Description

- This seminar reviews and analyzes selected significant changes from the 2012 IRC to the 2015 IRC.
- It assists code users in identifying the specific code changes that have occurred, and more importantly, understanding the reason behind the change.
- It focuses on those code changes selected due to their frequency of application, special significance or change in application.

Objectives

- Upon completion, participants will be better able to:
  - Identify the most significant differences between the 2012 IRC and the 2015 IRC.
  - Explain the differences between the current and previous edition.
  - Identify key changes in organization and code requirements.
  - Identify the applicability of design, plan review and inspection requirements.
Welcome

- Rules for the course,
- Breaks,
- Restroom location,
- Introduction of instructor and participants,
- Other

Chapter 1
Scope and Administration

R101.2, R202 Scope—Accessory Structures

<table>
<thead>
<tr>
<th>Change Type: Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>The maximum height for accessory structures has been increased from two to three stories above grade plane. Technical requirements have been removed from the definition, and accessory structures are now permitted to be unlimited in area.</td>
</tr>
</tbody>
</table>
R104.11 Alternative Materials, Design, and Methods of Construction and Equipment

- **Change Type**: Addition
  - When proposed alternatives are not approved, the reason for the disapproval must be stated in writing by the building official.

R105.3.1.1 Existing Buildings in Flood Hazard Areas

- **Change Type**: Modification
  - Determination of substantial improvement for existing buildings in flood hazard areas is the responsibility of the building official. The related provisions are now consolidated in Section R105.3.1.1.

R106.1.4 Information for Construction in Flood Hazard Areas

- **Change Type**: Modification
  - Construction documents for dwellings in Coastal A Zones shall include the elevation of the bottom of the lowest horizontal structural member.
Scope and Administration

1. What is the maximum number of square feet allowed for an accessory structure?

Unlimited Area or Square Feet

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Table R301.2(1) Climatic and Geographic Design Criteria

- **Change Type:** Modification

<table>
<thead>
<tr>
<th>2015</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table R301.2(1)</td>
<td>Table R301.2(1)</td>
</tr>
</tbody>
</table>

**TABLE R301.2(1)** Climatic and Geographic Design Criteria

| Ground Snow Load | Speed (mph) | Topographic effects | Special wind (mph) | Wind borne debris zone | Seismic Design Category |

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R301.2, R202
Wind Design Criteria

- Change Type: Modification
  - Ultimate design wind speed values replace basic wind speed values for 3-sec gust wind speeds in Section R301.2.1. A wind speed conversion table has been added for conversion from ultimate design $V_{u}$ to nominal design wind speeds, $V_{asd}$.

<table>
<thead>
<tr>
<th>$V_{u}$</th>
<th>110</th>
<th>115</th>
<th>120</th>
<th>125</th>
<th>130</th>
<th>135</th>
<th>140</th>
<th>145</th>
<th>150</th>
<th>155</th>
</tr>
</thead>
<tbody>
<tr>
<td>$V_{asd}$</td>
<td>85</td>
<td>90</td>
<td>95</td>
<td>100</td>
<td>105</td>
<td>110</td>
<td>115</td>
<td>120</td>
<td>125</td>
<td>130</td>
</tr>
</tbody>
</table>

For 30: 1 mile per hour = 0.447 m/s.

a. Linear interpolation is permitted.

R301.2 Wind Speed Maps

- Change Type: Modification

R301.2 Wind Speed Maps

- Change Type: Modification

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R301.2 Wind Speed Maps
- **Change Type:** Modification

2015 2012
R301.2 R301.2

R301.2.1.1 Sunrooms
- **Change Type:** Addition
  - The 2015 IRC requires sunrooms to comply with AAMA/NPEA/NSA 2100-12. The standard contains requirements for habitable and nonhabitable sunrooms.

