PROGRAM
75th ANNIVERSARY CONVENTION
October 28-November 2, 1979
Washington, D.C.

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SUSTAINING MEMBERS OF THE AMERICAN CONCRETE INSTITUTE

Master Builders
Division of Martin Marietta Corporation
Cleveland, Ohio

Portland Cement Association
Skokie, Illinois

Southwestern Portland Cement Company
Los Angeles, California

Sika Chemical Corporation
Lyndhurst, New Jersey

Marquette Company
Nashville, Tennessee

Martin Marietta Cement
Bethesda, Maryland

W.R. Grace, Construction Products Division
Cambridge, Massachusetts
Registration

Registration will be Sunday, October 28, 1:00 p.m.-5:00 p.m.; Monday, October 29, 7:30 a.m.-5:00 p.m.; Tuesday through Thursday, October 30-November 1, 8:00 a.m.-5:00 p.m.; Friday, November 2, 8:00 a.m.-10:30 a.m.

Registration fees cover attendance at all ACI technical and educational committee meetings, general session, symposia, and the Concrete Mixer. They do not cover the educational seminars on Tuesday for which there are separate charges.

Fees

Registration
Member $60
NonMember 75
One-day, Member 30
One-day, NonMember 35
Friday morning only 20
Students Free

Second Panamerican Symposium on Concrete Education No fee
Student Activity Seminar No fee
Admixture Seminar
Member 25
NonMember 35
Student 5

We regret we do not have the facilities for invoicing. We will accept personal checks both before and during the convention. You may charge your ACI convention registration and tour fees to your VISA or Master Charge.

SCHEDULE

SUNDAY, OCTOBER 28
8:30 a.m.-6:00 p.m.
Administrative and technical committee meetings

MONDAY, OCTOBER 29
8:30 a.m.-10:00 p.m.
Administrative, technical, and educational committee meetings
2:00 p.m.-5:00 p.m.
Concrete Research Activities by Washington-Based Organizations (ACI National Capital Chapter)
2:00 p.m.-6:00 p.m.
ACI-CEB Workshop on Creep

TUESDAY, OCTOBER 30
8:30 a.m.-10:00 p.m.
Administrative, technical, and educational committee meetings
9:00 a.m.-12:00 p.m.
Experimental Methods in Concrete Structures for Practitioners (ACI National Capital Chapter in cooperation with National ASCE Committee on Experimental Analysis and Instrumentation)
1:30 p.m.-5:30 p.m.
Second Panamerican Symposium on Concrete Education
2:00 p.m.-5:00 p.m.
The Success Story of Metro in Washington, D.C., (ACI National Capital Chapter)
2:00 p.m.-5:00 p.m.
Seminar: Mineral and Chemical Admixtures for Concrete (ACI Committee E-701) (Registration fee $25 ACI Members; $35 Nonmembers; Students $5)
2:00 p.m.-6:00 p.m.
ACI-CEB Workshop on Creep

WEDNESDAY, OCTOBER 31
9:30 a.m.-11:30 a.m.
General Session
2:00 p.m.-6:00 p.m.
Administrative, technical, and educational committee meetings
1:30 p.m.-5:30 p.m.
ACI-CEB Workshop on Creep
2:00 p.m.-5:00 p.m.
Research on Plain and Reinforced Concrete (ACI Committee 115)
2:00 p.m.-5:00 p.m.
History of Concrete (ACI Committee 120)
2:00 p.m.-5:00 p.m.
Concrete Guideways (ACI Committee 358)
6:30 p.m.-7:00 p.m.
Dedication of Concrete Exhibit at the National Museum of History and Technology, Smithsonian Institution
6:30 p.m.-8:30 p.m.
Concrete Mixer at Smithsonian Institution

Special recognition for ACI Fellows & Members

A gold lapel pin especially created to recognize ACI Fellows. The pins are approximately of ½-in. size and feature the ACI emblem as well as Fellow indication. Price is $7.25 each.
A lapel pin in blue enamel is also available for members at $7.25 each.
Buy your lapel pin at the registration desk.
THURSDAY, NOVEMBER 1
8:30 a.m.-10:00 p.m.
Administrative, technical, and educational committee meetings
9:00 a.m.-5:00 p.m.
Symposium in Celebration of Chester P. Siess' Contributions to Research, Education, and Practice
9:00 a.m.-5:00 p.m.
Symposium on the Application and Use of Shotcrete (ACI Committee 506)
9:00 a.m.-5:30 p.m.
Symposium on Evaluation of Existing Concrete Structures (ACI Committee 437)
12:30 p.m.-2:15 p.m.
C.P. Siess Symposium Luncheon
2:00 p.m.-5:00 p.m.
Student Activities Program (ACI Committee E-801)
7:30 p.m.-10:00 p.m.
Forum: Cold Weather Concreting—Any Problems? (ACI Committees 114 and 306)

FRIDAY, NOVEMBER 2
8:30 a.m.-12:30 p.m.
Technical and educational committee meetings
8:30 a.m.-12:00 noon
Symposium on High-Range Water-Reducing Admixtures (Superplasticizers) (ACI Committee 212)
9:00 a.m.-12:00 noon
Segmental Bridges: New Developments in Design, Bidding, Construction, and Behavior (ACI Committee 343)
9:00 a.m.-12:00 noon
Concrete Shell Buckling (ACI-ASCE Committee 334)

COMMITTEE MEETINGS
Be sure to check the bulletin board for last minute changes or added meetings.

SUNDAY
OCTOBER 28
8:30 a.m.-12:30 p.m.
— Technical Activities Committee Subgroup Pan American
544 Fiber Reinforced Concrete South American
8:30 a.m.-4:00 p.m.
— Technical Activities Committee Subgroup New York
— Technical Activities Committee Subgroup Michigan
2:00 p.m.-4:00 p.m.
— Institute & Industry Advancement Committee Ohio
2:00 p.m.-6:00 p.m.
— Technical Activities Committee Pan American

MONDAY
OCTOBER 29
8:30 a.m.-10:30 a.m.
201 Durability of Concrete Federal
308 Curing Concrete Michigan
8:30 a.m.-12:30 p.m.
211 Task Group on Evaluating Mixes Caucus I
215 Fatigue of Concrete California
224 Cracking New York
301 Specifications for Structural Concrete Foyer #2
303 Architectural Concrete Executive Suite
423 Prestressed Concrete Congressional
533 Precast Panels South American
8:30 a.m.-6:00 p.m.
— Technical Activities Committee Pan American
— Educational Activities Committee Ohio
318 Standard Building Code Presidential
547 Refractory Concrete Gallery
10:30 a.m.-12:30 p.m.
120 History of Concrete Continental
223 Expansive Cement Concretes Federal
517 Accelerated Curing of Concrete at Massachusetts
Atmospheric Pressure
532 Concrete Masonry Michigan
8:30 a.m.-6:00 p.m.
304 Measuring, Mixing, Transporting, and Congressional
Placing Concrete
2:00 p.m.-4:00 p.m.
CONCRETE RESEARCH ACTIVITIES BY WASHINGTON-BASED ORGANIZATIONS
See Page 14 Federal
2:00 p.m.-5:00 p.m.
ACI-CEB WORKSHOP ON CREEP OF CONCRETE
(first session) See Page 15 South American
— Ad hoc Committee on Publications Foyer #2
E-701 Materials for Concrete Construction Continental
TUESDAY
OCTOBER 30
8:30 a.m.-10:00 a.m.
LADIES BREAKFAST AND RAP SESSION
See Page 40
Senate

8:30 a.m.-10:30 a.m.
325 Concrete Pavements
Congressional

332 Residential Concrete Work
New York

8:30 a.m.-12:30 p.m.
— Construction Liaison Committee
Michigan

E-702 Designing Concrete Structures
Continental

117 Tolerances
Pan American

121 Quality Assurance Systems for Concrete
South American

221 Aggregates
California

318 Subcommittee 2-Concrete Quality and Construction Requirements
Presidential

318 Subcommittee 5-Serviceability
Presidential

318 Subcommittee 10-Seismic Provisions
Presidential

348 Structural Safety
Foyer #2

351 Foundations for Equipment and Machinery
Massachusetts

358 Concrete Guideways
Presidential

8:30 a.m.-6:00 p.m.
506 Shotcreting
Gallery

547 Refractory Concrete
Ohio

9:00 a.m.-12:00 p.m.
EXPERIMENTAL METHODS IN CONCRETE STRUCTURES FOR PRACTITIONERS
See Page 16
Federal

