

PHRC

The Pennsylvania Housing Research Center

PHRC Year in Review July 2010 – June 2011

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July 2011

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Table of Contents

1.	Introduction	2
2.	Training, Education and Outreach Activities	4
3.	Publications	11
4.	Research Activities	12
5.	Funding	15
6.	Proposals	18

Tables

Table 1: PHRC Training Programs Held July 1, 2010 through June 30, 2011	4
Table 2: PHRC Expenses July 1, 2010 through June 30, 2011	16
Table 3: Summary of Act 157 Funds - July 1, 2010 through June 30, 2011	17

Figure

Figure 1: PHRC Organizational Chart.....	3
Figure 2: Summary of Funding Sources July 1, 2010 through June 30, 2011	15

1. Introduction

The purpose of this document is to provide a summary of activities the Pennsylvania Housing Research Center has pursued and products that have been delivered between July 1, 2010 and June 30, 2011. Additionally, the document is intended to provide the reader an understanding of the amount and source of funds the PHRC has received during the reporting period.

Each year, the Pennsylvania Housing Research Center (PHRC) seeks to conduct a series of projects that collectively satisfy the following criteria. Projects should:

- meet the needs of the residential construction industry and the housing consumer in Pennsylvania;
- be consistent with the mission and goals of the PHRC;
- be affordable and feasible, given the resources available and the prevailing constraints on time, expertise and facilities; and
- be a balanced program of projects that address both the long- and the short-term needs of all segments of the industry.

The projects undertaken were developed with input and assistance from the PHRC's Industry Advisory Council (IAC) and the Operations Committee. These bodies consist of manufacturers, suppliers, builders, remodelers, and industry associations as well as building code organizations and state agencies. After a thorough discourse at the spring IAC meeting, the members of the IAC voted on projects they felt were the highest priority for the industry.

The result of this input was the "*PHRC Project Plan, July 2010 – June 2011*" which outlined projects that the PHRC would undertake during this time period. The plan included only those projects that were to receive funds provided to the PHRC by the Commonwealth of Pennsylvania. In most cases, we have attempted to use state funding to leverage outside support; in other cases the work is considered important enough to warrant full state support. It should also be recognized that the PHRC undertook a wide array of additional projects that did not receive any state funds. Those projects are included in this report but are identified as having no support from the Commonwealth of Pennsylvania.

The PHRC receives funds from multiple sources including funds collected under Act 157 of 2006 which established a two dollar fee collected for each building permit to support the activities at the PHRC. To assure that programs funded in whole or part with Act 157 monies meet the needs of the construction industry, Act 157 requires that education, training and other activities provided by the PHRC be approved by its Industry Advisory Council.

Please note that with the collection of monies under Act 157 of 2006, there is not an accurate estimate of the exact amounts of funding available during this period. Because of this, this plan is somewhat conservative in that it only considers funds on hand. Any remaining funds will be carried over for future projects. If there is less funding collected than expected, the project plan will need to be abridged. We plan to continue with our previous initiatives in the areas of training and education, modular housing, manufactured housing, and applied research.

