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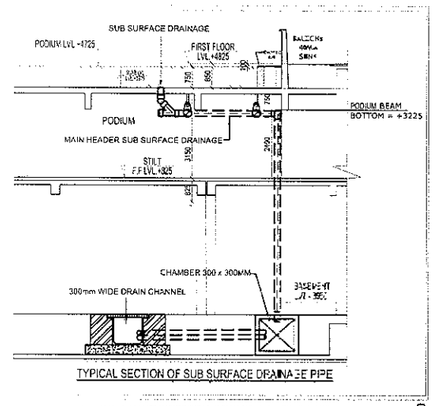
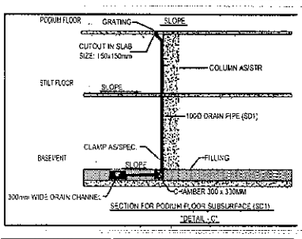
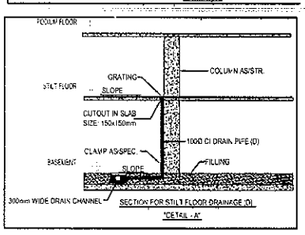


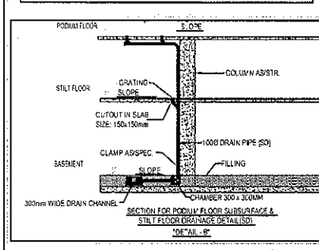
TYPICAL SECTION OF SUB SURFACE DRAINAGE PIPE



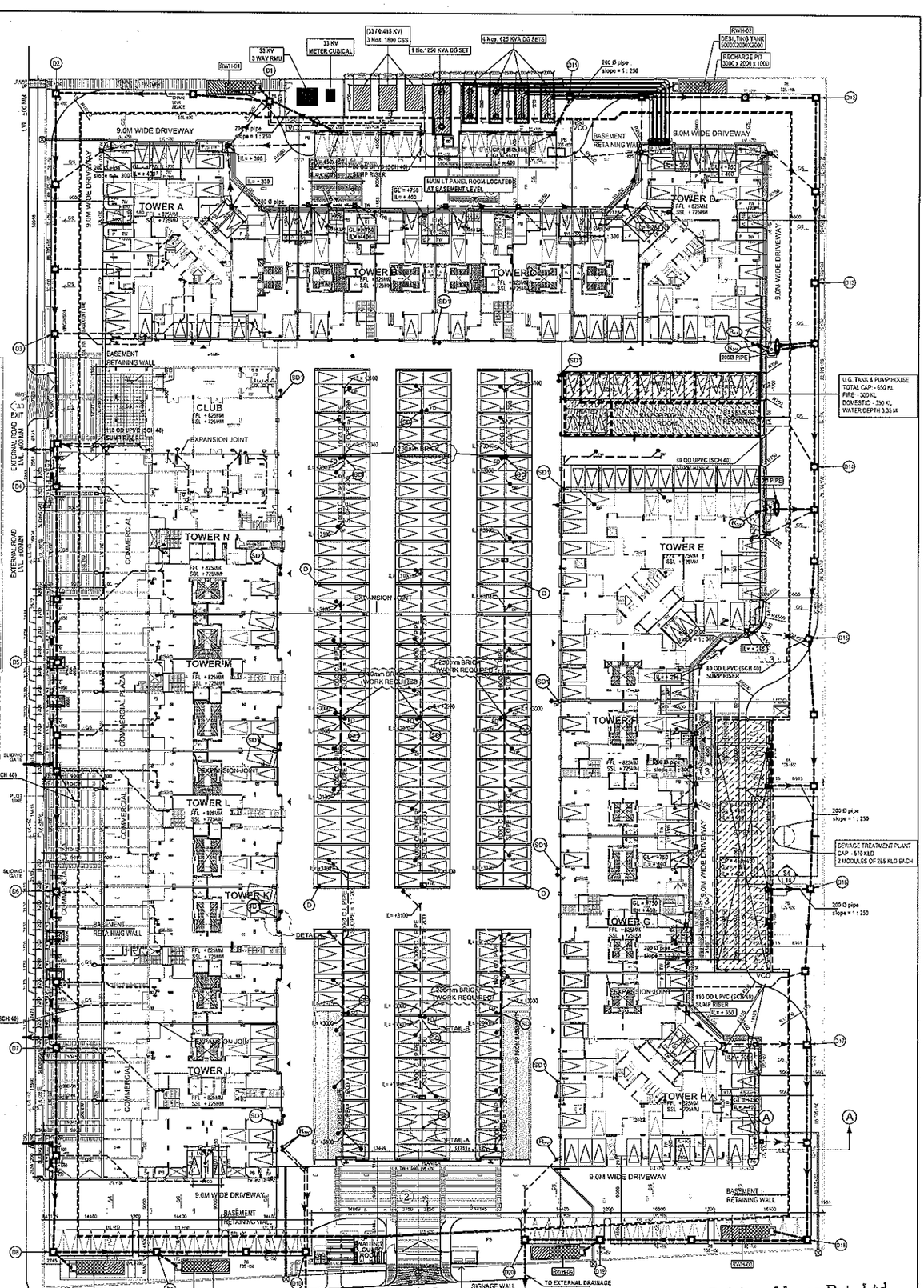
SECTION FOR PODIUM FLOOR SUBSURFACE (SD1)
"DETAIL - C"



