

the news



PHILADELPHIA SECTION

AMERICAN SOCIETY OF CIVIL ENGINEERS

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Vol. 70-1

Our 84th Year

October, 1997

OCTOBER DINNER MEETING

Philadelphia Section, American Society of Civil Engineers

THURSDAY, OCTOBER 9, 1997

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: "SEPTA - Visions for the Future"

SPEAKER: John K. Leary, Jr., General Manager, Southeastern Pennsylvania Transportation Authority

RESERVATIONS MUST BE SUBMITTED BY FRIDAY, OCTOBER 3, 1997. Please send your check for the number of attendees @ \$25 per member or guest; \$13 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).

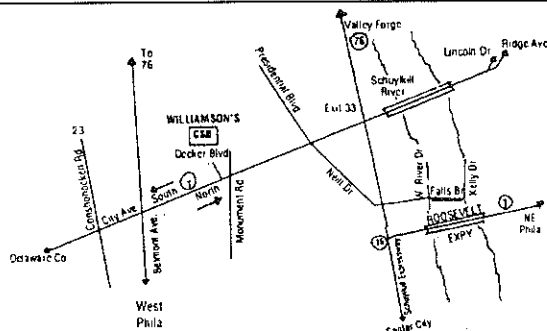
SEPTA General Manager **John K. Leary, Jr.** will discuss his vision for the Authority, and how SEPTA's Capital Program fits into that vision. Highlighted during Mr. Leary's address will be the status of SEPTA's operating and capital budgets, development of a Strategic Development Plan, and upcoming capital projects. In particular, Mr. Leary will discuss the reconstruction of the Market Street side of the Market-Frankford Subway Elevated.

John K. Leary, Jr., joined the Southeastern Pennsylvania Transportation Authority (SEPTA) as its General Manager in February, 1997, after serving seven years as Executive Director/Chief Executive Officer of St. Louis' Bi-State Development Agency.

In St. Louis, Mr. Leary is credited with restructuring the Agency's organization and assembling a strong management team that succeeded in changing the public's view of transit into that of an efficient and positive community asset. Doing so required the building of both new public transportation constituencies and community partnerships with business groups, elected officials, labor unions and the media, among others.

Bi-State achieved financial stability during Mr. Leary's tenure. This was accomplished through the introduction of management initiatives creating enhanced operating efficiencies; the expansion of revenues through innovative financing; the introduction of outsourcing; and passage of Proposition M, a tax referendum providing new funding for transit operations and rail expansion.

(Continued on Page 2)



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

TECHNICAL GROUP ACTIVITIES

**Geotechnical and Environmental/
Water Resources Group**

(Combined Program for 1997-98)

October Meeting

DATE: Tuesday, October 21, 1997 - 7:00 PM

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

SUBJECT: State of the Art in Grouting

SPEAKER: Michael Byle, Gannett Fleming, Consulting Engineers

For further information, please contact **Dr. Joseph P. Martin**, Dept. of Civil & arch. Eng'g., Drexel University, Philadelphia, PA 19104, (215) 895-2363.

Construction Group

October Luncheon Meeting

DATE: Thursday, October 23, 1997 - 12:00 noon - Cost \$15.00 per plate

LOCATION: Villa DiRoma, 923 South 9th St., Phila.

SUBJECT: Reconstruction of 9th Street Through The Italian Market

SPEAKER: Lawrence J. Bender, Jr., P.E., Asst. Chief Engineer, Bureau of Highways, Phila. Department of Streets

Larry Bender will describe the challenges faced by the City for the reconstruction of 9th Street through the Italian Market. The Italian Market is an active commercial center in South Philadelphia, with numerous sidewalk vendors who sell their produce on a daily basis. The challenge was to minimize disruption to the business area, while providing the much needed reconstruction of 9th Street through the area. Please contact **Brian A. Stover**, Chairman, Structural Group, at (215) 922-8080 or Larry Bender at (215) 686-5505 for reservations.

(Continued on Page 2)

*Living is just getting ready to
be dead a long time.*

-William Faulkner



THE PRESIDENT'S MESSAGE

Welcome to our 1997-98 season. Our Board of Directors and Section Officers have been busy this summer lining up a great schedule of events for this year. Two new events this year are a Student Conference in November, and the return of the Concrete Canoe Race in April. This past June the National Board Meetings were held here in Philadelphia and while they were in town we held a dedication ceremony of the bronze plaque designating the William Penn City Plan as a National Historic Civil Engineering Landmark. The plaque is located at the SW corner of Logan Square (19th & Benjamin Franklin Parkway) where

Race St. comes into the circle. I encourage everyone to stop by to see this wonderful monument to Civil Engineering.

My goal this year is to get more people talking about ASCE and Civil Engineering. I'm sure we've all been asked, "What does a Civil Engineer do?" and "Can you sign plans like an architect?" If we don't make it known who we are and what we do, no one else will, and our image will never improve. We got a great start with the dedication ceremony; there was a film clip on Channel 6 News and a front page article in the Inquirer. Our mural project (managed by the YMF and started under Al Zion's presidency) will also give us more of the public exposure that we need. In order to continue on toward our goal we must start within our Section. Public acknowledgment of those who volunteer and peer recognition, not peer pressure, inspire people into action. Employers can also help by encouraging employees, and allowing them time during the workday to attend meetings, work on ASCE business, or to speak at local schools.

We must also make sure that the Students, Younger Members and new members feel at home at our meetings. Our meetings are a great place to recruit new engineering talent, so let's take a minute at the meetings to introduce ourselves to the Students and Younger Members. They benefit from our experience and advice, and we get the opportunity to recruit some of the best new talent out there.

