Square Gardens with new landscaping and street furniture.

LAMB STREET

- The two-storey building complements.
- Mix of independent retailers and market traders operating in Bishops Square and the wider area.
- Smaller retail and food kiosks are located on the ground floor, along an existing service ramp.
- The kiosks are fitted with fully glazed fronts - which provide maximum transparency to animate the street - and contain fully built-in kitchens for tenants to move into.

- Carefully sited areas of verdant planting with semi-mature trees, herbaceous planting and wildlife area are integrated with communal seating.
- Large reflective water lily pool, which together with granite bench seating provide a place for contemplation and relaxation in the heart of the city.

Pool and the planting humanise the landscape

- A larger unit, on the level above, can be accessed via a double-height entrance space at one end of the building.
- The structure responds to its immediate surroundings, with warmer natural materials cladding the northern façade that faces Elder Gardens.

Bird view

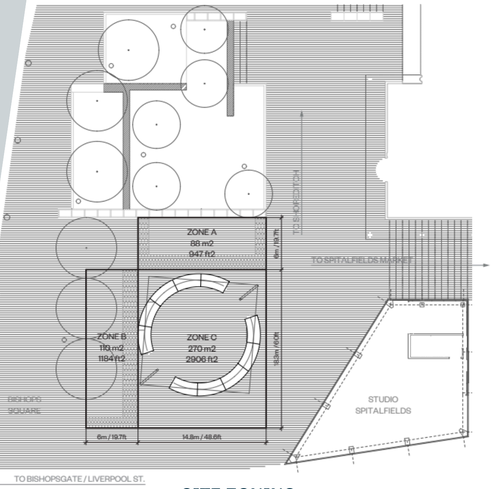
MARKET STREET

The glazed public open space has a warmer climate

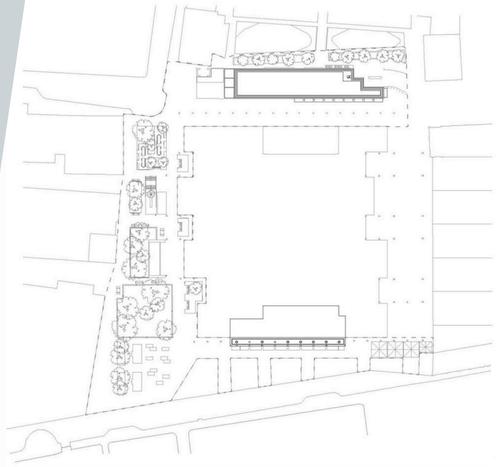
- Market Street is reimagined as a vibrant new shopping street that is open to the elements. Shop frontages have been extended outwards, beyond the existing colonnade, narrowing the street and creating a more intimate shopping experience.
- To enhance visual interest on the street and break up uniformity, a selection of facade configurations were designed and offered to tenants, to reflect the individual retailer's specific needs.

Occupying an area of 21m x 25m, the space is divided into three zones that can be hired individually, combined, or hired exclusively
Total usable area: 470 m2 / 5060 ft2 :

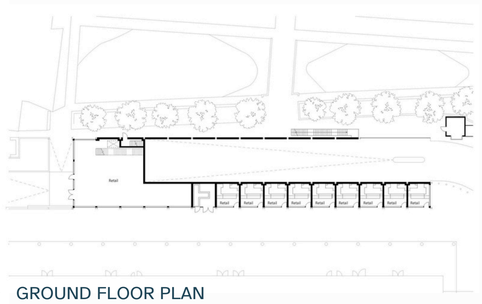
- Zone A - 88 m2 / 947 ft2
- Zone B - 110 m / 1184 ft2
- Zone C - 270 m2 / 2906 ft2



SITE ZONING



SITE PLAN



GROUND FLOOR PLAN

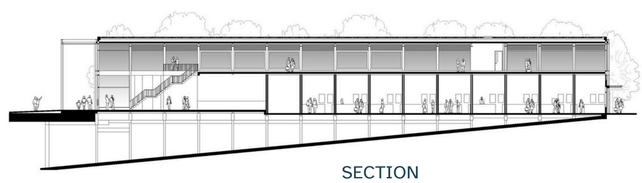
NORTH ELEVATION

BISHOPS SQUARE GARDENS

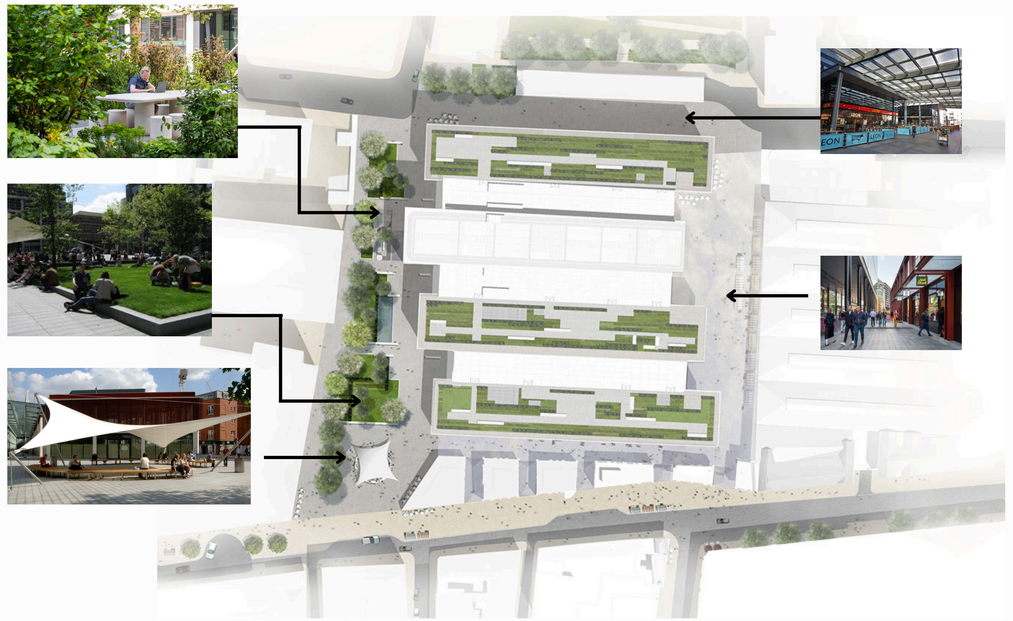
- The Adaptive Plaza serves as a gateway to the heart of Bishops Square.
- It is a flexible outdoor space that incorporates tiered pyramid seating for informal gatherings or community events.
- Modular timber benches can be moved easily and placed in different locations to facilitate performances, temporary exhibitions and screenings.
- The benches provide additional seating or can be pushed together to create a stage.

Modular timber benches

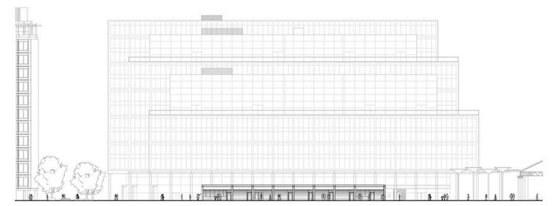
The canopy makes the space more comfortable for users



SECTION



MASTER PLAN



SOUTH ELEVATION

NAME : KRUPA T S
USN NO : 1AA21AT023
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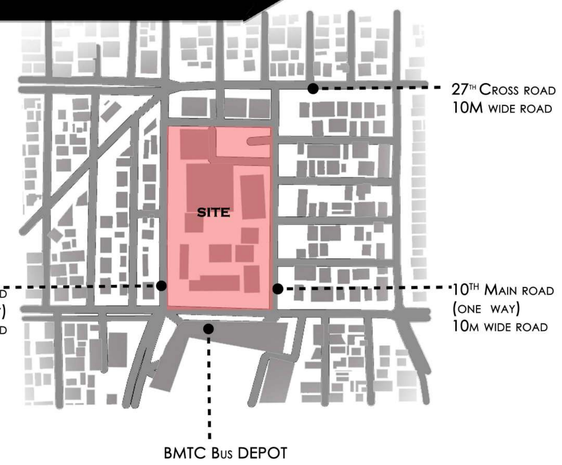
COLLEGE : ANRVSA

FACADE DESIGN

LOCATION: BDA COMPLEX, JAYNAGARA 4TH BLOCK



PROXIMITY

JAYANAGARA 4TH BLOCK IN BENGALURU IS WELL-CONNECTED AND CLOSE TO SEVERAL KEY LOCATIONS.
IT'S NEAR MAJOR ROADS LIKE JAYANAGARA MAIN ROAD AND ASHOKA NAGAR, MAKING IT EASY TO ACCESS THE CITY CENTER.
PUBLIC TRANSPORT OPTIONS, INCLUDING BUSES AND THE METRO, ARE CONVENIENT FOR COMMUTING.

1. BMTC BUS DEPOT JAYNAGAR : 10M
2. JAYANAGARA METRO STATION : 500M
3. KSR BENGALURU RAILWAY STATION : 6.4 KM
4. KEMPEGOWD INTERNATIONAL AIRPORT : 38.8KM

MAJOR LAND MARKS
1. METRO STATIONS
2. BUS DEPOT
3. BDA COMPLEX

SITE AREA: 19,245.16 SQM (4.75 ACERS)

TRAFFIC MOVEMENT AND SITE CONTEXT

1. TWO WAY MAIN ROAD 18M
2. ONE WAY MAIN ROAD 10M
3. INTERNAL ROADS 5M
4. NODES

EVERY ROAD HAS IST OWN PATHWAYS DEDICATED TO PEDESTRIANS

LAND USE ON THE BOUNDRIES ODF SITE

1. MIXED USE
2. LARGE SHOPES
3. SMALL SHOPES

THE NEIGHBOUR OF THE SITE IS SOURROUNDED BY COMERCIAL, RESEDENTIAL AND MIXED USE BUILDINGS

DEMOGRAFIC STUDY

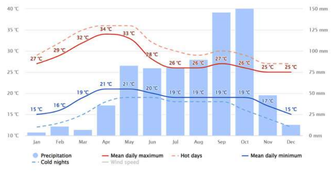
JAYANAGAR HAS A DIVERSE AGE DISTRIBUTION, WITH A SIGNIFICANT NUMBER OF FAMILIES, WORKING PROFESSIONALS, AND RETIREES. THIS MAKES THE NEIGHBORHOOD MORE FAMILY-ORIENTED COMPARED TO MORE COMMERCIAL OR TECH-CENTRIC AREAS OF BENGALURU.
THE AREA IS HOME TO A VARIETY OF AGE GROUPS, INCLUDING A LARGE NUMBER OF ELDERLY RESIDENTS AND YOUNG PROFESSIONALS.

