



## Pennsylvania Society of Professional Engineers

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### NSPE Code of Ethics for Engineers Engineers' Creed

As a Professional Engineer, I dedicate my professional knowledge and skill to the advancement and betterment of human welfare. I pledge:

To give the utmost of performance;

To participate in none but honest enterprise;

To live and work according to the laws of man and the highest standards of professional conduct;

To place service before profit, the honor and standing of the profession before personal advantage, and the public welfare above all other considerations. In humility and with need for Divine Guidance, I make this pledge.

*Adopted by National Society of Professional Engineers, June 1954*

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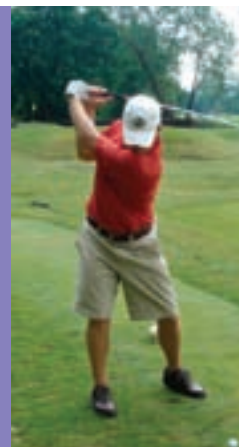
*The original central heating system serving Kutztown University was constructed in 1936. Only through the dedication and skills of the heating plant employees of Physical Facilities did the plant maintain operation for more than 70 years. However, it became increasingly difficult to supply steam reliably to the growing campus with the aging equipment. The University contracted Entech Engineering, Inc. from Reading, Pennsylvania to conduct a feasibility study to evaluate options for renovating and expanding the central heating plant. See page 13 for the complete story.*



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# President's Message

Leonard K. Bernstein, P.E., F.NSPE

The September/October *PE Reporter* included a series of priorities developed by the PSPE Executive Committee. These priorities evolved from a review of the PSPE Strategic Plan and were discussed with the PSPE Board of Directors in September. The Executive Committee and Board of Directors will work towards achieving each of the priorities during this administrative year. Each priority has an Executive Committee member assigned to it for oversight.

**The first priority is to develop an informational dialogue between PSPE and the State Registration Board.** We want to make sure that the Registration Board sees PSPE as an ally rather than an opponent. We tried to invite the full Registration Board to meet informally with the Executive Committee at our November meeting, but the Registration Board told us that they could not meet as a group outside of a regularly announced meeting of the Board. We have also invited the Board to hold an official meeting in conjunction with the PSPE Annual Conference. (Gettysburg, June 5-7, 2008.) The Board does not normally meet in June, but will consider our request. As President, I have oversight for this priority.

**The second priority is to have the Executive Committee define goals and objectives for all PSPE Committees.** We have found that it is sometimes difficult to say what a specific committee is supposed to be doing which then makes it difficult to attract new members to committees. By defining the goals and objectives for every committee, a potential member can have a better understanding of what the committee will be doing. Central Region Vice President Susan Sprague, P.E., has oversight of this priority.

**The third priority is to develop a plan to attract Young Engineers to become**

**members of PSPE.** I have noted in previous messages that we need to reverse the graying of PSPE. Less than 10 percent of the PSPE membership is under the age of 40. We need to increase that percentage. Northwest Regional Vice President Dave McCullough PE has been assigned to oversee this priority.

**The fourth priority is to recommend a simplified dues structure by the June 2008 Board meeting.** Chapters saw the first part of this when they received a request from PSPE Treasurer John Nawn, P.E., asking for a financial template to be completed. This issue stems from NSPE's request to each State Society that they adopt unified Chapter dues. Many State Societies have already adopted unified chapter dues. Pennsylvania has not because we're still trying to determine whether we should have a) unified dues for all chapters, b) a tiered chapter dues structure, or c) keep the present chapter dues structure. If we decide to keep the present chapter dues structure, NSPE has indicated that they may need to consider no longer remitting chapter dues payments to individual chapters and instead remit the entire amount to the State Society for the State to distribute funds to the chapters. If that happens, PSPE will undergo an administrative burden far beyond what it has now and it may necessitate hiring additional personnel to handle this function.

We are trying to gather all the financial information we can from the chapters to determine what would be best for PSPE and the chapters. At that point, we will be able to make a recommendation to the Board for action. That is why it will be very important for all chapters to be represented at the January 26, 2008 Board meeting.

**The fifth priority is to organize a PSPE Legislative and Government Affairs Committee.** The L&GA Committee will assist

the PSPE Legislative Consultant John Wanner in dealing with all of the issues and legislation that affects professional engineers in Pennsylvania. Past President Harve Hnatiuk, PE, F.NSPE and Treasurer John Nawn, PE will oversee this priority.

**The sixth priority is to conduct a "Celebration of the PE License" during National Engineers Week in the Southwest Region.** Some State Societies routinely hold an annual celebration where they formally recognize and celebrate newly licensed engineers. Southwest Region Vice President Michel Sadaka, P.E., volunteered to conduct a pilot celebration in Pittsburgh during Engineers Week. We will be inviting all the engineers in the southwest part of the State who were licensed in the last year. While this is still in the planning stages, we're looking at giving all the newly license engineers a document frame engraved with the PSPE logo and name that will be able to hold the PE certificate.

**The seventh priority is to appoint and Education Committee chair and revitalize the committee.** We all know that continuing education for license renewal will be required in the not too distant future and we know that many organizations, including colleges and universities, will be stepping up to offer courses. Why should PSPE not be out front as a provider? To do that we will need a strong Education Committee. Southeast Region Vice President Frank Stanton, P.E., and I will oversee this effort.

**The eighth priority is to develop a PSPE-oriented Chapter Operations Manual.** New chapter leaders may be unaware of what needs to be done or may be interested to know other chapter best practices. We would like this to be a guide for all chapters to use to

*"Message" continued p. 23*

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# On Capitol Hill

John D. Wanner, CAE

## PSPE Model Regulations for Continuing Education Update

In December of 2006, Pennsylvania joined 35 other states and enacted mandatory continuing education requirements for engineers, land surveyors and geologists. The original bill endorsed by PSPE included language that closely matched the NCEES model rules on continuing professional competency; the bill that finally passed eliminated that language. As a result, the details of how the process would work were left to the Registration Board for Engineers, Land Surveyors and Geologists to establish in regulations. The law gave the Registration Board 18 months to adopt regulations on continuing education.

A preliminary draft of the regulations was circulated to professional societies in August of 2007. PSPE's reaction to the draft was a mixture of surprise and disappointment. The regulations established a procedure that would require the Registration Board to approve every course on a case-by-case basis. In fact, PSPE wrote in its formal comments "this current approach would make Pennsylvania's requirements one of the most cumbersome sets of rules in the nation."

During October, PSPE's Executive Director, along with representatives of the land surveyors and geologists, met with representatives from the Department of State to discuss the best course of action. The consensus from that meeting was to pass an amendment to the Registration Act to bring the continuing education requirements more in line with the NCEES model rules. The three societies will work jointly to press for quick passage of such a bill. In the meantime, the Registration Board will move forward with its

regulations. No doubt, they will be formally published for comment before a bill can pass. Fortunately, the continuing education requirements probably will not be required for license renewal until 2011. Therefore, it is anticipated that the regulations will not go into effect prior to passage of the clean-up amendment. PSPE will continue to work to bring about reasonable continuing education rules that do not place an undue burden on licensees.

## Legislative Activity

### HB 1096 RE: Uniform Construction Code Advisory Council (by Rep. Ron Buxton, et al)

Amends the PA Construction Code Act to create the Uniform Construction Code Advisory Council which would be charged with gathering information from municipal officers, building code officials, construction code officials, licensed design professionals, builders and property owners concerning issues with the Uniform Construction Code and evaluating this information in order to give recommendations to the Governor, Labor and Industry Committees in the Senate and House and the Code Development Councils of the International Code Council. The composition of the Council and meeting requirements are further provided for in the legislation.

*Reported as amended from House Labor Relations Committee, read first time, and laid on the table, 10/2/2007*

*Removed from the table and Rereferred to House Appropriations Committee, 10/4/2007*

*Reported as amended from House Appropriations Committee, 10/17/2007*

*2 House Floor amendments adopted, and read second time, 10/23/2007*

*Read third time and passed House, 10/29/2007 (192-0)*

### HB 1600 RE: Supplemental Homeowner Property Tax Relief Act (By Rep. David Levdansky, et al)

Establishes the Personal Income Tax Surcharge Fund. The bill would charge a surtax equal to 0.5% imposed on the purchase price of property and services subject to taxation. There would also be a surtax equal to 0.22% imposed on the taxable income of resident and nonresident individuals. The department would calculate the State allocation pursuant to this chapter for each school district and each year, in which a school district receives a local property tax reduction allocation pursuant to this act, the school district would calculate a homestead and farmstead exclusion. This bill may be the vehicle for other tax reform proposals to be voted on the House floor, including another proposal to expand the sales tax to most all items and professional services. This vote may happen in early November.

