



**Webinar**  
Monday, September 13, 2021

## **Roofing industry technical issues update**

presented by



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### **Topics**

- Oregon adoption of 2018 IRC
- New synthetic underlayment standard
- Plywood and OSB roof decks and roof deck acceptance
- FM projects

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# Oregon State Adoption of 2018 IRC Codes

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## Oregon.gov – Building Codes Division

<https://www.oregon.gov/bcd/Pages/index.aspx>

**COVID-19 updates**  
Access division updates to operations and services due to COVID-19.

**Wildfire recovery**  
Access information and resources for wildfire recovery and rebuilding.

**Codes and standards**

- Adopted codes online
- Alternate methods
- Code interpretations
- Laws and rules

**Licensing**

- Renew a license
- License holder search
- Continuing education
- Enforcement

**Boards, hearings, and committees**

- Boards
- Code adoption
- Rule advisory committees
- Rulemaking hearings
- View live meetings

**Local and regional services**

- Local building department directory
- Building department administration
- Drug lab properties
- Regional program services
- Public records request
- Building official list

**Upcoming meetings**

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**Oregon Residential Specialty Code Adoption**

**Adopted codes online**

**ORSC adoption timeline**

**2021 ORSC - NEW EDITION**  
View the free read-only online version

- Chapter 1 provisions Effective and mandatory April 1, 2021
- Construction provisions Effective April 1, 2021 with a six-month phase-in period
- Code update training and resources

**Phase-in period - April 1 to Sept. 30, 2021**  
Use of one of the following is permitted:

- The 2017 ORSC (including the solar-ready amendments) with the 2021 ORSC Chapter 1
- The 2021 ORSC in its entirety

