GOVERNMENT OF WEST BENGAL OFFICE OF THE DIRECTOR GENERAL WEST BENGAL FIRE & EMERGENCY SERVIC

Memo. No.: WBFES/ 328/10 /Kol-CB/1106/09 (1127/09) Date: 21/01/2010 West Bengal Fire & Emergency Services.

5, Russel Street, Kolkata - 700 071. Sub: Provisional N.O.C. for proposed construction of G+XXVI storied Business building along with G+VI storied M.L.C.P. at premises No.-10, East Topsia Road, Ward No.-66, Borough-VII, Kolkata-700 046.

Mr. Harsh Sanon,

Sanon Sen & Associates (P) Ltd

Sir,

This is in reference to your letter dated 01.12.2009 regarding Provisional N.O.C. of fire safety measure for proposed construction of G+XXVI storied Business building along with G+VI storied M.L.C.P. at premises No.-10, East Topsia Road, Ward No.-66, Borough-VII, Kolkata-700 046. The plan submitted by you was scrutinized and marked as found necessary from fire &

Life 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 dudding subject to the compliance of the following fire and life safety.

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 fitted with self closing type open able in the direction of escape. Considering the staircases are only means of evacuation, emergency lighting arrangement directional, exit, sign etc. shall be made conforming the relevant I.S. Code in this regards.

D. EMERGENCY AND ESCAPE LIGHTING: Emergency lighting shall be powered from a source independent of that supplying the normal lighting Escape lighting shall be capable of: Indicating clearly and unambiguously the escape routes.

b) Providing adequate illumination along such routes to allow safe movement of persons towards and c) Ensuring that fire alarm call points and fire-fighting equipments provided along the escape routes can be readily location.

 The emergency lighting shall be provided to be put on within 1 second of the failure of the normal lighting supply. 3) Escape lighting luminaries should be sited to cover the following locations:

a) Near each intersection of corridors, b) at each exit door, c) Near each change of direction in the escape route, d) Near each staircase so that each flight of stairs receives direct light, e) Near any other change of floor level,

g) Near each Fire alarm call point, h) Near fire -fighting equipment, and i) To illuminate exit and safety signs as required by the enforcing author

f) Outside each final exit and close to it,

E. ILLUMINATION OF MEANS OF EXIT: Staircase and corridor lights shall conform to the following: a. The staircase and corridor lighting shall be on separate circuits and shall be independently connected so that it could be operated by one switch installation on the ground floor easily accessible to fire fighting staff at any time irrespective of the position of the individual control of the light points, if any, it should be of miniature circuit breaker type of switch so as to avoid replacement of five in case of crisis:

cement of fuse in case of crisis; Staircase and corridor lighting shall also be connected to alternative supply. The alternative source of supply may be provided by battery continuously trickle charged from the electric mains; and Suitable arrangements shall be made by installing double throw switches to ensure that the lighting installed in the staircase and the corridor does not get connected to two sources of supply simultaneously. Double throw switch shall be installed in the service region terminating the stand-by supply.

1. The walls of the lift enclosure of the building shall be on this swill be in the lift enclosure of the building shall be on this swill be in the lift enclosure of the building shall be on the lift with the resisting type respectively marked in the plan with the event at top of area not be sufficient to the lift enclosure of the building shall be on the lift enclosure of the building shall be on the lift enclosure of the building shall be on the lift enclosure of the building shall be on the lift enclosure of the building shall be on the lift enclosure of the building shall be on the lift enclosure of the building shall be on the lift enclosure of the building shall be on the lift enclosure of the building shall be on the lift enclosure of the building shall be on the lift enclosure of the building shall be on the lift enclosure of the building shall be on the lift enclosure of the lift

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RECOMMENDATION

A. CONSTRUCTION: Materials for rapid flame spread categories including untreated wood fibre board etc. shall be not

The floor area exceeds 750 m2 shall be suitably compartmented having four hours fire resisting capacity, sprinkler system should be provided as per N.B.C. Part IV. The interior finish decoration of the building shall be made with the materials with low flame spread and low smoke and toxic gas generating categories conforming IS. Specification. Arrangement shall have to be made for scaling all the vertical ducts by the materials of adequate 5. Fire rating test certificate of all interior finish decoration should be submitted to this office before

6. Business Building area should be mechanically exhausted of smoke in such a manner so that the exhaust system should be auto start with the actuation of detector and also to be auto shut off with the actuation of Sprinkler System. Service Ducts and shafts should be enclosed by a wall of 2 hours and doors of one hour fire rating.
 All such ducts shall be properly sealed and Fire stopped at all floor levels.

