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*PSPE members who wish to publish a project photo on the cover should contact Jennifer Summers, 717.441.6051.*

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# President's Message

Ernest U. Gingrich, P.E., PLS, F.NSPE



It is appropriate in my final President's Message to reflect and reminisce over what has occurred over the past year. Change in one way or another is inevitable over the course of a year; 2004-2005 was no exception.

We started the year with a Memorandum of Understanding jointly signed between the Pennsylvania Emergency Management Agency (PEMA) and PSPE. The memo established a working partnership whereby members of PSPE would aid PEMA, when needed, in the event of a natural or manmade disaster.

In October, PSPE hosted the annual conference for the Northeast Region NSPE

in Philadelphia. Engineers from most states in the northeast U.S. networked with each other and national staff. Education sessions provided Continued Professional Competency (CPC); governance meetings allowed the states to interact directly with NSPE leaders. Pennsylvania's own Barry Isett, P.E., FNSPE, was elected vice-president elect for the Northeast Region.

The issue of mandatory CPC is before us once again. Following a resolution presented by the Pittsburgh Chapter, a Continuing Education Task Force was formed to arrive at appropriate language to support mandatory CPC. It is expected that this Task Force will present its recommendation to the Board of Directors at the September meeting. Since many states, including several adjacent to Pennsylvania, have adopted mandatory CPC, many believe that PSPE should

endorse some form of CPC before an undesirable form is mandated by legislative action. Input from the membership is welcome.

The Summit at the winter conference of NSPE in San Diego endorsed changes recommended by the Future Directions Task Force. These changes affect the governance of NSPE as well as NSPE's relationship with the state organizations and chapters. The affect of these changes on PSPE, chapters and other entities of the organization will not be fully known until they are implemented.

As seen from the above, change will occur over the coming year and beyond. Thank you for the opportunity to serve you in this capacity over the past year. I am certain we are in good hands for the future of PSPE. ■


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(If you would like to receive monthly legislative updates from the PSPE listserv, simply send an e-mail message to [jennifer@wannerassoc.com](mailto:jennifer@wannerassoc.com) with the subject: "add me to the monthly update."

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# On Capitol Hill

John D. Wanner, CAE

## Democrats Win Both Special Elections - Senate Back at 30-20

Democrats won special elections in Philadelphia and Allegheny County to fill unexpired terms of former Democratic Senators Allyson Schwartz (now in Congress) and Jack Wagner (now State Auditor General) on May 17. Democrat Wayne Fontana easily defeated recently turned Republican state Rep. Mike Diven in the 42nd district race, and state Rep. LeAnna Washington trounced her Republican opponent, Ron Holt to succeed Schwartz in the 4th.

After three special elections, including Republican Pat Browne's win last month in the Lehigh Valley, and several million dollars spent, the Senate will return in June to the 30-20 Republican majority that last November. The House of Representatives will be 109-93 until special elections this summer fill the House seats of Browne and Washington.

## Legislative Activity

### HB 86 RE: Army Corps of Engineers Liability (by Rep. David Steil, et al)

Act stating that DCNR, PennDOT and DEP, acting in the name of the Commonwealth, are authorized to agree to hold and save the United States Army Corps of Engineers free from all damages arising from construction, operation and maintenance of projects along the Delaware Canal State Park, and projects in the Boroughs of Stockertown and Tatamy and the Township of Palmer located in Northampton County, involving cooperative agreements between the Commonwealth and the United States Army Corps of Engineers, except for any damages due to the fault or negligence of the United States Army Corps of Engineers.

**Reported as amended from House Environmental Resources and Energy Committee, read first time, and laid on the table, 5/10/2005**

**Removed from the table, read second time, and rereferred to House Appropriations Committee, 5/11/2005**

### HB 88 RE: Comprehensive Watershed Storm Water Act (by Rep. David Steil, et al)

This bill would enable counties and municipalities to develop comprehensive watershed storm water plans and encourage regional implementation of comprehensive watershed storm water plans within designated watershed boundaries to preserve and protect areas adversely affected by storm water runoff and subsurface drainage. The bill explains each plan's required content and provides that public participation is required in the development of the plan. A municipality would revise its ordinances and regulations to conform to the requirements of the comprehensive watershed storm water plan. A municipality would be reimbursed by the county for its identified costs of infrastructure implementation and maintenance. Counties would have the power to fix, alter, charge and collect fees in the area served by the county and the associated watershed as determined by the county in order to carry out the powers and duties authorized by the Act. "County" is defined as a county of the second-class or second class A or a county of the second class or second class A that has adopted a home rule charter. DEP, the Environmental Quality Board and other departments and agencies and county and municipal governments and agencies would make decisions with respect to issuance of necessary permits. DEP may administer grants to municipalities and counties and to assist or reimburse them for costs in preparing comprehensive watershed storm water plans. The bill provides for exemptions.

**Reported as committed from House Local Government Committee, read first time, and laid on the table, 5/3/2005**

**Removed from the table, read second time, and rereferred to House Appropriations Committee, 5/11/2005**

### HB 236 RE: Small Business Regulation Reform (by Rep. Tina Pickett, et al)

Amends the Regulatory Review Act further providing for legislative intent, for proposed regulations and procedure for

review. The act is intended to improve State rulemaking by creating procedures to analyze the availability of more flexible regulatory approaches for small businesses in accordance with certain findings. For any regulation subject to the act, a small business that is adversely affected or aggrieved by final agency action is entitled to judicial review of agency compliance. A small business may seek the review during the period beginning on the date of final agency action and ending one year later. The act is not intended to create a right or benefit, substantive or procedural, enforceable at law by a person against another person or against the Commonwealth, its agencies or its officers. Lastly, "small business" is defined as a business entity, including its affiliates, that is independently owned and operated and employs fewer than 250 full-time employees or has gross annual sales of less than \$6,000,000.

**Amended and passed House, 5/10/2005**

### HB 488 RE: Prototypical School Facility Design Clearinghouse (by Rep. Bev Mackereth, et al)

Amends the Public School Code providing for a prototypical school facility design clearinghouse. The legislation authorizes the Department of Education to establish a central clearinghouse of prototypical school facility designs for access by any school entity that may want to use a prototype design in the construction of school facilities. The Department will compile all necessary publications and set up a computer database to make the information available by school entities and the public at large. Design professionals registered in PA may submit plans. The original design professional retains ownership of a prototype design.

