THANE MUNICIPAL CORPORATION
FIRE BRIGADE THANE

No. TMC/CFO/M/HRI/105/19
Date : 16/12/2019

SUB :- NOC stipulating fire protection & fire fighting requirements for **Amendment** of high rise residential Building No. Platino Wing D on plot bearing old S.No. 208/pt & 217/14 respectively New S. No. 4/6/2, 109/14 at village Bhyanderpada, Thane

REF: i) V.P. No. S06/0032/09
ii) Letter from M/s. Pradip Kamble & Associates on 03/12/2019
iii) Initial NOC No. – TMC/CFO/M- 2334/38 dated. 07/12/2012
iv) Amended NOC No. TMC/CFO/M- 3241/80 dated. 21/02/2014
v) Amended NOC No. TMC/CFO/M- 140/88 dated. 04/11/2016
vi) Amended NOC No. TMC/CFO/M- 26/26 dated. 12/05/2018
vii) C.C. No. TMC/TDD/1923/16 Dt. 21/09/2016 upto 9th floor
viii)Amended permission No. TMC/TDD/2639/18, Dt. 23/05/2018 upto 32nd floor
ix)Amended permission No. TMC/TDD/3000/19, Dt. 26/02/2019 upto 22nd floor
x) Date of Inspection by STO Mr. M. U. Mulla on 04/12/2019

A.D.T.P. (THANE)

In this case please refer to this office N.O.C. issued vide Nos. Initial NOC No. TMC/CFO/M- 2334/38 dated. 07/12/2012, Amended NOC No. TMC/CFO/M- 3241/80 dated. 21/02/2014, Amended NOC No. TMC/CFO/M- 140/88 dated. 04/11/2016, Amended NOC No. TMC/CFO/M- 26/26 dated. 12/05/2018 for Building No. Platino Wing D having Ground + 22nd Floors with a total height of 67.35 Mtrs. from general ground level up to terrace level. Accordingly C.C. is issued vide No. TMC/TDD/1923/16 Dt. 21/09/2016 upto 9th floor, Amended permission No. TMC/TDD/2639/18, Dt. 23/05/2018 upto 32nd floor, Amended permission No. TMC/TDD/3000/19, Dt. 26/02/2019 upto 22nd floor. Accordingly building is constructed upto 33rd floor .

Now, the Architect has submitted the amended plan & proposed the following amendments.

1. Architect has added 11 nos. floor for Building No. Platino Wing D. Now, proposed High Rise Residential Building No. Platino Wing D having Ground + 1st to 23rd floor + Fire check floor + 24th to 32nd Floors + 33rd (pt) floor with a total height of 101.55 Mtrs. from general ground level up to terrace level.

THE FLOOR-WISE USER OF THE BUILDING

S. No.	Building Type	Floors	User
1	Platino Wing D	Ground Floor	06 nos. Residential flats, Store rooms, 02 nos. Meter rooms, Society Office
		1st to 7th , 9th to 12th, 14th to 17th, 19th to 22nd, 24th to 27th, 29th to 32nd Floor	08 nos. Residential flats on each floor level
		8th, 13th, 18th, 23rd & 28th floor	07 nos. flats + 01 no. Refuge area
		33rd floor	04 nos. Residential flats, Refuge area & Terrace
		Between 23rd & 24th floor	Fire check floor with break pressure tank of 30,000 ltr. capacity

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REFUGE AREA :-

Sr. No.	Floor	Required area	Provided area	Height
1.	8th floor	99.23	99.95	23.70
2.	13th floor	99.23	99.95	38.20
3.	18th floor	99.23	99.95	52.70
4.	23rd floor	99.23	99.95	67.20
5.	28th floor	99.23	99.95	84.15
6.	33rd (pt) floor	10.38	19.27	98.65

In addition to that terrace of building will be treated as refuge area.
Between 23rd & 24th Floor at high of 70.10 M from Ground level with 1.8 M height below beam bottom and break pressure tank with 30,000 liter capacity will be treated as Fire Check Floor.
Whether to calculate excess Refuge area and Fire Check Floor in FSI or not shall be decided by A.D.T.P. (TMC) Thane

OPEN SPACE:-

The plot approachable by 60.00 M. wide Ghodbunder road from South side & 12.00 M. wide access road from North side.

Building No.	Open spaces from building line at ground level			
	North	South	East	West
Platino Wing D	12.00 M.	12.00 M.	12.00 M. to 12.92 M.	12.00 M.

THE DETAILS OF STAIRCASES &LIFTS :-

Building	Staircase description	Width of staircase	Nos. of staircase
Platino Wing D	Leading from Ground to terrace Floors	2.00 m. wide	02 Nos.

Building	Lifts Type	Profile	Nos. of lifts
Platino Wing D	Passenger lift	Leading from Ground to 33rd Floors	02 Nos.
	Fire lift	Leading from Ground to 33rd Floors	01 No.
	Fire Evacuation lift	Leading from Ground to 33rd Floors	01 No.

