DEVELOPED BY SATPAL SINGH ON OF SISHRAM IN COLLABORATION WITH M/S GURUGRAM LAND & FINANCE PVT LTD.

ESTIMATE FOR PROVIDING WATER SUPPLY.SEWERAGE. STORM WATER DRAINAGE, ROADS,STREET LIGHTING AND HORTICULTURE IN RESPECT OF AFFORDABLE RESIDENTIAL PLOTTED COLONY UNDER DDJAY OVER AN AREA MEASURING 5.01875 ACRES (40 KANAL 3 MARLA) FALLING IN THE REVENUE ESTATE OF VILLAGE NAURANGPUR, SECTOR-78, TEHSIL- MANESAR DIST- GURUGRAM, HARYANA.

Gurugram is a town and municipal corporation in the Gurugram district of the state of Haryana, India. It is a part of the National Capital Region (NCR) of Delhi. Its proximity to the burgeoning city of Gurgaon has in recent years caused its character and demographics to change dramatically. It has many factories, offices, hotels, IT parks and educational institutes. There are several sightseeing spots around the area, some overlapping with Gurgaon. Sohna is 41 kilometres from Indira Gandhi International Airport and is located on National Highway 48, making it well connected with Delhi, Gurgaon, Rewari, Dharuhera, Jaipur, Ahmedabad and Mumbai.

PROJECT REPORT/ESTIMATE FOR PROVIDING WATER SUPPLY, SEWERAGE, STROM WATER DRAINAGE, ROADS, STREET LIGHTING AND HORTICULURE IN RESPECT OF AFFORDABLE RESIDENTIAL PLOTTED COLONY UNDER DDJAY OVER AN AREA MEASURING 5.01875 ACRES (40 KANAL 3 MARLA) FALLING IN THE REVENUE ESTATE OF VILLAGE NAURANGPUR, SECTOR-78, TEHSIL- MANESAR DIST- GURUGRAM, HARYANA.

The Haryana Government has prepared a master plan for development of Residential/Industrial/ Commercial urban estate Gurugram. Project is developed by Satpal Singh son of Sishram in collaboration with M/s Gurugram Land & Finance Pvt Ltd. They have decided to develop the area in this master plan as a plotted residential colony and has named this part as Proposed Affordable residential plotted Colony for an area measuring 5.01875 (40 Kanal 3 Marla) Acres in the Revenue Estate of Village Naurangpur, Sector-78, Tehsil Manesar, Dist-Gurugram, Haryana.

Water Supply

Source

1

The source of water supply in this area is from **HSVP** how ever tubewells shall be proposed for Emergency if permission will get from CGWA. At present water supply is from HSVP municipal supply and tanker supply is sweet and fit for human consumption. However in borewell 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 after the permission from CGWA in tune with growth of demand. The ultimate requirement of tubewells includes provisions of 10% stand by. Ultimately, water shall be supplied to the Project by **HARYANA SHAHARI VIKAS PRADHIKARAN, GURUGRAM, HARYANA.**

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Design

The scheme has been designed for approved population of **1710 persons in 5.01875 acres.** The rate of water supply per head per day has been taken as 172.5 litres (150+15%) as per NBC 2016 / HSVP norms. in addition to above necessary provision of water for community area, coomercial area, parks etc. have been taken into account for calculating the maximum quantity of water requirement.

3 Pumping Equipments

It has been proposed to install pumping set as described with standby of equal capacity. The provision for standby generating set has been provided in case of any electricity failure. Generator will be provided separately or added to the capacity of main generator.

4 Under Ground Storage

Underground storage tank provision has been made for ~~190KL~~ 350 capacity, in 4 compartments, which caters for the raw, domestic as well as for firefighting requirement. The water from fire compartment shall overflow to the raw water compartment so that the water in the fire compartment always remain fresh.

5 Boosting Station

A boosting station having monoblock centrifugal pump set is planned near under ground reservoir to pump water from domestic/ treated under ground water tank to over head water tank provided at individual plot terrace.