**Reported as committed from House Education Committee, read first time, and laid on the table, 5/4/2005**

**Removed from the table, read second time, and rereferred to House Appropriations Committee, 5/11/2005**

*"Capitol" continued p. 16*



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# Retirement Redefined

Robert W. Burnett

We are an aging population, yet even we grow older we have become more active and are embracing the future with a passion rarely seen in previous generations. At the turn of the 20<sup>th</sup> century, the average life expectancy was 47 years. Today, the average American will live approximately 77 years. The trend is expected to continue and by 2040, among individuals who reach age 65, average life expectancy is projected to rise from 81 to 85 for men and from 84 to 88 for women, according to the National Center For Health Statistics.

Simultaneously, as we enjoy medical advances and live healthier lifestyles that contribute to longer life spans, the largest portion of our population is nearing retirement. In fact, this year, 78 million baby boomers are between the ages of 41 and 59. At the end of 2005, the oldest baby boomers will begin turning 60 years old and this group is starting a new trend - seeing retirement as a new beginning rather than an ending. Furthermore, in the next decade, the number of Americans between 55 and 64 years old will increase 33 percent to 40 million while the number of people between 65 and 69 will increase 54 percent to almost 16 million, according to The American Association of Retired Persons (AARP.)

This generation of baby boomers will help redefine how our society thinks of its retirement years. The aging of America and these demographic changes are causing an "age wave", which will transform every aspect of our personal, social, financial and political lives, according to Dr. Ken Dychtwald, psychologist and gerontologist. But we should not expect people to enter into a 30-year retirement in the traditional sense of the word. According to Dychtwald, longer, healthier lives means new definitions of the life cycles. No longer are people expected to first go through their education, then work and then retire. Now, opportunities to continue working or to go back to school do not end with retirement as they usually did in the past. The old, linear life model is being

replaced with a cyclical approach including short-term retirements, followed by any combination of career shifts, part or flex-time work, entrepreneurial endeavors and continuing education. In fact, about 30 percent of people over 65 are currently in the labor force and that percentage is expected to increase to 37 percent by 2015, according to the Bureau of Labor Statistics, 2000.

These statistics support the belief that as boomers pass through their middle years and maturity, some key factors are reshaping how they live:

1. Concern about the onset of chronic disease and the desire to do whatever is possible to postpone physical aging.

2. Entry into new adult life stages including empty-nesting, care-giving, widowhood and retirement - each with its own challenges and opportunities.

3. A psychological shift from acquiring more material possessions toward a desire to pursue enjoyable and satisfying experiences.

Furthermore, one of the greatest challenges that baby boomers will face as they turn the corner into their retirement years is stretching finances to accommodate their longer lifespan. According to an AARP study, 25 million or nearly one third of baby boomers have virtually nothing saved for retirement. What can boomers do in their 40's and 50's to best prepare financially for this new definition of retirement and the numerous lifestyle changes that lie ahead? Following are three simple rules:

1. **Create or update your financial plan** - Seek the help of a qualified financial advisor to create a roadmap for your future. If you have a plan, be sure to update it and adjust it frequently to assure you remain on track with changing plans and goals. Websites that offer a variety of planning resources include [www.aarp.com](http://www.aarp.com), [www.getadvice.com](http://www.getadvice.com) and many others.

2. **Save, save, save** - Even if it's late in the game, take control and get started now. Less than 50 percent of working Americans have a pension plan at their workplace,

according to AARP. That means less than half of all private sector workers have a regular payroll deduction mechanism to save for their future.

3. **Don't ignore the rising costs of healthcare** - For many, healthcare costs are increasing by double digits annually and insurers are reducing offerings, raising prices and shifting costs. In addition, many employers are cutting back on employee health benefits and retiree health benefits. According to AARP, retirees are paying larger and larger portions of their post-work income for health care. Even with Medicare eligibility, the average older American is spending nearly one third of their income on health care, according to AARP.

Now is the perfect time for people nearing retirement (and those who want to get started early) to visit with a qualified financial advisor. An advisor can help with potential solutions to the issues many boomers will face. For example, long term care insurance can help cover the high cost of nursing home care and retirement plan catch-up contributions can boost savings for those age 50 and older. Retirement is being redefined and the time is now for investors to redefine their plans for paying for retirement as well. ■

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# Form Follows Function

by Johann F. Szautner, P.E., PLS

Henri Sullivan's classic adage came to mind as I participated in the Building Security Symposium sponsored by the Architectural Engineering Institute, the Steel and Ornamental Metal Institute of New York, and the Infrastructure Security Partnership at the McGraw-Hill conference center in New York City. The purpose of the symposium was to review available design options and risk analysis for an effective resistance to terrorist threats. Following is a synopsis of what I learned.

Buildings with simple geometric shapes and clear lines are obviously less vulnerable to the impact of dynamic blast loads than those with intricate and often convoluted shapes of architectural expression. While the most common threats are from explosives, threats from chemical, biological, and radioactive agents are real and must be considered. In addition, we must recognize that terrorist threats can come from misguided political activists, disgruntled employees, psychopaths and criminals within our borders, as well as from overseas.

Security planning starts by considering a specific threat and assessing the associated vulnerability, from which the appropriate level of protection may be determined based on an acceptable level of risk. While a building owner's defense against chemical or biological agents is limited to controlling utility access points and installation of expensive detection equipment, more practical options are available to mitigate blast threats from explosives. Explosive charges are limited by the load carrying capacity of the conveyance vehicle from 50 pounds by a personal carrier (satchel) to 5,000 pounds of a truck. Controlling/restricting physical access by establishing stand-off zones can be very effective and is less costly than the alternative of structural hardening.

However, in an existing urban environment, stand-off zones may not be feasible; hardening may need to be achieved via retrofitting of crucial structural elements to avoid progressive collapse and preserve structural integrity, at least for the time

required for building evacuation. In addition to forestalling progressive collapse, protection from flying debris, primarily broken glass, is another important challenge of hardening, which can be accomplished with specialty replacement windows and installation of blast curtains.

The goals of a security plan need to include the three "D's:" "Detection," "Deterrence," and "Delay." To that end, provide for physical control elements of building and perimeter access, including clear zones and lighting. Building and perimeter access for both pedestrians and vehicles are best controlled by closed-circuit television, electronic access, alarm and intrusion detection systems, vehicle gate control, and security monitoring with operational procedures. Diversion and camouflage are low cost options to be considered. The typical terrorist will most likely move on if the target appears well protected or of little strategic value.