The proposed staircases having flight width of 2.00 m. as shown in plans are enclosed type and are externally located & adequately ventilated to outside air above ground level. One of the lift from each lift bank of each building will be converted into Fire lift and one fire evacuation lift to be provided at the mid landing of 2.0 mt. wide staircase. The lift lobby & common corridor at each floor level is directly ventilated to outside air as shown on the plan.

The proposal has been considered favorably in view of the fact that;

i) All the fire safety measures stipulated earlier vide Initial NOC No. TMC/CFO/M- 2334/38 dated. 07/12/2012, Amended NOC No. TMC/CFO/M- 3241/80 dated. 21/02/2014, Amended NOC No. TMC/CFO/M- 140/88 dated. 04/11/2016, Amended NOC No. TMC/CFO/M- 26/26 dated. 12/05/2018 shall be strictly adhered to along with the following additional fire safety requirements.

ii) No compound wall shall be constructed on all road side & joint open spaces all around the building where open spaces are less than 12.00 M.

iii) The plot approachable by 60.00 M. wide Ghodbunder road from South side & 12.00 M. wide access road from west side.

iv) Architect has proposed operational area for firefighting partly on Ground floor.

v) The staircase shall be provided with pressurized system as per NBC.

vii) Controlled Lowering Device for evacuation or External Evacuation System as approved by CFO shall be provided.

vi) Automatic sprinkler system shall be provided in entire lift lobby, common corridor of each floor level and each habitable room of all flat of each floor level of the building (each wing) surface car parking area in such a way to cover each car parking as per the standards lay down by TAC or relevant IS specification.

vii) Break pressure tank of 30,000 litres capacity with 900 LPM booster pump shall be provided in each fire check floor of building between 21st & 22nd floor at height of 70.10 Mt. from Ground level

viii) Main Pump and Jockey pump should not be less than 300 Hp.

ix) Automatic smoke detection system shall be provided in lift lobby & common corridor at each floor level, electric meter room & each lift machine room, Control / BMS Room and in electric shaft at every floor level with response indicator.

x) If Built up area 10 Lakh sq.ft or more than that in single building or in group, proponent should hand over one Water Brouser cum High Rise Building fire Fighting vehicle free of cost to Fire Brigade Department. Hence one vehicle to be provided as per specification with following equipments :- 1. Light mast 2. Trust type ladder 3. Hook ladder 4. Hose 5. Suction hose 5. B.A.Set 6. Hydraulic cutting tools 7. Wood Cutters (petrol) 8. Fire Extinguishers 9.Various branches 10.Water tower monitor etc. Water Brouser cum High Rise Building fire Fighting vehicle before applying for NOC to O.C. And copy of the work order should be submitted within a week after approval of HRC.

xi) During construction stage and before the final occupation party agreed to comply additional requirement stipulated by Thane Fire Brigade Officer.

xii) If any discrepancies observed about the DCR during construction Thane Fire Brigade officer may changed the requirement as the rules.

In view of the above, as far as this department is concerned, there is no objection from fire safety point of view for the above mentioned amendment for the proposed construction of high rise residential Building No. Platino Wing D having Ground + 1st to 23rd floor + Fire check floor + 24th to 32nd Floors + 33rd (pt) floor with a total height of 101.55 Mtrs. from general ground level up to terrace level as shown on enclosed amended plans, signed in token of approval subject to compliances of the following additional modified requirements stipulated by this department.

As per details shown on enclosed plans; signed in taken of approval, subject to satisfactory compliance of the following requirements.

1. **ACCESS:**

i) All access & fire tender access should be free of encumbrances.

ii) Courtyards shall be flushed with the road levels.

iii) Entrance gate provided shall be of not less than 6.00 meters width each shall be provided, at locations marked on the plan. Archways, if any over the entrance gates, shall have height clearance of not less than 6.00 mtrs.

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2. **PROTECTION TO STRUCTURAL STEEL:**

i) All the structural steel members i.e. columns, beams etc., shall be protected with the 02 hours fire resisting materials and methods as stipulated under IS 1942-1960 as application for residential building.

ii) A certificate to that effect that the fire resistance protection has been provided as above shall be furnished from the Structural Engineer as the time of application for occupying the building.

3. **OPEN SPACES :**

i) The provided open space on all the sides of the building shall be paved, suitably to bear the load of fire engines having 68 ton load with point load of 10 kgs./sq. cms.

ii) All the open spaces (and podium, ramp if provided) shall be in one plane and mandatory open space(and podium, ramp if provided) shall be clear of any obstructions including tree.

iii) The open spaces (and podium, ramp if provided) shall be kept free from obstruction at all times.

4. **STAIRCASE:**

i) The flight width of staircases shall be maintained as shown in the enclosed plans.

ii) The layout of staircases shall be enclosed type as shown in the plan throughout its height and shall be approached (gained) at each floor level at least two hours fire resistant self-closing door placed in the enclosed wall of the staircase.

iii) Externally located staircases and lobbies adequately ventilated to outside air.

iv) Permanent vent at the top equal to 5% of the cross sectional area of the staircase shall be provided.

v) Open able sashes or R.C.C. grills with clear opening of not less than 0.5 sq.m. per landing on the external wall of the staircase shall be provided.

vi) No combustible material shall be kept or stored in staircase / passage and shall be kept unobstructed all time.

