



### **Notice for Publication**

The Section 1.1 (a) I & II of the Building Regulations and Bye-Laws (Kashmir Division) published on August 2010 states that the Building Byelaws shall extend to all local urban authorities/bodies or to the area which the Govt. may determine for erstwhile Kashmir province. Leh has been following guidelines namely, "Construction of Building within the limits of Scheme Area of Leh Town", signed by Mr. N.S. Pampori, Chief Town Planner. Since then, large scale developments have taken place in the fields of sustainability, Energy Conservation Building Code (ECBC), rainwater harvesting, Green Building etc. Meanwhile Bureau of Indian Standards has issued the National Building Code 2016 (NBC) and the Ministry of Housing and Urban Affairs, GoI has issued the Model Building Bye-laws 2016. Further, the Bye-laws of 2011 did not provide an elaborate mechanism for building permit process. This has necessitated to revisit the existing Bye-laws to make them more comprehensive and consistent with the practice in the Union Territory.

The draft "**UNIFIED LADAKH BUILDING BYE-LAWS-2022 for Union Territory of Ladakh**" have been prepared with the assistance of experts/professionals from the relevant fields after taking into account the National Building Code 2016, Energy Conservation Building Codes, CPWD Guidelines for Sustainable Habitat, Harmonised Guidelines and Standards for Universal Accessibility in India, 2021, Ancient Monuments and Archaeological Sites and Remains (AMASR) Act 2010 and Model Building Bye-laws 2016, among others including specialized norms and provisions for Ladakh. The new Bye-laws and Building Code are expected to serve the following objectives (i) simplify the procedure for building permits and streamline the entire process and (ii) ease of doing business (iii) addressing sustainability and integration of cultural heritage and identity, (iv) inclusive and design for all.

The draft "**UNIFIED LADAKH BUILDING BYE-LAWS-2022 for Union Territory of Ladakh**" shall be issued for public disclosure in the manner stated in the J&K Municipalities Public Disclosure Act, 2010:

- a) Newspaper
- b) Internet
- c) any other mode decided by the Administration from time to time.

*[Handwritten signature and date]*  
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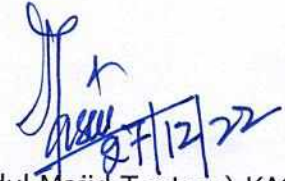
Now therefore, the Government, in exercise of the powers conferred by sub-section (1) of Section 218 of the J&K Municipal Act, 2000 intend to make these bye-laws as per the draft forming Annexure 1 and hereby publish the same for prior information of the residents of the concerned Municipal area/interested persons. The draft "**UNIFIED LADAKH BUILDING BYE-LAWS-2022 for Union Territory of Ladakh**" are available on the official website of Ladakh UT ([www.ladakh.nic.in](http://www.ladakh.nic.in))

The suggestions/objections can be sent by post to the Directorate of Urban Local Bodies, behind Hotel Moonland, Airport Road, Leh, UT-Ladakh (194101) or through e-mail ([dulbladakh@gmail.com](mailto:dulbladakh@gmail.com)) within a period of 30 days from the publication of the draft bye-laws.

Sd/-  
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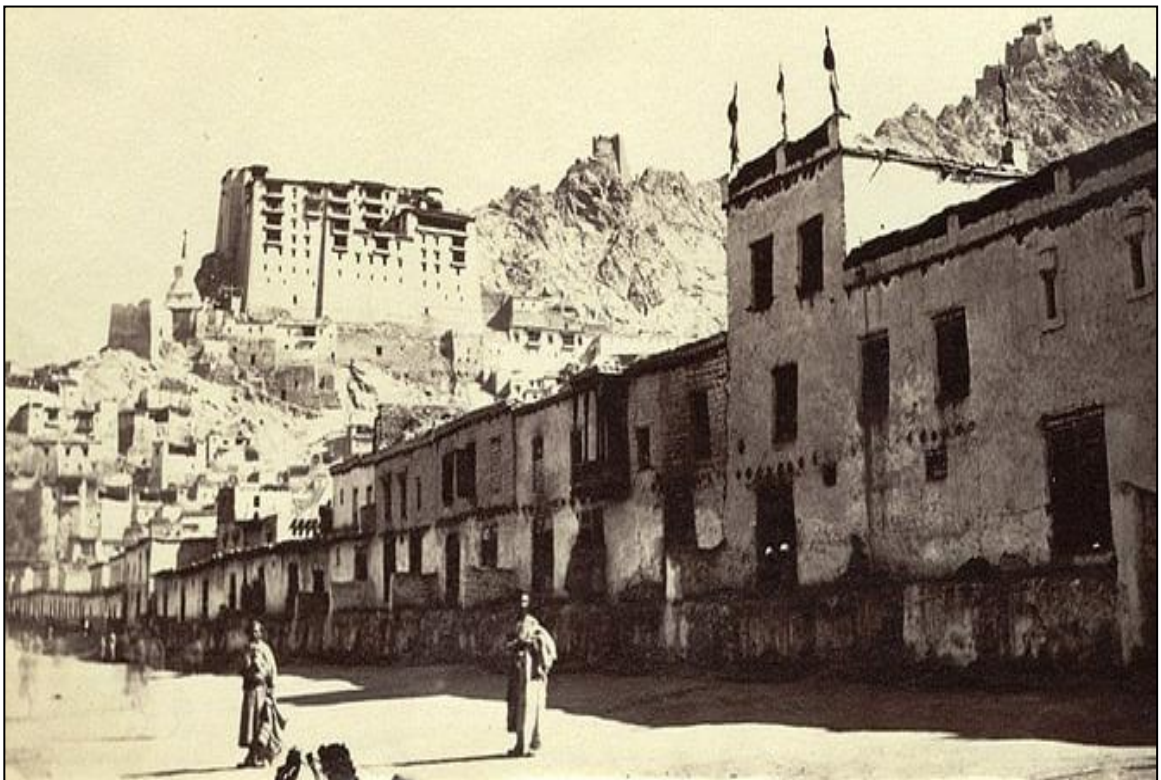
  
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## Annexure - 1



UNION TERRITORY OF LADAKH

# **Draft Unified Ladakh Building Bye Laws, 2022 Union Territory of Ladakh**



**The Administration of Union Territory, Ladakh**

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## **Preface**

The Administration of Union Territory of Ladakh intends to have Unified Building Bye-Laws applicable in whole of the Union Territory and shall be common for all the regulating/development agencies. For the same purpose, the Unified Ladakh Building Bye Laws, 2022 are being formed. The erstwhile building rules/ bye-laws applicable till date including Building Regulations and Bye-Laws (Kashmir Division) August 2010 will be ineffective from the date of publication of this Building Bye-Laws. All buildings approved and constructed as per the applicable Building Rules/ bye-laws shall be deemed to have been constructed as per these Building Bye-Laws and all actions taken under the Building Rules/ bye-laws shall be deemed to have been taken under this Building Bye-Laws: The Building Bye-Laws have referred inputs from Architect's Association, Municipal Committees, Himalayan Institute of Alternatives, Ladakh, Central Public Works Department's Guidelines for Sustainable Habitats, , Environmental Guidelines by Ministry of Environment, Forest and Climate Change.

## **Chapter -1: Title and Extent**

### **1. Short title and extent.**

- 1.1 These Bye-Laws shall be called the Unified Ladakh Building Bye Laws, 2022.
- 1.2 These shall be applicable to entire Union Territory of Ladakh with effect from the date, it is notified in the official gazette.

## **Chapter -2: Jurisdiction/Applicability**

### **2. Jurisdiction/Applicability**

- 2.1 The building bye-Laws shall be read in conjunction with the master plan/development plan/zonal development plan/any other statutory plan in force, if any, and notifications, if any, with regard to the same and as amended from time to time and shall be applicable for a period of FIVE years after which they shall be reviewed. Till such time the reviewed building Bye-Laws are notified, these building Bye-Laws will continue to be in force.

### **2.2 Jurisdiction of Building Bye-Laws:**

The Building Bye-Laws shall apply to the building activity in the entire UT of Ladakh including the Development Authorities, Local Area Authorities, Urban and Rural Local Bodies, for which they are framed and the same shall be unambiguously specified in the Building Bye-Laws. It is desirable that the jurisdiction of building Bye-Laws includes all contiguous urban settlements in an urban agglomeration.

### **2.3 Applicability of Building Bye-Laws:**

These building bye-Laws shall be applicable to all building activities and read in conjunction with the master plan/development plan/regional plan/any other statutory plan in force, if any, and notifications, if any, regarding the same and as amended from time to time and shall be applicable for a period of FIVE years after which they shall be reviewed. Till such time the reviewed building bye-Laws are notified, these building Bye-

Laws will continue to be in force.

**2.4** Development and part-construction:

Except hereinafter or otherwise provided, these Bye-Laws shall apply to all development, redevelopment, erection and/or re-erection of a building etc. as well as to the design, construction of, or reconstruction and additions and alterations to a building.

**2.5** In case of part construction:

Where the whole or part of a building is demolished or altered or reconstructed, except where otherwise specifically stipulated, these Building Bye-Laws shall apply only to the extent of the work involved.

**2.6** Change of use/occupancy:

Where use of a building is changed, except where otherwise specifically stipulated, these Building Bye-Laws shall apply to all parts of the building affected by the change.

**2.7** Reconstruction:

The reconstruction in whole or part of a building which has ceased to operate due to fire, natural collapse or demolition having been declared unsafe, or which is likely to be demolished by or under an order of the Authority as the case may be and for which the necessary certificate has been given by the Authority.

**2.8** Existing approved building:

Nothing in these Bye-Laws shall require the removal, alteration, or abandonment, nor prevent continuance of the lawfully established use or occupancy of an existing approved building unless, in the opinion of the Authority such a building is unsafe or constitutes a hazard to the safety of adjacent property or to the occupants of the building itself.

**2.9** Power of relaxation:

The Administration may relax any restriction(s) or condition(s) or norm(s) stated in these Bye-Laws or may issue direction(s) to review and revise the Bye-Laws in public interest.

## **Chapter -3: Definitions**

### **3. Definitions: -**

In these Bye-Laws, unless the context requires otherwise, shall define the terms as mentioned below, or as per the National Building Codes, 2016 and shall have the meaning as follows:

- 3.1** “abut” in relation to a building means when it is on a street and the outer face of any of its external walls is on the street boundary,
- 3.2** “Act” means the Jammu and Kashmir Development Act, 1970 and further amendments as mandated by the administration, as well as any other relevant acts as may be decided upon by the UT Administration,
- 3.3** “administration means”, the administration of Union Territory of Ladakh,
- 3.4** “advertising sign” means any sign, either free, standing or attached to a building or other structure which advertises a business or commercial establishment,
- 3.5** “alley” means a public thoroughfare, which affords only a secondary means of access to abutting property and not intended for general traffic circulation,
- 3.6** "amenity" includes roads, water supply, street lighting, drainage which includes sewerage, treatment, and disposal of sewage, sullage and storm water, public works, tourist spots, open spaces, Parks, landscaping and Play fields, and such other conveniences as the UT Administration may, by notification, specify to be an amenity for the purposes of these Bye-Laws,
- 3.7** “ancillary building” means the building ancillary to and serving the main building including meter- room, pump room, security room, sewage treatment plant, stores, guardroom, cycle-shed, dispensary, canteen, electric substation and quarters for watch and ward staff in the industrial/commercial/institutional plot but shall not include residential accommodation for the supervisory staff,
- 3.8** “apartment” means a part of a property, intended for any type of independent use, including building having one or more rooms with enclosed spaces located on one or more floors or any part or parts thereof, to be used for residence, office or for practicing any profession or for carrying on any occupation, trade, business or manufacturing or other uses relating to information technology or for such other types of independent uses, as may be prescribed, with a direct exit to a public street, road or highway or to a common area leading to such street, road or highway and includes any garage or room (whether or not adjacent to the building in which such apartment is located) provided by the owner of such property for use by the owner of such apartment for parking a vehicle or for the residence of any person employed in such apartment, as the case may be,
- 3.9** “applicant” means a person(s) including legal heirs who is owner(s) of the site and who applies to the competent authority, of his/her intention to erect or re-erect a building under these Bye-Laws,
- 3.10** “approved” means approved by the competent authority,
- 3.11** “architect” means a person registered with and has valid membership of the Council of Architecture, India as prescribed under the Architect Act, 1972,

- 3.12** “architectural control sheets” means the control sheets showing measures of architectural control or the drawings containing necessary directions to be adhered and signed by the Competent Authority which are available in the office of such authority and also on the website of the concerned authority,
- 3.13** “area” means area under the jurisdiction of the competent authority,
- 3.14** “atrium” means a high open area or central court within a multistoried building, covered with transparent material at the terrace level,
- 3.15** “authority”, means an authority constituted under Jammu and Kashmir Development Act, 1970, or the Jammu and Kashmir Municipal Act, Jammu and Kashmir Panchayati Raj Act, 1989, Jammu and Kashmir Panchayati Raj Rules, 1996 and/or any other acts as amended from time to time or under any other law for purpose of these Bye-Laws,
- 3.16** “authorized officer” means an officer authorized by the competent authority,
- 3.17** “balcony” means a horizontal cantilevered projection, or otherwise, not more than 1.8 meters from the face a wall, including the parapet or railing to serve as a passage or sit out space, open to air at least on one side,
- 3.18** "barsati" means a habitable space on the roof of the building with/without toilet facilities,
- 3.19** “basement or cellar” means the storey of a building, which is below the ground storey of a building and is in any part more than half of its height below the mean level of the street or adjoining ground, with one or more than one levels and where the front street is sloping, the average of the front length of the building shall be taken into account,
- 3.20** “bazaar” means a place or area reserved or licensed by the authority for the erection of shops or stalls or both,
- 3.21** "bio-technology industry" means the industrial unit primarily engaged in in micro-organisms research and development of related software applications only,
- 3.22** "building" means any structure constructed for whatsoever purpose and of whatsoever material and every part thereof whether used as human habitation or not and includes foundation, plinth, walls, floors, roofs, chimneys, plumbing and other services, fixed platforms, verandah, balcony, cornice or projection part of a building or anything affixed thereto or any wall enclosing or intended to enclose any land or space, signs and outdoor display structures, Tanks constructed or fixed for storage of chemicals or chemicals in liquid form and for storage of water, effluent, swimming pool, ponds etc., however, the shelters of whatever material used for tourists’ stay shall be allowed only at the designated sites by the competent authority,
- 3.23** “Building Envelope” - The horizontal spatial limits up to which a building may be permitted to be constructed on a plot,
- 3.24** “building height” means the vertical distance measured in the case of flat roofs from the average ground level on which the building stands and is contiguous up to the parapet. In the case of pitched roofs, from ground level to ridge top. The architectural features serving no other function except that of decoration shall be excluded for the purpose of taking heights. For the purposes of roof height, it is clarified that the angle of slope should not be less than 15 degrees, for stepped construction the vertical distance shall be measured from the lower floor level instead of average ground level as applicable in case of plains,

- 3.25** “building line” means a fixed line, if any, specified for a site beyond which no building shall project within that site other than a balcony and a canopy and compound wall as permissible under the Bye-Laws,
- 3.26** “built area” means area covered immediately above the plinth level and the external area up to upper floor,
- 3.27** “carpet area” means the net usable area of an apartment, excluding the area covered by the external walls, areas under service shafts, balcony or verandah and open terrace,
- 3.28** “canopy”- means a cantilevered projection from the face of a wall over an entrance to the building at the lintel or slab level provided that it,
- (a) shall not project beyond the plot line (boundary) and,
- (b) shall not be lower than 2.3 meters at all points when measured from the ground and shall remain uncovered from above,
- 3.29** “ceiling height” means the vertical distance between the floor and the ceiling, where a finished ceiling is not provided, the underside of the joists or top of post plate in case of pitched roof shall determine the upper point of measurement,
- 3.30** “chajja” means the sloping or horizontal structural projection usually provided over openings on external walls to provide protection from sun and rain.
- 3.31** “chimney” means the ventilation shaft/absorber provided in a building for intake and disposal of smoke,
- 3.32** “clear height” means height measured from the surface of ground or from any floor to the soffit of beam or ceiling, as the case may be
- 3.33** “colony” means an area of land divided or proposed to be divided into plots or flats for residential, commercial, industrial, cyber city/park, purposes or for the construction of flats in the form of group housing or integrated commercial complexes to be developed/constructed as notified and prescribed in these Bye-Laws by the competent authority from time to time.
- 3.34** “competent authority” means an officer or agency duly authorized to undertake preparation of plans, approval of building plans and drawings, grant of occupation certificate, and any other powers as deemed necessary by the administration,
- 3.35** “Conservation” means all the processes of looking after a place so as to retain its historical and/or architectural and/or aesthetic and/or cultural significance and includes maintenance, preservation, restoration, reconstruction and adoption or a combination of more than one of these.
- 3.36** “core area” means thickly built area of the old town, or a village included in the urban local body or area as shown in the Master Plan or as notified by the competent authority,
- 3.37** “courtyard” means an area open to the sky within the boundary of a plot, which is enclosed or partially enclosed or partially enclosed by buildings, boundary walls or railing and provides light and ventilation to one or more habitable rooms. It may be at ground floor level or any other level within or adjacent to a building,
- 3.38** “covered area” means the area covered immediately above the plinth of a building but



does not include the space covered by;

- (a) soak pit, rainwater harvesting tank, sewage/effluent treatment plant, uncovered swimming pool,
- (b) cantilevered porch without any coverage and areas covered by canopy and portico, open staircases for fire escape,
- (c) area under solar panel, service floor, service shaft, and atrium, and
- (d) basement and stilt floor if used for parking,

- 3.39** “cyber city” means self-contained intelligent city with high quality of infrastructure, attractive surrounding and high-speed communication access to be developed for nucleating the Information Technology concept germination of medium and large software companies and Information Technology enabled services, wherein no manufacturing units shall be permitted,
- 3.40** “cyber park” means an area developed exclusively for locating software development activities and Information Technology Enabled Services, wherein no manufacturing of any kind, including assembling activities, shall be permitted,
- 3.41** “damp proof course (DPC)” means a course laid to prevent seepage/penetration of dampness or moisture from plinth to any part of the structure above it,
- 3.42** ‘developer’ means individual owner, or a company, or an association, or firm or a limited liability partnership and includes any other entity designated through a collaboration/development agreement with the owner for making an application for grant of permission and for completion of formalities required on behalf of such owner to develop a colony,
- 3.43** "Development" with its grammatical variations means the carrying out of building, engineering, mining or other operations in, on, over or under land or the making of any material change, in any building or land and includes re-development,

**1. Development Permission:**

No person shall carry out any development or redevelopment including subdivision on any plot or land (not forming part of any approved layout plan or scheme) or cause to be done without obtaining approval from the Authority for the layout plan.

**2. Building Permit:**

No person shall erect, re-erect or make addition/ alterations in any building or cause the same to be done without, first obtaining a separate building permit for each such building from the Authority.

**3. Pre-Code Building Permit:**

Where any building permit which has been issued by the Authority before the commencement of the Building Bye-Laws and where construction is in progress and has not been completed within the specified period from the date of such permit, the said permission shall be deemed to be sanctioned under these Bye-Laws and shall only be eligible for revalidation thereunder. Accordingly, where the validity of sanction has expired and construction has not commenced, construction shall be governed by the provisions of these

### Building Bye-Laws.

- 3.44** “dhoonga” means a floating dwelling on water used for residential/kitchen purposes,
- 3.45** “drain” means a conduit or channel for the carriage of storm water, sewage, wastewater, or other waterborne wastes in a building,
- 3.46** “drainage system” means a system or a network of pipes, with their fittings and accessories, such as manholes, inspection chambers, traps, gullies, floor traps used for drainage of building or yards appurtenant to the building and includes an open channel for conveying surface water or a system for the removal of any wastewater.
- 3.47** “dwelling unit” means a building or a part thereof which is used or is intended to be used by a person(s) or family for habitation comprising of kitchen, toilet and room,
- 3.48** “electronic signature” or “e-signature” means “digital signature” defined in the Information Technology Act, 2008,
- 3.49** “Empaneled Architect”- A person empaneled by the Authority as per rules under the building Bye-Laws as an authorized person to sanction building plans of residential buildings up to 15 m. in height and for plot sizes up to 500 sqm, forming part of any approved lay-out plan.
- 3.50** “engineer” means a person graduate in civil engineering from a recognized Indian or Foreign University or an associate member of the Institution of Engineers (India),
- 3.51** “erection or re-erection of building” means and includes any material addition, alteration or enlargement of any building including sub-division of the existing covered area,
- 3.52** “exit” means a passage, or means of egress from a building to a street or to the open space,
- 3.53** “external wall” means an outer wall or vertical enclosure of a building not being a party wall, even though adjoining to a wall of another building and also includes a wall abutting on an interior open space of any building but shall not include an outer verandah wall;
- 3.54** “factory” shall have the same meaning as defined in the Factories Act, 1948 (Act LXIII of 1948);
- 3.55** “filling station” means an area of land including any structure thereon that is or used or designed to be used for the supply of gasoline or oil or fuel,
- 3.56** “flat” means an apartment intended to be used for residential purposes,
- 3.57** “floor” means the lower surface in a storey on which one normally walks in a building but does not include a mezzanine floor. The floor at ground level with direct access to a street or open space is the ground floor; the floors above it shall be termed as floor-1 and the next higher floor being termed as floor-2, and so on upwards.
- 3.58** “floor area ratio (FAR)” mean a quotient derived by dividing, the sum total of covered area of all floors and multiplied by hundred, with the area of plot cited as under.

$$\text{Floor Area Ratio (FAR)} = \frac{\text{Total Covered Area on All Floors}}{\text{Plot Area}}$$

*Equation 1 Calculation of Floor Area Ratio*

For calculating FAR, cantilevered/permitted roof projections, lift room, mumty, balcony, basement or any floor if used for parking, services and storage, stilt area (unenclosed) for parking, fire escape staircase, without *mumty*, atrium, water tank, open courtyard of permitted size shall not be counted towards FAR:

- i. Provided that the area under shaft, chutes, lift well and staircase from stilt to next floor shall be counted towards FAR only once at ground floor:
- ii. Provided further that in case the ventilation shaft area is more than 3 square meters, it shall not be counted in FAR,

- 3.59** “form” means a form appended to these Bye-Laws,
- 3.60** “footwear industry” means the industrial unit primarily engaged in the design, cutting, assembly and manufacturing of footwear from finished leather, fabric, rubber and their variants and includes other similar products such as belts, purses, bags, suitcases, brief cases etc. but shall not include the processing and tanning of leather and its variants,
- 3.61** “foundation” means a part of a structure which is below the lower most floor supporting the superstructure, and transmits load of the superstructure to the bearing surface,
- 3.62** “framed building” means a building, the external walls of which are constructed of a frame either of timber, iron, reinforced cement concrete or steel and such framing consisting of posts or columns and beams, filled in, wholly or partially covered with bricks, stones, iron plates or other materials and the stability of which depends upon such framing,
- 3.63** “front” as applied to a building means the portion facing the street from which it has access,
- 3.64** “garage” means a building or portion thereof used or intended to be used for shelter, storage or parking of vehicles,
- 3.65** “ground coverage” means built area at the ground level, for the purpose of calculating ground coverage, the area under shaft, chute, lift-well and staircase shall be counted towards ground coverage: however, ventilation shaft area more than 3 square meters, fire staircase, atrium and open courtyard of permitted size, shall not be counted in ground coverage,
- 3.66** “group housing” means a building designed and developed in the form of flats for residential purpose or any building ancillary to group housing,
- 3.67** “habitable room” means a room occupied or designed for occupancy by one or more persons for study, living, sleeping, eating, but not including bathrooms, water-closet compartments, laundries, serving and store pantries, corridors, cellars, attics, and spaces that are not used frequently or during extended periods.
- 3.68** “height” as applied to a building means vertical measurement of the building measured from the finished mean level of the street where such street exists or from the mean level of the ground adjoining the outside of the external walls to half the height of the roof in the case of sloping roofs and to the highest level of the building in case of building with flat roof, excluding the projected portions of *mumty*, flue, ducts building maintenance unit, machine room, minaret, water tank and parapet not exceeding 1.2 meters in height. Architectural features serving no purpose other than that of decoration

shall be excluded for the purpose of taking heights. Height as applied to a room shall mean the vertical measurement from the top surface of the floor to the lowest surface of the ceiling of the same room, joist and beams being allowed to project beneath the ceiling, and in the case of a sloping ceiling, the height shall be the mean height of any such room,

- 3.69** “heritage building” means and includes any building of one or more premises or any part thereof and/or structure and/or artifact which requires conservation and/or preservation for historical and/or architectural and/or artisanry and/or aesthetic and/or cultural and/or environmental and/or ecological purpose and includes such portion of land adjoining such building or part thereof as may be required for fencing or covering or in any manner preserving the historical and/or Architectural and/or aesthetic and/or cultural value of such building as decided by UT Level Heritage Commission/Committee
- 3.70** “heritage precinct” means and includes any space that requires conservation and/or preservation for historical and/or architectural and/or aesthetic and/or cultural and/or environmental and/or ecological purpose. Walls or other boundaries of a particular area or place or building or may enclose such space by an imaginary line drawn around it.
- 3.71** “heritage zone” means the area around such heritage building/ Buildings as defined in the Jammu and Kashmir Heritage Conservation Authority Act 2010, not inclusive of Archaeological Sites and Remains Act (AMASR), 1958 and further amendments,
- 3.72** “house boats” means wooden structure floating on water which includes dhoongas for the residential purpose or a facility of board and lodge for tourists with inbuilt mechanism for Solid waste disposal and disposal of liquid waste without polluting water body registered with the concerned government agency/department,
- 3.73** “integrated commercial complex” means building containing apartments sharing common services and facilities and having their undivided share in the land and meant to be used for office or for practicing any profession or for carrying on any occupation, trade, business or such other type of independent use as may be prescribed,
- 3.74** “layout plan” means a plan of a colony, both plotted and flatted, showing location of plots/ building blocks, roads, open spaces, entry/ exit, parking, landscaping etc., and indicating proportionate share of each land use and approved by the competent authority,
- 3.75** “ledge or taakh” means a shelf-like projection, supported in any manner whatsoever, except by vertical supports within a room itself but not projecting wider than half meter,
- 3.76** “load” includes:
- (a) ‘dead load’ i.e., weight of all permanent stationary construction becoming a part of the structure, and
  - (b) ‘live load’ i.e., all load except dead load that may be imposed on a structure including wind and snow loads shall be considered as live upon it,
- 3.77** “loft” means an intermediary floor between two floors on a residual space in a pitched roof above a residual normal floor level within a maximum height of 1.5 meters and which is constructed or adopted for storage purposes,
- 3.78** “material change of use” means a change from one class of building to another,
- 3.79** “mean level of street” means the average level of all points on the surface of the street from which the site derives its access measured at the center line of street,

- 3.80** “mezzanine floor” means an intermediate floor, between two floors, with area of mezzanine restricted to 1/3 (one-third) of the area of the lower floor and with a minimum clear height of 2.3 meters and shall not be lower than 2.3 meters (clear height) above floor level,
- 3.81** “*mumty*” means a small structure erected on the roof of a building to protect such staircase from weather with a maximum height of 3 meters, and a minimum height of 2.75 meters (exempted from maximum height criteria),
- 3.82** “multistoried or high-rise buildings” means a building whose height is 15 meters or more measured from the average level of the central line of the street on which the site abuts or more than four floors excluding basement or stilt,
- 3.83** “natural hazard prone areas” means areas of moderate to high intensity of earthquake or cyclonic/snowstorm or significant flood flow or inundation or landslides/mud flows or one or more of these hazards, and declared so by the competent authority,
- 3.84** “non-conforming use” means the use of a building/structure, or and of land not conforming to the land use zone of a Master Plan or Zonal Development Plan but existed prior to the notification of these plans
- 3.85** "non-nuisance professional consultancy services" include doctors, lawyers, tax consultants, architects, town planners, contractor consultants, chartered accountants, company secretaries, property consultants, ayurvedic and homeopathic practitioner, psychiatrist, clinical psychologist and tourist guides and as notified by the competent authority from time to time.
- 3.86** “occupancy” means the main purpose for which a building or a part of building is used or intended to be used,
- 3.87** “open space” means a space forming an integral part of the plot left open to sky,
- 3.88** “parapet” means a low wall built along the edge of a roof or a floor not more than 1.2 meters in height for buildings up to 15 meters and 1.5 meters for buildings above 15 meters in height,
- 3.89** “parking” means a space enclosed or unenclosed, to park vehicles together with driveways connecting the parking space with a street permitting ingress and egress of the vehicles,
- 3.90** “partition wall” means a wall which bears no load other than its own weight,
- 3.91** “party wall” means a common wall partly constructed on the plot of land, and partly on the adjoining plot and serving both structurally or otherwise,
- 3.92** “plinth” means the portion or structure between the surface of the surrounding ground and surface of the floor immediately above the ground,
- 3.93** “plinth area” means the built-up covered area measured at ground level,
- 3.94** “plot” means piece of land or site enclosed by definite boundaries,
- 3.95** “porch” means a covered surface supported on pillars or otherwise for the purpose of pedestrian or vehicular approach to a building,
- 3.96** “Preservation” means and includes maintaining the fabric of a place in its existing state and retarding deterioration



