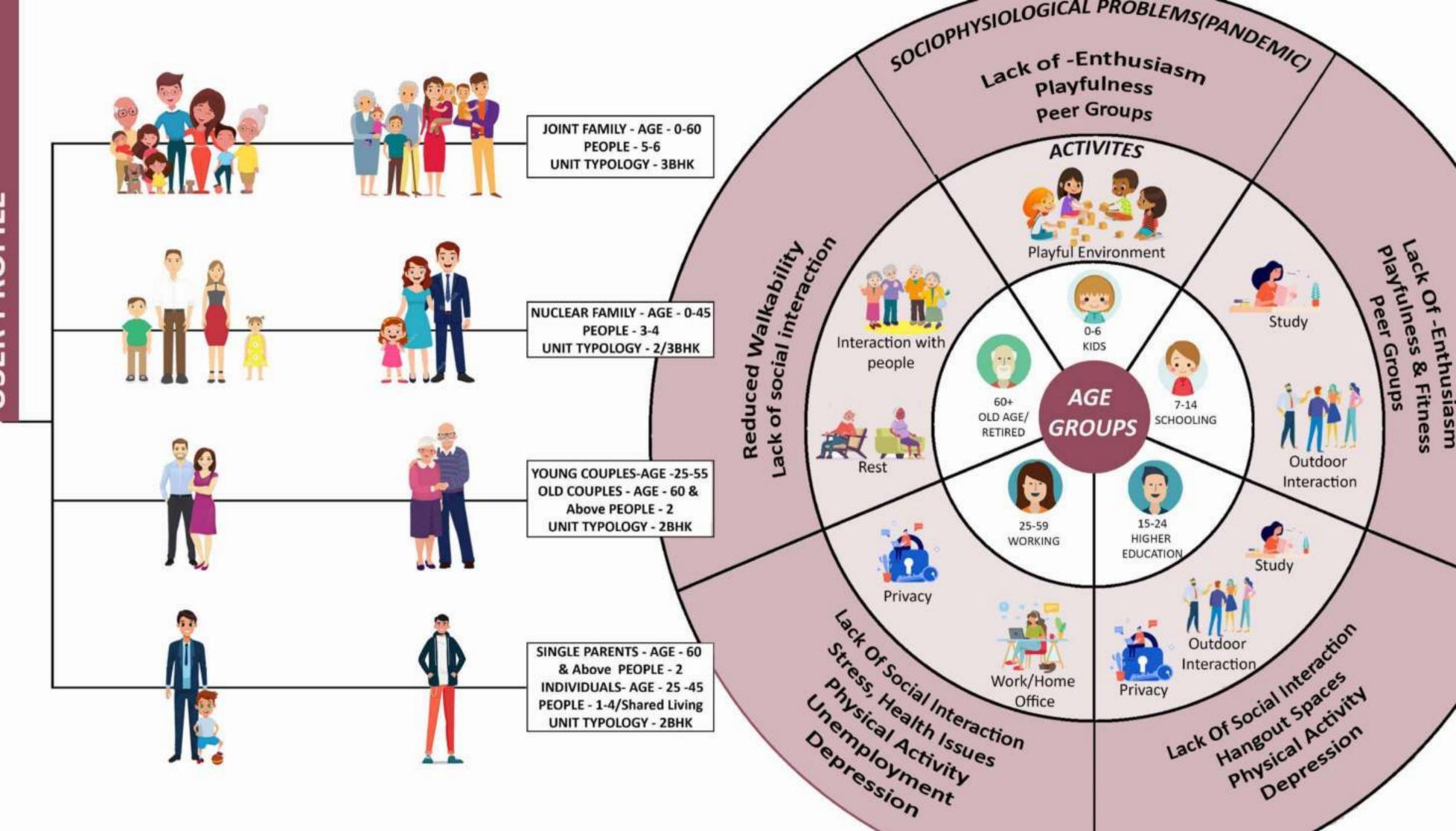
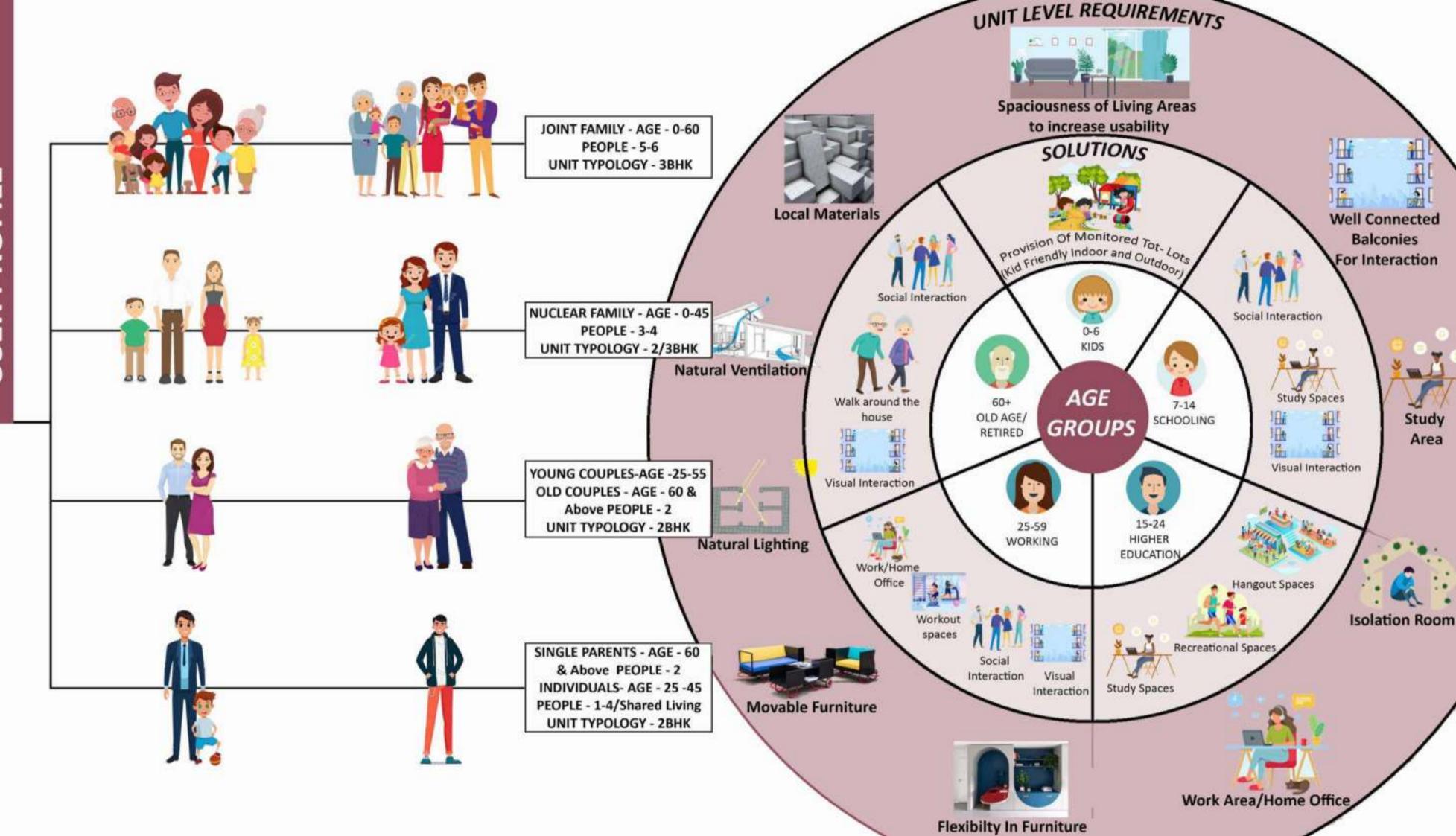


