



**TAMIL NADU FIRE AND RESCUE SERVICES DEPARTMENT**

From  
Dr. C.Sylendrababu, IPS.,  
Director General of Police (Railway)/  
Director Fire and Rescue Services (FAC),  
No.17, Rukmani Lakshmipathi Salai,  
Egmore,  
Chennai - 600 008.

To  
The Director,  
Directorate of Town and Country  
Planning,  
No.807, Anna Salai,  
Chennai - 600 002.

R.Dis.No.7517/C1/2020

Dated.25.09.2020

**PP NOC.No.94/2020**

Sir,

Sub: Tamil Nadu Fire and Rescue Services Department -  
Directorate - High Rise Building - Issue of Planning  
Permission NOC requested - Inspection at  
M/s. Government Medical College, S.No.351/1,  
354/2A, 361, Siluvampatty, Namakkal District - Reg.

- Ref: 1) The applicant letter Dated:01.07.2020.  
2) The Deputy Director, North-Western Region, Report  
RC.No.2614/A2/2020, dated:08.09.2020.

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With reference to the letter cited above, the MSB Inspection committee of North-Western Region has inspected the site at M/s. Government Medical College, S.No.351/1, 354/2A, 361, Siluvampatty, Namakkal District for which PP NOC has been requested and the committee has made certain observations as regards Fire and Life Safety, which are reproduced below:-

**Observation:**

It is a planning proposal proposed to construct Hospital Block, Faculty Block and Quarters Blocks. **Hospital Block** consists of Stilt Floor + 6 Floors with the height of 27.58 mts. **Faculty Block** consists of Ground Floor + 5 Floors with the height of 25.2 mts. **Girls Hostel Block and Male Hostel Block** consists of Stilt Floor + 5 Floors with the height of 22.65 mts. **Quarters Block (C&D) and A type Quarters Block** consists of Ground Floor

+ 4 Floors with the height of 15.9 mts. **CRR I Quarters Block (2)** consists of Ground Floor + 3 Floors with the height of 14.9 mts. **Administrative Block** consists of Ground Floor + 2 Floors with the height of 12.3 mts. **Resident Quarters(Female) Resident Quarters(Male)** consists of Ground Floor + 2 Floors with the height of 9.6 mts. **RMO & ARMO Quarters Block, Dean's Quarters Block, Nurses Hostel** consists of Ground Floor + 1 Floor only. **Auditorium Block, Gymnasium Block, Mortuary Block, Kitchen Block** consists of Ground Floor only. The plot area is 24.784 Acre and the total buildup area is 91038.62 sq.mts. The proposal plan has the enough side setback provision of 7 mts all around the building. The proposed occupancy is classified to come under Group C Institutional Building and the Sub Division C1 Hospitals, Group B Educational Building and the Sub Division B2 all others, Group A Institutional Building and the Sub Division A3 Dormitories and A4 Apartment Houses as per the National Building Code of India Part-IV Fire and Life Safety-2016.

**The following Fire and Life safety measures should be provided in the proposed Hospital Building before the actual occupation as listed below:**

1. One wet-riser should be provided every 1000 sq.mts area covering all floor area with landing valves along with delivery hoses. The riser should be fully charged with adequate pressure at all times and should have both automatic and manual operation. To feed the wet-riser system and yard hydrant system an underground static water tank of minimum capacity 200000 liters should be provided with refilling facilities. A terrace level tank of capacity 20000 liters also should be provided. To charge the wet-riser, yard hydrant and sprinkler system two electrical pumps of capacity 2280 LPM should be provided near the underground water tank and an equal capacity of diesel pump should also be provided as an alternative arrangement. Two electrical pump of capacity of 180 LPM should be provided as a jockey pump. Pumps should have the capacity of developing pressure of 3.5kg/cm.sq at remotest location.