TERRACE STAIRCASE:

The terrace door shall be provided in following manners:

a. The top of portion of the door shall be provided with louvers.

b. The single latch lock shall be installed from the terrace side at the height of not more than one meter.

c. The glass front of 6 inch dia. with the breakable glass shall be provided just above the single latch lock, as to open the latch in emergency.

d. The door shall either be fitted with magnetic lock or shall be synchronize with fire detection and alarm system.

5. **CORRIDOR / LIFT LOBBY :**

i) Corridor / lift lobby at each floor level shall be naturally ventilated as shown in plan.

ii) The common corridor / lift lobby at each floor level shall be kept free from obstructions at all times.

iii) Self glowing/fluorescent exit signs in green color shall be provided showing the means of escape for entire building.

iv) Portable lights / insta lights shall be provided at strategic locations in the staircase and lift lobby.

6. **PRESSURIZATION OF STAIRCASE / LIFT LOBBIES:**

Staircases / lift lobbies shall be provided with pressurized system as per NBC.

7. **STAIRCASE AND CORRIDOR LIGHTINGS:**

i) The staircase and corridor lighting shall be on separate circuits and shall be independently connected so that they could be operated by one switch installation on the ground floor control room easily accessible to fire fighting staff at any time irrespective of the position of the individual control of the light points, if any.

ii) Staircase and corridor lighting shall also be connected to alternate supply.

iii) Double throw switches should be installed to ensure that lighting in the staircase and the corridor do not get connected to two sources of supply simultaneously. A double throw switch shall be installed in the service room to terminate the stand-by-supply.

iv) Emergency lights shall be provided in the staircases/corridors.

8. **FLAT/ KITCHEN ENTRANCE & EXIT / ENTRANCE STAIRCASE:**

i) Flat entrance and kitchen doors shall be of solid core having fire resistance of not less than one hour (solid wood of 45 mm thickness.)

ii) The fire resistance rating for staircase F.R.D., Lift lobby / protected lobby & the lift doors as per N.B.C. provisions.

9. **ELECTRIC CABLE SHAFTS, ALL SHAFTS, SERVICES & METER ROOM:**

i) Electric cable shafts shall be exclusively used for electric cables and should not open in staircase enclosure.

ii) Inspection doors for shafts at the each floor level shall have two hours fire resistance.

iii) Electric shafts and each shaft shall be sealed at each floor level with non combustible materials such as vermiculite concrete. No storage of any kind shall be done in electric shaft.

iv) Electric wiring/ cable shall be non-toxic, non-flammable, low smoke hazard having copper core / fire resistance for the entire building with provision of ELCB/MCB.

v) Electric meter room shall be provided at the location shown in the plan. It shall be adequately ventilated & easily accessible.

vi) Low and medium voltage wiring running in shaft and in false ceiling should run in separate conduits;

Vii) Water mains, telephone lines, intercom lines, gas pipes or any other service line should not be laid in the duct for electrical cables; use of bus bar/solid rising mains instead of cables is preferred.

viii) Preferably bus bar system shall be installed from ground to all upper floors main supply.

ix) Separate circuits for firefighting pumps, lifts, 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 fuse in one circuit will not affect the others. Such circuits shall be protected at origin by an automatic circuit breaker with its no-volt coil removed.

x) Automatic smoke detector system shall be provided in each electric shaft on each floor along with response indicator which shall be connected to main consol panel board on ground floor level and each floor level.

xi) Master switches controlling essential service circuits shall be clearly labeled and shall be placed at control room on ground floor.

10. **FALSE CEILING (if provided):**

False ceiling if provided in the building shall be of non-combustible material. Similarly, the suspenders of the false ceiling shall be of no combustible materials.

11. **MATERIALS FOR INTERIOR DECORATION/FURNISHING**

The use of materials which are combustible in nature and may spread toxic fume/gases should not be used for interior decoration/furnishing, etc.

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12. **LIFTS:-**

A. **PASSENGER LIFT :-**

i) Walls enclosing lift shaft shall have a fire resistance of not less than two hour.

ii) Shafts shall have permanent vent of not less than 0.2 sq. mtrs in clear area immediately under the machine room.

iii) Landing doors and lift car doors of the lifts shall be of two hours fire resistance glass (as per VidhanParishad Resolution No. 135).

iv) Fire lift shown in the plan shall be as per specifications laid down under the regulations, a toggle switch shall be provided to this lift for the use of Firemen.

v) Threshold of non combustible material shall be provided at the entrance of each landing door.

vi) All lifts well shall be pressurized including fire lift.

