

# Glass and Glazing now a part of National Building Code

## CCPS Recommendations Find New Voice

National Building Code 2016, released by the Minister for Consumer Affairs, Ram Vilas Paswan, on March 15, 2017, is the fourth revision of the doctrine after 1970, 1983 and 2005. It represents the present state of knowledge on aspects of building construction. It is a continuous programme. Additional knowledge gained through technical evolution, users' suggestions/views, modification of codes, and research would be incorporated from time to time to make it a living document.



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National Building Code is a vital document aimed at unifying the building regulations throughout the country for use by government departments, public & municipal bodies, development authorities, construction agencies, professionals, consultants, builders and developers.

It may be recalled that at the behest of Planning Commission, an expert panel was constituted in 1965, to study the whole gamut of operations involved in construction activities and the 'Report on Economies in Construction Cost' was published in 1968. Based on the recommendations of the panel. Planning Commission entrusted the task of preparation of National Building Code to the then Indian Standards Institution (ISI). Civil Engineering Division Council was constituted, which set up 18 panels comprising of architects,

planners, material experts, structural, construction, electrical, illumination, air conditioning, acoustics, public health engineers and town planners drawn from the Central & State Governments, Local Bodies, Professional Institutions and private agencies to prepare various parts of the proposed Code.

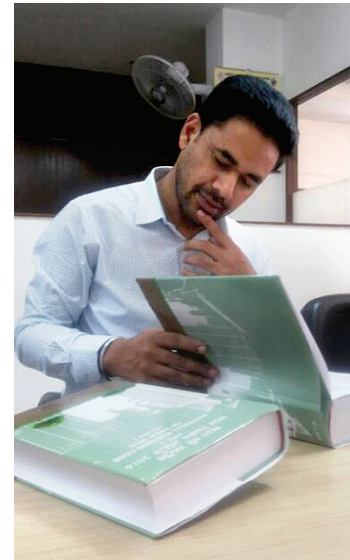
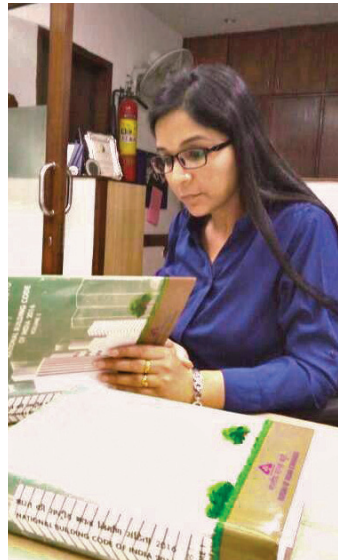
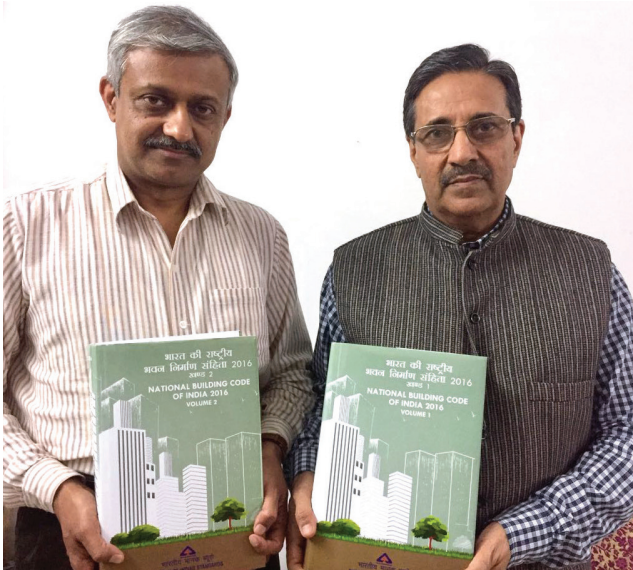
The first version of the Code was published in 1970. The Code contained regulations which can be immediately adopted or enacted for use by various departments, municipal administrations and public bodies. It laid down a set of minimum provisions designed to protect the safety of the public with regard to structural sufficiency, fire hazards and health aspects of buildings. Industrialized system of buildings and architectural control was also covered.

Implementation drive and wide propagation was launched by Indian Standards Institution which motivated construction departments, local bodies, development authorities and regulatory agencies of various states to take up the actual implementation of the code and initiate revision and modification of existing specifications, handbooks, manuals, building byelaws.

