

BIM PORTFOLIO



KATRAVATHU RAHUL NAIK

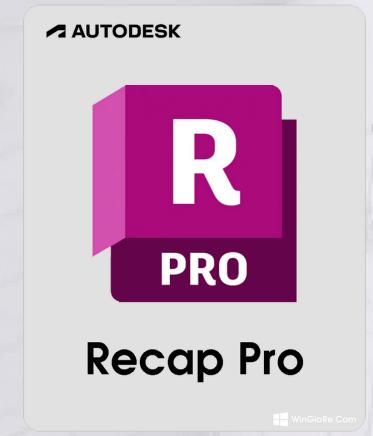
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 <https://github.com/Katravathu9>

technical skills



BIM TECHNICAL SKILLS

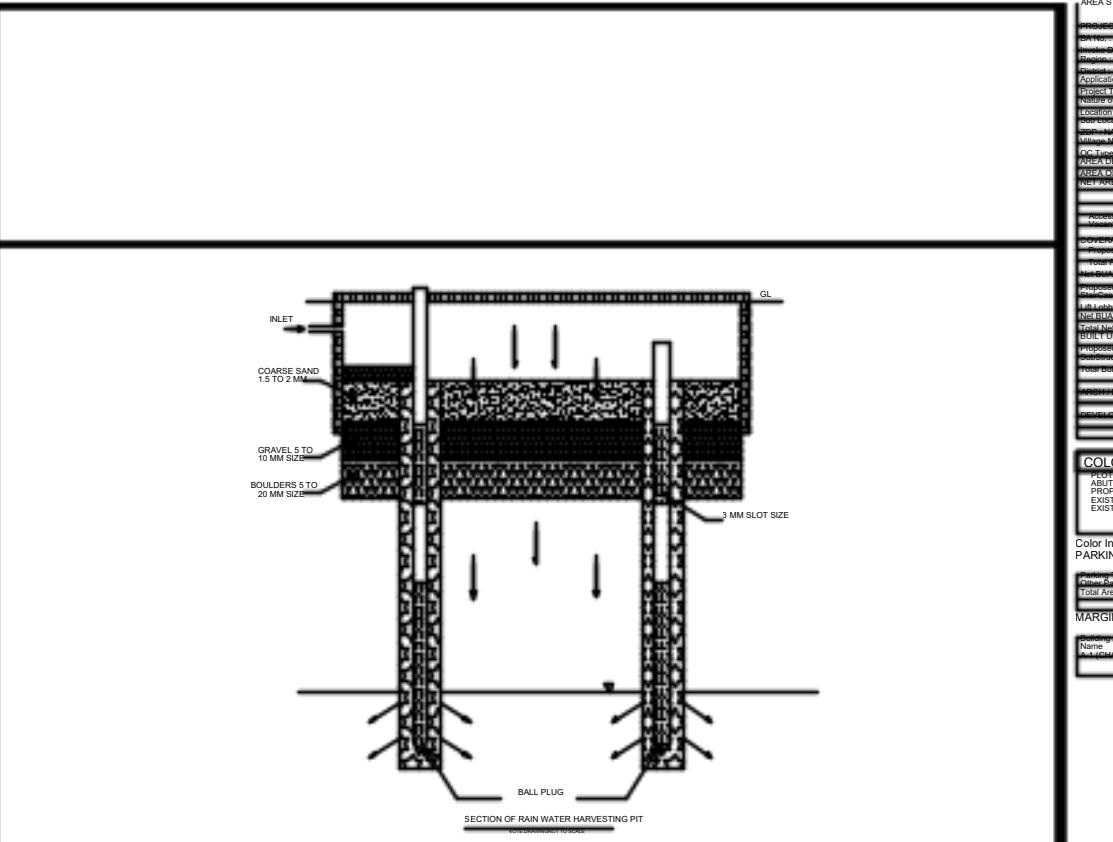
- Planning, Designing & Detailing of Residential, Commercial & Educational structures, Preparation of 3d Models.
- BIM Modelling for specific design disciplines.
- Hands-on experience in using BIM software's such as Revit, and AutoCAD.
- Ensure Construction document accuracy based on Architecture BIM Modelling.
- Collaborate and Coordinate with disciplines design-changes and model challenges.
- Acquired knowledge of BIM Execution Plan (BEP), COBie and BIM project workflow criteria.
- Understanding concepts like LOD, and Dimensions of BIM, Parameters, CAD to BIM, Scan to BIM & BIM 360.
- Acquired knowledge of Work Sharing, and how to create Central & Local files.
- Creation of Revit families (Parametric & Non-Parametric).
- Realistic Renderings and walkthroughs of Architectural Models on Escape.