R301.2.1.4 Wind Exposure Category
- **Change Type:** Modification
  - Wind Exposure Category A is a legacy category that no longer exists in the IBC and ASCE 7, which is the basis for determination of wind exposure categories.
  - In the 2015 IRC, Exposure Category A is deleted.
  - In the 2012 IRC, Wind Exposure Category D applied to regions adjacent to open water in non-hurricane-prone regions. Wind Exposure Category D now applies to open water, mud and salt flats, and unbroken ice fields. Exposure Category D also applies in hurricane-prone regions to residences on or near the ocean shore.
R301.3
Story Height

<table>
<thead>
<tr>
<th>Change Type: Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Story height of wood and steel wall framing, insulated concrete, and SIP walls may not exceed 11 feet, 7 inches. Masonry wall height is limited to 13 feet, 7 inches.</td>
</tr>
</tbody>
</table>

R302.1
Exterior Walls

<table>
<thead>
<tr>
<th>Change Type: Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table R302.1 shows minimum fire resistance ratings and minimum fire separations.</td>
</tr>
</tbody>
</table>

R302.1
Exterior Walls

<table>
<thead>
<tr>
<th>Change Type: Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table R302.1 shows minimum fire resistance ratings and minimum fire separations.</td>
</tr>
</tbody>
</table>
R302.1  Exterior Walls

- **Change Type:** Modification

<table>
<thead>
<tr>
<th>Condition</th>
<th>Minimum Fire Separation Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dwelling Without Sprinkler System</td>
<td>0 hours 1 hour on underside</td>
</tr>
<tr>
<td>Dwelling with Sprinkler System</td>
<td>0 hours 1 hour on underside</td>
</tr>
<tr>
<td>Top Plate</td>
<td>0 hours 0 hours</td>
</tr>
<tr>
<td>Sprinkler on All Dwelling and 1-Story Buildings on Adjoining Lot</td>
<td>N/A N/A 1 hour on underside</td>
</tr>
<tr>
<td>4-inch Overhang on Manufactured Garages</td>
<td>N/A N/A 1 hour on underside</td>
</tr>
</tbody>
</table>

**2015** | **2012**
R302.1 | R302.1

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R302.2  Townhouse Separation

- **Change Type:** Modification

- The provisions for separating townhouses with structurally independent fire-resistant-rated walls in accordance with Section R302.1 have been removed in favor of the common wall provisions of Section R302.2. Common walls separating townhouses must now be rated for 2 hours when an automatic fire sprinkler system is not installed in the townhouse dwelling units.

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R302.13  Fire Protection of Floors

- **Change Type:** Clarification

- The provisions for fire protection of floors have been relocated from Chapter 5 to the fire-resistant construction provisions of Section R302. New language clarifies that the code does not regulate penetrations or openings in the fire protection membrane.
R304.1
Minimum Habitable Room Area

<table>
<thead>
<tr>
<th>Change Type: Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>The requirement for one habitable room with a minimum floor area of 120 square feet has been removed from the code.</td>
</tr>
</tbody>
</table>

R305
Ceiling Height

<table>
<thead>
<tr>
<th>Change Type: Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>The minimum ceiling height for bathrooms, toilet rooms, and laundry rooms has been reduced to 6 feet 8 inches. The exception for allowing beams, girders, ducts, or other obstructions to project to within 6 feet, 4 inches of the finished floor has been expanded to include basements with habitable space.</td>
</tr>
</tbody>
</table>

R308.4.2
Glazing Adjacent to Doors

<table>
<thead>
<tr>
<th>Change Type: Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glazing installed perpendicular to a door in a closed position and within 24 inches of the door only requires safety glazing if it is on the hinge side of an in-swinging door.</td>
</tr>
</tbody>
</table>
R310 Emergency Escape and Rescue Openings

- **Change Type:** Clarification
  - The emergency escape and rescue openings provisions have been reorganized. Separate provisions spell out the requirements for windows and doors used for emergency escape and rescue.

R311.1 Means of Egress

- **Change Type:** Clarification
  - The required egress door of a dwelling unit must open directly into a public way or to a yard or court that opens to a public way.