10:30 a.m.-11:30 a.m.
— Information Services Committee
Executive Suite

E-703 Concrete Construction Practices
New York

211 Subcommittee 1-Proportioning Lightweight Concrete
Congressional

1:30 p.m.-5:30 p.m.
SECOND PANAMERICAN SYMPOSIUM ON CONCRETE EDUCATION
See Page 18
South American

SEMINAR: MINERAL AND CHEMICAL ADMIXTURES FOR CONCRETE
See Page 17
Federal

2:00 p.m.-4:00 p.m.
— Chapter Activities Committee
Caucus I

211 Proportioning Concrete Mixes
Continental

512 Precast Structural Concrete
Michigan

2:00 p.m.-5:00 p.m.
THE SUCCESS STORY OF METRO IN WASHINGTON, D.C.
See Page 21
Congressional

ACI-CEB WORKSHOP ON CREEP OF CONCRETE
(second session) See Page 15
Pan American

307 Reinforced Concrete Chimneys
California

309 Consolidation of Concrete
Massachusetts

318 Subcommittee 6—Flexure & Axial Loads
Presidential

318 Subcommittee 8—Two-Way slabs
Presidential

318 Subcommittee 12—Performance Code Concept Presidential

336 Combined Footings and Pier Foundations
Presidential

357 Offshore Concrete Structures
New York

360 Design of Slabs on Grade
Foyer #2

503 Adhesives for Concrete
Executive Suite

4:00 p.m.-6:00 p.m.
— International Activities Committee
Continental

437 Strength Evaluation of Existing Concrete Structures
Caucus I

439 Steel Reinforcement
Michigan

4:00 p.m.-9:30 p.m.
— Board Committee on Metrication
Caucus I

210 Erosion of Concrete in Hydraulic Structures Executive Suite
Pan American

212 Admixtures

213 Lightweight Aggregate and Lightweight Aggregate Concrete
Foyer #2

318 Task Group-Liaison
Caucus II

356 Industrialized Concrete Construction
Continental

421 Design of Reinforced Concrete Slabs
California

506 Shotcrete Subcommittee
Ohio

WEDNESDAY
OCTOBER 31
8:30 a.m.-12:30 p.m.
340 Strength Design Handbook
New York

349 Working Group on Embedments
Executive Suite

408 Bond and Development of Reinforcement
Michigan

8:30 a.m.-6:00 p.m.
349 Working Group on Materials
California

349 Working Group on Design
Foyer #2

9:30 a.m.-11:30 a.m.
GENERAL SESSION
See Page 22
Congressional

1:30 p.m.-5:30 p.m.
ACI-CEB WORKSHOP ON CREEP OF CONCRETE
(third session) See Page 15
Pan American
2:00 p.m.-4:00 p.m.

210 Erosion of Concrete in Hydraulic Structures Executive Suite
216 Fire Resistance and Fire Protection
    of Structures New York
222 Corrosion of Metals in Concrete Ohio

HISTORY OF CONCRETE
See Page 26 Federal

2:00 p.m.-5:00 p.m.

CONCRETE GUIDEWAYS
See Page 27 Congressional

RESEARCH ON PLAIN AND REINFORCED CONCRETE
See Page 23 Presidential

2:00 p.m.-6:00 p.m.

— Membership Recruitment Committee Massachusetts
— Convention Committee Continental
118 Use of Computers Gallery
318 Subcommittee 1-General Caucus II
318 Subcommittee 3-Detailing Reinforcement Michigan
318 Subcommittee 4-Analysis and Safety Caucus I
548 Polymers in Concrete South American

4:00 p.m.-6:00 p.m.

— Construction Review Committee Executive Suite
116 Nomenclature Ohio
214 Evaluation of Results of Tests Used to
    Determine the Strength of Concrete New York

6:30 p.m.-7:00 p.m.

DEDICATION OF CONCRETE EXHIBIT AT THE
NATIONAL MUSEUM OF HISTORY AND TECHNOLOGY,
SMITHSONIAN INSTITUTION
See Page 27

ACI CELEBRATES 75TH
WHILE PENDULUM SWINGS

THE CONCRETE MIXER....In the Pendulum Room, Smithsonian
Institution, Wednesday, October 31, 7:00 p.m.-8:30 p.m. The
traditional "Concrete Mixer" which promotes fellowship among
our great Institute will be held following the dedication of the Con-
crete Exhibit at the National Museum of History and Technology.
You will be treated to complimentary cocktails and
hors d'oeuvres, and English double-deck buses will available to
shuttle you to and from the Capital Hilton and Smithsonian.

THURSDAY

NOVEMBER 1

8:30 a.m.-10:30 a.m.

E-601 Seminars and Workshops Caucus I
114 Research and Development Caucus II
209 Creep and Shrinkage in Concrete California

8:30 a.m.-12:30 p.m.

311 Inspection of Concrete South American
315 Details of Concrete Reinforcement Ohio
318 Subcommittee 7-Shear & Torsion Executive Suite
345 Concrete Bridge Construction and Maintenance Massachusetts
355 Anchorage to Concrete New York

8:30 a.m.-6:00 p.m.

343 Concrete Bridge Design Foyer #2
349 Concrete Nuclear Structures Gallery

9:00 a.m.-6:30 p.m.

— Board of Director Pan American

8:30 a.m.-9:30 p.m.

344 Circular Prestressed Concrete Structures Continental

9:00 a.m.-5:00 p.m.

SYMPOSIUM ON THE APPLICATION AND
USE OF SHOTCRETE
See Page 32 Federal

9:00 a.m.-5:30 p.m.

SYMPOSIUM ON EVALUATION
OF EXISTING CONCRETE STRUCTURES
See Page 31 Congressional

9:00 a.m.-6:30 p.m.

SYMPOSIUM IN CELEBRATION OF CHESTER P. SIESS' CONTRIBUTIONS TO RESEARCH, EDUCATION, AND PRACTICE
See Page 28 Presidential

10:30 a.m.-12:30 p.m.

— Specifications Review Committee Caucus I
441 Reinforced Concrete Columns Michigan
549 Ferrocement Caucus II

10:30 a.m.-4:00 p.m.

302 Construction of Concrete Floors California

2:00 p.m.-4:00 p.m.

306 Cold Weather Concreting Michigan
428 Inelastic Behavior of Reinforced Concrete Structures Ohio

2:00 p.m.-5:30 p.m.

STUDENT ACTIVITIES PROGRAM
See Page 35 South American

2:00 p.m.-6:00 p.m.

225 Hydraulic Cements New York
318 Task Group on Metrication Caucus II
318 Task Group on Plain Concrete Caucus I
318 Subcommittee 9-Prestressed, Precast and Composite Concrete Executive Suite
546 Repair of Concrete Massachusetts
SPECIAL EVENTS

Publications Display . . . in the upper lobby all week. See the latest ACI publications now available. Orders are taken at the ACI Registration Desk which is also in the Upper Lobby.

Special Attraction . . . The American Concrete Institute (ACI) and the Comite Euro-International du Beton (CEB) are sponsoring a Workshop on Creep of Concrete.

- Monday, 2:00 p.m. - 6:00 p.m., South American Room
- Tuesday, 2:00 p.m. - 6:00 p.m., Pan American Room
- Wednesday, 1:30 p.m. - 5:30 p.m., Pan American Room

Come and listen to the international exchange of information and ideas.

"Concrete Mixer" . . . 7:00 p.m. - 8:30 p.m., Wednesday. This traditional event will be held at the Smithsonian Institution. Buses will shuttle you to and from the Smithsonian. Please wear your badge.