SOFT SKILLS

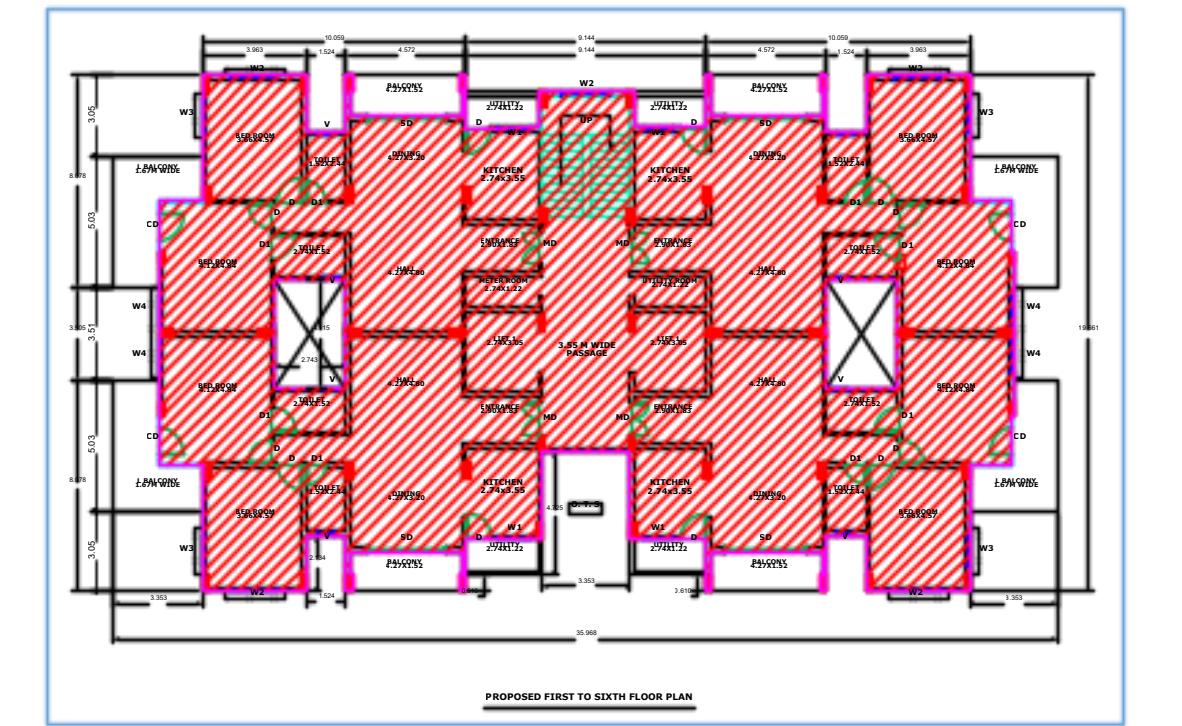
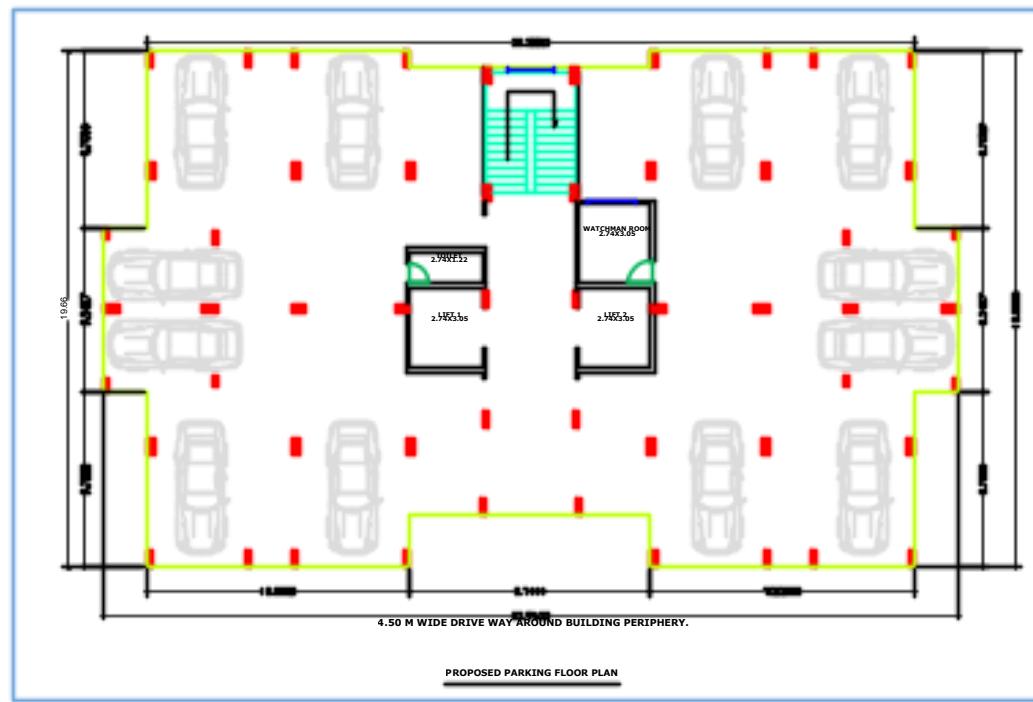
- Good Planning, designing & Visualization Skills.
- Keen to learn new technology.
- Quick learner, Curious to learn new things.
- Problem-solving ability.
- Hardworking, Honest, Self motivated, Discipline.
- Good Verbal Communication skills (English, Hindi, Telugu).
- Ability to cope with failures and try to learn from them

1)GATED COMMUNITY

- Designed a G+6 gated community project using 2D AutoCAD drafting and 3D Revit BIM modeling, including foundation layout and structural components, reducing design errors by 25% through coordinated modeling.
- Prepared cost estimation and BOQ with quantity takeoff from Revit models, ensuring 100% compliance with RERA regulations, Vastu principles, and local building by-laws, improving approval efficiency by 20%.
- Executed accurate structural detailing and submission drawings, minimizing rework by 30% and ensuring timely project submission as per statutory authority requirements.



