

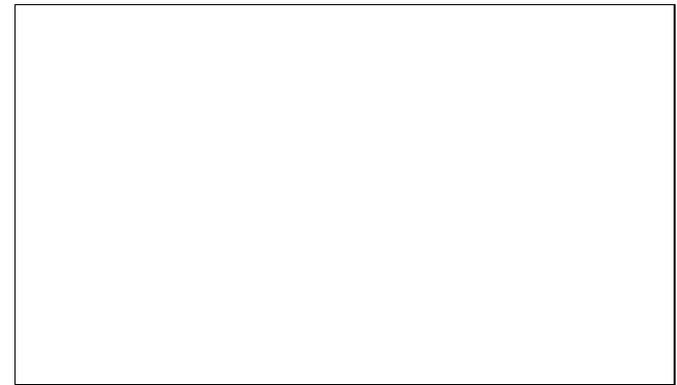
# ***INTERNATIONAL CODE COUNCIL***

Setting the Standard for Building Safety

TM



## **ICC Introductory Overview of Fire Protection Requirements of the International Codes**





*Setting the Standard for Building Safety*  
[www.iccsafe.org](http://www.iccsafe.org)

# *Purpose*

---

**Familiarize DOE Fire Protection staff with fire protection requirements contained in the International Building and Fire Codes®.**



# *Expected Outcome*

---

**A better understanding by DOE Staff of:**

- The ICC**
- I-Codes**
- ICC support infrastructure for I-Code users**



# ***DOE SAFETY STATEMENT:***

## **Good Practices in safety management:**

**A major concept of integrated safety management is the integration of safety awareness and good practices into all aspects of work conducted at DOE. Simply stated, work should be conducted in such a manner that protects workers and people, and does not cause harm to the environment.**





# ***ICC Goals***

**Safeguard public health, safety and welfare**

**Enhance economic development**

**Streamline the building regulatory system**

**Advance innovation**



*Setting the Standard for Building Safety*  
[www.iccsafe.org](http://www.iccsafe.org)



# The International Code Council®

**A 50,000-member association  
dedicated to public safety in the built environment.**

**Leads the process by which the codes regulating design and  
construction of residential and commercial buildings,  
including homes and schools, are developed.**



*Setting the Standard for Building Safety*  
[www.iccsafe.org](http://www.iccsafe.org)

# ***INTERNATIONAL CODE COUNCIL***®

**Not Just Codes but a  
Complete Building  
Regulatory System**



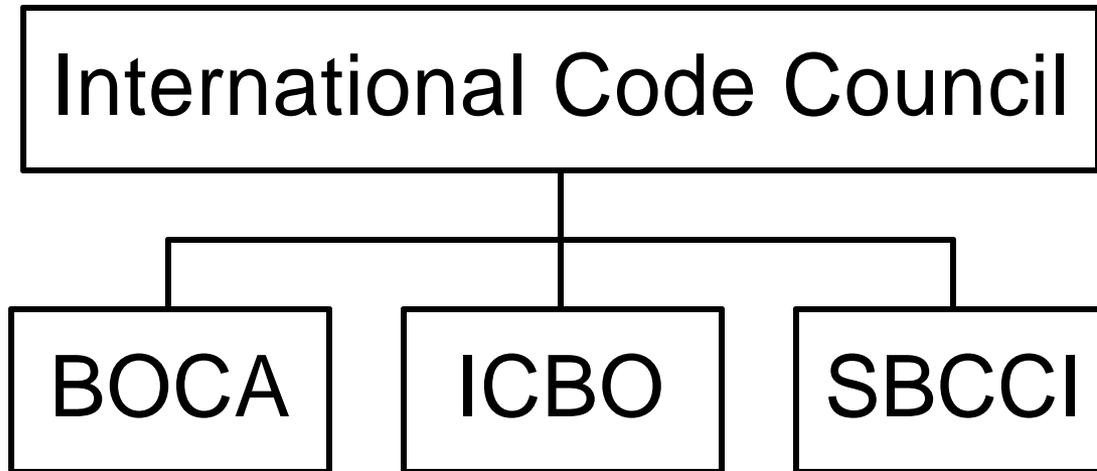
**Mission: to develop a  
comprehensive and compatible  
regulatory system for the built  
environment ...**



*Setting the Standard for Building Safety*  
[www.iccsafe.org](http://www.iccsafe.org)

