



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

Memo no.:FSR/0125186201202137

Date: 10-09-2020

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

**To:** RACHIT SANGHVI AND OTHERS

11035, 11041, 11054, 11042, 11043, 11052, 11053, 11050, 11051, 11049, 11043, 11047, 11043, 11033, 11046, 11034, 11033, 11074, 11044, 11041/11909, 11036/11925, 11098, 11094, 11081, 11096, 11092, 11258, 11093, 11097, 11095, 11087, 11259, 11090, 11082, 11083, 11084, 11086, 11078, 11079, 11021, 11022, 11024 TO 11279 MADARAT BARUIPUR-743610

**Sub:** Fire Safety Recommendation for proposed construction of a Residential complex comprising G + IV storied (Block - 1 to 22) Residential Building, 1 no. Single storied Mercantile Building and 1 no. G+ II storied Existing Club Building at the Premises No. – Mouza – Baruipur, J.L. No. – 31, P.S. – Baruipur, District – South 24 Parganas.

This is in reference to your application no. 0125186201202137 dated 20-06-2020 regarding the Fire Safety Recommendation for proposed construction of a Residential complex comprising G + IV storied (Block - 1 to 22) Residential Building, 1 no. Single storied Mercantile Building and 1 no. G+ II storied Existing Club Building at the Premises No. – Mouza – Baruipur, J.L. No. – 31, P.S. – Baruipur, District – South 24 Parganas.

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 buildings shall be carried out as per approved plan drawings conforming the relevant buildings rules of local authority.
- 2.The interior finish decoration of the buildings 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 buildings shall be provided for club building.
- 4.Arrangements shall have to be made for sealing all the vertical and horizontal ducts, shafts by the materials of adequate Fire-resisting capacity.

#### OPEN SPACE & APPROACH :

1. The open space surrounding the buildings shall conform the relevant buildings rules as well as permit the accessibility and maneuverability of Fire appliance with turning facility.
2. The approach & internal roads shall be sufficiently strong to withstand the load of Fire Engine weighting up to 45 M.T.
3. The width and height of the access gates into the premises shall not be less than 5.0Mtr. and 5.0Mtr respecting abutting the road.

#### STAIRCASE :

1. The staircase of the buildings shall be enclosed type. Entire construction shall be made of bricks/R.C.C. type having Fire resisting capacity not less than 2 hours.
2. The staircase of the buildings shall have permanent vents at the top and openable sashes at each floor level in the external wall of the buildings.
3. The width of the staircases shall be made as marked in the plan. Corridors and the exit doors shall conforming the relevant buildings rules with up to date amendment.
4. All the staircases shall be extended up to the terrace of the buildings and shall be negotiable to each other without entering into any room.
5. Fire and smoke doors at the entrances of one staircase enclosures and also as marked in the plan at each floor level of Club building shall be provided. The F.C.D. assembly shall be of at least two hour Fire resisting wire glass window fitted with self-closing type openable in the direction of escape & insulation criteria shall be 20 minute.

#### LIFT :

1. The walls of the lift enclosure shall be at least two hours Fire resisting type. Collapsible gate shall not be permitted.
2. Lifts shall be designed as Fire Lift. The word "FIRE LIFT" shall conspicuously written in fluorescent paint on the lift landing doors at each floor level.
3. Alternate source of power supply shall be provided for all lifts through manually operated change over switch.
4. In case of failure normal electric supply it shall automatically trip over to alter supply.
5. The Speed of the fire lift shall be such that it can reach the top floor from ground level within one minute.
6. Lift communication system shall be provided in the lift and this system shall be connected to fire control room of the buildings.

#### FIRE FIGHTING WATER :

Underground water reservoir having water capacity of 1,50,000 Ltr. exclusively for Fire Fighting purpose with replenishing arrangement @ 1000 Ltrs./Min. preferably from two different sources of water supply shall be provided. The Fire Water Reservoir 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. The Residential buildings shall be provided with Wet Riser of 50 mm internal diameter pipe lines for Hose Reel in conjunction with Wet Riser shall be made at each floor level conforming the relevant I.S. specification.
2. Club building shall be provided with Wet Riser of 100 mm internal diameter pipe lines with provision of landing valves at

the staircase landing/half landings at the rate of one such riser for 1000 Sq.Mt. of floor area conforming the relevant I.S. specification.

