

INTERNAL DEVELOPMENT WORKS

DESIGN AND COST ESTIMATES

FOR

**COMMERCIAL PLOTTED COLONY ON LAND
MEASURING 4.55625 ACRES FALLING IN
THE REVENUE ESTATE OF VILLAGE
BEGUMPUR KHATOLA, SECTOR 75A
GURUGRAM**

OWNER

**ACTIVE PROMOTERS PVT LTD AND
BALALAIKA BUILDERS PRIVATE LIMITED IN
COLLABORATION WITH M/S EMMAR MGF
LAND LIMITED.**



ESTIMATE FOR PROVIDING INTERNAL DEVELOPMENT WORKS OF PLOTTED COMMERCIAL PLOTTED COLONY ON LAND MEASURING 4.55625 ACRES FALLING IN THE REVENUE ESTATE OF VILLAGE BEGUMPUR KHATOLA, SECTOR 75A GURUGRAM BEING DEVELOPED BY ACTIVE PROMOTERS PVT LTD AND BALALAIKA BUILDERS PRIVATE LIMITED IN COLLABORATION WITH M/S EMMAR MGF LAND LIMITED.

Report

Gurugram town of Haryana State is situated in 30 Kms from Delhi. Being in the national capital Region, the town has fast developing tendency and potential. Further, it has also started sharing the growing Industrial load of Delhi. In order to relieve the growing pressure of population in National Capital of Delhi, Haryana Shahari Vikas Pradhikaran (HSVP) has already developed many commercial/residential sectors. Further to the increasing demand HSVP has planned to develop new sectors in Gurugram. This report and estimate is for approximately 4.55625 Acres, Sector - 75A, Gurugram, proposed to be developed by Active Promoters Pvt. Ltd. and Balalaika Builders Private Limited In Collaboration With M/S Emmar Mgf Land Limited.

WATER SUPPLY

At present the source of water supply in this area is HSVP Supply direct connection to each plot. The water supply system has been designed as per the Hazen William formula.

DESIGN

The scheme has been designed for population as given in attached sheets.

SEWERAGE SCHEME

Sewer line from proposed development will be connecting to the proposed sewage treatment plant(STP). Surplus sewage / treated effluent shall be disposing to HSVP sewer line on Sector Road. The sewerage system has been marked on the respective plans.

Sewer lines have been designed for three times average D.W.F in relation to water supply demand. It has been assumed that about 80% of the domestic & flushing water supply shall find its way into the proposed sewer. Sewer lines shall be laid to a gradient maintaining minimum 2.46 ft./sec self-cleaning velocity. Sewer line up to 400mm dia has been designed to run half full and above 400mm dia has been designed to run three fourth full at peak flow. Necessary provision for laying S.W/RCC pipe sewer line, construction of required number of manholes etc., has been made in the estimate. Considering the future expansion/ development STP capacity is increased.

Necessary design statement for entire sewerage system has been prepared and attached with estimate. Manning's formula has been used on the design of sewerage system.

STORM WATER DRAINAGE

We are proposing to lay underground R.C.C. pipe drains with required number of catch basins, manholes and rainwater recharge pits with over flow to the Proposed HSVP storm drain on sector Road. The intensity of rain fall has been taken as ¼" per hour. R.C.C storm water line will be designed as per Manning's formula.



SPECIFICATIONS

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

ROADS

Estimate of Road work is prepared as per revised specifications adopted by HUDA

STREET LIGHTING

Provision for streets lights also has been made

HORTICULTURE

Estimates of plantation, landscaping, signage, etc., have been included

RATES

The estimate has been prepared based on the present market rates

COST

The total cost of the scheme, including cost of all services works out to be **Rs. 328,91,172.06**
Including 3% Contingencies and 49% Departmental Charges

Area of commercial development as per License **4.55625 Acre**

Net Cost Per Acre **Rs. 72,18,912.93**

**For: M/S ACTIVE PROMOTERS PVT LTD AND BALALAIKA BUILDERS PRIVATE LIMITED IN
COLLABORATION WITH M/S EMMAR MGF LAND LIMITED.**

Authorized Signatory



ESTIMATE FOR PROVIDING INTERNAL DEVELOPMENT WORKS OF PLOTTED COMMERCIAL PLOTTED COLONY ON LAND MEASURING 4.55625 ACRES FALLING IN THE REVENUE ESTATE OF VILLAGE BEGUMPUR KHATOLA, SECTOR 75A GURUGRAM BEING DEVELOPED BY ACTIVE PROMOTERS PVT LTD AND BALALAIKA BUILDERS PRIVATE LIMITED IN COLLABORATION WITH M/S EMMAR MGF LAND LIMITED.