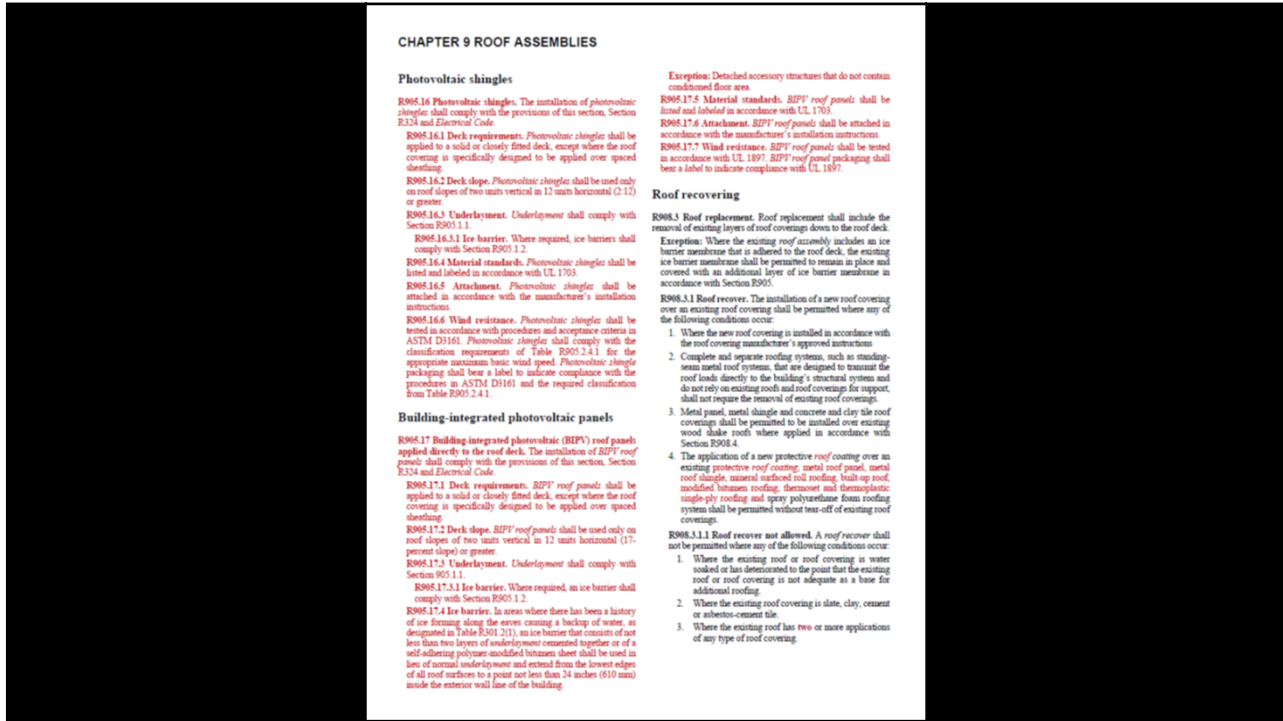
**APR 2021**

**OCT 2021** 2021 ORSC - Mandatory Oct. 1, 2021

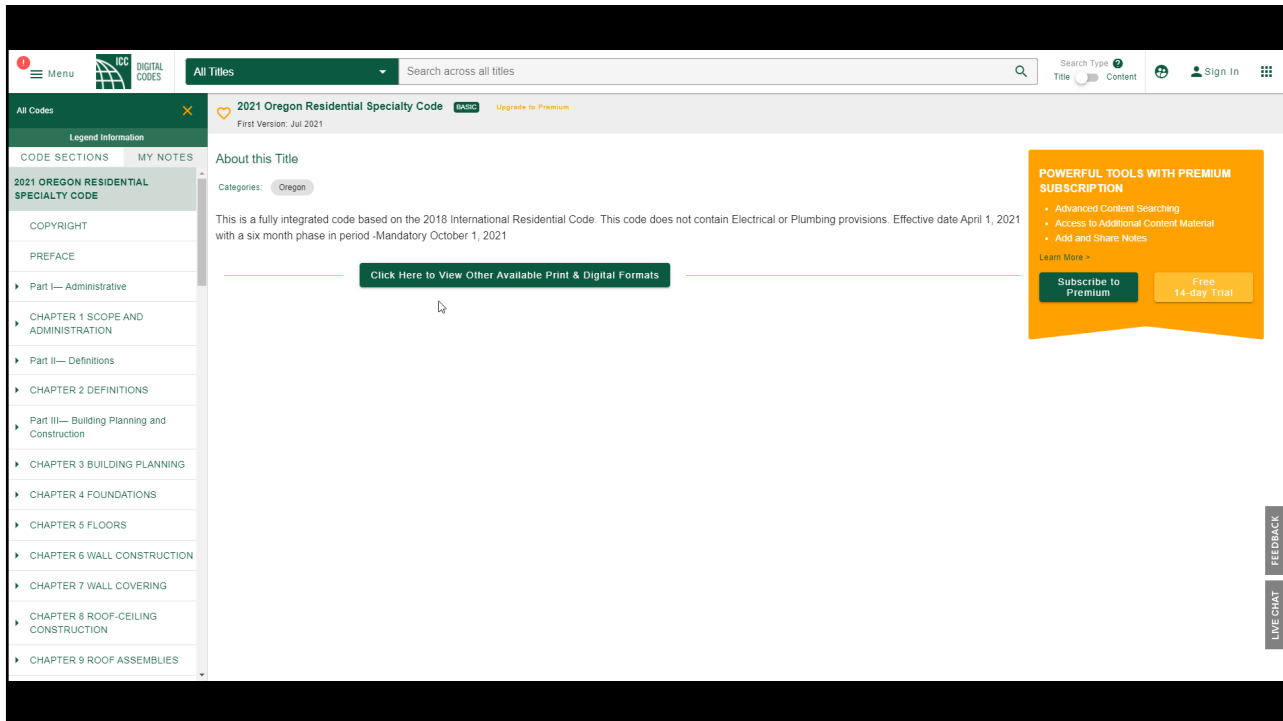
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Section	Topic / Summary of change
R507	<b>Decks.</b> Adopted new model code provisions expanding on permissible materials, required footings, and deck posts. Also, new language was added to incorporate deck guard requirements from the guard provisions of R312 of Chapter 3. See <i>American Wood Council's Design for Code Acceptance (DCA) 6</i> .
R602.9	<b>Cripple walls.</b> Added language to establish a differentiation between interior cripple walls used to support floor systems, and exterior cripple walls constructed on continuous exterior footing/stemwalls.
R602.10.1.2	<b>Wall bracing offsets.</b> Added language to clarify the requirements where all the braced wall panels along a braced wall line occur within a single line.
R602.10.1.4	<b>Mixing wall bracing methods.</b> Moved the provisions allowing mixing of intermittent bracing and continuous sheathing methods to its own item for clarity.
R602.10.4.4	<b>Braced wall panel joints.</b> Adopted new model code language clarifying that blocking at all horizontal panel joints for a continuously sheathed structure is not required, it's only required at the qualifying/designated braced wall panels.
R703.1.1	<b>Exterior wall envelope.</b> Retained the Oregon amendments for creating a drainage plane and added a clarification for the available exceptions.
R905.16.17	<b>Photovoltaic (PV) shingles and building integrated photovoltaic (BIPV) panels.</b> Adopted new model code provisions that address PV shingles and BIPV panels. This newer technology is becoming more common in residential construction.
R908.3.1	<b>Roof recover (Reroofing).</b> Rescinded the existing amendment allowing three layers of roofing to be installed on an existing dwelling. Adopted the model code requirement that allows for only two layers.
N1101.1	<b>Scope and additional measures.</b> <ul style="list-style-type: none"> <li>• Revised to require that all conditioned spaces within residential buildings comply with Table N1101.1(1) and one additional measure from Table N1101.1(2).</li> <li>• Reduced the required fenestration U-factor in Table N1101.1(1) from U-0.30 to U-0.27.</li> <li>• Revised Table N1101.1(2) into eight additional measures to choose for compliance.</li> </ul>
N1101.3	<b>Large and small additions.</b> <ul style="list-style-type: none"> <li>• Revised to clarify the difference between large and small additions by removing the reference to a percent of the existing building heated floor area.</li> <li>• Increased the small addition exception to represent a 15 ft. x 15 ft. room addition.</li> <li>• Aligned Table N1101.3 with the associated changes and deleted the path for ductwork sealing.</li> </ul>
N1104.5	<b>Advanced and intermediate framing.</b> Revised Sections N1104.5.1 and N1104.5.2 to specify R-10 insulation for voids in headers 2 inches or greater.

