



Surat Municipal Corporation

Fire & Emergency Services

Phone No. 0261 - 2423750 to 56, Fax No. 0261 - 2451935, 0261 - 2422110

NORMS FOR THE BASIC REQUIREMENT OF FIRE PREVENTION SYSTEM IN HIGH RISE BUILDINGS & COMMERCIAL COMPLEX WITH EFFECT FROM 01/07/2013

The said norms has been formulated keeping in view the increasing number of Infrastructure and hazard related to it. By adhering to this norms we can be able to reduce the intensity of it, thereby saving the precious life and property.

The said norms has to be followed by :-

- I. Residential Buildings exceeding 15 mtr. Height ;
- II. All Commercial Complex ;

1. FIRE HYDRANT SYSTEM:

- a. One riser of minimum 100 mm – 150 mm diameter (Depend upon the fire load) is required for each tower comprising for a maximum of 1000 Sq. meter floor area. And if the building is divided into two or more parts, then each part shall have a separate riser with all the necessary fittings on each floor ;
- b. The riser of the building shall be connected to the Pump located in the Ground Floor with an isolation valve & Non Return Valve and it should be connected to the overhead tank with an isolation valve and non return valve ;
- c. The Main Panel of the Pump should be located in the Ground Floor and it should have a provision to operate from all floors i.e. ON – OFF Switch to be provided on all Floors ;
- d. Fire Brigade Inlet of 4 way is required at the main gate of the building / complex and it should have the pipe connection of 150 mm dia. Pipes ;
- e. Pipe shall be of GI Heavy pipes and underground pipes shall be suitably coated as per IS 10221 with the membrane of minimum 4 mm thick ;
- f. All aboveground pipes shall be painted with two coats of Primer and two coats of PO Red synthetic paint ;
- g. Each floor of the Building shall have Fire Hydrant Valve, Hose Reel of 25mm hose & 8 mm bore shut off nozzle, ON – OFF Switch for Pump, Fire Hose Box comprising of Fire Hose, 63mm x 15 mtr. Length with couplings – 1 No. & Branch pipe with Nozzle of 12mm bore ;
- h. The Hose Reel shall be of adequate length so as to reach the farthest corner of the Floor ;
- i. Two hydrant points shall be on the terrace for testing purpose ;
- j. Overhead tank filling bypass connection to be provided at the terrace level ;
- k. The underground tank shall be of 100,000 ltrs. Capacity and overhead tank shall be of minimum 20,000 ltr. Capacity ;
- l. Fire pump should be designed 900 LPM @ 3bar pressure on the terrace.
- m. Motor & Pump set shall be Centrifugal type ;



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2. FIRE EXTINGUISHER's :

One Carbon Dioxide type FE of 4.5 Kgs with ISI mark and one FE of 5 Kgs Dry Chemical Powder type with ISI mark to be installed on each floor & Two 50 Kgs. DCP Extinguisher to be installed near Main electrical panel & transformer area ;

3. FIRE ALARM :

Fire alarm system to be provided with Manual Call Points & Sounder's to be provided on each floor capable of being heard throughout the building ;

4. 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 FIRE-LIFT and if the building is divided into two or more parts then each part 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 operated, so that it prevents the lift well from getting smoke logged ;

5. STAIRCASE :

The staircase has to be open from at least one or two sides. But if the staircase is in the centre or core of the building, then it has to be pressurized to prevent it from getting smoke logged.

The riser / downcomer should be located in the staircase or close to it to make it easily approachable in case of Fire from the floor below or above ;

External staircase to be provide in commercial building for speedy evacuation if required.

6. BASEMENT :

The basement should be protected with Automatic Sprinkler System as per the norms of NBC. Additionally, it should have all the equipments as mentioned for floors i.e. Hydrant Valve, Hose Reel, Hose Box, Fire Extinguisher's, etc. ;

7. LIGHTENING ARRESTOR :

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



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8. PHOTOLUMINESCENT SIGNAGES :

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 signages should be fixed at each floor, its pathway, landing, dead end and all along the exit routes leading to the ground level. The signage should indicate the position of the fire equipments, first aid, emergency exit routes, staircase, etc. ;

9. ELECTRIC POWER SUPPLY TO THE FIRE SYSTEM :

Electricity supply to the fire pump, fire alarm system, staircase pressurization system and fire lift should be made available from the main electrical supply (i.e. from electrical power supply of the company). This is to ensure availability of power supply to the fire system even after the main electric supply to the building is switched off at the time of fire ;

Fire system should be connected with generators & change over switch, Also electrical wiring should be treated 2 hr. fire resistant.

After inspection of the building by the authority of Fire Services, if the officer concerned feels the need for additional fire prevention / protection measures / ventilation system required or equipment (i.e. passive / Suppression / Fire Door / Detection / Sprinkler / Drencher System, etc.) as per Fire load / Fire risk / Public gathering / Potential / Occupancy / Confined area, those additional measures / equipment have to be implemented / installed.

DOCUMENT'S REQUIRED FOR OFFICIAL PROCEDURE OF NOC :

1. Request letter from Society / Association for Inspection ;
2. Copy of receipt of fees paid for Inspection ;
3. Refilling & Hydraulic test certificate of each fire extinguisher's ;
4. Copy of valid certificate of fire lift from "Inspector of Lifts" ;
5. Annual Maintenance Contract certificate for the total fire protection system installed which should be on Judicial Stamp paper of Rs. 100.00 & be duly **notarized** ;
6. Letter confirming appointment of contractor for maintenance on letterhead of the Society ;
7. Letter of acceptance from the contractor for maintenance contract ;
8. Photo & Video of the site inspection process of the building ;
9. Any other document, if required shall have to be provided by the Society ;

Chief Fire Officer
Surat Municipal Corporation