



Government Of West Bengal  
Office Of The Director General  
West Bengal Fire & Emergency Services  
13D, Mirza Ghalib Street, Kolkata - 16

mm39  
Fire

Memo no.:WBFES/7243/13/KOL-BB/88/13(88/13)

Date: 16-11-2020

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

To: Sugam Ggriha Nirmaan Ltd., Super Diamond Nirman Ltd., Goodluck Infradevelopers Pvt. Ltd., Orbit Towers Pvt. Ltd.  
Unit 1F, Sukh Sagar, Premises No. 2/5, Sarat Bose Road, P. O. Elgin Road, Police Staion - Ballygunge, Kolkata-700020

Sub: Revise Fire Safety Recommendation for proposed two nos. block as A1 & A2 of B + G + XVIII storied Residential building consisting approved A3 & A4 (G + XIX ) & B1, B2 (B + G +XVII)at 88 ,B .L . Saha road , Ward -116,Borough -XIII, Kolkata - 700053

This is in reference to your application no. 0125188208700335 dated 23-07-2020 regarding the Revise Fire Safety Recommendation for proposed two nos. block as A1 & A2 of B + G + XVIII storied Residential building consisting approved A3 & A4 (G + XIX ) & B1, B2 (B + G +XVII)at 88 ,B .L . Saha road , Ward -116,Borough -XIII, Kolkata - 700053

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 office is issuing **Revised Fire Safety Recommendation** in favor of the aforesaid building subject to the compliance of the following fire safety measure.

**Recommendation:**

**CONSTRUCTION:**

- 1.The whole construction of the existing building shall be carried out as per approved plan drawings conforming the relevant building rules of local Corporation/Municipality Body.
- 2.The interior finish decoration of the building shall be made low flame spread materials conforming I.S. specifications.
- 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 and horizontal ducts by the materials of adequate fire resisting capacity.
- 5.Doors and windows should be of at least two hrs. fire resisting type.

**OPEN SPACE AND APPROACH:**

- 1.The open spaces surrounding the building shall conform the relevant building rules as well as permit the accessibility and maneuverability of Fire Appliances with turning facility.

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Page : 1

- 2.The approach roads shall be sufficiently strong to withstand the load of Fire Engine weighting 45M.T.
- 3.The width and height of the access gate into the premises shall not be less than 4.5 mts. and 5.0 mts. respecting the abutting road.
- 4.Drive way should be free from any type of obstruction. No parking will be allowed on the drive way.
- 5.All the Passage way should be kept clear for free access.

#### STAIRCASE:

- 1.The staircases of the all 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 buildings shall have permanent vents at the top and open able sashes at each floor level in the external walls of the building.
- 3.The width of the staircases shall be made as marked in the plan. Corridors and the exit doors shall conform the relevant Building Rules with up to date amendment.
- 4.The both staircases shall be extended up to open terrace as marked in the plan drawing and shall be negotiated to each floor & each other & FCD shall be installed as marked/ shown in the plan drawing. The refuse area to be protected with the FCD with self-closing type openable in the direction of escape.
- 5.The pressurized fire fighting shaft to be installed as shown in the plan drawing in both blocks.

#### REFUGE AREA:

- 1.Refuge area is not less than 15 sqm. and shall be provided on the external wall with cantilever projection or other suitable means at above 23.65 mtr. (6th & 7th floor)and 36.65 mtr.(10th & 11th floor) & 49.65Mtrs.(14th & 15th floor) levels of the building as shown in the drawings.
- 2.The refuge areas shall be of Fire Resisting construction and protected with self-closing F.C.D. at the entrance from the corridors at staircase lobbies.
- 3.The position of refuge areas shall be such so that they are negotiable by the Fire Service Ladder from the ground level.

#### LIFT:

- 1.The walls of the lift enclosure shall be at least two hours Fire Resisting type.
- 2.Collapsible gate shall not be permitted.
3. One no. Fire fighting lift is mandatory in both blocks.
- 4.Lift and Lift Lobby shall be communicated to the basement and shall have to be pressurized as marked in the plan drawing as well as guide line of N.B.C. part-IV, Annexure 'C'.

#### BASEMENT:

- 1.The basement shall be adequately ventilated.
- 2.Additional staircase from the open air as shown in the drawing shall be constructed 3.beside the ramps conforming relevant I.S. specification.
- 4.The basement shall be protected with auto sprinklers system/hose reel system etc.
- 5.Mechanical extractors for smoke venting system from lower/upper basement levels shall also be provided. The system shall be of such design as to operate on actuation of heat/smoke sensitive detector or sprinkler. It shall also have an arrangement to start it manually.
- 6.Mechanical extractors shall have an alternative source of supply

#### Means of escape:

- 1.The emergency exit shall not be allowed to lock and key round the clock.



2.The walls of the lift enclosure shall be at least two hours fire resisting type. Collapsible gate shall not be permitted.

3. One of the lift shall be designed for Fire lift.

4.Time of evacuation should be as per IS: 1644-1988.