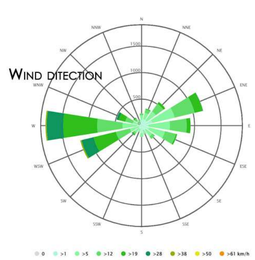
JAYANAGAR IS KNOWN FOR ITS MIDDLE TO UPPER-MIDDLE-CLASS POPULATION. MANY RESIDENTS ARE PROFESSIONALS, BUSINESSMEN, AND RETIRED INDIVIDUALS.
THE PRESENCE OF ESTABLISHED EDUCATIONAL INSTITUTIONS, HEALTHCARE FACILITIES, AND COMMERCIAL HUBS MAKES IT AN ATTRACTIVE AREA FOR BOTH RESIDENTS AND BUSINESSES.

THE LOCALITY IS HOME TO NUMEROUS RETAIL OUTLETS, SHOPS, AND LOCAL MARKETS. JAYANAGAR 4TH BLOCK IS PARTICULARLY WELL-KNOWN FOR ITS SHOPPING AREAS, WHICH OFFER A RANGE OF PRODUCTS FROM GROCERIES TO TRADITIONAL WEAR.
THERE IS A GROWING PRESENCE OF CAFES, RESTAURANTS, AND TECH-ORIENTED BUSINESSES DUE TO ITS PROXIMITY TO THE CITY CENTER AND ESTABLISHED URBAN INFRASTRUCTURE.

CLIMATE ANALYSIS

TROPICAL WET AND DRY CLIMATE
THE TEMPERATURE IN JAYANAGAR REMAINS FAIRLY CONSISTENT THROUGHOUT THE YEAR, WITH AVERAGE DAILY TEMPERATURES TYPICALLY RANGING FROM 15°C (59°F) IN THE WINTER TO 35°C (95°F) IN THE SUMMER.
THE AREA EXPERIENCES MODERATE TO HIGH HUMIDITY, ESPECIALLY DURING THE MONSOON SEASON.





CHARCTERISTICS OF SITE (BDA COMPLEX)

THE BDA COMPLEX IN JAYANAGAR 4TH BLOCK IS A BUSTLING COMMERCIAL AND RESIDENTIAL HUB WITH EXCELLENT INFRASTRUCTURE, GOOD CONNECTIVITY, AND A MIX OF MODERN AND TRADITIONAL ELEMENTS. IT PROVIDES A BALANCED ENVIRONMENT FOR LIVING AND WORKING, WITH EASY ACCESS TO SHOPPING, DINING, AND RECREATIONAL FACILITIES, MAKING IT ONE OF THE MOST SOUGHT-AFTER AREAS IN BENGALURU. ITS PROXIMITY TO VARIOUS URBAN AMENITIES, GREEN SPACES, AND CULTURAL ACTIVITIES ENHANCES THE OVERALL APPEAL OF THE COMPLEX.

CURRENT USE AND VIEWS OF SITE

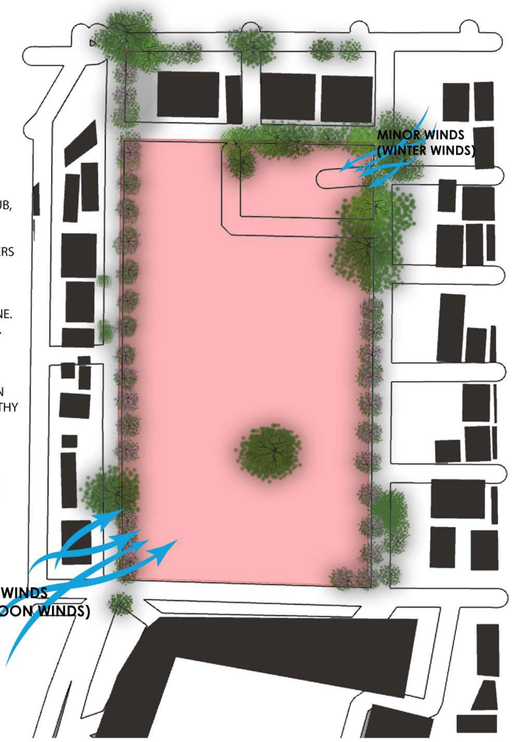
VEGETATION AND NATURAL FEATURE OF SITE

VEGETATION
1.
2.
3.
4.
5.
6.

SENCE
TRAFFIC NOISE: SINCE BDA COMPLEX IS A COMMERCIAL HUB, TRAFFIC SOUNDS ARE SIGNIFICANT. CARS, BUSES, RICKSHAWS, AND TWO-WHEELERS ALL CONTRIBUTE TO NOISE POLLUTION IN THIS AREA.
SMELL
1.STREET FOOD & LOCAL CUISINE.
2.POLLUTION & URBAN SMELLS.
3.INCENSE & RELIGIOUS FRAGRANCES.
4. GREENERY AND TREES: THE PRESENCE OF TREES AND GREEN SPACES CAN BRING FRESH, EARTHY SMELLS, ESPECIALLY AFTER RAINFALL

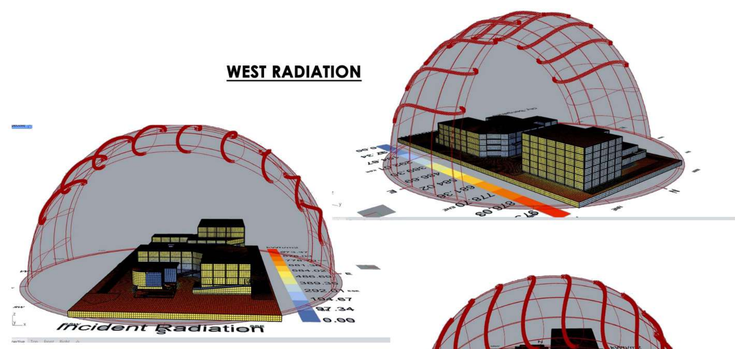
WIND DIRECTION
1.MAJOR WINDS (MANSON WINDS) FROM SOUTH WEST

2.MINOR WINDS (WINTER WINDS) NORTH EAST

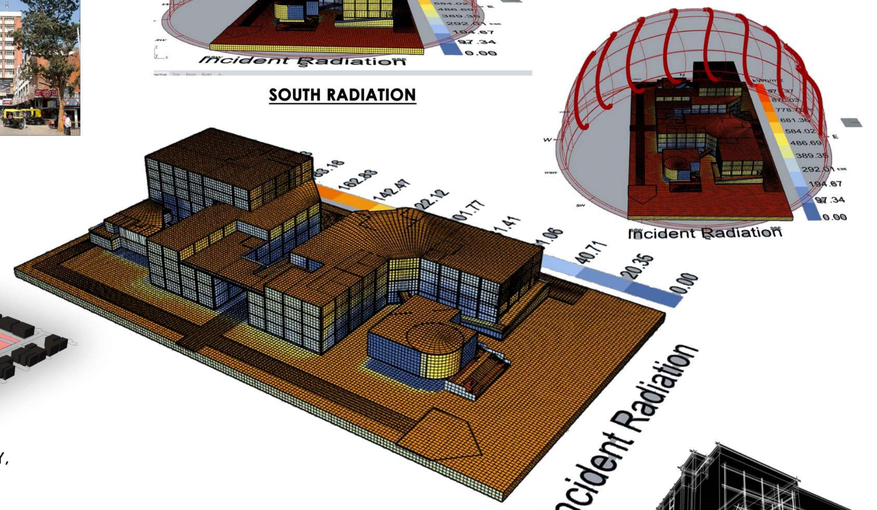


SUN RADIATION ANALYSIS ACCORDING TO MASSING

WEST RADIATION



SOUTH RADIATION

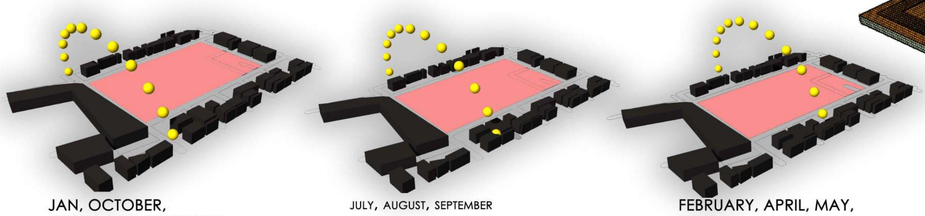


SWOT ANALYSIS

STRENGTHES
1. ACCESSIBILITY TO TRANSPORTATION, MARKETS, AND COMMUNITY FACILITIES.
2.BENGALURU HAS A MODERATE TROPICAL CLIMATE WITH MILD SUMMERS, COOLER WINTERS, AND A MONSOON SEASON.
3.BDA COMPLEX IS LOCATED NEAR COMMERCIAL AND RESIDENTIAL HUBS

OPPORUNITIES
1. JAYNAGARA 4TH BLOCK IS SITUATED IN A PRIME AREA, WITH EXCELLENT CONNECTIVITY TO OTHER PARTS OF BENGALURU, INCLUDING PROMINENT COMMERCIAL AND RESIDENTIAL HUBS.
2. BEING NEAR RESIDENTIAL AREAS AND EDUCATIONAL INSTITUTIONS PROVIDES AN OPPORTUNITY TO CATER TO BOTH LOCAL RESIDENTS AND PROFESSIONALS, MAKING IT AN IDEAL SPOT FOR RETAIL STORES, SHOWROOMS, CO-WORKING SPACES, AND RESTAURANTS.
3.THE BUSTLING AREA IS IDEAL FOR DESIGNING SPACES FOR RESTAURANTS, CAFES, AND EATERIES. THE INCREASING TREND OF DINING OUT, ALONG WITH THE DEMAND FOR VARIETY IN FOOD SERVICES, OFFERS A LUCRATIVE MARKET FOR F&B BUSINESSES.

