

**BRIHANMUMBAI MUNICIPAL CORPORATION**  
**MUMBAI FIRE BRIGADE**

**Sub:** NOC from Fire safety point of view i.e. fire protection & fire fighting requirements for the proposed construction of High rise Residential building (Proposed Development) on plot bearing C.T.S. No. 611, 611/1 to 10 of village Kanjur at L.B.S. Marg, 'S' Ward, Bhandup (West), Mumbai - 400 078.

**Ref:** 1. Online submission from **Mr. Shashikant Laxman Jadhav, L.S.**  
2. Online File No. **P-12131/2022/(611 And Other)/S Ward/KANJUR-W-CFO/1/New**

**Mr. Shashikant Laxman Jadhav, L.S.**

This is a proposal for the construction of High-Rise Residential building comprising of 05 wings designated as Wing 'T-1', 'T-2', 'T-3', 'T-4' & 'T-5' where **Wing 'T-1', 'T-2', 'T-4' & 'T-5'** are having common basement (at -4.45 mtrs) for car parking by the way of 03 nos. of 6.00 mtrs wide ramp + Ground floor part on stilt & part for shops + 1<sup>st</sup> Common Podium floor for car parking by the way of 02 nos. of 6.00 mtrs wide ramp + 2<sup>nd</sup> floor part Retail/commercial & part common podium floor for car parking + 3<sup>rd</sup> Common Podium floor for car parking by the way of 02 nos. of 6.00 mtrs wide ramp + Part service floor & part podium floor R.G. + 1<sup>st</sup> to 34<sup>th</sup> upper residential floors with a total height of 119.05 mtrs measured from general ground level up to terrace level and **Wing 'T-3'** is having common basement (at -4.45 mtrs) for car parking by the way of 03 nos. of 6.00 mtrs wide ramp + Ground floor part on stilt & part for shops + 1<sup>st</sup> Common Podium floor for car parking by the way of 02 nos. of 6.00 mtrs wide ramp + 1<sup>st</sup> floor part Retail/commercial & part 2<sup>nd</sup> common podium floor for car parking + 3<sup>rd</sup> Common Podium floor for car parking by the way of 02 nos. of 6.00 mtrs wide ramp + Part service floor & part podium floor R.G. + 1<sup>st</sup> to 22<sup>nd</sup> upper residential floors with a total height of 83.05 mtrs measured from general ground level up to terrace level. L.S. has proposed club house at South side within podium line having Ground floor + 04 upper floors up to top of podium floor as shown on the plan.

**The details of floor wise users of the building will be as follows:**

Floors	Detail of users				
	Wing 'T-1'	Wing 'T-2'	Wing 'T-3'	Wing 'T-4'	Wing 'T-5'
Common basement (At -4.45 mtrs)	Fire tanks + Pusmp room common for Wing 'T-1' & 'T-2' + Pump room common for Wing 'T-3', 'T-4' & 'T-5' + MV & LV room + Treated water tanks + Rain water tanks + STP tank + Stack car parking by the way of 03 nos. of 6.00 mtrs wide ramp.				
Ground floor	Double height entrance lobby + 05 shops + 03 cafes + 02 Anchor shops + retail washrooms	Double height entrance lobby + 07 shops + HT Panel rooms + retail washrooms	Double height entrance lobby + Landscape + STP + DG Control panel + retail washrooms	Double height entrance lobby + 05 shops + 02 Restaurant + FTTH + Retail washrooms + meter room	Double height entrance lobby + café + shop + Entertainment zone + OWC + HT panel room +Ent. TOI/services.
	Common Surface car parking in stilt area for each wing + Landscape + Entrance lobby for Club house + Fire control/BMS room+ D G set.				
Common 1 <sup>st</sup> Podium floor	Surface car parking by the way of 02 nos. of 6.00 mtrs wide ramp				

1 <sup>st</sup> floor part Retail/commercial & part common 2 <sup>nd</sup> podium floor	20 nos. of shops/F&B/Entertainment zone + 05 nos of LT Panel room/Service utility room + Surface car parking by the way of 02 nos. of 6.00 mtrs wide ramp.				
Common 3 <sup>rd</sup> Podium floor	Stack & Surface car parking by the way of 02 nos. of 6.00 mtrs wide ramp + Fitness center for Club house+ Meter rooms for each wing + swimming pool services.				
Service floor/ Podium top floor	For services + Club house + Pools + R.G.				
1 <sup>st</sup> floor	04 fitness centers + 05 nos. of flats	Fitness center + 05 nos. of flats	04 fitness centers + 05 nos. of flats	02 fitness centers + 05 nos. of flats	02 fitness centers + Community Hall + 05 nos. of flats
2 <sup>nd</sup> floor	08 nos. of flats	08 nos. of flats	08 nos. of flats	08 nos. of flats	08 nos. of flats
3 <sup>rd</sup> floor	06 nos. of flats + Refuge area	06 nos. of flats + Refuge area	06 nos. of flats + Refuge area	06 nos. of flats + Refuge area	06 nos. of flats + Refuge area
4 <sup>th</sup> to 9 <sup>th</sup> floors	08 nos. of flats on each floor	08 nos. of flats on each floor	08 nos. of flats on each floor	08 nos. of flats on each floor	08 nos. of flats on each floor
10 <sup>th</sup> floor	06 nos. of flats + Refuge area	06 nos. of flats + Refuge area	06 nos. of flats + Refuge area	06 nos. of flats + Refuge area	06 nos. of flats + Refuge area
11 <sup>th</sup> to 16 <sup>th</sup> floors	08 nos. of flats on each floor	08 nos. of flats on each floor	08 nos. of flats on each floor	08 nos. of flats on each floor	08 nos. of flats on each floor
17 <sup>th</sup> floor	06 nos. of flats + Refuge area	06 nos. of flats + Refuge area	06 nos. of flats + Refuge area	06 nos. of flats + Refuge area	06 nos. of flats + Refuge area
18 <sup>th</sup> to 22 <sup>nd</sup> floors	08 nos. of flats on each floor	08 nos. of flats on each floor	08 nos. of flats on each floor	08 nos. of flats on each floor	08 nos. of flats on each floor
23 <sup>rd</sup> floor	08 nos. of flats	08 nos. of flats	Terrace above 22 <sup>nd</sup> floor treated as refuge area	08 nos. of flats	08 nos. of flats
24 <sup>th</sup> floor	06 nos. of flats + Refuge area	06 nos. of flats + Refuge area	-----	06 nos. of flats + Refuge area	06 nos. of flats + Refuge area
25 <sup>th</sup> to 30 <sup>th</sup> floors	08 nos. of flats on each floor	08 nos. of flats on each floor	-----	08 nos. of flats on each floor	08 nos. of flats on each floor
31 <sup>st</sup> floor	06 nos. of flats + Refuge area	06 nos. of flats + Refuge area	-----	07 nos. of flats + Refuge area	07 nos. of flats + Refuge area
32 <sup>nd</sup> to 34 <sup>th</sup> floors	08 nos. of flats on each floor	08 nos. of flats on each floor	-----	08 nos. of flats on each floor	08 nos. of flats on each floor

