1. HYYDRANT SYSTEM:

ON/OFF switches located near the hose reel hose or hydrant outlet, at each floor the radio FirePump at the underground water tank sfb a capacity to discharge 900 liters per minute at 3 bar. pressure as prescribed by the Fire Prevention Authorities.

The Riser for the buildings exceeding 15 meters and above 15 meters height should not be of less than 100 mm. internal diameter. The riser should be connected to the bottom of the terrace tank with a stop valve and a NRV to act as a Down - comer.

One riser is required for every 1000sq. meters floor area and if the building is divided into, two or more parts then each part should have a separate riser with all the fittings at floor level. Each floor should have one hydrant outlet with a coupling for attaching a 63 mm.dia hose & 25 mm.bore Hose-reel hose with 8 mm. SS. Shut-off nozzle at each floor landing. The length of the hose reel hose should be enough to reach the farthest corner of the floor. Hose-box with 15 meters long 63mm. dia. hose and 12.5 mm. bore nozzle at alternate floors. The Hose-reel hose should be coupled to the Riser.

Fire-service inlet should be installed at a point near the entry to the premises where a Fire service vehicle can approach easily.

A permanent hydrant point comprising of 63 mm.dia size 2mo of hydrant outlet shall be provided in the Pump room.

Overhead tank Refilling bypass connection should be done at the terrace level. The Overhead tank shall be of a capacity of not less than 20,000 litrs. The Underground tank shall be of not less than 1,00,000 litrs.

2. FIRE LIFT :

The Fire-Lift and all the lifts should have a provision to ground automatically in case of electricity failure. Each building should have at least one lift as a Fire-Lift and if the building is divided into two or more parts then each should have a Fire-Lift. Lift-well should have blowers to pressurize the lift-well so connected that it will automatically operate when alarm call point is operate, so that it prevents the lift well getting smoke logged.

3. FIRE ALARM:

Fire alarm call point to be installed at each floor with sounders capable of being heard all throughout the building.

4. FIRE EXTINGUISHERS

One Carbon Dioxide (CO2) type extinguisher of 4.5 kg. with ISI mark. and one extinguisher of 9kg. Dry Chemical Powder (DCP) type extinguisher with ISI mark to be installed on each floor in case of commercial building.

One Carbon Dioxide (CO2) type extinguisher of 4.5 kg. with ISI mark. OR Two Carbon Dioxide (Co2) type extinguisher of 2 kg. with ISI mark capacity on alternate floors in case of residential building.

If the building is divided into two or more parts then each part should have these extinguishers installed.

5. STAIRCASE :

The staircase has to be open from at least one or two sides but if the staircase is in the centre core of the buildings it has to be pressurized to prevent it from getting smoke logged. The Riser/Down-comer should be located in the staircase or close to in to make it easily approachable in case of Fire from the floor below or above.

6. BASEMENT :

The basement of 200 sq. meters or more should be protected with Automatic Sprinkler system with at least one sprinkler head for actual Car parking space. Additionally be protected by a Hydrant outlet and two 25 mm. bore Hose-reel hoses with 8 mm. bore nozzles at each basement level.

7. LIGHTENING ARRESTER :

A lightening arrester should also be installed and be properly earthed to prevent damage to the building when the lightening strikes.

8. PHOTO LUMINESCENT (AUTO GLOW) SIGNAGE'S :

If the building falls in a confined area or if it has an enclosed staircase or is not well lit-up on the inside, then adequate photo luminescent (auto glow) signage's should be displayed at each floor / landing / pathway / dead-end along all exit routes leading to the ground level. The signage should indicate the fighting, fire safety equipment present on the respective floor/landing/pathway/dead end along all exit routes leading to the ground level.

9. ELECTRIC POWER SUPPLY TO THE ENTIRE FIRE-SAFETY SYSTEM

Electricity supply to the fire pump, fire alarm system, staircase pressurization system and the lift should be made available from the main Electrical supply. Ex: from Electrical Room or any other electrical supply. This is to ensure availability of power supply to the fire pump and fire safety system even after the main electrical supply to the building is switched off at the time of fire.

10.INDIVIDUAL FIRE SEFTY SYSTEM

FIRE SEFTY SYSTEM SHOULD BE PROVIDED IN EIVIDUAL SHOW ROOM BY OWNER

IMPORTANT INSTRUCTIONS:

After Inspection of a low-rise building by the fire service authority,if the fire officer concerned feels th need for additional fire prevention/protection measures / ventilation system required or equipment (i.e. - Passive system / Suppression system / Fire door - Window / Detection system / Active system / Sprinkler / Deracker etc.) as per Fire load / Firerick / Public gathering. Potential / Occupancy / Confined area, those additional measures / equipment have to be implemented / installed.

