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PHILADELPHIA SECTION

AMERICAN SOCIETY OF CIVIL ENGINEERS

1317 Spruce Street, Philadelphia, PA 19107

Vol. 60 - 5

OUR 74th YEAR

February, 1988

### FEBRUARY DINNER MEETING

Philadelphia Section, American Society of Civil Engineers

# TUESDAY, FEBRUARY 9, 1988

Joint Meeting with Reading Branch Location: SHERATON VALLEY FORGE HOTEL

Route 363 and First Avenue, King of Prussia, PA (SEE LOCATION MAP)
Cocktails - 5:30 P.M. Dinner - 6:30 P.M. Meeting - 7:30 P.M.

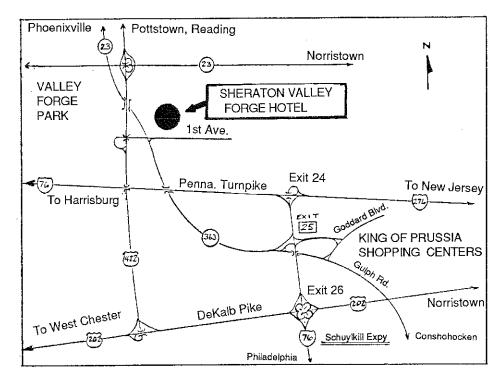
SUBJECT:

THE SAFE DRINKING WATER ACT

SPEAKER:

FREDERICK A. MARROCCO, Chief, Division of Water Supply, Pennsylvania Department of Environmental Resources. (Continued on Page 2)

#### **LOCATION MAP**



FOR RESERVATIONS FOR THE **FEBRUARY 9, 1988 MEETING** AT THE SHERATON VALLEY FORGE HOTEL, PLEASE CALL PRESIDENT NORMAN WEINTRAUB'S SECRETARY, PAULA, AT **(215) 592-6209** BEFORE 5:00 P.M. FEBRUARY 5, 1988. **RESERVATIONS ARE REQUIRED.** Dinner Meal Charge: ASCE Members and Guests - \$20.00; Students - \$10.00 STUDENTS: If you prefer, you are welcome to attend the Meeting after Dinner, at no charge.

# TECHNICAL GROUP ACTIVITIES Structural Group February Meeting

Date: Tuesday, February 23, 1988

Engineers' Club

Cocktails — 5:00 P.M.; Dinner — 6:00

Meeting — 7:00 P.M.

Subject: Slip-forming the Core of the Blue Cross Tower Building

Speaker: Harvey Lehr, President, NCI of

Minnesota, Inc.

The presentation will include a movie, slide show and discussion of the slip-formed concrete for the 48-story office building currently under construction at 19th and Market Streets, Philadelphia, PA. Mr. Lehr will explain the various aspects of the overall slip-forming operation; as well as considerations for the designer in developing reinforcing bar details, anchorages and embedments.

For reservations and full information, please call Timothy H. Haahs, Chairman, Structural Group, Walker Parking Consultants, (215) 751-9555; or David A. Van Ocker, Vice Chairman, at (215) 735-9755.

# WRIGHT SUBMITS SECTION'S ANNUAL REPORT

Philadelphia Section Secretary Robert M. Wright has submitted to ASCE National Head-quarters the Annual Report, Philadelphia Section, ASCE, Fiscal Year October 1, 1986 - September 30, 1987.

With the expert assistance of Section Past President Albert M. Tantala and Section Treasurer Charles J. Denny, and the cooperative efforts of Technical Group officers and Committee Chairmen, Bob Wright has assembled an outstanding, comprehensive Report.

As required by the National Society By-Laws, the Annual Report of the Section Activities, Finances and Membership summarizes monthly meetings; technical, social and educational programs and operations. It includes data on Zone 1 and District 4 participation; the Reading Branch of the Philadelphia Section; Technical Groups; Committees; Publications; Younger Member participation, encompassing the ASCE Student Chapters and Clubs in

(Continued on Page 5)

### IMPORTANT!! 1987 - 1988 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 P.M.

Dinner - 6:30 P.M.