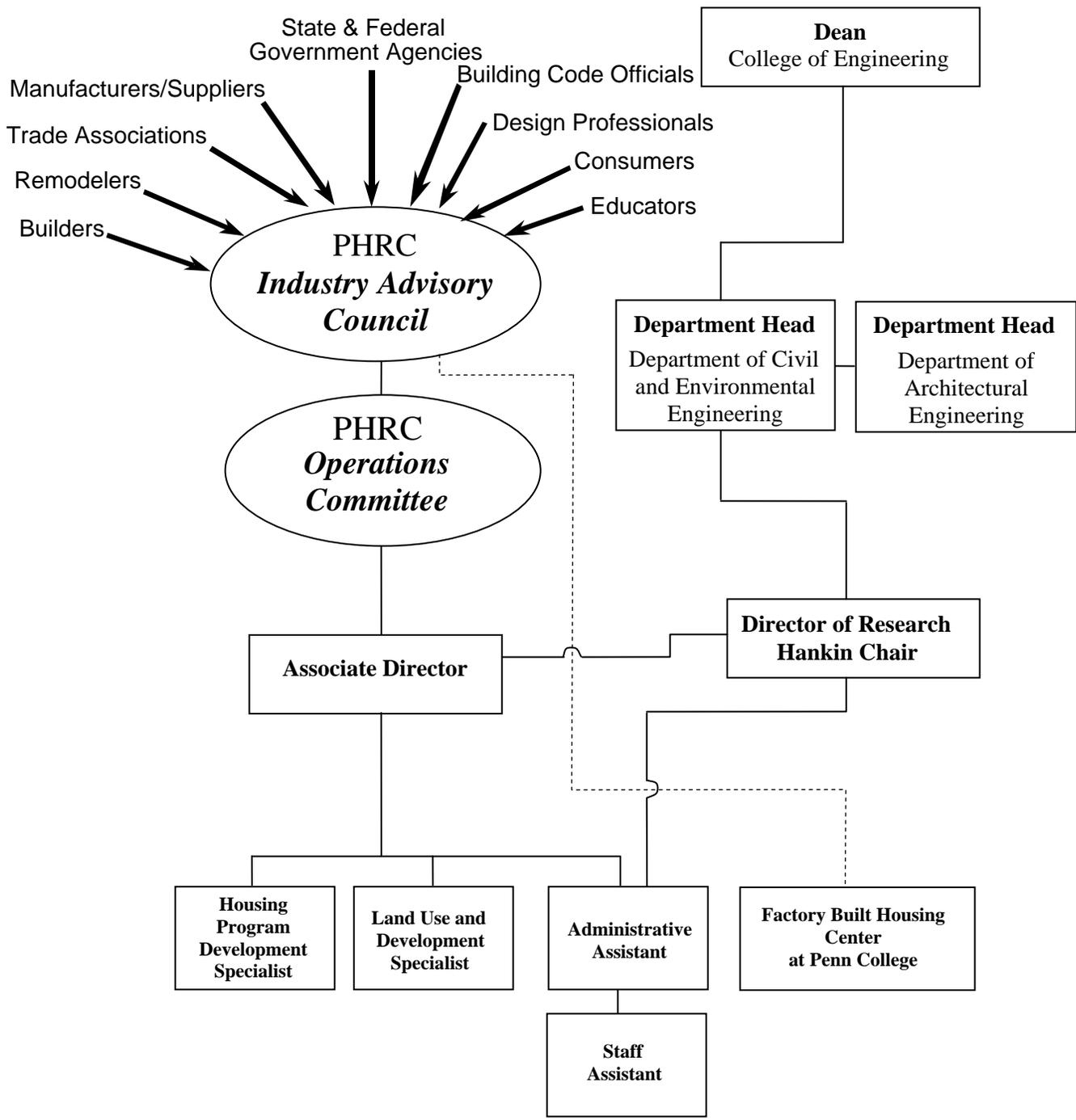


Figure 1: PHRC Organizational Chart

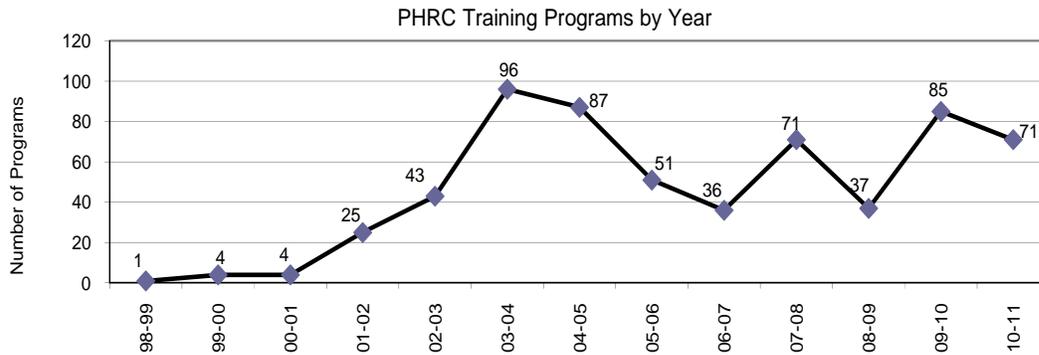
2. Training, Education and Outreach Activities

The PHRC offers a wide array of activities to educate and transfer appropriate technologies to the construction industry. Counting the training and less formal speaker service and presentations at conferences, the PHRC has provided educational services to over 3,598 individuals during this reporting period.

Workshops and Training – The PHRC delivered 71 technical workshops to 3,269 builders, remodelers, educators, code officials design professionals and planners during this reporting period (please see Table 1 below for detail).