Special Tours . . . have been planned by the Local Convention Committee. Be sure to check the Family Program for tours of interest to you. There will be at least one and probably several. Don't miss them!

Education at the Convention . . . The Educational Activities Committee presents the Second Panamerican Symposium on Concrete Education on Tuesday, October 30, from 1:30 p.m. - 5:30 p.m. in the South American Room. This Symposium will bring together a group of panelists from various countries. The objective is to define the problems of education in the respective countries, and through a mutual sharing of ideas and information, arrive at solutions.

Chester P. Siess Symposium . . . Thursday, November 1, 9:00 a.m. - 5:00 p.m. Luncheon by ticket only (see Meta Sozen or Clyde Kesler) will be held from 12:30 p.m. - 2:15 p.m. the same day with a no-host cocktail party (cash bar) following in the evening. All functions will take place in the Presidential Ballroom. This Symposium is for the purpose of celebrating Chester Siess' contributions to engineering education and research. Come join us in saluting a great man!

Special computer presentation . . . "Developments in Concrete Design by Computer." A special presentation by Douglas F. Burnside, Sys Comp Corporation, Santa Monica, California, will be given at 2:00 p.m., Wednesday, October 31 in the Gallery Room. The program is sponsored by ACI Committee 168. Use of Computers. It is open to the public and all convention attendees are encouraged to attend.

"Shotcrete in Prestressed Tank Construction" . . . A special presentation by Lars Balck, Crom Corporation, Gainesville, Florida, will be given at 11:30 a.m., Tuesday, October 30 in the Gallery Room. The program is sponsored by ACI Committee 506 Shotcreting.
MONDAY, OCTOBER 29  
2:00 p.m.-6:00 p.m.  
South American room

MONDAY, OCTOBER 29  
2:00 p.m.-6:00 p.m.  
Federal Room

MONDAY, OCTOBER 29  
2:00 p.m.-6:00 p.m.  
Pan American room

TUESDAY, OCTOBER 30  
2:00 p.m.-6:00 p.m.  
Pan American room

CONCRETE RESEARCH ACTIVITIES BY WASHINGTON-BASED ORGANIZATIONS

sponsored by National Capital Chapter, ACI

Introduction
Neal FitzSimons, chairman, ACI National Capital Chapter Subcommittee on Technical Sessions, and principal, Engineering Counsel, Kensington, Maryland

Current Research in Concrete at National Bureau of Standards

Current Research in Concrete at Department of Housing and Urban Development

Current Research in Concrete at Corps of Engineers
James A. Rhodes, Office, Chief of Engineers, Washington, D.C.

Current Research in Concrete at Federal Highway Administration
Thomas J. Pasko, Jr., chief, Paving and Structural Materials Group, Federal Highway Administration, Washington, D.C.

Current Research in Concrete at the Federal Railroad Administration on Prestressed Concrete Crossings
Howard Moody, program manager, Office of Research and Development, Federal Railroad Administration, Washington, D.C.

Current Research in Concrete at National Concrete Masonry Association
Gary Schoenfeld, National Concrete Masonry Association, McLean, Virginia

NSGA-NRMCA Joint Research Laboratory—A Link Between Research and Practice
Richard C. Meininger, director of engineering research, National Sand and Gravel Association, National Ready Mixed Concrete Association, Silver Springs, Maryland

ACI-CEB WORKSHOP ON CREEP OF CONCRETE

The American Concrete Institute (ACI) and the Comite Euro-International du Beton (CEB) are sponsoring a special Workshop on Creep of Concrete.

Co-Chairmen:  
Domingo J. Carreira, Sargent & Lundy Engineers, Chicago, Illinois

and

H.K. Hilsdorf, Institut fur Baustofftechnologie, Karlsruhe, West Germany

Co-Moderators:  
A.M. Neville, principal and vice chancellor, University of Dundee, Dundee, Scotland

and

R.E. Phillips, chief structures branch, Office, Chief of Engineers, Washington, D.C.

Panelists:  
Z.P. Bazant, Technological Institute, Northwestern University, Evanston, Illinois

Dan E. Branson, Department of Civil Engineering, University of Iowa, Iowa City, Iowa

D.J. Carreira, Sargent & Lundy Engineers, Chicago, Illinois

M. Chiorino, Politecnico di Torino, Instituto di Scienza delle Abruzzi, Torino, Italy

Bruce R. Gambrel, Department of Civil Engineering, University of Calgary, Calgary, Alberta, Canada

H.K. Hilsdorf, Institut fur Baustofftechnologie, Karlsruhe, West Germany

I.M. Ilston, School of Engineering, Hatfield, Herts, England

D. Jungwirth, Dyckerhoff & Widmann AG, Munich, West Germany

R.L. L’Hermite, RILEM secretariat generale, Paris, France

Bernard L. Meyers, Bechtel Power Corporation, Gaithersburg, Maryland

Lauge Fuglsang Nielsen, Building Materials Laboratory, Technical University of Denmark, Lyngby, Denmark

Frederic Roll, Department of Civil and Urban Engineering, University of Pennsylvania, Philadelphia, Pennsylvania

H. Trost, Institut fur Massivbau, Aachen, West Germany

TAC Coordinator: Ignacio Martin, Capacete-Martin and Associates, Santurce, Puerto Rico
EXPERIMENTAL METHODS IN CONCRETE STRUCTURES FOR PRACTITIONERS

sponsored by National Capital Chapter, ACI, in cooperation with the National ASCE Committee on Experimental Analysis and Instrumentation

Introduction
Gajanan M. Sabnis, chairman, ASCE Committee, and associate professor, Department of Civil Engineering, Howard University, Washington, D.C.

Use of Elastic Models in Concrete Structures
M. Saeed Mirza, associate professor, Department of Civil Engineering and Applied Mechanics, McGill University, Montreal, Quebec, Canada

Use of Ultimate Strength Models to Aid the Design of Concrete Structures
Richard N. White, professor, director, School of Civil Engineering, Cornell University, Ithaca, New York

Use of Photoelastic and Moire Fringe Techniques
Alex Redner, vice-president, Photolastic Inc., Malvern, Pennsylvania

Ultrasonic Testing to Determine Concrete Properties
Tarun R. Naik, assistant professor of structural engineering, Department of Civil Engineering, University of Wisconsin-Milwaukee, Wisconsin, Wisconsin

Laboratory Methods for Analysis of Concrete Deterioration Problems
B.D. Barnes, assistant professor of civil engineering, North Carolina State University, Raleigh, North Carolina; and Sidney Diamond, professor, School of Civil Engineering, Purdue University, Lafayette, Indiana

Instrumentation and Techniques of Full-Scale Testing of Structures

Use of Holographic and Acoustic Emission Technique to Detect Structural Damage in Concrete Members
Neil M. Hawkins, professor, and A.S. Kobayashi, Department of Civil Engineering, University of Washington, Seattle, Washington; and M.E. Fournier, professor, University of California, Berkeley, California

SEMINAR: MINERAL AND CHEMICAL ADMIXTURES FOR CONCRETE

sponsored by ACI Committee E-701

This seminar will be keyed to the needs of concrete technicians, inspectors, concrete plant personnel, and others involved in the production, control, or inspection of concrete containing admixtures.

Special registration fees:
ACI Member $25, Non member $35, Student $5.

Benefits of such materials, proper usage, and necessary precautions will be stressed. The speakers will discuss fly ash, natural pozzolans, air-entraining agents, water reducers, retarders, accelerators, and high range water reducers. Current wide-spread use of these admixtures requires an understanding of why they are used and how they should be used as well as possible disadvantages or undesirable side effects.

