

**SAFETY FEATURE TO PROVIDE IN BUILDING IN RESPECT OF NATURAL
HAZARD BY EARTHQUAKE
NOTIFICATION NO. K-12016/5/79-DDA/A/VA/IB (PT.) DT. 21ST MARCH, 2001**

S.O. 248(E) – Whereas, the issue of making suitable provision in the Building Bye-laws to ensure that the building that are erected in Delhi provide for the requisite safety feature in respect of natural hazard by way of earthquake has been under the consideration of the Government.

Whereas a Public Notice was issued and published in the newspapers on 10.2.2001 providing modifications/additions which the Central Government intended in the Building Bye-laws, 1983. In all 51 objections/suggestions were received from the public and they were examined by a committee under the convenorship of Chief Planner of Town and Country Planning Organization.

Whereas after thorough consideration of the report Central Government has decided to make following modifications/additions in the Building Bye-laws, 1983;

Now, therefore, in exercise of the powers conferred by sub-section (2) of Section 11A of Delhi Development Act, 1957, the Central Government hereby makes the following modifications/additions to the Building Bye-laws, 1983 with effect from the date of publication of this notification in the Gazette of India.

Modifications

- (i) Clause 18 of Part-III (Structural Safety and Services) of the Building Bye-laws, 1983 will be modified as :

18. "The structural design of foundation, masonry, timber, plain concrete, reinforced concrete, pre-stressed concrete and structural steel shall be carried out in accordance with Part-VI Structural Design, Section-1— Loads, Section 2 — Foundation, Section 3 — Wood, Section 4 — Masonry, Section 5 — Concrete, Section 6 — Steel of National Building Code of India, taking into consideration all relevant Indian Standards prescribed by Bureau of Indian Standards including the Indian Standards given in Annexure-A for earthquake protection of buildings".

(Note : Whenever an Indian Standard or the National Building Code is referred, the latest provision in the Standard should be adhered to.)

- (ii) An additional sub-clause is included under Clause 6.2.9 (Documents to accompany application for building permit) of Building Bye-laws as follows :
"(i) The certificate as indicated as Annexure-B and C to be signed by the owner, the architect and the Structural Engineer".

Annexure-A

List of Indian Standards/Guidelines for Hazard Safety

For earthquake protection

1. IS : 1893-1984 "Criteria for Earthquake Resistant Design of Structures (Fourth Revision)" June 1986.
2. IS : 13920-1993 "Ductile detailing of Reinforced Concrete Structures subject to Seismic Forces – Code of Practice" November 1993.
3. IS : 13828-1993 "Earthquake Resistant Design and Construction of Buildings – Code of Practice (Second Revision)" October 1993.
4. IS : 13828-1993 "Improving Earthquake Resistance of Low Strength Masonry Buildings - Guidelines" August 1993.
5. IS : 13827-1993 "Improving Earthquake Resistance of Earthen Building – Guidelines" October 1993.
6. IS : 13935-1993 "Repair and Seismic Strengthening of Buildings – Guidelines" November 1993.

Annexure B
(Under Clause 6.2.9)

Certificate : The following certificate is to be submitted along with the Building Drawing while submitting the plans for obtaining Building Permission :

1. Certified that the building plans submitted for approval satisfy the safety requirements as stipulated under Clause 18 of Building Bye-laws, 1983 and the information given therein is factually correct to the best of our knowledge and understanding.
2. It is also certified that the structural design including safety from natural hazards based on soil conditions has been duly incorporated in the design of the building and these provisions shall be adhered to during the construction.

Signature of the Owner
with date

Signature of Architect
with date

Signature of Structural Engineer
with date
(As defined in NBC of India)

Name in Block Letters
Address

Name in Block Letters
Address

Name in Block Letters
Address

Annexure C
(under Clause 7.5.2)

Certificate : The following certificate is to be submitted at the time of obtaining '[Form 'D'] or at the time of obtaining Completion Certificate, whichever is obtained earlier.

