

COCHISE COUNTY

2015 ICC Model Codes Changes Presentation

Development Services

April 7, 2021



Public Programs...Personal Service

COCHISE COUNTY

Table 301.2(1) Wind Design Criteria

Wind design has changed from 90 to 115 mph for our region. 97% of the United States is now 115 mph wind category. This doesn't affect much. Chapter 6 (Wall Construction) tables are basically the same.

301.3 Story Height

The exception for wall bracing increases were removed.

Other story heights changed to 11' 7"



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Table 302.1(1) Exterior Walls

Small changes to minimum fire separation distance

**TABLE R302.1(1)
EXTERIOR WALLS**

| EXTERIOR WALL ELEMENT | | MINIMUM FIRE-RESISTANCE RATING | MINIMUM FIRE SEPARATION DISTANCE |
|-----------------------|---------------------------|---|----------------------------------|
| Walls | Fire-resistance rated | 1 hour—tested in accordance with ASTM E 119 or UL 263 with exposure from both sides | < 5 feet |
| | Not fire-resistance rated | 0 hours | ≥ 5 feet |
| Projections | Not allowed | N/A | < 2 feet |
| | Fire-resistance rated | 1 hour on the underside ^{a, b} | ≥ 2 feet to < 5 feet |
| | Not fire-resistance rated | 0 hours | ≥ 5 feet |
| Openings in walls | Not allowed | N/A | < 3 feet |
| | 25% maximum of wall area | 0 hours | 3 feet |
| | Unlimited | 0 hours | 5 feet |
| Penetrations | All | Comply with Section R302.4 | < 3 feet |
| | | None required | 3 feet |

Less than 2 feet not allowed

Was reduced to 3 ft from 5 ft

For SI: 1 foot = 304.8 mm.
N/A = Not Applicable.

- a. Roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave if fireblocking is provided from the wall top plate to the underside of the roof sheathing.
- b. Roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave provided that gable vent openings are not installed. *NEW*

304.1 Minimum area

Removed 120 sq ft rule- “Habitable rooms shall have a floor area of not less than 70 sq ft.”

315.3 Location

CO alarms- “Where a fuel-burning appliance is located within a bedroom or its attached bathroom, a carbon monoxide alarm shall be installed within the bedroom.”



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New Section 324 Solar Energy Systems

Solar thermal systems shall be designed and installed in accordance with Chapter 23 Solar Thermal Energy Systems and the International Fire Code.

New Section 326 Swimming Pools, Spas and Hot Tubs

All swimming pool and spa requirements are now in the International Swimming Pool and Spa Code.



Chapter 4 Foundations

New Table 403.1(1)(2)(3) Minimum width and thickness for concrete footings

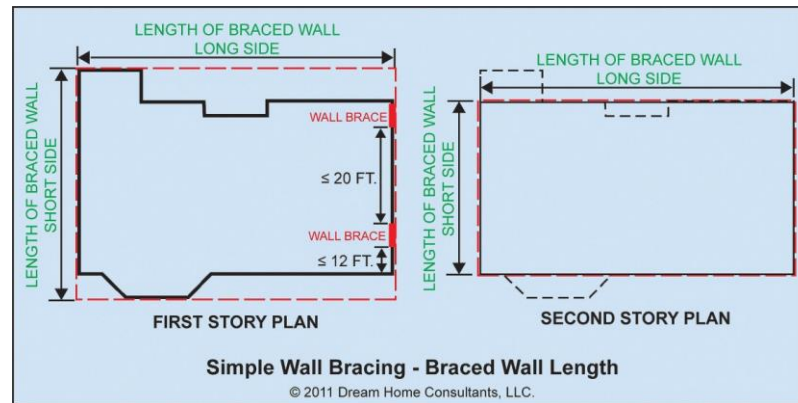
New figures with references

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602.10 Wall Bracing

602.10.3(1)- Use the 115 mph wind charts(from Table 301.2(1) very little change- formulas still the same- all prescriptive methods for BWL & BWP remain the same.

Note: Wall height not to exceed 11'7" where wind and seismic provisions(301.3) apply.



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602.12 Simplified wall bracing

This Section applies to our region- Exposure C

The design must include all the criteria listed in 602.12

602.12- Other methods not allowed- must meet all the following requirements:

1. No more than 3 stories
2. Floors not cantilevered more than 24"
3. 10' Max wall height
4. 15' Max eave-to-ridge height
5. ½" gyp board on interior walls
6. The structure shall be located where the Exposure is B or C
7. The structure shall be in Seismic Design Category A, B or C
8. No cripple walls in 3-story buildings

602.12.1- Circumscribed Rectangle- 60' max per side (all encompassing)

602.12.2- Sheathing Materials-Min. Sheathing either 3/8" WSP or ½" Fiberboard. Mixing materials is prohibited.

