



TAMIL NADU FIRE AND RESCUE SERVICES DEPARTMENT

From
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DGP / Director,
Tamil Nadu Fire and Rescue Services,
No.17, Rukmani Lakshmipathi Salai,
Egmore, Chennai - 600 008.

To
The Member Secretary,
Chennai Metropolitan Development
Authority,
No.1, Gandhi Irwin Road,
Egmore, Chennai - 600 008.

R.Dis.No.10819/C1/2024

PP NOC No.139/2024

Dated. 25.07.2024

Sir,

Sub : Tamil Nadu Fire and Rescue Services - Directorate - High Rise Building - Issue of Planning Permission NOC requested- Inspection at M/s. ARC Developers (GPA), New Door No.1, Old Door No.1A, Cathedral Garden Road, Nungambakkam, Chennai - 600 034 comprised in Old S.No.3404 Part, New R.S.No.2/40 & 2/62, Block No.1 of Mylapore Village, Mylapore Taluk, Chennai - Reg.

Ref : 1) Application from CMDA Letter
No.CMDA/PP/HRB/S/0336/2024, dated :24.06.2024.

2) The Joint Director, Northern Region, Report
Rc.No.3305 /C/2024, Dated:22.07.2024.

Kindly refer to the letter cited above. The MSB inspection committee of the Northern Region has inspected the site of M/s. ARC Developers (GPA), New Door No.1, Old Door No.1A, Cathedral Garden Road, Nungambakkam, Chennai - 600 034 comprised in Old S.No.3404 Part, New R.S.No.2/40 & 2/62, Block No.1 of Mylapore Village, Mylapore Taluk, Chennai for which the PP NOC has been requested. The committee has made certain observations with regard to fire and life safety, which are reproduced below:-

Observation:

It is a planning proposal for the construction of residential building consists of Extended Basement Floor (Parking) + Stilt Floor (Parking, Meter Room, Transformer Room, Double Height Lobby) + 1st Floor to 8th Floor and

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9th Floor Part (Duplex Unit) with the height of 30.0 meters. The plot area is 1449.50 square meters and the floor area is 4451.39 square meters. The proposal has the side set-back of 7 meters at all around the building. The proposed occupancy is classified to come under Group A Residential Building, Sub-Division A-4 Apartment as per the National Building Code of India Part IV Fire and Life Safety – 2016.

The following fire & life safety measures should be provided in the proposed building before the issue of compliance certificate as listed below:

1. There should be a down comer system along with hose reel assembly per thousand square meters area covering all floor areas with landing valves along with delivery hoses. Hence, two number of shafts should be provided. The system should be fully charged with adequate pressure at all times & should have both automatic and manual operation. To feed the system a terrace level water tank of minimum capacity 25000 liters should be provided with refilling facilities. To charge the system an electrical pump of capacity 900 LPM should be provided near the terrace level water tank. The pump should be capable of developing pressure of 3.5 kg/cm^2 at terrace level hydrant point.
2. Fire service inlets fitted with NRV at ground level should be provided.
3. Manually operated electric fire alarm system including talk back system to be provided at all floors.
4. Automatic sprinkler system should be provided at basement floor and stilt floor.
5. Public address system should be provided at all the floors.
6. Alternative & independent power systems should be provided to fire pumps, emergency lighting system and fire lift.
7. The first aid firefighting equipment's should be provided at all floors in accordance with the IS 2190: 2010 requirements
8. Fire exit - internal staircases and external staircase: Two staircases provided are natural / cross ventilation.

As per clause 4.4.2.4.3.2 of the National Building Code of India part IV Fire and Life safety 2016 – The staircases shall have minimum width of

1.25 meters without railing. The minimum width of tread without nosing shall be 250 mm for residential Building and the tread shall be constructed and maintained in a manner to prevent slipping. The maximum height of riser shall be 150 mm for residential building and the number shall be limited to 12 per flights.

