San Antonio, Texas
ACI's
1987 Annual Convention
March 22-27, 1987
Convention Theme:
Quality Concrete

AMERICAN CONCRETE INSTITUTE
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACI Accessories</td>
<td>37</td>
</tr>
<tr>
<td>ACI San Antonio Convention Committee</td>
<td>12</td>
</tr>
<tr>
<td>ACI Future Conventions</td>
<td>27</td>
</tr>
<tr>
<td>ACI San Antonio Chapter</td>
<td>13</td>
</tr>
<tr>
<td>ACI President's Welcome</td>
<td>5</td>
</tr>
<tr>
<td>AWARDS BREAKFAST</td>
<td>48</td>
</tr>
<tr>
<td>BOARD OF DIRECTION</td>
<td>24</td>
</tr>
<tr>
<td>COMMITTEE MEETINGS/PROGRAMS</td>
<td>14-23</td>
</tr>
<tr>
<td>Convention Center Floor Plan</td>
<td>62</td>
</tr>
<tr>
<td>Convention Committee</td>
<td>25</td>
</tr>
<tr>
<td>Educational Activities Committee</td>
<td>25</td>
</tr>
<tr>
<td>GENERAL SESSION</td>
<td>49</td>
</tr>
<tr>
<td>Governor's Welcome</td>
<td>6</td>
</tr>
<tr>
<td>Hotel Floor Plans</td>
<td>63</td>
</tr>
<tr>
<td>Mayor's Welcome</td>
<td>7</td>
</tr>
<tr>
<td>Personal Log</td>
<td>31-34</td>
</tr>
<tr>
<td>Registration Information</td>
<td>4</td>
</tr>
<tr>
<td>SCHEDULE</td>
<td>8-9</td>
</tr>
<tr>
<td>SPECIAL EVENTS</td>
<td>10-11</td>
</tr>
<tr>
<td>Sponsors</td>
<td>26</td>
</tr>
<tr>
<td>SPOUSE PROGRAM</td>
<td>60-61</td>
</tr>
<tr>
<td>Student Activities Program</td>
<td>35</td>
</tr>
<tr>
<td>Sustaining Members of ACI</td>
<td>27</td>
</tr>
<tr>
<td>Technical Activities Committee</td>
<td>25</td>
</tr>
</tbody>
</table>
REGISTRATION

The ACI staff is eager to answer any questions you may have pertaining to the convention.

The registration desk at the convention center is open to serve you during the following hours:

<table>
<thead>
<tr>
<th>Day</th>
<th>Date</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday</td>
<td>March 22</td>
<td>1:00 PM - 5:00 PM</td>
</tr>
<tr>
<td>Monday</td>
<td>March 23</td>
<td>8:00 AM - 5:00 PM</td>
</tr>
<tr>
<td>Tuesday</td>
<td>March 24</td>
<td>8:00 AM - 5:00 PM</td>
</tr>
<tr>
<td>Wednesday</td>
<td>March 25</td>
<td>8:00 AM - 5:00 PM</td>
</tr>
<tr>
<td>Thursday</td>
<td>March 26</td>
<td>8:00 AM - 5:00 PM</td>
</tr>
<tr>
<td>Friday</td>
<td>March 27</td>
<td>8:00 AM - 10:30 AM</td>
</tr>
</tbody>
</table>

**Fees:**

<table>
<thead>
<tr>
<th>Category</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member</td>
<td>$110.00 (full week)</td>
</tr>
<tr>
<td>Nonmember</td>
<td>$130.00 (full week)</td>
</tr>
<tr>
<td>One-day Member</td>
<td>$50.00 (per day)</td>
</tr>
<tr>
<td>One-day Nonmember</td>
<td>$60.00 (per day)</td>
</tr>
<tr>
<td>Student</td>
<td>$5.00 (excludes social functions)</td>
</tr>
</tbody>
</table>

Registration fees cover attendance at all ACI technical and educational committee meetings, General Session, and Forums. Also, the Concrete Mixer ticket is included in the full week registration fee.

**Local Tours:** (See page 11 for details.)

Dos' Rios Wastewater Treatment Plant
Wednesday, March 25, 1987
Time: 1:00 PM
Cost: $5.00/person

Stanley Structures Precast Concrete Plant
Wednesday, March 25, 1987
Time: 1:00 PM - 3:30 PM
Cost: $5.00/person

Phil M. Ferguson Structural Engineering Research Laboratory
University of Texas at Austin
Thursday, March 26, 1987
Time: 1:00 PM - 7:00 PM
Cost: $15.00/person

**Awards Breakfast**

Thursday, March 26, 1987
Cost: $12.00
8:00 AM - 10:00 AM
Room: Centro A-D, Convention Center

Come meet the awardees. Have fun, enjoy a good breakfast, and watch the multi-media presentation. Please purchase tickets at the ACI Registration Desk by Wednesday afternoon.

**Badges:**

Wear your badge on the right side at all times. (In shaking hands the eyes normally fall at shoulder level on the right side of the individual being greeted.) The convention badges are color coded for identification.

<table>
<thead>
<tr>
<th>Category</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member</td>
<td>White</td>
</tr>
<tr>
<td>Nonmember</td>
<td>Peach</td>
</tr>
<tr>
<td>Fellow</td>
<td>White</td>
</tr>
<tr>
<td>Student</td>
<td>Blue</td>
</tr>
<tr>
<td>Spouse</td>
<td>Beige</td>
</tr>
</tbody>
</table>
March 1987

Friends of the American Concrete Institute:

Welcome to San Antonio, deep in the heart of Texas!

The city promises to be the perfect setting for another ACI convention, and there is every indication that this will be another great meeting for the Institute. In recent years, San Antonio has come to the forefront of exciting American cities to visit because of its modern developments, coupled with its historical charms.

“Quality Concrete” is the theme for this convention, and it is hoped that all of us will gain additional expertise that will help insure a superior material worldwide. I urge you to participate in as many of the planned events as possible and certainly to take advantage of the spouse tours scheduled throughout the week.

If I, the other ACI officers, or staff personnel can be of any help during your stay here, do not hesitate to request it.

Frances and I look forward to greeting each of you personally. Make yourself at home, settle back, and enjoy another friendly, informative, and entertaining gathering of the American Concrete Institute.

Best regards,

Walter E. Kunze
President
American Concrete Institute

progress through knowledge
March, 1987

Greetings:

As Governor of Texas, I am pleased to extend warm greetings to all those attending the American Concrete Institute's International Convention being held in San Antonio.

Texans should realize the importance of — and the work that goes into — the design, construction, use, manufacture and maintenance of concrete products and structures. Your role is a vital one in the development of our state and nation.