DAILY WATER DEMAND & PUMPING SYSTEM													
Sl. No.	Description	Multi-dwelling unit or Area in Sqm.	Population /Unit or per Sqm.	Total Population	Water Demand in LPCD	Total Water Demand in LPD	Domestic Water Demand in LPCD	Total Domestic Water Demand in LPD	Flushing Water Demand in LPCD	Total Flushing Water Demand in LPD	Sewage Flow		
											80% of Domestic in LPD	100% Flushing of in LPD	Total Flow in LPD
A.	Block - A (10 Plots)												
1	Ground Floor (Retail)	1248.32	3	417									
1.1	Fixed Population @ 10% of			42	45	1890.00	25.00	1050.00	20.00	840.00	840.00	840	1680.00
1.2	Floating Population @ 90% of			375	15	5625.00	5.00	1875.00	10.00	3750.00	1500.00	3750	5250.00
2	First Floor (Retail)	833.16225	6	139									
2.1	Fixed Population @ 10% of			14	45	630.00	25.00	350.00	20.00	280.00	280.00	280	560.00
2.2	Floating Population @ 90% of			125	15	1875.00	5.00	625.00	10.00	1250.00	500.00	1250	1750.00
3	2nd, 3rd & 4th Floor (Office)	3258.9668	10	326	45	14670.00	25.00	8150.00	20.00	6520.00	6520.00	6520	13040.00
3.1	Visitors for Office Area @ 10%			33	15	495.00	5.00	165.00	10.00	330.00	132.00	330	462.00
	Total Block A			882		25185		12215		12970			22742
B.	Block B (15 Plots)												
1	Ground Floor (Retail)	1739.49	3	580									
1.1	Fixed Population @ 10% of			58	45	2610.00	25.00	1450.00	20.00	1160.00	1160.00	1160	2320.00
1.2	Floating Population @ 90% of			522	15	7830.00	5.00	2610.00	10.00	5220.00	2088.00	5220	7308.00
2	First Floor (Retail)	1208.226	6	202									
2.1	Fixed Population @ 10% of			21	45	945.00	25.00	525.00	20.00	420.00	420.00	420	840.00
2.2	Floating Population @ 90% of			181	15	2715.00	5.00	905.00	10.00	1810.00	724.00	1810	2534.00
3	2nd, 3rd & 4th Floor (Office)	4489.4805	10	449	45	20205.00	25.00	11225.00	20.00	8980.00	8980.00	8980	17960.00
3.1	Visitors for Office Area @ 10%			45	15	675.00	5.00	225.00	10.00	450.00	180.00	450	630.00
	Total Block B			1231		34980		16940		18040			31592
C.	Block C (13 Plots)												
1	Ground Floor (Retail)	1482	3	494									
1.1	Fixed Population @ 10% of			50	45	2250.00	25.00	1250.00	20.00	1000.00	1000.00	1000	2000.00
1.2	Floating Population @ 90% of			444	15	6660.00	5.00	2220.00	10.00	4440.00	1776.00	4440	6216.00
2	First Floor (Retail)	1051.3458	6	176									
2.1	Fixed Population @ 10% of			18	45	810.00	25.00	450.00	20.00	360.00	360.00	360	720.00
2.2	Floating Population @ 90% of			158	15	2370.00	5.00	790.00	10.00	1580.00	632.00	1580	2212.00
3	2nd, 3rd & 4th Floor (Office)	3814.2098	10	382	45	17190.00	25.00	9550.00	20.00	7640.00	7640.00	7640	15280.00
3.1	Visitors for Office Area @ 10%			39	15	585.00	5.00	195.00	10.00	390.00	156.00	390	546.00
	Total Block C			1052		29865		14455		15410			26974



D.	Block D (17 Plots)											
1	Ground Floor (Retail)	1983	3	661								
1.1	Fixed Population @ 10% of			67	45	3015.00	25.00	1675.00	20.00	1340.00	1340.00	1340
1.2	Floating Population @ 90% of			594	15	8910.00	5.00	2970.00	10.00	5940.00	2376.00	5940
2	First Floor (Retail)	1343.3843	6	224								
2.1	Fixed Population @ 10% of			23	45	1035.00	25.00	575.00	20.00	460.00	460.00	460
2.2	Floating Population @ 90% of			201	15	3015.00	5.00	1005.00	10.00	2010.00	804.00	2010
3	2nd, 3rd & 4th Floor (Office)	5122.8128	10	513	45	23085.00	25.00	12825.00	20.00	10260.00	10260.00	10260
3.1	Visitors for Office Area @ 10%			52	15	780.00	5.00	260.00	10.00	520.00	208.00	520
	Total Block D			1398		39840		19310		20530		35978
E.	Common											
	Maintenance Staff	L.S		30	45	1350.00	25.00	750.00	20.00	600.00	600.00	600
	Water Body Makeup	L.S				10000		10000				
	Horticulture area	3688			5	18440						
	Fiter Backwash	L.S				4600		4600				
	Total for Common Area (E)			30		34390		15350		600		1200
	Grand Total (A+B+C+D+E)			4593.00		164260.00		78270.00		67550.00		118486.00

Total Domestic Water Demand	78270	LPD	78 KLD
Total Flushing Water Demand	67550	LPD	68 KLD
Total Irrigation Water Demand	18440	LPD	18 KLD
Sewage Generated	118486	LPD	118 KLD
STP Capacity Add @ 20% as per MOEF	142183	LPD	142 KLD
SAY			145 KLD

Fire Water Tank Cap.											
Fire demand = $(100 * (P \text{ in thousand })^{1/2})/3$						SAY	72KL				
= $(100 * (0.4593)^{1/2})/3 \approx 71.43 \text{ KL only for Undrground static Reservior}$											
Total Underground Water Tank Capacity							156KL				



