Directorate of Town & Country Planning, Haryana
Nagar Yojana Bhawan, Plot No. 3, Block-A, Sector 18A, Madhya Marg
Chandigarh; Phone:0172-2549349
e-mail:tcpharyana7@gmail.com; http://tcpharyana.gov.in

ORDER

In pursuant to this office Endst. No. 22831 dated 12.09.2019, Licence No. 117 of 2019 dated 12.09.2019 was granted in favour of Sh. Narender Kumar, Nihal Singh, Kamal Singh Ss/o Sh. Ram Sarup in collaboration with International Land Developers Pvt. Ltd. B-418, New Friends Colony, Delhi-110025 for setting up of Affordable Plotted colony under DDJAY-2016 over an area measuring 15.00 acres (out of 25.531 acres under migration from licence no. 89 of 2013 dated 23.10.2013) in the revenue estate of village Hariyahara, Sector-36, Sohna, Distt. Gurugram under the provisions of the Haryana Development and Regulation of Urban Areas Act, 1975 and rules framed thereunder.

In principle approval for transfer of said licensed area and change of developer in favour of Signatureglobal Homes Pvt. Ltd. was granted under the provisions of Rule 17 of Rules 1976 and the policy parameter dated 18.02.2015 vide this office memo No. 25414 dated 11.10.2019 on the request of licensee, who have complied with the terms and conditions of said in principle approval within prescribed period of 90 days and submitted requisite documents. Therefore, the said licensed area measuring 15.00 acres is hereby transferred under Rule 17 of the Haryana Development & Regulation of Urban Areas Rules, 1976 in the name of Signatureglobal Homes Pvt. Ltd. The revised land schedule of License No. 117 of 2019 dated 12.09.2019 is enclosed herewith. The terms and conditions as stipulated in the above said license will remain the same and will be complied with by Signatureglobal Homes Pvt. Ltd. The transferee company will also abide by the terms and conditions of the agreement LC-IV and Bilateral Agreement executed with the Director, Town & Country Planning, Chandigarh.

The approval of all the plans accorded in favour of original licensees shall now be deemed approved in favour of transferee companies.

(K. Makrand Pandurang, IAS)
Director, Town & Country Planning
Haryana Chandigarh

Endst. No. LC-4084/Asstt(AK)/2019/ 30747-55 Dated 13-12-2019

A copy is forwarded to the following for information and necessary action:-

1. Sh. Narender Kumar, Nihal Singh, Kamal Singh Ss/o Sh. Ram Sarup in collaboration with International Land Developers Pvt. Ltd. B-418, New Friends Colony, Delhi-110025
2. Signatureglobal Homes Pvt. Ltd., 1309, 13th Floor, Dr. Gopal Das Bhawan, 28 Barakhambha Road, New Delhi-110001.
3. Chief Administrator, HSVP, Panchkula.
4. Chief Engineer, HSVP, Panchkula.
5. Chief Account's officer.
6. Senior Town Planner, Gurugram.
7. District Town Planner (P) Gurugram.
8. District Town Planner (E), Gurugram.
9. Nodal Officer for updation on the website

(Rajesh Kaushik)
District Town Planner (HQ)
For Director, Town & Country Planning
Haryana Chandigarh

To be Read with License No.....dated.....2019

Revised Land Schedule.

Details of land owned by Signatureglobal Homes Pvt.Ltd.

Village	Rect.No.	Kila No.	Area (K-M)
Hariahera	45	1/1	1-12
		1/2/1	4-4
		10/2	6-0
		11/1	6-0
		21/1min	2-15
	50	1/2/1min	0-1
	46	5/2min	2-8
		6/1	3-0
		15/2	3-0
		16/1	3-0
	45	20/2	6-0
	45	1/2/2	2-4
		2/1	1-0
		10/1	2-0
		11/2	2-0
		20/1	2-0
		2/2/1	5-18
		9/2	6-12
		12/1	6-12
		19/2	3-0
		21/2	5-4
		22/1	3-0
	50	1/2/2min	1-8
		2/1/1 m/s	0-2
	45	2/2/2	1-2
		3/1	0-14
		9/1	1-8
		12/2	1-8
		3/2	5-2
		8	6-7
		13	5-14
		18	3-16
		19/1	5-0
		22/2	5-18
	50	2/1/2min	4-11
		Total	**41-0**
	Grand Total		**120K-0M**
			Or 15.0 Acres

Director,
Town & Country Planning
Haryana

15 ACRES RESIDENTIAL PLOTTED COLONY UNDER DDJAY IN SECTOR 36, SOHNA

M/S SIGNATURE GLOBAL HOMES PVT LTD

ESTIMATE FOR PROVIDING WATER SUPPLY.SEWERAGE. STORM WATER DRAINAGE, ROADS,STREET LIGHTING AND HORTICULTURE IN RESPECT OF 15 ACRES RESIDENTIAL PLOTTED COLONY IN SECTOR 36,SHONA

INDEX

PROJECT REPORT/ESTIMATE FOR PROVIDING WATER SUPPLY, SEWERAGE, STROM WATER DRAINAGE, ROADS, STREET LIGHTING AND HORTICULURE IN RESPECT OF 15 ACRES RESIDENTAIL PLOTTED COLONY IN SECTOR 36 SOHNA

The Haryana Government has prepared a master plan for development of Residential/Industrial/ Commercial urban estate SHONA. M/S SIGNATURE GLOBAL HOMES PVT LTD has desided to develop a part of the area in this master plan and has named this part as 15 Acres Residential plotted colony. This scheme is located in sector-36 of Haryana Urban Development Authority SHONA.

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 20,000 litre per hour. The recharging of underground water table in this belt is stated to be good. However still we shall resort to rain water harvesting system to keep up the recharging system. 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 absolence of the tubewells. The ultimate requirement of tubewells includes provisions of 10% stand by. Ultimately, water shall be supplied to the Project by HARYANA URBAN DEVELOPMENT AUTHORITY, SHONA,

2 Design

The scheme has been designed for approved population of 4896 persons. The rate of water supply per head per day has been taken as 155.25 litres (135+15%)as per NBC 2016 / HUDA norms. in addition to above necessary provision of water for community area, shopping centres, 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 20,000 litre per hour. It is also proposed to equip required Nos pumping sets with stand by diesel engins /gen set for operation during failure of electricity.

4 **Under Ground Storage**

Underground storage tank provision has been made for **560KL** capacity. in 6 compartments, which caters for the domestic as well as for fire requirement. The water for domestic water compartment shall overflow the fire compartment so that the water in the fire compartment also remains fre

5 **Boosting Station**

The boosting is being planned near UGSR catering to the above requirement.

6 **Distribution System**

The distribution system for this development has been designed to supply @ 155.25 litre per head her day @ 3 times the average rate of flow on Hazen william formula. Necessary provision for laying CI/DI pipes conforming to relevent IS standards along with valves and specials has been made in the project. The minimum terminal head at any point will be more than 27.00 meters so thet it can serve the stilt and four floors stories construction envisaged in the plan. Minimum pipe dia for distribution is kept as 100 mm dia. Drinking water supply and 100mm dia for flushing cum irrigation water supply.

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 propoesd 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.

9 **Storm Water Drainage**

suitable provisions are contemplated in our scheme to ensure better recarging 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 9m wide. The following specification have been adopted which are reproduced below.

(i) 300 mm GSB

(ii) 250 mm stone aggregate

(iii) 50 mm thick ~~B.M~~ DBM

(iv) 25 mm ~~MSS~~ BC

The above construction shall be done on well compacted sub grade as per specification .complete work will be carried out as per Ministry of Road Transport and highways (MORTH) specification, IRC guide lines or HUDA specification, 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 sprcification of P.H. Department as laid down by HUDA & Haryana Government.

14 **Rates**

Estimate for providing services in this pocket has been preoared 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 ~~1722.76~~ Lacs**. 1290.70 The cost per gross acre for the phase works out to be **Rs ~~114.85~~ 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 escalation, administrative departmental and unforeseen charges.

The cost per gross acre for this phase works out to **Rs. ~~114.85~~ Lacs/acre** 86.05 which covers the provision of services like water supply, sewerage, storm water drainage, roads, street lighting and plantations including plantations maintenance thereof as well as future expansion whatsoever indicated.

			For 15 Acres	unit
	DESIGN CALCULATION			
	Daily water requirement			
	Total No. of Plots (Deen Dayal Awas)		272	Nos
	Total No. of EWS Plots		0	Nos
	Population per plot (Deen Dayal Awas)		18	Person/Plot
	Population per plot (EWS)		9	Person/Plot
1	Therefore population (Deen Dayal Awas)		4896	persons
	Therefore population(EWS)		0	persons
	Total Population		4896	persons
		SAY	4896	Persons
	Total daily Water requirement for plots (135 Lpcd + 15%)	@	155.25	Lpcd
			760104.00	Lpd
		Or Say	**760.11**	**KLD (1)**
2	**Non residential building water requirement**			
a	Area of commercial		1	Nos
	Daily water requirement	@	32000	Ltrs/Acre
	Area of commercial		0.60019	Acre
	Therefore daily water requirement		19206.05	lit/day
		Or Say	**19.21**	KLD
b	Area of community center		1	Nos
	Daily water requirement	@	25000	lit/day
	Therefore daily water requirement		25000	lit/day
		Or Say	**25**	KLD
	Total 2 (a+b)		**44.21**	**KLD (2)**
3	Area under Parks		1.14	Acre
	Daily water requirement	@	25000	lit/acre/day
			28384.6	lit/day
			28.38	KLD
4	Area under Roads		3.91	Acre
	Daily water requirement	@	5000	lit/acre/day
			19553.70	lit/day
			19.55	KLD
		Total	**47.94**	**KLD**
I	**Total daily requirement**			
a.)	For (1+2)		804.32	KLD
b.)	Under Road+ Parks (4+5)		47.94	KLD
	Total Daily Requirement		852.25	KLD
		Or Say	**860.00**	**KLD**
	Assuming requirement for flushing as 1/3 of total domestic demand and therefore daily requirement for flushing		268.11	KLD
	Or Say		270.00	KLD
	Daily requirement of portable drinking water supply		536.21	KLD
	Or Say		**540.00**	**KLD**
II	**Tubewell**			
	Assuming working hours of tubewells		**16**	hours
	Assuming discharge/hour of each tubewell		**20**	KL/hours
	Total domestic water requirment		**540**	**KLD**
	No. of tubewells required		1.69	
	~~Add 10% standby~~		~~0.17~~	
		Total	~~1.86~~	
		Proposed	**2.00** No	(2W+1S)

So it is proposed 3 nos of tubewell. The provision of 3 no of tubewell has been made in the estimate because the water demand for horticulture and the flushing purpose is to be met from re circulated after treatment at STP and ultimate water supply is to be provided by HUDA.