Your efforts to further engineering and technical education, scientific investigation and research, and development of standards for the design and construction of concrete structures should be highly commended. On behalf of the State of Texas, I am proud to welcome you to San Antonio.

You have my best wishes for a successful and productive convention.

Sincerely,

[Signature]

William P. Clements, Jr.
Governor of Texas
GREETINGS: AMERICAN CONCRETE INSTITUTE

Welcome to San Antonio! We are very pleased that you selected our lovely city as the site for your Annual State Convention to be held March 22-27, at the Convention Center in San Antonio.

We hope you will enjoy your stay and believe that you will experience the warmth and friendliness for which our city and its citizens are so well noted. These are only two of the many reasons that San Antonio was designated as an "All America City" several years ago.

You are invited to take advantage of the many attractions in San Antonio as you visit with us. A wide variety of entertainment, gourmet dining, and enchanting places to visit are available here. Of particular interest is the Paseo del Rio - our famed Riverwalk - with its sidewalk shops and cafes; our historic missions, including The Alamo; and HemisFair, anchored by the spectacular Tower of the Americas, for both visiting and dining enjoyment.

San Antonio, now the nation's 10th largest city, welcomes you and is at your service. Best wishes for a very successful convention!

Sincerely,

Henry G. Cisneros
Mayor
AWARDS BREAKFAST
Thursday, March 26, 1987
8:00 AM-10:00 AM
Centro A-D
Cost: $12.00
Come meet the awardees. Have fun, enjoy a good breakfast and watch the multi-media awards presentation.
Please purchase tickets before Wednesday afternoon.

BREAKFAST MEETINGS (by invitation only)
Monday, March 23, 1987
7:00 AM-8:15 AM
E-902 Breakfast
La Reina Room - Hilton Hotel

Monday, March 23, 1987
7:15 AM-8:30 AM
318 Steering Committee Breakfast
La Corona Room - Hilton Hotel

Tuesday, March 24, 1987
7:00 AM-8:30 AM
Chairman Training Breakfast
Salon Del Rey North Room - Hilton Hotel

COFFEE BAR
Monday through Friday
8:00 AM-10:00 AM
ACI Registration Area
Join your colleagues every morning for coffee and tea (complimentary) in the ACI Registration Area.

CONCRETE MIXER
Wednesday, March 25, 1987
6:30 PM-8:00 PM
River Court Room
All delegates and guests are cordially invited to attend our traditional convention social. (All full-week registrants have received a complimentary mixer ticket upon registration. Others may purchase tickets at the ACI Registration Desk.)

CONTRACTORS' DAY
Tuesday, March 24, 1987
Fiesta A
9:00 AM-12:00 NOON
Concrete Construction Forum
2:00 PM-5:00 PM
Advances in Concrete Technology
On Tuesday, contractors will find a full day of programs designed to fit their needs. In the morning will be the Concrete Construction Forum presenting problems and solutions to the most vexing problems faced by a concrete constructor today. At this informal session you will be able to ask questions and get answers. Then, in the afternoon, will be Advances in Concrete Technology. This session will explore some of the technological advances in materials such as polymer concrete, superplasticizers, fiber concrete, and high-strength concrete; and some new techniques such as air-inflated forms, and other new forming methods. In addition, there will be a special display of ACI publications and someone on hand to guide you to the information you need to compete in today’s concrete world.

GENERAL SESSION
Thursday, March 26, 1987
10:00 AM-12:00 NOON
Mission Room
Presidential Address:
Walter E. Kunze, President, Construction Technology Laboratories, Inc., Skokie, Illinois
Proposed revision of Article X of the ACI Bylaws
LOCAL TOURS
Wednesday, March 25, 1987
1:00 PM - 3:30 PM  Cost $5.00/person

Dos Rios Wastewater Treatment Plant
The Dos Rios plant is a new $151 million facility that will provide advanced treatment for all wastewater in the City of San Antonio. The plant will provide secondary treatment for 83 mgd (193 mgd peak) and receive 71 mgd (142 peak) of secondary effluent from three other facilities, and the combined flows will receive advanced treatment.

Wednesday, March 25, 1987
1:00 PM - 3:30 PM  Cost $5.00/person

Stanley Structures Precast Concrete Plant
The Texas Division of Stanley Structures in San Antonio operates facilities for production of structural and architectural precast concrete. Structural products include double tees, inverted tee beams, columns and load bearing spandrels. Architectural products are custom shapes and finishes used as cladding or load bearing members.

Thursday, March 26, 1987
1:00 PM - 7:00 PM  Cost $15.00/person

Phil M. Ferguson Structural Engineering Research Laboratory;
University of Texas at Austin
The Ferguson Laboratory, located in Austin, is one of the most active structural engineering laboratories in the world. Numerous projects in progress will be described by students, faculty and laboratory personnel. Complimentary refreshments will be served on the return trip to the hotel.

OPENING RECEPTION
Sunday, March 22, 1987  Hilton - Corte Real
5:30 PM - 7:00 PM
The San Antonio Chapter is sponsoring this event — Welcome to San Antonio!!!

POSTER SESSION
Tuesday through Thursday  200 Corridor

Tuesday, March 24, 1987  12:00 NOON - 5:00 PM
Wednesday, March 25, 1987  8:00 AM - 5:00 PM
Thursday, March 26, 1987  8:00 AM - 12:00 NOON

Presenters will be with their poster displays during the hours of 12:00 NOON to 3:00 PM on Wednesday, March 25, to answer any questions you may have. Please refer to page 38 for further details.

4:30 REHABILITATION (Cash Bar)
Tuesday, March 24, 1987  ACI Registration Area
4:30 PM - 6:30 PM

Rest, relax and restore...the day's meetings are now behind you and the evening is young. Join your colleagues in the ACI Registration Area where a cash bar has been set up for your pleasure.

SPOUSE PROGRAM
An excellent program has been planned by ACI and the Local ACI San Antonio Area Chapter. All delegates and guests are invited to participate. Check the program in the back of this booklet. There is something of interest for everyone!

TOURS
Refer to Local Tours listed above or the Spouse Program on page 60.

NOTE: All functions will be held in the Convention Center unless otherwise noted.
SAN ANTONIO
CONVENTION
COMMITTEE

General Chairman
Saul Shenkman
Stanley Structures

Tours
David Pickett
Raba-Kistner Consultants Inc.