6 Distribution System

The distribution system for this development has been designed to supply @ 172.5 litre per head her day @ 2.5 times the average rate of flow on "Hazen william" formula with C-140. Necessary provision for laying D.I. pipe K-7 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 30.00 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 for domestic water supply.

7 Rising Mains

Rising mains from HSVP water main or sector road to water works have also been designed and provision for 100 mm dia D.I. pipe line (dia as/ design) has been made in this estimate.

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8   Sewerage

This scheme is designed for sewer connecting to the proposed sewage treatment plant. The sewage system has been marked on the respsctive plans. The sewer lines have been designed for 3 times average DWF in relation to the water supply demand assuming that 80% of water supply shall find its way into the propoesd sewer. DWC HDPE SN8 pipe sewers have been proposed and designed to run half full. The sewers have been designed on 0.75 M per second minimum velocity i.e. self cleansing velocity Necessary provision for laying DWC HDPE SN8 pipes and manholes etc. has been made in this estimate.

Size/ Shape of Manholes

As per IS 4111:1986 "Circular type of manholes are much stronger than rectangular and arch type manholes thus these type of manholes are preferred over rectangular as well as arch type manholes. However both rectangular and circular type of manholes are propsed to be provided. The brick masonary rectangular manhole is proposed to be provided for depth upto 0.9m.

The brick masonry/ concrete circular manholes are proposed to be provided for all depth exceeding 0.9 m upwards. Circular manholes are strsaight down in lower portion and slanting on top portion so as to narrow down the top opening equal to internal dia of manhole cover.

Depending on the depth of manhole, brick circular manhole of dia 910, 1220, 1520, 1820 mm dia are proposed to be provided.

9   Storm Water Drainage

The storm water is designed to carry 6.25 mm rainfall per hour or 0.123 cusecs per acre as discharge. Also suitable provisions are contemplated in our scheme to ensure better recarging of underground water table in the area. Underground R.C.C. pipe drain with minimum 400 mm dia are proposed to be provided in this area with circular manhole.

Necessary design statement for entire storm water system has been prepared and attached with estiamte.

10   Rain Water Harvesting

The main emphasis on recharging the underground aquifers and safe disposal of storm water with flooding the site has been laid in designing/ planning of storm water drainage system. Conventional type rain water harvesting are proposed to be provided.

11   Roads

The roads are proposed to be provided in the plotted development in such a way that main 9 m wide colony road connects with 24 m sector road. Internal service of the roads of the colony 9m wide provide approach for construction of roads to the plots. Detailed calculation of the various item of works have been made on the basis of the detail design of the roads as approved by Chief Engineer HSVP, Gurugram.

12   Street Lighting

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13 Horticulture

Provision of road side plantation of trees with tree guards has been made for all roads. The parks shall be developed by providing lawns & ornamental trees with tree guards.

14 Specifications :

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

15 Rates

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

16 Cost

The total cost of development in this project including various P.H. and B & R services works out to Rs. ~~546.05~~ *539.80* **Lacs** which includes 3% contingency and PE charges and 49% departmental charges also.

The cost per gross acre for this phase works out to App. Rs. ~~108.80~~ *107.56* **Lacs/acre** 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.

DESIGN CALCULATION

Daily water requirement

	For 5.01875 Acres	Unit
	Acres	
Total No. of Plots (General)	95	Nos
Total No. of Plots (EWS)	0	Nos
Population per plot (General)	18	Person/Plot
Population per plot (EWS)	9	Person/Plot
1 Therefore population (General)	1710	Persons
Therefore population(EWS)	0	Persons
Total Population	1710	Persons

Street lighting system has been designed to provide ...umination of 15 to 20 lux on roads. Street ligh.. .e provided on 6 m high steel tubular poles are located on one side of 9.0 m wide road. Luminaries with 65 watts LED lights are proposed to be provided for achieving the desired illumination.