SECTION FOR STILT FLOOR DRAINAGE (D)
"DETAIL - A"



SECTION FOR PODIUM FLOOR SUBSURFACE & STILT FLOOR DRAINAGE DETAIL (SD)
"DETAIL - B"



For Gulshan Homz Pvt. Ltd.

Authorised Signatory

NOTES : SEWERAGE SYSTEM

1. THE SIZE OF MANHOLE SHALL BE AS UNDER (INNER SIZES)
   a) upto 900 m.m. depth — 600 x 600 m.m.
   b) 900 to 1650 m.m. depth — 900 m.m. dia.
   c) 1650 to 2250 m.m. depth — 1200 m.m. dia.
   d) Above 2250 m.m. depth — 1500 m.m. dia.
2. The levels of sewer lines has been worked out on the basis of certain ground level and for certain pipe lengths between two manholes, the invert levels has to be strictly followed. However, the slope of line may be slightly changed.
3. For any deviation / omission the matter should refer to the consultants before execution.
4. Manhole shall be provided at following places :-
   a) At the start of each sewer line.
   b) At every junction and position where there is change of size, gradient and alignment.
   c) 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 slope shall be given in the invert of the manhole chamber.
6. The structural design of manholes / pipe bedding has to be done for local field conditions such as filled up soil / 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 appurtenances / main holes etc.
8. Sewer line under the road shall be encased with 150 thick. pcc 1:2:4 all round.
9. Manhole cover should be finished with finished formation levels as per landscape drawing. the cover of manhole shall be square as per approximations drawing & should be coordinated with landscape drawing.
10. This drawing shall be coordinated with other drawing i.e. architecture, structural, electrical, landscape & other relevant drawing.
11. Material of pipe : RCC (NP 3) Pipe with rubber ring joint.
12. In the areas subject to subsidence or filled up soil (due to excess excavation at 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 c.c. 400mm. (or o.d. of pipe).
15. Shoring / underpinning should be adequate to prevent caving in of the trench and in case of subsidence of areas adjacent to the trench, an engineer-in-charge in consultation with a structural engineer should provide adequate arrangement to prevent caving in.
16. Before taking up the execution, the feasibility of connection of drain with the outside drainage may please be checked. any discrepancy may be reported to the consultant.

NOTES : SURFACE DRAINAGE SYSTEM

1. For any deviation / omission the matter should refer to the consultants before execution.
2. Sub culvert shall be provided at road crossing for surface drains.
3. You level of the drain shall flush with the proposed ground level of the respective area / as per landscape plan.
4. The drain bedding shall have to be structurally designed for local site conditions such as filled up soil / black cotton soil / high sub soil conditions.
5. The drawing shall be coordinated with other drawing i.e. architecture, structural, electrical, landscape & other relevant drawing.
6. Before taking up the execution, the feasibility of connection of drain with the outside drainage may please be checked. any discrepancy may be reported to the consultant.

NOTES : DRAINAGE SYSTEM

1. THE SIZE OF CATCHPIT SHALL BE AS UNDER (INNER SIZES)
   a) Upto 900mm. depth — 600 x 600 m.m.
   b) 900 to 1350 m.m. depth — 900 m.m. dia.
   c) 1350 to 2250 m.m. depth — 1200 m.m. dia.
   d) Above 2250 m.m. depth — 1500 m.m. dia.
2. The levels of drainage lines has been worked out on the basis of certain ground level and for certain pipe lengths between two catchpits, the invert levels has to be strictly followed. However, the slope of line may be slightly changed.
3. For any deviation / omission the matter should refer to the consultants before execution.
4. Catchpit shall be provided at following places :-
   a) At the start of each drain line.
   b) At every junction and position where there is change of size, GRADIENT AND alignment.
   c) At not more than 15 meter interval in straight length.
5. The structural design of catchpit / pipe bedding has to be done for local field conditions such as filled up soil / black cotton soil / high sub soil conditions.
6. This drawing shall be read along with the detailed landscape plan & ground floor plan of respective building for exact location of appurtenances / catchpit etc.
7. Drainage line under the road shall be encased with 150 thick. pcc 1:2:4 all round.
8. Catchpit cover should be finished with finished formation levels as per landscape drawing. the cover of catch pit shall be square as per appurtenances drawing & should be coordinated with landscape drawing.
9. This drawing shall be coordinated with other drawing i.e. architecture, structural, electrical, landscape & other relevant drawing.
10. Material of pipe : RCC (NP 3) Pipe with rubber ring joint.
11. In the areas subject to subsidence or filled up soil (due to excess excavation at site for construction of basements) the drain lines & catchpit should be laid on suitable support or concrete cradle supported on piles or suitable foundation as per structural design.
12. Incase where drains are laid in high subsoil conditions catchpits should be constructed in R.C.C. grade m-25.
13. The width of trench for sewer and drainage should be c.c. 400mm. (or o.d. of pipe).
14. Shoring / underpinning should be adequate to prevent caving in of the trench and in case of subsidence of areas adjacent to the trench, an engineer-in-charge in consultation with a structural engineer should provide adequate arrangement to prevent caving in.