1. Certified that the building(s) has been constructed according to the Sanctioned Plan and structural design (one set of structural drawings as executed is enclosed) which incorporates the provisions of structural safety as specified in relevant prevailing IS Codes/Standard/Guidelines.
2. It is also certified that construction has been done under our supervision and guidance and adheres to the drawings submitted and the records of supervision have been maintained by us.
3. Any subsequent change from the completion drawings will be the responsibility of the owner(s).

Signature of the Owner
with date

Signature of Architect
with date

Signature of Structural Engineer
with date
(As defined in NBC of India)

Name in Block Letters
Address

Name in Block Letters
Address

Name in Block Letters
Address

RAINWATER HARVESTING
NOTIFICATION NO. N-11011/98-DDVI (PT.) DDIB DT. 28TH JULY, 2001

S.O. 730 – Whereas the issue of making suitable provision in the Building Bye-laws, 1983 to ensure that the buildings that are erected in Delhi provide for the water harvesting through storing of rain water runoff to recharge underground aquifers has been under the consideration of the Government.

Whereas the following modifications/additions which the Central Government proposed to make in the Building Bye-laws, 1983 in this regard were published for public information vide Public Notice dated 20th June, 2001 and were advertised in the leading newspapers on 30.6.2001. In all five objections/suggestions were received and they were examined by a Committee under the convenorship of Chief Planner of Town and Country Planning Organisation.

Whereas after thorough consideration of the report, Central Government has decided to make the following Modifications/additions in the Building Bye-laws, 1983.

Now, therefore, in exercise of the powers conferred by sub-section (2) of Section 11A of Delhi Development Act, 1957, the Central Government hereby makes the following modifications/additions to the Building Bye-laws, 1983 with effect from the date of publication of this Notification in the Gazette of India.

Modifications

1. Clause 22.4 Part-III (Structural Safety and Services) of the Building Bye-laws, 1983.
2. 22.4.1 Water harvesting through storing of water runoff including rain water in all new buildings on plots of 100 sq. mtrs. and above will be mandatory. The plans submitted to the local bodies shall indicate the system of storm water drainage along with points of collection of rain water in surface reservoirs or in recharge wells. These provisions will be applicable as per the Public Notice(s) of Central Ground Water Authority issued from time to time.
3. 22.4.2 All buildings having a minimum discharge of 10,000 litres and above per day shall incorporate waste water re-cycling system. The recycled water should be used for horticultural purposes.

Note : These modifications/amendments will be applicable from the date of Notification.

Annexure-A

Certificate : The following certificate is to be submitted along with the building drawings while submitting the plans :

1. Certified that the building plans submitted for approval satisfy the water harvesting requirements as well as minimum anticipated discharge of waste water as stipulated under clause 22.4.1, 22.4.2 and the information given therein is factually correct to the best of our knowledge and understanding.

Signature of owner with date
Name in Block Letters
Address :

Signature of Architect with date
Name in Block Letters
Address :

4

NEW SYSTEM IN PLACE OF C & D FORMS
NOTIFICATION NO. S.O. 1154 (E) DT. 21ST NOVEMBER, 2001

In exercise of the powers conferred under Section 56 of Delhi Development Act, 1957, the following amendments/modifications are made in Unified Building Bye-laws, 1983.

Whereas the following modifications/additions which the Central Government proposed to make in the Building Bye-laws, 1983 in this regard were published for public information vide Public Notice dated 30th August, 2001 and was published in the Gazette of India Extraordinary. In all nineteen objections/suggestions were received and they were examined by a Committee under the censorship of Chief Planner of Town and Country Planning Organisation;

Whereas after thorough consideration of the report, Central Government has decided to make the following Modifications/additions in the Building Bye-laws, 1983:

Now, therefore, in exercise of the powers conferred by sub-section (2) of Section 11A of Delhi Development Act, 1957, the Central Government hereby makes the following modifications/additions to the Building Bye-laws, 1983 with effect from the date of publication of this Notification in the Gazetted of India.

