

PHRC News



The Pennsylvania Housing Research Center Presents

2 Conferences in 1

Allentown — February 24, 2005

Pittsburgh — March 10, 2005

13th Annual



Land Development Conference

UCC Update

Common Code Violations

Common Building Failures

Improving Concrete Performance

Flashing for Windows, Door and Decks

Penn State Research You Can Use:

Visitability in Pennsylvania
Ventilation Drying in Walls

Cracker-barrel Sessions:

Basement Insulation
Additions to Modular and HUD Code Homes
UCC Implementation
Innovative Concrete Products
New Pressure Treated Wood

Legislative Update

What's new in Harrisburg

Stormwater Management

Where are we?

Subdivision Planning and Design

Planning...Today's vision, tomorrow's trends
Lot Design...Thinking outside the building envelope
Road Standards...Optimizing for function and cost

Residential Site Selection:

Topography, Soils and Subsoil Conditions Can

Make or Break Your Project

The impact of topography and soils

Infiltration: Understanding the process and limitations
Soil testing and site investigation...how much is enough (\$)

The Pennsylvania Housing Resource/Research Center (PHRC) serves the home building and remodeling industries and the citizens of Pennsylvania by improving the quality and affordability of housing. The PHRC conducts applied research, fosters the development and commercialization of innovative technologies, and transfers appropriate technologies to the housing community.

Inside this Issue

Training:

IBC Program
PHRC Awarded Federal Grant for Energy Training

Land Development:

Residential Land Development Guidelines
Update on PA's Stormwater Management Manual
Stormwater Workshop

Factory Built Housing:

MHTI Online Update
MHRC Update
MHTI 2005 Schedule

PHFA Recognizes PHRC

Certificate program in Housing Approved

Calendar of Events for 2005

PHRC Members

2 Conferences in 1

PENNSYLVANIA STATE UNIVERSITY



Who Should Attend:

Builders, Remodelers, Code Officials, Educators, Design Professionals and Modular & HUD Code Builders

Who Should Attend:

Developers, Land Development Design Professionals, Township Engineers and Regulatory & Municipal Officials

For more information on the conferences or to register, go to www.engr.psu.edu/phrc.

Search Started for Hankin Chair

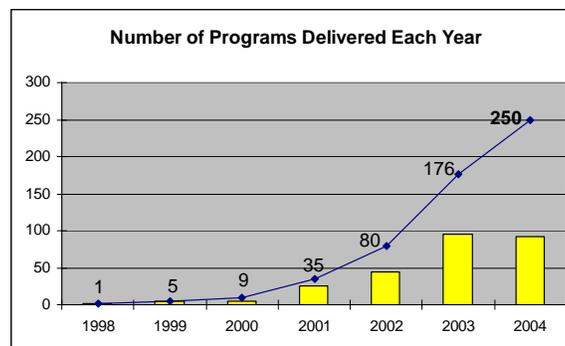
Eric Burnett who is the Director of Research at the PHRC is retiring in August of 2005. Dr. Burnett holds the Hankin Chair in Residential Construction in the Department of Civil and Environmental Engineering at Penn State University and has overseen the PHRC for the past 9 years. The search for a replacement is currently underway. Additional information on the position is available at www.engr.psu.edu/phrc.

Training

The table below summarizes the training programs the PHRC has delivered since 2000.

Program Summary January 2001— November 2004		Programs Held	Attendees
General	Comprehensive International Residential Code	102	3,774
	BOCA/CABO Transition Program	16	612
	Overview of the IRC's Plumbing Requirements	10	270
	Overview of the IRC's Mechanical Requirements	15	476
	Pennsylvania's New Energy Code	17	586
	IRC Update Program	2	56
	Other (PCMA, Moisture Control, etc.)	30	1,116
	Stormwater Management	5	318
Code Officials	Comprehensive International Residential Code	14	369
	Overview of the IRC's Plumbing Requirements	11	235
	Overview of the IRC's Mechanical Requirements	11	217
	Pennsylvania's New Energy Code	17	376
TOTAL		250	8,405

Over the last four years, the PHRC has developed and delivered a concerted program of training for the home building industry in Pennsylvania. At least 13 different one or two-day workshops have been developed. As shown in the figure below, some 250 programs have been delivered to over 8,400 individuals. This effort represents the largest and most ambitious effort ever conducted in PA to train builders, building officials, building inspectors, design professionals, educators and others involved in the home building business.