Terrace	Open to sky treated as refuge area				
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**STAIRCASES PROVIDED FOR THE BUILDING IS AS UNDER:**

Wing	No. of staircases	Width	From – To	Type of staircase
'T-1'	Two	2.00 mtrs.	One leading from Basement to terrace floor & same is diverted at ground floor & another is leading from Ground floor to terrace floor	Enclosed type
'T-2'	Two	2.00 mtrs.	One leading from Basement to terrace floor & same is diverted at ground floor & another is leading from Ground floor to terrace floor	Enclosed type
'T-3'	Two	2.00 mtrs.	One leading from Basement to terrace floor & same is diverted at ground floor & another is leading from Ground floor to terrace floor	Enclosed type
'T-4'	Two	2.00 mtrs.	One leading from Basement to terrace floor & same is diverted at ground floor & another is leading from Ground floor to terrace floor	Enclosed type
'T-5'	Two	2.00 mtrs.	One leading from Basement to terrace floor & same is diverted at ground floor & another is leading fr/om Ground floor to terrace floor	Enclosed type
Club house	One	1.50 Mtrs.	Leading from Basement to top of podium floor & same is diverted at ground floor	Enclosed type
Commercial	Ten	02.00/1.80 mtrs.	08 nos Each leading from Ground to 1 <sup>st</sup> retail/commercial floor & 02 nos for Anchor shop areas	Enclosed type
Each staircase of Wing 'T-1', 'T-2' & 'T-3' is externally located and adequately ventilated through pressurization duct & each staircase of Wing 'T-4' & 'T-5 are externally located and adequately ventilated to outside air.				

**DETAILS OF LIFTS FOR BUILDING IS AS UNDER:**

Wing	No. of lifts	Type of lifts	Profile
'T-1'	06 nos. of lifts	Passenger lifts	Each lift leading from Basement to terrace floor
	01 no. of lift	Firemen evacuation lift	Leading from Ground floor to terrace
'T-2'	06 nos. of lifts	Passenger lifts	Each lift leading from Basement to terrace floor

	01 no. of lift	Firemen evacuation lift	Leading from Ground floor to terrace
'T-3'	06 nos. of lifts	Passenger lifts	Each lift leading from Basement to terrace floor
	01 no. of lift	Firemen evacuation lift	Leading from Ground floor to terrace
'T-4'	08 nos. of lifts	Passenger lifts	Each lift leading from Basement to terrace floor
	01 no. of lift	Firemen evacuation lift	Leading from Ground floor to terrace
'T-5'	08 nos. of lifts	Passenger lifts	Each lift leading from Basement to terrace floor
	01 no. of lift	Firemen evacuation lift	Leading from Ground floor to terrace
Club House	02 nos. of lifts	Passenger lifts	Each leading from Basement to top of podium floor
Commercial	07 nos. of lifts	Passenger lifts	Each leading from Ground floor to 1 <sup>st</sup> floor & Anchor shop areas as shown on the plan.

02 lifts from each wing (excluding fireman evacuation lift) will be converted into fire lift leading from ground. The lift lobby/ common corridor at each floor level is ventilated to outside air as shown on plans.

**REFUGE AREA PROVIDED FOR THE BUILDING IS AS UNDER:**

Wing	Floor	<u>Refuge area in Sq.Mtrs required)</u>	<u>Refuge area in Sq. Mtrs (proposed)</u>	<u>Height of the refuge area from general ground level</u>
'T-1'	3 <sup>rd</sup>	151.24 sq mtrs	151.51 sq mtrs	23.05 mtrs
	10 <sup>th</sup>	157.56 sq mtrs	166.37 sq mtrs	44.05 mtrs
	17 <sup>th</sup>	157.50 sq mtrs	166.34 sq mtrs	65.05 mtrs
	24 <sup>th</sup>	162.86 sq mtrs	166.37 sq mtrs	86.05 mtrs
	31 <sup>st</sup>	93.29 sq mtrs	99.22 sq mtrs	107.05 mtrs
'T-2'	3 <sup>rd</sup>	151.24 sq mtrs	151.51 sq mtrs	23.05 mtrs
	10 <sup>th</sup>	157.56 sq mtrs	166.37 sq mtrs	44.05 mtrs
	17 <sup>th</sup>	157.50 sq mtrs	166.34 sq mtrs	65.05 mtrs
	24 <sup>th</sup>	162.86 sq mtrs	166.37 sq mtrs	86.05 mtrs
	31 <sup>st</sup>	93.29 sq mtrs	99.22 sq mtrs	107.05 mtrs
'T-3'	3 <sup>rd</sup>	151.24 sq mtrs	151.51 sq mtrs	23.05 mtrs
	10 <sup>th</sup>	157.56 sq mtrs	166.34 sq mtrs	44.05 mtrs
	17 <sup>th</sup>	134.34 sq mtrs	166.34 sq mtrs	65.05 mtrs
'T-4'	3 <sup>rd</sup>	198.37 sq mtrs	208.22 sq mtrs	23.05 mtrs
	10 <sup>th</sup>	205.90 sq mtrs	208.26 sq mtrs	44.05 mtrs
	17 <sup>th</sup>	205.90 sq mtrs	208.26 sq mtrs	65.05 mtrs
	24 <sup>th</sup>	208.86 sq mtrs	208.87 sq mtrs	86.05 mtrs
	31 <sup>st</sup>	119.43 sq mtrs	123.12 sq mtrs	107.05 mtrs
'T-5'	3 <sup>rd</sup>	198.37 sq mtrs	208.22 sq mtrs	23.05 mtrs
	10 <sup>th</sup>	205.90 sq mtrs	208.26 sq mtrs	44.05 mtrs
	17 <sup>th</sup>	205.90 sq mtrs	208.26 sq mtrs	65.05 mtrs
	24 <sup>th</sup>	208.86 sq mtrs	208.87 sq mtrs	86.05 mtrs
	31 <sup>st</sup>	119.43 sq mtrs	123.12 sq mtrs	107.05 mtrs

In addition to above, terrace of the building will be treated as refuge area. Refuge area calculation shall be verified by E.E.B.P.(E.S.) Excess refuge area shall be counted in FSI as per DCPR 2034.