Spouse Program
Richard Pennhorn
Stanley Structures

Spouse Hospitality
Donald Taubert
Capitol Cement

Publicity
Chuck Gregory
McBride-Ratcliff & Associates

Finance
Randall W. Connell
Southwestern Laboratories

Student Activities
Richard Furlong
University of Texas at San Antonio

Pat Hogue
U.S. Army Corps of Engineers
Kelly Air Force Base

Social Program
Richard Pennhorn
Stanley Structures

Contractors’ Day
Ray Gene Whitaker

San Antonio Reception Desk
William Barrow
Monier Resources

Robert Taggart
Master Builders
ACI
SAN ANTONIO
CHAPTER

President
Saul Shenkman
Stanley Structures

Vice President
Ray Gene Whitaker
Browning Construction Co.

Secretary-Treasurer
C. R. Guruprasad
Day & Zimmerman, Inc.

Directors
Richard Brown
Richard R. Brown Construction Co.

Randall W. Connell
Southwestern Laboratories

Richard Furlong
University of Texas at San Antonio

Jeffrey L. Lilley
Southform Systems/Supply

David Lee Pickett
Raba-Kistner Consultants Inc.

W. C. Reiffert
Walter P. Moore & Associates

The officers, staff, and members of ACI would like to thank the Local Convention Committee, the Hostesses, and the San Antonio Area Chapter for their contribution to a successful 1987 Annual Convention.

THANK YOU
# PROGRAM COMMITTEE MEETINGS

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

**NOTE:** All meetings are located in the Convention Center unless otherwise noted.

## SATURDAY/SUNDAY/MONDAY

<table>
<thead>
<tr>
<th>DAY/TIME</th>
<th>FUNCTION</th>
<th>ROOM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SATURDAY, March 21, 1987</strong></td>
<td><strong>8:00 AM-6:00 PM</strong></td>
<td>Marriott-Salon F</td>
</tr>
<tr>
<td>TAC Full</td>
<td>Technical Activities Committee</td>
<td>Marriott-Salon F</td>
</tr>
<tr>
<td>9:00 AM-5:00 PM</td>
<td>EAC Full</td>
<td>Marriott-Valero</td>
</tr>
<tr>
<td>2:00 PM-5:00 PM</td>
<td>Planning Committee</td>
<td>Marriott-Milam</td>
</tr>
<tr>
<td>5:00 PM-7:00 PM</td>
<td>Opening Reception</td>
<td>Hilton-Corte Real</td>
</tr>
</tbody>
</table>