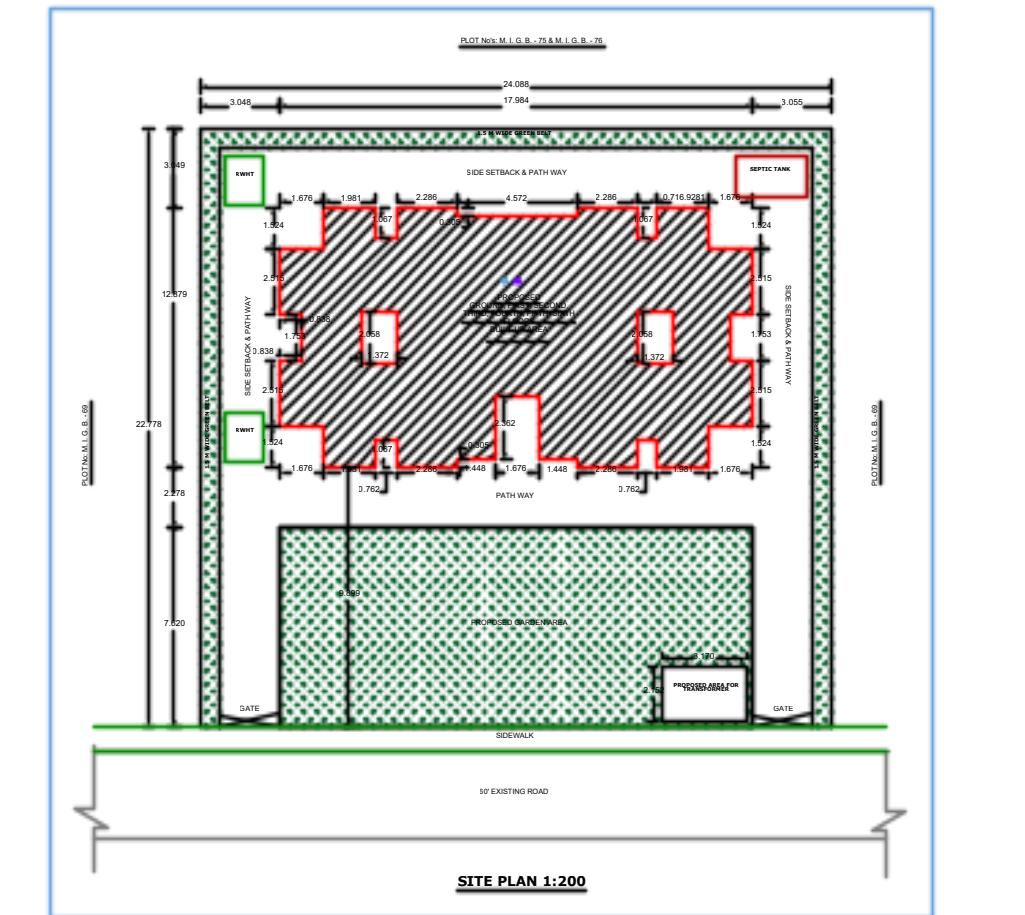
PROJECT DETAILS:		VERSION NO.: 1.501.44
Project Name:	SANGI WADI	Proposed Use : Residential
Region:	RANCHI & REGION	Area : 166.45 Sq. M.
Category:	GENERAL	Plot No. : 1022
Application Type:	General Proposal	Actual Plot Area : 166.45 Sq. M.
Nature of Development:	New	Actual Plot Width : 18.60 M.
Plot No.:	1022	Actual Plot Length : 10.00 M.
Address:	Plot No. 1022, Sangi Wadi, Ranchi, Jharkhand, India	Actual Plot Depth : 16.60 M.
Municipality Name:	SANGI WADI	North - South : 16.60 M.
DD/Tax File No.:	1022	East - West : 18.60 M.
Area of Plot (Minimum):	166.45 Sq. M.	
NET AREA OF PLOT:	166.45 Sq. M.	
(A) (A'Decking)	166.45 Sq. M.	
Plot Boundary Area:	166.45 Sq. M.	
Ground Coverage Area (G.C.A.):	166.45 Sq. M.	
Cost for Coverage Area (C.C.A.):	572.5	
Proposed Coverage Area (P.C.A.):	166.45 Sq. M.	
Actual Plot Area (A.P.A.):	166.45 Sq. M.	
Actual Plot Width (A.P.W.):	18.60 M.	
Actual Plot Length (A.P.L.):	10.00 M.	
Actual Plot Depth (A.P.D.):	16.60 M.	
Plot Margin (P.M.):	2022.5	
GENERAL INFORMATION:	OWNER: SANGI WADI	
GENERAL INFORMATION:	GENERAL AUTOMOTIVE	



SPECIFICATIONS:	
MD - MAIN DOOR	1.20 X 2.10 M
D D1-DEBRUSH DOOR	0.90 X 2.10 M
W1 - WINDOW W2 -	0.75 X 2.10 M
WINDOW W3 -	1.20 X 0.9 M
WINDOW W4 -	1.83 X 1.20 M
WINDOW W5 -	1.20 X 1.20 M
WINDOW	1.20 X 1.20 M
V - TRANSOM WINDOW	0.60 X 0.60 M
ST SEPTIC TANK	
B.W.BORE WELL	
R. W.H.P. - WATER HARVESTING PITS OF 1.50 M DEPTH	
PLASTERING WITH C.M (1:5)	
BRICK MASONRY WITH C.M (1:6)	