# ***Built on a Solid Foundation***

---



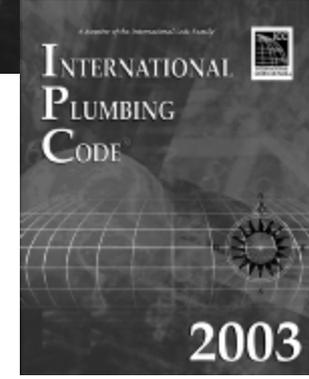
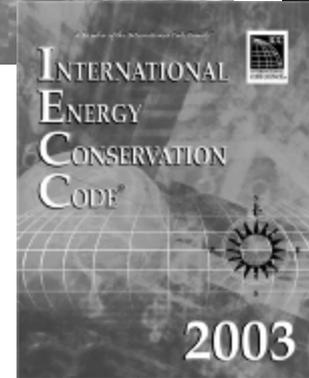
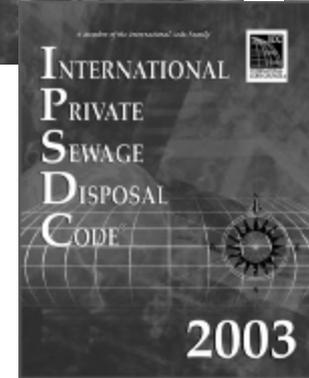
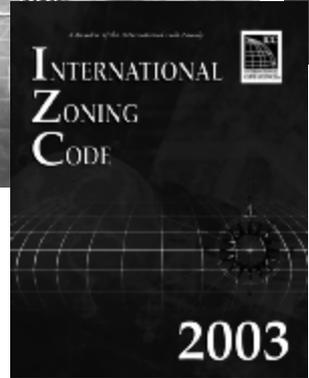
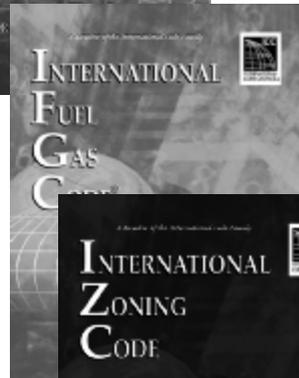
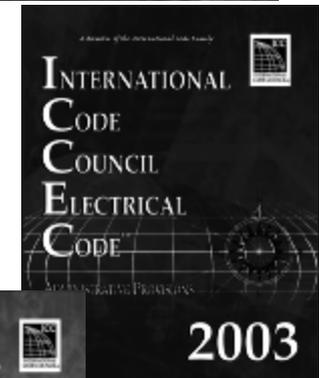
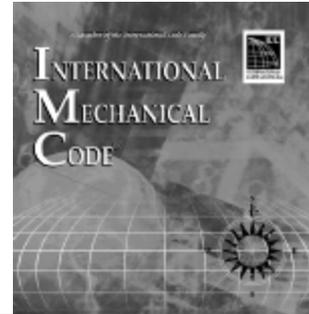
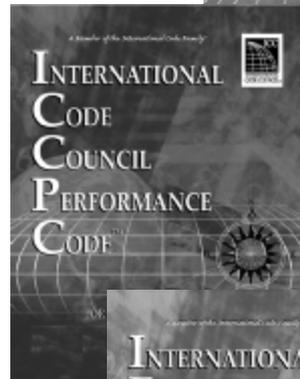
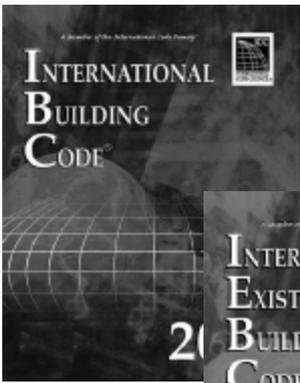
- **Over 340 highly trained staff in 15 U.S. and 2 international locations**
- **Widespread recognition throughout the U.S.**
- **A history of support for public safety**



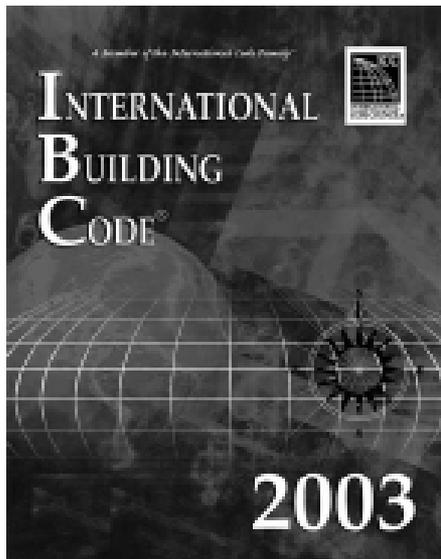
*Setting the Standard for Building Safety*  
[www.iccsafe.org](http://www.iccsafe.org)

# *International Codes*

The I-Codes are a complete family of 14 compatible codes that complement each other.



*Setting the Standard for Building Safety*  
[www.iccsafe.org](http://www.iccsafe.org)



# ***International Building Code***

**Regulations for the design and installation  
of building systems, components  
and protection schemes  
that emphasize performance.**



*Setting the Standard for Building Safety*  
[www.iccsafe.org](http://www.iccsafe.org)



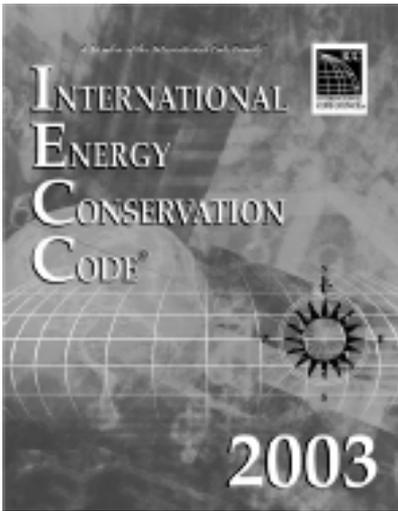
# ***International Fire Code***

**Construction and Maintenance requirements  
Coordinated with the  
International Building Code.**

**References national standards  
to comprehensively address fire safety  
in new and existing buildings.**



*Setting the Standard for Building Safety*  
[www.iccsafe.org](http://www.iccsafe.org)