R311.8 Ramps

- **Change Type:** Modification
  - Ramps that do not serve the required egress door are now permitted to have a slope not greater than 1 unit vertical in 8 units horizontal.
R314
Smoke Alarms

- Change Type: Modification
  - Battery-operated smoke alarms are permitted for satisfying the smoke alarm power requirements when alterations, repairs, and additions occur. Household fire alarm systems no longer require monitoring by an approved supervising station. New provisions address smoke alarms installed near bathrooms and cooking appliances.

R315
Carbon Monoxide Alarms

- Change Type: Modification
  - Carbon monoxide alarms now require connection to the house wiring system with battery backup. Exterior work such as roofing, siding, windows, doors, and deck and porch additions no longer trigger carbon monoxide alarm provisions for existing buildings.

R322.1, R322.2
Flood Hazards

- Change Type: Modification
  - This provision applies to existing buildings in flood hazard areas where 50 percent or more of the structure has damage and requires restoration. Minimum elevation allowed for dwellings in flood hazard areas is limited and the section defines a Coastal A zone.
2. What is the $V_{ul}$ wind speed in your local area?

Depending upon the local area, most of country is now 115 mph. Check the map in Figure R301.2(4A).

3. Is a common wall or structurally separated wall now considered the typical wall between townhouse units?

Common wall considered the typical townhome dividing wall in Section R302.2, Townhouses.

4. Does the glazing in the figure need to be safety glazing?

Glazing to the left does not require safety glazing. Glazing on the right, where potentially a person may be pushed through the window, requires safety glazing.
Building Planning

5. For existing buildings with alterations requiring a permit, do smoke alarms have to be wired into the electrical system?

No, battery-powered smoke alarms may be added in some situations.

Chapter 4

Foundations

R403.1.1
Minimum Footing Size

- Change Type: Modification

<table>
<thead>
<tr>
<th>2015</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>R403.1.1</td>
<td>R403.1.1</td>
</tr>
</tbody>
</table>

Minimum Footing Size Table

<table>
<thead>
<tr>
<th>Story Floor</th>
<th>Footing Width for Wood</th>
<th>Footing Width for Steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Floor</td>
<td>12 in. x 12 in.</td>
<td>12 in. x 12 in.</td>
</tr>
<tr>
<td>2nd Floor</td>
<td>12 in. x 12 in.</td>
<td>12 in. x 12 in.</td>
</tr>
<tr>
<td>3rd Floor</td>
<td>12 in. x 12 in.</td>
<td>12 in. x 12 in.</td>
</tr>
<tr>
<td>4th Floor</td>
<td>12 in. x 12 in.</td>
<td>12 in. x 12 in.</td>
</tr>
<tr>
<td>5th Floor</td>
<td>12 in. x 12 in.</td>
<td>12 in. x 12 in.</td>
</tr>
</tbody>
</table>

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R403.1.1 Minimum Footing Size

- Change Type: Modification

<table>
<thead>
<tr>
<th>Minimum Required Footing</th>
<th>2012</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slab on grade</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Two-story house with slab on grade foundation:
  - Light-frame construction
  - Soil-bearing strength 5,150 psi
  - Roof Live Load 5.20 psi
  - 32ft. wide building with interior load-bearing wall

R403.1.3 Footing and Stem Wall Reinforcing in Seismic Design Categories D0, D1, and D2

- Change Type: Clarification

Updated figures and code provisions in Section R403.1.3 now clearly define minimum required reinforcement in footings and stem walls located in Seismic Design Categories (SDC) D0, D1, and D2.
**R403.1.6 Foundation Anchorage**

**Change Type:** Modification
- Anchor bolts are now required to be placed in the middle third of the sill plate. Approved anchors may be used instead of ½-inch anchor bolts.

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6. Is the anchor bolt in the figure correctly located in the sill plate?

No, the anchor bolt is not within the middle third of the sill plate.

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**Chapter 5**

**Floors**
Tables R502.3.1(1), R502.3.1(2) Floor Joist Spans for Common Lumber Species

- Change Type: Modification

- The code sets the maximum allowable spacing for deck joists supporting the various types of common decking materials.

Floor Spans

- #1 Bedroom
  - Dead load 5 10 psf
  - 2310 joists
  - 160 o.c. spacing
  - Southern Pine (SP) #2

  The SP #2 span length is significantly reduced from the 2012 IRC span length.

