

**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/20172018/718

DATE: 20/01/2020

From :

The Director

Fire Prevention Wing,

West Bengal Fire & Emergency Services.

To :

PALLAB GUPTA

385, SHANTIPALLY

Baisnabghata Patuli F. S., Kasba,

Kolkata - 700107 .

Sub :Revised Fire Safety Recommendation for a proposed construction of B + G + 17 storied under group Assembly Building at the premises No.- 385, SHANTIPALLY, Kasba, Kolkata - 700107

This is in reference to your Application No. IND/WB/FES/20172018/718,dated 20/01/2020, regarding the Fire Safety Measure for a proposed construction of B + G + 17 storied under group Assembly Building at the premises No.- 385, SHANTIPALLY, Kasba, Kolkata - 700107.

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. 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.

2. On Plan Drawing a petrol pump was shown on the eastern side of the project which is not reflected in the title.

3. 1. On Plan Drawing a petrol pump was shown on the eastern side of the project which is not reflected in the title.

2. Detail plan of petrol pump is required along with area statement.

3. No driveway has been provided below refuge area on the northern side of the project.

4. Insufficient width of internal driveway i.r.o. height of building i.e 62.42 mtrs.

5. Capacity of underground water reservoir and Overhead water reservoir for fire fighting purpose shall have to be shown properly as per provision of NBC-IV, 2016.

6. Pressurization of lift & lift lobby shall have to be created on both basements.

7. Basement staircase shall have to be made with mechanically ventilated, pressurized and enclosed type.

4. GENERAL RECOMMENDATIONS:

1Fire safety measures for Car parking facilities of this building shall be made as per provision of Annex – H of N. B. C. – Part _IV, 2016.

2Fire License shall have to be obtained for proposed storing and processing with L.P.G. and other highly combustible articles.

3Disposable type B. A. Musk to be kept always for emergency fire situation.

4Fire Notice for Fire Fighting and evacuation from the building shall be prepared and be displayed at all vulnerable places of the building.

5Floor numbers and directional sign of escape route shall be displayed prominently.

6The occupancy and security staff shall be conversant with installed Fire Fighting equipments of the building and to operate in the event of Fire and Testing.

7Arrangement 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.

8A crew of trained Fireman under experienced officer shall be maintained round the clock for safety of the building.

9Mock Fire practice and evacuation drill shall be performed periodically with participation of all occupants of building.

10Each year a certificate is to be obtained from the Director General, West Bengal Fire &

Emergency Services certifying about the satisfactory services, performance of all the Life and Fire Safety arrangements and installation of the building.

On compliance of all the above Fire and Life safety recommendations, the Director General, West Bengal Fire & Emergency Services shall be approached for necessary inspection and testing of the installation, 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 shall be treated as cancelled.

5. 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.

5.Escape route like staircase, common corridors, lift lobby etc. shall not be used as return air passage.

6.Wherever the ducts pass through Fire wall of floors, the opening around the ducts shall be sealed with Fire resisting materials such as asbestos rope vermiculite concrete etc.

7.The metallic ducts shall be used even for the return air instead of space above the false ceiling.

8.The materials used for insulating the duct system (inside or outside) shall be of non-combustible materials glass wool shall not be wrapped or secured by any materials of combustible nature.

9.Area more than 750 sq. m. on individual floor shall be segregated by a Fire wall and automatic fire damper for isolation shall be provided.

10.Air duct services main floor area, corridors etc. shall not pass through the staircase

enclosures.

11. The air handling units shall be separation for each floor, and air ducts for every floor shall be separated and in no way interconnected with the ducting of any other floor.

12.If the air handling units serve more than 1 floor, the recommendation given above shall be complied with in addition to the conditions given below:-

a.Proper arrangements by way of automatic Fire dampers working on fuse able link for isolating all ducting at every floor from the main riser shall be made.

b.When the automatic Fire alarm operates the respective air handling units of the air conditioning system shall automatically switched off.

13.The vertical shaft for treated fresh air shall be of masonry construction.

14.The air filters for air handling units shall be of non-combustible materials.

15.Inspection panel shall be provided in the main trucking to facility the cleaning of ducts of accumulated dust and to obtain access for maintenance of fire dampers.