Total daily Water requirement for plots (150 LPCD + 15%)

SAY		1710		Persons
@		172.5		No.
		Domestic @ 65%	LPCD	Flushing @ 35%
		191733.75		103241.25 LPD
		172.5		103.30
Or Say		**191.80**		**103.30** KLD (1)

2 Non Residential building water requirement

a No. of commercial area
- Daily water requirement @   1   No.
- Area of commercial   32000   Ltrs/Acre/day
- Daily water requirement @   0.2007   Acre
-    20800   11200   Ltrs/Acre/day
- Therefore daily water requirement   4174.56   2247.84   lit/day
- Or Say   **4.17**   **2.25**   KLD

b No. of community center
- Area of community center @   1   No.
- Daily water requirement   0.5019   Acre
- Daily water requirement @   25000   lit/acre/day
-    8155.875   4391.625   lit/day
- Or Say   **8.16**   **4.39**   KLD

c No. of milk booth
- Daily water requirement @   1   No.
- Daily water requirement   1000   lit/acre/day
-    650   350   lit/day
- Or Say   **0.65**   **0.35**   KLD

Total 2 (a+b+c)   **12.98**   **6.99**   KLD (2)

3 Area under Parks
- Daily water requirement @   0.3765   Acre
-    25000   lit/acre/day
- Therefore daily water requirement   9412.5   lit/day

4	Area under Roads			9.41	Acre
	Daily water requirement	@	1,077 ~~0.82~~		lit/acre/day
	Therefore daily water requirement		5000	~~5383~~ 4100	lit/day
				~~5.38~~ 4.10	KLD

I	**Total daily requirement**				
a)	For (1+2)		204.78	110.29	KLD
b)	Under Road+ Parks (3+4)		0.00	~~14.80~~ 13.51	KLD
	Total				
	Total Daily Requirement		204.78	~~125.09~~ 123.80	KLD
II		**Or Say**	205.00	~~126.00~~ 125.00	KLD

191.80 + 12.98 lc

103.30 + 6.99 lc

Tubewell

		Proposed	
Assuming working hours of tubewells		12	hours
Assuming discharge/hour of each tubewell		20	KL/hours
Total domestic water requirment		205	KLD
No. of tubewells required		0.85	Nos.
Add 10% standby		0.09	Nos.
Total		0.94	Nos.
Proposed		**1.0**	Nos.

So It is proposed 1 nos of tubewell if permission will get from from CGWA. The provision of 1 no of tubewell has been made in the estimate because the water demand for flushing, horticulture and the road washing purpose is to be met from re circulated after treatment at STP and ultimate water supply is to be provided by HSVP.

III	**Pumping machinery for tubewell**			
a)	Gross working load	=	45.00	m
b)	Average Fall in S.L	=	3.05	m
c)	Depression head	=	6.10	m
d)	Friction loss	=	2.50	m

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BHP = (20x1000x60)/(60x60x75x0.6)
With 60% efficiency

Say	=	56.65 m
	=	60.00 m
	=	7.41 HP
Proposed	=	7.50 HP

It is proposed to install **1 no. Submersible pumping set** with a discharge of **20000 ltr./hour (335 lpm)** driven with **7.5 HP electric motor.**

IV Underground Tank

Daily requirement for domestic use and other except fire fighting	=	204.78	KLD
Capacity of under ground tank 14 hr storage except fire fighting @ 60% storage requirement	=	122.87	KLD
Say	=	~~130.00~~ *150*	KLD
Total Population in General plots	=	1710	Person	18 Person/plot
Total Population in Commercial area	=	271	Person	3 sqm/ Person
Total Population in community centre	=	677	Person	3 sqm/ Person
Total Population		2658	Person	
Fire Tank Capacity as 100 x [sqrt(2658) /1000] x 1/3	=	54.34	KLD	
Say	=	~~60.00~~ *100.00*	KLD	
Total		~~190.00~~ *250.00*	**KLD**	

It is proposed to provide 1 no. under ground tank of capacity ~~190 KL~~ *250* which also includes ~~60 KL~~ *100* capacity for **fire fighting**. Tank will have four compartments, Two for fire, one for raw and one for domestic use. The water first enters the fire compartment, then over flows to the domestic water use compartment so that the water in the fire compartment shall remain fresh.

