Evaluation of Valley Truss Connection Design

For Wind Uplift Resistance

Sun City - Hilton Head

Bluffton, South Carolina

August 17, 2010

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Attachments

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Introduction

This report describes engineering evaluation of design for connections between "valley" roof trusses and underlying main roof trusses installed on many one-story houses within a large development (Sun City Hilton Head) in South Carolina.

Extent of this report may at first seem excessive for analysis of what amounts to a single nail or screw connection. Yet, when considering that potential ramifications extend not only to hundreds or thousands of houses in Sun City Hilton Head, but also to many more houses along the Atlantic and Gulf coasts, the level of detail makes more sense.

Much of the report describes detailed engineering analysis that is necessary for thorough and complete engineering evaluation. For readers without engineering experience, much of this discussion will be difficult to understand. However, an effort is made to explain basic conclusions in terms that the general public can comprehend and appreciate.

Qualifications

As a structural engineer, I review design plans for residential and commercial buildings that specify roof trusses. I also review truss diagrams prepared by truss manufacturers. I have evaluated truss design and construction for construction defect and personal injury claims.

I am licensed as a professional engineer in New Jersey (since 1983), Pennsylvania, Maryland and, most recently, South Carolina. I have 32 years total experience as a structural engineer, including 17 years as a consulting engineer in private practice, based in New Jersey.

Use of Report

This report, intended for anyone interested, may be quoted, with proper reference.

However, this report may not be used for any legal claim or action, including any preparations for such claim or action, without the prior written agreement of the author (John F Mann, PE).

Initial Distribution Of Report

This report has initially been distributed (via mail) to the following persons;

1. Tony Kunich; Professional Home Inspections
2. Arthur Cummings, Director of Code Enforcement; Building Inspection & Code Enforcement Department of Beaufort County
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