PROJECT : "TRIBUNE COLONY",Gazipur Road, Zirakpur, Punjab.					
SUBHEAD : EXTERNAL DEVELOPMENT WORKS					
EXTERNAL WATER SUPPLY, STORM WATER DRAINAGE, ROAD WORK					
INTERNAL ESTIMATE OF BOQ					
S.No.	DESCRIPTION	QTY	UNIT	RATE (Rs.)	AMOUNT (Rs.)
1.0	EXTERNAL WATER SUPPLY				
1.1	Providing and laying S & S Ductile Iron pipes confirming to I.S. 8329, inside cement mortar lining, outside zinc coated / bitumen coated, suitable for tyton jointing including (all excavation & refilling of earth) standard specials (heavy class) confirming to I.S. 9523 such as bends, crosses, tees, tapers with large end socketed, flanged socketed tail pieces, double flanged DI duck foot bends, flanged, spigot and socketed tail pieces, end caps, including push-on-joints with premoulded rubber ring including the cost of rubber gasket, Disinfecting D.I. water mains by flushing with water containing bleaching powder at 0.5 gm per litre of water and cleaning the same with fresh water, operation to be repeated three times including getting the samples of water from the disinfected main tested in the municipal laboratory etc. Excavating trenches of required width for pipes, cables etc including excavation for socket and dressing of sides ramming of bottoms depth upto 1.50 m including getting out the excavated soil and then returning the soil as required in layers not exceeding 20 cm in depth including consolidating each deposited layer by ramming, watering etc. and disposal of surplus excavated soil as directed within a lead of 50m. complete in all respect. **(TATA MATALIKS DI PIPES LTD., H.C.JAIN PIPES & TUBES, JINDAL SAW LTD., CHANDRANCHAL ENTERPRISE)**				
	25 mm dia UPVC pipes for individual House connection only	1650	M		-
	80 mm dia Ductile Iron Class K-7 pipes	0	M		-
	100 mm dia Ductile Iron Class K-7 pipes	0	M		-
	150 mm dia Ductile Iron Class K-7 pipes	0	M		-
1.2	Providing and fixing C.I. double flanged sluice valves (with cap) PN-1.0, marked with IS:14846, stainless steel Stem, carbon steel nuts and bolts, including making connections to pipe or fittings by socketed / flanged tail pieces, cost of push-on-joints joints /lead joints/ flanged joints, including cost of carriage, loading, unloading, testing and commissioning complete.				
	MOC:				
	Body - Cast Iron				
	Shaft - Carbon Steel / Stainless Steel				
	Body Liner - EPDM/ nitrile rubber				
	Disc - Epoxy coated C.I / D.I.				
	a) 80 mm dia (with lever)	0	No.		-
	b) 100 mm dia (with lever)	0	No.		-
	c) 150 mm dia (with lever)	0	No.		-
1.3	Constructing masonry chamber 60 x 60 x 60 cm inside with 1st class brickwork in cement mortar 1 : 5 (1 cement : 5 fine sand) for branch line, with 60 x 60cm fabricated hinged MS cover with locking arrangement, RCC top slab 1 : 2 : 4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) necessary excavation foundation concrete 1 : 5 : 10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plaster with cement mortar 1 : 3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design and drawings.	0	No.		-

S.No.	DESCRIPTION	QTY	UNIT	RATE (Rs.)	AMOUNT (Rs.)
1.4	Constructing masonry chamber 90 x 90 x 100 cm inside with 1st class brickwork in cement mortar 1 : 5 (1 cement : 5 fine sand) for branch line, with 60 x 60cm fabricated hinged MS cover with locking arrangement, RCC top slab 1 : 2 : 4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) necessary excavation foundation concrete 1 : 5 : 10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plaster with cement mortar 1 : 3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design and drawings.	0	No.		-
	TOTAL of "External Water Supply" carried over to SUMMARY			Rs.	-
2.0	STORM WATER DRAINAGE				
2.1	Providing and laying non-pressure NP3 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1 : 2 (1 cement : 2 fine sand) including all excavation & backfilling of soil complete with all testing of joints etc. complete.				
	400 mm diameter R.C.C pipe	1008	M		-
2.2	Providing and laying cement concrete 1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size) 100 mm thick all around of RCC Pipes including bed concrete as per standard design				
	400 mm diameter R.C.C pipe	1008	M		-
2.3	Constructing brick masonry **circular manhole 0.91 m internal dia** at bottom and 0.56 m dia at top with 75 class designation F.P.S. bricks in cement mortar 1 : 4 (1 cement : 4 coarse sand) inside and outside cement plaster 12 mm thick with cement mortar 1 : 3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement foundation concrete 1 : 3 : 6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size), and making necessary channels in cement concrete 1 : 2 : 4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement, **including earthwork in excavation** in all kinds of soil, backfilling around manhole all complete as per standard design :				
	1 m deep with S.F.R.C. perforated cover and frame (heavy duty, HD-20 grade designation) 560 mm internal diameter conforming to IS 12592, including centering shuttering all complete.	57	No.		-
2.4	Providing orange colour safety foot rest of minimum 6mm thick plastic encapsulated as per IS:10910 on 12mm dia steel bar conforming to IS:1786 having minimum cross section as 23mmx25mm and over all minimum length 263mm and width as 165mm with minimum 112mm space between protruded legs having 2mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacturer's permanent identification mark to be visible even after fixing, including fixing in manholes with 30x20x15cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design	415	No.		-