  Note: An SP #1 joist will span about the same length in the 2015 IRC Table R502.3.1(1) or R502.3.1(2) as the SP #2 did in the tables in the 2012 IRC.

R507.1, R507.4 Decking

- Change Type: Modification

2015 IRC Update
R507.2.4 Alternative Deck Lateral Load Connection

Change Type: Modification

- When the prescriptive deck lateral load connection that has appeared in the previous editions of the code is chosen as a design option, the code now requires the two hold-down devices to be within 2 feet of the ends of the deck. A new lateral load connection option prescribes four hold-downs installed below the deck structure.

R507.5, R507.6, R507.7

Deck Joists and Beams

Change Type: Addition

- Provide prescriptive methods for joists and beams in deck construction. Section R507.5 describes requirements for deck joists, Section R507.6 lists requirements for deck beams, and Section R507.7 describes minimum bearing requirements for joists and beams.

---

2015 IRC Update
R507.5, R507.6, R507.7
Deck Joists and Beams

<table>
<thead>
<tr>
<th>2015</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>R507.5, R507.6, R507.7</td>
<td>-</td>
</tr>
</tbody>
</table>

R507.8
Deck Posts

Change Type: Addition
- New Section R507.8 establishes minimum sizes of wood posts supporting wood decks and describes the requirements for connection of deck posts to the footing.

<table>
<thead>
<tr>
<th>2015</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>R507.8</td>
<td>-</td>
</tr>
</tbody>
</table>

Floors

7. Are there prescriptive requirements within the IRC for the length of deck joists and beams?

- Yes, the IRC now contains span tables for the maximum length of deck joists and beams.
Chapter 6
Wall Construction

Table R602.3(1) Fastening Schedule—Roof Requirements

| Change Type: Modification |

<table>
<thead>
<tr>
<th>2015</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table R602.3(1)</td>
<td>Table R602.3(1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description of Building Element</th>
<th>Number and Type of Fasteners***</th>
<th>Spacing affixement and Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Footnotes not shown for brevity and clarity.*
**Table R602.3(1) Fastening Schedule—Floor Requirements**

- **Change Type:** Modification

<table>
<thead>
<tr>
<th>2015</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table R602.3(1)</td>
<td>Table R602.3(1)</td>
</tr>
</tbody>
</table>

- **Stud Size, Height, and Spacing**
  - **Change Type:** Modification
    - Table R602.3.1 is deleted and the exception for walls greater than 10 feet tall is added to the text of Section R602.3.1. If studs in a tall wall meet Exception 2, they meet the requirements of the IRC and do not need engineering or use of an alternate standard.

**Prescriptive Tall Walls**

- **2 x 6 Continuous Studs Used in an 18-Foot Gable end Wall**
  - The gable end wall studs do not support a roof load. They form a non-load-bearing wall. From Table R602.3(5), non-bearing walls may have studs up to 20 feet tall when using 2 x 6 lumber.
R602.7 Headers

Change TYPE: Modification

- The girder and header span tables of Chapter 5 have been moved into Chapter 6, to the header section. Multi-ply and single header tables are combined. A new section describing rim board headers is added.

Table R602.10.5 Contributing Length of Method CS-PF Braced Wall Panels

Change Type: Modification

<table>
<thead>
<tr>
<th>2015</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>R602.10.5</td>
<td>Table R602.10.5</td>
</tr>
</tbody>
</table>
R602.10.11 Cripple Wall Bracing

2015 2012
R602.10.11  R602.10.11

- Change Type: Modification
  - A reduction is no longer required in determining the maximum distance between braced wall panels in a cripple wall. References to the bracing length adjustment tables clarify that increased bracing is required if gypsum wall finish is not applied to the cripple walls.

