



PHILADELPHIA SECTION

AMERICAN SOCIETY OF CIVIL ENGINEERS

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

Vol. 66-2

Our 80th Year

November, 1993

NOVEMBER DINNER MEETING

Philadelphia Section, American Society of Civil Engineers

WEDNESDAY, NOVEMBER 10, 1993

OFFICERS' CLUB • U.S. NAVAL BASE • PHILADELPHIA, PA
Cocktails – 5:30 p.m. Dinner – 6:30 p.m. Meeting – 7:30 p.m.

SUBJECT: BALTIMORE METRO TUNNELING AND PROJECT OVERSIGHT

SPEAKER: KENNETH D. MERRILL, Parsons Brinckerhoff, Consulting Engineers

Ken Merrill is currently the Construction Manager for the Joint Venture of DKP (DMJM, Kaiser & PB) on the Northeast Extension of the Baltimore Metro (Section C). Ken is a native of Baltimore and a graduate of the University of Maryland with a Bachelor of Science in Civil Engineering. After college he worked for the Interstate Division for Baltimore City and was involved with the design and construction of I-95 through Baltimore City. His major accomplishment was as Construction Manager for the I-95 Fort McHenry Tunnel which was completed in 1985. Subsequently, he worked for Rummel, Klepper & Kahl, a local engineering consultant in Baltimore, during which time he was Construction Manager for the first Ocean City, Maryland Beach Replenishment Project. He is currently employed by Parsons Brinckerhoff on the Section C Project.

Mr. Ken Merrill of Parsons Brinckerhoff will be talking on the Baltimore Metro Northeast Extension with primary emphasis on the environmental problems that were encountered and the solutions that were developed. The Northeast Extension involves soft ground tunneling using compressed air. During the tunneling operation, gasoline contamination was discovered within the tunnel limits and also dry cleaning fluid (perchloroethylene—PERK). Unique and innovative solutions were developed to mitigate both problems.

Cost: \$19.00 per member or guest; \$10.00 ASCE Student Members

RESERVATIONS ARE REQUIRED. Please send your check for the number of plates required @ \$19.00 or \$10.00 Students each, payable to Philadelphia Section, ASCE, P.O. Box 58166, Phila., PA 19102-8186. The deadline for reservations is **Friday, November 5, 1993.**

1994 ACI THIRD ANNUAL AWARDS PROGRAM

The Delaware Valley Chapter of the American Concrete Institute (ACI) is pleased to announce its 3rd Annual Awards Competition. The purpose of the Competition is to recognize outstanding concrete projects. The previous Competition was a great success, honoring four Grand Prize winners and nine finalists. It is hoped that the Competition will continue to promote an appreciation of excellence in concrete design and construction among the industry and general public.

ELIGIBILITY

Submittal projects must be completed between January 1, 1989 and December 31, 1993. Projects located in the chapter Counties of Philadelphia,

Montgomery, Bucks, Delaware, Chester, Berks, Lehigh, Lancaster, Lebanon, Dauphin, and Northampton in the Commonwealth of Pennsylvania, or in the state of Delaware, are eligible for the competition. You are invited to submit negotiations in the following categories:

- Precast Concrete Systems Buildings
- Cast-in-Place Frame Construction
- Concrete Bridges/Highways
- Architectural Concrete/Precast Claddings
- Concrete Restoration and Rehabilitation
- **SPECIAL AWARD:** Concrete structures 25 years or older

(Continued on Page 2)

TECHNICAL GROUP ACTIVITIES

Geotechnical and Environmental / Water Resources Groups

(Combined Program for 1993-1994)

November Meeting

Date: **Tuesday, November 16, 1993, 7:00 pm**

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

SPEAKER: Chris Lawrence, CH2M Hill, Consulting Engineers

SUBJECT: Closure of Lagoons and Construction of New Treatment Plant on Improved Subgrade.

This is a case study of closing a lagoon system, and re-using the same "footprint" for new manufacturing and wastewater treatment facilities. At a mill generating large volumes of wastewater, the on-site lagoons were inadequate to meet new treatment standards. Closure involved removal of large quantities of sludge. Site constraints forced construction of the concrete basins of the replacement on-site treatment plant to be on the same footprint. Accordingly, the loose sand subgrade was improved by a combination of preloading and overexcavation and replacement. The total project also involved expanding paper production facilities over the closed lagoon area, a pump station at an old landfill area, and shoreline restoration.