Every exit, exit access or exit discharge shall be continuously maintained free of all obstructions or impediments to full use in the case of fire or other emergency.

All exits shall provide continuous means of egress to the exterior of a building or to an exterior open space leading to a street.

Exits shall be so arranged that they may be reached without passing through another occupied unit.

As per clause 4.4.2.4.3.4 of the National Building Code of India part IV fire and life safety 2016 - All external stairs shall be directly connected to the ground.

Entrance to the external stairs shall be separate and remote from the internal staircase.

Care shall be taken to ensure that no wall opening or window opens on to or close to an external stairs.

The route to the external stairs shall be free of obstructions at all times. The external stairs shall be constructed of non-combustible materials and any doorway leading to it shall have the required fire resistance.

No external staircase, used as a fire escape, shall be inclined at an angle greater than 45° from the horizontal.

Fire lifts: As per clause 4.4.2.4.3 (h) (6) of NBC 2016.

At least one lift should be designated as Fire lift. Fire lifts shall be provided with a minimum capacity for 8 passengers and fully automated

with emergency switch on ground level. In general, buildings 15m in height or above shall be provided with fire lifts.

In case of fire, only fireman shall operate the fire lifts. In normal course, it may be used by other persons.

Each fire lift shall be equipped with suitable inter-communications equipment for communicating with the control room on the ground floor of the buildings.

The number and location of fire lifts in a building shall be decided after taking into consideration various factors like building population, floor area, compartmentation, etc.,

9. The applicant should not provide any obstruction like transformer yard, generator, swimming pool, landscape, LPG bank etc., in the setback area, so as to facilitate the easy movement and operation of an aerial ladder platform vehicle during emergency. The setback area should not have any slope / gradient and not be elevated from the ground level.
10. The basement shall have the following requirements:
 - I) Design criteria:
Ramps with very steep slopes are not allowed and gradient of 1 in 8 or more alone is permissible. Ramps should not be constructed affecting the open space adjacent to the building. It should meet the following criteria; access, ventilation, firefighting and escape provisions. Brightly lit, colour coded sections are must to identify the different sections of the basements.
 - II) Flooding in basements: Basement shall be constructed in such a way that there should not be any water logging EB room / Generator/ etc., shall not be installed in the basement.
 - a) Every basement shall be in every part at least 2.4m in height from the floor to the underside of the roof slab or ceiling.

- b) Adequate ventilation shall be provided for the same as required by the particular occupancy according to byelaws. Any deficiency may be met by providing adequate mechanical ventilation in the form of blowers, exhaust fans, air-conditioning systems, etc.
- c) The minimum height of the ceiling of any basement shall be 0.9m and the maximum, 1.2m above the average surrounding ground level;
- d) Adequate arrangements shall be made such that surface drainage does not enter the basement;
- e) The walls and floors of the basement shall be watertight and be so designed that the effects of the surrounding soil and moisture, if any are taken into account in design and adequate damp proofing treatment is given; and
- f) The access to the basement shall be separate from the main and alternative staircase supply from the licensee's service and alternative supply cables. The door/doors provided for the
- g) Service room shall have fire resistance of not less than two hours.

11. Basement:

- Basements shall be separately ventilated. Vents with cross-sectional area (aggregate) not less than 2.5 percent of the floor area spread evenly round the perimeter of the basement shall be provided in the form of grills, or breakable stall board lights or pavement lights or by way of shafts.

Alternatively, a system of mechanical ventilation system may be provided with following requirements.

- a) Mechanical ventilation system shall be designed to permit 12 air changes per hour in case of fire or distress call. However, for normal operation, air changes schedule shall be as given in part 8 'Building Services, Section 3 Air conditioning. Heating and Mechanical Ventilation' of the Code.
- b) CO sensor should be provided.

