**Department of Fire & Rescue Services, Government of Kerala**

**FORM No. “R-5”**

**Fire Safety Approval for High Rise Residential Buildings**

 (Dormitories and Apartment Houses)

**Height: Above 60m**

**Application Form / Checklist \***

**(The following details shall be submitted by the applicant)**

|  |  |  |  |
| --- | --- | --- | --- |
| **For No Objection Certificate (for Building Permit)** |  | **For No Objection Certificate (Completion)** |  |

**A. General Section**

**1. Applicant Details**

|  |  |  |
| --- | --- | --- |
| **Sl No** | **Particulars** | **Details****(To be filled by the Applicant)** |
| **1** | **Applicant Name** |  |
| **2** | **Permanent Address with PIN Code** |  |
| **3** | **Communication Address with PIN Code****(If different from Permanent address )** |  |
| **4** | **Contact No(Mobile)** |  |
| **5** | **Email Id** |  |
| **6** | **Contact No(Landline)** |  |

**\***This checklist cum application will be first submitted for No Objection Certificate (for Building Permit) and then for No Objection Certificate (Completion).

**NB:** All the items/features in this Checklist must be shown / marked in the plan.

**2. Site Details**

**2.1 Details of Land in which Building is to be Constructed / Location of Proposed Building**

|  |  |  |
| --- | --- | --- |
| **Sl. No** | **Particulars** | **Details****(To be filled by the Applicant)** |
| **1** | **Survey / Resurvey Number** |  |
| **2** | **Village** |  |
| **3** | **Taluk** |  |
| **4** | **District** |  |
| **5** | **Corporation/ Municipality/Grama Panchayath** |  |
| **6** | **Nearby Permanent Landmark** |  |

**2.2 Details of No Objection Certificate (for Building Permit) [required only if the application is for No Objection Certificate (Completion)/ Revision]**

|  |  |  |
| --- | --- | --- |
| **Sl. No** | **Particulars** | **Details****(To be filled by the Applicant)** |
| **1** | **Whether** No Objection Certificate (for Building Permit) **is obtained for the construction of the building. (Y/N)** |  |
| **2** | **If answer to the Qn.1 is ‘YES’, give the details (Number, Date of issue and the issuing authority) of the certificate. (Copy of the same shall be attached)** |  |
| **3\*** | **If answer to the Qn.1 is ‘NO’, Details of building permit. (Copy of the same shall be attached)** |  |

**3. Building Details**

**3.1 Details of the Proposed Building** (To be filled in case of construction of a new building)

|  |  |  |
| --- | --- | --- |
| **Sl No** | **Particulars** | **Details****(To be filled by the Applicant)** |
| **1** | **Height (in meters) as per KMBR /KPBR**  |  |
| **2** | **Total Plinth Area (in sq m)\*\*(Including basement Floors)** |  |
| **3** | **No. of Floors (Including basement Floors)** |  |
| **4** | **Total Floor area (in sq m) \*\* (Including basement Floors)** |  |

\*\* Note: Area calculation details from Page-4, Table 1.

**3.2 Details of the Existing and Proposed Building** (To be filled in case of vertical / horizontal expansion of an existing building)

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl No** | **Particulars** | **Details****(To be filled by the Applicant)** | **Total** |
| **Existing Building** | **Proposed Building\*** | **Existing and Proposed** |
| **1** | **Height (in meters) as per KMBR /KPBR**  |  |  |  |
| **2** | **Total Plinth Area (in sq m)\*\*( Including basement Floors)** |  |  |  |
| **3** | **No. of Floors ( Including basement Floors)** |  |  |  |
| **4** | **Total Floor area (in sq m) \*\* (Including basement Floors)** |  |  |  |

Note: 1. Area calculation details from Page-4, Table 1.

2. Height and area of the building should be ascertained properly and correctly by the Architect and the same shall be certified by both the Applicant and Architect. (Rule 18 of KMBR/KPBR)

**Table 1 : Floor-wise area details of the Existing and Proposed Building**

(To be filled by the Applicant)

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl No** | **Floor No** | **Plinth Area(in Sqm)** | **Floor area(in Sqm)** |
| **Existing, if any.** | **Proposed** | **Total** | **Existing, if any.** | **Proposed** | **Total** |
| **1** |  |  |  |  |  |  |  |
| **2** |  |  |  |  |  |  |  |
| **3** |  |  |  |  |  |  |  |
| **4** |  |  |  |  |  |  |  |
| **5** |  |  |  |  |  |  |  |
| **6** |  |  |  |  |  |  |  |
| **7** |  |  |  |  |  |  |  |
| **8** |  |  |  |  |  |  |  |
| **9** |  |  |  |  |  |  |  |
| **10** |  |  |  |  |  |  |  |
| **11** |  |  |  |  |  |  |  |
| **12** |  |  |  |  |  |  |  |
| **13** |  |  |  |  |  |  |  |
| **14** |  |  |  |  |  |  |  |
| **15** |  |  |  |  |  |  |  |
| **16** |  |  |  |  |  |  |  |
| **17** |  |  |  |  |  |  |  |
| **18** |  |  |  |  |  |  |  |
| **19** |  |  |  |  |  |  |  |
| **20** |  |  |  |  |  |  |  |
| **21** |  |  |  |  |  |  |  |
|  | **Total** |  |  |  |  |  |  |

**Note**:

* Separate sheet should be attached if number of floors exceeds 21.
* Include details of basement floors also.