# ***International Energy Conservation Code***

**Provides prescriptive and performance-based approaches to energy-efficient design, and building envelope requirements for thermal performance and air leakage, for residential and commercial buildings.**

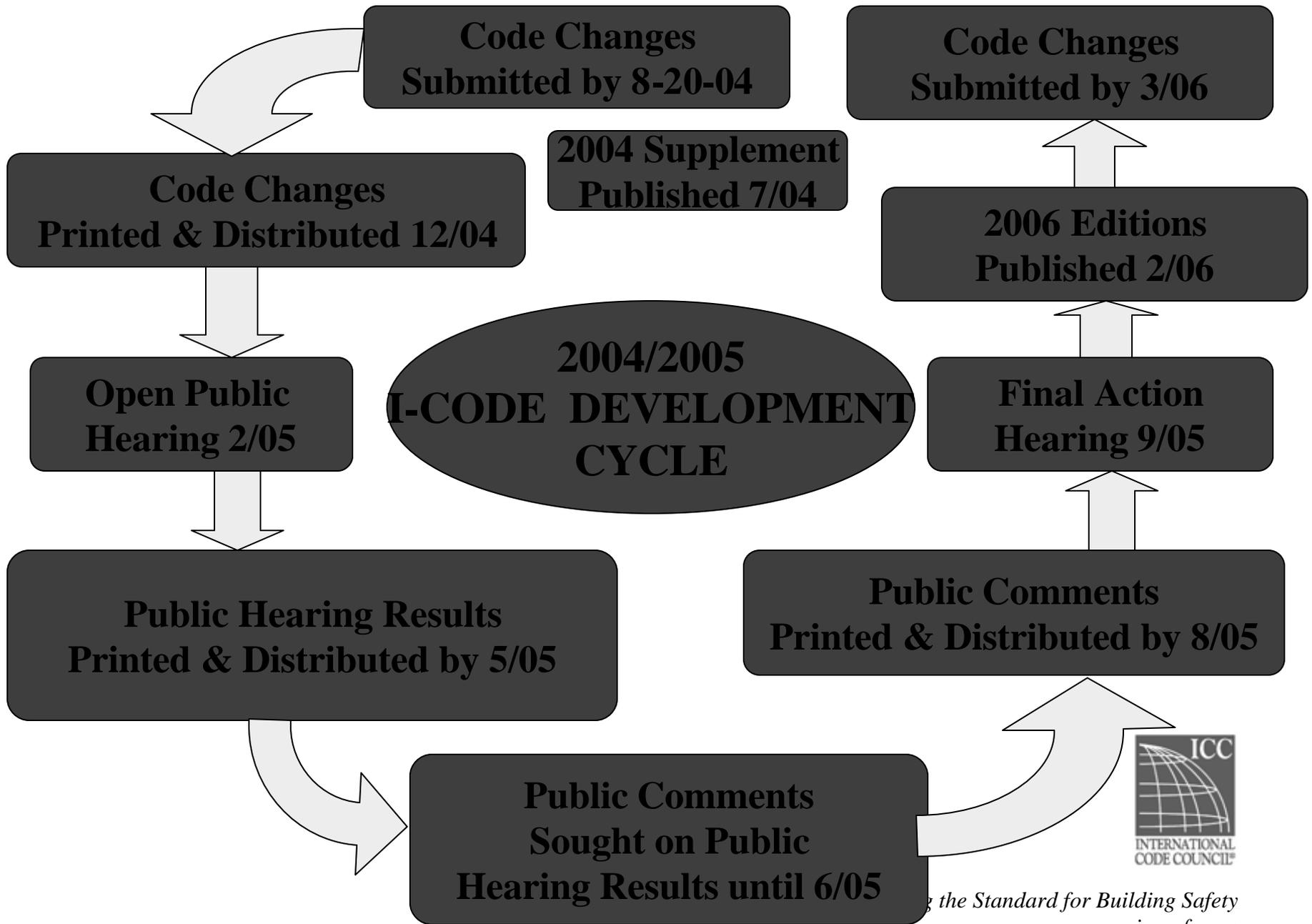


# *ICC Code Development*

---

- Any person, corporation or entity can participate
- Regulatory-based consensus
- Predictable agenda
- Two cycles every three years
- Two hearings per cycle





# *Public Buildings Amendments of 1988 U.S.C. 3312*

*The Public Buildings Amendments of 1988,  
40 U.S.C. 3312 require that ....*

**Each building constructed or altered by GSA  
or any other federal agency shall, to the  
maximum extent feasible, be in compliance  
with one of the nationally recognized model  
building codes and with other applicable  
nationally recognized codes.**