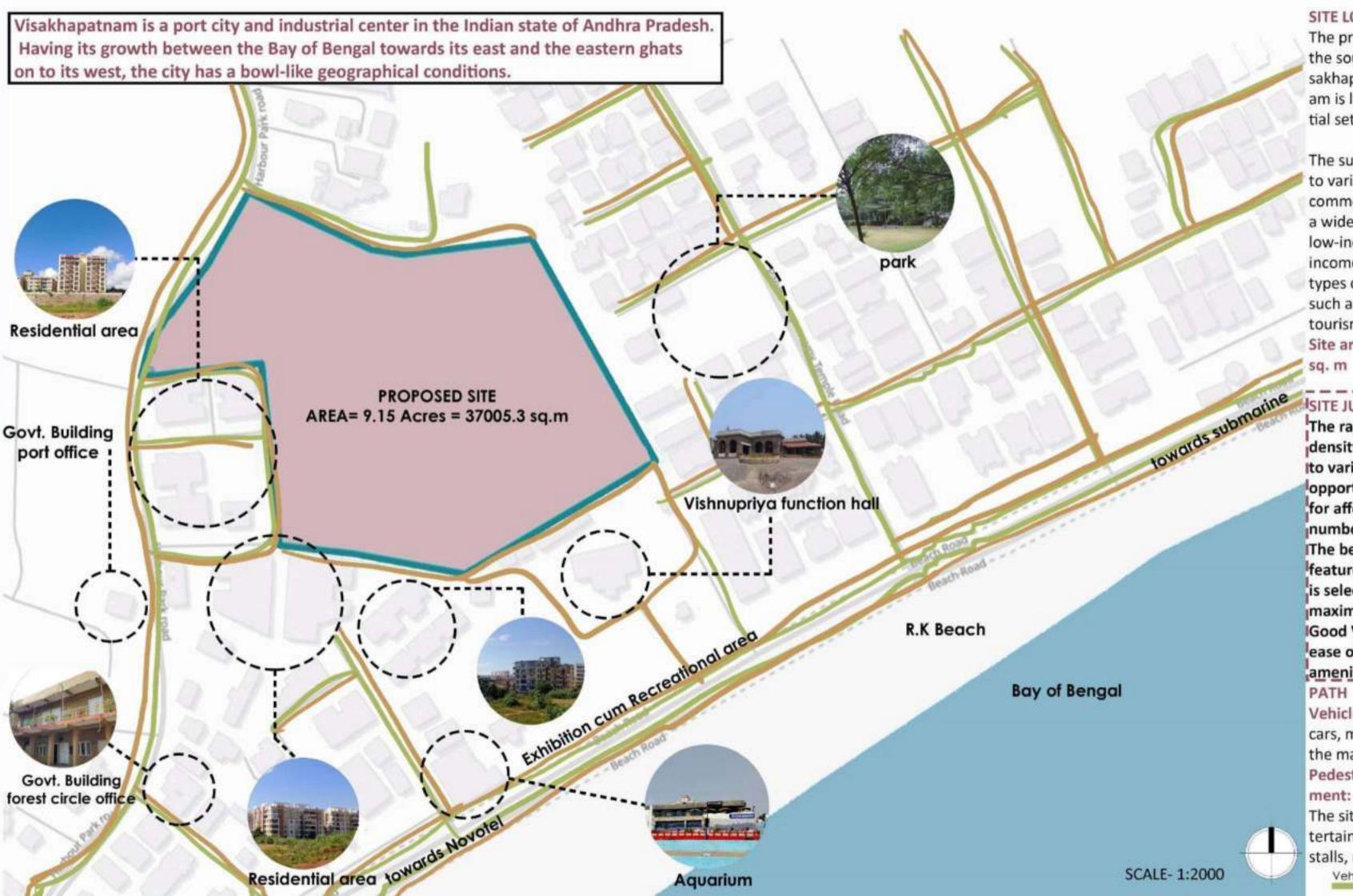
As social beings, interaction is an important necessity for humans. Situations like pandemic have raised barriers for this necessity leading to a detrimental effect on mental and physical health.

In recent times, people are encouraged to practice social distancing and stay indoors. This makes our living spaces "the epicentre" of our daily lives.

Limited access to outside spaces and decreased interaction with nature adds to the stressful home stay environment.







SITE LOCATION

The proposed site is located in the south-east region of visakhapatnam, pandurangapuram is largely a planned residential settlement.

The surrounding area is a home to variety of residential and commercial buildings which has a wide range of budgets from low-income workers to high income residents, and different types of commercial activities such as retails, services and tourism.

Site area: 9.15 acres = 37005.3

SITE JUSTIFICATION:

The rapid increase in habitation density of Visakhapatnam due Ito various new employment opportunities in the city calls for affordable housing in high numbers.

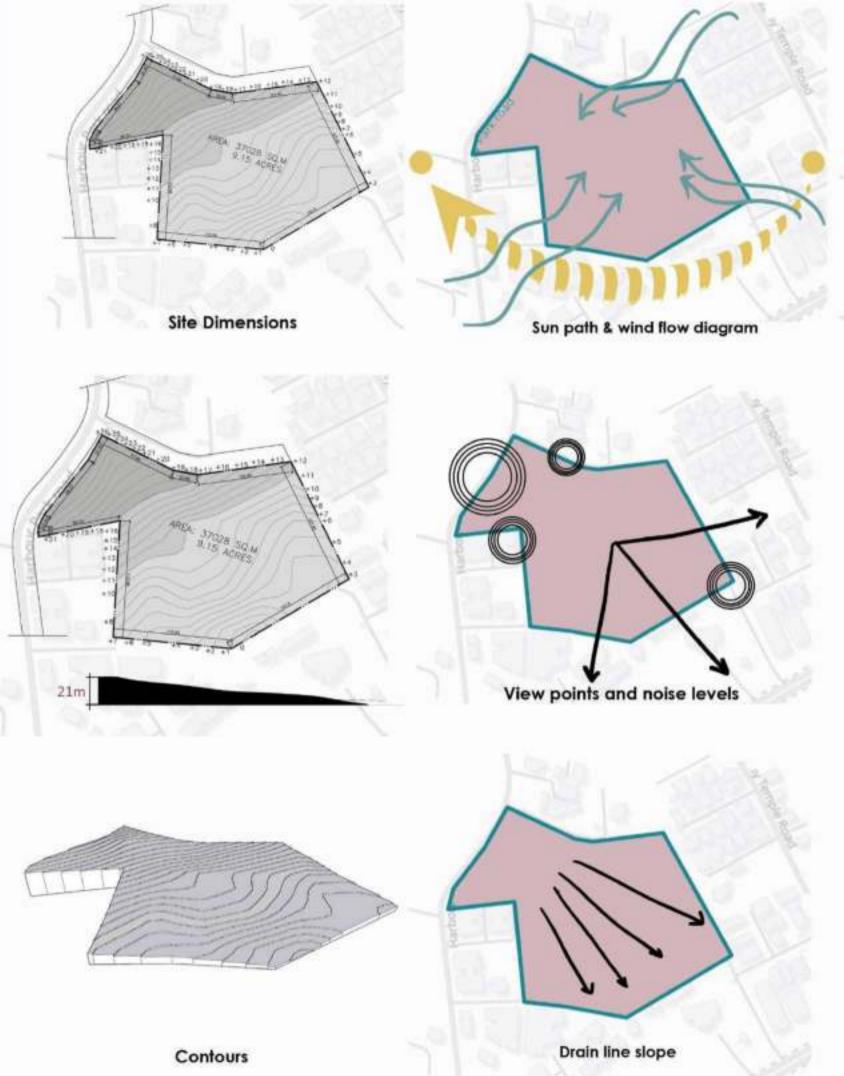
The beach acts as a significant feature of the city and the site is selected to use its view to the maximum.

Good Vehicular network and ease of accessibility to near by amenitites and facilities.

Vehicluar path and movement: cars, motorcycles and auto's are the major means of movement. Pedestrian path and move-

The site is surrounded by the entertainment based; cafe's, food stalls, recreational area;s etc.

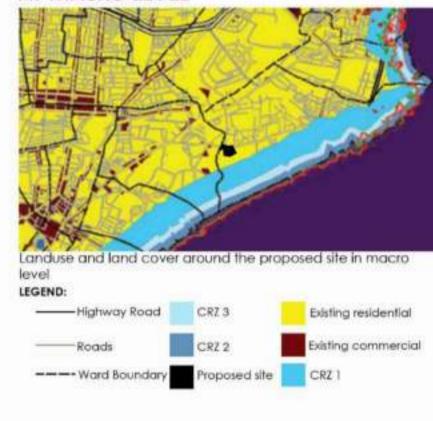
> Vehicular Pedestrian

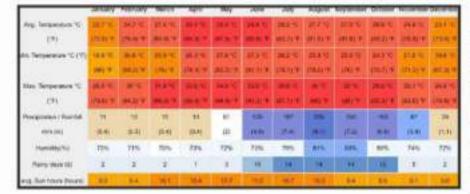




surrounding Building heights

AT MACRO LEVEL





Accessebility:

Visakhapatnam Railway station- 4.6 km Airport- 14 km Bus station- 3.2 km near by bus stop- around 1 km

land use and land holdings: mixed-use residential-commercial apartment buildings, near to Andhra university, tourism and commercial activities.

TOPOGRAPHY

Soil: red alluvial soil

Contours: The site has 27 levels of contour lines and each is

1m distance to each contour line.

It is a gradual slop facing towards the beach.

Land use: Majorly the site is located in the residential plots and towards its least slop commercial and recreational activities are more.

Contours: The site has 27 levels of contour lines and each is

1m distance to each contour line.

It is a gradual slop facing towards the beach.

CLIMATE

Micro Climate: Hot and humid

Sun path: adequate sun exposure is available in the site.

Winds: Sea breezes from the south-east direction

trade winds from the north-east direction

prevailing winds from the south-west direction

Drain line

As the site is of gradual slope, the drains flow from higher point to lower point that is from north to south of the site.

Average temperature: 26.9 °C

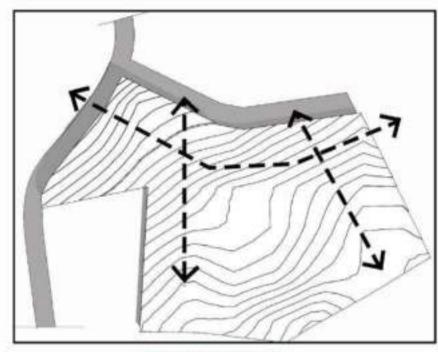
The driest month is March, with 10 mm | 0.4 inch of rainfall. In August, the precipitation reaches its peak, with an average of 205 mm | 8.1 inch.

The warmest month of the year is May, with an average temperature of 30.9 °C. At 22.7 °C on average, January is the coldest month of the year.