Moderator: George B. Southworth, chairman of the board, American Society for Concrete Construction and marketing consultant, Master Builders, Cleveland, Ohio

Fly Ash and Mineral Admixtures for Concrete

Air Entraining Admixtures
Herman G. Proze III, director, Technical Services, W.R. Grace and Company, Cambridge, Massachusetts

Water Reducing and Set Controlling Admixtures
Rolland L. Johns, director, Admixture Promotion, Master Builders, Cleveland, Ohio

High Range Water Reducing Admixtures (Superplasticizers)
Michael Shydlowski, manager, Sales and Engineering, American Admixtures Corporation, Chicago, Illinois

Admixture Dispensing Equipment
John Portman, manager, Dispenser Engineering, Protex Industries, Inc., Denver, Colorado

Question and Answer Period by Panelists
SECOND PANAMERICAN SYMPOSIUM ON CONCRETE EDUCATION
sponsored by ACI Educational Activities Committee

TUESDAY, OCTOBER 30
1:30 p.m. - 5:30 p.m.
South American Room

SECTION III: ARCHITECTURE
Chairman and Reporter: Charles F. Scholer, professor of civil engineering, Purdue University, West Lafayette, Indiana
Speaker: Alberto Gonzalez-Pozo, chairman, College of Architects of Mexico, Mexico, D.F., Mexico
Panelists: Robert C. Bates, technical coordinator, Skidmore, Owings and Merrill, Architects, Engineers and Planners, Annapolis, Maryland
Kai Holbek, president, Kai Holbek Associates, Ltd., West Vancouver, British Columbia, Canada
Franz Jerome, architect, Port au Prince, Haiti
Raul Marchetti, architect, Santiago, Chile

SECTION IV: CONSTRUCTION
Chairman and Reporter: Phillip R. Jackson, president, Jackson Construction Company, Inc., Dedham, Massachusetts
Speaker: Antonio Jose Guerra, director, Materials Laboratory, School of Engineering and Technology, National University Pedro Heriquez Urena, Santo Domingo, Dominican Republic
Panelists: Charles J. Pankow, president, Charles Pankow, Inc., Altaadena, California
Louis A. Gotthell, director of quality control, Lesmir/Demix, Montreal, Quebec, Canada
Guillermo Celis, head, Civil Engineering Department, Iberoamerican University, Mexico, D.F., Mexico
L.A. Falcao Bauer, president, L.A. Falcao Bauer Technological Center of Construction, Sao Paulo, Brasil

SECTION I: CRAFTSMEN AND TECHNICIANS
Chairman and Reporter: Joseph A. Dobrowolski, concrete consultant, Altaadena, California
Speaker: Jose Chacon-Toral, consulting engineer, Quito, Ecuador
Panelists: Edward L. Kawala, director of educational services, Portland Cement Association, Skokie, Illinois
Neil Mustard, manager, Civil Research Department, Ontario Hydro, Toronto, Ontario, Canada
Juvenicio Gutierrez, director, Training Institute of the Construction Industry (ICIC), Mexico, D.F., Mexico
Emilio Beltranena, director, Center for Research in Engineering, San Carlos University, Guatemala, Guatemala

SECTION II: ENGINEERING
Chairman and Reporter: William J. Wilhelm, dean of engineering, Wichita State University, Wichita, Kansas
Speaker: Russell S. Fling, president, R.S. Fling and Partners, Inc., Consulting Engineers, Columbus, Ohio
Panelists: John A. Bickley, general manager, Construction Testing Services, Ltd., Rexdale, Ontario, Canada
Luis Esteva, research engineer, Institute of Engineering, National University of Mexico, Mexico, D.F., Mexico
Celso A. Carbonell, president, Protex Panama, S.A., Panama, Panama
Oscar A. Andres, director, Engineering Department, National University of the South, Bahia Blanca, Argentina
SECTION V: CONTINUING EDUCATION

Chairman and Reporter: Edwin G. Hedstrom, administrator, Special Products, Cement Division, Ideal Basic Industries, Denver, Colorado

Speaker: V. Mohan Malhotra, head, Construction Materials Section, CANMET, Ottawa, Ontario, Canada

Panelists: John E. Breen, The J.J. McKetta Professor of Engineering, Department of Civil Engineering, University of Texas at Austin, Austin, Texas
Juan Jose Vazquez-Pena, head, Industrial Research Department, Mexican Cement and Concrete Institute (IMCYC), Mexico, D.F., Mexico
Emiliano Ruiz Pia, consulting engineer, San Juan, Puerto Rico
Jesus H. Arango, director, Technical Department, Colombian Institute of Cement Producers, Medellin, Colombia

CLOSING REMARKS:

John F. McLaughlin, president, American Concrete Institute, and assistant dean of engineering, Purdue University, West Lafayette, Indiana
Dennis T. Smith, chairman, ACI Educational Activities Committee, and manager, Technical Services, Gulf and Western Marquette Company, Nashville, Tennessee

TUESDAY, OCTOBER 30

2:00 p.m.-5:00 p.m. Congressional Room

THE SUCCESS STORY OF METRO IN WASHINGTON, D.C.

sponsored by the National Capital Chapter, ACI

Introduction to Metro System in Washington, D.C.
Robert A. Sloan, public information specialist, Washington Metropolitan Area Transit Authority, Washington, D.C.

An Architectural Overview of Metro
Emanuel Mevorah, assistant director, Office of Architecture, Washington Metropolitan Area Transit Authority, Washington, D.C.

Engineering Aspects of Design and Construction of the Washington Metro
Ado Valge, assistant director of engineering, Washington Metropolitan Area Transit Authority, Washington, D.C.

Building Metro System
(speaker to be announced)

Ready Mixed Concrete for Metro Construction
Edward T. McGinty, Super Concrete Corporation, Washington, D.C.

Concrete Quality Control
Douglas R. Lombard, assistant chief of materials inspection; and Calvin A. Knoke, project construction supervisor, Bechtel Associates, Washington, D.C.
WEDNESDAY, OCTOBER 31
9:30 a.m.-11:30 a.m. Congressional Room

GENERAL SESSION

Welcome
Gajanan M. Sabnis, general chairman, 1979 Fall Convention, and associate professor, Department of Civil Engineering, Howard University, Washington, D.C.

Keynote Address
The Honorable Neil Goldschmidt, Secretary of Transportation, Washington, D.C.

Secretary Goldschmidt is one of the most articulate individuals to lead the Department of Transportation and has a broad knowledge of transportation issues.

WEDNESDAY, OCTOBER 31
2:00 p.m.-5:00 p.m. Presidential Ballroom

RESEARCH ON PLAIN AND REINFORCED CONCRETE

sponsored by ACI Committee 115

(Brief and confidential reports)

Session
Chairman: Boris Bresler, chairman, ACI Committee 115, and senior consultant, Wiss, Janney, Elstner & Associates, Inc., Emeryville, California
Secretary: Charles F. Scholer, secretary, ACI Committee 115, and professor, Department of Civil Engineering, Purdue University, West Lafayette, Indiana

Optimized Sections for Major Prestressed Concrete Girders
Basile G. Rabbat and M. Saatcioglu, senior structural engineers, Structural Development Department, Structural Analytical Section, Portland Cement Association, Skokie, Illinois

Behavior of Columns Subjected to Simultaneously Varying Axial and Shear Force Reversals
Noreen D. Gilbersten, research assistant in civil engineering, University of Illinois at Urbana-Champaign, Urbana, Illinois

Seismic Resistance of Reinforced Concrete Floor Systems
Le-Wu Lu, professor of civil engineering and director, Building Systems Division, and Ti Huang, professor of civil engineering, Fritz Engineering Laboratory, Lehigh University, Bethlehem, Pennsylvania

New Apparatus for Testing Air Content of Fresh Concrete In situ
K.W. Nasser, professor, and R. Beaton, Department of Civil Engineering, University of Saskatchewan, Saskatoon, Saskatchewan, Canada

Ductile, Moment Resisting Beam-Column Connections in Precast Concrete
S.U. Pillai, visiting professor, Department of Civil Engineering, and Professor D.W. Kirk, head, Department of Civil Engineering, Royal Military College of Canada, Kingston, Ontario, Canada

Progressive Collapse Simulation of Precast Concrete Large Panel Buildings
Harry G. Harris, professor of civil engineering, and John C. Muslakivich, research assistant, Drexel University, Philadelphia, Pennsylvania

Segmentally Constructed Cooling Tower
Paul Zia, professor and department head; C. C. Tung, professor; J. Leroy Hulsey, adjunct assistant professor; and M. Talat Mostafa, Carolina State University at Raleigh, Raleigh, North Carolina

continued on page 26
Capital Hilton Hotel

Note: The following committee meetings’ rooms are located on other floors.