*Passed over in House Finance Committee, 10/24/2007*

*House Finance Committee Meeting set for 10:00 a.m., 10/31/2007, Room G-50, Irvis Bldg.*

### SB 9 RE: Proof of Citizenship for Receipt of Public Benefits Act (by Sen. Joe Scarnati, et al)

Requires anybody who is at least 18 years of age and applies for public benefits to provide one of a specified list of identifications and execute an affidavit stating that the person is a U.S. citizen or legal permanent resident or is otherwise lawfully present in the U.S. pursuant to Federal law. The agency receiving this affidavit would have to keep it on file. Agencies that administer public benefits have to verify, through the SAVE program that each applicant who has executed an affidavit is an alien legally present in the U.S. Penalties are further provided for in the bill.

*"Capitol" continued p. 24*

# Risky Business

## Sooner rather than later

Rebecca Bowman, Esq., P.E.

This month, we're going to talk about an event that I hope is unlikely in your life: an error. We all make mistakes. If you're uncomfortable thinking about the possibility that you committed an error, think about a scenario in which you realize that a colleague has committed an error.

The world would tell you that you should keep your head down and hope that no one notices the problem or to throw away your notes of analysis that revealed the error. An unpleasant segment of the world would tell you that, if you want to damage your colleague, tell your boss. I beg to differ with both approaches.

In our time together, you have learned little bits and pieces about my life. However, for my approach to make sense, you need to know that I work as an arbitrator, a mediator, and a Christian conciliator. You also need to

*I teach my children: When you mess up, 'fess up. My anger is much mitigated by confession, much amplified by stumbling upon a discovery. The same is true in construction. As soon as you become aware of a design defect, focus on solving the problem. Don't focus on hiding it, working around it, building your claim defense file, or rationalizing why you shouldn't do anything.*

know that I understand there to be a fundamental difference between the role of an attorney to the client and the role of an engineer, surveyor, or architect to his client. An attorney has a primary duty to the client with an ancillary duty to the justice system. I believe that engineers, surveyors, and architects have matching primary duties to the public and to the client. The primary responsibility of the engineer and the architect is to public safety. The surveyor's primary responsibility is to the accuracy of the land record.

That means that I believe that the behavior of engineers, surveyors, and architects in the face of discovering an error should NOT be governed by what the attorneys say is the best course of action. Your attorney will advise you of ways to minimize the risk of a claim, a lawsuit, a judgment... However, our role as guardians of the public requires that we take action that may (in fact is likely to) conflict with your attorney's advice.

There are two reasons that I recommend a different approach. One is this obligation to the public. The most effective to protect public safety is to bring the error immediately to the attention of the designer for review, to the project manager for action, and to the client for notice. Remember the o-rings on the Challenger? Lives would have been saved, space travel better funded, and knowledge more enhanced had the engineer been listened to. I would love to ask that engineer if he wishes he had been willing to sacrifice his job to make more noise about the problem. There are times when that is the question: How much must I sacrifice to protect the public safety?

How about the bridge collapse in Minneapolis? I don't yet know what

happened. But if someone on the project noticed an issue and failed to raise it, or the issue was raised to a superior and the superior failed to take action, or the superior notified the client of imminent danger and the client refused to take action, which one is most responsible for the loss of property and life?

The other reason for my different approach, though, actually supports your attorney's goals, but many attorneys don't sufficiently understand the construction process to value the approach: early intervention makes adjustments easier and less expensive than post-completion removal and replacement. If you're going to have to fix it anyway, you might as well do it when the work is open and accessible, rather than when it's enclosed and blocked by subsequent construction. Let's look at basic foundation work. If you discover that the footer needs to be wider, would you rather fix the problem before the pad is poured or after? Or later in the process, if you discover that you need a heavier electrical cable, would you rather fix the problem before the drywall is up or after? I worked on one project involving installation of piping in an existing facility. Clearances were tight. Working from as-built drawings, the facility



was mapped into a 3-D modeling program. The piping showed that, as designed, all of the piping cleared walls and obstructions. However, a forward-thinking project engineer went back out to the facility floor to videotape the facility and discovered that one of the walls was not in the location shown on the as-builts provided by the client and that two walls subsequently installed to form a clean room were not reflected on the as-builts at all. By inputting the new data into the modeling program, the project engineer discovered THIRTY-SEVEN interferences. Had the project engineer not taken the two days for that extra step, the whole construction process would have disrupted and delayed, resulting in lawsuits and countersuits. Would the contractor have been liable had the extra analysis not been conducted? Maybe. Maybe not. But do you want to spend years and thousands of dollars in court to find out?

So what is my approach? Something I teach my children: When you mess up, 'fess up. My anger is much mitigated by confession, much amplified by stumbling upon a discovery. The same is true in construction. As soon as you become aware of a design defect, focus on solving the problem. Don't focus on hiding it, working around it, building your claim defense file, or rationalizing why you shouldn't do anything. Deal with it. Report it up the chain of command. Examine the ramifications. It's fine to look at alternative ways to deal with it, but don't hide your head in the sand.

By the way, prompt action may be critical to your insurance coverage, too. When you first discover the problem is when notice is due to your carrier. If you hide the problem or a superior fails to address the problem and doesn't notify your carrier, you may not have coverage when the claim materializes. I had one client who can no longer find affordable malpractice insurance. Why? Because the organizational culture punishes people who bring up problems, so people don't. As a consequence, there are multiple potential claims out there for which

the insurance carrier has set up substantial reserves. On the other hand, in a less oppressive organizational culture, most of the problems could have been identified early and resolved internally or with the cooperation of the client. Furthermore, the company's credibility has been destroyed: If they hid this one, what else did they hide? For one of those claims, the forensic risk analysis indicated that the worst outcome of bringing up the problem at the time it was discovered would have been an assessment of approximately two weeks of liquidated damages for being late. Now, the company is faced with a massive multi-party lawsuit. Even if they negotiate or litigate their way out of trouble, they will have consumed multiple man-years of valuable resources defending, (paid out a high deductible before the insurance even kicks in to pay defense costs,) and severely damaged their reputation.

On the other hand, another client discovered that an employee was soliciting and accepting bribes. My client immediately notified affected project owners and offered to re-check the employee's work at no charge and, if necessary, re-do/repair the work at no charge to the owners. All of the owners accepted the offer and none filed any claim. My client's reputation was enhanced in the marketplace because of this demonstration of integrity and client-sensitivity.

Like I said, if you mess up, 'fess up. Otherwise, you're in a Risky Business. ■

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*The "Risky Business" column offers articles covering liability from both the legal and engineering perspective. Mrs. Bowman's articles share general information and should not be relied upon as professional legal advice of either a general or specific nature. Rebecca Bowman is a civil engineer-attorney in solo private practice in McMurray, Pennsylvania for more than 25 years. Her practice is a certified woman-owned business. Her B.S. in Civil Engineering is from the University of North Dakota.*

*...prompt action may be critical to your insurance coverage...*

*When you first discover the problem is when notice is due to your carrier. If you hide the problem or a superior fails to address the problem and doesn't notify your carrier, you may not have coverage when the claim materializes.*



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# Overcoming Construction Barriers

*Anthony Dougherty, P.E., Principal  
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Pottstown Pedestrian Underpass Project: Cooperation and Value Engineering connect to produce a successful project.



## Project Background

The Norfolk Southern Railroad runs above the Manatawny Creek atop a multiple arch concrete bridge between High Street and College Drive in Pottstown Borough, Montgomery County, Pennsylvania. Over time, sediment built up in the arch over land due to an old waterway diversion, which served local industries in the past, running through the arch. Flooding of the creek also contributed to the sediment build-up. Montgomery County Community College (MCCC), which had been located only on the southern side of the railroad, has recently expanded the campus to encompass properties on both sides of the railroad. Since no viable passage was available for pedestrians to safely travel between High Street and College Drive or for students traveling between the school buildings, pedestrians had been climbing and crossing the railroad bridge or mucking their way through the sediment-filled archway.

The Pottstown Pedestrian Underpass project proposed a pedestrian walkway to be constructed through the existing archway. Stairways and accessibility ramps for the disabled were proposed at each end of the underpass to bring the walkway up to street level. The Railroad required the project to include canopies extending from the north

and south faces of the underpass to protect pedestrians from ballast which may be kicked from the tracks when trains pass overhead. Refurbishing the archway to protect pedestrians from deteriorating material within the arch was also required. Pedestrian lighting and safety railing along the walkway were also proposed for the project. Many of these items were altered through the course of the project due to unforeseen conditions arising during construction.