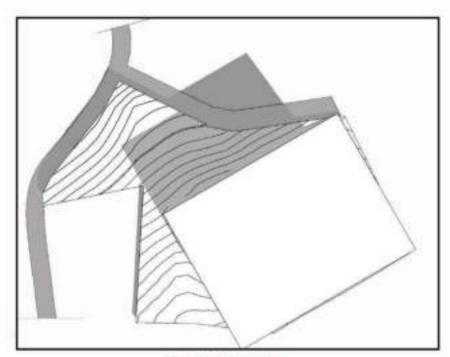
Why vertical?:-

As the site is located at the low lying areas of the city, to support the action of ground water rechargeability, and also complying to the norms, a maximum of 40% ground coverage is considered. To achieve an FAR of 4, verticality is considered as an efficient option.



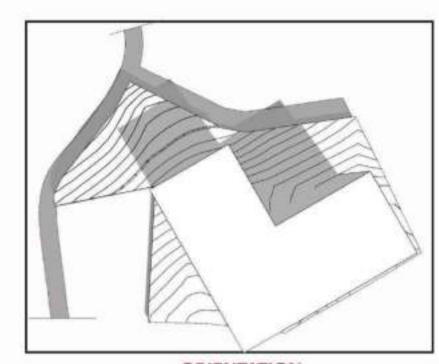
SITE NETWORK

Site surrounded with 24m main access and 18m road access on either side of the site. The main idea is to create a networking from the access to site which encourage micro urbanism and open site for neighbourhood.



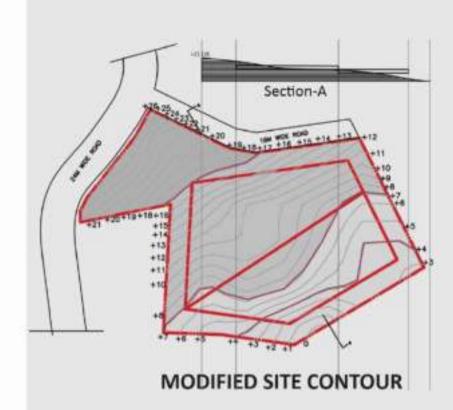
BUILT MASS

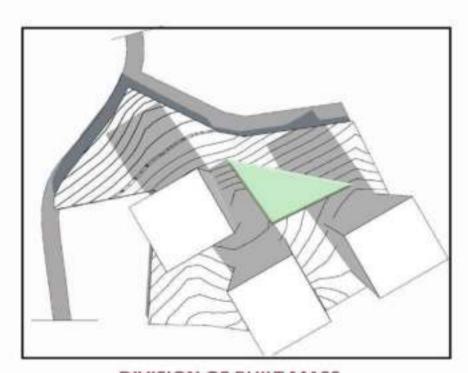
Creating a dense built mass considering the beach views from the site.



ORIENTATION

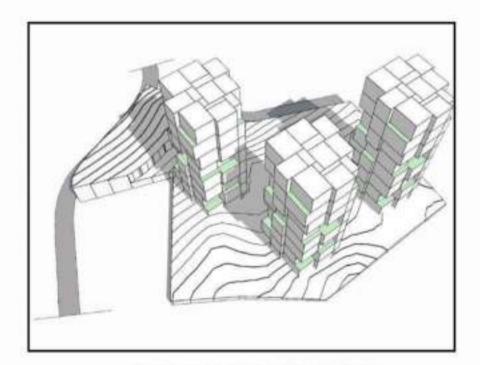
By aligning the blocks with the site edges the node widen up and a better connection between them is created. Orienting the longer side of built mass towards N-S Direction.





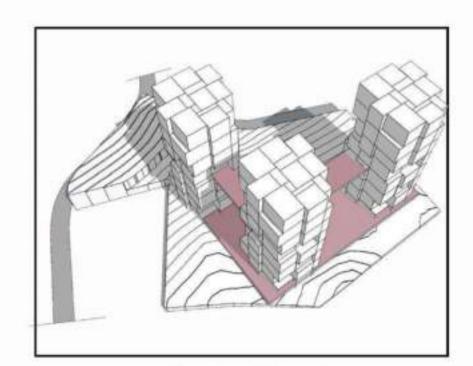
DIVISION OF BUILT MASS

segregation of blocks to create the street and plazas that open to landscape areas. Provision of nodes from the entrance to the built mass helps in distributing the users to different zones.



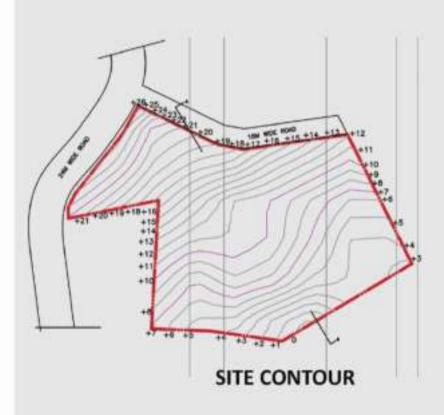
BREAKING THE MONOTONY

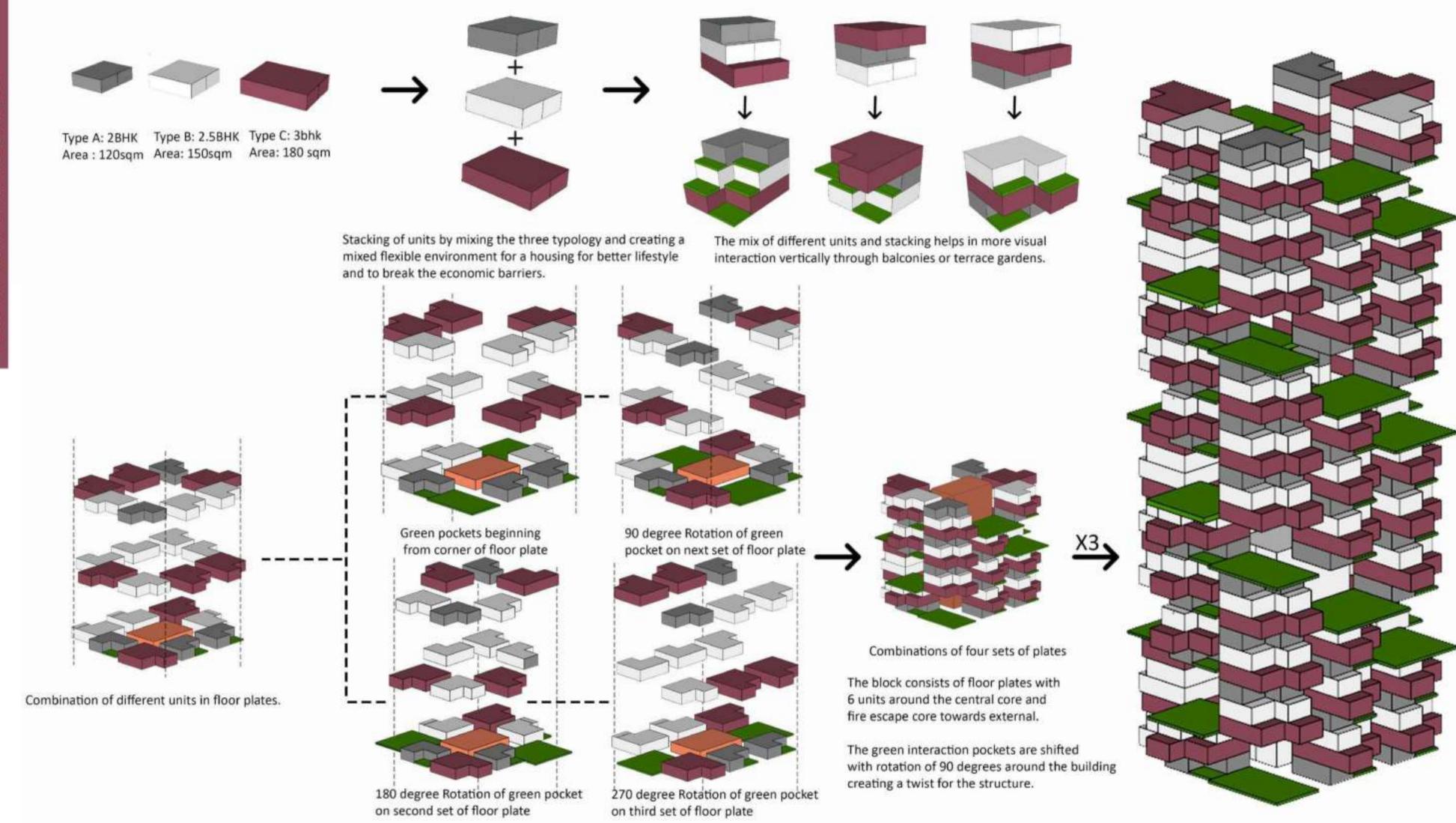
The solid chunk of blocks are broken by creating voids at every three intermediate levels around the building. The sense concrete jungle is broken by creating green interaction pockets around the structure. This also helps the winds to circulate around the structure without creating wind turblances.