B. **FIRE LIFT :-**

i) Walls enclosing lift shafts shall have two hours fire resistance.

ii) The shafts shall have permanent vent equal 0.2 sq.m. clear area under the Lift Machine room.

iii) Landing doors and lift car doors of the lifts shall be of two hours fire resistance glass (as per VidhanParishad Resolution No. 135).

iv) To enable fire services personnel to reach the upper floor with the minimumdelay, one fire lift shall be provided and shall be available for the exclusive use of the firemen in an emergency and the directly accessible to every dwelling of each floor.

v) The lift shall have a floor area of not less than 1.4 sq. m. with a minimumdimension of 1.12 m. It shall have loading capacity of not less than 545 k.g. (8persons lift) with automatic closing doors.

vi) There shall be an alternate electric supply of an adequate capacity apart from the normal electric supply the building and the cables run in a route safe from fire, i.e. within the lift shaft. In case of failure normal electric supply, it shall automatically trip over to alternate supply.

vii) The operation of fire lift should be by a simple toggle or two button switch situated in glass-fronted box adjacent to the lift at the entrance level. When the switch is on, landing call points will become inoperative and the lift will be on car control only or on priority control device. When the switch is off, the lift will return to normal working. This lift can be used by the occupants in normal times.

viii) The words 'Fire lift' shall be conspicuously displayed in florescent paint on the lift landing door at each floor level & Threshold of noncombustible material shall be provided at the entrance of each landing door.

ix) Except Service Lifts, other lifts shall be converted into Fire Lifts conforming to relevant regulations.

13. **FIRE EVACUATION LIFT TO BE PROVIDED :-**

1) ''Fire Evacuation Lift'' other than regular passenger lifts and fire lift/s. The requirement of "Fire Evacuation Lift'' shall be decided on the basis of travel distance in line with requirement of number of staircases as per prevailing D.C.R./N.B.C.

2) Capacity of ''Fire Evacuation Lift'' shall be of 800 to 1000 kg/8-15 persons and it shall be terminated on ground floor or podium where facility of the assembly of evacuation available in case of emergency and shall not commute to the Basement.

3) "Fire Evacuation Lift" core (Lift shaft) shall have minimum internal clear space of 2.0 sq. meter OR as per above mentioned weight carrying capacity.

4) ''Fire Evacuation Lift'' shall be housed in a separate core having smoke check lobby with opening on each floor shall be adjacent to one of the enclosed staircase and required

access to the staircase on each landing through fire resistance door of 2 hrs. rating. (If building is constructed as per previous approval and not possible to give on mid-landing).

5) For the new buildings Fire evacuation lift shall be provided on every mid-landing of one of the enclosed staircase of the building and the said staircase shall be protected with smoke check lobby by means of Fire resistance door/Fire curtain/Fire resistance Glass having 2 hrs fire resistance. (for all new proposal).
6) The "Fire Evacuation Lift" along with the enclosed staircase shall be marked as "Fire Escape Lift/Staircase" at each landing door terminating to the lobby.
7) All the requirements pertaining to civil and electrical aspects mentioned in National Building Code for "Fire Lift" shall be applicable for "Fire Evacuation Lift". In addition to that following fire safety measures shall be incorporated.
8) "Fire Evacuation Lift" car doors and Landing doors shall have at least two hours fire resistance and shall have provision of Glass vision for both doors of minimum 1 feet x 2 feet and the glass should also have two hours fire resistance.
9) Landing door on each floor shall have provision to open manually by using key. This key shall be placed in breakable safety glass case located at 7 feet from floor level.
10) Two way communication systems shall be provided in "Fire Evacuation Lift" car as well as at every landing level including ground floor lobby with following features.
    i. Calling floor number shall appear on display inside lift cabin to the operator.
    ii. Lift present floor level shall appear on calling floor panel to the caller.
    iii. Additional operating console shall be provided at bottommost landing. This operating console shall have display showing calling floor number, lift present floor level and voice communication control to all floor.
11) For operation of "Fire Evacuation Lift" wired remote shall be provided inside of the lift cabin for regular operation and second wireless remote shall be provided inside the cabin as a standby.
12) Bund wall of 150mm (6 inches) shall be provided at every landing door opening to avoid water logging.
13) "Fire Evacuation Lift" car shall have emergency operation switch which will be only operated by Fire Brigade personnel. On actuation of this switch, the "Fire Evacuation Lift" will only operate from inside and the lift car door shall not open automatically but shall have control from inside to open it. The emergency operation switch shall also be provided in Podium floor lobby.
14) The backup electric supply shall be provided with UPS and it should be online supported by another regular and alternate emergency supply.
15) All the electric cables shall be fire retardant with low smoke hazard complying relevant BIS standards.
16) "Fire Evacuation Lift" car shall be made of non-combustible material including interior having minimum 2 hrs. fire resistance.
17) Lift maintenance shall be carried out only by Manufacturing / Installation Company.
18) "Fire Evacuation Lift" shall have independent wiring at outside of dead wall of Building and have independent circuit to Podium floor / Stilt Floor
19) The separate switch (125 AMP or capacity to run) for the "Fire Evacuation Lift" shall be provided at ground floor.
20) "Fire Evacuation Lift" shall have mass SMS messaging system to alert occupants on each floor of building and nearest fire brigade station in fire emergency condition.
21) Separate alternate source of electricity i.e. D.G.Set shall be provided for the "Fire Evacuation Lift" as well as arrangement shall be made to connect the "Fire Evacuation Lift" to the Generator of Fire Vehicle.

