

General Development Rules 2023 for Dadra and Nagar Haveli District of Union Territory of Dadra and Nagar Haveli and Daman and Diu

PART 3 (I)

**Framed under Section 30, 140 (y) and 141 of
The Dadra and Nagar Haveli and Daman and Diu Town & Country
Planning Act, 1974 (Amended from time to time).**

**Dadra and Nagar Haveli Planning and Development Authority
Union Territory Administration of Dadra and Nagar Haveli,
Daman & Diu**

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*Framed under Section 30, 140 (y) and 141 of
The Dadra and Nagar Haveli and Daman and Diu Town & Country Planning Act, 1974
(Amended 20 April 2022).*

In exercise of powers conferred by Section 30, 140 (y) and 141 of the – Dadra and Nagar Haveli and Daman and Diu Town & Country Planning Act, 1974 (amended from time to time) and all other powers enabling him in that behalf, The Administrator of Dadra and Nagar Haveli and Daman and Diu hereby makes the following Rules in consonance with the Outline Development Plans for Dadra and Nagar Haveli Districts of Union Territory for Dadra and Nagar Haveli and Daman and Diu.

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Part A Administrative and Procedure Rules

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1 Short Title, Commencement, Applicability, Repeal and Savings

- 1.1 These Rules shall be called “General Development Rules 2023” for the District of Dadra and Nagar Haveli of Union Territory of Dadra & Nagar Haveli, Daman, and Diu.
- 1.2 These Rules shall come into force from the date of publication in the Official Gazette.
- 1.3 These Rules shall apply to the District of Dadra and Nagar Haveli of Union Territory of Dadra & Nagar Haveli, Daman, and Diu including Municipality and rural areas.
- 1.4 Notwithstanding anything else contained in any other rule, regulation, byelaw, notification, or order etc., of the UT administrator, any authority including Fire Department, Municipal Councils, Planning and Development Authorities, and CRZ committees, giving any permission required for or related to construction or occupancy of any building shall abide by these Rules.
- 1.5 Notwithstanding anything contained in these Rules:
 - 1 Any modifications or revision or anything done, or any action taken under the rules in force prior to such modification shall be deemed to be valid and continue to be so valid, unless otherwise specified.
 - 2 Removal, abandonment, or continuation of lawfully established use or occupancy of an existing approved building, unless in the opinion of the Competent Authority such building is unsafe or constitutes a hazard to the safety of adjacent property or to the occupants of the building itself or endangers any premises or person, shall not require permission.
 - 3 Any development permission (construction permission) given for which construction has not started shall be required to obtain revised development permission under these Rules.
- 1.6 Notwithstanding the National Building Code or any other code for the time being in force, if there are inconsistencies with the provision of these particular Rules, then these Rules shall supersede, the fire department or any other department shall follow the provision of these Rules.

2 Definitions

In these Rules, unless the context otherwise requires, the terms and expressions shall have the meaning indicated against each of them. The terms and expressions not defined in these Rules shall have the same meaning as in The Dadra and Nagar Haveli and Daman and Diu Town & Country Planning Act, 1974 as amended from time to time.

- 2.1 *Access:* A clear approach from the entry into the building unit to building/buildings within-the building unit.
- 2.2 *Accessory Building:* means a building separated from the main building on a building unit / plot which is put to use or is proposed to be put to use for one or more accessory uses.
- 2.3 *Accessory use:* means use of the building subordinate and customarily incidental to the principal use.
- 2.4 *Act:* means the [Dadra and Nagar Haveli and] Daman and Diu Town & Country Planning Act, 1974 as amended from time to time.
- 2.5 *Additions and/or alterations:* means: any change in the proposed or approved use or proposed or approved plan of the building.
- 2.6 *Advertising Display Infrastructure / Advertising Sign, billboards, and Hoarding:* means any surface or structure with characters, letter or illustrations applied thereto and displayed in any manner whatsoever for the purpose of advertising or giving information regarding or to attract the public to any place, person, public performance, article or merchandise, and which surface or structure is attached to, forms part of or is connected, with any building, or is fixed to a tree or to the ground or to any pole, screen, fence or hoarding or displayed in space; or in or over any water body in the jurisdiction of the Competent Authority.

- 2.6A **Affordable Housing:** affordable housing either group or plotted shall be such housing which is registered as affordable housing on basis of policy notified by the Competent Authority from time to time formed after considering local conditions such as need and necessity of affordable housing, mean income level etc.
- 2.7 **Air-conditioning:** the process of treating air, so as to control its temperature, humidity or quality to meet the requirements of a conditioned space.
- 2.8 **Amenities:** means roads, streets, open spaces, parks, recreational grounds, playgrounds, gardens, water supply, electric supply, street lighting, drainage, sewerage, public works and other utilities, communication network, services and conveniences or any other amenity which may be notified by the authority from time to time.
- 2.9 **Apartment / Flat:** means multi storeyed residential buildings constructed in a detached or semi-detached manner designed as ground floor with more upper floors and constructed as separate dwelling units with common staircase.
- 2.10 **Application:** means an application made under these Rules in such form as may be prescribed by the Competent Authority from time to time.
- 2.11 **Approved:** As approved / sanctioned by the Competent Authority under applicable rules, laws or regulations etc.
- 2.12 **Associate Town Planner:** means Town / Urban Planner of the Government of Dadra and Nagar Haveli District, Daman District and Diu District or Chief Town Planner in his / her absence.
- 2.13 **Atrium (Plural Atria):** A large-volume space created by a floor opening or series of floor openings connecting two or more stories that is covered at the top of the series of openings with a light weight or glazed roof and is used for purposes other than an enclosed stairway; lifts hoist-way; an escalator opening; or as a utility shaft used for plumbing, electrical, air conditioning, or communications facilities. (*Refer Figure No. 2.1*).

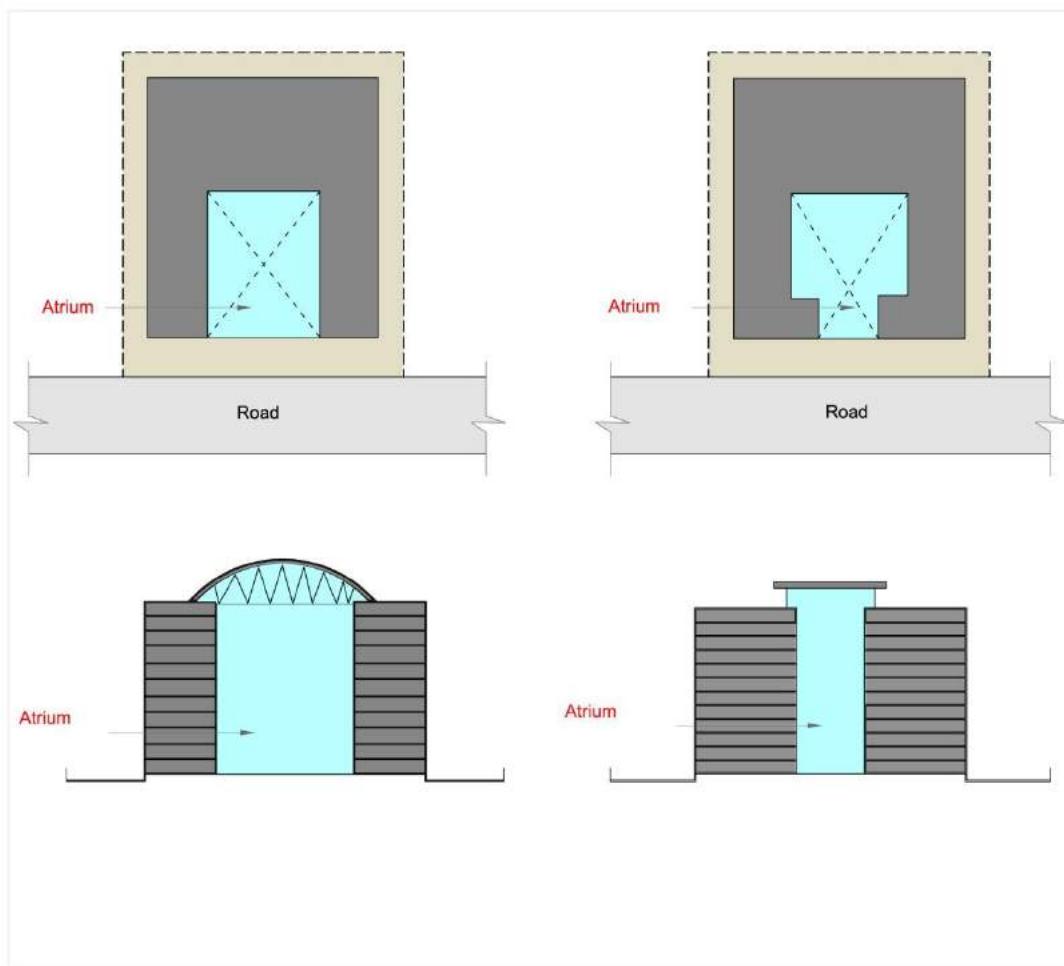


Figure No. 2.1: Atrium Within a Building

- 2.14 *Authorized Officer*: means any person appointed by the Competent Authority for the any specific purpose under these rules. There can be different authorised officers for different purposes.
- 2.15 *Authority*: Authority means either Planning and Development Authority or the Municipal Council, or any other authority specifically notified by the UT administration under these Rules, having jurisdiction over area in question.
- 2.16 *Banquet Hall*: means a room or an enclosed space or building for the purpose of hosting any social events or ceremonies like marriage, reception, party etc. accompanied with food and beverages.
- 2.17 *Basement*: means the lower storey of a building below the ground level.
- 2.18 *Build to Line*: means a line extending along the roadside margin and marks the location from which the vertical plane of the front building elevation must be erected; the build-to line is intended to create an even building façade line along a street. A certain percentage of the length of the roadside margin may be specified to which the building elevation must abut (Refer Figure No. 2.2).

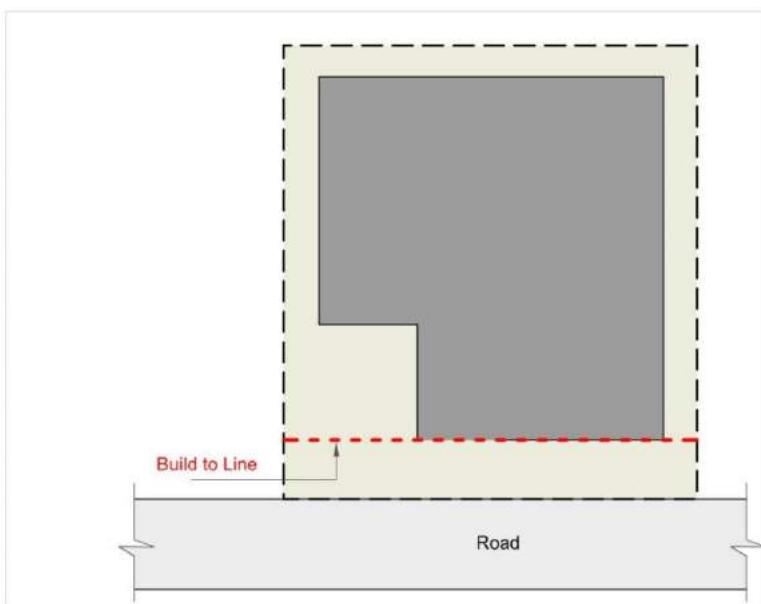


Figure No. 2.2: Built to Line for a Building

- 2.19 *Building*: means a structure constructed with any materials whatsoever for any purpose, whether used for human habitation or not, and includes:
- Foundation, plinth, walls, floors, roofs, chimneys, plumbing and building services, fixed platforms etc.
 - Verandahs, balconies, cornices, projections etc.
 - Parts of a building or anything affixed thereto;
 - Any wall enclosing or intended to enclose any land or space, sign, and outdoor display structures; etc.,
 - Tanks constructed or fixed for storage of chemicals or chemicals in liquid form and for storage of water, effluent, swimming pool, ponds etc.,
 - All types of buildings as defined in (a) to (l) below, except tents, shamianas and tarpaulin shelters erected temporarily for temporary purposes and ceremonial occasions with the permission of Competent Authority, shall be considered to be "buildings".

Types of buildings based on design or typology:

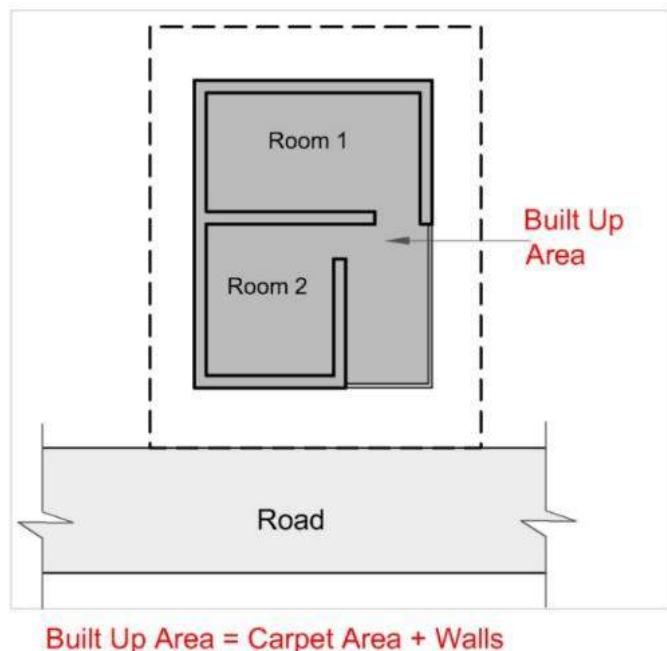
- Detached Building* means a building with walls and roofs independent of any other building and with open space on all sides.
- Semi Detached Building* means a building detached on three sides with open space as specified in these Rules.

- c *Tenement* means a residential dwelling unit constructed in a detached or semi-detached manner. Each dwelling unit in a tenement building is designed and constructed for separate entry with independent sanitary provisions.
- d *Multi-Storeyed Building – High Rise* means a building exceeding 15 m or more in height (without stilt) and 17.5 m (including stilt).
- e *Multi-Storeyed Building – Low Rise* means a building not exceeding 15 m or more in height (without stilt) and 17.5 m (including stilt).
- f *Dwelling 1* means a detached building used for residential purpose.
- g *Dwelling 2* means semi-detached building used for residential purpose.
- h *Dwelling 3* means multi storey building used for habitation of multiple families and/or individuals such as apartments, flats, hostels, lodging and boarding or cottage industry or pre-school purpose.
- i *Special Building* means a building that houses large gatherings at a time such as theatres for drama, cinema, motion picture; drive-in-theatre; assembly hall; auditorium; town hall; lecture hall; exhibition hall; museum; stadium; community hall; marriage hall, banquet hall etc.
- j *Multi Level Car Parking:* means a building primarily to be used for parking of cars, scooters, or any other type of light motorized vehicle. It may include two or more basements.

Types of buildings based on safety / maintenance:

- k *Hazardous building* means a building or part thereof used for:
 - 1 Storage, handling, manufacture, or processing of radio-active substances or of highly combustible explosive materials or products which are liable to burn with extreme rapidity and/or producing poisonous fumes.
 - 2 Storage, handling, manufacture, or processing of, which involves highly corrosive, toxic obnoxious alkalis, acids, or other liquids, gases or chemicals producing flame, fumes and explosive mixtures or which result in division of matter into fine particles and capable of spontaneous ignition.
 - 3 Buildings or industries declared as hazardous by any act, rule, regulation or order of any authority.
- l *Unsafe Building* means a building which, is structurally unsafe; is insanitary; is not provided with adequate means of egress; constitutes a fire hazard; is dangerous to human life in relation to its existing uses; constitutes a hazard to safety or health or public welfare by reasons of inadequate maintenance, dilapidation, or abandonment.
- 2.20 *Building Unit / Plot:* means a land or plot or part of a land / plot or combination of more than one land / plot enclosed by definite boundaries as approved by the Competent Authority. However, where an alignment has been fixed on any road by any Competent Authority, the Building Unit shall mean and refer to the land excluding the portion falling in alignment.
- 2.21 *Building Unit / Plot Depth:* means the mean horizontal distance between the front and rear plot boundaries.

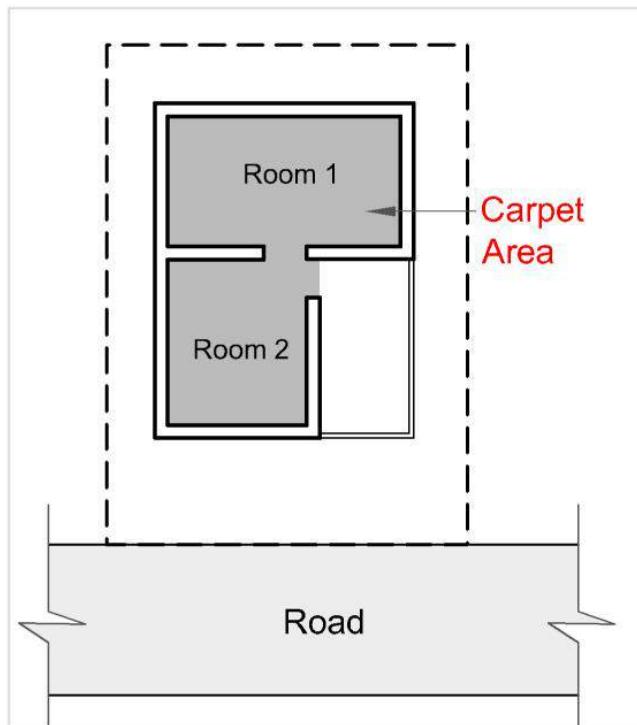
2.22 *Built up Area*: means the area covered by a building on all floors including all cantilevered portions and walls & columns, excepting areas that are excluded specifically under these Rules (Refer Figure No. 2.3).



Built Up Area = Carpet Area + Walls

Figure No. 2.3: *Built up Area, Building*

2.23 *Built up Area, Carpet*: means the covered area of usable rooms of dwelling unit / building, excluding area covered by walls (Refer Figure No. 2.4).



Carpet Area

Figure No. 2.4: *Carpet Area*

- 2.24 *Built up Area, Dwelling Unit:* means the areas covered by a dwelling unit within a building including all cantilevered portions and walls & columns, excepting the areas excluded specifically under these rules (*Refer Figure No. 2.5*).

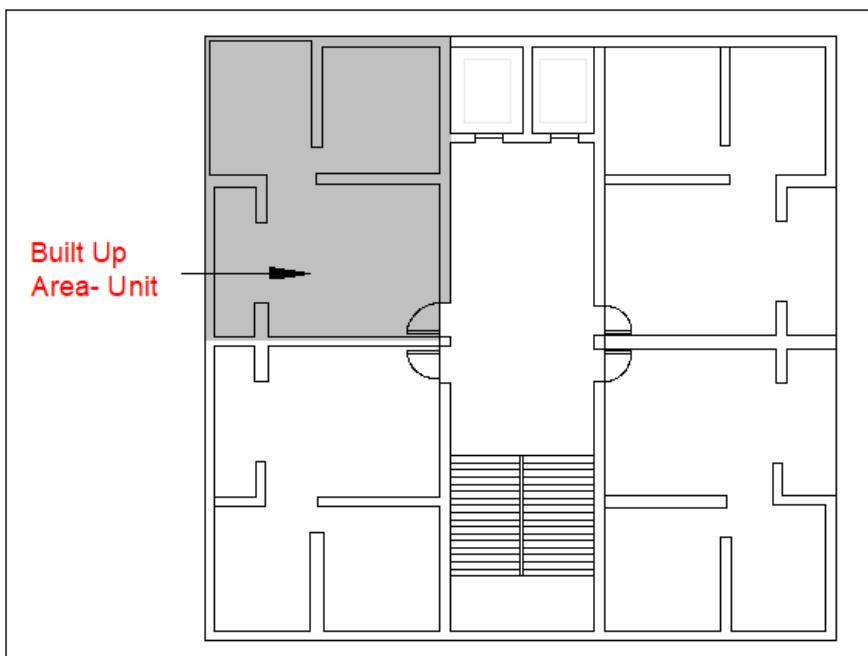


Fig No. 2.5: Built Up Area, Dwelling Unit

- 2.25 *Cabin:* means a non-residential enclosure.
- 2.26 *Canopy:* means cantilevered projection at lintel or slab level provided that it shall not extend beyond the building unit boundary and there shall be no structure on it and the top shall remain open to sky.
- 2.27 *Chairman PDA:* means the chairman of a Planning and Development Authority
- 2.28 *Chawl:* A building divided into many separate tenements suitable for living, each consisting of a single room, or two, but not more than two rooms and with common sanitary arrangements.
- 2.29 *Chajja / Weather Shed:* means a structural overhang provided over opening on external walls for protection from weather.
- 2.30 *Chief Officer:* means an Officer appointed by the Government under the Municipal Regulation for any Municipal Council to whom the duties and functions of the Chief Officer may be assigned within the territory.
- 2.31 *Chimney:* means a construction by means of which a flue is formed for the purpose of carrying products of combustion to open air and includes a chimney stack and a flue pipe.
- 2.32 *Chowk:* means a fully or partially enclosed space permanently open to sky within a building at any level.
- 2.33 *Cold Storage:* means a structure or room for the storage of edible or non-edible merchandise or commodities, which usually require special low temperatures and condition for storing or preservation, before their export or distribution for sale.
- 2.34 *Collector:* means the Collector appointed by the Government for the District.
- 2.35 *Competent Authority:* means authority empowered to grant Development Permission in any given area under any law for the time being in force or such other authority as may be notified by the Government or Prescribed Authority to perform any function under these rules.
- 2.36 *Common Plot:* means a common open space exclusive of approaches at ground level or at higher levels not exceeding 15.0 m from the ground level of the building unit.
- 2.37 *Community Hall:* means a building and accompanying ground such as wadis used for social, civic, or recreational purposes, serving the area in which it is located and open to the general

- public. It is also a place where members of community tend to gather for group activities, social support, public information, and other purposes.
- 2.38 *Construction:* means erection of a structure whether permanent or temporary or a building, including any addition or extension thereto either vertically or horizontally, but does not include, any reconstruction, repair and renovation of an existing structure or building, or, construction, maintenance and cleansing of drains and drainage works and of public latrines, urinals and similar conveniences, or, the construction and maintenance of works meant for providing supply of water for public, or, the construction or maintenance, extension, management for supply and distribution of electricity to the public; or provision for similar facilities for publicity, all of which may also be in the ROW of roads/streets after obtaining due permissions of any authority.
- 2.39 *Contiguous Holding:* means a continuous parcel of land in one ownership irrespective of separate survey numbers or revenue maps of the holding (*Refer Figure No. 2.6*).

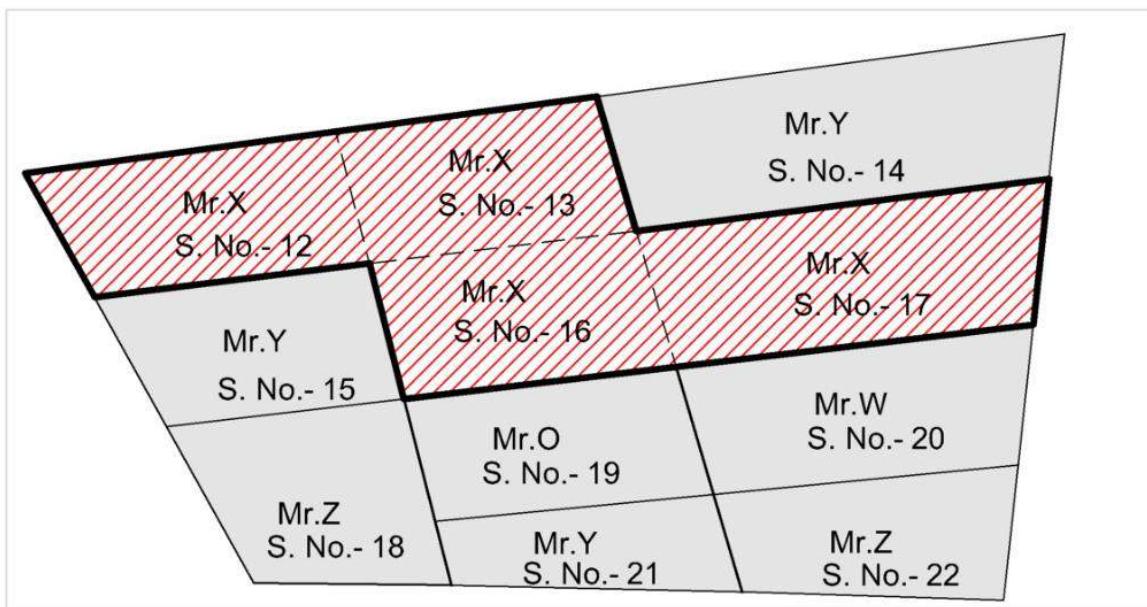


Fig No. 2.6: Contiguous Holding

- 2.40 *Conversion:* The change from one occupancy to other occupancy or any change in building structure or part thereof resulting in a change of space and use requiring additional occupancy certificate.
- 2.41 *Cornice:* means the decorated projection at the top of a wall provided to protect the wall face or to ornament and finish the eaves. The term is used as well for any projecting element that crowns an architectural feature, such as a doorway.

- 2.42 *Corridor*: means a common passage or circulation space including a common entrance lobby (Refer Figure No. 2.7).

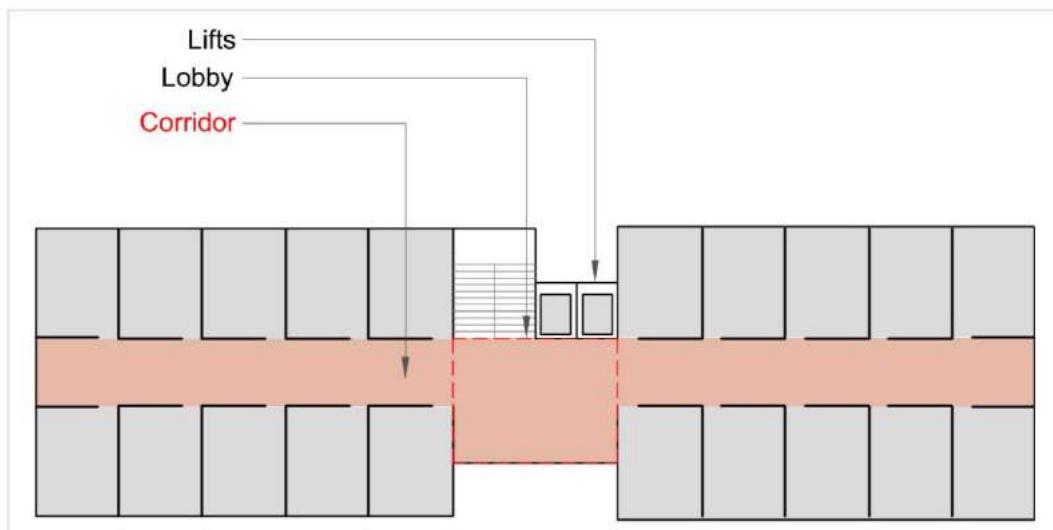


Figure No. 2.7: Corridor

- 2.43 *Council or Municipal Council*: means a Municipal Council constituted or deemed to be constituted under Dadra and Nagar Haveli and Daman and Diu Municipal Council Regulation 2004.
- 2.44 *Courtyard*: includes a chowk and also includes all spaces permanently open to the sky within a building.
- 2.45 *Density*: The residential density expressed in terms of the number of dwelling units per hectare.
- 2.46 *Developer*: means a person who has, by any law or contract, control over or would have had control over: 1) the appointment of registered professionals under these rules; 2) the design of the building; 3) the process of construction of the building and development, and; 4) financing of the construction and development. This control should be sufficient to ensure compliance of the various provisions related to development under these Rules.
- 2.47 *Development Permission*: means a permission granted by the Competent Authority to carry out any construction, reconstruction, erection, or re-erection permitted under these Rules.
- 2.48 *Dharamshala*: means a building devoted to religious or charitable purposes offering lodging and / or dining facilities for interested individuals or group of people at a nominal charge, or in some cases free of charge.
- 2.49 *Domestic Wastewater*: means either wastewater that is typically discharged from premises that are used solely for residential activities or wastewater of the same character discharged from any non-industrial and non-medical buildings.
- 2.50 *Drain / Drainage System*: means a system or a line of pipes or box or any other structure, with their fittings and accessories as manholes, inspection chambers, traps, gullies, floor traps used for drainage of buildings or yards appurtenant to the buildings within the same curtilage. A drain includes an enclosed or open channel for conveying surface water or a system for the removal of any liquid.
- 2.51 *Dwelling Unit*: means a shelter consisting of residential accommodation for one family and shall include a minimum of one room (with a carpet area of 9 sq m and one side 2.4 m), one kitchen, bathroom and WC.
- 2.52 *Enclosed staircase*: means a staircase separated by walls and doors from the rest of the building.
- 2.53 *Escalator*: means a power driven, inclined, continuous stairway used for raising or lowering passengers.

- 2.54 *Escape Route*: means a route by which a person may reach an unenclosed space at ground level in the open air and in relation to:
- any point on a storey of a building, means a route from that point
 - any room, means a route from the doorway of that room
 - any storey of a building, means a route from the exit from the storey
 - any flat, means a route from the main entrance door of the flat
- 2.55 *External Wall*: means an outer wall of a building not being a party wall even though adjoining a wall of another building and also means a wall abutting on an interior open space of any building.
- 2.56 *Existing Development / Building / Use*: means development, building, structure or its use as sanctioned, approved, regularized, authorized by the Competent Authority, existing prior to the date of notification of these rules.
- 2.57 *Farmhouse*: means a plot of land including permissible construction in the area designated as agricultural zone by the Competent Authority with a minimum land area of 4400 sq m.
- 2.58 *Floor*: means the lower surface in a storey on which one normally walks in a building and does not include a mezzanine floor. The floor above top most basement, closest to the ground, shall be ground floor. The floor above it with minimum permissible height shall be termed as first floor or floor 1, with the next higher floor shall be termed as second floor or floor 2, and so on upwards.
- 2.59 *Floor Area*: means the net enclosed area of a floor in the building including walls, circulation spaces like lobby or corridors, service areas and semi-open spaces such as verandah or balcony.
- 2.60 *Floor Space Index (FSI) or Floor Area Ratio (FAR)*: means the quotient of the ratio of the combined gross built-up area of all floors, to the total area of the building-unit (total plot area including common plot)

$$\text{Floor Space Index} = \frac{\text{Total Built up area of all floors.}}{\text{Area of the Building Unit / Plot}}$$

- 1 Base FSI – means the base FSI permitted in a Zone by the Competent Authority as a matter of right.
 - 2 Chargeable FSI – means the FSI available by payment.
 - 3 TDR FSI – means the FSI available by purchasing TDR
 - 4 Maximum Permissible FSI – means the maximum permissible FSI which includes Base FSI, Chargeable FSI and TDR FSI.
 - 5 Utilized Chargeable FSI – means the amount of FSI used that is paid for and purchased by the applicant.
 - 6 Total Utilized FSI – means the total Utilized FSI.
- 2.61 *Footing*: means a foundation unit constructed in brick work or stone masonry or concrete under the base of a wall or column for the purpose of distributing the load over a large area.
- 2.62 *Foundation*: means that part of the structure which is in direct contact with and transmitting load of the building to the ground.

- 2.63 *Front*: means the main frontage of a building unit on the roadside. For the building abutting two or more roads, front shall be chosen by the owner; however, the owner shall be required to leave road side margin on both the sides, as mentioned in 7.7.1 and Refer Figure No. 2.9.



Figure No. 2.8: *Front*

- 2.64 *Gaathan or Gamtal*: means all lands included within the site of a village at the commencement of the Dadra and Nagar Haveli, Daman & Diu Land Revenue Regulation in accordance with any survey, custom or usage or which may be declared as included within the site of village in accordance with the provisions of the said Regulation.
- 2.65 *Garage-Private*: means a building or a portion thereof, designed and used for the parking of vehicles. It can be within a building or within a portion of a building unit but does not include an unenclosed or uncovered parking space such as open parking area.
- 2.66 *Garage-Public*: means a building or a portion thereof, designed other than as a private garage, and operated for gain. It can be used for repairing, servicing, hiring, selling, storing, parking of vehicles.
- 2.67 *Government*: means The Administrator of Dadra and Nagar Haveli, Daman and Diu appointed by the President of India under Article 239 of Constitution of India.
- 2.68 *Ground Coverage*: means the ground area covered by a building including cantilevered portion on any floor, excluding margins, common plot, cut-out (open-to-sky) if any.
- 2.69 *Ground Level*: means the level of the crown of the existing adjacent constructed road or the existing ground level or the high flood level, whichever is higher as may be decided by Competent Authority.
- 2.70 *Habitable Room*: means a room occupied or designed for occupancy for human habitation and uses incidental thereto, including a kitchen if used as a living room, but excluding a bathroom, water closet compartment, laundry, serving and storing, pantry, corridor, cellar, attic, storeroom, pooja room and spaces not frequently used.

2.71 *Hazardous Material:* means any of the following materials:

- 1 Radioactive substance.
- 2 Inflammable, combustible or explosive materials that may produce poisonous fumes or explosions on storage, handling, processing or manufacturing.
- 3 Corrosive, toxic, obnoxious alkalis or acids, chemicals which may produce irritant, corrosive or poisonous gases on explosion or spontaneous combustion.
- 4 Material declared as hazardous by any act, rule, regulation or order of any Competent Authority

2.72 *Height of a Room:* means the vertical distance measured from the finished floor surface to the finished ceiling/ slab surface. The height of a room with a pitched roof means the average height between the finished floor surface and the bottom of the eaves and the bottom of the ridge (*Refer Figure No. 2.9*).

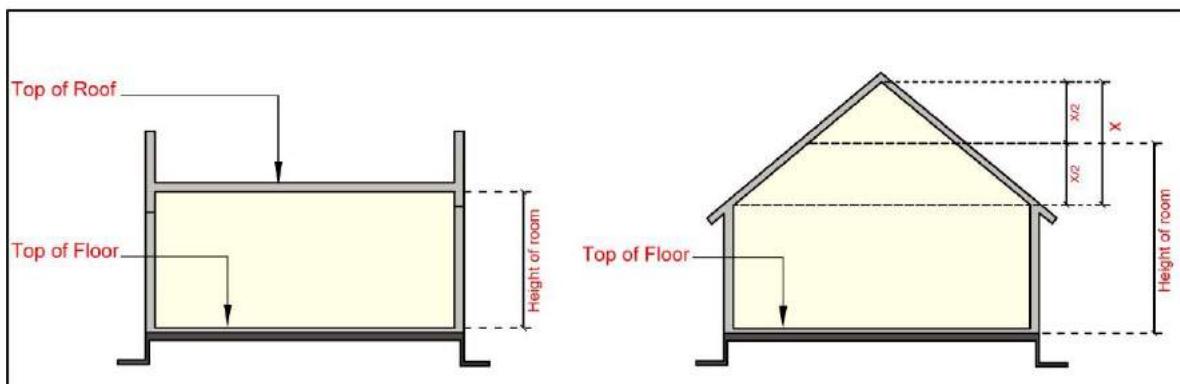


Figure No. 2.9: Height of a Room

2.73 *Height of Building:* means the vertical distance measured from the average ground level and up to the top of the finished level of the topmost floor slab or in case of sloping roofs up to the midpoint of the height of the sloping roof.

The height of the sloping roof shall be taken as an average height of the relevant floor.

Provided that for purpose of other than the fire rules, the following shall be excluded for the computation of building height:

- 1 Lift well, lift cabin with machine room above.
- 2 Roof top solar panel installation
- 3 Chimney
- 4 Water storage tank
- 5 Staircase cabin/ Mumty
- 6 Parapet

2.74 *Home Occupation:* means such customary home occupation other than the conduct of an eating or a drinking place offering services to the general public, customarily carried out by a member of the family residing on the premises without employing hired labour, and for which there is no display to indicate from the exterior of the building that it is being utilised in whole or in part for any purpose other than a residential or dwelling use and in connection with no article or service is sold or exhibited for sale except that which is produced therein, which shall be non-hazardous and not affecting the safety of the inhabitants of the building and the neighbourhood, and provided that no mechanical equipment is used except that as is customarily used for purely domestic or household purposes and / or employing licensable goods, which are decided by the Competent Authority as Home Occupation from time to time. If motor power is used, the total electricity load should not exceed 0.75 KW. The area for such uses shall not exceed 25% of the total floor area of the dwelling; further, there shall be no public display of goods. Dwelling units used for home occupation shall not be considered as mercantile building or commercial operation.

2.75 *Illuminated Exit Signs:* A device for indicating the means of escape during normal circumstances and power failure.

- 2.76 *Land*: means the land on which construction is proposed by the owner / developer and shall include benefits to arise out of land, things attached to the earth or permanently fastened to anything attached to the earth and rights created by legislative enactment over any street. For avoidance of doubts, it is hereby clarified that land can include any contiguous holding.
- 2.77 *Lift / Elevators*: means a mechanically guided car platform or transport for persons and materials between two or more levels in a vertical or substantially vertical direction.
- 2.78 *Lobby*: means a hall at the entrance of a building or corridor / hall connected with a larger room or series of rooms and used as a passageway or waiting room.
- 2.79 *Loft*: means an intermediate non habitable slab between two floors which is constructed and used for storage purpose in accordance with Rule 13.1.9.
- 2.80 *Margin*: means the space adjacent to boundary of building unit, buildings, or common plot that should be kept fully open to sky. No built up shall be permitted in marginal space except as specified in these Rules (*Refer Figure No. 2.10*).

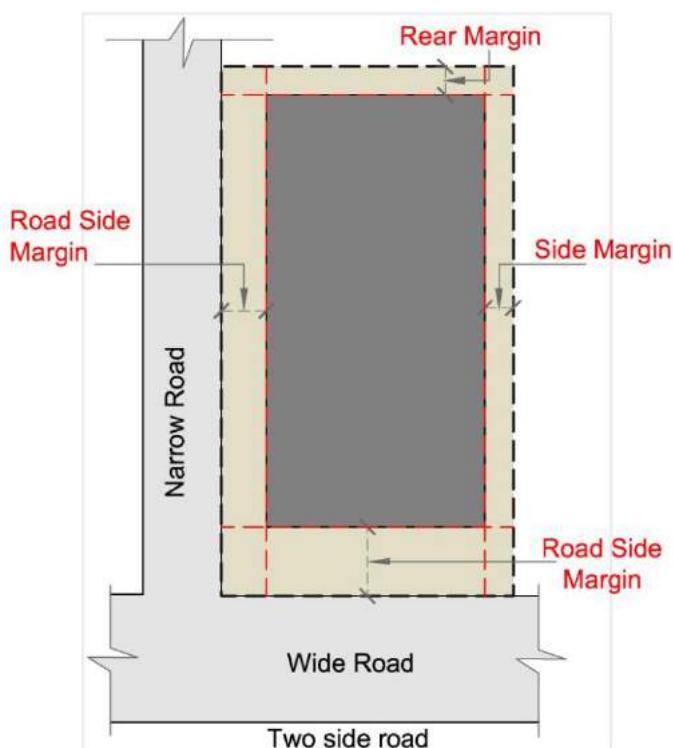


Figure No. 2.10: Margins

- 1 Roadside Margin: means the space provided from the roadside edge of the building unit.
 - 2 Side Margin: means the space provided from the sides of the building unit.
 - 3 Rear Margin: means the space provided from the rear edge of the building unit.
- 2.81 *Member Secretary*: means the member secretary of a Planning and Development Authority appointed by the UT of Dadra and Nagar Haveli, Daman, and Diu.
- 2.82 *Mezzanine Floor*: means an intermediate floor between two floors overhanging or overlooking a floor beneath which is constructed in accordance with these Rules.
- 2.83 *Natural Hazard*: means a potentially damaging natural phenomenon like high intensity earthquake, cyclonic storm, significant flood flow or inundation, landslides, mudflows, avalanches etc.
- 2.84 *Natural Hazard Prone Areas*: means areas with high probability of occurrence of natural hazard.
- 2.85 *Non-Agriculture Permission*: means a permission granted by a Goa, Daman, and Diu Land Revenue Code, 1968 under any law for the time being in force permitting a holder/owner of the land to change the land use from agriculture to non-agriculture.
- 2.86 *Non-Ambulatory Disabilities*: means impairments which confine individuals to wheelchairs.

- 2.87 *Non-Potable Water*: means water for non-domestic consumption uses such as car washing, toilet flushing, gardening, construction, landscaping, irrigation etc. and which is forbidden for domestic consumption as per drinking water standards set by Government/Appropriate Authority.
- 2.88 *Occupant Load*: means number of persons for which the means of egress of a building or portion thereof is designed.
- 2.89 *Open Space*: means an area forming an integral part of the plot, left permanently open to sky.
- 2.90 *Owner*: means a person who receives rent for the use of the land or building or would be entitled to do so if it were let, and includes: -
- 1 An authorised agent or trustee who receives such rent on behalf of the owner.
 - 2 A receiver, executor or administrator, or a manager appointed by any court of competent jurisdiction to have the charge of or to exercise the rights of the owner.
 - 3 An agent or trustee who receives the rent or is entrusted with or is concerned with any building devoted to religious or -charitable purposes; and
 - 4 A mortgage in possession.
- 2.91 *Parapet*: means a low wall or railing built along the edge of roof of a floor such as terrace, balcony, mezzanine, or staircase.
- 2.92 *Parking Space*: means an enclosed, semi-covered or open area including driveway and access aisles required to park vehicles, as per Rules related to parking. Parking spaces shall be served by a driveway connecting them with a street or alley and permitting ingress or egress of vehicles (Refer Figure No. 2.11).

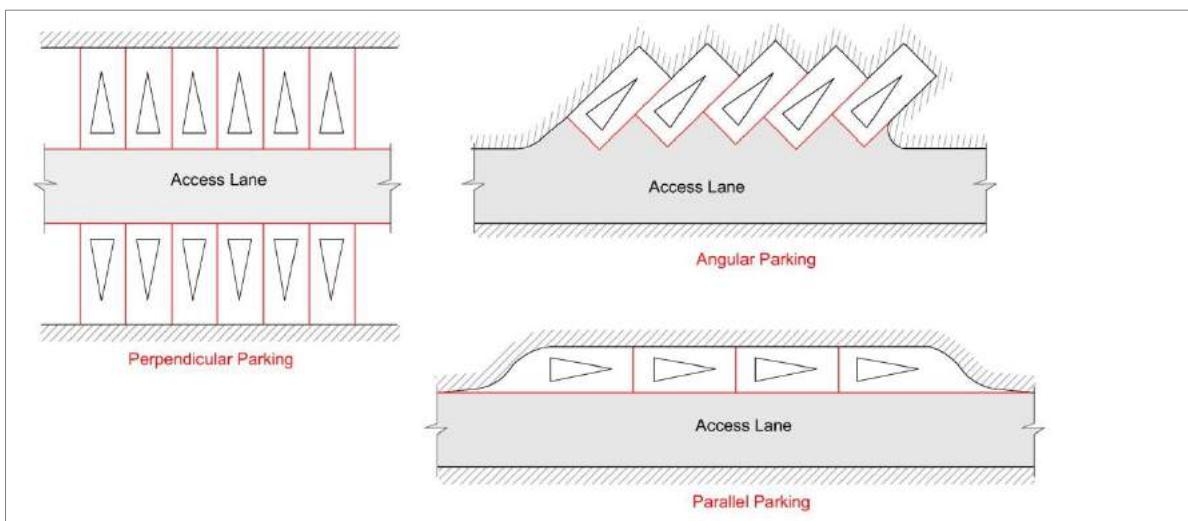


Figure No. 2.11: Parking Space

- 1 *Covered Parking Space*: means an enclosed, semi-covered area including driveway and access aisles required to park vehicles, as per Rules related to parking but does not include the garage-private or public.
 - 2 *Open Parking Space*: means a semi-covered or open area including driveway and access aisles required to park vehicles, as per Rules related to parking. Parking spaces shall be served by a driveway connecting them with a street or alley and permitting ingress or egress of vehicles.
- 2.93 *Partition*: means an interior non load bearing divider one storey or part storey in height.
- 2.94 *Persons on Record*: Architect, Civil Engineer, Structural Designer, Clerk of Works, Fire Protection Consultant on Record and registered with the Competent Authority and undertaking the responsibility for the particular work as prescribed by the Competent Authority.

2.95 *Plinth*: means the solid or hollow volume below the floor which is immediately above the ground level. Also, Hollow Plinth means the space provided below the floor which is on stilts immediately above the ground level for the purpose of parking and other permissible uses (Refer Figure No. 2.12).

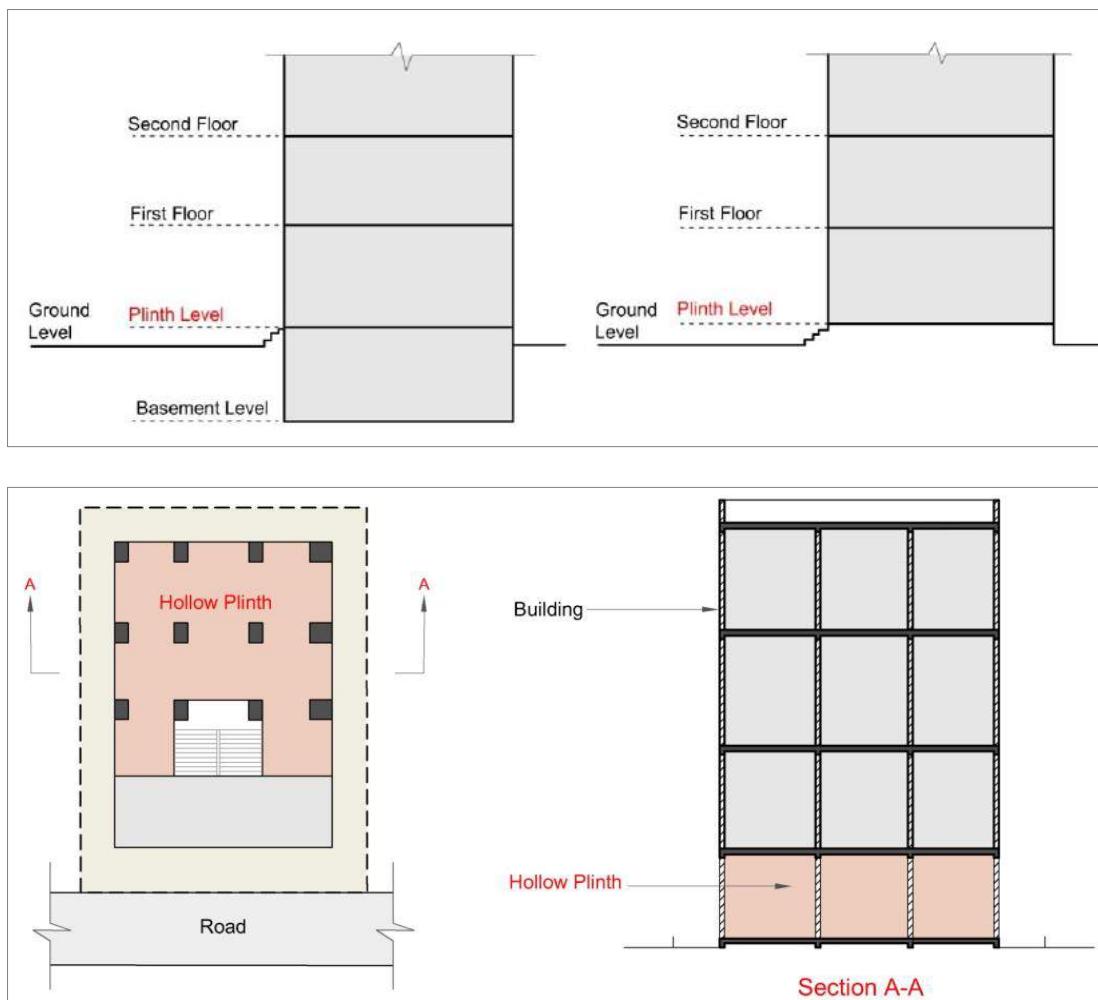


Figure No. 2.12: Plinth

2.96 *Pergola*: means an architectural feature or element of any material, which is used for aesthetic and elevation purpose and open on all sides including top side. In any case it shall not be integral part of any habitable space.

2.97 *Porch*: Means a covered surface supported on pillars or otherwise for the purpose of a pedestrian or vehicular approach to a building exclusive of marginal space (Refer Figure No. 2.13).

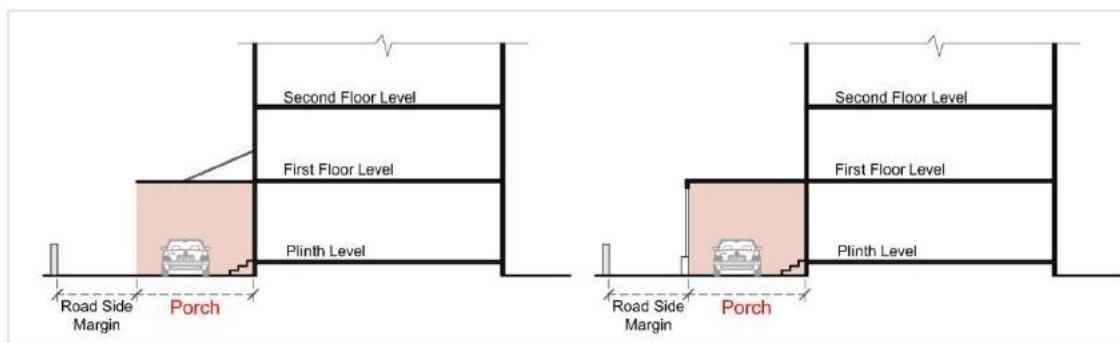


Figure No. 2.13: Porch

2.98 *Premises*: means either:

- 1 A property which is held under a separate record title or for which a separate title record or certificate may be issued and in respect to which a building plan have been or may be issued or
- 2 A building which is in possession as an individual unit by a cross-lease, unit title or company lease and for which a certificate of title is available or
- 3 Land held in public ownership, for a particular purpose or
- 4 Separately assessed to local authority taxes, individual unit within building.

2.98A *Prescribed Authority*: shall mean the authority notified as Prescribed Authority under Dadra and Nagar Haveli and Daman and Diu Town and Country Planning Act 1974.

2.99 *Prohibited Industrial Waste*: means an industrial waste having physical and chemical characteristics in excess as decided by Appropriate Authority for the time being in force.

2.100 *Pre-school*: means a school for young children, also known as kindergarten or nursery.

2.101 *Public Purpose*: The expression of “Public Purpose” includes:

- 1 Provision of land to any end for common use of public in an Outline Development Plan, Town Planning Scheme as enumerated in the Act;
- 2 Provision of village sites, or the extension, planned development or improvement of existing village sites.
- 3 Provision of land for town or rural planning.
- 4 Provision of land for planned development of land from public funds in pursuance of any scheme or policy of Government and subsequent disposal thereof in whole or in part by lease, assignment, or outright sale with the object of securing further development as planned.
- 5 Provision of land for a corporation owned or controlled by the Government.
- 6 Provision of land for residential purposes to the poor or landless or to persons residing in areas affected by natural calamities, or to persons displaced or affected due to implementation of any scheme undertaken by Government, any local Authority or a corporation owned or controlled by the Government.
- 7 Provision of land for carrying out any educational, infrastructure housing, health or slum clearance scheme sponsored by Government, local authority or any other authority or body established by or under any law for the time being in force.
- 8 Provision of land for any other scheme of development sponsored by Government or with the prior approval of appropriate Government, by a local Authority.
- 9 The provision of any premises or building for locating a public office, but NOT acquisition of land for companies.
- 10 The provision of land for a facility for physically challenged person.

2.102 *Renovation and Repair*: means any work to an existing building or structure, which improves its condition without structural alterations or changes to the building or structure.

2.103 *Rear*: means that portion of a building unit which is on the opposite side of the front.

2.104 *Registered Architect / Structural Engineer/ Civil Engineer*: A person on record having prescribed qualifications registered by the Competent Authority.

2.105 *Retrofitting*: means upgrading the strength of an unsafe building by using suitable engineering techniques.

2.106 *Road / Street*: means any road, footway, pathway, passageway, square, court, alley, or passage, accessible whether permanently or temporarily to the public, whether a thoroughfare or not; and shall include every vacant space, notwithstanding that it may be private property and partly or wholly obstructed by any gate, post, chain or other barrier, if houses, shops or other buildings abut thereon and if it is used by any person as a means of access to or from any public place or thoroughfare, whether such person be occupier of such buildings or not, but shall not include any part of such space which the occupier of any such building has a right at all hours to prevent all other persons from using as aforesaid.

2.107 *Road / Street – Public*: means any street.

- 1 Over which the public have a right of way and or which is declared a public street in the Outline Development Plan or any other notification by the Government.

- 2 heretofore levelled, paved, metalled, channelled, seweried or repaired out of municipal or other public funds; .
- 2.108 *Road / Street Level or Grade*: means the officially established elevation or grade of the centre line of the street upon which a plot fronts, and if there is no officially established grade, the existing grade of the street at its midpoint.
- 2.109 *Road / Street line*: means the line defining the side limits of a road / street or the side limits of the proposed ROW of the road as notified by the Government and shall include regular line of street as defined by any Authority.
- 2.110 *Road width or Width of road / street*: means the whole extent of space within the boundaries of a road when applied to a new road/street, as laid down in the city survey, Outline Development Plan, Town Planning Scheme or prescribed road lines by any act or law, and measured at right angles to the course or intended course of direction of such road / street.
- 2.111 *Row houses*: means group of residential buildings, on adjacent plots with or without common walls, often of similar or identical design, situated side by side and joined by common walls and having only front and rear open spaces.
- 2.112 *Service Apartment*: means a type of furnished apartment including kitchen or cooking facility and amenities for daily use, available for short term or long-term stays.
- 2.113 *Service Road*: means a road / lane provided at the front, rear, or side of a plot for service purpose.
- 2.114 *Setback Line*: means the line from an adjoining a street that indicates an extension of a street or a future street that may lawfully extend, in case of a non-Outline Development Plan Road or Town Planning Scheme Road. Roadside margin shall be considered from this imaginary plot boundary thus established. This additional land to be left is defined as setback. The setback line may change from time – to – time as decided by the Competent Authority (*Refer Figure No. 2.14*).

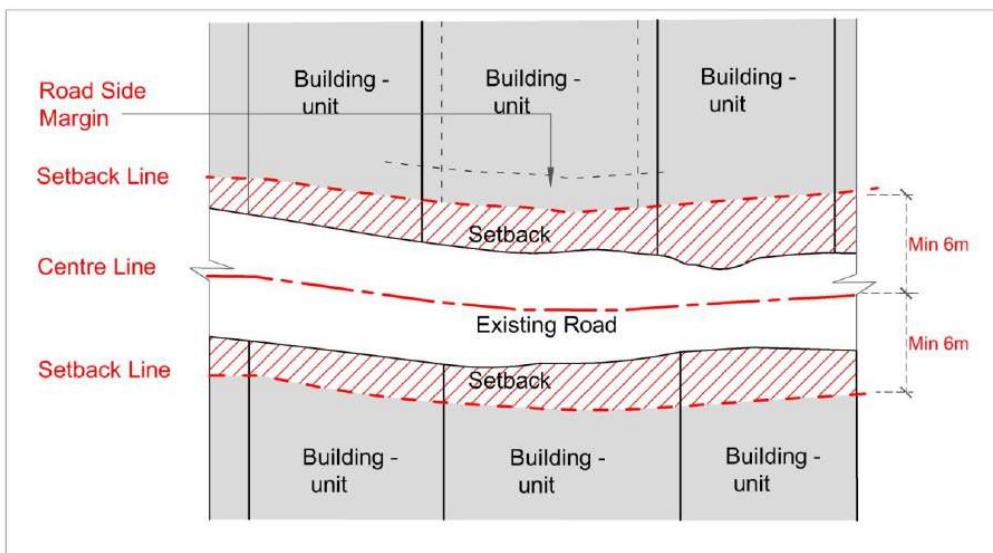


Figure No. 2.14: Setback Line from an Existing Street Not in the ODP/TPS

- 2.115 *Solid Waste*: means and includes solid or semi-solid domestic waste, sanitary waste, commercial waste, institutional waste, catering and market waste and other non-residential wastes, street sweepings, silt removed or collected from the surface drains, horticulture waste, agriculture, and dairy waste, treated bio-medical waste excluding industrial waste, bio-medical waste and e-waste, battery waste, radio-active waste generated in the area.
- 2.116 *SPARSH 2.0 Housing*: means various types of housing developments as delineated in SPARSH 2.0 Notification No- LE/LI/DMN/SPARSH/262(P)/2022/246 dated 06/07/2022 as amended from time to time.
- 1 *Affordable Housing in Partnership Housing*: means a housing project that has been approved by the appropriate Government as Affordable Housing in Partnership project and is entitled for any subsidies, if available, from the Appropriate Government.

- 2 *Low-Cost Housing complexes*: means either such housing in which at least 80% of dwelling units are residential flats having a carpet area of not exceeding 46.5 sq m (500 sq ft) and not less than 30 sq m (325 sq ft) which are intended to be sold to or hired by economically weaker sections of the society, or are labour dormitories with a carpet area of not less than 325 sq ft containing individual toilets which are intended to be hired to labourers, industrial workers etc.
- 3 *Housing under SPARSH*: means such housing which fulfils criterion mentioned in the SPARSH scheme as notified or amended by the Administration of the Union Territory of Dadra and Nagar Haveli or Daman or Diu or any of its predecessors or successors from time to time.
- 4 *Housing under ARHC*: means such housing which fulfils the criterion mentioned in the Affordable Rental Housing Complex scheme as notified or amended by the Union of India or Ministry of Housing and Urban Development from time to time.
- 2.117 *Stair Cabin / Stair Cover / Mumty*: means a structure with a covering roof over a staircase and its landing built to enclose only the stairs for the purpose of providing protection from the weather, and not to be used for human habitation (*Refer Figure No. 2.15*).

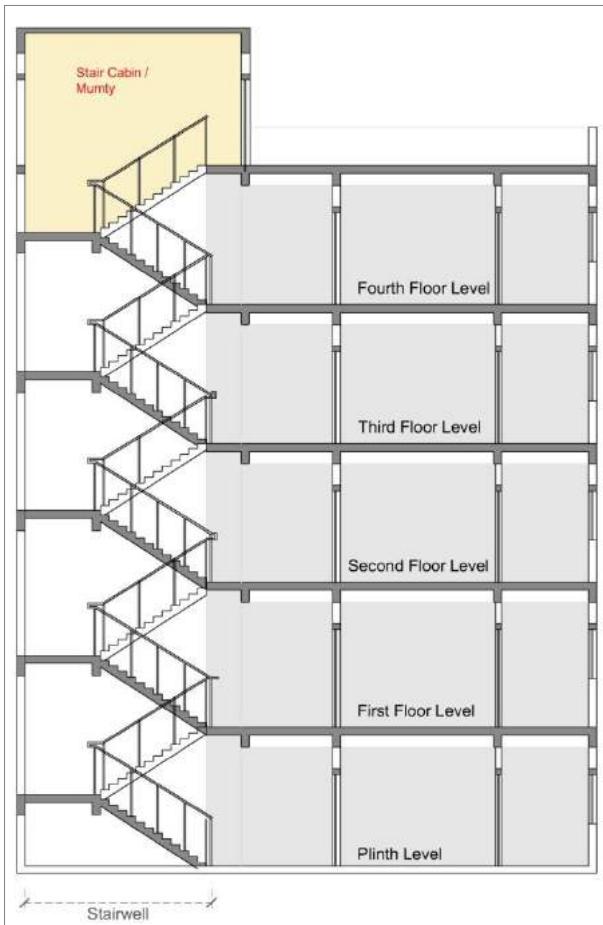


Figure No. 2.15: Stair Cabin / Mumty

- 2.118 *Staircase*: means a flight or series of flights of steps with the supporting framework, casing, and balusters, constructed to connect different floors or levels in a building.
- 2.119 *Stairwell*: means a vertical shaft around which a staircase has been built.
- 2.120 *Storey*: means the portion of a building included between the surface of any floor and the surface of the floor above it, or if there is no floor above it, then the space between any floor and the ceiling next above it. No storey in a building shall be less than 2.9 m.
- 2.121 *Temporary Structure*: means structures such as tents, shamianas etc where roof or walls are not made of RCC, brick, masonry etc., and are erected for temporary or ceremonial purposes.

2.122 *To Erect:* in relation to a building means:

- 1 To erect a new building on any site whether previously built upon or not.
- 2 To re-erect any building of which portions or entire building above the plinth level have been pulled down, burnt, or destroyed.

2.123 *Transferable Development Rights (TDR):* means a mechanism by which the Floor Space assigned to one building unit / plot can be traded for use on another building unit / plot. The Competent Authority shall identify the building unit / plots eligible for selling the TDR, receiving the TDR and the amount of floor space available for trading.

2.124 *Unauthorised Construction:* means any construction that is not approved by the Authority.

2.125 *Use / Occupancy:* Occupancy or Use is either existing occupancy / use or authorised occupancy / use. Existing Occupancy/use means the principal occupancy of a building for which the building or a part of it is used or intended to be used, including contingent subsidiary occupancies. Authorised Occupancy / use means the principal occupancy of an approved building for which the building or a part of it is permitted to be used, including contingent subsidiary occupancies. Mixed / multiple occupancy / use buildings being those in which more than one occupancy / use are present in different portions of the building / intermingled.

1 *Use – Agricultural:* means use of land for horticulture, farming, raising of crops, fruits, vegetables, grass, fodder, trees or any other kind of cultivation, breeding and keeping of live-stock, including horses, donkeys, mules, pigs, fish, poultry and bees, gaushalas and the use of land for any purpose which is ancillary to its cultivation or to any other agricultural purpose but does not include the use of land as a garden which is an appendage to a building and then expression “agriculture” shall be construed accordingly.

2 *Use - Farm buildings:* means a structure erected on land assessed or held for the purpose of agriculture for all or any of the following purposes connected with such land or any other and belonging to or cultivated by the holder thereof, namely:

- For the storage of agricultural implements, manure, or fodder.
- For the storage of agricultural produce.
- or sheltering cattle.
- For the residence of members of the family, servants, or tenants of the holder, or
- For any other purpose which is an integral part of his cultivating arrangement.

3 *Use – Assembly:* means a building or place or part thereof that is used for congregation of people for the cultural, amusement, recreational, social, religious, patriotic, civil, travel and similar such purposes and this includes building/s of auditorium, city hall, town hall, theatre hall, cinema theatre, exhibition hall, museums, party plot, community hall, banquet hall, dance hall, multiplex, shopping mall, stadium, skating rinks, gymnasium, restaurants, eating or boarding houses, places of worship, dance halls, clubs, gymkhana, road, railways, air, sea or other public transportation stations, and recreation areas.

4 *Use – Business / Offices:* means any building or place or part thereof used for transaction of business and / or keeping of books and records such as offices, banks, professional establishments, etc. Use for office includes work for the purpose of administration, clerical work, handling money, telephone, telegraph, publication, and computer operation.

5 *Use – Commercial / Mercantile:* means any building or place or part thereof used for mercantile and business use – shops, stores or markets for display and sale of wholesale / retail goods; offices and services.

6 *Use – Educational:* means a building or place or part thereof that is exclusively used for a preschool, school, college, polytechnic, recognised by the appropriate board or university, or any other Competent Authority involving assembly for instruction, education or recreation, incidental to educational use. Such use includes other incidental uses such as a library or a research institution, quarters for essential staff to reside in the premises, and a building used as a hostel for an educational institution whether situated in its campus or not.

- 7 *Use – Health:* means a building or place or part thereof used for healthcare facility such as medical or diagnostic or research centres, hospitals, nursing homes and care centres for elderly, destitute, orphans, abandoned women, children, and infants.
- 8 *Use – Hospitality:* means a commercial establishment in building or place or part thereof providing lodging and usually meals, entertainment, and various personal services to public on a short-term basis except homestays registered under the law for the time being in force.
- 9 *Use – Industrial:* means a building or space or part thereof wherein products or material is fabricated, assembled, or processed, such as assembly plants, laboratories, power plants, refineries, gas plants, mills, dairies, and factories.
- 10 *Use – Mercantile:* means a building or place or part thereof used for display and sale of wholesale or retail goods / merchandise, including ancillary uses such as office, storage and service facilities in the same premise. This use includes shops, stores, markets, shopping centre, shopping mall, wholesale market.
- 11 *Use – Public Utility:* means a building or premise or part thereof constructed for infrastructure and safety facilities such as electrical sub-station, fire station, bus-station, bus terminals, fuelling station, multi-level parking, water purification facility, pumping station, postal networks, and communication networks etc.
- 12 *Use – Public Offices:* means office facilities in a building or premise or part thereof, constructed/operated by Government (Central / State), Local Bodies and Public Sector Undertakings etc., used for or opted to be used as office / hospital / college / school / hall / exhibition, shops, commercial or for other public purpose activities. This includes buildings such as - Courts, Police Station, Medical facility, Public Library, Civic Centre, Ward, and Zonal Offices for any Authority.
- 13 *Use – Residential:* means a building in which sleeping accommodation is provided for normal residential purposes with sanitation facilities and with or without cooking or dining facilities, and includes one or more family dwellings, hostels, dormitories, apartment units, flats etc.
- 14 *Use – Religious:* means a building or place dedicated to accommodation and service of Religion or other such objects of religious nature. It may have different nomenclature in different religions like temple, mosque, church, gurudwara, synagogue, upashraya, shantniwas, and may have ancillary facilities like ashram, bathing ghat, madrasa and gaushala.
- 15 *Use – Storage:* means a building or place or part thereof used primarily for storage or shelter of goods and merchandise. Such use includes warehouse, cold storage, freight depot, transit shed, store house, public garage, hangar, grain elevator and barn.
- 2.126 *Ventilation:* means the supply of outside air into, or the removal of inside air from an enclosed space.
- 2.127 *Warehouse:* means a building or place or part thereof that is used or intended to be used for the storage of goods for stocking, sale, or similar purpose. It usually has loading docks to load and unload goods from trucks and often have cranes and forklifts for moving goods in and around the structure.
- 2.128 *Waterbody:* means a natural existing low-lying ground, forming a natural waterbody or wherein rainwater gets collected and / or plots designated as Talav / Lake / Pond under Outline Development Plan or any legitimate records.
- 2.129 *Water Closet (WC):* means a privy with an arrangement for flushing the pan with water but does not include a bathroom.
- 2.130 *Water Course:* means a channel that is natural or artificial formed by training or diversion of a natural channel meant for carrying storm and wastewater. A water course that carries storm water discharge of more than 100 hectares area, is termed as major.
- 2.131 *Wayside Shop:* means a shop that is situated at or near the side of a road, path, or highway.
- 2.132 *Wholesale Establishment:* means an establishment wholly or partly engaged in wholesale trade and manufacturing, wholesale outlets, including related storage facilities, warehouses and establishments engaged in truck transport, including truck transport booking warehouses.

2.133 *Window*: means an opening, other than a door, to the outside of a building, which provides all or part of the required natural light, ventilation, or both to an interior space.

Note:

Words not defined here will have the same meaning as in the National Building Code or Dadra and Nagar Haveli and Daman and Diu Town & Country Planning Act, 1974 as amended from time to time.

3 Responsibilities of Owner and / or Developer and Persons on Record

3.1 Responsibilities of Owner / Developer

3.1.1 Owner / Developer to Apply for a Development Permission

Application for the Development Permission can be made by Owner or Developer of the plot on which development / building is proposed.

3.1.2 Responsibilities of Owner or Developer

The Owner or Developer shall:

- 1 Be responsible for ensuring that the development / building complies with these Rules.
- 2 Appoint an Architect on Record / Civil Engineer on Record to ensure compliance with all procedural requirements and to certify that the architectural design and specifications of the proposed development / building comply with the Outline Development Plan and these Rules.
- 3 Appoint a Structural Engineer on Record to certify that the structural design and specifications of the proposed development / building comply with these Rules.
- 4 Appoint a Clerk of Works on Record irrespective of type of building / construction in all building units having proposed built-up area more than 1000 sq m for overall constant supervision of construction work on site and such person appointed shall not be allowed to supervise more than ten such sites at a time.
- 5 Appoint a Supervisor on Record irrespective of type of building / construction in all building-units having proposed built-up area more than 300 sq m or irrespective of built-up area in case of Apartments (DW3), Mercantile, mixed use (mercantile + residential) for overall constant supervision of construction work on site and such person appointed shall not be allowed to supervise more than two such site at a time.
- 6 Certify along with the Clerk of Works on Record that the construction of the building has been undertaken as per detailed design and specifications stipulated by the Architect on Record or Civil Engineer on Record and the Structural Engineer on Record.
- 7 Certify along with the Supervisor on Record that the construction of the building has been undertaken as per detailed design and specifications stipulated by the Architect on Record or Engineer on Record and the Structural Engineer on Record and instruction given by Clerk of Works from time to time.
- 8 Obtain a development permission from the Competent Authority prior to commencement of building.
- 9 Submit construction progress reports and certificates as required to the Competent Authority.
- 10 Obtain an Occupancy Certificate prior to making use or occupying the building.
- 11 Not cause or allow any deviations from the sanctioned drawings in course of execution of the project against the instruction of Architect / Civil Engineer / Structural Designer / Clerk of Works and shall bear all responsibility for any irregularity committed in the use and function of the building or its parts for which the approval has been obtained.
- 12 Ensure that no construction is undertaken during the period that the Development Permission has lapsed, is suspended or cancelled.
- 13 Provide adequate safety measures for structural stability and protection against fire hazards likely from installation of services like electrical installation, plumbing, drainage, sanitation, water supply or any other requirements under the rules.
- 14 Ensure that only names of persons on record are displayed on site and no additional names are mentioned.
- 15 Be required to produce the construction documents and its intended use as per sanctioned plan to any prospective buyer.
- 16 Approval of drawings and acceptance of any statement, documents, structural report, structural drawings, progress certificate, or building completion certificate shall not discharge owner, engineer, architect, clerk of work and structural designer, supervisor, developer from their responsibilities imposed under the act or from the development regulations or from any other law for the time being in force.

- 17 Be held responsible if any unauthorized construction, addition, and alteration is done without prior permission of Competent Authority.
- 18 Take adequate measures to ensure that in the course of work, no damage is caused to the work under construction and the adjoining properties, no undue inconvenience is caused to the people in neighbourhood and no nuisance is caused to traffic & neighbouring people by way of noise, dust, smell, vibration etc.

3.2 Registration of Persons on Record (POR)

3.2.1 Registering with the Competent Authority

The Competent Authority shall register architects, civil engineers, structural engineers, developers, clerk of works and supervisor as Architect on Record (AOR), Civil Engineers on Record (CEOR), Structural Engineers on Record (SEOR), Developer on Record (DOR), Clerk of Works on Record (COWOR) and Supervisor on Record (SOR) respectively. Applications for registration of POR should be made in the format prescribed in Schedule No. 1 and Form No. 1. The Competent Authority / Union Territory Administration may use an Online registration system for Persons on Record.

The registration must be renewed annually.

Provided that any architect, civil engineer, structural engineer, developer, clerk of works and supervisor shall not be required to get himself/ herself registered with more than one Competent Authority. That is to say, one registration with any Competent Authority shall be valid for seeking permission within jurisdiction of any other Competent Authority.

Provided further that any such person on record shall have to register himself compulsorily with the Competent Authority within whose jurisdiction such person ordinarily resides.

3.2.2 Minimum Qualifications and Competence Requirements

Minimum qualifications necessary for registration as Persons on Record shall be as specified in Schedule No. 1.

In the case of Fire Protection Consultant on Record (FPCOR), the minimum qualifications and process of registration etc. shall be such as specified by the Planning and Development Authority from time to time. So long as no such qualifications are specified, any person or agency registered as Fire Consultant, Fire Safety Officer or Fire Expert or by any other name in the neighbouring states of Gujarat and Maharashtra, and who has been empowered to perform functions similar to those mentioned in clause 3.3.7, or any person or agency registered as Qualified Agency by the Fire Department DNH and Daman and Diu under DNH and Daman Diu Fire Regulation 2021—who is willing to perform the functions mentioned in clause 3.3.7 and who is certified by the Fire Officer to be qualified to perform the functions of Fire Protection Consultant on Record (FPCOR)—shall be allowed to function as Fire Protection Consultant on Record (FPCOR) in the UT of DNH and DD.”

3.2.3 Registration Fee and Security Deposit

Registration fee and security deposit for registering Persons on Record with the Competent Authority shall be determined by the Competent Authority and are specified in Table No. 3.1.

Table No. 3.1: Registration Fees for Registration as Persons on Record

No.	Person on Record	Registration Fee Payable Annual	Deposit Payable One Time
(1)	(2)	(3)	
1	Architect on Record (AOR)*	Rs.4500	Rs.45000
2	Civil Engineer on Record (CEOR)*	Rs.4500	Rs.45000
3	Structural Engineer on SEOR 1	Rs.4500	Rs.45000

No.	Person on Record	Registration Fee Payable Annual	Deposit Payable One Time
(1)	(2)	(3)	
	Record (SEOR) ¹	SEOR 2	Rs.3500
		SEOR 3	Rs.2500
4	Clerk of Works on Record (COWOR) ²	COWOR 1	Rs.2000
		COWOR 2	Rs.1500
		COWOR 3	Rs.1000
5	Supervisor of Works on Record (SOR) ³	SOR 1	Rs.1000
		SOR 2	Rs.500
		SOR 3	Rs.250
		SOR 4	Rs.150
6	Developer	Nil	A onetime deposit of Rs. 2 lakhs shall be applicable on all projects where the BUA is more than 700 sq m. The deposit shall be released after one year of obtaining the Occupancy Certificate.

Notes:

*Only the architect or civil engineer of record is required to register for a specific project. In accordance with the current regulations, each project may have only one Architect on Record (AOR), or Civil Engineer on Record (CEOR) registered.

1 For Grade of SEOR refer Schedule No.1

2 For Grade of COWOR refer Schedule No.1

3 For Grade of SOR refer Schedule No.1

4 Registration of Fire Protection Consultant on Record (FPCOR) shall be specified by the Planning and Development Authority from time to time.

3.2.4 Cancellation of Registration

A registration is liable to be cancelled temporarily or permanently by the Competent Authority, if the registered person is found guilty of negligence or default in discharge of responsibilities and duties or of any breach of any of these Rules. In any such case, the said person shall be given a show cause notice and reasonable opportunity of being heard within the period of 7 days of the receipt of the notice, by the Competent Authority for the purpose of these Rules. Appeal against the order of Competent Authority shall lie before Prescribed Authority. Construction works of all projects in which the delinquent person on record is a member may be stopped till the person on record is associated with the project.

3.2.5 Penalties

Procedures for ascertaining whether a Person on Record has failed in discharging his responsibilities in the context of these Rules shall be determined by the Competent Authority and is specified in Schedule No. 2. Penalties for failing to discharge responsibilities shall also be determined by the Competent Authority and are also specified in Schedule No. 2.

3.3 Responsibilities of Individual Persons on Record (POR)

All POR have to jointly certify Technical Audit Report as per Schedule No. 3 for all high-rise residential buildings and for all type of non-residential buildings.

3.3.1 Responsibilities of all POR

The overall responsibilities of all POR shall be as follows:

- They shall prepare the plan of the buildings/ layout in accordance with the provisions of General Development Rules in such a manner that they are compatible and accessible to the persons who will reside therein.
- They shall inform the Competent Authority of their resignation from any work within 7 days of the date of such resignation.

- 3 They shall prepare and submit all plans, new or revised as applicable, documents and other details as required, in a neat, clean, and legible manner and on a durable paper properly arranged and folded in accordance with the prevailing Rules along with the soft copy of the same.
- 4 They shall submit plans, documents and details without any scratches or corrections. Only small corrections will be permitted with proper initials. They shall correctly represent all the site conditions including mature trees.
- 5 They shall personally comply with all requisitions / queries received from the Competent Authority in connection with the work under their charge, promptly expeditiously and at one time. Where they do not agree with requisitions/queries, they shall state objections in writing, otherwise for non-compliance of any requisition / query within stipulated time, the plans and applications shall be filed forthwith, and shall not be re-opened. In case the owner or developer is not cooperating in compliance of the points raised by the authority, an intimation to PDA within 15 days of this non-cooperation by PORs to this effect shall be considered a sufficient reason and accordingly the application shall be rejected.
- 6 They shall immediately intimate to the owners the corrections and other changes they make on the plans, documents, and details as per requisitions / queries from the Competent Authority.
- 7 They shall clearly indicate on every plan, document & submission, the details of their designation such as registered AOR, CEOR, SEOR, COWOR, SOR & FPCOR with registration number, date, full name, and their address below the signature for identification.
- 8 They or their authorised agent or employee, shall not accept the employment for preparation and submission of plans - documents and supervision of any work if the same is intended or proposed to be or being executed or already executed in contravention of any Rules or Rules under the Act.
- 9 Approval of drawings and acceptance of any statements, documents, structural reports, structural drawings, progress certificates, or building completion certificates shall not absolve the owner, engineer, architect, clerk of work, supervisor, structural designer, developer, or owner from the responsibilities imposed under the Act, the Development Rules, and the laws of tort and local acts.

Specific responsibilities shall be follows:

3.3.2 Architect on Record (abbreviated as AOR)

The Architect on Record shall:

- 1 Be the Person on Record responsible for ensuring compliance with all procedural requirements specified in these Rules.
- 2 Scrutinize and verify the architectural design and specifications of the proposed building.
- 3 Certify that the architectural design and specification of the proposed building comply with these Rules using the format prescribed in Form No. 2.
- 4 Immediately inform the Competent Authority in writing, if in his/her opinion, the construction of the building is not being undertaken in accordance with the sanctioned design requirement in a format as per Form No. 3.
- 5 Inform the Competent Authority in writing, within 7 working days, if for any reason he/she is relieved of his/her responsibilities or he/she relieves himself of responsibility as the Architect on Record for the building using the format prescribed in Form No. 4. In case of termination of services as Architect on Record, inform the Competent Authorities about the stage of work at which services are terminated. The registered architect appointed as of the preceding architect shall inform within 7 days about his/her appointment on the job and inform the Competent Authority of any deviation that might have occurred on the site with reference to the approved drawings and the stage at which he/she is taking over the charge. After Competent Authority has inspected the site for his/her report, the newly appointed architect shall allow the work to proceed under his/her direction.
- 6 On behalf of the owner, submit the progress certificates, completion certificates and obtain the Occupancy Certificate as required under these Rules.

- 7 Inform the Competent Authority immediately on termination of the services of the SEOR or COWOR.
- 8 Instruct the relevant agency that adequate provisions are made for ensuring the safety of workers and others during excavation, construction, and erection.
- 9 Instruct the relevant agency that adequate provisions are made for providing safe and adequate temporary structures required for construction and development.

3.3.3 Civil Engineer on Record (abbreviated as CEOR)

The Civil Engineer on Record shall:

- 1 Be the Person on Record responsible for ensuring compliance with all procedural requirements specified in these Rules.
- 2 Scrutinize and verify the structural design and specifications of the proposed building.
- 3 Certify that the structural design and specification of the proposed building comply with these Rules using the format prescribed in Form No. 2.
- 4 Immediately inform the Competent Authority in writing, if in his/her opinion, the construction of the building is not being undertaken in accordance with the sanctioned design requirements, in the format stipulated in Form No. 3.
- 5 Inform the Competent Authority in writing, within 7 working days, if for any reason he/she is relieved of his/her responsibilities or he/she relieves himself/herself of responsibility as the Civil Engineer on Record for the building using the format prescribed in Form No. 4. In case of termination of services as Civil Engineer on Record, inform the Competent Authority about the stage of work at which services are terminated. The registered Civil Engineer appointed as replacement of the preceding Engineer shall inform within 7 days about his / her appointment on the job and inform the Competent Authority of any deviation that might have occurred on the site with reference to the approved drawings and the stage at which he / she is taking over the charge. After Competent Authority has inspected the site for his/her report, the newly appointed Civil Engineer shall allow the work to proceed under his/her direction.
- 6 On behalf of the owner, submit the progress certificates, completion certificates and obtain the Occupancy Certificate as required under these Rules.
- 7 Inform the Competent Authority immediately on termination of the services of the Structural Engineer on Record or Clerk of Works on Record.
- 8 Instruct the relevant agency that adequate provisions are made for ensuring the safety of workers and others during excavation, construction, and erection.
- 9 Instruct the relevant agency that adequate provisions are made for providing safe and adequate temporary structures required for construction and development.

3.3.4 Structural Engineer on Record (abbreviated as SEOR)

The Structural Engineer on Record shall:

- 1 Scrutinize and verify the structural design and specifications of the proposed building.
- 2 Prepare a report of the structural design.
- 3 Supply two copies of structural drawings to the COWOR
- 4 Advise the Owner/developer/Clerk of Works for arranging for tests and their reports for soil, building material etc. for his evaluation and design consideration.
- 5 Submit the certificate of structural safety and over all structural soundness of the proposed building and its compliance to the Rules to Competent Authority using the format prescribed in Form No. 2.
- 6 To prepare detailed structural design and to prescribe the method and technique of its execution strictly on the basis of the National Building Code or relevant Indian Standard specifications.
- 7 Detailed structural drawings and specifications for execution indicating thereon, design live loads, safe soil bearing capacity, specifications of material, assumptions made in design, special precautions to be taken by contractor to suit the design assumptions etc. whatever applicable.
- 8 Immediately inform the Competent Authority in writing, if in his opinion, construction of the building is not being undertaken in accordance with the structural design and specifications stipulated by him, in the format stipulated in Form No. 3
- 9 In case of serious default, be blacklisted / de-registered by the Competent Authority

- 10 Inform the Competent Authority in writing, within 7 working days, if for any reason he is relieved of his responsibilities as the Structural Engineer on Record for the building, using the format prescribed in Form No. 4

3.3.5 Clerk of Works on Record (abbreviated as COWOR)

The Clerk of Works on Record shall:

- 1 Undertake all necessary measures, including but not limited to, adequate inspection during construction to ensure that the construction of the building is undertaken as per detailed design and specifications stipulated by the AOR and by the SEOR
- 2 Immediately inform the Competent Authority in writing, if in his opinion, the construction of the building is not being undertaken in accordance with the sanctioned design and specifications, in the format stipulated in Form No. 3.
- 3 Bring to the notice of the SEOR and AOR / EOR any situation or circumstances which in his opinion are liable to endanger the safety of structure.
- 4 Inform the Competent Authority in writing, within 7 working days, if for any reason he is relieved of his responsibilities or he relieves himself of responsibility as the Clerk of Works for the building using the format prescribed in Form No. 4. In case of termination of services as Clerk of Works, inform the Competent Authorities about the stage of work at which services are terminated. The registered Clerk of Works appointed as replacement of the preceding Clerk of Works shall inform within 7 days about his appointment on the job and inform the Competent Authority of any deviation that might have occurred on the site with reference to the approved drawings and the stage at which he is taking over the charge. After Competent Authority has inspected the site for his report, the newly appointed Clerk of Works on Record (COWOR) shall allow the work to proceed under his direction.
- 5 On behalf of the owner, submit the progress certificates, completion certificates and obtain the Occupancy Certificate as required under the Rules.
- 6 Deposit with the Competent Authority one set of working drawings of the works executed along with the progress certificates before proceeding to the next stage of the work.
- 7 Inform the Competent Authority immediately on termination of the services of any of Person on Record and shall not allow the work to continue till the vacancy is filled by appointment of another person and the certificate of appointment of such person is submitted to the Competent Authority within 7 days of his/her appointment.
- 8 Instruct the relevant agency that adequate provisions are made for ensuring the safety of workers and others during excavation, construction, and erection.
- 9 Instruct the relevant agency that adequate provisions are made for providing safe and adequate temporary structures required for construction and development.
- 10 Take adequate measures to ensure that no damage is caused to the work under construction and the adjoining properties.
- 11 Ensure that no undue inconvenience is caused in the course of his work to the people in neighbourhood.
- 12 Ensure that no nuisance is caused to traffic and neighbouring people by way of noise, dust, smell, vibration etc., in the course of the work.
- 13 Not be permitted to supervise more than ten independent building units at a given time as provided in these General Development Rules.
- 14 Be considered as Supervisor until the issue of Occupancy Certificate.

3.3.6 Supervisor of Works on Record (abbreviated as SOR)

The Supervisor of Works on Record shall:

- 1 Undertake all necessary measures, including but not limited to, adequate inspection during construction to ensure that the construction of the building is undertaken as per detailed design and specifications stipulated by the AOR and by the SEOR and instruction given by COWOR.
- 2 Immediately inform the developer and Competent Authority in writing, if in his opinion, the construction of the building is not being undertaken in accordance with the sanctioned design and specifications, in the format stipulated in Form No. 3.

- 3 Bring to the notice of the SEOR and AOR/CEOR/COWOR any situation or circumstances which in his opinion are liable to endanger the safety of structure.
- 4 Inform the Competent Authority in writing, within 7 working days, if for any reason he is relieved of his responsibilities or he relieves himself of responsibility as the supervisor of Works for the building using the format prescribed in Form No. 4. In case of termination of services as Supervisor of Works, inform the Competent Authorities about the stage of work at which services are terminated. The registered Supervisor of Works appointed as replacement of the preceding supervisor of Works shall inform within 7 days about his appointment on the job, and inform the Competent Authority of any deviation that might have occurred on the site with reference to the approved drawings and the stage at which he is taking over the charge. After Competent Authority has inspected the site for his report, the newly appointed Supervisor of Work on Record shall allow the work to proceed under his direction.
- 5 Instruct the relevant agency that adequate provisions are made for ensuring the safety of workers and others during excavation, construction, and erection.
- 6 Instruct the relevant agency that adequate provisions are made for providing safe and adequate temporary structures required for construction and development.
- 7 Take adequate measures to ensure that no damage is caused to the work under construction and the adjoining properties.
- 8 Ensure that no undue inconvenience is caused in the course of his work to the people in neighbourhood.
- 9 Ensure that no nuisance is caused to traffic and neighbouring people by way of noise, dust, smell, vibration etc., in the course of the work.
- 10 Not be permitted to supervise more than two independent building units at a given time as provided in General Development Rules within 500 m peripheral area of each site.
- 11 Be considered as Supervisor, until the issue of Occupancy Certificate.

3.3.7 Fire Protection Consultant on Record (FPCOR)

The Fire Protection Consultant on Record (FPCOR) shall be required for all buildings listed in Schedule No. 4 and shall:

- 1 Undertake all necessary measures, including but not limited to, adequate inspection during construction to ensure that the construction of the building is undertaken as per detailed design and specifications stipulated by the AOR and by the SEOR.
- 2 Certify that the design and specification of the proposed building comply with Fire Rules in Part 3 (II) and The Dadra and Nagar Haveli and Daman & Diu Fire and Emergency Service Regulation, 2021 as amended from time to time using the format prescribed in Form No. 2.
- 3 Immediately inform the Competent Authority in writing, if in his opinion, the construction of the building is not being undertaken in accordance with the sanctioned design and specifications stipulated by the AOR or CEOR and the SEOR, using the format prescribed in Form No. 3.
- 4 Bring to the notice of the SEOR and AOR or CEOR any situation or circumstances which in his opinion are liable to endanger the fire protection and safety of structure.
- 5 Inform the Competent Authority in writing, within 7 working days, if for any reason he is relieved of his responsibilities or he relieves himself of responsibility as the Fire Protection Consultant on Record (FPCOR) for the building using the format prescribed in Form No. 4. In case of termination of services as Fire Protection Consultant on Record (FPCOR), inform the Competent Authorities about the stage of work at which services are terminated. The registered FPCOR appointed as replacement of the preceding FPCOR shall inform within 7 days about his appointment on the job and inform the Competent Authority of any deviation that might have occurred on the site with reference to the approved drawings and the stage at which he is taking over the charge. After Competent Authority has inspected the site for his report, the newly appointed Fire Protection Consultant on Record (FPCOR) shall allow the work to proceed under his direction.
- 6 Instruct the relevant agency that adequate provisions are made for fire prevention and safety during construction and development.

4 Development Permission

4.1 Development Permission Required

As specified u/s 43 of The Dadra and Nagar Haveli and Daman and Diu Town & Country Planning Act, 1974 as amended from time to time, no person shall undertake any development without obtaining a Development Permission in writing, prior to commencement of development.

A Development Permission shall mean a Direct Development Permission issued either by an Architect on Record / Civil Engineer on Record or a Development Permission granted by the Competent Authority.

In consonance with the provision of section 49 of The Dadra and Nagar Haveli and Daman and Diu Town & Country Planning Act, 1974 as amended from time to time, these Rules shall be followed by every Authority for granting Permission for subdivision or amalgamation of land.

4.2 Development Permission Not Required

- 1 No development permission shall be required for undertaking minor alterations and works in all buildings as listed below.
 - a) Plastering and patch repairs.
 - b) Whitewashing, painting, and coating of building surfaces.
 - c) Construction of non-load bearing false ceilings.
 - d) Flooring and re-flooring.
 - e) Opening of new doors, windows, and ventilators such that they do not open directly on to adjoining plots.
 - f) Repairing doors and windows in the same location including change in size.
 - g) Rebuilding an existing wall, repairing, and plastering it.
 - h) Changing roof tiles and repairing the roof without increasing the existing room height.
 - i) Repairing an existing staircase.
 - j) Changing or repairing flooring at any floor or height. This only includes wood, stone and metal flooring and does not include RCC flooring.
 - k) Constructing new lofts allowed as per Rules including repairing them.
 - l) Constructing a new toilet block within standalone buildings.
 - m) Construction of water closets.
 - n) Construction of internal non-masonry partitions within the building without affecting any pre-approved exits or currently required exits in the building.
 - o) Construction or repair of parapet, railing, compound wall or wire fencing.
 - p) Construction of a water tank or wash area in open area of the building-unit or terrace for residential use only (this does not include building a swimming pool or tanks for commercial use).
 - q) Constructing and repairing weather sheds within the building unit and not projecting on to a public street.
 - r) Installing metal grill in verandah or courtyard.
- 2 Such works shall be carried out only after ascertaining that they are as per these Rules and that the work does not pose any danger, or it does not cause danger to other parts.
- 3 If the construction is falling under road line, then required action, prescribed, is undertaken by an agreement or deposits.
- 4 Works mentioned in Clause 4.2 (1) shall not be permitted without permission of Competent Authority if the area has been declared as an area of special architectural significance by Competent Authority

4.3 Grant of a Development Permission

4.3.1 Grant of a Development Permission

Grant of a development permission does not constitute acceptance of correctness, confirmation, approval, or endorsement of:

- 1 Title, ownership, and easement rights of the building unit for which the development is proposed.
- 2 Variation in area from recorded areas of a building unit.
- 3 Location and boundary of building unit.
- 4 Workmanship, soundness of material and structural safety of the proposed development.
- 5 Structural reports and structural drawings.

And shall not bind or render the Competent Authority liable in any way in regard to (1), (2), (3), (4) and (5) above.

4.3.2 Liability

Notwithstanding any Development Permission granted under the Act and these Rules, any person undertaking any development work shall continue to be wholly and solely liable for any injury or damage or loss whatsoever that may be caused to anyone in or around the area during and after such construction and no liability whatsoever in this regard shall be cast on the Competent Authority or any officer / employee to whom power has been delegated.

4.4 Lapse, Suspension or Cancellation of a Development Permission

4.4.1 A Development Permission shall Lapse

- 1 On expiry of time for which the development permission was granted unless the same is extended before such expiry.
- 2 On change in material facts of discovery of new facts related to material aspects of development permission like ownership, developer identity, capacity of owner or developer, misrepresentation of any facts or fraud committed upon the authority etc.

4.4.2 A Development Permission shall stand Suspended

- 1 On change of any person in record unless the factum of such change was communicated to Competent Authority at least 7 days in advance in accordance with these Rules.
- 2 For up to 60 days in total by a notice of the Competent Authority for specific reasons to be communicated in writing to the developer.
- 3 Upon initiation of any disciplinary proceedings against any person on record.

4.4.3 A Development Permission shall Stand Cancelled (Form No. 5)

- 1 By an order of the Competent Authority competent to grant the development permission issued after giving the developer / owner a reasonable opportunity of being heard on
 - a) Violation of any condition subject to which the permission was granted.
 - b) On non-fulfilment of any condition or duty imposed by these Rules or the permission which the developer was required to fulfil.

Provided that Architect on record shall not be considered as authority competent to grant Development permission within the meaning of these Rules. For direct development permission, it shall be presumed that appropriate officer of the Competent Authority granted the development permission.

- 2 In a given area by any general order of the government while declaring Town Planning Scheme or any similar scheme.

4.4.4 General Provisions regarding Lapse, Suspension, or Cancellation of the Development Permission

- 1 Development permission may be cancelled even after the grant of Occupancy Certificate if any new fact related to material misrepresentation or violation comes to the knowledge of Competent Authority.
- 2 On cancellation of development permission any development shall become unauthorised, and it shall be presumed that the development was and has always been unauthorised.
- 3 Development permission shall not be cancelled if the same can be regularised on payment of penalties specified in the Schedule No. 5D. That is to say, what can be regularised should be regularised.

4.5 Revision of a Development Permission

- 1 Changes or revisions in the sanctioned design and specification of a development may be made provided, that a Revised Development Permission is obtained before construction is undertaken, on the portion of the development that deviates from the Sanctioned Design and Specifications. These may be:
 - a) Change in utilised FSI
 - b) Change in parking area
 - c) Change in orientation / location of the building
 - d) Change in size or location of the Common Plot
 - e) Change in use of building or part thereof
 - f) Change in building unit and or blocks which affects the approved layout.
 - g) Change in Outline Development Plan / Town Planning Scheme which affects building unit and approved buildings / layout.
- 2 Procedures for obtaining a Revised Direct Development Permission and obtaining a Revised Development Permission are specified in Rule No. 4.12 and 4.13 respectively.

4.6 Extension / Revalidation of a Development Permission

- 1 A Development Permission shall remain valid for three years and can be extended for up to one year at a time, with a maximum total extension period of three years. This adds up to a total of six years from the date the permission was originally granted. The validity starts from the date of the initial development permission. Once the six-year period is over, a new Development Permission needs to be obtained.
- 2 A suspended Development Permission may be revalidated on payment of penalties / fees as specified in Schedule No. 5D. Any construction done after the permission is suspended shall be deemed to be unauthorised unless the same were regularised as per the Schedule No. 5D.

4.7 Unauthorized Development

4.7.1 Unauthorized Development

Any development undertaken without or in contravention of a valid Development Permission, or during cancellation of or upon cancellation of development permission shall be an Unauthorized Development and shall be deemed to have always been an unauthorised development.

4.7.2 Dealing with Unauthorized Development

- 1 Competent Authority, or such other officer as may have been authorised by it, after conducting and getting a site inspection report, by a written notice in the format prescribed in Form No. 6, require the person undertaking unauthorised development to stop the same forthwith and may further require the person to either get the construction regularised—if the same is possible within these Rules—or to demolish the same within 30 days.

This written notice may be affixed to any part of the premise and shall be deemed a sufficient intimation to the occupier of such building or part of building. If the person carrying out such work or doing such thing is not the owner at the time of giving such notice, such person shall be liable for obeying the directions of the Competent Authority.

If the construction is not stopped immediately, the Competent Authority, or the authorised officer, shall be entitled to seek help of police and police shall be duty bound to assist the authority or officer in getting the construction stopped. The Competent Authority or the officer, may in its discretion seal the premises to stop such construction from happening.

Competent Authority, or authorised officer may also seek help of local authorities in assisting it in preventing such construction from happening. Local authority shall be duty bound to assist the authority or the officer in discharge of such functions.

If the construction is not capable of being regularised within existing framework of Rules, or if such request is not received within 30 days, or if no reply is received, the Competent Authority, or such other officer as may have been authorised by it: -

- a) Seal or remove the unauthorised construction.
- b) Recover the cost of such sealing or removal from the person carrying out the development or the owner or both
- c) Proceed in accordance with Town and Country Planning Act or Municipal Council Regulation and register a criminal complaint against the accused.

- 2 In cases where development has already started/commenced on site without obtaining Development Permission, but where this development is in accordance with these Rules, the Competent Authority may grant development permission on the merits. For such development, considering it to unauthorised penalty, as specified in Schedule No. 5D shall be charged in addition to other fees / charges/ deposits etc.

4.7.3 Undertaking Unauthorized Development to be a Cognizable Offence

As provided for u/s 50(A) of the Act, undertaking an Unauthorised Construction is a cognizable offence to which the Code of Criminal Procedure, 1973 shall apply, and an Owner undertaking such construction may face prosecution(s) under provisions of section 51 of the Act.

4.8 Relaxation, Interpretation and Conflict Resolution Mechanism

4.8.1 Grant of Relaxation

- 1 “Grant of Relaxation” means grant of permission to deviate from these Rules / specific Rule.
- 2 The Prescribed Authority may for reasons to be recorded in writing, in cases of public interest grant relaxation to the government or any local authority or a government owned autonomous body in respect of any development permission. However, any relaxation shall not compromise fire and structural safety requirements of the building / development.
- 3 Except for the authority mentioned above, and conditions mentioned above, no other relaxation from the operations of these Rules, except as provided in the schedule shall be granted by any authority to any applicant.

4.8.2 Prescribed Authority to Clarify and Interpret Provisions of the Rules

Prescribed Authority, or such other officer or committee as may be appointed by it, shall clarify or interpret provisions of these Rules, as specified below. Clarifications or interpretations made by the Prescribed Authority shall be final and binding.

- 1 Decide on matters where it is alleged that there is an error in any order, requirement, decision or determination made by any Competent Authority under delegation of powers in Rules or interpretation in the application of these Rules.
- 2 Interpretation of road alignment as per site situation.
- 3 Authorize the erection of a building or the use of premises for a public service undertaking for public utility purposes only, where it finds such an authorization to be reasonably necessary for the public convenience and welfare, even if it is not permitted in any land use zone classification.

4.8.3 Conflict Resolution Mechanism and Appeals against unauthorised development and refusal to grant development permission or occupancy certificate.

- 1 Prescribed authority, or any officer or committee authorised by it, shall be authorised to hear appeal against notices of unauthorised construction, refusal to grant or grant of any occupancy certificate or development permission.
Provided that different officers or committees may be appointed by the prescribed authority to hear different appeals.
Provided further that all such appeals shall be deemed to have been heard by the prescribed authority and shall be deemed to have always been heard by the prescribed authority.

Table No. 4.1: Fee for Appealing Before Prescribed Authority

No.	Members	Designation
1	Against unauthorised development	Rs 1 /sq m of Built-Up Area
2	Against Grant or Refusal to Grant Development Permission or Occupancy Certificate	Same as Scrutiny Fees
3	Against Any other Order	Rs. 10000

- 2 All authorities in the territory shall be bound by the interpretation or the decision of the prescribed authority.

4.9 Penalties

Any person contravening any of the Rules or Provisions of the Outline Development Plan shall on such contravention be liable to a punishment as provided in the [Dadra and Nagar Haveli], Daman and Diu Town & Country Planning Act, 1974, amended from time to time, and Rules framed there under as in force from time to time.

4.10 Obtaining a Direct Development Permission

4.10.1 Application, Documents and Registration

- 1 Development may be commenced by the owner under the following conditions, without seeking Development Permission from the Competent Authority and it shall be treated as Direct Development Permission:
 - a) If the building unit size is up to 500 sq m and built-up area is up to 300 sq m.
 - b) Development shall not exceed a maximum height of 10 m.
 - c) Development is for self-use and meant for residential purpose only.
- 2 Architect on Record / Civil Engineer on Record in the format prescribed in Form No. 7, certifies that the proposed development complies with these Rules shall be deemed to be a Development Permission granted by the Competent Authority.
- 3 It shall be the responsibility of the Architect on Record / Civil Engineer on Record issuing the Direct Development Permission to register the same with the Competent Authority within 15 working days of issue of Direct Development Permission. Format of Application for Registering Issue of Direct Development Permission is prescribed in Form No. 8.
- 4 Before grant of such permission the Architect / Civil Engineer shall ensure that the grant of permission is not in contravention of any information or direction of the Competent Authority published on such notice board or such website as may be notified by the Competent Authority from time to time.
- 5 The plans and documents, in duplicate, to be submitted along with registration of Direct Development Permission application to the Competent Authority are prescribed in Schedule No. 6A and Schedule No. 6D. The format for submission of drawings, specifications and documents is specified in Schedule No. 6C.

4.10.2 Fees and Charges

All fees and charges for obtaining a direct development permission are listed in Schedule No. 5A. The fees and charges shall be determined by the Competent Authority from time to time.

4.10.3 Scrutiny of Application, Registration or Refusal of a Direct Development Permission

- 1 The Competent Authority may undertake scrutiny of the application for registering issue of Direct Development Permission.
- 2 The Competent Authority shall communicate the registration of issue of the Direct Development Permission, to the Architect on Record / Civil Engineer on Record, within 15 working days of date of receipt of application using the format prescribed in Form No. 9.
- 3 Issuance of Form No. 9, by the Competent Authority shall mean that the issue of the Direct Development Permission has been registered by the Competent Authority.
- 4 In the event that the Competent Authority does not issue Form No. 9 within a period of 15 working days of date of receipt of application, it shall be deemed that the Competent Authority has registered the issue of the Direct Development Permission.
- 5 In the event that the Competent Authority refuses the Direct Development Permission, it shall communicate the reasons for refusal to the AOR within 15 working days from the date of receipt of application, using the format specified in Form No. 9.
- 6 The Competent Authority shall handover the second copy of plan to the applicant duly acknowledged, which shall be kept for inspection on site.

4.10.4 Penalties

Any development undertaken shall be in conformity of these Rules. Financial penalty, for different conditions of commencement, shall be levied as prescribed in Schedule Rule No. 4.8 and Schedule No. 5D for unauthorised development.

4.11 Obtaining a Development Permission

4.11.1 Application, Documents and Registration

- 1 A owner / developer may make an application for development / building / layout / subdivision / amalgamation on a building unit / plot using Form No. 10A. Application for brick kiln, mining and quarrying on a building unit / plot using Form No. 10B.
- 2 Drawings, specifications, and documents to be submitted along with Application for obtaining a Development Permission shall be determined by the Competent Authority. These are prescribed in Schedule No. 6A for buildings or for Subdivision or/ and Amalgamation, Schedule No. 6B for Brick Kiln, Mining and Quarrying and Schedule No. 6D for Temporary Construction. The format for submission of drawings, specifications and documents is specified in Schedule No. 6C.
- 3 The receipt of the different fees and charges leviable under the Act and these Rules shall also be attached with the application.
- 4 The Application may be done either online or offline as may be directed by the Competent Authority from time to time.
- 5 The Competent Authority may as per time-to-time direction of the Government or otherwise adopt, for the scrutiny of development permission applications, an automated scrutiny system.

4.11.2 Fees and Charges

All fees and charges for obtaining a development permission are listed in Schedule No. 5A. The fees and charges shall be determined by the Competent Authority from time to time.

4.11.3 Scrutiny of Application, Grant, or Refusal of a Development Permission

- 1 Within thirty days from the date of payment of the Fees and Charges, and receipt of an application for development permission, either by electronic mode with digital authentic signature of all concerned persons on record or in physical mode the Competent Authority shall, as deemed fit, make an inquiry and scrutiny of the application for compliance with respect to

these Rules. The Competent Authority may utilise the automated building plan approval system for scrutiny of application. The Competent Authority after carrying out required scrutiny, shall:

- a) Communicate to the applicant in writing by a letter to furnish documents or clarify or ask for compliance in matters arising out of the scrutiny or
 - b) If satisfied about the compliance, may be issue orders, in the format of Form No. 12, granting the permission, with or without conditions or subject to any general or special orders, made by the State Government in this behalf or
 - c) Refuse to grant permission with reasons.
- 2 For any decision under Clause 4.11.3 (1a) above, in cases where the building design requirements are as per these Rules, but the co-owner of the property or Chairman / Secretary of the Cooperative Society are not giving consent at the time of development permission, the Competent Authority may issue permission after giving opportunity of hearing to the co-owner of the property or Chairman / Secretary of the Cooperative Society considering the merits and demerits of individual case.

4.11.4 Penalties

Any development undertaken shall be in conformity of these Rules. Financial penalty, for different conditions of commencement, shall be levied as prescribed in Schedule Rule No. 4.8 and Schedule No. 5D for unauthorised development.

4.12 Revising a Direct Development Permission

4.12.1 Application, Documents and Registration

- 1 Architect on Record / Civil Engineer on Record in the format prescribed in Form No. 13, certifies that the revisions to the sanctioned design and specifications comply with these Rules shall be deemed to be a Revised Direct Development Permission granted by the Competent Authority.
- 2 It shall be the responsibility of the Architect on Record / Civil Engineer issuing the Revised Direct Development Permission to register the same with the Competent Authority within 15 working days of issue of Revised Direct Development Permission. Format of Application for Registering Issue of Revised Direct Development Permission is prescribed in Form No. 14.
- 3 The plans and documents, in duplicate, to be submitted along with registration of Direct Development Permission application to the Competent Authority are prescribed in Schedule No. 6A and Schedule No. 6D. The format for submission of drawings, specifications and documents is specified in Schedule No. 6C.

4.12.2 Fees and Charges

All fees and charges for obtaining a revised development permission are listed in Schedule No. 5A. The fees and charges shall be determined by the Competent Authority from time to time.

4.12.3 Scrutiny of Application, Registration or Refusal of a Revised Direct Development Permission

- 1 The Competent Authority may undertake scrutiny of the application for registering issue of Revised Direct Development Permission.
- 2 The Competent Authority shall communicate the registration of issue of the Revised Direct Development Permission, to the Architect on Record, within 15 working days of date of receipt of application using the format prescribed in Form No. 9.
- 3 Issuance of Form No. 9, by the Competent Authority shall mean that the issue of the Revised Direct Development Permission has been registered by the Competent Authority.
- 4 In the event that the Competent Authority does not issue Form No 9 within a period of 15 working days of date of receipt of application, it shall be deemed that the Competent Authority has registered the issue of the Revised Direct Development Permission.

- 5 In the event that the Competent Authority refuses the Revised Direct Development Permission, it shall communicate the reasons for refusal to the AOR / EOR within 15 working days from the date of receipt of application, using the format specified in Form No. 9.
- 6 The Competent Authority shall handover the second copy of plan to the applicant duly acknowledged, which shall be kept for inspection on site.

4.12.4 Penalties

Any development undertaken shall be in conformity of these Rules. Financial penalty, for different conditions of commencement, shall be levied as prescribed in Schedule Rule No. 4.8 and Schedule No. 5D for unauthorised development.