My job as President is to serve the Section and the Society to the best of my ability. The more feedback that I get from our Membership, the better I can serve the Section. I am looking forward to hearing your comments, questions, criticisms, and suggestions, and I will personally respond to each message I get. If there are issues out there that you think that ASCE should be involved in, please let me know. I can be reached by any of the following means:

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

Phone: (215) 686-5573

Fax: (215) 686-5059

E-mail: darin.gatti@phila.gov

I am looking forward to a great year for our Section, and to hearing from all of our members.

Sincerely, Darin L. Gatti, P.E., President, Philadelphia Section, ASCE

October Dinner Meeting

(Continued from Page 1)

Mr. Leary guided the engineering and construction of St. Louis' new \$450 million light rail system, with the project completed on time and within budget. He also redesigned the region's bus network to create a fully integrated system. As a result of these initiatives, ridership growth exceeded all expectations. In addition, Mr. Leary successfully negotiated three consecutive labor contracts with the Amalgamated Transit Union.

Throughout his career, Mr. Leary has received numerous honors, including the American Public Transit Association's (APTA) Minority & Women Advancement Award in 1996. In addition, in 1995, APTA selected Bi-State for the Outstanding Achievement Award among the nation's large transit systems.

Prior to joining Bi-State, Mr. Leary served 24 years with the Massachusetts Bay Transportation Authority (MBTA) in Boston. He began his career there as a train operator and rose through the ranks to become Assistant Director of Construction, then Deputy Director and Chief of Staff for Operations, and finally Deputy General Manager for Operations.

Mr. Leary is a native of Boston and received his Bachelor of Science degree in Business Administration from Northeastern University in 1971, where he later pursued post graduate study in Public Administration. He also participated in

the executive management program at Pennsylvania State University.

Currently serving on the Board of the American Public Transit Association, while in St. Louis, Mr. Leary was a Board Member of the American Red Cross Bi-State Chapter, Missouri Goodwill Industries and the LaCade Landing Redevelopment Corporation. In addition, he served as president of the Missouri Public Transit Association.

Technical Group Activities

(Continued from Page 1)

Structural Group

Joint Meeting with October Section Meeting of the Lehigh Valley Section, ASCE

DATE: Tuesday, October 14, 1997 - Social Hour - 6:00 PM; Dinner - 7:00 PM; Presentation - 8:00 PM

LOCATION: Meyer's Family Restaurant, Route 309, Quakertown, PA (one mile north of Rts. 309/663, 313 intersection)

SUBJECT: Design and Construction of China's Tallest Building - The 88-story Jin Mao Tower, Shanghai.

SPEAKER: Mark Sarkisian, P.E., S.E., Associate Partner, Skidmore, Owings & Merrill LLP, Chicago, IL

For details and reservations, please contact: Bob Alpago at (610) 317-0275, Arif Fazil at (610) 865-3000 or Rich Roberts, Chairman, Structural Group, Phila. Section, ASCE at (215) 222-3000.

Transportation Group

The Transportation Group is tentatively making arrangements to hold three meetings this season. Help is definitely needed in finalizing a program. Also, the group is looking for additional members. Anyone interested in either providing possible program topics and/or joining the Group, please contact Chris Rood, P.E., Chairman, Transportation Group at (215) 580-7586.

RESOLVE TO ATTEND ALL MONTHLY SECTION MEETINGS AND FUNCTIONS... AND INVITE YOUR CLIENTS, ASSOCIATES AND COLLEAGUES TO COME ALONG WITH YOU!

PHILA. SECTION, ASCE OFFICERS 1997-1998

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**COPY DEADLINE FOR
NOVEMBER 1997 ISSUE
OCTOBER 9, 1997**

YOUNGER MEMBER FORUM NEWS

by Christopher Menna, Forum Editor

The Younger Member Forum (YMF) current membership includes college students, recent graduates, and young Registered Professional Engineers who are 35 years of age and under. The objectives of this group are: 1) To provide networking opportunities, 2) To interact with schools and the general public to promote Civil Engineering, and 3) To enhance career development.

Young engineers or college students who would like to become part of the YMF please contact **Carol Martsoff**, Parsons Brinkerhoff at (215) 790-2319.

Upcoming Events

Our next Habitat for Humanity workday will be held on **Saturday, October 25, 1997** at 9:00AM at the Chester City, Delaware County Site. This is a joint effort of the Villanova Student Chapter and the YMF. We hope that as many people as possible can attend. It is a way to have some fun and to do something rewarding at the same time. The registration deadline for this activity is **October 14, 1997**. If you would like to register or obtain additional information, please call **Orion Graham** at (610) 519-0316. When calling, please mention any construction experience that you may have.

On **Saturday, November 8, 1997**, the YMF will participate in a Student Conference, to be held at the University of Pennsylvania. Students from all six engineering schools in District 4 will be invited, as well as various featured speakers. All YMF members and Phila. Section members are strongly encouraged to attend this first-of-a-kind event. Anyone interested should contact **Mike Tantala**, President of the PA ASCE Student Chapter, at (215) 289-4600 for more information.

Past Accomplishments

The YMF has stayed active these past few months. Elections for our 1997-98 officers were held during the May meeting at the Ho Sai Gai Restaurant in Chinatown. We are proud to announce election of the following officers: **Yael Heller**, of Geraghty & Miller, Inc., President; **John Zarksy**, Parsons Brinkerhoff, Vice President; **Christina Berardi**, NTH Consultants, Vice President for College Contacts; **Jeff Chenault**, Frederic R. Harris, Vice President for Technical Groups; **Carol Martsoff**, Parsons Brinkerhoff, Secretary; and **Bernadette Caparas**, Dupont, Treasurer. Also serving as Officers are Editor **Chris Menna**, Phila. Streets Department; and Past President **David Hanly**, Frederic R. Harris.

Two new Officer positions resulted from this meeting. The first is the Vice President for College Contacts position. This person is charged with coordinating events with an appointed YMF representative for each local engineering school. One joint meeting between the YMF and each college will be planned before the end of Summer 1998. Currently there is a YMF representative for Villanova, Temple, Drexel, and the University of Pennsylvania. If you are interested in representing Swarthmore College or Widener University in this program call **Christina Berardi** at (610) 524-2300.

