THANE MUNICIPAL CORPORATION
FIRE BRIGADE THANE

No. TMC/CFO/NOC/22/122
Date : 22/05/2019

SUB: NOC stipulating fire protection & fire fighting requirements for **Amendment** of proposed development of Commercial Building Gingelia on Plot bearing G. No. 61/1/1, 2,3,4,61/2/1, 2, 3 of Village Chitalsar, Manpada, Tal. & Dist. Thane for M/s. Acme Housing India Pvt. Ltd.

REF: i) V.P. No. 88/142
ii) Letter dt. 20/05/2019 from M/s. Scapes Architect
iii) Initial NOC No. TMC/CFO/M/2608/114 Dt. 27/12/2013
iv)Amended permission No. TMC/TDD/97, Dt. 07/08/2013 (up to Ground floor)
v) Date of inspection by STO Mr. M. U. Mulla on dt. 20/05/2019

A.D.T.P. (TMC) Thane

In this case please refer to this office N.O.C. issued vide Initial NOC No. TMC/CFO/M/2608/114 Dt. 27/12/2013 for Building Gingelia having Ground Floors with a total height of 4.20 M. from general ground level up to terrace level. Amended permission was issued wide TMC/TDD/97, Dt. 07/08/2013 (CC issued for Gingelia up to Ground floor)

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

- Architect has added single level basement & increased the height of the commercial building Gingelia from 4.20mt. to 13.01 Mt., Now Commercial building Gingelia having Basement + Ground + 1st floor commercial (pt) only with total height of 13.01 Mt. from general ground level up to terrace level.

THE FLOOR-WISE USER OF THE BUILDING No. Gingelia

Floor	Users
Basement	Store for 07 nos. shops with individual spiral staircase
Ground	07 nos. of shops with individual spiral staircase
1st floor	07 nos. of offices

THE DETAILS OF STAIRCASES & LIFTS

Building No.	Staircase description	Width of staircase	Nos. of staircase
Gingelia	Leading from Ground to 1st floor	1.52 m wide	01 No.
	Leading from basement to ground floor	Spiral staircase	07 Nos.

Building No.	Lifts Type	Profile	Nos. of lifts
Gingelia	Passenger lift	Leading from Ground to 1st floor	01 No.

The proposed staircases having flight width of 1.52 M. as shown in plans are enclosed type and are externally located & adequately ventilated to outside air above ground level.

Fire Brigade Dept. * Thane Municipal Corporation * Thane City

THE DETAILS OF RAMPS

Building No.	Ramp description	Width of Ramp	Nos. of Ramp
Gingelia	Leading from basement to Ground floor	6.0 M wide for car parking	02 Nos.

THE OPEN SPACES :

Plot is approachable by 20.00 M. wide Existing DP road from north side.

Building No.	North	South	East	West
Gingelia	4.50 M. + 20.00 M. wide DP road	Attached to Bldg. no. 7	Attached to Bldg. no. 8	Attached to the podium

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

i) 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.

ii) Plot is approachable by 20.00 M. wide Existing DP road from north side

iii) Automatic sprinkler system shall be provided in entire lift lobby, common corridor of each floor level, entire commercial area, entire basement as per the standards lay down by TAC or relevant IS specification.

v) 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.

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

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

In view of above, as far as this department is concerned there is no objection from Fire safety point of view for the construction of commercial Building Gingelia having Basement + Ground + 1st floor commercial (pt) only with total height of 13.01 Mt. from general ground level up to terrace level. As per details shown on enclosed plans; signed in taken of approval, subject to satisfactory compliance of the following requirements.

All the fire safety measures stipulated earlier vide Initial NOC No. TMC/CFO/M/2608/114 Dt. 27/12/2013 shall be strictly adhered to along with the following additional fire safety 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.

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. 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.

4. 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.

5. 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. 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.

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

6. SHOPS & COMMERCIAL AREA & 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.

7. 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.

8. 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.

9. 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.

10. 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). No collapsible shutter shall be permitted.

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 Vidhan Parishad Resolution No. 135). No collapsible shutter shall be permitted.

iv) To enable fire services personnel to reach the upper floor with the minimum delay, 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 minimum dimension of 1.12 m. It shall have loading capacity of not less than 545 k.g. (8 persons 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.

11. BASEMENT

i) Basement shall be adequately ventilated. Vents with cross, sectional area (Aggregate) not less than 2.5 percent of the floor area spread evenly around the perimeter of the basement shall be provided in the form of grills or breakable stall boards lights or pavement lights or by way of shafts. Alternatively, a system of air inlets shall be provided at basement floor level and smoke outlets at basement ceiling level. Inlets and outlets may be terminated at ground level with stall boards or pavement lights as before but ducts to convey fresh air to the basement floor level shall have to be laid. Stall boards and pavement lights should be in position easily accessible to the fire Brigade personal and rescue teams and clearly marked 'SMOKE OUTLET' or 'AIR INLET' with an indication of area served at or near the opening.

ii) The basement shall be used for designated purpose only as shown in the plan.

