

2009 I Code Update

2009 INTERNATIONAL RESIDENTIAL
CODE®
FOR ONE- AND TWO-FAMILY
DWELLINGS

Presenter

- Karl Mott
- Duchesne County Building Official (15 yrs) 8/24/1995
- Certified Architectural Draftsman (1982)
- ICC Certified Building Inspector (1/96), Plumbing Inspector (5/96), Electrical Inspector (5/97), Mechanical Inspector (8/97), Building Official (3/98) and Plans Examiner (3/00)
- Utah State Certified Waste Water Designer Levels 1,2 (4/02) and 3 (5/02)

Brought to you by

- Duchesne County
- UBATC
- *Partial funding of this training program has been provided by the Division of Occupational & Professional Licensing from the 1% Surcharge funds on all building permits.*

Scope of This Class

- Review some changes from the 2006 to the 2009 I codes (International Residential Code)
- Legal issues due Legislative Changes and these code changes
- Complete the 6 hours of continued education required every 2 yrs for Contractor License Renewal (3 hrs core & 3 hrs Professional Or 6 hrs core) (Note : master, journeyman, residential master, residential journeyman and apprentice electricians need 16 continued education hours in 2 yrs)
- Hopefully avoid conflicts in the field

Who's a Contractor

- 58-55-102 (12) (a) "Contractor" means any person who for compensation *other than wages as an employee* undertakes any work in the construction, plumbing, or electrical trade for which licensure is required under this chapter and includes:
 - (i) a person who builds any structure on his own property for the purpose of sale or who builds any structure intended for public use on his own property;
 - (ii) any person who represents himself to be a contractor by advertising or any other means;
 - (iii) any person engaged as a maintenance person, other than an employee, who regularly engages in activities set forth under the definition of "construction trade";
 - (iv) any person engaged in any construction trade for which licensure is required under this chapter; or
 - (v) a construction manager who performs management and counseling services on a construction project for a fee.
- (b) "Contractor" does not include an alarm company or alarm company agent.

Who's Exempt

- 58-55-305. Exemptions from licensure.
- (a) an authorized representative of the United States government or an authorized employee of the state or any of its political subdivisions
- (b) a person engaged in construction or operation incidental to the construction and repair of irrigation and drainage ditches associated with agriculture, mining, drilling and lumbering
- (c) public utilities on construction work incidental to their own business;

Owner Builders 58-55-305. (d)

- (d) sole owners of property engaged in building:
 - (i) no more than one residential structure per year and
 - no more than three residential structures per five years
 - on their property for their own noncommercial, nonpublic use;
 - except, a person other than the property owner or individuals described in Subsection (1)(e), who engages in building the structure must be licensed under this chapter if the person is otherwise required to be licensed under this chapter; or
 - (ii) structures on their property for their own noncommercial, nonpublic use which are incidental to a residential structure on the property, including sheds, carports, or detached garages;

Owner Builder Helpers 58-55-305. (e)

- (e) (i) a person engaged in construction or renovation of a residential building for noncommercial, nonpublic use if that person:
 - (A) works without compensation other than token compensation that is not considered salary or wages; and
 - (B) works under the direction of the property owner who engages in building the structure; and
- (ii) as used in this Subsection (1)(e), "token compensation" means compensation paid by a sole owner of property exempted from licensure under Subsection (1)(d) to a person exempted from licensure under this Subsection (1)(e), that is:
 - (A) minimal in value when compared with the fair market value of the services provided by the person;
 - (B) not related to the fair market value of the services provided by the person; and
 - (C) is incidental to the providing of services by the person including paying for or providing meals or refreshment while services are being provided, or paying reasonable transportation costs incurred by the person in travel to the site of construction;

Manufactured Home Dealers

- (f) a person engaged in the sale or merchandising of personal property that by its design or manufacture may be attached, installed, or otherwise affixed to real property who has contracted with a person, firm, or corporation licensed under this chapter to install, affix, or attach that property;

Federal Highways

- (g) a contractor submitting a bid on a federal aid highway project if, before undertaking construction under that bid, the contractor is licensed under this chapter;

The Handi Man 58-55-305. (h)

- (h) (i) a person engaged in the alteration, repair, remodeling, or addition to or improvement of a building with a contracted or agreed value of less than \$3,000, including both labor and materials, and including all changes or additions to the contracted or agreed upon work; and
- (ii) notwithstanding Subsection (1)(h)(i) and except as otherwise provided in this section:
 - (A) work in the plumbing and electrical trades on a Subsection (1)(h)(i) project within any six month period of time;
 - (I) must be performed by a licensed electrical or plumbing contractor, if the project involves an electrical or plumbing system; and
 - (II) may be performed by a licensed journeyman electrician or plumber or an individual referred to in Subsection (1)(h)(ii)(A)(I), if the project involves a component of the system such as a faucet, toilet, fixture, device, outlet, or electrical switch;

Handi Man Cont.

