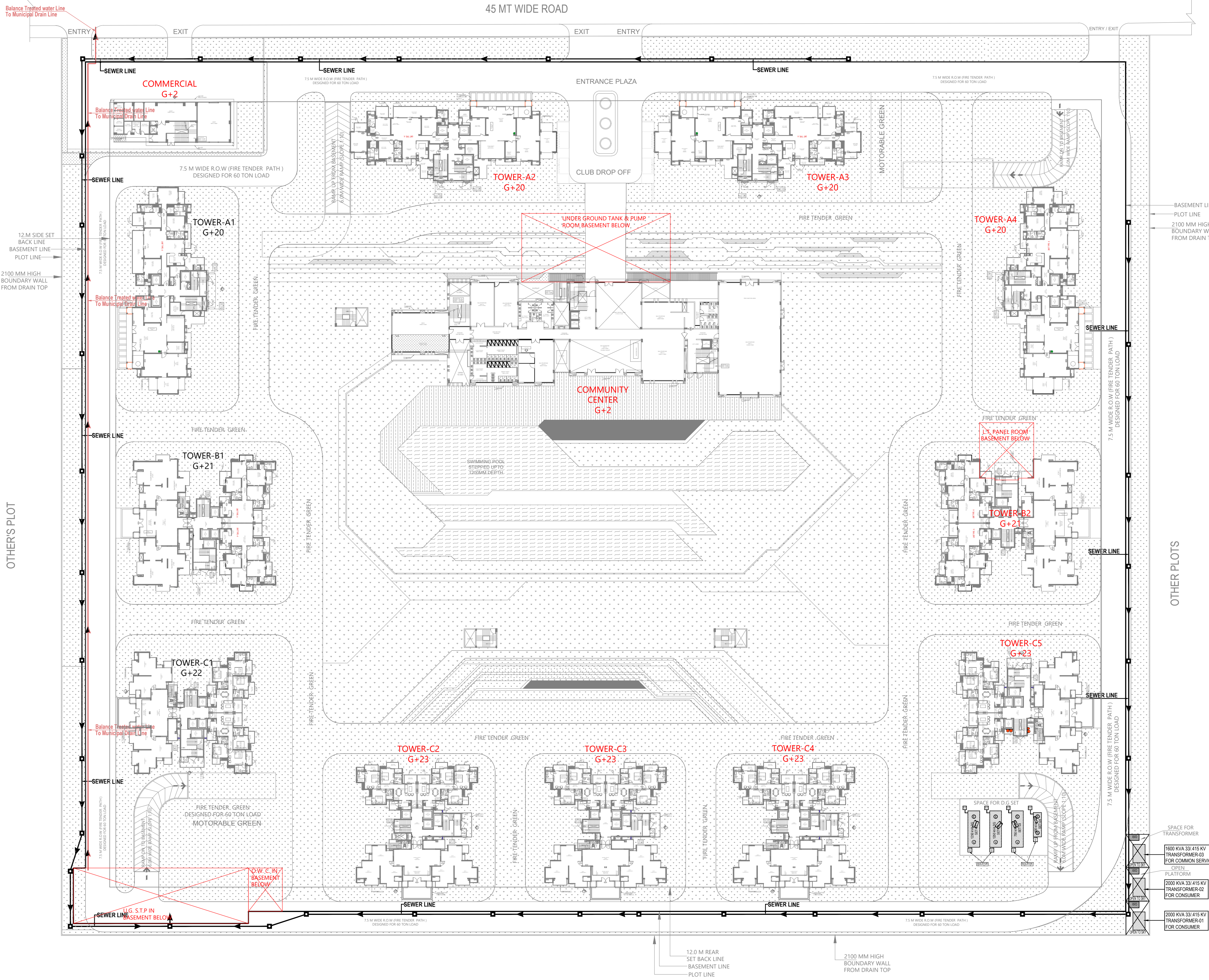
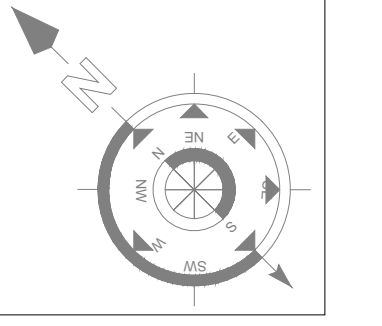




PROJECT - PROPOSED GROUP HOUSING FOR M/S ACE INFRA CITY DEVELOPERS PRIVATE LIMITED, AT PLOT NO:- SC-02-G, SECTOR -150, NOIDA (U.P.)			
DESIGN OF SEWER LINE			
Population			
Total No. of Apartments		=	784 Nos.
Total Permanent Population	@ 4.5	=	3,528 Persons
Club & Floating Population		=	750 Persons
Staff		=	250 Persons
Total Water Demand			
Apartments	@ 135 lpcd	=	476,280 Liters
Club & Floating	@ 15 lpcd	=	11,250 Liters
Staff	@ 45 lpcd	=	11,250 Liters
Total Water Demand			
		=	498,780 Liters
By taking Interception factor	@ 90%	=	448,902 Lit/day
Hence Total Sewage Load		or	5.20 Lit/sec
By taking Peak Factor	@ .3	=	15.56 Lit/sec
Peak Sewage Generated (3 times of Avg. Flow)		=	15.56 Lit/sec
Sewer Pipe Design			
Final Sewage Pipe Dia Selected		=	250 mm
Slope (1 in ...)		=	400
Sewer Design as per Manning Formula			
$V = \frac{3.986 \times 10^{-3} \times D^{.02} \times S^{.52}}{n}$			
V	=		0.79 m/sec
D	=	Dia (mm)	250 mm
S	=	Slope	400
n	=	Manning Coefficient	0.01
V	=	Velocity (m/sec)	
Actual Pipe Capacity (Q) at 100% flow			
$Q = \frac{\pi D^2 \times V}{4}$			
Q	=		38.63 m ³ /sec
Where -			
D	=	Dia (mm)	250 mm
V	=	Velocity (m/sec)	0.79
Q	=	Pipe Capacity (at full flow) m ³ /sec	
Peak Sewage Generated (site peak discharge)		=	15.56 Lit/sec
Actual Pipe Capacity at 100% flow		=	38.63 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.	M.H. □	MANHOLE
2.	—	SEWER LINE
3.	---	BYPASS SEWER LINE
4.	----	BASEMENT LINE



Rev. no.	Date	Revision

Project
PROPOSED GROUP HOUSING FOR M/S ACE INFRA CITY DEVELOPERS PRIVATE LIMITED, AT PLOT NO:- SC-02/G, SECTOR -150 NOIDA, (U.P.)

Title
SITE PLAN

Subtitle
EXTERNAL SEWERAGE SERVICES

Drawing released for
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☐ ADVANCE COPY ☐ CONSTRUCTION

Org. no. ACE / EX / S-01 Drawn by Kulwant

Scale A1@ 1 : 550 Designed by R.K.

Date Feb. 2026 Checked by R.K.

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