IBC Program

The PHRC is in the process of developing a one-day training program for the Pennsylvania Concrete Masonry Association (PCMA) and the Educational Fund of the National Concrete Masonry Association (NCMA). The objective of the program is to provide architects, engineers, and building code officials an overview of masonry related requirements of the 2003 IBC and IECC. This includes general design considerations, fire safety, structural, thermal enclosure and common code violations as well as some of the changes between BOCA and IBC. PCMA has tentatively scheduled programs for the following dates:

March 15, King of Prussia
 March 16, Harrisburg
 March 29, Cranberry Township
 March 30, State College

For additional information contact Mark Fortney at (814) 863-2366.

PHRC Awarded Federal Grant for Energy Training

The PHRC has been awarded a special projects grant to conduct energy related building code training. This \$90,000 federal grant, from the U.S. Department of Energy's Building Codes and Standards Division, leverages support from the Commonwealth of Pennsylvania.

This one-year grant will provide the following activities:

- Code Official Certification Training
- Advanced Training of Building Code Officials
- IECC Focus Topic-Basement Insulation Strategies
- Train-the-Trainer Programs
- Coordination and Information Sharing With Other States
- Continue the operation of the Code Training Consortium

For additional information on this project contact Mark Fortney at (814) 863-2366.

Land Development

Residential Land Development Guidelines

The PHRC continues to develop residential land development guidelines that can be applied state-wide. Initial efforts included a review of 80+ municipal ordinances across the state to get a snapshot of the standards used. Findings indicate significant variation in road design standards, many of which appear to be outdated and in need of updating. Two meetings of the land development consortium have been held. The consortium includes representatives from Penn Dot, DEP, DCED, associations representing design professionals (engineers, surveyors and planners), environmental groups, builder/developer representatives and municipal representatives. Based on input at these meetings, the following chapters will be included in the document:

- Streets and Roads
- Parking
- Non-Vehicular Circular
- Stormwater Management
- Potable Water Systems
- Sanitary Sewer
- Lot Geometry and Layout
- Grading and Drainage
- Subdivision Layout and Grading
- Misc. Utilities (Power, Gas, Telephone, Cable, etc.)

For more information on this project, visit the PHRC web site or contact Scott Brown at sbrown@enr.psu.edu.

Stormwater Workshop March 23-25 in State College

“Putting the Science Back in Stormwater Management”

Mark your calendars! Based on the overwhelming success of the introductory stormwater workshops offered in the summer of 2003, the PHRC will be offering a three-day stormwater workshop. The goal of this workshop is to provide a thorough understanding of both surface and subsurface hydrology as it applies to the design and analysis of stormwater systems including infiltration practices. This course will **not** present “cook-book” methods for stormwater analysis; rather, it will provide a science-based understanding of surface and subsurface hydrologic processes. The workshop will cover current stormwater issues along with probable causes; infiltration processes from a soil science perspective; field techniques for assessing site infiltration capacity; appropriate application of hydrologic methods; and computational methods for assessing infiltration practices as a part of overall site stormwater analysis. Case studies will be included to demonstrate the computational methods presented. A significant emphasis will be placed understanding infiltration processes and how soils and local geology affect these processes. For more information visit the PHRC web site at www.enr.psu.edu/PHRC.

Update on Pennsylvania's Stormwater Management Manual

PHRC staff are participating on the DEP's oversight committee for the development of a new stormwater management manual for the State. This manual will include suggested stormwater management standards for controlling runoff volume, peak-rate, and quality of stormwater discharges from land development activities within the state. Standards for the design and construction of stormwater best management practices (BMP) will be a significant element of this manual. Originally scheduled for completion in early 2005, the manual is now not expected to be released until late 2005. A significant reason for the delay is that DEP will be soliciting regional review of the proposed document prior to public release. During

January, February, and March of 2005, DEP scheduled a series of regional focus group meetings with interested parties to discuss the manual contents. DEP is convening these focus groups for two primary purposes: to provide an opportunity to participate in the manual development process for people who could not attend the statewide meetings, and, to ensure that the manual contents, recommended approaches, methodologies, and BMP's are regionally sensitive and applicable. If you are interested in being a part of the regional focus groups, please contact Mr. Kenneth Reisinger at kereisinge@state.pa.us or by phone at 717-787-6827.

