

the news



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PHILADELPHIA SECTION
AMERICAN SOCIETY OF CIVIL ENGINEERS
1317 Spruce Street, Philadelphia, PA 19107

Vol. 62-2

76 Years of Excellence

NOVEMBER, 1989

NOVEMBER JOINT DINNER MEETING

Philadelphia Section, American Society of Civil Engineers
South Jersey Branch, New Jersey Section, American Society of Civil Engineers

TUESDAY, NOVEMBER 14, 1989

LOCATION: HARBOR LEAGUE CLUB, 800 Hudson Square, Camden, NJ
Cocktails - 5:30 P.M. Dinner - 6:30 P.M. Meeting - 7:15 P.M.

SUBJECT: CIVIL ENGINEERING IN THE 1990'S

SPEAKER: JAMES E. SAWYER, Chief Operating Officer and Vice President, Greiner Engineering, Inc., Tampa, Florida

Mr. Sawyer has been elected President-Elect of ASCE and assumed office at the ASCE National Convention in New Orleans this past October. He will serve in the post for one year before moving up to the Society's Presidency a year from now.

Mr. Sawyer is a renowned speaker and his viewpoints on the topic will be most enlightening to all members and guests at this Joint Meeting.

SPECIAL FEATURES: UNIVERSITY OF PENNSYLVANIA AND SWARTHMORE COLLEGE NIGHT

THE ASCE Student Chapters, Faculty and Alumni of the Civil Engineering Departments of the University of Pennsylvania and Swarthmore College will be honored at this meeting. All students, faculty and alumni are cordially invited to attend.

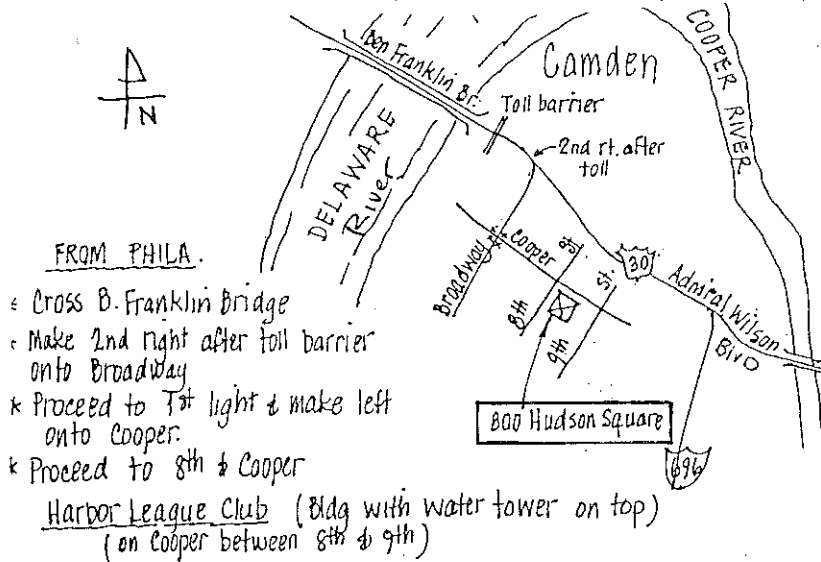
FOR RESERVATIONS, PLEASE CALL PRESIDENT WEGGEL'S SECRETARY, MARGIE, AT (215) 895-2364. RESERVATIONS ARE REQUIRED.

DINNER CHARGE:

NOVEMBER 14, 1989 MEETING AT HARBOR LEAGUE CLUB, Camden, NJ - ASCE Members & Guests - \$25.00; Students - \$12.50

STUDENTS: If you prefer, you are invited and welcome to attend the Meeting after Dinner, at no charge.