Dom. Use (760.11 + 44.21)

(28.38 + 19.55)

1/3 x 804.32

804.32 − 268.11

will be met from treated effluent

III	**Pumping machinery for tubewell**				
a	Gross working load		=	45.00	m
b	Average Fall in S.L		=	3.00	m
c	Depression head		=	9.00	m
d	Friction loss		=	3.00	m
			=	60.00	m
		Say	=	60.00	m
	BHP = 20000x60x1/60x60x75x0.6		=	7.40	BHP
	With 60% efficiency	**Proposed**		**7.5**	**BHP**

It is proposed to install ~~3~~ 2 **no. Submersible pumping set** with a discharge of **20000 ltr./hour (335 lpm) driven with 7.5 HP** electric motor each

IV	**Underground Tank(Drinking water supply)**				
	Daily requirement for domestic use and other except fire fighting		=	**536.21**	KL
	Fire Tank Capacity (100ÖP= 100Ö5.76) 1/3rd		=	221.27	KL 73.91 KL
		Say	=	~~**230.00**~~ 100	**KL**
	Capacity of under ground tank 60% day except fire fighting		=	321.73	KL
		Say	=	350 ~~**330.00**~~	**KL**
	Fire water storage		=	100 ~~**230.00**~~	**KL**
		Total		450 ~~**560**~~	**KL**

450 100

It is proposed to provide 1 no. under ground tank of capacity ~~560~~ **KL** which also includes **230 KL** capacity for **fire fighting**.

Tank will have six compartments, two for fire, two for raw and the other two for domestic use. The water first enters the fire compartment, then over flows to the raw water use compartment so that the water in the fire compartment shall remain fresh.

V	**BOOSTING MACHINERY (Drinking water)**				
	UG. Tank				
	Daily requirement for domestic use		=	536.21	KL
	Assuming 8 hours running 2 pumps (with one standby)				
	Discharge/hour		=	33.51	KL/HR
			Or Say	35.00	KL/HR
	Discharge/min		=	583.33	LTRS / MIN
			Or Say	~~583.33~~ 600	LTRS / MIN
	Head of pump		=	4.0	m
	i) Suction lifts		=	5.0	m
	ii) Friction loss in M<main & specials		=	31.0	m
	iii) Clear head		=	40.0	m
			=	40.00	m
	Say			8.88	
	BHP of motor (35*1000*40)/(4500*75*0.6)			~~6.914~~	HP
	600x40 / 4500x0.6	SAY	=	~~7.5~~ 10.0	HP

VI	**Over Head Services Resorver (Deleted) Direct pumping system adopted)**					
VII	**Gen Set**	Nos.	HP			
	Pumps for UG. Tank	2	~~7.5~~ 10	=	20 ~~15~~	HP
	Pumps for Flushing Tank	1	10.0	=	10	HP
	Tubewell	2	7.5	=	15	HP
	Lighting			=	15	HP
					~~55~~ 60	HP
	60 or ~~55~~ x 0.746 x 1.50				67.14 ~~61.545~~	KVA
	Say				~~63~~ 75	**KVA**

V	**BOOSTING MACHINERY (Flushing water supply)**			
	Daily requirement for flushing use	=	268.11	KL
	Add for horticulture and roads	=	47.94	KL
	TOTAL	=	316.04	KL
	Assuming 8 hours running 1 pumps (with one standby)			
	Discharge/hour	=	39.51	KL/HR
		Or Say	40.00	KL/HR
	Discharge/min	=	666.67	LTRS / MIN
		Or Say	~~666.67~~ 670	LTRS / MIN
	Head of pump			
	i) Suction lifts	=	4.0	m
	ii) Friction loss in M<main & specials	=	4.0	m
	iii) Clear head	=	31.0	m
		=	39.0	m
	Say	=	**40.00**	m
	BHP of motor (~~666.67~~*40)/(60*75*0.6) $\frac{670 \times 40}{4500 \times 0.60}$	SAY =	~~9.877~~ 9.93 10.0	HP HP
	Capacity of STP			
4	**Sewage load 75 % of total daily water requirement**		**603.24**	**KLD**
	Grand Total For 15 Acre Add 5% for margin factor		30.16 **603.24**	**KLD**
	STP Capacity (Or Say)		633.40 ~~605.00~~ 650	**KLD**

FINAL ABSTRACT OF COST

	Amount (Lacs.) For 15 Ac
Sub Work 1 Water Supply	~~295.00~~ ₹ 239.25 lacs
Sub Work 2 Sewerage	~~509.49~~ ₹ 168.25 lacs
Sub Work 3 S.W. Drainage	~~111.101~~ ₹ 163.27 lacs
Sub Work 4 Roads	~~311.70~~ ₹ 288.82 lacs
Sub Work 5 Street Lighting	₹ 57.55 Lacs
Sub Work 6 Horticulture	~~2.53~~ ₹ 8.81 lacs
Sub Work 7 Maintenance charges for 10 years i/c resurfacing of roads after 1st 5 years & 2nd 5 years.	₹ 365.33 lacs ~~435.38~~
	1290.68 lacs
	~~1722.76~~
COST / Acre	~~114.85~~ Say 1290.70 lacs

₹ 1290.70 lacs / 15.00 Acre = ₹ 86.05 lacs

Executive Engineer
HSVP Divn. No. VI
Gurugram

Checked subject to comments in forwarding letter No. 07242 Dt. 22/07/2022 and notes attached with the estimate

Superintending Engineer (HQ)
for Chief Engineer HSVP
Panchkula

Superintending Engineer,
HSVP Circle-II, Gurugram

Addl. Chief Engineer
HSVP, Gurugram

C/S

Director
Town and Country Planning,
Haryana, Chandigarh

WATER SUPPLY HEAD		Amount (Lacs.) For 15 Ac
Sub Head 1 Head Works		~~97.60~~ 66.95
Sub Head 2 Pumping Machinery		~~32.40~~ 26.50
Sub Head 3 Distribution System(Drinking) , Rising main		~~30.92~~ 30.92
Sub Head 4 Distribution System flushing cum irrigation		~~31.09~~ 31.52
Total		~~192.01~~ 155.89
Add 3% Contingencies & PE Charge		~~5.76~~ 4.68
		197.77 160.57
Add 49% Departmental Charges , price escalation Unforsen, Admn		~~96.91~~ 78.68
	Total	294.67 239.25
(CO to final abstract of cost)	Say	~~295.00~~

Sub Head I					Water Supply Head Works Rs.(lakhs)
S. No.	**Description**	**Unit**	**Qty**	**Rate**	**Amount**
1	Boring and installing 300X200 mm i/d tubewells with reverse/direct rotary rig complete with pipe strainer to a depth of about 150 m. complete.	Nos.	~~3~~ 2	1000000.00	2[illegible].00
2	Constructing pump chambers as per standard design of PWD PH/HUDA of size 4.90x4.25 m.	Nos.	~~3~~ 2	200000.00	4.00
3	Construction of boundary wall gate around the Tubewell site.				
a)	Water Works	Nos	1	100000.00	1.00
b)	Tubewells	Nos	~~3~~ L.S	~~120000.00~~	3.20
4	Provision of footpath hodges and lawns at tubewell.	Nos	~~3~~ (L.S)	~~100000.00~~	3.00
5	Construction of boosting chambers of suitable size along with under ground tank of capacity 450 KL pumping machinery and generating set etc. complete in all respects. Details of boosting station				
i)	construction of boosting chamber	LS		-	~~3.00~~ 5.06
ii)	UG tank **~~560~~ 450 KL** capacity incl. **~~230~~ 100 KL** for fire fighting, domestic, raw & fire tank in six compartments and 200 KL for flushing water tank near STP	kl.	~~560~~ 650	~~10000.00~~ 3500/-	~~56.00~~ 22.75
7	Provision for carriage of material and other unforeseen items	LS			~~1.00~~ 2.00
8	Provision for staff quarters for Maintenance.		LS	~~600000.00~~	1[illegible].00
i)	350 sft	Nos.			
ii)	~~440 sft~~	~~Nos.~~			
iii)	~~770 sft~~	~~Nos.~~			
					₹ 66.95 lacs
	(C.O. to abstract of cost of Sub-work No.I)			**Total**	~~**97.60**~~
				Say	~~**97.60**~~

Sub Work I

Sub Head No. II

Water Supply
Pumping Machinery
Amount (Rs.)
(in Lakhs)

S. No.	Description	Unit	Qty	Rate	
1	Providing and installing electricity driven electro or submersible pumping set capable of delivering about 20 KL water per hour against a total head of 60 M complete with motor and other accessories. (7.5HP)	Nos.	3 2	200000.00	~~6~~ 4.00
2	Provision for diesel engine genset stand bye arrangements for Tubewells.	Nos.	1	200000.00	2.00
3	Provision for cheap pressure type chlorination plant complete.	Nos.	1	100000.00	1.00
4	Provision for making foundations & erection of pumping machinery.	LS			2.00
5	Provision for pipes, valves & specials inside the pump chamber.	Nos.	~~3~~ (LS)	~~200000.00~~	1.50 ~~6.00~~
6	Provision for electric services connection including electric fittings for tubewells chambers complete. Including cost of trasfermer.	LS			2.50
7	Providing and installing centrifugal boosting pumping set for domestic water supply, capable of delivering water at 40M head complete in all respects. ~~(7.5HP)~~ 10HP (2 working + 1 standby)	Nos.	(2+1) 3	150000.00	3.00 ~~4.50~~
8	Providing and installing centrifugal boosting pumping set for flushing water supply, capable of delivering water at 40M head complete in all respects. (10HP) (1 working + 1 standby)	Nos.	1+1 2	170000.00	2.00 ~~3.40~~
9	Providing Gen set ~~53~~ 75 KVA.	LS			~~4.00~~ 7.50 Qa
10	Provision for carriage of materials and other unforeseen items.	LS		-	1.0
	(C.O. to abstract of cost of Sub-work No.I)			**Total**	26.50 Qas ~~32.40~~
				Say	~~32.40~~

Sub Work I — **Water Supply**
Sub Head No. III — **Distribution System/Rising Main**