OPEN SPACE & APPROACH: The open space surrounding the building shall be kept clear open to sky and shall conform the relevant building rules as well as permit the easy accessibility and manuserability of the Fire appliances with turning facility. The approach road and roads surrounding the building shall be sufficiently strong to withstand the load of Fire Engine weighting up to 45 M.T.

3. The with and height of the entry gates to the premises shall not be less than 5m and 6m respectively 4. Drive way should be free of any type obstruction. No Parking will be allowed on the Drive Way.

STAIRCASE (FOR BUSINESS BUILDING): 1. All principal staircases from ground to top floor shall be pressurized as manufication. A positive pressure of 25-30 pa. Shall be maintained inside the staircases, pressurfation of the pressure of 25-30 pa. Shall be maintained round the clock.

maintained round the clock

The staircase of the building shall be enclosed type, entire construction shall be enacted of broken R.C.C. type having Fire resisting capacity not less than 4 hours respectively marked in the shall have permanent vents at the top your 16 to 6 of the sectional area of the staircase enclosures and open able sashes at each flow level enacted to 6 of the said cross section are shall have to be provided in the external wall of the building of the said cross section are shall have to be provided in the external wall of the building of the said cross section are shall have to be provided in the external wall of the building of the said cross section are shall have to be provided in the external wall of the building of the said cross section are shall have to be provided in the external wall of the building shall be enclosed type, entire construction and the said cross section are shall have to be provided in the external wall of the building shall be enclosed type, entire construction and the said cross section are shall have to be provided in the external wall of the said cross section are shall have to be provided in the external wall of the said cross section are shall have to be provided in the external wall of the said cross section are shall have to be provided in the external wall of the said cross section are shall have to be provided in the external wall of the said cross section are shall have to be provided in the external wall of the said cross section are shall be said cross 4. All the staircase of the building shall be negotiable to each other in each floor without entering into any room and shall be extended upto respective terrace. The roof of the stair wall shall be Minimum of 2.25M above the surrounding roof area.

TRUE COPY ATTESTED The width of the staircases and corridor and travel distance of different categories of occupancies shall have to conform the relevant building rules.

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Landing doors in lift enclosure shall have a fire resistance of not less than one hour. The number of lifts in one row for a lift bank shall not exceed 4 and the total number of lifts in the

bank (of two rows) shall not exceed 8. a wall of 2 hrs. fire rating shall separate individual shafts in 4. Collapsible gates shall not be permitted for lifts and shall have solid doors with fire resistance of at

5. A positive pressure between 25 and 30 Pa shall be maintained in the lobby and a positive pressure of 50 Pa shall be maintained in the lift shaft. The mechanism for pressurization shall act automatically with the fire alarm, it shall be possible to operate this mechanically also.

6. Exit from the lift lobby if located in the core of the building, shall be through a self-closing smoke Grounding switch(es), at ground floor level shall be provided on all the lifts to enable the fire service to ground the lift.

8. Telephone or the other communication facilities shall be provided in lift cars for building of 30 m 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 stairs unless instructed otherwise. The sign shall also contain a plan for

each floor showing the location of the stairways. One lifts Tower of the buildings shall be designed as high speed "FIRE LIFT" and conspicuously
indicated (Good Lifts of the retail center may be excluded).

11. One lift car of each block shall be large enough to accommodate standard ambulance stretcher and 12. The electric power shall be for separate supply mains in the building and separate supply the lift shafts. Light and fan in the lift cars shall be operated from 24 volt supply the mergers.

In case of failure of normal power supply, lift shall automatically the over the address of the state of the s 3. Arrangements shall be provided for extraction of Smoke in all the shall be growing a

smoke venting system designed to permit 30 Air changes per hour and printing and shall be of such design as to operate on actuation of Sprinkler of Fire Alarm. 14. The speed of all lifts in each building shall be such that it can reach the top from the ground floor

All other requirements shall conform the I.S. specification including the communication facility in 15. To enable fire services personnel to reach the upper floors with the minimum delay, one fire lift per 1200 m2 of floor area shall be provided and shall be available for the exclusive use of the firemen

16. The lift shall have a floor area of not less than 1.4m2. It shall have loading capacity of not less than 545 kg (8 persons lift) with automatic closing doors of minimum 0.8 m width. 17. In case of failure of normal electric supply, it shall automatically trip over to alternate supply. For apartment houses, this changeover of supply could be done through manually operated changes witch. Alternatively, the lift shall be so wired that in case of power suites, tiggment down at the ground level and comes to stand-still with door open.

TRUE COPY All the standard of the ground level and comes to stand-still with door open.

