

**M/S REGIONAL CONSTRUCTION PVT. LTD.
AFFORDABLE PLOTTED COLONY UNDER DEEN
DAYAL JAN AWAS YOJNA IN SECTOR-5, SOHNA**

SERVICE PLAN ESTIMATE

ARCHITECT:

AD CONSULTANTS

SCO- 50 & 51, Parmami Tower, 3rd Floor, Old Judicial Complex, Civil Lines, Gurgaon,
Tel (+91-124)4081801-02 Fax: - 4084084, Email: - adconsultants13@gmail.com

SERVICE CONSULTANT:

MKG ENGINEERING SERVICES PVT. LTD.

First Floor, A-8, Paryavaran Complex,
IGNOU Road, New Delhi-30

PROJECTS

M/s Regional Construction Pvt. Ltd , area 15.0Acres, Affordable Plotted Colony Under Deen Dayal Jan Awas Yojna in Sector-5,

Sohna

REPORT

Sohna Town of Haryana State situated on Delhi-Alwar Road at a distance 65km from Delhi. Being in the national capital region, the town has fast developing tendency and potential. Further, it has also started sharing the growing Residential, Commercial and Industrial load of Delhi. In order to review the growing pressure of population in National Capital of Delhi. It has been decided by the Haryana Government to develop various infrastructure facilities in Sohna Development Area. This report is for proposed Affordable Plotted Colony Under Deen Dayal Jan Awas Yojna , Land Measuring 15.0 Acres at, Sector-5, Sohna being developed by M/s Regional Construction Pvt. Ltd. has been prepared with the following provisions which are as under:-

Water Supply

1. Source

The source of water supply in this area is tube well as underground water is sweet and fit for human consumption, moreover, the water is available at reasonable depth, the average yield of Tube wells, with approximate 60' to 80 metre depth will be about 15 KL per hour. 1 No. Tube wells are required to meet with the daily requirement of water.

2. Tube wells

The proposed tube wells shall be 510 mm bore drilled with reverse rotary rig and installed with 80 mm i/d housing pipe and 50 mm i/d slotted tube as strainer. The provision taken in the estimate under the sub-head tube well includes the cost of pea gravel packing. The lift of tube well is limited due to incrustation and rusting of strainer. Therefore, out of these tube wells the drilling of tube wells will be done for 3 Nos. tube wells and further tube wells will be drilled as the demand develops till the scheme is handed over the department.

3. Pump Chambers and Pumping Machinery

It is proposed to occupy each tube well with an electricity driven pumping set-submersible pump capable of delivering about 15,000 Liters per hour. It has been proposed to install pumping set as described with standby of equal capacity.

4. Ground Storage

Underground storage tank for One day of total daily demand of water supply have been proposed at one location in the scheme. The same shall be fed by Tube



well at present and shall be later augmented through HUDA mains canal supply at later date.

6. Distribution System

The distribution system for this development is has been designed for 172.5 Liters per person per day @3.0 times the average rate of flow on "Hazen Williams" formula with C-100. Necessary provision for laying C.I./D.I. pipes only conforming to relevant IS standards along with valves and specials has been made in this Estimate.

7. Rising Main

Rising mains from HUDA water main on sector road to water works have also been designed and provision for C.I. (class LA)/DI KA pipe line has been made in this estimate

8. Sewerage

The internal sewer lines have also been designed for three times average D.W.F in relation to water supply demand. It has been assumed that about 90 % of the domestic water supply shall find its way into the proposed sewer. All the SW / RCC pipes, sewer has been designed to run half/full/three fourth full.

Necessary design statement for entire internal sewerage system has been prepared and attached with estimate.

Necessary provision for laying SW/RCC pipes sewer lines and manholes etc. has been made in this estimate

9. Storm water drainage

It has been proposed to lay underground RCC-NP3 pipe drains on the road widths 40 ft. and above where it is possible to lay underground drains. The intensity of rain fall has been taken as $\frac{1}{4}$ th inch per hour. The internal storm water drains will be jointed into external storm water drainage to be laid by HUDA on sector dividing roads. Necessary provision for curves and channels has been made in the estimate. The estimate for these closed drains has been included as sub work no. III A minimum size of 400 mm RCC storm water line will be provided.

10. Specifications

The work will be carried out in accordance with the standard specifications of P.H. as laid down by the Haryana Government.

11. Roads

Cost of road has been taken in the estimate

12. Street Lighting

Provision for street lighting on surrounding area has been made.

13. Horticulture



Estimates and details of plantation, landscaping, signage etc. has been included.

14. Specifications

The work will be carried out in accordance with the standard specifications of PH as laid down by the HUDA/ Haryana Government.

15. Rates

The estimate has been based on the present market rates and probable escalation in prices.

16. Cost

The total cost of the Scheme including cost of all services works out to **Rs. 1230.1 lakhs** including 3% contingencies and 49% (departmental charges, unfrozen, price escalation and admin charges)

Cost per acres 81.0 lakhs.

-/-



PLOTTED DEVELOPMENT AT SECTOR-5, SOHNA, HARYANA
SUBJECT: POPULATION & WATER DEMAND CALCULATIONS

S. No.	Unit Type	Category as per latest NBC	Total Area (in Sqm)	Persons considered per plot as per HUDA norms	Total Population	I.PCD Factor for Potable Water Req.	I.PCD Factor for Flushing Water Req.	Potable Water Requirement (LPD)	Flushing Water Requirement (LPD)	Total Water Requirement (LPD)
I. DOMESTIC WATER DEMAND										
1. Plots	Residential	258	2427.33 m ² /ac.	13.5	3888	115.6	56.4	4893.36.2	22134.38	670.840
2. Commercial Block	Business		6171.95 or 1.5 ac.		12001/ ac.			12864.0	6336.0	19,200
3. Common Facilities					1.S.			25125.0	12375.0	37,500
Total								487325	240055	727360
Grand Total								487325	240055	727360
Say in Campday								490	285	790

II. AGRICULTURAL WATER DEMAND

For approx. 20% of Total site area approx. 1.5 Acre @ 25000 liter/ Acre(rai)

Total Say (in Cu.m. per day)

TOTAL WATER REQUIREMENTS FOR ALL PURPOSES

III. TUBE WELLS										
(a) Yield		15	KL/Hr							
(b) Working Hours per Day		16	Hours per Day							
Discharge per Tube well		240								
(c) Total water demand		690	m ³ /day							
(d) Number of Tube wells required		2.04								
(Water Demand/Discharge/Hours working per day)										
(e) Add 5% as standby		0.10								
	Total	2.14	Nos.							
	Say	3.00	Nos.							

(Water to the proposed development is to be supplied by HUDA and it is proposed to install the tube-wells for supplementation/standby purposes).