Clear zones, fencing, and proper lighting are required around building entrances, parking areas, and walking paths. This is not to say that they should be void of landscaping, but landscaping and planting need to be arranged to allow full view of potentially critical areas.

When planning a new building or facility in today's climate, the potential of a terrorist threat needs to be considered, although it is impractical to design a civilian structure to remain undamaged from a large explosion. The protective objectives are therefore related to the type of building and its function.

For an office, retail, residential, or light industrial building where the primary assets are its occupants, the objective is to minimize loss of life. Because of the severity of large-scale explosion incidents, goals are by necessity modest. Moreover, it is recognized that the building will be unusable after the event. This approach is considered a damage-limiting or damage-mitigating approach to design.

To save lives, the primary goals of the design professional are to reduce building damage and to prevent progressive collapse

of the building, at least until it can be fully evacuated. A secondary goal is to maintain emergency functions until evacuation is complete.

Preventing building collapse is the most important objective. Historically, the majority of fatalities that occur in terrorist attacks directed against buildings are due to building collapse. Collapse prevention begins with awareness by architects and engineers that structural integrity against collapse is important enough to be routinely considered in design. Features to improve general structural resistance to collapse can be incorporated into conventional buildings at affordable costs, often requiring no more than incorporating redundancy of structural components.

Furthermore, facilitating evacuation, rescue, and recovery efforts through effective placement, structural design and redundancy of emergency exits and critical mechanical/electrical systems may optimize building design. Through effective structural design, overall damage levels may be reduced to make it easier for occupants to get out and emergency responders to safely enter.

Beyond preventing collapse and facilitating evacuation/rescue, the objective is to reduce flying debris generated by failed exterior walls, windows and other components to reduce the severity of injuries and the risk of fatalities. This may be accomplished through selection of appropriate materials and use of capacity-design methods to proportion elements and connections. A well-designed system will provide predictable damage modes, selected to minimize injuries.

Finally, good anti-terrorist design is a multidisciplinary effort requiring concerted efforts of the architect; civil, structural, electrical and mechanical engineers; as well as security professionals and design team members. ■

*For detailed building and site design guidelines to mitigate risk from terrorists, refer to FEMA publications 426 and 429, both of which can be downloaded with additional relevant information from [www.fema.gov/fima/rmsp428.shtm](http://www.fema.gov/fima/rmsp428.shtm).*

# Cover Story

Jeffery M. Sheaffer, P.E. and Amanda Dalla Piazza, Larson Design Group, Inc.

## Filling the Gaps: Pipe re-lining satisfies demands for economical, immediate transportation solutions

Many of our nation's highways show the effects of age and environment. Chemical reactions, precipitation, traffic volume, and the freeze/thaw process accelerate deterioration of roadways, bridges, retaining walls, and culverts that work to support the highway system. Eventually, structures become too deteriorated to perform safely or efficiently and demand replacement. Often, design of the original structures did not account for difficulties that would be encountered during future replacement.

At nearly 40 years of age, Interstate 80, which runs West/East through the mountains of Pennsylvania, is no exception. The interstate received over \$26 million in funding from state and federal sources for rehabilitation projects in 2004. Funds are typically spent on discreet sections of the interstate to completely rehabilitate all features of that portion of the facility, including roadways, pipes, guide rails, sign structures, culverts, and bridges. Economical solutions are integral in meeting the demand to complete as much of the interstate as possible within the available budget.

Along Section B14 in Clearfield County, engineers provided a unique, effective

solution to a challenging portion of the project involving a deteriorated 72" diameter corrugated steel plate pipe culvert. The 740' long pipe, lying beneath 65' of fill, was in very poor condition - completely deteriorated in specific locations. Only a 2' high portion of the original inlet concrete wingwalls remained, and the inlet headwall had been completely removed. A 20' section of pipe was missing between the outlet headwall and the remainder of the pipe. The original embankment around the inlet of pipe had slumped into the stream. Poor inlet stream alignment combined with the missing inlet headwalls and wingwalls resulted in embankment erosion around the pipe and sedimentation within.

Because of the extreme fill depth, excessive excavation or a large, expensive temporary shoring system would have been required to completely remove the pipe. These options required an exorbitant amount of funding, disrupted time sensitive construction activities on the roadway above, and necessitated significant amounts of backfill. Tunneling a new culvert nearby was considered, but proved infeasible.

Weighing cost and hydraulics with environmental impact and service life, structural engineers chose to re-line the existing pipe. The pipe, originally 72" in diameter, received a 60" inside diameter, 0.138" thick aluminized steel spiral rib lining

system with a concrete paved invert. The 60" diameter pipe was the maximum feasible because of deformations to the original pipe.

In accordance with PennDOT criteria, the new pipe was designed to carry the complete weight of fill; the lining minimized headwater increases that would heavily impact flooding upstream. Hydraulic studies of pipe lining alternatives proved that any corrugated pipe profile would drastically increase headwater. The smooth interior profiled spiral rib pipe still raised headwaters, but to an acceptable height accommodated by the purchase of a drainage easement within an undeveloped upstream area of wetlands, pasture, and forest. Design life of the aluminized steel pipe was determined to be 47 years based on material loss rate of 1 mil/year and providing a factor of safety of 1.30 at the end of service life. Addition of a reinforced concrete paved invert added 35 years of service life, resulting in an estimated service life of 82 years.

During relining, pipe segments were placed efficiently with very limited environmental disturbance. Rock staging areas, 10' wide by 30' long, were constructed at the culvert inlet and outlet for the placement of the pipe sections. Each pipe section had external skids that aided in placement. The external skid mated with a steel channel welded to the inside of the

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existing pipe. The 20' long pipe segments were pushed through the pipe by hand to their final location. Waterproof gaskets and connection collars were placed between adjacent pipe sections. Two 6" diameter embankment drains that outlet into the existing pipe were maintained by the placement of a saddle plate assembly protruding through the pipe liner and into existing drains. This solution allowed for embankment drains to remain fully functional.

As placement progressed, adjusting rods and floor jacks were installed to maintain the position of the liner within the culvert during grout placement. Grout was

pumped into the spaces between the new and existing pipe using injection ports in several lifts so the pipe did not become buoyant. After the grout cured, all rods, jacks and collars were removed from within the pipe. Concrete headwalls and wingwalls were constructed to properly retain the surrounding embankment and more efficiently align the stream flow and pipe.