SUN PATH ANALYSIS

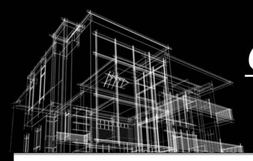


JAN, OCTOBER, NOVEMBER, DECEMBER

JULY, AUGUST, SEPTEMBER

FEBRUARY, APRIL, MAY, JUNE

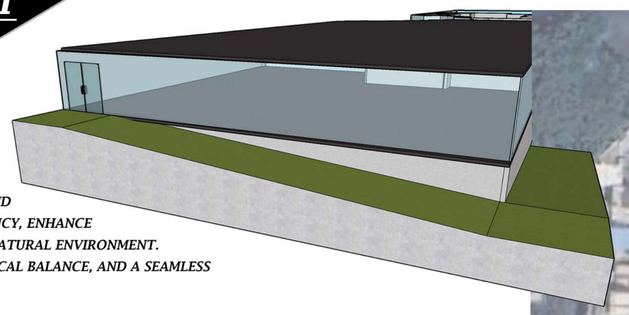
NAME : KRUPA T S USN NO : 1AA21AT023



CONCEPT, ZONING, AREA STATEMENT

CONCEPT :

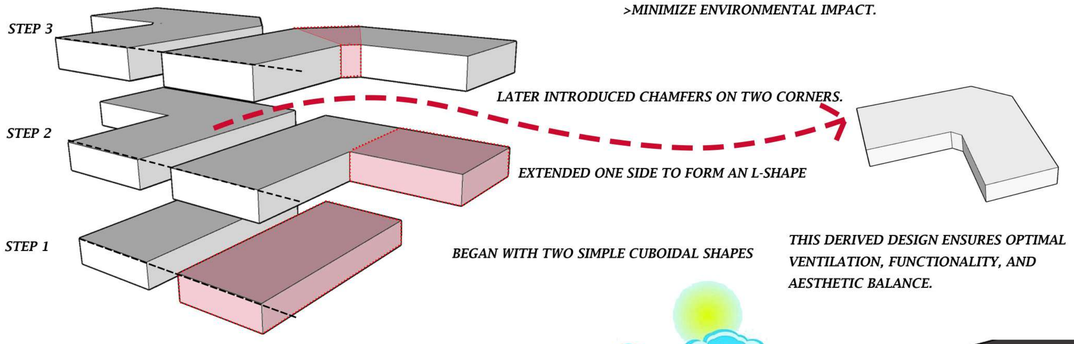
ECO-ARCHITECTURE



>IN MY DESIGN, ECO-ARCHITECTURE INTEGRATES SUSTAINABLE FEATURES LIKE BIOMIMETIC FACADES, GREEN RAMPS AND GREEN ROOFS TO OPTIMIZE ENERGY EFFICIENCY, ENHANCE BIODIVERSITY, AND HARMONIZE WITH THE NATURAL ENVIRONMENT.

>IT PROMOTES ENERGY EFFICIENCY, ECOLOGICAL BALANCE, AND A SEAMLESS CONNECTION WITH THE SURROUNDINGS.

>MINIMIZE ENVIRONMENTAL IMPACT.

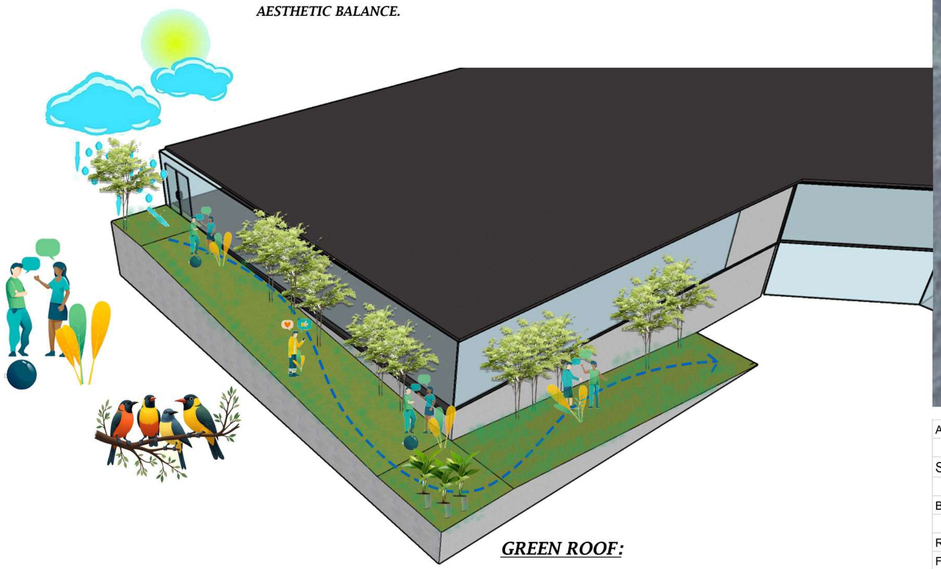


THIS DERIVED DESIGN ENSURES OPTIMAL VENTILATION, FUNCTIONALITY, AND AESTHETIC BALANCE.

GREEN RAMP

COMBINES FUNCTIONAL PATHWAYS WITH INTEGRATED GREENERY.
CREATING A SUSTAINABLE ARCHITECTURAL ELEMENT.
ENHANCES ACCESSIBILITY WHILE REDUCING HEAT ABSORPTION.
ADD VISUAL INTEREST WITH VEGETATION AND SOIL ON GREEN RAMPS.
ENHANCE THE OVERALL AMBIANCE.

FORM DERIVATION :



RAINWATER MANAGEMENT: THESE STRUCTURES ABSORB AND SLOW DOWN RAINWATER RUNOFF, REDUCING FLOODING AND EASING THE LOAD ON DRAINAGE SYSTEMS.

COMMUNITY ENGAGEMENT: GREEN RAMPS IN PUBLIC SPACES ENCOURAGE INTERACTION, PROMOTING A SENSE OF COMMUNITY AND ENVIRONMENTAL AWARENESS.

HABITAT CREATION: GREEN RAMPS PROVIDE HABITATS FOR BIRDS, INSECTS, AND OTHER SMALL WILDLIFE, INCREASING URBAN BIODIVERSITY.

USER EXPERIENCE: THEY CREATE MORE ENJOYABLE PATHWAYS, MERGING FUNCTIONALITY WITH THE CALMING EFFECTS OF NATURE

AIR QUALITY IMPROVEMENT: THE VEGETATION ON GREEN RAMPS ABSORBS POLLUTANTS AND RELEASES OXYGEN, CONTRIBUTING TO BETTER AIR QUALITY.

GREEN STAIRS:

INTEGRATES VEGETATION INTO STAIRCASES, ENHANCING BOTH THEIR FUNCTIONALITY AND ENVIRONMENTAL IMPACT.

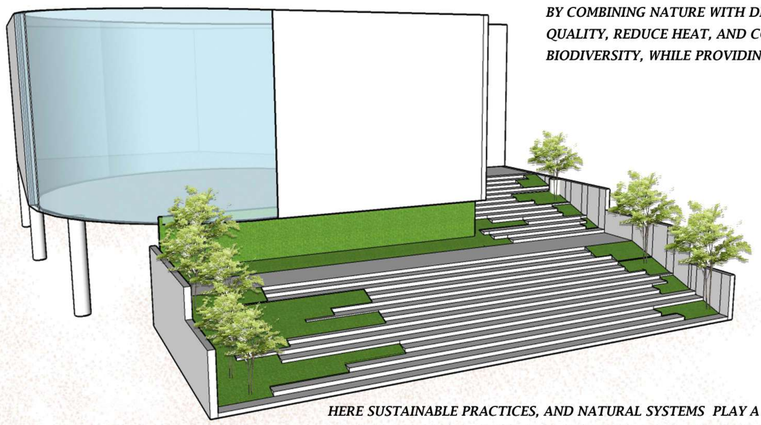
BY COMBINING NATURE WITH DESIGN, THEY IMPROVE AIR QUALITY, REDUCE HEAT, AND CONTRIBUTE TO URBAN BIODIVERSITY, WHILE PROVIDING A VISUALLY APPEALING.

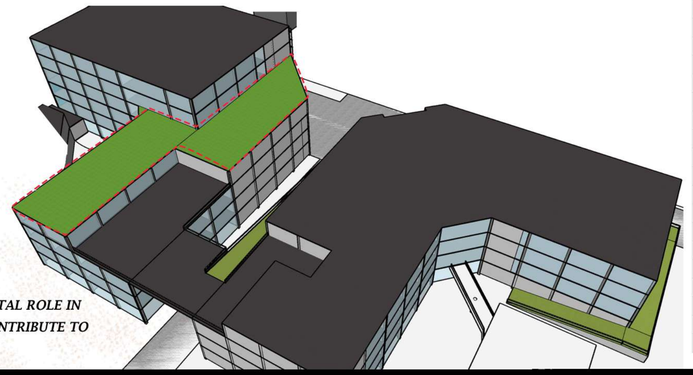
GREEN ROOF:

VEGETATION IS PLANTED ON THE ROOF OF A BUILDING.

IT SERVES MULTIPLE ENVIRONMENTAL BENEFITS

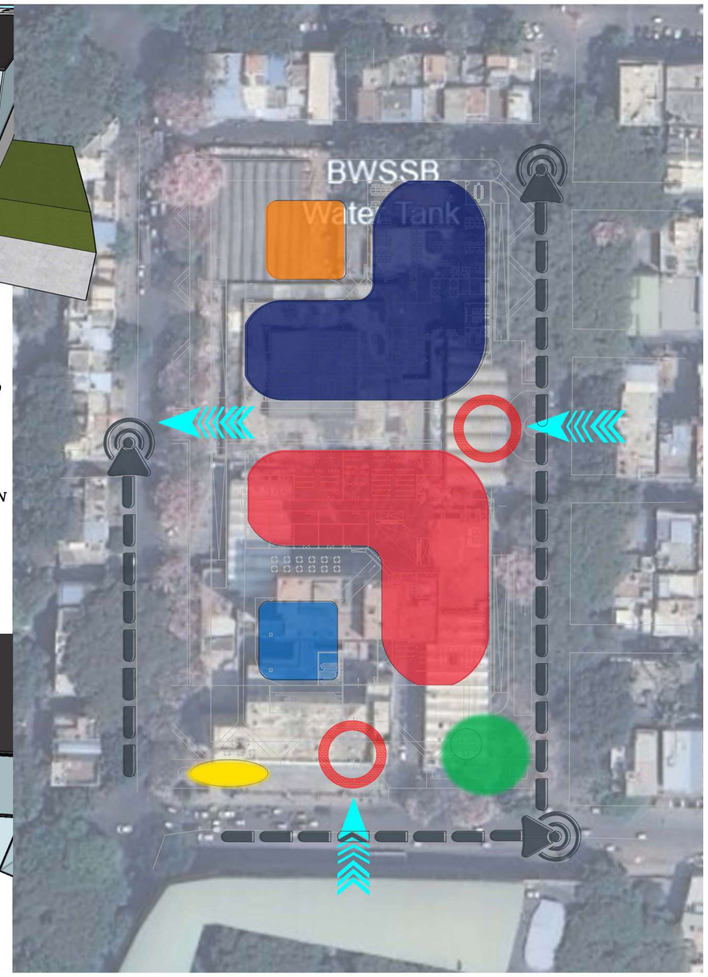
INCLUDING REDUCING ENERGY CONSUMPTION BY:
IMPROVING INSULATION
MANAGING STORMWATER BY ABSORBING RAINWATER
MITIGATING THE URBAN HEAT ISLAND EFFECT.