VII.B) BOOSTING MACHINERY/Flooding & Garden Supply Pumps from STP

(a) Daily Flushing & Horticultural Water Demanded.				
(b) Discharge per hour @ 8 hr. pumping / day	Say			
(c) No. of Working pump				
(d) Proposed Pump discharge (Working)	Say			

Gross Working Head

(e) Section lift - positive suction				
(f) Frictional Loss in Mains & Specials				
(g) Max Clear Head required				
	Total			
(h) HP. of each pump required (Pump HP.)				
	Say			

VII. GENERATING SETS

1. HP of Tube well pump				
2. HP of Domestic water supply Pump				
3. HP of Flooding water supply Pump				
	Total			
	in KVA			
	SAY			

VIII. STP CAPACITY

1. STP Capacity will be = total water required per day * 75% = 750 kld x 75 = 5625 kld say			



PROJECT: PLOTTED DEVELOPMENT AT SECTOR-5, SOHNA, HARYANA

SUBJECT: FINAL ABSTRACT OF COST

		Amount in Rs. Lacs
SUB WORK NO. I	WATER SUPPLY SCHEME	280.50
SUB WORK NO.	SEWERAGE SCHEME	175.43
SUB WORK	STORM WATER DRAINAGE	100.03
SUB WORK	ROADS & FOOT PATHS	240.88
SUB WORK NO.V	STREET LIGHTING	57.55
SUB WORK NO.	HORTICULTURE (PLANTATION & ROAD SIDE TREES)	12.85
SUB WORK NO. VII	MTC CHARGES INCL RESURFACING OF ROADS AFTER 1st 5 YEARS	362.85
	TOTAL	1230.10

TOTAL : (Rupees Twelve Crores ThirtyLacs and Ten Thousand Only)

AUTHORISED SIGNATORY



SUB WORK No. 1 (Abstract of Cost)		Water Supply & Fire Fighting	
1	Sub Head No. 01	Head Works	Rs.8,053,250
2	Sub Head No. 02	Pumping Machinery	Rs.2,200,000
3	Sub Head No. 03	Rising Main	Rs.388,000
4	Sub Head No. 04	Distribution System	7,635,900
		TOTAL	Rs.18,277,150
		Add 3% contingencies & PH Charges	Rs.548,314.50
		TOTAL	Rs.18,825,465
		Add 49% Departmental charges + Price escalation	Rs.9,224,477.61
		TOTAL	Rs.28,049,942
		Say in lacs	280.50



PROJECT: PLOTTED DEVELOPMENT AT SECTOR-5, SOHNA, HARAYANA

SUBJECT: DOMESTIC WATER SUPPLY DESIGN SHEET

S. No.	Line Designation	No. of Plot	Water Requirements (in KLD)	Self Water requirement (in KLD)	Branch Water Requirement (in KLD)	Total Water Requirements (in KLD)	Discharge per Hour considering 8 Hours Pumping	Size of Pipe Provided	Velocity in m/sec.	Head Loss per 1000m	Length of pipeline meters)	Hydraulic Level		Terminal Head		
												Start	End			
FROM	TO					Total	KLD/hr	mm								
1	WTI ^c	1		0.00	449.99	449.99	56.268	150	0.89	0.019	2	94.30	100.30	129.281		
2	1	2		0.00	449.99	449.99	56.268	100	1.99	0.019	3	100.30	100.30	129.072		
3	2	3		0.00	449.99	449.99	56.268	100	1.99	0.019	3	100.30	100.30	128.863		
4	3	4		0.00	196.79	196.79	34.979	100	0.87	0.019	6	100.30	100.30	128.865		
5	4	20	0	0.00	0.00	0.00	0.00	100	0.00	0.000	8	100.30	100.30	128.743		
6	4	5	0	0.00	196.79	196.79	34.979	100	0.87	0.019	70	100.30	100.30	127.553		
7	5	6	15		23.41	23.41	2.926	100	0.10	0.39	104	100.30	100.30	127.553		
8	5	7		0.00	171.38	171.38	21.673	100	0.77	0.019	7	100.30	100.30	127.469		
9	7	8	15		23.41	23.41	23.41	23.41	100	0.10	0.29	107	100.30	100.30	127.438	
10	7	9		0.00	0.00	149.97	149.97	18.747	100	0.60	0.11	36	100.30	100.30	127.123	
11	9	10	7		10.92	11.92	10.92	10.92	100	0.05	0.07	43	100.30	100.30	127.123	
12	9	11		0.00	0.00	139.95	139.95	17.993	100	0.02	7.92	7	100.30	100.30	127.123	
13	11	12	6	9.36	9.36	9.36	9.36	11.710	100	0.04	0.05	43	100.30	100.30	127.067	
14	11	13	6	9.36	9.36	120.32	129.69	16.211	100	0.57	0.06	72	100.30	100.30	126.566	
15	13	14		0.00	0.00	26.18	26.18	7.025	100	0.25	1.48	1010	7	100.30	100.30	126.556
16	13	Common Facility		25.13	25.13	25.13	3.141	100	0.11	0.03	0.001	2	100.30	100.30	126.565	
16	14	15	18	26.09	26.09	26.09	3.511	100	0.12	0.41	0.052	12b	100.30	100.30	126.564	
17	14	16	19	26.09	26.09	26.09	3.511	100	0.12	0.41	0.064	15b	100.30	100.30	126.492	
18	14	17	5	7.89	7.89	7.89	4.877	100	0.17	0.75	0.028	37	100.30	100.30	126.538	
19	17	19	18	26.09	26.09	26.09	5.511	100	0.12	0.41	0.053	133	100.30	100.30	126.538	
20	17	18	2	3.12	3.12	3.12	0.960	100	0.01	0.01	0.000	12	100.30	100.30	126.538	
21	3	21	4	6.24	6.24	246.95	253.20	31.650	100	1.12	28.01	22	100.30	100.30	128.863	
22	21	22		0.00	0.00	122.11	122.11	15.263	100	0.54	6.23	92	100.30	100.30	126.335	
23	22	23	5	7.89	7.89	7.89	0.973	100	0.03	0.04	0.002	40	100.30	100.30	127.762	
24	22	24		0.00	0.00	114.30	114.30	114.30	100	0.51	0.04	0	100.30	100.30	127.762	
25	24	25	30	15.61	15.61	15.61	1.951	100	0.07	0.14	0.010	75	100.30	100.30	127.718	
26	24	26		0.00	0.00	98.70	98.70	98.70	100	0.44	4.20	46	100.30	100.30	127.718	
27	26	27	7	10.92	10.92	10.92	1.56	100	0.05	0.07	0.004	61	100.30	100.30	127.516	
28	26	28		0.00	0.00	87.77	87.77	10.92	100	0.39	3.38	0.027	8	100.30	100.30	127.516
29	28	29	3	4.68	4.68	4.68	0.585	100	0.02	0.01	0.000	29	100.30	100.30	127.489	
30	28	30	7	10.92	10.92	10.92	11.96	93.09	100	0.37	3.06	0.092	30	100.30	100.30	127.489
31	30	31	0	0.00	0.00	67.49	67.49	67.49	100	0.30	2.08	0.054	15	100.30	100.30	127.366
32	31	32	7	10.92	10.92	10.92	1.366	100	0.05	0.07	0.004	51	100.30	100.30	127.366	
33	31	33	7	10.92	10.92	45.64	56.56	7.030	100	0.25	1.59	0.148	72	100.30	100.30	127.366