## Challenges and Solutions

Partial demolition of a concrete wall, as well as excavation for the pedestrian path, began on the south side of the tunnel. As excavation proceeded, it was apparent that the subgrade material was unsuitable for construction, and undercutting would be required. Underground water from behind the existing concrete wall began to seep into the subgrade and it appeared it would be a persistent problem since the excavation was approximately twelve feet below the top of the stairway landing. R-5 stone was used as fill in order to permit the underground water to flow to the 5 ft x 7 ft outlet pipe in the existing concrete wall. The design engineer proposed the walkway to be supported by R-5 stone and AASHTO #57 stone in order to allow storm water and flooding waters from

the creek to pass beneath the walkway and through the archway. As a result of the undercutting, R-5 stone was used as fill for an area of approximately 3,750 square feet. In addition, another layer of geotextile had to be installed in order to prevent the smaller stone used for the base of the walkway from choking the larger stone used for fill. These changes resulted in an approximate increase of \$14,000 in construction costs. While not a substantial increase in cost on a normal construction project, more changes would surface that would jeopardize Pottstown Borough's ability to complete the project with available funding.

The Railroad's bridge is comprised of two distinct elements. The original bridge was constructed with stone, and when it was widened years later, it was constructed using concrete. The underpass plans required pressure mortar pointing of the rock structure and replacement of deteriorating concrete with wire mesh and a 4 inch layer of pressure mortar within the concrete structure. During pressure mortar pointing operations, small portions of the stone arch began to separate and fall. The railroad halted construction and required the contractor to apply wire mesh and pressure mortar surfacing to the entire stone structure instead of the pointing. Additionally, the plans required deteriorating

*"Underpass" continued p. 21*

# Underfoot in the Big City...

Philadelphia's coal heritage affects design decisions today

Robert M. Wright, PE

Anyone over 40 who grew up in the older areas of Philadelphia will probably remember coal-heated homes. The basements of row homes had wooden coal bins, usually close to a street side cellar window, through which the coal was deposited. Ash, the byproduct of coal burning, was removed from heaters, placed in small ash cans and picked up by City sanitation wagons and trucks.

## **Vaults are a sidewalk problem in Center City**

In Philadelphia's downtown area, Center City, many office buildings and shops also used coal. Since the buildings had larger heating plants than rowhouses, the storage areas for both coal and ash were sizable and had to be close to the street to facilitate coal delivery and ash removal, and close to the boilers in basement areas. Frequently, the best areas for this purpose were in spaces built directly under the public sidewalks so as to not take up valuable rentable building space. These structures were known as vaults.

With the development of efficient gas and oil heating systems, commercial buildings began to

move away from coal heat and soon there was no need for coal and ash storage areas. In some cases, the vaults were entirely sealed off. As buildings changed hands, the new owners were often unaware that the vaults even existed. Those who knew, usually the building maintenance managers, kept the owners in the dark and used the vault for their own purposes. To compound matters, City records were often unclear and incomplete on the existence of vaults.

## **Who is responsible?**

Equally as uncertain was the City department with jurisdiction over these structures, as lines of responsibility were crossed. As the vaults were structures attached to buildings, they could be overseen by the City's Department of Licenses and Inspections. But, they were within the public right-of-way (the domain of the Department of Streets) and often housed underground utilities (also managed by Streets). As no single governmental agency took stewardship, there were generally no public records on vaults.



*Inside a typical vault: The top of the vault is the bottom of the sidewalk slab with, in this instance, a support beam.*



*The outer wall of this vault is brick.*



*Vaults have become convenient locations for utility lines.*



*View of a vault roof with several pipe runs located directly below the sidewalk.*

### **When vaults fail**

Vault roofs, which also serve as sidewalks, have limited lives. Since many were quite old and not maintained, their roofs began to deteriorate. Occasionally one would fail or collapse as a truck would pull onto a sidewalk, or just plain wear and tear would take its toll. As building owners were often unaware that the vaults existed, failures came as surprises.

When the Philadelphia Department of Streets initiates major roadway improvements, new sidewalks are usually part of the project. When sidewalks involve vault areas, the vault roofs must be investigated to determine their structural integrity. If the vault is no longer in use, the vault can be abandoned and backfilled. Often, utility meters and services must be adjusted and/or relocated before the vault can be abandoned. If the vault has a function/use, any repairs to the roof/sidewalk must be planned, or in the worst cases, an entirely new roof must be constructed. This can be expensive, especially since there are many methods of vault construction and little documentation on the design or construction of the vaults. This presents a situation in which each vault has to be evaluated individually, frequently without aid of as-built plans or design information.

### **How to find them**

When Urban Engineers designed roadway and sidewalk improvements on the streets around the Pennsylvania Convention Center in the early 1990s, the design team had to go door to door to find out which buildings might have vaults. Sometimes there were telltale hints in the sidewalk, such as access doors or covers that might give clues to the location of a vault. However, a cellar door in the sidewalk does not necessarily imply that a vault exists, and in many cases, sidewalk access had been removed or paved over.

### **Locating utilities**

Vaults can play havoc with the placement of street lights and traffic signals as these facilities require foundations and underground utility feeds. Even the simple sign post, which merely has a "ball" of concrete at its base to stabilize it, must be rethought if a vault exists in the desired post location. (Every so often, a vault is "discovered" this way, when a sign post hole is drilled and the auger suddenly meets no resistance.)

On Chestnut Street, a major artery in the heart of Center City that had been converted into a transitway in the 1970s, a decision was made to transform the corridor into a street

for all traffic. During the design phase, approximately 160 vaults that extended into the sidewalk more than five feet past the building line were encountered in the 12-block stretch (6th Street to 18th Street) covered by the effort. Some 60 of these were filled and abandoned. About 20 required new structural roofs, which had to be designed on a case-by-case basis. The remaining vaults were not affected by the project.

Even in the 21st Century, many sidewalks in our cities still have structures dating to the late 19th Century beneath them. As time passes and sidewalk improvements continue, more vaults will be abandoned and phased out. Until then, vaults may continue to constitute a "surprise" for those who plan and construct sidewalk improvements in our nation's older cities. ■

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*Robert Wright is Vice President and Director of the Municipal Engineering practice at Philadelphia-based Urban Engineers, Inc. Prior to joining Urban he was the Chief Engineer and Surveyor at the City of Philadelphia Department of Streets.*





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# Kutztown University

## Central Boiler Plant Project

*Jeffrey C. Euclide, PE, Executive Vice President*

Kutztown University is one of the fourteen State System of Higher Education (SSHE) universities that serve Pennsylvania. The University is experiencing significant growth, with enrollment increasing 30% in the past ten years. There are presently more than 10,000 students on this rural college campus located in eastern Pennsylvania and the University continues to grow.

The original central heating that has served the campus was constructed in 1936 and “modernized” in 1948. The central boiler plant had five coal-fired boilers, with the fifth boiler added in 1982. Only through the dedication and skills of the heating plant employees of Physical Facilities did the plant maintain operation for more than 70 years. However, it became increasingly difficult to supply steam reliably to the growing campus with the aging equipment. The University contracted Entech Engineering, Inc. from Reading, Pennsylvania to conduct a feasibility study to evaluate options for renovating and expanding the central heating plant.

The results of the study showed that it was possible, but very difficult and expensive, to renovate and expand the existing plant. Crammed inside a relatively small, old building was all the equipment necessary to operate a coal-fired heating plant. The coal conveyors, stokers, fans, ash silos, water treatment equipment, condensate systems, and instrumentation all had to be replaced. The building was also reaching the end of its useful life and needed constant maintenance. Little room was available for the plant staff to perform maintenance tasks and the employee lunchroom was beneath one of the modified boilers where the stoker

was removed after the boiler was converted to fire on natural gas.

Increasing boiler capacity was even more complicated because of environmental restrictions. Installing new coal boilers would require significant air pollution reduction equipment to be added in order to comply with today’s stringent regulations.

The University chose not to renovate the old plant, but instead decided to proceed with another option presented in the study. A new boiler plant was constructed at the edge of the campus near an abandoned quarry. In this new boiler plant three 30,000 pound per hour steam boilers were installed, each fueled by natural gas or No. 2 fuel oil. The new facility also included a new maintenance/machine shop, offices for the facilities staff, a control room, and a conference room.

Natural gas and fuel oil are more expensive fuels than anthracite coal. However, with this new facility, the campus realized the following benefits:

- The coal-fired plant requires a 12-man crew to operate the plant. The new plant requires half the staff, and because the new plant is highly automated, it is expected that much of their efforts can now be spent maintaining components of the steam distribution system on campus.
- The old plant was located behind Old Main which at one time had been at the edge of campus. Currently, as a result of campus growth, the plant was located in one of the busiest sections of the campus. The noise of the plant and the truck traffic transporting coal were in constant conflict with the heavy pedestrian and car traffic

on campus. The new plant is once again located in a much more remote location.

