

**GOVERNMENT OF NATIONAL CAPITAL TERRITORY OF DELHI**  
**HEAD QUARTERS: DELHI FIRE SERVICE: NEW DELHI - 110 001**

No. F. 6. / DFS / MS / BP / 2021/ 64

Dated: 10/02/2021

To,

The Executive Engineer (Bldg.) HQ  
 South Delhi Municipal Corporation,  
 9<sup>th</sup> floor, Civic Center, Minto Road  
 New Delhi 110002

Sub: Conditional clearance of online building plans in r/o revision of tower T-1 & club House at Plot No. B-319, Okhla Industrial Area, Phase-I, New Delhi from fire safety point of view.

Sir,

Please refer Online file No. 10080581 dated 03.02.2021 on the subject cited above. In this connection it is to inform you that the building plans have been scrutinized from fire and life safety point of view and observed that there is a proposal of revision of tower T-1 & club building (02 interconnected blocks) in already approved complex vide ID No. 10048555 dated 23.04.2018 at Plot No. B-319, Okhla Industrial Area, Phase-I, New Delhi – 110020. The details are as under:

Sr. No.	Name of block	Composition of block	No. of staircases and ramp	No. of lifts	No. of fire towers	Height (M)	Covered area (SQM)	Refuge Area / Fire Check floor	Occupancy
1.	Tower - 01	3B+G+36 (basement details given separately at sr. No. 3)	03 staircases (02 main staircases of 1.5 m each and 01 additional staircase of 2.0 m) serving from ground floor to terrace level.	05	01	119.45	919.15( ground coverage)	Refuge area of 55.68 SQM at 6th floor (24.45m) and Fire Check floor at 21st floor (71.45m)	Mixed (Mercantile ( up to 1st floor)+Business(2nd to 7th floor) +Residential( 8th to 36 floor)
2.	Club	3B+G+04 (basement details given separately at sr. No. 3)	02 staircases of 2.0 m each serving from ground to terrace	02	NA	21.450	370.09( Ground coverage)	Not required	Assembly
3.	Basement (extension of existing basement)	3 Tier Basement	04 staircases (01 of 2.0 m width and 03 of 1.5 m width each) serving from 3rd basement to ground floor and 02 vehicular ramps of --- m wide serving from ground to 1 <sup>st</sup> basement	06	01	--	4012.32 each level	Not required	Parking and services

 

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

- 1. Access to building:** The building abuts on 45.72 meter wide road and the premises is accessible through 03 no's of main gates having 6.0 width. The entrance gates shall fold back for free movement of fire service vehicles against the compound wall of the premises thus leaving the exterior access way within the plot. The archway, if any, shall not be at a height less than 5 meters. Clear-cut 9.0 meter wide internal road with 12.0 meter turning radius, shall be ensured all around the proposed high rise blocks for free movement of fire tender as marked on the plans as per clause 8.2 of UBBL-2016.
- 2. Number, width, Type and Arrangement of Exits:** As per the table staircases are proposed in revised tower T-1 & club building. Staircases, serving from basement, shall be segregated on ground floor as per clause 7.11 of UBBL-2016. The staircases shall meet the requirements of travel distance as per clause 8.4.5 (d) of UBBL-2016. Clear-cut width of staircases, corridors and doors shall be maintained at the time of completion. Width of staircases and doors in club building shall not be less than 2.0 m. This shall be in accordance with UBBL – 2016. **The exits shall be arranged as per clause 7.5.10 of UBBL 2016 and the direction of exits shall be as per clause 7.12.5 of UBBL 2016. Further alternate exits shall be ensured in the stores, club service room, Ht panel room in basement.**
- 3. Protection of exits by means of fire check doors and or pressurization:** The fire check doors of minimum 2 hrs fire resistance rating shall be provided at the entrance of each staircase/lift lobby in the building and as marked on plans. FCD shall also be provided in the store, server rooms, kitchen and UPS room. Pressurization system for staircases, lift well and lift lobbies or corridors shall be installed as per NBC Part IV and as per clause 9.3.2 of UBBL-2016. **Fire check doors are not proposed at the entrance of stores in the basement, same shall be ensured as per NBC part 4.**
- 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 & 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.
  - 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.