Modifications

- (i) In Clause 7.2.2 the following is added : –
"Appendix-C, Form C (Building Bye-laws 7.2.2) will not be applicable. However, the owner through his architect/engineer/supervisor shall give notice to the local bodies in the proforma as per Appendix B-1 (copy enclosed) on completion of work up to the plinth level to enable the local body to ensure that work conforms to the sanctioned building plans and Building Bye-Laws. It will be obligatory on the part of the local body to inspect the work and submit the objection, if any, to the owner and architect/engineer within 30 days from the receipt of such notice in Form B-2 failing which work will deemed to be cleared for further construction. It will be the responsibility of the owner/architect/supervisor to ensure further construction of the building in accordance with the sanctioned building plan".
- (ii) In Clause 7.2.3 the following is added :
"Form-D (Bye-Law 7.2.3) will not be applicable".
- (iii) In Clause 7.2.4 the following is added :
"It will not be applicable".
- (iv) In Clause 7.5.2 the following is added :
 - Sl. No. 9 A certificate by the owner and architect/supervisor engineer for covering up the underground drain, sanitary and water supply work, under their supervision and in accordance with Building Bye-Laws and sanctioned building plans stipulated in the Appendix B-3 (Copy attached) as applicable.
 - Sl. No. 10 In case of large campus/complex, completion of individual block/building will be issued by the local body in accordance with the construction work completed phase wise in the Performa Appendix B-3.
 - Sl. No. 11 The Extension of Time up to the date of applying for completion certificate. In case, if the completion certificate is refused due to deviation, which cannot be compounded, the completion will be rejected and extension of time will be required accordingly.
 - Sl. No. 12 NOC for regular water supply and electricity may be issued only after the completion certificate is obtained.

APPENDIX 'B-1'
(Bye-Law No. 7.2.2)

Information for Intimation of Completion of Work up to Plinth Level

To
The
..... Authority,
New Delhi

Sir,

The construction up to plinth/column up to plinth level has been completed in
building No. on/in Plot No.
Scheme No. Road/Street Ward
in accordance with your permission No. dated under
my supervision and in accordance with the sanctioned plan.

Yours faithfully,

Signature of Licensed
Architect/Engineer/Supervisor

Name
(in Block Letters)
Address

Dated

APPENDIX 'B-2'
(Bye-Law No. 7.2.2)

Inspection Report

I working as a with
have carried out the inspection of Building No. on/in Plot No.
Scheme No. Road/Street Ward in accordance
with your permission No. dated The following
deviation from the sanctioned plans have been noticed which are against the proviso
of Master Plan/Bye-Laws and are of non-compoundable nature.

Description of deviations noticed :
.....
.....
.....

You may not proceed with further work till such time the deviations made are
rectified and construction brought in conformity to sanction plans.

Yours faithfully,
For
.....
.....
Competent Authority

Office No.
Office Stamp
Date

The Vice-Chairman
Delhi Development Authority
New Delhi

The Commissioner
Municipal Corporation of Delhi
Delhi

Sir,

We hereby certify that the erection/re-erection or material alteration in/at building No. on/in Plot No. Block No. situated at Scheme has been supervised by us and has been completed on According to the plans sanctioned, vide office communication No. dated The work has been completed to our satisfaction, the workmanship and all the materials (type and grade) have been used strictly in accordance with general and detailed specifications. All the drainage/sanitary/water supply work has been executed under our supervision and as per building bye-laws/sanctioned plan. No provision of the Building Bye-laws and conditions prescribed or orders issued thereunder have been transgressed in the course of the work. The building is fit for use for which it has been erected/re-elected or altered/constructed and enlarged.

2. Certificates :

- (i) Certified that the building(s) has been constructed according to the Sanctioned Plan and structural design (one set of structural drawings as executed is enclosed) which incorporate the provisions of structural safety as specified in relevant prevailing IS Codes/Standards/Guidelines.
- (ii) Further certified that water harvesting as well as waste water re-cycling systems have been provided as per the sanctioned building plan.
- (iii) It is also certified that construction has been one under our supervision and guidance and adheres to the drawings submitted and the records of supervision have been maintained by us.