**OPEN SPACES:**

The plot abuts on 30.40 mtrs wide L.B.S. Marg on West side & 13.40 mtrs wide D.P. Road on East side as shown on the plan.

**THE SIDE OPEN SPACES ALL AROUND THE BUILDING ARE AS UNDER;****Wing 'T-1'**

<b>Sides</b>	<b>Building line to plot boundary</b>	<b>Building line to podium line</b>	<b>Podium line to plot boundary</b>
<b>North</b>	16.27 mtrs to 18.05 mtrs	1.35 mtrs to 2.55 mtrs.	09.38 mtrs to 25.00 mts
<b>South</b>	Annexed to podium level	N.A.	N.A.
<b>East</b>	20.02 mtrs	4.92 mts	12.46 mtrs + paved RG
<b>West</b>	8.95 mtrs to 23.94 mtrs + 30.40 mtrs wide L.B.S. Marg	1.65 mtrs	6.62 mts to 09.00 mts + including perforated paved RG

**Wing 'T-2'**

<b>Sides</b>	<b>Building line to plot boundary</b>	<b>Building line to podium line</b>	<b>Podium line to plot boundary</b>
<b>North</b>	21.08 mtrs	1.83 mtrs	19.25 mtrs
<b>South</b>	15.59 mtrs to 33.64 mtrs	3.45 mtrs	14.10 mtrs to 14.52 mtrs including perforated paved RG.
<b>East</b>	Annexed to podium level.	N.A.	N.A.
<b>West</b>	12.63 mtrs to 25.93 mtrs (including parported grass & paved RG+ 30.40 mtrs wide L.B.S. Marg	4.21 mtrs	6.88 mtrs to 23.36 mtrs + 30.40 mtrs wide L.B.S. Marg

**Wing 'T-3'**

<b>Sides</b>	<b>Building line to plot boundary</b>	<b>Building line to podium line</b>	<b>Podium line to plot boundary</b>
<b>North</b>	Annexed to podium level	N.A.	N.A.
<b>South</b>	09.06 mtrs to 11.95 mtrs + R.G.	Flushed	09.06 mtrs to 11.95 mtrs + R.G.
<b>East</b>	9.00 mtrs +RG	3.00 mtrs	9.00 mtrs
<b>West</b>	9.00 mtrs. to 32.06 mtrs + including perforated paved RG	Flushed	9.00 mtrs. to 32.06 mtrs + including perforated paved RG

**Wing 'T-4'**

<b>Sides</b>	<b>Building line to plot boundary</b>	<b>Building line to podium line</b>	<b>Podium line to plot boundary</b>
<b>North</b>	09.75 mtrs to 40.15 mtrs + including perforated paved RG	Flushed	09.75 mtrs to 40.15 mtrs + including perforated paved RG
<b>South</b>	Annexed to podium level.	N.A.	N.A.
<b>East</b>	11.95 mtrs + including perforated paved RG	3.32 mtrs	11.95 mtrs + including perforated paved RG
<b>West</b>	11.41 mtrs	2.41 mtrs	9.00 mtrs wide drive way

### Wing 'T-5'

Sides	Building line to plot boundary	Building line to podium line	Podium line to plot boundary
North	13.25 mtrs to 37.92 mtrs + including perforated paved RG.	1.70 mtrs & partly flushed	10.25 mtrs to 29.86 mtrs + including perforated paved RG
South	28.78 mtrs to 43.12 mtrs +including RG	11.70 mtrs	09.00 mtrs to 10.26 mtrs +including RG
East	16.18 mtrs to 17.99 mtrs +including RG	4.90 mtrs	09.22 mtrs to 15.85 mtrs
West	Annexed to t Podium level	N.A.	N.A.

**The proposal has been considered favorably taking into consideration the following; -**

- a) The plot abuts on 30.40 mtrs wide L.B.S. Marg on West side & 13.40 mtrs wide D.P. Road on East side as shown on the plan.
- b) L.S. has provided refuge area for Wing 'T-1' facing North side having clear open space of more than 9.00 mtrs, refuge area for Wing 'T-2' facing West Road side, refuge area for Wing 'T-3' facing West side having clear open space of more than 9.00 mtrs, refuge area for Wing 'T-4' & 'T-5' facing East Road side from where specialized appliances from this department can be operated.
- c) Automatic sprinkler system will be provided in car parking areas at basement, at ground floor & each podium floor covering each level of parking, each shop at ground & 1<sup>st</sup> floor, each fitness center, in each restaurant, society office, in each habitable room of each flat on each floor of each wing & in lift lobby/common corridor of each floor of each wing as per relevant I.S. standards laid down.
- d) The building i.e. each wing will be protected with advance in-built fixed firefighting system, such as wet riser system, automatic sprinkler system, voice evacuation system, Fire alarm & detection system, fireman evacuation lifts etc.
- e) Any additional fire safety requirements for proposed building recommended in future from Mumbai Fire Brigade Officer before final occupation shall be complied with.

In the view of above, as far as this department is concerned, these fire protection & fire fighting requirements are issued from fire safety point of view for the proposed construction of High-Rise Residential building comprising of 05 wings designated as Wing 'T-1', 'T-2', 'T-3', 'T-4' & 'T-5' where **Wing 'T-1', 'T-2', 'T-4' & 'T-5'** are having common basement (at -4.45 mtrs) for car parking by the way of 03 nos. of 6.00 mtrs wide ramp + Ground floor part on stilt & part for shops + 1<sup>st</sup> Common Podium floor for car parking by the way of 02 nos. of 6.00 mtrs wide ramp + 2<sup>nd</sup> floor part Retail/commercial & part common podium floor for car parking + 3<sup>rd</sup> Common Podium floor for car parking by the way of 02 nos. of 6.00 mtrs wide ramp + Part service floor & part podium floor R.G. + 1<sup>st</sup> to 34<sup>th</sup> upper residential floors with a total height of 119.05 mtrs measured from general ground level up to terrace level and **Wing 'T-3'** is having common basement (at -4.45 mtrs) for car parking by the way of 03 nos. of 6.00 mtrs wide ramp + Ground floor part on stilt & part for shops + 1<sup>st</sup> Common Podium floor for car parking by the way of 02 nos. of 6.00 mtrs wide ramp + 1<sup>st</sup> floor part Retail/commercial & part 2<sup>nd</sup> common podium floor for car parking + 3<sup>rd</sup> Common Podium floor for car parking by the way of 02 nos. of 6.00 mtrs wide ramp + Part service floor & part podium floor R.G. + 1<sup>st</sup> to 22<sup>nd</sup> upper residential floors with a total height of 83.05 mtrs measured from general ground level up to terrace level. L.S. has proposed club house at South side within podium line having separate stair case with width of 1.5 mtrs from Ground floor to top of podium floor as shown on the plan, as per

the details shown on the attached plans, signed in token of approval, subject to satisfactory compliance of the following requirements: -

**1) ACCESS:**

There shall be no compound wall on each Road side and the courtyards shall be flushed with the road level.