iii) The basement shall be provided with natural ventilations through the ventilators, open cut outs as shown in the plan.

iv) The staircase of the basement shall be of enclosed type and entry to basement areas shall be through two hours fire resistance self-closing door provided in the enclosed wall of the staircase .

v) The ducts of the mechanical ventilations system shall be of substantial metal gauge as per the relevant I.S. standard.

vi) The operating switches of the mechanical ventilation shall be located in the fire control room with appropriate zonal indications.

vii) Exhaust duct shall be provided to draw out exhaust at ground level of the basement.

viii) Suitable signages shall be provided in the basement showing exit direction, way to exits etc.

ix) Automatic sprinkler system shall be provided in entire basement & water spray projector system/double line sprinkler system shall be provided in stack car parking area. These systems shall be installed as per the standard laid down by T.A.C. and relevant I.S. specifications

x) Smoke check lobby, Staircases, common passages & escape routes of the entire building shall be painted with fire retardant paint.

xi) One Dry Chemical Powder fire extinguisher ABC type of 06 kgs. capacity each shall be kept for every 100 sq. mtrs. area in each basement.

xii) Staircase and lift lobby shall have illuminated by inverter operated exits signs with IP 54 enclosure. Luminance of the signages shall be such that they are visible from a distance of 12 to 16 meters.

xiii) The staircase of the basement & the associated lift lobbies shall be pressurized in the event of fire. The pressure in this enclosed staircase and enclosed lift lobbies shall be maintained not less than 5m.m. W.G. & 2.5 mm W.G. for lift lobbies.

xiv) CO Detector with audible alarm system shall be provided to all the basement areas and the circuit of the same shall be given / connected to mechanical ventilation system to start automatically on actuation of CO detector and the other detectors provided in the basement.

xv) Ventilation system shall start automatically on actuation of detector provided in the basement area.

xvi) Exhaust duct, mechanical ventilation duct should not pass through exit or entry.

xvii) Basement area shall be divided in compartments as per NBC regulations.

xviii) The ventilation and area of ventilation and compartmentation if required shall be checked by ADTP.

xix) The interconnectivity between (exit / entrance) between two compartments shall be protected by fire curtain having two hours fire resistance.

12. FIRE FIGHTING REQUIREMENTS :

A) OVERHEAD WATER STORAGE TANK :

A tank of 30,000 liters capacity shall be provided on staircase shaft at the terrace level of the building. The tank shall be connected to the wet riser through a booster pump through a non return valve and gate valve.

B) DOWN COMER

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. Wet riser extended from lower basement to terrace/top floor level.

C) 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.

D) AUTOMATIC SPRINKLERS SYSTEM

Automatic sprinkler system shall be provided in entire building including lift lobby, common corridor at each floor level of building , entire commercial area, entire basement. As per the standards lay down by TAC or relevant IS specification.

E) 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.

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

i) 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.

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

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

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

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

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

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

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

G) **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 wing near the wet riser outlet.

H) **ALTERNATE SOURCE OF POWER SUPPLY. (Separate for Each Building)**

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.

I) **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.

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

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

K) 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 Podium floor area.

L) 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.

M) SIGNAGES:

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

N) 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.

O) 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.

Below Gingelia - Basement + Ground + 1st floor Commercial (Pt.) only (13.30 Ht.)

Floors	B/U Area	Floor Ht.	Rate per sq.mt.	Fire Charges Total Area x Rs.	Total Amt.
1st Basement	882.54	5.98	Rs. 160/-	1855.52 x Rs. 160 = Rs. 2,96,883.20	Fire premium Rs. 2,96,883.20 Min. **Rs. 4,00,000/-**
Ground floor	512.88	4.12			
1st flr.	460.10	3.20			
Total	**1855.52**	**13.30**			**Rs. 4,00,000/-**

Below Gingelia (Amended fire NOC obtained vide no. TMC/CFO/M/2608/114 Dt. 27/12/2013 against fire premium already paid is as under by client.

Bldg. no.		Receipt no.	Amt. (Rs.)
Below Gingelia	Fire Premium	TMC/FIR/HQ/001020/2013Dt. 04/12/2013	1,60,000/-

Bldg. no.	Head	Area in sq.mt.	Previous paid amt.	Current Amt.	Difference Amt. (Rs.)
Below Gingelia	Fire Premium	1855.52	1,60,000/-	4,00,000/-	**Rs. 2,40,000/-** TMC/HQ/FIR/000131/19-20, Dt. 07/05/2019

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 Licensed engineer /

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 Architect. 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 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/car parking to be located in compulsory open spaces, No compound wall shall be constructed on all road side and joint open spaces all around the building.
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. If any discrepancies observed about the DCR during construction, then above said NOC will be revoked by chief Fire Officer.

Station Officer
Thane Fire Brigade

Thane Municipal Corporation of the City of Thane ★ Fire Brigade ★ Assistant Fire Officer

Copy To : 1. M/s. Scapes Architect

Station Officer
Thane Fire Brigade