- The new plant was designed to have a contemporary look that matches the existing campus architecture and enhances the appearance of the campus. The old plant had become an eyesore and is scheduled to be removed. This valuable real estate will be used for more productive use.
- Stack emissions are greatly reduced. It is estimated that overall 2,255 tons of carbon will no longer be emitted to the atmosphere as a result of replacing the coal-fired boilers with alternate fuels; the University’s contribution to slowing global warming.

Construction and commissioning for the \$10 million project was completed in September, 2007, ready to provide steam for the winter heating season.

Because Kutztown is located nearby the coal fields of Schuylkill County, it was a difficult decision to switch away from coal. However, even with the higher fuel cost, the University found for their campus that it was less costly to install and operate a natural gas/oil-fired heating plant.

The new facility cost approximately one-third to install when compared to a coal-fired plant, the new boilers were more efficient, and the manpower needed to operate the plant was significantly reduced.

The boiler plant investment has afforded Kutztown University the opportunity to meet financial and environmental goals, better manage campus growth, and in the process, enhance the character of this historical University. ■

# Report of the 2007-08 PSPE Nominating Committee

The Nominating Committee of the Pennsylvania Society of Professional Engineers (PSPE) conducted a teleconference during which we discussed the nominations received from the canvassing of PSPE's chapters for candidates for officers of our organization for the year 2008-09.

The Committee presents the following slate of candidates, each of whom have expressed a willingness to serve as officers and, in the Committee's opinion, possess the necessary skills and professionalism that are required:

President-Elect  
Walter Poplawski, P.E. (Luzerne County)

Vice President Southeast Region  
Frank Stanton, P.E. (Bucks County)

Vice President Northeast Region  
Eric Tappert, P.E. (Lehigh Valley)

Vice President Central Region  
Susan Sprague, P.E. (Lincoln Chapter)

Vice President Southwest Region  
Michel Sadaka, P.E. (Pittsburgh Chapter)

Vice President Northwest Region  
David McCullough, P.E. (Beaver County)

Treasurer  
John Nawn, P.E. (Delaware County)

Secretary  
Richard Aulenbach, P.E. (Reading)

PSPE is indeed fortunate to have such qualified and quality individuals who will provide leadership and direction for our organization in the coming year. For your reference, a brief biography of each nominee for state office is included in this issue of the *PE Reporter*.

Members who wish to run for state office may do so by petition. Nominations signed by at least 25 PSPE members in good standing, along with a picture and biography of the candidate, must be received by the PSPE Secretary by January 18, 2008.

A copy of the petition and accompanying material shall be concurrently delivered to the Chair of the Nominating Committee.

The secretary shall verify the membership validity of the signers and inform the Chair of the findings, and also if in proper order, make the appropriate listing on the ballot.

In the case of more than one nomination for office, a ballot will be mailed to the members by February 28, 2008.

My personal thanks to the members of the Nominating Committee for serving PSPE in this capacity:

Johann Szautner, P.E. (Lehigh Valley)  
David Briskey, P.E. (Pittsburgh)  
George Willis, P.E. (Erie)  
Carl DuPoldt, P.E. (Delaware County)  
Robert Reisinger, P.E. (Lincoln)

Submitted by:  
Harve Hnatiuk, P.E.  
Chair, 2007-08 Nominating Committee  
Nominating Committee Members

## 2008-09 PSPE State Officer Candidates



### Walter J. Poplawski, PE, NSPE President Elect Nominee

Walter J. Poplawski, P.E., NSPE, has served PSPE as Northeast Regional Vice-President since 2004-05. He is also a former State Treasurer and currently the Immediate Past State Chair of the PSPE Professional Engineers in Private Practice (PEPP).

A member of NSPE/PSPE since 1981, he was Luzerne County Chapter President twice, in 1990-91 and 1997-98. Walter had served as either the Chapter's State Director or the Alternate Director for ten years, 1994-2004. He has been an active participant in all Chapter activities, including chair of the Mathcounts and Engineers' Week committees, the monthly chapter meeting coordinator, and a variety of other Chapter duties. In 1993 and in 2006, he was the recipient of the Luzerne County Chapter's "Engineer of the Year Award" and in 1998 and in 2003, he received the Chapter's "Distinguished Service Award".

After graduating from Penn State in 1973 with a B. S. in Civil Engineering, Walter started his engineering career with Smith, Miller & Associates, Inc., in Kingston, PA. From 1974 to 1979 he served as the Assistant Project Manager in charge of Civil Engineering design for the Kingston Disaster Urban Renewal Project, a \$25 million flood recovery project to rebuild the infrastructure of the Municipality, which was ravaged during the Tropical Storm Agnes flooding in 1972. After leaving Smith Miller in 1979, he worked eight years for another engineering consultant and for a site construction contractor. In 1988, he rejoined some former colleagues in establishing the Architecture + Engineering Group, Inc., a multi-discipline consulting firm in Wilkes-Barre. He is currently the A + E Group's Senior Associate in charge of Civil Engineering and Site Development. In the last 18 years he has been involved with scores of projects, serving a variety of public and private clients such as Ecumenical Enterprises, Inc., TFP Limited, the Greater Pittston Chamber of Commerce, the U.S. Postal Service, the Luzerne County Housing Authority, Back Mountain Recreation, Inc., the Pittston Area School District, Biscontin Distribution Centers, TJ



Maxx, Energy Unlimited, Inc., the Wyoming Valley West School District, PA American Water Co., and the Luzerne County Community College, to name a few.

Walter's activity has not been limited to only the Engineering profession. Since 1981, he has been a member of the Kingston Shade Tree Commission, serving as the Chairman for the last 18 years. He was also involved with youth sports in the Kingston community for twenty years, having coached dozens of baseball, football, basketball, and soccer teams. He was president of the Kingston Little League for four years. He is a lector at St. Ignatius church and is a member and past president of the parish's Holy Name Society. He is also a member of the Knights of Columbus.

He and his wife Pearleen have been happily married for thirty-four years. They are the proud parents of two sons, Kevin, a Doctor of Physical Therapy, and Scott, an Accounting graduate of King's College, and one daughter, Mrs. Amy L. Daiute, P.E. Amy is also an active PSPE member, serving as the Luzerne Chapter's Secretary and Alternate State Director. Walter and Pearleen are blessed with two beautiful grandchildren, Antonio, 4, and Milana, 1½.



**Francis J. Stanton, Jr. P.E.  
Southeastern Region Vice President  
Nominee**

Francis J. Stanton, Jr., P.E. is currently the PSPE Southeast Regional Vice President, and former State Director, President and Treasurer for the Valley Forge Chapter of PSPE. He was also President of the Union County Chapter of NJSPE. Frank is active with the Pennsylvania Initiative, the New York State Practicing Institute of Engineering, NSPE Continuing Education

Task Force, and the Membership Recruitment Task Force in 2004

In 2004, Frank became a course evaluator with the Practicing Institute for Engineering, Inc. (PIE). His involvement with PIE, NSPE, PSPE and the Valley Forge Chapter encouraged each level of the society to provide members with educational opportunities to obtain PDH's approved by the New York State Education Dept. and other states requiring PDH's for professional engineering registration renewal. Frank encourages NSPE, PSPE and Chapters to provide PDH approved programs to our membership at no additional program cost. PSPE can provide more than half of the PDHs needed for licensure renewal by attending NSPE and PSPE conferences and meetings.

Frank participated in the NSPE Membership Recruitment Task Force, and the PSPE Membership Committee, hence he was able to promote ideas and concepts between National and State organizations to attract and retain our members. This included several programs from the 6 month free membership, student discounts, and adding value to our membership through chapter programs, continuing education, MATHCOUNTS, awards, and defending the professional engineer through legislative initiatives.

As a member of the NSPE Continuing Education Task Force, he works with the NSPE staff to select program offerings presented at the annual meeting.

Frank volunteers for numerous projects undertaken by PSPE. He co-organizes the regional leadership meetings, promotes engineering to the general public with his work on the Public Relations committee including radio ads heard statewide, and is currently helping to select and arrange programs for the June 2008 Conference in Gettysburg.

Frank graduated from Villanova University in 1981 with a Bachelors Degree in Mechanical Engineering. After graduation Frank was employed by Alfa-Laval Thermal and Food & Dairy Groups in Fort Lee N.J., Tower Performance, Inc., Amstar (Domino

Sugar), British Oxygen Corporation (BOC Gases) before becoming Vice President for design-build and consulting engineering firms.

In 2001, Frank and Ann Marie, his wife of twenty years and also a graduate of Villanova's mechanical engineering program, organized The ENC Group, LLC a DBE providing project support services to the industrial, commercial and governmental markets. They have provided operating, and engineering companies with technical support for projects in the U.S., Mexico, Canada, Sweden and India. In addition, they have completed the designs for major facility expansions with material handling upgrades, process plant relocations, power plant upgrades, boiler installations, process piping and process vessels, and they are active in the transportation market providing project support activities such as scheduling and cost estimating for major projects.

