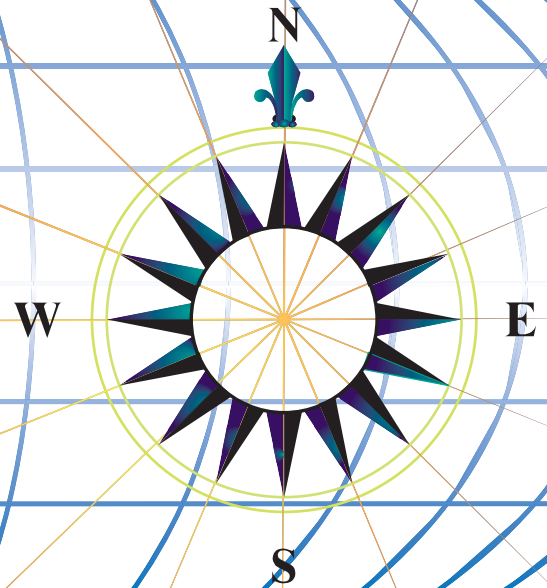
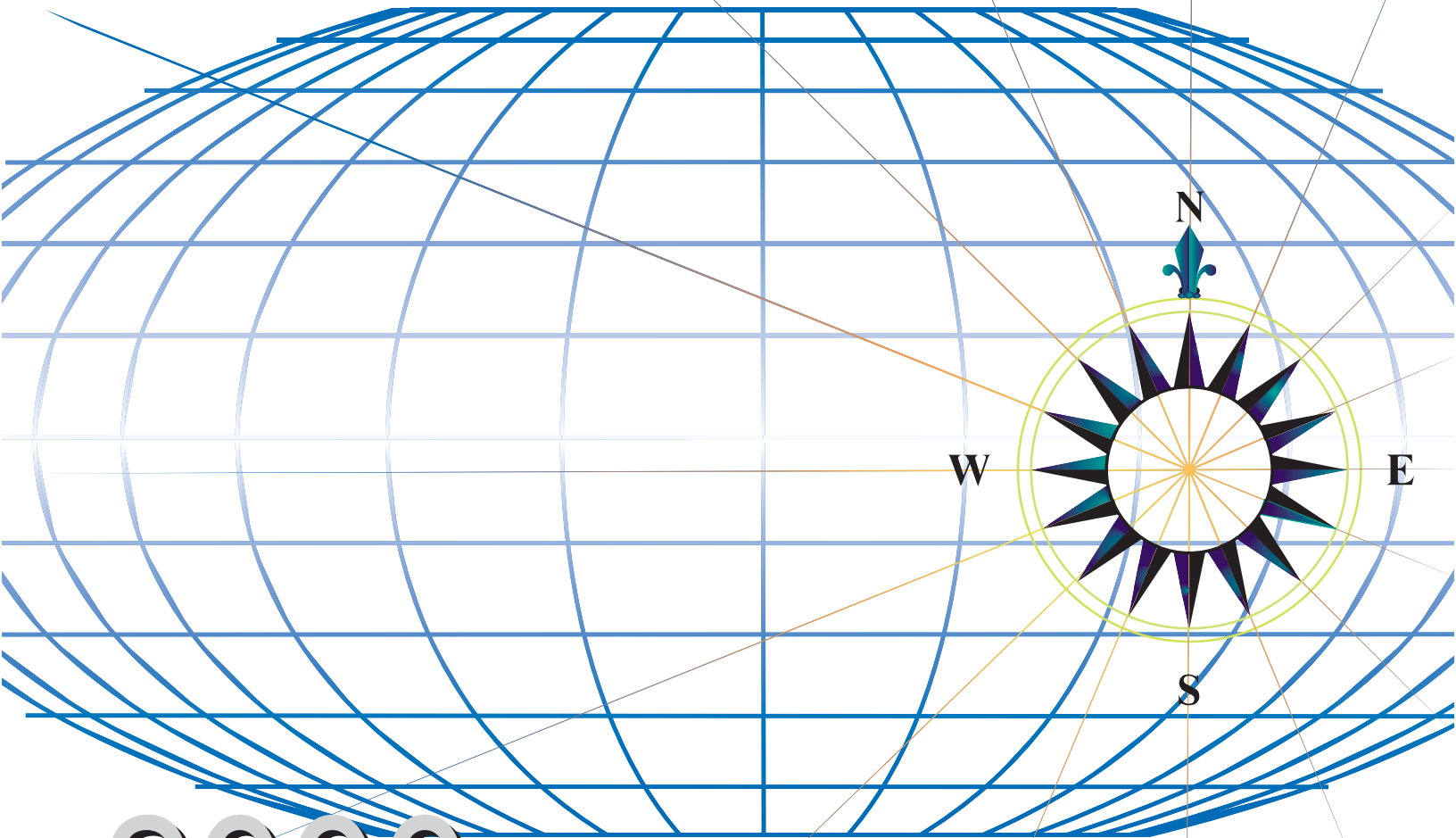


This is a preview of "ICC IBC-2000". Click here to purchase the full version from the ANSI store.

International Building Code®



2000



Third Printing

Publication Date: March 2000
ISBN # 1-892395-26-6

COPYRIGHT© 2000

by
INTERNATIONAL CODE COUNCIL, INC.

ALL RIGHTS RESERVED. This 2000 International Building Code is a copyrighted work owned by the International Code Council, Inc. Without advance written permission from the copyright owner, no part of this book may be reproduced, distributed, or transmitted in any form or by any means, including, without limitation, electronic, optical or mechanical means (by way of example and not limitation, photocopying, or recording by or in an information storage retrieval system). For information on permission to copy material exceeding fair use, please contact: President, International Code Council, 5203 Leesburg Pike, Suite 1600, Falls Church, Virginia 22041-3401. (Phone 703-931-4533).

Trademarks: "International Code Council," the "International Code Council" logo and the "International Building Code" are trademarks of the International Code Council, Inc. The "BOCA" logo is a trademark of Building Officials and Code Administrators International, Inc. The "ICBO" logo is a trademark of the International Conference of Building Officials. The "SBCCI" logo is a trademark of the Southern Building Code Congress International, Inc.

Published in cooperation with:

BUILDING OFFICIALS AND CODE ADMINISTRATORS INTERNATIONAL, INC.
4051 West Flossmoor Road • Country Club Hills, Illinois 60478-5795
www.bocai.org
(800) 214-4321

INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS
5360 Workman Mill Road • Whittier, California 90601-2298
www.icbo.org
(800) 423-6587

SOUTHERN BUILDING CODE CONGRESS INTERNATIONAL, INC.
900 Montclair Road • Birmingham, Alabama 34213-1206
www.sbcci.org
(877) 442-6337

PRINTED IN THE U.S.A.

PREFACE

Introduction

Internationally, code officials recognize the need for a modern, up-to-date building code addressing the design and installation of building systems through requirements emphasizing performance. The *International Building Code*® is designed to meet these needs through model code regulations that safeguard the public health and safety in all communities, large and small.

This comprehensive building code establishes minimum regulations for building systems using prescriptive and performance-related provisions. It is founded on broad-based principles that make possible the use of new materials and new building designs. Additionally, the *International Building Code* is designed to be compatible with the entire family of *International Codes* published by the International Code Council.

The *International Building Code* provisions provide many benefits, among which is the model code development process that offers an international forum for building professionals to discuss performance and prescriptive code requirements. This forum provides an excellent arena to debate proposed revisions. This model code also encourages international consistency in the application of provisions.

Development

The first draft of the *International Building Code* was prepared in 1997 by five drafting subcommittees appointed by the International Code Council (ICC) and consisting of representatives of BOCA, ICBO, and SBCCI. The intent was to draft a comprehensive set of regulations for building systems consistent with and inclusive of the scope of the existing model codes.

Technical content of the latest model codes promulgated by BOCA, ICBO and SBCCI and reports issued by the Board for the Coordination of Model Codes (BCMC) was utilized as the basis for the development of this document. While there were a great many similarities among the codes, careful consideration was given to identified differences. The committees followed certain principles as guidance in the resolution of the technical differences. The principles were based on the intent to establish provisions consistent with the scope of a building code that adequately protects public health, safety and welfare; provisions that do not unnecessarily increase construction costs; provisions that do not restrict the use of new materials, productions or methods of construction; and provisions that do not give preferential treatment to particular types or classes of materials, products or methods of construction.

In order to gain views of code users, industries and all other interested parties, a public comment forum was conducted and comments on the full content of the working draft were accepted. The drafting committees considered all comments submitted in writing in advance of a 1997 public comment forum. A public hearing was held in 1998 and two public hearings were held in 1999. Five technical subcommittees considered all written comments submitted in advance of the hearings. In addition to the changes made at the public comment forum and the three public hearings, other editorial changes have been made for consistency and correlation purposes.

Letter Designations in Front of Section Numbers

In each code development cycle, proposed changes to this code are considered at the First Public Hearing by the International Building Code Development Committee, whose action constitutes a recommendation to the voting membership for final action on the proposed change. Proposed changes to a code section whose number begins with a letter in brackets are considered by a different code development committee. For instance, proposed changes to code sections which have the letter [F] in front (e.g., [F] 1001.3), are considered by the International Fire Code Development Committee at the First Public Hearing. Where this designation is applicable to the entire content of a main section of the code, the designation appears at the main section number and title and is not repeated at every subsection in that section.

The content of sections in this code which begin with a letter designation are maintained by another code development committee in accordance with the following: [F] = International Fire Code Development Committee; [M] = International Mechanical Code Development Committee; [PM] = International Property Maintenance Code Development Committee; [P] = International Plumbing Code Development Committee; [RBE] = International Residential Code Building and Energy Development Committee; [RMP] = International Residential Code Mechanical/Plumbing Development Committee; [E] = International Energy Conservation Code Development Committee; and [EL] = ICC Electrical Code Development Committee.

Adoption

The *International Building Code* is available for adoption and use by jurisdictions internationally. Its use within a governmental jurisdiction is intended to be accomplished through adoption by reference in accordance with proceedings establishing the jurisdiction's laws. At the time of adoption, jurisdictions should insert the appropriate information in provisions requiring spe-

cific local information, such as the name of the adopting jurisdiction. These locations are shown in bracketed words in small capital letters in the code and in the sample ordinance. The sample adoption ordinance on page v addresses several key elements of a code adoption ordinance, including the information required for insertion into the code text.

Maintenance

The *International Building Code* is kept up to date through the review of proposed changes submitted by code enforcing officials, industry representatives, design professionals and other interested parties. Proposed changes are carefully considered through an open code development process in which all interested and affected parties may participate.

The contents of this work are subject to change both through the Code Development Cycles and the governmental body that enacts the code into law. For more information regarding the code development process, contact: BOCA, ICBO or SBCCI.

While the development procedure of the *International Building Code* assures the highest degree of care, BOCA, ICBO, SBCCI, their members and those participating in the development of this code do not accept any liability resulting from compliance or noncompliance with the provisions because BOCA, ICBO and SBCCI do not have the power or authority to police or enforce compliance with the contents of this code. Only the governmental body that enacts the code into law has such authority.

SAMPLE ORDINANCE FOR ADOPTION OF THE INTERNATIONAL BUILDING CODE

Ordinance Number _____

The *International Codes* are designed and promulgated to be adopted by reference by ordinance. Jurisdictions wishing to adopt the 2000 *International Building Code* as an enforceable regulation governing existing structures and premises should ensure that certain factual information is included in the adopting ordinance at the time adoption is being considered by the appropriate governmental body. The following sample adoption ordinance addresses several key elements of a code adoption ordinance, including the information required for insertion into the code text.

An ordinance establishing the minimum regulations governing the conditions and maintenance of all property, buildings and structures; by providing the standards for supplied utilities and facilities and other physical things and conditions essential to ensure that structures are safe, sanitary and fit for occupation and use; and the condemnation of buildings and structures unfit for human occupancy and use and the demolition of such structures; known as the *Building Code*.

Be it ordained by the [GOVERNING BODY] of the [NAME OF JURISDICTION] as follows:

Section 1. That a certain document, three (3) copies of which are on file in the office of the [JURISDICTION'S KEEPER OF RECORDS] of the [NAME OF JURISDICTION], being marked and designated as the *International Building Code*, including Appendix Chapters (fill in the applicable Appendix Chapters. [See *International Building Code* Section 101.2.1, 2000 edition]), as published by the International Code Council, Inc., be and is hereby adopted as the *Building Code* [NAME OF JURISDICTION], in the State of [STATE NAME]; for the control of building and structures as herein provided; and each and all of the regulations, provisions, penalties, conditions and terms of said *Building Code* are hereby referred to, adopted, and made a part hereof, as if fully set out in this ordinance, with the additions, insertions, deletions and changes, if any, prescribed in Section 2 of this ordinance.

Section 2. The following sections are hereby revised:

Section 101.1. Insert: [NAME OF JURISDICTION]

Section 1612.3. Insert: [NAME OF JURISDICTION]

Section 1612.3. Insert: [DATE OF ISSUANCE]

Section 3409.2. Insert: [DATE IN ONE LOCATION]

Section 3. That Ordinance Number [PRESENT ORDINANCE NUMBER], of the [NAME OF JURISDICTION], entitled [FULL TITLE OF PRESENT ORDINANCE] and all other ordinances or parts of ordinances in conflict herewith are hereby repealed.

Section 4. That nothing in this ordinance or in the *Building Code* hereby adopted shall be construed to affect any suit or proceeding impending in any court, or any rights acquired, or liability incurred, or any cause or causes of action acquired or existing, under any act or ordinance hereby repealed as cited in Section 2 of this ordinance; nor shall any just or legal right or remedy of any character be lost, impaired or affected by this ordinance.

Section 5. That the [JURISDICTION'S KEEPER OF RECORDS] shall certify to the adoption of this ordinance, and cause the same to be published as required by law; and this ordinance shall take effect and be in force from and after its approval as required by law.

This is a preview of "ICC IBC-2000". [Click here to purchase the full version from the ANSI store.](#)

TABLE OF CONTENTS

CHAPTER 1 ADMINISTRATION 1	405	Underground Buildings 44
Section	406	Motor-Vehicle-Related Occupancies 45
101 General 1	407	Group I-2 49
102 Applicability 1	408	Group I-3 51
103 Department of Building Safety 2	409	Motion Picture Projection Rooms 53
104 Duties and Powers of Building Official 2	410	Stages and Platforms 53
105 Permits 3	411	Special Amusement Buildings 56
106 Construction Documents 5	412	Aircraft-Related Occupancies 56
107 Temporary Structures and Uses 7	413	Combustible Storage 59
108 Fees 7	414	Hazardous Materials 59
109 Inspections 8	415	Groups H-1, H-2, H-3, H-4 and H-5 63
110 Certificate of Occupancy 9	416	Application of Flammable Finishes 78
111 Service Utilities 9	417	Drying Rooms 78
112 Board of Appeals 9	418	Organic Coatings 78
113 Violations 10		
114 Stop Work Order 10		
115 Unsafe Structures and Equipment 10		
CHAPTER 2 DEFINITIONS 11		CHAPTER 5 GENERAL BUILDING
Section		HEIGHTS AND AREAS 79
201 General 11		Section
202 Definitions 11	501	General 79
	502	Definitions 79
	503	General Height and Area Limitations 79
	504	Height Modifications 81
	505	Mezzanines 82
	506	Area Modifications 83
	507	Unlimited Area Buildings 83
	508	Special Provisions 84
CHAPTER 3 USE AND OCCUPANCY		CHAPTER 6 TYPES OF CONSTRUCTION 87
CLASSIFICATION 23		Section
Section		601 General 87
301 General 23		602 Construction Classification 87
302 Classification 23		603 Combustible Material in Types I
303 Assembly Group A 26		and II Construction 88
304 Business Group B 26		
305 Educational Group E 26		
306 Factory Group F 27		
307 High-Hazard Group H 27		
308 Institutional Group I 33		
309 Mercantile Group M 36		
310 Residential Group R 36		
311 Storage Group S 37		
312 Utility and Miscellaneous Group U 38		
CHAPTER 4 SPECIAL DETAILED		CHAPTER 7 FIRE-RESISTANCE-RATED
REQUIREMENTS BASED ON		CONSTRUCTION 91
USE AND OCCUPANCY 39		Section
Section		701 General 91
401 Scope 39		702 Definitions 91
402 Covered Mall Buildings 39		703 Fire Resistance Ratings and Fire Tests 92
403 High-Rise Buildings 42		704 Exterior Walls 93
404 Atriums 43		705 Fire Walls 97
		706 Fire Barriers 100
		707 Shaft Enclosures 100
		708 Fire Partitions 103
		709 Smoke Barriers 104
		710 Horizontal Assemblies 104

TABLE OF CONTENTS

711 Penetrations 105
 712 Fire-Resistant Joint Systems 107
 713 Fire-Resistance Rating of
 Structural Members 108
 714 Opening Protectives 109
 715 Ducts and Air Transfer Openings 112
 716 Concealed Spaces 115
 717 Fire-Resistance Requirements
 For Plaster 117
 718 Thermal- and Sound-Insulating
 Materials 117
 719 Prescriptive Fire Resistance 118
 720 Calculated Fire Resistance 140

CHAPTER 8 INTERIOR FINISHES 171

Section
 801 General 171
 802 Definitions 171
 803 Wall and Ceiling Finishes 171
 804 Interior Floor Finish 174
 805 Decorations and Trim 175

CHAPTER 9 FIRE PROTECTION SYSTEMS . . . 177

Section
 901 General 177
 902 Definitions 177
 903 Automatic Sprinkler Systems 180
 904 Alternative Automatic
 Fire-Extinguishing Systems 185
 905 Standpipe Systems 187
 906 Portable Fire Extinguishers 189
 907 Fire Alarm and Detection Systems 189
 908 Emergency Alarm Systems 198
 909 Smoke Control Systems 199
 910 Smoke and Heat Vents 208
 911 Fire Command Center 210

CHAPTER 10 MEANS OF EGRESS 211

Section
 1001 Administration 211
 1002 Definitions 211
 1003 General Means of Egress 212
 1004 Exit Access 230
 1005 Exits 235
 1006 Exit Discharge 239
 1007 Miscellaneous Means of
 Egress Requirements 241
 1008 Assembly 241
 1009 Emergency Escape and Rescue 246

CHAPTER 11 ACCESSIBILITY 249

Section
 1101 General 249
 1102 Definitions 249
 1103 Scoping Requirements 249
 1104 Accessible Route 250
 1105 Accessible Entrances 251
 1106 Parking and Passenger
 Loading Facilities 251
 1107 Special Occupancies 251
 1108 Other Features and Facilities 255
 1109 Signage 257

CHAPTER 12 INTERIOR ENVIRONMENT 259

Section
 1201 General 259
 1202 Ventilation 259
 1203 Temperature Control 260
 1204 Lighting 260
 1205 Yards or Courts 261
 1206 Sound Transmission 261
 1207 Interior Space Dimensions 261
 1208 Access To Unoccupied Spaces 262
 1209 Surrounding Materials 262

CHAPTER 13 ENERGY EFFICIENCY 263

Section
 1301 General 263

CHAPTER 14 EXTERIOR WALLS 265

Section
 1401 General 265
 1402 Definitions 265
 1403 Performance Requirements 265
 1404 Materials 266
 1405 Installation of Wall Coverings 266
 1406 Combustible Materials on the
 Exterior Side of Exterior Walls 270
 1407 Aluminum Composite Materials 272
 (ACM)

**CHAPTER 15 ROOF ASSEMBLIES AND
 ROOFTOP STRUCTURES 275**

Section
 1501 General 275
 1502 Definitions 275
 1503 Weather Protection 276
 1504 Performance Requirements 276
 1505 Fire Classification 276
 1506 Materials 277

TABLE OF CONTENTS

1507 Requirements for Roof Coverings 277
 1508 Roof Insulation 288
 1509 Rooftop Structures 288
 1510 Reroofing 290

CHAPTER 16 STRUCTURAL DESIGN 291

Section

1601 General 291
 1602 Definitions 291
 1603 Construction Documents 294
 1604 General Design Requirements 295
 1605 Load Combinations 296
 1606 Dead Loads 299
 1607 Live Loads 299
 1608 Snow Loads 304
 1609 Wind Loads 305
 1610 Soil Lateral Load 312
 1611 Rain Loads 313
 1612 Flood Loads 313
 1613 Earthquake Loads Definitions 329
 1614 Earthquake Loads—General 330
 1615 Earthquake Loads—Site Ground Motion 331
 1616 Earthquake Loads—Criteria Selection 354
 1617 Earthquake Loads—Minimum Design
 Lateral Force and Related Effects 357
 1618 Dynamic Analysis Procedure for the
 Seismic Design of Buildings 369
 1619 Earthquake Loads Soil-Structure
 Interaction Effects 372
 1620 Earthquake Loads—Design, Detailing
 Requirements and Structural Component
 Load Effects 372
 1621 Architectural, Mechanical and
 Electrical Component Seismic
 Design Requirements 375
 1622 Nonbuilding Structures Seismic Design
 Requirements 386
 1623 Seismically Isolated Structures 392

**CHAPTER 17 STRUCTURAL TESTS AND
 SPECIAL INSPECTIONS 405**

Section

1701 General 405
 1702 Definitions 405
 1703 Approvals 406
 1704 Special Inspections 407
 1705 Quality Assurance for Seismic Resistance 414
 1706 Quality Assurance for Wind Requirements 415
 1707 Special Inspections for Seismic Resistance 416
 1708 Structural Testing for Seismic Resistance 417
 1709 Structural Observations 418
 1710 Design Strengths of Materials 419

