

# 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. 71-1

## Our 85th Year

October, 1998

### OCTOBER JOINT DINNER MEETING

Philadelphia Section, American Society of Civil Engineers  
Delaware Valley Chapter, American Public Works Association (APWA)

## THURSDAY, OCTOBER 15, 1998

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:** "New Starts in the Transportation Equity Act for the 21st Century (TEA-21)"

**SPEAKER:** Nuria I. Fernandez, Deputy Administrator, Federal Transit Administration (FTA)

**SPECIAL FEATURE:** College to be honored to be announced.

**RESERVATIONS MUST BE SUBMITTED BY FRIDAY, OCTOBER 9, 1998.** 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).

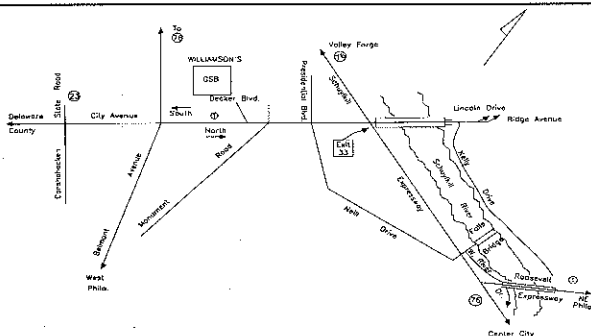
Nuria Fernandez knows transit. She is Deputy Administrator of the Federal Transit Administration (FTA), the Government's transit funding arm. She joined FTA in July 1997.

Second in command of the Federal transit funding and advocacy agency, Ms. Fernandez's focus is on the role of public transportation in making America's communities better for America's citizens. With her experience in transportation financing, program development, and facility construction, she brings a commitment of stewardship to FTA programs, ensuring that transit is people moving people into America's future.

At FTA, Ms. Fernandez leads the operations of the 170-person, 10-region field staff, who administer the Federal transit assistance program with hands-on, day-to-day, face-to-face contact with our Nation's transit operators. She assures that FTA's \$4.5 billion budget for transit capital construction is well invested so that America's transit riders get the most from America's transit resource.

Ms. Fernandez will address the Section on the benefits of understanding what is required of grantees in order to obtain a Full Funding Grant Agreement from the Federal Government. The discussion will center on the planning requirements in the Transportation Equity Act for the 21st century (TEA-21) overall, and specifically, the alternatives analysis, Draft Environmental Impact State-

(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 1998-99)

**LOCATION:** Drexel University  
Hill Conference Room,  
LeBow Engineering Center  
31st & Market Sts., Philadelphia  
6:30 - 9:00 pm

**CONTACTS:** Dr. J.P. Martin, (215) 895-2363  
Dr. S.C. Cheng, (215) 895-2996

**Program:** For the program, the committee is presenting a series of speakers on the range of geotechnical and geoenvironmental practice, including professional issues as well as technical projects.

**October 27, 1998**

*Perspectives on Changes in Geotechnical Practice;* Richard Mabrey, Private Consultant

### CONCRETE CANOE RACE & STEEL BRIDGE COMPETITION

By Darin L. Gatti, Past President,  
Phila. Section, ASCE

On April 18, 1998 we held the Regional competition of the Concrete Canoe Race and Steel Bridge Competition at Peace Valley Lake, near Doylestown. The competition has been held at Penn State for the past 10 years. Drexel U. was the host for the Canoe Race and Temple U. was the host for the Bridge Competition. The weather was perfect for the competition, warm and sunny. The following schools attended:

- Penn State - Bridge & Canoe
- Drexel - Canoe
- Temple - Canoe
- Delaware - Canoe
- Bucknell - Bridge & Canoe
- Univ. of Pittsburgh - Johnstown -  
Bridge & Canoe
- Widener - Bridge

The Canoe Race consisted of a display and technical paper about the construction of the canoe and a series of 5 sprint and distance races.

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## THE PRESIDENT'S MESSAGE

Now that the July heat wave is behind us, the SEPTA strike has ended and Bonnie has blown over, I want to welcome you back and prepare you for another fantastic year.

During the summer break, The Section's Program Committee continued the Section's "mark making" in Philadelphia. They donned their engineering thinking caps and prepared an all female slate of speakers for the 1998-1999 monthly meetings. One of the President's goals is to highlight a few of the many accomplishments made by females working on engineering or engineering-related projects. This is just one of the initiatives taken to enhance and promote diversity throughout the Section as suggested by National. And, thanks to the efforts of **Bill Thomsen**, we will hear from our first female speaker, **Nuria Fernandez**, on **October 15, 1998** at Williamson's City Line (see page 1 for details).

For the past three years, the Phila. Section has promoted diversity by hosting its Annual Dinner Dance. So far, you have joined us in visiting Mexico, West Africa and Italy. Next year, on **May 7, 1999**, we invite you to celebrate with us in Ireland. However, due to distance and time constraints, the celebration will be simulated at the Sugarloaf Conference Center in Chestnut Hill.

This year, the Section will build relationships with State legislators and other key policy leaders by establishing a State Government Relations Program. Also, as part of the mentoring initiative, the Younger Member Forum will work to establish a community project working with local grade school students who will study and seek solutions to environmental problems in a Third World country.

The Section applauds **Darin Gatti**, Past President (1997-1998), for the milestones reached during his presidency and looks forward to his continued support, including the coordination of the next Concrete Canoe Race and Steel Bridge Competition in the Spring. This is an exciting event, so for all of those looking to volunteer, don't miss this opportunity! Contact Darin for details.

We also congratulate **Joseph R. Syrnick**, Phila. Section, Past President (1980-1981) and last year's Delaware Valley Engineer of the Year, on his recent election as the District 4 Director. Joe, we know you will serve us well!

Our hotline is available 24-hours-a-day. Any suggestions or comments, please call (215) 934-3639 and leave a message for me or any Board member.

See you on October 15th!

Sincerely,

Sandra J. May, President, Phila. Section, ASCE

## October Dinner Meeting

(Continued from Page 1)

ment, Record of Decision, alternate funding for a new fixed guideway systems ("New Starts") and general issues surrounding the "New Starts" pipeline of projects.

For nearly a decade Ms. Fernandez has made transit work her specialty. As Assistant General Manager for Design and Construction for the Washington Metropolitan Transit Authority (WAMTA) in Washington, D.C., she played a significant role in the improvement and expansion of the area's system.

Before joining WMATA, Ms. Fernandez brought her budget and program development skills to the U.S. Department of Transportation, where, as Special Assistant to the Assistant Secretary for Budget and Programs, she helped formulate an annual \$40 billion transportation budget, she helped design research and technology programs for the Department and between the Department and other Federal agencies, and she helped create the planning initiative for a national transportation system.

Ms. Fernandez came to Washington from Chicago, where as Senior Vice President for Development and Construction at the Chicago Transit Authority, she developed and executed a five-year, \$1 billion capital improvement plan that modernized and improved facilities and equipment.

