

# ***PROJECT REPORT FOR***

***7.182 ACRES GROUP HOUSING COLONY IN  
SECTOR 20, PANCHKULA***

***SAMAR ESTATES PVT. LTD.***

***ESTIMATE FOR PROVIDING WATER SUPPLY, SEWERAGE, STORM  
WATER DRAINAGE, ROADS, STREET LIGHTING AND HORTICULTURE  
IN RESPECT OF 7.182 ACRES GROUP HOUSING COLONY IN SECTOR 20,  
PANCHKULA***

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**PROJECT REPORT/ESTIMATE FOR PROVIDING WATER SUPPLY, SEWERAGE, STORM WATER DRAINAGE, ROADS, STREET LIGHTING AND HORTICULTURE IN RESPECT OF 7.182 ACRES GROUP HOUSING COLONY, SECTOR 20, PANCHKULA.**

**REPORT**

The Haryana Government has prepared a master plan for development of Residential/Industrial urban estate at Faridabad. M/S SAMAR ESTATES PVT. LTD. PANCHKULA has decided to develop a part of the area in this master plan and has named this part as 7.182 Acres Group Housing Colony. This scheme is located in Sector 20 of Haryana Urban Development Authority Panchkula. License has already been granted vide license no. 609-612 of 2006 Dated 27.03.2006. The brief details of the scheme are as under:-

**WATER SUPPLY**

**1 Source**

The source of water supply in this area is tubewells at present as the underground water is potable and fit for human consumption. Moreover water is available at reasonable depth. The average yield of tubewell with 40-45 ft strainers will be about 22500 litre per hour. The recharging of underground water table in this belt is stated to be good. The number of tubewells required for the above area has been worked out and the tubewells will be bored in tune with growth of demand to avoid obsolesce of the tubewells. The ultimate requirement of tubewells includes provisions of 10% stand by.

**2 Design**

The scheme has been designed for approved population of 1778 persons. The rate of water supply per head per day has been taken as 172.50 litres (150+15%) as per HUDA norms. In addition to above necessary provision of water for commercial, electric substation, parks etc. have been taken into account for calculating the maximum quantity of water requirement.

### **3 Pump chambers and Pumping Machinery**

It is proposed to equip each tubewell with an electrically driven set ejecto type or submersible pump capable of delivering of 22500 litre per hour. It is also proposed to equip fifty percent of pumping sets with stand by diesel engines / gen set for operation during failure of electricity.

### **4 Under Ground Storage**

Underground storage tank provision has been made for 350 KL capacity in two compartments, which caters for the domestic as well as for firefighting requirement. The water for domestic water compartment shall overflow the fire compartment so that the water in the fire compartment also remains fresh.

### **5 Boosting Station**

The boosting station are being planned near underground storage tank catering to the above requirement

### **6 Distribution System**

The distribution system for this development has been designed to supply @ 172.5 litre per head per day @ 3 times the average rate of flow on Hazen William formula. Necessary provision for laying CI/DI pipes conforming to relevant IS standards along with valves and specials has been made in the project. The minimum terminal head at any point will be more than 57.00 meters so that it can serve the GROUND + 10 floors construction envisaged in the plan. Minimum pipe dia for distribution is kept as 100 mm dia.

### **7 Rising mains**

Rising mains from HUDA water main or sector road to water works have also been proposed and provision has been made in this estimate.

### **8 Sewerage**

The sewer lines have been designed for 3 times average DWF in relation to the water supply demand assuming that 75% of the domestic water supply shall find its way into the proposed sewer. SW/RCC pipe sewers have been proposed and designed to run half full. The sewers have been designed on 0.77 M per second minimum velocity i.e. self cleansing velocity. Necessary provision for laying s.w. /R.C.C. pipes manholes etc. has been made in this estimate.

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Along with S.T.P. of capacity 0.75 MLD. Treated Sewerage will be used for flushing purposes and Horticulture purpose. This over flow will be discharged into HUDA Sewerage.

#### **9 Storm water Drainage**

The storm water drainage is being designed to carry 6.25 mm rainfall per hour for intramural and 3.125mm rainfall intensity for extramural sewers. Also suitable provision are contemplated in our scheme to ensure better recharging of underground water table in the area R.C.C. Hume pipes drain with minimum 400mm dia is proposed in this area.

#### **10 Roads**

The roads in the colony have been planned as 6 M wide. The following specifications have been adopted which are reproduced below.

- (i) GSB-300 mm in one layer
- (ii) WBM-250 mm in two layers
- (iii) BM-50 mm thick
- (iv) MSS-25 mm thick

The above construction shall be done on well compacted sub grade as per specifications. Complete work will be carried out as per MORTH specifications, IRC guide lines or HUDA specifications, which ever applicable.

#### **11 Street lighting**

The provision has been made on lump sum basis.

#### **12 Horticulture**

The usual provision of road side plantation of tree guards has been made for all roads. The parks shall be developed by providing lawns etc.

#### **13 Specifications**

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

**14 Rates**

Estimate for providing services in this pocket has been prepared on the recent market rates.

**15 Cost**

The total cost of development in this project including various P.H. and B & R services works out to Rs 682.50 Lacs. including 3% contingencies & P.E. charges and 49% departmental administrative , unforeseen and escalation charges.

The cost per gross acre for the proposal works out to be Rs. 95.03 Lacs which covers the provision of services like water supply, sewerage, storm water drainage, roads, street lighting and plantation including maintenance thereof as well as future expansion whatsoever indicated.



## 7.182 ACRES GROUP HOUSING COLONY

### SECTOR - 20, PANCHKULA

#### DESIGN CALCULATIONS

##### Daily Requirement

1	Total No. of Dwelling Units (General)	= 332
	Total No. of EWS Dwelling Units	= 59
	Population per unit (General @ 5)	
	Total Population = 5 x 332	= 1660 Persons
	Population per EWS unit @ 2	= 118 Persons
	Therefore population = 59 x 2	
	Total Population (General + EWS) = 1660 + 118	= 1778 Persons
	Water requirement	
	@ 172.5 ltr / head / day = 1778 x 172.5	= 306705 litres
		= 306.70 KL
	Provision for service Personnel	= 50 Units
	Population @ 2 persons per unit = 50 x 2	= 100
	Total Population including service personnel	= 1878 Persons
	Water requirement for plots @ 172.5 litres/head/day	= 323955 litres
	= 1878 x 172.5	
		= 323.96 KL
		= 324.00 KL

SAY

##### 2. **Add Requirement for Institutions etc.**

- (a) No. of Nursery Schools = 1 Nos.

Daily Water requirements @ 10,000  
litre/day

Therefore daily water requirement = = 10,000 litres  
1 x 10,000

= 10 KL

(b) No. of Commercials = 1 No.

Daily Water requirement @ 32000  
litre/Acre

Area of Commercials = 140.87 Sq.m = 0.035 Acre

Therefore daily water requirements = 1120.00 litres  
=  $0.35 \times 32000$  SAY 5.00 KL

© Community Buildings = 1.00 nos.

Area = 917.31 sq.m. = 0.22 Acre

Therefore daily water requirements =

$0.22 \times 25000$  = 5500.00 ltr.  
= 5.50 KL

**TOTAL = 25.00 KL**

3. Area under Parks/green space = 9303.01 Sq.m  
= 2.30 Acres

Therefore daily water requirement @ 25000 litre/Acre = 57500.00 litres  
=  $2.30 \times 25000$  = 57.50 KL

4. Area under roads out of 7.182 Acres = 1.94 Acres

Therefore daily water requirement =  $1.94 \times 5000$  = 9700.00 litres  
For sweeping of roads etc. = 9.70 KL

**Total daily requirement**

a. For domestic use (1+2) =  $324.00 + 25.00$  = 349.00 KL

b. Under parks & roads (3+4) =  $57.5 + 9.70$  = 67.20 KL



Assuming 60 % of the total domestic demand as drinking water supply demand and 40 % of domestic demand as flushing water supply demand

Then daily water supply demand for drinking water =  $0.60 \times 349.00 = 209.40$  KL

The daily water supply demand of flushing water =  $0.40 \times 349.00 = 139.60$  KL

**TUBE WELLS FOR 7.182 ACRES GROUP HOUSING COLONY**  
**SECTOR - 20, PANCHKULA**

**TUBEWELLS**

Assuming working hours of tube well		= 16
Assuming discharge/hour of each tube well		= 22500 lit/hour
Total domestic demand		= 348.96 KLD
No of tube wells Required for domestic demands	$= \frac{348.96}{16 \times 22.5}$	= 0.96
Add 10% as stand by	$= 0.96 + 10\%$	= 1.06
No of tube wells Required for total demands	$\frac{349.00 + 67.20}{16 \times 22.5}$	= 1.16
Add 10% as stand by	$= 1.16 + 0.12$	= 1.28
	Say	= 2 nos.

So it is proposed to provide 50 % or 1 no. of tube well. However, the water demand for horticulture and flushing purposes is to be met from re-circulated water after treatment at S.T.P. and ultimate water supply is to be provided by HUDA.

**PUMPING MACHINERY FOR TUBE WELLS**

Gross working load		= 45.00 m
Average fall in is S.L.		= 3.00 m
Depression head		= 9.00 m
Friction Loss		= 3.00 m
Total		= 60.00 m
B.H.P. = $\frac{22500 \times 60}{60 \times 60 \times 75 \times 0.6}$		= 8.33
	Say	= 10 B.H.P.

### UNDERGROUND STORAGE TANK (DRINKING WATER)

Daily requirement for domestic use including Institutional demand = 209.40 KL

Capacity of under ground =  $0.5 \times 209.40$  = 10470  
= 150.00 KL

#### Fire Frightening 100

= 100 P =  $100 / 1.82$  = 134.00 KL  
SAY 200 KL

Hence it is proposed to provide under ground tank of capacity 350.00 KL for potable water supply including 200.00 KL for firefighting purposes at two compartments as shown in the drawing. The water first enters the fire compartment then over flows to the domestic use compartment so that the water in the fire compartment shall remain fresh.

### BOOSTING MACHINERY (DRINKING WATER SUPPLY)

Daily requirement for domestic use = 209.40 KL

Assuming 8 hours running 2 pump (with 2 standby )

Discharge/hour =  $\frac{209.40}{8 \times 2}$  = 13.08 KL/hr  
= 218.00 Litre/minute  
SAY 250.00 lpm

Head of Pump

- i) Suction lift 4.00M
- ii) Friction Loss in main & specials 4.00 M
- iii) Clear head  $\frac{57.00 M}{65.00 M}$   
Say 70M

B.H.P. of Motor =  $\frac{250 \times 70}{60 \times 75 \times 0.6}$  = 6.48  
SAY = 7.50 HP

It is proposed to provide 3 Nos. of pumping sets of 250 Litre per minute at a total head of 70 M (two working & one stand by).