HERE SUSTAINABLE PRACTICES, AND NATURAL SYSTEMS PLAY A VITAL ROLE IN ENABLING BUILDING THAT IS NOT JUST FUNCTIONAL BUT ALSO CONTRIBUTE TO THE REGENERATION OF OUR ECOSYSTEMS.

ZONING:



LEGEND :

- OFFICE
- RETAIL
- COMMUNITY CLUB
- ART GALLERY
- STREET VENDOR
- SEATING SPACE

AREA STATEMENT :

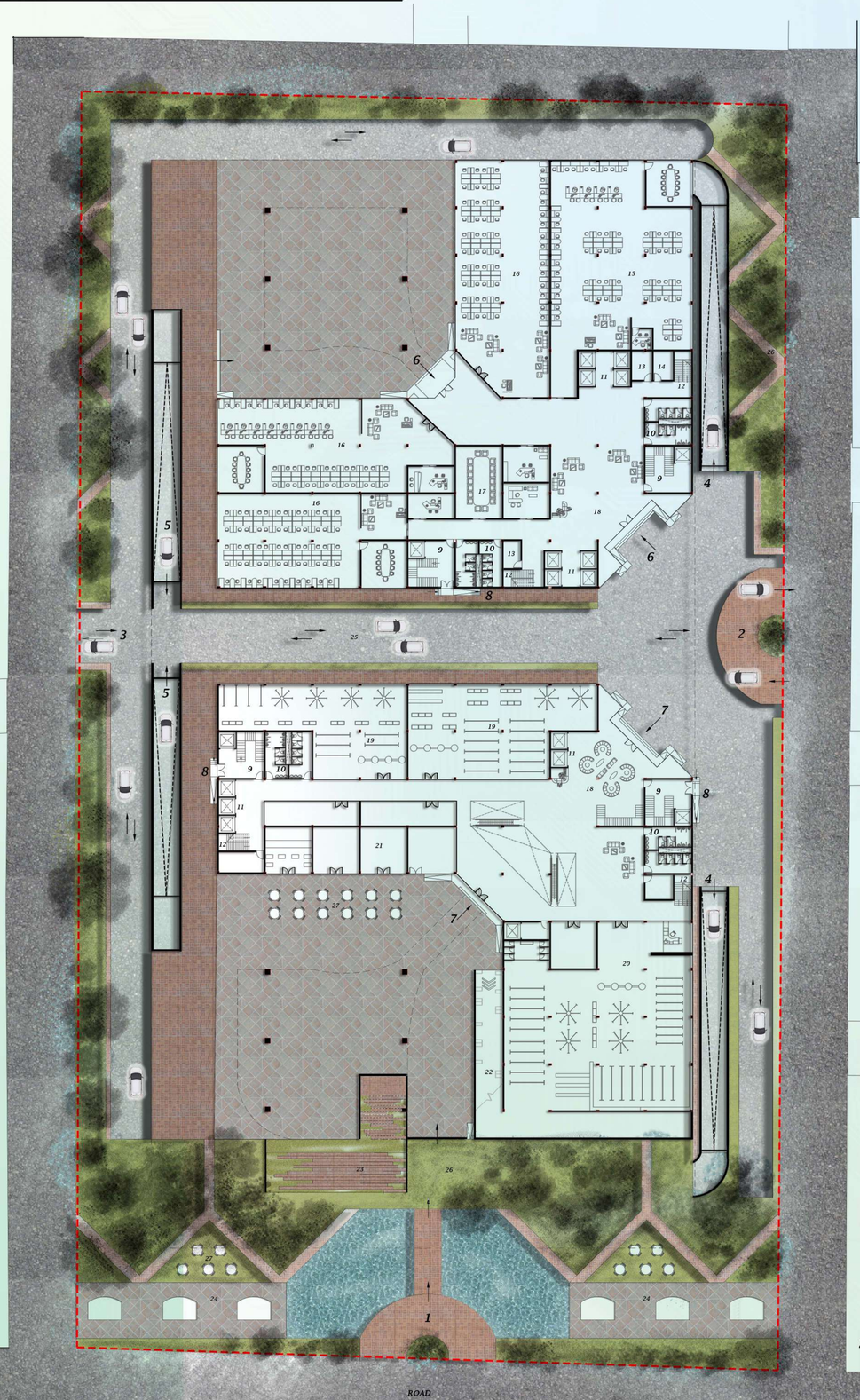
BUILT-UP AREA		36108 SQM
SPACES	PERCENTAGE	AREA
Retail	25%	9027 SQM
F and B	10%	3610 SQM
Office	50%	18054 SQM
Other	15%	5416 SQM
GROUND COVERAGE	50%	2256.7 SQM
Retail	25%	902.7 SQM
F and B	10%	3610 SQM
Office	50%	18054 SQM
Other	15%	5416 SQM
Parking		

AREA STATEMENT

Spaces	Percentage	Area	Area per unit	Units	Standard area	GROUND COVERAGE	NO.OF FLOORS
Built up area		36108sqm				9027sqm	
Retail Shops	30%		10832.4sqm	1		2708sqm	5
F and B Shops	10%		3610.8sqm			902.7sqm	
Office	45%		16248.6sqm	1		4062.15sqm	6
Other	15%		5416.2sqm			1354.05sqm	2
Parking							
RETAIL							
Anchor stores	10%	1083.2sqm	1083.2sqm	1	1200sqm - 2000sqm		
Large stores	15%	1625sqm	812.4sqm	2	500sqm - 1200sqm		
Medium stores	30%	3250sqm	406.2sqm	8	200sqm - 500sqm		
Small stores	15%	1625sqm	90.3sqm	18	20sqm - 80sqm		
Circulation	30%	3250sqm					
F AND B SPACES							
Restaurant	45%	1624.86sqm	812sqm	2	400sqm - 800sqm		
Kitchen	40%		324sqm	1			
Cafe	35%	1263.78sqm	180sqm	7	50sqm - 250sqm		
Kitchen	40%		72sqm	1			
Kiosk	20%	722.16sqm	40.11sqm	18	10sqm - 40sqm		
OFFICE							
Govt office	15%	2437.29sqm	610sqm	4			
Co-working spaces	15%	2437.29sqm	1625sqm	2			
Rentable office spaces	45%	7311.87sqm	530sqm	20			
Circulation	25%	4062.15sqm					
OTHER							
Artist studios and temporary galleries	50%	2500sqm					
Studio	40%	1000sqm	1000sqm	1			
Gallery	60%	1500sqm	1500sqm	1			
Healthcare	50%	2916.2sqm		1			

NAME : KRUPA T S USN NO : 1AA21AT023

SITE PLAN, MASTER PLAN



SITE PLAN
SCALE - 1:500

MASTER PLAN
SCALE - 1:750

LOCATION :

BDA COMPLEX, 4TH BLOCK,
JAYANAGAR, BENGALURU,
KARNATAKA, 560041

LEGENDS:

A - ART GALLERY

B - RETAIL

C - RESTAURANT

D - OFFICE

E - COMMUNITY CLUB

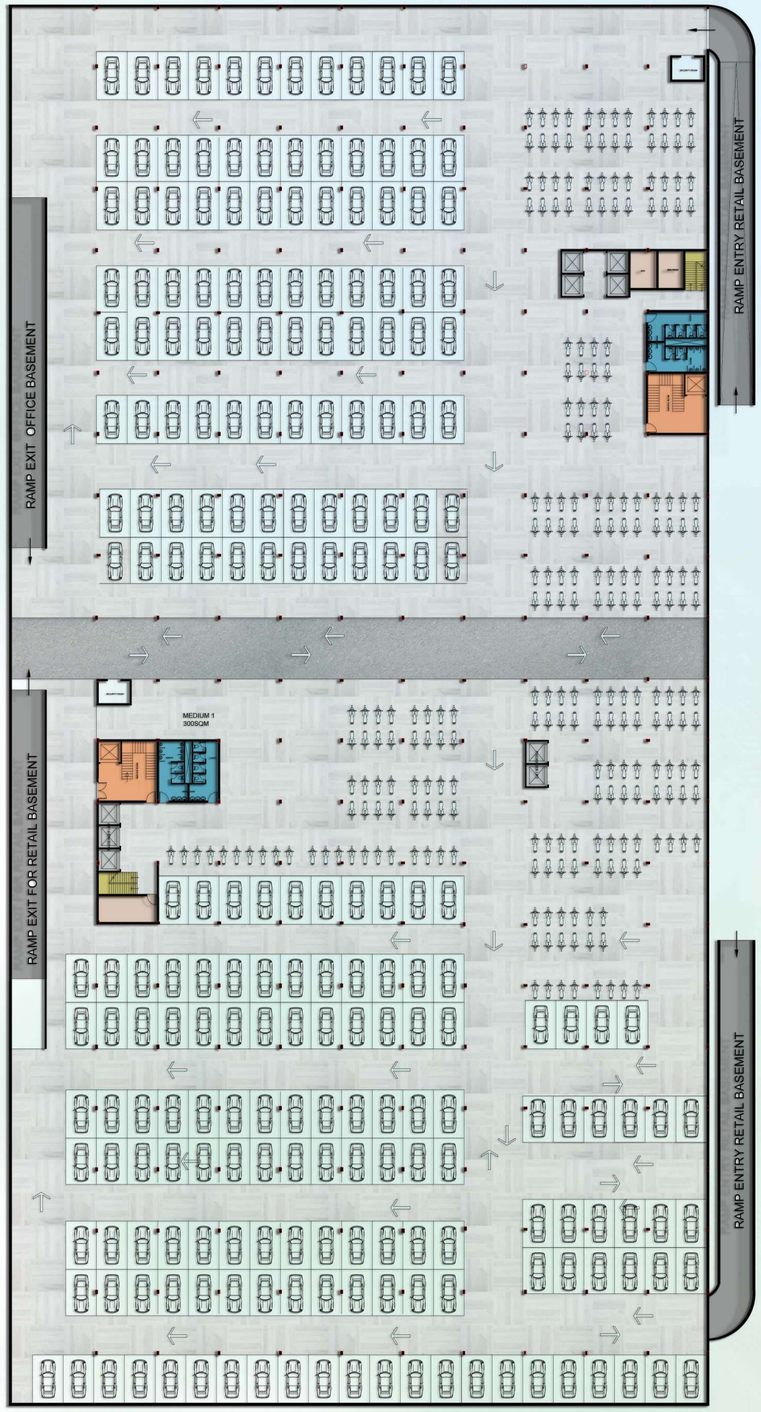
LEGENDS:

1	PEDESTRIAN ENTRY	16	RENTAL SPACE	26	GREEN SPACE
2	VEHICULAR ENTRY	17	OFFICE SPACE	27	SITTING SPACE
3	VEHICULAR EXIT	18	LOBBY		
4	RAMP ENTRY	19	MEDIUM SHOPS		
5	RAMP EXIT	20	LARGE SHOPS		
6	OFFICE ENTRY	21	SMALL KIOSK		
7	RETAIL ENTRY	22	GREEN RAMP		
8	SERVICE ENTRY	23	GREEN STAIRS		
9	SERVICE CORE	24	STREET VENDORS		
10	WASHROOM CORE	25	DRIVE WAY		
11	LIFT				
12	FIRE ESCAPE STAIRCASE				
13	AHU				
14	BMS ROOM				
15	GOVT OFFICE				

N

NAME : KRUPA T S USN NO : 1AA21AT023

OFFICE FLOOR PLAN

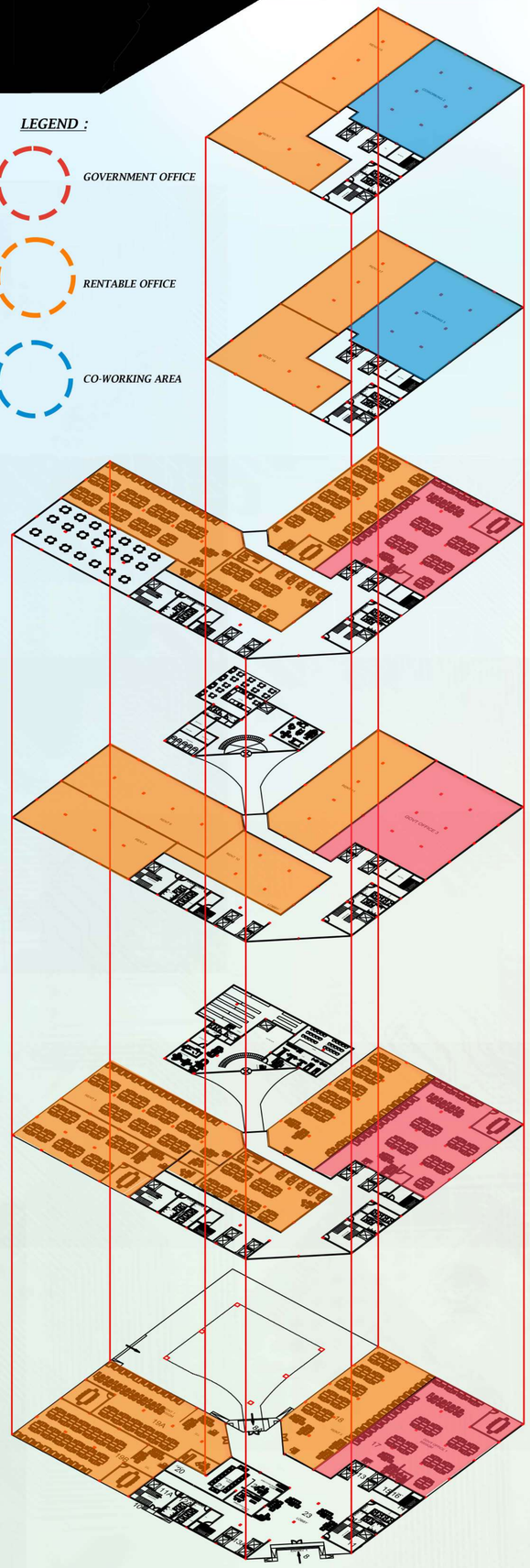


BASEMENT FLOOR PLAN

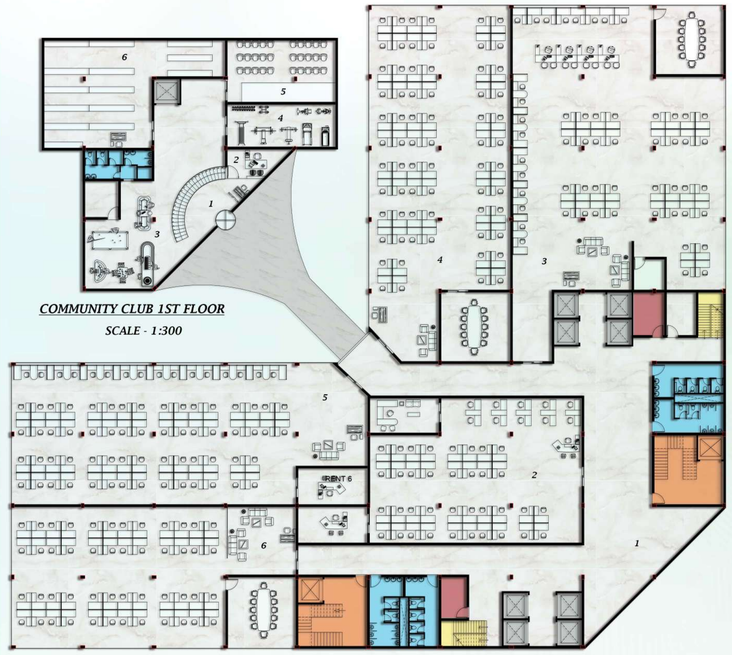
SCALE - 1:350

LEGEND :

- GOVERNMENT OFFICE
- RENTABLE OFFICE
- CO-WORKING AREA



STACKING DIAGRAM



COMMUNITY CLUB 1ST FLOOR

SCALE - 1:300

FIRST FLOOR PLAN (TYPICAL)

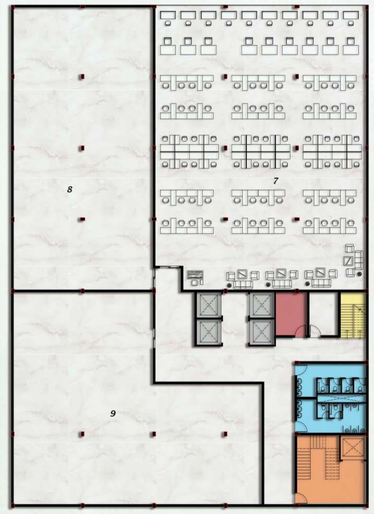
SCALE - 1:300

COMMUNITY CLUB 2ND FLOOR

SCALE - 1:300

COMMUNITY CLUB:

1 - LOBBY : 120SQM
2 - OFFICE ROOM : 15SQM
3 - INDOOR GAMES : 60SQM
4 - GYM : 45SQM
5 - MULTIPURPOSE HALL : 65SQM
6 - LIBRARY : 130SQM
7 - LOBBY : 120SQM
8 - KIDS PLAY AREA : 45SQM
9 - YOGA ROOM : 30SQM
10 - SPA ROOM : 30SQM
11 - CAFETERIA : 125SQM



FIFTH FLOOR PLAN (TYPICAL)

SCALE - 1:300

LEGEND :

- LIFT CORE
- AHU
- FIRE ESCAPE STAIRCASE
- WASHROOM
- ERVICE CORE

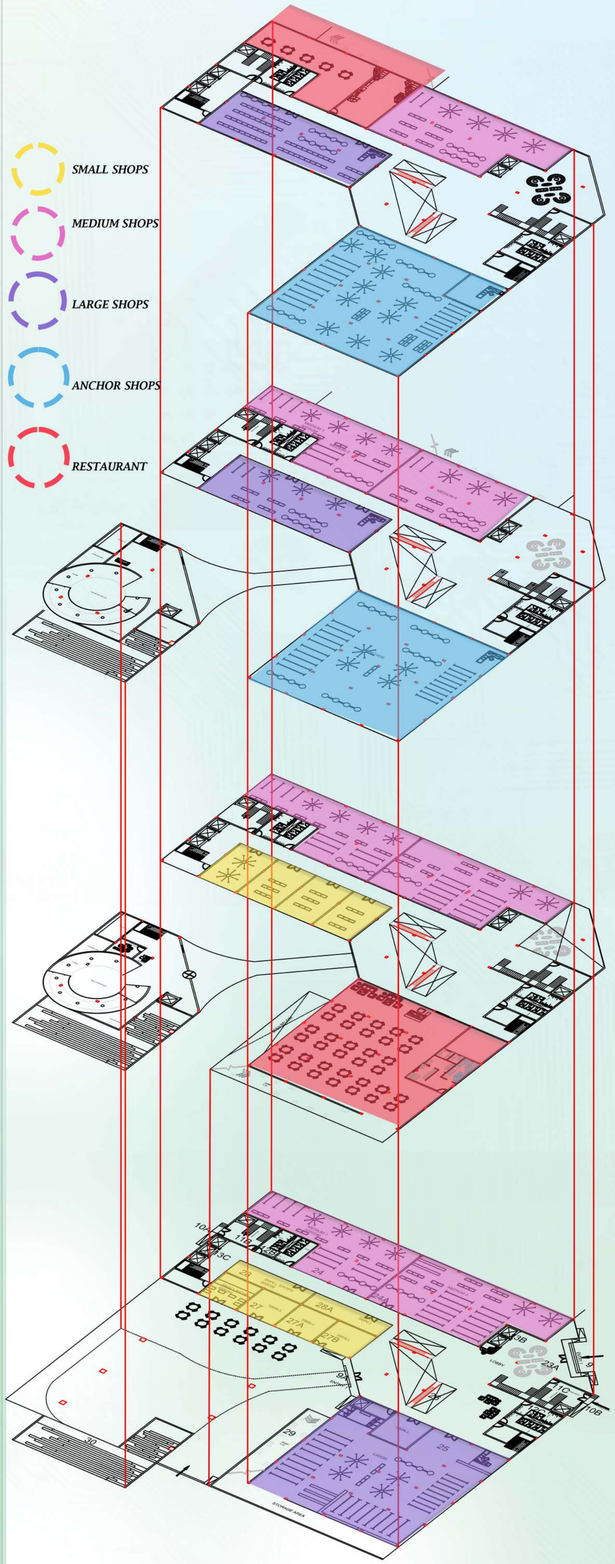
OFFICE :