- 3.97** “prohibited area” means any area specified or declared to be a prohibited area under section 20A of the AMASR Act, 2010,
- 3.98** “proof consultant” means a person who is a engineer/structural engineer or a group/firm of engineers/structural engineers having post-graduate qualification in structural engineering with ten years’ experience in structural design and evaluation thereof, for multistoried and specialized structure, and/ or an institute of the following type, employed for evaluation/checking of the structural design of the buildings referred to in the relevant Form BC-V(A2) for all buildings above 15 meters height (including stilt) (Please see Annexure “A”):-
- (a) Institute of Structural Engineers (India),
  - (b) Central Building Research Institute, Roorkee,
  - (c) Various engineering institutes,
  - (d) to name a few, like
    - i. Indian Institute of Technology,
    - ii. Engineering College,
    - iii. National Institute of Technology,
    - iv. Or Any other institute of repute notified by the Administration,
- 3.99** “protected monuments” means an ancient monument which is declared to be of national importance by or under the AMASR Act, 2010.
- 3.100** “public sewer” means a sewer line owned and maintained by competent authority for carriage of the sewage,
- 3.101** “public street” means any street levelled, paved, metalled, channelled, sewerred, repaired or maintained out of municipal or other public funds, and includes a private street which are maintained by municipal body or any other public agency under an agreement with the owner shall be the public street,
- 3.102** “rainwater pipe” means a pipe or drain used or constructed to be used solely for carrying off rainwater directly from roof surfaces,
- 3.103** “rear” as applied to a building means that portion which is on the opposite side of the ‘front’,
- 3.104** “regulated area” means any area specified or declared under section 20B under the AMASR Act, 2010
- 3.105** “Reconstruction” means and includes returning a place as nearly as possible to a known earlier state and distinguished by the introduction of materials (new or old) into the fabric. This shall not include either recreation or conjectural reconstruction.
- 3.106** “Restoration” means and includes returning the existing fabric of a place to a known earlier state by removing accretions or by reassembling existing components without introducing new materials.
- 3.107** “Retrofitting” means Reinforcement or upgrading of existing structures to become more resistant and resilient to the damaging effects of hazards.
- 3.108** “Road/Street”- Any highway, street, lane, pathway, alley, stairway, passageway, carriageway, footway, square, place or bridge whether a thorough-fare or over which the

- public have a right of way or access or have passed and have access uninterruptedly for specified period, whether existing or proposed in any scheme and includes all bends, channels, ditches, storm water drains, culverts sidewalks, traffic islands, roadside trees and hedges, retaining walls fences, barriers and railing within the street lines.
- 3.109** “Road/Street Level or Grade”- The officially established elevation or grade of the centerline of street upon which a plot fronts, and if there is no officially established grade, the existing grade of street at its mid-point.
- 3.110** “Road/Street Line” -The line defining the side limits of a road/street.
- 3.111** “Road Width or Width of Road/Street” - 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 or development plan or prescribed road lines by any act of law and measured at right angles to the course or intended course of direction of such road.
- 3.112** “Row Housing” -A row of houses with only front, rear and interior open spaces.
- 3.113** “repairs” means any renovation applied to any structure, which does not in any way change the dimensions of structure but saves the structure from further deterioration,
- 3.114** “retention activity” means any activity or use which is allowed to continue, notwithstanding its non-conforming nature in relation to the use permitted in the adjoining or surrounding area,
- 3.115** “retrofitting” means upgrading or and strengthening of an existing building or infrastructure by using suitable engineering techniques,
- 3.116** “sanctioned plan” means a plan, or a set of drawings approved/sanctioned by a competent authority under these Bye-Laws,
- 3.117** “self-certification” means seeking approval of building plans duly prepared and certified by the architect as per Building Bye-Laws, and parameters/policies issued by the competent authority, from time to time,
- 3.118** “Settlement”- A human settlement, whether urban or rural in character. It includes habited villages, towns, townships, cities and the areas notified under the control of the Authority. “service floor” means the floor of a building with maximum height of 2.4 meters, where service equipment, utility lines and various machinery are located,
- 3.119** “site” means a “plot” as defined at sub- code 3.93 in these Bye-Laws,
- 3.120** “Site Corner”- A site at the junction of and fronting on two or more intersecting roads or streets.
- 3.121** “Site Depth”- The mean horizontal distance between the front and rear site boundaries.
- 3.122** “site plan” means a detailed plan showing the proposed placement of structures, parking areas, open space, landscaping, and other development features, on a parcel of land, as required by specific sections of the Building Bye-Laws;
- 3.123** “Site, Interior or Tandem”- A site, access to which is by a passage from a street whether such passage forms part of the site or not.
- 3.124** “Spiral Staircase”- A staircase forming continuous winding curve round a central point or axis provided in an open space having tread without risers.
- 3.125** “storage tank” means a tank or a cistern for storage of water which is connected to water

- main by means of a supply pipe;
- 3.126** “storey” means the horizontal levels in a building referred from the ground level to the number of floors above the ground level but shall not include the mezzanine floor,
- 3.127** “stilt” means poles, posts or pillars or columns used to allow a structure or building to stand or rest on at a height above the ground,
- 3.128** “street line” means the line defining the outer limits of a street,
- 3.129** "Structural Engineer" means a person who is a post-graduate in structural engineering from a recognized Indian or Foreign University or Corporate Member of Civil Engineering Division of the Institution of Engineers, India or equivalent,
- 3.130** “structural wall” means a load bearing wall or wall that carries load in addition to its own load,
- 3.131** “sub-soil drain” means a drain constructed to be used solely for conveying any sewage, either directly or through another drain, any water that may percolate, through the sub-soil, “sun-shade” means a sloping or horizontal or vertical structure over hanging, usually provided over openings on external wall to provide protection from sun and rain and shall not be used for human habitation,
- 3.132** “superstructure” means the structure erected above the plinth level;
- 3.133** “supervisor” means a professional whose qualification and competency has been stated at Annexure-A,
- 3.134** “temporary building” means a building erected of any material and allowed by the competent authority for completion of an approved project and to be removed immediately after the completion of the project which shall not exceed three months from the completion of the project,
- 3.135** “third party” means
- 3.136** “town planner” means a person holding a Post-Graduate Degree in Urban/Regional Planning/ Town and Country Planning from a recognized Indian or Foreign University.
- 3.137** types of building” means a building which falls in one of the following categories:
- i. Class of buildings:
    - a. assembly building: a building or part thereof, where 50 (fifty) or more people gather for amusement, recreation, social, religious, patriotic, travel and similar purposes,
    - b. commercial and mercantile building; includes a building or complex or part thereof used as shops, stores or market for display and sale of wholesale and/ or retail goods or merchandise, including office, restaurant, banquet hall, hotel, motel, resort, dhaba, boarding house, guest house, amusement park, office establishments and service facilities incidental thereto and located in the same building,
    - c. educational building includes a building exclusively used for a school, college, training/research institute, vocational institute and university including quarters for essential staff required to reside within the premises, and building used as a hostel captive to such educational institution within its campus,
    - d. industrial building includes a factory or a part thereof wherein products or

materials are fabricated, assembled or processed, and includes, power plant, refinery, gas plant, mill, dairy plants,

- e. information technology building; includes building for software development activities, and IT enabled services and/ or IT related manufacturing,
  - f. inland container depot/custom bounded area; includes a building used as inland intermodal terminal connected by road or rail to a seaport/airport and is operating as transshipment centre including temporary storage,
  - g. institutional building includes a building constructed by government semi-government organization or registered trust/ society and used for offices, medical or other treatments, care for persons suffering from physical or mental illness, disease or infirmity, care of orphans, differently-abled persons, abandoned women, children and infants, convalescents, destitute or aged persons, hospice and for penal or correctional detention with restricted liberty of the inmates ordinarily providing sleeping accommodation, also includes auditorium, complex for cultural, social, religious, patriotic, and allied activities or assembly hall, city/town hall, exhibition hall, museum, place of worship, dharmshala, hospital, sanatorium, custodial and penal institutions such as jail, prison and the railway, air, and other surface public transportation stations,
  - h. mixed land-use building includes a building put under one or more conforming uses/activities and duly permitted by the competent authority,
  - i. residential building includes a building with living, sleeping accommodation, cooking, and toilet facilities for one or more dwellings, residential apartments, flats and garages used by occupants of such building,
  - j. Storage/warehousing building; includes a building or part thereof used primarily for storage or shelter of goods, wares, merchandise, freight depot including a building used as a warehouse, godown, freight depot, transit shed, store house, public garage, hanger, grain elevator/silos, barn, stables and parking spaces, attached therewith.
- ii. design and height:
- a. "Detached Building"- Includes a building with walls and roofs independent of any other building and with open spaces on all sides within the same plot.
  - b. "Multi-Storied Building or High-Rise Building"- A building above 4 stories, and/or a building exceeding 15 meters or more in height (without stilt) and 17.5M (including stilt).
  - c. "Semi-detached Building"- A building detached on three sides with open space as specified in these regulations
- iii. special features:
- a. "Special Building"- Includes all buildings like assembly, industrial, buildings used for wholesale establishments, hotels, hostels, hazardous, mixed occupancies with any of the aforesaid occupancies and centrally air-conditioned buildings having total built-up area exceeding 500 sq m.
  - b. "Multi-Level Car parking"- A building partly below ground level having two or more basements or above ground level, primarily to be used for parking of cars, scooters or any other type of light motorized vehicle.

- iv. Safety due to use/maintenance level:
- a. "Slum" – Buildings that are in poor condition of maintenance or have compromised habitability due to poor ventilation, sanitation or otherwise are termed slums. These are generally declared or notified as slums under relevant legislation by competent authority
  - b. "Unsafe Building"- Includes a building which:
    - i) Is structurally unsafe, or
    - ii) Is insanitary, or
    - iii) Is not provided with adequate means of ingress or egress or
    - iv) Constitutes a fire hazard or
    - v) Is dangerous to human life or
    - vi) In relation to its existing use, constitutes a hazard to safety or health or public welfare by maintenance, dilapidation, or abandonment.

**3.138** "unsafe building" means a building which is,

- (a) structurally unsafe, or
- (b) insanitary, or
- (c) not provided with adequate means of egress, or
- (d) constitutes a fire hazard, or and
- (e) in relation to its existing use constitutes a hazard to safety or health or public welfare by reasons of inadequate maintenance, dilapidation, or abandonment.

**3.139** "verandah" means a covered area with at least one side open to the outside with a parapet of 1.2 meters high on the upper floors to be provided on the open side,

**3.140** "water closet" means a privy with arrangement for flushing the pan with water but it does not include a bathroom,

**3.141** "Warehouse" means a building, the whole or substantial part of which is used or intended to be used for the storage of goods but does not include a storeroom attached to and used for the proper functioning of a shop.

**3.142** "zoning plan" mean the detailed layout plan of a colony or an area drawn by the competent authority or approved by the competent authority indicating individual sites and maintained in the office of the Competent Authority showing the subdivision of plots, open spaces, streets and other features and in respect of each plot, permitted land use, building lines and restrictions with regard to use and development of each plot in addition to those laid down in the Building Bye-Laws.



## **Chapter-: 4 Building Plan Application Procedure**

### **4. Plan Application Procedures**

#### **4.1 Application for erection or re-erection of building**

- (a) Any person who intends to erect, re-erect or make alternation in a building or demolish any building shall give notice in writing to the competent authority in the **Form BC-I**, accompanied by the following documents:
- i. Ownership documents-lease deed/sale deed, proof of ownership certified by the revenue authority (Jamabandi) in the case of self-owned property and in the case of a plot allotted by the authority copy of the allotment letter and of the possession letter in the name of owner issued by the allotment authority, and a copy of the letter in the case where permission to use the land for the intended purpose issued by the competent authority,
  - ii. Every person who intends to erect, re-erect or make alternation in any place in a building or demolish any building shall give notice in writing to the Authority of his intention in the prescribed **Form BC-I**, as per **Annexure – A** and such notice shall be accompanied by plans and statements in sufficient copies. The plans may be ordinary prints on ferro-paper or any other type, one set of which shall be laminated. One set of such plans shall be released, and the rest retained in the office of the Authority for record after the issue of permit or refusal as the case may be.
  - iii. Online portal for auto-scrutiny shall always require upload of the recommended digital format of the drawings to be uploaded on the portal for use; the provision of submission, of drawings and auto-scrutiny shall be formulated by UT Administration/Local bodies or any such bodies as appointed by UT Administration/Local bodies and shall have the purview of the same. These may include but not be limited to built features, coverage and features, coverages, setbacks, provisions for universal design, parking, mezzanine, building distances, heights, chimneys, parapets, mumties, fire management, exemptions, green rating applications, access, etc.
  - iv. a site plan as required under these Building Bye-Laws **Section 3.122**,
  - v. details of specifications of the work to be executed in **Form BC-II**,
  - vi. Structural drawings, for record, as per **Form BC-V(A1) or BC-V(A2)**,
  - vii. Fire safety design as required under Part IV of the National Building Code and as updated/revised from time to time in the case of buildings more than 15 meters in height and all non-residential buildings.
  - viii. Heating, ventilation, air-conditioning (H.V.A.C.) service plan wherever required,
  - ix. Plumbing drawings, water supply drawings and toilet drawings
  - x. Certificate of conformity with these Bye-Laws and structural safety for the relevant buildings (depending upon type and height) in the **relevant Form BC- V(A1) or BC-V(A2)**,
  - xi. Public health services plan in un-editable compact disc/DVD or any

other electronic medium, containing drawings in “DWG” Format,

xii. A person applying for permission to carry out any development shall have to pay tree plantation deposit along with his application to the Competent Authority at the rates decided by the Competent Authority time to time. 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 and shall be utilized only for tree plantation and maintenance by the Competent Authority.

xiii. Scrutiny fees (nonrefundable) at the rate of ten (10) rupees per square meter for the proposed aggregated construction area to be achieved including basement, stilt floor, service floor and mezzanine, to be deposited in favour of the competent authority through any prescribed payment mode.

xiv. No objection certificate from the Authority regarding land use as per Master/Zonal Plan, if required.

xv. Approval from the Chief Inspector of Factories in case of Industrial Buildings; as well as from the Pollution Control Board, wherever required

xvi. Approval from Chief Controller of Explosives in case of Industrial Buildings; as well as from the Pollution Control Board, wherever required

xvii. Indemnity Bond in case of proposal for the construction of a basement as given in Annexure – ‘B-1’

xviii. Approval from Chief Fire Officer, or any other authority as appointed by UT Administration, in case of building defined under **Code 3.22** shall be required

xix. No-objection certificate from Civil Aviation Department wherever required by competent authority

xx. No-objection certificate from relevant Defense Authority, wherever required by competent authority

xxi. In case the site falls in the built-up area declared as slum under any Act NOC from the Competent Authority, from slum clearance and land use points of view.

xxii. In case the application is for a Farmhouse, Motel, approval/NOC from the Competent Authority from land acquisition point of view.

xxiii. In case of the leasehold plots, clearance from the lessor with regard to the lease conditions shall be obtained wherever required.

xxiv. For individual plot, wherever required, approval of the site from the Competent Authority, if not the part of already approved layout plan.

xxv. Site plan for all the authorities, and details as required by the approval authority

xxvi. Any other information/document, which the Authority may require in case of listed buildings or otherwise.

Other documents to be submitted in special cases shall be as follows:

- i. For projects proposed within the Prohibited and Regulated areas as defined by AMASR Act 2010, permission /NOC from Competent Authority (NMA) shall have to be obtained as per Rules 2011 framed under the Act by submission of required documents as per rules.
- ii. Additional documents required for conservation of Heritage sites including Heritage Buildings, Heritage/Precincts and Natural Features Areas (wherever required)

**Note:** *The applicant shall submit all kinds of plans in electronic format of online portal of the competent authority. The competent authority shall convey objections/observations or sanction/refusal through online portal and or other prescribed mode.*

- (b) Every person applying under **Code 4.1** shall appoint an architect/engineer for drawing up of building plans/structural drawings and for the supervision of erection or re-erection of the building.
- (c) The supervision of erection or re-erection of residential or commercial buildings up to 9 meters height (G+2 floors including stilt floor) may be undertaken by the architect or the engineer. In case of buildings more than 9 meters in height, including stilt floor, the supervision shall be undertaken both by the architect and the engineer. In case of buildings in notified heritage zone, ecologically-conservation zone, special protection zones, or as mentioned in Development Control Regulations and Master Plan, as well as for plots facing arterial, sub-arterial and collector roads, licensed architects need to approve designs, undertake feasibility study, and provide inputs regarding specific design interventions, and approval.
- (d) During construction if appointed architect/engineer notices that violation(s), except compoundable, are continuing shall intimate the owner and advise him to stop further construction and rectify the violations and shall also intimate to the concerned authority.
- (e) The applicant, the architect and engineer shall digitally sign the application, plans, structural drawings, specifications, and the certificates as required in the relevant forms and documents, before making submission to the Competent Authority.
- (f) In case the building application is returned, it may be re-submitted within Sixty (60) days from the date of such return without fresh scrutiny fee. Such re-submission, however, may not be allowed more than two times in Sixty (60) days from the date of first return.

#### **4.2 Procedure for submitting application through self-certification:**

- (a) Any person intending to erect or re-erect building shall apply on Form **BCS-I** along with documents stated in **Code 4.1** to the competent authority for approval of building plans of buildings falling in low and moderate risk categories defined in **Code 6.2 (i) and 6.2(ii)**, under self-certification to the competent authority for

intimation. The applicant may initiate construction immediately after submission of the application and documents.

- (b) Certificate of conformity to regulation and structural safety for the relevant buildings (depending upon type and height) in the relevant **Form BCS-II**.
- (c) Competent Authority or any other authorized person reserves the right to check the building plans and construction at any stage and violations (except compoundable ones), if found shall have to be rectified by the owner/applicant. In case the owner/ applicant fails to rectify violations, the Competent Authority shall be intimated to take necessary steps to remove the violations within a stipulated time, as decided by the Approval Authority(ies). In case of failure to do so by architects, the case shall be referred to Council of Architecture, who may impose penalties as may deemed necessary. In case of failure by other competent authorities, the penalty shall be as imposed by local court. All rectifications shall be at the risk and cost of the owner and no plea of the owner shall be entertained for any default committed by the competent authority engaged by the owner. In all such cases the procedure of self- certification shall stand nullified.
- (d) If a building is erected or re-erected or construction work is commenced in contravention to any of the applicable provisions of the Bye-Laws, the competent authority or any other person authorized by it shall be competent to require the building to be altered or demolished, by a written notice delivered to the owner. Such notice shall also specify the period during which such alteration or demolition shall be completed and if the notice is not complied with, the competent authority or any other person authorized by it may demolish the said building at the expense of the owner.

**Note:** - *The decision of competent authority, in case of any dispute shall be final and binding on all concerned.*

- (e) At any stage during construction, if an architect notices that violations (except sanctionable ones) are taking place, he shall intimate to the concerned authority of such violations and stop further supervision. He/she shall also intimate the allottee about the violations and advise him to stop further construction. Complete details along with photographs shall be submitted to the concerned authority. The competent authority shall immediately issue a notice to the owner based on the architect's certificate to suspend further work and rectify violations. In such cases the owner shall be held responsible for further additions in violations. Such a situation shall automatically annul the process of self-certification and the owner may, after removal of violations, engage an architect for preparing the revised drawings. In such cases completion shall be given only after scrutiny of revised drawings and inspection of site.
- (f) Sanctionable changes shall be allowed, provided that at the completion stage all changes are incorporated by the architect in the completion drawings to be submitted by the owner to the competent authority. While seeking occupation certificate, the architect shall give a certificate that all changes are made as per Bye-Laws and or directions issued from time to time.

(g) After submission of the building application and or during the construction of building, if the owner changes the architect/structural engineer, shall intimate the competent authority by email or online building plan approval system and also the architect/structural engineer shall intimate the competent authority that he is no longer responsible for the project from the date of actual dispatch of the letter. The information must be sent within seven (7) days of occurrence of the change. The construction work shall have to be suspended until the new owner/architect/structural engineer, as case may be, undertakes the full responsibility of the project as per the forms and documents submitted at the time of applying for erection/re-erection of the building within seven (7) days of his taking over. Owner's intimation regarding change of name of professionals shall be considered final by the competent authority or any other person authorized by it.

#### **4.3 Online receipt and approval.**

- (a) All functions performed under these building Bye-Laws be performed through electronic form.
- (b) Without prejudice to the generality of **Code 4.2 (a)**, the functions shall include all or any of the following:
- i. receipt or acknowledgement of application and payment,
  - ii. issue of approvals, orders, or directions,
  - iii. scrutiny, enquiry, or correspondence for approval of building plans or grant of occupation certificates, etc.,
  - iv. filing of documents,
  - v. issue of notices for recoveries,
  - vi. maintenance of registers and records,
  - vii. any other function that the competent authority may deem fit in public interest.

#### **4.4 Preparation of Government building plans by Government Department (s)**

The Government Departments preparing the building plans for the government buildings conforming to these Building Bye-Laws, shall issue a certificate specifying that the provisions of these Building Bye-Laws have been adhered to in all respects. Such plans shall be sent to the competent authority, for information and records before the commencement of erection or re-erection of the building(s).

#### **4.5 Constitution of committees comprising officials of Municipal body and of the Authority**

The competent authority shall constitute a committee or committees to perform the following functions:

- (i) preparation of zoning plans,
- (ii) approval of building plans,
- (iii) composition of violations of building plans,
- (iv) grant of occupation certificate,
- (v) joint inspection, and
- (vi) any other committee with such powers and functions, as may deem proper

Relevant timelines shall be determined for approval, inspection or grant of occupation certificate as decided by the competent authority. The committee shall comprise of officials from Municipal Committees, Ladakh Autonomous Hill Development Council, Tourism Department, Pollution Control Committee, Ladakh Heritage Commission, Himalayan Institute of Alternatives, Ladakh (indicative).

#### 4.6 Submission of affidavit

The Competent Authority at the stage of approval of building plans, DPC level or grant of occupation certificate, if requires, case to case basis, may ask for an affidavit from the applicant, as per standard format given at **Annexure-A**.

#### 4.7 Building Drawing Norms

a) Size of drawing sheets and colouring of plans:

(i) The size of drawing sheets shall be any of those specified as below:

Sr. No.	Sheet name	Sheet size (in 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

(ii) All dimensions in plan shall be indicated in metric units.

(iii) Various elements of plans (site and building), elevation, section and details shall be shown in different colors and thickness/type of line, etc., and shall be preferably prepared in layers and as per these Bye-Laws.

(iv) The prints of drawings shall be on one side of the paper only.

b) Key Plan: A key plan drawn to a scale of not less than 1: 10,000 shall be submitted along with notice showing boundary and location of the site with respect of neighborhood landmarks, in area where there are no approved layout plans.

c) Site Plan:

(i) The site plan to be submitted along with the application for seeking permission shall be drawn to a scale of:

- 1:100 for plots up to 500 square meters in size and
- on a scale of 1:500 for plots up to 1 acre in size, and
- for plots above one acre in size the site plan may be submitted at any readable scale.

(ii) The plan shall indicate the following details:

- boundaries of the site and any contiguous feature, including but not limited to buildings up to 60 feet in surrounding areas,
- position of the site in relation to the neighbouring street/revenue *rasta*,
- name (s) and width of the street (s) on which the site is situated, if any,

- all existing buildings standing on, over or under the site,
- position of the building and of all other buildings, if any, which the applicant intends to erect upon his contiguous land referred to in (i),
- means of access from the street to the building, and to all other buildings, if any which the applicant intends to erect upon his contiguous land, referred to in (i),
- width of the street, in front, and or on the sides or rear of the site, if any,
- direction of the north point relative to the plan of the buildings,
- any existing physical feature(s) such as well, drains, trees, overhead/underground electricity lines including its voltage/capacity, etc.,
- service connection details with any critical infrastructure details including but not limited to drains, overhead/underground electricity lines including its voltage/capacity, etc.
- area of the site, proposed covered area on each floor, and covered area percentile to the total area of the site,
- plot number or revenue particulars of the property on which the building is intended to be erected,
- graphical scale with north direction,
- parks, landscape plans, parking plans and contour plans surrounding the land, and
- such other details as may be prescribed by the competent authority.

**4.8 Clearance zone for buildings near/adjoining High Tension Lines electricity (Distance from Electric lines NBC Part 3 Code 6.4)**

No building or part thereof including Projections from the face of the outer walls shall be allowed to be erected or re-erected or any addition or alteration made to a building within the distances quoted below in accordance with the current Indian Electricity Rules as amended from time to time between the buildings and any overhead electric supply line

<b>Type of High voltage Electricity Lines</b>		<b>*Vertical</b>	<b>**Horizontal clearance (in meters)</b>
a.	Low and medium Voltage and service lines,	2.5	1.2
b.	High Voltage lines up to and including 11 KV lines,	3.7	1.2
c.	High Voltage lines above 11 KV and up to and including 33 KV.	3.7	2.0
d.	Extra High voltage lines beyond 33 KV	3.7 (Plus 0.3 meters for very additional 33 KV or part thereof)	2.0 (Plus 0.3 meters for very additional 33KV or part thereof)

e.	<p>* The horizontal clearance shall be measured when the line is at a maximum deflection from the vertical due to wind pressure.</p> <p>** The horizontal clearance between the nearest conductor and any part of such building shall, on the basis of maximum deflection due to wind pressure, be not less than as given above</p>
<p>Also See Part VIII, Rules 77 to 80 of The Indian Electricity Rules, 1956</p>	

#### 4.9 Building Plan

- (a) The plans, elevations and sections of the building accompanying the notice with dimensions shall be drawn to a scale of:
- (i) 1:50 for plots measuring up to 500 square meters,
  - (ii) 1:100 for plots measuring from 500 square meters to 1000 square meters,
  - (iii) 1:200 for plots measuring more than 1000 square meters.
- (b) The Plans shall indicate:
- (i) all the floors including basements, stilts and all external elevations and cross sections illustrating distinctly all the different levels and a minimum one section through staircase, water closet, bath, kitchen and the garage if to be constructed,
  - (ii) all drawings shall fairly indicate the size of rooms, size of windows and ventilators, size of door opening, and stair runs, kitchens, bathrooms, and/or other key design elements (such as size of balconies, lift lobbies, lifts, etc.) as in the original design,
  - (iii) the plinth level of the building with reference to the mean level of street from where the access to the site is taken,
  - (iv) the schedule of dimensions of sizes of the doors, windows, other openings and methods of ventilation of each room/area,
  - (v) the means of access to the building(s) and to various floors as well as the means of escape in case of fire, if required under the specific law/National Building Code or these Bye-Laws; along with ramps and steps with respect to the building(s),
  - (vi) in case of proposed additions and alterations in the existing building(s), all new works shall be shown on the drawings in distinct colours with index, thereof,
  - (vii) details of method of wastewater disposal, sewage, storm water and water supply,
  - (viii) Facade wall and Roof Sections as per ECBC 2022 Section 4; Facade Glass, Facade Wall and Roof U-Value Calculation as per ECBC 2017 Section 4.
  - (ix) Provisions as per Eco-Niwas Samhita, 2018 by Bureau of Energy Efficiency, including but not limited to Thermal Transmittance, Thermal Emittance, Window-to-floor area ratio, calculation of building envelopes, compliances for cold climate, surface film thermal resistance, roofs, unventilated air layer thermal resistance, etc.
  - (x) SEF and Daylighting Calculation as per ECBC 2022 Section 4.
  - (xi) provisions of rainwater harvesting system as per Code 9.1,
  - (xii) provisions for photo voltaic solar power plant as per Code 9.3,
  - (xiii) provisions for differently abled person as per Chapter 10.