S. No.	Line Designation	No. of Plot	Water Requirements (in KLD)	Self Water requirement (in KLD)	Branch Water requirement (in KLD)	Total Water Requirements (in KLD)	Discharge per Hour considering 8 Hours Pumping	Size of Pipe Provided	Velocity in sec.	Head loss per 1000m	Loss of head as per pipe length	Length of pipe (metres)	Hydraulic Level		Terminal Head	
													Start	End		
34	33	34	0	0.00	23.79	23.79	2.974	100	0.11	0.30	0.002	8	100.30	100.30	127.394	
35	34	35	7	10.92	10.92	10.92	1.366	100	0.05	0.07	0.003	44	100.30	100.30	127.394	
36	34	36	COMMERCIAL	12.86	0.00	12.86	1.608	100	0.06	0.10	0.002	22	100.30	100.30	127.394	
37	35	37	6	9.36	9.36	12.48	21.85	100	0.10	0.26	0.012	47	100.30	100.30	127.394	
38	37	38	8	12.48	12.48	0.00	12.48	100	0.06	0.09	0.008	92	100.30	100.30	127.394	
39	21	39	0	0.00	0.00	124.85	124.85	15.606	100	0.55	0.49	0.035	7	100.30	100.30	127.355
40	19	40	25	39.02	39.02	59.02	4.877	100	0.17	0.75	0.049	198	100.30	100.30	127.381	
26	19	41	41	0.00	0.00	85.83	10.779	100	0.38	3.25	0.114	35	100.30	100.30	126.335	
27	41	44	27	42.14	42.14	0.09	42.14	5.267	100	0.19	0.87	0.009	217	100.30	100.30	126.271
38	41	42	0	0.00	43.70	43.70	5.462	100	0.19	0.95	0.007	7	100.30	100.30	128.035	
29	42	43		0.00	93.64	93.64	11.705	100	0.42	3.01	0.001	16	100.30	100.30	128.221	
30	42	45	28	47.70	43.70	17.17	60.86	7.608	100	0.27	1.72	0.080	224	100.30	100.30	128.160
31	20	46	11	17.17	17.17	21.16	30.9	0.08	0.17	0.014	86	100.30	100.30	127.781		
32	20	48	21	32.77	32.77	100	4.097	100	0.15	0.35	0.087	160	100.30	100.30	128.360	
															129.073	
															27.273	



PROJECT: PLOTTED DEVELOPMENT AT SECTOR-5, SOHNA, HARYANA

SUBJECT: WATER SUPPLY PIPES SHEET

S. No.	Line Designation	Size of Pipe Provided		Length of pipe metres
		mm	metres	
1	WTP	1	150	2
2	1	2	100	3
3	2	3	100	3
4	3	4	100	8
5	4	20	100	8
6	4	5	100	79
7	5	6	100	104
8	5	7	100	7
9	7	8	100	107
10	7	9	100	38
11	9	10	100	43
12	9	11	100	7
13	11	12	100	43
14	11	13	100	72
15	13	14	100	7
		Common Facility		
16	13	15	100	2
17	14	15	100	126
18	14	16	100	136
19	14	17	100	37
20	17	19	100	133
21	17	18	100	32
22	3	21	100	22
23	21	22	100	92
24	22	23	100	40
25	22	24	100	8
26	24	25	100	75
27	24	26	100	48
28	26	27	100	61
2	26	28	100	8
3	28	29	100	29
4	28	30	100	30
5	30	31	100	15
6	31	32	100	51
7	31	33	100	72
8	33	34	100	8
9	34	35	100	44
10	34	36	100	22
11	35	37	100	47
12	37	38	100	92
13	21	39	100	7
14	39	40	100	198
15	39	41	100	35
16	41	44	100	217
17	41	42	100	7
18	42	43	100	16
19	42	45	100	221
20	20	4C	100	86
21	20	4B	100	160
TOTAL FOR 100 DIA				2706
TOTAL FOR 150 DIA				2
TOTAL PIPING				2708
		MUNICIPAL LINE		
1		la - UGT	100	120
		TOTAL PIPE 100 DIA		120



PROJECT: PLOTTED DEVELOPMENT AT SECTOR-5, SOHNA, HARYANA

SUBJECT: FLUSHING & GARDEN WATER SUPPLY DESIGN SHEET

S. No.	Node No.	No. of Plot	Flushing Water Requirement in KLD	Branch Water	Total KLD	Discharge per Hour considering 8 Hours Pumping	Size of Pipe Provided	Velocity	Head Loss per 1000 m	Length of pipe (in meters)	Ground level		Hydraulic Level	Terminal Head	
											Start	End	Span	Fall	
											in m	in m	in m	in m	
1	51P	1	0.00	317.24	317.24	39.655	100	4.61	1.41	40	0.161	4	94.30	124.30	
2	1	2	0.00	317.24	317.24	39.655	100	4.61	1.41	40	0.242	6	100.30	124.14	
3	2	3	GREEN	15.00	60.00	75.00	9.375	100	1.09	0.33	2	0.063	26	100.30	123.90
4	3	4		20.00	40.00	60.00	7.500	100	0.87	0.27	1	0.062	43	100.30	123.83
5	3	5		40.00		40.00	5.000	100	0.58	0.18	1	0.079	123	100.30	123.75
6	2	2a	4"	3.07		3.07	0.384	100	0.04	0.01	0	0.000	30	100.30	123.90
7	3	6		0.00	239.16	239.16	29.896	100	3.48	1.06	23	0.160	7	100.30	123.90
8	6	7	9	6.91	106.09	113.00	14.125	100	1.64	0.50	5	0.409	80	100.30	123.74
9	7	8	15	11.52		11.52	1.440	100	0.17	0.05	0	0.005	113	100.30	123.33
10	7	9	1	0.77	93.80	94.57	11.821	100	1.37	0.42	4	0.025	7	100.30	123.33
11	9	10	15	11.52		11.52	1.440	100	0.17	0.05	0	0.006	113	100.30	123.30
12	9	11	5	3.84	78.44	82.28	10.285	100	1.20	0.36	3	0.088	33	100.30	123.30
13	11	12	6	4.61		4.61	0.576	100	0.07	0.02	0	0.000	46	100.30	123.21
14	11	13	1	0.77	73.06	73.83	9.228	100	1.07	0.33	2	0.015	7	100.30	123.21
15	13	14	6	4.61		4.61	0.576	100	0.07	0.02	0	0.000	51	100.30	123.20
16	13	15	5	3.84	64.61	68.45	8.956	100	1.00	0.30	2	0.071	38	100.30	123.20
17	15	16	114 Common facilities	22.36		22.36	2.705	100	0.33	0.10	0	0.022	108	100.30	123.13
18	15	17		0.00	42.25	42.25	5.261	100	0.61	0.19	1	0.005	7	100.30	123.13
19	17	16	12	9.22		9.22	1.152	100	0.13	0.04	0	0.003	82	100.30	123.12
20	17	19	7	5.38	27.65	30.03	4.129	100	0.46	0.15	0	0.031	70	100.30	123.12
21	19	20	18	13.63		13.63	1.278	100	0.20	0.06	0	0.010	127	100.30	123.09
22	19	21		0.00	13.63	13.63	1.278	100	0.20	0.06	0	0.001	7	100.30	123.09
23	21	22	18	13.63		13.63	1.278	100	0.20	0.06	0	0.010	126	100.30	123.09
24	6	23	1	0.77	125.59	126.16	15.770	100	1.83	0.56	6	0.153	24	100.30	123.74
25	23	24		0.00	95.44	95.44	11.929	100	1.39	0.42	4	0.033	9	100.30	123.58
26	24	25	27	20.74	0.00	20.74	2.593	100	0.30	0.09	0	0.044	256	100.30	123.25
27	23	26	8	6.15	23.81	29.96	3.745	100	0.44	0.15	0	0.015	41	100.30	123.51
28	24	27	12	9.22	65.48	74.70	9.357	100	1.09	0.53	2	0.206	92	100.30	123.55
29	27	28	3	3.84	0.460	3.84	0.460	100	0.06	0.02	0	0.000	47	100.30	123.34
30	27	29	1	0.77	60.87	61.64	7.705	100	0.90	0.27	2	0.011	7	100.30	123.34