**3.3 Multiple / Mixed Occupancy:**

|  |  |  |
| --- | --- | --- |
| **Sl. No** | **Particulars** | **Details****(To be filled by the Applicant)** |
| **1** | **Whether the building is having more than one Occupancy . (Y/N)** |  |
| **2** | **If answer to the Qn.1 is ‘YES’,** 1. **Types of Occupancies in the building**
 |  |
|  | 1. **Total Floor area of each individual Occupancy.**
 |  |
|  | 1. **Height Level of each individual Occupancy (from average ground level)**
 |  |
| **3** | **Whether the occupancies are intermingled either horizontally or vertically by any means. (Y/N)** |  |
| **4** | **If the answer to the above question is ‘YES’**1. **Whether the most restrictive provisions of Fire Protection among the individual Occupancies is provided in the entire building.\*(Y/N)**
 |  |
| 1. **Whether the Occupancies are separated (Horizontally and Vertically) by a 240 minutes Fire Resistance rating. (Y/N)**
 |  |

* If the building is with Mixed Occupancy, the occupancies shall be separated horizontally and vertically by 240 minute fire resistance rated structures and the most restrictive provisions in respect of fire protection among the individual occupancies shall be provided in the entire building.

**4. Fee/Chalan Amount Calculation**

**Total Chalan Amount to be calculated based on given rate.**

|  |  |  |
| --- | --- | --- |
| **Sl. No** | **Particulars** | **Details****(Vacant field to be filled by the Applicant)** |
| **1** | **Rate / square meter** | **Rs. 22.05\*\*** |
| **2** | **Total Fee \*= Total Plinth Area (m2) x Rate/sqm** |  |

**\*50% of total Fee (including Basement & Parking Area in the Building) subject to a minimum of Rs 16540/-\*\* is to be remitted for each application.**

**\*\* Fees will be subject to changes as and when ordered by the Government**

**5. Payment Details**

**Details of payment made at Treasury.**

|  |  |  |
| --- | --- | --- |
| **Sl. No** |  **Particulars** | **Details****(To be filled by the Applicant)** |
| **1** | **Chalan No.** |  |
| **2** | **Date of payment (DD/MM/YYYY)**  |  |
| **3** | **Name of Treasury** |  |
| **4** | **Paid Amount(in Rs)**  |  |
| **5** | **Fire and Rescue Station where the chalan is countersigned** |  |
| **6** | **Date of countersignature** |  |

**Note: Before remitting the Fee in Treasury, the chalan shall be got countersigned by the Station Officer where the treasury is located so as to facilitate reconciliation of remittance.**

**B. Technical Section**

1. **Site Details**

**1.1 Clearance from Electric Lines**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl. No** | **Particulars** | **Required** | **Proposed for the Building***(To be filled by the Applicant)* | **Remarks of Verifying Officer** | **Remarks of the Evaluating officers** |
| **1** | **Low & Medium Voltage Line** |
| a | Vertical Clearance (in mtr)(Where the electric line passes over the proposed building) | Min 2.5m |  |  |  |
| b | Horizontal Clearance(in mtr) | Min 1.2 m |  |  |  |
| **2** | **High Voltage Line** |
| a | Total Line Capacity(in kV) *(Please specify total High Voltage line capacity here)* |  |
| b | Vertical Clearance(in mtr) (Where the electric line passes over the proposed building) | Min 3.7 m up to 33KV (+ 0.3 m for every additional 33KV or pert there of) |  |  |  |
| c | Horizontal Clearance (in mtr) | Min 2.00 m up to 33KV (+0.3 for every addl. 33KV or pert there of) |  |  |  |

Note: Angular clearance from electrical lines should not be less than the Vertical Clearance of respective category.

* 1. **Access** ( KMBR / KPBR Rule 28)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl. No** | **Particulars** | **Required** | **Proposed for the Building***(To be filled by the Applicant)* | **Remarks of Verifying Officer** | **Remarks of the Evaluating officers** |
|  **1** | Minimum width of access (in mtr) : | Minimum width of access required based on Total Floor area in square meters:Up to 8000 **: 5.00 m**Above 8000 to 18000 sqm **: 6.00 m**Above 18000 to 24000 sqm **: 7.00 m**Above 24000 sqm**: 10m** |  |  |  |
| **2** | Whether the Location plan of the proposed building mentions the following details: |
|  | a) Width of the Approach Road : (Y/N) |  (Y) Mandatory |  |  |  |
|  | b)Visible land mark on either sides and opposite to the plot : (Y/N) |  (Y) Desirable |  |  |  |

Note: 1)In the case of **access to a multiple occupancy building**, the minimum width of access to the building and plot as well as the minimum width of existing street giving access to the plot from the main street shall be the minimum width of access required for the total built-up area of the building taken together as the most restrictive occupancy

 2) In the case of **a group of buildings within any plot**, the minimum width of access to the plot as well as the minimum width of existing street giving access to the plot from the main street shall be the minimum width of access required for the total built-up area of all the buildings taken together as the most restrictive occupancy

* 1. **Miscellaneous**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl. No** | **Particulars** | **Required** | **Proposed for the Building** | **Remarks of Verifying Officer** | **Remarks of the Evaluating officers** |
|  1 | Are there any adjacent Building/ Land of Nuclear Installation/ Nuclear Waste Dumping Site which may pose threat in respect of Fire Safety to the Proposed Building? (Y/N) |  (N) |  |  |  |
| 2 | If above answer is Yes,Whether the Location plan of the proposed building show the required details. (Y/N) |  (Y) |  |  |  |

* 1. **Open Space for High-rise Building**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl. No** | **Particulars** | **Required** | **Proposed for the Building***(To be filled by the Applicant)* | **Remarks of Verifying Officer** | **Remarks of the Evaluating officers** |
| **Minimum** | **Maximum** |
| 1 | Width of clear motorable open space of the building on the side contiguous to the street/Access ( in Mtr): | 5mtr (minimum) |  |  |  |  |
| 2 | Width of clear motorable open space in one of the sides contiguous to the side mentioned in (1) above (in Mtr) | 5mtr (minimum) |  |  |  |  |
| 3 | Width of the main Entrance Gate of the Building | 5mtr (minimum)  |  |  |  |
| 4 | Whether an Arch /Covered Gate is constructed for the Main Entrance? (Y/N)If the answer is Yes,Head Room clearance of Arch/Covered Gate | (Y/N)5mtr (minimum) |  |  |  |