**UNDERGROUND STORAGE TANK (FLUSHING WATER)**

Daily requirement for flushing use including Institutional demand	= 139.60 KL
Add , for horticulture and sweeping of roads	= 67.20 KL
	<hr/>
	= 207.80 KL
Therefore capacity of underground storage tank	= 103.90 KL
= 207.80/2	
Say	= 150.00 KL

**BOOSTING MACHINERY (FOR FLUSHING WATER)**

Daily requirement for flushing & irrigation	= 207.80 KL
Assuming 8 hours running two pump (with one standby )	
Discharge/hour	= $\frac{207.80}{8 \times 2}$ = 12.99 KL/hr
	= 216.50 Litre/minute
SAY	= 220.00 Litre/minute

However to keep similarity with the pumps of drinking water supply it is proposed to provide pumps of 250.00 litre/hour

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Head of Pump

- iv) Suction lift . . . . . 4.00M
- v) Friction Loss in main & specials 4.00 M
- vi) Clear head 57.00 M  
65.00 M

B.H.P. of Motor  $= \frac{250 \times 70}{60 \times 75 \times 0.6} = 6.48$   
SAY = 7.50

It is proposed to provide 3 Nos. of pumping sets of 250 Litre per minute at a total load of 70 M (two working & two stand by).

**7.182 ACRES GROUP HOUSING COLONY**

**SECTOR - 20, PANCHKULA**

**PUMPS FOR FIRE PROTECTION**

Sr. No.	PARAMETERS	LOCATION	PUMP SETS		
			Jockey	Main	Diesel
a.	Discharge in lpm	Pump Room	180 lpm	2280 lpm	2280 lpm
b.	Head in meters		120	120	120
c.	HP		7.5	125	125
d.	Quantity in nos.		1	1	1

**GEN SET**

Pumps for boosting. (4 x 7.50) = 30.00 H.P.

Lighting and others = 5.00 H.P.

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= 35.00 H.P.

Add 10% extra = 3.50 H.P.

= 38.50 H.P.

However it is proposed to provide Gen Set of capacity

=  $1.50 \times 38.50 \times 0.746 = 43.08$  KVA

SAY = 45.00 KVA

**CAPACITY OF S.T.P**

Total requirement of domestic water supply = 349.00 KLD

Total sewage load =  $0.75 \times 349.00$  = 261.75 KLD

Therefore capacity of S.T.P. required = 300.00 KLD

= 0.30 MLD

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**7.182 ACRES GROUP HOUSING COLONY**

**SECTOR - 20, PANCHKULA**

**FINAL ABSTRACT OF COST**

		Amount (Rs. In Lacs)
Sub Work No. I	Water Supply	187.20
Sub Work No. II	Sewerage	75.20
Sub Work No. III	Storm Water Drainage	45.80
Sub Work No. IV	Road Work	166.00
Sub Work No. V	Street Lighting	13.80
Sub Work No. VI	Horticulture Work	12.00
Sub Work No. VII	Maintenance Charges for 10 years i/e resurfacing of roads after 1 <sup>st</sup> 5 years and 2 <sup>nd</sup> 5 years	182.50
<b>TOTAL</b>		<b>682.50</b>



**7.182 ACRES GROUP HOUSING COLONY**  
**SECTOR - 20, PANCHKULA**  
**ABSTRACT OF COST (WATER SUPPLY)**

	AMOUNT (RS. IN LACS)
Sub Work No. 1 Head Works	49.90
Sub Work No. 2 Pumping Machinery	65.20
Sub Work No. 3 Distribution System	20.10
Sub Work No. 4 Fire Ring Main	27.70
Sub Work No. 5 Irrigation and flushing	24.30
<b>TOTAL</b>	<b>187.20</b>

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**7.182 ACRES GROUP HOUSING COLONY**  
**SECTOR - 20, PANCHKULA**

**Sub Head 1**

**Water Supply**

**Head Works**

**Amount (Rs. In Lacs)**

1.	Boring and installing 200 i/d tubewell with reserve/direct rotary rig complete with pipe strainer to a depth of about 80m complete along with machinery. 1 No. @ 7,00,000/-each	7.00
2.	Constructing pump chambers as per standar design of PWD PH/HUDA of size 1.5M x 1.55 M x 1.5M 1 No. L.S.	1.00
3.	Construction of boosting chambers of suitable size along with underground tank of capacity 1650 KL pumping machinery and generating set etc. complete in all respect. Details of boosting Station i) Construction of boosting chamber ii) U.G. tank 500 KL capacity incl 200 KL for domestic use 150.00 KL For fire fighting in two compartments & 125 KL at S.T.P. 500 KL @ Rs. 400/KL	4.00 20.00 0.50
	<b>Total</b>	<b><u>32.50</u></b>
	Add 3% Contingencies & P.E. Charges	0.97
		<b>33.47</b>
	Add 49% departmental price escalation, unforeseen charges	16.40
	<b>GRAND TOTAL</b>	<b>49.87</b>
	<b>SAY</b>	<b>49.90</b>

**7.182 ACRES GROUP HOUSING COLONY**

**SECTOR - 20, PANCHKULA**

**C.O. TO ABSTRACT OF COST OF SUB WORK NO. I**

**Sub Work I  
Sub Head No. 2**

**Water Supply  
Pumping Machinery**

**Amount (Rs. In Lacs)**

- |    |   |      |
|----|---|------|
| 1. | Providing and installing electricity driven electro or submersible sets capable of delivering about 20.00 KL water per hour against a total head of 60 M complete with motor and other accessories.<br>1 No. @ 2,00,000/-each | 2.00 |
| 2. | Provision for desiel engine genset stand by<br>1 No. @ 2,00,000/-   | 2.00 |
| 3. | Provision for cheap pressure type chlorination plant complete.<br>1 No. @ 1,00,000/-  | 1.00 |
| 4. | Provision for making foundations and erection of pumping machinery<br>1 No. (L.S)   | 0.50 |
| 5. | Provision for pipes, valves, and specials inside the pump chamber (L.S)   | 0.50 |
| 6. | Provisions for electric services connection including transformer, electric fittings for tubewells chambers complete. (L.S)   | 2.50 |
| 7. | Providing and installing centrifugal boosting pumping sets, capable of delivering water at 70 M head with 40 H.P. each complete in all respects domestic & flushing<br>(7.5+7.5 H.P.)<br>8 sets @ 1,00,000/- each             | 8.00 |
| 8. | Providing and fixing pumping sets of following capacity for fire protection   |      |

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i)	180 LPM at 120 M Head 1 No. 7.5 H.P.	2.00
ii)	2280 LPM at 120 M Head 1 No. 125 H.P.	7.50
iii)	2280 LPM at 120 M Head 1 No. Diesel Pump 125 H.P.	10.00
iv)	180 LPM at 120 M Head 1 No. Diesel Pump 7.5 H.P.	2.50
9.	Provision of Gen Set of capacity 45 KVA (L.S.)	5.00
10.	Provision for carriage for materials and other unforeseen items L.S.	1.00
		<b>42.50</b>
	Add 3% contingencies & P.E. charges	1.27
		<b>43.77</b>
	Add 49% departmental, escalation & unforeseen charges.	21.44
		<b>65.21</b>
	<b>GRAND TOTAL</b>	<b>65.21</b>
	<b>SAY</b>	<b>65.20</b>

**7.182 ACRES GROUP HOUSING COLONY**

**SECTOR - 20, PANCHKULA**

<b>Sub Work No. I</b>	<b>Water Supply</b>
<b>Sub Head No. 3</b>	<b>Distribution System/Rising Main</b>
	<b>Amount</b>
	<b>(Rs. in Lacs)</b>
1. Providing, laying, jointing and testing DI K <sub>9</sub> pipes including cost of excavation complete as per specifications. 100 mm dia i/d 450 mtrs @ Rs. 1250/- mtr 150 mm dia i/d 300 mtrs @ Rs. 1600/- mtr	5.62 4.80
2. Providing and fixing sluice valve including cost brick masonry chambers complete in all respect. 100 mm dia i/d 3 Nos. @ Rs. 12000/- Each 150 mm dia i/d 4 Nos. @ Rs. 15000/- Each	0.36 0.60
3. Providing and fixing air valves and scour valves including cost of brick masonry chamber.  2 Nos. @ Rs. 10000/- Each	  0.20
4. Providing and fixing indicator plates for sluice valve, air valve etc.  9 Nos. @ Rs. 1000/-Each	  0.09
5. Providing for carriage of material L.S.	0.50
6. Provision for rising main from tubewells to U.G. tank i) 100 mm dia i/d 48 mtrs @ Rs. 1250/- mtr	0.60
7. Provision for rising main from main HUDA water line to U.G. tank. 100 mm i/d 30 Mtrs @ Rs. 1900/-Mtr.	0.30
	<b>13.07</b>
Add 3% AR & Contingencies	0.39
	<b>13.46</b>
Add 49% Escalation, departmental, unforeseen charges. C.O. to abstract of cost of Sub Work No. I	6.60
<b>GRAND TOTAL</b>	<b>20.06</b>
<b>SAY</b>	<b>20.10</b>

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**7.182 ACRES GROUP HOUSING COLONY**

**SECTOR - 20, PANCHKULA**

**Sub Work No. 1**

**Sub Head No. 4**

**Fire Ring Main**

**Amount (Rs. in Lacs)**

1	Providing, laying, jointing and testing M.S./D.I. pipe for fire rising main including cost of fittings, valves, connection etc. complete in all respect.	
	i) 150mm C.I/D.I Pipe line 825.00 m @ Rs.1500/- M	12.37
	ii) 80mm C.I/D.I Pipe line 90 m @ Rs. 1000/- M	0.90
2	Providing and fixing valve including cost of surface boxes and masonry chambers etc. complete in all respects.	
	150mm dia 5 Nos. @ 15000/-Each	0.75
3	Providing and fixing fire hydrant with accessories 32 Nos. @ Rs. 10000/-	3.20
4	Providing for carriage of material (L.S.)	0.50
5	Providing and fixing indicating plates  37 Nos. @ Rs. 1000/- Each	0.37
		<b>18.09</b>
	Add 3% contingencies & P.E. charges	0.54
		<b>18.63</b>
	Add 49% departmental, escalation, adm. and unforeseen charges.	9.12
		<b>27.75</b>
	<b>GRAND TOTAL</b>	<b>27.75</b>
	<b>SAY</b>	<b>27.70</b>

**7.182 ACRES GROUP HOUSING COLONY**

**SECTOR - 20, PANCHKULA**

**Sub Work No. 1**

**Sub Head No. V**

**Water Supply Flushing & Irrigation**

	Amount (Rs. in Lacs)
1 Providing, laying, jointing and testing DI K <sub>9</sub> pipe including cost of excavation etc. complete in all respect.	
a) 100 mm dia 1075 M @ Rs. 1250/- M	13.43
2 Providing & fixing sluice valve including cost of surface boxes and masonry chambers etc. complete in all respect	
5 Nos. @ Rs. 1200/- each	0.60
3 Providing and fixing 25mm dia, irrigation hydrant valve complete in all respect.	
45 Nos. @ Rs. 1500/-Each	0.68
4. Providing and fixing indicating plates	0.50
50 Nos. @ Rs. 1000/- Each	
5 Provision for carriage of material and other unforeseen items.	0.50
	<hr/>
	15.71
Add 3% contingencies & P.E. charges	0.47
	<hr/>
	16.18
Add 49% departmental, escalation, adm. and unforeseen charges.	8.08
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<b>GRAND TOTAL</b>	<b>24.26</b>
<b>SAY</b>	<b>24.30</b>

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**7.182 ACRES GROUP HOUSING COLONY**

