

**GOVERNMENT OF WEST BENGAL  
OFFICE OF THE DIRECTOR GENERAL  
WEST BENGAL FIRE & EMERGENCY SERVICES  
13-D Mirza Ghalib Street, Kolkata- 700 016**

Memo No : IND/WB/FES/20192020/69218

DATE: 01/01/2020

**From :**

**The Director**

**Fire Prevention Wing,**

**West Bengal Fire & Emergency Services.**

**To :**

**BIBHUTI PRASAD AGARWAL MEENA DEVI AGARWAL SAJJAN KUMAR GOYAL  
SARALA DEVI GOYAL**

**Eastern By Pass**

**Jalpaiguri F.S., Bhaktinnagar,**

**Jalpaiguri - 734004 .**

**Sub :Fire Safety Recommendation for a proposed construction of G + 5 storied building under group Mercantile at the premises no.-Plot No- 348/703,355/706,348/355R(R.S.),54(L.R),KH no- 459/11,459/12,459/1,459/2(R.S),684,685,686,687(L.R),JL No- 02,Sheet No- 9(R.S.),59(L.R),Mouza- Dabgram Eastern By Pass, Bhaktinnagar, Jalpaiguri - 734004**

This is in reference to your Application No. IND/WB/FES/20192020/69218,dated 01/01/2020, regarding the Fire Safety Measure for a proposed construction of G + 5 storied building under group Mercantile at the premises no.-Plot No- 348/703,355/706,348/355R(R.S.),54(L.R),KH no- 459/11,459/12,459/1,459/2(R.S),684,685,686,687(L.R),JL No- 02,Sheet No- 9(R.S.),59(L.R),Mouza- Dabgram Eastern By Pass, Bhaktinnagar, Jalpaiguri - 734004.

The plan submitted by you was scrutinized and marked as found necessary from Fire Safety point of view. In returning one set of plan with recommendation, this is issuing Fire Safety Recommendation in favour of the aforesaid building subject to the compliance of the following fire safety measure.

Recommendation:

## 1. CONSTRUCTION

- 1.The whole construction of the proposed building shall be carried out as per approved plan drawing conforming relevant building rules of local Municipal body.
- 2.The interior finish decoration of the building shall be made low flame spread materials conforming I.S. specification
- 3.Provision of ventilation at the crown of the central core-duct of the building shall be provided.
- 4.Arrangement shall have to be made for sealing all the vertical ducts by the materials of adequate fire resisting capacity.

### OPEN SPACE & APPROACH

The open space surrounding the buildings shall conform the relevant building rules as well as permit

the accessibility and maneuverability of fire appliances with turning facility.

### STAIRCASE - .

- 1)One staircase of the building shall be enclosed type. Entire construction shall be made of bricks/R.C.C. type having fire resisting capacity not less than 4 hours.
- 2)The staircase of the building shall have permanent vents at the top and openable sashes at each floor level in the external wall of the building.
- 3)The width of the staircase shall be made as marked in the plan. Corridors and the exit doors shall be conforming the relevant building rules which upto date amendment.
- 4)All the staircases shall be extended upto terrace of the building and shall be negotiable to each other without entering into any room.
- 5)Fire and smoke doors at the entrances of all the staircase enclosure as marked in the plan at each floor level shall be provided. The F.C.D. shall be of at least one hour fire resisting wire glass window fitted with self-closing type openable in the direction of escape.

### LIFT

- 1)Walls of all lift enclosures shall have a fire rating of two hours; lifts shafts have a vent area not less than 0.2 M<sup>2</sup>
- 2)Lift Motor Room shall be located preferably on top of the shaft and separated from the shaft by the floor of the room.
- 3)Landing doors in all lift enclosures shall have a fire resistant of not less than half hour.
- 4)All Lift Car door shall have a fire resistance rating of half an hour.

5)Exit from the lift lobby, if located in the core of the building, shall be through a self closing smoke stop door of half an hour fire resistance.

6)Grounding Switch(es), at ground floor level shall be provided on all the lifts to enable the fire service to ground the lifts.

7)In case of failure of normal electric supply, it shall automatically trip over to alternate supply. For apartment houses, this changeover of supply could be done through manually operated changeover switch. Alternatively, the lift shall be so wired that in case of power failure, it comes down at the ground level and comes to stand still with door open.

#### BASEMENT

- 1.The basement shall be adequately ventilated.
- 2.The additional staircase from the open air as shown in the drawing shall be constructed besides the ramp conforming relevant I.S. specification.
- 3.The basement shall be protected with Auto sprinkler system.
- 4.Mechanical extractor for smoke venting system from basement levels shall also be provided. The system shall be of such design as to operate on actuation of heat/ smoke sensitive detector or sprinkling. It shall also have an arrangement to start it manually.
- 5.Mechanical extractors shall have an alternative source of supply.
- 6.Mechanical extractors shall have to be designed to permit 30 air changes/hour in case of fire and shall be incorporated with an alternate source of power supply, for normal operation air changes shall be 12-15 air changes per hour.

#### SEPARATION AND COMPARTMENTATION

The center shall be separated horizontally and vertically into its four functions such as retail area, service bays, storage area and car park.

The Mall Atrium shall rise up through all levels of the building and will be separated from the car

parking zone, lower ground basement.

Retail area shall be completely separated by compartmentation in order to consider separately with

regard to fire spread.

#### FIRE FIGHTING WATER

As the automatic fire sprinkler system serve the primary Defense against fire through out the complex, the shopping center shall have to be equipped to be 1,00,000 lts. of stored water

with replenishing arrangement @ 2850 lts./min preferably from two different sources of water supply shall have to be provided.