**Note**:

1. 1, 2 are meant to provide clear motorable road on the Street access side and at one of the sides contiguous to the street access side so that a fire tender can access the building from the road access side and contiguously to one of the two sides of the plot/premises.
2. The open space should be kept free of vehicle parking or any other erections and it should be shown properly in the plan.
3. The projections of roof or weather shade or cornices of not more than 75cm width shall be admissible in the open space.
4. For open space around the building the Applicant should enter **the minimum** and **maximum of the values** (if it is not uniform)
5. **Structural Details**
	1. **Staircase**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl. No** |  **Particulars** | **Required** | **Proposed in the Building** *(To be filled by the Applicant)* | **Remarks of Verifying Officer** | **Remarks of the Evaluating officers** |
| 1 | Total No: of staircases in the building:  |  Any building having more than 3 floors including basement shall have at least 2 staircases |  |  |  |
| 2 | No: of main staircases in the building:(KMBR 35/ KPBR 35) | As per Occupant Load (Calculation statement to be attached) |  |  |  |
| 3 | No of Fire escape staircases in the building:*(Refer Foot Note 1)* (KMBR 35/ KPBR 35) | Any residential building having more than 3 floors and any other building having more than 2 floors above ground level shall be provided with fire stair |  |  |  |
| 4 | Whether all staircases are continuous from ground floor to the terrace level? (Y/N) | (Y)  |  |  |  |
| 5 | Whether all staircases are constructed of non combustible materials?(Y/N). | (Y) |  |  |  |
| 6 | Whether any living Space, Store or other Fire Risk area is directly opened to staircases(Flights and Mid landing)? (Y/N) | (N) |  |  |  |
| 7 | Whether any electrical shaft/ AC ducts/ gas pipes etc is passing through or opening at staircase (Flights and Mid landing)?(Y/N)  | (N) |  |  |  |
| 8 | Whether any staircase is constructed around a lift shaft?(Y/N) | (N) |  |  |  |
| 9 | Whether any lift opens into any staircase (Flights and Mid landing)? (Y/N) | (N) |  |  |  |
| 10 | Whether any staircase is of completely enclosed type/ not with external wall? (Y/N)  | (Y/N) |  |  |  |
| 11 | If answer to above question(10) is Yes,Whether the staircase is a pressurized staircase? (Y/N) | (Y)  |  |  |  |
| 12 | Whether all the staircases are ventilated at each landing through an opening of an area min. 0.5 M2. (Y/N)  |  |  |  |  |
| 13 | Whether fire-escape stair is separated and as far as possible remote from the other staircases? (Y/N) | (Y) |  |  |  |
| 14 | Whether the Fire escape staircases are directly connected to Exterior open space at ground and has landing areas accessible from the external side? (Y/N)(KMBR 35/ KPBR 35) | (Y) |  |  |  |
| 15 | Whether at least one side of the Fire Escape stair cases has abutting with external wall? | (Y) |  |  |  |
| 16 | Whether any spiral Stairway is provided in the Building as Fire Escape Stairway? (Y/N) See Note 5 | (Y/N) |  |  |  |
| 17 | If answer is Yes, diameter of the spiral stair. (KMBR 35) | not less than 150cm |  |  |  |

**Note 1:** Fire escape staircase shall lead directly to the exterior open space at Ground**.**

**Note 2:** When any staircase is of **completely enclosed** type, it should be pressurized.

**Note 3:**Fire Escape Staircase shall always be kept in sound operable conditions.

**Note 4:** The routes of fire escape staircases shall be kept free from obstructions at all times.

**Note 5:** The use of spiral staircase as fire escape stair shall be limited to 10 mtrs.

**Note 6:** At least one side of the fire escape stairway shall be an external wall either with large openings or with break-open glass.

**Note 7:**In the event a door has been provided to access the staircase, that should be Fire Resistant (for 1hr) and open out. (It should not kept in locking conditions)

**Note 8**: All the occupants of each floor of the building should have access to minimum 2 staircases of which 1 should be the Fire escape staircase.

**Note 9**: Staircases should be properly ventilated. If natural ventilation is not possible, mechanically ventilation should be provided.

 **Note 10**: Ideally the Internal Staircase should not have any obstruction so as to give a clear passage to escape.

 **Note 11**: The treads of the staircases shall be constructed and maintained in a manner to prevent slipping.

**2.1.1 Staircase Specifications \*\***

1. **Main Staircase** *(KMBR 35/ KPBR 35)*

*This table should be filled and attached for all Main Staircases separately by the Applicant.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl. No** | **Parameter** | **Required value** | **Proposed value**(To be filled by the Applicant) | **Remarks of Verifying Officer** | **Remarks of the Evaluating officers** |
| 1 | Width of Staircase | Not less than 120cms |  |  |  |
| 2 | Width of Tread | Not less than 30cms |  |  |  |
| 3 | Height of Riser | Not exceeding 15cms |  |  |  |
| 4 | Height of Hand Rails | Not less than 90cms |  |  |  |
| 5 | Gap of Baluster | Not more than 10cms wide |  |  |  |

1. **Fire Escape staircase** *(KMBR 35,81/ KPBR 35, 81)*

*This table should be filled and attached for all fire escape staircases separately by the applicant.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl. No** | **Parameter** | **Required value** | **Proposed value**(To be filled by the Applicant) | **Remarks of Verifying Officer** | **Remarks of the Evaluating officers** |
| 1 | Width of Staircase | Not less than 100cms \* |  |  |  |
| 2 | Width of Tread | Not less than 25cms |  |  |  |
| 3 | Height of Riser | Not more than 19cms |  |  |  |
| 4 | Height of Hand Rails | Not less than 100cms & not more than 120cms |  |  |  |
| 5 | Gap of Baluster | Less than 15 cms wide |  |  |  |
| 6 | No of steps per Flights | Not exceeding 16 Nos. |  |  |  |

\* This is only the minimum width required. For high rise and heavily occupied buildings actual width and number of staircases are to be estimated by egress calculations by the Architect and the maximum travel distance permitted for each category of the building is to be strictly adhered.