1	Water Transfer Pumpset (Domestic)									
	a)	Water Pump Capacity								
	i	Total Domestic Demand (i)					78			KLD
	ii	Daily Working Hrs for pumping					6			Hrs
	iii	Required Pumping Capacity					217			LPM
	iv	Proposed pump set (1 W + 1S)								
	v	Each pump Capacity						217		LPM
						Say		220		LPM
	b)	Water Pump Head								
	i	Suction lift					0			Mtr
	ii	Elevation Height					10			Mtr
	iii	Residual Head required at farthest ferrule					17			Mtr
	iv	Friction Head Loss					17			Mtr
	v	Total pump head required						44		Mtr
		Proposed Pump head						45		Mtr
	c)	Pump HP								
	i	Power Required each pump (Lpm*head (m)/75*60*.67(effi)						3.3		HP
						Say		5.0		HP
2	Flushing / Irr. Water Transfer Pump									
	a)	Flush. water Pump Capacity								
	i	Total Flu. / Irr. Demand (i)					68			KLD
	ii	Daily Working Hrs for pumping					6			Hrs
	iii	Required Pumping Capacity					188			LPM
	iv	Proposed pump set (1 W + 1S)								
	v	Each pump Capacity						188		LPM
						Say		190		LPM
	c)	Flushing water Pump Head								
	i	Suction lift					0			Mtr
	ii	Elevation Height					10			Mtr
	iii	Residual Head required at farthest ferrule					17			Mtr
	iv	Friction Head Loss					17			Mtr
	v	Total pump head required						44		Mtr
		Proposed Pump head						45		Mtr
	d)	Pump HP								
	i	Power Required each pump (Lpm*head (m)/75*60*.65(effi)						2.9		HP
						Say		5.0		HP
6	CAPACITY OF DG SET									
			No of Pump							
		Equipment Description	Working	Standby	Each	Total Power Consumption	Unit			
	i	Domestic Water Transfer Pumps (Working)	1	1	5.0	5.0	HP			
	ii	Flu. / Irr. Water Transfer Pumps (Working) for Ph. 1 & 3	1	1	5.0	5.0	HP			
		Total HP Required				10.0	HP			
		DG KVA Required (HP*.746)				7	KW			
		DG Capacity- Say				10	KVA			
6	HSVP Water Suply Line									
		Total Daily Water Demand	1.5 Times Daily Water Demand	Line	Flow	Proposed Dia	Length of Line	Frictionl Head Loss	Velocity	Total Head Loss
		LPD			LPM	mm	Mtr.	Mtr./ Mtr.	Mtr./Sec.	Mtr.
		78	117.41	Huda to UGT	0.08	65	320	0.000000017	0.0005	0.000



ESTIMATE FOR PROVIDING INTERNAL DEVELOPMENT WORKS OF PLOTTED COMMERCIAL PLOTTED COLONY ON LAND MEASURING 4.55625 ACRES FALLING IN THE REVENUE ESTATE OF VILLAGE BEGUMPUR KHATOLA, SECTOR 75A GURUGRAM BEING BEING DEVELOPED BY ACTIVE PROMOTERS PVT LTD AND BALALAIKA BUILDERS PRIVATE LIMITED IN COLLABORATION WITH M/S EMMAR MGF LAND LIMITED.

FINAL ABSTRACT OF COST

Description	Total of sub work	3% Contingencies	TOTAL	49% departmental	Grand Total
Sub Work-1					
Water Supply	25,78,375	77,351	26,55,726	13,01,306	39,57,032
Sub Work-2					
Sewerage	40,50,700	1,21,521	41,72,221	20,44,388	62,16,609
Sub Work-3					
Drainage	28,29,800	84,894	29,14,694	14,28,200	43,42,894
Sub Work-4					
Road Works	67,54,063	2,02,622	69,56,684	34,08,775	103,65,460
Sub Work-5					
Street Lighting	4,55,625	13,669	4,69,294	2,29,954	6,99,248
Sub Work-6					
Plantation & Road side Trees/Horticulture	3,78,750	11,363	3,90,113	1,91,155	5,81,268
Sub Work-7					
MTC Charge and Resurfacing of Road	43,84,350	1,31,531	45,15,881	22,12,781	67,28,662
TOTALS	Rs. 214,31,662.25	Rs. 6,42,949.87	Rs. 220,74,612.12	Rs. 108,16,559.94	Rs. 328,91,172.06
Amount	Rs. 328,91,172.06				

Area of commercial development as per License **4.55625 Acre**

Net Cost Per Acre Rs. 72,18,912.93

For: M/S ACTIVE PROMOTERS PVT LTD AND BALALAIKA BUILDERS PRIVATE LIMITED IN COLLABORATION WITH M/S EMMAR MGF LAND LIMITED.

Authorized Signatory



SUB WORK No. 1**WATER SUPPLY**

ESTIMATE FOR PROVIDING INTERNAL DEVELOPMENT WORKS OF PLOTTED COMMERCIAL PLOTTED COLONY ON LAND MEASURING 4.55625 ACRES FALLING IN THE REVENUE ESTATE OF VILLAGE BEGUMPUR KHATOLA, SECTOR 75A GURUGRAM BEING DEVELOPED BY ACTIVE PROMOTERS PVT LTD AND BALALAIKA BUILDERS PRIVATE LIMITED IN COLLABORATION WITH M/S EMMAR MGF LAND LIMITED.

S No.	Heads	Description	Amount
1	Sub Head 1	HSVP Water Supply	Rs. 4,13,500.00
2	Sub Head 2	Pumping and machinery	Rs. 11,79,000.00
3	Sub Head 3	Domestic Water supply	Rs. 5,98,530.00
4	Sub Head 4	Flushing/Irrigation System	Rs. 3,87,345.00
TOTAL			Rs. 25,78,375.00