Caucus I ................ Room 509 on Fifth Floor
Caucus II ............. Room 511 on Fifth Floor
Executive Suite ...... Fourth Floor

A HOME FOR OUR HERITAGE: THE SMITHSONIAN

In conjunction with the Smithsonian Institution, the American Concrete Institute has prepared an exhibit of documents and artifacts of special significance to the heritage of concrete in America. The exhibit will be displayed as a part of our 75th anniversary celebration and will ultimately become part of the Smithsonian’s permanent collection. Join your fellow concrete professionals in this tribute to your profession!

The Smithsonian was founded in 1846 under the terms of the will of James Smithson, an English scientist who bequeathed his entire fortune of $550,000 to the people of the United States to found in Washington “an establishment for the increase and diffusion of knowledge among men.” It is estimated that there are over 60 million catalogued items in the Smithsonian collection.

Smithsonian Institution
Museum of History and Technology
Roger G. Kennedy, Director
Composite Beams with Web Openings
David Darwin, associate professor, and William C. Clawson, research assistant, Department of Civil Engineering, University of Kansas, Lawrence, Kansas

Use of Ferrocement for Confinement of Concrete
P. N. Balaguru, assistant professor, and E. G. Nawy, professor of civil engineering, Rutgers, The State University of New Jersey, Piscataway, New Jersey

Rehabilitation of Rigid Pavement by Methods Other than Overlay
R. Varadarajan, T.A. Iyob, Delon Hampton & Associates, Silver Spring, Maryland, and R.A. McComb, Federal Highway Administration, Washington, D.C.

HISTORY OF CONCRETE
sponsored by ACI Committee 120
Session
Chairman: Emory L. Kemp, chairman, ACI Committee 120, and professor, Department of Civil Engineering, West Virginia University, Morgantown, West Virginia

Working Places
A film produced by Society of Industrial Archeology which shows adaptive reuse of structures.

Historic Preservation of Concrete Bridges: The First Step in Inventory
Howard Newton, Jr., assistant state highway research engineer, Virginia Highway Research Council, Charlottesville, Virginia

Historic Preservation Through Recording
Emory L. Kemp, professor, Civil Engineering Department, West Virginia University, Morgantown, West Virginia

The History of Concrete Construction in the 20th Century
Katherine Mather, chief, Engineering Sciences Division; and Bryant Mather, acting chief, Structures Laboratory, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi

Mixing, Moving and Mashing Concrete — 75 Years of Progress?
William B. Ledbetter, professor of civil engineering, and Bonnie S. Ledbetter, assistant professor of history, Texas A&M University, College Station, Texas, and Eugene H. Boeke, Jr., vice president, Beers Construction Company, Atlanta, Georgia

WEDNESDAY, OCTOBER 31
2:00 p.m.-5:00 p.m.

CONCRETE GUIDEWAYS
sponsored by ACI Committee 358
Session
Chairman: Charles Dolan, chairman, ACI Committee 358, ABAM Engineers, Inc., Tacoma, Washington

Planning the Los Angeles Downtown People Mover
Frank Condos, technical manager, Los Angeles Downtown People Mover, Los Angeles, California

Planning a Downtown People Mover
Grant W. Hummer, manager, Gannett Fleming Corddry and Carpenter of Michigan, Inc., Detroit, Michigan, and Thomas B. Brenner, project manager, structures, Gannett Fleming Corddry and Carpenter, Inc., Harrisburg, Pennsylvania

Design Concepts, Criteria and Cost Analysis of System-Wide Standard Prestressed Girder for the Aerial Guideway of Dade County Rapid Transit System
Sarosh Dhondy, assistant chief structural engineer, Kaiser Transit Group, Miami, Florida

Design, Construction and Performance of At-Grade Guideways at Dade County Rapid Transit System

Design and Construction of Aerial Structures of Washington Metropolitan Area Transit System
Dah Fwu Fine, assistant chief engineer, De Leuw Cather and Company, Washington, D.C.

WEDNESDAY, OCTOBER 31
6:30 p.m.-7:00 p.m.

DEDICATION OF CONCRETE EXHIBIT AT THE NATIONAL MUSEUM OF HISTORY AND TECHNOLOGY, SMITHSONIAN INSTITUTION

Welcome from the National Museum of History and Technology
Robert M. Vogel, curator, Division of Mechanical and Civil Engineering, National Museum of History and Technology

Welcome from ACI National Capital Chapter
Neal FitzSimons, chairman, ACI National Capital Chapter Subcommittee on Technical Sessions, and principal, Engineering Counsel, Kensington, Maryland

Presentation and Dedication of Historical Material
John F. McLaughlin, president, American Concrete Institute, and assistant dean of engineering, Purdue University, West Lafayette, Indiana
THURSDAY, NOVEMBER 1
9:00 a.m.-10:40 a.m.  Presidential Ballroom

SYMPOSIUM IN CELEBRATION OF
CHESTER P. SIESS' CONTRIBUTIONS
TO RESEARCH, EDUCATION, AND PRACTICE

Session
Chairman: Eugene Zwoyer, executive director, American Society of Civil Engineers, New York, New York

SESSION 1A
Opening Remarks
Joseph H. Appleton, University of Alabama-Birmingham, Birmingham, Alabama

Load and Resistance Factor Design
Ivan M. Viest, assistant manager, Sales Engineering Division, Bethlehem Steel Corporation, Bethlehem, Pennsylvania

Applications of Theory to Practice in Scandinavia
Rolf J. Lenschow, professor, Technical University of Norway, Trondheim, Norway; S.O. Olesen, director, BKF-Centralen, Lyngby, Denmark; and Sven Sahlin, professor, Department of Structural Mechanics, Chalmers Technical University, Goteborg, Sweden

Recent Japanese Developments in Earthquake Resistant Design of Reinforced Concrete Buildings
Hirokui Aoyama, professor, and Shunsuke Otani, associate professor, Department of Architecture, University of Tokyo, Tokyo, Japan

Structural Walls
W. Gene Corley, director, Engineering Development Department, and Anthony E. Fiorato, manager, Construction Methods Section, Portland Cement Association, Skokie, Illinois

Role of Cover and Bar Spacing in Concrete
Peter Cergely, professor of structural engineering, School of Civil and Environmental Engineering, Cornell University, Ithaca, New York

Reinforced and Prestressed Concrete Slabs
William L. Gamble, professor of civil engineering, University of Illinois at Urbana, Urbana, Illinois; and Ned H. Burns, professor of civil engineering, University of Texas at Austin, Austin, Texas

11:00 a.m.-12:15 p.m.
SESSION 1B
Session
Chairman: Armas Lauppa, Rand Corporation, Santa Monica, California

Impact of Research on Prestressed Concrete Design Specifications
Neil M. Hawkins, associate professor of civil engineering, University of Washington, Seattle, Washington

Beam-Column Joints: Irrational Solutions to a Rational Problem
James D. Jirsa, professor, Balcones Research Center, University of Texas, Austin, Texas

Codes for Structural Concrete
James G. MacGregor, professor of civil engineering, University of Alberta, Edmonton, Alberta, Canada

Equivalent Frame Analysis of Unbraced Concrete Frames
M. Daniel Vanderbilt, professor of civil engineering, Colorado State University, Fort Collins, Colorado

Torsion in Reinforced Concrete
J. Warwaruk, professor of civil engineering, University of Alberta, Edmonton, Alberta, Canada

12:30 p.m.-2:15 p.m.
LUNCHEON

Master of Ceremonies: C.E. Kesler, University of Illinois, Urbana, Illinois

That Is The Question!