LOCATION MAP FOR HARBOR LEAGUE CLUB, CAMDEN, NJ



TECHNICAL GROUP ACTIVITIES

Geotechnical and Water/Environmental Group
(Combined Program for 1989-1990)
October Meeting

Date: **Tuesday, November 21, 1989** - 7:00 pm
Engineers' Club, 1317 Spruce Street, Philadelphia, PA, (215) 735-5234

SUBJECT: Use of Fly Ash in Earthwork Construction

Fly ash is the finely granulated inorganic material recovered as a byproduct of coal-fired power generation. While millions of tons of fly ash are produced annually, only a fraction is productively used, with the balance to be disposed of as waste at considerable expense. As a particulate "artificial soil" of well known mineralogy, the properties of fly ash are measurable and its behavior is predictable, such that it can be used in bulk as fill or as a component in pozzolanic cements. Two barriers to increased use are its perception as inferior material due to silt-size gradation, and concerns about its environmental effects, especially leaching and air or water erodibility.

This presentation concentrates on the use of fly ash in earthwork construction, including local and Mid-Atlantic area case histories on highway embankments, trench backfill, and subgrade stabilization. Issues such as leachability studies and isolation of fills from the hydrologic environment are addressed as well as compaction characteristics, loadbearing behavior, and post-construction exploration results.

For further information, please contact:

Geotechnical
Dr. J.P. Martin
Dept. of Civil & Arch. Eng'g.
Drexel University
Phila., PA 19104
(215) 895-2363

Water Resources/Environmental
Mr. Raymond A. Lees
ERM, Inc.
855 Springdale Dr.
Exton, PA 19341
(215) 524-3500

(Continued on Page 2)

DECEMBER JOINT DINNER MEETING

Philadelphia Section, American Society of Civil Engineers
The Association for Preservation Technology
Preservation Committee, American Institute of Architects

TUESDAY, DECEMBER 12, 1989

ENGINEERS' CLUB, 1317 Spruce Street, Philadelphia

Social Hour - 5:30 P.M. Dinner - 6:30 P.M. Meeting - 7:30 P.M.

SUBJECT: REPAIR AND INVESTIGATION OF ROOF TRUSS SYSTEM IN THE ACADEMY OF MUSIC

SPEAKERS: MR. NICK GIANOPULOS, Chairman of the Board, Keast and Hood, Structural Engineers.

DR. HARRY HARRIS, Professor of Civil Engineering, Drexel University

DINNER CHARGE:

DECEMBER 12, 1989 MEETING AT ENGINEERS' CLUB—ASCE Member & Guests—\$20.00; Students—\$10.00. (These charges will apply to all dinner Meetings at the Engineers' Club).

Technical Group Activities

(Continued from Page 1)

If you are interested in having dinner at the Engineers' Club before the meeting, please call Dr. Martin for arrangements.

Transportation and Urban Development Group

Date: Thursday, November 9, 1989 —

Engineers' Club, 1317 Spruce St. Phila., PA; Cocktails: 5:30 pm; Dinner - 6:15 pm; Meeting - 7:00 pm

SPEAKERS: J. William Vigrass, Project Director, Hill International, Inc.

David M. Weiss, Director of Project Development, Gibbs & Hill, Inc., NYC

SUBJECT: HIGH SPEED RAIL

Program Host: William Thomsen, P.E. Chairman Transportation and Urban Development Group

Mr. Vigrass and Mr. Weiss will discuss high speed rail in the U.S. and abroad. The program will focus on the status of high speed rail development and describe some of the technical aspects of the various forms of high speed rail technology, including conventional and mag-lev. The Program will also describe planning for the Orlando Airport - Disney World and Los Angeles - Las Vegas high speed rail proposals and discuss the latest status on both the California - Nevada Line and the Florida Triangle Line (Orlando, Miami, Tampa).

For reservations and information, please contact William T. Thomsen, Chairman, Transportation and Urban Development Technical Group; c/o Urban Engineers, Inc., 300 North Third Street, Philadelphia, PA 19106; (215) 922-8080. Dinner charge - \$18.50 per person.