SUB WORK No. 1		WATER SUPPLY
Sub Head 1		HUDA Water Supply Distribution System
ESTIMATE FOR PROVIDING INTERNAL DEVELOPMENT WORKS OF PLOTTED COMMERCIAL PLOTTED COLONY ON LAND MEASURING 4.55625 ACRES FALLING IN THE REVENUE ESTATE OF VILLAGE BEGUMPUR KHATOLA, SECTOR 75A GURUGRAM BEING DEVELOPED BY ACTIVE PROMOTERS PVT LTD AND BALALAIKA BUILDERS PRIVATE LIMITED IN COLLABORATION WITH M/S EMMAR MGF LAND LIMITED.		
S No.	Description	Amount
A	HSVP Rising Main	
1	Providing, laying, jointing and testing CI/DI/HDPE pipe lines Including cost of excavation etc. complete in all respects.	
a)	65 mm dia pipe 222 Mtr. @ Rs. 1,000	Rs. 2,22,000.00
2	Providing and fixing sluice valve and air release valve including cost of surface boxes and masonry chambers etc. complete in all respects	
a)	65 mm dia 1 Nos. @ Rs. 5,500	Rs. 5,500.00
3	Providing and fixing indicating plates for sluice valve and air valves	
a)	1 Nos. @ Rs. 6,000 each	Rs. 6,000.00
4	Provision for carriage for materials and other unforeseen items (L/S)	Rs. 30,000.00
5	Provision for cutting of roads and making good to its original conditions (L/S)	Rs. 50,000.00
6	Provision for making connection with HSVP water main (L/S)	
	1 Nos. @ Rs. 1,00,000	Rs. 1,00,000.00
Total of Sub Head 1		Carried over to summary of Sub work - 1
		Rs. 4,13,500.00



SUB WORK No. 1**WATER SUPPLY****Pumping and machinery****ESTIMATE FOR PROVIDING INTERNAL DEVELOPMENT WORKS OF PLOTTED COMMERCIAL PLOTTED COLONY ON LAND MEASURING 4.55625 ACRES FALLING IN THE REVENUE ESTATE OF VILLAGE BEGUMPUR KHATOLA, SECTOR 75A GURUGRAM BEING DEVELOPED BY ACTIVE PROMOTERS PVT LTD AND BALALAIKA**

S No.	Description	Amount
1	Providing & installing VFD based pumping set of following capacity for Domestic Supply	
a)	Capacity 220 LPM each pumps @ 45 mtr. 2 Nos. @ Rs. 90,000.00 each.	Rs. 1,80,000.00
2	Providing & installing VFD pumping set of following capacity for Flushing/Irrigation Pumps	
a)	Capacity 190 LPM each pumps @ 45 mtr. 2 Nos. @ Rs. 80,000.00 each.	Rs. 1,60,000.00
3	Provisions for chlorination plant complete 1 Nos @ Rs. 50,000.0 each	Rs. 50,000.00
4	Provision for making foundations and erection of pumping machinery 2 Set @ Rs. 25,000.00	Rs. 50,000.00
5	Provision for pipes, valves and specials inside the boosting chamber 2 Set @ Rs. 10,000.00	Rs. 20,000.00
6	Provision for Gen Set. 10 KVA @ Rs. 4,500.00	Rs. 45,000.00
7	Provision for Plumbing Plant Room and 150 KL Capacity water Tank complete in all respect 156 KL. @ Rs. 4,000.00 per KL	Rs. 6,24,000.00
9	Provision for carriage of material and other unforeseen items etc. L/S	Rs. 50,000.00
TOTAL COST TO SUB WORK - 1		Rs. 11,79,000.00



SUB WORK No. 1**WATER SUPPLY****Sub Head 3****Domestic Water supply**

ESTIMATE FOR PROVIDING INTERNAL DEVELOPMENT WORKS OF PLOTTED COMMERCIAL PLOTTED COLONY ON LAND MEASURING 4.55625 ACRES FALLING IN THE REVENUE ESTATE OF VILLAGE BEGUMPUR KHATOLA, SECTOR 75A GURUGRAM BEING DEVELOPED BY ACTIVE PROMOTERS PVT LTD AND BALALAIKA BUILDERS PRIVATE LIMITED IN COLLABORATION WITH M/S EMMAR MGF LAND LIMITED.

S No.	Description	Amount
1	Providing, laying, jointing and testing DI/CILA/HDPE/UPVC pipe lines including fittings, valves, cost of excavation etc. complete in all respects.	
a)	100 mm Pipe 545 Mtr @ Rs. 890 per Mtr	Rs. 4,85,050
2	Providing and fixing sluice valve including cost of surface boxes and masonry chambers etc. complete in all respects.	
a)	100 mm 4 Each @ Rs. 5,620	Rs. 22,480
3	Providing and fixing External Fire Hydrants including chamber	
	2 Nos @ Rs. 7,000	Rs. 14,000
4	Providing and fixing air release valve and scour valve	
	2 Nos @ Rs. 6,000	Rs. 12,000
5	Indication plate for valves, hydrant AV etc.	Rs. 25,000
6	Provision for carriage of materials and other unforeseen items	Rs. 40,000
TOTAL CO to SUB WORK - 1		Rs. 5,98,530.00



ESTIMATE FOR PROVIDING INTERNAL DEVELOPMENT WORKS OF PLOTTED COMMERCIAL PLOTTED COLONY ON LAND MEASURING 4.55625 ACRES FALLING IN THE REVENUE ESTATE OF VILLAGE BEGUMPUR KHATOLA, SECTOR 75A GURUGRAM BEING DEVELOPED BY ACTIVE PROMOTERS PVT LTD AND BALALAIKA BUILDERS PRIVATE LIMITED IN COLLABORATION WITH M/S EMMAR MGF LAND LIMITED.