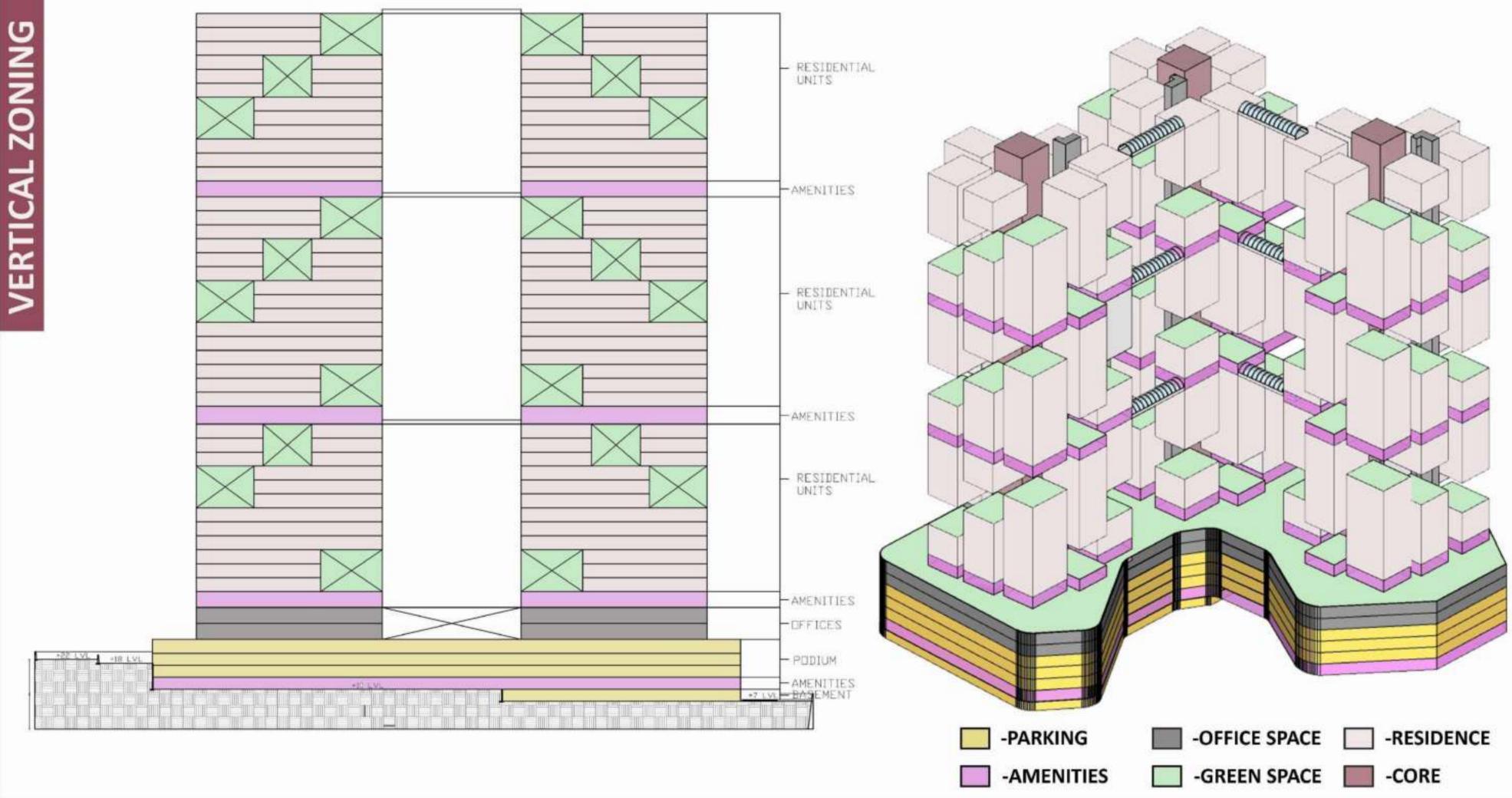


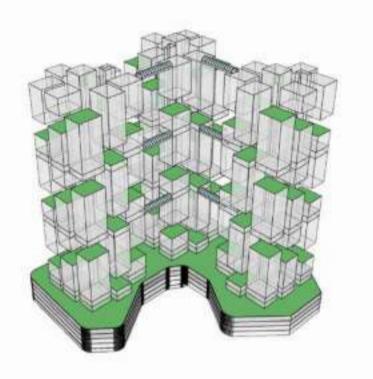
SOCIAL BRTIDGING

Social bridging between the towers builds community life or social ecosystems.

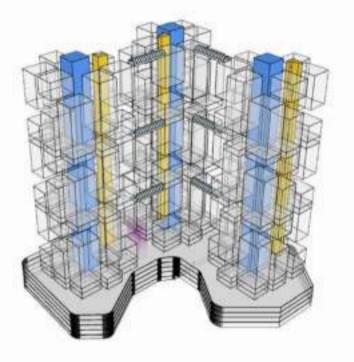






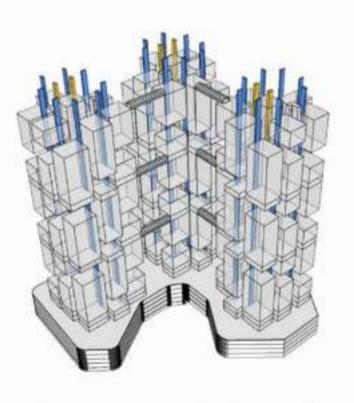




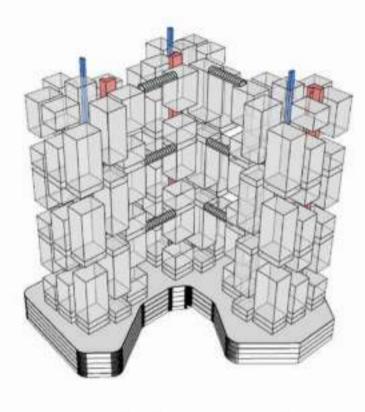


VERTICAL CIRCULATION

``.....



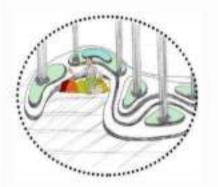
LIFT, TOILET SHAFTS, ELECTRICAL/HVAC SHAFTS



FIRE ESCAPE CORE, FIRE SHAFTS

- 8. Administration Office- 200sq.m
- 9. Office/Storage- 170sq.m
- Housing For Temporary Workers- 520sq.m
- 11. Waiting Lobby
- 13. Entry to Landscape

Functions related to the administration are zoned together within sight from the central node.



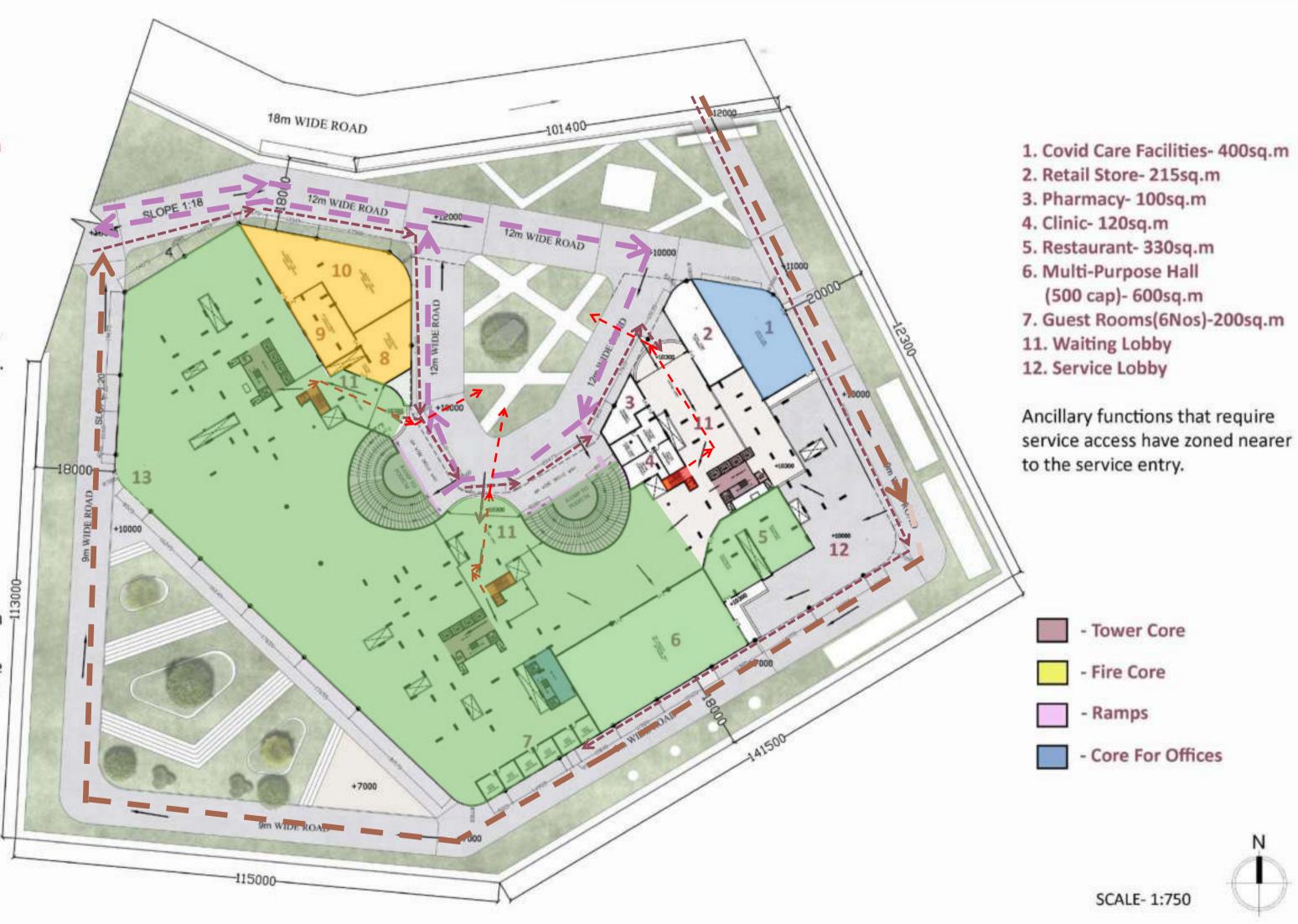


The ground level of the structure is an important medium of connection between the towers, and the surrounding site.