NOTES : C.G.D.C.R.- 2017 (GT. - 1999-2000)

- IT IS CERTIFIED THAT PLOT UNDER REFERENCE IS SURVEYED BY ME AND THE DIMENTIONS OF ALL SIDES OF PLOT AND PLOT AREA AS SHOWN IN PLAN AREA MEASURED BY ENGINEER ON RECORD AND IN ACCORDANCE WITH OWNERSHIP/REVENUE RECORD.
- ENGINEER IS FULLY RESPONSIBLE FOR LEAVING OPEN SPACE AND MARGIN.
- THE DEPTH AND POSITION OF EXISTING MUNICIPAL MANHOLE IS VERITIED ME ON SITE AND PERMISSION CAN GET DRAINAGE CONNECTION.
- IT IS CERTIFY THAT ACCORDING TO C.G.D.C.R.- 2017 ALL REQUIREMENT OF THE BUILDING ARE CHECKED AND NECESSARY ACTION ARE TAKEN.
- IT IS CERTIFY THAT ACCORDING TO THE CLAUSE NO. 4.4.10 OF THE C.G.D.C.R.- 2017 THE STRUCTURE OF THE BUILDING IS DESIGN AS PER THE NORMS OF THE INDIAN STANDERDS.
- DESIGN OF SEWARCAGE AND RAILING IS PROVIDED AS PER PROVISION OF THE CLAUSE NO. 11.3.1 OF C.G.D.C.R.- 2017.
- PLOT ENTRANCE RAMP IS PROVIDED AS PER THE PROVISION OF THE CLAUSE NO. 13.1.14 OF C.G.D.C.R.- 2017.
- LIFT IS PROVIDED AS PER THE PROVISION OF THE CLAUSE NO. 13.3 AND OF C.G.D.C.R.- 2017.
- WATER TANK IS PROVIDED AS PER THE PROVISION OF THE CLAUSE NO. 13.4 OF C.G.D.C.R.-2017.
- LETTER BOX FOR SMALL BIS PROVIDED AT GROUND LEVEL FOR EACH UNIT.
- ANTER TANK FOR FIRE SAFETY REQUIREMENT PROVIDED AS PER FIRE PREVENTION AND FIRE SAFETY ACT-2016.
- ELECTRICAL INFRASTRUCTURE SHALL BE PROVIDED AS PER CLAUSE NO.13.11 OF C.G.D.C.R.-2017.
- DRINKING WATER FACILITY FOR DISABLED PERSONS IS PROVIDED AS PER THE CLAUSE NO. 13.6.2 OF C.G.D.C.R.- 2017.
- DRAINAGE FACILITY IS PROVIDED AS PER THE CLAUSE NO. 13.10 OF C.G.D.C.R.- 2017.
- SIGNAGES OF THE PARKING PLACE IS TO BE PROVIDED AS PER THE PROVISION THE CLAUSE NO. 13.7 OF THE C.G.D.C.R.- 2017.
- ENTERANCE OF THE BUILDING IS PROVIDED AS PER CLAUSE NO.13.1.6 OF C.G.D.C.R.- 2017.
- THE PAVING OF BUILDING UNOFFIMAL PLOT AS PER THE PROVISION OF THE CLAUSE NO. 13.1.3 OF C.G.D.C.R.- 2017.
- THE STRUCTURE DESIGN OF BUILDING IS AS PER NORMS OF SPECIFIED IN THE INDIAN STANDERD AND NECESSARY ACTION SHALL BE TAKEN FOR THE STRUCTURAL SAFETY DURING CONSTRUCTION.
- RAIN WATER STORAGE TANK AND RAIN WATER HARVESTING SYSTEM SHALL BE PROVIDED AS PER THE CLAUSE NO. 17.2 OF C.G.D.C.R.- 2017.
- COMMUNITY BIN PROVIDED AS PER THE PROVISION OF THE CLAUSE NO.17.2.4 & 17.2.5 OF C.G.D.C.R.- 2017.
- GREY WATER RECYCLING SYSTEM & DUAL PLUMBING SYSTEM IS PROVIDED AS PER THE CLAUSE NO. 17.3 OF C.G.D.C.R. - 2017.
- TREE PLANTATION IS PROVIDED AS PER CLAUSE NO.17.4 OF C.G.D.C.R.- 2017.
- SOLAR ASSISTED WATER HEATING SYSTEM SHALL BE PROVIDED AS PER THE CLAUSE NO.17.5 OF C.G.D.C.R.- 2017.
- POLLUTION CONTROL SYSTEM IS PROVIDED AS PER THE CHAPTER NO - 18 OF C.G.D.C.R.- 2017.
- FIRE SAFEETY SYSTEM IS PROVIDED AS PER CHAPTER NO. 14 OF C.G.D.C.R.- 2017.
- FIRE SAFTY PROVISION SHALL BE MADE AS PER FIRE PREVENTION AND LIFE SAFETY MEASURES REGULATION-2016 AND FIRE PREVENTION AND LIFE SAFETY MEASURES REGULATION - 2015.
- MAINTANCE AND UPGRADATION OF BUILDING IS AS PER CHEPTER NO. 16 OF C.G.D.C.R.- 2017.
- MARGINAL SPACE & BASEMENT SLAB SHALL HAVE LOAD BEARING CAPACITY OF 4MSS TONNES PER SQURE METER SHALL BE PROVIDED AS PER CHAPTER NO. 14 OF C.G.D.C.R.- 2017 AND FIRE PREVENTION AND FIRE SAFETY ACT - 2016.
- ROOF TOP SOLAR ENERGY INSTALLATION & GENERATION SHALL BE PROVIDED AS PER CLAUSE NO.17.5.1 OF C.G.D.C.R.- 2017.
- THE GLAZED SURFACE AREA OF THE EXTERNAL FACADE SHALL BE NON REFLACTIVE AND PROVIDED UP TO MAX OF 50% OF THE TOTAL SURFACE AREA OF EACH FACADE WITH THE PROVISION OF SAFETY RAILLING UP TO SILL LEVEL AS PER CLAUSE NO.13.13. OF C.G.D.C.R.- 2017