- (B) installation, repair, or replacement of a residential or commercial gas appliance or a combustion system on a Subsection (1)(h)(i) project must be performed by a person who has received certification under Subsection 58-55-308(2) except as otherwise provided in Subsection 58-55-308(2)(d) or 58-55-308(3);
- (C) installation, repair, or replacement of water-based fire protection systems on a Subsection (1)(h)(i) project must be performed by a licensed fire suppression systems contractor or a licensed journeyman plumber;
- (D) work as an alarm business or company or as an alarm company agent shall be performed by a licensed alarm business or company or a licensed alarm company agent, except as otherwise provided in this chapter;
- (E) installation, repair, or replacement of an alarm system on a Subsection (1)(h)(i) project must be performed by a licensed alarm business or company or a licensed alarm company agent;
- (F) installation, repair, or replacement of a heating, ventilation, or air conditioning system (HVAC) on a Subsection (1)(h)(i) project must be performed by an HVAC contractor licensed by the division;
- (G) installation, repair, or replacement of a radon mitigation system or a soil depressurization system must be performed by a licensed contractor; and

Who's Here (Builders)

- E100 - General Engineering Contractor
- B100 - General Building Contractor
- R100 - Residential and Small Commercial Contractor
- B200 - Modular Unit Installation Contractor
- R200 - Factory Built Housing Contractor
- S221 - Cabinet, Millwork and Countertop Installation Contractor

Who's Here (Electrical)

- S200 - General Electrical Contractor
- S201 - Residential Electrical Contractor
- S202 - Solar Photovoltaic Contractor

Who's Here (Plumbing)

- S210 - General Plumbing Contractor
- S217 - Residential Plumbing Contractor
- S211 - Boiler Installation Contractor
- S216 - Residential Sewer Connection and Septic Tank Contractor.

Who's Here (Mechanical)

- S340 - Sheet Metal Contractor.
- S350 - HVAC Contractor
- S351 - Refrigerated Air Conditioning Contractor
- S352 - Evaporative Cooling Contractor
- S353 - Warm Air Heating Contractor

How About

- Architect (16 hours education / 2 yrs renewal)
- Engineer (24 hours education / 2 yr renewal)
 - Professional Structural
 - Professional
- Home Designers (Draftsman)
- Building Inspectors (4.5 CEUS to maintain 3 or more certifications. 1 clock hr = .1 ceu = 45 clock hours required / 3 yrs renewal)

How About

- S370 - Fire Suppression Systems Contractor
 - Layout, fabrication, and installation of fire protection systems using water, steam, gas, or chemicals. When a potable sanitary water supply system is used as the source of supply, connection to the water system must be accomplished by a licensed journeyman plumber. Excluded from this classification are persons engaged in the installation of fire suppression systems in hoods above cooking appliances.

E100 - General Engineering Contractor.

- A General Engineering contractor is a contractor licensed to perform work as defined in Subsection 58-55-102(19).
- (19) (a) "General engineering contractor" means a person licensed under this chapter as a general engineering contractor qualified by education, training, experience, and knowledge to perform construction of fixed works in any of the following:
 - irrigation, drainage, water, power, water supply, flood control, inland waterways, harbors, railroads, highways, tunnels, airports and runways, sewers and bridges, refineries, pipelines, chemical and industrial plants requiring specialized engineering knowledge and skill, piers, and foundations, or any of the components of those works.
- (b) A general engineering contractor may not perform construction of structures built primarily for the support, shelter, and enclosure of persons, animals, and chattels.

B100 - General Building Contractor.