1711 Alternative Test Procedure 419
 1712 Test Safe Load 419
 1713 In-Situ Load Tests 419
 1714 Preconstruction Load Tests 420
 1715 Material and Test Standards 421

CHAPTER 18 SOIL AND FOUNDATIONS 423

Section

1801 General 423
 1802 Foundation and Soils Investigations 423
 1803 Excavation, Grading and Fill 424
 1804 Allowable Load-Bearing Values of Soils 425
 1805 Footings and Foundations 425
 1806 Dampproofing and Waterproofing 434
 1807 Pier and Pile Foundations 436
 1808 Driven Pile Foundations 441
 1809 Cast-in-Place Concrete Pile Foundations 444
 1810 Composite Piles 448
 1811 Pier Foundations 448

CHAPTER 19 CONCRETE 451

Section

1901 General 451
 1902 Definitions 451
 1903 Specifications for Tests and Materials 452
 1904 Durability Requirements 453
 1905 Concrete Quality, Mixing and Placing 455
 1906 Formwork, Embedded Pipes and
 Construction Joints 460
 1907 Details of Reinforcement 461
 1908 Modifications to ACI 318 463
 1909 Structural Plain Concrete 466
 1910 Seismic Design Provisions 467
 1911 Minimum Slab Provisions 468
 1912 Anchorage to Concrete—Allowable
 Stress Design 469
 1913 Anchorage to Concrete—Strength Design 470
 1914 Shotcrete 477
 1915 Reinforced Gypsum Concrete 479
 1916 Concrete-Filled Pipe Columns 479

CHAPTER 20 ALUMINUM 481

Section

2001 General 481
 2002 Materials 481

TABLE OF CONTENTS

CHAPTER 21 MASONRY 483

Section

2101 General 483

2102 Definitions and Notations 483

2103 Masonry Construction Materials 488

2104 Construction 491

2105 Quality Assurance 493

2106 Seismic Design 495

2107 Working Stress Design 498

2108 Strength Design of Masonry 499

2109 Empirical Design of Masonry 515

2110 Glass Unit Masonry 522

2111 Masonry Fireplaces 523

2112 Masonry Heaters 528

2113 Masonry Chimneys 528

CHAPTER 22 STEEL 533

Section

2201 General 533

2202 Definitions and Nomenclature 533

2203 Identification and Protection of Steel
for Structures 533

2204 Structural Steel Construction 533

2205 Cold-Formed Steel 533

2206 Steel Joists 533

2207 Steel Cable Structures 534

2208 Welding 534

2209 Bolting 534

2210 Steel Storage Racks 534

2211 Wind and Seismic Requirements for Light
Framed Cold-Formed Steel Walls 534

2212 Seismic Requirements for Structural
Steel Construction 536

2213 Seismic Requirements for Composite
Construction 536

CHAPTER 23 WOOD 539

Section

2301 General 539

2302 Definitions 539

2303 Minimum Standards and Quality 541

2304 General Construction Requirements 543

2305 General Design Requirements for
Lateral-Force-Resisting Systems 552

2306 Allowable Stress Design 559

2307 Load and Resistance Factor Design 568

2308 Conventional Light-Frame Construction 568

CHAPTER 24 GLASS AND GLAZING 601

Section

2401 General 601

2402 Definitions 601

2403 General Requirements for Glass 601

2404 Wind, Snow and Dead Loads on Glass 601

2405 Sloped Glazing and Skylights 603

2406 Safety Glazing 616

2407 Glass in Handrails and Guards 618

2408 Glazing in Athletic Facilities 618

2409 Glass in Floors and Sidewalks 618

**CHAPTER 25 GYPSUM BOARD AND
PLASTER 621**

Section

2501 General 621

2502 Definitions 621

2503 Inspection 621

2504 Vertical and Horizontal Assemblies 621

2505 Shear Wall Construction 622

2506 Gypsum Board Materials 622

2507 Lathing and Plastering 622

2508 Gypsum Construction 623

2509 Gypsum Board in Showers and
Water Closets 623

2510 Lathing and Furring for Cement
Plaster (Stucco) 623

2511 Interior Plaster 624

2512 Exterior Plaster 625

2513 Exposed Aggregate Plaster 625

CHAPTER 26 PLASTIC 627

Section

2601 General 627

2602 Definitions 627

2603 Foam Plastic Insulation 627

2604 Interior Finish and Trim 630

2605 Plastic Veneer 630

2606 Light-Transmitting Plastics 631

2607 Light-Transmitting Plastic Wall Panels 632

2608 Light-Transmitting Plastic Glazing 633

2609 Light-Transmitting Plastic Roof Panels 633

2610 Light-Transmitting Plastic Skylight Glazing 634

2611 Light-Transmitting Plastic Interior Signs 635

CHAPTER 27 ELECTRICAL 637

Section

2701 General 637

2702 Emergency and Standby Power Systems 637

TABLE OF CONTENTS

CHAPTER 28 MECHANICAL SYSTEMS 639

Section
2801 General 639

CHAPTER 29 PLUMBING SYSTEMS 641

Section
2901 General 641
2902 Minimum Plumbing Facilities 641

CHAPTER 30 ELEVATORS AND CONVEYING SYSTEMS 645

Section
3001 General 645
3002 Hoistway Enclosures 645
3003 Emergency Operations 645
3004 Hoistway Venting 646
3005 Conveying Systems 646
3006 Machine Rooms 647

CHAPTER 31 SPECIAL CONSTRUCTION 649

Section
3101 General 649
3102 Membrane Structures 649
3103 Temporary Structures 650
3104 Pedestrian Walkways and Tunnels 651
3105 Awnings and Canopies 652
3106 Marquees 652
3107 Signs 652
3108 Radio and Television Towers 652
3109 Swimming Pool Enclosures 653

CHAPTER 32 ENCROACHMENTS INTO THE PUBLIC RIGHT-OF-WAY 655

Section
3201 General 655
3202 Encroachments 655

CHAPTER 33 SAFEGUARDS DURING CONSTRUCTION 657

Section
3301 General 657
3302 Construction Safeguards 657
3303 Demolition 657
3304 Site Work 657
3305 Sanitary 658
3306 Protection of Pedestrians 658
3307 Protection of Adjoining Property 659
3308 Temporary Use of Streets, Alleys and Public Property 659

3309 Fire Extinguishers 659
3310 Exits 660
3311 Standpipes 660
3312 Automatic Sprinkler System 660

CHAPTER 34 EXISTING STRUCTURES 661

Section
3401 General 661
3402 Additions, Alterations or Repairs 661
3403 Fire Escapes 661
3404 Glass Replacement 662
3405 Change of Occupancy 662
3406 Historic Buildings 662
3407 Moved Structures 662
3408 Accessibility for Existing Buildings 662
3409 Compliance Alternatives 664

CHAPTER 35 REFERENCED STANDARDS 675

APPENDIX A EMPLOYEE QUALIFICATIONS . . 699

Section
A101 Building Official Qualifications 699
A102 Referenced Standards 699

APPENDIX B BOARD OF APPEALS 701

Section
B101 General 701

APPENDIX C GROUP U—AGRICULTURAL BUILDINGS 703

Section
C101 General 703
C102 Allowable Height and Area 703
C103 Mixed Uses 703
C104 Exits 703

APPENDIX D FIRE DISTRICTS 705

Section
D101 General 705
D102 Building Restrictions 705
D103 Changes to Buildings 706
D104 Buildings Located Partially in the Fire District 706
D105 Exceptions to Restrictions in Fire District 706
D106 Referenced Standards 707

TABLE OF CONTENTS

**APPENDIX E SUPPLEMENTARY
ACCESSIBILITY
REQUIREMENTS..... 709**

Section

E101 General 709

E102 Definitions 709

E103 Accessible Route..... 709

E104 Special Occupancies 709

E105 Other Features and Facilities 710

E106 Telephones 710

E107 Signage..... 711

E108 Bus Stops and Terminals 711

E109 Fired Transportation Facilities and
Stations..... 712

E110 Airports..... 713

E111 Referenced Standards 714

APPENDIX F RODENT PROOFING..... 715

Section

F101 General 715

**APPENDIX G FLOOD RESISTANT
CONSTRUCTION..... 717**

Section

G101 Administration 717

G102 Applicability 717

G103 Powers and Duties..... 717

G104 Permits 718

G105 Variances..... 719

G201 Definitions 719

G301 Subdivisions 720

G401 Site Improvements 720

G501 Manufactured Homes 721

G601 Recreational Vehicles 721

G701 Referenced Standards 721

APPENDIX H SIGNS..... 723

Section

H101 General 723

H102 Definitions 723

H103 Location 723

H104 Identification..... 723

H105 Design and Construction 724

H106 Electrical..... 724

H107 Combustible Materials..... 724

H108 Animated Devices..... 725

H109 Ground Signs 725

H110 Roof Signs 725

H111 Wall Signs..... 725

H112 Projecting Signs 725

H113 Marquee Signs 726

H114 Portable Signs 726

H115 Referenced Standards 727

APPENDIX I PATIO COVERS..... 729

Section

I101 General 729

I102 Definitions 729

I103 Exterior Openings 729

I104 Structural Provisions 729

**APPENDIX J SUPPLEMENTARY ACCESSIBILITY
REQUIREMENTS FOR QUALIFIED
HISTORIC BUILDINGS AND
FACILITIES..... 731**

Section

J101 Accessibility Provisions 731

J102 Referenced Standards 731

INDEX 733

CHAPTER 1 ADMINISTRATION

SECTION 101 GENERAL

101.1 Title. These regulations shall be known as the *Building Code* of [NAME OF JURISDICTION], hereinafter referred to as "this code."

101.2 Scope. The provisions of this code shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures.

Exception: Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories high with separate means of egress and their accessory structures shall comply with the *International Residential Code*.

101.2.1 Appendices. Provisions in the appendices shall not apply unless specifically adopted.

101.3 Intent. The purpose of this code is to establish the minimum requirements to safeguard the public health, safety and general welfare through structural strength, means of egress facilities, stability, sanitation, adequate light and ventilation, energy conservation, and safety to life and property from fire and other hazards attributed to the built environment.

101.4 Referenced codes. The other codes listed in Sections 101.4.1 through 101.4.7 and referenced elsewhere in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference.

101.4.1 Electrical. The provisions of the *ICC Electrical Code* shall apply to the installation of electrical systems, including alterations, repairs, replacement, equipment, appliances, fixtures, fittings and appurtenances thereto.

101.4.2 Gas. The provisions of the *International Fuel Gas Code* shall apply to the installation of gas piping from the point of delivery, gas appliances and related accessories as covered in this code. These requirements apply to gas piping systems extending from the point of delivery to the inlet connections of appliances and the installation and operation of residential and commercial gas appliances and related accessories.

101.4.3 Mechanical. The provisions of the *International Mechanical Code* shall apply to the installation, alterations, repairs, and replacement of mechanical systems, including equipment, appliances, fixtures, fittings and/or appurtenances, including ventilating, heating, cooling, air-conditioning and refrigeration systems, incinerators, and other energy-related systems.

101.4.4 Plumbing. The provisions of the *International Plumbing Code* shall apply to the installation, alteration, repair and replacement of plumbing systems, including equipment, appliances, fixtures, fittings and appurtenances, and where connected to a water or sewage system and all aspects of a medical gas system. The provisions of the *International Private Sewage Disposal Code* shall apply to private sewage disposal systems.

101.4.5 Property maintenance. The provisions of the *International Property Maintenance Code* shall apply to existing structures and premises; equipment and facilities; light, ventilation, space heating, sanitation, life and fire safety hazards; responsibilities of owners, operators and occupants; and occupancy of existing premises and structures.

101.4.6 Fire prevention. The provisions of the *International Fire Code* shall apply to matters affecting or relating to structures, processes and premises from the hazard of fire and explosion arising from the storage, handling or use of structures, materials or devices; from conditions hazardous to life, property or public welfare in the occupancy of structure or premises is unoccupied; and from the construction, extension, repair, alteration or removal of fire suppression and alarm systems or fire hazards in the structure or on the premises from occupancy or operation.

101.4.7 Energy. The provisions of the *International Energy Conservation Code* shall apply to all matters governing the design and construction of buildings for energy efficiency.

SECTION 102 APPLICABILITY

102.1 General. Where, in any specific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.

102.2 Other laws. The provisions of this code shall not be deemed to nullify any provisions of local, state or federal law.

102.3 Application of references. References to chapter or section numbers, or to provisions not specifically identified by number, shall be construed to refer to such chapter, section or provision of this code.

102.4 Referenced codes and standards. The codes and standards referenced in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference. Where differences occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.

102.5 Partial invalidity. In the event any part or provision of this code is held to be illegal or void, this shall not have the effect of making void or illegal any of the other parts or provisions.

102.6 Existing structures. The legal occupancy of any structure existing on the date of adoption of this code shall be permitted to continue without change, except as is specifically covered in this code, the *International Property Maintenance Code* or the *International Fire Code*, or as is deemed necessary by the building official for the general safety and welfare of the occupants and the public.

SECTION 103 DEPARTMENT OF BUILDING SAFETY

103.1 Creation of enforcement agency. The department of building safety is hereby created and the official in charge thereof shall be known as the building official.

103.2 Appointment. The building official shall be appointed by the chief appointing authority of the jurisdiction.

103.3 Deputies. In accordance with the prescribed procedures of this jurisdiction and with the concurrence of the appointing authority, the building official shall have the authority to appoint a deputy building official, the related technical officers, inspectors, plan examiners and other employees. Such employees shall have powers as delegated by the building official. For the maintenance of existing properties, see the *International Property Maintenance Code*.

SECTION 104 DUTIES AND POWERS OF BUILDING OFFICIAL

104.1 General. The building official is hereby authorized and directed to enforce the provisions of this code. The building official shall have the authority to render interpretations of this code and to adopt policies and procedures in order to

clarify the application of its provisions. Such interpretations, policies and procedures shall be in compliance with the intent and purpose of this code. Such policies and procedures shall not have the effect of waiving requirements specifically provided for in this code.

104.2 Applications and permits. The building official shall receive applications, review construction documents and issue permits for the erection, and alteration, demolition and moving of buildings and structures, inspect the premises for which such permits have been issued and enforce compliance with the provisions of this code.

104.3 Notices and orders. The building official shall issue all necessary notices or orders to ensure compliance with this code.

104.4 Inspections. The building official shall make all of the required inspections, or the building official shall have the authority to accept reports of inspection by approved agencies or individuals. Reports of such inspections shall be in writing and be certified by a responsible officer of such approved agency or by the responsible individual. The building official is authorized to engage such expert opinion as deemed necessary to report upon unusual technical issues that arise, subject to the approval of the appointing authority.

104.5 Identification. The building official shall carry proper identification when inspecting structures or premises in the performance of duties under this code.

104.6 Right of entry. Where it is necessary to make an inspection to enforce the provisions of this code, or where the building official has reasonable cause to believe that there exists in a structure or upon a premises a condition which is contrary to or in violation of this code which makes the structure or premises unsafe, dangerous or hazardous, the building official is authorized to enter the structure or premises at reasonable times to inspect or to perform the duties imposed by this code, provided that if such structure or premises be occupied that credentials be presented to the occupant and entry requested. If such structure or premises is unoccupied, the building official shall first make a reasonable effort to locate the owner or other person having charge or control of the structure or premises and request entry. If entry is refused, the building official shall have recourse to the remedies provided by law to secure entry.

104.7 Department records. The building official shall keep official records of applications received, permits and certificates issued, fees collected, reports of inspections, and notices and orders issued. Such records shall be retained in the official records for the period required for retention of public records.

104.8 Liability. The building official, member of the board of appeals or employee charged with the enforcement of this code, while acting for the jurisdiction in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered liable personally and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties. Any suit instituted against an officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by legal representative of the jurisdiction until the final termination of the proceedings. The building official or any subordinate shall not be liable for cost in any action, suit or proceeding that is instituted in pursuance of the provisions of this code.

104.9 Approved materials and equipment. Materials, equipment and devices approved by the building official shall be constructed and installed in accordance with such approval.

104.9.1 Used materials and equipment. The use of used materials which meet the requirements of this code for new materials is permitted. Used equipment and devices shall not be reused unless approved by the building official.

104.10 Modifications. Wherever there are practical difficulties involved in carrying out the provisions of this code, the building official shall have the authority to grant modifications for individual cases, upon application of the owner or owner's representative, provided the building official shall first find that special individual reason makes the strict letter of this code impractical and the modification is in compliance with the intent and purpose of this code and that such modification does not lessen health, accessibility, life and fire safety, or structural requirements. The details of action granting modifications shall be recorded and entered in the files of the department of building safety.

104.11 Alternative materials, design and methods of construction and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been approved. An alternative material, design or method of construction shall be approved where the building official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety.

104.11.1 Tests. Whenever there is insufficient evidence of compliance with the provisions of this code, or evidence that a material or method does not conform to the requirements of this code, or in order to substantiate claims for alternative materials or methods, the building official shall have the authority to require tests as evidence of compliance to be made at no expense to the jurisdiction. Test methods shall be as specified in this code or by other recognized test standards. In the absence of recognized and accepted test methods, the building official shall approve the testing procedures. Tests shall be performed by an approved agency. Reports of such tests shall be retained by the building official for the period required for retention of public records.

SECTION 105 PERMITS

105.1 Required. Any owner or authorized agent who intends to construct, enlarge, alter, repair, move, demolish, or change the occupancy of a building or structure, or to erect, install, enlarge, alter, repair, remove, convert or replace any electrical, gas, mechanical or plumbing system, the installation of which is regulated by this code, or to cause any such work to be done, shall first make application to the building official and obtain the required permit.

105.1.1 Annual permit. In lieu of an individual permit for each alteration to an already approved electrical, gas, mechanical or plumbing installation, the building official is authorized to issue an annual permit upon application therefor to any person, firm or corporation regularly employing one or more qualified trade persons in the building, structure or on the premises owned or operated by the applicant for the permit.

105.1.2 Annual permit records. The person to whom an annual permit is issued shall keep a detailed record of alterations made under such annual permit. The building official shall have access to such records at all times or such records shall be filed with the building official as designated.

105.2 Work exempt from permit. Exemptions from permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction. Permits shall not be required for the following:

Building:

1. One-story detached accessory structures used as tool and storage sheds, playhouses and similar uses, provided the floor area does not exceed 120 square feet (11.15 m²).
2. Fences not over 6 feet (1829 mm) high.

3. Oil derricks.
4. Retaining walls which are not over 4 feet (1219 mm) in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge or impounding Class I, II or III-A liquids.
5. Water tanks supported directly upon grade if the capacity does not exceed 5,000 gallons (18 927 L) and the ratio of height to diameter or width does not exceed 2 to 1.
6. Sidewalks and driveways not more than 30 inches (762 mm) above grade and not over any basement or story below and which are not part of an accessible route.
7. Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.
8. Temporary motion picture, television and theater stage sets and scenery.
9. Prefabricated swimming pools accessory to a Group R-3 occupancy, as applicable in Section 101.2, which are less than 24 inches (610 mm) deep, do not exceed 5,000 gallons (19 000 L) and are installed entirely above ground.
10. Shade cloth structures constructed for nursery or agricultural purposes and not including service systems.
11. Swings and other playground equipment accessory to one- and two-family dwellings.
12. Window awnings supported by an exterior wall of Group R-3, as applicable in Section 101.2, and Group U occupancies.
13. Movable cases, counters and partitions not over 5 feet 9 inches (1753 mm) in height.

Electrical:

Repairs and maintenance: Minor repair work, including the replacement of lamps or the connection of approved portable electrical equipment to approved permanently installed receptacles.

Radio and television transmitting stations: The provisions of this code shall not apply to electrical equipment used for radio and television transmissions, but does apply to equipment and wiring for power supply, the installations of towers and antennas.

Temporary testing systems: A permit shall not be required for the installation of any temporary system required for the testing or servicing of electrical equipment or apparatus.

Gas:

1. Portable heating appliance.
2. Replacement of any minor part that does not alter approval of equipment or make such equipment unsafe.

Mechanical:

1. Portable heating appliance;
2. Portable ventilation equipment;
3. Portable cooling unit;
4. Steam, hot or chilled water piping within any heating or cooling equipment regulated by this code;
5. Replacement of any part which does not alter its approval or make it unsafe;
6. Portable evaporative cooler;
7. Self-contained refrigeration system containing 10 pounds (4.54 kg) or less of refrigerant and actuated by motors of 1 horsepower (746 W) or less.

Plumbing:

1. The stopping of leaks in drains, water, soil, waste or vent pipe; provided, however, that if any concealed trap, drainpipe, water, soil, waste or vent pipe becomes defective and it becomes necessary to remove and replace the same with new material, such work shall be considered as new work and a permit shall be obtained and inspection made as provided in this code.
2. The clearing of stoppages or the repairing of leaks in pipes, valves or fixtures, and the removal and reinstallation of water closets, provided such repairs do not involve or require the replacement or rearrangement of valves, pipes or fixtures.

105.2.1 Emergency repairs. Where equipment replacements and repairs must be performed in an emergency situation, the permit application shall be submitted within the next working business day to the building official.