#### FIRE FIGHTING WATER:

Underground water reservoir having water capacity of 300000 ltrs. and overhead water reservoir having capacity of 10000 ltrs. exclusively for fire fighting purpose with replenishing arrangements @ 1000 ltrs/min. preferably from two different sources of water supply shall be provided. The water reservoirs 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.

#### HYDRANT SYSTEM:

1.External Hydrant System: IS-13039:1991

The whole area of the building is to be protected by adequate no. of pillar type hydrants system / Ring Main Hydrant of 150 mm internal dia. Pipe line i.e. one pillar hydrant per 1000 sq. meter of area or as per the vulnerability of the place.

2.Hydrant/ Wet Riser System IS-3844:1989

The building shall be provided with Wet Riser of 150 mm internal diameter pipeline with provision of landing valves at the staircase landings/ half landings at the rate of one such riser for 1000 Sq.mtr. of floor area. The system shall be so designed that kept charged with water all the time under pressure and capable of discharge 2850 ltrs./min. at the ground floor level outlet and minimum 900 ltrs./ min. at the top most furthest outlet. In both cases the running pressure shall not be less than 3.5 kgs./ Sq.mtr.. All other requirement shall conform I.S. 3844-1989.

#### Sprinkler System:

Entire building in both blocks should be covered with the sprinkler system as per IS 9972. Sprinkler pump with separate jockey to be installed. Alarm gang to be incorporated in the the sprinkler system.

#### Hose reel system

Provision for Hose Reel in conjunction with Wet Riser shall be made at each floor level and conforming the relevant I.S. IS:844-1985 Specifications.

#### Small gears

Hose box, 15 meter length delivery hose, gunmetal short branch of half inch dia. one set at each pillar hydrants as IS:903-1993 specification should be installed.

#### Pumps for fire fighting

Two nos. electric and one diesel driven(stand by ) pump of capacity 2850 litre/min and Two nos. electric pump of capacity 180 litre/min should be installed and arranged in such a manner so that it will start automatically due to fall in pressure by installing as jockey pump as per IS-12469:1988 specification. All the pump shall be designed so as to supply water 900 LPM at a pressure 3.5 kg/cm<sup>2</sup> at the furthest point. Electrical and diesel driven arrangement for stand by fire pump shall be ensured. 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.

#### ELECTRICAL INSTALLATION AND DISTRIBUTION:

1.The electrical installation including Transformers, Switch Gear, 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.

2.The vertical and horizontal electrical ducts shall be sealed at each floor level by fire resisting materials.

3.The electrical installation shall be adequately protected with CO<sub>2</sub>/D.C.P. Fire Extinguishers conforming I.S. specification.

4.All cables should be FRLS type and all wiring along with appropriate gauge and resistance conforming the machineries to be used.

5.All electrical installation should be done in accordance with National Electrical Code and Part- VIII "Building Services"



Section-2 "Electrical installation" good practice[4(10) ].

6. Arrangement for alternative power supply shall have to be made to supply power with the help of a generator to operate at least the Fire Pump, Deep Tube-Well Pump, Fire Alarm System etc. and also for illuminating the Staircase, Corridors, Lobbies etc. and other places of assembly of the building in case of normal power failure.

#### DETECTION AND ALARM SYSTEM:

1. Manually operated Electrical Fire Alarm System with at least three numbers of break glass type call boxes fitted with Hooters along with Public Address System at each floor connecting with visual panel board shall be made in Control Room. The Control Room shall be located at entrance of ground floor of the building, other requirements of the system shall be made conforming I.S. 2189:2008.

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

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

4. Auto Fire Detection System with the help of Smoke/ heat Detectors shall be installed in entire building area in the both blocks. The system shall also be made in place of rooms where valuable articles have been kept. The other requirements of the system shall be made in accordance with I.S. 2189:2008(as amended) and the code of practice as laid down in the N.B.C Part-IV.

5. Fire Control Room of the premises having direct dialing facility to the local fire service.

6. Both way public address system shall be made available in all floors of the building. The system shall be connected to the Main Control Room.

Gas Bank's 6044-2000(if any):

In case of gas bank, the same should be installed conforming S/L 4.1.5 & 4.1.6 of the aforesaid IS code of practice and Fire service license to be obtained for such LPG gas bank.

#### First Aid Fire Fighting System

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

#### 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 First Aid Fire Fighting arrangement in the style 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 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 building shall be prepared and be displayed at all vulnerable places of the building.

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

4. The employees and security staffs shall be conversant with installed Fire Fighting Equipments of the building 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 building to keep them in perfectly good working conditions at all times.

6. A crew of trained Fireman under the experienced Fire 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 building.

8. 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 installation of the building.

On compliance of all the above Revised Fire and Fire Safety Recommendation, the Director General, West Bengal Fire & Emergency Services shall be approved for necessary inspection and testing of all 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 will be treated as cancelled.

Validity unknown

Digitally signed by ABHIJIT  
PANDEY  
Date: 2020.11.16 18:03:47 IST

Director  
West Bengal Fire & Emergency Services