Domestic Water supply hydraulic calculation																						
S No.	Line No	Total			Fixed Population			Floating Population			Domestic Water Demand @ 25 lpcd for Fixed Population and 5 lpcd for Floating Population	Total water demand ltr /day	Total water demand ltr /day (considering 6Hr pumping)	Length of Pipe	Proposed line dia.	Velocity in m/sec	head losse	self head losses	Total Head Loss	HL at Start	HL at End	Residual Head
		Self	Branch	Total	Self	Branch	Total	Self	Branch	Total												
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	23	24	25
		NOS	NOS	NOS	NOS			NOS			LPD	LPD	LPM	Mtr	MM	Mtr/sec	Mtr/Mtr	Mtr	Mtr	Mtr	Mtr	Mtr
1	WTP - D1		55	55	0	1993	1993	0	2769	2769	63670.0	63670.0	176.9	6	100	0.450	0.00322	0.0193	0.0193	45.00	44.98	44.961
2	D1 - D2	30	0	30	1087	0	1087	1511	0	1511	34730.0	34730.0	96.5	198	100	0.246	0.00105	0.2078	0.2271	44.981	44.77	44.546
3	D1 - D4		25	25	0	906	906	0	1258	1258	28940.0	28940.0	80.4	75	100	0.205	0.00075	0.0561	0.0755	44.981	44.92	44.849
4	D4 - D4A	15		15	544		544	755		755	17375.0	17375.0	48.3	102	100	0.123	0.00029	0.0297	0.1052	44.925	44.89	44.790
3	D4 - D5	10		10	362		362	503		503	11565.0	11565.0	32.1	164	100	0.082	0.00014	0.0225	0.0979	44.925	44.90	44.804



SUB WORK No. 1**WATER SUPPLY****Sub Head 4****Flushing/Irrigation System**

ESTIMATE FOR PROVIDING INTERNAL DEVELOPMENT WORKS OF PLOTTED COMMERCIAL PLOTTED COLONY ON LAND MEASURING 4.55625 ACRES FALLING IN THE REVENUE ESTATE OF VILLAGE BEGUMPUR KHATOLA, SECTOR 75A GURUGRAM BEING DEVELOPED BY ACTIVE PROMOTERS PVT LTD AND BALALAIKA BUILDERS PRIVATE LIMITED IN COLLABORATION WITH M/S EMMAR MGF LAND LIMITED.

S No.	Description	Amount
1	Providing, laying, jointing and testing pipes lines conforming uPVC pipe 10 Kg/Sq.cm Class-IV (IS: 4985) including cost of excavation etc. complete in all respects.	
1.1	75 mm Pipe 5 Mtr @ Rs. 575	Rs. 2,875.00
1.2	63 mm Pipe 580 Mtr @ Rs. 330	Rs. 1,91,400.00
1.3	50 mm Pipe 184 Mtr @ Rs. 330	Rs. 60,720.00
2	Providing and fixing sluice valve including cost of surface boxes and masonry chambers etc. complete in all respects.	
2.1	65 mm 1 Each @ Rs. 3,850	Rs. 3,850.00
2.2	50 mm 4 Each @ Rs. 3,500	Rs. 14,000.00
3	Providing and fixing Garden Hydrant 13 Nos. @ Rs. 2,500 each	Rs. 32,500.00
4	Providing and fixing air release valve and scour valve 2 Nos. @ Rs. 2,000 each	Rs. 4,000.00
5	Indication plate for valves, hydrant AV etc.	Rs. 30,000.00
6	Provision for carriage of materials and other unforeseen items	Rs. 48,000.00
TOTAL CO to SUB WORK - 1		Rs. 3,87,345.00



ESTIMATE FOR PROVIDING INTERNAL DEVELOPMENT WORKS OF PLOTTED COMMERCIAL PLOTTED COLONY ON LAND MEASURING 4.55625 ACRES FALLING IN THE REVENUE ESTATE OF VILLAGE BEGUMPUR KHATOLA, SECTOR 75A GURUGRAM BEING BEING DEVELOPED BY ACTIVE PROMOTERS PVT LTD AND BALALAIKA BUILDERS PRIVATE LIMITED IN COLLABORATION WITH M/S EMMAR MGF LAND LIMITED.

Flushing Water supply hydraulic calculation																									
S No.	Line No	Total			Fixed Population			Floating Population			Flushing Water Demand @ 20 lpcd for Fixed Population and 10 lpcd for Floating Population	Total water demand ltr /day	Total water demand ltr /day (considering 6Hr pumping)	Length of Pipe	Proposed line dia. (ID)	Velocity in m/sec	head losse	self head losses	Total Head Loss	HL at Start	HL at End	Residual Head	Remarks		
		Self	Branch	Total	Self	Branch	Total	Self	Branch	Total															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	23	24	25	26		
		NOS	NOS	NOS	NOS			NOS			LPD	LPD	LPM	Mtr	MM	Mtr/sec	Mtr/Mtr	Mtr	Mtr	Mtr	Mtr	Mtr			
1	STP - F1		55	55	0	1993	1993	0	2769	2769	67550.0	67550.0	187.6	5	65	1.130	0.02932	0.1466	0.1466	45.00	44.85	44.707			
2	F1 - F2		42	42	0	471	471	0	655	655	15970.0	15970.0	44.4	14	50	0.452	0.00728	0.1019	0.2485	44.853	44.75	44.503			
3	F2 - F2A			0	0		0	0		0	0.0	0.0	0.0	5	40	0.000	0.00000	0.0000	0.2485	44.751	44.75	44.503			
4	F2A - F2B			0	0		0	0		0	0.0	0.0	0.0	120	40	0.000	0.00000	0.0000	0.2485	44.751	44.75	44.503			
5	F1- F3	13		13	471		471	655		655	15970.0	15970.0	44.4	88	50	0.452	0.00728	0.6408	0.8893	44.751	44.11	43.221			
6	F2 - F4	17	25	42	616	906	1522	856	1258	2114	51580.0	51580.0	143.3	155	50	1.459	0.06385	9.8963	9.8963	44.853	34.96	25.061			
7	F4 - F4A			0	0		0	0		0	0.0	0.0	0.0	59	40	0.000	0.00000	0.0000	9.8963	34.957	34.96	25.061			
8	F4 - F5		25	25	0	906	906	0	1258	1258	30700.0	30700.0	85.3	16	50	0.868	0.02443	0.3908	10.2871	34.957	34.57	24.279			
9	F5 - F3	15		15	544		544	755		755	18430.0	18430.0	51.2	142	50	0.521	0.00949	1.3481	11.6353	34.566	33.22	21.583			
10	F5 - F6	10		10	362		362	503		503	12270.0	12270.0	34.1	165	50	0.347	0.00447	0.7375	11.0246	34.566	33.83	22.804			