It is proposed to provide under ground tank of following capacity

a)	Capacity of Fire tank-1	=	~~30.00~~ *50.00* KLD
b)	Capacity of Fire tank-2	=	30.00 *50.00* KLD
c)	Capacity of Raw tank	=	~~65.00~~ *75.00* KLD
d)	Capacity of Domestic tank	=	~~65.00~~ *75.00* KLD

V BOOSTING MACHINERY (Drinking water)

UG. Tank

a) Filter Feed Pump

Daily requirement for domestic use = 204.78 KLD

Assuming 10 hours running 1 pumps (with one standby)

Discharge/hour

	=	20.48	KL/HR
	=	341.30	LPM
Or Say		350.00	LPM

Head of pump

i) Suction lifts	=	0.0	m
ii) Friction loss in M<main & specials	=	0.0	m
iii) Clear head	=	35.0	m
Say		35.0	m

BHP of motor (350*35)/(60*75*0.6)

	=	4.54	HP
Or Say		5.0	HP

b) Domestic Water Transfer Pump

Daily requirement for domestic use = 204.78 KLD

Assuming 6 hours running 2 pumps (with one standby)

Discharge/hour

	=	17.07	KL/HR
	=	284.42	LPM
Or Say		290.00 / 300.00	LPM

Head of pump

i) Suction lifts	=	4 5.0	m
ii) Friction loss in M<main & specials	=	6 10.0	m
iii) Clear head	=	27 15.0	m
iv) Residual head	=	37 45.0	m
Say		45.0	m

BHP of motor (290*45)/(60*75*0.6)   300

= ~~4.83~~ 4.44   HP

Or Say   5.0   HP

VI Gen Set

		Nos.	HP			
a)	Raw Water Transfer Pump	1	5.0	=	5.0	HP
b)	Domestic Water Transfer Pump	2	5.0	=	10	HP
c)	Flushing Water Transfer Pump	~~2~~ 3	3.0	=	~~6.0 10~~	HP
d)	Tubewell	1	7.5	=	7.5	HP
e)	Lighting		5.0	=	0	HP

32.5
23.50

~~26.39~~ 36.4   KVA

~~40~~ 30   KVA

or 32.5 x 0.746 x 1.50

Say   23.50

5 Sewage Treatment Plant capacity

Gross domestic + Flushing water requirement/day   315.00   KLD

Sewage flow will be 80% of total load   252.0   KLD

STP Capacity required at 5% extra margin   264.66   KLD

Say 270   KLD

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STP Capacity (Or Say) = 270.00 KLD

VII STP Treated Tank

Daily requirement for flushing, horticulture, road washing = 125.09 KLD

Capacity of under ground tank 14 hr storage @60% storage = ~~75.00~~ 75.05 KLD

Say = ~~80.00~~ 100.00 KLD

VIII BOOSTING MACHINERY (Flushing water) STP

Daily requirement for Flushing & Horticulture use = 125.09 KLD

Assuming 6 hours running 2 pumps (with one standby)

Discharge/hour = 10.42 KL/HR
= 173.73 LPM
= ~~180.00~~ 200.00 LPM

Or Say = 200.00 LPM

Head of pump

i) Suction lifts = ~~5.0~~ m
ii) Friction loss in M<main & specials = 4 ~~10.0~~ m
iii) Clear head = 6 ~~15.0~~ m
iv) Residual head = 27 ~~40.0~~ m
= 37 ~~40.0~~ m

Say = 37 ~~40.0~~ m

= 2.96 ~~3.0~~ HP

BHP of motor (180*45 ᵗᵒ 200)/(60*75*0.6)