R602.12 Simplified Wall Bracing

2015 2012
R602.12  R602.12

- Change Type: Modification

R602.12 Simplified Wall Bracing

2015 2012
R602.12  R602.12
### R606 Masonry Walls

<table>
<thead>
<tr>
<th>2015</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>R606</td>
<td>R606, R607, R608, R609</td>
</tr>
</tbody>
</table>

- **Change Type:** Reorganization
  - Sections R606, R607, R608, and R609 have been organized into one section providing requirements for masonry construction of single- and two-family dwellings and townhouses.
8. A two-story single family dwelling is located in Wind Exposure Category C. Can the Simplified Wall Bracing procedure be used for the dwelling?

Yes, if the design meets the criteria for Simplified Wall Bracing.

Chapter 7

Wall Covering

R703.3 Siding Material Thickness and Attachment

- Table R703.4, Weather Resistant Siding Attachment and Minimum Thickness, is simplified. New code language is added to Section R703 to clarify limitations of use of the table and to describe fastener type, length, and penetration.
R703.3 Siding Material Thickness and Attachment

<table>
<thead>
<tr>
<th>2015</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>R703.3</td>
<td>R703.3</td>
</tr>
</tbody>
</table>

R703.9 Exterior Insulation and Finish Systems (EIFS)

- **Change Type:** Modification
  - Limitations for exterior insulation and finish systems with and without drainage have been added to the 2015 IRC.

R703.11.1 Vinyl Siding Attachment

- **Change Type:** Addition
  - Nailing penetration and spacing requirements for horizontal and vertical vinyl siding.
R703.13, R703.14 Insulated Vinyl Siding and Polypropylene Siding

- **Change Type:** Addition
  - New sections set minimum requirements for insulated vinyl siding and polypropylene siding.
  - **Insulated Vinyl Siding.** A vinyl cladding product with manufacturer-installed foam plastic insulating material as an integral part of the cladding product, having a minimum thermal resistance of not less than R-2.
  - **Polypropylene Siding.** A shaped material, made principally from polypropylene homopolymer, or copolymer, that in some cases contains fillers or reinforcements, that is used to clad exterior walls or buildings.

R703.15, R703.16, R703.17 Cladding Attachment over Foam Sheathing

- **Change Type:** Addition
  - Three new sections set minimum requirements for cladding attachment over foam sheathing to wood framing (R703.15), cold formed steel framing (R703.16) and masonry or concrete walls (R703.17). For light-frame construction, prescriptive requirements are given.
Tables R802.4, R802.5 Ceiling Joist and Rafter Tables

- Change Type: Modification

<table>
<thead>
<tr>
<th>2015</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tables R802.4, R802.5</td>
<td>Tables R802.4, R802.5.1</td>
</tr>
</tbody>
</table>

- Change Type: Modification

Ceiling Joint Spans

- #1 Uninhabitable attic with limited storage
  - LL 5 20 psf
  - DL 5 10 psf
  - 2310 joists
  - 160 o.c. spacing
  - SP #2
  - The SP #2 span length is significantly reduced from the 2012 IRC span length.
  - Note: An SP #1 joist will span about the same length in the 2015 IRC Table R802.4(1) or R802.4(2) as the SP #2 did in the tables in the 2012 IRC.

R806.1 Attic Ventilation

- Change Type: Deletion
  - The 2012 IRC exception allowing the building official to waive ventilation requirements due to atmospheric or climatic conditions has been deleted.
Roof-Ceiling Construction

9. Why did changes in span length occurred in the rafter span tables?

The rafter lengths changed due to the capacity (or strength) of today’s Southern Pine, Douglas Fir and Hemlock Fir lumber changing.