Meeting - 7:30 P.M.

Tuesday, April 12, 1988 - Engineers' Club

Joint Meeting with the Philadelphia Post, Society of American Military

Engineers, (S.A.M.E.)

Subject: ASCE Manual of Professional Practice

Speaker: James Poirot, P.E., Chairman of the Board, CH2M-Hill

Temple University Night

Saturday Evening, May 14, 1988

Annual Spring Dinner Dance - Colleen's, Park Towne Place

Arranged by the Women's Auxiliary

#### FEBRUARY DINNER MEETING

(Continued from Page 1)

In 1986, the United States Congress amended the Safe Drinking Water Act to apply stricter regulations to water suppliers serving greater than fifteen connections. Significant elements of this amendment include: water filtration/disinfection requirements; increased testing for contaminants; ban on lead solder pipes; and improved well head protection.

Mr. Marrocco will discuss DER's strategy, requirements and timetable for implementation of the Amendment for water systems in Pennsylvania.

Frederick A. Marrocco earned a B.S. in Civil Engineering at Drexel University (1971) and his M.S. in Environmental Engineering at the University of North Carolina (1974); and he is a Registered Professional Engineer in Pennsylvania. He has held his present position of Water Supplies Division Chief for Harrisburg Central Office, Permsylvania Department of Environmental Resources, since



December, 1982. His responsibility in the State's Safe Drinking Water and Bathing Place Programs include technical and administrative management over the Department's water facilities restoration loan program developmental and implementation activities,

Mr. Marrocco's previous positions with DER include: Regional Water Quality Manager, Harrisburg Region; Planning Section Chief for the Bureau's Harrisburg Regional Office, which covers the 14-county south-central Pennsylvania area, with responsibility for area-wide water quality standards, waste-water management planning, 201 construction grants program, and Pennsylvania's Municipal Sewage Facili-

ties Act, and Assistant River Basin Engineer, Division of Water Quality. Since 1985, Mr. Marrocco has been a member of the State Board for Certification of Sewage Treatment Plant and Waterworks Operators; and he is 1988 President of the Association of State Drinking Water Administrators. He is affiliated as a member and/or official of numerous Water and Sanitation Administration Regulatory Committees, Foundations, Associations and Professional Societies.

Technical papers published by Mr. Marrocco include: Giardia Monitoring and Regulation in Pennsylvania Surface Waters; Application of CT Factors in Pennsylvania Surface Water Supplies; and Does EPA's Surface Water Treatment Rule Include Filtration?

SPECIAL FEATURE: UNIVERSITY OF PENNSYLVANIA AND VILLANOVA UNIVERSITY NIGHT

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

### MARCH DINNER MEETING

Philadelphia Section, American Society of Civil Engineers

# TUESDAY, MARCH 8, 1988

ENGINEERS' CLUB, 1317 Spruce St., Philadelphia Cocktails - 5:30 P.M. Dinner - 6:30 P.M.

Meeting - 7:30 P.M. SUBJECT: THE NAVY'S CONTRACTOR - QUALITY - CONTROL SELF INSPECTION

**PROGRAM** 

SPEAKER: MYRON BERNHANG, P.E., Contract Administration, Northern Division, Naval Facilities Engineering Command, Philadelphia Naval Base

FOR RESERVATIONS FOR THE MARCH 8, 1988 MEETING, PLEASE CALL PRESIDENT NORMAN WEINTRAUB'S SECRETARY, PAULA, AT (215) 592-6209.
Dinner Meal Charge: ASCE Member - \$15.00; Non-Member - \$16.00; Students - \$8.00 STUDENTS: If you prefer, you are welcome to attend the Meeting after Dinner, at no charge.

#### POSITION WANTED

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Philadelphia, PA 19102

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COPY DEADLINE FOR **MARCH 1988 ISSUE** 

FEBRUARY 8, 1988

### PHILADELPHIA SECTION ASCE ANNUAL CIVIL ENGINEERING AWARDS

The Philadelphia Section takes pleasure in announcing the Annual Civil Engineering Awards. These awards are to recognize local members, for their contributions to the Civil Engineering field. If you wish to nominate someone, please read the rules and criteria and then fill out the nomination form.