3. Permission to occupy or use the building may be granted.

4. Any subsequent change from completion drawings will be the responsibility of the owner(s).

- | | |
|---|---|
| (a) Signature of the owner with date
Name in Block letters
Address | (b) Signature of the Architect
with date Name in Block letters,
Licence No. Address |
| (c) Signature of the Structural Engineer
with date (for certificate (1)
(As defined in NBC of India)
Name in Block letter
Address | (d) Signature of Supervisor/Group/
Engineer with date

Name in Block letters, Licence
No. Address |

Completion-cum-Occupancy Certificate

With reference to your notice of completion dated I hereby certify that building, as per description below certified plan at Plot No. Block No. Scheme whose plans were sanctioned vide No. has been inspected with reference to building bye-law in respect of the structural safety, fire safety, hygienic and sanitary conditions inside and in the surroundings and is declared fit for occupation and release of regular water and electricity connection. The description of the construction work completed is given as under :

Description of construction work block wise/building wise

1. Block/Building No.
2. Details of completed work floor wise.

For
(1) Vice-Chairman
Delhi Development Authority
Or
(2) Commissioner
Municipal Corporation of Delhi

STACKING CHARGES**NOTIFICATION NO. O-33011/14/2001-DDIB DT. 22ND JANUARY, 2002**

In exercise of the powers conferred under Section 56 of Delhi Development Act, 1957, the following amendments/modifications are made in Unified Building Bye-laws, 1983.

Whereas the following modifications/additions which the Central Government proposed to make in the Building Bye-laws, 1983 in this regard were published for public information vide Public Notice dated 13th November, 2001 and was published in the Gazette of India Extraordinary. No objections/suggestions were received.

Whereas after thorough consideration, Central Government has decided to make the following Modifications/additions in the Building Bye-laws, 1983.

Now, therefore, in exercise of the powers conferred by sub-section (2) of Section 11A of Delhi Development Act, 1957, the Central Government hereby makes the following modifications/additions to the Building Bye-laws, 1983 with effect from the date of publication of this Notification in the Gazette of India.

Modifications

- (i) In Clause 6.5 (h), stacking charges, following will be added/replaced
- The Para- II will be replaced as under :
 - In case of plots above 418 sq. mts. of area, stacking of building material shall be done within the plot area. An undertaking for not stacking the material on Government land in the proforma given in Appendix M will be submitted at the time of submission of application for sanction of building plans.

Following para will be added after Para III :

- (iv) (i) The mulba during the construction will be removed on weekly basis. If the same is not done, in that case the local body shall remove the mulba and the cost shall be borne by the owner of the plot.
- (ii) During construction, it is mandatory on the part of the owner to properly screen the construction site off the main road by means of erecting a screen wall not less than 8 ft. in height from ground level which is to be painted to avoid unpleasant look from the road side. In addition to this, a net or some other protective material shall be hoisted at the facades of the building to ensure that any falling material remains within the protected area.
- (iii) Noise related activities will not be taken up for construction at night after 10 P.M.

**BARRIER FREE ENVIRONMENT IN THE PUBLIC BUILDING FOR
PERSONS WITH DISABILITIES :- NOTIFICATION NO. K-12016/5/79/DDIA/VA/
IB VOL. IX (PT.) DATED 28TH AUGUST, 2002**

S.O. 917(E) — Whereas the issue of making suitable provision in the Building Bye-laws, 1983 to ensure that the public buildings that are erected in Delhi provide barrier free environment for the persons with disabilities has been under the consideration of the Government.

Whereas the following modifications/additions which the Central Government proposed to make in the Building Bye-laws, 1983 in this regard were published for the public information vide Public Notice dated 26th March, 2002 and were advertised in the leading newspapers on 4th April, 2002. In all 7 objections/suggestion were received and they were examined by a Committee under the Convenorship of Chief Planner of Town & Country Planning Organisation.