# ***Federal Agency Recognition***

---

- **ATBCB**
- **CPSC**
- **DOE, Energy Efficiency and Renewable Energy**
- **DOE, Environment Safety and Health**
- **DOI, National Park Service, DO #50B**
- **DoD, Tri Services**
- **DoS, Office of Overseas Building Operations**
- **EPA, Indoor Air Quality**
- **FEMA, Flood insurance & Mitigation**
- **GSA, Facilities Standards**
- **HUD Fair Housing, PD&R and FHA**
- **OMB A-119**
- **USDA, Rural Housing Service**



# ***Federal Agency Interaction***

---

## **Federal Agency Codes and Standards Forum**

- **Initiated operation January 9th (next meeting July 12)**
- **Foster an enhanced working relationship between the ICC and the Federal government**
- **Facilitate a better understanding of the individual and collective needs of the Federal agencies with respect to building codes and standards**
- **Address individual and collective needs of the agencies**



# ***State & Local Code Adoptions***

---

- **IBC is in use in 44 states (32 statewide)**
- **IFC is in use in 32 states (16 statewide)**
- **IRC is in use in 42 states (23 statewide)**
- **IPC is in use in 34 states, D.C. & P.R. (20 statewide)**
- **IMC is in use in 44 states & D.C.(30 statewide)**
- **IECC is in use in 27 states (15 statewide)**
- **IFGC is in use in 38 states (19 statewide)**
- **IPMC is in use in 27 states (7 statewide)**



# State and Local Code Adoption



Updated: 03/24/04



One or more International Codes currently enforced statewide



One or more International Codes enforced within state at local level



Adopted statewide with future enforcement date



# ***ICC Code Support Infrastructure***

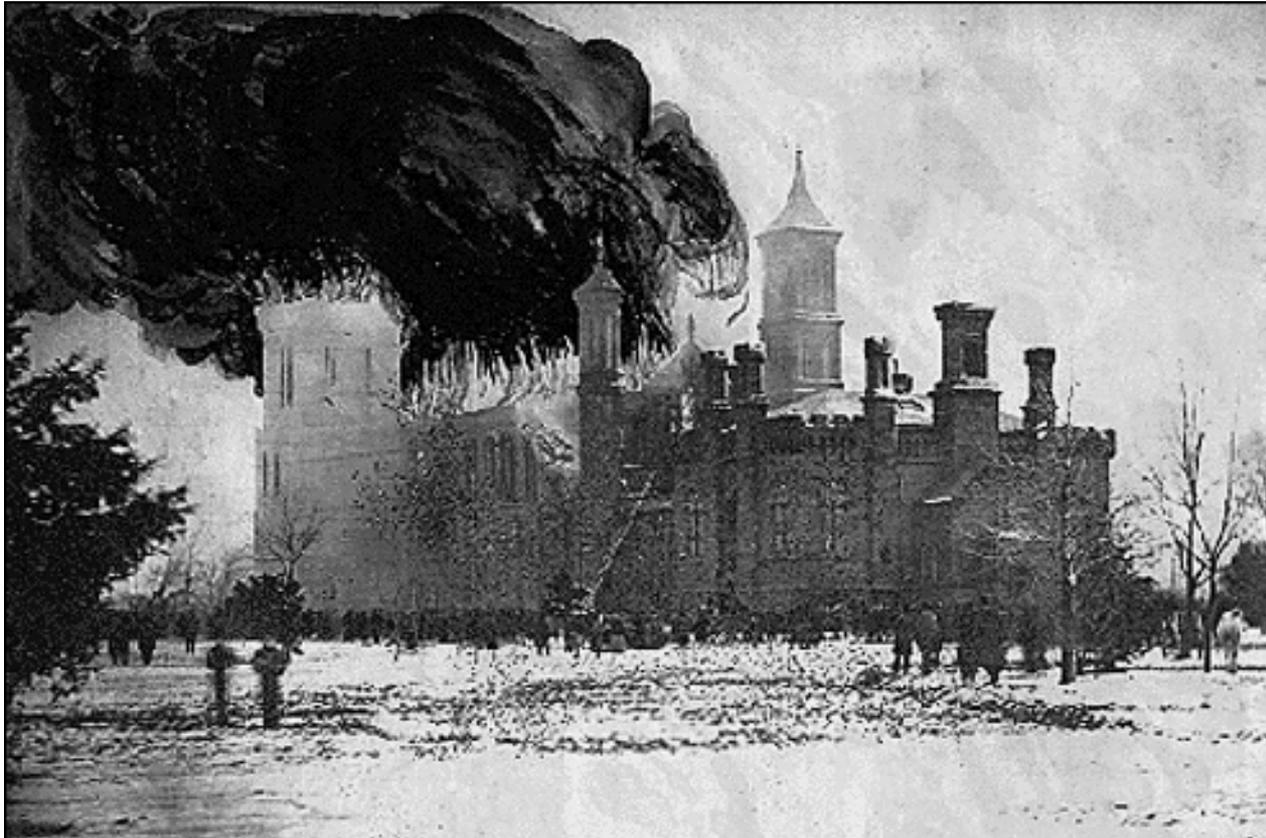
---

***ICC fulfills its mission of ensuring public safety with a support infrastructure that no one else offers and which facilitates the ease of application and use of the codes***

