

**GOVERNMENT OF WEST BENGAL
OFFICE OF THE DIRECTOR GENERAL
WEST BENGAL FIRE & EMERGENCY SERVICES
13-D Mirza Ghalib Street, Kolkata- 700 016**

Memo No : IND/WB/FES/20172018/4442

DATE: 20/06/2018

From :

**The Director
Fire Prevention Wing,
West Bengal Fire & Emergency Services.**

To :

**Pradeep Pugalia
G.T. ROAD
Burdwan F.S., Bardhaman PS,
Purba Bardhaman - 713101 .**

Sub :This Fire Safety Recommendation is being issued for proposed construction of Residential Complex consisting of 4nos Residential Tower (B+G+XI storied each) and 1no. B+G+V storied & 1no. G+III storied Mercantile Building in the name of "RDB Realty & Infrastructure Ltd." at premises no. Burdwan, Mouza- Goda, JI-41, Dag No. – 2194, 2195, Kh. No. 45, G.T. ROAD, Dist.- Purba Bardhaman.

This is in reference to your Application No. IND/WB/FES/20172018/4442,dated 20/06/2018, regarding the Fire Safety Measureation is being issued for proposed construction of Residential Complex consisting of 4nos Residential Tower (B+G+XI storied each) and 1no. B+G+V storied & 1no. G+III storied Mercantile Building in the name of "RDB Realty & Infrastructure Ltd." at premises no. Burdwan, Mouza- Goda, JI-41, Dag No. – 2194, 2195, Kh. No. 45, G.T. ROAD, Dist.- Purba Bardhaman..

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

Recommendation:

1. REFUGE AREA:

1. The refuge area is not less than 15 Sqm. shall be provided on the external wall with cantilever projection or other suitable means as approved plan drawing.
2. The refuge area shall be of Fire resisting construction and protected with self-closing F.C.D. at the entrance from the corridor or the staircase lobbies.
3. The position of refuge Areas shall be such that they are negotiable by the Fire service Ladder from the ground floor.

2. CONSTRUCTION:

1. The whole construction of the proposed building shall be carried out as per approved plan drawings conforming the relevant building rules of local Municipal Body.
2. The floor area exceeds 750 m² shall be suitable compartmented by separation walls up to ceiling level having at least Two hours Fire resisting capacity.
3. The interior finish decoration of the building shall be made of low flame spread materials conforming to I.S. specifications.
4. Provision of ventilation at the crown of the central core-duct of the building shall be provided.
5. Arrangements shall have to be made for sealing all the vertical & horizontal ducts by the materials of adequate Fire resisting capacity & the doors of service ducts / shafts of 2hr. Fire rating.

3. OPEN SPACE & 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 road 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 4.5 and 5 M respecting abutting the road.

4. STAIRCASE:

1. The staircase of the building shall be enclosed type. Entire construction shall be made of bricks / RCC 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 shown in the plan. Corridors and the exit doors shall conforming the relevant building rules and well as rules of the cinematograph act. with up to date amendments.
4. All the staircases shall be extended up to terrace of the building and shall be negotiable to each other without entering into any room.
5. Fire & Smoke doors at the entrance of all the staircase enclosures as marked / shown in the plan at each floor level shall be provided. The F.C.D. shall be of the least one hour Fire resisting Wire Glass Window fitted with self closing type openable in the direction of escape.

5. AUDITORIUM & HALL:

The doors/aisles/seating arrangement/corridors in hall shall be made as per good practices of national building code, Part-IV. Fire Protection as well as the conforming norms with up to date amendment.

6. LIFT:

1. The walls of the lift enclosure shall be at least two hours Fire Resisting type.
2. Collapsible gate shall not be permitted.
3. One of the lifts shall be designed for Fire Lift. The word "Fire Lift" shall conspicuously be written at ground floor.
4. In case of failure of normal electric supply, it shall automatically trip of alternate supply and also shall have manually operated change over facility. Alternatively, the lift shall be so wired that in case of power failure, it comes down at ground level stands still with door open.

7. BASEMENT:

1. The Basement shall be adequately ventilated with aggregate cross sectional area of not less than 2.5% of the area spread evenly round the perimeter of the basement shall be provided in the form of grills.
2. Mechanical smoke venting arrangements shall be provided to all the basements

conforming the I.S. Specification.

3. The exit from the basement shall be form open Air and form any points the travel distance shall not exceeds 15.5 M to reach any exit.
4. All the basement shall be protected with Automatic Sprinkler System conforming to I.S. 3844-1989.
5. The staircase of basement shall be of enclosed type having Fire resistance of not less than 4 hrs. and shall be situated at the periphery of the basement to be entered at ground level only from the open air and in such positions that smoke from any Fire in the basement shall not obstruct any exit having the ground upper floor of the building.
6. Mechanical extractor shall have an internal locking arrangement so that extracting shall continue to operate and supply fans shall stop automatically with the actuation of Fire Detectors.
8. FIRE FIGHTING WATER :
 1. Underground water reservoir having water capacity of 200000 Ltrs. and O.H.W.R. 20000 ltrs capacity each block exclusively for firefighting purpose shall be kept full at all time.
 2. The Fire water reservoir shall have overflow arrangement with the domestic water reservoir as well as to avoid stagnancy of water.
 3. Provision of necessary manhole shall be made on the top of this reservoir as per specification.
 4. Provision of replenishment at the rate of at least 2000 lts./min. from two spate source of water supplies shall be made.
 5. The deep tube wells for the replenishment of the reservoir shall be incorporated with auto starting facility with actuation of auto detection and suppression arrangement of the premises and shall also be connected with duel power supply units.
 6. Provision of placing Fire Appliances on the underground water reservoir to be made to draw water in case of emergency.
9. WATER LAYOUT SYSTEM:

1 The building shall be provided with Wet Riser at 150mm. internal diameter Pipe Line with provision of landing valves at the Staircase landings / half landings at the rate of one such riser for 1000 Sq.m. of floor area. The system shall be so designed that shall be kept charged with Water all the time under pressure and capable to discharge 2850 lts/min. at the ground floor level outlet and minimum 900lts/min. at the top most outlet. In both cases the running pressure shall not be less than 3.5Kgs/Sq.cm. All other requirements shall conforming I.S. 3844 – 1989.

2 Provision for Hose Reel units on swiveling drum in conjunction with Wet Riser shall be made near each landing valves.

3 Ring Main / Yard Hydrant with provision of adequate numbers Hydrant shall be installed surrounding the building in accordance with relevant I.S. specifications.

10. FIRE PUMP:

o 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 building. One such pump shall always be kept on stand-by be of diesel driven type.

o Separate Fire Pump shall have to be provided as same capacity of main pump for installation of sprinkler system of the project.

o 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. 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.

11. Sprinkler Installation:

Auto Sprinkler system shall have to be provided in all basement area, Corridor, Community Hall, and all floor area of the mercantile buildings as per I.S. 9972 and alarm gang to be incorporated along with the sprinkler system. Testing Sprinkler line shall be provided.

12. 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 building as laid down in I.S. specification 1946 – 1982.

2 Electrical distribution system shall conform all the requirements as laid in I. S. 1646-1982.

3 The electrical installation shall be adequately protected with automatic CO2/D.C.P.

4 All electrical installation viz. Transformer Switch Gear L. T., H. T. rooms shall be protected with both auto detection and suppression systems as per suitability.

5 Alternative Power Supply :

Arrangements shall have to 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, etc. and also for illuminating the Staircase, corridors etc. and other places of assembly of the building incase of normal power failure.

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

3. Smoke detector shall have to be installed in all basement area, Corridor, Community Hall, and all floor area of the mercantile buildings.

4. Public Address System :-

Public address system linked between all floors and Control Room shall have to be established.

14. Air Conditioning System (If Any):

1. Joints must be avoided in AC wires. It must be ensured that all AC units are comprehensively serviced before operation and filter is cleaned regularly through authorized service agency which increases cooling as well as results in less electric consumption.

2. Never use AC units on normal plug points or temporary extension boards except on covered MCB's.

3. Switch off air-conditioners, lights, fans, exhaust fans, heat convectors, fax machines,

computer monitors, printers /scanners/UPS, inverters, photocopiers, TVs and other office equipment's when they are not in use. Switch on only those lights fans, air-conditioners or other equipment's which are required for functioning office. Do not leave air-conditioners, heat convectors, lights, fans and other electrical equipment's and gadgets in 'ON' position when not required.

4.Keep the doors / Windows of air-conditioned rooms close to avoid loss of conditioned air. Provide automatic door closers. Use air-conditioner fan/blowers and fans at low speed.

5.In summer reduce load on air-conditioners by putting curtains/blinds/shades on windows.

6.Window type air-conditioners/split type AC's being highly energy intensive equipment's; they should be serviced at least thrice in a year as per the recommendations of manufacturers, The servicing included cleaning of air filters, cleaning of condensers/cooling coil, service and oiling of fan motors, checking of fasteners, checking of electrical spares, checking of current/voltage and checking of room temperature and grill temperature.

7.Replace old air-conditioners which have out-lived their useful life i.e. 7 years as per Competent authorized agency maintenance manual 2012 and have become unserviceable with star rated Energy Efficient air conditioners.

15. FIRTAID FIRE FIGHTING SYSTEM:

First Aid firefighting 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. 2190-92.

16. GENERAL RECOMMENDATIONS:

1 Fire License shall have to be obtained for proposed storing and processing with L.P.G. and other highly combustible articles.

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3 Disposable type B. A. Musk to be kept always for emergency fire situation.

4 Fire Notice for Fire Fighting and evacuation from the building shall be prepared and be displayed at all vulnerable places of the building.

5 Floor numbers and directional sign of escape route shall be displayed prominently.

6 The occupancy and security staff shall be conversant with installed Fire Fighting equipments of the building and to operate in the event of Fire and Testing.

7 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.

8 A crew of trained Fireman under an experienced officer shall be maintained round the clock for safety of the building.

9 Mock Fire practice and evacuation drill shall be performed periodically with participation of all occupants of building.

10 Each year a certificate is to be obtained from the Director General, West Bengal Fire & Emergency Services certifying about the satisfactory services, performance of all the Life and Fire Safety arrangements and installation of the buildings.

17. On compliance of all the above Fire and Life safety recommendations, the Director General, West Bengal Fire & Emergency Services shall be approached for necessary inspection and testing of 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.

Director
West Bengal Fire & Emergency Services