**Note:** - Any Govt. of India/UT Acts, Laws, Byelaws, or notifications shall be applicable for the same. (including Ladakh Energy Conservation Building Codes, once notified)

- (c) **Disaster Preparedness:** Hazard profiling for the construction zones should be mandatorily carried out as per National Disaster Management Plan, 2019. Based on topographic profile, specific inclusion of IS Codes should be implemented for Cloud bursts, Floods/Flashfloods, Avalanches, Earthquake (IS 4326, 13920 (Seismic load), IS 1893, IS 13827), Locust Menace/Agriculture Droughts, Landslide ((IS 14458) and IS 14496)), Sandstorm. Adaptation measures need to be explored as per NDMP 2019 and UT level Disaster Management Plan. Parametric insurance options for hazard proofing of structures are recommended for resilient building infrastructure development.

#### **4.10 Construction of buildings as per Architectural Control Sheet(s)**

- (i) The applicant shall obtain Architectural Control Sheet(s) approved by the authorized officer of the competent authority, by applying on plain paper and as per rate fixed by the competent authority. The applicant is not required to get the building plan sanctioned from the competent authority in case the Architectural Control Sheet is adopted for execution wherever, applicable.
- (ii) Provided the applicant constructs the building strictly in accordance with the standard architectural controls.
- (iii) The applicant shall, however, have to obtain formal permission from the competent authority for starting construction of the building and shall also intimate to the competent authority, the date of commencement of construction of building.

## **Chapter-5: Procedure for Approval of Building Plans**

### **5. Building Plan Approval**

#### **5.1 Valid Building Application**

All building plan applications submitted under **Code 4.1** shall not be considered valid, unless made on the prescribed Form and attached with requisite number of plans and documents, along with scrutiny fee and development permission fee other charges as prescribed by the competent authority. In case of non-compliance, the application together with plans and documents shall be returned to the applicant for resubmission in accordance with these Bye-Laws.

#### **5.2 Scrutiny and sanction of building plans**

- (1) The competent authority shall constitute such committees for the purpose specified in **Code 4.5**, for scrutiny of applications received as specified under **Code 4.1** and for submission of recommendations for sanction/refusal of such applications.
- (2) The Committee shall consist of officials/officers as constituted by the competent authority and shall at least once in a week.
- (3) The recommendations of the members of the committee shall be forwarded to the competent authority for consideration and approval, with or without change.
- (4) The committee or any officer authorized shall pass an order and convey the decision of sanction or rejection to the applicant in **Form BC-III**.

#### **5.3 Validity of sanctioned plans**

- (1) Sanction for erection or re-erection of a building(s) of less than 15 meters' height shall remain valid for three (3) years and in the case of buildings more than fifteen (15) meters' height the sanction shall remain valid for five (5) years from the date of sanction,
- (2) The temporary building (s) for construction works, permitted by the competent authority, shall not be allowed to continue beyond three months of the lapse of the validity of the sanctioned plans. An additional provision for extension by up to 3 months may be provided by taking permission from approval authority, in writing and submission of extension fees for the same.

#### **5.4 Re-validation of building plans**

- (1) If a building(s) is not completed within three (3) years or five (5) years, as the case may be, from the date of sanction, the sanction with respect to the portion of the building not been completed will be deemed to have lapsed.
- (2) A fresh application shall be submitted for the incomplete portion of a building (s), in accordance with **Code 4.1** and accompanied by the prescribed scrutiny fee.

- (3) In case the construction could not be started within three (3) years or five (5) years, as the case may be after the sanction of a building plan(s) or has been started but could not be completed within the validity period, the owner/applicant shall apply for revalidation of building plans before the lapse of sanction simply by depositing revalidation fee as decided by Approval Authority for the covered area requested for re-validation. This revalidation of building plan(s) shall automatically be deemed granted from the date of depositing the revalidation fee.

## **5.5 Deemed sanction**

The competent authority shall pass the orders, either of sanction or of rejection, within a period of twenty (20) days of submission of building plan (s) duly accompanied by all necessary documents as mentioned in **Code 4.1**. The building plan(s) shall be deemed sanctioned if it is in conformity with ECBC Codes, Ladakh ECBC, 2021 (once notified), and any other codes as mentioned in the Building Bye-Laws, or as deemed necessary by UT Government and/or Central Government, and in accordance with the permitted land use of the area and all leviable fee/charges have been deposited by the applicant, but no orders have been passed by the competent authority within the specified days in this sub-code. Risk based classification may differ from the given timeline, based on the nature of the risk on a case-to-case basis, within a period of 2 months.

## **5.6 Submission of revised building plans during the validity period of sanction**

- (1) If during the construction of a building (s), any deviation from the sanctioned plan (s) is intended to be made, approval of the Competent Authority for the same may be obtained before the change is made. The revised plan(s) showing deviations shall be submitted and the procedure laid down for the sanction of building plan as stated in **Code No. 5.1 and 5.2**, shall be followed for all revised plans, along with depositing scrutiny fee for the area proposed to be revised, as well as previously sanctioned plans and revised drawings in the same format.
- (2) No notice and or building approval is necessary for compoundable alterations/violations, which do not violate any provision (s) concerning building requirements, structural stability, and fire safety requirements of these Building Bye-Laws.

## **5.7 Revocation of sanction**

The sanction granted under **Code 5.2 and Code 5.4** can be revoked by the competent authority, if it is found that such sanction has been obtained by the owner by means of misrepresentation of material facts or fraudulent document (s) submitted along with the building plan application or otherwise or the construction is not being done in accordance with the sanction granted and or in accordance with these Bye-Laws.

## **5.8 Maintenance of E-Register for sanction/Registration of Building Plans**

An online E-register integrated with the existing E-Governance module shall be maintained for all building applications received, permissions granted or deemed to

have been granted or refused and or returned under these Bye-Laws. The said register shall be available online to the public for inspection on the website of sanctioning authority.

### 5.9 Damp Proof Course (DPC) Certificate

The owner or the architect shall submit a certificate, in case of self-certification, that the construction of building up to DPC level is as per the sanctioned plan(s). The competent authority shall verify the certification and shall issue consent/comments within three (3) days of receiving the certificate. DPC certificate shall be deemed to have been accepted if it is in conformity with Bye-Laws and no orders have been passed by competent authority within specified days.

### 5.10 Occupation Certificate

- (1) Every person who intends to occupy a building or part thereof for which the building plan(s) has been sanctioned shall apply for the occupation certificate in Form **BC-IV(A) or BC- IV(B)**, accompanied by certificates in relevant Form **BC-V (1) or BC-V (2)** duly signed by the architect and/or the engineer along with following documents:
  - (i) details of sanctionable violations from the approved building plan (s), if any in the building, jointly signed by the owner, architect and engineer,
  - (ii) completion drawings or as-built drawings along with completion certificate from architect as per **Form BC-VI**,
  - (iii) photographs of front, side, rear setbacks, front and rear elevations of the building shall be submitted along with photographs of essential areas like cut outs and shafts from the roof top. An un-editable compact disc/ DVD/ any other electronic media containing all photographs shall also be submitted,
  - (iv) Permit Checklist needs to be followed and permit certificate from Bureau of Energy Efficiency (BEE) Certified Energy Auditor for installation of Rooftop Solar Photo Voltaic Power Plant shall be required in accordance with orders/policies issued by the Renewable Energy Department from time to time, if applicable
  - (v) Construction permit and Occupancy Certificate from Bureau of Energy Efficiency (BEE) Certified Energy Auditor for constructing building in accordance with the provision of ECBC, wherever applicable
  - (vi) No Objection Certificate (NOC) of fire safety of building from concerned Fire Officer or an officer authorized by UT Administration for this purpose.
  - (vii) All provisions of Ladakh Energy Conservation Building Code 2021 (once notified)

**Note:** Online portal for auto-scrutiny shall always require upload of the recommended digital format of the drawings to be uploaded on the portal for use

- (2) No owner/applicant shall occupy or allow any other person to occupy a new building (s) or part thereof until such building or part thereof has been certified by the competent authority or by any officer authorized by it in this behalf as having been completed in accordance with the permission granted and an 'Occupation Certificate' has been issued in **Form BC-VII**. However, competent authority shall charge composition charges for compoundable violations before issuance of **Form BC-VII**. Further, the water, sewer and regular electricity connection shall be released only after issuance of occupation certificate by the competent authority. The 'Occupation Certificate' to be issued shall on the basis of parameters mentioned as under:
- i. minimum 25% of total permissible ground coverage, excluding ancillary zone if any, shall be essential for issuance of occupation certificate, other than residential and industrial buildings),
  - ii. in the case of residential plot, a minimum 50% of the total permissible ground coverage to be constructed with minimum one habitable room, a kitchen and a toilet forming a part of submitted or the approved building plan shall be completed,
  - iii. debris and rubbish consequent upon the construction has been cleared from the site and its surroundings,
  - iv. after receipt of application, the Competent Authority shall communicate in writing within eighteen (18) days, his decision for grant or refusal of such permission for occupation of the building in Form **BC-VII**. The E-register shall be maintained as specified in **Code-5.8** for maintaining record in respect of Occupation Certificate, if no communication is received from the Competent Authority within eighteen (18) days of submitting the application for "Occupation Certificate", the owner is deemed permitted to occupy building, considering "Occupation certificate" deemed issued and the application **Form BC-IV (A) or BC-IV(B)** shall be the "Occupation Certificates". However, the competent authority may check the violations made by the owner and take suitable action with regard to the violations, and,
  - v. if the owner or the architect or engineer or Consultant as mentioned in **Code 4.2 and 4.10** as the case may be, submits a wrong report while making application under these Bye-Laws or if any additional construction or violation is reported to exist at site or has concealed any fact or mis-represented regarding completion of construction of building along with essential conditions of seeking occupation certificate, he shall be jointly and severally held responsible for such omission/commission and complaint against the architect for suspension of his registration, and the owner shall be liable to pay for the penalty as may be decided by the competent authority after giving an opportunity of being heard. if it emerges during the hearing that the relevant information was concealed by architect/engineer/consultant, necessary penal proceedings of barring architect/engineer/consultant from practicing in the Union Territory of Ladakh.

## 5.11 Occupation Certificate through Self-Certification

- (1) The owner who had applied under **Code 4.2** and the building falls in the Low-Risk Category defined in **Code 4.9 (b) (vii) and Code 5.2 (1)**, shall submit an application to the competent authority for grant of occupation certificate on Form BCS-III and along with completion drawings, Completion Certificate on Form BCS- IV and along with the following documents:
  - (i) details of compoundable violations, if any, in the building, jointly signed by the owner, architect and structural engineer, along with demand draft of composition charges for such violations at the rates determined by the Competent Authority from time to time, shall be submitted along with **Form BCS-III**,
  - (ii) owner and architect both shall give a self-certification in **Form BCS-IV** that no provision of these Building Bye-Laws, has been violated excluding compoundable violations,
  - (iii) photographs of front, side, rear setbacks, front and rear elevations of the building shall be submitted along with photographs of essential areas such as cut outs and shafts from the roof top. An un-editable compact disc/ DVD containing all photographs shall also be submitted,
- (2) the competent authority shall issue the occupation certificate in **Form BCS-V** within eight (8) working days of the receipt of the **Form BCS-III** duly completed in all respects and accompanied by the required completion drawings, forms, and affidavits. The occupation certificate shall be issued provided that the documents submitted along with **Form BCS-IV** are in order. Provided that if any violation found within time prescribed above during inspection, which is not listed in compoundable violations stated at **Code 4.11(1)(i)**, then the violation (s) be compounded as per composition charges prescribed (or demolished if non-compoundable), by the competent authority.
- (3) if no communication is received from the competent authority within eight (8) working days of submitting the application for "Occupation Certificate", the owner is permitted to occupy building, considering deemed issuance of "Occupation certificate" and the application Form BCS-III shall act as "Occupation Certificate". Provided that violations, if found at any subsequent stage, shall result in cancellation of the occupation certificate issued and the same shall be restored only after removal of violations. Further, action against the architect shall also be taken for furnishing a wrong certificate/affidavit.
- (4) No person shall occupy or allow any other person to occupy any new building or a part thereof for any purpose whatsoever until such building or a part thereof has been certified by the competent authority as having been completed and an occupation certificate has been issued in his/her favour in Form BCS-V within the above-mentioned period. However, the minimum percentage of permissible covered area, for industrial plot only as mentioned below in the table shall have to be constructed to obtain occupation certificate or as decided by the competent authority, from time to time.

**Minimum requirement of construction area for obtaining Occupation Certificate**

<b>Sr. No.</b>	<b>Area of site</b>	<b>Percentage of permissible covered area</b>
1	Up to 2 acres	25%
2	Above 2 acres to 5 acres	20%
3	Above 5 acres to 10 acres	15%
4	Above 10 acres	10%

- (5) No occupation certificate shall be issued unless debris and rubbish consequent upon the construction has been cleared from the site and its surroundings.

**5.12 Occupation Certificate through third party certification**

- (1) The owner who had applied under **Code 4.1** and having building under Moderate Risk Category defined in **Code 6.1(1)**, shall submit an application to the competent authority for grant of occupation certificate in **Form BCS-III** and along with completion drawings, Completion Certificate in **Form BCS-IVA** and along with the following documents:
- (i) details of compoundable violations from the approved building plan (s), if any, in the building, jointly signed by the owner, architect and structural engineer, along with demand draft of the due payment for composition charges of such violations at the rates determined by the competent authority shall be submitted with Form BCS-III,
  - (ii) a certificate from third party (i.e., an architect or an engineer other than the architect/ engineer involved in designing, construction, and supervision of the building) in **Form BCS-IVA** that the building has been inspected in all respect and no provision of the Building Bye-Laws, has been violated excluding compoundable violations, and
  - (iii) photographs of front, side, rear setbacks, front and rear elevation of the building shall be submitted along with photographs of essential areas like cut outs and shafts from the roof top. An un-editable compact disc/ DVD containing all photographs shall also be submitted.
- (2) The competent authority shall issue an occupation certificate in **Form BCS-V** within eight (8) working days of receipt of the **Form BCS-III** duly completed in all respects and accompanied with the required completion drawings, forms, and affidavits. The occupation certificate shall be issued provided that the documents submitted along with **Form BCS-IVA** are in order. Provided that if any violation (s) found within the time prescribed above during inspection, which is not listed in compoundable violations stated at **Code 4.12 (1)(i)**, then the violation(s) be compounded or demolished by the competent authority if non-compoundable, as per composition charges prescribed.
- (3) If no communication is received from the competent authority within eight (8) working days of submitting the application for "Occupation Certificate", the owner is permitted to occupy building, considering deemed issuance of "Occupation certificate" and the application **Form BCS-III** shall act as "Occupation Certificate". Provided that the violations, if found at any subsequent stage, shall result in cancellation of the occupation certificate issued and the

same shall be restored only after removal of violations. Further, action against the architect shall also be taken for furnishing a wrong certificate/affidavit.

- (4) No person shall occupy or allow any other person to occupy any new building or a part thereof for any purpose whatsoever until such building or a part thereof has been certified by the competent authority as having been completed and an occupation certificate has been issued in his favour in **Form BCS-V** within the above-mentioned period.
- (5) No occupation certificate shall be issued unless debris and rubbish consequent upon the construction has been cleared from the site and its surroundings.

### 5.13 Revocation of Occupation Certificate

After the issuance of occupation certificate, if at any stage found that the building is used for some other purpose than as permitted to be used or made any addition/alteration in the building then, after affording personal hearing to the owner, the competent authority may pass orders for revocation of occupation permission and the same shall be restored only after removal of violations.

### 5.14 Green Building Measures and Incentives

1. For reducing consumption of total energy, fresh potable water and reduction in total waste generation by modern buildings, the green building measures are to be adopted by all building on various plot sizes.
2. The applicant shall be awarded benefits of additional Floor Area Ratio for adopting either green norms by getting his/her building/ site/ project certified from Green Rating for Integrated Habitat Assessment (GRIHA) or Green and Eco-friendly Movement (GEM) and achieving rating as specified below:
  - i. 09%: 3 Star / 3 GEM
  - ii. 12%: 4 Star / 4 GEM
  - iii. 15%: 5 Star / 5 GEM
3. The buildings should use minimum 20% of the materials from recycled construction and demolition waste. Further use shall help in incentives on Property Tax, as may be decided by Local Bodies.

**Note:**

- A. *The additional FAR shall be given over and above the maximum permissible FAR.*
- B. *Where solar space/ trombe wall areas are designed specifically for solar passive heating of building proposed, a maximum width of 2 feet can be exempted from FAR.*
- C. *The incentive of additional FAR for achieving GRIHA/GEM rating shall be applicable only on new buildings. The incentive of additional FAR would also be applicable on buildings which are under construction/design and registered and pre-certified and certified with the rating agencies (GRIHA/GEM) and incorporating features for making Green Buildings but have not yet obtained Occupation Certificate.*
- D. *The applicant has to pay only Infrastructure Development Charges on additional FAR granted as incentive.*
- E. *Procedure for availing incentive:*



- a. *The applicant is required to submit pre-certification rating from GRIHA/GEM Council at the time of submission of building plan application to the Competent Authority for claiming incentive of additional FAR as stated.*
- b. *At the time of applying for Occupation Certificate of building, the applicant is required to submit provisional/Final rating from GRIHA/GEM Council.*
- c. *The Competent Authority only after verifying that the GRIHA/GEM rating achieved in final rating is same as precertification rating submitted at the time of building plan application, shall issue the Occupation Certificate:*
  - i. *Provided, in case the final rating achieved is lesser than the provisional rating, the occupation certificate shall be issued after compounding the additional FAR (i.e., difference of additional FAR from precertification rating and final rating) acquired by the applicant, at ten times the rates of EDC applicable at the time of submission of occupation certificate application.*
  - ii. *Provided, the applicant may claim additional FAR, if final rating is higher than the provisional rating.*

### **5.15 Biodiversity and Wildlife Protection and inclusive design**

Ladakh is known for its serene and pristine connection with nature. The biodiversity forms an inclusive part of the ecosystem along with human interactions. However, the exponential rise in urbanization and tourism in Ladakh calls for an inclusive ecosystem which works in coherence of protection of wildlife and biodiversity. Building bye-laws thus play a very important and non-negotiable role to allow for inclusive design with the environment:

- 1) All development activities must adhere to the provisions as mentioned in The Wild Life (Protection) Act, 1972 [and any further amendments], The Biological Diversity Act, 2002 [and any further amendments] and/or any acts, laws, notifications or guidelines released by the Central, UT, or Municipal Government from time to time.
- 2) All development activities must be considerate of the People's Biodiversity Register (once formulated) and make necessary and conscious decision to utilize an inclusive design with the biodiversity. Any issues, qualms or considerations shall be as per The Wild Life (Protection) Act, 1972 [and any further amendments], The Biological Diversity Act, 2002 [and any further amendments], and/or any acts, laws, notifications or guidelines released by the Central, UT, or Municipal Government from time to time.
- 3) Ladakh had formulated National Biodiversity Strategy and Action Plan for the sub-state of Ladakh in 2003. The provisions of the same shall be followed by all developments. Exceptions shall be allowed as per the decision taken by the respective Biodiversity Management Cell. Further challenges and appeals shall be subject to rulings by UT-level Biodiversity Committee and National Biodiversity Authority.

## **Chapter-6: Classification of Buildings for approval and occupation requirements**

### **6. Building Approval and Occupation Certificate**

#### **6.1 Risk based classification of building applications**

There is a need to make provisions for fast-tracking building permission procedures for all non-automatic approvals. Therefore, in the spirit of 'Ease of Doing Business', the buildings have been classified further on the basis of risk parameters/ risk-based classification to clear the building permits on fast-track system. This kind of classification shall be used for fast tracking the sanction of building plans, which shall facilitate regulated and faster construction permits, and also aid in improving the rating of the country in World Bank's assessment in 'Ease of Doing Business'. Further, the ULB in consultation with all parastatal bodies involved, shall identify risk-based classification of industrial, commercial and institutional buildings and prepare risk-based matrix, in-line with those proposed in Model Building Bye Laws, 2016 for residential and storage buildings/ warehouses/ godown and accordingly prescribe the fast-tracking approval system. This exercise shall be done within a period of 3 months from the date of publication of the Local Building Bye-laws.

On the basis of above-mentioned risk matrix prepared by each of the agencies involved in approving building plans, UT Administration shall design and notify necessary legal instructions to implement risk-based mechanism with a view to fast track building permissions based on their risk classification. These instruments may include, but are not limited to, delegation of powers, out-sourcing, empowering architects, self-certifications, etc. These notifications shall be done within 3 months from the date of notification of risk matrix by each competent authority / agency as mentioned above.

For approval of the residential plotted and group housing buildings, risk-based classification:

- (1) For fast-track building plan approval, the competent authority shall approve building plans considering the risk-based classification of buildings depending upon the respective risk matrices as mentioned in **Code 6.1 (1) – 6.1 (3)**
- (2) The application for approval and grant of Occupation Certificate of very-low to moderate risk buildings shall be allowed as per **Code 4.2** and relevant sections of **Chapter-5**. The application for approval and grant of Occupation Certificate of high-risk buildings shall be allowed as per **Code 4.1** and relevant sections of **Chapter-5**.
- (3) For building plan approval, the competent authority shall approve building plans considering the risk-based classification of buildings depending upon height and area. The buildings are categorized in the following categories:

## i. Residential Buildings:

Table 1 Risk matrix for different residential buildings

Risks		Very Low	Low	Moderate	High
<b>Criteria</b>	<b>Parameters</b>				
Size of the plot	Square Meters	Below 105 m <sup>2</sup>	105 – 500 m <sup>2</sup>	Above 500 m <sup>2</sup>	All sizes
Height of the building	Meters	<15 m	<15 m	<15 m	15 m or above
Use of the premises	Various categories	Residential plotted	Residential plotted	Residential plotted	Group Housing

### Note:

- A. Considering no other issue like Monuments, Metro, DUAC, Airports etc. are involved. In case the property lies within the regulated zone of metro rail, airport etc. the online clearance from the local body concerned shall be taken
- B. Group Housing area is minimum 2000 sq mt (may vary between States)
- C. The Urban Local Body/ Urban Development Authority shall empanel professionals as necessary
- D. The Urban Local Body/ Urban Development Authority shall work out and prescribe fees for submitting the building plans
- E. The fees shall be derived by an automated built-in calculator in the online system of submission.

### Suggested Fast Tracking Tools:

#### For Very Low Risk Buildings:

In case of standard building plans prepared by the Authority for residential plots **up to 105 sq.mt.** in size and forming part of the approved layout plan, the owner shall be entitled to sign such standard plans and the required documents for sanction. In such cases, certificate from professionals would not be necessary and the owner shall be bound to follow the approved standard plan in detail. The Authority shall explore options of EWS/LIG/MIG plotted housing schemes to *develop pre-approved Standardized building plans of Housing Units* for variable plots sizes/carpet area (in the range 30sqm-105sqm). The owner shall undertake construction of the so formed standard housing units.

#### For Low-Risk Buildings:

A Competent professional (qualification & competence as per Annexure-D) shall be empowered to issue the building permit, but only after submitting the plan along with requisite documents and fees to the concerned local body. If the owner/ professional desires to get the building plan sanctioned by the local body, building plans prepared by a qualified architect/ engineer will have to be submitted to the concerned local body along with the fees and other requisite documents and the local body shall grant the building permit within 10 days.

#### For Moderate-risk Buildings:

Building plans will have to be prepared by a competent professional and the building plans will have to be submitted to the concerned local body along with the fees and other requisite documents. The local body shall grant the building permit within 20 days.

**For High-risk Buildings:**

Clearance from Fire department, or authority as appointed by UT Administration, and other necessary clearances from AAI, NMA and other agencies have to be obtained. Building plans will have to be prepared by a competent professional and the building plans will have to be submitted to the concerned local body along with the fees and other requisite documents. The local body shall grant the building permit within 20 days.

**ii. Storage/Warehouse Buildings**

For approval of the buildings meant for use as storage buildings/ warehouses/godown, risk-based classification shall be in the following categories:

*Table 2 Risk Matrix for Storage/Warehouses*

<b>Risks</b>	<b>Very Low</b>	<b>Low</b>	<b>Moderate</b>	<b>High</b>
Covered area on all floors / Built-up Area	Up to 250 m <sup>2</sup>	250 – 2000 m <sup>2</sup>	Up to 2000 m <sup>2</sup>	Above 2000 m <sup>2</sup>
Height of the building	<15 m	<15 m	<15 m	<15 m
Abutting Road width	Min. 12 m	Min. 12 m	Min. 12 m	Min. 12 m
Type of Material Storage	Category A	Category A	Category B (Stacking Height – Medium)	Category B (Stacking Height – Medium)

**Note:**

- A. The level of Risk is classified according to the material stored in the warehouse/storehouse. Material shall be classified according to the Categories defined in Annexure “C”.
- B. The Urban Local Body/ Urban Development Authority shall empanel professionals as per “Annexure D”.
- C. The building application processing fees shall be derived by an automated built-in calculator in the online system.

**Suggested modes of Fast Tracking:**

**For Very Low Risk Buildings:**

A competent professional (qualification & competence as per Annexure-D) shall be empowered to issue the building permit, but only after submitting the plan along with requisite documents and fees to the concerned local body. If the owner/ architect/ engineer desires to get the building plan sanctioned by the local body, he shall apply online to the local body and the local body shall grant the building permit within 10 days.

**For Low-Risk Buildings:**

Building plans will have to be prepared by a competent professional and the building plans will have to be submitted to the concerned local body along with the fees and other requisite documents. The local body shall grant the building permit within 20 days.

**For Moderate Risk Buildings:**

Building plans will have to be prepared by a competent professional and the building plans will have to be submitted to the concerned local body along with the fees and other requisite documents. The local body shall grant the building permit within 20 days.

**For High-Risk Buildings:**

Building plans will have to be prepared by a qualified architect and the building plans will have to be submitted to the concerned local body along with the fees and other requisite documents. The local body shall grant the building permit within 30 days.

**iii. Industrial Buildings**

For approval of the buildings meant for use as storage buildings/ warehouses/godowns, risk-based classification

Risks		Low	Moderate	High
<b>Criteria</b>	<b>Parameters</b>			
Size of the plot	Square Meters	Up to 350 m <sup>2</sup>	Above 350 m <sup>2</sup>	All sizes
Height of the building	Meters	Less than 15 m	Less than 15 m	15 m and above
Abutting Road width	Meters	Min. 12 m	Min. 12 m	Min. 12 m

**Note:**

- A. The level of Risk is classified according the size and height of the industrial building proposed.
- B. The Urban Local Body/ Urban Development Authority shall empanel professionals as per “Annexure D”.
- C. The building application processing fees shall be derived by an automated built-in calculator in the online system.

**Suggested modes of Fast Tracking:**

**For Low-Risk Buildings:**

1. Deemed Approval with Self-Certification
2. Plans to be submitted along with Structural drawings which does not require sanction

**For Moderate-Risk Buildings:**

1. Plans to be submitted to the empaneled professional.
2. Fire/Structural safety certification by Fire Services/ Structural Engineers
3. Approval to be granted within 10 working days by the empaneled professional.
4. Approved plan to be submitted to ULB/DA.

**For High-Risk Buildings:**

1. Online application
2. Immediate acknowledgement by software
3. Fire/Structural safety certification by Fire Services/ Structural Engineers
4. Approval by ULB/DA within 20 working days.

## **Chapter-7: Land Use of Site, Planning and Architectural Control and Coverage**

### **7.1 Use of site, type, and character of building**

- (i) Type and character of building, including ancillary buildings, that may be erected or re-erected on a site and the purpose for which these may be used shall not be other than that shown in the Master Plan or Zonal Development Plan, as the case may be or as shown in the approved layout plan of a colony or zoning plan, if any.
- (ii) Where the site does not form part of a layout plan or zoning plan, the use shall be in conformity with the use prescribed in the Master Plan or Zonal Development Plan and in case no master plan notified, in that case, the use of the surrounding area will be considered and in such cases the decision of the competent authority shall be final.
- (iii) Every building that may be erected or re-erected on a site, in addition to the foregoing restrictions, shall comply with the restrictions shown in the Architectural Control Sheets, wherever applicable which shall have precedence over the Building Bye-Laws.
- (iv) Every building that may be erected or re-erected on a site, in addition to other restrictions under these Bye-Laws, shall comply with the provisions made in the National Building Code of India (updated from time to time), wherever these Building Bye-Laws are not applicable.
- (v) Facade design to also incorporate Urban Design guidelines to preserve heritage conservation and city identity for the districts. Separate Urban Design guidelines need to be formulated and suitable notification need to be released for the same by the relevant authorities.