She currently is a member of the National Women's Political Caucus, the Women's Trans-

portation Seminar, Women in Transit, and Dialogue on Diversity. Led by a strong belief that she should "give back" to her community, she serves as a mentor for the Washington Center's "Women as Leaders" seminar, guiding and nurturing female students from colleges nationwide, who aspire to professional careers and leadership roles in their communities.

Ms. Fernandez holds a Bachelor of Science degree in Civil Engineering from Bradley University in Peoria, Illinois, and a Master of Business Administration from Roosevelt University in Chicago.

## Concrete Canoe Race & Steel Bridge Competition

(Continued from Page 1)

The bridges had to span 21' and were judged on aesthetics, weight, time of construction, and deflection under a 2500 lb. load. The competition ran from 10 AM until 4 PM. The trophies were presented to the winning entries at the end of the day.

In addition to the ideal weather, we had a great crowd of spectators, about 500 people came to see the Competitions. We tried something new this year; by setting up an area for informational displays on Civil Engineering for the benefit of the public. Seven companies had set up informational displays about Civil Engineering.

**Final Bridge Standings:**  
Penn State  
Bucknell  
Univ. of Pittsburgh,  
Johnstown  
Widener

**Final Canoe Standings:**  
Drexel  
Penn State  
Univ. of Pittsburgh,  
Johnstown  
Delaware  
Bucknell  
Temple

I would like to take this opportunity to thank the volunteers (several of these people had to get up before 5AM to help set up). I apologize in advance if I had missed anyone: Fred DuPree, Chris Menna, James Gabriel, Tom Branigan, Joe

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### PHILA. SECTION, ASCE OFFICERS 1998-1999

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**COPY DEADLINE FOR  
NOVEMBER 1998 ISSUE  
OCTOBER 15, 1998**

## 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 Martsof**, Parsons Brinckerhoff at (215) 790-2319.

### Upcoming Events

On **Thursday October 8, 1998**, there will be a Student Chapter Social for our area engineering schools at Sam Adams Brew House in Center City. The Social will run from 6:30 PM to 9 PM. This will be an excellent opportunity to network and to learn about the YMF and ASCE. For more information, please contact **Chrissy Berardi**, NTH Consultants at (610) 524-2300.

In November, we will return to the outdoors. On **Saturday November 7, 1998**, there will be a Joint YMF and Sierra Club Trailwork Day in The Wissahickon Park. The work will begin around 10 AM and will be in a different location in the park. Specific details are to be released one to two weeks prior to the event. YMF members, college students, and the general Philadelphia Section membership are encouraged to participate. To register for this volunteer activity, please contact **Chris Menna**, Streets Department, by **Monday November 2nd** at (215) 686-5070.

### Past Accomplishments

The YMF has stayed very active these past few months. Elections for our 1998-99 officers were held during the April meeting in Chinatown. We are proud to announce that **John Zarsky**, Parsons Brinckerhoff, has been elected President; **Christopher Menna**, Philadelphia Streets Department has been elected Vice President; **Christina Berardi**, NTH Consultants, has been re-elected Vice President for College Contacts; **Jeff Chenault**, Parsons Brinckerhoff, has been re-elected Vice President for Technical Groups; **Heather Givey**, Sun Oil, has been elected Vice President for Community Service; **Carol Martsof**, Parsons Brinckerhoff, has been re-elected Secretary; and **Christopher Barber**, Pennoni Associates has been elected Treasurer. Also serving on our Board of Officers is Past President **Yael Heller Jekogian** of Arcadis, Geraghty, & Miller.

On **Saturday May 9, 1998** several YMF and Women's Transportation Seminar members volunteered at the Habitat for Humanity North Central Philadelphia Site. Rehabilitation work was conducted in two rowhomes. The Pennsylvania General Store, located in The Reading Terminal, donated delicious box lunches for all of the workers. Individuals were given the opportunity to try various construction crafts. Overall, it was a very rewarding experience.

A special presentation was made to The Penn-

## MARCH JOINT DINNER MEETING

March 12, 1998

Williamson's City Line, Phila., PA

### The Meridian Fire Investigation

By Bob Wright, Staff Writer

A great turnout for the first (long overdue) Joint Meeting of the Phila. Section, ASCE and the Delaware Valley Chapter, American Concrete Institute (ACI) enjoyed a discussion at the March 12, 1998 meeting, of one of the most frustrating and controversial construction engineering enigmas of the Philadelphia area scene, namely, "The Meridian Plaza Fire Investigation," as well as "Fire Damage Assessment of Concrete Structures in General." Principal Speaker was **Richard F. ("Dick") Rowe, P.E., A.I.A.**, Principal Chief Structural Engineer, Kling Lindquist. The second

sylvania General Store for their generosity. Chris Menna and Carol Martsof created a Thank You poster for the establishment. The four square foot poster depicted YMF members working inside the Habitat homes. Upon receiving the poster, the owner displayed it outside of his store in The Reading Terminal for all to see.

Our next activity was the **May 19, 1998** meeting held at The Mayor's Reception Room in City Hall. Our guest speaker was **Ms. Denise Goren**, Deputy Mayor of Transportation for The City of Philadelphia. This gathering proved to be one of our largest ever. Over fifty people came to hear Ms. Goren's views on transportation issues facing the City and surrounding region. After the talk, she entertained many questions. Many thanks to Ms. Goren for her participation and to Carol Martsof for the arrangements.

On **Saturday June 6, 1998**, the YMF participated in National Trail Day at The Wissahickon Park. Our group joined many other organizations in a service project. This event was sponsored by The Friends of the Wissahickon and by Recreational Equipment Incorporated (REI) of Conshohocken. The area worked on was The Red Trail, which begins near the intersection of Manatawna Avenue and Clyde Lane in the Andorra Section of Philadelphia. Due to recent residential redevelopment, the volunteers helped to relocate this trail. Portions of this path were graded and cleared. Plantings were shifted to follow the trail naturally and the trail marker was reset. At the same time, others traversed up and down the hillside, collecting lots of trash. REI provided lunch and T-shirts for everyone. YMF members found this new type of activity to be very enjoyable and fulfilling. Chris Menna arranged YMF participation in this event.

The first meeting of the new year was held on **Thursday September 17, 1998** in South Philadelphia. Our invited guest was Mr. **Mike Sanders**, Sun Oil. Mike's position has enabled him to develop a broad background in Civil, Mechanical, Electrical, and Petrochemical Engineering. Mr. Sanders discussed how Civil Engineers could branch out into alternative careers. A special thanks goes to **Heather Givey** and **Chris Barber** for arranging this meeting.

scheduled speaker, **Ian R. Chin, P.E., A.I.A.**, Vice President, Principal and Group Manager, Wiss, Janney, Eisner Associates, Inc., was called out of town on an important emergency company mission and was unable to participate. Phila. Section, ASCE President **Darin L. Gatti, P.E.**, and ACI President **Mike Smith, P.E.**, co-chaired the meeting. Each made announcements of concern to their respective Societies.

### Temple University Night

The meeting honored the ASCE Student Chapter, Alumni and Faculty of the Civil and Environmental Engineering Department of Temple University. A large delegation of Chapter students attended the meeting, and participated in the discussion. **Professor Fred Higgins**, Temple ASCE Student Chapter Faculty Advisor, proudly boasted of the Civil and Environmental Department's growth in student body and baccalaureate and postgraduate degree programs, both of which he described briefly.