S. No.	Description	Unit	Qty	Rate	IN LACS
1	Providing, laying, jointing & testing D.I. pipes including cost of excavation complete as per ISI marked.				
i)	150 mm dia	M	16	1575.00	0.25
ii)	100 mm dia	M	1669	1250.00	20.86
2	Providing and fixing sluice valves including cost brick masonary chambers complete in all respects.				
i)	150 mm i/d	Nos.	1	15000.00	0.15
ii)	100 mm i/d	Nos.	27	12000.00	3.24
4	Providing and fixing 150 mm dia NRV including cost of brick masonry chamber.	Nos.	3	10000.00	0.30
5	Providing and fixing ~~80 mm dia~~ air valves and scour valves including cost of brick masonry chamber.	Nos.	~~2~~ (L.S.)	~~10000~~.00	0.20
6	Providing and fixing fire hydrants complete with masonary chambers.	Nos.	19	10000.00	1.90
7	Providing and fixing indicating plates for sluice valve, air valve etc.	Nos.	30	1000.00	0.30
8	Provision for carriage of material	LS	(L.S.)	~~100000.00~~	1.00
10	Provision for rising main from tubewells to UG Tank				
i)	100 mm	M	95	1250.00	1.1875
11	Provision for rising main from main Water supply line to UG Tank (DI Pipe)				
i)	100 mm	M	122	1250.00	1.53
	(C.O. to abstract of cost of Sub-work No.I)		**Total**		**30.92**
			Say		**30.92** Lacs

Sub Work I — **Water Supply**
Sub Head No. IV — **Flushing and Irrigation**

S. No.	Description	Unit	Qty	Rate	IN LACS
1	Providing, laying, jointing & testing D.I. pipes including cost of excavation complete as per ISI marked.				
i)	100 mm dia	M	1683	1250.00	21.04
2	Providing, laying, jointing & testing HDPE (SH80) pipes including cost of excavation complete as per ISI marked.				
i)	110 mm dia	M	~~4~~	~~1250.00~~	~~0.050~~
ii)	75 mm dia	M	426	~~715.00~~ 750/-	~~3.046~~ 3.20 lacs
iii)	63 mm dia	M	0	618.00	0.000
iv)	50 mm dia	M	89	415.00	~~0.369~~
v)	40 mm dia	M	97	310.00	~~0.301~~
vi)	32 mm dia	M	457	~~240.00~~ 450/-	~~1.097~~ 2.06 lacs
vii)	25 mm dia	M	15	~~120.00~~ 350/-	~~0.018~~ 0.05 lacs
2	Providing and fixing sluice valves including cost brick masonary chambers complete in all respects.				
i)	100 mm i/d	Nos.	28	12000.00	3.36
i)	75 mm i/d	Nos.	2	9000.00	0.18
3	Providing and fixing ~~80 mm~~ dia air valves and scour valves including cost of brick masonry chamber.	Nos.	~~3~~	~~10000.00~~ (L.S)	0.30
4	Providing and fixing indicating plates for sluice valve, air valve etc.	Nos.	33	1000.00	0.33
5	Provision for carriage of material	LS		100000.00	1.00
	(C.O. to abstract of cost of Sub-work No.I)		**Total**		~~31.09~~ 31.52 lacs
			Say		~~31.09~~

Sewerage Scheme

Sub Work II

S. No.	Description	Unit	Qty	Rate	in Lacs
1	Providing, lowering, jointing, cutting salt glazed stone ware/RCC NP^3 pipes and specials into trenches including cost of excavation, bed concrete lot of manholes complete.				
i)	**200 mm i/d stone ware**				
a)	**Average depth upto 1.5 m**	M	302	1250.00	3.78
b)	**Average depth 1.5 m to 4.5 m**	M	1105	~~1600.00~~ 1500	~~17.68~~ 16.58
ii)	**250 mm i/d stone ware**				
a)	**Average depth 1.5 m to 4.5 m**	M	46	1800.00	0.83
iii)	**300 mm i/d stone ware**				
a)	**Average depth 1.5 m to 4.5 m**	M	~~9.5~~ 10	2000.00	0.20
2	Provision for providing oblique junctions	LS		-	2.0
3	Provision for temporary timbering etc.	LS		-	1.0
4	Provision for providing and fixing vent shaft at suitable places as per PH requirements	LS			2.0
6	Provision for cutting of roads and carriage of materials etc. and other unforsean charges	LS		-	1.0
7	Provision for connection with HUDA main sewer line on master Road	LS		-	1.0
8	Provision of STP ~~605~~ 650 KLD upto tertiary level Complete	LS			81.25 lacs ~~302.5~~
			Total		~~331.98~~ 109.64 lacs
	Add 3% contingencies & PE charges				~~9.959475~~ 3.28 lacs
					~~341.94~~ 112.92 lacs
	Add 49% Deptt. Charges, price escalation, unforseen Admn.				~~167.55~~ 55.33 lacs
				Total	~~509.49~~ 168.25 lacs
				Say	~~509.49~~
	(C.O. to abstract of cost ~~of Sub-work No. 2)~~ final)				

Sub Work III — **Storm water drainage**

S. No.	Description	Unit	Qty	Rate	In Lacs
1	Providing, lowering, jointing, cutting RCC NP^3 pipes and specials into trenches including cost of excavation cost of manholes, ventilating chambers etc. complete in all respects.				
i)	**400 mm i/d**				31.15 ~~18.69~~
a)	Average depth upto 1.5 m	M	1246	2500.00	
b)	Average depth 1.5 m to 4.5 m	M	583	~~1750.00~~ 2700	10.2025 15.75
2	Provision for road gullies i.e. single and double. and pipe Connection (L.S)	LS	-	-	~~2.00~~ 5.0
3	Provision for lighting, watching and temporary diversion of traffic.	LS		-	1.00
4	Provision for cutting of roads and carriage of materials etc. and other unforseen items.	LS		-	5.0 ~~1.00~~
5	Provision for temporary disposal arrangements/ Re-charge pit. at Selected Places	Nos	~~2~~ (L.S)	~~1500000.00~~	30.00
6	Provision for connection with HUDA. SWD line on master Road	LS	(L.S.)	-	1.00
7	Provision for timbering and shoring	LS		-	0.50
8	Providing for temprorary disposal arrengment till HUDA service are provided LS	LS		-	~~5.00~~
	Add 3% contingencies on PE Charges				~~72.39~~ 106.39 ~~2.17~~ 3.19
	Add 49% Deptt. Charges , price escalation, unforseen Delum				~~74.56~~ 109.58 ~~36.54~~ 53.69
	(C.O. to abstract of cost of Sub-work No. 1			**Total** **SAY**	~~111.10~~ 163.27 ~~111.101~~

Sub Work IV — **Road Work**

S. No.	Description	Unit	Qty	Rate	In Lacs
	Site Clearance				
1	Clearing and grubbing road land including uprooting rank vegetation grass bushesh shrubs saplings and trees girth upto 300mm 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 removable and disposal of top soil not exceeding 150mm thickness by manual means in area of light jungle as per drwing and clause 201 of morth specifications	hectare	1.58	50000.00	0.79
	Earth Works				
2	Provision for levelling and earth filling as per site conditions.	Acre	~~3.91~~ 15.0	150000.00	~~5.87~~ 22.50 Lac
3	Provisions for				
	300 mm GSB				
	250 mm thick stone aggregate layer				
	50 mm thick B.M.				
	20 mm th M.S.S.		9300		111.60 lacs
	Total	Sq. M	~~12681~~	1200.00	~~152.17~~
4	Miscellaneous items				
(a)	Providing for Kerbs & Channels	RMT	~~2820~~ 3368	600.00	~~16.92~~ 20.21 lacs
	for 15 ACRES 168				
	9M wide road ~~1410~~ x 2 = 2820 RM				
(b)	Provision of foot path of precast conc.	Sq. M	3384	600.00	20.30
	for 15 acres (9m)				
	9 wide road 1410 x 1.2x 2 = 3384 SQM				
4	Provision for indicate plate / guide map/ demarcation burji etc./ traffic light etc.	LS			0.50
	Provision for plot indicators LS				1.00
	Provision for demarcating burgies LS				1.00
	Provision for traffic arrangment				2.00
	Provision for carriage of material LS				1.00
	Construction of pavement in shopping area ~~169+89=258 sqm~~ i.e. 50% of the area $\frac{2428.965}{2}$ = 1215 sqm	sqm	~~258~~	600.00	~~1.55~~ 7.29 lacs
	Add 3% contingencies etc PE Charges				~~203.10~~ 188.19 lacs ~~6.09~~ 5.65 lacs
					~~209.19~~
	Add 49% Deptt. Charges , price escalation, unforseen deluge				~~102.505~~ 193.84 lacs
				Total	~~311.70~~ 94.98 lacs
	(C.O. TO FINAL ABSTRACT OF COST SUB WORK -			**SAY**	~~311.70~~ 288.82 lacs

Sub Work V — Street Lighting

S. No.	Description	Unit	Qty	Rate	In Lacs
1	Providing street lighting on roads as per standerd specification complete in all respect				
	Provision made on L.S. cost @ Rs. 25,0000.00 per acre	L.S.	15.00	250000.00	37.50
					37.50
	Add 3% contingencies				1.13
					38.63
	Add 49% Deptt. Charges				18.93
				Total	**57.55**
	(C.O. TO FINAL ABSTRACT OF COST SUB WORK - VI)			**SAY**	**57.55**

Sub Work VI — Horticulture

S. No.	Description	Unit	Qty	Rate	Amount In Lacs
1	Development of lawn area				
a)	Trenching the ordinary soil upto depth of 60 cm. including removal and apcking of servicable material and disposing at the lead of 50m and making upto the tranched area to prope level by filling with earth mixed with manure before and after flooding trenches with water including cost of imported earth and manure.				
b)	Rough dressing of trenched area.				
c)	Grassing with(doop grass) including watering and maintenance of lawns free from weds and fit for moving in rows 7.5 cm in either direction including for hedges and grill andbarred wire fencing around park and green belt (as per hudda Norms) 4594.92 Sqm or 1.14 acre @ Rs 1.50 lacs/acre				~~0.74~~ Rs 1.71 lacs
2	Planting of trees with tree guards on roads at ~~40~~ 12 intervals 1684 total length of roads = ~~1410~~ mtr No of trees @ 40m c/c = ~~1410x2/40 = 70.5 nos~~ say = ~~70~~ 280 nos 1684 12 280 Nos Trees Cost of the tree Excavation rs 60/- Manure rs 90/- Tree plant rs 150/- Tree gaurds rs 1000/- Total = 1300 x ~~70~~ 280				Rs 3.64 lacs
	TOTAL				~~0.91~~ 5.35 lacs
	Add 3% contingencies @ 5% PE Charges				~~1.65~~ ~~0.05~~ 0.16 lacs
	Add 49% Deptt. Charges price escalation, Unforseen, Return				~~1.70~~ ~~0.83~~ 5.51 lacs
			Total		~~2.53~~ 2.70 lacs
	(C.O. TO FINAL ABSTRACT OF COST SUB WORK - VI)		**SAY**		~~2.53~~ 8.21 lacs