105.2.2 Repairs. Application or notice to the building official is not required for ordinary repairs to structures, replacement of lamps or the connection of approved portable electrical equipment to approved permanently installed receptacles. Such repairs shall not include the cutting away of any wall, partition or portion thereof, the removal or cutting of any structural beam or load bearing support, or the removal or change of any required means of egress, or rearrangement of parts of a structure affecting the egress requirements; nor shall ordinary repairs include addition to, alteration of, replacement or relocation of any standpipe, water supply, sewer, drainage, drain leader, gas, soil, waste, vent or similar piping, electric wiring or mechanical or other work affecting public health or general safety.

105.2.3 Public service agencies. A permit shall not be required for the installation, alteration or repair of generation, transmission, distribution or metering or other related equipment that is under the ownership and control of public service agencies by established right.

105.3 Application for permit. To obtain a permit, the applicant shall first file an application therefor in writing on a form furnished by the department of building safety for that purpose. Such application shall:

1. Identify and describe the work to be covered by the permit for which application is made.
2. Describe the land on which the proposed work is to be done by legal description, street address or similar description that will readily identify and definitely locate the proposed building or work.
3. Indicate the use and occupancy for which the proposed work is intended.
4. Be accompanied by construction documents and other information as required in Section 106.3.
5. State the valuation of the proposed work.
6. Be signed by the applicant, or the applicant's authorized agent.
7. Give such other data and information as required by the building official.

105.3.1 Action on application. The building official shall examine or cause to be examined applications for permits and amendments thereto within a reasonable time after filing. If the application or the construction documents do not conform to the requirements of pertinent laws, the building official shall reject such application in writing, stating the reasons therefor. If the building official is satisfied that the proposed work conforms to the requirements of this code and laws and ordinances applicable thereto, the building official shall issue a permit therefor as soon as practicable.

105.3.2 Time limitation of application. An application for a permit for any proposed work shall be deemed to have been abandoned 180 days after the date of filing, unless such application has been pursued in good faith or a permit has been issued; except that the building official is authorized to grant one or more extensions of time for additional periods not exceeding 90 days each. The extension shall be requested in writing and justifiable cause demonstrated.

105.4 Validity of permit. The issuance or granting of a permit shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or of any other ordinance of the jurisdiction. Permits presuming to give authority to violate or cancel the provisions of this code

or other ordinances of the jurisdiction shall not be valid. The issuance of a permit based on construction documents and other data shall not prevent the building official from requiring the correction of errors in the construction documents and other data. The building official is also authorized to prevent occupancy or use of a structure where in violation of this code or of any other ordinances of this jurisdiction.

105.5 Expiration. Every permit issued shall become invalid unless the work on the site authorized by such permit is commenced within 180 days after its issuance, or if the work authorized on the site by such permit is suspended or abandoned for a period of 180 days after the time the work is commenced. The building official is authorized to grant, in writing, one or more extensions of time, for periods not more than 180 days each. The extension shall be requested in writing and justifiable cause demonstrated.

105.6 Suspension or revocation. The building official is authorized to suspend or revoke a permit issued under the provisions of this code wherever the permit is issued in error or on the basis of incorrect, inaccurate or incomplete information, or in violation of any ordinance or regulation or any of the provisions of this code.

105.7 Placement of permit. The building permit or copy shall be kept on the site of the work until the completion of the project.

SECTION 106 CONSTRUCTION DOCUMENTS

106.1 Submittal documents. Construction documents, special inspection and structural observation programs, and other data shall be submitted in one or more sets with each application for a permit. The construction documents shall be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed. Where special conditions exist, the building official is authorized to require additional construction documents to be prepared by a registered design professional.

Exception: The building official is authorized to waive the submission of construction documents and other data not required to be prepared by a registered design professional if it is found that the nature of the work applied for is such that review of construction documents is not necessary to obtain compliance with this code.

106.1.1 Information on construction documents. Construction documents shall be dimensioned and drawn upon suitable material. Electronic media documents are permitted to be submitted when approved by the building official. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the

work proposed and show in detail that it will conform to the provisions of this code and relevant laws, ordinances, rules and regulations, as determined by the building official.

106.1.1.1 Fire protection system shop drawings.

Shop drawings for the fire protection system(s) shall be submitted to indicate conformance with this code and the construction documents and shall be approved prior to the start of system installation. Shop drawings shall contain all information as required by the referenced installation standards in Chapter 9.

106.1.2 Means of egress. The construction documents shall show in sufficient detail the location, construction, size and character of all portions of the means of egress in compliance with the provisions of this code. In other than occupancies in Groups R-2 and R-3 as applicable in Section 101.2 and I-1, the construction documents shall designate the number of occupants to be accommodated on every floor, and in all rooms and spaces.

106.1.3 Exterior wall envelope. Construction documents for all buildings shall describe the exterior wall envelope in sufficient detail to determine compliance with this code. The construction documents shall provide details of the exterior wall envelope as required, including flashing, intersections with dissimilar materials, corners, end details, control joints, intersections at roof, eaves, or parapets, means of drainage, water-resistive membrane, and details around openings.

The construction documents shall include manufacturer's installation instructions that provide supporting documentation that the proposed penetration and opening details described in the construction documents maintain the weather resistance of the exterior wall envelope. The supporting documentation shall fully describe the exterior wall system which was tested, where applicable, as well as the test procedure used.

106.2 Site plan. The construction documents submitted with the application for permit shall be accompanied by a site plan showing to scale the size and location of new construction and existing structures on the site, distances from lot lines, the established street grades and the proposed finished grades; and it shall be drawn in accordance with an accurate boundary line survey. In the case of demolition, the site plan shall show construction to be demolished and the location and size of existing structures and construction that are to remain on the site or plot. The building official is authorized to waive or modify the requirement for a site plan when the application for permit is for alteration or repair or when otherwise warranted.

106.3 Examination of documents. The building official shall examine or cause to be examined the accompanying construction documents and shall ascertain by such examinations whether the construction indicated and described is in accordance with the requirements of this code and other pertinent laws or ordinances.

106.3.1 Approval of construction documents. When the building official issues a permit, the construction documents shall be approved, in writing or by stamp, as "Reviewed for Code Compliance." One set of construction documents so reviewed shall be retained by the building official. The other set shall be returned to the applicant, shall be kept at the site of work and shall be open to inspection by the building official or his authorized representative.

106.3.2 Previous approvals. This code shall not require changes in the construction documents, construction or designated occupancy of a structure for which a lawful permit has been heretofore issued or otherwise lawfully authorized, and the construction of which has been pursued in good faith within 180 days after the effective date of this code and has not been abandoned.

106.3.3 Phased approval. The building official is authorized to issue a permit for the construction of foundations or any other part of a building or structure before the construction documents for the whole building or structure have been submitted, provided that adequate information and detailed statements have been filed complying with pertinent requirements of this code. The holder of such permit for the foundation or other parts of a building or structure shall proceed at the holder's own risk with the building operation and without assurance that a permit for the entire structure will be granted.

106.3.4 Design professional in responsible charge.

106.3.4.1 General. When it is required that documents be prepared by a registered design professional, the building official shall be authorized to require the owner to engage and designate on the building permit application a registered design professional who shall act as the registered design professional in responsible charge. If the circumstances require, the owner shall designate a substitute registered design professional in responsible charge who shall perform the duties required of the original registered design professional in responsible charge. The building official shall be notified in writing by the owner if the registered design professional in responsible charge is changed or is unable to continue to perform the duties.

The registered design professional in responsible charge shall be responsible for reviewing and coordi-

nating submittal documents prepared by others, including phased and deferred submittal items, for compatibility with the design of the building.

Where structural observation is required by Section 1709, the inspection program shall name the individual or firms who are to perform structural observation and describe the stages of construction at which structural observation is to occur. See also duties specified in Section 1704.

106.3.4.2 Deferred submittals. For the purposes of this section, deferred submittals are defined as those portions of the design that are not submitted at the time of the application and that are to be submitted to the building official within a specified period.

Deferral of any submittal items shall have the prior approval of the building official. The registered design professional in responsible charge shall list the deferred submittals on the construction documents for review by the building official.

Submittal documents for deferred submittal items shall be submitted to the registered design professional in responsible charge who shall review them and forward them to the building official with a notation indicating that the deferred submittal documents have been reviewed and that they have been found to be in general conformance with the design of the building. The deferred submittal items shall not be installed until the design and submittal documents have been approved by the building official.

106.4 Amended construction documents. Work shall be installed in accordance with the reviewed construction documents, and any changes made during construction that are not in compliance with the approved construction documents shall be resubmitted for approval as an amended set of construction documents.

106.5 Retention of construction documents. One set of approved construction documents shall be retained by the building official for a period of not less than 180 days from date of completion of the permitted work, or as required by state or local laws.

SECTION 107 TEMPORARY STRUCTURES AND USES

107.1 General. The building official is authorized to issue a permit for temporary structures and temporary uses. Such permits shall be limited as to time of service, but shall not be permitted for more than 180 days. The building official is authorized to grant extensions for demonstrated cause.

107.2 Conformance. Temporary structures and uses shall conform to the structural strength, fire safety, means of

egress, accessibility, light, ventilation and sanitary requirements of this code as necessary to ensure the public health, safety and general welfare.

107.3 Temporary power. The building official is authorized to give permission to temporarily supply and use power in part of an electric installation before such installation has been fully completed and the final certificate of completion has been issued. The part covered by the temporary certificate shall comply with the requirements specified for temporary lighting, heat or power in the ICC *Electrical Code*.

107.4 Termination of approval. The building official is authorized to terminate such permit for a temporary structure or use and to order the temporary structure or use to be discontinued.

SECTION 108 FEES

108.1 Payment of fees. A permit shall not be valid until the fees prescribed by law have been paid. Nor shall an amendment to a permit be released until the additional fee, if any, has been paid.

108.2 Schedule of permit fees. On buildings, structures, electrical, gas, mechanical, and plumbing systems or alterations requiring a permit, a fee for each permit shall be paid as required, in accordance with the schedule as established by the applicable governing authority.

108.3 Building permit valuations. The applicant for a permit shall provide an estimated permit value at time of application. Permit valuations shall include total value of work, including materials and labor, for which the permit is being issued, such as electrical, gas, mechanical, plumbing equipment and permanent systems. If, in the opinion of the building official, the valuation is underestimated on the application, the permit shall be denied, unless the applicant can show detailed estimates to meet the approval of the building official. Final building permit valuation shall be set by the building official.

108.4 Work commencing before permit issuance. Any person who commences any work on a building, structure, electrical, gas, mechanical or plumbing system before obtaining the necessary permits shall be subject to an additional fee established by the building official that shall be in addition to the required permit fees.

108.5 Related fees. The payment of the fee for the construction, alteration, removal or demolition for work done in connection with or concurrently with the work authorized by a building permit shall not relieve the applicant or holder of the permit from the payment of other fees that are prescribed by law.

108.6 Refunds. The building official is authorized to establish a refund policy.

SECTION 109 INSPECTIONS

109.1 General. Construction or work for which a permit is required shall be subject to inspection by the building official and such construction or work shall remain accessible and exposed for inspection purposes until approved. Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction. Inspections presuming to give authority to violate or cancel the provisions of this code or of other ordinances of the jurisdiction shall not be valid. It shall be the duty of the permit applicant to cause the work to remain accessible and exposed for inspection purposes. Neither the building official nor the jurisdiction shall be liable for expense entailed in the removal or replacement of any material required to allow inspection.

109.2 Preliminary inspection. Before issuing a permit, the building official is authorized to examine or cause to be examined buildings, structures and sites for which an application has been filed.

109.3 Required inspections. The building official, upon notification, shall make the inspections set forth in Sections 109.3.1 through 109.3.10.

109.3.1 Footing or foundation inspection. Footing and foundation inspections shall be made after excavations for footings are complete and any required reinforcing steel is in place. For concrete foundations, any required forms shall be in place prior to inspection. Materials for the foundation shall be on the job, except where concrete is ready mixed in accordance with ASTM C 94, the concrete need not be on the job.

109.3.2 Concrete slab or under-floor inspection. Concrete slab and under-floor inspections shall be made after in-slab or under-floor reinforcing steel and building service equipment, conduit, piping accessories and other ancillary equipment items are in place, but before any concrete is placed or floor sheathing installed, including the subfloor.

109.3.3 Lowest floor elevation. The elevation certification required in Section 1612.5 shall be submitted to the building official.

109.3.4 Frame inspection. Framing inspections shall be made after the roof deck or sheathing, all framing, fire blocking and bracing are in place and pipes, chimneys and vents to be concealed are complete and the rough electric,

plumbing, heating wires, pipes and ducts are approved.

109.3.5 Lath or gypsum board inspection. Lath and gypsum board inspections shall be made after lathing and gypsum board, interior and exterior, is in place, but before any plastering is applied or before gypsum board joints and fasteners are taped and finished.

Exception: Gypsum board that is not part of a fire-resistance-rated assembly or a shear assembly.

109.3.6 Fire-resistant penetrations. Protection of joints and penetrations in fire-resistance-rated assemblies shall not be concealed from view until inspected and approved.

109.3.7 Energy efficiency inspections. Inspections shall be made to determine compliance with Chapter 13 and shall include, but not be limited to, inspections for: envelope insulation R and U value, fenestration U value, duct system R value, and HVAC and water heating equipment efficiency.

109.3.8 Other inspections. In addition to the inspections specified above, the building official is authorized to make or require other inspections of any construction work to ascertain compliance with the provisions of this code and other laws that are enforced by the department of building safety.

109.3.9 Special inspections. For special inspections, see Section 1704.

109.3.10 Final inspection. The final inspection shall be made after all work required by the building permit is completed.

109.4 Inspection agencies. The building official is authorized to accept reports of approved inspection agencies, provided such agencies satisfy the requirements as to qualifications and reliability.

109.5 Inspection requests. It shall be the duty of the holder of the building permit or their duly authorized agent to notify the building official when work is ready for inspection. It shall be the duty of the permit holder to provide access to and means for inspection of such work for any inspections that are required by this code.

109.6 Approval required. Work shall not be done beyond the point indicated in each successive inspection without first obtaining the approval of the building official. The building official, upon notification, shall make the requested inspections and shall either indicate the portion of the construction that is satisfactory as completed, or shall notify the permit

holder or an agent of the permit holder wherein the same fails to comply with this code. Any portions that do not comply shall be corrected and such portion shall not be covered or concealed until authorized by the building official.

SECTION 110 CERTIFICATE OF OCCUPANCY

110.1 Use and occupancy. No building or structure shall be used or occupied, and no change in the existing occupancy classification of a building or structure or portion thereof shall be made until the building official has issued a certificate of occupancy therefor as provided herein. Issuance of a certificate of occupancy shall not be construed as an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction.

110.2 Change in use. Changes in the character or use of an existing structure shall not be made except as specified in Chapter 34.

110.3 Certificate issued. After the building official inspects the building or structure and finds no violations of the provisions of this code or other laws that are enforced by the department of building safety, the building official shall issue a certificate of occupancy that contains the following:

1. The building permit number.
2. The address of the structure.
3. The name and address of the owner.
4. A description of that portion of the structure for which the certificate is issued.
5. A statement that the described portion of the structure has been inspected for compliance with the requirements of this code for the occupancy and division of occupancy and the use for which the proposed occupancy is classified.
6. The name of the building official.
7. The edition of the code under which the permit was issued.
8. The use and occupancy, in accordance with the provisions of Chapter 3.
9. The type of construction as defined in Chapter 6.
10. The design occupant load.
11. If an automatic sprinkler system is provided, whether the sprinkler system is required.
12. Any special stipulations and conditions of the building permit.

110.4 Temporary occupancy. The building official is authorized to issue a temporary certificate of occupancy before the completion of the entire work covered by the permit, provided that such portion or portions shall be occupied safely. The

building official shall set a time period during which the temporary certificate of occupancy is valid.

110.5 Revocation. The building official is authorized to, in writing, suspend or revoke a certificate of occupancy or completion issued under the provisions of this code wherever the certificate is issued in error, or on the basis of incorrect information supplied, or where it is determined that the building or structure or portion thereof is in violation of any ordinance or regulation or any of the provisions of this code.

SECTION 111 SERVICE UTILITIES

111.1 Connection of service utilities. No person shall make connections from a utility, source of energy, fuel or power to any building or system that is regulated by this code for which a permit is required, until released by the building official.

111.2 Temporary connection. The building official shall have the authority to authorize the temporary connection of the building or system to the utility source of energy, fuel or power.

111.3 Authority to disconnect service utilities. The building official shall have the authority to authorize disconnection of utility service to the building, structure or system regulated by this code and the codes referenced in case of emergency where necessary to eliminate an immediate hazard to life or property. The building official shall notify the serving utility, and wherever possible the owner and occupant of the building, structure or service system of the decision to disconnect prior to taking such action. If not notified prior to disconnecting, the owner or occupant of the building, structure or service system shall be notified in writing, as soon as practical thereafter.

SECTION 112 BOARD OF APPEALS

112.1 General. In order to hear and decide appeals of orders, decisions or determinations made by the building official relative to the application and interpretation of this code, there shall be and is hereby created a board of appeals. The board of appeals shall be appointed by the governing body and shall hold office at its pleasure. The board shall adopt rules of procedure for conducting its business.

112.2 Limitations on authority. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply, or an equally good or better form of construction is proposed. The board shall have no authority to waive requirements of this code.

112.3 Qualifications. The board of appeals shall consist of members who are qualified by experience and training to pass on matters pertaining to building construction and are not employees of the jurisdiction.

SECTION 113 VIOLATIONS

113.1 Unlawful acts. It shall be unlawful for any person, firm or corporation to erect, construct, alter, extend, repair, move, remove, demolish or occupy any building, structure or equipment regulated by this code, or cause same to be done, in conflict with or in violation of any of the provisions of this code.

113.2 Notice of violation. The building official is authorized to serve a notice of violation or order on the person responsible for the erection, construction, alteration, extension, repair, moving, removal, demolition or occupancy of a building or structure in violation of the provisions of this code, or in violation of a permit or certificate issued under the provisions of this code. Such order shall direct the discontinuance of the illegal action or condition and the abatement of the violation.

113.3 Prosecution of violation. If the notice of violation is not complied with promptly, the building official is authorized to request the legal counsel of the jurisdiction to institute the appropriate proceeding at law or in equity to restrain, correct or abate such violation, or to require the removal or termination of the unlawful occupancy of the building or structure in violation of the provisions of this code or of the order or direction made pursuant thereto.

113.4 Violation penalties. Any person who violates a provision of this code or fails to comply with any of the requirements thereof or who erects, constructs, alters or repairs a building or structure in violation of the approved construction documents or directive of the building official, or of a permit or certificate issued under the provisions of this code, shall be subject to penalties as prescribed by law.

SECTION 114 STOP WORK ORDER

114.1 Authority. Whenever the building official finds any work regulated by this code being performed in a manner contrary to the provisions of this code or in a dangerous or unsafe manner, the building official is authorized to issue a stop work order.

114.2 Issuance. The stop work order shall be in writing and shall be given to the owner of the property involved, or to the owner's agent, or to the person doing the work. Upon issuance of a stop work order, the cited work shall immediately cease. The stop work order shall state the reason for the order, and the conditions under which the cited work will be permitted to resume.

114.3 Unlawful continuance. Any person who shall continue any work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be subject to penalties as prescribed by law.

SECTION 115 UNSAFE STRUCTURES AND EQUIPMENT

115.1 Conditions. Structures or existing equipment that are or hereafter become unsafe, unsanitary or deficient because of inadequate means of egress facilities, inadequate light and ventilation, or which constitute a fire hazard, or are otherwise dangerous to human life or the public welfare, or which involve illegal or improper occupancy or inadequate maintenance, shall be deemed an unsafe condition. Unsafe structures shall be taken down and removed or made safe, as the building official deems necessary and as provided for in this section. A vacant structure that is not secured against entry shall be deemed unsafe.

115.2 Record. The building official shall cause a report to be filed on an unsafe condition. The report shall state the occupancy of the structure and the nature of the unsafe condition.

115.3 Notice. If an unsafe condition is found, the building official shall serve on the owner, agent or person in control of the structure, a written notice that describes the condition deemed unsafe and specifies the required repairs or improvements to be made to abate the unsafe condition, or that requires the unsafe structure to be demolished within a stipulated time. Such notice shall require the person thus notified to declare immediately to the building official acceptance or rejection of the terms of the order.

115.4 Method of service. Such notice shall be deemed properly served if a copy thereof is delivered to the owner personally; sent by certified or registered mail addressed to the owner at the last known address with the return receipt requested; or delivered in any other manner as prescribed by local law. If the certified or registered letter is returned showing that the letter was not delivered, a copy thereof shall be posted in a conspicuous place in or about the structure affected by such notice. Service of such notice in the foregoing manner upon the owner's agent or upon the person responsible for the structure shall constitute service of notice upon the owner.

115.5 Restoration. The structure or equipment determined to be unsafe by the building official is permitted to be restored to a safe condition. To the extent that repairs, alterations or additions are made or a change of occupancy occurs during the restoration of the structure, such repairs, alterations, additions or change of occupancy shall comply with the requirements of Section 105.2.2 and Chapter 34.

CHAPTER 2 DEFINITIONS

SECTION 201 GENERAL

201.1 Scope. Unless otherwise expressly stated, the following words and terms shall, for the purposes of this code, have the meanings shown in this chapter.

