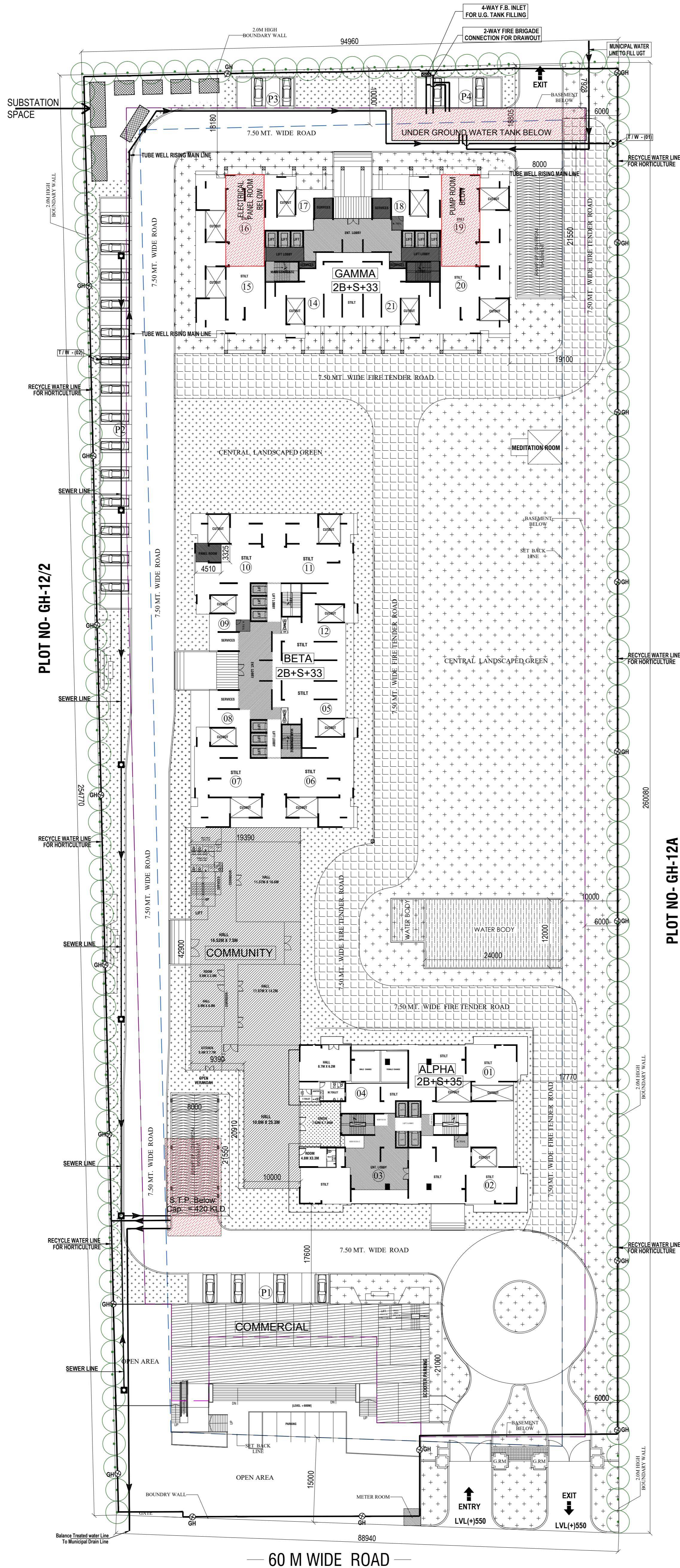


-24 M WIDE ROAD -



PROJECT - PROPOSED GROUP HOUSING (SKA DESTINY ONE) AT PLOT NO GH-12B, SECTOR - ZETA-1AT G. NOIDA U.P.		
DESIGN OF SEWER LINE		
Population		
Total No. of Apartments	=	645 Nos.
Total Permanent Population @ 4.5	=	2,903 Persons
Club & Floating Population	=	500 Persons
Staff	=	250 Persons
Total Water Demand		
Apartments @ 135 lpcd	=	3,91,838 Liters
Club & Floating @ 15 lpcd	=	7,500 Liters
Staff @ 45 lpcd	=	11,250 Liters
Total Water Demand	=	4,10,588 Liters
By taking Interception factor @ 90%		
Hence Total Sewage Load	=	3,69,529 Lit/day
	or	4.28 Lit/sec
By taking Peak Factor @ 3		
Peak Sewage Generated (3 times of Avg. Flow)	=	12.83 Lit/sec
Sewer Pipe Design		
Final Sewer Pipe Dia Selected	=	250 mm
Slope (1 in ...)	=	350
Sewer Design as per Manning Formula		
$V = \frac{3.968 \times 10^{-3} \times D^{2/3} \times S^{1/2}}{n}$		
$V = 0.77$ m/sec		
D = Dia (mm)	=	250 mm
S = Slope	=	350
n = Manning Coefficient =		0.011
V = Velocity (m/sec)		
Actual Pipe Capacity (Q) at 100% flow	=	$\frac{\pi D^2 \times V}{4}$
	=	0.037542 m ³ /sec
	=	37.54 Lit/sec
Where -		
D = Dia (mm)	=	250 mm
V = Velocity (m/sec)	=	0.77
Q = Pipe Capacity (at full flow) m ³ /sec		
Peak Sewage Generated (site peak discharge)	=	12.83 Lit/sec
Actual Pipe Capacity at 100% flow	=	37.54 Lit/sec
Site peak discharge is less than 50% of pipe capacity, hence 250 mm Pipe Dia is OK		

LEGEND :		
S. No.	SYMBOL	DESCRIPTION
1.		RECYCLED WATER SUPPLY PIPE LINE.
2.		RISING MAIN WATER PIPE LINE.
3.		MUNICIPAL WATER SUPPLY PIPE LINE.
4.		PROPOSED TUBE WELL
5.		BASEMENT LINE
6.		GARDEN HYDRANT

LEGEND :		
S. No.	SYMBOL	DESCRIPTION
1.		MANHOLE
2.		SEWER LINE
3.		BASEMENT LINE

Project : PROPOSED GROUP HOUSING (SKA DESTINY ONE) PROJECT AT PLOT NO GH-12B, SECTOR - ZETA-1 AT G. NOIDA U.P.	Title : SITE PLAN.	Drawing Released For : <input type="checkbox"/> APPROVAL <input type="checkbox"/> ADVANCE COPY <input checked="" type="checkbox"/> SUBMISSION <input type="checkbox"/> CONSTRUCTION	Drg. No. : SKA/EX/S-01 Date : Nov. 2023 Scale : 1 : 320	Drawn By : Abhilash Design By : R.k Ckd By : Anand Havelia	Architects : ATWIN ISO 9001-2008 CERTIFIED BRIJ (INDIA) ARCHITECTS F-89, GREEN PARK, NEW DELHI-16. Ph. +91-11-26853815, 26853077 Fax : +91-11-26850788 E-mail : brijarch@rediffmail.com, info@atwin.in Website : www.atwin.in	Services Consultant : Consummate Engineering Services (P) Ltd. Noida Office : B - 67, Sector - 67, Noida - 201 301 Tel : (0120) 6613500 (24 Lines) Lko Office : R 006, Rohtas Plumeria, Gomti Nagar, Lucknow e mail : mail@cespl.in website : www.cespl.in
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