

# the news



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PHILADELPHIA SECTION

AMERICAN SOCIETY OF CIVIL ENGINEERS

P. O. Box 58186, Philadelphia, PA 19102-8186

Electronic Message Hotline: (215) 934-3639 (24 hours a day)

Vol. 67-8

## Our 81st Year

March, 1995

### MARCH DINNER MEETING

Philadelphia Section, American Society of Civil Engineers  
Invited Participant - Philadelphia Chapter, PSPE

### THURSDAY, MARCH 9, 1995

WILLIAMSON'S • GSB Building • City Line Ave. • Philadelphia • (See Location Map Below)  
Cocktails - 5:30 p.m. • Dinner - 6:30 p.m. • Meeting - 7:30 p.m.

**SUBJECT: THE SUN COMPANY, INC. MIDDLE CREEK ABATEMENT PROJECT**  
**SPEAKERS: Charles D. Barksdale, Jr., P.E.**, Corporate Consultant, Environmental Affairs, Sun Company, Inc. and **Richard H. Hartzell**, Project Manager, Sun Company, Inc. Middle Creek Abatement Project

**SPECIAL EVENT: Presentation of Life Membership Certificates**

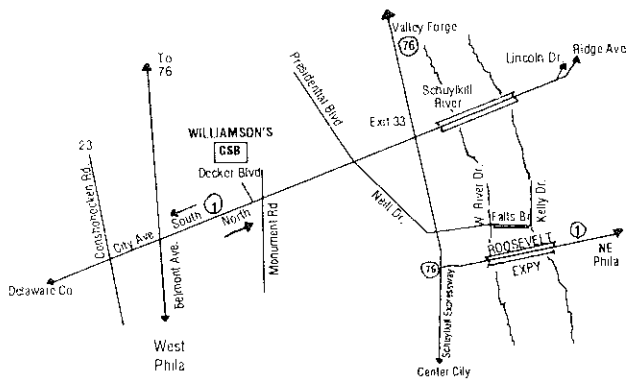
**SPECIAL FEATURE: VILLANOVA UNIVERSITY NIGHT**

The ASCE Student Chapter, Alumni, and Faculty of the Civil Engineering Department of Villanova University will be honored at this meeting. All Students, Alumni and Faculty are cordially invited.

**RESERVATIONS MUST BE SUBMITTED BY MONDAY, MARCH 6, 1995.** Please send your check for the number of attendees @ \$25.00 per member or guest; \$13.00 ASCE Student members, payable to the Phila. Section, ASCE, P.O. Box 58186, Phila. PA 19102-8186; or call the Electronic Message Center: **(215) 934-3639** (open 24 hours/day).

This presentation concerns the design and construction of a project to replace a hazardous waste surface impoundment at the Sun Company, Inc. (R&M) Marcus Hook Refinery. This project is referred to as the Middle Creek Abatement Project. A review of the regulations which required the work as well as affected the design will be presented by **Chuck Barksdale** of Sun's Corporate Environmental Affairs department. This discussion will be followed by a presentation by **Dick Hartzell** of Sun's Engineering Services Group on design challenges, design selection, and construction challenges of this project.

*Continued on Page 2*



**LOCATION MAP  
for  
Williamson's  
GSB Building,  
City Line Ave.,  
Philadelphia**

### TECHNICAL GROUP ACTIVITIES

#### Structural Group

##### March Meeting

Date: **Wednesday, March 29, 1995, 7:00 p.m.**

Location: Hill Seminar Room, LeBow Engineering Center, Drexel University, 31st & Market Sts., Phila., PA

**SUBJECT: Structural Design and Construction of the Malaysia Twin Towers**

**SPEAKER: Leonard Joseph**, Vice President, Thornton-Tomasetti Engineers

Mr. Joseph will give a slide presentation on the design and construction of what will be the world's tallest building. The Twin Towers, which will form a gateway to the commercial heart of Kuala Lumpur, will rise to 450 meters, 7 meters taller than Chicago's Sears Tower.

##### April Meeting

Date: **Wednesday, April 19, 1995, 7:00 p.m.**

Location: Hill Seminar Room, LeBow Engineering Center, Drexel University, 31st and Market Sts., Phila., PA

**SUBJECT: Discussion of New Developments in the Steel Joist Industry**

**SPEAKER: Dick Phaneuf**, Chief Engineer, New Columbia Joist Company

Mr. Phaneuf will discuss updates to the Steel Joist Institute Specifications. Stability requirements during erection and the new KCS/KCM - Constant Shear/Constant Moment Joists.