- A General Building contractor is a contractor licensed to perform work as defined in Subsection 58-55-102(18) and pursuant to Subsection 58-55-102(18)(b) is clarified as follows:
- (a) The General Building Contractor scope of practice does not include activities described in this Subsection under specialty classification S202 - Solar Photovoltaic Contractor unless the work is performed under the immediate supervision of an employee who holds a current certificate issued by the North American Board of Certified Energy Practitioners.
- (b) The General Building Contractor scope of practice does not include activities described in this Subsection under specialty classification S354-Radon Mitigation Contractor unless the work is performed under the immediate supervision of an employee who holds a current certificate issued by the National Radon Safety Board (NRSB) or the National Radon Proficiency Program (NEHA-NRPP).

58-55-102 (18) (a) "General building contractor" means a person licensed under this chapter as a general building contractor qualified by education, training, experience, and knowledge to perform or superintend construction of structures for the support, shelter, and enclosure of persons, animals, chattels, or movable property of any kind or any of the components of that construction except plumbing, electrical work, mechanical work, and manufactured housing installation, for which the general building contractor shall employ the services of a contractor licensed in the particular specialty, except that a general building contractor engaged in the construction of single-family and multifamily residences up to four units may perform the mechanical work and hire a licensed plumber or electrician as an employee.

(b) The division may by rule exclude general building contractors from engaging in the performance of other construction specialties in which there is represented a substantial risk to the public health, safety, and welfare, and for which a license is required unless that general building contractor holds a valid license in that specialty classification.

R100 - Residential and Small Commercial Contractor.

- A Residential and Small Commercial contractor is a contractor licensed to perform work as defined in Subsection 58-55-102(29) and pursuant to Subsection 58-55-102(29) is clarified as follows:
- (a) The Residential and Small Commercial Contractor scope of practice does not include activities described in this Subsection under specialty classification S202 - Solar Photovoltaic Contractor unless the work is performed under the immediate supervision of an employee who holds a current certificate issued by the North American Board of Certified Energy Practitioners.
- (b) The Residential and Small Commercial Contractor scope of practice does not include activities described in this Subsection under specialty classification S354-Radon Mitigation Contractor unless the work is performed under the immediate supervision of an employee who holds a current certificate issued by the National Radon Safety Board (NRSB) or the National Radon Proficiency Program (NEHA-NRPP).

58-55-102(29) "Residential and small commercial contractor" means a person licensed under this chapter as a residential and small commercial contractor qualified by education, training, experience, and knowledge to perform or superintend the construction of single-family residences, multifamily residences up to four units, and commercial construction of not more than three stories above ground and not more than 20,000 square feet, or any of the components of that construction except plumbing, electrical work, mechanical work, and manufactured housing installation, for which the residential and small commercial contractor shall employ the services of a contractor licensed in the particular specialty, except that a residential and small commercial contractor engaged in the construction of single-family and multifamily residences up to four units may perform the mechanical work and hire a licensed plumber or electrician as an employee.

Legal Changes

- Building Codes now adopted by the Legislature and part of the Utah Code (used to be through Administrative Rules)
- 2009 Code along with state amendments will become effective July 1, 2010
- State Amendments can be updated every year

Administration

- **R101.2 Scope.** The provisions of the *International Residential Code for One- and Two-family Dwellings* shall apply to the construction, *alteration*, movement, enlargement, replacement, repair, equipment, use and occupancy, location, removal and demolition of detached one- and two-family dwellings and townhouses not more than three stories above *grade plane* in height with a separate means of egress and their *accessory structures*.

Definition

- **ACCESSORY STRUCTURE.**
- A structure not greater than 3,000 square feet (279 m²) in floor area, and
- not over two stories in height,
- the use of which is customarily accessory to and incidental to that of the dwelling(s) and
- which is located on the same *lot*.

Definition

- **GRADE PLANE.**
- A reference plane representing the average of the finished ground level adjoining the building at all *exterior walls*. Where the finished ground level slopes away from the *exterior walls*, the reference plane shall be established by the lowest points within the area between the building and the *lot line* or, where the *lot line* is more than 6 ft (1829 mm) from the building between the structure and a point 6 ft (1829 mm) from the building.

Definition

■ GRADE.

- The finished ground level adjoining the building at all *exterior walls*.

R101.3 Intent.

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

R102.1 General.

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

R104.4 Inspections.

The *building official* is authorized to 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.

Definitions

■ APPROVED.

- Acceptable to the *building official*.

■ APPROVED AGENCY.