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22) Lift Machine Room shall be provided at Ground level between the ground floor and 1st floor or lift machine room can be alternatively provided between top of the podium floor and above floor..

23) Third party inspection shall be done and accordingly certificate shall be submitted.

15. FIRE FIGHTING REQUIREMENTS :

A) UNDERGROUND WATER STORAGE TANKS :

An underground water storage tank of 2,50,000 liters capacity shall be provided as per design specified in the rules with baffle wall and fire brigade collecting breaching. The layout of which shall be got approved from Water department prior to erection. The tanks shall be connected to sprinkler system.

B) OVERHEAD WATER STORAGE TANK :

A tank of 25,000 liters capacity shall be provided on each staircase shaft at the terrace level of each building. The tank shall be connected to the wet riser through a booster pump through a non return valve and gate valve. And Break pressure tank of 30,000 liters capacity with 900 LPM booster pump shall be provided in a fire check floor between 21st & 22nd floor at height of 69.15 Mt. from Ground level

C) WET RISER CUM DOWN COMER:

Wet riser cum down comer of internal dia. of 15 cms. of G.I. 'C' Class pipe shall be provided in the duct adjoining each staircase with double hydrant outlet & hose reel at each floor in such a way as not to reduce the width of the common corridor. Pressure reducing discs or orifices shall be provided at lower level, so as not to exceed the pressure of 5.5 kgs. per sq. cms. The wet risers shall be extended from ground floor up to terrace level. Wet riser outlet and hose reel at a distance of 100 ft. shall be provided on periphery of all R.G. / parking floors.

D) FIRE SERVICE INLET :

i) A fire service inlet on the external face of the building near the tank directly fronting the courtyards shall be provide to connect the mobile pump of the fire service to (a) The wet riser (b) Sprinkler system & (c) drencher system.

ii) Breeching connection inlet shall be provided to refill U.G. tank.

iii) Operating switches of fire pumps shall be also provided in glass fronted boxes at ground floor.

E) AUTOMATIC SPRINKLERS SYSTEM :

Automatic sprinkler system shall be provided in entire buildings including lift lobby, common corridor at each floor level of buildings and each habitable room of each flat on each floor level of each building, entire surface car parking area, entire parking such a way to cover each car parking at Stilt /parking. As per the standards lay down by TAC or relevant IS specification.

F) DRENCHER SYSTEM:-

Automatic Drencher system should be provided at periphery on podium floor and should be connected to the main sprinkler pump as per the standard laid down in relevant I.S. Specifications.

G) AUTOMATIC SMOKE DETECTION SYSTEM :

Automatic smoke detection system shall be provided in lift lobby & common corridor at each floor level of each building, each electric meter room & each lift machine room, Control / BMS Room and in electric shaft at every floor level with response indicator; same should be connected to main console panel on ground floor level in BMS Room, as per IS specification.

H) **HEATRISE DETECTORS :**

Heat rise detectors system shall be installed in the hot areas i.e. kitchen etc. and same shall be connected to main console at ground floor level.

I-1) **FIRE PUMP, BOOSTER PUMP, SPRINKLER PUMP AND JOCKEY PUMP :**

i) Wet-riser cum down comer shall be connected to a fire pump at ground level of capacity of not less than 3200 liters/min. capable of giving a pressure of not less than 3.2 kgs/ sq. cms. at the top most hydrant.

(ii) Booster pump of 900 liters/min. capacity giving a pressure of not less than 3.2 kgs./ sq. cms. at the top most hydrant out let of the wet-riser shall be provided at the fire check floor of immediate after 70 M. and 140 M. of Building

(iii) Booster pump of 900 liters/min. capacity giving a pressure of not less than 3.2 kgs./ sq. cms. at the top most hydrant out let of the wet-riser shall be provided at the terrace level.

(iv) Main Pump and Jockey pump should not be less than 300 Hp.

(iv) Sprinkler pump of suitable capacity along with jockey pump shall be provided for automatic sprinkler system.

(v) Electric supply (normal) to these pumps shall be independent circuit.

(vi) Separate jockey pump shall be provided to Wet riser system to keep system pressurized.

(vii) Operating switches for booster pumps shall be also provided in glass fronted boxes in lift lobbies on each floor at prominent place.

(viii) Operating switches of fire pumps shall be also provided in glass fronted boxes at ground floor.

(ix) All above pumps should be surface mounted or vertical turbine type (submersible pump not permitted) pump along with adequate size of pump room

I-2) **STAND BY PUMP:**

Set of standing pump shall be provided as mentioned in this NOC.

J) **EXTERNAL HYDRANTS.**

Courtyard hydrants shall be provided at distance of 30.00 mtrs each within the confines of the site of the wet riser-cum-down comer. Hose box with two non-percolating ISI marked hoses (length not less than 15 mtrs) & branch shall be equally distributed on ground floor, R.G. floor, as well as on each floor of each Building near the wet riser outlet.

K) **ALTERNATE SOURCE OF POWER SUPPLY.**

An alternate source of LV/HV supply from a separate substation as well as from a diesel generator with Auto/Manual changeover over switch shall be provided for fire pumps, booster pump, sprinkler pump, jockey pump, staircase and corridor lighting circuits and fire alarm system, detection system, public address system, voice evacuation system etc. It shall be housed in separate cabin.