4.13 Revising a Development Permission

4.13.1 Application, Document and Registration

- 1 Application for Revising a Development Permission shall be made by the Owner/ Developer of the plot on which the development is proposed, in the format prescribed in Form No. 15.
- 2 Drawings, specifications, and documents to be submitted along with Application for Obtaining a Revised Development Permission shall be determined by the Competent Authority. These are prescribed in Schedule No. 6A for Building or for Sub-division or/ and Amalgamation, Schedule No. 6B for Brick Kiln, Mining and Quarrying and Schedule No. 6D for Temporary Construction. The format for submission of drawings, specifications and documents is specified in Schedule No. 6C.
- 3 The receipt of the different fees and charges leivable under the Act and these Rules shall also be attached with the application.
- 4 The Application may be done either online or offline as may be directed by the Competent Authority from time to time.
- 5 The Competent Authority may as per time-to-time direction of the Government or otherwise adopt, for the scrutiny of development permission applications, an automated scrutiny system.
- 6 For first 6 months after notification of present GDR, the competent authority may, in its discretion allow any person, who is forced to revise his already granted construction permission or development permission because of operation of current ODP and GDR, to revise his construction permission with such relaxation (being not less than such obligation as was prescribed in last ODP and DCR) as may be deemed necessary.

4.13.2 Fees and Charges

All fees and charges for obtaining a revised development permission are listed in Schedule No. 5A. The fees and charges shall be determined by the Competent Authority from time to time.

4.13.3 Scrutiny of Application, Grant, or Refusal of a Revised Development Permission

- 1 Within thirty days from the date of payment of the Fees and Charges, and receipt of an application for revised development permission, either by electronic mode with digital authentic signature of all concerned persons on record or in physical mode the Competent Authority shall, as deemed fit, make an inquiry and scrutiny of the application for compliance with respect to these Rules. The Competent Authority may utilise the automated building plan approval system for scrutiny of application. The Competent Authority after carrying out required scrutiny, shall:
 - a) Communicate to the applicant in writing by a letter to furnish documents or clarify or ask for compliance in matters arising out of the scrutiny or
 - b) If satisfied about the compliance, may be issue orders, in the format of Form No. 15, granting the revised development permission, with or without conditions or subject to any general or special orders, made by the State Government in this behalf or
 - c) Refuse to grant revised development permission with reasons.

4.13.4 Penalties

Any development undertaken shall be in conformity of these Rules. Financial penalty, for different conditions of commencement, shall be levied as prescribed in Schedule Rule No. 4.8 and Schedule No. 5D for unauthorised development.

4.14 Revalidating a Lapsed / Suspended Direct Development Permission

4.14.1 Application, Documents and Registration

- 1 Architect on Record / Civil Engineer on Record in the format prescribed in Form No. 16, certifies that the lapsed Direct Development permission is revalidated and complies with these Rules shall be deemed to be a Revalidated Direct Development Permission granted by the Competent Authority.
- 2 It shall be the responsibility of the Architect on Record / Civil Engineer issuing the Revalidated Direct Development Permission to register the same with the Competent Authority within 15 working days of issue of Revalidated Direct Development Permission. Format of Application for Registering Issue of Revised Direct Development Permission is prescribed in Form No. 17.
- 3 The plans and documents, in duplicate, to be submitted along with registration of Direct Development Permission application to the Competent Authority are prescribed in Schedule No. 6A and Schedule 6D. The format for submission of drawings, specifications and documents is specified in Schedule No. 6C.

4.14.2 Fees and Charges

All fees and charges for obtaining a revised development permission are listed in Schedule No. 5A. The fees and charges shall be determined by the Competent Authority from time to time.

4.14.3 Scrutiny of Application, Registration or Refusal of a Revised Direct Development Permission

- 1 The Competent Authority may undertake scrutiny of the application for registering issue of Revalidated Direct Development Permission.
- 2 The Competent Authority shall communicate the registration of issue of the Revalidated Direct Development Permission, to the Architect on Record, within 15 working days of date of receipt of application using the format prescribed in Form No. 9.
- 3 Issuance of Form No. 9, by the Competent Authority shall mean that the issue of the Revalidated Direct Development Permission has been registered by the Competent Authority.
- 4 In the event that the Competent Authority does not issue Form No. 9 within a period of 15 working days of date of receipt of application, it shall be deemed that the Competent Authority has registered the issue of the Revised Direct Development Permission.
- 5 In the event that the Competent Authority refuses the Revalidated Direct Development Permission, it shall communicate the reasons for refusal to the AOR within 15 working days from the date of receipt of application, using the format specified in Form No. 9.
- 6 The Competent Authority shall handover the second copy of plan to the applicant duly acknowledged, which shall be kept for inspection on site.

4.14.4 Penalties

Any development undertaken shall be in conformity of these Rules. Financial penalty, for different conditions of commencement, shall be levied as prescribed in Schedule Rule No. 4.8 and Schedule No. 5D for unauthorised development.

4.15 Revalidating a Lapsed /Suspended Development Permission

4.15.1 Application, Documents and Registration

- 1 Application for Revalidating Lapsed /Suspended Development Permission shall be made by the Owner / Developer of the building units on which the development is proposed, in the format prescribed in Form No. 18.
- 2 Drawings, specifications, and documents to be submitted along with Application for Obtaining a Revalidated Development Permission shall be determined by the Competent Authority. These are prescribed in Schedule No. 6A for Building or for Sub-division or/ and Amalgamation, Schedule No. 6B for Brick Kiln, Mining and Quarrying and Schedule No. 6D for Temporary Construction. The format for submission of drawings, specifications and documents is specified in Schedule No. 6C.
- 3 The receipt of the different fees and charges leviable under the Act and these Rules shall also be attached with the application.
- 4 The Application may be done either online or offline as may be directed by the Competent Authority from time to time.
- 5 The Competent Authority may as per time-to-time direction of the Government or otherwise adopt, for the scrutiny of development permission applications, an automated scrutiny system.

4.15.2 Fees and Charges

All fees and charges for revalidating development permission are listed in Schedule No. 5A. The fees and charges shall be determined by the Competent Authority from time to time.

4.15.3 Scrutiny of Application, Grant, or Refusal of a Lapsed Development Permission

- 1 Within thirty days from the date of payment of the Fees and Charges, and receipt of an application for development permission, either by electronic mode with digital authentic signature of all concerned persons on record or in physical mode the Competent Authority shall, as deemed fit, make an inquiry and scrutiny of the application for compliance with respect to these Rules. The Competent Authority may utilise the automated building plan approval system for scrutiny of application. The Competent Authority after carrying out required scrutiny, shall:
 - a) Communicate to the applicant in writing by a letter to furnish documents or clarify or ask for compliance in matters arising out of the scrutiny or
 - b) If satisfied about the compliance, may be issue orders, in the format of Form No. 12, granting the permission, with or without conditions or subject to any general or special orders, made by the State Government in this behalf or
 - c) Refuse to grant permission with reasons.
- 2 For any decision under Clause 4.15.3 (1a) above, in cases where the building design requirements are as per these Rules, but the co-owner of the property or Chairman / Secretary of the Cooperative Society are not giving consent at the time of development permission, the Competent Authority may issue permission after giving opportunity of hearing to the co - owner of the property or Chairman / Secretary of the Cooperative Society considering the merits and demerits of individual case.

4.15.4 Penalties

Any development undertaken shall be in conformity of these Rules. Financial penalty, for different conditions of commencement, shall be levied as prescribed in Schedule Rule No. 4.8 and Schedule No. 5D for unauthorised development.

4.16 Temporary Construction Permission

4.16.1 Application, Documents and Registration

- 1 Application for Temporary Construction Permission shall be made by the Owner / Developer of the building units on which the Temporary Construction is proposed, in the format prescribed in Form No. 10C.
- 2 Drawings, specifications, and documents to be submitted along with Application for Obtaining a Temporary Construction Permission shall be determined by the Competent Authority. The format for submission of drawings, specifications and documents is specified in Schedule No. 6D. The format for submission of drawings, specifications and documents is specified in Schedule No. 6C.
- 3 The receipt of the different fees and charges leivable under the Act and these Rules shall also be attached with the application.
- 4 The Application may be done either online or offline as may be directed by the Competent Authority from time to time.
- 5 The Competent Authority may as per time-to-time direction of the Government or otherwise adopt, for the scrutiny of development permission applications, an automated scrutiny system.

4.16.2 Fees and Charges

All fees and charges for temporary construction are listed in Schedule No. 5C.

The fees and charges shall be determined by the Competent Authority from time to time.

4.16.3 Scrutiny of Application, Grant, or Refusal of a Temporary Construction Permission

- 1 No temporary construction shall be permitted, without obtaining prior approval of the Competent Authority or any authorised officer for the said purpose who may grant such permissions subject to such conditions as may be deemed necessary.
- 2 The Competent Authority may grant permission for temporary construction for a period not exceeding a period of one year.
- 3 Temporary Construction may be granted on following cases:
 - a) Shed for protection from the rain or covering of the terraces during monsoon.
 - b) Pandals for fairs, ceremonies, religious functions, or vendors etc. Pandal means a temporary structure with a roof or walls made of straw, hay, ulu grass, golpatta, hogla, darma, mat, canvas, cloth, or other like material.
 - c) Structures of exhibitions / circuses etc
 - d) Structures for ancillary works for quarrying operations in conforming zones.
 - e) Government booths and temporary shelters.
 - f) Transit accommodation for persons to be rehabilitated in a new construction.
 - g) Structures for educational and medical facilities within the site of the proposed building during the phase of planning and constructing the said permanent buildings.
 - h) Ready mix concrete plant.
 - i) Tent City, Camping Ground or Base Camp.
- 4 Temporary constructions for structures etc. mentioned at (f), (g) and (h) may be permitted to be continued temporarily by the Authority, but in any case, not beyond completion of construction of the main structure or building and that, structure in (d) and (e) may be continued on annual renewal basis by the Authority beyond a period of one year. Structures in (a) and (i) may be constructed for such duration as may be decided by the competent authority on case-to-case basis.

4.16.4 Penalties

Financial penalty shall be levied as prescribed in Schedule Rule No. 4.8 and Schedule No. 5D.

5 Procedure During Construction

5.1 Inspection of Construction

5.1.1 Inspection of Construction at Any Time

- 1 All buildings / development for which development permission is required, are subject to inspection by the Competent Authority and the Competent Authority reserves the right to inspect such buildings at any time during the period of Construction without giving prior notice of its intention to do so.
- 2 Owner of the building unit and / or any person undertaking construction shall permit authorized officers of the Competent Authority to enter the building unit and inspect the building for the purpose of enforcing these Rules.
- 3 No inspection of a residential premise shall be done after sunset and before sunrise without sufficient cause and without giving a reasonable opportunity of being heard.

5.1.2 Inspection where Direct Development Permission is Issued

- 1 All building / developments for which Direct Development Permission has been issued shall be subject to random inspection by the Competent Authority during construction.
- 2 It shall be the responsibility of the Architect on Record / Engineer on Record and the Clerk of Works on Record for the development to report commencement, progress at various stages, and completion of construction to the Competent Authority as specified in Rule No. 5.5.

5.1.3 Inspection where Development Permission is Granted

- 1 All buildings for which development permission has been granted shall be subjected to periodic inspection by the Competent Authority during construction.
- 2 It shall be the responsibility of the Owner, the Architect on Record or Engineer on Record, and the Clerk of Works on Record for the building to report commencement, progress at various stages, and completion of construction to the Competent Authority as specified in Rule No. 5.5.

5.1.4 Inspection for Fire Safety and Protection of Building under Construction

For buildings listed in Schedule No. 4, the Fire Officer shall carry out inspections at appropriate intervals, to ensure that the fire protection requirements and measures for such building under construction are adequate and operational. Fire Officer shall also satisfy himself that all elevators including fire lifts are duly tested and their test certificates are submitted to his satisfaction. If the above work is entrusted to a registered Fire Protection Consultant on Record (FPCOR), his reports shall be countersigned by the Fire Officer.

In case of inadequacy of these Rules, he shall issue a notice to the owner or occupier of such building directing him to rectify the shortcomings /contraventions within a specified period. Copies of all such notices shall also be endorsed by the Competent Authority.

5.2 Information to be Prominently Displayed on Site

- 1 It shall be the responsibility of the Clerk of Works on Record and the Owner to erect a notice board on the building unit displaying key information pertaining to the building/development within 15 working days from the grant or issue of development permission.
- 2 Specifications for notice board and the information to be displayed are specified in Schedule No. 7A.
- 3 The notice board should be prominently visible, easily readable and should be located next to the primary access to the building unit. More than one notice board may be erected.
- 4 The notice board/s should be maintained for the entire period of construction / development up to issue or grant of occupancy certificate.

- 5 Failure to comply with this Rule may result in cancellation of the development permission. Penalties leivable on the Clerk of works on Record for not displaying the necessary information are stipulated in Schedule No. 7A.

5.3 Documents and Drawings to be Maintained on Site

- 1 It shall be the responsibility of the Clerk of Works on Record and the Owner for the building to keep all the documents and drawings listed in Schedule No. 7B on the site, at all times after issuing notice of commencement of construction to the Competent Authority up to the issue or grant of occupancy certificate.
- 2 These documents should be made available to any authorised officer of the Competent Authority inspecting the site for the purpose of enforcing these Rules.
- 3 Failure to comply with this Rule may result in cancellation of the development permission. Penalties leivable on the Clerk of works on Record for not displaying the necessary information are stipulated in Schedule No. 5A.

5.4 Reducing Inconvenience and Ensuring Safety during Construction

5.4.1 Stacking, Storing and Disposal of Building Material

- 1 The stacking of building materials, sand debris on public roads, highways shall be prohibited.
- 2 It shall be the responsibility of the Clerk of Works on Record and the Owner / Developer to ensure that no building material, building equipment or building debris is stacked, stored, left or disposed off, outside the building unit for which development permission has been granted, on any public street or space.
- 3 Permission may be obtained in special circumstances to stack building materials, sand, debris on public roads / highways from the Competent Authority on payment of Deposits and Charges indicated in Schedule No. 5A.

5.4.2 Barricading the Building Unit / Plot during Construction

- 1 It shall be the responsibility of the Architect on Record or Engineer on Record and Clerk of Works on Record to ensure that the plot on which construction is being undertaken is adequately barricaded and safety measures are in place and there is no public inconvenience caused and or safety is compromised.
- 2 Failure to comply with this Rule may result in cancellation of a development permission.

5.4.3 No Damage or Undue Inconvenience during Construction

It shall be the responsibility of the Clerk of Works on Record and the Owner or Developer to undertake all necessary measures to ensure that no

- 1 No damage is caused to adjoining properties due to construction.
- 2 No undue inconvenience is caused to the public, due to factors such as noise, dust, smell, or vibrations.
- 3 No traffic is not disrupted due to construction.
- 4 Failure to comply with this Rule may result in cancellation of a development permission.

5.4.4 Liability for Ensuring during Construction

The Owner or Developer and the Clerk of Works on Record shall be responsible for ensuring that all necessary measures for safety for all are taken on site. Grant of Development Permission, grant of Building Use Permission for part of a building or issuing of any instructions to ensure public safety or reduce inconvenience, does not render the Competent Authority liable for any injury, damage or loss whatsoever that may be caused to anyone in or around the area during the Period of Construction.

5.5 Progress of Construction and Inspection

5.5.1 Notice for Commencement of Construction

- 1 The owner and the AOR shall intimate the Competent Authority about the commencement of construction after obtaining construction permission within 15 days of such commencement. in the format prescribed in Form No. 19.
- 2 The construction shall commence only after the Competent Authority registers the issue of Direct Development Permission by the AOR / EOR.
- 3 Failure to notify the Competent Authority after commencing construction may result in cancellation of the development permission.

5.5.2 Development Permission may Lapse if Construction Not Commenced on Time

Development permission can be extended for one year at a time, provided that there has been no change in the Rules of the construction is in conformity with new Rules. The extended period shall in no case exceed three years. In the aggregate, a development permission cannot remain valid for period of more than six years. After that an application for a new development permission shall be made.

5.5.3 Competent Authority to be Notified of Progress of Construction

The Owner or Developer and the Architect on Record or Engineer on Record shall be responsible for notifying the Competent Authority of progress of construction having been completed up to the stages stipulated in Schedule No. 7C. Notice of Progress of Construction shall be made in the format prescribed in Form No. 20. and approved by the Persons on Record.

The Notice of Progress of Construction shall not be necessary in the following cases:

- 1 Alteration in building not involving the structural part of the building.
- 2 Extension of existing residential building on the ground floor up to maximum area of 40 sq m.

On receipt of the Notice of Progress of Construction from the owner or developer, it shall be the duty of the Competent Authority, if necessary, to check any deviation from the sanctioned plan and convey decision within 7 days to the owner or developer accordingly for compliance.

5.6 Inspections

- 1 The Competent Authority shall carryout the inspection of construction based on the ‘risk’ posed by the development. Any development carried out by the owner, or the developer attracts risk during the design and construction. Risk is defined as the likelihood of non- compliance with building regulations and the potential extent of harm to current and future users of building and the environment associated with non-compliance.
- 2 The different Risk Consequence Classes (CC), along with description of the principles, use groups, design supervision levels (SL) And inspection requirements are indicated in Schedule No. 8
- 3 For the purpose of inspecting the construction at different stages, the Competent Authority may hire the services of the architects / engineers who are registered with the PDA. Schedule No. 8 indicates the experience requirements for such professional to conduct inspections based on the Risk Consequence Classes of buildings / development.
- 4 For this the Competent Authority shall, for the subsequent financial year, latest by 15 March every year invite the applications of architects and engineers who would be willing to work as inspection architect / engineer. On receipt of the applications, Competent Authority shall make a panel of approved engineer / architect. The Competent Authority shall make a contract agreement with all the engineers / architect included in the panel. The agreement shall include the scope of work, the reporting systems, and the protocols (including penalty Clauses, mode of

- payments and reporting systems both online and in hard copies) for smooth functioning of inspections.
- 5 The Competent Authority shall decide the fees for each site visit and the site report.

6 Occupancy Certificate / Building Use Permission

6.1 Occupancy Certificate Required

It is mandatory to obtain an Occupancy Certificate (also called Building Use Permission) from the Competent Authority prior to occupancy or use being made of any development or part of a development. In case occupancy is sought for a part of the development then it will also have to be sought when the development is completed.

6.2 Grant of Occupancy Certificate

Grant of Occupancy Certificate by the Competent Authority shall mean an acceptance by the Competent Authority that the development has conformed to the sanctioned design and specifications and that the Owner may use the development in conformity with the Sanctioned Use of the development.

Issue or grant of an Occupancy Certificate does not constitute acceptance of correctness, confirmation, approval or endorsement of and shall not bind or render the Competent Authority liable in any way in regard to:

- 1 Title, ownership, and easement rights of the plot on which development / building is proposed.
- 2 Workmanship, soundness of material and structural safety of the development / building.
- 3 Variation in area from recorded areas of a building unit.
- 4 Location and boundary of building unit.
- 5 Safety of the users of the building.
- 6 NOC from Appropriate Authority.
- 7 Structural reports and structural drawings.

6.3 Cancellation of Occupancy Certificate

- 1 Cancellation of an Occupancy Certificate shall mean that the Occupancy Certificate is no longer valid and that the Competent Authority has withdrawn the permission granted to make use of the development. Occupancy Certificate may be revoked for part of a development.
- 2 Occupancy Certificate can be revoked if there is a major change in occupancy and no change of occupancy is sought as per Rule 6.6.
- 3 After Cancellation of Occupancy Certificate, use may no longer be made of the whole of or part of the development for which the Occupancy Certificate has been suspended.
- 4 Notice of Cancellation of an Occupancy Certificate shall be issued by Competent Authority in writing, in the format specified in Form No. 24.

6.4 Unauthorized Use/ Occupancy of Building / Development

- 1 Use of any building or part of a building, without a building use permission or in a manner that does not conform with its permission granted or after issue of building use permission has been revoked, shall be deemed to be unauthorized use of building.
- 2 Also, the Competent Authority may declare the use of any building to be an unauthorized use if it deems the building to be unsafe for habitation or if its use poses a danger to public health or safety.

6.5 Obtaining an Occupancy Certificate

6.5.1 Application

- 1 The Owner and the Architect / Engineer on Record for the building shall be responsible for notifying the Competent Authority of completion of construction, for certifying that the

construction complies with the sanctioned design & specifications and applying for grant of Occupancy Certificate.

- 2 Notice of Completion of Construction and Compliance Certification shall be made in the format prescribed in Form No. 21.
- 3 Application for Occupancy Certificate may be made to the Competent Authority in the format stipulated in Form No. 22A and Form No. 22B and shall be accompanied by documents and drawings as prescribed by the Competent Authority in Schedule No. 9. The format for submission of drawings, specifications and documents is specified in Schedule No. 6C.
- 4 Application for Part Occupancy may be made to the Competent Authority in the format stipulated in Form No. 22A and shall be accompanied by documents and drawings as prescribed by the Competent Authority in Schedule No. 9. The format for submission of drawings, specifications and documents is specified in Schedule No. 6C.
- 5 Upon the request of the building permit owner/developer, the Authority has the discretion to issue a part occupancy certificate for a building or a specific portion thereof, even before the completion of the entire project as specified in the building permit. This issuance, however, is contingent upon the owner/ developer implementing adequate precautionary measures to guarantee the provision of essential infrastructure facilities, public safety, and health standards.

6.5.2 Fees and Charges

All fees and charges for obtaining Occupancy Certificate are listed in Schedule No. 5B.

The fees and charges shall be determined by the Competent Authority from time to time.

6.5.3 Final Inspection and Grant / Refusal of Occupancy Certificate

The Competent Authority, on receipt of Notice of Completion of Construction and a duly completed application for Occupancy Certificate, shall inspect the constructed building before granting the Occupancy Certificate, to verify its compliance to the sanctioned design and specifications within 21 days from the date of receipt of the application.

If the construction is found not complying with sanctioned design and specifications, the Competent Authority shall communicate queries regarding the construction and / or directions to ensure compliance to the Owner and the Architect on Record or Engineer on Record. Failure to comply with directions, as may be issued by the Competent Authority, may result in cancellation of the Occupancy Certificate. The Architect on Record or Engineer on Record shall respond to queries and notify the Competent Authority of having undertaken compliant modifications.

The final inspection of the work and communication of the decision about the grant of the Building Use Permission shall be made by the concerned Competent Authority within 21 days from the date of receipt of Notice of Completion of Construction and Compliance Certification. If the Competent Authority is satisfied that the construction of the building complies with the sanctioned design and specifications and other requirements as per Schedule No. 8, it shall grant Occupancy Certificate in the format stipulated in Form No. 23. Reasons for grant / refusal of Building Use Permission shall be communicated to the applicant.

In cases where the building construction is as per the Rules, but the owner of the adjoining building or Chairman / Secretary of the Cooperative Society are not giving consent at the time of building use permission, the Competent Authority may issue permission after giving opportunity of hearing to the owner of the adjoining building or Chairman / Secretary of the Cooperative Society considering the merits and demerits of individual case.

6.5.4 Penalties

Any development undertaken shall be in conformity of these Rules. Financial penalty, for different conditions of occupancy, shall be levied as prescribed in Schedule No. 5D for unauthorised use of development.

6.6 Permission to Change Sanctioned Occupancy / Use of Development

6.6.1 Application

- 1 No building or premises shall be changed or converted to a use other than the sanctioned use without prior permission of the Competent Authority in writing. Change of use not in conformity with these Rules shall not be permissible.
- 2 Application for obtaining Permission to change sanctioned use of building shall be made by the owner, for which a change in use is proposed and the Persons on Record, in the format prescribed in Form No. 25 Drawings, specifications, and documents to be submitted along with the application shall be as is specified in Schedule No. 6C.

6.6.2 Fees and Charges

All fees and charges for obtaining Permission to Change Sanctioned Use of Building are listed in Schedule No. 5A.

The fees and charges shall be determined by the Competent Authority from time to time.

6.6.3 Scrutiny of Application, Grant, Refusal

- 1 The Competent Authority shall undertake scrutiny of the Application for Permit to Change Sanctioned Occupancy of Development and communicate to the applicant the date and time for plot inspection, if required, using Form No. 20 within 15 working days of the date of acceptance of the application.
- 2 Lack of compliance with Rules and/or queries pertaining to the application shall be communicated in the format prescribed in Form No. 21 within 21 working days of the date of acceptance of the application.
- 3 Acceptance or rejection of compliant modifications in the application and responses to queries shall be communicated in the format prescribed in Form No. 22A or Form No. 22B within 10 working days of receipt of the modifications and responses. Acceptance or rejection of further compliant modifications in the application and responses to queries shall also be.
- 4 A Permit to Change Sanctioned Occupancy of Development, in the format prescribed in Form No. 25 shall be issued to the applicant when the Competent Authority is satisfied that the proposed change of Occupancy of the development complies with these Rules. Reasons for rejection of application shall be communicated in the format prescribed in Form No. 25.

6.6.4 Penalties

Any development undertaken shall be in conformity of these Rules. Financial penalty, for different conditions of occupancy, shall be levied as prescribed in Schedule No. 5D for unauthorised use of development.

For making unauthorised use of a building, penalty equal to, four times the development permission scrutiny fees that is leviable for the built-up area of the building entities used unauthorised.

Provided that the scrutiny fee calculated in reference to above shall be to the extent of excess area or for the area which may be considered unauthorised.

Part B Planning Rules

Part B Planning Rules

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7 General Planning and Development Rules

7.1 Use Zone Classification and Permissible Uses

In the Outline Development Plan, different use zones with the permissible uses are shown in Table No. 7.2 below.

In addition, the following conditions shall apply:

- 1 No development shall be permitted in area designated for water bodies and water courses (river, natural drains, canal, nala, kotar, ponds, lakes and talavs) shown in the Outline Development Plan. Margins to be maintained from a designated water body shall be as prescribed in these Rules.
 - 2 In any land designated under any legislation, for public purpose, the uses shall be permissible as per the requirements of these Rules.
 - 3 The land/plot allotted to any Government or Government Autonomous body like Municipality, District Panchayat, Planning and Development Authority, or a Government Company under Town Planning Scheme for public purpose shall be utilized for uses under 'Public Purpose' as per the applicable zones or road widths prescribed in these Rules subject to suspension of any provision of these Rules by the Government under Section 64 of the Act.
 - 3A Subject to these General Development Rules, the government may undertake any development without obtaining any permission under GDR, whether of a temporary or permanent nature, that are crucial for the community's well-being and public welfare. However, they must first secure the requisite approval from the competent authority as mandated by applicable laws, orders, notifications, or circulars that may be in effect at any given time.
 - 4 Every development shall have to conform with the presently recommended land use except in the following cases:
 - a) The existing buildings constructed as per previously recommended land use shall be allowed to be repaired or retrofitted.
 - b) The old use shall be permitted only until the useful life of the building.
 - c) Subject to these General Development Rules, any new development shall be permitted only when it conforms with the presently recommended land use in the presently earmarked zone. Provided that any person who has done part construction in his building unit in accordance with a valid construction permission, shall be allowed to apply for construction permission in conformity with the use to which the building unit is being used for within one year of the final publication of these rules. Provided further that any new construction shall have to comply with existing CRZ, Coast Guard, ASI regulations and Ministry of Environment, Forest and Climate Change Notifications etc.
 - 5 For all zones, if the line of a zone divides a building unit, the right of the plot holder to the FSI shall be determined as per following principles.
 - a) For plots whose part comes under CRZ, Coast Guard, Eco Sensitive Zone or ASI the owner / developer may either treat his plot as constituted of two separate plots and construct two buildings consuming the FSI available on these hypothetical parts—calculated on the basis of area of these supposed parts, or he may consume higher FSI available calculated on the basis of area of entire plot subject to condition that he shall be allowed construction only on the part of the plot where higher FSI is available.
 - b) If in such cases the Developer goes with First option, the use of each building unit shall be regulated as per respective zones.
In both cases, other development restrictions shall be applicable.
 - c) For cases, where 50% or more plot falls in the higher FSI zone then the developer shall be allowed higher of the two FSIs available. If less than 50% of the plot falls in higher of the two FSI zones, then the maximum permissible built up shall be based on the FSI of the respective zone.
- For contiguous development, the maximum permissible built-up area in the building unit shall be based on FSI of respective zone.

- 6 Utility structures shall be permitted in any zone except Preservation Zones but shall be subject to all applicable Rules and Regulations for the time being in force.
- 7 Permissible uses of a building shall be determined by the zone, the plot area and the abutting road width of the building unit.
- 8 For Eco-Sensitive Zone / Area shall also confirm the notification published by the “Ministry of Environment and Forest”, Notification no. S.O.1067, dated, 14th September 2006” and amended from time to time.
- 9 Any mixed-use building having industry as one of the uses, shall only be allowed in industrial zone. Residential and Industrial use shall not be allowed in the same building.
- 10 Land Use Zoning in Hazard Prone Areas
In natural hazard prone areas namely the earthquake prone zones as per IS:1893, the cyclone prone areas as per IS:875 Part – 3 and flood prone areas as per the Flood Atlas prepared by the Central Water Commission and/or the flood departments of the Government, the development shall be regulated to ensure special protection from hazards for any type of development irrespective of use zone. Whereas the hazard prone areas identified as per the Vulnerability Atlas of India, 1997 (hereinafter referred as Atlas) (or revisions thereof) prepared by Government of India or as may be prepared by Government from time to time shall be used for such regulations, as given in Appendix B of the Atlas. Further action for protection from these hazards is to be dealt with taking into consideration the guidelines given in Table No. 7.1 hereunder:

Table No.7.1: Protection of Buildings Structures and Infrastructures in Hazard Prone Areas

A Protection of Areas from Earthquakes
(i) In those areas where there are no dangers of soil liquefaction or settlements or landslides, all building structures and infrastructures should be designed using the relevant Indian Standards as provided in the Building Regulations and the National Building Code
(ii) Soils subjected to liquefaction potential under earthquake shaking, can be improved by compaction to desired relative densities, so as to prevent the possibility of liquefaction.
(iii) Buildings and structures could be founded on deep bearing piles going to non-liquefiable dense layers.
(iv) Steep slopes can be made more stable by terracing and construction of retaining walls and breast walls, and by ensuring good drainage of water so that the saturation of the hill-slope is avoided.
(v) Any other appropriate engineering intervention to save the building structures or infrastructure from the fury of the earthquake.
Note: The protective action given under (ii) to (v) in this table, will usually involve large amount of costs and should only be considered in the case of large and costly structures. For ordinary buildings the cost of improvement of the site will usually be uneconomical, hence bad sites should be excluded by Land Use Zoning.
B Protection from Cyclonic Wind Damage
i) Buildings, structures, and infrastructures in the cyclone prone areas should be designed according to the Indian Standards and Guidelines as provided in the Regulations and the latest National Building Code.
ii) Light utility structures used for electrical transmission and distribution, and towers for communications, chimneystacks of industrial structures require special design considerations against the cyclonic wind pressures, suction, and uplifts.
iii) In case the buildings, structures and infrastructures are founded on marine clay deposits it will be advisable to adopt either under-reamed piled foundations, or individual column footing with a reinforced concrete beam located at the level of the ground, or a continuous reinforced concrete strip footing.
iv) Wherever, the topsoil could become slushy due to flooding, the top layer of 30 cm depth of soil should not be considered for providing lateral stability.
v) In storm surge prone areas, it will be preferable to construct the community structures, like schools, cyclone shelters, etc. by raising the level of the ground protected by provision of retaining walls at sufficient distance away from the building, taken to such depth that no erosion takes place due to receding storm surge. Alternatively, construct the community structures on stilts with no masonry or bracing up to the probable maximum surge level.

C Protection of Areas from Floods

This may require one or more of the following actions:

- i) Construction of embankments against the water spills from the source of flooding like rivers, large drain etc.
- ii) Construction of high enough embankments / bunds around the planning area.
- iii) Raising the planning area above the high flood level.
- iv) Construction / improvement of drainage paths to effectively drain the water from the planning area.
- v) Construction of buildings and structures on deep foundations going below the depth of scour or on stilts with deep enough foundations underwater.
- vi) Flood proofing works such as the following:
- vii) Providing quick drainage facility, consisting of
 - a) Revitalisation of secondary and primary drainage channels after establishing the drainage blockage points.
 - b) Provision of additional waterways.
 - c) Clearing of clogged cross drainage works.
- viii) Providing human and animal Shelters for population living within embankments in the form of raised platform or use of available high ground.
- ix) Anti-erosion actions in affected areas.
- x) Any other suitable measure.

Notes:

- 1 Similar protection methods could be used against flooding caused in cyclone prone areas by high intensity rains or by the storm surge.
- 2 The concept of land zoning should be kept in mind for areas where protection works are taken up to decide inter-se priority for location of structures considering possibility of failure of protection works during extreme disaster events.

- 15 For Railway Container Depot the permission shall be issued for development of structures of the Railway Department.
- 16 Permissible uses as mentioned in Table No. 7.2 are broad indicators of the type of use permissible in each zone. In case any dispute arises whether or not an activity falls within the permissible use of a zone, concerned Planning and Development Authority shall be the Competent Authority to decide such issue.
- 17 In case of mixed-use buildings with residential and permissible non-residential uses, either on the ground floor or any other floors, they shall be provided with separate means of access / staircase.

Table No. 7.2: Classification of Land Use Zones and Permissible Uses in Outline Development Plan, (DNH District)

No.	Zones	Conceptualized Zone	Code	Permissible Use referred as code (Code detailed in Table No. 7.3)
(1)	(2)	(3)	(4)	(5)
1	Preservation Zone -I (Wildlife Sanctuary)	Preservation Zone	PZ-I	EP1, EP2
2	Preservation Zone - II (Reserved Forest)	Preservation Zone	PZ-II	EP1, EP2, REC1, TEMP (Except Concrete batching plant)
3	Preservation Zone- III (Wildlife Sanctuary 100m Buffer) *	Preservation Zone	PZ-III	EP3 All activities as per "Ministry of Environment, Forest and Climate Change Notification (2015)"
4	Recreational Zone -I	Light Intensity Recreational Zone	RZ-I	EP1, REC1, TEMP (Except Concrete batching plant)
5	Recreational Zone - II	Medium & High Intensity	RZ-II	EP1, EP2, REC1, REC2, TEMP, SP&L, REG, HO1, HO2, HO3, CBG, M1, EDU1, EDU2, AS1, AS2, AS3,

No.	Zones	Conceptualized Zone	Code	Permissible Use referred as code (Code detailed in Table No. 7.3)
(1)	(2)	(3)	(4)	(5)
		Recreational Zone		AS4, H1, H2, PO, U, DW1, DW2, AG1, DW1a, DW2
6	Industrial Zone	Light, Medium & High Intensity Industrial Zone	IZ	DW1, DW2, DW3a, DW3s, DW1a, DW2a, H1, H2, H3, M1, M2, M3, EDU1, EDU2, EDU3, AS1, AS2, AS3, AS4, IN1, IN2, IN3, CBG, PO, U, TR, REG, ST, HO3, SE1, SE2, TEMP, AG1, AG2, REC1
7	Development Zone - I	Light & Medium Intensity Development Zone	DZ-I	DW1, DW2, DW3, DW3a, DW3s, DW1a, DW2a, M1, M2, M3, EDU1, EDU2, EDU3, AS1, AS2, AS3, AS4, REG, HO1, HO2, HO3, REC1, REC2, SP&L, H1, H2, H3, H4, SE1, ST, TR (Except Goods Terminal), CBG, AG1, PO, U, TEMP, EP1, EP2
8	Development Zone - II	High Intensity Development Zone	DZ-II	DW1, DW2, DW3, DW3a, DW3s, DW1a, DW2a, M1, M2, M3, EDU1, EDU2, EDU3, AS1, AS2, AS3, AS4, REG, HO1, HO2, HO3, SE1, ST, TR (Except Goods Terminal), CBG, AG1 (Except Poultry Farming), PO, U, REC1, REC2, SP&L, H1, H2, H3, TEMP, EP1, EP2
9	Agriculture Zone	Agriculture & Related Activities	AZ	DW1**, EDU1, EDU2, REG, REC1, REC2, SP&L, H1, H2, TEMP, PO, U, CBG, EP1, EP2, AG1, AG2, ST, TR

Note:

Also refer Table No. 7.4 for road width provisions for some of the Uses.

Note:

*This zone is considered an Eco-Sensitive Zone, and all activities are in accordance with the Ministry of Environment, Forest and Climate Change Notification

**DW1 shall be allowed in Agriculture Zone with maximum built up area not exceeding 50 sqm (G+1)

**Farmhouse in Agriculture Zone shall be allowed as per table no. 7.7 subject to maximum built up area of 10% or 640 sqm whichever is less (G+1)

Table No. 7.3: Uses Permitted in Each Category

No.	Use		Uses
	Classification	Code	
(1)	(2)	(3)	(4)
1	Dwelling 1	DW1	Detached dwelling unit. Clinic not having indoor treatment facility. Farmhouse <i>Part of Residential building may be used for professional requirements for office by advocated, doctors, architects, engineers & chartered accountants, and home occupation</i>
2	Dwelling 1a	DW1a	Detached dwelling unit – affordable Housing
3	Dwelling 2	DW2	Semi-detached dwelling unit Row House Tenement Farmhouse Clinic not having indoor treatment facility, Cottage Industry (not involving use or installation of any kind which may create noise, vibration, fume dust etc.), Pre-school <i>Part of Residential building may be used for professional requirements for office by advocated, doctors, architects, engineers & chartered accountants, and home occupation</i>

No.	Use		Uses
	Classification	Code	
(1)	(2)	(3)	(4)
4	Dwelling 2a	DW2a	Semi Detached dwelling unit – affordable Housing
5	Dwelling 3	DW3	Flats / Apartment (including mixed use apartments, Serviced Apartments) Hostel Dharamshala Home stay Old Age Home Orphanage Night Shelter
6	Dwelling 3a Dwelling 3s	DW3a, DW3s	Affordable Housing Chawls Labour Housing Sparsh Housing / Affordable Housing / Affordable Rental Housing Complex / Low-Cost Housing Complexes
7	Mercantile 1	M1	Retail shop Shopping Centre Office Restaurant Café Light Home Workshop LPG Cylinder Godown Fitness Centre / Gyms Bank Fuel stations (with and without service station)
8	Mercantile 2	M2	Shopping Mall/Complex Business / Corporate offices Laboratory Training Centres Coaching Classes Cineplex (having maximum seating capacity of 40 seats), Vegetable/Fish Market/ Agriculture/ Horticulture Produce
9	Mercantile 3	M3	Wholesale Market and ancillary uses Timber mart / Lathi Bazaar Kerosene Depot
10	Education 1	EDU1	Anganwadi / Day Care / Pre School Pre-Primary School
11	Education 2	EDU2	Primary Schools Secondary Schools Higher Secondary Schools
12	Education 3	EDU3	Polytechnic Industrial Training Institutes (ITI) / Vocational Training Centre College University and ancillary use Research and Development Establishment / Centres
13	Assembly 1	AS1	Community Hall Banquet Hall Library
14	Assembly 2	AS2	Town Hall Convention Centre Exhibition Hall Auditorium Planetarium Museum Stadium Studio Performing Arts Theatre Gymnasium

No.	Use		Uses
	Classification	Code	
(1)	(2)	(3)	(4)
			Library Club
15	Assembly 3	AS3	Theatre Cinema Multiplex Club
16	Assembly 4	AS4	Party Plot Garden Restaurants Drive-in Cinema Golf Course
17	Religious	REG	Temple Shrine Church / Chapel Mosque / Dargah Gurudwara Synagogue Ashram / Upashraya / Math / Sant Niwas Any other Religious Structure.
18	Hospitality 1	HO1	Camping Tents Eco Hotels
19	Hospitality 2	HO2	Resort Cottage Houses Spa and Wellness Centre
20	Hospitality 3	HO3	Bed and Breakfast Guest House Lodging and Boarding Hotel / Motel Serviced Apartment
21	Service Establishment 1	SE1	Auto Repair Workshop Wood Workshop Fabrication workshop Service Garage Repair and Sale of agricultural equipment Flour mills Laundry / dry cleaning establishment
22	Service Establishment 2	SE2	Call Centres and other service-related shops Information Technology (IT) Biotechnology (BT) Nano Technology (NT)
23	Industrial 1	IN1	All White Category of Industries as defined by CPCB in Classification of Industrial Sector (2016)
24	Industrial 2	IN2	All Green Category of Industries as defined by CPCB in Classification of Industrial Sector (2016), CETP
25	Industrial-3	IN3	All Orange Category of Industries as defined by CPCB in Classification of Industrial Sector (2016), CETP Dumping of Solid Waste Mining and Quarrying Brick Kiln Roof Tiles Tannery Slaughterhouse Petroleum Storage Roofing Tiles and Cement Pipes
26	Storage	ST	Warehouse Godown Cold Storage Steel Stockyard

No.	Use		Uses
	Classification	Code	
(1)	(2)	(3)	(4)
			Ice factory
27	Transport	TR	Bus Terminal / station (public / private) Transport Terminal for Goods (Truck) Transport Terminal for Passengers
28	Cremation and Burial	CBG	Crematorium Cemetery Burial Ground / Kabrastan
29	Agriculture 1	AG1	Horticulture/ Orchard Green Houses Dairy Development Farmhouse Apiculture Organic farming Animal rearing and breeding / gaushala / panjrapole Golf Course, Poultry Farm
30	Agriculture 2	AG2	Repair and Sale of agriculture equipment Sawmill Brick Kiln Fisheries & Ancillary Activities Cemetery & Burial Ground Way-side shop Animal Shed Agro-Based Storage
31	Temporary Use	TEMP	Fair Circus Exhibition Mela Pandal Concrete Batching Plant for Construction Temporary Seasonal Market Portable Public toilets Tent City Base Camp Camping Ground
32	Utility	U	Bus Stop/Station Fuelling and eV Station and Storage with and without Service Station Taxies/ Scooter/Cycle Stands Parking / Multi-level Parking Infrastructure for Water Supply – treatment / purification Plant, pumping station. Communication Infrastructure – telephone, microwave tower or other means of communication facilities, Post & Telegraph Electricity Sub-station Drainage, Sanitation Domestic Garbage Disposal Collection / Solid Waste Transfer Station Fire Station Solar Power Plant Public Urinals or any development activity carried out by appropriate authority for public purpose
33	Public / Public Office	PO	Offices for public / government / semi government entities for Health, transport, communication, security, ward office, law courts, police stations / chowkis, panchayat, circuit house etc.

No.	Use		Uses
	Classification	Code	
(1)	(2)	(3)	(4)
			Custodial and Penal institutions such as jails, prison, mental hospitals, houses of correction, detention and reformatories
34	Health 1	H1	PHC, Clinic (with & without indoor facilities), Dispensary Health and Wellness Centre /Ayushman Bharat
35	Health 2	H2	Indoor Hospital facility up to 20 Bed Surgical Hospital, Nursing Home, Maternity Home Community Health Centre Veterinary Facilities
36	Health 3	H3	Multi-specialty hospital- Upto 100 beds Medical College and Research Centre Hospital – More than 100 Beds
37	Health 4	H4	Hospital for infectious diseases Mental Hospital / Asylum
38	Recreation 1	REC1	Camping Ground Picnic spots, Open Seating Areas Kiosk Gardens / Parks / Theme Gardens Nursery Play Fields
39	Recreation 2	REC2	Natural Reserve and Sanctuary Racetrack Shooting Range Zoo Botanical Garden Regional Parks Green House Forest / plantation
40	Sports and Leisure	SP&L	Gymnasium Sports complex Swimming pool Playfield Water sports facilities Theme / Amusement Park Aquarium Botanical Garden Exhibition and Mela Shooting Range
41	Environmental Preservation 1	EP1	Check dams. Structures to prevent landslides and erosion. Developments to preserve/conserve/enhance natural scenery, landscape, and environmental features. Natural Reserves and Sanctuary
42	Environmental Preservation 2	EP2	Pedestrian trail and board walk Fisheries related activities – natural fish drying, hatchery, aqua culture, fish processing. Jetties Wharves/ Quays/ Slipway Port Harbour Hover ports for Coast Guards Tidal Regulators Water Treatment Facilities, Non-Conventional Power Desalination Plant Ocean and Water Monitoring Platforms (Activities under CRZ 1A and 1B)

No.	Use		Uses
	Classification	Code	
(1)	(2)	(3)	(4)
43	Environmental Preservation 3 (Eco Sensitive Zone around Wildlife Sanctuary)	EP3	<p>All regulated and promoted activities in Eco-sensitive Zone around Wildlife Sanctuary defined by “Ministry of Environment, Forest and Climate Change Notification (2015)” which includes:</p> <p><u>Regulated Activities</u></p> <p>Felling of trees Commercial use of water resource including ground water harvesting Discharge of treated effluents Erection of electrical cables and telecommunication towers Widening of roads and strengthening of existing roads and construction of new roads Movement of vehicular traffic at night. Introduction of exotic species. Fencing of premises of hotels and Lodges Commercial Signboards and Hoardings Small scale industries not causing pollution. Laying of gas pipelines</p> <p><u>Promoted Activities</u></p> <p>Rainwater harvesting Organic farming Cottage industries including village industries, convenience stores and local amenities. Use of renewable energy sources</p>

7.2 Permissible Uses with respect to Road Width

- 1 Uses on a building unit shall be regulated on the basis of road width as mentioned in Table No. 7.4.
- 2 Public utility structures shall not be regulated based on road width.

Table No. 7.4: Permissible Uses as Per Road Width, DNH District

No.	RoW	Building Uses Permissible	Restrictions
(1)	(2)	(3)	(4)
1	12 m and less than 15 m	DW1, DW1a, DW2, DW2a, H1, M1, EDU1, REG, DW3, DW3a, DW3s, U, AS1, H2, M2, EDU2, H3, PO, TEMP, HO1, HO2, HO3, REC1, REC2, AG1, AG2, SE1, CBG, IN1, IN2, IN3	Only Low Rise allowed. M1, M2 and SE1 on Ground and first floor only. IN1, IN2, IN3 – Plot Size > 800 & ≤ 2000
2	15m and less than 18 m	All permitted in Sr. No. 1 above and SE2	High Rise permitted. IN1, IN2, IN3 – Plot Size > 2000 & ≤ 5000
3	18 m and less than 25 m	All permitted in Sr. No. 2 above and EDU3, AS2, AS3, AS4, H4, ST, SP&L, M3, EP1, EP2, EP3	High Rise permitted
4	25 m and more	All permitted in Sr. No. 3 TR	High Rise permitted

7.3 Floor Space Index (FSI)

7.3.1 Floor Space Index (FSI) for Different Use Zones

- a) The maximum permissible FSI, the chargeable FSI and TDR FSI on a building unit for land use zones shall be regulated as per Table No. 7.5.

- b) In case of Affordable Housing- Group the rates for chargeable FSI are indicated in Rule 8.1.3
- c) In case of SPARSH Housing the FSI is indicated in Rule 8.3.3

Table No. 7.5: Land Use Zones and FSI for DNH District

No.	Use Zone	Code	Permissible Base FSI	FSI Chargeable (At 100% of Circle rate)	TDR FSI	FSI Maximum Permissible
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Preservation Zone -I (Wildlife Sanctuary)	PZ-I	Nil	Nil	Nil	Nil
2	Preservation Zone -II (Reserved Forest)	PZ-II	Nil	Nil	Nil	Nil
3	Preservation Zone -III (Wildlife Sanctuary 100m Buffer)	PZ-III	Nil*	Nil	Nil	Nil
4	Agriculture Zone	AZ	0.50	0	0	0.50
5	Recreational Zone -I	RZ-I	0.20	0	0	0.20
6	Recreational Zone -II	RZ-II	0.75	0.50	0.25	1.50
7	Industrial Zone	IZ	2.00	0.50	0.25	2.75
8	Development Zone -I	DZ-I	2.00	0.80	0.20	3.00
9	Development Zone -II	DZ-II	2.00	1.00	0.50	3.50

Note:

*This zone is considered an Eco-Sensitive Zone, and all activities are in accordance with the Ministry of Environment, Forest, and Climate Change Notification

- 1 FSI is Nil for the zones that are formed due to 100m buffer of Eco- Sensitive Zone around Wildlife Sanctuary. These zones are not provided with any FSI under the provision of the Outline Development Plan, however, if there is any existing development it will be allowed to continue provided it complies with the respective notification of "Minister of Environment, Forest and Climate Change" prevailing at that time. Development in Preservation Zones- III will be subject to the permission of the respective authorities in compliance with the relevant act.

7.3.2 Area Exempted from Computation of Floor Space Index (FSI)

The following areas shall not be counted towards calculation of FSI:

- 1 All interior open to sky spaces such as courtyards and chowk, utility ducts in any form, shape and size required by these Rules.
- 2 Area used for parking at basement or hollow plinth or parking at any level provided. However, if more than 25% of any such level is used for any purposes other than parking, then the whole level shall be calculated towards FSI.
- 3 Hollow plinth – uses such as room for telephone distribution board, common toilet for both the genders, water room, servant room, and security cabin and entrance foyer etc are permitted up to 25 sq m in, which shall not be considered towards computation of FSI. An electric meter room upto 50 sq m is permitted and its area is not considered towards computation of FSI.
- 4 Loft up to a maximum of 30% of the enclosed space.
- 5 Staircase, sky walks intermediate landing and stair cabin / mumty subject to following conditions:
 - a) Only Maximum landing width at floor level shall be two times the width of stair (x m) including additional space (0.5 x m) provided at either side of the stair landing as common area shall be exempted (Refer Figure No. 7.1).

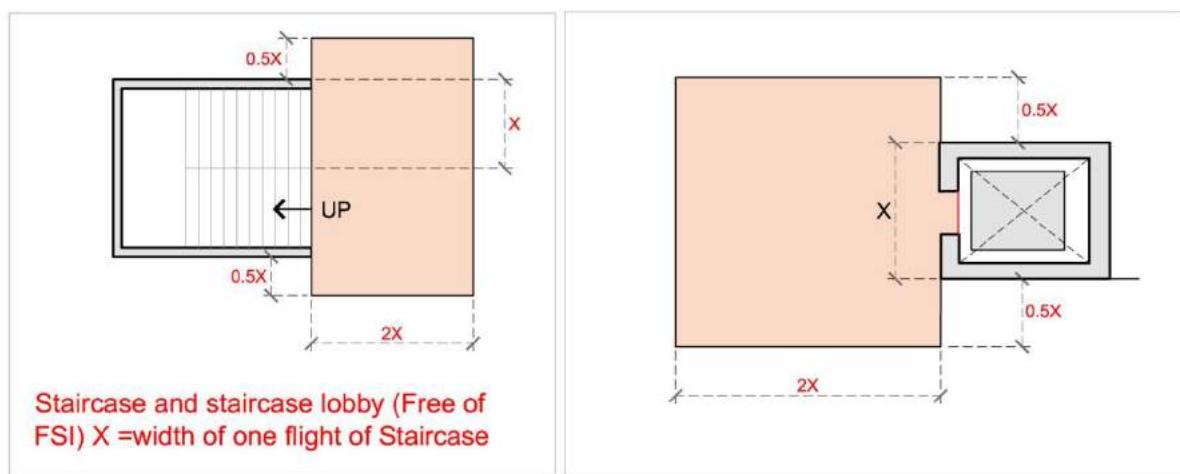


Figure No. 7.1: Staircase, Sky Walks and Stair Cabin / Mumty

- 6 Lift, lift well with lift cabin, lift landing of lift well and water tank, including walls provided as per Rule No. 13.1.12 with the following conditions:
 - a) The width of the lift landing shall be considered equal to the maximum width of the lift well including walls (x m) with an additional space ($0.5 \times x$ m) at either side of the lift provided as common area as illustrated across.
 - b) The depth of the lift landing shall be two times the maximum width of the lift well including walls (x m) as illustrated in Figure No. 7.1.
- 7 Vehicular ramps or vehicular elevator and pedestrian ramps.
- 8 Electric room, electric substation, transformer room, box-type transformer, section feeder pillar, auxiliary power back-up system and meter room as specified by Competent Electric Company.
- 9 Open to sky space used for solar-water heating system, outdoor units for air conditioners or mechanical ventilation.
- 10 In common plot the permissible built-up area of common facility shall not be considered towards computation of FSI as per Rule 7.15.5.
- 11 Balconies up to 33% of the perimeter of a building.
- 12 Pergolas as defined in these Rules.
- 13 Refuge area required as per Fire Rules in Part 3 (II) and Service floor used for providing MEP (Mechanical Electrical and Plumbing), AHU (Air Handling Units). Air Conditioning Systems and Fire Equipment may be exempted from computation of FSI. Provided that the Competent Authority shall ascertain the aforesaid exemptions based on the testimonial submitted with reasons to it.
- 14 Double height foyer shall be deducted once while computation of FSI.
- 15 Fire escape stairs.
- 16 Effluent Treatment Plants to be provided by industries as per requirements of Pollution Control Board or Competent Authority.

7.3.3 Transfer of Development Rights (TDR)

TDR certificate shall be granted by the PDA under the following conditions:

1 Outline Development Plan Roads / Access Roads / Public Works

In case a building unit is affected by road widening or construction of new road (Outline Development Plan or Access Road) which may include laying down of any public utility on road or public purpose development work, the owner may claim FSI in lieu of compensation from the Competent Authority for the land surrendered which is affected by such project. In case of FSI, the Competent Authority shall permit the FSI of the land / plot surrendered on same building unit or issue a TDR certificate for the surrendered land which may be used in the recipient zones as mentioned in Table No 7.5.

2 Recreational Zone I

In case a building unit is impacted by Recreational Zone I, the owner may claim FSI from the Competent Authority provided he / she surrenders the land under this zone to the Competent Authority. The Competent Authority shall issue a TDR certificate for the surrendered land which may be used in the recipient zones as mentioned in Table No 7.5. The TDR will be issued at a notional FSI of 1.

3 Unusable Plot

A plot will be deemed unusable, at the option of the owner or developer, if the possible plinth area left for development as per these Rules is less than 20 sq m or one of the dimensions of the plinth area is less than 3 m. In such cases, the plot owner shall be entitled to claim TDR for the entire plot, calculated as per base FSI, after surrendering the land to the Competent Authority.

Table No. 7.6: Transfer of Development Rights for the Respective Zone, DNH District

No.	Zones	Remarks
(1)	(2)	(3)
1	Recreational Zone -I	<ul style="list-style-type: none"> The maximum permissible FSI is 0.20. The owner may use this in the balance plot and leave it vacant or TDR may be issued by Competent Authority considering a notional FSI of upto 1 and subject to surrendering of land to Competent Authority who then may develop these as urban greens. The TDR can be used in zones indicated in Table 7.5 of Rule No. 7.3.1

7.4 Minimum Area of Building Unit for Different Uses

The minimum area of a building unit shall be 40 sq m with no side less than 4.5 m in width. Provided that, if the building unit size less than this is existing in revenue records, minimum area of building unit shall not be applicable.

To ensure that a use meets the various requirements of these Rules and other regulations, minimum building unit size requirements are indicated in Table No. 7.7.

Table No. 7.7: Use and Minimum Building Unit Size Requirement

No.	Use / Type	Minimum Building Unit Size (sq m)	Minimum Width of Building Unit (m)
(1)	(2)	(3)	(4)
1	Dwelling (For Subdivision/ Layout refer table no. 7.8 below)	40	4.5
2	Row Houses (In all zones except Agriculture Zone)	1000	
3	Farmhouse	4400	
4	Mercantile 1	200	
5	Mercantile 2 and 3	800	15
6	Education 1	300	
	Anganwadi / Day Care / Pre School Pre-Primary School		
7	Education 2	1600 1600 2400	
	Primary Schools Secondary Schools Higher Secondary Schools		
8	Education 3	Polytechnic Industrial Training Institutes (ITI) / Vocational Training Centre College University and ancillary use	3500

No.	Use / Type		Minimum Building Unit Size (sq m)	Minimum Width of Building Unit (m)
(1)	(2)		(3)	(4)
	Research and Development Centres			
9	Assembly 1, 2, 3, and 4		1500	20
10	Industry		800	20
11	Service Industry 2		800	
12	Public Offices		250	
13	Fuelling station without service station		600	20
14	Fuelling with service station		1200	30
15	eV station with service station		As per GOI Guidelines	
16	eV station without service station		As per GOI Guidelines	
17	Hospitality 3		500	
18	Health 1	PHC, Clinic (with & without indoor facilities)	1000	
		Dispensary	250	
		Health and Wellness Centre /Ayushman Bharat	300	
19	Health 2	Indoor Hospital facility up to 20 Bed	2000	
		Surgical Hospital, Nursing Home, Maternity Home	2000	
		Community Health Centre	4000	
		Veterinary Facilities	2000	
20	Health 3	Multi-specialty hospital- Upto 100 beds	10,000	20
		Medical College and Research Centre	80,940	20
		Hospital - More than 100 Bed	20,000	20
21	Health 4	Hospital for infectious diseases	20,000	20
		Mental Hospital / Asylum		

Note: For minimum sizes of Affordable Housing – Plotted is 25 Sqm

Table No. 7.8: Minimum Plot size for Subdivision / Layout

No.	Type of Development	Minimum Plot Area (sq m)	Minimum Width of Frontage (m)
1	Row Housing	40	4.5
2	Semi Detached Housing	150	10
3	Detached Housing	200	10
4	Group Housing Societies	1500	15
5	Residential + Mercantile	800	15
6	Industries	800	20

7.5 Approach Road / Access to Building Unit

7.5.1 Approach Road / Means of Access

- 1 Minimum Road width on which any development shall be allowed is 12 m. In case the proposed use or plot size in case of industrial use, demands a certain road width (Table No. 7.12) then it shall be considered in place of 12 m.
- 2 The designated roads widths in the Outline Development Plan are indicated in Table No 7.9.

Table No. 7.9: Road Widths in Outline Development Plan

No	Width of Roads (m)
1	12.00
2	15.00
3	18.00
4	25.00
5	30.00
6	45.00

- 3 For building units along overbridge or underbridge, the total width of the road including the these shall be considered for regulating permissible uses, margin, and height for proposed buildings.
- 4 In case the building unit abuts an existing road and not an Outline Development Plan Road / Town Planning Scheme Road, the right of way / plot boundary shall be considered as minimum 6 m from the centre line of such an existing road or more as decided by the Competent Authority. Roadside margin shall be considered from this imaginary plot boundary thus established. This additional land to be left is defined as ‘setback’. TDR for the land under setback may be given on the balance plot or can be used in zones indicated in Table No. 7.5 of Rule No. 7.3.1. For the sake of avoidance of doubts, it is hereby made clear that any non-notified road shall be presumed to have a minimum ROW of 12 m or existing ROW whichever is higher. (Refer Figure No. 7.2)
- 5 No new road shall be proposed, except for internal roads, which are less than 12 m in width.

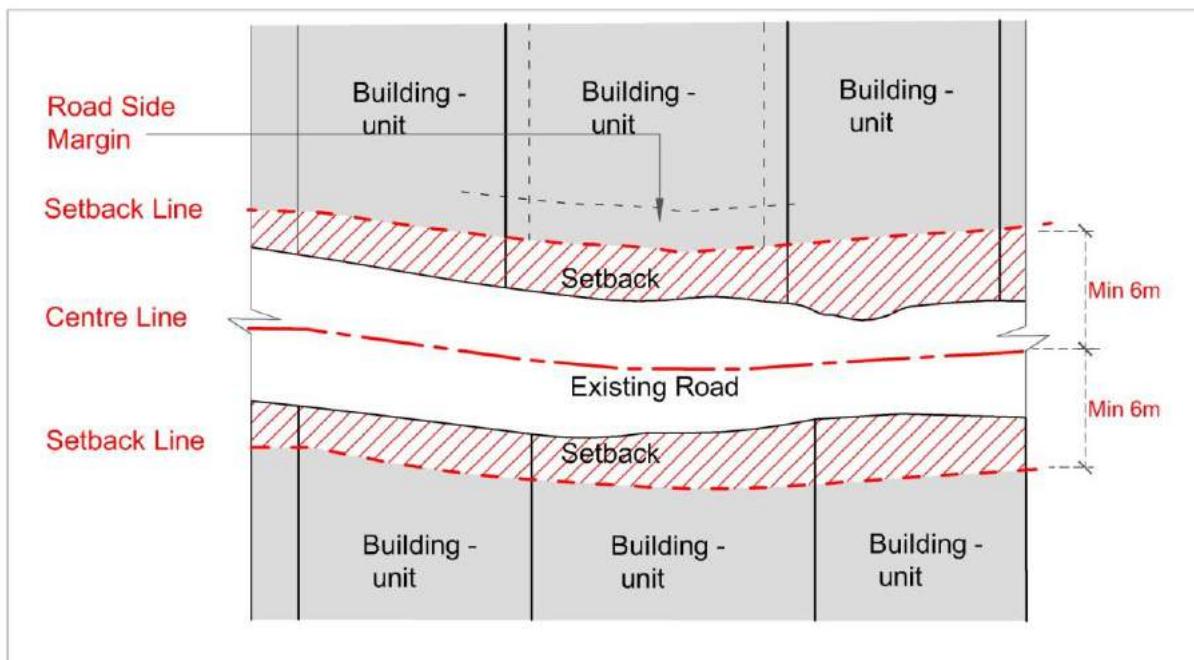


Figure No. 7.2: Building Unit Abuts the Existing Road

7.5.2 Land Locked Building Unit and Required Road Width

- 1 In case of land locked plots (plots which do not have access from an ODP road or an existing road), the Competent Authority will prepare town planning schemes to provide appropriate access road to the plot.
- 2 Where a Town Planning Scheme is not prepared, the Competent Authority shall, for proper access, circulation, and mobility, prepare a road network plan. This shall be in sync with any, existing or Outline Development Plan roads.

7.6 Building Height

- 1 Subject to present Rules and any other Rules for the time being force, and subject to any clearance that may be required from any authority, the maximum permissible building height is 45 m.
- 1A For Industrial building, unless so required by the Height of any Machinery (which shall be certified on case-to case basis by Inspector of Factories), no building of height more than 18 m shall be allowed in J1 and J2 category and no building of height more than 15 m shall be allowed in J3 category as per Table No. 14.7 of Chapter 14- Fire Rules.
- 2 The following shall not be considered towards computing the height:
 - 1 Lift well, lift cabin with machine room above.
 - 2 Roof top solar panel installation
 - 3 Chimney
 - 4 Water storage tank
 - 5 Staircase cabin/ Mumty
 - 6 Parapet

7.7 Margins

Margins / open space have to be maintained between the boundary of the building unit and building/s as follows.

7.7.1 Roadside Margin or Front Margin

- 1 Roadside margin for a building unit shall be regulated by the road width it abuts on and shall be as given in Table No 7.10, 7.11, 7.12.
- 2 For building units with two or more abutting roads, the roadside margin shall be applicable on all such abutting sides as illustrated in the figure (*Refer Figure No. 7.4*).
- 3 In case of setbacks required for widening an existing street for access, margins have to be kept after the setback and land in the setback will become a part of road. Land contributed towards the street will be compensated by the way of TDR on the balance plot or TDR can be used in zones indicated in Rule No. 7.3.1.
- 4 In case the declared ROW in Outline Development Plan or otherwise is more than the existing road on site and the Competent Authority has not acquired the road, land contributed towards the ROW may be compensated by the way of TDR.

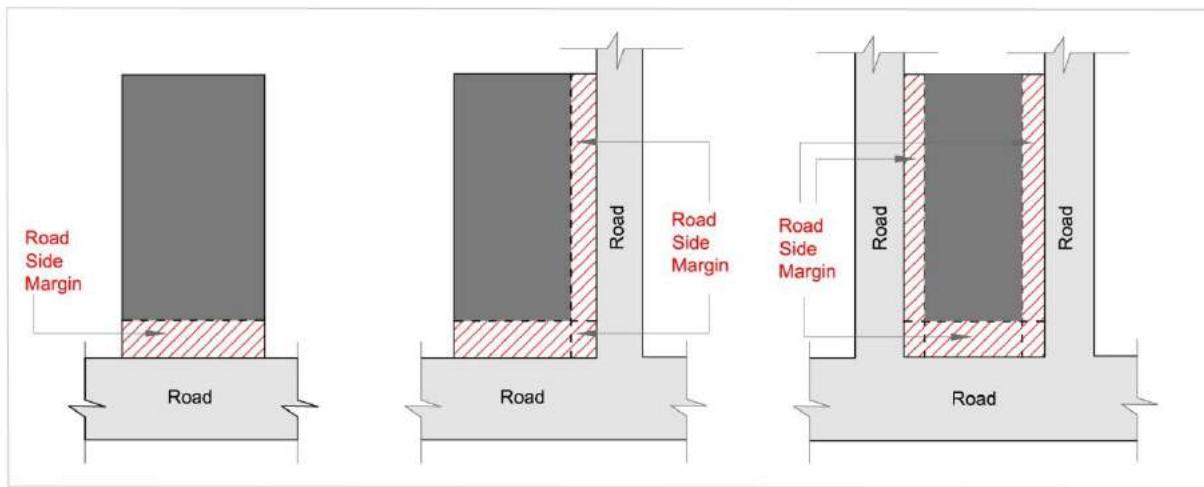


Figure No. 7.4: Roadside Margin / Front Margin

Table No. 7.10: Roadside Margin (Except for SMC, Gamtal / Gaothan and Industrial Zone)

No	ROW (Right of Way)	Roadside Margin (From the centreline of the road)
1	Less than and equal to 6m (Internal Road)	5.00
2	Greater than 6 and equal to 9 m (Internal Road)	7.00
3	Greater than 9 and equal to 12 (ODP Road)	9.00
4	Greater than 12 and equal to 15 m (ODP Road)	12.00
5	Greater than 15 and equal to 18 m (ODP Road)	15.00
6	Greater than 18 and equal to 25 m (ODP Road)	19.50
7	Greater than 25 and equal to 45 m (ODP Road)	30.50
8	Greater than 25 and equal to 45 m (NH/SH)	36.50

Note: Roadside margin for Special Buildings shall be minimum 12 m or whichever is higher

Table No. 7.11: Roadside Margin (SMC and Gamtal / Gaothan)

No	Road Width	Roadside Margin (From the centreline of the road)
1	Less than and equal to 6m (Internal Road)	5.00 (On roads identified by the authority)
2	Greater than 6 and equal to 9 m (Internal Road)	7.00
3	Greater than 9 and equal to 12 (ODP Road)	9.00
4	Greater than 12 and equal to 15 m (ODP Road)	12.00
5	Greater than 15 and equal to 18 m (ODP Road)	15.00
6	Greater than 18 and equal to 25 m (ODP Road)	18.50
7	Greater than 25 and equal to 45 m (ODP Road)	30.00
8	Greater than 25 and equal to 45 m (NH / SH within Municipal Limits)	30.00

Note: Roadside margin for Special Buildings shall be minimum 12 m or whichever higher

Table No. 7.12: Roadside Margin (For Industrial Zone)

No	Road Width	Roadside Margin (From the centreline of the road)
1	Greater than 9 and equal to 12 m (Internal Layout Road)	12.00
2	Greater than 12 and equal to 15 m (ODP Road)	13.50
3	Greater than 15 and equal to 18 m (ODP Road)	18.00
4	Greater than 18 and equal to 25 m (ODP Road)	21.50
5	Greater than 25 and equal to 45 m (ODP Road)	31.50
6	Greater than 25 and equal to 45 m (NH/SH)	36.50

Note: Roadside margin for Special Buildings shall be minimum 12 m or whichever higher

7.7.2 Rear and Other Side Margins

1 Rear and side margins shall be as per Table No. 7.13.

Table No. 7.13: Rear and Side Margins

No.	Use	Area of Building Unit (BU) (sqm)	Rear Margin (m)	Side Margin (m)	Remarks
(1)	(2)	(3)	(4)	(5)	(6)
1	Dwelling 1, 2 (Low-rise)	PS ≤ 25	Not Required	Not Required	Only G+1 floor
		PS > 25 & ≤ 80	-	-	1.0 on any one side including rear side
		PS > 80 & ≤ 150	-	-	1.5 on any one side including rear side
		PS > 150 & ≤ 300	2	1.5 (Any one side)	-
		PS > 300 & ≤ 500	2.5	1.5 (Both sides)	-
		PS > 500	3	3 (Both sides)	-
2	Other than above	BH ≤ 15 m without stilt and 17.50 m with stilt	3	3	
		BH > 15 m without stilt and 17.50 m with stilt & BH ≤ 25m	6	6	For PS ≥ 750 sqm required margins shall be 4.5m for low-rise buildings
		BH > 25 m & BH ≤ 45 m	8	8	
3	Industrial use	PS > 800 & ≤ 2000	4.5	4.5	4.5 m on any two sides including rear
		PS > 2000 & ≤ 5000	6	6	All three
		PS > 5000 & ≤ 10000	9	9	
		PS > 10000	12	12	
4		BH upto 25 m	6	6	

No.	Use	Area of Building Unit (BU) (sqm)	Rear Margin (m)	Side Margin (m)	Remarks
(1)	(2)	(3)	(4)	(5)	(6)
	Special Buildings	BH greater than 25	8	8	
5	Storage	Irrespective	6	6	
6	Fuelling Station with and without service station	Irrespective	9*	9*	

Notes:
PS = Building Unit / Plot Size
BH = Building Height

*Note- Subjected to minimum rear and side margin for administrative building & service station in fuelling station can be 4.5m

7.7.3 Margins between Buildings and Common Plot

Distance between two buildings or from any building to the common plot shall be calculated in such a manner that the minimum distance from the farthest protruding point of one building to farthest protruding point of the second building or to the vertical plane of the common plot at any given horizontal level shall be considered for margin in this clause.

Table No. 7.14: Margins between Two Buildings and Margin from Common Plot

No.	Building Height upto (m)	Margins (m)
(1)	(2)	(3)
1	Margin between two buildings	4.5 m for buildings less than 25 m in height 6 m for buildings 25 m and above in height
2	Margin from Common Plot	3 m for buildings less than 25 m in height 6 m for buildings 25 m and above in height

7.7.4 Permissible Uses in Margin (Refer Figure No. 7.5)

1 For Dwelling 1, 2 and 3 (except Row house):

- a) Ancillary uses such as parking garage, servant quarter, WC and bathroom shall be permitted at any zone, in side or rear margin space but in no case in roadside margins subject to clear movement for fire tender where required. The area of such uses shall not exceed 16.5 sq m on ground and the height shall not exceed of 3 m.
- b) Surface water tank up to 1.5 m in height.
- c) Open staircase, cantilever staircase with maximum width of 1 m and staircase landing of maximum 2 m at floor level shall be permitted in side or rear margins except on road side margin.
Provided that, for Dwelling 1 and 2, in case of plots not exceeding 150 sq m, 1 m wide stair may be allowed. However, the stair may be allowed after keeping 1.5 m margin if the plot abuts on 6 m wide road. Further if the plot abuts on 7.5 m wide road the stair may be allowed from the plot boundary.
- d) Doors, windows, or projections shall not be permitted along the common wall of the semi-detached adjoining property. No rainwater from the roof shall be drained in the adjoining property.
- e) Partition wall shall be allowed along the building unit boundary on common boundary of semi-detached building and on margin space between two structures up to a maximum height of 1.5 m.
- f) Underground water tank, percolation well, bore well and pump room with a maximum size of 2 m x 2 m and with a maximum height of 2 m.
- g) Margin shall not be required in case of building having approach from internal /approach road.

- 2 Building units of all uses other than Industrial, and Public Offices: A structure (only prefab) for security cabin including toilet with maximum dimensions of 2 m X 4 m, with maximum height of 3 m shall be permitted in the roadside margin subject to leaving clear access for fire tender movement.
- 3 For Industrial, and Public Office use: a security cabin structure up to a maximum ground coverage of 16.5 sq m with maximum height of 3.0 m shall be permitted in the roadside margin subject to leaving a clear access for fire tender movement with a minimum width of 4.5 m from the building.
- 4 Pedestrian access path, ramp, and stepped approach as prescribed shall be permissible in the marginal space.
- 5 Common plots shall be permitted in the marginal space.
- 6 Vehicular Ramp connecting the ground level with basement level 1 shall be permitted in side and rear margin as per Table No. 13.4 and 13.5 provided there is unhindered movement for fire tender on three sides. It should not start before the line of the roadside margin back OR it should commence only after the front / roadside margin line.
- 7 Electrical Infrastructure: Electrical sub-station, transformer room, box-type transformer, section feeder pillar, auxiliary power back-up system and meter room according to the norms of the Competent Electric Company shall be permitted in side margin space but not on the road side margin of the building unit.

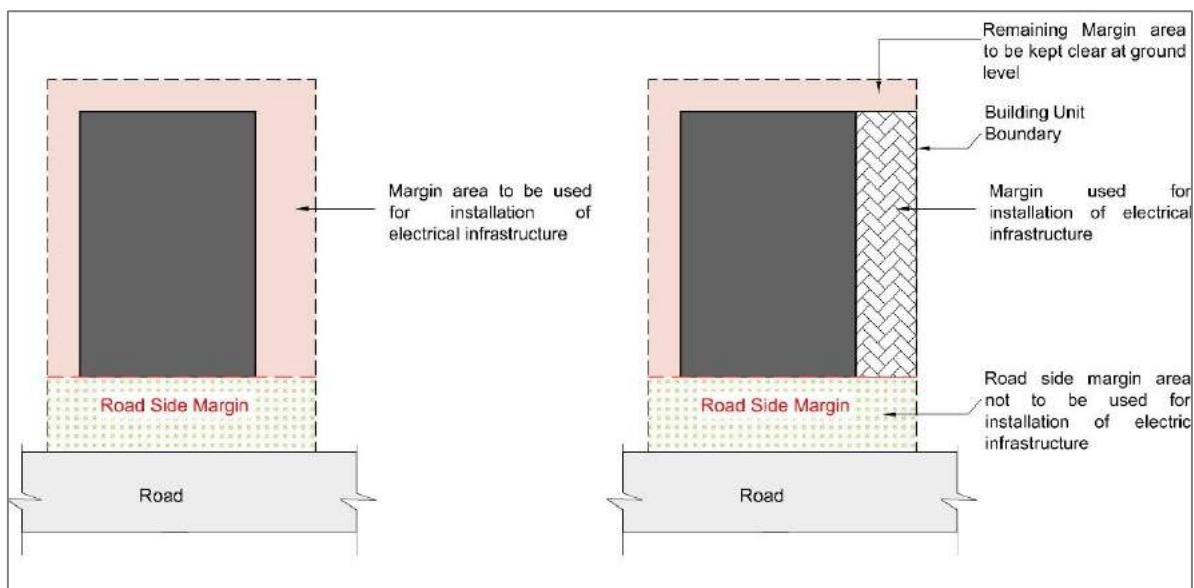


Figure No. 7.5: Margin to be Used for Electric Infrastructure

- 8 For a building unit using marginal space for providing electrical infrastructure as per Rule 7.7.4 (7) and underground water tank as per Rule 7.7.4 (1f), these permissible uses shall be allowed only one margin side except roadside margin. The other margin spaces shall be kept clear and accessible at ground level (*Refer Figure No. 7.5*).
- 9 Cantilever refuge area for building with height more than 25 m may be permitted subject to Fire Rules.
- 10 Parking shall be permitted in margins except in access path from gate to staircase (*Refer Figure No. 7.6*). If contiguous with parking in hollow plinth, provided with minimum dimension of 6 m, or contiguous with overall parking layout. No sheds shall be constructed for paring in margins.



Figure No. 7.6: Details of Permissible Parking

- 11 Basement shall be permitted within side and rear margins after leaving 3 m margin from the boundary of the building unit.
- 12 In any marginal open space, weather sheds sun breakers horizontal or vertical projections shall be permitted up to 0.60 m. These projections may also be part of the façade articulation at various levels but shall in no cases they become a part of the habitable space. Such projections shall be allowed above a minimum height of 2.4 m from the ground level.
- 13 Balcony projection may be permitted upto 33% of the perimeter of the building and it should not be more 50% of the margin width or 1.2 m in width, whichever is less. In case of buildings other than Dwelling 1 and Dwelling 2, the balcony projection should be above 6.5 m height to enable clear fire tender movement.
- 14 For a building unit with uses – Dwelling 1, Assembly 1 & 2, Education 1, 2, & 3, Public Offices, Health 1, 2, 3 & 4; the building unit level may be permitted to be raised up to plinth level.
- 15 Porch having 4.5 m minimum height shall be permitted in margin, at ground level subject to the condition that 4.5 m clear circulation space is kept for fire tender movement.
- 16 Special Buildings
 - a) The roadside margin may be permitted to be covered up to 6 m from the building line with a projected cantilever structure (porch) at a height of not less than 4.5 m from the ground level.
 - b) Parking shall be permitted in roadside margin after leaving minimum 6 m from the building unit boundary. This minimum 6 m shall be utilised for shade giving trees and plantation purpose ensuring clear movement for fire tender.
- 17 Sky walk shall be permissible in margin. However, it shall not be at a height less than 10.50 m.
- 18 Cantilever projection can be permitted after leaving the required margin.
- 19 Portable structures maximum upto 3 m height and security cabin of 2.4 m x 1.8 m shall be permitted. Space for fire tender should be kept clear.

7.7.5 Restriction on Development in Margin

- 1 The required margin open spaces except for permissible uses as per Rule No. 7.7.4 shall be kept permanently open to sky.
- 2 This space shall not be used for stocking materials or loose articles for the purpose of trade or otherwise, putting up fixed or movable platforms.
- 3 Parking shall be allowed in the rear and side margin space after keeping minimum required marginal spaces the case of building height more than 25 m.
- 4 Vehicular or Pedestrian ramp/s leading to parking in floors above ground level shall be permitted after keeping required margin.

- 5 The sunk in lower ground floor or basement provided for the purpose of light / ventilation shall not be permitted in the marginal open space.
- 6 No difference shall be permitted in the ground level of the margin space of the building even in cases where the permitted margin of the basement is lesser than the permitted margin of the super structure.

7.8 Basement in a Building Unit

Atleast half of the clear floor height of the basement shall be below the ground level (*Refer Figure No. 7.7*).

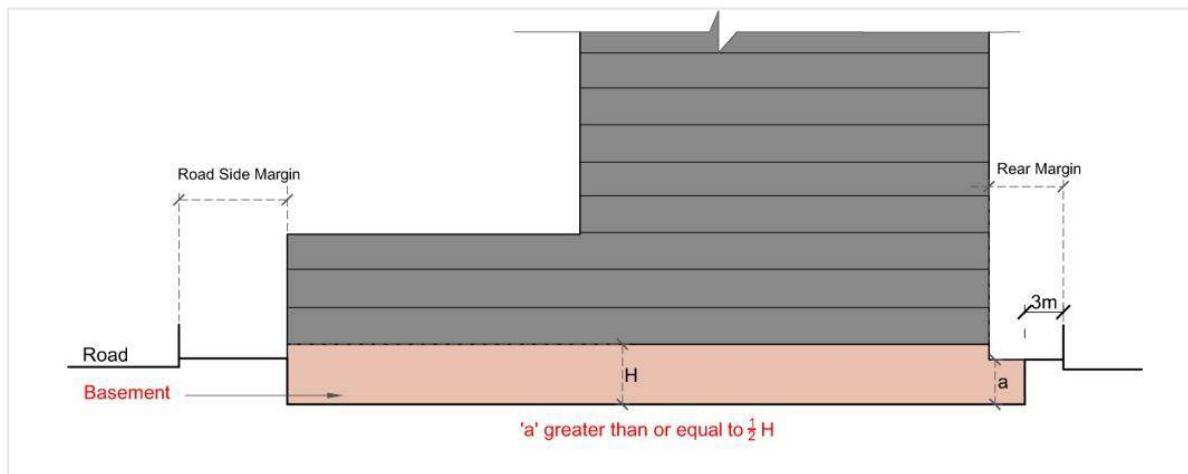


Figure No. 7.7: Basement or Cellar

7.8.1 Margins

- 1 Subject to Sub Rule 1, the side and rear side margins for the basement shall be 3 m from the building unit / plot boundary. A combined shared basement parking shall be permitted using full margin space other than roadside margin of building unit with the consent of the adjoining building unit owner for new development provided that the last building in such cases shall have to leave at least 3 m from the building unit boundary.
- 2 For building units with area less than 500 sq m, basement shall be permitted with margins as per Rule No. 7.7.4. A minimum margin of 3 m is required from the common wall of adjacent existing building.
- 3 Basement shall be permitted under common plot, internal road, and internal marginal space for exclusive use of parking only with adequate structural safety during construction in case of construction on a single building unit.
- 4 In cases where the permitted margin of the basement is lesser than the permitted margin of the super structure, no level difference shall be permitted in the margin space of the building. Such margin space shall be open to sky and motorable to enable fire tender movement.

7.8.2 Extent

- 1 Basement shall not be allowed for the purpose of parking for building units with area less than or equal to 250 sqm.
- 2 Only one level below ground level of basement can be used for any use other than parking. For parking, basement can be permitted at more levels than one.

7.8.3 Height

Maximum clear height of the basement shall be 4.50 m and minimum clear height shall be 2.80 m from finished basement to the bottom most soffit of beam/slab, whichever is applicable (*Refer Figure No. 7.8*).

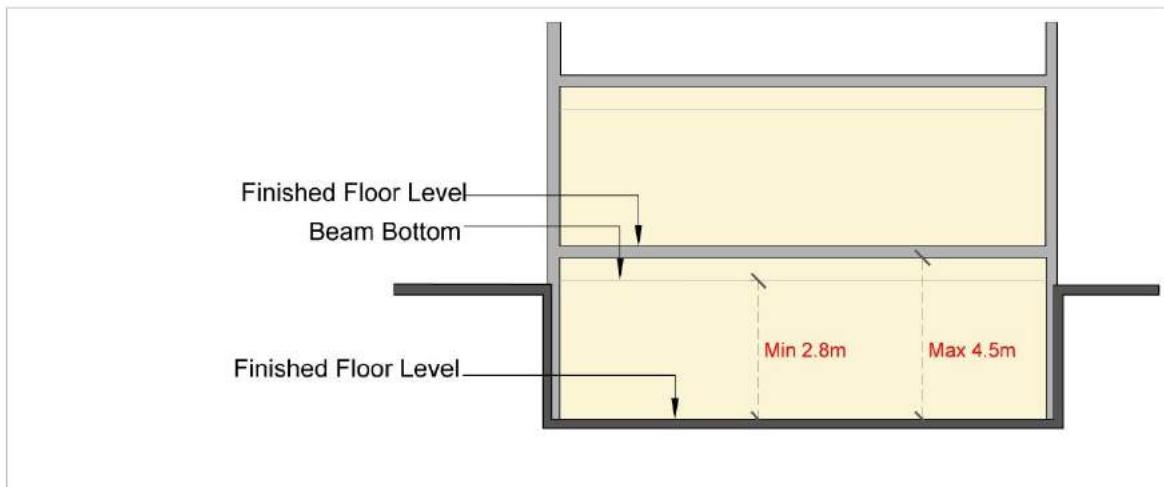


Figure No. 7.8: Height of the Basement

7.8.4 Permissible Uses

- 1 No residential use shall be allowed in the basement under any circumstances.
- 2 Uses permitted in a basement are – parking, safe deposit vault, AC Plant, grey water treatment plant, sewage treatment plant, water tank and storage other than inflammable material.
- 3 Uses permitted in the basement of a hospital building are – radiation producing device, radiation therapy room, MRI, or X-Ray room.
- 4 Commercial use, such as shopping complexes or malls, may be permitted for a single level below ground, provided that a minimum of 33% central open space is maintained to ensure adequate light and air circulation into the basement. However, this type of use shall not be allowed within a covered basement.
- 5 For basements exclusively for parking, any other permissible use is permitted only in basement level 1 up to a maximum area of 25% of the total built-up-area of the basement floor. This non-parking area shall be calculated towards the computation of FSI.
- 6 Other permissible uses of the basement can be allowed for two levels below ground. However, parking can be permitted for up to 4 levels below ground subject to removal of water, adequate provision of air, and structural issues.

7.8.5 Services

No water connection or drainage connection shall be permitted in the basement for the residential purposes.

7.9 Addition to an Existing Structure / Building

- 1 Any addition to an existing structure / building shall comply with these Rules and is to be treated as a new construction.
- 2 For approved, individual, existing, detached, and semi-detached dwelling units, permissible upper floors may be permitted as per sanctioned margins, staircase, projections, and structural safety.

7.10 Addition in Building Units with Existing Buildings

- 1 For building units with approved existing buildings, additional buildings shall be permitted with compliance to these Rules for construction of a new building.
- 2 The additional buildings shall be permitted as per remaining FSI (i.e., after deducting the utilised FSI of the approved existing building from the maximum permissible FSI of the entire building-unit) with compliance to respective margins, permissible height, structural safety, uses and all other applicable regulations.

7.11 Row House and Tenement Type Buildings

7.11.1 Row Type Buildings

- 1 The minimum area of plot on which row houses are to be constructed shall be 1000 sq m.
- 2 The minimum length of common wall between the two adjacent row houses shall be 50% of the depth of the row house.
- 3 The minimum size of an individual sub plot of a row house shall be 40 sqm and the minimum width of the plot shall not be less than 4.5 m.
- 4 Minimum margin in the front shall be 2 m and rear margin shall be 2.50 m. The end plot in a row house shall also have minimum side margin of 2 m on the side abutting on road.
- 5 6 m wide space open to sky shall be provided at the end of every such 10 continuous houses of row houses.
- 6 Basements are permitted, after the stipulated margins.
- 7 Requirement for common plot shall be as prescribed irrespective of number of row houses to be developed.
- 8 In case of Row house type building, the width of internal approaches/road for such development shall be regulated as per Table No. 7.19.

7.11.2 Tenement Type Buildings

- 1 The minimum length of common wall between the two adjacent tenements shall be 50% of the depth of the tenements.
- 2 In case of tenements type building, the width of internal approaches/road for such development shall be regulated as per Table No. 7.19.
- 3 Minimum requirement of margin, parking, and other applicable regulations as per Dwelling-2 category.
- 4 The term ‘tenements type building’ refers to row houses sharing a common wall.

Table No. 7.13: (Deleted)

7.12 Provision for Podium

Means a horizontal platform, projecting or otherwise, extending beyond the building footprint on one or more sides, and may consist of one or more levels.

7.12.1 Uses Permitted

Podium may be used for the following purposes which may be standalone or in combination:

- 1 Parking of vehicles,
- 2 Other uses as permissible in respective zone may be allowed by counting it in FSI subject to light, ventilation and fire safety requirements and other regulations as specified in these regulations.
- 3 Topmost portion of podium slab which is open to sky maybe landscaped and / or be used as recreational open space, common plot, subject to provision of 2.0 m high parapet wall.

7.12.2 General Requirements

- 1 Podium may be allowed for plots having area equal or more than 4000 sq m.
- 2 Height of podium shall not exceed 15 m from ground level.
- 3 Podium shall be allowed after leaving minimum 6 m distance form plot boundary or required set back / front margin whichever is higher after leaving space for movement for fire tenders.
- 4 Podium shall be allowed at a distance of 6 m from the plot boundary other than front side.
- 5 Common plot shall be permissible from the boundary of the top slab of podium subject to other regulations related to common plot.
- 6 The structural design of podium slab and ramp should be of adequate strength to bear the load of fire engines and vehicles.
- 7 The consent from The Fire Officer shall be necessary before permitting the aforesaid podium.
- 8 Ramp leading to basement, or any other floors or podium shall be regulated as per Table No. 13.5.
- 9 In case a podium is not provided with ramp, but provided with car lift only, the same may also be permitted in one or more levels, however, the total height shall not exceed 9.0 m above ground level.
- 10 Requirement of accessibility for elders and persons with disabilities shall be ensured as mentioned in these Rules-which may require providing ramps with specified gradient or accessible lifts for access to different levels.
- 11 Passenger lifts, fire lift, vehicular lift, shall be provided as mentioned in Rule No. 13.12.

Table No. 7.16: Width of Ramp for Vehicle

Type of Vehicle (1)	Type of Ramp (2)	Width of Ramp (M) (3)
LMV	One Way	3.00
	Two Way	6.00
LCV	One Way	4.50
	Two Way	9.00
HMV	One Way	6.00
	Two Way	12.00
Fire Tender	-	7.50

Note:

- 1 Minimum Radius of Inner Curvature shall be 4.5 m
- 2 The maximum slope shall be 1:7 and if podium is accessible for fire tender maximum slope of ramp shall be 1:10.
- 3 After a 40 m length of continuous ramp, a flat surface of minimum 6 m length shall be provided.
- 4 Abbreviations: -
 - a) LMV- Light Motor Vehicle
 - b) LCV- Light Commercial Vehicle
 - c) HMV- Heavy Motor Vehicle.

- 12 Heavy Motor Vehicles (HMV) shall not be permitted on podium and floors other than ground floor and basements.
- 13 Maximum projection from the footprint shall not exceed 11 m.

7.12.3 Requirements for Fire Tender Movement

- 1 All high-rise buildings shall necessarily be accessible by fire tender as below (*Refer Figure No. 7.11*).
 - a) For buildings having floor area less than or equal to 10,000 sqm, fire tender shall have access to at least 1/3 of the perimeter of the building which shall be minimum 6 m wide and having 9 m turning radius
 - b) For buildings having floor area more than 10,000 sqm, fire tender shall have access to at least half of the perimeter of the building which shall be minimum 6 m wide and having 9 m turning radius
- 2 If podium is not accessible by fire tender, the podium may be such that it is not extended beyond the building footprint to an extend more than 11 m on the side where the fire tender access is provided (*Refer Figure No. 7.10 & 7.11*).

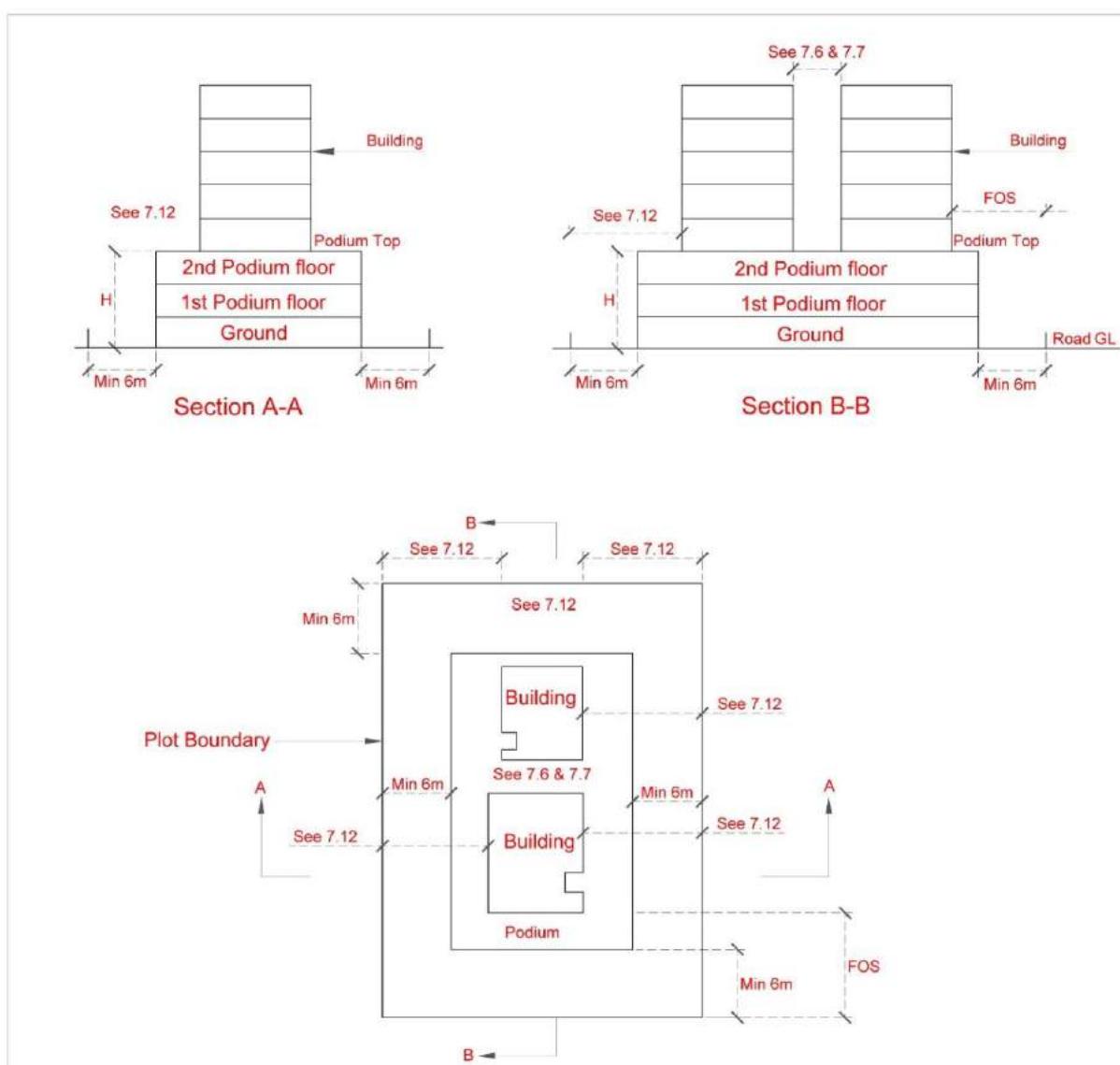


Figure No. 7.9: Building on Podium

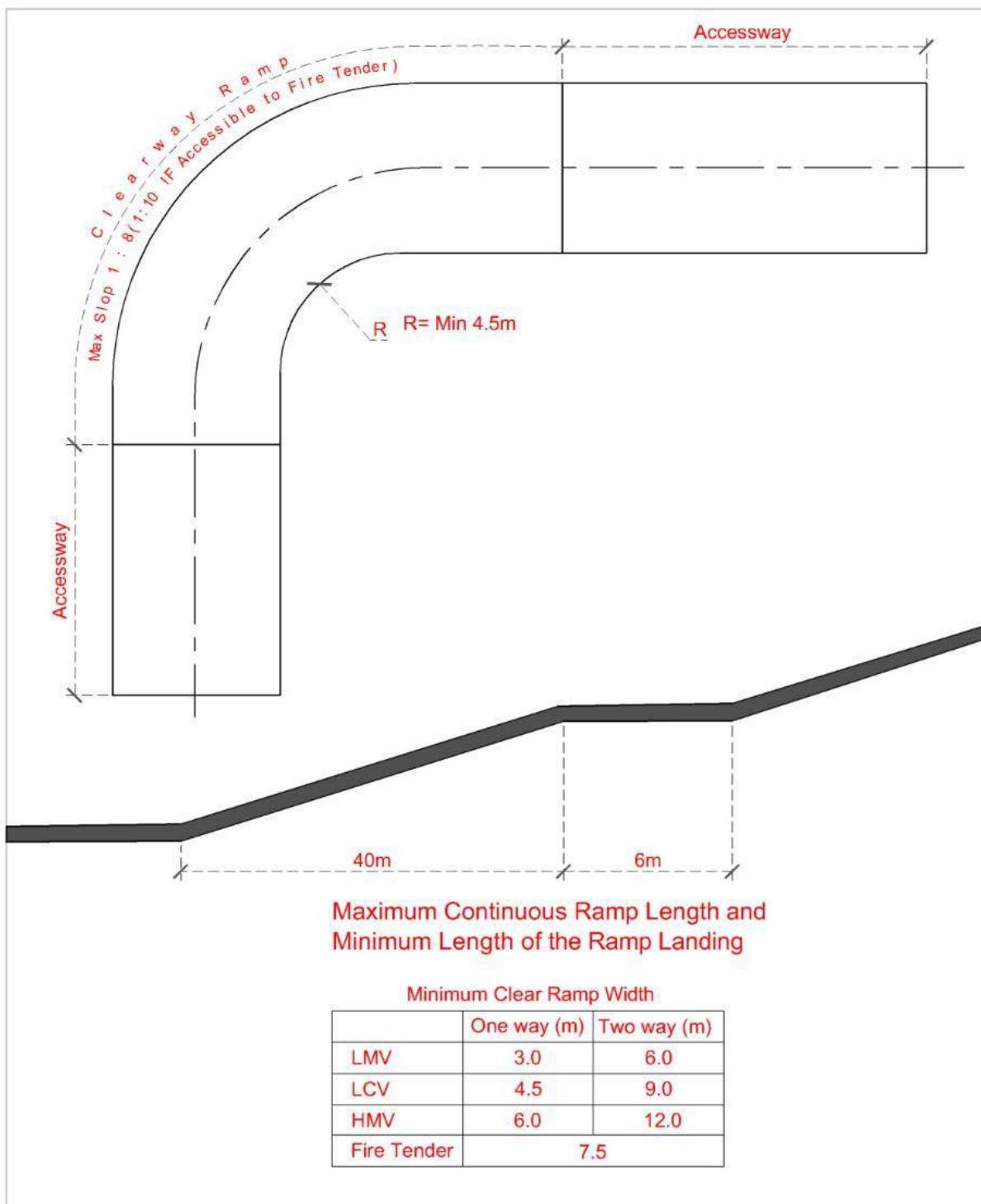


Figure No. 7.10: Ramp on Podium

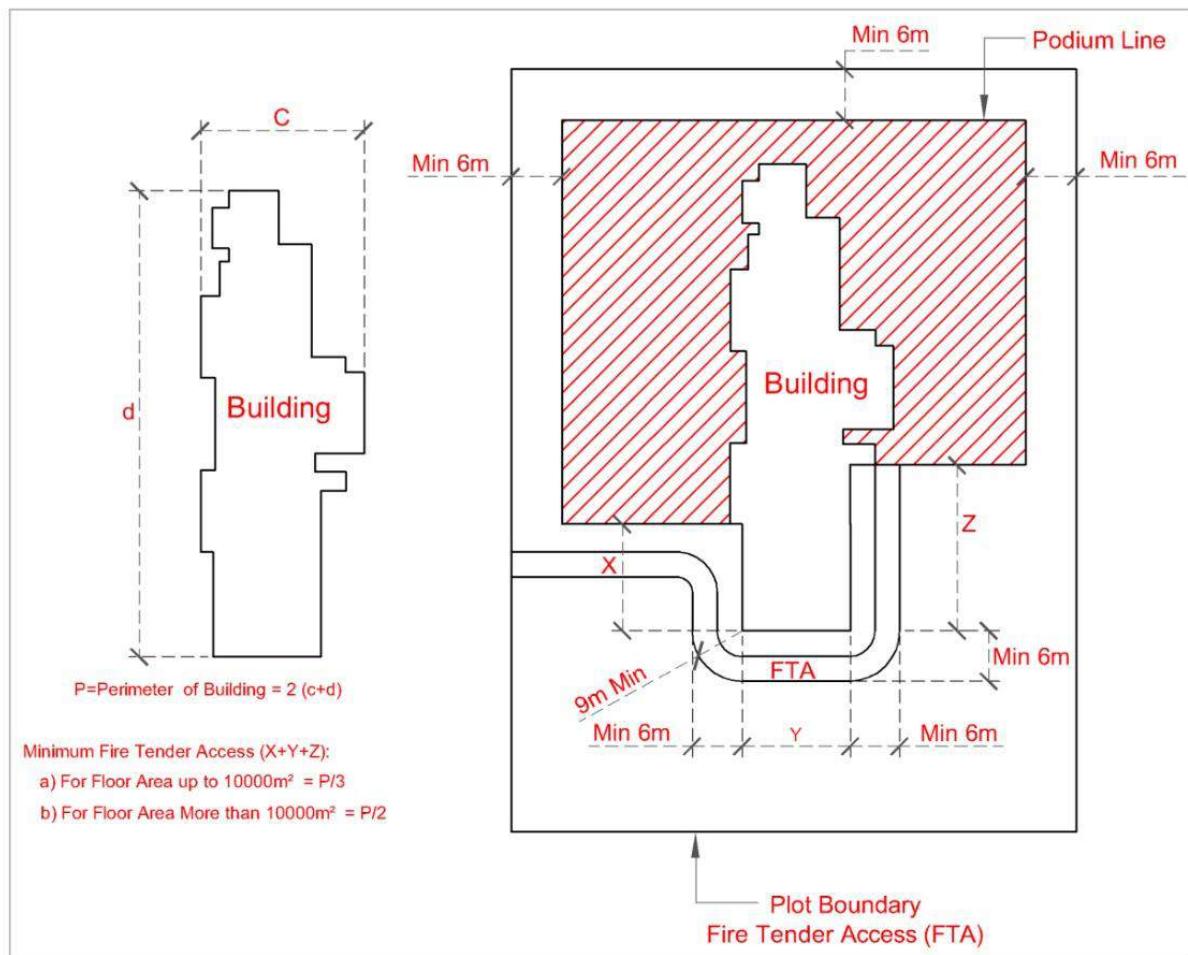


Figure No. 7.11: Emergency Vehicle Access Requirements in Case Podium is Not Accessible by Fire Tender

7.13 Parking

- 1 Parking space for vehicles shall be provided within the building unit for every new building and /or extension to an existing building constructed for the first use and /or when the use of old building is changed to any of the uses mentioned in the Table No. 7.17 below:

Table No. 7.17: Parking Requirements

No.	Type of Use	Minimum Parking Required	Visitor's Parking
(1)	(2)	(3)	(4)
1	Dwelling 1, Dwelling 2	1 car park for more than 100 sq m and up to 300 sq m of plinth area per unit. Additional 1 car park for every 100 sq m or part thereof of plinth area per unit. This shall be permitted within the marginal space.	Nil
	Dwelling 3	20% of utilized FSI	Additional 10%, of the required parking space shall be provided as visitors parking.
2	Mixed Use (Residential + Commercial), Mercantile 1,2 & 3, Religious, Hospitality 1, 2 & 3, Transport	Dwelling 1, 2, 3, as prescribed above. For other uses, % of utilized FSI: <ul style="list-style-type: none"> • 30%, if building unit size is up to 750 sq m • 40%, if building unit size is above 750 sq m and up to 2000 sq m 	Residential: Additional 10%, of the required parking space shall be provided as visitors parking. Commercial:

No.	Type of Use	Minimum Parking Required	Visitor's Parking
(1)	(2)	(3)	(4)
		<ul style="list-style-type: none"> • 50%, if building unit size more than 2000 sq m 	Additional 20%, of the required parking space shall be provided as visitors parking.
3	Assembly 1,2 and 3	50% of utilized FSI	Additional 20%, of the required parking space shall be provided as visitors parking.
	Assembly 4	50% of building unit area	
	Assembly – Stadium	1.25 sq m of parking area per person of the total stadium capacity	Nil
4	Health 1, 2, 3 & 4 Public Offices	50% of Total Utilized FSI For Hospitals and nursing homes, additional parking of Ambulance shall be provided at the ground level.	20%
5	Industrial- 1, 2, 3 & 4; Storage	10% of the Total Utilized FSI	Nil
6	Educational 1, 2, 3	Primary & Pre-schools- 25% of the Total Utilized FSI Secondary & Higher Secondary Schools - 40% of the Total Utilized FSI Colleges -40% of the Total Utilized FSI, Facility for drop-off and pick-up shall be provided within the premises. Others – 50% of the utilized FSI	10%
7	Sports and Leisure	25% of building unit Area	10%
8	Recreation 1 & 2	10% of building unit area	10%

Note: For the purposes of computing parking 'Utilised FSI' means total BUA including all exempted area from the computation of FSI.

- 2 Parking requirement for a mixed-use development shall be calculated on prorata basis of the FSI consumed specific to the different uses.
- 3 Parking is permitted at any floor level above ground and at more levels of basement as per required parking, with provision of vehicular ramp or vehicular elevator / lift.
- 4 50% of the required visitors parking shall be provided at the ground level.
- 5 Parking area includes parking space, driveway and aisles but excludes approach road, vehicular lift, and vehicular ramps.
- 6 Parking layouts with minimum size requirements for parking space, driveways and access lanes shall be provided as prescribed.
- 7 Parking shall be permitted in side and rear margins except in Access as per Rule No. 7.7.4 (11).
- 8 Parking can be permitted in roadside margin after leaving clear margin of 4.5 m from the building boundary towards roadside at ground level only. In case a building unit abuts more than one road and has area up to 1000 sqm, it shall be permitted to utilise narrow roadside margin for parking.
- 9 Parking shall be allowed in any roadside margin for building unit having area up to 750 sqm.
- 10 Parking area should be retained as effective parking space and shall be maintained with light and ventilation system if provided in an enclosed area.
- 11 For multi-level parking, a vehicular ramp or vehicular elevator / lift shall be necessary.
- 12 If parking is provided on any upper floors with vehicular elevator, vehicular ramp is not necessary if parking space is provided with provision of floor sprinklers.
- 13 Parking shall not be permitted within an Atrium.
- 14 In case the maximum permissible FSI is not utilised, for any extension or additions in the future, additional parking as per Rules shall be provided as required for the additional utilised FSI.
- 15 Notwithstanding anything contained in Clause 7.13 (1 to 14) above, ramp, vehicular elevator / lift leading to basement or upper floors and parking at ground level shall be provided in such a manner that 4.5 m clear stretch of space is kept for the movement of fire equipment and machineries. Provided that in case of parking to be provided in front margin as per Clause 7.13 (8) and 7.13 (9) shall be applicable.

- Provided that, if ramp leads to the podium, in such cases vehicular elevator shall be permissible after keeping required margin as mentioned in podium Rule No. 7.12.
- 16 In case of stacked parking (mechanized parking) where in parking slots are provided at elevated platform, a common approach is provided to the parking below the elevated platform. The provision will be considered an equivalent to 1.5 times the area on ground, meaning if the parking space on ground/floor is 500 sq m and stacked parking is provided, it shall be considered as 750 sq m of parking space provided.
 - 17 The Competent Authority may disallow parking in basement in case of flooding.
 - 18 Vehicular Ramp: Connecting ground level with basement level-1 shall be permitted in side and rear margin for:
 - a) Building unit with area up to 2000 sq m or and,
 - b) Building unit with building less than and equal to 25 m in height.

7.14 Open to Sky Space

Open to sky space (interior or exterior) shall be provided for natural light and ventilation in conformity with the following Rules.

7.14.1 Dimensions of Open Space (interior / exterior)

The minimum width of open to sky space provided in buildings at plinth and above each level shall be as under:

Table No. 7.18: Minimum Width of Open to Sky

No.	Building Height (m)	Minimum dimension of the smaller side (m)
(1)	(2)	(3)
1	Less than or equal to 10 m	3
2	Greater than 10 m and less than 15 m without stilt and 17.50 m with stilt	4
3	Greater than 15 m without stilt and 17.50 m with stilt and less than 25 m	6
4	Greater than 25 m	7

7.14.2 Open Space next to WC and Bathroom

1 For open space next to WC and Bathroom refer Rule 13.3.4.

7.14.3 General Requirements

- 1 Every such chowk / open to sky space (interior / exterior) shall be maintained for the benefit of the building and it shall be with the building unit.
- 2 Every such chowk / open space (interior / exterior) shall be provided with suitable and sufficient access.
- 3 Every such chowk / open to sky space (interior / exterior) shall be always kept free from any erection thereon and kept open to the sky.
- 4 No open drain except for rainwater shall be provided in any open space required by these Rules.
- 5 No construction work on a building shall be allowed if such work operates to reduce an open-air space of any other adjoining building belonging to the same owner to an extent less than what is prescribed by any of these Rules in force at the time of the proposed work to further reduce such open space if it is already less than what is prescribed.