PHILA. SECTION, ASCE GOLF OUTING

The 1997 - Second Annual - Philadelphia Section, ASCE Golf Outing will take place on **Wednesday, October 15, 1997**, at the **Westover Inn and Golf Club**, South Schuylkill Ave., Norristown, PA.

Tee times start at 12:30 PM. Cost for golf and dinner is \$65.00 per person, which includes greens fee, golf cart, beer and soda, and a sit-down dinner. Cost for golf alone is \$35.00; dinner alone, \$30.00.

For full information, foursome and dinner preference selections, please call Philadelphia Section Secretary **Greg Yates** or Membership Secretary **Sean Markey**, at Frederic R. Harris, Inc., (215) 735-0832. Tee times will then be assigned.

The second newly created position is Vice President for Technical Groups. This person is charged with coordinating events with an appointed YMF representative for each Phila. Section Technical Group. One joint meeting between the YMF and each Technical Group will be planned before the end of June 1998. We encourage all Younger Members to attend these meetings, whether they are related to your field or not. Currently, there is a YMF representative for each Technical Group, except for Construction Management. Call **Jeff Chenault** at (215) 735-0832 for more information or if you are interested in filling this last available position.

On **Saturday, June 28, 1997**, several YMF members helped out at the Habitat for Humanity Norristown Site. Rehabilitation work was conducted in three rowhomes and entailed closet carpentry work, mixing concrete, installing roofing, aluminum siding, and windows, and loading a truck with construction debris. The group worked from 8:00 AM to 4:00 PM side by side with other organizations, including some Villanova students. Overall, it was a very rewarding hands-on experience and it gave individuals a chance to put their engineering skills to use.

The YMF met for its summer Happy Hour on July 23rd at the River Deck Cafe in Manayunk. After some socializing, tentative plans for the upcoming year were announced. The main purpose of the meeting was to introduce YMF members to the ASCE Key Contact Program, which keeps our members up to date on the critical national issues affecting Civil Engineers. If you missed this meeting, and would like more information on the Key Contact Program, call **Yael Heller** at (215) 752-6840.

The first meeting of the new year was held on **September 23, 1997** at the Cherry Street Tavern in Center City. After the social hour, **Ms. Emily Bittenbender**, Director of the City of Philadelphia Capital Programs Office, discussed the contrast between working for a private organization and a government agency. We would especially like to thank Ms. Bittenbender for participating in our guest speaker program. Following the presentation, our newly elected officers reviewed their agenda for the year.

SECTION PARTICIPATES IN SCIENCE FAIR

By Chris Rood, P.E., Section Director

The Philadelphia Section, ASCE, for the third successive year sponsored Special Awards in the 1997 Delaware Valley Science Fair held on April 2, 1997 at the Fort Washington Expo. Led by Section Director, **Chris L. Rood, P.E.**, the team of judges representing our Section examined over 800 entries from area school students in Grades 6 thru 12 looking for the top projects relating to the Civil Engineering field.

The Section presented four awards. First and Second place awards were presented in both Grades 6 thru 8 and Grades 9 thru 12 categories. The Second place awards consisted of a plaque and a \$50 check. These were presented to **Nathan Quirk** for his project entitled "What Is the Most Effective Way to Eliminate Toxins in Aquaculture Waste Water" and **Leah Horowitz** for her project entitled "The Rate of Water Flow from Contaminant Pool to Water Source." The First place awards consisted of a plaque, a \$100 check and complimentary tickets for the student and his or her parents to attend our Section's Spring Dinner Dance. These were presented to **Erika Marion**, an 8th grader from St. Agnes High School in West Chester, PA for her project entitled "The Strength of Various Concrete Mixture - Phase II" and to **Robert D'Onofrio**, a 9th grader from Methaton High School in Providence, PA for his project entitled "Which Beam Design has the Least Deflection." All four of these projects were exceptional and well presented by the students.

The Phila. Section anticipates participating in the 1998 Science Fairs to be held in April, 1998. If anyone is interested in volunteering to be a judge for the Section's Awards or being one of the over 500 volunteer judges needed for the overall Fair Judging, contact Section Director, **Mr. Chris Rood** at (215) 580-7586.

KOERNER GEOSYNTHETIC LECTURE

Robert M. Koerner, Ph.D., P.E., Phila. Section, ASCE Past President (1975-76), H.L. Bowman Professor of Civil Engineering, and Director of the Geosynthetic Research Institute, Drexel University, will be Principal Speaker at a Dinner Meeting of the Philadelphia Post, Society of American Military Engineers, on **Wednesday, October 8, 1997**, at the Harbor League Club, Camden, NJ. The Dinner Meeting will be preceded by a 2 1/2 hour Workshop, starting at 3:00 PM, on the subject: "Engineering Applications of Geosynthetics." Dr. Koerner will lead a panel discussion in the Workshop. His topic at the Dinner Meeting will be: "The Evolution of Geosynthetics."

The Workshop is being sponsored by ACF Environmental and NTH Consultants, Ltd. Cost of the Workshop and Dinner is \$40.00 (Workshop only, \$20.00).

For full details and reservations, please call **Rocky Romagnoli** at (215) 656-6729.

APRIL JOINT DINNER MEETING

April 10, 1997

Williamson's City Line, Phila., PA

FastShip – A Revolution in Shipping and Logistics

By Bill Richards, Staff Writer

The Annual Joint Dinner Meeting of the Phila. Section, ASCE and the Philadelphia Post, Society of American Military Engineers (S.A.M.E.), brought to a celebrated conclusion the 1996-97 series of the Section's regular monthly technical presentations. An audience of about 85 members and guests from the Phila. Section, ASCE and from SAME enjoyed an excellent presentation by **Dr. David Giles**, newly elected President of FastShip Atlantic, Inc., Alexandria, VA, on a pioneering topic (and in the King's English), the new FastShip concept. ASCE Phila. Section President **Al Zion** presided over the final meeting of his illustrious term.