AREA TABLE.		SQ.MT.
1	PLOT AREA	2758.00
2	PERMISSIBLE F.S.I (1:1.2)	3309.60
3	PERMISSIBLE CHARGABLE F. S.I. (1:1.5)	4137.00
4	MAX. PERMISSIBLE F. S.I. (2x3)	7446.60
5	TOTAL UTILISED F.S.I	7435.57
6	UTILISED CHARGABLE F. S.I. (5-2)	4125.97
7	MAX. PERMISSIBLE F.S.I. COMMERCIAL	743.98

MOSQUITO - PROOF WATER TANK :-

THE WATER STORAGE TANK SHALL BE MAINTAINTED THAT PERFECTLY MOSQUITO - PROOF CONDITION BY PROVIDING A PROPERLY FITTING HINGED COVER AND EVERY TANK MORE THAN 1.50 MTS. IN HEIGHT SHALL BE PROVIDING WITH A PERMANENTLY FIXED IRON LADDER TO ENABLE INSPECTION BY ANTI - MALARIA STAFF.

COMM.BIN AREA CALCULATION :-

(COMMERCIAL) - (5x57.8M REQUIRED 20 LTS/1000SQ.MTS.)
TOTAL FLOOR AREA = 711.09 SQ.MT.
100 SQ. MTS. PL AREA / 20 LTS.
711.09 SQ.MTS / 142.22 LTS.= 1.77 SAY 2
TOTAL PROVI. 100.00 LTS. (80 X 2)

TREE PLANTATION

PLOT AREA = 2758.00 SQ. MTS.
200 SQ. MTS. / 5 TREE
(2758.00/5)200 = 69.00 TREE SAY 69 TREES
PROVI. 69 TREES

REQ.FERCOLATING WELL

PLOT AREA - 1800 TO 4000 SQ. MTS.
1 PERCOLATING WELL
PLOT AREA = 2758.00 SQ. MTS.
2758.00 / 4000.00 = 0.68 SQ. MTS.
PROVI. 1 PERCO. WELL.

COMMUNITY BIN (RESI.)
RESI. UNITS :- 09 UNITS
1 UNITS / 10 LTS.
09 UNITS / 90 LTS.
800 / 80 = 11 02 NOS. CONT.
PROVI. 900 LTS. (80 X 12)

SANITATION FACILITY

FLOOR AREA (TOTAL) :- 711.09 SQ. MTS.