16.No combustible materials shall be fixed nearer than 15cm to any duct unless such duct properly enclosed and protected with non-combustible materials (glass wool or Spun wool with neoprene facing enclosed and wrapped with aluminum sheeting) at least 3.2m thick. And which would not readily conduct heat.

6. DETECTION, ALARM AND SUPPRESSION SYSTEM:

1.Addressable analogue manually operated Electrical Fire Alarm system with at least two numbers of break glass type call boxes fitted with Hooters along with public address 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 building, other requirements of the system shall be made conforming I.S. 2189 – 1988.

2.Auto fire detection system with the help of Heat and smoke detector shall be installed in all places of below and preferably above false ceiling of the building. The system shall also be made in places of rooms where valuable articles have been kept. The other requirements of the system shall be made in accordance with I.S. 2189-1988.

3.The automatic Fire Detection, Alarm and Suppression system shall be made as per provision of N. B. C. – Part –IV, 2016 and relevant I. S. specification.

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

5.Public Address System :-

Public address system along with Talk back facility linked between all floors and Control Room shall have to be established.

7. ELECTRICAL INSTALLATION & DISTRIBUTION:

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

2The vertical & horizontal ducts shall be sealed at all floor level by fire resisting materials.

3The electrical installation shall be adequately protected with automatic fire detection and suppression system as per provision of N. B. C. – Part – IV, 2016 and relevant I. S. specification.

4Alternative Power Supply :

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

8. SPRINKLER INSTALLATION:

The automatic Sprinkler installation shall be provided in all Basements and in all floor areas of the building and Gas Bank as per I.S. 9972 and alarm gong to be incorporated along with the sprinkler system.

9. 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 building. One such pump shall always be kept on stand-by of diesel driven type.

Provision of separate pump for sprinkler system to be made to keep the Water based system under pressurized condition at all the time and shall be installed.

Provision of separate Jockey Pumps shall also have to be made to keep the Water based system under pressurized 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.

The Number and type of fire pumps shall be as per provision of N. B. C. – Part – IV, 2016.

10. WATER LAYOUT SYSTEM:

1The buildings shall be provided with Wet Riser of 150 mm. internal diameters Pipe Line with provision of landing valves at the Staircase landings / half landings at the rate of one such riser for 1000 Sq.m. of floor area. The system shall be so designed that shall be kept charged with Water all the time under pressure and capable to discharge 2280 lts/min. at the ground floor level outlet and minimum 900 lts/min. at the top most and furthest outlet. In both cases the running pressure shall not be less than 3.5 Kgs/Sq.cm. All other requirements shall conforming I.S. 3844 – 1989.

2Provision for Hose Reel units on swivelling drum in conjunction with Wet Riser shall be made near each landing valves.

3Yard Hydrant / Ring Main Hydrant with provision of adequate numbers Pillar type Hydrant shall be installed surrounding the buildings in accordance with relevant I.S. specifications.

11. FIRE FIGHTING WATER:

1.Underground water reservoir having capacity of 150,000 (1.5 Lac) ltrs for exclusively firefighting purpose of the Building shall have to be provided.

2.Overhead reservoir on the South Side stair head room shall be dedicated for Firefighting purpose.

3.The water reservoirs shall have to be kept full at all time and also have overflow arrangement with the domestic water reservoirs as well as to avoid stagnancy of water.

4.Provision of necessary manhole shall be made on the top of the reservoirs as per specification.

5.Provision of replenishment at the rate of at least 2000 lts./min. from two separate source of water supplies shall be made.

6.The deep tube wells for the replenishment of the reservoirs shall be incorporated with auto starting facility with actuation of auto detection and suppression arrangement of the premises and shall also be connected with dual power supply units.

7.Provision of placing Fire Appliances on the underground water reservoir to be made to draw water in case of emergency.

12. BASEMENT:

1.The Basement shall be adequately ventilated with aggregate cross sectional area of not less than 2.5% of the area spread evenly round the perimeter of the basement shall be provided in the form of grills.

2.Mechanical smoke venting arrangements shall be provided to all the basements conforming the relevant I.S. Specification.

3.The exit from the basement shall be from open Air and from any points the travel distance

shall not exceeds 15.5 M to reach any exit.