\*\* In a Building there may be a number of Staircases Internal and External. So details shall be provided in respect of each of the Staircase.

**2.2 Exit requirements**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl. No** | **Particulars** | **Required** | **Proposed in the Building***(To be filled by the Applicant)* | **Remarks of Verifying Officer** | **Remarks of the Evaluating officers** |
| 1 | What is the Number of Exits from each floor of the building? | Min 2 (Desirable)  |  |  |  |
| 2 | Whether all means of exits towards staircases are adequately and naturally ventilated? (Y/N) | (Y) |  |  |  |
| 3 | Whether signages are installed to guide the occupants to reach all means of exits? | (Y) |  |  |  |
| 4 | Whether all signs posted to guide the occupants are illuminated (24 X 7) with an alternate source of Power supply or made in such glowing/luminous material ? (Y/N) | (Y) |  |  |  |

**Note:**

All exit requirements should be adhered to as per KMBR KMBR 36 to 42/ KPBR 36 to 42.

All routes to exit should be clearly marked

All exits should be clearly visible

All exits should be reached without passing through another occupied unit

All exits should be removed from each other and arranged to provide direct access in separate directions from any point.

**The plan of each floor of the building, clearly showing the Emergency Exits, Staircases, Lifts, Fire Ducts etc should be kept in the respective Floor at strategic points.**

**2.3 Travel Distance**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl. No** | **Particulars** | **Required** | **Proposed in the Building***(To be filled by the Applicant)* | **Remarks of Verifying Officer** | **Remarks of the Evaluating officers** |
| 1. | What is the maximum travel distance to an emergency exit? (refer note) | Should not exceed 30 M |  |  |  |
| 2 | What is the minimum Dead end corridor length in exit access in all floors | Shall not Exceed 15 M |  |  |  |

**Note:**

1. In case of upper or lower floors Emergency exits maybe a staircase leading to the ground.
2. Emergency exit maybe a horizontal exit leading to an adjoining building at the same level.
3. Lift and Escalators shall not be considered as emergency exits.
4. Ramps shall not be considered as an exit in case of basements below the first basement in car parking.
5. The dead end corridor length in exit access shall not exceed 6 metre for Educational, Institutional and Assembly Occupancies. For other Occupancies, the same shall be 15 metre.
6. For fully sprinklered buildings, the travel distance may be increased by 50 percent of the values specified.

**2.4 Refuge Area**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl. No** | **Particulars** | **Required** | **Proposed in the Building***(To be filled by the Applicant)* | **Remarks of Verifying Officer** | **Remarks of the Evaluating officers** |
| 1 |  Whether balcony is provided for each apartment | (Y/N) |  |  |  |
| 2 | If the answer to above question is ‘Y’, Whether a refuge area\* is provided on the floor at or immediately above 60 meter and there after at every 30 meters, having size 15 m2 or 0.3 m2 per occupant of two consecutive floors, whichever is higher? (Y/N) |  |  |  |  |
| 3 | If the answer to above question 2 is ‘N’, Whether a refuge area\* is provided on the floor immediately above 24 meter and there after at every 15 meters, having size 15 m2 or 0.3 m2 per occupant of two consecutive floors? (Y/N) | (Y) |  |  |  |
| 4 | Whether the entire refuge area is provided with Sprinklers? (Y/N) |  (Y) |  |  |  |

**Note:** \*(a). Refuge area shall be provided on the periphery of the floor and open to air at least on one side protected with suitable railing.

 (b). A prominent sign bearing the words, “REFUGE AREA” shall be installed at the entry of the refuge area.

 (c). The refuge area shall be provided with Sprinkler System, First Aid Box, Fire Extinguishers, Public Address Speaker,

Fireman Talkback and adequate emergency lighting

**2.5 Fire Lifts**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl. No** | **Particulars** | **Required** | **Proposed in the Building***(To be filled by the Applicant)* | **Remarks of Verifying Officer** | **Remarks of the Evaluating officers** |
| 1 | Number of Fire Lifts\* provided in the building | Min 1 |  |  |  |
| 2 | Minimum loading capacity of Fire Lift (in Kg) | 1000 Kg  |  |  |  |
| 3 | Whether fire lift is fully automated with emergency switch on ground level?**(Y/N)** | (Y) |  |  |  |
| 4 | Whether Inter communication equipment for communicating with the Control Room is provided? **(Y/N)** | (Y) |  |  |  |
| 5 | Minimum floor area of fire lifts(in m2) | 2.35 M2  |  |  |  |
| 6 | Whether the lift Door is having min. 0.80 meter width.(Y/N) | (Y) |  |  |  |
| 7 | Whether the word **‘fire lift’**is displayed in fluorescent paint on lift landing doors at each floor level? (Y/N) | (Y) |  |  |  |
| 8 | Whether alternate power supply is provided for fire lifts? (Y/N) | (Y) |  |  |  |
| 9 | Whether the height of the building is 200 meter or above? (Y/N) | (Y/N) |  |  |  |
| 10  | If answer to Qn. No. 9 is Yes, Whether ‘evacuation lift’ is provided(Y/N) | Y |  |  |  |

**Note: \***One Fire Lift per 1200 m2of floor area should be provided for the exclusive use of firemen during emergency

 \* During power failures, Fire lift should come down at the ground level and stand still with doors open by automatic trip over to automatic power supply

 \*Fire lift should reach top floor from ground level within 1 minute

\* Exit from the lift lobby, if located in the core of the building, shall be through a self-closing smoke stop door of half an hour fire resistance.