## SUNDAY, March 22, 1987

<table>
<thead>
<tr>
<th>DAY/TIME</th>
<th>FUNCTION</th>
<th>ROOM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>8:00 AM-6:00 PM</strong></td>
<td>TAC Sub</td>
<td>Marriott-Salon F</td>
</tr>
<tr>
<td>Technical Activities Committee</td>
<td>Review Group 1</td>
<td>Marriott-Salon F</td>
</tr>
<tr>
<td>Review Group 2</td>
<td>Marriott-Salon E</td>
<td></td>
</tr>
<tr>
<td>Review Group 3</td>
<td>Marriott-Crockett</td>
<td></td>
</tr>
<tr>
<td>Review Group 4</td>
<td>Marriott-Bonham</td>
<td></td>
</tr>
<tr>
<td>8:00 AM-12:00 NOON</td>
<td>TAC Full</td>
<td>Marriott-Salon F</td>
</tr>
<tr>
<td>(4 hrs)</td>
<td>Construction Liaison Committee</td>
<td>203</td>
</tr>
<tr>
<td>8:30 AM-10:00 AM</td>
<td>E902-A Field Technician I (3 hrs)</td>
<td>206</td>
</tr>
<tr>
<td>8:30 AM-10:00 AM</td>
<td>E902-Z Training Courses (3 hrs)</td>
<td>205</td>
</tr>
<tr>
<td>8:30 AM-10:00 AM</td>
<td>FAC Financial Advisory Committee (CLOSED)</td>
<td>204</td>
</tr>
<tr>
<td>122</td>
<td>Energy Conservation (3 hrs)</td>
<td>210</td>
</tr>
<tr>
<td>201</td>
<td>Durability (3 hrs)</td>
<td>Centro C</td>
</tr>
<tr>
<td>211-D</td>
<td>High Strength (3 hrs)</td>
<td>208</td>
</tr>
<tr>
<td>212</td>
<td>Chemical Admixtures (3 hrs)</td>
<td>Centro D</td>
</tr>
<tr>
<td>223</td>
<td>Expansive Cement (3 hrs)</td>
<td>Plaza A</td>
</tr>
<tr>
<td>336</td>
<td>Footings (4-1/2 hrs)</td>
<td>Plaza D</td>
</tr>
<tr>
<td>351-4</td>
<td>Grouting of Equip/Mach (4-1/2 hrs)</td>
<td>209</td>
</tr>
<tr>
<td>441</td>
<td>Columns (3 hrs)</td>
<td>Plaza C</td>
</tr>
<tr>
<td>445</td>
<td>Shear &amp; Torsion (3 hrs)</td>
<td>Centro B</td>
</tr>
<tr>
<td>DAY/TIME</td>
<td>FUNCTION</td>
<td>ROOM</td>
</tr>
<tr>
<td>------------------</td>
<td>--------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td><strong>8:30 AM-10:00 AM (continued)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>506</td>
<td>Shotcreting (4-1/2 hrs)</td>
<td>207</td>
</tr>
<tr>
<td>530-J</td>
<td>Masonry Structures (9 hrs)</td>
<td>Plaza B</td>
</tr>
<tr>
<td><strong>10:00 AM-11:30 AM</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRC</td>
<td>Construction Review Committee</td>
<td>203</td>
</tr>
<tr>
<td>(1-1/2 hrs)</td>
<td>*E902-A: Field Technician I</td>
<td>206</td>
</tr>
<tr>
<td>*E902-Z</td>
<td>Training Courses</td>
<td>205</td>
</tr>
<tr>
<td>*FAC</td>
<td>Financial Advisory Committee</td>
<td>204</td>
</tr>
<tr>
<td>(CLOSED)</td>
<td>*122: Energy Conservation</td>
<td>210</td>
</tr>
<tr>
<td>*201: Durability</td>
<td>Centro C</td>
<td></td>
</tr>
<tr>
<td>*211-D: High Strength</td>
<td>208</td>
<td></td>
</tr>
<tr>
<td>*212: Chemical Admixtures</td>
<td>Centro D</td>
<td></td>
</tr>
<tr>
<td>*223: Expansive Cement</td>
<td>Plaza A</td>
<td></td>
</tr>
<tr>
<td>318 Full</td>
<td>Standard Building Code (3 hrs)</td>
<td>Centro A</td>
</tr>
<tr>
<td>*336: Footings</td>
<td>Plaza D</td>
<td></td>
</tr>
<tr>
<td>*351-A: Grouting of Equip/Mach</td>
<td>209</td>
<td></td>
</tr>
<tr>
<td>*441: Columns</td>
<td>Plaza C</td>
<td></td>
</tr>
<tr>
<td>*445: Shear &amp; Torsion</td>
<td>Centro B</td>
<td></td>
</tr>
<tr>
<td>*506: Shotcreting</td>
<td>207</td>
<td></td>
</tr>
<tr>
<td>*530-J: Masonry Structures</td>
<td>Plaza B</td>
<td></td>
</tr>
<tr>
<td><strong>11:30 AM-1:00 PM</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E702</td>
<td>Designing Structures (1-1/2 hrs)</td>
<td>203</td>
</tr>
<tr>
<td>E901</td>
<td>Scholarships (1-1/2 hrs)</td>
<td>206</td>
</tr>
<tr>
<td>E902-F</td>
<td>Formwork Designer (1-1/2 hrs)</td>
<td>205</td>
</tr>
<tr>
<td>*FAC</td>
<td>Financial Advisory Committee</td>
<td>204</td>
</tr>
<tr>
<td>(CLOSED)</td>
<td>*120: History (1-1/2 hrs)</td>
<td>Centro B</td>
</tr>
<tr>
<td>*211-E: Evaluation (1-1/2 hrs)</td>
<td>208</td>
<td></td>
</tr>
<tr>
<td>308</td>
<td>Curing (1-1/2 hrs)</td>
<td>210</td>
</tr>
<tr>
<td>318 Full</td>
<td>Standard Building Code</td>
<td>Centro A</td>
</tr>
<tr>
<td>*336: Footings</td>
<td>Plaza D</td>
<td></td>
</tr>
<tr>
<td>*351-A: Grouting of Equip/Mach</td>
<td>209</td>
<td></td>
</tr>
<tr>
<td>357</td>
<td>Precast Chimneys (1-1/2 hrs)</td>
<td>Centro D</td>
</tr>
<tr>
<td>*506: Shotcreting</td>
<td>207</td>
<td></td>
</tr>
<tr>
<td>515</td>
<td>Coatings (1-1/2 hrs)</td>
<td>Centro C</td>
</tr>
<tr>
<td>*530-J: Masonry Structures</td>
<td>Plaza B</td>
<td></td>
</tr>
<tr>
<td>552</td>
<td>Cement Grouting (1-1/2 hrs)</td>
<td>Plaza A</td>
</tr>
<tr>
<td><strong>1:00 PM-2:00 PM</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lunch Break</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2:00 PM-3:30 PM</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E703</td>
<td>Construction Practices (3 hrs)</td>
<td>207</td>
</tr>
<tr>
<td>E902-B</td>
<td>Lab Technician (3 hrs)</td>
<td>203</td>
</tr>
<tr>
<td>E902-C</td>
<td>Concrete Const. Inspector (3 hrs)</td>
<td>205</td>
</tr>
<tr>
<td>RC</td>
<td>Responsibility in Construction</td>
<td>Marriott, Austin Room</td>
</tr>
<tr>
<td>(3 hrs)</td>
<td>207: Mass Concrete (4-1/2 hrs)</td>
<td>Plaza C</td>
</tr>
<tr>
<td>211-B</td>
<td>Lightweight (3 hrs)</td>
<td>208</td>
</tr>
<tr>
<td>318-B</td>
<td>Reinf. &amp; Develop. (4-1/2 hrs)</td>
<td>Centro A</td>
</tr>
<tr>
<td>318-C</td>
<td>Serviceability/Safety (4-1/2 hrs)</td>
<td>Centro B</td>
</tr>
<tr>
<td>DAY/TIME</td>
<td>FUNCTION</td>
<td>ROOM</td>
</tr>
<tr>
<td>----------</td>
<td>----------</td>
<td>------</td>
</tr>
<tr>
<td>2:00 PM-3:30 PM (continued)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>318-D</td>
<td>Flexure &amp; Axial Loads (4-1/2 hrs)</td>
<td>Centro C</td>
</tr>
<tr>
<td>318-F</td>
<td>Two-Way Slabs (4-1/2 hrs)</td>
<td>Centro D</td>
</tr>
<tr>
<td>351</td>
<td>Equipment Foundations (4-1/2 hrs)</td>
<td>209</td>
</tr>
<tr>
<td>363</td>
<td>High Strength (1-1/2 hrs)</td>
<td>204</td>
</tr>
<tr>
<td>* 530-J</td>
<td>Masonry Structures</td>
<td>Plaza B</td>
</tr>
<tr>
<td>533</td>
<td>Wall Panels (1-1/2 hrs)</td>
<td>Plaza A</td>
</tr>
<tr>
<td>543</td>
<td>Piles (3 hrs)</td>
<td>Plaza D</td>
</tr>
<tr>
<td>548-A</td>
<td>Polymer PC Concrete (1-1/2 hrs)</td>
<td>210</td>
</tr>
<tr>
<td>553</td>
<td>Swimming Pools (1-1/2 hrs)</td>
<td>206</td>
</tr>
</tbody>
</table>

2:00 PM-5:00 PM SESSION:
- Research in Progress

| 3:30 PM-5:00 PM | | |
| *E703 | Construction Practices | 207 |
| *E902-B | Lab Technician | 203 |
| *E902-C | Concrete Const. Inspector | 205 |
| E902-D | Concrete Craftsman (3 hrs) | 206 |
| IAC | International Activities Committee | 204 |
| (2-1/2 hrs) | | |
| RC | Responsibility in Construction (3 hrs) | Marriott-Austin |
| * 207 | Mass Concrete | Plaza C |
| * 211-B | Lightweight | 208 |
| * 318-B | Reinf. & Develop | Centro A |
| * 318-C | Serviceability/Safety | Centro B |
| * 318-D | Flexure & Axial Loads | Centro C |
| * 318-F | Two-Way Slabs | Centro D |
| 349-3 | Embedded Steel (3 hrs) | Plaza A |
| * 351 | Equipment Foundations | 209 |
| * 530-J | Masonry Structures | Plaza B |
| * 543 | Piles | Plaza D |
| 548-B | Sub on Standard Tests (1-1/2 hrs) | 210 |

5:00 PM-6:30 PM
| *E902-D | Concrete Craftsman | 206 |
| E902-G | Shotcrete Nozzlemen (1-1/2 hrs) | 205 |
| *IAC | International Activities Committee | 204 |
| * 207 | Mass Concrete | Plaza C |
| 222 | Corrosion (1-1/2 hrs) | Plaza D |
| 229 | Controlled Low Strength (1-1/2 hrs) | 208 |
| * 318-B | Reinf. & Develop | Centro A |
| * 318-C | Serviceability/Safety | Centro B |
| * 318-D | Flexure & Axial Loads | Centro C |
| * 318-F | Two-Way Slabs | Centro D |
| 349-3 | Embedded Steel | Plaza A |
| * 351 | Equipment Foundations | 209 |
| 362 | Parking Structures (1-1/2 hrs) | 207 |
| * 530-J | Masonry Structures | Plaza B |
| 546-1 | Underwater Repair (1-1/2 hrs) | 203 |
| 548-C | PC Overlays (1-1/2 hrs) | 210 |