S.No.	DESCRIPTION	QTY	UNIT	RATE (Rs.)	AMOUNT (Rs.)
2.5	**3 Mtr dia Rain water Harvesting pit / BOREWELL CUM DUGWELL with desilting chamber as per drawing** : Constructing a borewell cum dugwell ground water recharge structure generally as per enclosed standard detail and having following construction specifications :	6	Job		-
	Peripherical brick masonry in cement mortar 1:4 (1 cement:4 coarse sand) with necessary 15 mm thick cement plaster 1:3 neat finish.				
	Foundation concrete 1:5:10 (300mm thick)				
	300 mm thick dry stone aggregate bed (40 to 65 mm nominal grade)				
	200 mm thick R.C.C (1:2:4) slab to cover the well at top including necessary centring, shuttering and reinforcement with required opening/cut-outs etc. supplying & fixing 600 mm X 600 mm S.F.R.C Manhole cover / frame(total weight 208 Kg.) heavy duty type, all complete as per drawings.				
	160 mm dia PVC perforated pipe lowered vertically upto first granular saturated sandy formation including necessary drilling / boring in ground in all kinds of soil.				
	Supplying & fixing P.V.C foot rests.				
	Making all inlets & outlets in brick masonry walls including cutting holes & making good the same.				
	10-12 mm thick cement plaster 1:3 mixed with water proofing compound on top of R.C.C slabs & in ceiling of slab, finished smooth.				
	3.5x6x3.0 Mtr. Cube Sump Pit In M30 grade Concrete and FE-550 Reinforcement as per drawing and rest specification as above	1	Job		-
	TOTAL for "Storm Water Drainage & Rainwater Harvesting" carried over to SUMMARY			**Rs.**	-
3.0	**ROAD WORK**				
3.1	Preparation of subgrade with proper camber by dressing the surface, cutting and filling up to 150 mm, watering and compaction with road roller of 8 - 10 tonnes each layer including earth compaction, and As per CPWD specification. (Sub-grade Preparation.) (9M X 1265.0156 L) (15M X 34 L) (24M X 237.5650L) (Note : Considering area as per road section drawings	8386.00	SQMT.		-
3.2	Supplying & laying of Granular sub-base with coarse graded material (having minimum CBR value 30%), spreading in uniform layers including profile correction with moto grader on prepared surface, mixing by mix in lace method with rotavator at OMC and competing with vibratory roller to achieve the desired density complete as per drawing . **Note : Considering area as per road section drawings.**				
	For Grading 1 Material (100 mm compacted thick)	838.6	CUM		-
3.3	Supplying & laying, spreading and compacting stone aggregates of specific sizes of water bound macadam specification including spreading in uniform thickness, hand packing, rolling with 3 wheels steel/vibratory roller 8-10 tonnes in stages to proper grade and camber, applying and brooming requisite type of screenings/ binding materials to fill up the interstices of coarse aggregate, watering and compacting to the required density complete as per drawing. **Note : Considering area as per road section drawings.**				

S.No.	DESCRIPTION	QTY	UNIT	RATE (Rs.)	AMOUNT (Rs.)
	Stone Aggregate -1st layer- 63mm to 40mm & 2nd layer-40mm to 22.50 mm total thick of both layer 150mm	1257.9	CUM		-
3.4	Providing & fixing 100mm thick (M-30) Paver 8"x4"(Dumble Shaped or as per approved shape) including Stone dust and Fine Sand complete with all respect.	7359.40	SQMT.		-
3.5	Providing, Laying & fixing precast cement concrete Kerbs of size (300x300x150)as approved pattern & setting in position with cement mortar 1:3 (1 cement: 3 coarse sand)including the cost of centring ,shuttering & finishing with 6mm thick cement mortar 1:3 (1 cement :3 fine sand)including the cost of excavation, refilling & base and backside PCC 1:4:8 (75mm thick).	6637.00	RMT.		-
	TOTAL for "Road Work" carried over to SUMMARY			Rs.	-

