

**PROPOSED ESTIMATE FOR PROVIDING
INTERNAL DEVELOPMENTS WORKS IN
LAYOUT PLAN FOR COMMERCIAL PLOTTED
COLONY (SCO) AN AREA MEASURING
6.54375 ACS. IN SECTOR 84, VILLAGE SIHI,
GURUGRAM (HARYANA)**

DEVELOPED BY



M/s DLF HOME DEVELOPERS LTD.

**PROPOSED ESTIMATE FOR PROVIDING INTERNAL
DEVELOPMENTS WORKS IN LAYOUT PLAN FOR
COMMERCIAL PLOTTED COLONY (SCO) AN AREA
MEASURING 6.54375 ACS. IN SECTOR 84, VILLAGE SIHI,
GURUGRAM (HARYANA)**

DESIGN REPORT:

proposed project is for Plotted Commercial (SCO) at Gurgaon. Everyone knows the fact why Gurgaon is developing so fast, the main reason behind it is that Gurgaon is hardly 25 to 30 KM away from Delhi. Being in the National Capital Region the Gurgaon town has fast developing tendency and potential, further Haryana Govt. has also started sharing the growing industrial/commercial load of Delhi and Faridabad. Keeping in view of the above facts Haryana Govt, has decided to establish various sectors for Institutional, Group Housing, Mall Multiplex and Commercial Complex buildings in Gurgaon. The above-mentioned commercial colony project is being developed by DLF. The client is submitting the same for your reference and approval. This report and estimate are for area measuring approximately 6.54375 acres.

The Total Services have been designed with a view to Integrate any further extension of area with the presently licensed area under development and with master / external services to be laid by HSVP/GMDA, with the salient features given as under:

1. WATER SUPPLY SCHEME:

i) SOURCE:

The source of water supply shall be HSVP/GMDA water supply connection, water supply shall be through, and this water is potable. It has been proposed to construct underground water in this area is potable and fit for domestic & drinking purposes and at location as per drawing for the purpose of domestic and fire protection. It has been proposed to construct underground tanks of capacity as per attached details and at location for domestic purposes. The underground tanks will be fed from HSVP/GMDA supply, from there water will be pumped each plot using hydro-pneumatics pumps.

It has been proposed a centralized UGT of the total required capacity for domestic 90 KLD purpose. Provision of Firefighting static tank also been provided adjacent to Dom. UGT as recommended in the 'Manual on Water supply & Water Treatment' published by CPHEEO, Ministry of Urban Development, GOI.



ii) DESIGN:

The Water supply distribution Scheme has been designed for a total ultimate population of 6833 persons approx., for the Commercial Plots. The rate of water supply per head per day has been taken assumed as 45 liter per head per day for staff & 15 liter per head per day for visitor, D.I (Ductile Iron) pipelines have been designed on 'Hazen-William formula' with C Value of 140 & peak factor of 3.0 is considered as per the Manual & guidelines. A minimum pipe size of 100mm Dia is taken for main GMDA / HSVP line.

iii) PUMPING MACHINERY:

It has been proposed the municipal supply shall be stored in the UGT as referred to in the plan of the required capacity. Through a Separate pumping system, the water shall be supplied to individual plots. Provision of pumping set as described with standby of equal capacity pumps have been considered for entire project, Provision of DG set of required capacity also been made for essential & emergency load as power-back up.

2. SEWERAGE SCHEME:

i) DESIGN OF SEWERS:

The proposed sewers have been designed by using "Manning's Formula" with running Half-full of peak flow, i.e. 3 x DWF of Domestic Water demand. It has been considered that about 80% of the Domestic Water supply shall find its way into the Sewerage system.

SW Pipe/ HDPE DWC Pipe is considered in sewerage system, and these lines are laid in such a way that the required slope (gradients) to minimum required self-cleansing velocity is maintained. The Hydraulic Design Sheets have been prepared and attached along with the Estimate.

ii) STP & Re-cycling of Treated Effluent:

It is also proposed to install 1 no STP of required Cap. 160 KLD at appropriate location in the Project and Treated effluent from this STP shall be used in Horticulture/ Washing, etc. Surplus Treated effluent is taken to discharge into existing HSVP/GMDA Sewerage System.

Provision of uPVC/ HDPE Distribution lines are taken for flushing purpose of plots Horticulture from this STP Treated Effluent Tank. The Estimate is prepared accordingly.

3. STORM WATER DRAINAGE SCHEME:

It is proposed to lay underground piped storm water drainage system with RCC NP-3 pipes. In order to improve the ground water table/sub soil aquifer, It is proposed to harvest the storm run-off in to Rain Water Harvesting Structures which are proposed



with de-silting chambers for Pre-Filtration along the SWD System, so that maximum rain water is harvested into the sub-soil aquifer and the surplus/ overflow run-off shall be taken & connected to existing HSVP/GMDA S W Drain System. This will also minimize pumping requirements of storm run-off from the colony to HSVP/GMDA SW Drain. For design of piped SWD system, the intensity of rainfall has been taken as **6.25mm per hour** and SWD pipes have been designed as running – full of Manning 's formula. A minimum size of 400 mm I /d RCC pipe has been proposed. The estimate has been framed accordingly. The Hydraulic Design Sheets have been prepared and attached along with the Estimate.