If you are interested in joining us for these informal meetings (March and April) (snacks and refreshments will be provided), please make your reservations with: **Richard D. Roberts, Chairman, Structural Group, (215) 561-0460.**

#### Transportation Group

##### April Luncheon Meeting

Date: **April 11, 1995, 11:30 a.m.**

*Tour of the New University City Commuter Rail Station*

The Phila. Section, ASCE Transportation Group is sponsoring a Tour of the newly constructed University City Commuter Rail Station. The station was constructed by the City of Philadelphia, Department of Public Property and will be turned over to SEPTA for operation. The sta-

*Continued on Page 2*

**THE PRESIDENT'S MESSAGE**



As we head into March, hope springs eternal for the warmth and prosperity (and the new construction season) that follow the deep freeze of winter. Our March 9th program on the Middle Creek Environmental Cleanup project by Sun Oil Company, should prove very exciting. Sun Oil Company has been on the forefront of environmental solutions for the petrochemical industry. Don't miss it!

Looking back on February, Engineers' Week was a proud moment for the Philadelphia Section, ASCE, as they installed our nominee, **Harry M. Perks, P.E.**, as the "Delaware Valley Engineer of the Year." We are sure he will carry the banner high. Congratulations also are extended to **Gregory R. Yates, P.E.**, who was

voted to complete Mike Carragher's term as Secretary of the Section. Greg brings several years of service to the Section as the Transportation Group Chairman. We also congratulate **Al Zion, P.E.**, on his elevation to Vice President to complete the term of George Stanley. Al, too has served the Section loyally for many years and is currently also Chairman of the Engineering Management Group. We are looking for greater participation from all our members. If any of you are interested in a more active role, there is more than enough work to go around.

We are instituting a new program entitled "Civil Engineering Focus," which will provide a forum for each owner, firm or engineering organization to present a special project presentation or just a general qualifications statement at our Section meeting. The project, owner or firm selected will be from those applications submitted to the Board in the previous month. The presentation will be passive and will be available for viewing during the cocktail hour. It should prove as a useful tool for us to learn more about our Section's projects and organizations (see separate article on this new program in this issue of THE NEWS).

Also, after several years' lapse, we are restoring a column on Legislative issues called "Legislative Corner" in THE NEWS. Civil Engineers need to be actively involved in the public policy making that affects our society and profession. In order to do so, we need to be informed. We have an able bodied volunteer in **Mark McCain, P.E., Esq.** who will provide articles of interest. If there are other interested contributors, send articles to **Sid Robin**, Editor of THE NEWS.

Notable upcoming events include: the Geosynthetic Seminar by Section Past President **Dr. Robert M. Koerner**, March 16, 1995; The Annual Spring Dinner Dance, May 5, 1995 at Sugarloaf; and the First Annual ASCE Golf Outing, Friday, May 19, 1995 (see separate article in this issue of THE NEWS). There will be other Section activities throughout the year. Mark your calendars and check for the details in THE NEWS.

Finally, with many exciting events coming up, I hope you will all come and bring an associate or friend to the Section functions of interest, to encourage membership. I am sure they will be enlightening and enjoyable. I hope to see you at all of them.

Sincerely,  
William T. Thomsen, P.E.,  
President, Phila. Section, ASCE

**March Meeting**

(Continued from Page 1)

The Middle Creek impoundment was previously used to convey process and stormwater from various portions of the Refinery to a central final oil-water separator. USEPA hazardous waste regulations required that this impoundment be closed. Sun chose to replace the impoundment with an above ground sewer. This project was significantly complicated since the work was conducted in an operating refinery which was continuously generating wastewater which needed to be managed during construction of the replacement facilities.

**Charles D. Barksdale, Jr., P.E.**, received his B.S. in Chemical Engineering at Drexel University, 1980, and his B.S. M.E. at Widener University, 1991. From 1980-1989 his position was Environmental Engineer at the Marcus Hook Refinery of BP Oil Company on waste and water issues. He has been with Sun Company, Inc. from 1989 to the present at the Company's various refineries in Pennsylvania as Senior Environmental Engineer, Environmental Supervisor, Sr. Environmental Consultant, Special Projects Managing Environmental Consultant; and from 1994 to present, Corporate Consultant on RCRA and other waste issues.

**Richard G. Hartzell** served in the U.S. Air Force, 1956-1961 and received his B.S.M.E. at Drexel University in 1967. He has been with Sun Company, Inc. from 1965 to the present. From 1967-1978 he was involved in various engineering/design activities; instrumentation/rotating equipment. From 1978 to 1983, he was Project Manager, \$150MM Lube Oil Complex. From 1983-1990, Engineering Manager, Marcus Hook Refinery; and 1990 to the present, Project Manager of the \$130 MM Middle Creek Abatement Project.