S. No.	Node No.	No. of Flot	Flushing Water Requirement In KLD	Branch Water	Total KLD	Discharge per Hour considering 8 Hours Pumping	Size of Pipe provided	Velocity	Head Loss per 1000 m	Length of pipe (in meters)	Ground level	Hydraulic Level	Terminal Head			
							mm	in ft/sec.	in m/s							
							mm	in ft/sec.	in m/s							
31	29	30	13	9.99	9.99	1.248	100	0.15	0.04	0	0.004	100	123.33	123.33		
32	29	31	0.00	50.88	50.88	6.360	100	0.74	0.23	1	0.008	8	100.30	123.33	123.33	
33	31	32	10	7.68	7.68	0.960	100	0.11	0.03	0	0.002	87	100.30	123.33	123.32	
34	31	33	0.00	43.20	43.20	5.400	100	0.63	0.19	1	0.000	40	100.30	123.33	123.30	
35	33	34	7	5.98	5.98	0.672	100	0.08	0.02	0	0.001	68	100.30	123.30	123.30	
36	33	35	0.00	37.02	37.02	4.728	100	0.95	0.17	1	0.005	8	100.30	123.30	123.29	
37	35	36	3	2.30	2.30	0.268	100	0.03	0.01	0	0.000	26	100.30	123.29	123.29	
38	35	37	3	2.70	33.22	35.52	4.440	100	0.52	0.16	1	0.016	32	100.30	123.29	123.26
39	37	38	0.00	33.22	33.22	4.152	100	0.46	0.15	0	0.005	11	100.30	123.28	123.27	
40	38	39	7	5.98	5.98	0.672	100	0.08	0.02	0	0.001	54	100.30	123.27	123.27	
41	38	40	7	5.98	22.46	27.84	3.480	100	0.60	0.12	0	0.022	72	100.30	123.27	123.25
42	40	41	14	10.75	10.75	1.344	100	0.16	0.05	0	0.006	127	100.30	123.25	123.24	
43	40	42	0	0.00	11.71	11.71	1.463	100	0.17	0.03	0	0.000	8	100.30	123.25	123.25
44	42	43	7	5.98	5.98	0.672	100	0.08	0.02	0	0.001	69	100.30	123.25	123.25	
45	42	44	0	6.34	0.00	6.33	0.791	100	0.09	0.03	0	0.000	23	100.30	123.25	123.25
46	23	26	8	6.15	23.81	28.96	3.745	100	0.44	0.13	0	0.015	41	100.30	123.25	123.23
47	26	45	4	3.07	0.00	3.07	0.984	100	0.04	0.01	0	0.000	17	100.30	123.25	123.25
31	26	46	27	20.74	0.00	20.74	2.993	100	0.39	0.09	0	0.000	234	100.30	123.58	123.54



PLOTTED DEVELOPMENT AT SECTOR-5, SOHNA, HARYANA				
SUBJECT: FLUSHING & GARDEN WATER SUPPLY MATERIAL				
S. No.	Line Designation	Size of Pipe Provided mm Dia	Length of pipe	
1	STP	1	100	4
2	1	2	100	6
3	2	3	100	28
4	3	4	100	43
5	3	5	100	123
6	2	2a	100	23
7	2	6	100	7
8	6	7	100	80
9	7	8	100	113
10	7	9	100	7
11	9	10	100	113
12	9	11	100	33
13	11	12	100	46
14	11	13	100	7
15	13	14	100	51
16	13	15	100	38
17	15	16	100	107
18	15	17	100	7
19	17	18	100	83
20	17	19	100	70
21	19	20	100	127
22	19	21	100	7
23	21	22	100	126
24	6	23	100	24
25	23	24	100	9
26	24	25	100	223
27	23	26	100	41
28	24	27	100	92
29	27	28	100	47
30	27	29	100	7
31	29	30	100	100
32	29	31	100	8
33	31	32	100	87
34	31	33	100	40
35	33	34	100	68
36	33	35	100	8
37	35	36	100	26
38	35	37	100	32
39	37	38	100	11
40	38	39	100	54
41	38	40	100	72
42	40	41	100	123
43	40	42	100	7
44	42	43	100	49
45	42	44	100	23
46	26	45	100	17
47	26	46	100	234
TOTAL PIPE OF 100 DIA			2651	



Sub Work No. 1	Water Supply Head Works	Amount in Rs.
Sub Head No. 01		
1. Boring and installing tube well with reverse Rotary Rig Complete with pipe and strainer to a depth of about 120 meter in all respect 3 Nos. for overall 15 Acre Site Area Total -3 No. @ Rs. 10,00,000/- each.		Rs.3,000,000.00
2. Provision for rising mains, connecting tube wells with UGT Tanks including Valve & NRV a) 100 mm dia - 390 m @ Rs. 1250/- b) 150 mm dia - 10 m @ Rs. 1575/-		Rs.487,500.00 Rs.15,750.00
3. Providing Tube well Submersible Pumps : Capacity 15000 LPH at 88 M head ,3 Nos. @ Rs. 200,000/-each		Rs.600,000.00
4. Construction of UG Tanks 500 KL @ Rs. 3500/KL		Rs.1,750,000.00
5. Provision of Construction of Tube well Chambers of Size 1.5x1.5x1.5 m tube well - 3 Nos @ Rs.100000 each		Rs.300,000.00
6. Provision for Carriage of material & other unforeseen items		Rs.100,000.00
7. Provision for footpath, lawn, boundary wall around tubewell & waterworks (L.S)		Rs.300,000.00
8. Construction of boosting chamber (L.S.)		Rs.500,000.00
9. Provision for staff offices & for maintenance staff		Rs.1,000,000.00
TOTAL		Rs.8,053,250.00
(C/O To Abstract of Cost for Sub work No.1)		

For Tube Well Line

S. No.	Line Designation	Size of Pipe Provided	Length of pipe(in meters)
		mm	
1	TW 1 & TW2 - UGT	100	390



Sub Work No. 1	Water Supply Pumping Machinery	Amount in Rs.
Sub Head No. 02		
1A. Providing and installing electricity driven Domestic Transfer pumping Set capable of delivering about 400 LPM of water against a total Head of 35 M complete with motor and other accessories including Valve(5 HP) & NRV, (4 Working + 1 Stand by) 5 Nos. @ 120000/- Each	Rs.600,000.00	
1B. Providing and installing electricity driven Flushing & Garden pumping Set capable of delivering about 300 LPM of water against a total Head of 35 M complete with motor and other accessories including Valve(4 HP) & NRV, (3 Working + 1 Stand by) 4 Nos. @ 100000/- Each	Rs.400,000.00	
2. Provision for making foundations and erection of Pumping Machinery: - Lump Sum	Rs.100,000.00	
3. Provision for electric service connection including electrical Fittings for tube-well and boosting chamber etc. - Lump Sum	Rs.250,000.00	
4. Provision for pipes, valves and specials inside boosting chamber. (LS)	Rs.200,000.00	
5. Provision for carriage of material	Rs.50,000.00	
6. Provision for formation of plant etc.	Rs.100,000.00	
7. Provision for diesel engine generator set each for stand by arrangement for tubewell is boosting pump craft etc.(50kVA)	Rs.500,000.00	
TOTAL	Rs.2,200,000.00	

(C/O To Abstract of Cost for Sub work No.1)



Sub-Work No. 1
Sub Head No. 03

Water Supply
Rising Main from HUDA

Amount in Rs.