3.Provision for Hose Reel for club building in conjunction with Wet Riser shall be made at each floor level conforming the relevant I.S. specification.

4.Yard Hydrant & Ring Main Hydrant with provision of adequate numbers Hydrant alongwith Fire Service inlet shall be installed surrounding the buildings in accordance with relevant I.S. specification.

5.The system shall be so designed that be kept charged with Water all the time under pressure and capable to discharge 2280 Ltr./Min. at the ground floor level outlet and minimum 900 Ltr./Min. at the top most outlet. In both cases the running pressure shall not be less than 3.5 Kgs./Sq.cm. All other requirements shall conform I.S. 3844-1989.

#### SPRINKLER INSTALLATION :

The automatic Sprinkler installation shall be provided in all floor areas of the club building as per I.S. 9972. Alarm gang to be incorporated along with the sprinkler system.

#### FIRE PUMP :

Provision of the Fire Pump shall have to be made to supply water at the rate-designed pressure and discharge into the water based system, which shall be installed in the buildings. One such pump shall always be kept on Stand-by preferably of diesel driven type.

Provision of Jockey Pump shall also have to be made to keep the Water based system under pressurized condition at all the time. All the pumps shall be incorporated with both manual and auto starting facilities.

#### ELECTRICAL INSTALLATION & DISTRIBUTION :

1.The electrical installation including transformers, Switch Gears, Main & Meters etc. and the distribution system of the premises shall be made satisfying the code of practice for Fire Safety in general buildings as laid down in the I.S. specification 1946-1982.

2.All ducts shall be supply sealed at all floor level.

6.The electrical installation shall be adequately protected with CO2/D.C.P. or High/Medium Velocity Projector System in accordance with relevant I.S. specification.

3.Alternative Power Supply:

Arrangements shall have to be made to supply power with help of a generator to operate at least the Fire Pump, Pump for deep Tube-well, Fire Alarm System, Fire Lift, etc. and also for illuminating the Staircase, Corridors etc. and other places of assembly of the buildings in case of normal power failure.

#### DETECTION, ALARM AND SUPPRESSION SYSTEM :

1.Manually operated Electrical Fire Alarm System with break glass type call boxes fitted with Hooters along with public address system at each floor of club building connecting with audio-visual panel board shall be made in Control Room. The Control Room shall be located at the 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 and smoke detector shall be installed in all floor areas of the club building. The system shall also be made in places 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 and Electrical processing and data room and in a room Of irreplaceable articles, if any.

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

5.Public Address System :

Public Address System linked between all floors 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.

3.The Air Handling Units room shall not be used for storage of any combustible materials.

4.Arrangement shall be made for isolation at the strategic locations by incorporating auto dampers in the Air Conditioning System.

5.The system of auto shut down of AHU shall be incorporated with the auto detection and alarm system.

6.Escape route like staircase etc. shall not be used as return air passage.

7.Whenever the ducts pass through Fire wall of floors, the opening surrounding the ducts shall be sealed with Fire resisting materials such as asbestos rope vermiculite concrete etc.

8.The metallic ducts shall be used even for the return air instead of space above the false ceiling.

9.The materials used for insulating the duct system (inside or outside) shall be of non – combustible materials glass wool shall not be wrapped or secured by any materials of combustible nature.

10.Area more than 750 sq. m. on individual floor shall be segregated by a Fire wall and automatic fire damper for isolation shall be provided.

11.Air duct services main floor area, corridors etc. shall not pass through the staircase enclosures.

12.The air handling units shall be separation for each floor, and air ducts for every floor shall be separated and in no way interconnected with the ducting of any other floor.

13.If the air handling units serve more than 1 floor, the recommendation given above shall be complied with in addition to the conditions given below:-

a.Proper arrangements by way of automatic Fire dampers working on fuseable link for isolating all ducting at every floor from the main riser shall be made.

b.When the automatic Fire alarm operators the respective air handling units of the air conditioning system shall automatically switched off.

14.The vertical shaft for treated fresh air shall be of masonry construction.