2:30 p.m.-3:30 p.m.
SESSION 2
Session

Computers in Engineering
Joseph H. Appleton, professor of civil engineering, University of Alabama-Birmingham, Birmingham, Alabama

Education in Mexico
Roger Diaz de Cossio, Secretary for Culture and Recreation, Mexico, D.F., Mexico

Role of Engineering in a General Education
W.E. Fluhri, professor of civil engineering, U.S. Air Force Academy, Colorado Springs, Colorado

Experiential Learning in Engineering Education
Richard E. Woodring, dean of college of engineering, Drexel University, Philadelphia, Pennsylvania
SESSION 3

THURSDAY, NOVEMBER 1
9:00 a.m.-12:30 p.m.  Congressional Room

SYMPOSIUM ON EVALUATION OF EXISTING CONCRETE STRUCTURES

sponsored by ACI Committee 437

Session

Chairman: Tarun R. Naik, chairman, ACI Committee 437, and assistant professor of structural engineering, Department of Civil Engineering, The University of Wisconsin-Milwaukee, Milwaukee, Wisconsin

Evaluation of Existing Concrete Structures by Full Scale Load Tests
Dov Kaminetzky, partner, Feld, Kaminetzky and Cohen, P.C., New York, New York

Lead Tests on Prestressed Concrete Multi-Girder Bridge Decks
J. Kirkpatrick, A.E. Long, head; and W.M.C. Stevenson, and A. Thompson, Department of Civil Engineering, Queen's University of Belfast, Belfast, Northern Ireland

Failure of a Reinforced Concrete Silo
Fred W. Beaufait, chairman and professor of civil engineering, West Virginia University, Morgantown, West Virginia

Big Eddy Dam Investigation
John A. Bickley, vice-president; J.A. Franklin, and John C. Payne, manager, Concrete Technology Division, Trow Group Limited, Rexdale, Ontario, Canada

Structural Performance and Bending Test of Deteriorated Reinforced Concrete—Concrete Bridges
Takeshi Oshiro, professor, Department of Architectural Engineering; and Sumio Hamada, associate professor, Department of Civil Engineering, University of the Ryukyus, Okinawa, Japan

Composite Strength—A Probabilistic Evaluation
Achintya Halder, assistant professor of civil engineering, Georgia Institute of Technology, Atlanta, Georgia

Earthquake Damage Assessment of Reinforced Concrete Buildings
Christian Meyer, associate professor of civil engineering, and Masanobu Shinozuka, Renwick professor of civil engineering, Department of Civil Engineering and Engineering Mechanics, Columbia, University, New York, New York

Session I

Design Consideration for Construction of Two Long Concrete Buildings in the Southwest

The Captive Engineer
Hedley E.H. Roy, managing partner, Neish, Owen, Rowland and Roy, Toronto, Ontario, Canada

Special Event: Presidential Ballroom, 5:30 p.m., no-host cocktail party for “all friends and enemies of Chester Paul Siess.”

Special thanks are extended to Mete A. Sozen, Department of Civil Engineering, University of Illinois at Urbana-Champaign, Urbana, Illinois, and the committee consisting of J.H. Appleton, University of Alabama-Birmingham, Birmingham, Alabama, chairman; Evind Hognesad, Portland Cement Association, Skokie, Illinois; Armas Laupa, Rand Corporation, Santa Monica, California; Ivan Viest, Bethlehem Steel Corporation, Bethlehem, Pennsylvania, and Eugene Zwoyer, American Society of Civil Engineers, New York, New York, for organizing this symposium.
THURSDAY, NOVEMBER 1
9:00 a.m.-12:00 noon Federal Room

SYMPOSIUM ON THE APPLICATION AND USE OF SHOTCRETE
sponsored by ACI Committee 506

Session I
Introduction
Theodore R. Cram, chairman, Committee 506, and The Cram Corporation, Gainesville, Florida

Refractory Shotcrete—Current State-of-the-Art
J. Leon Glassgold, president, Davidson Resurfacing and Construction Company Inc., Baltimore, Maryland

Durability of Shotcrete
Thomas J. Reading, consultant, Omaha, Nebraska

Steel Fiber Shotcrete—A Laboratory Study
D.R. Morgan, manager, Materials Engineering Division, Hardy Associates (1976) Limited, Vancouver, British Columbia, Canada

New Methods for Determining Rebound and Water/Cement Ratio in Shotcrete
Magne Maage, assistant professor of civil engineering, University of Trondheim, Trondheim, Norway (currently at Purdue University, West Lafayette, Ind.)

Shotcrete Repairs of Concrete Structures in Marine Environment
Joseph Haneghan, president, Gunite Masonry Company, Inc., North Bellmore, New York

THURSDAY, NOVEMBER 1
2:00 p.m.-5:00 p.m. Federal Room

SYMPOSIUM ON THE APPLICATION AND USE OF SHOTCRETE
sponsored by ACI Committee 506
Moderator: P.T. Seabrook, B.H. Levelt and Associates, Ltd., Vancouver, British Columbia, Canada

Session II
Shotcrete Lining for Peach Tunnels
Elwyn H. King, assistant vice-president, and William Pease, associate, Parson, Brinckerhoff, Quade and Douglas, Inc., San Francisco, California

A Comparative Evaluation of Fiber Shotcretes
L.J. Fowler, V. Ramakrishnan, professor of civil engineering; and William V. Coyle, professor of civil and structural engineering, South Dakota School of Mines and Technology, Rapid City, South Dakota; and Ernest K. Schrader, materials specialist, U.S. Army Corps of Engineers, Walla Walla, Washington

Comparative Evaluation of Protective Thin Shotcrete Coatings

Tunnel Shotcrete Lining—A Washington Metropolitan Experience
E.S. Plotnik, MacLean Grove and Company, Inc., Greenwich, Connecticut

A Guide for Certification of Shotcrete Nozzlemen
Committee 506 draft report presented by John C. Fredericks, California Gunite Company, Inc., Los Angeles, California

Experience with the Application of the New German Standard DIN 18551 “Shotcrete”
Gunter Ruffert, senior engineer, Torkret GmbH, Essen, Germany

The officers, staff, and members of ACI would like to thank the Local Committee, the Hostesses, and the National Capital Chapter for their part in the 1979 Fall Convention!
SYMPOSIUM ON EVALUATION OF EXISTING CONCRETE STRUCTURES

sponsored by ACI Committee 437

Session
Chairman: Craig A. Ballinger, structural research engineer, Federal Highway Administration, Washington, D.C.

Session II

Diagnosis of Structural Concrete Deficiencies
Neil FitzSimons, principal, Engineering Counsel, Kensington, Maryland

Load Capacity Evaluation of the Bronson Avenue Canal Bridge
Claudius A. Carnegie, structural evaluation engineer; and David C. Marett, chief structural engineer, Transportation Department, Regional Municipality of Ottawa-Carleton, Ontario, Canada

Structural Evaluation of Existing Underground Reinforced Concrete Tanks for Radioactive Waste Storage
F.R. Vollert, staff engineer, Rockwell Hanford Operations, Richland, Washington

Evaluation of a Reinforced Concrete Bridge
William L. Gamble, professor of civil engineering, University of Illinois at Urbana-Champaign, Urbana, Illinois

Features of Assessment of Precast Pretensioned Beams in Structures
J.H. Bungey, lecturer, Department of Civil Engineering, Liverpool University, Liverpool, England

In-Situ Testing for Concrete Strength—A Review
V.M. Malhotra, head, and G.G. Carette, materials engineer, Construction Materials Section, CANMET, Department of Energy, Mines and Resources, Ottawa, Ontario, Canada

Strength Evaluation of the Manotick Bridge Piers
G.A. Hartley, professor; G.T. Suter; and D.C. Marett, chief structural engineer, Transportation Department, Ottawa, Ontario, Canada

STUDENT ACTIVITIES PROGRAM

sponsored by ACI Committee E-801

This program has three main goals:
1. To create student interest and familiarity with ACI;
2. To stimulate interest in working on concrete projects at both the undergraduate and graduate levels;
3. To show students some of the existing careers in concrete construction and design.