**2) COURTYARD / OPEN SPACES:**

- i) The entire open spaces shall be sufficiently hardened to bear the weight of fire engine weighing up to 58 m. tones with a point load of 10 kgs/sq.cm.
- ii) All the open spaces shall be in one plane and shall be clear of any obstructions including tree.
- iii) Open spaces around the building shall be maintained free from encumbrances / encroachments at all time.

**3) BASEMENT (Common for each wing):**

- i) Basement shall be used for designated purpose only.
- ii) Basement shall be adequately ventilated. Vents with cross, sectional area (Aggregate) not less than 2.5 percent of the floor area shall be provided in the form of cut outs / 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 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 laid. Stall boards and pavement lights should be in position easily accessible to the fire brigade personnel and rescue teams and clearly marked 'Smoke Outlets' or 'Air Inlet' with an indication of area served at or near the opening.
- iii) Basement shall be provided with natural ventilations through the cut- outs, as shown on the plan.
- iv) The staircases of the basement shall be of enclosed type and entry to basement areas shall be through one-hour fire resistance self-closing door provided in the enclosed wall of the staircase and through cut off lobby.
- v) In additions to the natural ventilation, mechanical ventilation shall be provided to the basement with 6 air changes per hour with an arrangement to accelerate the rate of air changes to 12 per hour in the event of a fire emergency.
- vi) The ducts of the mechanical ventilations system shall be of substantial metal gauge as per the relevant I.S. standard.
- 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) The proposed wet risers of the building shall be extended to basement.
- x) Staircase and lift lobby shall have illuminated by inverter operated exits signs with IP 54 enclosure. Luminance of the signage's shall be such that they are visible from a distance of 12 to 16 meters.
- xi) 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.
- xii) Ventilation system shall start automatically on actuation of detector provided in the basement area.
- xiii) Exhaust duct, mechanical ventilation duct should not pass through exit routes.
- xiv) Automatic sprinkler system shall be provided in entire basement area & in stack parking area.

- xv) One Dry Chemical Powder Extinguisher ABC type of capacity 09 kgs. Each shall be kept for every 100 sq. meters. area.
- xvi) The Basement area shall be divided in compartments as per norms & these compartments shall be segregated by 02 hrs fire curtain system, as shown on the plan.
- xvii) The basement beyond building line shall be paved, suitably to bear the load of fire engines with point load of 10 kgs./cm<sup>2</sup>.
- xviii) The ventilation and area of ventilation and compartmentation, shall be checked by **E.E.B.P.(E.S.)**

**4) STAIRCASE (For Each Wing):**

- i) The flight width of each staircase shall be maintained not less than 2.00 mtrs. as shown in the enclosed plans.
- ii) The layout of each staircase shall be of 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 (as per NBC provisions) placed in the enclosed wall of the staircase.
- iii) Staircases shall be externally located & adequately ventilated to outside air.
- iv) Open-able sashes or R.C.C. grills with clear opening of not less than 0.5 sq. mtrs. per landing on the external wall of the staircase shall be provided.

**The staircase door at terrace level shall be provided in the manner as follows (For Each Wing):**

- I) The top of portion of the doors shall be provided with louvers.
- II) The single latch lock shall be installed from the terrace side at the height of not more than one mtrs.
- III) The glass front of 6-inch diameter with the breakable glass shall be provided just above the single latch lock, so as to open the latch in case of an emergency by breaking glass.
- IV) The door shall either be fitted with magnetic lock or shall be synchronize with fire detection and alarm system.

**5) CORRIDOR / LIFT LOBBY (For Each Wing):**

- i) Corridor / lift lobby at each floor level shall be naturally ventilated.
- 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.
- iv) Portable lights / instant lights or Battery/UPS operated lights shall be provided at strategic locations in the staircase and lift lobby of each floor.

**6) PODIUM FLOORS (For Each Wing):**

- i) The podium floors shall be used for designated purpose as per shown on the plans.
- ii) All the sides of the stilted car parking shall be kept open except parapet walls of not more than 1.2 meters height.
- iii) Drencher system on the top of podium floor shall be provided at the podium periphery & shall be connected to automatic sprinkler system of the building.
- iv) The driveways shall be properly marked and maintained unobstructed, proper illuminated signage shall be provided for escape route at prominent location.

**7) SURFACE & STACK CAR PARKING (For Each Wing):**

- i) The designated parking shall be used for car parking only.
- ii) The drainage of the car parking areas shall be separate from that of the building and shall be provided with catch with fire trap before connecting to Municipal Sewer.

- iii) Repairing / servicing of cars, use of naked light shall not be permitted in the car parking areas.
- iv) The parking area shall not be used for dwelling purpose and repairing / maintenance of vehicles, storage, trade activity etc, at any time and use of naked light / flame shall be strictly prohibited.
- v) Vertical deck separation shall be provided between the upper & lower decks of Stack parking by using the non-perforated and non-combustible materials. (structural steel plate) This is to minimize direct impingement of flame to the car in the upper deck and also to prevent dripping of any possible leaking fuel to the lower deck.
- vi) Elements of the Stack parking structure shall have 1 hr. fire resistance.
- vii) Sprinkler system shall be provided in Stack parking area covering each level of parking.
- viii) Each car parking deck shall have 1 hr. fire resistance.
- ix) Parking area shall be accessible by trained staff when carrying out the maintenance work.
- x) The parking system is to be ceased during the maintenance operation.
- xi) The drive ways shall be properly marked & maintained unobstructed. Proper illuminated signage's for escape routes, ramps, etc. shall be provided at prominent locations.