Table 1: PHRC Training Programs Held July 1, 2010 through June 30, 2011

PHRC Training Programs Delivered			
PROGRAM		Activities for 2010-2011	
		# of Programs	# of Attendees
Advanced Framing	AF1	2	59
Blueprint Reading Program	BP1	2	50
IRC Building Essentials Academy	CO1A	2	29
International Residential Code Inspection Essentials	CO2	1	22
IRC Plumbing Academy	CO3A	2	10
IRC Mechanical Academy	CO4A	2	13
Commercial Energy Provisions (IECC)	CO5C	2	34
Residential Energy Essentials	CO5R	2	23
IRC 2009 Update Program	CO6	2	65
Custom Programs	CP	0	0
Residential Deck	D1	2	41
Electrical Essentials Academy	EE1A	2	27
First Energy Program	FE1	4	49
Mechanical Compliance Program	MC2	5	73
Photovoltaic Program	PV1	12	459
Two Family Dwellings and Multi-Family Housing	MF1	2	34
Residential Sprinkler (2 day)	SP1	8	291
Residential Sprinkler (1 day)	SP2	2	52
Wall Bracing Program (2 day)	WB1	1	34
Wall Bracing Program (1 day)	WB2	4	71
Webinars	W1	12	1833
Total Programs Held		71	3269



The following is a description of new programs that were developed or held during this reporting period:

Training, Technical Assistance & Outreach: The PHRC has a mandate to transfer knowledge by providing the necessary training and education to the wide variety of groups that make up the housing industry. The projects that are described below are in response to the recommendations that flow out of the PHRC’s Industry Advisory Council and reflect the current needs within the housing industry.

**PHRC Training
Provided Through
Industry
Partnerships**

Description: The PHRC has developed and maintains a wide array of training for all sectors of the construction industry with a focus on residential construction. These programs are intended to address technical issues facing the industry. Additionally the PHRC will customize programs to better meet a need of an industry partner. Each program is developed with a particular audience which may include builders, remodelers, trade contractors, design professionals, teachers, building code officials, etc.

These programs are intended to be offered through our industry partners, which may include trade associations such as the Pennsylvania Builders Association or their 42 local associations, professional associations, building code associations, as well as the Pennsylvania Construction Code Academy (PCCA).

General Audience Programs

- | | | |
|-----|----------------------------------------------------------------|-------------|
| 1. | International Residential Code Essentials | 2 day |
| 2. | Residential Energy Essentials | 2 day |
| 3. | IRC Plumbing Essentials | 2 day |
| 4. | IRC Mechanical Essentials | 2 day |
| 5. | Residential Mechanical Compliance | 1 day |
| 6. | International Energy Conservation Code Essentials (Commercial) | 2 day |
| 7. | International Residential Code Inspection Essentials | 2 day |
| 8. | Two-family-dwellings and Townhouses | 1 day |
| 9. | IRC 2012 Sneak Peek | ½ day |
| 10. | Residential Deck Design, Construction & Inspection | 1 day |
| 11. | Blueprint Reading | 1 day |
| 12. | Advanced Framing – increasing performance and reducing costs | ½ day |
| 13. | Residential Fire Sprinklers | 1 day/2 day |

Available Only through the Pennsylvania Construction Codes Academy

1. International Residential Codes Academy	4 day
2. IRC Plumbing Academy	4 day
3. IRC Mechanical Academy	4 day
4. Electrical Essentials Academy	4 day
5. Photovoltaic Inspections/Installation Training	1 day

New Program Development

Description: The PHRC developed the following new training programs. These programs address issues challenging the residential construction industry (builders, remodelers, building code officials, materials suppliers, etc.) During this period the following programs were developed:

1. **Wall Bracing: Prescriptive Design and Plan Reviews** - The interest in this program continues to grow as builders and code officials struggle to implement the new requirement of the 2009 IRC. This workshop is designed to provide an overview of the 2009 IRC wall bracing requirements. The program provides a general understanding of structural principals of wood frame buildings, as well as wind and seismic loading. The program also provides an emphasis on prescriptive design using the IRC versus when a building is exceeding the limits of this approach requiring a design professional. How to conduct wall bracing plan reviews is also emphasized.

A second day has been added to this program with several exercises that put into practice the lessons learned during the first day of the program. The PHRC will be offering the program as either a one- or two-day program.

2. **Advanced Framing: Reducing Costs and Improving Energy Performance** – Developed primarily by the National Association of Home Builders Research Center in the mid-1970s, advanced framing is a series of techniques that can significantly reduce the amount of lumber used in a home. Advanced framing, also known as optimal value engineering (OVE), significantly improves a home's energy efficiency without compromising its quality or durability. This half-day session provides an overview of various advanced framing techniques, including 24" o.c. stud spacing, two-stud corners, single top plates, right-sized and insulated headers, foam sheathing, and more. The presentation covers benefits of advanced framing, such as reduced construction costs, less waste, improved durability, increased energy efficiency, and mitigated environmental impacts. The session also covers potential drawbacks, including design costs, contractor training needs, window area limitations, and negative consumer perceptions. In addition, the presentation discusses code acceptance of advanced framing techniques under the International Residential Code (IRC).
3. **Electrical Essentials** – This four-day program is a comprehensive review of Chapters 34-43 of the International Residential Code. It includes examples, exercises and case studies designed to illustrate daily practices performed by a Residential Electrical Inspector or Plans Examiner. Material includes a review of how the UCC amends certain provisions of the IRC, especially with regard to residential alterations and exclusions.