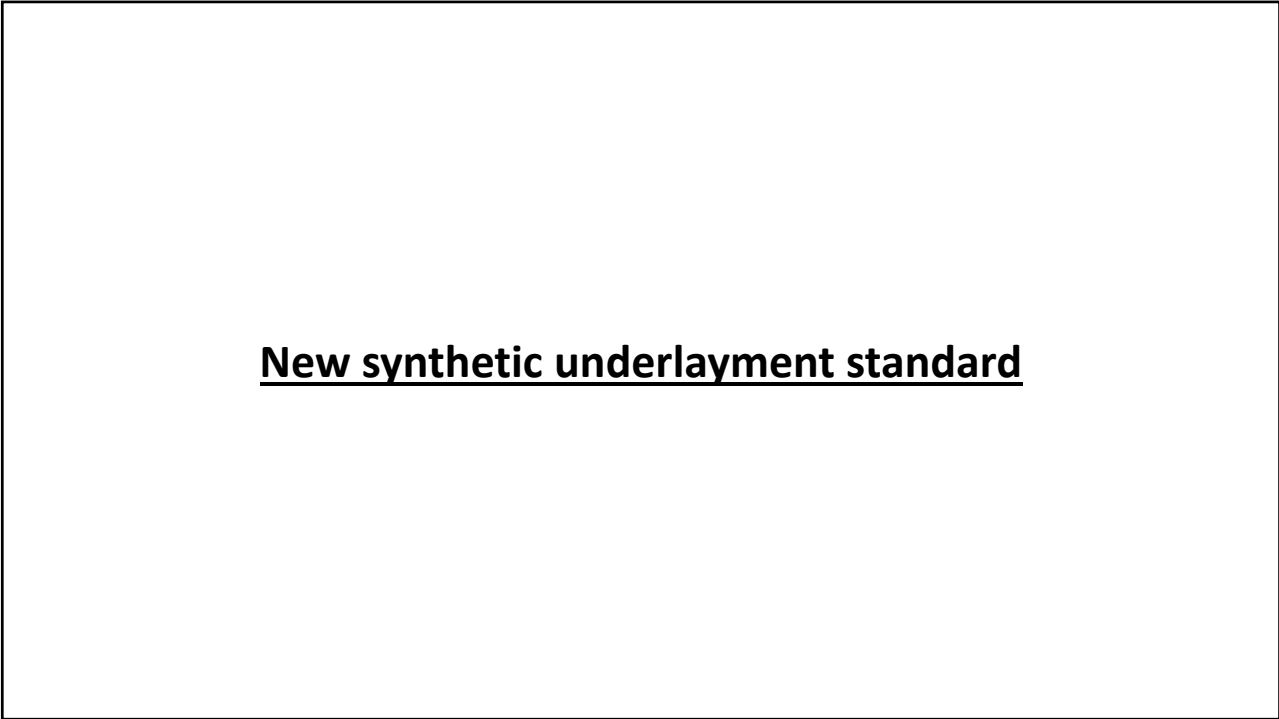
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**New synthetic underlayment standard**

