

**NC Department of Insurance
Office of the State Fire Marshal - Engineering Division
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Pier and Curtain Wall Bonding

Code: 2018 Residential Code

Date: April 10, 2019

Section: R404.1.5.1

Question:

1. Could piers alone be used as the foundation for a single-family dwelling without any foundation wall? Why must piers be bonded to the curtain wall?
2. Can corrugated veneer ties be used to bond the pier to the curtain wall?

Answer:

1. No. The code does not permit the use of piers alone as a foundation for a dwelling. Section R404.1.5.1 specifies the use of “pier and curtain” walls bonded together and having concrete footings poured integrally as a minimum for frame construction and masonry veneer frame construction not more than two stories in height. The bonding of the pier and curtain wall is required for lateral loads (racking).

An acceptable alternative to this section would be for an engineer to design the foundation consisting only of piers which will accommodate all superimposed live, dead, and other loads and all lateral loads.

2. No. Corrugated veneer ties may not be used to bond the curtain wall to the pier.

Keywords:

Brick, block