Frank and Ann Marie reside in Richboro, PA with their three sons, Francis, Matthew and Jonathan. The three boys are competitive swimmers on Council Rock High School South's Swim & Diving Team, Tri-Hampton YMCA Swim Team and Council Rock Swimming & Diving Club.



**Eric W. Tappert, P.E.  
Northeast Region Vice President  
Nominee**

Eric Tappert received his Bachelor of Science in Electrical Engineering from the Moore School of Electrical Engineering at the University of Pennsylvania in 1969. He also received a Master of Science in Telecommunications from the University of Colorado in 1998. His career started with the Western Electric Company, on loan to Bell Laboratories, working on the

Safeguard Anti-Ballistic Missile System with responsibility for the maintenance and development of the multi-processor computer system. In this capacity he served 18 months in the Marshall Islands supporting system test. An important outcome of this project was the signing of the Strategic Arms Limitation Treaty I (SALT I) which limited the nuclear arsenals of the cold war adversaries.

Subsequent assignments for various entities associated with Bell System included design work for cell site equipment used in the Bell System service trial of cellular telephony. In 1979 he came to the Allentown Works of the Western Electric Company to perform application and integrated circuit definition work. In this capacity he contributed to several long distance transmission and switching improvement programs. Upon the breakup of the Western Electric Company, Eric stayed with the semiconductor spinoff and worked on local switching system devices before retiring at the end of 2001.

Since retirement he has done some consulting work in the area of communication system design and has been an adjunct faculty member of the Pennsylvania State University, Berks Campus, teaching electrical engineering technology courses. Eric is a past president of the Lehigh Valley Chapter of PSPE as well as a past state director. He currently serves the chapter in the capacity of alternate state director. He is a member of the Association for Computing Machinery (ACM) and a senior member of the Institute for Electrical and Electronic Engineers (IEEE). For the last 10 years he has been active in the ABET accreditation process for engineering technology and currently is a member-at-large of the executive committee of the Technology Accreditation Commission.

Eric lives in Upper Bucks County, just over the Lehigh/Northampton county lines outside of Coopersburg. His two daughters are both married and one lives in rural Minnesota, the other in New York City.



**Susan K. Sprague P.E.**  
**Central Region Vice President**  
**Nominee**

Susan K. Sprague is a project manager and municipal engineer with Johnson, Mirmiran and Thompson in York and has over 20 years experience with civil and municipal engineering projects in Pennsylvania. Her experience includes preparation of plans, specifications and contract documents and construction cost estimating for publicly bid

projects. Currently she is responsible for the design, bidding and construction management of municipal public works projects.

Susan received a B.S. in Civil Engineering from Lehigh University in 1986 and served on the Lehigh University Alumni Association Board of Directors from 1999-2001. She is a registered Professional Engineer in Pennsylvania (1991) and is a Certified Bridge Safety Inspector (1988).

In 2002, Susan earned CSI certification as a Certified Construction Specifier.

Susan has been actively involved with PSPE since 1987. She served the Lincoln Chapter as a board member from 1992 through 2000 and as President in 1996-1997. She currently serves as chapter coordinator of the MATHCOUNTS program and treasurer of the York County Science and Engineering Fair, which was founded by Lincoln Chapter. At the state level, Susan served as the Pennsylvania State MATHCOUNTS Coordinator from 2003-2005 and currently serves as PSPE Central Region Vice-President.

In addition to being active with PSPE, Susan is a member of the American Society of Civil Engineers, the Construction Specifications Institute, American Public Works Association, Pennsylvania Municipal Authorities Association and ASTM and serves on the Leadership York Curriculum Planning Committee. Susan resides in Dallastown with her husband, Kevin.



**Michel J. Sadaka, P.E.**  
**Southwest Region Vice President**  
**Nominee**

Michel J. Sadaka is founder and president of Sadaka Corporation, a project management and engineering consulting firm. With more than 25 years experience in the Construction Management and Engineering fields, he is recognized as an expert in the construction claims field and has testified on many occasions

in court and arbitration hearings in that capacity.

Michel received an M.S.C.E. in Construction Management from the University of Pittsburgh, and a B.S.C.E. with an emphasis on structural engineering at the University of Massachusetts at Dartmouth.

Michel has been actively involved with PSPE since 1993. He has served the Pittsburgh Chapter as Construction Legislative Council delegate, President, chair of the regional MATHCOUNTS program, and Alternate State Director, and a board member for the past seven years. He currently serves as chapter webmaster. In the past, Michel has chaired the Pittsburgh Chapter task force to review the Pennsylvania Registration Act, the Engineer's week banquet committee, and the awards committee.

At the state level, Michel currently serves as PSPE Southwest Region Vice President. He is also the Professional Engineers in Private Practice (PEPP) Southwest Region Vice Chair.

In addition to being active with PSPE, Michel is also a member of the American Arbitration Association National Panel of

Commercial Arbitrators (Construction Industry) and an associate member of the Constructors Association of Western Pennsylvania and serves on the Professional Services Council for the CAWP. In 2006-2007 Michel chaired the Construction Legislative Council on behalf of the Pittsburgh Chapter.



**David L. McCullough, P.E.**  
**Northwest Region Vice President**  
**Nominee**

Mr. McCullough is a Transportation Engineering Manager for PBS&J in Canonsburg, Pennsylvania where he leads the Transportation Group of the company's Pennsylvania Division. He is responsible for developing client relationships and pursuing transportation projects. His current project assignment includes the role of Project

Section Manager on the Design Management Team for the Pennsylvania Turnpike Commission's Mon/Fayette Expressway SR 51 to I-376 project. When constructed, the project will complete a tolled expressway from I-68 in West Virginia to I-376 in Pittsburgh, Pennsylvania.

Dave formerly worked as a Project Manager for the Michael Baker Corporation. He was part of a project team that serves the Pennsylvania Turnpike Commission as General Engineering Consultant. At Baker, his assignments included Turnpike expansion projects, the James E. Ross (Beaver Valley) Expressway and the Amos K. Hutchison (Greensburg) Bypass. Dave's work on Turnpike projects included traffic and roadway engineering review as well as environmental and preliminary engineering studies. He was a member of the management steering committee for the Turnpike's 65-mile Mon/Fayette Expressway and 35-mile Southern Beltway Environmental Study for nine years, leading the traffic and engineering sub-committees. He also participated in the development of design plans for the Uniontown to Brownsville portion of the Mon/Fayette Expressway. Further, he served on the Design Management Team for portions of the Southern Beltway. Other work assignments were on projects in Ohio, West Virginia, Florida, Illinois and Mississippi.

Dave's prior employment includes work for the District 12 office of the Pennsylvania Department of Transportation in Uniontown, Pennsylvania. Dave was a Project Engineer in the Construction Unit, managing reconstruction projects on Interstate 70, PA Route 19 and local bridges. He also worked as a surveyor for Mounts Engineering in Washington, Pennsylvania where he was involved with many private and municipal property surveys. Some projects of interest include a large boundary survey of Appalachian Trail properties in New York for the US Department of Interior, construction surveys for the Uranium Tailings Remediation Superfund site in Canonsburg, Pennsylvania and monitoring of coal mine subsidence in Greene and Fayette Counties, Pennsylvania.

Dave graduated from the University of Pittsburgh in Pittsburgh, Pennsylvania with a Bachelor of Science degree in Civil Engineering in 1983. He received a Master of Science degree in Civil Engineering from the University of Pittsburgh in 1986 where he studied Traffic and Transportation Planning. He is a registered professional engineer in Pennsylvania. He joined the Washington County Chapter of PSPE and later transferred to the Beaver County Chapter when he began working at Baker. In addition to committee work, Dave has served as a Director, Vice-President and President of the Beaver County Chapter. He has been part of the Beaver County MATHCOUNTS Committee for fifteen years and has been the Chapter's Coordinator for the past eleven years.

Dave was born and grew up in Washington, Pennsylvania where he was active in East Buffalo Presbyterian Church, serving in leadership roles and as the church organist. He later moved to Beaver County where he met his wife, Linda. Linda is a Doctor of Audiology with Jameson Health System in New Castle, Pennsylvania and in private practice with Audiology Associates LLC in Beaver, Pennsylvania. Dave serves as Council President, sings in the choir and teaches classes at Holy Trinity Evangelical Lutheran Church in Beaver, Pennsylvania. His spare time is spent in the garden, running and working on his house and yard. Dave and Linda reside in Brighton Township, Beaver County.



**John A. Nawn, P.E., PTOE  
Treasurer Nominee**

John has been a member of NSPE and PSPE since 1990. His service to PSPE has included four years as editor of the Delaware County Chapter Newsletter, three years as the Chapter President, and two terms as State Treasurer. Service to NSPE has included three terms on the Critical Infrastructure and Homeland Security Task Force with a current appointment to the

Legislative and Government Affairs Committee.