TEMPLE GRADUATE PROGRAM ANNOUNCED

The Civil Engineering Department of Temple University announces a new graduate program in Computer Integrated Civil Engineering Systems leading to the Degree Master of Science in Engineering. It features:

- Programs concentrating in either Structural Systems or Engineering Project Management.
- Late afternoon and evening classes; part-time or full-time study; Assistantships available for qualified full-time students.

For additional information, including an application kit, please contact: Dr. Frederick C. Schmitt, P.E., Graduate Program Coordinator, Civil Engineering Dept., Temple University, Phila., PA 19122, (215) 787-7831.

MIHOCKO APPOINTED MEMBERSHIP SECRETARY

Phila. Section President J. Richard Weggel announces the appointment of — and acceptance by — Drew S. Mihocko, Supervisor of Water and Sewer Squad, Philadelphia Water Department, as Section Membership Secretary. Mr. Mihocko succeeds Joanne M. Anovick, Water Treatment Engineer 1, Philadelphia Water Department, who has served in the post since October, 1988.

Dr. Weggel has dispatched a letter to Mrs. Anovick, expressing the Section's great appreciation for her devoted service as Membership Secretary and Hospitality Committee Hostess.

RICHARDS AND WRIGHT JOIN STAFF OF THE NEWS

The Editor of THE NEWS is pleased to announce a successful appeal for assistance in authorship of the Section's newsletter. Two talented Philadelphia Section current officers have volunteered to join the staff: Director William G. Richards, P.E., and Secretary Robert M. Wright, P.E.

Bill Richards is Manager, Engineering and Scientific Systems, Weston Designers/Consultants, West Chester, PA. His writeup of the October 10, 1989 Section Meeting appears on page 3 of this issue of THE NEWS.

Bob Wright, Project Engineer, Major Highways Section, Department of Streets, City of Philadelphia, authored the article on the Section's 1989 Awards Presented at the Spring Social on June 3, 1989, which appeared in the October, 1989 issue of THE NEWS.

The Editor and staff welcome the new writers and look forward to continued visibility of their great talents and perceptions in coming issues of THE NEWS.

Please remit your dues to National ASCE Headquarters NOW. The Section benefits through a National subsidy when you do.

PHILADELPHIA SECTION AMERICAN SOCIETY OF CIVIL ENGINEERS OFFICERS 1989-1990

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COPY DEADLINE FOR DECEMBER 1989 ISSUE NOVEMBER 14, 1989

OCTOBER MEETING

October 10, 1989

Engineers' Club

"The Future of Superfund"

By William G. Richards, Staff Writer

A substantial turnout of over 100 ASCE members, guests, and students gathered to open the Phila. Section's 1989-90 regular meeting schedule. Held at the Engineers' Club, the dinner meeting inaugurated the Sections' 76th year and highlighted the Civil Engineering programs at Spring Garden College and Temple University. The guest speaker was **Thomas C. Voltaggio**, who discussed the future of the U.S. Environmental Protection Agency's **Superfund Hazardous Waste Management Program**.

Spring Garden College and Temple University Honored

The meeting featured the ASCE Student Chapters alumni, faculty advisors and the Civil Engineering Departments at both Spring Garden College and Temple University. Both schools were enthusiastically represented by their members who attended the meeting in strength.

Spring Garden's Program

Phila. Section President Richard Weggel, introduced **Dr. P.K. Mitra**, Faculty Advisor of the Student Chapter, who described the ongoing activities at Spring Garden. After providing a background on the College's history, Dr. Mitra detailed the Civil Engineering Technology program and praised the ASCE Student Chapter which is nearing its tenth year. He then introduced **Richard Hayes**, Student Chapter President who described the series of lectures and field trips planned by the Chapter, and their participation in the Concrete Canoe Race and Beam Competitions.

Mr. Hayes introduced his fellow Student Chapters Officers and other Chapter members in attendance: **Dan Stalheim**, Vice President; **Robin Haggen**, Secretary; and **Tom Smith**, Treasurer. Faculty member Professor **Nick Colanzi** was also present, in addition to Professor Mitra.