Session
Chairman: Robert John Craig, chairman, ACI Committee E-801, and assistant professor, Department of Civil and Environmental Engineering, New Jersey Institute of Technology, Newark, New Jersey

Discussion of the Technical Activities of ACI
Robert E. Price, member of the Technical Activities Committee and consulting engineer, Denville, New Jersey, will explain what the committee does and will give a brief presentation on some of the technical concrete projects.

Codes and Specifications for Design and Construction
Gerald B. Neville, secretary, Committee 318, and manager, Structural Codes, Portland Cement Association, Skokie, Illinois, will briefly describe the function of the committee and go through the procedure of how the codes and specifications are set up.

Careers in Concrete Construction and Design
William E. Brewer, associate professor, consulting technology, Bowling Green State University and principal, Brewer and Associates, Bowling Green, Ohio, will outline career prospects.

Concrete Canoe Racing Program
Charles R. Scholer, professor of civil engineering, Purdue University, West Lafayette, Indiana, and Peter J. Tavino, Jr., manager of student services and membership development, American Society of Civil Engineers, New York, New York, will bring the students up to date on this activity. A short film from IIT will be shown of a typical race. Slides may also be shown of the construction of a concrete canoe.

Student Involvement in Concrete Projects in Civil Engineering
Robert John Craig, chairman of ACI Committee E-801, and assistant professor, Civil and Environmental Engineering Department, New Jersey Institute of Technology, Newark, New Jersey, will present a couple of concrete projects on which students have worked as undergraduates. A discussion on how ACI Committee E-801 can develop interest in student projects will be included.
FORUM: COLD WEATHER CONCRETING—ANY PROBLEMS?

sponsored by ACI Committees 114 and 306

Chairman: Robert L. Henry, chairman, Committee 114, and chief engineer, Texas Testing Laboratories, Dallas, Texas

Moderator: George R.U. Burg, manager of field evaluations, Master Builders, Cleveland, Ohio

Panelists: John M. Scanlon, chief, Engineering Mechanics Division, Structures Laboratory, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi
Philip E. Bruce, supervising quality assurance engineer, Perini Power Constructors, Inc., Seabrook, New Hampshire
Jules Houte, professor, Ecole Polytechnique, Campus Universite de Montreal, Montreal, Quebec, Canada
Irwin H. Hahn, Jr., administrative vice-president, National Mobile Concrete Corporation, Berrien Springs, Michigan

The objective of this forum is to bring together specifiers, engineers, constructors, and owners to consider how to adequately specify, produce, transport, place, and protect concrete during cold weather.

Different geographical locations present unique problems for cold weather concreting. The ACI has no "standard specification" for cold weather concreting. Economics play a vital role in cold weather concreting.

Particular questions to be explored will include the following:
- How can the specifier use the ACI Cold Weather Committee's report to establish Cold Weather Concreting Specifications?
- How realistic is it to specify absolute minimum and maximum temperatures of concrete "as mixed" and "as placed"?
- When and where is the "as mixed" or "as placed" concrete temperature taken?
- How can the concrete producer supply specified cold-weather concrete economically when his plant is located in an area that only occasionally encounters "cold weather"?
- When should concrete damaged by frost or freezing be removed?
- How do we know when the concrete placed during cold weather is safe for form removal or use?

The forum will consist of prepared presentations and then the session will be opened for discussion with the speakers remaining as panelists.

FRIDAY, NOVEMBER 2
8:30 a.m.-12:00 noon

HIGH-RANGE WATER-REDUCING ADMIXTURES (SUPERPLASTICIZERS)

sponsored by ACI Committee 212

Introductory Remarks

The Place for Superplasticizers
James M. Shustone, Sr., president, The Concrete Associates, Inc., Dallas, Texas

Flowing Concrete in Europe
Dieter Freese, research director, Sibo-Gruppe, GmbH & Company KG, Osnabruck, West Germany

Structural Properties of Superplasticized Concrete
Gajanan M. Sabnis, associate professor; and A. Ghorbanpoor, graduate student, Department of Civil Engineering, Howard University, Washington, D.C.

Practical Use of Superplasticizers in Residential Concrete
Michael Zummo, corporate concrete specialist, Fox & Jacobs, Carrollton, Texas; and Robert L. Henry, chief engineer, Texas Testing Laboratories, Inc., Dallas, Texas

The Use of Superplasticizers with Fiber Reinforced Concrete
David R. Lankard, president, Lankard Materials Laboratory, Inc., Columbus, Ohio

SEGMENTAL BRIDGES: NEW DEVELOPMENTS IN DESIGN, CONSTRUCTION AND BEHAVIOR

sponsored by ACI Committee 343

Innovation in U.S. Segmental Bridge Design and Construction
Eugene C. Figg, Jr., president, Figg and Muller Engineers, Inc., Tallahassee, Florida

A Contractor's Viewpoint on Alternate Designs
J.B. Michael, Jr., president, Michael Construction Company, Chattanooga, Tennessee

The Evolution of Concrete Cable-Stayed Bridges
Walter Podolny, Jr., Bridge Division, Federal Highway Administration, Washington, D.C.

Temperature Effects on Segmental Bridges
K.N. Shiu, structural engineer, Structural Development Department; and W. Gene Corley, director, Engineering Development Division, Portland Cement Association, Skokie, Illinois

The Design and Use of Sectional Prestressed Girders for Longspan Bridges
Francis J. Jacques, vice-president, Engineering, Stanley Structures, Denver, Colorado
CONCRETE SHELL BUCKLING

sponsored by ACI-ASCE Committee 334:

Session
Chairman: Stefan J. Medwadowski, chairman ACI-ASCE Committee 334 and consulting engineer, San Francisco, California

Concrete Shell Buckling—An Overview
Egor P. Popov, professor, University of California, Berkeley, California; and Stefan J. Medwadowski, consulting engineer, San Francisco, California

Stability of Cylindrical Reinforced Concrete Shells
Paul Seide, professor, University of Southern California, Los Angeles, California; and Aminadav Siev, associate, Weidlinger Associates, New York, New York

Domes and Hyperbolic Paraboloids
Alexander C. Scordelis, professor of civil engineering, University of California, Berkeley, California

The Buckling of Reinforced Concrete Folded Plate Structures
Sidney A. Guralnick, provost, Illinois Institute of Technology, Chicago, Illinois; Stuart E. Swartz, professor of civil engineering, Kansas State University, Manhattan, Kansas; and Antonio Longinow, engineering advisor, IIT Research Institute, Chicago, Illinois

Buckling of Concrete Cooling-Tower Shells
John F. Abel, associate professor of civil engineering, Cornell University, Ithaca, New York; and Phillip L. Gould, professor and chairman, Department of Civil Engineering, Washington University, St. Louis Missouri

Analytical Methods
Henry C. Schnobrich, professor, Department of Civil Engineering, University of Illinois, Urbana, Illinois

Experimental Methods
David P. Billington, professor, Department of Civil Engineering, Princeton University, Princeton, New Jersey; and Harry G. Harris, associate professor of civil engineering, Drexel University, Philadelphia, Pennsylvania

WASHINGTON CONVENTION COMMITTEE

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Gajanan M. Sabnis
Howard University

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Charles Tolley
Solute Corporation
William W. Wagner, Jr.
Wire Reinforcement Institute

LINCOLN MEMORIAL
THE FAMILY TOUR PROGRAM

MONDAY, OCTOBER 29

9:30 a.m. Local Orientation—Introduction to the Washington scene; its many attractions, how to get to them, and get the most out of your trip.

10:30 a.m. Genealogical Research—Methods and Sources; getting the most out of your visits to the Nation's Capital's repositories. A basic introduction, including handouts, given by Mrs. Donna R. Harting, G.R.S., Executive Secretary of the Board for Certification of Genealogists, Washington, D.C.

1:30 p.m. Behind the Scenes at Metro Central—What Makes a Subway Tick; all you've ever wanted to know about how to run a rapid transit system but didn't know who to ask. A personally guided “fun and games” tour conducted by Cody Pfanzsthel, Director of Community Services for the Washington Metropolitan Area Transit Authority. Return by 4:00 p.m.