201.2 Interchangeability. Words used in the present tense include the future; words stated in the masculine gender include the feminine and neuter; the singular number includes the plural and the plural, the singular.

201.3 Terms defined in other codes. Where terms are not defined in this code and are defined in the *International Plumbing Code*, *International Mechanical Code*, *International Fuel Gas Code*, or *International Fire Code*, such terms shall have the meanings ascribed to them as in those codes.

201.4 Terms not defined. Where terms are not defined through the methods authorized by this section, such terms shall have ordinarily accepted meanings such as the context implies.

SECTION 202 DEFINITIONS

ACCESSIBLE. See Section 1102.1.

ACCESSIBLE MEANS OF EGRESS. See Section 1002.1.

ACCESSIBLE ROUTE. See Section 1102.1.

ACCREDITATION BODY. See Section 2302.1.

ACTIVE FAULT/ACTIVE FAULT TRACE. See Section 1613.1.

ADDITION. An extension or increase in floor area or height of a building or structure.

ADHERED MASONRY VENEER. See Section 1402.1.

ADMIXTURE. See Section 1902.1.

ADOBE CONSTRUCTION. See Section 2102.1.

Stabilized adobe. See Section 2102.1.

Unstabilized adobe. See Section 2102.1.

[F] AEROSOL. See Section 307.2.

Level 1 aerosol products. See Section 307.2.

Level 2 aerosol products. See Section 307.2.

Level 3 aerosol products. See Section 307.2.

[F] AEROSOL CONTAINER. See Section 307.2.

AGGREGATE. See Section 1902.1.

AGGREGATE, LIGHTWEIGHT. See Section 1902.1.

AGRICULTURAL, BUILDING. A structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products. This structure shall not be a place of human habitation or a place of employment where agricultural products are processed, treated or packaged, nor shall it be a place used by the public.

AIR-INFLATED STRUCTURE. See Section 3102.2.

AIR-SUPPORTED STRUCTURE. See Section 3102.2.

Double skin. See Section 3102.2.

Single skin. See Section 3102.2.

AISLE ACCESSWAY. See Section 1002.1.

[F] ALARM NOTIFICATION APPLIANCE. See Section 902.1.

[F] ALARM SIGNAL. See Section 902.1.

[F] ALARM VERIFICATION FEATURE. See Section 902.1.

ALLEY. See "Public Way."

ALLOWABLE STRESS DESIGN. See Section 1602.1.

ALTERATION. Any construction or renovation to an existing structure other than repair or addition.

ALTERNATING TREAD DEVICE. See Section 1002.1.

ALUMINUM COMPOSITE MATERIAL. See Section 1402.1.

ALUMINUM COMPOSITE MATERIAL SYSTEM. See Section 1402.1.

ANCHOR. See Sections 1913.2.2 and 2102.1.

ANCHOR BUILDING. See Section 402.2.

ANCHORED MASONRY VENEER. See Section 1402.1.

ANNULAR SPACE. See Section 702.1.

[F] ANNUNCIATOR. See Section 902.1.

APPROVED. Acceptable to the building official.

APPROVED AGENCY. See Section 1702.1.

APPROVED FABRICATOR. See Section 1702.1.

ARCHITECTURAL TERRA COTTA. See Section 2102.1.

AREA. See Section 2102.1.

Bedded. See Section 2102.1.

Gross cross sectional. See Section 2102.1.

Net cross sectional. See Section 2102.1.

AREA, BUILDING. See Section 502.1.

AREA OF REFUGE. See Section 1102.1.

AREAWAY. A subsurface space adjacent to a building open at the top or protected at the top by a grating or guard.

ATRIUM. See Section 404.1.1.

ATTACHMENT. See Section 1913.2.2.

ATTACHMENTS, SEISMIC. See Section 1613.1.

ATTIC. The space between the ceiling beams of the top story and the roof rafters.

[F] AUDIBLE ALARM NOTIFICATION APPLIANCE. See Section 902.1.

[F] AUTOMATIC. See Section 902.1.

[F] AUTOMATIC FIRE-EXTINGUISHING SYSTEM. See Section 902.1.

[F] AUTOMATIC SPRINKLER SYSTEM. See Section 902.1.

[F] AVERAGE AMBIENT SOUND LEVEL. See Section 902.1

AWNING. An architectural projection that provides weather protection, identity or decoration and is wholly supported by the building to which it is attached. An awning is comprised of a lightweight, rigid skeleton structure over which a covering is attached.

BACKING. See Section 1402.1.

BALCONY, EXTERIOR. See Section 1602.1.

[F] BARRICADE. See Section 307.2.

Artificial barricade. See Section 307.2.

Natural barricade. See Section 307.2.

BARRIER. See Section 3302.

BASE. See Section 1613.1.

BASE SHEAR. See Section 1602.1.

BASEMENT. That portion of a building that is partly or completely below grade (see "Story Above Grade Plane" and Sections 502.1 and 1612.2).

BED JOINT. See Section 2102.1.

BLEACHERS. See Section 1002.1.

BOARDING HOUSE. See Section 310.2.

[F] BOILING POINT. See Section 307.2.

BOND BEAM. See Section 2102.1.

BOND REINFORCING. See Section 2102.1.

BOUNDARY ELEMENT. See Sections 1613.1 and 2302.1.

BOUNDARY MEMBERS. See Section 1602.1.

BRACED WALL LINE. See Section 2302.1.

BRACED WALL PANEL. See Section 2302.1.

BRICK. See Section 2102.1.

Calcium silicate (Sand lime brick). See Section 2102.1.

Clay or shale. See Section 2102.1.

Concrete. See Section 2102.1.

BRITTLE. See Section 1613.1.

BRITTLE STEEL ELEMENT. See Section 1913.2.2.

BUILDING. Any structure used or intended for supporting or sheltering any use or occupancy.

BUILDING, ENCLOSED. See Section 1609.2.

BUILDING LINE. The line established by law, beyond which a building shall not extend, except as specifically provided by law.

BUILDING, LOW-RISE. See Section 1609.2.

BUILDING OFFICIAL. The officer or other designated authority charged with the administration and enforcement of this code, or a duly authorized representative.

BUILDING, OPEN. See Section 1609.2.

BUILDING, PARTIALLY ENCLOSED. See Section 1609.2

BUILDING, SIMPLE DIAPHRAGM. See Section 1609.2.

BUILT-UP ROOF COVERING. See Section 1502.1.

BUTTRESS. See Section 2102.1.

CABLE-RESTRAINED, AIR SUPPORTED STRUCTURE. See Section 3102.2.

CANOPY. An architectural projection that provides weather protection, identity or decoration and is supported by the building to which it is attached and at the outer end by not less than one stanchion. A canopy is comprised of a rigid structure over which a covering is attached.

CANTILEVERED COLUMN SYSTEM. See Section 1602.1.

[F] CARBON DIOXIDE EXTINGUISHING SYSTEMS. See Section 902.1.

CAST STONE. See Section 2102.1.

[F] CEILING LIMIT. See Section 902.1.

CEILING RADIATION DAMPER. See Section 702.1.

CELL. See Section 2102.1.

CEMENT PLASTER. See Section 2502.

CEMENTITIOUS MATERIALS. See Section 1902.1.

- CERAMIC FIBER BLANKET.** See Section 720.1.1.
- CERTIFICATE OF COMPLIANCE.** See Section 1702.1.
- CHIMNEY.** See Section 2102.1.
- CHIMNEY TYPES.** See Section 2102.1.
- High-heat appliance type.** See Section 2102.1.
 - Low-heat appliance type.** See Section 2102.1.
 - Masonry type.** See Section 2102.1.
 - Medium-heat appliance type.** See Section 2102.1.
- CIRCULATION PATH.** See Section 1102.1.
- CLADDING.** See "Components and Cladding."
- [F] CLEAN AGENT.** See Section 902.1.
- CLEANOUT.** See Section 2102.1.
- [F] CLOSED SYSTEM.** See Section 307.2.
- COLLAR JOINT.** See Section 2102.1.
- COLLECTOR.** See Sections 1613.1 and 2302.1.
- COLLECTOR ELEMENTS.** See Section 1602.1.
- COLUMN.** See Section 1902.1.
- COLUMN, MASONRY.** See Section 2102.1.
- COMBINATION FIRE/SMOKE DAMPER.** See Section 702.1.
- [F] COMBUSTIBLE DUST.** See Section 307.2.
- [F] COMBUSTIBLE FIBERS.** See Section 307.2.
- [F] COMBUSTIBLE LIQUID.** See Section 307.2.
- Class II.** See Section 307.2.
 - Class IIIA.** See Section 307.2.
 - Class IIIB.** See Section 307.2.
- COMMON PATH OF EGRESS TRAVEL.** See Section 1002.1.
- COMPONENT.** See Section 1613.1.
- Component, equipment.** See Section 1613.1.
 - Component, flexible.** See Section 1613.1.
 - Component, rigid.** See Section 1613.1.
- COMPONENTS AND CLADDING.** See Section 1609.2.
- COMPOSITE MASONRY.** See Section 2102.1.
- [F] COMPRESSED GAS.** See Section 307.2.
- COMPRESSIVE STRENGTH OF MASONRY.** See Section 2102.1.
- CONCRETE.** See Section 1902.1.
- CONCRETE CARBONATE AGGREGATE.** See Sections 720.1 and 720.1.1.
- CONCRETE, CELLULAR.** See Section 720.1.1.
- CONCRETE, LIGHTWEIGHT AGGREGATE.** See Section 720.1.1.
- CONCRETE, PERLITE.** See Section 720.1.1.
- CONCRETE, SAND-LIGHTWEIGHT.** See Section 720.1.1.
- CONCRETE, SILICEOUS AGGREGATE.** See Section 720.1.1.
- CONCRETE (f'_c), SPECIFIED COMPRESSIVE STRENGTH OF.** See Section 1902.1.
- CONCRETE, VERMICULITE.** See Section 720.1.1.
- CONFINED REGION.** See Section 1602.1.
- CONNECTOR.** See Section 2102.1.
- [F] CONSTANTLY ATTENDED LOCATION.** See Section 902.1.
- CONSTRUCTION DOCUMENTS.** Written, graphic and pictorial documents prepared or assembled for describing the design, location and physical characteristics of the elements of a project necessary for obtaining a building permit.
- CONSTRUCTION TYPES.** See Section 602.
- Type I.** See Section 602.2.
 - Type II.** See Section 602.2.
 - Type III.** See Section 602.3.
 - Type IV.** See Section 602.4.
 - Type V.** See Section 602.5.
- [F] CONTINUOUS GAS-DETECTION SYSTEM.** See Section 415.2.
- CONTRACTION JOINT.** See Section 1902.1.
- [F] CONTROL AREA.** See Section 307.2.
- CONVENTIONAL LIGHT-FRAME WOOD CONSTRUCTION.** See Section 2302.1.
- CORRIDOR.** See Section 1002.1.
- CORROSION RESISTANT.** See Section 1502.1.
- [F] CORROSIVE.** See Section 307.2.
- COUPLING BEAM.** See Section 1602.1.
- COURT.** An open, uncovered space, unobstructed to the sky, bounded on three or more sides by exterior building walls or other enclosing devices.
- COVER.** See Section 2102.1.
- COVERED MALL BUILDING.** See Section 402.2.
- CRIPPLE WALL.** See Section 2302.1.
- CRYOGENIC FLUID.** See Section 307.2.
- DALLE GLASS.** See Section 2402.1.
- DAMPER.** See Section 702.1.
- DEAD LOADS.** See Section 1602.1.
- DECK.** See Section 1602.1.
- DECORATIVE GLASS.** See Section 2402.1.

[F] **DEFLAGRATION.** See Section 307.2.

DEFORMABILITY. See Section 1602.1.

High deformability element. See Section 1602.1.

Limited deformability element. See Section 1602.1.

Low deformability element. See Section 1602.1.

DEFORMATION. See Section 1602.1.

Limited deformation. See Section 1602.1.

Ultimate deformation. See Section 1602.1.

DEFORMED REINFORCEMENT. See Section 1902.1.

[F] **DELUGE SYSTEM.** See Section 902.1.

DESIGN EARTHQUAKE. See Section 1613.1.

DESIGN STRENGTH. See Section 1602.1.

DESIGNATED SEISMIC SYSTEM. See Section 1613.1.

[F] **DETACHED STORAGE BUILDING.** See Section 307.2.

DETECTABLE WARNING. See Section 1102.1.

[F] **DETECTOR, HEAT.** See Section 902.1.

[F] **DETONATION.** See Section 307.2.

DIAPHRAGM. See Sections 2102.1 and 2302.1.

DIAPHRAGM, BLOCKED. See Section 2302.1.

DIAPHRAGM, BOUNDARY. See Section 2302.1.

DIAPHRAGM, CHORD. See Section 2302.1.

DIAPHRAGM, FLEXIBLE. See Section 1602.1.

DIAPHRAGM, RIGID. See Sections 1602.1 and 2302.1.

DIAPHRAGM, UNBLOCKED. See Section 2302.1.

DIMENSIONS. See Section 2102.1.

Actual. See Section 2102.1.

Nominal. See Section 2102.1.

Specified. See Section 2102.1.

DISPLACEMENT. See Section 1613.1.

Design Displacement. See Section 1613.1.

Total Design Displacement. See Section 1613.1.

Total Maximum Displacement. See Section 1613.1.

DISPLACEMENT RESTRAINT SYSTEM. See Section 1613.1.

DISPENSING. See Section 307.2.

DOOR, BALANCED. See Section 1002.1.

DORMITORY. See Section 310.2.

DRAFT STOP. See Section 702.1.

DRAG STRUT (COLLECTOR, TIE, DIAPHRAGM STRUT). See Section 2302.1.

[F] **DRY-CHEMICAL EXTINGUISHING AGENT.** See Section 902.1.

DURATION OF LOAD. See Section 1602.1.

DWELLING. A building that contains one or two dwelling units used, intended, or designed to be used, rented, leased, let or hired out to be occupied for living purposes.

DWELLING UNIT. See Section 310.2.

DWELLING UNIT, GROUND FLOOR. See Section 1102.1.

DWELLING UNIT, MULTISTORY. See Section 1102.1.

DWELLING UNIT, TYPE A. See Section 1102.1.

DWELLING UNIT, TYPE B. See Section 1102.1.

EFFECTIVE DAMPING. See Section 1613.1.

EFFECTIVE DEPTH OF SECTION (*d*). See Section 1902.1.

EFFECTIVE HEIGHT. See Section 2102.1.

EFFECTIVE PERIOD. See Section 2102.1.

EFFECTIVE STIFFNESS. See Section 1613.1.

EFFECTIVE WIND AREA. See Section 1609.2.

EGRESS COURT. See Section 1002.1.

ELEMENT. See Section 1602.1.

Ductile element. See Section 1602.1.

Limited ductile element. See Section 1602.1.

Nonductile element. See Section 1602.1.

[F] **EMERGENCY ALARM SYSTEM.** See Section 902.1.

[F] **EMERGENCY CONTROL STATION.** See Section 415.2.

EMERGENCY ESCAPE AND RESCUE OPENING. See Section 1002.1.

[F] **EMERGENCY VOICE/ALARM COMMUNICATIONS.** See Section 902.1.

EQUIPMENT SUPPORT. See Section 1602.1.

ESSENTIAL FACILITIES. See Section 1602.1.

[F] **EXHAUSTED ENCLOSURE.** See Section 415.2.

EXISTING STRUCTURE. A structure erected prior to the date of adoption of the appropriate code, or one for which a legal building permit has been issued.

EXIT. See Section 1002.1.

EXIT ACCESS. See Section 1002.1.

EXIT DISCHARGE. See Section 1002.1.

EXIT DISCHARGE, LEVEL OF. See Section 1002.1.

EXIT ENCLOSURE. See Section 1002.1.

EXIT PASSAGEWAY. See Section 1002.1.

EXPANDED VINYL WALL COVERING. See Section 802.1.

- [F] **EXPLOSION.** See Section 902.1.
- [F] **EXPLOSIVE.** See Section 307.2.
High explosive. See Section 307.2.
Low explosive. See Section 307.2.
- UN/DOTh Class 1 Explosives.** See Section 307.2.
Division 1.1. See Section 307.2.
Division 1.2. See Section 307.2.
Division 1.3. See Section 307.2.
Division 1.4. See Section 307.2.
Division 1.5. See Section 307.2.
Division 1.6. See Section 307.2.
- EXTERIOR STAIRWAY.** See Section 1002.1.
- EXTERIOR SURFACES.** See Section 2502.
- EXTERIOR WALL.** See Section 1402.1.
- EXTERIOR WALL COVERING.** See Section 1402.1.
- EXTERIOR WALL ENVELOPE.** See Section 1402.1.
- F RATING.** See Section 702.1.
- FABRICATED ITEM.** See Section 1702.1.
- [F] **FABRICATION AREA.** See Section 415.2.
- FACILITY.** See Section 1102.1.
- FACTORED LOAD.** See Section 1602.1.
- FIBERBOARD.** See Section 2302.1.
- [F] **FIRE ALARM BOX, MANUAL.** See Section 902.1.
- [F] **FIRE ALARM CONTROL UNIT.** See Section 902.1.
- [F] **FIRE ALARM SIGNAL.** See Section 902.1.
- [F] **FIRE ALARM SYSTEM.** See Section 902.1.
- FIRE AREA.** See Section 702.1.
- FIRE BARRIER.** See Section 702.1.
- [F] **FIRE COMMAND CENTER.** See Section 902.1.
- FIRE DAMPER.** See Section 702.1.
- [F] **FIRE DETECTOR, AUTOMATIC.** See Section 902.1.
- FIRE DOOR.** See Section 702.1.
- FIRE DOOR ASSEMBLY.** See Section 702.1.
- FIRE EXIT HARDWARE.** See Section 1002.1.
- FIRE PARTITION.** See Section 702.1.
- FIRE PROTECTION RATING.** See Section 702.1.
- [F] **FIRE PROTECTION SYSTEM.** See Section 902.1.
- FIRE RESISTANCE.** See Section 702.1.
- FIRE-RESISTANCE RATING.** See Section 702.1.
- FIRE-RESISTANT JOINT SYSTEM.** See Section 702.1.
- [F] **FIRE SAFETY FUNCTIONS.** See Section 902.1.
- FIRE SEPARATION DISTANCE.** See Section 702.1.
- FIRE WALL.** See Section 702.1.
- FIREBLOCKING.** See Section 702.1.
- FIREPLACE.** See Section 2102.1.
- FIREPLACE THROAT.** See Section 2102.1.
- FIREWORKS.** See Section 307.2.
- FIREWORKS, 1.3G.** See Section 307.2.
- FIREWORKS, 1.4G.** See Section 307.2.
- FIRE WINDOW ASSEMBLY.** See Section 702.1.
- FLAME RESISTANCE.** See Section 802.1.
- FLAME SPREAD.** See Section 802.1.
- FLAME SPREAD INDEX.** See Section 802.1.
- [F] **FLAMMABLE GAS.** See Section 307.2.
- [F] **FLAMMABLE LIQUEFIED GAS.** See Section 307.2.
- [F] **FLAMMABLE LIQUID.** See Section 307.2.
Class IA. See Section 307.2.
Class IB. See Section 307.2.
Class IC. See Section 307.2.
- [F] **FLAMMABLE MATERIAL.** See Section 307.2.
- [F] **FLAMMABLE SOLID.** See Section 307.2.
- [F] **FLAMMABLE VAPORS OR FUMES.** See Section 415.2.
- [F] **FLASH POINT.** See Section 307.2.
- FLEXIBLE BUILDINGS AND OTHER STRUCTURES.** See Section 1609.21.
- FLEXIBLE EQUIPMENT CONNECTIONS.** See Section 1602.1.
- FLOOR AREA, GROSS.** See Section 1002.1.
- FLOOR AREA, NET.** See Section 1002.1.
- FLOOR FIRE DOOR ASSEMBLY.** See Section 702.1.
- FLY GALLERY.** See Section 410.2.
- [F] **FOAM EXTINGUISHING SYSTEM.** See Section 902.1.
- FOAM PLASTIC INSULATION.** See Section 2602.1.
- FOLDING AND TELESCOPIC SEATING.** See Section 1002.1.
- FOOD COURT.** See Section 402.2.

FOOTBOARDS. See Section 1002.1.

FRAME. See Section 1602.1.

Braced frame. See Section 1602.1.

Concentrically braced frame (CBF). See Section 1602.1.

Eccentrically braced frame (EBF). See Section 1602.1.

Ordinary concentrically braced frame (OCBF). See Section 1602.1.

Special concentrically braced frame (SCBF). See Section 1602.1.

FRAME, MOMENT. See Section 1602.1.

Intermediate moment frame (IMF). See Section 1602.1.

Ordinary moment frame (OMF). See Section 1602.1.

Special moment frame (SMF). See Section 1602.1.

FRAME SYSTEM. See Section 1602.1.

Building frame system. See Section 1602.1.

Dual frame system. See Section 1602.1.

Space frame system. See Section 1602.1.

[F] **GAS CABINET.** See Section 415.2.

[F] **GAS ROOM.** See Section 415.2.

GLASS FIBER BOARD. See Section 720.1.1.

GLUED BUILT-UP MEMBER. See Section 2302.1.

GRADE FLOOR OPENING. A window or other opening located such that the sill height of the opening is not more than 44 inches (1118 mm) above or below the finished ground level adjacent to the opening.

GRADE (LUMBER). See Section 2302.1.