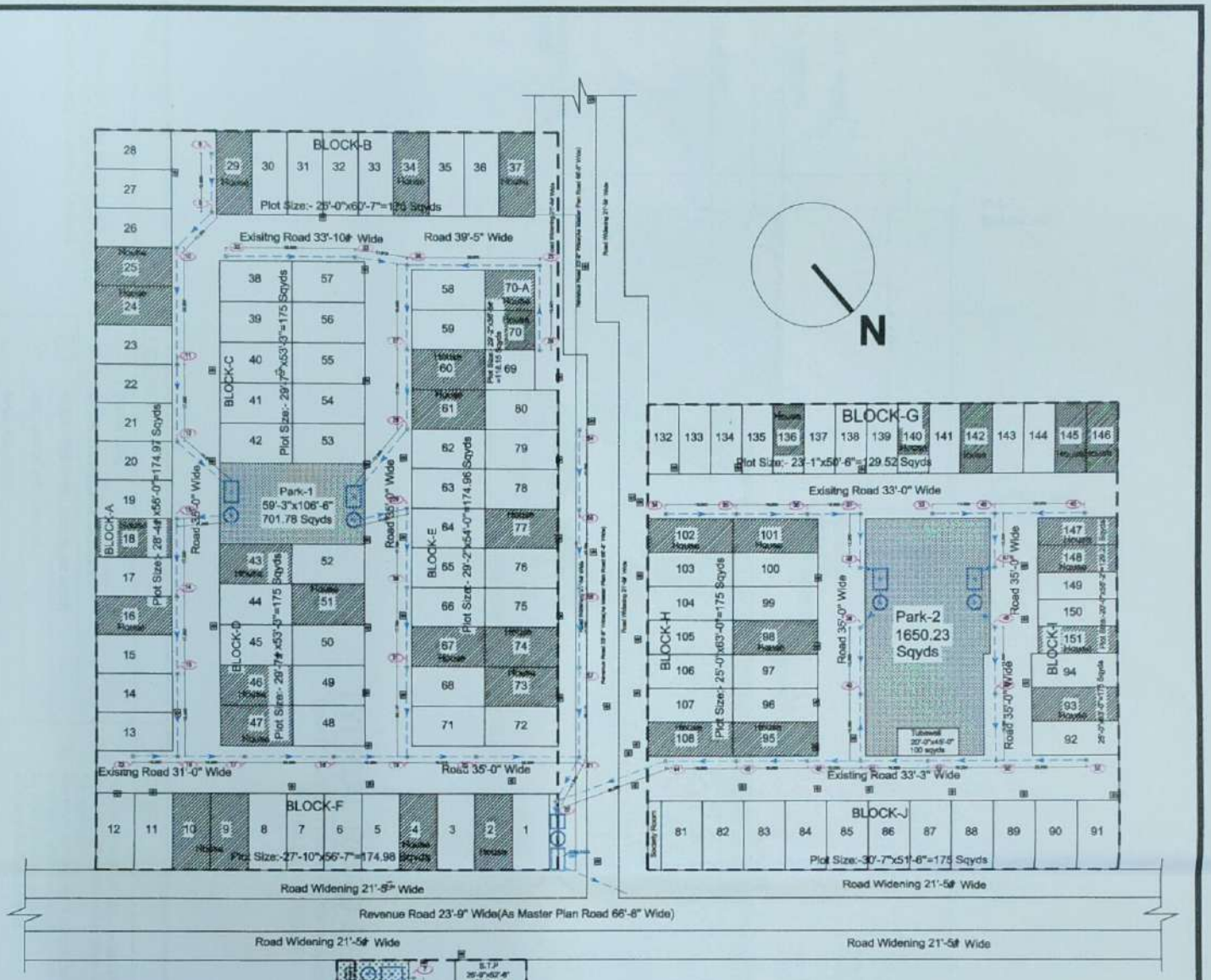
Grand Total of All Items -

DETAILS OF DRAINAGE LINES								
CATCH BASIN FROM			CATCH BASIN TO			LENGTH	DIA.	SLOPE
CB NO.	MH TOP LEVEL	INVERT LEVEL	CB NO.	MH TOP LEVEL	INVERT LEVEL			
UPPER END (MM)			LOWER END (MM)			(M)	(MM)	1M IN
1	R.L.	-0.900	2	R.L.	-0.933	18.267	400	550
2	R.L.	-0.933	3	R.L.	-0.966	18.267	400	550
3	R.L.	-0.966	4	R.L.	-0.999	18.267	400	550
4	R.L.	-0.999	5	R.L.	-1.032	18.345	400	550
5	R.L.	-1.032	6	R.L.	-1.065	18.267	400	550
6	R.L.	-1.065	7	R.L.	-1.085	11.593	400	550
7	R.L.	-1.085	RWH	R.L.	AS SITE	AS SITE	400	550
8	R.L.	-0.900	9	R.L.	-0.923	12.985	400	550
9	R.L.	-0.923	10	R.L.	-0.944	11.184	400	550
10	R.L.	-0.944	11	R.L.	-0.990	25.995	400	550
11	R.L.	-0.990	12	R.L.	-1.021	17.252	400	550
12	R.L.	-1.021	RWH	R.L.	-1.048	14.576	400	550
RWH	R.L.	-1.048	13	R.L.	-1.067	11.042	400	550
13	R.L.	-1.067	14	R.L.	-1.099	17.330	400	550
14	R.L.	-1.099	15	R.L.	-1.130	17.252	400	550
15	R.L.	-1.130	16	R.L.	-1.163	18.430	400	550
16	R.L.	-1.163	17	R.L.	-1.190	15.000	400	550
17	R.L.	-1.190	18	R.L.	-1.226	20.000	400	550
18	R.L.	-1.226	19	R.L.	-1.256	16.585	400	550
19	R.L.	-1.256	20	R.L.	-1.284	15.574	400	550
20	R.L.	-1.284	21	R.L.	-1.321	20.568	400	550
21	R.L.	-1.321	22	R.L.	-1.339	11.315	400	550
22	R.L.	-1.339	TO SUMP	R.L.	AS SITE	AS SITE	400	550
23	R.L.	-0.900	16	R.L.	-1.163	10.000	400	550
24	R.L.	-0.900	25	R.L.	-0.934	18.821	400	550
25	R.L.	-0.934	26	R.L.	-0.988	29.834	400	550
26	R.L.	-0.988	27	R.L.	-1.021	18.820	400	550
27	R.L.	-1.021	28	R.L.	-1.053	17.798	400	550
28	R.L.	-1.053	RWH	R.L.	-1.085	17.655	400	550
RWH	R.L.	-1.085	29	R.L.	-1.105	11.094	400	550
29	R.L.	-1.105	30	R.L.	-1.137	17.798	400	550
30	R.L.	-1.137	31	R.L.	-1.169	17.720	400	550
31	R.L.	-1.169	19	R.L.	-1.256	20.147	400	550