# ALL AWARDS WILL BE PRESENTED AT THE MAY 14TH ANNUAL DINNER DANCE at Colleen's Restaurant, Park Towne Place

#### RULES

Nominations must be received prior to 3 p.m., February 26, 1988. (If time extension or information are necessary, contact John Durrant (215) 225-3977 or Bob Wright (215) 686-5538.)

Individuals may be nominated for awards by a member in any grade of membership.

Individuals may be awarded only one award in a single year.

Individuals may be nominated for more than one award.

Award recepients must be approved by the Board of Directors.

All awards are presented only in years, where in the judgment of the Selection Committee, or the Board, there is at least one suitable candidate.

The Selection Committee will be required to nominate an alternate for Board consideration for each award.

Each Selection Committee will also recommend to the Board of Directors whether the recepient should be nominated for applicable national or regional awards by the Section.

#### AWARDS

#### Philadelphia Civil Engineer of the Year

The section's highest award is presented to an individual who is judged to have contributed substantially to the civil engineering profession.

#### CRITERIA:

- Membership Grade Member, Fellow, Life or Honorary
- ---- Member in good standing of the Philadelphia Section RECIPIENT ALSO CONSIDERED FOR:
  - 1. Delaware Valley Engineer of the Year
  - 2. Edmund Friedman Professional Recognition Award

## Philadelphia Young Civil Engineer of the Year

This award is presented to a young civil engineer who is judged to have contributed to the civil engineering profession.

#### CRITERIA:

- Membership Grade Associate or Student
- -- Member in good standing of the Philadelphia Section or member of a student chapter assigned to the Philadelphia Section
- Must be 31 years of age or younger on Feb. 1 of the award year RECIPIENT ALSO CONSIDERED FOR:
  - Edmund Friedman Professional Recognition Award

## Philadelphia Government Engineer of the Year

This award is presented to an individual who is employed by the Federal Government, a State Government, a Municipal Government or a public authority that has contributed substantially to the civil engineering profession.

#### CRITERIA:

- Membership Grade Member, Life, Honorary or eleigible for membership
- Assigned to the Philadelphia Section or employed or residing within the Philadelphia Section boundaries.

#### RECIPIENT ALSO CONSIDERED FOR:

- 1. Zone I Government Engineer of the Year
- 2. Civil Government Award

# Philadelphia Young Government Engineer of the Year

This award is presented to a younger member who is employed by the Federal, a State or a Municipal Government or a public authority that has contributed to the civil engineering profession.

#### CRITERIA:

- -Membership Grade Associate member or eligible for membership.
- —Member in good standing of the Philadelphia Section or employed within the Philadelphia Section boundaries.

#### RECIPIENT ALSO CONSIDERED FOR:

- Zone I Young Government Engineer of the Year

#### Government Service Award

Presented to an elected or appointed governmental official who has contributed substantially to the status of the civil engineering profession by their public service.

#### CRITERIA:

 Holds office in a jurisdiction which represents a geographical including an area which corresponds to the boundaries of the Philadelphia Section.
 This would include the President, a U.S. Senator from Pennsylvania, Congressman, Mayor, Commissioner, etc.

#### RECIPIENT ALSO CONSIDERED FOR:

- Civil Government Award

#### Individual Technical Awards

The following awards have the same criteria. Each award is presented to an individual who is judged to have contributed substantially to civil engineering and in the area of the particular award,

Civil Engineering Manager of the Year Geotechnical Engineer of the Year Structural Engineer of the Year Construction Engineer of the Year Transportation Engineer of the Year Water Resources Engineer of the Year

(over)

#### CRITERIA:

--- Membership in any grade

— Member of the Philadelphia Section RECIPIENT ALSO CONSIDERED FOR:

 Technical Groups will be responsible for nominating winners for appropriate national award.