**SECTOR - 20, PANCHKULA**

**SUB HEAD II**

**SEWERAGE SCHEME**

	Amount (Rs. in Lacs)
1. Providing, lowering, cutting, salt glazed stoneware pipes and specials into trenches including cost of excavation, bed concrete, cost of manholes complete in all respect.	
200 mm i/d	10.00
i) Av. Depth upto 2.5 M-800 M @ Rs.1250/- Per M	
2. Provision of S.T.P. 300 KLD and allied structure	35.00
3. Provision for vent shafts as per P.H. requirement at suitable places (L.S.)	1.00
4. Provision for road cutting and making the same to original condition (L.S.)	1.00
5. Provision for making connection with HUDA main sewer line	0.50
6. Provision of temporary timbering etc.	1.00
7. Provision for carriage of material etc. and other unforeseen charges. L.S.	0.50
<b>TOTAL</b>	<b>49.00</b>
Add 3% contingency & P.E Charges.	1.47
<b>TOTAL</b>	<b>50.47</b>
Add 49% departmental escalation unforeseen charges.	24.73
<b>GRAND TOTAL</b>	<b>75.20</b>

**7.182 ACRES GROUP HOUSING COLONY**

**SECTOR - 20, PANCHKULA**

**SUB HEAD III**

**STORM WATER DRAINAGE**

	<b>Amount (Rs. in lacs)</b>
1. Providing laying RCC pipes drain class NP-3 with cement joints, manholes, excavation etc. complete in all respect.	
300 mm i/d	0.54
Av. Depth upto 2.0 M - 40 M @ Rs. 1350/- Per M	
400 mm i/d	11.16
Av. Depth upto 2.0 M - 620 M @ Rs. 1800/- Per M	
450 mm i/d	2.64
Av. Depth upto 2.0 M - 120 M @ Rs. 2200/- Per M	
2. Provision for road gullies L.S.	2.00
3. Provision for lighting, watching and temporary diversions of traffic.	0.50
4. Provision for cutting of roads and carriage of materials etc. and other unforeseen items L.S.	0.50
5. Provision for temporary disposal arrangement / recharge pit	10.00
6. Provision for connection with HUDA.	1.50
7. Provision for timbering & shoring	1.00
<b>TOTAL</b>	<b>29.84</b>
Add 3% contingencies & P.E. charges.	0.89
<b>TOTAL</b>	<b>30.73</b>
Add 49% departmental, escalation and unforeseen charges.	15.06
<b>GRAND TOTAL</b>	<b>45.79</b>
<b>SAY</b>	<b>45.80</b>

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**7.182 ACRES GROUP HOUSING COLONY**

**SECTOR - 20, PANCHKULA**

**SUB WORK NO. IV**

**ROAD WORK**

Item No.	Description of Item	Unit	Qty.	Rate (Rs.)	Amount (Rs. In Lacs)
<b>1</b>	<b>Site Clearance</b>				
1.1	Clearing and grubbing road land including uprooting rank, vegetation, grass, bushes, shrubs, saplings and trees girth upto 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable materials to be used or auctioned, upto a lead of 1000mm including removal and disposal of top soil not exceeding 150 mm thickness by manual means in areas of light jungle as per drawings and Clause 201 of Morth Specifications.	Hectare	1.17	25000	0.29
<b>2</b>	<b>Earth Works</b>				
2.1	Provision for leveling + earth filling as per site condition approximate	Acre	7.182	100000	7.18
<b>3</b>	<b>Provision for</b>				
i.	300 mm GSB				
ii.	250 mm thick stone aggregate				
iii.	50mm thick B.M.				
iv.	20mm thick MSS				
		Sqm	8300	1000	83.00
<b>4</b>	<b>Miscellaneous Items</b>				
4.1	Construction of cement concrete Kerb and Channels as per specifications	Meter	2300	400	9.20
4.2	Construction of Footpath as per Specifications for approach to each block.				5.00

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4.3	Providing and fixing guide maps at selected locations (L.S.)				0.50
4.4	Provision for plot indicators (L.S.)				0.50
4.5	Provision for demarcating burgies (L.S.)				1.00
4.6	Provision for traffic arrangement				0.50
4.7	Provision for carriage of material (L.S.)				1.00
	<b>TOTAL</b>				<b>108.17</b>
	Add 3% contingencies& P.F charges				3.25
	<b>TOTAL</b>				<b>111.42</b>
	Add 49% departmental, escalation Unforeseen & Administrative charges				54.60
	<b>GRAND TOTAL</b>				<b>166.02</b>
	<b>SAY</b>				<b>166.00</b>

**SUB WORK-V**

**7.182 ACRES GROUP HOUSING COLONY**

**SECTOR - 20, PANCHKULA**

**COST ESTIMATE**

**STREET LIGHTING**

	<b>Amount (Rs. in Lacs)</b>
Providing street lighting on internal roads as per standard specification in 7.182 acre area @ Rs. 125000/- Per Acre 7.182 x 125000	8.98
Add 3% contingency charge & P.E charges.	0.27
<b>TOTAL</b>	<b>9.25</b>
Add 49% departmental charges, escalation, unforeseen, admin. Charges.	4.53
<b>GRAND TOTAL</b>	<b>13.78</b>
<b>SAY</b>	<b>13.80</b>

**C/O TO FINAL ABSTRACT OF COST**

**SUB WORK - VI**

**7.182 ACRES GROUP HOUSING COLONY**

**SECTOR - 20, PANCHKULA**

**COST ESTIMATE**

**HORTICULTURE**

		Amount (Rs. In Lacs)
1	Development of Lawn Area	
	a) Trenching the ordinary soil up to depth of 60cm. including removal and packing of serviceable material and disposing at a lead of 50m/ and making up the trenched area to proper level by filling with earth mixed with manure including cost of improved earth and manure.	
	b) Rough dressing of trenched area.	
	c) Grassing with "doob grass" including watering and maintenance of lawns free from weeds and fit for moving rows 7.50cm in either direction including for hedges and grill and barbed wire fencing around park and green belts (as per HUDA norms) Area 7.182Acres @ Rs.100000 Per Acre	7.18
2	Planting or trees with tree guards on roads at 6 M intervals Length of roads = 1150.00 M No. of Trees @ 12 m c/c = 1150 x 1/12 = 95.8 Nos. SAY = 100 Nos.	

**COST OF THE TREE**

Excavation	Rs. 50/-	
Manure	Rs. 60/-	
Tree Plants	Rs. 60/-	
Tree Guards	Rs. 600/-	
Total	Rs. 750 x 100	0.75
<b>TOTAL</b>		<b>7.83</b>
Add 3% contingencies and P.E. charges		0.23
<b>TOTAL</b>		<b>8.06</b>
Add 49% departmental, escalation, adm. and unforeseen charges		3.95
<b>GRAND TOTAL</b>		<b>12.01</b>
<b>SAY</b>		<b>12.00</b>

[[Pick the date]]

**7.182 ACRES GROUP HOUSING COLONY**

**SECTOR - 20, PANCHKULA**

**SUB WORK NO. VII**

**MAINTENANCE CHARGES AND RESURFACING OF ROADS**

<b>2<sup>ND</sup> PHASE AFTER 5 YEARS OF 1<sup>ST</sup> PHA</b>	<b>AMOUNT (RS. IN LACS)</b>
1. Provision for maintenance charges for water supply, sewerage, storm water drainage, roads, streetlights, horticulture etc. complete including operation and establishment charges as per HUDA norm after completion and resurfacing of roads after 10 years.  7.182 Acres @ Rs. 5.00 Lacs	35.91
2. Provision for resurfacing of roads after 1 <sup>st</sup> 5 years of maintenance i.e. 100 mm thick B.M. & 25 mm thick premix carpet with seal coat with mechanical paver  8300 Sqm @ Rs. 600/- P. Sqm	49.80
3. Resurfacing of road after 10 years of maintenance by providing 25mm thick premix carpet with seal coat with mechanical paver.  8300 Sqm @ Rs. 400/- per sqm total	33.20
<b>TOTAL</b>	<b>118.91</b>
Add 3% P.E. and contingency charges	3.57
<b>TOTAL</b>	<b>122.48</b>
Add 49% departmental charges, price, escalation unforeseen and administrator charges.	60.01
<b>GRAND TOTAL</b>	<b>182.49</b>
<b>SAY</b>	<b>182.50</b>

**CALCULATION OF WATER LOAD**

Sr. No.	Name of Line	Providing Water Supply Scheme 7.182 Acres Group Housing Colony Sector-20, Panchkula			Population @5 OR 2 persons per unit	Water requirement @ 172.5 Lts per head per day in KLPD	Water requirement for non residential unit in KLPD	Gross water requirement in KLPD	Gross requirement of water in gallons per day
		No. of Dwelling Units		Service Personnel					
		General	E.W.S.						
1	RA	-	-	-	-	-	-	-	
2	AB	6	59	325	56.06	N.S.=10KLPD	66.06	14520	
3	BC	80	-	440	75.9	-	75.9	16700	
4	CD	120	-	660	113.85	-	113.85	25050	
5	AE	-	-	-	-	-	-	-	
6	EF	63	-	315	54.34	-	54.34	11960	
7	FG	63	-	315	54.34	-	54.34	11960	
8	GH	-	-	-	-	SHOPPING+COMMUNITY = 15.00 KLPD	15.00	3300	

**DESIGN STATEMENT FOR WATER SUPPLY**

**Providing Water Supply Scheme 7.182 Acres Group Housing Colony Sector-20, Panchkula**

Sr. No.	Name of Line	Water load in gallons per day			3 Times Water Load in Gallons per day	Designed Water load in gallons per day C=100	Size in MM	Length in M	Head loss per 1000 Mtr in M	Head Loss in pipe in Mtr	Hydraulic Level in M		Formation Level at L/E in Mtr	Terminal Head at L/E in Mtr
		Self	Branch	Total							U/E	L/E		
1	RA	0	83490	83490	283000	150	20.00	8.27	0.17	377.00	376.83	310.75	66.08	
2	AB	14520	41750	56270	200000	150	190.00	4.35	0.83	376.83	376.00	310.80	65.20	
3	BC	16700	25050	41750	133000	150	70.00	2.06	0.15	376.00	375.85	310.90	64.95	
4	CD	25050	-	25050	84000	100	75.00	6.30	0.45	375.85	375.30	311.00	64.30	
5	AE	-	27220	27220	84000	100	130.00	6.30	0.82	376.83	376.01	310.80	65.24	
6	EF	11960	15260	27220	84000	100	65.00	6.30	0.40	376.01	375.61	310.85	64.76	
7	FG	11960	3300	15260	60000	100	80.00	3.32	0.27	375.61	375.34	311.00	64.34	
8	GH	3300	-	3300	24000	100	85.00	0.62	0.05	375.34	375.29	311.15	64.14	

## Schedule Quantities of D.I. Pipes

Providing Water Supply Scheme 7.182 Acres Group Housing  
Colony Sector-20, Panchkula

S.NO.	Name of Line	Dia. Of Pipe in MM /			Dia. Of S.V. in MM /		
		100	150	200	100	150	200
1	RA		20.00			1	
2	AB		190.00			1	
3	BC		70.00			1	
4	CD	75.00					
5	AE	130.00				1	
6	EF	65.00			1		
7	FG	80.00			1		
8	GH	85.00			1		
<b>TOTAL</b>		435.00	280.00		3	4	
<b>Say</b>		450.00	300.00		3	4	