**8) STAIRCASE AND CORRIDOR LIGHTINGS (For Each Wing):**

- 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 easily accessible to firefighting 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

**9) ENTRANCE DOORS & KITCHEN DOORS (For Each Wing):**

- i) All entrance doors including flat entrance and kitchen doors shall be of solid core having fire resistance of not less than one hour. Rolling shutter for each shop shall be of fire resistance of not less than one hour.
- ii) The fire resistance rating for staircase F.R.D., Lift lobby / protected lobby & the lift doors shall be as per N.B.C. provisions.

**10) ELECTRIC CABLE/ DUCT, SERVICES & METER ROOM (For Each Wing):**

- i) Electric cable duct shall be exclusively used for electric cables and should not open in staircase enclosure.
- ii) Inspection doors for duct shall have two hours fire resistance.
- iii) Electric ducts 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, fire retardant, 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 location marked on 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
- vii) Separate circuits for firefighting pumps, lifts, staircases and corridor lighting 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.
  - ix) Automatic smoke detector system shall be provided in each electric shaft on each floor along with response indicator which shall be connected to main console panel board on ground floor level and each floor level
  - x) Master switches controlling essential service circuits shall be clearly labeled in building.
- 11) ACCESS RAMP:**
- a) Basement floor is provided with 03 nos. of two-way ramp of width 6.00 mtrs which has entry at the ground level.
  - b) Podium floors are provided with 02 nos. of two-way ramp of width 6.00 mtrs which has entry at the ground level.
  - c) The gradient of ramp shall not be steeper than 1:08 for vehicular traffic as per Reg. 37(16) of DCPR 2034.
  - d) The access provided to the podium shall be kept unobstructed at all time.
- 12) VERTICAL FINS:**
- Vertical fins of non-combustible type shall be provided on podium floors with sufficient openings for adequate natural ventilation and shall be of solid core having fire resistance of not less than one hour.
- 13) FALSE CEILING (if provided) (For Each Wing):**
- False ceiling if provided in the building shall be of non-combustible material. The suspenders of the false ceiling shall be of non-combustible materials.
- 14) MATERIALS FOR INTERIOR DECORATION/FURNISHING (For Each Wing):**
- The use of materials which are combustible in nature and may spread toxic fume/gases should not be used for interior decoration/furnishing, etc.
- 15) PRESSURIZATION SYSTEM (For each staircase of Wing 'T-1', 'T-2' & 'T-3'):**
- i) The pressurization system shall activate on activation of smoke detection system of the building.
  - ii) Smoke detectors with audible alarm shall be provided in each staircase & each lift/lobby on each floor shall be provided and connected to pressurization system to start automatically on activation of smoke detector.
  - iii) The pressurization will start automatically on activation of detector provided on each staircase each floor.
  - iv) The manual operating switches to actuation of pressurization ventilation system shall be located on ground floor of the building.
  - v) The pressurization in each staircase shall be maintained continuously to avoid the ingress of smoke staircase.
  - vi) The pressurization in each staircase shall be maintained above 1.2 bar above atmospheric pressure and shall be more in case of fire emergency.
  - vii) The staircase pressurization system shall be as per NBC/NFPA Codes or other related specification.

**16) LIFTS (For Each Wing):**

**A. PASSENGER LIFT (For Each Wing):**

- i) Walls enclosing lift shaft shall have a fire resistance of not less than two hours.
- 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 steel shuttered with fire resistance of one hour. 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.

**B. FIRE LIFT (For Each Wing):**

- i) To enable fire services personnel to reach the upper floor with the minimum delay, total four lifts shall be converted into fire lift (excluding fire evacuation lift) and shall be available for the exclusive use of the firemen in an emergency and shall be directly accessible to every dwelling of each floor.
- ii) Walls enclosing lift shafts shall have two hours fire resistance.
- iii) The shafts shall have permanent vent equal 0.2 sq. mtrs. clear area under the Lift Machine room.
- iv) Landing doors and lift car doors shall be of steel shuttered type with one-hour fire resistance. No collapsible shutters shall be provided.
- v) The lift shall have a floor area of not less than 1.4 sq. mtrs. with a minimum dimension of 1.12 mtrs. It shall have loading capacity of not less than 545 kg. (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 switches 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. It 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 non-combustible material shall be provided at the entrance of each landing door.

**C. FIREMAN EVACUATION LIFT (For Each Wing):**

- a. Capacity of Fireman Evacuation Lift shall be of 845 to 1000 kgs. /8 to 15 persons and it shall be terminated on ground floor where facility of assembly or evacuation is available in case of emergency.
- b) Fireman Evacuation Lift shall be housed in a separate core having smoke check lobby with opening on each floor and shall be connected with one of the staircases and required access to the staircase on each landing through fire resistance of two hours rating. Alternatively, firemen evacuation lift shall be provided on every mid-landing of one of the enclosed staircases and the staircase shall be protected with smoke check lobby by means of fire resistance door/ fire curtain or fire resistance glass having two hours rating.
- c) All the requirements pertaining to civil and electrical aspects mentioned in NBC for Fire Lift shall be applicable for Fireman Evacuation Lift.
- d) Fireman Evacuation Lift car doors and landing doors shall have two hours fire resistance and shall have provision of glass vision for both doors of minimum 1 ft. X 2 ft. And the glass shall also have two hours fire resistance.

- e) Fireman Evacuation Lift shall have emergency operation switch which will be only operated by fire brigade personnel. On actuation of the switch the Fireman Evacuation Lift will 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 the ground floor lobby.
- f) In case of failure of regular electric supply, the premises is proposed with two D.G.sets. As such the lifts including fire evacuation lift, pressurization system & fixed fire fighting installations shall be connected by way of looping to actuate automatically through change over switch as back up.
- g) Two-way communication systems shall be provided in Fireman Evacuation Lift car as well as at every landing level including lobby at ground floor.
- h) All the electrical cable shall be fire retardant with low smoke hazard complying relevant BIS standards.
- i) Fireman Evacuation Lift car shall be of made of non-combustible material including interior having minimum two hours resistance.
- j) Lift maintenance shall be carried out only by Lift Manufacturing or Installation Company.
- k) Fireman Evacuation Lift and the staircase attached to it shall be clearly marked mentioning FIRE ESCAPE LIFT/STAIRCASE at each landing door at each floor level.
- l) The smoke check lobby with evacuation lift shall have positive level difference of minimum 75 mm with respect to staircase landing or mid landing level to avoid ingress of water in fireman lift shaft.