IV. ROADS:

Roads have been proposed in the colony as per an approved layout plan of the colony with road levels & road gradients designed to achieve smooth flow of traffic to & fro as well.

Necessary provisions have been made in the estimate accordingly as per revised specifications for roads by HSVP/GMDA.

VI. HORTICULTURE:

Estimate includes the necessary provisions for plantation, landscaping, signage's etc.

VII. SPECIFICATIONS:

The work will be carried out in accordance with the standard specifications as laid down by HSVP/GMDA

VIII. RATES:

The estimate has been prepared on the rates as per recently approved estimates by HSVP/GMDA.

IX. COST:

The total cost of the "Internal Development Works" including cost of all services works out to **Rs. 739.64 Lacs** (@ Rs.113.03 Lacs / acre) including 3 % contingencies & PE charges, and 49% administrative, price escalation & other unforeseen charges.

Please note that this estimate is based on the information available to us at this stage. Any changes or additional requirements may impact on the estimate at the time of Completion certificate.

For **M/S DLF HOME DEVELOPERS LTD.**

Authorized signatory



<u>DESIGN CALCULATION</u>		For COMMERCIAL PLOTTED COLONY (SCO) AN AREA MEASURING 6.54375 ACS. IN SECTOR 84, VILLAGE SIHI, GURUGRAM (HARYANA)				
		Total Plots	Total FAR	Population	Total Population	Water demand / day/ person (in KLD)
Daily water requirement						
	Ground Floor					
	Staff		9226.71	10 % of 3Sqm/Person	308	45
	Visitors		9226.71	90 % of 3Sqm/Person	2768	15
	1st floor					
	Staff		7115.16	10 % of 6Sqm/Person	119	45
	Visitors	46	7115.16	90 % of 6Sqm/Person	1067	15
	Typ. Floor (2nd, 3rd & 4th floor)					
	Staff		23380.48	10Sqm/Person	2338	45
	Visitors		23380.48	10% of total staff of offices	234	15
	Total	46	39722.35		6833	185.42
1	Therefore Total Populations				6833	Nos
	Total daily Water requirement for 45 liter per head per day for staff & 15 liter per head per day for visitor,		@		185.42	KLD
	Total 1 =				185.42	KLD
2	Area under Parks				0.78	Acre
	Daily water requirement		@		25.00	kl/acre/day
	Therefore daily water requirement				19.50	kl/day
	Total 2 =				19.50	KL



[illegible]

			=	187.50 200.00	LPM LPM	Each
Head of pump						
i) Suction lifts			=	4.00	m	
ii) Friction loss in M<main & specials			=	4.00	m	
iii) Clear head			=	15.00	m	
iv) Residual head			=	20.00	m	
Say			=	43.00	m	
			=	45.00	m	
HP of motor $(200 \times 45 \times 1) / (60 \times 75 \times 0.6)$			=	3.33	HP	
			Or Say	5.00	HP	Each
IV Gen Set	Nos.	HP				
Pumps for Domestic Water Supply	1	5.0	=		5	HP
Pumps for Flushing Water Supply	1	5.0	=		5	HP
Lighting(LS)			=		0.5	HP
Total					10.5	HP
or					11.7	KVA
		Say			12.50	KVA
I Sewage Treatment Plant capacity						
Total water requirement/day				185.42	KLD	
Sewage flow will be 80% of total load				148.34	KLD	
Add 5% for margin factor ✓				7.42	KLD	
STP Capacity (Or Say)			Say	155.76 160.00	KLD KLD	
VII STP Treated Tank						
Daily requirement for flushing & horticulture		=		115.47	KLD	
Flushing Tank (Horticulture + Flushing), THE FLUSHING TANK IN STP		=		115.47	KLD	
Say		=		120.00	KLD	
VIII BOOSTING MACHINERY (Flushing water)						
Near/in STP						
Daily requirement for Flushing & Horticulture use			=	115.47	KLD	



REVISED ESTIMATE LAYOUT PLAN FOR COMMERCIAL PLOTTED COLONY (SCO) AN AREA MEASURING 6.54375 ACS. IN SECTOR 84, VILLAGE SIHI, GURUGRAM (HARYANA)

FINAL ABSTRACT OF COST	Amount (Lacs.)
	For 6.54375 Acres
Sub Work 1- Water Supply	115.48 ✓
Sub Work 2- Sewerage	75.82 ✓
Sub Work 3- Storm water drainage	74.97 ✓
Sub Work 4- Roads	276.81 ✓
Sub Work 5- Street Lighting	25.11 ✓
Sub Work 6- Horticulture	5.41 ✓
Sub Work 7- Maintenance of services for 10 years including resurfacing of roads after 1st 5 years Phase i.e. 10 years maintenance (as per HSVP/GMDA norms)	166.04 ✓
TOTAL	739.64 ✓
COST PER ACRE (739.64/6.54375)	113.03 ✓

For M/S DLF HOME DEVELOPERS LTD.