L) **PORTABLE FIRE EXTINGUISHERS :**

(i) One dry chemical powder type fire extinguisher of 09 kgs. capacity having I.S.I. certification mark and two sand buckets filled with dry cleaned sand shall be kept in each electric meter room as well as in each lift machine room.

(ii) One dry chemical powder type fire extinguisher of 06 kgs. capacity having I.S.I. certification mark shall be kept on each floor level at prominent place & refuge area

(iii) All above fire extinguishers should be placed on each floor level as per IS:2190 of 1992.

M) **FIRE ALARM SYSTEM / FIRE DETECTION SYSTEM :**

a) Buildings shall be provided with intelligent analog addressable fire alarm system with microprocessor based main control panel at ground floor level and addressable call points

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and hooters at each floor level. The design of fire alarm system shall be in accordance with I.S. specification and based on NFPA 72 guidelines (as per 2010 edition).

b) The addressable fire alarm system shall be equipped with the latest evacuation features such as digital voice evacuation capabilities; fire fighters telephone system, directional sounders etc. The main entry / exit points shall be provided with fire fighters interactive interface to enable viewing of critical information in event of fire.

c) Buildings shall be provided with manual fire alarm system with main control panel at ground floor level and pill-boxes and hooters at each upper floor level. The layout of fire alarm system shall be in accordance with I.S. specification.

d) Access control system, close circuit cameras shall be installed in the entire building & connected at the control room.

e) Trained security staff & fire staff shall be posted on duty at strategic location around the clock.

f) Security / fire staff shall be trained in evacuation procedure & use of fire fighting equipment.

g) The entire building floors shall be provided with proper standard signage.

N) CONTROLLED LOWERING DEVICE :

Controlled Lowering Device for evacuation or External Evacuation System as approved by CFO shall be provided.

O) FIRE OFFICER:

A qualified fire officer, with minimum qualification of either B.E. (fire) or Advanced diploma in Divisional officer's course from National Fire Service College or its equivalent and having at least 3 years working experience in a regular a Metropolitan Fire Service shall be appointed on full time basis for looking after the fire prevention, evacuation, escapes, repairs, drills, maintenance and upkeep of fire protection and firefighting equipment, as also to train the security staff and selected persons using the premises.

The qualified officer as mentioned above shall be appointed simultaneously with the occupation of the premises and the selection of the officer shall be made in consultation with the Chief Fire Officer, Thane Fire Brigade.

P) PUBLIC ADDRESS SYSTEM :

The entire building shall be provided with public address system as per the rules with main control operator at console panel at ground floor area.

Q) BUILDING MANAGEMENT SYSTEM:

i)The entire building should be provided with intelligent, properly designed / programmed building management system having its main control at near reception on ground floor.

ii)Addressable wireless stand alone system with connectivity to nearby fire station shall be provided.

R) FIRE DRILLS / EVACUATION DRILLS:

Fire Drills and evacuation drills shall be conducted regularly in consultation with Thane Fire Brigade and log of the same shall be maintained.

S) SIGNAGES:

Self glowing/fluorescent exit signs in green color shall be provided showing the means of escape for each building.

T) VOICE EVACUATION SYSTEM:

The voice evacuation system shall be integrated to Fire Alarm system so as to facilitate the co-ordination activities in case of fire emergencies. The actuation of the fire alarm control panel

shall automatically activate the Voice Evacuation system. A pre-recorded message shall be broadcast on the affected floor, one floor below & two floors above the affected floor.

U) BREATHING APPARATUS SETS:

Two Self-contained Compressed Air Breathing Apparatus sets of 45 minutes duration each shall be kept in the fire control room & refuge area.

V) INTEGRATED SYSTEM:

The entire firefighting system shall be of the type "Integrated Building Automation System" combining all the systems. Flasher light shall be installed at the top of the building which will be switched on in case of incident of fire in that building to indicate involvement of building in fire. It will also help the incoming fire brigade appliances to reach the spot in time without delay.

W) DETECTOR SYSTEM:

L.P.G. / P.N.G. detector system shall be installed in kitchen area of each building.

X) FIRE CHECK FLOOR:

A high rise building having height more than 70 m, shall be provided with fire check floor (entire floor) at every 70 m level. Height of the fire check floor shall not be more than 1.8 mts. .(below beam bottom). The fire check floor shall not be used for any purpose and it shall be the responsibility of the owner/occupier to maintain the same clean and free of encumbrances and encroachments at all times. Periphery of the Fire Check floor shall not be enclosed. Fire Drenchers shall be provided at the periphery of the each fire check floor

Y) SUB-STATION / SWIMMING POOL/ CLUB HOUSE:

Swimming Pool should be open to sky and a separate No Objection Certificate shall be obtained from this department for the swimming pool / Sub Station/club house.