University of Pennsylvania Night – Mike Tantala Featured

In keeping with its policy of honoring ASCE Student Chapters of area colleges and universities, the spotlight of the meeting was on the University of Pennsylvania. After business announcements appropriate to the two Societies by Phila. Section President Zion and his associates, and S.A.M.E. President **Paul Brott**, University of PA Student Chapter President **Michael Tantala**, who was honored by the Phila. Section as a recipient of a 1997 Section scholarship, thanked his hosts for their courtesies. He introduced his fellow officers of Penn's Student Chapter: Vice President, **Toni Loiacano**; Treasurer, **Barry Levin**; Secretary, **Daniel Chung**; Faculty Advisor, **Dr. John Lepore, P.E.**; and Department of Systems Head **Dr. Nelson Dorney**. Also in attendance was Civil Engineering student **James Guest**.

Michael summarized the impressive agenda of his very active Student Chapter, which features noted speakers at its monthly meetings, as well as field trips to major public works projects. An important and impressive Chapter activity has been the building of an urban neighborhood playground at the Locke Elementary School, an ambitious West Phila. YMCA project. The Penn students did the design, calculations and analyses. They addressed successfully the logistics of the legal, environmental, City zoning and building permits requirements of the project. Construction of the project began on April 5, 1997. The endeavor was a learning experience on the practical side of engineering projects.

Michael Tantala, son of Phila. Section, ASCE Past President **Albert M. Tantala** (1986-87), explained the Civil Engineering Systems program, which was instituted at Penn several years ago. Basically, it encompasses most of the engineering disciplines, including civil, mechanical, structural, electrical, chemical and environmental engineering, interacting the technological aspects of the sciences with sociological and economic factors and influences.

The Phila. Section commends Penn's Student Chapter for the great playground project and its impressive agenda of activities.

David Giles Speaks

Following the business announcements, Construction Technical Group Chairman **Brian Stover** introduced the featured speaker, **Mr. David Giles**, President of FastShip Atlantic, Inc. (substituting for the originally scheduled speaker, Mr. Collister Johnson, and inventor of the FastShip Technology). A graduate of Winchester College, U.K. with a Masters Degree from New College, Oxford University.

Initially, David described the similarities of air and water propulsion and how his aeronautics background was helpful in the development of new ship designs and propulsion systems. He reviewed how the command of the sea, and the speed of its fleets were instrumental in Great Britain's past dominance of commercial shipping. That position stood until the emergence in global logistics, but air freight has the competitive edge in time of delivery. Oceanic shipping is measured in weeks, rather than days, and is subject to delays by weather. Air cargo is only limited by size restrictions and cost.

Status of Oceanic Cargo Movement

Ninety-five percent of global freight movement occurs by sea. Yet the speed of delivery remains virtually the same as at the beginning of the century. The times it takes for oceanic shipping is determined by five factors"

1. movement from origin by inland carrier to port.
2. being loaded (by crane) onto a ship,
3. oversea travel,
4. being unloaded (by crane) at a port,
5. movement to destination by inland carrier.

Parameters of Vessel Speed

At this point, Mr. Giles turned to a discussion of the factors impacting shipping speed, notably the details of the hydraulic and energy requirements in overcoming waves. In addition to oceanic waves, ships generate their own waves. The ship's stern sinks into the wake of its own wave, generating drag. The speed-to-length ratio is a measure of this pressure drag. For conventional freighters, pressure drag becomes prohibitive at 26 knots. Reduced hull columns, which also means less freight can be carried, have achieved 30 knots. That speed has become a traditionally-held limitation to oceanic shipping.

Two propulsion breakthroughs have allowed for breaking the 30 knot barrier, gas turbines and water jets. The gas turbine provides great power with a smaller size requirement, and is also environmentally preferable to diesel engines. Water jets are driven by separate engines propelling the ship, without propellers, and their efficiency actually increases above 30 knots. Gas turbines and/or water jets are being considered in three alternatives, multi-hull ships, slender mono-hull ships, and semi-planning mono-hull ships.

Multiple hulls, such as catamarans, use the hull spacing to provide stability, while allowing for a lighter ship with less drag. They have a low power requirement for high speeds. Their disadvantage is the stresses on the cantilevered structure between hulls.

The slender mono-hull demonstrates a low power requirement to achieve higher speeds in calm water. Recent developments are pushing the envelope on lowering pressure drag. However, these vessels are extremely sensitive to weather with severe bow slamming in high waves.

The FastShip Concept

The semi-planning mono-hull ship is the category which includes FastShip. The aft portion of the hull is designed to be slightly concave, creating an artificial wave crest at the stern. This eliminates or mitigates the stern sinking into its own wake. The result, according to Mr. Giles, is practical speeds up to 45 knots while maintaining nearly the same interior hull volume for cargo as traditional vessels. This ship is actually more stable the faster that it goes, and provides the ideal environmental for using water jets and eliminating propellers.

The primary disadvantage to the FastShip is the power requirement to maintain the speed and, therefore, the fuel requirement and cost. It becomes advantageous when the decrease in transportation time outweighs the additional fuel costs. Since time is the advantage of FastShip, its designers have also worked to reduce the loading and unloading time component. By use of intermodal shipping containers, and horizontal loading and unloading from the stern using belts and vehicles, and using port facilities designed to handle this, FastShip is eliminating the need for cranes. The target is complete loading and unloading in a port in five hours rather than the usual 48 hours. This is where the Philadelphia connection comes into play. Philadelphia has the infrastructure that makes it FastShip's targeted North American port. The highways and railroads are here. An expanding and underutilized airport is an attraction. And, the converted Navy Yard site provides FastShip with access to all of these. FastShip is planning an initial fleet of four ships operating between Philadelphia and Belgium. The goal is a fleet of eight with daily cross-Atlantic departures and arrivals in each direction.