### Student Chapter President Speaks

Temple ASCE Student Chapter President **Curtis Daniel** was introduced by Dr. Higgins. Curtis thanked his hosts for their courtesies and the honor of their invitation for the Chapter to be featured at the meeting and to participate in the discussion. He presented his fellow Chapter Officers: Vice President, **Karl Forman**; Secretary, **Marcus Weidner**; Treasurer, **Eric Oberle**. He also introduced Faculty member, **Dr. James Matthews**, who has been a faithful attendant at Phila. Section meetings, and a participant in its technical and social activities.

Curtis reviewed the many busy and significant doings of the Chapter. These include a vigorous membership drive, the Steel Bridge Competition participation, lectures at their regular meetings by leading consulting engineering firm representatives and contractors, field trips, and many miscellaneous educational and communal initiatives.

### VanOcker Introduces Speaker

**David A. VanOcker, P.E.**, Principal of the Consulting Engineering firm Christakis VanOcker Morrison, Phila. Section, ASCE Past Director and a prominent activist in its programs; and a Past President of the Delaware Valley Chapter, American Concrete Institute; and the individual responsible for arranging this important Joint Meeting, introduced the Principal Speaker, **Richard ("Dick") Rowe, P.E., A.I.A.**

### Historical Review and Litigation

Mr. Rowe separated his presentation into two parts, with the first concentrating on the initial five to six month period after the fire, and the second highlighting the various testing and measurements that would be needed in the aftermath to secure the building. He noted that more than seven years has elapsed since the fire and that the

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## March Joint Meeting

(Continued from Page 3)

issue has been in litigation for most of that time. During that period, the first priority has always been stabilization of the building until a decision had been made on its future. Now that the litigation is settled, building demolition has been decided as the course of action and the work has begun.

### Building Description and the Fire

Rowe described the location of the building, on South Penn Square across from City Hall. It was opened in 1972 as part of ongoing efforts in the revival of Center City. The tower is 38 stories tall with three additional levels below grade and reaches a height of 490 feet. It is a steel frame building designed as one of two identical towers, the second of which was not built. Extra fireproofing was included in the structure, which exceeded the then-current building code. The exterior of the frame was clad in a combination of granite and precast concrete.

The notorious fire occurred on February 23, 1991, a Saturday night. It burned for over twelve hours and spread throughout the upper floors of the building quite rapidly. The fire eventually knocked out electric power which rendered standpipe pumps useless, forcing firefighters to attempt to battle the blaze from adjacent high rises. Once the fire was contained, considerable exterior damage was found. On the inside, fire damage was extremely random. In many places, it was limited to contamination from soot and muck, while in other locations, floors deflected up to eight inches as steel buckled from the heat and connections were sheared.

### Consequences of the Fire and Corrective Initiatives

Rowe was brought in to assess the post-fire response, once the Fire Department relinquished control of the site. City agencies were quick to issue violations since several dangerous conditions had to be addressed as quickly as possible, and traffic had to be restored to as near normal as could be. The location of the building in the heart of Center City further complicated these efforts given the high level of foot and motor traffic around the site. Within the building itself, safety was also a prime concern. There was still no power and environmental problems caused by the fire needed to be handled. All issues had to be assessed, addressed and completed quickly.

### Concerns and Structural Stabilization

There were three immediate concerns — the stabilization of the structure, the stabilization of the cladding and windows (many of which had been broken), and encapsulation of the building to contain debris. A decision was made to shore the affected floors (19 through 30), install proper bracing, and then analyze structural viability. This accomplished the first goal of structural stabilization and ensured against any unforeseen future failure, especially as hurricane season began and the possibility of high winds which could literally blow the top of the building to the street.

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## SECTION AWARDS PRESENTED AT SPRING DINNER DANCE

The Phila. Section Awards for 1998 were presented at the Annual Spring Dinner Dance, on Friday, May 1, 1998 at the Sugarloaf Conference Center in Chestnut Hill. Close to one hundred fifty Section members, spouses and guests literally packed the house at the Social, which included the traditional induction of new Officers and Board of Director Members. Section Past President and 1997 Delaware Valley Engineer of the Year **Joe Syrnick** (who can now add incoming District 4 Director to his many titles) presented the oath of office to the new Officers as well as those completing the second year of their terms.

The Award recipients were highlighted through the audio-slide show that has become a Section standard. A total of seven individuals were recognized for honors, as follows:

### Philadelphia Civil Engineer of the Year

**Robert A. Waitkus** is this year's recipient of this award, the Section's highest honor. Bob is Principal, Vice President and Operating Unit Manager for Woodward Clyde International and he directs the firm's local office, located in Blue Bell. He has held this position for the past four years. His career at Woodward Clyde has spanned the past 22 years and included 17 years at the firm's Washington DC office.

Bob manages the firm's efforts in water resources, wastewater treatment, management of solid and hazardous wastes, environmental planning and permitting, site assessments and remediation. He is a 1974 graduate of Drexel University, earning his Bachelor degree in Civil Engineering, with a Masters degree from Drexel three years later. He is an active member of several Professional Societies in addition to ASCE. He has been recognized by the Metropolitan Washington Chapter of the American Consulting Engineers Council as its Engineer of the Year in 1994. Bob and his family reside in Blue Bell.

### Water Resources Engineer of the Year

**William G. Richards**, a Senior Associate with Hazen and Sawyer Engineers at its new office in Philadelphia, is the honoree for this year. Bill directs the firm's local projects in Water and Wastewater Engineering. Prior to this, he was a Vice President and manager of the Center City office of Roy F. Weston Inc. He has handled a variety of water, wastewater and environmental projects during his 18 year tenure with Weston.

Bill is a 1970 graduate of Drexel University, where he received his Bachelors degree in Chemical Engineering, followed by a Masters in Environmental Engineering in 1975. He is a member of several Technical Societies. He is a Past President of the Philadelphia Section (1995-1996) and continues to be active on several Committees. He and his family live in Northeast Philadelphia.

### Government Engineer of the Year

**Jay Beratan** was nominated for this award. Jay is the Acting Deputy Director of Aviation for Facilities for the Division of Aviation of the

City's Department of Commerce, a position he has held since last September. Prior to that appointment, he served as Chief Airport Engineer for nine years and in various engineering positions for the Division of Aviation since 1969. He is responsible for all planning, development, maintenance, design and construction at the City's two airports.

Jay received his Bachelors degree in Civil Engineering from Villanova University in 1969. He is a member of several professional organizations in addition to ASCE. He and his wife are residents of Northeast Philadelphia.

### Transportation Engineer of the Year

**Thomas J. Branigan** is the 1998 nominee for this award. Tom is the Assistant Engineering Manager in the Transportation Engineering and Planning Section of the Engineering Section of the City's Department of Streets, a position he has held for the past five years. In this capacity, his duties include the oversight of design and planning for the City's transportation network and management of improvement for City transportation facilities. He also has direct responsibility for the Department's pedestrian and bicycle coordination and outreach efforts and has helped the City become more accommodating for these modes.

