



Delaware County

CODE COMPLIANCE

Building Regulations Floodplain Regulations Zoning Regulations

Truss and Rafter Connections

07-25-17

The 2013 Residential Building Code requires that all truss and rafters be connected to the top plate to prevent the members from being displaced. Sections 802.10.5 and 802.11.1, give the minimum requirements for these connections. Researching tables 301.2(2) and 301.2(3) shows that Delaware County is not subject to more than 20 pounds per square foot of uplift pressure.

What does this mean to those of us that enforce the building code of Delaware County? It means that we enforce only the minimum requirements for uplift connections. Connection requirements will be as follows:

Trusses and rafters of vaulted ceilings: Approved connectors having a resistance to uplift of not less than 175 pounds (79.45 kg.) and shall be installed in accordance with the manufacturer's specifications.

Conventional rafter-ceiling joist construction: Only toenails as required by the fastener schedule for structural members in Table 602.3(1) are required.

802.10.5 Truss to wall connection. Trusses shall be connected to wall plates by the use of approved connectors having a resistance to uplift of not less than 175 pounds (79.45 kg.) and shall be installed in accordance with the manufacturer's specifications. For roof assemblies subject to wind uplift pressures of 20 pounds per square foot (0.958 kN/m²) or greater, as established in Table 301.2(2), adjusted for height and exposure per Table 301.2(3), see section 802.11.

802.11 Roof tie-down.

802.11.1 Uplift resistance. Roof assemblies which are subject to wind uplift pressures of 20 pounds per square foot (0.958 kN/m²) or greater shall have roof rafters or trusses attached to their supporting wall assemblies by connections capable of providing the resistance required in Table 802.11. Wind uplift pressures shall be determined using an effective wind area of 100 square feet (9.3 m²) and Zone 1 in Table 301.2(2), as adjusted for height and exposure per Table 301.2(3).

A continuous load path shall be provided to transmit the uplift forces from the rafter or truss ties to the foundation. (No additional connections required if less than 20 pounds per square foot of uplift pressure is required)