### **7.2 Sub-division and amalgamation of plots**

- (i) Sub-division of a bigger plot into smaller units is permissible in the case of a family division, in case the plot is not allotted by the development agency. In case a plot has been allotted by the development agency, the prior approval of the competent authority is required. Each such sub-division shall be accessible independently through a street or a public road/street.
- (ii) Except as otherwise expressly provided at the time of sale/allotment of plot in a colony under specific scheme approved by the competent authority, not more than one building unit shall be erected on any one plot, however, two or more plots may be combined together under a single ownership for purposes of erection of one "building unit".

**Note:-**

*"Building unit" means a self-contained building with such outbuildings as are ordinarily ancillary to the main building used in connection therewith and physically incapable of sub-division into two or more*

independent building units. A building unit may, however, be owned by an individual or may be jointly and severally owned, provided it remains in a single indivisible ownership.

### 7.3 Proportion of the site which may be covered with buildings

- (1) The proportions of covered area of a building, including ancillary buildings, shall be in accordance with the categories of plots given in following sub-Codes and the remaining portion shall be left open in the form of open space around the building falling in the core area identified in the Master Plan or Zonal Development Plan or as notified by the competent authority and other than Core Area.
- (2) For General Building Requirements, **Chapter-4 of Model Building Bye Laws 2016** needs to be referred.
- (3) **Chapter 5 & 6 of Model Building Bye Laws, 2016** need to be referred for provisions of high rise and structural safety, as relevant, unless mentioned otherwise
- (4) Unless specified in these building bye-Laws, DCRs, or Architecture Control Sheet, the minimum setbacks, permissible heights and any relevant critical sections shall be referred to from **Model Building Byelaws, 2016**.
- (5) Restrictions based on critical areas need to be included, including Airport Authority of India, Archaeological Department, Hazard Risk Mitigation and other critical areas need to be consulted with the relevant authorities, and NOC shall need to be obtained as the case may be.
- (6) Relevant group housing requirements need to be referenced with Master Plan/DCR documents. Special provisions for construction of EWS and slums housing based on spatial impact assessment depending on the feasibility of the project, location, and impact shall be taken from Master Plan/DCR Documents. Private developers need to provide 15% for EWS and hand over to ULB at predetermined price; similar reservations need to be explored and provided in the Group Housing wherever relevant.
- (7) Core Area land use-wise permissible coverage, floor area ratio and height shall be as follows:

#### (i) Residential

Sr. No.	Plot area slabs in square meters	Maximum permissible Ground Coverage	Permissible basement	Maximum permissible Floor Area Ratio (FAR)	Maximum permissible Height (G+3 Floor) (including stilt (S+4 Floor in meters)
1	Up to 100	80%	Single level	200 %	15.0
2	Above 100 to 200	75%	Single level	200 %	15.0
3	Above 200 to 300	70%	Single level	180 %	15.0
4	Above 300 to 400	65%	Single level	160 %	15.0
5	Above 400	55%	Single level	140 %	15.0

#### (ii) Commercial

Sr. No.	Plot area slabs Square meters	Maximum permissible Ground Coverage	Permissible basement	Maximum permissible Floor Area Ratio (FAR)	Maximum permissible Height
1	up to 50	90%	Single level	200 %	18
2	Above 50 to 100	80%	Single level	200 %	18
3	Above 100 to 200	70%	Single level	180 %	18
4	Above 200 to 400	60%	Single level	160 %	18

5	Above 400	40%	Single level	150 %	18
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(iii) Plot setbacks

The buildings shall not project beyond the building lines as shown in the zoning plan of respective schemes/Zonal Development Plans and or as indicated below the minimum setbacks shall be adhered.

Sr. No.	Area of plot (in sq. meters)	Minimum Front Setback (meters)	Minimum Rear Setback (meters)
1.	Up to 50	1.0	-
2.	Above 50 to 150	1.5	1.0
3.	Above 150 to 200	2.5	2.0
4.	Above 200 to 400	3.0	3.0
5.	Above 400 square meters	4.5	4.0

(8) Areas other than core area:

(i) Residential: In the case of Plots; permissible coverage, floor Area ratio and height

Sr. No.	Plot area in Square Meters	Maximum permissible Ground Coverage	Permissible Basement	Maximum permissible FAR	Maximum permissible Height (G+3 Floor) (including stilt (S+4 Floor)) (in meters)
1	Up to 100	65%	Single level	160 %	15.0
2	Above 100 to 250	65%	Single level	145 %	15.0
3	Above 250 to 350	60%	Single level	130 %	15.0
4	Above 350 to 500	60 %	Single level	120 %	15.0
5	Above 500	55 %	Double level	100 %	15.0

**Note:**

- A. The additional FAR to the extent of 5% within the permissible height can be purchased at the collector's rates fixed from time to time for the respective localities.
- B. Provided that the building shall conform to the restrictions contained in the zoning plans, development control regulations (DCRs) or the architectural control sheets of respective areas.
- C. Provided that the 25% of the built-up area of the building not exceeding up to 50 square meters, whichever is less, can be used for non-nuisance professional consultancy services, after getting permission from the competent authority in writing. The applicant shall apply for specific use of consultancy services as mentioned in Code 3.83 in Form NAC-I along with fee as fixed from time to time and the permission shall be granted in Form NPC-II".
- D. Stilt floor is permitted for parking purposes in residential and commercial plots of all sizes, subject to the condition that maximum permissible height of the building shall not exceed 15 meters.
- E. Transfer of Development Rights need to be provided in accordance to Master Plan, DCRs and Zoning Regulations [that should include disaster management component, heritage preservation and conservations and other zoning regulations as required].



(ii) Group Housing

Sr. No.	Maximum permissible ground coverage	Permissible Basement	Floor Area Ratio	Maximum Permissible height (m)
1.	40%	Up to two levels	175%	21

**Note:**

- A. The height of mummy/lift room/water tank/building maintenance unit are not counted in the building height,
- B. The parking requirement of group housing shall be governed by Code 7.1 or as per the national building code updated.

(iii) Commercial

Sr. No.	Type of building	Area Norm	Maximum permissible Ground Coverage	Permissible Basement	Maximum permissible Floor Area Ratio (FAR)	Maximum permissible Height
1	Individual Shops	No Limit	As per the Architectural Control Sheets relating to façade and height controls in a street.			
2	Approved Commercial colony: includes shopping mall, multiplex, Departmental store, Integrated commercial Complex, Service Apartments, starred Hotels/ Unstarred Hotels and Guest Houses, offices.	No Limit	60 %	Two levels	175 %	15
3	Dhabas	500 square meters to 1/2 acre	50 %	One level	50 % (with maximum 50 sqm for kiosks for other items)	5 meters
4	Banquet Hall	Minimum 2.5 acres	<u>50 %</u>	One level	50% (10% FAR allowed for gift shop/STD Booths, Toy Centre and flower shops etc.)	15
5	Resort, 5-star Hotels, Motel (with/without banquet hall facilities)	No Limit	40%	Two levels	175 %	
6	Starred Hotels, Restaurants	No Limit	40 %	Two levels	175 % (with permissible 15% commercial component)	18
7	Amusement Park	No Limit	30 %	One Level	50 % (with permissible 15% commercial component)	Unrestricted
8	Big retail stores	No Limit	50%	Two Levels	175%	15
9	Petrol Stations	No Limit	As per terms and conditions of Oil companies.			

**Note:**

For all use cases subject to petroleum and explosive material handling, PESO regulations including Fire clearances are to be recommended

(iv) Institutional and Educational

Plot area slabs (Square meters)	Maximum permissible Ground Coverage	Permissible Basement	Maximum permissible Floor Area Ratio (FAR)	Maximum permissible Height
Up to 10000	35 %	Up to two levels	150%	15 m
Above 10000	25 % of such portion of site	Up to two levels	150 %	15 m

**Note:**

- A. In the case of educational institutions (Schools/College/University), the Hostel component is restricted to 20% of maximum permissible covered area, and
- B. The residential component (i.e., residential facility for principal, teachers/professors, staff, etc.) is restricted to 10% of maximum permissible covered area in addition to hostel component).
- C. However, the competent authority may consider the requirement of the project for permitting residential component up to maximum limit of 50% of FAR by recording the reasons of Justification.

(v) Industrial and IT

Sr. No.	Type of Industry	Maximum Ground Coverage	Permissible Basement	Maximum Permissible Floor Area Ratio	Maximum Permissible Height	Remarks
1.	General	60%	Twin level	150 %	30 Meters	--
2.	Apparel and Footwear	40%	Twin level	200 %	No Restriction	To be located on a road with Right of Way of 12 meters and above.
3.	Biotechnology other than Pharmaceuticals					
4.	Information Technology/ Information Technology Enabled Services					
5.	Approved Information Technology Park, Cyber Park, Cyber City, Technology Park	40%	Twin Level	250 %	No Restriction	Subject to condition that the plot must be located on roads with a Right of Way of 15 meters and above.

(vii) Storage/ Godown

Sr. No.	Type of building	Maximum permissible Ground coverage	Maximum permissible Floor Area Ratio (FAR)	Setbacks all around the plot (in meters)
1	Integrated Inland Container Depot/Custom Bounded Area	60%	75 %	8
2	Warehouse other than agricultural produce/Grain Godown/Silos			6
3	Warehouse for Agricultural Produce/Grain Godowns/ Silos			6
4	Gas Go-down			6

(viii) Recreational

Sr. No.	Type of building	Area norms	Maximum permissible Ground coverage	Permissible basement	Maximum permissible Floor Area Ratio (FAR)	Maximum permissible Height meters
1	Recreational site in residential zone such as Club/Community Centre including swimming pool, Badminton/Tennis/ Squash Court, Indoor Games, Canteen/ Restaurant (not exceeding 200 square meters area) and related uses. <b>Note:</b> a. Not more than 10% of the permitted FAR to be allowed for rooms. b. Maximum 10% of the total FAR can be utilized for commercial use viz, Canteen/ Restaurants.	0.5 acre to 2 acres	40 %	Single level	100 %	15
2	Open Space Zone such as Mini Amusement Park, Outdoor games facility, Canteen (not exceeding 200 square meters area) and related infrastructure requiring minimal construction activity <b>Note:</b> The overall character of the site shall be maintained as open with minimum construction to be permitted at site. However, Joy rides/ water parks etc. Installed in such projects, which are open to sky shall not be part of covered area/ FAR.	2 acres to 5 acres	10%	Single level	10%	15

**Note:**

A. Control of signs (hoardings) and outdoor display structures and transmission tower, telephone tower, mobile/broadband tower and outdoor display structure (Apart from provisions laid down in NBC 2005)

**7.4 General note**

- a. The unrestricted height shall only be allowed subject to submission of No Objection Certificate from the appropriate authority (i.e., Defense Establishment, Air Force Establishment, Airport Authority of India, etc.), if any in the area. The same needs to be sanctioned by Chief Engineer of UT Ladakh.
- b. It shall be the responsibility of the competent authority to procure the zoning map/ instructions issued by the appropriate authority (i.e., Defense Establishment, Air Force Establishment, Airport Authority of India, etc.),
- c. **Architectural/ Frame Control and siting of building**

In the case of building sites where architectural control is considered necessary by the competent authority shall cause to prepare Architectural Control Sheets showing the extent of architectural control on various units of the buildings or on the streets for such buildings to have a rhythmic façade and height control, inter-alia, the following:

- (i) compulsory elevations for a particular building or a row of buildings,
- (ii) compulsory height on the front or on any side exposed to view from a street upon which building shall have to be erected and completed within a certain period,
- (iii) compulsory height of floors,
- (iv) compulsory height and design of cornices, sills and top of windows in the first and higher stories,
- (v) compulsory building line along which the building shall have to be erected and completed within a certain period,
- (vi) compulsory type designs of balconies,
- (vii) compulsory use of materials texture and colour, and,
- (viii) building line in front, rear and side shall be as approved by the competent authority.
- (ix) Chapter 5 & 6 for National Building Codes, 2016 needs to be referred, as well as IS-Codes need to be incorporated for various building materials, and prevalent building codes for common materials found in Ladakh needs to be referred:
  - (a) IS-456 (2000) – Concrete/RCC
  - (b) IS-800 – Steel Structures
  - (c) IS-857 (Part 4): 1987 – Design loads (other than earthquake) for buildings and structures - Snow Loads
  - (d) IS-2212- Brickwork
  - (e) IS-13077 – Mud Mortar Construction
  - (f) IS-1904 – Structural Safety
  - (g) IS-1905 – Structural use of unreinforced masonry
  - (h) IS – 3629 – Structural Timber
  - (i) Any other relevant codes as deemed necessary by Competent Authorities, as mentioned in Chapter-3, and Annexure - D

d. Special zoning

In case competent authority decides that it is not feasible to keep setbacks/ spaces as prescribed in these Bye-Laws due to peculiar shape and condition of the site, then the competent authority after recording reasons in writing may issue special zoning plan, keeping in view the fire safety measures given in Part IV of NBC, and as updated from time to time.

e. Green building measures and incentives

- (i) For reducing consumption of total energy, fresh potable water and reduction in total waste generation in modern buildings, the green building measures shall be adopted by all buildings on plot measuring more than 250 square meters.
- (ii) All buildings more than 100 sq. m. shall comply with the green norms and conform

to the requirements mandatory for sanction as per provisions mentioned in **Chapter-10 of Model Building Bye Laws 2016**

- (iii) The applicant shall be awarded benefits of additional Floor Area Ratio (on plot area) for adopting either green norms specified in sub-Code (iii) or by getting building/ site/ project certified from Green Rating for Integrated Habitat Assessment (GRIHA) /Indian Green Building Council (IGBC)/ Leadership in Energy and Environmental Design (LEED)/ Green & Eco-friendly Movement (GEM) certification and achieving rating as specified in **Code 7.4 (e) (iv)**
- (iv) The details of green norms for additional FAR:
- (a) For Solar Power

Generating power in respect of total connected load of building from solar photovoltaic power plant	<b>15 to 25%</b>	<b>26 to 50%</b>	<b>51 to 75%</b>	<b>76 to 100%</b>
Additional FAR for all building Uses (except approved plotted residential)	3%	6%	9%	12%

- (b) For installing Solid Waste Management Unit in industrial sites:

Installing Solid Waste Management Unit for treatment of total generated waste.	
Additional FAR for all building uses (except approved plotted residential)	3%

- (c) The details of rating achieved from GRIHA/IGBC/LEED and Additional Floor Area Ratio (FAR) is as under: -

Additional FAR for all building uses (except plotted residential)	3%	6%	9%	12%	15%
GRIHA rating	1 star	2 star	3 star	4 star	5 star
IGBC/LEED rating	-	-	Silver	Gold	Platinum
GEM Rating	-	GEM 2	GEM 3	GEM 4	GEM 5

**Note: -**

- (i) The additional FAR shall be given over and above the maximum permissible FAR as stated in Code 7.3.
- (ii) The incentive of additional FAR for achieving GRIHA/IGBC/LEED rating shall be applicable only in the case of erection and re-erection buildings.
- (iii) The incentive of additional FAR would also be applicable for buildings which are under construction and registered with the rating agencies (GRIHA/IGBC/LEED) and incorporating features for making Green Buildings but have not yet obtained Occupation Certificate.

**7.5 Procedure for availing incentive:**

- (i) The applicant is required to submit provisional rating from GRIHA/LEED/IGBC at the time of submission of building plan application to the competent authority (**Code 5.1 and 5.2, Chapter 3, and Annexure 'D'**) for claiming incentive of additional FAR stated at **Code 7.5 (iv)**,
- (ii) At the time of applying for Occupation Certificate of building, the applicant is required to submit final rating from GRIHA/LEED/IGBC,
- (iii) The competent authority only after verifying that the GRIHA/LEED/IGBC rating

achieved in final rating is same as provisional rating submitted at the time of building plan application, shall issue the Occupation Certificate. Provided, in case the final rating achieved is lesser than the provisional rating, the occupation certificate shall be issued after compounding additional FAR (i.e., difference of additional FAR from provisional rating and final rating) acquired by the applicant. However, the applicant may claim additional FAR, if final rating is higher than the provisional rating.

- (iv) The applicant must submit a rating certificate for the building from GRIHA/LEED/IGBC /Compliance Certificate with respect to clause 6.5 (iii) [duly issued by architect or engineer or Bureau of Energy Efficiency Certified Energy Auditors as the case may be]is to be submitted after every five (5) years. In case, he fails to submit this certificate, the authority, after giving him one month notice may charge the compounding fee or may take appropriate action on case-to-case basis by recording the reasons in writing, thereof.

## **Chapter-8: Parking Spaces and Building Design Norms**

### **8. Parking v/s Building**

#### **8.1 Parking Car Space norms for buildings land-use-wise shall be as follows:**

(1) Car space Norms for residential plots:

<b>Sr. No.</b>	<b>Size of plot (square meters)</b>	<b>No of ECS</b>
1	Above 500	1 ECS for each dwelling unit.
2	Above 250 to 500	0.75 ECS for each dwelling unit.
3	Above 150 to 250	0.5 ECS for each dwelling unit.
4	Up to 150	Not required

Note-One ECS=12.5 sq. m. to be indicated in car bay size of 2.5 m X 5 m in residential plots.  
No on street parking where the right of way of road/street is less than 12 meters shall be permissible

- (2) For Group Housing minimum 1.5 Equivalent Car Space (ECS) for each dwelling unit,
- (3) For integrated/multi storied commercial building, big retail stores, restaurant, multiplex/ cinema/ theatre, and shopping mall 1.0 ECS for every 50 square meters of covered area,
- (4) For offices, cyber park/IT park/ cyber cities, 1.0 ECS for every 75 square meters of covered,
- (5) For shopping area and designated shopping markets being developed by competent authority, 65% of total site area shall be kept for parking purpose,
- (6) For hospitals/1.0 ECS for every 2 beds and for visitors 1 ECS for every 4 beds,
- (7) For industries, 1.0 ECS for every 300 square meters of covered area,
- (8) For assembly buildings (i.e., standalone theatres, cinema houses, concert halls, auditoria, and assembly halls), 1 ECS for every 40 square meters of covered area,
- (9) For primary and secondary schools, 15% of total site area for parking purpose,
- (10) For college, parking at rate of 1 ECS for every 200 square meters of covered area,
- (11) For government or semi-public offices including civil/High Court, 1 ECS for every 75 square meters of covered area,
- (12) For hotels and Motels, 1.0 ECS for every 75 square meters of covered area,
- (13) For institutional/ educational/ assembly buildings with parking areas, designate space in parking lots for on-site snow storage in areas that maximize sunlight and melting, while being mindful of drainage considerations
- (14) Covered parking in the basement or in the form of multi-level parking above ground level or stilt shall not be counted towards FAR. However, the footprint of separate parking building block(s) shall be counted towards ground coverage. For existing properties, separate parking area shall not be counted towards FAR.
- (15) Parking facilities need to include no-parking zones as per DCRs and Master Plans

of the respective Local bodies

- (16) Necessary changes may be made in the parking as per subsequent Development Plans and requirement of the time for which the changes are being provided. Furthermore, **Code 3.3 of Model Building Bye Laws 2016** needs to be referred, wherever not mentioned in these Bye-Laws.
- (17) In case of provision of mechanical parking in the basement floor/upper stories, the floor to ceiling clear height of the basement/floor shall be maximum of 4.75 meters.
- (18) No storage and commercial activities shall be permissible in the covered parking areas,
- (19) The misuse of the covered parking space shall immediately attract levy of three times the penalty of the composition fee prescribed (i.e., applicable collector rates for the locality) for the excess covered area in the respective category.
- (20) Fast charging facilities need to be incorporated at feasible locations for high volume of vehicles

**8.2 Applicable Car Space norms for sub-code 8.1 (1) to (19) above shall be as under:**

- i. 1ECS = 23 square meters for open parking,
- ii. 28 square meters for parking on stilts and
- iii. 32 square meters for basement parking.

**8.3 Party Wall**

- (1) In case the plot holder intends to construct a common boundary wall with minimum width of 230mm, shall be required to submit consent of owners of adjacent plots with which plot shares a common boundary i.e., the plot on both sides and at the rear.
- (2) Wherever the plot owner opts for independent boundary wall within the plot boundary:
  - (i) shall be allowed independent boundary wall only where adjacent plots are vacant, and,
  - (ii) the owner shall ensure that no part of foundation and boundary wall is constructed on the adjoining plot.

**8.4 Courtyard**

Interior courtyard for light and ventilation of habitable rooms shall not be less than 12.0 square meters in area and the minimum width of every such courtyard in any direction shall not be less than 3.0 meters.

**8.5 Plinth**

- (1) Plinth area shall be considered from Plot boundary Centerline sharing the approach road. The plinth of the main building shall be sited with respect to surrounding ground level for proper drainage of the plot. The height of the plinth shall not be less than 450 mm and more than 1.5 meters in the case of independent building not sharing party wall. If the party wall is shared the plinth level shall be the same as already laid for the party wall.
- (2) The plinth of courtyard shall be at least 150 mm above the level of the street from where entry to plot has been taken and shall be satisfactorily drained.



- (3) In no case, any part of the ramp/steps connecting building plinth to street/road shall lie on street/road and obstruct traffic movement.

### 8.6 Minimum area, size, height, light and ventilation required for different components of Residential buildings

- (1) Minimum area of a habitable room, kitchen and water closet shall be followed in accordance with table given as under:

Sr. No.	Room type	Minimum area (in square meters)	Minimum width (in meters)	Minimum clear Height (in meters)	Light and Ventilation (area of openable windows, ventilators)
1	Habitable room	9.5	2.4	2.40	Not less than 1/8 <sup>th</sup> of the total floor area of the room.
2	Kitchen	5.5	1.8	2.40	Not less than 1/8 <sup>th</sup> of the total floor area of the room.
3	Pantry	3.00	1.40	2.10	Not applicable
4	Bathroom	1.80	1.20	2.10	
5	Water Closet	1.1	0.90	2.10	
6	Combined Bath and Water Closet	2.8	1.2	2.10	
7	Store	No restriction	No restriction	2.10	Not applicable
8	Garage	14.85	2.75 x 5.40	2.40	
9	Doorways Habitable room	Not applicable	0.90	1.95	
10	Doorways for kitchen, bath, W.C	Not applicable	0.75	2.10	

#### (2) Habitable room Size and height

- (i) In case of Group Housing scheme, the dwelling unit having more than one room may have one of the rooms with a clear floor area not less than 7.5 sq. meters with one side not less than 2.4 meters,
- (ii) in case of air-conditioned rooms, the height shall not be less than 2.4 meters measured from the surface of the floor to the lowest point of air conditioning duct or false ceiling; and,
- (iii) all doors and windows shall open directly or through a verandah or to a permanent open space or an open space abutting the building not less than 1.8 meters in width.

#### (3) Bathroom and Water Closet (W.C)

- (i) Every bathroom and water closet shall:
  - (a) preferably be so situated that at least one of its walls shall have opening for circulation of external air, with provision of exhaust fan, and,
  - (b) toilet be provided with impervious floor covering sloping towards the drain with a suitable gradient.
- (ii) where the water-closet in a building is not connected to exterior, it shall be

- ventilated by mechanical means or through a vertical shaft open to sky of a minimum size stated in the **Model Building Bye Laws 2016**, for ventilation to toilet, bath, and water closet, and shall be counted in covered area,
- (iii) no room containing water-closet shall be used for any other purposes except as lavatory and no such room shall open directly into any kitchen or cooking space by a door/ window or another opening, and every room containing water- closet shall have a door completely closing its entrance.
  - (iv) soil or ventilating pipes shall not be allowed on the exterior face of any building, provided these shall either be embedded in the walls or pipe ducts to be provided to accommodate them.
  - (v) Security rooms each measuring maximum area of 3.0 square meters is permitted only at the entry-exit gates of premises.
  - (vi) All commercial buildings should necessarily design a public toilet with winter friendly technology and universal design. Buildings with plinth areas more than 75 sqm shall be accessible from outside of main building block.

### **8.7 Boundary Wall, Fence, Gate and Porch**

- (1) The location of gate shall be one side of front wall.
- (2) Maximum permissible height of front side boundary wall shall be not more than 1.2 meters from the mean level of abutting street in front of the plot from where entry to the plot is taken. Note: The owner/applicant if desires, not to construct the front boundary wall, is permitted so to utilize for parking.
- (3) maximum height of boundary wall at rear and side of plot shall not be more than 1.8 meters from the mean level of abutting street in front of the plot from where entry to the plot has been taken.

Note: In case of plots above 2000 square meters, maximum height of boundary wall at the rear and side of plot shall not be more than 1.8 meters from the abutting ground level.

- (4) a railing/grill with or without poly carbonate/fiber glass sheet covering for a height of 0.75 meter shall be permitted over and above the maximum height of boundary wall on all sides.
- (5) the temporary porches of polycarbonate sheets/fiber glass roof or any other temporary material covering on suitable structure, shall be allowed in residential plots with the condition that these shall be open on sides in the driveway area within the plot.
- (6) boundary wall up to the height of 2.4 meters may be permitted by the competent authority in industrial buildings, electric sub-stations, transformer stations, institutional buildings like hospitals, industrial buildings like workshops, factories and educational buildings like schools, colleges, including hostels and other uses of public utility undertakings and strategically sensitive buildings.
- (7) Construction of boundary/compound walls of the site should be at least 10 m away from the bank of the river, if the location is proposed near any river bank.

## 8.8 Staircase

- (1) Every building intended to be used as multiple residential building or commercial or educational and institutional or industrial building shall be provided with required number of staircases (accessible from a maximum distance of 30 meters (45 meters, if building has automatic sprinklers for firefighting) from any part of the building, extending from ground floor level to the highest floor, having following specifications:

Sr. No.	Type of building		Minimum permissible clear width of staircase (in meters)	Minimum permissible width of tread (in meters)	Maximum permissible height of riser (in meters)
1	Residential	Plots up to 15 meters height	0.9	0.25 (Without nosing)	0.19
		Plots above 15 meters height	1.2		
2	Commercial	Plots up to 50 square meters area	0.9	0.25 (Without nosing)	0.15
		Plots above 51 square meters area	1.2	0.30 (Without nosing)	
3	Assembly building		2.0	0.30 (Without nosing)	0.15
4	Educational building		1.5	0.30 (Without nosing)	0.15
5	Institutional building		2.0	0.30 (Without nosing)	0.15
6	Inland Container Depot & Custom bounded area		1.5	0.30 (Without nosing)	0.15
7	Industrial building;		1.5	0.30 (Without nosing)	0.15
8	Any other buildings		1.5	0.30 (Without nosing)	0.15

- (2) minimum headroom in a passage under the landing of a staircase and the minimum clear headroom in any staircase shall be 2.1 meters.
- (3) maximum numbers of risers in single flight are limited to 14.
- (4) if a service or a spiral staircase is provided, its width shall not be less than 1.0 meter and its average tread width shall not be less than mention in table of sub- Code (1).
- (5) notwithstanding anything contained in sub-Code (1), the staircases in the private portion of a public building and industrial building, not open to the general public, may be of the sizes mentioned for residential building.

## 8.9 Ramps and Lifts

- (1) Every building having more than 15 meters height shall be provided with a lift or a ramp with an inclination of 1:10 in addition to the staircases. In all residential buildings having more than 15 meters height, lift is mandatory to install in numbers depending on the occupancy of building.
- (2) In case of public buildings with only ground floor, ramp shall be provided for differently abled persons reaching its plinth level, if public buildings are of more than one storey, lift or ramp shall be provided, but at ground floor, ramp shall be provided for reaching plinth level of building.
- (3) Ramps:
- (i) The ramp to basement and parking floors shall not be less than 6 meters wide for two-

way traffic and 4 meters wide for one-way vehicular movement, provided with gradient not less than 1:8.