**2.6 Emergency and Escape Lighting**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl. No** | **Particulars** | **Required** | **Proposed in the Building***(To be filled by the Applicant)* | **Remarks of Verifying Officer** | **Remarks of the Evaluating officers** |
| 1 | Whether adequate illumination with alternate power supply is provided for safe movement of persons towards and through the exits? (Y/N) | (Y) |  |  |  |
| 2 | Whether adequate illumination with alternate power supply is provided for locating fire alarm call points and fire fighting equipments? (Y/N) | (Y) |  |  |  |
| 3 | Whether emergency lighting is independently connected and can be operated by one switch on the ground floor which is easily accessible to Fire Fighters? (Y/N) | (Y) |  |  |  |

**Note:**

Emergency and escape lighting should be capable of indicating the escape routes clearly and unambiguously

Emergency escape lighting should be activated within five seconds of the failure of main electric supply

Emergency lighting system should be capable of continuous operation for a minimum duration of 1Hr. and 30 Mins

**2.7 Basements**

(NBC Part IV 4.2.19&4.6.2)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl. No** | **Particulars** | **Required** | **Proposed in the Building***(To be filled by the Applicant)* | **Remarks of Verifying Officer** | **Remarks of the Evaluating officers** |
| 1 | Whether the building is provided with basement floor (Y/N) |  |  |  |  |
| 2 | If answer to above question is Yes,How many number of basement floors are proposed in the building? | Number not restricted |  |  |  |
| 3 | Number of exits provided to basements | Not less than 2 |  |  |  |
| 4 | Whether each basement has total ventilation not less than 2.5 % of the floor area evenly distributed around the perimeter of the basement? (Y/N) | (Y/N) |  |  |  |
| 5 | If the answer to the above (4) is ‘N’Whether Mechanical Ventilation is provided? (Y/N) | (Y) |  |  |  |
| 6 | If no: of basement floor is more than 1,Whether Mechanical Smoke Extractors are provided with alternate source of power supply? (Y/N) | (Y) |  |  |  |
| 7 | Whether any part of building lower than the ground has direct accessibility from outside? (Y/N) (NBC 2005 Part IV- 6.1.3.4.c ) | (Y) |  |  |  |
| 8 | If the stairs of the building are continuous to the basement, whether the stairs are enclosed in the basement portion? (Y/N) | (Y) |  |  |  |

**Note: 1.** Kitchen working in Gas fuel should not be allowed in basements

 **2.** Ramps shall not be considered as an exit in case of basements below the first basement in car parking

**2.8 Service Ducts and shafts**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl. No** | **Particulars** | **Required** | **Proposed in the Building***(To be filled by the Applicant)* | **Remarks of Verifying Officer** | **Remarks of the Evaluating officers** |
| 1 | Whether internal service Duct or shaft is proposed / provided in the building | (Y/N) |  |  |  |
| 2 | If the answer to the above Question is ‘Y’, (a) Whether all Internal Service Ducts and Shafts are properly enclosed by fire resistant masonry walls and doors? (Y/N) | (Y) |  |  |  |
|  | (b) Whether all Internal Service Ducts/Shafts are properly sealed and Fire Stopped at all Floor Levels? (Y/N) | (Y) |  |  |  |
|  | (c) Whether all Internal Service Ducts and Shafts have a vent opening at the top(Y/N). | (Y) |  |  |  |

**2.9 Fire Command Centre (FCC)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl. No** | **Particulars** | **Required** | **Proposed in the Building***(To be filled by the Applicant)* | **Remarks of Verifying Officer** | **Remarks of the Evaluating officers** |
| 1 | Whether a FCC having Main Fire Alarm Panel with Communication System (suitable Public Address System) to all floors is provided on the entrance floor? (Y/N) | (Y) |  |  |  |
| 2 | Whether the facility to receive message from different floors is provided in the FCC? (Y/N) | (Y) |  |  |  |
| 3 | Whether details of all floor plans and fire fighting installations (laminated) are maintained in control room? (Y/N) | (Y) |  |  |  |

Note: a)FCC shall be on the entrance floor of the Building

 b) FCC shall be provided with Emergency Lighting

**2.10 Assembly Point(s)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl. No** | **Particulars** | **Required** | **Proposed in the Building***(To be filled by the Applicant)* | **Remarks of Verifying Officer** | **Remarks of the Evaluating officers** |
| 1 | Whether adequate Fire assembly point(s)\* with proper marking is provided for the building? (Y/N) | (Y) Desirable |  |  |  |
| 2 | Whether the Fire assembly point(s) are clearly shown in architectural submission drawings, with locations, areas and calculations for the same\*\*? (Y/N) | (Y) |  |  |  |

**Note:**

\*Fire Assembly point(s) is for the occupants to assemble after the evacuation during the practice of drill or during any emergency in the building

\*Fire Assembly Point(s) preferably can be in many (more than one) strategic and safe locations as per possibilities and should be at the ground level.

\*Fire Assembly Point(s) shall be without any hindrance.

\*‘Recreation Spaces’ at the ground (as per KMBR/KPBR) in a Residential Building can be utilized as Fire Assembly Point(s) during emergency.

\*\*The aggregate area of Fire Assembly Point(s) should be equal to the total number of occupants in the building x 0.3M2.