7.15 Development of Land

7.15.1 Internal Road and Approach to Building and Common Plot (*Refer Figure No. 7.13*).

- 1 Internal Road length shall be measured from its origin to the Access Road to the building unit.
- 2 In case of single building the width of approach / internal road shall be measured based on the distance from the Town Planning Scheme or Outline Development Plan Road up to the edge of the building in case of hollow plinth, or location of the farthest entrance of a building in case of solid plinth.
- 3 In case of buildings connected internally or externally the length of internal road shall be considered up to the edge of the hollow plinth of the farthest building (in case of building with hollow plinth) and up to the location of the farthest entrance of the building in case of solid plinth.

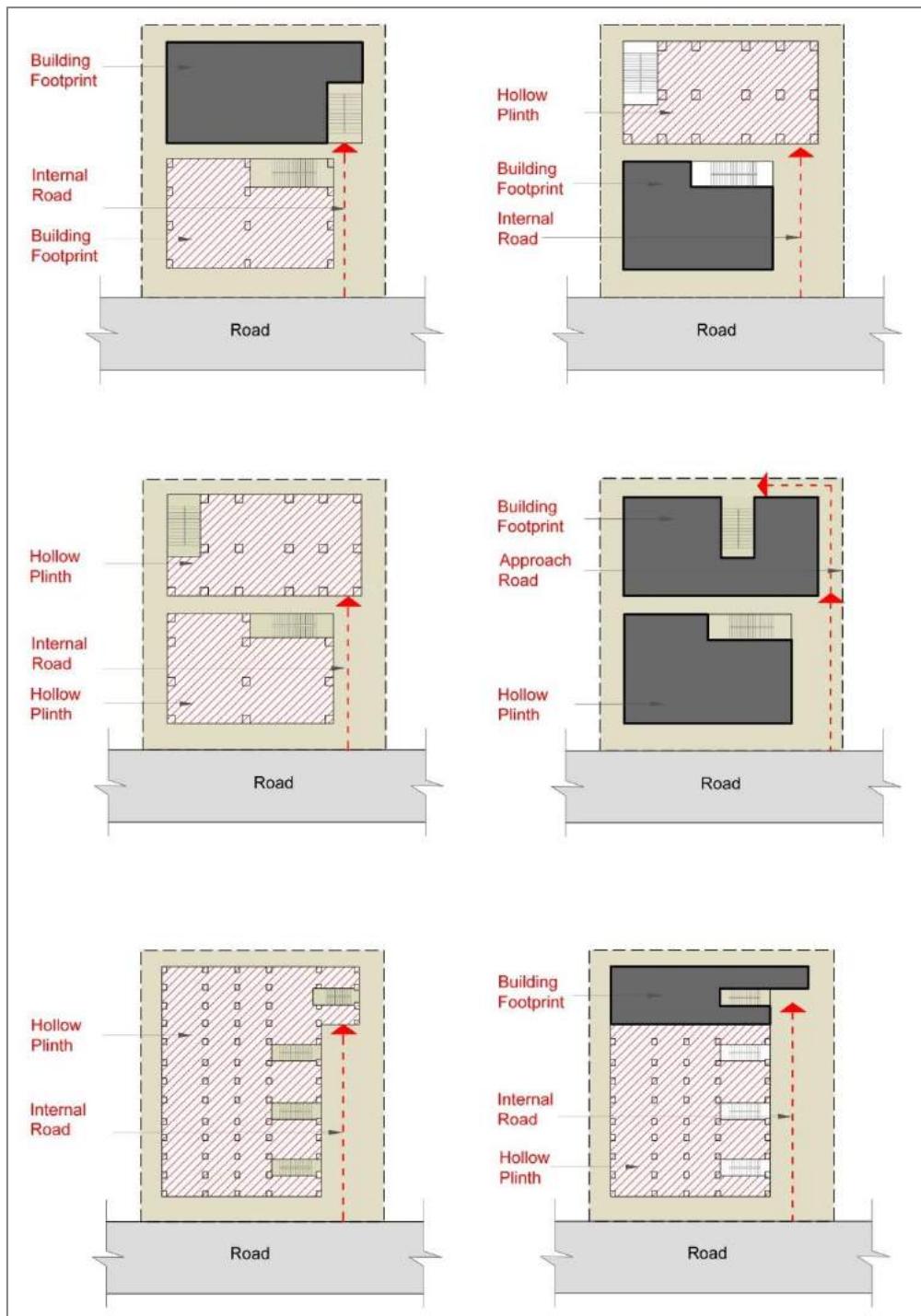


Figure No. 7.13: Internal Road and Approach to Building and Common Plot

- 4 In case of layout with two or more buildings of Dwelling 3 type dwelling units, commercial units or independent establishments, the width of Internal Road on which the building abuts shall be as applicable for a length of above 45 m category as per Table No. 7.19. In case of more than two buildings including Dwelling 1 and / or Dwelling 2 type, approach of as applicable width shall be allowed up to the second dwelling unit as per Table No. 7.19
- 5 The width of the Internal or Approach Road shall be based on the length and use of the building-unit as under:

Table No. 7.19: Provisions for the Length of Road for Layout, Sub Plotting and Building Approach

Length of road / approach in m	Width of Road / Approach (in m)					
	Layout		Sub Plotting		Building Approach (For campus planning)	
	Residential	Non- Residential	Residential	Non- Residential	Residential	Non- Residential
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Upto 15 or less	6.0	6.0	3.0	4.5	3.0	4.5
Upto 45	6.0	6.0	4.5	6.0	4.5	6.0
Above 45 and upto 75	6.0	7.5	6.0	7.5	6.0	7.5
Above 75 and upto 150	7.5	9.0	7.5	9.0	7.5	9.0
Above 150 and upto 450	9.0	12.0	9.0	12.0	9.0	12.0
Above 450	12.0	15.0	12.0	15.0	12.0	15.0

Note:

- 1 Layout means the laying out of plots for the first time when land is converted from Agriculture to Non-Agriculture.
- 2 Sub Plotting means modification in the boundary of plot by sub dividing plot into more than one sub plot.
- 3 Building Approach (for campus planning) means approach given to development of a gated environment.
- 4 The length of road for calculating the width shall be considered by separating the length from junction. The length of smaller road shall be considered from the wider road.

7.15.1(A) Completion Certificate for Approved Layout Plan

The Completion Certificate for approved layout plans shall be granted within the time stipulated by the Competent Authority only after the completion of the basic minimum works as mentioned below:

- 1 Levelling of all the Plots with proper demarcation;
- 2 Asphalt/ RCC road with Storm Water drainage on both sides
- 3 Appropriate Street lighting;
- 4 Development of all designated Common Open Spaces and Parking areas.
- 5 Compound Wall of Building Unit.

7.15.2 General Requirements for Internal Roads

- 1 The Internal Road shall be provided up to each individual building.
- 2 Internal Road width shall be measured from the farthest point of its origin to the next wider road it meets.
- 3 In cases where the road is in continuation with any private road in the adjoining estate / plot or any public road continuous to the estate, the length of the adjoining road of the public road shall be added to the length of the internal road for the purpose of determining the width of such road.
- 4 Curves at the junction: Curvature radius shall be provided at the junction of roads as prescribed in Table No. 7.20. However, in case where approval has been granted for any building unit or a lay out plan under any Rules the Competent Authority shall not insist on these as prescribed below.

Table No. 7.20: Radius of Road Curvature Based on Width of the Road

No	Width of the Road (m)	Radius of Road Curvature (m)
(1)	(2)	(3)
1	Up to 6	3
2	More than 6 and up to 18	Half the width of the wider road whichever is higher, maximum 7.5
3	More than 18	9

Note: The width of the wider road shall be taken into consideration in determining the radius of the curvature at the junction of roads of different widths.

- 5 The shape of the plots and the junction of the roads, at the corners shall be designed as directed by the Competent Authority.
- 6 The alignment of the internal road or roads shall be regulated to be in continuation of the public or private roads continuous to the applicant's Building Unit; but in case of termination of an internal road or roads; a turning circle with diameter of 13.5 m or 12 m x 6 m turning "T" shall be required at the cul-de-sac. This requirement may be waived for such road with width of 7.5 m if the length does not exceed 110 m.
- 7 The Development Permission shall be regulated as per the proposed road network by the Competent Authority.
- 8 For development area in Non - Town Planning Area, the width of one road shall be decided by the Competent Authority.

7.15.3 Amalgamation and Subdivision of Building-Unit (Refer Figure No. 7.14)

The Owner or Developer shall be required to get the land reconstituted by the Competent Authority as 'Building unit' or 'Building units' before amalgamation or sub-division of land.

- 1 In case of subdivision or amalgamation, the depth of building unit shall be regulated as per Clause 7.15.3 (3) below.

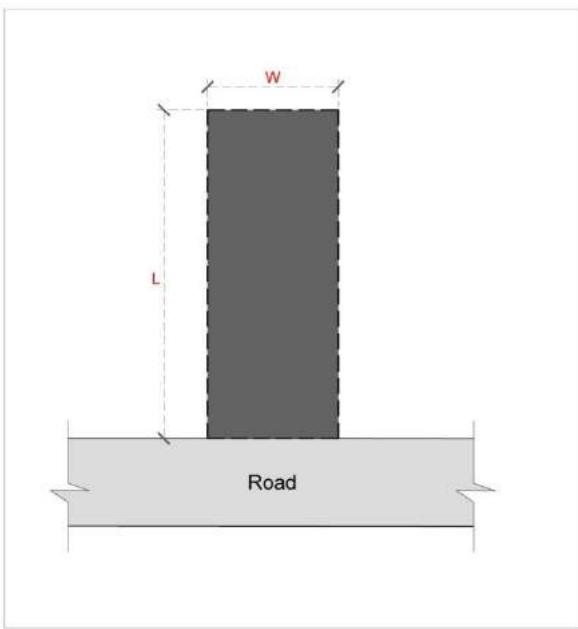


Figure No. 7.14: Amalgamation and Subdivision of Building - Unit.

- 2 Amalgamation of building unit abutting on a road with width equal or more than 18 m, shall be permitted if depth of the building unit shall not exceed three times the frontage of the building unit abutting on road.
- 3 The minimum side of the building unit shall be in accordance with its size as per Table No. 7.21.

Table No. 7.21: Minimum Side of Building Unit

No	Building Unit Area (Sq m)	Minimum Side Abutting to Road (m)
(1)	(2)	(3)
1	≤ 60	3
2	$> 60 \text{ to } \leq 100$	4
3	$> 100 \text{ to } \leq 200$	5
4	$> 200 \text{ to } \leq 500$	7
5	> 500	10.5

Provided that building units not in conformity to the minimum size and specified in the aforesaid table shall be exempted from the applicability of the above if they are subdivided or amalgamated prior to final notification of these Rules.

- 4 Subdivision of building unit with existing structure may be approved but such newly created subdivision shall comply with the prevailing relevant provision of General Development Rules. However, the provision of margins, for the existing building may be allowed as per the development permission granted for the existing building.

7.15.4 (Deleted)

7.15.5 Common Plot

- 1 Common plot is required for building unit of area 2000 sq m or above in all zones other than Agriculture zone / Preservation Zone I, II and III as per following Table No. 7.22:

Table No. 7.22: Minimum Common Plot Requirements (Refer Figure No. 7.15)

No.	Use	Area of the Building-Unit /Plot Size (sq m)	Minimum Required Area of Common Plot
(1)	(2)	(3)	(4)
1	Other than use mentioned in No. 2 and 3 below	≥ 2000	10 % of the area of building unit
2	Industrial 1, 2 & 3	≤ 5000	Nil
		$> 5000 \text{ and } < 20000$	8 % of the area of building unit
		≥ 20000	1600 sq m + 5 % of the building unit area exceeding 20,000 sq m
3	Religious, Educational 1, 2 & 3, Health 1, 2, 3 & 4, Assembly, Public Office	≥ 2000	20% of the building unit area

- 2 For building units with area less than 2000 sq m and having buildings with height more than 25 m, a common plot shall be provided of 10% of the area of building unit or 200 sq m, whichever is more.
- 3 The common plot area shall be exclusive of approaches but can be permitted in marginal space. However, it shall not be allowed within Atrium or any covered space.
- 4 The area of the Common Plot may be sub divided such that the minimum area of the Common Plot shall be 200 sq m with no sides less than 10.0 m. In case of Affordable Housing / SPARSH 2, the Common Plot shall be provided with no sides less than 8.0 m.
- 5 Angle between adjacent sides of the Common Plot shall be 60 degrees or more.
- 6 No construction shall be permissible in the Common Plot except electric substation, transformer room, auxiliary power generator, box type transformer, section feeder pillar, meter room, over and underground water tank and pump room, security cabin, community/ society common amenities shall be allowed to be constructed in the Common Plot subject to the following requirements:
- a) Maximum ground coverage of 15% of the respective Common Plot.

- b) Maximum Height of construction shall be 7.5 m from the level of the building unit except in the case of overhead water tank, where more height may be permitted.
 - c) Community/ Society common facility shall be permitted on a Common Plot. The area of this Community / Society common facility built up area shall not be considered towards computation of FSI of the Building Unit. Community facilities with common plot shall be hand over to the association of allottees as the case may be as per The Real Estate (Regulation and Development) Act, 2016.
 - d) Such a building shall be required to maintain the minimum margin requirements between buildings with respect to the adjacent buildings and roadside margin as prescribed.
- 7 In case of Residential Use, 50% of the Common Plot may be allowed to be used as parking space including driveway and aisles. Parking in common plot shall be permitted in roadside margin after leaving minimum 1.5 m from the building unit boundary. This minimum 1.5m shall be utilised for shade giving trees and plantation purpose.
- 8 In case of 'all other uses except Residential Use, complete area of the Common Plot may be allowed to be used as parking space including driveway and aisles. Such parking shall be permitted in road-side margin after leaving minimum 1.5 m from the building-unit boundary. This minimum 1.5 m shall be utilised for shade giving trees and plantation purpose.
- 9 In cases where layout or subdivision of Building Unit is sanctioned with provision of required Common Plot, Common Plot shall not be insisted in case of sub-division of such sub-divided new Building-unit and/ or amalgamation of such sub-plots and/ or further development of such sub-divided new Building-unit irrespective of its area.
- 10 The Owner shall be required to give an undertaking that the Common Plot shall be used exclusively for the resident's occupants of the building unit. On sanction of the Occupancy Certificate, the Common Plot shall deem to have vested in the society/association of the residents/ occupants. In case such society or Association is to be formed, the possession /custody of common plot shall remain with Developer until such association/society is formed. The Common Plot shall not be sold to any other person, and it shall not be put to any other use except for the common use of the residents /occupants.

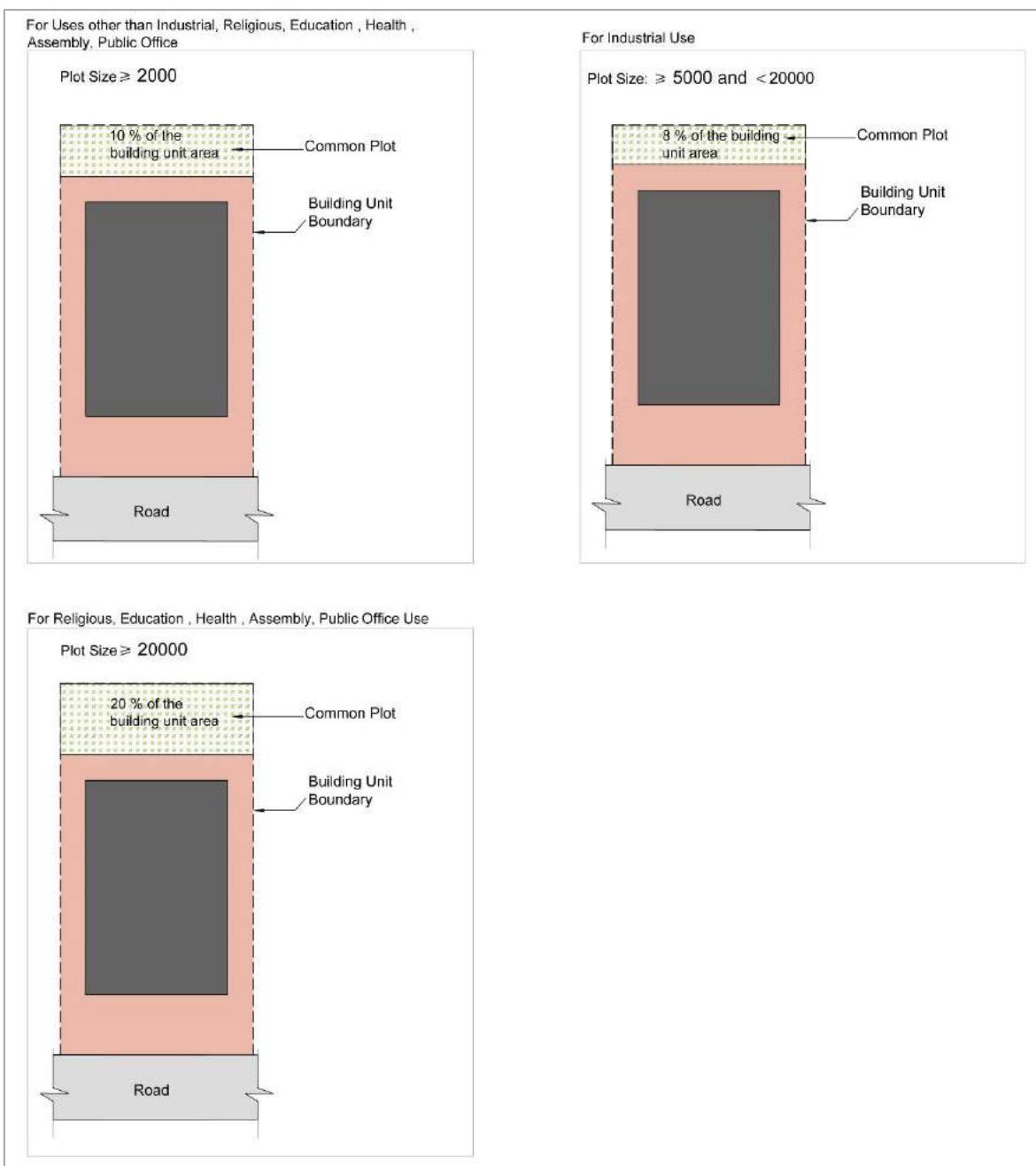


Figure No. 7.15: Common Plot

7.16 Development on Kabrastan, Burial Ground etc.

The land occupied by the graveyards, kabrastan, burial grounds, crematoria and such uses in the Outline Development Plan shall be kept permanently open. A compound wall / boundary wall can be built. Competent Authority may permit structures to be built for specific purpose.

7.17 Development on Open Space Plots

20% of the area of the "Open Space Plots" provided under Town Planning Schemes may be utilized for the construction with required margins for common / community / public uses. Such construction shall be permitted with basement, ground floor or a floor on hollow plinth. In case the building is on hollow plinth, in addition to stair cabins and ramps, 5% of the total permissible built-up area of this plot shall be allowed to be built for the construction of storeroom, security cabin, toilet etc., at the ground level.

7.18 Heritage / Architectural Significant Areas

The Competent Authority may notify ‘Heritage / Architectural Significant Areas’ from time to time and frame special development Rules and Guidelines for these.

7.19 Discrepancy Removal

Any discrepancy found in the text of revenue survey number / block number / final plot number in Outline Development Plan, the Competent Authority after following the prescribed procedure of verification with Appropriate Authority for authorized revenue records / Final Town Planning Scheme records can take appropriate decision for correction of the said discrepancy in revenue survey number / block number / final plot number in Outline Development Plan, while sanctioning the Development Permission.

7.20 Development Work to be in Conformity with the Rules

All development work shall conform to the Outline Development Plan proposals and the provisions made under these Rules. Town Planning Schemes / Detailed Development Plans shall be made keeping the Outline Development Plan proposals and these Rules in view. In case Special Town Planning Schemes / Detailed Development Plans are made with a specific objective and there is a conflict between the two, in that case:

- 1 Road Network Proposals of Town Planning Scheme / Detailed Development Plan shall prevail.
- 2 Special Development Rules made for the Town Planning Scheme / Detailed Development Plan shall prevail.

8 Affordable Housing and SPARSH 2.0 Housing

The following Rules shall be applicable to development of housing for socially and economically backward section of society, low-cost housing undertaken by public agencies, cooperative societies, government / semi government bodies and registered developers. This section also includes housing under SPARSH 2.0 Notification No - LE/LI/DMN/260/SPARSH/2018/11 as amended from time to time.

8.1 Affordable Housing – Group

Other than the specific provisions below, all other Rules shall be same.

8.1.1 Applicability

Affordable Housing – Group shall be permitted all zones except Preservation Zone I, II, III, Recreational Zone I, II and Agriculture Zone.

8.1.2 Minimum Sizes and Accommodation Requirements

- 1 In case of DW3a the maximum built up area of a dwelling unit shall not exceed 60 sq m.
- 2 For eligible complexes, upto 10% of the total utilized FSI shall be allowed for commercial uses.
- 3 The minimum accommodation provided in every dwelling unit shall be one living room, kitchen, and Bath &WC

8.1.3 Density and Floor Space Index

- 1 Minimum density for any proposed Affordable Housing shall be 225 dwelling units per hectare.
- 2 Floor Space Index (FSI) shall be regulated as under:
 - a) Base FSI shall be available as per relevant zone. Minimum permissible base FSI must be consumed to qualify as affordable housing. Additional FSI shall be charged as specified in Table No. 8.1.
 - b) Areas under staircase, passages and corridors shall be exempt from the computation of FSI.

Table No. 8.1: Chargeable FSI for Affordable Housing Dwelling

No.	Residential Dwelling Units Built-up Area (sq m)	Additional FSI Charge
(1)	(2)	(3)
1	up to 30	30% of Circle Rates
2	more than 30 and up to 40	40% of Circle Rates
3	more than 40 and up to 60	50% of Circle Rates
4	Commercial Built-up area	60% of the Circle Rates

8.1.4 Common Plot

Common plot for affordable housing shall be provided at 10% of the building unit area for building units 2000 sq m and above. Smaller common open plots may be provided spread within the plot.

8.1.5 Parking

- 1 Parking space for vehicles shall be provided as specified in Table No. 8.2

Table No. 8.2: Parking Norms for Affordable Housing

No.	Type of Use	Minimum Parking Required	Visitor's Parking
(1)	(2)	(3)	(4)
1	Affordable Residential Apartments with dwelling units of built-up area up to 30 sq m	10% of utilized FSI	Additional 10% of the required parking space shall be provided as Visitors parking.

No.	Type of Use	Minimum Parking Required	Visitor's Parking
(1)	(2)	(3)	(4)
2	Affordable Residential Apartments with dwelling units of built-up area more than 30 sq m	15% of utilized FSI	Additional 10% of the required parking space shall be provided as Visitors parking.
3	Commercial Use	50% of utilized FSI	Additional 20% of the required parking shall be provided as Visitors parking.

Note: For the purposes of computing parking 'Utilised FSI' means total BUA including all exempted area from the computation of FSI.

- 2 In case the maximum permissible FSI is not utilized, for any extension or addition in the future, additional parking shall have to be provided as required for this additional utilized FSI.
- 3 Rest of the parking requirements shall conform to provisions of Rule No. 7.13.

8.2 Affordable Housing – Plotted

Other than the specific provisions below, all other Rules shall be same.

8.2.1 Applicability

Affordable Housing – Plotted shall be permitted all zones except Preservation Zone I, II, III, Recreational Zone I, II and Agriculture Zone.

8.2.2 Minimum Sizes and Accommodation Requirements

- 1 In case of DW1a and DW2a, the minimum, and the maximum plot size shall be between 25 sq m and 40 sq m.
- 2 The minimum frontage of plot shall be 3 m in width.
- 3 At every 20 such continuous plots 2 m wide spaces open to sky shall be provided.
- 4 The minimum accommodation provided in every dwelling unit shall be one living room and a WC where there is a drainage system; the agency developing the area shall install and maintain the internal drainage system, where there is no drainage system the individual soak-pit shall be provided as per provision of National Building Code.
- 5 The maximum number of stories in a building construction on the plot shall be ground plus one upper storey only.

8.2.3 Density

- 1 Minimum density for any proposed Affordable Housing shall be 225 dwelling units per hectare.

8.2.4 Common Plot

Common plot for affordable housing shall be provided at 10% of the building unit area for building units 2000 sq m and above. Smaller common open plots may be provided spread within the plot.

8.2.5 General Building Requirements

- 1 The minimum height of the plinth shall be 30 cm from the top surface of approach road or pathway.
- 2 Room sizes:
 - a) The size of living room, bedroom shall not be less than 8 sqm with minimum width of 2.4 m
 - b) The size of independent bathroom and WC shall be 0.9 sqm with minimum width of 0.9 m each. The size of combined bathroom and WC shall be 1.8 sqm with minimum width of 1m.

3 Room heights:

Minimum heights of rooms shall be as under:

Living room-	2.4 m
Kitchen	2.4 m
Bath/WC-	2.1 m
Corridor-	2.1 m

In case of the sloping roof the average height of thereof shall be 2.4 m and the minimum height of the eaves shall be 2.1 m.

The minimum slopes of the sloping roof shall be 30 degree for G.I sheets, asbestos sheets or tiled roof while for R.C.C sloping roof, the minimum slop shall be 12 degree.

4 The opening through windows, ventilators, and other opening for light and ventilation shall

- a) One tenth of the room floor area.
- b) For WC and bath not less than 0.2 sq m

5 Stairs

- a) The width of staircase shall be 0.75m minimum, the maximum height of the riser shall be 20 cm. The minimum width of the tread shall be 22.5 cm.
- b) The minimum clear head room of the staircase shall be 2.10 m.
- c) There shall be one staircase for every 12 (twelve) dwelling units or part thereof.

8.2.6 Structural Requirements

- 1 Load bearing walls of the building shall be of Brick stone or pre-cast block in any mortar, in the case of R.C.C framed structure or wooden framed structure filler walls may be of suitable local materials.
- 2 Roof of the building shall be of galvanized iron sheets, asbestos sheet, tiles roof or RCC roof .in the case of upper storied buildings middle floor shall be of wooden or RCC and rest as per choice.
- 3 Doors and windows of building shall be of any material.
- 4 Rest of the work of building shall be as per locally available resources and as per choice.
- 5 For structural safety and services Rules 16.2 and 16.7 shall be applicable.

8.3 SPARSH 2.0 Housing

Other than the specific provisions below, all other Rules shall be same.

8.3.1 Applicability

SPARSH 2.0 Housing shall be permitted all zones except Preservation Zone I, II, III, Recreational Zone I, II and Agriculture Zone. It has been notified the vide Notification No. LE/LL/DMN/SPARSH/262(P)/2022/246 dated 06/07/2022

8.3.2 Minimum Required Accommodation

- 1 In case of DW3s, one dwelling unit of the complex should not be less than 30 sq m (322 sq ft). Moreover, not more than 33 % of the dwelling units of the complex should be more than 32.5 sq m (350 sq ft)
- 2 For eligible complexes, upto 10% of the total utilized FSI shall be allowed for commercial uses.
- 3 Each dwelling unit should at least two rooms and a separate toilet, bathroom and either a separate kitchen for each room or a common kitchen for the entire housing complex.
- 4 Each dwelling unit should be properly ventilated.
- 5 If the dwelling unit is being used as a dormitory, the dwelling unit shall not contain more than 1 bed per 5.10 sq m (55 sq ft)
- 6 Each dwelling unit (DU) should have a dedicated water supply.
- 7 The housing complex should have solar panels and common areas should have free of cost lighting for all residents.
- 8 The housing complex should have septic tank or soak pit of size not less than 105 liters X 5 X the number of dwelling units X 2 or as CPHEO norms, whichever is higher.

- 9 The developer should agree to either sell or rent for atleast 20 years, a minimum of 66% of the dwelling units, rounded to the lowest integer, to the Economically Weaker Section.
- 10 The responsibility for maintenance of the housing complex, including the collection of waste in twin bins etc., shall be of the owner of the housing complex.

8.3.3 Floor Space Index

- 1 Floor Space Index (FSI) shall be regulated as under:
 - a) Base FSI shall be available as per relevant zone. Minimum permissible base FSI must be consumed to qualify as SPARSH 2.0 Housing.
 - b) Additional 50% of the permissible base subject to utilisation of maximum permissible FSI of the zone shall be available for the developer free of charge.
 - c) No TDR and chargeable FSI shall be available.

8.3.4 Margins

The roadside margins shall be as per Rule No. 7.7.1. The side and rear margins are based on plot sizes and shall be as under:

Table No. 8.3: Plot Area and Minimum Margins

Land Use	Plot Area (sq m)	Minimum Setback (m)	
		Rear	Sides
Residential Use	Up to 100	1.50	Nil
	101 to 200	2.00	Nil
	201 to 400	2.50	1.50
	401 to 600	2.50	2.50
	601 to 2000	3.00	3.00
	2001 to 5000	5.00	5.00
	5001 to 10000	9.00	5.50
	Above 10001	10.50	5.50

8.3.5 Common Plot

Common plot shall be provided at 10% of the building unit area for building units 2000 sq m and above. Common plot may be provided in a manner that atleast one portion / part shall have an area of 200 sq m with no side less than 8 m.

8.3.6 Parking

No Parking spaces shall be required for housing under Scheme for Promotion of Affordable Rental Smart Housing (SPARSH)/ Affordable Rental Housing Complexes (ARHCs)/ Affordable Housing in Partnership (AHP)/ Low-Cost Housing Complexes for EWS.

9 Mining, Quarrying and Brick Kiln

The following regulations shall govern Mining, Quarrying and Brick Kiln operations and shall form conditions for development permission:

- 1 Any mining, quarrying and brick kiln operations without any blasting shall be permitted within a distance of 75 m from the boundary of any public road, railway line, canal, transmission line or any other building.
- 2 Mining, quarrying and brick kiln operations which involves blasting shall not be permitted within a distance of 200 m from any public road, railway line, canal, transmission line or any other building.
- 3 No building operations shall be permitted on the plot on which mining and quarrying, and brick kiln operations have been permitted, without the prior approval of the Competent Authority
- 4 The mining, quarrying and brick kiln shall be permitted for a stipulated period not exceeding three years from the date of development permission at a time and shall be so prescribed in the development permission.
- 5 The mining, quarrying and brick kiln operations shall not cause any nuisance to people in the vicinity.
- 6 The mining, quarrying and brick kiln operations below the average ground level shall be permitted only for the extraction.
- 7 For brick kiln, every manufacturer of clay bricks, tiles or blocks shall use at least 25% of fly ash.

10 Fuelling Station

Building units for use as Fuelling Station shall comply with Petroleum Rules 1976 under the Petroleum Act 1934.

10.1 Location

- 1 Fuelling Stations may be permitted on road width of 18 m and above in any Zone except Preservation Zone I, II and III.
- 2 The location of fuelling station with Service Station shall be at a distance of 50 m, away from the junction of two or more roads among which one of them is wider than 18m and it shall be 30m in case of other junctions. The minimum distance shall be computed from the boundary of the building unit to the junction (*Refer Figure No. 10.1*).
- 3 In the case the Service Station is provided along a main road which has a service road or a margin access road, the access to the Service Station should be provided from the service road or the margin access road and not from the main road.

10.2 Maximum Permissible Ground Coverage

The maximum permissible ground coverage for Fuelling Station with and without service station, shall be 45% of the building unit including the area of the canopy.

10.3 Margins

10.3.1 For Fuelling Station without Service Station (*Refer Figure No. 10.2*).

- 1 Roadside margin from canopy to the building unit boundary shall be as per Rule 7.7 subject to minimum 6 m. On all other sides, margin from canopy to the building unit boundary shall be 4.5 m and 6 m in the case of canopy having up to 6 m and more than 6 m from the ground respectively.
- 2 Marginal distance from curb site to the building unit boundary abutting the road shall be minimum 9 m and for other sides, it shall be 6 m.
- 3 Administration building shall have minimum roadside margin as per Rule 7.7 and minimum side and rear margins of 4.5 m and as per Rule 7.7. Zero margins can be provided towards canopy, but minimum 6 m clear driveway shall be provided along curb site.
- 4 Minimum 6 m clear driveway shall be maintained along the curb site.
- 5 Minimum width of access road shall be 6 m.

10.3.2 For Fuelling Station with Service Station (*Refer Figure No. 10.3*).

- 1 Roadside margin from canopy to the building unit boundary shall be as per Rule 7.7 subject to minimum 6 m and all other sides shall be 6 m.
- 2 Marginal distance from curb site to the building unit boundary abutting the road shall be minimum 9 m and for other sides, it shall be 6 m.
- 3 Administration building shall have minimum roadside margin as per Rule 7.7 and minimum side and rear margins of 4.5 m and as per Rule 7.7. Zero margins can be provided towards canopy, but minimum 6 m clear driveway shall be provided along curb site.
- 4 Service station building shall maintain a minimum roadside margin of 6 m and minimum side and rear margins of 4.5 m. Zero margins can be provided towards canopy, but minimum 6.0 m clear driveway shall be provided along curb site and 3 m towards other sides of the plot.
- 5 Minimum 6 m clear driveway shall be maintained along the curb site.
- 6 Minimum width of access road shall be 6 m.

10.4 Height, Floor Space Index and Common Plot

- 1 The maximum allowable height of the canopy shall be 7.5 m and administration / service station building shall be 10 m.
- 2 FSI shall be according to the relevant zone. In case the permissible FSI is not consumed, there shall be no compensation.
- 3 Common plot shall not be required.

10.5 Parking

Every fuelling Station without and with Service Station should provide minimum parking spaces based on the building unit area as given in Table No. 10.1 below:

Table No. 10.1: Minimum Parking for Fuelling Station

No	Fuelling (Sq m)	Minimum Parking Requirement
(1)	(2)	(3)
1	600 to less than 1200	3 cars and 5 two-wheelers
2	1200 and above	For every 500 sq m or part thereof more than 1000 sq m area of building unit, additional parking for 1 car and 2 two-wheelers shall be provided.

10.6 Basement

No basement shall be allowed. Underground fuel tanks are allowed.

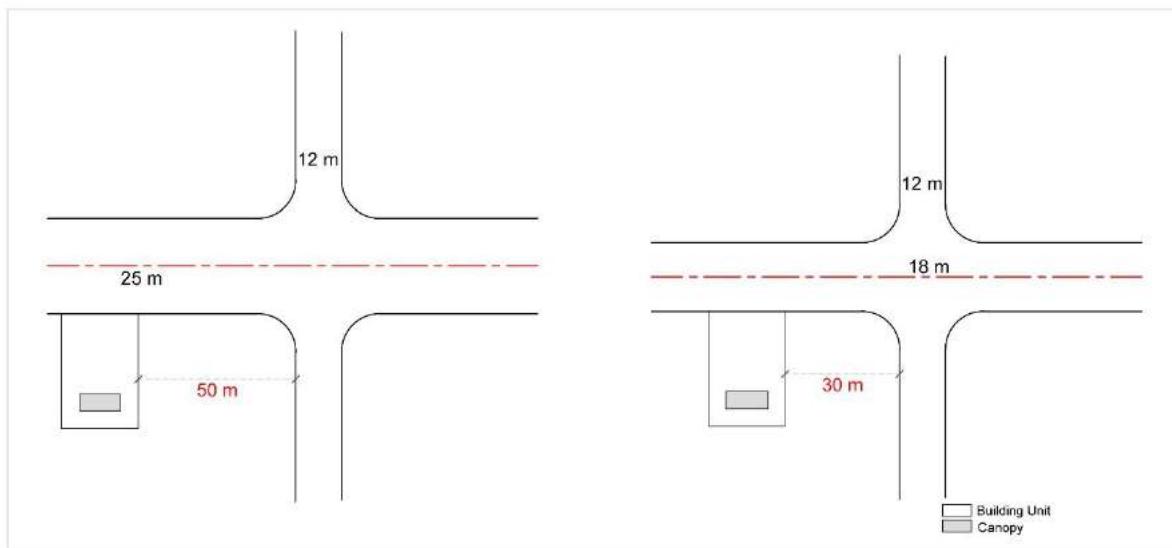


Figure No. 10.1: Minimum Distance from the Junction.

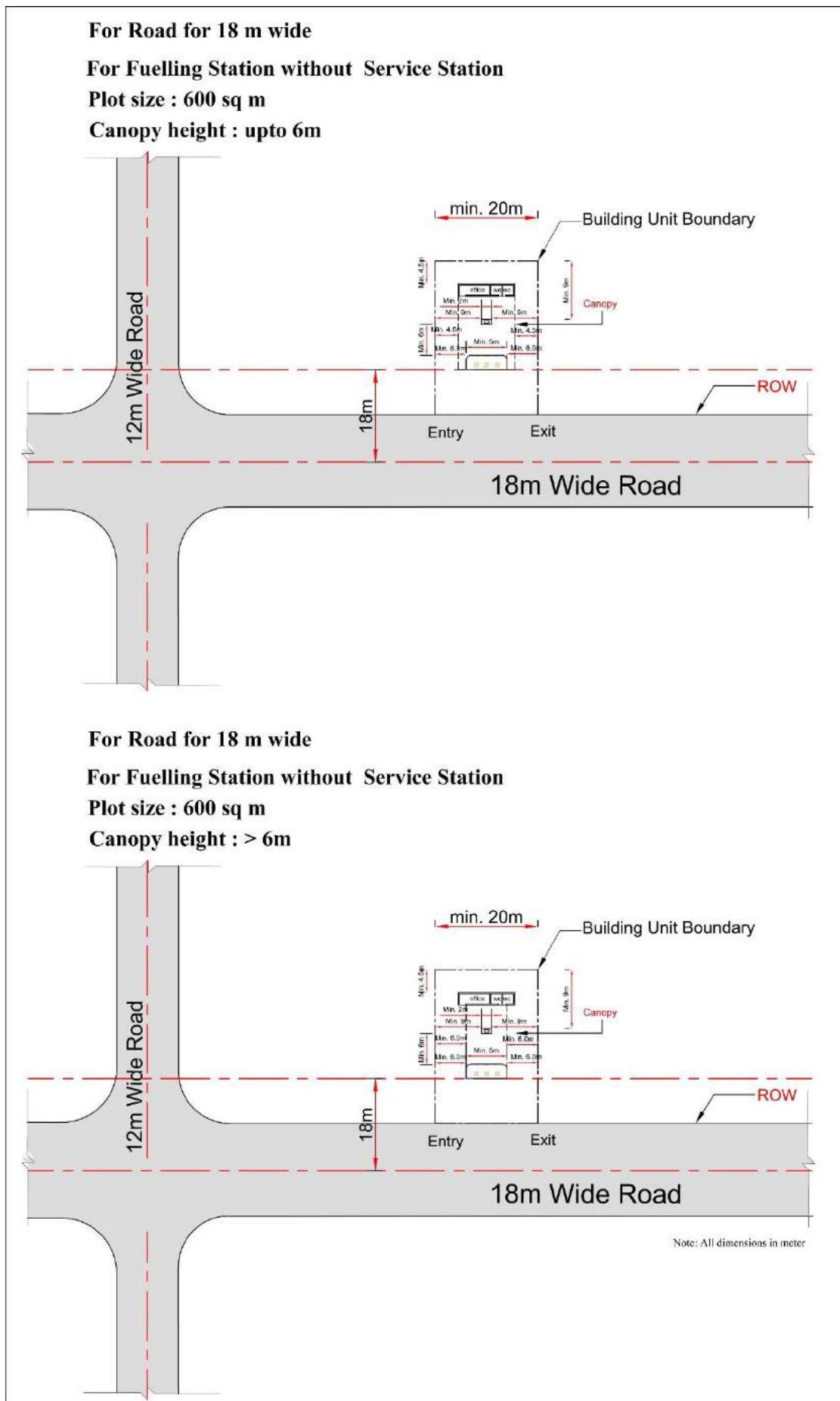
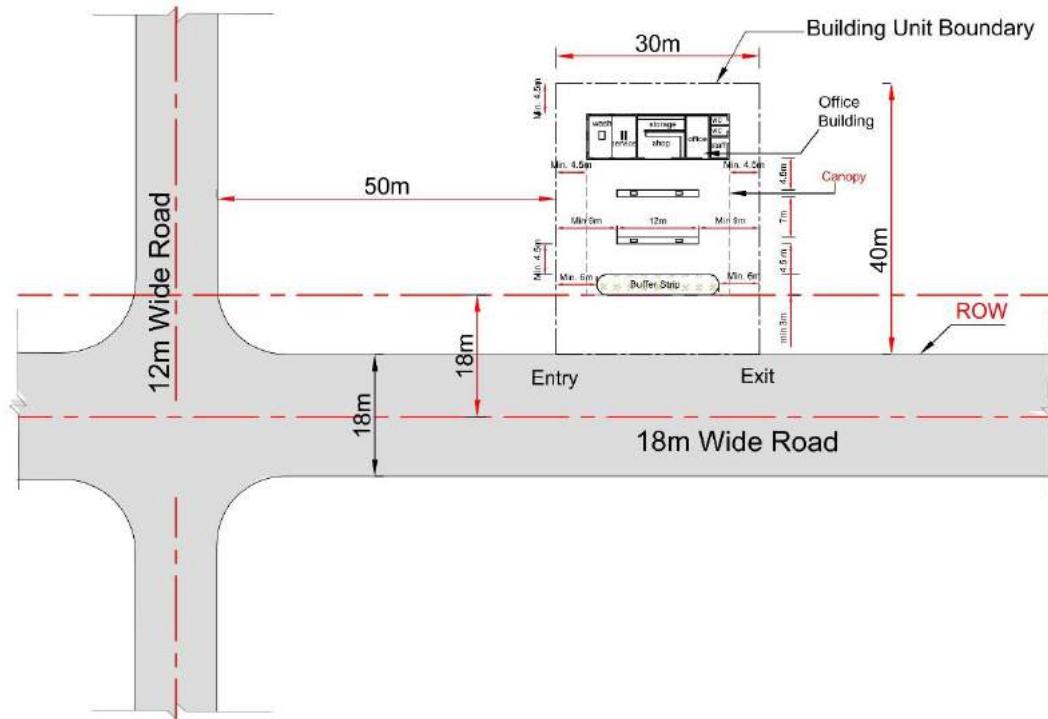


Figure No. 10.2 Minimum Margin for Fuelling Station without Service Station

For Road for 18 m wide
For Fuelling Station with Service Station
Canopy height : upto 6m
Plot size : 1200 sq m



For Road for 18 m wide
For Fuelling Station with Service Station
Canopy height : > 6m
Plot size : 1200 sq m

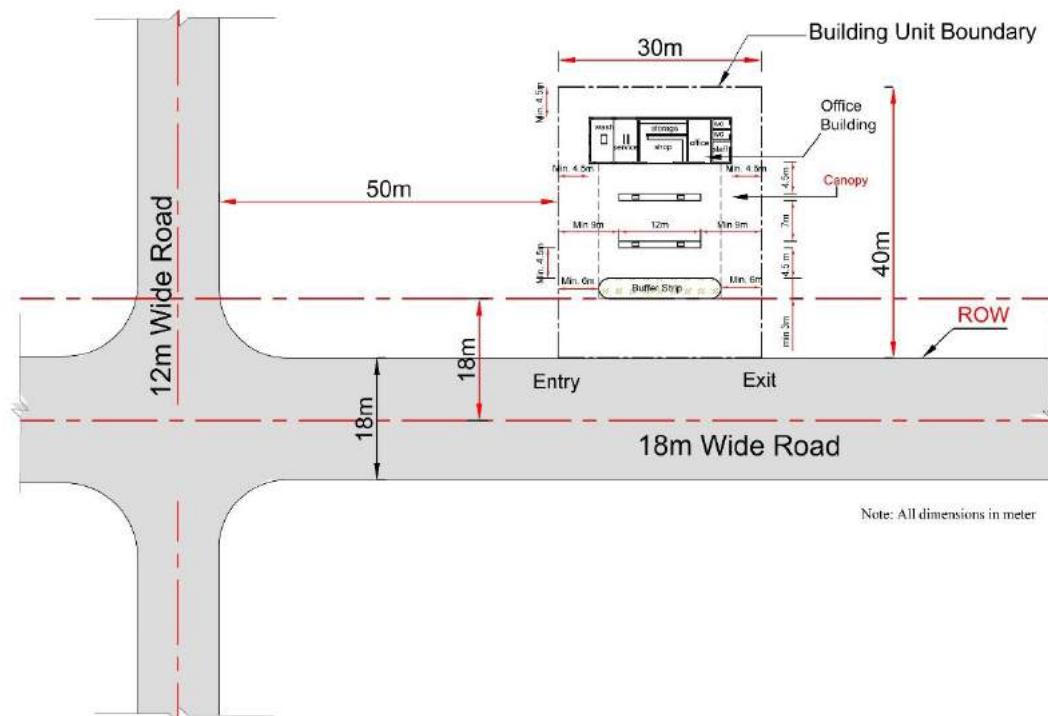


Figure No. 10.3 Minimum Margin for Fuelling Station with Service Station

11 Electric Vehicle (eV) Charging Station

Building units for use as eV Charging Stations shall comply with electric charging station established under Charging Infrastructure for Electric Vehicles- Guidelines and Standards notified by Ministry of Power, dated 2018 (Amended 14 January 2022).

- 1 Owners may charge their Electric Vehicles at their residences (DW1 and DW2) using their existing electricity connections.
- 2 For all DW3 residential dwellings, 10% of the parking area provided (either on ground / stilt / basement) must be equipped with Type 2 connector charging points OR have atleast one charging point that is equipped with Type 2 connector.
- 3 For all Mercantile 2, Education 2 & 3, Assembly 1, 2, 3 & 4, Hospitality 1, 2 & 3, Service Establishment 2, and Industrial 1, 2 and 3, 10% of the parking area provided must be equipped with Type connector charging points.
- 4 Any individual/entity is free to set up public charging stations provided that, such stations meet the technical, safety as well as performance standards and protocols laid down below as well as norms / standards / specifications laid down by Ministry of Power, Bureau of Energy Efficiency (BEE) and Central Electricity Authority (CEA) from time to time.

In an urban area / PDA area such a PCS can be set up on a 12 m and above road in any zone except Preservation Zone I, II and III.

Along the NH / SH they can be set up at every 25 km distance on both sides of the road.

12 Advertising Display and Communication Infrastructure

12.1 Outdoor Advertising Display Infrastructure

Permission shall be required for any nature of **outdoor** advertising display infrastructure or communication infrastructure / telecommunication infrastructure / microwave communication tower as per Schedule No. 11 (other than sign boards for wayfinding). This is applicable for but not limited to billboards with liquid crystal display board (LCD), light emitting diodes (LED), kiosks, wall Signs, glass display, vehicles (non-motorized and motorized etc.), floating balloons and digital display.

12.1.1 Billboards / Hoardings in Margin Space

- 1 One billboard / hoarding is permitted in the marginal open space up to 500 sq m area of the building unit. Up to a maximum of two billboards / hoardings per building unit shall be permitted in the marginal open space in building unit above 500 sq m.
- 2 The billboards / hoardings shall be permitted in the margin open space of the building unit as per Table No. 12.1.
- 3 Lighting may extend beyond the stipulated maximum height of, for the billboards / hoardings erected on ground.

Table No. 12.1: Billboards / Hoardings in Margin Space

Location	Road Width (m)	Maximum Billboard / Hoarding Size (width x height) (m x m)	Minimum Margin Roadside (m)	Minimum Ground Clearance (m)	Max. Height (m)
(1)	(2)	(3)	(4)	(5)	(6)
Margin Open Space	Upto 60	9.0 x 4.5	0.6	3.0	17.5
	Above 60	12.0 x 6.0	1.5	3.0	17.5

12.1.2 Billboards / Hoardings on Roof tops / Terrace

- 1 Maximum permissible height of the billboard / hoarding shall be considered over and above the permissible/ existing height of the building.
- 2 No roof top billboards / hoardings shall extend beyond the building line of the building on which it is erected, nor shall it extend beyond the roof in any direction.
- 3 Lighting may extend beyond the stipulated maximum height of, for the billboards / hoardings within the building unit.
- 4 The billboards / Hoardings on roof tops and terrace shall be permitted and shall be regulated as per Table No. 12.2.
- 5 Billboards on roof tops are not permitted unless the entire roof is constructed with non-combustible materials.

Table No. 12.2: Billboards / Hoardings on Roof Tops / Terrace

Location	Road Width (m)	Maximum Billboard/ Hoarding Size (width x height) (m x m)	Max. no. of billboard / hoarding	Minimum Margin (m)		Maximum Height from top of Terrace (m)
				Parapet	Between two Billboards	
On Roof Tops / Terrace	Upto 60	12.0 x 6.0	2 (different facing directions)	1.5 m	1.5	7.5
	Above 60	18.0 x 9.0				10.5

12.1.3 Billboards / Hoardings on Public Roads

- 1 The Billboards / Hoardings on Public Roads shall be permitted and shall be regulated as per Table 12.3.
- 2 The Competent Authority may allow /disallow billboards / hoardings having exceptional size on specific locations considering safety aspects and for which it shall record reasons in writing.

Table No.12.3: Billboards / Hoardings on Public Roads

No	Road Width (m)	Minimum Ground Clearance (m)	Permissible Size of the Billboard /Hoarding (width x height) (m x m)
(1)	(2)	(3)	(4)
1	Upto 60	3.0	9.0 x 4.5
2	Above 60	3.0	12.0 x 6.0

12.1.4 Billboards in Urban Renewal Project Areas

These billboards must confirm with these Rules and with the Local Area Plan / Comprehensive Development Plan or special restrictions for the area, which may include additional regulations or requirements.

12.1.5 Heritage Buildings and Precincts

The Competent Authority can deny the permission on the grounds of protecting the ambience of heritage buildings and precincts.

12.1.6 General Restrictions

Billboards / hoardings will be restricted under the following conditions:

- 1 Any billboard / hoarding which may obstruct the vision required for safe traffic movement.
- 2 Any billboard / hoarding which in the opinion of the Competent Authority is likely to be confused with authorized traffic signs or signals.
- 3 Any billboard / hoarding contains the word "Stop", "Look", "Danger" or other similar words that might mislead or confuse the travellers.
- 4 Any billboard / hoarding that is attached to or printed on a rock or other natural objects.
- 5 Any billboard / hoarding that is prohibited or restricted for the purpose of public appearance under local or state or national law.
- 6 Any billboard / hoarding with overhang over public property which obstructs access or egress from any building.
- 7 Any billboard / hoarding containing unfair, vulgar matter or advertisement that is considered objectionable in Competent Authority's opinion shall not be permitted. Advertisements that are prohibited by the Government shall not be permitted.
- 8 Billboard / hoarding, its structure or lighting that is projecting outside the boundary of the building unit.

12.2 Communication Infrastructure / Telecommunication Infrastructure / Microwave Communication Tower

Provisions shall apply for communication infrastructures such as Post & Telegraph, Telephone, Wireless, Broadcasting, Cellular Mobiles, Internet, 'V' Set, ATM, Channel Discs and Overhead lines (for telephone, digital connections for internet and channels and other similar forms of communication).

The communication infrastructure shall be either placed on the building roof tops or terraces at a distance of minimum 1.5 m from the parapet or on the ground or open space within the premises subject to other Regulations.

Part C Performance Rules

Part C Performance Rules

13 Building and Infrastructure

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- 13.1.2 Level of Building Unit
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- 13.2.1 Parking to be Provided.
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- 13.11.1 Solutions for In-Buildings and Gated Buildings
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- 13.11.3 Provision of In Building Solutions Components (as per NBC 2016)
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- 13.12.1 For buildings exceeding 4 m height with following uses: Public Offices, Assembly, Educational 2, 3
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- 13.12.3 General Requirements for Lifts and Elevators
- 13.13 External Facade
- 13.14 Occupant Load

14 Fire Rules (See Part 3 (II))

(Only contents are listed here, the Rules are in Part 3 (II)).

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 - 14.1.1 Scope
 - 14.1.2 Definitions
 - 14.1.3 Procedure for Clearance from Fire and Emergency Services for Development Permission and Occupancy Certificate
 - 14.1.4 Renewal of Fire Clearance
 - 14.1.5 Fee
 - 14.1.6 Penalties
- 14.2 Fire Prevention
 - 14.2.1 Classification of Buildings Based on Occupancy
 - 14.2.2 Fire Divisions
 - 14.2.3 Types of Building Construction
 - 14.2.4 General Requirements of All Individual Occupancies
- 14.3 Life Safety
 - 14.3.1 General
 - 14.3.2 General Exit Requirements
 - 14.3.3 Occupant Load
 - 14.3.4 Egress Components
 - 14.3.5 Compartmentation
 - 14.3.6 Smoke Control
 - 14.3.7 Gas Supply
 - 14.3.8 Hazardous Areas, Gaseous, Oil Storage Yard, etc.
 - 14.3.9 Fire Detection and Alarm
 - 14.3.10 Fire Officer
 - 14.3.11 Fire Drills and Fire Orders
- 14.4 Fire Protection
 - 14.4.1 Fire Extinguishers/ Fixed Firefighting Installations
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 - 14.5.4 Health and Public Buildings (Group D)
 - 14.5.5 Assembly Buildings (Group E)
 - 14.5.6 Transportation (Group F)
 - 14.5.7 Storage Buildings (Group G)
 - 14.5.8 Mercantile Buildings (Group H)
 - 14.5.9 Business Buildings (Group I)
 - 14.5.10 Industrial Buildings (Group J)

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- 15.3 Public Offices / Hospital Buildings
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- 16.3 Additions and Alterations to Existing Buildings
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- 16.5 Structural Safety Provision during Construction
- 16.6 Structural Safety Tests for Special Buildings
- 16.7 Design for Structural and Seismic Safety
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- 16.8 Structural Safety of Display Structure

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- 17.2 Rainwater Management
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13 Building and Infrastructure

13.1 Architectural Elements

13.1.1 Boundary Wall / Compound Wall and Gate

- 1 The maximum height of the boundary wall / compound wall is given in Table No.13.1.
- 2 For building units at junction of roads, a grill fence shall be provided with the following provisions:
 - a) At least 50% perforation in the grill.
 - b) The base of the grill fence shall not exceed 0.8 m from the level of the crown of the adjacent road for a length of 9 m from the corner of the building unit at the junction.
- 3 Boundary gate shall not open outward and shall be provided with a means to prevent the gate from opening outward on the pavement or road.
- 4 The minimum width of a boundary gate for all uses except Dwelling 1 and 2 shall be 6 m.
- 5 For building unit at junction of roads, the following shall be applicable:
 - a) A gate shall not be permitted on the corner of the boundary wall.
 - b) If the adjacent road width is equal or more than 12 m, the opening in the boundary wall shall be located at a minimum distance of 15 m from the corner of the building unit at the junction. If the length of the building unit on the roadside is less than 15 m, the opening in the boundary wall shall be provided at the farthest end from the junction.

Table No. 13.1 Maximum Permissible Height of Boundary Wall / Compound Wall for all Buildings

No	Use	Maximum Height from crown of the Adjacent Road (m)	
		Roadside	Other than adjacent road / roadside or all other side of building-unit
(1)	(2)	(3)	(4)
1	Other than Industrial	1.5*	1.8
2	Industrial	3	3

Note: * Boundary wall of more than 1.5 m may be allowed with permission (Refer Figure No. 13.1).

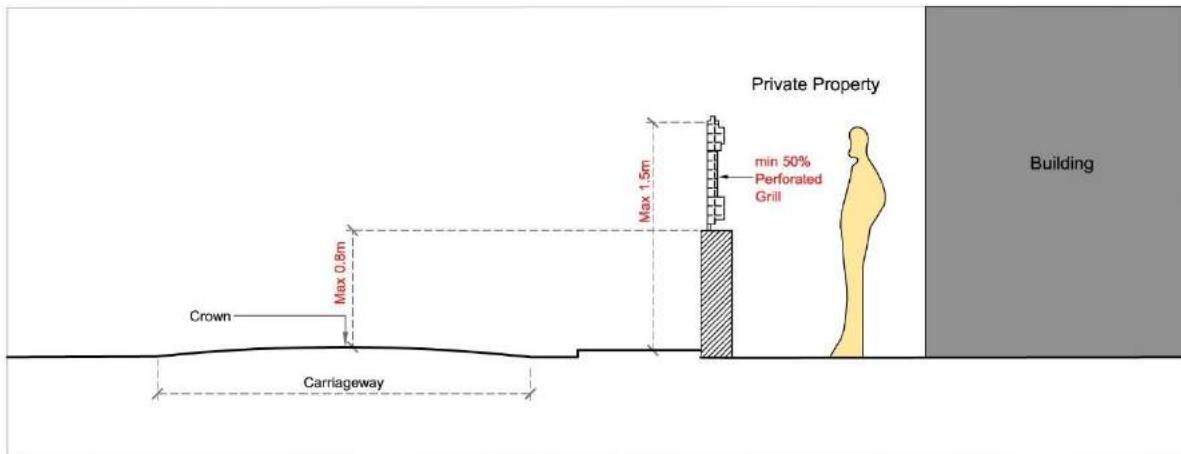


Figure No. 13.1: Boundary Wall / Compound Wall for Building

13.1.2 Level of Building Unit

The level of the building shall be established with respect to the average ground level or high flood level, as may be applicable. This level shall in no case be lower than street / road level of the adjacent road. For building units with access from two or more roads, the level of the wider road shall be considered.

In the case of a building unit where the level of the land is lower than the level of the road in front and which in the opinion of the Competent Authority, could be drained off in the storm water drainage and sewer, the Competent Authority may permit a suitable lower level.

Any difference between the building unit level and road level, shall be accommodated by filling etc. within the building unit boundary.

13.1.3 Paving in Building Unit

Maximum of 50% of the total open space including marginal open spaces and common plot of a building unit shall be paved. The remaining shall be permeable for rainwater percolation.

13.1.4 Access

Access for all Buildings

- 1 Access from the building unit entry to the building entry or the plinth shall have a minimum width of 1.8 m for DW1 and DW2 and 3.5 m for all other buildings. The surface shall be even.
- 2 In case of a sloping access path, the gradient shall not be greater than 1:15.
- 3 Selection of floor material shall be made suitably to attract or to guide visually impaired persons (limited to coloured floor material) whose colour and brightness is conspicuously different from that of the surrounding floor material or the material that emits different sound to guide visually impaired persons; hereinafter referred as "guiding floor material". Finishes shall have a non-slip surface with a texture traversable by a wheelchair. Kerbs wherever provided should blend well.

Ramped Access for all Buildings (Except Dwelling 1 and 2):

- 1 Minimum one ramp entrance shall be provided that is accessible by people with disability and accompanied by appropriate signages as per Rule No. 13.7.
- 2 Minimum width of the ramped access shall be 1.2 m, 1.5 m and 1.8 m for ramp having length upto 3.6 m, upto 9 m and more than 9 m respectively.
- 3 The pedestrian ramp leading main entrance required as per these Rules may be provided in the margin.
- 4 Ramp specifications shall be as follows:
 - a) The gradient shall not be greater than 1:15.
 - b) Minimum width of ramp shall be 1.2 m and the maximum continuous length shall be 9 m. Such ramp shall have 800 mm high handrail on both sides extending 300 mm beyond top and bottom of the ramp. Minimum gap from the adjacent wall to the handrail shall be 50 mm (*Refer Figure No. 13.2*).
 - c) Entrance landing shall be provided adjacent to ramp, with the minimum dimension 1.2 m x 1.5 m.
 - d) The surface shall be adequately prepared as a guide to visually impaired person by using colour and material guide brightness that is different from the surrounding floor material or by using 'guiding floor material' that emits different sounds.
 - e) Finishes shall have a non-slip surface traversable by a wheelchair.
 - f) Kerbs, wherever provided, should blend to a common level.

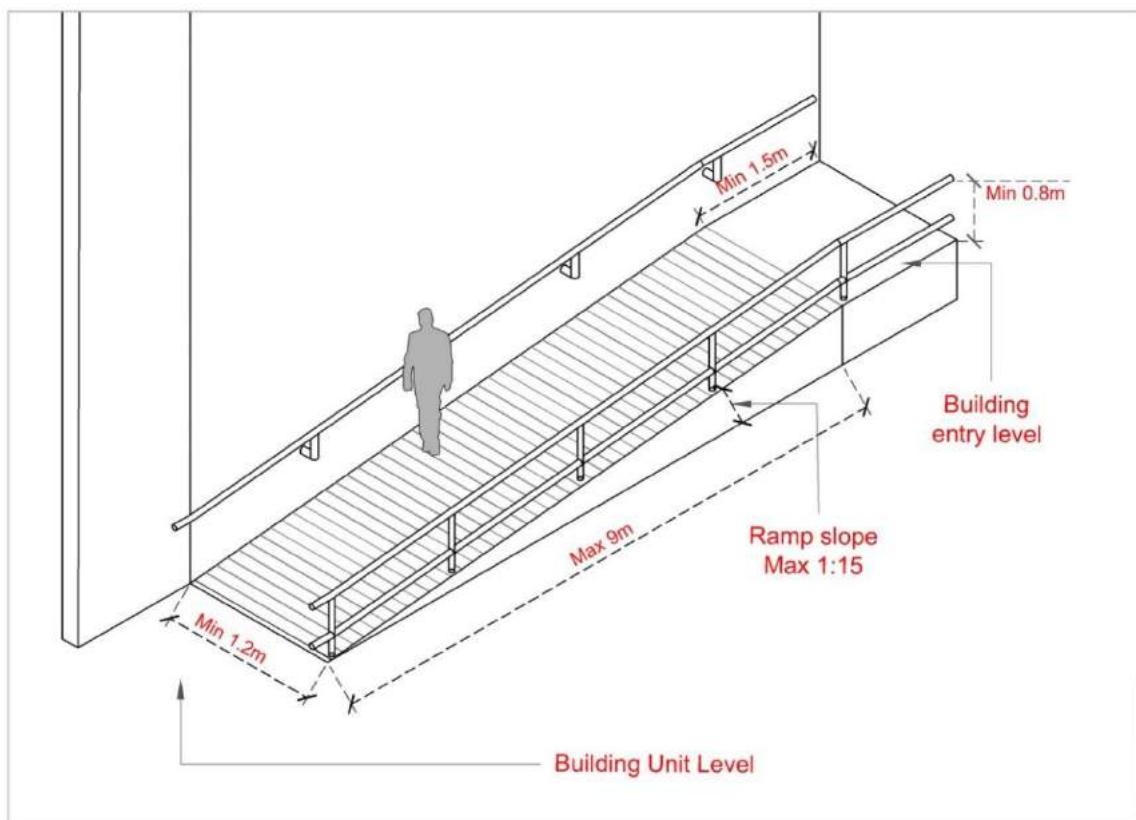


Figure No. 13.2: Details for Sloping Access Path

Additional stepped approach for all buildings:

- Minimum width shall be 1.35 m.
- Size of tread shall not be less than 300 mm and maximum riser shall be 150 mm.
- The steps shall not have abrupt (square) nosing.
- Maximum number of risers on a continuous flight without landing shall be limited to 12.
- The stepped approach shall be provided with 1150 mm, high handrail on both sides. Handrails shall extend 300 mm on the top and bottom flight of the steps.
- All steps edges shall have a contrasting colour band of 50 mm width stretched entirely across the step width.
- The edges should also be non-slippery.

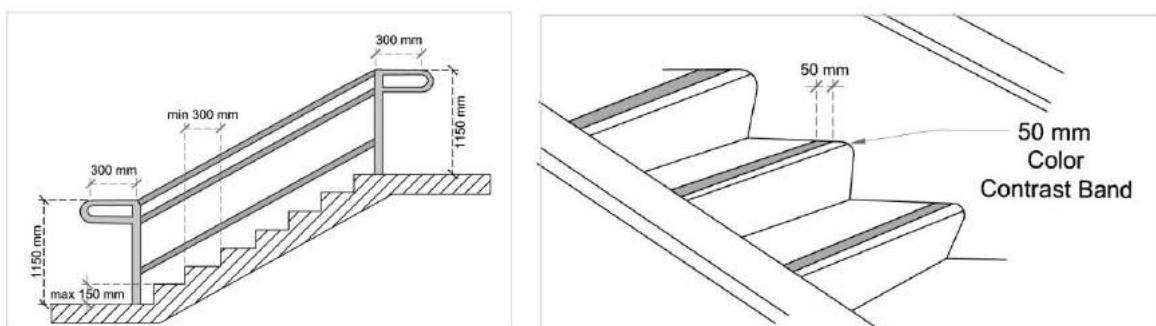


Figure No. 13.3: Details for Stepped Approach

13.1.5 Plinth

- 1 The plinth of the habitable area of any building shall be at a minimum height of 0.45 m from the established level of the building unit.
- 2 The building may be permitted on hollow plinth at the ground level, with the following provisions:
 - a) Maximum height shall be 3.5 m from finished ground level to finished next floor level and minimum height shall be 3 m from finished ground level to finished next floor level. The minimum clear height from finished ground level to finished beam bottom shall be 2.1 m.
 - b) It is free of enclosures except for staircase and other permitted uses under these Rules.

13.1.6 Entrance

For all buildings except Dwelling 1 and 2, entrance with the following specifications shall be provided:

- 1 Minimum clear opening of the entrance door shall be 900 mm wide and shall not be provided with a step that obstructs the passage of a wheelchair user.
- 2 Level difference at threshold shall not exceed 12 mm.
- 3 Glazed Manual doors should incorporate kick plates 300 mm high to withstand impact of wheelchair footrest.
- 4 Door handle and locks should be positioned between 900 – 1000 mm above floor level and must enable the user to operate it with a single hand. For special use cases, the applicant may provide different door handles with prior permission of the Competent Authority. (*Refer Figure No. 13.4*).

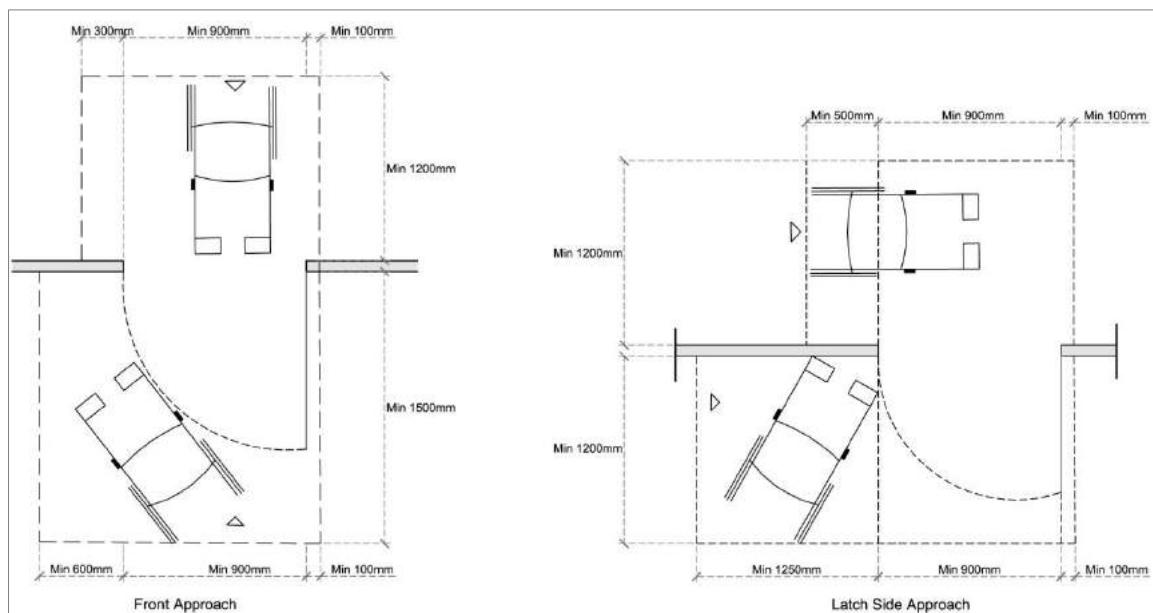


Figure No. 13.4: Entrance Details

13.1.7 Minimum Clear Heights in Buildings

- 1 For Dwelling Units or Mercantile Buildings (*Refer Figure No. 13.5*):
 - a) All habitable spaces shall have minimum height of 2.9 m between finished floor levels.
 - b) All circulation and service spaces such as verandah, bathroom, washroom, toilet, passage, puja room, storeroom and stair cabin shall have a minimum clear height of 2.1 m.

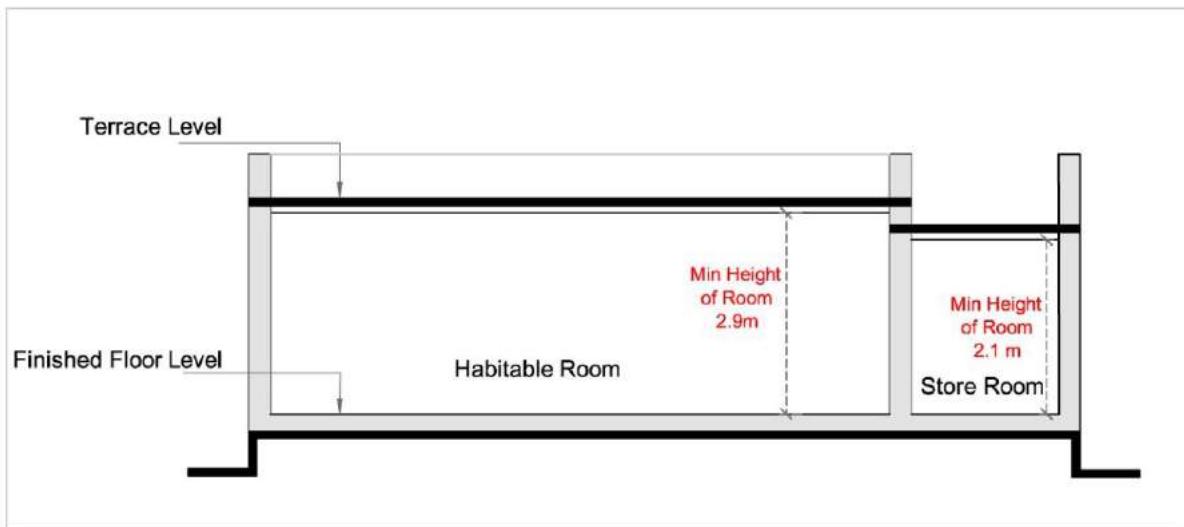


Figure No. 13.5: Minimum Clear Height for Dwelling Unit / Commercial Building

- 2 For industrial uses, all spaces shall have a minimum clear height of 3.5 m (Refer Figure No. 13.6).

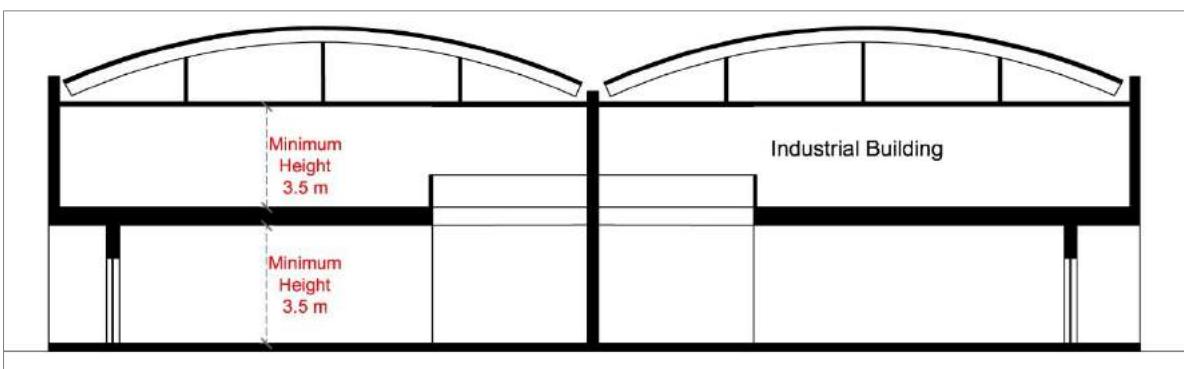


Figure No. 13.6: Minimum Clear Height for Industries

- 3 In case of folded roof, minimum clear height shall be 3 m (measured from the lowest point of the fold) (Refer Figure No. 13.7).

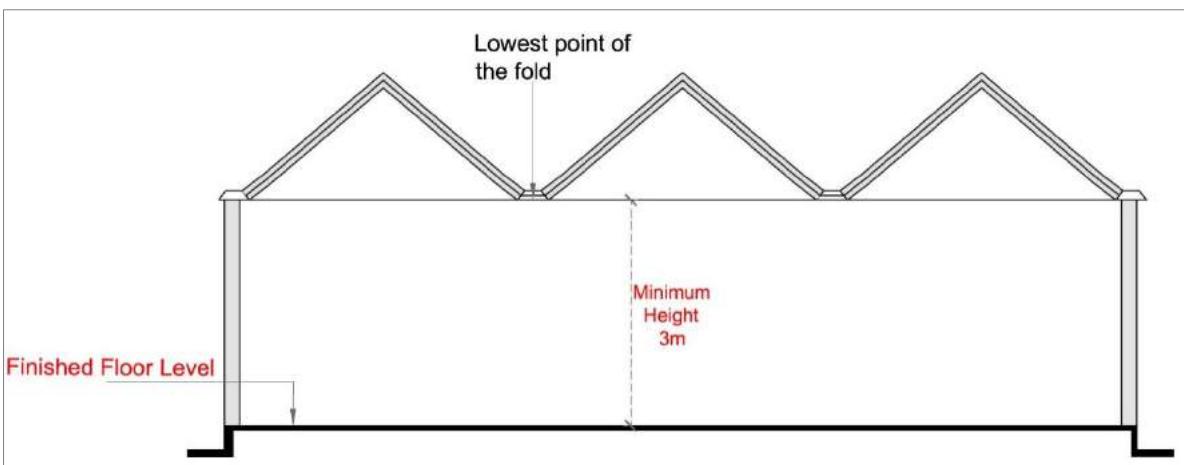


Figure No. 13.7: Minimum Clear Height for Folded Roof

- 4 In case of sloping roof, minimum clear height shall be 2.2 m (measured from the lowest point of the roof). The average height of the room shall not be less than the minimum clear height of 2.9

and 3 as may be applicable according to the building use and stipulated above (*Refer Figure No. 13.8*).

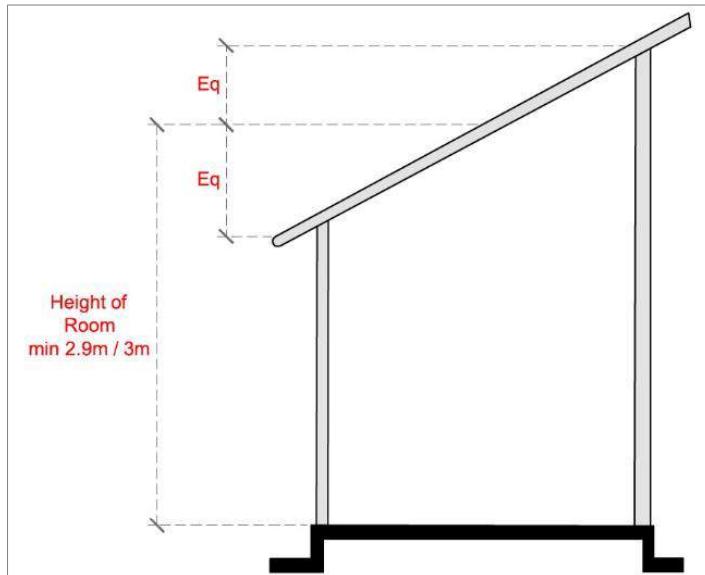


Figure No. 13.8: Minimum Clear Height for Sloping Roof

- 5 In case of trussed roof, minimum clear height shall be measured from the floor level to the bottom of the tie beam and shall be 2.8 m (*Refer Figure No. 13.9*).

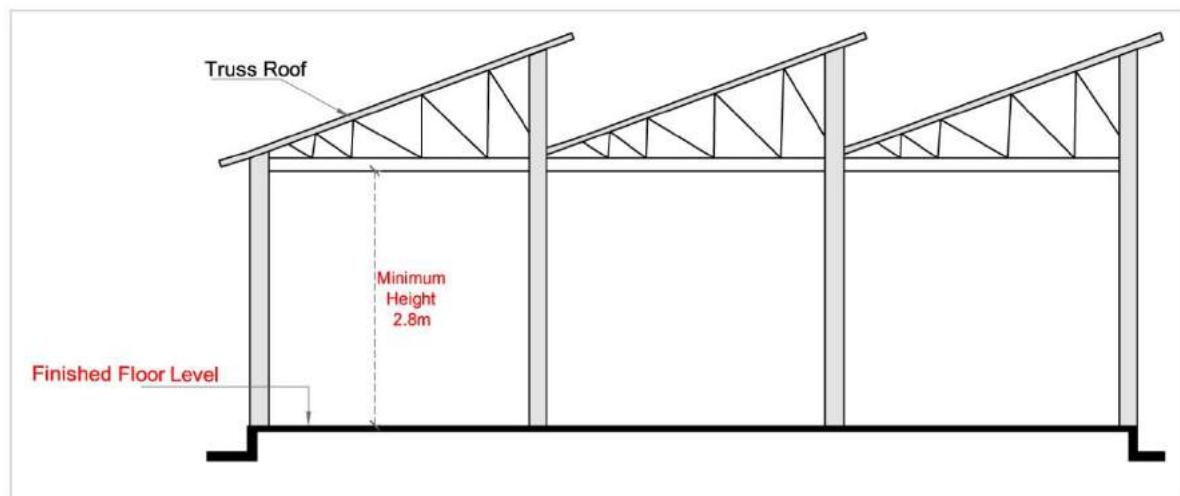


Figure No. 13.9: Minimum Clear Height for Trussed Roof

- 6 In case of hollow plinth, from finished ground level to finished next floor level provided for the purpose of parking shall have maximum clear height of 3.5 m (*Refer Figure No. 13.10*).

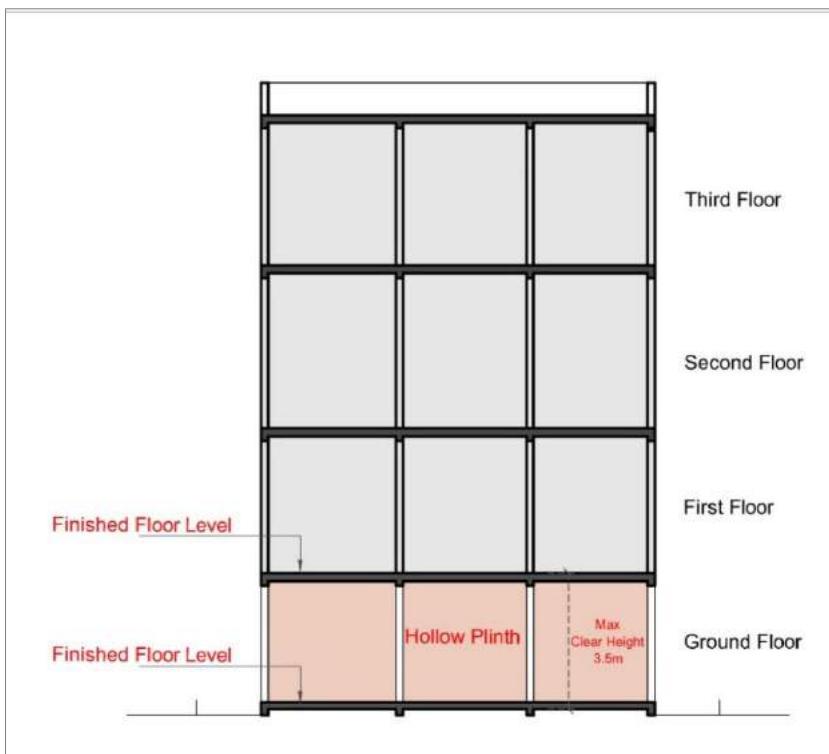


Figure No. 13.10: Minimum Clear Height for Hollow Plinth

- 7 In case of basement, exclusively used for parking shall have minimum clear height of 2.8 m, and maximum clear height of 4.5 m. In case of mechanical parking more height may be permitted (Refer Figure No. 13.11).

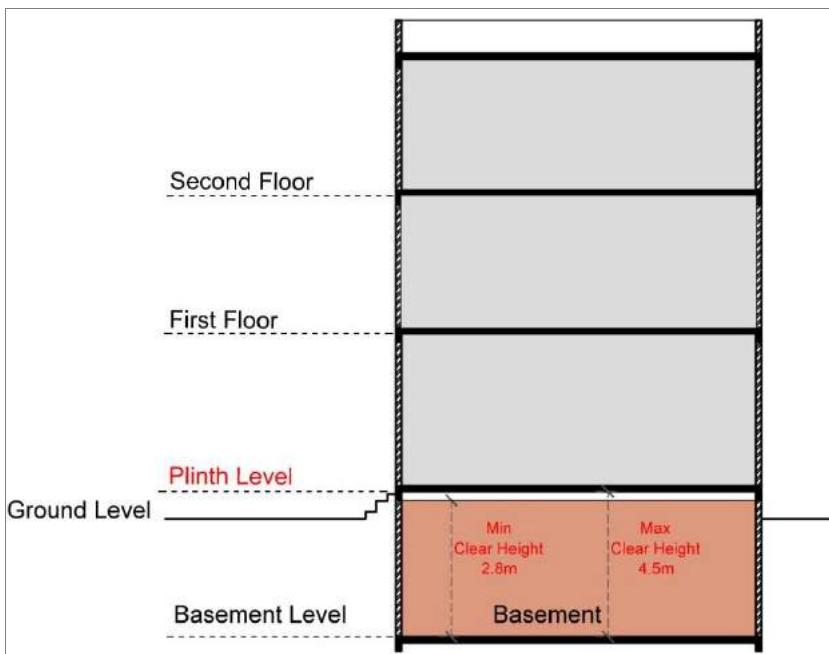


Figure No. 13.11: Minimum Clear Height for Basement

13.1.8 Mezzanine

Mezzanine floor shall have a minimum clear height of 2.1 m from the finished floor level in a room. The area must not exceed 30% of the area of the enclosed space. Its area shall be counted in FSI (Refer Figure No. 13.12).

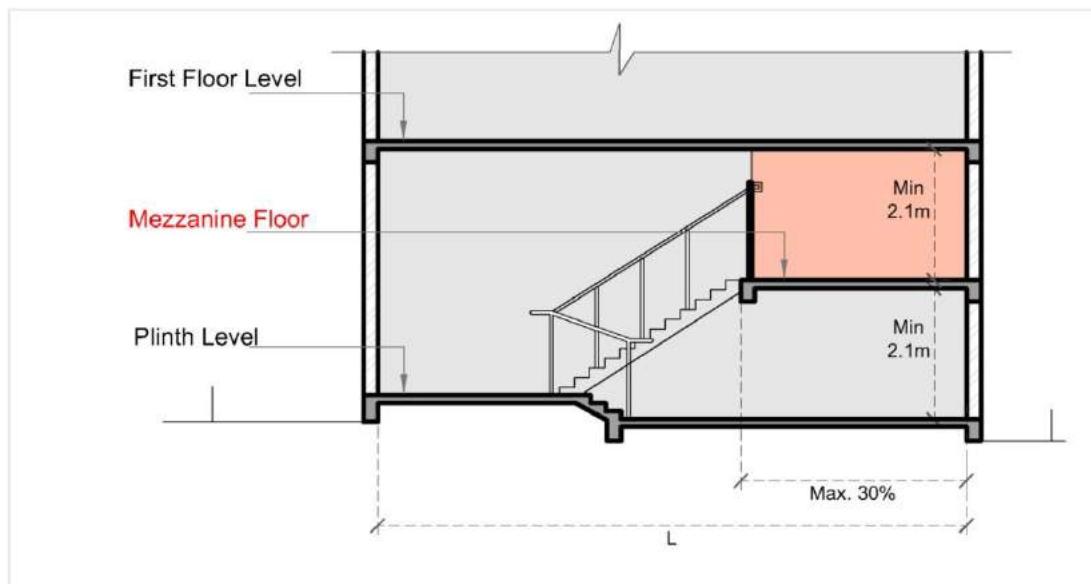


Figure No. 13.12: Mezzanine Floor

13.1.9 Loft

Loft of a maximum height of 1.2 m may be allowed in a room at a minimum clear height of 2.1 m from the finish floor level. The loft shall not cover more than 30% the floor area of the enclosed space / room. In case the loft is in bathroom, WC, or toilet 100% of the floor areas bath, WC or toilet respectively shall be permitted for the loft.

13.1.10 Railings / Parapet

- 1 Parapet walls / handrails provided on the edges of the roof, terrace, balcony, staircase, large openings, fully glazed windows etc. shall not be less than 1.15 m from the finished floor level and not more than 1.5 m height above floor level.
- 2 Construction of parapet / handrails shall be of such material and design, that it ensures optimum safety to the user / occupants of the building.
- 3 The maximum dimension of the railing / parapet members shall not exceed 0.15 m (Refer Figure No. 13.13).

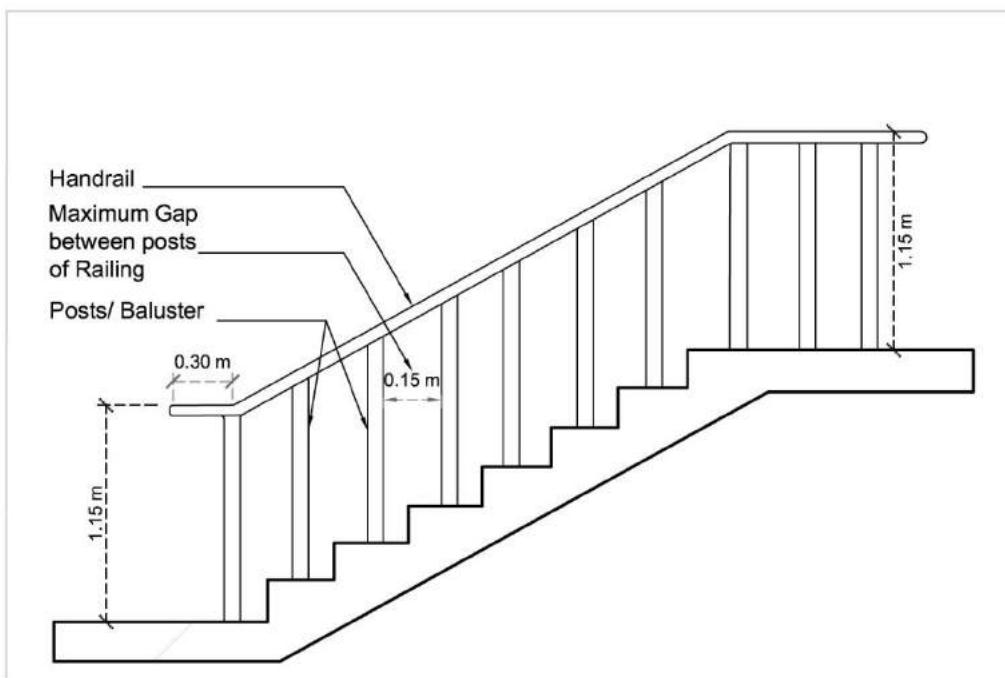


Figure No. 13.13: Fixing Detail of Railing / Parapet

- 4 In buildings meant for predominant use by children, it will be necessary to suitably alter the height of the fixtures.
- 5 Hand – rail shall be provided with a pipe of minimum diameter of 40 mm and as illustrated across (Refer Figure No. 13.14).
6. The parapet/ handrail height shall not be included while calculating the height of the building.

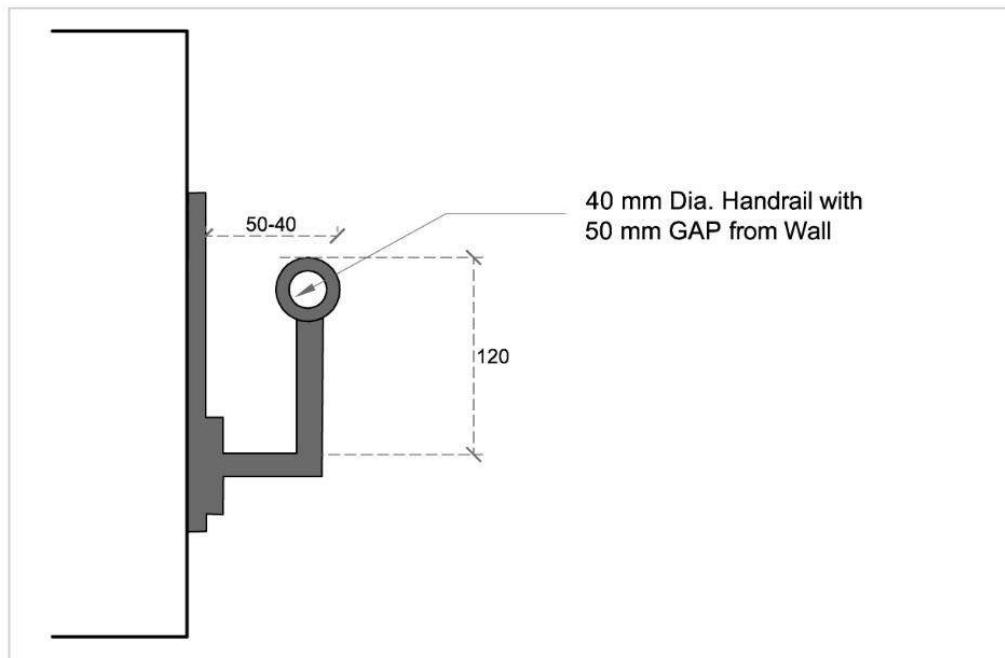


Figure No. 13.14: Fixing Detail of Handrail to the Wall

13.1.11 Terrace

Terrace of a building shall be accessible by a common staircase and shall be free from partitions.

13.1.12 Staircases, Corridors and Passageway

1 Staircase

The minimum width of the flight shall be exclusive of parapet and floor mounted railing.

Table No. 13.2: (*Deleted*)

Kindly refer Table no. 14.4A (Chapter 14- Fire) for Staircase detail.

- a Staircase for basement:
 - i The staircase to the basement shall have the same width as the regular staircase leading to upper floors.
 - ii Any staircase leading to the basement shall be as per Fire Rules in Part 3 (II) amended from time to time.
 - iii A staircase shall be provided from the lowest level of the basement as a means of access or exit at a travel distance mentioned in the Table No. 13.2.
- b Staircase for all buildings other than detached and semi-detached dwelling units:
Separate staircases shall be provided if a building has residential and non-residential uses.
- c For all buildings, staircase shall be compliant with Fire Rules in Part 3 (II) amended from time to time.

2 Corridor and Passageway (Refer Figure No. 13.15)

For all buildings except Dwelling 1, the minimum clear width of corridors and passageways shall be as under:

Table No. 13.3: Corridor and Passageway

No	Length of Corridor (m)	Width of Corridor (m)	
		Residential	Non-Residential
(1)	(2)	(3)	(4)
1	Up to 6	1.2	1.2
2	Up to 9	1.2	1.5
3	Up to 15	1.2	1.5
4	Above 15 and up to 24	1.5	1.8
5	24 and above	1.8	2.0

- a) Corridor shall be clear of any obstructions. No projection in any form shall be allowed up to a height of 2.1 m from floor level.
- b) The minimum height of corridor shall be 2.1 m from finished floor level.
- c) In case of any level difference in a corridor, a slope shall be provided with gradient not more than 1:15. In such case, guiding floor material shall be provided.
- d) In case of all types of building, if the building height is more than 15 m and there is no natural ventilation on either side of corridor, then smoke / air exhaust system or alternatively pressurization system with supply air system for these exit access corridors shall be required.

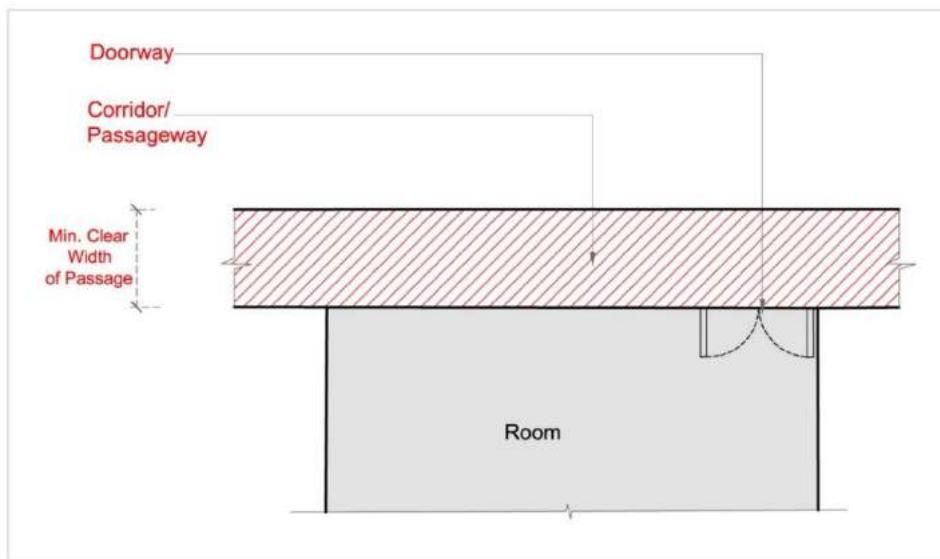


Figure No. 13.15: Details for Corridor and Passageway

13.1.13 Ramp

1 Ramp for Vehicular Access:

Minimum width and radius for a ramp for two wheelers, cars, and trucks, respectively are specified in the Table No. 13.4 below:

Table No. 13.4: Minimum Width of Ramp and Radius of Inner Curve

No	Vehicle	Minimum width of Ramp (m)	Minimum Radius of Inner Curve (m)
(1)	(1)	(2)	(3)
1	Two-wheeler	2	2
2	Car	3	3
3	Truck	6	4

- a) The maximum slope of ramp shall be 1:10.
- b) A level platform of width equal to ramp width and length of minimum 4.5 m shall be provided at end of the ramp at ground level and basement level.
- c) A minimum clear height of 2.6 m shall be maintained at all points on the ramp.
- d) For parking in basements, the number and width of ramp shall be provided as specified below and as per Table No. 13.5 (as applicable)

Table No. 13.5: Ramp Details Based on Area of Parking in Basement

No	Area of Parking in Basement	Number of Ramps	Width of Ramp
(1)	(1)	(2)	(3)
1	$\leq 750 \text{ sq m}$	1	3 m
2	$> 750 \text{ sq m}$	1 2	6 m 3 m each

Buildings constructed on building units with area less than 2000sqm may, if they are required under these rules to provide for vehicular ramp, provide for a mechanical vehicular lift in its place provided that a staircase connecting to the ground level for human egress is also provided.

2 Ramp for Pedestrians (*Refer Figure No. 13.16*):

- a) For buildings exceeding 4 m in height with uses namely, Public Offices, Assembly, Educational 2 & 3, Mercantile 1, 2 & 3; a pedestrian ramp shall be provided unless provision for a lift is made as per Rule 13.12. The ramp shall be provided with the following specifications:

- b) The minimum width of the ramp shall be 1.2 m, 1.5 m and 1.8 m for the ramp length upto 3.6 m, up to 9 m and more than 9 m respectively.
- c) A landing shall be provided of 1.8 m length for every 9 m length of the ramp.
- d) The slope of a ramp shall not exceed 1:15.
- e) Surface of the ramp shall be slip-resistant, and the edge of the ramp shall be protected with a minimum height of 100 mm.
- f) Handrails on the ramps shall be on both sides at two levels, at 700 mm and 900 mm, both ends shall be rounded, grouted, and extended 300 mm beyond top and bottom of ramp.
- g) Entrance landing shall be provided at the starting and ending level of the ramp with the minimum length equal to 1.8 m.
- h) Ramps shall lead directly to outside open spaces at ground level or courtyards or other safe places.

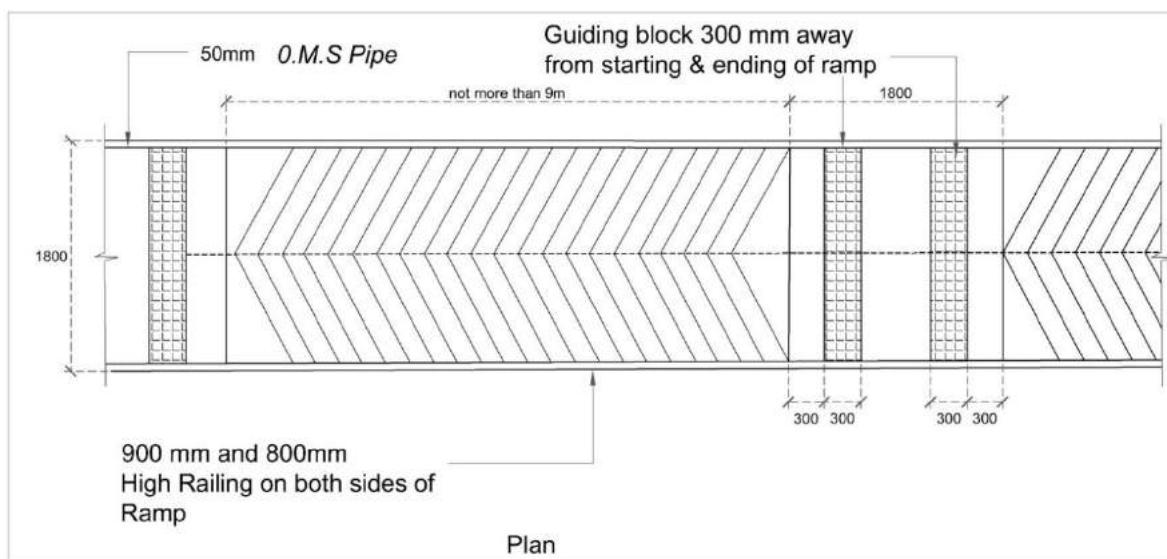
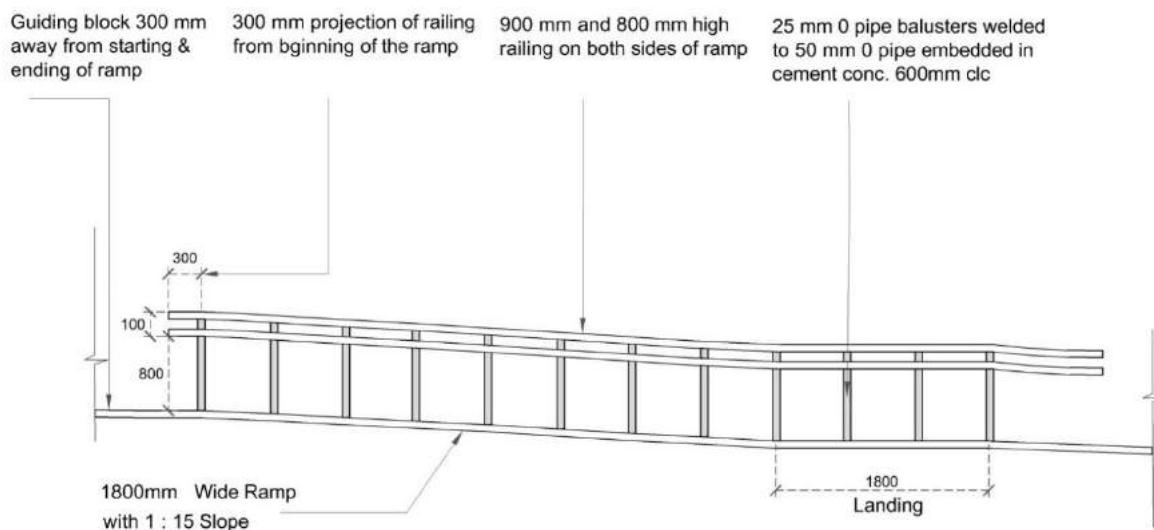


Figure No. 13.16: Ramp for Pedestrians

3 Ramp for Fire Tender:

- a) For parking except basements, hollow plinth at ground level and ramp leading to parking above ground level at any floor shall be permissible inside/rear margin are subject to any site/building unit which fulfils following minimum requirement in case of building height exceeds 25 m.

Table No.13.6: Ramp Details for Fire Tender

No.	Requirement	Particular
1	Minimum Gross Operational weight	30 Ton
2	Minimum Overhead Clearance	4.5 m
3	Minimum Width of Fire Appliance Accessway	3.5 m
4	Minimum Width of Perimeter Vehicular Access for Large Isolated Building	6 m
5	Minimum Lateral Clearance	2 m
6	Hardstanding	6 m wide x 15 m long
7	Minimum Turning Circle Kerb / Kerb	24 m
8	Minimum Turning Circle Wall/ Wall	28 m
9	Maximum Dead end	45 m
10	Maximum Gradient	1:15

4 Turning Facilities

Fire appliance access leading to a dead end shall neither exceed 45 m nor be less than 15 m in length. If the length exceeds 45 m, then turning facilities at the dead end (a turning circle or a hammerhead) must be provided (*Refer Figure No. 13.17*) (Left Image).

The outer radius for turning in an access way and fire appliance access road shall comply with the requirements (*Refer Figure No. 13.17*) (Right Image)

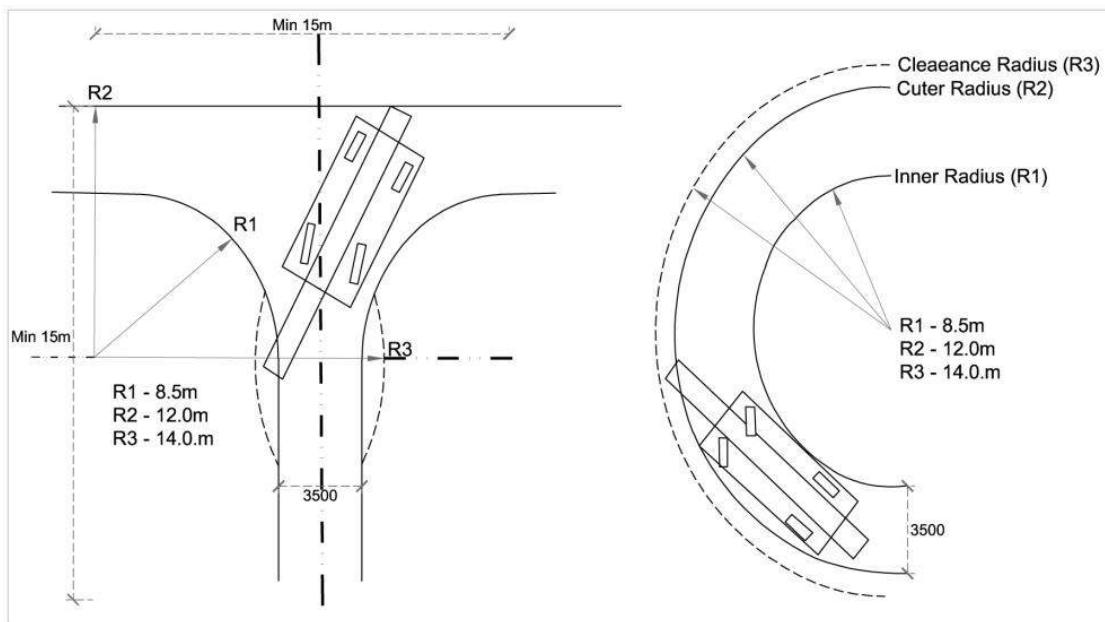


Figure No. 13.17: Turning Facility for Fire Appliance (Left) and U - turn Facility for Fire Appliance (Right)

13.1.14 Façade Maintenance Requirement

The Competent Authority may identify certain streets and areas that have a built form that is special / historic. For these streets and areas, it may introduce additional architectural controls and guidelines from time to time which will need to be followed in addition to these Rules. The Competent Authority may announce incentives for this.

13.2 Parking

13.2.1 Parking to be Provided

- 1 In any building, provision for parking shall be made as per requirements specified in Rule 16.5 Schedule No.16.
- 2 Parking for people with disability shall be provided for all buildings and facilities other than Dwelling 1 and 2 as per Rule No.13.2.2 (5).

13.2.2 Parking Layout Specifications for Cars (*Refer Figure No. 13.18*)

Parking layout for cars in all buildings shall conform to the following specifications:

- 1 Minimum dimension of a space provided for parking a car shall be 2.5 m x 5.5 m.
- 2 Each car parking space should be connected to the street providing access to the building unit by means of an access / exit lane.
- 3 Minimum width of the access / exit lane for single sided parking shall be 3 m and for double sided parking layout, the minimum width of the access lane shall be 5.5 m.
- 4 A minimum clear height of 2.6 m shall be maintained at all points in the parking space and access / exit lanes.
- 5 Minimum provision of two accessible car parking space shall be provided for people with disability for every 25 car parking spaces or less. This accessible car parking space shall:
 - a) Have a minimum bay width of 2.5 m.
 - b) Have a 1.2 m side transfer bay. This can be shared by two successive parking bays.
 - c) Be located within 30 m from the main entrance of the building.
 - d) Have appropriate signages indicating that the space is reserved for wheelchair that are conspicuously displayed as specified in Rule No. 13.7.
 - e) Have guiding floor materials or have a device to guide visually impaired persons with audible signals or any other devices which serves the above purpose.