7:30 PM-9:00 PM
<p>| E801 | Student Concrete Projects | Marriott-Salon B |
| (1-1/2 hrs) | | |</p>
<table>
<thead>
<tr>
<th>DAY/TIME</th>
<th>FUNCTION</th>
<th>ROOM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TUESDAY, March 24, 1987</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8:30 AM-10:00 AM</td>
<td>Construction Materials (3 hrs)</td>
<td>207</td>
</tr>
<tr>
<td>E701</td>
<td>Educational Computer Act. (3 hrs)</td>
<td>208</td>
</tr>
<tr>
<td>E705</td>
<td>Certification (4-1/2 hrs)</td>
<td>206</td>
</tr>
<tr>
<td>E902</td>
<td>Membership Committee (3 hrs)</td>
<td>203</td>
</tr>
<tr>
<td>117</td>
<td>Tolerances (4-1/2 hrs)</td>
<td>Plaza D</td>
</tr>
<tr>
<td>211-A</td>
<td>Edit &amp; Coordination (3 hrs)</td>
<td>209</td>
</tr>
<tr>
<td>230</td>
<td>Soil Cement (1-1/2 hrs)</td>
<td>204</td>
</tr>
<tr>
<td>307</td>
<td>Reinforced Conc. Chimneys (4-1/2 hrs)</td>
<td>Plaza C</td>
</tr>
<tr>
<td>318-A</td>
<td>General Conc. &amp; Const. (4-1/2 hrs)</td>
<td>Centro A</td>
</tr>
<tr>
<td>318-E</td>
<td>Shear &amp; Torsion (4-1/2 hrs)</td>
<td>Centro B</td>
</tr>
<tr>
<td>318-G</td>
<td>Prestressed Precast (4-1/2 hrs)</td>
<td>Centro C</td>
</tr>
<tr>
<td>318-H</td>
<td>Seismic Provisions (4-1/2 hrs)</td>
<td>Centro D</td>
</tr>
<tr>
<td>343</td>
<td>Bridge Design (3 hrs)</td>
<td>210</td>
</tr>
<tr>
<td>530-J</td>
<td>Masonry Structures (9 hrs)</td>
<td>Plaza B</td>
</tr>
<tr>
<td>550</td>
<td>Precast Structures (3 hrs)</td>
<td>Plaza A</td>
</tr>
<tr>
<td><strong>9:00 AM-12:00 NOON SESSIONS:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Concrete Construction Forum</td>
<td>Fiesta A</td>
</tr>
<tr>
<td></td>
<td>Good Concrete Mixtures Under Dwindling Supply of Good Quality Aggregates</td>
<td>Fiesta B</td>
</tr>
<tr>
<td></td>
<td>Seminar for Educators/Students</td>
<td>Fiesta C</td>
</tr>
<tr>
<td><strong>9:00 AM-6:00 PM</strong></td>
<td>ACI Board of Direction</td>
<td>205</td>
</tr>
<tr>
<td><strong>10:00 AM-11:30 AM</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*E701</td>
<td>Construction Materials</td>
<td>207</td>
</tr>
<tr>
<td>*E705</td>
<td>Educational Computer Act.</td>
<td>208</td>
</tr>
<tr>
<td>*E902</td>
<td>Certification</td>
<td>206</td>
</tr>
<tr>
<td>*117</td>
<td>Tolerances</td>
<td>Plaza D</td>
</tr>
<tr>
<td>*211-A</td>
<td>Edit &amp; Coordination</td>
<td>209</td>
</tr>
<tr>
<td>*307</td>
<td>Reinforced Conc. Chimneys</td>
<td>Plaza C</td>
</tr>
<tr>
<td>*318-A</td>
<td>General Conc. &amp; Const.</td>
<td>Centro A</td>
</tr>
<tr>
<td>*318-E</td>
<td>Shear &amp; Torsion</td>
<td>Centro B</td>
</tr>
<tr>
<td>*318-G</td>
<td>Prestressed Precast</td>
<td>Centro C</td>
</tr>
<tr>
<td>*318-H</td>
<td>Seismic Provisions</td>
<td>Centro D</td>
</tr>
<tr>
<td>*343</td>
<td>Bridge Design</td>
<td>210</td>
</tr>
<tr>
<td>*530-J</td>
<td>Masonry Structures</td>
<td>Plaza B</td>
</tr>
<tr>
<td>*550</td>
<td>Precast Structures</td>
<td>Plaza A</td>
</tr>
<tr>
<td><strong>10:00 AM-5:00 PM SESSION:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Film Session</td>
<td>Fiesta D</td>
</tr>
<tr>
<td><strong>11:30 AM-1:00 PM</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*E902</td>
<td>Certification</td>
<td>206</td>
</tr>
<tr>
<td>*117</td>
<td>Tolerances</td>
<td>Plaza D</td>
</tr>
<tr>
<td>213</td>
<td>Lightweight Aggregates (1-1/2 hrs)</td>
<td>207</td>
</tr>
<tr>
<td>306</td>
<td>Cold Weather (1-1/2 hrs)</td>
<td>Plaza A</td>
</tr>
<tr>
<td>307</td>
<td>Reinforced Conc. Chimneys</td>
<td>Plaza C</td>
</tr>
<tr>
<td>*318-A</td>
<td>General Conc. &amp; Const.</td>
<td>Centro A</td>
</tr>
<tr>
<td>*318-E</td>
<td>Shear &amp; Torsion</td>
<td>Centro B</td>
</tr>
<tr>
<td>DAY/TIME</td>
<td>FUNCTION</td>
<td>ROOM</td>
</tr>
<tr>
<td>---------------</td>
<td>---------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>11:30 AM-1:00 PM (continued)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>* 318-G</td>
<td>Prestressed Precast</td>
<td>Centro C</td>
</tr>
<tr>
<td>* 318-H</td>
<td>Seismic Provisions</td>
<td>Centro D</td>
</tr>
<tr>
<td>349-1</td>
<td>General Materials Const. (1-1/2 hrs)</td>
<td>208</td>
</tr>
<tr>
<td>* 349-2</td>
<td>Design (1-1/2 hrs)</td>
<td>209</td>
</tr>
<tr>
<td>* 349-3</td>
<td>Embedded Steel (1-1/2 hrs)</td>
<td>210</td>
</tr>
<tr>
<td>* 530-J</td>