Or Say = 3.0 ~~5.0~~ HP

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FINAL ABSTRACT OF COST

	Amount (Lacs.) For 5.01875 Ac
Sub Work 1- Water Supply	~~115.00~~ 142.24
Sub Work 2- Sewerage	~~130.27~~ 91.67
Sub Work 3- S.W. Drainage	~~55.10~~ 54.97
Sub Work 4- Roads	~~108.75~~ 103.73
Sub Work 5- Street Lighting	19.26
Sub Work 6- Horticulture	2.50
Sub Work 7- Maintenance of services for 10 years including resurfacing of roads after 1st 5 years & II. Phase i.e. 10 years maintenance (as per HSVP norms)	~~125.43~~ ~~115.18~~ 539.80
TOTAL	~~546.05~~ ~~108.80~~ 107.56 las Per Acre
COST / ACRE	

Rs. 539.80 las
───────────── =
S.01875 Acre

Checked subject to Comments
In forwarding letter No. 7.9.739
Dt. 09/05/2022 and notes
attached with the estimate

Executive Engineer
HSVP Division No. VI
Gurugram

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Superintending Engineer (HQ)
HSVP, Panchkula
(SDEwar)

Ramesh
Superintending Engineer,
HSVP Circle, Gurugram

Director General
Town & Country Planning
Haryana, Chandigarh
Cls

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WATER SUPPLY HEAD

	Amount (Lacs.) For 5.01875 Ac
Sub Head 1- Head Works	31.40 49.75
Sub Head 2- Pumping Machinery	21.60 18.30
Sub Head 3- Distribution System	21.75 24.25
Sub Head 4- Irrigation scheme	0.34 0.38
Total	75.09 92.68
Add 3% Contingencies & PE Charge	2.25 2.78 95.46
Add 49% Departmental Charges , *price escalation, unforseen*	77.34 37.90 46.78
delum.	
TOTAL	115.24 142.24
SAY	115.00

(CO to final abstract of cost)

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S. No.	Description	Unit	Qty	Rate	Amount
1	Boring and installing 510 mm i/d tubewells with reverse/direct rotary rig complete with pipe strainer to a depth of about 80m. complete. *(For clear tank purposes with Permission of court)*	Nos.	1	~~400000.00~~ 15.00	~~16~~.00
2	Constructing pump chambers as per standard design of PWD PH/HSVP of size 1.50x1.50 m.	Nos.	1	100000.00	1.00
3	Construction of boosting chambers of suitable size along with under ground tank pumping machinery and generating set etc. complete in all respects.					
	Details of boosting station				
i)	construction of boosting chamber				5.00
ii)	construction of UG Tank 250 KL cap. incl. 100KL *For Fire eq, 100 KL cap. of Flushing water tank near STP* 250+100 KL = 350 KL	KL.	~~350~~ ~~190~~	~~LS~~ 5500 ~~6000.00~~	~~11.40~~ 19.25
4	Provision for carriage of material and other unforeseen items	LS			1.00
5	*Pour for boundary wall around T.W. & work works*			LS		2.50
6	Provision for facilities staff for Maintenance.	LS		LS		5.00
7	*Pour for flushing lawn of water works silk C.LS*					1.00
	(C.O. to abstract of cost of Sub-work No.I)			TOTAL		~~31.40~~ 49.75
				SAY		~~31.40~~

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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.	Nos.	1	200000.00	2.00
2	Provision for cheap pressure type chlorination plant complete.			LS	1.00
3	Provision for making foundations & erection of pumping machinery.			LS	1.00
4	Provision for pipes, valves & specials inside the pump chamber.			LS	1.50
5	Provision for electric services connection including electric fittings for tubewells chambers complete. Including cost of trasfermer.			LS	2.90
6	Providing and installing electricity driven pumping set capable of delivering 350 LPM of water at 35M head complete in all respects. (For Filter Feed Pump) (5 HP) (1 working + 1 standby)	Nos.	2	120000.00	2.40
7	Providing and installing electricity driven pumping set, capable of delivering 200 LPM of water at 45M head complete in all respects. (HP) (5 H.P.) (Domestic Water Transfer Pump) (2 working + 1 standby)	Nos.	3	100000.00	3.00 3.60