GRADE PLANE. See Section 502.1.

GRANDSTAND. See Section 1002.1.

GRIDIRON. See Section 410.2.

GROSS LEASABLE AREA. See Section 402.2.

GROUTED MASONRY. See Section 2102.1.

Grouted hollow-unit masonry. See Section 2102.1.

Grouted multiwythe masonry. See Section 2102.1.

GUARD. See Section 1002.1.

GYPHUM BOARD. See Section 2502.

GYPHUM PLASTER. See Section 2502.

GYPHUM VENEER PLASTER. See Section 2502.

HABITABLE SPACE. A space in a building for living, sleeping, eating or cooking. Bathrooms, toilet rooms, closets, halls, storage or utility spaces and similar areas are not considered habitable spaces.

[F] **HALOGENATED EXTINGUISHING SYSTEMS.** See Section 902.1.

[F] **HANDLING.** See Section 307.2.

HANDRAIL. See Section 1002.1.

HARDBOARD. See Section 2302.1.

HAZARDOUS CONTENTS. See Section 1613.1.

[F] **HAZARDOUS MATERIALS.** See Section 307.2.

[F] **HAZARDOUS PRODUCTION MATERIAL (HPM).** See Section 415.2.

HEAD JOINT. See Section 2102.1.

HEADER (Bonder). See Section 2102.1.

[F] **HEALTH HAZARD.** See Section 307.2.

HEIGHT, BUILDING. See Section 502.1.

HEIGHT, STORY. See Section 502.1.

HEIGHT, WALLS. See Section 2102.1.

HELIPORT. See Section 412.4.2.

HELISTOP. See Section 412.4.2.

[F] **HIGHLY TOXIC.** See Section 307.2.

HISTORIC BUILDINGS. Buildings that are listed in or eligible for listing in the National Register of Historic Places, or designated as historic under an appropriate state or local law. See Section 3406.

HORIZONTAL EXIT. See Section 1002.1.

[F] **HPM FLAMMABLE LIQUID.** See Section 415.2.

[F] **HPM ROOM.** See Section 415.2.

HURRICANE-PRONE REGIONS. See Section 1609.2.

IMMEDIATELY DANGEROUS TO LIFE AND HEALTH (IDLH). See Section 415.2.

IMPACT LOAD. See Section 1602.1.

IMPORTANCE FACTOR, *I*. See Section 1609.2.

INCOMPATIBLE MATERIALS. See Section 307.2.

INDUSTRIAL EQUIPMENT PLATFORM. See Section 502.1.

[F] **INITIATING DEVICE.** See Section 902.1.

INSPECTION CERTIFICATE. See Section 1702.1.

INTERIOR FINISH. See Section 802.1.

INTERIOR FLOOR FINISH. See Section 802.1.

INTERIOR STAIRWAY. See Section 1002.1.

INTERIOR SURFACES. See Section 2502.

INTERIOR WALL AND CEILING FINISH. See Section 802.1.

INTERLAYMENT. See Section 1502.1.

INVERTED PENDULUM-TYPE STRUCTURES. See Section 1613.1.

ISOLATION INTERFACE. See Section 1613.1.

ISOLATION JOINT. See Section 1902.1.

ISOLATION SYSTEM. See Section 1613.1.

ISOLATION UNIT. See Section 1613.1.

JOINT. See Sections 702.1 and 1602.1.

JURISDICTION. The governmental unit that has adopted this code under due legislative authority.

LABEL. See Section 1702.1.

LIGHT-DIFFUSING SYSTEM. See Section 2602.1.

LIGHT-FRAME CONSTRUCTION. A type of construction whose vertical and horizontal structural elements are primarily formed by a system of repetitive wood or light gauge steel framing members.

LIGHT-TRANSMITTING PLASTIC ROOF PANELS. See Section 2602.1.

LIGHT-TRANSMITTING PLASTIC WALL PANELS. See Section 2602.1.

LIMIT STATE. See Section 1602.1.

[F] **LIQUID.** See Section 415.2.

[F] **LIQUID STORAGE ROOM.** See Section 415.2.

[F] **LIQUID USE, DISPENSING AND MIXING ROOMS.** See Section 415.2.

LISTED. See Section 902.1.

LIVE LOADS. See Section 1602.1.

LIVE LOADS (ROOF). See Section 1602.1.

LOAD. See Section 1613.1

Gravity Load(W). See Section 1613.1.

LOAD AND RESISTANCE FACTOR DESIGN. See Section 1602.1.

LOAD FACTOR. See Section 1602.1.

LOADS. See Section 1602.1.

LOADS EFFECTS. See Section 1602.1.

LOT. A portion or parcel of land considered as a unit.

LOT LINE. A line dividing one lot from another, or from a street or any public place.

[F] **LOWER FLAMMABLE LIMIT (LFL).** See Section 415.2.

MAIN WINDFORCE-RESISTING SYSTEM. See Section 1609.2.

MALL. See Section 402.2.

[F] **MANUAL FIRE ALARM BOX.** See Section 902.1.

MANUFACTURER'S DESIGNATION. See Section 1702.1.

MARK. See Section 1702.1.

MARQUEE. A permanent roofed structure attached to and supported by the building and that projects into the public right of way.

MASONRY. See Section 2102.1.

Ashlar masonry. See Section 2102.1.

Coursed Ashlar. See Section 2102.1.

Glass Unit Masonry. See Section 2102.1.

Plain Masonry. See Section 2102.1.

Random Ashlar. See Section 2102.1.

Reinforced Masonry. See Section 2102.1.

Solid Masonry. See Section 2102.1.

MASONRY-BONDED HOLLOW WALL. See Section 2102.1.

MASONRY UNIT. See Section 2102.1.

Clay. See Section 2102.1.

Concrete. See Section 2102.1.

Hollow. See Section 2102.1.

Solid. See Section 2102.1.

MAXIMUM CONSIDERED EARTHQUAKE. See Section 1613.1.

MEAN DAILY TEMPERATURE. See Section 2102.1.

MEAN ROOF HEIGHT. See Section 1609.2.

MEANS OF EGRESS. See Section 1002.1.

MECHANICAL-ACCESS OPEN PARKING GARAGES. See Section 406.3.2.

MECHANICAL EQUIPMENT SCREEN. See Section 1502.1.

MEMBRANE-COVERED CABLE STRUCTURE. See Section 3102.2.

MEMBRANE-COVERED FRAME STRUCTURE. See Section 3102.2.

MEMBRANE PENETRATION. See Section 702.1.

MEMBRANE-PENETRATION FIRESTOP. See Section 702.1.

METAL ROOF PANEL. See Section 1502.1.

METAL ROOF SHINGLE. See Section 1502.1.

MEZZANINE. See Section 502.1.

MINERAL BOARD. See Section 720.1.1.

MODIFIED BITUMEN ROOF COVERING. See Section 1502.1.

MORTAR. See Section 2102.1.

MORTAR, SURFACE BONDING. See Section 2102.1.

[F] **MULTIPLE-STATION ALARM DEVICE.** See Section 902.1.

[F] MULTIPLE-STATION SMOKE ALARM. See Section 902.1.

NAILING BOUNDARY. See Section 2302.1.

NAILING EDGE. See Section 2302.1.

NAILING FIELD. See Section 2302.1.

NATURALLY DURABLE WOOD. See Section 2302.1.

Decay resistant. See Section 2302.1.

Termite resistant. Redwood and Eastern red cedar.

NOMINAL LOADS. See Section 1602.1.

NOMINAL SIZE (LUMBER). See Section 2302.1.

NOMINAL STRENGTH. See Section 1602.1.

NONBUILDING STRUCTURE. See Section 1613.1.

NONCOMBUSTIBLE MEMBRANE STRUCTURE. See Section 3102.2.

[F] NORMAL TEMPERATURE AND PRESSURE (NTP). See Section 415.2.

NOSING. See Section 1002.1.

[F] NOTIFICATION APPLIANCE. See Section 902.1.

[F] NUISANCE ALARM. See Section 902.1.

OCCUPANCY IMPORTANCE FACTOR. See Section 1613.1.

OCCUPANT LOAD. See Section 1002.1.

OCCUPIABLE SPACE. A room or enclosed space designed for human occupancy in which individuals congregate for amusement, educational or similar purposes or in which occupants are engaged at labor, and which is equipped with means of egress and light and ventilation facilities meeting the requirements of this code.

OPEN-AIR SEATING GRANDSTANDS AND BLEACHERS. See Section 1002.1.

OPEN PARKING GARAGE. See Section 406.3.2.

[F] OPEN SYSTEM. See Section 307.2.

[F] ORGANIC PEROXIDE. See Section 307.2.

Class I. See Section 307.2.

Class II. See Section 307.2.

Class III. See Section 307.2.

Class IV. See Section 307.2.

Class V. See Section 307.2.

Unclassified Detonable. See Section 307.2.

ORIENTED STRAND BOARD (OSB). See Section 2302.1.

OTHER STRUCTURES. See Section 1602.1.

OWNER. Any person, agent, firm or corporation having a legal or equitable interest in the property.

[F] OXIDIZER. See Section 307.2.

Class 4. See Section 307.2.

Class 3. See Section 307.2.

Class 2. See Section 307.2.

Class 1. See Section 307.2.

[F] OXIDIZING GAS. See Section 307.2.

PANEL (PART OF A STRUCTURE). See Section 1602.1.

PANIC HARDWARE. See Section 1002.1.

PARAPET WALL. See Section 2102.1.

PARTICLEBOARD. See Section 2302.1.

P-DELTA EFFECT. See Section 1602.1.

PEDESTAL. See Section 1902.1.

PENETRATION FIRESTOP. See Section 702.1.

PENTHOUSE. See Section 1502.1.

PERMIT. An official document or certificate issued by the authority having jurisdiction which authorizes performance of a specified activity.

PERSON. An individual, heirs, executors, administrators or assigns, and also includes a firm, partnership or corporation, its or their successors or assigns, or the agent of any of the aforesaid.

PERSONAL CARE SERVICE. See Section 310.2.

[F] PHYSICAL HAZARD. See Section 307.2.

PIER FOUNDATIONS. See Section 1807.1.

Belled piers. See Section 1807.1.

PILE FOUNDATIONS. See Section 1807.1.

Augered uncased piles. See Section 1807.1.

Caisson piles. See Section 1807.1.

Concrete-filled steel pipe and tube piles. See Section 1807.1.

Driven uncased piles. See Section 1807.1.

Enlarged base piles. See Section 1807.1.

Piles. See Section 1807.1.

PINRAIL. See Section 410.2.

PLAIN CONCRETE. See Section 1902.1.

PLAIN REINFORCEMENT. See Section 1902.1.

PLASTIC, APPROVED. See Section 2602.1.

PLASTIC GLAZING. See Section 2602.1.

PLASTIC HINGE. See Section 2102.1.

PLATFORM. See Section 410.2.

PLYWOOD. See Section 2302.1

POSITIVE ROOF DRAINAGE. See Section 1502.1.

PRECAST CONCRETE. See Section 1902.1.

PRESERVATIVE-TREATED WOOD. See Section 2302.1.

PRESTRESSED CONCRETE. See Section 1902.1.

PRISM. See Section 2102.1.

PROSCENIUM WALL. See Section 410.2.

PUBLIC ENTRANCE. See Section 1102.1.

PUBLIC-USE AREAS. See Section 1102.1.

PUBLIC WAY. See Section 1002.1.

[F] PYROPHORIC. See Section 307.2.

[F] PYROTECHNIC COMPOSITION. See Section 307.2.

QUALITY ASSURANCE PLAN. A written procedure complying with the requirements of Section 1705.

RAMP. See Section 1002.1.

RAMP-ACCESS OPEN PARKING GARAGES. See Section 406.3.2.

[F] RECORD DRAWINGS. See Section 902.1.

REFERENCE RESISTANCE (*D*). See Section 2302.1.

REGISTERED DESIGN PROFESSIONAL. An individual who is registered or licensed to practice their respective design profession as defined by the statutory requirements of the professional registration laws of the state or jurisdiction in which the project is to be constructed.

REINFORCED CONCRETE. See Section 1902.1.

REINFORCED PLASTIC, GLASS FIBER. See Section 2602.1.

REINFORCEMENT. See Section 1902.1.

REPAIR. The reconstruction or renewal of any part of an existing building for the purpose of its maintenance.

REQUIRED STRENGTH. See Sections 1602.1 and 2102.1.

REROOFING. See Section 1502.1.

RESHORES. See Section 1902.1.

RESIDENTIAL AIRCRAFT HANGAR. See Section 412.3.1.

RESIDENTIAL CARE/ASSISTED LIVING FACILITIES. See Section 310.2.

RESISTANCE FACTOR. See Section 1602.1.

REVIEWING STANDS. See Section 1002.1.

ROOF ASSEMBLY. See Section 1502.1.

ROOF COVERING. See Section 1502.1.

ROOF COVERING SYSTEM. See Section 1502.1.

ROOF DECK. See Section 1502.1.

ROOF RECOVER. See Section 1502.1.

ROOF REPAIR. See Section 1502.1.

ROOF REPLACEMENT. See Section 1502.1.

ROOF VENTILATION. See Section 1502.1.

ROOFTOP STRUCTURE. See Section 1502.1.

RUBBLE MASONRY. See Section 2102.1.

Coursed rubble. See Section 2102.1.

Random rubble. See Section 2102.1.

Rough or ordinary rubble. See Section 2102.1.

RUNNING BOND. See Section 2102.1.

SCUPPER. See Section 1502.1.

SEISMIC DESIGN CATEGORY. See Section 1613.1.

SEISMIC-FORCE-RESISTING SYSTEM. See Section 1613.1.

SEISMIC FORCES. See Section 1613.1.

SEISMIC RESPONSE COEFFICIENT. See Section 1613.1.

SEISMIC USE GROUP. See Section 1613.1.

SELF-CLOSING. See Section 702.1.

SELF-SERVICE STORAGE FACILITY. See Section 1102.1.

[F] SERVICE CORRIDOR. See Section 415.2.

SERVICE ENTRANCE. See Section 1102.1.

SHAFT. See Section 702.1.

SHAFT ENCLOSURE. See Section 702.1.

SHALLOW ANCHORS. See Section 1602.1.

SHEAR PANEL. See Section 1602.1.

SHEAR WALL. See Sections 1602.1, 1613.1 and 2102.1.

Detailed plain masonry shear wall. See Section 2102.1.

Intermediate reinforced masonry shear wall. See Section 2102.1.

Ordinary plain masonry shear wall. See Section 2102.1.

Ordinary reinforced masonry shear wall. See Section 2102.1.

Special reinforced masonry shear wall. See Section 2102.1.

SHEARWALL-FRAME INTERACTIVE SYSTEM. See Section 1613.1.

SHELL. See Section 2102.1.

SHORES. See Section 1902.1.

SHOTCRETE. See Section 1914.1.

SINGLE-PLY MEMBRANE. See Section 1502.1.

[F] SINGLE-STATION SMOKE ALARM. See Section 902.1.

SITE. See Section 1102.1.

SITE CLASS. See Section 1613.1.

SITE COEFFICIENT. See Section 1613.1.

SKYLIGHTS AND SLOPED GLAZING. Glass or other transparent or translucent glazing material installed at a slope of 15 degrees (0.26 rad) or more from vertical. Glazing material in sky-lights, solariums, sun spaces, roofs and sloped walls are included in this definition.

SLEEPING ACCOMMODATIONS. See Section 1102.1.

[F] SMOKE ALARM. See Section 902.1.

SMOKE BARRIER. See Section 702.1.

SMOKE COMPARTMENT. See Section 702.1.

SMOKE DAMPER. See Section 702.1.

[F] SMOKE DETECTOR. See Section 902.1.

SMOKE-DEVELOPED INDEX. See Section 802.1.

SMOKE-PROTECTED ASSEMBLY SEATING. See Section 1002.1.

SMOKEPROOF ENCLOSURE. See Section 902.1.

[F] SOLID. See Section 415.2.

SPECIAL AMUSEMENT BUILDING. See Section 411.2.

SPECIAL INSPECTION. See Section 1702.1.

Special continuous inspection. See Section 1702.1.

Special periodic inspection. See Section 1702.1.

SPECIAL TRANSVERSE REINFORCEMENT. See Section 1602.1.

SPECIFIED. See Section 2102.1.

SPECIFIED COMPRESSIVE STRENGTH OF MASONRY (f'_m). See Section 2102.1.

SPIRAL REINFORCEMENT. See Section 1902.1.

SPIRAL STAIRWAY. See Section 1002.1.

SPLICE. See Section 702.1.

SPRAYED FIRE-RESISTANT MATERIALS. See Section 1702.1.

STACK BOND. See Section 2102.1.

STAGE. See Section 410.2.

STAIR. See Section 1002.1.

STAIRWAY. See Section 1002.1.

STAIRWAY, EXTERIOR. See Section 1002.1.

STAIRWAY, INTERIOR. See Section 1002.1.

STAIRWAY, SPIRAL. See Section 1002.1.

[F] STANDPIPE SYSTEM, CLASSES OF. See Section 902.1.

Class I system. See Section 902.1.

Class II system. See Section 902.1.

Class III system. See Section 902.1.

[F] STANDPIPE, TYPES OF. See Section 902.1.

Automatic dry. See Section 902.1.

Automatic wet. See Section 902.1.

Manual dry. See Section 902.1.

Manual wet. See Section 902.1.

Semiautomatic dry. See Section 902.1.

STEEL CONSTRUCTION, COLD-FORMED. See Section 2202.1.

STEEL JOIST. See Section 2202.1.

STEEL MEMBER, STRUCTURAL. See Section 2202.1.

STEEP SLOPE. A roof slope greater than two units vertical in 12 units horizontal (17-percent slope).

STIRRUP. See Section 2102.1.

STONE MASONRY. See Section 2102.1.

Ashlar stone masonry. See Section 2102.1.

Rubble stone masonry. See Section 2102.1.

[F] STORAGE OF HAZARDOUS MATERIALS. See Section 415.2.

STORY. That portion of a building included between the upper surface of a floor and the upper surface of the floor or roof next above (also see "Basement" and "Mezzanine"). It is measured as the vertical distance from top to top of two successive tiers of beams or finished floor surfaces and, for the topmost story, from the top of the floor finish to the top of the ceiling joists or, where there is not a ceiling, to the top of the roof rafters.

STORY ABOVE GRADE PLANE. Any story having its finished floor surface entirely above grade plane, except that a basement shall be considered as a story above grade plane where the finished surface of the floor above the basement is:

1. More than 6 feet (1829 mm) above grade plane;
2. More than 6 feet (1829 mm) above the finished ground level for more than 50 percent of the total building perimeter; or

3. More than 12 feet (3658 mm) above the finished ground level at any point.

STORY DRIFT RATIO. See Section 1613.1.

STRENGTH. See Section 2102.1.

Design strength. See Section 2102.1.

Nominal strength. See Sections 1602.1 and 2102.1.

STRENGTH DESIGN. See Section 1602.1.

STRUCTURAL CONCRETE. See Section 1902.1.

STRUCTURAL GLUED-LAMINATED TIMBER. See Section 2302.1.

STRUCTURAL OBSERVATION. See Section 1702.1.

STRUCTURE. That which is built or constructed.

SUBDIAPHRAGM. See Section 2302.1.

[F] **SUPERVISING STATION.** See Section 902.1.

[F] **SUPERVISORY SERVICE.** See Section 902.1.

[F] **SUPERVISORY SIGNAL.** See Section 902.1.

[F] **SUPERVISORY SIGNAL-INITIATING DEVICE.** See Section 902.1.

SWIMMING POOLS. See Section 3109.2.

T RATING. See Section 702.1.

TECHNICALLY INFEASIBLE. See Section 1102.1.

TENDON. See Section 1902.1.

TENT. Any structure, enclosure or shelter which is constructed of canvas or pliable material supported in any manner except by air or the contents it protects.

THERMOPLASTIC MATERIAL. See Section 2602.1

THERMOSETTING MATERIAL. See Section 2602.1.

THROUGH-PENETRATION. See Section 702.1.

THROUGH-PENETRATION FIRESTOP SYSTEM. See Section 702.1.

TIE, LATERAL. See Section 2102.1.

TIE, WALL. See Section 2102.1.

TIE-DOWN (HOLD-DOWN). See Section 2302.1.

TILE. See Section 2102.1.

TILE, STRUCTURAL CLAY. See Section 2102.1.

[F] **TIRES, BULK STORAGE OF.** See Section 902.1.

TORSIONAL FORCE DISTRIBUTION. See Section 1613.1.

TOUGHNESS. See Section 1613.1.

[F] **TOXIC.** See Section 307.2.

TREATED WOOD. See Section 2302.1.

TRIM. See Section 802.1.

[F] **TROUBLE SIGNAL.** See Section 902.1.

UNDERLAYMENT. See Section 1502.1.

[F] **UNSTABLE (REACTIVE) MATERIAL.** See Section 307.2.

Class 4. See Section 307.2.

Class 3. See Section 307.2.

Class 2. See Section 307.2.

Class 1. See Section 307.2.

[F] **USE (MATERIAL).** See Section 415.2.

VAPOR RETARDER. A material having a permeance rating of 1.0 perm or less, when tested in accordance with ASTM E 96, such as foil, plastic sheeting, or insulation facing, installed to resist the transmission of water vapor through the exterior envelope.

VENEER. See Section 1402.1.