32	R.L.	-0.900	33	R.L.	-0.952	28.892	400	550
33	R.L.	-0.952	26	R.L.	-0.973	11.819	400	550
34	R.L.	-0.900	35	R.L.	-0.929	16.000	400	550
35	R.L.	-0.929	36	R.L.	-0.958	16.000	400	550
36	R.L.	-0.958	37	R.L.	-0.979	12.000	400	550
37	R.L.	-0.979	38	R.L.	-0.998	10.517	400	550
38	R.L.	-0.998	RWH	R.L.	-1.008	AS SITE	400	550
RWH	R.L.	-1.008	39	R.L.	-1.023	AS SITE	400	550
39	R.L.	-1.023	40	R.L.	-1.050	15.000	400	550
40	R.L.	-1.050	41	R.L.	-1.077	15.000	400	550

41	R.L.	-1.077	42	R.L.	-1.099	12.000	400	550
42	R.L.	-1.099	43	R.L.	-1.128	16.000	400	550
43	R.L.	-1.128	44	R.L.	-1.156	16.000	400	550
44	R.L.	-1.156	22	R.L.	-1.339	26.399	400	550
45	R.L.	-0.900	46	R.L.	-0.936	20.000	400	550
46	R.L.	-0.936	47	R.L.	-0.958	12.000	400	550
47	R.L.	-0.958	RWH	R.L.	-0.968	AS SITE	400	550
RWH	R.L.	-0.968	48	R.L.	-0.983	AS SITE	400	550
48	R.L.	-0.983	49	R.L.	-1.010	15.000	400	550
49	R.L.	-1.010	50	R.L.	-1.037	15.000	400	550
50	R.L.	-1.037	51	R.L.	-1.064	15.224	400	550
51	R.L.	-1.064	41	R.L.	-1.077	15.000	400	550
52	R.L.	-0.900	50	R.L.	-1.037	20.000	400	550
53	R.L.	-0.900	46	R.L.	-0.936	14.000	400	550
54	R.L.	-0.900	55	R.L.	-0.932	17.798	400	550
55	R.L.	-0.932	56	R.L.	-0.964	17.798	400	550
56	R.L.	-0.964	57	R.L.	-0.998	17.720	400	550
57	R.L.	-0.998	21	R.L.	-1.321	20.147	400	550
				Sub Total		923.095		

Approximate Extra For Recharge pit connections and MC Connections as per Site Situations 85

Total Length 1008.095



STORM WATER DRAINAGE LAYOUT PLAN WITH SUMP

PROJECT :

THE ZIRAKPUR TRIBUNE PARIVAR COOPERATIVE HOUSE BUILDING SOCIETY, GAZIPUR ROAD, ZIRAKPUR, PUNJAB.

LEGENDS:

.....	DRAIN LINE
⊕	DRAIN MANHOLE - CIRCULAR
⊡	DESILTING TANK, (size as per detail)
⊙	RECHARGE PIT, 3.0m DIA
G.L.	GROUND LEVEL
I.L.	INVERT LEVEL