Professionally, Mr. Nawn is a Vice President with GAI Consultants and Managing Officer of their Philadelphia Regional office in Berwyn, PA. With over 20 years of experience, Mr. Nawn has grown GAI's Philadelphia operations from a staff of 15 to over 55 in two short years, providing engineering and construction inspection services to clients in the Transportation, Industrial, Government, Energy and Real Estate markets.

John holds a Bachelor of Science degree in Civil Engineering from Drexel University. John is a licensed professional engineer in Pennsylvania, New Jersey, Maryland and Delaware and a Certified Professional Traffic Operations Engineer. Mr. Nawn has been accepted as a traffic-engineering expert in many municipalities and three courts. He designed and managed the installation of the first application of Back In Angle Parking in the Commonwealth of Pennsylvania.

Besides his service to PSPE, John is a member of the Mid-Atlantic Section of the Institute of Transportation Engineers (ITE) and served as the Section's Newsletter Editor for two years. John is also a member of the American Society of Civil Engineers, the Traffic Club of Philadelphia, the Engineer's Club of Philadelphia and a Fellow of the American Board of Forensic Engineering and Technology. John is the current Vice Chairman of the Municipal Services Committee of the American Council of Engineering Companies/Pennsylvania and the Vice Chairman of the Delaware County Transportation Management Association.

In the community, John, an Eagle Scout, is the Chairman of the Conestoga District, Cradle of Liberty Council, Boy Scouts of America. John is a member of the Newtown Township Planning Commission and active as an Election Day poll watcher including serving as Machine Inspector and Judge of Elections. As a model railroad aficionado, John was the Convention Chairman for the 2006 National Model Railroad Association Convention, held in Philadelphia.

John resides in Newtown Square, PA with Barbara, his wife of 20 years and their two children. Son John is a Freshman at Villanova University and daughter Julie is a Junior at Villa Maria Academy. Barbara is the Physical Education teacher at Our Lady of Fatima School in Secane, PA. John's father and youngest brother are also engineers, electrical and mechanical respectively, with his youngest brother also a licensed professional engineer in Pennsylvania and a PSPE, Lincoln Chapter member.



**Richard P. Aulenbach, P.E.  
Secretary Nominee**

Richard P. Aulenbach received his BS in Mechanical Engineering from the University of Pittsburgh and his MBA in Administrative Management from St Joseph's University. Rick continued his education earning a Bachelor of Science in Mechanical Engineering from the University of Pittsburgh, an MBA Administrative Management from St Joseph's University, Leadership in Professional Service from

Harvard Business School and New Developments in Manufacturing Process Technology from Massachusetts Institute of Technology.

Rick began his career with Aluminum Company of America (ALCOA) in Pittsburgh, PA as a mechanical engineer. He joined Gilbert Commonwealth (which became Parsons Power) as a mechanical engineer and progressed to the position of Project Manager for major power and industrial projects.

Rick founded RPA Associates Inc. in 1989 which is headquartered in Wyomissing PA and has a staff of more than 80 people located in offices in Pennsylvania, New Jersey, Tennessee and Florida. RPA Associates Inc. is a professional engineering consulting firm that offers comprehensive mechanical, electrical and process engineering, machine design, and structural analysis services to pharmaceutical, educational, industrial, institutional, and utility clients. RPA serves local, regional, national and international clients such as GlaxoSmithKline, Carpenter Technologies and Kutztown University.

In addition to serving his profession, Rick has served on the Board of Directors for the American Red Cross, Penn State Berks-Lehigh Valley Industrial Advisory Council, Alvernia College, Presidents Advisory Council and Northampton Community College, Advisory Group. Rick is an Adjunct Instructor of Mechanical Engineering Technology and Fluids Mechanics Program at Penn State University.

Rick has authored "Considerations in Specifying Dampers in Utility Draft Applications", American Power Conference, Chicago IL 1981; and "Engineering Aspect for a 25 MW Cogeneration Plant," American Society of Mechanical Engineers Conference, Philadelphia, PA, 1988.

He is a member of the National Society of Professional Engineers (NSPE), has served as President and is the current State Director of the Reading Chapter PSPE. Rick is also a member of the International Society of Pharmaceutical Engineers (ISPE), American Society of Heating and Air Conditioning Engineers (ASHRAE) and Association of Iron and Steel Technology (AIST).

A native of Berks County, Rick resides in Wyomissing with his wife Judy and their family. ■

**Nominating Committee Chair**

Harve Hnatiuk, P.E., F.NSPE  
PO Box 1075  
Ft Washington, PA 19034  
Phone: 267.252-0166  
harvehnat@aol.com

**PSPE Secretary**

Joseph F. Boward, P.E.  
411 Poplar Ct  
Moon Township PA 15108-9028  
724.457.0708  
jboward@garvinbowardengineering.com



# PSPE Member Update

Following is a list of members who have joined PSPE to date in 2007. Chapter officers can access member data in realtime with a login and password from NSPE. If your chapter does not yet have a membership chair or officer who has this access, please contact Jennifer Summers, jennifer@wannerassoc.com or 717.441.6051.

## Beaver

Paul A Ellis PE  
Paul L Hoback EI

## Bucks County

James D Barlow  
Keith T DAmato P.E.  
Albert L de Richemond PE  
Edward J Godorov PE  
Mark Alan Havers PE  
James K Lynam EI  
Eric Matthew Lysiak EI  
Kevin McAuliffe EIT  
Brian J Morrison PE  
Luke T Teller PE  
Christopher W Wright

## Central

Kaiser Mohammed EIT  
George J Selembo Jr PE

## Chester County

James J Brady Jr EI  
Ray S Crossan PE  
Robert M Danek PE  
Joseph John Hunt PE  
Michael P Noonan PE  
Eric Michael Rich  
Vincent P Ridley PE

## Delaware County

Michael C Clinger PE  
Guido W DiMartino PE  
Wayne A Droesser PE  
James M Gade PE  
Gerard C Gambs PE  
Eileen M Nelson PE

## Erie

Harry R Diz PE  
Dwight David Hoare P.E.  
John F Novotny PE  
Edward F Orris Jr PE  
Robert L Rabell PE

## Harrisburg

Bryan J Anthony EI  
John J Baldassari PE  
Larry M Brown PE  
Susan M Bruns PE  
Matthew D Chicy PE  
Paul Eric Mains  
Wendy L McAbee PE  
Kathleen J Rhoten PE  
George David Whitcomb EIT

## Johnstown

David M Cunningham PE  
Stanley J Kieta PE  
John M Weiland PE

## Lehigh Valley

Charlie J Baker  
Kevin T Campbell  
John A Cooke PE  
James W Davis PE  
Stephanie M Grahl PE  
Jeffrey Todd Nason PE  
Jennifer R Walls PE

## Lincoln

David Wayne Bernhardt PE  
Joseph D Brown Sr PE  
Steven M Brown PE  
Timothy T Koppenhaver EIT  
Eric P Sellers PE

## Luzerne County

Joseph J Gibbons PE  
Salvatore Luzio EIT  
Lawrence Marchetti PE  
Casey A Monagan P.E.  
Cheryl Satkowski

## Midwestern

Michelle L Evanto PE  
Joseph M Gianvito P.E.  
Eric J Kirsch PE  
Robert L Mueller PE  
Jonathan C Snyder PE

## Northeast

Marshall E King PE  
William W Schneider Jr PE

## Philadelphia

Michael Devuono  
Garret Thomas Hooper  
Scott Kupper PE  
Liang Luo Student  
Joseph C McGowan PE  
Bariki Mlaw  
Joseph Patrick Morrin  
Michael Monroe ONeal PE  
Todd Michael Rohn PE  
Mark Tiger PE  
Kevin Bromley Watson EI  
Stephen White P.E.