## Statement for Calculation of Sewage Load

Providing Sewerage Scheme 7.182 Acres Group Housing Colony Sector-20, Panchkula

S. NO	Name of Line	No. of Dwelling Units			Population @ 5 persons or 2 persons per Unit	Water Requirement @ 172.5 LPCD in KLPD	Quantity of Sewage @ 75% of Water requirement in cusecs	
		General	EWS	Service Personnel				
1	AB	80	-	20	440	75.90	0.023	
2	BC	80	-	20	440	75.90	0.023	
3	CD	46	-	10	250	43.12	0.013	
4	DE	-	59	-	295	50.89	0.015	
5	EL	N.S.	-	-	-	10	0.003	
6	FG	shopping and community					15	0.003
7	GH	-	-	-	-	-	-	
8	HI	63	-	-	315	54.34	0.016	
9	IJ	63	-	-	315	54.34	0.016	
10	JK	-	-	-	-	-	-	

## Statement for Calculation of Sewage Load

Providing Sewerage Scheme 7.182 Acres Group Housing Colony Sector-20, Panchkula

S. NO	Name of Line	No. of Dwelling Units		Population @ 5 persons or 2 persons per Unit	Water Requirement @ 172.5 LPCD in KLPD	Quantity of Sewage @ 75% of Water requirement in cusecs
		General	Service Personnel			
11	KM	-	-	-	-	-
12	LM	-	-	-	-	-
13	M-STP	-	-	-	-	-
14	OVERFLOW					
15	TOTAL					

## DESIGN STATEMENT

### Providing Sewerage Scheme 7.182 Acres Group Housing Colony Sector-20, Panchkula

Sr. No	Name of Line	Sewage Load in Cusecs			3 Times Sewage Load in Cusecs	Designed Discharge in Cusecs	Size in MM	Length in M	Slope 1 in 100	Velocity in M/Sec.	Fall in M	Formation Level in M		Invert Levels in M		Depth in M		Avg. Depth
		Self	Branch	Total								U/E	L/E	U/E	L/E	U/E	L/E	
1	AB	0.023	-	0.023	0.069	0.44	200	40.00	225	0.77	0.18	311.10	310.90	309.90	309.72	1.20	1.18	1.19
2	BC	0.023	0.023	0.046	0.138	0.44	200	75.00	225	0.77	0.34	310.90	310.60	309.72	309.38	1.18	1.22	1.20
3	CD	0.013	0.046	0.059	0.177	0.44	200	70.00	225	0.77	0.32	310.60	310.80	309.38	309.06	1.22	1.74	1.48
4	DE	0.015	0.059	0.074	0.222	0.44	200	40.00	225	0.77	0.18	310.80	310.70	309.06	308.88	1.74	1.82	1.78
5	EL	0.003	0.074	0.077	0.231	0.44	200	70.00	225	0.77	0.32	310.70	310.78	308.88	308.56	1.82	2.22	2.02
6	FG	0.005	-	0.005	0.015	0.44	200	45.00	225	0.77	0.20	311.20	311.10	310.00	309.80	1.20	1.30	1.25
7	GH	-	0.005	0.005	0.015	0.44	200	48.00	225	0.77	0.22	311.10	311.00	309.80	309.58	1.30	1.42	1.36
8	HI	0.016	0.005	0.021	0.063	0.44	200	77.00	225	0.77	0.35	311.00	310.90	309.58	309.23	1.42	1.67	1.60
9	IJ	0.016	0.021	0.037	0.111	0.44	200	77.00	225	0.77	0.35	310.90	310.85	309.23	308.90	1.67	1.95	1.81
10	JK	-	0.037	0.037	0.111	0.44	200	65.00	225	0.77	0.29	310.85	310.80	308.90	308.61	1.95	2.19	2.07

## DESIGN STATEMENT

Providing Sewerage Scheme 7.182 Acres Group Housing Colony Sector-20, Panchkula

Sr. No	Name of Line	Sewage Load in Cusecs			3 Times Sewage Load in Cusecs	Designed Discharge in Cusecs	Size in MM	Length in M	Slope 1 in 1	Velocity in M/Sec.	Fall in M	Formation Level in M		Invert Levels in M		Depth in M		Avg. Depth
		Self	Branch	Total								U/E	L/E	U/E	L/E	U/E	L/E	
11	KM	-	0.037	0.037	0.111	0.44	200	15.00	225	0.77	0.07	310.80	308.61	308.54	2.19	2.26	2.23	
12	LM	-	0.037	0.037	0.111	0.44	200	30.00	225	0.77	0.13	310.78	308.56	308.43	2.22	2.37	2.30	
13	M-STP	-	0.114	0.114	0.342	0.44	200	10.00	225	0.77	0.04	310.80	308.43	308.39	2.37	2.43	2.40	
14	OVERFLOW	-	0.114	0.114	0.342	0.44	200	115.00	225	0.77	0.51	310.82	309.32	308.81	1.50	1.69	1.55	



## DESIGN STATEMENT

### Providing Storm Water Drainage Scheme 7.182 Acres Group Housing Colony Sector-20, Panchkula

Sr. No	Name of Line	Area in Acres			Discharge @1/4" in Rain Fall in causes	Designed Discharge in Cusecs	Size in MM	Length in M	Slope 1 in	Velocity in M/Sec.	Fall in M	Formation Level in M		Invert Levels in M		Depth in M		Avg. Depth
		Self	Branch	Total								U/E	L/E	U/E	L/E	U/E	L/E	
1	A2A1	1.03	-	1.03	0.261	2.53	300	36	300	0.77	0.12	311.10	310.90	310.10	309.98	1.00	0.92	0.96
2	A1A	2.07	1.03	3.1	0.77	4.8	400	120	300	1.02	0.36	310.90	310.70	309.88	309.52	1.02	1.18	0.10
3	AB	0.7	3.1	3.8	0.95	6.18	450	75	340	1.05	0.2	310.70	310.70	309.47	309.27	1.23	1.43	1.33
4	B-HUDA STORM	-	3.8	3.8	0.95	6.18	450	30	340	1.05	0.1	310.70	310.50	309.27	309.17	1.43	1.33	1.38
5	CD	43	-	43	0.11	3.52	400	60	560	0.77	0.11	310.70	310.70	309.50	309.39	1.20	1.31	1.26
6	D5D4	0.67	-	0.67	0.17	3.52	400	95	560	0.77	0.17	311.20	311.00	310.00	309.83	1.00	1.17	1.09
7	D4D3	1.11	0.67	1.78	0.44	3.52	400	145	560	0.77	0.25	311.00	310.85	309.83	309.58	1.17	1.27	1.22
8	D3D2	0.59	1.78	2.37	0.59	3.52	400	70	560	0.77	0.12	310.85	310.80	309.58	309.46	1.27	1.34	1.31
9	D2D1	0.1	2.37	2.47	0.62	3.52	400	30	560	0.77	0.05	310.80	310.75	309.46	309.41	1.32	1.34	1.34
10	D1D	0.42	2.47	2.89	0.72	3.52	400	70	560	0.77	0.12	310.75	310.70	309.41	309.29	1.34	1.41	1.37
11	D-HUDA STORM	-	3.32	3.32	0.78	3.52	400	20	560	0.77	0.04	310.70	310.50	309.29	309.25	1.41	1.25	1.33

## Schedule of Quantities of R.C.C Pipes

Providing Storm Water Drainage Scheme 7.182 Acres Group  
Housing Colony Sector-20, Panchkula

S.NO.	Name of Line	Length in M		
		300	400	450
1	A2A1	36.00		
2	A1A		120.00	
3	AB			75.00
4	B-HUDA STORM			30.00
5	CD		60	
6	D5D4		95	
7	D4D3		145	
8	D3D2		70	
9	D2D1		30	
10	D1D		70	
11	D-HUDA SEWER		20	
	<b>Total</b>	<b>36.00</b>	<b>610.00</b>	<b>105.00</b>
	<b>SAY</b>	<b>40.00</b>	<b>620.00</b>	<b>120.00</b>

## DESIGN DATA OF ROADS

7.182 Acres Group Housing Colony Sector-20, Panchkula

### 6.0 M WIDE ROAD

S.NO	Name of Road	Length in M	
1	R1	20.00	
2	R2	20.00	
3	R3	230.00	
4	R4	30.00	
5	R5	15.00	
6	R6	20.00	
7	R7	90.00	
8	R8	23.00	
9	R9	126.00	
10	R10	82.00	
11	R11	47.00	
12	R12	120.00	
13	R13	31.00	
14	R14	121.00	
15	R15	43.00	
	<b>TOTAL</b>	<b>1018.00</b>	
	<b>Total length of 6.0 M wide roads</b>	<b>1018.00</b>	
	<b>Add 10 % at curves</b>	<b>102.00</b>	
	<b>TOTAL</b>	<b>1120.00</b>	
	<b>SAY</b>	<b>1150.00</b>	
	<b>Paved Area of Roads= 1150 M x 6.00 M=</b>	<b>6900.00</b>	<b>SQ.M</b>
	<b>Add extra for entry, exit and widened roads=</b>	<b>500.00</b>	<b>SQ.M</b>
	<b>add for surface parking 70 x 2.5 x 5.00=</b>	<b>875.00</b>	<b>SQ.M</b>
	<b>Total</b>	<b>8275.00</b>	<b>SQ.M</b>
	<b>say</b>	<b>8300.00</b>	<b>SQ.M</b>
	<b>Length of kerbs = 2 X 1150</b>	<b>2300.00</b>	<b>SQ.M</b>



NOTES & REFERENCES

SANCTIONED

To be read in conjunction with Form No. 10

IMPORTANT SHORT NOTES :

- All dim. are in mm.
- All dim. to be read not scaled.
- All levels are in mm. w.r.t ± 00mm.