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\* **THINK SPRING! THE ANNUAL SPRING DINNER DANCE • FRIDAY, MAY 5TH!** \*  
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**Technical Group Activities**

(Continued from Page 1)

tion is located off of Convention Avenue adjacent to the Philadelphia Civic Center. The new station will provide service to the University City section of the City, and to the University of Pennsylvania and Children's Hospitals.

The Tour will be conducted by **Ruben D. David, PE** and **Zia A. Kahn, P.E.** Mr. David is Chief Civil Engineer in the City's Architectural/Engineering Division and served as the City's Project Manager on this project. Mr. Khan is the Director of Engineering & Construction in the City's A/E Division, Department of Public Property.

A luncheon will follow at the Penn Towers Hotel located at 24th Street and Convention Avenue. The cost of the luncheon will be \$18.00. For reservations, please contact **Greg Yates, Chairman, Transportation Group at (215) 923-5077, no later than April 1, 1995.**

<b>PHILA. SECTION, ASCE OFFICERS 1994-1995</b>	
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**President - William T. Thomsen**  
Urban Engineers, Inc.  
Penn Mutual Tower, Suite 1680  
530 Walnut St., Phila., PA 19106  
(215) 923-5077; fax (215) 923-5611

**Secretary - Gregory R. Yates**  
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<p><b>COPY DEADLINE FOR APRIL 1995 ISSUE MARCH 10, 1995</b></p>
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## YOUNGER MEMBER NEWS

Hey, all you younger, out-of-touch ASCE members — this message is for you. WE NEED YOU!

Recently, the Phila. Section, ASCE Younger Member Forum has started to accelerate into high gear. I know many are asking — What is the Younger Member Forum and what can it do for me? Let me give you a short list of the benefits:

- To provide a forum to discuss topics of concern and interest to members (which will shape your future).

- Recognition of young engineers in the region.

- Networking — build upon your circle of contacts and friends with other young engineers who you will see through the rest of your career.

- To effect closer ties and improved communication between Younger Members and all of the Society.

• Many other benefits can be found by attending our next meeting.

The Group is continuing to have monthly meetings, usually at a region-centralized location of interest (tavern and/or restaurant). There are no dues, dress-code, or other requirements for attendance at these casual meetings. Recently, we have been actively pursuing connections with the colleges and universities in the region in hopes of helping the student ASCE Chapters with various projects and upcoming job search activities. Other events have or will also include:

- Ski trip to Camelback in February

- Demolition of a house in conjunction with Habitat for Humanity (March 11, 1995)

- Participation in the George Washington Carver Science Fair (March 7 & 14, 1995).

To find out the next meeting time/place or if you have any questions, please contact: **Allen W. Cadden**, YMF President, Schnabel Engineering Associates, 882 S. Matlack St., Suite 206, West Chester, PA 19382, (610) 696-6066 or **Paul Fry**, NTH Consultants, Ltd., 860 Springdale Dr., Exton, PA 19341, (610) 524-2300.

### YMF Ski Trip

YMF would like to thank **Tim Brouse** and **Brian McTiernan** for pulling together a great trip to Camelback, Feb. 13. We had 32 people join ASCE for a day of great weather and snow conditions.

## GRADES 1-9 CECP LIBRARY

For *Civil Engineer Presenters* and Civil Engineering Class Projects (CECP), the Phila. Section, ASCE now has a small but well focused library. To obtain access to this library, please call (215) 204-7802, the 24-hour voice-mail number of **Stephen G. Jochum, P.E.**, at Temple University.

In addition to books and other published material, the library contains video tapes, transparencies for overhead projectors, slides, and other material which *Civil Engineering Presenters* can adapt and bring to schools when they introduce Civil Engineering Class Projects to Grade 1-9.

Appropriate additions to this library are always welcome and encouraged. The library is cur-

## WRIGHT NOMINATED FOR NATIONAL HONOR

Philadelphia Section, ASCE President William T. Thomsen has submitted to ASCE National Headquarters the nomination of Section Past President (1993-1994) **Robert M. Wright, P.E.**, for the 1995 *Government Civil Engineer of the Year Award*, to represent Zone 1. The Award is presented annually to a distinguished Civil Engineer, employed in the public sector, for sustained, significant contributions to Public Service Engineering (at least 15 years). One recipient from each National ASCE Zone will be designated.

It is beyond controversy that Bob Wright has been, and is, one of the most dedicated, hard-working members in the history of the Philadelphia Section, in a limitless spectrum of its programs and functions. In addition to his terms as President and Vice President, he served as Membership Secretary (1985-1987), and Secretary (1987-1991).