R905.1.1 Underlayment

- Change Type: Modification

<table>
<thead>
<tr>
<th>TABLE R905.1.1 UNDERLAYMENT TYPES</th>
<th>2015</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roof Covering</td>
<td>Section</td>
<td>Maximum Ultimate Design Wind Speed, F (kPa)</td>
</tr>
<tr>
<td>Asphalt shingles</td>
<td>R905.1</td>
<td>ASTM D 3465 Type I, ASTM D 684 Type F</td>
</tr>
<tr>
<td>Metal and shingles</td>
<td>R905.2</td>
<td>ASTM D 5855 Type I, ASTM D 684 Type F</td>
</tr>
<tr>
<td>Wood and shingles</td>
<td>R905.3</td>
<td>ASTM D 5855 Type I, ASTM D 684 Type F</td>
</tr>
<tr>
<td>Other materials</td>
<td>R905.4</td>
<td>ASTM D 5855 Type I, ASTM D 684 Type F</td>
</tr>
<tr>
<td>Roof decks</td>
<td>R905.5</td>
<td>ASTM D 5855 Type I, ASTM D 684 Type F</td>
</tr>
<tr>
<td>Roof sheathing</td>
<td>R905.6</td>
<td>ASTM D 5855 Type I, ASTM D 684 Type F</td>
</tr>
<tr>
<td>Underlayment</td>
<td>R905.7</td>
<td>ASTM D 5855 Type I, ASTM D 684 Type F</td>
</tr>
<tr>
<td>Other materials</td>
<td>R905.8</td>
<td>ASTM D 5855 Type I, ASTM D 684 Type F</td>
</tr>
<tr>
<td>Table</td>
<td>R905.9</td>
<td>Underlayment types</td>
</tr>
</tbody>
</table>

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R905.1.1 Underlayment

Change Type: Modification

<table>
<thead>
<tr>
<th>2015</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>R905.1.1</td>
<td>Multiple Sections</td>
</tr>
</tbody>
</table>

R905.7.5 Wood Shingle Application

Change Type: Modification

- The minimum requirements for application of wood shingles are expanded.
- Fastener type is clarified and a new table lists minimum sizes for box nails. Labeling requirements for fastener packaging have also been added.
R905.8.6 Wood Shake Application

- Change Type: Modification
- The minimum requirements for application of wood shakes are expanded. Fastener type is clarified, and a new table lists minimum sizes for box nails. Labeling requirements for fastener packaging have also been added.

R905.16 Photovoltaic Shingles

- Change Type: Modification
- Additional requirements and limits for photovoltaic shingles have been added to Section R905.16.
  - R905.16 Photovoltaic shingles.
  - R905.16.1 Deck requirements.
  - R905.16.2 Deck slope.
  - R905.16.3 Underlayment.
  - R905.16.4 Underlayment application.
  - R905.16.4.1 Ice barrier.
  - R905.16.4.2 Underlayment and high winds.

R907 Rooftop-Mounted Photovoltaic Systems

- Change Type: Addition
- This code provision describes the requirements and limits of rooftop-mounted photovoltaic systems.
N1101.13 Compliance Paths

Change Type: Modification

- The compliance paths in the energy provisions have been clarified. The mandatory provisions combined with either the prescriptive provisions or the performance provisions are deemed to comply with the code.

1. Sections N1101.14 through N1104.
2. Section N1105 and the provisions of Sections N1101.14 through N1104 labeled “Mandatory.”
3. An energy rating index (ERI) approach in Section N1106.

N1101.14 Permanent Energy Certificate

Change Type: Modification

- The code now requires the permanent energy certificate to be placed on a wall in proximity to the furnace, in a utility room, or in another approved location inside the building.
N1102.1.3 R-Value Computation—Insulated Siding

Change Type: Modification
- Insulated siding is allowed in the calculation for satisfying the wall insulation R-value. The labeled R-value for the siding must be reduced by 0.6 for calculation purposes.

N1102.2.8, Floor Framing Cavity Insulation

Change Type: Modification
- An air space is allowed above the required insulation installed in a floor framing cavity above unconditioned space.

N1103.3 Duct Sealing and Testing

Change Type: Modification
- The duct sealing and testing provisions have been reorganized to clarify the application. The maximum duct leakage rates are now prescriptive rather than mandatory provisions to accommodate design flexibility.

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N1103.5 Heated Water Circulation and Temperature Maintenance Systems

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- **Change Type:** Modification
  - Automatic controls to maintain hot water temperature for heated water circulation systems and for heat trace temperature maintenance systems when such systems are installed. To save energy, continuously operating circulation pumps are no longer permitted. Heat trace systems must comply with one of the referenced standards.