Authorized Signatory

**Executive Engineer
HSVP Division No. V
Gurugram**



Checked subject to Comments
In forwarding letter No. 109211
Dt. 04.04.2025...and notes
Attached with the estimate

**Superintending Engineer,
HSVP, Circle-I, Gurugram**

**Executive Engineer (M)
for Chief Engineer-I
HSVP, Panchkula**

**Director
Town & Country Planning
Haryana, Chandigarh**

WATER SUPPLY HEAD(Abstract of cost Sub-Work-I)	Amount (Lacs.)
	For 6.54375 Acres
Sub Head 1- Head Works	32.05 ✓
Sub Head 2- Pumping Machinery	12.86 ✓
Sub Head 3- Distribution System Domestic water	18.18 ✓
Sub Head 4- Flushing and Irrigation scheme	12.16 ✓
	✓
Total	75.25
Add 3% contingencies & PE charges.	2.25 ✓
	✓
TOTAL	77.50
Add 49% Deptt.,price escalation unforeseen and administrator charges.	37.98 ✓
	✓
TOTAL	115.48 ✓
(CO to final abstract of cost)	



Sub Head I							Water Supply
							Head Works
							Rs.(laks)
S. No.	Description	Unit		Qty	Rate		Amount
1	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				LS		4.00 ✓
ii)	construction of UG Tank Including Fire Tank (90 KL+ 100 KL)	KL.		190 ✓	5500.00		10.45 ✓
iii)	The construction charges of Flushing water Tank near STP	KL.		120.00 ✓	5500.00		6.60 ✓
2	Provision for carriage of material and other unforeseen items .				LS		1.00 ✓
5	Provision for boundary wall around the STP sites & water works site, cost of footpath lawn ets.				LS		2.50 ✓
6	Provision for facilities staff Qtrs. for Maintenance staff.				LS		7.50 ✓
(C.O. to abstract of cost of Sub-work No.I)					TOTAL		32.05
					SAY		32.05 ✓



S. No.	Sub Work I	Unit					Water Supply
	Sub Head No. II						Pumping Machinery
							Amount (Rs.)
							(in Lakhs)
	Description	Unit	Qty	Rate			
1	Provision for cheap pressure type chlorination plant complete.	Nos.	1	L.S			1.00
2	Provision for making foundations & erection of pumping machinery.			LS			1.00
3	Provision for pipes, valves & specials inside the pump chamber.			LS			1.50
4	Provision for electric services connection including electric fittings for tubewells chambers complete. Including cost of trasfermer.			LS			2.50
5	Providing and installing centrifugal boosting Domestic pumping set, capable of delivering 200 LPM of water at 45 M head complete in all respects. (5HP)	✓					
	(1 working + 1 standby)	Nos.	2	100000.00	✓		2.00 ✓
6	Providing and installing centrifugal boosting Flushing & irrigation pumping set, capable of delivering 245 LPM of water at 45 M head complete in all respects. (5.0 HP)						
	(1 working + 1 standby)	Nos.	2	100000.00	✓		2.00 ✓
7	Provision of diesel generator set of 12.50KVA each for standby arrangements for booster pump complete with gear head arrangements of following capacities(for all machinery)	12.50 per KVA	1	15000 per KVA	✓		1.86 ✓
8	Provision for carriage of materials and other unforeseen items.			LS			1.00
(C.O. to abstract of cost of Sub-work No.I)				TOTAL			12.86 ✓
				SAY			12.86 ✓



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 IS 16647 :2017, IS 016422 : 2014 4 EN 17176 - 2 Standard including cost of excavation complete as per ISI marked. (For Domestic distribution water supply line rising main HSVP/UGT TANK)						
i)	100 mm dia	M		480	1460.00		7.0
2	Providing and fixing sluice valves including cost brick masonry chambers complete in all respects.						
i)	100 mm i/d	Nos.		5	12000.00		0.60
ii)	150 mm i/d	Nos.					0.00
3	Providing, fixing and testing butterfly valves including cost of valve chambers complete in all respects.						
i)	100 mm i/d	Nos.		5	10000.00		0.50
4	Providing and fixing 100 mm dia NRV including cost of valve chambers complete in all respects.						
ii)	100 mmm dia	Nos.		2	10000.00		0.20
5	Providing and fixing air valves and scour valves including cost of valve chambers complete in all respects.	Nos.		2	10000.00		0.20
6	Providing and fixing indicating plates for sluice valve, air valve etc.	Nos.		7	2000.00		0.14
7	Provision for carriage of material & other unfoeseen items				LS		1.00
8	Provision for cutting the roads and making to its original condition				LS		1.00
9	Providing and fixing fire hydrants complete with masonry chambers.near by Community & Commercial	Nos.		6	15000.00		0.90
10	Making water supply connection with HSVP/GMDA Master Line				LS		2.00
11	Provision for rising main from HSVP/GMDA water supply line to UG Tank						



i)	100 mm dia	M	318 ✓	1460.00 ✓	4.64 ✓
(C.O. to abstract of cost of Sub-work No.I)				TOTAL	18.18 ✓
				SAY	18.18 ✓



