

# PYRAMID DREAMHOMES

LLPIN: AAL-5039 | GSTIN: 06AAVFP4202E1ZC

To

Date:-11.01.2021

The Executive Engineer,

HSVP, Division No.- 4

Gurugram.

**Subject:- Approval of the Service Plan Estimate of the Affordable Group Housing Colony on the land measuring 4.3375 Acres in Sector- 70, Gurugram being developed by Pyramid Dream Homes LLP.**

Dear Sir,

With reference to the above mentioned subject, we hereby submitting Five sets of the service plan estimate for your consideration please.

Kindly do the needful and oblige.

Thanking you,

Yours truly,

For Pyramid Dream Homes LLP  
For PYRAMID DREAM HOMES LLP

  
Authorised Signatory

Authorized Signatory

Executive Engineer  
HSVP Division No. IV  
Gurugram

Cc:- Director, Town & Country Planning, Haryana, Chandigarh

*Pyoole*  
11-1-2021

**PYRAMID DREAM HOMES LLP**

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**SERVICE ESTIMATE, DESIGN REPORT AND  
CALCULATION OF  
INTERNAL DEVELOPMENT WORKS**

**FOR**

**PROPOSED "AFFORDABLE GROUP HOUSING COLONY AREA  
MEASURING 4.3375 ACRES (LICENSE NO. 26 OF 2020 DATED  
25.09.2020) IN SECTOR – 70, GURUGRAM – MANESAR URBAN  
COMPLEX BEING DEVELOPED BY M/S PYRAMID INFRATECH  
PVT.LTD.**

**SERVICE ESTIMATE, DESIGN REPORT AND CALCULATIONS OF INTERNAL DEVELOPMENT WORKS FOR PROPOSED "AFFORDABLE GROUP HOUSING COLONY" AREA MEASURING 4.3375 ACRES (LICENSE No. 26 of 2020 Dated 25.09.2020) IN SECTOR - 70, GURUGRAM - MANESAR URBAN COMPLEX BEING DEVELOPED BY M/S PYRAMID INFRA TECH PVT.LTD.**

Gurugram town of Haryana State situated on N.H. -8 road at a distance of 35 Km from Delhi. Being in the national capital region, the town has fast developing tendency and potential. Further, it has also started sharing the growing residential, commercial and Industrial load of Delhi. In order to review the growing pressure of population in National Capital of Delhi, It has been decided by the Haryana Government to develop various infrastructure facilities in Gurugram Manesar Urban Complex. This report is for a part of service estimate for proposed "Affordable Group Housing Colony" measuring 4.3375 acres (License No. 26 of 2020 dated 25.09.2020) in Sector - 70, Gurugram - Manesar urban complex being developed by M/s Pyramid Infratech Pvt. Ltd. has been prepared with the following provisions which are as under :-

**1. WATER SUPPLY**

The source of water supply in this area is by HSVP Mains. It has been proposed to construct two underground tanks of capacity as per attached details and to location for domestic purpose and for fire protection. The underground tanks will be fed from the HSVP based supply, which will feed O.H. tanks on the roof of the Building and has been designed as per the Hazen Williams formula. Presently there is proposed / under execution HSVP W/S in this area. However the provision of tube wells have been taken due to non availability of water but after getting the approval from the competent authority through tube wells / tankers / any other approved source till HSVP W/S will be made available. The proposed tube wells shall be 510mm bore drilled with reverse rotary rig and installed with 80mm i/d housing pipe and 50mm i/d slotted tube as strainer, hence the provision of 1 Nos Tube Wells have been taken in this estimate.

**DESIGN**

The scheme has been designed for population of 3420 persons and considering @ 5 persons / units for Affordable Group Housing and other provision etc. The combined quantum of water supply (domestic + flushing) per head / day has been taken as 172.50 Liters per head per day as per design calculation.

**PUMPING EQUIPMENTS**

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

**2. SEWERAGE**

The scheme is designed for sewer connecting to the STP and bypass connection to HSVP sewer scheme. The sewer lines have designed for three times average D.W.F in relation to water supply demand. It has assumed that about 80% of the domestic and flushing water supply shall find its way into the proposed sewer. Sewer lines shall be running by gravity and discharge to STP proposed. Treated water will be used for Irrigation & Flushing purpose (through recycling) under the pipe line system.

**3. STORM WATER DRAINAGE**

It has been proposed to lay R.C.C pipes with required number of manholes for disposal of storm water, which will be connected to the HSVP drain. The intensity of rain fall has been taken as 6.00mm per hour. A minimum size of 400mm i/d R.C.C pipe for storm water drain will be provided and designed as per Manning's formula. Necessary provision of rainwater harvesting arrangement has also been taken in this estimate.

**4. ROADS**

Road, Parking and Pavement have been provided to above areas and estimate is prepared as revised specifications adopted by HSVP.

**5. STREET LIGHTING AND ELECTRIFICATION :-**

Provision for external lighting and electrification of proposed area has been made.

**6. HORTICULTURE :-**

Estimate and details of plantation, landscaping, signage etc. have been included.

**7. FIRE FIGHTING :-**

Provision of Fire Fighting system has been made.

**8. SPECIFICATIONS**

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

**9. RATES**

The estimate has been based on the present market rates.

**10. COST**

The total cost of the scheme including cost of all services works out to Rs. 393.46 Lacs (Rupees Three Crores Ninety Three Lacs Forty Six Thousand only) including 3% contingencies and 49% departmental charges + Price escalation and cost per acre comes out to Rs. 90.72 Lacs.

(Authorized Signatory)

**1. DESIGN CALCULATION :-**

Total Area of plot (commercial)	= 4.3375 Acres or 17553.212 Sqm
Permissible Ground Coverage 50%	= 8776.606 Sqm
Proposed Ground Floor	= 8776.606 Sqm
Permissible F.A.R. @ 2.25% (Resi.)	= 37914.938 Sqm
Add@12% Green Building	= 2022.130 Sqm
Total F.A.R.	= 39937.068 Sqm
Proposed F.A.R Achieved (Resi.)	= 39865.482 Sqm
Proposed area of commercial (F.A.R)	= 1312.447 Sqm
Community Building	= 197.280 Sqm
Anganwari	= 197.280 Sqm

**Detail of Units**

No. of Units	No. of Floors	No. of Block	Unit / Block	Total Unit	Density
Tower - 1	G + 14	1	118	118	590
Tower - 2	G + 14	1	118	118	590
Tower - 3	G + 14	1	118	118	590
Tower - 4	G + 14	1	118	118	590
Tower - 5	G + 14	1	118	118	590
Tower - 6	G + 11	1	94	94	470
<b>Total Density</b>				<b>684</b>	<b>3420</b>

**I) Water Requirement :-**

Total Population	= 3420 Persons
@ 172.50 LPCD	= 5,89,950.00 LPD
Commercial & Community Buildings :-	
• Commercial	= 1312.447 Sqm
@ 3 Sqm / person = 438 Persons @ 45 LPCD	= 19710 LPD
• Community Building (Area 197.280 Sqm)L.S	= 10000.00 LPD
• Anganwari (Area 197.280 Sqm) L.S	= 10000.00 LPD
<b>Total</b>	<b>= 6,29,660.00 LPD Or 630 KLD</b>
	<b>Say 650 KLD</b>

**II. FIRE DEMAND**

(i) Population	= 3420 Persons
(p) $\frac{1}{2} \times 100/1000 = (3.420) \frac{1}{2} \times 100$	= 184.93 KLD      Say 200 KLD

**III. Garden Irrigation Requirement (For Total Area) = 60.00 KLD****IV. Total Water Requirement for UGT**

(Excluding Fire Demand)

Hence Domestic Water Requirement (67%) = 650 x 67% = 436.00 KLD

Hence Flushing Water Requirement (33%) = 650 x 33% = 214.00 KLD

Half Day Requirement = 230 K.L. for Domestic

= 120 K.L. for Flushing

But it is proposed to construct an UGT 230 K.L. in two compartment for domestic use and 120 K.L. for non potable water in two compartment (at STP) and 200 K.L. for fire fighting purposes for UGT in two compartment as shown location in the plan.

Total Capacity of UGT = 230 + 200	= 430.00 KLD
Total Requirement for Flushing at STP	= 120.00 KLD
<b>V. Tube Well</b>	<b>For UGT</b>
a) Yield	= 15 K.L. / Hr.
b) Working Hour per day	= 16 Hr. / Per Day
c) Total water demand	= 436 M3/Day
d) Number of tube well required (Water Demand / Discharge / Hr. working Per day)	= 1.82 Nos
e) Add 5% extra	= 0.09
Total	= 1.91 Nos
Say	= 2 Nos

Water to the proposed development is to be supplied by HSVP. However consider 50% T.W.'s it is proposed to install only one no tube well for augmentation / standby purposes and provision has also been taken in the estimates due to non availability of water but after getting the approval from the competent authority.

<b>VI) Pumping Machinery for Tube wells</b>	
a) Gross Working Head	= 80 Mtr
b) Average fall in S.L	= 2 Mtr
c) Depression Head	= 6 Mtr
d) Friction loss in main	= 10 Mtr
Total	= 98 Mtr
e) Discharge	= 15000 LPH (Or 4.17 LPS Say 4.50 LPS)
f) Horse Power	= 9.80 H.P.
HP = (4.50 x 98) / (75 x 0.60)	
Say	= 10.00 H.P.