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No.	Description	Unit	Qty	Rate
7	Providing and installing electricity driven pumping set, capable of delivering 180 LPM of water at 45M head complete in all respects. (3.HP) (Flushing Water Transfer Pump) (2 working + 1 standby)	Nos.	3	0.60 ~~120000-00~~
8	Provision of diesel generator set of each for standby arrangements for booster pump complete with gear head arrangements of following capacities 40 KVA.			1.80 ~~3-60~~
9				4.50 ~~4-00~~
10	Provision for carriage of materials and other unforeseen items.	LS	1.00	18.30 ~~21-60~~
	(C.O. to abstract of cost of Sub-work No.I)	LS		
	TOTAL			~~21.60~~
	SAY			21.60

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S. No.	Description	Unit	Qty	Rate	IN LACS
1	Providing, laying, jointing & testing D.I. K-7 pipes including cost of excavation complete as per ISI marked. (For Domestic water supply line)				
i)	100 mm dia	M	~~526~~ 524	~~1475.00~~ *1460*	~~7.73~~ *7.67*
2	Providing, laying, jointing & testing D.I. K-7 pipes including cost of excavation complete as per ISI marked. (For borewell line)				
i)	100 mm dia	M	15	~~1475.00~~ *1460*	0.22
3	Providing, laying, jointing & testing ~~HDPE PE-80~~ *DI* pipes including cost of excavation complete as per ISI marked. (For Flushing water supply line)				
i)	~~80~~ *180* mm dia	M	~~495~~ *500*	~~800.00~~ *1460*	~~3.96~~ *7.30*
4	Providing and fixing sluice valves including cost brick masonary chambers complete in all respects.				
i)	100 mm i/d	Nos.	6	~~25000.00~~ *12,000/*	~~1.50~~ *0.72*
5	Providing, fixing and testing butterfly valves including cost of valve chambers complete in all respects.				
i)	80 mm i/d	Nos.	6	15000.00	0.90
6	Providing and fixing 100 mm dia NRV including cost of valve chambers complete in all respects.				
i)	100 mmm dia	Nos.	1	~~25000-00~~ *10000*	~~0.25~~ *0.10*
ii)	~~80 mmm dia~~	Nos.	1	20000.00	0.20

No.	Description	Unit	Quantity	
7	Providing and fixing air valves and scour valves including cost of valve chambers complete in all respects.	Nos.	4	0.40 0-60
			,0000.00	
8	Providing and fixing indicating plates for sluice valve, air valve etc.	Nos.	18	0.18 0.36
			2000.00	
9	Provision for carriage of material		LS	1.00
10	Provision for cutting the roads and making to its original condition		LS	1.00
11	Providing and fixing fire hydrants complete with masonary chambers.	Nos.	6	15000.00	0.90
12	Making water supply connection *with HSVP line on madhrrad (L.S)*		LS	1.00
13	Provision for rising main from HSVP water supply line to UG Tank				2.96
i)	100 mm dia (DI Pipe K-7)	M	170	1460	2-51
			1475.00	24.25
	(C.O. to abstract of cost of Sub-work No.I)		**TOTAL**	21-75
			SAY	24-75

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Sub Work I					Water Supply
Sub Head No. IV					Irrigation

S. No.	Description	Unit	Qty	Rate	IN LACS
1	Providing, laying, jointing & testing HDPE PE-80 pipes including cost of excavation complete as per ISI marked.				
i)	25 mm dia	M	20	300.00	0·06 0·080
ii)	32 mm dia	M	4	530.00	0·021 0·02
2	Providing & fixing 20 mm PVC Irrigation hydrant valve with PVC lid complete in all respect including cost of PVC keys	Nos.	4	3500.00	0·14 0·20
3	Provision for carriage of material *& other worknden* LS *items*			10000.00	0.10
				TOTAL	0·38 0·34
	(C.O. to abstract of cost of Sub-work No.I)			**SAY**	0·34

