

PHRC NEWS

PENNSYLVANIA



Vol. 4, No. 2, Summer 1996

The Pennsylvania
Housing Research Center



A Publication of the Pennsylvania Housing Research Center

DIRECTOR'S NOTE

DR. ERIC F. P. BURNETT

This is the first newsletter to be distributed since I took over from Jack Willenbrock in January of this year. During the last six months there have been a number of significant initiatives and events, e.g.:

- With the pro-active assistance of the PBA we are attempting to obtain state funding to support the PHRC.
- The name of the Housing Research Center (HRC) was changed to the Pennsylvania Housing Research Center (PHRC).
- The fourth annual Pennsylvania Housing Conference was held on March 27-28 at the Scanticon Conference Center in State College.
- An Advisory Committee meeting was held in conjunction with the Housing Conference.

An afternoon meeting was held in Harrisburg in late April to review the conference. It was decided that these should be a small conference planning committee to ensure that the needs of each of the main client groups are better met and to attempt to improve attendance. Marlin Gayman and Bob Murphy are to represent the PBA and PEA respectively. We met on June 27 and planning for the Fifth Pennsylvania Housing Conference (February 19 and 20, 1997) is well underway.

We would like to have some feedback, especially from the builder community, on how to improve this two day meeting. Please contact either Marlin Gayman (phone: (717)263-3993, fax: (717)263-7796), Bob Murphy (phone: (717)368-5257, fax: (717)368-5204) or myself if you would like to provide some input.

Last month I attended my first dinner meeting of the Builders Association of Central Pennsylvania. This was most enjoyable and a good opportunity to meet members of the local building community. As I am in the process of having a house built, it was also quite useful. Some local building practices are different from those I am used to, and I am thinking of using the newsletter to write about some of these practices.

FOURTH ANNUAL PENNSYLVANIA

HOUSING CONFERENCE

The Fourth Annual Housing Conference was held on March 27-28, 1996, at the Penn State Scanticon Conference Center Hotel in State College, PA. The conference was co-sponsored by the PHRC, Pennsylvania Builders Association (PBA), and Pennsylvania Electric Association (PEA). The conference was attended by approximately 125 representatives of the residential construction industry from Pennsylvania and beyond. There were three keynote sessions, seven topic-oriented sessions, three workshops, and a dinner program.

The workshops included one on *Hands-On CAD for the Residential Builder, Engineered Wood Products, and Computer-Based Cost Estimating*. The topic-oriented and plenary sessions covered subjects including current and future challenges for the PA builder, legislation and regulatory issues affecting PA builders, planned communities, a Canadian perspective on home building, and several energy efficiency issues (NAHB's Volunteer Energy Efficiency Initiative, marketing with E-Seal Volunteer Energy Program, energy-efficient heating systems and comfort extenders, energy efficiency with steel, concrete and masonry, and structural insulated panel construction).

In addition, twelve representatives from material manufacturers demonstrated their products and answered questions for the attendees.

IMPORTANT DATES IN 1996/97

NAHB National Convention

Jan 24-27, '97

Fifth Annual Pennsylvania

Housing Conference Feb 19-20, '97

Spring Advisory Council Meeting

Feb 21, '97

Fourth Annual PA Housing Conference (continued)

Many thanks are due to Steve Taylor, Stacy Worley, Michelle McMullen and the staff (particularly Debbie Noyes and Amy Spangler) of the Scanticon. The success of the conference would not have been possible without their efforts. With the continued support of PBA, PEA, and the residential construction industry, the conference will continue to grow and improve in the future.

FIFTH ANNUAL PENNSYLVANIA HOUSING CONFERENCE PLANNING COMMITTEE MEETING

The conference committee appointed at the March 1996 Advisory Council meeting, met on April 24, 1996, at the PBA offices in Harrisburg, PA. After a brief review of the past conference, several points were discussed including defining the various client groups, attracting better builder participation, organizational improvements, scheduling, and a framework for the sessions.

Builders were identified as our primary client, with utilities, regulators, code officials, students, researchers, developers, realtors, and design professionals rounding out the client group. Increasing builder participation and interest was discussed extensively. Location, duration, and registration fees were all identified as important factors. The committee decided to hold the next conference at the Scanticon, primarily due to the quality of the facilities. The scheduling of the conference was moved back to February to avoid conflicts with the numerous home shows that are typically held in March.

The two-day format was retained, but an alternative program organization was recommended in order to have one-day that concentrates on builder-oriented issues. This would facilitate one-day attendance. Other suggestions included reduced registration for multiple attendees from a single company, parallel tracks of interest to contractors and craftspersons, and establishing complimentary or reduced registrations for vocational students and instructors.

Several alternative session formats such as "expert round-tables" were proposed. A continued interest in new, alternative and environmentally friendly building products was also identified. Other suggestions included providing a binder of presentation materials and videotaping the sessions for distribution.

Finally a need for improved publicity was identified. Reminders need to be circulated every 90 days for prospective attendees and constant contact with PBA regional representatives were suggested.

We would welcome any contributions towards improving or better promoting the conference.

OPERATIONS COMMITTEE MEETING

The Operations Committee of the PHRC Advisory Council met on April 24, 1996, at the PBA offices in Harrisburg, PA. The primary function of this meeting was to discuss funding issues and allocate funds for new 1995/96 and 1996/97 projects.

Don DeLess provided an update on the status of the line-item funding proposal currently under consideration by the PA state legislature. He reported that the initiative was progressing favorably and that a decision could be expected in the near future. Dr. Burnett stated that a funding proposal had been submitted to the Ben Franklin Partnership. This proposal included proposed improvements to the operation and organization of the PHRC.