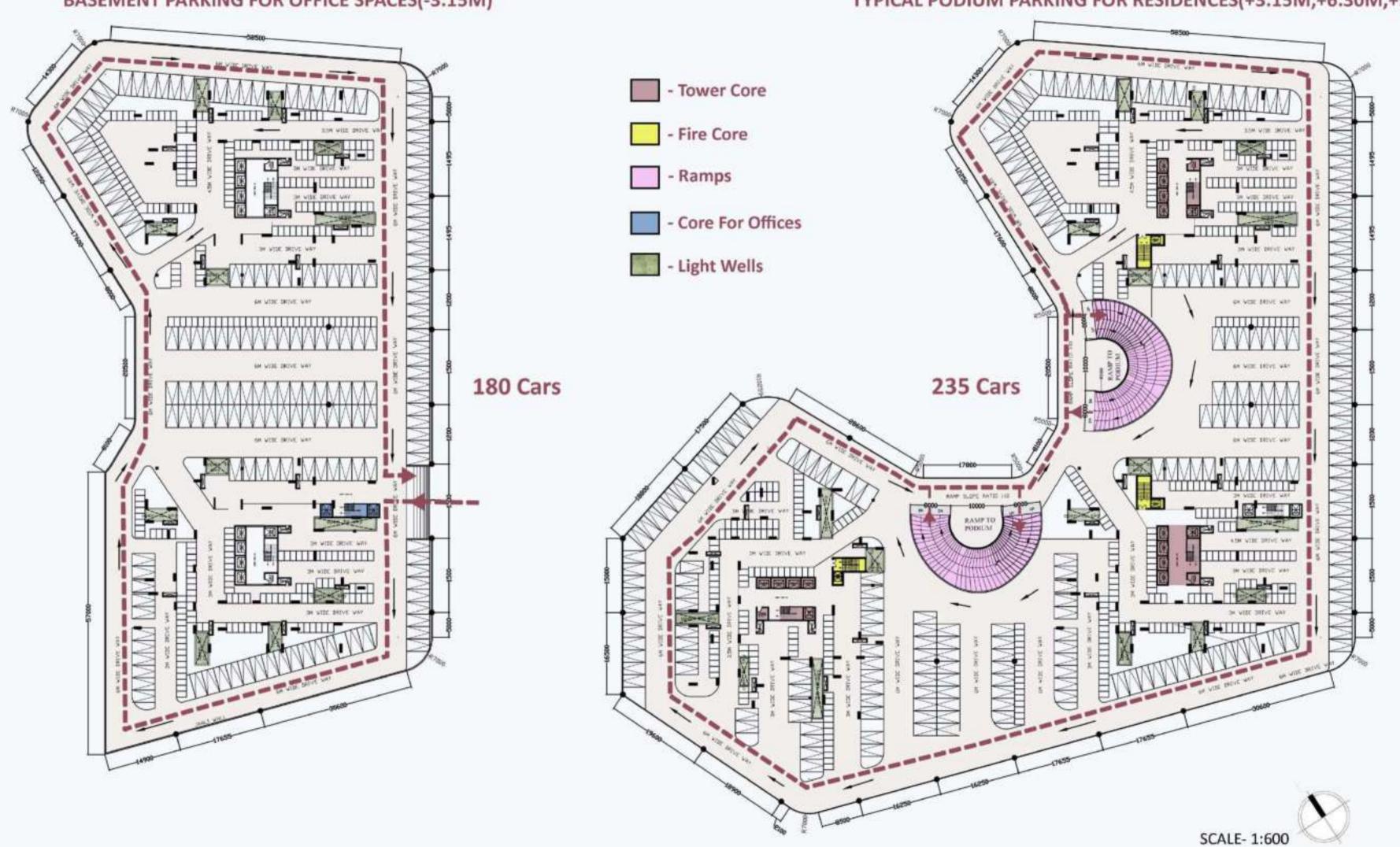
As this level is a socially active zone, these parametric plazas help promote the social interactiveness between the residents.

These plazas enhance the quality of space and promote people to relax, rejuvenate an interact with nature and surroundings.

These Semi-Open Space also accomodate Small Time vendros & Hawkers.







3 1000

3 122

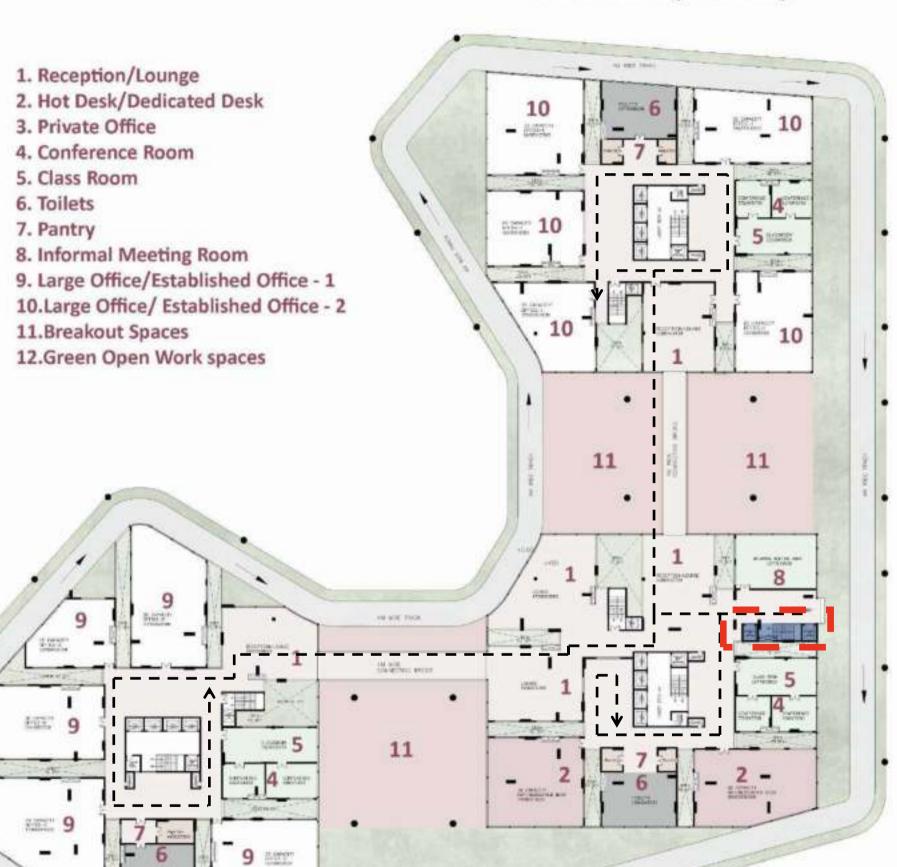
12

11

- a second

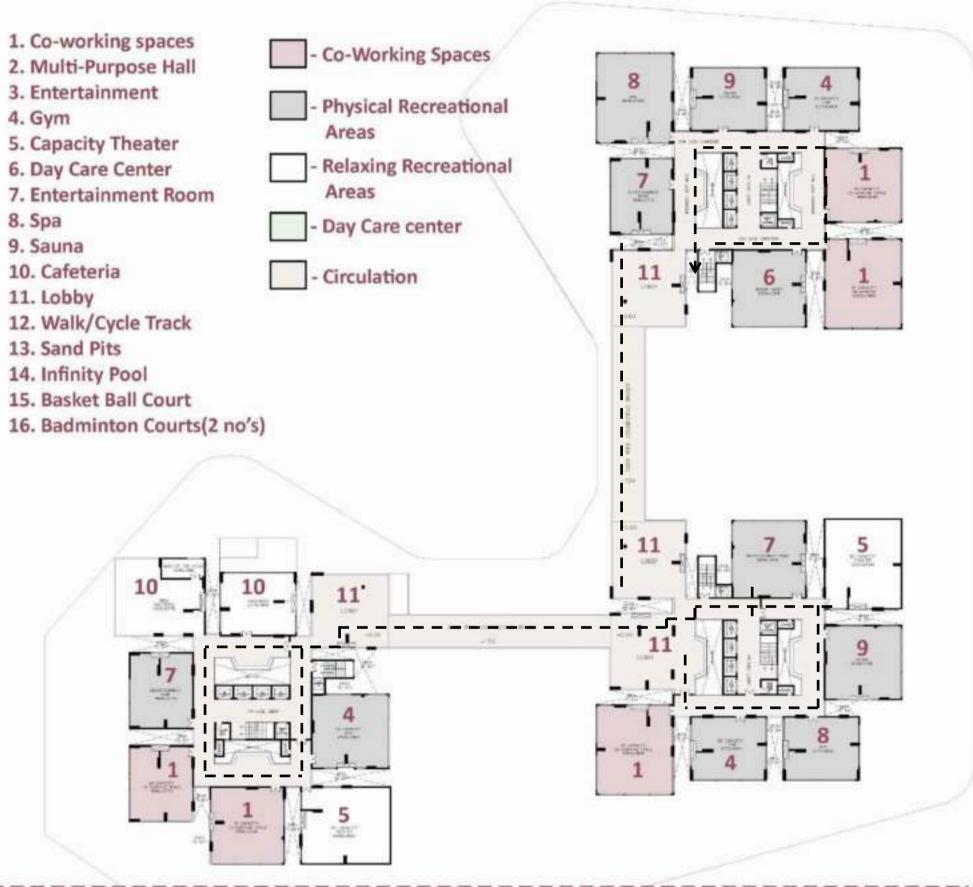
12

SCALE- 1:600



The programs forming a symbiotic relationship with the housing have combination of functions where co-working spaces are supported with recreational areas that acts as breakout spaces while working.

