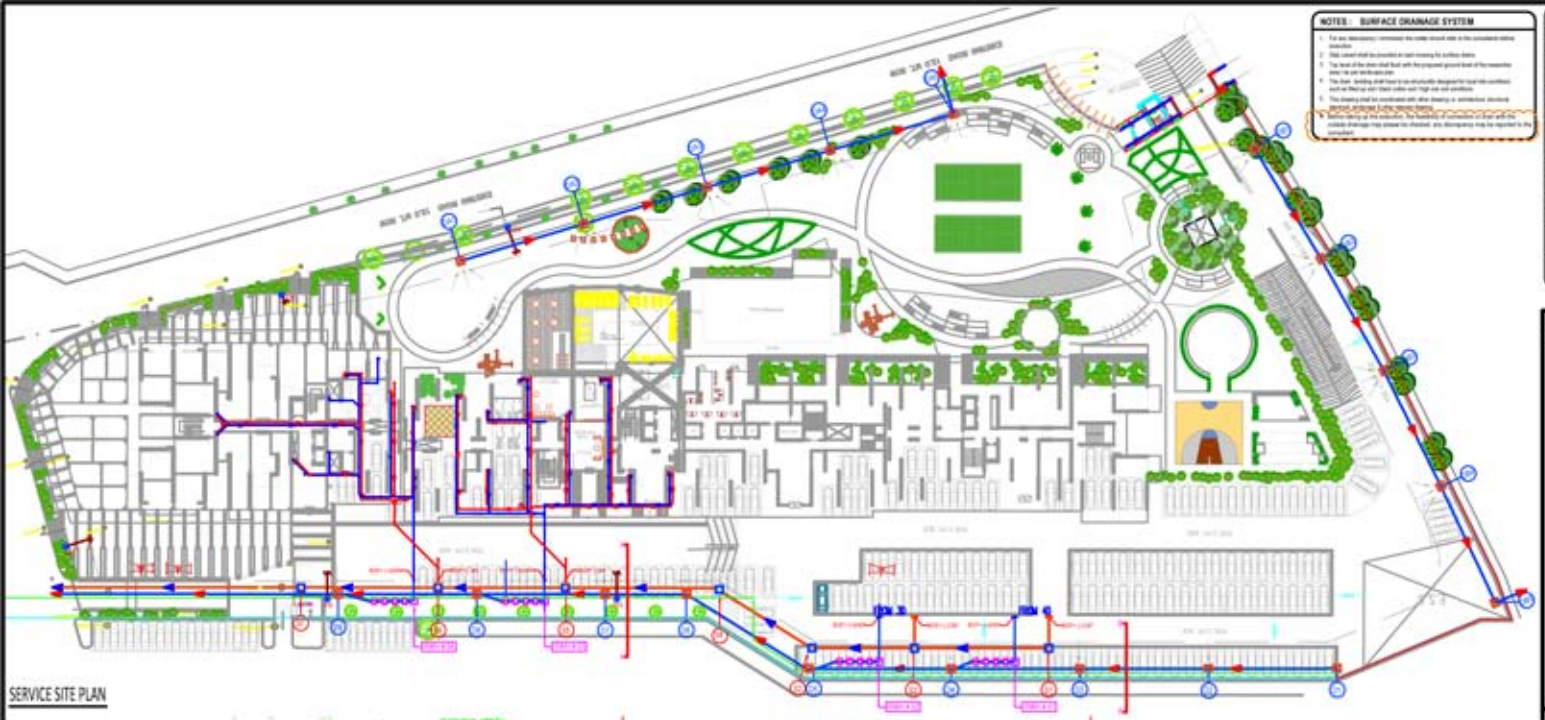

SERVICE SITE PLAN

NOTES : SURFACE DRAINAGE SYSTEM

1. For any discrepancy / omission the matter should refer to the consultants before execution.
2. Slab culvert shall be provided at road crossing for surface drains.
3. The level of the drain shall flush with the proposed ground level of the respective area / as per landscape plan.
4. The drain / building shall have to be structurally designed for local site conditions such as filling up and / black cotton soil / high sub soil conditions.
5. This drawing shall be coordinated with other drawing i.e. architectural, structural services, landscape & other relevant drawing.
6. Before laying of the substructure, the feasibility of connection of drain with the outlet drainage may please be checked, any discrepancy may be reported to the consultant.