- (ii) The minimum width of the ramps in hospitals shall be 2.4 meters for movement of stretcher and for public use. In no case, the hospital ramps shall be used for vehicular movement.
- (iii) Ramps may also be provided in the setbacks which can be sloped considering unhindered movement of fire engine and in no case the gradient shall be less than 1:8. (to be read with basement)
- (iv) All structural design/safety aspects as per latest Bureau of Indian Standards Codes and National Building Code, as amended from time to time, shall be complied along with consideration of weight of fire engine and its maneuvering.
- (v) A ramp for human movement shall have handrail on at least one side, and preferably two sides with minimum height of 0.90 meters, measured from the surface of the ramp. The handrails shall be smooth and extend to 0.30 meters beyond the top and bottom of the ramp. Where predominant movement is of children, the extra handrail shall be placed at a height of 0.76 meter.
- (vi) Standards of Ramps to be referred from Fire safety perspective (**Chapter 11, Model Building Bye Laws, 2016**) and **Harmonised Guidelines and Standards for Universal Accessibility 2021**

(4) Lifts

Wherever lift is required as per Code, provision of at least one lift shall be made for the wheelchair users, with the following cage dimensions, recommended for passenger lift of 13 persons capacity by the Bureau of Indian Standards:

- (i) Clear internal depth 1.1 meters.
- (ii) Clear internal width 2.0 meters.
- (iii) Entrance door width 0.9 meter.
- (iv) a handrail not less than 0.6 meter long and 1 meter above floor level shall be fixed adjacent to the control panel.
- (v) the minimum size of lift lobby shall be 1.8 meters x 2.0 meters or more.
- (vi) the interior of the cage shall be provided with Braille symbols and audible that sounding the floor, when the cage reaches on a floor, indicating that the door of the cage for entrance/ exit is either open or closed.

Further standards of lifts shall be referred from **Code 5.4.4 of Model Building Bye-laws, 2016, and National Building Codes, 2016**, wherever applicable.

### 8.10 Passages and corridors

- (1) The minimum width of corridors and passages in a residential building shall be 1.25 meters and these shall be of fire-resistant material.
- (2) Minimum width of any corridor and passage in case of residential buildings with multiple dwelling units and for other types of buildings, shall be as given below:

<b>Sr. No.</b>	<b>Building type</b>	<b>Minimum permissible width of passage and corridor (in meters)</b>
1	Residential	1.25
2	Commercial	1.25
3	Assembly	2.0
4	Educational	2.0
5	Institutional	2.0
6	Inland Container Depot & Custom bounded area	1.5
7	Industrial	1.5
8	Hospital, nursing homes, etc.	2.4
9	All other building including hostels.	1.5

- (3) The clear headroom height of passage and corridors shall, in no case, be less than 2.15 meters.
- (4) All surfaces including ceiling shall be of fire-resistant materials.
- (5) All the passages and corridors shall be naturally lighted and ventilated and if not possible, provision for artificial lighting and mechanical ventilation shall be made.

### **8.11 Outside Seating**

1. Seating and gathering places need to be oriented in public spaces to maximize sunlight and offer some wind protection.
2. Climate sensitive materials for seating need to be used, e.g., wood, or heated tiles need to be chosen for the design.
3. Benches and cluster seating near shrubs and coniferous trees to be provided, where possible, for protection from extreme cold winter. A variety of styles of benches and tables need to be explored that are moveable, so people may choose to group with others or sit alone. Public provisions need to be explored by competent authorities.

### **8.12 Exit**

- (1) The requisite number and sizes of various exits shall be provided, based on the occupants in each room and floor, on the occupant load, capacity of exits, travel distance and height of buildings as per provisions of Part 4- Fire and Life Safety, National Building Code, as updated from time to time.
- (2) At least one primary entrance and exit to each building shall be usable by individuals in wheelchairs, indicated by a sign and on a level that would make the elevators accessible.
- (3) Arrangement of Exits
  - (i) Exits shall be so located that the travel distance on the floor shall not exceed 22.50 meters for residential, educational, institutional, and hazardous occupancies and 30.0 meters for assembly, business, mercantile, industrial and storage occupancies. Whenever more than one exit is required for a floor of a building they shall be placed as

remote from each other as possible. All the exits shall be accessible from the entire floor area at all floor levels.

- (ii) The travel distance to an exit from the farthest point shall not exceed half the distance as stated above.

**Note:** In the case of fully sprinklered building, the travel distance may be increased by 50 percent of the values specified.

- (4) Width of Exit (to be read with sub code 8.6)
  - (i) No exit doorways shall be less than 1 meter in width except assembly and institutional buildings where it shall not be less than 2 meters,
  - (ii) Exit doors shall open outwards, that is away from the room but shall not obstruct the travel along any exit. No door when opened shall reduce the required width of stairway or landing to less than 0.90 meter. Overhead door shall not be installed.

### **8.13 Means of Access**

- (1) No Building shall be erected which deprives any other building of its means of access.
- (2) If there are any bends or curves in the approach road, sufficient width shall be permitted at the curve to enable the fire tenders with a turning circle minimum of 9.0 meters radius.
- (3) Other provisions of means of access for buildings other than plotted residential and commercial shall be as under:
  - (i) The approach to the building and open spaces on its all sides up to 6.0 meters width, shall have composition of hard surface capable of taking the weight of fire tender, weighing up to 22 tones for low rise buildings and 45 tons for building with a height of 15 meters and above. The said open space shall be kept free of an obstructions/hindrance,
  - (ii) Main entrance to the premises shall be of adequate width to allow easy access to the fire tender and in no case, it shall measure less than 6.0 meters. The entrance gate shall fold/ slide back against the compound wall of the premises, thus leaving the exterior access way within the plot free for movement of the fire service vehicles. If archway is provided over the main entrance, the height of the archway shall not be less than 5.0 meters,
  - (iii) In case of basement extending beyond the building line, it shall be capable of taking live load of 45 tons in the case building 15.0 meters and above in height and 22 tons for building less than 15.0 meters in height,
- (4) Every person who applies for permission for erection or re-erection of a building shall also submit NOC from the concerned authority for accessing the National Highway and State Highway.

#### 8.14 Light and Ventilation of building

- (1) Every room that is intended for human habitation shall abut on an interior or exterior open space or on to a verandah which opens to such interior or exterior open space.
- (2) The whole or part of one side of one or more rooms intended for human habitation and not abutting on either the front, rear or side open spaces shall abut on an interior open space whose minimum width in all directions shall be 3.0 meters in case of buildings not more than 15 meters in height, and in case of buildings above 15 meters, the provision of **Code 7.2 (1)** shall apply.
- (3) Sunken courtyard up to the lowest floor of basement(s) shall be allowed as 'light well' within building envelop for light and ventilation for basement area subject to drainage provisions.
- (4) Other provisions for light and ventilation in buildings other than plotted residential and commercial schemes where exterior open-air space is intended to be used for the benefit of more than one building on same plot/site, then the width of such open air space shall be the one specified for the tallest building abutting on such open air space, as given below:

Sr. No.	Height of Building up to (in meters)	Exterior open spaces to be left on all sides of building blocks (in meters) (front, rear and sides in each plot)
1.	10	3
2.	15	5
3.	18	6
4.	21	7
5.	24	8
6.	27	9
7.	30	10
8.	35	11
9.	40	12
10.	45	13
11.	50	14
12.	55 and above	16

- (5) Ventilation shaft

For ventilating the water closets and bathrooms, if not opening on the front, rear and interior open spaces, can open on the ventilation shaft, the size of which shall not be less than the values given below:

Sr. No.	Height of Building (in meters)	Minimum size of Ventilation Shaft (in square meters)	Minimum width of Shaft (in meters)
1.	Up to 10.0	1.2	0.9
2.	Up to 12.0	2.8	1.2
3.	Up to 18.0	4.0	1.5
4.	Up to 24.0	5.4	1.8
5.	Up to 30.0	8.0	2.4
6.	Above 30.0	9.0	3.0

**Note:**

- (i) *For buildings above 30.0 meters in height, mechanical ventilation system shall be installed on ventilation shaft.*
  - (ii) *For fully air-conditioned buildings the ventilation shaft shall not be required, provided the air-conditioning system works on uninterrupted source of power supply including power backup system.*
  - (iii) *Horizontal ducting for ventilation may be installed in building with exhaust fan of appropriate capacity for discharging used air to the external space of building.*
- (6) Integrated Heating and Winter Friendly Heating Systems need to be incorporated at building levels. **Chapter 10.2.3, and 10.2.4, Model Building Bye Laws, 2016** need to be referred for specifications.

### **8.15 Cantilevered roof and chajja projections**

- (1) No building verandah, chajja or other projections from the face of the building shall be allowed to be erected or re-erected on or over a road or beyond the boundaries of the applicants own land/ plot in view of safe distance from an overhead power line.
- (2) Balcony of a width of maximum 1.80 meters in front and rear sides of a plot can be permitted within the plot, provided the width of balcony does not exceed half of the width of setback beyond it shall not be compounded and has to be rectified, if exceeding.
- (3) On plots of the size of 300 square meters or above, where side setback has been provided, a balcony of maximum width of 1.0 meter, inside set back can be permitted.
- (4) Roofs shall be designed to prevent falling ice, snow, etc. onto entrances and walkways. Snow guards to be included in the roofs to prevent hazards and avoiding snow accumulation on gutters, etc.
- (5) Roof shapes against pedestrian accesses and/or exterior amenity areas to reduce ice and snow hazards. These shapes may include elements such as slippery sloped surfaces, curved roofs, roof steps and the direction of shedding snow loads.
- (6) Lightwells and roof orientation need to increase solar access to building interiors and covered outdoor spaces.
- (7) Sunshades over opening can be allowed subject to the following:
  - (i) Sunshade of 0.23-meter width may be permitted over any road/over any park/public place,
  - (ii) Sunshade if permitted, shall be not less than a height of 2.3 meters from the ground level to project up to a maximum of 0.45 meter within the applicants own land, provided it does not exceed half of the width of setback/open space.

### **8.16 Mezzanine floor**

- (1) A mezzanine floor or internal balcony shall not be permitted unless the height of the room is minimum 5.0 meters and such mezzanine floor or balcony does not cover more than 1/3rd of the room area. The area of such mezzanine floor shall not be counted in FAR.



- (2) The clear height of such mezzanine floor or internal balcony shall not be less than 2.3 meters from the floor level to the soffit of ceiling.

### 8.17 Motor Garage

- (1) The minimum size of a private motor garage shall be 2.75 meters X 5.0 meters. The clear height of the garage shall not be less than 2.40 meters. The plinth of the motor garage shall not be less than 150 mm above the average ground level.
- (2) A garage is permissible within the zoned area and shall be counted in the covered area.
- (3) Garage shall not be used for habitable purposes.

### 8.18 Minimum provisions for a dwelling unit

Each dwelling unit shall have following minimum provisions, for granting permission to construct or use/occupy:

For Economic Weaker Section (EWS)	Other than EWS
(i) A Living/bedroom. (ii) A Pantry, (iii) One Bathroom and water closet (W.C) integrated.	(i) A Living/bedroom. (ii) A kitchen, (iii) One Bathroom and One latrine or W.C integrated.

### 8.19 Basement

- (1) The construction of the basement shall be allowed by the Competent Authority in accordance with the provisions of these Bye-Laws.
- (2) The basement shall be constructed exactly below the building which may be put to following uses:
  - (i) Storage of household or other goods of ordinarily non-combustible material,
  - (ii) Strong rooms, bank cellars, etc.,
  - (iii) Air-conditioning equipment and other machines used for services and utilities of the building,
  - (iv) Modern automated laundry may be allowed only in the basement of Hotel and Hospital/ Nursing Home sites, group housing, service apartments, as an ancillary services for the purpose for which permission is granted by Competent Authority and meant for in-house services only and subject to the condition that these meet the public health requirement such as effluent of the laundry properly pumped up to the ground floor inspection chambers and discharged to the main sewer, and also for lift/escalator lobbies and parking.
- (3) The use of basement shall be specified in the building plans at the time of submission, stated in **Code 4.1 and 4.2.**
- (4) The basement shall have the following provisions:
  - (i) Light and ventilation of basement:
    - a. an open area of a minimum width of 1.8 meters shall be provided across the full length and/ or width of the basement storey. This area shall be within the limits

of the site and shall be paved with impervious material above a concrete bed. It shall be completely unobstructed,

- b. in the case of buildings governed by the zoning approved by the competent authority, basement stories shall be lighted and ventilated by means of windows of the minimum area within 1/10<sup>th</sup> to 1/25<sup>th</sup> of the total floor area, at least half of which must open subject to the condition that the deficit of light and ventilation shall be made up by providing artificial lighting and mechanical ventilation as per provision of National Building Code of India,
- c. in case of buildings governed by Architectural Control and the basement are for storage/ services, the provisions of light and ventilation shall be as shown on the control sheets, and
- d. in the second basement i.e., basement lower than below the ground floor where it is to be used for parking/ services, part IV of National Building Code to be adhered.

(ii) Damp proofing of basement:

The walls of the basement story shall be damp-proof for effectively securing against dampness from the soil.

(iii) Height of the basement

- a. The minimum clear height of the basement shall be 2.4 meters and maximum clear height of the basement shall be up to 4.75 meters from floor to the underside of the roof slab or ceiling subject to structural stability to be certified by the structural engineer.
- b. The minimum height of the roof of basement shall be 0.45 meters (with mechanical ventilation/cutout in stilts) and maximum 1.5 meters above the average surrounding ground level for plots up to 1000 square meters.
- c. For plots above 1000 square meters, can be up to 1.5 meters above the average surrounding ground level.

(iv) Drainage of basement

- a. Open area adjoining a basement story, if any, shall be effectively drained to the satisfaction of the Competent Authority:
- b. The responsibility of draining the basement storey/stories and for protecting it from rain shall be of the owner.
- c. The access to the basement shall be separate from the main and alternative staircase providing access and exit from higher floors.
- d. Where the staircase is continuous in the case of buildings served by more than one staircase, the same shall be of enclosed type serving as a fire separation from the basement floor and higher floors. Open ramps shall be permitted if they are constructed within the building line subject to the provision of **Code 8.9**.
- e. The "Exit" requirements in basements shall comply with the provisions of Part 4 'Fire and Life Safety' of National Building Code of India.

- (5) Basement shall not be constructed beyond the zoned area or in case there is an adjacent existing building, a setback of 2.4 meters shall be taken from the existing

adjacent building.

## **8.20 Fire**

- (1) Fire protection measures provided in Part IV of National Building Code of India, dealing with the fire protection measures as updated from time to time, shall be adhered.
- (2) The fire provisions made in the building wherever applicable, shall have to be got verified from the Competent Authority or officer authorized from fire safety point of view and accordingly a certificate shall be submitted by the owner.
- (3) All public buildings, as well as publicly accessible buildings including but not limited to hotels, guesthouses, restaurants, commercial complexes, hospitals, government offices, bus stations, airports, schools, institutions, wellness centers, religious buildings, multilevel car parking, apartments, etc. should have fire evacuation plans on each floor. The evacuation plans themselves should incorporate feasible locations for the placement of evacuation plans, and should be vetted by an architect/engineer/appropriate authority as given power by the UT Administration.
- (4) Notwithstanding the provisions mentioned in the previous sections, **Chapter 11 of Model Building Bye Laws, 2016** for Fire Protection and Fire Safety requirements need to be adhered to. This is to include but shall not be limited to provisions for building components, means of access, fire escapes, stairs & staircases, lifts, basement, helipad, service ducts, refuge chute, electrical services, staircase and corridor lights, air-conditioning, fire dampers, boiler room, electric supply, fire protection requirements, water storage, sprinklers, extinguisher systems, alarm systems, material of construction, storage of chemicals & materials, and occupancy restrictions.

## **Chapter-9: Climate Change and Sustainable Measures in Cold Desert**

### **9.1. Rainwater Harvesting for Ground Water Recharge**

Arrangement for roof top and ground surface rainwater harvesting within the plot shall be made by the plot owner plot measuring more than 70 square meters:

- (i) Recharging of ground water shall be mandatory not only for residential buildings but for all types of buildings, including Group Housing Societies having a plot area more than 250 square meters,
- (ii) The Ground Water Recharge shall be mandatory for open spaces like parks, parking, plazas, playgrounds, and other common areas. The harvesting and recharge structures should be constructed by the Authority by associating community-based organizations including Resident Welfare Associations, or by any other agencies or client themselves,
- (iii) Where snow remains on the surface within a plot or in parks, open spaces, the water of melting snow should flow to the ground water recharge system.

#### **Rainwater Harvesting System Measures**

- i. The collection, conveyance, and dispersal of rainwater for harvesting should only be of clear water to check contamination of ground water. This shall include 'filtration and storage' of surface run-off for limited range, and re-use of collected and filtered rainwater.
- ii. The entry or pouring points of the rainwater shall be designed to remain covered.
- iii. The arrangement of quick filtration of rainwater shall also be made in the rainwater harvesting well/ tube well so that rainwater does not choke the strata.
- iv. The complete rainwater harvesting system shall be constructed within the available area of the plot.
- v. The recharge well shall be located at a distance of not less than 10 meters away from any structure handling sewage or industrial wastewater (such as septic tank or effluent treatment plant etc.). This minimum distance of 10 meters shall not be applicable to manholes or sewer lines although it shall be ensured that they are leak proof.
- vi. The detailed proposal of the system comprising collection, conveyance and dispersion of rainwater harvesting well/ tube well shall have to be shown on the building plan submitted for approval.
- vii. An architect/engineer duly engaged for supervision and execution of the construction of the building shall submit the certificate stating that the rainwater harvesting system is functional at site and same conforms to the provisions of

these Bye-Laws. However, if the architect/ engineer found guilty of misrepresentation of the facts, penal proceedings shall be initiated along with debarring the concerned architect/engineer from practicing in the UT of Ladakh.

- viii. The construction of the building as laid down in sub-clause (1) shall be the part of occupation certificate. Unless such construction is completed as per the approval, occupation certificate shall not be issued.
- ix. The owner of every building shall ensure that the rainwater harvesting structure is maintained in good repair for storage of water of non-potable purposes and recharge of ground water at all time.
- x. The above said provisions of Rainwater Harvesting shall be strictly implemented in the Local Areas, notified from time to time.
- xi. Groundwater extraction needs to be regulated; water meters need to be installed for recording flow/quality of water extraction. District metered areas and connection to SCADA system needs to be incorporated for all connections
- xii. Snowmelt run-off drains need to be away from pathways in order to prevent hazards due to freeze-thaw cycles.
- xiii. **Chapter-9 of Model Building Byelaws, 2016** need to be referred for incorporating further techniques and measures of Rainwater Harvesting.
- xiv. Any further guidelines and rules released by Govt. of India/UT Acts, Laws, and Byelaws would be applicable as notified from time to time.

## **9.2. Compulsory tree Plantation to increase tree cover**

- i. To reduce cold desert effect in Ladakh, measures to increase the vegetal cover shall be enforced. Each household shall plant the minimum number of plants as prescribed in these Bye-Laws.
- ii. To enhance fertility in the sand-shedding slopes, the biodegradable waste shall be deposited in layers under the sand cover to allow decomposition. The layers of waste shall be watered by the recycled treated water which will facilitate natural growth of vegetal cover in days to come.
- iii. Such sand-shedding slopes where snow is received even in meager quantity, shall be terraced, or provided with check dams to store the snow and allow the water to percolate gradually, in the biodegradable waste layers.
- iv. The kitchen waste, waste from food industry, fruit and vegetable markets, horticulture waste shall be carried to the sandy surface and deposited below the sand layers and sprinkled with the recycled treated water, or surface water/ground water, as the case may be.

## **9.3. Provision of Rooftop Solar Photo Voltaic Power Plant**

- i. The mandatory installation of Rooftop Solar Photovoltaic Power Plant for the buildings/ areas shall be in accordance with the directions issued, from time to time.
- ii. Installation of Solar Photovoltaic Power Plant as per **Code 9.3(i)** above, shall be

part of the occupation certificate.

- iii. The Competent Authority shall empanel consultants (experts in solar photo voltaic power plant installations) for inspecting, verifying and issuing certification for installation of Rooftop Solar Photovoltaic Power Plant and solar evacuated tube collectors for hot water.

#### **9.4. Provision of Energy Conservation Building Code**

- i. The provision for Energy Conservation Building Code shall be mandatory applicable on buildings/ areas in accordance with the direction issued by Administration of UT Ladakh from time to time.
- ii. The applicant/ owner along with building plan application shall submit a certificate from an architect confirming that the building plans confirms to the Energy Conservation directions.
- iii. Occupation certificate of building to be issued by the competent authority only after the applicant/ owner submits a certificate from an architect/engineer (who has supervised the construction of building) that the building has been constructed in accordance with the provision of the Energy Conservation directions.
- iv. The applicant/owner shall submit building plans along with the submission of Design Stage and Occupancy Stage ECBC Compliance Forms and/or Simulation Report duly signed and stamped by Bureau of Energy Efficiency (BEE) Approved Empaneled Experts/Firms confirming or from Ladakh UT Level empaneled architect that the building plans and construction confirms to the Energy Conservation directions as per ECBC and Ladakh ECBC 2021 (once notified).

#### **9.5. Recycling of Treated water**

- i. The sites or buildings in a complex or individual building, discharging water 30,000 liters and above, per day, shall have the treated wastewater recycle system for horticultural, flushing, cooling tower purposes, etc. to increase the vegetal cover and minimize the use of potable water.
- ii. The dual pipe system shall be adopted in these buildings and indicated in building plans submitted for approval.
- iii. In order to mitigate water pollution, the bulk waste generators including Hotels, restaurants/cafes, laundry, car wash facilities etc. should provide Effluent Treatment Plants to treat wastewater generated from their respective units
- iv. Water conservation measures need to be adopted/regulated to maximize the use of treated STP water for non-potable purpose/gardening, construction activity, toilet flushing, etc. as per Code 9.6 (1) and 9.6 (2).
- v. Any Govt. of India/UT Ladakh Acts, laws, byelaws, notifications and statutory provisions shall be binding and applicable as notified from time to time.

#### **9.6. Sustainable Habitat**

- (1) **Part-11 Approach to Sustainability of National Building Code** need to be

referred for detailed approach to sustainability. This shall include but not be limited to built environment, ecological footprint, renewable resource, 3Rs (reduce, reuse, recycle), sustainable development, thermal conditioning (capacity, conductance, conductivity, etc.), technology options, disaster preparedness, water management, site design and development, external landscaping, fenestration designs, rainwater harvesting, water elements and irrigation, access design, parking, lighting, envelope optimization and materials, along with any other relevant sections.

- (2) **CPWD Guidelines for sustainable habitat** need to be referred to incorporate sustainable architecture and layout planning, sustainable index and guidance of materials, selection of equipment for electrical and mechanical services for sustainable buildings and reuse and recycling of construction & demolition waste. These shall include energy efficiency design and process, site development, building orientation and shading, design strategies for day lighting, building envelope, design strategies in cold climate, reduction in overall embodied energy of building materials, integrated water management, solid waste management, sustainability index, building materials, functional life period, capital cost, building loads (live and dead loads), power saving, lighting, HVAC and solar power, along with any other relevant sections.
- (3) The following supplementary building materials (derived or processed from waste) may be suitably used while constructing building in combination with conventional resources in addition to mud bricks:
  - (i) Panels, hollow slabs, hollow blocks, or other factory materials which consume less water.
  - (ii) Fly Ash bricks, Portland Pozzolana cement, Fly-ash concrete, phosphor gypsum-based walling & roofing panels, particle wood, Recycled use of industrial/agricultural by-products.
  - (iii) Fly ash/ AAC (Autoclaved Aerated light weight Concrete) panels/ CLC (Cellular Light weight Concrete) panels- Ensuring thermal comfort.
  - (iv) Use of timber from rapidly growing plants from environment point of view.
  - (v) Compressed Soil Earth Block and Rammed Earth Walls and Vaults.
  - (vi) Use of Polyurethane Foams (PUF), Extruded Polystyrene (XPS), Expanded Polystyrene (EPS), Rockwool, Glasswool as per the suitability to keep building insulated

Further materials and techniques shall be referred as per **Code 9.6(1) and Code 9.6(2)** of these Bye-Laws.

- (4) Solar passive techniques specific to Ladakh need to be incorporated. This is to include inputs from competent authorities to provide sustainable building techniques, solar passive heating and comfort retention techniques, thermal insulation technologies to provide sustainable solutions to extremities of cold desert climate. The techniques should be in accordance with **Code 9.6(1) and Code 9.6(2)** of these Bye-Laws for a more inclusive design.
- (5) The following passive heating provisions need to be provided in accordance with **Code 9.6(1) and Code 9.6(2)**:
  - a. North-south orientation should be optimized for utilizing maximum sunlight, wherever possible, along the main path of the sun, exposing maximum facades to higher solar radiation.

- b. Most openings (doors, windows, vents) should face east west to enhance sun exposure. The window positions should allow optimal use of daylight, but with a large surface to enhance solar radiation inside. Horizontal glazing should be preferred.
- c. Major hindrances should be avoided on South orientation of the buildings for utilizing maximum sunlight.
- d. Avoid overglazing- excessive areas of glass can be a large energy liability product with low conductivity or U value (for example, double glazing) and high solar heat gain coefficients (SHGC) to be used.
- e. Window frames also conduct heat. Timber, uPVC, or thermally separated metal window frames can be used in cooler climates to prevent heat transfer.
- f. Permanently shaded glass at the top of the window is a significant source of heat loss. To avoid this, the distance between the top of glazing and underside of eaves or other horizontal projection should be 50% of overhang or 30% of window height, where possible.
- g. Living areas and the kitchen are usually the most important locations for passive heating because they are used day and evening. Bedrooms generally require less heating, because it is easy to get warm and stay warm in bed. Children's bedrooms can be classified as living areas if considerable hours are spent there. Utility and service areas such as bathrooms, laundries and garages are used for shorter periods, require smaller windows, and generally require less heating. The orientation of these rooms may be done accordingly.
- h. Design doors to blow closed if left open in strong winds or consider using spring closers on external doors. Principles of good insulation for doors and windows as shown below:
  - Airlock doors
  - Sealing around doors, windows and roofs
  - Double glazed windows and doors
  - Relevant thermal mass and lag of materials
  - Trombe walls
- i. Allow sufficient space between doors so that it is easy to close the outer door before opening the inner door (or vice versa)
- j. Insulation -  
 Ceilings and roof spaces account for 25–35% of winter heat loss. To prevent heat loss, place most of the insulation next to the ceiling because this is where the greatest temperature control is required.
- k. Floors account for 10–20% of winter heat loss. In cool climates, insulate the underside of suspended timber floors and suspended concrete slabs. Insulate the edges of ground slabs. Insulation is not required beneath earth-coupled concrete slabs; however, it may be desirable when groundwater is present Waffle pod construction helps to insulate under slabs.
- l. Walls account for 15–25% of winter heat loss. Insulation levels in walls are often limited by cavity or frame width. In cold climates,



alternative wall construction systems that allow higher insulation levels are recommended.

- (6) 3D- printed housing techniques may be provisioned for construction of buildings. The construction shall need to meet the safety and habitability conditions laid against **National Building Code, 2016, Model Building Bye Laws, 2016, and Unified Ladakh Building Bye-Laws 2022.**

## **Chapter-10: Guidelines for Universal Design**

The norms, other than the ones mentioned in this chapter shall be in accordance with Harmonised Guidelines and Standards for Universal Accessibility in India, 2021. These shall include design elements, and standards to for an include universal design.