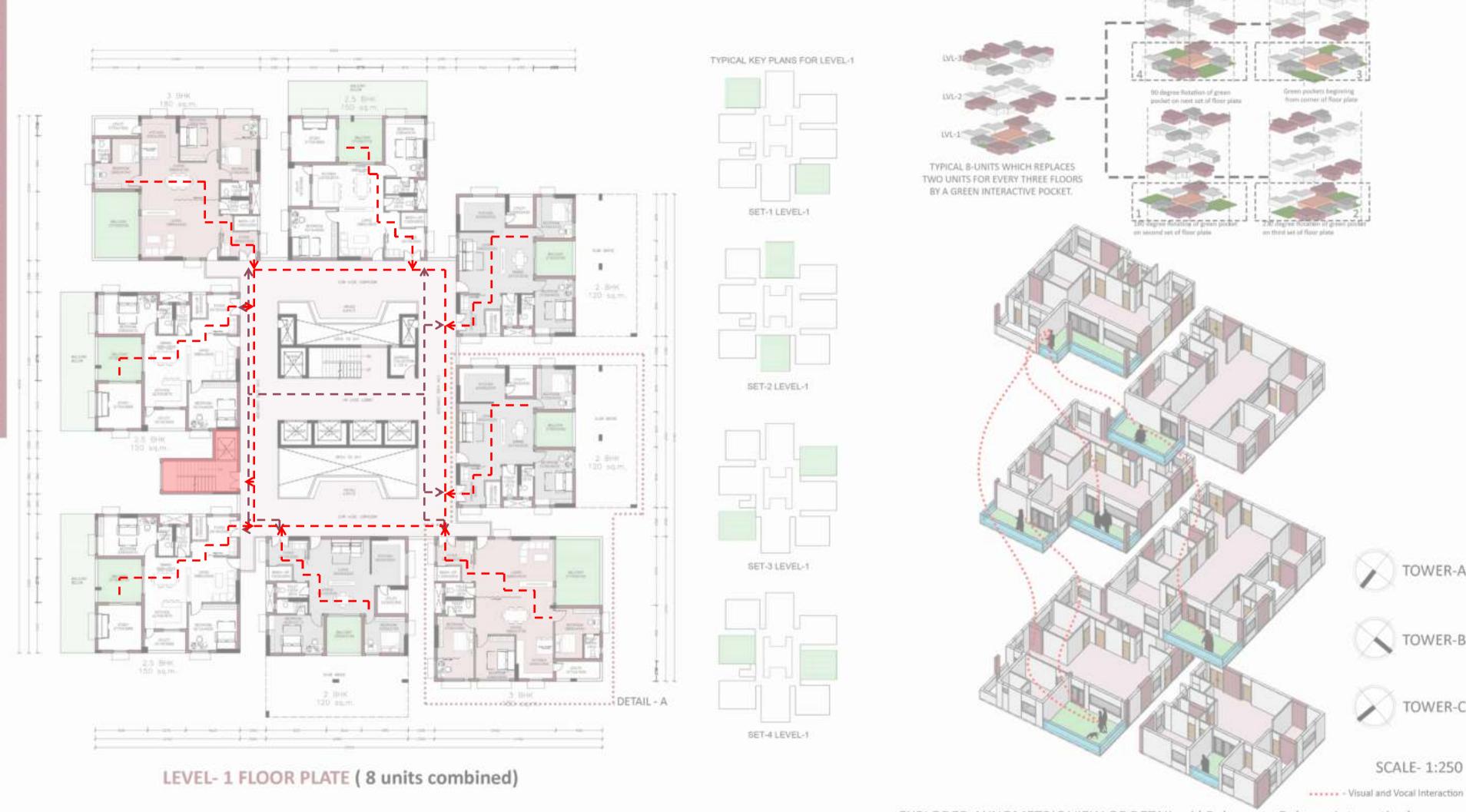




The programs forming a symbiotic relationship with the housing have combination of functions where co-working spaces are supported with recreational areas that acts as breakout spaces while working.







EXPLODED AXNOMETRIC VIEW OF DETAIL - A(Balcony to Balcony Interaction)



EXPLODED AXNOMETRIC VIEW OF DETAIL - A(Balcony to Balcony Interaction)



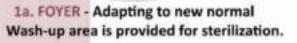
90 degree Rotation of green podest on next set of floor plate TYPICAL 8-UNITS WHICH REPLACES TWO UNITS FOR EVERY THREE FLOORS BY A GREEN INTERACTIVE POCKET. 180 degree Rotation of green pocket 270 degree Rotation of green pocket on second set of floor plate on third set of floor plate SCALE- 1:250 · · · · · · · Visual and Vocal Interaction

LEVEL- 3 FLOOR PLATE (8 units combined)

EXPLODED AXNOMETRIC VIEW OF DETAIL - A(Balcony to Balcony Interaction)





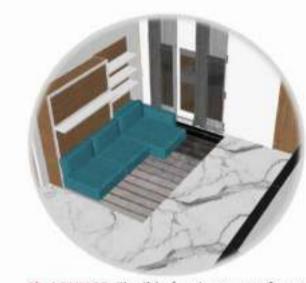




2a. PRIVATE LIVING- Secondary living space for private members of the family.



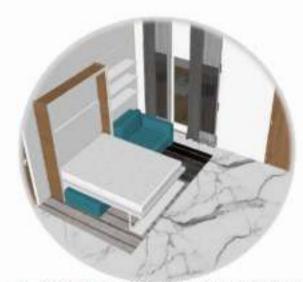
1b. ISOLATION ROOM - Foyer transforming into Isolation room and wash-up area as its balcony during pandemic, common toilet provided with extra door in this context.



2b. LOUNGE- Flexible furniture transforms into lounger..



1c. HOME OFFICE - Foyer space transforming into Home office considering new normal.



2c. GUEST BED- Flexible furniture transforms into an additional bed.





3a. BEDROOM - Accommodated with movable wardrobe and flexible furniture.



4a.DRAWING ROOM: This space acts as an extra work/living space.



BEDROOM: Provided with collapsible partition wall and workspace.



3b. WORK DESK- Wardrobe moved to create partition between resting and working area.



4b.WORKSPACE: The flexible furniture converts itself to increase the work desks.



ISOLATION ROOM: The collapsible partition opened to convert the bedroom into isolation room with an attached toilet.



3c. PRIVATE LIVING- This flexible furniture transforms the bedroom into private living.



GUEST BEDROOM: Collapsible partition wall and flexible furniture converts it into an additional bedroom.



PRIVATE LIVING: The flexible furniture transforms the bedroom into a private living room.



Implementing socialisation and creating a mixed flexible environment for a housing gives better lifestyle and offers affordable housing place for all user groups. An abstractive idea showing how vertical living and informal interactive spaces are imagined together by pixelating terraces/ balconies allowing visual interaction and a constant public, private relationship being in one's own individual entity.

The ground level of the structure is an important medium of connection between the towers, and the surrounding site. As this level is a socially active zone, these parametric plazas help promote the social interactiveness between the residents. These plazas enhance the quality of space and promote people to relax, rejuvenate and interact with nature and surroundings.



Balcony Interaction



ARUGU Space



Social Bridging



Landscape Features In Site

LANDSCAPE FEATURES IN SITE:

Landscape at site level is designed considering all age groups by providing tot-lot areas. The stepped landscape also acts as amphitheatre that provides a vibrant, healthy environment for the community.

SOCIAL BRIDGING:

Social bridging between the towers builds community life or social ecosystems.

BALCONIES:

Balconies are designed in such a way that every user balcony would interact with other residents vertically with cone of vision less than 45 degrees.

· ARUGU:

Arugu spaces are the increased varendha width near the main core where users/residents interact with their neighbours which helps in healthy social interaction at every floor level.

TRIPLE HEIGHT GREEN POCKETS:

The triple height green pockets are the spaces where users in each set would interact. These green pockets are designed considering all age groups.

