



Government Of West Bengal
Office Of The Deputy Director
West Bengal Fire & Emergency Services
Station Feeder Road, P.O & P.S Siliguri,
District: Darjeeling, Pin - 734005

Memo no.:FSR/0125186237900065

Date: 05-05-2023

From:
Deputy Director
North Zone, HQ Wing,
West Bengal Fire & Emergency Services

**To: 1. RUKMA DEVI AGARWALLA 2. ANITA DEVI AGARWAL 3. BINOD KUMAR AGARWAL 4. BINODE BAJLA
WARD NO. 43, BHANUNAGAR, SILIGURI**

Sub: Fire Safety Recommendation of Proposed B+G+7 storied Commercial cum Residential Building under group of Residential in the name of 1. RUKMA DEVI AGARWALLA 2. ANITA DEVI AGARWAL 3. BINOD KUMAR AGARWAL 4. BINODE BAJLA at the Premises no - MOUZA -DABGRAM,PLOT NO -258,259 LR, 254,255,102 R.S.,KHATIAN NO.-123,217 L.R.,176/5 KA ,449R.S. Ward no- 43, PARGANA-BAIKUNTHAPUR, P.S.-BHAKTINAGAR, DIST-JALPAIGURI 734001.

This is in reference to your application no. 0125186237900065 dated 15-02-2023 regarding the Fire Safety Recommendation of Proposed B+G+7 storied Commercial cum Residential Building under group of Residential in the name of 1. RUKMA DEVI AGARWALLA 2. ANITA DEVI AGARWAL 3. BINOD KUMAR AGARWAL 4. BINODE BAJLA at the Premises no - MOUZA -DABGRAM,PLOT NO -258,259 LR, 254,255,102 R.S.,KHATIAN NO.-123,217 L.R.,176/5 KA ,449R.S. Ward no- 43, PARGANA-BAIKUNTHAPUR, P.S.-BHAKTINAGAR, DIST-JALPAIGURI 734001.

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:
CONSTRUCTION

- 1.The whole construction of the proposed building shall be carried out as per approved plan drawing conforming relevant building rules of local administrative body (Municipality/Panchayat).
- 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

- 1.The open space surrounding the buildings shall conform the relevant building rules as well as permit the accessibility and manoeuvrability of fire appliances with turning facility having minimum 6.5 M width in each side.
- 2.The approach roads shall be sufficiently strong to withstand load of fire engine weighing up to 20 M.T.
- 3.The width and height of the access gates into the premises shall not be less than 5M and 5M respectively abutting the 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.

In case of Air Condition (IS 659:1991):-

It shall conform to the following:-

- i) Escape routes like staircases, common corridors, lift lobbies etc. shall not be used as return air passages.
- ii) Regular check up of all split type window machine to prevent dust, foreign materials in the air inlet should maintained to prevent spontaneous combustion.
- iii) In case of central A.C. system, the same shall be incorporated with automatic dampers with fusible link with a View to shut down the system automatically in case of any fire in AC system.
- iv) Regular checking, testing, cleaning the Air inlet is must.
- v) Arrangements shall be made for isolation at the strategic locations by incorporating auto dampers in the Air Conditioning system.

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 open able 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 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 open able 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 M2
- 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) Fire Lift marked in the plan with the following specification – to enable fire services personnel to reach the upper floors with the minimum delay, and shall be available for the exclusive use of the firemen in an emergency.
- 8) The lift shall have a floor area of not less than 1.4 m². It shall have landing capacity of not less than 545 Kg (8 persons lift) with automatic closing doors of minimum 0.8 mm width.
- 9) In case of failure of normal electric supply, it shall automatically trip over to alternate supply. 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.
- 10) Lift and Lift Lobby shall be communicated to the basement and shall have to be pressurized as per guide line of N.B.C. part-IV, Annexure 'C'.

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.

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 .. mtr. and ..mtr. 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.

FIRE FIGHTING WATER:

Underground water reservoir having water capacity of 50000 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.