SUB WORK No. 2**SEWERAGE SCHEME**

ESTIMATE FOR PROVIDING INTERNAL DEVELOPMENT WORKS OF PLOTTED COMMERCIAL PLOTTED COLONY ON LAND MEASURING 4.55625 ACRES FALLING IN THE REVENUE ESTATE OF VILLAGE BEGUMPUR KHATOLA, SECTOR 75A GURUGRAM BEING DEVELOPED BY ACTIVE PROMOTERS PVT LTD AND BALALAIKA BUILDERS PRIVATE LIMITED IN COLLABORATION WITH M/S EMMAR MGF LAND LIMITED.

S No.	Description	Amount (RS)
1	Providing, laying, jointing and testing Sewer pipe lines (stoneware pipes class SP-1/ DWC Pipes) including fittings, valves, Manholes & cost of excavation and connect to STP along with bypass to HSVP sewer line etc. complete in all respects.	
a)	200 mm dia Average Depth upto 2 Mtr. 542 Mtr. @ Rs. 1,300	Rs. 7,04,600.00
2	Providing, laying, jointing and testing Sewer by-pass pipe lines 90 od uPVC pipe 10kg/sqcm including fittings, Manholes & cost of excavation etc. complete in all respects.	
	90 mm OD Average Depth upto 1.5 Mtr. 322 Mtr. @ Rs. 1,050	Rs. 3,38,100.00
3	Sewage Treatment Plant of 145 KL@ Rs. 17600/ KL	Rs. 25,52,000.00
4	Provision for providing oblique junctions (L.S)	Rs. 96,000.00
5	Provision for temporary timbering etc. (L.S)	Rs. 80,000.00
6	Provision for carriage of material (L.S)	Rs. 80,000.00
7	Provision for providing and fixing vent shaft at suitable places as per PH requirements. (L.S)	Rs. 1,00,000.00
8	Provision for making connection with HSVP sewer	Rs. 1,00,000.00
TOTAL CO to FINAL ABSTRACT OF QUANTITY		Rs. 40,50,700.00



ESTIMATE FOR PROVIDING INTERNAL DEVELOPMENT WORKS OF PLOTTED COMMERCIAL PLOTTED COLONY ON LAND MEASURING 4.55625 ACRES FALLING IN THE REVENUE ESTATE OF VILLAGE BEGUMPUR KHATOLA, SECTOR 75A GURUGRAM BEING DEVELOPED BY ACTIVE PROMOTERS PVT LTD AND BALALAIKA BUILDERS PRIVATE LIMITED IN COLLABORATION WITH M/S EMMAR MGF LAND LIMITED.

DESIGN STATEMENT OF SEWERAGE LINE

S No	Line No		Plot		Total water consumption	Daily waste water (80%) of water consumption	Total Waste water (peak=average*3)	Total Waste water (peak=average*3)	Dia Proposed	Gradient	Velocity	Design discharge	Length	Fall in Pipe Line (m)	Invert Level Upper	Invert Level Lower	Average Depth	REMARKS
			Self	Total														
	From	To	Main Plots	Plots	LPD	LPD	LPD	LPS	mm	1/	m/Sec	LPS	Mtr	Mtr.	Mtr	Mtr	Mtr	
1	S1	S5	13	13	35374.182	28299.345	106122.55	1.23	200	260	0.65	10.17	85	0.33	-0.900	-1.227	1.0635	
1	S3	S4	10	10	27210.909	21768.727	65306.182	0.76	200	260	0.65	10.17	172	0.66	-0.900	-1.562	1.2308	
1	S4A	S4	15	15	40816.364	32653.091	97959.273	1.13	200	260	0.65	10.17	103	0.40	-0.900	-1.296	1.0981	
1	S4	S5	17	42	114285.82	91428.655	274285.96	3.17	200	260	0.65	10.17	179	0.69	-1.562	-2.250	1.9058	
1	S5	STP		55	149660	119728	359184	4.16	200	260	0.65	10.17	3	0.01	-2.250	-2.262	2.2558	
	BY Pass connection					119728	359184	4.16	90				322					



SUB WORK No. 3**STORM WATER DRAINAGE**

ESTIMATE FOR PROVIDING INTERNAL DEVELOPMENT WORKS OF PLOTTED COMMERCIAL PLOTTED COLONY ON LAND MEASURING 4.55625 ACRES FALLING IN THE REVENUE ESTATE OF VILLAGE BEGUMPUR KHATOLA, SECTOR 75A GURUGRAM BEING DEVELOPED BY ACTIVE PROMOTERS PVT LTD AND BALALAIKA BUILDERS PRIVATE LIMITED IN COLLABORATION WITH M/S EMMAR MGF LAND LIMITED.