### **10.1. Provision/ facilities for Differently abled Persons**

- a) In all public buildings/places of public gathering, the level of the roads, access paths and parking areas shall be described in the plan, along with specification of the materials.
- b) It should be ensured that during winter the ramps, canopies and sheds are kept dry and non-slippery.
- c) The specified facilities in public buildings/sites for differently abled persons shall be as follows:
  - (i) Parking: For parking of vehicles of differently-abled people the following provisions shall be made: -
    - (a) surface parking for two car spaces shall be provided, near the entrance, for the differently abled persons, with maximum travel distance of 30 meters from building entrance,
    - (b) the parking bay shall be of minimum 3.6 meters in width and marked as reserved for wheelchair users.
  - (ii) Every building shall have at least one entrance accessible to the differently- abled and shall be approachable through a ramp in addition to the stepped entry made of non-slippery material with a minimum width of 1.5 meters in a maximum gradient of 1:12, length of ramp shall not exceed 9.0 meters having 0.8 meters high handrail on both sides of extending 0.3 meters beyond top and bottom levels of the ramp. The minimum gap between the wall and the handrail shall be 5 cm.
  - (iii) **Stepped approach-** For stepped approach, size of tread shall not be less than 0.3 meters and maximum riser shall be 0.15 meters with provision of 0.8 meters high handrail on both sides of the stepped approach similar to the ramped approach shall be made.
    - (a) Exit/ entrance door- Minimum clear opening of the entrance door shall be 0.9 meters and shall not be provided with a step that obstructs the passage of a wheelchair user.
    - (b) Entrance landing- Entrance landing shall be provided adjacent to the ramp, with the minimum dimension of 1.8 meters x 2.0 meters.
  - (iv) **Corridor connecting the entrance/exit for the differently abled;** the corridor

connecting the entrance/exit for differently abled leading directly outdoor to a place where information concerning the overall use of the specified building can be provided to visually impaired persons by a person:

- (a) the minimum width of corridor shall not be less than 1.5 meters,
  - (b) in case there is a difference of level, slope-ways shall be provided with a slope of 1:12 with specified above handrails.
- (v) **Stair-ways-** One of the stairways near the entrance/exit, for the use of differently abled, shall have the following provisions:
- (a) the minimum width shall be 1.35 meters,
  - (b) height of the riser shall not be more than 0.15 meters and width of the tread 0.30-meter, maximum number of risers on a flight limited to maximum 12,
  - (c) handrails shall be provided on both sides.
- (vi) **Lifts-** Wherever lift is required as per NBC, provision of at least one lift shall be made for the wheelchair users, with the following cage dimensions, recommended for passenger lift of 13 persons capacity by the Bureau of Indian Standards:
- (a) Clear internal depth 1.1. meters,
  - (b) Clear internal width 2.0 meters,
  - (c) Entrance door width 0.9 meter,
  - (d) a handrail not less than 0.6 meter long and 1.0 meter above floor level shall be fixed adjacent to the control panel,
  - (e) the lift lobby shall measure 1.8 meters x 2.0 meters or more,
  - (f) the time of an automatically closing door shall be minimum 5 seconds and the closing speed shall not exceed 0.25 meter/ second,
  - (g) the interior of the cage shall be provided with a device that audibly indicates the floor. When the cage reaches on floor, it shall indicate that the door of the cage for entrance/ exit is either open or closed.
- (vii) **Toilets:** One special water closet shall be provided with essential provision of wash basin inside toilet near the entrance having:
- (a) minimum dimensions of 1.50 meters x 1.75 meters,
  - (b) minimum clear opening of the door of 0.90 meter and shall swing out,
  - (c) suitable arrangement of vertical/horizontal handrails with 50mm clearance from the wall.
- (viii) **Drinking Water:** Suitable provision of drinking water shall be made for the differently abled persons near the special toilet provided for them.
- (ix) **Designing for Children:** In the building meant for the predominant use of children, the height of the handrail and other fittings and fixtures, shall suit the requirements of children.

## **Chapter-11: Structural Materials**

### **11.1. Materials**

The requirement of building materials to be used in construction shall conform to the Building Materials specified in **Part V of the National Building Code of India**, as updated from time to time.

### **11.2. Foundations**

- (1) The loads and forces shall be calculated in accordance with Structural Design Section on Loads of specified **Part VI of the National Building Code of India, 2016**, as updated from time to time.
- (2) The structural design of foundations and elements of substructures and superstructures of wood, masonry, reinforced, or pre-stressed concrete shall be in accordance with Part VI- Structural Design, Section 1-Loads, Section 2- Foundations, Section 3- Wood, Section 4- Masonry, Section 5- Concrete, Section 6- Steel and Section 7- Prefabrication and Systems Building, of the **National Building Code of India**, as amended from time to time.
- (3) Occupancy type and occupancy loads per 100 sqm of plinth or covered area need to be specified as per **National Building Code of India, 2016 (as amended from time to time) and Chapter 4: Model Building Bye Laws**.

### **11.3. Building Services**

The planning, design and installation of heating systems or air-conditioning as the case may be in a building shall be in accordance with Building Services, Section 2- Electrical Installations and Section 3- Air-conditioning and Heating specified in Part VIII of the National Building Code of India, as updated from time to time.

### **11.4. Plumbing Services**

The planning design and installation of water supply systems, drainage, sanitary installations and gas supply installations in a building shall be in accordance with Plumbing Services, Section 1- Water Supply, Section 2- Drainage and Sanitation and Section 3- Gas supply specified in the Part IX of the National Building Code of India, as updated from time to time.

### **11.5. Construction Practices and Safety**

- (1) The various activities including demolition, excavation, blasting, construction from foundation level up to completion shall be in accordance with Construction Practices and Safety specified in the Part VII of the National Building Bye-Laws of India, as updated from time to time.
- (2) The Safety Measures to be adopted during various construction operations,

including storage of materials on the construction site and municipal/public land shall be in accordance with Construction Practices and Safety specified in the Part VII of the National Building Code of India, as updated from time to time.

#### **11.6. Damp Proof Course**

Wall of a building including a pier forming a part of the wall or a compound wall shall be provided with a damp-proof course, except when built in cement concrete rated of 1:2:4.

## **Chapter-12 Public Health Installations**

#### **12.1. Two pipe system in drainage**

- (1) The drainage system in a building shall be of two pipe system, one for soil and another for waste. The soil pipe(s) to be connected to the drain directly and the waste pipes first in a gully trapped and then to the drain. All traps to be ventilated vertically.
- (2) In Group housing, commercial complexes, commercial (other than plotted), institutional, industrial, other building specified by the competent authority in accordance with **Code 8.4**, the water from waste pipes shall be treated within the premises and used for flushing, horticulture, cooling tower etc. purposes. Further, no soil/ waste pipe shall be allowed in common wall/party wall.

#### **12.2. Minimum sanitary facilities required for various type of buildings**

- (1) Dwellings with individual convenience shall have at least the following fitments:
  - (i) one bathroom provided with a tap;
  - (ii) one water closet; and
  - (iii) Where only one water closet is provided in a dwelling, the bath and water closet shall be separately provided.
  - (iv) Kitchen with wash basin.
  - (v) All wastewater outlets shall be provided with suitable traps for preventing back flow of water or foul smell or both.
- (2) Dwellings (tenements) without individual conveniences shall have the following fitments.
  - (i) one water taps with draining arrangements in each tenement;
  - (ii) one water closet and one bath for every two tenements; and
  - (iii) water tap in common bathroom and common water closet.
- (3) The requirements for fitments for drainage and sanitation, in case of buildings other than residential such as office buildings, factories, cinemas, concert halls, theatres, hospitals, hotels, restaurants, schools and hostels shall be in accordance with NBC applicable to "Basic Requirements for Water Supply, Drainage and Sanitation" with such updating as may be made from time to time.

#### **12.3. Method of disposal**

- (1) Every water borne drainage installation shall be connected with the public sewer, but in case no public sewer exists in the vicinity of the said premises, the

drainage system may as a temporary measure and subject to the previous written approval of the Competent Authority be connected to a septic tank from which the effluent shall be drained off:

- (i) into absorption pits, or,
- (ii) by sub-soil drain
  - Provided that no absorption pit shall be allowed in the case of any premises or area in which domestic supply is taken from sub soil water.
  - Provided further that if in future a public sewer is constructed in the nearby area, the owner shall at his own expense connect to the sewer.
- (2) Effective arrangements shall be made to treat the effluents up to the parameters/ guidelines issued from time to time by Central Pollution Control Board (CPCB) or Administration of UT Ladakh to ensure that the untreated effluents do not enter into any river, canal or water body or a ground water zone.

#### **12.4. Septic tank**

- (1) No septic tank shall be located -
  - (i) at a distance of less than 25 meters from a dwelling unit or any other building used for human habitation or for work or recreation.
  - (ii) in a public through fare
  - (iii) within 60 (sixty) meters from any percolation well, watercourse or stream used or likely to be used for drinking or domestic purposes or for manufacture or preparation of any article of food or drink for human consumption and it shall be readily accessible so as to permit cleaning operation being carried out without interference with the operation of any water borne sanitary installation as a whole.
- (2) Every septic tank intended to serve a population of 24 (twenty-four) or more persons shall have two separate compartments so that one compartment for alternate use for cleaning the filtered one. The capacity of every compartment of the septic tank shall be 2½ (two and half) times the total water supply allowances for the total number of residents of the buildings in the premises.
- (3) Every inlet pipe into a septic tank shall be effectively trapped.
- (4) The design of septic tank shall be in accordance with the National Building Code and guidelines issued by Administration of UT Ladakh.

#### **12.5. Absorption pit**

- (1) The location of every absorption pit shall conform to same restrictions as specified for a septic tank in **Code 12.4.**
- (2) No absorption pit shall have any outlet into a storm water drain or surface drain.
- (3) The walls of every absorption pit shall be at least 0.5 meters above the ground level to ensure that storm water does not enter into the absorption pit.

- (4) The absorption pits shall be constructed in duplicate as laid in **code 12.4 (2)**. The capacity of the absorption pit shall be as approved by the Competent Authority.
- (5) All details shall conform to the National Building Code of India as updated from time to time.

#### **12.6. Sub-soil irrigation for disposal of effluent**

No Sub-soil irrigation work for disposal of effluent from a septic tank shall allowed

#### **12.7. Zero wastewater discharge**

- (1) The group housings, industries, commercial, institutions and any other building specified by the competent authority shall ensure zero wastewater discharge into main sewer line and shall install suitable treatment plant for treatment of wastewater. The applicant shall submit completion certificate of installation of treatment plant from independent expert agency along with the application of Occupation Certificate.
- (2) For water conservation in the building, provision shall be made whereby the wastewater generated from the sources such as dishwashing or washing machines, is used for sub- surface irrigation, or if treated, for non-potable purposes as mentioned in these Bye-Laws.

*Note: The above restriction shall not apply in case of plots up to 2000 square meters.*

#### **12.8. Sewerage Connection**

All buildings need to be connected to public sewer and shall need prior permissions by Competent Authority. No connection to any public sewer shall be made nor any water borne sanitary and drainage installations intended to be connected until a certificate after completion by the Competent Authority has been issued.

#### **12.9. Application for connection with public sewer**

- (1) After the grant of a certificate referred to in the building Bye-Laws or in the event of the said certificate having been deemed to have been granted, every person intending to connect a drain to a public sewer shall apply to the Competent Authority at least seven days before the date on which such connection is required.
- (2) The application shall be accompanied by a certificate referred to the **Code 12.8** and such amount as may be laid down from time to time by the Competent Authority and calculated on the basis of the current schedule of rates to meet the cost of the proposed connection.
- (3) On receipt of the application and subject to the requirement of the foregoing clauses, the Competent Authority shall approve or reject the request.

#### **12.10. Sewage Discharge**

- (1) Every drain discharging into a public sewer shall join the sewer obliquely in the direction the sewer is flowing.
- (2) If practicable, the connection shall be made at an existing junction in the sewer and if not possible, then there shall be an intercepting manhole before the connection.

#### **12.11. Drainage of roof**

The roof of every building shall drain rainwater into gutters, chutes or trough and shall be carried down through adequate number of down pipes without causing dampness in any part of the wall or foundation of the building or any adjacent building

#### **12.12. Effect on the transferred areas**

Where the planned areas are transferred to the Competent Authority then the norms/ byelaws/ zoning bye-laws applicable to them at the time of transfer of these areas shall remain same, as defined, and enforced by the concerned Authority.

#### **12.13. Sustainable waste management**

Wherever applicable, **Chapter 4, Chapter 10.2.5, as well as any other relevant sections from Model Building Bye Laws, 2016** shall be applicable for sustainable waste management.

#### **12.14. Provisions of Dry Toilets**

The dry toilets should be in the traditional two-storied design to convert waste into compost, and the facility should be well ventilated and have smell free technology. The cleaning needs to be free of Manual Cleaning, carrying and disposal. Ventilation requirements shall be subjected to Chapter 4.30 and all other relevant sections from Model Building Bye-Laws, 2016. Approval by approval authority needs to be taken before construction.

## **Chapter 13 – Environmental Clearance**

**Note:** The Directions/Guidelines issued by the Ministry of Environment, Forest and Climate Change from time to time shall be part of this chapter of the Bye-Laws. Also, relevant sections from Chapter 14, as well as any other relevant sections from Model Building Bye Laws, 2016 shall be applicable in the same.

### **13.1. Environmental clearances for building and construction**

- (1) The competent authority shall approve and certify the compliance of environmental clearances requirements for following categories of buildings:

Sr. No.	Building Category	Built up area (in square meters)
1	Category A	5000- 20000
2	Category B	Above 20000-50000
3	Category C	Above 50000-150000

- (2) The Competent Authority shall ensure the conditions fulfilled before approving and certifying the compliance of environmental clearances stated below:

#### **Environmental conditions for Category A buildings:**

Sr. No.	Medium	Environmental conditions	Schedule for submitting self- certification
1	Natural Drainage.	The inlet and outlet point of natural drain system should be maintained with adequate size of channel for ensuring obstructed flow of water.	Along with Occupation Certificate application.
2	Water Conservation- Rain Water Harvesting/ Ground Water Recharge.	i. A rainwater harvesting plan needs to be designed where the recharge bores (minimum one per 5000 sqm of built-up area) shall be provided. The rainwater harvested should be stored in a tank for reuse in household through a provision of separate water tank and pipeline to avoid mixing with potable municipal water supply. The excess rainwater harvested be linked to the tube well bore in the premise through a pipeline after filtration in the installed filters.	Along with Occupation Certificate application.



		ii. The unpaved area shall be more than or equal to 20% of the recreational open spaces	Along with Occupation Certificate application.
3	Solid Waste Management	Separate wet and dry bins must be provided at the ground level, as well as segregation areas on each floor for facilitating segregation of waste.	Along with Occupation Certificate application.
4	Energy	In common areas, LED/ solar lights must be provided.	Along with Occupation Certificate application.
5	Air Quality and Noise	i. Dust, smoke and debris prevention measures such as screens, barricading shall be installed at the site during construction. Plastic/ tarpaulin sheet covers must be used for trucks bringing in sand and material at the site.	Along with notice of commencement of construction
		ii. The exhaust pipe of the DG set, if installed, must be minimum 10 meters away from the building. In case it is less than 10 meters away, the exhaust pipe shall be taken up to 3 meters above the building.	Along with Occupation Certificate application.
6	Green cover	i. A minimum of 1 tree for every 40 square meters of land shall be planted and maintained. The existing trees will be counted for this purpose. Preference should be given to planting native species.	Along with notice of commencement of construction.
		ii. Where the trees need to be cut, compensatory plantation in the ratio of 1:3 (i.e., planting of 3 trees for 1 tree cut) shall be done with the obligation to provide continued maintenance for such plantations.	Along with notice of commencement of construction.

**Environmental conditions for Category B buildings:**

Sr. No.	Medium	Environmental conditions	Schedule for submitting self-certification
1	Natural Drainage.	The inlet and outlet point of natural drain system should be maintained with adequate size of channel for ensuring obstructed flow of water.	Along with Occupation Certificate application.
2	Water Conservation-Rain Water Harvesting and Ground Water Recharge	i. A rainwater harvesting plan needs to be designed where the recharge bores (minimum one per 5000 sqm of built-up area) shall be provided. The rainwater harvested should be stored in a tank for reuse in household through a provision of separate water tank and pipeline to avoid mixing with potable municipal water supply. The excess rainwater harvested be linked to the tube well bore in the premise through a pipeline after filtration in the installed filters.	Along with Occupation Certificate application.

3	Solid Waste Management	i. The unpaved area shall be more than or equal to 20% of the recreational open spaces.	Along with Occupation Certificate application.
		ii. Separate wet and dry bins must be provided at the ground level for facilitating segregation of waste.	Along with Occupation Certificate application.
4	Energy	i. In common areas, LED/ solar lights must be provided.	Along with Occupation Certificate application.
		ii. At least 1% of connected applied load generated from renewable energy source such as photovoltaic cells.	Along with Occupation Certificate application.
		iii. As per the provisions of the Ministry of New and Renewable energy solar water heater of minimum capacity 10 liters/4 persons (2.5 liters per capita) be installed.	Along with Occupation Certificate application.
		iv. Sun dried/ rammed earth/ earth blocks/ solar passive building materials should be used as building material	Along with notice of commencement of construction.
		i. Dust, smoke and debris prevention measures such as screens, barricading shall be installed at the site during construction. Plastic/ tarpaulin sheet covers must be used for trucks bringing in sand and material at the site.	Along with notice of commencement of construction.
5	Air Quality and Noise	ii. The exhaust pipe of the DG set, if installed, must be minimum 10 meters away from the building. In case it is less than 10 meters away, the exhaust pipe shall be taken up to 3 meters above the building.	Along with Occupation Certificate application.
6	Green cover	i. A minimum of 1 tree for every 40 square meters of land shall be planted and maintained. The existing trees will be counted for this purpose. Preference should be given to planting native species.	Along with notice of commencement of construction.
		ii. Where the trees need to be cut, compensatory plantation in the ratio of 1:3 (i.e., planting of 3 trees for 1 tree cut) shall be done with the obligation to provide continued maintenance for such plantations.	Along with notice of commencement of construction.

**Environmental conditions for Category C buildings:**

Sr. No.	Medium	Environmental conditions	Schedule for submitting self-certification
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1	Natural Drainage.	The inlet and outlet point of natural drain system should be maintained with adequate size of channel for ensuring obstructed flow of water.	Along with Occupation Certificate application.
2	Water Conservation- Rain Water Harvesting/ Ground Water Recharge.	i. A rainwater harvesting plan needs to be designed where the recharge bores (minimum one per 5000 sqm of built-up area) shall be provided. The rainwater harvested should be stored in a tank for reuse in household through a provision of separate water tank and pipeline to avoid mixing with potable municipal water supply. The excess rainwater harvested be linked to the tube well bore in the premise through a pipeline after filtration in the installed filters.	Along with Occupation Certificate application.
		ii. The unpaved area shall be more than or equal to 20% of the recreational open spaces.	Along with Occupation Certificate application.
		iii. The ground water shall not be withdrawn without approval from the competent authority.	Along with notice of commencement of construction.
		iv. Use of potable water in construction should be minimized.	
		v. Low flow fixtures and sensors must be used to promote water conservation.	
		vi. Separation of grey and black water should be adopted by the use of dual plumbing system.	
3	Solid Waste Management	i. Separate wet and dry bins must be provided at the ground level for facilitating segregation of waste.	Along with Occupation Certificate application.
		ii. All non-biodegradable waste shall be handed over to authorized recyclers for which a written tie-up must be done with the authorized recyclers.	Along with Occupation Certificate application.
		iii. Organic waste composter/ vermiculture pit with a minimum capacity of 0.3 Kg/tenement/ day must be installed wherein the STP sludge may be used to be converted to manure which could be used at the site or handed over to authorized recyclers for which a written tie-up must be done with the authorized recyclers.	Along with Occupation Certificate application.
4	Energy	i. In common areas, LED/ solar lights must be provided.	Along with Occupation Certificate application.
		ii. At least 1% of connected applied load generated from renewable energy source such as photovoltaic cells.	Along with Occupation Certificate application.

		iii. As per the provisions of the Ministry of New and Renewable energy solar water heater of minimum capacity 10 liters/4 persons (2.5 liters per capita) be installed.	Along with Occupation Certificate application.
		iv. Fly ash bricks should be used as building material in the construction.	Along with notice of commencement of construction.
		v. Adoption of passive solar design of buildings using architectural design approaches that minimize energy consumption in buildings by integrating conventional energy-efficient devices, such as mechanical and electric pumps, fans, lighting fixtures and other equipment with proper orientation of buildings, landscaping, efficient building envelope, appropriate fenestration increased day lighting and thermal mass.	Along with Occupation Certificate application
		vi. Optimizing use of energy systems in buildings that should maintain a specific indoor environment conducive to the functional requirements of the building by following mandatory compliance measures (for all applicable buildings) as recommended in the Energy Conservation Building Code (ECBC) 2007 of the Bureau of Energy Efficiency, Government of India.	Along with Occupation Certificate application, and certifications as mentioned in Ladakh ECBC 2021 (once notified)
5	Air Quality and Noise	i. Dust, smoke and debris prevention measures such as screens, barricading shall be installed at the site during construction. Plastic/ tarpaulin sheet covers must be used for trucks bringing in sand and material at the site.	Along with notice of commencement of construction.
		ii. The exhaust pipe of the DG set, if installed, must be minimum 10 meters away from the building. In case it is less than 10 meters away, the exhaust pipe shall be taken up to 3 meters above the building.	Along with Occupation Certificate application.
6	Green cover	i. A minimum of 1 tree for every 40 square meters of land shall be planted and maintained. The existing trees will be counted for this purpose. Preference should be given to planting native species.	Along with notice of commencement of construction.

		ii. Where the trees need to be cut, compensatory plantation in the ratio of 1:3 (i.e., planting of 3 trees for one (1) tree cut) shall be done with the obligation to provide continued maintenance for such plantations.	Along with notice of commencement of construction.
7	Sewage Treatment Plant	Sewage treatment plant with capacity of treating 100% wastewater shall be installed. Treated water must be recycled for gardening, flushing etc.	Along with Occupation Certificate application.
8	Environment Management Plan	The infrastructure such as Sewage Treatment Plant, Landscaping, Rainwater Harvesting/ ground water recharging, Power backup, Infrastructure, Environment Monitoring, Solid Waste Management and Solar and Energy conservation, should be kept operational through Environment Monitoring Committee with defined functions and responsibilities.	Along with Occupation Certificate application.

- (3) All the provisions mentioned under Municipal Solid Waste (Management and Handling) Rule, 2016 and their subsequent amendments; Plastic Waste Management Rules, 2016 and their subsequent amendments and adoptions by the UT and any other competent authority and their notifications would be applicable
- (4) The applicant shall self-certify the above stated environmental conditions with the certification of supervision/ completion from the architect or engineer or Bureau of Energy Efficiency Certified Energy Auditors, as the case may be, responsible for supervising the construction of building and/ or installing the solar photovoltaic power unit. Sewage Treatment Plant, Solid waste management system, ECBC Code, Ladakh ECBC 2021 (once notified) & others,
- (5) The applicant shall submit the self-certification on environmental conditions to the Competent Authority as per schedule given in **Code 13.1(2)**.
- (6) The Competent Authority shall verify the certification and issue consent/ comments within 10 (Ten) working days of receiving the certification. The Environmental Clearance certificate shall be deemed accepted, if it is in conformity with conditions stated herein before, but no consent/ comments have been passed by Competent Authority within specified time.
- (7) If the owner or architect or engineer or consultant as mentioned in **Code 13.1(3)** or as the case may be, submits a wrong or false self-certification or if any additional construction or violation is reported to exist at site or has concealed any fact or mis- represented regarding environmental conditions stated in **Code 13.1(2)**, they shall be jointly and severally responsible for such omission/commission and complaint against the architect for suspension of his registration and the owner shall be liable to pay for the penalty as may be decided by the Competent Authority after giving an opportunity of being heard. Further, if it emerges that the information was

concealed by Engineer/ Consultant/Architect/Owner, necessary penal proceedings, as decided by the administration will be initiated along with barring Engineer/ Consultant/ architect from practicing in the UT of Ladakh.

- (8) In case environmental clearance is issued by Competent Authority, no separate prior environmental clearance shall be required.
- (9) In case the building is certified from GRIHA/LEED/IGBC, there is no requirement for issue environmental clearance.
- (10) Any Govt. of India/UT Acts, Laws, Byelaws would be applicable as notified from time to time
- (11) EV Charging rationale, options and infrastructure shall be guided by Amendments in **Model Building Bye Laws, 2016** for Electric Vehicle Infrastructure
- (12) Indoor Air Quality rationale, options and infrastructure shall be guided by Amendments in **Model Building Bye Laws, 2016** for Electric Vehicle Infrastructure, as and when applicable
- (13) In-building solutions for IT Infrastructure rationale, options and infrastructure shall be guided by Amendments in **Model Building Bye Laws, 2016** for Electric Vehicle Infrastructure, as and when applicable

## **Chapter-14: Heritage and Protected Monuments**

Conservation of heritage sites shall include buildings, artifacts, structures, areas and precincts of historic, aesthetic, architectural, cultural or environmentally significant nature (heritage buildings and heritage precincts), natural feature areas of environmental significance or sites of scenic beauty.

### **14.1. Applicability of these Bye-Laws**

These regulations shall apply to heritage sites which shall include those buildings, artifacts, structures, streets, areas and precincts of historic, architectural, aesthetic, cultural or environmental value (hereinafter referred to as Listed Heritage Buildings/Listed Heritage Precincts) and those natural feature areas of environmental significance or of scenic beauty including, but not restricted to, sacred groves, hills, hillocks, water bodies (and the areas adjoining the same), open areas, wooded areas, points, walks, rides, bridle paths (hereinafter referred to as 'listed natural feature areas') which shall be listed in notification(s) to be issued by the UT administration, or as identified in Master Plan.

The provisions in this chapter are beyond the regulations applicable on the Prohibited and Regulated areas as defined by Ancient Monuments and Archaeological Sites and Remains (AMASR) Act 2010, where site specific Heritage Bye-Laws prepared and notified by the Competent Authority (National Monuments Authority) under the AMASR Act shall be applicable. NOC shall have to be obtained by submission of required documents as may be necessary, including "Heritage Impact Assessment" report, if so, necessitated by the NMA.

### **14.2. Responsibility of the owners of Heritage Buildings**

Post notification It shall be the duty of the owners of heritage buildings and buildings in heritage precincts or in heritage streets to carry out regular repairs and maintenance of the buildings. The UT administration, the Municipal Committee or the Local Bodies and Authorities concerned shall not be responsible for such repair and maintenance except for the buildings owned by the Government, the Municipal Committee or the other local bodies.

### **14.3. Restrictions on Development/Redevelopment/repairs, etc.**

No development or redevelopment or engineering operation or additions / alterations, repairs, renovations including painting of the building, replacement of special features or plastering or demolition of any part thereof of the said listed buildings or listed precincts or listed natural feature areas shall be allowed except with the prior permission of Executive Officer, Municipal Committee, or equivalent official of Municipal Committee/ Vice Chairman, Development Authority. Before granting such permission, the agency concerned shall consult the Heritage Conservation Committee to be appointed by the UT Administration and shall act in according with the advice of the Heritage Conservation Committee.

- i. Provided that, before granting any permission for demolition or major alterations / additions to listed buildings (or buildings within listed streets or precincts), or construction at any listed natural features, or alteration of boundaries of any listed natural feature areas, objections and suggestions from the public shall be invited and shall be considered by the Heritage Conservation Committee.
- ii. Provided that, only in exceptional cases, for reasons to be recorded in writing, the Executive Officer, Municipal Committee, or equivalent official of Municipal Committee/ Vice Chairman, Development Authority may refer the matter back to the Heritage Conservation Committee for reconsideration.

However, the decision of the Heritage Conservation Committee after such reconsideration shall be final and binding.

#### **14.4. Penalties**

Violation of the regulations shall be punishable under the provisions regarding unauthorized development. In case of proved deliberate neglect of and/or damage to Heritage Buildings and Heritage Precincts, or if the building is allowed to be damaged or destroyed due to neglect or any other reason, in addition to penal action provided under the concerned Act, no permission to construct any new building shall be granted on the site if a Heritage Building or Building in a Heritage Precinct is damaged or pulled down without appropriate permission from Executive Officer, Municipal Committee, or equivalent official of Municipal Committee/ Vice Chairman, Development Authority.

It shall be open to the Heritage Conservation Committee to consider a request for rebuilding/reconstruction/retrofitting of a Heritage Building that was unauthorizedly demolished or damaged, provided that the total built-up area in all floors put together in such new construction is not in excess of the total built-up area in all floors put together in the original Heritage Building in the same form and style in addition to other controls that may be specified.

#### **14.5. Preparation of list of heritage sites including heritage buildings, heritage precincts and listed natural features**

The list of heritage sites including Heritage Buildings, Heritage Precincts and listed Natural Features Areas is to be prepared and supplemented by Executive Officer, Municipal Committee, or equivalent official of Municipal Committee/ Vice Chairman, Development Authority on the advice of the Heritage Conservation Committee. Before being finalized, objections and suggestions of the public are to be invited and considered. The said list to which the regulation applies shall not form part of this regulation for the purpose of Building Bye-Laws.

The list may be supplemented from time to time by Government on receipt of proposal from the agency concerned or by Government suo-moto provided that before the list is supplemented, objections and suggestions from the public be invited and duly considered by the Executive Officer, Municipal Committee, or equivalent official of Municipal Committee/ Vice Chairman, Development Authority /and/or UT Administration and / or the Heritage Conservation Committee.

When a building or group of buildings or natural feature areas are listed it would automatically mean (unless otherwise indicated) that the entire property including its entire compound / plot boundary along with all the subsidiary structures and artifacts, etc. within the compound/plot boundary, etc. shall form part of list. The buildings, however, on this list (original and supplemented, as notified by the Executive Officer, Municipal Committee, or equivalent official of Municipal Committee/ Vice Chairman, Development Authority /and/or UT Administration and / or the Heritage Conservation Committee) shall follow these Building Bye-Laws post its notification.