DATE REVISION NUMBER DESCRIPTION OF REVISION

DATE OF ISSUING NUMBER OF PRINT ISSUED TO

PROJECT : PROPOSED GROUP HOUSING at Sector -20, Panchkula, Haryana.  
PLANS FOR POCKET 'B'  
MEASURING 7.182 ACRES

PROMOTERS  
Samar Estate Pvt. Ltd.  
For Samar Estate (P) Ltd.  
Mg. Director

STATUS  
SUBMISSION DRAWING

DRAWING TITLE :  
ROAD LVL. PLAN

Scale 1:400 Date: SEPT 2005

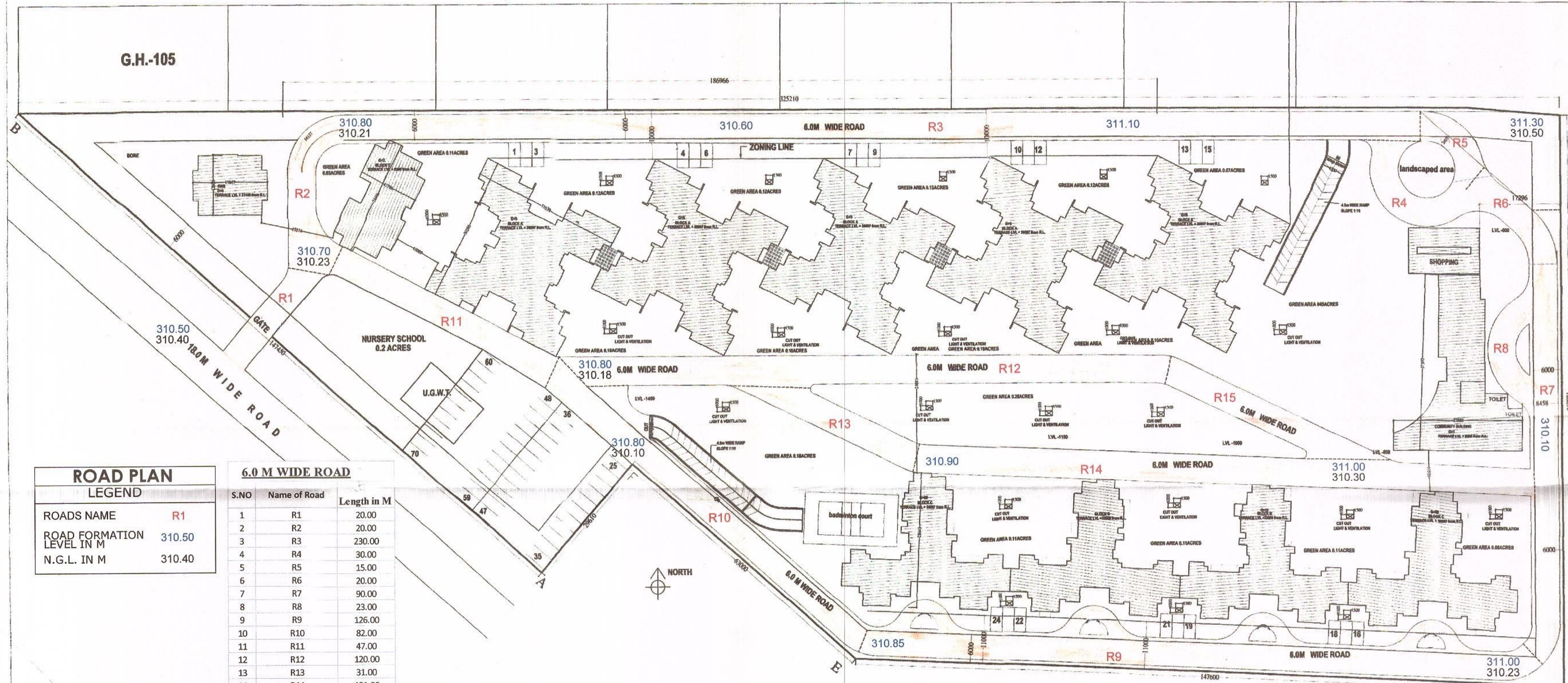
DEALT BY: SHEKHAR STATUS: SUBMISSION DRAWING

Dwg No. Rev No.

P.K/SER/04

18.0 M WIDE ROAD

G.H-105



**ROAD PLAN LEGEND**

ROADS NAME	R1
ROAD FORMATION LEVEL IN M	310.50
N.G.L. IN M	310.40

**6.0 M WIDE ROAD**

S.NO	Name of Road	Length in M
1	R1	20.00
2	R2	20.00
3	R3	230.00
4	R4	30.00
5	R5	15.00
6	R6	20.00
7	R7	90.00
8	R8	23.00
9	R9	126.00
10	R10	82.00
11	R11	47.00
12	R12	120.00
13	R13	31.00
14	R14	121.00
15	R15	43.00

AREA STATEMENT

SITE AREA 7.182 ACRES OR 29064.48 SQM  
PERMISSIBLE GROUND COVERAGE - 35% = 10172.57 SQM  
PROPOSED GROUND COVERAGE = 5994.09 SQM (20.62 %)  
MAX PERMISSIBLE FAR = 175% = 50862.83 SQM  
PROPOSED FAR = 50791.27 SQM (174.75%)

Housing Block	Description	No. of Blocks	No. of Floors	No. of Apt.	Units of Dom. Serv.	Ground Coverage	Total Gr. Coverage	Ground Floor FAR	Typical Floor FAR	P.H. FAR	Tower FAR	Total FAR
A	4 unit apartm	5	G+09	200	50	614.57	3072.84	614.57	590.98		5933.40	29667.00
B	partm	2	G+10	66	-	451.65	903.30	451.65	428.89		4740.55	9481.10
C	partm	2	G+09	60	-	451.65	903.30	451.65	428.89		4511.66	9023.32
D	partm	1	G+2	6	-	256.91	256.91	256.91	255.11		767.13	767.13
COMMUNITY BUILDING	commu	1	G+1	-	-	533.37	533.37	533.37	383.94		917.31	917.31
SHOPPING	0.5% OF SITE	1	G	-	-	140.97	140.97	140.97	140.97			140.97
EWS	9 units per floor	1	G+5/6	59	-	183.40	183.40	183.40	178.98	118.64	1194.44	1194.44
				391	50		5994.09					50791.27

REQUIRED CAR PARKING  
REQUIRED NO. OF CAR PARKINGS @ 1 ECS PER MAIN D.U. = 391 NOS.  
REQUIRED OPEN CAR PARKING 20% OF TOTAL REQUIRED ECS = 67 ECS

PROPOSED CAR PARKING  
B) BASEMENT CAR PARKING = 340 Nos.  
C) SURFACE CAR PARKING = 70 Nos.  
TOTAL CARP = 410 Nos.

PARKING DETAIL OF BASEMENT  
Available area for each car in Basement = 21256.885 = 62.52 SQM. PER ECS  
340

POPULATION DENSITY  
SERVICE POPULATION  
EWS REQUIRED 15% OF TOTAL DUS  
PROPOSED EWS  
SERVICE PERSONEL REQUIRED 10% OF MAIN DUS  
PROPOSED SERVICE PERSONEL

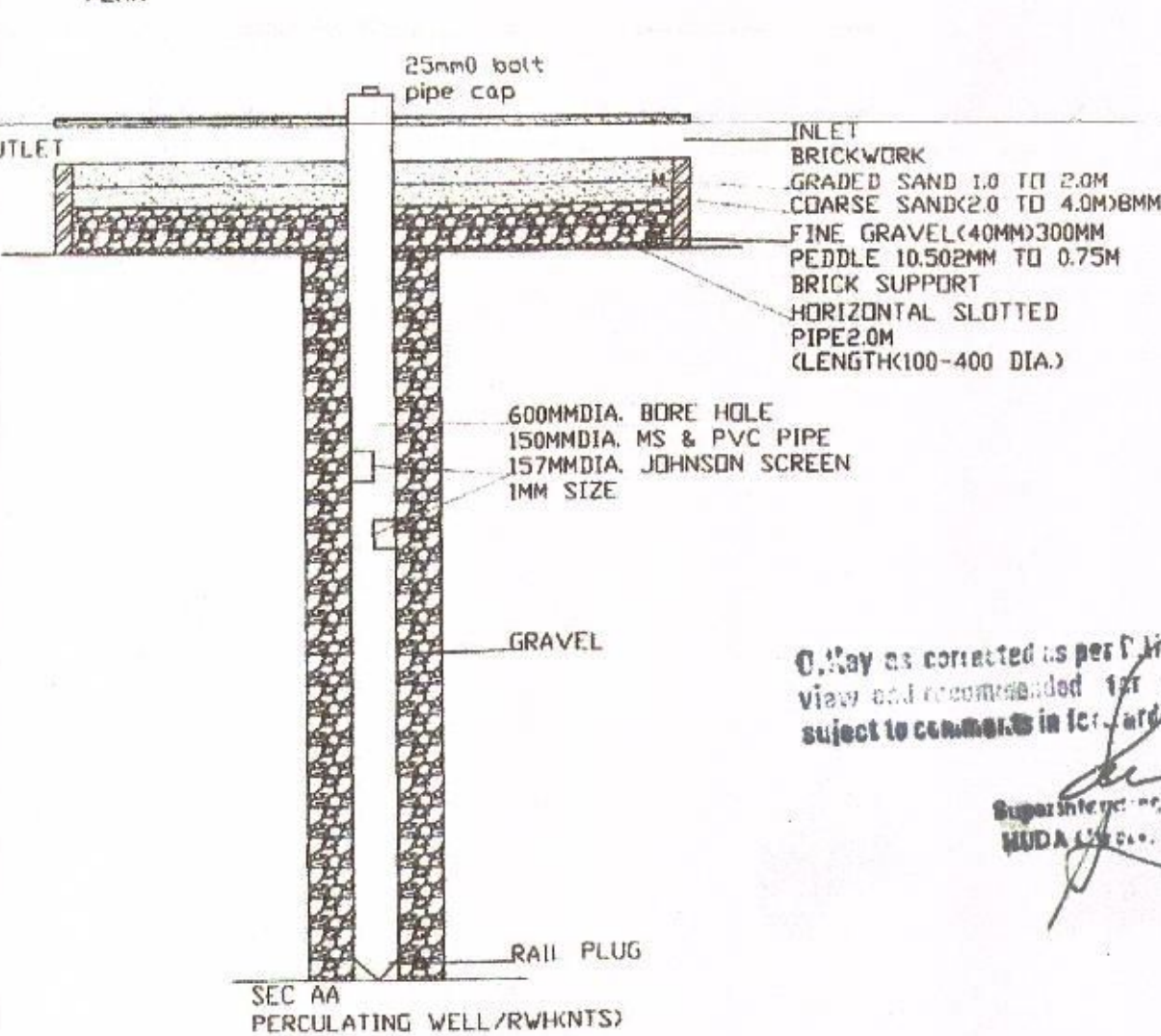
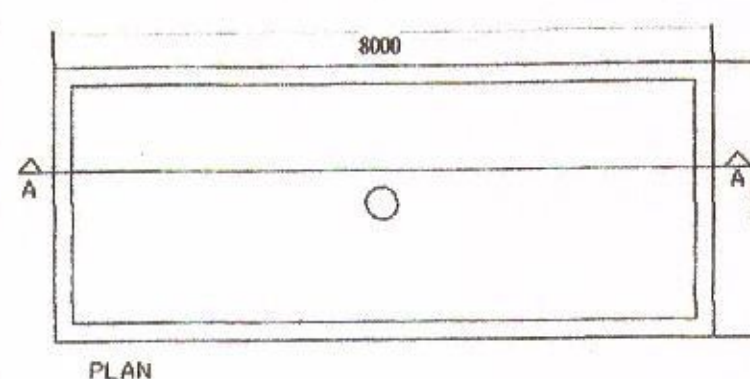
PERMISSIBLE DENSITY 100-400/PPA  
PROPOSED  
NO. OF MAIN DUS  
DOMESTIC SERVANTS  
EWS

SHOPS 1/1000 POP. 2 NOS.  
PROPOSED POP. DENS 1261.48/PPA

OPEN SPACE / ORGANISED GREEN  
OPEN SPACE / ORGANISED GREEN REQUIRED. 4359.672 SQ.M  
OPEN SPACE / ORGANISED GREEN PROVIDED. 9303.01 SQ.M

SCHOOL RESERVATION  
NURSERY SCHOOL REQUIRED 1NO  
PROPOSED RESERVATION FOR NURSING SCHOOL

0.2 ACRES 809.4sq m  
0.20 ACRES 809.4sq m



As per corrected as per drawing. It may be corrected as per drawing. It may be corrected as per drawing. It may be corrected as per drawing.