Sub Work VII

S. No.	Description	Unit	Qty	Rate	Maintenance In Lacs
1	Provision for maintenance charges for water supply, sewerage, storm water drainage, roads, street light, horticulture etc. complete including operation and establishment charges as per HUDA norms after completion and resurfacing of roads after 10 years or 1st phase.	Acre	15	750000.00	112.50
2	Provision for resurfacing of roads after 1st five years of maintenance (as per details attached). Area in Sqm. @600/sqm	Sq. M	~~12681~~ 9300	600.00	~~76.09~~ 55.80 lacs
3	Provision for resurfacing of road after 10 years @ Rs.750/- per sqm.	Sq. M	~~12681~~ 9300	750.00	~~95.11~~ 69.75 lacs
					~~283.69~~ 238.65 lacs
	Add 3% contingencies				~~8.51~~ 7.16 lacs
					~~292.20~~ 245.81 lacs
	Add 49% Deptt. Charges				~~143.18~~ 120.14 lacs
				Total	~~435.38~~
	(C.O. TO FINAL ABSTRACT OF COST ~~SUB WORK-VII~~)			**SAY**	~~435.38~~ 365.33 lacs

PROJECT :- SIGNATURE GLOBAL (15 ACRE)

TITLE :- STORM WATER DRAINAGE - HYDRAULIC DESIGN CHART

S.No	Line No.		Length in mtr.	self area in sqmtr.	Self Area (Hec)	previous area in hec.	Total Area (Hec)	Rain Fall mm/hr	Discharge @12.15 lps/Hec	Pipe dia (mm)	Slope (mm) 1 in	Velocity m/sec.	Cap of pipe in lps.	Fall in line mtr.	Ground level at Start	Free board at start	H.F.L at Start	Invert Level at Start	Ground level at End	Manhole Depth in mtr					Manhole Type			
																				H.F.L at End	Invert Level at End	Free Board at end	Depth at Start	Depth at End	Average Depth	No. of Man hole	910 Dia upto 1.67m Type-A	1220 Dia upto 2.29m Type-B	1520 Dia From 2.29 to 4.18m	1520 Dia Above 4.19m
1	B1	B2	185.0	3402	0.340	0.000	0.340	6.25	4.13	400	500	0.642	80.75	0.37	100.00	0.90	99.10	98.70	100.00	98.73	98.33	1.27	1.30	1.67	1.49	9	9	0	0	0
2	B2	B3	48.0	488	0.049	0.340	0.389	6.25	4.73	400	500	0.642	80.75	0.10	100.00	1.27	98.73	98.33	100.00	98.63	98.23	1.37	1.67	1.77	1.72	1	0	1	0	0
3	B14	B3	96.0	4560	0.456	0.000	0.456	6.25	5.54	400	500	0.642	80.75	0.19	100.00	0.90	99.10	98.70	100.00	98.91	98.51	1.09	1.30	1.49	1.40	5	5	0	0	0
4	B3	B4	48.0	642	0.064	0.845	0.909	6.25	11.05	400	500	0.642	80.75	0.10	100.00	1.09	98.91	98.51	100.00	98.81	98.41	1.19	1.49	1.59	1.54	3	3	0	0	0
5	B13	B4	103.0	4410	0.441	0.000	0.441	6.25	5.36	400	500	0.642	80.75	0.21	100.00	0.90	99.10	98.70	100.00	98.89	98.49	1.11	1.30	1.51	1.40	6	6	0	0	0
6	B4	B5	46.0	509	0.051	1.350	1.401	6.25	17.03	400	500	0.642	80.75	0.09	100.00	1.11	98.89	98.49	100.00	98.80	98.40	1.20	1.51	1.60	1.55	2	2	0	0	0
7	B6	B7	59.0	3057	0.306	0.000	0.306	6.25	3.72	400	500	0.642	80.75	0.12	100.00	0.90	99.10	98.70	100.00	98.98	98.58	1.02	1.30	1.42	1.36	3	3	0	0	0
8	B7	B8	46.0	866	0.087	0.306	0.392	6.25	4.77	400	500	0.642	80.75	0.09	100.00	1.02	98.98	98.58	100.00	98.89	98.49	1.11	1.42	1.51	1.46	2	2	0	0	0
9	B11	B8	59.0	2559	0.256	0.000	0.256	6.25	3.11	400	500	0.642	80.75	0.12	100.00	0.90	99.10	98.70	100.00	98.98	98.58	1.02	1.30	1.42	1.36	3	3	0	0	0
10	B8	B9	27.0	1095	0.110	0.648	0.758	6.25	9.21	400	500	0.642	80.75	0.05	100.00	1.02	98.98	98.58	100.00	98.93	98.53	1.07	1.42	1.47	1.45	1	1	0	0	0
11	B9	B10	46.0	462	0.046	0.758	0.804	6.25	9.77	400	500	0.642	80.75	0.09	100.00	1.07	98.93	98.53	100.00	98.84	98.44	1.16	1.47	1.56	1.52	2	2	0	0	0
12	B12	B10	84	4567	0.457	0.00	0.457	6.25	5.55	400	500	0.642	80.75	0.17	100.00	0.90	99.10	98.70	100.00	98.93	98.53	1.07	1.30	1.47	1.38	5	5	0	0	0
13	B10	B5	29	461	0.046	1.261	1.307	6.25	15.88	400	500	0.642	80.75	0.06	100.00	1.07	98.93	98.53	100.00	98.87	98.47	1.13	1.47	1.53	1.50	1	1	0	0	0
14	B5	RWHT-1	22	196	0.020	2.7078	2.727	6.25	33.15	400	500	0.642	80.75	0.04	100.00	1.13	98.87	98.47	100.00	98.83	98.43	1.17	1.53	1.57	1.55	2	2	0	0	0
1	A10	A11	82	3788	0.379	0.000	0.379	6.25	4.60	400	500	0.642	80.75	0.16	100.00	0.90	99.10	98.70	100.00	98.94	98.54	1.06	1.30	1.46	1.38	4	4	0	0	0
2	A11	A12	47	753	0.075	0.379	0.454	6.25	5.52	400	500	0.642	80.75	0.09	100.00	1.06	98.94	98.54	100.00	98.84	98.44	1.16	1.46	1.56	1.51	2	2	0	0	0
3	A13	A12	84	3236	0.324	0.000	0.324	6.25	3.93	400	500	0.642	80.75	0.17	100.00	0.90	99.10	98.70	100.00	98.93	98.53	1.07	1.30	1.47	1.38	5	5	0	0	0
4	A12	A5	26	492	0.049	0.778	0.827	6.25	10.05	400	500	0.642	80.75	0.05	100.00	1.07	98.93	98.53	100.00	98.88	98.48	1.12	1.47	1.52	1.49	2	2	0	0	0
5	A1	A2	72	3039	0.304	0.000	0.304	6.25	3.69	400	500	0.642	80.75	0.14	100.00	0.90	99.10	98.70	100.00	98.96	98.56	1.04	1.30	1.44	1.37	4	4	0	0	0
6	A6	A2	35	2832	0.283	0.000	0.283	6.25	3.44	400	500	0.642	80.75	0.07	100.00	0.90	99.10	98.70	100.00	99.03	98.63	0.97	1.30	1.37	1.34	2	2	0	0	0
7	A2	A3	137	8513	0.851	0.587	1.438	6.25	17.48	400	500	0.642	80.75	0.27	100.00	0.97	99.03	98.63	100.00	98.76	98.36	1.24	1.37	1.64	1.51	6	6	0	0	0
8	A3	A4	15	177	0.018	1.438	1.456	6.25	17.70	400	500	0.642	80.75	0.03	100.00	1.24	98.76	98.36	100.00	98.73	98.33	1.27	1.64	1.67	1.66	1	1	0	0	0
9	A7	A8	60	3326	0.333	0.000	0.333	6.25	4.04	400	500	0.642	80.75	0.12	100.00	0.90	99.10	98.70	100.00	98.98	98.58	1.02	1.30	1.42	1.36	4	4	0	0	0
10	A9	A8	16	806	0.081	0.000	0.081	6.25	0.98	400	500	0.642	80.75	0.03	100.00	0.90	99.10	98.70	100.00	99.07	98.67	0.93	1.30	1.33	1.32	1	1	0	0	0
11	A8	A4	46	1938	0.194	0.413	0.607	6.25	7.38	400	500	0.642	80.75	0.09	100.00	0.93	99.07	98.67	100.00	98.98	98.58	1.02	1.33	1.42	1.38	2	2	0	0	0
12	A4	A5	49	1811	0.181	2.063	2.244	6.25	27.27	400	500	0.642	80.75	0.10	100.00	1.02	98.98	98.58	100.00	98.88	98.48	1.12	1.42	1.52	1.47	3	3	0	0	0
13	A5	A14	32	1500	0.150	3.071	3.221	6.25	39.15	400	500	0.642	80.75	0.06	100.00	1.12	98.88	98.48	100.00	98.82	98.42	1.18	1.52	1.58	1.55	1	1	0	0	0
14	A14	RWHT-2	12	0.00	0.000	3.221	3.221	6.25	39.15	400	500	0.642	80.75	0.02	100.00	1.18	98.82	98.42	100.00	98.79	98.39	1.21	1.58	1.61	1.60	1	1	0	0	0

PROJECT :- SIGNATURE GLOBAL (10.07ACRES)

TITLE :- DOMESTIC WATER SUPPLY HYDRAULIC CHART FOR RING LINES.

