



Government of West Bengal
Office of the Divisional Fire Officer
West Bengal Fire & Emergency Services
Bauxarfidder Road, Alipurduar, Pin:- 736121

Memo No.: FSR/211862506300013389

Date : 13-04-2025

From :
Divisional Fire Officer
Alipurduar Division
West Bengal Fire & Emergency Services

To :
Smt. Tanushree Bhadra
MOUZA-DAMANPUR, WARD NO-06, HOLDING NO-304/11 A, KH NO-9756, PLOT NO-3217, J.L. NO-51, P.S. & DIST-ALIPURDUAR

Sub: Fire Safety Recommendation of a G plus four Storied under construction Residential Flat Building . .

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This is in reference to your AIN 211862506300013389 dated 12-Apr-2025 regarding Fire Safety Recommendation of a G plus four Storied under construction Residential Flat Building .

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 Fire Safety Recommendation in favor of the aforesaid building for compliance of the following fire safety measure.

Recommendation :

Recommendations:-As per F.S.Act. And risk factors of such building

A) Construction Part:- G+4 Residential Flat

- The whole construction of the proposed building shall be carried out as per approved plan of the Corporation/Municipality & conforming the relevant building rules of local authority.
- The floor area exceeds 500 sq.meter shall be suitably compartmented by separation walls up to ceiling level having at least two hrs fire resisting capacity.
- The interior finish decoration of the building shall be made of low flame spread materials conforming I.S



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Specification.

- iv) All construction materials should be of four hrs. Fire resisting type.
- v) Doors & windows should be of at least 2 hrs of fire resisting type.
- vi) All opening of services ducts, void, gap, joints etc. should be sealed with fire check materials.
- vii) The design and structure of the building shall be earth quake resistant.

B) Open Space & approach:-

- i) The open space surrounding the building shall conform the relevant building rules as well as permit the accessibility and maneuverability of fire appliance with turning facility. The minimum open space surrounded the building should be at least six meters and it should be free from any obstruction at all times.
- ii) The approach roads shall be sufficiently strong to withstand the load of fire engine weighting up to 45 M.T.
- iii) The width and height of the access gates into the premises shall not be less than 4.5 meters & 5 meters respectively abutting the roads.

C) Means of escape:-

- i) The Staircases of the building shall be enclosed type & construction shall be made of bricked/RCC type having fire resistance capacity not less than 4 hrs.
- ii) The escape routes from the basement as well as from the staircases should be free from any obstruction.
- ii) Time of evacuation should be as per I:S 1644-1988 i.e. 2.5 minutes.
- iii) The width of the staircases shall be 1.35 meters. Corridors of the building and the exit doors shall conforming the relevant building rules.
- iv) All the staircases shall be extended up to terrace of the building and shall be negotiable to each other without entering into any room.
- v) In no way the travel distance from any point of the building exceeds the limit of 22.5 meters.
- vi) 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.

D) Ventilation:-

- i) Sufficient natural/cross ventilation to be provided in all the floors, corridors, compartments etc.

E) In case of Lift:-

- i) The walls of the lifts enclosures shall be at least two hour fire resisting type and collapsible gate shall not be permitted. The lifts materials should be 4 hrs fire resisting type, the door of the lifts should be 1 hr fire resisting type, the landing door should be ½ hr fire resisting type & Area of the lift car should be minimum 1.4 sq.meters.
- ii) The load bearing capacity of the lifts should be minimum 8 passenger capacity.
- iii) In case of failure of normal power supply it shall automatically trip over to alternate power supply. This change over of supply could be done through manually operated change over switch alternatively; the lift shall be so wired that in case of any power failure, it comes down at the ground level and comes to stand still with door open.
- iv) A sign shall be posted and maintained on every floor at or near the lifts 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.

F) Electrical Installation: 1946:1982:- (I:S-694)

- i) All electrical installation should be done in accordance with National Electrical code & part –viii “Building Service” section -2 “Electrical installation” good practice.[4(10)].
- ii) All cable should be of FRLS type & all wiring should be done by the copper wire along with appropriate gauge .
- iii) Electrical installation shall be tested by the licensed Electricians.

G) In case of Air Condition:- I:S 659-1991:- IS code of practice shall be followed.

In case of Spilt or window types then regular maintenance are must with related resister for maintaining the records.