Plans for the following future events are now in progress. Dates and details will be announced in coming issues of THE NEWS:

Craig Calabria

on EPA Geomembrane Testing

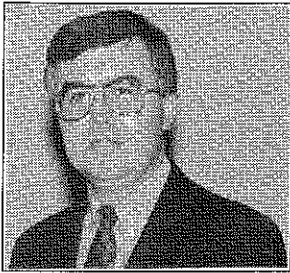
Arthur Raymond

on Stormwater Discharge Permitting

For further information, please contact: **Dr. J.P. Martin**, Chairman, Geotechnical Group, Dept. of Civil & Arch Eng., Drexel University, Phila., PA 19104, (215) 895-2363 or **Mr. Raymond Lees**, Chairman, Environmental/Water Resources Group, Groundwater Technology, Inc., 223 Wilmington-West Chester Pike, Chadds Ford, PA 19317, (215) 558-1730.

(Continued on Page 2)

THE PRESIDENT'S MESSAGE



After considerable prodding from our esteemed editor, Sid Robin, I have relented and provided a picture for use with this column. I kind of like anonymity (and most of you probably know what I look like anyway), but now you'll have a face to go with the name, and there goes the anonymity! Please feel free to "redesign" the picture as you see fit. Maybe we'll have a contest at some point for the best mustache, beard, etc. Stay tuned!

We're in full swing now with Section activities and meetings. The Section Meeting Program has finally been wrapped (see the schedule on back page of this issue to update your calendar) and I

think it is promising. Remember to keep March 18 open for our second annual Geosynthetics Seminar, provided under the auspices of our esteemed Honorary Member **Dr. Robert Koerner** of Drexel University. Every time we drag Bob out to speak, his "groupies" follow - we always get a good turnout. (I hope this statement doesn't jinx you, Bob!)

On the administrative end, we hosted the semi-annual District 4 Council in early October. This is always helpful to me personally as I get a chance to get to meet with our District Direction, **Joel Abrams**, and the officers of other Sections and Branches throughout Pennsylvania. We made some new friends at the Coast and Geodetic Survey through our participation in the rededication of the Hassler Monument in Laurel Hill Cemetery in mid-September.

On the "hope-so" front, by the time you read this I should have completed my trip to the National Convention in Dallas and at least become a little smarter because of it. Also, we should be finished with our celebration of the Phillies' success in the World Series. And maybe the Eagles will have won another game. (Remember, this is written a month ahead!)

Let's continue to work together for a successful year. Please feel free to pass along ideas, suggestions, etc. in this vein.

Sincerely,
Bob Wright, President, Phila. Section, ASCE

ACI Awards Program

(Continued from Page 1)

JUDGING

The jury will consist of professionals in the fields of architecture, engineering, construction and education. Awards will be judged for outstanding conception, originality, and applicability in design and construction.

Grand prize winners and finalists will be honored at an ACI banquet to be held in April, 1994. The exact time and location of the banquet will be announced at a later date.

Phila. Section, ASCE Director **David A. VanOcker** is Chairman of the ACI Awards Committee. For entry forms and full information about the 1994 Annual Awards Competition, contact Dave c/o Christakis & Kachele, Inc., 6910 Ludlow St., Upper Darby, PA 19082, Phone (215) 352-7676.

All submissions must be postmarked no later than November 19, 1993 and sent to: ACI, Delaware Valley Chapter, c/o A.W. Lookup Corporation, 10 E. 6th Avenue, Suite 300, Conshohocken, PA 19428.

TECHNICAL GROUP ACTIVITIES

(Continued from Page 1)

Construction Group

November Meeting

Date: Tuesday, November 23, 1993, 7:00 pm

Location: University Faculty Club, 33rd & Chestnut Streets, Philadelphia, PA.

SPEAKER: Joseph P. McAttee, P.E., Urban Engineers, Inc.

SUBJECT: Project Management Oversight for the Baltimore Section C Tunnel

Mr. McAttee is a Principal and Executive Vice

President of Urban Engineers, Inc. He is responsible for the firm's construction services and is a Registered Professional Engineer, receiving his Bachelor of Science degree from Drexel University in Civil Engineering. Additionally, he is the National Chairman for the Construction Management of America's Quality Management Committee.