Tom graduated from Drexel University's Evening College in 1983 with a Bachelors degree in Civil Engineering and has remained active in Drexel's alumni association. He has served as Phila. Section Treasurer and Director and is incoming Vice President. He and his family reside in the Fox Chase section of Northeast Philadelphia.

### Educator of the Year

This year, **Dr. John A. Lepore**, Professor of Civil Engineering Systems at the University of Pennsylvania, was cited for this honor. John has been a part of Penn's civil engineering program since 1968 when he accepted an Assistant Professor position, and has risen through the ranks to become a full Professor, with a specialty in materials, earthquake analysis and design, and structural mechanics. He was chairman of the Department of Civil and Urban Engineering for six years. He has guided many Civil Engineering students through Penn's program during his tenure.

John is a 1957 graduate of the Drexel Institute, where he earned his Bachelors degree in Civil Engineering. He received subsequent Masters and Doctorate degrees from Penn. He has been involved with several Professional Societies as served as the Faculty Advisor for the Penn ASCE Student Chapter. He and his wife live in Springfield, Delaware County.

### Young Civil Engineer of the Year

This year's award went to **Sean Markey**, a Project Engineer with Frederic R. Harris at its Center City office. Sean's specialties are Transit Facility Design, Catenary Systems and Structures, and Passenger Facilities Engineering. He has served in this capacity for several significant local projects for SEPTA, Amtrak, Conrail, and CSX Transportation, among others.

Sean is a 1993 graduate of Lehigh University,

(Continued on Page 5)

## Awards

(Continued from Page 4)

earning a Bachelors degree in Civil Engineering. He has been very active in the Philadelphia Section and has served as our Membership Secretary as well as the Section's incoming Secretary. He recently received his Professional Engineer's license in Pennsylvania. He and his family live in Jenkintown.

### Presidential Award

This Award, while not a specific technical citation, is given at the discretion of the President and Board to recognize special contributions to the Section. It was given only once before. This year, the decision was made to cite **John E. Durrant** for his assistance to the Section. John, a Past President of the Section (1984-1985) and District 4 Director, took a position at ASCE's National Headquarters as the Director of its Institutes Programs. National's gain is the Section's loss, but we wish John well in his new position. The award doubled as a sign of the Section's appreciation for his years of service as well as an excuse to have John and his wife, Pam, come back to Philadelphia and see their old friends at the Social.

Special thanks is extended to those who helped make the Awards Program a success once again this year. This includes the audio narrators, who gave up a nice spring evening to donate their voices to the effort — **Darin Gatti, Sue Lior, Sandra May, and Bob Wright** and the Awards Committee — **Bill Thomsen and Bob Wright**. The Social itself, with the theme of "La Festiva Italiana," was skillfully coordinated as usual by Section President **Sandra May**.

The 1999 Dinner Dance is tentatively scheduled for Friday, May 7, 1999. Watch THE NEWS for more details on this event.

## Concrete Canoe Race & Steel Bridge Competition

(Continued from Page 2)

Syrnick, Cyrille Swanson, Adam Swanson, David Hanley, Mark Mayhew, John Stone, Chris Barber, Carol Martsof, Carolyn Gatti.

Judges: Tom Branigan, Heather Givy, Ruben David, Fred Higgins, David Hanly.

This past June, members of the Drexel University Concrete Canoe Team embarked from the "Great Fightin' City of Philadelphia," to Rapid City, South Dakota, to take part in the 11th Annual National Concrete Canoe Competition sponsored by ASCE and Master Builders, Inc. The culmination of a year's worth of effort and dedication, the Drexel team successfully integrated recent advances in concrete technology with the concepts of naval architecture to produce a national-caliber racing canoe. This marked Drexel's second appearance at the National competition, at its first return following a ten-year absence.

As representatives of the Penn-Delaware Region, Drexel had a remarkable showing at the National Competition. The 22.5 foot, 130-pound ca-

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## APRIL JOINT DINNER MEETING

April 9, 1998

Williamson's City Line, Phila., PA

### The Storebaelt-East Bridge

By Bob Wright, Staff Writer

The Annual Joint Meeting of the Phila. Section, ASCE and the Philadelphia Post, Society of Military Engineers (SAME) drew a satisfactory turnout at Williamson's Restaurant on April 9, 1998. The very interesting subject of the meeting was: "The Storebaelt-East Bridge — Superstructure Main Span and Approaches." Speaker for this important project in Denmark was **Jose R. Celis, P.E.**, Project Manager, Director of Engineering and Construction Services, Steinman, Boynton, Gronquist and Birdsall, New York. Phila. Section President **Darin Gatti** presided.

### Widener University Night

The meeting honored the ASCE Student Chapter, Alumni and Faculty of the Civil Engineering Department of Widener University. **Charles (Chuck) Bartholomew**, Head of the Department of Civil Engineering, is very proud that enrollment is steadily increasing. New options, in addition to Environmental Engineering, include studies and research on major structures including bridges, pipelines, etc. Chuck reviewed the varied graduate programs at Widener.

### Advisor Davis Speaks

Dr. Bartholomew introduced Widener ASCE Student Chapter Advisor **John Davis**. Mr. Davis thanked the Phila. Section for its recognition and courtesies, and presented the Chapter Officers: President, **Shawn Pressley**; Vice President, **David Johns**; Treasurer, **Scott Drumbore**; Secretary, **Mike Groark**. Also introduced were Faculty member **Vic Marcus**, a long-time dedicated Phila. Section member; and Chapter members **Peter Cappelli** and **Susan Giannantonio**.

Mr. Davis reviewed the activities of the busy ASCE Student Chapter, which highlighted the ACI Concrete Beam Competition; active participation in Engineers' Week activities; and cooperation with local high schools in promoting varied civil engineering pursuits. He also spoke of the industrious preparations for the coming Concrete Canoe Race.

### The Project Described

**Jose R. Celis, P.E.**, Project Manager for the effort, delivered the presentation and slide illustration. The Storebaelt, or Great Belt, Bridge will link two major islands in Denmark. The western bridge, 6.6km in length, is primarily a low-level causeway, while the eastern bridge is a 6.8km suspension structure with a main span nearly 1.6km (5400 ft.) in length. The span crosses one of the busiest shipping channels in the world. A tunnel is located on an island between the bridges. The bridges will carry both vehicular and rail traffic.

Although the project is located in Denmark, several European countries contributed to the effort, making it a truly international project. Materials and labor came from far-off places given the lack of both readily available in Denmark.

### International Participation

The east bridge was begun in 1991. The bridge towers, each 252m tall, were constructed off-site in a drydock located in Portugal. The drydock was the size of two football fields in area. The beams for the towers were produced in Italy. The towers, when erected in place, became the highest points in Denmark. The depth of the sea in the location of the bridge is not extreme, thus the foundations for the anchor blocks and towers rest on the sea bed.