It is proposed to provide 1 No. pumping set of 4.50 LPS discharge at 98 Mtr head (1W)

<b>VII) Boosting Machinery for domestic water For UGT</b>	
Total Water Requirement	= 436.00 KLD
Pumping per hour @ 8 hr. pumping / day= 436 / 8 KL / hr.	
	= 54.50 KL / hr.
	= 908.33 lpm = 15.14 lps
	Say 2 No. 10.00 lps each
Gross working head	For UGT
- Suction lift	= 5.00 mts.
- Frictional loss in mains & specials	= 5.00 mts.
- Clear Head required	= 75.00 mts.
Total	= 85.00 mts.
Say	= 85.00 mts.
Pump HP	= (10.00x85)/(75x0.60)
	= 18.88 H.P.
Say	= 20.00 HP

It is proposed to provide 3 NoS of pumping set of 10.00 lps discharge at 85mts Head each (2W + 1S) for UGT.

**VIII) Boosting Machinery for flushing water at STP**

<b>Total Water Requirement</b>	= 214 K.L.D
Pumping per hour @ 8 hr. pumping / day	= 214 /8 KL / hr. = 26.75 KL / hr. = 445.83 lpm = 7.43 lps, Say 2 No. 5.00 lps each
Gross working head	
- Suction lift	= 5.00 mts.
- Frictional loss in mains & specials	= 5.00 mts.
- Clear Head required	= 75.00 mts.
Total	= 85.00 mts.
Say	= 85.00 mts.
Pump HP	= (5.00 x 85) / (75 x 0.60) = 9.44 HP Say = 10.00 HP

It is proposed to provide 3 Nos of pumping set of 5.00 lps discharge at 85 mts Head each (2W + 1S)

**IX) Boosting Machinery for Irrigation water**

<b>Total Water Requirement</b>	= 60 KLD
Pumping per hour @ 5 hr. pumping / day	= 60 /5 KL / hr. = 12.00 KL / hr. = 200.00 lpm = 3.33 lps Say = 5.00 LPS
Gross working head	
- Suction lift	= 3.00 mts.
- Frictional loss in mains & specials	= 3.00 mts.
- Clear Head required	= 25.00 mts.
Total	= 31.00 mts.
Say	= 31.00 mts.
Pump HP	= (5.00 x 31) / (75 x 0.60) = 3.44 HP Say = 5.00 HP

It is proposed to provide 2 No. of pumping set of 5.00 lps discharge at 31 mts Head each (1W + 1S)

**X) Boosting Machinery for Fire water****Total Water Requirement**

Hydrant pump as per CFO Directive	= 2280 LPM, 95M Head and 80 H.P = 1 Nos
Jockey pump (Hydrant) as per NBC table No. 23	= 180 LPM, 95M Head and 7.50 H.P = 1 Nos
Diesel pump as per CFO Directive	= 2280 LPM, 95 M Head and 80 H.P = 1Nos
<b>Gross working head</b>	
- Suction lift	= 5.00 mts.
- Frictional loss in mains & specials	= 5.00 mts.
- Clear Head required	= 85.00 mts.
Total	= 95.00 mts.
Jockey Pump HP (Fire)	= $(3 \times 95) / (75 \times 0.60)$
	= 6.33HP
Say	= 7.50 HP

**XI) DG Set for plumbing****DG Set Requirement**

	<b>For UGT</b>
Submersible Pump (1 x 10)	= 10.00 HP
Domestic Pump (2 x 20)	= 40.00 HP
Flushing Pump at STP (2 x 10)	= 20.00 HP
Street Light and other etc.	= 10.00 HP
Fire Jockey pump	= <u>7.50 HP</u>
<b>Total pump load</b>	<b>= 87.50 HP</b>
	= $87.50 \times 0.746 \times 1.50$
	= 97.91 K.W
<b>Total DG capacity</b>	<b>= 1 No. 100 KVA</b>

Hence it is proposed to provide 1 No. D.G. Set of 100 KVA capacity for UGT.

**FLOW TO SEWAGE TREATMENT PLANT**

**Total Water Requirement = 650 KLD (436 for domestic & 214 KLD for flushing)**

i) 80% of total Domestic Water Demand = 80% of 436 KLD	= 348.80 KLD
ii) 75% of total Flushing Water Demand = 80% of 214 KLD	= <u>171.20 KLD</u>
<b>Total</b>	<b>= 520.00 KLD</b>
Considering 5% marginal factor	= <u>26.00 KLD</u>
<b>G. Total</b>	<b>= 546.00 KLD</b>

Say 550 KLD

**Proposed STP Capacity = 550 KLD Or 0.55 MLD**

(Authorized Signatory)



**FINAL ABSTRACT OF COST**

SR. NO.	SUB WORK	DESCRIPTION	AMOUNT (Rs. In Lacs)
1	SUB WORK NO. I	WATER SUPPLY SCHEME	123.63
2	SUB WORK NO. II	SEWERAGE SCHEME	93.53
3	SUB WORK NO. III	STORM WATER DRAINAGE	48.69
4	SUB WORK NO. IV	ROAD AND FOOTPATH	57.38
5	SUB WORK NO. V	STREET LIGHTING	6.66
6	SUB WORK NO. VI	HORTICULTURE (PLANTATION & ROAD SIDE TREES)	6.96
7	SUB WORK NO. VII	MTC. OF SERVICES & RESURFACING OF ROADS (After 1st 5 years of 1st Phase & Next 5 years in 2nd Phase)	56.61
		<b>TOTAL</b>	<b>393.46</b>
<b>TOTAL : (Rupees Three Crore Ninety Three Lacs Fourty Six Thousand only)</b>			

Cost Per Acre = Rs.393.46 Lacs / 4.3375 = 90.72 Lacs Per Acre

**AUTHORISED SIGNATORY**

## SUB WORK NO. 1 (Abstract of cost)

## WATER SUPPLY SCHEME

SR. NO.	SUB WORK	DESCRIPTION	AMOUNT (Rs. In Lacs)
1	Sub Head No. 01	Head Works	24.15
2	Sub Head No. 02	Pumping Machinery	26.10
3	Sub Head No. 03	Water Supply Distribution & Rising main pipe	16.48
4	Sub Head No. 04	External Fire Hydrants	11.45
6	Sub Head No. 05	Irrigation	2.37
		<b>TOTAL</b>	<b>80.55</b>
		Add 3% contingency & P.H. Services	2.42
		<b>Total</b>	<b>82.97</b>
		Add 49% Department charges + Price Escalation	40.66
		<b>G. Total</b>	<b>123.63</b>
		<b>Say in Lacs</b>	<b>123.63</b>

(C.O. to Final Abstract Of Cost)

**SUB WORK NO. I**  
**Sub Head No. 01**

**WATER SUPPLY**  
**Head Works**

/b

Sr. NO.	Description	Amount in Rs.
1	Construction of U.G. tanks and Fire Tank Including pipes, valve & Specials. 430 KLD @ Rs. 3500/- per K.L.D	1505000
2	Provision for construction of Boosting Station 1 Nos @ Rs. 250000/- each	250000.00
3	Boring and installing tube well reverse rotary rig complete with pipes and strainer to a depth of about 120 Mtr complete in all respect. 1 Nos @ Rs. 500000/- each	500000.00
4	Provision for construction of tube well chamber size 1.50m x 1.50m complete in all respect. 1 Nos @ Rs. 80000/- each	80000.00
5	Provision for carriage of material and unforeseen items L.S.	30000.00
6	Provision of specials for tube well & rising main to UGT L.S.	50000.00
	<b>Total</b>	<b>2415000.00</b>
	<b>Say</b>	<b>24.15</b>

(C.O. to Abstract of cost of Sub Work No. I)

**SUB WORK NO. 1**  
**Sub Head No. 02**

**WATER SUPPLY**  
**Pumping Machinery**

Sr. NO.	Description	Amount in Rs.
1	Providing and installing Hydro pneumatic pumping set of following capacities for domestic water Supply with specials	
	10.00 lps at 85 mts head - 3 No. (2W+1SB) - @ Rs. 1,00,000/- each Set (20.00HP)	300000
2	Providing and installing Hydro Pneumatic pumping set of following capacities for Flushing water supply at STP	
	5.00 lps at 85 mts head - 3 No. (2W+1SB) @ Rs. 1,00,000/- 1 Set (10.00 HP each)	300000.00
3	Providing and installing Submersible pump for tube wells with specials	
	4.50 lps at 98 mts head - 1 Nos (1W) @ Rs. 80,000/- 1 Set (10HP each)	80000.00
4	Provision for construction of ESS = 1 Nos Shed with foundation @ Rs. 50,000/- each	50000.00
5	Providing and installing pumping sets of following capacities for Fire Protection etc. with foundation complete	
	- 180 lpm at 95 M head 1 No. @ Rs. 80,000/- (7.50 HP each)	80000.00
	- 2280 lpm at 95 M head 1 No. @ Rs. 4,50,000/- (80 HP each) (Hydrant )	450000.00
	- 2280 lpm at 95 M head 1 No. @ Rs. 6,50,000/- (80 HP) (Diesel Engine)	650000.00
6	Provision for D.G. Set for stand by arrangement for all machinery	
	= 1 No. 100 KVA @ Rs. 4,00,000/- each	400000.00
7	Provision for making foundations & erection of pumping machinery	50000.00
8	Provision for pipes, valve & specials inside boosting chamber	100000.00
9	Provision for electric services connection including electric fittings for boosting chambers and pump chamber etc.	100000.00
10	Provision for carriage of materials and other unforeseen items L.S.	50000.00
	<b>Total</b>	<b>2610000.00</b>
	<b>Say</b>	<b>26.10</b>

