

GOVERNMENT OF NATIONAL CAPITAL TERRITORY OF DELHI
HEADQUARTERS: DELHI FIRE SERVICE
Connaught Place: New Delhi-110001

No. F.6/DFS/MS/2018/BP/ 294

Dated : 20/9/18

To,

The Executive Engineer (Bldg.) HQ
South Delhi Municipal Corporation,
9th floor, Civic centre, Minto Road
New Delhi 110002

Subject: Conditional approval of building plans from fire safety point of view in r/o revised plans of Motel building at Khasra No. 218/3/2, 218/3, 219/1, 219/2, 220 min, 222/2, 223/1 at village Sultanpur, Mehrauli, New Delhi,

Sir,

Please refer to ID No. 10053614 dated 08.09.2018 on the above cited subject. In this connection, this is to inform you that the online building plans in respect of proposed motel building have been scrutinized by this department from fire safety point of view and observed that there is proposal of construction of motel building comprising of 03 basements, ground and six upper floors. The brief details of the building are as under :-

S.No.	Particulars	Details proposed
1.	Occupancy	Mixed occupancy (Business & Assembly)
2.	Plot size	7790 860 m ²
3.	No. of floors	03 Basements, Ground + 06 upper floors
4.	Covered area at basement 1, 2 & 3, ground and six upper floor	5186.77, 4824.09, 4903.36, 2850.45, 2394.82, 1932.02, 1932.02, 1932.09, 1932.09, and 1264.76 m ² respectively
5.	Height	38.85 m
6.	Refuge area	153 m ² at 3rd floor 25.5 m level
7.	No. of staircases	Ground to basement- 04 staircases (03 of 2.0 meter & 01 of 1.5 m), Ground to first floor-04 staircases (03 of 2.0 meter & 01 of 1.5 m). Second floor to terrace floor 04 staircases (02 of 2.0 meter & 02 of 1.5 m). Out of them 02 are fire tower.
8.	No. of Ramps	02 ramps of 4.0 m wide each

There is no objection to this department for the construction of the said building subject to the compliance of the following fire safety recommendations:-

1. **Access to building:** The building is proposed to be located on 90 meter wide road. Main entrance to the premises shall be 6.0 meter wide. The entrance gate shall fold back against the compound wall of the premises thus leaving the exterior access in the plot. The archway, if any, shall not be at a height less than 5 meters. Clear cut 06 meter wide fire tender movement road with 09 meter turning circle all around the building, capable of taking the load of fire engine weighing up to 45 tonnes shall be ensured as per clause 8.2 of UBBL 2016.

Motel Building at Khasra No. 218/3/2, 218/3, 219/1, 219/2, 220 min, 222/2, 223/1 at village Sultanpur, Mehrauli, New Delhi,



