## STRUCTURAL BUILDING COMPONENTS MAGAZINE (FORMERLY woodwords) January/February 1999

# Engineering Review Committee Update

The Engineering Review Committee (ERC) monitors, provides advice and offers direction concerning technical matters involving industry standards, technical policy, code enforcement procedures, etc., affecting the metal plate connected wood truss industry and the manufacture and use of trusses. We closely cooperate with and participate in efforts by the Truss Plate Institute and its Technical Advisory Committee, as well as any other code-writing or standards-setting organizations. In addition, the committee serves as the Engineering Review Board for WTCA.

#### STANDARDS DEVELOPMENT

Several members of the committee are currently participating in TPI's ANSI accredited standards program as members of the project committees charged with the re-evaluation and development of ANSI/TPI 1-2000, National Design Standard for Metal Plate Connected Wood Truss Construction and the development of ANSI/TPI/ WTCA 4-2000, Standard Responsibilities in the Design Process Involving Metal Plate Connected Wood Trusses. Successful completion of this work will provide the wood truss industry with two state-of-the-art, consensus-based standards pertaining to truss design and design responsibility.

### **BUILDING CODE DEVELOPMENT**

The committee continues its involvement in building code issues involving trusses. WTCA and TPI have been active participants in the developmental process of the International Building Code and the International Residential Code, which will be available for national adoption in 2000. We have submitted several code changes pertaining to trusses and have been successful in getting many of them adopted. The ERC is also currently working with several member truss manufacturers in California in an attempt to amend the Truss Marking provision in the Uniform Building Code.

### COMMENTARY AND GUIDELINE DOCUMENTATION

The committee has been working on several important commentary and guideline documents aimed at providing better insight and clarification with respect to design responsibilities and the use and application of wood trusses. These documents include:

• Commentary to WTCA 1-1995, which provides background and supplementary information pertaining to the responsibilities of the various parties involved in construction projects in which components, such as trusses, are used.

- Design Responsibilities Guidelines for Truss Manufacturers, which outlines several important considerations each truss manufacturer must evaluate in order to determine the level of responsibility they are willing and/or permitted to accept for a project.
- WTCA's Recommended Policy for Building Designer's Review of Prefabricated-Engineered Component Product Placement Plans, which outlines for the proper sequence of events to be followed during the review and approval process of placement plans.
- Commentary for Permanent Bracing of Metal Plate Connected Wood Trusses, which provides guidelines for building designers to consider when determining the permanent bracing required to provide a stable wood truss system.
- Texas Board of Registration for Professional Engineers Policy Advisory 11-97-A, "Structural Engineering Relating to Custom Manufactured Products Including Trusses": Based on the strategy developed by the ERC and TPI, WTCA's legal counsel, Kent Pagel, was successful in persuading the Texas Board to adopt many of our proposed changes to Policy Advisory 11-97-A. The scope of this document has now been broadened to include all custom manufactured products and corresponds more closely with WTCA 1-1995.
- The ERC and TPI also worked together to develop the following "scope of work" statement: "The seal on this drawing indicates acceptance of professional engineering responsibility solely for the truss component design shown. The suitability and use of this component for any particular building design is the responsibility of the building designer, per ANSI/TPI 1-1995 Section 2."
- San Diego Area Chapter of ICBO Chapter Policy on "Truss Layout Plans": The committee worked with several truss manufacturers from southern California to develop the document entitled, "WTCA's Recommended Policy for Building Designer's Review of Prefabricated-Component Product Placement Plans." This document provides a guideline for the review process of truss placement plans and was instrumental in shaping the intent of an ICBO Chapter Policy on this subject. The text in the policy follows:

**Background:** Placement Plans, when required by the Building Structural System Design Documents, are prepared by the Component Supplier for the purpose of assisting Contractors and code enforcement officials in correctly locating individual members in a particular structure. The Placement Plan contains no structural information and requires no engineering know ledge and calculations. It is not an engineered drawing and is not intended to replace the Building Structural System Design Documents; it is only a guide for installation and requires no engineering input. As such it should never be "sealed" by the Component Supplier or the Professional Building Designer. Nevertheless, if a Placement Plan is required, it must be reviewed and approved by the Contractor and the Professional Building Designer.

This policy statement is offered as a means of improving the coordination between the Professional Building Designer, Contractor, Component Supplier and the code enforcement official regarding the review and approval of the Placement Plans for these products.

Sequence of Events: Placement Plans are prepared by the Component Supplier based on the supplier's interpretation of information shown on the Building Structural System Design Documents prepared by the Professional Building Designer (where there is no Professional Building Designer, typically this becomes the responsibility of the owner and/or the contractor.)

Placement Plans and component design drawings/calculations are presented by the Component

Supplier to the Contractor for review and approval, use in obtaining the construction permit and for use in the installation of the individual prefabricated-engineered component products.

The Contractor submits Placement Plans and component design drawings/calculations to the Professional Building Designer for review and approval.

The Professional Building Designer completes the review of the Placement Plans and component design drawings/calculations and submits a copy of these documents to the building department, showing their "shop drawing approval" stamp.

The code enforcement official for the building department makes note that the Professional Building Designer has received, reviewed and approved the Placement Plan(s) and component design drawings/calculations. The code enforcement official reviews and approves the component design drawings/calculations and Placement Plans.

The appropriate building permit is issued.

**Recommended Policy:** A Placement Plan may be prepared by the Component Supplier to be used as a guide for the location of the component products within a structure.

The location of the prefabricated-engineered component products may be critical with respect to the design of the Building Structural System and, therefore, it is within the scope of responsibility of the Professional Building Designer to review the Placement Plan(s).

The Professional Building Designer must review and approve the Placement Plan(s) and apply the appropriate "shop drawing approval" stamp.

The "approved" Placement Plan(s) must be forwarded to the code enforcement official.

#### SBC HOME PAGE

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