(C.O. to Abstract of cost of Sub Work No. 1)

**SUB WORK NO. 1**  
**Sub Head No. 03**

**WATER SUPPLY**  
**Water Supply Distribution & Rising Main Pipe**

Sr. NO.	Description	Amount in Rs.
<b>1</b>	<b>Providing, laying, jointing &amp; testing pipe lines including cost of excavation etc. complete in all respects</b>	
i)	100mm dia D.I. Pipe 791 Mtr @ Rs. 600/- Per Mtr	474600.00
ii)	150mm i/d D.I. Pipes - 850 Mtr @ Rs. 800/- Per Mtr	680000.00
iii)	200mm i/d D.I. Pipes -20 Mtr @ Rs. 1200/- per mtr	24000.00
<b>2</b>	<b>Providing and fixing sluice valve including cost of surface box and masonry chamber etc. complete in all respect</b>	
a)	100mm i/d 12 No. @ Rs. 7500/- each	90000.00
b)	150mm i/d 15 No. @ Rs. 10000/- each	150000.00
c)	200mm i/d 2 No. @ Rs. 15000/- each	30000.00
<b>3</b>	<b>Providing and fixing indicating plates for sluice valve 29 No. @ Rs. 1000/-</b>	<b>29000.00</b>
<b>4</b>	<b>Provision for carriage of materials and other unforeseen items</b>	<b>20000.00</b>
<b>5</b>	<b>Provision for making connection with HSVP Pipe &amp; T.W's etc.</b>	<b>100000.00</b>
<b>6</b>	<b>Provision for cutting the road and making good the same</b>	<b>50000.00</b>
	<b>Total</b>	<b>1647600.00</b>
	<b>Say</b>	<b>16.48</b>

(C.O. to Abstract of cost of Sub Work No. I)

SUB WORK NO. 01

WATER SUPPLY

SUB HEAD.NO. 04

EXTERNAL FIRE HYDRANTS

Sr. NO.	Description	Amount in Rs.
1	Providing, Laying, jointing and testing Heavy Class M.S. Pipes for fire rising main including cost of fittings, valves, connection etc. complete in all respect	
a)	100mm dia - 200 M @ Rs. 600/- Per Mtr	120000.00
b)	150mm dia - 847 M @ Rs. 900/- Per Mtr	762300.00
2	Providing and fixing fire Hydrant with accessories 25 No. @ Rs. 7500/- each	165000
3	Provision for Security Services for Fire Arrangement L.S.	50000.00
4	Providing and fixing indicating plate -25 No. @ Rs. 1000/- each	22000.00
6	Provision for carriage of material L.S.	25000.00
	<b>Total</b>	<b>1144300.00</b>
	<b>Say</b>	<b>11.45</b>

(C.O. to Abstract of cost of Sub Work No. 1)

SUB WORK NO. 01

WATER SUPPLY

14

SUB HEAD NO. 05

IRRIGATION

Sr. NO.	Description	Amount in Rs.
1	Providing, Laying, jointing and testing UPVC pipe lines suitable for 6 kg pressure including cost of fittings, valves, connection etc. complete in all respect	
a)	25mm dia - 240 M @ Rs. 300/- Per Mtr	72000.00
2	Providing and fixing 25mm dia, Irrigation hydrant valve complete in all respect 30 Nos @ Rs. 3000/- each	90000.00
3	Provision for carriage of materials and other unforeseen items L.S.	20000.00
4	Provision for indicating plate with safety box etc. complet in all respect	25000.00
6	Provision for road cutting and making it condition as original L.S.	30000.00
	<b>Total</b>	<b>237000</b>
	<b>Say</b>	<b>2.37</b>

(C.D. to Abstract of cost of Sub Work No. 1)

## SUB WORK NO. II

## SEWERAGE SCHEME

Sr. NO.	Description	Amount in Rs.
1	Providing, jointing, cutting and testing stoneware pipe grade A and lowering into trenches including cost of excavation, bed concrete, cost of manholes etc. complete	
	a) SW Pipe 200mm i/d avg. depths 0 - 2.00M 190 M @ Rs. 1200/- per Mtr	228000.00
	b) SW Pipe 250mm i/d avg depth 2.00 M 275 M @ Rs. 1300/- per Mtr	357500.00
	c) SW Pipe 300mm i/d avg depth 2.75 M 90 M @ Rs. 1500/- per Mtr	135000.00
	d) SW Pipe 400mm i/d avg depth 3.00 M 12 M @ Rs. 1800/- per Mtr	21600.00
2	Providing, laying, jointing & testing pipe lines including cost of excavation etc. complete in all respect - 200mm dia Heavy Class DI pipes (overflow for STP)	
	a) 200MM i/d D.I. Pipe - 210 M @ Rs. 1200/- Per Mtr	252000.00
3	Provision of lighting and watching etc.	30000.00
4	Provision for cartage of material	20000.00
5	Provision for making connection with HSVP	50000.00
1	Provision for construction of Sewerage Treatment Plant (STP) including the cost of tertiary treatment level with recycling storage tank and machinery with all arrangement etc. complete in all respect. = 550 KLD or (0.55 MLD) Capacity L.S.	5000000.00
		6094100.00
	Add 3% contingency & P.H. Services	182823
	<b>Total</b>	<b>6276923</b>
	Add 49% Department charges + Price Escalation	3075692
	<b>G. Total</b>	<b>9352615</b>
	<b>Say</b>	<b>93.53</b>

(C.O. to Final Abstract of Cost )



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## SUB WORK NO. III

## STORM WATER DRAINAGE SCHEME

Sr. NO.	Description	Amount in Rs.
1	Providing, lowering, laying, jointing RCC pipe class Np3 with cement joint, a) RCC Np3 pipe 400mm i/d = 761M @ Rs. 2000/- Per Mtr	1522000.00
2	Provision for Rain Water Harvesting arrangement including the cost of screening chamber and pit with all type of pipes and other material etc. complete in all respect as per standard drawing and bore upto requirement of site etc. 4 Nos RWH @ Rs. 2,50,000/- each	1000000.00
2	Provision for road gulley & pipe with connection	300000.00
3	Provision for lighting and watching	50000.00
4	Provision for timbering and shoring	50000.00
5	Provision for cartage of material	50000.00
6	Provision for making connection with HUDA storm water drain	200000.00
	<b>Total</b>	<b>3172000</b>
	Add 3% contingency & P.H. Services	95160
	<b>Total</b>	<b>3267160</b>
	Add 49% Department charges + Price Escalation	1600908
	<b>G. Total</b>	<b>4868068</b>
	Say	48.69

(C.O. to Final Abstract of Cost )

## Sub Work No. IV

## ROAD AND FOOTPATH

1	Provision for leveling & earth filling as per site conditions	Per Acre	4.3375	80000	347000
2	i) Providing and laying 100mm thick PCC under pavement, cement concrete of specified grade 1:4:8 and 150mm thick RMC grade M-40 ii) Providing and laying Bituminous road (250mm GSB, 300mm WMM, 50mm DBM, 40mm BC).	Sqm	5918	300	1775400
3	Provision for kerbs & channels of C.C. 1:2:4	Metre	967	340	328780
4	Provision for arrangement of guide map and indicating board etc.	LS			50000
5	Provision for parking arrangement with 100mm thick PCC under pavement cement concrete of specified grade 1:4:8 and 150mm thick RMC Grade M-40 or Bituminous road with 250mm GSB, 300mm WMM, 50mm thick DBM & 40mm thick BC etc. as per requirement of site for surface car parking and approach to Tower / Blocke etc. complete in all respect	Sqm	4750	250	1187500
5	Provision for carriage of material	LS			50000
	<b>Sub Total</b>				<b>3738680</b>
	Add 3% contingencies & PH Services				112160
	<b>Sub Total</b>				<b>3850840</b>
	Add 49% Departmental Charges + Price Escalation				1886912
	<b>Total</b>				<b>5737752</b>
	<b>Say Rs. In Lacs</b>				<b>57.38</b>

(C.O. to Final Abstract of cost )

## Sub Work No. V

## STREET LIGHTING

1	Provision for Street Lighting at surrounding area as per standard specifications of HVPN etc. complete	Acre	4.3375	10000	43375.00
	Add 3% contingencies & PH Services				1301.25
	<b>Total</b>				<b>44676.25</b>
	Add 49% Departmental Charges + Price Escalation				21891.36
	<b>Total</b>				<b>66567.61</b>
	<b>Say Rs. In Lacs</b>				<b>6.66</b>

(C.O. to Final Abstract of cost )

