



## Fastening Roof Sheathing Over Existing 1x Roof Deck Boards

### Bulletin No. 2016-04

**First Release:**

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Plains

**Applicable Standards:**

FORTIFIED Home™–High Wind  
FORTIFIED Home™–High Wind & Hail  
FORTIFIED for Safer Living®

**Applicable Designation Level:**

### Abstract

FORTIFIED standards, asphalt shingle manufacturers and many municipalities require that shingles be installed over a solidly sheathed roof deck. Often, when re-roofing an existing home, a roof deck constructed with excessive spacing (more than  $\frac{1}{8}$  in.) between boards is encountered. This bulletin provides information on how/when to install solid sheathing over spaced deck boards on homes located in areas that use the FORTIFIED Home™–High Wind and FORTIFIED Home™–High Wind & Hail standards.

### Requirements

Maximum spacing of framing members (rafters or trusses) is 24 in. When unacceptably spaced boards exist where solid sheathing is required, there are three allowable options to achieve the FORTIFIED attachment of the new solid sheathing to the existing substrate.

#### Option 1

Remove existing boards and install sheathing ( $\frac{7}{16}$  in. preferred) directly to the rafters/trusses per FORTIFIED requirements: 8d ring shank nails at 6 in. o.c. on all framing members.

#### Option 2

If the existing boards are in good condition, without cupping or rot present, install sheathing ( $\frac{7}{16}$  in. preferred) over the existing boards by attaching the sheathing to the rafters/trusses below using minimum #8 deck screws, which must be long enough to penetrate into the wood framing members a minimum of  $1\frac{1}{8}$  in.

#### Option 3

If the existing boards are in good condition, without cupping or rot present, install sheathing ( $\frac{7}{16}$  in. preferred) over the existing boards by attaching the sheathing to the rafters/trusses below using minimum 0.120-in.-diameter ring-shank nails, which must



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be long enough to penetrate into the wood framing members a minimum of 1½ in.

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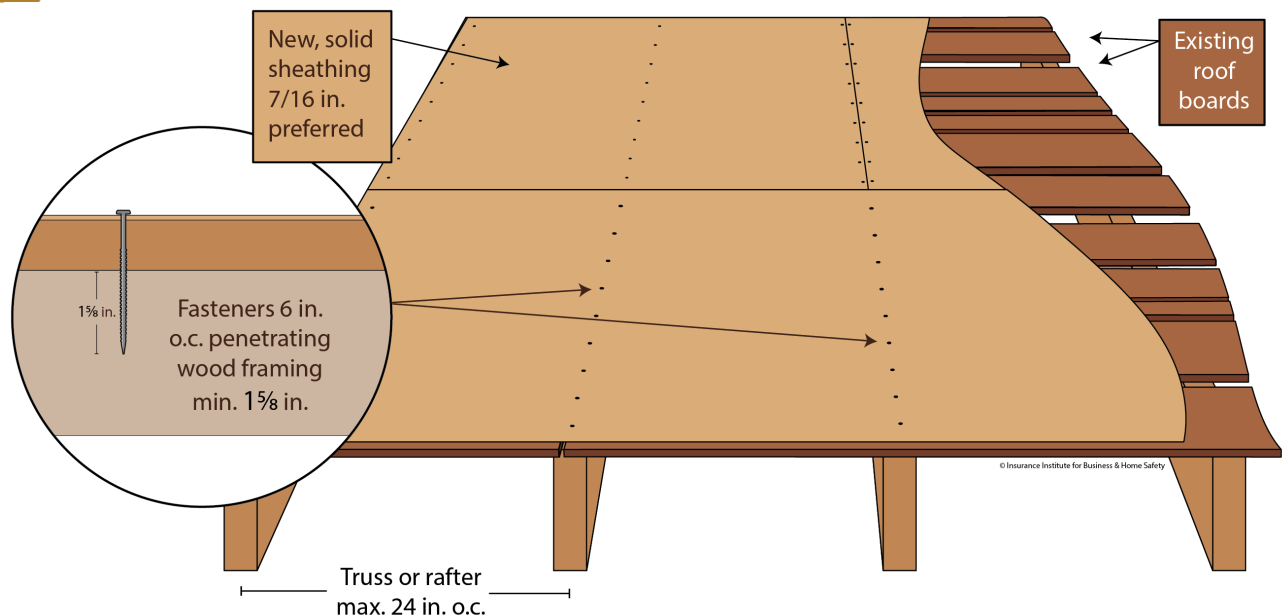


### Minimum Fastener Lengths for Option 2 and Option 3

Sheathing Thickness	Nominal Board Thickness	Minimum Fastener Length (rounded up to nearest 1/8 in.)
7/16 in.	¾ in.	2 7/8 in.
7/16 in.	1 in.	3 1/8 in.
7/16 in.	1¼ in.	3 3/8 in.
7/16 in.	1½ in.	3 5/8 in.

### Exception

In municipalities where the local code requirements exceed the FORTIFIED attachments, local code requirements shall have precedence. Always confirm that the roof deck construction meets the Building Department requirements.





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## Documentation Requirements

The installation of the overlaid sheathing is to be documented and verified by a certified FORTIFIED Evaluator. Acceptable documentation includes but is not limited to a photo of the APA grading stamp to verify sheathing thickness, four separate photos showing fastener spacing delineated, photo of the fasteners illustrating length or of fastener carton label or copy of material supplier invoice recording fastener type/size delivered to the site, and a completed Roofing Compliance Form (RCF-1HWH).

## For Evaluators Only: Evaluation Form Input

On the evaluation form, in section “Roof Deck,” for question “Roof Deck Type,” select “Deck over battens”. Next, indicate the sheathing thickness ( $\frac{7}{16}$  in. min), fastener type and fastener size on the appropriate line followed by the fastener count in 48 in.

The screenshot shows a software interface for entering evaluation data. The 'Roof Deck' section is highlighted in green. The following fields are visible:

- Roof Pitch: >6/12
- Roof deck type: Deck over battens (indicated by a red arrow)
- Roof deck thickness: 7/16" (indicated by a red arrow)
- Roof deck fastener type: Ring shank nails (indicated by a red arrow)
- Roof deck fastener size: 10d nails (2-7/8 - 2-3/4 inches long) (indicated by a red arrow)
- Roof deck fastener count in 48" location 1: 0
- Roof deck fastener count in 48" location 2: 10
- Roof deck fastener count in 48" location 3: 10
- Roof deck fastener count in 48" location 4: 9
- Average number of missed fasteners: 1
- Is qualified supplemental deck attachment installed?: No

At the bottom, the 'Section: Roof Deck' is circled in red.