#### **14.6. Alteration/modification/relaxation in development norms**

On the advice of the said Heritage Conservation Committee to be appointed by the Government and for reasons to be recorded in writing, the Commissioner, Executive Officer, Municipal Committee, or equivalent official of Municipal Committee/ Vice Chairman, Development Authority shall follow the procedure as per Development Authority Act, to alter, modify or relax the Development Control Norms prescribed in the Master Plan, if required, or



Heritage Conservation and Preservation Act, as may be notified from time to time, for the conservation or preservation or retention of historic or aesthetic or cultural or architectural or environmental quality of any heritage site.

#### **14.7. Heritage precincts / Natural feature areas**

In cases of streets, precincts, areas and (where deemed necessary by the Heritage Conservation Committee) natural feature areas notified, development permissions shall be granted in accordance with the special separate regulation prescribed for respective streets, precincts / natural feature areas which shall be framed by the Executive Officer, Municipal Committee, or equivalent official of Municipal Committee/ Vice Chairman, Development Authority on the advice of the Heritage Conservation Committee. Before finalizing the special separate regulations for precincts, streets, natural features, areas, the draft of the same shall be published in the official gazette and in leading newspapers for the purpose of inviting objections and suggestions from the public. All objections and suggestions received within a period of 30 days from the date of publication in the official gazette shall be considered by the Executive Officer, Municipal Committee, or equivalent official of Municipal Committee/ Vice Chairman, Development Authority. After consideration of the above suggestions and objections, the agency concerned, acting on the advice of the Heritage Conservation Committee shall modify (if necessary) the aforesaid draft separate regulations for streets, precincts, areas and natural features and forward the same to Government for notification.

#### **14.8. Road Widening**

Widening of the existing roads under the Master Plan of the City or Town / Zonal Development Plan or in the Layout Plan shall be carried out considering the existing heritage buildings (even if they are not included in a Heritage Precinct) or which may affect listed natural features areas.

#### **14.9. Incentive uses for heritage buildings**

In cases of buildings located in non-commercial use zones included in the Heritage Conservation List, if the owner / owners agree to maintain the listed heritage building as it is in the existing state and to preserve its heritage state with due repairs and the owner / owners / lessees give a written undertaking to that effect, the owner / owners / lessees may be allowed with the approval of the Heritage Conservation Committee within permissible use zone to convert part or whole thereof of the non-commercial area within such a heritage building to commercial/office use/hotel. Provided that if the heritage building is not maintained suitably or if the heritage value of the building is spoiled in any manner, the commercial / office / hotel use shall be disallowed.

#### **14.10. Maintaining Skyline and Architecture Harmony**

After the guidelines are framed, buildings within heritage precincts or in the vicinity of heritage sites shall maintain the skyline in the precinct and follow the architectural style (without any high-rise or multistoried development) as may be existing in the surrounding area, so as not to diminish or destroy the value and beauty of or the view from the said heritage sites. The development within the precinct or in the vicinity of heritage sites shall be in accordance with the guidelines framed by the Executive Officer, Municipal Committee, or equivalent official of Municipal Committee/ Vice Chairman, Development Authority on the advice of the Heritage Conservation Committee or separate regulations / guidelines, if any, prescribed for respective zones by Municipal Committee / Development Authority. There needs to be a touch of local architecture in all buildings, e.g., Shingstak.

#### **14.11. Restrictive Covenants**

Restrictions existing as imposed under covenants, terms and conditions on the leasehold plots either by the UT Administration or by Municipal Committee of the city/town or by Development Authority shall continue to be imposed in addition to Development Control Regulations. However, in case of any conflict with the heritage preservation interest/environmental conservation, this Heritage Regulation shall prevail.

#### **14.12. Grading of the listed buildings / listed precincts**

Listed Heritage Buildings / Listed Heritage Precincts shall be graded as per decisions taken by the Heritage Conservation Committee, or, in absence of it, shall follow **Chapter-12 Conservation of Heritage Sites, Table-12.1 Grading of Listed Heritage**. Listing does not prevent change of ownership or usage. However, change of use of such Listed Heritage Building / Listed Precincts is not permitted without the prior approval of the Heritage Conservation Committee. Use should be in harmony with the said listed heritage site.

#### **14.13. Opinion of the Heritage Conservation Committee**

Nothing mentioned above should be deemed to confer a right on the owner / occupier of the plot to demolish or reconstruct or make alterations to his heritage building / buildings in a heritage precinct or on a natural heritage site if in the opinion of the Heritage Conservation Committee, such demolition / reconstruction /alteration is undesirable.

#### **14.14. Approval to preserve the beauty of the area**

The Heritage Conservation Committee shall have the power to direct, especially in areas designated by them, that the exterior design and height of buildings should have their approval to preserve the beauty of the area.

#### **14.15. Signs and Outdoor display structures/ including street furniture on heritage sites**

Commissioner, Municipal Corporation/ Vice- Chairman, Development Authority on the advice of the Heritage Conservation Committee shall frame regulations or guidelines to regulate signs, outdoor display structures and street furniture on heritage sites.

#### **14.16. Implications of listing as heritage buildings**

The Regulations do not amount to any blanket prevention of demolition or of changes to Heritage Buildings. The only requirement is to obtain clearance from Executive Officer, Municipal Committee, or equivalent official of Municipal Committee/ Vice Chairman, Development Authority and Heritage Conservation Committee from heritage point of view.

#### **14.17. Ownership not affected**

Sale and purchase of Heritage Buildings does not require any permission from Municipal Committee of the city/town/ Development Authority/or Heritage Conservation Committee. The Regulations do not affect the ownership or usage. However, such usage should be in harmony with the said listed precincts / buildings. Care will be taken to ensure that the development permission relating to these buildings is given within 60 days.

## **Chapter-15 Roll out of Street Infrastructure and Small Cells for 5G Networks**

With the advent of 5G, there will be a requirement to deploy Low Power Base Transceiver Stations (LPBTS) with 5G radios often called “small cells” due to network elements working on higher frequency spectrum bands that necessitate denser network deployments to support larger traffic volumes per unit area. A small cell is a cellular base station that transmits & receives 3GPP-defined Radio Frequency (RF) signals with small power and small form factor. In most cases, it services a small coverage area ranging from ten meters to several hundred meters in contrast to a typical mobile macro cell that might have a range of up to several tens of kilometers.

Various types of street furniture such as poles (streetlights, electricity, traffic lights), advertisement hoardings, bus shelters and towers have been identified by TRAI as suitable national assets for deploying small cells.

### **15.1. Background**

Previous generations of cellular infrastructure can no longer keep pace with the growing demand for communication (data transmission) bandwidth and throughput. The macro towers that have been serving Fourth-Generation Long-Term Evolution (4G LTE) networks cannot connect to the rapidly growing number of devices that users are simultaneously utilizing. The next generation of cellular technology, 5G, represents a paradigm shift for cellular infrastructure.

As the roll-out of 5G continues, more and more radios need to be deployed and networks will need to be densified. The Macro radios provide excellent coverage and high capacity. However, in some cases, for example dense-urban locations dominated by tall buildings, providing the necessary coverage can be challenging. Similarly, where there are high numbers of mobile-users, such as busy city-centers and transportation hubs, providing enough capacity needs from a single radio can also be challenging. In these cases, outdoor small cells are ideal solutions for improved coverage. These solutions include micro remote radio heads and high-capacity 5G millimeter wave radios. Around 80% of mobile broadband traffic originates from mobile users located indoors. However, ensuring good indoor coverage can also be a challenge, especially as the higher frequencies used by 5G are more prone to signal propagation limitations than previous generations of mobile technology. To help overcome this, it is essential to consider indoor small cells as a deployment option.

Mobile operators will look to small cell deployment technology to add data capacity in areas of traffic congestion. This dense small cell network increases both the radios per subscriber and provides subscribers improved signal quality for more efficient data transfer. The shorter distance between radio sites also helps overcome the short signal reach of higher frequency 5G radio spectrum. As a result, small cells are becoming the leading solution in growing the data capacity of the network

Small cells are therefore required in the 5G network due to the following reasons:

- Offloading: The Macro site of the area is getting congested and is unable to serve the entire community of the area.
- Capacity Enhancement: The macro site serving the building/ area is unable to meet the capacity requirements of some parts of the building/ spot.
- Low Coverage of Signal: Higher spectrum band.
- Indoor Coverage: In building solutions are essential for indoor coverage including

basements, underground metro tunnels etc.

Various small cell product types exist generally depending on, among other attributes, their targeted coverage range (transmit power) and provided capacity. These small cell variants include (but are not limited to) femtocells, picocells and microcells/metrocells – broadly increasing in cell range from femtocells (the smallest) to metrocells (the largest) as summarized below:

- Femtocells: A low-power, short range, self-contained small cells. Initially used to describe consumer small cell units intended for residential homes, the term has expanded to encompass higher capacity units for enterprise, rural and metropolitan areas.
- Picocells: Typically used to describe low power compact base stations, used in enterprise or public indoor areas, the term is sometimes used to encompass outdoor small cells as well.
- Microcells: Typically used to describe an outdoor short-range base station aimed at enhancing coverage for both indoor and outdoor users where macro coverage is insufficient. Occasionally installed indoors to provide coverage and capacity in areas above the scope of a picocells.
- Metrocells: A recent term used to describe small cell technologies designed for high-capacity metropolitan areas. Such devices are typically installed on building walls or street furniture (e.g., lampposts). This category can include technologies such as femtocells, picocells and microcells where they meet these deployment criteria.

## **15.2. Small Cell Deployment Scenarios and Use cases:**

Small cells generally support two lower coverage range base station classes defined by 3GPP [TS38.104] which also determine the RF performance:

- i. Medium-range base stations (derived from microcell scenarios) for outdoor small cell deployment.
- ii. Local area base stations (derived from Pico cell scenarios) for indoor small cells.

Small cells will play a critical role in a number of use cases in the 5G network. Some of use cases of Small Cells are given below-

- Large venues such as sports complexes or concert halls where thousands of users need to connect within an enclosed area. In order to ensure all users, maintain network coverage with good throughput, 5G small cells can be deployed in these facilities and surrounding areas to provide extra capacity so that the influx of users doesn't exhaust the network.
- Another use case is cellular vehicle-to-everything (C-V2X) enabling communications between vehicles and between the car and infrastructure. Both capabilities are necessary for autonomous automobiles. 5G small cells can be used to build infrastructure that can handle massive communications needed for this application where human lives can be at stake.
- In smart cities, 5G small cells can be attached to traffic posts or light posts to enable better coverage in metropolitan areas to ensure the network coverage is there with the necessary throughput for smart city initiatives, analytics and intelligence.
- 5G small cells can support residential or business network needs. In a smaller community of users, that doesn't justify the capital costs for a macrocell deployment, a

5G small cell is a great alternative. Placing a 5G small cell near residential buildings or homes, can ensure throughput is not degraded due to lack of coverage.

### **15.3. Communication System:**

Data growth is exploding globally and in India as per Nokia MBit 2021 Report, the average monthly data usage per user in India has increased almost 17 times over the past 5 years. Covid-19 has further pushed data consumption with people staying indoors. Government has facilitated Work from Home (WFH) guidelines with a Work from Anywhere (within India) permitted. Home consumption of data has therefore grown exponentially through 2020. According to the Tower and Infrastructure Providers Association, almost 85% data traffic and 70% voice traffic is now generated indoors.

The World Bank has clearly demonstrated that every 10% increase in broadband penetration leads to nearly 1.40% increase in GDP growth rate. While that is a global average, even the India specific study by the reputed quasi-Government research agency, ICRIER, has shown that every 10% increase in internet traffic delivers 3.1% increase in GDP per capita and a 10% increase in investment in Telecom Infrastructure will increase GDP by 3.3%. The entire consumer pull today is focused on data and broadband now with the new digital services providing voice services free with the data services. Video and app-based services are driving the demand for broadband with Apps for ecommerce, eHealth care etc. in everyday use. It is very clear that Internet Traffic and Apps are contributing to GDP growth and for this to grow even further, conventional connectivity needs to be replaced with duct-sharing and fibre especially, which is an essential requirement In-Building as much as it is for FTTx and Tower Fiberization.

Note: “Service Provider”: any organization that provides any type of telecom or IT services in the building complex, as per scope defined by DOT i.e., TSP / ISP / IP1 etc.

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. This section describes the general and specific requirements of such an ICT infrastructure in Building specially in respect of cabling aspects.

Communication systems are general utility in much the same way as water, power, gas, cable TV & CCTV/Security. Unlike traditional communication systems which are constantly evolving, the recommended Digital infrastructure has to be designed to be flexible enough to accommodate a variety of ICT systems and emerging technologies and be future proof for the next 25-30 years. Space and power are required for installation of common ducts, optical fiber, small cells, antennas, smart sensors etc., space, power and earthing is required for electronic equipment installation for supporting the various digital technologies of now and the future. Most communication utilities can share the same space since the physical topology and wiring requirements are similar and no significant power is present in the cables. However, in some cases state-of-the-art communication cabling or equipment will involve new or more specific requirements for utility spaces such as:

- i. Cable routing layout and cable length restrictions between Work-Space and utility closet,
- ii. Bending radius and working clearance requirements for different cable types, e.g., Fiber optic cables, Cat-6 Cables and co-axial cables,
- iii. Isolated power circuits for permanent communication equipment,

- iv. Protection, Safety, Grounding and environmental requirements of communication equipment.

#### **15.4. Emerging Technologies in Telecommunication Services:**

The technologies used for telecommunications have changed greatly and over the past few years and particularly during the pandemic, India has experienced a massive surge in indoor voice and data consumption. According to the Tower and Infrastructure Providers Association, almost 85% data traffic and 70% voice traffic is now generated indoors. Telecommunication network architecture is changing to meet new requirements for a number of services/applications viz. 5G, massive Internet of things, Artificial Intelligence etc. Choosing efficient and cost-effective and fast-deployment technologies such as wired and wireless networks will improve accessibility. Based on type of building and profile of customers in the buildings, the needs of wired and wireless may vary. Further, the architecture of the information and communication infrastructure is changing to accommodate the requirements of a growing number of ICT-enabled services/applications (broadband, IP, mobile, multimedia, surveillance, IoT, etc.). In order to improve in-building coverage and to offer better-quality high-speed data services, there is a definite need to install in - building solutions (IBS) for augmenting the wireless-based voice and data services. This is equally true for installing 5G and Wi-Fi hotspots along with Fibre to x (FTTX) distribution network of Fiber and Cat-6 Cables for seamless data connectivity.

Provisioning of telecom services and broadcasting services viz Cable TV, DTH and Security Services viz. CCTV Cameras and futuristic services viz IoT based sensors would require suitable wireline connectivity inside the buildings inside buildings are not confined to wireless medium only. Wireline services through cables such as copper cables, optical fibre cables (OFC), LAN Cat-6 cables are also equally important for having uninterrupted connectivity. Also, for services such as Cable TV, DTH and Smart Devices Solutions (IoT), suitable cabling within building premises is a pre- requisite and for that, shared duct space across the building riser and floors is critical to achieve the flexibility in the future.

#### **15.5. Incorporation with Smart Cities:**

##### **i. In-Building and Gated building solutions:**

It is important to ensure quality telecom services inside a building - in residential, multi-story building, commercial complex, hotel or airport. It is also essential for Telecommunication Service Providers/IP-1s to work on sharing of telecom infrastructure which may be made mandatory as they extend the services in the buildings.

Telecom Service Providers/IP-1s require a non-discriminatory and unhindered access inside the building / along the premises to install the telecom infrastructure or lay their cables.

At present, mobile operators and the building owner or building developer or Resident Welfare Associations (RWA) enter into commercial agreements for in-building deployment. Building owners or building developers delay the negotiations or request exorbitant rents – slowing down the speed of deployment. The Urban Local Body / Urban Development Authority may intervene in this regard wherein commercial agreements are insisted upon. TSPs/IP-1s should be given legal rights to use the Common Telecom Infrastructure (CTI) within the premises of Building / Gated Society free of charge or for a standardized nominal charge just like other essential services like water electricity and/or gas. Provision of CTI in a building should not be deemed as a revenue source in any way, much as the water and electricity utilities are not.

The issue is not limited to sharing of IBS/ Distributed Antenna System (DAS) systems only, but TSP should get access to all telecom infrastructures including Fiber Cable and LAN cables

for provision of wired and wireless network, other telecom/ICT and IoT services.

It is important for telecom service providers to provide mobile coverage / network presence/high speed connectivity inside big residential / commercial complexes to improve QoS of their networks. It may not be practical to install individual in-building infrastructure by TSPs/IP-1s as this will result in not only duplication of network resources but will also entail huge avoidable cost. It may also be not advisable to lay down cables again and again on the same land / building by several TSPs/IP-1s.

## **ii. Built Provisions:**

The buildings are to be constructed in such a way that they are 'Digital Infrastructure deployment'/ 'Digital Connectivity' ready. There should be provision of telecom ducts/ common pathways/runways (digital access paths) to reach to the accessible parts of the buildings. The common ducts/digital access paths to access buildings from outside should invariably be part of the CTI, which could be used by TSPs/IP-1s for laying/deploying digital infrastructure including cables. While approving the building plans, it has to be ensured that plan for creation of CTI including the common duct to access the common space used as telecom room inside the building is also prepared and separate set of drawings showing the inter/intra connectivity access to the building with distribution network need to be furnished.

Occupancy-cum-Completion certificate to a building to be granted only after ensuring that the CTI as per the prescribed standards is in place and an undertaking by the Architect or Engineer to be insisted to certify that building has ensured common access to all digital infrastructure to all Service providers in accordance with plan of creation of CTI.

**As part of Building Bye-Laws, the builder/Resident Welfare Association should be mandated to ensure that:**

- i. While preparing the building plans, there is a need to mandate to have properly demarcated sections within buildings and on rooftops for housing Broadband / digital connectivity infrastructure / antenna. These areas should have access to power supply for reliable, always-on services.
- ii. Access to building as well as CTI facilities inside the building should be available on a fair, transparent and non-discriminatory manner to all Service Providers /IP1's.
- iii. The Service Providers / IP1's should have unrestricted access for maintenance work.
- iv. The permission to in-building access and/or CTI facilities inside the building should not be seen as a source of revenue generation for builder(s)/RWA(s) but as a means for facilitating penetration of broadband access and thereby helping in socio-economic growth of all the residents.
- v. Charges (rentals/power rates etc.) levied to the TSPs/IP-1s should be fair, transparent, and non-discriminatory and should be on residential rates.

**Suitable provision for the creation of Common Telecom Infrastructure (CTI) inside the newly constructed public places like Airports, commercial complexes and residential complexes, be incorporated in State/UT Building Bye Laws.**

**i. At Layout Level**

While developing Greenfield areas, the layout plans should clearly indicate the telecom as Utility infrastructure lines. Standards followed for Utility planning shall be published and work shall be done by the respective department for bringing in the standardization of the utility coding and sequences. The placement and sequence of above- and below-ground utilities at the appropriate location in the right-of-way to be ensured for unconstrained movement as well as easy access for maintenance. 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.

Digital Readiness Rating of Buildings / Society in line to the Green ratings (as mentioned in these Bye-Laws, as well as further laws/notifications/amendments taken up by shall be created where the existing and new buildings shall be rated on standardized parameters such as; but not limited to; Digital Infrastructure access, provisions for Emerging Technologies, Maintenance and Operational ease to TSPs / IPv1, Quality of Wireless Services, Quality / Interchangeability ease of Wireline Services till each Unit Security, redundancy and Expandability of the digital infrastructure etc. A detailed rating parameters and calculation mechanism of Points / Stars shall be devised and benchmarked for all new / retrofitting of buildings/ societies.

Digital Asset repository which will ensure Proper planning and mapping of utilities through GIS is necessary especially when the alignments of telecommunication cables are identified. Design criteria and standards Utilities should meet the following criteria:

- 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.
- 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.
- In order to minimize disruptions, cables should be installed with proper maintenance infrastructure.

**ii. Other procedures for setting up In-Building Solution (IBS)/ Fiber Networks:**

- There is a need to promote installation of In-Building Solution (IBS) / Smart Connectivity infrastructure, where there is a poor connectivity in terms of weak signal strength inside the office, shopping mall, hospitals, multi-story building, education institutions and the objective has to be to strengthen quality of service of the voice & data of mobile and Fiber broadband network and access to digital services being offered by TSP and IP1's
- Mode of deployment of In-Building, FTTx/IP Solution: There shall be various mode of deployment of In Building solutions such as: The possible modes are deployment by a neutral host infrastructure provider or build and managed by mobile operator and sharing with other service providers on non-discriminatory basis. The In-Build Solutions (IBS), FTTx/IP Solutions can also be deployed by TSPs/ IPs. For deploying indoor



solutions these companies should have deemed permissions from the premise's owners for installation of Distribution Network within the utility shafts / common spaces with provisions for common / shared Points of Interconnect for Connectivity to individual units. Moreover, if the TSP/IP requires to install optical fiber for connecting In-Building Solution (IBS) / Distributed Antenna System (DAS) nodes, FTTx/IP Solutions for which RoW / permissions should be granted by the road owning agency through online mode.

- Permissibility: The IBS, FTTx/IP component being small equipment can be installed on any type of land/building/utility pole and shall be exempted from obtaining the permission for installation of these components from the respective Urban Local Body/Urban Development Authority but should get permission from the Administrative Authority of the concerned premises.
- Procedure for submitting application for obtaining clearance: The application should be made to the Administrative Authority of the Building/ Head of the office with Layout diagram for implementing IBS in the building.
- Fees: There shall be no fee to be charged for IBS / FTTx Network. However, charges may be levied for provision of power, fixtures, etc. if taken by the TSP/IP-1s.
- Access and Distribution Fiber and IP/LAN networks for connectivity for the Shopping Malls, Multi-Storey Residential Buildings, Cooperative Housing Societies, Residential Welfare Association and Commercial Buildings to be planned and deployed by TSP/IP-1s as per standard requirement of providing high bandwidth and adequate indoor coverage to each unit / apartment in these complexes.

# Annexure “A”

## Standard Affidavit

I ..... son/daughter/wife of ....., applied for building plan approval/ DPC Level/ occupation certificate vide application dated..... on Form BC....., and resident of , hereby solemnly state & affirm as under:

1. That I shall not use basement as habitable space, as the same has not been included in the FAR and has not been shown as habitable space in the approved plans.
2. That I shall use the building only for the purpose for which approval and occupation certificate has been obtained.
3. That I shall comply with all the condition(s) implied by the competent authority at the time of approval of building Plan and Occupation certificate.
4. That ..... (condition/ indemnity/ affirmity required by the Competent Authority)-I.
5. That ..... (condition/ indemnity/ affirmity required by the Competent Authority)-II.
6. That ..... (condition/ indemnity/ affirmity required by the Competent Authority)-III.
7. ....

Place:  
Date:

DEPONENT

### VERIFICATION

I ..... son/daughter/wife of ..... , applied for building plan approval/ DPC Level/ occupation certificate vide application dated..... on Form BC....., and resident of....., hereby verify and affirm that the contents of this affidavit are true and correct to the best of my knowledge, belief and information in witness whereof I have signed hereunder on day of \_  
\_\_\_\_\_.

**FORM BC-I**  
[See Code 4.1(1)]  
Form of Application

<b>Class of Building</b>		Institutional	<input type="checkbox"/>
Residential	<input type="checkbox"/>	Industrial	<input type="checkbox"/>
Commercial	<input type="checkbox"/>	Warehousing	<input type="checkbox"/>
Educational	<input type="checkbox"/>	Any other	<input type="checkbox"/>
Health	<input type="checkbox"/>		

From .....

To.....

Sir,

I/We apply for permission to erect/re-erect/add/alter a building/wall in accordance with the plans submitted herewith on Site No. \_\_\_\_\_; Street No. \_\_\_\_\_; at \_\_\_\_\_/Khasra No. \_\_\_\_\_, Village \_\_\_\_\_ (strike out whichever is not applicable)

1. I/We attach:

- a. Site plan (in triplicate) showing the position of site proposed to be built upon as required by the Bye-Laws along with an un-editable Compact Disc/DVD or any other electronic medium permissible by competent authority from time to time containing the drawings so submitted,
- b. Plans, elevations and sections (in triplicate) as required by the Bye-Laws along with an un-editable compact Disc/DVD or any, other electronic medium permissible by Director from time to time containing the drawings so submitted,
- c. Drainage plans (in triplicate), as required by Bye-Laws along with an un-editable compact Disc/DVD or any, other electronic medium permissible by the competent authority from time to time containing the drawings so submitted,
- d. Structural drawings (for record) as per Form BC-V(A1)/BC-V(A2), as may be applicable,
- e. Specifications of the proposed building (in triplicate) in Form BC-II;
- f. Certificate of conformity to regulation and structural safety for the relevant buildings (depending upon type and height) in **Form BC-V(A1)** and

2. Scrutiny fee @ Rs. 10 per square meter deposited as per prescribed mode

3. The construction of the building will be undertaken as per the approved building plans, structural design given by the structural engineer, and got supervised through the following architect/engineer:

Architect:		Engineer:	
Name of Architect:		Name of Engineer:	
Council of Architecture Registration No.-----valid up to-----		Qualifications:	
Complete Address		Complete Address	
E-Mail		E-Mail	
Mobile No.		Mobile No.	

Enclosures

(No digital signatures are required)

Signature of applicant

- i. Complete Address
- ii. E-Mail
- iii. Mobile No.

**FORM BC-II**  
See Code 4.1 (a) (iv))  
**Specifications**

The materials to be used in the construction to be clearly specified under the following heads:-

Items	Specifications
(a) Foundations	
(b) Walls	
(c) Damp-proof course	
(d) Floors	
(e) Roofs	
(f) Windows and Doors and other wood-work	
(g) Steel work	
(h) Internal finish	
(i) External finish.	

Signature of applicant  
(No digital signatures are required)

Signature of Architect/Engineer

i. Complete Address

ii. E-Mail

iii. Mobile No.

**Form BC-V (A1)**

(See code 4.1 (a) (vi, viii and ix)

**Certificate of conformity to Bye-Laws and structural safety for Residential and Commercial Buildings up to 15 meters height.**

Certificate to be submitted along with the building application in **Form BC-1** duly signed by the Architect and the Structural Engineer.

**Details of the building for which the certificate is issued**

Plot No. \_\_\_\_\_, Sector \_\_\_\_\_, Colony \_\_\_\_\_

City/Town \_\_\_\_\_.

Name of the owner \_\_\_\_\_.

Complete address of the owner \_\_\_\_\_.

**A. Building Plan :**

i. Name of Architect:

ii. Council of Architecture Registration No. \_\_\_\_\_, valid up to \_\_\_\_\_.

iii. Complete Address

iv. E-Mail

v. Mobile no.

**B. Structural Design:**

i. Name of Engineer:

ii. Qualifications:

iii. Complete Address

iv. E-Mail

v. Mobile no.

**Certificate**

It is hereby certified that the plans submitted in Form BC-1 for the building detailed above, are in accordance with the Administration of UT Unified Ladakh Building Bye-Laws – 2022 (and the approved zoning plan of the plot wherever applicable). The structure has been designed in accordance with the provisions of the National Building Code and the relevant Indian Standard Code (with latest amendments) including Bureau of Indian Standard Codes for structures resistant to earthquakes and other natural hazards. The local soil conditions, its load bearing capacity and the underground water table etc. have been kept in view while designing the same.

Dated \_\_\_\_\_

Signature of Owner  
(No digital signatures are required)  
Mobile No.  
E-mail

Signature of Architect

Signature of Engineer/  
Structural Engineer

**FORM BC-V (A2)**

[See code 4.1 (a) (vi and ix)]

**Certificate of conformity to rules and structural safety for all buildings except as stated in Form BC-V (A1).**

Certificate to be submitted along with the building application in Form BC-1 duly signed by the Architect and Structural Engineer and the Proof Consultant.

**Details of the building for which the certificate is issued**

Plot No. \_\_\_\_\_, Sector \_\_\_\_\_, Colony \_\_\_\_\_

City/Town \_\_\_\_\_.

Name of the owner \_\_\_\_\_.

Complete address of the owner \_\_\_\_\_

**A. Building Plan :**

i. Name of Architect:

ii. Council of Architecture Registration No. \_\_\_\_\_, valid up to \_\_\_\_\_.

iii. Complete Address

iv. E-Mail

v. Mobile No.

**B. Structural Design:**

i. Name of Engineer:

ii. Qualifications:

iii. Complete Address

iv. E-Mail

v. Mobile No.