During re-lining, stream flow ran through the pipe normally. Stream flow was pumped through hoses lying within the liner pipes during grouting and concrete invert placement operations. Construction

of the pipe lining was completed quickly and efficiently, and without any impact to the remainder of the construction activities.

As the future of transportation becomes today, engineers persist in striving for economical designs that satisfy the needs of an aging, demanding, and growing infrastructure. As just one of those solutions, pipe re-lining will continue to meet these requirements.

For more information, contact: Amanda Dalla Piazza, Larson Design Group, Inc.; 1000 Commerce Park Drive; Williamsport, PA 17701; Phone (570) 323-6603; arp@larsondesigngroup.com. ■

## Project Facts

Pipe Length:	740 ft.
Type:	Spiral Rib Aluminized Steel
Design Engineer:	Larson Design Group, Inc., Williamsport, PA
Prime Contractor:	New Enterprise Stone and Lime Co., Inc., New Enterprise, PA
Re-lining Subcontractor:	C.H.&D. Enterprises, Inc., New Stanton, PA
Pipe Manufacturer:	Contech Construction Products, Inc., Greencastle, PA
Grouting Contractor:	Mar-Allen Concrete Products, Ephrata, PA
Client:	PennDOT Engineering District 2-0, Clearfield, PA
Total Construction Cost:	\$204,780

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# Pennsylvania MATHCOUNTS 2005

## Highlights



**Sandy Run Middle School, Dresher, PA. Pennsylvania MATHCOUNTS First Place Team.** Members (l-r) Bernard Gaskey, Matt Tanzer, Kevin Bors, Ben Zauzmer, and Coach Sandy Van Horn.



**First place countdown round:** Tyler Vuxta (l) with coach Sheila Stephanis; Elizabethtown Area Middle School, Elizabethtown, PA.



**Second place countdown round:** Matt Tanzer (l) with coach Sandy Van Horn; Sandy Run Middle School, Dresher, PA.



**Third place countdown round:** Ed Zheng (l) with coach Marie Caramanica; Lionville Middle School, Exton, PA.



**Fourth place countdown round:** Matt Superdock (r) with Lynne Shuda coach; Radnor Middle School, Wayne, PA.

March to many folks in central Pennsylvania means transition from a gray, cold, cloudy, and more gray winter to the sunshine and longer days of spring. Members of PSPE mark the transition with an unusual spring ritual - the Pennsylvania MATHCOUNTS competition. The energy, excitement and enthusiasm displayed by this group of outstanding students, coaches, parents and volunteers is unparalleled.

Twenty three regional competitions took place across Pennsylvania, coordinated by members of PSPE and the Business and Professional Women's Federation of Pennsylvania. 2,628 students participated in the regional competitions, 153 of whom qualified to advance to the state competition in Harrisburg.

The team from Sandy Run Middle School in Dresher, PA, won the team round. As coach of the first place team, Sandy Van Horn earned the role of coach for the state team advancing to the National Competition in Detroit, May 5-8, 2005.

The top four students in the oral countdown round - Tyler Vuxta, Matt Tanzer, Ed Zheng, and Matt Superdock - advanced as the Pennsylvania team, placing 19th among 57 teams in the national competition. 227 students competed at the national level, representing all 50 states, the District of Columbia, Puerto Rico, Guam, U.S. Virgin Islands, the Northern Mariana Islands and the Department of Defense and State Department schools.

PSPE has been fortunate to secure appointments with members of the House and Senate for the first place team and the top four individuals. In April these students, their families and coaches come to the capitol for a guided tour of the Pennsylvania capitol. (If you have never had the opportunity to tour the capitol building, it truly is a remarkable feat of engineering and architecture.)



*Pennsylvania MATHCOUNTS team at the National Competition in Detroit.*



*Debbie Grant, Shell Oil Co. presents gift certificates to Matt Tanzer (c) and Ben Zauzmer (r) as highest scoring 7th and 6th grade competitors.*



*BPW President Jean Byers (l) presents savings bonds to Matt Tanzer (c) and Melissa Niu (r) as highest scoring male and female competitors.*

Top scoring students were eligible to receive numerous scholarships from Pennsylvania universities:

- Drexel University:** \$5,000 per year A.J. Drexel Scholarship for the duration of student's academic studies in any major.
- Gannon University:** \$2,500 per year scholarship for up to four years at Gannon University.
- Penn State University:** \$2,500 per year for a four (4) year scholarship to the Pennsylvania State University; student must be enrolled in the Schreyer Honors College and the College of Engineering.
- Temple University:** \$2,500 per year for four (4) years to study engineering sciences or math at Temple University.
- Pennsylvania Engineering Foundation:** One time \$1,000 grant from the Pennsylvania Engineering Foundation.
- University of Pittsburgh:** \$2,500 per year engineering scholarship for four (4) years to the University of Pittsburgh.
- University of Pittsburgh at Johnstown:** \$5,000 per year for four (4) years study in math, science or engineering.



*Members from top team and top five individuals, along with their families stand on the back steps of the capitol.*



*Proud mom and dad, Amy and Bill Vuxta, stand with their son Tyler as he receives his citation from Senator David Brightbill.*

## 2005 Pennsylvania MATHCOUNTS Sponsors

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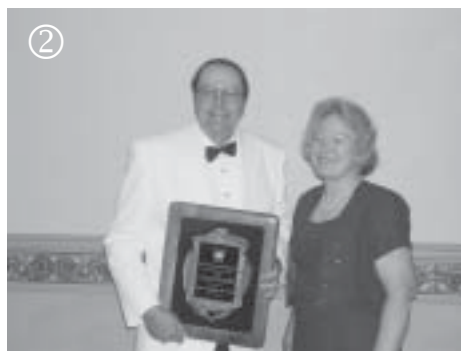
# PSPE Annual Conference

## ~Photo Review~

Attendees at the PSPE 72nd Annual Conference reported it a success. Seminars offered a depth of knowledge covering forensics, liability, technical quality, ethics and computer security. Professional development hours were a welcome bonus. Special thanks to Richard Bovee, PE and David Taillon, PE, Clough, Harbour & Associates, Inc.; Rich Davies, Esq., Powell Trachtman Logan Carrle and Lombardo, PC; Johann Szautner, PE, Cowan Associates, Inc.; Albert Tantala, PE, Tantala Associates; and Eric Tappert, PE, Tappert Engineering for sharing their experience and expertise with attendees.

Awards were granted to highly accomplished engineers in Pennsylvania, recognizing them for outstanding contributions, on both professional and community levels.