2. **Number, width, Type and arrangement of exits:** The staircases as proposed in aforesaid table shall be provided in the building and shall meet the requirements as per UBBL-2016. Dead end travel distance shall meet the requirements as per clause 7.2.8 of UBBL-2016. The staircases serving to basement shall be segregated at ground floor and shall be continuous up to terrace floor as per clause 8.4.5 & 8.4.3 of UBBL 2016. The exit doors of assembly area, restaurant, banquet hall shall not be less than 2 meter as per clause 7.23.3 of UBBL-2016. 02 staircases as proposed shall be Fire tower as per clause 9.3.13 of UBBL-2016. **The staircase No. 2 proposed from second to upper floors for the office area required to be connected to adjoining staircase No.1 at second level, to ensure the exit discharge continuously to ground level. The slope of the ramps serving the basements shall be 1:10 as per clause 8.4.7 (a) of UBBL 2016.**
3. **Protection of exits by means of fire check doors and or pressurization:** The fire check doors of minimum 2hrs fire resistance rating shall be provided at the entrance of lift lobbies /staircases as per clause of UBBL 2016. Pressurization system for staircases, lift well & lift lobbies and corridors shall be installed as per NBC-2016 Part IV, as per clause 9.3.2 of UBBL-2016.
4. **Compartmentation :** The building shall be suitably compartmentalized so that the fire / smoke remain confined to the area where fire incidents have occurred and does not spread to the remaining part of the building. This shall conform to clause 8.4.6 of UBBL-2016 & of NBC-IV.
 - a. The services, standby generator, store etc. must be segregated from other by erecting fire-resisting wall of not less than 04 hours rating. Each of the compartments must be individually ventilated and the opening for entry into each of these compartments must be fitted with self-closing fire / smoke check doors of not less than one hour fire rating fitted with magnetic latches. **Fire rated doors are not proposed in the laundry, store room, boiler room and garbage room in basement and alternate exit doors are also not provided in these rooms, same shall be provided.**
 - b. All electric cables ducts and shafts shall be properly sealed at all floors with fire resisting material of similar rating. These shafts shall be minimum 02 hours fire rating
 - c. Under no circumstances, two services shall pass through the same shaft, i.e. separate shaft be used for different purpose.
 - d. The entry to the staircase from all levels shall be segregated with a self-closing fire / smoke check door of not less than 02hour fire resistance rating. All vertical and horizontal openings including the gap between the glazing and the slab at each level in entire building shall be sealed properly with the non-combustible material having 02 hr fire resistance. Wherever false ceiling / suspended ceiling is provided, the same shall be of non-combustible in nature and that the compartmentation shall be extended up to ceiling level
5. **Smoke Management System.** Smoke control facilities shall be provided as per clause 8.4.5 of UBBL and 4.4.2.5,4.6 of NBC Part IV. Fire and Life Safety Mechanical extractors shall have an interlocking arrangements and the system shall be of such design as to operate on actuation of heat/ smoke sensitive detectors or sprinklers. Smoke extractor system shall be designed to permit 12 air changes per hour in case of fire in upper floors and basement. A system of fresh air supply shall be provided at floor level and smoke outlet at ceiling level. Following points shall be ensured :



- a All ducting shall be constructed of substantial gauge metal conforming to IS 655. Air duct serving main floor areas, corridors etc. shall not pass through the staircases enclosures
- b Automatic fire dampers shall be provided in the ducts at the inlets of the fresh air and return air of each compartment/floor
- c Automatic fire dampers shall be closed automatically upon operation of a detector/sprinkler
- d The air ducts for every floor/compartment shall be separated. In no way inter-connected with the ducting of any other compartment.
6. **Fire Extinguishers:** Fire extinguisher of ISI mark suitable to risk at all floors shall be provided as per clause 9.3.9 of UBBL 2016 in accordance with IS 2190-1992
7. **First Aid Hose Reel:** The first aid hose reel shall be provided in accordance with IS 884/1989
8. **Automatic Fire Detection and Alarming Systems:** Automatic fire detection system i.e. smoke / heat detection system shall be provided in building including machine rooms as per clause 9.3.9 of UBBL-2016. The system shall be connected to fire alarm system and shall conform to IS: 2189 /1999.
9. **Manually Operated Fire Alarm System:** Manually operated electric fire alarm (MOEFA) system shall be provided as per clause 9.3.9 of UBBL-2016/ NBC part 4 and the same shall conform to IS: 2189/1999.
10. **Public Address System:** The public address system shall be provided in the building, having loudspeakers in the common area. The microphone, amplifier and control switches of public address system shall be installed in the fire control room.
11. **Automatic Sprinkler System:** The Automatic sprinkler system shall be installed in entire building as per clause 9.3.5 of UBBL-2016, in accordance with BIS: 15105 / 2002. Flow alarm switch/gong shall be incorporated in the installation for giving proper indication/sound. The pressure gauge shall also be provided near the testing facility. The entire system including pump capacity and head, size of pipe network, orifice control etc. shall be provided in accordance with the relevant code. Fire service inlet shall also be provided at ground floor level.
12. **Internal Hydrant and Yard Hydrant:** Wet riser system in the building near staircase/ entrance lobby shall be provided as per IS 3844-1989. Hose box of suitable dimension shall be provided near each internal hydrant. Its design shall be such that it can be readily opened in an emergency. Each box shall contain two lengths of 63 mm diameter, 15m length, rubber lined delivery hoses conforming to IS: 636 complete with 63 mm instantaneous coupling conforming to IS: 903 with a nozzle of 16 mm diameter. Yard hydrants shall be provided in the premises as per relevant code/ standard.
13. **Pumping Arrangements:** A fire pump-house having two electric pumps of 2850 LPM(for sprinklers & hydrants), a standby diesel engine driven pump of 2850 LPM, 02 jockey pumps of 180 LPM capacity and one additional pump of 1620 LPM for water curtain in the basement shall be provided. The suitable orifice plate /reducer shall be provided to maintain the requisite pressure of 3.5 Bars at the remotest point. All the pumps shall be automatic in operation.
14. **Captive Water Storage for Firefighting:** An underground water storage tank of 2,00,000 liters capacity shall be provided for fire fighting only. The replenishment through bore well or from the town main shall be ensured @ 1000 LPM. This shall conform to the requirements given in National Building Code of India Part IV. Additional Overhead tank having 20,000 liters capacity shall also be provided. The underground water storage tank shall be approachable by the fire