### Innovative Procedures and Unique Challenges

Danish authorities required that a scale model of the suspension bridge be tested to observe structural behavior under wind loadings. The bridge's owner went one step further and insisted on the most comprehensive tests ever performed on a suspension bridge anywhere. A new wind tunnel apparatus was used, and at first it was troublesome, but the tests were successful and proved the stability of the bridge in the adverse conditions that could be expected at the location.

The owner had never built any bridges prior to this undertaking, and the learning curve for aspects such as dealing with contractors was often slow. Many subcontracts were let to companies which had no bridge building experience, often against the advice of the engineering consultant. Several critical cable spinning operations were handled by firms which had plenty of expertise in the erection of cable trams but none in bridge building. Regardless, the project remarkably succeeded.

The bridge's tied-back structural system required that the towers deflect slightly. This became difficult when high levels of vibration were discovered in the cables. The solution for this was the hanging of slings on the tiebacks to dampen vibrations.

### A Spinning System First

A new system of cable spinning was tried when the time came to place cable. The method was controlled-tension spinning, which required a counterweight tower to maintain tension in the cable. This was the first time that the method was employed on a bridge and it was a success. (Beforehand, it had been employed only on cable trams.) Once spinning began, work continued around the clock, and was finally completed in 112 days. Lighting of the structure was needed to accomplish this, which often made a striking sight from a distance at night.

### Problems of Multi-National Cooperation

While the cooperation of different nationalities was admirable, this often led to problems, especially with communication. For example, many cable spinners were recruited from the area around Grenoble, France, where many experienced workers lived. While these workers had

(Continued on page 6)

## April Joint Dinner Meeting

(Continued from Page 4)

participated in the construction of numerous cable trams and ski lifts, most had never been involved in a suspension bridge project. Despite the friction among different nationalities, the workforce was an enthusiastic one.

Once the structural work and bridge deck were in place, paving could begin. It was necessary to build enclosures to allow paving to proceed uninterrupted by weather.

On May 10, after seven years of construction, the project will be completed. The Queen of Denmark is scheduled to cut the ribbon on June 14 to open the bridges to the public. The total project cost is \$3.6 billion, of which \$1.1 billion will have been spent on the east bridge. Only two deaths (one of them a suicide!) can be attributed to the project, a very impressive safety record for such a large and difficult undertaking.

### Question and Answer Period

Mr. Celis responded to several questions into the complex logistics of this gigantic project. Inspection and construction management are much different in Denmark than in this country, with mistakes often corrected after they are made. Bidding was highly political and everything was contracted out. On questions of the design to fabrication to construction sequences, etc. Mr. Celis' explanations and responses were superbly articulated. It was an extremely interesting presentation of a fascinating and awe-inspiring project.

Phila. Section President Gatti presented Mr. Celis the Section's Gift of Appreciation.

## March Joint Meeting

(Continued from Page 4)

### Safety Measures Accomplished

Various sections of the heavy cladding were in danger of falling, moreso as the sealant between segments fails as a result of heat exposure and strain. To prevent this, the building was "netted" through wrapping and strapping. Work was done from the roof, with nets airlifted into place with helicopters. A double-net system additionally aided in the efforts to encapsulate the structure to keep any debris from falling or being blown from the upper floors.

### General Review of Other Major Fire Damaged Structures

Several case histories of high-rise fires were reviewed to learn what else needed to be done as well as to ascertain the structural effects on the damaged building. The structure would need to comply with BOCA (Building Officials and Code Administrators International, Inc.) requirements, and there were various guidelines on fire-damaged buildings. Other occurrences, such as the Occidental Tower and the First National (Los Angeles) and the Westvaco (New York) buildings were not nearly as intense and lengthy as Meridian. Meridian would remain unique as a total of ten floors above the scene of the fire were affected, and that the temperature of the fire, which was estimated to go as high as 2000 degrees, was

## MUNICIPAL OFFICIALS, WATER RESOURCE SPECIALISTS, ENGINEERS, PLANNERS, JOIN US FOR THE

1998 Pennsylvania Stormwater Management Symposium

20th Anniversary of Act 167 —  
Future Visions for Municipal Implementation  
October 21-22 1998

Villanova University, Villanova PA

**Mission Statement** — The Pennsylvania a Department of Environmental Protection Bureau of Watershed Conservation, the Pennsylvania Department of Transportation Bureau of Environmental Quality, the Pennsylvania a State Association of Township Supervisors, and Villanova University will jointly hold a symposium on Pennsylvania municipal implementation of stormwater management on October 21-22, 1998, at Villanova University. This is the fourth symposium of a continuing series. Villanova is honored to be the host for the 1998 symposium

The purpose of the conference is to bring together Municipal Officials and Water Resource Professionals to discuss the successes, failures, and future of stormwater management Institutional financial, intergovernmental and environmental issues faced by municipalities and water resource professionals in implementing ordinances for stormwater quantity and associated management strategies for nonpoint source pollution control will be discussed. Innovative stormwater management techniques based on a watershed approach will be presented. Villanova will award 2.0 CEU's to all attendees.

### Preliminary Conference Agenda

**Plenary Session:** Water Resource Leaders from the Pennsylvania Department of Environmental Protection, Pennsylvania Department of Transportation, and the Pennsylvania State Association of Township Supervisors will address the symposium Confirmed speakers include Doug Zimmerman, Division Head Pollution Prevention Division, Bureau of environmental Quality, PennDOT, Durla Lathia, Chief Stormwater Planning and Management Section, Division of Water

sufficient to bucklet steel and melt glass. It was determined that this was by far the most severe structural damage by fire in any North American high-rise.

### Question and Answer Discussion

A lively question and answer period followed. The formal presentation. Numerous varied, penetrating comments on the nature, investigative procedures, analyses, and conclusions as to building stabilization, worker and public safety provisions, standpipe water pressure and sprinkler performances and deficiencies were exchanged between members of the audience and our distinguished and highly informed speaker.

Phila. Section President Gatti presented Mr. Rowe the Section's Gift of Appreciation for his outstanding talk.

Use Planning, PaDEP, and James Wheeler, Director of Member Services, PSATS.

**Conference Sessions:** The first session focuses on the recommendations of the Governors' 21st Century Environment Commission. Former director Carol Collier (DRBC Executive Director) & current director Robert Barkanic will be the presenters. Mr. Michael McCabe, Regional Administrator of EPA Region III, will be the luncheon speaker. On Thursday, Carl DuPoldt & Barry Frantz of NRCS will address the use of the new PA E&S control and SWM BMP handbook. The conference will wrap up with a panel session discussing the Legislative Issues and Future of SWM in Pennsylvania.

**Breakout Sessions:** Twelve sessions over 4 periods with 30+ speakers—covering a broad range of issues including comprehensive watershed approach, municipal involvement in planning and implementation, innovative stormwater management, nonpoint source pollution, sustainable development, and state assistance programs. See the Conference website for a complete list of speakers and topics.

1-A The Watershed Approach to Integrating Comprehensive Watershed

### Management -

1-A Wes Homer, Brandywine Conservancy

1-B Comprehensive Watershed Management—Geoffrey Reese, Lehigh Valley Planning Commission

1-C Stormwater Management Tools and Techniques I — Paul DeBarry, Borton-Lawson Eng.

