We suggest/advice the following Fire precautionary measures based on N.B.C guide line and the local circumstances :-

i) **Construction :**

a) The whole construction of the proposed building shall be carried out as per approved plan drawing conforming the relevant building rules of local Municipal Corporation.

b) The floor area exceeds 750 m ² shall be suitably compartmented by separation walls up to ceiling level having at least two hours Fire resisting capacity.

c) The interior finish decoration of the building shall be made low flame spread materials conforming I.S. specifications.

d) Provision of ventilation at the crown of the central core-duct of the building shall be provided.

e) Arrangements shall have to be made for sealing all the vertical ducts by the materials of adequate Fire resisting capacity.

ii) **Open Space & Approach :**

a) The open space surrounding the building shall conform the relevant building rules as well as permit the accessibility and maneuverability of Fire appliance with turning facility.

b) The approach roads shall be sufficiently strong to withstand the load of Fire Engine weighting up to 20 M.T.

c) The width and height of the access gates into the premises shall not be less than 4.5 M and 5M respecting abutting the road.

iii) **Stair Case :-**

a) 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 respectively marked in the plan.

b) The Staircase of the building shall have permanent vents at the top equal to 5% of the cross sectional area of the staircase enclosures and openable sashes at each floor level equal to 15% of the said cross section are shall have to be provided in the external wall of the building.

c) All the Staircase of the building shall be negotiable to each other in each floor without entering into any room and shall be extended up to respective terrace. The roof of the Stair wall shall be 1M above the surrounding roof area.

d) The width of the Staircases and corridor and travel distance of different categories of occupancies shall have to confirm the relevant building rules.

iv) **LIFT :-**

a) The walls of the Lift enclosure of the building shall be at least two hours Fire resisting type respectively marked in the plan with the event at top of area not less than 0.2 m ².

b) The lift of the building shall be designed at high speed "Fire Lift" and conspicuously indicated marked in the plan.

c) In case of failure of normal electric supply, it shall automatically trip over to alternate supply. For apartment houses these change over of supply could be done through manually operated change over switch. Alternatively, the lift shall be so wired that in case of power failure, it comes down at the ground level land comes to stand still with door open.

d) Arrangement shall be provided for extraction of smoke in all the lift shaft by incorporation smoke venting system designed to permit 30 Air changes per hour in case of Fire and shall be of such design as to operate on actuation of sprinkler of Fire Alarm. In case of failure of normal electric supply. It shall automatically trip to alternate supply.

e) All other requirements shall conform the I.S. specification including the communication facility in the lift cars connecting with the Fire Control Room of the building.

v) That active Fire protection system such as wet cum down comer system with landing valve and hose reel at each floor incorporated with 450 LPM pump at Terrace level, ISI marked Fire extinguishers as per I.S 2190/1992, F.R. check door, manual call alarm point, Fire safety luminescent sign & other Fire precautionary measures as mentioned in NBC be provided before occupancy.

vii) That an underground water static tank of not less than 20,000 Ltrs. capacity with automatic refilling arrangements prefebly on front side where Fire Brigade vehicles can reach easily & overhead water static tank of not less than 10,000 Ltrs. capacity should be provided before occupancy

viii) That the internal finishing shall be non-combustible or class – I surface spread of flame.

ix) That electric cables must be shield at each floor with intumescent coating.

x) That AMC should be given to a qualified firm or person for the maintenance of above recommended Fire equipments.

xi) That Fire exit drill be carried out regularly at least twice in a year after occupation.

xii) That the building must be constructed on at least 20 feet wide road and it is responsibility of the concerned Architect to be sure of the road width because he is the passing authority.

STATE FIRE OFFICER
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