2. Fire service inlets (4 Way) should be fitted with NRV at ground level.
3. Yard Hydrants should be provided all around the building at 30 mts interval.
4. Automatic sprinkler system should be provided for whole buildings.
5. Automatic detection and Fire alarm system should be provided for the entire building.
6. Hose reel assembly should be provided per 1000 sq.mts covering each floor area.
7. Manually Operated Fire Alarm Call Points should be provided in each floor near exits.
8. "Exit" Signages should be provided with alternative source of power supply or battery back-up with "GLOW" TYPE.
9. Emergency Lights should be provided at staircase landing and exit routes.
10. Public Address System should be provided connecting all the floors.
11. Automatic smoke ventilation system should be provided including basements.
12. Do's and Don'ts laminated hanging pads should be provided in all floors in prominent places.
13. Assembly point should be designated at ground floor.
14. Evacuation route plan should be displayed in all floors.
15. Alternate and Independent power system should be provided to fire pumps, Emergency Lighting and Fire Lift.
16. Number of Exit, location and its width should conform to the requirement of NBC of India, Part 4, Second Revision 2016.
17. Fire Escape Staircases should be prescribed as per the clause 4.4.2.5 of the NBC part IV fire and life safety 2016.
18. Minimum two numbers of Staircase should be provided with pressurization with the width of 2.0 meters and they should be away from each other.
19. Compartmentation should meet the requirement as per clause 4.5.1 & 4.5.2 NBC part IV 2016.

20. Each compartment should be able to accommodate, in addition to its own, patients from adjoining compartment also considering  $3.5 \text{ m}^2$  per person. If patients are not bed-ridden, a factor of  $0.6 \text{ m}^2$  person is recommended.
21. All critical patients and those incapable of self - preservation and having physical impairment should be housed within 30m height.
22. Other types of patients and occupancies incidental to the hospitals such as consultation rooms, nurses stations, medical shops, canteens, etc., may be housed at heights beyond 30 m but not more than 45 m.
23. Basement should not be used to store flammables or for pathological or other laboratories particularly those involving usage of chemicals.
24. Operation theaters, delivery rooms, Intensive care units, recovery rooms, etc., that containing patients lacking self preservation in case of emergencies should be fire /smoke separated( 120 min minimum rating) from all the adjoining areas.
25. Aisles, corridors, ramps, etc, through which patients are moved should have minimum width of 2.4 m throughout. Aisles, corridors and ramps in other areas not intended for the housing, treatment
26. All exits from hospital or infirmary sections should not less than 2.0 m in width.
27. Minimum width of door of single or double occupancy patient room should be 1.25 m while for the wards for 3 to 5 patient beds should be 1.50 m, to permit movement of patients. The minimum width of door for wards for more than 5 patient beds and for wards for more than 5 patient beds and for areas necessarily requiring patient evacuation on bed (such as ICU, recovery units, delivery rooms, etc,) should have door width of 2.0 m may be reduced to minimum 1.5 m where two such doors are provided in such areas.
28. Any sleeping accommodation or suite exceeding  $100 \text{ m}^2$  in area should have at least two doorways leading to the exit access corridors.
29. Floor surface of corridors should not be inclined at a gradient steeper than 1 in 12 to the horizontal.

30. Exit access corridors from a compartment to another compartment should be divided at the compartment intersection by a fire door of 120 min fire rating in the fire compartment wall.
31. Rooms designated for laboratory and the like should not exceed 100 m<sup>2</sup> in area and if additional space is required, fire separation of 120 min should be provided.
32. Storage of flammable liquids in laboratories or in any other area should not be more than 3 litre for every 10m<sup>2</sup> area.
33. Disposal of any equipment and other (particularly hazardous) materials should be accomplished in the premises by a disposal specialist or at a safe location away from the health care facility by competent personnel using procedures established in concurrence with the safe practices.
34. A stretcher lift in a lift bank should also act as fireman's lift meeting the requirement of part 8 'Building services, section 5 Installation of lifts, Escalators and Moving Walks, Subsection 5A Lifts' of the code.

**35. FIRE ESCAPE- INTERNAL STAIRCASE AND EXTERNAL STAIRCASE:**

**a) Internal staircases:**

As per clause 4.4.2.4.3 of the national building code of India part IV Fire and life safety 2016-All staircases shall be minimum width of 2.0 meter. The minimum width of tread without nosing shall be 250mm. The maximum height riser shall be 190 mm. The number of riser shall be limited to 12 per flights.