- An established and recognized agency regularly engaged in conducting tests or furnishing inspection services, when such agency has been *approved* by the *building official*.

What Requires a Permit Cities

■ Cities. 10-9a-802. Enforcement.

- (2) (a) The municipality may enforce the ordinance by withholding building permits.
- (b) It is unlawful to erect, construct, reconstruct, alter, or change the use of any building or other structure within a municipality without approval of a building permit.
- (c) The municipality may not issue a building permit unless the plans of and for the proposed erection, construction, reconstruction, alteration, or use fully conform to all regulations then in effect.

What Requires a Permit Counties

■ Counties. 17-27a-802. Enforcement.

- (2) (a) The county may enforce the ordinance by withholding building permits.
- (b) It is unlawful to erect, construct, reconstruct, alter, or change the use of any building or other structure within a county without approval of a building permit.
- (c) The county may not issue a building permit unless the plans of and for the proposed erection, construction, reconstruction, alteration, or use fully conform to all regulations then in effect.

Work Exempt From Permit Requirements

- 1. One-story detached *accessory structures* used as tool and storage sheds, playhouses and similar uses, provided the floor area does not exceed 200 square feet (18.58 m²).
- 3. Retaining walls that 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.
- 10. Decks not exceeding 200 square feet (18.58m²) in area, that are not more than 30 inches (762 mm) above *grade* at any point, are not attached to a *dwelling* and do not serve the exit door required by Section R311.4.

Electrical Exceptions

- 1. *Listed* cord-and-plug connected temporary decorative lighting.
- 2. Reinstallation of attachment plug receptacles but not the outlets therefor.
- 3. Replacement of branch circuit overcurrent devices of the required capacity in the same location.
- 4. Electrical wiring, devices, *appliances*, apparatus or *equipment* operating at less than 25 volts and not capable of supplying more than 50 watts of energy.
- 5. Minor repair work, including the replacement of lamps or the connection of *approved* portable electrical *equipment* to *approved* permanently installed receptacles.

Mechanical Exemptions

- **Gas:**
 - 1. Portable heating, cooking or clothes drying *appliances*.
 - 2. Replacement of any minor part that does not alter approval of *equipment* or make such *equipment* unsafe.
 - 3. Portable-fuel-cell *appliances* that are not connected to a fixed piping system and are not interconnected to a power grid.

Mechanical Exemptions

- **Mechanical:**
 - 1. Portable heating *appliances*.
 - 2. Portable ventilation *appliances*.
 - 3. Portable cooling units.
 - 4. Steam, hot- or chilled-water piping within any heating or cooling *equipment* regulated by this code.
 - 5. Replacement of any minor part that does not alter approval of *equipment* or make such *equipment* unsafe.
 - 6. Portable evaporative coolers.
 - 7. Self-contained refrigeration systems containing 10 pounds (4.54 kg) or less of refrigerant or that are actuated by motors of 1 horsepower (746 W) or less.
 - 8. Portable-fuel-cell *appliances* that are not connected to a fixed piping system and are not interconnected to a power grid.

R105.2.1 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*.

Agricultural Exemption

- 58-56-4. Definitions -- Adoption of building codes -
- Amendments -- Approval of other codes --
Exemptions.
- (7) (a) Except in a residential area, a structure used solely in conjunction with agriculture use, and not for human occupancy, is exempted from the permit requirements of an adopted code.
(b) Notwithstanding Subsection (7)(a), unless otherwise exempted, plumbing, electrical, and mechanical permits may be required when that work is included in the structure.

Definitions

- (a) "agricultural use" means a use that relates to the tilling of soil and raising of crops, or keeping or raising domestic animals;
- (b) "not for human occupancy" means use of a structure for purposes other than protection or comfort of human beings, but allows people to enter the structure for:
 - (i) maintenance and repair; and
 - (ii) the care of livestock, crops, or equipment intended for agricultural use which are kept there; and

- (c) "residential area" means land that is not used for an agricultural use and is:
 - (i) (A) within the boundaries of a city or town; and
 - (B) less than five contiguous acres;
 - (ii) (A) within a subdivision for which the county has approved a subdivision plat under Title 17, Chapter 27a, Part 6, Subdivisions; and
 - (B) less than two contiguous acres; or
 - (iii) not located in whole or in part in an agricultural protection area created under Title 17, Chapter 41, Agriculture and Industrial Protection Areas.