- **Conformity Assessment**
  - Testing, Quality Assurance and Fabrication
  - Building Technology Evaluation
- **Codes and Standards Support Services**
- **Personnel Certification**
- **Professional Development Services**
- **Membership Services**



# *Fire Safety and the Code*



*Setting the Standard for Building Safety*  
[www.iccsafe.org](http://www.iccsafe.org)

# *Basic Philosophy*

Higher Life Hazard  
(Number, condition)



Higher Physical Hazard  
(Frequency, severity)



Isolate hazard by distance, construction	Highest Level of Protection & redundancy; shortest exit distances greatest distances (isolation)
Combustible Construction, minimal fire protection	High level of protection – less redundancy



# *Basic Philosophy*

Higher Life Hazard  
(Number, condition)



Higher Physical Hazard  
(Frequency, severity)



High Piled Stock warehouses; mini-warehouses; large retail, explosive storage, etc.	High-rise buildings; large assemblies; Hazardous occupancies
Group U – barns, small storage buildings, etc.	Assemblies; large business occupancies



**TABLE 503**  
**ALLOWABLE HEIGHT AND BUILDING AREAS**  
 Height limitations shown as stories and feet above grade plane.  
 Area limitations as determined by the definition of "Area, building," per floor.

GROUP	H <sub>gx</sub> (ft) H <sub>gx</sub> (S)	TYPE OF CONSTRUCTION								
		TYPE I		TYPE II		TYPE III		TYPE IV	TYPE V	
		A	B	A	B	A	B	HT	A	B
		UL	160	65	55	65	55	65	50	40
A-1	S	UL	5	3	2	3	2	3	2	1
	A	UL	15,500	8,500	14,000	8,500	15,000	11,500	5,500	
A-2	S	UL	11	3	2	3	2	3	2	1
	A	UL	15,500	9,500	14,000	9,500	15,000	11,500	6,000	
A-3	S	UL	11	3	2	3	2	3	2	1
	A	UL	15,500	9,500	14,000	9,500	15,000	11,500	6,000	
A-4	S	UL	11	3	2	3	2	3	2	1
	A	UL	15,500	9,500	14,000	9,500	15,000	11,500	6,000	
A-5	S	UL	UL	UL	UL	UL	UL	UL	UL	UL
	A	UL	UL	UL	UL	UL	UL	UL	UL	UL
B	S	UL	11	5	4	5	4	5	3	2
	A	UL	37,500	23,000	28,500	19,000	36,000	18,000	9,000	
E	S	UL	5	3	2	3	2	3	1	1
	A	UL	26,500	14,500	23,500	14,500	25,500	18,500	9,500	
F-1	S	UL	11	4	2	3	2	4	2	1
	A	UL	25,000	15,500	19,000	12,000	33,500	14,000	8,500	
F-2	S	UL	11	5	3	4	3	5	3	2
	A	UL	37,500	23,000	28,500	18,000	50,500	21,000	13,000	
H-1	S	1	1	1	1	1	1	1	1	NP
	A	21,000	16,500	11,000	7,000	9,500	7,000	10,500	7,500	NP
H-2	S	3	2	1	2	1	2	1	1	1
	A	21,000	16,500	11,000	7,000	9,500	7,000	10,500	7,500	3,000
H-3	S	6	4	2	4	2	4	2	2	1
	A	60,000	26,500	14,000	17,500	13,000	25,500	10,000	5,000	
H-4	S	7	5	3	5	3	5	3	3	2
	A	37,500	37,500	17,500	28,500	17,500	36,000	18,000	6,500	
H-5	S	3	3	3	3	3	3	3	3	2
	A	37,500	37,500	23,000	28,500	19,000	36,000	18,000	9,000	
I-1	S	9	4	3	4	3	4	3	3	2
	A	55,000	19,000	10,000	16,500	10,000	18,000	10,500	4,500	
I-2	S	4	2	1	1	NP	1	1	NP	NP
	A	15,000	UL	11,000	12,000	NP	12,000	9,500	NP	
I-3	S	4	2	1	2	1	2	2	2	1
	A	15,000	UL	11,000	10,500	7,500	12,000	7,500	5,000	
I-4	S	5	3	2	3	2	3	1	1	1
	A	60,500	26,500	13,000	23,500	13,000	25,500	18,500	9,000	
M	S	UL	11	4	4	4	4	3	1	9,000
	A	UL	21,500	12,500	18,500	12,500	20,500	14,000		
R-1	S	UL	11	4	4	4	4	3	2	7,000
	A	UL	24,000	16,000	24,000	16,000	20,500	12,000		
R-2 <sup>a</sup>	S	UL	11	4	4	4	4	3	2	7,000
	A	UL	24,000	16,000	24,000	16,000	20,500	12,000		
R-3 <sup>a</sup>	S	UL	11	4	4	4	4	3	3	UL
	A	UL	UL	UL	UL	UL	UL	UL	UL	
R-4	S	UL	11	4	4	4	4	3	2	7,000
	A	UL	24,000	16,000	24,000	16,000	20,500	12,000		
S-1	S	UL	11	4	3	3	4	3	1	9,000
	A	UL	48,000	26,000	17,500	26,000	25,500	14,000		
S-2 <sup>b,c</sup>	S	UL	11	5	4	4	5	4	2	13,500
	A	UL	79,000	39,000	26,000	39,000	38,500	21,000		
U <sup>c</sup>	S	UL	5	4	2	3	2	2	1	5,500
	A	UL	35,500	19,000	8,500	14,000	8,500	18,000	9,000	