NO. OF PERSONS=1878  
WATER REQUIREMENT  
1. 1878 PERS @ 172.50 = 323955 LTR  
2. COMMUNITY BUILDING = 24970 LTR  
3. NURSERY SCHOOL = 9988 LTR  
4. FIRE FIGHTING = 1,00,000.00 LTR

TOTAL = 4,58,913.00 LTRS  
SIZE OF TANK @ 1000LTR/CU M = 458.91 CU.M  
SAY 460.0 CU.M  
= 16.0X10.0X2.5 M

SEWERAGE CALCULATIONS  
1000LTR @ 300000X3X75 0-42 Cu. Sec.  
540000X100 = 1250000 LTR

IT IS PROPOSED TO PROVIDE 250 MM DIA S.W. PIPE SEWER FOR MAIN CONNECTION

STORM WATER

AREA OF PLOT = 7.182 ACRES  
TAKING INTENSITY OF RAIN FALL @ 34" PER SEC.  
7.182 X 3/4 = 5.38 CU/SEC.  
IT IS PROPOSED TO PROVIDE 350MM DIA. RCC PIPE FOR CONNECTION TO MAIN STORM WATER LINE



NOTES & REFERENCES

SANCTIONED

IMPORTANT SHORT NOTES:  
 \* All dim. are in mm.  
 \* All dim. to be read not scaled.  
 \* All levels are in mm. w.r.t 200mm

DATE: \_\_\_\_\_ REVISION: \_\_\_\_\_ DESCRIPTION OF REVISION: \_\_\_\_\_

DATE OF ISSUING: \_\_\_\_\_ NUMBER OF PRINT: \_\_\_\_\_ ISSUED TO: \_\_\_\_\_

PROJECT: PROPOSED GROUP HOUSING at Sector -20, Panchkula, Haryana.  
 PLANS FOR POCKET 'B' MEASURING 7.182 ACRES

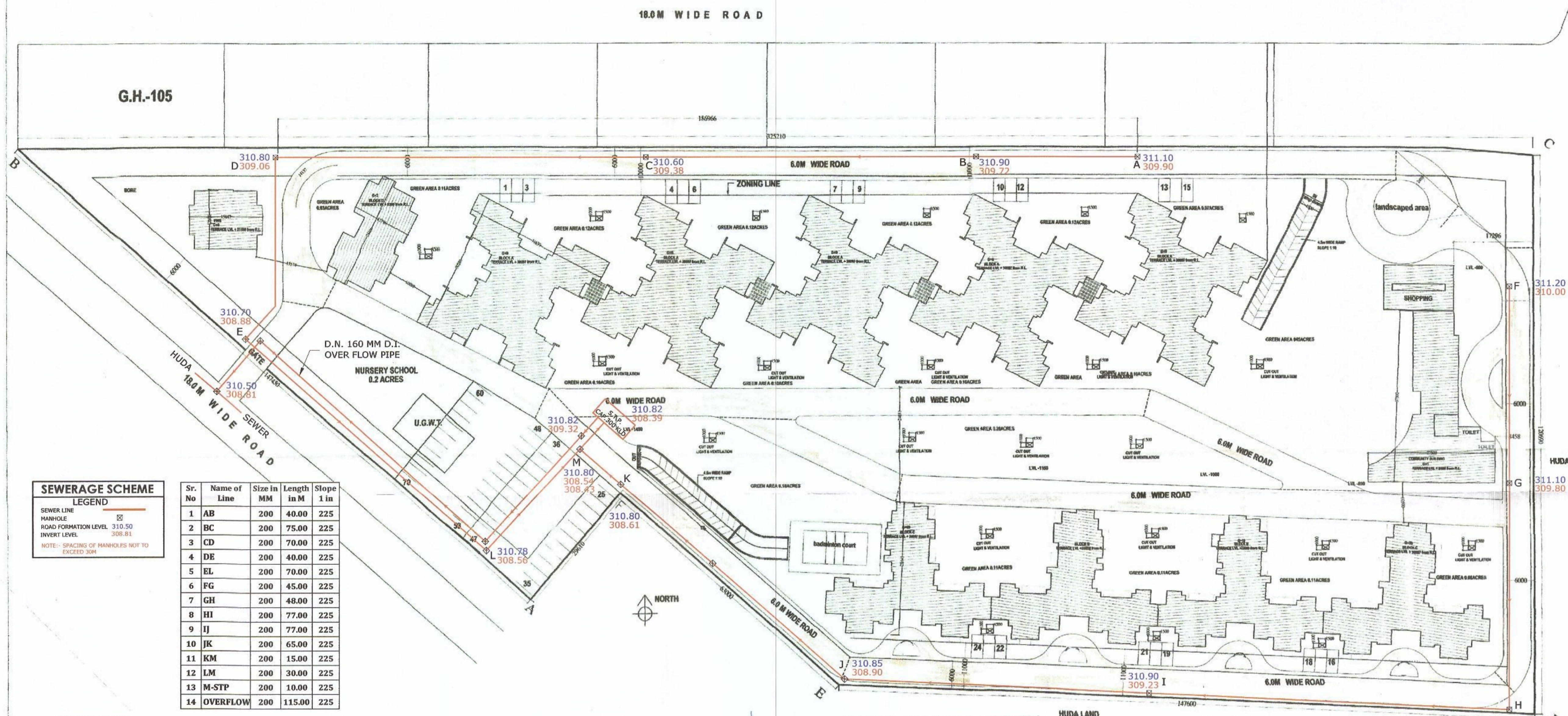
PROMOTERS: Samar Estate Pvt. Ltd.  
 For Samar Estate Pvt. Ltd.  
 Mgr. Director

ARCHITECT: [Signature]

STATUS: SUBMISSION DRAWING

DRAWING TITLE: ROAD LVL. PLAN

Scale: 1:400 Date: SEPT 2005  
 DEALY BY: SHEKHAR STATUS: SUBMISSION DRAWING  
 Dwg No. Rev No. P.K/SER/04



**SEWERAGE SCHEME LEGEND**

SEWER LINE: [Symbol]  
 MANHOLE: [Symbol]  
 ROAD FORMATION LEVEL: 310.50  
 INVERT LEVEL: 308.81

NOTE: SPACING OF MANHOLES NOT TO EXCEED 30M

Sr. No	Name of Line	Size in MM	Length in M	Slope 1 in
1	AB	200	40.00	225
2	BC	200	75.00	225
3	CD	200	70.00	225
4	DE	200	40.00	225
5	EL	200	70.00	225
6	FG	200	45.00	225
7	GH	200	48.00	225
8	HI	200	77.00	225
9	IJ	200	77.00	225
10	JK	200	65.00	225
11	KM	200	15.00	225
12	LM	200	30.00	225
13	M-STP	200	10.00	225
14	OVERFLOW	200	115.00	225

AREA STATEMENT

SITE AREA 7.182 ACRES OR 28064.48 SQM  
 PERMISSIBLE GROUND COVERAGE - 35% = 10172.57 SQM  
 PROPOSED GROUND COVERAGE - 5994.09 SQM (20.62%)  
 MAX PERMISSIBLE FAR - 175% = 50882.83 SQM  
 PROPOSED FAR = 50791.27 SQM (174.75%)

Housing Block	Description	No. of Blocks	No. of Floors	No. of Apt.	Units of Dom. Serv.	Ground Coverage	Total Gr. Coverage	Ground Floor FAR	Typical Floor FAR	P.H. FAR	Tower FAR	Total FAR
A	4 unit apartm	5	G+09	200	50	614.57	3072.84	614.57	590.08		5933.40	28667.00
B	apartm	2	G+10	66	-	451.65	903.30	451.65	428.88		4740.55	9481.10
C	apartm	2	G+09	90	-	451.65	903.30	451.65	428.88		4911.88	9823.72
D	apartm	1	G+2	6	-	256.91	256.91	256.91	255.11		767.13	767.13
COMMUNITY BUILDING	commu	1	G+1	-	-	533.37	533.37	533.37	383.94		917.31	917.31
SHOPPING	0.5% OF SITE	1	G	-	-	140.97	140.97	140.97				140.97
EWS	9 units per floor	1	G+5/6	59	-	183.40	183.40	183.40	178.98	116.64	1194.44	1194.44
				391	50		5994.09					50791.27

REQUIRED CAR PARKING  
 REQUIRED NO. OF CAR PARKINGS @ 1 EGS PER MAN DU = 351-59 = 332 NOS.  
 REQUIRED OPEN CAR PARKING 20% OF TOTAL REQUIRED ECS = 67 ECS

PROPOSED CAR PARKING  
 B) BASEMENT CAR PARKING = 340 Nos.  
 C) SURFACE CAR PARKING = 70 Nos.  
 TOTAL CARS = 410 Nos.

PARKING DETAIL OF BASEMENT  
 Available area for each car in Basement = 21256.885 = 62.52 SQM. PER ECS  
 340

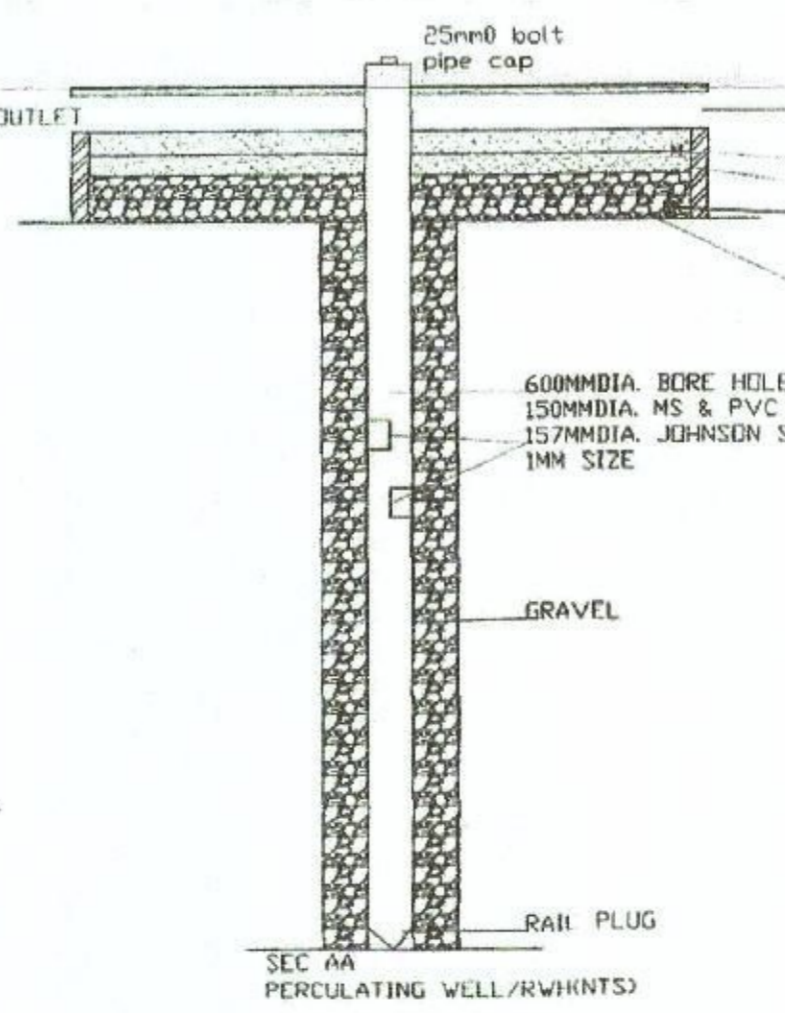
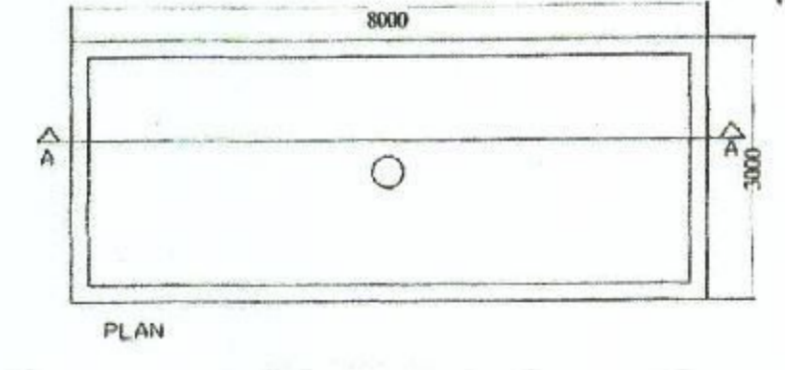
POPULATION DENSITY  
 SERVICE POPULATION 58.65  
 EWS REQUIRED 15% OF TOTAL DUS 59  
 PROPOSED EWS 33.2  
 SERVICE PERSONEL REQUIRED 10% OF MAIN DUS 50  
 PROPOSED SERVICE PERSONEL 50