4. **Residential Sprinkler** – Designed for residential plan reviewers, inspectors and contractors but open to any interested party, this session assists participants with learning how to design and review residential fire sprinkler construction documents in compliance with the applicable building codes for fire protection and life safety requirements in one- and two-family dwellings and townhouses.
5. **Blueprint Reading Program** - This one-day workshop is designed to familiarize people with little or no construction experience with the technical components of blueprint reading. This program is intended to provide people who want to become residential inspectors or inspectors with this essential skill.
6. **Pennsylvania Energy Efficient New Homes** – Act 129 brought requirements for Pennsylvania’s seven major Electric Distribution Companies (EDCs) to reduce electricity consumption by 1% by May 31, 2011, and 3% by May 31, 2013. As a result, EDCs have created Public Utility Commission-approved Energy Efficiency and Conservation Programs. This training program was developed in conjunction with the FirstEnergy’s new homes incentive program. Development and delivery of this program was funded by Performance Systems Development (PSD), which acts as the program administrator for FirstEnergy.

This half-day session provides an overview of the Pennsylvania Energy Efficient New Homes incentive program, and discusses a variety of energy efficient building techniques and technologies. The program covers how to participate in the FirstEnergy program and what it takes to build a qualifying home. Up to \$10,000 per home is available for qualifying homes built in Met-Ed, Penelec, and Penn Power service territories.

7. **FirstEnergy Whole House Energy Performance Training Program** – Similar to the above program this program focuses on retrofitting existing homes rather than new home construction.
8. **Solar Electric System Installation and Inspection:** Helped along by significant state and federal incentive programs, and increasing consumer demand, the solar industry has been growing by leaps and bounds. This rapid growth has presented many code offices with the challenge of providing approvals for installation involving unfamiliar technologies. This full-day session presents how to address inherent safety risks of the electrical components, as well as structural and durability issues relating to integration with the building. Proper installation, adherence to relevant code requirements, and a suggested plan review and inspection process are discussed. Development and delivery of this program is funded by the Pennsylvania Construction Codes Academy with Recovery Act funds distributed by the Pennsylvania Department of Environmental Protection.

Builder Briefs

Description: Continuation of the series of short technical documents - two to four pages in length - that address specific issues that have been identified by builders or remodelers. These documents are intended to be quick to read with much information presented graphically or pictorially. The following research and builder briefs were written during this period: **Insulating Basements: Part 1- Fundamentals**, BB0510; **Insulating Basements: Part 2 - Materials**, BB0610; **Insulating Basements: Part 3 - Basement Wall Systems**, BB0710; **Life-Cycle Assessment Tools for Building Analysis**, RB0511.

19th Annual PA Housing and Land Development Conference – For the past 19 years, the conference has served as a forum to discuss and resolve challenges facing the various sectors of the residential construction industry. This year it was held February 23 and 24, 2011 in York, PA. There were more programs than ever at this conference with a Housing Day, Land Development Day, and a Training Day. The first day of the conference focused on technical issues related to the delivery of houses and the latest information on emerging technologies and how to resolve problems facing the industry. It was attended by 97 individuals. Some of the topics included:

- 2009 IRC Compliance Challenges
- New Utility Energy Efficiency Incentive Programs
- Alternative Deck Attachment Details and Free-Standing Decks
- Improving Energy Performance of Existing Homes
- Residential Fire Sprinklers—What Builders Should Know
- 2009 IRC Wall Bracing Requirements
- Marketing Green Building to Customers
- Meeting the Demands of the Baby Boomer Generation
- 2009 Energy Codes

The second day was changed to a Land Development and Training Day. After a one-year hiatus, the PHRC brought back the Land Development Day of the conference on February 24, 2011. There were 64 people in attendance for this portion of the conference. The Land Development Day took on a theme of stormwater management reflecting one of the major issues facing the industry. The topics included:

- Impacts of the Chesapeake Bay TMDL on Land Development and Stormwater Management From the US EPA Perspective
- "An Update on Pennsylvania's Chesapeake Bay Watershed Implementation Plan (WIP) and the Environmental Protection Agency's TMDL"
- Updates to Chapter 102 and Key Issues That Relate to Land Development Professionals
- Key Changes in the New PA DEP Erosion and Sediment Pollution Control Manual
- Chapter 102 Deed Restrictions and Other Legal Requirements
- Performance Data on Stormwater BMPs from the Villanova Urban Stormwater Partnership

Training Sessions (Day 2): For the 2010 conference the PHRC offered training programs in lieu of the Land Development Day. Because of the success of those training programs the PHRC decided to offer training again concurrent with the resurrected Land Development Day. Below is a list of programs held:

- Residential Fire Sprinklers (18 attendees)
- Advanced Framing (16 attendees)
- Energy Incentives for New Homes (23 attendees)
- Solar/Electric Systems/Installation (75 attendees)

Webinars – The PHRC’s Industry Advisory Council has requested the development and deployment of web-based training. There is a need for technical programs with a lower cost delivery mechanism than a formal classroom setting. This initiative is intended to develop interactive web-based training that can be available live and archived for future viewing. These programs are scheduled on the second Tuesday of every month. During this reporting period, twelve programs were held:

- Turns, M. – *PCCA Webinar – IRC Update for Code Officials* – July 15, 2010 (~19 attendees)
- Turns, M. – *Special Webinar – Coordination of the 2009 IRC Energy Requirements with Industrialized Housing Installation* – July 2, 2010 (~132 attendees)
- Blansett, K., Buddenbohn, B. – *Special Webinar: Act 46 – The Permit & Approval Extension Act – What is its Impact on You?-* August 3, 2010 (~346 attendees)
- Turns, M., Buddenbohn, B. – *Building Permit Fees in PA – Overview of Center for Rural PA Study* – September 14, 2010 (~89 attendees)
- Wolfgang, B. – *Basement Wall Insulation Strategies* - October 12, 2010 (~126 attendees)
- Turns, M., Sagan, K. – *The 2012 International Energy Conservation Code: A Sneak Peak* - November 9, 2010 (~149 attendees)
- Turns, M. – *Understanding Barriers – Vapor, Air, Water Resistive, etc.* - December 14, 2010 (~102 attendees)
- Turns, M. – *Wall Bracing Overview (2009 IRC)* - January 11, 2011 (~139 attendees)
- Turns, M. – *Performing Inspections Using the IECC Insulation and Air Sealing Checklist* – March 8, 2011 (~106 attendees)
- Blansett, K. – *Chapter 102 Erosion and Sediment Control and Stormwater Management* – April 12, 2011 (~256 attendees)
- Turns, M. – *Bringing the Ducts Inside: Unvented Attics, Conditioned Basements and Crawl Spaces, and Avoiding Exterior Walls* – May 10, 2011 (~82 attendees)
- Turns, M. - *Special Webinar – Act 1 of 2011: New Uniform Construction Code Exemptions and Code Adoption* – May 17, 2011 (~287 attendees)

Speaker Service and Conference Presentations – As a service to the home building and remodeling industry in Pennsylvania, the PHRC offers a speaker service to local and regional associations. This service is provided at no charge to the local builders associations and other interested groups. The PHRC offers short (20 to 45 minute) sessions, often technical, that address some of the issues or problems that builders and remodelers may be facing. Since July, the following presentations have been made by the PHRC:

- Blansett, K. Panel Speaker. Council of Engineering & Scientific Societies Executives. CESSE 2010 Annual Meeting. July 14 - 16, 2010. Pittsburgh, PA (~80 attendees)
- Turns, M., *Center for Rural PA – Impact of the UCC in Rural PA*, Bradford, PA, August 10, 2010 (~ 15 attendees)
- Buddenbohn, B., *Overview of UCC*, USDA Conference, Pittsburgh, PA, September 1, 2010 (~ 93 attendees)
- Turns, M., *2009 IRC Update*, Pro-ASHI, Pittsburgh, PA, September 10, 2010 (~60 attendees)
- Turns, M., *What is the PHRC?*, September 14, 2010 (~18 attendees)
- Turns, M., *Emerging Issues in Energy Codes*, PennBOC Conference, Seven Springs, PA, October 13, 2010 (~14 attendees)
- Turns, M., *IRC Update*, HBA of Harrisburg, October 21, 2010 (~20 attendees)