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NOTARY GOVT. OF NOIA
Reg. No. 37992
G.M.M.'s Court-Calcula.

e operation of a fire lift is by a simple toggle or two-outlons switch sincate in a gust a secent to the lift at the entrance level. When the switch in on, landing call-points will become operative and the lift will be on car control only or on a priority control device. When the switch off, the lift will return to normal working. This lift can be used by the occupants in normal times

For building more than 24m in height, refuge area of 15 m2 or an area equivalent to 0.3 m2 per person to accommodate the occupants of two consecutive floors, whichever is higher, shall be provided as under:

The refuge area shall be provided on the periphery of the floor or preferably on a cantilever projection and open to air at least on one side protected with suitable railings. For floor above 24m, 39m and above 50 m - One refuge area on the floor immediately above 24 m. b) For Floors Above 50m - One refuge area on the floor immediately above 50m and so on after every 15m refuge area provided in excess of the requirements shall be counted towards FAR.

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 so that they are negotiable by the Fire Service Ladder from the Ground. Water exclusively for Fire Fighting operation shall be ensuring minimum 3.5 Lac. Its, all the time.

 The Fire water reservoir shall be have overflow arrangement with the domestic reservoir to avert stagnancy of water. 3. Provision of necessary manhole shall be made on the top of the reservoir as per specification. Provision of replenishment at the rate of atleast 2000lts/min. from two separate source of water supplies shall be made.

 1257 B 5. The deep tube wells for the replenishment of the reservoir shall be included with the authorin of auto detection and suppression of all the same and shall also be connected with duel power supply units.

Provision of placing Fire Amiliana. 5. Provision of placing Fire Appliances on the underground water research to the made to draw in case of emergency.

WATER LAYOUT SYSTEM: Ringmain Hydrant System:

200 mm dia Ringmain water layout arrangement covering the entire premises of the project with provision of piller type yard hydrants without door hose boxes, containing 2 lengths of 63mm delivery hose and short branch pipe shall be provided at all the strategic location and surrounding the building conforming 1.S. 3844-1989 (upto date amendment). The system shall be so designed that shall always be kept charged with water under pressure and capable to discharge min. 2850 ltrs/min. at the pressure 3.5kg/sq.cm. at any point.

Wet Riser & Hose Reels System:-The building shall be provided with Wet Riser and Hose Ree, unit with new ison of outlets in each floor at the staircases landings half landings as persidiable at the more of one such unit of Wet Rise and Hose Reel per 1000sq.m. of floor area. R. N. MAITI NOTARY COVI. OF INDIA Rep. No. 37992 Rep. No. 37992 Rep. No. 37992

3 Addressable analogue manual call boxes incorporating with sounders shall be installed in all floor area of all block building in such a manner that maximum travel distance shall not be more than 22.5m in order to reach any of the call point. 4 Block-wise 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

Both way Public address system shall be made available on all floors of all blocks of the building including the retail center. The system shall be connected to the main control room. All the installation shall also satisfy the 1.S. Specification 2189 (as amended) and the code of practice as laid down in N.B.C. pt. IV.

the A.H.U. shall be separated for each floor with the system Air Ducts for individual floors. In no by the ducts shall be connected with the ducting system of other floors of the retail & gallery.

Arrangement shall be provided for isolation at the strategic locations by incorporating auto-dampers in the Air Conditioning system with operating facilities by auto-detection systems besides The system of auto shut down of A.H.U. shall be incorporated with the auto detection and alarm system. In no way the ducts shall be connected with the ducting system of other floors of the retail & gallery.

4 Escape route like Staircases, Common Corridors, Lift, Lobbies etc. shall not be used as return Air 5. Whenever the ducts pass through Firewalls of floors, the opening around the ducts shall be sealed with Fire resisting materials such as asbestos rope vermiculite concrete etc.

The materials used for insulating the ducts system (inside or outside) shall be of conception with the materials Glass Wool shall not be wrapped or secured by any materials of the materials Glass Wool shall not be wrapped or secured by any materials of the materials Glass Wool shall not be wrapped or secured by any materials.

Area more than 750m on individual floor shall be segregated by a large Wall and Automatic Dampers for isolation shall be provided Air duct serving main floor area, corridors etc shall not pass through the Shirepast Phicles
 The Air heading daily. 9 The Air handling shall be separated for each floor and Air ducts for even floor shall be separated and in no way interconnected with the ducting of any other floor. 10. If the Air handling units serve more than one floor, the recommendation given above shall be complied within addition to the conditions given below:

 Proper arrangements by way of automatic Fire dampers working on fumible links for isolating all ducting at every floor from the main riser shall be made. When the Automatic Fire Alarm operator the respective Air handling units of the air conditioning system shall automatically be switched off.