Temple University's Program

Temple's **Dr. Frederick C. Schmitt, P.E.**, Chair, Civil Engineering Department, explained the available Civil Engineering programs at the University. These include the fully-accredited Civil Engineering course, the Civil/Construction Engineering Technology program that has been ongoing since 1970, and the newly initiated Civil Engineering Graduate Studies program. Dr. Schmitt pointed out that three successive Deans of the Temple College of Engineering were present in the audience: **Dr. John Rumpf**, **Dr. Robert Haythornthwaite**, and **Dr. Frederick Higgins**. Dr. Schmitt introduced **Dr. Bechara Abboud**, Student Chapter Faculty Advisor who presented **Maria Villanti**, Student Chapter President and the other Officers of the Temple Student Chapter: **Paul Carroll**, Vice President; **Mark Schroder**, Treasurer; **Mike De Benedictis**, Secretary; and **Vince Puleio**, Chairman.

Temple Dean of the College of Engineering, **Dr. Charles Alexander** concluded the Temple presentation with his inspiring vision of the future revolution in Civil Engineering due to the use and proliferation of computers and computer applications and of the role of today's engineering students in carrying this out. Dr. Alexander antici-

pates as many innovations and inventions to occur in the next decade as have occurred in all history to date, and challenged his students and all engineers to work toward this vision.

President Weggel Introduces Guest Speaker

Dr. Weggel then introduced **Thomas C. Voltaggio**, EPA Region III's Director of the Superfund Program, to speak on "**The Future of Superfund**." Mr. Voltaggio was born in Queens, New York and received a B.S. degree in Chemical Engineering from the City College of New York and an MS degree in Management Science from Texas Christian University. Tom has been employed by Stauffer Chemical Company from 1968-71 and by EPA since 1971, where he has served in the Dallas, Chicago and Philadelphia regional offices. From 1980 to 1984 he supervised the Hazardous Waste Enforcement effort in Region III. In 1982 he also became responsible for the implementation of the Superfund Remedial Program and in 1984 for Superfund response activities such as emergency and remedial response. In 1989 he became responsible for the entire Superfund Program, including all remedial activities.

Overview of Superfund

Mr. Voltaggio began with a historical summary of the EPA hazardous waste response and cleanup program. He explained the CERCLA and SARA regulations which deal with the clean-up problems from the past improper disposal of hazardous waste. These regulations, in addition to requiring hazardous waste problems to be reported and giving the Federal Government enforcement powers and the authority to respond, also established a trust fund to finance these clean-ups. This trust fund has been named "Superfund" and is presently established at \$8.5 billion.

The Superfund is used to finance remediation at hazardous waste sites where responsible parties cannot be determined and to allow quick response while responsible parties are identified. When those responsible are determined, they are to be held financially liable for recovering the costs. The process involves the EPA, contractors, State and Local governments, other Federal agencies, the public, and potentially responsible parties (PRP's). EPA uses its enforcement powers to seek out and identify potentially responsible parties; for litigation to bring responsible parties to perform or pay for cleanup; to supervise remedial actions; and to recover costs for the program.

Future Changes

Mr. Voltaggio explained that the direction of the Superfund program is changing from EPA having the primary role in clean-up to one where the responsible parties are made to provide the clean-up with Federal oversight. EPA is expanding its role in the use of mixed-party settlements, where there are many responsible parties involved in a site, and trying to negotiate allocations for funding among them. The Superfund program funds will be used for "orphan" sites where the responsible parties cannot be found or may no longer exist. The EPA will also be getting tougher in enforcement or non-cooperative responsible parties in paying for cleanup. In this area they will be aided by the doctrine of "joint and several lia-

bility" where any partially responsible party (having been shown to contribute in part - no matter how small - to the problems of a hazardous waste site) can be held wholly financially liable for clean-up, if necessary. This process has given EPA significant leverage in negotiating financial settlements.