1 - LOBBY : 190SQM
2 - RENTABLE SPCAE : 320SQM
3 - GOVERNMENTT OFFICE : 620SQM
4 - RENTABLE SPACE : 500SQM
5 - RENTABLE SPACE : 500SQM
6 - RENTABLE SPACE : 450SQM
7 - CO WORKING SPACE : 620SQM
8 - RENTABLE SPACE : 500SQM
9 - RENTABLE SPACE : 400SQM

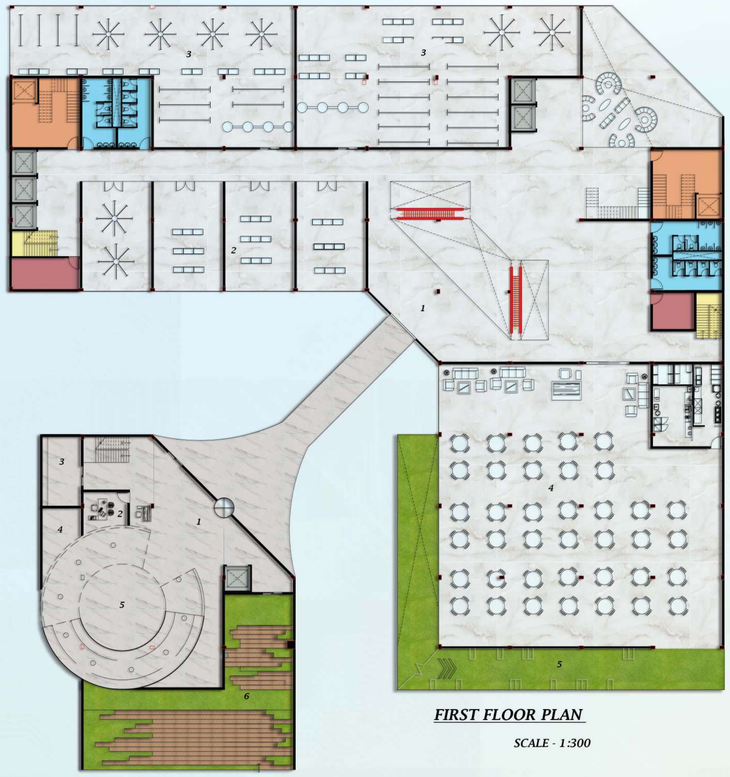
KEY PLAN

NAME : KRUPA T S USN NO : 1AA21AT023

RETAIL FLOOR PLAN

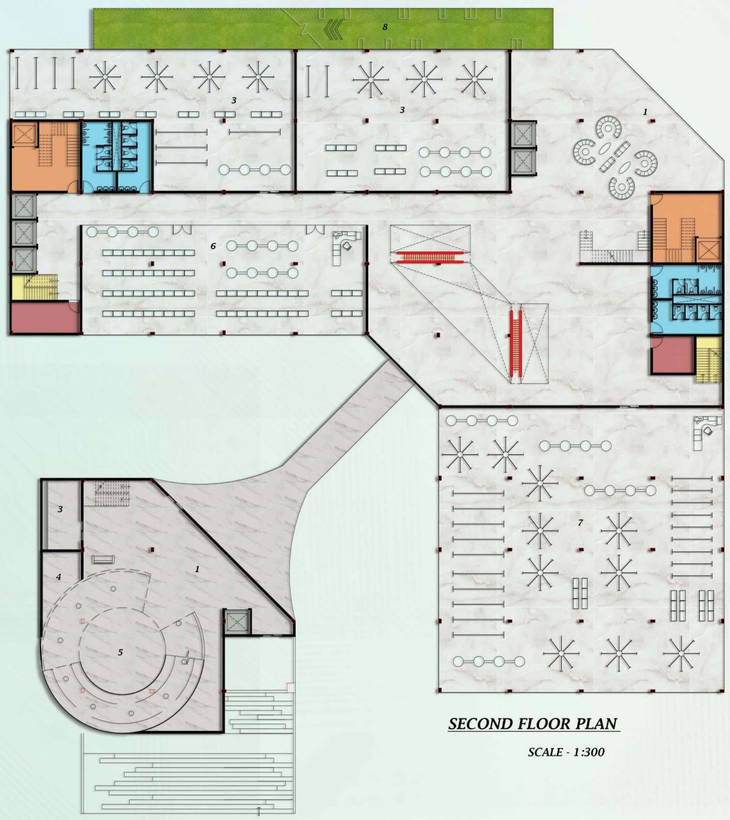


STACKING DIAGRAM



FIRST FLOOR PLAN

SCALE - 1:300



SECOND FLOOR PLAN

SCALE - 1:300

LEGEND :

- LIFT CORE
- AHU
- FIRE ESCAPE STAIRCASE
- WASHROOM
- ERVICE CORE

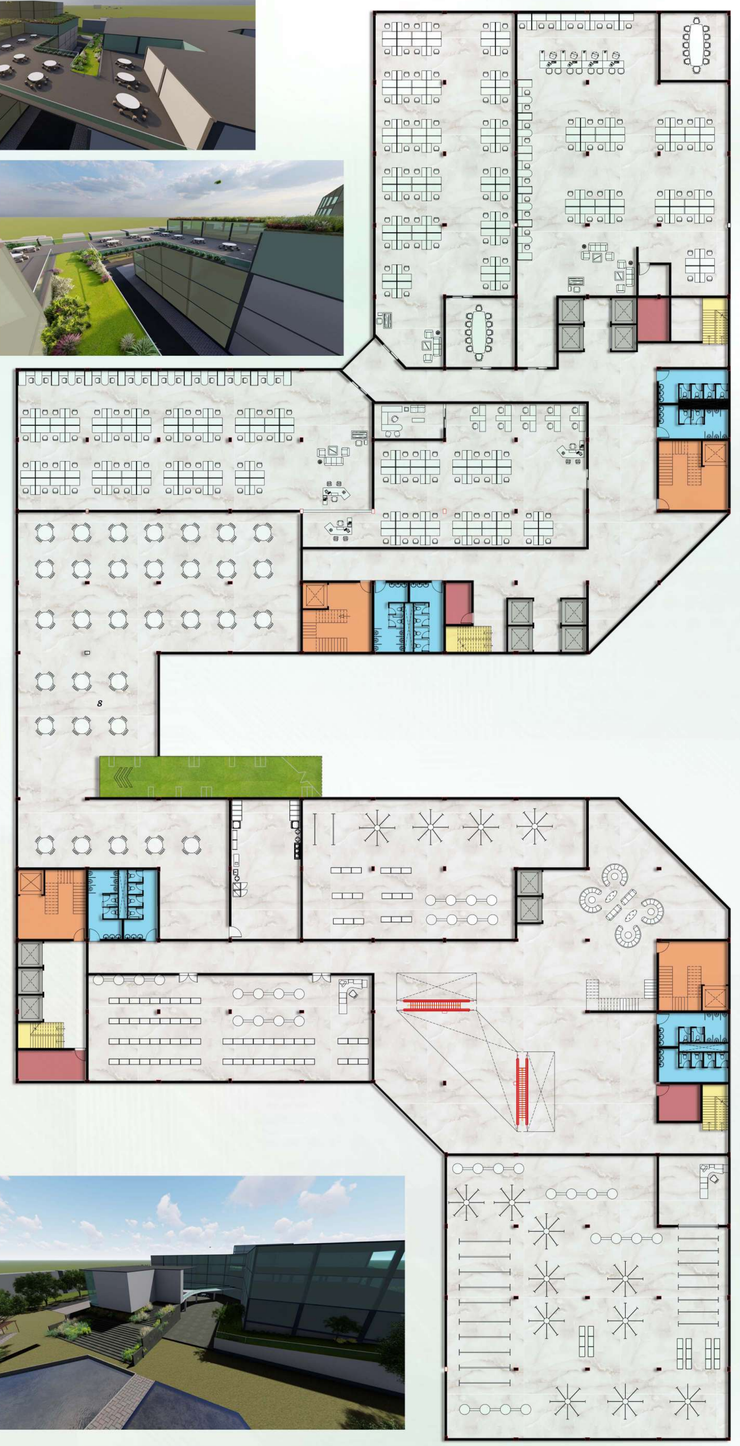
RETAIL :

1 - LOBBY : 400SQM
2 - SMALL SHOP : 80SQM
3 - MEDIUM SHOP : 250SQM
4 - RESTAURANT : 750SQM
5 - GREEN RAMP : 220SQM
6 - ANCHOR SHOPS : 750SQM
7 - GREEN RAMP : 220SQM
8 - RESTAURANT : 300SQM

ART GALLERY

1 - LOBBY : 120SQM
2 - OFFICE : 15SQM
3 - ART AGLLERY 1 - 30SQM
4 - ART GALLERY 2 - 25SQM
5 - ART GALLERY 3 - 180SQM
6 - GREEN STAIRS - 230SQM