Bob Wright has been an institution in the Philadelphia government, working in the Streets Department since 1979, and has ascended the ranks to his present position of Highway Engineering Manager. One of his achievements is the \$6.2 million street reconstruction of Market Street. He also managed the \$15 million street improvement portion of South Broad Street, which is part of over a \$300 million investment program for the "Avenue of the Arts," an effort to revitalize South Philadelphia. All throughout his illustrious career he has remained a leader inside and outside the work force upholding the excellence of the Civil Engineering profession.

The Philadelphia Section, ASCE, takes lofty pride in this nomination, and looks forward with optimism to his being named the Zone 1 winner. We can think of no individual more worthy.

## WEST RIVER DRIVE FIELD TRIP

The Streets Department and Urban Engineers will host a field trip to West River Drive on **Saturday, April 1, 1995**. The West River Drive project was named a Notable Engineering Achievement by the Engineers Week Council and will receive special recognition as part of Engineers Week, February 17-25, 1995.

The field trip, part of the Engineers Week project celebration, will begin at Fairmount Park's Horticultural Center, just off Montgomery Drive, east of Belmont Avenue, at 10 a.m. Following a short slide presentation the participants will board a Fairmount Park trolley for a tour of the project. The entire tour will take approximately 75 minutes.

Everyone is welcome but to assist in making proper arrangements the organizers ask that you call **Rainey** or **Mary** at 686-5538 to reserve a spot on the tour. Ample parking is available at the Horticultural Center. The trolley will return to the Center following the tour.

rently maintained by **Stephen G. Jochum, P.E.**, Associate Professor of Civil Engineering at Temple University.

## 1995 SPRING GOLF OUTING

The first annual Philadelphia Section, ASCE, Golf Outing will be held at the *Westover Inn & Golf Club*, Jeffersonville, PA on **Friday, May 19, 1995**. The cost at this point will be approximately \$60.00 to \$70.00 per person and includes greens fee, cart and dinner afterwards. There will also be prizes awarded at the dinner.

To get an idea as to how many ASCE members believe they can golf, please call **Greg Yates** at (215) 923-5077 with the names of players in your foursome. If you don't have a foursome, call with your name and additional foursomes will be arranged. This will be a great opportunity to relax (hah!) and network with other ASCE members that you only see at meetings. Depending on the level of interest, we may be able to arrange for a shotgun start (requires approximately 100 golfers). If we don't get the required number for a shotgun start, tee times will be assigned on a first come, first served basis.

We are also looking for companies to sponsor holes as a means of getting their names in front of their clients.

Watch future editions of THE NEWS for more details. In the meantime, think of how nice and warm it will be in mid-May on the back nine with that set of bent golf clubs in the bag. Use this outing as the first of the season to get in shape for the summer!

## MEMBERS IN THE NEWS

### Gouda Nominated for National ASCE Director, District 1

Phila. Section, ACSE, Past President (1991-1992) **Moustafa A. Gouda, P.E.**, Executive Vice President and Managing Partner, Lippincott, Jacobs & Gouda, Consulting Engineers, New Jersey, has been nominated for ASCE National Director, District 1, by the New Jersey Section, ASCE. Long associated with ASCE both in Local Sections (New Jersey and Philadelphia) and National ASCE services and participation; with over 30 years of professional experience; Moustafa is affiliated, in addition to ASCE, with the American Society of Highway Engineers, the Egyptian Syndicate of Civil Engineers, the Society of Military Engineers, NJ Society of Professional Engineers, Burlington County College Foundation, and the NJ Water Pollution Control; and numerous civic organizations. He is the recipient of many Professional Awards, including: the Phila. Section Civil Engineer of the Year (1987); nominated Delaware Valley Engineer of the Year (1992 and 1993); nominated South Jersey Civil Engineer of the Year (1994); Marquis' "Who's Who in the World." The Phila. Section wishes Moustafa well in this latest recognition of honor.

### Bartholomew Named Delaware County Engineer of the Year

Dr. Charles L. Bartholomew, Chairman of the Civil Engineering Department at Widener University, Chester, PA, was recently named 1995 Engineer of the Year by the Delaware County Chapter

(Continued on page 6)

## **NOMINATIONS FOR OFFICE PHILADELPHIA SECTION, ASCE 1995-1996**

In accordance with the Constitution and By-laws of the Section, the Nominating Committee appointed by President Thomsen and chaired by Past President Bob Wright has submitted the following slate of nominees for elective office for the 1995-96 administrative year:

President – William Richards (moves from current President Elect position automatically)  
 President Elect – Alvin Zion (one year as President Elect followed by one year as President)  
 Vice President – Darin Gatti  
 Treasurer – Jian Jin (two years)  
 Membership Secretary – Sean Markey (to complete one remaining year of term of Richard Markwith)  
 Director – Dennis McBride (two years)  
 Director – Richard Markwith (two years)  
 Director – Faruq Siddiqui (two years)  
 Officers in which incumbents have one remaining year to serve are:  
 Secretary – Gregory Yates  
 Director – Sandra May  
 Director – Chris Rood  
 Director – Frederick Schmitt  
 Past Presidents to serve on the Board of Directors:  
 Klaus Fuelleborn – one year  
 Robert Wright – two years  
 William Thomsen – three years

The above slate of nominees will be announced at the March 9, 1995 meeting. If no additional nominations are received by the Section Secretary by April 1, the above slate shall be declared as elected at that time and will be officially installed at the Section's Annual Dinner Dance on Friday, May 5, 1995, at Sugarloaf Conference Center, Philadelphia.

The Section's appreciation is extended to the Nominating Committee, which consisted of Sue Lior, Bill Richards, Sid Robin, Bill Thomsen and Bob Wright.

## **APTI SYMPOSIUM ON HISTORIC TIMBER ENGINEERING**

The Delaware Valley Chapter of the Association for Preservation Technology International (APTI) will sponsor an all-day wood-timber truss symposium in center city Philadelphia, **Saturday, March 11, 1995**, 9:00 am to 5:00 p.m. This is the second of an annual series and will focus on "Diagnostic Aspects of Structural Timber Framing and Trusses." The details of exact location and a slate of speakers are being confirmed, but it is important to note the date.

Registration cost is \$35.00; a special rate of \$10.00 is offered to full-time students. Please call **(610) 565-1131** for registration materials or for more information.

The Association for Preservation Technology International, Inc. (APTI) is an international, non-profit, educational corporation that encourages, promotes and advances research, training and the dissemination of information relating to preserva-

## **ONE-DAY SEMINAR ON "GEOSYNTHETICS IN WASTE CONTAINMENT SYSTEMS"**

by Robert M. Koerner, Ph.D., P.E., H.L. Bowman  
*Professor of Civil Engineering and Director, GRI,  
 Drexel University*  
 (See end of article for registration info)

On **Thursday, March 16, 1995**, a Seminar (with notes) will be presented at Drexel University to ASCE members and their guests.

This one-day seminar on liners and covers for waste containment systems focuses on selection, design and testing of the various individual components used to make successful waste disposal containment facilities. The focus is on the various geosynthetic components such as: geomembranes • geosynthetic clay liners • geotextiles • geogrids • geonets • geopipe and related materials like geosynthetic erosion control systems. Natural soils will be described for comparison, such as compacted clay liners and gravel/sand leachate collection drains and filters, but the major emphasis of the program is clearly on geosynthetics.

The initial 45-min. is oriented so as to recognize that legislation plays a large role in the conceptual design of a waste facility and allows the designer to counterpoint geosynthetic materials against natural soil materials. An insight into the various geosynthetics used in liners and covers is then given along with selected durability issues, i.e., chemical resistance, and lifetime prediction.

Salient features of the design and testing of geosynthetics are presented with worked-out numeric examples for each type of geosynthetics. Included are geomembranes on side slopes and undergoing differential settlement, geonets as secondary leachate collection system, geotextiles as filters and protection components, geogrids for veneer stability and landfill expansions, geopipe for leachate removal systems. The assemblage of these components into a complete system will then be described and will involve the use of geosynthetic clay liners and geosynthetic erosion control materials. The entire presentation is generic, i.e., trade names will not be mentioned, however, they will be discussed if questions are directed to a specific material.

Several case histories where problems have occurred will be offered so as to gain perspective with regard to the integration of design and construction practices. Construction related CQC and CQA issues and trends will be described. The newly established NICET field inspectors and GAI laboratory accreditation programs will be discussed.

Future projections for the waste containment industry will be offered and a summary of the current state-of-the-art will conclude the program.

Contact **Dr. Jonathan Cheng** at Drexel University **(215) 895-2996** for registration forms and additional information. The cost is \$60.00 per attendee.

tion technology and the historic preservation of buildings, sites and objects. It is represented by the APT Delaware Valley Chapter.

## **Louis W. Petulla**

Those who were associated with him, and remember him as a very active Philadelphia Section, ASCE, member during the 1970s and 1980s (he was a Section Director during this period) will mourn the loss of **Louis W. ("Lou") Petulla**, he died on December 12, 1994 at the age of 60, after suffering a massive heart attack several days earlier. Lou assisted your editor on THE NEWS for several years and he was a valued personal friend. We extend our appreciation to former Section Director **George R. Beetle** – who also worked with Lou and contributed his talents in a Legislative Column in THE NEWS at the time. George provided the biographical data for this article.