**Certificate**

It is hereby certified that the plans submitted in Form BC-1 for the building detailed above, are in accordance with the Bye-Laws ((and the approved zoning plan of the plot wherever applicable). The structure has been designed in accordance with the provisions of the National Building Code and the relevant Bureau of Indian Standard Codes (with latest amendments) including Bureau of Indian Standard Codes for structures resistant to earthquakes and other natural hazards. The local soil conditions, its load bearing capacity and the underground water table etc. have been kept in view while designing the same.

Dated \_\_\_\_\_

Signature of Owner

Signature of Architect

Signature of Structural Engineer

(No digital signatures are required)

Mobile No. .... E-mail -----

The structural design has been checked and has been found to be in order. The design is in accordance with the provisions of the National Building Code and the relevant Bureau of Indian Standard Codes (with latest amendments) including Bureau of Indian Standard Codes for structures resistant to earthquakes and other natural hazards. The local soil conditions, its load bearing capacity and the underground water table etc. have been kept in view while designing the same.

Dated \_\_\_\_\_

Signature of Proof  
Consultant along with Mob.  
No. & E-mail



**FORM BC-III**  
(See Code 5.2 (4))  
**Form of Sanction**

From

---

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To

---

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Memo No.

Dated the .....

Reference you application for permission to erect/re-erect-add to/alter a building on plot No.\_\_\_\_\_/ Khasra no.\_\_\_\_\_, Village\_\_\_\_\_in accordance with the plans submitted with it.

Permission is hereby-

(i) granted/sanctioned for the aforesaid construction subject to the provisions of the respective Acts and Administration of UT Ladakh Building Bye-Laws -2022 and subject to the following amendments, terms and conditions;

(ii) rejected for reasons given below :-

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Enclosures

Competent Authority,

**FORM BC-IV (A)**  
(See Code 5.10 (1 & 2))  
**For Residential and Commercial Buildings up to 15 meters height.**  
**Application for permission to occupy**

From

\_\_\_\_\_  
\_\_\_\_\_

To

\_\_\_\_\_  
\_\_\_\_\_

Sir,

I/We hereby give you notice that the building/part-of-building described below and sanctioned vide your order No.\_\_\_\_\_, dated\_\_\_\_\_, has been completed on \_\_\_\_\_ in all respects according to the sanctioned plans and the structural design made for the same and the suggested modifications have been carried out.

**Description of Building**

Plot No.\_\_\_\_\_, Sector\_\_\_\_\_, Colony \_\_\_\_\_

City/Town\_\_\_\_\_.(or)

Khasra no.\_\_\_\_\_, Village\_\_\_\_\_

1. Name of the owner along with Mob. No. and E- mail

\_\_\_\_\_.

Complete address of the owner\_\_\_\_\_.

2. The modifications made to the building plans and carried out at site during the course of construction are submitted herewith:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. Corresponding to the above modifications made in the building plans, the necessary amendments were also carried out in the structural design and implemented a site.

4. Completion certificate from the architect/engineer who supervised the construction of the building is submitted herewith.

5. Kindly issue an occupation certificate as required by Administration of UT Ladakh Building Bye-Laws -2022 Dated \_\_\_\_

Signature of applicant

(No digital signatures are required)

Signature of Architect/Engineer  
supervising the construction at site

i. Complete Address

ii. E-Mail

Mobile no.

**FORM BC-IV (B)**  
(See Code 5.10 (1))

**For all Buildings except as stated in Form BR-IV (A) Application for permission to occupy**

From

---

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To

---

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Sir

I/We hereby give you notice that the building/part-of-building described below and sanctioned vide your order No. \_\_\_\_\_, dated \_\_\_\_\_, has been completed on \_\_\_\_\_ in all respects according to the sanctioned plans and the structural design made for the same and the suggested modifications have been carried out.

**Description of Building**

Plot No. \_\_\_\_\_, Sector \_\_\_\_\_, Colony \_\_\_\_\_  
City/Town \_\_\_\_\_.(or)  
Khasra no. \_\_\_\_\_, Village \_\_\_\_\_

1. Name of the owner alongwith Mob.No. and E-mail \_\_\_\_\_

Complete address of the owner \_\_\_\_\_.

2. The modifications made to the building plans and carried out at site during the course of construction are submitted herewith:

---

---

---

3. Corresponding to the above modifications made in the building plans, the necessary amendments were also carried out in the structural design and implemented a site.

4. Completion certificate (**Form BC-VI**) from the Architect/Engineer who supervised the construction of the building is submitted herewith.

5. Kindly issue an occupation certificate as required under Administration of UT Unified Ladakh Building Bye-Laws -2022

Dated \_\_\_\_\_

Signature of applicant (No digital signatures are required)

Signature of

i) Architect:

a. Complete Address

b. E-Mail

Mobile No.

Signature of

ii) Engineer supervising the construction at site

a. Complete Address

b. E-Mail

Mobile No.

**FORM BC V (I)**  
[See Code 4.10(1)]  
**For Residential and Commercial Buildings up to 15 meters height.**  
**Completion certificate by an Architect/Engineer in respect of building on:**

Plot No. \_\_\_\_\_, Sector \_\_\_\_\_, Colony \_\_\_\_\_

City/Town \_\_\_\_\_.

Name of the owner \_\_\_\_\_.

Complete address of the owner \_\_\_\_\_.

It is hereby certified that the above work has been supervised by us and has been completed to my satisfaction in accordance with the sanctioned building plans and its structural design. The workmanship and all the material used for construction meet the specifications laid down in the National Building Code. No provision of the Administration of UT Unified Ladakh Building Bye-Laws -2022 and no rules made, conditions prescribed, or order issued thereunder has been transgressed in the course of the work.

Dated \_\_\_\_\_

Signature of

- i. Architect:
  - a. Complete Address
  - b. E-Mail
  - c. Mobile No.

Signature of

- ii. Engineer supervising the construction at site
  - a. Complete Address
  - b. E-Mail
  - c. Mobile No.

(See Code 5.10(1))  
**For all Buildings except as stated in Form BC-V(1)**

**Completion certificate by the Architect and the Structural Engineer in respect of building on:**

Plot No. \_\_\_\_\_, Sector \_\_\_\_\_, Colony \_\_\_\_\_

City/Town \_\_\_\_\_.

Name of the owner \_\_\_\_\_.

Complete address of the owner \_\_\_\_\_.

It is hereby certified that the above work has been supervised by us and has been completed to our satisfaction in accordance with the sanctioned building plans and its structural design as checked and certified by the proof consultant. The workmanship and all the material used for construction meet the specifications laid down in the National Building Code. No provision of the Administration of UT Unified Ladakh Building Bye-Laws -2022 and no rules made, conditions prescribed or order issued thereunder has been transgressed in the course of the work.

Dated \_\_\_\_\_

Signature of

- i) Architect:
  - a. Complete Address
  - b. E-Mail
  - c. Mobile no.
  
- ii) Structural Engineer supervising the construction at site
  - a. Complete Address
  - b. E-Mail
  - c. Mobile No.

**Form BC-V (2)**  
(See Code 5.10(1))  
**For all Buildings except as stated in Form BC-V(1)**

**Completion certificate by the Architect and the Structural Engineer in respect of building on:**

Plot No. \_\_\_\_\_, Sector \_\_\_\_\_, Colony \_\_\_\_\_

City/Town \_\_\_\_\_.

Name of the owner \_\_\_\_\_.

Complete address of the owner \_\_\_\_\_

It is hereby certified that the above work has been supervised by us and has been completed to our satisfaction in accordance with the sanctioned building plans and its structural design as checked and certified by the proof consultant. The workmanship and all the material used for construction meet the specifications laid down in the National Building Code. No provision of the Administration of UT Unified Ladakh Building Bye-Laws -2022 and no rules made, conditions prescribed or order issued thereunder has been transgressed in the course of the work.

Dated \_\_\_\_\_

Signature of

iii) Architect:

- a. Complete Address
- b. E-Mail
- c. Mobile no.

iv) Structural Engineer supervising the construction at site

- a. Complete Address
- b. E-Mail
- c. Mobile No.

**FORM BC VI**  
**See Code 5.10 (a) (ii)**  
**Completion Certificate by an Architect**

I do hereby certify-

- i) that the following work has been supervised by me and has been completed to my satisfaction in accordance with the sanctioned plan.
- ii) that no deviation from sanctioned plan is made while constructing the building/ deviation from sanction plan is made (details as below) and these deviations are duly shown on completion drawings. Due to these deviations, human safety has not been compromised (strike off whichever is not applicable).
- iii) that the workmanship and the whole of the materials used are good; that no provision of the Administration of UT Unified Ladakh Building Bye-Laws, 2022 and no requisition made, conditions prescribed, or order issued there under has been violated in the course of the work.

Details of construction on (floor-wise along with covered area on each floor)

City \_\_\_\_\_ Street \_\_\_\_\_  
Plot No. \_\_\_\_\_ House No. (if any) \_\_\_\_\_ (or)  
Khasra no. \_\_\_\_\_, Village \_\_\_\_\_

Dated

Signature of Architect

- i. Complete Address
- ii. E-Mail
- iii. Mobile No.

**FORM BC-VII**  
(See Code 5.10 (2)),  
**Form of Occupation Certificate**

From

\_\_\_\_\_,  
\_\_\_\_\_

To

---

Memo

No.....

Dated

.....

Whereas Shri/ Smt/ M/s .....has applied for the issue of an occupation certificate in respect of the building described below:-

City \_\_\_\_\_ Street \_\_\_\_\_

Site No. \_\_\_\_\_ House No.(if any) \_\_\_\_\_

(or) Khasra no. \_\_\_\_\_, Village \_\_\_\_\_

Indicating description of the building, covered area, towers, nature of buildings etc. I hereby:-

- (i) grant permission for the occupation of the said building with following conditions; or
- (ii) refuse permission for the occupation of the said building for reason given below:-

Competent Authority



**Form-BCS-I**

(See Code 4.2.(a))

**Form of application under self-certification**

Class of Building –

- Residential
- Commercial
- Educational
- Institutional
- Warehousing
- Industrial Any other

From .....

To.....

Sir,

I/we apply for permission to erect/re-erect/add/alter a building/wall in accordance with the plan submitted herewith on site NO..... Street No..... at .....

2. I/We attach:

- a. a site plan showing the position of site proposed to be built upon as required by the Bye-Laws (in triplicate) an un-editable Compact Disc/DVD or any other electronic medium permissible by Competent Authority from time to time containing the drawings as required by **Code 4.1**;
- b. Plans, elevations and sections as required by the Code (in triplicate) an un-editable Compact Disc/DVD or any other electronic medium permissible by Competent Authority from time to time containing the drawing as required by **Code 4.2**;
- c. Drainage plans (in triplicate), as required by Bye-Laws along with an un-editable Compact Disc/DVD or any other electronic medium permissible by Competent Authority from time to time containing the drawings as required under these Bye-Laws;
- d. Structural drawings (for record) along with structure Certificate as per **Form BCS-II**;
- e. Fire Safety design as required in the National Building Code as approved by the UT Fire Authority, or any other authority as appointed by UT Administration. Alternatively, an undertaking to the effect that the fire safety plans duly approved by the UT Fire Authority or any other authority as appointed by UT Administration, will be submitted within sixty days;
- f. Heating, Ventilation, Air conditioning (H.V.A.C.) service plans, wherever required;
- g. Specifications of the proposed building (in triplicate) in **Form BC-II**;
- h. Certificate of conformity to regulation and structural safety for the relevant buildings;
- i. An affidavit from the owner and architect, as required under **Code 4.2**;
- j. Scrutiny fee through an electronic transfer

3 The construction of the building will be undertaken as per the approved building plans, structural design given by the Structural Engineer, fire safety design as approved by the Competent Authority and got supervised through the following Architect/Engineer;

Signature of Architect

- i. Complete Address
- ii. E-Mail.....Mobile No.....

Signature of Structural Engineer supervising the Construction

- i. Complete Address

ii. E-Mail..... Mobile No.....

**Form BCS-II**  
(See Code 4.2.(b))  
**Certificate for structure conforming under self-certification**

Plot No.....Sector.....Colony.....City/Town.....  
Name of the Owner.....  
Complete address of the owner.....

It is hereby certified that the plans submitted in **Form BCS-I** for the building detailed above are in conformity with the Administration of UT Unified Ladakh Building Bye-Laws -2022 and the approved zoning plan of the plot. The structure has been designed in accordance with the provision of National Building Code for structures resistance to earthquakes and other natural hazards. The local soil conditions, its load bearing capacity and the underground water table etc have been kept in view while designing the same.

Date.....

Signature of Architect

Signature of Owner  
(No digital signatures are required)  
Mobile no.  
E-mail

Signature of Structural Engineer

**FORM BCS-III**

[see Code 5.11. (a), (b) and (c)]

**For Buildings Residential and Industrial Buildings applied under Code 4.2 Application for permission to occupy**

From:

.....  
.....

To:

.....  
.....

Sir, I/We hereby give you notice that the building/part of building described below and sanctioned vide your order no. ...., dated ....., has been completed in all respect according to the sanctioned plans and the structural design made for the same and suggested medications have been carried out

Description of Building

Plot No. \_\_\_\_\_, Sector \_\_\_\_\_, Colony \_\_\_\_\_ City/Town\_ \_\_\_\_\_  
\_\_\_\_\_.(or) Khasra no. \_\_\_\_\_, Village \_\_\_\_\_

1. Name of the owner alongwith mob.No\_ \_\_\_\_\_  
and E-mail \_\_\_\_\_  
Complete address of the owner \_\_\_\_\_.
2. The modifications made to the building plans and carried out at site during the course of construction are submitted herewith:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. Corresponding to the above modifications made in the building plans, the necessary amendments were also carried out in the structural design and implemented a site.
4. Completion certificate from the architect/engineer who supervised the construction of the building is submitted herewith.
5. Kindly issue an occupation certificate as required by Administration of UT Unified Ladakh Building Bye-Laws -2022 Dated \_\_\_\_\_

Signature of applicant  
(No digital signatures are required)

Signature of Architect

Mobile no.  
E-mail

Signature of Engineer supervising the construction

**FORM BCS-IV**  
(See Code 5.11(1) and (2))

**Certificate of conformity to rules and structural safety.**

Certificate to be submitted along with the building application in **Form BCS-III** duly signed by the Architect and the Structural Engineer.

**Details of the building for which the certificate is issued**

Plot No. \_\_\_\_\_, Sector \_\_\_\_\_, Colony \_\_\_\_\_  
City/Town \_\_\_\_\_.

Name of the owner \_\_\_\_\_.

Complete address of the owner \_\_\_\_\_.

A. Building Plan :

i. Name of Architect:

ii. Council of Architecture Registration No. \_\_\_\_\_, valid up to \_\_\_\_\_.

iii. Complete Address

iv. E-Mail

v. Mobile no.

B. Structural Design:

i. Name of Engineer:

ii. Qualifications:

iii. Complete Address

iv. E-Mail

v. Mobile no.

**Certificate**

It is hereby certified that the plans submitted in **Form BCS-I** for the building detailed above, are in accordance with the Administration of UT Unified Ladakh Building Bye-Laws -2022 and the approved zoning plan of the plot. The structure has been designed in accordance with the provisions of the National Building Code and the relevant Bureau of Indian Standard Codes (with latest amendments) including Bureau of Indian Standard Codes for structures resistant to earthquakes and other natural hazards. The local soil conditions, its load bearing capacity and the underground water table etc. have been kept in view while designing the same.

Dated \_\_\_\_\_

Signature of Architect

Mobile No. \_\_\_\_\_ E-mail \_\_\_\_\_

Signature of Engineer supervising the construction

Mobile No. \_\_\_\_\_ E-mail \_\_\_\_\_

In case of the building is above 15 meters height, the certificate shall be signed by the proof consultant, as followed:

The structural design has been checked and has been found to be in order. The design is in accordance with the provisions of the National Building Code and the relevant Bureau of Indian Standard Codes (with latest amendments) including Bureau of Indian Standard Codes for structures resistant to earthquakes and other natural hazards. The local soil conditions, its load bearing capacity and the underground water table etc. have been kept in view while designing the same.

Dated.....Signature of Proof Consultant along with Mob. No. & E-mail

**Form BCS-IVA**

**(See Code 5.12(1) and (2))**

**3<sup>rd</sup> party certification for conformity to rules and structural safety.**

Certificate to be submitted along with the building application in **Form BCS-III** duly signed by the 3<sup>rd</sup> party Architect and 3<sup>rd</sup> party Structural Engineer.

**Details of the building for which the certificate is issued**

Plot No. \_\_\_\_\_, Sector \_\_\_\_\_, Colony \_\_\_\_\_

City/Town \_\_\_\_\_.

Name of the owner \_\_\_\_\_.

Complete address of the owner \_\_\_\_\_.

A. Building Plan :

i. Name of Architect:

ii. Council of Architecture Registration No. \_\_\_\_\_, valid up to \_\_\_\_\_.

iii. Complete Address

iv. E-Mail

v. Mobile no.

B. Structural Design:

i. Name of Engineer:

ii. Qualifications:

iii. Complete Address

iv. E-Mail

v. Mobile no.

**Certificate**

It is hereby certified that the site has been inspected and construction has been found in order as per plans submitted in **Form BCS-I**, in accordance with the Administration of UT Unified Ladakh Building Bye-Laws -2017 and the approved zoning plan of the plot, for the building detailed above. The structure has been designed in accordance with the provisions of the National Building Code and the relevant Bureau of Indian Standard Codes (with latest amendments) including Bureau of Indian Standard Codes for structures resistant to earthquakes and other natural hazards. The local soil conditions, its load bearing capacity and the underground water table etc. have been kept in view while designing the same.

Dated.....

Signature of Architect (3<sup>rd</sup> party): Complete Address.....E-Mail.....

Mobile no.....

Engineer/ Structural Engineer (3<sup>rd</sup> party): Complete Address.....

E-Mail.....Mobile no.....

**In case of the building is above 15 meters height, the certificate shall be signed by the proof consultant (3<sup>rd</sup> party), as followed:**

The structural design has been checked and has been found to be in order. The design is in accordance with the provisions of the National Building Code and the relevant Bureau of Indian Standard Codes (with latest amendments) including Bureau of Indian Standard Codes for structures resistant to earthquakes and other natural hazards. The local soil conditions, its load bearing capacity and the underground water table etc. have been kept in view while designing the same.

Dated \_\_\_\_\_

Signature of Proof Consultant (3<sup>rd</sup> party) along with Mob. No. & E-mail.

**Form BCS-V [see Code 5.11(4)]**

From

\_\_\_\_\_,  
\_\_\_\_\_

To

.....

Memo

No.....

Dated

.....

Whereas Shri/ Smt/ M/s ..... has applied for the issue of an occupation certificate in respect of the building described below:-

City \_\_\_\_\_ Street \_\_\_\_\_

Site No. \_\_\_\_\_ House No.(if any) \_\_\_\_\_

(or) Khasra no. \_\_\_\_\_, Village \_\_\_\_\_

Indicating description of the building, covered area, towers, nature of buildings etc. I hereby:-

- (i) grant permission for the occupation of the said building with following conditions; or
- (ii) refuse permission for the occupation of the said building for reason given below:-

Competent Authority

**Form-NAC-I**  
**(See Code 3.53, 6.1(3), Annexure-D)**

**Application form for rendering non-nuisance professional consultancy in residential premises.**

To

.....  
.....

1. Name of applicant\_\_\_\_\_
2. Premises Number and size \_\_\_\_\_
3. Name of colony/change of land use site \_\_\_\_\_
4. Sector\_\_\_\_\_
5. Detail of floor-wise built up area \_\_\_\_\_(Square meters)
6. Copy of approved building plan showing duly marked area upon which mixed land use is applicable.
7. Whether occupation certificate has been issued, if so, attested copy thereof to be attached.
8. Details of profession\_\_\_\_\_
9. Numbers of anticipated visitors \_\_\_\_\_
10. Working hours of consultancy \_\_\_\_\_
11. Detail of fee \_\_\_\_\_through electronic transfer as per **Schedule IV A**.
12. Affidavit to the effect that he shall abide by all the terms and conditions, which shall be imposed by Competent Authority from time to time.

Place:

Date:

Signature of Owner  
(No digital signatures are required)  
Mobile no.  
E-mail



**Form-NPC-II**  
**(See Code 3.85,6.1(3), Annexure-D)**

From

.....

To

.....

Memo No.

Dated:

**Subject: Permission to provide non-nuisance consultancy services in the residential premises.**

This is with reference to your application dated \_\_\_\_\_.

2. Permission is hereby granted to provide \_\_\_\_\_ services, within the premises of your land/house bearing number \_\_\_\_\_ Sector \_\_\_\_\_ town/city \_\_\_\_\_ . The above permission shall be subject to the following terms and conditions:-

(1) You can use the premises of your house up to 25% of the covered area of the premises or 50 square meters, whichever is less for the purpose.

(2) Total charges paid i.e. Rupees \_\_\_\_\_ is for a period of five years.

(3) Water, sewerage and electricity charges for such premises to the extent that is being used for non-residential use would be charged at commercial rates by the service providing agency.

(4) The permission given by Competent Authority shall be valid for a period of five years which may be renewed thereafter for a period of five years and further in block of five years on payment of renewal fee @ 10% of updated commercial charges.

(5) The owners of a premises where mixed land is used is permitted should accept any other condition such as restriction with respect of provision of parking advertisement etc.

(6) Competent Authority can withdraw the permission give for mixed land use at any point of time, if the percentage area permitted under mixed land use is found to exceed the stipulated limit or for any other reason in the public interest.

(7) That the permission shall also be governed by the provision of these Bye-Laws.

(8) That the owners of building shall not further sublet/lease out the premises for which permission is being granted.

Signatures of Permission Issuing Authority along with seal.

## Annexure “B”

### INDEMNITY BOND FOR BASEMENT

This Indemnity Bond is executed by Shri/Smt.....  
S/o, D/O, W/O Shri/Smt.....  
R/O.....in favour of Development Authority. Whereas the executant has submitted to the concerned Authority the plans for, sanction of basement over Plot No..... under the provisions of the Act and lie bye- laws made there under:-

And whereas the concerned Authority has agreed to sanction the aforesaid construction subject to the conditions that the owner shall indemnify the concerned Authority in the event of any loss or damage being cause to the adjoining building on account of the construction of the said basement either at the time of digging of its foundations or in the course of its construction or even thereafter and also against any claim of any concern thereto. And whereas the executant has agreed to execute an indemnity bond to the above affect and also to abide by the terms imposed by the concerned Authority to the grant of sanction for construction of the basement.

Now this deed witnesses:

1. That in consideration of the sanction of the plans by.....for construction of the basement the executant undertakes that he/she shall at all times keep.....harmless and free from any liability, loss or damages/flowing from any injury or damage caused to the adjoining built-up properties or to any person as a consequence of the construction of at the time of digging of its foundations or during the course of its construction or at any time thereafter.
2. The owner agreed and undertakes that in the event of any claim being made by any person or persons against the concerned Authority either in respect of the sanction granted by the concerned Authority to the owner for the construction of basement or in respect of the construction or manner of construction of the basement by the owner or the consequences flowing from the said sanction the executant shall be responsible and liable and not the concerned Authority.
3. The executant agrees and undertake to indemnify the concerned Authority fully in respect of any amount which the concerned Authority may be required to pay to any person either by way of compensation or damages or on any other account as a result of any claim or suit or any other proceedings concerning the sanctioning of the construction of the basement of the making thereof and also in respect of the costs and expenses which the concerned Authority may incur on defending any action.
4. Without prejudice to the above undertaking the executant hereby binds itself to pay to the concerned Authority to the full extent any amount which the concerned Authority may be required to pay to any person in connection with, relating to or concerning the sanctioning of the basement or the making thereof.
5. The owner further agrees and undertakes that this bond shall remain in full force and effect till the executant faithfully observes/performs the undertaking herein before contained.

In witness whereof the executant above named has signed this bond on this .....day of .....at.....

**Indemnifier**

Witness:

(Signatures).....  
1. Name.....  
Full Address.....

(Signatures).....  
2. Name.....  
Full Address.....

## Annexure “C”

### Categories of Materials of storage for Warehouses as per combustion risk

#### A. Noncombustible materials:

Articles (which are Non- Combustible, Non -Flammable, Non-Corrosive, Non -toxic, Non-poisonous, Non-Explosive) such as Cement, brick, mortar, hardware items, metals in solid bar/metal goods (excluding those having melting point below 1000° C)

#### B. Combustible Materials in following 4 sub-categories:

*Table 3 Source: Page 232, Model Building Bye Laws, 2016*

*(further explanations may be referred from Page 233 of Model Building Bye-Laws)*

Category	Material Specifications	Stacking height	
		Medium (in m)	High (in m)
Category I	Articles such as Carpets, Non synthetic/synthetic yarn and fabrics. Mechanical and electrical goods (dominantly metal parts), Glassware and crockery, fiberboards, groceries, metal goods, Papers other than those listed under categories Moderate and High, Powdered and canned foods, Plastic/glass bottles containing non-flammable liquids, etc.	4	6.5
Category II	Articles such as Batteries, Baled cotton/synthetic fibers, Books, Baled cork, Baled waste paper, Cartons containing alcohols ( in cans/bottles), Cartons of canned lacquers which dry by solvent evaporation, Chipboard, Cardboard rolls (horizontally Stored), Cereals/Grains/Foodstuff/ Flour/Sugar in sacks, Cellulose/Cellulose pulp, Electrical goods other than those stated in Category low, Flammable liquids in non-combustible containers, Leather goods, Palletized liquor stocks, Plastics (non-foamed, other than cellulose nitrate), Rolled pulp and paper and asphalted paper (Horizontal storage), Veneer sheets, Wooden patterns, Metal/wooden furniture with plastic seats, etc	3	5.5
Category III	Articles such as Bitumen/Wax coated paper, Candles, Carbon black, Card board rolls (vertically stored), Charcoal, Coal> cellulose nitrate, Foamed plastic and foam rubber products, Flammable liquids in combustible containers, Linoleum products, Matches, Plastics other than those stated in Category Moderate, Rolled pulp and paper and asphalted paper (vertical storage), Rubber goods including tyres and tubes, Sawn timber, Ventilated wood stacks, Waxed and asphalt coated papers and containers in cartons, Wood wool, wooden pallets and flats (idle), Ail materials having wrappings or pre-formed containers of foamed plastics, etc.	2	4.5
Category IV	Offcuts and random pieces of foamed plastic or rubber rolls of sheets of foamed plastic or foamed rubber, Foam mattress, Expanded polystyrene packaging, Foam upholstery, etc	1.25	3.5

## Annexure “D”

### Empanelment of Competent professional

1. **Definition:** In these rules, unless the context otherwise requires:

- a) **“Act”** – the Act of the concerned Authority
- b) **“Empanelled Architect”** – A person empanelled by the Authority as per rules under these bye-laws as authorized person to sanction building plans of *residential buildings up to 15 mt. in height and for plot size up to 500sqm*, forming part of an approved lay-out plan *and for other buildings as authorized in section 13.5 of the Bye-laws.*
- c) **“Person Authorized”** – means a qualified and duly registered Architect having a degree in Architecture or equivalent qualification and registered with the Council of Architects, India with minimum 5 years of experience.
- d) **“Sanctioned Building Plan”** means a building plan of a building/premises to be constructed on a plot and approved by the Competent Authority/Architect in accordance with the provisions of Master Plan/Zonal development plan and Building Bye-laws.
- e) **“Fee”** means a fee to be charged by the Authority/Architect for sanction of building plans. (*Design and consultations fees agreed between the architect and his/her client is independent of this ‘Fee’*)

**For the empanelment**, the qualified Architect/Engineer shall submit list of projects handled with proof and credentials along with recommendations from Council of Architecture, India.

2. **Authority should obtain** security deposit/professional indemnity bond and professional liability insurance from empaneled Architects as decided in value from time-to-time.
3. **The empanelment of an Architect** shall be for a period of **two years** and can be extended from time to time subject to review by the Authority at the end of every two years.
4. **The Architect shall be empowered** to sanction building plans of *residential buildings up to 15 mt. height and for plot size up to 500sqmt*, forming part of approved layout plan. And **for other buildings** the criteria of empanelment shall be as per section 13.5 of the Bye-laws.
5. **In respect of sanction of building plans of Government buildings**, the plans shall be sanctioned by the Chief Architect/ Senior Architect of the concerned Department of the Government, provided it conform to Master Plan/Zonal Development Plan, approved layout plan and Building Bye-laws.