S.NO	Line No		PLOTS (GENERAL)			Water Requirement for Non Residential Plots.					Gross Water Requirement (Load on Line)	Average Demand	Peak Demand @ 2.5 Times	Flow Rate	Length of Pipe	Head Loss /m/ 1000	Total Head Loss	Velocity	Dia of Pipe	Ground LVL at start	Hydraulic LVL at start	Head at start	Ground LVL at End	Hydraulic LVL at End	Head at End
	From	To	Nos.	Population @ 4ll persons / Plot	Water Requirement @ 103.5 Ltr/ Head / day	Area in Acre	TYPE OF BUILDING	Basis of Water Requirement in LPD	Basis of Water requirement for community centre	Total Water Requirement in LPD	LPD	KLD	KLD	LPM	MTR.	MTR.	MTR.	MM/S	MM	MTR.	MTR.	MTR.	MTR.	MTR.	MTR.
				18	103.5																				
1	UGT	1	272	4896	506736	0.600	COMMERCIAL-1	12804	16667	29471	536207	536	1341	931	16	0.0069	0.11	0.877	150	100.00	140.00	40.00	100.00	139.89	39.89
2	1	2	156	2808	290628	0.000	OCF	0	16667	16667	307295	307	768	533	39	0.0178	0.69	1.131	100	100.00	139.89	39.89	100.00	139.20	39.20
3	2	3	93	1674	173259	0.000	OCF	0	16667	16667	189926	190	475	330	64	0.0073	0.47	0.699	100	100.00	139.20	39.20	100.00	138.73	38.73
4	2	5	76	1368	141588	0.000	PLOTS	0	0.000	0	141588	142	354	246	96	0.0042	0.41	0.521	100	100.00	139.20	39.20	100.00	138.79	38.79
5	3	4	54	972	100602	0.000	OCF	0	16667	16667	117269	117	293	204	77	0.0030	0.23	0.432	100	100.00	138.73	38.73	100.00	138.50	38.50
6	3	12a	56	1008	104328	0.000	OCF	0	16667	16667	120995	121	302	210	44	0.0032	0.14	0.446	100	100.00	138.73	38.73	100.00	138.59	38.59
7	12a	12	52	936	96876	0.000	OCF	0	16667	16667	113543	114	284	197	77	0.0028	0.22	0.418	100	100.00	138.59	38.59	100.00	138.37	38.37
8	4	12	30	540	55890	0.000	OCF	0	16667	16667	72557	73	181	126	44	0.0012	0.05	0.267	100	100.00	138.50	38.50	100.00	138.45	38.45
9	12	13	30	540	55890	0.000	PLOTS	0	0.000	0	55890	56	140	97	44	0.0008	0.03	0.206	100	100.00	138.37	38.37	100.00	138.34	38.34
10	13	13a	11	198	20493	0.000	PLOTS	0	0.000	0	20493	20	51	36	43	0.0001	0.01	0.075	100	100.00	138.34	38.34	100.00	138.34	38.34
11	13	13b	19	342	35397	0.000	PLOTS	0	0.000	0	35397	35	88	61	74.5	0.0003	0.02	0.130	100	100.00	138.34	38.34	100.00	138.32	38.32
12	5	4	27	486	50301	0.000	PLOTS	0	0.000	0	50301	50	126	87	44	0.0006	0.03	0.185	100	100.00	138.79	38.79	100.00	138.76	38.76
13	5	6	46	828	85698	0.000	PLOTS	0	0.000	0	85698	86	214	149	18	0.0017	0.03	0.316	100	100.00	138.79	38.79	100.00	138.76	38.76
14	6	6a	33	594	61479	0.000	PLOTS	0	0.000	0	61479	61	154	107	45	0.0009	0.04	0.226	100	100.00	138.76	38.76	100.00	138.72	38.72
15	1	11	162	2916	301806	0.600	COMMERCIAL-1	12804	0.000	12804	314610	315	787	546	35	0.0186	0.65	1.158	100	100.00	139.89	39.89	100.00	139.24	39.24
16	11	8	110	1980	204930	0.000	PLOTS	0	0.000	0	204930	205	512	356	115	0.0084	0.97	0.755	100	100.00	139.24	39.24	100.00	138.27	38.27
17	11	10	78	1404	145314	0.600	COMMERCIAL-1	12804	0.000	12804	158118	158	395	275	50	0.0052	0.26	0.582	100	100.00	139.24	39.24	100.00	138.98	38.98
18	10	9	64	1152	119232	0.000	PLOTS	0	0.000	0	119232	119	298	207	115	0.0031	0.35	0.439	100	100.00	138.98	38.98	100.00	138.63	38.63
19	10	12	19	342	35397	0.600	COMMERCIAL-1	12804	0.000	12804	48201	48	121	84	40	0.0006	0.02	0.177	100	100.00	138.98	38.98	100.00	138.96	38.96
20	12	13	19	342	35397	0.000	PLOTS	0	0.000	0	35397	35	88	61	195	0.0003	0.06	0.130	100	100.00	138.96	38.96	100.00	138.89	38.89
21	14	13	5	90	9315	0.000	PLOTS	0	0.000	0	9315	9	23	16	40	0.0000	0.00	0.034	100	100.00	138.19	38.19	100.00	138.19	38.19
22	9	14	31	558	57753	0.000	PLOTS	0	0.000	0	57753	58	144	100	85	0.0008	0.07	0.213	100	100.00	138.26	38.26	100.00	138.19	38.19
23	8	9	16	288	29808	0.000	PLOTS	0	0.000	0	29808	30	75	52	50	0.0002	0.01	0.110	100	100.00	138.27	38.27	100.00	138.26	38.26
24	8	6	26	468	48438	0.000	PLOTS	0	0.000	0	48438	48	121	84	74	0.0006	0.04	0.178	100	100.00	138.27	38.27	100.00	138.23	38.23
25	8	7	36	648	67068	0.000	PLOTS	0	0.000	0	67068	67	168	116	45	0.0011	0.05	0.247	100	100.00	138.27	38.27	100.00	138.23	38.23
26	7	7a	10	180	18630	0.000	PLOTS	0	0.000	0	18630	19	47	32	41	0.0001	0.00	0.069	100	100.00	138.23	38.23	100.00	138.22	38.22
27	7	6a	20	360	37260	0.000	PLOTS	0	0.000	0	37260	37	93	65	74	0.0004	0.03	0.137	100	100.00	138.23	38.23	100.00	138.20	38.20

PROJECT :- SIGNATURE GLOBAL [illegible]

TITLE :- FLUSHING WATER SUPPLY HYDRAULIC CHART FOR RING LINES

S.NO	Line No		PLOTS (GENERAL)			Water Requirement for Non Residential Plots						Gross Water Requirement / Load on Lines	Average Demand	Peak Demand @ 2.5 Times	Flow Rate	Length of Pipe	[illegible]	[illegible]	Velocity	Dia of Pipe	[illegible]	Hydraulic LVL at start	Head at start	[illegible]	Hydraulic LVL at End	Head at End
	From	To	Nos.	Population @ 18 persons / Plot	Water Requirement @ 51.75 Ltr/ head / day	Area in Acre	TYPE OF BUILDING	Basis of Water Requirement in LPD	Basis of Water requirement for community centre	Total Water Requirement in LPD	LPD	KLD	KLD	LPM	MTR	MTR	MTR.	M/SEC	MM	MTR.	MTR.	MTR.	MTR	MTR.	MTR
				18	51.75																				
1	STP	F1	272	4896	253368	0.600	COMMERCIAL-1	6402	8333	14735	268103	268	670	465	10	0.0138	0.14	0.987	100	100.00	140.00	40.00	100.00	139.86	39.86
2	F1	F2	192	3456	178848	0.600	COMMERCIAL-1	6402	0	6402	185250	185	463	322	46	0.0070	0.32	0.682	100	100.00	139.86	39.86	100.00	139.54	39.54
3	F1	F13	172	3096	160218	0.000	OCF	0	8333	8333	168551	169	421	293	19	0.0058	0.11	0.621	100	100.00	139.86	39.86	100.00	139.75	39.75
4	F2	F11	106	1908	98739	0.000		0	0	0	98739	99	247	171	97	0.0022	0.21	0.364	100	100.00	139.54	39.54	100.00	139.33	39.33
5	F13	F12	67	1206	62411	0.000	OCF	0	8333	8333	70744	71	177	123	77	0.0012	0.09	0.260	100	100.00	139.75	39.75	100.00	139.66	39.66
6	F13	F14a	56	1008	52164	0.000	OCF	0	8333	8333	60497	60	151	105	44	0.0009	0.04	0.223	100	100.00	139.75	39.75	100.00	139.71	39.71
7	F14a	F14	52	936	48438	0.000	OCF	0	8333	8333	56771	57	142	99	77	0.0008	0.06	0.209	100	100.00	139.71	39.71	100.00	139.65	39.65
8	F12	F14	30	540	27945	0.000	OCF	0	8333	8333	36278	36	91	63	44	0.0003	0.01	0.134	100	100.00	139.66	39.66	100.00	139.65	39.65
9	F14	F15	30	540	27945	0.000	PLOTS	0	0	0	27945	28	70	49	43	0.0002	0.01	0.103	100	100.00	139.65	39.65	100.00	139.64	39.64
10	F15	F15a	11	198	10247	0.000	PLOTS	0	0	0	10247	10	26	18	42	0.0000	0.00	0.038	100	100.00	139.64	39.64	100.00	139.64	39.64
11	F15	F15b	19	342	17699	0.000	PLOTS	0	0	0	17699	18	44	31	77	0.0001	0.01	0.065	100	100.00	139.64	39.64	100.00	139.63	39.63
12	F11	F12	27	486	25151	0.000	PLOTS	0	0	0	25151	25	63	44	47	0.0002	0.01	0.093	100	100.00	139.33	39.33	100.00	139.32	39.32
13	F11	F10	76	1368	70794	0.000	PLOTS	0	0	0	70794	71	177	123	17	0.0012	0.02	0.261	100	100.00	139.33	39.33	100.00	139.31	39.31
14	F10	F9b	47	846	43781	0.000	PLOTS	0	0	0	43781	44	109	76	45	0.0005	0.02	0.161	100	100.00	139.31	39.31	100.00	139.29	39.29
15	F2	F3	149	2682	138794	0.600	COMMERCIAL-1	6402	0	6402	145196	145	363	252	74	0.0044	0.33	0.535	100	100.00	139.54	39.54	100.00	139.21	39.21
16	F3	F8	81	1458	75452	0.000	PLOTS	0	0	0	75452	75	189	131	114	0.0013	0.15	0.278	100	100.00	139.21	39.21	100.00	139.06	39.06
17	F3	F4	82	1476	76383	0.600	COMMERCIAL-1	6402	0	6402	82785	83	207	144	50	0.0016	0.08	0.305	100	100.00	139.21	39.21	100.00	139.14	39.14
18	F4	F7	68	1224	63342	0.000	PLOTS	0	0	0	63342	63	158	110	115	0.0010	0.11	0.233	100	100.00	139.14	39.14	100.00	139.03	39.03
19	F4	F5	19	342	17699	0.600	COMMERCIAL-1	6402	0	6402	24101	24	60	42	235	0.0002	0.04	0.089	100	100.00	139.14	39.14	100.00	139.10	39.10
20	F6	F5	5	90	4658	0.000	PLOTS	0	0	0	4658	5	12	8	40	0.0000	0.00	0.017	100	100.00	139.00	39.00	100.00	139.00	39.00
21	F7	F6	38	684	35397	0.000	PLOTS	0	0	0	35397	35	88	61	85	0.0003	0.03	0.130	100	100.00	139.03	39.03	100.00	139.00	39.00
22	F8	F7	22	396	20493	0.000	PLOTS	0	0	0	20493	20	51	36	50	0.0001	0.01	0.075	100	100.00	139.06	39.06	100.00	139.06	39.06
23	F8	F10	13	234	12110	0.000	PLOTS	0	0	0	12110	12	30	21	74	0.0000	0.00	0.045	100	100.00	139.06	39.06	100.00	139.06	39.06
24	F8	F9	36	648	33534	0.000	PLOTS	0	0	0	33534	34	84	58	45	0.0003	0.01	0.123	100	100.00	139.06	39.06	100.00	139.05	39.05
25	F9	R9a	10	180	9315	0.000	PLOTS	0	0	0	9315	9	23	16	42	0.0000	0.00	0.034	100	100.00	139.05	39.05	100.00	139.05	39.05
26	F9	F9b	20	360	18630	0.000	PLOTS	0	0	0	18630	19	47	32	74	0.0001	0.01	0.069	100	100.00	139.05	39.05	100.00	139.04	39.04