PERMISSIBLE DENSITY 100-400/PPA  
 PROPOSED NO. OF MAN DUS 332X5 = 1660  
 DOMESTIC SERVANTS 50X2 = 100  
 EWS 59X2 = 118  
 1878

SHOPS 1/1000 POP 2 NOS.  
 PROPOSED POP. DENSIT 261.48/PPA

OPEN SPACE / ORGANISED GREEN  
 OPEN SPACE / ORGANISED GREEN REQUIRED. 4359.672 SQ.M 15.00%  
 OPEN SPACE / ORGANISED GREEN PROVIDED. 5003.01 SQ.M 32.00%

SCHOOL RESERVATION  
 NURSERY SCHOOL REQUIRED 1NO 0.2 ACRES 809.4sq.m  
 PROPOSED RESERVATION FOR NURSING SCHOOL 0.20 ACRES 809.4sq.m



0.5m dia corrected as per [unclear] view and recommended for [unclear] subject to [unclear] in [unclear] section

NO. OF PERSONS=1878  
 WATER REQUIREMENT  
 1. 1878 PERS @ 172.50 = 323955 LTR  
 2. COMMUNITY BUILDING = 24970 LTR  
 3. NURSERY SCHOOL = 9988 LTR  
 4. FIRE FIGHTING = 1.00.000.000 LTR

TOTAL = 4 58,913.00 LTRS or 10102.911 m<sup>3</sup>  
 SIZE OF TANK @ 1000L/CU M = 458.91 CU.M.  
 SAY 460.0 CU.M.  
 = 16.0X10.0X2.5 M

SEWERAGE CALCULATIONS  
 10102.911 X 3X75 @ 4.2 G.P. Sec.  
 540000X100 = 1750-0.000001

IT IS PROPOSED TO PROVIDE 250 MM DIA. S.W. PIPE SEWER FOR MAIN CONNECTION

STORM WATER  
 AREA OF PLOT = 7.182 ACRES  
 TAKING INTENSITY OF RAIN FALL @ 3/4" PER SEC. 7.182 X 3/4 = 5.38 CU/SEC.  
 IT IS PROPOSED TO PROVIDE 350 MM DIA. R.C.P. PIPE FOR CONNECTION TO MAIN STORM WATER LINE

NOTES & REFERENCES

1. SANCTIONED

To be read in conjunction with Memo No. \_\_\_\_\_

IMPORTANT SHORT NOTES:  
 \* All dim. are in mm.  
 \* All dim. to be read not scaled.  
 \* All levels are in mm. w.r.t ± 00mm.

DATE: \_\_\_\_\_ REVISION: \_\_\_\_\_ DESCRIPTION OF REVISION: \_\_\_\_\_

DATE OF ISSUING: \_\_\_\_\_ NUMBER OF POINT: \_\_\_\_\_ ISSUED TO: \_\_\_\_\_

PROJECT:  
 PROPOSED GROUP HOUSING  
 at Sector -20, Panchkhola, Haryana.  
 PLANS FOR 'POCKET 'B'  
 MEASURING 7.182 ACRES

PROMOTERS  
**Samar Estate Pvt. Ltd.**  
 For Samar Estate (Pvt.) Ltd.  
 Mgr. Director

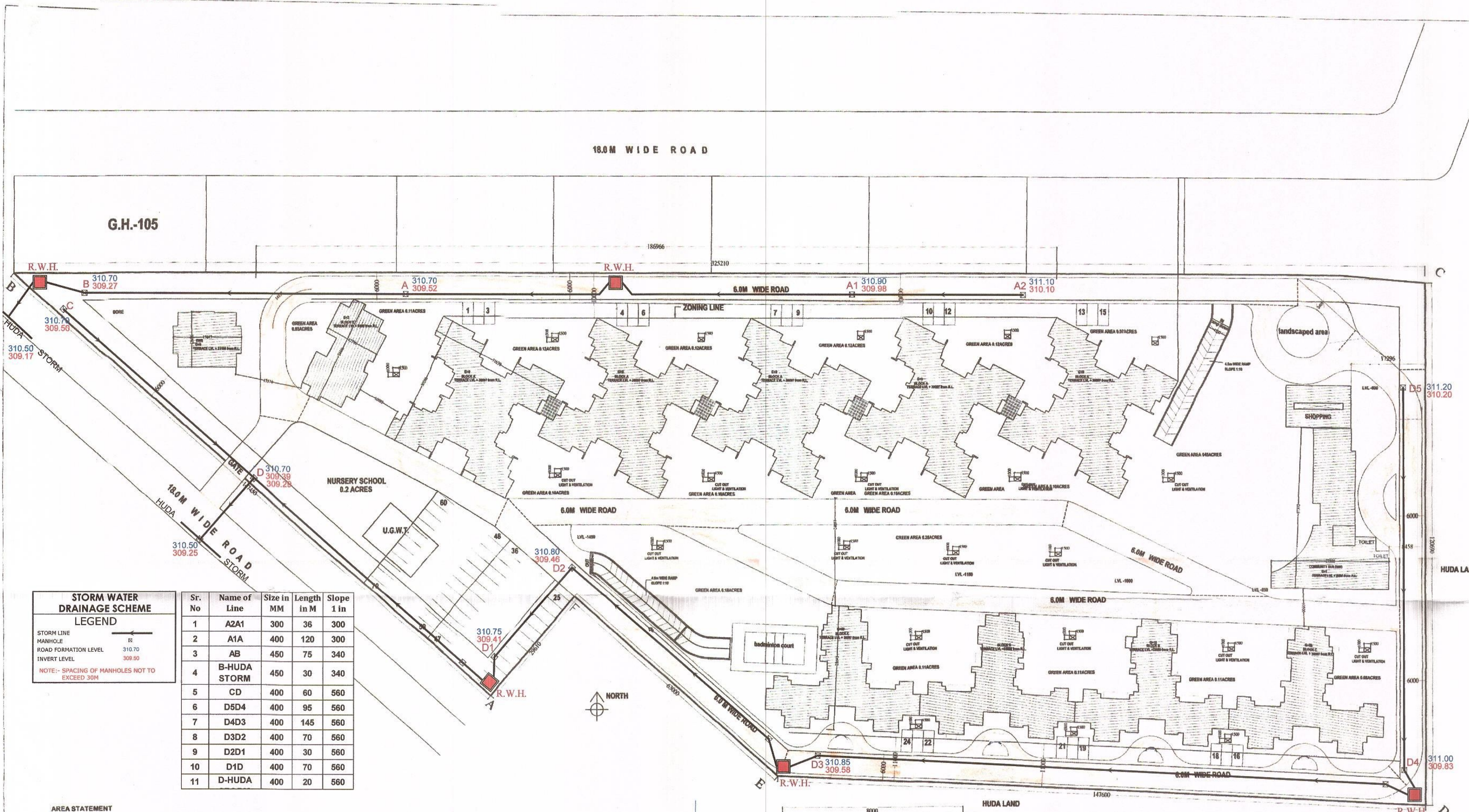
*Mangaldeep*

ARCHITECT: \_\_\_\_\_

STATUS  
 SUBMISSION DRAWING

DRAWING TITLE:  
 ROAD LVL. PLAN

Scale: 1:400 Date: SEPT 2006  
 DEALT BY: SHRIHAR STATUS: SUBMISSION DRAWING  
 Draw No. Rev No.  
**P.K/SER/04**



**STORM WATER DRAINAGE SCHEME LEGEND**

Sr. No	Name of Line	Size in MM	Length in M	Slope 1 in
1	A2A1	300	36	300
2	A1A	400	120	300
3	AB	450	75	340
4	B-HUDA	450	30	340
5	CD	400	60	560
6	D5D4	400	95	560
7	D4D3	400	145	560
8	D3D2	400	70	560
9	D2D1	400	30	560
10	D1D	400	70	560
11	D-HUDA	400	20	560

**AREA STATEMENT**  
 SITE AREA 7.182 ACRES OR 29054.48 SQM  
 PERMISSIBLE GROUND COVERAGE - 35% = 10172.57 SQM  
 PROPOSED GROUND COVERAGE - 5994.09 SQM (20.62 %)  
 MAX PERMISSIBLE FAR - 175% = 50862.83 SQM  
 PROPOSED FAR = 50791.27 SQM (174.75%)

Housing Block	Description	No. of Blocks	No. of Floors	No. of Apt.	Units of Dom. Serv.	Ground Coverage	Total Gr. Coverage	Ground Floor FAR	Typical Floor FAR	P.H. FAR	Tower FAR	Total FAR
A	4 unit apartment	5	G+09	200	50	614.57	3072.84	614.57	590.98		5933.40	29867.00
B	apartment	2	G+10	66	-	451.85	903.30	451.85	428.89		4740.55	9481.10
C	apartment	2	G+09	90	-	481.85	963.30	481.85	428.89		4511.66	8023.92
D	apartment	1	G+2	6	-	256.91	256.91	256.91	255.11		767.13	767.13
COMMUNITY BUILDING	commu nty	1	G+1	-	-	533.37	533.37	533.37	383.94		917.31	917.31
SHOPPING	0.5% OF SITE	1	G	-	-	140.97	140.97	140.97	140.97			140.97
EWS	8 units per floor	1	G+5/6	59	-	163.40	163.40	163.40	178.98	118.64	1194.44	1194.44
				391	50		5994.09					50791.27

REQUIRED CAR PARKING  
 REQUIRED NO. OF CAR PARKINGS @ 1 ECS PER MAN D.U. = 391 NOS.  
 REQUIRED OPEN CAR PARKING 20% OF TOTAL REQUIRED ECS = 87 ECS

PROPOSED CAR PARKING  
 B) BASEMENT CAR PARKING = 340 Nos.  
 C) SURFACE CAR PARKING = 70 Nos.  
 TOTAL CARP. = 410 Nos.