**17) ELECTRIC SUB STATION:**

- a) Only dry type substation shall be installed.
- b) Entire installation of substation including switchgear room, capacitors, transformer etc. shall be confirmed to the Indian Electric Act/Rules in practice.
- c) Cables in the cable trenches shall be coated with fire retardant material. Automatic built-in circuit breakers shall be provided in the substation.
- d) The door of the sub-station shall be of two hours fire resistance.
- e) The capacity of the substation shall be as per service provider's requirements.
- f) Adequate heating ventilation of switch room is essential to prevent condensation of moistures.
- g) The substation area shall be kept prohibited and no unauthorized person shall be allowed to enter in the area.
- h) The proposed substation shall be completely segregated either by brick masonry wall each of 9" thickness or R.C.C of 4" thickness from the rest of the premises as shown in the enclosed plans.
- i) The danger signage shall be provided on the substation fencing along with the electric voltage load.
- j) Entrance and exit door provided for transformer fencing shall be under lock and key at all the times.
- k) Two dry chemical power type (ABC stored pressure type) fire extinguishers each of 09 kgs. capacity each with BIS certification mark coupled with four buckets filled with dry clean sand shall be kept in the sub-station at the entrance.

**18) D.G SET:**

- i) D.G. Set with appropriate change over switch shall be provided for fire pumps, sprinkler pump, booster pump, staircase and corridor lighting circuits, manual fire alarm system & Fire lift.
- ii) For proposed D.G. Set acoustic enclosure will be provided for safe operation.
- iii) Entire installation of D.G. Set shall be confirming to the Indian electrical act/rules & practice.
- iv) A deep tray shall be kept under the fuel tank of the D.G. Set to collect the spillage

- & same shall be disposed off daily without fail.
- v) Cable in the cable trenches shall be coated with fire retardant material.
  - vi) Electrical wiring shall be having copper core having the fire resistant and low smoke hazards cables for the entire building with the provision of ELCB/MCB.
  - vii) In electrical installation of the building shall be provided for vertical electrical shaft with feeder pillar box of a gap of every 24 mtrs. Height of the building.
  - viii) Adequate air and ventilation for switchgear room is essential to prevent condensation of moistures.
  - ix) The capacity of the D.G. Set shall be as per electricity company requirements.
  - x) D.G. Set shall be properly grounded.
  - xi) Exhaust of D.G. Set shall not be directed in to the exit/entrance of any adjoining structure.
  - xii) Sand bed of 6 inches thickness shall be provided below D.G. Set.
  - xiii) Electrical cable of D.G. Set shall be FRL Stype.
  - xiv) Adequate quantity of diesel shall be stored in its original container near D.G. Set, away from electrical switches of source of ignition.
  - xv) Automatic built-in circuit breaker shall be provided to the D.G. Set.
  - xvi) Rubber pad shall be provided to the D.G. Set for absorbed vibrations if any.
  - xvii) The D.G. Set area shall be kept prohibited and no unauthorized shall be allow to enter the area.
  - xviii) Structural stability of the building regarding absorption of the vibration of D.G. Set shall be checked by Structural Engg. before installation of the D.G. Set.
  - xix) Two foam type fire extinguishers of 9.00 ltrs. Capacity each with ISI certification mark coupled with 4 buckets filled with dry, clean sand shall be kept in the D.G. Set.

**19) SWIMMING POOL (Open to Sky):**

Necessary permission shall be obtained from the competent authority.

**20) FIRE FIGHTING REQUIREMENTS: -**

**A) UNDER GROUND WATER STORAGE TANK (Common for Wing 'T-1' & 'T-2' and Common for Wing 'T-3', 'T-4' & 'T-5):**

A Common Underground water storage tank of 3,00,000 liters capacity for Wing 'T-1' & 'T-2' and another common Underground water storage tank of 3,00,000 liters capacity for Wing 'T-3', 'T-4' & 'T-5' shall be provided at location marked on the plan, as per the design specified in the rules with baffle wall and fire brigade collecting breaching.

**B) OVERHEAD WATER STORAGE TANK (FOR EACH STAIRCASE OF EACH WING):**

A tank of 50,000 liters capacity shall be provided on the terrace level, the layout of which shall be got approved from H. E.'s departments prior to erection. The tank shall be connected to the wet riser through a booster pump through a non-return valve gate valve.

**C) WET-RISER (For Each Wing & Club house):**

Wet riser of internal dia. of 15cm of G.I. 'C' Class pipe shall be provided as shown on the plan with double hydrant outlet & hose reel at each floor. 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.

**D) FIRE SERVICES 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 independently to (a) The wet riser cum down comer (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 SPRINKLER SYSTEM (For Each Wing):**  
Automatic sprinkler system will be provided in car parking areas at basement, at ground floor & each podium floor covering each level of parking, each shop at ground & 1<sup>st</sup> floor, in each restaurant, in entire club house, each fitness center, society office, in each habitable room of each flat on each floor of each wing & in lift lobby/common corridor of each floor of each wing as per relevant I.S. standards laid down.
- F) DRENCHER SYSTEM (For Each Wing):**  
Drencher system should be provided on the periphery of the top of each podium floor of the building 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 Fire control room, each shop at ground & 1<sup>st</sup> floor, in each restaurant, in each pump room, in entire club house, in each electric meter room, in each electric duct on each floor & each lift machine room as per IS specification. Also, Automatic smoke detection system shall be provided on each floor with response indicator & same should be connected to main console panel on ground floor level, as per IS specification.
- H) FIRE PUMP, SPRINKLER PUMP & JOCKEY PUMP (Common for Wing 'T-1' & 'T-2' and Common for Wing 'T-3', 'T-4' & 'T-5) AND, BOOSTER PUMP (Separate for Each Wing):**
- i) Wet-risers shall be connected to a fire pump at ground level of capacity of not less than 2800 liters/min. capable of giving a pressure of not less than 3.2 kgs/sq. cms. at the top most hydrant. The fire pump shall be coupled with jockey pump of sufficient capacity. Separate jockey pump shall be provided to Wet riser system of each wing to keep system pressurized.
  - 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 terrace level.
  - iii) Sprinkler pump of suitable capacity along with jockey pump shall be provided for automatic sprinkler system.
  - iv) Electric supply (normal) to these pumps shall be independent circuit.
  - v) Operating switches for booster pumps shall be also provided in glass fronted boxes in lift lobbies on each floor at easily accessible place.
  - vi) Operating switches of fire pumps shall be also provided in glass fronted boxes at ground level.
  - vii) All above pumps should be surface mounted or vertical turbine type (submersible pump not permitted) along with adequate size of pump room. Fire fighting panel shall be provided at ground level at easily accessible place.
  - viii) All the pumps shall be TAC norms or complied to NFPA-20.
  - ix) Repeater panel for actuation of fixed fire fighting system including fire fighting pumps shall be provided separately for each wing at Ground Floor.