Z) REFUGE AREA:

Refuge area shall be conforming to the following requirements:

i) **Manner of refuge area**

a) The refuge area shall be so located that it shall preferably face the access road/s or otherwise face the wider open space on the side of the building perpendicular to the main access road.
b) The refuge area shall be provided with railing / parapet of 1.20 mtrs.
c) The cantilevered refuge area shall necessarily be of RCC Type. If approved earlier
d) R.C.C. covering shall be provided above the topmost cantilever refuge area. If approved earlier.
e) The refuge area shall have a door which 'shall be painted or fixed with a sign in luminous paint mentioning "REFUGE AREA"
f) The lift/s shall not be permitted to open into the refuge areas.

ii) **Use of refuge area :**

a. The refuge area shall be earmarked exclusively for the use of occupants as temporary shelter and for the use of Fire Brigade Department or any other organization dealing with fire or other emergencies when occur in the building and also for exercises/drills if conducted by the Fire Brigade Department.
b. The refuge areas shall not be allowed to be used for any other purpose and it shall be the responsibility of the owner/occupier to maintain the same clean and free of encumbrances and encroachments at all times.

iii) **Facilities to be provided at refuge area**

a. Adequate emergency lighting facility shall be provided.

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iv) To allow or to count excess refuge area in FSI shall be discretion of Building Proposal Department. This department is not responsible for providing excess refuge area.

v) **Terrace floor as a refuge floor:**

a. The necessary facilities such as emergency lighting, drinking water etc. shall be provided.

b. The access door/s from the enclosed staircase/s to the terrace floor shall have louvers at top half portion of the door. The entrance doors to the terrace shall be painted or fixed with sign painted in luminous paint mentioning "REFUGE AREA".

Floors	Built up Area in sqm	Height in Mtr	Rate	Amount	Already paid as per NOC dated 04.11.2016	Balance to be paid as per amendment
Ground	425.65	3.4				
1st Floor	508.18	2.9				
2nd Floor	508.18	2.9				
3rd Floor	508.18	2.9				
4th Floor	508.18	2.9				
5th Floor	508.18	2.9				
6th Floor	508.18	2.9				
7th Floor	508.18	2.9				
	3982.91	**23.7**	**300**	**1194873**		
Total Fire Premium Charges to be paid				**1194873**	**2159193**	**-964320**
8th Floor	447.93	2.9				
9th Floor	508.18	2.9				
10th Floor	508.18	2.9				
11th Floor	508.18	2.9				
12th Floor	508.18	2.9				
13th Floor	447.93	2.9				
14th Floor	508.18	2.9				
15th Floor	508.18	2.9				
16th Floor	508.18	2.9				
17th Floor	508.18	2.9				
18th Floor	447.93	2.9				
19th Floor	508.18	2.9				
20th Floor	508.18	2.9				
21st Floor	508.18	2.9				
22nd Floor	508.18	2.9				
23rd Floor	447.93	2.9				
Fire Check Floor		2.45				
24th Floor	508.18	2.9				
25th Floor	508.18	2.9				
26th Floor	508.18	2.9				
27th Floor	508.18	2.9				
28th Floor	447.93	2.9				
29th Floor	508.18	2.9				
TOTAL	**10878.71**	**89.95**	**600**	**6527226**		

30th Floor	508.18	2.9				
31st Floor	508.18	2.9				
32nd Floor	508.18	2.9				
33rd floor	259.39	2.9				
TOTAL	**1783.93**	**101.55**	**1000**	**1783930**		
Total Fire Infrastructure Charges to be paid				**8311156**	**7383075**	**928081**

Floors	BUA in sqm	Sitlt Area in sqm	Staircase Area in sqm	Balcony Area in sqm	Refuge Area in sqm	Cupboard Area in sqm
Ground	425.65	57.58	190.25			
1st Floor	508.18		130.78	50.5		8.94
2nd Floor	508.18		130.78	50.5		8.94
3rd Floor	508.18		130.78	50.5		8.94
4th Floor	508.18		130.78	50.5		8.94
5th Floor	508.18		130.78	50.5		8.94
6th Floor	508.18		130.78	50.5		8.94
7th Floor	508.18		130.78	50.5		8.94
8th Floor	447.93		130.78	44.99	99.39	8.1
9th Floor	508.18		130.78	50.5		8.94
10th Floor	508.18		130.78	50.5		8.94
11th Floor	508.18		130.78	50.5		8.94
12th Floor	508.18		130.78	50.5		8.94
13th Floor	447.93		130.78	44.99	99.39	8.1
14th Floor	508.18		130.78	50.5		8.94
15th Floor	508.18		130.78	50.5		8.94
16th Floor	508.18		130.78	50.5		8.94
17th Floor	508.18		130.78	50.5		8.94
18th Floor	447.93		130.78	44.99	99.39	8.1
19th Floor	508.18		130.78	50.5		8.94
20th Floor	508.18		130.78	50.5		8.94
21st Floor	508.18		130.78	50.5		8.94
22nd Floor	508.18		130.78	50.5		8.94
23rd Floor	447.93		130.78	44.99	99.39	8.1
Fire Check Floor						
24th Floor	508.18		130.78	50.5		8.94
25th Floor	508.18		130.78	50.5		8.94
26th Floor	508.18		130.78	50.5		8.94
27th Floor	508.18		130.78	50.5		8.94
28th Floor	447.93		130.78	44.99	99.39	8.1
29th Floor	508.18		130.78	50.5		8.94
30th Floor	508.18		130.78	50.5		8.94
31st Floor	508.18		130.78	50.5		8.94
32nd Floor	508.18		130.78	50.5		8.94
33rd floor	259.39		130.78	50.5		8.94
TOTAL	**16645.55**	**57.58**	**4505.99**	**1638.95**	**496.95**	**290.82**