#### Educator of the Year

This award is presented to an outstanding educator in the field of civil engineering, who has contributed substantially to the field. CRITERIA:

- Membership Grade Higher than student
- Member of the Philadelphia Section
- Must be a staff member of a college or university with an ASCE student club chapter

### Philadelphia History and Heritage Award

Presented to an individual whose efforts have made contributions to better the knowledge of, or appreciation for, the history and heritage of civil engineering.

#### CRITERIA:

— Must reside within the geographical boundaries of the Philadelphia Section or be a member of the Philadelphia Section.

#### RECIPIENT ALSO CONSIDERED FOR:

- Civil Engineering History and Heritage Award

cut along line

#### — NOMINATION FORM —

IF YOU DESIRE TO MAKE NOMINATIONS FOR MORE THAN ONE PERSON, PLEASE PHOTOCOPY THIS FORM.

Name of Candid	late			
Address		Ph	Phone	
Job Tifle				
Work Location_				
Membership			Registration Information	
ASCE	☐ Yes ☐ No			
Phila. Section	☐ Yes ☐ No			
Age (if applicable	le)			
Award(s) Nomin	ated to— Check One (or more if applicable)			
Philadelphia Civil Engineer of the Year			Individual Technical Awards	
☐ Philadelphia Young Civil Engineer of the Year			Civil Engineering Manager of the Year	
☐ Philadelphia Government Engineer of the Year			Geotechnical Engineer of the Year	
☐ Philadelphia Young Government Engineer of the Year			Structural Engineer of the Year	
☐ Government Service Award			Construction Engineer of the Year	
☐ Educator of the Year			Transportation Engineer of the Year	
☐ Philadelphia History and Heritage Award			Water Resources Engineer of the Year	
Academic Degrees —		Other Professional Socities —		
Civic or Charitable Activities —		Continuing Education —		
		=		
Other Awards or	Honors			
Nominated by:	Name			
	Address			
	Telephone Number			

Achievements — (In 200 words or less, that supports the candidate's nomination, please use separate sheet.)

#### JANUARY MEETING

January 12, 1988

Engineers' Club

# Waste Management and the Civil Engineer

The January, 1988 regular Philadelphia Section, ASCE meeting featured a presentation on the timely subject: "Waste Management in the '80s and Beyond—Challenges and Opportunities for the Civil Engineer." Principal speaker was Amir A. Metry, Ph.D., P.E., Vice President, Roy F. Weston, Inc., West Chester, PA. The excellent meeting was arranged by Farid F. Mansour, Chairman of the Section's Water and Environmental Engineering Group. The plaudits of the Section are extended to Mr. Mansour for his thorough planning and detailing of the program for the meeting. Mr. Mansour introduced Dr. Metry.

#### Engaging Style of the Speaker

In a genial and witty introduction — which set the pace and tenor of his entire presentation — Dr. Metry related humorous anecdotes about his early experiences as an immigrant engineer to America, fresh from Cairo, Egypt. His engaging style of delivery continued throughout his talk, which featured slide illustrations on the environmental challenges wrought by the waste management crisis which pervades our time.

Dr. Metry reviewed new, contemporary issues in solid, hazardous and nuclear waste management, including inventories of site-selection know-how; economic, human and technical resources - which must be addressed for remediation in the '80s and beyond by the Civil/Environmental Engineer.

#### Case Histories

Dr. Metry synopsized the waste management cycle from storage to treatment and safe disposal in such a way as to preclude negative natural processes. He explained the advantages of resource recovery technology for steam, conversion to electrical energy and the creation of bi-products useful to industry, and harmless to society. He emphasized that land disposal should be used only as a last resort, after processes of treatment and neutralization of hazardous materials are examined and analyzed.

Our speaker showed examples in which positive results were achieved:

- Coal-burning electric utilities produce millions of tons of fly-ash and sludge. Recycling of scrubber sludge fluids and chemical treatments produce manageable and reclaimable materials for construction purposes, such as road-base slag and other useful by-products.
- The production, through waste conversion treatment, of an offshore artificial reef, which is environmentally viable and esthetically acceptable.