<td>Masonry Structures</td>
<td>Plaza B</td>
</tr>
<tr>
<td>546</td>
<td>Repair (1-1/2 hrs)</td>
<td>203</td>
</tr>
<tr>
<td>12:00 NOON-5:00 PM SESSION:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Poster Session</td>
<td>200 Corridor</td>
</tr>
<tr>
<td>1:00 PM-2:00 PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lunch Break</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2:00 PM-3:30 PM</td>
<td>Educational Activities Committee</td>
<td>203</td>
</tr>
<tr>
<td></td>
<td>(4-1/2 hrs)</td>
<td></td>
</tr>
<tr>
<td>210</td>
<td>Erosion in Hydraulic Struct.</td>
<td>207</td>
</tr>
<tr>
<td></td>
<td>(1-1/2 hrs)</td>
<td></td>
</tr>
<tr>
<td>211-C</td>
<td>No Slump (3 hrs)</td>
<td>206</td>
</tr>
<tr>
<td>214</td>
<td>Strength Tests (3 hrs)</td>
<td>Centro D</td>
</tr>
<tr>
<td>302</td>
<td>Construction of Floors (4-1/2 hrs)</td>
<td>210</td>
</tr>
<tr>
<td>* 318 Full</td>
<td>Standard Building Code (4-1/2 hrs)</td>
<td>Centro A</td>
</tr>
<tr>
<td>* 349 Full</td>
<td>Nuclear Structures (3 hrs)</td>
<td>208</td>
</tr>
<tr>
<td>357 Sub</td>
<td>Offshore Structures (1-1/2 hrs)</td>
<td>Plaza A</td>
</tr>
<tr>
<td>421-J</td>
<td>Slabs (3 hrs)</td>
<td>Plaza C</td>
</tr>
<tr>
<td>435</td>
<td>Deflection (3 hrs)</td>
<td>Centro B</td>
</tr>
<tr>
<td>503</td>
<td>Adhesives (1-1/2 hrs)</td>
<td>Centro C</td>
</tr>
<tr>
<td>* 530-J</td>
<td>Masonry Structures</td>
<td>Plaza B</td>
</tr>
<tr>
<td>551</td>
<td>Tilt-Up (4-1/2 hrs)</td>
<td>209</td>
</tr>
<tr>
<td>554</td>
<td>Bearing Systems (3 hrs)</td>
<td>Plaza D</td>
</tr>
<tr>
<td>2:00 PM-5:00 PM SESSION:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Advances in Concrete Technology</td>
<td>Fiesta A</td>
</tr>
<tr>
<td></td>
<td>Open Paper Session</td>
<td>Fiesta B</td>
</tr>
<tr>
<td></td>
<td>New Techniques in Proportioning</td>
<td>Fiesta C</td>
</tr>
<tr>
<td>3:30 PM-5:00 PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>* EAC Full</td>
<td>Educational Activities Committee</td>
<td>203</td>
</tr>
<tr>
<td>116</td>
<td>Notation &amp; Nomenclature (3 hrs)</td>
<td>Centro C</td>
</tr>
<tr>
<td>* 211-C</td>
<td>No Slump</td>
<td>206</td>
</tr>
<tr>
<td>* 214</td>
<td>Strength Tests</td>
<td>Centro D</td>
</tr>
<tr>
<td>* 302</td>
<td>Construction of Floors</td>
<td>210</td>
</tr>
<tr>
<td>* 318 Full</td>
<td>Standard Building Code</td>
<td>Centro A</td>
</tr>
<tr>
<td>325</td>
<td>Pavements (3 hrs)</td>
<td>207</td>
</tr>
<tr>
<td>* 349 Full</td>
<td>Nuclear Structures</td>
<td>208</td>
</tr>
<tr>
<td>* 357 Full</td>
<td>Offshore Structures (3 hrs)</td>
<td>Plaza A</td>
</tr>
<tr>
<td>* 421-J</td>
<td>Slabs</td>
<td>Plaza C</td>
</tr>
<tr>
<td>* 435</td>
<td>Deflection</td>
<td>Centro B</td>
</tr>
<tr>
<td>437</td>
<td>Strength of Structures (3 hrs)</td>
<td>204</td>
</tr>
<tr>
<td>* 530-J</td>
<td>Masonry Structures</td>
<td>Plaza B</td>
</tr>
<tr>
<td>* 551</td>
<td>Tilt-Up</td>
<td>209</td>
</tr>
<tr>
<td>* 554</td>
<td>Bearing Systems</td>
<td>Plaza D</td>
</tr>
<tr>
<td>5:00 PM-6:30 PM SESSION:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Student Concrete Beam Contest</td>
<td>208</td>
</tr>
<tr>
<td>DAY/TIME</td>
<td>FUNCTION</td>
<td>ROOM</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>5:00 PM-6:30 PM</td>
<td>*EAC Full Educational Activities Committee</td>
<td>203</td>
</tr>
<tr>
<td></td>
<td>* 116 Notation &amp; Nomenclature</td>
<td>Centro C</td>
</tr>
<tr>
<td></td>
<td>209 Creep &amp; Shrinkage (1-1/2 hrs)</td>
<td>206</td>
</tr>
<tr>
<td></td>
<td>216 Fire Resistance (1-1/2 hrs)</td>
<td>Centro D</td>
</tr>
<tr>
<td></td>
<td>226-3 Silica Fume (1-1/2 hrs)</td>
<td>Centro B</td>
</tr>
<tr>
<td></td>
<td>* 302 Construction of Floors</td>
<td>210</td>
</tr>
<tr>
<td></td>
<td>* 318 Full Standard Building Code</td>
<td>Centro A</td>
</tr>
<tr>
<td></td>
<td>* 325 Pavements</td>
<td>207</td>
</tr>
<tr>
<td></td>
<td>350 Environmental Eng. Struct. (1-1/2 hrs)</td>
<td>Plaza C</td>
</tr>
<tr>
<td></td>
<td>* 357 Full Offshore Structures</td>
<td>Plaza A</td>
</tr>
<tr>
<td></td>
<td>* 437 Strength of Structures</td>
<td>204</td>
</tr>
<tr>
<td></td>
<td>504 Joint Sealants (1-1/2 hrs)</td>
<td>Plaza D</td>
</tr>
<tr>
<td></td>
<td>* 530-J Masonry Structures</td>
<td>Plaza B</td>
</tr>
<tr>
<td></td>
<td>* 551 Tilt-Up</td>
<td>209</td>
</tr>
</tbody>
</table>