H) Alternate power supply :-Arrangement shall be made to supply power with the help of a Generator to operate at least the fire pump, pump for deep tube-well ,Fire alarm system, Fire Lift , illumination of stairs, corridors, basement ,means of escape etc. in case of normal power failure.

I) Fire Fighting Water: -The building should be provided with 25000 liters capacity of underground stored water with replenishing arrangement @ 1000 liters of water per minutes preferably from two different sources. The height of the reservoir should not be exceeding 30 cm from the ground level. Fire water reservoir shall have overflow and connected with the domestic water reservoir as well as to avoid



stagnancy of water. The water reservoir shall be kept full at all times.

ii) The location of the underground reservoir should be such so that the Fire Service vehicle may get access to the site of the reservoir with a view to draw the waters from said reservoir.

Or Terrace Tank:-One Terrace Tank of capacity Minimum 10000 liter should be installed in the building along with suitable terrace pump & wet riser cum down comer system.

J) Internal Hydrant System:-IS:3844:1989:- Pressurized risers of 100 mm dia each should be provided at each staircases with provision of landing valve at each landing and half landing @ one such riser for each 1000 sq.meters of floor area of the building or as per the vulnerability of the area. This system shall be designed in such a manner that it should be kept charged with water at all time and capable of discharge 2850 liters of water per minutes at the ground level & minimum 900 liters per minutes at the top most out lets. In both the cases, the running pressure at the ground level shall be 3.5 kg/sq.cm & 2.5 kg/sq.cm at the top most landing valves should be ensured. Or down comer

K) Hose Reel System:-IS 884-1985, the Hose reel hose system should be provided at each floor of the building. 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 miters. The distance of such

Installation should be in such a way that no part of the floor is more than 6 miters distance from a hose nozzle when fully extended.

L) Pumps for firefighting Installation.IS-12469-1988.

Fire pumps shall be provided one electrical run , one diesel run of 1800 Lpm capacity each with 70 miters head and another is Jockey pump of 180 Lpm capacity with same head. In case of terrace pumps it will be 900 lpm.

i) 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.

ii) 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 building.

iii) One such pump shall always be kept on stand by preferably be of diesel driven type.

iv) 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.

v) Provision of Jockey pump shall also be made to keep the water based system under pressurized condition at all times

vi) All the pumps shall be incorporated with both normal and auto starting facilities , the suction of the pump shall preferably of positive type or in case of negative suction the system shall be wet riser- cum- down comers with suitable terrace pump fitted with over head tank.

M) Small gears:-IS 903-1993:- Hose box, 15 miters permaline/CRL delivery hose & Gun metal short branch of half inch dia @ one set each at or near all the pillar hydrant, landing valve on all floors of the building should be installed.

N) Detection & Alarm System, -IS 2189-1988. Sufficient Nos. of manually operated electrical fire alarm system of break glass type call boxes and fitted with alarm like Hooters with public address system, talk back system at different places of the building should be installed.

O) Sprinkler Installation system (IS; 9972-2002) with revised code of practice:- This system should be provided in the parking area of the building as per the code of practice

P) First aid fire fighting system:-IS 2190-1992./IS-15683 Sufficient Nos. of Portable fire extinguishers of ABC type, Water type and Sand and water bucket should be provided at different places of the building and it should be within the reach of all concern as stated in the IS Code i.e. one no.@ 1000 sq. miters floor area or as per the vulnerability of the area.

Q) General recommendations: -

i) Trained fire crew/staff who have good knowledge of fire safety and uses of inbuilt fire safety equipments should be available in the building round the clock .

ii) A resister for the recording of mock fire drill , evacuation drill ,testing and checking of whole fire fighting installation ,electrical installation should be maintained & shall be liable to produce the same to the authorized Officer of this department on demand.

iii) Fire notice for fire fighting and evacuation from the building should be provided and shall be displayed at all places of the building as per clause 5.5 of N.B C.

iv) Floor No. and Directional Sign of escape route should be displayed prominently as per clause 5.5 of the N.B Code.



- v) All the occupants and other peoples shall be conversant with the installed fire fighting equipments of the building so that they can operate the same in case of exigency.
- vi) Arrangement shall be made for regular checking, testing and proper maintenance of all fire fighting equipments and keep them in good working condition at all time it should be written in the Register.
- vii) Good housekeeping should be maintained.
- viii) Mock fire drill and evacuation drill should be done periodically with participation of all occupants.

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