The vertical shaft for treated fresh air shall be of masonry construction. 12. The Air filters for Air handling units shall be of non-combustible mattracts COPY ATTESTED 2. The Air filters for Air handling units shall be of non-combination for the filter of the filter o

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2 Nos of Helipad shall be provided on the roof of the building.

Floor numbers, Directional exit signs, showing the nearest exit refuge area, fire points etc. shall have photo-luminescent signal at each floor of all blocks of building including the retail center shall be made available conforming the relevant I.S. Specification.

The occupants, employees and security staff shall know how to operate the First-Aid Fire Fighting
equipments and systems installed in the building.

The Wet Riser installation shall be made in reference to the neight of the building in stage wi

1st Stage Ground floor to 20st floor 200mm dia twin Hydrant outlet. 2st Stage 21st Floor to Top Floor 150mm. Dia. Twin Hydrant outlet. iii. Hose Reel Unit - Provision of hose reel units on swiveling drum in conjunction with wet riser near each landing valves shall be made at each floor level of the building.

 All other requirements of the water base Fire Protection System shall be made as per I.S. Specification 3844-1989 (with upto date amendment). Automatic Sprinkler Installation :

 All floors of buildings and basement area shall be suitablely protected by automatic Sprinkler installation conforming the grade as per I.S. Specification. The Sprinkler arrangement shall be laidout in Zonewise distribution preferably.
 Zone 1 – Basement to 9th floor.

1. 2850 litres per minute giving a pressure not less than 3.5 Kgs/Sq.Cm. at top most landing valve. The Pump provided will be of multi-stage type with suction and delivery sizes not less than 15cm. dia. With low level riser up to 15 storied and high level riser delivery for upper floors up to 60m another pump of equal performance with a break tank of 12000Lts. capacity at 75cm. level and set ball valves to supply the tank with at least 2850 Lts. per minute from the first pump. Alternatively, a multi-stage, multi-outlet pump may be installed. K. FIRE PUMP:

2. A separate Fire pump shall be made for the total Sprinkler installation of the building the solution of pumps shall be positive type. Stand-by pump of equal capacity shall be provided on alternative source of supply

ELECTRICAL INSTALLATION & DISTRIBUTION: Electrical distribution system of all the building shall be made in the form of concesses surings of in heavy gauge M.S. conducted continuously bonded to earth cables shall be I.S. marked and preferably be of F.R.L.S. categories. Electrical distribution System shall conform all the requirements laid in I.S. 1646-1982. 3. For every 230V writing above false ceiling 660 grade insulated cable shall be used Transformer Switch Gear H.T.,L.T. and other electrical rooms shall be at the ground floor level the walls of these rooms shall be at least 4hrs. fire resisting capacity. Adequate ventilation arrangement shall have to be made in all the rooms, Dry and explosion proof type transformer shall be installed.

 All electrical installation viz. Transformer Switch Gear L.T., HT rooms shall be protected with both auto detection and suppression systems as per suitability. Auto Fire Alarm System which analogue addressable smoke heat detectors as per suitability shall be installed in all floor area of all block of residential and retail captes where by sprinking heads are not feasible. M. AUTO DETECTION AND ALARM SYSTEM:

Smoke venting facilities for safe use of exits in windowless buildings shall be automatic in action with manual controls in addition. Natural draft smoke venting shall utilize roof vents or vents in walls at or near the ceiling level; such vent shall be normally open, or, if closed, shall be designed for automatic opening in case of fire, by release of smoke sensitive devices.

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3. Smoke venting facilities are to be installed for purposes of exit safety, these shall be adequate to prevent dangerous accumulation of smoke during the period of time necessary to reacenate the area served, using available exit facilities with margin of safety to allow for unforeseen contingencies. It is recommended that smoke exhaust equipment should have a minimum capacity of twelve-year changes per hour. Where mechanical venting is employed, it shall be fire safe. The discharge apertures of all natural drafts smoke vents shall be so arranged as to be readily accessible for opening by fire service personnel.

 Power operate smoke exhausting systems shall be substituted for natural drafts vents by specific permission of the Authority. Fire Damper shall be located in conditioned Air ducts and return. Air Duct / passages at the following points: 1. At the Fire operational wall. 2 Their Ducts/passages enter the central vertical shaft. 3. Where the ducts pass through floors. 4. At the inlet of supply Air duct and the return Air duct of each complete an every gos b) The dampers shall operate automatically and shall simultaneous 2017 Of the Air handling fans. Manual Operation facilities shall also be provided.

c) Automatic fire Dampers shall be so arranged so as to close by gravity in the direction of an movement and to remain rightly closed open operation of a fusible link. First Aid Fire fighting arrangement in the style of placing suitable categories of portable Fire Extinguishers ISI Mark Fire Buckets etc. in all floors and vulnerable locations of the premises shall be made in accordance with I.S. 2190-1992 (latest).