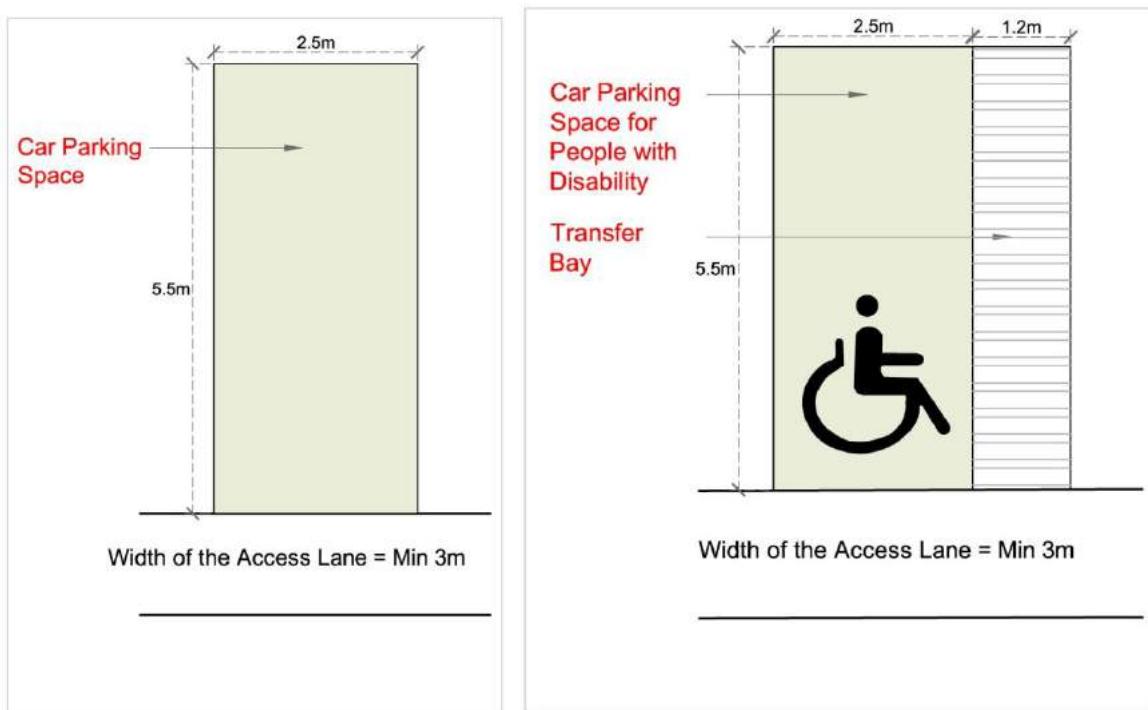


Figure No. 13.18: Design of Parking for Cars

13.2.3 Parking Layout Specifications for Two Wheelers (*Refer Figure No. 13.19*)

Parking layout for two wheelers in all buildings shall conform to the following specifications:

- 1 Minimum dimension of a space provided for parking a two-wheeler shall be 0.90 m x 2 m.

- 2 Each two-wheeler parking space should be connected to the street providing access to the building unit by means of an access / exit lane. Minimum width of the access / exit lane shall be 2 m.
- 3 A minimum clear height of 2.6m shall be maintained at all points in the parking space and access / exit lanes.

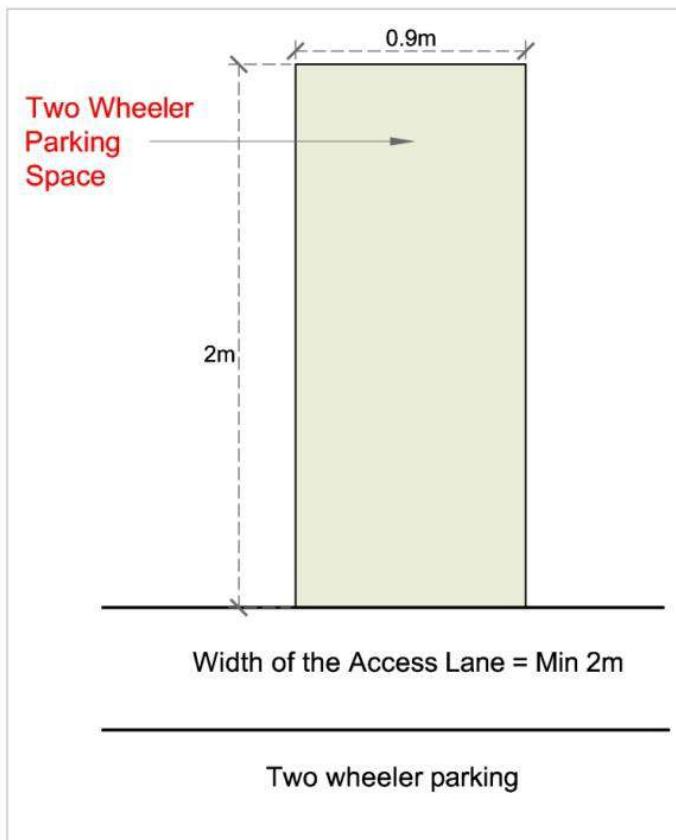


Figure No. 13.19: Design of Parking for Two - Wheelers

13.2.4 Parking Layout Specifications for Trucks

Parking layout for trucks in all relevant buildings shall conform to the following specifications:

- 1 Minimum dimension of a space provided for parking a truck shall be 4 m x 8 m.
- 2 Each truck parking space should be connected to the street providing access to the building-unit by means of an access / exit lane. Minimum width of the access / exit lane shall be 6 m.

13.2.5 Specified Parking for Loading and Unloading

- 1 Loading and unloading space shall be provided as per Rule No. 6.15 (1) in Industrial, Storage and Mercantile 1, 2, 3 except the following:

Shops / shopping centre / shopping malls having aggregate carpet area up to 1000 sq m, restaurant, hospitals of any category, nursing home, business establishment, light home workshop, activity related to IT, call centre and training centre and laboratory.

- 2 In case of mixed development, the loading and unloading space shall be provided for the area referred in (1) above on prorate basis. Such loading unloading space requirements shall be provided in a manner that 3.5 m x 7.5 m shall be provided at the rate of one space for every 1000 sq m of carpet area or part thereof.
- 3 The ramps leading to loading and unloading space provided as per (1), (2) shall have minimum 6 m width. Such ramp provided for loading unloading may also be used for the purpose of approach to parking.
- 4 The loading and unloading space shall be permitted on ground level or in first basement. It shall be considered as a part of parking area.

13.3 Lighting and Ventilation

13.3.1 Lighting and Ventilation of Rooms

- 1 Every habitable and usable room shall be equipped for adequate lighting and ventilation by provision of windows and /or ventilators that open directly into an open space or semi open space such as courtyard or verandah. The size of such an open space shall be minimum one tenth of the floor area of the room.
- 2 The aggregate of all openings including doors, windows and ventilators in a room shall be minimum one seventh of the floor area of the room.
- 3 Where lighting and ventilation requirements are not met through day lighting and natural ventilation, they shall be ensured through artificial lighting and ventilation in accordance with the provisions of Part VIII Building Services, Section I Lighting and Ventilation, National Building Code and to the satisfaction of the Competent Authority.

13.3.2 Ventilation of Basement

Every basement shall be ventilated adequately for its respective use. Vent duct openings shall be permitted at building unit level in accordance with Fire Rules in Part 3 (II) and amended from time to time. Any deficiency shall be compensated by use of mechanical system such as blowers, exhaust fans or air conditioning system according to the standards in Part VIII Building Services, Section-I Lighting and Ventilation, National Building Code, and to the satisfaction of the Competent Authority.

13.3.3 Ventilation of Atrium

Any atrium covered from top shall be provided with adequate provision of light and ventilation.

13.3.4 Ventilation of Bathrooms and Water Closets

- 1 Every bathroom and water closet shall be ventilated adequately.
- 2 At least one of the walls of a water closet or bathroom or sanitary block shall have an opening of minimum 0.30 sq m with one dimension of 0.3 m, for each unit of WC or bathroom. In case the WC or bathroom abut a ventilation shaft, its size shall be as per the Table No 13.7 in Rule No 7.14.2:

Table No. 13.7: Size of Ventilation Shafts

No.	Height of Building (m)	Cross Section of Ventilation Shaft (sqm)	Side of Shaft (m)
1	Upto 12m	2.8	1.2
2	Upto 18m	4	1.5
3	Upto 30m	5.4	1.8
4	Above 30m	8	2.4

- 3 Where lighting and ventilation requirements are not met through day lighting and natural ventilation, they shall be ensured through artificial lighting and ventilation in accordance with the provisions of Part VIII Building Services, Section I Lighting and Ventilation, National Building Code and to the satisfaction of the Competent Authority

13.3.5 Ventilation of Staircase for Dwelling 1 and 2

- 1 Ventilation by windows:

Every staircase shall be ventilated adequately from an open-air space with a minimum area of 1 sqm. The aggregate area of all windows provided shall be at least 1.2 sq m at each stair landing or floor in the enclosing wall of the staircase which abuts on such 1 sq m open air space.

- 2 Mechanical ventilation:

Where lighting and ventilation requirements are not met through day lighting and natural ventilation, they shall be ensured through artificial lighting and ventilation in accordance with the provisions of Part VIII Building Services, Section I Lighting and Ventilation, National Building Code and to the satisfaction of the Competent Authority.

13.3.6 Ventilation of Industrial Building

- 1 Every usable room shall be equipped for adequate ventilation by provision of windows, ventilators, skylights, or artificial means.
- 2 For natural light and ventilation, every room in such building shall be lit and ventilated by adequate number of windows, ventilators, and sky lights exclusive of doors having clear opening not less than 1/7th of the floor area abutting on open air space of width not less than 1/3rd of the height of the part of the building abutting such open space.
- 3 Where lighting and ventilation requirements are not met through day lighting and natural ventilation, they shall be ensured through artificial lighting and ventilation in accordance with the provisions of Part VIII Building Services, Section I Lighting and Ventilation, National Building Code and to the satisfaction of the Competent Authority.

13.3.7 Ventilation of Special Buildings

- 1 Every auditorium, halls and other special buildings shall be naturally lit and ventilated by doors, ventilators and windows abutting on an interior or exterior open-air space which shall not be less than 1/5th of the total floor area.
- 2 Special buildings may be designed with through artificial lighting and ventilation in accordance with the provisions of Part VIII Building Services, Section I Lighting and Ventilation, National Building Code and to the satisfaction of the Competent Authority.

13.3.8 Change of Ventilation System

No permission shall be granted to convert an existing air-conditioned theatre to a non-air conditioned theatre.

13.4 Heating and Air Conditioning

Adequate heating and air conditioning as published in the National Building Code of India, Part VIII – Building Services, Section 3 Air Conditioning, shall be provided in all parts of a building and to the satisfaction of the Competent Authority.

13.4.1 Air Conditioning of Special Buildings

Auditorium or cinema halls shall be air-conditioned as per following specifications:

- 1 Temperature Range – 22 to 26.5 degrees Celsius (72° F to 80° F).
- 2 Change of Air per hour – approximately 10 times.
- 3 Relative Humidity – 50 to 60%.
- 4 Fresh Air Requirement – 7.5 CFM per person.

13.5 Water Supply Requirements

13.5.1 Water Storage Tank

Water storage tank shall be maintained to be perfectly mosquito proof condition, by providing a properly fitting hinged cover and every tank more than 1.50 m in height shall be provided with a permanently fixed non-ferrous metal ladder to enable inspection by anti-malaria staff.

13.5.2 Drinking Water Supply

In all buildings other than residential buildings, suitable provision of drinking water shall be made for people with a disability near the accessible toilet provided under Rule No. 13.9.2.

13.6 Building Signage

Signage directly pertaining to the use of the building may be erected on the plot.

For all buildings other than Dwelling 1 and 2, signage pertaining to the internal building uses shall be provided. Such signage shall comply with the following:

- 1 The size of lettering shall not be less than 20 mm to enable easy legibility.

- 2 Public address system may also be provided in busy public areas.
- 3 The symbols or information should be in contrasting colour and properly illuminated to help people with limited vision to differentiate amongst primary colours.
- 4 International symbol mark for wheelchair (*Refer Figure No. 13.20*) shall be installed at the lift, toilet, staircase, parking areas etc., that have been provided for people with a disability.
- 5 For educational, institutional and government buildings, information board in braille shall be installed on a wall near the entrance at a suitable height and such that is approachable.
- 6 To ensure safe walking, there should not be any protruding sign which creates obstruction in walking.



Figure No. 13.20: Signages

13.7 Letter Box

In all case of a building having more than two floors including ground floor, a letter box for each separate unit shall be provided at ground floor level to facilitate easy mail delivery.

13.8 Sanitation

Minimum sanitary accommodation shall be provided for all proposed buildings and additions and extensions to existing buildings.

13.8.1 For Residential Buildings

The minimum sanitary requirement for a residential dwelling unit shall be one water closet. The dimensions and area of WC and Bathroom are given in Table No. 13.8 below:

Table No. 13.8: Area and Floor Dimension of Bathroom and Water Closet

No	Type	Area (sq m)	Minimum Length of one side (m)
1	Bathroom	1.5	1.1
2	Water Closet (WC)	1.1	0.9
3	Combined bathroom & Water closet	2.2	1.1

13.8.2 For all Buildings other than Residential (*Refer Figure No. 13.21*)

- 1 Minimum one special water closet shall be provided for the use of persons with disability with provision of washbasin and drinking water at the ground level.
 - a Minimum size of toilet shall be 1.5 m X 1.75 m.
 - b Minimum width of door shall be 900 mm with outward door swing.
 - c Suitable arrangement of vertical or horizontal handrails with 50 mm clearance from the wall shall be provided.
 - d WC seat shall be 500 mm from the floor.

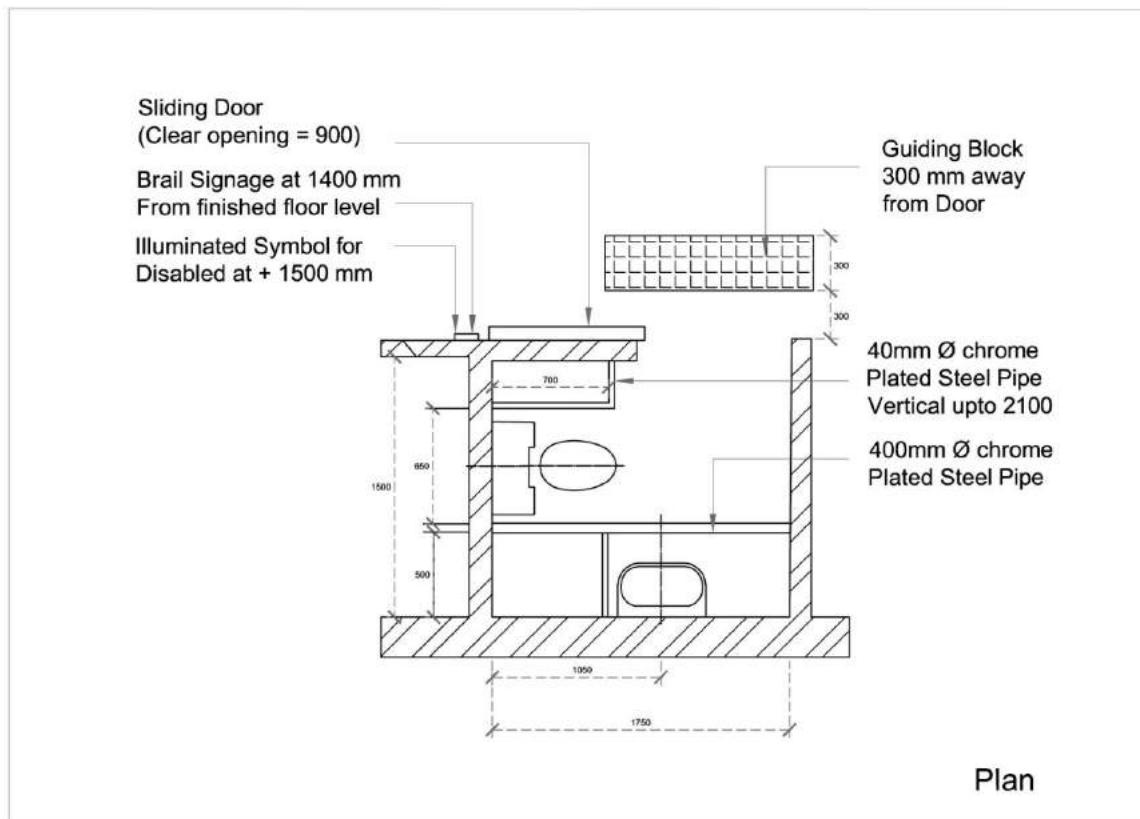


Figure No. 13.21: Typical Toilet Details

- 2 Water closets shall be provided for each gender. The dimensions and area of WC and Bathroom are given in Table No. 13.8 above.
- 3 The number of water closets shall be decided on the basis of the maximum number of building users by gender at any time and as specified in Table No. 13.9.

Table No. 13.9: Requirement of Sanitation

Building Use	Rate for No. of Users	No. of Users	Min. No. of Urinals	Min. No. of Water Closets	Min. No. of Washbasins or Wash area
(1)	(2)	(3)	(4)	(5)	(6)
Educational 1, 2 & 3	1 user per 1 sq m per carpet area		5 or 1 per 50 male users or less, whichever is more	2 or 1 per 200 users or less per gender, whichever is more	1 per 200 users
Mercantile 1, 2 & 3	1 user per 4 sq m per carpet area	<20	1 may be provided	1 WC per gender each	1 per WC
		21-100	1 per 25 male users or less	1 per 25 users or less per gender	1 per 50 users
		101-500	1 per 50 male users or less	1 per 50 users or less per gender	1 per 100 users
		>500		1 per 100 users or less per gender	1 per 200 users
Industrial 1, 2 & 3, Storage	1 user per 25 sq m of carpet area	1-100	1 per 100 male users or less	1 per 25 users or less per gender	1 per 50 users
		>100	1 per 50 male users or less	1 per 50 users or less per gender	1 per 100 users
Special Buildings	1 user per seat		2 per 75 users or less	1 per 100 users or less per gender	1 washbasin per 200 users or less

- 4 Minimum 25% of such water closets and urinals shall be provided in common and accessible locations of the building.

5 These sanitation facilities shall be provided with signage indicating the use and the intended users gender as per Rule No. 13.8.

13.8.3 For Special Buildings

The number of water closets shall be decided on the basis of the number of seats provided as indicated in Table No. 13.9. Water closets shall be provided for each gender, apportioned suitably.

13.9 Drainage

The manner in which it is intended to connect the drainage system of a building to a public sewer shall be subject to approval by the Competent Authority while granting development permission. Rules for construction, maintenance, and control of drains, sewers, drainage, and sewage works of any description within Development Area shall be as per the norms of Pollution Control Board.

1 Provision of Septic Tank, Soak Pit and Soak Well

In case where there is no drainage facility available for the land to be developed, the owner shall provide septic tank, soak pit or soak well for disposal of sewage and wastewater.

2 Location and Sub Soil Dispersion

A sub soil dispersion system shall not be closer than 12 m to any source of drinking water, such as a well, to mitigate the possibility of bacterial pollution of water supply. It shall also be as far removed from the nearest habitable building is economically feasible but not closer than 2 m to avoid damage to the structure.

3 Dimensions and Specifications

- a) Septic tank shall have a minimum inner width of 75 cm, a minimum depth of one meter below the water level and a per capita minimum liquid capacity of 120 litres. The length of the tanks shall be least twice the width.
- b) Septic tanks may be constructed of brick work, stone masonry, concrete, or other suitable material as approved by the Competent Authority.
- c) Under no circumstances should effluent from a septic tank or allowed into an open channel drain or body of water without adequate treatment.
- d) The minimum normal diameter of the pipe shall be 100 mm. Further at junction of pipes in manholes, the direction of flow from a branch connection should not make an angle exceeding 45 degrees with the direction of flow in the main pipe.
- e) The gradients of land-drains, under-drainage as well as the bottom of dispersion trenches and soak wells should be between 1:300 and 1:1400.
- f) Every septic tank shall be provided with a ventilating pipe of at least 50 mm diameter. The top of the pipe shall be provided with a suitable cage of mosquito proof wire mesh. The ventilating pipe shall extend to a height which would cause no smell or nuisance to any building in the area. Generally, the ventilating pipe should extend to a height of about 2 m above the septic tank if it is located within the proximity of 15 m of the building.
- g) When the disposal of a septic tank effluent is to a soak pit, the soak pit may be of sectional dimension of 90 cm and not less than 100 cm in depth below the inner level of the inlet pipe. The pit may be lined with stone, brick and concrete blocks with dry open joint which should be backed with at least 7.5 cm of clean coarse aggregate. The lining above the inlet level should be narrowed to reduce the size of the RCC cover slabs. Where no lining is used, especially near trees, the entire pit should be filled with loose stones. A masonry ring should be constructed at the top of the pit to prevent damage by flooding of the pit by surface run off. The inlet pipe should be taken down to a depth of 90cms from the top as an anti-mosquito measure.
- h) When the disposal of septic tank effluent is to a dispersion trench, the dispersion trench shall be 50 to 100 cm wide, excavated to a slight gradient and shall be provided with a layer of shed gravel or crushed stones 15 to 25 cm deep. Open, joined pipes placed inside the trench shall be made of unglazed earthenware clay or concrete and shall have a

minimum internal diameter or 70 to 100 mm. Each dispersion trench should not be longer than 30 m and trenches should not be placed closer than 1.8 m to each other.

- i) The above-mentioned Rules shall be subject to modification from time to time as required by Pollution Control Board/ Competent Authority.

4 Provision of connecting sewerage line

In cases where there is no pre-existing sewerage infrastructure available for the land, intended to be developed, the owner/ developer shall make a provision of connecting sewerage line extending upto the main road. The dimensions of this connecting sewerage line should be determined in accordance with the type of building/ intended development on the said plot with the minimum size of pipe 15cm diameter. An occupancy certificate will not be issued without the provision of this sewerage line.

13.10 Electrical Infrastructure

Adequate electrical infrastructure as published in the National Building Code of India, Part VIII - Building Services, Section 2- Electrical Installations, shall be provided in all buildings to the satisfaction of the Competent Authority.

13.11 Digital Communication Infrastructure

A broad variety of Information Communication Technology (ICT) systems are expected to be installed in buildings. In order to facilitate proper cabling and installation / up gradation of ICT systems and their cost effectiveness and maintenance, adequate physical infrastructure is required within buildings. This infrastructure will include common ducts, cable riser systems, conduits, cable trays and utility closets etc. among other things. The same can also be retrofitted into existing buildings wherever possible and feasible and must be designed in all new, re-developed and renovated structures. Sharing of in building infrastructure will save capex and opex, as well as avoid duplication of infrastructure deployment by multiple providers.

Provision for in buildings for ‘Common Telecommunication Infrastructure’ (CTI) is mandatory in Dwelling 3, Mercantile 2 & 3, Assembly 1, 2, 3 & 4, Hospitality 1, 2 & 3, Education 2 &3, Health 1, 2, 3 & 4, Service Establishment 2, Industrial 1, 2 & 3, Transport, Storage and Public Offices etc.

CTI needs duct sharing and fibre sharing. It will need space and power for installation of common ducts, optical fibre, small cells, antennas, smart sensors etc. Earthing requirements may also be there for some ICT. In some cases, there may be more specific requirements for utility spaces such as:

- Cable routing layout and cable length restrictions between Workspace and utility closet.
- Bending radius and working clearance requirements for different cable types, e.g. Fiber optic cables, Cat-6 Cables and co-axial cables.
- Isolated power circuits for permanent communication equipment.
- Protection, Safety, Grounding, and environmental requirements of communication equipment.

13.11.1 Solutions for In-Buildings and Gated Buildings

- 1 The buildings are to be constructed in such a way that they are ‘digital connectivity’ ready. For this they need to provide common telecom ducts / pathways to reach accessible parts of the buildings. They should also have properly demarcated sections within buildings and on rooftops for housing broad band / digital connectivity infrastructure / antenna. These areas should have access to power supply for reliable, always-on services.
- 2 These common telecom ducts / pathways can be used/shared by various TSPs/IP-1s for laying / digital infrastructure including cables.
- 3 Further the TSPs/IP-1s shall be given unhindered access inside the buildings to install the telecom infrastructure / cables etc, as well as for their maintenance. This access can be free of charge or for a standardized nominal charge like other utilities.

13.11.2 Provisions at the Layout Level

- 1 While developing Greenfield cities/towns, the layout plans should clearly indicate the telecom as Utility infrastructure lines.
- 3 The placement and sequence of above and below-ground utilities at the appropriate location in the right-of-way shall be ensured for unconstrained movement as well as easy access for maintenance.
- 4 Telecommunication cables should be placed in a duct that can be accessed at frequent service points with sufficient spare capacity to enable scaling and future expansion, and empty pipes (large size hume pipes / HDPE pipes) should be laid before planting trees in order to accommodate additional infrastructure.
- 5 Telecommunication cables should ideally be placed below the parking area or service lane, which may be dug up easily without causing major inconvenience. Where this is not possible, the cables may be placed at the outer edge of the right-of-way.
- 6 There is a need to reduce conflicts with pedestrian movements is to place telecom boxes in easements just off the right-of-way. Where this is not possible, they should be placed within parking or landscaping areas. If cables have to be located in the pedestrian path, a space of at least 2m should be maintained for the through movement of pedestrians. Telecom boxes should never constrain the width of a cycle track.
- 7 To minimize disruptions, cables should be installed with proper maintenance infrastructure.

13.11.3 Provision of In Building Solution Components (as per NBC 2016)

- 1 Entrance Facilities (EF) /Lead-in conduits: (NBC 2016 Clause 3.1.4, of Part VIII: Sec 6) min. 1.2 m x 1.83 m space to be allocated for each TSP adjacent to the Entrance Facility.
- 2 Underground conduits/pipes to MDF room: min 100mm dia encased conduits.
- 3 Main Distribution Frame (MDF)/Equipment Room (ER):
(NBC 2016 Clause 3.1.2, Part VIII: Sec 6)
 - a) prescribed size with L:W ratio between 1:1 to 2:1
 - b) appropriate ventilation of MDF room
 - c) proper Lighting for vision of equipment.
 - d) located at a level above from the ground level to avoid incidence of flooding
- 4 Electric distribution panels, isolators, sockets and earthing as per specific requirements with respect to the area proposed for coverage (DUs/ service subscribers).
- 5 Telecommunications Room (TR) at each building block unless provided with MDF room (all provisions of space to be as per NBC 2016 Clause 3.1.3.2, Part VIII: Sec 6)
- 6 Appropriate nos. of Service / Telecom risers (vertical shafts) for all multi storeyed buildings w.r.t the area proposed for coverage (DUs/ service subscribers):
 - a) of appropriate numbers and size (width & depth) to accommodate cable trays
 - b) with access door at each floor.
- 7 Telecommunications Enclosures (TE) at each floor of a block or TR (NBC 2016 Clause 3.1.5, Part VIII: Sec 6).
- 8 Telecom Media and Connecting Hardware (TE) (NBC 2016 Clause 3.2, Part VIII: Sec 6)
- 9 Various cabling system and trays (NBC 2016 Clause 3.2.4, Part VIII: Sec 6)
- 10 Wireless systems (NBC 2016 Clause 3.2.5, Part VIII: Sec 6)
- 11 Backbone Cabling Media Distribution and Building pathways (NBC 2016 Clause 3.3, Part VIII: Sec 6)
- 12 Horizontal Cabling Media Distribution and Building pathways (NBC 2016 Clause 3.4, Part VIII: Sec 6)
- 13 IBS installation spaces: area for rooms or systems (eg., antennas, base stations, remote units, power distribution boxes etc.) to be provided as per requirements with respect to the area proposed for coverage/ no. of proposed users (NBC 2016 Clause 3.1.3.2, Part VIII: Sec 6 and Table No. 13.10 & 13.11)

Table No. 13.10: Telecom room space norm for buildings with Built-up area >465 sq m

No	Area to be covered by IBS	Size of Telecom Room (m)
1	Upto 465 sq m	3 x 2.4
2	465 sq m to 930 sq m	3 x 3.4
3	More than 930 sq m	Additional TR required with same space norms

Table No. 13.11: Space requirements for smaller buildings with Built-up area <465 sq m

No	Area to be covered by IBS	Space provisions (m)
1	Upto 93 sq m	Wall cabinets, self – contained enclosed cabinets
2	93 sq m to 465 sq m	Shallow Room (0.6 x 2.6) Walk-in Room (1.3 x 1.3)

IBS installation spaces, so provided, should be:

- 1 Not susceptible to flooding.
- 2 Not exposed to water, moisture, fumes, gases, or dust.
- 3 Able to withstand designed equipment load (to be specified in design)
- 4 Located away from any vibrations to avoid dislocation/dislodgement.

13.11.4 Process for obtaining IBS-NOC for Development permission and Occupancy Certificate

- 1 While submitting the application of development permission, the applicant shall also submit:
 - a) A complete Service Plan for IBS-infrastructure along with required specifications (in consultation with, and certified by a credible Telecom Networking hardware-consultant)
 - b) An undertaking that such IBS Infrastructure, when constructed shall be available for sharing by various TSPs/IP-Is.
- 2 Such Service Plan (IBS) shall be forwarded by the concerned Local Authority to the Telecom Enforcement Resource and Monitoring (TERM) cell of the State (external NOC agency) – for approval NOC.
- 3 During the Joint Site Inspection of the completed building structure the TERM cell shall undertake inspection of the constructed/installed IBS infrastructure – for issuance of NOC for OC.
- 4 The Competent Authority shall liaise with the TERM cell as per its relevant online/offline process of communication to seek the relevant NOCs within the specified time as per the Service Charter / Service Guarantee Act and rules in place. Separate communication from the applicant shall be needed to secure the IBS NOC.

13.12 Lifts and Elevators

13.12.1 For buildings exceeding 4 m height with following uses: Public Offices, Assembly, Educational 2, 3

Minimum one lift shall be provided to access public areas on floors above ground level.

13.12.2 For buildings exceeding 10 m height.

- 1 For buildings with height more than 10m, lifts shall be required as per the following Table No: 13.12.

Table No. 13.12: Provision for Passengers Lift

No.	Building Use	Height of Building	Minimum no. of Lifts (whichever is more from column A and B)	
			A	B
1	Dwelling 3	Above 10 m	Minimum 1, or	1 Lift per thirty dwelling units (Excluding dwelling units on ground level and two upper

No.	Building Use	Height of Building	Minimum no. of Lifts (whichever is more from column A and B)	
			A	B
		Above 25m	Minimum 2, or	floors or hollow plinth and two upper floors)
2	Non-residential	Above 10 m	Minimum 1, or	1 Lift per 1200 sq m built-up area (Excluding area on ground floor and two upper floors or hollow plinth and two upper floors)
		Above 25 m	Minimum 2, or	

Note:
If, DW 1 and DW 2 type building having building height up to & equal to 12 m from ground level then provision for requirement of lift shall not be applicable.
The above shall also be confirmed with National Building Code of India, Part VIII - Building Services, Section 5- Installation of Lifts and Escalators. More stringent of both the provisions shall be adopted.

- 2 For all high-rise buildings, one of the required lifts shall be a fire lift, in conformity with as per Fire Rules in Part 3 (II) and amended from time to time.
- 3 For buildings having parking at other than ground floor and for accessibility ramp is not provided, in such cases building shall be provided with vehicular lift as per Table No.13.13. In addition to requirement of passenger lift as per Rule No. 13.12.2 (1 & 2) and Rule No. 13.12.3.

Table No.13.13: Size of Vehicle Lift shall be According to Weight of Car

No. (1)	Use (2)	Weight of Car / No. of Vehicle (3)	Size (m x m) (4)
1	Affordable Housing / Sparsh Housing / Chawls	3000 kg/2 nos. of car	3.80 x 6.45
2	Other than above	3000 kg/1.5 nos. of car	3.80 x 6.45
3	Non-Residential / Mix Use on other than up to first floor (other than Industries)	4 000 kg/2 Nos. of Car	4.30 x 6.95

Note: Average vehicle occupancy may be considered as

- 1.5 per car for office car parks,
- 4 for airports and retail and 2 elsewhere.

The above shall also be confirmed with National Building Code of India, Part VIII - Building Services, Section 5- Installation of Lifts and Escalators. More stringent of both the provisions shall be adopted.

- 4 Multi Level Car Parking
 - a) Number of car lifts ensuring that average car retrieval/parking time does not exceed 2 min.
 - b) The sizing of the car lifts has to be adequate to fit the largest vehicle that is intended to be transported as well as adequate space to enable opening of the doors to enable evacuation of passengers in the eventuality of an entrapment.
 - c) Designers will also need to take into account the probability of queues developing and provide for holding lanes as per Rule No.13.2.2.

13.12.3 General Requirements for Lifts and Elevators

- 1 Lift shall be provided from the ground level or lower level.
- 2 Minimum capacity of the lift shall be for six persons.
- 3 Lifts of either or 6, 8, 12 and/or 24 persons capacity can be permitted, as considered by Competent Authority as per the peak hour passenger volume. However more than 1 lift shall be provided as per Fire Rules in Part 3 (II) and amended from time to time.
- 4 A clear door opening with minimum width of 900 mm shall be provided. A clear landing area in front of the lift doors shall have minimum dimensions of 1.8 m x 2 m or more.
- 5 A handrail of 600 mm length shall be provided at a height of 1 m from the floor of the lift car.

- 6 The duration of an automatic closing lift door shall be minimum 5 seconds with a maximum closing speed of 0.25 m/sec.
- 7 The interior of the lift cabin shall be equipped with a device that audibly indicates the floor level reached and whether the door of the cabin is open or closed.

All lifts shall also meet Fire Rules in Part 3 (II) and amended from time to time.

13.13 External Façade

On the external facade of any building, the glazed surface area of the façade shall be non- reflective and provided up to a maximum of 50% of the total surface area of each facade, with the provision of safety railing up to sill level. On the North facade, entire surface area may be glazed. 10 degrees deviation may be permitted in consideration of the Northern facade (*Refer Figure No. 13.22*).

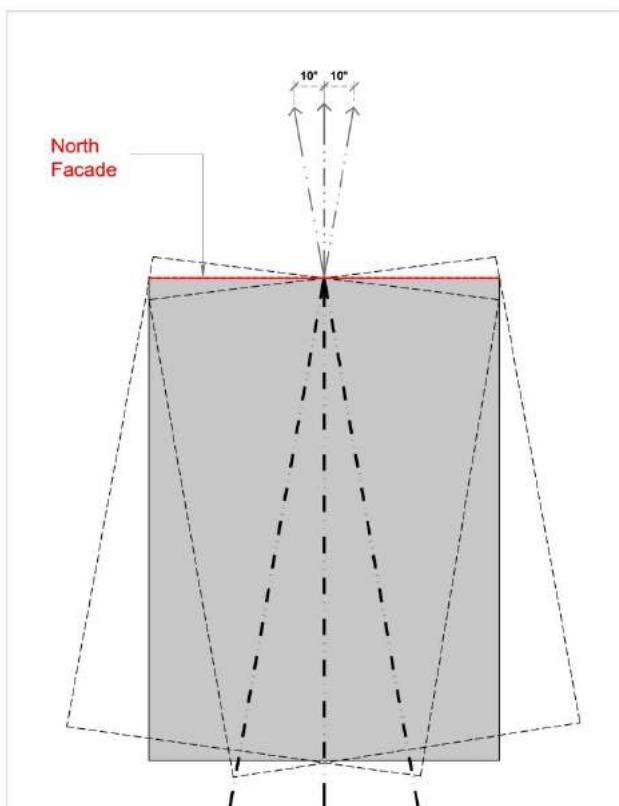


Figure No. 13.22: Details for External Façade

13.14 Occupant Load

- 1 The standard space and service requirements of various parts of a building like light and ventilation, fire safety etc., depend on the number of persons who would normally occupy the building. The occupant load therefore for any building should be worked out from Table No. 01 in Part 3 (II).
- 2 The plinth or covered area shall include, in addition to the main assembly room or space, any occupied connecting room or space in the same storey or in the storeys above or below where entrance is common to such rooms and space and the area available for use by the occupants of the assembly place. No deduction shall be made in the plinth/covered area for corridors, closets, and other sub-divisions; that area shall include all space serving the assembly occupancy.

14 Fire Prevention, Safety and Protection

Refer Part 3 (II) Fire Regulations.

15 Special Buildings

The following Rules shall be applicable for all Special Buildings in addition to the other Performance Rules.

15.1 Visibility

Auditoriums or cinema halls shall provide minimum visibility requirements as per following specifications:

- 1 The seat nearest to the screen shall not be nearer than the effective width of the normal picture (ratio 1:1.33). This distance shall be 3/4 in case of cinema scope and other wide angles techniques and one half in case of 70 mm presentations.
- 2 The elevation of the balcony seats shall be such that line of sight is not inclined more than 30° to the horizontal.
- 3 The seats should preferably be staggered sideways in relation to those in front, so that a spectator in any row is not looking directly over the head of the person immediately in front of him.
- 4 The position and height of the screen shall be regulated in such a way that the maximum angle of the line of vision from the front seat to the top of the screen shall not exceed 50°.

15.2 Mixed Occupancy

- 1 Places of assembly in buildings of other occupancy, such as all rooms in hotels, restaurants, stores and assembly rooms in schools, shall be so located, separated, or protected as to avoid any undue danger to the occupants of the place of assembly from a fire / smoke originating in the other occupancy.
- 2 Every place of assembly, every tier of balcony, and every individual room used as a place of assembly shall have exits sufficient to provide for the total capacity therein as required such that door width for assembly building shall not be less than 2000 mm for every 600 persons.
- 3 Every place of assembly shall have at least four separate exits as remote from each other as practicable.
- 4 At least one row of seating area shall be made accessible by ramps or elevators for disabled visitors.
- 5 Clear aisles not less than 1.2 m in width shall be formed at right angles to the line of seating in such number and manner that no seat shall be more than seven seats away from an aisle. Rows of seats opening to an aisle at one end only shall have not more than seven seats. Under the condition, where all these aisles do not directly meet the exit doors, cross-aisles shall be provided parallel to the line of seating so as provide direct access to the exit, provided that not less than one cross aisle for every 10 rows shall be required. The width of cross-aisles shall be minimum of 1 m. Steps shall not be placed in aisles to overcome differences in levels unless gradient exceeds 1 in 10.
- 6 The fascia of boxes, balconies and galleries shall have substantial railings not less than 1000 mm high above the floor. The railings at the end of aisles extending to the fascia shall be not less than 1000 mm high for the width of the aisle or 1100 mm high at the foot of steps.
- 7 Cross aisles except where the back of seats on the front of the aisle project 600 mm or more above the floor of the aisle shall be provided with railings not less than 900 mm high.
- 8 No turnstiles or other devices to restrict the movement of persons shall be installed in any place of assembly in such a manner as to interfere in any way with the required exit facilities.
- 9 In theatres and similar places of public assembly where persons are admitted to the building at a time when seats are not available for them are allowed to wait in lobby or similar place until seats are available, such use of lobby or similar space shall not encroach upon the required clear width of exits. Such waiting shall be restricted to areas separated from the exit ways by substantial permanent partition or fixed rigid railing not less than 105 cm high. Exits shall be provided for such waiting spaces on the basis of 1 person for each 0.3 sq m of waiting space /

- area. Such exits shall be in addition to exits specified for the main auditorium area and shall conform in construction and arrangement to the general Rules of exits given above.
- 10 No display or exhibit shall be so installed or operated as to interfere in any way with access to any required exit, or with any required exit sign. All displays or exhibits of combustible material or construction and all booths and temporary constructions in connection therewith shall be so limited in combustibility or protected so as to avoid any undue hazard of fire which might endanger occupants before they have opportunity to use the available exits, as determined by the Competent Authority.
 - 11 Places of assembly in buildings of other occupancy may use exits common to the place of assembly and the other occupancy, provided the assembly area and the other occupancy are considered separately, and each has exits sufficient to meet the requirements of the code.
 - 12 Exits shall be sufficient for simultaneous occupancy of both the place of assembly and other parts of the building, unless authority determines that the simultaneous occupancy will not occur.
 - 13 At least half the required means of exit shall lead directly outdoors or through exit ways completely separated from exits serving other parts of the building.
 - 14 The decoration of place of assembly shall be of non-flammable materials. Fabrics and papers used for such purpose shall be treated with an effective flame-retardant material. Stage settings made of combustible materials shall likewise be treated with fire retardant materials of class 1 flame spread.
 - 15 Seats in places of public assembly, accommodating more than 300 persons, shall be securely fastened to the floor except as permitted in (16) below. All seats in balconies and galleries shall be securely fastened to the floor, except that in nailed-in enclosures like boxes with level floors and having not more than 14 seats, the seats need not be fastened. Tapestry of the seats shall be fire resistant.
 - 16 Chairs not secured to the floor may be permitted in restaurants, night clubs and other occupancies where fastening of seats to the floor may not be practicable, provided that in the area used for seating, excluding dance floor, stage etc., there shall be not more than one seat for each 1.4 sq m of floor area and adequate aisles to reach exits shall be maintained at all times.
 - 17 Seats without dividing arms shall have their capacity determined by allowing 450 mm per person.
 - 18 The spacing of rows of seats from back shall neither be less than 850 mm nor less than 700 mm plus the sum of the thickness of the back and the inclination of the back. There shall be a space of atleast 350 mm between the back of one seat and the front of the seat immediately behind it as measured between plumb lines.
 - 19 Rooms containing high-pressure boilers, refrigerating machinery other than domestic refrigerator type, or other service equipment subject to possible explosion shall not be located directly under or adjacent to required exits. All such rooms shall be effectively cut off from other parts of the building and provided with adequate vents to the outer air.
 - 20 All rooms or areas used for storage of any combustible material or equipment, or for painting, refinishing, repair or similar purposes shall be effectively cut off from assembly areas or protected with a standard system of automatic sprinklers. They shall be located away from staircases.
 - 21 Every stage equipped with fly galleries, grid irons and rigging for movable theatre type scenery shall have a system of automatic sprinklers over and under such stage areas or spaces and auxiliary spaces, such as dressing rooms, storerooms, and workshops. The proscenium opening shall be provided with a fire-resisting curtain, capable of withstanding a lateral pressure of 4 KN/ sq m over the entire area. The curtain shall have an emergency closing device capable of causing the curtain to close without the use of power and when so closed, it shall be reasonably tight against the passage of smoke.
 - 22 The stage roof of every theatre using movable scenery or having a motion picture screen of highly combustible construction shall have a ventilator or ventilators in or above it, openable from the stage floor by hand and also opening by fusible links or some other approved automatic heat/ smoke actuated device, to give a free opening equal to at least one-eighth the area of the floor of the stage.

- 23 The proscenium wall of every theatre using movable scenery or decorations shall have exclusive of the proscenium opening, not more than two openings entering the stage, each not to exceed 2 sq m and fitted with self-closing fire-resistant doors.
- 24 Automatic smoke vents actuated by smoke detectors shall be installed above the auditorium or theatres, including motion picture houses, with capacity of 8 air change per hour.

15.3 Public Offices / Hospital Buildings

These shall conform to 6.3 Part IV National Building Code, amended from time to time and particular attention is drawn to the following:

- 1 In building or sections occupied by bed ridden patients where the floor area is over 280 sq m, facilities shall be provided to move patients in hospital beds to the other side of a smoke barrier from any part of such building or section not directly served by approved horizontal exits or exits from first floor (floor 2) of a building to the outside.
2. Not less than two exits of one or more of the following types shall be provided for every floor, including basements, of every building or section:
 - a Doors leading directly outside the building.
 - b Stairways
 - c Ramps
 - d Horizontal Exits and
 - e Fire Escape Staircase
- 3 All required exits as per Table in Rule No. 22.4 of corridor width.
- 4 No building constructed in whole or in part of combustible materials shall be used to confine inmates in cells or sleeping quarters unless automatic sprinkler protection is provided.

15.4 Public Safety

Closed Circuit Television (CCTV) Network shall be installed in public areas of assembly buildings and other places of entertainment as per protocols laid down by the Competent Authority.

16 Structural Safety

16.1 Applicability

The following structural and seismic safety Rules shall apply to all buildings as per Schedule No. 10.

16.2 Structural Stability and Maintenance of Existing Buildings

- 1 The owner / developer / occupants and registered appointed Persons on Record shall carry out the assessment of structural safety of an existing building at stipulated periodical intervals through expert(s) chosen from a panel of experts identified by the Competent Authority. The intervals for maintenance and inspection shall be as per Schedule No. 10.
- 2 The owner / developer / occupant on advice of such expert(s) shall carry out such repair / restoration and strengthening / retrofitting of the building found necessary so as to comply with the safety standards laid down in The National Building Code and the Indian standards as specified.
- 3 In case the owner / developer / occupant does not obtain certificate of structural fitness of the building for the sanctioned use from authorized person having expertise as per stipulated timelines, the Competent Authority may take befitting action to discontinue the use of the building.
- 4 The Competent Authority may also direct the owner / developer / occupant, whether the building could be occupied or not during the period of compliance.

16.3 Additions and Alterations to Existing Buildings

An alteration or addition to an existing building that is not structurally independent shall be designed and constructed such that the entire structure conforms to the structural and seismic safety requirements for new buildings, unless the following three conditions are complied with:

- 1 The alteration or addition complies with the requirements for new buildings.
- 2 The alteration or addition does not increase the seismic forces in any structural element of the existing building by more than 5% unless the capacity of the element subject to the increased force is still in compliance with the requirements for new buildings.
- 3 The alteration or addition does not decrease the seismic resistance of any structural element of the existing building unless the reduced resistance is equal to, or greater than, that required for new buildings.

16.4 Change of Use of Building or Part of a Building

When a change of use results in a structure being reclassified to a Higher Importance Factor (I) as defined in the IS: 1893-2002 "Criteria for Earthquake Resistant Design of Structures (Fifth Revision)", the building shall conform to seismic requirements for a new building with the Higher Importance Factor.

16.5 Structural Safety Provision during Construction

- 1 The quality of all materials and workmanship shall conform to accepted standards and Indian Standard Specifications and Codes as included in Part V: Building Materials and Part VII Constructional Practices and Safety, National Building Code of India.
- 2 All borrow pits dug in the course of construction and repair of buildings, embankments, etc., shall be deep and connected with each other in the formation of a drain directed towards the lowest level and properly stepped for discharge into a river, stream, channel or drain, and no person shall create any isolated borrow pit which is likely to cause accumulation of water that may breed mosquitoes.

- 3 Alternative materials, method of design and construction and tests: The provisions of the Rules are not intended to prevent the use of any material or method of design of construction not specifically prescribed in them provided any such alternative has been approved. Nothing of the provisions of these Rules is intended to prevent the adoption or architectural planning and layout conceived as an integrated development scheme. The Competent Authority may approve any such alternative if it conforms to the provisions of the relevant parts of the National Building Code, regarding material, design and construction, and the material, method, or work offered is, for the purpose intended, at least equivalent to that prescribed in these Rules in quality, strength, compatibility, effectiveness, fire and water resistance, durability, and safety.
- 4 All buildings shall be constructed on quality control requirements.
- 5 In case of buildings under construction based on approved development permission, structural safety requirements shall have to be observed. However, due to such structural work of strengthening / retrofitting in the event of natural disaster if certain setbacks and margin get reduced, special permission may be granted by the Competent Authority on case-to-case basis.

16.6 Structural Safety Tests for Special Buildings

Whenever as per an opinion of panel experts, there is insufficient evidence of compliance with the provisions of the Rules or evidence that any material or method of design or construction does not conform to the requirements of the Rules, in order to substantiate claims for alternative materials, design or methods of construction, the Competent Authority may require tests, sufficiently in advance, as proof of compliance. These tests shall be made by an approved agency at the expense of the owner as follows:

- 1 Test Methods: Test methods shall be as specified by the Rules for the materials or design or construction in question. If there are no appropriate test methods specified in the Rules, the competent authority shall determine the test procedure. for methods or tests for building materials, reference shall be made to the relevant Indian standards as given in the National Building Code of India published by the Bureau of Indian Standards.
- 2 Test result to be preserved: Copies of the result of all such tests shall be retained by the Competent Authority for not less than two years after the acceptance of the alternative material
 - a) The testing of the materials as per Indian standards shall be carried out by laboratories approved by the Competent Authority on this behalf.
 - b) The laboratory/agency shall work out in consultation with the construction agency a testing programme of materials such as cement, steel and quality of concrete including its mixing, laying and strength at site as well as in the laboratory.
 - c) This should cover various stages of construction from foundation to completion as per Rule. The laboratory shall maintain a duly authenticated report in a bound register, copy of which will be submitted to the construction agency, which will in turn forward the testing report to the Competent Authority.

16.7 Design for Structural and Seismic Safety

16.7.1 Design Standards

In addition to the any other law for the time being in force, the structural design of foundations, elements of masonry, timber, plain concrete, reinforced concrete, pre-stressed concrete, and structural steel shall conform to:

- 1 The provisions of the National Building Code of India second revision, Part VI - Structural Design (Section – 1 Loads, Section – 2 Foundation, Section – 3 Wood, Section – 4 Masonry, Section – 5 Concrete and Section – 6 Steel), and as amended from time to time and,
- 2 The following Indian Standards:

Structural Safety:

- 1 IS: 456: 2000 "Code of Practice for Plain and Reinforced Concrete"
- 2 IS: 800: 1984 "Code of Practice for General Construction in Steel"
- 3 IS 875 (Part 2): 1987 "Design loads (other than earthquake) for buildings and structures"
Part 2 Imposed Loads
- 4 IS 875 (Part 3): 1987 "Design loads (other than earthquake) for buildings and structures"
Part 3 Wind Loads
- 5 IS: 883: 1966 "Code of Practice for Design of Structural Timber in Building"
- 6 IS: 1904: 1987 "Code of Practice for Structural Safety of Buildings: Foundation"
- 7 IS1905: 1987 "Code of Practice for Structural Safety of Buildings: Masonry Walls"

Seismic Safety

- 1 IS: 1893-2002 "Criteria for Earthquake Resistant Design of Structures (Fifth Revision)"
- 2 IS:13920-1993 "Ductile Detailing of Reinforced Concrete Structures subjected to Seismic Forces - Code of Practice".
- 3 IS:4326-1993 "Earthquake Resistant Design and Construction of Buildings - Code of Practice (Second Revision)"
- 4 IS:13828-1993 "Improving Earthquake Resistance of Low Strength Masonry Buildings - Guidelines"
- 5 IS:13827-1993 "Improving Earthquake Resistance of Earthen Buildings - Guidelines"
- 6 IS:13935-1993 "Repair and Seismic Strengthening of Buildings - Guidelines"
- 7 "Guidelines for Improving Earthquake Resistance of Buildings", by Expert Group, Government of India, Ministry of Urban Affairs & Employment, published by Building Materials and Technology Promotion Council, 1998.
- 8 In pursuance of the above, a certificate as indicated in Form 2A shall be submitted along with building plans/ drawings and other building information schedule annexed thereto.

Cyclone/ Windstorms:

- 1 IS 875 (3): 1987 "Code of Practice for Design Loads (other than Earthquake) for Buildings and Structures, Part 3, Wind Loads"
- 2 "Guidelines (based on IS 875 (3): 1987) for Improving the Cyclonic Resistance of Low-rise Houses and Other Building", by Expert Group, Government of India, Ministry of Urban Affairs & Employment, published by Building Materials and Technology Promotion Council,1998.

Note: Wherever an Indian Standard including those referred to in the National Building Code or the National Building Code is referred, the latest revision of the same shall be followed except specific criteria, if any, mentioned above against that Code. All Standards applicable as amended from time to time by Competent Authority.

16.7.2 Structural Inspection Report

A Structural Inspection Report (SIR) shall be prepared for all buildings specified in Schedule No. 10 and submitted as specified in Form No. 26.

16.8 Structural Safety of Display Structure

Every display structure such as billboard / hoarding shall be designed to ensure safety and shall be installed in compliance with the National Building Code.

17 Environmental Management / Sustainability

17.1 Minimum Distance from Water Body and Water Course

- 1 Minimum clearance of 15 m shall be provided between the boundary of the bank of a river where there is no embankment and any development work or part thereof (*Refer Figure No. 17.1*).

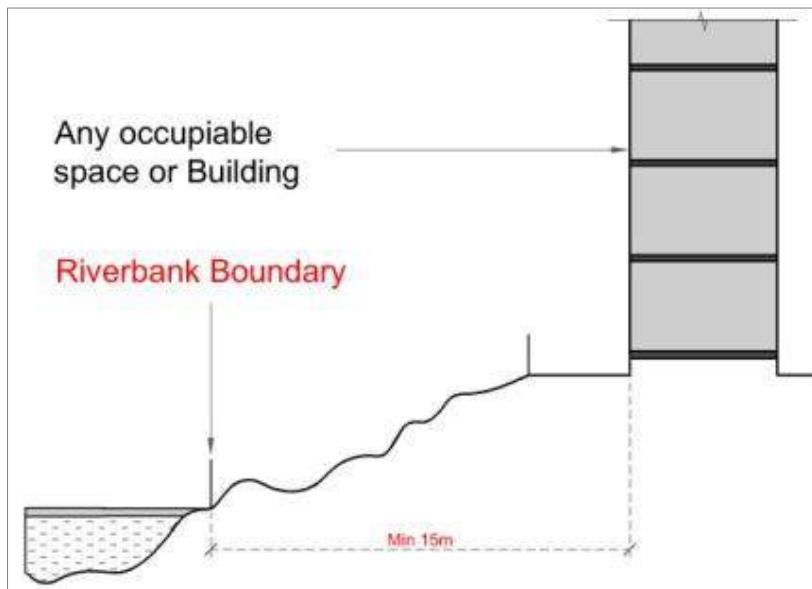


Figure No. 17.1: Minimum Distance of Water Body and Water Course from Riverbank Boundary

- 2 Minimum clearance of 10 m to be provided between the embankment of a river and any building or part thereof or any other clearance as may be prescribed under any other general or specific orders of Government and Competent Authority whichever is more (*Refer Figure No. 17.2*).

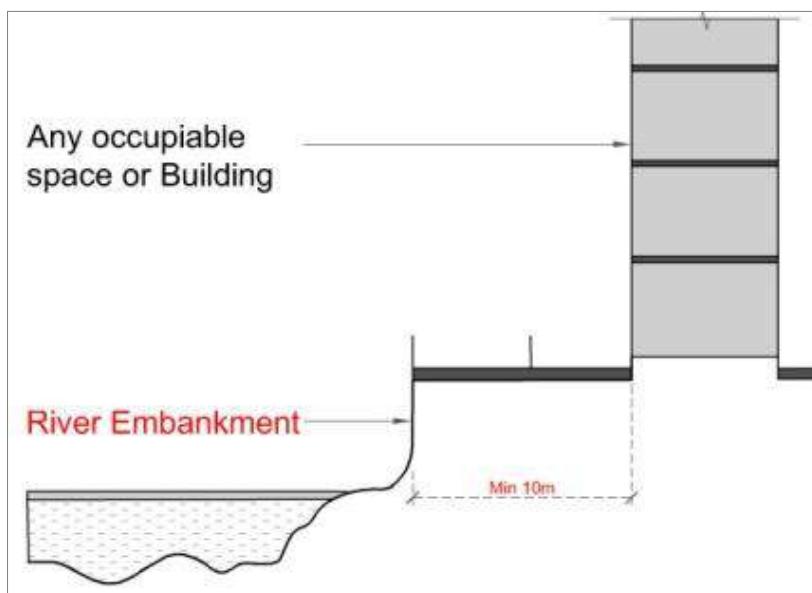


Figure No. 17.2: Minimum Distance of Water Body and Water Course from River Embankment

- 3 Minimum clearances of 6 m shall be provided between the boundary of any other waterbody / water course such as lake, talav, pond, canal, nala, kotar (perineal / non perineal), and any building or part thereof (*Refer Figure No. 17.3*).

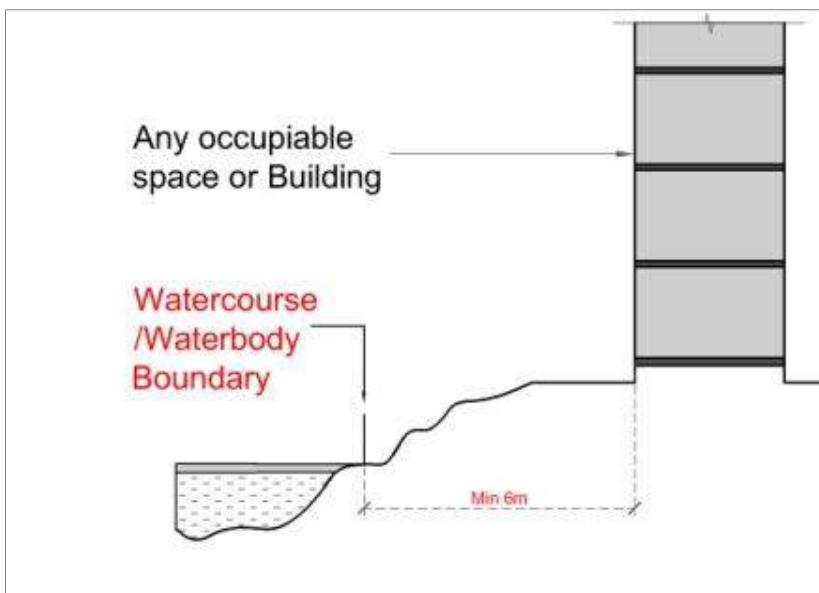


Figure No. 17.3: Minimum Distance of Water Body and Water Course from Watercourse / Water Boundary

- 4 Where a water course passes through a low-lying land without any well-defined bank, the applicant may be permitted by the Competent Authority to restrict or re-direct the water course to an alignment and cross-section determined by the Competent Authority.

17.2 Rainwater Management

17.2.1 Rainwater Disposal

- 1 The roof (terrace) of a building and the remaining area of the building unit shall be provided with an effective rainwater drainage system so as to ensure that the rainwater is not discharged into adjacent building units and no dampness is caused in any walls or foundation of adjacent buildings.
- 2 Rainwater pipes shall be affixed to the outside of the walls of the building or in recesses or formed in such walls or in such other manner as may be approved by the Competent Authority.
- 3 No roof or terrace abutting on a public street shall be constructed without providing sufficient number of down take pipes and such pipes shall be so fixed as to discharge the rainwater at a level not higher than 0.6 m above the street level.
- 4 The manner of channelling rainwater discharge from a building unit to a public storm water drain, if available, shall be determined by the Competent Authority.

17.2.2 Rainwater Harvesting

Rainwater harvesting refers to collecting / capturing the runoff from the roofs / terraces and open areas of the building unit for 1) storing it for future use, and 2) using it to recharge the underground water aquifers.

1 Rainwater Storage

Rainwater storage is mandatory for all building units having an area of 100 sq m and above. Rainwater storage tank of adequate capacity shall be constructed in marginal open space such that rainwater from the roof and plot drains into it. The water may be used for household uses such as washing, cleaning, and gardening.

2 Ground Water Recharge

Ground water recharge is mandatory for all building units having an area above 100 sq m. It shall be provided for as follows:

- a) For building units / plots having area 100 sq m and above and up to 500 sq m
Percolation pit or bore recharge shall be provided in the marginal space around the building. Such pits shall be filled with small pebbles, brick jelly or river sand and covered with perforated concrete slabs (*Refer Figure No. 17.4*).

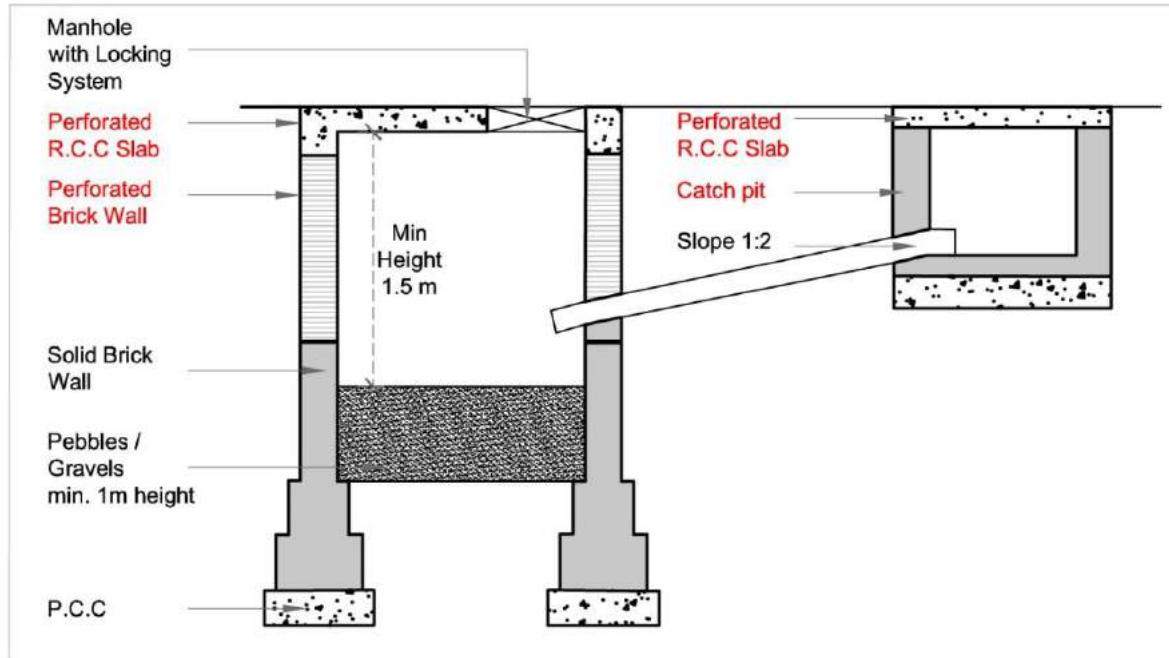


Figure No. 17.4: Percolation Pit or Bore Recharge

- b) For building units having area above 500 sq m and up to 1500 sq m:
Percolating well with rainwater harvesting system shall be provided (*Refer Figure No. 17.5-Left Image*) (up to first ground aquifer).
- c) For building units having area above 1500 sq m and up to 4000 sq m
Percolating well with rainwater harvesting system shall be provided (*Refer Figure No. 17.5-Right Image*) (up to second ground aquifer).

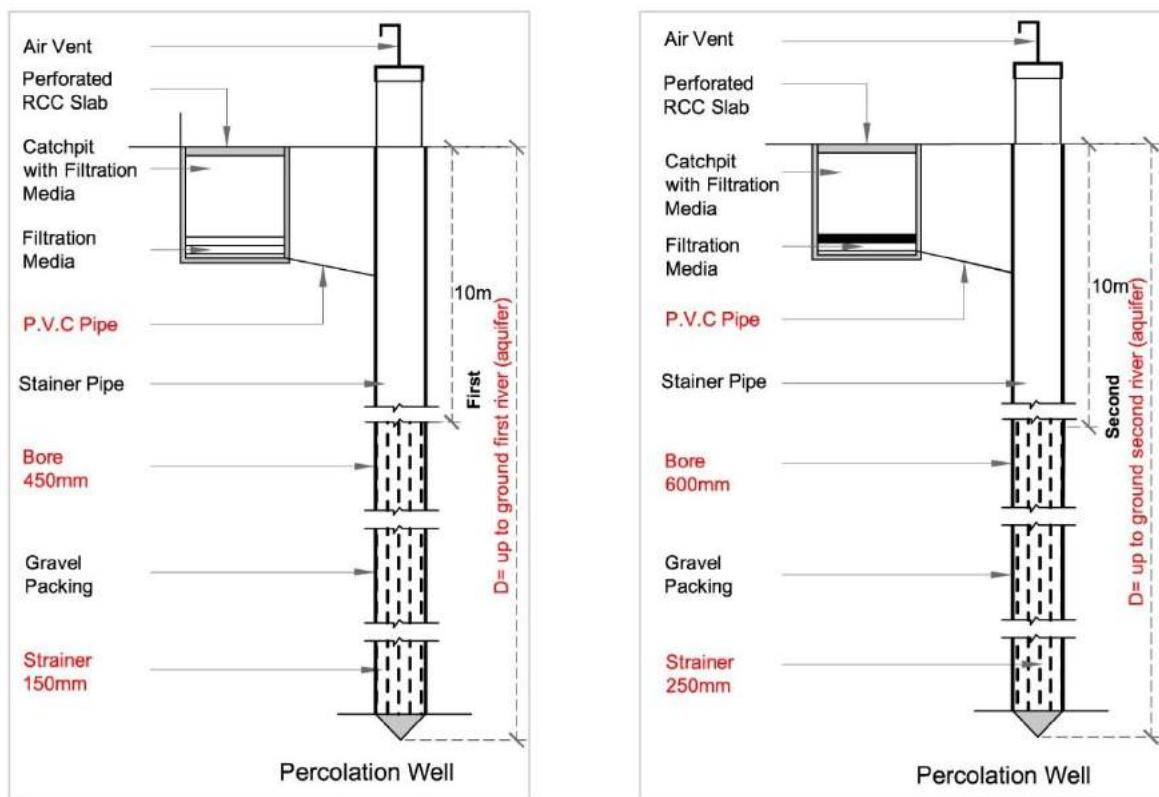


Figure No. 17.5: Percolation Well with Rainwater Harvesting System upto Ground First River (Left) and upto Ground Second River (Right)

- d) For buildings with building unit area above 4000 sq m
 One percolating well shall be provided as per Rule No. 17.2.2(c) for every 4000 sq m land area. As an alternative to providing multiple percolating wells, a water retention pond with minimum capacity of 300,000 litres with a percolating well for every five percolating wells or part thereof shall be permitted.

17.2.3 Open Spaces within Layouts

All open spaces / common plots that is provided must be provided with ground water recharge wells. The gradients must be such that the runoff from the layout leads towards these.

17.2.4 Public Open Spaces

All public parks, gardens, water bodies must be provided with ground water recharge wells.

17.3 Solid Waste Management

All buildings shall provide facilities for solid waste management with segregation of dry and wet waste at source. Standards and specifications of facilities shall conform to the following requirements:

17.3.1 Solid Waste Bin for Residential Use

- 1 Separate collection bins for dry and wet waste shall be provided in the premises of every residential building which shall be placed at a location where they can be easily picked by waste collection vehicle of the local authorities.
- 2 The size of the bin container shall be calculated at the rate of 10 liters capacity per dwelling unit with a maximum size of bin of 80 liters. The numbers of bins shall be calculated on the basis of total number of dwelling units / tenements.

17.3.2 Solid Waste Bin for Non-Residential Use

- 1 Separate collection bins for dry and wet waste shall be provided in the premises of every non-residential building which shall be placed at a location where they can be easily picked by waste collection vehicle of the local authorities.
- 2 The size of the bin container shall be calculated at the rate of 20 liters capacity per 100 sq m of floor area with a maximum size of bin of 80 liters.
- 3 For hospitals, hotels and restaurant, disposal of solid waste shall be carried out as per the applicable rules and byelaws made by any authority.
- 4 For clubs, community halls and party plots, garbage containers for dry and wet waste shall be provided as per the rules and bye laws of the local authority. In absence of any such direction, the bins shall be of such size and placed as such location as may be decided by the competent authority from time to time.

17.4 Grey Water Recycling

17.4.1 Applicability

Any owner / developer shall make provision for reuse of recycled water when applying for approval for -

- 1 new construction of development with 100 dwelling units or more.
- 2 new set of buildings for categories with total built up area mentioned in Table No.17.1 below:

Table No.17.1: Reuse of Recycled Water

No.	Building Use	Built up Area (sq m)
(1)	(2)	(3)
1	Health 1, 2, 3 and 4	More than 5,000
2	Hospitality 1, 2 and 3	
3	Hostels for Schools, Colleges, Training Centres etc	
4	Community Centre, Banquet Halls, and similar uses	
5	Mercantile 1, 2 and 3	More than 10,000
6	All hazardous, water-polluting, chemical industries	

17.4.2 Provisions of Recycling System

The applicant shall along with his application submit the designs, plans, calculations, and the references used for the calculations etc. to provide the system to recycle the grey water. Such system shall include the provisions to facilitate the following:

- 1 Separate plumbing/collection systems for collecting wastewater from toilets/WCs and wastewater from bathrooms & kitchens. Wastewater from WCs shall be let into the sewerage system / septic tanks. Wastewater / grey water from bathrooms and kitchens shall be treated within the premises and recycled – used for non-potable uses such as maintaining gardens, irrigation, vehicle washing, water closets, ground water recharge etc.
- 2 The grey water will be taken to a storage tank which may be provided in the marginal open space. Next to it a grey water treatment plant shall be provided / installed to enable treatment of the grey water. The treatment facility shall not constitute a nuisance of foul gases or cause public hazard or not comply with any other Rules.
- 3 Treated grey water shall be pumped and stored into a separate tank on the roof from where it may be supplied to WCs, garden taps, common taps for car washing, cleaning premises etc. The down take pipes for the recycled water shall be distinguished by purple-coloured pipes.
- 4 It shall be ensured that there is no connection between the potable water plumbing system and recycled water plumbing system to avoid contamination.
- 5 The treated water quality shall conform to standards of non-potable water. The recycled water shall be tested once in six months and results shall be made available to Competent Authority whenever demanded.

- 6 To enable use of treated grey water in WCs, it shall be mandatory to provide double button cistern (dual flush tank.).
- 7 Arrangements for diverting excess grey water to the sewerage system of the local authority / septic tanks shall also be provided.
- 8 Arrangements for diverting the excess treated grey water into the storm water system of the local authority shall be made and treated grey water may be diverted into this, provided it is on accepted quality as mentioned in Rules of Competent Authority.

17.4.3 Quality of Water and Treatment

- 1 The water generated after treatment should be safe for its use for flushing toilets, gardening etc.
- 2 The company or the agency engaged for installation of system for recycling of wastewater shall preferably confirm ISO:14000.
- 3 Water quality from the Grey Water Recycling plants shall be as approved by the Pollution Control Board.
- 4 Provision may be made for checking the quality of recycled water with water testing laboratory with Municipal Council / Pollution Control Board / Competent Authority.
- 5 The testing of wastes and the submission of the results shall be done in a manner in accordance with the terms and conditions prescribed by Pollution Control Board / Competent authority.

17.4.4 General Provisions

- 1 Mandatory disclosure regarding changes:
An occupier of premises shall inform the Competent Authority of any change in the quality, nature or quality of the wastes discharged from his / her plant or premises and / or the manner of their discharge of water, immediately, if the change is likely to cause discharge of water in variation or violation of license under these Rules.
- 2 Corrective action:
In the event it is found if any person is violating the provisions of these Rules, the Competent Authority or Pollution Control Board shall issue notice, and after inquiry and personal hearing, take necessary corrective action.
- 3 Dispute Resolution:
All the disputes arising in the enforcement of these Rules shall be referred to Competent Authority who in turn will resolve the disputes in advice with his authorized technical officer or any experts and intimate to the occupier / owner/ developer. The decision of the Competent Authority will be final and binding on the occupier.
- 4 Authorized Laboratories:
List of these shall be authorized by Pollution Control board or the Municipal Council.

17.4.5 Enforcement of Rules

- 1 In case of proposed / intending / under redevelopment properties, the occupier / developer / owner will submit an application to the Competent Authority with details of proposed grey water reuse system along with the application for demand of water permission to connect the grey water / sewage to local government sewerage system. Before the grant of final Occupancy Certificate, the developer shall have to produce permission to connect his sewerage system to sewerage network of the city
- 2 Conditional Waste Discharge Permission – waste discharges of the conditional type of plant will be allowed, on the issue of a conditional permission, provided the conditional type of plant has recycling and reuse of water facility and not exceeding limits as per Pollution Control Board norms.

17.5 Tree Plantation

Tree plantation to be provided as per following:

- 1 Building unit / plot having area of more than 100 sq m shall be provided with minimum four trees and further for every 200 sq m area or part thereof, upto 500 sq m of area, minimum four

trees, and beyond that for every 200 sq m area or part thereof minimum five trees shall be provided.

- 2 The trees shall preferably be shade giving and from the species listed in Schedule No. 12.
- 3 The requirement of trees shall be reduced on the basis of the number of grown existing trees that are conserved and not affected by the proposed development.
- 4 Trees shall be planted on site and guarded by the tree guards and shall be maintained properly.
- 5 Trees shall be planted without causing obstruction to the easy movement of fire fighting vehicles in case of fire emergency.
- 6 A fees for tree plantation are listed in Schedule No. 5A while applying for any development permission.
- 7 Competent Authority may consult Forest Department for tree typology, plantation, and maintenance, etc. if required.

17.6 Solar Energy Systems

Solar energy system provisions shall be made for meeting the requirements of hot water and electricity generation.

17.6.1 Solar Water Heating System

All buildings in the following categories of uses shall provide solar assisted water heating systems:

Table No.17.2: Building Use Categories and Built-up Area for Provision of Solar Water Heating

No.	Building Use	Built-up Area
(1)	(2)	(3)
1	Bedded Hospitals and Nursing Homes	Irrespective to built up area.
2	Hospitality: Hotels, Lodges, Guest houses	
3	Hostels for Schools, Colleges, Training Centres	More than 1000 sq m
4	Community Centre, Banquet Halls, and similar uses	
5	Residential – detached and semi-detached dwelling units	More than 200 sq m of individual dwelling unit area

17.6.2 Roof Top Solar Energy Installations and Generation

All buildings in the following categories of uses shall provide roof top solar energy installations and generation:

Table No 17.3: Norms for Roof Top Solar PV Installation and Generation

No.	Category of building/ area	Area Standards	Generation Requirement*	Solar Panel Coverage
1	Dwelling 1 & 2	Plot Size of 500 sq m and above	Minimum 3 KWp	Maximum 70% of the roof area**
2	Dwelling 3	All proposals	Lighting and Ventilation of Staircase, Driveways, Parking, Common Corridors, Lift lobby, Setback areas and roof should be covered through Solar energy	Minimum 30% of the roof area should be utilized for solar energy
3	Education 1, 2 & 3 Public Office Health 1, 2, 3 & 4 Industrial 1, 2, & 3 Mercantile 1, 2 & 3 Recreational 1 & 2	Plot Size of 1000 sq m and above And Rooftop shadow free area greater than 50 sq m	All the common areas Lighting and Ventilation of Staircase, Driveways, Parking, Common Corridors, Lift lobby, Setback areas and roof should be covered through	Minimum 30% of the roof area should be utilized for solar energy

No.	Category of building/ area	Area Standards	Generation Requirement*	Solar Panel Coverage
			Solar energy	

*Area provisions on roof top shall be @12 sq m per 1KWP, as suggested by Ministry of New and Renewable Energy (Solar Rooftop System).

**“available roof area” = 70 % of the total roof size, considering 30 % area reserved for residents’ amenities.

17.7 Energy Efficient Buildings

Any owner or developer, who constructs energy efficient buildings and gets a certificate indicating the rating, from GRIHA (Green Rating for Integrated Habitat Assessment) / IGBC (Indian Green Building Council) or any other Government recognised Institute, shall be eligible for an incentive. Based on the rating certificate, the Competent Authority may offer 5% discount in the rate of chargeable FSI for the energy efficient buildings / Green Buildings on the total payable amount.

The owner shall have to apply prior to commencement of the project to GRIHA / IGBC for the rating certificate and registration. This shall be indicated in the development permission application.

17.8 Energy Conservation Code Compliant Buildings

Building and Building complexes which are required to follow Dadra and Nagar Haveli and Daman and Diu Energy Conservation Building Code Rules shall have to follow the same as and when the same is finally notified. They shall also be required to produce the certificate of Empanelled Energy Auditor—as and when the same are empanelled and available—in such form and manner as may be stated in the finalized Energy Conservation Building Code Rules at the time of grant of Occupancy Certificate.

17.9 Environment Impact Assessment

No development permission shall be given to the building and construction projects, townships and area development project until getting Environment Clearance from SEIAA (State Level Environment Impact Assessment Authority) as required under the Environmental Impact Assessment Notification, 2006 as amended from time to time.

18 Pollution Control

18.1 Air Pollution

All buildings shall conform to provisions of Air (Prevention and Control of Pollution) Act, 1981, amended from time to time.

18.2 Water Pollution

All buildings shall conform to provisions of Water (Prevention and Control of Pollution) Act, 1974, amended from time to time.

18.3 Noise Pollution

All buildings shall maintain ambient air quality standards in respect of noise, as prescribed in the Noise Pollution (Regulation and Control) Rules, 2000, amended from time to time.

18.4 Industrial Pollution

No industrial effluent shall be disposed or exposed so as to cause nuisance and endanger to public health and shall not be disposed in a water body of any kind.

Without prejudice to the generality of the above provisions, the Competent Authority may stipulate certain conditions or measures to control the air borne emissions and liquid effluents from industrial units. These measures shall be stipulated as conditions of the building permission.

Any industry which emits liquid and gaseous effluents shall not be allowed to emit such effluent unless they are purified and rendered harmless from the public health point of view by provision of purification plants, as may be prescribed by the Competent Authority and / or the Pollution Control Board. And if any industry starts emitting effluents in future, then it shall be a violation of Development Permission.

19 Maintenance and Upgradation

19.1 Maintenance of Buildings

19.1.1 Responsibility for Maintenance of Buildings

It shall be the responsibility of the owner of a building to ensure that the building is kept in good state of repair, such that its structural stability is not compromised.

19.1.2 Periodic Inspection and Maintenance Certificate

The intervals for maintenance and inspection for different types of buildings shall be as per Schedule No. 10.

The inspection shall be carried out by a SEOR to ascertain that the building's structural stability has not been compromised due to lack of adequate maintenance along with a Structural Inspection Report.

It shall be the responsibility of the owner to submit the Structural Inspection Report to the Competent Authority no later than one month after the date on which inspection is due.

19.2 Maintenance of Lifts and Escalators

19.2.1 Responsibility for Maintenance of Lift and Escalators

It shall be the responsibility of the owner of a building to ensure that lifts and escalators in the building are kept in good working condition and state of repair, such that their use is safe.

19.2.2 Maintenance Protocol

- 1 Maintenance protocol for lifts and escalators shall be as per following Indian Standards amended from time to time.:
 - a) IS: 1860 – 1980 Code of Practice for Installation, Operation and Maintenance of Electric Passenger and Goods Lift
 - b) IS: 6620 – 1972 Code of Practice for Installation, Operation and Maintenance of Electric Service Lifts; and
 - c) IS: 4591 – 1968 Code of Practice for Installation and Maintenance of Escalators.
- 2 The lift installation should receive regular cleaning, lubrication adjustment and adequate servicing by authorized person / firm at such intervals as the type of equipment and frequency of service demand.
- 3 In order that the lift installation is maintained at all times in a safe condition, a proper maintenance schedule shall be drawn up in consultation with the lift manufacturer and maintenance firm / person and strictly adhered to.
- 4 A logbook to record all items relating to general servicing and inspection shall be maintained.
- 5 The electrical circuit diagram of the lift with the sequence of operation of different components and parts shall be kept readily available for reference by persons / firm responsible for the maintenance and replacement, where necessary, to the satisfaction of the Competent Authority.
- 6 Any accident arising out of operation or maintenance of the lifts shall be duly reported to the Competent Authority.

19.3 Maintenance of Fire Prevention and Safety Provisions

It shall be the responsibility of the owner of a building to ensure that all the fire prevention and safety provisions in a building are kept in good working condition at all times.

The fire prevention and safety provisions shall include all the fixed fire protection systems, installations, fire extinguishers, first aid kits, fire lifts and escape stairs provided in the building.

19.3.1 Periodic Inspection and Maintenance Certificate

For all the buildings for which, Fire Protection Consultant on Record (FPCOR) is required, he shall inspect the building at intervals not more than 12 months to ascertain and certify to the Competent Authority that the building's fire safety has not been compromised due to lack of adequate maintenance.

20 Conformity to other Acts and Rules

20.1 Minimum Clearance from Trunk Infrastructure

In addition to the margins / setbacks from the building unit boundary as per these Rules, the following clearances are to be observed, as applicable.

20.1.1 Minimum Clearance from Electric Lines

For building units in the vicinity of electrical lines, clearances shall be provided between any building or part thereof and electrical lines, according to the following Table No.: 20.1 and Figure No. 20.1:

Table No. 20.1: Minimum clearances from Electric Lines

No.	KV of Electrical Line (x)	Minimum Clearance from Centre of Electrical Grid Line (d) in m
(1)	(2)	(3)
1	220	17.5 m
2	132	13.5 m
3	110	11 m
4	66	9 m
5	33	7.5 m
6	22	3 m
7	11	2.5 m

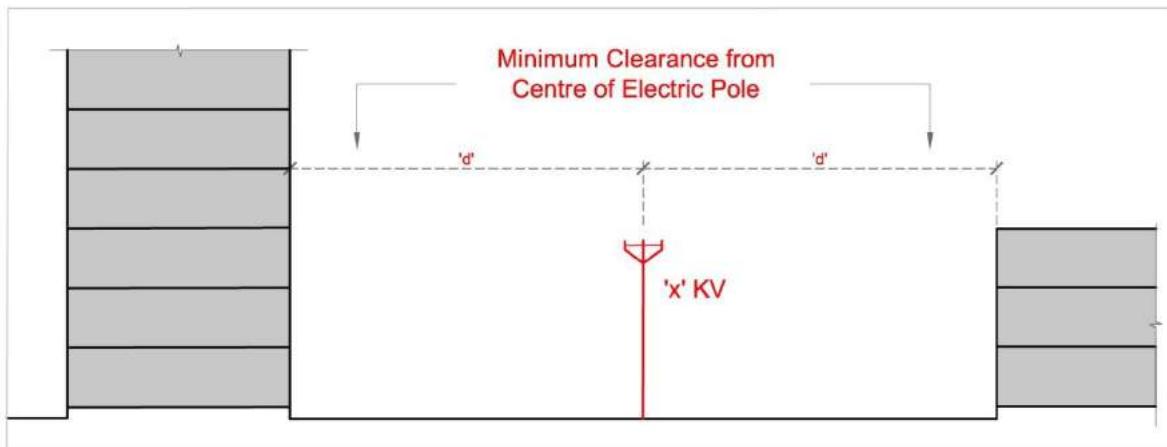


Figure No. 20.1: Minimum clearances from Electric Lines

20.1.2 Minimum Clearance from Petroleum Pipelines

Minimum clearances to be provided between any building or part thereof and petroleum pipelines shall be 12 m from the centre of pipeline.

20.1.3 Minimum Clearance from Oil Well

Clearances to be provided between any building or part thereof and oil well shall be in accordance with provisions of the Oil Mines Regulations, 1984, under the Mines Act, 1952.

20.1.4 Minimum Clearance from Water Body

Minimum clearance shall be provided as per Rule No.17.1

20.2 No Objection Certificates (NOC) / Approvals

Development permission granted to any applicant shall not preclude the necessity of obtaining any other NOC under any other law for the time being in force. The development shall be considered legal and authorised only when all such NOCs are available. Even if the Development Permission or Occupancy Certificate is granted for any building, the Competent Authority may—in its discretion—, proceed against the development as being non authorised if any of the NOCs is not obtained. While the list given below is by no means exhaustive, some of the most common NOCs required are mentioned as under.

20.2.1 NOC from Coast Guard Authority

For building units within Airport Funnel Area and Critical Area, construction for building shall be regulated as per NOC provided by the Coast Guard Authority.

20.2.2 NOC from Railways

For building unit within 30 m vicinity of railway boundary, construction of building shall be regulated as per NOC provided by the Railway Authorities.

20.2.3 NOC from Commissioner of Police / Collector

For building unit with uses for Assembly 1, 2, 3 &4, Religious, Hospitality 1, 2 & 3, and Fuelling Stations, construction of building shall be regulated as per NOC provided by Commissioner of Police / Collector if applicable.

20.2.4 NOC from Jail Authority

For building unit within 300 m vicinity of any jail, construction of building shall be regulated as per NOC provided by the Jail Authority.

20.2.5 NOC from ASI

Development in the vicinity of protected monuments under Ancient Monuments and Archaeological Sites and Remains Act (or AMASR Act), 1958 shall be regulated as per NOC provided by Archaeological Survey of India.

20.2.6 NOC from UT Administration

Development in the vicinity of protected monuments declared under The Goa, Daman and Diu Ancient Monuments and Archaeological Sites and Remains Act, 1978 shall be regulated as per NOC provided by UT Administration

20.2.7 NOC from Defence Establishment

Development in the vicinity of defence establishments, shall be subject to NOC from Station Commander Explosives Rules 1983 under Indian Explosives Act 1884.

20.2.8 Environmental Clearance

Notification of Requirement of Environmental Clearance of Projects, 1994 (MOEF), Environment Protection Act 1986 and Environment Protection Rules 1986.

20.2.9 NOC under CZMA

For building units within CRZ, construction for building shall be regulated as per approval provided by Coastal Zone Management Authority.

20.3 Conformity to Other Acts

The development must be in conformity to other acts, as applicable:

- 20.3.1 Factories Act 1948 and Factories Rules.
- 20.3.2 Gas Cylinders Rules, 1981.
- 20.3.3 Explosives Rules 1983 under Indian Explosives Act, 1884.
- 20.3.4 Manufacture, Storage, and Import of Hazardous Chemicals Rule, 1989

21 Quality Control and Inspection

21.1 Applicability

The quality control and inspection shall apply to all high-rise residential building and all non-residential buildings.

21.2 Inspection and Safety Certificate

The owner / developer / occupants and registered appointed Person on Record shall have to certify the inspection and safety report as per Schedule No. 3.

Schedules & Forms

Schedules:

No.	Schedules
1	Minimum Qualification, Experience and Document Requirements for being considered for Registering with the Competent Authority as Persons on Record
2	Procedures for Ascertaining Whether a Person on Record has failed in Discharging his Responsibilities and Penalties
3	Technical Audit Report
4	Buildings requiring Fire Protection Consultant on Record and Inspection by Fire Officer
5A	Fees and Charges for Grant of a Development Permission / Revised Development Permission / Revalidation of Development Permission
5B	Fees and Charges for Grant of Occupancy Certificate / Change of Occupancy Certificate
5C	Fees for Temporary Construction
5D	Penalties
6A	Drawings, Specifications and Documents to be Submitted with Application for Obtaining / Revising Development Permission for Building and for Sub- division & Amalgamation of Building Unit / Plot
6B	Drawings, Specifications and Documents to be Submitted with Application for Obtaining / Revising / Revalidating Development Permission for Brick Kiln, Mining and Quarrying
6C	Format for submission of Documents, Drawings and Specifications
6D	Drawing, Specification and Documents to be Submitted with Application for Obtaining Permission for Temporary Construction
7A	Information to be Displayed on Site
7B	Documents and Drawings to be Maintained on Site During Period of Construction
7C	Stages of Construction Work for which Notice for Progress of Construction to be Submitted to the Competent Authority
8	Inspection Requirements
9	Documents and Drawings to be Submitted along with the Application for Occupancy Certificate
10	Schedule for Maintenance and Inspection for Structural Stability and Fire Safety
11	Documents and Fees Required with Application for Advertising Display & Communication Infrastructures
12	List of Recommended Trees
13	Standalone Multi-Level Public Parking

Forms:

No.	Forms
1	Application for Registering as Person on Record
2	Certificate of Undertaking for Persons on Record
3	Notice to the Competent Authority of Non-Compliance of Building to Sanctioned Design and Specifications
4	Notice to the Competent Authority of Discontinuation as Person on Record
5	Notice of Cancellation of Development Permission
6	Notice to Stop Unauthorized Development
7	Direct Development Permission
8	Application for Registering Issue of Direct Development Permission
9	Registration or Cancellation of Direct Development Permission / Revised Direct Development Permission / Revalidated Direct Development Permission
10A	Application for Development Permission for Building / Layout / Subdivision / Amalgamation
10B	Application for Development Permission for Brick Kiln, Mining and Quarrying
10C	Application for Development Permission for Temporary Construction
11A	Area Statement for Buildings
11B	Area Statement for Subdivision / Amalgamation / Layout of Land
11C	Area Statement for Temporary Construction
12	Grant / Refusal of Development Permission / Revised Development Permission / Revalidated Development Permission
13	Application for Revised Direct Development Permission
14	Application for Registering Issue of Revised Direct Development Permission
15	Application for Revising Development Permission for Building / Layout / Sub – division / Amalgamation
16	Application for Revalidating Direct Development Permission / Revised Direct Development Permission
17	Application for Registering Revalidated Direct Development Permission / Revised Direct Development Permission
18	Application for Revalidating a Lapsed / Suspended Development Permission / Revised Development Permission
19	Notice for Commencement of Construction
20	Notice for Progress of Construction
21	Notice for Completion and Compliance Certification
22A	Application for Occupancy Certificate
22B	Application for Occupancy of Temporary Construction
23	Grant / Refusal of Occupancy Certificate
24	Cancellation of Occupancy Certificate
25	Change in the Sanctioned Occupancy of Building / Development
26	Structural Inspection Report
27	Fire Safety Certificate

Tables

Table No. S1-1	SEOR Qualification and Experience
Table No. S1-2	COWOR Qualification and Experience
Table No. S1-3	SOR Qualification and Experience
Table No. S2-1	Penalties for Person on Record
Table No. S3-1	Details of Technical Audit Report
Table No. S4-1	(Deleted)
Table No. S5A-1	Scrutiny Fees for Buildings
Table No. S5A-2	Fees for Subdivision/ Amalgamation / Layout of Building Unit / Plot
Table No. S5A-3	Charges for Change of Land Use
Table No. S5A-4	Development Charges for Buildings
Table No. S5A-5	Charges for Stacking Building Material on Public Roads
Table No. S5B-1	Fees for Occupancy Certificate
Table No. S5B-2	Fees for Change of Occupancy
Table No. S5C-1	Fees for Applying for Temporary Construction
Table No. S5D-1	Penalties for Unauthorized Construction and Occupancy
Table No. S5D-2	Penalties Applicable for Regularizing Unauthorised Construction for Residential Use
Table No. S6C-1	Drawing Sizes
Table No. S6C-2	Colours and Notations for Drawings and Documents
Table No. S8A-1	Principles of Risk Categorization (Definition of Consequence Class) and Inspection Requirements
Table No. S12-1	List of Trees
Table No. F10A-1	Information Sheet with Application for Development Permission for Building / Layout / Amalgamation/ Subdivision
Table No. F10B-1	Application for Development Permission for Brick Kiln, Mining and Quarrying
Table No. F10C-1	Information Sheet with Application for Development Permission for Temporary Construction
Table No. F11A-1	Area Statement for Buildings
Table No. F11B-1	Area Statement for Subdivision / Amalgamation / Layout of Land
Table No. F11C-1	Area Statement for Temporary Construction
Table No. F26-1	Details of Structural Inspection Report (Part 1)
Table No. F26-2	Details of Structural Inspection Report (Part 2)
Table No. F26-3	Details of Structural Inspection Report (Part 3)

Schedule

Schedule No. 1

Minimum Qualification, Experience and Document Requirements for being considered for Registering with the Competent Authority as Persons on Record

(Refer Rule No. 3.2.1, 3.2.2, 3.2.3)

The procedure for registering persons with the Competent Authority is given in Rule No. 3.2.1. The registration shall be renewed annually. The following are the minimum qualifications and experience requirements for all persons to be considered for registering with the Competent Authority as Persons on Record, in order to determine their competence to fulfil their responsibilities as specified in Rule No. 3.2.2.

1 Architect on Record (AOR)

A Qualification and Experience:

Minimum qualifications and experience requirements for architects, for being considered for registration with the Competent Authority, as Architects on Record shall be as follows:

- (a) Architect must hold a valid registration with the Council of Architecture, India, issued as per the provisions of the Architects Act, 1972 or Bachelor's Degree in Architecture / Diploma in Architecture Equivalent to B. Arch; and
- (b) Architect must have a minimum of two years of experience in practice of architecture.

B Scope Work and Competence:

- (a) Preparation & planning of all types of layouts; submission of drawings; submission of certificate of supervision, progress reports and submission of certificate of completion for all types of buildings in accordance with the provisions of these building Rules.
- (b) Supervision & execution of construction work as per specifications & drawings prepared by authorised registered structural designer & engineer.

2 Civil Engineer on Record (EOR)

A Qualification and Experience:

Minimum qualifications and experience requirements for engineers, for being considered for registration with the Competent Authority, as Engineers on Record shall be as follows:

- (a) Master's Degree in Civil Engineering, a bachelor's degree in Civil Engineering or Building construction or its equivalent qualification recognized by the All-India Board of Technical Education, or, a Diploma in Civil Engineering or Diploma in Building Construction recognized by State Board of Technical Examination of any State of India or Associate Membership (Civil Engineering) of the Institute of Engineers, India (AMIE), and
- (b) Engineer having bachelor's degree, or its equivalent qualification must have minimum of two years of experience and Diploma holder/or AMIE must have minimum of five years of experience in professional work.

B Scope Work and Competence:

- (a) Preparation & planning of all types of layouts except special structures / special buildings as per these Rules; submission of drawings and submission of certificate of supervision & completion for all types of buildings. A person having qualification of a Diploma in Civil Engineering shall be permitted to undertake low rise buildings only.

- (b) Supervision & execution of construction work as per specifications & drawings prepared by authorized registered structural designer.
- (c) He / she can prepare & submit structural details & calculations for buildings of load bearing structures.

3 Structural Engineer on Record (SEOR)

A Qualification and Experience:

Minimum qualifications and experience requirements for structural engineers, for being considered for registration with the Competent Authority as Structural Engineer on Record shall be as follows:

Table No. S1 – 1: SEOR Qualifications and Experience

Grade	Scope of Work	Qualification	Minimum Years of Experience*
SEOR 1	1 Building with height above 25 m 2 Total proposed built-up area for a building unit is more than 10000 sqm 3 Mercantile - 2, 3; Educational - 1, 2, 3; Assembly - 1, 2, 3; Health - 2, 3, 4; Hospitality - 2, 3, Utility; Public Office; Special Buildings	Category 1	10
		Category 2	3
SEOR 2	1 Building with height above 15 m /17.5 m (with Stilt) and up to 25 m 2 Total proposed built-up area for a building unit is more than 2000 sqm and up to 10000 sqm	Category 1	5
		Category 2	2
SEOR 3	1 Building with height up to 15 m /17.5 m (with Stilt). 2 Total proposed built-up area for building unit up to 2000 sqm	Category 1	2
		Category 2	-----

Notes:

- 1 *Minimum years of experience of preparing structural design, detailed drawings, and specifications after attaining the degree/ Diploma.
- 2 Category 1: B.E/ B. Tech Civil or equivalent degree recognized by the AICTE.
- 3 Category 2: M.E/ M. Tech Civil, or a Ph. D in Structural Engineering.
- 4 Person holding Higher grade license can also work for Lower Grade Work

4 Clerk of Works on Record (COWOR)

A Qualification and Experience:

Minimum qualifications and experience requirements for construction engineers, for being considered for registration with the Competent Authority as Clerk of Works on Record qualified for certifying the construction of buildings shall be as follows:

Table No. S1 – 2: COWOR Qualifications and Experience

Grade	Scope of Work	Qualification	Minimum Years of Experience*
COWOR 1	1 Building with height above 25 m 2 Total proposed built-up area for a building unit is	Category 1	3
		Category 2	5

Grade	Scope of Work	Qualification	Minimum Years of Experience*
	more than 10000 sqm. 3 Mercantile - 2, 3; Educational -1, 2, 3; Assembly - 1, 2, 3; Health – 2, 3, 4; Hospitality – 2, 3; Utility; Public Office; Special Buildings	Category 3	3
COWOR 2	1 Building with height above 15 m /17.5 m (with Stilt) and up to 25 m.	Category 1	2
	2 Total proposed built-up area for a building unit is more than 2000 sqm and up to 10000 sqm.	Category 2	4
		Category 3	2
COWOR 3	1 Building with height up to 15 m /17.5 m (with Stilt).	Category 1	1
	2 Total proposed built-up area for building-unit up to 2000 sqm	Category 2	2
		Category 3	1

Notes:

- *Minimum years of experience (after attaining the degree/ Diploma) in Construction work at a responsible position in any organization
- Category 1: A Degree in Civil Engineering / Architecture or Diploma in Architecture equivalent to degree Architecture, or its equivalent qualification recognized by All India Board of Technical Education
- Category 2: Diploma in Civil Engineering recognized by State Board of Technical Examinations of any State in India
- Category 3: Bachelor's Degree with specialized training in building in construction technology or Diploma in Building Construction Technology from a recognized institute.
- Person holding Higher grade license can also work for Lower Grade Work

5 Supervisor of Works on Record (SOR)

A Qualification and Experience:

Minimum qualifications and experience requirements for construction engineers, for being considered for registration with the Competent Authority as Supervisor of Works on Record qualified for certifying the construction of buildings shall be as follows:

Table No. S1 – 3: SOR Qualifications and Experience

Grade	Scope of Work	Qualification	Minimum Years of Experience*
SOR 1	1 Building with height above 25 m	Category 1	3
	2 Total proposed built-up area for a building unit is more than 10000 sqm	Category 2	5
	3 Mercantile - 2, 3; Educational -1, 2, 3; Assembly - 1, 2, 3; Health – 2, 3, 4; Hospitality – 2, 3; Utility; Public Office; Special Buildings	Category 3	3
SOR 2	1 Building with height above 15 m /17.5 m (with Stilt) m and up to 25 m	Category 1	2
	2 Total proposed built-up area for a building unit is more than 2000 sqm and up to 10000 sqm	Category 2	4
		Category 3	2
SOR 3	1 Building with height up to 15 m /17.5 m (with Stilt) m	Category 1	1
	2 Total proposed built-up area for building-unit up to 2000	Category 2	2

Grade	Scope of Work	Qualification	Minimum Years of Experience*
	sqm	Category 3	1
SOR 4	1 Building with height up to 10 m 2 Total proposed built-up area for building-unit up to 200 sq m	Category 1 Category 2	0 1

Note:

- 1 *Minimum years of experience (after attaining the degree/ Diploma) in Construction work at a responsible position in any organization
- 2 Category 1: A Degree in Civil Engineering / Architecture or Diploma in Architecture equivalent to degree Architecture, or its equivalent qualification recognized by All India Board of Technical Education
- 3 Category 2: Diploma in Civil Engineering recognized by State Board of Technical Examinations of any State in India
- 4 Category 3: Bachelor's Degree with specialized training in building in construction technology or Diploma in Building Construction Technology from a recognized institute.
- 5 Person holding Higher grade license can also work for Lower Grade Work

Schedule No. 2

Procedures for Ascertaining Whether a Person on Record has failed in Discharging his Responsibilities and Penalties

(Refer Rule No. 3.2.5)

- 1 Procedure for Ascertaining whether a Person on Record has failed to Discharge his Responsibility.

A four-member Professional Oversight Committee shall be established by the Union Territory / PDA to ascertain whether a Person on Record has failed to discharge his responsibilities.

The Professional Oversight Committee shall comprise of the following four members:

- 1 Chairman PDA
- 2 MS, PDA (respective)
- 3 Associate Town Planner of the PDA
- 4 Expert Architect / Engineer from the Private Sector

The Professional Oversight Committee shall undertake scrutiny of each case on an individual basis and shall provide at least one opportunity to the Person on Record under scrutiny to be heard. Its proceedings shall be recorded in writing.

The cost(s) incurred for conducting the scrutiny shall be borne by the PDA.

The Professional Oversight Committee shall ascertain whether the Professional on Record has failed in discharging his responsibilities and shall determine and administer penalties for the same.

2. Penalties for Person on Record for Failing to Discharge his Responsibilities

Table No. S2 – 1: Penalties for Person on Record

Violation of Reg. No.:	Financial penalty¹	Financial penalty¹	Financial penalty¹	Financial penalty¹ and delisting for 6 months	Delisting for 12 months and registration of complaint with professional body	Permanent delisting and prosecution¹
Rule Nos. 4.4: Person on Record undertake construction on plot without revalidating a Lapsed Development Permission or when a Development Permission has been cancelled		1 st offence (Rs. 10,000)	2 nd offence (Rs.15,000)	3 rd offence (Rs.20,000)	4 th offence (Rs.25,000)	5 th offence (Rs.30,000)
Rule No. 5.4: Negligence of Person on Record leading to structural failure of a building						1 st offence (Rs.50,000)
Rule Nos. 4.10.1, 4.12.1 and 4.14.1: Architect on Record fails to register the Issue of Direct Development Permission / Revision of Direct Development Permission / Revalidation of Direct Development Permission with the Commissioner within the stipulated period		1 st offence (Rs. 10,000)	2 nd offence (Rs.15,000)	3 rd offence (Rs.20,000)	4 th offence (Rs.25,000)	5 th offence (Rs.30,000)
Rule Nos. 4.10, 4.11, 4.12, 4.13, 4.14, 4.15, 4.16: Person on Record submits incomplete or inadequate drawings, document, and specifications along with application to register Issue of Direct Development Permission / Revision of Direct Development Permission / Revalidation of Direct Development Permission to the Commissioner		1 st offence (Rs. 10,000)	2 nd offence (Rs.15,000)	3 rd offence (Rs.20,000)	4 th offence (Rs.25,000)	5 th offence (Rs.30,000)
Rule Nos. 4.10, 4.11, 4.12, 4.13, 4.14, 4.15, 4.16: Person on Record intentionally and fraudulently misrepresents or hides material facts from the Commissioner in the application to register issue of or grant of Development Permission / Revised Development Permission / Revalidation of Development Permission				1 st offence (Rs. 15,000)	2 nd offence (Rs.25,000)	3 rd offence (Rs.35,000)
Rule No. 5.2: Construction Engineer on Record fail to display necessary information on the Notice Board at site	1 st offence (Rs. 10,000)	2 nd offence (Rs.15,000)	3 rd offence (Rs.20,000)	4 th offence (Rs.25,000)	5 th offence (Rs.30,000)	

¹ Prosecution under section 140 (y) and 141 of the Dadra and Nagar Haveli and Daman and Diu Town & Country Planning Act, 1974

Violation of Reg. No.:	Financial penalty¹	Financial penalty¹	Financial penalty¹	Financial penalty¹ and delisting for 6 months	Delisting for 12 months and registration of complaint with professional body	Permanent delisting and prosecution¹
Rule No. 5.3: Construction Engineer on Record fails to maintain necessary drawings and documents at site during Period of Construction	1 st offence (Rs. 10,000)	2 nd offence (Rs.15,000)	3 rd offence (Rs.20,000)	4 th offence (Rs.25,000)	5 th offence (Rs.30,000)	
Rule No. 5.4.1: Construction Engineer on Record stack, store or dispose building material on public space or street without obtaining Permit to Use Abutting Street for Construction	1 st offence (Rs. 10,000)	2 nd offence (Rs.15,000)	3 rd offence (Rs.20,000)	4 th offence (Rs.25,000)	5 th offence (Rs.30,000)	
Rule No. 5.4.2: Construction Engineer on Record does not provide barricading or provides inadequate barricading of the plot during period of construction	1 st offence (Rs. 10,000)	2 nd offence (Rs.15,000)	3 rd offence (Rs.20,000)	4 th offence (Rs.25,000)	5 th offence (Rs.30,000)	
Rule No. 5.4.3: Construction Engineer on Record causes or fails to prevent damage or inconvenience during construction	1 st offence (Rs. 10,000)	2 nd offence (Rs.15,000)	3 rd offence (Rs.20,000)	4 th offence (Rs.25,000)	5 th offence (Rs.30,000)	
Rule Nos. 5.5.1: Architect on Record or Construction Engineer on Record fail to notify the Commissioner before commencing construction on the plot within the stipulated period		1 st offence (Rs. 15,000)	2 nd offence (Rs.20,000)	3 rd offence (Rs.25,000)	4 th offence (Rs.30,000)	5 th offence (Rs.40,000)
Rule Nos. 5.5.3: Architect on Record and Construction Engineer on Record fail to notify the PDA of Progress of Construction, Compliance Certification and obtaining Permission to Proceed with Further Construction within the stipulated period		1 st offence (Rs. 15,000)	2 nd offence (Rs.20,000)	3 rd offence (Rs.25,000)	4 th offence (Rs.30,000)	5 th offence (Rs.40,000)
Rule No. 6.5.1 and 6.6.1: Person on Record submits incomplete or inadequate drawings, document, and specifications to the PDA along with application to register Issue or grant of Development Use Permission or Permission to Change Sanctioned Use of Development		1 st offence (Rs. 10,000)	2 nd offence (Rs.15,000)	3 rd offence (Rs.20,000)	4 th offence (Rs.25,000)	5 th offence (Rs.30,000)
Rule Nos. 6.5 and 6.6: Person on Record intentionally and fraudulently misrepresents or hides material facts from the PDA in the application to register issue or grant of				1 st offence (Rs. 15,000)	2 nd offence (Rs.25,000)	3 rd offence (Rs.35,000)

Violation of Reg. No.:	Financial penalty¹	Financial penalty¹	Financial penalty¹	Financial penalty¹ and delisting for 6 months	Delisting for 12 months and registration of complaint with professional body	Permanent delisting and prosecution¹
Development Use Permission or Permission to Change Sanctioned Use of Development						
Rule Nos. 3.3.2: If there is any deviation from building sanction plan the AOR blacklisted for 10 years						1 st offence (Rs.50,000)
Rule Nos. 5.1.4: Fire Protection Consultant on Record (FPCOR) shall inspect the building at intervals not more than 12 months to ascertain and certify to competent authority that the building's fire safety has not been compromised due to lack of adequate maintenance. For not doing so penalties will be taken						1 st offence (Rs.1,00,000)

NOTES:

- 1 All financial penalties are to be decided by the Professional Oversight Committee of the PDA to ascertain whether a Person on Record has failed to discharge his responsibilities and to determine penalties for the same.
- 2 If the penalties imposed in the 1st offence are not complied with by the Person on Record within 1 month of the date of imposing the penalty, the penalty for 2nd offence shall apply and so forth.
- 3 If the penalties imposed in the 1st offence are not complied with by the Person on Record within 6 months of the date of imposing the penalty, the Person on Record shall be unregistered from the records of the PDA for 1 year and complaint filed with his professional body.