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**ASTM D8257, “Standard Specification for Mechanically Attached Polymeric Roof Underlayment Used in Steep Slope Roofing”**

Published in December 2020

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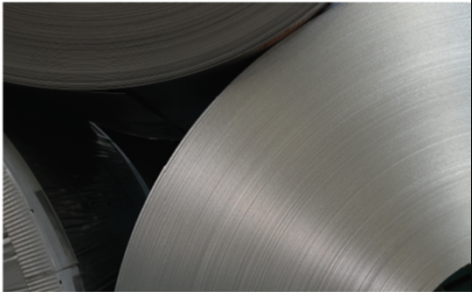
## Conclusions and recommendations

### Synthetic underlayments

- Specify, select and purchase synthetic underlayments based upon ASTM D8257
- Beware of specific products' vapor retarder or vapor "open" characteristics
- ASTM D8257 will first be introduced into IBC 2024 and IRC 2024
  - Until then, code official "acceptance" is still needed

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RESEARCH+TECH



**A new standard**  
Guidelines for synthetic underlayments  
by Mark S. Graham

**A**fter more than eight years in development, in December 2020 ASTM International published the first U.S. product standard applicable to synthetic, steep-slope underlayment products. If you are involved with the design or installation of steep-slope roof systems, I encourage you to become familiar with this standard and begin to use it when specifying and procuring steep-slope underlayment products.

**ASTM D8257**  
ASTM D8257, "Standard Specification for Mechanically Attached Polymeric Roof Underlayment Used in Steep-Slope Roofing," addresses mechanically attached synthetic underlayment used in steep-slope roof systems.

The standard defines polymeric underlayment as a sheet material primarily composed of polymers that are used as a secondary water-shedding layer on steep-slope roofs when installed before a primary roof covering. The standard's objective is to provide a finished product that will be used as a water-shedding underlayment layer before and after the installation of a primary steep-slope roof covering.