Lou Petulla was the Pennsylvania Turnpike Commission's Assistant Chief Engineer for expansions at the time of his death. Previously, he was District Engineer for PennDOT at Franklin, PA. His death came one week after the Turnpike Commission was to have announced his appointment as Acting Commissioner of the Statewide Commission, to replace the retiring agency Director.

Mr. Petulla, a Highway Engineer since 1958, had managed the Turnpike Commission's ongoing Expansion Program since May, 1987, under the Administration of then Governor Richard Thornburgh. Many expansion projects in western Pennsylvania were completed under his guidance, including responsibility for planning, design, and construction, and maintenance of 4500 miles of State roads.

Lou earned his Bachelor of Science degree in Civil Engineering from the University of Detroit. He began his career with the Michigan State Highway Department in 1958, and later as a Civil Engineer for District 1-0 of the former Pennsylvania Department of Highways. From 1966 to 1972 he was employed as Senior Engineer for Day and Zimmermann, Inc., and Principal Engineer for Louis T. Klauder & Associates, Inc., both Consulting Engineering firms in Philadelphia. It was at Klauder that Lou worked with George Beetle. While in Philadelphia, he was a Volunteer in the Big Brothers program. He was a Registered Professional Engineer and a frequent contributor to trade periodicals and newspapers. He also authored a chapter on engineering math to a current high school mathematics textbook.

Mr. Petulla traveled to the People's Republic of China in 1985 as a representative of American Civil Engineers, in a People-to-People International Outreach Program. He maintained a private practice in Oil City, PA from 1983 to 1987, serving as a leader in public/private railway projects. He received a special award from the Pennsylvania Travel Society in recognition of this work. He was intimately involved in church activities, Chambers of Commerce and Civic Agencies.

Surviving Lou are his beloved wife, Sheila, two sons in college, and three brothers. The Philadelphia Section, ASCE extends its sincere condolences to the Petulla family on their loss.

## FEBRUARY JOINT DINNER MEETING

February 15, 1995

Harbor League Club, Camden, NJ

### Timber Bridges In The Spotlight

A well-attended ASCE Joint Meeting of the Phila. Section; South Jersey Branch, New Jersey Section; and South Jersey Chapter, PSPE, enjoyed an excellent presentation at the Harbor League Club on February 15, 1995, on the topic: "Design and Construction of Modern Timber Bridges." Principal speaker was **John B. Crist, Ph.D.**, Mid-Atlantic Representative, Krenn Bridge Companies, Inc. Co-host organization Presidents **John B. Carty, P.E., P.P.**, South Jersey Branch, ASCE; **William T. Thomsen, P.E.**, Phila. Section, ASCE; and **Jerry L. Kilby, P.E.**, South Jersey Chapter, PSPE, shared the presiding duties.

#### Drexel University Night

The meeting honored the Civil and Architectural Engineering Department of Drexel University, Philadelphia, PA. A splendid representation of the Student Chapter officers and members, alumni and faculty attended and were introduced by Phila. Section President Thomsen.

**Dr. Joseph P. Martin**, Faculty Advisor of the Drexel ASCE Student Chapter, thanked the hosts for their courtesies and acknowledged all the Drexel affiliates in attendance. Dr. Martin paid special tribute to **Dr. Richard E. Woodring**, Professor of Civil and Architectural Engineering at Drexel and former dean of its College of Engineering. Dr. Woodring is retiring after 39 years of dedicated service to the University. He outlined the development of a revised civil engineering curriculum at Drexel, made possible through a grant from the National Science Foundation. Among other developmental changes, the new program enables the establishment of team design projects of more complexity than formerly exercised. The emphasis is now more focused on computer and systems technology, and on students' articulation, by compositions about – and presentation of – their design objectives, development and results.

#### Chapter President Reviews Programs

Drexel's ASCE Student Chapter President **Kenneth Cloud** presented a brief rundown of the Chapter's membership and activities, after introducing his fellow officers: Vice President, **Heather Currie**; Treasurer, **Michael McGettigan**; and Secretary, **Deborah Talarico**.

The membership now stands at 63 strong, and growing. Meetings feature diversified subjects, including distinguished guest speakers; active participation by Chapter members in Engineers' Week events; victories by two Chapter teams, over competing Principal Civil Engineering schools, in the ACI Beam Competition; preparation of its entry in the Concrete Canoe Race Competition, scheduled for April 2, 1995 at Penn State University; inaugurating a Job Fair through invitations to Civil Engineering allied companies, contractors and consulting firms, in order to motivate recruitment of potential job candidates among Chapter members and other Civil Engineering stu-

dents of the University; participation in a Habitat for Humanity Housing Project; and numerous additional interesting and educational programs.