---

**Energy Conservation**

**10. Where may a permanent energy certificate be placed?**

The permanent energy certificate may now be placed in multiple locations, including on a wall near the furnace or in a utility room.

---

Chapter 15

Exhaust Systems
M1502.4.4, M1502.4.5 Dryer Exhaust Duct Power Ventilators

- **Change Type:** Addition
  - The code now recognizes the use of dryer exhaust duct power ventilators (DEDPVs) to increase the allowable exhaust duct length for clothes dryers.

M1502.4.6 Dryer Duct Length Identification

- **Change Type:** Modification
  - A permanent label identifying the concealed length of the dryer exhaust duct is no longer required where the equivalent duct length does not exceed 35 feet. For the dryer exhaust duct exceeding 35 feet, a label or tag is required whether the duct is concealed or not.

M1506.2 Exhaust Duct Length

- **Change Type:** Addition
  - The code establishes maximum exhaust duct lengths based on duct diameter, type of duct and the exhaust fan airflow rating.
Exhaust Systems

11. Do concealed dryer ducts require a permanent label stating their length?

No, all dryer ducts longer than 35 ft require a permanent label, concealed ducts less than 35 feet in length do not require a label stating their length.

Chapter 16

Duct Systems

M1601.4 Duct Installation

Change Type: Modification
- Tapes and mastics used to seal sheet metal ducts must be listed to UL 181 B as has been required for sealing flexible ducts. Snap-lock and button-lock seams are no longer exempt from the sealing requirements.
G2404.11 Condensate Pumps

Change Type: Addition

- Condensate pumps located in uninhabitable spaces must be connected to the appliance to shut down the equipment in the event of pump failure.

G2411.1.1 Electrical Bonding of Corrugated Stainless Steel Tubing

Change Type: Modification

- The maximum allowable length of the bonding jumper for corrugated stainless steel tubing (CSST) is 75 feet. Bonding methods must comply with NFPA 70 and devices, such as clamps, must be listed in accordance with UL 467.
G2413.2  
**Maximum Gas Demand**

Change Type: Modification
- Table G2413.2 and the reference to it were deleted to clarify that the code requires the actual maximum input rating of the appliances to be known and used for gas pipe sizing purposes.

G2414.6  
**Plastic Pipe, Tubing and Fittings**

Change Type: Modification
- PVC and CPVC pipe are expressly prohibited materials for supplying fuel gas.

G2415.7  
**Protection of Concealed Piping Against Physical Damage**

- Change Type: Modification
  - Piping parallel to framing members and piping within framing members are now addressed. Protection is required to extend well beyond the edge of members that are bored or notched.
G2421.2 Medium-Pressure Regulators
Change Type: **Modification**
- Medium-Pressure (MP) line regulators installed in rigid piping must have a union installed to allow removal of the regulator.

G2426.7.1 Door Clearance to Vent Terminals
Change Type: **Addition**
- An appliance vent terminal is not permitted in a location within 12 inches of the arc of a swinging door.

G2427.8 Venting System Termination Location
Change Type: **Modification**
- Category IV appliance vent system terminal locations must be at least 10 feet from an adjoining building opening when the vent discharges in the direction of the adjacent building.
Fuel Gas

- Can CPVC pipe be used for natural gas supply lines?

No, neither PVC nor CPVC pipe may be used to supply fuel gas.

Chapter 25

Plumbing Administration

P2502.1, P2503.4 Inspection and Tests for Building Sewers

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- **Change Type:** Clarification
  - Internal examination is required to verify size, slope and condition of existing piping. A new provision prescribes a pressure test for a forced sewer at a test pressure of 5 psi greater than the pump rating.
P2503.5 Drain, Waste, and Vent Systems Testing

**Change Type:** Modification
- The head pressure for a water test on drain, waste, and vent (DWV) systems has been reduced from 10 feet to 5 feet.

