

Roof Deck Attachment

For the South Carolina Safe Home Program, when a home is being upgraded as part of the Program and the roof covering is removed and replaced, the following procedure shall be performed if needed according to the nailing patterns detailed in Table B-1.

- A. Fastening shall be in accordance with section B or C as appropriate for the existing construction. 8d nails shall be a minimum of 0.141 inch in diameter and shall be a minimum of 2 ¼” long to qualify for the provision of this section for existing nails regardless of head shape or head diameter.
- B. Roof decking consisting of sawn lumber or wood planks up to 12” wide and secured with at least two nails (minimum size 8d) to each roof framing member it crosses shall be deemed to be sufficiently connected. Sawn lumber or wood plank decking secured with smaller fasteners than 8d nails or with fewer than two nails (minimum size 8d) to each framing member it crosses shall be deemed sufficiently connected if fasteners are added such that two clipped head, round head, or ring shank nails (minimum size 8d) are in place on each framing member it crosses.
- C. For roof decking consisting of wood structural panels, fasteners and spacing required on columns 3 and 4 of Table B-1 are deemed to comply with the requirements of the South Carolina Safe Home Program for the indicated design wind speed range. Wood structural panel connections retrofitted with a two part urethane based closed cell adhesive sprayed onto the joint between the sheathing and framing members are deemed to comply with the requirements of the South Carolina Safe Home Program, provided testing using the manufacturer’s recommended application on panels connected with 6d smooth shank nails at no more than a 6 inch edge and 12 inch field spacing demonstrate an uplift resistance of a minimum of 200 psf.

Table B-1

Supplement Fasteners at Panel Edges and Intermediate Framing

Existing Fasteners	Existing Spacing	Wind Speed 110 mph or less supplemental fastener spacing shall be no greater than	Wind speed greater than 110 mph supplemental fastener spacing shall be no greater than
Staples or 6d	Any	6" o.c. (a)	6" o.c. (a)
8d clipped head, round head, smooth or ring shank	6" o.c. or less	None necessary	None necessary
8d clipped head round head, smooth or ring shank	Greater than 6" o.c.	6" o.c. (b)	6: o.c. (b)

(a) Maximum spacing determined based on supplemental fasteners only.

(b) Maximum spacing determined based on existing fasteners and supplemental fasteners.

Supplemental fasteners as required by Table B-1 shall be 8d ring shank nails with round heads and the following minimum dimensions:

1. 0.113 inch nominal shank diameter
2. Ring diameter a minimum of 0.012 inch greater than shank diameter
3. 16 to 20 rings per inch.
4. A minimum 0.280 inch full round head diameter
5. Ring shank to extend a minimum of 1 ½" from the tip of the nail.
6. Minimum 2 ¼" nail length.