

**GOVERNMENT OF WEST BENGAL**  
**OFFICE OF THE DEPUTY DIRECTOR ( NZ )**  
**WEST BENGAL FIRE & EMERGENCY SERVICES**  
S.F. Road, P.O. - Siliguri, P.S. - Siliguri Bazar, Pin -734005

Memo No : WBFES/TEC/NB/ 17/20

DATED: 20-08-2020

From :

The Deputy Director (North Zone)  
Fire Prevention Wing,  
West Bengal Fire & Emergency Services.

To :

MODERN BUILDERS  
Sekhar Guha Roy And Others  
Khudiram Sarani, Cooch Behar, P.S.- Kotwali  
Cooch Behar - 736101

Sub : Fire Safety Recommendation submitted for Proposed construction of B+G+6 storied Residential building under group of Residential in the name and MODERN BUILDERS at the Premises no - Sekhar Guha Roy And Others - at Ward No- 19, KH No- LR 23355 , 23359 , Plot No- LR 8371 , JL No- 130, Mouza- Sahar Coochbehar , Khudiram Sarani , P.S.- Kotwali ,Cooch Behar- 736101

This is in reference to your Application No IND/WB/FES/20192020/77162 offline Demand Memo No - WBFES/NZ/FP/08 Dt.-21/03/2020 (vide Message no -103, Dt. 26.02.2020) , regarding the Fire Safety Measure for a Proposed construction of B+G+6 storied building under group Residential at the premises no.- Sekhar Guha Roy And Others - at Ward No- 19, KH No- LR 23355 , 23359 , Plot No- LR 8371 , JL No- 130, Mouza- Sahar Coochbehar , Khudiram Sarani , P.S.- Kotwali , Cooch Behar- 736101

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 Offline Fire Safety Recommendation vide Message no -103, Dt. 26.02.2020. in favour 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 Municipal 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.

#### 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 20 M.T.
3. The width and height of the access gates into the premises shall not be less than 4.5M and 5M respectively abutting the road.

#### 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 conforming 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.
- 6) The staircase of basement shall be of enclosed type having fire resistance of not less than two hours and shall be situated at the periphery of the basement to be entered at the ground level only from the open air and in such positions that smoke from any fire shall not obstruct any exit serving the lower ground and upper mall of the building.

#### LIFT

- 1) Walls of all lift enclosures shall have a fire rating of two hours; lifts shafts have a vent area not less than  $0.2 \text{ M}^2$
- 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 half 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) Fire Lift marked in the plan with the following specification – to enable fire services personnel to reach the upper floors with the minimum delay, and shall be available for the exclusive use of the firemen in an emergency.
- 8) The lift shall have a floor area of not less than  $1.4 \text{ m}^2$ . It shall have landing capacity of not less than 545 Kg (8 persons lift) with automatic closing doors of minimum 0.8 mm width
- 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.

#### BASEMENT

1. The basement shall be adequately ventilated.
2. The additional staircase from the open air as shown in the drawing shall be constructed besides the ramp conforming relevant I.S. specification.
3. The basement shall be protected with Auto sprinkler system.
4. Mechanical extractor for smoke venting system from basement levels shall also be provided. The system shall be of such design as to operate on actuation of heat/smoke sensitive detector or sprinkling. It shall also have an arrangement to start it manually.
5. Mechanical extractors shall have an alternative source of supply.
6. Mechanical extractors shall have to be designed to permit 30 air changes/hour in case of fire and shall be incorporated with an alternate source of power supply, for normal operation air changes shall be 12-15 air changes per hour.

#### FIRE FIGHTING WATER

The Centre shall have to be equipped with 100,000 lts. of underground stored water with replenishing arrangement @ 1000 lts./min preferably from two different sources of water supply.

#### HYDRANT SYSTEM

The complex shall be provided with wet Riser of 150 mm internal diameter pipeline with provision of landing valves at the staircase landings/ half landings at the rate of one such riser for 1000 square meters of floor area. The systems shall be so designed that shall be kept charged with water on the time under pressure and capable to discharge 2850 lts./min. at the ground floor level outlet and a minimum 900lts./min. at the top most outlet. In both the cases the running pressure shall not be less than 3Kgs/sq.cm. All the other requirements confirm I.S. 3844-1989

#### AUTOMATIC SPRINKLER SYSTEM

The automatic sprinkler system shall have to be installed in accordance with ordinary hazard group III. Sprinkler system will be serving the basement and Car parking Zone. They shall have to be installed standard sprinklers and maximum fire size at 5 MW.

Electrical Installation- shall be as per code of practice 1946: 1978, (NBC-Gr-iv) & Indian Electricity rules-1956 with up to date amendment. No electrical switch gear/ distribution should be installed below the staircase.

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

i) The standard code of practice recommended that all water based fixed fire fighting 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 install.

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) A Buster Pump may be incorporated at the requisite floor so as to enable to obtain the required flow and pressure as per standard at the top most level.

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

#### DETECTION ALARM SYSTEM

Manual operated Electrical Fire alarm system fitted with hooters along public address system, talk back system at each floor of the complex shall have to be provided. Other requirements of the system shall be made conforming I.S. 2189-1988.

#### PUBLIC ADDRESS SYSTEM

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

#### 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 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 RECOMMENDATION

1. Fire notice for fire fighting and evacuation from the building shall be prepared and be displayed at all vulnerable place of the building as per clause 5.5 of N.B. Code.
2. Floor number and direction sign of escape shall be displayed prominently as per clause 5.5 of N.B. Code.
3. The employees and security staff shall be conversant with installed fire fighting equipments of the building on to operate in the event of fire and testing as per clause 5.5 of N.B. Code.
4. 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.
5. Mock fire practice and evacuation drill shall be performed periodically with participation of all occupants of building.
6. 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 ..

On compliance of all the fire & Life safety recommendations, this office shall be approached for necessary inspection and testing of the installation. Final N.O.C/ Fire S. Certificate in favour of the occupancy shall be issued on being satisfied with the test and performance of safety aspects of the installation of the building.

  
Deputy Director (NZ)  
West Bengal Fire & Emergency Services  
19/8/2020