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Total Area in sqm	23635.84
Total	236358.4
Already paid vide NOC dated 04.11.2016	244980
Fire Safety charges to be paid	NIL

Type of Fees	Area	Rate	Amount	Receipt No.
Fire Premium Charges	3982.91		NIL	---
Total Fire Infrastructure Charges			8311156/-	
Fire Infrastructure Charges to be paid	12,662.64	--	928081	TMC/HQ/FIR/000736/19-20, Dt. 11/11/2019
Fire Safety Charges	16645.55		NIL	---
Fire Premium	6159.27	300	1847781	FIR/HQ/000648/2016 dated 28.10.2016
	519.02	600	311412	
Total Fire Premium Charges already paid			2159193	
Fire Infrastructure	3373.64	700	2361548	FIR/HQ/000649/2016 dated 28.10.2016
	3503.39	800	2802712	
	2465.35	900	2218815	
Total Fire Infrastructure Charges already paid			7383075	
Fire Safety Charges	24498.086	10	244981.00	FIR/HQ/000650/2016 dated 28.10.2016
Total Fire Safety Charges already paid			244981.00	
Fire Premium	6137.811	200	1227562.2	FIR/HQ/001322/2013 dated 30.01.2014
	518.316	400	207326.4	
Total Fire Premium Fees already paid			1434888.6	
Fire Infrastructure Charges	3367.89	500	1683945	FIR/HQ/001323/2013 dated 30.01.2014
	3498.051	600	2098830.6	
	2461.419	700	1722993.3	
Total Fire Infrastructure Fees already paid			5505768.9	
Capitation Fees	19083		1144980	FIR/HQ/000971/2012 dated 03.12.2012
Total Capitation Fees already paid			1144980	
Scrutiny Fees	19083		572490	FIR/HQ/000972/2012 dated 03.12.2012
Total Scrutiny Fees already paid			572490	

Architect has certified the area & accordingly paid the various fees, Architect has verified & submitted the table of area along with fees paid. If any differences in fee paid or any queries objected by the auditor then balance fees to be paid by the Architect / Developer or After payment of the said fees then only any amended NOC or final NOC for Occupation will be issued or recovered legally as per rules and Regulation. At the time of submission if any wrong or irregularity submitted and observed late on during construction, then above said NOC will be revoked by Chief Fire Officer, Thane.

Above mentioned built up area has been verified by Licensed engineer. However, The A.D.T.P.is requested to verify the total built-up area and inform this department, if the same is found to be more for the purpose of levying additional Scrutiny fees, if required.

Note:

1. The fire fighting installation shall be carried out by licensed approved agency.
2. The area calculation shown in the enclosed plan shall be checked by the A.D.T.P.
3. The A.D.T.P. is requested to scrutinized the plans as per DCR &verify civil work and all other requirements pertaining to civil Engineering side including open spaces, R.G., corridors,

staircases, amendments, height, refuge area in sq. m. & floor occupancy of the building. And if these plans, given open space is not approvable then this NOC shall be refer back to this department for revised NOC also till then further process of issuing IOD & C.C. shall not be permitted.

4. This N.O.C. is issued from fire risk point of view only.
5. The schematic drawings/plans of Sprinkler system, smoke detection System, Rate of rise detection system, Wet riser system, Public Address system etc. and specification of Water Bowser cum High Rise Building fire Fighting vehicle and controlled lowering device are applicable and copy of the work order should be submitted within a week after approval of HRC & shall be got approved from CFO prior to installation.
6. Necessary permission for fitness center, shops as well as any licensable activity shall be obtained from concerned department & T.M.C. / C.F.O.'s department till then shall not be allowed to use.
7. During construction stage and prior to final occupation party agreed to comply with additional requirements stipulated by Thane Fire Brigade Officer if any in future.
8. There shall be no tree/canopy/arch/car parking to be located in compulsory open spaces. No compound wall shall be constructed on all road side, & joint open spaces all around the building where open spaces is less than 12.00 M.
9. The area, size is to be consulted as per relevant I.S. Standards and Codes with consultant for the sprinkler system, detection system, fire alarm system, wet riser system, public address system, electrical duct, etc. to be verified & examined.
10. No stack parking is allowed in to the basement.
11. If any discrepancies observed about the DCR during construction, then above said NOC will be revoked by chief Fire Officer.
12. **This NOC is subject to approval of H.R.C. & Hon. Municipal Commissioner Sir.**

Chief Fire Officer
Thane Fire Brigade

Municipal Corporation of the City of Thane * Fire Brigade Dept. * ठाणे महानगरपालिका अग्निशमन दल