15.The air filters for air handling units shall be of non combustible materials.

16.The air handling units room shall not be storage of any combustible materials.

17.Inspection panel shall be provided in the main trucking to facilitate the cleaning of ducts of accumulated dust and to obtain access for maintenance of fire dampers.

18.No combustible materials shall be fixed nearer than 15cm to any duct unless such duct properly enclosed and protected with non combustible materials (glass wool or Spun wool with neoprene facing enclosed and wrapped with aluminum sheeting) at least 3.2m thick. And which would not readily conduct heat.

FIRE DAMPER :

1.Fire damper shall be located in air ducts and return air duct / passages at the following point.

- a. At the fire separation wall.
  - b. Where ducts / passage enter the central vertical shaft.
  - c. Where the ducts pass through floors.
  - d. At the inlet of supply Air Duct and the return air duct of each compartment on every floor.
2. The dampers shall operate automatically and shall simultaneously switch off the air handling fans. Manual operation facilities shall also be provided.
  3. Automatic Fire Dampers shall be so arranged so as to close by gravity in the direction of Air movement and to remain tightly closed open operation of a fusible link.

#### 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 including basements and vulnerable locations of the premises shall be made in accordance with I.S. 2190-1992.

#### L.P.GAS BANK

1. L.P. Gas bank shall be shifted to another safe place on the ground level of the said building area which to be constructed at least 3mt. distance between an installation and any building, public place, roadways, and other surroundings. The installation shall be protected from excessive weathering by sun, rain etc. and from tampering by unauthorized person. A lean-to roof with expanded metal on angle iron framework on the sides is considered suitable for this purpose.
2. Adequate ventilation at ground level and below ceiling level to the outside air shall be provided.
3. Cylinders shall be located on a concrete or brick floor, preferably raised in case of outdoor installations.
4. No electrical connections shall be installed into the gas bank.
5. The controlling device of L.P.G. shall have to be placed at a far away (at least 3mtr.) from gas bank.
6. L.P. Gas detector/ sensor to be installed at the kitchen & gas bank area.
7. No electrical heater, kerosene stove, open chulla etc. shall be allowed in the kitchen where L.P.G. are in use.
8. Cylinders shall not be stored along with any combustible materials.
9. Two buckets filled with sand & two with water shall also be installed nearby.
10. Auto fire suppression system to be provided in the gas bank.
11. Two nos. dry powder type fire extinguisher of 10 K.G. capacity shall be provided in places where L.P.G. installations are situated and shall be located near such installations as per I.S. 2171.
12. Red letterings of minimum height of 40mm as " LPG / HIGHLY INFLAMABLE / NO SMOKING/ NO NAKED LIGHTS " on white background shall be written on the left portion of the warning sign / notice.

#### 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. Lightning protection for buildings shall be provided as per Part 8 'Building Services', Section 2 Electrical installations.
3. Fire Notice for Fire Fighting and evacuation from the building shall be prepared and be displayed at all vulnerable places of the buildings.
4. Floor numbers and directional sign of escape route shall be displayed prominently.
5. The occupants and security staff shall be conversant with installed Fire Fighting equipments of the buildings and to operate in the event of Fire and Testing.
6. Arrangement shall be made for regular checking, testing and proper maintenance of all the Fire Safety installation and equipments installed in the buildings to keep them in perfectly good working conditions at all times.

7. A crew of trained Fireman under the experienced Officer shall be maintained round the clock for safety of the buildings.
  8. Mock Fire practice and evacuation drill shall be performed periodically with participation of all occupants of the buildings.
  9. Close circuit T.V. shall have to be provided for the entire floor area of the buildings.
  10. On compliance of all the above Fire Safety recommendations, the Director General, West Bengal Fire & Emergency Services shall be approached for necessary inspection and testing of the installation before occupancy of the buildings; 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 buildings.
- N.B. : Any deviation and changes the nature of use of the building in respect of the approved plan drawings, without obtaining prior permission from this office, this Fire Safety Recommendation will be treated as cancelled.

Signature valid

Signed by: TARUN KUMAR SINHA  
Reason: Approval  
Location: West Bengal  
Date: 10-Sep-2020 15:46:12

Director  
West Bengal Fire & Emergency Services

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