



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/0125186210500226

Date: 22-11-2021

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

To: EM SQUARE HOMES PVT. LTD
MOUZA-UJANU, PARGANA-BAIKUNTHAPUR,R.S PLOT NO-299,301,303,305.335,336,439,440., L.R PLOT NO-720,759,801,806,808,810,811,819, R.S KHAITAN NO-260, L.R KHAITAN NO-807, J.L NO-86,P.S-MATIGARA,DIST-DARJEELING,W.B, PIN-734010

Sub: Fire Safety Recommendation of Proposed construction of 3 block type B+G+XIII Storied Residential Building under group of Residential in the name of EM SQUARE HOMES PVT. LTD. Director Shri Manish Agarwal At The Premises No- Mouza-Ujanu, Pargana - Baikunthapur, R.S Plot No-299,301,303,305.335,336,439,440., L.R Plot No-720, 759, 801, 806,808,810,811,819, R.S Khaitan No-260, L.R Khaitan No-807, J.L No-86,P.S-Matigara, Dist-Darjeeling,W.B, Pin-734010

This is in reference to your application no. 0125186210500226 dated 03-11-2021 regarding the Fire Safety Recommendation of Proposed construction of 3 block type B+G+XIII Storied Residential Building under group of Residential in the name of EM SQUARE HOMES PVT. LTD. Director Shri Manish Agarwal At The Premises No- Mouza-Ujanu, Pargana - Baikunthapur, R.S Plot No-299,301,303,305.335,336,439,440., L.R Plot No-720, 759, 801, 806,808,810,811,819, R.S Khaitan No-260, L.R Khaitan No-807, J.L No-86,P.S-Matigara, Dist-Darjeeling,W.B, Pin-734010

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 (Municipal/ 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.

Ventilation:-

- i) Sufficient ventilation will be provided at every place of the building. It should be designed as auto opening system in case of emergency.
- ii) Provision of ventilation at the crown of the central core-duct of the building shall be provided.
- iii) Mechanical extractor for smoke venting system shall also be provided. The design operating mechanism of the system shall be such that the system shall operate on actuation of heat / smoke sensitive detector and sprinklers. It shall also have an arrangement to start it automatically or manually. It shall have an interlocking arrangement, so that the extractors shall continue to operate and supply fans shall stop automatically with the actuation of fire detectors. This ventilation system designed 30 air changes per hour than that of the scheduled air changes for normal operation shall be ensured in the system in case of fire or distress call. Mechanical extractors shall have an alternative source of power supply.
- iv) Smoke venting facilities for safe use of escape routes shall be automatic in action with manual control in addition in the windowless (sealed box type) buildings.

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 45 M.T.
- 3.The width and height of the access gates into the premises shall not be less than 5 M and 5M respectively abutting the road.
- 4.If the building height 60 mtr & above the Internal road (Open to Sky) of one side of the building having 9 mtr from abutting road to last point of the building.

Means of escape:-

- i) All the staircases should be from the terrace to the ground floor of the building and shall be negotiable to each other entering into any floor and in no way the travel distance from the dead end of a corridor of the building shall not exceeds the limit of 6 meters. Time of evacuation should be as per 18 1644:1988 (i.e. 1 minute).
- ii) The staircases of the building will be enclosed type & construction to be made of bricked or RCC type and the head of stairs shall be ventilated to prevent mushrooming.
- iii) The staircases of the building shall have permanent vent at the top and open able sashes at each floor level in the external wall of the building and the treads, flights and risers of the staircases shall be made as per W. B. Municipal (Building) Rules, 2007. Corridors of the building and the exit doors should be conform the relevant building rules.
- iv) The staircases, corridors & all the means of escape should be free from any obstruction.
- v) 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.

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.

6)The staircase of basement shall be of enclosed type having fire resistance of not less than two hours and shall be situated at the periphery of the basement to be entered at the ground level only from the open air and in such positions that smoke from any fire shall not obstruct any exit serving the lower ground and upper mall of the building.

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 1 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)Collapsible gates shall not be permitted for lifts and shall have solid lift doors with fire resistance of at least 1h.

8)A sign shall be posted and maintained on every floor at or near the lift indicating that in case of fire, occupants shall use the stairs unless instructed otherwise. The sign shall also contain a plan for each floor showing the locations of the stairways.

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.

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.
- 7.Water curtain shall be incorporated for compartmentation.

FIRE FIGHTING WATER

The Centre shall have to be equipped with 3,50,000 lts. of underground stored water with replenishing arrangement @ 1000 lts./min preferably from two different sources of water supply.

WET RISER SYSTEM IS:3844

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

AUTOMATIC SPRINKLER SYSTEM

The automatic sprinkler system shall have to be installed in accordance with ordinary hazard group I. Sprinkler system will be serving the basement and in the entire building.

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 metres distance from a hose nozzle when fully extended.

Electrical Installation - Shall be as per code of practice 1946: 1978, (NBC-Gr-iv) & Indian Electricity rules-1956 with up to date amendment. No electrical switch gear/ distribution should be installed below the staircase.

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

i) The standard code of practice recommended that all water based fixed fire fighting 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

Automatic detection & alarm system to be installed in all floor area. Installation of additional manually operated alarm system is optional. The system shall be made Conforming I.S. 2189-1988.

Yard Hydrants

Yard Hydrant / Landing Valve IS 13039:2014 shall have to be installed as per requirement..

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.

FIRST AID FIRE FIGHTING SYSTEM

First Aid Fire Fighting arrangement (Extinguisher) 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 RECOMMENDATION

- 1.Fire notice for fire fighting 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.
- 2.Floor number and direction sign of escape shall be displayed prominently as per clause 4.11 Annex D of N.B. Code.
- 3.The employees and security staff shall be conversant with installed fire fighting equipments of the building on to operate in the event of fire and testing as per clause 4.11 Annex D of N.B. Code.
- 4.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.
- 5.Mock fire practice and evacuation drill shall be performed periodically with participation of all occupants of building.
- 6.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.

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