602.12.3- Bracing units- Exterior only, full height, no openings, no offsets

1. Full shear- minimum 3' bracing unit
2. Intermittent shear- 4' bracing unit

602.12.3.1- Multiple bracing units-No contributing length narrower than required

602.12.4- Number of bracing units-Required number of BU- table 602.12.4













602.12.5- Distribution of Bracing Units

1. Less than 12' from a wall corner
2. less than 20' between BU's
3. Walls 8' and greater, no less than one BU

602.12.6- Narrow panels bracing methods;

- CS-G 50% of required BU (garage)
- CS-PF 75% of required BU (Full shear)
- ABW & PFH- 100% of required BU
- PFG- 75% of required BU

TABLE R602.12.4
MINIMUM NUMBER OF BRACING UNITS ON EACH SIDE OF THE CIRCUMSCRIBED RECTANGLE

| ULTIMATE DESIGN WIND SPEED (mph) | STORY LEVEL | EAVE-TO-RIDGE HEIGHT (feet) | MINIMUM NUMBER OF BRACING UNITS ON EACH LONG SIDE ^{a,b,c} | | | | | | MINIMUM NUMBER OF BRACING UNITS ON EACH SHORT SIDE ^{a,b,c} | | | | | |
|----------------------------------|---|-----------------------------|--|----|----|----|----|----|---|----|----|----|----|----|
| | | | Length of short side (feet) ^d | | | | | | Length of long side (feet) ^d | | | | | |
| | | | 10 | 20 | 30 | 40 | 50 | 60 | 10 | 20 | 30 | 40 | 50 | 60 |
| 115 |    | 10 | 1 | 2 | 2 | 2 | 3 | 3 | 1 | 2 | 2 | 2 | 3 | 3 |
| | | | 2 | 3 | 3 | 4 | 5 | 6 | 2 | 3 | 3 | 4 | 5 | 6 |
| | | | 2 | 3 | 4 | 6 | 7 | 8 | 2 | 3 | 4 | 6 | 7 | 8 |
| |    | 15 | 1 | 2 | 3 | 3 | 4 | 4 | 1 | 2 | 3 | 3 | 4 | 4 |
| | | | 2 | 3 | 4 | 5 | 6 | 7 | 2 | 3 | 4 | 5 | 6 | 7 |
| | | | 2 | 4 | 5 | 6 | 7 | 9 | 2 | 4 | 5 | 6 | 7 | 9 |
| 130 |    | 10 | 1 | 2 | 2 | 3 | 3 | 4 | 1 | 2 | 2 | 3 | 3 | 4 |
| | | | 2 | 3 | 4 | 5 | 6 | 7 | 2 | 3 | 4 | 5 | 6 | 7 |
| | | | 2 | 4 | 5 | 7 | 8 | 10 | 2 | 4 | 5 | 7 | 8 | 10 |
| |    | 15 | 2 | 3 | 3 | 4 | 4 | 6 | 2 | 3 | 3 | 4 | 4 | 6 |
| | | | 3 | 4 | 6 | 7 | 8 | 10 | 3 | 4 | 6 | 7 | 8 | 10 |
| | | | 3 | 6 | 7 | 10 | 11 | 13 | 3 | 6 | 7 | 10 | 11 | 13 |



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Sections 606 General Masonry Construction, 607 Unit Masonry, 608 Multiple-Wythe Masonry & 609 Grouted Masonry

These are combined into Section 606 General Masonry Construction

Chapter 8 Roof-Ceiling Construction

All Section 802 Wood Roof Framing tables have small changes to spans

Chapter 11 Energy Efficiency

Cochise County adopted the 2012 International Energy Conservation Code

Chapter 14 Heating and Cooling Equipment

1411.4 Condensate pumps

When the pump fails, it shuts off the equipment it serves.



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Chapter 23

Was Solar Energy Systems, now Solar Thermal Energy Systems

2301.4 Heat transfer gasses or liquids and heat exchangers

Heat transfer liquids- no Ethylene Glycol in closed PV water heaters

2439.7.2 Duct installation

No screws may protrude more than 1/8" into the dryer duct.

2502.1 Existing building sewers and building drains

Testing of underground plumbing system is required when entire sanitary drainage system is replaced.

2708.2 Shower drain

Shower drains shall have an outlet size of not less than 1 1/2" in diameter.



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2802 Solar Water Heating Systems

New thermostatic mixing valve to temper the water temperature for solar thermal systems

2901.2 Identification of nonpotable water systems

The piping conveying nonpotable water shall be identified as such.

2906.4.1 Separation of water service and building sewer

Sewer-water separation- 5' if listed pipe is not used
Table 3001.1(2) took out asbestos

New sections added: 2910 Nonpotable water systems, 2911, 2912 & 2913

New nonpotable water systems, reuse, rainwater collection, distribution systems and reclaimed water usage requirements



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3005.2.- Clean outs required for drainage piping

2.2- Building sewers, cleanout manholes

2.3- Building drain and building sewer junctions

2.9- Clearance for obstructions for differing pipe sizes of 18" or 36"

2.10- Cleanout access- No concealed cleanouts.