- e. Further different occupancy i.e (2nd floor & 8th floor) are not separated on the plans as per clause 3.1.11 of NBC part 4, same shall be separated horizontally and/or vertically by a 240min fire resistance rating as per clause 3.1.11 of NBC part 4.
5. **Smoke Management System:** Smoke venting facilities shall be provided as per 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. 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:** The portable fire extinguishers of ISI mark suitable to risk shall be provided in all buildings/basements in accordance with IS -2190/ 1992.
7. **First aid Hose Reel:** Hose reel containing 30 m length of 20 mm bore terminating into a shut-off nozzle of 5 mm outlet connected directly to riser shall be provided in all buildings/basements. This shall conform to IS: 884/1998.
8. **Automatic Fire Detection and Alarming Systems:** Automatic fire detection system i.e. smoke / heat detection system shall be provided in the both proposed buildings 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) shall be provided near escape point in both buildings including machine rooms as per clause 9.3.9 of UBBL-2016 and the same shall conform to IS: 2189/1999.
10. **Public Address System:** The public address system shall be provided in high rise blocks 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 both the building blocks as per clause 9.3.9 of UBBL-2016 and it shall conform IS: 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:** As proposed wet riser system near staircases shall be provided as per clause 9.3.9 of UBBL-2016 and it shall conform to 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 as proposed shall be provided in the building premises.
13. **Pumping Arrangements:** A fire pump house having two sets of pumps, each set containing two electric driven pump of 2850 LPM capacity with suitable head (one for



hydrant & one for sprinkler), one diesel driven stand by pump of 2850 LPM capacity and two electric pump of 180 LPM capacity having suitable head, 01 electrical pump of 2280 LPM for water curtain as already approved vide ID No. 10048555 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. One set of pumps shall be provided for each 100 hydrants or part thereof, with a maximum of two sets. In case more than one pump set installation, both sets shall be interconnected at their delivery headers. Alternative to provisions of additional set of pumps, the objective can be met by providing additional diesel pump of the same capacity and doubling the water tank capacity as required for one set of pumps. This shall conform to NBC-IV.

- 14. Captive Water Storage for fire fighting:** An underground fire water tank of 5.5 Lac litres capacity against the requirement of 4,00,000 liters shall be provided as already approved vide ID No. 10048555. **Further, an overhead tank of 20,000 litres capacity as against the proposed 10,000 liters capacity on the terrace of revised Tower T-1** and Overhead tank of 10,000 liters on the terrace of club house as proposed shall be provided. The replenishment through bore well or from the town main be ensured @ 1000 LPM. 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. This shall conform to the requirements given in National Building Code of India Part IV/UBBL-2016.
- 15. Exit Signage:** Exit signages shall be provided in all buildings at appropriate locations. Floor level marking, all exits and exit way marking signs in entire complex must be illuminated and wired to independent circuit supplied by alternate source of power supply. Wiring for the illuminated exit signs shall be suitably protected against fire. Illuminated / glowing paint strips shall be provided at each level to guide the direction for escaping towards a safe place. The size and colour of the exit signs shall be as per IS 9457: 1980.
- 16. Provision of lifts:** As per the table, lifts are proposed in the building. The lifts shall be equipped with a fireman's grounding switch so that, it is possible to ground the lift during a fire/ emergency. In case of failure of normal supply, it shall automatically trip over to the alternate supply. Suitable slope in the floor of lift lobby shall be made to prevent water, used during fire fighting etc. at any landing, from entering into lift shaft. All other conditions and provisions shall be provided strictly in accordance with the clause 8.4.4 of UBBL-206.
- 17. Standby Power Supply:** Emergency lighting, exit signs, staircase and corridor lighting circuit, lift, fire pumps smoke extraction system and pressurization shall be powered from an additional source of power supply like generator and shall be automatic in action. The emergency lighting system shall be capable of continuous operation for a minimum duration of 1hour and 30 minutes. The emergency lighting shall be provided to be put on within 5 second of the failure of the normal lighting supply.
- 18. Refuge Area:** As proposed, refuge area admeasuring 55.68 sqm at 6th floor (24.45 m level) and one entire floor as fire check floor at 21st floor (71.45 m level) in tower T-1 shall be provided in accordance with clause 9.3.6 , 9.3.7 and 9.3.8 of UBBL-2016.
- 19. Fire Control Room:** As proposed on the building plan one Fire Control Room in revised Tower T-01 shall be established at the entrance floor in accordance with the



c/s  
provisions contained in clause 9.3.10 of UBBL-2016. Trained fire officer and fire 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:

- a. 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.
- b. 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;
- c. 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.
- d. 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.
- e. 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.
- f. The fire protection of kitchens shall be done as per clause G 5.2 of part 4 NBC 2016.

The approval of building plans shall be valid only for the proposed occupancy/layout of the floors shown on the plans and any subdivision of the floors and change of trade/ use shall only be done with the prior approval of the building sanctioning authority concerned. The provisions of UBBL 2016 & NBC Part 4 shall be followed in letter & spirit.

**The building sanction authority shall ensure correction in the building plans as mentioned above at Sr. No 2,3,4 & 14 in bold letters of this approval letter no. F6/DFS/MS/BP/2021/ 64 dated 10/02/2021 before release of plans.**

Yours faithfully

(Atul Garg)

Director

011-23414000