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Sub Work II

S. No.	Description	Unit	Qty	Rate (in Lacs)
1	Providing, lowering, jointing, cutting DWG-HDPE SN8 [*S.W.*] pipes and specials into trenches including cost of excavation, bed concrete lot of manholes complete.			
i)	200 mm i/d			
a)	Average depth upto 1.5 m	M	344	~~2270.00~~ 1700 5.85 / 7.81
b)	Average depth 1.5 m to 4.5 m	M	153	2370.00 / 18 cu 3.63 / 2.75
2	Provision for lighting, watching and temporary diversion traffic	LS		1.00
3	Provision for timbering & shoring	LS		1.00
4	Provision for cutting of roads and carriage of materials etc. and other unforsean charges	LS		2.00
5	Provision for connection with HSVP [*Sewer*] [*on madhu Road*]	LS		2.00
6	Providing and installation of STP 270 KL including civil tanks and all electro mechanical works. It ~~also includes~~ ~~flushing tank.~~	KL	270 ~~KL~~	25000.00 / 16 crose L 67.5 / 43.20
7	Provision for DI K-7 pipe from S.T.P. to HSVP main line (Over flow line)			
i)	100 mm dia pipe	M	132	~~1475.00~~ 1460L 1.95 / 84.88 / 59.73

Add 3% contingencies & PE charges

Add 49% Deptt. Charges , *unforeseen, price escalation admn*

(C.O. TO FINAL ABSTRACT OF COST SUB WORK - II)

TOTAL
SAY

59.73 2.55 1.79	
87.43	
61.52	
30.15	
42.84 91.67	
130.27	
130.27	
91.67	

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Storm water drainage

In Lacs

S. No.	Description	Unit	Qty	Rate
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			
a)	Average depth upto 1.5 m	M	236	2500/ ~~2950-00~~ 5.90 ~~6-96~~
b)	Average depth 1.5 m to 4.5 m	M	242	~~3050-00~~ ~~7-38~~ 6.41 2650
2	Provision for road gully and drain.			
3	Provision for lighting, watching and temporary diversion of traffic.			LS ~~5.00~~
4	Provision for cutting of roads and carriage of materials etc. and other unforseen items.			LS ~~3.00~~ 1.00
5	Construction of rain water harvesting pit as per details and specification given below and as per attached drawing including, cost of excavation of all ind soil foundation trenches of drain including dressing of sides of ramming and getting out excavtion of soil.	Nos	3	LS ~~3.00~~
6	Provision for connection with HSVP. _line on master road_			350000.00 ~~18.50~~
7	Provision for connection with HSVP line _till HSVP services are Provid_	M	2	~~3050~~ L·5

Storm water

Provision for connection with HSVP. _line on master road_

400 mm i/d (Average depth 1.5 m to 4.5 m) _temporary disposal arrangement till HSVP Services are Provid._

~~2.v~~
~~0-06~~
5.00
————
35·81

35.81

Add 3% contingencies *& PE charts*	35.90
	1.08
Add 49% Deptt. Charges *, wages/son, price escalation column*	36.989
	18.08
	18.12
	54.97
(C.O. TO FINAL ABSTRACT OF COST SUB WORK - III)	
TOTAL	55.10
SAY	55.10

54.97

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S. No.	Description	Unit	Qty	Rate
				In Lacs
1	Provision for levelling and earth filling as per site conditions.	Acre	5.01875	8.78
2	Construction of road by- ~~Bituminous Road~~		175000.00	
	i) 150 mm thick W.B.M. stone aggregate layer			
	ii) 100 mm thick PCC _200 mm GSB_			
	iii) 50 thick sand bed _250 mm WMM_			
			50 mm DBM	
	iv) 80 mm thick conc. pavers _30 mm BC_			
	Total	Sq. M	2870 ~~2771~~	42.r ~~41.57~~
3	Miscellaneous items			
(a)	Providing for Kerbs & Channels for 5.01875 ACRES 9M wide road 352 x 2 = 704 RM	RMT	704	600.00
				4.22
(b)	Provision of foot path of precast conc. for 5.01875 acres (9m wide road) 9 wide road 352 x 1.75x 2 = 1232 SQM	Sq. M	~~1232~~	~~750.00~~
				~~9.24~~
4	Provision for traffic lighting and guide map	LS		~~100000.00~~ 1.00
5	Provision for carriage of material	LS		~~100000.00~~ (LS) 1.00
6	Provision for plot indicator	LS		100000.00 1.00