Whereas after thorough consideration of the report, Central Government has decided to make the following Modifications/additions in the Building Bye-laws, 1983.

Now, therefore, in exercise of the powers conferred by sub-section (2) of section 11A of Delhi Development Act, 1957, the Central Government hereby make the following Modifications/additions to the Building Bye-laws, 1983 with effect from the date of publication of this Notification in the Gazette of India.

Modification

To provide barrier free environment in the public building for persons with disabilities.

2. Definitions :

- 2.91 **Non-ambulatory disabilities** : Impairments that, regardless of cause or manifestation, for all practical purposes, confine individuals to wheelchairs.
- 2.92 **Semi-ambulatory disabilities** : Impairments that cause individual to walk with difficulty or insecurity. Individuals using braces or crutches, amputees, arthrities, spastics and those with pulmonary and cardiac ills may be semi-ambulatory.
- 2.93 **Hearing disabilities** : Deafness or hearing handicaps that might make an individual insecure in public areas because he is unable to communicate or hear warning signals.
- 2.94 **Sight disabilities** : Total blindness or impairment affecting sight to the extent that the individual functioning in public areas is insecure or exposed to danger.
- 2.95 **Wheel Chair** : Chair used by disabled people for mobility
 - (i) Size of Small Wheel Chair 750 x 1050 mm
 - (ii) Size of Large Wheel Chair 800 x 1500 mm

30.0 To provide facilities in the public building for the disabled persons.

- 30.1 **Scope** : These bye-laws are applicable to all building, recreation areas & facilities used by public. It does not apply to private domestic residences.

30.1.1. **Site Planning** : Level of the roads, access paths & parking areas shall be described in the plan along with specification of materials. Every building should have at least one access to main entrance/exit to the disabled which shall be indicated by proper signage. This entrance shall be approached through a ramp together with stepped entry. The ramp should have a landing after every 9 metre run and in front of the doorway. Minimum size of landing shall be 1000 x 2000 mm.

30.1.2 *Access path/walk way* : Access path from plot entry and surface parking to building entrance shall be minimum of 1800 mm wide having even surface without any step. Slope, if any shall not have gradient greater than 5%. Selection of floor material shall be made suitably to attract or to guide visually impaired persons (limited to floor material whose colour texture is conspicuously different from that of the surrounding floor material or the material that emit different should to guide visually impaired persons. Finishes shall have a non-slip surface with texture traversable by a wheel chair. Curbs wherever provided should blend to common level.

30.1.3 *Parking* : For parking of vehicles of disabled people the following provisions shall be made :

- (a) Surface parking for two Equivalent Car Space (ECS) shall be provided near entrance for the physically handicapped persons with maximum travel distance of 30 metres from building entrance.
- (b) The width of parking bay shall be minimum 3.6 metre.
- (c) The information stating that the space is reserved for wheel chair users shall be conspicuously displayed.
- (d) Guiding floor materials shall be provided or a device which guides visually impaired persons with audible signals or other devices which serves the same purpose shall be provided.

30.2 **Building requirements** : The specified facilities for the buildings for disabled persons shall be as follows :

- (1) Approach to plinth level.
- (2) Corridor connecting the entrance/exist for the handicapped.
- (3) Stair-ways.
- (4) Lift.
- (5) Toilet.
- (6) Drinking water.

Braille Signage shall be provided at the above specified facilities.

30.2.1 *Approach to Plinth Level* : Ramp shall be provided with non-slip material to enter the building minimum clear width of ramp shall be 1800 mm with maximum gradient 1:12, between top and bottom of the ramp. Length of ramp shall not exceed 9.00 metres having 800 mm high handrail on both sides extending 300 mm beyond the ramp. Minimum gap from the adjacent wall to the handrail shall be 50 mm. Minimum clear opening for the entrance door shall be 1000 mm. Threshold shall not be raised more than 12 mm.