rev. no.	date	revision
R - 2	11 / 08 / 2017	RAIN WATER PIPE POSITION MODIFIED.
R - 1	25 / 04 / 2017	SUB SURFACE DRAINAGE ADDED.

LEGEND :

S. No.	SYMBOL	DESCRIPTION
1.	C.P.	CATCH PIT
2.		UNDER GROUND PIPE DRAIN
3.		SURFACE DRAIN
4.		BASEMENT RETAINING WALL
5.		CATCH PIT 750X750
6.		CATCH PIT 900X450
7.		CATCH PIT 450X450
8.		RAIN WATER HARVESTING
9.		200 Ø PVC RAIN WATER PIPE
10.		160 Ø PVC RAIN WATER PIPE
11.		100Ø STILT FLOOR DRAIN PIPE
12.		COMBINED 100Ø STILT FLOOR DRAIN & SUB SURFACE DRAIN PIPE
13.		100Ø SUB SURFACE DRAIN PIPE
14.		SUB SURFACE DRAINAGE POINT AT CEILING LVL
15.		FLOOR DRAIN AT STILT FLOOR LVL

DETAILS OF DRAIN LINES

Catch Pit No. From	Catch Pit No. To	Length (m)	Dia. (mm)	Slope 1 in	C.P. Top Level (m)	Invert Level (m)	Depth (m)	C.P. Top Level (m)	Invert Level (m)	Depth (m)
					Upper End			Lower End		
D1	D2	38	300	500	0.65	-1.20	1.85	0.65	-1.28	1.93
D2	D3	42	300	500	0.65	-1.28	1.93	0.65	-1.36	2.01
D3	D4	26	300	500	0.65	-1.36	2.01	0.65	-1.41	2.06
D4	D5	30	300	500	0.65	-1.41	2.06	0.65	-1.47	2.12
D5	D6	40	300	550	0.65	-1.47	2.12	0.65	-1.54	2.19
D6	D7	28	300	550	0.65	-1.54	2.19	0.65	-1.60	2.25
D7	D8	36	300	550	0.65	-1.60	2.25	0.60	-1.66	2.26
D8	D9	18	300	550	0.60	-1.66	2.26	0.60	-1.69	2.29
D9	D10	26	300	550	0.60	-1.69	2.29	0.60	-1.74	2.34
D10	OUT	20	400	600	0.60	-1.74	2.34	0.60	-1.77	2.37
D11	D12	42	300	500	0.65	-0.45	1.10	0.65	-0.53	1.18
D12	D13	32	300	500	0.65	-0.53	1.18	0.65	-0.60	1.25
D13	D14	32	300	500	0.65	-0.60	1.25	0.65	-0.66	1.31
D14	D15	30	300	500	0.65	-0.66	1.31	0.65	-0.72	1.37
D15	D16	44	300	500	0.65	-0.72	1.37	0.65	-0.81	1.46
D16	D17	28	300	500	0.65	-0.81	1.46	0.65	-0.87	1.52
D17	D18	34	400	600	0.65	-0.87	1.52	0.60	-0.92	1.52
D18	D19	36	400	600	0.60	-0.92	1.52	0.60	-0.98	1.58
D19	D20	13	400	600	0.60	-0.98	1.58	0.60	-1.00	1.60
D20	OUT	20	400	600	0.60	-1.30	1.90	0.60	-1.34	1.94

Project :
GULSHAN BELLINA HOUSING,
GREATER NOIDA.

Title :
LAYOUT PLAN

Subtitle :
EXTERNAL DRAINAGE SYSTEM

Drawing Released For :
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Drg. No : G.B / ES-04
Date : November 2016
Scale : 1 : 400
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Design By : Sanjay Goel
Ckd By : Anand Havelia

Architects :
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