1. Providing , laying , jointing and testing pipe lines including Cost of excavation etc. complete in all respects.
100 mm dia, G.I. Pipe 120 m @ Rs. 1250/M- Rs.150,000.00
2. Providing and fixing sluice valve including cost of surface box and masonry chamber etc. complete in all respects.
100 mm i/d 1 No. @ Rs. 12000/- Rs.12,000.00
3. Providing and fixing indicating plates for sluice valve and air Valves, - 1 @ Rs. 1000/- each Rs.1,000.00
4. Provision for carriage for materials (Lump Sum) Rs.25,000.00
5. Making Water Supply Connection,including road cut with HUDA master line. Rs.100,000.00
6. Provision for roads cut and make up good condition Rs.100,000.00

TOTAL Rs.388,000.00**For HUDA Supply Line**

S. No.	Line Designation	Size of Pipe Provided	Length of pipe(in meters)
		mm	
1	MU Connection – UGT	100	120



Sub Work No. 1

Sub-Head No. 04

Water Supply
Water Distribution System (Domestic
And Flushing)

	<i>Amount in Rs.</i>
1. Providing , Laying , jointing and testing G.I pipe line including Fittings, valves, cost of excavation etc. complete in all respect. G.I Pipe 100 mm ,53257 M @ Rs.1250/- per meter G.I Pipe 150 mm ,2 M @ Rs.1575/- per meter	Rs.6,696,250.00 Rs.3,150.00
2. Providing and fixing 20 mm dia. irrigation hydrant Valve,Chamber & Cover Etc. complete in all respect. 19 Nos. @ Rs. 3500/ each	Rs.66,500
3. Provision for carriage of materials (Lump Sum)	Rs.200,000.00
4. Provision for cutting of road and making its good condition	Rs.100,000.00
5. Provision for air valve 4 No. and sluice valve complete with masonry chamber (L.S)	Rs.200,000.00
6. Providing & Fixing indicating plates for sluice valve,air valve (L.S)	Rs.20,000
7. Providing & Fixing fire hydrant complete with masonry chamber(L.S)	Rs.350,000
Total	Rs.7,635,900.00

(C/O To Abstract of Cost for Sub work No.1)



PROJECT PROFESSIONAL ENVIRONMENT SHEET

Sl. No.	Server Name	No. of Ports	Rate of Production (UAS/PLDT)		Water Supply		Total Water Requirements		Average Sewage Discharge (PLDT)		Sewage Discharge (PLDT)		Peak Storage Discharge		Size of Pipe		Welding		Usage Discharge of Line		Falling Water		Ground Level		Depth of KHI		Average depth of pipe	
			3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
1	Room 30	8	18.5	18.5	18.5	18.5	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	77	100.0	0.429	0.080	100.0	100.0	1.20	1.91	1.71	
2	1	2	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	49	100.0	0.377	0.080	100.0	100.0	1.20	1.91	2.06	
3	2	4	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	19	100.0	0.336	0.080	100.0	100.0	1.20	1.81	1.35	
4	3	4	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	80	100.0	0.309	0.080	100.0	100.0	1.20	1.81	1.35	
5	4	5	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	80	100.0	0.309	0.080	100.0	100.0	1.20	1.81	1.35	
6	5	6	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	43	100.0	0.336	0.080	100.0	100.0	1.20	1.81	1.35	
7	6	7	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	18	100.0	0.364	0.080	100.0	100.0	1.20	1.81	1.35	
8	7	8	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	41	100.0	0.377	0.080	100.0	100.0	1.20	1.81	1.35	
9	8	9	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	8	100.0	0.364	0.080	100.0	100.0	1.20	1.81	1.35	
10	9	10	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	46	100.0	0.364	0.080	100.0	100.0	1.20	1.81	1.35	
11	10	11	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	101	100.0	0.377	0.080	100.0	100.0	1.20	1.81	1.35	
12	11	12	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	18	100.0	0.364	0.080	100.0	100.0	1.20	1.81	1.35	
13	12	13	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	22	100.0	0.377	0.080	100.0	100.0	1.20	1.81	1.35	
14	13	14	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	63	100.0	0.364	0.080	100.0	100.0	1.20	1.81	1.35	
15	14	15	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	25	100.0	0.377	0.080	100.0	100.0	1.20	1.81	1.35	
16	15	16	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	125	100.0	0.364	0.080	100.0	100.0	1.20	1.81	1.35	
17	16	17	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	125	100.0	0.377	0.080	100.0	100.0	1.20	1.81	1.35	
18	17	18	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	125	100.0	0.364	0.080	100.0	100.0	1.20	1.81	1.35	
19	18	19	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	125	100.0	0.377	0.080	100.0	100.0	1.20	1.81	1.35	
20	19	20	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	125	100.0	0.364	0.080	100.0	100.0	1.20	1.81	1.35	
21	20	21	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	125	100.0	0.377	0.080	100.0	100.0	1.20	1.81	1.35	
22	21	22	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	125	100.0	0.364	0.080	100.0	100.0	1.20	1.81	1.35	
23	22	23	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	125	100.0	0.377	0.080	100.0	100.0	1.20	1.81	1.35	
24	23	24	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	125	100.0	0.364	0.080	100.0	100.0	1.20	1.81	1.35	
25	24	25	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	125	100.0	0.377	0.080	100.0	100.0	1.20	1.81	1.35	
26	25	26	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	125	100.0	0.364	0.080	100.0	100.0	1.20	1.81	1.35	
27	26	27	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	125	100.0	0.377	0.080	100.0	100.0	1.20	1.81	1.35	
28	27	28	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	125	100.0	0.364	0.080	100.0	100.0	1.20	1.81	1.35	
29	28	29	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	125	100.0	0.377	0.080	100.0	100.0	1.20	1.81	1.35	
30	29	30	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	125	100.0	0.364	0.080	100.0	100.0	1.20	1.81	1.35	
31	30	31	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	125	100.0	0.377	0.080	100.0	100.0	1.20	1.81	1.35	
32	31	32	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	125	100.0	0.364	0.080	100.0	100.0	1.20	1.81	1.35	
33	32	33	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	125	100.0	0.377	0.080	100.0	100.0	1.20	1.81	1.35	
34	33	34	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	125	100.0	0.364	0.080	100.0	100.0	1.20	1.81	1.35	
35	34	35	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	125	100.0	0.377	0.080	100.0	100.0	1.20	1.81	1.35	
36	35	36	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	125	100.0	0.364	0.080	100.0	100.0	1.20	1.81	1.35	
37	36	37	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	125	100.0	0.377	0.080	100.0	100.0	1.20	1.81	1.35	
38	37	38	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	125	100.0	0.364	0.080	100.0	100.0	1.20	1.81	1.35	
39	38	39	18	18	18	18	172.5	169.8	159.7	139.7	139.7	139.7	114.0	100.0	20.0	2.5	0.76	0.43	125	100.0	0.377	0.080	100.0	100.0	1.20	1.81	1.35	
40	39	40	18	18	18	18	172.5</td																					

PROJECT: PLOTTED DEVELOPMENT AT SECTOR-5, SOHNA, HARYANA**SUBJECT: SEWERAGE SYSTEM SHEET**

S. No.	Sewer Line		Size of Pipe mm	Length of Line Meters
	From	To		
1	1	2	200	77
2	2	4	200	49
3	3	4	200	19
4	4	5	200	88
5	6	5	200	43
6	5	7	200	11
7	7	9	200	49
8	8	9	200	8
9	9	11	200	48
10	10	11	200	103
11	11	15	200	94
12	12	14	200	225
13	13	14	200	22
14	14	15	200	65
15	15	26	200	23
16	16	18	200	125
17	17	18	250	16
18	18	19	200	28
19	19	21	200	38
20	20	21	200	86
1	21	23	200	52
2	22	23	200	43
3	23	25	200	40
4	24	25	200	113
5	25	26	200	82
9	26	27(STP)	300	12
Total 200 Dia Pipe				1547
Total 300 Dia Pipe				12
Total 200 to 300 Dia Pipe				1559



Sub-Work No. II

SEWERAGE SCHEME

Amount in Rs.