Permit Exempt Buildings Still Must Comply With Adopted Codes

- (2) A person shall follow an adopted code when:
 - (a) new construction is involved; and
 - (b) the owner of an existing building, or the owner's agent, is voluntarily engaged in:
 - (i) the repair, renovation, remodeling, alteration, enlargement, rehabilitation, conservation, or reconstruction of the building; or
 - (ii) changing the character or use of the building in a manner which increases the occupancy loads, other demands, or safety risks of the building.

R105.2.2 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 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.

R105.9 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.

SECTION R106 CONSTRUCTION DOCUMENTS

■ R106.1 Submittal documents.

- Submittal documents consisting of *construction documents*, and other data shall be submitted in two 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*.

Definition

■ 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 drawings shall be drawn to an appropriate scale.

Definition

■ DESIGN PROFESSIONAL.

- See “*Registered design professional*.”

■ 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.

R106.1.1 Information on construction documents.

- *Construction documents* shall be 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*.
- Where required by the *building official*, all braced wall lines, shall be identified on the *construction documents* and all pertinent information including, but not limited to, bracing methods, location and length of braced wall panels, foundation requirements of braced wall panels at top and bottom shall be provided.

R106.3.1 Approval of construction documents.

- When the *building official* issues a *permit*, the *construction documents* shall be *approved* in writing or by a stamp which states "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 or her authorized representative.

Reviewed For Code Compliance With The Adopted 2006 International Code Series; By The Duchesne County Department Of Building Safety. Approved for construction when signed by the Building Official and with the following;

- Attached Review — Redline Notations
- Attached Details — Attached Revisions
- Attached Engineering



R106.3.2 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.

R106.4 Amended construction documents.

- Work shall be installed in accordance with the *approved 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*.

R108.6 Work commencing before permit issuance.

- Any person who commences work requiring a *permit* on a building, structure, electrical, gas, mechanical or plumbing system before obtaining the necessary permits shall be subject to a fee established by the applicable governing authority that shall be in addition to the required *permit* fees.

SECTION R109 INSPECTIONS

- **R109.1 Types of inspections.**
- For onsite construction, from time to time the *building official*, upon notification from the *permit* holder or his agent, shall make or cause to be made any necessary inspections and shall either approve that portion of the construction as completed or shall notify the *permit* holder or his or her agent wherein the same fails to comply with this code.

Code Required Inspections

- **R109.1.1 Foundation inspection.**
- **R109.1.2 Plumbing, mechanical, gas and electrical systems inspection.**
 - prior to framing inspection.
- **R109.1.3 Floodplain inspections.**
- **R109.1.4 Frame and masonry inspection.**
- **R109.1.5 Weather-resistive barrier and flashing inspections.**
(UTA)
- **R109.1.6 (UTA) Other inspections.**
 - **R109.1.6.1 (UTA) Fire-resistance-rated construction inspection.**
 - **R109.1.6.2 Reinforced masonry, insulating concrete form (ICF) and conventionally formed concrete wall inspection (UTA)**
- **R109.1.7 (UTA) Final inspection.**

Other Required Inspections

- Insulation Inspection
 - To Verify Energy Provisions have been met
- Drywall Inspection
 - To verify ceiling gypsum thickness, ceiling and wall attachment and proper tile back is installed
- Site Built Shower Pan Inspection
 - Verify floor slope, support blocking and material installation height above the curb

Certificate of Occupancy

- R110.1 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. Certificates presuming to give authority to violate or cancel the provisions of this code or other ordinances of the jurisdiction shall not be valid.
- Exceptions:
 1. Certificates of occupancy are not required for work exempt from permits under Section R105.2.
 2. Accessory buildings or structures.

SECTION R112 BOARD OF APPEALS

- **R112.1 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.

R112.2 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 there under 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.

Now for Building Planning

Things to Consider in Design

Basic Design Requirements

- **SECTION R301 DESIGN CRITERIA**
 - **R301.1 Application.** Buildings and structures, and all parts thereof, shall be constructed to safely support all loads, including dead loads, live loads, roof loads, flood loads, snow loads, wind loads and seismic loads as prescribed by this code.
 - **R301.1.2 Construction systems.** The requirements of this code are based on platform and balloon-frame construction for light-frame buildings. The requirements for concrete and masonry buildings are based on a balloon framing system. Other framing systems must have equivalent detailing to ensure force transfer, continuity and compatible deformations.