## Sub Work No. VI

## HORTICULTURE

<b>1</b>	<b>Development of Lawn Areas</b>				
a.	Trenching of ordinary soil upto depth of 60 cm i/c removal & stacking of serviceable material & disposing by spreading and levelling within a lead of 50 M and making up the trench area for proper levels by filling with earth or earth mixed with manure before and after flooding trench with water i/c cost of imported earth and manure with all fitting and valve etc. complete				
b.	Rough dressing of turfed area				
c.	Grassing with "Cynadon dactylon" i/c watering and maintenance of lawns for 30 days till the grass forms a thick lawn, free from weeds and fit for moving in row 7.5 cm part in either direction				
d.	organized green 4113.45 Sqm Or 1.02 Acres (As per detail given in green park area calculation)	Acres	1.02	250000	255000
<b>2</b>	Providing and planting trees along boundary @ 6 m interval (Length appx 967M ) = 967/6 =162 Nos Say No. of trees = 162 Nos Cost details : Excavation = Rs. 73 Manure = Rs. 300 Tree Plant = Rs. 850 Total Rs. = Rs. 1223				
		Each	162	1223	198126
	<b>Total</b>				<b>453126</b>
	Add 3% contingencies & PH Services				13594
	<b>Total</b>				<b>466720</b>
	Add 49% Departmental Charges + Price Escalation				228693
	<b>Total</b>				<b>695413</b>
	<b>Say Rs. In Lacs</b>				<b>6.96</b>

(C.O. to Final abstract of cost)

## Sub Work No. VII

## Mtc. Of services &amp; Resurfacing of Road

1	Mtc. Of water supply, sewer, storm water drain, roads, street light, hort. Etc. for period of 10 years including operation charges full establishment etc. complete in all respects 4.3375 acres @ Rs. 1.00 lacs per acre	Acre	4.3375	100000	433750
2	Provision for resurfacing of roads after 5 years of 1st phase with provision of 50mm thick BM including leveling coarse and 25mm BC as per crust design whichever is safer	Sqm	5918	250	1479500
3	2nd phase after next five years of 1st phase (50mm DBM & 25mm BC or as per crust design whichever is safer	Sqm	5918	300	1775400
<b>Sub Total</b>					<b>3688650</b>
Add 3% contingencies & PH Services					110660
<b>Sub Total</b>					<b>3799310</b>
Add 49% Departmental Charges					1861662
<b>Total</b>					<b>5660971</b>
<b>Say Rs. In Lacs</b>					<b>56.61</b>

(C.D. to Final abstract of cost)

21

**SUMMARY OF DESIGN REQUIREMENT**

S. No.	Description	Qty	Unit
1	Total Population	3420	Persons
2	Total Water Requirement (Domestic)	436	KLD
3	Total Water Requirement (Flushing)	214	KLD
4	Total Water Requirement (Horticulture)	60	KLD
5	U. G Tank (Domestic)	1	No.
6	U.G.T (Fire) 200 KLD	1	No.
7	No. of Domestic WS pumps for UGT	2+1	Set
8	No. of Flushing pumps at STP	2+1	No.
9	No. of submersible pumps	1	No.
10	Main Fire Hydrant electrical pumps	1	No.
11	Diesel fire pumps	1	No.
12	Jockey fir pumps	1	No.
13	Generating sets for UGT	1	100 KVA
14	S.T.P. ( 550 K.L. )	1	No.

**TOTAL MATERIAL STATEMENT FOR WATER SUPPLY i.e. DOMESTIC, FLUSHING & RISING MAIN ETC.**

22

S. No.	Description	Size of pipe upto valve in 100mm	Size of pipe upto valve in 150mm	Size of pipe upto valve in 200mm
1	Domestic	162M	586M	12M
2	Flushing	384M	264M	8M
3	Rising Main	245	-	-
	<b>Total</b>	<b>791M</b>	<b>850M</b>	<b>20M</b>

**MATERIAL STATEMENT (DOMESTIC WATER SUPPLY)**

S. No.	Line Designation		Size of Pipe Provided	Length of Pipe (Mtr)	Length in Mtr		
	From	To			200MM	150MM	100MM
1	UGT	A	200	12	12	-	-
2	A	B	150	70	-	70	-
3	B	C	150	32	-	32	-
4	C	D	150	36	-	36	-
5	D	E	100	126	-	-	126
6	A	F	150	50	-	50	-
7	F	G	150	112	-	112	-
8	G	H	150	70	-	70	-
9	H	I	150	98	-	98	-
10	I	E	100	36	-	-	36
11	C	H	150	28	-	28	-
12	D	I	150	90	-	90	-
	<b>Total</b>			<b>760</b>	<b>12</b>	<b>586</b>	<b>162</b>

200mm i/d Pipe Length

12 Mtr

150mm i/d Pipe Length

586 Mtr

100mm i/d Pipe Length

162 Mtr



**MATERIAL STATEMENT (FLUSHING WATER SUPPLY)**

S. No.	Line Designation		Size of Pipe Provided	Length of Pipe (Mtr)	Length in Mtr		
	From	To			200mm	150mm	100mm
1	STP	a	200	8	8	-	-
2	a	b	150	53	-	53	-
3	b	c	150	32	-	32	-
4	c	d	100	36	-	-	36
5	d	e	100	26	-	-	26
6	a	f	150	67	-	67	-
7	f	g	150	112	-	112	-
8	g	h	100	70	-	-	70
9	h	i	100	98	-	-	98
10	i	e	100	36	-	-	36
11	c	h	100	28	-	-	28
12	d	i	100	90	-	-	90
	<b>Total</b>			<b>656</b>	<b>8</b>	<b>264</b>	<b>384</b>

200mm i/d Pipe Length

8 Mtr

150mm i/d Pipe Length

264 Mtr

100mm i/d Pipe Length

384 Mtr

**MATERIAL STATEMENT FOR BOREWELL RISING MAINS AND HUDA MAIN**

S. No.	Name of Line		Size of Pipe Provided	Length of Pipe (Mtr)	Length in Mtr		
	From	To			100mm	150mm	200mm
1	T.W.	UGT	100	35	35	-	-
3	HSVP Line	UGT	100	210	210	-	-
	<b>Total</b>			<b>245</b>	<b>245</b>	<b>0</b>	<b>0</b>

## MATERIAL STATEMENT FOR SEWERAGE SCHEME

26

S. No.	Line No.		Length (In Mtr)	Pipe Dia	Av. Depth	Length in Mtr			
	From	To				200mm i/d 0 to 2.00 Mtr	250mm i/d 0 to 2.00 Mtr	300mm i.d 0 to 2.50 Mtr	400mm i.d 0 to 3.00 Mtr
1	A	B	115	200	1.33	115	-	-	-
2	B1	B	75	200	1.22	75	-	-	-
3	B	C	40	250	1.81	-	40	-	-
4	C1	C	75	250	1.20	-	75	-	-
5	C	D	30	300	2.01	-	-	30	-
6	D	E	60	300	2.15	-	-	60	-
7	E2	E1	95	250	1.18	-	95	-	-
8	E1	E	65	250	1.44	-	65	-	-
9	E	STP	12	400	2.36	-	-	-	12
10	STP - HSVP / Sewer By Pumping 200mm i/d D.I. Pipe = 160 Mtr								
	<b>Total</b>		<b>567</b>			<b>190</b>	<b>275</b>	<b>90</b>	<b>12</b>

200mm i/d Pipe Length                      190 Mtr  
 250mm i/d Pipe Length                      275 Mtr  
 300mm i/d Pipe Length                      90 Mtr  
 400mm i/d Pipe Length                      12 Mtr  
 200mm i/d D.I. Pipe (By Pumping) = 210 Mtr

**MATERIAL STATEMENT OF STORM WATER DRAINAGE SCHEME**

27

Sr. No.	Line Reference		400mm i/d RCC Np3 Pipe
	From	To	Length in Mtr
1	A	B	105
2	B	C	70
3	C1	C	55
4	C	D	30
5	D1	D	140
6	D	E	36
7	E1	E	85
8	E	F	40
9	F2	F1	65
10	F1	F	85
11	F	Master SWD (HSVP)	50
	<b>Total Length</b>		<b>761</b>

**Total Length 400mm i/d RCC Np3 pipe = 761 Mtr**

**Total Rain Water Harvesting (RWH) = 4 Nos**

**Material Statement of Road Works**

28

Sr. No.	Road No.	Length	Width	Area	
1	1 (6m)	175.00	6.00	1050.00	Sqm
2	2 (6m)	125.00	6.00	750.00	Sqm
3	3 (6m)	85.00	6.00	510.00	Sqm
4	4 (6m)	90.00	6.00	540.00	Sqm
5	5 (6m)	82.00	6.00	492.00	Sqm
6	6 (6m)	115.00	6.00	690.00	Sqm
7	7 (6m)	84.00	6.00	504.00	Sqm
8	8 (24m)	110.00	7.00	770.00	Sqm
9	9 (6m)	32.00	6.00	192.00	Sqm
10	10 (6m)	23.00	6.00	138.00	Sqm
	<b>G. Total</b>	<b>921.00</b>	6.00	<b>5636.00</b>	Sqm
Add 5% extra for curves				282	Sqm
<b>Total</b>				<b>5918</b>	<b>Sqm</b>

## ii) Kerbs &amp; Channels

i) 6 Mtr wide Road	811.00 Mtr
ii) 24 Mtr wide Road (1 x 110Mtr)	110.00 Mtr (Part one Lane to be Constructed )
<b>Total</b>	<b>921.00 Mtr</b>
Add. 5% Extra for Curves	46.00 Mtr
<b>G. Total</b>	<b>967.00 Mtr</b>

## II) PARKING :-

(i) Surface Car Parking = 331 Nos		
Area = 331 Nos x 2.50 Mtr x 5.00 Mtr = 4137.50 Sqm		
ii) Approach of Towers L.S.	= <u>500.00 Sqm</u>	
<b>Total</b>	<b>= 4637.50 Sqm</b>	Say 4750.00 Sqm.

