



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

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Date: 15-02-2024

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

**To: SANJOY KUMAR MOHANTY DIRECTOR OF DTL ESTATE PVT LTD AND 29 ORS
119,43,VINOBA BHAVE ROAD**

Sub: Fire Safety Recommendation proposed construction of B+G+XXII Storied Building i.e. (Block-A) Comprising of Tower-1, 2 & 3 and G+XVII Storied Building i.e. (Block-B) under group of Residential Building in the name & style of "SANJOY KUMAR MOHANTY DIRECTOR OF DTL ESTATE PVT LTD AND 29 ORS" at premises no.- 43, Vinoba Bhava Road, Kolkata-700 038, Ward -119, Borough - XIII, P.S.- New Alipore, Under K.M.C.

Application Reference : KMC (CAF-2023130236) received on 10-01-2024 regarding the Fire Safety Recommendation proposed construction of B+G+XXII Storied Building i.e. (Block-A) Comprising of Tower-1, 2 & 3 and G+XVII Storied Building i.e. (Block-B) under group of Residential Building in the name & style of "SANJOY KUMAR MOHANTY DIRECTOR OF DTL ESTATE PVT LTD AND 29 ORS" at premises no.- 43, Vinoba Bhava Road, Kolkata-700 038, Ward - 119, Borough - XIII, P.S.- New Alipore, Under K.M.C.

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:

A.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 Municipality Body.
- 2.The floor area exceeds 750 m² shall be suitably compartmented by separation walls up to ceiling level having two hours fire resisting capacity.
- 3.The interior finish decoration of the building shall be made low flame spread materials conforming I.S. specifications.
- 4.Provision of ventilation at the crown of the central core duct of the building shall be provided.
- 5.Arrangement shall have to be made for sealing all the vertical and horizontal ducts by the materials of adequate fire resisting capacity.

B.OPEN SPACE AND 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 roads shall be sufficiently strong to withstand the load of Fire Engine weighting 45M.T.
- 3.The width and height of the access gate into the premises shall not be less than
- 4.4.5 mt. and 5.0 mt. respecting the abutting road.
- 5.Drive way should be free from any type of obstruction. No parking will be allowed on the drive way.
- 6.All the Passage way should be kept clear for free access.

C.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 openable sashes at each floor level in the external walls of the building.
- 3.The width of the staircase shall be made as marked in the plan. Corridors and the exit doors shall conform the relevant Building Rules with up to date amendment.
- 4.All the staircase shall be extended up to terrace of the building and shall be negotiated to each floor.
- 5.Fire and smoke doors at the entrances of all the staircase enclosures 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 openable in the direction of escape.

D.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 lift shall be designed for Fire Lift. The word "FIRE LIFT" shall conspicuously written at ground floor.
- 4.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'.

E.REFUGE AREA:

- 1.The refuge area on calculating the area at the rate of 0.3 m² / person on the basis of floor area but not less than 15 sq. mtr. each shall be provided on the external wall as cantilever projection or any other suitable floor levels of each building as shown shall be constructed.
- 2.The refuge areas shall be of fire resisting construction and protected with self-closing FCD 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 level.

F.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 relevant I.S. Specification & provision of N.B.C.- Part IV.
3. The exit from the basement shall be from open Air and from any points the travel distance shall not exceed 15 mtr. to reach any exit.
4. All the basements shall be protected with Automatic Sprinkler System conforming to I.S. 3844- 1989.
5. The staircases of basements shall be of enclosed type and pressurized having Fire resistance of not less than 4 hrs., 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 of upper floor of the building.
6. Mechanical extractors shall have an alternative source of supply.
7. 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 / Sprinklers.
8. Mechanical extractors shall be designed to permit 12 Air Changes per Hour in case of Fire or Distress Call.
9. Basement compartmentation shall be achieved as shown / marked in plan & protection shall be made as per provision of N.B.C.-Part-IV.

G. FIRE FIGHTING WATER:

Underground water reservoir having water Capacity 2,79,000 ltrs. & 3,55,000 ltrs. (As shown in the submitted plan drawing) and overhead water reservoir having capacity of 20,000 ltrs. for each tower 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.

H. HYDRANT SYSTEM :

1. The building shall be provided with separate Wet Riser of each building of 150mm. Internal diameter pipe Line with single outlet 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 not less than 2850Lts./min. at the ground floor level outlet and minimum 900 Lts./min. at the top most outlet. In both cases the running pressure shall not be less than 3.5 Kgs/cm². All other requirements shall conform I.S. 3844 – 1989.
2. Provision of Hose Reel in conjunction with wet Riser shall be made at each floor level conforming the relevant I.S. specification.
3. Ring Main Hydrant with provision of adequate numbers Hydrant shall be installed surrounding the project in accordance with relevant I.S. specification.
4. Fire service inlets shall have to be installed at the entrance of the premises.

I. SPRINKLER INSTALLATION:

The automatic sprinkler installation shall be provided in Basement level, Mechanical car parking area, Banquet area, Common lobby along with all blocks of the said premises as per I.S. 9972. Alarm Gong to be incorporated along with the sprinkler system.