Factory Built Housing

MHTI Online Update

On November 17th, the Factory Built Home Center (FBHC) at Penn College hosted an Executive Briefing to introduce its MHTI Online Course to industry, government, and education representatives. The purpose of the briefing was to demonstrate the application of online technology as applied to the existing MHTI traditional classroom course. Grants from the Modular Building Systems Association and Ben Franklin Partnership enabled MHTI staff to convert what would normally be a



lecture and discussion led classroom to a technology based online format. The staff was tasked with the challenge of developing a format that would match or exceed the content of the traditional course.

The guests at the executive briefing remarked that it exceeded expectations. Features included computer animation, easy to follow instructional units, and excellent resources in the form of industry practices and project management documents. The day was highlighted by a demonstration of Horizon Live, an internet program used by the instructors to hold a live discussion with offsite class participants. A lively question and answer session followed the demonstration. The first official MHTI online course is scheduled to kick off in March 2005 and interested participants can register online at: www.pct.edu/mhti.

MHRC Update



The Manufactured Housing Resource Center (MHRC) serves the manufactured housing industry through the development of a sustainable educational program and a resource center for those involved in the on-site completion of manufactured homes.

Recent legislation will recognize the Manufactured Housing Certification Onsite Completion Course at the MHRC as the certification course for the state of PA that meets the federal December 2005 requirements of the Manufactured Housing Improvement Act of 2000. See the "Calendar of Events" in this newsletter for the MHRC course listings. For more information, visit the website at www.pct.edu/mhrc.

MHTI 2005 Schedule



For those who prefer the traditional course setting or cannot wait for the online course, MHTI is offering its traditional course at Penn College on the following dates:

January 12-13, 2005
 February 1-2, 2005
 February 23-24, 2005
 March 8-9, 2005
 March 30-31, 2005

MHTI has also recently joined with instructors in the Workforce Development and Continuing Education (WDCE) department of Penn College to present its first industry related "Leading Small Staffs to Big Triumphs" course. Because today's workplace finds more and more people responsible for managing small teams of two to ten employees, this course was designed for those leaders and will focus on the most productive methods for leading and energizing a small staff. Factory Built Housing Industry has found the course to be an excellent opportunity to help train first line supervisors and new managers in the manufacturing sector. The course has been customized to address industry issues and challenges, and is also offered by the WDCE at the Business & Technology Resource Center (BTRC) in Williamsport. For more information about the WDCE, check online at <http://wdce.pct.edu>.

MHTI offers its courses on-site at the request of industry. For more information about on-site offerings, or any other aspect of MHTI, please visit its web site at <http://www.pct.edu/mhti>.



PA Housing Finance Agency (PHFA) Recognizes PHRC

The PHRC received a *Certificate of Meritorious Service* on October 14, 2004 from the Pennsylvania Housing Finance Agency (PHFA) for its research project to evaluate VisitAbility in PA. VisitAbility specifically encourages: one step-free entrances; wider doors; and, basic accessibility in a bathroom.

The project is working with builders across Pennsylvania to implement these basic design approaches in new houses. The PHRC is providing technical assistance and evaluating the costs and technical challenges builders may have to overcome. Some of the technical challenges encountered range from innovative foundation design to subdivision design. The PHRC is developing a series of technical reports documenting the findings and recommendations to design professionals, builders, developers, and policy makers. For additional information contact Mark Fortney at (814) 863-2366.



Certificate Program in Housing Approved

Engineers have many important roles to play in the housing business, especially with the developmental, economic and technical aspects of housing. The objective of the Housing Certificate is to provide those students who wish to enter the housing business with the background, the knowledge, and the skills they need in order to be equipped to do so.

A student who completes this housing certificate will:

- be better prepared (in terms of breadth and depth of knowledge) to enter the housing industry
- have a deeper knowledge of the following:
 - housing technology and house design, analysis, construction and performance;
 - the developmental process and the associated economics;
 - the nature of housing and the housing industry in the U.S.; and
 - the demographic and socio-economic aspects of housing.

The program is directed primarily at senior level undergraduate students in engineering. However, the program is by no means limited to undergraduate students in engineering; applications from interested graduate students as well as students outside engineering will be considered.

The minimum number of credits required is 12, with no less than six credits at the 400-level. All students must take AE470 *Residential Building Design and Construction*. A minimum of three courses are then chosen from a list of other relevant courses.

For further information on the Housing Certificate, contact Dr. Eric Burnett at 814-863-9788 who holds the Bernard and Henrietta Hankin Chair in Residential Construction.