**2.11 Compartmentation of Large Areas**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl. No** | **Particulars** | **Required** | **Proposed in the Building***(To be filled by the Applicant)* | **Remarks of Verifying Officer** | **Remarks of the Evaluating officers** |
| 1 | Whether the area of any single compartment in the building exceeds 750 M2?(Y/N) | (Y/N) |  |  |  |
| 2 | If the answer to the above question is ‘Y’, Whether such area of the building is fully sprinklered? (Y/N) | (Y) |  |  |  |
| 3 | If the answer to the above question is ‘Y’Whether compartmentation is provided as specified (2) below. (Y/N) | (Y) |  |  |  |

**Note:**

\* 1.All floors should be compartmented with area not exceeding 750m2 by a separation wall.

2. For the following occupancies, the maximum size of the compartment can be as given below, if the building is fully sprinklered.

 a)Business buildings and any Basement for parking - 3000 M2

 b)Mercantile / Assembly Buildings and any Basement - 2000m2

 c) Institutional Building (C 1) - 1800m2

 d) Institutional Building (C 2 &C3) - 1125m2

**2.12 Static Water Storage Tank (For Fire Fighting)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl. No** | **Particulars** | **Required** | **Proposed in the Building***(To be filled by the Applicant)* | **Remarks of Verifying Officer** | **Remarks of the Evaluating officers** |
| 1 | How many inter connected compartments are there for the UG Fire tank? | Min 2 |  |  |  |
| 2 | No: of manholes provided for each compartment for inspection, repair and suction hose insertion: | Min 2 |  |  |  |
| 3 | Whether the drawing of U G Fire Sump with all the dimensions and capacity calculation is provided with fire system plans. (Y/N) | (Y) |  |  |  |

**Note:**

1. Static storage tank shall preferably be accessible to local fire service vehicles and the depth of the tank shall not be more than 7 meters from the level of fire brigade draw-out connection and the fire brigade draw-out connection shall not be more than 5 m away from the tank wall.
2. Static storage tank should be provided with a fire brigade collecting head with 4 inlets of 63 mm each at convenient positions at street level, if the tank is situated at the basement or not approachable by the fire service vehicle.
3. A Fire brigade draw out collecting head shall be provided in a valve box with 63mm male instantaneous connection at street level. The draw out connection shall not be at a distance more than 5m from the tank wall. The draw out connection shall be connected to the tank with 100mm GI pipe with foot valve arrangement in the tank.
4. The covering slabs of tank should have the capacity to withstand a total vehicular load of 45 ton, if the slab forms a part of pathway or driveway.

**2.13 Helipad (applicable for building above 200 m height)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl. No** | **Particulars** | **Required** | **Proposed in the Building***(To be filled by the Applicant)* | **Remarks of Verifying Officer** | **Remarks of the Evaluating officers** |
| 1 | Whether Helipad is provided in the building? (Y/N) | (Y) |  |  |  |

1. **Portable fire fighting Equipments/ Fixed Installations**

**3.1Minimum Requirement for fire fighting installations** *NBC Part IV (Table 7)*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl. No** | **Particulars** | **Required** | **Proposed in the Building***(To be filled by the Applicant)* | **Remarks of Verifying Officer** | **Remarks of the Evaluating officers** |
| 1 | Whether fire safety installations proposed/installed conform to relevant Indian Standards? (Y/N) | (Y) |  |  |  |
| 2 | Whether Portable fire Extinguisher-BIS-2190 installed? (Y/N) |  (Y) |  |  |  |
| 3 | Whether First Aid Hose reel-3844/1989 installed? (Y/N) | (Y) |  |  |  |
| 4 | Whether Wet Riser \* is installed? (Y/N) | (Y) |  |  |  |
| 5 | Whether Yard Hydrant is installed? (Y/N) | (Y) |  |  |  |
| 6 | Whether Automatic Sprinkler system-BIS-15105 is installed in entire building? (Y/N) | (Y) |  |  |  |
| 7 | Whether the sprinkler spacing calculation statement is included in the Fire plan (Y/N) | (Y) |  |  |  |
| 8 | Whether Manually Operated electronic Fire alarm system – BIS-2189 installed? (Y/N) \*\*\*\* | (Y) |  |  |  |
| 9 | Whether Automatic Detection and Alarm System\*\*\*\* – BIS 2189/1989 & 2175/1988 is installed in the building?(Y/N) | (Y) |  |  |  |
| 10 | Whether the Detector spacing calculation statement is included in the Fire plan (Y/N) | (Y) |  |  |  |
| 11 | What is the capacity of Under Ground Static Storage Tank? (in ltr) | 200000 |  |  |  |
| 12 | What is the capacity of Terrace tank? (in ltr) | 10000 |  |  |  |
| 13 | Whether two Electric Pumps of capacity 180 LPM each are installed? (Y/N) | (Y) |  |  |  |
| 14 | Whether two Electric Pump of capacity 2850 LPM is installed? (Y/N) | (Y) |  |  |  |
| 15 | Whether one Stand-by Pump of capacity 2850 LPM is installed? (Y/N) | (Y) |  |  |  |
| 16 | Whether Fire Brigade Inlet is installed in the building? (Y/N) | (Y) |  |  |  |

 **\***The size (dia) of rising mains should be 100mm.

 \*\* Dia of the sprinkler pipes and their reduction at different levels shall be marked in the plan.

\*\*Sprinkler Installation Control Valves shall be installed inside the Fire Pump Room.

 \*\* The number of sprinklers arranged in the pipe line shall not exceed the limit specified for the diameter of the pipe.

\*\* Automatic Sprinkler System shall be installed if the false ceiling voids exceeding 800 mm in height.

**\*\*\*\*** Not required to be provided in car parking area. Required to be provided in other areas of car parking such as electrical rooms, cabins & other areas. Detection system shall be provided in the electrical shaft and lift machine room.