LEGEND :

S. No.	SYMBOL	DESCRIPTION
1		MANHOLE
2		SEWER LINE
3	C.P.	CATCH PIT
4		UNDER GROUND PIPE DRAIN
5		RAIN WATER HARVESTING
6		BASEMENT RETAINING WALL
7		INTERNAL ROAD (CUT)
8	F.L.	FORMATION LEVEL
9	G.L.	GRADE LEVEL
10	F.L.	CONNECTION LEVEL
11		DRAIN CATCH PIT
12		SEWER MANHOLE

NOTES : SEWERAGE SYSTEM

1. THE SIZE OF MANHOLE SHALL BE AS UNDER (INVERT SIZE) :
   - (a) Will be 1000 m in depth — 900 m in dia
   - (b) 1000 to 2250 m in depth — 1200 m in dia
   - (c) Above 2250 m in depth — 1500 m in dia
2. The levels of sewer lines has been worked out on the basis of certain ground level and by certain pipe lengths between two manholes. The level levels may to be strictly followed but the slopes of the line may be slightly changed.
3. For any discrepancy / omission the matter should refer to the consultants before execution.
4. Manholes shall be provided at following places :
   - (i) At the start of each sewer line.
   - (ii) At every junction and junction where there is change of size, gradient and alignment.
   - (iii) At not more than 45 meter interval in straight length.
5. Where the diameter of pipe is increased the crown of the pipe shall be fixed at the same level and necessary steps shall be given in the invert of the manhole chamber.
6. The structural design of manholes / pipe building has to be done for local field conditions such as filled up and / black cotton soil / high sub soil conditions.
7. This drawing shall be read along with the detailed landscape plan & ground floor plan of respective building for exact location of approximate / rain water pits.
8. Sewer line under the road shall be encased with 150 thick, per 1:2:4 allowed.
9. Minimum cover should be finished with finished formation level as per landscape drawing. No cover of manhole shall be crossed as per approximate drawing & should be coordinated with landscape drawing.
10. This drawing shall be coordinated with other drawing i.e. architectural, structural services, landscape & other relevant drawing.
11. Material of pipe : RCC (NP 3) Pipe with cement mortar (1:4) (1:2:4) (1:1:2) (1:1:1)
12. In the areas subject to subsidence or filled up soil given in course, excavation of site for construction of basements the sewer lines & manhole should be laid on suitable support or concrete cradle supported on piles or suitable foundation as per structural design.
13. In case where sewers are laid in high subsoil conditions manholes should be constructed in r.c.c. grade m-25.
14. The width of trench for sewer and drainage should be 0.150mm. (6" c.c. of pipes).
15. Shoring / Strutting should be adequate to prevent cavings of the trench walls of subsidence of areas adjacent to the trench, an engineer in charge in consultation with a structural engineer should provide adequate arrangement to prevent cavings.
16. Indicated levels.

SECTION-AA

SECTION-BB

DETAILS OF DRAIN LINES

Catch Pit No. From	Catch Pit No. To	Length	Dia.	Slope	C.P. Top Level (Upper End)	Invert Level (Upper End)	Depth (Upper End)	C.P. Top Level (Lower End)	Invert Level (Lower End)	Depth (Lower End)
		(m)	(mm)	1 in	(m)	(m)	(m)	(m)	(m)	(m)
CP1	CP2	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
CP2	CP3	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
CP3	CP4	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
CP4	CP5	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
CP5	CP6	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
CP6	CP7	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
CP7	CP8	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
CP8	CP9	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
CP9	CP10	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
CP10	CP11	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
CP11	CP12	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
CP12	CP13	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
CP13	CP14	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
CP14	CP15	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
CP15	CP16	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
CP16	CP17	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
CP17	CP18	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
CP18	CP19	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
CP19	CP20	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
CP20	CP21	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100

DETAILS OF SEWER LINES

Manhole No. From	Manhole No. To	Length	Dia.	Slope	Mh Top Level (Upper End)	Invert Level (Upper End)	Depth (Upper End)	Mh Top Level (Lower End)	Invert Level (Lower End)	Depth (Lower End)
		(m)	(mm)	1 in	(m)	(m)	(m)	(m)	(m)	(m)
MH1	MH2	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
MH2	MH3	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
MH3	MH4	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
MH4	MH5	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
MH5	MH6	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
MH6	MH7	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
MH7	MH8	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
MH8	MH9	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
MH9	MH10	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
MH10	MH11	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
MH11	MH12	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
MH12	MH13	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
MH13	MH14	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
MH14	MH15	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
MH15	MH16	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100
MH16	MH17	20	300	1:200	0.00	-0.100	0.100	0.00	-0.100	0.100

Rev. No.	Date	Remarks

Project : PROPOSED TOWNSHIP (SKARDI) AT PLOT NO. - NH-24, GHAZIABAD (U.P.)

Title : SKARDI SITE PLAN

Subtitle : EXTERNAL SEWERAGE SYSTEM

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

Drg. No : SKA-1ESP-01

Scale : AS@ 1:100 | Drawn By :

Date : 02.12.2016 | Design By :

Chd By :

services consultant
Consultmate Engineering Services (P) Ltd.
cespl