#### The Waste Storage Sites Problem

What to do with the hazardous waste sites? The problems of ground water management and site improvement to intercept and divert dangerous leachates are formidable. Dr. Metry illustrated several facilities designed and built by his firm. These included surface rehabilitation and cover; subsurface barriers and waste removal; and materials handling - utilizing lagoon containments, han-

dling contaminated wastes through site drilling, ground penetrating radar, and soil vapor profile analyses.

#### On-Site Remedies

Dr. Metry described several on-site remedial action strategies within the contraints of government regulations and client option selections. He analyzed the risk assessment and costs of the various remedial action alternatives. He detailed laboratory experiments and on-site procedure evaluations conducted by Weston in arriving at management solutions, depending upon the particular problems of individual hazardous waste sites.

In summarizing the statistics of the inventory of nuclear electrical generating capacity since 1983, Dr. Metry illustrated favorable-to-medium desirable disposal site areas investigations now under way throughout the United States. Key features of these sites are: chemical repository composition; rock formations; salt deposits, etc. The investigations include underground sampling as deep as one-half mile beneath the surface into aquifers, rock formations, soil layers, etc.

A particularly interesting slide showed a schematic of an underground repository for processing and storage of hazardous wastes at depths of one-half to one-mile below ground surface.

#### To Meet the Challenge

Dr. Metry listed key new skills with which the Civil/Environmental Engineer must confront the waste management challenge:

- 1. A total systems approach for waste minimization by the public. This includes storage, transportation and disposal.
- 2. A shift of emphasis from the study phase to the implementation phase of remedies.
- 3. The transition from land disposal to treatment, destruction or neutralization of wastes.
- 4. Risk assessment/management and environmental simulation.
- 5. Economic trade-off and financial feasibility of methods.
- 6. Dealing with regulatory and institutional complexity and restraints (you must be a "social scientist") having to do with the human needs of the public. This also involves political sensitivity and awareness of how neighborhoods and private owners' land values would be affected by waste management methods. Effectiveness of noise barriers, traffic problems around treatment plants, etc. must also be taken into account.

#### Question and Answer Period

In a discussion with members of the audience comments and questions, Dr. Metry stressed the importance of the Civil Engineering community to address the inexorable and inescapable trash disposal crisis facing cities like Philadelphia and others throughout the United States.

Dr. Metry's presentation was enlightening, as well as easy to listen to, on a subject which could be less than stimulating if delivered by a speaker of inferior articulation. The Philadelphia Section is grateful to Dr. Metry for his splendid presentation — and to Mr. Mansour for engaging him. President Weintraub presented our distinguished speaker the Section's Certificate of Appreciation.

# CONSTRUCTION INDUSTRY SEMINAR

With the objective of examining sound accounting practices and management techniques which maximize profit and minimize financial risks in the construction industry, the PICPA Foundation for Education and Research is sponsoring its Seventh Annual Construction Industry Seminar, to be held on February 18, 1988 at the Marriott Hotel, Green Tree, PA; and February 24, 1988 at the Hilton Hotel, Valley Forge, PA. The theme of the seminar is: "Building for the Future."

Speakers prominent in the relevant seminar subjects will discuss basic management principles and focus on those areas unique to construction contractors, including: Insurance; Computers on the Job Site; Bonding; Taxes and Cash Flow. Lectures and workshops will give seminar participants the opportunity to have their questions answered. Typical topics to be covered in the Seminar are:

- · Controlling the Insurance Crisis
- Computers: An Inside Look at Construction Applications
- · Women in the Construction Field
- · Tax Reform Act Revisited
- · Bonding in a Risky Environment
- Employee Benefits Package
- Controlling Cash Flow: From Bidding Through Performance
- Do You Manage Your Company or Just Watch?
- · Who is Being Sued and Why?
- · What Happens When You're Gone?
- Special Taxes

The registration fee is \$110.00 and includes all course materials, coffee breaks and luncheon. For full registration information about the Construction Industry Seminar, write the PICPA Foundation for Education and Research, P.O. Box 8068-393, Philadelphia, PA 19177.