## Pittsburgh

George J Anderson PE  
Laura B Cherock P.E.  
Ernest W Deemer PE  
Timothy S Erney PE  
Graham L Ferry PE  
Joseph Garlicki

Susan P Grant PE  
Elizabeth Marley John  
Daniel Joseph Larken IV PE  
Andrew M Lasich PE  
Lawrence J Lennon Jr P.E.  
Leah A Milcarek  
Emily A Palmer PE  
Samuel John Sero PE  
Thomas J Tarka PE  
Lyndsie M Wilcox

## Reading

Denise R Alston-Guiden PE  
Jonathan E Belinski EI  
Matthew L Boggs PE  
James Musa Eways PE  
Thomas C Green PE  
Clifford Chukwuemeka Iroanya  
Eric M Mountz  
Robert I Weir PE

## Valley Forge

Chad Edward Camburn PE  
Gary M Horninger PE  
Brian F Malloy PE  
Kristin M Norwood PE  
Bruce Jeffery Rhoades PE  
Richard Herbert Struble PE  
Daniel J Yaw Jr

## Westmoreland County

Peter C Buss PE  
Steve M Rogers

## Chapter not yet determined

Lawrence Arthur John Gilchrist  
Matthew Z Kensil PE  
Syed J Qasim PE  
C Richard Roseberry PE



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# Membership

*Timothy S. Ormiston, PE*

We continue this issue with the series of articles presenting information on each of the PSPE practice divisions. Jon W. Drosendahl, P.E., Past-President of PSPE, writes the following on Professional Engineers in Construction:

The Professional Engineers in Construction Practice Division (PEC) is an interest group sponsored by NSPE and PSPE to further the interests of construction Engineers. There are also four other interest groups, PEI (Industry), PEHE (Higher Education), PEPP (Private Practice), and PEG (Government). At the National level, membership is included with the NSPE dues if you check off your interest. At the State level, PEC dues are \$5.00 per year, a real bargain.

PEC offers the following to our members:

- Our own newsletter – PEC Reporter.
- Scholarship awarded annually to promote construction education.
- Ongoing relationship with NICET.
- Networking with other construction professionals through our Sustaining Associates Program.
- Web Seminars for Continuing Education requirements.
- Representation for construction Engineers on NSPE/PSPE governance issues.
- Monitoring of license activities that affect construction Engineers.
- Monitoring of legislative activities which impact the construction industry at State and National levels.

PEC, like the other Practice Divisions, is proud to serve our “constituency”, bringing a construction focus to all our activities, and furthering the value of our license and our membership. When you submit your dues to NSPE, be sure to check off your interest group and pay your State dues.

Watch the next issue for an article discussing the practice division Professional Engineers in Government.

Members whose expiration date is December 31, 2007 should have received your membership renewal notice from NSPE. It is easy to complete renewals online by going to [www.nspe.org](http://www.nspe.org) and selecting the Membership section. All you need is your membership number, last name, and a credit card number to access the member only section and complete the renewal.

Should you, or someone you know, become interested in participating in the membership committee efforts, or if you have new ideas to share, please contact me via e-mail at: [tsormiston@zoominternet.net](mailto:tsormiston@zoominternet.net). ■

*Engineering is a great profession. There is the satisfaction of watching a figment of the imagination emerge through the aid of science to a plan on paper. Then it moves to realization in stone or metal or energy. Then it brings homes to men or women. Then it elevates the standard of living and adds to the comforts of life. This is the engineer's high privilege.*  
~Herbert Hoover~

## Member Question of the Month...

**Q** What resource do you use now to answer questions about membership? What resource would you like to use to answer questions about membership?

**A** Send your reply to [pspeinfo@pspe.org](mailto:pspeinfo@pspe.org) with the subject: Member Answer of the Month.

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# Political Action Committee Report

## 2007 Sponsor Recognition

Many thanks to the following individuals who contribute to the PSPE Political Action Committee fund. The PAC fund allows PSPE lobbyists to influence bills on behalf of PSPE members. PSPE is very active at the Pennsylvania state capitol. Each session we monitor legislation that could impact PSPE members in their profession. Your contributions are critical as PSPE affects bills such as those found in the article "On Capitol Hill."

### Pennsylvania Circle

**\$500 - \$999**

Christopher Briglia, PE  
Mark Onesky, PE

### Century Club

**\$100 - \$499**

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John Boderocco, PE	J. Dixon Earley, PE	Charles Lentz, Jr, PE	Gregory Newell, PE	Zeyn Uzman, PE, F.NSPE
John Boyer, Sr, PE, AIA	William Erdman, PE	Robert Lentz, PE	Kevin Orndorf, PE	N. Daniel Waltersdorff, PE
Gary Bruce, PE	Belknap Freeman, PE	Frank Lundy II, PE	Walter Poplawski, PE	Patrick Ward, PE
Joseph Capuano, PE	Ralph Gilbert, Jr., PE	Thomas Maheady, PE	John Prybella, PE	Craig Weaver, PE
Lisa Catania, PE, F.NSPE	Daniel Grieco, Jr, PE	Joseph McAtee, PE	Michel Sadaka, PE	David K. Williams, PE
Joseph Daily, Jr., PE	Frederick Hay, PE	Earl McCabe, Jr, PE	William Schumacher Jr. PE	William Yoder, PE
Edward D'Alba, PE	Harve Hnatiuk PE, F.NSPE	Daniel McCay	Robert Seeler, PE	Douglas Zaenger, PE
Robert Dietz, PE	Charles Homan, PE	David McCullough, PE	John Stadnicar, PE	L. Robert Kimball & Assoc. PAC
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### Capitol Club

**\$50 - \$99**

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Henry Bartony, PE	Charles Fuellgraf, PE	John Smyth, PE
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Charles Catania, Sr, PE	F.NSPE	Raymond Szczucki, PE
Srinivasarao Chitikela, PE	Richard Gray, PE	Stephen Talian, PE
Bruno Cinti, PE	Arthur Hall, PE	Maurice Wadsworth, PE
Arthur Dvinoff, PE	Harold Light, PE	Steven Wilson, PE
	Louis O'Brien, PE	

### Friends Society

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Kin Chung, PE	Alfred Fazio, PE	Joseph Keller, PE	George Stanley, PE	James Ward, PE
James Cobb, PE	Jack Ferenci, PE	Roger Miller, PE	Robert Stieg, PE	Willard Whitbreard, PE
Howard Doran, PE	vedgar Forman, PE	Ronald Olsen, PE	Robert Swartley, PE	George Whitcomb, EIT
James Driscoll, PE	Alma Forman, PE	Michael Quickel, PE	Gerald Swendsen, PE	Helumth Wilden, PE
William Dulling, PE	Henry Gorman, PE	Jack Slusser, PE	James Szalankiewicz, PE	Clarence Wysocki, PE
Edmond Dunlop, PE	Jack Hager, PE	Louis Smith, PE	Benjamin Thayer, PE	Ronald Zborowski, PE
	James Horton, PE	Kevin Smith, PE	Thomas Tronzo, PE	



*"Underpass" continued from p. 9*

concrete to be removed and replaced with pressure mortar surfacing on both the north and south abutments and wing walls of the underpass. Unfortunately, portions of the northern face of the structure had deteriorated to a depth greater than 4 inches and required additional pressure mortar surfacing to bring the structure to its original thickness. While this was being completed, additional change orders were unfolding in other areas of the project.

The underpass plans for this project were completed prior to the construction of MCCC's expansion to the north. Even though these plans were provided to the college's contractor, they placed a large transformer in the location of one of the proposed pedestrian underpass retaining walls. In addition, they placed the power supply line through the area of the northern stairway. After much contemplation of an almost certain relocation of the transformer and electrical lines to another location, which would have cost an additional \$70,000-\$80,000, the project team determined they could eliminate the retaining wall. This solution would require construction of proper slopes and shoring during construction to prevent the transformer from sliding into the excavated area for the stairway. The challenge was installing the shoring around the electrical line, beneath the railroad's communication lines, and close enough to the transformer to allow construction of the footer for the western stairway wall. Encasement of the electrical line within the stairway walls was also required. The contractor did not believe the transformer could be shored safely, and it would ultimately have to be relocated. Around the same time, the pressure mortar surfacing was completed. With the cost overruns mounting, this was the point at which the project team started contemplating possible items that could be removed from the project or changed without sacrificing the safety and structural integrity of the project.

### Cooperation and Value Engineering

As stated previously, two canopies over the pedestrian walkway were proposed, one at each end of the tunnel, in order to prevent

ballast from entering the area of the pedestrian walkway from the tracks above. Members of the project team suggested revising the design of the canopy in order to reduce the cost of construction, thereby helping to offset the cost of relocating the transformer. Based on an estimate provided by the contractor for the revised canopy design, a savings of approximately \$48,000 could be realized. After much consideration, the project team decided to move forward and incorporate a new canopy design into the plans.

While the issues with the transformer were coming to a close, the cost for the additional pressure mortar surfacing was coming into light. The additional mortar surfacing required on the stone arch and the additional depth on the northern face of the tunnel resulted in an increased cost of approximately \$110,000. Elimination of the pressure mortar pointing resulted in a decreased cost of approximately \$22,000. The net increase in cost based on these two items alone was approximately \$88,000. This, in addition to the increased cost of the additional fill required in the areas of undercutting resulted in a total net increase of approximately \$102,000 to the project cost. On top of that, an additional \$70,000-\$80,000 would have to be spent on the relocation of the transformer. The project budget was being exceeded by approximately \$124,000-\$134,000 (this includes the cost savings of \$48,000 for the revised canopy design). The project budget was quickly being exceeded and tough decisions had to be made to enable completion of this project.