The Plans

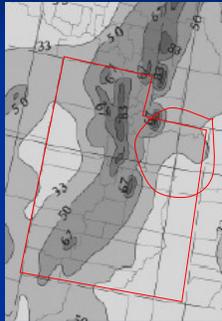
- Designed Project Specific
 - Plans By Architect (Requires Stamp by 58-3a-602. Plans and specifications to be sealed.)
 - Plans By Engineer (Requires Stamp 58-22-602. Plans, specifications, reports, maps, sketches, surveys, drawings, documents, and plats to be sealed.)
 - Plans By Designer or Draftsman
- Generic Design (Purchased of the web)
- Owners single line sketch

- **58-3a-602. (2) Any final plan and specification of a building prepared by or under the supervision of the licensed architect shall bear the seal of the architect when submitted to a client, or when submitted to a building official for the purpose of obtaining a building permit, even if the practice is exempt from licensure under Section 58-3a-304.**
- **58-22-602. (2) Any final plan, specification, and report prepared by, or under the supervision of, the professional engineer or professional structural engineer shall bear the seal of the professional engineer or professional structural engineer when submitted to a client, when filed with public authorities, or when submitted to a building official for the purpose of obtaining a building permit, even if the practice is exempt from licensure under Section 58-22-305.**

R301.1.1 Alternative provisions.

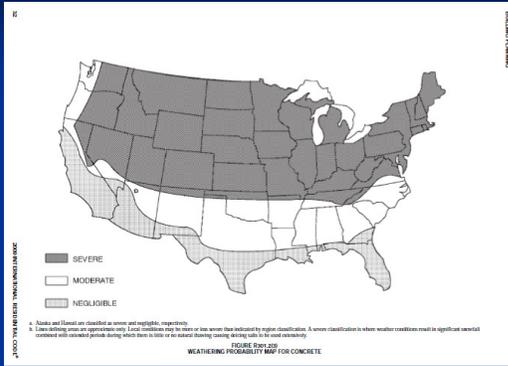
- As an alternative to the requirements in Section R301.1 the following standards are permitted subject to the limitations of this code and the limitations therein. Where engineered design is used in conjunction with these standards, the design shall comply with the *International Building Code*.
- 1. American Forest and Paper Association (AF&PA) *Wood Frame Construction Manual (WFCM)*.
- 2. American Iron and Steel Institute (AIS) *Standard for Cold-Formed Steel Framing—Prescriptive Method for One- and Two-Family Dwellings (AIS S230)*.
- 3. ICC-400 *Standard on the Design and Construction of Log Structures*.

Seismic Areas



Explanation	
%g	Seismic Design Category
117	E
83	D ₂
67	D ₁
50	D ₀
33	C
17	B
0	A

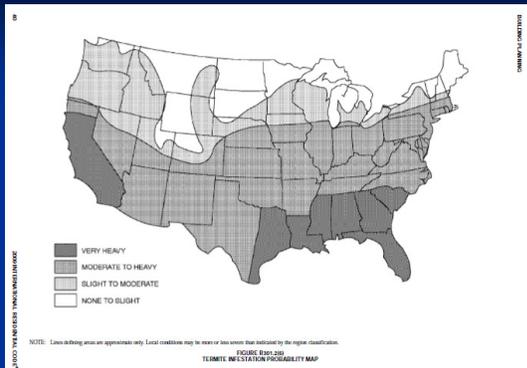
Weathering



Frost Protection Depth

- **R403.1.4 Minimum depth.** All exterior footings shall be placed at least 12 inches (305 mm) below the undisturbed ground surface. Where applicable, the depth of footings shall also conform to Sections R403.1.4.1 through R403.1.4.2.
- **R403.1.4.1 Frost protection.** Except where otherwise protected from frost, foundation walls, piers and other permanent supports of buildings and structures shall be protected from frost by one or more of the following methods:
 - 1. Extended below the frost line specified in Table R301.2.(1);
 - 30 inches below **Finished Grade**
 - 2. Constructing in accordance with Section R403.3;
 - Frost protected shallow foundations.
 - 3. Constructing in accordance with ASCE 32; or
 - Design and Construction of Frost-protected Shallow Foundations
 - 4. Erected on solid rock.

Termites



Winter Design Temperature