For SI: 1 foot = 304.8 mm, 1 square foot = 0.0929 m<sup>2</sup>.  
 UL = Unlimited, NP = Not permitted.  
 a. As applicable in Section 101.2.  
 b. For open parking structures, see Section 406.3.  
 c. For private garages, see Section 406.1.



# TABLE 601 FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (hours)

BUILDING ELEMENT	TYPE I		TYPE II		TYPE III		TYPE IV	TYPE V	
	A	B	A <sup>d</sup>	B	A <sup>d</sup>	B	HT	A <sup>d</sup>	B
Structural frame <sup>a</sup> Including columns, girders, trusses	3 <sup>b</sup>	2 <sup>b</sup>	1	0	1	0	HT	1	0
Bearing walls Exterior <sup>f</sup>	3	2	1	0	2	2	2	1	0
Interior	3 <sup>b</sup>	2 <sup>b</sup>	1	0	1	0	1/HT	1	0
Nonbearing walls and partitions Exterior	See Table 602								
Nonbearing walls and partitions Interior <sup>e</sup>	0	0	0	0	0	0	See Section 602.4.6	0	0
Floor construction Including supporting beams and joists	2	2	1	0	1	0	HT	1	0
Roof construction Including supporting beams and joists	1½ <sup>c</sup>	1 <sup>c</sup>	1 <sup>c</sup>	0	1 <sup>c</sup>	0	HT	1 <sup>c</sup>	0

- a. The structural frame shall be considered to be the columns and the girders, beams, trusses and spandrels having direct connections to the columns and bracing members designed to carry gravity loads. The members of floor or roof panels which have no connection to the columns shall be considered secondary members and not a part of the structural frame.
- b. Roof supports: Fire-resistance ratings of structural frame and bearing walls are permitted to be reduced by 1 hour when supporting a roof only.
- c.
  1. Except in Factory-Industrial (F-1), Hazardous (H), Mercantile (M) and Moderate-Hazard Storage (S-1) occupancies, fire protection of structural members shall not be required, including protection of roof framing and decking, wherever part of the roof construction is 20 feet or more above any floor immediately below. Fire-retardant-treated wood members shall be allowed to be used for such unprotected members.
  2. In all occupancies, heavy timber shall be allowed where a 1-hour or less fire-resistance rating is required.
  3. In Type I and II construction, fire-retardant-treated wood shall be allowed in buildings including girders and trusses as part of the roof construction when the building is:
    - i. Two stories or less in height;
    - ii. Type II construction over two stories; or
    - iii. Type I construction over two stories and the vertical distance from the upper floor to the roof is 20 feet or more.
- d. An approved automatic sprinkler system in accordance with Section 905.3.1.1 shall be allowed to be substituted for 1-hour fire-resistance-rated construction, provided such system is not otherwise required by other provisions of the code or used for an allowable area increase in accordance with Section 506.3 or an allowable height increase in accordance with Section 504.2. The 1-hour substitution for the fire resistance of exterior walls shall not be permitted.
- e. Not less than the fire-resistance rating required by other sections of this code.
- f. Not less than the fire-resistance rating based on fire separation distance (see Table 602).

# *Hazard – Specific Requirements:*

- **Height & Area – Chapter 5**
- **Fire Resistance Rated Construction – Chapter 7**
- **Interior Finishes – Chapter 8**
- **Fire Protection Systems – Chapter 9**
- **Special Construction – Chapter 31**
- **Safeguarding during Construction – Chapter 33**



# *Life-Safety Specific Requirements*

- **All of the above**
- **Occupancy Classifications – Chapter 3**
- **Special Detailed Requirements Based on Occupancy – Chapter 4**
- **Means of Egress – Chapter 10**
- **Structural Design – Chapter 16**



# *Material Specific Requirements*

- **Concrete – Chapter 19**
- **Aluminum – Chapter 20**
- **Masonry – Chapter 21**
- **Steel – Chapter 22**
- **Wood – Chapter 23**
- **Glass & Glazing – Chapter 24**
- **Gypsum – Chapter 25**
- **Plastic – Chapter 26**



# *Other Components*

- **Administration**
- **Definitions**
- **Occupancy Classification**
- **Existing Buildings**
- **Systems Chapters**
- **Energy Efficiency**
- **Interior Environment**
- **Structural Design**



# *Hazardous Materials*

- **References the International Fire Code**
- **Divides Hazardous materials by hazard**
  - Physical (fire, explosion)
  - Health (toxicity, injury potential)



