

## Who Should Attend

This program is intended for two primary groups:

- design professionals from a variety of engineering and architectural firms including private practices
- engineering staff from the modular and manufactured housing industries, and
- individuals with an engineering or engineering technology background.

## Presenters

Dr. Harvey B. Manbeck, PE  
Distinguished Professor Emeritus  
Penn State

Dr. Bo Kasal, Ing., Director of Research,  
Pennsylvania Housing Research Center and  
Hankin Chair Civil and Environmental and  
Architectural Engineering Departments at  
Penn State

Mike Perakis, P.E.  
Structural Frame Engineer  
iLevel by Weyerhaeuser (Formerly Truss  
Joist MacMillan), Columbus, OH

## Sponsoring Organizations

American Society of Civil Engineers (Central PA)  
Pennsylvania Construction Codes Academy  
American Institute of Architects (AIA-PA)  
PA Association of Building Code Officials  
PA Association of Code Officials  
Pennsylvania Department of Community and  
Economic Development, Manufactured  
Housing Division  
Pennsylvania Housing Research Center  
Penn State Departments of :

- Architectural Engineering
- Agricultural and Biological Engineering
- Civil and Environmental Engineering

PA Manufactured Housing Association

Pennsylvania Housing Research/Resource Center  
Penn State  
219 Sackett Building  
University Park, PA 16802

# Wood Frame Design for Buildings (NDS-2005 Based)

(Application Refresher and  
Update on the 2005 NDS)

2-Day Program for  
Engineers and Architects

2007 ~ 2008

State College ~ November 28-29, 2007

and

Harrisburg ~ March 26-27, 2008



Pennsylvania Housing Research Center

## Overview

This 2-day hands on program will provide an overview of the basic principals of wood frame design as well as an opportunity for problem solving activities—so bring your calculators!

### The Need for this program

Most model building codes contain limited applicability for wood frame construction. Any deviation, such as cantilevers, from a simple box design goes beyond the scope of the code and references the ANSI/AF&PA National Design Specification ASD Provisions (NDS)<sup>®</sup> 2005 for Wood Construction published by the American Forest and Paper Association (AF&PA).

This has special application as the Commonwealth of Pennsylvania implements a statewide building code. The Commonwealth has adopted the 2006 International Code Council family of codes, which references the 2005 edition of ANSI/AF&PA NDS. Additionally, these specifications are widely used in both the manufactured and modular housing industry.

This 2-day workshop will introduce participants to the ASD provisions of the new NDS. Participants will learn how to analyze and design wood beams, columns, beam columns and connections using the NDS provisions.

### Fee and Registration

To register, please complete the registration form and return it with your fee to the address on the bottom of the registration form by November 9, 2007. Fax registrations must include credit card payment information. You may also register with your credit card by calling 814 865-2341. We will confirm your enrollment in the program and provide information on travel and accommodations. The fee may be paid by check (made payable to Penn State), VISA or MasterCard.

Attendees will receive a certificate of attendance, a course notebook with examples, and a copy of the National Design Specification (ANSI/AF&PA NDS-2005). Registration fees cover all instruction, handouts, a copy of the National Design Specification (an \$80 value), breaks and lunch. Registrants are responsible for all other meals and for lodging.

You will be notified promptly of any cancellations or schedule or program changes. If a program is cancelled or postponed, we will refund registration fees, but cannot be held responsible for any other related costs, charges, or expenses, including cancellation/change charges assessed by airlines or travel agencies.

Penn State is committed to affirmative action, equal opportunity, and the diversity of its workforce.

## Program Day 1

- Allowable strength and stiffness of engineered solid sawn lumber and glulam
- Wood column analysis and design procedures
- Wood beam analysis and design procedures
- Wood beam-column analysis and design procedures

## Program Day 2

- General provisions for wood connections
- Nailed connection analysis and design
- Bolted connection analysis and design
- Lag screw connection analysis and design
- Design check examples (IRC/NDS)
- Introduction to Structural Composite Lumber-LVL, PSL, LSL and I-Joists
- Informal Question and Answer

## Accreditation

Penn State is a CES registered provider of educational programs. (AIA for Architects and DLI for Code Officials). AIA Participants in this program will receive 14 Contact Hours. A certificate of attendance will be issued to each attendee.

## Registration Form

This form may be duplicated for additional registrations. Please print in ink or type, and return the form by **November 9, 2007**. You may also register by calling 814 865-2341.

**Training Program Dates:** (please indicate which date you will be attending)

- Nov. 28-29, 2007**  
State College
- OR
- March 26-27, 2008**  
Harrisburg

Last name First name Middle Initial

Title

Company/Organization

Business Address

City State Zip

Business Phone Fax

E-mail address

### Registration Fees:

- General: \$750
- Sponsoring Organization Member: \$650
- PHRC Member: \$550

### Method of Payment: (check one)

- Check (payable to Penn State)
- Charge the fee I have checked to my:
- Visa  MasterCard

Credit Card # Exp. date

Cardholders Name (please print)

Signature

**SEND TO:**  
Pennsylvania Housing Research Center  
Penn State  
219 Sackett Building  
University Park, PA 16802  
Fax: 814 863-7304