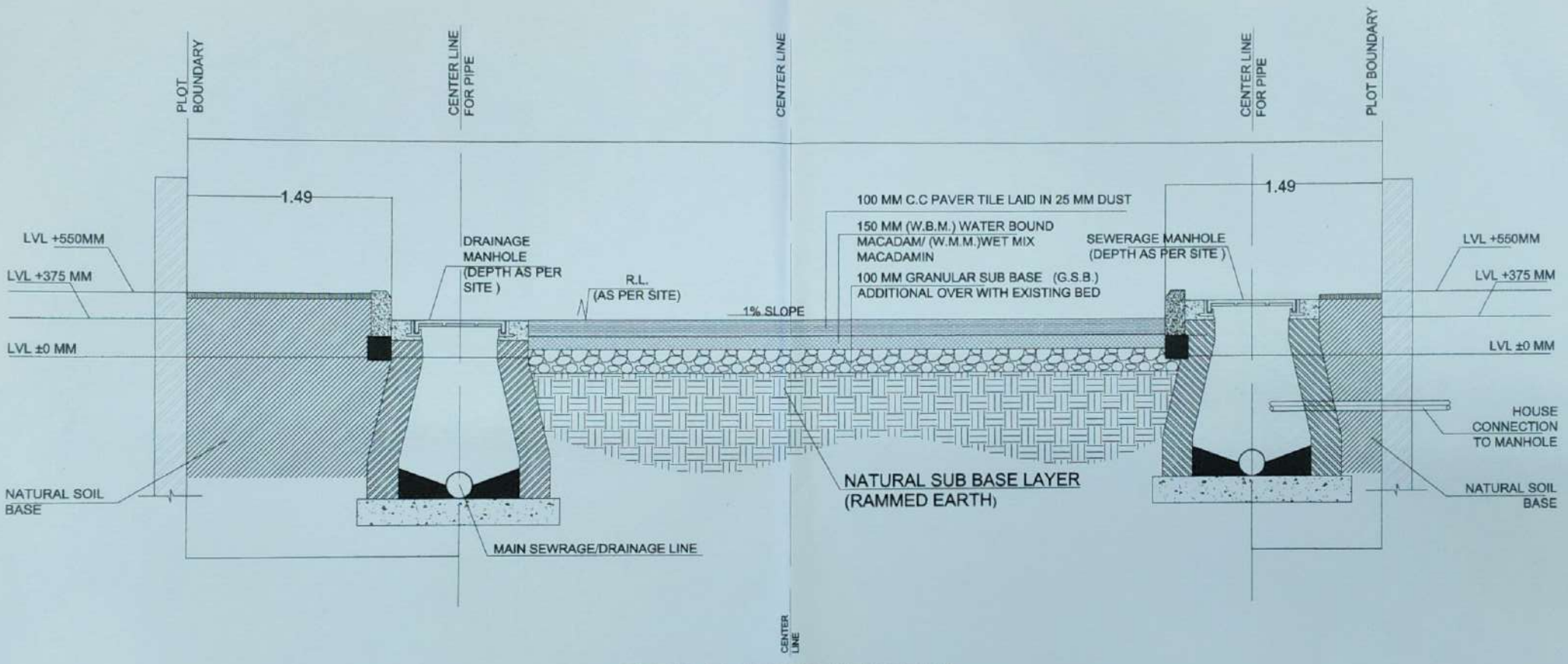
NOTES :

1. The size of manholes shall be as under (inner sizes)
2. The PCCP (Prestressed Concrete Cylinder Pipe) is to be used for Drainage lines.
3. The slope for Drainage Pipe is to be taken as 1:550 i.e. 1.8mm/1m.
   a) 1100 to 1650 m.m. depth — 900 m.m. dia.
   b) 1650 to 2250 m.m. depth — 1250 m.m. dia.
   c) Above 2250 m.m. depth — 1500 m.m. dia.

DRAWING TITLE - STORM WATER DRAINAGE LAYOUT PLAN WITH SUMP

DRAWING ISSUED AS: GPC			STRUCTURAL CONSULTANT :
DWG NO : 201	REV NO : 1	JOB NO : 1	PLUMBING CONSULTANT :
DEALT BY: Kuldeep	CHKD BY: AKSHAY	SCALE : #75	DATE : 11-10-25
			ELECTRICAL CONSULTANT :

TOTAL SOLUTIONS.
ARCHITECTS AND INTERIOR DESIGNERS.
SCO- 06,FF, PRIME SQUARE,ZIRAKPUR-CHANDIGARH.
MOB: 09041130343
EMAIL ID - er.akshaykumar@gmail.com



TYPICAL ROAD SECTION

(EXACT SIZE AND LOCATION OF CHAMBERS AND MANHOLES AS PER SITE)

PROJECT :

THE ZIRAKPUR TRIBUNE PARIVAR COOPERATIVE HOUSE BUILDING SOCIETY, GAZIPUR ROAD, ZIRAKPUR, PUNJAB.

