

NRC Publications Archive Archives des publications du CNRC

Ceiling heights for dwellings Stinson, H.

For the publisher's version, please access the DOI link below. / Pour consulter la version de l'éditeur, utilisez le lien DOI ci-dessous.

Publisher's version / Version de l'éditeur:

<https://doi.org/10.4224/20338547>

Technical Note (National Research Council of Canada. Division of Building Research); no. TN-256, 1958-07-01

NRC Publications Archive Record / Notice des Archives des publications du CNRC :

<https://nrc-publications.canada.ca/eng/view/object/?id=e5553e51-f3e5-4cd1-b8c3-42d156a44699>

<https://publications-cnrc.canada.ca/fra/voir/objet/?id=e5553e51-f3e5-4cd1-b8c3-42d156a44699>

Access and use of this website and the material on it are subject to the Terms and Conditions set forth at

<https://nrc-publications.canada.ca/eng/copyright>

READ THESE TERMS AND CONDITIONS CAREFULLY BEFORE USING THIS WEBSITE.

L'accès à ce site Web et l'utilisation de son contenu sont assujettis aux conditions présentées dans le site

<https://publications-cnrc.canada.ca/fra/droits>

LISEZ CES CONDITIONS ATTENTIVEMENT AVANT D'UTILISER CE SITE WEB.

Questions? Contact the NRC Publications Archive team at

PublicationsArchive-ArchivesPublications@nrc-cnrc.gc.ca. If you wish to email the authors directly, please see the first page of the publication for their contact information.

Vous avez des questions? Nous pouvons vous aider. Pour communiquer directement avec un auteur, consultez la première page de la revue dans laquelle son article a été publié afin de trouver ses coordonnées. Si vous n'arrivez pas à les repérer, communiquez avec nous à PublicationsArchive-ArchivesPublications@nrc-cnrc.gc.ca.



NATIONAL RESEARCH COUNCIL OF CANADA

DIVISION OF BUILDING RESEARCH

No.

256

TECHNICAL NOTE

NOT FOR PUBLICATION

FOR INTERNAL USE

PREPARED BY H. Stinson

CHECKED BY RSF

APPROVED BY RFL

PREPARED FOR General Information

DATE July 1958

SUBJECT Ceiling Heights for Dwellings

At the request of the Associate Committee on the National Building Code of the National Research Council the Building Standards Section of the Division of Building Research is investigating ceiling heights for dwellings. The results of the investigation will be used by the Associate Committee in the development of a national housing code for Canada and will be made available to all interested.

The first step in this investigation has been a review of a selection of building codes, standards, and municipal by-laws from many countries. The minimum ceiling heights for dwellings specified in these documents are listed in Table I. The table indicates that ceiling heights are higher in warmer regions and lower as one goes towards the colder regions - except in Canada. The relationship between ceiling height and temperature is graphically shown in Fig. 1.

It should be noted that the requirements tabulated are not all on the same basis. In Canada, for instance, height is governed according to room use whereas in the United States separate values are stated for the first and second stories. Cubic area contained is given as a secondary qualification in the California Housing Act and in the standards from Chile. In some instances diagrams are used to illustrate the intent.

Minimum ceiling heights for occupancies other than dwellings are not usually specified although the Uniform Building Code, the New York State Building Code, and the Building By-law of Chicago do contain such regulations.

The next step in this investigation will be an attempt to determine the basis for the various requirements listed. For this purpose organizations associated with the development of the

documents listed will be asked to comment on the attached table and to favour the Division with any information they may be able to contribute with reference to their own standards for room height.

Research work already carried out on this subject is also being analysed. Besides giving the Associate Committee on the National Building Code information for the development of a housing code for Canada, this study may point out the need for further research. It is therefore hoped that the results of this study may eventually be published for general information.