As a result of adoption and use of NBC 1970 by all concerned, large numbers of comments were received suggesting modifications

and additions to different parts and sections of the Code. Based on the comments and suggestions received, the National Building Code of India 1970 was first revised in 1983 wherein addition of development rules, requirements for greenbelts and landscaping, low income housing, fire safety regulations for high rise buildings, revision of structural design, energy conservation etc were included. The major changes incorporated in the second revision of the code in 2005 included incorporation of new chapters on 'Integrated approach – Prerequisite for applying provisions of the Code', structural design using bamboo, composite construction, modifications of number of provisions related to reform in administrative aspects, structural sufficiency of buildings, challenges during natural disasters, planning norms for large hilly areas and rural habitats, planning norms for large number of amenities, fire safety aspects, energy conservation and sustainable development, appropriate technologies and materials, rainwater harvesting etc. Subsequently, two amendments were included to the Code, one modification in Part 4 'Fire and Life Safety' and added a new chapter namely Part 11 'Approach to Sustainability'.

In view of developments in the techno-legal and techno financial



“ It is a matter of great appreciation that a new section on ‘Glass and Glazing’ (Part 6/ Section 8) has been added in the revised version of National Building Code 2016. It is a timely action taken by BIS, as the glass use has been increased many folds in the country. In the absence of guidelines and human safety norms, it was a matter of concern for Architects, Engineers and Fire fighters to ensure human safety while using glass in buildings and undertaking fire fighting and rescue operations. Confederation of Construction Products and Services (CCPS) has been doing commendable work in this field and propagating recommendations of CCPS Guidelines on Use of Glass in Buildings: Human Safety since 2007 which has been widely implemented and adopted. We are sure Local Bodies and Development Authorities will initiate immediate action to include glass related safety norms prescribed in NBC 2016 in their building byelaws.”

– **Lakhan Singh**, Editor & publisher, Glass Bulletin

N. Dandekar, former Addl. Director General, CPWD.

It may be recalled that Confederation of Construction Products and Services (CCPS) a not for profit organization has brought Guidelines on Use of Glass in Buildings – Human safety in 2007, which has already been adopted and implemented through GO/OMs by 20 States and Central & State Govt. Depts., PSUs, Educational Institutions and eminent construction agencies which include Central PWD, Govt. of Andhra Pradesh, Govt. of Rajasthan, NBCC, Airport Authority of India, Haryana PWD, DDA, JDA etc. Subsequently, IS: 16231 (Pt. 4) 2014 “Code of Practice for Use of Glass in Buildings - Safety related to Human Impact” was brought out by BIS, and it was derived from CCPS Guidelines. The recommendations included in para 7 Safety Related to Human Impact has been drawn from IS: 16231 (Part4).

The provisions of the NBC 2016 will serve as a model for adoption of various parameters and existing byelaws of local bodies, PWD and government construction departments codes/manuals now could be suitably replaced and added as per provisions made in the NBC 2016, in particular considering recommendations as per new chapter ‘Glass and Glazing’ to ensure safety while using glass in buildings.

regime, changing requirements of cityscapes and life style, changes in various standards, the revision of NBC 2005 was taken up in July 2014. The revision was initiated under National Building Code Sectional Committee CED 46 of BIS, under the Chairmanship of Padmashree Dr. H. C. Visvesvaraya, former Vice-Chancellor of the University of Roorkee. New sections have been added on glass and glazing; information and communication enabled installations; solid waste management; and asset and facility management. With the concerted efforts of Mr. Sanjay Pant, HOD, Civil Division, Mr. Arun Kumar, Sr. Scientist and his team, revision of the Code was completed in record

time involving 1000 experts of 24 Panels, conducting more than 50 meetings and reviewing 1500 pages of comments received during the process of revision.

Glazing being an important item in building construction, a new section on ‘Glass and Glazing’ Part 6/ Section 8 has been added in the NBC 2016. This section provides guidance on the selection of appropriate glazing for various types for buildings, the energy and light aspects, determining the appropriate thickness of glass used in glazing, specialised operation for fixing and with respect to rescue and fire fighting operations, human safety aspect while using glass in buildings. This section was finalized under Panel CED 46/ P20 convened by Mr. R.