1. Providing, jointing, cutting and testing SW pipe class "A" and lowering into trenches including cost of Excavation, bed concrete, cost of manholes etc. complete in all respect	
a) SW pipe 200 to 250 mm i/d avg. depth 1.60 - 2.81 M 1547M @ Rs. 1500/M	Rs.2,320,500
2. Providing and laying R.C.C. pipe drain class NP-3 With cement joint ,Catch Basins & Road Gullies, manholes excavation etc complete in all respect.	
b) R.C.C pipe 250 to 300 mm i/d avg depth above 2.82 M 12 M @ Rs. 2000/M	Rs.24,000
2. Rising Main From STP To MH a)200 mm dia 110m @ Rs. 2150/m	Rs.236,500
3. STP Cap. 550 KLD upto tertiary level (L.S)	Rs.8,250,000
4. Provision for making HUDA Connection on main line (L.S)	Rs.100,000
5. Provision for watering & lighting	Rs.100,000
6. Provision for vent pipe as per	Rs.200,000
7. Provision for cutting of roads and making good condition	Rs.100,000
8. Provision for timbering & shovering (L.S)	Rs.100,000
Total	Rs.11,431,000
Add 3% contingencies & PH charges	Rs.342,930
Total	Rs.11,773,930
Add 49% Price Escalation,Departmental charges	Rs.5,769,226
TOTAL	Rs.17,543,156
Say In lacs	175.43
(Cost to Final abstract of cost)	



PROJECT: PLOTTED DEVELOPMENT AT SECTORS 5, SOHNA, HARYANA

SUBJECT: DRAINAGE SYSTEM DESIGN SHEET

S. No.	LINE NO.	FROM	TO	Self Area (sqm)	Self Area (Acre)	Branch Area (sqm)	Branch Area (Acre)	Total Area (sqm)	Total Area (Acre)	Rain Fall mm/hr	Discharge 917.36 LPS/Hectare	Length in m	Pipe dia in mm	Slope 1 in mm	Velocity in m/sec.	Cap of pipe in lps	Fall in line m	Ground Level			Invert Level			Depth		
																		Start	End	Start	End	Start	End	Average		
1	1	3	4999.05	1.24	0.12	0.30	0.30	0.25	0.25	0.05	0.23	0.12	400	300	0.04	80.75	0.25	100.30	100.30	99.10	98.85	1.20	1.45	1.33		
2	2	2	475.10	0.12	1.35	1.35	1.35	0.61	0.61	0.61	0.61	17	400	500	0.04	80.75	0.12	100.30	100.30	99.10	99.08	1.20	1.22	1.21		
3	3	4	674.48	0.17	1.52	1.52	1.52	0.70	0.70	0.70	0.70	22	400	500	0.04	80.75	0.05	100.30	100.30	99.85	99.81	1.45	1.49	1.47		
4	4	5	822.85	0.22	1.52	1.74	1.74	0.70	0.70	0.70	0.70	42	400	500	0.04	80.75	0.04	100.30	100.30	99.81	99.77	1.49	1.53	1.51		
5	5	8	1666.35	0.41	1.74	2.15	2.15	0.85	0.85	0.85	0.85	400	300	0.04	80.75	0.18	100.30	100.30	99.77	98.69	1.23	1.61	1.57			
6	6	7	2578.88	0.64	0.64	0.64	0.64	0.26	0.26	0.26	0.26	65	400	500	0.04	80.75	0.13	100.30	100.30	99.70	98.97	1.20	1.33	1.29		
7	7	8	595.13	0.15	0.64	0.78	0.78	0.32	0.32	0.32	0.32	15	400	500	0.04	80.75	0.07	100.30	100.30	98.97	98.94	1.53	1.56	1.55		
8	8	9	1160.25	0.29	2.05	3.23	3.23	1.31	1.31	1.31	1.31	30	400	500	0.06	80.75	0.16	100.30	100.30	98.69	98.63	1.61	1.67	1.64		
9	9	11	158.70	0.04	3.25	3.27	3.27	1.32	1.32	1.32	1.32	4	400	500	0.04	80.75	0.11	100.30	100.30	98.63	98.62	1.67	1.68	1.66		
10	10	11	1547.33	0.38	0.15	0.38	0.38	0.15	0.15	0.15	0.15	99	400	500	0.04	80.75	0.18	100.30	100.30	99.10	99.02	1.20	1.20	1.24		
11	11	12	1507.65	0.37	3.65	4.02	4.02	1.63	1.63	1.63	1.63	38	400	500	0.04	80.75	0.18	100.30	100.30	98.62	98.54	1.66	1.76	1.72		
12	12	13	277.73	0.07	4.02	4.09	4.09	1.65	1.65	1.65	1.65	7	400	500	0.04	80.75	0.12	100.30	100.30	98.54	98.53	1.76	1.77	1.76		
13	13	14	8010.05	1.00	1.00	1.00	1.00	0.40	0.40	0.40	0.40	102	400	500	0.20	80.75	0.19	100.30	100.30	98.11	98.90	1.29	1.40	1.30		
14	14	15	1706.05	0.42	5.09	5.51	5.51	2.35	2.35	2.35	2.35	43	400	500	0.04	80.75	0.19	100.30	100.30	98.53	98.44	1.27	1.36	1.34		
15	15	17	2380.50	0.59	5.51	6.10	6.10	2.67	2.67	2.67	2.67	60	400	500	0.04	80.75	0.12	100.30	100.30	98.44	98.32	1.36	1.36	1.35		
16	16	17	952.20	0.24	0.24	0.34	0.34	0.10	0.10	0.10	0.10	24	400	500	0.04	80.75	0.05	100.30	100.30	99.10	99.05	1.20	1.25	1.22		
17	17	29	5729.45	0.92	6.33	7.26	7.26	2.94	2.94	2.94	2.94	94	400	500	0.04	80.75	0.19	100.30	100.30	98.32	98.13	1.98	2.17	2.07		
18	18	20	991.88	0.25	0.25	0.19	0.19	0.25	0.25	0.25	0.25	25	400	500	0.04	80.75	0.05	100.30	100.30	99.10	99.05	1.20	1.25	1.23		
19	19	20	1983.75	0.49	0.49	0.69	0.69	0.36	0.36	0.36	0.36	50	400	500	0.04	80.75	0.10	100.30	100.30	98.10	99.00	1.20	1.30	1.25		
20	20	24	2023.43	0.50	1.14	1.64	1.64	0.66	0.66	0.66	0.66	51	400	500	0.04	80.75	0.10	100.30	100.30	98.00	98.00	1.30	1.40	1.35		
21	21	22	2420.18	0.60	0.60	0.60	0.60	0.24	0.24	0.24	0.24	61	400	500	0.04	80.75	0.12	100.30	100.30	98.10	98.08	1.20	1.32	1.26		
22	22	19	915.39	0.75	0.60	0.75	0.75	0.30	0.30	0.30	0.30	76	400	500	0.04	80.75	0.15	100.30	100.30	99.10	98.95	1.20	1.35	1.28		
23	23	24	2359.20	0.63	0.60	1.23	1.23	0.50	0.50	0.50	0.50	64	400	500	0.04	80.75	0.13	100.30	100.30	98.95	98.82	1.35	1.46	1.42		
24	24	25	595.13	0.15	2.66	3.01	3.01	1.77	1.77	1.77	1.77	35	400	500	0.04	80.75	0.05	100.30	100.30	98.82	98.79	1.48	1.51	1.50		
25	25	26	1110.90	0.27	1.01	1.33	1.33	0.25	0.25	0.25	0.25	28	400	500	0.04	80.75	0.06	100.30	100.30	99.10	99.04	1.20	1.26	1.23		
26	26	27	952.20	0.24	0.24	0.10	0.10	0.25	0.25	0.25	0.25	24	400	500	0.04	80.75	0.05	100.30	100.30	98.79	98.74	1.51	1.56	1.53		
27	26	28	1269.60	0.31	3.52	3.63	3.63	1.50	1.50	1.50	1.50	32	400	500	0.04	80.75	0.16	100.30	100.30	98.74	98.68	1.56	1.62	1.59		
28	28	29	436.41	0.11	3.81	3.94	3.94	1.39	1.39	1.39	1.39	11	400	500	0.04	80.75	0.12	100.30	100.30	98.10	98.11	1.20	2.17	1.69		
29	29	30	3520.73	0.88	11.20	12.08	12.08	4.39	4.39	4.39	4.39	90	400	500	0.04	80.75	0.18	100.30	100.30	98.13	97.95	2.17	2.35	2.26		
30	30	31	10169.03	0.10	12.08	12.18	12.18	4.93	4.93	4.93	4.93	10	450	500	0.04	80.75	0.02	100.30	100.30	97.95	97.93	2.35	2.37	2.36		
31	32	33	291.50	0.20	0.00	0.20	0.20	0.00	0.00	0.00	0.00	20	400	600	0.59	73.71	0.05	100.30	100.30	99.10	99.07	1.20	1.23	1.22		
32	33	34	8490.46	2.70	0.20	2.29	2.29	0.95	0.95	0.95	0.95	1612	214	400	600	0.59	73.71	0.36	100.30	100.30	98.71	98.71	1.59	1.61	1.41	
33	34	35	10169.03	0.10	2.29	2.39	2.39	0.97	0.97	0.97	0.97	10	450	600	0.63	100.91	0.02	100.30	100.30	98.21	98.69	1.59	1.61	1.60		