LEGENDS:

	DRAIN LINE
	DRAIN MANHOLE - CIRCULAR
	DESILTING TANK, (size as per detail)
	RECHARGE PIT, 3.0m DIA
GL	GROUND LEVEL
IL	INVERT LEVEL

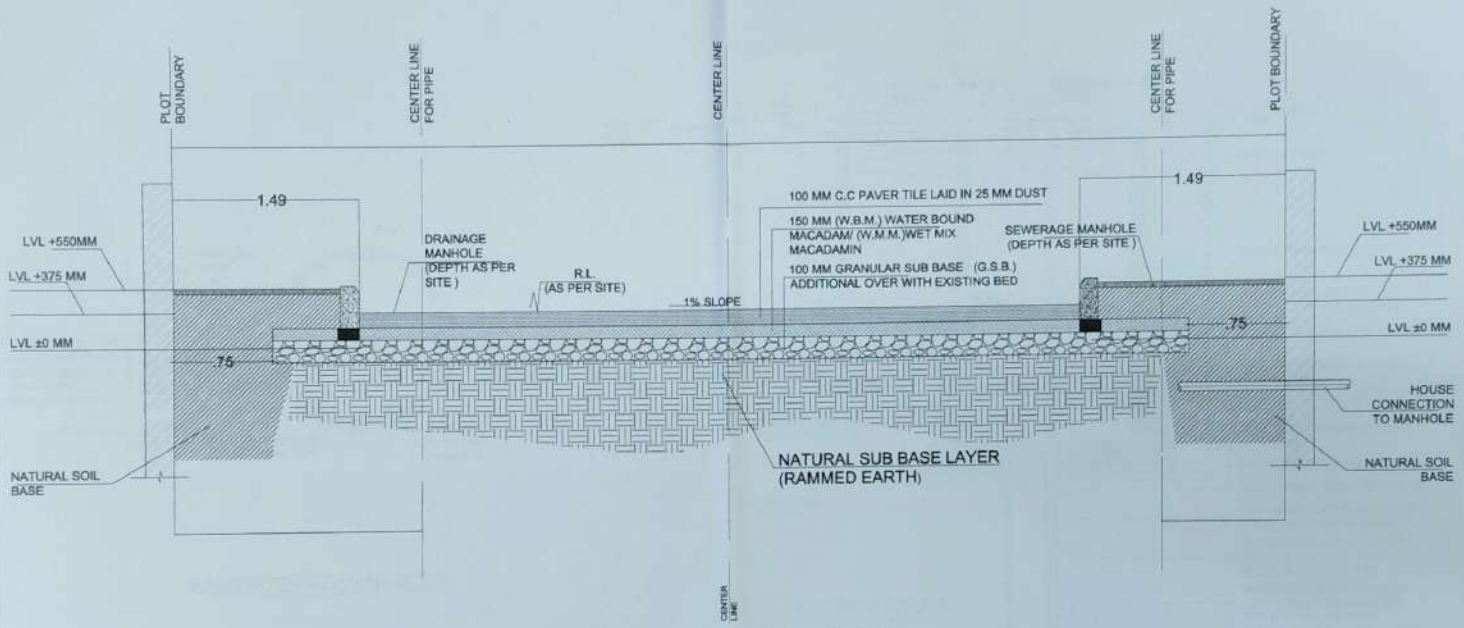
NOTES :

1. The size of manholes shall be as under (inner sizes)
2. The PCCP (Prestressed Concrete Cylinder Pipe) is to be used for Drainage lines.
3. The slope for Drainage Pipe is to be taken as 1:550 i.e 1.8mm/1m.
   a) 1100 to 1650 m.m. depth — 900 m.m. dia.
   b) 1650 to 2250 m.m. depth — 1250 m.m. dia.
   c) Above 2250 m.m. depth — 1500 m.m. dia.

DRAWING TITLE - TYPICAL ROAD SECTION

DRAWING ISSUED AS: GFC			STRUCTURAL CONSULTANT :
DWG NO : 202	REV NO : 1	JOB NO : 0	PLUMBING CONSULTANT :
DEALT BY:	CHKD BY:	SCALE : FTS / DATE : 17-10-25	ELECTRICAL CONSULTANT :
Kuldeep	AKSHAY		

TOTAL SOLUTIONS.
ARCHITECTS AND INTERIOR DESIGNERS.
CHANDIGARH DELHI KOTA
SCO- 09,FF, PRIME SQUARE,ZIRAKPUR-CHANDIGARH.
MOB: 09654130242
EMAIL ID - ar.akasheyuman@gmail.com



TYPICAL ROAD SECTION -2

(EXACT SIZE AND LOCATION OF CHAMBERS AND MANHOLES AS PER SITE)

PROJECT :

THE ZIRAKPUR TRIBUNE PARIVAR COOPERATIVE HOUSE BUILDING SOCIETY, GAZIPUR ROAD, ZIRAKPUR, PUNJAB.