2-A Nonpoint Source Pollution — Terry Ostrowski, Borton-Lawson Engineering.

2-B Rethinking Stormwater Management Practices — Tom Seybert, PSU

2-C Stormwater Management Aesthetics — Case Studies — Durla Lathia, PaDEP

3-A Local Government Management/Implementation Issues — James Wheeler, PSATS & John Maslanik, Chester Engineers

3-B Watershed Conservation — Mike Sherman, PaDEP

3-C Stormwater Management Tools and Techniques II — Laura Eberly, Lehigh Valley Planning Commission

4-A Stormwater Management Partnerships — A Roundtable Discussion Chaired by James Wheeler, PSATS

4-B Sustainable Development — Tom Seybert, Penn State University

4-C Stormwater Management Applications — John Maslanik, Chester Eng.

**QUESTIONS?** [www.vill.edu/~engine/cee/grad.htm](http://www.vill.edu/~engine/cee/grad.htm). Program: **Professor Rob Traver, (610) 519-7899**, [rtraver@email.vill.edu](mailto:rtraver@email.vill.edu). Registration/Sponsors: **Professor Frank Falcone, (610) 519-7920**, [ffalcone@email.vill.edu](mailto:ffalcone@email.vill.edu)

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**1998 PHILA. SECTION, ASCE SALARY & BENEFITS SURVEY**

Dear Fellow ASCE Members,

In May 1998, you were asked to complete the biennial ASCE Salary and Benefits Survey. The 1998 Survey was sent to approximately 1,050 ASCE members and there were 136 responses for a response rate of 13%. This is slightly better than the 1996 survey's 12% response rate. The typical respondent is a 42 year old married Caucasian male who has worked full time for 20 years. He has a Master's degree, is a licensed PE, and has been a member of ASCE for 10 years. He is a Consultant who has had three employers since beginning full time employment and has worked for his current employer for eight years. His one way commute is 30 minutes and he works an average of 45 hours per week at a salary of \$68,000 per year. His employer provides 15 days of vacation and personal time, nine holidays and six sick days. Following are some observations:

- The median salary increased five percent (5%) over the two year period. This appears to be lower than would be expected. However, there was a larger spread between the minimum and maximum salaries in the 1998 survey compared to the 1996 survey. Also, those earning over \$100,000 increased from 4% in 1996 to 13% in 1998.
- Forty-one percent (41%) of the 1998 respondents stated that they received bonuses compared to 30% in 1996. The median bonus was \$5,000.
- Respondents with Bachelor's, Master's and Doctorate degrees earned median salaries of \$57,000, \$70,000 and \$85,000, respectively. Engineers-In-Training earned a median salary of \$42,500 while those with a Professional Engineer's license earned \$70,000. Eleven respondents had both a PE and an LS and earned a median salary of \$90,000. Overall, there were direct correlations between education and salary and between professional registration and salary.
- Sixty-seven percent (67%) of the respondents are "mostly satisfied" or "very satisfied" with their current employment compared with 45% in 1996.
- Respondents who believed that finding a new job would be "easy" or "very easy" increased from 39% in 1996 to 62% in 1998. This indicates that the US economy is better now than it was two years ago.
- Fifty-one percent (51%) agreed that registration should be required as a condition of employment. This is an increase from 39% in 1996.
- Sixty percent (60%) of the members believe that continuing education should be required to maintain registration. This was essentially unchanged from previous surveys. Despite the debate on voluntary vs. mandatory continuing professional development, Philadelphia's ASCE members' opinions have not changed since the earlier surveys.
- Thirty-nine percent (39%) believed that there is a shortage of Civil Engineering graduates. In 1996, 10% believed that there was a shortage. This also indicates that the US economy is better now than it was two years ago.

• Finally, 80% of the respondents, if given a second chance, would still be a Civil Engineer. Of those who said that they would, 39% said that they enjoy the work. Of those who said that they would not, 37% cited lower pay as compared to other professional fields.

Thanks to all of the ASCE members who took the time to respond to this year's survey. Your participation helps us to evaluate our careers and the state of the profession. If you have any questions, comments, or additional observations, call me at (215) 580-7084.

Dennis M. MacBride, P.E.  
Professional Practices Committee

A PERSONAL DATA	1998	1996	1994
1 Age	42 yrs	42 yrs	41 yrs
2 Years of full-time employment	20 yrs	19 yrs	18 yrs
3 Race			
Caucasian	93%	93%	94%
African American	1	1	1
Hispanic	2	3	1
Asiatic	4	4	3
Other	0	0	2
4 Sex			
Male	92%	94%	94%
Female	8	6	6
5 Marital Status			
Single	13%	17%	---
Married	83	78	---
Divorced	4	4	---
Widowed	0	1	---
Number of children, if any	2	2	---
6 Education			
No Degree	0%	1%	0%
Bachelor's Degree	31	35	37
BS + 15 hours	14	16	15
Master's Degree	48	45	43
Doctorate Degree	7	3	6
7 ASCE Membership Grade			
Student	0%	0%	0%
Associate	18	20	25
Member	76	75	67
Fellow	2	2	4
Life	4	3	4
Number of years Member of ASCE	10 yrs	10 yrs	---
8 Registration			
EIT only	16%	17%	---
PE only	76	77	---
LS only	0	0	---
Both PE and LS	8	6	---
Number of Years Registered	14 yrs	13 yrs	---
9 Other Membership, if any	2	2	2
B EMPLOYMENT DATA			
1 Income Source			
Self-employed	7%	7%	5%
Salaried	91	91	88
Commissioned	0	1	0
Retired	1	1	4
Unemployed	1	0	3
Student	0	0	0

2 Type of Employer	1998	1996	1994
Consultant	55%	54%	53%
Contractor/Builder	6	3	5
Federal Govt.	6	6	4
State Govt.	1	3	5
Mun., Local or Reg. Gov. or Auth.	13	13	19
Utility (Private & Public)	5	5	5
Manufacturer	---	---	3
Education	5	3	3
Sales	0	3	0
Other	9	10	6
3 Primary Responsibility			
Technical	52%	53%	53%
Sales	1	3	0
Management	33	37	---
Supervisory	---	---	24
Administrative	12	3	15
Other	2	4	8
4 Do you supervise other people?			
Yes	75%	72%	77%
No	25	28	23
5 Number of different employers since graduation	3	3	3
6 Do you have a second job?			
Yes	8%	11%	9%
No	92	89	91
7 Years with current employer	8 yrs	7 yrs	8 yrs
8 Primary County of Employment			
PA-Bucks	5%	21%	4%
Chester	11	7	13
Delaware	8	9	6
Montgomery	23	11	20
Philadelphia	42	37	44
NJ-Burlington	2	4	2
Camden	0	2	0
Gloucester	0	0	0
Other (Berks, Lancaster, 9 Lebanon, Mercer and York counties; state of Delaware and New York City)	9	10	11
Primary County of Residence			
PA-Bucks	12%	15%	---
Chester	15	10	---
Delaware	20	16	---
Montgomery	20	21	---
Philadelphia	17	22	---
NJ-Burlington	2	3	---
Camden	2	9	---
Gloucester	0	0	---
Other (Berks, Cape May, 12 Lancaster, Mercer, Northampton & Salem counties; state of Delaware and New York City)	4	---	---
9 Method of Commuting			
Drive	73%	63%	68%
Mass Transit	16	21	15
Car Pool	1	2	1
Walk	4	3	1
Drive & Mass Transit	6	9	13
Other	0	2	3
10 Approximate commuting time (minutes)	30	35	35

