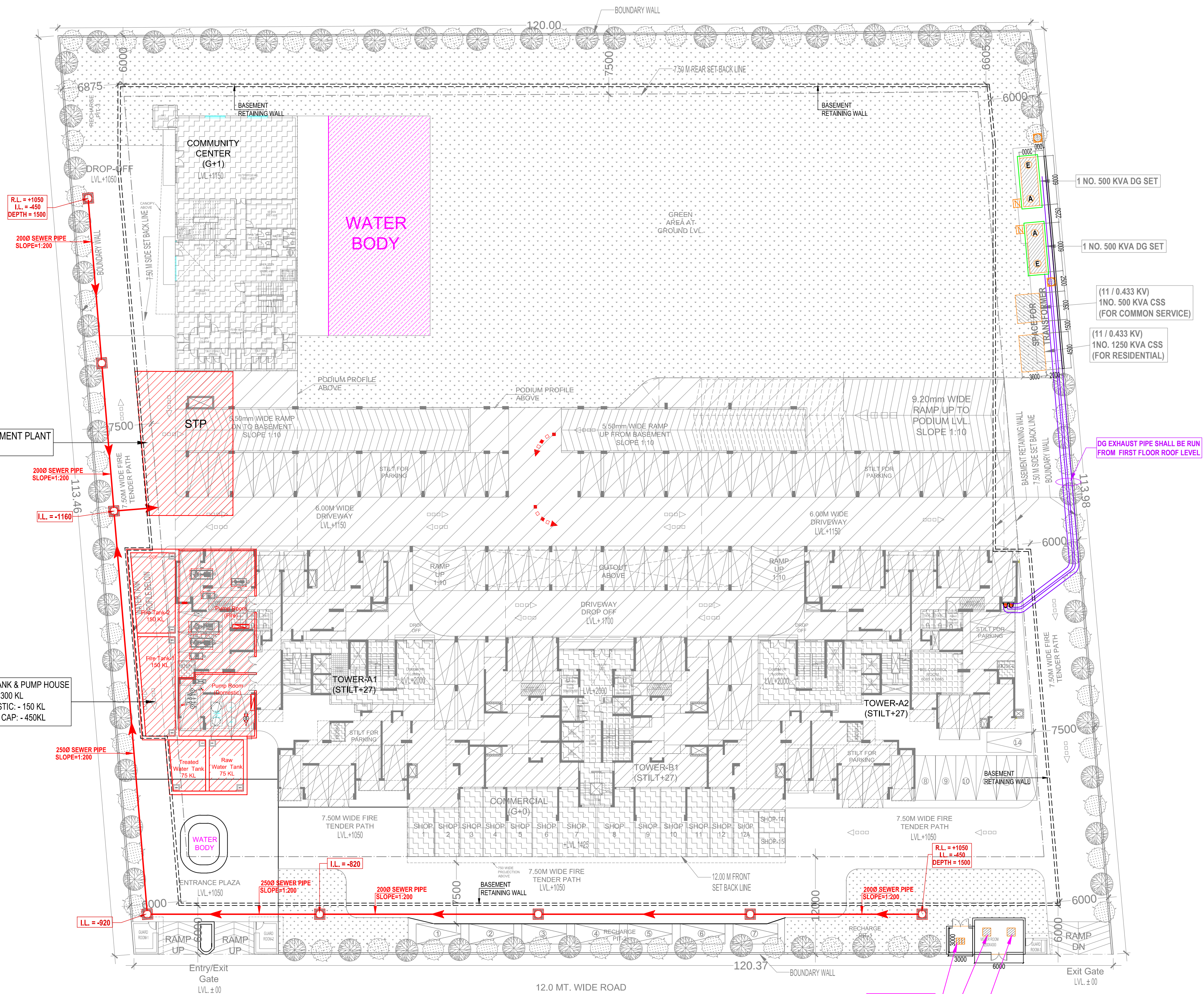
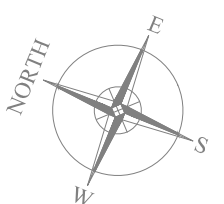




PROJECT : NIRALA TRIO AT SECTOR - 02, GREATER NOIDA				
DESIGN OF SEWER LINE				
Population				
Total No. of Apartments				378 Nos.
Total Permanent Population	@ 4.5	=	1,701	Persons
Club & Floating Population		=	450	Persons
Staff		=	100	Persons
Total Water Demand				
Apartments	@ 86 lpcd	=	2,29,635	Liters
Club & Floating	@ 15 lpcd	=	6,750	Liters
Staff	@ 45 lpcd	=	4,500	Liters
Total Water Demand		=	2,40,885	Liters
By taking Interception factor	@ 90%	=	2,16,797	Lit/day
Hence Total Sewage Load		or	2.51	Lit/sec
By taking Peak Factor	@ 3	=	7.53	Lit/sec
Peak Sewage Generated (3 times of Avg. Flow)		=		
Sewer Pipe Design				
Final Sewage Pipe Dia Selected		=	250	mm
Slope (1 in 200)		=	200	
Sewer Design as per Manning Formula				
V	=	$3.988 \times 10^{-3} \times D^{2/3} \times S^{1/2}$		
V	=	1.01 m/sec		
D = Dia (mm)	=	250 mm		
S = Slope	=	200		
n = Manning Coefcien	=	0.011		
V = Velocity (m/sec)	=	1.01		
Actual Pipe Capacity (Q) at 100% flow	=	$\frac{\pi D^2 \times V}{4}$		
		Q = 0.049664 m ³ /sec		
		Q = 49.66 Lit/sec		
Where -				
D = Dia (mm)	=	250 mm		
V = Velocity (m/sec)	=	1.01		
Pipe Capacity (at full flow)	=	49.66 m ³ /sec		
Peak Sewage Generated (site peak discharge)	=	7.53 Lit/sec		
Actual Pipe Capacity at 100% flow	=	49.66 Lit/sec		
Site peak discharge is less then 50% of pipe capacity, hence 250 mm Pipe Dia is OK				

LEGEND :		
S.No.	SYMBOL	DESCRIPTION
1.	M.H. □	MANHOLE
2.	—+—	SEWER LINE
3.	-----	BASEMENT RETAINING WALL



Rev. No.	Date	Revision
..	..	..

Project :
NIRALA TRIO
PROPOSED GROUP HOUSING
AT PLOT NO. GH-03A, SECTOR-2, GREATER NOIDA (UP)

Title :
LAYOUT PLAN

Subtitle :
EXTERNAL SEWERAGE SYSTEM

Drawing Released For :
☐ APPROVAL ☒ SUBMISSION
☐ ADVANCE COPY ☐ CONSTRUCTION

Drg. No : **NIRALA TRIO / ES-01**

Scale : **1:300** Drawn By : **Amit Kamboj**

Date : **June 2022** Design By : **Sanjay Goel**

Ckd By : **Anand Havelia**

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