① PSPE President Ernie Gingrich, PE, PLS, FNSPE (l) presented **Delaware County Chapter President John Nawn (r) with the 2004 Chapter Program Award**. This award is presented to a Chapter whose overall programs during the year were judged to be informative and which achieved in content the professional and timely objectives of PSPE.



② The **2004 PSPE Engineer of the Year** was awarded to **John F. Bradshaw, P.E., PLS**, of Mechanicsburg, Pennsylvania. This award is presented to a PSPE member who has made significant achievements in the areas of: technical and professional society activities; civic, fraternal, religious or humanitarian activities; professional and/or technical publications, papers or patents; and engineering endeavors during their professional career.

John Bradshaw manages the Construction Services Department for Michael Baker Jr., Inc., (a division of Michael Baker Corporation) in its Harrisburg office. John is registered as a Professional Engineer in Pennsylvania and several other states, and is also a registered Professional Land Surveyor in Pennsylvania.

③ **Lance E. Shreffler, P.E.**, of McDonald, Pennsylvania, is the recipient of the **2005 PSPE Young Engineer of the Year Award**. This award is presented to a young individual (no more than 35 years old) based on his/her scholastic achievements, technical and professional society activities, technical papers and/or patents, engineering experience and accomplishments, and civic/humanitarian activities. It is awarded to a young candidate who is a licensed Professional Engineer or Engineer-in-Training, and is nominated by his/her PSPE Chapter.



Lance is the District Manager, Pittsburgh office, of McKinney Drilling Company, a nation-wide specialty foundation drilling contractor.



④ **Lisa A. Catania, P.E., F.NSPE** was the recipient of this year's **President's Dedicated Service Award**. Lisa was selected to receive the Dedicated Service Award for serving on the PSPE Executive Board for eight years as vice-president for the Southeast Region, President-Elect, President and Past President. She also served as Trustee to the Pennsylvania Engineering Foundation for five years. Following this, she served as Vice-President of the Northeast Region, NSPE and as National Director. She has served and continues to serve on several National committees and task forces. As Lisa has stated, "I just can't say no when asked to serve."

Lisa is currently a principal at Catania Engineering Associates, Inc. in Milmont Park, PA. She stands here (c) with PSPE President Ernie Gingrich (l) and her father, Charles Catania, P.E. (r).



⑤ **Harry E. Garman, P.E., PLS** was installed as **PSPE President for the 2005-06 term**. Harry will navigate PSPE through tough challenges such as the continuing education debate, the symptoms of declining membership and inactive chapters, changes recommended by the NSPE Future Directions Task Force and the ensuing impact on members of PSPE.

Harry is supported by strong leaders on the executive committee including President Elect Harve Hnatiuk, PE, FNSPE; Secretary/Treasurer Len Bernstein, PE, FNSPE; Immediate Past President Ernie Gingrich, PE, PLS, FNSPE; John Bradshaw, PE, Central Region Vice President; Walter Poplawski, PE, Northeast Region Vice President; Dave McCullough, PE, Northwest Region Vice President; Frank Stanton, PE, Southeast Region Vice President; and Michel Sadaka, PE, Southwest Region Vice President.



⑥ PSPE held its inaugural ceremony becoming a link in the **Order of the Engineer**. Twenty three PSPE members were inducted into in the honored Order of the Engineer ceremony. The Order of the Engineer is a solemn obligation to oneself, to uphold devotion to the standards and the dignity of the engineering profession. It is an obligation to turn to practical use the principles of science and the means of technology... to serve humanity by making the best use of earth's precious wealth. Order of the Engineer members must be licensed engineers and/or graduates from an ABET Engineering Accreditation Commission approved degree program. Amy Daiute, PE and her father, Walter Poplawski, PE, both of the Luzerne County Chapter, joined the Order of the Engineer through PSPE's link.

⑦ Barry Isett, PE, FNSPE, PSPE Past President and soon-to-be-installed NSPE Northeast Region Vice President shares a laugh with his wife Shirley, (far left) and Lehigh Valley Chapter President Angelika Forndran, PE. Barry Isett and Associates generously sponsored coffee during the highly successful seminar series on Friday. Angelika deftly managed the Installation Banquet and Awards ceremony as emcee.



⑧ Pennsylvania Professional Engineers in Private Practice (PEPP) generously recognized two firms for their professional development policies. The PSPE Private Practice Professional Development Award is presented to the nominated engineering firm that has made outstanding contributions to the advancement and improvement of the engineering profession through its employment policies and practices.



The purpose of the award is to recognize those firms with the best engineering employment practices, and to encourage all firms to adopt progressive policies and practices. Walter Poplawski, PE (r) serves as PEPP chair for 2005-2006. William Kee, PE (l) chairman of Cowan Associates, accepted the award on behalf of the firm. Amy Daiute, PE, (lc) and Matt Malozi, PE, (rc) Executive Vice President, accepted the award on behalf of Traffic Planning and Design, Inc. (Rumor has it that TPD's award is touring the state, making appearances in all branch offices!)

⑨ PSPE was honored with the attendance of Robert C. Miller III, PE. Bob served as NSPE treasurer for a number of years before successfully campaigning to become NSPE President Elect. It is always a pleasure to meet and talk with NSPE officers and staff directly. Bob generously offered NSPE financial support to PSPE membership initiatives. In the photo to the left he can be seen extending that offer directly to PSPE Secretary/Treasurer Len Bernstein, PE, FNSPE.



Many thanks to all who helped make this conference successful. If you missed the conference this year, just remember there's always 2006...looking forward to seeing you in the Valley Forge region! ■

*“Capitol” continued from p. 5*

**HB 1108 RE: Water and Wastewater System Connection Funding (by Rep. Carol Rubley, et al)**

Amends the Pennsylvania Infrastructure Investment Authority Act establishing the Water and Wastewater System Connection Funding Program to authorize financial assistance in the form of grants and low-interest loans to homeowners for tapping or facilities extension fees and eligible costs relating to the installation of a water or wastewater lateral for homes constructed prior to the installation of a publicly or privately owned water distribution system or a publicly or privately owned wastewater collection system servicing the property or relating to the replacement of water or wastewater laterals to housing units as part of an upgrading or reconstruction of a publicly or privately owned water distribution system or publicly or privately owned wastewater collection system. To be eligible for the program, an applicant must be an owner-occupier of a housing unit and any of the following exist: (1) the housing unit is served by a publicly or privately owned water or wastewater system; (2) the owner- occupier is required to replace private water or wastewater laterals as part of an upgrading or reconstruction of a publicly or privately owned water or wastewater system; (3) the owner of the real property into which the property lateral will be installed is the owner of the housing unit located thereon. Loans would be provided under the program if the applicant’s household income is less than 200% of the statewide median household income and grants would be provided to applicants whose household income does not exceed the most recent Federal poverty guidelines. Grants and loans would be made out of the Water and Wastewater System Connection Funding Program Fund, into which \$5,000,000 would be transferred from the Pennsylvania Infrastructure Investment Bond Authorization Fund. The legislation also makes several editorial changes.