In summary the new thrust of the Superfund program will be for less emphasis in direct Federal involvement in the site clean-ups, but for more enforcement actions against the potentially responsible parties.

Question and Answer Discussion

The presentation was followed by a lively question and answer period. Among the topics discussed were the equity of the "joint and several liability" process, Federal R&D programs sponsored under Superfund, and the risk evaluation models used to rank hazardous waste sites. Mr. Voltaggio was then awarded the Section's Certificate of Appreciation by President Weggel, for his excellent presentation.

LEHIGH VALLEY SECTION SPONSORS MASONRY STANDARDS SEMINAR

The Lehigh Valley Section, ASCE is co-sponsoring a seminar on "**How to Apply the New 530 Masonry Standards**" with the Council for Masonry Research, to be held all day Friday, **November 10, 1989**, at the Allentown Hilton in Allentown, PA.

The seminar introduces the masonry structural design code, *Building Code Requirements for Masonry Structures* (ACI-ASCE 530) and its accompanying *Specifications for Masonry Structures* (ACI-ASCE 530.1). Recently completed, these documents are now included in the National and Standard Building Code by reference. They contain the latest design and construction requirements for clay brick, concrete block & composites of brick and block are presented under one cover.

Participants will receive a copy of the new code and specifications, a commentary on each, and sample problems and answers which illustrate their use.

Time: 8:30 am to 4:30 pm - Registration and refreshments at 8:00 am and throughout the day. Lunch is included.

Seminar leaders include: **Russell H. Brown**, Ph.D., P.E., Head of Civil Engineering at Clemson University; **Marlo Catani**, MS, P.E., President, Dur-O-Wal, Inc., Arlington Heights, IL; **Al Isberner**, P.E., Principal, Al Isberner, P.E., Portage, WI; **Thomas Munsell**, P.E., President, Munsell Associates and Engineers, Southfield, MI; **Max Porter**, Ph.D., P.E., Professor at Iowa State University, Ames, IA; and **James Colville**, Ph.D., Professor and Chairman, University of Maryland, College Park, MD. The leaders represent experienced specialists in all aspects of masonry design.

To register or for more information, call 1-800-548-2723; or call **Mr. Paul A. LeMenager**, Seminar Coordinator, at (215) 770-6697.

ASCE DUES BILL AND TECHNICAL GROUP DETAILS

Section members will notice in the 1989 dues bill from National ASCE Headquarters, that the PHILADELPHIA (SECTION) DUES is itemized as \$13.00. This amount includes assessment for membership in one Phila. Section Technical Group of your choice. *If you choose to be a member of more than one group, please add \$1.00 for each group.*

Also, because National's bill did not list the Technical groups to which your \$1.00 payments were to be applied, *you are requested to get in touch with the Chairman of the Technical Groups of your preference*, so that their membership lists can be classified.

The appropriate individuals to contact are the following:

Liaison

Moustafa A. Gouda
Lippincott Engineering Associates
1 Pavilion Place
Riverside, NJ 08075
(609) 461-1239

Younger Member Forum

Chairman position available. If interested, please contact **Moustafa Gouda** (See "Liaison" above).

Construction

Fredric L. Plotnick, Chairman
Engineering & Property Mgt. Consultants
806 Hilton Lane
Elkins Park, PA 19117
(215) 885-3733

Structural

David A. VanOcker, Chairman
Christakis & Kachele, Inc.
6910 Ludlow Street
Upper Darby, PA 19082
(215) 352-7676

Transportation & Urban Development

William T. Thomsen, Chairman
Urban Engineers, Inc.
330 N. Third St.
Philadelphia, PA 19406
(215) 922-8080

Engineering Management

Edward F. Koehler, Chairman
416 Longfellow Avenue
Wyncote, PA 19095
(215) 557-1603

Geotechnical

Dr. Joseph P. Martin, Chairman
Drexel University
Civil Engineering Dept.
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Philadelphia, PA 19104
(215) 895-2363