Sub Work I						Water Supply	
Sub Head No. IV						Flushing & Irrigation	
S. No.	Description	Unit		Qty	Rate		IN LACS
1	Providing, laying, jointing & testing UPVC Agricultural pipes(6 kg/sq.cm) including cost of excavation complete as per ISI marked. (For Flushing water supply & irrigation supply line)						
i)	100 mm dia	M		480 ✓	1460.00		7.01 ✓
ii)	25 mm dia for Garden hydrant	M		140 ✓	300.00		0.42 ✓
iii)	32 mm dia for Garden hydrant	M		246 ✓	400.00		0.98 ✓
iv)	40 mm dia for Garden hydrant	M		23 ✓	600.00		0.14 ✓
v)	50 mm dia for Garden hydrant	M		0	750.00		0.00
2	Providing and fixing sluice valves including cost of brick masonry chambers complete in all respect						
	100 mm dia	Nos.		5 ✓	12000.00		0.60 ✓
3	Providing, fixing and testing butterfly valves including cost of valve chambers complete in all respects.						
i)	100 mm i/d	Nos.		5 ✓	10000.00		0.50 ✓
4	Providing & fixing 20 mm Irrigation for hydrant valve complete in all respect.	Nos.		10 ✓	5000.00		0.50 ✓
5	Providing and fixing air valves and scour taps including cost of bricks masonry chambers.	Nos.		2 ✓	10000.00		0.20 ✓
6	Provision for carriage of material & unforeseen items				LS		0.50 ✓
7	Provision for cutting of roads & make is good the same.				LS		1.00 ✓
8	Provision for indicating Plate with safety box etc. complete in all respect.	Nos.		15 ✓	2000.00		0.30 ✓
(C.O. to abstract of cost of Sub-work No.I)					TOTAL		12.16 ✓
					SAY		12.16 ✓



Sub Work II						Sewerage Scheme
S. No.	Description	Unit	Qty	Rate		in Lacs
1	Providing, lowering, jointing, conforming to HDPE DWC Pipe and specials into trenches including cost of excavation, bed concrete lot of manholes complete.					
i)	200 mm i/d					
a)	Average depth upto 4 m	M	458.00 ✓	1700.00 ✓		7.79 ✓
2	Provision for providing oblique junction ✓			LS		2.00 ✓
3	Providing fixing vent shaft at suitable place as per P.H requirement			LS		2.00 ✓
4	Provision for lighting, watching and temporary diversion traffic			LS		5.00 ✓
5	Provision for cutting of roads and making good in original condition			LS		1.00 ✓
6	Provision for connection with HSVP/GMDA Master Line.			LS		2.00 ✓
7	Providing and installation of STP 160 KLD including civil tanks and all electro mechanical works.	KLD	160.00 ✓	16000.00 ✓		25.60 ✓
8	Provision for over flow line from S.T.P. to HSVP/GMDA line					
i)	150 mm dia pipe	M	197 ✓	2040.00		4.02 ✓
SUB TOTAL						49.41
Add 3% contingencies & PE charges						1.48 ✓
						50.89 ✓
Add 49% Deptt., price escalation unforeseen and administrator charges.						24.93 ✓
TOTAL						75.82 ✓
(C.O. TO FINAL ABSTRACT OF COST SUB WORK - II)						75.82 ✓



Sub Work III						Storm water drainage
S. No.	Description	Unit	Qty	Rate		In Lacs
1	Providing, lowering, jointing, cutting RCC NP3 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 0.2M to 4m	M	455	2500.00		11.38 ✓
	Including Over Flow Line					
ii)	500 mm i/d					
a)	Average depth 0.2M to 4m	M	110	2700.00		2.97 ✓
	Including Over Flow Line					
2	Provision for road gully and drain with connection pipe (300MM Ø)			LS		2.00 ✓
3	Provision for lighting, watching and temporary diversion of traffic.			LS		2.50 ✓
4	Provision for cutting of roads and making good in original condition.			LS		1.00 ✓
5	Construction of rain water harvesting pit of modular type as per details and specification given below, including, cost of excavation of all ind soil foundation trenches of drain including dressing of sides of ramming and getting out excavtion of soil.	Each ✓	6	350000.00 ✓		21.00 ✓
3	Provision for timbering & shoring			LS		1.00 ✓
7	Provision for storm water connection with HSV/P/GMDA Master Line.			LS		2.00 ✓
8	Provision for carriage of material & unforeseen items & Provision of temporary disposal arrangements till HSV/P/GMDA services are provided.			LS		5.00 ✓
				SUB TOTAL		48.85 ✓
				Add 3% contingencies & PE charges		1.47 ✓
						50.32
				Add 49% Deptt., price escalation unforeseen and administrator charges.		24.65 ✓
				TOTAL		74.97 ✓
	(C.O. TO FINAL ABSTRACT OF COST SUB WORK - III)			SAY		74.97 ✓



