

Govt. of West Bengal,
Office of the Dy. Director, North Zone, Siliguri,
W.B.Fire & Emergency Services,

Memo No:-WBFES/NZ/FP/ 1128/15

Date.:- 27/03/15

From: - The Dy. Director,
North Zone, Siliguri.

To: The Director,
Sandeep G.Realestate Ltd.
For proposed P + 5 Residential Building,
Mauza:-Baniakhari,JL-55,Plot.170/RS,487/LR,KH.35/RS,314/LR,306/LR,
PS-Matigara,Dist:-Darjeeling.

Sub:-Fire Safety Recommendations for the proposed P+5 Storied Residential building complex as per Fire Risk assessment and NBC.

Ref.:-Your letter No.-Nil, Date. 18/3/15

Sir,

With reference to the letter noted above regarding the Provisional NOC for the Proposed P+5 Residential building, you have submitted different documents inter alia the Building Plan. After scrutinizing the same from fire and life safety points of view, the **fire safety recommendation** is here by issued as per the direction of the authority subject to the compliance of the **same before occupancy.**

Recommendations:- Land needs to be converted if required, and permission from each corner needs to be obtained.

A) Construction Part:-

- i) **The whole construction of the proposed building shall be carried out as per approved plan of the local authority & conforming the relevant building rules.**
- ii) The floor area exceeds 750 sq.miter shall be suitably compartmented by separation walls up to ceiling level having at least two hrs fire resisting capacity.
- iii) The interior finish decoration of the building shall be made of low flame spread materials conforming I.S Specification.
- iv) All construction materials should be of four hrs. Fire resisting type.
- v) Doors & windows should be of at least 2 hrs of fire resisting type.
- vi) All opening of services ducts, void, gap, joints etc. should be sealed with fire check materials.
- vii) **The construction design, materials etc. should be earth quake resistance and related IS code should be maintained in every cases like design, materials etc.**

B)Open Space & approach:-

- i) 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.
- ii) The approach roads shall be sufficiently strong to withstand the load of fire engine weighting up to 45 M.T.
- iii) The width and height of the access gates into the premises shall not be less than 4.5 miters & 5 miters respectively abutting the roads.

C) Means of escape: -

- i) The Staircases of the building shall be enclosed type & construction shall be made of bricked/RCC type having fire resistance capacity not less than 4 hrs.
- ii) Time of evacuation should be as per I:S 1644-1988 i.e. 2.5 minutes.
- iii) The width of the staircases shall be 1.5 miters. Corridors of the building and the exit doors shall conforming the relevant building rules.
- iv) The staircases shall be extended up to terrace of the building and shall be negotiable to each other without entering into any room.

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v) **The entrances doors/each door of each staircase and lift doors in the parking area should be F.C.D and two hrs. fire resisting type.**

vi) In no way the travel distance from any point of the building shall exceed the limit of 22.5 meters.

vii) 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.

D) Electrical Installation: 1946:1982:-(I:S-694)

i) All electrical installation should be done in accordance with National Electrical code & part -viii "Building Service" section -2 "Electrical installation" good practice.[4(10)].

ii) All cable should be of FRLS type & all wiring should be done by the copper wire along with appropriate gauge such as 1.2 sq. mm for light, fan, bulbs etc. 2.5 sq. mm for freezer, TV & 4 sq. mm for gezer, washing machine etc.

iii) Electrical installation shall be tested by the licensed Electricians.

E) In-case of Central Air Condition:-I:S 659-1991:- It shall conform to the following:-

i) Escape routes like corridors, lift lobbies etc. shall not be used as return air passages.

ii) Regular checkup of all split type window machine to prevent dust, foreign materials in the air inlet should be 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.

iv) Regular checking, testing, cleaning the Air inlet is must. **(for all type A.C.Machine,)**

v) AHU room shall not be used for storage of combustible articles.

F) Alternate power supply :- Arrangement shall be made to supply power with the help of a Generator to operate at least the fire pump, pump for deep tube-well, illumination of stairs, corridors, means of escape etc. in case of normal power failure.

G) Under ground water Reservoir:- The building should be provided with 50000 liters of water of u/g stored water with replenishing arrangement @ 1000 liters of water per minutes preferably from two different sources. The height of the same shall be 30 cm. from the ground level. The reservoir shall have overflow arrangement. The location of the reservoir should be such so that the Fire service vehicles may get access to the site the reservoir. In case of two phase of buildings or two

H) Terrace Tank:- One Terrace Tank (RCC) of capacity Minimum 10000 liter should be installed in each tower and in case of phase wise building for two phase building minimum 20000 liters capacity of one tank of RCC type shall be provided centrally or the roof of any of the phases of a building along with suitable terrace pump & wet riser cum down comer system.

I) Hose Reel System:- IS 884-1985, the Hose reel hose system should be provided at each floor of the building. 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.

J) Pumps for fire fighting Installation. IS-12469-1988.

i) The pump 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. As per NBC the discharge capacity of the said pump minimum 900 liters per minutes,**

ii) 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 building.

iii) One such pump shall always be kept on stand by preferably be of diesel driven type.

iv) All the pumps shall be incorporated with both normal and auto starting facilities, the suction of the pump shall preferably of positive type or in case of negative suction the system shall be wet riser-cum- down comer with suitable terrace pump fitted with over head tank.