Age: 0-6yrs - kid friendly tot-lot areas

7-24yrs – hangout area by enclosing benches/ desk

25-59yrs - hangout area by enclosing benches/ desk

60+ yrs — barrier free environment by providing ramps, views from the pockets. The pockets facing east and west would receive 100% of direct sunlight.

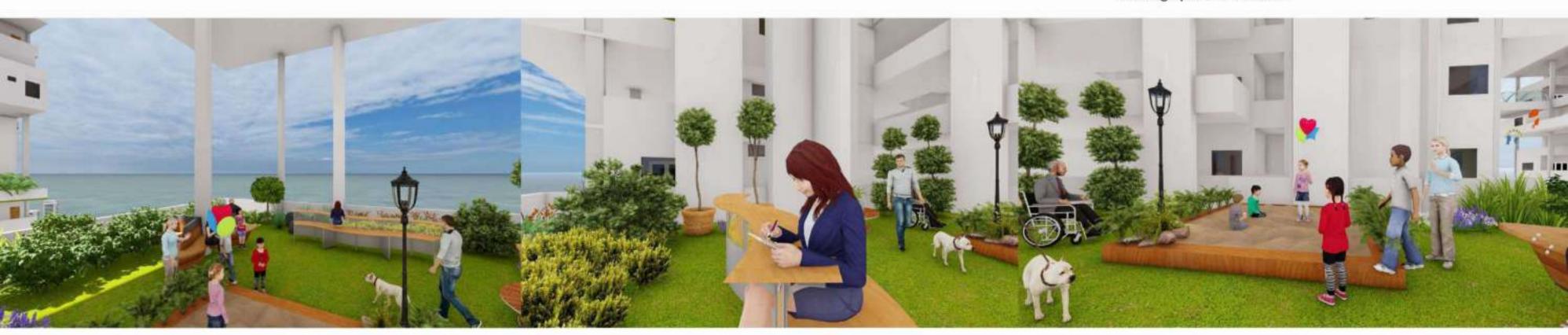
The pockets facing south-east and south-west would receive 75% of direct sunlight.

The pockets facing south would receive 50% of direct sunlight.

Hence, landscaping is done considering the above points.



Seating Space In Pockets

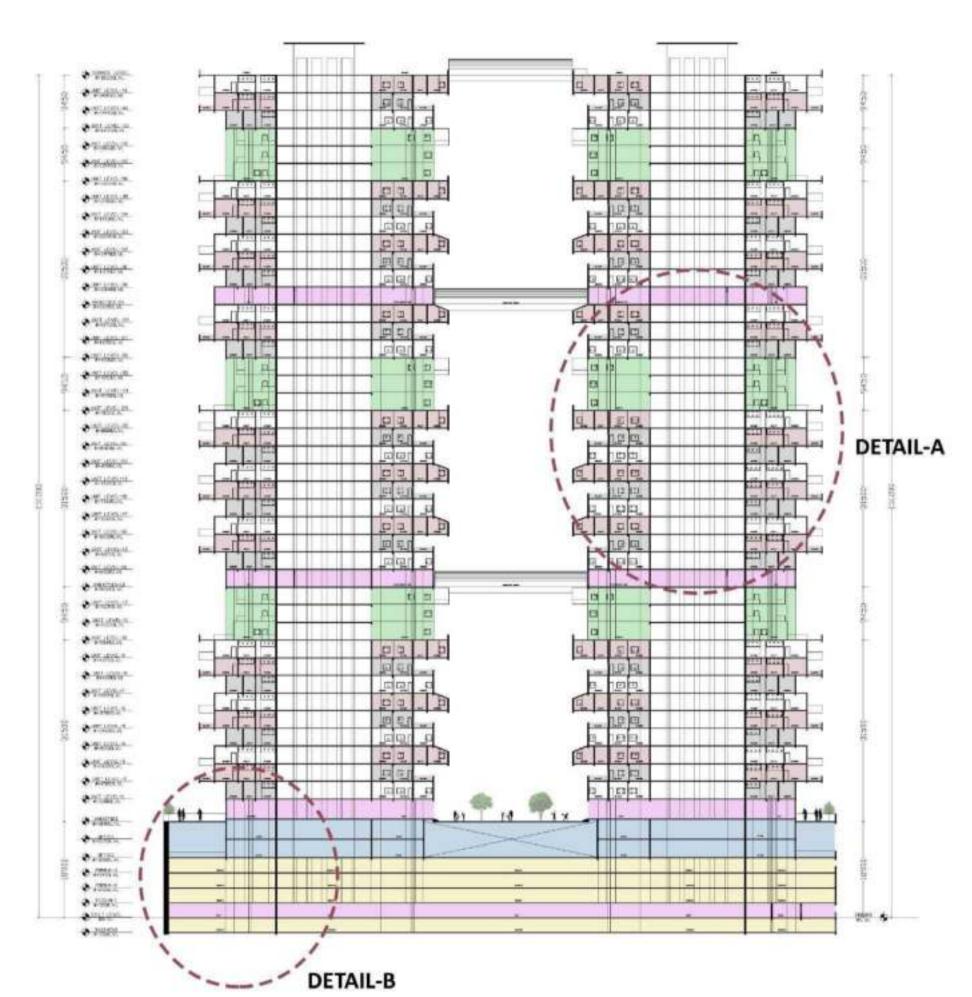


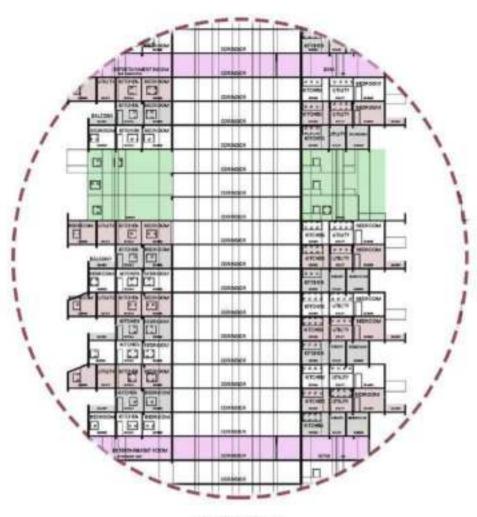
View From Pockets Working Space In Pockets Tot-lot Area In Pockets



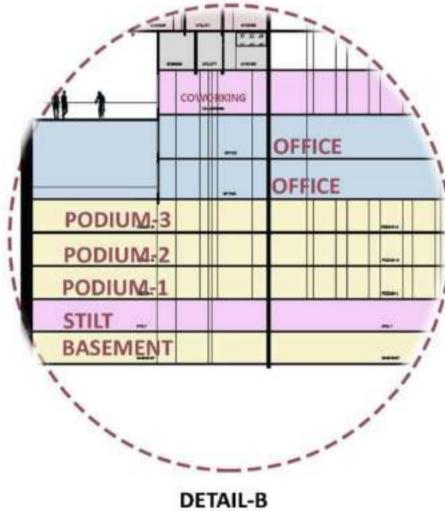
- Parking







DETAIL-A







LANDSCAPING: The landscaping of the site is designed considering the site contours, slopes, and walkability of pedestrians. All the species selected are few of the native species of Visakhapatnam and are abundantly grown in the site surroundings. The trees are located to provide ambient shade and ample sunlight in the site.

Permaculture is the design of an ecologically sound way of living - in households, gardens, communities, and businesses. The design of the landscape becomes self- reliant and resourceful after a certain period. It involves the integration of ecology, landscape, organic gardening, architecture and agro-forestry in creating a rich and sustainable way of living. After a certain period of time, this landscape develops its own ecosystem, hence, making it self-sufficient and cutting maintenance cost.



VERTICAL GARDENS:

Vertical gardens using creepers is a technique used to maximise the wilderness in an urban context. This is used around the free standing columns in the triple height green spaces.





COMPOST PIT:

Decomposing the kitchen and garden waste into organic fertilizer which can be used for organic farming and landscapes.





HARDSCAPE:

Walkways - Walkways are designed with the concept of Acupressure. It creates a daily exercise that is easy to access and has impactful health results. The walkways require Low or no maintenance. They are also water permissible and therefore avoid suppage.



The operation costs are minimized. Solar street lights require much less

VEGETATION

Native Species: These Species are used at all points at open site.













Arjuna Tree Neem Tree

Thatch Palm Bamboo

Elephant Kasava Thatch Palm

Flowering Trees: Adjacent to driveways, Nodal points, main entrance, service entrance, opposite to building entrance points, podium roof top.



Pipal Tree



Trumpet Tree



yard





Singapore-Grave Oleander tree Gulmohar tree Night Jasmine

Edible Species: Permaculture on the site and at terrace gardening.



Banana





papaya







Low Light Plants: In green pockets which recieve low sun light.













Solar Street Lights- Solar street lights are Independent of the utility grid. Hence, maintenance compared conventional street lights.

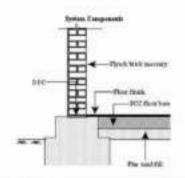
Retaining walls:

in order to retain the natural site contour undisturbed, retaining walls with green creepers as curtains are designed. This helps the vertical members to blend into the site landscapes.

FLY-ASH BRICKS:

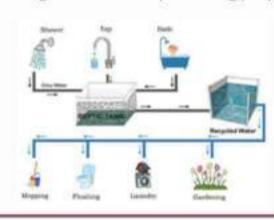
Fly ash bricks are more fire resistant than cement and bud brick. They are also lighter in weight, reducing structural loads. Also, they are "greener", because fly ash - a waste product - replaces cement - a highly energy-intensive material to produce.