This will NOT be a dinner meeting. However, we would like to know how many members are expected - please call **Fredric L. Plotnick**, Chairman Construction Group, at (215) 885-3733 if you plan to attend.

SOLID WASTE MANAGEMENT CONFERENCE

The Philadelphia Section, ASCE, is a co-sponsor, in company with local universities, State and City Technology and Environmental agencies, international research instrumentalities, and foreign universities, of the Ninth International Conference on Solid Waste Management, to be held at the Penn Tower Hotel, Philadelphia, PA, November 14-17, 1993. Conference Chair is **Dr. Iraj Zandi**, of the University of Pennsylvania; and Program and Planning Chair is **Dr. Ronald L. Mersky**, of Widener University (both are distinguished members of the Phila. Section).

The First Conference in this series was held under the title First Symposium on Industrial Resource Management in Philadelphia in 1981 to bring together experts from government, business and academia to examine issues related to various fields of solid wastes/resources management and technology.

(Continued on Page 4)

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SECTION 1993 AWARDS GIVEN AT SPRING SOCIAL

The Philadelphia Section, as has been its custom, presented its Section Awards for 1992-93 at its annual Spring Social and Dinner Dance, which was conducted on Sunday, May 16 at the Officers Club at the Philadelphia Naval Base. The event was switched from Saturday to Sunday, an experiment which proved to be popular with the Section membership. Approximately 120 guests attended the Section's year-end affair to welcome in the new Section officers as well as to cite four members who were nominated for Section awards.

Philadelphia Civil Engineer of the Year

Harry M. Perks, Executive Director of the Pennsylvania Convention Center Authority, was this year's recipient of the Section's highest honor. Harry has served as Director from 1990 until his retirement this past July. In this position, he controlled all design and construction activities at the half-billion dollar Center. Before his stint at the Convention Center, Harry was Streets Commissioner for the City of Philadelphia for three years. Before that, he enjoyed a successful 34-year career with Day and Zimmerman Consulting engineers which culminated with his presidency of the firm.


Harry obtained a Bachelor degree in Civil Engineering from The Citadel in 1951 and a Masters from Yale University in 1952. He is an active member of the National Society of Professional Engineers as well as ASCE.

Civil Engineering Manager

Richard J. Craig was the Section's choice for this award. Rick is the Assistant County Engineer for Bridges in Chester County. He has held several positions in the County's Bridge Department over the past eleven years and has directed a program of ongoing replacement and upkeep of County structures. He is a 1981 graduate of the University of Pittsburgh. He is a member of the American Society of Highway Engineers as well as ASCE.

Government Engineer of the Year

The recipient of this award was **Ruben D. David**. Ruben serves as Design and Construction Project Manager for the City of Philadelphia Department of Public Property, where he has been involved with numerous mass transit and public building undertakings. His skillful management has kept these visible efforts on schedule and within budget. He earned his Bachelor degree from the University of the East in Manila, the Philippines, in 1976. He is quite involved in numerous church activities and local youth programs.

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OCTOBER DINNER MEETING

October 12, 1993

Williamson's, City Line

DIRECTIONAL DRILLING AND MICROTUNNELING

An excellent beginning to the new ASCE year occurred with the Philadelphia Section's dinner meeting at Williamson's restaurant. The large crowd, gratifying social hour, excellent meal, and new President Wright's concise conduct of the Section's business, led into the very interesting presentation. Bob reviewed some of the activities of the Board Meeting which preceded the social hour, and announced Technical Group activities. He then

Transportation Engineer of the Year

Our own President Elect for 1993-94, **William T. Thomsen**, was nominated for this honor. Bill manages the Transportation Section at Urban Engineers. In this capacity, he directs the firm's mass transit activities and projects. He has handled design for various transit projects for the City of Philadelphia, SEPTA, PATCO and New Jersey Transit, as well as other transit authorities nationwide. He is a 1978 graduate of Clarkson College where he obtained his Bachelor degree in Civil and Environmental Engineering. He returned to school to earn a Masters degree from Drexel University in 1985. In addition to his duties at Urban Engineers, he serves as a part-time Associate Professor in the Civil Engineering program at Temple University.

Bill has been quite active in Section activities. He has chaired the Transportation Technical group and has served as a member of the Board of Directors.

Section Scholarships

The Section marked the third year of its Section Scholarship program with scholarships presented to **James O'Malley** of Widener University and **Peter Smith** of Temple University. Congratulations to both Jim and Pete - we hope we'll see both of you as active Section members after graduation.