PROJECT :- SIGNATURE GLOBAL (15 ACRE)					
TITLE :- WATER SUPPLY QTY FLUSHING WATER LINE					
S.NO	Line No		Length of Pipe	Dia of Pipe	Sluice valve
	From	To	MTR.	MM	Each
1	STP	F1	10	100	1
2	F1	F2	46	100	1
3	F1	F13	19	100	1
4	F2	F11	97	100	1
5	F13	F12	77	100	1
6	F13	F14a	44	100	1
7	F14a	F14	77	100	1
8	F12	F14	44	100	1
9	F14	F15	43	100	1
10	F15	F15a	42	100	1
11	F15	F15b	77	100	1
12	F11	F12	47	100	1
13	F11	F10	17	100	1
14	F10	F9b	45	100	1
15	F2	F3	74	100	1
16	F3	F8	114	100	1
17	F3	F4	50	100	1
18	F4	F7	115	100	1
19	F4	F5	235	100	2
20	F6	F5	40	100	1
21	F7	F6	85	100	1
22	F8	F7	50	100	1
23	F8	F10	74	100	1
24	F8	F9	45	100	1
25	F9	R9a	42	100	1
26	F9	F9b	74	100	1
	TOTAL		1683		27

PROJECT :- SIGNATURE GLOBAL (15 ACRE)					
TITLE :- WATER SUPPLY QTY DOMESTIC WATER LINE					
S.NO	Line No		Length of Pipe	Dia of Pipe	Sluice valve
	From	To	MTR.	MM	Each
1	UGT	1	16	150	1
2	1	2	39	100	1
3	2	3	64	100	1
4	2	5	96	100	1
5	3	4	77	100	1
6	3	12a	44	100	1
7	12a	12	77	100	1
8	4	12	44	100	1
9	12	13	44	100	2
10	13	13a	43	100	1
11	13	13b	74.5	100	1
12	5	4	44	100	1
13	5	6	18	100	1
14	6	6a	45	100	1
15	1	11	35	100	1
16	11	8	115	100	1
17	11	10	50	100	1
18	10	9	115	100	1
19	10	12	40	100	1
20	12	13	195	100	1
21	14	13	40	100	1
22	9	14	85	100	1
23	8	9	50	100	1
24	8	6	74	100	1
25	8	7	45	100	1
26	7	7a	41	100	1
27	7	6a	74	100	1
	TOTAL	150mm	**16**		**1**
		100mm	**1669**		**27**

PROJECT :- SIGNATURE GLOBAL (15 ACRE)

TITLE :- SEWAGE GRID SHEET

S.No.	Line No.		Length	Size of Pipe		Depth			Excavation				Total No. of circular Manhole	Manhole				Extra Depth				Rectangular Manhole (900x600)
						Start	End	Avg.	0.0-1.5mtr	1.5-3.0mtr	3.0-4.5mtr	4.5-6.0mtr		Type-A	Type-B	Type-C	Type-D	Type-A	Type-B	Type-C	Type-D	
			(mtr.)	(mm)	(M)	(mtr.)	(mtr.)	(mtr.)														
1.	S1	S2	185.0	200.00	0.200	1.2	2.17	1.69	0.0	185.0	0.0	0.0	9	0	9	0	0	0.000	0.135	0.000	0.000	
2	S2	S3	46.0	200.00	0.200	2.17	2.42	2.30	0.0	46.0	0.0	0.0	1	0	0	1	0	0.000	0.000	0.005	0.000	
3	S7	S3	192.0	200.00	0.200	1.2	2.21	1.71	0.0	192.0	0.0	0.0	10	0	10	0	0	0.000	0.350	0.000	0.000	
4	S3	S4	48.0	200.00	0.200	2.42	2.67	2.55	0.0	48.0	0.0	0.0	3	0	0	3	0	0.000	0.000	0.765	0.000	
5	S8	S4	200.0	200.00	0.200	1.2	2.25	1.73	0.0	200.0	0.0	0.0	11	0	11	0	0	0.000	0.605	0.000	0.000	
6	S4	S5	77.0	200.00	0.200	2.67	3.07	2.87	0.0	77.0	0.0	0.0	3	0	0	3	0	0.000	0.000	1.740	0.000	
7	S13	S10	16.0	200.00	0.200	1.2	1.28	1.24	16.0	0.0	0.0	0.0	1	1	0	0	0	0.330	0.000	0.000	0.000	
8	S9	S10	60.0	200.00	0.200	1.2	1.52	1.36	60.0	0.0	0.0	0.0	4	4	0	0	0	1.800	0.000	0.000	0.000	
9	S10	S11	46.0	200.00	0.200	1.52	1.76	1.64	0.0	46.0	0.0	0.0	2	2	0	0	0	1.460	0.000	0.000	0.000	
10	S12	S11	60.0	200.00	0.200	1.2	1.52	1.36	60.0	0.0	0.0	0.0	4	4	0	0	0	1.800	0.000	0.000	0.000	
11	S11	S5	116.0	200.00	0.200	1.76	2.37	2.07	0.0	116.0	0.0	0.0	7	0	7	0	0	0.000	2.765	0.000	0.000	
12	S5	S6	46.0	250.00	0.250	3.07	3.32	3.20	0.0	0.0	46.0	0.0	1	0	0	1	0	0.000	0.000	0.905	0.000	
13	S18	S14	35.0	200.00	0.200	1.2	1.38	1.29	35.0	0.0	0.0	0.0	2	2	0	0	0	0.760	0.000	0.000	0.000	
14	S13	S14	72.0	200.00	0.200	1.2	1.58	1.39	72.0	0.0	0.0	0.0	4	4	0	0	0	1.920	0.000	0.000	0.000	
15	S14	S15	46.0	200.00	0.200	1.58	1.82	1.70	0.0	46.0	0.0	0.0	2	0	2	0	0	0.000	0.060	0.000	0.000	
16	S15	S16	76.0	200.00	0.200	1.82	2.22	2.02	0.0	76.0	0.0	0.0	4	0	4	0	0	0.000	1.400	0.000	0.000	
17	S16	S17	46.0	200.00	0.200	2.22	2.46	2.34	0.0	46.0	0.0	0.0	2	0	0	2	0	0.000	0.000	0.100	0.000	
18	S19	S17	59.0	200.00	0.200	1.2	1.51	1.36	59.0	0.0	0.0	0.0	3	3	0	0	0	1.335	0.000	0.000	0.000	
19	S17	S6	27.0	200.00	0.200	2.46	2.61	2.54	0.0	27.0	0.0	0.0	1	0	0	1	0	0.000	0.000	0.245	0.000	
20	S6	STP	9.5	300.00	0.300	2.61	2.64	2.63	0.0	9.5	0.0	0.0	1	0	0	1	0	0.000	0.000	0.335	0.000	
	Total		1462.5						302.0	1114.5	46.0	0.0	75.0	20.0	43.0	12.0	0.0	9.4	5.3	4.1	0.0	0.0

Pipe Dia in mm	Excavation Depth			
	(0.0 - 1.5)	(1.5 - 3.0)	(3.0 - 4.5)	(4.5 - Above)
150 mm	0.00	0.00	0	0
200 mm	302.00	1105.0	0	0
250 mm	0	0.0	46	0
300 mm	0	9.5	0	0
400 mm	0	0	0	0
450 mm	0	0	0	0
500 mm	0	0	0	0

PROJECT :- SIGNATURE GLOBAL (10 ACRE)