Schedule No. 3

Technical Audit Report

(Refer Rule No. 3.3)

Table No. S3 – 1: Details of Technical Audit Report

1	Design	Comments
1.1	Design / Drawings available?	Y/N
1.2	Design Category	
1.2.1	Type Design?	Y/N
1.2.2	Specific Design	Design to be collected to refer to Design Consultant /H.O.
1.3	Drawings prepared / checked by competent Authority?	Y/ N
1.3	Design Drawing/ Details	Y/ N
1.5	Structural details included	Y/ N
1.6	Earthquake/cyclone resistant features Included?	Y/ N
1.7	Design verified/vetted by Dept./Govt. approved agency/competent authority?	Y/N
1.8	Design changes approved by Dept./Govt. approved agency/competent authority	Y/N
2	Foundation	
2.0	Foundation used	Existing/ New
2.1	If existing foundation used	
2.1.1	Depth of foundation below ground	<50 cm @ 50-70/> 70cm
2.1.2	Type of masonry	Stone / Bricks / PCC Blocks
2.1.3	Thickness of masonry (above ground)	23cin /35 />35
2.1.4	Mortar used	Cement – Sand
2.1.5	Mix of cement mortar	As per NBC Indicate
2.1.6	Height up to Plinth	_____ m, as per GDCR Y/N
2.1.7	If stone masonry	
2.1.7.1	Through Stones	Yes / No. If Yes Adequate/Inadequate
2.1.7.2	Corner Stones	Yes / No. If Yes Adequate/Inadequate
2.2	If a new foundation used	
2.2.1	Depth of foundation below ground	<50/50-70/>70 cm
2.2.2	Type of masonry blocks	Stone / bricks / PCC
2.2.3	Thickness of Masonry above plinth -	23cm/35/>35cm
2.2.4	Mortar used	Cement-sand / lime / mud
2.2.5	Mix of cement mortar (1:4)/As Per NBC	Yes/No
2.2.6	Height up to plinth	_____ m, as per GDCR Y/N
2.2.7	If stone masonry	
2.2.7.1	Through Stones	Yes / No. If Yes Adequate/Inadequate
2.2.7.2	Comer Stones	Yes / No. If Yes Adequate/Inadequate
2.3	Vertical reinforcement in foundation	Yes / No
3	Walls	
3.1	Type of masonry	Stone/ Brick / PCC Blocks
3.2	Mortar used	Cement- Sand / Lime /Mud
3.3	Mix of cement mortar	1:4 /1:1.6/Leaner
3.4	Thickness of wall	>23cm/23cm/23cm
3.5	Mixing of mortar	OK /Not OK
3.6	Join property filled	OK /Not OK

	3.7	Wetting of bricks	Good / Medium / Poor
	3.8	Stone masonry	
	3.8.1	Through Stones	Yes/No
	3.8.2	Corner Stones	Yes / No
	3.9	Overall workmanship	Good / Medium / Poor
4	Roofing		
	4.1	Type of roof	Flat / Sloping
	4.2	If sloped	Morbid tiles / AC sheet / G.I. sheet
	4.3	Purlins	Angle - Material - Iron/ Timber/ NA
	4.4	Truss type	
	4.5	Anchorage with wall	Adequate / Inadequate /NA
5	Materials		Specifications must be conforming to NBC/Relevant IS Codes
	5.1	Cement	
	5.1.1	Source	Authorized Dealer / Market OPC/PPC/ PSC
	5.1.2	Type of cement	Grade (33 / 43 / 53)
	5.1.3	If OPC	OPC / PPC/ PSC
	5.2	Sand	
	5.2.1	Type of sand	Fine / Coarse
	5.2.2	Presence of deleterious materials	Mild / Moderate / High
	5.3	Coarse Aggregates	
	5.3.1	Type coarse Aggregates	Gravel / Crushed Stone
	5.3.2	Presence of deleterious material	Mild / Moderate / High
	5.4	P.C.C. Blocks (Applicable for onsite production)	
	5.4.1	Type of P.C.C. Blocks	Solid blocks / Hollow blocks
	5.4.2	Ratio of concrete in block	
	5.4.3	Interlocking feature	Yes / No
	5.4.4	Coarse aggregates used	Natural / Crushed stone
	5.5	Bricks Blocks, Stone etc.	
	5.5.1	Strength (field assessment)	Low / Medium / High
	5.5.2	Dimensional accuracy	Yes / No
	5.6	Concrete	
	5.6.1	Mix of concrete	(1:1 1/2:3)/ (1:2:4)/ Design Mix
	5.6.2	Batching	Weight batching/ Volume batching
	5.6.3	Compaction	Vibrators / Thappies and rods
	5.6.4	Workability	Low / Medium / High
	5.6.5	Availability of water	Sufficient / Insufficient
	5.6.6	Curing	Satisfactory/ unsatisfactory
	5.7	Reinforcing Steel	
	5.7.1	Type of Steel	Plain mild steel HYSD bars
	5.7.2	Source	Authorized Dealer /Market
	5.7.3	Whether IS Marked	Yes/No
	5.7.4	Conditions of bars	Clean / Corrugated
	5.7.5	Fixing of reinforcement as per drawing	Yes / No
	5.7.6	Suitable cover	Yes/No
	5.7.7	Spacing of bars	Regular / Irregular
	5.7.8	Overlaps as per specifications	Yes / No
	5.8	Form Work	Timber/ Play board /Steel
	5.8.1	Type of form work	Yes/No
	5.8.2	Use of mould oil	
	5.8.3	Leakage of cement slurry	Observed / Not
	5.9	Source	
	5.9.1	Cement	
	5.9.2	Sand	
	5.9.3	Coarse Agg.	

	5.9.4	Bricks	
	5.9.5	PCC Blocks	
6	Seismic Resistance Features for Masonry Structures		
	6.1	Provision of seismic band provided Adequate	Yes/No
	6.1.1	Plinth level	Yes/No
	6.1.2	Stilt level	Yes/No
	6.1.3	Lintel level	Yes/No
	6.1.4	Roof level (if applicable)	Yes/No
	6.2	If sloped roof, whether seismic bands are provided at	Yes/No
	6.2.1	Gable wall top	Yes/No
	6.2.2	Eaves level	Yes/No
	6.3	Provision of vertical street in masonry at	Yes/No
	6.3.1	Each corner	Yes/No
	6.3.2	Each T- junction	Yes/No
	6.3.3	Each door joint	Yes/No
	6.3.4	Around each window	Yes/No
	6.4	Openings	Yes/No
	6.4.1	Total width of openings (*-42% for double storey)	<50%/50*-60%/>60%
	6.4.2	Clearance from corner	Ok/ Not Ok
	6.4.3	Pier width between two opening	Ok/ Not Ok
7	Workmanship		
	<u>Specifications must be conforming to NBC/Relevant IS Codes</u>		

Name of AOR
 Registration No.:
 Address:
 Tel. No.:
 Signature:
 Date:

Name of EOR:
 Registration No.:
 Address:
 Tel No.:
 Signature:
 Date:

Name of SEOR
 Registration No.:
 Address:
 Tel. No.:
 Signature:
 Date:

Name of COWOR:
 Registration No.:
 Address:
 Tel No.:
 Signature:
 Date:

Name of SOR:
 Registration No.:
 Address:
 Tel. No.:
 Signature:
 Date:

Schedule No. 4

Buildings requiring Fire Protection Consultant on Record and Inspection by Fire Officer

(Refer Rule No. 3.3.7, 5.1.4)

Table No. S4 – 1: (*Deleted*)

Fire Officer (FO) shall be required in all cases in which the provisions of Fire Chapter (Part 2) of these GDR related to fire safety are applicable within the meaning of clause 14.1.1 of the GDR. Fire Protection Consultant on Record (FPCOR) shall be required in all cases where either the building is High Rise or for the non-residential uses, the total built up area is more than 4000 sq m.

Schedule No. 5A

Fees and Charges for Grant of a Development Permission / Revised Development Permission / Revalidation of Development Permission

(Refer Rule No. 4.10.2, 4.11.2, 4.12.2, 4.13.2, 4.14.2, 4.15.2, 5.3, 5.4.1, 6.6.2)

A person applying for a Development Permission / Revised Development Permission / Revalidation of Permission shall have to pay the following Fees and Charges along with the application to the Competent Authority at the following rates:

A Fees:

1 Scrutiny Fees for Buildings:

The fees shall be paid for both – Direct Development Permission and Development Permission. The scrutiny fees shall be levied at the time of making an application for Development Permission.

Table No. S5A – 1: Scrutiny Fees for Building

No	Type of Use	Rate per sq m of Built-Up Area (Subject to minimum fees of Rs. 1000/-)	
		Building upto 15m height	Building more than 15m height
1	Residential	Rs. 5.00	Rs. 10.00
2	Commercial	Rs. 8.00	Rs. 13.00
3	Residential Cum Commercial	Rs. 6.00	Rs. 11.00
4	Industrial	Rs. 7.00	Rs. 12.00
5	Public Offices, Utilities	Rs. 4.00	Rs. 9.00
6	Others	Rs. 5.00	Rs. 10.00

(*others: includes Health, Education, etc. and other than the above-mentioned type of land use)

- In case of a revised development permission, these shall be paid again.
- In case of revalidation of lapsed / suspended development permission, these shall not be paid again, only a revalidation fee will be paid which will be 25% of the Scrutiny Fee already paid.
- In case of cancellation of development permission, these shall be forfeited.

2 Fees for Subdivision / Amalgamation / Layout of Land

A One-time payment shall be made for approval of subdivision / amalgamation / layout of land. It shall be valid for a period of 5 years.

Table No. S5A – 2: Fees for Subdivision /Amalgamation / Layout of Building Unit / Plot

No	Type of land Use	Rate per sq m of land (Subject to minimum fees of Rs. 1000/-)	
		Amalgamation	Subdivision / Layout of Building Unit / Plot
1	Residential	Rs. 3.00	Rs. 6.00
2	Commercial	Rs. 4.00	Rs. 8.00
3	Residential Cum Commercial	Rs. 3.50	Rs. 7.00
4	Industrial	Rs. 5.00	Rs. 10.00
5	Public Offices, Utilities	Rs. 3.00	Rs. 6.00
6	Others	Rs. 4.00	Rs. 8.00

(*others: includes Health, Education, etc. and other than the above-mentioned type of land use)

- In case of a revised development permission, these shall be paid again.
- In case of revalidation of lapsed / suspended development permission, these shall not be paid again, only a revalidation fee will be paid which will be 25% of the Scrutiny Fee already paid.
- In case of cancellation of development permission, it shall be forfeited.

3 Fees for Mining, Quarrying and Brick Kiln Operations

Mining, quarrying and brick kiln with or without chimney and processing of lime, sagol etc. without construction- Rs.1,00,000 per 0.1 hectare or part thereof.

- In case of a revised development permission, these shall be paid again.
- In case of revalidation of lapsed / suspended development permission, these shall not be paid again, only a revalidation fee will be paid which will be 25% of the Scrutiny Fee already paid.
- In case of cancellation of development permission, it shall be forfeited.

B Charges

1 Charges for Change in Land Use:

Charges for change in land use shall be paid every time there is a change of use of land.

Table No. S5A – 3: Charges for Change of Land Use

No	Type of land Use	Rate per sq m of land (Subject to minimum fees of Rs. 1000/-)
1	Residential	Rs. 25.00
2	Commercial	Rs. 40.00
3	Residential Cum Commercial	Rs. 40.00
4	Industrial	Rs. 50.00
5	Public Offices, Utilities	Rs. 10.00
6	Others	Rs. 40.00

(*others: includes Health, Education, etc. and other than the above-mentioned type of land use)

2 Development Charges for Infrastructure:

- The Development Charges for infrastructure shall be paid for both – Direct Development Permission and Development Permission.
- The development charges for infrastructure shall be levied at the time of making an application for Development Permission.

Table No. S5A – 4: Development Charges for Buildings

No	Type of land Use	Rate per sq m of Built up (Subject to minimum fees of Rs. 1000/-)
1	Residential	Rs. 50.00
2	Commercial	Rs. 80.00
3	Residential Cum Commercial	Rs. 80.00
4	Industrial	Rs. 100.00
5	Public Offices, Utilities	Rs. 20.00
6	Others	Rs. 80.00

(*others: includes Health, Education, etc. and other than the above-mentioned type of land use)

- In case of a revision of development permission, the differential shall be paid.
- In case of revalidation of lapsed / suspended development permission, these shall not be paid again.
- In case of cancellation of development permission, it shall be forfeited.

3 Stacking Charges

Stacking Charges shall be levied during grant of commencement certificate and charges will be taken per week.

Table No. S5A – 5: Charges for Stacking Building Material on Public Roads

No	Type of land Use	Rate per sq m of Building Unit (Subject to minimum fees of Rs. 1000/-)
1	Residential	Rs. 4.00
2	Commercial	Rs. 8.00
3	Residential Cum Commercial	Rs. 6.00
4	Industrial	Rs. 10.00
5	Public Offices, Utilities	Exempted
6	Others	Rs. 4.00

(*others: includes Health, Education, etc. and other than the above-mentioned type of land use)

4 Tree Plantation

A person applying for permission to carry out any development shall have to pay tree plantation deposit (Rs. 500 / tree required to be planted) along with his application to the Competent Authority. This deposit shall be refundable after the period of five years with the condition that trees planted on the site shall be grown up and maintained properly, otherwise the deposit shall be forfeited.

C Other Charges/Fees

Other Charges / Fees shall be levied under the provisions of other Act and or instructed by Government.

Note: All Charges and Fees may be revised by MS PDA from time to time.

Schedule No. 5B

Fees and Charges for Grant of Occupancy Certificate / Change of Occupancy Certificate

(Refer Rule No. 6.5.2)

A Occupancy Certificate

A person applying for an Occupancy Certificate shall have to pay Fees along with the application to the Competent Authority at the following rates:

Table No. S5B – 1: Fees for Occupancy Certificate

No.	Description	Fees equal to
(1)	(2)	(3)
1	If the Occupancy is in conformity with these Rules and no change from the permission granted.	10% of the Development Permission Scrutiny Fees that is leviable on the building unit, as the case may be

B Change of Occupancy

If the development use is in conformity with the General Development Rules but there is change of use, then a fee equal to two times of the Scrutiny Fees paid shall be paid.

The Development Charges as per the new proposed use shall be paid – the earlier shall be forfeited.

Table No. S5B – 2: Fees for Change of Occupancy

No.	Description	Fees equal to
(1)	(2)	(3)
1	In conformity with these Rules but with internal modification without any change in overall location and/or overall dimension or margins of the building.	Two times of the Development Permission Scrutiny Fees that is leviable on the building unit, as the case may be.

Schedule No. 5C
Fees for Temporary Construction

(Refer Rule No. 4.16.2)

A FEES FOR TEMPORARY CONSTRUCTION PERMISSION

Table No. S5C – 1: Fees for Applying for Temporary Construction

No.	Type of Temporary Construction	Rate per sq m of land (Subject to minimum fees of Rs. 1000/-)
1	Pandals for fair, ceremonies, religious functions or for vendors	Rs 100
2	Temporary Monsoon Shed of bamboo (May to September)	Rs 75
3	Temporary construction like tent city, camping ground or base camp.	Rs 500
4	a) Structures of exhibitions/ circuses etc	Rs 100
	b) Structures for ancillary works for quarrying operations in conforming zones.	
	c) Government booths and temporary shelters.	
	d) Transit accommodation for persons to be rehabilitated in a new construction.	
	e) Structures for educational and medical facilities within the site of the proposed building during the phase of planning and constructing the said permanent buildings.	
	f) Ready mix concrete plant.	

- Equal amounts of fees shall be payable as deposit, which will be refundable provided by end of the stipulated period, such temporary structures are removed without fail by the owner / applicant.
- Failure to remove such temporary sheds will be liable for forfeiture of the deposit and any such failure continuing beyond the said period shall be liable for imposition of penalty which will, be three times the rate of 100/ per sq m per week.

Schedule No. 5D

Penalties

(Refer Rule No. 4.4.4, 4.6, 4.7.2, 4.10.4, 4.11.4, 4.12.4, 4.13.4, 4.14.4, 4.15.4, 4.16.4, 6.5.4, 6.6.4)

A PENALTIES FOR UNAUTHORIZED CONSTRUCTION AND OCCUPANCY

Table No. S5D – 1: Penalties for Unauthorised Construction and Occupancy

No.	Type	Penalty (Rs/ Sq m)	Remarks
1	Construction / Occupancy started / completed before applying for permission.		Applicable to total proposed built up area or total occupied or constructed area, whichever is higher.
	1.1 For Residential	300	
	1.2 For Commercial	500	
	1.3 For Industrial	800	
	1.4 For Others use	600	
2	Construction / Occupancy started / completed before granting permission but had applied for permission.		Applicable to total proposed built up area or total occupied or constructed area, whichever is higher
	1.1 For Residential	200	
	1.2 For Commercial	300	
	1.3 For Industrial	500	
	1.4 For Others use	400	
3	Minor Deviation from the approved construction plan, but within these Rules.	Twice the scrutiny fees	Deviation in this respect would be only for minor alteration within the approved building plan without deviation in approved built up area

B OTHER PENALITES

- **Penalties for Lift**

Lift auditor shall provide certificate at interval not more than 2 years that the lifts and escalator in the building are kept in good working condition. For not doing so penalties will be levied as decided by Competent Authority.

- **Parking Space Misuse**

In cases where misuse of parking space is noticed, the use of the entire building shall be discontinued by the Competent Authority. Building use shall be permitted only after the required parking spaces are provided. High penalty shall be levied considering the period of misuse of the parking space and the benefit derived out of misuse as decided by the Competent Authority from time to time.

Schedule No. 6A

Drawings, Specifications and Documents to be Submitted with Application for Obtaining/ Revising Development Permission for Building and for Sub- division & Amalgamation of Building Unit / Plot

(Refer Regulation No. 4.10.1, 4.11.1, 4.12.1, 4.13.1, 4.14.1, 4.15.1)

The owner / developer shall submit to the Competent Authority the following documents, drawings, and specifications along with application for obtaining and revising a development permission. These are common documents for obtaining / revising development permission for buildings and for sub-division & amalgamation of building unit / plot.

A Copies of Documents, Drawings and Specifications

- 1 Five copies of all plans and statements shall be made available along with the notice. Soft copy of the drawings in cad format shall also be submitted.
- 2 All documents, drawings, and specifications to be submitted along with the notice shall be duly signed by the Owner and the appropriate Person on Record and shall indicate their names, contact information and registration number.
- 3 Every drawing, document and report shall be signed by the Owner and the Architect on Record or Civil Engineer on Record, the Structural Engineer on Record, and the Clerk of Works on Record as the case may be and in accordance with the General Development Rules.

B List of Documents which needs to be uploaded or submitted offline

- 1 Satisfactory documentary legal evidence of the Right to Develop or Build on the Building Unit, including original copies of the relevant extract from the Property Register for City Survey Lands or Record of Rights for Revenue Lands as applicable.
- 2 Certified copies of approved sub-divisions or layout of the final plot from the concerned Authority as the case may be showing:
 - a City Survey No. or Revenue No.
 - b Area and measurements of the building unit. Authority may dispense with this requirement in the cases where it is satisfied regarding the ownership of land on the basis of any documentary evidence or proof produced by the applicant.
- 3 Copy of Sanctioned Layout including date of sanction and Reference No.
- 4 Certified part plan and zoning certificate from the Authority.
- 5 Form No 10A/13: Application for obtaining / revising a development permission.
- 6 Form No. 2: Certificate of Undertaking by the Persons on Record or Engineer on Record as applicable.
- 7 Form No. 11A: Area Statement for Buildings or Form No. 11B: Area Statement for Sub- division and Amalgamation or Form No. 11C: Area Statement for Temporary Construction (whichever is applicable)
- 8 NOC from Appropriate Authority as per Rules as applicable.
- 9 Calculation statement for payment of all relevant Development Permission Fees / Charges or any other charges.
- 10 Photographic Identity Proof of Owner or Developer and person on records.
- 11 Photograph of Building Unit
- 12 Certificate, NOC, opinions as may be required by Competent Authority.
- 13 In case of application for buildings, in addition to above, the following shall be submitted:
 - a) Soil Test Report for buildings with more than 3 floors or frame structures.
 - b) Form No. 2: Certificate of Undertaking by the Structural Engineer on Record.
 - c) Form No. 2: Certificate of Undertaking by the Clerk of Works on Record.
 - d) Form No. 2: Certificate of Undertaking by the FPCOR, if applicable.
 - e) Form No. 2: Certificate undertaking for Hazard Safety

C List of Drawings

- 1 Key Plan for both Building Plan and Sub-division & Amalgamation shall be as under:
 - a) Minimum Scale: 1:8000 and
 - b) The plan should explain the boundary and location of the site with respect to neighbourhood landmarks.
- 2 Site Plan for buildings shall be drawn as under:
 - a) Minimum Scale: 1:500 for plots less than 100 hectares and 1:1000 for others.
 - b) Boundaries of the plot and of any contiguous plots belonging to the owner.
 - c) Position of the building unit / plot in relation to the neighbouring streets and street names.
 - d) Direction of north point relative to the plan of buildings.
 - e) Building unit level in relation to the neighbouring street level.
 - f) Building unit number or plot number of the plot on which the building is intended to be erected.
 - g) All existing buildings standing on, over or under the building unit / plot.
 - h) Any existing natural or manmade physical features, such as wells, drains, trees, high tension line, gas pipeline, railway line, etc.
 - i) Proposed use of every building.
 - j) The position of building(s) and construction which the applicant intends to erect in relation to:
 - i The boundaries of the plot and in case where the plot has been partitioned, the boundaries of the portion owned by the applicant and also of the portions owned by others.
 - ii All buildings (with number of storeys and height) and premises adjacent to the plot and of the contiguous land, if any, referred to in (a), and.
 - iii Any street prescribed under the Act and passing through the building unit/s clearly indicating the regular line of streets.
 - iv The area within the regular line of the street not to be built upon but to be added to the street, hatched in green together with its measurements.
 - v Building lines and margins of streets.
 - k) The width and level of the street in front, and of the street, if any, at the side or rear of building clearly indicating the regular line of streets.
 - l) The means of access from the street to the site and all existing and proposed buildings.
 - m) Open space to be left around the building to secure free circulation of air, admission of light and access.
 - n) Open space to be provided under these rules.
 - o) The area of the whole plot and the break-up of Total built-up area on each floor
 - p) Area classified for exemption of built-up area calculations.
 - q) Dimensions and areas of common plot, as required under these rules,
 - r) Parking layout, indicating the parking spaces, access lane, driveway, or ramp.
 - s) Layout and details of rainwater harvesting required under the Development Rules, if any.
 - t) The position of every water closet, privy, urinal, bathrooms, cess pool, well or cistern in connection with the building other than those shown in the building plan.
 - u) The lines of drainage of the building, the size, depth and inclination of every drain and the means to be provided for the ventilation of the drains.
 - v) The position and level of the outfall of the drain, any existing facilities regarding water supply, sewerage etc, diameter and gradient of water supply line, drainage lines for the disposal of storm water as well as for sewerage.
- 3 Site Plan for Subdivision and Amalgamation:
 - a) Minimum scale: 1:500 for building units / plots less than 100 hectares and 1:1000 for others.
 - b) Boundaries of the building unit / plot and of any contiguous plots belonging to the owner, position of the plot in relation to the neighbouring streets and street names and direction of north point relative to the plan of building.
 - c) Building unit level in relation to the neighbouring street level; all existing buildings standing on, over or under the plot.

- d) The position of the building, and of all other buildings (if any) which the applicant intends to erect upon the contiguous land and referred to in (b) in relation to:
 - i The boundaries of the building unit / plot and in case where the building unit / plot has been partitioned, the boundaries of the portion owned by the applicant and also of the portions owned by others.
 - ii All streets, buildings (with number of stories and height) and premises adjacent to the building unit / plot and of the contiguous land, if any, referred to in (b), and.
 - iii If there is no street within a distance of 12 m of the plot, the nearest existing street.
 - iv Any street prescribed under the Act and passing through the plot/s.
 - v Building lines and margins of streets
- e) Sub-division of the land or plot or building unit with dimension and area of each of the proposed sub-divisions and their use according to these rules.
- f) The width and length of the proposed streets and internal roads.
- g) Dimensions and Areas of Open space to be left as per the Development Rules
- h) Any existing natural or manmade physical features, such as wells, drains, trees, high tension line, gas pipeline, railway line, etc.
- i) The area of the whole plot and the break-up of covered area on each floor with the calculations for percentage covered as required under the Development Rules,
- j) Dimensions and areas of common plot, as required under these rules, provided in the layout / sub-division of plot.

D Details Drawings to be attached in case of Application for Building

- 1 Detailed Drawings shall be submitted showing the boundary walls and gates.
- 2 Landscape Plan
 - Minimum Scale: 1:100 for plots less than 500 sq m and 1:500 for others and shall contain the following:
 - a) Space for circulation and parking.
 - b) Paved pathways.
 - c) Existing trees.
 - d) Proposed tree plantation.
 - e) Green areas.
 - f) Unpaved areas.
- 3 Building Plan
 - The plans, elevations and sections of the proposed building shall be drawn to a scale of 1:100 showing the following details, wherever applicable:
 - a) All floor plans together with the covered area, size and spacing of framing members, size of rooms and the position and width of staircases, ramps and other exit ways, lift wells, lift machine room and lift pit details.
 - b) Built-up area of each dwelling unit, or shop or office space at every floor level.
 - c) Use or occupancy of all parts of the building.
 - d) Exact location of essential services, like WC, sink, bathroom, kitchen, cesspool, water tank, cistern, etc.
 - e) Section drawings clearly showing the size of the footings, thickness of basement wall, wall construction, sizes and spacing of structural members, floor slabs and roof slabs with their materials. The section shall indicate the heights of building and rooms and also the height of the parapet, and the drainage and the slope of the roof. At least one section should be taken through the staircase. Access to the various parts of the building and its appurtenances also should be shown in one section.
 - f) Levels of the site and all floors in relation to the datum or crown level of the access street.
 - g) All elevations.
 - h) Details of service privy, if any.
 - i) Dimensions of the projected portions beyond the permissible building line.
 - j) Terrace plan including cabin structure.
 - k) Parking spaces provided and the parking layout.
 - l) Direction of north point relative to the plan of buildings.

m) Such other particulars as may be required to explain the proposed building clearly.

4 Additional Fire Prevention and Safety Provisions:

Additional fire prevention and safety provisions to be provided in buildings eligible for a Development Permission are specified in Schedule No.4 according to different uses and the height of the building. Details of these shall be indicated in the drawings as required.

5 Services Plans:

The outside service pipe for sewerage that is to say from where will they connect with sewerage line if and when sewerage will be provided and from where the rain water coming from back of the plot shall go and to which drain shall be shown. The buildings shall be required to have adequate amount of soak pit and septic tank.

6 Specifications

General specifications of the proposed building giving type and grade of material shall be signed by the Architect on Record and the Structural Engineer on Record.

E Detail Drawings to be attached in case of application Sub-division & Amalgamation of Building Unit / Plot:

1 Detailed drawing shall be submitted showing the boundary walls and gates.

2 Landscape plan

Minimum Scale: 1:100 for plots less than 500 sqm and 1:500 for others and shall contain the following:

- a The space for circulation and parking;
- b Paved pathways.
- c Existing trees.
- d Proposed tree plantation.
- e Green areas.

F Development Permission Fees

Receipt of development permission fees and charges paid as per Schedule No. 5A and of other charges leivable on the building unit shall be attached with the application.

Schedule No. 6B

Drawings, Specifications and Documents to be Submitted with Application for Obtaining / Revising / Revalidating Development Permission for Brick Kiln, Mining and Quarrying

(Refer Rule No. 4.11.1, 4.13.1, 4.15.1)

The owner / developer shall submit to the Competent Authority the following documents, drawings, and specifications along with application for obtaining and revising a development permission.

A Copies of Documents, Drawings and Specifications

Every drawing, document and report shall be signed by the owner and the Clerk of Works on Record as the case may be and in accordance with these rules.

B List of Documents

- 1 An extract of the record of rights or any other document showing the ownership of the land for this purpose. If the applicant is not the owner of the land, necessary documentary proof shall be provided.
- 2 Zoning Certificate from the Competent Authority
- 3 Form No. 10B: Application for Obtaining / Revising a Development Permission
- 4 True Copies of previous year's development permission
- 5 Form No. 2: Certificate of Undertaking by the Architect on Record or Engineer on Record as applicable.
- 6 Form No. 2: Certificate of Undertaking by the Structural Engineer on Record, as applicable
- 7 Form No. 2: Certificate of Undertaking by the Clerk of Works on Record
- 8 NOC from Appropriate Authority as applicable.
- 9 Calculation statement for payment of all relevant development permission fees or any other charges.
- 10 Photographic identity proof of owner or developer.

C List of Drawings

- 1 A certified site plan showing the land in question along with surrounding area shall be attached.
- 2 Sketch site plan showing:
 - a Area of site presently used.
 - b Area of site proposed to be used.

D Development Permission Fees

Receipt of Development Permission Fees and Charges paid as per Schedule No. 5A and of other charges leviable on the plot shall be attached with the application.

Schedule No. 6C

Format for submission of Documents, Drawings and Specifications

(Refer Rule No. 4.10.1, 4.11.1, 4.12.1, 4.13.1, 4.14.1, 4.15.1, 4.16.1, 6.6.1)

- 1 Copies of Plan and Documents.
- 2 Submission of all documents, certificates, reports, and drawings to the Competent Authority:
 - a Shall represent all facts accurately,
 - b Shall be as per formats and forms prescribed by the Competent Authority,
 - c Shall be neat, clean, and fully legible, and, on durable paper folded in the manner prescribed by the Competent Authority,
 - d Shall be free of any scratches or corrections – small, initiated corrections shall be permitted.
- 3 Standard sizes of all drawings and documents
All drawings and documents shall be of standard sizes as prescribed below:

Table No. S6C – 1: Drawing Sizes

No	Standard Sizes	Trimmed Size (mm)
1	A0	841 X 1189
2	A1	594 X 841
3	A2	420 X 594
4	A3	297 X 420
5	A4	210 X 297
6	A5	148 X 210

- 4 Colours and notations to be followed for all drawings and documents.
All drawings and documents shall follow standard colours and notations as prescribed below:

Table No. S6C – 2: Colours and Notations for Drawings and Documents

No.	Item	Site Plan	Building Plan
1	Plot lines	Thick Black	Thick Black
2	Existing street	Green	
3	Future street, if any	Green dotted	
4	Permissible building line	Thick dotted Black	
5	Open spaces	No colour	No colour
6	Existing works	Blue	Blue
7	Work proposed to be demolished	Yellow hatched	Yellow hatched
8	Proposed work	Red	Red
9	Drainage and sewerage work	Red dotted	Red dotted
10	Water supply work	Black dotted thin	Black dotted thin
11	Work without permission if started on site	Grey	Grey
12	Approved work	Yellow	Yellow

Schedule No. 6D

Drawings, Specifications and Documents to be Submitted with Application for Obtaining Permission for Temporary Construction

(Refer Regulation No. 4.10.1, 4.11.1, 4.12.1, 4.13.1, 4.14.1, 4.15.1, 4.16.1)

The owner / developer shall submit to the Competent Authority the following documents, drawings, and specifications along with application for obtaining and revising a development permission. These are common documents for obtaining permission for Temporary Construction.

A Copies of Documents, Drawings and Specifications

- 1 Two copies of all plans and statements shall be made available along with the notice. Soft copy of the drawings in cad format shall also be submitted.
- 2 All documents, drawings, and specifications to be submitted along with the notice shall be duly signed by the Owner and the appropriate Person on Record and shall indicate their names, contact information and registration number.
- 3 Every drawing, document and report shall be signed by the Owner and the Architect on Record or Civil Engineer on Record, the Structural Engineer on Record, and the Clerk of Works on Record as the case may be and in accordance with the General Development Rules.

B List of Documents which needs to be uploaded or submitted offline

- 1 Satisfactory documentary legal evidence of the Right to Develop or Build Temporary Construction, including original copies of the relevant extract from the Property Register for City Survey Lands or Record of Rights for Revenue Lands as applicable.
- 2 If the applicant is not the owner of the land, necessary documentary proof shall be provided.
- 4 Certified part plan and zoning certificate from the Authority.
- 5 Form No 10A/13: Application for obtaining / revising a development permission.
- 6 Form No. 2: Certificate of Undertaking by the Persons on Record or Engineer on Record as applicable.
- 8 NOC from Appropriate Authority as per Rules as applicable.
- 9 Calculation statement for payment of all relevant Development Permission Fees / Charges or any other charges.
- 10 Photographic Identity Proof of Owner or Developer and person on records.
- 12 Certificate, NOC, opinions as may be required by Competent Authority.
- 13 In case of application for buildings, in addition to above, the following shall be submitted:
 - a Form No. 2: Certificate of Undertaking by the Structural Engineer on Record.
 - b Form No. 2: Certificate of Undertaking by the Clerk of Works on Record.
 - c Form No. 2: Certificate of Undertaking by the FPCOR, if applicable.
 - d Form No. 2: Certificate undertaking for Hazard Safety

C List of Drawings

- 1 Key Plan for temporary construction shall be as under:
 - a Minimum Scale: 1:8000 and
 - b The plan should explain the boundary and location of the site with respect to neighbourhood landmarks.
- 2 Site Plan for buildings shall be drawn as under:
 - a Minimum Scale: 1:500 for plots less than 100 hectares and 1:1000 for others.
 - b Boundaries of the plot and of any contiguous plots belonging to the owner.
 - c Position of the building unit / plot in relation to the neighbouring streets and street names.
 - d Direction of north point relative to the plan of buildings.
 - e Building unit level in relation to the neighbouring street level.
 - f Building unit number or plot number of the plot on which the temporary construction is intended to be erected.

- g Any existing natural or manmade physical features, such as wells, drains, trees, high tension line, gas pipeline, railway line, etc.
- h Proposed use of temporary construction.
- i The width and level of the street in front, and of the street, if any, at the side or rear of temporary construction clearly indicating the regular line of streets.
- j The means of access from the street to the site and all existing and proposed temporary construction.
- k Open space to be left around the temporary construction to secure free circulation of air, admission of light and access.
- l Open space to be provided under these rules.
- m The area of the whole plot and the break-up of Total temporary construction area

D Development Permission Fees

Receipt of development permission fees and charges paid as per Schedule No. 5C and of other charges leivable on the building unit shall be attached with the application.

Schedule No. 7A

Information to be Displayed on Site

(Refer Rule No. 5.2)

It shall be the responsibility of the Owner or Developer and the Clerk of Works on Record to erect a notice board on the site of development displaying the key information pertaining to the Building Unit.

Information that shall be displayed on the Notice Board:

- 1 Name and address of the proposed building.
- 2 Sanctioned Use of the Building (use as sanctioned in the Development Permission).
- 3 Survey No, City Survey No, Block No., Final Plot No., Sub Plot/ Property No., and complete address of the plot.
- 4 Name of the Owner(s) / Developer(s)
- 5 Names and Registration Numbers of duly appointed Persons on Record on the project:
 - a Architect on Record/ Engineer on Record
 - b Structural Engineer on Record, and
 - c Clerk of Works on Record
 - d Supervisor of works on Record
 - e Fire Protection Consultant on Record, as applicable

Failure to comply with the above requirements may result in cancellation of the Development Permission

Schedule No. 7B

Documents and Drawings to be Maintained on Site During Period of Construction

(Refer Rule No. 5.3)

It shall be the responsibility of the Owner or Developer and the Clerk of Works on Record to keep all the documents and drawings which are listed below at the site at all times during the entire Period of Construction from commencement to completion. These documents should be made available to any authorised officer of the Competent Authority inspecting the site for the purpose of enforcing the General Development Rules.

The following documents shall be kept on site during construction:

- 1 A set of the sanctioned drawings.
- 2 A copy of the valid Development Permission

Schedule No. 7C

Stages of Construction Work for which Notice for Progress of Construction to be Submitted to the Competent Authority

(Refer Rule No. 5.5.3)

The Architect on Record or Engineer on Record and the Owner or Developer shall be responsible for notifying the Competent Authority of construction having been completed up to the stages specified below. They shall also certify that the construction has been carried out in compliance with sanctioned drawings and to the Development Rules, using the format as prescribed in Form No. 20:

- 1 Lower Basement Slab Level
- 2 Plinth level
- 3 Ground Floor
- 4 Middle storey (in case of high-rise buildings)
- 5 Last storey (when the last structural roof has been completed)

Schedule No. 8

Inspection Requirements

(Refer Rule No. 5.6, 6.5.3)

Table No. S8A – 1: Principles of Risk Categorization (Definition of Consequence Class) and Inspection Requirements

No.	Consequences Class	Description	Use and Building type	Design Super-vision Level	Supervision Requirements	Minimum recommended requirements for checking of calculations, drawings, and specifications.	Minimum requirements for Inspection of implementations and the insurance requirements.	Minimum Experience required
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	CC1	<ul style="list-style-type: none"> • Low consequence for loss of human life. • Negligible economic, social, or environmental consequences, • Developed, owned, and maintained by single owner 	Following development carried out in all areas other than Seismic Zone 5: Dwelling 1 Agro-Based Storage (Agriculture 2)	SL1	Supervision by the owner and POR	Self-checking: Checking performed by the person who has prepared the design. Self-certification of design by the architect and the structural engineer appointed by the owner.	Self-certification by the architect and the structural engineer appointed by the owner for carrying out the construction as per drawings and specifications and for which the plans are approved. The POR shall for all levels submit the reports and submission of completion plan. No inspection to be carried out by the Inspector of the competent authority and shall issue the building use permission based on the documents supplied by the owner and POR The competent authority shall not insist on the insurance for the building.	As per regulation no. AOR, EOR and SEOR registration

No.	Consequences Class	Description	Use and Building type	Design Supervision Level	Supervision Requirements	Minimum recommended requirements for checking of calculations, drawings, and specifications.	Minimum requirements for Inspection of implementations and the insurance requirements.	Minimum Experience required
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2	CC2	Low consequence for loss of human life; small or negligible economic, social, or environmental consequences, but the developer, owner or the person who may maintain may not be the same person.	For the following development where the building height does not exceed 13.5m: Dwelling 2 Mercantile 1	SL2	Normal supervision by POR and the Competent Authority	Self-checking: Checking performed by the person who has prepared the design. Self-certification of design by the architect and the structural engineer appointed by the owner.	Self-certification by the architect and the structural engineer appointed by the owner for carrying out the construction as per drawings and specifications and for which the plans are approved. The POR shall for all levels submit the reports and submission of completion plan. Inspection to be carried out by the Inspector of the competent authority at the plinth level and at time when the owner makes an application for getting building use permission. The building use permission shall issue based on the inspection report and the documents supplied by the owner and POR. The competent authority shall not insist on the insurance for the building.	One year after registration as AOR, EOR, SEOR for respective task
3	CC3	Medium consequence for loss of human life; considerable economic,	For the following development	SL3	Normal supervision by POR and the Competent Authority	Checking by different persons in	Certification by the architect and the structural engineer appointed by the owner	Two years after registration as AOR for respective task

No.	Consequences Class	Description	Use and Building type	Design Super-vision Level	Supervision Requirements	Minimum recommended requirements for checking of calculations, drawings, and specifications.	Minimum requirements for Inspection of implementations and the insurance requirements.	Minimum Experience required
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		social, or environmental consequences	where the building height does not exceed 25m: Dwelling 3 Dwelling 4 Hospitality 2 Mercantile 1 Mercantile 2 Mercantile 3 Assembly 4 Health 2		Competent Authority	accordance with the procedure prescribed in these rules no 3, 5, 6 and 7. Plinth and occupancy inspection and certification by structure designer.	owner for carrying out the construction as per drawings and specifications and for which the plans are approved. The POR shall for all levels submit the reports and submission of completion plan. Inspection to be carried out by the Inspector of the competent authority at the at all levels as required in regulation no 4, 5 and 6. The building use permission shall issue based on the inspection reports and the documents supplied by the owner and POR. The competent authority shall ask the owner to seek insurance coverage for the building for minimum 5 years and then only issue the building use permission.	
4	CC4	High consequence for loss of human life; High consequences for economic, social, or	For the following development where the	SL4	Extended supervision	Checking by different persons in accordance with	Certification by the architect and the structural engineer appointed by the owner for carrying out the	Three year after registration as AOR for respective task

No.	Consequences Class	Description	Use and Building type	Design Super-vision Level	Supervision Requirements	Minimum recommended requirements for checking of calculations, drawings, and specifications.	Minimum requirements for Inspection of implementations and the insurance requirements.	Minimum Experience required
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		environmental consequences	building height exceeding 25m but up to 45m: Hospitality 1 Hospitality 2 Hospitality 3 For the following development where the building height exceeding 13.5m but up to 45m: Service Establishment 1 Service Establishment 2 Mercantile 1 Mercantile 2 Storage For the following development having up to 45m: Education 1			the procedure prescribed in these rules no 3, 5, 6 and 7. Plinth and occupancy inspection and certification by structure designer.	construction as per drawings and specifications and for which the plans are approved. The POR shall for all levels submit the reports and submission of completion plan. Inspection to be carried out by the Inspector of the competent authority at the at all levels as required in regulation no 4, 5 and 6. The building use permission shall issue based on the inspection reports and the documents supplied by the owner and POR The competent authority shall ask the owner to seek insurance coverage for the building for minimum 15 years and then only issue the building use permission.	

No.	Consequences Class	Description	Use and Building type	Design Super-vision Level	Supervision Requirements	Minimum recommended requirements for checking of calculations, drawings, and specifications.	Minimum requirements for Inspection of implementations and the insurance requirements.	Minimum Experience required
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
			Education 2 Education 3 Assembly 1 Assembly 2 Assembly 3 Assembly 4 Religious Recreation 1 Recreation 2 Sports and Leisure Industrial 1 Industrial 2 Industrial 3 Agriculture 1 Agriculture 2 Temporary Use Utility Public office Health 1 Health 2 Health 3 Health 4 Transport Storage Environmental Preservation 1 Environmental Preservation 2 Environmental					

No.	Consequences Class	Description	Use and Building type	Design Super-vision Level	Supervision Requirements	Minimum recommended requirements for checking of calculations, drawings, and specifications.	Minimum requirements for Inspection of implementations and the insurance requirements.	Minimum Experience required
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
			Preservation 3 Cremation and Burial All others not specified.					

Schedule No. 9

Documents and Drawings to be Submitted along with the Application for Occupancy Certificate

(Refer Rule No. 6.5.1)

The following documents and drawings shall be submitted along with the Application for Occupancy Certificate for a building:

A Documents and Drawings:

- 1 One set of Completion Plans and as-built drawings, duly certified by POR.
- 2 Form No. 2: Certificates of Undertaking by the Architect on Record or Engineer on Record.
- 3 Form No. 2: Certificates of Undertaking by the Structural Engineer on Record.
- 4 Form No. 2: Certificates of Undertaking by the Clerk of Works on Record.
- 5 Form No. 2: Certificates of Undertaking by the FPCOR.
- 6 Clearance from Fire Officer, as applicable and mentioned in Schedule No. 4.
- 7 Certificate of Lift Inspector for buildings taller than 15 m.
- 8 A copy of valid Registration Certificate of the Persons on Record issued by the Competent Authority.

B Occupancy Certificate Fees and Charges:

Receipt of Occupancy Certificate Fees and Charges paid as per Rule No.6.5.2 and Schedule No. 5B and of other charges leviable on the building-unit shall be attached with the application.

Schedule No. 10

Schedule for Maintenance and Inspection for Structural Stability and Fire Safety

(Refer Rule No. 16.2, 16.7.2, 19.1.2)

- Class 1 Buildings: All types of framed structures, factory buildings, special buildings, buildings for educational use such as schools, colleges, etc; hostels and other public buildings.
- Class 2 Buildings: Masonry walled residential buildings with height more than 10 m.

A Structural Stability

The interval at which buildings are to be examined and a Structural Inspection Report in Format as per Form 15 submitted to Competent Authority shall be as under:

For Class 1 buildings which are erected fifteen years earlier from the date on which these Rules has come into force or which becomes five years old thereafter:

- 1 Within three years from the coming into force of these Rules
- 2 Thereafter at the interval of every fifteen years from the date of submission of the first report

For Class 2 buildings which are erected fifteen years earlier from the date on which these Regulation has come into force or which become fifteen years old thereafter:

- 1 Within five years from the coming into force of these Rules
- 2 Thereafter at the interval of every fifteen years from the date of submission of the first report

B Fire Safety

The interval at which buildings are to be examined by Fire Officer or FPCOR and a Fire Safety Certificate as stipulated in Form 27 be submitted to Competent Authority shall be as under:

- 1 Within one year from the coming into force of these Rules
- 2 Thereafter at the interval not more than 12 months from the date of submission of the first certificate.

Schedule No. 11

Documents and Fees Required with Application for Advertising Display & Communication Infrastructures

(Refer Rule No. 12.1)

1 Advertising Display

The Owner / Developer shall submit to the Competent Authority the following documents for erecting Advertising Display:

A List of Documents

- 1 Receipt of Fees paid and of other charges leviable shall be attached with the application.
- 2 Certificate from Registered Structural Engineer for the stability, safety of display structure to be erected.
- 3A For tender cases the documents to be submitted are:
 - a Shop Establishment Number
 - b Sale tax number
 - c Income tax clearance certificate.
- 3B For Private property cases:
 - a Lay-out plan.
 - b Structural detail plan.
 - c NOC from property holder.
 - d 2 copies of photograph of the actual site.
 - e Electricity Bill of last month.
 - f Property Tax Bill.
 - g Agreement copy.
 - h 1/14 nakal
 - i Ekrarnama

B Deposit, Fees, and Penalty:

- 1 The fees for erection and maintenance of the Advertising Display shall be charged as decided by Competent Authority. The fees shall be paid by the applicant in advance, for the calendar year or part thereof as may be prescribed by the Competent Authority.
- 2 Competent authorities may also decide penalty norms for non-compliance of Rules specified for Advertising Display Structures of various types.

2 Communication Infrastructures

The Owner / Developer shall submit to the Competent Authority the following documents for erecting Communications Infrastructure:

A List of Documents

- 1 Receipt of Fees paid and of other charges leviable shall be attached with the application.
- 2 Structural Stability Certificate from Registered Structural Engineer for the stability, safety of display structure to be erected which shall be the liability of the Owner and the Registered Structural Engineer
- 3 Permission from the "Standing Advisory Committee on Radio Frequency Allocation" (SACFA) issued by Ministry of Telecommunications.

B Deposit and Fees:

The fees for erection of the Communication Infrastructure shall be charged as revised by Competent Authority from time to time.

Schedule No. 12

List of Recommended Trees

(Refer Regulation No. 17.5)

Following list of trees are recommended for their suitability regarding shade and foliage:

Table No. S12 – 1: List of Trees

No.	Common Name
1	Cocous Nucifera
2	Mangifera Indica
3	Palm Oil Tree
4	Polyalthia
5	Phoenix Sylvesteris
6	Terminalia tomentosa
7	Butea Frondosa
8	Tectona Grandis
9	Bridelia Retusa
10	Anogeissus Latifolia
11	Lannea Coromandelica
12	Diospyros Melanoxylon
13	Madhuca Indica
14	Borassus Flabellifer
15	Cascabela thevetia
16	Ficus Benghalensis
17	Azadirachta Indica
18	Delonix Regia
19	Saraca Asoca
20	Ficus Religiosa
21	Syzygium Cumini
22	Tamarindus Indica
23	Abizia Saman
24	Madhuca Longifolia
25	Terminalia Catappa
26	Erythrina Variegata
27	Casuarina Equisetifolia
28	Ziziphus Jujuba
29	Ficus Virens
30	Tectona grandis
31	Dalbergia Sissoo
32	Santalum Album
33	Senegalia Catechu
34	Swoetenia

Schedule No. 13

Standalone Multi-Level Public Parking

Standalone multi-level public parking may be permissible in residential, mercantile, public office, industrial, recreational, assembly and transportation land use classification. 5% of the built-up area of the parking structure may be used for commercial activity. Other planning norms for such stand-alone parking buildings shall be as below:

- 1 Front / Road Margin: 12 metres.
- 2 All other three sides: 7.5 metres.
- 3 Building height: To be determined in each case by the Competent Authority.
- 4 Parking floors: Where the plot size is not less than 1000 sq m cover parking with a clear height of not more than 2.4 metres may be permitted on any floor of the building according to the requirement of the FAR. If such parking is provided on the entire floor area, then such parking floor would not be included in the height of the building.

Forms

Form No. 1

Application for Registering as Person on Record

(Rule No. 3.2.1)

To,

The Competent Authority

- 1 Name:
- 2 Local Address:
- 3 Permanent Address:
- 4 Telephone/Fax No:
- 5 Qualification:
- 6 Membership of Professional:
- 7 Associations (Indicate appropriate professional affiliations)
- 8 Experience (No. of years):
- 9 Previous year's Registration No.
- 10 Name of Employer: (if employed)
- 11 PAN Number:
- 12 Aadhar Number:
- 13 Bank Account Details:

Sir/Madam,

Kindly register me as (Architect on Record / Civil Engineer on Record / Structural Engineer on Record / Clerk of Works on Record / Supervisor on Record / Developer) of the Competent Authority. I meet with the minimum qualifications and competence requirements as specified in Rule No. 3.2.1 and Schedule No. 1. Relevant documents attesting to the same are attached herewith.

I hereby undertake to abide by all rules, regulations, standing orders, requisitions and instructions given by the Competent Authority and shall carry out my responsibilities as prescribed in the General Development Rules. I also understand that if I fail to perform my responsibilities as above, the Competent Authority reserves the right to de- register me, forfeit my security deposit and take other appropriate action as defined in the General Development Rules as per the provisions of the Act.

Name of the Applicant:

Signature:

Date:

Form No. 2
Certificate of Undertaking for Persons on Record

(Refer Rule No. 3.3.2, 3.3.3, 3.3.4, 3.3.7)

To,

The Competent Authority

Proposed Development:

(Title of the work)

Plot No /Sub Plot No.: _____ Area of the Plot / Sub Plot: _____ (sq m)
Survey No.: _____ Area of Survey No.: _____ (sq m)
Final Plot No.: _____ Area of Final Plot No.: _____ (sq m)

Full Address of Proposed Development:

Name of the Owner / Developer: _____

Sir / Madam,

A I am currently registered as Architect on Record with the Competent Authority as per Rule Nos. 3.3.1 and 3.3.2.

I, hereby certify that I am appointed as the Architect on Record to prepare the plans, sections and details as required under the General Development Rules for the above-mentioned project and that I have prepared and signed the same and that the execution of the project shall be carried out under my direction and supervision of supervisor or owner, as per the approved drawings. I am fully conversant with the provisions of the Rules, which are in force, and about my duties and responsibilities under the same and I undertake to fulfil them in all respects, except under the circumstances of natural calamities.

I fully understand that in case my certificate/s is found to be false, or if it is found that I have not fulfilled my responsibilities as prescribed therein, the Competent Authority shall be at liberty to penalize me as per the provisions of the Act.

B I am currently registered as Civil Engineer on Record with the Competent Authority as per Rule Nos. 3.3.1 and 3.3.3.

I, here by certify that I am appointed as the Civil Engineer on Record to prepare the plans, sections and details as required under the General Development Rules for the above-mentioned project and that I have prepared and signed the same and that the execution of the project shall be carried out under my direction and supervision of supervisor or owner, as per the approved drawings. I am fully conversant with the provisions of the Rules, which are in force, and about my duties and responsibilities under the same and I undertake to fulfil the min all respects, except under the circumstances of natural calamities.

I fully understand that in case my certificate/s is found to be false, or if it is found that I have not fulfilled my responsibilities as prescribed therein, the Competent Authority shall be at liberty to penalize me as per the provisions of the Act.

C I am currently registered as Structural Engineer on Record with the Competent Authority as per Rule No. 3.3.1 and 3.3.4.

This is to certify that I am appointed as the Structural Engineer on Record to prepare the structural report, structural details, and structural drawings as required under the General Development Rules for the above-mentioned project. I am fully conversant with the Rules and of my duties and responsibilities under the Rules and assure that I shall fulfil them in all respects. I have prepared and signed the structural design and drawings of the proposed building as per the prevailing Indian Standard Specifications and further certify its structural safety and stability in design.

I fully understand that in case my certificate/s is found to be false, or if it is found that I have not fulfilled my responsibilities as prescribed therein, the Competent Authority shall be at liberty to penalize me as per the provisions of the Act.

D I, am currently registered as Clerk of Works on Record with the Competent Authority as per Rule Nos. 3.3.1 and 3.3.5.

This is to certify that I am appointed as the Clerk of Works on Record for the above-mentioned project. I am fully aware of my duties and responsibilities under the Rules and assure that I shall fulfil them in all respects. I shall undertake all necessary measures, including but not limited to adequate inspection during construction, to ensure that the construction of the building is undertaken in accordance with the detailed design and specifications provided by (name of the Architect on Record) and (name of the Structural Engineer on Record), and, with the sanctioned design and specifications.

- I undertake not to supervise more than ten works at a given time as provided in Development Rules.
- I undertake not to supervise work simultaneously at one point of time on any other sites during my supervision of the execution of this work.

I fully understand that in case my certificate/s is found to be false, or if it is found that I have not fulfilled my responsibilities as prescribed therein, the Competent Authority shall be at liberty to penalize me as per the provisions of the Act.

E I, am currently registered as Supervisor of Works on Record with the Competent Authority per Rule Nos. 3.3.1 and 3.3.6.

This is to certify that I am appointed as the supervisor of Works on Record for the above-mentioned project. I am fully aware of my duties and responsibilities under the Rules and assure that I shall fulfil the min all respects. I shall undertake all necessary measures, including but not limited to adequate inspection during construction, to ensure that the construction of the building is undertaken in accordance with the detailed design and specifications provided by (name of the Architect on Record) and (name of the Structural Engineer on Record), and, with the sanctioned design and specifications.

- I undertake not to supervise more than ten works at a given time as provided in Development Rules.
- I undertake not to supervise work simultaneously at one point of time on any other sites during my supervision of the execution of this work.

I fully understand that in case my certificate is found to be false, or if it is found that I have not fulfilled my responsibilities as prescribed therein, the Competent Authority shall be at liberty to penalize me as per the provisions of the Act.

F I, am currently registered as Fire Protection Consultant on Record with the Fire Officer per Rule Nos. 3.3.1 and 3.3.7

I is hereby certify that I have been appointed as the Fire Protection Consultant on Record of the proposed building. I am fully conversant with the Rules and of my duties and responsibilities under the Rules and as sure that I shall fulfil the min all respects. I have prepared and signed the fire safety drawings of the proposed building as per the Rules and further certify its fire safety.

I, is fully understand that in case my certificate is found to be false, or if it is found that I have not fulfilled my responsibilities as prescribed there in, the Competent Authority shall be at liberty to penalize me as per the provisions of the Act.

As per Rule No. 16 and Schedule 6A of these General Development Rules we all undersigned:

- 1 Certify that the building plans submitted for approval satisfy the safety requirements as stipulated under Rule No. 16 and the information given therein is factually correct to the best of our knowledge and understanding.
- 2 Certify that the structural design including safety from hazards based on soil conditions shall be duly incorporated in the design of the building and these provisions shall be adhered to during the construction.

Name of AOR
Registration No.:
Address:
Tel. No.:
Signature:
Date:

Name of EOR:
Registration No.:
Address:
Tel No.:
Signature:
Date:

Name of SEOR
Registration No.:
Address:
Tel. No.:
Signature:
Date:

Name of COWOR:
Registration No.:
Address:
Tel No.:
Signature:
Date:

Name of SOR:
Registration No.:
Address:
Tel. No.:
Signature:
Date:

Name of FPCOR:
Registration No.:
Address:
Tel No.:
Signature:
Date:

Signature of Owner /Developer with date:
Name:
Address:

Form No. 3

Notice to the Competent Authority of Non-Compliance of Building to Sanctioned Design and Specifications

(Refer Rule Nos. 3.3.2, 3.3.3, 3.3.4, 3.3.5, 3.3.6, 3.3.7)

To,

The Competent Authority

Proposed Development:

(Title of the work)

Plot No /Sub Plot No.: _____ Area of the Plot / Sub Plot: _____ (sq m)
Survey No.: _____ Area of Survey No.: _____ (sq m)
Final Plot No.: _____ Area of Final Plot No.: _____ (sq m)

Full Address of Proposed Development:

Name of the Owner / Developer: _____

Sir / Madam,

I am currently registered as (Architect / Civil Engineer / Structural Engineer / Clerk of Works Supervisor of Works / Fire Protection Consultant on Record with the Competent Authority. I have been appointed as (Architect / Civil Engineer / Structural Engineer / Clerk of Works / Supervisor of Works / Fire Protection Consultant on Record) on Record for the proposed building.

This is to bring to your notice that construction of the building is not being undertaken in accordance with the sanctioned design and specifications and/or with the following General Development Rules. Details of non-compliance are as follows:

1

2

3

Name: _____

Registration No.: _____

Address:

Tel. No.: _____

Email: _____

Signature: _____

Date: _____

Form No. 4

Notice to the Competent Authority of Discontinuation as Person on Record

(Refer Rule Nos. 3.3.2, 3.3.3, 3.3.4, 3.3.5, 3.3.6, 3.3.7)

To,

The Competent Authority

Proposed Development:

(Title of the work)

Plot No /Sub Plot No.: _____ Area of the Plot / Sub Plot: _____ (sq m)
Survey No.: _____ Area of Survey No.: _____ (sq m)
Final Plot No.: _____ Area of Final Plot No.: _____ (sq m)

Full Address of Proposed Development:

Name of the Owner / Developer: _____

Sir / Madam,

This is to bring to your notice that I have been relieved of my responsibility / have relieved myself of my responsibility as (Architect / Civil Engineer / Structural Engineer / Clerk of Works / Supervisor of Works/ Fire Protection Consultant on Record for the proposed building, with effect from _____ (date).

I wish to place on record that with effect from the said date, I shall neither be associated with this building nor be responsible for its compliance to the sanctioned design and specifications and to the Development Rules.

Name: _____

Registration No.: _____

Address: _____

Tel. No.: _____

Email: _____

Signature: _____

Date: _____

Form No. 5
Notice of Cancellation of Development Permission

(Refer Rule No. 4.4.3)

To _____

File No: _____
Dated: _____

Proposed Development:

(Title of the work)

Plot No /Sub Plot No.: _____ Area of the Plot / Sub Plot: _____ (sq m)
Survey No.: _____ Area of Survey No.: _____ (sq m)
Final Plot No.: _____ Area of Final Plot No.: _____ (sq m)

Full Address of Proposed Development:

Name of the Owner / Developer: _____

Sir,

This is to notify you that the Direct / Development Permission No. _____ issued /granted on date: _____ by _____ AOR / CEA / PDA been cancelled by the Chief Executive Authority / Member Secretary on the following grounds:

- 1.
- 2.

Please note that no further construction may be undertaken on the plot. A new Development Permission has to be obtained before undertaking any further construction on the plot.

Yours faithfully
The Competent Authority

Form No. 6

Notice to Stop Unauthorized Development

(Refer Rule No. 4.7.2)

To _____

File No: _____
Dated: _____

Proposed Development:

(Title of the work)

Plot No /Sub Plot No.: _____ Area of the Plot / Sub Plot: _____ (sq m)
Survey No.: _____ Area of Survey No.: _____ (sq m)
Final Plot No.: _____ Area of Final Plot No.: _____ (sq m)

Full Address of Proposed Development:

Name of the Owner / Developer: _____

Sir,

This is to notify you the development constructed on the plot is Unauthorized Development on the following grounds:

- 1
- 2

.....

Please ensure that such development is stopped with immediate effect and that no use may be made of the development.

OR

This is to notify you that part of the development specified below, constructed on the plot is Unauthorized Development on the following grounds:

(Description of part of the development that is Unauthorized Development)

- 1
- 2

.....

Please ensure that such construction is stopped with immediate effect and that no use may be made of the part of the development specified above.

OR

This is to notify you that the development being undertaken on the plot is Unauthorized.

Development on the following grounds:

- 1
- 2

I hereby order that the development on the plot be stopped with immediate effect.

Yours faithfully
The Competent Authority

Form No. 7

Direct Development Permission

(See Rule No. 4.10.1)

To,

The Competent Authority

Proposed Development:

(Title of the work)

Plot No /Sub Plot No.: _____ Area of the Plot / Sub Plot: _____ (sq m)
Survey No.: _____ Area of Survey No.: _____ (sq m)
Final Plot No.: _____ Area of Final Plot No.: _____ (sq m)

Full Address of Proposed Development:

Name of the Owner / Developer: _____

Sir,

I am currently registered as Architect on Record with Competent Authority and am fully conversant with the General Development Rules. I have been appointed as the Architect on Record of the proposed development. I hereby certify that I have verified the designs and specifications of the proposed development and certify that they comply with the General Development Rules.

I hereby issue a Direct Development Permission for construction of the proposed Development. This Direct Development Permission is to be read in conjunction with all other documents and drawings which are enclosed as per the provisions of Rule No 4.10.1 and its Schedules, and that all such documents, drawings, and specifications form part of this Direct Development Permission.

I further assure that the owner shall:

- 1 Comply all Rules required for safety
- 2 Submit the plans and documents to the Competent Authority.
- 3 Commence development only after the registration of this permission.

I fully understand that in case my certificate is found to be false, or if it is found that the Direct Development Permission issued by me is inconsistent with the General Development Rules or that I have not fulfilled my responsibilities as prescribed therein, the PDA / CA shall be at liberty to penalize me / revoke my registration as per the provisions of the Act and Rules.

Name of the AOR: _____

Registration No.: _____

Address: _____

Tele. No.: _____

Signature: _____

Date: _____

Form No. 8
Application for Registering Issue of Direct Development Permission

(See Rule No. 4.10.1)

To,

The Competent Authority

Proposed Development:

(Title of the work)

Plot No /Sub Plot No.: _____

Area of the Plot / Sub Plot: _____ (sq m)

Survey No.: _____

Area of Survey No.: _____ (sq m)

Final Plot No.: _____

Area of Final Plot No.: _____ (sq m)

Full Address of Proposed Development:

Name of the Owner / Developer: _____

Sir,

I am currently listed as Architect on Record with Competent Authority. I am fully conversant with the General Development Rules.

I have been appointed as the Architect on Record of the proposed development. I hereby certify that I have verified the design and specifications of the proposed development and certify that they comply with the General Development Rules of the PDA.

I have issued a Direct Development Permission for construction of the proposed Development and hereby apply for registration of the same on the records of the PDA.

I fully understand that in case my certificate is found to be false, or if it is found that the Direct Development Permission issued by me is inconsistent with the General Development Rules of the PDA shall be at liberty to penalize me.

Name of the AOR: _____

Registration No.: _____

Address: _____

Tele. No.: _____

Signature: _____

Date: _____

Form No. 9

Registration or Cancellation of Direct Development Permission / Revised Direct Development Permission / Revalidated or Extended Direct Development Permission

(See Rule. No. 4.10.3, 4.12.3, 4.14.3)

To _____

File No: _____

Dated: _____

Proposed Development:

(Title of the work)

Plot No /Sub Plot No.: _____

Area of the Plot / Sub Plot: _____ (sq m)

Survey No.: _____

Area of Survey No.: _____ (sq m)

Final Plot No.: _____

Area of Final Plot No.: _____ (sq m)

Full Address of Proposed Development:

Name of the Owner / Developer: _____

Sir,

With reference to your application for registering issue of _____ (Direct Development Permission / Revised Direct Development Permission / Revalidated Direct Development Permission) on _____ (date), I am directed to inform you that the Issue of Direct Development Permission / Revised Direct Development Permission / Revalidated Direct Development Permission has been registered on the records of the PDA on _____ (date).

OR

With reference to your application for registering issue of _____ (Direct Development Permission / Revised Direct Development Permission/ Revalidated Direct Development Permission) on _____ (date), I am directed to inform you that the Direct Development Permission/ Revised Direct Development Permission/ Revalidated Direct Development Permission issued by you, has been cancel on the following grounds:

- 1.
- 2.

Yours faithfully
The Competent Authority

Form No. 10A

Application for Development Permission for Building / Layout / Subdivision / Amalgamation

(Refer Rule No. 4.11.1)

Application for development permission under sections 44, 49 and 66 of The Dadra and Nagar Haveli and Daman & Diu Town & Country Planning Act, 1974, as the case may be.

To,

The Competent Authority

I / We hereby apply for permission for the following:

- Development on building unit
- Development of layout
- Subdivision of building unit
- Amalgamation of building unit

The information sheet is enclosed with this application. All drawings and documents as per Schedule No. 6A are enclosed with this application.

The names of the persons on record are as under:

- a) The plans are prepared by Registered Architect / Civil Engineer: _____
(Please specify the license number and date of expiry)
- b) The structural report, details and drawings are prepared and supplied by Registered Structural Engineer: _____ (if Applicable)
(Please Specify the license number and date of expiry)
- c) The site supervision of the construction work will be done by Registered Clerk of Work:
_____ (if Applicable)
(Please Specify the license number and date of expiry)

I shall be responsible for ensuring that the development complies with the Development Rules framed by the Competent Authority under the provisions of the Act. I shall fulfil my duties and responsibilities in accordance with the provisions of the Development Rules.

Signature of Owner / Developer or Authorized Agent of Owner _____
Date: _____

Table No. F10A – 1: Information Sheet with Application for Development Permission for Building / Layout / Amalgamation / Subdivision

No.	Title	Details		
1	Ownership Details			
	1.1 Applicant's Name			
	1.2 Postal Address for correspondence			
	1.3 Address of Land in Question			
	1.4 Applicants interest / title in land with respect of record of rights			
2	Land Details - Legal			
	2.1 Land Description			
	2.2 Village Name			
	2.3 TPS/Revenue village / Gamtal			
	2.4 FP No/ Revenue Survey No./ C S No			
	2.5 Sub-Plot No/Tenement No			
	2.6 Ward			
	2.7 Zone			
	2.8 Details of Approval before taken			
3	Type of Case for Application			
	3.1 New / Revision / Reopen / Renewal/ Addition/Alteration			
4	Land Occupancy Type Existing	Tick as applicable	Land Occupancy Type- Proposed	Tick as applicable
	4.1 Vacant	Vacant		
	4.2 Partly - Built	Partly - Built		
	4.3 Fully - Built	Fully - Built		
5	Site Details			
	A Width of Road Abutting the Site	TP Road	Non-TP Road/DP Road/Other Road	BRTS Corridor
	5.1 Road 1: Front Side			
	5.2 Road 2: Other than Front Side			
	5.3 Road 3: Other than Front Side			
	5.4 Road 4: Other than Front Side			
	B Seismic Details	Yes/ No	Zone No.	Details
	5.5 Seismic Zone			
	C Water Supply	Available by Local Government/A uthority	Bore Well	
	5.6 Water Supply Facility in Building-unit			
D Drainage	Available by Local Government/A uthority	Not Available		
5.7 Drainage Facility in Building- unit				
E Storm Water	City Network	Percolation Pit/ Percolating Well/ Recharge Pit		
5.8 Storm Water Facility in Building-unit				
F Solid Waste Disposal	Local Government/A uthority	None		
5.9 Solid Waste Disposal Facility in Building-unit				
G Electricity	Available by Torrent/GEB/ Other	None		
5.10 Electricity facility in Building- unit				
6 Land-Use Details				

No.	Title	Details				
	A Existing Use	Details				
		Use Sub-type	Total Units	Max. No of Floor	Max. Building Height.	Total Built-up Area
		6.1 Residential				
		6.2 Commercial				
		6.3 Mixed Use				
		6.4 Industrial				
	B Proposed Use	Details				
		6.6 Residential				
		6.7 Commercial				
		6.8 Mixed Use				
		6.9 Industrial				
		6.10 Others (please specify)				
Attachments: Annexure as above						

Form No. 10B
Application for Development Permission for Brick Kiln, Mining and Quarrying

(Refer Rule No. 4.11.1)

Application for permission of Brick-kiln, Mining and Quarrying under Section 44 The Dadra and Nagar Haveli and Daman & Diu Town & Country Planning Act, 1974

To,

The Competent Authority

I/We hereby apply for permission for development as described below. I/We are applying for development on this land for the first time. I/We certify that all terms and conditions laid down in the development permission granted during last year/previous years have been scrupulous observed.

Table No. F10B – 1: Application for Development Permission for Brick Kiln, Mining and Quarrying

No	Title		Details
1	Ownership Details		
	1.1	Applicant's Name	
	1.2	Postal Address for correspondence	
	1.3	Address of Land in Question	
	1.4	Applicants interest/title in land with respect of record of rights	
2	Land Details - Legal		
	2.1	Land Description	
	2.2	Village Name	
	2.3	TPS/ Revenue Village/ Gamtal	
	2.4	FP No/ Revenue Survey No./ C S No	
	2.5	Sub-Plot No/Tenement No	
	2.6	Details of 1/14 attached	
	2.7	Ward	
	2.8	Zone as per sanctioned DP	
	2.9	Details of Approval before taken.	
3	Was land in question used for brick-kiln/mining/quarrying in the past?		
	3.1	Yes/ No	
4	Whether Development Permission and N.A. permission were obtained in past?		
	4.1	Yes/ No	
5	Total area of land in question:		
6	Present Use of Land:		
7	Proposed Use of Land:		
8	Mention the area of land used for above mentioned uses so far (sq m) Indicate the same on-site plan		
9	Mention the proposed area to be used. (sqm) Indicate the same on-site plan		
10	Mention the duration for which permission is sought (in month / year)		
	10.1	Mention time-limit for completion or termination of such use (in month / year)	
11	For Renewal of Permission		
	11.1	Case No. and Date of previous Permission	
	11.2	Amount of the Security Deposit	
Attachments: Annexure as above			

Signature of Owner/Developer or Authorized agent of owner: _____
Date: _____

Form No. 10C
Application for Development Permission for Temporary Construction

(Refer Rule No. 4.16.1)

Application for development permission under sections 44, 49 and 66 of The Dadra and Nagar Haveli and Daman & Diu Town & Country Planning Act, 1974, as the case may be.

To,

The Competent Authority

I / We hereby apply for permission for the Development Permission for Temporary Construction

The information sheet is enclosed with this application. All drawings and documents as per Schedule No. 6D are enclosed with this application.

The names of the persons on record are as under:

- a) The plans are prepared by Registered Architect / Civil Engineer: _____
(Please specify the license number and date of expiry)
- b) The structural report, details and drawings are prepared and supplied by Registered Structural Engineer: _____ (if Applicable)
(Please Specify the license number and date of expiry)
- c) The site supervision of the construction work will be done by Registered Clerk of Work:
_____ (if Applicable)
(Please Specify the license number and date of expiry)

I shall be responsible for ensuring that the development complies with the Development Rules framed by the Competent Authority under the provisions of the Act. I shall fulfil my duties and responsibilities in accordance with the provisions of the Development Rules.

Signature of Owner / Developer or Authorized Agent of Owner _____
Date: _____

Table No. F10C – 1: Information Sheet with Application for Development Permission for Temporary Construction

No.	Title	Details		
1	Ownership Details			
	1.1 Applicant's Name			
	1.2 Postal Address for correspondence			
	1.3 Address of Land in Question			
	1.4 Applicants interest / title in land with respect of record of rights			
2	Land Details - Legal			
	2.1 Land Description			
	2.2 Village Name			
	2.3 TPS/Revenue village / Gamtal			
	2.4 FP No/ Revenue Survey No./ C S No			
	2.5 Sub-Plot No/Tenement No			
	2.6 Ward			
	2.7 Zone			
	2.8 Details of Approval before taken			
3	Was land in question used for temporary construction in the past?			
	3.1 Yes/ No	If YES, please specify details		
4	Land Occupancy Type Existing	Tick as applicable	Land Occupancy Type- Proposed	Tick as applicable
	4.1 Vacant	Vacant		
	4.2 Partly - Built	Partly - Built		
	4.3 Fully - Built	Fully - Built		
5	Site Details			
	A Width of Road Abutting the Site	TP Road	Non-TP Road/DP Road/Other Road	BRTS Corridor
	5.1 Road 1: Front Side			
	5.2 Road 2: Other than Front Side			
	5.3 Road 3: Other than Front Side			
	5.4 Road 4: Other than Front Side			
	B Seismic Details	Yes/ No	Zone No.	Details
	5.5 Seismic Zone			
	C Water Supply	Available by Local Government/ Authority	Bore Well	
	5.6 Water Supply Facility in Building-unit			
D Drainage	Available by Local Government/ Authority	Not Available		
5.7 Drainage Facility in Building- unit				
E Storm Water	City Network	Percolation Pit/ Percolating Well/ Recharge Pit		
5.8 Storm Water Facility in Building-unit				
F Solid Waste Disposal	Local Government/ Authority	None		
5.9 Solid Waste Disposal Facility in Building-unit				
G Electricity	Available by Torrent/GEB /Other	None		
5.10 Electricity facility in Building- unit				
6	Land-Use Details			
	A Existing Use	Details		

No.	Title	Details				
		Use	Sub-type	Total Units	Max. Height.	Total Area
6.1	Residential					
6.2	Commercial					
6.3	Mixed Use					
6.4	Industrial					
6.5	Others (please specify)					
B Proposed Use		Details				
6.6	Residential					
6.7	Commercial					
6.8	Mixed Use					
6.9	Industrial					
6.10	Others (please specify)					
Attachments: Annexure as above						

Form No. 11A
Area Statement for Buildings

(See Schedule No. 6A)

Table No. F11A – 1: Area Statement for Buildings

No	Title	Details (Area in sq m)		Supporting Documents Provided Yes / No / Not required	
A	Building-unit Area				
	A.1 (a) As per Revenue Record				
	A.2 (b) As per TPS Record				
	A.3 (c) Per site condition				
B	Deduction Area				
	B.1 (a) Roads (Proposed or under process)				
	B.2 (b) Reservations (under TP or DP or any other Statutory Plans / Under provision of GDR)				
	B.3 Area- not in possession				
	B.4 Other				
C	Net Area				
Existing					
No	Title	Details (Area in sq m/ Nos./m)		Supporting Documents Provided Yes / No / Not required	
		Required	Provided		
1	Common Plot				
2	Width of Roadside Margin				
	2.1 Width of Other than Roadside Margin				
	2.2 Total Marginal Area				
3	Width of Internal Road				
	3.1 Internal Road Area				
4	Total Permissible Ground-coverage				
5	Permissible FSI - Base (as per old DP)				
6	Permissible FSI - Chargeable				
7	FSI Consumed				
8	Ground Coverage				
9	Use	Use Sub-type	Total Built-up Area (in sq m)	No. of Units	Drawings Provided Yes / No
	Existing Use - as per old DP				
	9.1 Residential				
	9.2 Commercial				
	9.3 Mixed Use				
	9.4 Industrial				
	9.5 Others (please specify)				
	9.6 Total				
10	Floors	Numbers of Units	Floor Area/Built-up Area/FSI (in sq m)	Payment FSI (in sq m)	
Provide Details for Individual Building					
	10.1 Hollow Plinth				
	10.2 Ground Floor				
	10.3 Typical Floor				
	10.4 Floors other than Typical Floor				
	10.5 Total				

No	Title	Details (Area in sq m)		Supporting Documents Provided Yes / No / Not required
	10.6 Total of all buildings			
	10.7 Building	Building Height in mt	Number of Floors	
11	Dwelling Units	Numbers of Units	Total Unit Area (In sq m)	Details of unit area (Size) of Individual Unit (in sq m)
Provide Details for individual Building				
	11.1 1BHK			
	11.2 2BHK			
	11.3 3BHK			
	11.4 4BHK			
	11.6 More than 4BHK			
	11.7 Others (e.g., Studio units, penthouse etc.)			
	11.8 Other than Dwelling Units			
	11.9 Total			
	11.10 Total of all buildings			
12	Basement	Number of Basement	Area per Basement (in sq m)	Total Basement Area
	12.1 Basement 1: Area			
	12.2 Basement 2: Area			
	12.3 Others			
Existing Area Statement for Parking				
13	Parking	Area (in sq m)		Percentage (%)
	13.1 Area under parking (including visitors parking)			% of Total Built-up Area
	13.2 Visitors Parking			% of Total Parking Area
	13.3 Covered Parking			% of Total Parking Area
	13.4 Open Parking			% of Total Parking Area
	13.5 Sports & Leisure			
	13.6 Parks			
	13.7 Service establishment			
	13.8 Industrial			
	13.9 Storage			
	13.10 Transport			
	13.11 Agriculture			
	13.12 Temporary Use			
	13.13 Public Utility			
	13.14 Public Institutional			
	13.14 Total			
14	Floors/Levels	Numbers of Units	Floor Built-up Area/ Area/FSI (in sq m)	Payment FSI (in sq m)
Provide Details for individual Building				
	14.1 Basement			
	14.2 Hollow Plinth			
	14.3 Ground Floor			
	14.4 Typical Floor			
	14.5 Floors other than Typical Floor			
	14.6 Total			
	14.7 Total of all buildings			
15	Dwelling Units	Numbers of Units	Total Unit Area (in sqm)	Details of unit area (Size) of Individual Unit (in sqm)
Provide Details for individual Building				

No	Title	Details (Area in sq m)		Supporting Documents Provided Yes / No / Not required			
15	1BHK						
	2BHK						
	3BHK						
	4 BHK						
	More Than 4BHK						
	Others (e.g., Studio units, penthouse etc.)						
	Other than Dwelling Units						
	Total						
	Total of all buildings						
16	Dwelling Units	Carpet Area of each Unit (in sq m)	Details of Balcony & Verandah area (Size) of Individual Unit (in sq m)	Proportionate Common Amenities area in sq m	Total Built up Area (sq m)		
	16.1 Ground Floor						
	16.2 First Floor						
17	Building	Building Height in meters		Number of Floors			
18	Floor Level	Each Dwelling Unit (DU) No. (in sq m)	Carpet Area of Each DU (In sq m)	Total Carpet Area of Each Type (In sq m)	Total Carpet Area on Each Floor (in sq m)		
	Ground Floor						
	First Floor						
Proposed Area Statement for Parking							
19	Parking	Area (in sq m)		Percentage (%)			
	19.1 Parking Area required as per Regulation (please specify in % as well as area)			%Of Total Built-up Area			
	19.2 Proposed Parking Area (please specify in % as well as area)			% Of Total Built-up Area			
	19.3 Visitors parking area required at Ground Level (please specify in % as well as area)			% Of Total Built-up Area			
	19.4 Visitors parking area provided at Ground Level (please specify in % as well as area)			% Of Total Built-up Area			
20	Parking	Area (in sq m)	No. of spaces for 2-heelers	No. of Parking spaces for 4-wheelers			
	20.1 Proposed Parking on Ground Level (including Hollow Plinth)						
	20.2 Proposed Parking on Basement Level						
	20.3 Proposed Parking on levels above Hollow Plinth						
	20.4 Covered Parking						
	20.5 Open Parking						
	20.6 Total						
Build-to-line							
*Building-Unit (Plot) as mentioned in Local Area Plan, please provide the following details.							
1	Length of Build-to-Line	In meters					
2	Length of Build-to-Line coinciding the front façade of the building	In meters					
3	Percentage of length of Build-to- line coinciding the front façade of the building	%					
Proposal Details							

No	Title	Details (Area in sq m)		Supporting Documents Provided Yes / No / Not required
Description of proposed property				
List of Drawings	No. of Copies	North	Scale of drawing	Remarks
Plans				
Layout Plan				
Site plan				
Detailed Plan				
Sections				
Elevations				
Services & Amenities Plan				
Landscape Plan				
Ref Description of last approved plans (If any)		Date		

Form No. 11B
Area Statement for Subdivision / Amalgamation / Layout of Land

(See Schedule No. 6B)

Table No. F11B – 1: Area Statement for Subdivision / Amalgamation / Layout of Land

No.	Area Statement Particular		Sq m			
1	Area of Plot/Plots			1. List of Drawing attached	No. of copies	
	1.1	Internal Road Area				
	1.2	Common plot/ Plots				
	1.3	Amalgamated Area (in case of amalgamation)				
2	Deduction for:					
	2.1	Proposed roads		2. Ref. & Description of Last approved plans if any	Date	
	2.2	Any reservation				
	2.3	Not in Possession				
	2.4	Other				
	Total: (a+b+c+d)					
3	Net area of plot (1-2)					
4	(In case of Sub-Division) Common plot / Plots Internal Roads			3. Description of proposed development and property		
5	Balance area of Sub plot/sub plots (3-4)					
	Permissible F.S.I.					
	Total Built-up area permissible			4.		
6	Existing floor area			North line	Scale	
					Remarks	
	F.S.I.					
	Notes:			5. Certificate		
				Certified that the plot under reference was surveyed by me on and the dimensions of sides etc. of plot state on plan are as measure on site and the area so worked out tallies with the area stated in document of ownership / T.P. record. Architect/Engineer Signature.		
				6. Signatories		
				Signatory, Name, and address with		
				Regn. No.		
				Owner/ Developer/		
				Architect/		
				Engineer/Clerk of works/Site supervisor		

		A	Area Statement	Sq m		
For Subdivision/ Amalgamation/ Layout of Land	1	Area of Plot/Plots		I. List of Drawing attached	No. of copies	
		Internal Road Area				
		Common plot/ Plots				
		Amalgamated Area (in case of amalgamation)				
	2	Deduction for:		II. Ref. & Description of Last approved plans if any	Date	
		(a) Proposed roads				
		(b) Any reservation				
		(c) Not in Possession				

	A	Area Statement	Sq m	
	(d) Other			
	Total: (a+b+c+d)			
	3 Net area of plot (1-2)			
SITE PLAN (Under regulation no. 4.10.1/4.11.1/4.16.1)	(In case of Sub-Division) Common plot/ Plots Internal Roads			III. Description of proposed development and property
Layout Plan (under regulation no. 4.12, 4.13, 4.14, 4.15)	Balance area of Sub plot/sub plots (3-4)			
	Permissible F.S.I.			
	Total Built-up area permissible			IV.
	Existing floor area		North line	Scale
	F.S.I.			
	Notes:			
				V. Certificate
				Certified that the plot under reference was surveyed by me on and the dimensions of sides etc. of plot state on plan are as measure on site and the area so worked out tallies with the area stated in document of ownership / T.P. record.
				Architect/Engineer Signature.
				VI. Signatories
				Signatory, Name, and address with
				Regn. No.
				Owner/ Developer/
				Architect/
				Engineer/Clerk of works/Site supervisor

Form No. 11C
Area Statement for Temporary Construction

(See Schedule No. 6D)

Table No. F11C – 1: Area Statement for Temporary Construction

No.	Area Statement Particular		Sq m		
1	Area of Plot/Plots			1. List of Drawing attached	No. of copies
	1.1	Internal Road Area			
	1.2	Common plot/ Plots			
	1.3	Amalgamated Area (in case of amalgamation)			
2	Deduction for:				
	2.1	Proposed roads		2. Ref. & Description of Last approved plans if any	Date
	2.2	Any reservation			
	2.3	Not in Possession			
	2.4	Other			
	Total: (a+b+c+d)				
3	Net area of plot (1-2)				
4	(In case of Sub-Division) Common plot / Plots Internal Roads			3. Description of proposed development and property	
5	Balance area of Sub plot/sub plots (3-4) Permissible F.S.I.				
	Total Built-up area permissible			4.	
6	Existing floor area			North line	Scale
	F.S.I.				Remarks
	Notes:				
				5. Certificate	
				Certified that the plot under reference was surveyed by me on and the dimensions of sides etc. of plot state on plan are as measure on site and the area so worked out tallies with the area stated in document of ownership / T.P. record. Architect/Engineer Signature.	
				6. Signatories	
				Signatory, Name, and address with	
				Regn. No.	
				Owner/ Developer/	
				Architect/	
				Engineer/Clerk of works/Site supervisor	

Form No.12

Grant / Refusal of Development Permission / Revised Development Permission / Revalidated Development Permission

(Refer Rule No. 4.11.3, 4.15.3)

Permission is hereby granted/refused under Section 44(3a) (i)/ 44(3a) (ii) / 44(3a) (iii)/ 44(3b) (1)/ 44(3b) (ii), 49, 66 of The Dadra and Nagar Haveli and Daman & Diu Town & Country Planning Act, 1974, as the case may be.

To

(Name of person)

Proposed Development:

(Title of the work)

Plot No /Sub Plot No.: _____ Area of the Plot / Sub Plot: _____ (sq m)
Survey No.: _____ Area of Survey No.: _____ (sq m)
Final Plot No.: _____ Area of Final Plot No.: _____ (sq m)

Full Address of Proposed Development:

Name of the Owner / Developer: _____

Sir

With reference your application dated _____, for Development Permission for:

- Development on building unit
- Development of layout
- Subdivision of building unit
- Amalgamation of building unit

Has been

A Granted on following conditions before commencement of work (if any):

1 _____
2 _____

Development may be undertaken as per sanctioned design and specifications. This Development Permission is to be read in conjunction with all other document and drawings which enclosed as per the provision of Rule 4 and Schedule 6A, 6B, 6C & 6D, and that all such documents, drawings and specifications form a part of this Development Permission.

B Refused on the following grounds:

1 Documents /NOC etc.:

Following documents /plans /NOC / undertakings as mentioned in Form No. 1 are not submitted.

2 Site Clearance:

- i) Site is not cleared as per the provisions of the Outline Development Plan with respect to
 - Road line
 - Reservations
 - Zone
 - Other (specify)
- ii) Site is not cleared as per the provision of TP Scheme _____ with respect to
 - Road
 - Reservation
 - Final plot
 - Other (specify)
- iii) Proposed use is not permissible according to the width of road as per the Provision No.7.7.

3 Scrutiny of Layout:

Following provisions are not as per the Development Rules:

- Set back
- Margin
- Common plot
- Internal roads
- Parking space
- Ground coverage
- Any other (specify)

4 Scrutiny of Building Requirements:

Following provisions are not as per the Development Rules

- FSI.
- Height
- Ventilation
- Open air space
- Provisions for Fire protection
- Any other (specify)

Yours faithfully

The Competent Authority

Form No. 13
Application for Revised Direct Development Permission

(See Reg. No. 4.12.1)

To,

The Competent Authority

Proposed Development:

(Title of the work)

Plot No /Sub Plot No.: _____ Area of the Plot / Sub Plot: _____ (sq m)
Survey No.: _____ Area of Survey No.: _____ (sq m)
Final Plot No.: _____ Area of Final Plot No.: _____ (sq m)

Full Address of Proposed Development:

Name of the Owner / Developer: _____

Sir,

I am currently registered as Architect on Record with Competent Authority and am fully conversant with the General Development Rules. I have been appointed as the Architect on Record of the proposed development. I hereby certify that I have verified the revisions made to the designs and specifications of the proposed development and certify that they comply with the General Development Rules.

I hereby issue a Revised Direct Development Permission for construction of the proposed Development. This Revised Direct Development Permission is to be read in conjunction with all other documents and drawings which are enclosed as per the provisions of Rule No 4.14.1 and its Schedules, and that all such documents, drawings and specifications form part this Revised Direct Development Permission.

I fully understand that in case my certificate is found to be false, or if it is found that the Revised Direct Development Permission issued by me is inconsistent with the General Development Rules or that I have not fulfilled my responsibilities as prescribed therein, the PDA / CA shall be at liberty to penalize me / revoke my registration as per the provisions of the Act and Rules.

Name of the AOR: _____

Registration No.: _____

Address: _____

Tele. No.: _____

Signature: _____

Date: _____

Form No. 14
Application for Registering Issue of Revised Direct Development Permission

(See Rule No. 4.12.1)

To,

The Competent Authority

Proposed Development:

(Title of the work)

Plot No /Sub Plot No.: _____ Area of the Plot / Sub Plot: _____ (sq m)

Survey No.: _____ Area of Survey No.: _____ (sq m)

Final Plot No.: _____ Area of Final Plot No.: _____ (sq m)

Full Address of Proposed Development:

Name of the Owner / Developer: _____

Sir,

I am currently listed as Architect on Record with Competent Authority. I am fully conversant with the General Development Rules.

I have been appointed as the Architect on Record of the proposed development. I hereby certify that I have verified the revisions to the design and specifications of the proposed development and certify that they comply with the General Development Rules of the PDA.

I have issued a Revised Direct Development Permission for construction of the proposed Development and hereby apply for registration of the same on the records of the PDA.

I fully understand that in case my certificate is found to be false, or if it is found that the Direct Development Permission issued by me is inconsistent with the General Development Rules of the PDA shall be at liberty to penalize me.

Name of the AOR: _____

Registration No.: _____

Address: _____

Tele. No.: _____

Signature: _____

Date: _____

Form No. 15

Application for Revising Development Permission for Building / Layout / Sub-division / Amalgamation

(Refer Rule No. 4.13.1, 4.13.3)

To,

The Competent Authority

Proposed Development:

(Title of the work)

Plot No /Sub Plot No.: _____ Area of the Plot / Sub Plot: _____ (sq m)
Survey No.: _____ Area of Survey No.: _____ (sq m)
Final Plot No.: _____ Area of Final Plot No.: _____ (sq m)

Full Address of Proposed Development:

Name of the Owner / Developer: _____

Sir/ Madam,

I am the Owner / Developer of the building unit / plot and wish to undertake:

- Development on building unit
- Development of layout
- Subdivision of building unit
- Amalgamation of building unit

The Development Permission No. _____ has been granted to me by the Competent Authority vide Letter No. _____ dated _____. I wish to vary the sanctioned layout / design & specifications of the proposed building. I shall be responsible for ensuring that the building complies with the General Development Rules.

I request that the Revised Development Permission be granted to me.

Name of the Owner/Developer: _____

Address: _____

Tel. No.: _____

Signature: _____

Date: _____

Form No. 16

Application for Revalidating Direct Development Permission / Revised Direct Development Permission

(Refer Rule No. 4.14.1)

To,

The Competent Authority

File No: _____
Dated: _____

Proposed Development:

(Title of the work)

Plot No /Sub Plot No.: _____ Area of the Plot / Sub Plot: _____ (sq m)
Survey No.: _____ Area of Survey No.: _____ (sq m)
Final Plot No.: _____ Area of Final Plot No.: _____ (sq m)

Full Address of Proposed Development:

Name of the Owner / Developer: _____

Sir,

I am currently listed as Architect on Record with the PDA and am fully conversant with the General Development Rules of PDA. I have been appointed as the Architect on Record of the proposed Development. The Direct Development Permission that was issued on _____ (date) by _____ (name of the Architect on Record) has lapsed /suspended due to _____.

I hereby certify that I have verified the design and specifications of the proposed Development and certify that they comply with the General Development Rules. I hereby issue a Revalidated Direct Development Permission for construction of the proposed development. This Revalidated Direct Development Permission is to be read in conjunction with all other documents and drawings which are enclosed as per the provisions of Rule No 4.14.1 and its Schedules, and that all such documents, drawings, and specifications form part of this Revalidated Direct Development Permission.

I fully understand that in case my certificate is found to be false, or if it is found that the Revalidated Direct Development Permission issued by me is inconsistent with the General Development Rules the PDA shall be at liberty to penalize me as per the provisions of the Act and Rules.

Name of the AOR: _____
Registration No.: _____
Address: _____
Tele. No.: _____
Signature: _____
Date: _____

Form No. 17

Application for Registering Revalidating Direct Development Permission / Revised Direct Development Permission

(Refer Rule No. 4.14.1)

To,

The Competent Authority

Proposed Development:

(Title of the work)

Plot No /Sub Plot No.: _____ Area of the Plot / Sub Plot: _____ (sq m)
Survey No.: _____ Area of Survey No.: _____ (sq m)
Final Plot No.: _____ Area of Final Plot No.: _____ (sq m)

Full Address of Proposed Development:

Name of the Owner / Developer: _____

Sir,

I am currently listed as Architect on Record with Competent Authority. I am fully conversant with the General Development Rules.

I have been appointed as the Architect on Record of the proposed development. This is to notify you that the Direct Development Permission issued on _____ (date) by _____ (name of the Architect on Record) had lapsed on _____ (date) due to _____.

I hereby certify that I have verified the design and specifications of the proposed Development and certify that they comply with the General Development Rules of the PDA.

I have issued a Revalidated Direct Development Permission for construction of the proposed Development and hereby apply for registering the same on the records of the Corporation. I fully understand that in case my certificate is found to be false, or if it is found that the Revalidated Direct Development Permission issued by me is inconsistent with the General Development Rules of PDA, the PDA shall be at liberty to penalize me as per the provisions of the Act and Rules.

Name of the AOR: _____
Registration No.: _____
Address: _____
Tele. No.: _____
Signature: _____
Date: _____

Form No. 18

Application for Revalidating a Lapsed / Suspended Development Permission / Revised Development Permission

(Refer Rule No. 4.15.1)

To,

The Competent Authority

Proposed Development:

(Title of the work)

Plot No / Sub Plot No.: _____ Area of the Plot / Sub Plot: _____ (sq m)
Survey No.: _____ Area of Survey No.: _____ (sq m)
Final Plot No.: _____ Area of Final Plot No.: _____ (sq m)

Full Address of Proposed Development:

Name of the Owner / Developer: _____

Sir/ Madam,

I am the Owner/Developer of the plot and wish to undertake construction of the proposed building on the building-unit.

The Development Permission has been granted to me by the Competent Authority vide Letter No. _____ dated. The Development Permission that was issued on (date) by the Competent Authority shall lapse on / has lapsed / suspended on _____ (date) due to _____

I shall be responsible for ensuring that the building complies with the General Development Control Rules. I request that the Revalidated Development Permission be granted to me.

Name of the Owner/Developer: _____
Address: _____

Tel. No.: _____
Signature: _____
Date: _____

Form No. 19
Notice for Commencement of Construction

(Refer Rule No. 5.5.1)

To,

The Competent Authority

File No: _____

Dated: _____

Proposed Development:

(Title of the work)

Plot No /Sub Plot No.: _____ Area of the Plot / Sub Plot: _____ (sq m)

Survey No.: _____ Area of Survey No.: _____ (sq m)

Final Plot No.: _____ Area of Final Plot No.: _____ (sq m)

Full Address of Proposed Development:

Name of the Owner / Developer: _____

Sir/ Madam,

This is to notify you that the construction of the proposed building / development has commenced on _____ (date). The construction of the building / development shall be undertaken in compliance with the sanctioned design & specifications and the General Development Rules.

Signature of Owner with date: _____

Name: _____

Address: _____

Signature of Architect on Record with date: _____

Name: _____

Address: _____

Form No. 20
Notice for Progress of Construction

(Refer Rule No. 5.5.3, 6.6.3)

To

The Competent Authority

File No: _____
Dated: _____

Proposed Development:

(Title of the work)

Plot No /Sub Plot No.: _____ Area of the Plot / Sub Plot: _____ (sq m)
Survey No.: _____ Area of Survey No.: _____ (sq m)
Final Plot No.: _____ Area of Final Plot No.: _____ (sq m)

Full Address of Proposed Development:

Name of the Owner / Developer: _____

Sir/ Madam,

This is to notify you that the construction of the proposed building has reached the following stage:

No	Stage Date
1	Plinth level
2	Ground Floor
3	Middle storey
4	Last storey

The construction of the building / development is in compliance with the sanctioned drawings and the General Development Rules. We declare that the amended plan is not necessary at this stage.

Name of AOR/EOR	Name of Clerk of Works:
Registration No.:	Registration No.:
Address:	Address:
Tel. No.:	Tel. No.:
Signature:	Signature:
Date:	Date:

Signature of Owner with date: _____
Name: _____
Address: _____

Form No. 21
Notice for Completion and Compliance Certification

(Refer Rule No. 6.5.1, 6.6.3)

To,

The Competent Authority

File No: _____

Dated: _____

Proposed Development:

(Title of the work)

Plot No /Sub Plot No.: _____ Area of the Plot / Sub Plot: _____ (sq m)

Survey No.: _____ Area of Survey No.: _____ (sq m)

Final Plot No.: _____ Area of Final Plot No.: _____ (sq m)

Full Address of Proposed Development:

Name of the Owner / Developer: _____

Sir/ Madam,

This is to notify you that the construction of the proposed building / development has been completed under our supervision.

We hereby certify that the construction of the building has been undertaken in compliance with the sanctioned drawings and the General Development Rules. We declare that the building is to be used for purpose as per approved plan and it shall not be changed without obtaining written permission.

Any subsequent change from the completion drawings will be our responsibility.

Name of AOR/EOR

Registration No.:

Address:

Tel. No.:

Signature:

Date:

Name of SEOR

Registration No.:

Address:

Tel. No.:

Date:

Signature of Owner with date: _____

Name: _____

Address: _____

Form No. 22A
Application for Occupancy Certificate

(Refer Rule No. 6.5.1, 6.6.3)

To

The Competent Authority

File No: _____

Dated: _____

Proposed Development:

(Title of the work)

Plot No /Sub Plot No.: _____ Area of the Plot / Sub Plot: _____ (sq m)

Survey No.: _____ Area of Survey No.: _____ (sq m)

Final Plot No.: _____ Area of Final Plot No.: _____ (sq m)

Full Address of Proposed Development:

Name of the Owner / Developer: _____

Sir / Madam,

This is to notify you that the proposed building(s)/ fully built (No. of building blocks) out of the proposed building blocks has been completed in compliance with the sanctioned drawings and the General Development Rules.

Enclosed with this application are:

- 1 Notice of Completion of Construction and Compliance Certification as prescribed in Form No. 21.
- 2 One set of Completion Plans and as-built drawings, duly certified by the POR.
- 3 Form No. 2: Certificates of Undertaking by the Architect on Record or Engineer on Record; and form No. 2: Certificates of undertaking by the FPCOR
- 5 Form No. 2: Certificates of Undertaking by the Structural Engineer on Record,
- 6 Form No. 2: Certificates of Undertaking by the Clerk of Works on Record,
- 7 Clearance from Fire Officer, as applicable & mentioned in Schedule No. 4
- 8 A copy of valid Registration Certificate of the Persons on Record issued by the Competent Authority.
- 9 Certificate of lift Inspector (Government of UT) for high-rise buildings.

We request that the Occupancy Certificate be granted to the building. Any subsequent change from the completion drawings will be our responsibility.

Name of the Owner/Developer: _____

Address: _____

Tel. No.: _____

Signature: _____

Date: _____

Form No. 22B
Application for Occupancy Certificate of Temporary Construction

(Refer Rule No. 6.5.1, 6.6.3)

To

The Competent Authority

File No: _____

Dated: _____

Proposed Development for Temporary Construction:

(Title of the work)

Plot No /Sub Plot No.: _____ Area of the Plot / Sub Plot: _____ (sq m)

Survey No.: _____ Area of Survey No.: _____ (sq m)

Final Plot No.: _____ Area of Final Plot No.: _____ (sq m)

Full Address of Proposed Development for Temporary Construction:

Name of the Owner / Developer: _____

Sir / Madam,

This is to notify you that the proposed temporary construction has been completed in compliance with the sanctioned drawings and the General Development Rules.

Enclosed with this application are:

- 1 Notice of Completion of Construction and Compliance Certification as prescribed in Form No. 21.
- 2 One set of Completion Plans and as-built drawings, duly certified by the POR.
- 3 Form No. 2: Certificates of Undertaking by the Architect on Record or Engineer on Record; and form No. 2: Certificates of undertaking by the FPCOR
- 5 Form No. 2: Certificates of Undertaking by the Structural Engineer on Record,
- 6 Form No. 2: Certificates of Undertaking by the Clerk of Works on Record,
- 7 Clearance from Fire Officer, as applicable & mentioned in Schedule No. 4
- 8 A copy of valid Registration Certificate of the Persons on Record issued by the Competent Authority.
- 9 Certificate of lift Inspector (Government of UT) for high-rise buildings.

We request that the Occupancy Certificate be granted to the building. Any subsequent change from the completion drawings will be our responsibility.

Name of the Owner/Developer: _____

Address: _____

Tel. No.: _____

Signature: _____

Date: _____

Form No. 23
Grant / Refusal of Occupancy Certificate

(Refer Rule No. 6.5.3)

To _____

(Name of person)

Proposed Development:

(Title of the work)

Plot No /Sub Plot No.: _____ Area of the Plot / Sub Plot: _____ (sq m)
Survey No.: _____ Area of Survey No.: _____ (sq m)
Final Plot No.: _____ Area of Final Plot No.: _____ (sq m)

Full Address of Proposed Development:

Name of the Owner / Developer: _____

With reference to your Application No: _____ dated: _____ I am directed to inform you that the building unit has been inspected on date: _____ and the development is as per sanctioned design and specifications; and that Occupancy Certificate has been granted. The building / part of building may be used as per sanctioned drawings. This Occupancy Certificate is to be read in conjunction with all other documents and drawings which are enclosed as per the provisions of Rule No 7 and its Schedules, and that all such documents, drawings, and specifications form part of this Occupancy Certificate

OR

With reference to your Application No: _____ dated: _____ I am directed to inform you that the building-unit has been inspected on date _____ and that a Occupancy Certificate has not been granted on the following grounds:

- 1.
- 2.

Yours faithfully

For,
The Competent Authority

Form No. 24
Cancellation of Occupancy Certificate

(Refer Rule No. 6.3)

To _____

File No: _____
Dated: _____

Proposed development:

(Title of the work)

Plot No.: Area of the Plot:

Address and location of proposed development:

Sir,

This is to notify you that the Occupancy Certificate No. _____ issued or granted on date: _____ by _____ (name of the Architect on Record)/ MS PDA/ Chief Executive Authority has been revoked by the MS PDA / Chief Executive Authority on the following grounds:

- 1.
- 2.

Please note that no further use may be made of the development. A new Occupancy Certificate has to be obtained before making use of the development.

For,

The Competent Authority

Form No. 25
Change in the Sanctioned Occupancy of Building / Development

(Refer Rule No. 6.6.1, 6.6.3)

To

The Competent Authority

Proposed Development:

(Title of the work)

Plot No /Sub Plot No.: _____ Area of the Plot / Sub Plot: _____ (sq m)
Survey No.: _____ Area of Survey No.: _____ (sq m)
Final Plot No.: _____ Area of Final Plot No.: _____ (sq m)

Full Address of Proposed Development:

Name of the Owner / Developer: _____

Sir,

I am the Owner of the development to which the Occupancy Certificate has been granted by the MS PDA / Chief Officer vide Letter No. ____ dated _____. I wish to change the Sanctioned Use of the Development to a new use as specified below:

(Description of the new use to which the Development is proposed to be put to)

I shall be responsible for ensuring that the new use of the Development complies with the General Development Control Rules.

We hereby certify that in case the new use results in the Development being re-classified to a Higher Importance Factor (as defined in the IS: 1893-2002 "Criteria for Earthquake Resistant Design Structures - Fifth Revision"), the Development shall conform to seismic requirements for the Development with the Higher Importance Factor.

I request that the Permission to Change Sanctioned Use of the Development be granted.

Name of the Owner: _____

Address: _____

Tele. No.: _____

Signature: _____

Date: _____

Name of the SEOR: _____

Registration No.: _____

Address: _____

Tele. No.: _____

Signature: _____

Date: _____

Form No. 26
Structural Inspection Report

(Maintenance of Building –Schedule No. 10)

(This form has to be completed by registered Structural Engineer on Record after his / her site inspection and verification regarding compliance of all recommendation by the owner, which in the opinion of the registered Structural Engineer on Record is necessary for safety of the structure)

Table No. F26 – 1: Details of Structural Inspection Report (Part 1)

No	Description	Information	Notes
1	Title, Location and Address of the building including T.P. No, F.P. No, etc		
2	Name of Present Owner		
3	Name of Structural Engineer on Record		
4	Use of the building		
5	Year of construction Year of subsequent additions Nature of additions or alterations		
6	Date of Last Inspection Report SEOR for Last Inspection Report		
7	Class1 -Building		
8	Class2 -Building		
9	Type of structure i) Load bearing walls ii) R.C.C frame iii) R.C.C frame and Shear walls iv) Steel Frame		
10	Soil data i) Type of soil ii) Design safe bearing capacity iii) Any change subsequent to construction iv) Any open excavation pit v) Any water body nearby vi) Proximity of drain vii) Underground water tank viii) Outlets of rainwater pipes ix) Settlements		IS:1893Cl.6.3. 5.2 IS:1904

Table No. F26 – 2: Details of Structural Inspection Report (Part 2)

(a) Function	(b) Framed construction							
	Residence (with or without shops)	Apartments (with or Without shops)	Office Bldg.	Shopping center	School, College	Hostel	Auditoria	Factory
1	2	3	4	5	6	7	8	
A. Load bearing masonry wall construction								
Framed structure								
Construction and structural materials	Critical load bearing element	Brick	RCC	Stone	Timber	Steel		
	Roof Floor	RCC	Timber	RBC	Steel	Jack- arch		

Table No. F26 – 3: Details of Structural Inspection Report (Part 3)

Part 1 Load bearing masonry buildings			
Description		Information	Notes
1	Building category		
2	Any cracks in masonry walls		
	Extent of cracks		
	Location of cracks		
	Sketch of cracks, if necessary		
3	Recommendations, if any		
Part 2 Reinforced Concrete framed buildings			
Description		Information	Notes
1	Type of Building		
2	Any cracks in beams		
	Extent of cracks		
	Probable causes		
3	Any cracks in columns		
	Extent of cracks		
	Probable causes		
4	Any cracks in slab		
	Extent of cracks		
	Probable causes		
	Spilling of concrete or plaster of slab		
	Corrosion of Reinforcement		
5	Cover Spell		
Part 3 Reinforced Concrete framed buildings			
Description		Information	Notes
6	Exposure of reinforcement		
7	Subsequent damage by user for taking pipes, conduits,		

	hanging fans or any other fixtures, etc.		
8	Loads in excess of design loads		
9	Recommendations, if any		

Part 4 Buildings in Structural Steel

Description	Information	Notes
1 Building category		
2 Painting		
3 Corrosion		
4 Joints, nuts, bolts, rivets, welds, gusset plates		
5 Bending or buckling of members		
6 Base plate connections with columns of pedestal		
7 Loads in excess of design loads		
8 Recommendations, if any		

This is to certify that the above is a correct representation of facts as given to me by the owner and as determined by me after Site Inspection to the best of my ability and judgment.

The recommendations made by me to ensure adequate safety of the structure are compiled with by the owner to my entire satisfaction.

Name of the SEOR: _____

Registration No.: _____

Address: _____

Tel. No.: _____

Signature: _____

Date: _____

Form No. 27
Fire Safety Certificate

(Refer Rules, Schedule No. 10)

To

The Competent Authority

Existing Building:

Survey No.:

City Survey No.:

Block No.:

Final Plot No.:

Sub Plot / Property No.:

Address and location of existing building:

Name of Owner:

Type of Structure:

Sir / Madam,

I am currently registered as Fire Protection Consultant on Record for the above building.

This is to notify that I have inspected the above building on date _____
and to the best of my knowledge; I certify that the fire safety of the building has not been
compromised due to lack of maintenance.