The Section is grateful to the Awards and Spring Social committees for the usual good job which they do every year. We look forward to our 1993-94 Social, which will be held at the Officers Club at the Philadelphia Naval Base on Sunday, May 15, 1994. Watch THE NEWS for details.



WILLIAM R. SCHUTT
President

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Cathodic Protection Systems and Technical Services

introduced **Randall J. Essex** and **Lynne F. Cramer** of Woodward-Clyde Consultants, who spoke on directional drilling and microtunneling.

Randall J. Essex is Vice President and National Practice Manager for tunnels for Woodward-Clyde and has 16 years of geotechnical and tunnel design experience. **Lynne F. Cramer** is a Project Engineer with Woodward-Clyde and has technical expertise in rock and soil mechanics, excavation design, and tunnel construction. **Eric Flicker** of the Phila. Section helped to arrange the speakers.

Randy began by describing microtunneling. He highlighted the many advantages of trenchless construction, applicable to both microtunneling and directional drilling. These include minimizing disruption, reducing settlement and soil disposal volumes, safety and less noise and air pollution.

There are two forms of microtunneling, (1) using an auger that moves soils back through the shaft, and (2) a pressurized slurry line which returns slurry for settling displaced soil and is then recycled.

Randy highlighted several applications that allowed for drilling up to 3500 feet using intermediate jacking pits. These included tunneling under the Raritan River for the Middlesex Co. (N.J.) Wastewater Treatment Plant, and under major Interstate Highways, creek crossings, and educational facilities for a relief sewer for the Contra Costa Sanitary District in California.

Lynne followed Randy with a discussion of directional drilling. Typical applications were for river crossings or wetlands. Used for smaller applications than microtunneling, directional drilling starts at one surface point and emerges at another. Microtunneling goes in a straight line from one pit to another.


Directional drilling is also finding applications in in-situ treatment of soils contaminated by volatiles. Directional drilling to allow for vapor extraction, air sparging or in-situ bioremediation significantly reduces the number of wells that might otherwise have to be drilled, with attendant minimization of surface disruption, and provides access to soils that might not be accessible from a site directly above them.

A lengthy question and answer period following the presentation demonstrated the interest in this topic and provided an excellent start to the Section's new season.

James T. Smith P.E.
President

James T. Smith Engineering Company

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IMPORTANT! 1993-1994 MEETING NOTICES

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

ALL DINNER MEETINGS (Except as noted for Luncheon Meetings)

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

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

Tuesday, December 7, 1993 (previous date in error) - LUNCHEON MEETING

Tour of the Restored Reading Terminal Train Shed, Pennsylvania Convention Center.

Luncheon at Chinatown.

Host: **Harry Perks**, Pennsylvania Convention Center Authority

Wednesday, January 12, 1994 - Holiday Inn, King of Prussia

Joint Dinner Meeting with American Society of Highway Engineers (ASHE)

Subject and Speaker to be announced.

Wednesday, February 16, 1994 - Harbour League Club, Camden, NJ

Joint Dinner Meeting with South Jersey Branch, New Jersey Section, ASCE

NJ Transit South Jersey Rail Transportation Alternatives Study.

Friday, March 18, 1994 - Dinner Meeting, Drexel University Geosynthetic Research Institute

Geotextile Seminar II - Transportation Applications

Speaker: **Dr. Robert M. Koerner**, Director, GRI

March, 1994 - Location, date and time to be announced

Financial Planning/Insurance Seminar

Saturday, March 26, 1994 - Family Night of Bowling

Details to be announced.

Wednesday, April 13, 1994 (previous date in error) - Officers' Club, Philadelphia Naval Base

Joint Dinner Meeting with Society of American Military Engineers (SAME)

World Trade Center Emergency Preparedness - Response to Bombing

Speaker: **Eugene Fasulla**, Port Authority of New York and New Jersey

Sunday, May 15, 1994 - Officers' Club, Philadelphia Naval Base

Annual Spring Dinner Dance

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Solid Waste Management Conference

(Continued from Page 2)

For full information and registration forms, please inquire to the Ninth International Conference on Solid Waste Management, Systems Business Office, Room M60A Towne Building, University of Pennsylvania, Phila., PA 19104-6315, phone: (215) 898-7106.



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