Calendar of Events for 2005

Training Programs for General Audience:

Comprehensive International Residential Code

January 20-21	NARI (Philadelphia)
January 27-28	PSU Hazleton
March 15-16	Blair County Builders Association

Overview of the IRC Plumbing Requirements

April 19	Blair County Builders Association
----------	-----------------------------------

Overview of the IRC Mechanical Requirements

October 8	Blair County Builders Association
-----------	-----------------------------------

PA's New Energy Requirements

January 18	Blair County Builders Association
------------	-----------------------------------

PHRC Industry Advisory Council Meeting:

April 21	Meeting in State College
----------	--------------------------

Land Development Consortium Meetings:

February 2	Harrisburg
March 15	Conference Call
May 13	State College
July 12	Harrisburg

Modular Housing Training Institute Courses:

January 12-13	Penn College (Williamsport)
February 1-2	Penn College (Williamsport)
February 23-24	Penn College (Williamsport)
March 8-9	Penn College (Williamsport)
March 30-31	Penn College (Williamsport)

Manufactured Housing Resource Center Courses:

January 12-13	Exton
March 22-23	Johnstown (Pittsburgh)
May 10-11	Wilkes-Barre (Scranton)

Training Programs for Code Officials:

Comprehensive International Residential Code

February 3-4	PCCA (PSATS & Luzerne County)
Mar 31-Apr 1	PCCA (Westmoreland & Bucks Counties)
June 2-3	PCCA (State College)

Overview of the IRC Plumbing Requirements

January 13-14	PCCA (Westmoreland County & Allentown)
---------------	--

April 28-29	PCCA (Luzerne & Bucks Counties)
-------------	---------------------------------

Overview of the IRC Mechanical Requirements

March 23-24	PCCA (PSATS & Luzerne County)
-------------	-------------------------------

PA's New Energy Requirements

February 8	PCCA (Luzerne County)
April 8	PCCA (Beaver & Bucks Counties)
June 8	PCCA (Westmoreland County)
June 10	PCCA (PSATS)

Conferences & Other Workshops:

13th Annual PA Housing & Land Development Conferences

February 24	PHRC (Allentown)
March 10	PHRC (Pittsburgh)

Stormwater Workshop

March 23-25	PHRC (State College)
-------------	----------------------

IBC Workshop

March 15	PCMA (King of Prussia)
March 16	PCMA (Harrisburg)
March 29	PCMA (Cranberry Township)
March 30	PCMA (State College)

For additional details on training programs, visit www.engr.psu.edu/ctc.

PHRC Members

Leadership

Blair County Builders Association
 BA of Northwestern PA
 CertainTeed Corporation
 Dow Chemical Company
 DuPont Nonwovens
 Glunt Development Co., Inc.
 Governor's Office of Housing & Community Revitalization
 Granor Price Homes
 Hankin Group
 HBA Metropolitan Harrisburg
 HBA of Chester and Delaware Counties
 Indiana-Armstrong Builders Association
 Lebanon County Builders Association
 Lehigh Valley Builders Association
 Liberty Homes Custom Builders
 Mercer County Builders Association
 North Suburban Builders Association
 Office of Community Development and Housing
 PA Department of Community & Economic Development
 PA Manufactured Housing Association
 Penn State University
 PennBOC
 Pennsylvania Association of Code Officials
 Pennsylvania Builders Association
 Pennsylvania College of Technology
 Pennsylvania State University
 Roy Newsome
 Superior Walls of America, Ltd.
 York County Builders Association

Supporting

BA of Central PA
 Benjamin Obdyke Incorporated
 Cedar Knoll Builders
 Comfort Home Corporation
 Greater Dubois Builders
 HBA of Berks County
 Independent Quality Assurance
 Irwin Contracting
 Lackawanna HBA
 Pennsylvania Concrete Masonry Association
 Pennsylvania Housing Finance Agency
 Pulte Homes Corporation
 Ryland Group, Inc.
 S&A Homes
 T.H. Properties
 Wayne County Builders Association
 Weyerhaeuser Company