S No.	Description	Amount
1	Providing, laying, RCC pipe class NP-2 excavation, manholes etc. complete in all respects	
a)	300 mm dia Average Depth upto 2 Mtr. 487.00 Mtr. @ Rs. 1,888	Rs. 9,19,456.00
a)	350 mm dia Average Depth upto 2 Mtr. 96.00 Mtr. @ Rs. 2,000	Rs. 1,92,000.00
a)	400 mm dia Average Depth upto 2 Mtr. 76.00 Mtr. @ Rs. 2,250	Rs. 1,71,000.00
2	Provision for lighting and watching and temporary diversion of traffic	Rs. 2,00,000.00
3	Provision for road gullies & connecting pipe L.S.	Rs. 2,50,000.00
4	Provision for rainwater harvesting arrangements	
	Rs. 1,75,000.00 per acre - 4.55625 Acre	Rs. 7,97,343.75
5	Provision for timbering & shoring (L.S.)	Rs. 1,50,000.00
6	Provision for making connection with HSVP (L/S)	Rs. 1,50,000.00
TOTAL CO to FINAL ABSTRACT OF QUANTITY		Rs. 28,29,799.75



ESTIMATE FOR PROVIDING INTERNAL DEVELOPMENT WORKS OF PLOTTED COMMERCIAL PLOTTED COLONY ON LAND MEASURING 4.55625 ACRES FALLING IN THE REVENUE ESTATE OF VILLAGE BEGUMPUR KHATOLA, SECTOR 75A GURUGRAM BEING DEVELOPED BY ACTIVE PROMOTERS PVT LTD AND BALALAIKA BUILDERS PRIVATE LIMITED IN COLLABORATION WITH M/S EMMAR MGF LAND LIMITED.

DESIGN OF STORM WATER DRAINAGE SYSTEM																
SL NO	LINE NO.	LENGTH	SELF AREA TO BE DRAINED IN	AREA IN HACTARES			DISCHARGE IN CUM/SEC RAIN INTENSITY =6.25mm	DISCHARGE	Pipe Dia	SLOPE	VELOCITY	DISCHARGE CAPACITY	FALL	INVERT LEVEL AT START	INVERT LEVEL AT END	REMARKS
	FROM	MTR	SQM	SELF	BRANCH	TOTAL	M3/HR	IN M3/SEC	in mm	1 IN	M/SEC	IN M3/SEC	MTR	MTR.	MTR	
1	W1-W2	72.00	2916	0.29		0.29	10.935	0.0030	300	400	0.684	0.05	0.180	-0.900	-1.080	
2	W2-W3	88.00	4879	0.49	0.29	0.78	29.232	0.0081	300	400	0.684	0.05	0.220	-1.080	-1.300	
3	W3A-W3	91.00	1534	0.15		0.15	5.753	0.0016	300	400	0.684	0.05	0.228	-0.900	-1.128	
4	W3-W4	19.00	739	0.07	0.93	1.01	37.756	0.0105	300	400	0.684	0.05	0.048	-1.300	-1.348	
5	W4a-W4c	86.00	1755	0.18		0.18	6.581	0.0018	300	400	0.684	0.05	0.215	-0.900	-1.115	
6	W4b-W4c	21.00	731	0.07		0.07	2.741	0.0008	300	400	0.684	0.05	0.053	-0.900	-0.953	
6	W4c-W4	49.00	1173	0.12	0.25	0.37	13.722	0.0038	300	400	0.684	0.05	0.123	-1.115	-1.238	
7	W4-W5	96.00	1353	0.14	1.37	1.51	56.551	0.0157	350	470	0.699	0.07	0.204	-1.398	-1.602	
8	W5a-W5	61.00	2632	0.26		0.26	9.870	0.0027	300	350	0.731	0.05	0.174	-0.900	-1.074	
9	W5-W6	33.00	726	0.07	1.77	1.84	69.144	0.0192	400	600	0.677	0.08	0.055	-1.652	-1.707	
10	W6-OUTFALL	43.00		0.00	1.84	1.84	69.144	0.0192	400	600	0.677	0.08	0.072	-1.707	-1.778	



SUB WORK No. 4**ROAD WORK**

ESTIMATE FOR PROVIDING INTERNAL DEVELOPMENT WORKS OF PLOTTED COMMERCIAL PLOTTED COLONY ON LAND MEASURING 4.55625 ACRES FALLING IN THE REVENUE ESTATE OF VILLAGE BEGUMPUR KHATOLA, SECTOR 75A GURUGRAM BEING DEVELOPED BY ACTIVE PROMOTERS PVT LTD AND BALALAIKA BUILDERS PRIVATE LIMITED IN COLLABORATION WITH M/S EMMAR MGF LAND LIMITED.

Width in meter	length in meter	Metalled Portion	Area in Sqm.
5	0	5	0
6	135	6	810
7	380	7	2660
12	60	7	420
24	75	14	1050
Total	650		4940
		Add 5% for curves	247
		Total Area	5187

No. of Cars on surface	175 Nos			
Area	5 x	2.50 x	175	2187.5
Total Area			7374.5	
	SAY		7380	

S No.	Description	Amount
1	Provision for leveling & earth filling as per site condition	
	Approx 4.55625 Acre @ Rs. 80,000 per acre	Rs. 3,64,500.00
2a	P/L 100mm thick (compacted) WBM with earth as per most Specification using 63-40mm size stone aggregate. The rate is Inclusive of all labour, material & equipment etc.	
	7380 Sqm @ Rs. 250 per sqm	Rs. 18,45,000.00
2b	Provision for making connection with HSVP (L/S)	
	7380 Sqm @ Rs. 250 per sqm	Rs. 18,45,000.00
2c	25mm thick premix carpet with seal coat	
	7380 Sqm @ Rs. 300 per sqm	Rs. 22,14,000.00
3	Provision for guide map and other unforeseen item L.S	Rs. 80,000.00
4	Provision for plot indicators L.S	Rs. 80,000.00
5	Provision for demarcating burgies L.S	Rs. 80,000.00
6	Provision for traffic arrangement L.S	Rs. 1,20,000.00
7	Provision for making approach to each plot.	
	Approx 4.55625 Acre @ Rs. 10,000 per acre	Rs. 45,562.50
8	Provision for carriage of material & unforeseen items L.S	Rs. 80,000.00
	TOTAL CO to FINAL ABSTRACT OF QUANTITY	Rs. 67,54,062.50