Water Resources & Environmental Engineering

Raymond A. Lees, Chairman
ERM, Inc.
855 Springdale Dr.
Exton, PA 19341
(215) 524-3500

IMPORTANT!! 1989-1990 MEETING NOTICES

MARK YOUR CALENDAR for the dates of the remaining Philadelphia Section, ASCE monthly meetings and social functions, as follows:

ALL DINNER MEETINGS

Cocktails - 5:30 pm Dinner - 6:30 pm Meeting - 7:30 pm
STUDENTS: All dinner and luncheon charges one-half price. If you prefer, you are invited to attend all meetings after dinner or luncheon, at no charge.

WEDNESDAY, January 17, 1990 - Dinner Meeting

Holiday Inn, Goddard Boulevard, King of Prussia

Joint Meeting with Delaware Valley Section, American Society of Highway Engineers (ASHE)

Subject: **The Vine Street Expressway**

Speakers: A panel of designer, construction manager and owner will discuss this highly complex and interesting project.

Drexel University Night

Tuesday, February 13, 1990 - LUNCHEON Meeting

Engineers' Club - 12:00 Noon

Subject: **Professional Liability Insurance - A Primer With Case Studies**

Speaker: **Ken Wortley**, Insurance Underwriter

Villanova University Day

Tuesday, March 13, 1990 - Dinner Meeting

Engineers' Club

Subject: **The "Chunnel" (English Channel Tunnel)**

Speaker: To be announced

Widener University Night

Tuesday, April 10, 1990 - Dinner Meeting - Engineers' Club

Joint Meeting with Society of American Military Engineers (SAME)

Subject: (Tentative) - **The Penn's Landing Project**

Speaker: To be announced

Saturday Evening, May 5, 1990

Annual Spring Dinner Dance - Colleen's, Park Towne Place,
Benj. Franklin Parkway, Philadelphia

LEHIGH UNIVERSITY CATLSS SEMINAR SERIES

The Lehigh University Center for Advanced Technology for Large Structural Systems (CATLSS) is conducting a series of Seminars which should be of interest to Philadelphia Section members, as follows:

November 8, 1989

Subject: *"Lessons from Structural Connections Failures: Case Study - L'Ambiance Plaza"*

Speaker: **Dr. Charles G. Culver**, Director, Office of Construction, Maritime and Health Engineering Support, U.S. Department of Labor, OSHA, Washington, D.C.

December 6, 1989

Subject: *"Innovative Techniques for Bridge Construction and Rehabilitation: Development and Case Studies"*

Speaker: **Mr. Edward Cohen**, Managing Partner, Ammann & Whitney, New York, NY

Place: Sinclair Auditorium, Lehigh Campus

Time: 3:10 pm -

Refreshments served at 2:45 pm

For additional inquiries, please call **William D. Michalerya**, (215) 758-5483 or **David A. Thomas**, (215) 758-4280.

POSITION SOUGHT

Mauricio Silva, a Brazilian Engineer, married to an American citizen, has relocated his family in the Philadelphia Metropolitan area. He is interested in a position in any phase of Civil Engineering, particularly in industrial/home building and highways. He holds Degrees in Civil Engineering (mathematics major), Business Administration, and Post-Graduate studies in Urban Planning and Industrial Psychology.

His experience includes Resident Construction Engineer (1987 to present); Construction Coordinator (1986); Contract Coordinator and Construction Supervisor (1983-1985); and several similar positions. In 1977-1978 he was Head of Civil Engineering Department which included contract negotiations and industrial building of an area of 11,000 square meters for Dow Corning of Brazil. Mr. Silva is 38 years old.

Please direct responses, if you are interested in employing Mr. Silva, to him c/o **Isadore Reivich**, 7300 Cresheim Road, B-7, Philadelphia, PA 19119 - (215) 247-0225.

**National ASCE
Headquarters
1-800-548-ASCE**