TUESDAY, OCTOBER 30

8:30 a.m. Breakfast for the Ladies. A chance for all the ladies to find out everything they want to know about ACl. The session will be moderated by ACl President John McLaughlin and Executive Director George Leyh. Come and air your views and your questions!

10:30 a.m. Shopping at White Flint Mall, Rockville. The spectacular enclosed mall shopping center that's the rage of Washington! At least that's what a lot of ladies tell us. You be the judge for this five-hour jaunt into the world of fashion, gifts, specialties, and of course food. Return by 4:00 p.m.

10:30 a.m. See the National Bureau of Standards, Gaithersburg. An education in itself! A lightly oriented technical tour including concrete highlights. Cement relations with the meter bar (or is it metric bar?). Find out for yourself why we lost the metric war. Return by 4:00 p.m.

8:30 p.m. Washington by Night—Bus Tour. A riding, lectured tour with three stops; the Library of Congress on Capitol Hill, Jefferson Memorial and Lincoln Memorial; lasting approximately three hours.

WEDNESDAY, OCTOBER 31

1:00 p.m. Inspirations of Church and State—Bus Tour. A riding, lectured tour with three stops; the Washington Cathedral, National Shrine and Franciscan Monastery; with 4:30 p.m. return to Capital Hilton.

THURSDAY, NOVEMBER 1

10:00 a.m. Olde Towne Alexandria and Mount Vernon, Virginia—Bus Tour. Eight hours of Colonial America. A combination of riding and strolling with appropriate lectures. Stops at Christ Church, Cafe Rembrant for lunch, and George Washington's plantation estate. Admissions and lunch included in the cost.

FRIDAY, NOVEMBER 2

9:00 a.m. Last Chance Washington—Bus Tour. An eight-hour tour with six stops; the White House, Capitol, Smithsonian Museum's History and Technology Buildings, Arlington Cemetery, Jefferson Memorial and Lincoln Memorial; to give you that “last chance” to pay yourself back for all those long hours in committee or seminar that kept you from viewing your Nation's capital earlier.

FRIDAY, NOVEMBER 2 & SATURDAY, NOVEMBER 3

THE POST-CONVENTION OVERNIGHT SPECIAL BUS TOUR!

9:00 a.m. Colonial Virginia—Overnight Bus Tour. Only the best; Jamestown, Williamsburg and Yorktown; with accommodations at the Williamsburg Hilton Motor Hotel. Also includes all admissions, bus transport, day one evening meal and day two breakfast for an inclusive cost.

This tour will return to the Capital Hilton Hotel, Washington, D.C., not later than 6:00 p.m. on Saturday, November 3, 979, in plenty of time to transfer to airport limousine service or taxicabs and make your return flight home. Plan your flight departure for no earlier than 8:00 p.m. if you take this tour. Otherwise spend the night in Washington, returning home at your leisure on Sunday, November 4.

SATURDAY, NOVEMBER 3 & SUNDAY, NOVEMBER 4

THE ABSOLUTELY LAST POST-CONVENTION OVERNIGHTER!!! IDENTICAL TO THE ABOVE. JUST ADD ONE DAY TO TIME.

9:00 a.m. Colonial Virginia—Overnight Bus Tour. (For details see day above.)

LADIES HOSPITALITY
Every day of the Convention complimentary coffee and sweet rolls will be provided to the ladies in their hospitality suite, “Senate”.

40 41
TOUR FEE SCHEDULE

WASHINGTON BY NIGHT—BUS TOUR
Adults-$9.00, and Children aged 12 and under-$4.50

INSPIRATIONS OF CHURCH AND STATE—BUS TOUR:
Adults-$11.00, and Children aged 12 and under-$6.50

OLDE TOWNE ALEXANDRIA AND MOUNT VERNON—BUS TOUR:
Adults-$17.50, and Children aged 12 and under-$11.00

WASHINGTON BY DAY—BUS TOUR:
Adults-$15.00, and Children aged 12 and under-$7.50

COLONIAL VIRGINIA—OVERNIGHT BUS TOUR:
Adults: Double Occupancy-$119.00; Single Supplement-$15.50; Children, when occupying the same room as the parents-$103.00

NOTE: The tour operator reserves the right to cancel any offering for which less than twenty-five (25) register. All monies will be refunded in such event.

SIGHTS TO SEE IN WASHINGTON

Sometime during the October 28—November 2 ACI Convention, every registrant and his family should find the time to visit a score of Federal Buildings and historical monuments.

• THE U.S. CAPITOL shouldn't be missed. In the Senate and House Chambers and Statuary Hall are sculptures and other art treasures immortalizing the history of America and the men who helped build it.

• THE U.S. SUPREME COURT is located two blocks east of the Capitol. Court room presentations are made every half hour, from 9:30 a.m. until 4 p.m., except when court is in session.

• THE WHITE HOUSE (Executive Mansion), where every president lived but George Washington, was completed in 1800, eight years after the cornerstone was laid. When the building was burned by British troops in 1814 during the war of 1812, white paint was applied to cover fire damage....and the White House got its common name.

• THE LINCOLN MEMORIAL. Dedicated on Memorial Day (then called Decoration Day) in 1922, the 21-ft (6.4 m) statue of the seated Lincoln, 16th president, is surrounded by 36 marble columns, one for each state in the union when the great emancipator died. Fifty-six steps, one for every year of his life, lead up to the inner chamber where his imposing statue stands.

• THE JEFFERSON MEMORIAL, honoring the third U.S. president, reflects the classic style Thomas Jefferson used in designing the rotunda at the University of Virginia and his home, Monticello. In the center of the circular Memorial Room stands the 19 ft (5.8 m) Rudolph Evans statue of the man who drafted the Declaration of Independence.

• MUSEUM OF HISTORY AND TECHNOLOGY—14th St. and Constitution Ave., N.W. Huge Smithsonian facility contains Star Spangled Banner, locomotives, gowns of first ladies.

• MUSEUM OF NATURAL HISTORY (SMITHSONIAN) 10th and Constitution Ave., N.W. World's largest stuffed elephant, dinosaur bones, stuffed whale, Hope Diamond.

• NATIONAL AIR AND SPACE MUSEUM (SMITHSONIAN), 7th and Independence Ave., S.W. Houses the Wright brothers' airplane, the Spirit of St. Louis, a special effects theater, and Spacearium.

• THE JOHN F. KENNEDY CENTER FOR THE PERFORMING ARTS, is one of the world's finest cultural facilities, housing four major theaters, a concert hall, an opera house, a drama theater, and a film theater.
ART GALLERIES. Washington is the only city with seven major art galleries. The National Gallery of Art is spectacular with its new East Building, displaying treasures of French art from the Ailsa Mellon Bruce Collection, as well as other classic and modern works in the West Building, the only American gallery to own a Leonardo da Vinci; the National Collection of Fine Arts has a spectacular collection of Americana; The Freer Gallery specializes in Oriental art; The National Portrait Gallery displays portraits of great Americans; and The Corcoran is one of the world's outstanding privately-owned museums, with free admission on Tuesday and Wednesday. The Phillips Collection, although not extensive, is of internationally-acclaimed quality. The unique Hirshhorn Museum and Sculpture Garden is of donut shape and has a beautiful outdoor courtyard in the center. The Hirshhorn houses an unprecedented collection of paintings and monumental sculpture of the past 125 years. Other things of interest:

- BUREAU OF ENGRAVING AND PRINTING—14th and C Streets, S.W. See money and stamps made.
- EXPLORERS HALL, NATIONAL GEOGRAPHIC SOCIETY—17th and M Streets, N.W. Displays depict archaeology, astronomy, adventure, and discovery.
- FEDERAL BUREAU OF INVESTIGATION—E Street between 9th and 10th Streets, N.W. Closed Saturdays and Sundays. Hour tours every 15 minutes.
- FORD'S THEATER AND LINCOLN MUSEUM—511 10th St., N.W. Free except for theater performances.

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