

Local Building Inspection Departments

Memorandum

To: Building Contractors, Material Suppliers, and Truss Manufacturers

From: Armin Wallner, Chief Building Official-Catawba County *AW*
Doug Kerley, Chief Building Official-Alexander County *DK*
Stephen W. Holden, Chief Building Official-Burke County *SH*
Mike Crotts, Chief Building Official-City of Morganton *MC*
Robin Soots, Chief Building Official-Caldwell County *RS*
Wayne Godfrey, Chief Building Official-Lincoln County *WG*

Date: 03/31/05

Re: Roof Trusses

Area inspection departments including Alexander, Burke, Caldwell, Catawba, Lincoln and Morganton met regarding issues relating to building construction. During the meeting it was identified that occasionally truss layout plans are not available during the framing inspection. Truss component sheets are provided that are not sealed by a North Carolina registered design professional. Periodically wood trusses are not adequately secured to exterior wall top plates with metal connectors/anchors properly rated for the uplift reactions identified on the truss component sheet.

Area inspection departments request that the following be on site for the framing inspection 1) truss layout plan for the entire roof system, 2) truss component sheets bearing the seal of a NC registered design professional and 3) the appropriate metal connectors/anchors rated for the uplift reactions identified on the truss component sheets are in place.

As an alternate method to metal connectors/anchors the Wood Truss Council of America has published a BCSI-B8 Summary Sheet "Toe-Nailing for Uplift Reactions". This guide can be viewed on-line at http://www.woodtruss.com/projects/woodtruss/images/publication_images/b8.pdf. Normal uplift capacity of one 16D gun nail, toe nailed into a Spruce Pine Fir top-plate is 30 lbs, a normal 3 nail connection in a 2 x 4" S-P-F top plate would provide 90 lbs of uplift resistance adjusted to 144 lbs with the a wind load duration factor of 1.6 per the National Design Specification for Wood Construction. In most cases this amount of uplift resistance would not meet the uplift reactions specified on the truss component sheet. Adding more nails at the truss to bearing connection could increase the uplift resistance however the additional nails would damage the bottom chord of the truss.

If you have any questions on determining the appropriate metal connectors/anchors please contact your local inspection department for assistance.

Alexander County Building Inspections (828) 632-1000
Burke County Building Inspections (828) 438-5420
Caldwell County Building Inspection (828) 426-8585
Catawba County Building Services Division (828) 465-8454
City of Morganton Building Inspections (828) 438-5271
Lincoln County Building Inspections (704) 736-8723