



PROJECT - IT/ITES project at Plot No. 5A, Sector Techzone, Greater Noida

DESIGN OF SEWER LINE			
Population	Population	Water Requirement	Total Water Requirement
IT Block			
Office Population (Tower-1)	5710	45 lpcd	= 2,56,950 Liters
Office Population (Tower-2)	5280	45 lpcd	= 2,37,600 Liters
Floating Population (Office)	1184	15 lpcd	= 17,760 Liters
Food Court (Tower 1)	1080	35 lpcd	= 37,800 Liters
Commercial Block			
Permanent Population (Shopping)	230	45 lpcd	= 10350 Liters
Transient Population (Shopping)	2030	15 lpcd	= 30450 Liters
Total Water Demand			= 5,90,910 Liters
By taking Interception factor @	90%		
Hence Total Sewage Load			= 5,31,819 Lit/day
			or 6.16 Lit/sec
By taking Peak Factor @	3		
Peak Sewage Generated (3 times of Avg. Flow)			= 18.47 Lit/sec
Sewer Pipe Design			
Final Sewage Pipe Dia Selected			= 300 mm
Slope (1 in ...)			= 450
Sewer Design as per Manning Formula			
$V = \frac{3.968 \times 10^{-3} \times D^{2.63} \times S^{1/2}}{n}$			
$V = 0.76 \text{ m/sec}$			
$D = 300 \text{ mm}$			
$S = 450$			
$n = 0.011$			
$V = 0.76 \text{ m/sec}$			
Actual Pipe Capacity (Q) at 100% flow			= $\frac{\pi D^2 \times V}{4}$
			= 0.053839 m^3/sec
$Q = 53.84 \text{ Lit/sec}$			
Where -	$D = 300 \text{ mm}$		
$V = 0.76 \text{ m/sec}$			
$Q = 53.84 \text{ Lit/sec}$			
Peak Sewage Generated (site peak discharge)			= 18.47 Lit/sec
Actual Pipe Capacity at 100% flow			= 53.84 Lit/sec
Site peak discharge is less than 50% of pipe capacity, hence 300 mm Pipe Dia is OK			

LEGEND :

S. No.	SYMBOL	DESCRIPTION
1.	M.H. □	MANHOLE
2.	—○—	SEWER LINE
3.	—	BALANCE TREATED WATER LINE
4.	---	BASEMENT LINE

OWNER'S SIGNATURE : ARCHITECT'S SIGNATURE :

AUTHORITY SIGNATURES

NOTE:
HT Meter Room size (4.5 x 4.5 Meter for 33 KV Supply) has been considered as required by the concerned Electrical Department.

OWNER
M/S. STAR LANDCRAFT PVT. LTD.

RELEASED FOR
SUBMISSION DRAWING

KEY PLAN :



PROJECT
PROPOSED IT/ITES BUILDING AT Plot No-5A, Sector-Techzone, Greater Noida

DATE
29.09.2025

DEALT BY
Ramesh Kumar

SCALE
1:600

CHECKED BY
Anand Havelia

SITE PLAN
PLUMBING DRAWING

DRAWING TITLE
SITE PLAN
EXTERNAL SEWERAGE SYSTEM

ARCHITECT SIGN

architects
AEON DESIGN & DEVELOPMENT LLP
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DRAWING NO.
SITE/A/001/M.U. / EX / S-01

REVISION
R1