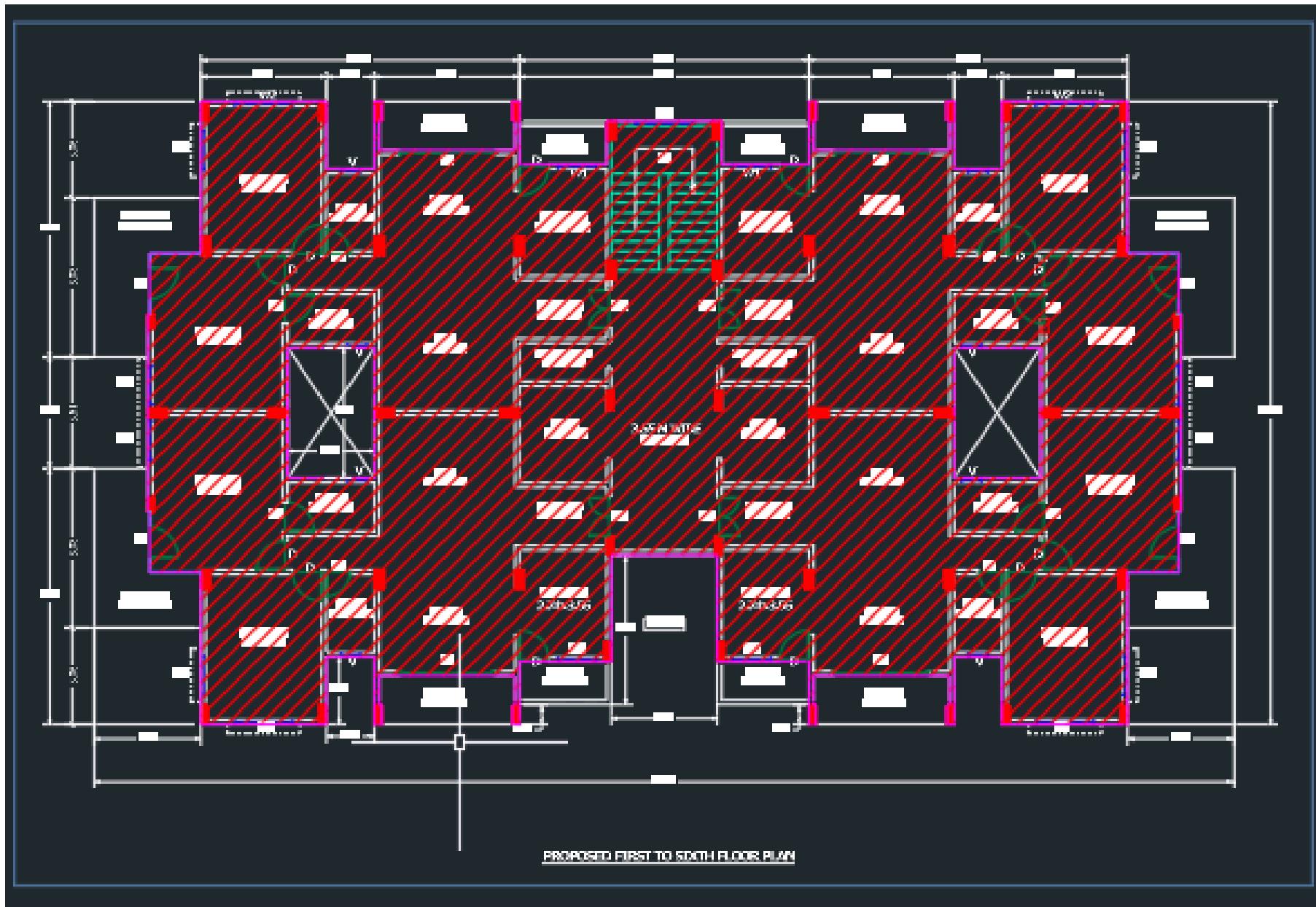
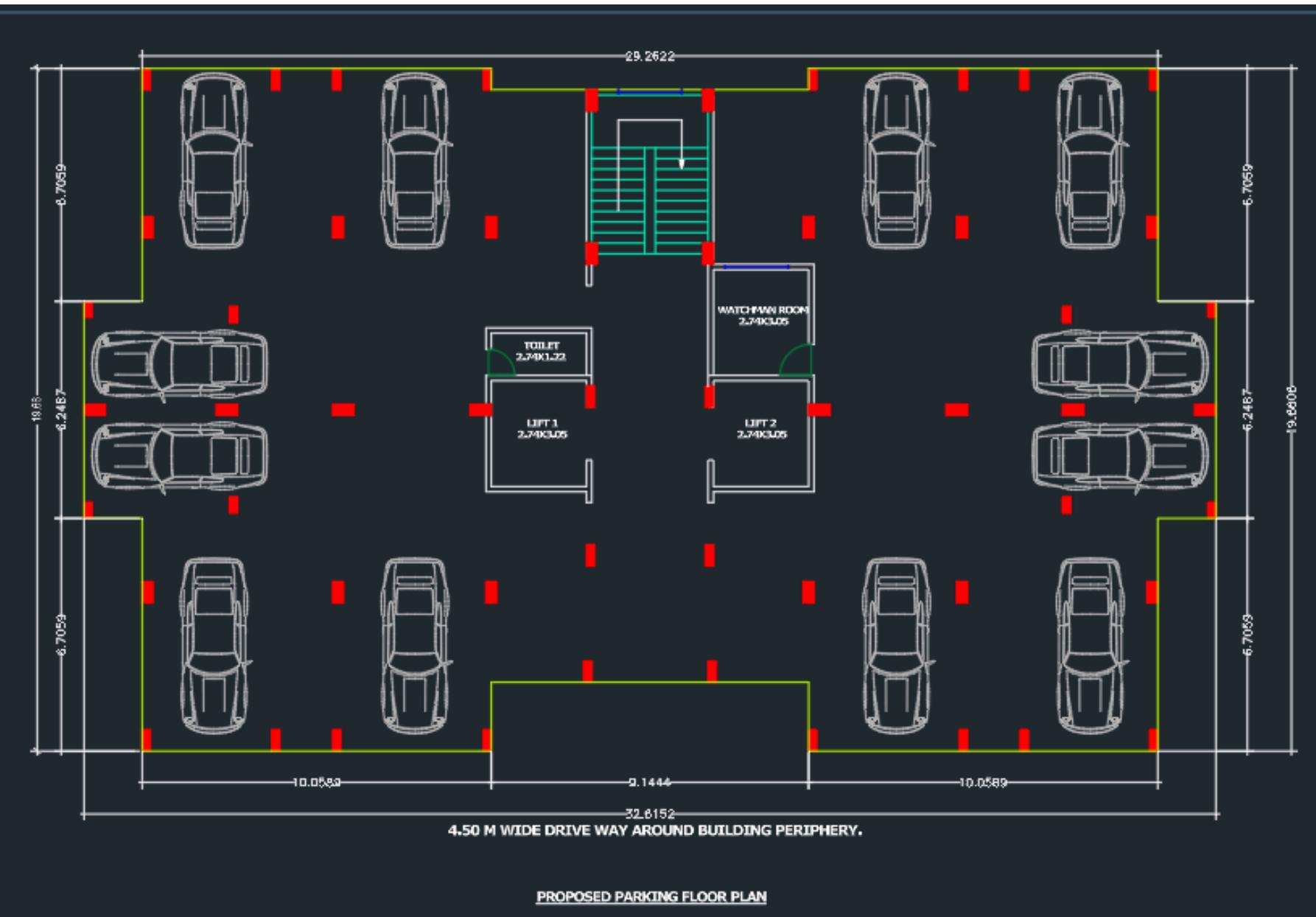
AREA STATEMENT:	
TOTAL SITE AREA (AS PER DOCUMENT)-	2200.15 Sq. M
TOTAL SITE AREA (AS ON GROUND)	2194.67 Sq. M
PROPOSED PARKING FLOOR AREA	572.57 Sq. M
PROPOSED WATCHMAN ROOM AND TOILETS AREA AT PARKING FLOOR	11.63 Sq. M
PROPOSED FIRST FLOOR AREA	514.95 Sq. M
PROPOSED SECOND FLOOR AREA	514.95 Sq. M
PROPOSED THIRD FLOOR AREA	514.95 Sq. M
PROPOSED FOURTH FLOOR AREA	514.95 Sq. M
PROPOSED FIFTH FLOOR AREA	514.95 Sq. M
PROPOSED SIXTH FLOOR AREA	514.95 Sq. M
PROPOSED LIFT AREA AT PARKING FLOOR	24.50 Sq. M
PROPOSED STAIRCASE AREA @ PARKING FLOOR	18.40 Sq. M
REMAINING SITE AREA	330.58 Sq. M