	1998	1996	1994
<b>C SALARY AND BENEFITS</b>			
1 Salary	\$68,000	\$65,000	\$61,000
% Receiving Bonus	41%	30%	28%
2 Median Amount of Bonus	\$5,000	\$4,900	--
<b>3 Overtime Remuneration</b>			
None	58%	58%	52%
Time (Compensatory)	13	14	19
Paid at regular pay rate	23	24	20
Paid at time and a half	6	4	8
Double time	0	0	0
4 Average Number of hours worked per week	45	45	--
<b>5 Vacation Days, Personal Days, etc.</b>			
15	18	15	
<b>6 Holidays</b>			
9	9	9	
<b>7 Sick Leave</b>			
6	10	10	
<b>8 Insurance (Company Paid)</b>			
<b>Hospitalization</b>			
100% Company Paid	34%	39%	41%
Partially Company Paid	63	59	56
None	3	2	3
<b>Major Medical</b>			
100% Company Paid	32%	38%	37%
Partially Company Paid	64	60	56
None	4	2	7
<b>Dental</b>			
100% Company Paid	16%	27%	25%
Partially Company Paid	64	55	48
None	20	18	27
<b>Optical</b>			
100% Company Paid	11%	12%	15%
Partially Company Paid	55	42	33
None	34	46	51
<b>Disability</b>			
100% Company Paid	35%	47%	36%
Partially Company Paid	48	29	33
None	17	24	31
<b>Life</b>			
100% Company Paid	45%	47%	51%
Partially Company Paid	46	36	33
None	9	16	16
<b>Legal Fees</b>			
100% Company Paid	11%	18%	10%
Partially Company Paid	9	1	5
None	80	81	84
<b>Child Care</b>			
100% Company Paid	3%	1%	1%
Partially Company Paid	10	6	4
None	87	93	95
<b>9 Pension Plan</b>			
Yes	59%	63%	80%
No	41	37	20
<b>10 Profit Sharing</b>			
Yes	37%	34%	41%
No	46	41	36
Not applicable	17	25	23
<b>11 401(k) or equivalent</b>			
Yes	81%	82%	--
No	19	18	--
<b>12 Formal severance pay policy</b>			
Yes	28%	24%	39%
No	72	76	61
<b>13 Continuing ed. tuition reimbursement</b>			
Yes	76%	70%	29%
No	24	30	71

	% 1998	% 1996	% 1994
If yes, maximum %			
33% and 50%	24%	22%	--
67, 70, 75, 80 and 90%	18	20	--
100%	58	58	--
<b>D OPINIONS</b>			
<b>1 Are you satisfied with current employment?</b>			
Unsatisfied	4%	6%	8%
Somewhat unsatisfied	11	22	14
Satisfied	18	27	29
Mostly satisfied	37	25	29
Very satisfied	30	20	20
<b>2 Are you performing true engineering work?</b>			
Yes	61%	54%	59%
No, admin, super, business, prom, etc.	32	35	32
No, technician/draftsperson	2	3	1
No, other functions	5	8	8
<b>3 Is your work properly reviewed?</b>			
Yes	33%	37%	34%
Yes, but could be better	40	37	34
No	14	19	16
Not applicable	13	8	17
<b>4 Looking for a new job within the next two years?</b>			
Yes	30%	37%	35%
No	70	63%	65%
If yes, why?			
Salary	33%	23%	20%
Boss	10	19	13
Lack of responsibility	10	10	13
Other:	47	48	54
Retirement, layoff, end of assignment	56%	20%	--
Location	11	12	4
Lack of Challenge	22	8	--
Management Problems	11	4	13
<b>5 If looking for a new job, most critical concern?</b>			
Pay and benefits	28%	20%	30%
Company reputation	5	7	3
Responsibility	17	9	19
Security	7	15	7
Location	13	11	7
Amount of travel	0	2	--
Type of work	28	36	31
Other	2	1	3
<b>6 How easy to find a new job?</b>			
Very easy	21%	11%	9%
Easy	41	28	38
Somewhat difficult	32	50	39
Difficult	6	10	14
<b>7 Salary compared to other CE's?</b>			
Much lower	5%	2%	4%
Lower	23	29	16
Similar	46	54	50
Higher	25	13	27
Much higher	2	2	3
<b>8 Fringe benefits compared to other CE's?</b>			
Much lower	5%	6%	6%
Lower	14	19	12
Similar	50	38	39
Higher	27	30	38
Much higher	4	60	5

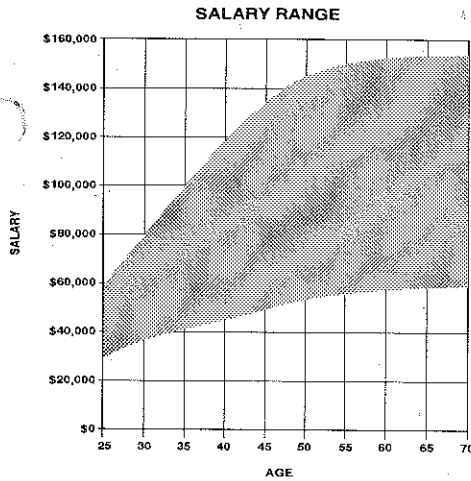
	% 1998	% 1996	% 1994
<b>9 Professional physical environment important?</b>			
Yes	79%	87%	83%
No	21	13	17
<b>10 Satisfied with professional physical environment?</b>			
Yes	79%	69%	71%
No	21	31	29
<b>11 Do you agree or disagree with following?</b>			
Registration should be required as a condition of employment?			
Agree	51%	39%	42%
Disagree	49	61	58
Continuing Ed should be required to maintain registration?			
Agree	60%	61%	59%
Disagree	40	39	41
Should consulting work be competitively bid?			
Agree	43%	46%	61%
Disagree	57	54	39
Advertising by Engineers is acceptable?			
Agree	86%	89%	86%
Disagree	14	11	14
Is there a shortage of CE graduates?			
Agree	39%	10%	19%
Disagree	61	90	81
<b>12 If you had a 2nd chance, would you still be a CE?</b>			
Yes	80%	78%	82%
No	20	22	

Of the respondents who said "Yes", 39% said that they enjoy the work, 23% said that it is an interesting, challenging, or rewarding profession, 8% noted the profession's contribution to society and the rest cited other reasons.

Of the respondents who said "No", 37% noted lower pay as compared to other fields, 26% indicated that there are better or more interesting opportunities in other fields, 7% said that there is no appreciation or reward for good work and the rest cited other reasons.