**MATERIAL STATEMENT (FIRE FIGHTING)**

S. No.	Line Reference		Length in Mtr	Size of M.S. Pipe	Remarks
	From	To		150mm i/d Fire Rising	
				150mm	
1	UGT	A	10	10	
2	A-A'	B	70	70	
3	B	C	70	70	
4	C	D	140	140	
5	D	E	45	45	
6	E	F	40	40	
7	F	G	60	60	
8	G-G'	H	67	67	
9	H	I	120	120	
10	A	J	15	15	
11	J	I	40	40	
12	C	E	95	95	
13	A'	H	40	40	
14	B	G'	35	35	
	<b>Total</b>		<b>847</b>	<b>847</b>	

i) Length of 150mm i/d M.S. Pipe = 847 Mtr

ii) Length of 100mm i/d F.H. = 22 X 8 = 200 Mtr

iii) Nos of F.H. = 25 Nos

30

## SUBHEAD : IRRIGATION WATER SUPPLY SCHEME - DESIGN CALCULATION (HORTICULTURE)

## HYDRAULIC STATEMENT OF IRRIGATION WATER SUPPLY

S. No.	Line Reference	Population	Peak Flow in LPH	Velocity (m/s)	Size of the pipe required (in mm)	Size of the Pipe Recommend (mm)	Hydraulic Radius	Total Friction Loss In m/m	Length (M)	Loss of Head in Line (M)	Formation Level	Available head (M)
1	From Flushing Water Supply line	60000 (60 K.L.)	-	-	25.00	25	-	-	240	-	-	-

Note :- 60 Nos connections are to be done from flushing water supply line i.e. 30 Nos x 8 Mtr/each = 240 Mtr for 25mm i/d

HYDRAULIC STATEMENT OF WATER SUPPLY (DOMESTIC)

SUBHEAD : DOMESTIC WATER SUPPLY SCHEME - DESIGN CALCULATION

S. No.	Line Reference		Tower No.	Flat / Unit			Population @ 5 person per flat	Water Requirement @ 172.50 LPCD	Other Water Requirement i.e. Commercial/Community Centre and Anganwadi	Total Water Requirement in LPD	Water Requirement @ 67% of total water requirement	Peak Flow in LPH	Velocity (m/s)	Size of the pipe in (mm)	Total Friction Loss in 50/M	Length in (M)	Loss of Head in Line (M)	Formation Level at Lower End	Available Head at Lower end (M)	Terminal Head (M)	Remarks
	From	To		Self	Branch	Total															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	UGT	A	1 to 6	D	60A	68A	3420	589950	39710	629660	421872	158206	0.68	200	0.004	11	0.05	232.15	317.15	85.00	Formation Level at Water Works i.e. UGT = 232.20 M Boosting Head = 85.00 M Hydraulic Head = 317.20 M
2	A	B	1 to 5	118	236	354	1770	305375	14730	320105	214423	80411	0.62	150	0.005	70	0.35	232.10	316.80	84.70	
3	B	C	2,2,3	0	236	256	1180	203550	14730	218280	146234	54829	0.43	150	0.003	32	0.09	232.05	316.71	84.66	
4	C	D	1,2,3	0	177	177	885	152663	4710	157373	105440	39541	0.38	150	0.002	36	0.07	231.95	316.64	84.69	
5	D	E	1	59	0	59	295	50988	4710	55698	37250	13669	0.39	100	0.003	126	0.37	231.80	316.27	84.47	
6	A	F	2 to 6	47	283	330	1650	284625	25000	309625	207449	77795	0.62	150	0.005	50	0.25	232.30	316.90	84.60	
7	F	G	2,3,4,5,6	165	118	283	1415	244088	25000	269088	180289	67610	0.43	150	0.003	117	0.33	232.15	316.57	84.42	
8	G	H	2,3	0	118	118	590	101775	25000	126775	84939	31853	0.29	150	0.001	70	0.07	232.00	316.50	84.50	
9	H	I	2,3	118	0	118	590	101775	15000	116775	78239	28240	0.29	150	0.001	98	0.09	231.85	316.41	84.56	
10	I	F	-	0	0	0	0	D	15000	15000	10050	3760	0.39	100	0.003	36	0.10	231.80	316.31	84.51	
11	C	H	-	0	0	0	0	0	10000	10000	6700	2513	0.29	150	0.001	28	0.03	232.00	316.68	84.68	
12	D	I	2,2,3	177	0	177	885	152663	0	152663	102284	38357	0.28	150	0.001	90	0.09	231.85	316.55	84.70	



HYDRAULIC STATEMENT OF WATER SUPPLY (FLUSHING) RECYCLING OF TREATED SEWAGE WATER  
SUBHEAD : FLUSHING WATER SUPPLY SCHEME - DESIGN CALCULATION

S. No.	Line Reference	Tower No.	Unit / Flat				Population @ 5 Person per flat	Water Requirement @ 172.50 LPCD	Other Water Requirement i.e. Commercial, Community Centre / Anganwadi in LPCD	Total Water Requirement in LPCD	Water Requirement @ 33% of total water requirement	Peak Flow in LPH	Velocity (m/s)	Size of the pipe in (mm)	Friction Loss in M/No	Total Length in (M)	Loss of Head in Line (M)	Formation Level at Lower End	Available Head at Lower end (M)	Terminal Head (M)	Remarks
			Self	Branch	Total																
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	STP	b	1 to 6	0	604	604	3120	509550	39710	207789	77970	0.61	200	0.003	8	0.02	232.15	317.18	85.03	Formation Level at STP = 232.20 M	
2	a	b	1 to 5	118	236	354	1770	305325	14710	105612	39604	0.43	150	0.003	53	0.16	232.10	317.02	84.92	Boasting Head = 85.00 M	
3	b	c	2,2,3	0	236	236	1180	203550	14710	218260	72026	0.29	150	0.001	32	0.08	232.05	316.99	84.94	Flushing Hydraulic Head at STP = 217.20 M	
4	c	d	1,2,3	0	177	177	885	152663	4710	157373	51933	0.47	100	0.005	36	0.18	231.95	316.81	84.86		
5	d	e	1	59	0	59	295	50888	4710	55598	18347	0.23	100	0.001	126	0.13	231.80	316.68	84.88		
6	b	f	2 to 6	47	283	330	1650	280625	25000	305625	102176	0.43	150	0.002	67	0.20	232.30	316.98	84.88		
7	f	g	2 to 6	165	118	283	1415	240088	25000	265088	88799	0.36	150	0.002	112	0.22	232.15	316.76	84.61		
8	g	h	2,3	0	118	118	590	101775	25000	126775	41836	0.39	100	0.003	70	0.21	232.00	316.55	84.55		
9	h	i	2,3	118	0	118	590	101775	15000	116775	38536	0.39	100	0.003	98	0.29	231.85	316.26	84.41		
10	i	e	-	0	0	0	0	0	15000	15000	4950	0.23	100	0.001	36	0.04	231.80	316.22	84.42		
11	e	h	-	0	0	0	0	0	10000	10000	3100	0.23	100	0.001	28	0.08	232.00	316.98	84.98		
12	d	i	1,2,3	177	0	177	885	152663	0	152663	50379	0.47	100	0.005	90	0.45	231.85	316.76	84.91		

4.3375 ACRES AFFORDABLE GROUP HOUSING COLONY IN SECTOR 70, GURUGRAM

DESIGN STATEMENT OF SEWERAGE SCHEME

S. No.	Line Reference	Tower No.	Unit / Flat			Population @ 5 Person per flat	Water Requirement lit @ 172.50 LPCD	Other Requirement (i.e. comm. / community building / Anganwadi)	Total water requirement LPD	Sew. Quantity after evaporation in losses @ 20% (in LPCD)	Discharge Peak flow (m <sup>3</sup> /sec)	Site of pipe in (mm)	Gradient in (m)	Velocity (m/sec)	Carrying capacity of pipe (m <sup>3</sup> /sec)	Length in Mtr	Fall + Extra Fall due to slope (m)	Ground Level		Formation Level		Invert level		Depth			
			From	To	Self													Branch	Total	Start	End	Start	End	Start	End	Start	End
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1	A	B	1	59	0	59	795	50888	19710	70598	0.0020	200	225	0.76	0.012	115	0.51	231.30	231.80	231.95	231.80	230.20	230.20	230.26	1.00	1.66	1.33
2	B1	B	1,2,3	177	0	177	385	35263	0	152063	0.0042	200	225	0.76	0.012	75	0.33	231.45	231.85	231.95	231.85	230.85	230.85	230.52	1.00	1.43	1.22
3	B1	C	1,2,3	236	0	236	3180	203550	19710	223260	0.0062	250	305	0.76	0.019	40	0.43	231.75	231.95	232.05	231.95	230.36	230.36	230.13	1.69	1.92	1.81
4	C3	C	2,2	118	0	118	590	101725	10000	111725	0.0031	250	305	0.76	0.019	75	0.24	231.80	231.90	232.05	231.90	230.66	230.66	230.10	1.00	1.39	1.20
5	C	D	1,2,3	354	0	354	1770	306325	39710	346035	0.0096	300	385	0.76	0.027	30	0.07	231.85	232.05	232.10	232.05	230.10	230.10	230.03	3.95	2.07	2.01
6	D	E	1 to 5	354	472	2360	2360	407100	39710	446810	0.0124	300	385	0.76	0.027	60	0.15	231.90	232.10	232.15	232.10	229.88	229.88	229.83	2.07	2.22	2.15
7	E2	E3	4,5,6	365	0	365	875	142333	0	142333	0.0039	250	305	0.76	0.019	95	0.31	231.90	232.15	232.20	232.15	230.80	230.80	230.10	1.00	1.36	1.18
8	F1	E	4,5,6	47	165	212	1060	182850	0	182850	0.0051	250	305	0.76	0.019	65	0.21	231.95	232.20	232.25	232.20	230.84	230.84	230.63	3.56	1.52	1.44
9	E	STP	1 to 6	0	684	684	3420	589950	39710	629660	0.0174	400	570	0.76	0.043	12	0.02	231.90	232.15	232.20	232.15	229.83	229.81	232.32	2.32	2.39	2.35
10	STP	HSP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	231.90	232.20	232.20	232.20	230.20	230.20	230.20	2.00	2.00	2.00