TITLE :- STORM WATER QTY. SHEET

S.No.	Line No.		Length	Size of Pipe		Depth			EXCAVATION				Total No. of Manhole	Catch Basin (600x600)	Manhole			Extra Depth			
						Start	End	Avg.	0-1.5 mtr	1.5-3.0 mtr	3.0-4.5 mtr	4.5 - Above			Type-A	Type-B	Type-C	Type-A	Type-B	Type-C	Catch Basin (600x600)
			(mtr.)	(mm)	(M)	(mtr.)	(mtr.)	(mtr.)													
1	B1	B2	185.0	400	0.400	1.3	1.67	1.49	185.0	0.0	0.0	0.0	9		9	0	0	5.175	0.000	0.000	
2	B2	B3	48.0	400	0.400	1.67	1.77	1.72	0.0	48.0	0.0	0.0	1		0	1	0	0.000	0.050	0.000	
3	B14	B3	96.0	400	0.400	1.3	1.49	1.40	96.0	0.0	0.0	0.0	5		5	0	0	2.425	0.000	0.000	
4	B3	B4	48.0	400	0.400	1.49	1.59	1.54	0.0	48.0	0.0	0.0	3		3	0	0	1.890	0.000	0.000	
5	B13	B4	103.0	400	0.400	1.3	1.51	1.41	103.0	0.0	0.0	0.0	6		6	0	0	2.970	0.000	0.000	
6	B4	B5	46.0	400	0.400	1.51	1.6	1.56	0.0	46.0	0.0	0.0	2		2	0	0	1.290	0.000	0.000	
7	B6	B7	59.0	400	0.400	1.3	1.42	1.36	59.0	0.0	0.0	0.0	3		3	0	0	1.350	0.000	0.000	
8	B7	B8	46.0	400	0.400	1.42	1.51	1.47	46.0	0.0	0.0	0.0	2		2	0	0	1.110	0.000	0.000	
9	B11	B8	59.0	400	0.400	1.3	1.42	1.36	59.0	0.0	0.0	0.0	3		3	0	0	1.350	0.000	0.000	
10	B8	B9	27.0	400	0.400	1.42	1.47	1.45	27.0	0.0	0.0	0.0	1		1	0	0	0.535	0.000	0.000	
11	B9	B10	46.0	400	0.400	1.47	1.56	1.52	0.0	46.0	0.0	0.0	2		2	0	0	1.210	0.000	0.000	
12	B12	B10	84	400	0.400	1.3	1.47	1.39	84.0	0.0	0.0	0.0	5		5	0	0	2.375	0.000	0.000	
13	B10	B5	29	400	0.400	1.47	1.53	1.50	29.0	0.0	0.0	0.0	1		1	0	0	0.590	0.000	0.000	
14	B5	RWHT-1	22	400	0.400	1.53	1.57	1.55	0.0	22.0	0.0	0.0	2		2	0	0	1.280	0.000	0.000	
1	A10	A11	82	400	0.400	1.3	1.46	1.38	82.0	0.0	0.0	0.0	4		4	0	0	1.880	0.000	0.000	
2	A11	A12	47	400	0.400	1.46	1.56	1.51	0.0	47.0	0.0	0.0	2		2	0	0	1.200	0.000	0.000	
3	A13	A12	84	400	0.400	1.3	1.47	1.39	84.0	0.0	0.0	0.0	5		5	0	0	2.375	0.000	0.000	
4	A12	A5	26	400	0.400	1.47	1.52	1.50	26.0	0.0	0.0	0.0	2		2	0	0	1.170	0.000	0.000	
5	A1	A2	72	400	0.400	1.3	1.44	1.37	72.0	0.0	0.0	0.0	4		4	0	0	1.840	0.000	0.000	
6	A6	A2	35	400	0.400	1.3	1.37	1.34	35.0	0.0	0.0	0.0	2		2	0	0	0.850	0.000	0.000	
7	A2	A3	137	400	0.400	1.37	1.64	1.51	0.0	137.0	0.0	0.0	6		6	0	0	3.570	0.000	0.000	
8	A3	A4	15	400	0.400	1.64	1.67	1.66	0.0	15.0	0.0	0.0	1		1	0	0	0.745	0.000	0.000	
9	A7	A8	60	400	0.400	1.3	1.42	1.36	60.0	0.0	0.0	0.0	4		4	0	0	1.800	0.000	0.000	
10	A9	A8	16	400	0.400	1.3	1.33	1.32	16.0	0.0	0.0	0.0	1		1	0	0	0.405	0.000	0.000	
11	A8	A4	46	400	0.400	1.33	1.42	1.38	46.0	0.0	0.0	0.0	2		2	0	0	0.930	0.000	0.000	
12	A4	A5	49	400	0.400	1.42	1.52	1.47	49.0	0.0	0.0	0.0	3		3	0	0	1.680	0.000	0.000	
13	A5	A14	32	400	0.400	1.52	1.58	1.55	0.0	32.0	0.0	0.0	1		1	0	0	0.640	0.000	0.000	
14	A14	RWHT-2	12	400	0.400	1.58	1.61	1.60	0.0	12.0	0.0	0.0	1		1	0	0	0.685	0.000	0.000	
1	RWHT-1	C2	12	400	0.400	1.3	1.32	1.31	12.0	0.0	0.0	0.0	0		0	0	0	0.000	0.000	0.000	
2	RWHT-2	C1	5	400	0.400	1.3	1.31	1.31	5.0	0.0	0.0	0.0	0		0	0	0	0.000	0.000	0.000	
3.	C1	C2	35	400	0.400	1.31	1.38	1.35	35.0	0.0	0.0	0.0	2		2	0	0	0.870	0.000	0.000	
4.	C2	C3	36	400	0.400	1.38	1.45	1.42	36.0	0.0	0.0	0.0	1		1	0	0	0.505	0.000	0.000	
5	C3	C4	125	400	0.400	1.45	1.7	1.58	0.0	125.0	0.0	0.0	5		5	0	0	3.325	0.000	0.000	
6	C4	EXTERNAL	5	400	0.400	1.7	1.71	1.71	0.0	5.0	0.0	0.0	1		0	1	0	0.000	0.035	0.000	
	Total		1829.0						1246.0	583.0	0.0	0.0	92.0	0.0	90.0	2.0	0.0	48.0	0.1	0.0	0.0

Pipe Dia in mm	Excavation Depth (0.0 - 1.5) in mtr	(1.5 - 3.0) in mtr	(3.0 - 4.5) in mtr	(4.5 above) in mtr
200 mm	0	0	0	0
400 mm	1246	583	0	0
450 mm	0	0	0	0
500 mm	0	0	0	0
600 mm	0	0	0	0
700 mm	0	0	0	0
800 mm	0	0	0	0

WATER SUPPLY LINE EXTERNAL TO UG TANK				
SL NO.	LENGTH IN M	DIA IN MM		
1	122	100		

WATER SUPPLY LINE TUBEWELL TO UG TANK				
SL NO.	LENGTH IN M	DIA IN MM		
1	95	100		

GARDEN IRRIGATION						
SL NO.	NODE NO.		DIA IN MM	LENGTH IN M	GARDEN HYDRANT	
	FROM	TO				
1	STP	R1	110	4	0	
2	R1	R7	75	98	0	
3	R7	R6	75	50	1	
4	R6	R5	75	15	0	
5	R7	R8	50	89	1	
6	R8	R11	32	61	1	
7	R8	R9	40	34	1	
8	R9	R10	40	63	1	
9	R9	GH	32	30	1	
10	R1	R2	75	76	0	
11	R2	R2a	32	63	1	
12	R2	R3	75	113	2	
13	R3	GH	32	26	1	
14	R3	R4	75	25	1	
15	R4	R3a	32	147	1	
16	R4	R5	75	49	0	
17	R5	R11a	32	130	3	
					15	

PIPE QUANTITY		
SL NO.	PIPE DIA	QUANTITY IN M
1	110	4
2	75	426
3	63	0
4	50	89
5	40	97
6	32	457

NO. OF GARDEN HYDRANT	15

PROJECT :SIGNATURE GLOBAL (15.00ACRES)											
TITLE :SEWAGE LOAD CALCULATION											
			Plots (General)			Water Requirement for Non Residential Plots					
S. No.	Name of Sewer Line		Number of Plots	Population @ 18persons / Plot.	Water Reuirement @ 155.25 Ltr/ head / day	Type of Building	Basis of Water Requirement	Total Water Requirement.	Gross Water Requirement (Load on Line)	Sewage Flow (Self Load on Line)	Sewage Flow (Self Load on Line)
			Nos.	Nos.	lpd.		lpd.	lpd.	lpd.	lpd.	kld.
	From	To		18	155.25		Lumpsum			75%	1000
1	S1	S2	19	342	53096	COMMERCIAL-1	9605	9605	62701	47025	47
2	S2	S3	0	0	0	PLOTS	0	0	0	0	0
3	S7	S3	49	882	136931	Commercial-1	9605	9605	146536	109902	110
4	S3	S4	0	0	0	PLOTS	0	0	0	0	0
5	S8	S4	48	864	134136	PLOTS	0	0	134136	100602	101
6	S4	S5	0	0	0	PLOTS	0	0	0	0	0
7	S13	S10	4	72	11178	PLOTS	0	0	11178	8384	8
8	S9	S10	20	360	55890	PLOTS	0	0	55890	41918	42
9	S10	S11	9	162	25151	PLOTS	0	0	25151	18863	19
10	S12	S11	13	234	36329	PLOTS	0	0	36329	27246	27
11	S11	S5	30	540	83835	PLOTS	0	0	83835	62876	63
12	S5	S6	0	0	0	PLOTS	0	0	0	0	0
13	S18	S14	11	198	30740	PLOTS	0	0	30740	23055	23
14	S13	S14	19	342	53096	PLOTS	0	0	53096	39822	40
15	S14	S15	0	0	0	OCF	25000	25000	25000	18750	19
16	S15	S16	22	396	61479	PLOTS	0	0	61479	46109	46
17	S16	S17	4	72	11178	PLOTS	0	0	11178	8384	8
18	S19	S17	20	360	55890	PLOTS	0	0	55890	41918	42
19	S17	S6	4	72	11178	PLOTS	0	0	11178	8384	8
20	S6	STP	0	0	0	PLOTS	0	0	0	0	0