2D DRAFTING

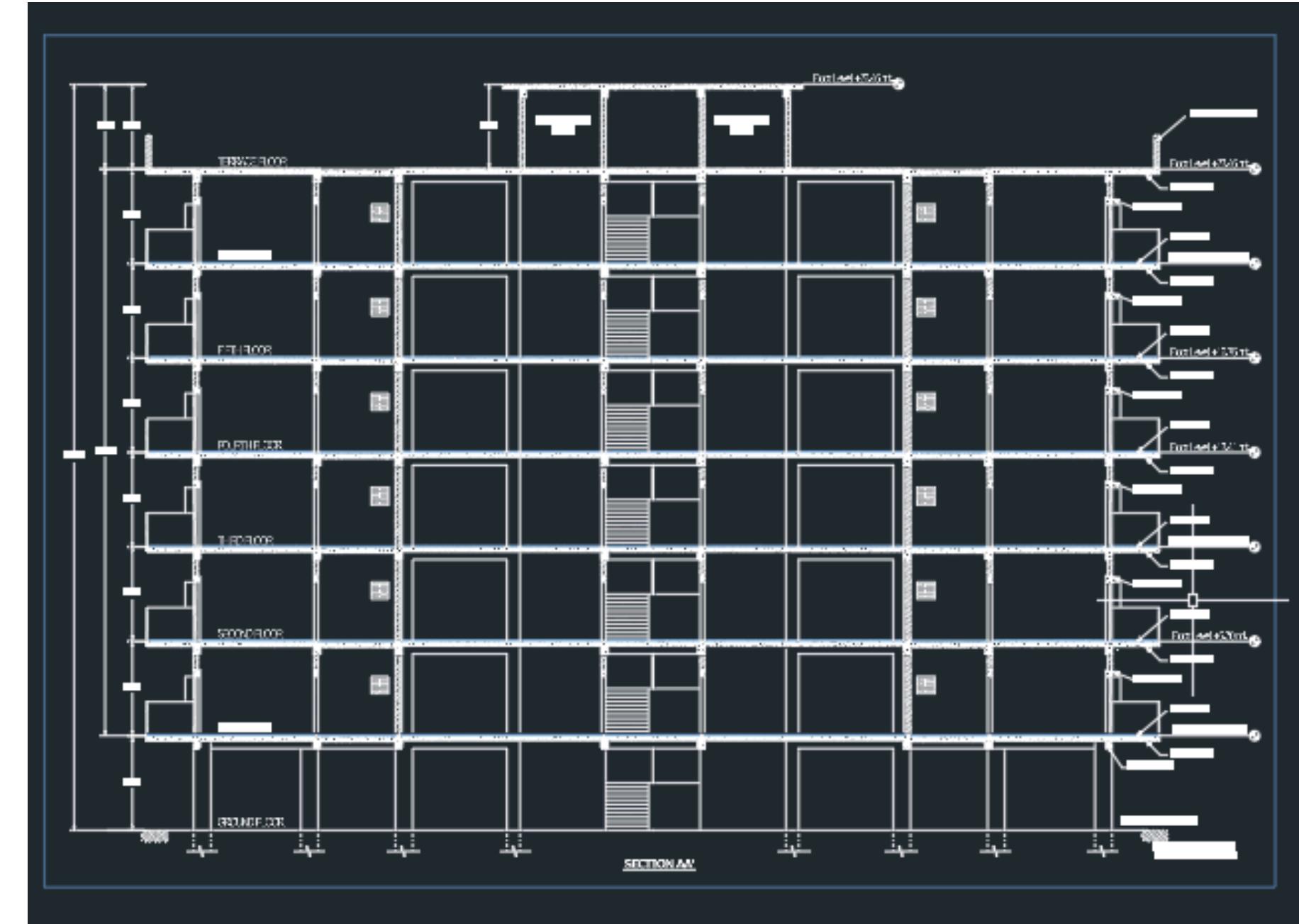




3D View

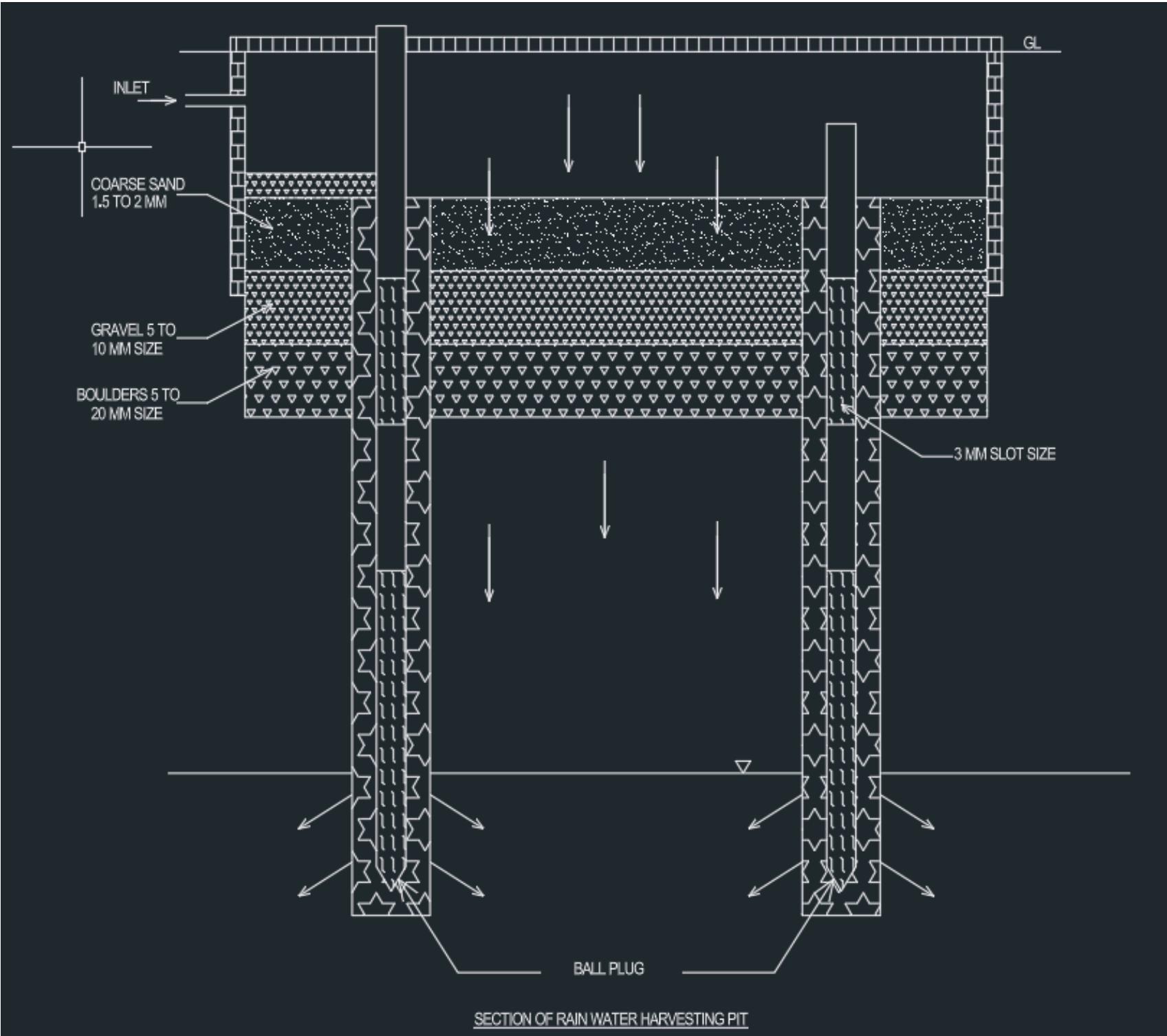


Parking Area and Main Entrance



Front View

- This is a G+6 residential apartment building with a symmetrical elevation, central staircase ($\approx 1.5\text{--}2.0\text{ m}$ wide), balconies projecting about 1.2 m, typical floor height $\approx 3.0\text{ m}$, and total building height $\approx 18\text{--}20\text{ m}$ including parapet.
- The section shows RCC framed structure with columns ($\approx 0.3\text{ m} \times 0.45\text{ m}$), beams ($\approx 0.23\text{ m} \times 0.45\text{ m}$), slab thickness $\approx 0.125\text{--}0.15\text{ m}$, parking at ground floor (clear height $\approx 2.4\text{--}3.0\text{ m}$), and overall width $\approx 15\text{--}18\text{ m}$.



REFERENCE:

PROPOSED SHOWN AS

RAIN WATER HARVESTING PITS
(OF 6.80 X 2.00 X 1.50 M) SHOWN AS
(2 No.s WITH A VOLUME OF 10.20 Cum EACH; TOTAL = 20.40 Cum.)

-
-
-
-

MORTGAGE AREA SHOWN AS

DRIVE WAY SHOWN AS (IN STILT FLOOR)

MORTGAGE AREA INFORMATION:

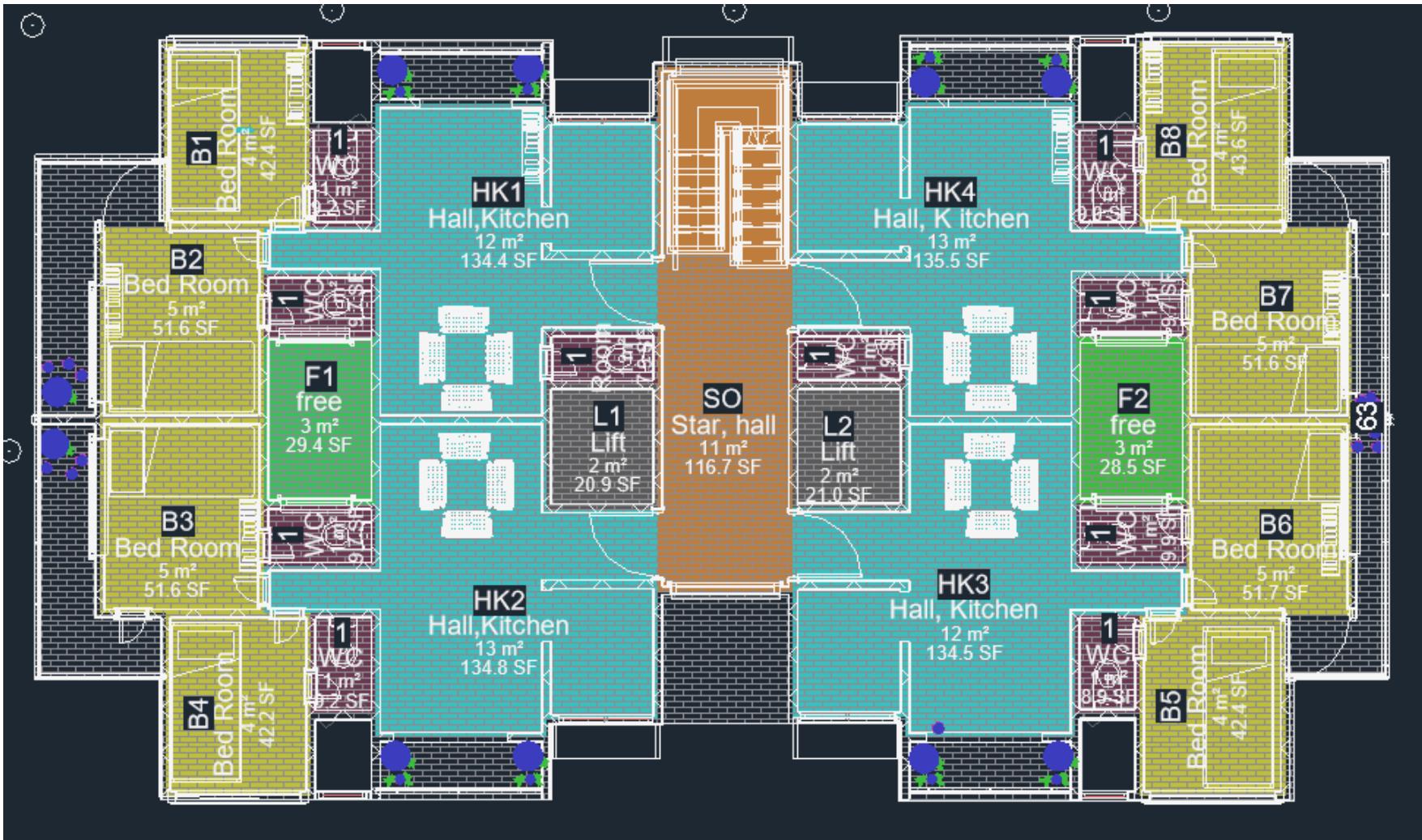
* THE BUILT-UP AREA OF 166.45 Sq. Mts. (10.07 %)
AT SECOND FLOOR REQUIRED TO BE HAND OVER
TO THE SANCTIONING AUTHORITY BY WAY OF A
NOTARISED AFFIDAVIT.