# ***Philosophy of Requirements***

- **Occupants and first responders – immediate hazards**
- **Chapter 27 allows limited amounts of hazmat without Group H Classification**
  - Control areas
  - Cabinets
  - Sprinklers



# ***Chapter 27 General Provisions***

- **Requirements different for storage vs. use; use – open vs. use closed**
- **Apply to all amounts**
- **MAQs provided**
- **Piping, valving, container and tank design and construction requirements**
- **Identification of hazards – placarding**
- **Sources of ignition**
- **Construction requirements – control areas, cabinets and exhausted enclosures**



TABLE 2703.1.1(1)  
 MAXIMUM ALLOWABLE QUANTITY PER CONTROL AREA OF HAZARDOUS MATERIALS POSING A PHYSICAL HAZARD<sup>a, j, m, n</sup>

MATERIAL	CLASS	GROUP WHEN THE MAXIMUM ALLOWABLE QUANTITY IS EXCEEDED	STORAGE <sup>p</sup>			USE-CLOSED SYSTEMS <sup>p</sup>			USE-OPEN SYSTEMS <sup>p</sup>	
			Solid pounds (cubic feet)	Liquid gallons (pounds)	Gas cubic feet at NTP	Solid pounds (cubic feet)	Liquid gallons (pounds)	Gas cubic feet at NTP	Solid pounds (cubic feet)	Liquid gallons (pounds)
Combustible liquid <sup>e, i</sup>	II IIIA IIIB	H-2 or H-3 H-2 or H-3 Not Applicable	Not Applicable	120 <sup>d, *</sup> 330 <sup>d, *</sup> 13,200 <sup>d, f</sup>	Not Applicable	Not Applicable	120 <sup>d</sup> 330 <sup>d</sup> 13,200 <sup>f</sup>	Not Applicable	Not Applicable	30 <sup>d</sup> 80 <sup>d</sup> 3,300 <sup>f</sup>
Combustible fiber	Loose Baled	H-3	(100) (1,000)	Not Applicable	Not Applicable	(100) (1,000)	Not Applicable	Not Applicable	(20) (200)	Not Applicable
Cryogenic Flammable	Not Applicable	H-2	Not Applicable	45 <sup>d</sup>	Not Applicable	Not Applicable	45 <sup>d</sup>	Not Applicable	Not Applicable	10 <sup>d</sup>
Consumer fireworks (Class C Common)	1.4G	H-3	125 <sup>d, *</sup>	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Cryogenic Oxidizing	Not Applicable	H-3	Not Applicable	45 <sup>d</sup>	Not Applicable	Not Applicable	45 <sup>d</sup>	Not Applicable	Not Applicable	10 <sup>d</sup>
Explosives	Division 1.1 Division 1.2 Division 1.3 Division 1.4 Division 1.4G Division 1.5 Division 1.6	H-1 H-1 H-1 or H-2 H-3 H-3 H-1 H-1	1 <sup>*, g</sup> 1 <sup>*, g</sup> 5 <sup>*, g</sup> 50 <sup>*, g</sup> 125 <sup>d, *</sup> 1 <sup>*, g</sup> 1 <sup>d, *, g</sup>	(1) <sup>*, g</sup> (1) <sup>*, g</sup> (5) <sup>*, g</sup> (50) <sup>*, g</sup> Not Applicable (1) <sup>*, g</sup> Not Applicable	Not Applicable	0.25 <sup>g</sup> 0.25 <sup>g</sup> 1 <sup>g</sup> 50 <sup>g</sup> Not Applicable 0.25 <sup>g</sup> Not Applicable	(0.25) <sup>g</sup> (0.25) <sup>g</sup> (1) <sup>g</sup> (50) <sup>g</sup> Not Applicable (0.25) <sup>g</sup> Not Applicable	Not Applicable	0.25 <sup>g</sup> 0.25 <sup>g</sup> 1 <sup>g</sup> Not Applicable 0.25 <sup>g</sup> Not Applicable	(0.25) <sup>g</sup> (0.25) <sup>g</sup> (1) <sup>g</sup> Not Applicable Not Applicable (0.25) <sup>g</sup> Not Applicable
Flammable gas	Gaseous Liquefied	H-2	Not Applicable	Not Applicable 30 <sup>d, *</sup>	1,000 <sup>d, *</sup> Not Applicable	Not Applicable	Not Applicable 30 <sup>d, *</sup>	1,000 <sup>d, *</sup> Not Applicable	Not Applicable	Not Applicable
Flammable liquids <sup>e</sup>	IA IB and IC	H-2 or H-3	Not Applicable	30 <sup>d, *</sup> 120 <sup>d, *</sup>	Not Applicable	Not Applicable	30 <sup>d</sup> 120 <sup>d</sup>	Not Applicable	Not Applicable	10 <sup>d</sup> 30 <sup>d</sup>
Combination Flammable liquid (IA, IB, IC)	Not Applicable	H-2 or H-3	Not Applicable	120 <sup>d, *, h</sup>	Not Applicable	Not Applicable	120 <sup>d, h</sup>	Not Applicable	Not Applicable	30 <sup>d, h</sup>
Flammable solid	Not Applicable	H-3	125 <sup>d, *</sup>	Not Applicable	Not Applicable	125 <sup>d</sup>	Not Applicable	Not Applicable	25 <sup>d</sup>	Not Applicable
Organic peroxide	UD I II III IV V	H-1 H-2 H-3 H-3 Not Applicable Not Applicable	1 <sup>*, g</sup> 5 <sup>d, *</sup> 50 <sup>d, *</sup> 125 <sup>d, *</sup> Not Limited Not Limited	(1) <sup>*, g</sup> (5) <sup>d, *</sup> (50) <sup>d, *</sup> (125) <sup>d, *</sup> Not Limited Not Limited	Not Applicable	0.25 <sup>g</sup> 1 <sup>d</sup> 50 <sup>d</sup> 125 <sup>d</sup> Not Limited Not Limited	(0.25) <sup>g</sup> (1) <sup>d</sup> (50) <sup>d</sup> (125) <sup>d</sup> Not Limited Not Limited	Not Applicable	0.25 <sup>g</sup> 1 <sup>d</sup> 10 <sup>d</sup> 25 <sup>d</sup> Not Limited Not Limited	(0.25) <sup>g</sup> (1) <sup>d</sup> (10) <sup>d</sup> (25) <sup>d</sup> Not Limited Not Limited