Since the high-rise building having a height of 144mts, and douated belong the 3 km. Distance from nearest fire station therefore it is imperative to establish a two pump fire station consist of 2

Nos. of 16 K.L. Water Bouser within the premises with Fire & Maintenance Crew under an

 Provision of emergency illumination of exits, shall also be made at all floor levels of all blocks of building conforming the I.S. Specification. If diesel oil is stored beyond the specified quantity license shall be accorded for the appropriate

Arrangement shall be made for regular checking, testing and proper maintenance of all the Fire Safety installation, equipments and means of escape installed in the building to keep them in perfectly good working conditions at all time by authorized competent Agency in this regard

9 Practice of Fire and evacuation drill shall be arranged at regular interval of time involving all the occupants and security staff shall be recorded. Trained and experienced fire fighting staff not less than twenty (20) per shift under an qualified and
experienced Fire Officer shall be maintained round the cleck (Total Strength - Officer - 4 Nos.,
Fire Engine Operator-cum-Driver - 9 Nos., Leader - 9 Nos., Fire Operator - 36 Nos.) 1. Each year a certificate is to be obtained from the Director General, West Bengal Fire &

PARTY'S COPY Knelos Ground

Before starting any Construction the

The validity of the written permission

site must conform with the plans sanctioned

and all the conditions as proposed in the plan

to execute the work is subject to the above

Code of India

should be fulfilled.

conditions.

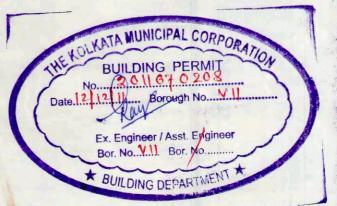
Plan for Water Supply arrangement including SEMILI G. & O. H. reservoirs should be submitted at the Office of the Ex-Engineer Water Supply and the sanction obtained before proceeding with the work of Water Supply any deviation may lead to disconnection/demolition.

> No rain water pipe should be fixed of discharged on Road or Footpath Drainage plan should be submitted a. the Borough Executive Engineer's Office and the sanction obtained before proceeding with the drainage work

A suitable pump has to be provided i.e. pumping unfiltered water for the distribution to the flushing cisterns and urinals in the building incase unfiltered water from street main is not available.

DEVIATION WOULD MEAN DEMOLITION

THE SANCTION IS VALIE



CONSTRUCTION SITE SHALL BE MAINTAINED TO PREVENT MOSQUITO BREEDING AS REQUIRED U/S 496 (1) & (2) OF CMC ACT 1980. IN SUCH MANNER SO THAT ALL WATER COLLECTION & PARTICULARLY LIFT WELLS, VATS, BASEMENT CURING SITES, OPEN RECEPTACLES ETC. MUST BE EMPITED COMPLETELY TWICE A WEEK.

All Building Materials to necessary & construction should conform's to standered specified in the Nationa Building Code of India.

Design of all Structural Members

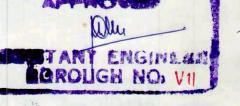
including that of the foundation

should conform to Standards

specified in the National Building

The Building Committee

Non Commencement of Erection. Re-Erection within Two Year will Require Fresh Application for Sanction.



Splayed portion: - Sanctioned conditionally byundertaking of the owner that the splayed portionwill be free gifted to the K. M. C. and no wall can be constructed over it

> Approved subject to Compliance of requisition of West Bengal Fire Services. If any, 21 01/10

The building materials that will be stacked on Road/Passage or Foot-path beyond 3-months or after construction of G. Floor, whichever is earlier may be seized forthwith by the K.M.C. at the cost and risk of the owner.

BUSINESS BUILDING

OFFICE OF THE EXECUTIVE ENGINEER BUILTING BIROUGH - VII DA 8/12/ 2011

Structural plan and design calculation as submitted by the structural engineer have been kept with B.P. No. 201107 0 208 Date 12 12 11 for record of the Kolkata Municipal Corporation without verification No. deviation from the submitted structural plan should be made at the time of erection without submitting fresh structural plan along with design calculation and stability certificate in the prescribed form, necessary steps should be taken for the safetyof the adjoining premises public and private properties and safety of human life during construction.

EXECUTIVE ENGINEER/ASSTTENGINEER BOROUGH NO. VI