**b) Fire Exit:**

As per the National building code of India part IV fire and life safety 2016- 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 open space leading to a street.

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

**c) External staircases:**

As per clause 4.4.2.4.3 of the National Building Code of India part IV fire and life safety 2016-All external stairs shall be directly connected to the ground.

External Staircases shall always be kept in sound and usable condition.

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.

Handrails to be provided on both sides shall be of a height not less than 1000 mm and not exceeding 1200 mm. There shall be provision of balusters with maximum gap of 150 mm.

The external stairs shall be constructed of non-combustible materials, and any doorway leading to it shall have the required fire resistance.

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

**d) Fire lifts:**

- a. Where applicable, 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.
- b. In case of fire, only fireman shall operate the fire lifts. In normal course, it may be used by other persons.
- c. Each fire lift shall be equipped with suitable inter-communications equipment for communicating with the control room on the ground floor of the buildings.
- d. 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.

36. One Fire Lift should be provided.
37. Lightning arrester should be provided.
38. One Number of ramp should be provided for easy evacuation for stretcher patients as per the Requirements NBC of India, Part 4, Second Revision 2016.

39. Ramp:

- a) Ramps shall comply with all the applicable requirements for staircases regarding enclosure, capacity and limiting dimensions, excepts where specified in 6.1 to 6.9 for special uses and occupancies.
- b) The slope of a ramp shall not exceed 1 in 12 (8 percent).
- c) Ramp(s) shall be surfaced with approved slip resistant materials that are securely attached. No perforations are permissible on ramp floors.
- d) Any changes in travel direction in ramp shall be preceded by landings of 1.5m X 1.5m size.
- e) Ramps and intermediate landings shall continue with no decreases in width along the direction of egress travel.
- f) Outside ramps and landings shall be designed to minimize water accumulation on their surfaces.
- g) Ramps shall have landings located at the top, at the bottom, and at doors opening onto the ramp.
- h) Every landing shall be not less than 1500 mm long in the direction of travel.
- i) Where the ramp is not part of an accessible route, the ramp landings shall not be required to exceed 1250 mm in the direction of travel, provided that the ramp has a straight run.
- j) Handrails shall be provided on all ramps on both sides. (Above requirements are not applicable to basement car parking ramps)
- The ramps shall in addition comply with the requirements given in 13 of part 3 "Development control rules and General Building Requirements" of the code.

40. Refuge area should be provided at 24<sup>th</sup> meter level as per the requirements of NBC of India, Part 4, Second Revision 2016.
41. The first aid fire fighting equipment's should be provided at all floors for in accordance with the IS 2190:2010 requirements.
42. Gas bank / Gas Manifold should be in accordance with NBC 2016 part 4 fire and life safety 4.7.1 to 4.7.9.
43. Clear side set back area of 7 mts should be provided all around the building without any obstructions so as to allow Fire service vehicle to move closer to the building at the time of emergency and it should be designed to withstand a weight of 45tons 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 set back 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.
44. Electrical Installation and wiring, Ducts should meet the requirements of NBC of India, Part 4, Second-Revision 2016.
45. The width and height of any arch or gate, if any, should have the clearance of not less than 4.5m and 5m respectively.
46. The service ducts such as power cables, communication cables, Ducts etc should be protected with proper fire sealing/fire dampers.
47. The fire dampers should be located at air conditioned ducts for check the spread of heat, flame, smoke and gases.
48. Fire Resistant and Low smoke emission cable should be used.
49. 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.
50. Fire Lift, Electrical installation and wiring, AC Duct & other service Ducts should meet the requirements of NBC of India, part IV Second Revision 2005.
51. Authorized persons should be available to handle flammable, poisonous and Anastasia Medicines.
52. Ambulance position should be marked visibly.