- Turns, M., *Changes to the PA Building Codes that Apply to Component Manufacturers*, Adamstown, PA, November 11, 2010 (~22 attendees)
- Turns, M., *Residential Fire Sprinklers*, Central PA BA, February 9, 2011 (~15 attendees)
- Turns, M., *Proposed Alternate Deck Connections*, BAMP, Pittsburgh, PA, March 23, 2011 (~14 attendees)
- Turns, M., *Understanding Energy Code Compliance Paths*, BAMP, Pittsburgh, PA, March 23, 2011 (~21 attendees)
- Turns, M., *Impact of the Uniform Construction Code and What It Means to Townships*, PSATS Conference, Hershey, PA, April 19, 2011 (21 attendees)
- Buskirk, D., *Residential Fire Sprinkler Panel Discussion*, Pennsylvania Municipal Authorities Association meeting, Nemaquin, PA, April 19, 2011 (5 attendees)
- Turns, M., *Residential Fire Sprinkler Panel Discussion*, Pennsylvania Municipal Authorities Association meeting, Hershey, PA, April 26, 2011 (27 attendees)

Web Site – The PHRC maintains a web site (www.engr.psu.edu/phrc) to help disseminate information. An executive summary from each of the reports as well as builder, research and technical briefs are available on-line.

Pennsylvania Focus Committees:

- Pennsylvania Industrialized Housing Advisory Group (DCED)
- Pennsylvania Manufactured Housing Advisory Group (DCED)
- Pennsylvania Builders Association (PBA)—(PHRC Committee)
- Pennsylvania Builders Association (PBA) – Housing Finance Committee
- PA Stormwater Technical Workgroup – Committee at Large, Chapter 4 Land Development Process Committee, Chapter 5 Stormwater Design Committee
- American Society of Civil Engineers – Central PA Chapter
- Pennsylvania Society of Professional Engineers

National and International Focus Committees:

- National Consortium of Housing Research Centers
- American Concrete Institute Technical Committees on Cracking, Safety, and Deflection Control

3. Publications

The PHRC produces a wide array of publications to provide technical information to the construction industry and to disseminate results of research projects.

Reports:

Turns, M., Kasal, B., *Impact of the Uniform Construction Code in Rural Pennsylvania*, September 2010.

Builder Briefs:

Wolfgang, B., *Insulating Basements: Part 3 – Basement Wall Systems*, BB0710, July 2010.

Han, G., Srebric, J., *Life-Cycle Assessment Tools for Building Analysis*, RB0511, May 2011.

4. Research Activities

Guidelines for Efficient Basement Insulation – This project was built from two previous projects conducted by the PHRC involving sophisticated testing of the performance of basement wall systems. This project synthesized the results of previous work to develop simplified guidelines for energy-efficient and healthy basement insulation based on the latest knowledge. Typical basement insulation details have been developed and their positive and negative attributes assessed. The target audience for this document is builders, design professionals as well as building code officials.

REPORT: Experiments were conducted testing several interior insulation strategies comparing permeable and non-permeable insulations under basement-like conditions. Available materials and publications regarding basement insulation systems were collected and studied.

A series of three Builder Briefs were developed that synthesizes previous research findings as well as current literature. The Builder Brief series covers fundamentals of below-grade building physics, relevant material properties of common components of basement wall systems, as well as a presentation of typical basement wall system configurations. The final brief includes comparisons between typical wall systems, including a discussion with regard to cost and risk implications associated with each system.

Applied Projects

These groups of projects are application oriented and have a direct need by the residential construction industry. This includes the development and support of standards, and longer term initiatives.

Development of Alternative Residential Deck Lateral Load Connections

Deck failures frequently have tragic consequences. The 2009 International Residential Code establishes a prescriptive option for deck lateral attachment connections that is problematic to construct and may not meet the loads imposed. Aside for this prescriptive detail, there is no guidance in the code or elsewhere on how to determine the lateral forces to be resisted, or how to resist those forces. This project develops a set of practical details that will result in safe deck construction, specifically in terms of resisting lateral loads. This is done through structural analyses of deck systems. The project deliverable will be guidelines for deck construction including typical details.

REPORT: A draft of the guidelines is currently under review by a PHRC review committee.

Engineering Based Bracing for the State of Pennsylvania

Description: The International Residential Code (IRC 2009) bracing requirements are based on tributary area approach and simplified (box-type) building models. In addition, the minimum wind speed in Pennsylvania based on IBC (2009) is 90 mph. It has been shown in the latest PHRC research project that the 50-year recurrence wind speed in PA can be reduced to 80 mph. However, unless a simplified method useable by engineers is developed, 90 mph and tributary approach will be used to design bracing and this will result in requirements exceeding the current IRC minimum bracing requirements due to the incorrect initial assumptions (tributary areas). This work will use simple building model and the fact that forces in the building are distributed according to the wall stiffness and not the areas attributed to them.