**Reported from House Local Government Committee with request to re-refer to House Environmental Resources and Energy Committee, 5/3/2005**

**Rereferred to House Environmental Resources and Energy Committee, 5/3/2005**

**HB 1507 RE: Building Code Exemptions (by Rep. Rod Wilt, et al)**

Amends the Pennsylvania Construction Code Act by adding that an existing building which did not have a certificate of occupancy prior to April 10, 2004, would be treated as an existing building under Chapter 3. Such a building would be issued an occupancy permit if the entire building meets requirements for fire protection systems and means of egress and the building is not unsafe, unsanitary or judged to be a fire hazard or dangerous to human life or public welfare. A code administrator may not require changes which are technically infeasible for the purpose of meeting means of egress requirements.

**Referred to House Local Government Committee, 5/3/2005**

**Reported from House Local Government Committee with request to re-refer to House Labor Relations Committee, 5/9/2005**

**Rereferred to House Labor Relations Committee, 5/9/2005**

**Reported as amended House Labor Relations Committee, read first time, and laid on the table, 5/11/2005**

**SB 62 RE: Local Government Unit Electronic Bidding Act (by Sen. Jane Earll, et al)**

Amends Title 62 (Procurement) by adding chapter 46, entitled the Local Government Unit Electronic Bidding Act. The legislation states that a local government unit may permit the electronic submission of bids and may receive bids electronically if the local government unit has the electronic capability to maintain the confidentiality of the bid until the bid opening time. The legislation outlines the procedure for competitive electronic auction bidding; construction services are not subject to this reverse auction bidding.

**Passed Senate, 5/9/2005 (47-0)**

**Referred to House State Government Committee, 5/10/2005**

**SB 393 RE: Amendments to General Associations Act (by Sen. Stewart Greenleaf, et al)**

Amends Title 15 (Corporations and Unincorporated Associations) further providing for the form of records, the Department of State, filing requirements, administrative processing, for nonprofit associations, and for liabilities. The bill amends and defines numerous provisions of the bill including definitions, fees, debit cards, format of filing, notices, shareholder meetings, amendments to articles, mergers, among other things.

**Rereferred to Senate Appropriations Committee, 5/2/2005**

**New Bills Introduced**

**HB 1467 RE: Residential Construction Dispute Resolution Act (by Rep. Tom Stevenson, et al)**

Establishes dispute resolution procedures relating to residential construction defects between contractors and homeowners or members of associations. In an action under the legislation, the claimant must notify the contractor of a claim at least 60 days before initiating action. The contractor would have 15 days to respond. The legislation would not apply to any claim for personal injury or death.

**Referred to House Urban Affairs Committee, 5/2/2005**

**HB 1513 RE: Construction Quality Assurance (by Rep. Mike McGeehan, et al)**

Amends Title 62 (Procurement) providing for construction quality assurance by adding that a State agency, contractor or subcontractor would not participate in the practice of bid shopping with respect to a contract. Also, any invitation for bid or request for proposal issued by a State agency would

include a clause explicitly prohibiting the practice of bid shopping and specifying the penalties for violating the prohibition against bid shopping. The bill provides for penalties.  
**Referred to House State Government Committee, 5/3/2005**

**HB 1514 RE: Retainage (by Rep. Mike McGeehan, et al)**

Amends Title 62 (Procurement) by adding that when a contract including a retainage provision is 50% completed, four fifths of the amount retained by the government agency would be returned to the contractor. Also, payment of retainage to subcontractors is due immediately upon: the expiration of 20 days after the draw request has been approved, certificate of occupancy has been granted, or a trade's lien rights have expired.

**Referred to House State Government Committee, 5/3/2005**

**HB 1522 RE: PA Construction Code Act Enforcement (by Rep. Tom Creighton, et al)**

Amends the Pennsylvania Construction Code Act by stating that municipalities may administer and enforce the PA Construction Code Act by designating an employee to serve as the municipal code official as long as the municipality has at least two other third party agencies from whom persons may select services. The bill increases the number of required construction code officials from one to three for single municipalities and for multiple municipalities that have entered into an inter-municipal agreement for joint administration and enforcement of the Act. The bill states that municipalities may administer and enforce the PA Construction Code Act by entering into an agreement with the department as long as they make at least two other third party agencies accessible from whom persons may select services.

**Referred to House State Government Committee, 5/3/2005**

**SB 643 RE: Contractor WC Liability (by Sen. John Gordner, et al)**

Amends the Workers' Compensation Act by adding that a contractor who subcontracts all or any part of a contract and his insurer would be liable for the payment of compensation to the employees of the subcontractor unless the subcontractor has certified that he/she does not employ other individuals, operates as an independent contractor and is not required to carry workers' compensation insurance. If such a form is submitted, the subcontractor waives the right to file a claim for benefits under this act against the contractor's insurer.

**Referred to Senate Labor & Industry Committee, 4/28/2005**

**SB 645 RE: Health Insurance Tax Credits (by Sen. Mike O'Pake, et al)**

Amends the Tax Reform Code establishing a credit of up to \$500 against personal income tax for an amount paid in insurance premiums for a policy covering the costs of care provided by a licensed health care provider or facility to the taxpayer or to a member of the immediate family of the taxpayer. A credit would not be allowed unless: (1) the premiums paid during the taxable years are separately stated by the insurer, (2) the premiums paid during the taxable years were paid to purchase only that kind of insurance permitted, and (3) the insurance policy has been preapproved by the Insurance Department.