LEGENDS:

	DRAIN LINE
	DRAIN MANHOLE - CIRCULAR
	DESILTING TANK, (size as per detail)
	RECHARGE PIT, 3.0m DIA
GL	GROUND LEVEL
IL	INVERT LEVEL

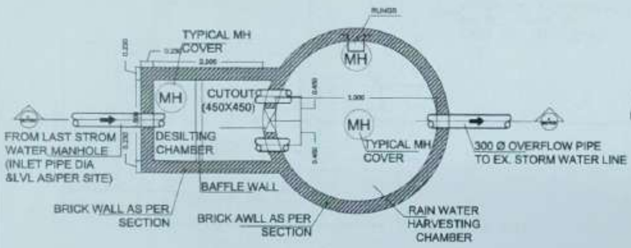
NOTES :

1. The size of manholes shall be as under (inner sizes)
2. The PCCP (Prestressed Concrete Cylinder Pipe) is to be used for Drainage lines.
3. The slope for Drainage Pipe is to be taken as 1:550 i.e. 1.8mm/1m.
   a) 1100 to 1650 m.m. depth 900 m.m. dia.
   b) 1650 to 2250 m.m. depth 1250 m.m. dia.
   c) Above 2250 m.m. depth 1500 m.m. dia.

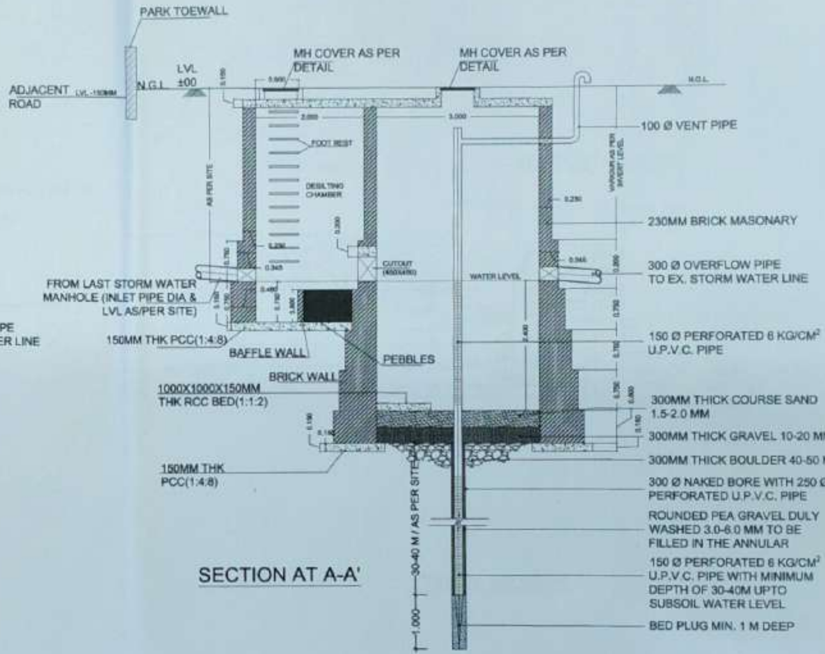
DRAWING TITLE - TYPICAL ROAD SECTION

DRAWING ISSUED AS: SPC			STRUCTURAL CONSULTANT :
DWG NO. :103	REV NO. :1	JOB NO. :0	PLUMBING CONSULTANT :
DEALT BY:	CHKD BY:	SCALE:	DATE: ELECTRICAL CONSULTANT :
KARAN	AKSHAY	FTS	17-10-25

TOTAL SOLUTIONS.
ARCHITECTS AND INTERIOR DESIGNERS.
CHANDIGARH DELHI KOTA
SCO- 09,FF, PRIME SQUARE,ZIRAKPUR-CHANDIGARH.
MOB: 09654130242
EMAIL ID - ar.akshaykumar@gmail.com



RAINWATER RECHARGE PIT



SECTION AT A-A'

PROJECT :

THE ZIRAKPUR TRIBUNE PARIVAR COOPERATIVE HOUSE BUILDING SOCIETY, GAZIPUR ROAD, ZIRAKPUR, PUNJAB.

LEGENDS:

	DRAIN LINE
	DRAIN MANHOLE - CIRCULAR
	DESILTING TANK, (size as per detail)
	RECHARGE PIT, 3.0m DIA
	GROUND LEVEL
	INVERT LEVEL

NOTES :

1. The size of manholes shall be as under (inner sizes)
2. The PCCP (Prestressed Concrete Cylinder Pipe) is to be used for Drainage lines.
3. The slope for Drainage Pipe is to be taken as 1:550 i.e. 1.8mm/1m.
   a) 1100 to 1650 m.m. depth 900 m.m. dia.
   b) 1650 to 2250 m.m. depth 1250 m.m. dia.
   c) Above 2250 m.m. depth 1500 m.m. dia.