**WEDNESDAY, March 25, 1987**

**SESSION:**
- Poster Session
  
**8:30 AM-10:00 AM**
- Personal Awards Committee (CLOSED)
- 121-TG QA-Designer (1-1/2 hrs)
- 121-TG QA-Owners (1-1/2 hrs)
- 305 Hot Weather (4-1/2 hrs)
- 311 Inspection (4-1/2 hrs)
- * 318 Full Standard Building Code (4-1/2 hrs)
- 344-1 Wrapped Tank (1-1/2 hrs)
- 344-2 Tendon Tank (1-1/2 hrs)
- 345 Bridge Construction (1-1/2 hrs)
- 347 Formwork (4-1/2 hrs)
- 355 Anchorage (9 hrs)
- 439 Steel Reinforcement (3 hrs)
- 442 Lateral Forces (4-1/2 hrs)
- 524 Plastering (3 hrs)
- 530-J Masonry Structures (9 hrs)
- 544 Fiber Reinforced (9 hrs)

**9:00 AM-12:00 NOON SESSIONS:**
- **Mexico Earthquakes**
- **Evaluation of Concrete Strength Test Results (Part I)**
- **High-Strength Concrete (Part I)**

**10:00 AM-11:30 AM**
- Publications (3 hrs)
- 118-Sub Concrete Comp. Users Group (3 hrs)
- 121-SG QA-Material Supplier (1-1/2 hrs)
- 121-SG QA-Contractors (1-1/2 hrs)
- * 305 Hot Weather
- * 311 Inspection
- * 318 Full Standard Building Code
- 344 Circular Prestressed Tanks (7-1/2 hrs)

* Reconvener Meeting
( ) Total Duration of Meeting
### WEDNESDAY

<table>
<thead>
<tr>
<th>DAY/TIME</th>
<th>FUNCTION</th>
<th>ROOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00 AM-11:30 AM (continued)</td>
<td>* 347 Formwork</td>
<td>208</td>
</tr>
<tr>
<td></td>
<td>* 355 Anchorage</td>
<td>Centro D</td>
</tr>
<tr>
<td></td>
<td>* 439 Steel Reinforcement</td>
<td>Plaza A</td>
</tr>
<tr>
<td></td>
<td>* 442 Lateral Forces</td>
<td>209</td>
</tr>
<tr>
<td></td>
<td>* 524 Plastering</td>
<td>205</td>
</tr>
<tr>
<td></td>
<td>* 530-J Masonry Structures</td>
<td>Plaza B</td>
</tr>
<tr>
<td></td>
<td>* 544 Fiber Reinforced</td>
<td>Centro C</td>
</tr>
<tr>
<td>11:30 AM-1:00 PM</td>
<td>* Publications</td>
<td>203</td>
</tr>
<tr>
<td></td>
<td>* 118-Sub Concrete Comp. Users Group</td>
<td>Centro B</td>
</tr>
<tr>
<td></td>
<td>121-SG Inspection/Testing (1-1/2 hrs)</td>
<td>207</td>
</tr>
<tr>
<td></td>
<td>213-Sub High Strength (1-1/2 hrs)</td>
<td>204</td>
</tr>
<tr>
<td></td>
<td>224 Cracking (1-1/2 hrs)</td>
<td>Plaza A</td>
</tr>
<tr>
<td></td>
<td>* 305 Hot Weather</td>
<td>Plaza D</td>
</tr>
<tr>
<td></td>
<td>* 311 Inspection</td>
<td>Plaza C</td>
</tr>
<tr>
<td></td>
<td>* 318 Full Standard Building Code</td>
<td>Centro A</td>
</tr>
<tr>
<td></td>
<td>325-E RC Compacted Conc. Pav. (1-1/2 hrs)</td>
<td>205</td>
</tr>
<tr>
<td></td>
<td>330 Parking Lots (1-1/2 hrs)</td>
<td>206</td>
</tr>
<tr>
<td></td>
<td>* 344 Circular Prestressed Tanks</td>
<td>210</td>
</tr>
<tr>
<td></td>
<td>* 347 Formwork</td>
<td>208</td>
</tr>
<tr>
<td></td>
<td>* 355 Anchorage</td>
<td>Centro D</td>
</tr>
<tr>
<td></td>
<td>* 442 Lateral Forces</td>
<td>209</td>
</tr>
<tr>
<td></td>
<td>* 530-J Masonry Structures</td>
<td>Plaza B</td>
</tr>
<tr>
<td></td>
<td>* 544 Fiber Reinforced</td>
<td>Centro C</td>
</tr>
<tr>
<td>1:00 PM-2:00 PM</td>
<td>Lunch Break</td>
<td></td>
</tr>
<tr>
<td>2:00 PM-3:30 PM</td>
<td>Fellows Nominating Committee (CLOSED)</td>
<td>206</td>
</tr>
<tr>
<td></td>
<td>CAC Chapter Activities Committee (4-1/2 hrs)</td>
<td>203</td>
</tr>
<tr>
<td></td>
<td>Convention Committee (3 hrs)</td>
<td>204</td>
</tr>
<tr>
<td></td>
<td>CMRC Concrete Mat'l Res. Council (3 hrs)</td>
<td>207</td>
</tr>
<tr>
<td></td>
<td>E902-E Concrete Inspector-Nuclear (4-1/2 hrs)</td>
<td>208</td>
</tr>
<tr>
<td></td>
<td>SC Specifications (3 hrs)</td>
<td>205</td>
</tr>
<tr>
<td></td>
<td>118 Full Computers (3 hrs)</td>
<td>Centro B</td>
</tr>
<tr>
<td></td>
<td>121 Full Quality Assurance (1-1/2 hrs)</td>
<td>209</td>
</tr>
<tr>
<td></td>
<td>303 Full Architectural C I P (1-1/2 hrs)</td>
<td>Plaza D</td>
</tr>
<tr>
<td></td>
<td>* 344 Circular Prestressed Tanks</td>
<td>210</td>
</tr>
<tr>
<td></td>
<td>* 355 Anchorage</td>
<td>Centro D</td>
</tr>
<tr>
<td></td>
<td>364 Full Rehabilitation (1-1/2 hrs)</td>
<td>Plaza A</td>
</tr>
<tr>
<td></td>
<td>531-J Full Concrete Masonry Structure (4-1/2 hrs)</td>
<td>Plaza B</td>
</tr>
<tr>
<td></td>
<td>* 544 Fiber Reinforced</td>
<td>Centro C</td>
</tr>
<tr>
<td></td>
<td>548 Full Polymers (3 hrs)</td>
<td>Centro A</td>
</tr>
<tr>
<td>2:00 PM-5:00 PM</td>
<td>SESSIONS:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>* Chile Earthquakes</td>
<td>Fiesta D</td>
</tr>
<tr>
<td></td>
<td>* Evaluation of Concrete Strength</td>
<td>River Room B</td>
</tr>
<tr>
<td></td>
<td>Test Results (Part II)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>* High-Strength Concrete (Part II)</td>
<td>River Room A</td>
</tr>
<tr>
<td>3:30 PM-5:00 PM</td>
<td>* E902-E Concrete Inspector-Nuclear</td>
<td>208</td>
</tr>
<tr>
<td>DAY/TIME</td>
<td>FUNCTION</td>
<td>ROOM</td>
</tr>
<tr>
<td>----------</td>
<td>----------</td>
<td>------</td>
</tr>
<tr>
<td>3:30 PM-5:00 PM (continued)</td>
<td>CAC: Chapter Activities Committee</td>
<td>203</td>
</tr>
<tr>
<td></td>
<td>Convention Committee</td>
<td>204</td>
</tr>
<tr>
<td></td>
<td>CMRC: Concrete Mat'l Res. Council</td>
<td>207</td>
</tr>
<tr>
<td></td>
<td>SC: Specifications</td>
<td>205</td>
</tr>
<tr>
<td></td>
<td>118 Full: Computers</td>
<td>Centro B</td>
</tr>
<tr>
<td></td>
<td>124: Esthetics (3 hrs)</td>
<td>209</td>
</tr>
<tr>
<td></td>
<td>211 Full: Proportioning (3 hrs)</td>
<td>206</td>
</tr>
<tr>
<td></td>
<td>332: Residential (3 hrs)</td>
<td>Plaza D</td>
</tr>
<tr>
<td></td>
<td>344: Circular Prestressed Tanks</td>
<td>210</td>
</tr>
<tr>
<td></td>
<td>355: Anchorage</td>
<td>Centro D</td>
</tr>
<tr>
<td></td>
<td>423-J: Prestressed (3 hrs)</td>
<td>Plaza A</td>
</tr>
<tr>
<td></td>
<td>531-J: Concrete Masonry Structure</td>
<td>Plaza B</td>
</tr>
<tr>
<td></td>
<td>544: Fiber Reinforced</td>
<td>Centro C</td>
</tr>
<tr>
<td></td>
<td>548 Full: Polymers</td>
<td>Centro A</td>
</tr>
<tr>
<td>5:00 PM-6:30 PM</td>
<td>CAC: Chapter Activities Committee</td>
<td>203</td>
</tr>
<tr>
<td></td>
<td>E902-E: Concrete Inspector-Nuclear</td>
<td>208</td>
</tr>
<tr>
<td></td>
<td>124: Esthetics</td>
<td>209</td>
</tr>
<tr>
<td></td>
<td>211 Full: Proportioning</td>
<td>206</td>
</tr>
<tr>
<td></td>
<td>226: Fly Ash, Pozzolan, Slag (1-1/2 hrs)</td>
<td>204</td>
</tr>
<tr>
<td></td>
<td>231: Early Age (1-1/2 hrs)</td>
<td>205</td>
</tr>
<tr>
<td></td>
<td>332: Residential</td>
<td>Plaza D</td>
</tr>
<tr>
<td></td>
<td>344: Circular Prestressed Tanks</td>
<td>210</td>
</tr>
<tr>
<td></td>
<td>355: Anchorage</td>
<td>Centro D</td>
</tr>
<tr>
<td></td>
<td>360: Design of Slabs on Grade (1-1/2 hrs)</td>
<td>Centro B</td>
</tr>
<tr>
<td></td>
<td>408: Bond &amp; Develop. of Reinf. (1-1/2 hrs)</td>
<td>Plaza C</td>
</tr>
<tr>
<td></td>
<td>423-J: Prestressed</td>
<td>Plaza A</td>
</tr>
<tr>
<td></td>
<td>444: Models of Structures (1-1/2 hrs)</td>
<td>Centro A</td>
</tr>
<tr>
<td></td>
<td>531-J: Concrete Masonry Structure</td>
<td>Plaza B</td>
</tr>
<tr>
<td></td>
<td>544: Fiber Reinforced</td>
<td>Centro C</td>
</tr>
<tr>
<td></td>
<td>555: Removal &amp; Reuse (1-1/2 hrs)</td>
<td>207</td>
</tr>
<tr>
<td>6:30 PM-8:00 PM</td>
<td>Concrete Mixer</td>
<td>River Court</td>
</tr>
</tbody>
</table>