**Referred to Senate Finance Committee, 4/28/2005**

**SB 656 RE: Residential Construction Dispute Resolution Act**

Provides for procedures relating to dispute resolution for residential construction defects between contractors and homeowners or members of associations. The bill requires a claimant to provide a contractor with a written notice of a claim at least 60 days prior to initiating an action. The bill also

provides procedures for the contractor to react to the claim within 15 days of its receipt.  
**Referred to Senate Urban Affairs & Housing Committee, 4/29/2005**

**SB 671 RE: Pennsylvania Health Care Security Act (by Sen. Rob Wonderling, et al)**

The bill is intended to promote the availability of health insurance coverage to individuals and small employers regardless of their health status in order to prevent abusive rating practices, to spread health insurance risk more broadly, to establish rules regarding renewability of coverage and to establish limitations on the use of preexisting condition exclusions. The legislation would accomplish this by mandating that premium rates for small employer group health benefit plans are based on "modified demographic rating" as outlined in the bill. A carrier could not adjust a premium more frequently than annually, except as laid out in the bill. The legislation also provides for renewability and availability of coverage; establishing standards to assure fair marketing; providing for powers and duties of the Insurance Commissioner; and making related repeals.

**Referred to Senate Banking & Insurance Committee, 5/10/2005**

**House & Senate Session Days Schedule**

**Remaining 2005 House Spring Session Schedule**

June 6, 7, 8, 13, 14, 15, 20, 21, 22, 23, 24, 27, 28, 29, 30

**Remaining 2005 Senate Spring Session Schedule**

June 6, 7, 8, 13, 14, 15, 20, 21, 22, 23, 27, 28, 29, 30

Copies of all bills of interest are available from the PSPE office, or they can be accessed via the Internet at <http://www.legis.state.pa.us/WU01/LI/BI/billroom.htm>. ■

# Member Spotlight

Helmuth Wilden, P.E. has announced his retirement from H. Wilden & Associates (HWA) and the creation of Wilden Enterprises, Inc., effective January 1, 2005. After 35 years in the industry and more than 26 years as President & CEO of HWA, Helm has decided it is time to do something different and equally as exciting. HWA is in good hands under the leadership of Todd McCoy, P.E. and will continue providing the same quality service for which HWA has established a reputation.

Helm will continue as an "Affiliated Consultant" with HWA and will maintain his office at 7310 Tilghman Street for use on projects that he is currently working on and will complete. He can be contacted there for HWA related projects.

Through Wilden Enterprises, Inc. he will provide services to the precast, prestressed concrete industry offering his many years in the industry. He can be contacted at:

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e-mail: hwilden@ptd.net

## PSPE Calendar of Events

**2005**

July 7-9	NSPE Annual Convention & Expo <i>Renaissance Chicago Hotel</i>
September 10	MATHCOUNTS Coordinators Harrisburg/Hershey Wyndham
September 16	Pennsylvania PEPP Board Harrisburg
September 23 September 24	PSPE Executive Committee PSPE Board of Directors Best Western Inn, Bedford
October 27-29	NSPE Northeast Region Conference <i>Sheraton Harborside Hotel and Conference Center Portsmouth NH</i>

## Classified

### Senior Highway Engineer/Project Manager - York, PA

Buchart-Horn, Inc. is seeking the following position. BSCE, PE in PA, 10+ years experience in design/ management of highway/transportation projects for PennDOT and/or the Pennsylvania Turnpike Commission. Project manager responsible for coordinating very high profile projects, client contact and monitoring of the highway design group. Communication skills and computer knowledge required. PennDOT and/or PTC references required.

Send resume or email to: Jim Smith, Buchart-Horn, Inc., PO Box 15040, York, PA 17405-7040; jsmith@bh-ba.com EOE/M/F/D/V

### Plumbing Designer/Engineer for Altoona Office:

- Responsible for entire plumbing and fire protection process
- Minimum two years experience in educational and healthcare facilities design

- CPD certification
- NICET Level II or III certification in automatic sprinkler systems
- PE license (or registered in the near future)
- Autodesk Building Systems 2005 experience

Contact Carol Gensimore cagensimore@hayeslarge.com or Hayes Large Architects LLP; PO Box 1784; Altoona, PA 16603. EOE

### Electrical Engineer for Altoona Office:

- responsible for design of power distribution, lighting, fire alarm, communications systems and security
- 2-3 years experience or five-year A/E degree and ability to become licensed
- AutoCAD Building Systems 2005 experience

Contact Carol Gensimore cagensimore@hayeslarge.com or Hayes Large Architects, LLP; PO Box 1784; Altoona, PA 16603. EOE.

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# New Professional Engineers in PA!

Following is a list of engineers licensed in Pennsylvania as of August 2004. PSPE will be sending a letter of congratulations, recognizing them for their professional success. Chapter presidents will receive a mailing list for these new P.E.s. (Sorry, e-mail addresses are not available.) Feel free to call if you need anything - 717.441.6051.

