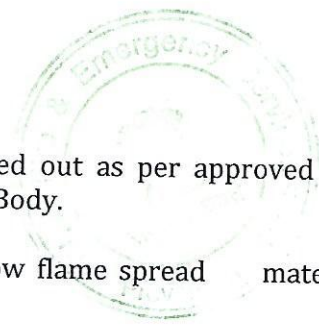


RECOMMENDATION



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 Municipal Body.
2. The interior finish decoration of the building shall be made of low flame spread materials conforming to I.S. specifications.
3. Provision of ventilation at the crown of the central core-duct of the building shall be provided.
4. 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.

B. 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.

C. 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 in the plan at each floor level shall be provided. The F.C.D. shall be of the least two hours 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. One of the lifts shall be designed for Fire Lift. The word "Fire Lift" shall conspicuously be written at ground floor.

3. The Electric power shall be from separate supply mains in the building and cables run with in the lift shafts, light and fans in the lift cars shall be operated from 24 volts, supply on emergency in case of failure of normal power supply lift shall automatically trip over alternate power supply.

E. REFUGE AREA:

1. The Refuge area shall have to be provided as per 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.

F. FIRE FIGHTING WATER :

1. Underground water reservoir having water capacity of 1,00,000 ltrs and Over head Water Reservoir of 18500 Ltrs capacity for Block D and 12000 Ltr. Capacity for Block C exclusively for Fire Fighting purpose with replenishing arrangements @1000 ltrs/min. preferably from two different sources of water shall be provided. The water reservoirs shall have overflow arrangement with the domestic water reservoir as well as to prevent stagnancy of water. The water reservoirs shall be kept full at all time.

G. HYDRANT SYSTEM :

1. The building shall be provided with Wet Riser of 150mm internal diameter pipe line for G+XII storied building and 100 mm dia pipeline for G+IV storied building with provision of landing valves at the Staircase Landings / Half Landings @ one such Riser for 1000 SQ. Mtr. of floor area. The system shall be so designed that shall be kept charged with water all the time under pressure and capable to discharged 2850 Ltrs per Minute at the ground floor level outlet and minimum 900 Ltrs/minute 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 to I.S. specifications 3844-1989.
2. Provision for Hose reel In conjunction with Wet Riser shall be made at each floor level conforming the relevant I.S. specification.
3. Yard Hydrant / Ring Main Hydrant with provision of at least two numbers Hydrant with one number Fire Service inlet shall be installed in the building in accordance with relevant I.S specifications.

H. FIRE PUMP:

1. 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.
2. 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.

I. 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 and horizontal ducts shall be sealed at each floor level by fire resisting materials.
- 3 The electrical installation shall be adequately protected with automatic CO₂/D.C.P.
- 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, etc. and also for illuminating the Staircase, corridors etc. and other places of assembly of the building incase of normal power failure.

J. 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 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. 2189-1988.
2. 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.
3. Public Address System:
Public Address System linked between all floors and Control Room shall have to be established.

K. AIR CONDITIONING SYSTEM (If any):

1. **Joints must be avoided in AC wires.** It is generally found that there are multiple joints in AC wires which is the single most common cause of Electric Fire due to heat generated in it which spreads quickly to inflammable materials like curtains, paper files etc.
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 equipments when they are not in use. Switch on only those lights fans, air-conditioners or other equipments which are required for functioning office. Do not leave air-conditioners, heat convectors, lights, fans and other electrical equipments 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.
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 equipments; 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 authorised agency maintenance manual 2012 and have become unserviceable with star rated Energy Efficient air conditioners.

L. FIRSTAID 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.

M. GENERAL RECOMMENDATIONS:

- 1 Fire Notice for Fire Fighting and evacuation from the building shall be prepared and be displayed at all vulnerable places of the building.
- 2 Floor numbers and directional sign of escape route shall be displayed prominently.
- 3 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.
- 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 A crew of trained Fireman shall be maintained round the clock for safety of the building.
- 6 Mock Fire practice and evacuation drill shall be performed periodically with participation of all occupants of building.
- 7 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 tested as Fire Safety Recommendation 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.


Deputy Director (Headquarter)
WEST BENGAL FIRE & EMERGENCY SERVICES