By Pumping (Recycling) D.I. Pipe 200mm i/d = 210 Mtr

DESIGN CALCULATION OF STORM WATER DRAINAGE SCHEME

INTENSITY OF RAIN FALL = 0.006 MTR / HR

IMPERMEABILITY FACTOR = 0.6

S. No.	Name of Node		Area (Self) SQM	Area (Self) In Acre	Branch Area In Acre	Total Area In Acre	Total Area Hectore	Rain fall mm / hr.	Discharge @ 17.36 LPS/ Hectore In LPS	Length In MTR	Pipe dia In mm	Slope In Mir	Velocity In m/sec	Cap. Of drain In LPS	Fall + Extra Fall In Mir	Ground level		Formation Level		Invert Level		Depth of M.N's		Average Depth	Remarks
	From	To														Start	End	Start	End	Start	End	Start	End		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	A	B	2600	0.64	0	0.64	0.25	6.00	4.50	105	400	570	0.76	98.57	0.18	231.95	231.90	232.30	232.15	231.70	230.92	1.20	1.23	1.22	RWH - 1
2	B	C	1400	0.35	0.64	0.99	0.40	6.00	6.96	70	400	570	0.76	98.57	0.12	231.90	231.80	232.15	232.00	230.92	230.80	1.23	1.20	1.22	
3	C1	C	1375	0.34	0	0.34	0.14	6.00	2.39	55	400	570	0.76	98.57	0.10	231.60	231.80	231.90	232.00	231.00	230.90	0.90	1.10	1.00	
4	C	D	900	0.22	1.33	1.55	0.53	6.00	10.89	30	400	570	0.76	98.57	0.05	231.80	231.85	232.00	232.05	230.80	230.75	1.20	1.30	1.25	
5	D1	D	3500	0.86	0	0.86	0.35	6.00	6.04	140	400	570	0.76	98.57	0.25	231.95	231.85	232.30	232.05	231.40	230.85	1.20	1.20	1.20	RWH - 2
6	D	E	720	0.21	2.41	2.59	1.05	6.00	18.20	36	400	570	0.76	98.57	0.06	231.85	231.75	232.05	231.95	230.75	230.69	1.30	1.26	1.28	RWH - 3
7	E1	E	2550	0.63	0	0.63	0.26	6.00	4.43	85	400	570	0.76	98.57	0.15	231.45	231.75	232.85	231.95	230.85	230.70	1.00	1.25	1.13	
8	E	F	800	0.20	3.22	3.42	1.38	6.00	23.96	40	400	570	0.76	98.57	0.07	231.75	231.50	231.95	231.90	230.89	230.62	1.26	1.28	1.27	
9	F2	F1	865	0.21	0	0.21	0.09	6.00	1.56	65	400	570	0.76	98.57	0.11	231.60	231.30	231.90	231.80	231.00	230.89	0.90	0.91	0.91	
10	F1	F	1275	0.32	0.21	0.53	0.21	6.00	3.64	85	400	570	0.76	98.57	0.15	231.30	231.50	231.80	231.90	230.89	230.74	0.91	1.16	1.04	
11	F	Master SWD (HSWP)	200	0.05	3.95	4.00	1.62	6.00	28.12	50	400	570	0.76	98.57	0.09 + 0.50 = 0.59	231.50	231.40	231.90	231.60	230.82	230.08	1.28	1.57	1.43	RWH - 4

WATER SUPPLY SCHEME

AREA CALCULATION OF MUMTY'S & MACH. ROOM - TOWERS-1 to 4

AREA CALCULATION OF MUMTY'S & MACH. ROOM - TOWERS-5&6

AREA CALCULATION OF REST/TYPICAL FLOOR COMM AREA

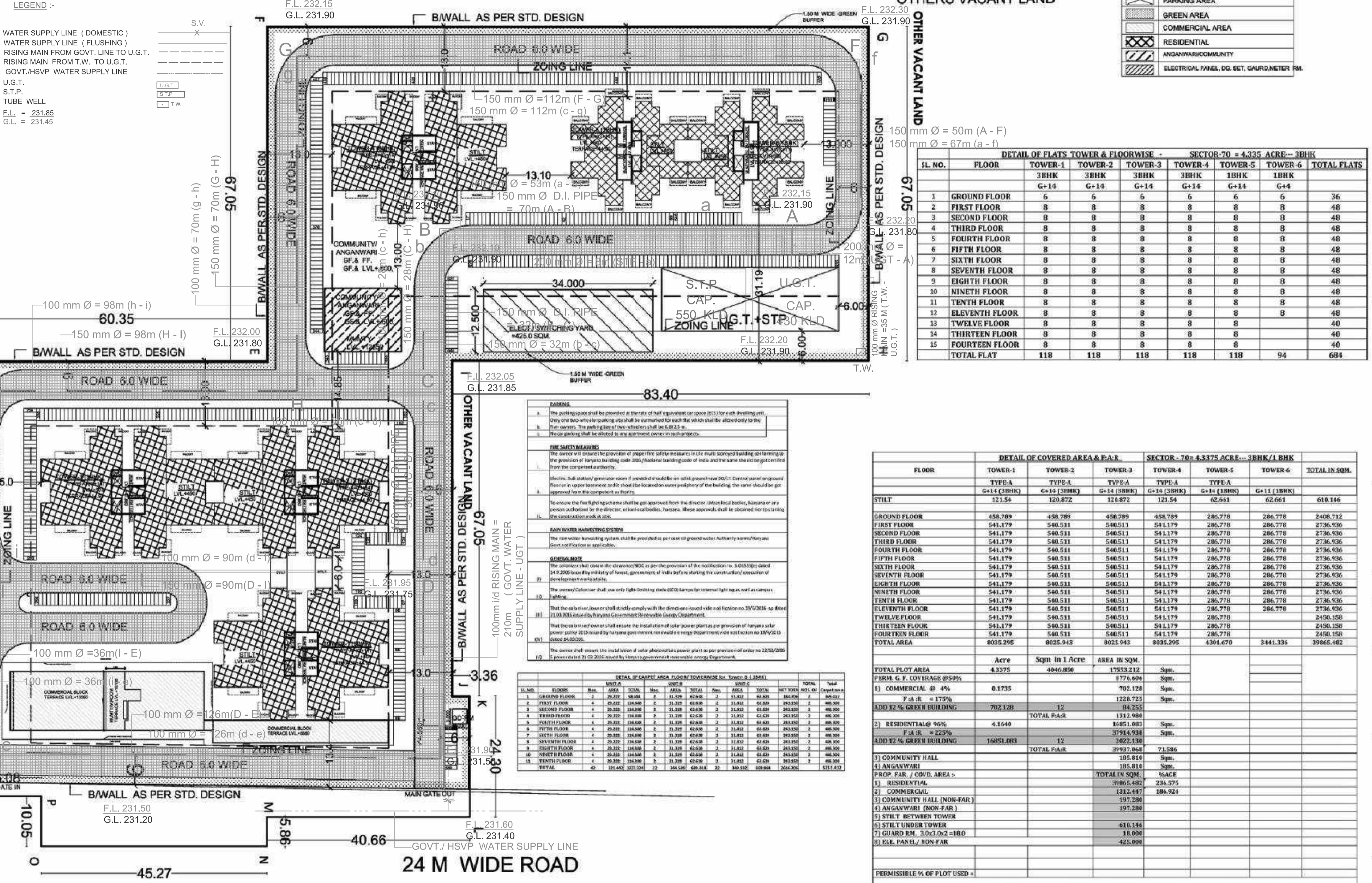
DETAIL OF FLOOR LEVELS

- LEGEND :- 1. WATER SUPPLY LINE (DOMESTIC) 2. WATER SUPPLY LINE (FLUSHING)...

