



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

Memo no.:FSR/0125186229100148

Date: 23-09-2022

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

To: Balaji Complex
Balaji Complex, Kulti College Bus Stop G. T. Road, PO and PS - Kulti, Dist- Paschim Bardhaman W. B. Pin- 713343

Sub: Fire Safety Recommendation for a proposed construction of consisting two part of B + G + VII storied mixed occupancy building under principal group occupancy Residential building in the name & style "Balaji Complex" at DAG NO.-703/1118 & 704, JL NO. 22, LR KHATIAN NO.1761,1758,1759,1760, MOUZA-PUNURI, WARD-64, UNDER ASANSOL MUNICIPALTY, PO & PS - KULTI, DIST- PASCHIM BARDHAMAN, W. B. PIN- 713343

This is in reference to your application no. 0125186229100148 dated 28-05-2022 regarding the Fire Safety Recommendation for a proposed construction of consisting two part of B + G + VII storied mixed occupancy building under principal group occupancy Residential building in the name & style "Balaji Complex" at DAG NO.-703/1118 & 704, JL NO. 22, LR KHATIAN NO.1761,1758,1759,1760, MOUZA-PUNURI, WARD-64, UNDER ASANSOL MUNICIPALTY, PO & PS - KULTI, DIST- PASCHIM BARDHAMAN, W. B. PIN- 713343

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 favor of the aforesaid building subject to the compliance of the following fire safety measure.

Recommendation:

Fire Safety Recommendation for a proposed construction of consisting two part of B + G + VII storied mixed occupancy building under principal group occupancy Residential building in the name & style "Balaji Complex" at DAG NO.-703/1118 & 704, JL NO. 22, LR KHATIAN NO.1761,1758,1759,1760, MOUZA-PUNURI, WARD-64, UNDER ASANSOL MUNICIPALTY, PO & PS - KULTI, DIST- PASCHIM BARDHAMAN, W. B. PIN- 713343

CONSTRUCTION:

- 1.The whole construction of the ware house shall be carried out as per approved plan drawings conforming the relevant building rules of local Municipality/local Body.
- 2.The floor area of the basement exceeds 3000m2 shall be suitably compartmented by separation walls/water curtain up to

ceiling level having 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.Arrangement shall have to be made for sealing all the vertical and horizontal ducts by the materials of adequate fire resisting capacity.

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.
- 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 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 walls of the building.
- 3.The width of the staircase shall be made as shown in the plan. Corridors and the exit doors shall conform the relevant Building Rules with up to date amendment.
- 4.Additional staircase to be provided from basement to ground floor driveway & internal staircase to be pressurized as shown in the plan drawing.
- 5.Staircase to be enclosed with FCD as shown in the plan drawing.

LIFT:

- 1.Collapsible gates shall not be permitted with the lift cars & shall have solid doors.
- 2.Lift cannot be used as a means of escape during fire situation. Lifts including "Fire Lift" shall be pressurized with a positive pressure of 25-30 Pa inside the lift lobbies shall be maintained.
3. The mechanism for pressurizing the staircases shall be operated either manually or automatically with fire alarm in accordance with I.S. 941:1985.
4. Fire lift shall be provided & in case normal power failure, it shall automatically trip over to alternate power supply. The word "fire lift" shall be conspicuously displayed in fluorescent paints on lift landing door at each floor level.

BASEMENT:

- 1.The basement shall be adequately ventilated.
- 2.The basement shall be protected with auto sprinklers system/hose reel system etc.
- 3.Auto mechanical extractors with the help of jet fan & axel fan for smoke venting system from basement levels with proper mechanism 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.
- 4.Mechanical extractors shall have an alternative source of supply.