REPORT: The PHRC was unable to complete this project due to the departure of Dr. Kasal, the principal investigator for the project, in August 2010. Dr. Kasal is now a professor and Director of the Fraunhofer-Klauditz Institute at the Carolo-Wilhelmina University of Braunschweig in Germany.

Methods for Life-Cycle Cost Assessment of Building Enclosure Systems

Description: The life-cycle cost assessments are becoming crucial in the housing industry, because products will be marketed based on their energy and environmental impacts. It is important to have an overview of existing life-cycle cost assessment methods available to builders in Pennsylvania to be able to inform their customers and negotiate with suppliers. This project overviews existing methods for lifecycle assessments, from the simple ones such as “life-cycle energy efficiency” to more complex methods such as BEES (Building for Environmental and Economic Sustainability) software created by the Environmental Protection agency (EPA). We have created a list of most important input parameters, as well as their range of values to be able to question any life-cycle assessment result from the perspective of its sensitivity to input parameters.

REPORT: The results are available in the form of a builder brief published by PHRC, RB0511.

MHTI & MHRC Support – Two programs focusing on training for the factory-built housing industries have been developed. The first is the Modular Housing Training Institute (MHTI) and the second is the Manufactured Housing Resource Center (MHRC). The MHTI program currently provides a two-day training program that focuses on the on-site completion of modular houses. The program is intended for builders, installation crews, code officials, as well as industry representatives. The MHRC currently provides training for the on-site completion of manufactured or HUD Code housing. The program is intended for retailers, installers, manufacturers, as well as building code officials. In recognition of the importance of factory-built housing to PA, a Ben Franklin award has been made to enable employment of a full-time Director of MHTI and MHRC.

REPORT: No activity during this reporting period due to organization losing funding.

Land Development

The land development process is a key component of providing affordable homes; however, there is no single group looking at land development practices in Pennsylvania. During the past year, the PHRC has renewed land development activities by filling the Land Use and Development Specialist position completing a five-year strategic plan for land development activities at the PHRC and creating a subcommittee of the Industry Advisory Council to focus on land development related projects. This new subcommittee comprising of leaders in the development, design and regulatory industries met and prioritized applied research projects for the coming year.

Support of Standards – The PHRC has developed three standards to respond to industry demand. These include Pennsylvania’s Alternative Residential Energy Provisions, Pennsylvania Standards for Residential Site Development Standards and Foundation Systems for Relocated Manufactured Housing. Each of these standards requires training and timely technical assistance for local governments, builders/developers, design professionals, contractors, etc. All of these standards are available electronically for free and hard copies are available for a fee.

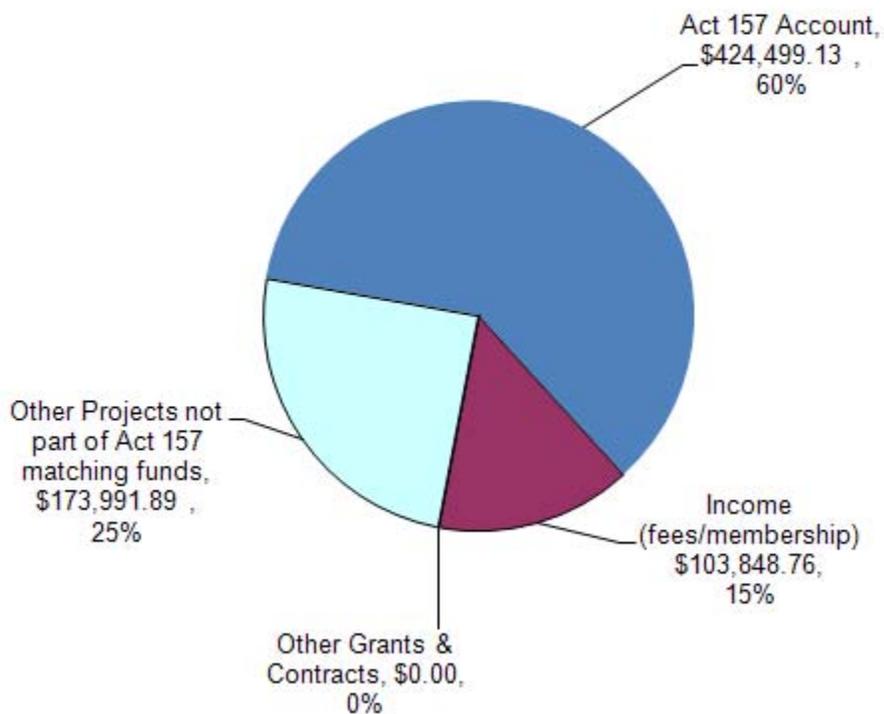
1. Pennsylvania’s Alternative Residential Energy Provisions - 2009: Education was provided through various building code training programs and technical assistance provided through telephone and email support by the PHRC.
2. Pennsylvania Standards for Residential Site Development Standards: Please see the Land Development section.
3. Foundation Systems for Relocated Manufactured Housing: The PHRC delivered a one-hour training program for building code officials and contractors. This is posted on the PHRC’s web site for open viewing.