- I) STANDBY PUMP (Common for Wing 'T-1' & 'T-2' and Common for Wing 'T-3', 'T-4' & 'T-5):**  
A separate Fire main pump, sprinkler pump & jockey pump of suitable capacity as stand by pumps shall be provided to the building or a Diesel -oil driven fire pump of suitable capacity shall be kept as stand by pump as per N.B.C.
- J) High Velocity total flooding water mist system :**
- a. In addition to sprinkler system, High velocity total flooding water mist system shall be provided for each basement area.
  - b. The panel for the water mist system shall be provided at ground level of each wing.
  - c. The pumps of water mist system shall be provided with alternate source of power supply from DG set as well as from separate sub-station.
  - d. The high velocity total flooding water mist system shall operate on actuation of rate of rise heat detector provided in entire basement area.
- m) EXTERNAL HYDRANTS:**  
Courtyard hydrants shall be provided at distance of every 30.00 mtrs around the building within the confines of the site of the wet riser at basement, on ground & on each podium floor.
- n) HOSES & HOSE BOXES:**  
Two Hose Box, each with two hoses of 15mts length of 63mm dia. along with branch shall be provided shall be kept in ground floor & each podium floor at easily accessible places.
- o) ALTERNATE SOURCE OF POWER SUPPLY (Common for Wing 'T-1' & 'T-2' and Common for Wing 'T-3', 'T-4' & 'T-5):**  
An alternate source of L. V. /H. V. supply from a separate sub-station as well as from D.G. Set with appropriate change over switch shall be provided for Fireman evacuation lift, fire pump, Booster pump, sprinkler pump, jockey pump, fire lift, staircase, corridor lighting circuits, and fire alarm system, detector systems, etc. It shall be housed in a separate cabin.
- p) PORTABLE FIRE EXTINGUISHERS (For Each Wing):**
- a) One dry chemical powder (ABC type) fire extinguisher of 09 kgs. Capacity having BIS certification mark and one no. of bucket filled with dry clean sand shall be kept in each floor of club house, in each restaurant, in each shop, in electric meter room & in each Lift Machine Room.
  - b) Four dry chemical powder (ABC type) fire extinguishers of 09 kgs. Capacity each having BIS certification mark and two buckets filled with dry clean sand shall be kept at car parking areas at basement, ground & each podium floor.
  - c) One dry chemical powder type fire extinguisher of 06 kgs. Capacity having BIS Certification mark shall be kept in society office, in each fitness center, in lift lobby / common corridor on each floor as well as in refuge area of each wing.
- q) PANEL BOARD OF FIRE-FIGHTING SYSTEM (For Each Wing):**  
Fire alarm system, public address system, Alternate supply, etc. panels shall be installed on ground floor & which shall be manned 24 hours.
- r) HEAT DETECTORS (For Each Wing):**  
Heat detectors shall be installed in the hot areas i.e. kitchen room each flat of the building.

- s) **GAS DETECTOR SYSTEM (For Each Wing):**  
LPG /PNG detector system shall be installed in each kitchen room on each floor of the building as per relevant I.S. specifications.
- t) **BREATHING APPARATUS SET (For Each Wing):**  
Two self-contained breathing apparatus sets of 45 mins duration each shall be kept in fire control room & in each refuge area.
- u) **PUBLIC ADDRESS SYSTEM (For Each Wing):**  
The building shall be provided with public address system as per the rules with main control operator at console panel at ground floor area.
- v) **FIRE ALARM SYSTEM (For Each Wing):**  
The building shall be provided with manual fire alarm system with main control panel at ground floor level and pill-boxes & hooters at each upper floor level. The layout of fire alarm system shall be in accordance with I.S. specification.
- T) **SIGNAGES (For Each Wing):**  
Self-glowing/fluorescent exit signs shall be provided showing the means of escape for the entire building.
- 21) **INTERNET OF THINGS SYSTEM (For Each Wing):**
- The IOT based Micro Controller Device shall be provided in the electrical installation of the building as per the requirement stipulated in circular No. शासन परिपत्रक क्र. मुविनि-२०२१/प्र. क्र. ११४/ऊर्जा -५.
  - The IOT based Micro Controller Device shall be tested and verified by NABL accredited testing agency / laboratory in accordance with the recognized IS:732-2019 code for practice for Electrical wiring installation.
  - The complete installation of IOT based Micro Controller Devices shall be checked and certified by the Chief Electrical Inspector, Govt. of Maharashtra and certificate to that effect shall be issued at that time of compliance.
  - The data and the alert generated by IOT based Micro Controller Devices shall be monitored by building management system and the necessary corrective measures shall be taken by the owner, occupier immediately.
  - The data generated by IOT based Micro Controller Devices shall be made available to fire brigade department as and when required to investigate the cause of fire.
- 22) **VOICE EVACUATION SYSTEM (For Each Wing):**  
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.
- 23) **INTEGRATED SYSTEM (For Each Wing):**  
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.

- 24) FIRE DRILLS / EVACUATION DRILLS (For Each Wing):**  
Fire Drills and evacuation drills shall be conducted regularly in consultation with Mumbai Fire Brigade and log of the same shall be maintained.
- 25) SERVICE DUCT (For Each Wing):**
- i) All service ducts shall have 2 hr. fire resistance.
  - ii) Inspection door of the service ducts shall have 2 hr. fire resistance.
  - iii) Duct for water service, drainage line, shall be separate from that of electrical cable duct.
  - iv) All service duct shafts shall be sealed at each floor level with non-combustible materials such as vermiculite concrete. No storage of any kind shall be done in the shaft.
- 23) TRAINED OFFICER/STAFF (For Each Wing):**
- i) The trained Officer / staff having basic knowledge of firefighting & fix firefighting installation shall be provided / posted in the building.
  - ii) They will be responsible for the following:
    - a. Maintenance of all the first aid firefighting equipments, fixed installations & Other firefighting equipment / appliance in good working condition at all times.
    - b. Imparting training to the occupants of the building in the use of firefighting equipment provided on the premises & keep them informed about the fire & other emergency evacuation procedures.
- 24) FIRE CONTROL ROOM (For Each Wing):**
- i) Separate Fire control room with well qualified man power shall be established at ground floor.
  - ii) Plan of each floors indicating means of egress as well escape shall be maintained.
  - iii) Control panel of fire safety system shall be located in the BMS / Fire control room.
- 25) BUILDING MANAGEMENT SYSTEM (For Each Wing):**
- 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 standalone system with connectivity to nearby fire station shall be provided.
- 26) DISASTER MANAGEMENT PLAN (For Each Wing):**
- a. Disaster management plan for fire & other emergency shall be prepare and kept ready at the control room.
  - b. The mock drill with the designated fire marshal for any operation of disaster management plan shall be carried out regularly after occupation as per National building code.
- 27) OTHER NOC / PERMISSIONS (For Each Wing):**  
Necessary permissions / N.O.C. for swimming pool, licensable trade, addition/ alteration, interior work, etc. shall be obtained from competent Municipal Authorities & CFO's Department.
- 28) FIRE FIGHTING REQUIREMENTS AT THE CONSTRUCTION STAGE OF BUILDING:**  
Following fire protection arrangement shall be provided with the following fire protection measures shall be provided & same shall be maintained in good working condition at all the times.