Name of the FPCOR: _____

Registration No.: _____

Address: _____

Tel. No.: _____

Signature: _____

Date: _____

General Development Rules 2023 for Dadra and Nagar Haveli District of Union Territory of Dadra and Nagar Haveli and Daman and Diu

CHAPTER 14 – Fire Rules

PART 3 (II)

**Framed under Section 30, 140 (y) and 141 of
The Dadra and Nagar Haveli and Daman and Diu Town & Country
Planning Act, 1974 (Amended from time to time).**

**Dadra and Nagar Haveli Planning and Development Authority
Union Territory Administration of Dadra and Nagar Haveli,
Daman & Diu**

General Development Rules 2023 for Dadra and Nagar Haveli District of Union Territory of Dadra and Nagar Haveli and Daman and Diu

CHAPTER 14 – Fire Rules

PART 3 (II)

**Framed under Section 30, 140 (y) and 141 of
The Dadra and Nagar Haveli and Daman and Diu Town & Country
Planning Act, 1974 (Amended from time to time).**

**Dadra and Nagar Haveli Planning and Development Authority
Union Territory Administration of Dadra and Nagar Haveli,
Daman & Diu**

14 Fire Prevention, Life Safety and Fire Protection Requirements

14.1 General

- 14.1.1 Scope
- 14.1.2 Definitions
 - 1 Fire Detection and Alarm System
 - 2 Combustible Material
 - 3 Down-comer
 - 4 Dry Riser
 - 5 Emergency Lighting
 - 6 Emergency Lighting System
 - 7 Escape Lighting
 - 8 Evacuation Lift
 - 9 Exit
 - 10 Fire Barrier (or Fire Resisting Barrier)
 - 11 Fire Compartment
 - 12 Fire Door / Fire Resistant door
 - 13 Fire Exit
 - 14 Firefighting Shaft (Fire Tower)
 - 15 Fire Load
 - 16 Fire Load Density
 - 17 Fire/Fireman's Lift
 - 18 Fire Resistance
 - 19 Fire Resistance Rating
 - 20 Fire Resistant Wall
 - 21 Fire Separation
 - 22 Fire Stop
 - 23 Fire Suppression Systems
 - 24 Fire Wall or Fire Separating Wall
 - 25 Fire Exit Hardware
 - 26 Lift Lobby
 - 27 Means of Egress
 - 28 Occupant Load
 - 29 Place of Comparative Safety
 - 30 Pressurization:
 - 31 Pressurization Level
 - 32 Ramp
 - 33 Refuge Area
 - 34 Roof Exits
 - 35 Smoke Barrier
 - 36 Smoke Compartment
 - 37 Stack Pressure
 - 38 Travel Distance
 - 39 Venting Fire
 - 40 Visual Strobes/Flashing
 - 41 Water Based Systems
 - 42 Wet Riser
- 14.1.3 Procedure for Clearance from Fire and Emergency Services for Development Permission and Occupancy Certificate
- 14.1.4 Renewal of Fire Clearance
- 14.1.5 Fees
- 14.1.6 Penalties

14.2 Fire Prevention

- 14.2.1 Classification of Buildings Based on Occupancy
- 14.2.2 Fire Divisions
- 14.2.3 Types of Building Construction
- 14.2.4 General Requirements of All individual Occupancies

14.3 Life Safety

- 14.3.1 General
- 14.3.2 General Exit Requirements
- 14.3.3 Occupant Load
- 14.3.4 Egress Components
- 14.3.5 Compartmentation
- 14.3.6 Smoke Control
- 14.3.7 Gas Supply
- 14.3.8 Hazardous Areas, Gaseous, Oil Storage Yard, etc
- 14.3.9 Fire Detection and Alarm
- 14.3.10 Fire Officer
- 14.3.11 Fire Drills and Fire Orders

14.4 Fire Protection

- 14.4.1 Fire Extinguishers/ Fixed Firefighting Installations
- 14.4.2 Fire Detection and Alarm System

14.5 Additional Occupancy wise Requirements

- 14.5.1 Residential Buildings (Group A)
- 14.5.2 Hospitality Buildings (Group B)
- 14.5.3 Educational Buildings (Group C)
- 14.5.4 Health and Public Buildings (Group D)
- 14.5.5 Assembly Buildings (Group E)
- 14.5.6 Transportation (Group F)
- 14.5.7 Storage Buildings (Group G)
- 14.5.8 Mercantile Buildings (Group H)
- 14.5.9 Business Buildings (Group I)
- 14.5.10 Industrial Buildings (Group J)

Annexures

- Annexure A: Calorific Value of Common Materials
- Annexure B: Broad Classification of Industrial Occupancies into Different Degree of Hazards
- Annexure C: Available Data regarding Fire Resistance Rating of various Building Components
- Annexure D: Guidelines for Fire Drill and Evacuation procedures for High Rise Buildings
- Annexure E: Additional Requirements for High Rise Buildings
- Annexure F: Atrium
- Annexure G: Commercial Kitchens
- Annexure H: Car Parking Facilities
- Annexure J: Fire Protection Considerations for Venting in Industrial Buildings
- Annexure K: List of Standards

Table

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14.1 General

This section, which has been framed in accordance with National Building Code 2016, covers the requirement for fire prevention, life safety in relation to fire and fire protection of buildings. Notwithstanding anything contained anywhere else, this section shall be followed by the fire department and all the authorities required to issue fire and safety permissions. Notwithstanding anything else contained anywhere else in proposed or finalised ‘Dadra and Nagar Haveli and Daman & Diu Fire and Emergency Service Regulation, 2022’ or in any other such law, these bye-laws shall be deemed to be Bye-Law within the meaning of 2(e) of the draft Dadra and Nagar Haveli and Daman & Diu Fire and Emergency Service Regulation, 2022 and the fire department shall follow the provisions of this part of GDR in supersession of anything contained anywhere else in NBC or any other law. In case there is any confusion regarding any provision in this Part the same may be referred to the Planning and Development Authority whose decision in this regard shall be final. A certificate of the fire department to the effect shall be sufficient proof that all requirements of this chapter have been met.

14.1.1 Scope

The provisions are applicable to:

- 1 All multi storeyed buildings (High-rise)
- 2 All of the following:
 - a) Hospitality, education, public offices, mercantile, industrial, storage, hazardous and mixed occupancies, where any of these buildings have floor area more than 500 sq. m on any one or more floors.
 - b) educational buildings having height 9 m and above.
 - c) public offices, health buildings having height 9 m and above.
 - d) all assembly buildings.
 - e) buildings, having area more than 300 sq m of incidental assembly occupancy on any floor; and
 - f) buildings with two basements or more, or with one basement of area more than 500 sq m.

NOTE The owner of the building and parties to agreement, may however, decide to apply the provisions of this rule to buildings other than those given above.

14.1.2 Definitions

- 1 **Fire Detection and Alarm System:** A system comprising components and sub-systems required for automatically detecting smoke, heat or fire initiating an alarm and other actions as appropriate. This system also includes manually operated electronic fire alarm (MOEFA¹) system.
- 2 **Combustible Material:** A material which either burns itself or adds heat to a fire, when tested for non-combustibility in accordance with accepted standard.
- 3 **Down-comer:** An arrangement of firefighting within the building by means of down-comer pipe connected to terrace tank through terrace pump, gate valve and non-return valve and having mains not less than 100 mm internal diameter with landing valves on each floor/landing. It is also fitted with inlet connections at ground level for charging with water by pumping from fire service appliances and air release valve at roof level to release trapped air inside.
- 4 **Dry Riser:** An arrangement of firefighting within the building by means of vertical rising mains not less than 100 mm internal diameter with landing valves on each floor/landing which is

¹ MOEFA system (with or without automatic fire detection and alarm system) includes all or some of the components such as manual call stations (initiating an alarm for fire and other actions as required), talk-back system and public address system.

normally dry but is capable of being charged with water usually by pumping from fire service appliances.

- 5 *Emergency Lighting:* Lighting provided for use when the supply to the normal lighting fails.
- 6 *Emergency Lighting System:* A complete but discrete emergency lighting installation also fed from the standby power source to the emergency lighting lamp(s), for example, self-contained emergency luminaire or a circuit from central battery (with or without monitoring system) connected through wiring to several escape lighting luminaries.
- 7 *Escape Lighting:* That part of the emergency lighting which is provided to ensure that the escape route is illuminated at all material times, for example, at all times when persons are on the premises, or at times the main lighting is not available, either for the whole building or for the means of egress.
- 8 *Evacuation Lift:* Lift that can be used, during an emergency, for self- evacuation.
- 9 *Exit:* means a passage, channel or means of egress from any building, storey or floor area to a street or other open space of safety. Exit components include exterior exit doors at the level of exit discharge, interior exit stairways, exit passageways, exterior exit stairways and exterior exit ramps.
 - a) *Exit Access:* That portion of a means of egress that leads to an exit (for example, doorways, staircase lobby, ramps, Veranda, corridor, or passageway leading to an exit. (Refer Figure No. 14.1).
 - b) *Exit Access Corridor:* A corridor in exit access which may not necessarily have the requirement of exits being met.
 - c) *Exit Discharge:* The component of a means of egress between the termination of an exit and a public way (Refer Figure. No. 14.1).
 - d) *Horizontal exit:* A defend in place or a staging arrangement, providing safety from fire and smoke originating from the area of incidence, by allowing alternative egress from a compartment to an area of refuge or another compartment at or near the same level. This also includes such egress from a compartment to an adjoining building. A horizontal exit shall be through a fire door of 120 min rating in a fire-resistant wall. Horizontal exits require separation with the refuge area or adjoining compartment through 120 min fire barrier. The adjoining compartment of the horizontal exit should allow unlocked and ease of egress and exits for the occupants using defend in place strategy.
 - d) *Vertical Exit:* means an exit used for ascending or descending between two or more levels, including stairways. smoke-proof towers, ramps, escalators, and fire escapes.

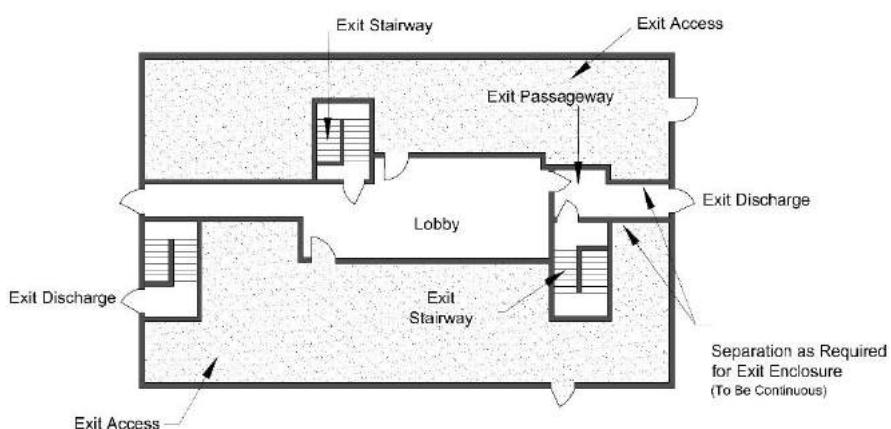


Figure No. 14.1: Components of Exit

- 10 *Fire Barrier (or Fire Resisting Barrier)*: A fire barrier is a vertically or horizontally aligned member such as a wall or a fire curtain, or a floor. These may be with discontinuities created by openings with a specified fire resistance rating, where such members are designed and constructed with a specified fire resistance rating to limit the spread of fire that also restricts the movement of smoke.
- 11 *Fire Compartment*: A space within a building that is enclosed by fire barrier or fire-resistant walls on all sides, including the top and bottom.
- 12 *Fire Door / Fire Resistant Door*²: Any combination of fire door, frame, hardware, and other accessories that together provide a specific fire-resistant rating to the opening in terms of its stability, integrity, and insulation properties, when installed in the openings in fire separation walls.
- 13 *Fire Exit*: A way out leading from exit access with or without panic bar provided on the door.
- 14 *Firefighting Shaft (Fire Tower)*: An enclosed shaft having protected area of 120 min fire resistance rating comprising protected lobby, staircase, and fireman's lift, connected directly to exit discharge or through exit passageway with 120 min fire resistant wall at the level of exit discharge to exit discharge. These shall also serve the purpose of exit requirement/ strategy for the occupants. The respective floors shall be approachable from fire-fighting shaft enabling the fire fighters to access the floor and also enabling the fire fighters to assist in evacuation through fireman's lift. The firefighting shaft shall be equipped with 120 min fire doors. The firefighting shaft shall be equipped with firemen talk back, wet riser and landing valve in its lobby, to fight fire by fire fighters. (*see Figure 14.2 for a typical firefighting shaft*).

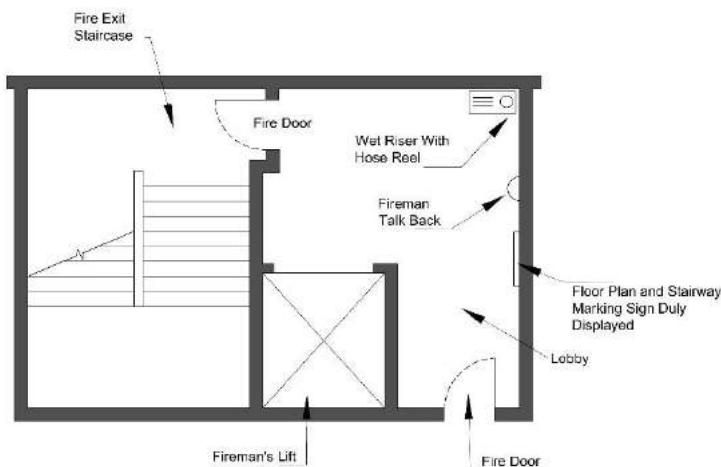


Figure No 14.2: Typical Fire Fighting Shaft

- 15 *Fire Load*: Calorific energy, of the whole contents contained in a space, including the facings of the walls, partitions, floors and ceilings.

² NOTES

- 1 Fire doors in exits shall have fire rating as required in this Part/ these Rules to meet the requirement of integrity and stability; and the insulation criteria shall be 20 min.
- 2 Fire doors in exits shall be provided with intumescent seal.
- 3 Fire doors in exits shall not be allowed to be on hold open position and kept closed and to close by 'door closure — spring mechanism'.
- 4 Fire curtains shall not be allowed as fire exits. If so provided for compartmentation, independent fire door shall be provided meeting the requirement for fire door in exits as above (of the width as required) within the prescribed travel distance requirement.

- 16 *Fire Load Density*: Fire load divided by floor area.
- 17 *Fire/Fireman's Lift*: A lift or a group of lifts invariably associated with all the features and requirements of a fire-fighting shaft. Such lift(s) are installed to enable fire services personnel to reach different floors with minimum delay and shall meet the additional features as required in accordance with these Rules. This lift also serves the purpose of meeting the requirement of evacuation lift for assisted evacuation.
- 18 *Fire Resistance*: Fire resistance is a property of an element of building construction and is the measure of its ability to satisfy for a stated period, some or all of the following criteria:
- Load bearing capacity (Stability) (R)* — The ability of a load bearing element to withstand fire exposure without any loss of structural stability.
 - Integrity (E)* — Resistance to penetration of flame and hot gases (minimum 2 hours).
 - Insulation (I)* — Resistance to temperature rise on the unexposed face up to a maximum of 180°C at any single point and average temperature of 140°C.

The fire resistance test of structures shall be done in accordance with IS: 3809-1966 Fire Resistance Test of Structure.

- 19 *Fire Resistance Rating*³— The time that a material or construction will withstand the standard fire exposure as determined by fire test done in accordance with the standard methods of fire tests of materials/ structures as per the accepted standard (Refer Annexure K (2)).
- 20 *Fire Resistant Wall*: Fire resistance rated wall, having opening(s) with specified fire-resistant rating, which restricts the spread of fire from one part of a building to another part of the same building.
- 21 *Fire Separation*: The distance in metre, measured from the external wall of the building concerned to the external wall of any other building on the site, or from other site, or from the opposite side of street or other public space for the purpose of preventing the spread of fire.
- 22 *Fire Stop*⁴: A fire resistant material, or construction, having a fire resistance rating of not less than the fire separating elements, installed in concealed spaces or between structural elements of a building to prevent the spread/propagation of fire and smoke through walls, ceilings and the like as per the laid down criteria.
- 23 *Fire Suppression Systems*
- Gas based systems*: Systems that use gaseous agents as fire suppression media, such as, all agents alternate to Halon gases, listed and approved for use by relevant Indian Standards; other methods/types of gas-based systems where their protection is equal to or better than what is suggested above for the type of application subject to the acceptance of Authorities concerned may also fall under such systems.

³ NOTES

- The requirement of rating of various building elements as given in this Part shall be applicable in accordance with the provisions given in the accepted standard (Refer Annexure K (2))
- The fire resistance rating shall be specified in terms of minutes.
- Fire resistance rating for non-structural material/assembly shall bear a label of compliance to such rating as per the approval of competent authority based on testing and evaluation. The label shall be permanently affixed to the material/assembly and may carry other relevant details such as name and type of the product, and manufacturer's details.

⁴ Fire stop assembly for through penetrations is a combination of firestop compatible for use with the penetrant, penetration items such as cables, cable tray, conduits, ducts, pipes, etc, and their means of support through the wall or opening that together restores the fire resistance rating of the fire separating elements in terms of its integrity and/or insulation properties.

Fire stop assembly for joints is the one where fire stop with movement capability is used to seal the linear joints between adjacent fire separating elements, to maintain the fire resistance of the separating elements, which should be installed within its tested design limits with regard to size of the joint, type of assembly, and anticipated compression and extension of the joint.

- b) *Water based systems:* Systems that use mainly water as firefighting media such as hydrant system, sprinkler system, water spray system, foam system and water mist system.
- 24 *Fire Wall or Fire Separating Wall:* A fire resistance rated wall having fire protected openings, which restricts the spread of fire and extends continuously from the foundation to the roof (and through the roof at least 1m above the roof in case of combustible roof), with sufficient structural stability under fire conditions to allow collapse of construction on one side or either side without collapse of the wall.
- 25 *Fire Exit Hardware:* A door-latching assembly incorporating an actuating member or panic bar that releases the latch bolt upon the application of a force in the direction of egress travel, provided on exits.
- 26 *Lift Lobby:* A space from which people directly enter a lift car(s) and into which people directly enter upon exiting a lift car(s).
- 27 *Means of Egress:* A continuous way of travel from any point in a building or structure to a public way, consisting of three separate and distinct parts, that is, exit access, exit, and exit discharge.
- 28 *Occupant Load:* Maximum number of persons that might occupy a building or portion thereof at any one time.
- 29 *Place of Comparative Safety:* Places within a building where people can stay little longer until evacuation, for example, refuge areas, terrace, fire/ smoke separated compartments, etc.
- 30 *Pressurization:* The establishment of a pressure difference across a barrier to protect exit, stairway, lobby, exit passageway or room of a building from smoke penetration.
- 31 *Pressurization Level:* The pressure difference between the pressurized space and the adjoining area served by the pressurized space expressed in Pascal (Pa).
- 32 *Ramp:* The construction, in the form of an inclined plane that is steeper than or equal to 1: 20 (5 percent) from the horizontal, together with any intermediate landing, that makes it possible to pass from one level to another.
- 33 *Refuge Area:* An area within the building for a temporary use during egress. It generally serves as a staging area which is protected from the effect of fire and smoke.
- 34 *Roof Exits:* A means of escape on to the roof of a building, where the roof has access to it from the ground through alternative staircase or adjacent building.
- 35 *Smoke Barrier:* A continuous membrane, or a membrane, where such membrane is designed and constructed to restrict the movement of smoke.
- 36 *Smoke Compartment:* A space within a building enclosed by smoke barriers on all sides.
- 37 *Stack Pressure:* Pressure difference caused by a temperature difference creating an air movement within a duct, chimney or enclosure.
- 38 *Travel Distance:* The distance to be travelled from any point in a building to a protected exit or external escape route or final exit measured along the line of travel (*Refer Figure No. 14.3*).

Figure No. 14.3: (Deleted)

- 39 *Venting Fire:* The process of facilitating heat and smoke to leave a building as quickly as possible by such paths so that lateral spread of fire and heat is checked, firefighting operations are facilitated and minimum fire damage is caused.
- 40 *Visual Strobes/Flashing:*⁵ It is an audio-visual fire alarm for alerting persons with hearing impairment with flashing light. The strobe frequency should be from 0.5 Hz to 4.0 Hz.
- 41 *Water Based Systems*
- Hydrant System:* A distribution system having a network of piping installed underground/aboveground around and/or through inside of a building with internal and/or external hydrants fitted with landing valves at regular intervals according to the occupancy. The distribution system is connected to water supply system for firefighting.
 - Automatic Sprinkler System:* A system of water pipes fitted with sprinkler heads at suitable intervals and heights and designed to actuate automatically, control and extinguish a fire by the discharge of water.
 - Automatic Water Spray Systems:* A special fixed pipe system connected to a reliable source of fire protection water supply and equipped with water spray nozzles for specific water discharge and distribution over the surface or area to be protected. The piping system is connected to the water supply through an automatically actuated deluge valve which initiates flow of water. Automatic actuation is achieved by operation of automatic detecting equipment installed along with water spray nozzles. There are two types of systems namely high velocity and medium velocity systems.
 - Water Mist Systems:* A distribution system connected to a pumping and water supply system that is equipped with nozzles capable of delivering water mist to the part/entire enclosure or area, intended to control, suppress, or extinguish fire and is capable of meeting the specified performance requirements.
 - Foam Protection System:* Firefighting systems where foam is made by mechanically mixing air with a solution consisting of fresh water to which a foaming agent (liquid concentrate) has been added. Firefighting foam is a stable aggregation of small bubbles of density lower than oil or water and shows tenacious qualities for covering horizontal surfaces. There are three types of foam applications that is, low, medium and high expansion foams depending upon the application.
- 42 *Wet Riser:* An arrangement for firefighting within the building by means of vertical rising mains not less than 100 mm nominal diameter with landing valves on each floor/landing for firefighting purposes and permanently charged with water from a pressurized supply.

14.1.3 Procedure for Clearance from Fire and Emergency Service for Development Permission and Occupancy Certificate

- The buildings as mentioned in the ‘The Dadra and Nagar Haveli and Daman & Diu Fire and Emergency Service Regulation, 2021’ (*Refer Clause 24(1)*) shall obtain ‘Fire Safety Certificate’ from Fire and Emergency Service.
- Owners of such Buildings, shall ensure that they are equipped with such fire prevention and life safety measures to prevent or extinguish fire, as may be prescribed under these Rules.

⁵ NOTE — Care should be taken to ensure that overlapping strobes do not combine to result in a higher frequency of flashing.

- 3 The owner or occupier, as the case may be, shall furnish to the Fire Officer, a certificate in the prescribed form issued by a Fire Protection Consultant on Record (FPCOR) regarding the compliance of the fire prevention and life safety measures in his building or part thereof, as required by or under the provisions of these Rules. This shall be accompanied by plans that clearly mark and indicate the complete fire protection arrangements and the means of access/escape for the proposed building with suitable legend along with standard signs and symbols on the drawings.
- 4 The Fire Officer shall scrutinize the compliances with regard to the requirements made by owners or occupiers or applicant, as the case may be, either independently or jointly, after making necessary inquiry, if any, issue fire safety certificate within a month of the application subject to the condition that all necessary documents, designs, maps, completion certificates etc. shall be submitted by the owner or occupier or applicant.
- 5 If the owner or occupier, as the case may be, fails to comply with the directions issued by the Fire Officer, the fire safety certificate, shall be cancelled after giving owner or occupier an opportunity of hearing to show-cause.
- 6 The owner or occupier of the building or premises, whose fire safety certificate has been cancelled due to default on his part, shall not be entitled to occupy the building or premises on the ground of non-compliance of fire prevention and life safety measures.

14.1.4 Renewal of Fire Clearance

The owner or occupier, as the case may be, shall furnish to the Fire Officer, a certificate in the prescribed form issued by a Fire Protection Consultant on Record (FPCOR) regarding the compliance of the fire prevention and life safety measures in the building or part thereof, and shall also furnish to the Fire Officer a certificate as stipulated in Form 27, at the interval not more than 12 months regarding the maintenance of fire prevention and life safety measures in good repair and efficient condition.

14.1.5 Fees

For augmentation of fire service facilities fee payable to Fire Officer by the owner/ occupier along with sets of plans for obtaining the No Objection Certificate shall be as prescribed by the Authority.

14.1.6 Penalties

Whoever fails without reasonable cause to comply with the necessary fire safety measures shall be punishable with fine which may extend to Ten thousand rupees or with imprisonment for a term which may extend to three months or with both (*Refer Section 35 Dadra and Nagar Haveli and Daman & Diu Fire and Emergency Services Regulation, 2021*).

14.2 Fire Prevention

14.2.1 Classification of Buildings based on Occupancy

- 1 All buildings/uses, whether existing or hereafter erected shall be classified according to use or the character of occupancy in one of the following groups as indicated in the table below. The table also summarizes the types of examples of buildings:

Table No. 14.1: Classification of Buildings based on Occupancy and Fire Divisions

No	Main	Sub	Use Group as per proposed ODP GDR	Detailed Uses As per proposed ODP GDR	Fire Divisions	Occupant Load Factor (sqm/person) As per NBC**	Capacity Factors (Width Per Person in mm) As per NBC		Maximum Travel Distance (Based on Occupancy and Construction Type in m) As per NBC***		Final Remarks
							Stairways	Level Components and Ramps	Types 1 and 2	Types 3 and 4	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	A	A-1	Dwelling 1	Detached dwelling unit. Clinic not having indoor treatment facility.	Fire Division 1	12.50	10.00	6.50	30.00	22.50	Firefighting installations in Table No. 14.7
			Agriculture 1 (Part)	Farmhouse.		12.50	10.00	6.50	30.00	22.50	
			Dwelling 1a	Detached dwelling unit – affordable Housing		12.50	10.00	6.50	30.00	22.50	
			Dwelling 2	Semi-detached dwelling unit Row House Tenement Cottage Industry		7.5	15	13	30.00	22.50	
			Dwelling 2a	Semi Detached dwelling unit – affordable Housing		12.50	10.00	6.50	30.00	22.50	
			Agriculture 1 (Part)	Farmhouse		12.50	10.00	6.50	30.00	22.50	
2		A-2	Dwelling 3 (Part)	Old Age Home Orphanage		12.50	10.00	6.50	30.00	22.50	Firefighting Installation in Table No. 14.7, vary with Height of the Building.
3		A-3	Dwelling 3 (Part) Dormitory	Hostels Dormitories Dharamshala Homestay Night Shelter		12.50	10.00	6.50	30.00	22.50	Firefighting Installation in Table No. 14.7, vary with Height of the Building.
			Dwelling 3 (Part)	Flats Apartment (mixed, serviced)		12.50	10.00	6.50	30.00	22.50	
			Dwelling 3a	Affordable Housing		12.50	10.00	6.50	30.00	22.50	
			Dwelling 3s	Chawls Labour Housing SPARSH Housing / Affordable Housing Affordable Rental Housing		12.50	10.00	6.50	30.00	22.50	

No	Main	Sub	Use Group as per proposed ODP GDR	Detailed Uses As per proposed ODP GDR	Fire Divisions	Occupant Load Factor (sqm/person) As per NBC**	Capacity Factors (Width Per Person in mm) As per NBC		Maximum Travel Distance (Based on Occupancy and Construction Type in m) As per NBC***		Final Remarks
							Stairways	Level Components and Ramps	Types 1 and 2	Types 3 and 4	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
				Complex Low-Cost Housing Complexes		12.50	10.00	6.50	30.00	22.50	Firefighting Installation in Table No 14.7, vary with Height of the Building and Floor Area
4	B	B-1	Hospitality 1	Camping Tents Eco Hotels (Upto Four Star Category)							
			Hospitality 2	Resort Cottage Houses Spa and Wellness Centre (Upto Four Star Category)							
			Hospitality 3	Bed and Breakfast Guest House Lodging and Boarding Hotel Motel Serviced Apartment (Upto Four Star Category)							
5		B-2	Hospitality 1	Camping Tents Eco Hotels (Five Star and above Category)	Fire Division 1	12.50	10.00	6.50	30.00	22.50	Firefighting Installation in Table No. 14.7, vary with Height of the Building
			Hospitality 2	Resort Cottage Houses Spa and Wellness Centre (Five Star and above Category)							
			Hospitality 3	Bed and Breakfast Guest House Lodging and Boarding Hotel Motel Serviced Apartment (Five Star and above Category)							
6		B-3	Hospitality 3 (Part)	Bed and Breakfast Guest House Lodging and Boarding		12.50	10.00	6.50	30.00	22.50	Firefighting Installation in Table No. 14.7, vary with the number of rooms

No	Main	Sub	Use Group as per proposed ODP GDR	Detailed Uses As per proposed ODP GDR	Fire Divisions	Occupant Load Factor (sqm/person) As per NBC**	Capacity Factors (Width Per Person in mm) As per NBC		Maximum Travel Distance (Based on Occupancy and Construction Type in m) As per NBC***		Final Remarks
							Stairways	Level Components and Ramps	Types 1 and 2	Types 3 and 4	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
				Motel Serviced Apartment (Non-Starred Category)							
7	C	C-1	Education 1	Anganwadi Day Care Pre School Pre-Primary School	Fire Division 1	4	10.00	6.50	30.00	22.50	Firefighting Installation in Table No. 14.7, vary with Height of the Building
			Education 2	Primary Schools Secondary Schools Higher Secondary Schools							
			Education 3	Polytechnic Industrial Training Institutes (ITI) Vocational Training Centre College University and Ancillary use							
8		C-2	Education 3	Research and Development Establishments/ Centre	Fire Division 2	10	10.00	6.50	30.00	30.00	Firefighting Installation in Table No. 14.7, vary with Height of the Building
9	D	D-1	Health 1	PHC, Clinic without indoor facility Dispensary Health and Wellness Centre Ayushman Bharat	Fire Division 1	10 (Outdoor Patients area) 15 (Indoor Patients area)	15	13	30.00	22.50	Firefighting Installation in Table No. 14.7, vary with Height of the Building, area of Building Unit and No. of Beds
			Health 2	Clinic with indoor facility Indoor Hospital facility up to 20 Bed Surgical Hospital, Nursing Home, Maternity Home, Community Health Centre Veterinary Facilities							

No	Main	Sub	Use Group as per proposed ODP GDR	Detailed Uses As per proposed ODP GDR	Fire Divisions	Occupant Load Factor (sqm/person) As per NBC**	Capacity Factors (Width Per Person in mm) As per NBC		Maximum Travel Distance (Based on Occupancy and Construction Type in m) As per NBC***		Final Remarks
							Stairways	Level Components and Ramps	Types 1 and 2	Types 3 and 4	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	10	D-2	Health 3	Multi-specialty hospital- Upto 100 beds Medical College, Research and Development Centre Hospital- more than 100 beds		15 (see Note 2)	15	13	30.00	22.50	Firefighting Installation in Table No. 14.7, vary with Height of the Building and number of persons
10			Health 4	Hospital for infectious diseases Mental Hospital / Asylum							
			Public / Public Office	Custodial and Penal institutions Jails Prison Mental hospitals Houses of Correction Detention Reformatories							
11	D-3	Public / Public Office	Public / Public Office	Offices for public Government / semi government entities for Health Transport Communication Security Ward Office Law Courts, Police Stations / Chowkis Panchayat Circuit House etc.	Fire Division 1	0.65	10	6.5	30.00	30.00	Firefighting Installation in Table No. 14.7, vary with Height of the Building
12				Community Hall Banquet Hall (No permanent seating and no permanent stage)							
	E	E-1	Assembly 1	Town Hall Convention Centre Exhibition Hall Studio		0.65	10	6.5	30.00	30.00	Firefighting Installation in Table No. 14.7, vary with Height of the Building and number of persons
			Assembly 2								

No	Main	Sub	Use Group as per proposed ODP GDR	Detailed Uses As per proposed ODP GDR	Fire Divisions	Occupant Load Factor (sqm/person) As per NBC**	Capacity Factors (Width Per Person in mm) As per NBC		Maximum Travel Distance (Based on Occupancy and Construction Type in m) As per NBC***		Final Remarks
							Stairways	Level Components and Ramps	Types 1 and 2	Types 3 and 4	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
				Performing Arts Theatre Gymnasium (without spectator seating) Club (No permanent seating and no permanent stage)		N *1.2 (where N = number of seats) (see Note 4)					
			Assembly 4	Party Plot (No permanent seating and no permanent stage)							
13	E-2	Assembly 2		Convention Centre Auditorium Planetarium Museum Performing Arts Theatre (with Fixed seatings)		0.65	10	6.5	30.00	30.00	Firefighting Installation in Table No. 14.7, vary with Height of the Building and number of persons.
		Assembly 3		Theatre Cinema Multiplex (with Fixed seatings)							
14	E-3	Religious		Temple Shrine Church / Chapel Mosque / Dargah Gurudwara Synagogue Ashram / Upashraya / Math / Sant Niwas Any other Religious Structure. (No permanent seating and no permanent stage)	Fire Division 1						Firefighting Installation in Table No. 14.7, vary with Height of the Building and number of persons

No	Main	Sub	Use Group as per proposed ODP GDR	Detailed Uses As per proposed ODP GDR	Fire Divisions	Occupant Load Factor (sqm/person) As per NBC**	Capacity Factors (Width Per Person in mm) As per NBC		Maximum Travel Distance (Based on Occupancy and Construction Type in m) As per NBC***		Final Remarks
							Stairways	Level Components and Ramps	Types 1 and 2	Types 3 and 4	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
15		E-4	Sports and Leisure	Gymnasium Sports complex Swimming pool Playfield Water sports facilities Theme Amusement Park Aquarium Exhibition Mela Shooting Range	Fire Division 1	1.4 (see Note 3)	10	6.5	30.00	30.00	Firefighting Installation in Table No. 14.7, vary with Height of the Building and number of persons.
			Cremation and Burial	Crematorium							
			Temporary Use	Fair Circus Exhibition Mela Pandal Concrete batching plant for construction Seasonal Market							
16	F	F-1	Transportation	Bus Terminal / station (public / private) Transport Terminal for Passengers	Fire Division 1	30	10	6.5	30.00	30.00	Firefighting Installation in Table No. 14.7, vary with Height of the Building and number of persons
			EP 2	Port Harbour Hover ports for Coast Guards Jetties							
17		F-2	Transportation	Transport Terminal for Goods (Truck)	Fire Division 3	30	10	6.5	30 (see Note 8)	NA	Firefighting Installation in Table No. 14.7, vary with Height of the Building and Covered area

No	Main	Sub	Use Group as per proposed ODP GDR	Detailed Uses As per proposed ODP GDR	Fire Divisions	Occupant Load Factor (sqm/person) As per NBC**	Capacity Factors (Width Per Person in mm) As per NBC		Maximum Travel Distance (Based on Occupancy and Construction Type in m) As per NBC***		Final Remarks
							Stairways	Level Components and Ramps	Types 1 and 2	Types 3 and 4	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
18	G	G-1	Agriculture 1 (Part)	Green Houses Dairy Development Animal rearing and breeding/gaushala Poultry Farm	Fire Division 2	10	10	6.5	45 (see Note 8)	NA	Firefighting Installation in Table No. 14.7, vary with Height of the Building and Covered area
19		G-2	Agriculture 2	Animal Shed Agro-Based Storage	Fire Division 3	30	10	6.5	30 (see Note 8)	NA	Firefighting Installation in Table No. 14.7, vary with Height of the Building and Covered area
			Storage	Warehouse Godown Cold storage Steel stockyard Ice Factory							
20	H	H-1	Mercantile 1	Office	Fire Division 1	10	10	6.5	30.00	30.00	Firefighting Installation in Table No. 14.7, vary with Height of the Building and Area
			Mercantile 2	Business Offices Corporate Offices		1.8	10	6.5	30.00	30.00	Firefighting Installation in Table No. 14.7, vary with Height of the Building and Area
21		H-2	Mercantile 2	Shopping mall Shopping complex Cineplex		6	10	6.5	30.00	30.00	Firefighting Installation in Table No. 14.7, vary with Height of the Building and Area
22		H-3	Mercantile 1	Retail shop Shopping Centre Office Restaurant Café	Fire Division 1	3	10	6.5	30.00	30.00	Firefighting Installation in Table No. 14.7, vary with Height of the Building and Area
23		H-4	Mercantile 2	Vegetable Fish Market Agriculture Horticulture Produce		3	10	6.5	30.00	30.00	Firefighting Installation in Table No. 14.7, vary with Height of the Building and Area
			Mercantile 3	Wholesale Market and ancillary uses Timber mart / Lathi Bazaar							

No	Main	Sub	Use Group as per proposed ODP GDR	Detailed Uses As per proposed ODP GDR	Fire Divisions	Occupant Load Factor (sqm/person) As per NBC**	Capacity Factors (Width Per Person in mm) As per NBC		Maximum Travel Distance (Based on Occupancy and Construction Type in m) As per NBC***		Final Remarks
							Stairways	Level Components and Ramps	Types 1 and 2	Types 3 and 4	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
24	I	I	Mercantile 2	Laboratory Research establishments	Fire Division 2	10	10	6.5	30.00	30.00	Firefighting Installation in Table No. 14.7, vary with Height of the Building
			Assembly 2	Library							
			Service Establishment 2	Call Centres Service-related shops Information Technology (IT) Biotechnology (BT) Nano Technology (NT)							
			Utility	Communication Infrastructure – telephone, microwave tower or other means of communication facilities							
25	J	J-1*	Utility	Infrastructure for Water Supply – treatment / purification plant, pumping station.	Fire Division 2	10	10	6.5	45 (see Note 8)	NA	Firefighting Installation in Table No 14.7, vary with Height of the Building and Covered area
			Industrial 1	All White Category of Industries as defined by CPCB in Classification of Industrial Sector (2016)							
			Industrial 2	All Green Category of Industries as defined by CPCB in Classification of Industrial Sector (2016), CETP							
			Industrial 3	All Orange Category of Industries as defined by CPCB in Classification of Industrial Sector (2016), CETP Dumping of Solid Waste Mining and Quarrying Brick Kiln Roof Tiles Tannery Slaughterhouse							

No	Main	Sub	Use Group as per proposed ODP GDR	Detailed Uses As per proposed ODP GDR	Fire Divisions	Occupant Load Factor (sqm/person) As per NBC**	Capacity Factors (Width Per Person in mm) As per NBC		Maximum Travel Distance (Based on Occupancy and Construction Type in m) As per NBC***		Final Remarks
							Stairways	Level Components and Ramps	Types 1 and 2	Types 3 and 4	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
				Petroleum Storage Roofing Tiles and Cement Pipes	J-2*	10	10	6.5	45 (see Note 8)	NA	Firefighting Installation in Table No. 14.7, vary with Height of the Building and Covered area
26	Service Establishment 1	Wood Workshop Service Garage Flour mills Laundry / dry cleaning establishment									
	Utility	Electric substations									
	Industrial 1	All White Category of Industries as defined by CPCB in Classification of Industrial Sector (2016)									
	Industrial 2	All Green Category of Industries as defined by CPCB in Classification of Industrial Sector (2016), CETP									
	Industrial 3	All Orange Category of Industries as defined by CPCB in Classification of Industrial Sector (2016), CETP Dumping of Solid Waste Mining and Quarrying Brick Kiln Roof Tiles Tannery Slaughterhouse Petroleum Storage Roofing Tiles and Cement Pipes	Fire Division 2	10	10	6.5	22.5 (see Note 8)	NA	Fire fighting Installation in Table No. 14.7, vary with Covered Area		
27	J-3*	Industrial 1									
	Industrial 2	All Green Category of Industries as defined by CPCB in									

No	Main	Sub	Use Group as per proposed ODP GDR	Detailed Uses As per proposed ODP GDR	Fire Divisions	Occupant Load Factor (sqm/person) As per NBC**	Capacity Factors (Width Per Person in mm) As per NBC		Maximum Travel Distance (Based on Occupancy and Construction Type in m) As per NBC***		Final Remarks
							Stairways	Level Components and Ramps	Types 1 and 2	Types 3 and 4	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
				Classification of Industrial Sector (2016), CETP							
				Industrial 3 All Orange Category of Industries as defined by CPCB in Classification of Industrial Sector (2016), CETP Dumping of Solid Waste Mining and Quarrying Brick Kiln Roof Tiles Tannery Slaughterhouse Petroleum Storage Roofing Tiles and Cement Pipes							

Notes:

*Detailed uses of Subgroup J-1, J-2 and J-3 will correspond to low hazard, moderate hazard and high hazard respectively as in accordance with Annex B

** Occupant load

- 1 Gross area shall be the floor area. All factors expressed are in gross area unless marked net.
- 2 Occupant load in dormitory portions of homes for the aged, orphanages, insane asylums, etc. where sleeping accommodation is provided shall be calculated at not less than 7.5 m² gross floor area / person.
- 3 These shall include gymnasium, table tennis room, billiard room and other gaming rooms, library, swimming pool and like.
- 4 In case of assembly occupancy having fixed seats, the occupant load shall be determined by multiplying the number of seats by 1.2.
- 5 Car parking areas under occupancy other than storage shall also be 30 m² per person.

*** Travel Distance

- 6 For fully sprinklered building, the travel distance may be increased by 50 percent of the values specified.
- 7 Ramp shall not be counted as an exit in case of basements below first basement in car parking.
- 8 Construction of Type 3 or Type 4 is not permitted.

14.2.2 Fire Divisions

- 1 The above occupancies are grouped in fire divisions, also indicated in the Table No. 14.2. The fire divisions are broadly designated as follows:
- Fire Division No. 1: This division shall comprise all the sub-groups and detailed uses falling under low hazard uses as per these Rules.
 - Fire Division No. 2: This division shall comprise all the sub-groups and detailed uses falling under moderate hazard uses as per these Rules.
 - Fire Division No. 3: This division shall comprise all the sub-groups and detailed uses falling under high hazard uses as per these Rules.

Table No.14.2: Fire Divisions

No (1)	Fire Division (2)	Sub Category (3)	Use Group as per proposed ODP GDR (4)
1	Fire Division 1	A-1	Dwelling 1
			Agriculture 1 (Part)
			Dwelling 1a
			Dwelling 2
			Dwelling 2a
		A-2	Dwelling 3 (Part)
			Dwelling 3 (Part)
			Dormitory
			Dwelling 3 (Part)
			Dwelling 3a
			Dwelling 3s
		B-1	Hospitality 1
			Hospitality 2
			Hospitality 3
		B-2	Hospitality 1
			Hospitality 2
			Hospitality 3
		B-3	Hospitality 3 (Part)
		C-1	Education 1
			Education 2
			Education 3
		D-1	Health 1
			Health 2
			Health 3
		D-2	Health 4
			Public / Public Office
		D-3	Public / Public Office
		E-1	Assembly 1
			Assembly 2
			Assembly 4
		E-2	Assembly 2
			Assembly 3
		E-3	Religious
		E-4	Sports and Leisure
			Cremation and Burial
			Temporary Use
		F-1	Transportation
			EP 2
		H-1	Mercantile 1
			Mercantile 2
		H-2	Mercantile 2
		H-3	Mercantile 1

		H-4	Mercantile 2 Mercantile 3
2	Fire Division 2	I	Mercantile 2 Assembly 2 Service Establishment 2 Utility
			Utility Industrial 1 Industrial 2 Industrial 3
			Service Establishment 1 Utility Industrial 1 Industrial 2 Industrial 3
			G-1 Agriculture 1(Part) C-2 Education 3
		J-2	F-2 Transportation G-2 Agriculture 2 Storage
			Industrial 1 Industrial 2 Industrial 3
3	Fire Division 3	J-3	

2 Temporary Buildings or Structures

- a) Temporary buildings and structures shall be put under Fire Division No. 1 as the case may be, according to the purpose for which these are to be used, by special permit from the Authority for a limited period and subject to such conditions as may be imposed in the permit.
- b) Such buildings and temporary structures shall be completely removed on the expiry of the period specified in the permit.
- c) Adequate fire precautionary measures in the construction of temporary structures and Pandals shall be taken in accordance with good practice (*Refer Annexure K (10)*).

3 Restriction on the type of construction for new buildings

These shall be as follows:

- a) Buildings erected in Fire Division No. 1 shall conform to construction of Type 1, 2, 3 or 4.
- b) Buildings erected in Fire Division No. 2 shall conform to construction of Type 1, 2 or 3.
- c) Buildings erected in Fire Division No. 3 shall conform to construction of Type 1 or 2.

4 Restrictions on Existing Buildings

The existing buildings in any fire divisions not be required to comply with the requirements of these Rules unless these are altered, or in the opinion of the Authority, such building constitutes a hazard to the safety of the adjacent property or to the occupants of the building itself or is an unsafe building.

In the event of alteration, it shall be necessary to obtain permission of the Authority for such alteration consistent with fire hazard. Alterations/modifications/renovations shall be accomplished so as to ensure conformity with all the safety requirements of the new buildings. Such alterations shall not in any way bring down level of fire and life safety below that which existed earlier. Any addition or alterations or construction of cubicles or partitioning, for floor area exceeding 500 m² for all high-rise buildings shall be with the approval of local fire authority.

14.2.3 Types of Building Construction

- 1 The design of any building and the type of materials used in its construction are important factors in making the building resistant to a complete burn-out and in preventing the rapid spread of fire, smoke or fumes, which may otherwise contribute to the loss of lives and property.

The fire resistance of a building or its structural and non-structural elements is expressed in minutes against a specified fire load which is expressed in kcal/m², and against a certain intensity of fire. The fire-resistance test for structural element shall be done in accordance with accepted standards.

Types of construction according to fire resistance shall be classified into four categories:

- a) Type 1 Construction,
- b) Type 2 Construction,
- c) Type 3 Construction
- d) Type 4 Construction.

The minimum fire resistance ratings of structural and non-structural members for various types of construction shall be as given in Table No. 14.3. Non-combustible materials should be used for construction of buildings, and the internal walls of staircase enclosures should be of brick work or reinforced concrete or any other material of construction with minimum of 120 min rating. The walls for the chimney shall be of Type 1 or Type 2 Construction depending on whether the flue gas temperature is above 200°C or less, respectively. Load bearing steel beams and columns of buildings having total covered area of 500 m² and above shall be protected against failure/collapse of structure in case of fire.

- 2 It is required that a structural and/or non-structural element/component shall have the requisite fire resistance rating (*Refer Table No. 14.3*). The fire resistance rating for the structural and non-structural elements shall be based on guidelines as per approved and accepted standards. The fire rating shall be validated and certified with a view to meeting the requirements of Table No. 14.3. In the absence of any validated/certified rating, guidance may be obtained from the information available in Annexure C.
- 3 Load bearing steel beams and columns of buildings having total covered area of 500 m² and above shall be protected against failure/collapse of structure in case of fire. This could be achieved by use of appropriate methodology using suitable fire resistance rated materials along with suppression system (*Refer Annexure C, Table 25 and Table 26 Timber Floors*).
- 4 The false ceiling, including all fixtures used for its suspension, shall be of non-combustible material and shall provide adequate fire resistance to the ceiling in order to prevent spread of fire across ceiling.

Table No.14.3: Fire Resistance Ratings of Structural and Non-Structural Elements (minutes)

No.	Structural Element	Fire Resistance Ratings (min) for Type of Construction			
		Type 1	Type 2	Type 3	Type 4
(1)	(2)	(3)	(4)	(5)	(6)
i)	Exterior walls:				
	a) Fire less than 3.7 m:				
	1) Bearing	240	120	120	60
	2) Non-bearing	120	90	60	60
	b) Fire separation of 3.7 m or more but less than 9 m				
	1) Bearing	240	120	120	60
	2) Non-bearing separation	90	60	60	60
	c) Fire separation of 9 m or more:				
	1) Bearing	240	120	120	60

No.	Structural Element	Fire Resistance Ratings (min) for Type of Construction			
		Type 1	Type 2	Type 3	Type 4
	2) Non-bearing	60	60	60	60
ii)	Fire separation assemblies (like fire check doors)	120	120	120	120
iii)	Fire enclosures of exits	120	120	120	120
iv)	Shafts for services, lift hoist way and refuse chutes	120	120	120	120
v)	Vertical separation between adjacent tenant spaces	60	60	60	60
vi)	Dwelling unit separation:				
	a) Load bearing	120	120	60	60
	b) Non-load bearing	60	60	30	30
vii)	Interior bearing walls, bearing partitions, columns, beams, girders, trusses (other than roof trusses) and framing:				
	a) Supporting more than one floor	240	120	120	120
	b) Supporting one floor only	180	90	60	60
	c) Supporting a roof only	180	90	60	60
viii)	Walls supporting structural members	180	90	60	60
ix)	Floor construction	120	90	60	60
x)	Roof construction:				
	a) 5 m or less in height to lowest member	120	90	60	60
	b) More than 5 m but less than 6.7 m in height to lowest member	60	60	60	60
	c) 6.7 m or more in height to lowest member	0	0	0	0
NOTES:					
1 The above fire resistance rating shall be required to achieve the respective type of construction unless otherwise specified in the respective clauses for different applications/use.					
2 In case of lift bank, the partition wall, if any, need not be of fire rating specified in this table.					

14.2.4 General Requirements of All individual Occupancies

1 General

All buildings shall satisfy certain requirements, which contribute, individually and collectively, to the safety of life from fire, smoke, fumes and panic arising from these or similar causes. There are, however, certain general principles and common requirements, which are applicable to all or most of the occupancies.

2 Exceptions and Deviations

Exceptions and deviations to the general provisions of requirements of individual occupancies are given as applicable to each type of occupancy in Rule No. 14.5. In case of practical difficulty or to avoid unnecessary hardship, without sacrificing reasonable safety, local head, fire services may consider exemptions from the Rules.

3 Occupation of Buildings under Construction

- a) A building or portion of the building may be occupied during construction, repairs, alterations, or additions only if all means of exit and fire protection measures are in place and continuously maintained for the occupied part of the building.
- b) A high rise building during construction shall be provided with the following fire protection measures, which shall be maintained in good working condition at all the times:
 - i) Dry riser of minimum 100 mm diameter pipe with hydrant outlets on the floors constructed with a fire service inlet to boost the water in the dry riser and maintenance should be in accordance with good practice (*Refer Annexure K (12)*).
 - ii) Drums of 2000 litre capacity filled with water with two fire buckets on each floor;
 - iii) A water storage tank of minimum 20000 litre capacity, which may be used for other construction purposes also.

4 Openings in Fire Resistant Walls and Floors

- a) At the time of designing openings in fire resistant walls and floors, particular attention shall be paid to all factors which limit fire spread through these openings and maintain fire rating of the structural members.
- b) For Types 1 to 3 constructions, a doorway or opening in a fire-resistant wall on any floor shall be limited to 5.6 sq m in area with a maximum height/width of 2.75 m. Every wall opening shall be protected with fire-resisting doors, having the fire rating of not less than 120 min. The openings in the floors shall be protected by vertical enclosures extending above and below such openings, such enclosures having a fire resistance of not less than 120 min and all openings therein being protected with a fire-resisting assembly as per Rule No.14.2.4 (4(f)).
For escalator openings, the smoke spill shall be avoided by provision of smoke barrier (of 450-600 mm) thereby creating smoke compartment. Further, the protection shall be ensured through installation of sprinklers on all sides of the cut out opening on each floor (*Refer Figure No. 14.4*).
- c) For Type 4 construction, openings in the fire separating walls or floors shall be fitted with 120 min fire-resistance rated assemblies.
- d) Service ducts and shafts
Openings in walls or floors which are necessary to be provided to allow passages of all building services like cables, electrical wirings, telephone cables, plumbing pipes, etc., shall be protected by enclosure in the form of ducts/shafts having a fire resistance not less than 120 min. The inspection door for electrical shafts/ducts shall be not less than 120 min. Further, medium and low voltage wiring running in shafts/ducts, shall either be armoured type or run through metal conduits.

The space between the electrical cables/conduits and the walls/slabs shall be filled in by a fire stop material having fire resistance rating of not less than 120 min. This shall exclude requirement of fire stop sealing for low voltage services shaft.

For plumbing shafts in the core of the building⁶ , with shaft door opening inside the building, the shafts shall have inspection doors having fire resistance rating not less than 30 min.

For plumbing shafts doors which open in wet areas or in naturally ventilated areas or on external wall of the building, the shafts may not require doors having any specified fire rating.

- e) Refuse chutes
Refuse chutes, if any provided in a building, shall have opening at least 1 m above roof level for venting purpose and they shall have an enclosure wall of non-combustible material with fire resistance of not less than 120 min.

They shall not be located within the staircase enclosure or service shafts, or air conditioning shafts. Refuse chutes inspection panel and doors shall be tight fitting with 60 min fire resistance. Sprinkler protection system shall be provided for the refuse chutes. They shall be at least 6 m away from exits.

- f) Vertical Opening
Every vertical opening between the floors of a building shall be suitably enclosed or protected, as necessary, to provide the following:
 - i) Reasonable safety to the occupants while using the means of egress by preventing spread of fire, smoke, or fumes through vertical openings from floor to floor to allow

⁶ NOTE: In the case of buildings where it is necessary to lower or lift heavy machinery or goods from one floor to the other, it may be necessary to provide larger openings in the floor. Such openings shall be provided with removable covers which shall have the same strength and fire resistance as the floor.

occupants to complete their use of the means of egress. Further it shall be ensured to provide a clear height of 2100 mm in the exit access.

- ii) Limitation of damage to the building and its contents.

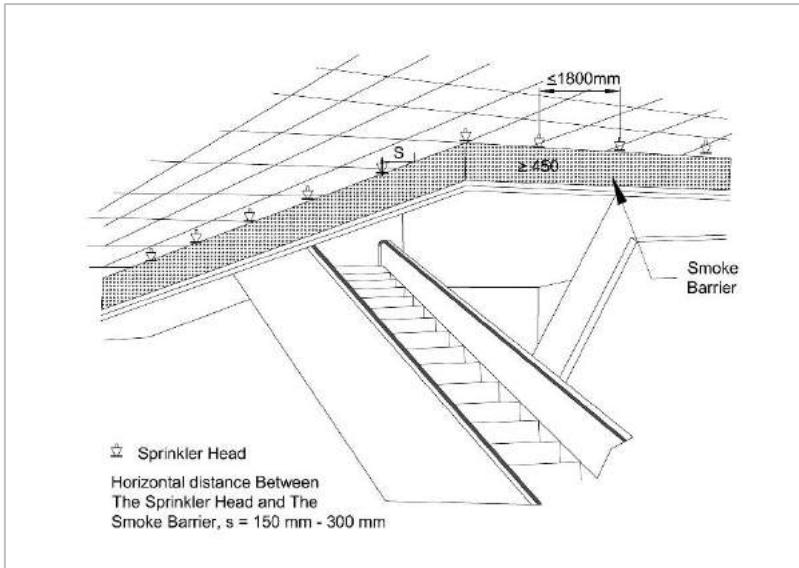


Figure No. 14.4: Sprinklers around Escalator Opening

5 Electrical Installation

a) General Requirements

For requirements regarding electrical installations from the point of view of fire safety, reference may be made with the provisions of Part VIII Building Services, Section II Electrical and Allied Installations, National Building Code and Annexure K(6), to the satisfaction of the Competent Authority.

In general, it is desirable that wiring and cable must have flame retardant property. Medium and low voltage wiring running in shafts, and within false ceiling shall run in metal conduit. Any 230 V wiring for lighting or other services, above false ceiling, shall have 660 V grade insulation.

The electric distribution cables/wiring shall be laid in a separate shaft. The shaft shall be sealed at every floor with fire stop materials having the same fire resistance as that of the floor. High, medium and low voltage wiring running in shaft and in false ceiling shall run in separate shaft/conduits.

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

All metallic items like steel structural members, etc., shall be bonded properly to the earthing system.

b) Emergency Power for Fire and Life Safety Systems

Emergency power supplying distribution system for critical requirement for functioning of fire and life safety system and equipment shall be planned for efficient and reliable power and control supply to the following systems and equipment where provided:

- i) Fire pumps.
- ii) Pressurization and smoke venting; including its ancillary systems such as dampers and actuators.
- iii) Fireman's lifts (including all lifts).

- iv) Exit signage lighting.
- v) Emergency lighting.
- vi) Fire alarm system.
- vii) Public address (PA) system (relating to emergency voice evacuation and annunciation).
- viii) Magnetic doors hold open devices.
- ix) Lighting in fire command centre and security room.

Power supply to these systems and equipment shall be from normal and emergency (standby generator) power sources with changeover facility. If power supply, is from HV source and HV generation, the transformer should be planned in standby capacity to ensure continuity of power to such systems. Wherever transformers are installed at higher levels in buildings and backup DG sets are of higher voltage rating, then dual redundant cables shall be taken to all transformers. The generator shall be capable of taking starting current of all the fire and life safety systems and equipment as above.

Where parallel HV/LV supply from a separate substation fed from different grid is provided with appropriate transformer for emergency, the provision of generator may be waived in consultation with the Authority.

The power supply to the panel/distribution board of these fire and life safety systems shall be through fireproof enclosures or circuit integrity cables or through alternate route in the adjoining fire compartment to ensure supply of power is reliable to these systems and equipment. It shall be ensured that the cabling from the adjoining fire compartment is protected within the compartment of vulnerability. The location of the panel/ distribution board feeding the fire and life safety system shall be in fire safe zone ensuring supply of power to these systems.

Circuits of such emergency system shall be protected at origin by an automatic circuit breaker with its no-volt coil removed. Master switches controlling essential service circuits shall be clearly labelled. Cables for fire alarm and PA system shall be laid in metal conduits or armoured to provide physical segregation from the power cables.

c) Substation/Transformers

Areas in substation shall not be used as storage/dump areas or for other utility purposes other than those required for the functioning of the substation. The substation area should be adequately ventilated.

An independent, ventilated or air conditioned MV panel room shall be provided on the ground level or first basement. This room shall be provided with access from outside (or through exit passageway accessible from outside). The MV panel room shall be provided with fire resistant walls and doors of fire resistance of not less than 120 min.

If the licensees agree to provide meters on upper floors, the licensees cables shall be segregated from consumers cables by providing a partition in the shaft. Meter rooms on upper floors shall not open into staircase enclosures and should be ventilated directly to open air outside or in electrical room of 120 min fire resistant walls.

Electrical MV main distribution panel and lift panels shall be provided with CO₂/inert gas flooding system for all panel compartments with a cylinder located beside the panel.

i) Oil Filled Substation

A substation or a switch-station with oil filled equipment shall be limited to be installed in utility building or in outdoor location. Such substation/utility building shall be at least 7 m away from the adjoining building(s).

Substation equipment (exceeding oil capacity of 2000 litre) in utility building shall have fire rated baffle walls of 240 min rating constructed between such equipment,

raised to at least 600 mm above the height of the equipment (including height of oil conservators) and exceeding 300 mm on each side of the equipment.

All transformers where capacity exceeds 10 MVA shall be protected by high velocity water spray systems or nitrogen injection system.

ii) Dry Type Substation

Transformers located inside a building shall be of dry type and all substation/switch room walls, ceiling, floor, opening including doors shall have a fire resistance rating of 120 min. Access to the substation shall be provided from the nearest fire exit/exit staircase for the purpose of electrical isolation.

d) Standby Supply

Diesel generator set(s) shall not be installed at any floor other than ground/first basement. If the same are installed indoors, proper ventilation and exhaust shall be planned. The DG set room shall be separated by 120 min fire resistance rated walls and doors.

The oil tank for the DG sets (if not in the base of the DG) shall be provided with a dyked enclosure having a volumetric capacity of at least 10 percent more than the volume of the oil tank. The enclosure shall be filled with sand for a height of 300 mm.

For detailed information regarding fire safety requirements for hazardous petroleum products, reference may be made to the Petroleum Act, 1934 and the Rules, framed thereunder.

e) Lightning Protection of Buildings

Routing of down conductors (insulated or uninsulated) of lightning protection through electrical or other service shafts are not allowed as it can create fire and explosion during lightning (Refer Part VIII Building Services, Section II Electrical and Allied Installations, National Building Code).

6 Escape Lighting and Exit Signage:

Exit access, exits, and exit discharge shall be properly identified, with adequate lighting maintained in the elements of the egress systems so that all occupants shall be able to leave the facility safely.

a) Lighting

- i) The exit, exit access and exit discharge systems shall be illuminated continuously. The floors of the means of egress shall be illuminated at all points, including angles and intersections, in corridors and passageways, stairwells, landings of stairwells and exit.
- ii) Emergency lighting shall be powered from a source independent of that supplying the normal lighting.
- iii) Escape lighting shall be capable of,
 - indicating clearly and unambiguously the escape routes.
 - providing adequate illumination along such routes to allow safe movement of persons towards and through the exits; and
 - ensuring that fire alarm call points and firefighting equipment provided along the escape routes can be readily located.
- iv) The horizontal luminance at floor level on the centreline of an escape route shall not be less than 10 lumen/m². In addition, for escape routes up to 2 m wide, 50 percent of the route width shall be lit to a minimum of 5 lumen/m². In auditoriums, theatres, concert halls and such other places of assembly, the illumination of floor exit/access may be reduced during period of performances to values not less than 2 lux.
- v) Required illumination shall be arranged such that the failure of any single lighting unit, such as the burning out of one luminaire, will not leave any area in darkness and does not impede the functioning of the system further.

- vi) The emergency lighting shall be provided to be put on within 5s of the failure of the normal lighting supply. Also, emergency lighting shall be able to maintain the required illumination level for a period of not less than 90 min in the event of failure of the normal lighting even for smaller premises.
- vii) Battery pack emergency lighting, because of its limited duration and reliability, shall not be allowed to be used in lieu of a diesel engine driven emergency power supply.
- viii) Escape lighting luminaires should be sited to cover the following locations:
 - Near each intersection of corridors,
 - At exits and at each exit door,
 - Near each change of direction in the escape route,
 - Near each staircase so that each flight of stairs receives direct light,
 - Near any other change of floor level,
 - Outside each final exit and close to it,
 - Near each fire alarm call point,
 - Near firefighting equipment, and
 - To illuminate exit and safety signs as required by the enforcing authority.
- ix) The luminaires shall be mounted as low as possible, but at least 2 m above the floor level.
- x) Signs are required at all exits, emergency exits and escape routes, which should comply with the graphic requirements of the relevant Indian Standards.
- b) Exit passageway (at ground) and staircase lighting shall also be connected to alternative supply. The alternative source of supply may be provided by battery continuously trickle charged from the electric mains.
- c) Suitable arrangements shall be made by installing double throw switches to ensure that the lighting installed in the staircase and the corridor does not get connected to two sources of supply simultaneously. Double throw switch shall be installed in the service room for terminating the stand-by supply.
The emergency lighting system shall be well maintained by periodical inspections and tests so as to ensure their perfect serviceability at all times.

d) **Exit Signage**

Where exit access is provided through corridors/paths, the occupants shall be able to easily identify the way to exits. Exit signs shall be provided such that no point in an exit access is more than 30 m from a visible exit directional sign. An exit sign indicating the direction to an exit shall be provided at all changes in direction.

Exits shall be clearly visible and the route to reach the exits shall be clearly marked and signs posted to guide the occupants of the floor concerned. Signs shall be illuminated and wired to an independent electrical circuit on an alternative source of supply. The sizes and colours of the exit signs shall be in accordance with good practice (*Refer Annexure K(7)*). The colour of the exit signs shall be green.⁷

The exit sign with arrow indicating the way to the escape route shall be provided at a suitable height from the floor level on the wall and shall be illuminated by electric light connected to corridor circuits. All exit way marking signs should be so installed that no mechanical damage shall occur to them due to moving of furniture or other heavy equipment. Further, all landings of floor shall have floor indicating boards prominently indicating the number of the floor. Photo luminescent markings shall be pasted at internal hydrant boxes.

7 Air Conditioning, Ventilation and Smoke Control

- a) Air conditioning and mechanical ventilation requirements of different rooms or areas in any occupancy shall be in accordance with Part VIII ‘Building Services Section I Lighting

⁷ Note: This provision shall not apply to A-2 and A-4 occupancies less than 15m in height.

and Natural Ventilation and ‘Section III Air conditioning, Heating and Mechanical Ventilation’ National Building Code.

Air conditioning and ventilating systems shall be so installed and maintained as to minimise the danger of spread of fire, smoke or fumes from one floor to other or from outside to any occupied building or structure.

Many high-rise buildings integrate smoke management systems into their conventional HVAC systems. In such installation, it requires special design considerations, including safe and adequate controls, acceptable and documented testing, and regular maintenance systems.

Wherever batteries are provided, the same shall be segregated by 120 min fire rated construction. Ventilation to the room shall be provided as per manufacturer’s instructions.

b) Air Handling Unit

- i) From fire safety point of view, Separate air handling units (AHU) for each floor shall be provided so as to avoid the hazards arising from spread of fire and smoke through the air conditioning ducts. The air ducts shall be separate from each AHU to its floor and in no way shall interconnect with the duct of any other floor. Within a floor it would be desirable to have separate air handling unit provided for each compartment.

Air handling unit shall be provided with effective means for preventing circulation of smoke through the system in the case of a fire in air filters or from other sources drawn into the system and shall have smoke sensitive devices for actuation in accordance with the accepted standard and control.

- ii) Shafts or ducts ⁸, if penetrating multiple floors, shall be of masonry construction with fire damper in connecting ductwork or shall have fire rated ductwork with fire dampers at floor crossing. Alternatively, the duct and equipment may be installed in room having walls, doors and fire damper in duct exiting/entering the room of 120 min fire resistance rating. Such shafts and ducts shall have all passive fire control meeting 120 min fire resistance rating requirement to meet the objective of isolation of the floor from spread of fire to upper and lower floors through shaft/duct work.
- iii) The air filters of the air handling units shall be made of non-combustible materials.
- iv) The air handling unit room shall not be used for storage of any combustible materials.

c) Duct Work

- i) Air ducts serving main floor areas, corridors, etc., shall not pass through the exits/exit passageway/ exit enclosure. Exits and lift lobbies, etc., shall not be used as return air passage.
- ii) As far as possible, metallic ducts shall be used even for the return air instead of space above the false ceiling.
- iii) Wherever the ducts pass through fire walls or floors, the opening around the ducts shall be sealed with materials having fire resistance rating of the compartment. Such duct shall also be provided with fire dampers at all fire walls and floors unless such ducts are required to perform for fire safety operation; and in such case fire damper may be avoided at fire wall and floor while integrity of the duct shall be maintained with 120 min fire resistance rating to allow the emergency operations for fire safety requirements.
- iv) The ducting within compartment would require minimum fire resistance rating of 30 min. Such ducting material in substantial gauge shall be in accordance. If such duct crosses adjacent compartment/floor and not having fire dampers in such compartment/floor, it will require fire resistance duct work rating of 120 min. The

⁸ Zoned and compartmented HVAC systems are encouraged with an approach to avoid common exhaust shafts and fresh air intake shafts which will limit the requirements of such passive measure and fire rated duct work and dampers.

- requirements of support of the duct shall meet its functional time requirement as above.
- v) The materials used for insulating the duct system (inside or outside) shall be of non-combustible type. Any such insulating material shall not be wrapped or secured by any material of combustible nature.
 - vi) Inspection panels shall be provided in the ductwork to facilitate the cleaning accumulated dust in ducts and to obtain access for maintenance of fire dampers.
- d) Fire or Fire/Smoke Dampers
- I) These dampers shall be evaluated to be located in supply air ducts, fresh air and return air ducts/ passages at the following points:
 - At the fire separation wall,
 - Where ducts/passages enter the vertical shaft,
 - Where the ducts pass through floors, and
 - At the inlet of supply air duct and the return air duct of each compartment on every floor.
 - ii) Damper shall be of motorized type/fusible link. Damper shall be so installed to provide complete integrity of the compartment with all passive fire protection sealing. Damper should be accessible to maintain, test and also replace, if so required. Damper shall be integrated with Fire Alarm Panel and shall be sequenced to operate as per requirement and have interlocking arrangement for fire safety of the building. Manual operation facilities for damper operation shall also be provided.

8 Heating

- a) Installation of Chimney and heating apparatus shall be in accordance with the good practice (*Refer Annexure K (10)*).
- b) Boiler Rooms
 - i) Provisions of boiler and boiler rooms shall conform to The Boilers Act, 1923.
 - ii) Further, the following additional aspects may be taken into account in the location of boiler room:
 - The boilers shall be installed in a fire resisting room of 180 min fire resistance rating.
 - Entry to this room shall be provided with a composite door of 120 min fire resistance rating.
 - The boiler room shall be provided with its dedicated natural or mechanical ventilation system. Mechanical ventilation system for the boiler room would be accepted with 120 min fire resistance rating ductwork, if it has interface with other mechanical areas. Ventilation system should not be allowed to be routed through electrical room area or through exit corridor/exits.
 - The oil tank for the boiler shall be provided with a dyked enclosure having a volumetric capacity of at least 10 percent more than the volume of the oil tank. The enclosure shall be filled with sand for a height of 300 mm.

9 Glazing

- a) The glazing shall be in accordance with Part VI Structural Design, Section VIII Glass and Glazing. of the National Building Code. The entire glazing assembly shall be rated to that type of construction as given in Table No. 14.3. The use of glass shall not be permitted for enclosures of exits and exit passageway. This shall be applicable along with other provisions of this Part related to respective uses as specified therein. The use of glass shall not be permitted for enclosures of exits and exit passageway.

- b) Glass facade shall be in accordance with the following:
- i) For fully sprinklered⁹ buildings having fire separation of 9 m or more, tempered glass in a non-combustible assembly, with ability to hold the glass in place, shall be provided. It shall be ensured that sprinklers are located within 600 mm of the glass facade providing full coverage to the glass.
 - ii) All gaps between floor-slabs and facade assembly shall be sealed at all levels by approved fire-resistant sealant material of equal fire rating as that of floor slab to prevent fire and smoke propagation from one floor to another.
 - iii) Openable panels shall be provided on each floor and shall be spaced not more than 10 m apart measured along the external wall from centre-to-centre of the access openings. Such openings shall be operable at a height between 1.2 m and 1.5 m from the floor and shall be in the form of openable panels (fire access panels) of size not less than 1000 mm X 1000 mm opening outwards.
- The wordings, FIRE OPENABLE PANEL OPEN IN CASE OF FIRE, DO NOT OBSTRUCT of at least 25 mm letter height shall be marked on the internal side. Such panels shall be suitably distributed on each floor based on occupant concentration. These shall not be limited to cubicle areas and shall be also located in common areas/corridors to facilitate access by the building occupants and fire personnel for smoke exhaust in times of distress.

10 Surface Interior Finishes

- a) The use of combustible surface finishes on walls (including facade of the building) and ceilings affects the safety of the occupants of a building. Such finishes tend to spread the fire and even though the structural elements may be adequately fire resistant, serious danger to life may result. It is, therefore, essential to have adequate precautions to minimise spread of flame on wall, facade of building and ceiling surfaces. The finishing materials used for various surfaces and decor shall be such that it shall not generate toxic smoke/fumes.
- b) The susceptibility of various types of wall surfaces to fire is determined in terms of the rate of spread of flame. Based on the rate of spread of flame, surfacing material shall be considered as divided into four classes as follows:
 - i) Class 1 Surfaces of very low flame spread.
 - ii) Class 2 Surfaces of low flame spread.
 - iii) Class 3 Surfaces of medium flame spread.
 - iv) Class 4 Surfaces of rapid flame spread.
- c) The uses for which surface materials falling into various classes shall be adopted in building construction are given below:

Table No. 14.4: Surface Material details for various uses as per class

Class 1 (1)	Class 2 (2)	Class 3 (3)
May be used in any situation	May be used in any situation, except on walls, facade of the building, staircase, and corridors.	May be used only in living rooms and bedrooms (but not in rooms on the roof) and only as a lining to solid walls and partitions ¹⁾ ; not on staircases or corridors or facade of the building.

¹⁾ Panelling (lining) shall be permitted in a limited area. It shall not be permitted in a vestibule.

- d) Materials of Class 4 which include untreated wood fibreboards may be used with due fire-retardant treatment as ceiling lining, provided the ceiling is at least, 2.4 m from the top surface of the floor below, and the wall surfaces conform to requirements of class. Class 4

⁹ In case of all other buildings, fire resistance rating of glass facade shall be in accordance with Table No. 14.3.

materials shall not be used in kitchens, corridors and staircases. Some materials contain bitumen and, in addition to risk from spread of fire, emit dense smoke on burning; such materials shall be excluded from use under these conditions and shall also not be used for construction of ceiling where the plenum is used for return air in air-conditioned buildings.

- e) When frames, walls, partitions or floors are lined with combustible materials, the surfaces on both sides of the materials shall conform to the appropriate class, because there is considerable danger from fire starting and rapidly spreading within the concealed cavity unknown to the occupants whose escape may be hampered thereby. For detailed information on materials and details of construction with their fire resistance rating, reference may be made to good practice (*Refer Annexure K (12)*).

11 Fire Command Centre (FCC)

- a) Fire command centre shall be on the entrance floor of the building having direct access. The control room shall have the main fire alarm panel with communication system (suitable public address system) to aid floors and facilities for receiving the message from different floors.
- b) Fire command centre shall be constructed with 120 min rating walls with a fire door and shall be provided with emergency lighting. Interior finishes shall not use any flammable materials. All controls and monitoring of fire alarm systems, pressurization systems, smoke management systems shall happen from this room. Monitoring of integrated building management systems, CCTVs or any other critical parameters in building may also be from the same room.
- c) Details of all floor plans along with the details of firefighting equipment and installations (2 sets laminated and bound) shall be maintained in fire command centre.
- d) The fire staff in charge of the fire command centre shall be responsible for the maintenance of the various services and firefighting equipment and installations in coordination with security, electrical and civil staff of the building.

14.3 Life Safety

14.3.1 General

Every building shall be so designed, constructed, equipped, maintained and operated as to provide adequate means of egress to avoid undue danger to the life and safety of the occupants from fire, smoke, fumes or panic during the time period necessary for escape.

For high occupancy areas, it may be required to have annunciation, announcements and voice guided/aided system to direct the occupants towards safe egress routes, areas of comparative safety or exits, and to avoid situation of panic during distress.

Every main occupancy may have certain occupancies which may be incidental to the main occupancy. The exit requirements pertaining to such incidental occupancies from the floor of the occupancy to the level of exit discharge shall be calculated to meet the requirement of the actual occupancy of such type, to ensure adequate means of egress of the occupants.

Refer Part III Development Control Rules and General Building Requirements, National Building Code for accessibility for elderly and persons with disabilities, for various requirements for enabling a smooth and safe egress.

14.3.2 General Exit Requirements

- 1 An exit may be a fire exit doorway; an internal staircase, exit passageway, external doorway, external staircase, and these having access to the street or to a veranda or to a refuge area or to the terrace or roof of a building. An exit may also include a horizontal exit leading to an adjoining building/fire compartment having its further access to unlocked/public exit at the same level.
- 2 Unless otherwise specified, lifts, escalators, moving walks and revolving doors shall not be considered as exits and shall not constitute any part of the required exit.
- 3 Every exit, exit passageway and exit discharge shall be continuously maintained free of all obstructions or impediments to full use in the case of fire or other emergency.
- 4 Every building having human occupancy shall be provided with exits sufficient to permit safe egress of occupants, in case of fire or other emergency.
- 5 In every building or structure, exits shall comply with the minimum requirements of this Part, except those not accessible for general public use.
- 6 No building shall be so altered as to reduce the number, width or protection of exits to less than that required.
- 7 For non-naturally ventilated areas, fire doors with 120 min fire resistance rating shall be provided and particularly at the entrance to lift lobby and stair well where a funnel or flue effect may be created, inducing an upward spread of fire, to prevent spread of fire and smoke.
- 8 Exits shall be so arranged that they may be reached without passing through another occupied unit/passage in others control, if they pose challenge or restriction in means of egress.
- 9 Doors in exits shall open in the direction of exit. In case of assembly building (Group E) and Health (Group D-1), exit door shall not open immediately upon a flight of stair and all such entries to the stair shall be through a landing, so that such doors do not impede movement of people descending from a higher floor when fully opened. While for other occupancies, such doors shall not reduce the pathway in the landing by more than half the width of such staircase. Overhead or sliding doors shall not be installed.
- 10 At least half of the required exit stairs from upper floors (rounded to the next higher number) shall discharge directly to the exterior or through exit passageways.
- 11 Unless otherwise specified, all the exits and exit passageways to exit discharge shall have a clear ceiling height of at least 2.4 m. However, the height of exit door shall be at least 2.0 m.
- 12 Where changes in elevation of more than 300 mm are encountered in the exits, ramps or sloped surfaces shall be used with handrails and floor finish materials that contrast with the adjacent finish materials.

- 13 The capacity of the means of egress required from any storey of the building shall not be reduced along the path of egress travel until arrival to the exit discharge.
- 14 The lifts, escalators, moving walks, turnstiles and revolving doors shall not be considered in determining the required capacity of means of egress for the individual floor(s) or the building.
- 15 Turnstiles or similar devices that restrict travel to one direction or that are used to restrict unauthorized entry shall not be so placed as to obstruct any required means of egress. Alternative door openings of required exit width shall be available within 3 m of such devices, if installed.
- 16 Suitable means shall be provided so that all access-controlled exit doors, turnstiles, boom barriers and other such exits shall automatically operate to open mode during emergencies like fire, smoke, acts of terrorism, etc., so that people can safely and quickly egress into safe areas outside. If required, a master controlling device may be installed at a strategic location to achieve this.
- 17 Penetrations into and openings through an exit are prohibited except those necessary like for the fire protection piping, ducts for pressurization and similar life safety services. Such openings as well as vertical passage of shaft through floors shall be protected by passive systems.
- 18 Walking surfaces in exit access shall comply with the following requirements for smooth exit:
 - a) Walking surfaces shall be nominally level.
 - b) The slope of walking surface in the direction of travel shall not exceed 1 in 20 unless the ramp requirements are met.
 - c) Slope perpendicular to the direction of travel shall not exceed 1 in 48.
 - d) Walking surfaces shall be slip-resistant along the entire path of travel.
- 19 Basement
 - a) Basement exits shall be sufficient to provide for the capacity of the basement as determined in accordance with Rule No. 14.3.4(2). In no case shall there be less than two independent basement exits.
 - b) Basements having incidental occupancies to main occupancy shall be planned with exit requirements of the basements for the actual occupancy within the basement.
 - c) Where basement is used for car parking and also there is direct approach from any occupancy above to the basement, door openings leading to the basement shall need to be protected with fire doors with 120 min fire rating, except for exit discharge doors from the basements.

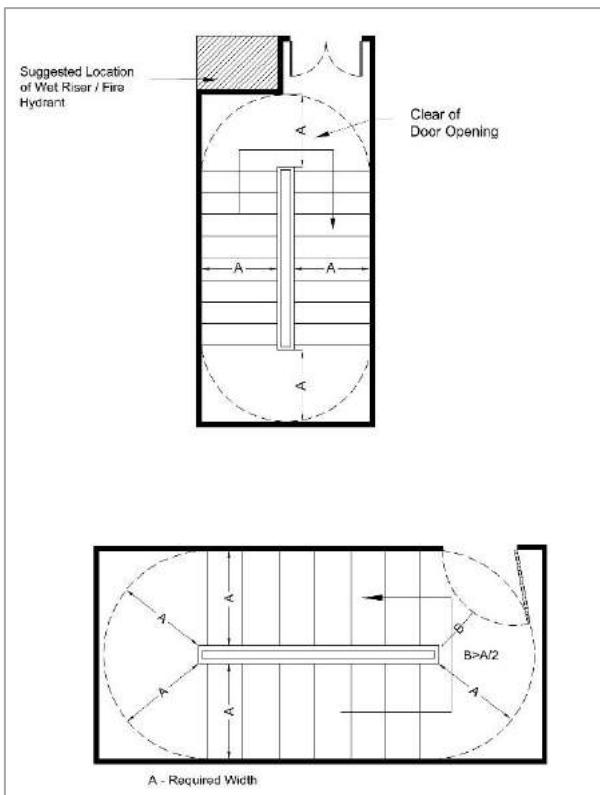


Figure No. 14.5: Door Locations at Landing in Fire Exists

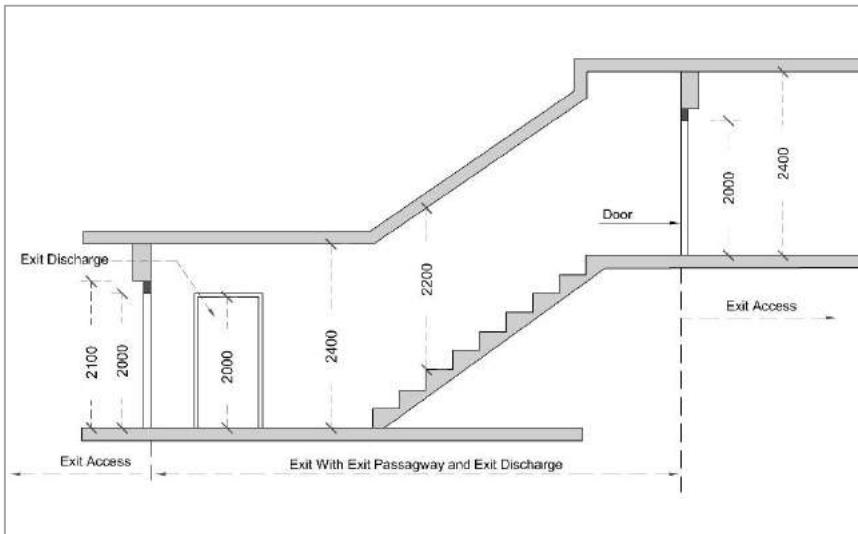


Figure No. 14.6: Minimum Head Room Measurement

14.3.3 Occupant Load

For determining the exits required, the number of persons within any floor area or the occupant load shall be based on the actual number of occupants declared, but in no case less than that specified in Table No. 14.1. The occupant load of a mezzanine floor discharging to a floor below shall be added to that floor occupancy and the capacity of the exits shall be designed for the total occupancy load thus established.

The occupant load of each story considered individually shall be required to be used in computing the number of means of egress at each story, provided that the required number of means of egress is not decreased in the direction of egress travel.

The assembly occupancies and call centres shall be required to display, limiting occupant load details positioned in a conspicuous place near the entrance of each of such respective occupancy to avoid possible overcrowding and overloading. The display shall preferably be engraved on a metal plate of not less than 300 mm × 200 mm, with letters of height and width not less than 50 mm, with detail of occupancy, area and occupancy load.

The capacity of any open mezzanine/balcony shall be added to the capacity of the floor below for the purpose of determining exit capacity.

MAXIMUM OCCUPANCY
<u>PERSONS PERMITTED WITHIN THIS SPACE/ROOM</u>
<p>IT IS CONFIRMED THAT THE FIRE EXITS ARE PLANNED FOR EGRESS OF THE OCCUPANCY AS MENTIONED ABOVE AND OCCUPANCY MORE THAN THE ABOVE IS NOT PERMITTED IN THE SPACE/ROOM AS FOLLOWS:</p>
<p>SPACE/ROOM DETAIL: _____</p>
<p>FLOOR NO. _____</p>
<p>SIGN: _____ DATE: _____ (MANAGER/AUTHORIZED SIGNATORY)</p>

14.3.4 Egress Components

Egress components to be considered are the number of exits to which access is provided, capacity of exit access, travel distance to an exit, the obviousness of the direction to an exit, and any hindrance including due to security issues involved.

1 Exit Access

- a) A common path of travel is desirable in exit access which leads to two independent directions to separate exits.
- b) Capacity of exit access: The width of corridors, aisles or ramps required for exit access shall be sufficient to ensure a smooth flow of occupants to the exit. Where a corridor is the only way of access to an exit, the corridor width shall not be less than the calculated exit width.
- c) Objects like tables, chairs or any other temporary/permanent structures in exit access corridors shall be avoided as this may result in congestion and impeding smooth flow of personnel during emergencies.
- d) In order to ensure that each element of the means of egress can be effectively utilized, they shall all be properly lit and marked. Lighting shall be provided with emergency power back-up in case of power failures. Also, exit signs of adequate size, marking, location, and lighting shall be provided so that all those unfamiliar with the location of the exits may safely find their way.
- e) Exit access to fireman's lift and refuge area on the floor shall be step free and clearly sign posted with the international symbol of accessibility.
- f) Exit access shall not pass through storage rooms, closets or spaces used for similar purpose.
- g) The calculation of capacity of exit access shall be in accordance with Rule No. 14.3.2(4).

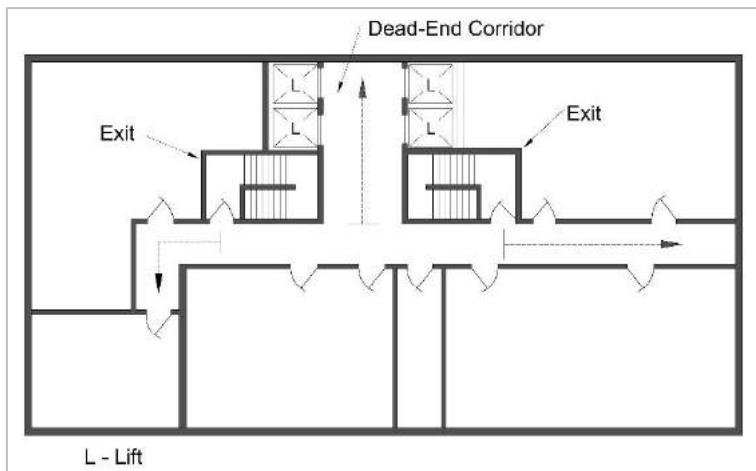


Figure No. 14.7: Dead End Corridor

2 Exits

a) Number of Exits

The minimum required number of exits in a building shall be determined based on occupant load (*Refer Table No. 14.1*) and width required per person (*Refer No. Table 14.1*) as appropriate to the type of exit for respective occupancies, subject to complying with maximum travel distance requirement (*Refer Table No. 14.1*).

b) Arrangement of Exits

- i) Exits shall be so located that the travel distance on the floor shall not exceed the distance (*Refer Table No. 14.1*).
- ii) Travel distance shall be measured from the most remote point within a storey or a mezzanine floor along the natural and un-obstructed path of horizontal or vertical egress travel to the door to an exit.
- iii) The dead-end corridor length in exit access shall not exceed 6 m for educational, institutional and assembly occupancies. For other occupancies, the same shall be 15 m. (*Refer Figure No. 14.7*).
- iv) Exits shall be placed as remote from each other as possible and shall be arranged to provide direct access in separate directions from any point in the area served.

c) Capacities of means of egress.

- i) Exit capacity is the number of people that can pass through a stairway, and level components (door and corridor) and ramps. The total capacity of all the respective means of egress serving a floor shall be sufficient to allow egress of the entire population of the floor.
- ii) The unit of exit width, used to measure the capacity of any exit, shall be 500 mm. A clear width of 250 mm shall be counted as an additional half unit. Clear widths less than 250 mm shall not be counted for exit width.
- iii) Width per person for stairways, and level components and ramps shall be determined using the capacity factors in accordance with Table No. 14.1. For example, if an exit doorway measures 1000 mm in clear width, it would be defined as providing exit capacity for $1000/6.5$ occupants, that is, 153 persons (say 150 persons) and number of such exit doorways can then be calculated depending on the occupant load.
- iv) When calculating stairways, level components and ramps and other exit means, the capacity of the entire system shall have to be based upon the minimum capacity available from any part of the system. The corridor, if so provided shall also to be planned with consideration of exit access adequacy for the number of occupants. Further, consider the situation of doors opening to an exit stairway. If the stairway provides an exit capacity of 150 persons, and the doors leading into the stairway provide an exit capacity of 153 persons, the overall exit system would be considered

to provide the minimum exit capacity of only 150 persons afforded by the stairway. The exit planning will be limited by the most restrictive exit calculation under the means of egress.

- v) In the procedures for determining required egress capacity, the number of required means of egress is based on a floor-by-floor consideration, rather than the accumulation of the occupant loads of all the floors. However, the number of means of egress cannot decrease as an occupant proceeds along the egress path.

d) Types of exit access and exits

Various types of exit access and exits are doorways, corridors and passageways, horizontal exits, internal staircases, exit passageways, external staircases, and ramps.

Requirements for each are as detailed below:

i) Doorways

- Every exit doorway shall open into an enclosed stairway or a horizontal exit of a corridor or passageway providing continuous and protected means of egress (*Refer Figure No. 14.8*).
- No exit doorway shall be less than 1000 mm in width except assembly buildings, where door width shall be not less than 2000 mm (*Refer Figure No. 14.9*). Doorways shall be not less than 2000 mm in height.
- Exit doorways shall be operable from the side which they serve, without the use of a key.
- Mirrors shall not be placed on exit doors and in exits to avoid confusion regarding the direction of exit.
- Revolving doors can be accepted as a component in a means of egress where the following requirements are fully complied with:
 - Doors shall be capable of collapsing to a book fold position with parallel egress paths, of width not less than 1000 mm.
 - Doors shall not be located within 3 m of the foot or top of stairs or escalators. A dispersal area shall be provided between the stairs or escalators and the doors.
 - Each revolving door shall be provided with a hinged door in the same wall within 3 m thereof, with same exiting capacity.
 - Each revolving door shall be considered as capable of exiting only 50 persons.
- All fire rated doors and assembly shall be provided with certificate and labels prominently indicating the manufacturer's identification, door details covering door type, serial/batch number, month and year of manufacture, fire resistance rating, etc. The doors and assembly shall be certified with all prescribed hardware such as hinges, locks, panic bars, door closer, and door viewers.
- Access controlled doors: Access controlled doors and electromagnetic doors shall fall under this category. These shall meet the following requirements:
 - Doors shall have fire rating as per the requirements at the location of installation.
 - Activation of the building automatic sprinkler or fire detection system, if provided, shall automatically unlock the doors in the direction of egress, and the doors shall remain unlocked until the automatic sprinkler system or fire-alarm system has been manually reset.
 - Loss of power to the part of the access control system that locks the doors shall automatically unlock the doors in the direction of egress.
 - A manual release device shall be provided in the readily accessible vicinity of the egress door with a signage PUSH TO EXIT and when the same is operated, it shall result in direct interruption of power to the lock, independent of the access control system electronics.

- Turnstiles: Turnstiles or similar devices that restrict travel to one direction or are used to collect fares or admission charges shall not be placed so as to obstruct any required means of egress unless door openings of required width are available within 3m thereof. Turnstiles or such similar devices shall also be disengaged through automatic or manual intervention to allow egress in the direction of exit.
 - Doors in folding partition shall not be treated as approved means of egress.
- ii) Corridors and passageways of means of egress.
- Corridors and passageways shall be of width not less than the calculated aggregate width of exit doorways leading from them in the direction of travel to the exit (*Refer Table No. 14.1*).
 - In the case of buildings where there is a central corridor, which is part of exit access, the doors of rooms (except for rooms having assembly occupancy) shall open inwards to permit smooth flow of traffic in the corridor.

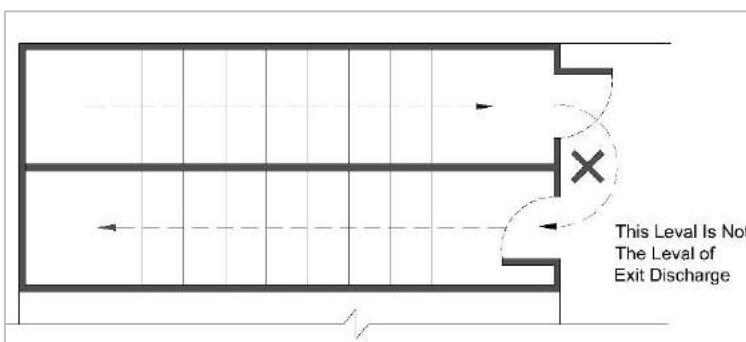


Figure No. 14.8: Unacceptable Arrangement for Enclosing a Stair Serving as a Required Exit

iii) Staircases

- General

The requirements of number of staircases shall supplement the requirement of different occupancies in accordance with Rule No. 14.5.

All buildings, as mentioned in accordance with Rule No. 14.1.1, shall have a minimum of two staircases. The actual number of staircases shall comply with the requirement of Rule No. 14.3.4(2). All exit staircases shall discharge, at the level of exit discharge, to the exit discharge, either,

- directly, or
- through an exit passageway, or
- through a large lobby.

At least 50 percent of the staircases shall discharge directly and/or through an exit passageway.

The minimum width of tread without nosing shall be 250 mm for staircase of residential buildings. This shall be minimum 300 mm for assembly, hotels, educational, institutional, business and other buildings. The treads shall be constructed and maintained in a manner to prevent slipping. The maximum height of riser shall be 190 mm for staircase of residential buildings (A-1) and 150 mm for other buildings. The number of risers shall be limited to 12 per flight. The staircases may be internal staircases or external staircases.

Table No. 14.4A: Staircase Details

No	Use	Staircase		
		Minimum Flight Width (m)	Minimum Tread (mm)	Maximum Riser (mm)
(1)	(2)	(3)	(4)	(5)
1	Residential(A-1) Note- For row housing with 2 storeys, the minimum width shall be 0.75	1		
2	Residential (A-2)	1.25		
3	Residential hotel (A-3)	1.50		
4	Assembly Note- The width of stairs may be accepted to be 1.50m in case of assembly occupancy having less than 150 persons	2.00	300 ¹	150 ²
5	Educational	1.50		
6	Institutional	2.00		
7	All other occupancies	1.50		

*Note:

1 For one or two family dwelling, it may be reduced to not less than 250mm

2 For one or two family dwelling, it may be increased to not more than 190mm. The number of risers shall be limited to 12 per flight

- Internal staircases

The internal staircases may be constructed with an external wall, or otherwise, and shall comply with the following:

- Internal stairs shall be constructed of non-combustible materials throughout, and shall have fire resistant rating of minimum 120 min.
- A staircase shall not be arranged round a lift shaft.
- Exits shall not be used as a portion of a supply, return or exhaust air system serving adjoining areas. Any opening(s) shall not be permitted in walls or in doors, separating exits from adjoining areas.
- No flue chimney, electromechanical equipment, air conditioning units, gas piping, or electrical panels shall be allowed in the stairway.
- Notwithstanding the detailed provision for exits in accordance with Rule No. 14.3.2 and Rule No. 14.3.3, the minimum width shall be provided for staircases (*Refer Table No. 13.2 of Part 3(I)*).
- A handrail shall be provided on one side of the staircase of width less than 1500 mm, and on both sides of the staircase of width 1500 mm and more. The projection of handrail(s) in the staircase width shall not be more than 115 mm. All other requirements of handrail shall be in accordance with Part III ‘Development Control Rules and General Building Requirements’, National Building Code.
- Handrails may project inside the measured width by not more than 90 mm.
- The design of staircase shall also take into account the following:
 - The minimum headroom in a passage under the landing of a staircase and under the staircase shall be 2.2 m.
 - Access to exit staircase shall be through a fire door of a minimum 120 min fire resistance rating.
 - No living space, store or other fire risk shall open directly into staircases.

- The exit (including staircases) shall be continuous from refuge floors or terrace level, as applicable, to the level of exit discharge.
- No electrical shafts/air conditioning ducts or gas pipes, etc., shall pass through or open in the staircases.
- Lifts shall not open in staircase.
- No combustible material shall be used for decoration/wall panelling in the staircase.
- Beams/columns and other building features shall not reduce the head room/ width of the staircase.
- The floor indication board, indicating the location/designated number of staircase, respective floor number and direction to exit discharge shall be placed inside the staircase, on the wall nearest to the fire door. It shall be of size not less than 300 mm × 200 mm.
- Individual floors shall be prominently indicated on the wall outside the staircase and facing it.
- All staircase shall terminate at the level of exit discharge. The access to the basement shall be by a separate staircase.
- Scissors type staircases shall not be treated as part of exit.

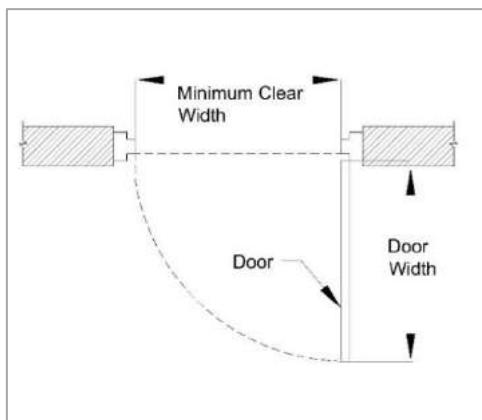


Figure No. 14.9: Minimum Clear Door Width

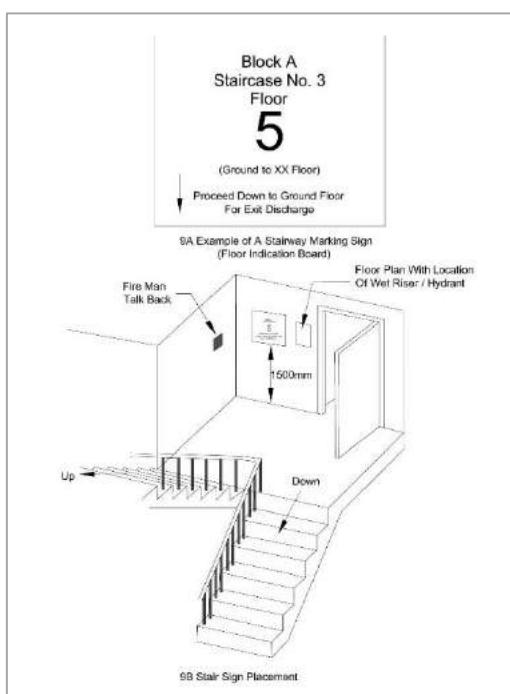


Figure No.14.10: Star Marking and Requirement in Exit

- Curved Staircase
Curved stairs shall not be treated as part means of egress. However, these may be used as part of exit access provided the depth of tread is not less than 280 mm at a point 350 mm from the narrower end of the tread and the smallest radius is not less than twice the stair width.
- External staircases
The external staircases are the staircases provided on the external wall/facade, and shall comply with the following:
 - External stairs shall always be kept in sound and usable condition.
 - All external stairs shall be directly connected to the ground.
 - Entrance to the external stairs shall be separate and remote from the internal staircase.
 - Where an external staircase is provided, it shall be ensured that the use of it at the time of fire is not prejudiced by smoke and flame from openings (for example, windows, doors) in the external face of the building. Care shall be taken to ensure that no external wall or window opening opens on to or close to an external stair. If such openings exists within 3 m from an external staircase, they shall be protected with fire rated doors/window assemblies with rating of at least 60 min (*Refer Figure No. 14.11*).
 - The external stairs shall be constructed of non-combustible materials, and any doorway leading to it shall have minimum 120 min fire resistance.
 - No external staircase shall be inclined at an angle greater than 45° from the horizontal.
 - External stairs shall have straight flight not less than 1500 mm wide.
 - Handrails, to be provided on both sides, shall be of a height not less than 1000 mm and not exceeding 1200 mm. There shall be provisions of balusters with maximum gap of 150 mm.
 - The use of spiral staircase shall be limited to low occupant load and to a building not exceeding 9 m in height. A spiral staircase shall be not less than 1500 mm in diameter and shall be designed to give adequate headroom.
- Ramps
 - Ramps shall comply with all the applicable requirements for staircases regarding enclosure, capacity (*Refer Table No. 14.1*) and limiting dimensions, except where specified in Rule No. 14.5 for special uses and occupancies.
 - The slope of a ramp shall be in accordance with Rule 13.1.3 of Part 3(I).
 - Ramp(s) shall be surfaced with approved slip resistant materials that are securely attached. No perforations are permissible on ramp floors.
 - Any changes in travel direction in ramp shall be preceded by landings of 1.5 m × 1.5 m size.
 - Ramps and intermediate landings shall continue with no decrease in width along the direction of egress travel.
 - Outside ramps and landings shall be designed to minimise water accumulation on their surfaces.
 - Ramps shall have landings located at the top, at the bottom, and at doors opening onto the ramp.
 - Every landing shall be not less than 1500 mm long in the direction of travel.
 - Where the ramp is not part of an accessible route, the ramp landings shall not be required to exceed 1250 mm in the direction of travel, provided that the ramp has a straight run.
 - Handrails shall be provided on all ramps on both sides.

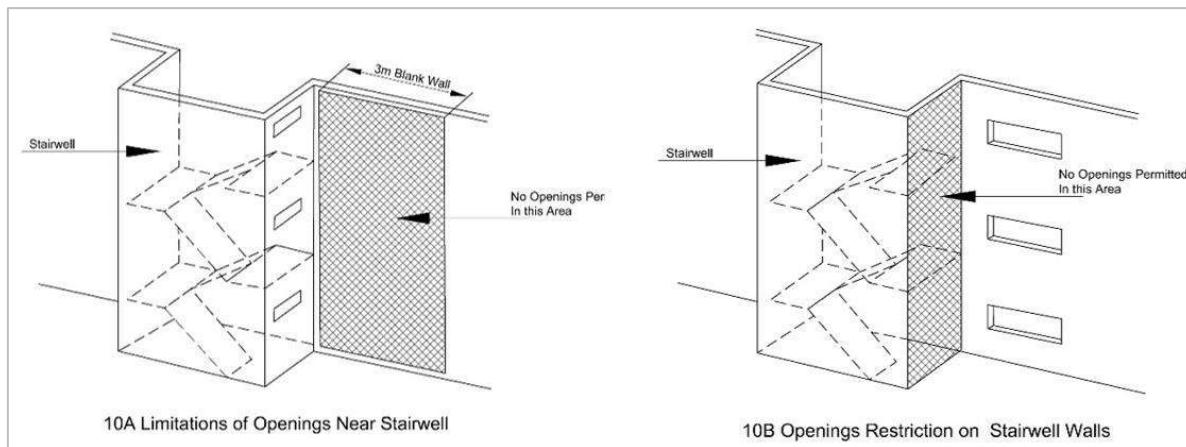


Figure No. 14.11: Opening Restrictions

e) Smoke Control of Exits

- i In building design, compartmentation plays a vital part in limiting the spread of fire and smoke. The design should ensure avoidance of spread of smoke to adjacent spaces through the various leakage openings in the compartment enclosure, such as cracks, openings around pipes ducts, airflow grills and doors. In the absence of proper sealing of all these openings, smoke and toxic gases will obstruct the free movement of occupants of the building through the exits. Pressurization of staircases is of great importance for the exclusion of smoke and toxic gases from the protected exit.
- ii Pressurization is a method adopted for protecting the exits from ingress of smoke, especially in high-rise buildings. In pressurization, air is injected into the staircases, lobbies, etc, as applicable, to raise their pressure slightly above the pressure in adjacent parts of the building. As a result, ingress of smoke or toxic gases into the exits will be prevented. The pressurization of staircases and lift lobbies shall be adopted as given in Table No. 14.5. The pressure difference for staircases shall be 50 Pa. Pressure differences for lobbies (or corridors) shall be between 25 Pa and 30 Pa. Further, the pressure differential for enclosed staircase adjacent to such lobby (or corridors) shall be 50 Pa. For enclosed staircases adjacent to non-pressurized lobby (or corridors), the pressure differential shall be 50 Pa.
- iii Equipment and ductwork for staircase pressurization shall be in accordance with one of the following:
 - Directly connected to the stairway by ductwork enclosed in non-combustible construction.
 - If ducts used to pressurize the system are passed through shafts and grills are provided at each level, it shall be ensured that hot gases and smoke from the building cannot ingress into the staircases under any circumstances.
- iv The normal air conditioning system and the pressurization system shall be designed and interfaced to meet the requirements of emergency services. When the emergency pressurization is brought into action, the following changes in the normal air conditioning system shall be effected.
 - Any re-circulation of air shall be stopped, and all exhaust air vented to atmosphere.
 - Any air supply to the spaces/areas other than exits shall be stopped.
 - The exhaust system may be continued provided,
 - the positions of the extraction grills permit a general air flow away from the means of egress.
 - the construction of the ductwork and fans is such that, it will not be rendered inoperable by hot gases and smoke; and

- there is no danger of spread of smoke to other floors by the path of the extraction system which can be ensured by keeping the extraction fans running.
- v For pressurized stair enclosure systems, the activation of the systems shall be initiated by signalling from fire alarm panel.
- vi Pressurization system shall be integrated and supervised with the automatic/manual fire alarm system for actuation.
- vii Wherever pressurized staircase is to be connected to unpressurized area, the two areas shall be segregated by 120 min fire resistant wall.
- viii Fresh air intake for pressurization shall be away (at least 4 m) from any of the exhaust outlets/grille.

Table No. 14.5: Pressurization of Staircases and Lift Lobbies

No	Component¹⁾	Width per Person (mm)		
		Less than 15 m	15 m to 30 m	More than 30 m
(1)	(2)	(3)	(4)	(5)
i)	Internal staircase not with external wall	Pressurized except for residential buildings (A-1 and A-3(Apartment houses))	Pressurized	Pressurized
ii)	Internal staircase with external wall	Pressurized except for residential buildings (A-1 and A-3(Apartment houses)) or naturally ventilated	Naturally ventilated or pressurized	Cross-ventilated or pressurized
iii)	Lift lobby	Not required at ground and above However lift lobby segregation and pressurization is required for lift commuting from ground to basement	Naturally ventilated or Pressurized ¹⁾	Cross-ventilated or Pressurized ¹⁾

¹⁾ Lift lobby with fire doors (120 min) at all levels with pressurization of 25-30 Pa is required. However, if lift lobby cannot be provided at any of the levels in air-conditioned buildings or in internal spaces where funnel/flue effect may be created, lift hoist way shall be pressurized at 50 Pa. For building greater than 30 m, multiple point injection air inlets to maintain desired pressurization level shall be provided. If the lift lobby, lift and staircase are part of firefighting shaft, lift lobby necessarily has to be pressurized in such case, unless naturally ventilated.

Notes

- 1 The natural ventilation requirement of the staircase shall be, achieved through opening at each landing, of an area 0.5 m² in the external wall. A cross ventilated staircase shall have 2 such openings in opposite/adjacent walls or the same shall be cross ventilated through the corridor.
- 2 Enclosed staircases leading to more than one basement shall be pressurized.

14.3.5 Compartmentation

- 1 General
 - a) It is important to limit the spread of a fire in any building. The usual method is to use fire barriers. In some instances, these barriers need to be penetrated for ductwork, plumbing and electrical systems, and in such cases, use of passive fire protection measures shall be done so that the integrity of these barriers is not compromised.
 - b) Floor(s) shall be compartmented with area as given below.
- 2 All floors shall be compartmented/zoned with area of each compartment being not more than 750 m². The maximum size of the compartment shall be as follows, in case of sprinklered basement/building:

Table No.14.6: Maximum Compartmentation Area of Sprinklered Basement / Buildings

No.	Use	Compartmentation Area (m ²)
(1)	(2)	(3)
1	Basement car parking	3000
2	Basements (other than car parking)	2000
3	Health Buildings: Subdivision D-1	1800
4	Public Buildings: Subdivision D-2	1125
5	Mercantile and Assembly building	2000
6	Business building	3000
7	All other building (Excluding low hazard and moderate hazard industrial building and storage building) ¹	750

¹⁾ Compartmentation for low hazard and moderate hazard industrial buildings and storage buildings shall be done in consultation with local fire department.

In addition, there shall be requirement of a minimum of two compartments if the floor plate size is equal or less than the areas mentioned above. However, such requirement of minimum two compartments shall not be required, if the floor plate is less than 750 m².

Compartmentation shall be achieved by means of fire barrier having fire resistance rating of 120 min.

14.3.6 Smoke Control

- 1 Smoke Exhaust and Pressurization of Areas Above Ground
 - a) Corridors in exit access (exit access corridor) are created for meeting the requirement of use, privacy, and layout in various occupancies. These are most often noted in hospitality, health care occupancies and sleeping accommodations.
 - b) Exit access corridors of guest rooms and indoor patient department/areas having patients lacking self-preservation and for sleeping accommodations such as apartments, custodial, penal and mental institutions, etc., shall be provided with 60 min fire resistant wall and 20 min self-closing fire doors along with all fire stop sealing of penetrations.
 - c) Smoke exhaust system having make-up air and exhaust air system or alternatively pressurization system with supply air system for these exit access corridors shall be required.
 - d) Smoke exhaust system having make-up air and exhaust air system shall also be required for theatres/auditoria. Such smoke exhaust system shall also be required for large lobbies, and which have exit through staircase leading to exit discharge. This would enable eased exit of people through smoke-controlled area to exit discharge.
 - e) All exit passageway (from exit-to-exit discharge) shall be pressurized or naturally ventilated. The mechanical pressurization system shall be automatic in action with manual controls in addition. All such exit passageway shall be maintained with integrity for safe means of egress and evacuation. Doors provided in such exit passageway shall be fire rated doors of 120 min rating. Smoke exhaust system where provided, for above areas and occupancies shall have a minimum of 12 air changes per hour smoke exhaust mechanism. Pressurization system where provided shall have a minimum pressure differential of 25-30 Pa in relationship to other areas.
 - f) The smoke exhaust fans in the mechanical ventilation system shall be fire rated, that is, 250°C for 120 min. For naturally cross-ventilated corridors or corridors with operable windows, such smoke exhaust system or pressurization system will not be required.
- 2 Smoke Exhaust and Pressurization of Areas Below Ground

Each basement shall be separately ventilated. Vents with cross-sectional area (aggregate) not less than 2.5 percent of the floor area spread evenly round the perimeter of the basement shall

be provided in the form of grills, or breakable stall board lights or pavement lights or by way of shafts.