**Comments and suggestions for future survey questions:** Do you believe that engineers are properly compensated? Do you know someone who was downsized? Is downsizing beneficial to employers? Do you agree or disagree with affirmative action? Is it fair? Has membership in ASCE benefitted your career? How can ASCE help your career? What is the single most important factor you could undertake to improve the profession? What do you believe is the greatest detriment to the profession today? Do you promote civil engineering? If so, how? If you supervise people, how many? How many direct reports? Include questions regarding relationship with your supervisors. Include a question regarding the ethical challenges in daily practice. Include a question regarding the importance of advanced education (MS, PhD) *Thanks for doing the survey. I think it is a great idea!*





**1999 EDMUND FRIEDMAN  
YOUNG ENGINEER AWARD**

To recognize professional contributions of younger members of the Society, Edmund Friedman, Past President of ASCE, contributed funds to establish the Edmund Friedman Young Engineer Award for Professional Achievement. The award was officially instituted by action of the Board of Direction in October 1972.

The recognition is awarded annually to members of the American Society of Civil Engineers who are 35 years of age or less on February 1 in the year of the award, and who are judged to have attained significant professional achievement, by the degree to which the candidates have shown:

- Service to the advancement of the profession;
- Evidence of technical competence, high character and integrity;
- Leadership in the development of younger member attitudes towards the profession;
- Contributions to public service outside of their professional career;
- Other evidence of merit, which has advanced the Society objectives.

**RULES:**

- The award may be made each year to as many as five recipients. No recipient may receive the award more than once.
- An individual or group may submit written nomination forms which are available from ASCE at the address below.
- A nominee not selected one year may be re-nominated in a subsequent year, provided he/she is eligible under the above stipulations. Meritorious nominees, not selected in a given year, may be held over by the Committee on Younger Members for consideration in the competition of the following year.
- Deceased persons are not eligible for nomination for the award, although an award can be made posthumously to a nominee whose petition had reached the award committee during his/her lifetime.
- The award shall consist of a framed certificate inscribed with the name of the recipient and his/her exceptional achievements, to be presented at the 1999 ASCE National Convention.
- By February 1, 1999, seven copies of the nomination should be submitted to: ASCE Awards Department, 1015 15th Street NW, Suite 600, Washington DC 20005.

**1999 YOUNG MEMBER GROUP  
AWARD**

The purpose of the award is to promote excellence among the Younger Member Groups of the American Society of Civil Engineers. Younger Member Groups are defined as Associate Member Forums (AMF), Younger Member Forums (YMF), Younger Member Committees (YMC), etc. which operate at the Section and Branch level. It does not include Younger Member Councils. The award was officially instituted by action of the Society on July 9, 1985.

The Younger Member Group Award is made annually to the most outstanding Younger Member Groups of the American Society of Civil Engineers. Certificates of Commendation may also be awarded.

The Committee on Younger Members (CYM) shall recommend the winners of the award and those Groups receiving Certificates of Commendation.

The award shall consist of a framed certificate to be presented to the winning Younger Member Groups at an Annual Convention of the Society.

Up to two awards will be made each year. One Younger Member Group in each size category is eligible to receive the award. Size categories consist of large Sections and Branches (Section membership greater than 1,000 and Branch membership greater than 250; and small Sections and Branches with Section membership of 1,000 or less and Branch membership of 250 or less).

**RULES:**

- The evaluation process involves scoring of nomination documents submitted by Younger Member Groups. The nomination documents should list professional, technical, social, and special activities sponsored by the Younger Member Group for the preceding calendar year.
- Younger Member Groups may submit written nomination forms which are available from ASCE at the address below.
- Previous award recipients are eligible to reapply.
- By February 1, 1999, seven copies of the nomination should be submitted through the Section or Branch Secretary to: ASCE Awards Department, 1015 15th Street NW, Suite 600, Washington DC 20005.

**1999 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 their professional development and gain national attention.

*The paper must be written on:  
"Is it ethical for consulting firms  
to make political contributions to  
candidates that can directly affect  
engineering contracts?"*

**RULES:**

- Authors must be Associate Members, Members or Affiliates of the Society 35 years of age or less on February 1, 1999.
- 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 the 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, Charlotte, North Carolina, in October, 1999.
- The paper by the national winner will be submitted for publication in *Civil Engineering*.
- By February 1, 1999, two copies of each paper must be submitted through the Section or Branch Secretary to: ASCE Awards Department, 1015 15th Street NW, Suite 600, Washington DC 20005.

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SEPTA - Eng'g & Construction Div.  
1234 Market St., 12th Fl.  
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### Environmental-Geotechnical

Dr. Joseph P. Martin, Chairman

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32nd & Chestnut Sts.  
Philadelphia, PA 19104  
(215) 895-2363

Adam Hockenberry, Asst. Chairman

Drexel University  
Civil & Architectural Engineering Dept.  
32nd & Chestnut Sts.  
Philadelphia, PA 19104  
(215) 895-1633

## Concrete Canoe Race & Steel Bridge Competition

(Continued from Page 5)

noe, aptly named *Rocky Canoa*, finished 10th in final product and led the way to a top 10 finish in both men's and women's 200 meter sprints. The highlight of the competition was a fifth place finish in the oral presentation where the students performed an innovative skit featuring a ring announcer, color commentators and, of course, the "Italian Stallion." Combined, these performances made for an 11th place overall finish out of the 21 schools that participated. The 21 schools at the competition represent the best of the more than 250 ASCE Student Chapters and Clubs from across the nation that designed, built and raced concrete canoes this past year.

Drexel's *Rocky Canoa's* hull is constructed of a lightweight composite of epoxy-modified Portland cement concrete reinforced with a specially woven glass fiber mesh. The concrete possesses a

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**Location:** The conference will be held at the landmark Warwick Hotel, located in Philadelphia's famous Rittenhouse Square district, near fine shops, restaurants, theaters, museums and galleries. Tours of Philadelphia's historic sites can be arranged at the hotel desk.

**Format:** The conference will feature ten blocks of concurrent working sessions covering dozens of solid waste technology and management topics. These include both technical and nontechnical subjects. The goal is to provide all solid waste professionals with the opportunity to learn about the latest advances in their areas of interest and to meet with experts from around the world. The conference will be conducted in English.

To receive a printed copy of the detailed agenda, or for more information, please contact:

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and Management*  
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unit weight of 800kg/m<sup>3</sup> (50 lb/ft<sup>3</sup>) and a 7-day compressive strength of 10.3 Mpa (1500 psi). Draped in red, white and blue of Old Glory, *Rocky Canoa* is a 6.7m (22.25 ft) long asymmetrical canoe that weighed in at 0.58 kN (130 lbs).

The team which represented Drexel at the National Competition were: Andrea Calkins, Sarah Holtz, Sarah Hollinger, Carrie Dillman, Jeffrey Given, Matthew Marcello, Brian Stoudt, Dan Marut, Mike Garafalo, Tom Silverstrim, Rob Blair, and Chris Pinto. The team's Technical Advisor, Mike Carnivale, and Department head, Dr. Joseph Martin, also attended.

We hope to have the Competition here in Philadelphia in 1999 and make it an even bigger event. Villanova and Temple are proposed to be hosts for the competition. Watch for more information in future issues of THE NEWS.

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