

Govt. of West Bengal,  
Office of the Dy. Director, North Zone  
Siliguri.

Memo No:- WBFES/NZ/FP/ 191 /11

Date:- 25/4/11

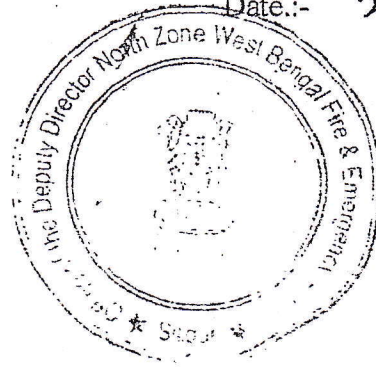
From: - The Station Officer (FP),  
North Zone, Siliguri.

To: - Sri <sup>Nateendra</sup> Narayan Chandra Garg (Partner),  
Office at Gyan Bhawan, Sevoke Road, Siliguri,  
(Proposed P+5 Residential Building),

At

Pathar gahata Gram Panchayet Samiti,

PS: - Matigara Dist: - Darjeeling



**Sub:- Fire Safety Recommendations for the proposed P+5 type, G+2, types, B+G+1 types etc. Residential complex at Plot No. (95 to 97 old), Khatiyon No-774 old at Patharghata gram Panchayet Samiti in the district Darjeeling.**

**Ref:- Your letter No.-Nil, Date. 7-4.11**

Sir,

With reference to the letter noted above regarding the Provisional NOC for the proposed Residential buildings, you have submitted different documents inter alia the Building Plans. After scrutinizing the same from fire and life safety points of view, the fire safety recommendations as well as the approved building plans are hereby issued as per the direction of the authority subject to the compliance of the same before occupancy.

**Recommendations:-**

**A) Construction Part:-**

- i) The whole construction of the proposed buildings shall be carried out as per approved plan of the Corporation & conforming the relevant building rules of local authority.
- 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 buildings 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, gaps, joints etc. should be sealed with fire check materials.
- vii) Sufficient gapes should be maintained in between the buildings as per the rules.

**B) Open Space & approach:-**

- i) The open space surrounding the buildings shall conform the relevant building rules as well as permit the accessibility and maneuverability of fire appliance with turning facility. The minimum open space surrounded the buildings should be at least six miters and it should be free from any obstruction at all times.
- 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. (The entrance road from the entry to the end part of the building should be said width & height and that should be free from any obstruction)

Cont.



**Means of escape: -**

The Staircases of the buildings 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 2 meters. Corridors of the building and the exit doors shall conforming the relevant building rules.

iv) All the staircases shall be extended up to terrace of the buildings and shall be negotiable to each other without entering into any room.

v) Fire & Smoke doors at the entrance of all the staircases enclosures at each floor level shall be provided. The F.C.D shall be at least two hour fire resisting with self closing type open able in the direction of the escape.

**vi) There should be minimum two staircases from the terrace of each building and in no way the travel distance from any point of the building exceeds 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 buildings.

viii) There should be a Pressurized staircases and lobby approach staircase with required pressure of 0.5 mm water gauge along with gape between door and windows not more than 0.3 mm water gauge should be installed.

**D) Ventilation:-i)** the crown of the central core duct of the buildings shall be provided along with five percent at the apex of the roof and 15 percent at the walls of each floor of the buildings shall be maintained.

ii) Ventilation of the kitchen should be provided towards the wall of the balcony but not in the stair side.

iii) Arrangement of stall board light, pavement light & Sky lark in the basement & at strategic location shall be installed.

**E) Lift:-i)** the walls of the lifts enclosures shall be at least two hour fire resisting type and collapsible gate shall not be permitted. The lifts materials should be 4 hrs fire resisting type, the door of the lifts should be 1 hr fire resisting type, the landing door should be ½ hr fire resisting type & Area of the lift car should be minimum 1.4 sq.meters.

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

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

iv) A sign shall be posted and maintained on every floor at or near the lifts indicating that in case of fire, occupants shall use the stairs unless instructed otherwise. The sign shall also contain a plan for each floor showing the locations of the stairways.

v) To enable fire services personnel to reach the upper floors of the buildings with the minimum delay, one lift per 1200 sq.meters of floor area shall be permitted and shall be available for the exclusive use of the firemen in an emergency. The words **fire lift** shall be conspicuously displayed in fluorescent paint on the lift landing doors at each floor level.

vi) The Fire Man switch of the fire lift should be installed at the ground level and on the fascia of the buildings and the switch should be operable from the opposite direction.

**F) Basement:-i)** The Basement shall be adequately ventilated.

ii) Additional staircase from the open air should be provided.

iii) The basement shall be protected with auto sprinkler system.

iv) Mechanical Extractor for smoke venting system shall be provided with alternate power supply.

v) The slope of the ramps shall not exceed 1 in 10 as laid down in the NBC & shall be installed.

vi) Ramps shall comply with all the applicable requirements of the related rules. Emergency lighting should be provided in the basement, ramps and in the stairways.



**Sprinkler Installation.-I:S:9972:2002:-**The automatic sprinkler installation shall be provided in lift shaft, staircase, corridors, means of escape, storage area, all strategic location including all rooms etc. Other vulnerable areas of the residential building should be protected by such system as per the IS Code of practice.

**P) Pumps for fire fighting Installation.IS-12469-1988.** i) 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**.

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 buildings.

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

iv) 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.

v) Provision of Jockey pump shall also be made to keep the water based system under pressurized condition at all times

vi) 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 comers with suitable terrace pump fitted with over head tank.

**Q) Small gears:-I:S 903-1993:-** Hose box, 1.5 meters permaline 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.

**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 buildings should be installed & connecting with audio visual panel board shall be made in Control Room as per the IS Code of practice. ii) Automatic fire detection system with the help of smoke & heat detectors shall be installed at all places of below and preferably above false ceiling of the buildings. This system shall also be made available in places of rooms where valuables have been kept. Other requirements shall be made in accordance with the IS code of practice.

iii) Suppression system shall be made with full flooding system with CO<sub>2</sub>, FM-200 particularly in Transformer room, computer, electrical processing and data room and in a room of irreplaceable articles.

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

**T) 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.

**U) Lighting Protection of the Building: -** This protection for buildings shall be provided as given in Part-VIII Building Services, Section-2 Electrical installation.

**V) Gas Bank-I:S 6044-2000:-**Incase of any cooking gas bank, the same should be installed conforming S/L 4.1.5 & 4.1.6 of the aforesaid I:S code & after obtaining Fire Service license u/s 12 of W.B.Fire & Emergency Services Act. & W.B.F.E.S. (license) Rules 2004.

**W) General recommendations: -** i) A fire crew under a Fire Officer or supervisor with experience at least 3 years should be available at all times in the building for checking, testing, maintenance, to conduct different drills and for other safety purposes.

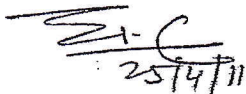


- Register for the recording of mock fire drill, evacuation drill, testing and checking of whole fire  
ing installation, electrical installation should be maintained & shall be liable to produce the same  
the authorized Officer of this department on demand.
- Fire notice for fire fighting and evacuation from the building should be provided and shall be  
displayed at all places of the building as per clause 5.5 of N.B.C.
- iv) Floor No. and Directional Sign of escape route should be displayed prominently as per clause 5.5  
of the N.B. Code. (Auto glow type)
- v) 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.
- vi) 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 house keeping should be maintained.
- viii) Mock fire drill and evacuation drill should be done periodically with participation of all  
occupants.

**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.**

  
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