Alternatively, a system of mechanical ventilation system may be provided with following requirements:

- a) Mechanical ventilation system shall be designed to permit 12 air changes per hour in case of fire or distress call. However, for normal operation, air changes schedule shall be as given in Part VIII Building Services, Section 3 Air conditioning, Heating and Mechanical Ventilation., National Building Code.
- b) In multi-level basements, independent air intake and smoke exhaust shafts (masonry or reinforced concrete) for respective basement levels and compartments therein shall be planned with its make-up air and exhaust air fans located on the respective level and in the respective compartment. Alternatively, in multi-level basements, common intake masonry (or reinforced cement concrete) shaft may serve respective compartments aligned at all basement levels. Similarly, common smoke exhaust/outlet masonry (or reinforced cement concrete) shafts may also be planned to serve such compartments at all basement levels. All supply air and exhaust air fans on respective levels shall be installed in fire resisting room of 120 min. Exhaust fans at the respective levels shall be provided with back draft damper connection to the common smoke exhaust shaft ensuring complete isolation and compartmentation of floor isolation to eliminate spread of fire and smoke to the other compartments/floors.
- c) Due consideration shall be taken for ensuring proper drainage of such shafts to avoid insanitation condition. Inlets and extracts may be terminated at ground level with stall board or pavement lights as before. Stall board and pavement lights should be in positions easily accessible to the fire brigade and clearly marked AIR INLET or SMOKE OUTLET with an indication of area served at or near the opening.
- d) Smoke from any fire in the basement shall not obstruct any exit serving the ground and upper floors of the building.
- e) The smoke exhaust fans in the mechanical ventilation system shall be fire rated, that is, 250°C for 120 min.
- f) The smoke ventilation of the basement car parking areas shall be through provision of supply and exhaust air ducts duly installed with its supports and connected to supply air and exhaust fans. Alternatively, a system of impulse fans (jet fans) may be used for meeting the requirement of smoke ventilation complying with the following:
 - i Structural aspects of beams and other down stands/services shall be taken care of in the planning and provision of the jet fans.
 - ii Fans shall be fire rated, that is, 250°C for 120 min.
 - iii Fans shall be adequately supported to enable operations for the duration as above.
 - iv Power supply panels for the fans shall be located in fire safe zone to ensure continuity of power supply.
 - v Power supply cabling shall meet circuit integrity requirement in accordance with accepted standard. The smoke extraction system shall operate on actuation of flow switch actuation of sprinkler system. In addition, a local and/or remote manual start-stop control/switch' shall be provided for operations by the fire fighters. Visual indication of the operation status of the fans shall also be provided with the remote control. No system relating to smoke ventilation shall be allowed to interface or cross the transformer area, electrical switchboard, electrical rooms or exits. Smoke exhaust system having make-up air and exhaust air system for areas other than car parking shall be required for common areas and exit access corridor in basements/underground structures and shall be completely separate and independent of car parking areas and other mechanical areas. Supply air shall not be less than 5 m from any exhaust discharge openings.

14.3.7 Gas Supply

1 Town Gas/LPG Supply Pipes

Where gas pipes run in buildings, the same shall run in separate shafts exclusively for this purpose and these shall be on external walls, away from the staircases.

Gas distribution pipes shall always be below the false ceiling. The length of these pipes shall be as short as possible. In the case of kitchen cooking range area, hood should have grease filters using metallic grill to trap oil vapours escaping into the fume hood.

2 Thermal Detectors

These shall be installed into fume hoods of large kitchens for hotels, hospitals, and similar areas located in high rise buildings. Arrangements shall be made for automatic tripping of the exhaust fan in case of fire. If gas is used, the same shall be shut off.

The voltage shall be 24 V or 100 V d.c. operated with external rectifier. The valve shall be of the hand re-set type and shall be located in an area segregated from cooking ranges. Valves shall be easily accessible. The hood shall have manual facility for steam or suitable hood extinguishing gas released depending on duty condition.

- 3 Gas cylinders and manifold shall need to be housed in a detached location with no other occupancy within distances prescribed in good practice (*Refer Annexure K (14)*). There shall be an enclosure suitably ventilated. It is desirable to provide medium velocity spray nozzles which can be operated by quick opening valve situated away from the enclosure.
- 4 In the case of gas cylinders, if manifold has to be installed on podium/close to podium, the same shall be away from any air intakes/smoke exhaust openings/ any windows.
- 5 Pressure regulating stations shall be designed and installed at critical locations for excess flow shut off valves. Seismic shut off valve at the main distribution point shall be installed for buildings in D-6 occupancy and institutional occupancy above 15 m.
- 6 Gas meters shall be housed in a suitably constructed metal cupboard located in a well-ventilated space, keeping in view the fact that LPG is heavier than air and town gas is lighter than air.
- 7 Wherever LPG reticulation/cylinders are used in buildings above 100 m, gas leak detectors shall be provided at the usage points and monitored from fire command centre. The cables used for signalling shall be circuit integrity cables.
- 8 The gas lines shall not be installed through any electrical shafts, escape routes, refuge areas/refuge floors.
- 9 Kitchens working on LPG fuel shall not be permitted in basements.

14.3.8 Hazardous Areas, Gaseous, Oil Storage Yard, etc.

Rooms containing high pressure boilers, refrigerating machinery, transformers or other service equipment subject to possible explosion shall not be located directly under or adjacent to exits. All such rooms shall be effectively cut-off from other parts of the building and shall be provided with adequate vents to the outside air. All rooms or areas of high hazard in additions to those hereinbefore mentioned, shall be segregated, or shall be protected with fire resistant walls having fire rating of 120 min as fire, explosion or smoke therefrom is likely to interfere with safe egress from the building. Further,

- 1 Each building shall be provided with an approved outside gas shut-off valve conspicuously marked. The detailed requirements regarding safe use of gas shall be as specified in Part IX Plumbing Services, Section IV Gas Supply, National Building Code; and
- 2 All exterior openings in a boiler room or rooms contain central heating equipment, if located below opening in another storey or if less than 3 m from other doors or windows of the same building shall be protected by a fire assembly (*Refer Rules 14.2.4 (4)*). Such assemblies shall be fixed, automatic or self-closing.

14.3.9 Fire Detection and Alarm

- 1 The requirements of fire detection and alarm systems are covered for each occupancy in Table No 14.7 and under Rules 14.5 for annunciation to occupants in view of the ensuing vulnerability and to warn occupants early of the existence of fire, so as to facilitate orderly and safe egress.
- 2 Fire detection and alarm systems in buildings shall be so planned and programmed so as to enable operations of various systems and equipment to facilitate requirements leading to life safety, compartmentation and fire protection. These systems and equipment may include

electromechanical systems such as air handling units; pressurization systems; smoke management systems; creation of compartmentation through the release of fire barrier, hold-up fire doors, etc.; and monitoring of fire water storage tanks and pumps, pressures in hydrant and sprinkler system, etc. These planning and requirements shall be based on building occupancy and other requirements on case-to-case basis.

- 3 Voice evacuation systems shall employ Hindi, English and vernacular language using pre-recorded messages and integrate with fire alarm panels for alerting the zone of fire and surrounding zones/floors as required for annunciation (*Refer Table No. 14.7 and its Note 1*).
- 4 Appropriate visual warning arrangement through visual strobes/beacons may be considered in appropriate situations particularly in public buildings, at required locations to ensure visual as well as alarm for persons with hearing impairment.
- 5 For assembly buildings, Health and Public /Public Office buildings and all buildings above 30 m in height where fire alarm system is provided in accordance to Table 7, detectors shall also be provided inside the electrical shafts, and lift machine rooms, etc., besides occupancy areas.
- 6 Fire alarm panels shall be connected in peer-to-peer network or with redundant cables, run in different shafts. Each panel shall be able to work in standalone mode and master slave architecture may be used where required.
- 7 The fire detection system shall be in accordance with accepted standards (*Refer Annexure K (15)*). Guidelines for selection of various types of fire detectors for different occupancies and their installation and maintenance shall be in accordance with good practice (*Refer Annexure K (16)*) and the Part XII, Asset and Facility Management, National Building Code.
- 8 In buildings where automatic fire alarm system is provided, the following shall be monitored from fire alarm panel:
 - a) Water level in all tanks.
 - b) Hydrant and sprinkler pressures of respective zones as provided.
 - c) Pump ON/OFF status.
 - d) All isolation valves, wherever provided with supervisory switch (non-padlock valves).
 - e) Other requirements to meet electro-mechanical services interface.

14.3.10 Fire Officer

- 1 A qualified Fire Officer with experience of not less than 3 years shall be appointed who will be available on the premises, for large educational complexes, business buildings with height 30 m and above¹⁰, Health and Public buildings of 15 m and above, Hospitality buildings B-2 and H-2 occupancy.
- 2 The Fire Officer shall,
 - a) maintain the firefighting equipment in good working condition at all times.
 - b) prepare fire orders and fire operational plans and get them promulgated.
 - c) impart regular training to the occupants of the buildings in the use of firefighting equipment provided on the premises and keep them informed about the fire emergency evacuation plan.
 - d) keep proper liaison with the city fire brigade.
 - e) ensure that all fire precautionary measures are observed at the times.

14.3.11 Fire Drills and Fire Orders

Fire notices/orders shall be prepared to fulfil the requirements of firefighting and evacuation from the buildings in the event of fire and other emergency. The occupants shall be made thoroughly conversant with their action in the event of emergency, by displaying fire notices at vantage points and also through regular training. Such notices should be displayed prominently in bold lettering. For guidelines for fire drills and evacuation procedures for high rise buildings, see Annexure D.

¹⁰ NOTE — Competent authority having jurisdiction may insist on compliance of the above rules in case of buildings having very large areas even if the height is less than 30 m.

Table No.14.7: Height of Building with Minimum Requirements for Fire Fighting Installations

No.	Type of Building Occupancy	Type of Installation						Water Supply (litre)			Pump Capacity (litre/min.)		
		Fire Extinguisher	First Aid Hose Reel	Wet Riser	Down Corner	Yard Hydrant	Automatic Sprinkler system	Manually Operated Electronic Fire alarm system (MOEFA) (See Note 1)	Automatic Detection and alarm system (see note 2)	Under-ground Static Water Strong Tank Combined Capacity for Wet Riser Yard Hydrant and Sprinklers per Set of Pumps	Terrace Tank over Respective Tower Terrace	Pump Near Underground Static Water Tank (Fire Pump) with Minimum Pressure of 3.5 kg/cm ² at Remotest Location	At the Terrace Tank Level with Minimum Pressure of 3.5 kg/cm ²
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
RESIDENTIAL BUILDING (A)													
a)	One- or two-Family Private Dwellings (A-1)	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
b)	Custodial Houses (A-2)												
	1) Less than 10 m in height												
	i) Up to 300 persons	R	R	NR	NR	NR	R (see Note 3)	R	NR	NR	10000 (5000) (see Note 5)	NR	450 (450) (see Note 5)
	ii) More than 300 persons	R	R	NR	R	NR	R (see Note 3)	R	NR	NR	15000 (5000) (see Note 5)	NR	900 (450) (see Note 5)
	2) 10 m and above but not exceeding 15 m in height	R	R	R	NR	R	R (see Note 3)	R	R	100000	5000 (5000) (see Note 5)	(see Note 9)	NR
	3) 15 m and above but not exceeding 24 m in height	R	R	R	NR	R	R	R	R	150000	10000	(see Note 10)	NR
	4) Above 24 m but not exceeding 30 m in height	R	R	R	NR	R	R	R	R	200000	20000	(see Note 10)	NR
c)	Dormitories and Apartment Houses (A-3)												
	1) Less than 15 m in height	R	R	NR	NR	NR	R (see Note 3)	NR	NR	NR	5000 (5000) (see Note 5)	NR	450 (450) (see Note 5)
	2) 15 m and above but not exceeding 35 m in height	R	R	NR	R	NR	R (see Note 3)	R (see Note 7)	NR	NR	25000	NR	900
	3) Above 35 m but not exceeding 45 m in height	R	R	R	NR	NR	R (see Note 3 and Note 8)	R	NR	75000	5000	(see Note 9)	NR
HOSPITALITY BUILDINGS (B)													
a)	Hospitality (B-1)												
	1) Less than 15 m in height												
	i) Floor area not exceeding 300 m ²	R	R	NR	NR	NR	R (see Note	R	NR	NR	5 000 (5000)	NR	450 (450)

No.	Type of Building Occupancy	Type of Installation						Water Supply (litre)			Pump Capacity (litre/min.)		
		Fire Extinguisher	First Aid Hose Reel	Wet Riser	Down Corner	Yard Hydrant	Automatic Sprinkler system	Manually Operated Electronic Fire alarm system (MOEFA) (See Note 1)	Automatic Detection and alarm system (see note 2)	Under-ground Static Water Strong Tank Combined Capacity for Wet Riser Yard Hydrant and Sprinklers per Set of Pumps	Terrace Tank over Respective Tower Terrace	Pump Near Underground Static Water Tank (Fire Pump) with Minimum Pressure of 3.5 kg/cm ² at Remotest Location	At the Terrace Tank Level with Minimum Pressure of 3.5 kg/cm ²
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
a)	Residential Buildings (B-1)	on any of the floor						3)				(see Note 5)	
													(see Note 5)
			ii)	Floor area exceeding 300 m ² but not more 1000 m ² on any of the floor	R	R (see Note 7)	NR	NR	R (see Note 3)	R	R	10000 for every 500 m ² floor area subject to minimum of 50000 (see Note 6)	10000 (5000) (see Note 5)
		iii)	Floor area exceeding 1000 m ² on any of the floor	R	R (see Note 13)	NR	R	R	R (see Note 1)	R	100000 (see Note 13)	10000 (see Note 3)	(see Note 13 and Note 12)
		2)	15 m and above but not exceeding 30 m	R	R	NR	R	R	R	R	150000	20000	(see Note 10)
		3)	Above 30 m in height	R	R	R	NR	R	R	R	200000	20000	(see Note 10)
b)	Hospitality (B-2)		R	R	R	NR	R	R	R	R	250000	20000	(see Note 11)
c)	Lodging and Rooming Houses (B-3)												
1)	Less than 15 m height	i)	Up to 15 rooms	R	NR	NR	NR	R (see Note 3)	NR	NR	NR	5000 (see Note 5)	NR
		ii)	More than 15 and up to 30 rooms	R	R	NR	NR	R (see Note 3)	NR	NR	NR	5000 (5000) (see Note 5)	NR
		iii)	More than 30 rooms	R	R	NR	NR	R (see Note 3)	R (see Note 7)	NR	NR	10000 (5000) (see Note 5)	NR
													450 (450) (see Note 5)
EDUCATIONAL BUILDINGS (C)													
1)	Less than 15 m in height	i)	Ground plus one or more storeys	R	R	NR	NR	R (see Note 3)	NR	NR	NR	10000 (5000) (see Note 5)	NR
		ii)	15 m and above but not exceeding 24 m in height	R	R	NR	R	NR	R (see Note 3)	NR	NR	25000	NR
		iii)	Above 24 m but not exceeding 30 m in height	R	R	R	NR	R (see Note 1)	R	NR	50000	(5 000) (see Note 5)	(see Note 12)
													NR

No.	Type of Building Occupancy	Type of Installation							Water Supply (litre)			Pump Capacity (litre/min.)	
		Fire Extinguisher	First Aid Hose Reel	Wet Riser	Down Corner	Yard Hydrant	Automatic Sprinkler system	Manually Operated Electronic Fire alarm system (MOEFA) (See Note 1)	Automatic Detection and alarm system (see note 2)	Under-ground Static Water Strong Tank Combined Capacity for Wet Riser Yard Hydrant and Sprinklers per Set of Pumps	Terrace Tank over Respective Tower Terrace	Pump Near Underground Static Water Tank (Fire Pump) with Minimum Pressure of 3.5 kg/cm ² at Remotest Location	At the Terrace Tank Level with Minimum Pressure of 3.5 kg/cm ²
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
HEALTH & PUBLIC BUILDINGS (D)													
a)	Hospitals (D-1)												
	1)	Less than 15 m in height with plot area up to 1000 m ²											
	i)	Up to ground plus one storey, with no beds	R	NR	NR	NR	NR	R (see Note 3)	R	NR	NR	(5000) (see Note 5)	NR
	ii)	Up to ground plus one storey with beds	R	R	NR	NR	NR	R (see Note 3)	R	NR	NR	5000 (5000) (see Note 5)	NR
	iii)	Ground plus two or more storeys, with no beds	R	R	NR	R	NR	R (see Note 3)	R	R	NR	10000 (5000) (see Note 5)	NR
	iv)	Ground plus two or more two or more storeys, with beds	R	R	R	NR	NR	R	R (see Note 1)	R	75000	10000	(see Note 12)
	2)	Less than 15 min height with plot area more than 1000 m ²	R	R	R	NR	R	R	R (see Note 1)	R	100000	10000	(see Note 12)
	3)	15 m and above but not exceeding 24 m in height	R	R	R	NR	R	R	R	R	150000	20000	(see Note 9)
	4)	Above 24 m and not exceeding 45 m in height	R	R	R	NR	R	R	R	R	200000	20000	(see Note 10)
b)	Public (D-2)												
	1)	Less than 10 m in height											
	i)	Up to 300 persons	R	R	NR	NR	NR	R (see Note 3)	R	NR	NR	10000 (5000) (see Note 5)	NR
	ii)	More than 300 persons	R	R	NR	R	NR	R (see Note 3)	R	NR	NR	15000 (5000) (see Note 5)	NR
	2)	10 m and above but not exceeding 15 m in height	R	R	R	NR	R	R (see Note 3)	R	R	100000	5000 (5000) (see Note 5)	(see Note 9)
	3)	15 m and above but not	R	R	R	NR	R	R	R	R	150000	10000	(see Note 10)

No.	Type of Building Occupancy	Type of Installation							Water Supply (litre)			Pump Capacity (litre/min.)		
		Fire Extinguisher	First Aid Hose Reel	Wet Riser	Down Corner	Yard Hydrant	Automatic Sprinkler system	Manually Operated Electronic Fire alarm system (MOEFA) (See Note 1)	Automatic Detection and alarm system (see note 2)	Under-ground Static Water Strong Tank Combined Capacity for Wet Riser Yard Hydrant and Sprinklers per Set of Pumps	Terrace Tank over Respective Tower Terrace	Pump Near Underground Static Water Tank (Fire Pump) with Minimum Pressure of 3.5 kg/cm ² at Remotest Location	At the Terrace Tank Level with Minimum Pressure of 3.5 kg/cm ²	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
c)	exceeding 24 m in height													
	4) 24 m and above but not exceeding 30 m in height	R	R	R	NR	R	R	R	R	200000	20000	(see Note 10)	NR	
Public Office (D-3)														
1)	Less than 10 m in height	R	R	NR	R	NR	R (see Note 3)	R	NR	NR	10000 (5000) (see Note 5)	NR	450 (450) (see Note 5)	
2)	Above 10 m but not exceeding 15 m in height	R	R	R	NR	NR	R (see Note 3)	R	R	50000	5000 (5000) (see Note 5)	(see Note 12)	450 (450) (see Note 5)	
3)	Above 15 m and up to 24 m in height	R	R	R	NR	R	R	R	R	100000	10000	(see Note 9)	NR	
4)	Above 24 m and up to 30 m in height	R	R	R	NR	R	R	R	R	150000	20000	(see Note 10)	NR	
5)	Above 30 m in height	R	R	R	NR	R	R	R	R	200000	20000	(see Note 11)	NR	
ASSEMBLY BUILDINGS (E)														
a)	Assembly Building (E-1 to E-4)													
	1)	Less than 10 m in height												
	i)	Up to 300 persons	R	R	NR	R	NR	R (see Note 3)	R	NR	20000 (5000) (see Note 5)	NR	450 (450) (see Note 5)	
	ii)	More than 300 persons	R	R	NR	R	NR	R (see Note 3)	R	NR	25000 (5000) (see Note 5)	NR	900 (450) (see Note 5)	
	2)	Above 10 m but not exceeding 15 m in height	R	R	R	NR	NR	R (see Note 3)	R (see Note 1)	R	100000	5000 (5000) (see Note 5)	(see Note 9)	450 (450) (see Note 5)
	3)	Above 15 m but not exceeding 24 m in height	R	R	R	NR	R	R	R	R	150000	10000	(see Note 9)	NR
	4)	Above 24 m but not exceeding 30 m in height	R	R	R	NR	R	R	R	R	200000	20000	(see Note 10)	NR
TRANSPORTATION (F)														
a)	Transportation (F-1)													
	1)	Less than 10 m in height												
	i)	Up to 300 persons	R	R	NR	R	NR	R (see Note	R	NR	NR	20000 (5000)	NR	450 (450)

No.	Type of Building Occupancy	Type of Installation						Water Supply (litre)			Pump Capacity (litre/min.)			
		Fire Extinguisher	First Aid Hose Reel	Wet Riser	Down Corner	Yard Hydrant	Automatic Sprinkler system	Manually Operated Electronic Fire alarm system (MOEFA) (See Note 1)	Automatic Detection and alarm system (see note 2)	Under-ground Static Water Strong Tank Combined Capacity for Wet Riser Yard Hydrant and Sprinklers per Set of Pumps	Terrace Tank over Respective Tower Terrace	Pump Near Underground Static Water Tank (Fire Pump) with Minimum Pressure of 3.5 kg/cm ² at Remotest Location	At the Terrace Tank Level with Minimum Pressure of 3.5 kg/cm ²	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
a)	ii) More than 300 persons						3)				(see Note 5)		(see Note 5)	
		R	R	NR	R	NR	R (see Note 3)	R	NR	NR	25000 (5000) (see Note 5)	NR	900 (450) (see Note 5)	
	2)	Above 10 m but not exceeding 15 m in height	R	R	R	NR	NR	R (see Note 3)	R (see Note 1)	R	100000	5000 (5000) (see Note 5)	(see Note 9)	450 (450) (see Note 5)
	3)	Above 15 m but not exceeding 24 m in height	R	R	R	NR	R	R	R	150000	10000	(see Note 9)	NR	
	4)	Above 24 m but not exceeding 30 m in height	R	R	R	NR	R	R	R	200000	20000	(see Note 10)	NR	
b)	Transportation (F-2)													
	1)	Below 15 m in height and covered area less than 250 m ²	R	R	NR	NR	NR	R	NR	NR	25000	NR	900	
	2)	Below 15 min height and covered area more than 250m ²												
	i)	Ground floor only	R	R	R	NR	R	R	R	50000	10000	(see Note 12)	450	
	ii)	Ground plus one floor	R	R	R	NR	R	R	R	75000	10000	(see Note 9)	450	
	iii)	More than ground plus one floor	R	R	R	NR	R	R	R	100000	10000	(see Note 9)	450	
	3)	Multi-Level Car Parking (MLCP)	R	R	R	NR	R	R	NR	150000	10000	(see Note 10)	900	
STORAGE BUILDINGS (G)														
a)	Storage (G-1)													
	1)	Covered area up to 100 m ²	R	NR	NR	NR	NR	R (see Note 3)	NR	NR	5000 (see Note 4)	NR	450 (see Note 4)	
	2)	Covered area more than 100 m ² and up to 500 m ²	R	R	NR	R. (see Note 7)	NR	R (see Note 3)	NR	NR	20 000 (5 000) (see Note 5)	NR	450 (450) (see Note 5)	
	3)	Covered area more than 500 m ² (for	R	R	NR	R	NR	R (see Note	R	NR	NR	20000 (5000)	NR	450 (450)

No.	Type of Building Occupancy	Type of Installation							Water Supply (litre)			Pump Capacity (litre/min.)		
		Fire Extinguisher	First Aid Hose Reel	Wet Riser	Down Corner	Yard Hydrant	Automatic Sprinkler system	Manually Operated Electronic Fire alarm system (MOEFA) (See Note 1)	Automatic Detection and alarm system (see note 2)	Under-ground Static Water Strong Tank Combined Capacity for Wet Riser Yard Hydrant and Sprinklers per Set of Pumps	Terrace Tank over Respective Tower Terrace	Pump Near Underground Static Water Tank (Fire Pump) with Minimum Pressure of 3.5 kg/cm ² at Remotest Location	At the Terrace Tank Level with Minimum Pressure of 3.5 kg/cm ²	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
	building height up to 15 m)						3)				(see Note 5)		(see Note 5)	
	4) Covered area more than 500 m ² (for building height above 15 m)	R	R	R	NR	R	R (see Note 3)	R	R	75000	5000 (see Note 5)	(see Note 12)	NR	
b)	Storage (G-2)													
	1) Below 15 m in height and covered area less than 250 m ²	R	R	NR	NR	NR	R	NR	NR	NR	25000	NR	900	
	2) Below 15 min height and covered area more than 250m ²													
	i) Ground floor only	R	R	R	NR	R	R	R	R	50000	10000	(see Note 12)	450	
	ii) Ground plus one floor	R	R	R	NR	R	R	R	R	75000	10000	(see Note 9)	450	
	iii) More than ground plus one floor	R	R	R	NR	R	R	R	R	100000	10000	(see Note 9)	450	
MERCANTILE BUILDINGS (H)														
a)	Mercantile (H-1)													
	1) Less than 10 m in height	R	R	NR	R	NR	R (see Note 3)	R	NR	NR	10000 (5000) (see Note 5)	NR	450 (450) (see Note 5)	
	2) Above 10 m but not exceeding 15 m in height	R	R	R	NR	NR	R (see Note 3)	R	R	50000	5000 (5000) (see Note 5)	(see Note 12)	450 (450) (see Note 5)	
	3) Above 15 m and up to 24 m in height	R	R	R	NR	R	R	R	R	100000	10000	(see Note 9)	NR	
	4) Above 24 m and up to 30 m in height	R	R	R	NR	R	R	R	R	150000	20000	(see Note 10)	NR	
	5) Above 30 m in height	R	R	R	NR	R	R	R	R	200000	20000	(see Note 11)	NR	
b)	Mercantile Buildings H-2	R	R	R	NR	R	R	R	R	200000	20000	(see Note 11)	NR	
c)	Mercantile Buildings H-3 and H-4													
	1) Less than 15 m in height	i)	Ground plus one storey, with total of all floor area not exceeding 500 m ²	R	R	NR	NR	R (see Note 3)	NR	NR	NR	5 000 (5000) (see Note 5)	NR	450 (450) (see Note 5)

No.	Type of Building Occupancy	Type of Installation						Water Supply (litre)			Pump Capacity (litre/min.)		
		Fire Extinguisher	First Aid Hose Reel	Wet Riser	Down Corner	Yard Hydrant	Automatic Sprinkler system	Manually Operated Electronic Fire alarm system (MOEFA) (See Note 1)	Automatic Detection and alarm system (see note 2)	Under-ground Static Water Strong Tank Combined Capacity for Wet Riser Yard Hydrant and Sprinklers per Set of Pumps	Terrace Tank over Respective Tower Terrace	Pump Near Underground Static Water Tank (Fire Pump) with Minimum Pressure of 3.5 kg/cm ² at Remotest Location	At the Terrace Tank Level with Minimum Pressure of 3.5 kg/cm ²
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	ii)	Ground plus one storey and total of all floor area exceeding 500 m ²	R	R	NR	R	NR	R (see Note 3)	R	NR	NR	20000 (5000) (see Note 5)	NR 900 (450) (see Note 5)
	iii)	More than ground plus one storey	R	R	NR	R	NR	R (see Note 3)	R	NR	NR	25000 (5000) (see Note 5)	NR 900 (450) (see Note 5)
	2)	Above 15 m but not exceeding 24 m in height	R	R	R	NR	R	R	R	100000	10000	(see Note 9)	NR
3)	Above 24 m but not exceeding 30 m in height	R	R	R	NR	R	R	R	R	200000	20000	(see Note 10)	NR
BUSINESS BUILDINGS (I)													
	1)	Less than 10 m in height	R	R	NR	R	NR	R (see Note 3)	R	NR	NR	10000 (5000) (see Note 5)	NR 450 (450) (see Note 5)
	2)	Above 10 m but not exceeding 15 m in height	R	R	R	NR	NR	R (see Note 3)	R	R	50000	5000 (5000) (see Note 5)	(see Note 12) 450 (450) (see Note 5)
	3)	Above 15 m and up to 24 m in height	R	R	R	NR	R	R	R	100000	10000	(see Note 9)	NR
	4)	Above 24 m and up to 30 m in height	R	R	R	NR	R	R	R	150000	20000	(see Note 10)	NR
	5)	Above 30 m in height	R	R	R	NR	R	R	R	200000	20000	(see Note 11)	NR
INDUSTRIAL BUILDINGS (J)													
a)	Low Hazard (J-1)												
	1)	Covered area up to 100 m ²	R	NR	NR	NR	NR	R (see Note 3)	NR	NR	NR	5 000 (see Note 4)	NR 450 (see Note 4)
	2)	Covered area more than 100 m ² and up to 500 m ²	R	R	NR	R. (see Note 7)	NR	R (see Note 3)	NR	NR	NR	20 000 (5 000) (see Note 5)	NR 450 (450) (see Note 5)
	3)	Covered area more than 500 m ² (for building height up to 15	R	R	NR	R	NR	R (see Note 3)	R	NR	NR	20000 (5000) (see Note 5)	NR 450 (450) (see Note 5)

No.	Type of Building Occupancy	Type of Installation						Water Supply (litre)			Pump Capacity (litre/min.)		
		Fire Extinguisher	First Aid Hose Reel	Wet Riser	Down Corner	Yard Hydrant	Automatic Sprinkler system	Manually Operated Electronic Fire alarm system (MOEFA) (See Note 1)	Automatic Detection and alarm system (see note 2)	Under-ground Static Water Strong Tank Combined Capacity for Wet Riser Yard Hydrant and Sprinklers per Set of Pumps	Terrace Tank over Respective Tower Terrace	Pump Near Underground Static Water Tank (Fire Pump) with Minimum Pressure of 3.5 kg/cm ² at Remotest Location	At the Terrace Tank Level with Minimum Pressure of 3.5 kg/cm ²
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	m)												
4)	Covered area more than 500 m ² (for building height above 15 m)	R	R	R	NR	R	R (see Note 3)	R	R	75000	5000 (see Note 5)	(see Note 12)	NR
b) Moderate Hazard (J-2)													
1)	Covered area up to 100 m ²	R	R	NR	NR	NR	R	NR	NR	NR	10000	NR	450
2)	Covered area more than 100 m ² and up to 500 m ²	R	R	NR	NR	NR	R	NR	NR	NR	20000	NR	900
3)	Coveted area more than 500 m ² and up to 1000 m ² (for height up to 15 m)	R	R	NR	R	NR	R	R	R	NR	50000	NR	900
4)	Covered area more than 500 m ² and up to 1000 m ² (for height above 15 m)	R	R	R	NR	R	R	R	R	100000	10000	(see Note 12)	NR
5)	Covered area more than 1000 m ²	R	R	R	NR	R	R	R	R	150000	20000	(see Note 10)	NR
c) High Hazard (J-3)													
1)	Covered area up to 50 m ²	R	R	NR	NR	NR	R	NR	NR	NR	10000	NR	900
2)	Covered area more than 50 m ² and up to 150 m ²	R	R	NR	NR	NR	R	R	R	NR	25000	NR	900
3)	Covered area more than 150 m ² and up to 300 m ²	R	R	R	NR	NR	R	R	R	50000	10000	(see Note 12)	NR
4)	Covered area more than 300 m ² and up to 500 m ²	R	R	R	NR	R	R	R	R	100000	20000	(see Note 9)	NR
5)	Covered area more than 500 m ²	R	R	R	NR	R	R	R	R	150000	20000	(see Note 10)	NR

R- Required

NR-Not Required

NOTES:

- 1 MOEFA System shall also include talk-back system and public address system for the occupancies wherever mentioned in the table. These shall also be provided in car parking areas more than 300 m² and in multi-level car parking irrespective of their areas.
- 2 Automatic detection and alarm system is not required to be provided in car parking area. Such detection system shall however be required in other areas of car parking such as electrical rooms, cabins and other areas.
- 3 Required to be installed in basement, if area of basement exceeds 200 m².
- 4 Required to be provided if basement area exceeds 200 m².
- 5 Additional values given in parenthesis shall be added if basement area exceeds 200 m².
- 6 Required to be provided for buildings with more than two storeys (Ground + One).
- 7 Required to be provided for buildings with height above 15 m and above.
- 8 Sprinklers shall be fed water from both underground static water storage tank and terrace tank.
- 9 Provide required number of sets of pumps each consisting of one electric and one diesel pump (stand by) of capacity 2280 litre/min and one electric pump of capacity 180 litre/min (Refer Figure No. 14.12) (see also notes 15 and 16).
- 10 Provide required number of sets of pumps each consisting of two electric and one diesel pump (stand by) of capacity 2280 litre/min and two electric pump of capacity 180 litre/min (Refer Figure No. 14.13) (see also Notes 15 and 16).
- 11 Provide required number of sets of pumps each consisting of two electric and one diesel pump (stand by) of capacity 2850 litre/min and two electric pump of capacity 180 litre/min (Refer Figure No.14.13) (see also Notes 15 and 16).
- 12 Provide required number of sets of pumps each consisting of one electric and one diesel pump (stand by) of capacity 1620 litre/min and one electric pump of capacity 180 litre/min (Refer Figure No. 14.12) (see also Notes 15 and 16).
- 13 Required to be provided for buildings with more than one storey.
- 14 The requirements given in this table for Group J Industrial Buildings are for small scale industry units. For other industries the requirements will have to be worked out on the basis of relevant Indian Standards and also in consultation with the local fire authorities.
- 15 One set of pumps shall be provided for each 100 hydrants or part thereof, with a maximum of two sets. In case of more than one pump set installation, both pump sets shall be interconnected at their delivery headers.
- 16 Alternative to provisions of additional set of pumps, the objective can be met by providing additional diesel pump of the same capacity and doubling the water tank capacity as required for one set of pumps.
- 17 As per the requirement of local authority dry riser may be used in hilly areas, industrial areas or as required.
- 18 Unless so required by the Height of any Machinery (which shall be certified on case-to-case basis by Inspector of Factories), no building of height more than 18 m shall be allowed in J1 and J2 category and no building of height more than 15 m shall be allowed in J3 category.

14.4 Fire Protection

14.4.1 Fire Extinguishers/ Fixed Firefighting Installations

- 1 All buildings depending upon the occupancy use and height shall be protected by fire extinguishers, hose reels, wet riser, down-comer, yard hydrants, automatic sprinkler installation, deluge system, high/medium velocity water spray, foam, water mist systems, gaseous or dry powder system, manual/automatic fire alarm system, etc, in accordance with the provisions of various clauses given below, as applicable:
 - a) These fire extinguishing equipment, and their installation shall be in accordance with accepted standards. The extinguishers shall be mounted at a convenient height to enable its quick access and efficient use by all in the event of a fire incidence. The requirements of fire extinguishers/yard hydrant systems/wet riser/down-comer installation and capacity of water storage tanks and fire pumps, etc., (*Refer Table No.14.7*). The requirements regarding size of mains/risers (*Refer Table No 14.8*). The typical arrangements of down-comer and wet riser installations are shown in Figure No.14.14. The wet riser shall be designed for zonal distribution ensuring that unduly high pressures are not developed in risers and hosepipes.
 - b) First-aid firefighting appliances shall be provided and installed in accordance with good practice (*Refer Annexure K (18)*). The firefighting equipment and accessories to be installed in buildings for use in firefighting shall also be in accordance with the accepted standard (*Refer Annexure K (17)*) and shall be maintained periodically so as to ensure their perfect serviceability at all times.
 - c) Valves in fixed firefighting installations shall have supervisory switch with its signalling to fire alarm panel or to have chain(s), pad lock(s), label and tamper-proof security tag(s) with serial number to prevent tampering/unauthorized operation. These valves shall be kept in their intended open position.
 - d) In addition to wet riser or down-comer, first aid hose reels shall be installed in buildings (*Refer Table No. 14.7*) on all the floors, in accordance with accepted standard (*Refer Annexure K (19)*). The first-aid hose reel shall be connected directly to the riser/down-comer main and diameter of the hose reel shall not be less than 19 mm.
 - e) Wet risers shall be interconnected at terrace level to form a ring and cut-off shall be provided for each connection to enable repair/ maintenance without affecting rest of the system.
 - f) Pressure at the hydraulically remote hydrant and at the highest hydrant shall not be less than 3.5 bar. The pressure at the hydrants shall however not exceed 7.0 bar, considering the safety of operators. It may be planned to provide orifice plates for landing valves to control pressure to desired limit especially at lower levels; this could also be achieved through other suitable means of pressure reducing devices such as pressure-controlled hydrant valves.
 - g) Hydrants for firefighting and hose reels shall be located in the lobby in firefighting shaft. Those hydrants planned to be provided near fire exit staircase on the floor shall be within 5 m from exit door in exit access. Such hydrant cabinet may finish with doors to meet interior finishes with requirement of glass panel to provide visibility to the installations inside and inscribed with the word: FIRE HOSE CABINET of letter size 75 mm in height and 12 mm in width. Such door of the fire hose cabinet need not be fire resistant rated. The location of such cabinets shall be shown on floor plan and duly displayed in the landing of the respective fire exit staircase.
- 2 Static Water Storage Tanks and Pump House.
 - a) Static water storage tanks
 - i A satisfactory supply of water for the purpose of firefighting shall always be available in the form of underground/terrace level static storage tank with capacity specified for each building with arrangements or replenishment.
 - ii Water for the hydrant services shall be stored in an easily accessible surface/underground lined reservoir or above ground tanks of steel, concrete or masonry. The effective capacity of the reservoir above the top of the pump casing

- (flooded suction) for various types of occupancies shall be as indicated in Table No. 14.7.
- iii Water for firefighting shall be stored in two or more interconnected compartments of equal size to facilitate cleaning and maintenance of the tanks without interrupting the water availability for firefighting.
 - iv To prevent stagnation of water in the static water storage tank, the suction tank of the domestic water supply shall be fed only through an overflow arrangement from the fire water storage tanks to maintain the level therein at the minimum specified capacity.
 - v Alternatively, domestic and fire water can be stored in two interconnected compartments as mentioned above. The suction inlet(s) for the domestic water pumps shall be so located at an elevation that minimum water requirements for firefighting as stated in Table No. 14.7 will be always available for fire pumps.
 - vi The static storage water supply required for the above mentioned purpose shall entirely be accessible to the fire engines of the local fire service. Suitable number of manholes shall be provided for inspection, repairs, insertion of suction hose, etc. As an alternative to the arrangement of manholes to allow access from the top, suitable arrangement to enable efficient access to the tank by the firemen from the adjoining fire pump room having direct access from the ground level, shall be made. The underground fire water storage tank(s) shall not be more than 7 m in depth from the level having fire brigade draw-out connection, while the draw-out connection shall not be more than 5 m away from the tank wall. The covering slab shall be able to withstand a total vehicular load of 45 t (or as applicable) equally divided as a four-point load when the slab forms a part of pathway/driveway.
 - vii The static water storage tank shall be provided with a fire brigade collecting head with 4 number 63 mm diameter (2 number 63 mm diameter for pump with capacity 1400 litre/min) instantaneous male inlets arranged in a valve box at a suitable point at street level. The same shall be connected to the static tank by a suitable fixed galvanized iron pipe not less than 150 mm in diameter to discharge water into the tank when required at the rate of 2250 litre/min, if tank is in the basement or not approachable for the fire engines.
 - viii Each of the static water storage tanks shall also be provided with a fire brigade draw out collecting head with 63 mm diameter instantaneous male draw out arranged in a valve box at a suitable point at street level. This draw out shall be connected to galvanized iron pipe of 100 mm diameter with foot valve arrangement in the tank.
- b) Firefighting pump house
- The requirements shall be as given below:
- i It is preferable to install the pump house at ground level. Pump house shall be situated so as to be directly accessible from the surrounding ground level.
 - ii Pump house shall be installed not lower than the second basement. When installed in the basement, staircase with direct accessibility (or through enclosed passageway with 120 min fire rating) from the ground, shall be provided. Access to the pump room shall not require to negotiate through other occupancies within the basement.
 - iii Pump house shall be separated by fire walls all around and doors shall be protected by fire doors (120 min rating).
 - iv Pump house shall be well ventilated and due care shall be taken to avoid water stagnation.
 - v No other utility equipment shall be installed inside fire pump room.
 - vi Insertions like flexible couplings, bellows, etc, in the suction and delivery piping shall be suitably planned and installed.
 - vii Installation of negative suction arrangement and submersible pumps shall not be allowed.

- viii Pump house shall be sufficiently large to accommodate all pumps, and their accessories like PRVs, installation control valve, valves, diesel tank and electrical panel.
 - ix Battery of diesel engine operated fire pump shall have separate charger from emergency power supply circuit.
 - x Exhaust pipe of diesel engine shall be insulated as per best engineering practice and taken to a safe location at ground level, considering the back pressure.
 - xi Fire pumps shall be provided with soft starter or variable frequency drive starter.
- c) Automatic Sprinkler Installation
- i Automatic sprinklers shall be installed wherever required in terms of Table No. 14.7 throughout the building in accordance with good practice (*Refer Annexure K (20)*).
 - ii If selective sprinklering is adopted, there is a real danger of a fire starting in one of the unsprinklered area gathering momentum spreading to other areas and reaching the sprinklered areas as a fully developed fire. In such an event, the sprinklers can be rendered useless or ineffective.
 - iii Automatic sprinklers shall be installed in false ceiling voids exceeding 800 mm in height.
 - iv Installation of sprinklers may be excluded in any area to be used for substation and DG set.
 - v In areas having height 17 m or above such as in atria, sprinkler installations may be rendered ineffective and hence may be avoided.
 - vi Pressure in sprinkler system shall not exceed 12 bar or else high-pressure sprinkler to be installed for above 12 bar operations.
 - vii The maximum floor area on any one floor to be protected by sprinklers supplied by any one sprinkler system riser from an installation control valve shall be based on system protection area limitations considering maximum floor area on any one floor to be 4500 m² for all occupancies except industrial and hazardous occupancies, where Authorities shall be consulted for advice based on type and nature of risk.
 - viii Sprinkler installation control valves shall be installed inside the fire pump room.
 - ix For industrial buildings, such installation control valves may be installed outside the building and Authorities shall be consulted in situations where it is not possible to locate them inside the buildings. It is advisable to provide electrically operated siren for each valve outside the buildings in addition to water gongs in such case.
 - x The sprinkler flow switches provided shall be monitored by fire alarm panel.
 - xi It is essential to make provisions for avoiding water from sprinkler/hydrant operation entering lifts and electrical rooms.
 - xii Ramps at all levels shall be protected with sprinklers.

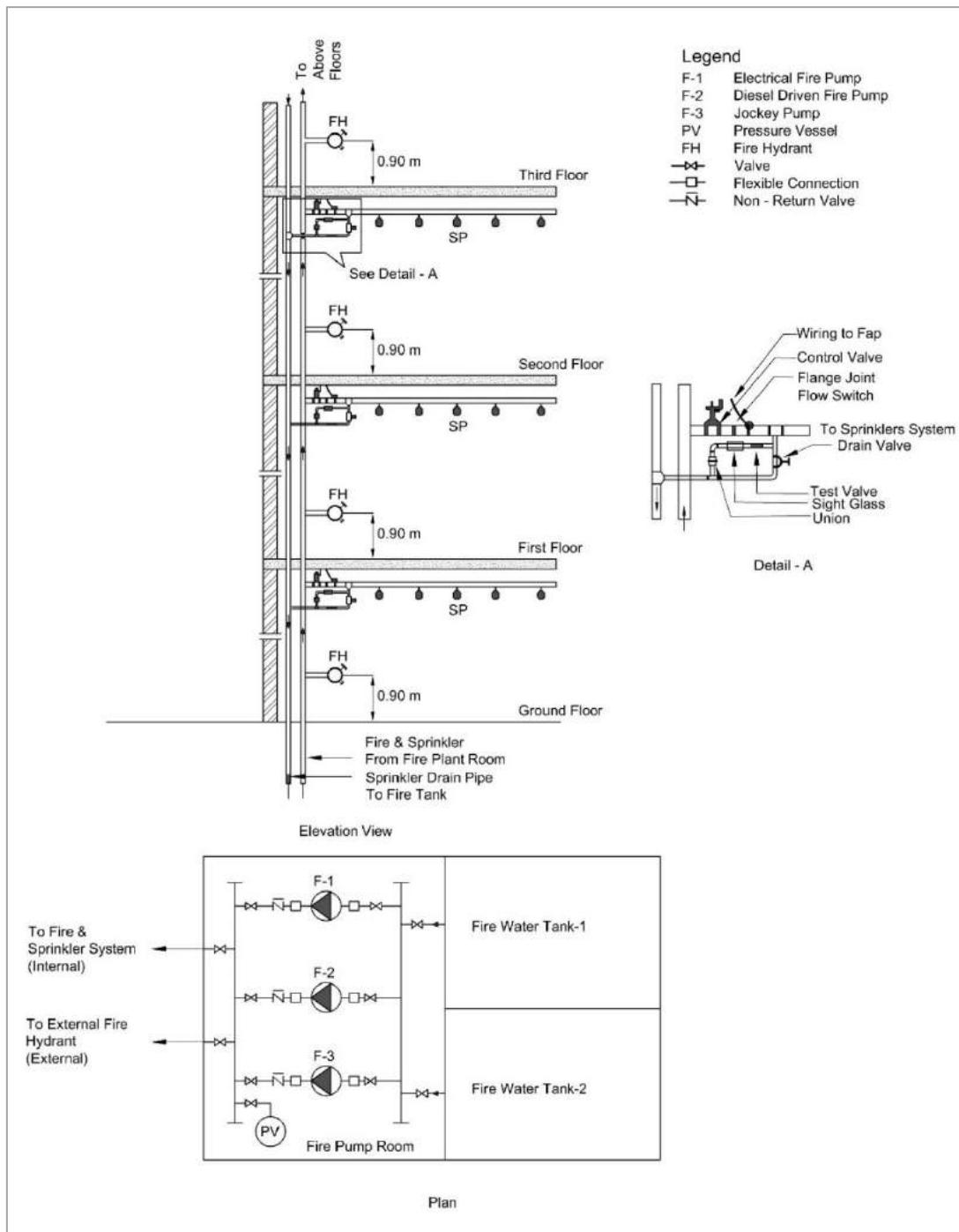


Figure No 14.12: Typical System of Pumping with One Electric, One Diesel Fire Pump

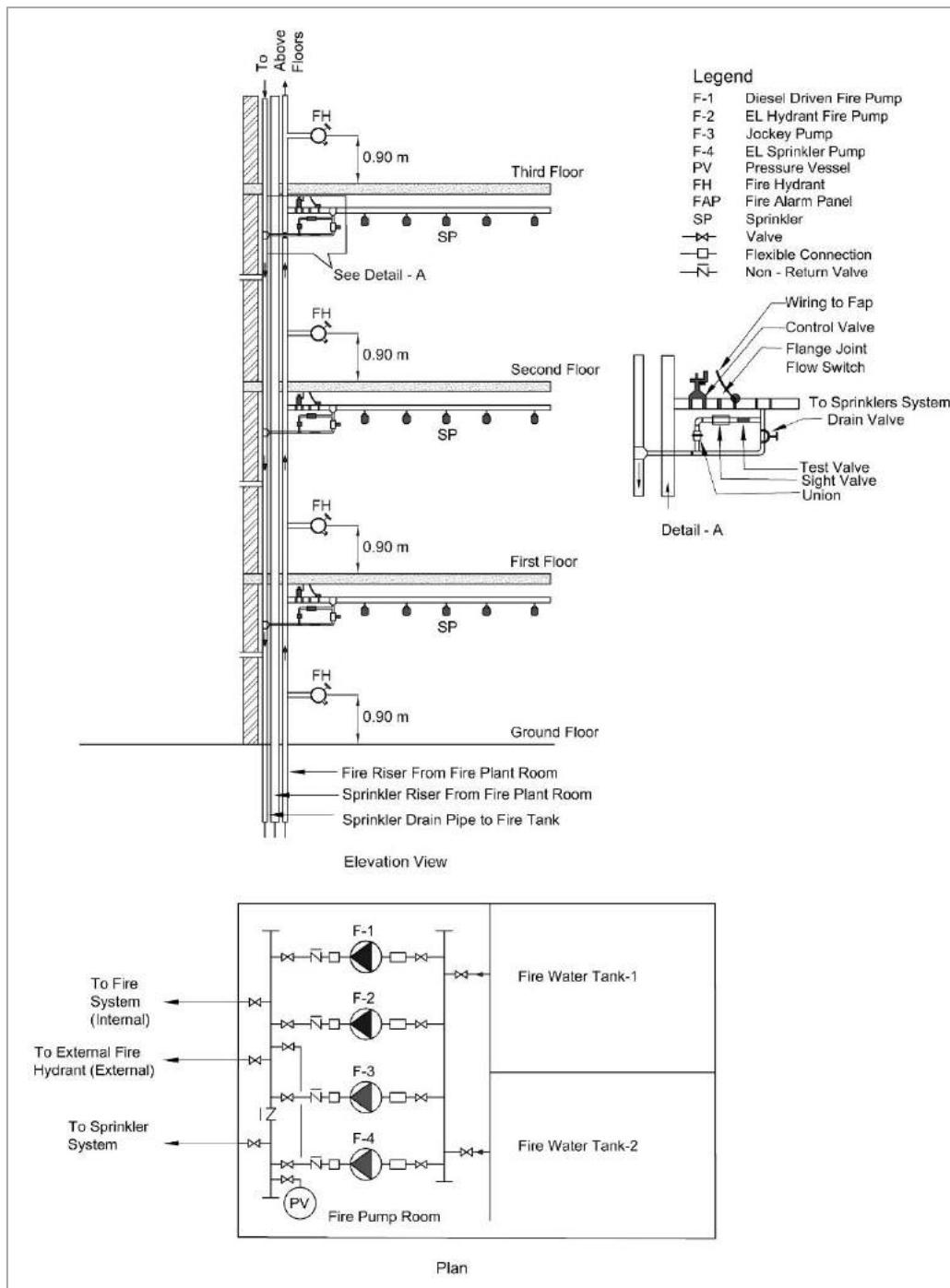


Figure No 14.13: Typical System of Pumping with Two Electric, One Diesel Fire Pump

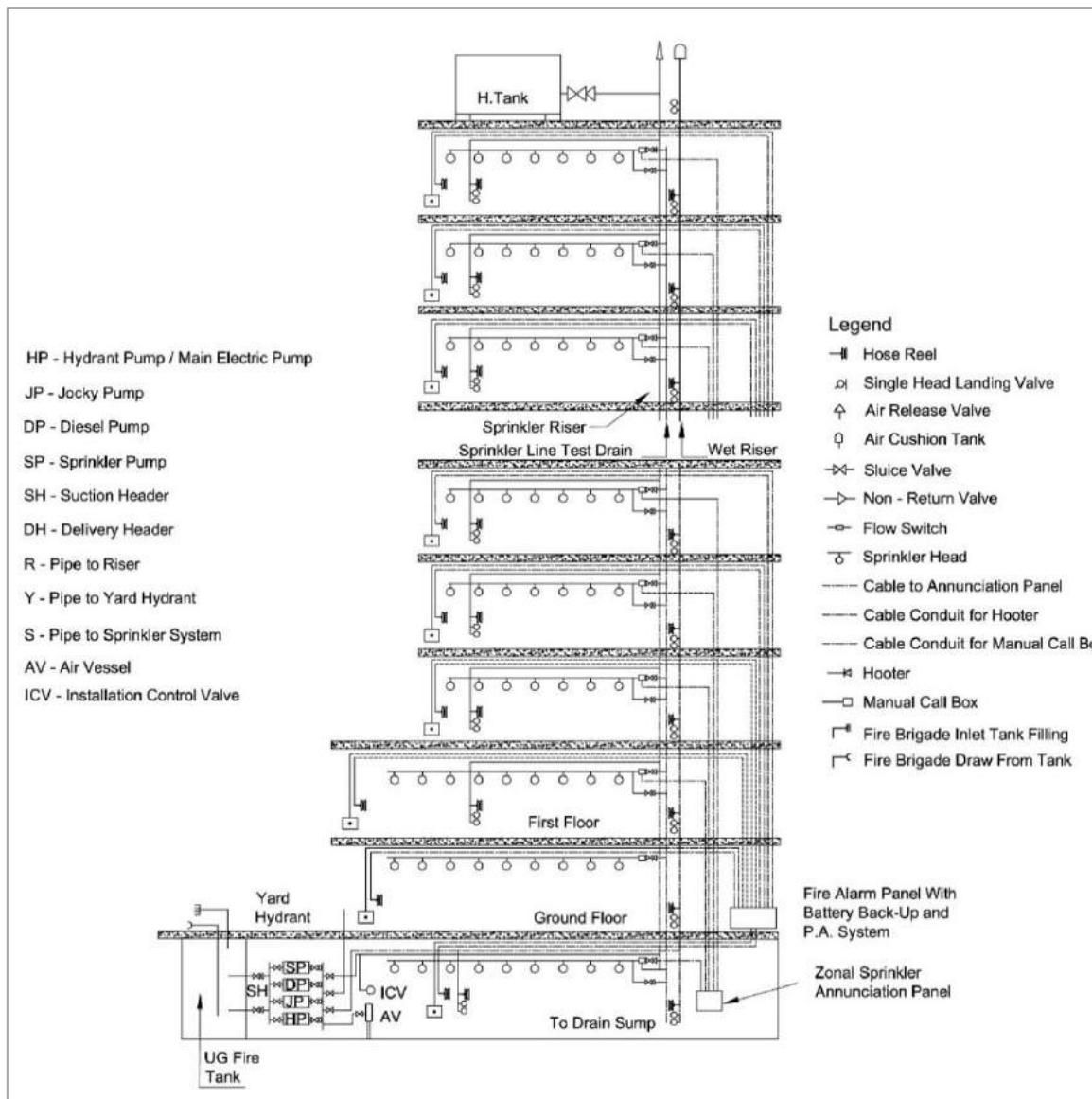


Figure No 14.14: Typical Arrangement of Wet Riser and Total Sprinkler System of Building

Table No.14.8: Size of the Mains

No.	Size of the Mains (mm)	Type of Building	Remarks
(1)	(2)	(3)	(4)
i)	100 mm with single outlet landing valves	a) 1 Residential buildings (A-3)	
		2 Hospitality buildings (B-3)	Up to 45 m height
		b) 1 Educational building (B)	
		c) 1 Health and Public building (D)	Up to 30 m height
		2 Residential buildings (A-2)	
		d) Assembly buildings (E)	
		e) 1 Business buildings (I)	Up to 45 m height
		2 Public building (D-3)	
		f) Mercantile buildings (H-3/ H-4)	
ii)	150 mm with single	g) 1 Industrial buildings (J)	Up to 15 m height
		2 Storage buildings (G-1)	
		a) Hospitality buildings (B-1)	Above to 45 m height
		b) Hospitality buildings (B-2)	

No.	Size of the Mains (mm)		Type of Building	Remarks
(1)	(2)		(3)	(4)
outlet landing valves	c)	1	Health and Public (D)	Above to 30 m height
		2	Residential buildings (A-2)	
	d)	1	Business buildings (I)	Above to 45 m height
		2	Public buildings (D-3)	
	e)	1	Industrial buildings (J)	Above to 15 m height
		2	Storage buildings (G-1)	
	f)	1	Storage buildings (G-2)	Up to 15 m height
		2	Transportation (F-2)	

- d) Automatic High Velocity and Medium Velocity Water Spray Systems
Automatic high velocity water spray or emulsifying system shall be provided for protection of outdoor and/ or indoor oil-cooled transformers as applicable in accordance with good practice (*Refer Annexure K (21)*) where applicable (*Refer Annexure E*). Also, medium velocity water spray system shall be provided for tankage (where applicable), conveyors, cable galleries and other occupancies listed in good practice (*Refer Annexure K (21)*).
- e) Fixed Foam Installation
Fixed foam generating system shall be provided for protection of oil storage area for boilers with its ancillary storage of furnace oils in basement. Fixed foam installations can be low, medium or high expansion types, which can be provided based on the type of fire hazards identified in the facility. High expansion foams are used for cable tunnels and other confined areas. Design and installation of foam systems shall be governed by good practice (*Refer Annexure K (22)*).
- f) Gas Based Suppression System
Gas based fire extinguishing installation shall be provided in accordance with good practice on premises where water or foam cannot be used for fire extinguishing because of the special nature of the contents of the buildings/areas to be protected where either the building(s) have very limited manpower or unmanned. The protection design for fixed carbon dioxide fire extinguishing system shall conform to good practice in all respects. For some special fire risk/essential applications, carbon dioxide may not be suitable and alternate provisions shall be made as per relevant standards (*Refer clause 14.4.1 (2(i))*).
- g) Firefighting equipment shall be suitably located and clearly marked by luminous signs.
- h) Automatic Water Mist Systems
These systems involve the use of fine water sprays for the efficient extinguishment of fires. These systems may be provided to protect areas in buildings for the uses as specified in good practice.
- i) Extinguishing Systems with Clean Agents
Alternative systems for halon gas protection systems shall be provided where necessary as prescribed in this Part. These shall be in accordance with the accepted standards.

14.4.2 Fire Detection and Alarm System

See Rule No. 14.3.9

- 14.4.3** The fixed firefighting installations and systems shall be maintained in accordance with good practice (*Refer Annexure K (26)*) and the Part XII ‘Asset and Facility Management’, National Building Code.

14.5 Additional Occupancy Wise Requirements

- 14.5.1 Residential Buildings (Group A)
- 14.5.2 Hospitality Buildings (Group B)
- 14.5.3 Educational Buildings (Group C)
- 14.5.4 Health and Public Buildings (Group D)
- 14.5.5 Assembly Buildings (Group E)
- 14.5.6 Transportation (Group F)
- 14.5.7 Storage Buildings (Group G)
- 14.5.8 Mercantile Buildings (Group H)
- 14.5.9 Business Buildings (Group I)
- 14.5.10 Industrial Buildings (Group J)

14.5.1 Residential Buildings (Group A)

- 1 Life Safety
 - a) Subdivision A-3 (Dormitories)
 - i Requirements of subdivision B-3 shall be applicable.
 - ii All sleeping rooms having occupancy of more than 10 persons shall have two separate and distinct exit access in different directions.
 - c) Subdivision A-3 (Apartment houses)
 - i In case of high-rise apartments, of the minimum exits as specified in clause 14.3.4(2), the naturally ventilated exit staircases may not require the provision of fire door. However, fire door shall be provided for all other staircases and pressurized staircases.
- 2 Additional Precautions
 - a) Flammable liquids for household purposes shall be kept in tightly stoppered or sealed containers. For the limits of quantities of flammable liquids to be allowed in various occupancies, reference may be made to appropriate regulations.
 - b) No stove or combustion heater shall be located directly under or immediately at the foot of stairs or otherwise so located as to block escape in case of malfunctioning of the stove or heater.
 - c) All kitchen exhaust fans, where provided, shall be fixed to an outside wall or to a duct of non-combustible material, which leads directly to the outside. The ducts shall not pass through areas having combustible materials. However, in case of centralized ducting, the duct shall be provided with adequate protection to limit the spread of fire.
 - d) Stores, engineering workshops, areas of high hazard, etc. used for storage of substantial amount of flammable liquids shall be of 120 min fire resistance rating wall. Such areas shall be provided with fire doors, to be kept closed and shall be posted with a sign on each side of the door in 25 mm high block letters stating — ‘FIREDOOR — KEEP CLOSED’.

14.5.2 Hospitality Buildings (Group B)

- 1 Life Safety
 - a) Subdivision B-1 / B-2
 - i Panic bars shall be provided in the fire exits. Panic bars shall be located at a height between 865 mm and 1220 mm from the floor level.
 - ii All guest rooms and suites shall be protected by extended throw, quick response type sprinklers only. Also, these areas shall be provided with audio-based detectors, having a sound level of at least 75 dB.
 - iii Horizontal-sliding doors shall not be used for door openings across corridors.
 - b) Subdivision B-3

- i All locking devices, which would impede or prohibit exit, such as chain type bolts, limited opening sliding type locks and burglar locks, which are not disengaged easily by quick releasing catches, shall be prohibited.
- ii All bathroom door locks or fasteners shall be designed to permit the opening of the locked or closed door from the outside in an emergency without the use of a special key.
- iii No lodging or rooming house shall have its sole means of egress pass through any non-residential occupancy in the same building.
- iv Rooming and lodging houses having floor area of 500 m² on any one or more floors shall have access to minimum two separate means of exits, at least one of which shall be so arranged as to have direct exit discharge.

2 Additional Precautions

It shall be in accordance with the additional precautions for Residential buildings Group A.

14.5.3 Educational Buildings (Group C)

- 1 Fire Prevention
 - a) Subdivision C-1
 - i Buildings intended for educational occupancy shall not be used for storage of any hazardous material.
 - ii Gymnasiums, indoor stadiums and similar occupancies are permitted to have floors/ running tracks of wood, cinder, synthetic or the like.
- 2 Life Safety
 - a) Subdivision C-1
 - i Every room with a capacity of over 45 persons in area shall have at least two doorways. Exit doors shall be operated by panic bars except that doors leading from classrooms directly to the outside may be equipped with the same type of lock as is used on classroom doors leading to corridor, with no provision whatsoever for locking against egress from the classroom.
 - ii A building, which will have only the first floor and is accessible to not more than 20 pupils at any time, may be used for school purposes with the following exceptions:
 - Exterior walls or parts of walls which are less than 900 mm from adjacent property lines shall have no openings therein.
 - Classrooms may have only one exit not less than 900 mm wide.
 - iii Rooms or areas for use by the preschool, kindergarten, Class/Grade 1 students shall be located on ground floor/level of exit discharge. Rooms or areas occupied by Class/Grade II students shall be located not above one floor higher than ground floor/level of exit discharge.
 - iv Of the minimum exits as specified in clause 14.3.4(2), the naturally ventilated exit staircases, may not require provision of fire door. However, fire door shall be provided for all other staircases and pressurized staircases.
- 3 Additional Precautions
 - a) Subdivision C-1
 - i Storage of volatile flammable liquids shall be prohibited, and the handling of such liquids shall be restricted to science laboratories only.
 - ii All exterior openings in a boiler room or rooms containing central heating equipment, if located below an opening in another storey or if less than 3 m from other doors or windows of the same building, shall be protected by a fire assembly as in clause 14.2.4(4). Such assemblies shall be of fixed, automatic or self-closing type.

14.5.4 Health and Public (Group D)

1 Fire Prevention

No combustible material of any kind shall be stored or used in any building or section thereof used for institutional occupancy, except as necessary to normal occupancy and use of the building.

2 Life Safety

- a) The common path of travel shall be 30 m. The maximum dead end of corridor distance shall not exceed 6 m.
- b) Principle of progressive horizontal evacuation is of paramount consideration for hospital patients particularly those lacking self-preservation. This calls for moving occupants from a fire affected area to an adjoining area at the same level through a fire-resistant wall, to protect them from the immediate dangers of fire and smoke (*Figure No.14.15*).
- c) Progressive horizontal evacuation operates on the basis of evacuation from compartment to compartment and on use of adjacent compartments as temporary means of refuge. All compartments shall be divided with self-closing (door closers) fire doors with electromagnetic hold open. A coordinator shall be provided to sequence the closing of double leaf in case of emergency.
- d) Doors in fire resistant walls shall be so installed that these may normally be kept in open position but will close automatically. Corridor door openings shall be not less than 2.0 m in width of double swing double leaf type door. A coordinator shall be provided as above, for closing of double leaf in case of emergency.
- e) Exits and other features for penal and mental institutions, and custodial institutions shall be the same as specified for hospitals (Refer clause 14.5.3 (2)) in so far as applicable. Reliable means shall be provided to permit the prompt release of inmates from any locked section in case of fire or other emergency.
- f) All buildings or sections of buildings in penal and mental institution used for manufacturing, storage or office purposes shall have exits in accordance with the provisions of the Code for those occupancies.
- g) For hospitals (Subdivision D-1), the following shall also be complied with:
 - i Compartmentation shall meet the requirement as per Rule No. 14.3.5
 - ii Each compartment (*Refer Rule No. 14.3.5*) shall be able to accommodate, in addition to its own, the patients from adjoining compartment also considering 3.5 m^2 per person. If patients are not bed-ridden, a factor of 0.6 m^2 per person is recommended.
 - iii All critical patients and those incapable of self-preservation and having physical impairment shall be housed within 30 m height.
 - iv Other types of patients and occupancies incidental to the hospitals such as consultation rooms, nurses' stations, medical shops, canteens, etc. may be housed at heights beyond 30 m but not more than 45 m.
 - v Basement shall not be used to store flammables or for pathological or other laboratories particularly those involving usage of chemicals.
 - vi Operation theatres, delivery rooms, intensive care units, recovery rooms, etc., that contain patients lacking self-preservation in case of emergencies shall be fire/smoke separated (120 min minimum rating) from all the adjoining areas.
 - vii Aisles, corridors, ramps, etc., through which patients are moved, shall have a minimum width of 2.4 m throughout. Aisles, corridors, and ramps in other areas not intended for the housing, treatment, or use of inpatients shall be not less than 1.5 m in width.
 - viii All exits from hospital or infirmary sections shall be not less than 2.0 m in width.
 - ix Minimum width of door of single or double occupancy patient room shall be 1.25 m while for the wards for 3 to 5 patient beds shall be 1.50 m, to permit movement of patients. The minimum width of door for wards for more than 5 patient beds and for areas necessarily requiring patient evacuation on bed (such as ICU, recovery units,

- delivery rooms, etc.), shall have door width of 2.0 m. The width of 2.0 m may be reduced to minimum of 1.5 m where two such doors are provided in such areas.
- x Any sleeping accommodation or suite exceeding 100 m^2 in area shall have at least two doorways leading to the exit access corridors.
 - xi Floor surface of corridors shall not be inclined at a gradient steeper than 1 in 12 to the horizontal.
 - xii Exit access corridors from a compartment to another compartment shall be divided at the compartment intersection by a fire door of 120 min fire rating in the fire compartment wall.
 - xiii Rooms designated for laboratory and the like shall not exceed 100 m^2 in area and if additional space is required, fire separation of 120 min shall be provided.
 - xiv Storage of flammable liquids in laboratories or in any other area shall be not more than 3 litre for every 10 m^2 area.
 - xv Disposal of any equipment and other (particularly hazardous) materials shall be accomplished in the premises by a disposal specialist or at a safe location away from the health care facility by competent personnel using procedures established in concurrence with the safe practices.
 - xvi A stretcher lift in a lift bank shall also act as fireman's lift meeting the requirements of Part VIII 'Building Services, Section 5 Installation of Lifts, Escalators and Moving Walks, Subsection 5A Lifts', National Building Code.
- h) Progressive evacuation strategy (*Refer Figure No. 14.16*) in which, as an example, the exit calculations at two locations shall be based on requirements of total occupancy for area (A, B, C and D) divided by 2 considering progressive evacuation strategy.

3 Exception and Deviation

It is recognized that in institutions or part of buildings housing various types of psychiatric patients, or used as mental institutions and penal institutions, it is necessary to maintain locked doors and barred windows; and to such extent the necessary provision in other sections of the code requiring the keeping of exits unlocked may be waived. It is also recognized that certain type of psychiatric patients are not capable of seeking safety without adequate guidance. In buildings where this situation prevails, reliable means for the rapid release of occupants shall be provided, such as remote control of locks, or by keying all locks to keys commonly used by attendants.

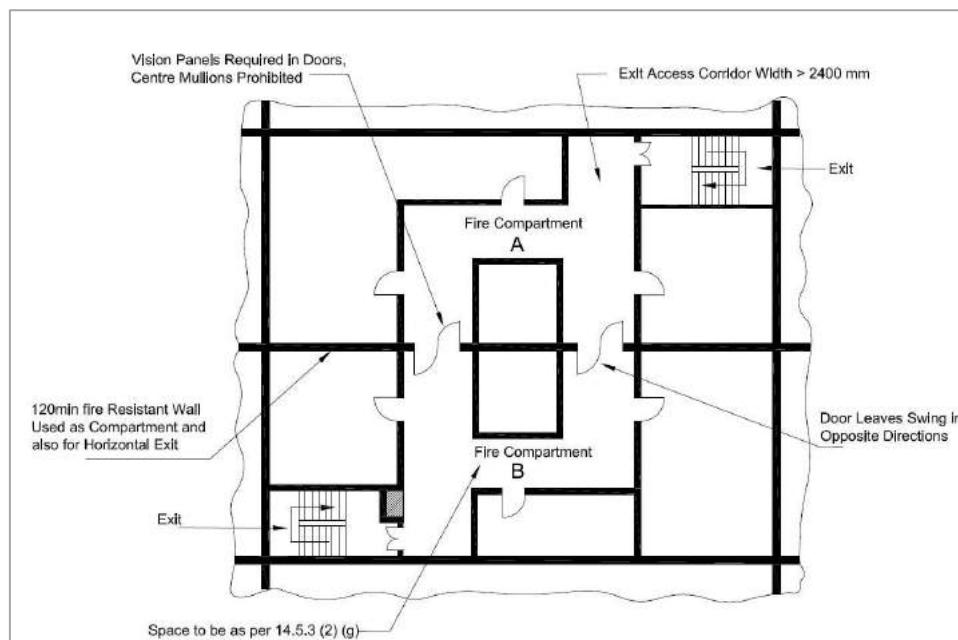


Figure No. 14.15: Part Plan Indicating Concept of Horizontal Exit in Hospital

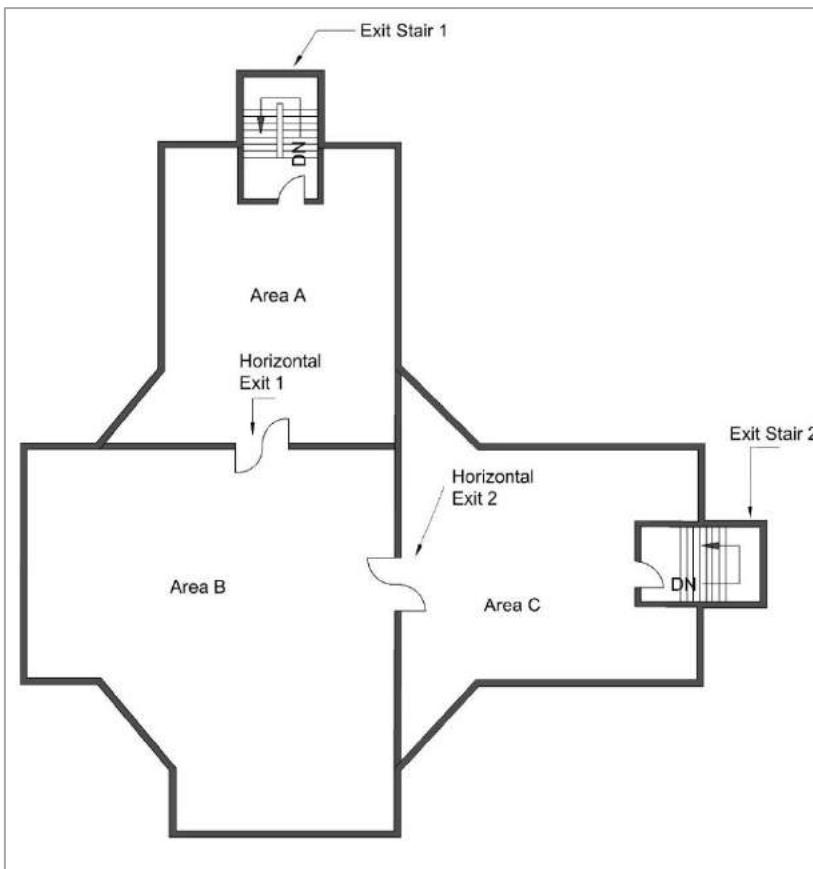


Figure No. 14.16: Minimum of Two Exits Accessible from all Parts of Floor

14.5.5 Assembly/ Religious (Group E)

1 Fire Prevention

- a) The following shall be applicable:
 - i Decorations of places of assembly shall be of non-flammable materials. Fabrics and papers used for such purpose shall be treated with an effective flame-retardant material. Stage settings made of combustible materials shall likewise be treated with fire retardant materials of Class 1 flame spread.
 - ii Gymnasiums, indoor stadiums and similar occupancies are permitted to have floors/ running tracks of wood, cinder, synthetic or the like.

2 Life Safety

- a) The following shall be applicable:
 - i Exit door width for assembly buildings shall not be less than 2.0 m.
 - ii Every place of assembly of sub-division E-2 shall have at least four separate exits as remote from each other as practicable.
 - iii Every place of assembly of sub-division E-2 shall have at least two separate exits as remote from each other as practicable and if of capacity over 600, at least three exits shall be provided with each exit not less than of 2.0 m width.
 - iv Clear aisles not less than 1.2 m in width shall be formed at right angles to the line of seating in such number and manner that no seat shall be more than seven seats away from an aisle. Rows of seats opening on to an aisle at one end only shall have not more than seven seats.
 - v Under the conditions, where all these aisles do not directly meet the exit doors, cross aisles shall be provided parallel to the line of seating so as to provide direct access to the exit, provided that not less than one cross aisle for every 10 rows shall be required.

- The width of cross-aisles shall be minimum of 1 m. Steps shall not be placed in aisles to overcome differences in levels, unless the gradient exceeds 1 in 10.
- vi The fascia of boxes, balconies and galleries shall have substantial railings not less than 1000 mm high above the floor. The railings at the end of aisles extending to the fascia shall be not less than 1100 mm high for the width of the aisle or 1.2 m high at the foot of steps.
 - vii Cross-aisles, except where the backs of seats on the front of the aisle project 600 mm or more above the floor of the aisle, shall be provided with railings not less than 900 mm high.
 - viii No turnstiles or other devices to restrict the movement of persons shall be installed in any place of assembly in such a manner as to interfere in any way with the required exit facilities.
 - ix In theatres and similar places of public assembly where persons are admitted to the building at a time when seats are not available for them and are allowed to wait in a lobby or similar space until seats are available, such use of lobby or similar space shall not encroach upon the required clear width of exits. Such waiting shall be restricted to areas separated from the required exit ways by substantial permanent partitions or fixed rigid railing not less than 1050 mm high. Exits shall be provided for such waiting spaces on the basis of one person for each 0.3 m² of waiting space area. Such exits shall be in addition to the exits specified for the main auditorium area and shall conform in construction and arrangement to the general rules of exits given above.
 - x No display or exhibit shall be so installed or operated as to interfere in any way with access to any required exit, or with any required exit sign.
 - xi All displays or exhibits of combustible material or construction and all booths and temporary construction in connection therewith shall be so limited in combustibility or protected as to avoid any undue hazard of fire which might endanger occupants before they have opportunity to use the available exits, as determined by the authority.
 - xii Places of assembly in buildings of other occupancy may use exits common to the place of assembly and the other occupancy, provided the assembly area and the other occupancy are considered separately, and each has exits sufficient to meet the requirements of the rules.
 - xiii Exits shall be sufficient for simultaneous occupancy of both the places of assembly and other parts of the building.
 - xiv For detailed information regarding cinema buildings, reference may be made to good practice (*Refer Annexure K (27)*).
 - xv Seats in places of public assembly, accommodating more than 300 persons, shall be securely fastened to the floor, except as permitted in (xvi) below. All seats in balconies and galleries shall be securely fastened to the floor, except that in nailed-in enclosures, boxes with level floors and having not more than 14 seats, the seats need not be fastened.
 - xvi Chairs not secured to the floor may be permitted in restaurants, night clubs and other occupancies where the fastening of seats to the floor may not be practicable, provided that in the area used for seating, excluding dance floor, stage, etc., there shall be not more than one seat for each 1.4 m² of floor area and adequate aisles to reach exits shall be maintained at all times. The arrangements shall be as follows in general:
 - Rows of seats between aisles shall have not more than 14 seats.
 - Rows of seats opening on to an aisle at one end only shall have not more than 7 seats.
 - Seats without dividing arms shall have their capacity determined by allowing 450 mm per person.
 - xv The spacing of rows of seats from back to back shall be neither less than 850 mm nor less than 700 mm plus the sum of the thickness of the back and inclination of the back. There shall be a space of not less than 350 mm between the back of one seat and the front of the seat immediately behind it as measured between plumb lines.

xvi Lighting: No open flame lighting devices shall be used in any place of assembly, except in the following cases:

- Where necessary for ceremonial purposes, the enforcing Authority may permit open flame lighting under such restrictions as are necessary to avoid danger of ignition of combustible materials or injury to occupants.
- Candles may be used on restaurant tables if securely supported on non-combustible bases and so located as to avoid danger of ignition of combustible materials.
- Open flame devices may be used on stages where they are a necessary part of theatrical performance, provided adequate precautions, satisfactory to the Authority are taken to prevent ignition of combustible materials.

b) Fire Protection

- i Every stage equipped with fly galleries, grid irons and rigging for movable theatre type scenery, shall have a system of automatic sprinklers over and under such stage areas or spaces and auxiliary spaces, such as dressing rooms, storerooms and workshops, and the proscenium opening shall be provided with a fire resisting curtain, capable of withstanding a lateral pressure of 4 k N/m² over the entire area. The curtain shall have an emergency closing device capable of causing the curtain to close without the use of power and when so closed, it shall be reasonably tight against the passage of smoke.
- ii The stage roof of every theatre using movable scenery or having a motion picture screen of highly combustible construction shall have a ventilator or ventilators in or above it, openable from the stage floor by hand and also opening by fusible links or some other approved automatic heat/smoke actuated device, to give a free opening equal to at least one-eighth the area of the floor of the stage.
- iii The proscenium wall of every theatre using movable scenery of decorations shall have, exclusive of the proscenium opening, not more than two openings entering the stage, each not to exceed 2 m² and fitted with self-closing fire-resistant doors.
- iv Every place of assembly in which projection of motion pictures by light is made shall have the projection apparatus enclosed in a fire resisting fixed booth in accordance with good practice (*Refer Annexure K (27)*), except that such booth shall not be required where no nitrocellulose motion picture film is used.

14.5.6 Transportation (Group F)

1 Fire Prevention

a) Subdivision F-1

The following shall be applicable:

- i Decorations of places of assembly shall be of non-flammable materials. Fabrics and papers used for such purpose shall be treated with an effective flame-retardant material. Stage settings made of combustible materials shall likewise be treated with fire retardant materials of Class 1 flame spread.

2 Life Safety

a) Subdivision F-1

The following shall be applicable:

- i Exit door width for assembly buildings shall not be less than 2.0 m.
- ii Clear aisles not less than 1.2 m in width shall be formed at right angles to the line of seating in such number and manner that no seat shall be more than seven seats away from an aisle. Rows of seats opening on to an aisle at one end only shall have not more than seven seats.
- iii Under the conditions, where all these aisles do not directly meet the exit doors, cross-aisles shall be provided parallel to the line of seating so as to provide direct access to the exit, provided that not less than one cross aisle for every 10 rows shall be

- required. The width of cross-aisles shall be minimum of 1 m. Steps shall not be placed in aisles to overcome differences in levels, unless the gradient exceeds 1 in 10.
- iv The fascia of boxes, balconies and galleries shall have substantial railings not less than 1000 mm high above the floor. The railings at the end of aisles extending to the fascia shall be not less than 1100 mm high for the width of the aisle or 1.2 m high at the foot of steps.
 - v Cross-aisles, except where the backs of seats on the front of the aisle project 600 mm or more above the floor of the aisle, shall be provided with railings not less than 900 mm high.
 - vi No turnstiles or other devices to restrict the movement of persons shall be installed in any place of assembly in such a manner as to interfere in any way with the required exit facilities.
 - vii In theatres and similar places of public assembly where persons are admitted to the building at a time when seats are not available for them and are allowed to wait in a lobby or similar space until seats are available, such use of lobby or similar space shall not encroach upon the required clear width of exits. Such waiting shall be restricted to areas separated from the required exit ways by substantial permanent partitions or fixed rigid railing not less than 1050 mm high. Exits shall be provided for such waiting spaces on the basis of one person for each 0.3 m² of waiting space area. Such exits shall be in addition to the exits specified for the main auditorium area and shall conform in construction and arrangement to the general rules of exits given above.
 - viii No display or exhibit shall be so installed or operated as to interfere in any way with access to any required exit, or with any required exit sign.
 - ix All displays or exhibits of combustible material or construction and all booths and temporary construction in connection therewith shall be so limited in combustibility or protected as to avoid any undue hazard of fire which might endanger occupants before they have opportunity to use the available exits, as determined by the authority.
 - x Places of assembly in buildings of other occupancy may use exits common to the place of assembly and the other occupancy, provided the assembly area and the other occupancy are considered separately, and each has exits sufficient to meet the requirements of the rules.
 - xi Exits shall be sufficient for simultaneous occupancy of both the places of assembly and other parts of the building.
 - xii For detailed information regarding cinema buildings, reference may be made to good practice (*Refer Annexure K (27)*).
 - xiii Seats in places of public assembly, accommodating more than 300 persons, shall be securely fastened to the floor, except as permitted in (r) below. All seats in balconies and galleries shall be securely fastened to the floor, except that in nailed-in enclosures, boxes with level floors and having not more than 14 seats, the seats need not be fastened.
 - xvi Chairs not secured to the floor may be permitted in restaurants, night clubs and other occupancies where the fastening of seats to the floor may not be practicable, provided that in the area used for seating, excluding dance floor, stage, etc., there shall be not more than one seat for each 1.4 m² of floor area and adequate aisles to reach exits shall be maintained at all times. The arrangements shall be as follows in general:
 - Rows of seats between aisles shall have not more than 14 seats.
 - Rows of seats opening on to an aisle at one end only shall have not more than 7 seats.
 - Seats without dividing arms shall have their capacity determined by allowing 450 mm per person.
 - xv The spacing of rows of seats from back to back shall be neither less than 850 mm nor less than 700 mm plus the sum of the thickness of the back and inclination of the back. There shall be a space of not less than 350 mm between the back of one seat and the front of the seat immediately behind it as measured between plumb lines.

xvi Lighting: No open flame lighting devices shall be used in any place of assembly, except in the following cases:

- Where necessary for ceremonial purposes, the enforcing Authority may permit open flame lighting under such restrictions as are necessary to avoid danger of ignition of combustible materials or injury to occupants.
- Candles may be used on restaurant tables if securely supported on non-combustible bases and so located as to avoid danger of ignition of combustible materials.
- Open flame devices may be used on stages where they are a necessary part of theatrical performance, provided adequate precautions, satisfactory to the Authority are taken to prevent ignition of combustible materials.

b) Subdivision F-2

- i) Every area used for the storage of hazardous commodities shall have an exit within 22.5 m of any point in the area where persons may be present or 35 m where automatic sprinkler protection is provided.
- ii) Every storage area or space exceeding 1400 m² gross area, or where more than 10 persons may be normally present shall have at least two exit access doors leading to the corridors in exit access, which can be readily opened. This shall not be subject to locking so long as any persons are inside and shall not depend on power operation. Exits in such cases shall be as remote from each other as practicable.
For warehouses, natural draft smoke venting shall utilize roof vents or vents in walls at or near the ceiling level; such vents shall be normally open, or, if closed, shall be designed for automatic opening in case of fire, by release of smoke sensitive devices.
- iii) The following special provisions shall apply to aircraft hangers:
 - Exits from aircraft hangers (storage or servicing areas) shall be provided at intervals of not more than 45 m on all exterior walls of aircraft hangers. There shall be a minimum of two exits serving each aircraft storage or servicing areas. Horizontal exits through interior fire walls shall be provided at intervals of not more than 30 m. ‘Dwarf’ or ‘smash’ doors accommodating aircraft may be used to comply with these requirements. All doors designated as exits shall be kept unlocked in the direction of exit travel while the area is occupied.
 - Exits from mezzanine floors in aircraft storage or servicing areas shall be so arranged that the maximum travel to reach the nearest exits from any point on the mezzanine shall not exceed 22.5 m. Such exits shall lead directly to a properly enclosed stairwell discharging directly to the exterior or to a suitably cut-off area or to outside fire escape stairs.
- iv) The following special provisions shall apply to grain elevators:
 - There shall be at least one stair tower from basement to first floor and from the first floor to the top floor of workhouse which is enclosed in a dust tight non-combustible shaft.
 - Non-combustible doors of self-closing type shall be provided at each floor landing.
 - An exterior fire escape of the stair or basket ladder type shall be provided from the roof of the workshop to ground level or the roof of an adjoining annexe with access from all floors above the first.
 - An exterior fire escape of either the stair or basket ladder type shall be provided from the roof of each storage annexe to ground level.
- v) For provisions relating to car parking facilities, see Annexure H.

2 Additional Precautions

Requirements specified in Additional precautions for Group J shall apply to Group G occupancies also.

14.5.7 Storage Buildings (Group G)

1 Life Safety

- a) Every area used for the storage of hazardous commodities shall have an exit within 22.5 m of any point in the area where persons may be present or 35 m where automatic sprinkler protection is provided.
- b) Every storage area or space exceeding 1400 m² gross area, or where more than 10 persons may be normally present shall have at least two exit access doors leading to the corridors in exit access, which can be readily opened. This shall not be subject to locking so long as any persons are inside and shall not depend on power operation. Exits in such cases shall be as remote from each other as practicable.
For warehouses, natural draft smoke venting shall utilize roof vents or vents in walls at or near the ceiling level; such vents shall be normally open, or, if closed, shall be designed for automatic opening in case of fire, by release of smoke sensitive devices.
- c) The following special provisions shall apply to aircraft hangers:
 - i Exits from aircraft hangers (storage or servicing areas) shall be provided at intervals of not more than 45 m on all exterior walls of aircraft hangers. There shall be a minimum of two exits serving each aircraft storage or servicing areas. Horizontal exits through interior fire walls shall be provided at intervals of not more than 30 m. ‘Dwarf’ or ‘smash’ doors accommodating aircraft may be used to comply with these requirements. All doors designated as exits shall be kept unlocked in the direction of exit travel while the area is occupied.
 - ii Exits from mezzanine floors in aircraft storage or servicing areas shall be so arranged that the maximum travel to reach the nearest exits from any point on the mezzanine shall not exceed 22.5 m. Such exits shall lead directly to a properly enclosed stairwell discharging directly to the exterior or to a suitably cut-off area or to outside fire escape stairs.
- d) The following special provisions shall apply to grain elevators:
 - i There shall be at least one stair tower from basement to first floor and from the first floor to the top floor of workhouse which is enclosed in a dust tight non-combustible shaft.
 - ii Non-combustible doors of self-closing type shall be provided at each floor landing.
 - iii An exterior fire escape of the stair or basket ladder type shall be provided from the roof of the workshop to ground level or the roof of an adjoining annexe with access from all floors above the first.
 - iv An exterior fire escape of either the stair or basket ladder type shall be provided from the roof of each storage annexe to ground level.
- e) For provisions relating to car parking facilities, see Annex H.

2 Additional Precautions

- a) In any room in which volatile flammable substances are used or stored, no device generating a glow or flame capable of igniting flammable vapour shall be installed or used, such a room shall be provided with a suitably designed exhaust ventilation system (see Annexure M).

14.5.8 Mercantile Buildings (Group H)

1 Life Safety

- a) Not less than two exits shall be provided for every floor, including basements occupied for office purposes or uses incidental thereto.
- b) Open air mercantile operations, such as open air markets, petrol filling stations, roadside stands for the sale of a farm produce and other outdoor mercantile operations shall be so arranged and conducted as to maintain free and unobstructed ways of travel at all times to permit prompt escape from any point of danger in case of fire or other emergency, but no dead-ends in which persons might be trapped due to display stands, adjoining buildings, fences, vehicles or other obstructions.

- c) If such mercantile operations are conducted in roofed-over areas, these shall be treated as mercantile buildings, provided canopies over individual small stands to protect merchandise from the weather shall not be construed to constitute buildings for the purpose of the Rules.
- d) Life Safety provisions for H-2 Occupancy
The following additional requirements shall be applicable:
 - i Assembly occupancies of theatres, cinema halls and multiplexes shall be so located in the mall building that their exits will be separate and lead the occupant directly to exit discharge.
 - ii The common path of travel shall be 30 m. The maximum dead end of corridor distance shall not exceed 6 m.
 - iii The minimum width of an exit passageway shall be 2.0 m.
 - iv Where wheeled carts or buggies are used by customers, adequate provision shall be made for the transit and parking of such carts to minimise the possibility that they might obstruct means of egress. Any other storage or hindrances causing obstruction in exits shall be avoided.
 - v Car parking facilities shall comply with Annexure H. Car parking areas at upper levels adjacent to shops, food courts or multiplex shall be separated by 120 min fire rated construction and building elements.
 - vi 50 percent lifts in common areas in H-2 shall be with features and requirement of fireman's lift.
 - vii The manual call points shall be break glass and not pull stations.
 - viii Photoluminescent markings shall be done along the width and length of treads in all enclosed exits staircases. Exit directional arrow on the wall (in the direction of egress) shall be 175 mm × 50 mm.
 - ix Refuge area to be provided on the floor at or immediately above 18 m shall be not less than 10 percent of gross area of floor. Next refuge area to be at/on the floor immediately above 24 m. The refuge area shall be 10 percent of the respective floor, which may be divided into two or more separate refuge areas at each of the respective floors, with each being not less than 100 m². Refuge area shall also meet all the requirements of life safety as per Rule No. 14.3.

2 Fire Prevention

- a) Additional fire prevention requirements for H-2 occupancy

Building having H-2 mixed use assembly/mercantile occupancy will limit the height of the assembly/ mercantile occupancy portion of the buildings to 30 m. Above this height the buildings may be used for business or residential occupancies with 240 min separation. Independent exits shall be provided for such occupancy above 30 m and shall not interface with exits of assembly/mercantile occupancy.

3 Exception and Deviation

Any mercantile occupancy, where goods of a highly hazardous nature are predominant, shall be considered under Group J occupancy for the purpose of the Rules.

14.5.9 Business Buildings (Group I)

1 Life Safety

Not less than two exits shall be provided for every floor, including basements occupied for office purposes or uses incidental thereto.

2 Fire Protection

- a) For Subdivision E-2, the requirement shall be provision of automatic fire detection alarm system, while for fire protection, CO₂ and/or foam-based installation to be planned based on the requirements.
- b) For Subdivision E-3, E-4 and E-5, the requirement shall be provision of automatic fire detection alarm system, while for fire protection, any or combination of clean agents, mist technologies, hypoxic air technology, etc., may be planned for appropriate/special

situations/locations. Electrical panels may be provided with CO₂/inert gas flooding system based on the requirement and reliability of power for the functional requirement and performance.

14.5.10 Industrial Buildings (Group J)

1 Fire Prevention

a) Fire separating walls, fire separating floors and fire partitions

Fire separating walls shall be provided between two buildings or between two blocks inside a building, having different fire hazards in accordance with the provisions of this Part. The areas having storage, manufacturing, hazardous activities such as paint store, oil storage, spray booths, etc., shall be separated from non-hazardous areas like administrative office, staff canteen, etc. by fire rated walls/doors of 120 min fire resistance rating. The fire resistance rating of high hazardous areas like petrochemical, explosives shall be 240 min.

The fire separating wall where provided shall comply with the following requirements:

- i The separating wall shall be carried through the roof. This portion of the wall extending above the roof, known as 'screen wall' shall be of such a height (in no case less than 600 mm) that the horizontal distance at the level of the top of the screen wall between the roofs of the buildings/compartments being segregated is at least 6 m.
- ii The screen wall shall be of not less than 230 mm in thickness if it is an extension of a masonry wall, and not less than 150 mm in thickness if it is an extension of a reinforced concrete wall.
- iii The separating wall need not be extended as a screen wall if the roof of one or both of the buildings/blocks being segregated is of reinforced concrete construction (RCC).
- iv In the case of buildings of unequal height, windows or other openings in the wall of the higher building overlooking the roof of the lower building and within 6 m, thereof, shall be protected by fire resistant glass assembly or by approved type fire doors unless the roof of the lower building is of reinforced concrete.
- v In case the eaves of the higher building fall within 6 m of the roof of the lower building such eaves should be cut-off and the screen wall raised as a parapet, 600 mm high over the roof of the higher building, unless the roof of the lower building is of RCC construction.
- vi Fire separating walls shall also be extended outwards on both sides by at least 450 mm.
- vii Doors and window openings in external walls within 3 m of the fire separating walls shall be protected by fire doors having a rating of at least 60 min and window openings may be protected by fire resistant glass assembly having same fire rating.
- viii In the case of buildings/compartments having north-light roofs when a separating wall runs parallel to the axis of the north-light opening, the screen wall shall be carried through and 600 mm above the ridge of the north light. If, however, the separating wall is at right angles to the axis of the north-light opening, the saw tooth gaps shall be bricked up and the screen wall extended 600 mm above the ridge of the north light as well as beyond the extreme north-light opening.
- ix Similarly, the thickness of the floor slabs in case of buildings having upper levels shall be designed to provide fire rating as mentioned above.
- x Storage areas shall be separated from the remainder of the building/block by fire walls.
- xi Moderate and high hazard areas in industries to have two fire doors each having 180 min fire resistance rating.

2 Life Safety

a) In buildings used for aircraft assembly or other occupancy requiring undivided floor areas so large that the distances from points within the area to the nearest outside walls where exit doors could be provided are in excess of 45 m, requirements for distance to exits may be satisfied by providing stairs leading to exit tunnels or to overhead passageways. In cases where such arrangements are not practicable, the Authority may, by special ruling, permit

other exit arrangements for single storeyed buildings with distances in excess of the maximum distances specified in 4, if completely automatic sprinkler protection is provided and if the heights of ceiling curtain boards and roof ventilation are such as to minimise the possibility that employees will be overtaken by the spread of fire or smoke within 1.8 m of the floor level before they have time to reach exits, provided, however, that in no case may the distance of travel to reach the nearest exit exceed 65 m where smoke venting is required as a condition for permitting distances of travel to exits in excess of the maximum otherwise allowed.

- b) The following shall apply to special purpose industrial occupancies:
 - i Exits need be provided only for the persons actually employed; spaces not subject to human occupancy because of the presence of machinery or equipment may be excluded from consideration.
 - ii Where unprotected vertical openings are necessary to manufacturing operations, these may be permitted beyond the limits specified for industrial occupancy, provided every floor level has direct access to one or more enclosed stairways or other exits protected against obstruction by any fire in the open areas connected by the unprotected vertical openings or smoke therefrom.
- c) The following shall apply to high hazard industrial occupancies¹¹:
 - i From every point in every floor area, there shall be at least two exits accessible in different directions; where floor areas are divided into rooms, there shall be at least two ways of escape from every room, however small rooms, except toilet rooms, so located that the points of access thereto are out of or suitably shielded from areas of high hazard.
 - ii In addition to types of exits for upper floors specified for Group J occupancies, slide escapes may be used as required exits for both new and existing buildings.

3 Additional Precautions

- a) In any room in which volatile flammable substances are used or stored, no device generating a glow or flame capable of igniting flammable vapour shall be installed or used, such a room shall be provided with a suitably designed exhaust ventilation system (see Annexure J).
- b) For detailed information on fire safety of certain individual (specific) industrial occupancies, reference may be made to good practice (*Refer Annexure K (28)*)
- c) Fire protection considerations for venting industrial occupancies shall be as in Annexure J.

¹¹ NOTE — All high hazard industrial occupancies shall have automatic sprinkler protection, or such other protection as may be appropriate to the particular hazard, including explosion venting for any area subject to explosion hazard, designed to minimise danger to occupants in case of fire or other emergency before they have time to utilize exits to escape.

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ANNEXURE A

CALORIFIC VALUES OF COMMON MATERIALS

A-1 The calorific values of some common materials are given in Table No AA-1 for guidance.

Table No AA-1 : Calorific Values of Common Materials

No	Material	Calorific Value ($\times 10^3$ kJ/ Kg) ¹⁾	Wood Equivalent (kg/kg)
(1)	(2)	(3)	(4)
i) Solid Fuels			
a)	anthracite	28.6	1.66
b)	Bituminous coal	30.8	1.75
c)	Charcoal	28.4	1.61
d)	Coke (average)	27.5	1.56
e)	Peat	20.9	1.19
f)	Sub-Bituminous coil	22.0	1.25
g)	Woods (hard or softwood)	17.6	1.00
ii) Hydrocarbons			
a)	Benzene	39.6	2.25
b)	Butane	47.1	2.68
c)	Ethane	49.1	2.79
d)	Ethylene	47.7	2.71
e)	Fuel oil	41.6	2.36
f)	Gas oil	42.9	2.44
g)	Hexane	44.9	2.55
h)	Methane (natural gas)	52.8	3.00
i)	Octane	45.3	2.58
j)	Paraffin	39.6-44.0	2.3-2.5
k)	Pentane	46.0	2.61
l)	Propane	47.3	2.69
m)	Propylene	46.2	2.63
iii) Alcohols			
a)	Ethyl Alcohol	28.4	1.61
b)	Methyl Alcohol	21.1	1.20
c)	Propyl Alcohol	31.9	1.81
iv) Polymers			
a)	Casein	23.1	1.31
b)	Cellulose	16.5	0.94
c)	Cellulose acetate	17.8	1.01
d)	Polyethylene	48.4	2.75
e)	Polystyrene	48.4	2.75
f)	Polyvinylchloride	41.8	2.38
g)	Polymethyl methacrylate	24.6	1.40
h)	Polyurethane	35.2	2.00
i)	Polyamide (nylon)	22.0	1.25
j)	Polyester	22.0	1.25
v) Common Solids			
a)	Asphalt	38.3	2.13
b)	Bitumen	33.4	1.90
c)	Carbon	32.1	1.83
d)	Cotton (dry)	15.8	0.90
e)	Flax	14.3	0.81
f)	Furs and skins	18.7	1.06
g)	hair (animal)	20.9	1.19
h)	Leather	17.6	1.00

No	Material		Calorific Value ($\times 10^3$ kJ/ Kg) ¹⁾	Wood Equivalent (kg/kg)
(1)	(2)		(3)	(4)
j) k) m) n) p) q) r) s) t) u) w)	Ozokerite (wax)	43.1	2.46	
	Paper (average)	15.4	0.88	
	Paraffin wax	40.9	2.31	
	Pitch	33.0	1.88	
	Rubber	37.4	2.13	
	Straw	13.2	0.75	
	Tallows	37.6	2.14	
	Tan bark	20.9	1.19	
	Tar (bituminous)	35.2	2.00	
	Wool (raw)	21.6	1.21	
	Wool (scoured)	19.6	1.11	
	Foodstuffs			
vi)	Barley	14.1	0.80	
	Bran	11.0	0.63	
	Bread	9.9	0.56	
	Butter	29.5	1.68	
	Cheese (cheddar)	18.1	1.03	
	Corn meal	14.1	0.80	
	Flour	14.1	0.80	
	Margarine	29.5	1.68	
	Oatmeal	15.8	0.90	
	Rice	13.9	0.79	
	Soya been flour	16.1	0.91	
	Sugar	15.4	0.88	
	Whole wheat	14.3	0.81	
vii)	Miscellaneous			
	Acetone	29.7	1.69	
	Acetaldehyde	25.1	1.43	
	Formaldehyde	17.6	1.00	
	Hydrogen	134.2	7.61	
	Magnesium	24.0	1.36	

Note:

1) 1 kJ is approximately equal to 1 Btu so the figures in the tables are also equivalent to Btu/kg

ANNEXURE B

BROAD CLASSIFICATION OF INDUSTRIAL OCCUPANCIES INTO DIFFERENT DEGREE OF HAZARD

Table No. AB-1 Classification of Industries as per Degree of Hazard

Light Hazard	Moderate Hazard	High Hazard
Abrasive Manufacturing Premises	Aluminium Factories	Sub-Category (A)
Aerated Water Factories	Atta and Cereal Grinding	Aircraft Hangers
Agarbatti Manufacturing	Bakeries and Biscuit Factories	Aluminium/Magnesium Powder Plants
Areca Nut Slicing and/or Betel nut Factories	Beedi Factories	Bituminised Paper and/or Hessian Cloth/Tar Felt Manufacturing
Analytical and/or Quality Control Laboratories	Bobbin Factories	Cotton Waste Factories
Asbestos Steam Packing and Lagging Manufacturing	Bookbinders, Envelopes and Paper Bag Manufacturing	Celluloid Goods Manufacturing
Battery Charging/Battery Service Stations	Cable Manufacturing	Chemical Manufacturing using raw materials having flash points below 23°C
Battery Manufacturing	Camphor Boiling	Cigarette Filter Manufacturing
Breweries	Candle Works	Cinema Films and T.V. Production Studios
Brick Works	Carbon Paper/Typewriter Ribbon Manufacturing	Coal and/or Coke and/or Charcoal Ball and Briquettes Manufacturing
Canning Factories	Cardboard Box Manufacturing	Collieries
Cardamom Factories	Carpenters, Wood Wool and Furniture Manufacturing	Cotton Seed Cleaning or De-linting Factories.
Cement Factories and/or Asbestos or Concrete Products Manufacturing	Carpet and Durries Factories	Distilleries
Ceramic Factories and Crockery and Stoneware Pipe Manufacturing	Cashewnut Factories	Duplicating/Stencil Paper Manufacturing
Clay Works	Chemical Manufacturing using raw materials having flash points above 23°C	Fire-works Manufacturing
Clock and Watch Manufacturing	Cigar and Cigarette Factories	Foam Plastics Manufacturing and/or Converting Plants.
Coffee Curing Roasting and Grinding Premises	Coir Factories	Godowns and Warehouses (Storing Combustible/Flammable Goods)
Condensed Milk Factories, Milk Pasteurising Plant and Dairies	Coir Carpets, Rugs, Tobacco, Hides and Skin Presses	Grass, Hay, Fodder and <i>Bhoosa</i> (chaff) Pressing Factories
Confectionery Manufacturing	Cold Storage Premises	Industrial Gas Manufacturing (Other than Inert/Halogenated Hydrocarbon Gases)
Electric Generating Houses (Hydro electric)	Cork Products Manufacturing	Jute Mills and Jute Presses
Electric Lamps (Incandescent and Fluorescent) and TV Picture Tube Manufacturing	Dry Cleaning, Dyeing and Laundries.	Linoleum Factories LPG Bottling Plants (Mini)
Electro Plating Works	Electric Substations/Distribution	Man Made Fibres (Acrylic)

Light Hazard	Moderate Hazard	High Hazard
	Stations	Fibres/yarn Manufacturing)
Engineering Workshops	Electric Generating Stations (Other than Underground Power houses)	Match Factories
Fruits and Vegetables	Enamelware Factories	Mattress and Pillow Making
Dehydrating and Drying Factories	Filter and Wax Paper Manufacturing	Metal or Tin Printers (where more than 50 Percent of floor area is occupied as Engineering Workshop; this may be taken as ordinary hazard risk)
Fruit Products and Condiment Factories	Flour Mills	Oil Mills
Glass and Glass Fibre Manufacturing	Garages	Oil Extraction Plants
Godowns and Warehouses Storing Non-combustible Goods only	Garment Makers	Oil Terminals/Depots handling flammable Liquids having flash point of 23° C and Below
Green Houses	Ghee Factories (Other than Vegetable)	Paints and Varnish Factories
Gold Thread/Gilding Factories	Godowns and Warehouses (Other than those Under Light and High A Categories)	Paper and Cardboard Mills having raw material yards
Gum and/or Glue and Gelatine Manufacturing	Grain or seed Disintegrating and/or Crushing Factories	Piers, Wharves and Jetties — Handling Extra Hazardous Materials
Ice, Ice Candy and Ice-cream Manufacturing	Grease Manufacturing	Printing Ink Manufacturing.
Ink (Excluding Printing Ink) Factories	Hosiery, Lace, Embroidery and Thread Factories	Rosin Lamp-Black and Turpentine Factories
Mica Products Manufacturing	Incandescent Gas Mantle Manufacturing	Saw Mills
Pottery Works	Industrial Gas Manufacturing (Inert/Halogenated hydrocarbon gases)	Sponge Iron Steel Plants (Gas Based)
Poultry Farms	Man-made Yarn/Fibre Manufacturing (Other than Acrylic Fibres/Yarn Manufacturing)	Surgical Cotton Manufacturing
Salt Crushing Factories and Refineries	Manure and Fertilizer Works (Blending, Mixing and granulating)	Tarpaulin and Canvas Proofing Factories
Stables	Mineral Oil Blending and Processing	Turpentine and Rosin Distilleries
Sugar Candy Manufacturing	Oil and Leather Cloth Factories	Tyre Re treading and Resoling Factories
Sugar Factories and Refineries	Oil Terminals/Depots Other than those Categorised under High Hazard A	
Tanneries/Leather Goods Manufacturers	Open storage of Flammable Liquids in Drums, Cans, etc	SUB-CATEGORY (B)
Umbrella Assembling Factories	Oxygen Plants	Ammonia and Urea Synthesis Plants
Vermicelli Factories	Paper and Cardboard Mills. without Raw Material Yards Piers, Wharves, Jetties and Dockyards other than those Categorized Under High Hazard A	CNG Compressing and Bottling Plants
Water Treatment/Filtration Plants and Water Pump Houses	Plastic Goods Manufacturing	Coal Based Methane Plants

Light Hazard	Moderate Hazard	High Hazard
Zinc/Copper Factories	Plywood/Wood Veneering Factories	Explosive Factories
	Printing Press Premises	
	Pulverising and Crushing Mills	
	Rice Mills	
	Rope Works	
	Rubber Goods Manufacturing	
	Rubber Tyres and Tubes Manufacturing	
	Shellac Factories	
	Silk Filiatures	
	Soaps and Glycerine Factories	
	Spray Painting	
	Starch Factories	
	Tea Factories	
	Textile Mills	
	Tobacco (Chewing) and Pan-Masala Making	
	Tobacco Grinding and Crushing	
	Tobacco Redrying Factories	
	Woollen Mills	

Note –

- 1) Any occupancy that is not covered in this Annexure shall be classified in the most appropriate class which resembles the proposed occupancy
- 2) In case of complexes having separate plants having varying degrees of hazard, authority having jurisdiction shall be consulted to decide on level of protection to be provided.