#### Dr. Crist is Introduced

**Russ Cipolla, P.E.**, a Director of the ASCE South Jersey Branch, thanked the Phila. Section and the PSPE Chapter for their courtesies and cooperation in arranging the meeting. After introducing other officers and some announcements pertinent to the Branch, Mr. Cipolla introduced the principal speaker of the evening, **John B. Crist, Ph.D.**, Mid-Atlantic Representative, Krenn Bridge Companies, Inc.

Bridges are an expression of engineering accomplishment, asserted Dr. Crist in introduction. Timber structures play important roles in this expression, but unfortunately timber design is not very well marketed in engineering schools, he advised. This fact is especially significant when some staggering statistics are called to public attention: forty-two percent of the Nation's bridges are structurally or functionally deficient, principally because of lack of adequate maintenance. Even relatively recent steel and concrete structures are deteriorating. Timber could and should play a much greater role in design decisions, because of its many beneficial characteristics. It is totally immune from de-icing or chemical material injury, and considerably less vulnerable to many other maintenance problems associated with the more commonly used structural materials.

#### 70,000 Timber Bridges

There are more than 70,000 timber bridges in the United States – a surprising statistic to many engineers. With some excellent slides, Dr. Crist illustrated good and badly engineered bridges in steel, concrete and timber, including historically nostalgic covered wooden bridges. He showed slides of major prominent timber bridges, as well as smaller capacity structures. He explained the connections design and construction techniques of the structural members and deck elements of various types and architectural styles of timber bridges, including advances in longitudinally laminated bridges – esthetically pleasing, structurally sound, and economically viable.

#### Design and Code Regulations

Dr. Crist expounded on the intricacies of structural design, conformity with code regulations and limitations; and joining details of timber bridge construction, to meet various loading requirements. He also advised about the economic realities and constraints of this medium, important elements which must be addressed. He explained test procedures and the technicalities of composite action of timber members when steel reinforcing stressing rods are integrated into the structure.

Dr. Crist's slides included many strikingly architecturally attractive timber arch bridges, supporting concrete decks (suggestive of the wooden vaulted ceiling complexes in churches and cathedrals throughout the world) He illustrated the use of timber bridges in urban locations, as well as the almost universally presupposed rural areas which most individuals associate with their use. He listed the various preservative methods to prevent corrosive effects on timber: pressure treatment, creosoting and oil-borne penetrants being the agents in universal application.

#### Longevity and Comparisons

The expected life of major modern timber bridges, properly designed and constructed, should be 75 years, asserted Dr. Crist. Many older structures should have expected lives of 50 years. In illustrating timbers' high strength-to-weight ratio and low expansion factors, he showed that timber structures are compatible with steel and concrete in such important beneficial functions as rehabilitating steel and concrete bridges. His slides pictured several types and styles of pedestrian wooden bridges, as well as vehicular ones. Dr. Crist concluded his splendid presentation with an interesting construction sequence program for a typical timber bridge.

#### Audience Discussion and Questions

Numerous informative comments and questions from members of the audience were directly and knowledgeably addressed by our distinguished speaker. He was congratulated by the Meeting co-chairmen and the joint organizations' members.

#### PSPE Introductions and Comments

Following Dr. Crist's presentation, South Jersey Chapter, Pennsylvania Society of Professional Engineers (PSPE) President Jerry L. Kilby, P.E., introduced his fellow officers, Chapter representatives and members. He synopsized current and recently completed activities, and announced names of nominees for special PSPE awards. Mr. Kilby thanked the other Societies for their invitation to join with them in this rewarding Joint Meeting.

## C.E. REVIEW WORKSHOPS AT TEMPLE UNIVERSITY

For **Saturday, March 25, 1995**, a Civil Engineering Review Workshop is scheduled on Sanitary Engineering; Design, and Analysis of Water Supply Systems, Waste Water Treatment Systems, and Solid/Hazardous Waste Systems; Transportation; Design, Analysis and Operation of Traffic Systems.

These workshops are designed to be useful as an early start (a year or more prior to the examination) and as a brief but well-focused final review before the Civil Engineering Principles and Practice Examination. Each workshop is a complete unit and includes a self-scored testing exercise with criteria-specific feedback from presenters who are well qualified in the specific areas covered by the workshop. Refreshments, lunch, brief video-labs, notes, and reviews of PE exam literature and exam requirements are included in the \$100 fee per workshop. Additional information and registration forms can be obtained by calling (215) 204-7814, at any time.