VENTILATION. The natural or mechanical process of supplying conditioned or unconditioned air to, or removing such air from, any space.

[F] **VISIBLE ALARM NOTIFICATION APPLIANCE.** See Section 902.1.

WALKWAY, PEDESTRIAN. A walkway used exclusively as a pedestrian trafficway.

WALL. See Section 2102.1.

Cavity wall. See Section 2102.1.

Composite wall. See Section 2102.1.

Dry-stacked, surface-bonded wall. See Section 2102.1.

Masonry-bonded hollow wall. See Section 2102.1.

Parapet wall. See Section 2102.1.

WALL FRAME. See Section 2102.1.

WALL, LOAD BEARING. See Section 1602.1.

WALL, NONLOAD BEARING. See Section 1602.1.

[F] **WATER-REACTIVE MATERIAL.** See Section 307.2.

Class 3. See Section 307.2.

Class 2. See Section 307.2.

Class 1. See Section 307.2.

WEATHER-EXPOSED SURFACES. See Section 2502.

WEB. See Section 2102.1.

[F] **WET-CHEMICAL EXTINGUISHING SYSTEM.** See Section 902.1.

WHEELCHAIR SPACE. See Section 1102.1.

WHEELCHAIR SPACE CLUSTER. See Section 1102.1.

WIND-BORNE DEBRIS REGION. See Section 1609.2.

WIND-RESTRAINT SEISMIC SYSTEM. See Section 1613.1.

WIRE BACKING. See Section 2502.

[F] WIRELESS PROTECTION SYSTEM. See Section 902.1.

WOOD SHEAR PANEL. See Section 2302.1.

WOOD STRUCTURAL PANEL. See Section 2302.1.

[F] WORKSTATION. See Section 415.2.

WYTHER. See Section 2102.1.

YARD. An open space, other than a court, unobstructed from the ground to the sky, except where specifically provided by this code, on the lot on which a building is situated.

[F] ZONE. See Section 902.1.

CHAPTER 3 USE AND OCCUPANCY CLASSIFICATION

SECTION 301 GENERAL

301.1 Scope. The provisions of this chapter shall control the classification of all buildings and structures as to use and occupancy.

SECTION 302 CLASSIFICATION

302.1 General. Structures or portions of structures shall be classified with respect to occupancy in one or more of the groups listed below. Structures with multiple uses shall be classified according to Section 302.3. Where a structure is proposed for a purpose which is not specifically provided for in this code, such structure shall be classified in the group which the occupancy most nearly resembles, according to the fire safety and relative hazard involved.

1. Assembly (see Section 303): Groups A-1, A-2, A-3, A-4 and A-5
2. Business (see Section 304): Group B
3. Educational (see Section 305): Group E
4. Factory and Industrial (see Section 306): Groups F-1 and F-2
5. High Hazard (see Section 307): Groups H-1, H-2, H-3, H-4 and H-5
6. Institutional (see Section 308): Groups I-1, I-2, I-3 and I-4
7. Mercantile (see Section 309): Group M
8. Residential (see Section 310): Groups R-1, R-2, R-3 as applicable in Section 101.2, and R-4
9. Storage (see Section 311): Groups S-1 and S-2
10. Utility and Miscellaneous (see Section 312): Group U

302.1.1 Incidental use areas. Areas that are incidental to the main occupancy shall be separated and protected in accordance with Table 302.1.1 and shall be classified in accordance with the main occupancy of the portion of the building in which the incidental use area is located.

Exception: Incidental use areas within and serving a dwelling unit are not required to comply with this section.

**TABLE 302.1.1
INCIDENTAL USE AREAS**

ROOMS OR AREA	SEPARATION ^a
Furnace room where largest piece of equipment is over 400,000 Btu per hour input	1 hour or provide automatic fire-extinguishing system
Boilers over 15 psi and 10 horsepower	1 hour or provide automatic fire-extinguishing system
Refrigerant machinery rooms	1 hour or provide automatic fire-extinguishing system
Automotive parking garage in other than Group R-3	2 hours
Incinerator rooms	2 hours and automatic sprinkler system
Paint shops, not classified as Group H, located in occupancies other than Group F	2 hours; or 1 hour and provide automatic fire-extinguishing systems
Laboratories and vocational shops, not classified as Group H, located in Group E and I-2 occupancies	1 hour or provide automatic fire-extinguishing system
Laundry rooms over 100 square feet	1 hour
Storage rooms over 100 square feet	1 hour
Group I-3 padded cells	1 hour
Waste and linen collection rooms over 100 square feet	1 hour
Stationary lead-acid battery systems having a liquid capacity of more than 100 gallons used for facility standby power, emergency power or uninterrupted power supplies	1-hour fire barriers and floor-ceiling assemblies in Group B, F, H, M, S and U occupancies. 2-hour fire barriers and floor-ceiling assemblies in Group A, E, I and R occupancies

For SI: 1 square foot = 0.0929 m², 1 pound per square inch = 6.9 kPa, 1 British thermal unit = 0.293 watts, 1 horsepower = 746 watts, 1 gallon = 3.785 L.

- a. Where an automatic fire-extinguishing system is provided, it need only be provided in the incidental use room or area.

302.1.1.1 – 302.3.3

USE AND OCCUPANCY CLASSIFICATION

302.1.1.1 Separation. Where Table 302.1.1 requires a fire-resistance-rated separation, the incidental use area shall be separated from the remainder of the building with a fire barrier. Where Table 302.1.1 permits an automatic fire-extinguishing system without a fire barrier, the incidental use area shall be separated by construction capable of resisting the passage of smoke. The partitions shall extend from the floor to the underside of the fire-resistance-rated floor/ceiling assembly or fire-resistance-rated roof/ceiling assembly or to the underside of the floor or roof deck above. Doors shall be self-closing or automatic-closing upon detection of smoke. Doors shall not have air transfer openings and shall not be undercut in excess of the clearance permitted in accordance with NFPA 80.

302.2 Accessory use area. Except for accessory use areas of Group H in accordance with Section 302.3.1, or when required for incidental use areas as indicated in Section 302.1.1, a fire barrier shall not be required for a use not occupying more than 10 percent of the area of any floor of a building, nor more than the tabular values for either height or area for such use.

302.3 Mixed occupancies.

302.3.1 Two or more uses. Where the building is occupied for two or more uses not included in the same occupancy, the building or portion thereof shall comply with Section 302.3.2 or 302.3.3 or combinations of these sections, except that areas of Group H shall be separated from other occupancies in accordance with Section 302.3.3. Areas of Group H-1 shall be in a separate and detached building and structure. Also, see Section 508 for special provisions for buildings containing mixed uses.

302.3.2 Nonseparated uses. Each portion of the building shall be individually classified as to use. The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building. The other requirements shall apply to each portion of the building based on the use of that space except that the most restrictive applicable provisions of the high rise building provisions and fire-protection

system requirements shall apply to these nonseparated uses. Fire separations are not required between uses, except as required by other provisions.

302.3.3 Separated uses. Each portion of the building shall be individually classified as to use and shall be completely separated from adjacent areas by fire barrier walls or horizontal assemblies or both having a fire-resistance rating determined in accordance with Table 302.3.3 for the uses being separated. Each fire area shall comply with the code based on the use of that space. Each fire area shall comply with the height limitations based on the use of that space and the type of construction classification. In each story, the building area shall be such that the sum of the ratios of the floor area of each use divided by the allowable area for each use shall not exceed 1.

Exceptions:

1. Except for Group H and I-2 areas, where the building is equipped throughout with an automatic sprinkler system, the fire-resistance ratings in Table 302.3.3 shall be reduced by 1 hour but to not less than 1 hour and to not less than that required for floor construction according to the type of construction.
2. The private garage shall be separated from the residence and its attic area by means of minimum 1/2-inch (12.7 mm) gypsum board applied to the garage side. Door openings between the garage and the residence shall be equipped with either solid wood doors not less than 1 3/8 inches (35 mm) thick, solid or honeycomb core steel doors not less than 1 3/8 inches (35 mm) thick or doors in compliance with Section 714.2.3. Openings from a private garage directly into a room used for sleeping purposes shall not be permitted.
3. Ducts in the garage and ducts penetrating the walls or ceilings separating the dwelling from the garage shall be constructed of a minimum No. 26 gage (0.48 mm) sheet steel and shall have no openings into the garage.
4. A separation is not required between a Group R-3 and Group U carport provided the carport is entirely open on two or more sides and there are not enclosed uses above.

USE AND OCCUPANCY CLASSIFICATION

TABLE 302.3.3

TABLE 302.3.3
REQUIRED SEPARATION OF OCCUPANCIES (HOURS)^a

USE	A-1	A-2	A-3	A-4	A-5	B ^b	E ^e	F-1	F-2	H-1	H-2	H-3	H-4	H-5	I-1	I-2	I-3	I-4	M ^b	R-1	R-2	R-3,R-4	S-1	S-2 ^c	U
A-1	2	2	2	2	2	2	2	3	2	NP	4	3	2	4	2	2	2	2	2	2	2	2	3	2	1
A-2 ^h	—	2	2	2	2	2	2	3	2	NP	4	3	2	4	2	2	2	2	2	2	2	2	3	2	1
A-3 ^{d,f}	—	—	2	2	2	2	2	3	2	NP	4	3	2	4	2	2	2	2	2	2	2	2	3	2	1
A-4	—	—	—	2	2	2	2	3	2	NP	4	3	2	4	2	2	2	2	2	2	2	2	3	2	1
A-5	—	—	—	—	2	2	2	3	2	NP	4	3	2	4	2	2	2	2	2	2	2	2	3	2	1
B ^b	—	—	—	—	—	2	2	3	2	NP	2	1	1	1	2	2	2	2	2	2	2	2	3	2	1
E	—	—	—	—	—	—	2	3	2	NP	4	3	2	3	2	2	2	2	2	2	2	2	3	2	1
F-1	—	—	—	—	—	—	—	3	3	NP	2	1	1	1	3	3	3	3	3	3	3	3	3	3	3
F-2	—	—	—	—	—	—	—	—	2	NP	2	1	1	1	2	2	2	2	2	2	2	2	3	2	1
H-1	—	—	—	—	—	—	—	—	—	4	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
H-2	—	—	—	—	—	—	—	—	—	—	4	1	2	2	4	4	4	4	2	4	4	4	2	2	1
H-3	—	—	—	—	—	—	—	—	—	—	—	3	1	1	4	3	3	3	1	3	3	3	1	1	1
H-4	—	—	—	—	—	—	—	—	—	—	—	—	2	1	4	4	4	4	1	4	4	4	1	1	1
H-5	—	—	—	—	—	—	—	—	—	—	—	—	—	2	4	4	4	3	1	4	4	4	1	1	3
I-1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	2	2	2	2	2	2	4	3	2
I-2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	2	2	2	2	2	3	2	1
I-3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	2	2	2	2	3	2	1
I-4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	2	2	2	3	2	1
M ^b	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	2	2	3	2	1
R-1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	2	3	2	1
R-2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	3	2	1
R-3, R-4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	3	2 ^g	1 ^g
S-1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	3	3
S-2 ^c	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	1
U	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1

For SI: 1 square foot = 0.0929 m².

NP = Not permitted.

a. See Exception 1 to Section 302.3.3 for reductions permitted.

b. Occupancy separation need not be provided for incidental storage areas within Groups B and M if the:

1. Area is less than 10 percent of the floor area;
2. Area is provided with an automatic fire-extinguishing system and is less than 3,000 square feet; or
3. Area is less than 1,000 square feet.

c. Areas used only for private or pleasure vehicles may reduce separation by 1 hour.

d. Accessory assembly areas are not considered separate occupancies if the floor area is 750 square feet or less.

e. Assembly uses accessory to Group E are not considered separate occupancies.

f. Accessory religious educational rooms and religious auditoriums with occupant loads of less than 100 are not considered separate occupancies.

g. See exception to Section 302.3.3.

h. Commercial kitchens need not be separated from the restaurant seating areas that they serve.

**SECTION 303
ASSEMBLY GROUP A**

303.1 Assembly Group A. Assembly Group A occupancy includes, among others, the use of a building or structure, or a portion thereof, for the gathering together of persons for purposes such as civic, social or religious functions, recreation, food or drink consumption or awaiting transportation. A room or space used for assembly purposes by less than 50 persons and accessory to another occupancy shall be included as a part of that occupancy. Assembly occupancies shall include the following:

A-1 Assembly uses, usually with fixed seating, intended for the production and viewing of the performing arts or motion pictures including, but not limited to:

- Motion picture theaters
- Television and radio studios admitting an audience
- Theaters

A-2 Assembly uses intended for food and/or drink consumption including, but not limited to:

- Banquet halls
- Night clubs
- Restaurants
- Taverns and bars

A-3 Assembly uses intended for worship, recreation or amusement and other assembly uses not classified elsewhere in Group A, including, but not limited to:

- Amusement arcades
- Art galleries
- Auditoriums
- Bowling alleys
- Churches
- Community halls
- Courtrooms
- Dance halls
- Exhibition halls
- Funeral parlors
- Gymnasiums
- Indoor swimming pools
- Indoor tennis courts
- Lecture halls
- Libraries
- Museums
- Passenger stations (waiting area)
- Pool and billiard parlors

A-4 Assembly uses intended for viewing of indoor sporting events and activities with spectator seating, including, but not limited to:

- Arenas

- Skating rinks
- Swimming pools
- Tennis courts

A-5 Assembly uses intended for participation in or viewing outdoor activities including, but not limited to:

- Amusement park structures
- Bleachers
- Grandstands
- Stadiums

**SECTION 304
BUSINESS GROUP B**

304.1 Business Group B. Business Group B occupancy includes, among others, the use of a building or structure, or a portion thereof, for office, professional or service-type transactions, including storage of records and accounts. Business occupancies shall include, but not be limited to, the following:

- Airport traffic control towers
- Animal hospitals, kennels and pounds
- Banks
- Barber and beauty shops
- Car wash
- Civic administration
- Clinic—outpatient
- Dry cleaning and laundries; pick-up and delivery stations and self-service
- Educational occupancies above the 12th grade
- Electronic data processing
- Fire and police stations
- Laboratories; testing and research
- Motor vehicle showrooms
- Post offices
- Print shops
- Professional services (architects, attorneys, dentists, physicians, engineers, etc.)
- Radio and television stations
- Telephone exchanges

**SECTION 305
EDUCATIONAL GROUP E**

305.1 Educational Group E. Educational Group E occupancy includes, among others, the use of a building or structure, or a portion thereof, by six or more persons at any one time for educational purposes through the 12th grade.

305.2 Day care. The use of a building or structure, or portion thereof, for educational, supervision or personal care services for more than five children older than 2½ years of age, shall be classified as a Group E occupancy.

**SECTION 306
FACTORY GROUP F**

306.1 Factory Industrial Group F. Factory Industrial Group F occupancy includes, among others, the use of a building or structure, or a portion thereof, for assembling, disassembling, fabricating, finishing, manufacturing, packaging, repair or processing operations that are not classified as a Group H hazardous occupancy.

306.2 Factory Industrial F-1 Moderate-Hazard Occupancy. Factory Industrial uses which are not classified as Factory Industrial F-2 Low Hazard shall be classified as F-1 Moderate Hazard and shall include, but not be limited to, the following:

- Aircraft
- Appliances
- Athletic equipment
- Automobiles and other motor vehicles
- Bakeries
- Beverages (alcoholic)
- Bicycles
- Boats; building
- Brooms or brushes
- Business machines
- Cameras and photo equipment
- Canvas or similar fabric
- Carpets and rugs (includes cleaning)
- Clothing
- Construction and agricultural machinery
- Disinfectants
- Dry cleaning and dyeing
- Electric light plants and power houses
- Electronics
- Engines (including rebuilding)
- Food processing
- Furniture
- Hemp products
- Jute products
- Laundries
- Leather products
- Machinery
- Metals
- Millwork (sash & door)
- Motion pictures and television filming
- Musical instruments
- Optical goods
- Paper mills or products
- Photographic film
- Plastic products
- Printing or publishing
- Recreational vehicles
- Refuse incineration
- Shoes
- Soaps and detergents

- Textiles
- Tobacco
- Trailers
- Upholstering
- Wood; distillation
- Woodworking (cabinet)

306.3 Factory Industrial F-2 Low-Hazard Occupancy. Factory industrial uses that involve the fabrication or manufacturing of noncombustible materials which during finishing, packing or processing do not involve a significant fire hazard shall be classified as F-2 occupancies and shall include, but not be limited to, the following:

- Beverages (nonalcoholic)
- Brick and masonry
- Ceramic products
- Foundries
- Glass products
- Gypsum
- Ice
- Metal products (fabrication and assembly)

**[F] SECTION 307
HIGH-HAZARD GROUP H**

307.1 Hazardous Group H. Hazardous Group H occupancy includes, among others, the use of a building or structure, or a portion thereof, that involves the manufacturing, processing, generation or storage of materials that constitute a physical or health hazard in quantities in excess of those found in Tables 307.7(1) and 307.7(2). (See also definition of "Control Area".)

307.2 Definitions. The following words and terms shall, for the purposes of this section and as used elsewhere in this code, have the meanings shown herein.

AEROSOL. A product that is dispensed from an aerosol container by a propellant.

Aerosol products shall be classified by means of the calculation of their chemical heats of combustion and shall be designated Level 1, Level 2 or Level 3.

Level 1 aerosol products. Those with a total chemical heat of combustion that is less than or equal to 8,600 British thermal units per pound (Btu/lb) (20 kJ/g).

Level 2 aerosol products. Those with a total chemical heat of combustion that is greater than 8,600 Btu/lb (20 kJ/g), but less than or equal to 13,000 Btu/lb (30 kJ/g).

Level 3 aerosol products. Those with a total chemical heat combustion that is greater than 13,000 Btu/lb (30 kJ/g).

AEROSOL CONTAINER. A metal can or a glass or plastic bottle designed to dispense an aerosol. Metal cans shall be limited to a maximum size of 33.8 fluid ounces (1000 ml). Glass or plastic bottles shall be limited to a maximum size of 4 fluid ounces (118 ml).

BARRICADE. A structure that consists of a combination of walls, floor and roof, which is designed to withstand the rapid release of energy in an explosion and which is fully confined, partially vented or fully vented; or other effective method of shielding from explosive materials by a natural or artificial barrier.

Artificial barricade. An artificial mound or revetment a minimum thickness of 3 feet (914 mm).

Natural barricade. Natural features of the ground, such as hills, or timber of sufficient density that the surrounding exposures that require protection cannot be seen from the magazine or building containing explosives when the trees are bare of leaves.

BOILING POINT. The temperature at which the vapor pressure of a liquid equals the atmospheric pressure of 14.7 pounds per square inch (psia) (101 kPa) or 760 mm of mercury. Where an accurate boiling point is unavailable for the material in question, or for mixtures which do not have a constant boiling point, for the purposes of this classification, the 20-percent evaporated point of a distillation performed in accordance with ASTM D 86 shall be used as the boiling point of the liquid.

CLOSED SYSTEM. The use of a solid or liquid hazardous material involving a closed vessel or system that remains closed during normal operations where vapors emitted by the product are not liberated outside of the vessel or system and the product is not exposed to the atmosphere during normal operations; and all uses of compressed gases. Examples of closed systems for solids and liquids include product conveyed through a piping system into a closed vessel, system or piece of equipment.

COMBUSTIBLE DUST. Finely divided solid material that is 420 microns or less in diameter and which, when dispersed in air in the proper proportions, could be ignited by a flame, spark or other source of ignition. Combustible dust will pass through a U.S. No. 40 standard sieve.

COMBUSTIBLE FIBERS. Readily ignitable and free-burning fibers, such as cocoa fiber, cloth, cotton, excelsior, hay, hemp, henequen, istle, jute, kapok, oakum, rags, sisal, Spanish moss, straw, tow, wastepaper or other like materials.

COMBUSTIBLE LIQUID. A liquid having a closed cup flash point at or above 100°F (38°C). Combustible liquids shall be subdivided as follows:

Class II. Liquids having a closed cup flash point at or above 100°F (38°C) and below 140°F (60°C).

Class IIIA. Liquids having a closed cup flash point at or above 140°F (60°C) and below 200°F (93°C).

Class IIIB. Liquids having a closed cup flash point at or above 200°F (93°C).

The category of combustible liquids does not include compressed gases or cryogenic fluids.

COMPRESSED GAS. A material, or mixture of materials which:

1. Is a gas at 68°F (20°C) or less at 14.7 pounds per square inch atmosphere (psia) (101 kPa) of pressure; and
2. Has a boiling point of 68°F (20°C) or less at 14.7 psia (101 kPa) which is either liquefied, nonliquefied or in solution, except those gases which have no other health- or physical-hazard properties are not considered to be compressed until the pressure in the packaging exceeds 41 psia (282 kPa) at 68°F (20°C).

The states of a compressed gas are categorized as follows:

1. Nonliquefied compressed gases are gases, other than those in solution, which are in a packaging under the charged pressure and are entirely gaseous at a temperature of 68°F (20°C).
2. Liquefied compressed gases are gases that, in a packaging under the charged pressure, are partially liquid at a temperature of 68°F (20°C).
3. Compressed gases in solution are nonliquefied gases that are dissolved in a solvent.
4. Compressed gas mixtures consist of a mixture of two or more compressed gases contained in a packaging, the hazard properties of which are represented by the properties of the mixture as a whole.