PROJECT: PLOTTED DEVELOPMENT AT SECTOR-5, SOHNA, HARYANA**SUBJECT: DRAINAGE SYSTEM MATERIAL SHEET**

S. No.	Line No.		Pipe dia.	Length
	From	To	mm	Meters
1	1	3	400	126
2	2	3	400	12
3	3	4	400	17
4	4	5	400	22
5	5	8	400	42
6	6	7	400	65
7	7	8	400	15
8	8	9	400	30
9	9	11	400	4
10	10	11	400	39
11	11	12	400	38
12	12	14	400	7
13	13	14	400	102
14	14	15	400	43
15	15	17	400	60
16	16	17	400	24
17	17	29	400	94
18	18	20	400	25
19	19	20	400	50
20	20	24	400	51
21	21	23	400	8
22	23	24	400	64
23	19	22	400	76
24	22	21	400	61
25	24	25	400	15
26	25	26	400	28
27	27	26	400	24
28	26	28	400	32
29	28	29	400	11
30	29	30	400	90
31	30	31(DISPOSAL)	450	10
32	32	33	400	20
33	33	34	400	214
34	34	35(DISPOSAL)	450	10
		Total 400 Dia Pipe		1509
		Total 450 Dia Pipe		20
		SAY		1530



Sub-Work No. III

STORM WATER SCHEME

Amount in Rs.

1. Providing and laying R.C.C. pipe drain class NP-2 With cement joint ,Catch Basins & Road Gullies, manholes excavation etc complete in all respect.	
a) 400 mm dia. 1509 M @ Rs. 2000/m	Rs.3,018,000
450 mm dia. 20 M @ Rs. 2500/m	Rs.50,000
b). Providing Rain Harvesting arrangements 13 Nos @ Rs 150,000	Rs.1,950,000
3. Provision for Carriage of Material (L.S)	Rs.200,000
4. Provision for watering & timbering and unforeseen (L.S)	Rs.100,000
5. Provision for connection with HUDA line	Rs.50,000
6. Provision for Road gullies and cement (L.S)	Rs.500,000
7. Provision for watering & lighting	Rs.100,000
8. Provision for temporary disposal arrangements till HUDA services are provided.	Rs.550,000
Total	Rs.6,518,000
Add 3% for contingencies and PH charges	Rs.195,540
Total	Rs.6,713,540
Add 49% Departmental charges	Rs.3,289,635
TOTAL	Rs.10,003,175
(Cost to Final abstract of cost)	
Say in lacs	100.03



PLOTTED DEVELOPMENT AT SECTOR-5, SOHNA, HARYANA					
SUBJECT: ROAD WORKS					
Sub Work No. IV		Road Works			
S. No.	Description	Unit	Qty	Rate (in Rs.)	Amount (in Rs.)
1	Provision for leveling & earth filling as per site conditions	Acres	15.0	150,000.0	2,250,000.00
2	20 mm thick ORSS	Sqm	9,180.0	1,200.0	11,016,000.00
3	Provision for Kerbs & channels of CC 1:2, 5:5 on both side of roads complete in all respect	Metre	1,836.0	600.0	1,101,600.00
4	Provision for pavement in shopping area i.e. 50% of area 2427.30 sqm /2	sqm.	1,213.7	600.0	728,190.00
5	Provision for traffic light control	LS			200,000.00
6	Provision for carriage of materials	LS			100,000.00
7	Provision for guide map, plot indicator, and other unfrozen item	LS			300,000.00
	Sub Total				15,695,790.00
	Add 3% contingencies & PH charges				470,873.70
	Sub Total				16,166,663.70
	Add 4% deptt., price escalation, unfrozen and admin charges				7,921,665.21
	Total				24,088,328.91
	Say Rs in Lakhs (C/O to Final abstract of cost)				240.88



PLOTTED DEVELOPMENT AT SECTOR-5, SOHNA,
HARYANA

S. NO.	ROAD FROM	ROAD TO	LENGTH IN M.
1	1	2A	130
2	2	3	56
3	3	3A	44
4	4	3A	87
5	3A	5A	45
6	5	5A	50
7	5A	5B	39
8	6	5B	111
9	5B	7	86
10	7	7B	24
11	7B	7A	42
12	8	7A	21
13	7A	9	236
14	7B	10A	99
15	10A	11A	48
16	10	10A	105
17	9	10	53
18	9	13	25
19	10	12	71
20	12	11	77
21	12	14A	91
22	14A	14	30
23	14A	15A	58
24	15	15A	70
25	15A	16	138
	TOTAL		1836