Support of the UCC Review and Advisory Council (RAC) – During the RAC review of the 2009 ICC codes, the PHRC made itself available as a resource to RAC members for questions on technical issues related to code requirements being considered.

5. Funding

The PHRC receives funding from diverse sources including contracts, grants, membership fees, fees for services as well as funds collected under Act 157 of 2006. Additional contributions were made by the Pennsylvania State University through a variety of sources including the Hankin Endowment and in-kind support.

During this reporting period total project costs were \$702,339.78 (Figure 2). Act 157 Construction Training Account accounted for 60% of these funds, we had no other grants and contracts, other projects not part of Act 157 matching funds accounted for 25%, and income from fees and services accounted for 15%.



**Figure 2: Summary of Funding
July 1, 2010 through June 30, 2011**

The funds collected under Act 157 of 2006 stem from a \$2 fee collected for each building permit to support the activities at the PHRC. This legislation took effect in January 2007. As of July 1, 2010, the beginning of this reporting period, the PHRC received one payment of \$76,868.89 in August 2010, \$120,313.86 in November 2010, \$116,147.62 in February 2011, and \$107,692.17 in May from the Department of Community and Economic Development.

Any remaining funds, and disbursements received during this period, will be used for activities in the next fiscal year.

The Act 157 Account incurred expenses of \$424,499.13 during this reporting period. This is a little more than anticipated in the Project Plan for a variety of reasons. The salaries were increased because the Land Development Specialist and Training, Education, and Development Specialist positions were filled for part of the reporting period.

The *PHRC Project Plan July 2011 – June 2012* was developed with the remaining funds in the Act 157 Account as of June 30, 2011. This plan has anticipated expenditures of \$420,032.

Table 2: PHRC Expenses July 1, 2010 through June 30, 2011

Category	Act 157 Account	Leveraged Funding	Total Expenses
Total Salaries	\$208,220.24	\$102,583.80	\$310,804.04
Fringe Benefits	\$57,841.06	\$17,774.84	\$75,615.90
Supplies and Materials		\$8,255.50	\$8,255.50
Communications Services	\$120.00	\$4,766.13	\$4,886.13
Travel	\$41,204.08	\$74,697.14	\$115,901.22
Publications	\$223.66	\$2,351.04	\$2,574.70
Maintenance		\$417.00	\$417.00
Consulting & Prof Svc	\$109,878.00	\$11,781.64	\$121,659.64
Copies and Photographic Services	\$42.09	\$21,097.99	\$21,140.08
Scholarships		\$229.95	\$229.95
Tuition and Fees	\$6,970.00	\$22,515.00	\$29,485.00
Equipment		\$1,343.82	\$1,343.82
Purchased Services		\$1,849.00	\$1,849.00
Miscellaneous		\$8,177.80	\$8,177.80
Total	\$424,499.13	\$277,840.65	\$702,339.78

Table 3: Summary of Act 157 Funds - July 1, 2010 through June 30, 2011

Summary of Act 157 Funds				
		Expenses	Deposits	Balance
Fiscal Year 2010-2011	Starting Balance FY 2010-11			\$439,369.64
	Expenditures FY 2010-11	\$424,499.13		\$14,870.51
	August 2010		\$76,868.89	\$91,739.40
	November 2010		\$120,313.86	\$212,053.26
	February 2011		\$116,147.62	\$328,200.88
	May 2011		\$107,692.17	\$435,893.05
	August 2011		\$154,580.48	\$590,473.53
	Projected Expenditures FY 2011-12	\$420,032.00		\$170,441.53

6. Proposals

The PHRC continuously seeks to leverage funding from the Commonwealth with funds from other sources. The following is a list of proposals submitted during 2010-11.

Proposals Submitted:

- National Housing Endowment, Homebuilding Education Leadership Program (HELP) – *Establish the Instructor-Practitioner Position*. Awarded \$100,000 over three years.