4 SQ. MTS. = 1 PERSON
711.09 SQ. MTS. = 177.77 PERSON SAY 178 PERSON
89 MALE & 89 FEMALE PROVIDED

SANITORY REQ.
URINAL REQD:
= 1 URINAL FOR EVERY 25 PERSONS
= 89/25 = 3.56 REQ. SAY 4 FOR MALE USERS

W.C. REQD:
= 1 W.C. FOR EVERY 25 PERSONS FOR MALE
= 89/25 = 3.56 REQ. SAY 4 FOR MALE

W.C. REQD:
= 1 W.C. FOR EVERY 25 PERSONS FOR FEMALE
= 89/25 = 3.56 REQ. SAY 4 FOR FEMALE

	REQ.		PROVIDED		
	WC	U		WC	U
MALES	4	4			
FEMALES	4	-	G.F&F.F	22	22

MINIMUM 25% OF SUCH WATER CLOSETS AND URINALS SHALL BE PROVIDED COMMON AND ACCESSIBLE LOCATION OF THE BUILDING.
PROVIDED 1 W.C. & 1 URINAL 1 PROVIDED 1W.C. & 3 URI. & 1 P.H.P. TOILET PER GENDER.

BLOCK	CONSUME F.S.I.			NO. OF COMM. UNIT	RESI. DWELLING UNIT MORE THAN 50SMT.AND UPTO=85SMT.			RESI. DWELLING UNIT MORE THAN 85SMT.AND UPTO=200SMT.			COMM. FSI	
	COMM.	RESI.	TOTAL		NO.OF UNIT	F.S.I. AREA	% USED F.S.I.	NO.OF UNIT	F.S.I. AREA	% USED F.S.I.	F.S.I. AREA	% USED F.S.I.
A+B	711.09	6724.48	7435.57	24	0.00	0.00	0.00	89	6724.48	100.00	711.09	9.56
TOTAL	711.09	6724.48	7435.57	24	0.00	0.00	0.00	89	6724.48	90.44	711.09	9.56

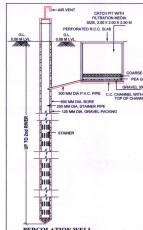
GRAND TOTAL DETAIL

SR. NO.	DWELLING UNIT TYPE	NO.OF UNIT	USED F.S.I.	% USED F.S.I.	CHARGABLE F.S.I.
A	COMMERCIAL UNIT	24	711.09	9.56	584.58
B	UP TO 50 SQ.MT.	00	00	00	0.00
C	MORE THAN 50 AND UP TO 85	00	00	00	0.00
D	MORE THAN 85 UP TO 200	89	6724.48	90.44	3731.06
F	WITH AFF.F.S.I. (40% S.I.AR)	00	00	00	0.00
	GRAND TOTAL	113	7435.57	100.00	4125.97

COMMON PLOT AREA CALC :-

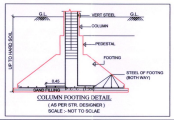
(1) 16.63 X 11.25 = 187.09
(2) 12 X 16.86 X 2.73 = 23.01
(3) 12 X 05.76 X 0.93 = 02.68
(4) 08.27 X 05.68 = 46.97
(5) 12 X 03.08 X 4.04 = 16.30
= 276.07

NET COMMON PLOT AREA
= 276.07 SQ. MT.

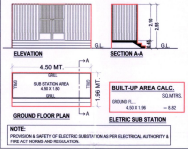


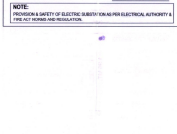
PERCOLATION WELL

FOR BUILDING UNIT 1500.00 S. M. OR MORE AND UP TO 4000.00 S. M.
A PART THERE OF IT.
NOTE - STRUCTURE DESIGN AS PER STRUCTURAL ENGINEER.
(THIS IS ONLY SKETCH PLAN)

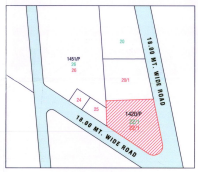


COLUMN FOOTING DETAIL
SCALE :- 1 CM = 1 MT.
SCALE :- NOT TO SCALE

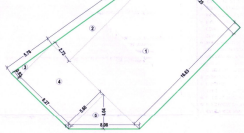




NOTE:
PROVISION & SAFETY OF ELECTRIC SUBSTITION AS PER ELECTRICAL AUTHORITY & FIRE ACT HORMS AND REGULATION.



N KEY PLAN
SCALE :- 1.00 CM. = 20.00 MT.


1.5
2.25
1.5
1.5
1.5