\*\*\*\* MOEFA System should also include Talk-Back System and Public Address System .

**Note:**. One set of Pumps shall be provided for each 100 Hydrants or part thereof, with a maximum of 2 sets. In case of more than one Pump Set installation, both Pump Sets shall be interconnected at their Delivery Headers. Alternative to provisions of additional Pump Sets, the objective can be done by providing additional Diesel Pump of the same capacity and doubling the Water Tank capacity as required for one set of Pumps.

 Buildings with height 60 meter and above are recommended to consider multistage, multy outlet or variable frequency drive pumps or any other equivalent arrangements

**3.2 Automatic High Velocity Water Spray Emulsifying System**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl. No** | **Particulars** | **Required** | **Proposed in the Building***(To be filled by the Applicant)* | **Remarks of Verifying Officer** | **Remarks of the Evaluating officers** |
| 1 | Whether indoor / outdoor oil-cooled transformers present in the building? (Y/N)  | (N) |  |  |  |
| 2 | If answer to above question is Y, Whether Automatic High Velocity Water Spray or Emulsifying System is provided in accordance with IS 3034:1993? (Y/N) |  (Y) |  |  |  |

**3.3 Fixed Foam Installation**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl. No** | **Particulars** | **Required** | **Proposed in the Building***(To be filled by the Applicant)* | **Remarks of Verifying Officer** | **Remarks of the Evaluating officers** |
| 1 | Whether oil storage area of boilers are present in the basement? (Y/N) | (N) |  |  |  |
| 2 | If answer to above question is Y, Whether Fixed foam Installation system is provided?(Y/N) | (Y) |  |  |  |
| 3 | Whether cable tunnels and confined areas are present in the building?(Y/N) | (N) |  |  |  |
| 4 | If answer to above question is Y, Whether Fixed Foam Installation system is provided or not? (Y/N) | (Y) |  |  |  |

**3.4 Gas Based Suppression System**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl. No** | **Particulars** | **Required** | **Proposed in the Building***(To be filled by the Applicant)* | **Remarks of Verifying Officer** | **Remarks of the Evaluating officers** |
| 1 | Whether there is an area in building where water or foam cannot be used, or areas of special fire risk/essential applications?(Y/N) | (N) |  |  |  |
| 2 | If answer to above question is Y, Whether Gas Based Fixed system provided or not in accordance with IS 15528:2004? | (Y) |  |  |  |

**3.5 Fire Station/Cabinet**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl. No** | **Particulars** | **Required** | **Proposed in the Building***(To be filled by the Applicant)* | **Remarks of Verifying Officer** | **Remarks of the Evaluating officers** |
| 1 | No of Fire Station/Cabinet provided in the building: | \*See note. |  |  |  |
| 2 | Whether all Fire Stations/ Cabinets are clearly marked ‘FIRE’ with luminous signs powered by UPS? (Y/N) | (Y) |  |  |  |

**Note:**

\*All Fire Stations / Cabinets, for installing or keeping First Aid Fire Protection Equipment such as fire hose reel, hydrant valve, fire hose, branch pipe, etc should be provided in strategic locations of all floors, @ one station for every 1000M2 of Floor area.

\*Fire Stations shall be preferably inside the building

\*The location of Fire Stations / Cabinets should be easily accessible, visible and should be in such a way that any remote corner of the building/floor is within 30Mtrs radius of the nearest fire station.

**3.6 Marking of equipments**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl. No** | **Particulars** | **Required** | **Proposed in the Building***(To be filled by the Applicant)* | **Remarks of Verifying Officer** | **Remarks of the Evaluating officers** |
| 1 | Whether all the metal fittings of Down comer system and all the fire extinguishers have BIS Marking? (Y/N) | (Y) |  |  |  |

**Note:** All fire fighting equipment should be suitably located and clearly marked by luminous signs.

**3.7 Fire Pump Room\***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1 | Whether the Fire pump room is directly accessible from surrounding ground level. (Y/N) | (Y)  |  |  |  |
| 2 | Whether pump room is installed in any floor lower than 2nd basement floor? (Y/N) | (N) |  |  |  |
| 2 | Whether the fire pump room is separated by fire walls all around and provided with fire doors. (Y/N) | (Y) |  |  |  |
| 3 | Whether positive suction is ensured for the pumps. (Y/N) | (Y) |  |  |  |

\* Note: (1)The Pump room shall be preferably at the ground level. However, it shall be installed not lower than the second Basement. If provided in the basement, direct accessibility from the ground shall be provided. Access to Pump room shall not pass through any other occupancy.

 (2) Negative suction and submersible pumps shall not be allowed.

(3) No other utility equipment shall be installed inside the fire pump room

**4. Affidavit / Confirmation from the Applicant, Architect and Licensed Contractor concerned.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl. No** | **Particulars** | **Signature of the applicant** | **Signature of Architect /Engineer/ Concerned Licensed Contractor with details & Seal** | **Details of Registration of Concerned Architect//Engineer Contractor** | **Verifying Officer Input** |
| **1** | Certified that this plan is prepared strictly in compliance with KMBR/kpbr 2019 and other relevant rules |  |  |  |  |
| **2** | Certified that the materials used / proposed to be used or installed are as per the required fire resistant rating in NBC of India -2016, Part-IV  |  |  |  |  |
| **3** | Certified that all the proposed Electrical Installations and power supply for the proposed building is as per NBC of India -2016 Part 1V and necessary emergency power distribution system for fire and life safety systems also proposed in the building as per NBC 2016 Part IV 3.4.6.2  |  |  |  |  |
| **4** | Certified that all the proposed Air Conditioning, Smoke Management, Ventilation and Staircase Pressurisation Systems for the building are as per NBC of India -2016; Part-IV |  |  |  |  |
| **5** | Certified that all the proposed lightning protection installations for building is as per NBC of India -2016; Part-IV? (Y/N) |  |  |  |  |
| **6** | Certified that gas bank, supply lines and other associated fittings proposed / installed in the Building are as per NBC of India -2016, Part-IV. |  |  |  |  |

**Note:** 1. The address with PIN Code and license details of the Licensed Technical Person signing the Affidavit along with the applicant shall be clearly written.