Sub Work IV							Road Work
S. No.	Description	Unit		Qty	Rate		In Lacs
1	Provision for levelling and earth filling as per site conditions.	Acre		6.54375 ✓	175000.00		11.45
2	Construction of road by- Blacktop or Bituminous road						56.40 ✓
	i) Providing GSB by 150 mm thick.						
	ii) 230 mm thick W.M.M. stone aggregate layer						
	iii) 50 mm DBM.						
	iv) 30 mm thick B.C. complete in all respect.						
	Total including 6 & 7.5M	Sq. M		3760 ✓	1500.00		
3	Miscellaneous items						
(a)	Providing for Kerbs & Channels AS PER Specification.	RMT		497 ✓	600.00		2.98 ✓
	<u>for 6.54375 ACRES</u>						
	7.5 m wide road m (429 x 2 = 858 RM)						



b	Construction of footpath with paver block over 100mm thick cement and concrete 1.0m wide on one side of 7.5 m wide road = $1.0 \times 429 = 429$ m. Total = 429 m.			429 ✓	1000.00		4.29 ✓
4	Provision for traffic control, lighting and guide map, lighting watching etc.			LS			2.00 ✓
5	Provision for carriage of material & other unforeseen items.			LS			2.00 ✓
6	Provision for plot indicator, guide maps etc.			LS			1.00 ✓
7	Provision for demarcation etc.			LS			0.50 ✓
8	Provision for Parking & pavement in Plaza / Open Area Cement coc. 1:4:8 + 80MM thick paver block	sqm		9975 ✓	1000.00 ✓		99.75 ✓
					SUB TOTAL		180.37 ✓
					Add 3% contingencies & PE charges		5.41 ✓
							185.78 ✓
					Add 49% Deptt., price escalation unforeseen and administrator charges.		91.03 ✓
					TOTAL		276.81 ✓
	(C.O. TO FINAL ABSTRACT OF COST)				SAY		276.81 ✓



S.NO	PARKING, PLAZA AREA & OPPEN AREA No. (P&O)	AREA in SQM	
1	P1	900	
2	P2	863	
3	P3	900	
4	P4	863	
5	O1	375	
6	O2	364	
7	O3	410	
8	PLAZA AREA	5300	
	TOTAL PARKING & OPPEN AREA	9975.00 ✓	
	SAY TOTAL	9975.000 ✓	
Total Length of 6, 7.5 & 12 M Wide Road	638.40 ✓	Total Area of 6, 7.5 & 12 M Wide Road	3830.40 ✓ 3759.90
Length SAY	640 Meters ✓	Area Say	3831 Sqm.

3760 sqm



Sub Work V						Street Lighting
S. No.	Description	Unit	Qty	Rate		In Lacs
1	Providing street lighting on internal roads as per standard specification of HVPNL and CFL complete in all respect AREA 6.54375 ACRES					
	Provision made on L.S. cost @ Rs.2,50,000.00 per acre	Acre.	6.54375 ✓	250000.00 ✓	per acres	16.36 ✓
				SUB TOTAL		16.36 ✓
				Add 3% contingencies & PE charges		0.49 ✓
						16.85 ✓
				Add 49% Deptt., price escalation unforeseen and administrator charges.		8.26 ✓
				TOTAL		25.11 ✓
	(C.O. TO FINAL ABSTRACT OF COST)			SAY		25.11 ✓



Sub Work VI						Horticulture
S. No.	Description	Unit	Qty	Rate		Amount
1	Development of lawn area					In Lacs
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 tranced 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/GMDA Norms)	Per acre	0.78	150000.00 ✓		1.17 ✓
2	Planting of trees with tree guards on roads at 6, 7.5 & 12m intervals					
	Total length of roads =608 mtr.					
	No of trees @ 12m c/c = 608x2/12 = 102 nos					
	say = 102 nos					
	Cost of the tree @ 2310/- each Cost Analysis of Planting Trees Excavation = 50.00 each Manure = 100.00 each Tree plants = 150.00 each Tree guards = 2000.00 each Total Cost = Rs. 2310.00 per tree	Nos.	102	2310.00 ✓		2.36 ✓
				SUB TOTAL		3.53 ✓
				Add 3% contingencies & PE charges		0.11 ✓
						3.63 ✓
				Add 49% Deptt.,price escalation unforeseen and administrator charges.		1.78 ✓
				TOTAL		5.41 ✓
	(C.O. TO FINAL ABSTRACT OF COST SUB WORK - VI)			SAY		5.41 ✓