J. FIRE PUMP:

1. One no. Jokey pump(electric) capacity 180 LPM,
2. One no. Main pump capacity 2850 LPM .,

3. One no. Diesel driven Stand by pump of capacity 2850LPM.
 4. One no. separate sprinkler pump of capacity 2850LPM. And
 5. Lower levels in high rise buildings 60 m or above in height are likely to experience high pressure and therefore, it is recommended to consider multi-stage, multi-outlet pumps (creating pressure zones) or variable frequency drive pumps or any other equivalent arrangement.
 6. If any one set of pumps shall be provided for each 100 hydrants or part thereof, with a maximum of two sets. In case of more than one pump set installation, both pump sets shall be interconnected at their delivery headers.
- All the pump designed so as to supply water 900 LPM at a pressure of 3.5kg/cm² at the furthest point. Only diesel driven arrangement for stand by fire pump shall be ensured. 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. All other requirements shall conforming I.S. 12469-1988.

K. Multi-Layer Automated Mechanized Car Parking System:

1. Structural design: - The M.L.C.P. shall be constructed of structural steel construction.
2. Vertical Deck Separation: - For M.L.C.P. having Multi Car Parking level, vertical Fire separation between the upper and lower decks by using a non-perforated and non-combustible materials (Structural Steel Plate) shall be provided. This is to minimize direct impingement of flame to the Car in the upper deck and also to prevent dripping of any possible leaking fuel to the lower deck. Proper drainage system shall have to be provided for accidental leaking of oil from the car and sand bed shall be provided at the ground level.
3. Fire Engine Access way: - Access way shall be provided for the Fire Engine to gain access to the car park entrance and exit.
4. Fire Hydrant: - Fire hydrants are to be provided in accordance with Cl. 4.4
5. Natural Ventilation: - Each car parking deck shall be provided with at least 50% external ventilation openings of the perimeter wall areas and uniformly distributed.
6. Sprinkler & Detection System: - Open Modular Type Sprinkler along with detectors shall be provided in all M.L.C.P. areas as per relevant I.S. Specification. Cross zone wise sprinkler system shall have to be implemented.
7. Operating System: - Both Mechanical and Manual type operating system shall have to be provided.

L. 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. All electrical installation viz. Transformer, Switch Gear, LT/HT rooms shall be protected with both auto detection and suppression systems as per suitability.
5. For every 230V wiring above false ceiling 660 grade insulated cable shall be used Transformer Switch Gear H.T., L.T. and others electrical rooms shall be at the ground floor level the other electric rooms shall be at least 4 hrs. fire resisting capacity adequate ventilation arrangement shall have to be made in all the rooms, Dry and explosion proof type Transformer shall be installed.

M. Alternative Power Supply:-

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.

N.AUTO DETECTION AND ALARM SYSTEM:-

- 1.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 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. specification.
- 2.The suppression system shall be made with Fire Extinguishers particularly in Computer, Electrical processing and Data Room and in all rooms of irreplaceable articles.
- 3.Public Address System linked between all floors and Control Room shall have to be established.
- 4.All the installation shall also satisfy the I.S. Specification 2189 as amended and the code of practice as laid down in N.B.C.Part – IV.

O.GAS BANK (If any):-

- 1.Manually operated Medium Velocity Water Spray System shall be provided in LPG Gas Bank.
- 2.The gas bank shall have to be installed at the outside of the main building.
- 3.Sufficient LPG sensors shall be installed.

P.Public Address System :-

Public address system linked between all floors and Control Room shall have to be established in the ground floor of the buildings.

Q.Pressurization system:-

Pressurization system shall have to be provided at the Stairs of Residential part as well as MLCP part of the entire project.

R.AIR CONDITIONING SYSTEM (If any):-

- 4.The A.H.U. shall be separated for each floor with the system. Air Ducts for individual floors.
- 5.Arrangement shall be made for isolation at the strategic locations by incorporating auto dampers in the Air Conditioning System.
- 6.The system of auto shut down of A.H.U. shall be incorporated with the Auto Detection and Alarm System. The Air Handling Units room shall not be used for storage of any combustible First Aid Fire Fighting arrangement in the style 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.

S.Small Gears: IS : 903 -1993:-

Hose box, 15 M length Permolin delivery hose, Gun Metal short branch of half inch dia. One set at each half landing hydrant should be installed.

T.FIRST AID FIRE FIGHTING SYSTEM: -

First Aid Fire Fighting arrangement in the style 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.

U.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 Fire Fighting and evacuation from the building shall be prepared and be displayed at all vulnerable places of the building.
- 7.Floor numbers and directional sign of escape route shall be displayed prominently.
- 8.The employees and security staffs shall be conversant with installed Fire Fighting Equipments of the building and to operate in the event of Fire and Testing.
- 9.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.
- 10.A crew of trained Fireman shall be maintained round the clock for safety of the building.
- 11.Mock Fire practice and Evacuation Drill shall be performed periodically with participation of all occupants of the building.
- 12.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 installation of the building. 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 favor 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