2. If any of the services listed above is not proposed for the building, the same shall be certified by the applicant and architect.

**5. Certificate of compliance from the Authorised Signatory/Architect.**

1. **It is certified that the plan/drawing has been prepared, taking in to account all the fire and life safety measures to be provided inside and outside as contained in this checklist cum application (for** No Objection Certificate (for Building Permit))**.**
2. **It is certified that the check list has been fully complied with for the completion of the building (**For No Objection Certificate (Completion)**).**
3. **It is certified that all the Fire protection installations/logistics proposed/provided are as per relevant Indian Standards**
4. **It is certified that the height and area of the building are ascertained properly by the Architect in presence of the applicant before submitting this application.**
5. **It is certified that the dimensions and capacity of the Underground and Terrace level fire water tanks are measured properly and are mentioned correctly in the Fire system plan and Checklist, along with the details of tank capacity calculation.**
6. **It is certified that all the above information/data are correct to the best of my knowledge.**
7. **The plans and Drawings are prepared strictly in conformity with provisions contained in the Act and Rules concerned, any direction issued by the Government or Municipality/Panchayath and all applicable Statutes.**

**Place:**

**Date: Dated Signature of Applicant Dated Signature of Architect/Engineer with details of Registration**

**Note: The Architect, who prepared the plan/Drawings shall verify and sign himself. Certificate as per Rule 18 of KMBR / KPBR shall be made by the Architect in the plans/Drawings also. It is the responsibility of the Builder to either sign himself or authorise a responsible Official of his concern to sign the application and certificate. If so, copy of such Authorization Letter must be attached.**

1. **CERTIFICATE**

**A. For No Objection Certificate (for Building Permit)**

The site for the proposed building is inspected by the authorised/Competent officials of Fire and Rescue Department in the presence of the Applicant/ Authorised Representative. The checklist cum application duly filled was compared with the fire plan and prima facie found to be in order

OR

**B. For No Objection Certificate (Completion)**

The site and constructed building is inspected by the Authorised/Competent officials of Fire and Rescue Department as per the approved fire system plan issued at the time of initial clearance, in the presence of the Applicant/ Authorised Representative. The checklist cum application and the fire plan were also compared and were found to be in order.

**Signature of the Applicant/ Signature with Date**

 **Authorised Signatory (For Fire and Rescue Services)**

**Note from Fire and Rescue Services Department, Government of Kerala**

1. This Proforma will be available for downloading from the Department Website [www.fire.kerala.gov.in](http://www.fire.kerala.gov.in). This Check list Cum Application is valid for applying For No Objection Certificate (for Building Permit) & again For No Objection Certificate (Completion). This shall be filled up by the Applicant and submitted along with other documents including the Plan. The applicant should mark in the front page of the Checklist, whether it is for “**For No Objection Certificate (for Building Permit)”** or for **“For No Objection Certificate (Completion)”.**

2. For obtaining **No Objection Certificate (for Building Permit)**, two Hard Copies of the Checklist Cum Application, one set of Civil Plan, 3 sets of Fire System Drawings and Soft Copy of the filled up Check List cum Application and all plans are to be submitted.

3. For obtaining **No Objection Certificate (Completion)** one Hard Copy of the Checklist Cum Application, one set of Civil Plan, 3 sets of Fire System Drawings and Soft Copy of the filled up Check List cum Application and all plans are to be submitted.

4. Copy of the No Objection Certificate (for Building Permit) along with Approved Fire Plan and approved checklist must also be submitted along with the application for the No Objection Certificate (Completion).

4. The checklist should be filled up with **word processing** in a computer, **not in hand writing**, by the Applicant.

5. All the points in the checklist shall match with the **Fire Drawings/Plan.** The Fire Plan shall be submitted with the serial numbers of the points of the check list, marked in the plan itself. If a particular point cannot be shown in the Fire Plan, descriptive details shall be written in the Fire Plan (During No Objection Certificate (for Building Permit) and For No Objection Certificate (Completion).

6. Height and area of the building shall be ascertained properly by the architect in presence of the applicant before submitting this application. If the Height or area is found to differ in any later stage, the applicant and the Architect will be responsible for such lapses.

7. Fire sprinklers, Fire Alarm, Fire Detection and all Fire Fighting components, which are proposed Floor wise and in sections should be in red letter / red colour for the Fire Service Department to understand quickly.

8. Fire protection Equipments and Machineries proposed should be as per Indian Standards

9. Along with application, the Design and Calculations of installation of Fire Pump, Automatic Detection, Automatic Sprinklers, Egress Calculation and Affidavit/Undertaking/Confirmation are also to be submitted for fire Safety Approvals.

10. If there is more than one building in the same plot, the applicant should submit separate application and fee

11. In case of any doubt the concerned District Fire Officer of the Fire & Rescue Services Department is to be contacted either over

 Phone/Email / Person

12. For Inspection in connection with the issuance of **No Objection Certificate (Completion)**, the applicant shall make all arrangements in advance so as to ensure smooth conduct of inspection. The entire area of inspection shall be accessible and kept open for inspection.

13. Applicant or his authorised representative shall be present at the site during the inspection to witness the inspection and clear doubts, if any.

s/d

 **Director General**

 **Fire and Rescue Services**