26 professionalroofing.net JAN/AUGUST 2021

**Professional Roofing**  
July/August 2021

[Link](#)

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**RESEARCH+TECH**



**Know your steep-slope roof decks**

Following plywood and OSB installation guidelines can help ensure a successful roof system performance

by Mark S. Graham

22 professionalroofing.net DECEMBER/JANUARY 2020-21

**Professional Roofing**

December/January 2020-21

[Link](#)

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## **Standards for wood structural panels**

*International Residential Code, 2018 Edition*

**Plywood:**

- U.S. Department of Commerce PS-1, “Structural Plywood”
- CSA Group O325, “Construction Sheathing”

**Oriented-strand board (OSB):**

- U.S. Department of Commerce PS-2, “Performance Standard for Wood-based Structural-use Panels”
- CSA Group O437, “Standards for OSB and Waferboard”

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## **Common, but not referenced in the Code**

### **Plywood and OSB:**

- APA-The Engineered Wood Association Standard PRP-108, “Performance Standards and Policies for Structural-Use Panels”

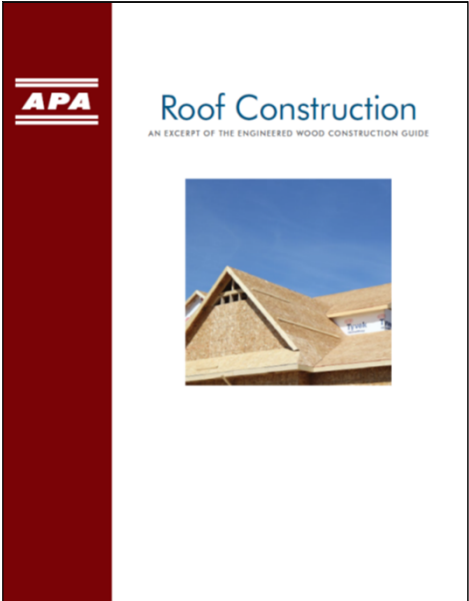
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## **Roof sheathing attachment**

### **IRC 2018 Table 602.3(1), Rows 30-32 (minimum attachment):**

- Panel edges:
  - 2½-inch-long 8d common nails at 6 inches o.c. at supported panel edges
- Intermediate supports:
  - 2½-inch-long 8d common nails at 12 inches o.c. at intermediate supports

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**APA Form E30, "Roof Construction"**  
--Roofing-specific excerpts from APA's *Engineered Wood Construction Guide* (102 pages)

[Link](#)

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## **Recommendations**

Roof sheathing attachment

- **New construction:**
  - Be careful with deck "acceptance".
  - Deck acceptance should be limited to the visual surface and no visual presence of moisture on the surface
- **Reroofing:**
  - Since deck condition typically cannot be determined until roof covering tear-off, consider unit price or T & M pricing for deck replacement and/or deck re-fastening

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CHECKLIST FOR ROOFING SYSTEM

FM Global OFFICE REVIEW  
(Please leave blank for FM Global Office Review)

**FM Global OFFICE REVIEW**  
(Please leave blank for FM Global Office Review)

**WIND:**

Design Wind Speed: <input type="text"/> (mph)	Ground Terrain: <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D
Uplift Pressure in field: <input type="text"/> (psf)	Uplift Rating Required: <input type="checkbox"/> Yes <input type="checkbox"/> No
Adequate Uplift Rating Provided: <input type="checkbox"/> Yes <input type="checkbox"/> No	

(If standing seams, has collapse been reviewed?)  Yes  No

COMMENTS:

X2688 ENGINEERING (Rev. Oct 2016)

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## Conclusions and recommendations

FM Global-insured roofing project process

- FM Global/FM Approvals is not likely a party to the Contract for roofing work
  - FM Global makes recommendations to their insureds/building owner clients
  - FM Global should not be dictating to the Roofing Contractor
- A FM Global-insured roof assembly is a premium product
  - It is typically (well) above minimum code requirements
- Actively manage roofing projects for FM Global-insured clients

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