Sub Work VII							Maintenance Charges of Road
S. No.	Description	Unit		Qty	Rate		Rs. 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/GMDA norms after completion and resurfacing of roads after 10 years or 1st phase.	Acre		6.54375	800000.00		52.35
2	Provision for resurfacing and strengthening of roads after 1st five years of 1st phase with 50 mm B.M. & 30 mm B.C.	Sq. M		3760 ✓	660.00		24.82 ✓
3	Provision for resurfacing and strengthening of road after 10 years of 2nd phase with 50 mm B.M. & 30 mm B.C.	Sq. M		3760 ✓	825.00		31.02 ✓
					TOTAL		108.19 ✓
					Add 3% contingencies & PE charges		3.25 ✓
					Sub-Total		111.44 ✓
					Add 49% Deptt., price escalation unforeseen and administrator charges.		54.60 ✓
					TOTAL		166.04 ✓
(C.O. TO FINAL ABSTRACT OF COST)					SAY		166.04 ✓



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MATERIAL OF DOMESTIC

SL NO	LINE NO	LENGTH OF PIPE	SIZE OF RISER PIPE IN MM Dia
1	MAIN LINE FROM HSVP/ GMDA	318	100
2	EFH LINE(M.S 'C' CLASS PIPES)	25	80



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MATERIAL OF DOMESTIC PIPE

SL NO	LINE NO		LENGTH OF PIPE	SIZE OF RISER PIPE IN MM Dia
1	UGT	D1	25	100
2	D1	D2	187	100
3	D1	D3	82	100
4	D4	D3	187	100
	TOTAL		480	
	SAY		480	



PROJECT : COMMERCIAL PLOTTED COLONY (SCO) AN AREA MEASURING 6.54375 ACS. IN SECTOR 84, VILLAGE SIHI, GURUGRAM (HARYANA)													
DESIGN CALCULATION FOR DOMESTIC WATER SYSTEM													
S. NO.	Reference line		NO OF UNIT			Popul. (Total No of Persons)	Total Require ment (In LPD)	Total Water Require ment. (In LPM)	D/A. (In MM)	Velocity m/sec	Length of Line (In Mtr)	(S) Slope of pipe Length	Head Loss for line Length (In Mtr)
	FROM	TO	SELF	PREVIOUS	TOTAL							Fitting Loss @ 10% of pipe length (In Mtr)	Total Head Loss (In Mtr)
1	UGT	D1	0	46	46	3395	44512	93	100	1.2	25	0.028	0.69
6	D1	D2	23	0	23	1697	22256	46	100	1.2	187	0.028	5.18
7	D1	D3	0	0	0	0	0	0	100	1.2	82	0.028	2.28
8	D4	D3	23	0	23	1697	22256	46	100	1.2	187	0.028	5.18
Total length=											480.0		



**PROJECT : COMMERCIAL PLOTTED COLONY (SCO) AN AREA MEASURING
6.54375 ACS. IN SECTOR 84, VILLAGE SIHI, GURUGRAM (HARYANA)**

MATERIAL OF GARDEN HYDRANT

	FROM	TO	25 MM	32 MM	40 MM	50 MM
1	G.H - 01	G.H - 02	50			
2	G.H - 02	G.H - 04		100		
3	G.H - 04	F - 02			23	
4	G.H -07	G.H -08	42			
5	G.H -08	G.H -10		100		
6	G.H -10	F04		46		
7	F-03	G.H -06	48			
		TOTAL LENGTH	140 mtr	246 mtr	23 mtr	0 mtr
		Say	140	246	23	0
TOTAL GARDEN HYDRANT = 10 Nos						



**PROJECT : COMMERCIAL PLOTTED COLONY (SCO) AN AREA
MEASURING 6.54375 ACS. IN SECTOR 84, VILLAGE SIHI, GURUGRAM
(HARYANA)**

MATERIAL OF FLUSHING PIPE

SL NO	LINE NO		LENGTH OF PIPE	SIZE OF RISER PIPE IN MM Dia
1	STP	F5	15	100
2	F5	F4	16.5	100
3	F4	F3	176	100
4	F5	F2	82	100
5	F2	F1	190	100
	TOTAL		480	
	Say		480	



PROJECT : COMMERCIAL PLOTTED COLONY (SCO) AN AREA MEASURING 6.54375 ACS. IN SECTOR 84, VILLAGE SIHI, GURUGRAM (HARYANA)

TITLE :- FLUSHING WATER SUPPLY HYDRAULIC CHART

S.NO	Line No		NO OF UNIT			Popul. (Total No of Person s)	Total Water Require ment in LPD	Average Demand @ 2.5 Times	Flow Rate LPM	Length of Pipe MTR.	Head Loss Mtr/ Mtr	Total Head Loss MTR.	Velocity M/SEC	Dia of Pipe Require d MM	Dia of Pipe MM	Ground LVL at start	Hydraulic LVL at start	Head at start	Ground LVL at End	Hydraulic LVL at End	Head at End
	From	To	SELF	PREVIOUS	TOTAL																
1	STP	F5	0	46	46	3395	47718	48	83	15	0.0004	0.01	0.176	37.51	100	225.28	270.280	45.00	225.28	270.274	44.99
2	F5	F4	1	0	1	74	1037	1	2	16.5	0.0000	0.00	0.004	5.53	100	225.28	270.27	44.99	225.28	270.27	44.99
3	F4	F3	22	23	45	3321	46680	47	81	176	0.0004	0.07	0.172	37.10	100	225.28	270.27	44.99	225.28	270.20	44.92
4	F5	F2	0	0	0	0	0	0	0	82	0.0000	0.00	0.000	0.00	100	225.33	270.20	44.87	225.28	270.20	44.92
5	F2	F1	23	0	23	1697	23859	24	41	190	0.0001	0.02	0.088	26.52	100	225.33	270.20	44.87	225.33	270.18	44.85
										Total Length= 479.5											