Question and Answer Session

Mr. Giles' excellent presentation was well-received by the attentive audience. A comprehensive series of probing questions resulted, demonstrating the interest in the subject. Many of these dealt with the design of the ship and the demonstration of the technology. Mr. Giles described the exhaustive series of laboratory and field testing that has occurred. In response to schedule questions, he indicated that approval of the structural design review by authorities is due October 1st 1997, and that investors are being lined up so an initial fleet order can go to the shipyards after that. The audience showed its appreciation and President Al Zion provided the speaker with the Phila. Section's Gift of Appreciation for his excellent entertaining and informative evening.

SECTION AWARDS PRESENTED AT DINNER DANCE

The Phila. Section, ASCE Awards for the 1996-97 season were presented at the Section's Annual Dinner Dance on Friday, May 2, 1997, at the Sugarloaf Conference Center in Chestnut Hill. Close to 150 Section members and spouses participated in the Social, which included the traditional induction of new Officers and Board Members. Past President and current Delaware Valley Engineer of the Year **Joe Syrnick** presented the oath of office to the newly-inducted officers.

The recipients of Section awards were cited with the audio-slide show that has become a tradition at the Social over the past several years. A total of eight individuals were recognized for honors.

Philadelphia Civil Engineer of the Year

Susan K. Lior is this year's recipient of the Section's highest honor, the Philadelphia Civil Engineer of the Year.

Sue is a Deputy Commissioner in the Philadelphia Water Department and heads the Department's Information Science and Technology branch. She has been in this position for the past year and is responsible for the development of the Department's geographic information system (GIS) production as well as the management of all computer records and networks. Prior to this, Sue worked in several firms, including two which she founded, in project and infrastructure management, planning and budgeting. Sue has been active in the Philadelphia Section for many years, having served on many committees, and is a Past President of the Section (1988-1989), the first woman to hold this post. She also has been a member of several National ASCE committees.

Sue is a graduate of the State University of New York at Oswego. She earned her Masters degree at the University of South Florida. She lives in Center City with her daughter, Nina.

Young Civil Engineer of the Year

Allen Cadden is this year's winner of this award. He is the manager of geotechnical services at Schnabel Engineering in West Chester and is involved with geotechnical and foundation aspects of various structure, dam and tunnel projects.

Allen received both Bachelor's and Master's degrees from Virginia Tech. He has been an extremely active member of the Section's Younger Member Forum and has served a key role in the recent reactivation of the Forum. He also is a current member of the Section Board of Directors.

Allen and his family live in West Chester.

Government Service Award

Andrew L. Warren, the District Administrator of District 6 of the Pennsylvania Department of Transportation, was presented this award.

Andy directs the operations of the Department's largest Engineering District, which encompasses the five-county Philadelphia metropolitan area. He has helped to move numerous projects to implementation during his three years at the Department. Prior to this appointment, he served as a Bucks County Commissioner for 15

years and was a board member of SEPTA and the Delaware Valley Regional Planning Commission.

Andy earned his Bachelor's degree at Westminster College and a Master degree from Trenton State College. He and his wife, Shelley, live in Newtown, Bucks County.

Geotechnical Engineer of the Year

This year's awardee is **Dr. Arthur H. Dvinoff**. Art is a Principal Engineer with GeoSystems Consultants in Fort Washington and is involved with the application of geosynthetics and geotechnical evaluations and design. He has worked on numerous local projects throughout his 26 year career.

Art received a Bachelor's degree from the Drexel Institute of Technology and subsequent Masters and Doctorate degrees from Purdue University. He is the current President of the Philadelphia Chapter of the Consulting Engineers Council of Pennsylvania. He and his family reside in Northeast Philadelphia.

Transportation Engineer of the Year

This year's awardee is **John Smyth**, the Vice President of Boles Smyth Associates of Philadelphia. His efforts in highway and transportation facility design, concept development, and preparation of environmental impact documents have helped advance such significant projects as the Blue Route, Vine Street Expressway, and the I-95 Center City Access Ramps.

Jack is a graduate of Pennsylvania State University, where he earned a Bachelor of Science in Civil Engineering, with a Masters degree from the Drexel Institute of Technology. He and his family are residents of Aston, Delaware County.

Structural Engineer of the Year

David Van Ocker was cited as the recipient of this honor. Dave is the President of Christakis Van Ocker Morrison, a firm which deals primarily in building diagnostics and structural restoration, repair and evaluation. He helped found the firm and has served in this capacity for the past two years.

Dave is a graduate of Spring Garden College. He has served on the Section Board and as Chair of the Structural Technical Group, as well as the President of the Local Chapter of the American Concrete Institute. He and his family live in Berwyn.

Philadelphia History and Heritage Award

In an unusual move, the Section found it necessary to cite two individuals for this honor this year, mainly due to the efforts of these young men expended in submitting the Philadelphia City Plan for recognition as a National Historic Civil Engineering Landmark. You may have heard about this or seen the commemorative plaque in Logan Square near the Academy of Natural Science in Center City. The two awardees primarily responsible for this recognition are **David Hanly** and **Christopher Menna**.

Dave Hanly is a Structural Engineer with Fredric R. Harris' office in Center City. He is a graduate of Temple University (magna cum laude, by the way) and has been quite active in the

Section's Younger Member Forum, having served last year as its President. He and his wife live in Center City.

Chris Menna recently began employment as a Graduate Engineer with the Bridge Section of the Philadelphia Department of Streets after several years with two other firms. He, too, is a Temple graduate, and is also an active member of the Younger Member Forum, where he is its Editor. He resides in South Philadelphia.