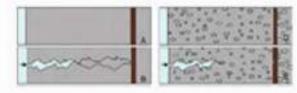
WATER MANAGEMENT:

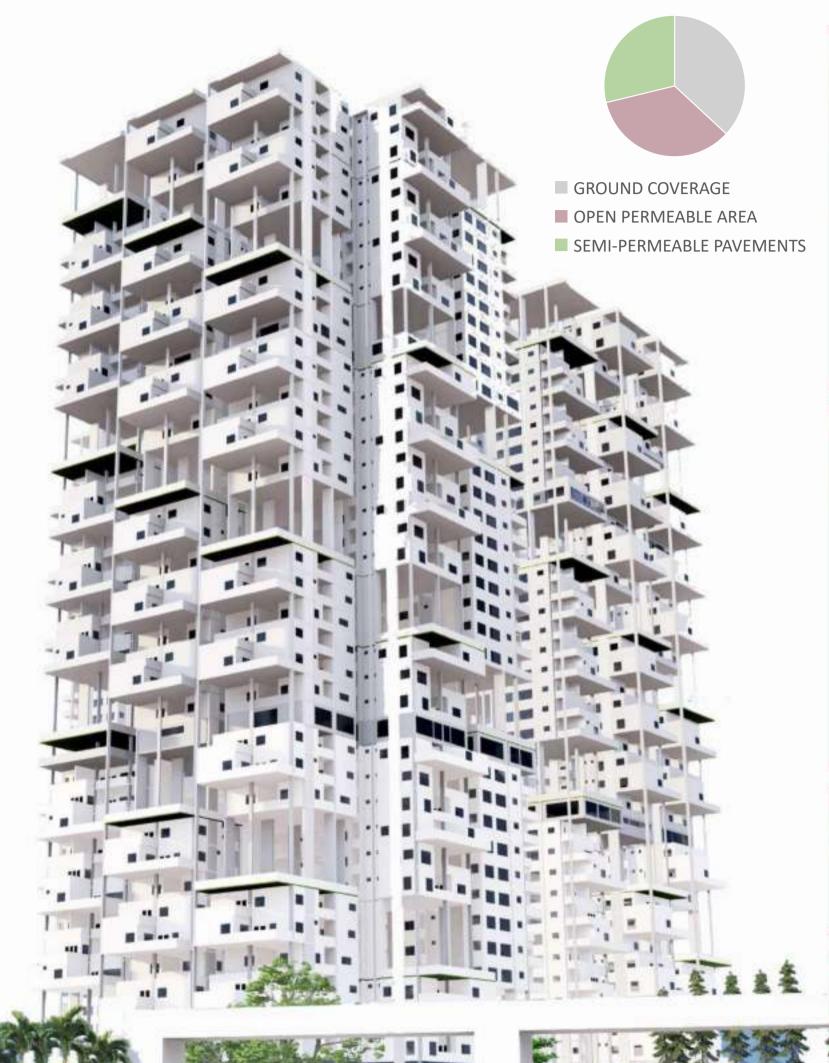
Low contours of the site left to recharge the underground water table by capturing the surface storm water.Recycling of grey water: treated and recycled grey water can be used for landscaping, flushing and other daily servicing purposes.



SELF- HEALING CONCRETE:

It has higher compressive and flexural strength.
It prevents corrosion of steel due to reduced
permeability and it best suited for humid regions
like Visakhapatnam.





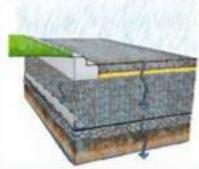
PERMEABLE DRIVEWAYS:

Permeable driveways and pedestrian pathways allow storm water to infiltrate into underlying soil, hence recharging the ground water table.

Semi - Permeable area-17560.58sq.m

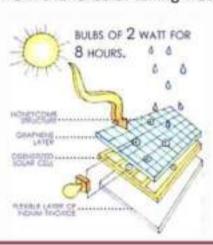
- 28.8% of site area

Ground Coverage - 36.9% of site. Open permeable area - 34.3% of site



HYBRID SOLAR PANELS AND WATER HEATERS:

They provide electricity in both sun and rain. In the presence of sun, it converts the solar radiation into electricity, and in case of rains, it generates electricity from the force of falling water.



WASTE MANAGEMENT:

Vermi- composting kitchen waste to get organic fertilizer and provision of sewage treatment plant to treat and reuse wastewater.



FIRE SUMP

Usage of water in the swimming pool in emergency fire situations, providing required volume of water.



PROGRAM:

SITE PARAMETERS AND AREA C	ALCULATION	
PARAMETER	UNITS	VALUE
SITE AREA	sq.m.	37000
FRONT SETBACK	m	18
SIDE SETBACK 1	m	18
SIDE SETBACK 2	m	18
REAR SETBACK	m	18
MAX. PERMISSIBLE GROUND COVRAGE	*	40
PROJECTED MAX. PLOT COVERAGE AREA	sq.m.	14800
MAX. PERMISSIBLE F.A.R		4
PROJECTED MAX, BUILT-UP AREA	sq.m.	148000
ERMISSIBLE MAX. HEIGHT OF THE BUILDING	m	N.A.
MIN. AREA OF GREEN SPACES	56	15
PROJECTED MIN. AEA OF GREEN SPACE	esq.m.	3330

SITE PARAMETERS		
PARAMETER	UNIT	ACHIEVEC
FRONT SETBACK	m	18
SIDE SETBACK 1	(D ())	20
SIDE SETBACK 2	m	18
REAR SETBACK	m	18
GROUND COVRAGE	96	36.9
PLOT COVERAGE AREA	sq.m.	13683
F.A.R. ACHIEVED		3,98
TOTAL BUILT-UP AREA ACHIEVED	sq.m.	147230
70% OF F.A.R. AREA FOR PERMANENT PROGRAMS	sq.m.	103080
BO% OF F.A.R. AREA FOR FLEXIBLE PROGRAMS	sq.m.	44170
HEIGHT OF THE BUILDING	ama:	151.2

UNIT PROGRAM FOR TOWER				
UNIT TYPE	NO.OF PROTOTYPES	PLINTH AREA PER UNIT (sq.m.)	NO. OF UNITS	TOTAL AREA
A-ZBHK	3	120	78	9360
8-2.5 BHK	3	150	78	11700
C- 3 BHK	3	180 TOTAL	78 234	14040

	LOOR PROG	RAMS FOR TOWER	
FLOOR TYPE	BUILT-UP AREA	TYPOLOGY	HEIGHT
BASEMENT	NA	Parking	3
STILT	X 50.00	Semi-public Ammenities	3
PODIUM 1,2	NA	Parking	3
PODIUM 3	MA	Office and co-working	3
		Recreational and co-working	
AMENITIES		spaces	3
Typical floors 8,21,33,46	785	TYPE A AND TYPE B	3.
Typical floors 9,22,34,47	8.2/0	TYPE A AND TYPE C	3
Typical floors 10,23,35,48	910	TYPE B AND TYPE C	.3
Typical floors 11,24,37	900	TYPEA, TYPEB AND TYPEC	3
Typical floors 12,25,38	900	TYPEA, TYPES AND TYPE C	3
Typical floors 13,26,39	900	TYPEA, TYPEB AND TYPEC	3
Typical floors 14,27,40	900	TYPEA, TYPEB AND TYPEC	3
Typical floors 15,28,41	900	TYPEA, TYPEB AND TYPEC	3
Typical floors 16,29,42	900	TYPEA, TYPE, BAND TYPEC	3
Typical floors 17,30,43	900	TYPEA, TYPEB AND TYPEC	3
Typical floors 18,31,44	900	TYPEA, TYPEB AND TYPE C	3
Typical floors 19,32,45	900	TYPEA, TYPES AND TYPE C	3
TOTAL	34360	C.	
OTAL(3 Towers)	103080		

	AMENITIES PROGRAM	
PARAMENTER	NUMBER	TOTAL BUILT-UP AREA
	180 cars (basement) 235 cars(podium-1)+ 235 cars(podium- 2)+	
PARKING	235 cars(podium- 3) TOTAL = 885 CARS	NA
1.0 m (c)		
SYM Mini theatre	9	1200
With theatre	ibi:	800
INDOOR GAMES/		
ENTERTAINMENT AREAS	11	1400
MULTI- PURPOSE HALLS	2 (500+170)	940
POOLS	1	250
CO-WORKING SPACES OFFICE/CO-WORKING	15	1500
(public)	6	13600
COVID FACILITIES	1	400
MEDICAL FACILITIES	40	275
RETAIL SPACE	1	2200
RESTAURANT/ CAFÉ	72	1065
DAY CARE CENTER	i	200
HOUSING FOR		
TEMPORARY WORKERS	19	520
ADMINISTRATION	19	370
SPA	4	700
SAUNA	4	700
SEMI-OPEN PLAZAS AND		0.00000
RECREATIONAL AREAS	NA	10100
TRIPLE HEIGHT		
RECREATIONAL SPACES	78 (Built-up area = 50%)	8000
GUEST ROOMS	6	200
	TOTAL	44170

THANK YOU