DETAIL OF CARPET AREA FLOOR/TOWERWISE for Tower-1 to 4 (3BHK)

DETAIL OF CARPET AREA FLOOR/TOWERWISE for Tower-5 (3BHK)

DETAIL OF CARPET AREA FLOOR/TOWERWISE for Tower-6 (3BHK)



LEGEND table with symbols for INTERNAL ROAD, PARKING AREA, GREEN AREA, COMMERCIAL AREA, RESIDENTIAL, ANGANWARI/COMMUNITY, and ELECTRICAL PANEL, DG. SET, GAUDD.METER RM.

DETAIL OF FLATS/TOWER & FLOORWISE - SECTOR-70 = 4.3375 ACRE - 3BHK table with columns for SL. NO., FLOOR, TOWER-1 to TOWER-6, and TOTAL FLATS.

DETAIL OF COVERED AREA & P.A.R. SECTOR-70 = 4.3375 ACRE - 3BHK/LI BHK table with columns for FLOOR, TOWER-1 to TOWER-6, and TOTAL IN SQM.

DETAIL OF CARPET AREA FLOOR/TOWERWISE for Tower-1 (3BHK) table with columns for SL. NO., FLOOR, UNIT-A, UNIT-B, UNIT-C, and TOTAL.

DETAIL OF CARPET AREA FLOOR/TOWERWISE for Tower-1 to 4 (3BHK) table with columns for Sl. No., Floors, Nos., Area, Total, Net, and Total Carpet Area.

DETAIL OF CARPET AREA FLOOR/TOWERWISE for Tower-5 (3BHK) table with columns for Sl. No., Floors, Nos., Area, Total, Net, and Total Carpet Area.

DETAIL OF CARPET AREA FLOOR/TOWERWISE for Tower-6 (3BHK) table with columns for Sl. No., Floors, Nos., Area, Total, Net, and Total Carpet Area.

PROPOSED BUILDING PLAN OF AFFORDABLE GROUP HOUSING COLONY FOR AN AREA MEASURING 4.3375 ACRES.



SITE PLAN LAY-OUT PLAN

ENGINEER SIGNATURE

OWNER'S SIGNATURE

ARCHITECT'S SIGNATURE

PROJECT NO. RA-5029, Dwg. No. A-1/12, ARCHITECTS RAO AND ASSOCIATE, PROJECT ADDRESS AND CONTACT INFO.

SEWERAGE SCHEME

LEGEND

Legend table with symbols for INTERNAL ROAD, PARKING AREA, GREEN AREA, COMMERCIAL AREA, RESIDENTIAL, ANGANWARI/COMMUNITY, and ELECTRICAL PANEL, DG. SET, GAUDD METER RM.

LEGEND

- 1. SEWER LINE
2. D.I. PIPE LINE (BY PUMPING) FROM STP TO GOVT. LINE
3. GOVT./HSVP SEWER LINE
4. S.T.P.
5. F.L. = 232.15, G.L. = 231.90, I.L. = 230.15

Area calculation tables for various building components including MUMTY'S & MACH ROOM, STAIR WELLS, COMMUNITY HALL, and various floors.

Area calculation tables for PRECAST/RCFC FLOOR, COMMUNITY HALL, and various floors.

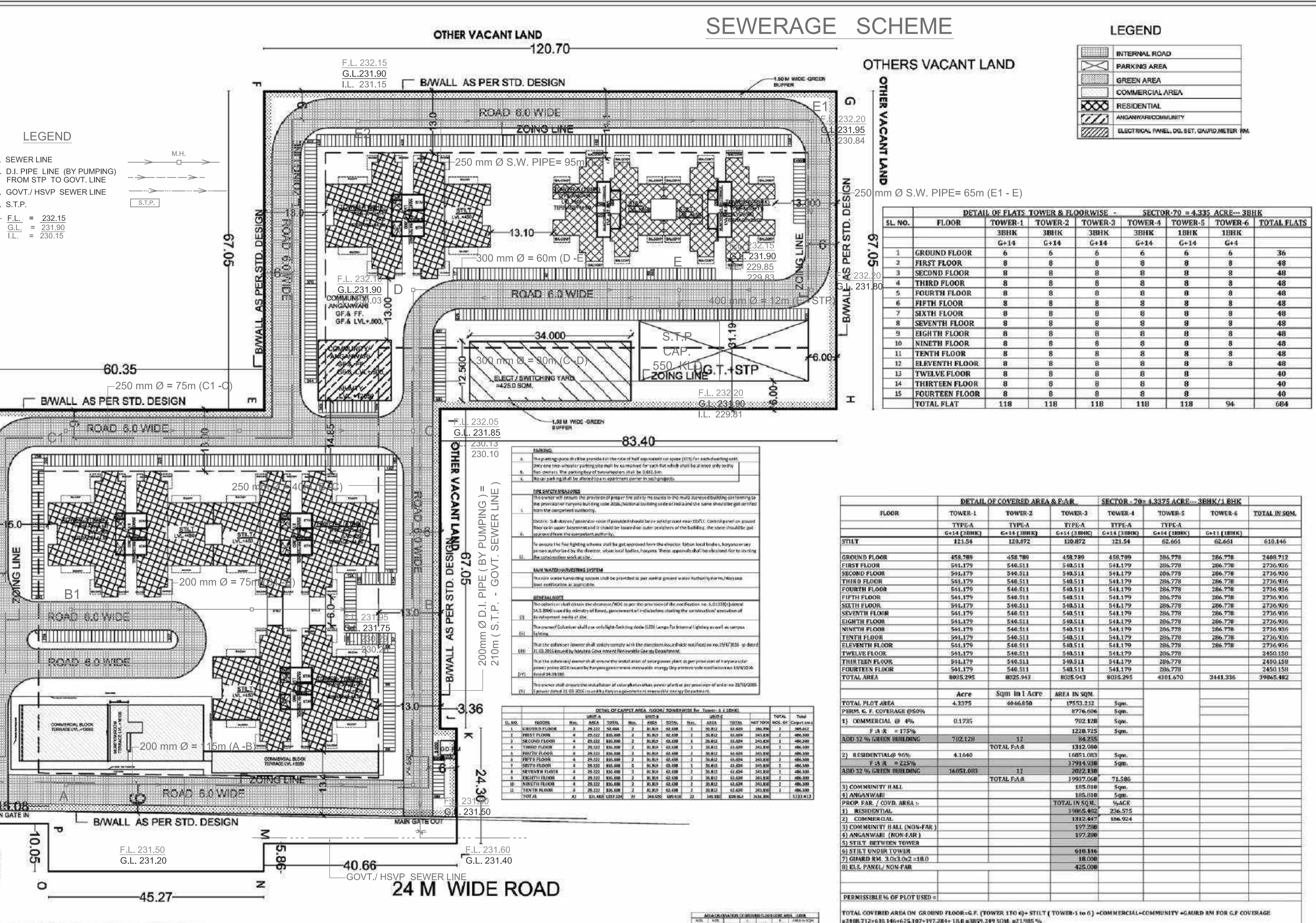
DETAIL OF FLOOR LEVELS table with columns for FLOOR, FINISH LEVEL, and FINISH.

DETAIL OF CARPET AREA FLOOR/TOWERWISE for Tower-1 to 4 (3BHK) table.

DETAIL OF CARPET AREA FLOOR/TOWERWISE for Tower-1 to 4 (1BHK) table.

DETAIL OF CARPET AREA FLOOR/TOWERWISE for Tower-1 to 4 (1BHK) table.

DETAIL OF CARPET AREA FLOOR/TOWERWISE for Tower-1 to 4 (1BHK) table.



DETAIL OF FLATS, TOWER & FLOORWISE - SECTOR-70 = 4.335 ACRE - 3BHK table with columns for SL. NO., FLOOR, TOWER, and TOTAL FLATS.

DETAIL OF COVERED AREA & FAR table with columns for FLOOR, TOWER, TYPE-A, TYPE-B, and TOTAL IN SQM.

NOTES: 1. The parking space... 2. The owner will ensure... 3. The contractor shall... 4. The contractor shall... 5. The contractor shall... 6. The contractor shall... 7. The contractor shall... 8. The contractor shall... 9. The contractor shall... 10. The contractor shall...

LAY-OUT PLAN

NOTE:- GATE & B/WALL AS PER STD. DESIGN

DETAIL OF CARPET AREA FLOOR/TOWERWISE for Tower-1 to 4 (1BHK) table.

Area calculation tables for various building components including MUMTY'S & MACH ROOM, STAIR WELLS, COMMUNITY HALL, and various floors.

PARKING DETAIL table with columns for TOTAL CAR PARKING REQUIRED, TOTAL NOS. OF FLATS, PROPOSED SUB FACE PARKING, and TOTAL WHOLESALE PARKING REQUIRED.

PROPOSED BUILDING PLAN OF AFFORDABLE GROUP HOUSING COLONY FOR AN AREA MEASURING 4.3375 ACRES. (LICENCE NO.-26 OF 2020 DATED. 25.09.2020) IN SECTOR-70, GURUGRAM MANESAR URBAN COMPLEX BEING DEVELOPED BY PYRAMID DREAM HOMES LLP.



SITE PLAN

LAY-OUT PLAN

ENGINEER SIGNATURE

OWNER'S SIGNATURE

ARCHITECT'S SIGNATURE

Project information table with columns for PROJECT NO., SCALE, DATE, DRAWN BY, and ARCHITECTS.