- engine. Draw off connection/ fire service inlet shall be provided. One ladder or any other form of open access to the overhead fire water tank for inspection, shall be provided as per clause 7.10.3 of UBBL-2016.
- 15 Exit Signs: Exit signage shall be provided in the building conforming to IS 9457:1980.
- 16 Provision of lifts: 09 lifts are proposed in the building and these shall be installed & protected in accordance with clause 8.4.4 of UBBL-2016. Valet lift serving from ground to basements is not protected as per 8.4.4 of UBBL-2016, same shall be protected as per clause.
- 17 Standby Power Supply: The standby power supply shall be provided as per clause 8.5.3 of UBBL-2016.
- 18 Refuge Area: Refuge area proposed at 3rd floor (25.5 m level) admeasuring 153 m² shall be provided in the building as per clause 9.3.6 & 9.3.7 of UBBL 2016. The windows proposed in the refuge area shall be 02 hr fire rated as per NBC.
- 19 Fire Control Room: Fire Control Room proposed in building shall be established in accordance with the provisions contained in clause 9.3.10 of UBBL-2016. Trained personal shall be appointed round the clock to look after the fire protection arrangements in the building.
20. Special Fire Protection Systems for protections of Special risks The construction of electric sub-station and installation of Dry Transformer, LT & HT panels shall be as per the provisions specified by the Electrical Authority. However, the following points shall be followed:
- The HT & LT panels shall be separated with the walls of 2 hours fire resistance rating. It is necessary to separate shield wall extending up to the one meter on sides above the highest point of the transformer. Special protection systems as applicable shall be provided as per clause 5.1.4, 5.1.5, 5.1.6 of Part 4 NBC 2016.
 - The electric distribution cables/wiring shall be laid in a separate duct. The duct shall be sealed at every floor with non-combustible materials having the same fire resistance as that of the duct. Low and medium voltage wiring running in shaft and in false ceiling shall run in separate conduits;
 - Water mains, telephone lines, intercom lines, gas pipes or any other service line shall not be laid in the duct for electric cables; use of bus ducts/solid rising mains instead of cables is preferred.
 - Separate circuit for firefighting pumps, staircases and corridor lighting and blowers for pressurizing system shall be provided directly from the main switch gear panel and these circuits shall be laid in separate conduit pipes, so that fire in one circuit will not affect the others.
 - The inspection panel doors and any other opening in the shaft shall be provided with air tight doors having fire resistance of not less than 2 Hrs. the electric installations shall be as per BIS 1646.
 - The fire protection of kitchens shall be done as per clause G 5.2 of part 4 NBC 2016.
 - The Boiler room shall be constructed strictly as per the provisions contained in clause 8.5.7 of UBBL 2016.

The approval of building plans shall be valid only for the proposed occupancy/layout of the floors shown on the plans subject to correction in the plans as stated above. It shall also be ensured that provisions of all requisite fire and life safety measures stipulated in National Building Code of India/UBBL-2016 shall be complied in letter and spirit before the occupancy of the building under intimation to this



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department. Any subdivision of the floors and change of occupancy shall only be done with the prior approval of this department.

The building sanction authority shall ensure correction in the building plans as mentioned above at Sr. No. 2, 4, 14, 16 & 18 in bold letters of this approval letter no. F6/DFS/MS/BP/2018/254 dated 22.11.17 before release of plans.

The fire safety guidelines issued earlier vide letter No. F6/DFS/MS/BP/2016/73 dated 07.04.16 shall stand null and void.