CONTROL AREA. Spaces within a building that are enclosed and bounded by exterior walls, fire walls, fire barriers and roofs, or a combination thereof, where quantities of hazardous materials not exceeding the maximum allowable quantities per control area are stored, dispensed, used or handled.

CORROSIVE. A chemical that causes visible destruction of, or irreversible alterations in, living tissue by chemical action at the point of contact. A chemical shall be considered corrosive if, when tested on the intact skin of albino rabbits by the method described in DOTn 49 CFR, Part 173, such a chemical destroys or changes irreversibly the structure of the tissue at the point of contact following an exposure period of 4 hours. This term does not refer to action on inanimate surfaces.

CRYOGENIC FLUID. A liquid having a boiling point lower than -150°F (-101°C) at 14.7 pounds per square inch atmosphere (psia) (an absolute pressure of 101 kPa).

DEFLAGRATION. An exothermic reaction, such as the extremely rapid oxidation of a flammable dust or vapor in air, in which the reaction progresses through the unburned

material at a rate less than the velocity of sound. A deflagration can have an explosive effect.

DETACHED STORAGE BUILDING. A separate single-story building, without a basement or crawl space, used for the storage of hazardous materials and located an approved distance from all structures.

DETONATION. An exothermic reaction characterized by the presence of a shock wave in the material which establishes and maintains the reaction. The reaction zone progresses through the material at a rate greater than the velocity of sound. The principal heating mechanism is one of shock compression. Detonations have an explosive effect.

DISPENSING. The pouring or transferring of any material from a container, tank or similar vessel, whereby vapors, dusts, fumes, mists or gases are liberated to the atmosphere.

EXPLOSIVE. Any chemical compound, mixture or device, the primary or common purpose of which is to function by explosion. The term includes, but is not limited to, dynamite, black powder, pellet powder, initiating explosives, detonators, safety fuses, squibs, detonating cord, igniter cord, igniters and display fireworks, 1.3G (Class B, Special).

The term "explosive" includes any material determined to be within the scope of USC Title 18: Chapter 40 and also includes any material classified as an explosive other than consumer fireworks, 1.4G (Class C, Common) by the hazardous materials regulations of DOTn 49 CFR.

High explosive. Explosive material, such as dynamite, which can be caused to detonate by means of a No. 8 test blasting cap when unconfined.

Low explosive. Explosive material that will burn or deflagrate when ignited. It is characterized by a rate of reaction that is less than the speed of sound. Examples of low explosives include, but are not limited to, black powder; safety fuse; igniters; igniter cord; fuse lighters; fireworks, 1.3G (Class B special) and propellants, 1.3C.

UN/DOTn Class 1 explosives. The former classification system used by DOTn included the terms "high" and "low" explosives as defined herein. The following terms further define explosives under the current system applied by DOTn for all explosive materials defined as hazard Class 1 materials. Compatibility group letters are used in concert with the division to specify further limitations on each division noted (i.e., the letter G identifies the material as a pyrotechnic substance or article containing a pyrotechnic substance and similar materials).

Division 1.1. Explosives that have a mass explosion hazard. A mass explosion is one which affects almost the entire load instantaneously.

Division 1.2. Explosives that have a projection hazard but not a mass explosion hazard.

Division 1.3. Explosives that have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but not a mass explosion hazard.

Division 1.4. Explosives that pose a minor explosion hazard. The explosive effects are largely confined to the package and no projection of fragments of appreciable size or range is to be expected. An external fire must not cause virtually instantaneous explosion of almost the entire contents of the package.

Division 1.5. Very insensitive explosives. This division is comprised of substances that have a mass explosion hazard, but which are so insensitive that there is very little probability of initiation or of transition from burning to detonation under normal conditions of transport.

Division 1.6. Extremely insensitive articles which do not have a mass explosion hazard. This division is comprised of articles that contain only extremely insensitive detonating substances and which demonstrate a negligible probability of accidental initiation or propagation.

FIREWORKS. Any composition or device for the purpose of producing a visible or an audible effect for entertainment purposes by combustion, deflagration or detonation that meets the definition of 1.4G fireworks or 1.3G fireworks as set forth herein.

FIREWORKS, 1.4G. (Formerly known as Class C, Common Fireworks.) Small fireworks devices containing restricted amounts of pyrotechnic composition designed primarily to produce visible or audible effects by combustion. Such 1.4G fireworks which comply with the construction, chemical composition and labeling regulations of the DOTn for fireworks, 49 CFR (172), and the U.S. Consumer Product Safety Commission (CPSC) as set forth in CPSC 16 CFR: Parts 1500 and 1507, are not explosive materials for the purpose of this code.

FIREWORKS, 1.3G. (Formerly Class B, Special Fireworks.) Large fireworks devices, which are explosive materials, intended for use in fireworks displays and designed to produce audible or visible effects by combustion, deflagration or detonation. Such 1.3G fireworks include, but are not limited to, firecrackers containing more than 130 milligrams (2 grains) of explosive composition, aerial shells containing more than 40 grams of pyrotechnic composition, and other display pieces which exceed the limits for classification as 1.4G fireworks. Such 1.3G fireworks are also described as fireworks, 49 CFR (172) by the DOTn.

FLAMMABLE GAS. A material that is a gas at 68°F (20°C) or less at 14.7 pounds per square inch atmosphere (psia) (101

kPa) of pressure [a material that has a boiling point of 68°F (20°C) or less at 14.7 psia (101 kPa)] which:

1. Is ignitable at 14.7 psia (101 kPa) when in a mixture of 13 percent or less by volume with air; or
2. Has a flammable range at 14.7 psia (101 kPa) with air of at least 12 percent, regardless of the lower limit.

The limits specified shall be determined at 14.7 psi (101 kPa) of pressure and a temperature of 68°F (20°C) in accordance with ASTM E 681.

FLAMMABLE LIQUEFIED GAS. A liquefied compressed gas which, under a charged pressure, is partially liquid at a temperature of 68°F (20°C) and which is flammable.

FLAMMABLE LIQUID. A liquid having a closed cup flash point below 100°F (38°C). Flammable liquids are further categorized into a group known as Class I liquids. The Class I category is subdivided as follows:

Class IA. Liquids having a flash point below 73°F (23°C) and having a boiling point below 100°F (38°C).

Class IB. Liquids having a flash point below 73°F (23°C) and having a boiling point at or above 100°F (38°C).

Class IC. Liquids having a flash point at or above 73°F (23°C) and below 100°F (38°C).

The category of flammable liquids does not include compressed gases or cryogenic fluids.

FLAMMABLE MATERIAL. A material capable of being readily ignited from common sources of heat or at a temperature of 600°F (316°C) or less.

FLAMMABLE SOLID. A solid, other than a blasting agent or explosive, that is capable of causing fire through friction, absorption or moisture, spontaneous chemical change, or retained heat from manufacturing or processing, or which has an ignition temperature below 212°F (100°C) or which burns so vigorously and persistently when ignited as to create a serious hazard. A chemical shall be considered a flammable solid as determined in accordance with the test method of CPSC 16 CFR: Part 1500.44, if it ignites and burns with a self-sustained flame at a rate greater than 0.1 inch (2.5 mm) per second along its major axis.

FLASH POINT. The minimum temperature in degrees Fahrenheit at which a liquid will give off sufficient vapors to form an ignitable mixture with air near the surface or in the container, but will not sustain combustion. The flash point of a liquid shall be determined by appropriate test procedure and apparatus as specified in ASTM D 56, ASTM D 93 or ASTM D 3278.

HANDLING. The deliberate transport by any means to a point of storage or use.

HAZARDOUS MATERIALS. Those chemicals or substances that are physical hazards or health hazards as defined and classified in this section and the *International Fire Code*, whether the materials are in usable or waste condition.

HEALTH HAZARD. A classification of a chemical for which there is statistically significant evidence that acute or chronic health effects are capable of occurring in exposed persons. The term "health hazard" includes chemicals that are toxic or highly toxic, and corrosives.

HIGHLY TOXIC. A material which produces a lethal dose or lethal concentration that falls within any of the following categories:

1. A chemical that has a median lethal dose (LD_{50}) of 50 milligrams or less per kilogram of body weight when administered orally to albino rats weighing between 200 and 300 grams each.
2. A chemical that has a median lethal dose (LD_{50}) of 200 milligrams or less per kilogram of body weight when administered by continuous contact for 24 hours (or less if death occurs within 24 hours) with the bare skin of albino rabbits weighing between 2 and 3 kilograms each.
3. A chemical that has a median lethal concentration (LC_{50}) in air of 200 parts per million by volume or less of gas or vapor, or 2 milligrams per liter or less of mist, fume or dust, when administered by continuous inhalation for 1 hour (or less if death occurs within 1 hour) to albino rats weighing between 200 and 300 grams each.

Mixtures of these materials with ordinary materials, such as water, might not warrant classification as highly toxic. While this system is basically simple in application, any hazard evaluation that is required for the precise categorization of this type of material shall be performed by experienced, technically competent persons.

INCOMPATIBLE MATERIALS. Materials that, when mixed, have the potential to react in a manner that generates heat, fumes, gases or byproducts which are hazardous to life or property.

OPEN SYSTEM. The use of a solid or liquid hazardous material involving a vessel or system that is continuously open to the atmosphere during normal operations and where vapors are liberated, or the product is exposed to the atmosphere during normal operations. Examples of open systems for solids and liquids include dispensing from or into open beakers or containers, dip tank and plating tank operations.

ORGANIC PEROXIDE. An organic compound that contains the bivalent -O-O- structure and which may be considered to be a structural derivative of hydrogen peroxide where one or both of the hydrogen atoms have been replaced by an

USE AND OCCUPANCY CLASSIFICATION

307.2

organic radical. Organic peroxides can pose an explosion hazard (detonation or deflagration) or they can be shock sensitive. They can also decompose into various unstable compounds over an extended period of time.

Unclassified detonable. Organic peroxides that are capable of detonation. These peroxides pose an extremely high explosion hazard through rapid explosive decomposition.

Class I. Those formulations that are capable of deflagration but not detonation.

Class II. Those formulations that burn very rapidly and that pose a moderate reactivity hazard.

Class III. Those formulations that burn rapidly and that pose a moderate reactivity hazard.

Class IV. Those formulations that burn in the same manner as ordinary combustibles and that pose a minimal reactivity hazard.

Class V. Those formulations that burn with less intensity than ordinary combustibles or do not sustain combustion and that pose no reactivity hazard.

OXIDIZER. A material that readily yields oxygen or other oxidizing gas, or that readily reacts to promote or initiate combustion of combustible materials. Examples of other oxidizing gases include bromine, chlorine and fluorine.

Class 4. An oxidizer that can undergo an explosive reaction due to contamination or exposure to thermal or physical shock. In addition, the oxidizer will enhance the burning rate and can cause spontaneous ignition of combustibles.

Class 3. An oxidizer that will cause a severe increase in the burning rate of combustible materials with which it comes in contact or that will undergo vigorous self-sustained decomposition due to contamination or exposure to heat.

Class 2. An oxidizer that will cause a moderate increase in the burning rate or that causes spontaneous ignition of combustible materials with which it comes in contact.

Class 1. An oxidizer whose primary hazard is that it slightly increases the burning rate but which does not cause spontaneous ignition when it comes in contact with combustible materials.

OXIDIZING GAS. A gas that can support and accelerate combustion of other materials.

PHYSICAL HAZARD. A chemical for which there is evidence that it is a combustible liquid, compressed gas, cryogenic, explosive, flammable gas, flammable liquid, flammable solid, organic peroxide, oxidizer, pyrophoric or unstable (reactive) or water-reactive material.

PYROPHORIC. A chemical with an autoignition temperature in air, at or below a temperature of 13°F (-11°C).

PYROTECHNIC COMPOSITION. A chemical mixture that produces visible light displays or sounds through a self-propagating, heat-releasing chemical reaction which is initiated by ignition.

TOXIC. A chemical falling within any of the following categories:

1. A chemical that has a median lethal dose (LD_{50}) of more than 50 milligrams per kilogram, but not more than 500 milligrams per kilogram of body weight when administered orally to albino rats weighing between 200 and 300 grams each.
2. A chemical that has a median lethal dose (LD_{50}) of more than 200 milligrams per kilogram but not more than 1,000 milligrams per kilogram of body weight when administered by continuous contact for 24 hours (or less if death occurs within 24 hours) with the bare skin of albino rabbits weighing between 2 and 3 kilograms each.
3. A chemical that has a median lethal concentration (LC_{50}) in air of more than 200 parts per million but not more than 2,000 parts per million by volume of gas or vapor, or more than 2 milligrams per liter but not more than 20 milligrams per liter of mist, fume or dust, when administered by continuous inhalation for 1 hour (or less if death occurs within 1 hour) to albino rats weighing between 200 and 300 grams each.

UNSTABLE (REACTIVE) MATERIAL. A material, other than an explosive, which in the pure state or as commercially produced, will vigorously polymerize, decompose, condense or become self-reactive and undergo other violent chemical changes, including explosion, when exposed to heat, friction or shock, or in the absence of an inhibitor, or in the presence of contaminants, or in contact with incompatible materials. Unstable (reactive) materials are subdivided as follows:

Class 4. Materials that in themselves are readily capable of detonation or explosive decomposition or explosive reaction at normal temperatures and pressures. This class includes materials that are sensitive to mechanical or localized thermal shock at normal temperatures and pressures.

Class 3. Materials that in themselves are capable of detonation or of explosive decomposition or explosive reaction but which require a strong initiating source or which must be heated under confinement before initiation. This class includes materials that are sensitive to thermal or mechanical shock at elevated temperatures and pressures.

Class 2. Materials that in themselves are normally unstable and readily undergo violent chemical change but do not detonate. This class includes materials that can undergo chemical change with rapid release of energy at normal temperatures and pressures, and that can undergo violent chemical change at elevated temperatures and pressures.

Class 1. Materials that in themselves are normally stable but which can become unstable at elevated temperatures and pressure.

WATER-REACTIVE MATERIAL. A material that explodes; violently reacts; produces flammable, toxic or other hazardous gases; or evolves enough heat to cause self-ignition or ignition of nearby combustibles upon exposure to water or moisture. Water-reactive materials are subdivided as follows:

Class 3. Materials that react explosively with water without requiring heat or confinement.

Class 2. Materials that may form potentially explosive mixtures with water.

Class 1. Materials that may react with water with some release of energy, but not violently.

307.3 Group H-1 structures. Buildings and structures that contain materials that pose a detonation hazard, shall be classified as Group H-1. Such materials shall include, but not be limited to:

- Explosives
- Organic peroxides, unclassified detonable
- Oxidizers, Class 4
- Unstable (reactive) materials, Class 3 detonable and Class 4
- Detonable pyrophoric materials

307.4 Group H-2 structures. Buildings and structures which contain materials that pose a deflagration hazard or a hazard from accelerated burning, shall be classified as Group H-2. Such materials shall include, but not be limited to:

Class I, or II or IIIA flammable or combustible liquids that are used or stored in normally open containers or systems, or in closed containers or systems pressurized at more than 15 pounds per square inch gauge (103 kPa).

- Combustible dusts
- Cryogenic liquids, flammable
- Flammable gases
- Organic peroxides, Class I
- Oxidizers, Class 3, that are used or stored in normally open containers or systems, or in closed containers or systems pressurized at more than 15 pounds per square inch gauge (103 kPa).
- Pyrophoric liquids, solids and gases, nondetonable
- Unstable (reactive) materials, Class 3, nondetonable
- Water-reactive materials, Class 3

307.5 Group H-3 structures. Buildings and structures that contain materials that readily support combustion or pose a physical hazard, shall be classified as Group H-3. Such materials shall include but not be limited to:

Class I, II or III A flammable or combustible liquids that are used or stored in normally closed containers or systems pressurized at less than 15 pounds per square inch gauge (103 kPa).

- Combustible fibers
- Consumer fireworks, 1.4G (Class C, Common)
- Cryogenic liquids, oxidizing
- Flammable solids
- Organic peroxides, Class II and Class III
- Oxidizers, Class 1 and Class 2
- Oxidizers, Class 3, that are used or stored in normally closed containers or systems pressurized at less than 15 pounds per square inch gauge (103 kPa)
- Oxidizing gases
- Unstable (reactive) materials, Class 2
- Water-reactive materials, Class 2

307.6 Group H-4 structures. Buildings and structures that contain materials that are health hazards, shall be classified as Group H-4. Such materials shall include, but not be limited to:

- Corrosives
- Highly toxic materials
- Toxic materials

307.7 Group H-5 structures. Semiconductor fabrication facilities and comparable research and development areas in which hazardous production materials (HPM) are used and the aggregate quantity of materials is in excess of those listed in Tables 307.7(1) and 307.7(2). Such facilities and areas shall be designed and constructed in accordance with Section 415.9.

307.8 Multiple hazards. Buildings and structures containing a material or materials representing hazards that are classified in one or more of Groups H-1, H-2, H-3 and H-4, shall conform to the code requirements for each of the occupancies so classified.

307.9 Exceptions: The following shall not be classified in Group H, but shall be classified in the occupancy which they most nearly resemble. Hazardous materials in any quantity shall conform to the requirements of this code, including Section 414, and the *International Fire Code*.

1. Buildings and structures that contain not more than the maximum allowable quantities per control area of hazardous materials as shown in Tables 307.7(1) and 307.7(2) provided that such buildings are maintained in accordance with the *International Fire Code*.
2. Buildings utilizing control areas in accordance with Section 414.2 that contain not more than the maximum allowable quantities per control area of hazardous materials as shown in Tables 307.7(1) and 307.7(2).

3. Buildings and structures occupied for the application of flammable finishes, provided that such buildings or areas conform to the requirements of Section 416 and NFPA 33, NFPA 34 and the *International Fire Code*.
4. Wholesale and retail sales and storage of flammable and combustible liquids in mercantile occupancies conforming to NFPA 30 and the *International Fire Code*.
5. Closed systems housing flammable or combustible liquids or gases utilized for the operation of machinery or equipment.
6. Cleaning establishments that utilize combustible liquid solvents having a flash point of 140°F (60°C) or higher in closed systems employing equipment listed by an approved testing agency, provided that this occupancy is separated from all other areas of the building by 1-hour fire-resistance-rated fire barrier walls or horizontal assemblies or both.
7. Cleaning establishments which utilize a liquid solvent having a flash point at or above 200°F (93°C).
8. Liquor stores and distributors without bulk storage.
9. Refrigeration systems.
10. The storage or utilization of materials for agricultural purposes on the premises.
11. Stationary batteries utilized for facility emergency power, uninterrupted power supply or telecommunication facilities provided that the batteries are provided with safety venting caps and ventilation is provided in accordance with the *International Mechanical Code*.
12. Corrosives, shall not include personal or household products in their original packaging used in retail display or commonly used building materials.
13. Buildings and structures occupied for aerosol manufacturing or storage shall be classified as Group F-1 or S-1, provided that such buildings conform to the requirements of NFPA 30B and the *International Fire Code*.
14. Display and storage of nonflammable solid and nonflammable or noncombustible liquid hazardous materials in quantities not exceeding the maximum allowable quantity per control area in Group M or S occupancies complying with Section 414.2.4.
15. The storage of black powder, smokeless propellant and small arms primers in Groups M and R-3 and special industrial explosive devices in Groups B, F, M and S, provided such storage conforms to the quantity limits and requirements prescribed in the *International Fire Code*.

SECTION 308 INSTITUTIONAL GROUP I

308.1 Institutional Group I. Institutional Group I occupancy includes, among others, the use of a building or structure, or a portion thereof, in which people having physical limitations because of health or age are harbored for medical treatment or other care or treatment, or in which people are detained for penal or correctional purposes or in which the liberty of the occupants is restricted. Institutional occupancies shall be classified as Group I-1, I-2, I-3 or I-4.

308.2 Group I-1. This occupancy shall include a building or part thereof housing more than 16 persons, on a 24-hour basis, who because of age, mental disability or other reasons, live in a supervised residential environment that provides personal care services. The occupants are capable of responding to an emergency situation without physical assistance from staff. This group shall include, but not be limited to, the following: residential board and care facilities, assisted living facilities, half-way houses, group homes, congregate care facilities, social rehabilitation facilities, alcohol and drug centers and convalescent facilities. A facility such as the above with five or fewer persons shall be classified as Group R-3. A facility such as above, housing at least six and not more than 16 persons shall be classified as Group R-4.

308.3 Group I-2. This occupancy shall include buildings and structures used for medical, surgical, psychiatric, nursing or custodial care on a 24-hour basis of more than five persons who are not capable of self-preservation. This group shall include, but not be limited to the following: hospitals, nursing homes (both intermediate care facilities and skilled nursing facilities), mental hospitals and detoxification facilities. A facility such as the above with five or fewer persons shall be classified as Group R-3.

308.3.1 Child care facility. A child care facility that provides care on a 24-hour basis to more than five children 2½ years of age or less shall be classified as Group I-2.

308.4 Group I-3. This occupancy shall include buildings and structures that are inhabited by more than five persons who are under restraint or security. An I-3 facility is occupied by persons who are generally incapable of self-preservation due to security measures not under the occupants' control. This group shall include, but not be limited to, the following: prisons, jails, reformatories, detention centers, correctional centers and prerelease centers. Buildings of Group I-3 shall be classified as one of the occupancy conditions indicated in Sections 308.4.1 through 308.4.5 (see Section 408.1).