TABLE I

MINIMUM CEILING HEIGHTS FOR DWELLINGS

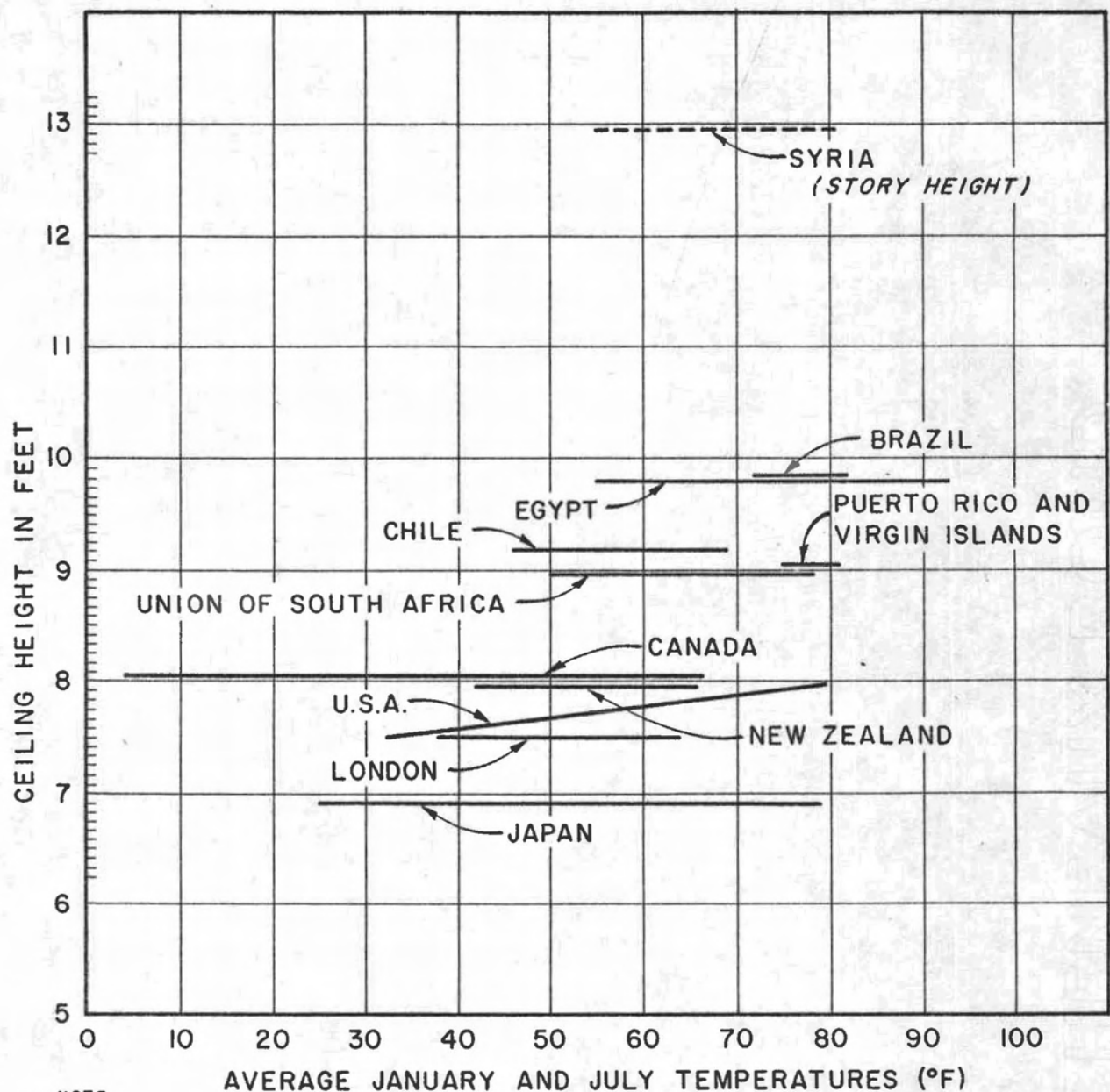
Document	A ¹ ft in.	B ft in.	C ft in.	D ft in.	E
<u>Canada</u>					
National Building Code 1953 NRC	8-0	7-6	7-0	4-6	25-50
National Building Code 1941 NRC	8-0	7-6	7-0		50
Shorter Form of N.B.C. 1953	8-0	7-6	7-0	4-6	50
Code for Dwelling Construction 1950	8-0	7-6	7-0		50
Housing Standards 1958 NRC	8-0	7-6	7-0	4-6	50
Building Standards 1954 CMHC	8-0	7-6	7-0	4-6	50
Apt. Bldg. Standards 1954 CMHC	8-0	7-6	7-0	4-6	50
Apt. Bldg. Standards 1944 CMHC	8-0	7-6	7-0	4-6	50
St. John's, Nfld 1948	8-0	7-6	7-0	4-6	50
Saint John, N.B. 1954	8-0	8-0	8-0		50
Montreal 1948	8-0	8-0	8-0		50
Toronto 1947	8-0	8-0	8-0		50
Winnipeg 1947	8-0	8-0	8-0	4-0	50
Dauphin 1948	8-0	8-0	8-0	4-0	50
Vancouver 1944	No ceiling height regulations				
Aklavik 1956	8-0	7-6	7-0	4-6	50
<u>U.S.A.</u>					
Basic Building Code 1955 BOCA	7-6	7-6	7-6		66
Uniform Building Code 1955 PCBOC	7-6	7-6	7-6	5-0	50
State Building Code (draft) 1955 N.Y.	7-6	7-6	7-0		
Detroit 1956	8-0	7-6	7-6	5-0	50
Chicago 1947	7-6	7-6	7-6	5-0	50
Los Angeles 1949	8-0	8-0	7-6	5-0	50
F.H.A. Standards (draft) 1957	7-6	7-6	7-6	5-0	(50)
F.H.A. Districts (excl. P.R. & V.I.) 1947 ²	7-6 ²	7-6 ²	7-6 ²		50
F.H.A. Puerto Rico and Virgin Islands	9-0				
<u>Other Countries</u>					
London Model By-law 1952	7-6	7-6		5-0	50
London Building By-law 1952	8-0	7-6		3-0	50
New Zealand Standard Code 1943	8-0	8-0	7-0	5-0	50
Sweden 1950	No ceiling height regulations				
Japan 1954	6-11				(50)
Brazil ³	9-10				
Chile ³	9-2				
Egypt ³	9-10	9-10	7-6		
Syria (incl. ceiling thickness) ³	13-2	11-6			
Union of South Africa ³	9-0	(Kitchen max. 10' 6")			