KEY PLAN



4TH FLOOR PLAN

CONNECTION BETWEEN TWO BLOCKS

SCALE - 1:300

N

NAME : KRUPA T S USN NO : 1AA21AT023

SECTIONS

SECTION AT XY

SCALE - 1:300

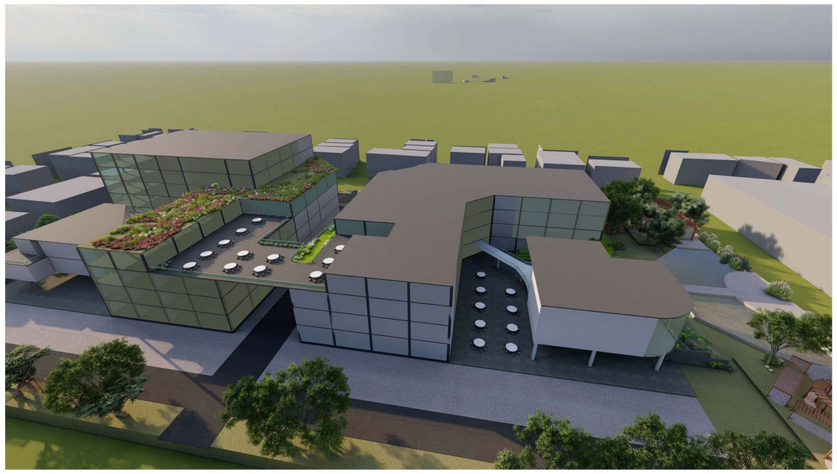
SECTION AT AB

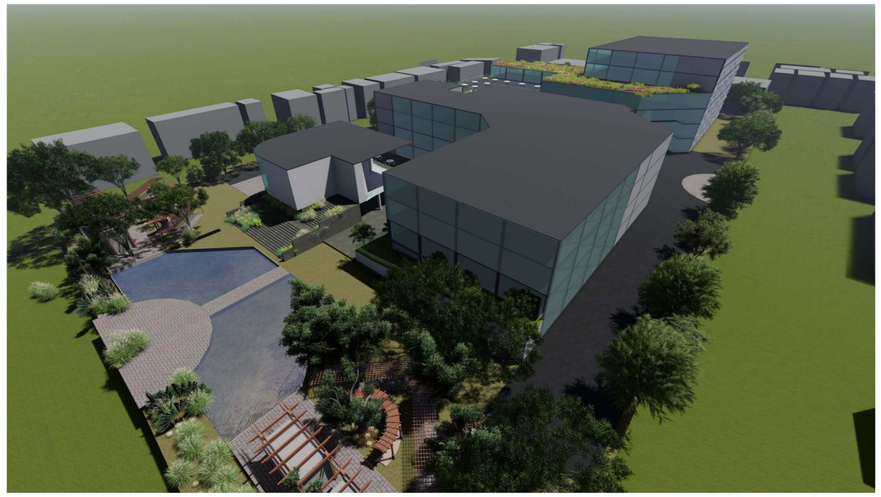
SCALE - 1:300

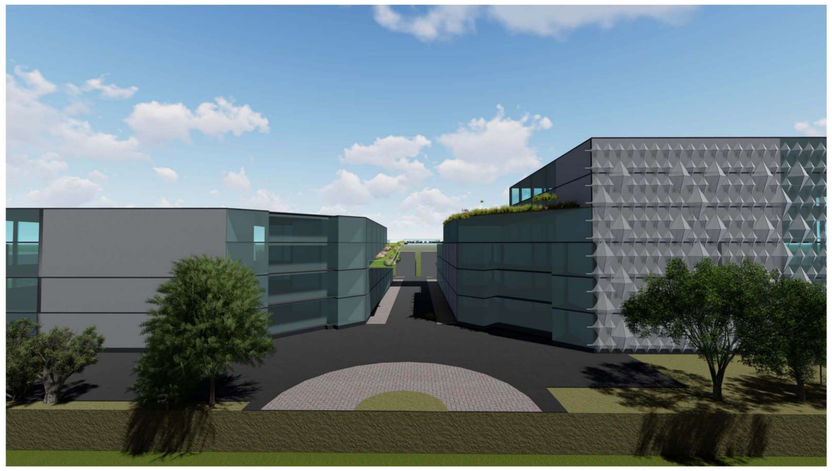
KEY PLAN

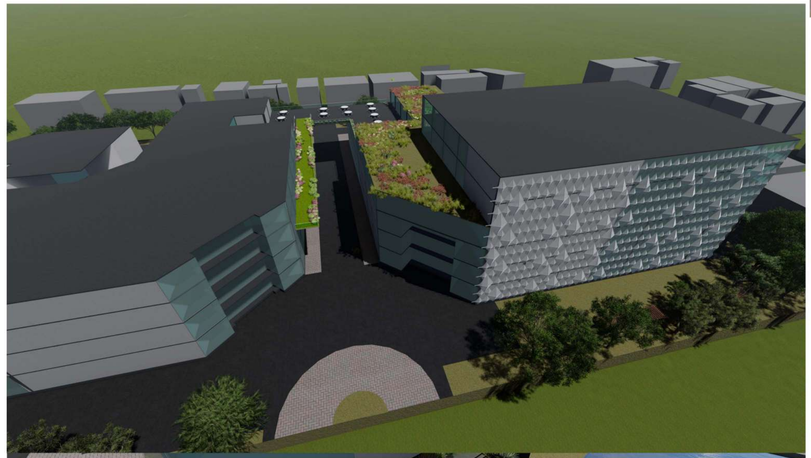
NAME : KRUPA T S USN NO : 1AA21AT023

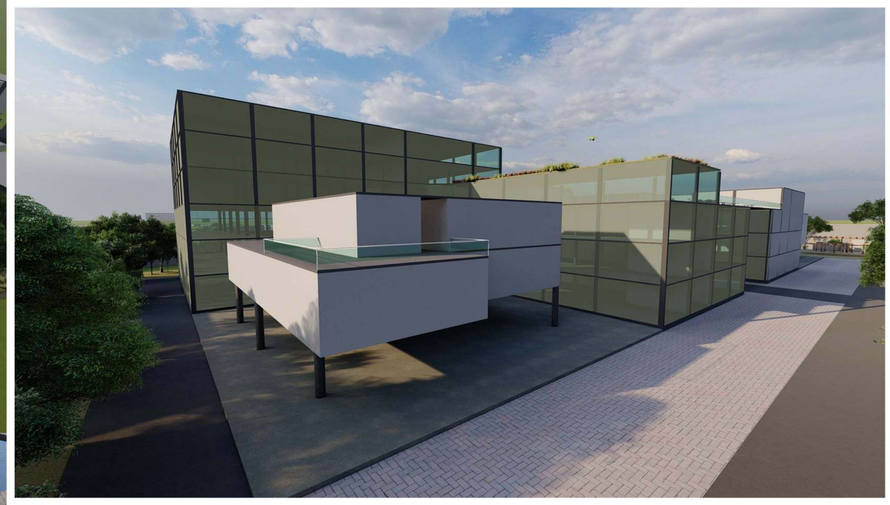
VIEWS

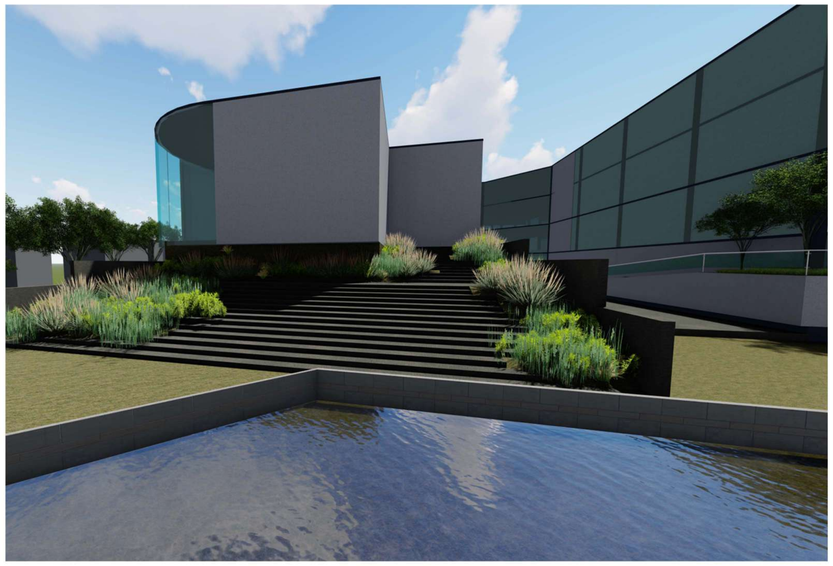












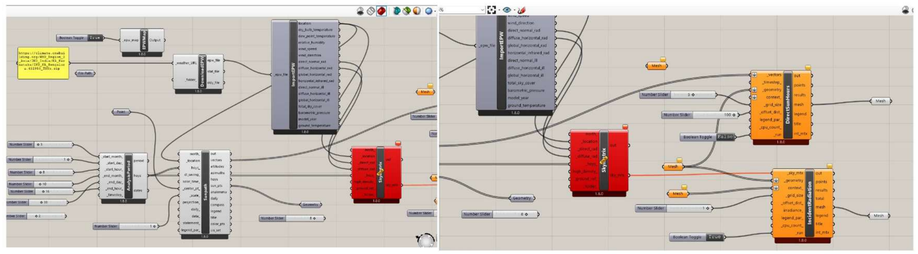
NAME : KRUPA T S USN NO : 1AA21AT023

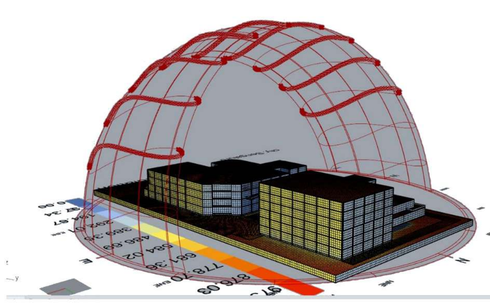
FACADE DESIGN

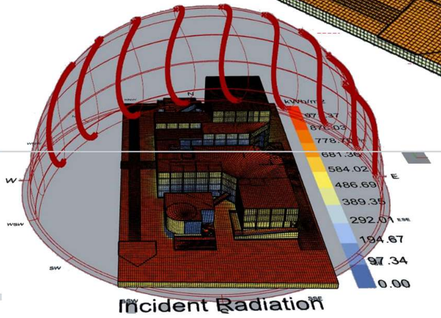
INSPIRATION FROM SPOOKFISH :

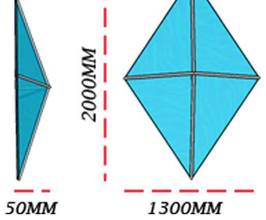
A BUILDING'S SKIN ACTS AS ARMOUR, AS THE MODERATOR OF LIGHT, AND SOMETIMES SKIN CAN ALSO BE STRUCTURE.
ADAPTIVE LIGHT BEHAVIOR : THE SPOOKYFISH, KNOWN FOR ITS ABILITY TO MANIPULATE LIGHT IN ITS ENVIRONMENT, INSPIRES A SYSTEM THAT DYNAMICALLY ADAPTS TO SUNLIGHT ANGLES.
FLUID INTERACTION : THE FACADE'S LIQUID-FILLED CAVITY EMULATES HOW AQUATIC ORGANISMS USE WATER AS A MEDIUM FOR LIGHT AND HEAT DIFFUSION.