Patron

Adams Township
 Alan Hawman Architect
 Alpine Contracting Company
 Avignon Homes, Inc.
 Borough of Fox Chapel
 Clay Township
 Comfort Supply, Inc.
 Cross Keys Homes & Building
 Crouse and Company of Somerset
 Devland Corporation
 Dewey Homes
 E&M Engineers
 East Petersburg Borough
 Engineering Projects Inc.
 Fine Line Homes
 Franklin County BA
 Franklin County CTC
 Gluszko Architects, P.C.
 JHW C/M Consultant
 Jones Township
 Kohlhepp Stone Center
 Kunselman Electric Inc.
 MaGrann Associates
 Millersville Borough
 Nolen Companies, Inc.
 Paul Kearney Inspections, Inc.
 Perry L. Cisney Inc.
 Peters Township
 Pure Energy
 Queen Engineering
 Ray-Core, Inc.
 Real Estate Buyer's Assurance
 Ryan Homes
 Somerset County BA
 Somerset County Technology Center
 Spectrum Properties
 Stratton Homes
 T.H. Properties
 U.S. Spray Systems
 Upper Darby Township
 UpStreet Architects, Inc.
 Westmoreland Professional BA
 Whitehall Township

<p>Not a member? Join the PHRC today!</p>		<p>Membership Levels:</p>	
<p>_____</p> <p>Name</p>		<p>Corporate or Trade Associations:</p>	
<p>_____</p> <p>Address</p>		<p><input type="checkbox"/> Leadership \$2,500</p>	
<p>_____</p>		<p><input type="checkbox"/> Supporting \$1,000</p>	
<p>_____</p>		<p><input type="checkbox"/> Patron \$500</p>	
<p>_____</p> <p>Phone</p>		<p>Local Associations:</p>	
<p>Method of Payment:</p>		<p><input type="checkbox"/> Leadership \$1,000</p>	
<p><input type="checkbox"/> Bill Me <input type="checkbox"/> Visa</p>		<p><input type="checkbox"/> Supporting \$500</p>	
<p><input type="checkbox"/> Check <input type="checkbox"/> MasterCard</p>		<p><input type="checkbox"/> Patron \$250</p>	
<p>_____</p> <p>Credit Card #</p>		<p>Individuals:</p>	
<p>_____</p> <p>Signature</p>		<p><input type="checkbox"/> Leadership \$500</p>	
<p>_____</p> <p>Exp. date</p>		<p><input type="checkbox"/> Supporting \$250</p>	
<p>_____</p> <p>Total: _____</p>		<p><input type="checkbox"/> Patron \$100</p>	



www.engr.psu.edu/phrc

PHRC

Pennsylvania Housing Research/
Resource Center
Penn State University
219 Sackett Building
University Park, PA 16802
Tel: (814) 865-2341
Fax: (814) 863-7304
E-mail: phrc@psu.edu

Director: Mark Fortney
Director of Research: Eric Burnett
Training and Education Development
Specialist: Ken Sagan
Land Use and Development Specialist:
Scott Brown
Admin. Assistant: Michelle McMullen
Staff Assistant: Tracy DeSoto

PHRC at Penn College

Pennsylvania Housing Resource Center
Pennsylvania College of Technology
One College Avenue
Williamsport, PA 17701
Tel: (570) 327-4768
Fax: (570) 320-5239
E-mail: phrc@pct.edu

Director: Bill Van der Meer
Director of Factory Built Housing:
Rick Terry

The Pennsylvania Housing Research Center Presents

2 Conferences in 1

Allentown — February 24, 2005

Pittsburgh — March 10, 2005

13th Annual PA Housing Conference



Land Development Conference

UCC Update

Common Code Violations

Common Building Failures

Improving Concrete Performance

Flashing for Windows, Door and Decks

Penn State Research You Can Use:

Visitability in Pennsylvania

Ventilation Drying in Walls

Cracker-barrel Sessions:

Basement Insulation

Additions to Modular and HUD Code Homes

UCC Implementation

Innovative Concrete Products

New Pressure Treated Wood

Legislative Update

What's new in Harrisburg

Stormwater Management

Where are we?

Subdivision Planning and Design

Planning...Today's vision, tomorrow's trends

Lot Design...Thinking outside the building envelope

Road Standards...Optimizing for function and cost

Residential Site Selection:

Topography, Soils and Subsoil Conditions Can Make or
Break Your Project

The impact of topography and soils

Infiltration: Understanding the process and limitations

Soil testing and site investigation...how much is enough (\$)

Who Should Attend:

Builders, Remodelers, Code Officials, Educators,
Design Professionals and Modular & HUD Code Builders

Who Should Attend:

Developers, Land Development Design Professionals, Township
Engineers and Regulatory & Municipal Officials