A decorative 6 foot high fence was to be installed on top of the arches on both sides of the tunnel to replace the existing fence. The Railroad was approached and asked if the proposed fence on the northern side could be removed from the project. The removal of the



fence was not considered a safety issue, and therefore, the railroad agreed to the change. The Railroad had expressed concern for the fence prior to this request since they feared it would be damaged by their maintenance equipment, much like the existing fence. This resulted in a decrease in cost of approximately \$24,500, which was not enough. The Railroad was again approached and asked if the proposed fence on the southern side of the project could be removed. Again, since it was not a safety concern, there was no problem. This saved an additional \$11,500, which was still not enough. There remained \$88,000-\$98,000 of additional costs.

During this time, other construction aspects of the project were going according to plan. Nothing else appeared to have the possibility of further increasing the cost. Then, the contractor developed a way he could safely shore the transformer with additional supports and encase the electrical line in the stairway walls. Without the costly relocation of the transformer, the project budget was within

*"Underpass" continued p. 22*

# Classifieds

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## HVAC Designer, Allentown, PA

HVAC designer for commercial, institutional and industrial facilities. Knowledge of basic computer load calculations, equipment selection, duct & piping design. Proficient in AutoCad. Associate Degree in HVAC or B.A. in Electrical Engineering. Interest in pursuing E.I.T and P.E.

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*"Underpass" continued from p. 21*

approximately 1% of the original cost. Everything was looking great until the pedestrian safety railing estimate came in at approximately \$40,000 more than what was bid. Now, the project was going to be approximately 5% over budget. This would typically be expected, but the owner requested the project team look into more possible cost saving measures.

Again, the Railroad was approached. There are three sets of tracks that go over the bridge, and they are all located toward the northern side. The southernmost track is located approximately 40 feet from the southern tunnel opening. The Railroad was asked if the southern canopy was really necessary to protect pedestrians from ballast since the tracks were located 40 feet away. The Railroad decided a canopy on the southern side of the tracks was not necessary. In fact, the owner and project team were very happy with the look of the southern face of the tunnel after the pressure mortar surfacing was applied and felt the openness was very inviting. The canopy was removed from the project and approximately \$23,000 was eliminated from the overrun.

## Engineering Success

All projects face change order issues during construction. There is nothing new about that. But excellent and timely coordination between the project team members, owner, and contractor, as well as all parties being willing to compromise, will result in the successful completion of this project. The project is nearly complete and, ultimately, due to other changes in material quantities, the project looks like it will be completed at the original budgeted amount (+/- 1%). ■

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# Member Spotlight



Pennsylvania State University named **Barry E. Isett, PE, PLS, ENSPE** the outstanding Civil Engineering Alumni during a spring Awards Convocation held at the Nittany Lion Inn on the College Park Campus.

Awarded by the College of Engineering, the prize recognizes exceptional levels of professional achievement and exemplary leadership abilities. Barry earned his bachelor's in civil engineering from Penn State in 1958. He also holds a masters degree from Villanova University.

Barry's career of almost 50 years includes a three-year stint with the U.S. Navy upon graduation from Penn State. The young officer handled construction assignments with the Seabees and facilities management in the Public Works division. Prior to founding his own company in 1977, Barry was a field engineer with Lehigh

Structural Steel and held engineering and project manager positions with Day and Zimmerman in Philadelphia, Sanders & Thomas in Pottstown, F&M Associates in Allentown and Wallace & Watson Architects in Allentown.

A Fellow member of the National Society of Professional Engineers (NSPE), Barry is a Director of the Northeast Region of NSPE. He also serves on the board of Pennsylvania Economy League, Central Division. He formerly held the position of state president of the Pennsylvania Society of Professional Engineers and Pennsylvania chairman of the Professional Engineers in Private Practice.

In addition to the Lehigh Valley headquarters, Barry Isett & Associates has Pennsylvania offices in Hazleton and Valley Forge and an office in Berlin, MD.



*ACE Mentor Program of Central PA board members Bob DiFiore, Hershey Entertainment & Resorts Company, and Josh Carney, C.S. Davidson, Inc., accept a scholarship check from SMPS Central PA board members Kristi Rachael, C.S. Davidson, Inc., and Casey Waller, Benatec Associates.*

The ACE Mentor Program of Central PA kicked off their program year with a fundraiser breakfast at the Milton Hershey Purcell Friendship Hall. Donations and sponsorships gathered from Architecture, Engineering and Construction industry firms totaled \$10,025. ACE program organizers also accepted a \$1000 check presented by the Society for Marketing Professional Services Central Pennsylvania Chapter; the money will be used to award two \$500 scholarships to high school students interested in pursuing a college degree in the architecture, engineering or construction fields.

The ACE Mentor Program began in 1994, and has expanded to more than 80 cities across the United States. Started locally in 2004 by six York County building industry firms, the Central Pennsylvania ACE Mentor Program introduces local high school juniors and seniors to the wide range of career opportunities available in architecture, construction and engineering.

Industry professionals volunteer as mentors to introduce program participants to the professions and encourage them to pursue studies and careers in these fields. In return, the industry will get a much-needed boost of new talent as students graduate and enter the industry.

Sixty-seven students from across York County are currently enrolled in the fourth year of the York program, and 50 Dauphin County students have been accepted to participate in the inaugural year of the Harrisburg/Hershey program.

For more information on the ACE Mentor Program of Central PA please contact **Josh Carney, P.E.** at [jmc@csdavidson.com](mailto:jmc@csdavidson.com), or Bob DiFiore at [bdefiore@hersheypa.com](mailto:bdefiore@hersheypa.com).

*"Message" continued from p. 2*

become more vibrant. This effort will be under the leadership of Northeast Region Vice President Walter Poplawski, P.E.

**The ninth priority is to establish the 2009 Conference Planning Committee. This committee will determine the date and location of the 2009 NSPE Northeast Region Meeting, possibly combined with the PSPE Annual Conference.** PSPE will be the host State Society for the 2009 NSPE Northeast Region Meeting. This priority will also be under the leadership of Walter Poplawski.

These are the priorities that the Executive Committee established and your help as a PSPE member will be needed if we are to be successful in all of these efforts. Please contact me or your Regional Vice President if you would like to help us with any of these priorities. ■



"Capitol" continued from p. 5

Public hearing held in committee Senate State Government Committee, 10/17/2007

#### **SB 903 RE: Openness in Consulting Contracts Act (by Sen. Jane Orie, et al)**

Amends Title 62 (Procurement) by adding a chapter creating the Openness in Consulting Contracts Act. Under the act, no Commonwealth agency, State-affiliated entity or State-related institution may contract with any individual or business who is not an employee of such entity to provide legal, bond or management consulting services, unless the contracting meets the disclosure and other requirements of this chapter or is opened up to competitive bidding pursuant to this chapter. The bill also adds that all individuals and businesses that perform work for State government under this chapter would be required to report their campaign contributions as one condition of receiving future consulting contracts. All

information as to criteria, contracts awarded and contributions would be made available for public inspection on the Internet.

*Reported as amended from Senate State Government Committee, read first time, 10/2/2007*

*Rereferred to Senate Appropriations Committee, 10/15/2007*

#### **New Bills Introduced**

#### **HB 1889 RE: Prototypical School Facility Plan Clearinghouse (by Rep. David Kessler, et al)**

Amends the Public School Code establishing a prototypical school facility plan clearinghouse, for use by school entities as a reference guide in the design and construction of new facilities.

*Referred to House Finance Committee, 10/4/2007  
Passed over in House Finance committee 10/24/2007*

*House Finance Committee Meeting set for 10/31/2007, 10:00 a.m., Room G-50, Irvis*

#### **Upcoming Meetings of Interest**

##### **2007 Senate Fall Session Schedule**

The following are the remaining scheduled session days for the Senate in 2007:

October	29, 30
November	13, 14, 15, 19, 20, 27, 28
December	3, 4, 5, 10, 11, 12

##### **2007 House Fall Session Schedule**

The following are the remaining scheduled session days for the House in 2007:

October	29, 30, and 31
November	13, 14, 19, 20, 27, and 28
December	3, 4, 5(Non-voting), 10, 11, and 12

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> ■

## **PSPE Calendar of Events**

### **2008**

January 10  
**Pennsylvania Engineering Foundation BOD**  
Conference Call

January 28  
**PSPE Executive Committee Meeting**

January 29  
**PSPE Board of Directors Meeting**  
Harrisburg Holiday Inn Hotel & Conference Center  
New Cumberland, PA

March 28-29  
**Pennsylvania MATHCOUNTS Competition**  
Sheraton Harrisburg-Hershey Hotel  
Harrisburg, PA

June 5-7  
**PSPE Annual Conference**  
Wyndham Gettysburg  
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