4.All the basements shall be protected with Automatic Sprinkler System along with Hydrants and Hose Reel Hoses conforming to I.S. 3844-1989.

5.The staircase of basement shall be of enclosed type having Fire resistance of not less than 4 hrs. and shall be situated at the periphery of the basement to be entered at ground level only from the open air and in such positions that smoke from any Fire in the basement shall not obstruct any exit having the ground upper floor of the building.

6.In multi-story basements, intake ducts may serve all basement level, but each basement and basement compartment shall have separate smoke outlet duct or ducts.

7.Mechanical extractors shall have an alternative source of power supply.

8.Mechanical extractor shall have an internal locking arrangement so that extracting shall continue to operate and supply fans shall stop automatically with the actuation of Fire Detectors.

9.The Lifts runs towards basement shall be pressurized. A positive pressure of 25 to 30 Pa. shall be maintained inside the lift well and lobby. The pressurization shall be maintained round the clock.

13. REFUGE AREA:

1.The Refuge area on calculating the area at the rate of 0.3 m²/ person on the basis of floors area shall be provided on the external wall as cantilever projection or any other suitable means at 25.65 mtr. level, 40.9 mtr. level and 56.15 mtr. of the building.

2.The refuge area shall be of Fire resisting construction and protected with self-closing F.C.D. at the entrance from the corridor or the staircase lobbies.

3.The position of refuge Areas shall be such that they are negotiable by the Fire service Ladder from the ground floor.

14. LIFT:

oThe walls of the lift enclosure of the building shall be at least two hours FIRE resisting type respectively marked in the plan with the event at top of area not less than 0.2m².

oAll the passenger lifts of the building shall be designed as high speed "Fire Lift".

oThe Electric power shall be from separate supply mains in the building and cables run with

in the lift shafts, light and fans in the lift cars shall be operated from 24 volts, supply on emergency in case of failure of normal power supply lift shall automatically trip over alternate power supply.

oArrangement shall be provided for extraction of smoke in all the lift shaft by incorporation smoke venting system designed to permit 30 Air changes per hour in case of Fire and shall be of such design as to operate on actuation of Sprinkler or Fire Alarm. In case of failure of normal electric supply, it shall automatically trip to alternate supply.

oExit doors of the lift lobby shall be through a self- closing smoke stop door of at least 2 hours for the Building.

oThe speed of the fire lifts in the building shall be such that it can reach the top from the ground floor within 1 minute in visual indications of floor numbers shall incorporated in the lift cars.

oAll other requirements shall conform the I.S. specification including the communication facility in the lift cars connecting to the Fire Control Room of the building.

oThe Lift Lobbies and staircase of basements shall be enclosed type and pressurized as per existing norms and relevant I.S. specification. The Lifts runs towards basements shall be pressurized. A positive pressure of 25 to 30 Pa. shall be maintained inside the lift wall and lobby. The pressurization shall be maintained round the clock.

15. OPEN SPACE & APPROACH:

1.The open space surrounding the building shall conform the relevant building rules as well as permit the accessibility and manoeuvrability of Fire appliance including Aerial Ladders with turning facility.

2.The approach roads, internal road / driveway shall be sufficiently strong to withstand the load of Fire Engine weighing up to 45 M.T.

3.The width and height of the access gates into the premises shall not be less than 5M & 5.5 M respecting the abutting road.

16. CONSTRUCTION:

1.The whole construction of the proposed buildings shall be carried out as per approved plan drawings conforming the relevant building rules of local Municipal Body.

2.The floor area exceeds 750m² 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 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 & horizontal ducts by the materials of adequate Fire resisting capacity.

17. This is in reference to your Application No. IND/WB/FES/20172018/718,dated 09/08/2019, regarding Revised Fire Safety Recommendation for a proposed construction of B + G + 17 storied building under group Assembly at the premises No.- 385, Shantipally, Kasba, Kolkata – 700107.

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.

1. Issued Fire Safety Recommendation vide Memo No. IND/WB/FES/20172018/718,dated 13/12/2017 shall be followed strictly and amendment shall be made as per NBC part- IV, 2016.

Director
West Bengal Fire & Emergency Services