FIRE FIGHTING SCHEME

LEGEND

Legend table with symbols for INTERNAL ROAD, PARKING AREA, GREEN AREA, COMMERCIAL AREA, RESIDENTIAL, ANGANWARI/COMMUNITY, ELECTRICAL PANEL, DG. SET, GAURD.METER RM.

LEGEND :-

- 1. MAIN FIRE RING
2. FIRE HYDRANT
3. U.G.T.

Area calculation tables for various building components like towers, stairs, and common areas.

Area calculation table for the ground floor (G.F.) including commercial and community blocks.

Area calculation table for the ground floor (G.F.) including various utility and service areas.

Area calculation table for the ground floor (G.F.) including various utility and service areas.

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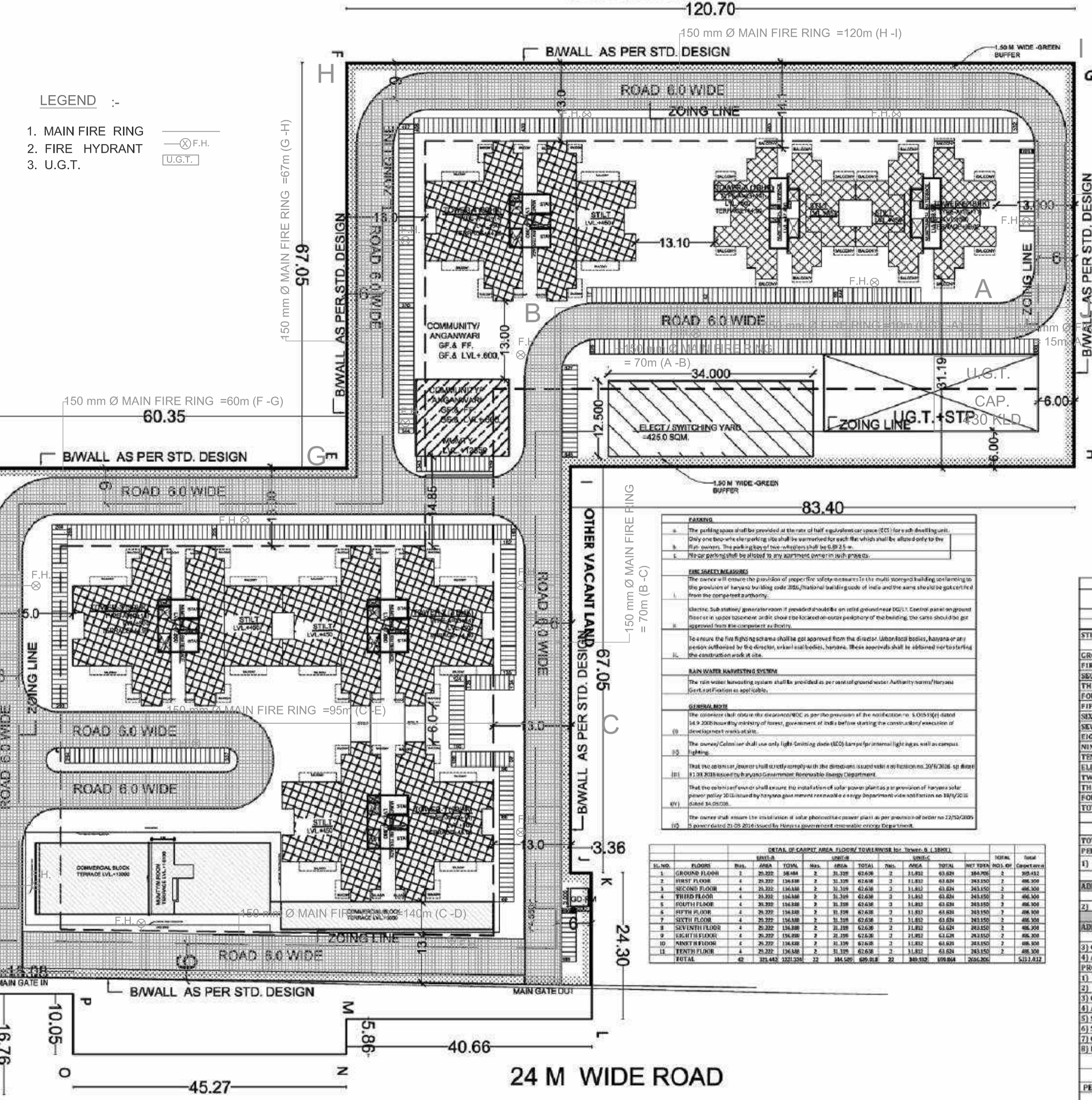


Table: DETAIL OF FLATS - TOWER & FLOORWISE - SECTOR-70 = 4.335 ACRE - 3BHK. Columns include SL. NO., FLOOR, TOWER, and TOTAL FLATS.

Table: DETAIL OF COVERED AREA & F.A.R. SECTOR-70 = 4.3375 ACRE - 3BHK/L BHK. Columns include FLOOR, TOWER, TYPE, and TOTAL IN SQM.

NOTES: 1. The parking space shall be provided at the rate of half equivalent car space (E.C.S.) for each dwelling unit.

2. The parking space shall be provided at the rate of half equivalent car space (E.C.S.) for each dwelling unit.

3. The parking space shall be provided at the rate of half equivalent car space (E.C.S.) for each dwelling unit.

4. The parking space shall be provided at the rate of half equivalent car space (E.C.S.) for each dwelling unit.

5. The parking space shall be provided at the rate of half equivalent car space (E.C.S.) for each dwelling unit.

6. The parking space shall be provided at the rate of half equivalent car space (E.C.S.) for each dwelling unit.

7. The parking space shall be provided at the rate of half equivalent car space (E.C.S.) for each dwelling unit.

8. The parking space shall be provided at the rate of half equivalent car space (E.C.S.) for each dwelling unit.

9. The parking space shall be provided at the rate of half equivalent car space (E.C.S.) for each dwelling unit.

10. The parking space shall be provided at the rate of half equivalent car space (E.C.S.) for each dwelling unit.

11. The parking space shall be provided at the rate of half equivalent car space (E.C.S.) for each dwelling unit.

12. The parking space shall be provided at the rate of half equivalent car space (E.C.S.) for each dwelling unit.

13. The parking space shall be provided at the rate of half equivalent car space (E.C.S.) for each dwelling unit.

14. The parking space shall be provided at the rate of half equivalent car space (E.C.S.) for each dwelling unit.

15. The parking space shall be provided at the rate of half equivalent car space (E.C.S.) for each dwelling unit.

Table: DETAIL OF CARPET AREA FLOOR/TOWERWISE FOR Tower-1 to 4 (3BHK). Columns include SL. NO., FLOORS, UNIT-A, UNIT-B, NET TOTAL, and Total Carpet area.

Table: DETAIL OF CARPET AREA FLOOR/TOWERWISE FOR Tower-5 (3BHK). Columns include SL. NO., FLOORS, UNIT-A, UNIT-B, UNIT-C, NET TOTAL, and Total Carpet area.

Table: AREA CALCULATION OF BALCONY UNIT-A (3BHK). Columns include NO., L, B, AREA IN SQM.

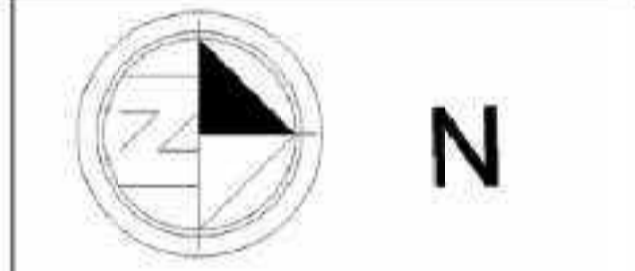
Table: AREA CALCULATION OF BALCONY UNIT-B (3BHK). Columns include NO., L, B, AREA IN SQM.

Table: AREA CALCULATION OF BALCONY UNIT-C (3BHK). Columns include NO., L, B, AREA IN SQM.

Table: AREA CALCULATION OF BALCONY UNIT-D (3BHK). Columns include NO., L, B, AREA IN SQM.

Table: AREA CALCULATION OF BALCONY UNIT-E (3BHK). Columns include NO., L, B, AREA IN SQM.

Table: AREA CALCULATION OF BALCONY UNIT-F (3BHK). Columns include NO., L, B, AREA IN SQM.



DATE: TITLE SITE PLAN

LAY-OUT PLAN

ENGINEER SIGNATURE

OWNER'S SIGNATURE

ARCHITECT'S SIGNATURE

PROJECT NO. RA-5029

DWG. NO. A-1/12

SCALE: 1:500 DATE: OCT. - 2020

DRAWN BY: RSDH EXD. BY: V.S. RAO

ARCHITECTS RAO AND ASSOCIATE

ARCHITECTS PLANNERS ENGINEERS INTERIORS WALLERS

374, UDYOG VIHAR, PHASE - 4, SEC - 18, GURUGRAM, HARYANA (INDIA)

PH. (0124) - 2347705, 2347707 FAX 0124 - 2347707

100% GUARANTEE TO THE PROPERTY OF THE CLIENT. THE ARCHITECT SHALL NOT BE HELD RESPONSIBLE FOR ANY DAMAGE TO THE PROPERTY OF THE CLIENT WHICH MAY OCCUR DURING THE COURSE OF THE PROJECT.