

**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/20192020/66106

DATE: 17/12/2019

**From :**  
The Director  
Fire Prevention Wing,  
West Bengal Fire & Emergency Services.

**To :**  
SAMPURNA  
76F/1 B.T ROAD,P.S-KHARDAH,MOUZA-AGARPARA,24Pgs(N)-700058.  
Dum Dum F.S., Khardha,  
North 24 Parganas - 700058 .

**Sub :Revised Fire Safety Recommendation for a proposed construction of G + XVIII storied building under group Residential at the premises no.- 76F/1 B.T ROAD,P.S-KHARDAH,MOUZA-AGARPARA,24Pgs(N)-700058., Khardha, North 24 Parganas - 700058**

This is in reference to your Application No. IND/WB/FES/20192020/66106,dated 17/12/2019, regarding the Fire Safety Measure for a proposed construction of G + XVIII storied building under group Residential at the premises no.- 76F/1 B.T ROAD,P.S-KHARDAH,MOUZA-AGARPARA,24Pgs(N)-700058., Khardha, North 24 Parganas - 700058.

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 Revised Fire Safety Recommendation in favour of the aforesaid building subject to the compliance of the following fire safety measure.

Recommendation:

1. RECOMMENDATION

A.CONSTRUCTION :

- 1.The whole construction of the proposed building shall be carried out as per approved plan drawings conforming the relevant buildings rules of Kolkata Municipal Corporation.
- 2.The floor area exceeds 750 Sq.Mts. shall be suitably compartmented by separation walls up to ceiling level having at least two hours Fire resisting capacity.
- 3.The interior finish decoration of the building shall be made with low flame spread materials conforming I.S. specifications.
- 4.Provision of ventilation at the crown of the central core-duct of the building shall be provided.
- 5.Arrangements shall have to be made for sealing all the vertical and horizontal ducts by the materials of adequate Fire resisting capacity.
- 6.Roof is used as a refugee area in case of an emergency and it should be clear open to sky for all time. No permanent or temporary structure will be allowed on the roof.

#### B.OPEN SPACE & APPROACH :

- 1.The open space surrounding the building shall conform the relevant building rules as well as permit the accessibility and maneuverability of Fire appliance with turning facility.
- 2.The approach roads shall be sufficiently strong to withstand the load of Fire Engine weighting up to 45 M.T.
- 3.The width and height of the access gates into the premises shall not be less than 4.5 Mts. and 5 Mts respecting abutting the road as marked in the plan.

#### C.STAIRCASE :

- 1.The staircase of the buildings 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 buildings shall have permanent vents at the top and open able sashes at each floor level in the external wall of the building.
- 3.The width of the staircases shall be made as marked in the plan. Corridors and the exit doors shall conforming the relevant building rules with up to date amendment.
- 4.All the staircases shall be extended up to the 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 enclosures 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 open able in the direction of escape.

#### REFUGE AREA

- 1.Refuge area is not less than 15 sqm .and shall be provided on the external wall with cantilever projections shown in plan drawing.
2. The refuge area shall be of Fire Resisting construction and protected with self closing F.C.D at the entrance from the corridors at stair case lobbies.
3. The position of refuge areas shall be such so that they are negotiating by the Fire Service Ladder from the ground level.

#### FIRE SHAFT:

- i) An enclosed Fire Shaft having protected area of 2 hours fire resistance rating comprising protected lobby, Staircase and Fireman's Lift connected directly to exit discharge or through exit passageway with 2 hours fire resisting wall at the level of exit discharge.
- ii) Fire Shaft shall be equipped with 2 hours Fire Check Door.
- iii) Fire Shaft shall be equipped with firemen talk back, wet riser and landing valve in its lobby.
- iv) Fire Shaft shall be extended up to terrace of the building and shall be negotiated to each floor.
- v) Fire and smoke doors at the entrances of all the staircase enclosures as marked in the plan at each floor level shall be provided and shall have to be pressurized as per guide line of N.B.C. part-IV, 2016 Annexure 'C'. The F.C.D. shall be of at least two hours Fire Resisting wire glass window fitted with self-closing type openable in the direction of escape.
- vi) Lift and Lift Lobby shall be communicated to the Fire Shaft and shall have to be pressurized.

#### D.LIFT :

1. The walls of the lift enclosure shall be at least two hours Fire resisting type. Collapsible gate shall not be permitted.
2. One of the lift shall be designed for Fire Lift. The word "FIRE LIFT" shall conspicuously written at ground floor.

#### E.HALL :

The doors/aisles/gangway/cross gangway/sitting arrangement/ corridors/in hall shall be made as per good practices of national building code, part IV fire protection.

#### F.FIRE FIGHTING WATER :

Underground water reservoir having water capacity at 224000Ltrs. and overhead reservoir of 90,000Ltrs. Capacity exclusively for Fire Fighting purpose with replenishing arrangement @ 1000 Ltrs./Min. preferably from two different sources of water supply shall be provided. The Fire Water Reservoir shall have overflow arrangement with the domestic Water Reservoir as well as to avoid stagnancy of water. The water reservoir shall be kept full at all time.

#### G.HYDRANT SYSTEM :

1. The building shall be provided with Wet Riser of 150 mm internal diameter pipe line with provision of landing valves at the staircase landing/half landings at the rate of one such riser

for 1000 Sq.Mt. of floor area. The system shall be so designed that be kept charged with Water all the time under pressure and capable to discharge 1620Ltrs./Min. at the ground floor level outlet and minimum 900 Ltrs./Min. at the top most outlet. In both cases the running pressure shall not be less than 3.5 Kgs./Sq.cm. All other requirements shall conform I.S. 3844-1989.