Anthony Aievoli	James Deeney	Sean Hinze	Melissa Marshall	Robert Schultz
Chad Alander	Andrew Defonzo	John Horgan	Joshua Marteny	Richard Seiler
Theodore Andersen	James Denave	David Horst	Justin Massie	Jaffer Shad
Richard Anderson	Richard Deschamps	Leonard Hotham	Joseph Matje	Jason Shaner
Michael Andrewsh	Derek Donnelly	Melissa Howard	Jack Matson	Ryan Shore
Simon Armstrong	Jason Duong	John Hudacek	Bruce McClish	Racheal Smart
Eric Ashley	Scott Ebling	Gary Huntington	Michael McNabb	Adrienne Smith
Terry Ausel	Richard Ernest	Randall Ide	David Meketa	Charles Smith
Kenneth Bair	Michael Eustice	Stephen Ives	Adam Melewsky	Donald Smith
Todd Banks	Michael Ewalt	Brian Ivey	Craig Mellott	Mark Spatz
Aaron Barnes	Benjamin Faas	Derek Jenson	Jeremy Mertz	Daniel Stare
Kevin Barron	Yassar Farhan	William Johnson	Jeffrey Meyers	Benjamin Staud
Cary Basinger	Jared Fasick	Kathleen Jones	David Miraglia	Brian Stevenson
Eric Baskin	William Fedorka	Dennis Kaiser	David Mitchell	Michael Stolz
N Bazan-Arias	Clayton Fisher	Jeffrey Kaminski	Joel Mitchell	Martin Swaggard
Nikki Bedillion	Bryan Flaugh	Dimitrios Katehis	Shawn Modar	Michael Tantala
Mark Best	Patrick Foley	Kevin Keenan	Jeffrey Moreland	Malcolm Taylor
John Billings	Robert Follett	Justin Keister	Kimberly Morrissey	Edward Telega
Daniel Bitterlich	Paul Ford	Courtney Kennedy	Chris Musser	Brian Teles
Jennifer Boardman	Frederick Fordham	Ryan Kern	Charles Myers	Rachel Tereska
Paul Boettinger	Alan Fornwalt	Michael Kilkeary	Bradley Newlin	Dwain Thomas
Kristin Boldaz	Joy Foster	John Kissane	Daniel O'Neill	Monica Thomas
Mark Bradshaw	Edwin Fox	Paul Klemunes	William Off	Kenneth Thompson
Matthew Burns	Timothy Franklin	Michele Klopf	Bryan Ondrasik	Charles Thorpe
Joseph Cafferata	Millie French	Eric Kolasa	Keith Pabst	Mehran Tiv
Chad Camburn	Kathleen Gammell	Alicia Koller	Todd Palmer	Matthew Tressler
Todd Campbell	Isaac Gamwo	Sandy Koza	Amanda Parrish	Eric Trice
Melody Caron	James Gaslevic	Jason Kratsas	Christopher Patackis	Kerry Uhler
Nocole Charlton	Michele Gehring	Stephen Kurtz	Matthew Peleschak	Christopher Underwood
Grant Cherrington	Joel Gibbel	Louis LaFratte	Steven Perman	Gerard Vaerewyck
Vincent Chin	David Gilliland	Sandor Laszlo	Michael Piepoli	Jason Van Zelst
Mark Cicerchi	Keith Gindlesperger	Kevin Laudenslager	Charles Pillar	Scott Wainwright
Gerald Ciranni	Anthony Giuliano	Charles Leighty	Jeffrey Pitchford	David Walasavage
John Cockroft	James Gordon	Chad Lello	Boris Polyakov	Deborah Walker
Matthew Cofone	Stuart Gorka	John Lennon	Benjamin Postles	John Wallen
Randal Coleman	Jason Gutshall	Jonathan Lessard	Kimberly Potvin	Mitchell Weaver
Brian Collett	Jennifer Gutshall	Ping Li	Padraic Quinn	Kyle Weir
Keith Colussy	Dennis Hafer	Keith Lilley	Jacob Rainwater	Robert Weissbach
Michael Conchilla	Christopher Hamm	Donald Lock	Jeremy Rajter	Edwin Wetzel
Christopher Conn	D Hancq	Bryan Lowe	Anthony Ream	Christopher Whaley
James Connor	Chad Hanley	David Lukens	William Repsher	Derrick Whitaker
Brian Conroy	Sean Hart	John Lynch	Dean Rivest	James Wickersham
Troy Cosgrove	Joseph Hay	Jason Lytle	James Roman	Andrew Wiist
Robert Costello	Brian Healy	Jeffrey Mackay	James Romig	Douglas Williams
Jeffrey Crozier	Kevin Healy	Jeffrey Madden	Alfonso Rossi	Michael Williams
Neil Curry	James Hendricks	Jody Magilson	Ronald Rovanseck	Thomas Wilson
Craig Darosh	Kerry Herr	Brian Maloney	Peter Russo	Kenneth Yerges
Ronald Datovech	Dale Hertzler	Marcus Marasco	Ian Salada	John Yurick
Bruce Decker	Charles Hess	Kevin Markell	Bryon Schmidt	William Zeisler

# Chapter Spotlight

Charles Gales, PE

## Timeline of a Successful PSPE Lincoln Chapter Event

- Jan 2005 Lincoln Chapter Program Chairman Charles Gales, PE proposes to chapter President Josh Carney, PE that a tour of the new baseball stadium in Lancaster be considered for May's monthly meeting.
- Feb 2005 Members respond to proposed stadium tour with high level of interest. Potential speakers are discussed.
- Mar 2005 Game date is selected and reviewed with Lancaster Barnstormers. Tickets must be purchased in advance.
- April 2005 Based on member interest, (75) tickets are purchased for the May 19th game in the Picnic Area of the new stadium. Newsletter is e-mailed and also sent via US mail to all members. Sign-up is only accepted with payment. Speakers for the event are confirmed.
- May 2005 Tickets are sold out in two weeks and 25 additional tickets are purchased!
- May 19, 2005 Members arrive at 5:30 p.m. for 7:05 p.m. game. Two easels are set up in Picnic Area for presentation boards of site plans, construction photos, etc. Presenters use bullhorn to speak to (98) attendees from 5:45 p.m.-6:15 p.m.  
Stadium gates open to the public at 6:00 p.m.  
Presenters lead tour around entire stadium answering questions and pointing out interesting aspects of the stadium from 6:15 p.m. - 6:45 p.m.  
President Carney throws out First Pitch at 6:50 p.m.  
Attendees enjoy buffet picnic food until 7:30 p.m.

Chapter State Representative Bob Reisinger inducts 2005-2006 Chapter officers between innings. Two Chapter winners of annual college scholarships are recognized.

### Presenters:

**Principal Architect - Michael Berninger, AIA;** Tetra Tech Sports, Christiana, DE. **Civil Engineer - Mark Campbell, PE;** Herbert, Rowland & Grubic (HRG), Lancaster, PA. **Project Manager/Mechanical Engineer - David Barto, P.E.;** Barton Associates, York, PA.

Clipper Magazine Stadium in Lancaster, PA is a 6,200 seat multi-use stadium primarily designed for minor league baseball. The stadium is also designed to accommodate other events, such as football and concerts. Groundbreaking for the stadium was on April 28, 2004 and the first baseball game was played on May 11, 2005.

Numerous sites were considered for the stadium in Lancaster County and City. HRG worked closely with Tetra Tech and the ownership group to develop site plans and cost estimates. Once the site was selected and approved, an accelerated project schedule was adopted and executed. Opening Day on May 11 attracted a standing-room-only crowd of over 7,000 people.

Regional firms provided the full range of engineering services including excavation, structural, erection, utilities, accommodation and event requirements for the stadium. ■



*First Pitch: Lincoln Chapter President Josh Carney, PE (right) threw out the First Pitch with Jeopardy Ultimate Tournament champion Brad Rutter of Lancaster.*



*2005-2006 Lincoln Chapter Officers pose with Lancaster Barnstormers mascot Cylo following installation ceremonies. (L-R) Mike Poletti, Paul Francis, Jim California, Cylo, Bob Reisinger, Josh Carney, Mark Hilson, John Conaway, Charles Gales.*

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