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#	Description	Unit	Qty		Amount
7	Provision for demaracation & unfloreseen items	LS		00000.00	1.00 _las_
8	Provision for parking & pavement for commercial area @ 50% 812.40 = 406.20 sqm	sqm	406.20	3.05	~~3.05~~ 6.09
	Add 3% contingencies _ec PE charts_			~~750.00~~ 15ml _(less)_	~~70.86~~ 67.59
					~~2.13~~ 2.03
	Add 49% Deptt. Charges , _underground, pria escalation Beluna_				~~72.99~~ 69.62
					36.76 ~~34.11~~
	(C.O. TO FINAL ABSTRACT OF COST SUB WORK - IV)			TOTAL	~~108.75~~ 103.73
				SAY	~~108.75~~

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Sub Work V

Street Lighting

S. No.	Description	Unit	Qty	Rate		In Lacs
1	Providing street lighting on internal roads as per standerd specification of HVPNL and CFL complete in all respect					
	Provision made on L.S. cost @ Rs.2,50,000.00 per acre	L.S.	5.01875	250000.00		12.55
	Add 3% contingencies *on PE Charges*					**12.55**
						0.38
	Add 49% Deptt. Charges , *pric escalation*					12.92
	supervision , Admn.					6.33
					TOTAL	19.26
	(C.O. TO FINAL ABSTRACT OF COST SUB WORK - V)				SAY	19.26

₹ 19.26 /65

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Sub Work VI

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 including watering and maintenance of lawns free from weds and fit for moving in rows including for hedges, shrubs and green belt (as per HSVP Norms)	Per acre	0.3765	150000.00	0.56
2	Planting of trees with tree guards on roads at 12 m intervals				
	Total length of roads = 352 mtr				
	No of trees @ 12m c/c = 352x2/12 = 58.66 nos				
	say = 59 nos _60_				
	Cost of the tree @ 1800/- each	Nos.	~~59~~ 60	1800.00	~~1.06~~ 1.08
	TOTAL				~~1.63~~ 1.64
	Add 3% contingencies & PE Charges				0.05
	Add 49% Deptt. Charges , price escalation, unforseen adm.-				1.68 0.82
	(C.O. TO FINAL ABSTRACT OF COST SUB WORK - VI)			TOTAL	2.50 / as
				SAY	2.50 / ₹

Sub Work VII

Maintenance

S. No.	Description	Unit	Qty	Rate	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 HSVP norms after completion and resurfacing of roads after 10 years or 1st phase.	Acre	5.01875	~~750000.00~~ 8 in lacs	40.15 37.64
2	Provision for resurfacing and strengthening of roads Sq. M after 1st five years of 1st phase with ~~80 mm thick~~ 30 mm thick concrete pavers @ 600/-sqm *3m incl. tendering coats and 30 mm BC as per crust design which ever is safer*	Sq. M	2771	660 600.00	18.48 16.63
3	Provision for resurfacing and strengthening of road after 10 years of 2nd phase with 80 mm thick concrete pavers @ 750/-sqm *3m BC and 30 mm BC as per crust design whichever is safer*	Sq. M	2771	825 ~~750.00~~	23.10 20.78 81.73
					75.05 ~~-2.25~~ 2.45 84.18
	Add 3% contingencies *& PE charges*				
	Add 49% Deptt. Charges *, including price escalation*				77.30 41.25 37.88
				TOTAL	125.43 115.18
				SAY	125.43 115.18

(C.O. TO FINAL ABSTRACT OF COST SUB WORK - VII)

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