K) Small gears:-I:S 903-1993:- Hose box, 15 meters permoline delivery hose & gun metal short branch half inch dia @ one set each at or near all the pillar hydrant, landing valve on all floors of the building should be installed.

L) Internal Hydrant System:-IS:3844:1989:-Presurised wet risers of 100 mm dia should be provided at each staircases with a provision of landing valves at each landing and half landing position of the building as per the above IS code of practice. The designed will be in such a manner that it should be kept charged with water at all time and capable of discharge 2850 liters of water per minutes at the ground level and 900liters of water per minutes at the top most point of the building.

M) External Hydrant System:-IS: 13039:1991:-The surrounding of the building should be protected by **ring main with** adequate no. of pillar type yard hydrants system as per the IS code of practice. **i.e. @ one pillar type hydrant shall be provided per 1000 esq. miters of floor area or as per the vulnerability of the area. In each point one hose box with two delivery hoses and one GM short branch shall be provided.**

N) Sprinkler Installation.-I.S:9972:2002(with up to date revision):-The automatic sprinkler installation shall be provided in the **Car Parking areas of the building , main Corridors** and other vulnerable areas **if any like** conference hall, banquet type halls, etc. and Conference hall/community hall/Pantry areas as per the I.S Code of practice.**(As per RISK factor)**

O) R) Detection & Alarm System, Suppression system & Public address system-IS 2189-1988.

i)Sufficient Nos. of manually operated electrical fire alarm system of break glass type call boxes and fitted with alarm like Hooters with public address system, talk back system at different places of the building should be installed & connecting with audio visual panel board shall be made in Control Room as per the IS Code of practice.

P) First aid fire fighting system:-IS 2190-1992(IS-15683). Sufficient Nos. of Portable fire extinguishers of ABC type, Water type etc. and Sand and water buckets should be provided at different places of the building and it should be within the reach of all concern as stated in the IS Code i.e. one **no.@ 1000 esq.meters** floor area or as per the vulnerability.

Q) Lighting Protection of the Building: - This protection for buildings shall be provided as given in Part-VIII building services, section-2 electrical installation.

R)In case of Lift:-

i)The walls of the lift enclosures shall be at least two hrs. fire resisting type and collapsible gates shall not be permitted. The lift materials should be 4 hrs.fire resisting types, the door of the lift should be 1 hr. fire resisting type, the landing door should be ½ hr.fire resisting type and area of the lift should be minimum 1.4 sq.meters.

ii)The load bearing capacity of the lift should be minimum 554 kg.

iii)In case of power failure it shall automatically trip over to alternate power supply. This change over of supply could be done through manually operated change over switch alternatively, the lift shall be so wired that in case of any power failure, it comes down at the ground floor and comes to stand still with door open.

iv) 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 stair unless instructed otherwise. The sign shall also contain a plan for each floor showing the locations of stairways.

S) Fire control Room:-The Control room shall be located on the entrance of the building with communication system /suitable public address system .Details of all floor plans, different facilities, fire fighting equipments, installations shall be maintained in the control room. The panel board shall also to be installed in the control room for the purpose of the detection of the location of particular detectors; sprinklers etc. of the building in case any fire accident and it should be manned at all times.

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1) General recommendations: -

- i) Mock drill & evacuation drill should be conducted periodically & in this regard a register for the recording of mock fire drill, evacuation drill, testing and checking of whole fire fighting installation, electrical installation should be maintained & shall be liable to produce the same to the authorized Officer of this department on demand.
- ii) Fire notice should be provided and shall be displayed at all places of the building as per clause 5.5 of N.B.C.
- iii) Floor no, shall be provided in such a that from the staircases and from the lift it should be confirmed or identified in which floor the lift is standing or in case of landing in which particular floor is belongs to.
- iv) All the occupants and other peoples shall be conversant with the installed fire fighting equipments of the building so that they can operate the same in case of exigency.
- v) Arrangement shall be made for regular checking, testing and proper maintenance of all fire fighting equipments and keep them in good working condition at all time it should be written in the Register.
- vii) Good housekeeping should be maintained.
- viii) Staircases/escape routes /drive ways/ entrance road etc. should not be obstructed in any way and all the staircases/escape routes, corridors etc. should be under the cover of emergency lighting.

Note: -i) After issuing the work orders of the said recommendations to any authorized agency from your side for the installations of the same, a primary clearance to the style of provisional NOC for such installations shall be issued from this end.

ii) On compliance of the aforesaid recommendations up to the satisfactions of this department & as per the scale as advised from this end, Final Fire Safety Certificate (NOC) shall be issued.

iii) The Fire Service recommendations are issued subject to the free from any Court Case or legal re-encumbrances.

iv) This is a fresh Fire safety recommendation of the of the building at the site as stated above in respect of phase wise construction of the building as prayed for.

Alankar
27.3.15
Dy. Director,
North Zone, Siliguri.

NORTH ZONE DIRECTOR
NORTH ZONE, SILIGURI
WEST BENGAL FIRE & EMERGENCY SERVICES