The successful preparation and presentation of the awards was, as usual, the responsibility of the Section's Awards Committee, and the combined efforts of **Sue Lior**, **Al Zion**, **Bill Thomsen**, **John Durrant** and **Bob Wright**. The Dinner Dance itself, with this year's Polynesian theme resulting in lei-decorated participants (and our esteemed Editor sporting a grass skirt for at least part of the festivities), was thoroughly enjoyed by all, thanks to the tireless efforts of Section President-Elect **Sandra May**. The Section offers its collective thanks for another job well done on this for 1996-97.

The 1997-98 Dinner Dance is tentatively scheduled for May 1, 1998. Watch THE NEWS for more details.

1998 DANIEL W. MEAD CONTEST FOR YOUNGER MEMBERS

The Daniel W. Mead Prize for Younger Members was established in 1939 to honor the memory and accomplishments of the 67th President of the American Society of Civil Engineers. The talents of many of the leaders of the profession were first recognized in previous contests for this significant professional honor. The current contest provides another opportunity for alert young civil engineers to further the professional development and gain national attention.

The paper must be written on:

Hospital Part 2

Prologue: In the 1997 Mead Prize Contest, a developer was trying to build a hospital in a third world country. She was planning to dispose of the toxins and low level radioactive waste in an unsafe landfill that would endanger the water supply of a local community. No local laws prevented her from this and the local people wanted the hospital because of the jobs it would create. Would you have participated in the design of the project for the developer knowing the risks?

It is now summer of 1997, and the hospital is under construction. With support from ASCE National, you were able to get the U.N. to force the developer to build an incinerator and a small landfill for disposal of the waste. She is not pleased, and you are chosen to be one of the field engineers. The contractor's steel supplier has submitted shop drawings which are grossly incorrect. The structural steel certifications appear to be phony. The first batch of concrete delivered to the site does not match the design mix specification which had been submitted and approved. While you were out sick for three days, you suspect that many piles were not driven or were driven in the wrong locations. You rationalize that walking off

(Continued on page 6)

BLAIR BIRDSALL

Blair Birdsall, noted bridge engineer and Past President of the Philadelphia Section, ASCE (1955-56), died recently. He was 90. Your editor is particularly saddened at Blair's passing, as they were for many decades, esteemed professional associates and personal friends.

Mr. Birdsall graduated from Princeton University in 1929 and worked for the John A. Roebling & Sons Co. shortly thereafter. He ultimately became Chief Engineer and General Manager of the Bridge Division of that firm.

He later joined the New York firm of Steinman, Boynton, Gronquist and London where he became Managing Partner in 1976.

During his career he worked on many large bridge projects including the Golden Gate Bridge, the Chesapeake Bay Bridge, the Forth Road Bridge in England, the San Marcos Bridge in El Salvador and the second Tacoma Narrows Bridge. At the time of his death he was still active, serving as a consultant on the Great Belt East Bridge in Denmark.

He received many honors during his career, including Honorary Membership in ASCE, Engineer of the Year honors, and the John A. Roebling Award.

1998 Daniel W. Mead Contest

(Continued from Page 5)

the job would certainly allow the contractor to build a substandard building. The project is months behind schedule, and it appears as though the funding will be lost soon.

If you stop the project for safety and construction quality reasons, the funding will be stopped and the project will not be able to continue. Your letters and meetings with the village councils have proved fruitless and made you very unpopular. The local people are pleased with the jobs that the hospital has created and are desperate for the increased health care it will bring. Already, there is overwhelming support from surrounding villages, and new businesses are beginning to open. It is estimated that 1000's of lives will be saved.

Your company has the patent on a new type of insulated precast building construction which is going to revolutionize the industry. It allows building schedules to be shortened by 20 percent, cuts construction costs by 20 percent, and cuts heating and cooling costs by 18 percent per year. The current design of the hospital does not use the new precast system as it is only being sold to developers who will pay the higher cost which will help defray the development costs your company has invested. The project will be saved and the hospital constructed safely if you take it upon yourself to change the design in the field incorporating the new design.

Mead Prize Topic Question: "Is it ethical to use the new patented construction method for the construction of the hospital?"

1998 Daniel W. Mead Contest

(Continued)

RULES:

- Authors must be Associate Members, Members or Affiliates of the Society 35 years of age or less on February 1, 1998.
- Only one person can write each paper.
- Each Section or Branch can submit only one paper.
- Paper must contain no more than 2,000 words.
- One winner may be selected from each of four Zones and International membership of the Society.
- The National winner, selected from the Zonal winners, will receive a wall plaque and a certificate.
- The national winner may be invited to present his/her paper at the ASCE National Convention, Boston, Massachusetts, in October 1998.
- The paper by the national winner will be submitted for publication in Civil Engineering.
- By February 1, 1998, two copies of each paper must be submitted through the Section or Branch Secretary to: ASCE Awards Department, 1015 15th St. NW, Suite 600, Washington, DC 20005.

Philadelphia Section Younger Members are urged to get to work on the Mead Competition. We are proud of our past winners and want to continue to be in the forefront.

Past Mead Competition winners from the Philadelphia Section are:

- 1974 - John Spitko, National Award
- 1977 - Joseph R. Syrnick, Zone I Award
- 1978 - David S. Shaw, Zone I Award
- 1979 - Haym Bernaroya, Zone I Award
- 1983 - Greg Neiderer, Zone III Award
- 1997 - Michael Tantara, Zone I Award

LANDMARK AWARD

(Continued from Page 7)

Mr. Robin extended highest praise to two distinguished members of the Phila. Section's dynamic affiliate, its Younger Member Forum: David Hanly, President of the YMF, and Chris Menna, the YMF Publications Editor. Both these men researched, collated and presented to the appropriate National ASCE Committee the nomination of the City Plan of Philadelphia as a National Historic Civil Engineering Landmark. He emphasized that the City Plan was the first in the United States to provide for long-term urban growth. These features inspired the planners of many cities to adopt the Philadelphia Plan as a model.

