



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/0125186220500158

Date: 02-02-2023

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

To: ROLEX COMMOSALE PRIVATE LIMITED REPRESENTED BY ITS DIRECTOR SRI KISHAN KUMAR AGARWAL
AND OTHERS
OPPOSITE UTTORAYAN NEW TOWNSHIP,SILIGURI

Sub: Revised Fire Safety Recommendation of Proposed 6 nos of G+P1+P2+P3+24th Storied Residential block & G+1 storied club house building which was Previously approved as 7 nos of B+G+21 storied Residential block & G+2 storied club house, under group of Residential in the name Rolex Commercial Private Limited Represented By Its Director Sri Kishan Kumar Agarwal And Others at the Premises no- Mouza :- Ujanu,J.L. No. :- 86, Plot No. :- 470,335, 338, 439,446,447, 299, 305,336,469, 440 (R.S), 804,759,761, 720,737,736,811, 810, 819, 801 (L.R), Khatian No. :- 260,(R.S), 307 (L.R), Opposite Uttorayan New Township, Siliguri,P.S. :Matigara,Dist. :- Darjeeling

This is in reference to your application no. 0125188220500019 dated 30-12-2022 regarding the Revised Fire Safety Recommendation of Proposed 6 nos of G+P1+P2+P3+24th Storied Residential block & G+1 storied club house building which was Previously approved as 7 nos of B+G+21 storied Residential block & G+2 storied club house, under group of Residential in the name Rolex Commercial Private Limited Represented By Its Director Sri Kishan Kumar Agarwal And Others at the Premises no- Mouza :- Ujanu,J.L. No. :- 86, Plot No. :- 470,335, 338, 439,446,447, 299, 305,336,469, 440 (R.S), 804,759,761, 720,737,736,811, 810, 819, 801 (L.R), Khatian No. :- 260,(R.S), 307 (L.R), Opposite Uttorayan New Township, Siliguri,P.S. :Matigara,Dist. :- Darjeeling

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 **Revised 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 (Municipal/Panchayat) body.
- 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 6M and 5M respectively abutting the road.

4. 9mtr drive way one side of building shall be provided.

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.

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 6.000 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 conforming the relevant building rules.

iv) There should be a separate entrance and escape routes from every floor of the building.

Horizontal exits should be given priority. All the staircases shall be extended up to terrace of the building and shall be negotiable to each floor.

vi) The staircases, corridors & all the means of escape should be free from any obstruction.

vii) 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 operable 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 conform 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.

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.

REFUGE AREA:

1.Refuge area is not less than 15 sqm. and shall be provided on the external wall with cantilever projection or other suitable means at above .. mtr. and ..mtr. levels of the building as shown in the drawings.

2.The refuge areas shall be of Fire Resisting construction and protected with self-closing F.C.D. at the entrance from the corridors at staircase lobbies.

3.The position of refuge areas shall be such so that they are negotiable by the Fire Service Ladder from the ground level.

MULTI LAYER AUTOMATED MECHANIZED CAR PARKING SYSTEM:

1.Structural design:- The MLCP shall be constructed of structural steel construction.

2.Vertical Deck Separation:- For MLCP 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 CI 4.4 .

5. Natural Ventilation:- Each Car Parking deck shall be provided with at least 50% external ventilation opening of the perimeter wall areas and uniformly distributed.

6. Sprinkler & Detection System: - Open Modular Type Sprinkler along with Detectors shall be provided in all MLCP areas as per relevant I.S. Specification. Cross zone wise Sprinkler system shall have to be implemented.

7. Fire Pump:- Separate Jockey and Sprinkler pump of suitable capacity shall have to be installed for the MLCP areas.

8. Operating System:- Both Mechanical and Manual type operating system shall have to be provided.

FIRE FIGHTING WATER:

Underground water reservoir having water capacity of 350000 ltrs. and overhead water reservoir having capacity of 10000 ltrs. 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.

WET RISER SYSTEM IS:3844

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

AUTOMATIC SPRINKLER SYSTEM

The automatic sprinkler system shall have to be installed in the entire building of all blocks. Alarm Gong to be incorporated along with the sprinkler system.

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. Transformer to be protected by High Velocity Water Spray Projection System as per relevant I.S. specification.

5. 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.

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

i) The standard code of practice recommended that all water based fixed firefighting 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 2850 LPM and One electric pump of capacity 180 LPM should be installed and a separate Fire Pump shall preferably be made for the total Sprinkler Installation of the building.

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 AND ALARM SYSTEM: I.S. 2189-1988.

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 visual panel board shall be made in Control Room. The Control Room shall be located at entrance of ground floor of the building, other requirements of the system shall be made conforming I.S. specifications.

2. 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. specifications.

3. The suppression system shall be made with Fire Extinguishers particularly in Computer, Electrical processing and Data Room and in all rooms of irreplaceable articles.

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

5. Public Address System linked between all floors and Control Room shall have to be established.

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 meters distance from a hose nozzle when fully extended.

Yard Hydrants

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

TRANSFORMER PROTECTION:

1. Transformer to be protected H.V. Water projector system / Modular (DCP) base should be filled up by stone, the flow of oil.

2. Entry of unauthorized person should be restricted inside the transformer area.

3. Dykes to be provided to contain the oil of the transformer in case of leakage.

4. It is strongly recommended that any oil – insulated outdoor type transformer containing 2250 ltrs. or more oil is to be separated from nearby structure by two hours rated fire wall or by specific spatial separation in accordance with NFPA-850 recommendations.

5. Wherever a firewall is installed between transformer it should be extended at least 300 mm above the top the transformer shall and oil tank at least 600 mm. beyond the width of the transformer and cooling radiator.

6. Dry type transformer is strongly preferred for use inside factory. In case however an oil insulated transformer is installed indoors, then if its oil content exceeds 450 ltrs. then it should be separated from nearby areas by a fire barrier of three hours fire resistance rating. In resistance of the fire barrier reduced to one hour.

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 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 firefighting 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.
3. Floor number and direction sign of escape shall be displayed prominently as per clause 4.11 Annex D of N.B. Code.
4. The employees and security staff shall be conversant with installed firefighting equipment of the building on to operate in the event of fire and testing as per clause 4.11 Annex D of N.B. Code.
5. Arrangement shall be made for regular checking, testing and proper maintenance of all the fire safety installation and equipment installed in the building to keep them in perfectly good working conditions at all times.
6. Mock fire practice and evacuation drill shall be performed periodically with participation of all occupants of building.
7. 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.

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 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.

Signature Not Verified

Digitally Signed
Name: RATAN KUMAR MALDER
Date: 02-Feb-2023 16:02:04
Reason: Approved
Location: West Bengal

Deputy Director
West Bengal Fire & Emergency Services