FIRE FIGHTING WATER:

Underground water reservoir having water capacity of 100000 lt. & O.H.W.R. capacity of 10000 lt. each block exclusively for firefighting purpose with replenishing arrangements @ 1000 lt./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 & PUMP:

External Hydrant System: IS-13039:1991

1.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.Internal Hydrant/ Wet Riser System IS-3844:1989

The all building shall be provided with Wet Riser of 100 mm internal diameter pipeline with provision of twin outlet landing valves at the staircase landings/ half landings at the rate of one such riser for 1000 Sq.m. of floor area in th e each tower. The system shall be so designed that kept charged with water all the time under pressure and capable of discharge 2280 Lt./min. at the ground floor level outlet and minimum 900 Lt./ min. at the top most furthest outlet. In both cases the running pressure shall not be less than 3.5 kgs. / Sq.cm All other requirement shall conform I.S. 3844-1989.

PUMP FOR FIREFIGHTING

One no. electric and one diesel driven preferably (stand by) pump of capacity 2280 Lt./min and One no. electric pump of capacity 180 Lt./min should be installed and arranged in such a manner so that it will start automatically & manual 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/cm² 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.

SPRINKLER INSTALLATION:

The automatic sprinkler system to be provided entire basement & commercial area of the building with Separate Sprinkler pump & separate jockey. Alarm Going to be incorporated to the sprinkler system and should be followed the NBC part –IV with up to date amendment.

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. Transformer (if oil type) to be protected with HVWPS/MVWPS as applicable.

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

3.The electrical installation shall be adequately protected with CO₂/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, pressurization 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 of each tower, basement& community hall 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. 2189-1988.

2.Auto Fire Detection System with the help of Heat/ Smoke Detectors which are suitable shall be installed in all places of below and preferably above false ceiling of the building area including basement, commercial area & community hall. 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. 2189-1988.

3.The suppression system shall be made with Fire Extinguishers and total flooding system with CO₂/F.M.-200 particularly in Computer, Electrical processing and Data Room and in all rooms of irreplaceable articles as well as suitable of inflammable materials.

4.Hooters will be sounded in such a manner so that an operation of an any Detector or Manual Call Point.

5.Public Address System in both ways to be linked between all parts of the entire area and Control Room shall have to be established.

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. Dampers shall operate automatically switch off the air handling fans. Manual operation facility shall also be provided.

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.

5.Escape routes like staircase, corridor, lift lobbies, etc. shall not be used as return air passage.

6.The ducting shall be constructed of substantial gauge metal in accordance with good practice.

7.Where the ducts pass through fire wall or floors, opening round of the ducts shall be sealed with materials having fire resistance rating of the compartment. All other should be followed the NBC part –IV with up to date amendment.

HOSE REEL HOSE

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.

FIRST AID FIRE FIGHTING SYSTEM:

First Aid firefighting 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.

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

4.Emergency lighting shall be powered from a independent source for illuminating escape route, corridor, exit, etc.

GAS BANKS'S 6044-2000:

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 & to be protected as per norms.

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.Suitable no. trolly mounted foam extinguishers to be provided at the diesel storing, etc. storing area as suitable.

- 3.Fire control room to be established at the ground floor.
- 4.CC TV to be installed in the building.
- 5.Assembly area shall be specified in the ground floor area.
- 6.Fire Notice for Fire Fighting and evacuation from the building shall be prepared and be displayed at all vulnerable places of the building.
- 7.Floor numbers and directional sign of escape route shall be displayed prominently.
- 8.The employees and security staffs shall be conversant with installed Fire Fighting Equipment's of the building and to operate in the event of Fire and Testing.
- 9.Arrangement shall be made for regular checking, testing and proper maintenance of all the Fire Safety installation and equipment's installed in the building to keep them in perfectly good working conditions at all times.
- 10.Mock Fire practice and Evacuation Drill shall be performed periodically with participation of all occupants of the building.

- 11.A crew of trained Fireman under the experienced Fire Officer shall be maintained round the clock for safety of the building.

On compliance of all the above Fire and Life 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 favor 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 Not Verified
Digitally signed by ABHIJIT
PANDEY
Date: 2022.09.28 16:23:04 IST

Director
West Bengal Fire & Emergency Services