National ASCE President Edward O. Groff, described the Landmark Award program in detail from the National perspective as opposed to the achievements which Mr. Robin enumerated. He, too, congratulated Messrs. Hanly and Menna for their outstanding preparation and presentation of the nomination. He also praised the City's political officials, the Planning Commission and Public Works Departments for their talented commissioners and employees in their labors to advance the admirable urban growth and achievements of objectives, particularly in recent years.

A beautiful reception for all the invited guests followed the dedication ceremonies, at the nearby Ritz-Carlton hotel.

THE 13TH INTERNATIONAL CONFERENCE ON SOLID WASTE TECHNOLOGY AND MANAGEMENT

Sponsored by *The Journal of Solid Waste Technology and Management*, the University of Pennsylvania and Widener University, the Conference will be held on **November 16-19, 1997** at the Warwick Hotel, Rittenhouse Square, Philadelphia, PA. A "must see" event for researchers, government officials, consultants and solid waste professionals. The Conference, one of the world's major solid waste meetings, will feature over 120 speakers from all six continents. It will feature both technical and non-technical subjects in areas of interest on the latest advances in the field.

A summary of Working Sessions include:

Monday, November 17

Landfill Gas Monitoring and Control; Medical Waste Management; Landfill Leachate Treatment and Water Contamination; Biological and Land Treatment; Slag and Ash Wastes; Durables Solid Waste Technology and Management; Innovations in Landfilling; Landfill Siting and Policy

Tuesday, November 18

Solid Waste Performance Evaluation and Planning; Thermal Treatment of Wastes 2; Recycling Technology; Landfill Gas Control and Utilization; Research Advances I; Landfill Closure,

Wednesday, November 19

Waste Policy and Public and Business Involvement; Landfill Stabilization, Settlement Properties; Research Advances 2; Collection Vehicles and Routing; Landfill Liners and Covers; Sludge, Dredging and Mining Wastes

To receive a printed copy of the detailed agenda, or for more information, please contact: The Journal of Solid Waste Technology and Management, Department of Civil Engineering, Widener University, One University Place, Chester, PA 19013-5792, phone (610) 499-4042; fax (610) 499-4059. The Conference agenda may be viewed on the Internet at www.widener.edu/solid.waste

ACI SEMINAR

STRUCTURAL LIGHTWEIGHT CONCRETE

The Delaware Valley Chapter, American Concrete Institute (ACI) is sponsoring a Seminar on Structural Lightweight Concrete on **Tuesday, October 28, 1997**, at Holiday Inn, King of Prussia, PA, (610) 265-7500. Registration begins at 8 AM and the Seminar will begin at 8:30 AM and end at 5:00 PM. Continental breakfast, lunch and coffee breaks are included in registration fee.

Within the scope of the main theme of "How to Design, Specify and Construct Structural Concrete Using Lightweight Aggregates", a sampling of the important items the Seminar will cover are:

- A detailed overview of the differences between lightweight aggregate concrete and normal weight concrete.
- Why lightweight concrete should be used rather than normal weight concrete for certain applications

ACI Seminar

(Continued from Page 6)

- Examination and analysis of real problems of light weight concrete structures
- Why lightweight concrete, a porous material, has permeability of the same order or even less than normal weight concrete.
- How to specify lightweight concrete in measurable parameters and ensure that the requirements are satisfied.
- The use of lightweight concrete in severe environments

Valuable publications on the subject will be given out at no extra cost. Leading experts in lightweight concrete will be the Seminar instructors. Subjects to be discussed include: history and challenges, current practice and future trends in lightweight concrete; production technology; mixing, placing and finishing, quality control, etc.; properties (compressive, tensile and flexural strength, etc.); long-term performance in severe environments; design, specifications and economics of lightweight concrete structures (floor systems, concrete frames, precast structures, bridge decks, parking garages, and special structures).

Registration fees for the Seminar are: \$334 ACI non-members; \$288 ACI National members; \$175 ACI Chapter Officers; \$98 Students. Complimentary ACI Membership privileges and Continuing Education Units will also be earned by attendees.

For complete details and reservation information, please contact **Helm Wilden, H. Wilden & Associates, (610) 966-3935**.

MEMBERS IN THE NEWS

"J.J." Has A New Job

Phila. Section Treasurer **Jian Jin, P.E.**, familiarly known to his friends and professional associates as "J.J.", has transferred to the position of Project Engineer at Edwards and Kelcey, Inc., Consulting Engineers, West Chester, PA, phone: (610) 701-7000, Fax (610) 696-3550. J.J. was formerly employed as Civil Engineer 2 in the Bridge Division, Bureau of Surveys and Design, Phila. Department of Streets. The Section extends its best wishes to J.J. for success and fulfillment in his new job.

Urban Engineers, Inc. Expands Headquarters

Urban announces its relocation to a new expanded corporate headquarters and the unveiling of its web site, at 539 Walnut Street, 14th Floor, Philadelphia, PA 19106-3685, phone: (215) 922-8080; Fax (215) 922-8082.

Pennoni Associates, Inc. Relocates Offices

Pennoni Associates, Inc. has moved its corporate offices to 3001 Market Street, Philadelphia, PA 19107, phone: (215) 222-3000; Fax: (215) 222-3588.

PHILADELPHIA SECTION, ASCE, LANDMARK AWARD DEDICATED

The Philadelphia Section, ASCE, was signally honored recently when the ASCE National Committee on History and Heritage of American Civil Engineering recommended to the National Board of Direction — and the Board complied — to award the Philadelphia Section's nomination by its History and Heritage Committee of "*The City of Philadelphia City Plan*" as a National Historic Civil Engineering Landmark.