**PROJECT : COMMERCIAL PLOTTED COLONY (SCO) AN AREA MEASURING 6.54375 ACS. IN
SECTOR 84, VILLAGE SIHI, GURUGRAM (HARYANA)**

MATERIAL STATEMENT FOR SEWER WATER LINE

SL	LINE		200 MM DIA LENGTH	250 MM DIA LENGTH	TOTAL 200,250,300 MM LENGTH OF LINE
NO.	From	To	METER	METER	METER
1	S-01	S-02	183		183.0
2	S-02	S-04	84		84.0
4	S-03	S-04	181		181.0
	S-04	STP	10		10.0
	TOTAL		458.00	0.00	458.00
	SAY		458.00	0.00	458.00
STP BYPASS LINE 197 METER @ 150 MM DIA					



PROJECT : COMMERCIAL PLOTTED COLONY (SCO) AN AREA MEASURING 6.54375 ACS. IN SECTOR 84, VILLAGE SIHI, GURUGRAM (HARYANA)

DESIGN OF SEWERAGE SYSTEM

S.No.	sewerage Line No.	Length (m)	Design of Sewerage System			Population	Sewage flow @ 80%LPC D	Peak Flow (lps)	Peak Flow (lps)	Infiltration @ 25% Av. Discharge	Total discharge(lps)	Pipe Size (mm)	Slope (mm)	"C" Value	Velocity (m/s)	Capacity of pipe(lps)	Check	Fall (m)	Ground Level(m)		Invert Level(m)		q/Q	va/v	Actual velocity (va)	d/D	Depth(m)		Avg Depth of Manhole	
			Self	Prev.	Total														Start	End	Start	End								
																											Start	End		
	From To																													
			plots																											
1	S-01	S-02	183	23	0	23	1697	36892	92230	1.067	0.267	1.334	200	150	0.011	1.01	15.83	OK	1.220	225.50	225.50	224.10	222.88	0.030	0.460	0.463	0.130	1.400	2.620	2.010
2	S-02	S-04	84	0	23	23	1697	36892	92230	1.067	0.267	1.334	200	150	0.011	1.01	15.83	OK	0.560	225.50	225.50	222.88	222.32	0.030	0.460	0.463	0.130	2.620	3.180	2.900
4	S-03	S-04	181	23	0	23	1697	36892	92230	1.067	0.267	1.334	200	150	0.011	1.01	15.83	OK	1.207	225.50	225.50	224.10	222.89	0.030	0.460	0.463	0.130	1.400	2.607	2.003
5	S-04	STP	10	0	46	46	3395	73784	184460	2.135	0.534	2.669	200	150	0.011	1.01	15.83	OK	0.067	225.50	225.50	222.32	222.25	0.070	0.590	0.594	0.190	3.180	3.247	3.213



**PROJECT : COMMERCIAL PLOTTED COLONY (SCO) AN AREA
MEASURING 6.54375 ACS. IN SECTOR 84, VILLAGE SIHI, GURUGRAM
(HARYANA)**

MATERIAL STATEMENT OF STORM

SL	SW LINE		DIA OF	LENGTH OF LINE	
NO.	From	To	PIPE	400 MM DIA	500 MM DIA
			IN MM	METER	
1	SW-01	SW-02	400	119	
2	SW-02	SW-03	400	59	
3	SW-03	SW-04	400	42	
4	SW-04	SW-07	400	45	
5	SW-05	SW-06	400	107	
6	SW-06	SW-07	400	83	
7	SW-07	TO EXT.	500		110
TOTAL				455	110.0



PROJECT : COMMERCIAL PLOTTED COLONY (SCO) AN AREA MEASURING 6.54375 ACS. IN SECTOR 84, VILLAGE SIHL, GURUGRAM (HARYANA)