# INVITE YOUR ASSOCIATES TO ALL ASCE MEETINGS!

#### Wright Submits

(Continued from Page 1)

area colleges and universities; Section Prizes, Awards and Scholoarships; Women's Auxiliary; and other subsidiary affiliations.

The Report conveys information helpful to the National ASCE Board of Direction, the Committee on Local Sections and District Councils, Headquarters staff and other Sections — in evaluating Philadelphia Section affairs. It is also a prime prerequisite for the payment by National of the annual financial allotment to the Section.

In addition to Intra-Section programs and functions, the volume describes in detail the Section's participation in Intersociety Council of Delaware Valley (ETSCO); Annual Engineers' Week Committee of Delaware Valley; Joint Meeting annually with the Society of American Military Engineers (SAME); the Philadelphia Urban Manpower Program (PUMP); Opportunities in Engineering for Minorities; Construction Career Day Conferences; and many others.

The Philadelphia Section extends its highest plaudits and appreciation to Secretary Wright and his skillful helpers for this excellent publication.

# ASCE DUES BILL AND TECHNICAL GROUP DETAILS

Section members will notice in the 1987 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 \$100 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

J. Richard Weggel
Drexel University
Dept. of Civil Engineering
Philadelphia, PA 19104
(215) 895-2355

Younger Member Forum Anthony M. Micciolo, Chairman 1141 Dyre Street Philadelphia, PA 19124 (215) 744-8767

#### Construction

Fredric L. Plotnick, Chairman 806 Hillton Lane Elkins Park, PA 19117 (215) 487-1443

Engineering Management Chairman position available. If interested, please contact I Pichard Woosel

J. Richard Weggel (See "Liaison" above).

Geotechnical

Moustafa A. Gouda, Chairman Lippincott Engineering Associates 501 Burlington Avenue Delanco, NJ 08075 (609) 461-1239

Structural

Timothy H. Haahs, Chairman Walker Parking Consultants 2 Penn Center Plaza Philadelphia, PA 19102 (215) 751-9555

David A. Van Ocker, Vice Chairman (215) 735-9755

Transportation and Urban Development William T. Thomsen, Chairman

Urban Engineers, Inc.
300 N. 3rd Street
Philadelphia, PA 19106-1193
(215) 922-8080

Water and Environmental Engineering Farid F. Mansour, Chairman

F. Mansour, Charman
United Engineers & Constructors, Inc.
30 S. 17th Street
Philadelphia, PA 19101
(215) 422-3376

# CONSTRUCTION AND ENGINEERING EXPO

Sponsored by the Engineers' Club of Philadelphia and more than 30 trade associations, the *Third Annual Construction and Engineering Expo* will be held March 3-5, 1988 at the Valley Forge Convention Center (adjacent to the Sheraton Valley Forge Hotel), King of Prussia, PA. The Club invites exhibitors and attendees to participate or visit this important professional event. The Exposition will feature:

- 300 exhibits on construction
- · Engineering products and services
- Over 40 informative seminars
- · Construction equipment auction
- · Free parking and outside displays

Some Associations and Societies supporting the Expo include: Associated Builders & Contractors, General Building Contractors Assn., American Concrete Institute, American Public Works Assn., Consulting Engineers Council of PA, American Institute of Architects, Greater Phila. Chamber of Commerce, Society of American Military Engineers, American Society of Highway Engineers, PA Society of Professional Engineers, American Society of Civil Engineers, Subcontractors Assn. of Delaware Valley, Engineering & Technical Societies Council of Engineers, and many others.

#### Construction Related Seminars Include:

Radon Resistant Construction; Geosynthetics; Energy-Efficient Lighting Systems; Project Scheduling and Delays; Computerized Estimating and Scheduling; Computers for Construction; Delay Claims; Synthetic Fibers for Concrete; Maintenance Control of Your Building via Project Management.

Engineering Related Seminars Include:

Infra-Red Scanning for Commercial/Industrial Maintenance; AutoCAD & Autosketch Techniques; Microcomputers-Based CAD/CAM Software; Computer-Integrated Manufacturing; How Effective are Your Project Management Capabilities; Building Inspection; engineer/Architect Liability; and many more.