53. Patients lift with special provisions should also be provided with enough room for transporting of stretcher trolley.
54. The storage of Oxygen and Nitrogen cylinders shall be separated with manifold connection and away from hospital. At every floors level of the hospital emergency stop valve to be provided with suitable visible warning.
55. The hospital building should be provided with integrated building management system.
56. Fire drill and fire order shall be conducted twice in a year & Fire order shall be kept ready.
57. The distribution system of Oxygen should meet the requirements of standard practice.
58. The Cable gallery should be routed through fire resistant duct or fire protected tray.

**The following Fire and Life safety measures should be provided in the proposed Faculty Block And Administrative Block before the actual occupation as listed below:**

1. One wet-riser should be provided every 1000 sq.mts area covering all floor area with landing valves along with delivery hoses. The riser should be fully charged with adequate pressure at all times and should have both automatic and manual operation. To feed the wet-riser system and yard hydrant system an underground static water tank of minimum capacity 50000 liters should be provided with refilling facilities for each block. A terrace level water tank of minimum capacity 5000 liters should be provided with 450 LPM booster pump for Administrative Block. To charge the wet-riser, yard hydrant and sprinkler system an electrical pump of capacity 1620 LPM should be provided near the underground water tank and an equal capacity of diesel pump should also be provided as an alternative arrangement for each block. An electrical pump of capacity of 180 LPM should be provided as a jockey pump for each block. Pumps should have the

capacity of developing pressure of 3.5kg/cm.sq at terrace level at remotest location.

2. Fire service inlets (4 Way) should be fitted with NRV at ground level.
3. Yard Hydrants should be provided at all around the building at 30 mts interval for faculty block.
4. Manually Operated Fire Alarm Call Points should be provided in each floor near exits for each block.
5. Automatic Detection and Alarm System should be provided for Administrative Block.
6. Minimum two numbers staircase should be provided with the width of 1.50 meters and they should be away from each other for each block.
7. Clear side set back area of 7 mts should be provided all around the building without any obstructions so as to allow Fire service vehicle to move closer to the building at the time of emergency and it should be designed to withstand a weight of 45 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 set back 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.
8. One fire lift should be provided as per NBC of India 2016, Part IV Fire and Life safety for each block.
9. Lightning arrester should be provided for each block.
10. Public Address system should be provided for an announcement during the emergency for each block.
11. Evacuation route plan should be provided in each floor for each block.
12. Do's and Don'ts laminated hanging pads should be provided in all floors for each block.
13. "Exit" Signage's should be provided with alternative source of power supply or battery back-up with "GLOW" TYPE for each block.
14. Emergency Lights should be provided at staircase landing and exit routes.

15. The width and height of any arch or gate, if any, should have the clearance of not less than 4.5m and 5m respectively.
16. The first aid fire fighting equipment's should be provided at all floors in accordance with the IS 2190:2010 requirements.
17. Number of Exit, location and its width should be conforms to the requirement of National Building Code of India Second Revision Part IV 2016.
18. Assembly Point should be designated at the ground floor.
19. The service ducts such as power cables, communication cables, Ducts etc should be protected with proper fire sealing/fire dampers.
20. Electrical Installation and wiring, Ducts should meet the requirements of NBC of India 2016, Part IV.
21. The cable gallery should be routed through fire resistance duct or fire protected tray.
22. 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.

**The following Fire and Life safety measures should be provided in the proposed Girls Hostel Block and Male Hostel Block, Quarters Block (C&D) and A type Quarters Block, CRRl Quarters Block (2), Resident Quarters(Female) Resident Quarters(Male), RMO & ARMO Quarters Block, Dean's Quarters Block, Nurses Hostel before the actual occupation as listed below:**

**For Hostel Block and Male Hostel Block, Quarters Block (C&D) and A type Quarters Block:**

1. One down comer should be provided per 1000 sq.mts area covering all floors with landing valves along with delivery hoses for each block. The down comer should be fully charged with adequate pressure at all times and should have both automatic and manual operation. To feed the down comer system and sprinkler system a terrace level water tank of minimum capacity 25000 liters should be provided with refilling facilities for each block. To charge the down comer system and sprinkler system an electrical pump of capacity 900 LPM should be

provided near the terrace level water tank for each block. The pump should have the capacity of developing pressure of 3.5 kg/ cm<sup>2</sup> at hydrant points.