DESIGN CALCULATION FOR STORM WATER

S. NO.	NAME OF THE LINE	AREA TO BE SERVED IN ACRES		DISCHARGE @ 1/4" RAIN FALL	FINAL DISCHARGE	SIZE OF PIPE DRAIN (IN MM)	"C" VALUE	VELOCITY (In m/sec)	DISCHARGE CAPACITY OF PIPE (In LPS)	LENGTH OF PIPE (In mtrs.)	SLOPE (In mtrs.)	FALL IN METERS As per pipe slope (In mtrs.)	GROUND LEVEL		INVERT LEVEL		DEPTH OF PIPE AT		AVERAGE DEPTH OF PIPE (in mts)
		SELF	PREVIOUS	TOTAL	(In LPS)	In mm			(In LPS)	(In mtrs.)	(In mtrs.)	(In mtrs.)	U/End	L/End	U/End	L/End	U/End	L/End	
1	SW-01 SW-02	1.5	0.00	1.47	0.0103	400	0.013	0.78	98.21	119	450	0.264	225.50	225.50	224.30	224.04	1.20	1.46	1.33
2	SW-02 SW-03	1.1	1.47	2.60	0.0183	400	0.013	0.78	98.21	59	450	0.13	225.50	225.50	224.04	223.90	1.46	1.60	1.53
3	SW-03 SW-04	0.0	2.60	2.60	0.0183	400	0.013	0.78	98.21	42	450	0.09	225.50	225.50	223.90	223.81	1.60	1.69	1.64
4	SW-04 SW-07	1.3	2.60	3.94	0.0277	400	0.013	0.78	98.21	45	450	0.10	225.50	225.50	223.81	223.71	1.69	1.79	1.74
6	SW-05 SW-06	1.6	0.00	1.55	0.0109	400	0.013	0.78	98.21	107	450	0.24	225.50	225.50	224.30	224.06	1.20	1.44	1.32
7	SW-06 SW-07	1.0	1.55	2.60	0.0183	400	0.013	0.78	98.21	83	450	0.18	225.50	225.50	224.06	223.88	1.44	1.62	1.53
8	SW-07 TO EXT.	0.0	4.15	4.15	0.0292	500	0.013	0.82	161.07	110	550	0.20	225.50	225.50	223.71	223.51	1.79	1.99	1.89



PROJECT : COMMERCIAL PLOTTED COLONY (SCO) AN AREA MEASURING 6.54375 ACS. IN SECTOR 84, VILLAGE SIHI, GURUGRAM (HARYANA)

MATERIAL STATEMENT OF ROAD

6 METER WIDE PATH WAY

S.NO	NODE	WIDE(m)	LENGTH(m)	6 M	WIDTH Metalled	AREA in SQM
1	R5-R6	6	22 ✓	22.0	6	132 ✓
2	R7-R8	6	22 ✓	22.0	6	132 ✓
	Total 6 M Wide Road Length =		44.00 ✓	Total 6 M Wide Road Area =		264.000 ✓
	Add 5% for Curve		2.20 ✓			13.2 ✓
	TOTAL		46.20 ✓			277.200 ✓

S.NO	NODE	WIDE(m)	LENGTH(m)	7.5 M	WIDTH Metalled	AREA in SQM
1	R1-R2	7.5	216 ✓	216	6	1296 ✓
2	R3-R4	7.5	213 ✓	213	6	1278 ✓
	Total 7.5 M Wide Road Length =		429.00 ✓	Total 7.5 M Wide Road Area =		2574.000
	Add 5% for Curve		21.45 ✓			128.7
	TOTAL		450.45 ✓			2702.700

12 METER WIDE ROAD

S.NO	NODE	WIDE(m)	LENGTH(m)	12 M	WIDTH Metalled	AREA in SQM
1	R15-R16	12	135 ✓	135.0	5.50	742.50
	Total 12 M Wide Road Length =		135.00	Total 12 M Wide Road Area =		742.50
	Add 5% for Curve		6.75			37.12
	TOTAL		141.75			779.62 SAY 780 SQM





हरियाणा शहरी विकास प्राधिकरण

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Panchkula

C.E.I-No. 109211
Dated: 04/04/2025
Annexure-A

SUB:- Approval of service plan estimate for commercial plotted colony (SCO) over an area 6.54375 acres under license no. 8 of 2025 dated 14.01.2025 falling in the revenue estate of Village-Sihi, Sector-84, Gurugram being developed by M/s DLF Home Developers Ltd.

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.
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.




हरियाणा शहरी विकास प्राधिकरण

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8. Only D.I pipes will be used in water supply and flushing system, UPVC/ HDPE pipe for irrigation purposes.
9. A minimum 100 & 150mm i/d/D.I (K-7), 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. If needed, the same may be sought by the colonizer from concerned Executive Engineer of HSVP.
11. The developer may be directed to get the Sewage Treatment Plant (STP) got designed from a Govt. Institute like IIT, NIT etc. so as to ensure that the technology adopted by him is appropriate. He must take this action before construction of STP and submit documentary proof for the same at the time of grant of occupation certificate. The efficacy of such STP shall be checked randomly by the concerned Regional Officer of HSPCB.
12. 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. If needed, the same may be sought by the colonizer from concerned Executive Engineer of HSVP
13. The specifications for various roads will be followed as per IRC/MORTH specifications.
14. The wiring system of street lighting and specifications of street lighting fixture will be as per relevant standards.
15. This shall confirm to such other conditions as are incorporated in the approved estimate and the letter of approval.


Executive Engineer (M),
For Chief Administrator, HSVP,
Panchkula.