New Section 3009

Subsurface landscape irrigation systems

3405.4 Outdoor dedicated panelboard space

Outdoor- nothing foreign in the required space

Most changes to Chapter 36 & 39

Most changes are just adjusting to 2014 NEC

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4204.3 Pool water

Where none of the bonded parts is in direct connection with the pool water, the pool water shall be in direct contact with an approved corrosion –resistant conductive surface that exposes not less than 9 square inches of surface area to the pool water at all times.



IRC Appendix G- Swimming Pools, Spas and Hot Tubs- Deleted

All pool regulations are now in the International Swimming Pool & Spa Code. Still the same regulations.

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Cochise County Building Safety Code Including Appendices and Amendments

International Building Code, 2012 edition:

Appendices

- B: Board of Appeals
- E: Supplementary Accessibility Requirements
- G: Flood Resistant Construction
- I: Patio Covers
- K: Administrative provisions

1. Section 101.1 Title, change to read: "These regulations shall be known as the Building Code of the County of Cochise, hereinafter referred to as 'this code'."
2. Section 101.4.4, delete the entire section.
3. Section 102.6, add "the International Existing Building Code" and delete "International Property Maintenance Code."
4. Section 103.1, change to read: "There exists a Building Safety Department under the Cochise County Planning Division of the Community Development Department and the official in charge thereof shall be known as the Building Official."
5. Section 103.3, Remove the last sentence "For maintenance of existing buildings see property Maintenance Code."



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6. Section 109.3 Building permit valuations, Change to read: The valuation of work for Complete Structures and Additions shall be determined from the County adopted ICC Bi-Yearly Construction Costs Schedule or the adopted Residential One and Two-Family Homes Valuation Rates. If a project is covered under an adopted Flat Fee rate the value of the work is still required for reporting purposes. For Remodeling, Tenant Fit-Ups and Phased Project work the applicant for a permit shall provide an estimated permit value at the 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.
7. Section, 110.3.7, Delete the entire section and renumber the remaining sections “110.3.7-110.3.9.”
8. Section 310.5.1, Change to read: "Care facilities for 6 or fewer persons receiving care that are within a single-family dwelling are permitted to comply with the International Residential Code.



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International Residential Code, 2012 edition:

Appendices:

A: Sizing and Capacities of Gas Piping

B: Sizing of Venting Systems Serving Appliances Equipped with Draft Hoods, Category I Appliances and Appliances Listed for Use and Type B Vents.

C: Exit Terminals of Mechanical Draft and Direct-Vent Venting Systems

D: Recommended Procedure for Safety Inspection of an Existing Appliance Installation

G: Swimming Pools, Spas and Hot Tubs

H: Patio Covers

J: Existing Building and Structures

K: Sound Transmissions

1. Section R101.1 Title, change to read: "These provisions shall be known as the Residential Code for One and Two-Family Dwellings of the County of Cochise, and shall be cited as such and will be referred to herein as 'this code'."
2. Section R103.1, change to read: "There exists a Building Safety Department under the Cochise County Planning Division of the Community Development Department and the official in charge thereof shall be known as the Building Official."
3. Add New Section R105.2.2.1, Ordinary Repairs: Ordinary repairs which involve only the replacement of component parts of existing work with similar parts or materials and don't exceed \$1000.00 in valuation (materials and labor at market value), and do not change any structural, electrical, mechanical, plumbing or fire safety condition.



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a. A "component part" is a portion of an assembly and not a complete rework or replacement of the total assembly (e.g., an existing door or water heater replaced with a new unit and a repair or replacement of individual roof shingles but not an entire re-roof). Ordinary repairs need to abide by the limitations contained in Section R105.2.2 Repairs of this code.

4. Section R-108.3, Change to read: The valuation of work for Complete Structures and Additions shall be determined from the County adopted ICC Bi-Yearly Construction Costs Schedule or the adopted Residential One and Two-Family Homes Valuation Rates. If a project is covered under an adopted Flat Fee rate the value of the work is still required for reporting purposes.

a. For Remodeling, Tenant Fit-Ups and Phased Project work the applicant for a permit shall provide an estimated permit value at the 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.



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5. At Table R301.2(1), insert the following data:
 - i. Ground snow load:
 - ii. Under 5500 ft. 0 p/sf.
 - iii. Above 5500 ft. 20-p/sf.
 - iv. Wind Speed 90-mph (3 - second gust)
 - v. Seismic Design Category C
 - vi. Exposure C
 - vii. Live Load 20-pounds
 - viii. Rainfall 3-inches per hour
 - ix. Weathering Negligible

 - x. Above 6000 ft. Moderate
 - xi. Frost Line Depth:
 - xii. Under 5500 ft. 0-inch
 - xiii. Above 5500 ft. 12-inch
 - xiv. Termite Very Heavy
 - xv. Decay None to Slight
 - xvi. Winter Design Temperature 18 – 20 Degrees
 - xvii. Flood Hazards:

12/4/84, 5/19/87, 4/17/89, 2/13/00, 2/14/00, 2/15/00, and new panels as adopted by FEMA



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This concludes the major 2015 code changes presentation.

All other code changes have been compiled for you in your handout.

Questions and Discussion

Suggestions for code amendment changes.