**For CRRI Quarters Block (2), Resident Quarters(Female) Resident Quarters(Male), RMO & ARMO Quarters Block :**

1. One down comer should be provided per 1000 sq.mts area covering all floors with landing valves along with delivery hoses for each block. The down comer should be fully charged with adequate pressure at all times and should have both automatic and manual operation. To feed the down comer system and sprinkler system a terrace level water tank of minimum capacity 5000 liters should be provided with refilling facilities for each block. To charge the down comer system an electrical pump of capacity 450 LPM should be provided near the terrace level water tank for each block. The pump should have the capacity of developing pressure of 3.5 kg/ cm<sup>2</sup> at hydrant points.
2. Fire service inlets should be fitted with NRV at ground level.
3. Hose reel assembly should be provided per 1000 sq.mts covering each floor for each block.
4. Manually Operated Fire Alarm Call Points should be provided in each floor near exits for Hostel Block and Male Hostel Block, Quarters Block (C&D) and A type Quarters Block.
5. Automatic Sprinkler system should be provided at Stilt Floor car parking area.
6. Two number of staircase should be provided with the width of 1.25 meters and they should be away from each other for each block.

**7. FIRE ESCAPE- INTERNAL STAIRCASE AND EXTERNAL STAIRCASE:**

**a) Internal staircases:**

As per clause 4.4.2.4.3 of the national building code of India part IV Fire and life safety 2016-All staircases shall be minimum width of 1.25 meter. The minimum width of tread without nosing shall be 250mm. The maximum height riser shall be 190 mm. The number

of riser shall be limited to 12 per flights. Staircases should be pressurized

**b) Fire Exit:**

As per the National building code of India part IV fire and life safety 2016- 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 open space leading to a street.

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

**c) External staircases:**

As per clause 4.4.2.4.3 of the National Building Code of India part IV fire and life safety 2016-All external stairs shall be directly connected to the ground.

External Staircases shall always be kept in sound and usable condition.

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.

Handrails to be provided on both sides shall be of a height not less than 1000 mm and not exceeding 1200 mm. There shall be provision of balusters with maximum gap of 150 mm.

The external stairs shall be constructed of non-combustible materials, and any doorway leading to it shall have the required fire resistance.

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

11. Lightning arrester should be provided for each block.
12. The first aid fire fighting equipment's should be provided at all floors for in accordance with the IS 2190:2010 requirements for each block.
13. As per the DCR rules, side setback area should be provided all around the building and in-between the Blocks without any obstructions so as to allow Fire service vehicle to move closer to the building at the time of emergency and should be designed to withstand a weight of 45 tons at any point of operation for the use of Hydraulic Platform Vehicle.
14. Electrical Installation and wiring, Ducts should meet the requirements of NBC of India, Part 4, Second Revision 2016.
15. The width and height of any arch or gate, if any, should have the clearance of not less than 4.5m and 5m respectively.
16. The service ducts such as power cables, communication cables, Ducts etc should be protected with proper fire sealing/ fire dampers.
17. The fire dampers should be located at air conditioned ducts for check the spread of heat, flame, smoke and gases.
18. The cable gallery should be routed through fire resistance duct or fire protected tray.
19. Fire Resistant and Low smoke emission cable should be used.
20. 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.

**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 Planning permission No objection certificate to the proposed building subject to the fulfillment of the above conditions.

In view of the above PP NOC is issued on fire service point of view to accord planning permission to the above said proposed building subject to fulfillment of the above conditions, as recommended by the MSB committee. After completion of this project, Fire Licence should be obtained to ensure the Fire Safety Measures.

  
for Director,  
Fire and Rescue Services,  
Tamil Nadu.

To:

M/s. K. Santha Arul Mozhi, MD, DA,  
Correspondent and Special Officer,  
Govt. Medical College Hospital,  
Namakkal.



Copy to

The Deputy Director, Fire and Rescue Services,  
North-Western Region, Vellore.