## WET RISER SYSTEM

Wet Riser system shall have to be installed providing landing valves in each floor level which will be linked to sprinkler installation.

## AUTOMATIC SPRINKLER SYSTEM

The automatic sprinkler system shall have to be installed in accordance with ordinary hazard group III.

Sprinkler system will be serving the major stores, shops. They shall have to be installed standard

sprinklers and maximum fire size at 5 MW.

In order to limit maximum fire size to 1 MW or less within the Offices, shops, storage areas and

service corridors, fast response sprinklers with a RTI of 50 or less may be used.

The automatic sprinkler installation shall be provided in the basement +Lower basement of the

building and in all floor areas including all shops, corridors, food court, banquet hall, conference room,

Hotel rooms, restaurant, kitchen, meeting hall, etc. of the building as per I.S. 9972. Alarm gong to be

incorporated along with the sprinkler system.

## FIRE PUMPS

Two electric motor pumps, one diesel driven pump as stand-by + jockey pump shall supply the sprinkler installation, hydrant and riser with water from the storage tanks.

The electrical supply to the pumps will be from two independent sources. In the event of failures of the main source of supply will be switched to the stand by generator which is capable of supplying power to both pumps.

### DISTRIBUTION PIPING

The fire pumps discharge through separate 150mm risers to main distribution pipes will be located at lower ground floor level.

### VALVE STATION

The total system (Sprinkler) shall be divided into four valve station at lower mall level which

will serve the shops, major stores, food court and management suit. For purposes of increased reliability separate valve set will be provided at each sprinkler valve station for the monitoring to ensure it is in the open position.

#### FIRE BRIGADE CONNECTION

A breaching place shall be provided in the sprinkler system at the lower ground floor to enable a fire brigade appliance to connect up if the building sprinkler pumps become inoperable.

#### HYDRANT SYSTEM

The complex shall be provided with wet Riser of 150mm internal diameter pipeline with provision of landing valves at the staircase landings/ half landings at the rate of one such riser for 1000 square meters of floor area. The systems shall be so designed that shall be kept charged with water on the time under pressure and capable to discharge 2850 lts./min. at the ground floor level outlet and a minimum 900lts./min. at the top most outlet. In both the cases the running pressure shall not be less than 3Kgs/sq.cm. All the other requirements confirm I.S. 3844-1989

#### DETECTION, ALARM SYSTEM

The fire alarm and detection system shall be divided into four main sectors and has a fully addressable analogue system. The system shall be linked by a communication loop to the central operator stationed in the security Control room. East sector has a local sector fire alarm panel situated at the fire brigade initial attendance point. Interruption at the communication loop shall not affect the operation at any of the sector fire alarm system. Manually operated electrical fire alarm system with at least 8 nos. of break glass type case box, fitted with hooters along public address system, talk back system at each floor of the complex and block connecting with Audio-Visual Panel board shall be made in the Control room. The Control room shall be located at the entrances of ground floor of the building. Other requirements of the system shall be made conforming I.S. 2189-1988

#### PUBLIC ADDRESS SYSTEM

Public address system linked between all floors and Control Room shall have to be established.

PUMPS FOR FIRE FIGHTING INSTALLATION I.S- 12469: 1988 shall have to be arranged in such a manner so that it will start automatically due to fall in pressure as prefixed in the installation.

Electrical Installation- shall be as per code of practice 1946: 1978, (NBC-Gr-iv) & Indian Electricity rules- 1956 with up to date amendment. No electrical switch gear/ distribution should be installed in violation Of statutory Fire safety condition.

#### ALTERNATE POWER SUPPLY

Arrangement shall have to be made to supply of power with the help of generator to operate at least fire pump, illumination of staircase, corridors etc. and other places of assembly area in case of normal power failure

#### FIRST AID FIRE FIGHTING SYSTEM

First Aid Fire Fighting arrangement in the style of placing suitable type of portable fire extinguishers, fire buckets, etc. in all floors and vulnerable locations of the premises shall be made in accordance with I.S. 2190-1992

#### GENERAL RECOMMENDATION

- 1.Fire notice for fire fighting and evacuation from the building shall be prepared and be displayed at all vulnerable place of the building as per clause 5.5 of N.B. Code.
- 2.Floor number and direction sign of escape shall be displayed prominently as per clause 5.5 of N.B. Code.
- 3.The employees and security staff shall be conversant with installed fire fighting equipments of the building on to operate in the event of fire and testing as per clause 5.5 of N.B. Code.
- 4.Arrangement shall be made for regular checking, testing and proper maintenance of all the fire safety installation and equipments installed in the building to keep them in perfectly good working conditions at all times.
- 5.A crew of trained firemen under the experienced officer shall be maintained round the clock for safety of the building.
- 6.Mock fire practice and evacuation drill shall be performed periodically with participation of all occupants of building. Each year a certificate is to be obtained from the Director General, West Bengal Fire & Emergency Services certifying about the satisfactory services, performing of all the life and fire safety arrangements and installation of the building.

The planning and designing of the safety system shall be approved by the undersigned before construction of the safety installation.

On compliance of all the fire & Life safety recommendations, this office shall be

approached for

necessary inspection and testing of the installation. Final N.O.C/ Fire S. Certificate in favor of the

occupancy shall be issued on being satisfied with the test and performance of safety aspects of the installation of the building

**Director**  
**West Bengal Fire & Emergency Services**