Wet Riser System IS:3844

150mm ring main, 100 mm dia riser with single out let landing valve shall have to be provided.

AUTOMATIC SPRINKLER SYSTEM (IS 15105:2021)

The automatic sprinkler system shall have to be installed in the basement & commercial part of the (ground floor) building. Alarm Gong to be incorporated along with the sprinkler system.

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.
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 CO2/D.C.P. Fire Extinguishers conforming I.S. specification.
4. Transformer to be protected by High Velocity Water Spray Projection System as per relevant I.S. specification.
5. 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.

Pumps for fire fighting Installation (IS 12469:1988):-

- i) The standard code of practice recommended that all water based fixed firefighting installations should be fed by two separate automatic pumps, one of which should act as stand by. Each pump should be designed to deliver water at required pressure and discharge, taking into account the height and volume of the building.
- ii) The Fire pumps should be provided near the underground static water storage tank with minimum pressure of 3.5 kg. / sq. cm. at terrace level or farthest point.
- iii) One electric and one diesel pump of capacity 2280 LPM and One electric pump of capacity 180 LPM should be install.
- iv) The pumps should be installed and arranged in such manner so that it will start automatically due to fall in pressure as prefixed in the installation by installing a Jockey pump. Provision of Jockey pump shall also be made to keep the water-based system under pressurized condition at all times.
- v) All the pumps shall be so designed as to supply water at the designed pressure and discharge into the water-based system which shall be installed in the buildings.
- vi) An independent identical pump for the purpose of sprinkler installation shall be made available. All such arrangement shall be done as per above code of practice.
- vii) All the pumps shall be incorporated with both manual and auto starting facilities .

DETECTION ALARM SYSTEM I.S. 2189-1988.

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. specifications.
2. Auto Fire Detection System with the help of Heat and Smoke Detectors shall be installed in all places of below and preferably above false ceiling of the commercial place of building. 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. specifications.

3. The suppression system shall be made with Fire Extinguishers particularly in Computer, Electrical processing and Data Room and in all rooms of irreplaceable articles.
4. Hooters will be sounded in such a manner so that an operation of a Detectors or Manual Call Point. Hooters will be sounded on the same floor and immediate alternate floor.
5. Public Address System linked between all floors and Control Room shall have to be established.

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.

Yard Hydrants

Yard Hydrant IS 13039:2014 shall have to be installed.

HOSE REEL SYSTEM (IS 884:1985):-

- i) Provision for Hose Reel in conjunction with wet riser shall be made at each floor of the building level from the underground reservoir through main pump conforming the relevant I.S. specification.
- ii) The Hose reel hose system should be provided at each floor of the buildings. The internal dia of the said hose reel shall be 19 mm to 32 mm and the discharge capacity not less than 22.5 LPM. While the length of the hose reel not more than 36.50 meters. The distance of such installation should be in such a way that no part of the floor is more than 6 meters distance from a hose nozzle when fully extended.

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 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 firefighting and evacuation from the building shall be prepared and be displayed at all vulnerable place of the building as per clause 4.11 Annex D of N.B. Code.
3. Floor number and direction sign of escape shall be displayed prominently as per clause 4.11 Annex D of N.B. Code.
4. The employees and security staff shall be conversant with installed firefighting equipment of the building on to operate in the event of fire and testing as per clause 4.11 Annex D of N.B. Code.
5. Arrangement shall be made for regular checking, testing and proper maintenance of all the fire safety installation and equipment installed in the building to keep them in perfectly good working conditions at all times.
6. Mock fire practice and evacuation drill shall be performed periodically with participation of all occupants of building.
7. Considering the gravity of growing hazard in the township, a crew of trained firemen under one experienced officer shall be maintained round the clock along with water tender (type-B) conforming I.S. 948 : 1983.

On compliance of all the above Life 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.

Signature valid

Digitally signed by RATAN
KUMAR HANDE
Date: 2023.05.05 16:16:50 IST

Deputy Director
West Bengal Fire & Emergency Services