For stepped approach, size of tread shall not be less than 300 mm and maximum riser shall be 150 mm. Provision of 800 mm high handrails on both sides of the stepped approach similar to the ramped approach shall be made.

30.2.2 *Corridor connecting the entrance/exit for the disabled* : The corridor connecting the entrance/exit for handicapped leading directly outdoors to a place where information concerning the overall use of the specified building can be provided to visually impaired person either by a person or by signs, shall be provided as follows :

- (a) Guiding floor materials shall be provided or devices that emit sound to guide visually impaired persons.
- (b) The minimum width shall be 1500 mm.
- (c) In case there is a difference of level, slope ways shall be provided with a slope of 1:12.
- (d) Handrails shall be provided for ramps/slope ways.

30.2.3 *Stairways* : Stairways with open riser & provision of nosing are not permitted in such building.

30.2.4 *Lifts* : Whenever lift is required as per bye-laws, provisions of at least one lift shall be made for the wheel chair user with the following car dimensions of lift recommended for passenger lift for 13 persons capacity by Bureau of Indian Standard.

Clear internal depth 1100 mm

Clear internal width 2000 mm

Entrance door width 910 mm

- (a) A handrail not less than 600 mm long at 900mm above floor level shall be fixed adjacent to the control panel.
- (b) The lift lobby shall be of an inside measurement of 1800 mm x 2000mm or more.
- (c) The Braille signage will be posted outside the lifts.
- (d) Operational details of lifts shall conform to the National Building Code (NBC) and will be the responsibility of designer as well as manufacturer.

30.2.5 *Toilets* : One special WC in a set of toilet shall be provided for the use of handicapped with essential provision of wash basin near the entrance for the handicapped.

- (a) The minimum size shall be 1500 mm x 1750 mm.
- (b) Minimum clear opening of the door shall be 900 mm and the door shall swing out/sliding type.
- (c) Suitable arrangement for vertical/horizontal handrails with 50 mm clearance from wall shall be made in the toilet.
- (d) The WC seat shall be 500 mm from the floor.

30.2.6 *Refuge* : An alternative to immediate evacuation of a building via staircases and/or lifts is the movement of disabled persons to areas of safety within a building. If possible, they could remain there until the fire is controlled and extinguished or until rescued by the fire fighters.

It is useful to have the provisions of a refuge area, usually at the fire protected stair landing on each floor that can safely hold one or two wheelchairs.

- Hand doorways with clear opening width of 900 mm and complying with Section 4.6; and
- Have an alarm switch installed between 900 mm and 1200 mm from the floor level.

MINISTRY OF URBAN DEVELOPMENT

(DELHI DIVISION)

NOTIFICATION

New Delhi, the 27th February, 2009

S.O. 568(E).—Whereas certain modifications which the Central Government proposed to make in the Building Bye-Laws, 1983 regarding the Clause mentioned hereunder were published in the Gazette of India as Public Notice *vide* No. S.O. 2958(E), dated the 23rd December, 2008 by the Government of India inviting objections/suggestions in writing to the Government within thirty days from the date of the said notice.

2. Whereas no objection and suggestion has been received in response to the Public Notice with regard to the proposed modifications. And whereas the Central Government have, after carefully considering all aspects of the matter, decided to modify the Building Bye-Laws, 1983.

3. Now, therefore, the Central Government hereby makes the following modifications in the said Building Bye-Laws, 1983 with effect from the date of publication of this notification in the Gazette of India.

Modification :

Modify Clause 17.1 as under :—

“17.1 Buildings, shall be planned, designed and constructed to ensure fire safety and this shall be done in accordance with Part IV Fire Protection of National Building Code of India. In the case of buildings (identified in Bye-Laws No. 6.2.4.1), the building schemes shall also be cleared by the Chief Fire Officer, Delhi Fire Service.”

[No. K-20013/4/2008-DDIB]

P. K. SANTRA, Under Secy.