S.No.	Line No.		Number of Plots	Population @ 18 persons / Plot.	Water Requirement @ 155.25 Ltr/ head / day	Type of Building	Water Requirement	Gross Water Requirement (Load on Line)	Sewage Flow (Self Load on Line) LPD	Sewage Flow (Self Load on Line) KLD	Previous Load	Prog-ressive Discharge	Prog- ressive Discharge (Average)	Prog-ressive Discharge (Peak)	Infilteration @ 25% Av. Discharge	Total Dis-charge	Length	Pipe Size	Slope (1 in)	Fall	Velocity	Capacity of Pipe	Road Formation level at Start	Invert Levels at Start	Road Formation level at End	Invert Levels at End	Manhole Start Depth	Manhole Depth End	Average Depth	Number of Manhole	Type of Manhole			
																														910 Dia Upto 1.67m	1220 Dia From 1.67 to 2.29m	1520 Dia From 2.29 to 4.18m	1820 Dia Above 4.19m
			Nos.		lpd.																												
	From	To		18	155.25		lpd	lpd.	76%	1000	Kld.	Kld.	lps.	lps.	lps.	lps.	(mtr.)	(mm)	(mm)	(mtr.)	(m/s) (v)	lps.	(mtr.)	(mtr.)	(mtr.)	(mtr.)	(mtr.)	(mtr.)	(mtr.)	(nos.)	A	B	C	D
1	S1	S2	19	342	53096	COMM	9605	62701	47025	47.03	0.00	47.03	0.54	1.63	0.14	1.77	185.0	200.00	190.00	0.97	0.76	11.90	100.00	98.80	100.00	97.83	1.20	2.17	1.69	9	0	9	0	0
2	S2	S3	0	0	0	PLOTS	0	0	0	0.00	47.03	47.03	0.54	1.63	0.14	1.77	46.0	200.00	190.00	0.24	0.76	11.90	100.00	97.83	100.00	97.58	2.17	2.42	2.29	1	0	0	1	0
3	S7	S3	49	882	136931	COMM	9605	146536	109902	109.90	0.00	109.90	1.27	3.82	0.32	4.13	192.0	200.00	190.00	1.01	0.76	11.90	100.00	98.80	100.00	97.79	1.20	2.21	1.71	10	0	10	0	0
4	S3	S4	0	0	0	PLOTS	0	0	0	0.00	156.93	156.93	1.82	5.45	0.45	5.90	48.0	200.00	190.00	0.25	0.76	11.90	100.00	97.58	100.00	97.33	2.42	2.67	2.54	3	0	0	3	0
5	S8	S4	48	864	134136	PLOTS	0	134136	100602	100.60	0.00	100.60	1.16	3.49	0.29	3.78	200.0	200.00	190.00	1.05	0.76	11.90	100.00	98.80	100.00	97.75	1.20	2.25	1.73	11	0	11	0	0
6	S4	S5	0	0	0	PLOTS	0	0	0	0.00	257.53	257.53	2.98	8.94	0.75	9.69	77.0	200.00	190.00	0.41	0.76	11.90	100.00	97.33	100.00	96.93	2.67	3.07	2.87	3	0	0	3	0
7	S13	S10	4	72	11178	PLOTS	0	11178	8384	8.38	0.00	8.38	0.10	0.29	0.02	0.32	16.0	200.00	190.00	0.08	0.76	11.90	100.00	98.80	100.00	98.72	1.20	1.28	1.24	1	1	0	0	0
8	S9	S10	20	360	55890	PLOTS	0	55890	41918	41.92	0.00	41.92	0.49	1.46	0.12	1.58	60.0	200.00	190.00	0.32	0.76	11.90	100.00	98.80	100.00	98.48	1.20	1.52	1.36	4	4	0	0	0
9	S10	S11	9	162	25151	PLOTS	0	25151	18863	18.86	50.30	69.16	0.80	2.40	0.20	2.60	46.0	200.00	190.00	0.24	0.76	11.90	100.00	98.48	100.00	98.24	1.52	1.76	1.64	2	2	0	0	0
10	S12	S11	13	234	36329	PLOTS	0	36329	27246	27.25	0.00	27.25	0.32	0.95	0.08	1.02	60.0	200.00	190.00	0.32	0.76	11.90	100.00	98.80	100.00	98.48	1.20	1.52	1.36	4	4	0	0	0
11	S11	S5	30	540	83835	PLOTS	0	83835	62876	62.88	96.41	159.29	1.84	5.53	0.46	5.99	116.0	200.00	190.00	0.61	0.76	11.90	100.00	98.24	100.00	97.63	1.76	2.37	2.06	7	0	7	0	0
12	S5	S6	0	0	0	PLOTS	0	0	0	0.00	416.82	416.82	4.82	14.47	1.21	15.68	46.0	250.00	190.00	0.24	0.88	21.57	100.00	96.93	100.00	96.68	3.07	3.32	3.19	1	0	0	1	0
13	S18	S14	11	198	30740	PLOTS	0	30740	23055	23.05	0.00	23.05	0.27	0.80	0.07	0.87	35.0	200.00	190.00	0.18	0.76	11.90	100.00	98.80	100.00	98.62	1.20	1.38	1.29	2	2	0	0	0
14	S13	S14	19	342	53096	PLOTS	0	53096	39822	39.82	0.00	39.82	0.46	1.38	0.12	1.50	72.0	200.00	190.00	0.38	0.76	11.90	100.00	98.80	100.00	98.42	1.20	1.58	1.39	4	4	0	0	0
15	S14	S15	0	0	0	OCF	25000	25000	18750	18.75	62.88	81.63	0.94	2.83	0.24	3.07	46.0	200.00	190.00	0.24	0.76	11.90	100.00	98.42	100.00	98.18	1.58	1.82	1.70	2	0	2	0	0
16	S15	S16	22	396	61479	PLOTS	0	61479	46109	46.11	81.63	127.74	1.48	4.44	0.37	4.80	76.0	200.00	190.00	0.40	0.76	11.90	100.00	98.18	100.00	97.78	1.82	2.22	2.02	4	0	4	0	0
17	S16	S17	4	72	11178	PLOTS	0	11178	8384	8.38	127.74	136.12	1.58	4.73	0.39	5.12	46.0	200.00	190.00	0.24	0.76	11.90	100.00	97.78	100.00	97.54	2.22	2.46	2.34	2	0	0	2	0
18	S19	S17	20	360	55890	PLOTS	0	55890	41918	41.92	0.00	41.92	0.49	1.46	0.12	1.58	59.0	200.00	190.00	0.31	0.76	11.90	100.00	98.80	100.00	98.49	1.20	1.51	1.36	3	3	0	0	0
19	S17	S6	4	72	11178	PLOTS	0	11178	8384	8.38	178.04	186.42	2.16	6.47	0.54	7.01	27.0	200.00	190.00	0.14	0.76	11.90	100.00	97.54	100.00	97.39	2.46	2.61	2.53	1	0	0	1	0
20	S6	STP	0	0	0	PLOTS	0	0	0	0.00	603.236	603.24	6.98	20.95	1.75	22.69	9.5	300.00	250.00	0.04	0.87	30.57	100.00	97.39	100.00	97.36	2.61	2.64	2.62	1	0	0	1	0

200 mm = 1105 m

250 mm = 46 m

300 mm = 10 m

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हरियाणा शहरी विकास प्राधिकरण
HARYANA SHEHRI
VIKAS PRADHIKARAN

Address: C-3, HSVP , HQ Sector-6
Panchkula

C.E.I-No. 97242
Dated: 02/07/2020

Annexure-A

SUB:- Approval of Service Plan/Estimates for Affordable Residential Plotted Colony(Under Deen Dayal Jan Awas Yojna)measuring 15.00 acres area in the revenue estate of Village Hariyahara in Sector-36 Sohna, Distt. Gurugram being developed by M/S. Signature Global Homes Pvt. Ltd. (License No. 117 of 2019 dated 12.09.2019).

Technical note and comments:-

1. All detailed working drawings would have to be prepared by the colonizer for Integrating the internal services proposals with the master proposals of town.
2. The correctness of the levels will be the sole, responsibility of the colonizer for the integration of internal proposals, with the master proposals, of town and will be got confirmed before execution.
3. The material to be used shall the same specifications as are being adopted by HSVP and further shall also confirm to such directions, as issued by Chief Engineer, HSVP from time to time.
4. The work shall be carried out according to Haryana PWD specification or such specifications as are being followed by HSVP. Further it shall also confirm to such other directions, as are issued by Chief Engineer, HSVP from time to time.
5. The colonizer will be fully responsible to meet the demand of water supply and allied services till such time these are made available by State Government/ HSVP. All link connections with the State Government/ HSVP system and services will be done by the colonizer. If necessary extra tube-wells shall also be installed to meet extra demand of water beyond the provision according to EDC deposited.
6. Structural design & drawings of all the structures, such as pump chamber, boosting chamber, RCC OHSR underground tanks quarters, manholes chamber, sections of RCC pipes sewer and SW pipes, sewer, ventilating shafts for sewerage and Masonry Ventilation Chamber for Chamber for storm water drainage, temporary disposal/ arrangement etc. will be as per relevant I.S codes and PWD specifications; colonizer himself will be responsible for structural stability of all structures.

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HARYANA SHEHRI
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Address: C-3, HSVP , HQ Sector-6
Panchkula

C.E.-I No: 97242
Dated: 02/07/2020

7. Potability of water will be checked and confirmed and the tube-wells will be put into operation after getting chemical analysis of water tested.

8. Only C.I/D.I pipes will be used in water supply and flushing system, UPVC/HDPE pipe for irrigation purposes.

9. A minimum 100 i/d C.I/D.I, 200mm i/d SW and 400mm id RCC NP-3 pipes will be used for water supply, sewerage and storm water drainage respectively.

10. Standard X-section for S.W. pipes sewer, RCC pipes sewer etc. will be followed as are being adopted in Haryana Public Health Engineering Deptt.or HSVP.

11. The X-section, width of roads, will be followed as approved by the Chief Town Planner, Haryana, Chandigarh. The kerbs and channels will also be provided as per approved X-section and specifications.

12. The specifications for various roads will be followed as per IRC/MORTH specifications.

13. The wiring system of street lighting and specifications of street lighting fixture will be as per relevant standards.

14. This shall confirm to such other conditions as are incorporated in the approved estimate and the letter of approval.

For Superintending Engineer (HQ),
Chief Engineer-I, HSVP,
Panchkula.
2/7/2020

S.No	Line No.		Length in mtr.	self area in sqmtr.	Self Area (Hec)	previous area in hec.	Total Area (Hec)	Rain Fall mm/hr	Discharge @12.15 lps/Hec	Pipe dia (mm)	Slope (mm) 1 in	Velocity m/sec.	Cap of pipe in lps.	Fall in line mtr.	Ground level at Start	Free board at start	H.F.L at Start	Invert Level at Start	Ground level at End	H.F.L at End	Invert Level at End	Free Board at end	Depth at Start	Depth at End	Average Depth	No. of Man hole	910 Dia upto 1.67m Type-A	1220 Dia upto 2.29m Type-B	1520 Dia From 2.29 to 4.18m	1520 Dia Above 4.19m
1	RWHT-1	C2	12	0.000	0.000	0.000	0.000	6.25	0.00	400	500	0.642	80.75	0.02	100.00	0.90	99.10	98.70	100.00	99.08	98.68	0.92	1.30	1.32	1.31	0	0	0	0	0
2	RWHT-2	C1	5	0.000	0.000	0.000	0.000	6.25	0.00	400	500	0.642	80.75	0.01	100.00	0.90	99.10	98.70	100.00	99.09	98.69	0.91	1.30	1.31	1.31	0	0	0	0	0
3	C1	C2	35	500	0.050	0.0000	0.050	6.25	0.61	400	500	0.642	80.75	0.07	100.00	0.91	99.09	98.69	100.00	99.02	98.62	0.98	1.31	1.38	1.35	2	2	0	0	0
4	C2	C3	36	100	0.010	0.0500	0.060	6.25	0.73	400	500	0.642	80.75	0.07	100.00	0.98	99.02	98.62	100.00	98.95	98.55	1.05	1.38	1.45	1.42	1	1	0	0	0
5	C3	C4	125	700	0.070	0.0600	0.130	6.25	1.58	400	500	0.642	80.75	0.25	100.00	1.05	98.95	98.55	100.00	98.70	98.30	1.30	1.45	1.70	1.58	5	5	0	0	0
6	C4	XTERNA	5	0.000	0.000	0.1300	0.130	6.25	1.58	400	500	0.642	80.75	0.01	100.00	1.30	98.70	98.30	100.00	98.69	98.29	1.31	1.70	1.71	1.71	1	0	1	0	0

1829 m