METALED WIDTH OF ROAD 5 M
 TOTAL AREA OF ROAD 9180



PLOTTED DEVELOPMENT AT SECTOR-5, SOHNA, HARYANA**SUBJECT: STREET LIGHTING****Sub Work No. V**

S.No.	Description	UM	Qty.	Rate	Amount
1	Provision for street lighting on roads as per standard specification of HVPN with CFL				
	150 acres @ Rs. 2.50 Lakhs/Acres	acres	15.00	250000	3750000.00
	Sub Total				3750000.00
	Add 3% contingencies & PH charges				112500.00
	Total				3862500.00
	Add 49% deptt., price escalation, unfrozen and admion charges				1892625.00
	SUB-TOTAL				5755125.00
	Say Rs in Lakhs (C/O to Final abstract of cost)				57.55



PLOTTED DEVELOPMENT AT SECTOR-5, SOHNA, HARYANA

SUBJECT: PLANTATION & ROAD SIDE TREES

Sub Work No. VI

Plantation & Road Side trees

S.No.	Description	Unit	Qty	Rate (in Rs.)	Amount (in Rs.)
1	Development of organised lawn green area.	Acre	1.25	150,000.00	187,500.00
	a Trenching of ordinary soil upto depth of 60 cm i/c removal & stacking of serviceable material & disposing by spreading and levelling within a lead of 50 M and making up the trench area for proper levels by filling with earth or earth mixed with manure before and after flooding trench with water i/c cost of imported earth and manure.				
	b Rough dressing of turfed area.				
	c Grassing with "DOOB GRASS" i/c watering and maintenance of lawns for 30 days till the grass forms a thick lawn , free from weeds and fit for mowing in row 7.5 cm part in either direction.				
2	Providing and planting trees along boundary @ 12 m interval	Nos.	500.00	1,300.00	650,000.00
	Cost Detail				
	Excavation	60.00			
	Manure	90.00			
	Tree Plant	150.00			
	Tree Guard	1000.00			
	Total	1300.00			
	Sub Total				837,500.00
	Add 3% contingencies & PH charges				25,125.00
					862,625.00
	Add 49% deptt., price escalation, unfrozen and admion charges				422,686.25
	Total				1,285,311.25
	Say Rs in Lakhs (C/O to Final abstract of cost)				12.85



PLOTTED DEVELOPMENT AT SECTOR-5, SOHNA, HARYANA**SUBJECT: SERVICES & RESURFACING OF ROADS**

Services & Resurfacing of Roads					
S.No.	Description	Unit	Qty	Rate (in Rs.)	Amount (in Rs.)
1	Provision of MTC charges for W/S, SWD & Sewarage, Roads, Street Lighting, Horticulture etc.				
a.	Complete in all aspect, including operational and establishment charges as per HUDA norms for 10 years completion.	Acre	15.0	750,000.0	11,250,000.00
2	Provision of resurfacing of roads MTC one layer of 100 mm thick WBM compacted to 75 mm thick with 25mm thick premix carpet with seal coat.				
a	Resurfacing of road after 5 years of MTC .	Sqm	9,180.0	600.0	5,508,000.00
b	Resurfacing of road after 10 years of MTC.	Sqm	9,180.0	750.0	6,885,000.00
Sub Total					23,643,000.00
Add 3% contingencies & PH charges					709,290.00
Sub Total					24,352,290.00
Add 49% deptt., price escalation, unfrozen and admion charges					11,932,622.10
Total					36,284,912.10
Say Rs in Lakhs (C/O to Final abstract of cost)					362.85



प्राप्ति द्वारा अनुभव करने वाली विशेषता है। इसका अर्थ यह है कि एक विशेष विकल्प को अपने विकल्पों में से बाहर नियन्त्रण करने की क्षमता नहीं है। इसका अर्थ यह है कि एक विशेष विकल्प को अपने विकल्पों में से बाहर नियन्त्रण करने की क्षमता नहीं है। इसका अर्थ यह है कि एक विशेष विकल्प को अपने विकल्पों में से बाहर नियन्त्रण करने की क्षमता नहीं है।

THE EASY ROAD

JOURNAL OF CLIMATE

	1	2	3	4	5	6	7	8
Frage:	Was ist ein Vokal?	Was ist eine Konsonant?	Was ist eine Silbe?	Was ist ein Wort?	Was ist eine Aussprachetechnik?			
Antwort:	Ein Vokal ist eine Laute, die aus der Mundhöhle ohne Anstrengung ausgespielt werden kann.	Ein Konsonant ist eine Laute, die aus der Mundhöhle mit Anstrengung ausgespielt werden kann.	Eine Silbe ist eine Gruppe von Lauten, die zusammengehören und als Einheit wahrgenommen werden.	Ein Wort ist eine Gruppe von Lauten, die einen Sinn ausdrücken.	Aussprachetechnik ist eine Methode, um die Sprache flüssig und klar auszusprechen.	Aussprachetechnik ist eine Methode, um die Sprache flüssig und klar auszusprechen.	Aussprachetechnik ist eine Methode, um die Sprache flüssig und klar auszusprechen.	Aussprachetechnik ist eine Methode, um die Sprache flüssig und klar auszusprechen.

SEWERAGE SYSTEM LAYOUT

03

PLAYOUT PLAN



N

SEWERAGE SYSTEM LAYOUT 03

The site plan illustrates the layout of Block 100A, featuring several plots labeled A through G and numbered 1 to 27. The plan includes the following key elements:

- Roads:** Major roads are labeled as 24M WIDE ROAD. A central road is labeled 9 M WIDE ROAD. A diagonal road is labeled 9 M WIDE ROAD.
- Plot Labels:** Plots are labeled with letters and numbers, such as A-1, B-1, C-1, D-1, E-1, F-1, G-1, A-2, B-2, C-2, D-2, E-2, F-2, G-2, A-3, B-3, C-3, D-3, E-3, F-3, G-3, A-4, B-4, C-4, D-4, E-4, F-4, G-4, A-5, B-5, C-5, D-5, E-5, F-5, G-5, A-6, B-6, C-6, D-6, E-6, F-6, G-6, A-7, B-7, C-7, D-7, E-7, F-7, G-7, A-8, B-8, C-8, D-8, E-8, F-8, G-8, A-9, B-9, C-9, D-9, E-9, F-9, G-9, A-10, B-10, C-10, D-10, E-10, F-10, G-10, A-11, B-11, C-11, D-11, E-11, F-11, G-11, A-12, B-12, C-12, D-12, E-12, F-12, G-12, A-13, B-13, C-13, D-13, E-13, F-13, G-13, A-14, B-14, C-14, D-14, E-14, F-14, G-14, A-15, B-15, C-15, D-15, E-15, F-15, G-15, A-16, B-16, C-16, D-16, E-16, F-16, G-16, A-17, B-17, C-17, D-17, E-17, F-17, G-17.
- Open Areas:** There are several large open areas labeled COMMERCIAL AREA, COMMERCIAL AREA, and COMMERCIAL AREA.
- Other Labels:** A dashed line is labeled H-T LINE. A shaded area is labeled SPARE PLOT COMMERCIAL SITE. A curved line is labeled MAILIN. A straight line is labeled MAILIN. A label 120 ACRES (100ha) is present.