TABLE 307.7(1)

USE AND OCCUPANCY CLASSIFICATION

[F] TABLE 307.7(1)
 MAXIMUM ALLOWABLE QUANTITY PER CONTROL AREA OF HAZARDOUS MATERIALS
 POSING A PHYSICAL HAZARD^{a, j}

MATERIAL	CLASS	GROUP WHEN THE MAXIMUM ALLOWABLE QUANTITY IS EXCEEDED	STORAGE ^b			USE-CLOSED SYSTEMS ^b			USE-OPEN SYSTEMS ^b	
			Solid pounds (cubic feet)	Liquid gallons (pounds)	Gas (cubic feet)	Solid pounds (cubic feet)	Liquid gallons (pounds)	Gas (cubic feet)	Solid pounds (cubic feet)	Liquid gallons (pounds)
Combustible liquid ^{c,i}	II IIIA IIIB	H-2 or H-3 H-2 or H-3	N/A	120 ^{d,e} 330 ^{d,e} 13,200 ^{e,f}	N/A	N/A	120 ^d 330 ^d 13,200 ^{e,f}	N/A	N/A	(1/4) ^g 80 ^d 3,300 ^f
Combustible fiber	Loose Baled	H-3	(100) (1,000)	N/A	N/A	(100) (1,000)	N/A	N/A	(20) (200)	N/A
Consumer fireworks (Class C, Common)	1.4G	H-3	125 ^{d,e,l}	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cryogenics, flammable		H-2	N/A	45 ^d	N/A	N/A	45 ^d	N/A	N/A	10 ^d
Cryogenics, oxidizing	N/A	H-3	N/A	45 ^d	N/A	N/A	45 ^d	N/A	N/A	10 ^d
Explosives		H-1	1 ^{e,g}	(1) ^{e,g}	N/A	0.25 ^g	0.25 ^g	N/A	0.25 ^g	0.25 ^g
Flammable gas	Gaseous Liquefied	H-2	N/A	N/A 30 ^{d,e}	1,000 ^{d,e} N/A	N/A	N/A 30 ^{d,e}	1000 ^{d,e} N/A	N/A	N/A
Flammable liquid ^c	1A IB 1C	H-2 or H-3	N/A	30 ^{d,e} 60 ^{d,e} 90 ^{d,e}	N/A	N/A	30 ^d 60 ^d 90 ^d	N/A	N/A	10 ^d 15 ^d 20 ^d
Combination Flammable Liquid (1A,1B,1C)		H-2 or H-3	N/A	120 ^{d,e,h}	N/A	N/A	120 ^{d,h}	N/A	N/A	30 ^{d,h}
Flammable Solid		H-3	125 ^{d,e}	N/A	N/A	125 ^d	N/A	N/A	25 ^d	N/A
Organic peroxide	UD I II III IV V	H-1 H-2 H-3 H-3	1 ^{e,f} 5 ^{d,e} 50 ^{d,e} 125 ^{d,e} NL NL	(1) ^{e,g} (5) ^{d,e} (50) ^{d,e} (125) ^{d,e} NL NL	N/A N/A N/A N/A N/A N/A	0.25 ^g 1 ^d 50 ^d 125 ^d NL NL	0.25 ^g (1) ^d (50) ^d (125) ^d NL NL	N/A N/A N/A N/A N/A N/A	0.25 ^g 1 ^d 10 ^d 25 ^d NL NL	0.25 ^g (1) ^d (10) ^d (25) ^d NL NL
Oxidizer	1 ^{e,g} 3 ^k 2 1	H-1 H-2 H-3 H-3	1 ^{e,g} 10 ^{d,e} 250 ^{d,e} 4,000 ^{d,e}	(1) ^{e,g} (10) ^{d,e} (250) ^{d,e} (4,000) ^{d,e}	N/A N/A N/A N/A	0.25 ^g 2 ^d 250 ^d 4,000 ^d	0.25 ^g (2) ^d (250) ^d (4,000) ^d	N/A N/A N/A N/A	0.25 ^g 2 ^d 50 ^d 1,000 ^d	0.25 ^g (2) ^d (50) ^d (1,000) ^d
Oxidizing gas	Gaseous Liquefied	H-3	N/A N/A	N/A 15 ^{d,e}	1,500 ^{d,e} N/A	N/A N/A	N/A 15 ^{d,e}	1,500 ^{d,e} N/A	N/A N/A	N/A N/A
Pyrophoric material		H-2	4 ^{e,g}	(4) ^{e,g}	50 ^{e,g}	1 ^g	(1) ^g	10 ^{e,g}	0	0
Unstable (reactive)	4 3 2 1	H-1 H-1 or H-2 H-3	1 ^{e,g} 5 ^{d,e} 50 ^{d,e} NL	(1) ^{e,g} (5) ^{d,e} (50) ^{d,e} NL	10 ^{d,g} 50 ^{d,e} 250 ^{d,e} NL	0.25 ^g 1 ^d 50 ^d NL	0.25 ^g (1) ^d (50) ^d NL	2 ^{e,g} 10 ^{d,e} 250 ^{d,e} NL	0.25 ^g 1 ^d 10 ^d NL	0.25 ^g (1) ^d (10) ^d NL
Water reactive	3 2 1	H-2 H-3	5 ^{d,e} 50 ^{d,e} NL	(5) ^{d,e} (50) ^{d,e} NL	N/A N/A N/A	5 ^d 50 ^d NL	(5) ^d (50) ^d NL	N/A N/A N/A	1 ^d 10 ^d NL	(1) ^d (10) ^d NL

USE AND OCCUPANCY CLASSIFICATION

TABLE 307.7(2)

Notes to Table 307.7(1).

For SI: 1 cubic foot = 0.023 m³, 1 pound = 0.454 kg, 1 gallon = 3.785 L.

NL = Not Limited; N/A = Not Applicable

- a. For use of control areas, see Section 414.2.
- b. The aggregate quantity in use and storage shall not exceed the quantity listed for storage.
- c. The quantities of alcoholic beverages in retail and wholesale sales occupancies shall not be limited providing the liquids are packaged in individual containers not exceeding 1.3 gallons. In retail and wholesale sales occupancies, the quantities of medicines, foodstuffs, consumer or industrial products, and cosmetics containing not more than 50 percent by volume of water-miscible liquids with the remainder of the solutions not being flammable shall not be limited, provided that such materials are packaged in individual containers not exceeding 1.3 gallons.
- d. Maximum quantities shall be increased 100 percent in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1. Where Note e also applies, the increase for both notes shall be applied accumulatively.
- e. Quantities shall be increased 100 percent when stored in approved cabinets, gas cabinets, exhausted enclosures, or safety cans as specified in the *International Fire Code*. Where Note d also applies, the increase for both notes shall be applied accumulatively.
- f. The permitted quantities shall not be limited in a building equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.
- g. Permitted only in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.
- h. Containing not more than the maximum allowable quantity per control area of Class IA, Class IB or Class IC flammable liquids.
- i. Inside a building, the maximum capacity of a combustible liquid storage system that is connected to a fuel-oil piping system shall be 660 gallons provided such system conforms to the *International Fire Code*.
- j. Quantities in parenthesis indicate quantity units in parenthesis at the head of each column.
- k. A maximum quantity of 200 pounds of solid or 20 gallons of liquid Class 3 oxidizers is allowed when such materials are necessary for maintenance purposes, operation or sanitation of equipment. Storage containers and the manner of storage shall be approved.
- l. Net weight of the pyrotechnic composition of the fireworks. Where the net weight of the pyrotechnic composition of the fireworks is not known, 25 percent of the gross weight of the fireworks including packaging shall be used.

[F] TABLE 307.7(2)
 MAXIMUM ALLOWABLE QUANTITY PER CONTROL AREA OF HAZARDOUS MATERIAL
 POSING A HEALTH HAZARD^{a,b,c}

MATERIAL	STORAGE ^d			USE-CLOSED SYSTEMS ^d			USE-OPEN SYSTEMS ^d	
	Solid pounds ^{e,f}	Liquid gallons (pounds) ^{e,f}	Gas cubic feet ^e	Solid pounds ^e	Liquid gallons (pounds) ^e	Gas cubic feet ^e	Solid pounds ^e	Liquid gallons (pounds) ^e
Corrosive	5,000	500	810 ^g	5,000	500	810 ^g	1,000	100
Highly toxic	10	(10) ⁱ	20 ^h	10	(10) ⁱ	20 ^h	3	(3) ⁱ
Toxic	500	(500) ⁱ	810 ^f	500	(500) ⁱ	810 ^f	125	(125) ⁱ

SI: 1 cubic foot = 0.028 m³, 1 pound = 0.454 kg, 1 gallon = 3.785 L.

- a. For use of control areas, see Section 414.2.
- b. In retail and wholesale sales occupancies, the quantities of medicines, foodstuffs, consumer or industrial products, and cosmetics, containing not more than 50 percent by volume of water-miscible liquids and with the remainder of the solutions not being flammable, shall not be limited, provided that such materials are packaged in individual containers not exceeding 1.3 gallons.
- c. For storage and display quantities in Group M and storage quantities in Group S occupancies complying with Section 414.2.4, see Table 414.2.4.
- d. The aggregate quantity in use and storage shall not exceed the quantity listed for storage.
- e. Quantities shall be increased 100 percent in buildings equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1. Where Note f also applies, the increase for both notes shall be applied accumulatively.
- f. Quantities shall be increased 100 percent when stored in approved storage cabinets, gas cabinets, or exhausted enclosures as specified in the *International Fire Code*. Where Note e also applies, the increase for both notes shall be applied accumulatively.
- g. A single cylinder containing 150 pounds or less of anhydrous ammonia in a single control area in a nonsprinklered building shall be considered a maximum allowable quantity. Two cylinders, each containing 150 pounds or less in a single control area shall be considered a maximum allowable quantity provided the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.
- h. Allowed only when stored in approved exhausted gas cabinets or exhausted enclosures as specified in the *International Fire Code*.
- i. Quantities in parenthesis indicate quantity units in parenthesis at the head of each column.

308.4.1 – 310.1

USE AND OCCUPANCY CLASSIFICATION

308.4.1 Condition 1. This occupancy condition shall include buildings in which free movement is allowed from sleeping areas, and other spaces where access or occupancy is permitted, to the exterior via means of egress without restraint. A Condition 1 facility is permitted to be constructed as Group R.

308.4.2 Condition 2. This occupancy condition shall include buildings in which free movement is allowed from sleeping areas and any other occupied smoke compartment to one or more other smoke compartments. Egress to the exterior is impeded by locked exits.

308.4.3 Condition 3. This occupancy condition shall include buildings in which free movement is allowed within individual smoke compartments, such as within a residential unit comprised of individual sleeping rooms and group activity spaces, where egress is impeded by remote-controlled release of means of egress from such a smoke compartment to another smoke compartment.

308.4.4 Condition 4. This occupancy condition shall include buildings in which free movement is restricted from an occupied space. Remote-controlled release is provided to permit movement from sleeping rooms, activity spaces and other occupied areas within the smoke compartment to other smoke compartments.

308.4.5 Condition 5. This occupancy condition shall include buildings in which free movement is restricted from an occupied space. Staff-controlled manual release is provided to permit movement from sleeping rooms, activity spaces and other occupied areas within the smoke compartment to other smoke compartments.

308.5 Group I-4, day care facilities. This group shall include buildings and structures occupied by persons of any age who receive custodial care for less than 24 hours by individuals other than parents or guardians, relatives by blood, marriage, or adoption, and in a place other than the home of the person cared for. A facility such as the above with five or fewer persons shall be classified as a Group R-3. Places of worship during religious functions are not included.

308.5.1 Adult care facility. A facility that provides accommodations for less than 24 hours for more than five unrelated adults and provides supervision and personal care services.

308.5.2 Child care facility. A facility, that provides supervision and personal care on less than a 24-hour basis for more than five children 2½ years of age or less shall be classified as Group I-4.

Exception: A child day care facility that provides care for more than five but no more than 100 children 2½

years or less of age, when the rooms where such children are cared for are located on the level of exit discharge and each of these child care rooms has an exit door directly to the exterior, shall be classified as Group E.

**SECTION 309
MERCANTILE GROUP M**

309.1 Mercantile Group M. Mercantile Group M occupancy includes, among others, buildings and structures or a portion thereof, for the display and sale of merchandise, and involves stocks of goods, wares or merchandise incidental to such purposes and accessible to the public. Mercantile occupancies shall include, but not be limited to, the following:

- Department stores
- Drug stores
- Markets
- Motor vehicle service stations
- Retail or wholesale stores
- Sales rooms

309.2 Quantity of hazardous materials. The aggregate quantity of nonflammable solid and nonflammable or non-combustible liquid hazardous materials stored or displayed in a single control area of a Group M occupancy shall not exceed the quantities in Table 414.2.4.

**SECTION 310
RESIDENTIAL GROUP R**

310.1 Residential Group R. Residential Group R occupancy includes, among others, the use of a building or structure, or a portion thereof, for sleeping accommodations when not classed as an Institutional Group I. Residential occupancies shall include the following:

- R-1** Residential occupancies where the occupants are primarily transient in nature (less than 30 days) including:
 - Boarding houses (transient)
 - Hotels (including motels)
- R-2** Residential occupancies containing more than two dwelling units where the occupants are primarily permanent in nature, including:
 - Apartment houses
 - Boarding houses (not transient)
 - Convents
 - Dormitories
 - Fraternities and sororities
 - Monasteries

R-3 Residential occupancies where the occupants are primarily permanent in nature and not classified as R-1,

USE AND OCCUPANCY CLASSIFICATION

310.2 – 311.3

R-2 or I and where buildings do not contain more than two dwelling units, or adult and child care facilities that provide accommodations for five or fewer persons of any age for less than 24 hours.

R-4 Residential occupancies shall include buildings arranged for occupancy as Residential Care/Assisted Living Facilities including more than five but not more than 16 occupants, excluding staff.

Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3 except for the height and area limitations provided in Section 503.

310.2 Definitions. The following words and terms shall, for the purposes of this section and as used elsewhere in this code, have the meanings shown herein.

BOARDING HOUSE. A building arranged or used for lodging for compensation, with or without meals, and not occupied as a single-family unit.

DORMITORY. A space in a building where group sleeping accommodations are provided in one room, or in a series of closely associated rooms, for persons not members of the same family group, under joint occupancy and single management, as in college dormitories or fraternity houses.

DWELLING UNIT. A single unit providing complete, independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking and sanitation.

PERSONAL CARE SERVICE. The care of residents who do not require chronic or convalescent medical or nursing care. Personal care involves responsibility for the safety of the resident while inside the building.

RESIDENTIAL CARE/ASSISTED LIVING FACILITIES. A building or part thereof housing a maximum of 16 persons, on a 24-hour basis, who because of age, mental disability or other reasons, live in a supervised residential environment which provides personal care services. The occupants are capable of responding to an emergency situation without physical assistance from staff. This classification shall include, but not be limited to, the following: residential board and care facilities, assisted living facilities, halfway houses, group homes, congregate care facilities, social rehabilitation facilities, alcohol and drug abuse centers and convalescent facilities. Residential care/assisted living facilities housing more than 16 persons shall be classified as a Group I-1.

310.3 Required dwelling unit and guestroom separation. Walls and floors separating dwelling units in the same building, or guestrooms in Group R-1 hotel occupancies, shall be

fire partitions or horizontal assemblies as required by Sections 708 and 710.

SECTION 311 STORAGE GROUP S

311.1 Storage Group S. Storage Group S occupancy includes among others, the use of a building or structure, or a portion thereof, for storage that is not classified as a hazardous occupancy.

311.2 Moderate-hazard storage, Group S-1. Buildings occupied for storage uses which are not classified as Group S-2 including, but not limited, to storage of the following:

- Aerosols, Level 2 and Level 3
- Aircraft hangars
- Bags, cloth, burlap and paper
- Bamboos and rattan
- Baskets
- Belting, canvas and leather
- Books and paper in rolls or packs
- Boots and shoes
- Buttons, including cloth covered, pearl or bone
- Cardboard and cardboard boxes
- Clothing, woolen wearing apparel
- Cordage
- Furniture
- Furs
- Glues, mucilage, pastes and size
- Grains
- Horns and combs, other than celluloid
- Leather
- Linoleum
- Lumber
- Motor vehicle repair garages complying with the maximum allowable quantities of hazardous materials listed in Table 307.7(1). (See Section 406.6.)
- Petroleum warehouses for storage of lubricating oils with a flash point of 200°F (93°C) or higher
- Photo engravings
- Resilient flooring
- Silks
- Soaps
- Sugar
- Tires, bulk storage of
- Tobacco, cigars, cigarettes and snuff
- Upholstery and mattresses
- Wax candles

311.3 Low-hazard storage, Group S-2. Includes, among others, buildings used for the storage of noncombustible materials such as products on wood pallets or in paper cartons with or without single thickness divisions; or in paper wrappings. Such products may have a negligible amount of plastic trim such as knobs, handles or film wrapping. Storage uses include, but are only limited to, storage of the following:

Asbestos	Sheds
Beer or wine up to 12-percent alcohol in metal, glass or ceramic containers	Stables
Cement in bags	Tanks
Chalk and crayons	Towers
Dairy products in nonwaxed coated paper containers	
Dry cell batteries	
Electrical coils	
Electrical motors	
Empty cans	
Food products	
Foods in noncombustible containers	
Fresh fruits and vegetables in nonplastic trays or containers	
Frozen foods	
Glass	
Glass bottles, empty or filled with noncombustible liquids	
Gypsum board	
Inert pigments	
Ivory	
Meats	
Metal cabinets	
Metal desks with plastic tops and trim	
Metal parts	
Metals	
Mirrors	
Oil-filled and other types of distribution transformers	
Parking garages, open or enclosed	
Porcelain and pottery	
Stoves	
Talc and soapstones	
Washers and dryers	

SECTION 312 UTILITY AND MISCELLANEOUS GROUP U

312.1 General. Buildings and structures of an accessory character and miscellaneous structures not classified in any specific occupancy shall be constructed, equipped and maintained to conform to the requirements of this code commensurate with the fire and life hazard incidental to their occupancy. Group U shall include, but not be limited to, the following:

- Agricultural buildings
- Aircraft hangars, accessory to a one- or two-family residence (See Section 412.3)
- Barns
- Carports
- Fences more than 6 feet (1829 mm) high
- Grain silos, accessory to a residential occupancy
- Greenhouses
- Livestock shelters
- Private garages
- Retaining walls

CHAPTER 4 SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY

SECTION 401 SCOPE

401.1 Detailed use and occupancy requirements. In addition to the occupancy and construction requirements in this code, the provisions of this chapter apply to the special uses and occupancies described herein.

SECTION 402 COVERED MALL BUILDINGS

402.1 Scope. The provisions of this section shall apply to buildings or structures defined herein as covered mall buildings not exceeding three floor levels at any point nor more than three stories above grade. Except as specifically required by this section, covered mall buildings shall meet applicable provisions of this code.

Exceptions:

1. Foyers and lobbies of Groups B, R-1 and R-2 are not required to comply with this section.
2. Buildings need not comply with the provisions of this section where they totally comply with other applicable provisions of this code.

402.2 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

ANCHOR BUILDING. An exterior perimeter building of a Group other than H having direct access to a covered mall building but having required means of egress independent of the mall.

COVERED MALL BUILDING. A single building enclosing a number of tenants and occupants such as retail stores, drinking and dining establishments, entertainment and amusement facilities, passenger transportation terminals, offices, and other similar uses wherein two or more tenants have a main entrance into one or more malls. For the purpose of this chapter, anchor buildings shall not be considered as a part of the covered mall building.

FOOD COURT. A public seating area located in the mall that serves adjacent food preparation tenant spaces.

GROSS LEASABLE AREA. The total floor area designed for tenant occupancy and exclusive use. The area of tenant occupancy is measured from the centerlines of joint partitions

to the outside of the tenant walls. All tenant areas, including areas used for storage, shall be included in calculating gross leasable area.

MALL. A roofed or covered common pedestrian area within a covered mall building that serves as access for two or more tenants and not to exceed three levels that are open to each other.

402.3 Lease plan. Each covered mall building owner shall provide both the building and fire departments with a lease plan showing the location of each occupancy and its exits after the certificate of occupancy has been issued. No modifications or changes in occupancy or use shall be made from that shown on the lease plan without prior approval of the building official.

402.4 Means of egress. Each tenant space and the covered mall building shall be provided with means of egress as required by this section and this code. Where there is a conflict between the requirements of this code and the requirements of this section, the requirements of this section shall apply.

402.4.1 Determination of occupant load. The occupant load permitted in any individual tenant space in a covered mall building shall be determined as required by this code. Means of egress requirements for individual tenant spaces shall be based on the occupant load thus determined.

402.4.1.1 Occupant formula. In determining required means of egress of the mall, the number of occupants for whom means of egress are to be provided shall be based on gross leasable area of the covered mall building (excluding anchor buildings) and the occupant load factor as determined by the following equation.

$$OLF = (0.00007) (GLA) + 25 \quad \text{(Equation 4-1)}$$

where:

OLF = The occupant load factor (square feet per person).

GLA = The gross leasable area (square feet).

402.4.1.2 OLF range. The occupant load factor (*OLF*) is not required to be less than 30 and shall not exceed 50.

402.4.1.3 Anchor buildings. The occupant load of anchor buildings opening into the mall shall not be included in computing the total number of occupants for the mall.