ANNEXURE C

AVAILABLE DATA REGARDING FIRE RESISTANCE RATING OF VARIOUS BUILDING COMPONENTS

Table No. AC-1 Masonry Walls: Solid (Required to Resist Fire from One Side at a Time)

No.	Nature of Construction and Materials	Minimum Thickness (mm), Excluding any Finish for a Fire Resistance (min) of									
		Load Bearing					Non-load bearing				
		60	90	120	180	240	60	90	120	180	240
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
i)	Reinforced cement concrete ¹⁾	120 (25) ²⁾	140)	160 (25) ²⁾	200)	240 (25) ²⁾	—	—	—	—	—
ii)	Unreinforced cement concrete	150	175	—	—	—	—	—	—	—	—
iii)	No-fines concrete with:										
a)	13 mm cement/sand or gypsum/sand	—	—	—	—	—	150	150	150	150	150
b)	13 mm light weight aggregate gypsum plaster	—	—	—	—	—	150	150	150	150	150
iv)	Bricks of clay:										
a)	Without finish	90	100	100	170	170	75	90	100	170	170
b)	With 13 mm lightweight aggregate plaster	90	90	90	100	100	75	90	90	90	100
v)	Bricks of sand lime:										
a)	Without finish	90	100	100	190	190	75	90	100	170	170
b)	With 13 mm lightweight aggregate plaster	90	90	90	100	100	75	90	90	90	100
vi)	Blocks of concrete:										
a)	Without finish	90	100	100	—	—	75	90	100	140	150
b)	With 13 mm lightweight aggregate gypsum plaster	90	90	90	100	100	75	75	75	90	100
c)	With 13 mm cement/sand or gypsum/sand	—	—	—	—	—	75	90	90	100	140
vii)	Blocks of lightweight concrete:										
a)	Without finish	90	100	100	140	150	75	75	75	125	140
b)	With 13 mm lightweight aggregate plaster	90	90	90	100	100	50	63	75	75	75
c)	With 13 mm cement/sand or gypsum/sand	—	—	—	—	—	75	75	75	90	100
viii)	Blocks of aerated concrete:										
a)	Without finish	90	100	100	140	180	50	63	63	75	100
b)	With 13 mm lightweight aggregate plaster	90	90	100	100	150	—	—	—	—	—

Note:

¹⁾ Walls containing at least 1 percent of vertical reinforcement

²⁾ Minimum thickness of actual cover to reinforcement

Table No. AC-2 : Masonry Walls: Hollow (Required to Resist Fire from One Side at a Time)

No	Nature of Construction and Materials	Minimum Thickness (mm), Excluding any Finish for a Fire Resistance (min) of											
		Load Bearing						Non-load bearing					
		60	90	120	180	240	30	60	90	120	180	240	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
i)	Bricks of clay:												
	a) Without finish	170	170	170	200	200	75	75	90	100	170	170	
ii)	b) With 13 mm lightweight aggregate plaster	100	100	170	170	170	75	75	90	90	90	100	
	Blocks of concrete:												
	a) Without finish	—	—	—	—	—	90	125	125	140	140	150	
	b) With 13 mm cement/sand or gypsum/sand	—	—	—	—	—	90	125	125	140	140	140	
iii)	c) With 13 mm lightweight aggregate gypsum plaster	190	200	200	—	—	75	90	90	100	125	125	
	Blocks of lightweight concrete:												
	a) Without finish	100	100	100	—	—	75	90	90	100	140	150	
	b) With 13 mm cement/sand or gypsum/sand	—	—	—	—	—	75	75	75	100	140	140	
	c) With 13 mm lightweight aggregate gypsum plaster	—	—	—	—	—	63	63	63	75	90	100	

Table No. AC-3: Framed Construction, Load Bearing (Required to Resist Fire from One Side at a Time)

No.	Nature of Construction and Materials/Timber Studs at Centres not Exceeding 600 mm, Faced on Each Side With	Minimum Thickness (mm) of Protection for a fire Resistance of 60 min
(1)	(2)	(3)
i)	Plasterboard layers with joints staggered, joints in outer layer taped and filled -Total thickness for each face	25
ii)	One layer of 12.7 mm plasterboard with a finish of lightweight aggregate	13
iii)	Metal lath and plaster, thickness of plaster:	
	a) Sanded gypsum plaster (metal lathing grade)	22
	b) Lightweight aggregate gypsum plaster	13

Table No. AC-4: Framed Construction, Non-Load Bearing (Required to Resist Fire from One Side at a Time)

No	Stud Construction	Nature of Construction and Materials/Steel or Timber Frame at Centres not Exceeding 600 mm, Facing on Both Sides of	Minimum Thickness (mm) of Protection for a fire Resistance of			
			30 min	60 min	90 min	120 min
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dry lining with materials fixed direct to studs, without plaster finish:						
i)	a) One layer of plasterboard with taped and filled joints	Timber or steel	12.7	—	—	—
	b) Two layers of plasterboard with joints staggered, joints in outer layer taped and filled — Total thickness for each face	Timber or steel	19	25	—	—
	c) One layer of asbestos insulating board with transverse joints backed by fillers of asbestos insulating board not less than 9 mm thick, or by timber	Timber or steel	9	12	—	—
	d) One layer of wood wool slabs Timber 25	Timber	25	—	—	—
	e) One layer of chipboard or of plywood	Timber or steel	18	—	—	—
Lining with materials fixed direct to studs, with plaster finish:						
ii)	a) Plasterboard of thickness:					
	1) With not less than 5 mm gypsum plaster finish	Timber or steel	9.5	—	—	—
	2) With not less than 13 mm gypsum plaster finish	Timber or steel	—	12.7	—	—
Wet finish:						
iii)	a) Metal lath and plaster, thickness of plaster:					
	1) Sanded gypsum plaster	Timber or steel	13	13	19	25
	2) Lightweight aggregate gypsum plaster	Timber or steel	—	13	—	—

Table No. AC-5: Framed External Walls Load Bearing (Required to Resist Fire from One Side at a Time)

No	Nature of Construction and Materials	Minimum Thickness (mm) of Protection for a fire Resistance of 60 min
(1)	(2)	(3)
i)	Timber studs at centres not exceeding 600 mm with internal linings of: Plasterboard layers with joints in outer layer taped and filled, total thickness of plasterboard	31

Table No. AC-6: Framed External Walls Non-Load Bearing [Required to Resist Fire from Inside the Building (A)]

No.	Nature of Construction and Materials	Minimum Thickness (mm) of Protection for a fire Resistance of					
		30 min	60 min	90 min	120 min	180 min	240 min
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
i)	Steel frame with an external cladding of non-combustible sheets (excluding sheet steel), with a steel supporting framework and internal lining of:						
	a) Metal lath and plaster, thickness of plaster:						
	1) Sanded gypsum plaster (metal lathing grade)	13	13	—	—	—	—
	2) Lightweight aggregate gypsum plaster	10	13	15	15	15	19
	b) Two layer of plasterboard with joints staggered joints in outer layer taped and filled – Total thickness	21	32	—	—	—	—
	c) Plasterboard of thickness:						
ii)	1) With not less than 5 mm gypsum plaster finish	12.7	—	—	—	—	—
	2) With not less than 13 mm gypsum plaster finish	9.5	—	—	—	—	—
	3) With not less than 10 mm lightweight aggregate gypsum plaster	9.5	—	—	—	—	—
	d) One layer of asbestos insulating board with transverse joints backed by fillers of asbestos insulating board not less than 9 min thick, or by timber	9	9	12	12	12	12
iii)	e) One layer of wood/wool slabs without finish	—	50	—	—	—	—
	f) One layer of compressed straw building slabs:						
	1) Without finish	50	—	—	—	—	—
	2) With not less than 5 mm gypsum plaster finish	—	50	—	—	—	—
	g) Aerated concrete blocks	50	50	63	63	75	100
	h) Bricks of clay:						
	1) Without finish	75	75	90	90	100	100
	2) With not less than 13 mm lightweight aggregate gypsum plaster	—	—	75	75	90	90

Table No. AC-7: Framed External Walls Non-Load Bearing [Required to Resist Fire from Inside the Building (B)]

No.	Nature of Construction and Materials	Minimum Thickness (mm) of Protection to provide Sufficient Insulation to achieve a Modified Fire Resistance of Upto 240 min
(1)	(2)	(3)
i)	Steel frame with an external cladding of sheet steel fully lapped, steel bolted and fixed to steel sheeting rails, with timber or steel supporting framework and internal lining of:	
a)	Metal lath and plaster, thickness of plaster:	
1)	Sanded gypsum plaster (metal lathing grade)	13
2)	Lightweight aggregate gypsum plaster	10
b)	One layer of plasterboard with joints taped and filled	12.7
c)	Plasterboard of thickness with not less than 5 mm gypsum plaster finish	9.5
d)	One layer of asbestos insulating board with transverse joints backed by fillers of asbestos insulating board not less than 9 mm thick, or by timber	9
e)	One layer of wood/wool slabs	25
f)	One layer of compressed straw building slabs	50
g)	One layer of chipboard or of plywood	18
h)	Aerated concrete blocks	50
j)	Bricks of clay	75
k)	Any internal decorative lining with a cavity fill independently supported and retained in position of mineral fibre insulating material (excluding glass) at a density of 48 kg/m ³	50

Table No. AC-8: Framed External Walls Non-Load Bearing [Required to Resist Fire from Inside the Building (C)]

No	Nature of Construction and Materials	Minimum Thickness (mm) of Protection for a Fire Resistance of 90 min
(1)	(2)	(3)
i)	Timber frame with external cladding of weather boarding or external plywood, 9.5 mm with an internal lining of:	
a)	Plasterboard not less than 9.5 mm thick, finished with:	
1)	Gypsum plaster	13
2)	Lightweight aggregate gypsum plaster	10
b)	Plasterboard not less than 12.7 mm thick, finished with:	
1)	Gypsum plaster	10
2)	Lightweight aggregate gypsum plaster	10
c)	One layer of asbestos insulating board with transverse joints backed by fillers of asbestos insulating board not less than 9 mm thick. or by timber	9 12

Table No. AC-9: Reinforced Concrete Columns

No.	Nature of Construction and Materials	Minimum Dimensions (mm) of Protection for a fire Resistance of						
		30 min	60 min	90 min	120 min	180 min	240 min	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
i)	Fully exposed	a) Width	150	200	250	300	400	450
		b) Cover	40	40	40	40	40	40
ii)	50 percent exposed	a) Width	125	160	200	200	300	350
		b) Cover	40	40	40	40	40	40
iii)	One face exposed	a) Thickness	100	120	140	160	200	240
		b) Cover	40	40	40	40	40	40

Table No. AC-10: Concrete Beams

No	Nature of Construction and Materials	Minimum Dimensions (mm) of Protection for a fire Resistance of						
		30 min	60 min	90 min	120 min	180 min	240 min	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
i)	Reinforced concrete (simply supported)	a) Width	200	200	200	200	240	280
		b) Cover	20	20	20	40	60 ¹⁾	70 ¹⁾
ii)	Reinforced concrete (continuous)	a) Width	200	200	200	200	240	280
		b) Cover	20	20	20	30	40	50 ¹⁾
iii)	Prestressed concrete (simply supported)	a) Width	100	120	150	200	240	280
		b) Cover	25	40	55 ¹⁾	70	80 ¹⁾	90 ¹⁾
iv)	Prestressed concrete (continuous)	a) Width	80	100	120	150	200	240
		b) Cover	20	30	40	55 ¹⁾	70 ¹⁾	80 ¹⁾

¹⁾ Require attention to the additional measures necessary to reduce the risk of spilling.

Table No. AC-11: Concrete Floors

No.	Nature of Construction and Materials	Minimum Dimensions (mm) Excluding any Finish, for a Fire Resistance of						
		30 min	60 min	90 min	120 min	180 min	240 min	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
i)	Reinforced concrete (simply supported)	a) Thickness	75	95	110	125	150	170
		b) Cover	20	20	25	35	45 ¹⁾	55 ¹⁾
ii)	Reinforced concrete (continuous)	a) Thickness	75	95	110	125	150	170
		b) Cover	20	20	20	25	35	45 ¹⁾

¹⁾ Require attention to the additional measures necessary to reduce the risk of spilling

Table No. AC-12: Concrete Floors: Ribbed Open Soffit

No.	Nature of Construction and Materials	Minimum Dimensions (mm) Excluding any Finish, for a Fire Resistance of							
		30 min	60 min	90 min	120 min	180 min	240 min		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		
i)	Reinforced concrete (simply supported)	a)	Thickness of floor	75	95	110	125	150	170
		b)	Rib width	125	125	125	125	150	175
		c)	Cover	20	20	35	45 ¹⁾	55 ¹⁾	65 ¹⁾
ii)	Reinforced concrete (continuous)	a)	Thickness of floor	75	95	110	125	150	170
		b)	Rib width	125	125	125	125	150	175
		c)	Cover	20	20	20	35	45 ¹⁾	55 ¹⁾

¹⁾ Require attention to the additional measures necessary to reduce the risk of spilling

Table No. AC-13: Encased Steel Columns, 203 mm x 203 mm

No.	Nature of Construction and Materials	Minimum Dimensions (mm) Excluding any Finish for a Fire Resistance of				
		60 min	90 min	120 min	180 min	240 min
(1)	(2)	(3)	(4)	(5)	(6)	(7)
i)	Hollow protection (without an air cavity over the flanges):					
	a) Metal lathing with trowelled lightweight aggregate gypsum plaster ¹⁾	13	15	20	32	—
	b) Plasterboard with 1.6 mm wire binding at 100 mm pitch, finished with lightweight aggregate gypsum plaster not less than the thickness specified:					
	1) 9.5 mm plaster board	10	15	—	—	—
	2) 19 mm plaster board	10	13	20	—	—
	c) Asbestos insulating boards, thickness of board:					
	1) Single thickness of board, with 6 mm cover fillets at transverse joints	—	19	3.	—	—
	2) Two layers, of total thickness	—	—	—	38	—
	d) Solid bricks of clay, composition or sand lime, reinforced in every horizontal joint, unplastered	50	50	50	75	100
	e) Aerated concrete blocks	60	60	60	—	—
	f) Solid blocks of lightweight concrete hollow protection (with an air cavity over the flanges)	50	50	50	60	75
ii)	Asbestos insulating board screwed to 25 mm asbestos battens	12	19	—	—	—
iii)	Solid protections:					
	a) Concrete, not leaner than 1:2:4 mix (unplastered):					
	1) Concrete not assumed to be load bearing, reinforced)	25	25	25	50	75
	2) Concrete assumed to be load bearing	50	50	50	75	75

No.	Nature of Construction and Materials	Minimum Dimensions (mm) Excluding any Finish for a Fire Resistance of				
		60 min	90 min	120 min	180 min	240 min
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	b) Lightweight concrete, not leaner than 1:2:4 mix (unplastered): concrete not assumed to be load bearing, reinforced ²⁾	25	25	25	40	60

¹⁾ So rued or designed, as to allow full penetration fin mechanical bond,
²⁾ Reinforcement shall consist of steel binding wire not less than 2.3 mm in thickness, or a steel mesh weighing not less than 0.5 kg/d. in concrete protection, the spacing of that reinforcement snail not exceed 200 mm in any direction.

Table No. AC-14: Encased Steel Beams, 406 mm X 176 mm (Protection Applied on Three Sides)

No	Nature of Construction and Materials	Minimum Thickness (mm) of Protection for fire Resistance of					
		30 min	60 min	90 min	120 min	180 min	240 min
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
i)	Hollow protection (without an air cavity beneath the lower flange):						
a)	Metal lathing with trowelled lightweight aggregate gypsum plaster ¹⁾	13	13	15	20	25	—
b)	Plasterboard with 1.6 mm wire binding ²⁾ at 100 mm pitch, finished with lightweight aggregate gypsum plaster not less than the thickness specified:						
	1) 9.5 mm plaster board	10	10	15	—	—	—
	2) 19 mm plaster board	10	10	13	20	—	—
c)	Asbestos insulating boards, thickness of board:						
	1) Single thickness of board, with 6 mm cover fillets at transverse joints	—	—	19	25	—	—
	2) Two layers of total thickness					38	50
ii)	Hollow protection (with an air cavity below the lower flange):						
a)	Asbestos insulating board screwed to 25 mm asbestos battens	9	12	—	—	—	—
iii)	Solid protection:						
a)	Concrete, not leaner than 1:2:4 mix (unplastered):						
	1) Concrete not assumed to be load bearing, reinforced ³⁾	25	25	25	25	50	75
	2) Concrete assumed to be load bearing	50	50	50	50	75	75
b)	Lightweight concrete ⁴⁾ , not leaner than 1:2:4 (mix) unplastered	25	25	25	25	40	60

¹⁾ So fixed or designed, as to allow full penetration for mechanical bond.

²⁾ Where wire binding cannot be used, expert advice should be sought regarding alternative methods of support to enable the lower edges of the plasterboard to be fixed together and to the lower flange, and for the top edge of the plasterboard to be held in position.

³⁾ Reinforcement shall consist of steel binding wire not less than 2.3 mm in thickness or a steel mesh weighing not less than 0.5 kg/m². In concrete protection, the spacing of that reinforcement shall not exceed 200 am in any direction.

⁴⁾ Concrete no assumed to be load bearing reinforced.

Table No. AC-15: Timber Floors – Tongued and Grooved Boarding, or Sheets of Tongued and Grooved Plywood or Wood Chipboard, of not Less than 21 mm Finished Thickness

No.	Nature of Construction and Materials	Minimum Thickness (mm) of Protection for fire Resistance of		
		30 min	60 min	120 min
(1)	(2)	(3)	(4)	(5)
i)	37 mm (minimum) timber joists with a ceiling of:			
a)	Timber lathing and plaster, plaster of thickness	15	—	—
b)	Metal lathing and plaster, thickness of plaster:			
1)	Sanded gypsum plaster (metal lathing grade)	15	—	—
2)	Lightweight aggregate gypsum plaster	13	13	25
c)	One layer of plasterboard with taped and filled joints	12.7	—	—
d)	Two layers of plasterboard with joints staggered, joints in outer layer taped and filled total thickness	19	31	—
e)	One layer of plasterboard not less than 9.5 mm thick, finished with:			
1)	Gypsum plaster	5	—	—
2)	Sanded gypsum plaster	13	—	—
3)	Lightweight aggregate gypsum plaster	13	—	—
f)	One layer of plasterboard not less than 12.7 mm thick, finished with:			
1)	Gypsum plaster	5	—	—
2)	Lightweight aggregate gypsum plaster	10	—	—
g)	One layer of asbestos insulating board with any transverse joints backed by fillets of asbestos insulating board not less than 9 mm thick, or by timber	9	12	—

Table No. AC-16: Timber Floors – Tongued and Grooved Boarding, or Sheets of Tongued and Grooved Plywood or Wood Chipboard, of not Less than 15 mm Finished Thickness

No.	Nature of Construction and Materials	Minimum Thickness (mm) of Protection for fire Resistance of			
		30 min	60 min	120 min	
(1)	(2)	(3)	(4)	(5)	
i)	37 mm (minimum) timber joists with a ceiling of:				
a)	Timber lathing and plaster, plaster of thickness	15	—	—	
b)	Metal lathing and plaster, thickness of plaster:				
	1) Sanded gypsum plaster (metal lathing grade)	15	—	—	
	2) Lightweight aggregate gypsum plaster	13	13	25	
c)	One layer of plasterboard with taped and filled joints	12.7	—	—	
d)	Two layers of plasterboard with joints staggered, joints in outer layer taped and filled total thickness	22	31	—	
e)	One layer of plasterboard not less than 9.5 mm thick, finished with:				
	1) Gypsum plaster	5	—	—	
	2) Sanded gypsum plaster	15	—	—	
	3) Lightweight aggregate gypsum plaster	13	—	—	
f)	One layer of plasterboard not less than 12.7 mm thick, finished with:				
	1) Gypsum plaster	5	—	—	
	2) Lightweight aggregate gypsum plaster	10	—	—	
g)	One layer of asbestos insulating board with any transverse joints backed by fillets of asbestos insulating board not less than 9 mm thick, or by timber	9	12 ¹⁾	—	

¹⁾Finished on top with 25 mm minimum thick glass fibre or mineral wool laid between joints.

Table No. AC-17: Timber Floors – Any Structurally suitable flooring of Timber or Lignocellulose Boards

No.	Nature of Construction and Materials	Minimum Thickness (mm) of Protection for fire Resistance of	
		30 min	60 min
(1)	(2)	(3)	(4)
i)	37 mm (minimum) timber joists with a ceiling of:		
a)	Timber lathing and plaster, plaster of thickness	15	—
b)	Metal lathing and plaster, thickness of plaster for:		
1)	Sanded gypsum plaster (metal lathing grade)	15	—
2)	Lightweight aggregate gypsum plaster	13	19
c)	One layer of plasterboard with joints taped and filled and backed by timber	12.7	—
d)	Two layers of plasterboard with joints staggered, joints in outer layer taped and filled total thickness	25	—
e)	Two layers of plasterboard, each not less than 9.5 mm thick, joints between boards staggered, and outer layer finished with gypsum plaster	5	—
f)	One layer of plasterboard not less than 9.5 mm thick, finish with:		
1)	Sanded gypsum plaster	13	—
2)	Lightweight aggregate gypsum plaster	15	—
g)	One layer of plasterboard not less than 12.7 mm thick, finished with:		
1)	Sanded gypsum plaster	15	—
2)	Lightweight aggregate gypsum plaster	13	—
h)	One layer of asbestos insulating board with any transverse joints backed by fillets of asbestos insulating board not less than 9 mm thick, or by timber	12	—

ANNEXURE D

GUIDELINES FOR FIRE DRILL AND EVACUATION PROCEDURES FOR HIGH RISE BUILDINGS

D-1 Introduction

In case of fire in a high-rise building, safe evacuation of its occupants may present serious problems unless a plan for orderly and systematic evacuation is prepared in advance and all occupants are well drilled in the operation of such plan. These guidelines are intended to assist them in this task.

D-2 Alarms

Any person discovering fire, heat or smoke shall immediately report such condition to the fire brigade, unless he has personal knowledge that such a report has been made. No person shall make, issue, post or maintain any regulation or order, written or verbal, that would require any person to take any unnecessary delaying action prior to reporting such condition to the fire brigade.

D-3 Drills

- D-3.1 Fire drills shall be conducted, in accordance with the Fire Safety Plan, at least once every three months for buildings during the first two years. Thereafter, fire drills shall be conducted at least once every six months.
- D-3.2 All occupants of the building shall participate in the fire drill. However, occupants of the building, other than building service employees, are not required to leave the floor or use the exits during the drill.
- D-3.3 A written record of such drills shall be kept on the premises for a three years period and shall be readily available for fire brigade inspection.

D-4 Signs and Plan

D-4.1 Signs at Lift Landings

A sign shall be posted and maintained in a conspicuous place on every floor at or near the lift landing in accordance with the requirements, indicating that in case of fire, occupants shall use the stairs unless instructed otherwise. The sign shall contain a diagram showing the location of the stairways except that such diagram may be omitted, provided signs containing such diagram are posted in conspicuous places on the respective floor.

A sign shall read 'IN CASE OF FIRE, USE STAIRS UNLESS INSTRUCTED OTHERWISE'. The lettering shall be at least 12.5 mm block letters in red and white background. Such lettering shall be properly spaced to provide good legibility. The sign shall be at least 250 mm × 300 mm, where the diagram is also incorporated in it and 62.5 mm × 250 mm where the diagram is omitted. In the latter case, the diagram sign shall be at least 200 mm × 300 mm. The sign shall be located directly above the call-button and squarely attached to the wall or partition. The top of the sign shall not be above 2 m from the floor level.

D-4.2 Floor Numbering Signs

A sign shall be posted and maintained within each stair enclosure on every floor, indicating the number of the floor, in accordance with the requirements given below. The numerals shall be of bold type and at least 75 mm high. The numerals and background shall be in contrasting colours. The sign shall be securely attached to the stair side of the door.

D-4.3 Stair and Lifts Identification Signs

Each stairway and each lift bank shall be identified by an alphabetical letter. A sign indicating the letter of identification shall be posted and maintained at each lift landing and on the side of the stairway door from which egress is to be made, in accordance with the requirements given in (Refer 14.3.4.(2))

D-4.4 Stair Re-entry Signs

A sign shall be posted and maintained on each floor within each stairway and on the occupancy side of the stairway where required, indicating whether re-entry is provided into the building and the floor where such re-entry is provided, in accordance with the requirements given below.

The lettering and numerals of the signs shall be at least 12.5 mm high of bold type. The lettering and background shall be of contrasting colours and the signs shall be securely attached approximately 1.5 m above the floor level.

D-5 Fire Safety Plan

D-5.1 A format for the Fire Safety Plan shall be as given in D-9.10.

D-5.2 The applicable parts of the approved Fire Safety Plan shall be distributed to all tenants of the building by the building management when the Fire Safety Plan has been approved by the Fire Authority.

D-5.3 The applicable parts of the approved Fire Safety Plan shall then be distributed by the tenants to all their employees and by the building management to all their building employees.

D-5.4 In the event there are changes from conditions existing at the time the Fire Safety Plan for the building was approved, and the changes are such so as to require amending the Fire Safety Plan, within 30 days after such changes, an amended Fire Safety Plan shall be submitted to the fire brigade for approval.

D-6 Fire Command Centre

A Fire Command Centre shall be established in the building (*Refer 14.2.4(11)*)

D-7 Communications and Fire Alarm

A means of communication and fire alarm for use during fire emergencies shall be provided and maintained by the owner or person in charge of the building.

D-8 Fire Safety Plan Format**D-8.1 Building Address**

Street and Pin Code Number _____

Telephone Number _____

D-8.2 Purpose and Objective**D-8.2.1 Purpose**

To establish method of systematic, safe and orderly evacuation of an area or building by and of its occupants in case of fire or other emergency, in the least possible time, to a safe area by the nearest safe means of egress; also the use of such available fire appliances (including sounding of alarms) as may have been provided for controlling or extinguishing fire and safeguarding of human life.

D-8.2.2 Objective

To provide proper education as a part of continuing employee indoctrination and through a continuing written programme for all occupants, to ensure prompt reporting of fire, the response of fire alarms as designated, and the immediate initiation of fire safety procedures to safeguard life and contain fire until the arrival of the fire brigade.

D-8.3 Fire Safety Director

- a) Name
- b) Regularly assigned employment — Title
- c) Regularly assigned location.
- d) How is he notified when at regular location?
- e) How is he notified when not at regular location?
- f) Normal working hours
- g) Duties of Fire Safety Director (see D-9.1)

D-8.4 Deputy Fire Safety Director

- a) Name
- b) Regularly assigned employment — Title
- c) Regularly assigned location
- d) How is he notified when at regular location?
- e) How is he notified when not at regular location?
- f) Normal working hours
- g) Duties of Deputy Fire Safety Director (see D-9.2)

D-8.5 Fire Wardens and Deputy Fire Wardens

- a) Are their names on organization charts for each floor and/or tenancy?
- b) Submit typical completed organization chart for Fire Drill and Evacuation Assignment.
- c) Duties of Fire Wardens and Deputy Fire Wardens (see D-9.3).

D-8.6 Building Evacuation Supervisor

- a) Name
- b) Regularly assigned employment — Title
- c) Regularly assigned location
- d) How is he notified when at regular location?
- e) How is he notified when not at regular location?
- f) Normal working hours
- g) Duties of Building Evacuation Supervisor (see D-9.4).

D-8.7 Fire Party

- a) Submit a completed organization chart for Fire Parties naming person in charge, and his title in the building.
- b) Indicate standards of selection from building employees based on background and availability.
- c) How are they notified?
- d) How are they notified when they are not at their regular locations?
- e) Means of responding
- f) Duties of each member of Fire Party (see D-9.5).

D-8.8 Occupants Instructions

Distribution of instructions of all tenants, tenants' employees and building employees (see D-9.6).

D-8.9 Evacuation Drills

- a) Frequency of drills
- b) How conducted?
- c) Participation? Who participated? How?
- d) Controls and supervision
- e) Recording of details of drills

D-8.10 Fire Command Station

- a) Location
- b) Requirements:
 - i Adequate illumination
 - ii Adequate communication to mechanical equipment room and lifts control room on each floor
 - iii Copy of Fire Safety Plan
 - iv Copy of Building Information Form

- v Representative floor plans showing location of signs, floor remote station, communications, etc.

D-8.11 Signs

- a) Signs at lifts landings, Floor diagrams
- b) Floor numbering
- c) Stairway identification
- d) Lifts identification
- e) Stair re-entry

D-8.12 Fire Prevention and Fire Protection Programme

See D-9.7.

D-8.13 Building Information Form

See D-9.8

D-8.14 Representative Floor Plan

See D-9.9

D-8.15 Fire Safety Plan Prepared by

See D-9.10

- a) Date when prepared, and
- b) Date when revised

D-9 Duties

D-9.1 Fire Safety Director's Duties

- D-9.1.1 Be familiar with the written Fire Safety Plan providing for fire drill and evacuation procedure in accordance with orders on the subject.
- D-9.1.2 Select qualified building service employees for a Fire Party and organize, train and supervise such fire brigade.
- D-9.1.3 Be responsible for the availability and state of readiness of the Fire Party.
- D-9.1.4 Conduct fire and evacuation drills.
- D-9.1.5 Be responsible for the designation and training of a Fire Warden for each floor, and sufficient Deputy Fire Wardens for each tenancy in accordance with orders on the subject.
- D-9.1.6 Be responsible for a daily check for the availability of the Fire Wardens, and see that up-to date organization charts are posted¹².
- D-9.1.7 Notify the owner or some other person having charge of the building when any designated individual is neglecting his responsibilities contained in Fire Safety Plan. The owner or the other person in-charge of the building shall bring the matter to the attention of the firm employing the individual. If the firm fails to correct the condition, the fire department shall be notified by the owner/person in charge of the building.
- D-9.1.8 In the event of fire, shall report to the fire command centre to supervise, provide for and coordinate with respect to the following:
 - a Ensuring that the fire department has been notified of any fire or fire alarm.
 - b Manning of the fire command station.
 - c Direction of evacuating procedures as provided in the Fire Safety Plan.
 - d Report on conditions on fire floor for information of fire department on their arrival.
 - e Advising the fire department officer in-charge in the operation of the Fire Command Centre.

¹² Note — If the number of Fire Wardens and Deputy Fire Wardens in the building is such that it is impractical to individually contact each one daily, a suggested method to satisfy the requirements is to make provisions for the Fire Warden, or a Deputy Fire Warden in the absence of the Fire Warden, to notify the Fire Safety Director when the Fire Warden or required number of Deputy Fire Wardens are not available. In order to determine the compliance by the Fire Warden and Deputy Fire Wardens, when this method is used, the Fire Safety Director shall make a spot check of several different floors each day.

D-9.1.9 Be responsible for the training and activities of the Building Evacuation Supervisor.

D-9.2 Deputy Fire Safety Director's Duties

- 1 He is the subordinate to the Fire Safety Director.
- 2 He shall perform duties of Fire Safety Director in his absence.

D-9.3 Fire Warden's and Deputy Fire Warden's Duties

The tenant or tenants of each floor shall, upon request of the owner or person in charge of buildings, make responsible and dependable employees available for designation by the Fire Safety Director as Fire Warden and Deputy Fire Wardens.

D-9.3.1 Each floor of a building shall be under the direction of a designated Fire Warden for the evacuation of occupants in the event of fire. He shall be assisted in his duties by the Deputy Fire Wardens. A Deputy Fire Warden shall be provided for each tenancy. When the floor area of a tenancy exceeds 700 m² of occupiable space, a Deputy Fire Warden shall be assigned for each 700 m² or part thereof.

D-9.3.2 Each Fire Warden and Deputy Fire Warden shall be familiar with the fire safety plan, the location of exits and the location and operation of any available fire alarm system.

D-9.3.3 In the event of fire, or fire alarm the Fire Warden shall ascertain the location of the fire, and direct evacuation of the floor in accordance with directions received and the following guidelines:

- a The most critical areas for immediate evacuation are the fire floor and floors immediately above. Evacuation from the other floors shall be instituted when instructions from the fire Command Centre or conditions indicate such action. Evacuation shall be via uncontaminated stairs. The Fire Warden shall try to avoid stairs being used by the Fire department. If this is not possible, he shall try to attract the attention of the Fire department personnel before such personnel open the door to the fire floor.
- b Evacuation to two or more levels below the fire floor is generally adequate. He shall keep the fire command station informed regarding his location.
- c Fire Wardens and their deputies shall see that all occupants are notified of the fire, and that they proceed immediately to execute the Fire Safety Plan.
- d The Fire Warden on the fire floor shall, as soon as practicable, notify the Fire Command Centre of the particulars.
- e Fire Wardens on floors above the fire shall, after executing the Fire Safety Plan, notify the Fire command station of the means being used for evacuation and any other particulars.
- f In the event that stairways serving fire floor and/or floors above are unusable due to contamination or cut-off by fire and/or smoke or that several floors above fire involve large numbers of occupants who must be evacuated, consideration may be given to using lifts in accordance with the following:
 - i) If the lifts servicing his floor also service the fire floor, they shall not be used. However, lifts may be used if there is more than one bank of lifts, and he is informed from the Fire Command Centre that one bank is unaffected by the fire.
 - ii) If lifts do not service the fire floor and their shafts have no openings on the fire floor, they may be used, unless directed otherwise.
 - iii) Lifts manned by trained building personnel or firemen may also be used.
 - iv) In the absence of a serviceable lift, the Fire Warden shall select the safest stairway to use for evacuation on the basis of the location of the fire and any information received from the Fire Command Centre. The Fire Warden shall check the environment in the stairs prior to entry for evacuation. If it is affected by smoke, alternative stair shall be selected, and the Fire Command Centre notified.
 - v) The Fire Warden shall keep the Fire Command Centre informed of the means being employed for evacuation by the occupants of his floor.
- g Ensure that an alarm has been transmitted.

D-9.3.4 Organization Chart for Fire Drill and Evacuation Assignment

A chart designating employees and their assignments shall be prepared and posted in a conspicuous place in each tenancy and on each floor of a tenancy that occupies more than one floor and a copy shall be in the possession of the Fire Safety Director.

- D-9.3.5 Keep available an updated listing of all personnel with physical disabilities who cannot use stairs unaided. Make arrangements to have these occupants assisted in moving down the stairs to two or more levels below fire floor. If it is necessary to move such occupants to a still lower level during the fire, move them down the stairs to the uppermost floor served by an uninvolved lifts bank and then evacuate them to the street floor by lifts. Where assistance is required for such evacuation, notify Fire Safety Director.
- D-9.3.6 Provide for Fire Warden identification during fire drills and fires, such as using armband, etc.
- D-9.3.7 Ensure that all persons on the floor are notified of fire and all are evacuated to safe areas. A search must be conducted in the lavatories to ensure all are out. Personnel assigned as searchers can promptly and efficiently perform this duty.
- D-9.3.8 Check availability of applicable personnel on organization chart and provide for a substitute when the position on a chart is not covered.
- D-9.3.9 After evacuation, perform a head count to ensure that all regular occupants known to have occupied the floor have been evacuated.
- D-9.3.10 When alarm is received, the Fire Warden shall remain at a selected position in the vicinity of the communication station on the floor, in order to maintain communication with the Fire Command Centre and to receive and give instructions.

D-9.4 Building Evacuation Supervisor's Duties

A Building Evacuation Supervisor is required at all times other than normal working or business hours when there are occupants in the building and there is no Fire Safety Director on duty in the building.

- D-9.4.1 He should be capable of directing the evacuation of the occupants as provided by the Fire Safety Plan.
- D-9.4.2 During fire emergencies, the primary responsibility of the Building Evacuation Supervisor shall be to man the Fire Command Centre, and the direction and execution of the evacuation as provided in the Fire Safety Plan. The Building Evacuation Supervisor's training and related activities shall be under the direction of the Fire Safety Director in accordance with these rules, and the Fire Safety Plan. Such activities shall be subject to fire department control.

D-9.5 Fire Party Duties

On receipt of an alarm for fire, the Fire Party shall,

- 1 report to the floor below the fire to assist in evacuation and provide information to the Fire Command Centre.
- 2 after evacuations of fire floor, endeavour to control spread of fire by closing doors, etc. attempt to control the fire until arrival of the fire department, if the fire is small and conditions do not pose a personal threat.
- 3 leave one member on the floor below the fire to direct the fire department to the fire location and to inform them of conditions.
- 4 on arrival of the fire department, the Fire Party shall report to the Fire Command Centre for additional instructions.
- 5 have a member designated as runner, who shall know the location of the nearest telephone, and be instructed in its use. Such member shall immediately upon receipt of information that there is a fire or evidence of fire, go to the telephone, transmit an alarm and await the arrival of the fire department and direct them to the location of the fire.¹³

¹³ Note — A chart designating employees and their assignments shall be prepared.

D-9.6 Occupant's Instructions

- 1 The applicable parts of the approved Fire Safety Plan shall be distributed to all tenants of the building by the building management when the Fire Safety Plan has been approved by the Fire Commissioner.
- 2 The applicable parts of the approved Fire Safety Plan shall then be distributed by the tenants to all their employees and by the building management to all their building employees.
- 3 All occupants of the building shall participate and cooperate in carrying out the provisions of the Fire Safety Plan.

D-9.7 Fire Prevention and Fire Protection Programme

- 1 A plan for periodic formal inspections of each floor area, including exit facilities, fire extinguishers and housekeeping shall be developed. A copy of such plan be submitted.
- 2 Provision shall be made for the monthly testing of communication and alarm systems.

D-9.8 Building Information Form

It shall include the following information:

- 1 Building address _____ Pin Code _____
- 2 Owner or person in-charge of building — Name, Address and Telephone Number.
- 3 Fire Safety Director and Deputy Fire Safety Director's Name and Telephone Number.
- 4 Certificate of occupancy. Location where posted, or duplicate attached.
- 5 Height, area, class of construction.
- 6 Number type and location of fire stairs and/ or firefighting shaft.
- 7 Number, type and location of horizontal exits or other areas of refuge.
- 8 Number, type, location and operation of lifts and escalators.
- 9 Interior fire alarms, or alarms to central stations.
- 10 Communications systems and/or walkie-talkie, telephones, etc.
- 11 Standpipe system; size and location of risers, gravity or pressure tank, fire pump, location of siamese connections, name of employee with certificate of qualification and number of certificate.
- 12 Sprinkler system; name of employee with Certificate of Fitness and certificate number. m Primary and secondary water supply, fire pump and areas protected.
- 13 Special extinguishing system, if any, components and operation.
- 14 Average number of persons normally employed in building (Daytime and night time).
- 15 Average number of persons with disabilities in building and their location (Daytime and night time).
- 16 Number of persons normally visiting the building (Daytime and night time).
- 17 Service equipment such as:
 - a) Electric power, primary, auxiliary;
 - b) Lighting, normal, emergency, type and location;
 - c) Heating, type, fuel, location of heating unit;
 - d) Ventilation — with fixed windows, emergency means of exhausting heat and smoke;
 - e) Air conditioning systems — Brief description of the system, including ducts and floors serviced;
 - f) Refuse storage and disposal;
 - g) Firefighting equipment and appliances, other than standpipe and sprinkler system;
 - h) and other pertinent building equipment.
- 18 Alterations and repair operations, if any, and the protective and preventive measures
- 19 Necessary to safeguard such operations with attention to torch operations.
- 20 Storage and use of flammable solids, liquids and/or gases.
- 21 Special occupancies in the building and the proper protection and maintenance thereof.
- 22 Places of public assembly, studios, and theatrical occupancies.

D-9.9 Representative Floor Plan

A floor plan, representative of the majority or the floor designs of the entire building, shall be at the Command Post, in the main lobby, under the authority of the Fire Safety Director. One copy of a representative floor plan shall be submitted to the Fire department with the Fire Safety Plan.

D-9.10 Fire Safety Plan

In planning, evaluate the individual floor layouts, the population of floors, the number and kinds of exits, the zoning of the floor by area and occupants. Determine the movement of traffic by the most expeditious route to an appropriate exit and alternative route for each zone, since under fire conditions one or more exits may not be usable. This format should be used in the preparation of the Fire Safety Plan. Nothing contained in this Fire Safety Plan format shall be construed as all inclusive. All rules and other requirements shall be fully complied with.

D-9.11 Personal Fire Instruction Card

All the occupants of the building shall be given a Personal Fire Instruction Card giving the details of the floor plan and exit routes along with the instruction to be followed in the event of fire. A typical Personal Fire Instruction Card shall be as follows:

PERSONAL FIRE INSTRUCTION CARD

SEAL

NAME OF THE ORGANIZATION

ADDRESS OF THE ORGANIZATION

NAME: _____

DESIGNATION: _____

FLOOR NO. : _____

DATE : _____

FIRE WARDEN

INSTRUCTIONS

FOR YOUR OWN SAFETY YOU SHOULD KNOW

- 1 Two push button fire alarm boxes are provided per floor. You should read the operating instructions.
- 2 You should read the operating instructions on the body of the fire extinguishers provided on your floor.
- 3 The nearest exit from your table.
- 4 Your assembly point on ground floor (check with your Fire/Deputy Fire Warden).
- 5 **FOR YOUR OWN PROTECTION YOU SHOULD REPORT TO YOUR FIRE/DEPUTY FIRE WARDEN**
 - a If any exit door/route is obstructed by loose materials, goods, boxes, etc.
 - b If any staircase door, lift lobby door does not close automatically, or does not close completely.
 - c If any push button fire alarm point, or fire extinguisher is obstructed, damaged or apparently out of order.

IF YOU DISCOVER A FIRE

- 1 Break the glass of the nearest push button fire alarm and push the button.
- 2 Attack the fire with extinguishers provided on your floor. Take guidance from your Wardens.
- 3 Evacuate, if your Warden asks you to do so.

IF YOU HEAR EVACUATION INSTRUCTIONS

- 1 Leave the floor immediately by the nearest staircase as directed.
- 2 Report to your Warden, at your predetermined assembly point outside the building.
- 3 Do not try to use lifts.
- 4 Do not go to cloakroom.
- 5 Do not run or shout.
- 6 Do not stop to collect personal belongings.
- 7 Keep the lift lobby and staircase doors shut.

ANNEXURE E

ADDITIONAL REQUIREMENTS FOR HIGH RISE BUILDINGS

E-1 General

High rise buildings (15 m and above in height) shall receive special attention with respect to fire and life safety particularly with regard to planning, design, execution, maintenance and training so that the intended provisions of this Code are well implemented. These get further accentuated as the buildings go taller; some of the key aspects are as follows:

- 1 Staging and evacuation requirements of occupants.
 - 2 Stack effect posing challenges towards pressurization and smoke exhaust.
 - 3 Zoning of firefighting system to meet functional requirements of hydraulic pressure and flow.
 - 4 Challenges experienced by fire personnel in reaching the place of fire and towards evacuation.
- Aspects to mitigate these challenges require innovative approach, interaction with local fire authorities and meaningful strategic planning towards maintenance and fire drills.

E-2 Egress and Evacuation Strategy

One firefighting shaft shall be planned for each residential building/tower, in an educational building/ block, and for each compartment of institutional, assembly, business and mercantile occupancy types. For other occupancy types, requirement of firefighting shaft shall be ascertained in consultation with the local fire authority. The firefighting shaft shall necessarily have connectivity directly to exit discharge or through exit passageway (having 120 min fire resistance walls) to exit discharge.

Staircase and fire lift lobby of a firefighting shaft shall be smoke controlled as per Rule 14.3.4 and Table No 14.6.

It is recommended that the pressurization requirement for staircase in firefighting shaft and for other fire exit staircases in buildings greater than 60 m in height be evaluated to limit the force required to operate the door assembly (in the direction of door opening) to not more than 133 N to set the door leaf in motion. The aspect of pressurization, door area/width and door closure shall be planned in consideration to the above.

E-3 Fire Safety Requirements for Lifts

The provisions as given in 7.1 to 7.2.4 under fire safety requirements of lifts in high rise buildings in Part VIII ‘Building Services, Section 5 Installation of Lifts, Escalators and Moving Walks, Subsection 5A Lifts’, National Building Code shall be applicable.

E-4 Horizontal Exit/Refuge Area

A horizontal exit shall be through a fire door of 120 min rating in a fire-resistant wall. Horizontal exit require separation with the refuge area or adjoining compartment through 120 min fire barrier. The adjoining compartment of the horizontal exit should allow unlocked and ease of egress and exits for the occupants using defend in place strategy.

Requirements of horizontal exits are as under:

- 1 Width of horizontal exit doorway shall be suitable to meet the occupant load factor for egress.
- 2 Doors in horizontal exits shall be openable at all times from both sides.
- 3 All doors shall swing in the direction of exit travel. For horizontal exits, if a double leaf door is used, the right hand door leaf shall swing in the direction of exit travel.
- 4 Refuge area shall be provided in buildings of height more than 24 m. Refuge area provided shall be planned to accommodate the occupants of two consecutive floors (this shall consider occupants of the floor where refuge is provided and occupants of floor above) by considering area of 0.3 m² per person for the calculated number of occupants and shall include additionally to accommodate one wheelchair space of an area of 0.9 m² for every 200 occupants, portion thereof, based on the occupant load served by the area of refuge or a minimum of 15 m², whichever is higher, shall be provided as under:

- a) The refuge area shall be provided on the periphery of the floor and open to air at least on one side protected with suitable railings.
- b) Refuge area(s) shall be provided at/or immediately above 24 m and thereafter at every 15 m or so.
- 5 The above refuge area requirement for H-2 occupancy requirement shall however be in accordance with life safety provisions for H-2 occupancy.
- 6 A prominent sign bearing the words 'REFUGE AREA' shall be installed at the entry of the refuge area, having height of letters of minimum 75 mm and also containing information about the location of refuge areas on the floors above and below this floor. The same signage shall also be conspicuously located within the refuge area.
- 7 Each refuge area shall be ventilated and provided with first aid box, fire extinguishers, public address speaker, fire man talk back, and adequate emergency lighting as well as drinking water facility.
- 8 Refuge areas shall be approachable from the space they serve by an accessible means of egress.
- 9 Refuge areas shall connect to firefighting shaft (comprising fireman's lift, lobby and staircase) without having the occupants requiring to return to the building spaces through which travel to the area of refuge occurred.
- 10 The refuge area shall always be kept clear. No storage of combustible products and materials, electrical and mechanical equipment, etc. shall be allowed in such areas.
- 11 Refuge area shall be provided with adequate drainage facility to maintain efficient storm water disposal.
- 12 Entire refuge area shall be provided with sprinklers.
- 13 Where there is a difference in level between connected areas for horizontal exits, ramps of slope not steeper than 1 in 12 shall be provided (and steps should be avoided). ¹⁴

High rise apartment buildings with apartments having balcony, need not be provided with refuge area; however, apartment buildings without balcony shall provide refuge area as given above. Refuge areas for apartment buildings of height above 60 m while having balconies shall be provided at 60 m and thereafter at every 30 m. The refuge area shall be an area equivalent to 0.3 m² per person for accommodating occupants of two consecutive floors, where occupant load shall be derived on basis of 12.5 m² of gross floor area and additionally 0.9 m² for accommodating wheel chair requirement or shall be 15 m², whichever is higher.

E-5 Electrical Services

The specific requirements for electrical installations in multi-storeyed buildings given in Part VIII 'Building Services, Section 2 Electrical and Allied Installations' of the Code and Section VII of National Electrical Code 2011 shall be followed.

Wherever transformers are planned at higher floors, the HT cables shall be routed through a separate shaft having its own fire resistance rating of 120 min. Wherever HT generators are planned centrally at ground or first basement level, redundant transformers and HT cables shall be planned for buildings above 60 m in height.

E-6 Fire Protection

For residential occupancies above 120 m in height and other occupancies above 60 m in height, the sprinklers shall be fed from the main and an alternate/standby riser with suitable isolation valves. The entire sprinkler system shall be designed in accordance with good practice (*Refer Annexure K (20)*).

Where the height of the building exceeds 150 m to 175 m, fire water static storage and pumps shall be required to be provided at 160 m to 180 m and thereafter at intermediate floors at higher levels enabling efficient and functional firefighting installations. The static fire water storage tanks located at such levels shall have capacity at minimum half of the storage of underground static water storage tank prescribed in Table No. 14.7. Such tanks shall be supplemented with water supplies through

¹⁴ Note — Refuge area provided in excess of the requirements shall be counted towards FAR.

one working and one standby pump of capacity 2850 litre/min with two risers at alternate locations feeding to such fire water static storage tanks. The fire pump's requirement and capacity shall also be derived for occupancy type as per Table No. 14.7 substituting the diesel pump with electrical pump. The fire pump room at such level shall have dedicated connectivity through passageway (with 120 min integrity) from the firefighting shaft. Such fire pump room shall have 120 min fire resisting wall and provided with adequate ventilation with talk-back connectivity to the main fire pump room and Fire Command Centre.

For high rise buildings, seismic bracings shall be considered for firefighting installations depending on seismic vulnerability of the region and the type of occupancy.

E-7 Fire and Life Safety Audit

- 1 Fire and life safety audit shall be carried out for all buildings having a height of more than 15 m.
- 2 Such audits shall preferably be conducted by a third party auditor having requisite experience in fire and life safety inspections.
- 3 Frequency of such audits shall be once in two years.

E-8 Helipad

For high rise buildings above 200 m in height, provision for helipad is recommended for specific requirements like landing of fire equipment, and support facilities or other emergencies.

ANNEXURE F

atrium

F-1 Atrium Requirements

- 1 In order for an atrium to be permitted in buildings, the following shall be complied:
 - a) Atrium shall be permitted in buildings of Type 1 and Type 2 construction only.
 - b) The use of combustible furnishings and decorations on the floor of the atrium shall be limited and sparsely distributed.
- 2 Smoke detectors shall be provided on the underside of each floor protruding into the atrium, at the atrium roof and adjacent to each return air intake from the atrium. Within atrium space, beam type or aspirating type smoke detectors shall be used to ensure detection of smoke, considering factors such as stratification of smoke.
- 3 Where the ceiling of the atrium is more than 17 m above the floor, water based protection (automatic sprinklers) at the ceiling of atrium is not required.
- 4 Hydrants shall be available at the floor of the atrium and also at the adjoining upper spaces/floors of the atrium. Sprinklers are required to be installed for coverage of glass areas of retail, tenant and other areas adjoining the exit access corridor and atrium. Sprinklers shall be at a distance of 450 mm to 600 mm enabling cooling of such glass and limiting the extent of fire and smoke to the atrium (*see Figure No. AF-1*). This provision does not allow similar sprinkler installation arrangement to offset fire compartmentation requirements, in which case fire barrier is required as per relevant provisions of this Part.
- 5 Atrium in business occupancy shall be planned with 6 air changes per hour (ACPH) while atrium in hotels and assembly occupancy shall be planned with 8 ACPH smoke extraction system. Such air changes shall be planned in atrium for a height of 15 m from the top.
- 6 Smoke exhaust fans shall be capable of operating effectively at 250°C for 120 min.
- 7 Makeup air supply points shall be located beneath the smoke layer and on the lower levels connected by the atrium.
- 8 Makeup air shall be provided by fans, openings to outside to allow infiltration, or the combination thereof.
- 9 It is recommended that makeup air be designed at 85 percent to 95 percent of the exhaust flow rate, not including the leakage through these small paths.
- 10 The makeup air shall not cause door-opening force to exceed allowable limits.
- 11 The makeup air velocity shall not exceed 1.02 m/s where the makeup air could come into contact with the plume unless a higher makeup air velocity is supported by engineering analysis.
- 12 Atrium smoke management system fans shall be provided with emergency power.
- 13 If so required by the Authority, an engineering analysis should be performed which demonstrates that the smoke system for the atrium is designed to keep the smoke layer interface 1800 mm above the highest occupied floor level of exit access, open to the atrium, for a period equal to 1.5 times the calculated egress time or 20 min, whichever is greater.

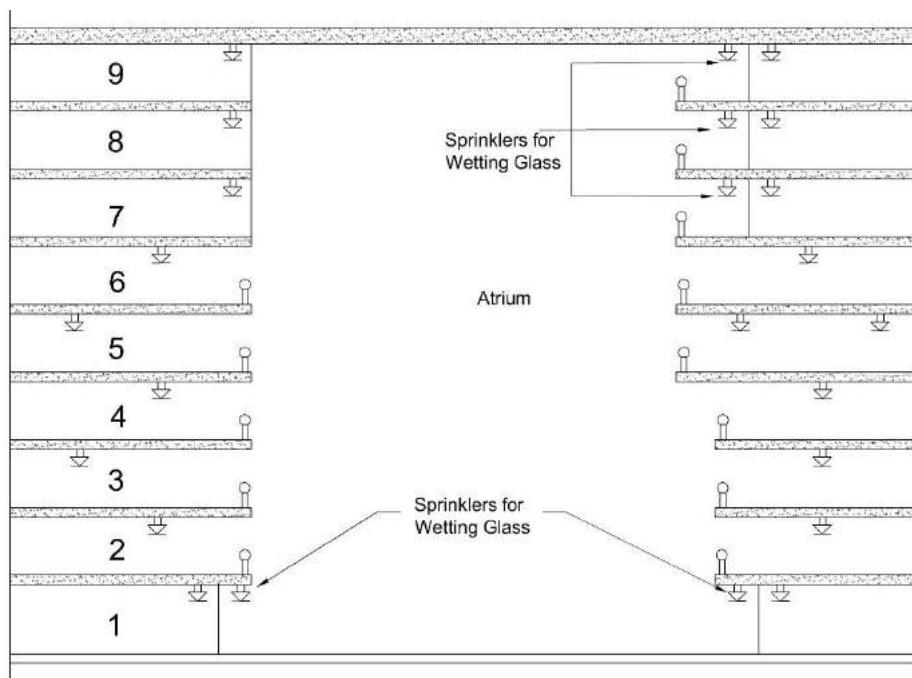


Figure No. AF-1: Sprinkler protection of glass for floor open to Atrium

ANNEXURE G

COMMERCIAL KITCHENS

G-0 General

The provisions given herein are applicable to those commercial kitchens serving in centrally air-conditioned buildings such as kitchens of starred hotels, food courts, malls, banquet halls and restaurants.

Electricity, gas and in some cases solid fuels such as wood or charcoal are the energy sources used to power a commercial kitchen.

The potential hazards posed by the commercial cooking facilities are as follows:

- 1 On cooking appliances using oil as fuel — The oil can self-ignite due to overheating of the cooking appliances or through open flames.
- 2 Full grease residues trapped in the hoods due to non-cleaning of filters and dusts periodically and exhaust ventilation system can ignite through overheated air flues or open flames.
- 3 Faulty electrical equipment and electrical installation are more likely to spark, and failure of thermostat and safety switches that may lead to overheat and consequent fire.
- 4 Flammable materials in the vicinity of open flames or heat sources

G-1 Terms Associated with Cooking Operations

- 1 *Types of restaurants/food preparation facilities* — Buffet restaurants, cafeterias, coffee shops, entertainment facilities (nightclubs, dinner theatres), and ethnic, fast food, speciality and traditional restaurants, corporate canteens, casinos, educational facilities, schools and universities, hospitals, care homes, mental homes and prisons.
- 2 *Ventilation/grease extraction equipment* — Exhaust hoods, grease removal devices, exhaust ductwork, exhaust fans, dampers and other ancillary components or systems that are involved in the capture, Containment, and control of grease-laden cooking effluent.
- 3 *Cooking appliances* — Ranges, deep fat fryers, microwave ovens, griddles, grills, pressurized fryers, potato chip fryers, woks, broilers, doughnut fryers, barbecue/smokers, ovens, Tandoors, steam kettles, appliances initializing grease and cooking oils, etc.

G-2 Fire Protection Systems

- 1 A kitchen fire suppression system needs to be installed whenever cooking appliances are using LPG/PNG/oil/electricity and/or dry fuel like wood or charcoal for cooking and/or can ignite the exhaust or fat for cooking and/or can ignite the ventilation system. Cooking equipment that produces grease-laden vapours and that might be a source of ignition of grease in the hood, grease removal device, or duct shall be protected by fire-suppression equipment.
- 2 The initial fire hazard is the cooking appliance itself. However, once the exhaust ventilation system is involved in fire due to propagation from the appliances, the exhaust system becomes the more severe hazard due to the potential of fire propagation outside the cooking space.
- 3 The requirement for kitchen fire suppression systems shall be directly linked to measurements that actually represent the risk. Some other contributory factors could be but not necessarily — connected load (kW), area occupied by kitchen equipment, volume of cooking oil and other flammables, inter distances between equipment, cooking media, etc.
- 4 Grease laden hoods can be ignited by heat penetrating the outside of the kitchen hood. Any penetration to the outside of a hood, shall be either welded or fitted with an approved sealing device so as not to allow cooking grease and oil to migrate to the outer portion of the hood.
- 5 If sprinkler protection is specified for a building, it needs careful consideration of the likely consequences if certain portion of the building is omitted from the scope of protection, for example, no water should get on the cooking appliances (especially the fryer). Removing

this protection from a high hazard area logically requires this area to be protected by a more suitable solution, dedicated to this special hazard.

G-3 FIRE SEPARATION REQUIREMENTS

- 1 Where a kitchen is required for the preparation of food and/or where ‘open flame’ cooking appliances are used and/or where fryers (with no open flames) are used, the kitchen shall be separated from other parts of the same building by compartment wall and floor having fire resistance of at least 60 min.
- 2 Food serving areas shall be fire separated from the kitchens/cooking areas by fire rated elements having a resistance of at least 60 min. Doors shall have fire resistance of 60 min rating and fitted with automatic self-closing device.
- 3 In open type kitchen cooking area, sitting area needs to be segregated by 60 min fire rated glass or drop fire curtains [*Refer G-3(4) and G-5.2(2)*].
- 4 Where the flue or exhaust duct passes through the compartment wall or floor, the flue or duct shall be encased by non-combustible construction and no damper shall be permitted to be installed in such flue or duct. Also such flue or ductwork shall be clear from combustible materials.
- 5 If the commercial kitchen/cooking is situated in a building that is not sprinkler protected, the floor area of the kitchen/cooking shall not exceed 50 m².
- 6 Commercial kitchen/cooking using LPG as fuel for the ‘open flame’ cooking activities shall not be allowed to be located at the basements. As regards LPG cylinder storage, attention is drawn to good practice (Annexure K(14)) and Part VIII ‘Building Services, Section II Electrical and Allied Installations’ of the Code for compliance requirements
- 7 It is advisable to locate the kitchen/cooking operations on the external periphery of the building so that in the event of mechanical ventilation failure, it can be naturally ventilated.

- ### **G-4**
- Life safety and egress requirements shall be governed by the requirements under life safety (*Refer Rule 14.3*). In case the requirements under this Annexure differs from those under Rule 14.3, this Annexure shall take precedence.

G-5 Fire Safety Requirements

G-5.1 General

- 1 The following equipment must always be kept in working condition:
 - a) Cooking equipment,
 - b) Hoods,
 - c) Exhaust ducts (if provided),
 - d) Fans,
 - e) Fire extinguishing systems,
 - f) Fire detection and alarm system, and
 - g) Gas leakage detectors (if gas is used as fuel).
- 2 An automatic fixed suppression system shall be installed to protect all cooking equipment producing grease laden vapours and that might be a source of ignition of grease in the hood, grease removal device.
- 3 Fire-suppression equipment shall be provided for the protection of grease removal devices, hood exhaust plenums, and exhaust duct systems.
- 4 All fire suppression systems and components installed shall be in accordance with relevant Indian and/or International Standards.

G-5.2 Protection of Cooking Equipment (General)

- 1 Cooking equipment shall be protected with the following:
 - a Automatic wet chemical fire suppression system for the protection of hoods (OR) other equivalent approved systems like water mist applications for kitchen fires.
 - b Automatic sprinkler system for noncooking areas (not in the vicinity of cooking areas or inside hoods).

- c Exhaust ducts shall be protected by automatic high temperature sprinklers designed as per good practice (*Refer Annexure K(20)*)
- 2 Due diligence shall be exercised before considering protection with sprinkler/water mist installation particularly for the protection of fryers. No sprinklers shall be provided within 3 m of cooking equipment and kitchen hoods. Area sensitive to sprinklers shall be protected with wet chemical suppression systems or other approved systems for the type of protection. Water mist systems, if approved for use for the type of application (that is, commercial cooking equipment) by fire tests, may also be considered.
- 3 Kitchen hoods independent suppression systems shall discharge wet chemicals to all areas of a kitchen range extract hood that is potentially coated in grease. The system shall also discharge over deep fat cooking pans or other potential fire source. The system shall be activated by heat detectors located above the appliances/within hoods and in the entrance to exhaust duct. Additional detectors behind equipment in the duct may be necessary. These may be of fusible link type. Extinguishing systems shall also incorporate manually actuating devices which shall be located in easily accessible locations in the means of egress.
- 4 The operational sequence shall be as follows:
 - a) On detection of fire in the hood and upon actuation of fire suppression system, any power or gas supplies serving the kitchen equipment must be cut-off and isolated automatically.
 - b) Pressure regulating stations shall be designed and installed at critical locations for excess flow shut off valves.
 - c) Seismic shut off valve at the main distribution point shall also be provided.
 - d) The exhaust fan shall not stop and continue operating, even after activation of the system. The supply fan shall switch off.
 - e) Gas leakage detectors shall be provided in all kitchens that link to a gas solenoid valve for emergency shut off. Suitable gas detection system (based on type of gas used LPG or PNG) integrated with fire detection and alarm system must be provided in addition to heat/multi-criteria detectors and sprinklers.
 - f) Manually operating devices shall immediately activate fire suppression system, which in turn shall shut off other systems like fuel supply/power supply, etc. Manual system shall operate mechanically and not rely on electrical power for activation, unless this is from an emergency power source as described in this Code.
 - g) In the event of the kitchen hood system being activated, an alarm should be sounded. The system must also be interfaced with the fire detection and alarm system.
- 5 Fire extinguishers in the vicinity of cooking area and the hoods shall be suitable for the type of fire.

G-5.3 Cooking Equipment Exhaust Ventilation

- 1 Hoods/ducts containing automatic fire suppression systems are protected areas; therefore, these hoods are not considered obstructions to overhead sprinkler systems and shall not require floor coverage underneath thereof.
- 2 Sprinkler installation shall comply with various provisions contained in accepted standard (*Refer Annexure K(28)*). The temperature rating of sprinklers shall be so selected that it is 30°C above the anticipated maximum temperature within cooking/kitchen areas. Sprinklers provided inside the exhaust ducts shall be of 141°C temperature.
- 3 Provision of cleaning of the kitchen exhaust every six months to ensure that the carbon soot accumulated in the exhaust duct is cleaned to avoid the chances of outbreak of fire shall be made.
- 4 Independent exhaust ducts shall be provided for equipment using dry fuel like wood/charcoal which produce spark and are likely to ignite the grease which might have accumulated in the common duct.
- 5 Alternatively, approved spark arrestors may be provided before the duct from equipment using dry fuel meets the main duct. These spark arrestors shall be so provided that these are easily accessible and removable for cleaning.

G-5.4 Cooking Equipment

- 1 Cooking equipment (such as deep fat fryers, rangers, griddles, and broilers) that may be a source of ignition shall be provided in accordance with the provision of G-5.2(1).
- 2 The operation of any sprinkler within the kitchen or cooking area shall automatically shut off all sources of fuel and heat to all equipment requiring protection. Any gas appliance not requiring protection but located under ventilating equipment shall also be shut off. All shutdown devices shall be of the type that requires manual resetting prior to fuel or power being restored.
- 3 An approved indicating valve (flow indicating switch) shall be installed in the water supply line feeding to the sprinklers protecting the cooking and extraction ventilating system.
- 4 A system test connection shall be provided to verify proper operation of equipment specified in item G-5.2(4)(d).
- 5 Sprinklers shall be inspected at least twice in a year and cleaned, if found coated with grease and other particles during their use and thus their thermal sensing elements desensitized.
- 6 Any penetrations to the outside of a hood, be either welded or fit with a sealing device (certified by national/international approval bodies) to not allow cooking grease, oil to migrate to the outer portion of the hood. The fitment arrangements shall be of approved type. Gaskets for the panels shall be certified to withstand a temperature of 815.6°C (1500°F).
- 7 Grease strip shall be readily available for efficient and regular cleaning of concrete or paved floors of kitchen and restaurant and also the drainage areas.
- 8 The hood or that portion of a primary collection means designed for collecting cooking vapours and residues shall be constructed of and be supported by steel not less than 1.09 mm (No. 18 MSG) in thickness or stainless steel not less than 0.94 mm (No. 20 MSG) in thickness or other approved material of equivalent strength and fire and corrosion resistance.
- 9 All seams, joint, and penetrations of the hood enclosure that direct and capture grease-laden vapours and exhaust gases shall have a liquid tight continuous external weld to the hood's lower outermost perimeter.
- 10 Grease filters shall be of steel rigid construction that will not distort or crush under normal operation handling and cleaning conditions. They shall be so arranged that all exhaust air passes through the grease filters. Filters shall be easily accessible and removable for periodic cleaning.
- 11 Grease filters shall be installed at an angle not less than 45° from the horizontal.
- 12 Grease filters shall be equipped with a grease drip tray beneath their lower edges and shall have a suitable minimum depth needed to collect grease. The grease drip trays shall be pitched to drain into an enclosed metal container having a capacity not exceeding 3.8 litre.
- 13 The exhaust ducts shall be constructed of and supported by carbon steel not less than 1.37 mm (No. 16 MSG) in thickness or stainless steel not less than 1.09 mm (No. 18 MSG) in thickness.

G-5.5 Rooftop Terminations — Exhaust Systems

- 1 The exhaust system shall terminate either outside the building with a fan or duct or through the roof or to the roof from outside with minimum 3 m of horizontal clearance from the outlet to the adjacent buildings, property lines and air intakes.
- 2 There shall be a minimum of 1.5 m of horizontal clearance from the outlet (fan housing) to any combustible structure.
- 3 There shall be a vertical separation of 1.0 m below any exhaust outlets for air intakes within 3.0 m of the exhaust outlet.

ANNEXURE H

CAR PARKING FACILITIES

H-1 The provisions given in H-2 to H-5 shall apply to parking structures of the closed or open type, within buildings above or below grade.

H-2 General

- 1 Where both parking and repair operations are conducted in the same building, the entire building shall comply with the requirements for Group G occupancies, unless the parking and repair sections are effectively separated by separation walls of 120 min.
- 2 Floor surfaces shall be non-combustible, sloping towards drains to remove accumulation of water.
- 3 Those parts of parking structures located within, immediately above or below, attached to, or less than 3 m away from a building used for any other purpose shall be separated by fire-resistant walls and floors having fire resistance rating of not less than 120 min. This shall exclude those incidental spaces which are occupied by cashier, attendant booth or those spaces used for toilets, with a total area not exceeding 200 m².
- 4 Vehicle ramps shall not be considered as exits unless pedestrian facilities are provided.
- 5 Other occupancies like fuel dispensing, shall not be allowed in the building. Car repair facilities, if provided, shall be separated by 120 min fire resistant construction.
- 6 In addition to fire protection requirements as per Table No. 14.7, appropriate fire detection and suppression systems shall be provided for the protection of hydraulic oil tank and pumps located below ground level for operation of car lifts.
- 7 Means of egress shall meet the requirements specified in Rule 14.3.

H-3 Open Parking Structures (*Including Multi-Level Parking and Stilt Parking*)

- 1 The term open parking structure specifies the degree to which the structure's exterior walls must have openings. Parking structures that meet the definition of the term open parking structure provide sufficient area in exterior walls to vent the products of combustion to a greater degree than an enclosed parking structure.
- 2 A parking structure having each parking level wall openings open to the atmosphere, for an area of not less than 0.4 m² for each linear metre of its exterior perimeter shall be construed as open parking structure. Such openings shall be distributed over 40 percent of the building perimeter or uniformly over two opposing sides. Interior wall lines shall be at least 20 percent open, with openings distributed to provide ventilation, else, the structure shall be deemed as enclosed parking structures.¹⁵
- 3 All stilt parking are required to be provided with sprinkler system where such buildings are required to be sprinklered.
- 4 Open parking structures are not required to be provided with compartmentation.
- 5 Open car parking (open to sky) within building complex having fire hydrant system shall also need to be protected with yard hydrant installation system in accordance with good practice (*Refer Annexure K(29)*).

¹⁵ Note — A car park located at the stilt level of a building (not open to sky) can be considered an open or an unenclosed car park if any part of the car park is within 30 m of a permanent natural ventilation opening and any one of the following is complied with towards the permanent natural ventilation requirement:

i) 50 percent of the car park perimeter shall be open to permanent natural ventilation.
ii) At least 75 percent of the car park perimeter is having the 50 percent natural ventilation opening.

H-4 Enclosed Parking Structures

- 1 Those car parking structures which are enclosed on all sides and on top, not falling within the definition of open car parking [see H-3(2)] and also those situated in the basements shall be known as enclosed car parking structures.
- 2 All sprinklers in car parking shall be standard response type with minimum K-Factor of 80, area coverage of 9 m² and designed as per good practice (*Refer Annexure K(20)*)
- 3 For basement car parking, compartmentation can be achieved, with fire barrier or with water curtain nozzle (K-23) or with combination thereof. Automatic deluge system comprising deluge valve, piping, nozzles, etc. shall be used to zone the compartment in case of water curtain system. In case of water curtain, existing water storage shall be supplemented by water demand for water curtain nozzles for 60 min considering the largest compartment's perimeter out of all compartments of car parking in any of the basements.
- 4 The water supply for the water curtain nozzles shall be through independent electric pump of adequate capacity (flow and head) with piping/riser for the water supply to the nozzles.
- 5 The water curtain shall be operated by the actuation of flow switch actuating sprinkler system.
- 6 For smoke ventilation requirement of car parking, Refer Rule 14.3.5.
- 7 All fire exit doors from the car parking to exits shall be painted green and shall display exit signage.

H-5 Automated Car Parking Utilizing Mechanical or Computerized / Robotics Means

- 1 Automated car parking structure can be of open parking type or enclosed types.
- 2 Automated car parking facilities pose more hazard compared to manual parking due to following reasons:
 - a) High density of cars due to close stacking one over another.
 - b) Lack of provision on fire separation/ compartmentation-horizontal or vertical leading to rapid fire spread.
 - c) Non-availability of any person to notice/ control the fire in initial stages.
 - d) Limited access to firefighting personnel.
 - e) Extensive height and depth involved with highly combustible load.
- 3 Fire escape staircases, at least 1250 mm wide shall be provided at appropriate locations so that no place is more than 45 m from the nearest staircase. Horizontal walkways, at least 1000 mm wide for access to all the areas shall be provided at every parking level.
- 4 Travel distance and means of egress shall be governed by the respective sections of this Code.
- 5 The hazardous areas like DG sets, transformers, HT/LT panels for the parking lot shall be suitably segregated from other areas as per requirements given in this Code and all such areas shall be protected by suitable automatic fire suppressions systems.

ANNEXURE J

FIRE PROTECTION CONSIDERATIONS FOR VENTING IN INDUSTRIAL BUILDINGS

J-1 Application

- J-1.1 The provisions given below are applicable only to single storey industrial buildings (factories and storage buildings) covering large floor areas without sub-dividing/separating walls which are usually designed to meet modern production methods.
- J-1.2 The requirements of fire and explosion venting of industrial buildings, as dealt with in this section, fall under two categories:
- a) Smoke and fire venting, and
 - b) Explosion relief vents.

J-2 Smoke and Fire Venting

- J-2.1 The basic considerations for formulating the design and other requirements for smoke and fire vents are as given in J-2.1.1 to J-2.1.20.
- J-2.1.1 The smoke and hot combustion products from a fire, being lighter than the surrounding air, tend to rise, and on reaching the roof or ceiling spread out (mushroom) on all sides and form a layer which floats on top of the cold air beneath. In the absence of vents, this layer becomes progressively deeper until the whole building is filled with hot smoky gases. The time consumed for this to happen may be only a few minutes, depending on variables like, type of materials on fire, process/storage conditions involved, etc.
- J-2.1.2 The hot gases at the roof level moved by convection currents contribute to rapid lateral spread of fire.
- J-2.1.3 The provision of properly designed and suitably located vents in adequate number helps the speedy removal of smoke and hot gases, thereby preventing spread of fire, besides reducing risks of explosion of unburnt gases and reducing damage to the contents and structure of the building by heat and smoke. In addition, they facilitate firefighting operations, and minimise personal hazards to the firemen.
- J-2.1.4 The time taken for accumulation of smoke and hot gases within a building on fire being very short, the venting devices installed shall be designed to operate in the early stage of the fire and must be automatic so as to ensure speed and efficiency in their operation.
- J-2.1.5 The smoke and fire venting system shall be designed in such a manner as to keep the temperature of the combustion products from the fire as low as possible, preferably below approximately 150°C.
- J-2.1.6 Automatic venting systems are complementary to the fire extinguishing systems, and automatic sprinklers, where provided, should operate before the operation of the vents; otherwise, venting may delay sprinkler operation.
- J-2.1.7 It is easier to vent a building of smoke than clear it of smoke once it has been filled.
- J-2.1.8 Venting is particularly desirable in large area industrial buildings or warehouses, windowless buildings, underground structures or in areas housing hazardous operations. Automatic fire vents shall be provided for all industrial occupancies (including storage buildings) classified as medium hazard or above having floor areas exceeding 750 m², irrespective of whether they are compartmentalized or not.
- J-2.1.9 These provisions do not cover other aspects, of ventilation (or lighting) designed for regulation of temperature within a building for personal comfort or meeting process needs.
- J-2.1.10 Similarly, fire and smoke venting requirements as given here under are also not applicable to multi-storeyed buildings, as their requirements are different and more complex.
- J-2.1.11 It is difficult to determine precise venting requirements on account of the many variables involved. For instance, the rate of combustion varies appreciably according to the nature, shape, size and packaging of the combustible materials as well as the size, height and disposition of the stacks of materials.

- J-2.1.12 In industrial buildings of floor area less than 750 m² and used as low fire hazard occupancies, conventional ventilators fitted high up near the eaves of the external walls may serve as vents for smoke and hot gases, provided care is taken to ensure that they are kept open at all times or are designed to open automatically in case of fire.
- J-2.1.13 Extinction of fires by closing the doors and windows is not likely in the case of industrial buildings because of their large size, where sufficient air to sustain the fire at least in the initial stages can be expected to be present.
- J-2.1.14 Of the two types of building ventilation, namely, vertical and horizontal, vertical ventilation is the one commonly adopted in the case of single storey industrial buildings.
- J-2.1.15 Since 70 to 80 percent of heat produced in a fire is convective heat, the ventilation system has to be suitably designed to ensure early outflow of the heat and thereby minimise fire spread.
- J-2.1.16 Combustible roof linings shall be avoided, as they themselves will contribute to the spread of fire, thereby multiplying the venting problems.
- J-2.1.17 A wind blowing across a flat roof or a roof with a pitch under 40° produces a negative pressure, that is, it tends to draw gases out of the building and so aids venting of hot gases. Wind blowing across a roof of pitch greater than 40° will draw gases out on the leeward side but oppose outward flow on the windward side of the roof.
- J-2.1.18 For vents to work at full efficiency, the area of the inlets for cold air entering the compartment must equal at least the total area of the vents. Ideally, the inlets shall be as close to the ground as possible.
- J-2.1.19 Where roof vents are installed in a single storey building any neighbouring buildings, particularly those of more than one storey, will be subject to some degree of exposure hazard either from flying birds or radiation, or both, as a result.
- J-2.1.20 If vents are to be installed, the size, design, number and disposition of the vents and the associated roof screens/curtain boards have to be assessed after careful analysis of the various factors stated under J-2.1.11, as well as other related factors like type of building construction, nature and height of roof, process hazards, exposure hazard, etc.

J-2.2 Venting Area

- J-2.2.1 The estimated requirements for ventilation are largely based on the assumed build-up of the fire from the time of initial outbreak to the time of effective firefighting action by fire brigade.
- J-2.2.2 The vent area required to be provided shall be approximately proportional to the perimeter of the fire area, because the entrained air forms the bulk of the vented gases.
- J-2.2.3 The effective area shall be the minimum cross-sectional area through which the hot gases must flow out to the atmosphere.
- J-2.2.4 No consideration shall be given to the increased air movement obtained by power operated fans, since it must be assumed that in the event of fire, power will be interrupted, or fans damaged by heat.
- J-2.2.5 The total vent areas to be provided shall be as per the following ratios of effective area of vent openings to floor area for various occupancy classifications indicated:
- Low heat release content - 1: 150 (Sub-division G-1)
 - Moderate heat release - 1: 100 contents (Sub-division G-2)
 - High heat release - 1: 30 to 1: 50 contents (Sub-division G-3)

J-2.3 Types of Vents

- J-2.3.1 Venting shall be accomplished by any of the types such as monitors continuous gravity vents, until type vents or saw tooth roof skylights.
- J-2.3.2 Where monitor type vents are installed, wire glass or metal panels shall be used only if the sash is arranged to open automatically.
- J-2.3.3 The use of plain thin glass for venting shall be avoided on account of its unpredictable behaviour during fire. However, if glass or other suitable plastic sheet materials with early disintegration characteristics are used, they should be designed for automatic operation.

- J-2.3.4 Where monitors or unit type vents are used, the panels shall be hinged at the bottom and designed to open automatically. Both sides of the vents shall be designed to vent simultaneously to ensure that their effectiveness at the time of fire is not in any way impeded by wind direction.
- J-2.3.5 Where movable shutters are provided for continuous gravity vents, these shall open automatically in the event of fire.
- J-2.3.6 Unit type vents shall be of relatively small area, ranging between 1 m² and 9 m², having light weight metal frames and housing with hinged dampers which shall be designed for both manual and automatic operation.
- J-2.3.7 Sawtooth roof skylight shall be considered as satisfactory for venting purposes only when designed for automatic operation.
- J-2.3.8 Likewise, exterior wall windows shall not be reckoned as satisfactory means for venting of fire gases and smoke in industrial buildings. However, they may be reckoned as additional means of venting when, they are located close to the caves and are provided with ordinary glass or movable sash arranged for both manual and automatic operation.
- J-2.3.9 Baffles shall not be installed inside vents, as they greatly reduce the effective area for venting.

J-2.4 Vent Operation

- J-2.4.1 The vents shall be automatic in operation, unless where specified in these provisions that they shall be designed for both manual and automatic operation.
- J-2.4.2 The release mechanism shall be simple for operation and independent of electrical power, since electrical services may be interrupted by fire.
- J-2.4.3 The automatic operation of vents shall be achieved by actuation of fusible links or other types of heat and smoke detectors, or by interlocking with operation of sprinkler system or any other automatic fire extinguishing system covering the area. Following their release, the vents shall be designed to open by a system of counterweights and associated equipment utilizing the force of gravity or spring loaded levers.
- J-2.4.4 Automatic fire alarm system, where installed, shall be coupled to the automatic vents to ensure simultaneous operation.
- J-2.4.5 Automatic sprinklers, where installed, shall operate before the vents open order to avoid any likely delay in sprinkler operation. However, heat actuated devices used for vent release shall be suitably shielded from sprinkler discharge so that water does not delay their action. Further, provision of operating the vents manually may also be provided.
- J-2.4.6 Premises where height of roof apex is 10 m or more or where the materials handled or stored have high smoke producing characteristics, in addition to fusible links, the vent release mechanism shall be interlinked to smoke actuated automatic fire detectors to ensure early operation of vents.
- J-2.4.7 Non-corrosive materials shall be used for hinges, hatches and other related parts to ensure long fail-safe operation of the vents.
- J-2.4.8 In case of any doubts regarding the types of vents required to be installed for any particular occupancy, authorities having jurisdiction shall be consulted.

J-2.5 Size, Spacing and Disposition of Vents

- J-2.5.1 Vents shall be correctly sited to ensure their functional efficiency. Ideally, they shall be sited at the highest point in each area to be covered.
- J-2.5.2 They shall, as far as possible, be located immediately above the risk to be protected so as to allow free and speedy removal of smoke and other combustion products in the event of fire.
- J-2.5.3 The minimum dimension for an effective vent opening shall be not less than 1.25 m in any direction.
- J-2.5.4 The spacing of the individual vent shall be based on the principle that more number of well distributed smaller vents are more effective than fewer number of badly located larger vents.

- J-2.5.5 The maximum spacing between vents for the three occupancy classifications shall be as follows:
- Low heat release: 45 m between centres content
 - Moderate heat: 36 to 37 m between release content centres
 - High heat release: 22.5 to 30 m between content centres, depending on the severity of fire potential.
- J-2.5.6 Vents shall be placed in a sheltered situation where advantage can be taken of the prevailing wind. The design of the vent shall be such as to produce a suction effect. A wind blowing across a flat roof or one with a pitch of 40° produces a negative pressure, that is, it tends to draw gases out of the building and so aids venting of hot gases. Wind blowing across a roof of pitch greater than 40° will draw gases out of the leeward side, but oppose outward flow on the windward side of the roof.
- J-2.5.7 Low level inlets, with total area not less than the total area of vents, shall be provided to permit outside air to be drawn in to aid automatic venting. These inlets, which may be in the form of doors, windows or such other openings, shall be designed for manual operation when desired.

J-2.6 Roof Screens or Curtain Boards

- J-2.6.1 Industrial buildings with large areas and having no subdivision/separating walls limiting the area of individual compartments to 750 m² or less, shall be provided with roof screens or curtain boards.
- These screens which extend from the roof downwards at specific intervals not only prevent lateral spread of heat and smoke in the event of fire below, but substantially assist in early operation of automatic sprinklers and vents.
- J-2.6.2 They shall be of sheet metal or any other substantially non-combustible material strong enough to withstand damage by heat or impact.
- J-2.6.3 They shall be reasonably gas-tight, although small openings for passage of pipes, conduits, etc., shall be permitted.
- J-2.6.4 They shall extend down from the roof/ceiling for a minimum depth of 2.2 m. Around specific hazards, the depth shall be 4 m. Where roof/ceiling height exceeds 15 m they shall extend down to within 3 m of the floor. For pitched saw-toothed roofs, they shall extend down to truss level dividing the roof into compartments.
- J-2.6.5 In moderate hazard occupancies, the distance between the screens/curtain boards shall not exceed 75 m and the curtained areas shall be limited to a maximum of 4500 m².
- J-2.6.6 In high hazard occupancies, the distance between screens shall not exceed 30 m and the curtained area shall be limited to 750 m².
- J-2.6.7 The curtained roof area shall be so arranged that they effectively aid in the venting of smoke and hot gases through the automatic vents provided in each area.
- J-2.6.8 In sprinklered buildings, the screens shall preferably be so located as to coincide with the individual sprinkler system areas.

J-3 Explosion Relief Vents

- J-3.1 Industrial premises where combustible dusts can accumulate or where flammable gases, vapours or mists in explosive concentrations may be present are constantly exposed to explosion hazards. Pressures developed by such explosions may be of the order of 7×10^5 Pa and ordinary buildings will not be able to withstand the shock of such pressures. Hence, such buildings require explosion relief vents for preventing structural damage.

J-3.2 Basic Principle/Considerations

- J-3.2.1 Most ordinary building walls will not withstand a sustained internal pressure as great as 6.9×10^3 Pa. Hence, explosion relief vents for buildings must be designed to operate at pressures well below those at which the building walls will fail.
- J-3.2.2 There is a rise in pressure during an explosion within an enclosure even with open, unobstructed vents, and any delay in opening the venting devices increases that pressure.

- J-3.2.3 Structural damage can be minimised by locating hazardous operations or equipment outside buildings and cut-off from other operations by a pressure resisting wall. Such isolated processes or equipment shall be housed in single-storey buildings properly vented and a device provided at the inlet of the collector which will prevent an explosion from blowing back through the duct work and into the building.
- J-3.2.4 Where highly hazardous operations cannot be located outside of main buildings, they shall be segregated by pressure resisting walls and each such unit shall be ventilated outdoors. External walls may be of heavy construction, if equipped with suitable vents or high weight panels which blow out easily.
- J-3.2.5 Operations or equipment involving explosion hazards shall not be permitted in basements or areas partially below grade.
- J-3.2.6 Fire can be expected to follow an explosion in most occupancies, so that any fixed fire extinguishing equipment, like sprinklers, if installed, shall be such that only the minimum damage is caused to it.
- J-3.2.7 For a given material, the finer the particle size of the dust, the more violent is the explosion. Some materials, such as aluminium powder, hydrogen, and acetylene, are difficult to vent effectively due to the rapid rate of pressure rise. Some slow burning materials, such as coal dust in a confined space, may do much damage because of the longer duration of their presence. Some dusts, such as magnesium, titanium and zirconium and several metal hydrides may react with and ignite in some common inert gases, such as nitrogen and carbon dioxide.
- J-3.2.8 The maximum explosion pressure in a vented structure decreases as the size of the vent increases but is independent of the rupturing pressure of a diaphragm.
- J-3.2.9 The most effective vent for the release of explosion pressures is an unobstructed vent opening.
- J-3.2.10 Pressure required to rupture diaphragms of the same area and material directly varies with the thickness of the material.
- J-3.2.11 The slower the rate of pressure rise, the more easily can the explosion be vented.
- J-3.2.12 The degree of venting required is directly proportional to the degree of explosion hazard.
- J-3.2.13 Experience has shown that most explosions of dusts, vapours and gases do not involve a large part of the total volume of the enclosure, and frequently occur near the upper or lower limits of the explosive range. Consequently, such explosions are relatively weak compared with the optimum.
- J-3.2.14 Rectangular unrestricted vents areas effective as square vents of equal area.

J-3.3 Types of Explosion Relief Vents

- J-3.3.1 The explosion relief vents shall be any one or more of the following types, depending on individual requirements as assessed by the Authority. Open or unobstructed vents, louvres, open roof vents, hanger type doors, building doors, windows, roof or wall panels or movable fixed sash.
- J-3.3.2 The effect of external wind pressure or suction on these devices shall be taken into consideration while designing and selecting the type of vents, since wind pressures may reach over 2×105 Pa in severe wind storms.
- J-3.3.3 The type of vent for explosion relief for any occupancy shall be selected with life safety as the primary aim followed by minimum damage to property.
- J-3.3.4 Where large hanger type doors of metal curtain doors inside walls are used as vents, care shall be taken to ensure that they are kept wide open during operations.
- J-3.3.5 Where weather hoods are used to cover roof vents, they shall be as light as possible and lightly attached so as to enable them to be blown off quickly when an explosion occurs.
- J-3.3.6 Doors and windows when used as explosion vents shall be installed to swing outwards. Doors shall have friction, spring or magnetic latches that will function automatically to permit the door to open under slight internal pressure.
- J-3.3.7 Movable sash shall be of the top or bottom hinged or protected type. These shall be equipped with a latch or friction device to prevent accidental opening due to wind action or intrusion. Such latches or locks shall be well maintained.

- J-3.3.8 Fixed sash shall be set in place with very light wall anchorages, or, if tight, shall be securely fitted and glazed with plastic panes in plastic putty.
- J-3.3.9 Where the process is such that the whole of a building or a room may be desirable to arrange for a lightly constructed wall or roof to collapse and thus avert the worst effects of an explosion.

J-3.4 Design, Size and Disposition of Vents

- J-3.4.1 The required area of explosion vents shall ordinarily depend on the expected maximum intensity of an explosion in the occupancy, the strength of the structure, the type of vent closure and other factors.
- J-3.4.2 Venting shall be planned in such a manner as to prevent injury to personnel and damage to exposure. In congested locations, substantial ducts or diverters shall be provided to direct the blast.
- J-3.4.3 When ductwork is used, the ducts shall be of sufficient strength to withstand the maximum expected explosion pressure.
- J-3.4.4 Where explosions are likely within duct and piping systems, they shall be vented by the use of suitable diaphragms designed to blow out at a predetermined pressure. There shall be no physical connection between ductwork system for more than one collector.
- J-3.4.5 In large structures, the position of vents shall be relative to the point of origin of explosion, when it can be determined.
- J-3.4.6 Where relatively slow explosions involving coal dust, chlorinated solvents, etc, are involved, light, hinged swinging panels may be preferred to diaphragm type of vents.
- J-3.4.7 Obstructions of any kind blocking the vents from the risk covered shall be avoided, particularly where risks of rapid violent explosions are present.
- J-3.4.8 Counterweights add to the inertia of the vents and so shall be avoided.
- J-3.4.9 Various relieving devices, including devices actuated by detonators, shall start to open at as low a pressure as possible. They shall be of light construction, so that full opening can be quickly attained.
- J-3.4.10 Vents shall be of such size and design as to prevent rupture of the protected device or apparatus.
- J-3.4.11 Skylights or monitors with movable sash that will open outwards, or fixed sash containing panes of glass or plastic that will blow out readily under pressure from within, can be used to supplement wall vents or windows, provided resistance to their displacement or opening is kept as low as consistent with the requirements for structural strength.
- J-3.4.12 Flexible plastic sheets when used for vent closures shall be installed in slotted frames in such a way that pressure from within bulges the sheets and releases them from the holding frame.
- J-3.4.13 Fragile sheets made of plastic, when used for vent closures, shall be thin sheets that will crack or rupture under less pressure than single strength glass. For this reason use of transparent or translucent plastic sheets is more advantageous than use of glass in window sash.
- J-3.4.14 If closed vents are used they shall be larger in area than unenclosed vents to provide equivalent explosion pressure relief.
- J-3.4.15 Small enclosures, such as machines, shall be vented more generously than buildings, because if an explosion occurs in a machine, its entire volume may be involved.
- J-3.4.16 Vents for the protection of buildings and equipment shall be installed on the following basis:
- 1 Small enclosures of less than 30 m^3 , machines and ovens of light construction: 1000 cm^2 for each 0.3 m^3 to 0.9 m^3 .
 - 2 For small enclosures of more substantial construction having reasonably high bursting strength: 1000 cm^2 for each 0.9 m^3 .
 - 3 Fairly large enclosures of 30 to 700 m^3 , such as bins, silos, rooms, storage tanks, etc: 1000 cm^2 for each 0.9 m^3 to 1.5 m^3 . In these cases, attempt shall be made to the extent possible to predict the likely point of origin of the explosion in relation to the vent.

- 4 Large rooms and buildings over 700 m³ containing hazardous equipment comprising a small fraction of the entire volume:
 - a) For heavy reinforced concrete, walls: 100 cm² for each 2.25 m³.
 - b) For light reinforced concrete, brick or wood construction: 1000 cm² for each 1.65 m³ to 2.25 m³.
 - c) For lightweight construction such as prefabricated panels: 1000 cm² for each 1.5 m³ to 1.65 m³.
- 5 Large rooms or building over 700 m³ containing hazardous equipment comprising a large part of the entire volume of a room or building shall be vented as generously as possible: 1000 cm² for each 0.3 m³ to 1.05 m³.
- 6 In order to obtain these ratios, the size of the building or room must be limited. For some hazardous materials, such as hydrogen, acetylene, carbon disulphide, etc., these limits are extremely low.
- 7 Emphasis shall always be placed on segregating hazardous areas by means of firewalls or separating walls to prevent spread of fire.
- 8 Interior walls of light construction, such as tile, shall be avoided in hazardous locations, since they can cause injuries to personnel in the event of an explosion.

Annexure K

LIST OF STANDARDS

The following list records those standards which are acceptable as good practice and accepted standards in the fulfilment of the requirements of the Rule. The latest version of a standard shall be adopted at the time of enforcement of the Rule. The standards listed may be used by the Authority for conformance with the requirements of the referred clauses in the Rule. In the following list, the number appearing in the first column within parentheses indicates the number of the reference in this Part.

Table No. AK-1 –: List of IS Codes and Titles

No.	IS No.	Title
1	3808: 1979	Method of test for non-combustibility of building materials (first revision)
2	IS/ISO 834-1 1999	Fire resistance tests - Elements of building construction Part 1 General Requirements
	IS/ISO 834-4 2000	Fire resistance tests - Elements of building construction: Part 4 Specific requirements for load bearing vertical separating elements
	IS/ISO 834-5 2000	Fire resistance tests - Elements of building construction: Part 5 Specific requirements for load bearing horizontal separating elements
	IS/ISO 834-6 2000	Fire resistance tests - Elements of building constructions: Part 6 Specific requirements for beams
	IS/ISO 834-7 2000	Fire resistance tests - Elements of building construction: Part 7 Specific requirements for columns
	IS/ISO 834-8 2003	Fire resistance tests - Elements of building construction: Part 8 Specific requirements for non-load bearing vertical separating elements
	IS/ISO 834-9 2003	Fire resistance tests – Elements of building construction: Part 9 Specific requirements for non-load bearing ceiling elements
3	8757:1999	Glossary of terms associated with fire safety (first revision)
	7673:2004	Glossary of terms for fire fighting equipment (first revision)
4	8758 : 2013	Code of practice for fire precautionary measures in construction of structures and pandals (second revision)
5	9668 : 1990	Code of practice for provision and maintenance of water supplies and fire fighting
	3844 : 1989	Code of practice for installation and maintenance of internal fire hydrants and hose reels on premises (first revision)
6	1646 : 2015	Code of practice for fire safety of buildings (general) : Electrical installations (third revision)
7	9457 : 2005	Code of practice for safety colours and safety signs (first revision)
	12349 : 1988	Fire protection - Safety sign
	12407 : 1988	Graphic symbols for fire protection plans
8	11360 : 1985	Specification for smoke detectors for use in automatic electrical fire alarm system
9	655 : 2006	Specification for air ducts
10	1649 : 1962	Code of practice for design and construction of flues and chimneys for domestic heating appliances (first revision)
	1642 : 2013	Code of practice for safety of buildings (general): Details of construction (second revision)
11	12777 : 1989	Method for classification of flame spread of products
12	1642 : 2013	Code of practice for safety of buildings (general): Details of Construction (second revision)
13	16246 : 2015	Elastomer insulated cables with limited circuit Integrity when affected by fire-Specification
14	6044 (Part 1): 2013	Liquefied petroleum gas storage installations - Code of Practice : Part 1 Residential commercial and industrial cylinder installations
	6044 (Part 2): 2001	Code of Practice for liquefied petroleum gas storage Installations: Part 2 Commercial, industrial and domestic bulk storage installations

No.	IS No.	Title
15	2175 : 1988	Specification for heat sensitive fire detectors for use in automatic fire alarm system (second revision)
	IS/ISO 7240-5 : 2003	Fire detection and alarm systems: Part 5 Point-type heat detectors
	IS/ISO 7240-7 : 2011	Fire detection and alarm systems: Part 7 Point-type smoke detectors using scattered light, transmitted light or ionization.
	IS/ISO7240-11 : 2011	Fire detection and alarm systems: Part 11 Manual call points
	IS/ISO 7240-15 : 2004	Fire detection and alarm systems: Part 15 Point-type fire detectors
	11360 : 1985	Specification for smoke detectors for use in automatic electrical fire alarm system
16	2189 :2008	Code of practice for selection, installation, and maintenance of automatic fire detection and alarm system (second revision)
17	636 : 1988	Specification for non-percolating flexible firefighting delivery hose (third revision)
	884 : 1985	Specification for first-aid hose reel for fire fighting(first revision)
	901 : 1988	Specification for couplings, double male and double female instantaneous pattern for fire fighting (third revision)
	902 : 1992	Specification for suction hose couplings for fire fighting purposes (third revision)
	903 : 1993	Specification for fire hose delivery couplings, branch pipe, nozzles and nozzle spanner (fourth revision)
	904 : 1983	Specification for two-way and three-way suction collecting heads for fire fighting purposes (second revision)
	905 : 1980	Specification for delivery breechings, dividing and collecting, instantaneous pattern for fire fighting purposes (second revision)
	906 : 1988	Specification for revolving branch pipe for fire fighting (third revision)
	907 : 1984	Specification for suction strainers, cylindrical type for fire fighting purpose (second revision)
	908 : 1975	Specification for fire hydrant, stand post type (second revision)
	909 : 1992	Specification for underground fire hydrant : Sluice valve type (third revision)
	910 : 1980	Specification for combined key for hydrant, hydrant cover and lower valve (second revision)
	926 : 1985	Specification for fireman's axe (second revision)
	927 : 1981	Specification for fire hooks (second revision)
	928 : 1984	Specification for fire bells (second revision)
	937 : 1981	Specification for washers for water fittings for fire fighting purposes (second revision)
	939 : 1977	Specification for snatch block for use with fibre rope for fire brigade use (first revision)
	941: 1985	Specification for blowers and exhauster for fire fighting (second revision)
	942 : 1982	Functional requirements for 275 l/min portable pump set for fire fighting (second revision)
	943 : 1979	Functional requirement for 680 l/min trailer pump for fire brigade use (second revision)
	944 : 1979	Functional requirement for 1800 l/min trailer pump for fire brigade use (second revision)
	947 : 1985	Functional requirement for towing tender for trailer fire pump for fire brigade use (first revision)
	948 : 1983	Functional requirement for water tender, Type A, for fire brigade use (second revision)
	949 : 2012	Functional requirement for emergency (rescue) tender (third revision)
	950 : 2012	Functional requirements for water tender, Type B for fire brigade use (third revision)
	952 : 1986	Specification for fog nozzle for fire brigade use (second revision)
	955 : 1980	Functional requirements for dry power tender for fire-brigade use (150 kg capacity) (first revision)
	957 : 1967	Specification for control van for fire brigade

No.	IS No.	Title
	1941 (Part 1) : 1976	Functional requirements for electric motor sirens : Part 1 AC, 3-Phase, 50 Hz, 415 volts type (second revision)
	2097 : 2012	Specification for foam making branch pipe and foam inductor (second revision)
	2175 : 1988	Specification for heat sensitive fire detectors for use in automatic detectors for use in automatic fire alarm system (second revision)
	2546 : 1974	Specification for galvanized mild steel fire bucket (first revision)
	2696 : 1974	Functional requirements for 1125 l/min light fire engine (first revision)
	2745 : 1983	Specification for non-metal helmet for firemen and civil defence personnel (second revision)
	2871 : 2012	Specification for branch pipe, universal for fire fighting purposes (second revision)
	2878 : 2004	Specification for fire extinguisher, carbon-dioxide type (portable and trolley mounted) (third revision)
	2930 : 1980	Functional requirements for hose laying tender for fire brigade use (first revision)
	3582 : 1984	Specification for basket strainers for fire fighting purposes (cylindrical type) (first revision)
	4308 : 2003	Specification for dry chemical powder for fire fighting B and C class fires (second revision)
	4571 : 1977	Specification for aluminium extension ladders for fire brigade use (first revision)
	4643 : 1984	Specification for suction wrenches for fire brigade use (first revision)
	4861 : 1984	Specification for dry powder for fighting fires in burning metals (first revision)
	4927 : 1992	Specification for unlined flax canvas hose for fire fighting (first revision)
	4928 : 1986	Specification for delivery valve for centrifugal pump outlets (first revision)
	4947 : 2006	Specification for gas cartridges for use in fire extinguishers (third revision)
	4989 : 2006	Foam concentrate for producing mechanical foam for fire fighting - Specification (third revision)
	4989 (Part 4) : 2003	Specification for multipurpose aqueous film forming foam liquid concentrate for extinguishing hydrocarbon and polar solvent fires
	5131 : 2002	Specification for dividing breeching with control, for fire brigade use (second revision)
	5290 : 1993	Specification for landing valve (third revision)
	5486 : 1985	Specification for quick release knife (first revision)
	5505 : 1985	Specification for multi-edged rescue axe (non-wedging) (first revision)
	5612 (Part 1) :1977	Specification for hose-clamps and hose-bandages for fire brigade use Hose clamps (first revision)
	(Part 2) :1977	Hose bandages (first revision)
	5714 : 1981	Specification for hydrant, standpipe for fire fighting (first revision)
	6026 : 1985	Specification for hand operated sirens (first revision)
	6067 : 1983	Functional requirements for water tender, Type 'X' for fire brigade use (first revision)
	IS/ISO 7240-5 : 2003	Fire detection and alarm systems - Part 5: Point-type heat detectors
	IS/ISO 7240-7 : 2011	Fire detection and alarm systems - Part 7: Point-type smoke detectors using scattered light, transmitted light or ionization
	IS/ISO 7240-11 : 2011	Fire detection and alarm systems Part 11 Manual call points
	8090 : 1992	Specification for couplings, branch pipe, nozzle, used in hose reel tubing for fire fighting (first revision)
	8096 : 1992	Specification for fire beaters (first revision)
	8149 : 1994	Functional requirements for twin CO2 fire extinguishers (trolley mounted) (first revision)
	8423 : 1994	Specification for controlled percolating hose for fire fighting (first revision)
	8442 : 2008	Specification for stand post type water and foam monitor for fire fighting (first revision)
	9972 : 2002	Specification for automatic sprinkler heads (first revision)

No.	IS No.	Title
	10460 : 1983	Functional requirements for small foam tender for fire brigade use
	10658 : 1999	Specification for higher capacity dry powder fire extinguisher (trolley mounted) (first revision)
	10993 : 1984	Functional requirements for 2 000 kg dry powder tender for fire brigade use
	11101 : 1984	Specification for extended branch pipe for fire brigade use
	11108 : 1984	Specification for portable fire extinguisher halon-1211 type
	11833 : 1986	Specification for dry powder fire extinguisher for metal fires
	12717 : 1989	Functional requirements of fire fighting equipment - High capacity portable pumpset (1 100-1 600 l/min)
	12796 : 1989	Specification for fire rake
	13039 : 1991	Code of practice for provision and maintenance of external hydrant system
	13385 : 1992	Specification for fire extinguisher 50 capacity wheel mounted water type (Gas cartridge)
	13386 : 1992	Specification for 50 litre capacity fire extinguisher, mechanical foam type
	14609 : 1999	Specification for ABC dry powder for fire fighting
	14933 : 2001	Specification for high pressure fire fighting hose
	14951 : 2001	Specification for fire extinguisher, 135 litre capacity mechanical foam type
	15051 : 2002	Specification for high pressure fire hose delivery couplings
	IS 15105 : 2002 / ISO 6182-1	Design and installation of fixed automatic sprinkler fire extinguishing system
	IS 15220 : 2002 ISO 7201-1	Specification for halon 1211 and halon 1301 — fire extinguishing media for fire protection
	IS 15683 : 2006 / ISO 7165 : 2009	Portable fire extinguishers - Performance and construction – Specification
	11360 : 1985	Specification for smoke detectors for use in automatic electrical fire alarm system
	IS 15493 : 2004 / ISO 14520-1	Gaseous fire extinguishing systems : General requirements
	IS 15505 : 2004 / ISO 14520-6	Gaseous fire extinguishing systems: HCFC Blend A extinguishing systems
	IS 15506 : 2004 / ISO 14520-14	Gaseous fire extinguishing systems : IG 55 extinguishing systems
	IS 15525 : 2004 / ISO 14520-13	Gaseous fire extinguishing systems : IG 100 extinguishing systems
	IS 15501 :2004 / ISO 14520-15	Gaseous fire extinguishing systems - IG 541 extinguishing systems
	IS 15497 : 2004 / ISO 14520-12	Gaseous fire extinguishing systems - IG 01 extinguishing systems
	15519 : 2004	Code of practice for water mist fire protection systems - System design, installation and commissioning
	IS 15517 : 2004 / ISO 14520-9	Gaseous fire extinguishing systems : Carbon dioxide, total flooding and local application including in cabinet subfloors systems
	IS 15517 : 2004 / ISO 14520-9	Gaseous fire extinguishing systems - HFC 227ea (Hepta Fluoro Propane) extinguishing system
18	2190 : 2010	Code of practice for selection, installation and maintenance of portable first aid fire extinguishers (fourth revision)
19	884 : 1985	Specification for first aid hose reel for fire fighting (first revision)
20	15105 : 2002	Design and installation of fixed automatic sprinkler fire extinguishing system
21	15325 : 2003	Design and installation of fixed automatic high and medium velocity water spray system -Code of practice
22	12835 (Part 1) : 1989	Design and installation of fixed foam fire extinguishing system - Code of practice: Part 1 Low expansion foam
23	15528 : 2004	Gaseous fire extinguishing systems - Carbon dioxide, total flooding and local application (sub-floor and in-cabinet), high and low floor pressure (refrigerated) systems
24	15519 : 2004	Water mist fire protection systems — System design, installation and commissioning — Code of Practice
25	15493 : 2004	Gaseous fire extinguishing Systems — General requirements

No.	IS No.	Title
	15497 : 2004	Gaseous fire extinguishing systems — IG 01 extinguishing systems
	15501 : 2004	Gaseous fire extinguishing systems — IG 541 extinguishing systems
	15505 : 2004	Gaseous fire extinguishing systems — HCFC Blend A
	15506 : 2004	Gaseous fire extinguishing systems — IG 55 extinguishing systems
	15517 : 2004	Gaseous fire extinguishing systems — HFC 227 ea (Hepta fluoro propane) extinguishing systems
	15525 : 2004	Gaseous fire extinguishing systems — IG 100 extinguishing systems
26	2189 : 2008	Code of practice for selection, installation and maintenance of automatic fire detection and alarm system (fourth revision)
	2190 : 2010	Code of practice for selection, installation and maintenance of portable first aid fire extinguishers (fourth revision)
	3844 : 1989	Code of practice for installation and maintenance of internal fire hydrants and hose reels on premises (first revision)
	9668 : 1990	Code of practice for provision and maintenance of water supplies for fire fighting
	13039 : 1991	Code of practice for provision and maintenance of external hydrant system
	13039 : 2014	External hydrant systems - Provision and maintenance - Code of practice
27	4878 : 1986	Byelaws for construction of cinema buildings (first revision)
28	2726 : 1988	Code of practice for fire safety of industrial buildings : Cotton ginning and pressing (including cotton seed delinting) factories (first revision)
	3034 : 1993	Code of practice for fire safety of industrial buildings : Electrical generating and distributing stations (second revision)
	3058 : 1990	Code of practice for fire safety of industrial buildings : Viscose rayon yarn and/or staple fibre plants (first revision)
	3079 : 1990	Code of practice for fire safety of industrial buildings : Cotton textile mills (first revision)
	3594: 1991	Code of practice for fire safety of industrial buildings : General storage and warehousing including cold storage (first revision)
	3595: 1984	Code of practice for fire safety of industrial buildings : Coal pulverizers and associated equipment (first revision)
	3836 : 2000	Code of practice for fire safety of industrial buildings : Jute mills (second revision)
	4209 : 2013	Code of safety for chemical laboratories (second revision)
	4226 : 1988	Code of practice for fire safety of industrial buildings : Aluminium/ Magnesium powder factories (first revision)
	4886 : 1991	Code of practice for fire safety of industrial buildings : Tea factories (first revision)
	6329 : 2000	Code of practice for fire safety of industrial buildings : Saw mills and wood works (first revision)
	9109 : 2000	Code of practice for fire safety of industrial buildings : Paint and Varnish factories
29	11457 (Part 1) : 1985	Code of practice for fire safety of chemical industries: Part 1 Rubber and plastic
	13039 : 2014	External hydrant systems - Provision and maintenance - Code of practice