- 2.Provision for Hose Reel in conjunction with Wet Riser shall be made at each floor level conforming the relevant I.S. specification.
- 3.Yard Hydrant/Ring Main Hydrant with provision of two numbers Hydrant with one number Fire Service inlet shall be installed surrounding the building in accordance with relevant I.S. specification.
- 4.Proper replenishing arrangement shall have to be made to keep the water reservoir full at all time.

#### H.SPRINKLER INSTALLATION :

The automatic Sprinkler installation shall be provided in the Corridor /internal passage of all floor areas the building as per I.S. 9972. Alarm gang to be incorporated along with the sprinkler system.

The sprinkler arrangement shall be laid out in zone wise distribution.

All the storage area should be protected by sprinkler system with auto detection.

Provision for testing of sprinkler head should be provided at each floor as per convenient.

#### I.FIRE PUMP :

Provision of the Fire Pump shall have to be made to supply water at the rate-designed pressure and discharge into the water based system, which shall be installed in the buildings.

One such pump shall always be kept on Stand-by preferably be of diesel driven type.

A separate Fire Pump shall preferably be made for the total sprinkler installation of the building. Provision of Jockey Pump shall also have to be made to keep the Water based system under pressurizes condition at all the time. All the pumps shall be incorporated with both manual and auto starting facilities. The suction of pumps shall preferably of positive type or in case of negative suction the system shall be Wet Riser-cum-Down Comer with suitable terrace pump with overhead tank.

#### J.ELECTRICAL INSTALLATION & DISTRIBUTION :

1.The electrical installation including transformers, Switch Gears, Main & Meters etc. and the distribution system of the premises shall be made satisfying the code of practice for Fire Safety in general buildings as laid down in the I.S. specification 1946-1982.

2.The vertical ducts shall be supply sealed at all floor level.

3.The electrical installation shall be adequately protected with CO2/D.C.P. or Medium Velocity Projector System.

4.All electrical sub-station shall be on the ground floor level and structurally to be separated from the main enclose with the provision of entry from outside open air.

5.Alternative Power Supply :

Arrangements shall have to be made to supply power with help of a generator to operate at least the Fire Pump, Pump for deep Tube-well, Fire Alarm System, Fire Lift etc. and also for illuminating the Staircase, Corridors etc. and other places of assembly of the buildings in case of normal power failure.

The electrical installation viz transformer ,HT ,LT switch gear etc shall be protected by high velocity water projector system as per suitability.

**K.DETECTION, ALARM AND SUPPRESSION SYSTEM :**

1.Manually operated Electrical Fire Alarm System with break glass type call boxes fitted with Hooters along with public address system, talk back system at each floor connecting with audio-visual panel board shall be made in Control Room. The Control Room shall be located at the entrance of Ground Floor of the buildings, other requirements of the system shall be made conforming I.S. 2189-1988.

2.Hooter will be sounded in such a manner so that an operation of a Manual Call Point Hooters will sounded on the same floor and immediate alternate floor.

3.Public Address System :

Public Address System linked between all floors and Control Room shall have to be established.

4. The suppression system shall be made with the fire extinguisher and total flooding system with co2/F.M-200 particularly in computer and electrical processing and data room and in a room of irreplaceable articles.

**L.AIR CONDITIONING SYSTEM : ( if any )**

1.The A.H.U. shall be separated for each floor with the system Air Ducts for individual floors.

2.Arrangement shall be made for isolation at the strategic locations by incorporating auto dampers in the Air Conditioning System.

3.The system of auto shut down of A.H.U. shall be incorporated with the auto detection and alarm system.

4.The Air Handling Units room shall not be used for storage of any combustible materials.

**M.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.

**P.GENERAL RECOMMENDATIONS :**

1.Fire License shall have to be obtained for proposed storing and processing with L.P.G. and

other highly combustible articles.

2. Fire Notice for Fire Fighting and evacuation from the buildings shall be prepared and be displayed at all vulnerable places of the buildings.
3. Floor numbers and directional sign of escape route shall be displayed prominently.
4. The employees and security staff shall be conversant with installed Fire Fighting equipments of the buildings and to operate in the event of Fire and Testing.
5. Arrangement shall be made for regular checking, testing and proper maintenance of all the Fire Safety installation and equipments installed in the buildings to keep them in perfectly good working conditions at all times.
6. A crew of trained Fireman under an experienced officer shall be maintained round the clock for safety of the building.
7. Mock Fire practice and evacuation drill shall be performed periodically with participation of all occupants of the buildings.
8. Haphazard indoor & out door storages shall be avoided .

A certificate is to be obtained from the Director General, West Bengal Fire & Emergency Services certifying about the satisfactory services, performances of all Fire Safety arrangements and installation of the buildings.

On compliance of all the above Fire Safety recommendations, the Director General, West Bengal Fire & Emergency Services shall be approached for necessary inspection and testing of the installation; Final Fire Safety Certificate in favour of the occupancy shall be issued on being satisfied with the tests and performances of safety aspects of installation of the building.

N.B. : Any deviation and changes the nature of use of the building in respect of the approved plan drawing, without obtaining prior permission from this office, this Fire Safety Recommendation will be treated as cancelled.

Signature valid  
Digitally signed by TARUN  
KUMAR SINHA  
Date: 2019.12.17 15:29:04 IST

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