MORTGAGE AREA SHOWN AS

-



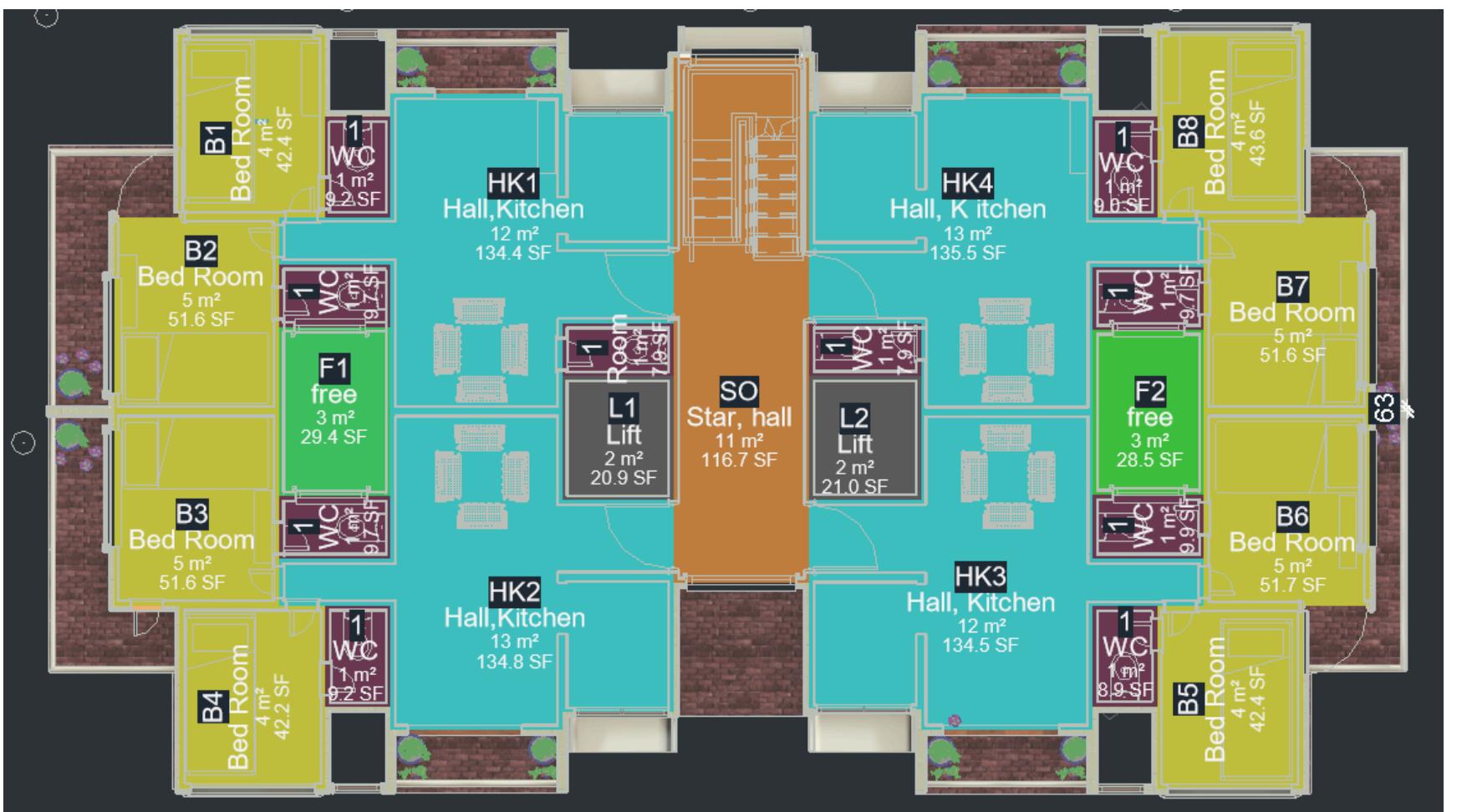
Section of Rain Water Harvesting Pit
UNITES IN METTERS



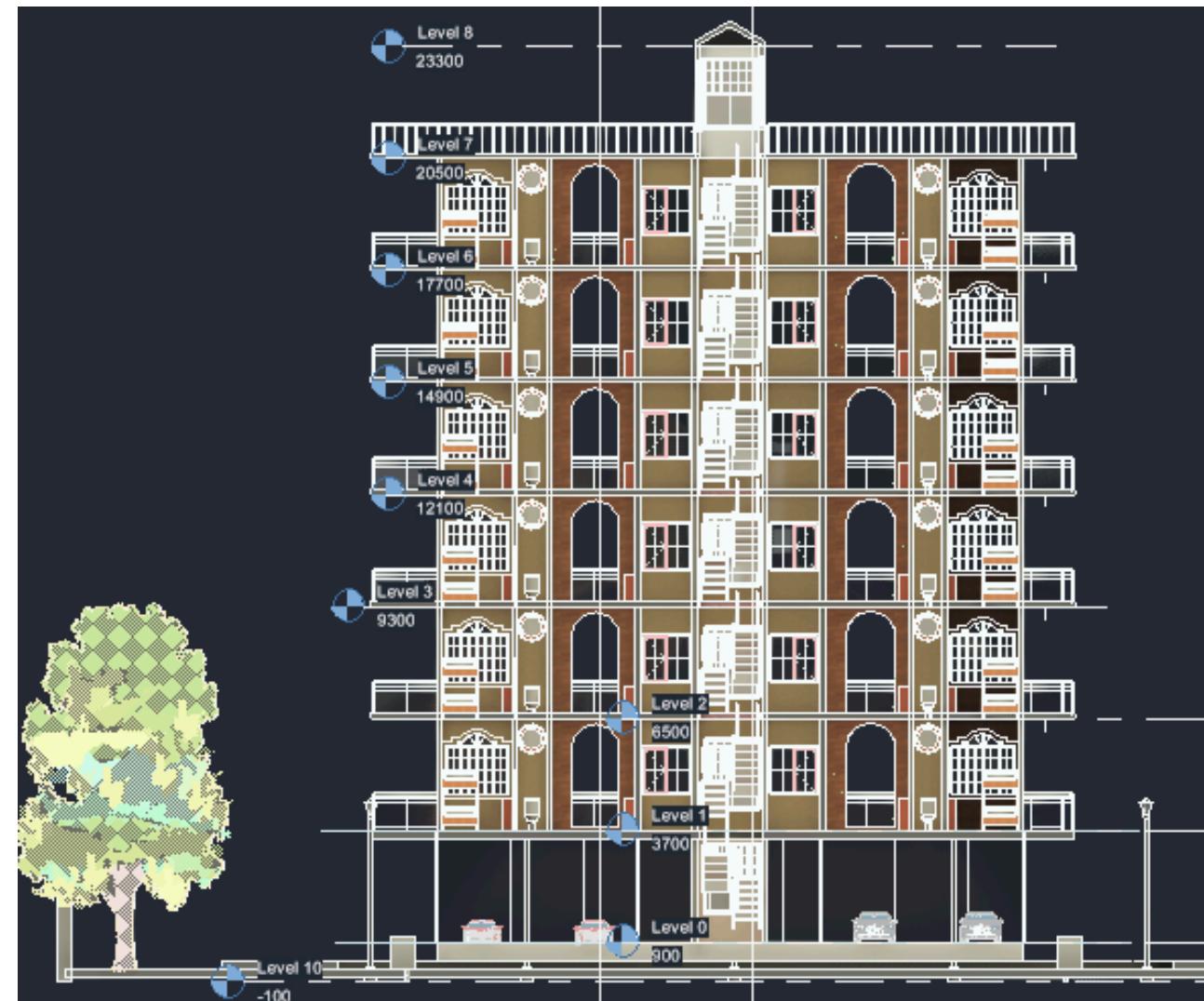
By Room Number Legend

1	F1
B1	F2
B2	HK1
B3	HK2
B4	HK3
B5	HK4
B6	L1
B7	L2
B8	SO

Color Explanation in Plan (Path / Zoning):