- c) Due consideration shall be taken for ensuring proper drainage of such shafts to avoid insanitation condition. Inlets and extracts may be terminated at ground level with stall board or pavement lights as before. Stall board and pavements lights should be in positions easily accessible to the fire brigade and clearly marked 'AIR INLET' or 'SMOKE OUTLET' with an indication or area served at or near the opening.
 - d) Smoke from any fire in the basement shall not obstruct any exit serving the ground and upper floor of the building.
 - e) The smoke exhaust fans in the mechanical ventilation system shall be fire rated, that is 250⁰ C for 120 min.
 - The staircase of basements shall be of enclosed type having fire resistance of not less than 2 h and shall be situated at the periphery of the basement to be entered at ground level only from the open air and in such positions that smoke from any fire in the basement shall not obstruct any exit serving the ground and upper stores of the building and shall communicate with basement through a lobby provided with fire resisting self-closing doors of 1 h resistance.
 - All floors shall be compartmented with area of each compartment not exceeding 3000 square meters. Compartmentation shall be achieved by means of fire barrier wall of 2h rating or water curtain nozzle (K - 23). In case of water curtain, existing water storage shall be supplemented by water demand for water curtain nozzles for 60 min considering the largest size of compartment. The water supply for the water curtain nozzles shall be through independent electric pump of adequate capacity (flow and head) with piping / riser for the water supply to the nozzles.
12. Service ducts and shafts: As per clause 3.4.5.4 of the National Building Code of India part IV fire and life safety 2016.
13. Fire lift, electrical installation and wiring, AC duct & other service ducts should meet the requirements of NBC of India, Part 8, 2016.

14. The width and height of any arch or gate, if any, should have the clearance of not less than 7 m respectively.
15. The compulsory open space as per DCR set back area all around the building should be designed to withstand a weight of 64 tons at any point of operation for the use of hydraulic platform vehicle. In any case, no ramp, landscape garden and swimming pool shall be allowed in the setback area. The entire setback area earmarked shall be hard paved or provided with reinforced concrete so as to withstand the weight of the aerial ladder platform.
16. The service ducts such as power cables, communication cables, A/C ducts etc., should be protected with proper fire sealing/fire dampers.
17. The cable gallery should be routed through fire resistant duct or fire protected tray. Suitable detectors shall be provided along the lines of the cable gallery.
18. As per section 3.2 of BIS 12459, 1988 – code of practice for fire safety in cable regularization, 1m transparent fire retardant coatings shall be applied to all cables at termination points in electrical panels and all cables inside the distribution boxes.
19. Fire resistant and low smoke emission cable should be used.
20. Assembly points should be designated at the ground floor as per the requirements of fire and life safety measures.
21. Dos and don'ts laminated hanging pads should be available in all floors in prominent places.
22. Evacuation route plan should be displayed in each floor at prominent places.
23. If the construction is done with prefabricated materials, sufficient natural vent / mechanized ventilation system should be provided.
24. A trained fire officer with a crew shall be arranged to maintain as well as to operate the fire protection systems in case of any need.
25. During construction of the building the following fire protection measures should be provided in good working condition:

- 1) Dry riser minimum 100 mm diameter pipe with hydrant outlets on the floors constructed with a fire service inlet to boost the water in the riser from fire service pumps.
- 2) Drums filled with water of 2000 liters capacity with two fire buckets on each floor.
- 3) A water storage tank of minimum 20000 liters capacity, which may be used for other construction purposes also.

The MSB inspection team has recommended to issue of planning permission / no objection certificate to the proposed building subject to the fulfillment of the above mentioned conditions.

In view of compliance with the above said facts a PP/NOC is issued from the fire service point of view so as to accord planning permission for the above said proposed building subject to fulfillment of all the above said conditions, as recommended by the MSB committee. After completion of this project the compliance certificate should be obtained to ensure fire safety measures.

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for Director,
Fire and Rescue Services,
Tamil Nadu.

To: M/s. ARC Developers (GPA).,
Elite Chambers,
No.78, Greams Road, Thousand Lights,
Chennai-600 006.

Copy to: The Joint Director, Fire and Rescue Services,
Northern Region, Chennai.