SUB WORK No. 4**ROAD WORK**

ESTIMATE FOR PROVIDING INTERNAL DEVELOPMENT WORKS OF PLOTTED COMMERCIAL PLOTTED COLONY ON LAND MEASURING 4.55625 ACRES FALLING IN THE REVENUE ESTATE OF VILLAGE BEGUMPUR KHATOLA, SECTOR 75A GURUGRAM BEING DEVELOPED BY ACTIVE PROMOTERS PVT LTD AND BALALAIKA BUILDERS PRIVATE LIMITED IN COLLABORATION WITH M/S EMMAR MGF LAND LIMITED.

Sl. No.	Node	Road Width in Mtr.				
		6 Mtr. Wide	7 Mtr. Wide	9 Mtr. Wide	12 Mtr. Wide	24 Mtr. Wide
1	R1	74.5
2	R2	56
3	R3	144
4	R4	12.5
5	R5	12.5
6	R6	34
7	R7	74.5
8	R8	102
9	R9	18
10	R10	36.5
11	R11	16.5
12	R12	43.5
13	R13	17.5
	Total	132	379.5	0	56	74.5
	SAY	135	380	0	60	75



SUB WORK No. 5**Street Lighting**

ESTIMATE FOR PROVIDING INTERNAL DEVELOPMENT WORKS OF PLOTTED COMMERCIAL PLOTTED COLONY ON LAND MEASURING 4.55625 ACRES FALLING IN THE REVENUE ESTATE OF VILLAGE BEGUMPUR KHATOLA, SECTOR 75A GURUGRAM BEING BEING DEVELOPED BY ACTIVE PROMOTERS PVT LTD AND BALALAIKA BUILDERS PRIVATE LIMITED IN COLLABORATION WITH M/S EMMAR MGF LAND LIMITED.

S No.	Description	Amount
1	Providing street lightning on roads as per standard specifications of HVPN.	
	Approx 4.55625 Acre @ Rs. 1,00,000 per acre	Rs. 4,55,625.00
	TOTAL CO to FINAL ABSTRACT OF QUANTITY	Rs. 4,55,625.00



SUB WORK No. 6**Plantation & Road side Trees/Horticulture**

ESTIMATE FOR PROVIDING INTERNAL DEVELOPMENT WORKS OF PLOTTED COMMERCIAL PLOTTED COLONY ON LAND MEASURING 4.55625 ACRES FALLING IN THE REVENUE ESTATE OF VILLAGE BEGUMPUR KHATOLA, SECTOR 75A GURUGRAM BEING DEVELOPED BY ACTIVE PROMOTERS PVT LTD AND BALALAIKA BUILDERS PRIVATE LIMITED IN COLLABORATION WITH M/S EMMAR MGF LAND LIMITED.

S No.	Description	Amount
1	Development of Green areas	
a	Trenching the ordinary soil up to dept of 60 cm including removal and stacking of serviceable material and disposing of by spreading and leveling within a lead to 50m and making up the trenches area of proper leads by filling with earth mixed with manure before and after flooding trench with water including cost of imported earth and manure	
b	Rough dressing of roof area	
	Grassing with "Doob Grass" including watering and maintenance of lawns for 30 days till the grass a thick lawn, free weeds and fit for moving in rows 7.5m apart in either direction including provision for hedges and barbed wire fencing around park.	
	Approx. 4.55625 Acres @ Rs. 80,000 per Acres	Rs. 3,64,500.00
2	Planting Tree	
a	Provision of trees, along 12.0 M wide(One Side) and 24 M wide (Both Side) roads at 12 Mtr intervals.	
	$(60/12) + ((75) \times 2/12) = 19$ @ Rs. 750 per tree	Rs. 14,250.00
	TOTAL CO to FINAL ABSTRACT OF QUANTITY	Rs. 3,78,750.00



SUB WORK No. 7**MTC Charge and Resurfacing of Road**

ESTIMATE FOR PROVIDING INTERNAL DEVELOPMENT WORKS OF PLOTTED COMMERCIAL PLOTTED COLONY ON LAND MEASURING 4.55625 ACRES FALLING IN THE REVENUE ESTATE OF VILLAGE BEGUMPUR KHATOLA, SECTOR 75A GURUGRAM BEING BEING DEVELOPED BY ACTIVE PROMOTERS PVT LTD AND BALALAIKA BUILDERS PRIVATE LIMITED IN COLLABORATION WITH M/S EMMAR MGF LAND LIMITED.

S No.	Description	Amount
1	Provision for maintenance charge for Water supply, sewerage, storm water, Drainage, roads, street light, Hort. Etc. Complete including operation & Establishment charges as per HSVP Norms after completion.	
	Area 4.55625 Acre @ Rs. 1,20,000 per acre	Rs. 5,46,750.00
2	Provision for resurfacing of roads after First five year of maintenance.	
	Total Road area 7380.00 Sqmt @ Rs. 400 per Sqmt	Rs. 29,52,000.00
3	Provision for resurfacing of roads after 10 Years of MTC.	
	Total Road area 7380.00 Sqmt @ Rs. 120 per Sqmt	Rs. 8,85,600.00
	TOTAL CO to FINAL ABSTRACT OF QUANTITY	Rs. 43,84,350.00