The remainder of the meeting focused on proposed research and technology transfer projects. As discussed at the March 1996 Advisory Council meeting, the funds allocated to the Ground-Source Heat Pump project were reallocated to support other projects in the current operating year. Funds were allocated to expand and revise the modular housing project and initiate a study of computer application needs and a study of improving the habitability of basements.

Funding was also allocated for the continuation of the above-listed projects, operations and technology transfer, and one project each in the structures and infrastructure/land development research focus areas.

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Volume 4, Number 2 Summer 1996

Published three times annually in
November, June, and September

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Contributions and news items are
welcome. The deadline for fall
submissions is September 31, 1996.

PHRC RESEARCH PROJECTS

NEW 1995/96 PROJECTS

Funding reallocation has resulted in funding of three new projects for the 1995/96 operating year. Funds (\$15K) were allocated to initiate a study of issues concerning the performance of house basements. Specific issues to be addressed include habitability, affordability, utility, prevention and remediation of flooding, and energy efficiency. The first phase of this project will consist of the computer modeling of basement heat transfer and a parametric study of basement insulation for low-energy housing.

Teaching, research, and technology transfer in the area of computer applications in residential construction are a continuing need. Funds (\$4K) were allocated to initiate an investigation to characterize the computer hardware and software needs of PA builders and to develop a comprehensive plan for appropriate PHRC involvement in meeting these needs.

Finally, funding (\$3K) was allocated to the continuation of work on the Builder's Guide to Modular Housing project. The continued effort will revise and expand the study to improve its utility to PA builders.

PROJECTS FOR THE 1996/97 OPERATING YEAR

Funds have been allocated for 1996/97 operations, technology transfer, and research projects based on the continuation of current funding levels. In addition to allocations for operations (\$24K) and technology transfer (\$11K), funds were allocated for five research projects.

Three of these projects are continuations of the computer applications (\$2K), modular housing (\$2K), and basement (\$29K) projects described above. Funds were allocated (\$4K) to develop an ongoing session at the annual housing conference which would address the issues and concerns of the land development industry.

Finally, \$25K was conditionally allocated to the continuation of the current project in the structures focus area, *Modeling and Maximization of Floor Systems Utilizing Alternative Materials*. Dr. Harvey Manbeck and Stacy Worley have submitted a joint proposal with Dr. John Janowiak (*PSU Forest Products*) to the US Department of Agriculture competitive grants. In the event that this funding is secured, an

alternate project related to property loss reduction will be funded instead. This project will focus on the prevention or minimization of property loss related to residential housing that can result from forces of nature such as flooding, ice and snow damage, fire, explosion, hurricanes, earthquakes, etc. Abnormal and accidental loadings would also be considered. Reduced property loss would benefit homeowners, governments, and insurance agencies. Providing homes that are less susceptible to this type of damage could be a significant advantage to home builders and owners. The enormous financial and property loss resulting from the recent floods in PA is evidence of the need to develop means of eliminating or minimizing these losses.

TECHNOLOGY TRANSFER PROGRAMS

Computer-aided Design

A series of one-day workshops entitled, *Computer-aided Design for the Residential Builder* were offered during May and June. The workshops were jointly sponsored by the HRC and Continuing and Distance Education at Penn State. The workshops were to give builders a "hands-on" introduction to a variety of CAD products specifically developed for the residential building industry. These were an introductory course that required no previous experience with computers or CAD. Anyone who is 1) involved in residential design, 2) contemplating the purchase of a CAD system, or 3) wants to learn more about CAD applications in residential construction was invited to attend the workshop. The workshops were presented at the following Penn State Commonwealth campus locations:

ALTOONA	Tues. - May 21
WILKES-BARRE	Wed. - May 22
HARRISBURG	Tues. - June 4

For information concerning the content of the workshop contact:

Charles McIntyre
HRC at Penn State
TEL: (814) 692-7121
E-mail: CMHRC@aol.com

FAREWELL TO STEVE TAYLOR AND CHARLES MCINTYRE

The PHRC would like to bid a fond farewell to Steve Taylor and Charles McIntyre. They have supported the PHRC for a number of years through their commitment of time and effort to the research and daily operations of the PHRC.

Steve has been active with the PHRC for 6 years. He has served as a research engineer, Assistant Director of Operations ('92-'94), and most recently as the director of the Fourth Annual Housing Conference. He has contributed significantly to the development of the PHRC and to residential construction industry. His research efforts have focused on the application of structural insulated panels (SIPs) in residential construction. He has also served the University as an instructor in the Department of Agricultural and Biological Engineering, where he has educated many students in structural design with wood. Steve will complete his research and his doctorate in May 1996.

Charles McIntyre joined the PHRC in 1989. He has served as a research engineer and the Assistant

Director of Infrastructure Systems. His research has focused on a marriage of land development issues and a CAD-oriented decision support system. Charles is also an instructor in the Department of Civil and Environmental Engineering. In this capacity, he contributed significantly to the development and teaching of the two residential construction courses offered at Penn State. He has also served as the advisor for the Student Chapter of NAHB and director of the Civil Engineering CAD laboratory facility at Penn State. One of his contributions to the residential construction courses has been the development of the CAD component of these courses. Charles has also developed a hands-on CAD course for residential builders.

The contributions of both Steve and Charles have been critical in the development and continued improvement of the PHRC. We thank them for their contributions and wish them well in their future endeavors.

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U. Ed. ENG 92-87

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