## PHILADELPHIA SECTION CIVIL ENGINEERING "FOCUS"

ASCE Phila. Section will initiate a special "Focus" on Consulting Firms, Agencies or Manufacturers at their monthly meetings. This will occur through the use of Presentation Boards or Exhibit Materials focused on the capabilities of agencies and firms on the unique characteristics of projects that have been undertaken in the Philadelphia area. We look forward to these presentations as an opportunity to meet the engineers throughout our community and gain a better understanding of current and new projects or technologies.

We will provide a limited space to those who would like to volunteer to set-up a presentation which will be of interest to the Society. We will make every effort to provide as much diversity as we can. If you are interested call the **Hotline (215) 934-3639**.

The following are the criteria for ASCE's Civil Engineering FOCUS:

- The company, supplier, manufacturer or agency must be actively working or supplying within the greater Phila. area.
- Presentations shall be limited to information describing the firm, agency, and Civil Engineering project or Civil Engineering aspect of a project. Presentations displaying new or innovative aspects of Civil Engineering are preferred.
- Agency presentations shall focus on their scope of authority, current projects of future plans. Manufacturer presentations shall display new and innovative product lines.
- Presentations shall be limited to information which can be visually presented on boards which are not greater than 10 ft. wide.
- Presenters shall be limited to one presentation every two years, unless the Section's Board of Directors believes additional presentation offers a significant contribution to the membership.
- Presentations will be scheduled as time and space permits, generally on a first come, first serve basis. We will, however, limit the presenters to a maximum of one agency, one consultant, one manufacturer, or supplier per meeting. This is intended to limit the potential for a competitive environment. Some effort will also be made to coordinate presentations with speaker topics.

### Members In the News

(Continued from Page 3)

of the Pennsylvania Society of Professional Engineers (PSPE). In 1989, Dr. Bartholomew was named Educator of the Year by the Phila. Section, ASCE. In addition to his teaching responsibilities at Widener, he is very much involved in community affairs. He currently serves on the Concord Township Planning Commission, and speaks frequently about the engineering profession at area public schools, both elementary and high schools. The Phila. Section congratulates its distinguished member on this honor.

## IMPORTANT! 1994-1995 MEETING NOTICES

MARK YOUR CALENDAR for the dates of the remaining Philadelphia Section, ASCE monthly meetings and social functions, as follows: (Check each issue of coming editions of THE NEWS for details, possible date and topic changes.) THIS IS A TENTATIVE LIST.

### ALL DINNER MEETINGS (Except as noted for Luncheon Meetings)

Cocktails - 5:30 p.m. Dinner - 6:30 p.m. Meeting - 7:30 p.m.

**STUDENTS:** All dinner and/or luncheon charges one-half price. If you prefer, you are welcome to attend all meetings after dinner or luncheon, at no charge.

**Thursday, April 20, 1995** - NOTE: Change of date from original schedule.

Dinner Meeting, Williamson's City Line  
"Philadelphia International Airport" (Arr. by Engineering Management Group)  
Temple University Night.

**Friday Evening, May 5, 1995** - Annual Spring Dinner Dance

Sugarloaf Conference Center, 9230 Germantown Ave., Phila., PA 19118

**Friday, May 19, 1995** - Spring Golf Outing

Westover Inn & Golf Club, Jeffersonville, PA

### Members In the News

#### Mike Tantala Skillful As An Active Student Chapter Protagonist

Michael W. Tantala, a first year C.E. student at the University of Pennsylvania, and son of Past President (1986-1987) of the Phila. Section, ASCE, Albert M. Tantala, P.E., has distinguished himself as a rising star of the future in his chosen profession. Mike recently represented the ASCE Student Chapter of Penn (along with Chapter Treasurer Glenn Standifer and member Clayton Lane) at the 1995 ASCE Workshop for Student Chapter Leaders (WSCL) program in Washington, D.C., where he was provided with the excellent opportunity to meet National ASCE Officers and his peers representing their Student Chapters

and Clubs. The comprehensive Conference included briefings by the Chapter representatives about their schools and their ASCE activities and innovations; a Seminar which focused on communications, writing and public speaking; ASCE goals in programs and membership growth; encounter sessions with ASCE National Officers; a panel discussion on "Civil Engineering in the 21st Century: Embarking on a Global Agenda," which addressed concerns, problems and trends for the future Civil Engineer; Management Conferences; and receptions for informal intermingling of the Chapter representatives. In Mike's words: "I left this Conference a better person, with a strong attitude, new ideas, a new motivation, and new friends." Keep up the great work, Mike. We're all rooting for you!

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