

# DEPARTMENT OF CODE ENFORCEMENT



## CITY OF ENGLEWOOD

333 W. National Rd. Englewood, Ohio 45322 (937)836-5106 Fax (937) 836-7426

# SHINGLE ROOF REQUIREMENTS

### PERMITS

***A PERMIT IS REQUIRED; If structural changes or repairs are made, such as replacing or repairing damaged roof rafters and/or trusses or altering structural supports for rooftop mechanical equipment or signs***

***NO PERMIT IS REQUIRED for tear-offs and re-roofs that don't involve structural repairs, but they must still be installed in accordance with the provisions of the 2006 Residential Code of Ohio (RCO), or the 2007 Ohio Building Code (OBC).***

### ICE PROTECTION required to be installed on roofs?

- a. *RCO Section R905.2.7.1, states that, "In areas where the average temperature in January is 25° F or less, or when Table R301.2 (1) criteria so designates, an ice barrier that consists of at least two layers of underlayment cemented together or of a self-adhering polymer modified bitumen sheet, shall be used in lieu of normal underlayment and extend from the eave's edge to a point at least 24 inches from the inside of the exterior wall line of the building. Exception: detached accessory structures that contain no conditioned floor area."*

*(OBC Section 1507.2.8.2 has very similar language.)*

- b. *RCO Table 301.2(1) further elaborates that communities can require Ice Shield Underlayment "...when there has been a history of local damage from the effects of ice damming."*

***Due to a history of ice damming in our jurisdiction, Englewood has determined that eave flashing that complies with RCO Section R905.2.7.1 or OBC 1507.2.8.2 (also known as "ice shield" or "ice guard") is required on new and re-roofing projects.***

### DRIP EDGE required at the bottom and along the sides of sloped roofs?

- a. *RCO Section R903.1 states that, "Flashings shall be installed in such a manner so as to prevent moisture entering the wall and roof through joints in copings, through moisture permeable materials, and at intersections with parapet walls and other penetrations through the roof plane."*
- b. *RCO Section R903.2.1 "Locations", states, "Flashings shall be installed at wall and roof intersections wherever there is a change in roof slope or direction; and around roof openings."*
- c. *OBC Section 1507.2.9.3 "Drip Edge", states, "Provide drip edge at eaves and gables of shingle roofs."*

# DIVISION OF CODE ENFORCEMENT



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### Minimum Requirements for Roof and Floor Structural Sheathing

TABLE R503.2.1.1 (1) ALLOWABLE SPANS AND LOADS FOR WOOD STRUCTURAL PANELS FOR **ROOF** AND SUBFLOOR SHEATHING AND COMBINATION SUBFLOOR UNDERLAYMENT <sup>a,b,c</sup>

SPAN RATING	MINIMUM NOMINAL PANEL THICKNESS (inch)	Allowable Live Load (pounds per square foot) <sup>h,1</sup>		MAXIMUM SPAN (inches)		LOAD (pounds per square foot, at maximum span)		MAXIMUM SPAN (inches)	
		16" o.c. Span	24" o.c. Span	With edge support <sup>d</sup>	Without edge support	Total load	Live load		
<b>Sheathing<sup>e</sup></b>		<b>Roof<sup>f</sup></b>						<b>Subfloor<sup>j</sup></b>	
12/0	5/16	—	—	12	12	40	30	0	
16/0	5/16	30	—	16	16	40	30	0	
20/0	5/16	50	—	20	20	40	30	0	
<b>24/0</b>	<b>3/8</b>	100	30	<b>24</b>	20 <sup>g</sup>	40	30	0	
24/16	7/16	100	40	24	24	50	40	16	
32/16	15/32, 1/2	180	70	32	28	40	30	16 <sup>h</sup>	
40/20	19/32, 5/8	305	130	40	32	40	30	20 <sup>h,i</sup>	
48/24	23/32, 3/4	—	175	48	36	45	35	24	
60/32	7/8	—	305	60	48	45	35	32	
<b>Underlayment, C-C plugged, single floor<sup>e</sup></b>		<b>Roof<sup>f</sup></b>						<b>Combination subfloor underlayment<sup>k</sup></b>	
16 o.c.	19/32, 5/8	100	40	24	24	50	40	16 <sup>i</sup>	
20 o.c.	19/32, 5/8	150	60	32	32	40	30	20 <sup>j</sup>	
24 o.c.	23/32, 3/4	240	100	48	36	35	25	24	
32 o.c.	7/8	—	185	48	40	50	40	32	
48 o.c.	1 <sup>3</sup> /32, 1 <sup>1</sup> /8	—	290	60	48	50	40	48	

(continued)



Minimum Requirements for  
Roof and Floor Structural Sheathing  
(continued)

For SI: 1 inch = 25.4 mm, 1 pound per square foot = 0.0479 kN/m<sup>2</sup>.

- a. The allowable total loads were determined using a dead load of 10 psf. If the dead load exceeds 10 psf, then the live load shall be reduced accordingly.
- b. Panels continuous over two or more spans with long dimension perpendicular to supports. Spans shall be limited to values shown because of possible effect of concentrated loads.
- c. Applies to panels 24 inches or wider.
- d. Lumber blocking, panel edge clips (one midway between each support, except two equally spaced between supports when span is 48 inches), tongue-and-groove panel edges, or other approved type of edge support.
- e. Includes Structural I panels in these grades.
- f. Uniform load deflection limitation:  $\frac{1}{180}$  of span under live load plus dead load,  $\frac{1}{240}$  of span under live load only.
- g. Maximum span 24 inches for  $\frac{15}{32}$ - and  $\frac{1}{2}$ -inch panels.
- h. Maximum span 24 inches where  $\frac{3}{4}$ -inch wood finish flooring is installed at right angles to joists.
- i. Maximum span 24 inches where 1.5 inches of lightweight concrete or approved cellular concrete is placed over the subfloor.
- j. Unsupported edges shall have tongue-and-groove joints or shall be supported with blocking unless minimum nominal  $\frac{1}{4}$ -inch thick underlayment with end and edge joints offset at least 2 inches or 1.5 inches of lightweight concrete or approved cellular concrete is placed over the subfloor, or  $\frac{3}{4}$ -inch wood finish flooring is installed at right angles to the supports. Allowable uniform live load at maximum span, based on deflection of  $\frac{1}{360}$  of span, is 100 psf.
- k. Unsupported edges shall have tongue-and-groove joints or shall be supported by blocking unless nominal  $\frac{1}{4}$ -inch-thick underlayment with end and edge joints offset at least 2 inches or  $\frac{3}{4}$ -inch wood finish flooring is installed at right angles to the supports. Allowable uniform live load at maximum span, based on deflection of  $\frac{1}{360}$  of span, is 100 psf, except panels with a span rating of 48 on center are limited to 65 psf total uniform load at maximum span.
- l. Allowable live load values at spans of 16" o.c. and 24" o.c. taken from reference standard EWA-E30 APA Engineered Wood Construction Guide.

Refer to reference standard for allowable spans not listed in the table.