- a) Dry riser of minimum 10 cm diameter pipe with hydrant outlets on the floor constructed with fire service inlet to boost the water in the dry riser & maintenance should be in accordance with good practice.
- b) Drums of 200 liters capacity filled with water & two fire buckets shall be kept of each floor.
- c) Water storage tank of minimum 20,000 liters capacity shall be kept at site ready to use in case of emergency, which may be used for other construction purpose also.

**29) ELEVATION FEATURE (For Each Wing):**

As shown on plan, elevation feature/treatment shall be given as per the MCGM guidelines, DCPR-2034 and circular u/r.no. Ch.Eng./D.P./110/Gen. Dtd. 30.01.2020.

**30) REFUGE AREA:**

The Refuge area for Wing 'T-1', 'T-2', 'T-4' & 'T-5' is provided on 3<sup>rd</sup>, 10<sup>th</sup>, 17<sup>th</sup>, 24<sup>th</sup> & 31<sup>st</sup> floor & for Wing 'T-3' is provided on 3<sup>rd</sup>, 10<sup>th</sup>, 17<sup>th</sup> floor and 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 wider open space on the side of the building perpendicular to the main access road.
- b) Therefugeareashallbeprovidedwithrailing/fireratedglass/parapetofheight1.20 mt.
- c) The refuge area shall have a door which 'shall be painted or fixed with a sign in luminous paint mentioning "REFUGEAREA".
- d) The lift/s shall not be permitted to open into the refuge areas.
- e) The refuge area provided within building line shall be accessible from common passage/staircase.

**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.
- b. Adequate drinking water facility shall be provided in the refuge area.

**iv) Terrace of the building as a refuge area:**

- a. Necessary facilities like emergency lighting, drinking water 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 "REFUGEAREA".

**v) Excess refuge area (above 4%) shall be counted in FSI.**

The L.S. vide his letter dated 05/05/2023 has certified the gross built up area as 216554.30 sq. mtrs. and paid scrutiny fee of Rs.21,562,950.00 vide Receipt No. CHE/BP/94217/22 dated 20/10/2022 & Rs. 7,42,200.00 vide receipt no. CHE/CFO/110746/23 dtd. 29/05/2023.

However, E.E.B.P.(E.S.) is requested to verify the gross built up area and inform this department if the same is found to be more for levying the additional scrutiny fees if any.

L.S. has certified height of the building as 119.05 mtrs. & Total built-up area 216554.30 sq. mtrs. for the said Residential Building & as per Schedule II of Section 11(1) of Maharashtra Fire Prevention & Life Safety Measure Act. 2006, has paid **Fire Service Fee** of Rs. 39,44,439.00/- vide receipt no. CHE/CFO/94979/22 dated 23/03/2023.

However, the rate of fire service fees revised if any as per Govt. notification then the difference in amount of fire services fees shall have to be paid as and when intimated by this department or before acquiring final NOC/occupation from this department. Also the party has submitted undertaking & stated that they will pay Fire service fee as per Maharashtra Fire Prevention & Life Safety Measure (Amendment) Act-2023, as and when demanded by Mumbai Fire Brigade.

**NOTE TO E.E.B.P.(E.S.) & L.S.:**

1. The fire-fighting installation shall be carried out by Govt. of Maharashtra approved Licensing Agency.
2. The width of abutting road & open spaces are mentioned in plans as submitted by the L.S. attached herewith and these parameters shall be certified by the L.S..
3. E.E.B.P.(E.S.) shall examine the proposal in context with the relevant Regulations of DCPR-2034.
4. The schematic drawings/plans of automatic sprinkler system, automatic smoke detection system, wet riser system, public address system, manual fire alarm system shall be got approved from CFO.
5. The area, size, etc. for the sprinkler system, detection system, fire alarm system, wet riser system, public address system, Fire duct, electrical duct etc. to be verified & examined by MEP Consultant.
6. Separate necessary permission for any licensable activity shall be obtained from concerned authorities of MCGM/CFO's department, till then shall not be allowed to use.
7. There shall be no any tree located in the compulsory open spaces or in the access way near the Entrance gates.
8. This recommendation letter is issued only from Fire Protection & Fire-Fighting requirements point of view on behalf of the online application from L.S.. If any matter pertaining to authenticity or legality shall be cleared by concerned Owner/Occupier/Developer/ L.S., etc.
9. The plans approved along with this approval are issued from Fire Risk & Life Safety point of view only. Approval of these plans does not mean in any way of allowing construction of the building. It is L.S./Developers responsibility to take necessary prior approval from all concerned competent authorities for the proposed construction of the building.
10. As per section 3 of Maharashtra Fire Prevention and Life Safety Measures Act 2006, it is the liability of Owner/Occupier to provide the Fixed Fire Fighting installations and shall be maintained in good working order& in efficient condition all the time, in accordance with the provisions of Maharashtra Fire Prevention and Life Safety Measures Act or the rules.
11. This approval is issued without prejudice to legal matters pending in court of law, if any.

VINOD  
DATTARAM  
MAYEKAR

Digitally signed by  
VINOD DATTARAM  
MAYEKAR  
Date: 2023.07.04  
10:31:51 +05'30'

**Divisional Fire Officer  
(Scrutinized & Prepared by)**

**Chief Fire Officer(i/c)  
Approved**

**Copy to:  
E.E.B.P.(E.S.)**