The Show Hours are as follows: Thursday, March 3, 1988 - 11 A.M.

Thursday, March 3, 1988 - 11 A.M. to 9 P.M. Friday, March 4, 1988 - 11 A.M. to 9 P.M. Saturday, March 5, 1988 - 10 A.M. to 3 P.M.

For full information on promotional material and booth reservations, contact Josef L. deKovacs, Exeuctive Manager, The Engineers' Club, 1317 Spruce Street, Philadelphia, PA 19107 (215) 735-5234. PHILADELPHIA SECTION, ASCE MEMBERS, SEE FREE ADMISSION COUPON BELOW.

PHILA. SECTION, ASCE MEMBERS AND GUESTS PRESENT THIS COUPON FOR FREE ADMISSION TO THE CONSTRUCTION & ENGINEERING EXPOVALLEY FORGE CONVENTION CENTER MARCH 3-5, 1988

#### EDUCATIONAL COURSES SCHEDULED FOR SPRING, 1988 ENGINEERS' CLUB

• INTRODUCTION TO PROJECT CONTROLS CPM PLANNING, SCHEDULING & COST CONTROL: Sponsor and Director, Fred Plotnick, Esq., P.E. Course begins Monday, February 22, 1988.

 PLANT LAYOUT AND EQUIPMENT AR-RANGEMENTS DESIGN CONCEPTS:
 Sponsor, J.L. de Kovacs; Director, J. Barger.
 Course begins Tuesday, February 16, 1988.
 HIGHWAY ENGINEERING CON-

TRUCTION: Sponsor, K. Zitomer, P.E.; Director, J.R. Syrnick, P.E. Course begins Tuesday, February 23, 1988.

• CONSTRUCTION MANAGEMENT: Sponsor, J.L. de Kovacs; Director, T. McGeehan. Course begins Wednesday, February 17, 1988.

• APPLICATION OF ANALYSIS TECHNIQUES IN MANAGEMENT AND ENGINEERING: Sponsor, C.R. Pennoni, P.E.; Director, W. Robertson. Course begins Wednesday, February 24, 1988.

• CONSTRUCTION SUPERVISION CONTRACTING AND FIELD OPERATIONS: Sponsor, J.L. de Kovacs; Director, W. Di Addezio. Course begins Thursday, February 18, 1988.

 B.O.C.A. BASIC NATIONAL BUILDING CODE 1988: Sponsor, J.L. de Kovacs; Director, D. L. Wismer, P.E. Course begins Thursday, February 25, 1988.

February 25, 1988.
CONTRACTS, SPECIFICATIONS AND LAW FOR CONSTRUCTION CONTRACTORS AND ENGINEERS: Sponsor and Director, Fredric L. Plotnick, Esq., P.E. Course begins Tuesday, February 23, 1988.

All Philadelphia Section members are entitled to discounts for the courses. For full information, call **Josef L. de Kovacs**, Executive Manager, The Engineers' Club, (215) 735-5234.

### HISTORIC BRIDGES CONFERENCE

A Conference on Historic Bridges will be held in Columbus, Ohio on Friday, March 11, 1988 at the University Inn, Columbus, Ohio. The Conference, which is sponsored by the Civil Engineering Department of the Ohio State University and the Historic Preservation Division of the Ohio Historical Society, will bring together the diverse points of view of engineers and historic preservationists and invite an exchange of ideas and information that each may learn from the other.

There will be discussion of new uses for old bridges, guidelines for historic birdge rehabilitation, presentations on several historic canal aqueducts, consideration of historic bridge failures and reports on several bridge preservation programs. The program will include speakers from Florida, New Jersey, New York, Ohio, Pennsylvania and Virginia. A national perspective will be provided by a representative from the Historic American Engineering Record of the National Park Service.

For more information, contact The Ohio State University Department of Conferences and Institutes, Box 21878, Columbus, OH 43221, Attention:

Louise Larew, (614) 292-8571.