- Light Blue (HK1, HK2, HK3, HK4): Hall + Kitchen areas (main living spaces).
- Yellow (B1–B8): Bedrooms.
- Green (F1, F2): Free / Open utility spaces ($\approx 3 \text{ m}^2$).
- Brown (SO): Staircase lobby / common circulation area.
- Dark Grey: Lift areas (L1, L2).
- Maroon: Toilets / W.C. areas.
- White Lines: Doors, windows, and internal partitions.





3D & Front View

In this 3D residential design, colours can be related to human comfort, emotions, and friendly connection with nature (animals & environment):

- ● Earthy Brown / Beige (Building Walls): Represents stability and warmth – like soil and natural habitat – creating a safe and comfortable feeling for humans and animals.
- ■ Terracotta / Red Roof: Symbol of shelter and protection, similar to traditional homes that feel secure and welcoming.
- ● Green Areas (Landscape): Connects to nature, trees, birds, and small animals – promotes harmony, freshness, and healthy living for people.
- ○ White / Light Railings & Frames: Shows cleanliness, peace, and openness – encouraging friendly and positive human interaction.
- ● Dark Grey Roads: Represents movement and connectivity – safe pathways for people while separating vehicle zones from green areas.

Overall, the colour combination creates a friendly, natural, and human-centered environment, encouraging close relationships between residents, nature, and surrounding living beings.

<u>SPECIFICATIONS:</u>		<u>AREA STATEMENT:</u>	
MD - MAIN DOOR	- 1.20 X 2.10 M	TOTAL SITE AREA (AS PER DOCUMENT) -	2200.15 Sq. M
D - DOOR	- 0.90 X 2.10 M	TOTAL SITE AREA (AS ON GROUND) -	2194.67 Sq. M
D1 - FLUSH DOOR	- 0.75 X 2.10 M	PROPOSED PARKING FLOOR AREA -	572.57 Sq. M
W1 - WINDOW	- 1.20 X 0.9 M	PROPOSED WATCHMAN ROOM AND TOILETS AREA AT PARKING FLOOR -	11.63 Sq. M
W2 - WINDOW	- 1.83 X 1.20 M	PROPOSED FIRST FLOOR AREA -	514.95 Sq. M
W3 - WINDOW	- 1.20 X 1.20 M	PROPOSED SECOND FLOOR AREA -	514.95 Sq. M
W4 - WINDOW	- 1.20 X 1.20 M	PROPOSED THIRD FLOOR AREA -	514.95 Sq. M
W5 - WINDOW	- 1.20 X 0.76 M	PROPOSED FOURTH FLOOR AREA -	514.95 Sq. M
V - TRANSOM WINDOW	- 0.60 X 0.60 M	PROPOSED FIFTH FLOOR AREA -	514.95 Sq. M
ST - SEPTIC TANK		PROPOSED SIXTH FLOOR AREA -	514.95 Sq. M
B.W. - BORE WELL		PROPOSED LIFT AREA AT PARKING FLOOR -	24.50 Sq. M
R. W.H.P. - WATER HARVESTING PITS OF 1.50 M DEPTH		PROPOSED STAIRCASE AREA @ PARKING FLOOR -	18.40 Sq. M
PLASTERING WITH C.M (1:5)		REMAINING SITE AREA -	330.58 Sq. M
BRICK MASONRY WITH C.M (1:6)			

COLOR INDEX	
PLOT BOUNDARY	
ABUTTING ROAD	
PROPOSED WORK (COVERAGE AREA)	
EXISTING (To be retained)	
EXISTING (To be demolished)	

Color Index:

PARKING CALCULATION:

Parking Type	Prop No.	Prop Area
Other Parking	1	572.57
Total Area	1	572.57

MARGIN DETAIL:

Building / Wing Name	Road Name	Front Margin	Rear Margin	Side1 Margin	Side2 Margin
A-1 (CHAMARTI)	18.00 M WIDE ROAD	19.7	6.10	6.10	6.10

AREA STATEMENT: TENALI (CRDA)	VERSION NO.: 1.101.44
	VERSION DATE: 24/01/2023

PROJECT DETAIL :

BA No. : -	Proposed Use : Residential
Invoke Department : AP DTCP ULBs	Proposed Activity : Residential Apartment Bldg
Region : SANGLI REGION	Plot Near by Religious Structure : NA
District : SANGLI	Land Use Zone : NA
Application Type : General Proposal	Land Sub Use Zone : NA
Project Type : Building Permission	Abutting Road Width : -
Nature of Development : New	Plot No. : -
Location : Municipality under CRDA	Survey No. : -
Sub Location : New Areas / Approved Layout Areas	North : -
ZDP : NA	South : -
Village Name : SANGALWADI	East : -
OC Type : Fully OC	West : -

AREA OF PLOT (Minimum)	(A)	2194.67
NET AREA OF PLOT	(A-Deductions)	2194.67
Accessory Use Area		9.00
Vacant Plot Area		1622.1
COVERAGE CHECK		
Proposed Coverage Area (51.55 %)		572.57
Total Prop. Coverage Area (51.55 %)		572.57
Net BUA CHECK		
Proposed OC Residential Net BUA		1652.90
StairCase Area Add in Net BUA		20.76
Lift Lobby Area Add in Net BUA		13.14
Net BUA Area		1682.40
Total Net BUA Area		1682.40
BUILT UP AREA CHECK		
Proposed BuiltUp Area		2019.35
SubStructure Area Added in BuiltUp Area		9.00
Total BuiltUp Area		2028.35
ARCH / ENGG / SUPERVISOR (Regd)	OWNER	
DEVELOPMENT AUTHORITY	LOCAL BODY	

