

**GOVERNMENT OF WEST BENGAL
OFFICE OF THE DIRECTOR GENERAL
WEST BENGAL FIRE & EMERGENCY SERVICES
13-D, Mirza Ghalib Street,
Kolkata-700016.**

Memo. No.: WBFES/ 9856/WR/Kol-RB/329/06 (344/06)

Date : 08/11/06.

From : **The Director General
West Bengal Fire & Emergency Services.**

To : **The Joint Secretary to the Govt. of West Bengal
Refugee Relief & Rehabilitation Dept.
Writers' Buildings
Kolkata - 700 001**

Sub: **Provisional N.O.C. of proposed Residential Housing Complex at premises No. Holding No. 1290, Ward No. 29, Bonhooghly, 24-Parganas (North)**

Sir,

This is in reference to your letter No. 17/JS/RR&R/2006 dated 01.09.2006 regarding Provisional N.O.C. of fire safety measure for proposed Residential Housing Complex at premises No. Holding No. 1290, Ward No. 29, Bonhooghly, 24-Parganas (North).

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 Provisional N.O.C. in favour of the aforesaid building subject to the compliance of the following fire measure.

Encl. :

1. One set of plan.
2. Recommendation placed in this file.

Yours faithfully,

DIRECTOR

WEST BENGAL FIRE & EMERGENCY SERVICES

RECOMMENDATION

A. CONSTRUCTION:

1. The whole construction of the proposed building shall be carried out as per approved plan drawing conforming the relevant building rules of local Municipal Body (Bidhannagar/ Kolkata Municipal Corporation).
2. The floor area exceeds 750 m² shall be suitably 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 low flame spread materials conforming I.S. Specification.
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 ducts by the materials of adequate fire resisting capacity.

B. OPEN SPACE & APPROACH:

1. The open space surrounding the building shall conform the relevant building rules as well as permit the accessibility and manoeuvrability of fire appliance with turning facility.
2. The approach roads shall be sufficiently strong to withstand the load of Fire Engine weighting 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.

C. STAIRCASE:

1. The staircase of the building shall be enclosed type. Entire construction shall be made of brick / 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 wall of the building.
3. The width of the staircases shall be made as marked in the Plan. Corridors and the Exit doors shall conforming the relevant building rules as well as rules of the Cinematograph Act with upto date amendments.
4. All the Staircase shall be extended up to 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 enclosures 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.
6. One of the staircase in each building (G+12 & G+15) shall be pressurized, positive pressure of 25-30 Pa shall be maintained inside the staircase.
7. One additional staircase shall be provided as marked in the plan drawing.

D. LIFT:

1. The walls of the lift enclosure shall be at least 2 hours Fire resistance type. Collapsible gate shall not be permitted.
2. One of the lifts shall be designed for fire lift. The word 'FIRE LIFT' shall conspicuously be written at ground floor.

E. REFUGE AREA:

1. Refuge area is not less than 1.5 Sq.m. shall be provided on the external wall with cantilever projection or other suitable means at above 24m and 39m. 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 that they are negotiable by the Fire Service Ladder from the ground.

F. BASEMENT:

1. The Basement shall be adequately ventilated.
2. Additional Staircase from the open air as shown the in the drawing shall be constructed besides the ramps conforming relevant I.S. Specification.
3. The basement shall be protected with Auto Sprinkler System/Hose Reel System etc.
4. Mechanical extractor for smoke venting system from lower/upper 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.

G. FIRE FIGHTING WATER:

6 Nos. underground water reservoirs having water capacity at 13,00,000 ltrs. And overhead reservoir of 25,000 ltrs. Capacity exclusively for fire fighting purpose with replenishing arrangements @ 1000 ltrs./min. Preferably from two different sources of water supply shall be provided. The 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 times.

H. HYDRANT 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 kept charged with water all the time under pressure and capable to discharge 2850 ltrs/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 3.5 Kgs./Sq.cm. All other requirements shall conforming I. S. 3844 -1989.

2. Provision for Hose Reel in conjunction with Wet Riser shall be made at each floor level and both sides of stage of the Auditorium, Cinema Hall, Video Halls etc. conforming the relevant I.S. Specification.
3. Provision of standard Hose Reel Hose supplied from the Overhead Reservoir through Booster Pump shall have to be made in all the floors of the building satisfy the code of I.S. 3844 - 1989.
4. Yard Hydrant/Ring Main Hydrant with provision of four numbers Hydrant shall be installed surrounding the building in accordance with relevant I.S. Specification.

I. **SPRINKLER INSTALLATION :**

The automatic Sprinkler installation shall be provided in Basement and in all floor areas of the building as per I.S. 9972. Alarm gang to be incorporated alongwith the Sprinkler System.

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

A separate Fire Pump shall preferably be made for the total Sprinkler installation of the building. 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 be positive type or in case of negative suction the system shall be wet riser-cum-down comer with suitable terrace pump fitted with overhead tank.

K. **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. The vertical ducts shall be supply sealed at alternative floor level.
3. The electrical installation shall be adequately protected with CO₂/D.C.P. or Medium Velocity/Projector System.
4. **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, Fire Lift etc. and also for illuminating the Staircase, Corridors etc. and other places of assembly of the building incase of normal power failure.

L. DETECTION, ALARM AND SUPPRESSION SYSTEM :

1. Manually operated Electrical Fire Alarm System with at least four numbers of break glass typical boxes fitted with Hooters alongwith public address system, talk back 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. Auto Fire Detection System with the help of flint and smoke detector shall be installed in all places of below and preferably above false ceiling of the 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.
4. Hooters will be sounded in such a manner so that an operation of a director or 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.

M. INTELLIGENCE ANALOGUE SYSTEM :

1. Auto Fire Alarm System with analogue addressable smoke/heat detector as per suitability shall be installed in each floor.
2. Addressable analogue manual call boxes incorporating with sounders shall be installed in all floors area of the building in such a manner that maximum travel distance shall not be more than 22.5 m in order to reach any of the call point.
3. Micro-processor based fire alarm panel shall be installed and all shall also be connected with main panel at the Fire Control Room of the premises having direct dialing facility to the local service unit.
4. Both way public address systems shall be made available in all floors of the building. The system shall be connected to the Main Control Room.
5. All the installations shall also be satisfied the I.S. Specifications 2189 (as amended) and the code of practice as laid down in the N.B.C. Part-IV.

N. 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 system of auto shut down of A.H.U. shall be incorporated with the auto detection and alarm system.
4. The air handling units room shall not be used for storage of any combustible materials.

N. 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.

O. GENERAL RECOMMENDATIONS :

1. Fire license shall have to be obtained for proposed strong 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.
3. Floor numbers and directional sign of escape route shall be displayed prominently.
4. The employees and security staff shall be conversant with installed Fire Fighting equipments of the building and to operate in the event of Fire and Testing.
5. 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.
6. A crew of trained fireman under an experienced officer shall be maintained round the clock for safety of the building.
7. Mock Fire practice and evacuation drill shall be performed periodically with participation of all occupants of building.
8. 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 building.

This shall be treated as provisional N.O.C. 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. Final N.O.C. in favour of the occupancy shall be issued on being satisfied with the tests and performances of safety aspects of installations 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 provisional N.O.C. will be treated as cancelled.


DIRECTOR
WEST BENGAL FIRE & EMERGENCY SERVICES