In impressive ceremonies, covered by local television stations and a feature article in the Philadelphia Inquirer, held at Logan Square and the Benjamin Franklin Parkway on July 18, 1997, a beautiful bronze plaque was mounted on a specially built stone pedestal at the Logan Square site. At the ceremonies, the plaque was formally presented by National ASCE President, **Edward O. Groff**, and accepted by Philadelphia Commissioner of Streets **Lawrence M. Moy**. Attendee's included, in addition to President Groff, honorable members of the ASCE National Board of Direction; Philadelphia City Planning Commission Executive Director **Barbara Kaplan**, representing Philadelphia Mayor **Edward Rendell**, who was unable to attend because of prior commitments; other City Public Works Departments officials; and several officials and members of the Phila. Section, ASCE. Section President **Darin Gatti** presided at the ceremonies.

Director Kaplan expressed the City's pride in receiving the honor, and praised the Phila. Section for its splendid preparation and presentation of the nomination for the Historic Landmark Award. She also extolled the superb planning of William Penn and his Surveyor's Team under the direction of Thomas Holme, who fulfilled Penn's outline of the City Plan in 1682.

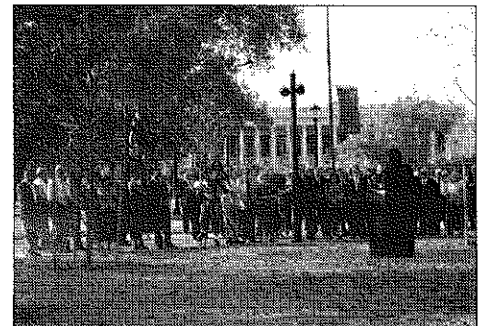
The City Plan of Philadelphia has its roots in 1681, when William Penn inherited the Territory called Pennsylvania from King Charles II of England, who had owed a debt to Penn's father. He founded the City of Philadelphia as Pennsylvania's capital when he arrived in 1682 and created the outline of the City, which was accomplished essentially as we know it today.

Sidney Robin, Chairman of the Phila. Section, ASCE Committee on the History and Heritage of American Civil Engineering, described the history of the National Historic Civil

Engineering Landmark Program, which was established in 1964 to recognize unique and outstanding structural, public and private works, developments, infrastructures, etc., which are at least 50 years old and still in use. Historically significant projects awarded the Historic Landmark recognition include the Golden Gate Bridge in San Francisco; the St. Lawrence Seaway Project; the Mormon Tabernacle, Salt Lake City, Utah; the Brooklyn Bridge, Brooklyn, NY, and many other notable engineering projects.

Mr. Robin described previous Phila. Section ASCE nominations which received the National Landmark Award. These were: 1970 — the **Frankford Avenue Bridge** over Pennypack Creek, Holmesburg, Philadelphia, PA, a three-span, first known stone arch bridge to be built in the United States, still in use; 1974 — **The Philadelphia Municipal Water Supply System** — the first municipal major water works system in the United States to employ steam-powered pumping methods and large-scale steam-driven turbines and water-wheels; and 1977 — **The Walnut Lane Memorial Bridge** over Wissahickon Creek and Lincoln Drive, Upper Germantown, Philadelphia, PA, the first prestressed concrete bridge constructed in the United States.

(Continued on Page 6)



Phila. Section President Darin Gatti addresses crowd at dedication site on Logan Square and Benjamin Franklin Parkway.



ASCE Officials admire Dedication Plaque. From left: Lawrence M. Moy, Phila. Commissioner of Streets, who accepted the plaque for the City; Darin Gatti, President, Phila. Section, ASCE; Sid Robin, Chairman, Phila. Section Committee on History and Heritage of Civil Engineering; Barbara Kaplan, Executive Director, Phila. City Planning Commission, representing Mayor Edward Rendell; and Edward O. Groff, National President, ASCE.

JOIN THE SECTION'S TECHNICAL GROUPS

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IMPORTANT! 1997-1998 MEETING NOTICES

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

ALL DINNER MEETINGS (Except as noted)

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.

NOTE: College Night Assignments to be published next month.

Wednesday, October 8, 1997 - Workshop and Dinner Meeting, Harbor League Club, Camden, NJ, 3:00 PM - Sponsored by S.A.M.E. - Dr. Robert M. Koerner, "The Evolution of Geosynthetics" (See separate article in this issue.)

Thursday, October 9, 1997 - Phila. Section, ASCE Dinner Meeting. See Page 1 for full details.

Wednesday, October 15, 1997 - Golf Outing, Westover Inn and Golf Club. (See separate article in this issue of THE NEWS.)

Saturday, November 8, 1997 - Student Conference - University of Pennsylvania (See details in Younger Member Forum News column in this issue of THE NEWS.)

Thursday, November 13, 1997 - Section Dinner Meeting, Williamson's City Line, "City Hall Renovations."

December, 1997 - No Section activities planned at this time.

Wednesday, January 14, 1998 - Joint Dinner Meeting with Delaware Valley Section, American Society of Highway Engineers (ASHE), and Reading Branch, Phila. Section, ASCE • Holiday Inn, King of Prussia, PA
"Atlantic City Casino Connection and Tunnel"

Wednesday, January 21 and Thursday, January 22, 1998 - City Hall Tours and Luncheons. Times and details to be announced.

Thursday, February 12, 1998 - Joint Dinner Meeting with South Jersey Branch, NJ Section, ASCE - Harbor League Club, Camden, NJ - "Schuylkill River Park and Bulkhead."

Thursday, March 12, 1998 - Joint Dinner Meeting with Delaware Valley Chapter, American Concrete Institute (ACI) • "Fire Damaged Structures - The Meridian Building"
Phila. Section, ASCE Past Presidents Night

Thursday, April 9, 1998 - Joint Dinner Meeting with Phila. Post, Society of American Military Engineers (SAME) • Williamson's City Line • Topic to be announced

Saturday, April 25, 1998 - Reinforced Concrete Canoe Race and Model Steel Bridge Competition. Location and details to be announced.

Friday, May 1, 1998 - Annual Spring Dinner Dance - Sugarloaf Conference Center, Germantown Avenue, Chestnut Hill, PA

William G. Richards, P.E.
Vice President



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