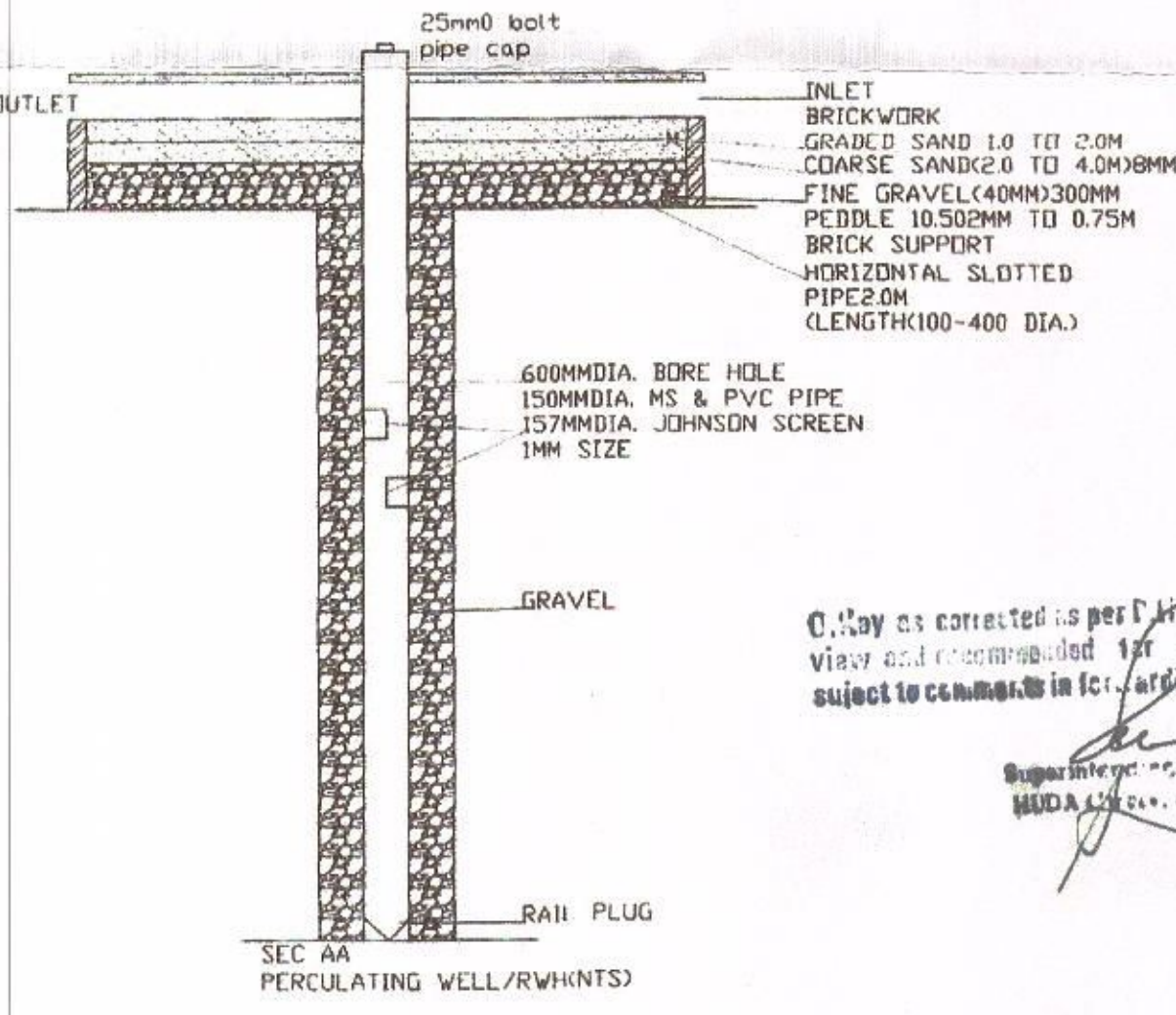
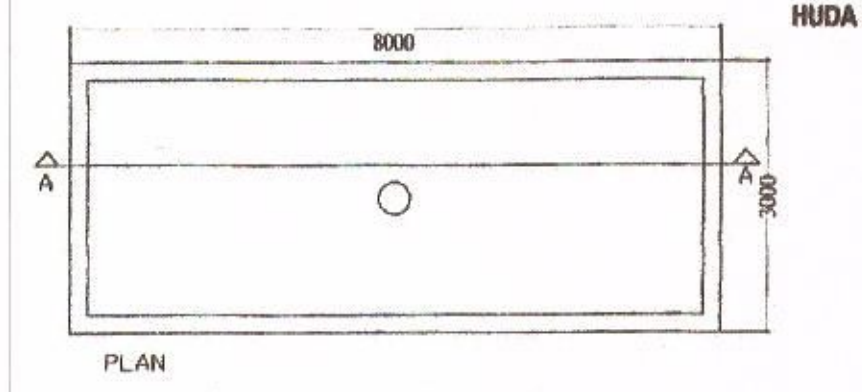
PARKING DETAIL OF BASEMENT  
 Available area for each car in Basement = 21256.88 = 62.52 SQM. PER ECS  
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POPULATION DENSITY  
 SERVICE POPULATION 58.65  
 EWS REQUIRED 15% OF TOTAL DUS 59  
 PROPOSED EWS 33.2  
 SERVICE PERSONEL REQUIRED 10% OF MAN DUS 39.1  
 PROPOSED SERVICE PERSONEL 50

PERMISSIBLE DENSITY 100-400/PPA  
 PROPOSED NO. OF MAN DUS 332X5 = 1660  
 DOMESTIC SERVANTS 50X2 = 100  
 EWS 59X2 = 118  
 1878

SHOPS 1/1000 POP. 2 NOS.  
 PROPOSED POP. DENS 261.48/PPA  
 OPEN SPACE / ORGANISED GREEN  
 OPEN SPACE / ORGANISED GREEN REQUIRED. 4359.672 SQ M 15.00%  
 OPEN SPACE / ORGANISED GREEN PROVIDED. 5933.01 SQ M 32.00%

SCHOOL RESERVATION  
 NURSERY SCHOOL REQUIRED (NO.) 0.2 ACRES 809.46sq.m  
 PROPOSED RESERVATION FOR NURSING SCHOOL 0.20 ACRES 809.46sq.m



NO. OF PERSONS=1878  
**WATER REQUIREMENT**  
 1. 1878 PERS @ 172.50 = 323955 LTR  
 2. COMMUNITY BUILDING = 24970 LTR  
 3. NURSERY SCHOOL = 9988 LTR  
 4. FIRE FIGHTING = 1 00 000 00 LTR

TOTAL = 4,58,913.00 LTRS  
 SIZE OF TANK @ 1000LTR/CU.M = 458.91 CU.M.  
 SAY 460 CU.M.  
 = 18 0X10 0X2.5 M

**SEWERAGE CALCULATIONS**  
 10x10x30x75 0-42 Co. Sec.  
 540000X100 = 125000 LTR

IT IS PROPOSED TO PROVIDE 250 MM DIA S W PIPE SEWER FOR MAIN CONNECTION

STORM WATER  
 AREA OF PLOT = 7.182 ACRES  
 TAKING INTENSITY OF RAIN FALL @ 34" PER SEC. 7.182 X 3/4 = 5.38 CU/SEC.  
 IT IS PROPOSED TO PROVIDE 350 MM DIA. RCC PIPE FOR CONNECTION TO MAIN STORM WATER LINE

It may be corrected as per the plan view and recommended for approval subject to comments in the working drawings.

No-497

24<sup>th</sup> January 2018

To,  
The Superintending Engineer,  
HUDA Circle, Panchkula

**Sub: Approval of Service Plan Estimate of Pocket-B in the matter of Licence No. 609 to 612 of 2006 granted in the name of M/s Samar Estate Pvt. Ltd area measuring 7.182 acres, village Kundi sector 20, Panchkula.**

**Ref: Please refer to your office memo No. 240934 dated 19.12.2017 on the subject cited above.**

Sir,

The Para wise reply to the observation is submitted as under please:-

1. The design statement for water supply, sewerage & storm water have been prepared on the basis of the number of dwelling units as per provision made in the approved layout plan appended with the estimate. However in case of any variation up to 10% from original approved plan is in built while planning the service plan estimates submitted for approval.

In case of any variation with respect to approved building plans within the stipulated maximum limits or beyond thereof shall be submitted as revised plan for approval to the competent authority and the estimate for the services will be revised accordingly. As such no necessity of preparing the design statements at this stage is required.

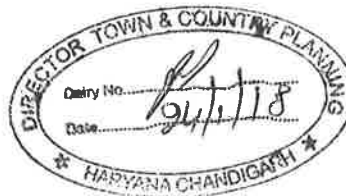
More-over the size of pipes fulfill the requirement of norms of HUDA/Public Health Engineering Department.

2. The services marked on the plan are as per approved plan. The service plan estimate has also been prepared accordingly.

Contd...P/2

*Sujay Saini*

*24/01/2018*  
*(SE HUDA Circle P&L)*



3. The rates provided in the estimate are as per prevalent practices and norms in HUDA presently.

In view of the above, estimate submitted by us is in order and you are therefore requested to kindly approve the same at the earliest and oblige.

Thanking You

Yours Sincerely,

For Samar Estate Pvt. Ltd.

*S. S. Saini*

(Authorized Signatory)

CC:-

1. The Director General, Town & Country Planning, Haryana Sector 17 Chandigarh.
2. The Chief Engineer, HUDA Panchkula. *24/10/18*
3. The Executive Engineer HUDA Division No. I Panchkula. *24/11/18*



# SAMAR ESTATES PVT. LTD.

(A COMPANY OF ESS VEE GROUP)

(REAL ESTATE PROMOTERS, BUILDERS, ENGINEERS, ARCHITECTS AND CONTRACTORS)  
H.O. / A.O. : # 1005, 10th FLOOR, ANTRIKSH BHAWAN, 22-K.G. MARG, NEW DELHI-1  
BRANCH OFFICE : SCO-283, SECTOR - 20, PANCHKULA-134 112  
REGD. OFFICE : # 254, NAC, MANIMAJRA, CHANDIGARH-160 101

Ref.No. SE/AVP/SANC/PKL/ 2017/09/204

15<sup>th</sup> September, 2017

To,  
SE., HUDA,  
Sector 8, Panchkula

**Subject:** Request for approval of Service Plan Estimates of Pocket 'B' in matter of License Nos. 609 to 612/2006 dated 27.03.2006 granted in name of M/s Samar Estates Pvt. Ltd. and developed as 'Parsvnath Royale' by M/s Parsvnath Developers Ltd. at Sector-20, Village Kundi, Panchkula on area ad-measuring 7.182 Acres.

Dear Sir,

In reference to the building plans approved of the captioned project vide BR-III memo no.9095 dated 30<sup>th</sup> March 2007 by Chief Town Planner, Haryana and in compliance of clause no. 6 thereof, please find attached the Service Plan Estimates in triplicate along with the drawings of Water Supply Scheme, Sewerage Disposal Scheme, Storm Water Drainage Scheme and Road Level Plan for processing and according approval at the kind earliest.

Warm Regards,

Truly yours,  
for Samar Estates Pvt. Ltd.

  
Authorized Signatory

Copy to: Chief Administrator, HUDA  
Sector 8, Panchkula

The Director, Town & Country Planning Haryana,  
SCO 71-75, Sector 17, Chandigarh