GRASSHOPPER SCRIPT FOR GENERATING RADIATION



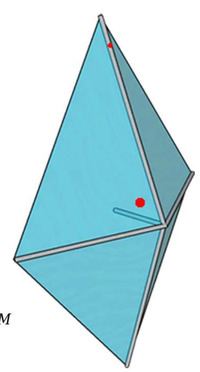






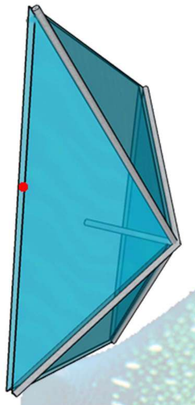
DETAIL OF SINGLE GLASS PANEL

FACADE IS LOCATED ON THE SOUTHEAST SIDE, FACING A COMMERCIAL AREA, AND IS EXPOSED TO HARSH, MAXIMUM SUNLIGHT THROUGHOUT THE DAY.

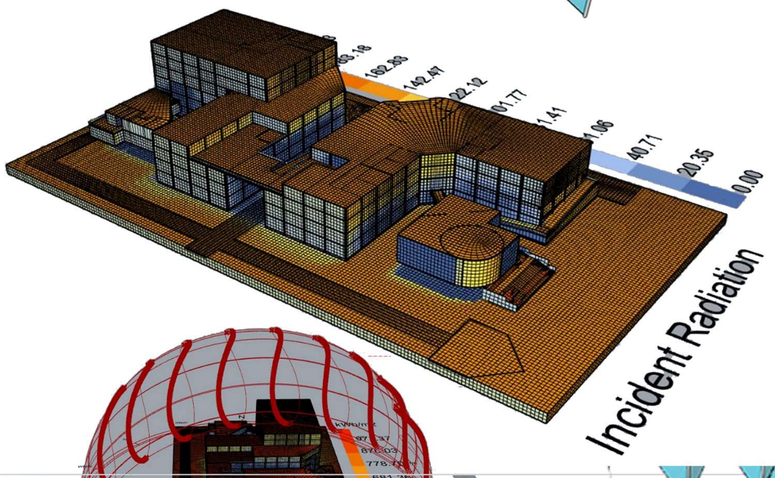


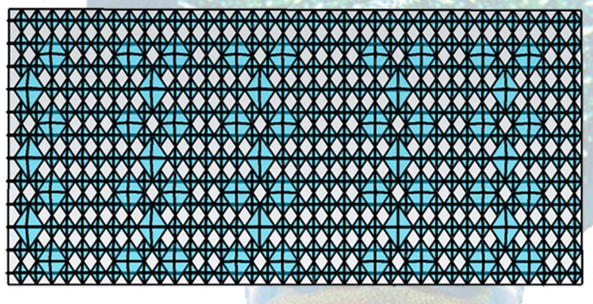
MULLION 40MM DIA SUPPORTING THE GLASS PANELS WHILE HOUSING THE LIQUID MOVEMENT SYSTEM.

LAMINATED GLASS COATED FOR UV RESISTANCE AND THERMAL PERFORMANCE.

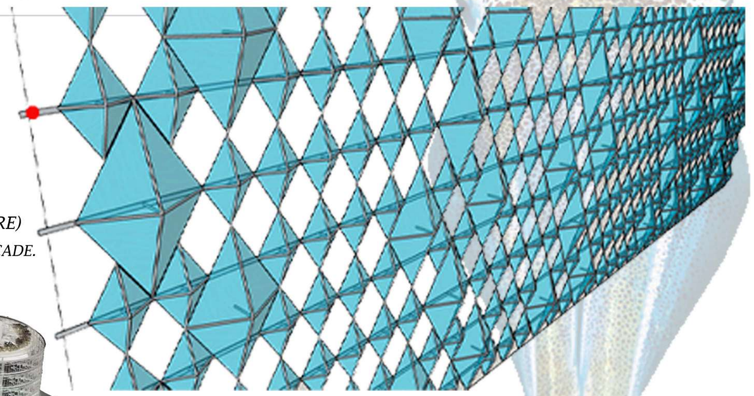


LIQUID MEDIUM BETWEEN 2 GLASS PANELS. WATER WITH ADDITIVES LIKE NANOPARTICLES, DYES, OR SALTS THAT CAN ADJUST ITS REFRACTIVE INDEX, COLOR, OR THERMAL CONDUCTIVITY.





THE GLASS PANELS ARE NEATLY ARRANGED IN A PRECISE CONFIGURATION, ENSURING OPTIMAL FUNCTIONALITY.



STEEL CHANNELS OF 150MM ARE USED HERE TO CONNECT THE GLASS FACADE SECURELY.

FACADE MECHANISM:

DYNAMIC LIQUID MOVEMENT:
THE CAVITY BETWEEN TWO GLASS PANELS IS FILLED WITH A REFRACTIVE LIQUID. THIS LIQUID CHANGES ITS OPTICAL PROPERTIES IN RESPONSE TO SUNLIGHT, CONTROLLED BY SENSORS OR NATURAL HEAT GRADIENTS.
LIGHT REDIRECTION
THE SYSTEM REFRACTS OR REFLECTS LIGHT INTO DEEPER SECTIONS OF THE BUILDING, ENSURING EVEN DISTRIBUTION OF NATURAL ILLUMINATION.
THERMAL REGULATION:
THE LIQUID ABSORBS EXCESS HEAT, PREVENTING OVERHEATING OF INTERIORS AND MAINTAINING COMFORTABLE INDOOR TEMPERATURE

JOINERY DETAILS:

EDGE SEALING: HIGH-PERFORMANCE SILICONE OR EPDM SEALS ARE USED TO ENSURE LIQUID CONTAINMENT AND PREVENT LEAKAGE.
FLEXIBLE CONNECTIONS: JOINERY INCORPORATES FLEXIBLE GASKETS TO ACCOMMODATE EXPANSION AND CONTRACTION DUE TO TEMPERATURE CHANGES.

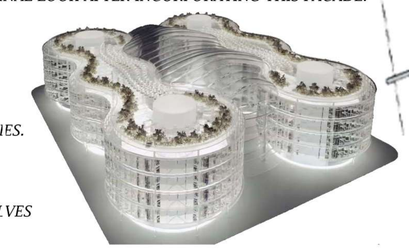
BENEFITS:

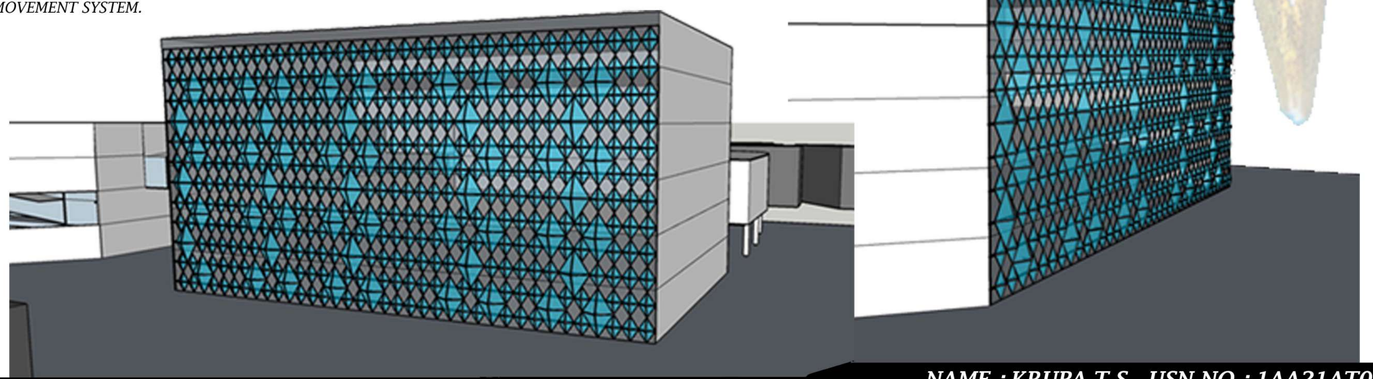
ENERGY EFFICIENCY: REDUCES LIGHTING AND COOLING LOADS.
AESTHETIC APPEAL: CREATES DYNAMIC VISUAL EFFECTS AS THE LIQUID SHIFTS.
SUSTAINABILITY: INCORPORATES RENEWABLE ENERGY PRINCIPLES THROUGH REDUCED POWER CONSUMPTION.

STRUCTURAL AND FUNCTIONAL DETAILS:

GLASS PANELS:
MADE OF LAMINATED GLASS FOR CLARITY AND DURABILITY.
COATED FOR UV RESISTANCE AND THERMAL PERFORMANCE.
LIQUID MEDIUM:
TRANSPARENT, NON-TOXIC LIQUIDS WITH SPECIFIC REFRACTIVE PROPERTIES.
CAN INCLUDE ADDITIVES TO ENHANCE THERMAL OR OPTICAL BEHAVIOR.
CONTROL SYSTEMS:
SENSORS DETECT SUN ANGLE AND INTENSITY, ACTIVATING PUMPS OR VALVES TO ADJUST THE LIQUID'S POSITION.
FULLY AUTOMATED OR SEMI-AUTOMATED SYSTEMS FOR PRECISE ADJUSTMENTS.
FRAME DESIGN: ALUMINUM OR STEEL FRAMES WITH INTEGRATED CHANNELS SUPPORT THE GLASS PANELS WHILE HOUSING THE LIQUID MOVEMENT SYSTEM.

BIOMIMETIC OFFICE(EXISTING STRUCTURE)
FINAL LOOK AFTER INCORPORATING THIS FACADE.





KEY PLAN

NAME : KRUPA T S USN NO : 1AA21AT023