(continued)

# ***Increasing MAQ's***

- **Increases are allowed for:**
  - Sprinklers (X 2)
  - Hazmat cabinets and exhausted enclosures (X 2)
  - Control areas (Per Table 2703.8.2.2)
- **Limitations on increases**
  - Use limited in use of cabinets
  - Increases for sprinklers not always allowed
  - Some features such as exhausted enclosures may be required



# ***Control Areas***

- **Table 2703.8.2.2 provides:**
  - Number
  - Location
  - Separation requirements
- **Useful in increasing MAQs**
- **M and S occupancies limited to two control areas per floor (special increases apply).**



# TABLE 2703.8.2.2

TABLE 2703.8.2.2 DESIGN AND NUMBER OF CONTROL AREAS				
FLOOR LEVEL		PERCENTAGE OF THE MAXIMUM ALLOWABLE QUANTITY PER CONTROL AREA <sup>a</sup>	NUMBER OF CONTROL AREAS PER FLOOR <sup>b</sup>	FIRE-RESISTANCE RATING FOR FIRE BARRIERS IN HOURS <sup>c</sup>
Above grade	Higher than 9	5	1	2
	7-9	5	2	2
	6	12.5	2	2
	5	12.5	2	2
	4	12.5	2	2
	3	50	2	1
	2	75	3	1
	1	100	4	1
Below grade	1	75	3	1
	2	50	2	1
	Lower than 2	Not Applicable	Not Applicable	Not Applicable

- Percentages shall be of the maximum allowable quantity per control area shown in Tables 2703.1.1(1) and 2703.1.1(2), with all increases allowed in the footnotes of those tables.
- There shall be a maximum of two control areas per floor in Group M occupancies and in buildings or portions of buildings having Group S occupancies with storage conditions and quantities in accordance with Section 2703.11.
- Fire barriers shall include walls and floors as necessary to provide separation from other portions of the building.



# ***Control Area - Multiple Stories***



*Setting the Standard for Building Safety*  
[www.iccsafe.org](http://www.iccsafe.org)

# ***Amounts Exceeding MAQs***

- **Building code classifies as Group H**
  - H1 – Detonation Hazards
  - H2 – Deflagration hazards
  - H3 – Conflagration/ Highly Combustible
  - H4 – Health Hazard
  - H5 – Semiconductor Fabrication Facilities
- **Sections 2704 Storage and 2705 Use, dispensing and Handling apply**
- **Chapters 28 – 44 may have more specific and more stringent requirements**



# ***2704 Storage***

- **Spill control and secondary containment**
- **Ventilation**
- **Sprinkler criteria (ordinary hazard 2,3000 sq ft design area)**
- **Emergency alarms and supervision requirements**
- **Limit controls**
- **Explosion controls**



# ***2705 Use, Dispensing and Handling***

- **Use more hazardous**
- **Open use more hazardous than closed use**
- **Many requirements simply reference 2704, but in some cases more restrictive**
  - Ventilation
  - Liquid limit controls



# ***Chapters 28-44***

- **Deals with specific types of materials**
- **Generally divided into storage and use**
- **Requirements specific to material such as:**
  - Treatment systems for toxic and highly toxic gases
  - Occupant specific restrictions (i.e. flammable gases not allowed in Group B occupancies)



# *Summary:*

- **International Codes<sup>®</sup> are the most widely adopted codes in the U.S.**
- **International Code Council has a robust support infrastructure for your use**
- **The codes are logically assembled with a goal of providing the appropriate level of safety to the workforce, the public, and emergency responders**
- **The International Codes<sup>®</sup> are the future.**



***Thank You!***



*Setting the Standard for Building Safety*  
[www.iccsafe.org](http://www.iccsafe.org)