DRAWING TITLE - TYPICAL SUMP DETAILS

DRAWING ISSUED AS: GFC				STRUCTURAL CONSULTANT :
DWG NO : 204	REV NO : 1	JOB NO : 0		PLUMBING CONSULTANT :
DEALT BY:	CHKD BY:	SCALE	DATE	ELECTRICAL CONSULTANT
Kuldeep	AKSHAY	FTS	17-10-25	

TOTAL SOLUTIONS.
ARCHITECTS AND INTERIOR DESIGNERS.
CHANDIGARH DELHI KOTA

SCO- 39 FF, PRIME SQUARE ZIRAKPUR-CHANDIGARH
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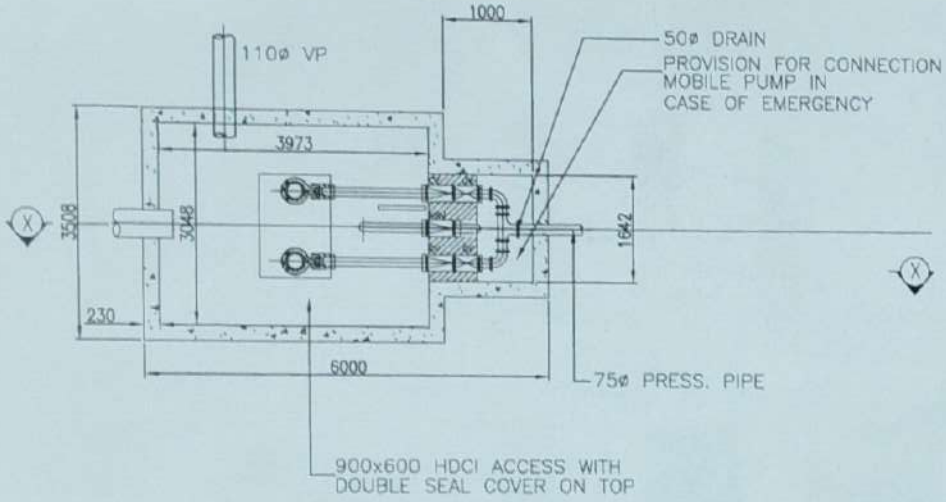
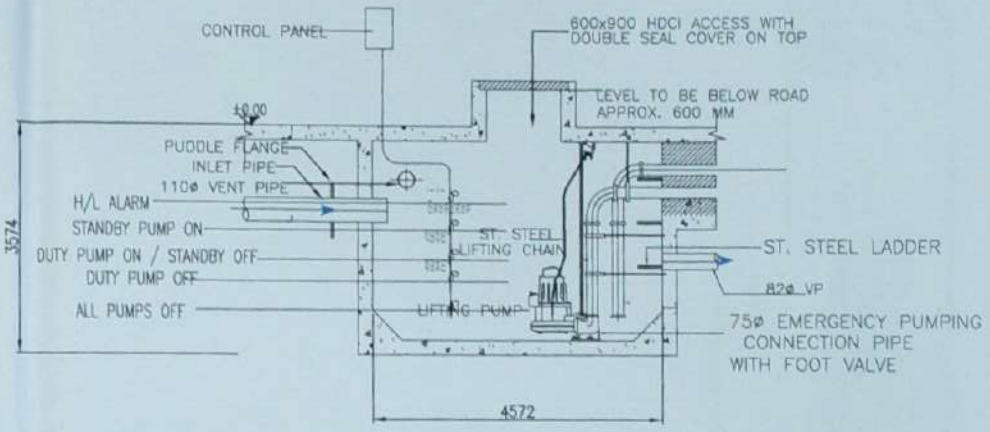
EMAIL ID : ar.akshaykumar@gmail.com



TYPICAL PLAN OF SUMP



TYPICAL SECTION

PROJECT :	LEGENDS:	NOTES :	DRAWING TITLE - TYPICAL SUMP DETAILS
THE ZIRAKPUR TRIBUNE PARIVAR COOPERATIVE HOUSE BUILDING SOCIETY, GAZIPUR ROAD, ZIRAKPUR, PUNJAB.	DRAIN LINE DRAIN MANHOLE - CIRCULAR DESILTING TANK, (size as per detail) RECHARGE PIT, 3.0m DIA GROUND LEVEL INVERT LEVEL	1. The size of manholes shall be as under (inner sizes) 2. The PCCP (Prestressed Concrete Cylinder Pipe) is to be used for Drainage lines. 3. The slope for Drainage Pipe is to be taken as 1:550 i.e. 1.8mm/1m. a) 1100 to 1650 m.m. depth 900 m.m. dia. b) 1650 to 2250 m.m. depth 1250 m.m. dia. c) Above 2250 m.m. depth 1500 m.m. dia.	DRAWING ISSUED AS: GFC DWG NO : 206 | REV NO : 1 | JOB NO : 0 DEALT BY: Kuldeep | CHKD BY: AKSHAY | SCALE : FTS | DATE : 17-10-25 STRUCTURAL CONSULTANT : PLUMBING CONSULTANT : ELECTRICAL CONSULTANT : TOTAL SOLUTIONS. ARCHITECTS AND INTERIOR DESIGNERS. CHANDIGARH DELHI KOTA # SCO- 09,FF, PRIME SQUARE,ZIRAKPUR-CHANDIGARH. MOB: 09654130242 EMAIL ID - ar.akshaysumen@gmail.com C THIS DRAWING IS THE SOLE PROPERTY OF TOTAL SOLUTIONS USE OF THIS DRAWING FOR ANY PURPOSE OTHER THAN THAT MENTIONED TO BE DONE ONLY AFTER THEIR PRIOR APPROVAL.