- ¹ A - main floor, or living, dining, kitchen
 B - second floor, or bedrooms
 C - bathroom
 D - the minimum height to which the attic ceiling may slope, and
 E - the per cent of sloped ceiling which may be less than the required second floor or bedroom ceiling height.

- ² The minimum height of ceilings is 7' 6" excepting the states of Alabama, California, Florida and Georgia, where it is 8' 0", and the states of Arizona, Tennessee and Texas, where it is 8' 0" for the main floor.

- ³ These figures come from a U.N. document dated 1951 and titled "Minimum Standards of Occupancy and Fitness for Habitation of Urban Dwellings Enforceable Under Penalty - Third Interim Report of the Secretary General (U.N.)".

PLEASE NOTE: The figures listed in this table are basic for the code referred to. Slight deviations are permitted in most instances.



NOTE

THE INDICATED TEMPERATURE RANGES ARE FROM THE COLDEST TO THE WARMEST TEMPERATURES LISTED, FOR THE GIVEN COUNTRIES, IN THE RAND McNALLY COSMOPOLITAN WORLD ATLAS, 1953 EDITION.

FIGURE 1
CEILING HEIGHTS FOR DWELLINGS AS
REQUIRED BY BUILDING REGULATIONS IN
DIFFERENT COUNTRIES