

2018 IBC<sup>®</sup> Code and Commentary—Volume 1

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# PREFACE

The principal purpose of the Commentary is to provide a basic volume of knowledge and facts relating to building construction as it pertains to the regulations set forth in the 2018 *International Building Code*. The person who is serious about effectively designing, constructing and regulating buildings and structures will find the Commentary to be a reliable data source and reference to almost all components of the built environment.

As a follow-up to the *International Building Code*, we offer a companion document, the *IBC® Code and Commentary—Volume 1*. Volume 1 covers Chapters 1 through 15 of the 2018 *International Building Code*. The basic appeal of the Commentary is thus: it provides in a small package and at a reasonable cost thorough coverage of many issues likely to be dealt with when using the *International Building Code*—and then supplements that coverage with historical and technical background. Reference lists, information sources and bibliographies are also included.

Throughout all of this, effort has been made to keep the vast quantity of material accessible and its method of presentation useful. With a comprehensive yet concise summary of each section, the Commentary provides a convenient reference for regulations applicable to the construction of buildings and structures. In the chapters that follow, discussions focus on the full meaning and implications of the code text. Guidelines suggest the most effective method of application, and the consequences of not adhering to the code text. Illustrations are provided to aid understanding; they do not necessarily illustrate the only methods of achieving code compliance.

The format of the Commentary includes the full text of each section, table and figure in the code, followed immediately by the commentary applicable to that text. At the time of printing, the Commentary reflects the most up-to-date text of the 2018 *International Building Code*. As stated in the preface to the *International Building Code*, the content of sections in the code that begin with a letter designation (i.e., Section [F]307.1) are maintained by another code development committee. Each section's narrative includes a statement of its objective and intent, and usually includes a discussion about why the requirement commands the conditions set forth. Code text and commentary text are easily distinguished from each other. All code text is shown as it appears in the *International Building Code*, and all commentary is indented below the code text and begins with the symbol ❖.

Readers should note that the Commentary is to be used in conjunction with the *International Building Code* and not as a substitute for the code. The Commentary is advisory only; the code official alone possesses the authority and responsibility for interpreting the code.

Comments and recommendations are encouraged, for through your input, we can improve future editions. Please direct your comments to the Codes and Standards Development Department at the Chicago District Office.

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### S.I. CONVERSION CHART FOR ENGLISH UNITS

English Unit	Metric Equivalent
1 inch (in.)	25.4 millimeters (mm)
1 foot (ft.)	304.8 millimeters (mm)
1 square inch (in <sup>2</sup> )	645.2 square millimeters (mm <sup>2</sup> )
1 square foot (ft <sup>2</sup> )	0.093 square meters (m <sup>2</sup> )
1 cubic foot (ft <sup>3</sup> )	0.028 cubic meters (m <sup>3</sup> )
1 gallon (gal.)	.00379 cubic meters (m <sup>3</sup> )
1 gallon (gal.)	3.79 liters (L)
1 pound (lb.)	0.454 kilograms (kg)
1 ton (T)	0.907 metric ton
1 ton (T)	907.2 kilograms (kg)
1 pound per square inch (psi)	6.894 kilopascals (kPa)
1 pound per square inch (psi)	.0703 kilogram force per square centimeter
1 pound per square foot (psf)	47.88 Pascals (Pa)
1 pound per square foot (psf)	47.88 Newton per square meter (N/m <sup>2</sup> )
1 foot candle	10.764 lux
1 inch water column	248.84 Pascal
1 degree	0.01745 radian
1 Btu/hr	0.2931 Watt
Temperature degrees Fahrenheit	1.8 × degrees C + 32

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