P2603.2.1 Protection Against Physical Damage

**Change Type:** Modification
- For piping installed through bored holes or in notches, the minimum clearance distance from the concealed piping to the edge of the framing member has been reduced from 1.5 inches to 1.25 inches. Protection is required for piping installed less than 1.25 inches from the edge of the framing member.
### Chapter 27

**Plumbing Fixtures**

#### P2702.1, P2706.1

**Waste Receptors**

**Change Type:** Modification

- A definition of waste receptor has been added to the code. Waste receptors are now permitted in bathrooms and closets.

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- **WASTE RECEPTOR.** A floor sink, standpipe, hub drain or a floor drain that receives the discharge of one or more indirect waste pipes.

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### Chapter 28

**Water Heaters**

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P2801 Water Heater Drain Valves and Pans

Change Type: Modification

- Drain valves are required to have a threaded outlet for water heaters. The water heater pan requirements have been expanded to accept aluminum and plastic pans of the prescribed thickness. A pan drain is not required when a water heater is replaced and there is no existing drain.

P2901, P2910 through P2913 Nonpotable Water Systems

Change Type: Modification

- Nonpotable water outlets, such as hose connections, that utilize nonpotable water must be identified with a warning and a symbol that nonpotable water is being used. The color purple is established for identifying distribution piping conveying nonpotable water. New Sections P2910 through P2913 are extracted from the International Green Construction Code (IgCC) and intend to provide guidance on the collection, storage, and distribution of various types of nonpotable water for residential buildings.
P2906.2 Lead Content of Drinking Water Pipe and Fittings

Change Type: Modification

- The code has a more stringent limitation for lead content in pipe, pipe fittings, joints, valves, faucets, and fixture fittings that convey water used for drinking and cooking.

P3005.2 Cleanouts

Change Type: Modification

- The section on cleanouts has been completely reorganized and reworded for clarity. Brass cleanout plugs are only permitted for metallic piping.
- Where located at a finished wall, the cleanout must be within 1.5 inches of the finished surface.
- A cleanout is no longer required at the base of each waste or soil stack.
P3008.1
Backwater Valves

Change Type: Modification

- For existing buildings, fixtures that are located above the next upstream manhole cover are allowed to discharge through a backwater valve.

P3103.1, P3103.2
Vent Terminals

- Change Type: Modification
  - Vent terminations where roofs may be occupied and where very cold weather conditions occur are clarified.
Chapter 32
Traps

P3201.2 Trap Seal Protection Against Evaporation

**Change Type:** Modification

- Trap seal protection against evaporation can now be accomplished in a variety of ways, including trap seal primer valves supplied with nonpotable water and barrier-type trap seal protection devices.

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**Drain, Waste, Vent**

13. For DWV systems, a head pressure of 6 feet is maintained. Does this meet the code minimum head height?

- Yes, DWV system tests only require 5 feet of head.
E3901.9
Receptacle Outlets for Garages

Change Type: Modification
- Garage receptacle outlets must be served by a separate branch circuit that does not supply other outlets. At least one receptacle outlet is required for each car space in a garage.

E3902.8, E3902.9, E3902.10 Ground-Fault Circuit Interrupter Protection

Change Type: Modification
- Laundry areas have been added to the list of locations requiring ground-fault circuit interrupter (GFCI) protection. Receptacles within 6 feet of bathtubs and showers, and receptacles for dishwashers also require GFCI protection.
14. Describe a new location requiring GFCI circuits.

Within 6 feet of a bathtub or shower, for use by a dishwasher, and in laundry areas.

Part 9
Appendices

Appendix R
Light Straw-Clay Construction

Change Type: Addition
- Prescriptive provisions for light straw-clay construction have been added as an appendix to the 2015 IRC. Light straw-clay walls are nonbearing infill around a structural frame.
Appendix S
Strawbale Construction

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- **Change Type:** Addition
- Prescriptive provisions for strawbale construction have been added as an appendix to the 2015 IRC.

Strawbale walls may be bearing walls or nonbearing infill around a structural frame depending upon the method of construction and detailing. Appendix S contains requirements for both construction methods.

Final Reflection

- This slide will help the learner to reflect on the day and what they will take back to the job and apply.

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