**THURSDAY, March 26, 1987**

<table>
<thead>
<tr>
<th>8:00 AM-10:00 AM</th>
<th>Awards Breakfast</th>
<th>Centro A-D</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 AM-12:00 NOON</td>
<td>Session</td>
<td>200 Corridor</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>8:30 AM-10:00 AM</th>
<th>Nondestructive Testing (3 hrs)</th>
<th>204</th>
</tr>
</thead>
<tbody>
<tr>
<td>301: Structural Specifications (9 hrs)</td>
<td>210</td>
<td></td>
</tr>
<tr>
<td>309: Consolidation (3 hrs)</td>
<td>205</td>
<td></td>
</tr>
<tr>
<td>315: Detailing of Reinforcement (3 hrs)</td>
<td>207</td>
<td></td>
</tr>
<tr>
<td>359-2: Design (7-1/2 hrs)</td>
<td>208</td>
<td></td>
</tr>
<tr>
<td>359-3: Mat'l Const. &amp; Ex. (7-1/2 hrs)</td>
<td>209</td>
<td></td>
</tr>
<tr>
<td>531-J: Concrete Masonry Structure (4-1/2 hrs)</td>
<td>206</td>
<td></td>
</tr>
<tr>
<td>549: Ferrocement (1-1/2 hrs)</td>
<td>203</td>
<td></td>
</tr>
<tr>
<td>10:00 AM-11:30 AM</td>
<td>Nondestructive Testing</td>
<td>204</td>
</tr>
<tr>
<td>DAY/TIME</td>
<td>FUNCTION</td>
<td>ROOM</td>
</tr>
<tr>
<td>---------------</td>
<td>---------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>10:00 AM-11:30 AM (continued)</td>
<td>* 301 Structural Specifications</td>
<td>210</td>
</tr>
<tr>
<td></td>
<td>* 309 Consolidation</td>
<td>205</td>
</tr>
<tr>
<td></td>
<td>* 315 Detailing of Reinforcement</td>
<td>207</td>
</tr>
<tr>
<td></td>
<td>359-2 Design</td>
<td>208</td>
</tr>
<tr>
<td></td>
<td>359-3 Mat'l. Const. &amp; Ex.</td>
<td>209</td>
</tr>
<tr>
<td></td>
<td>* 531-J Concrete Masonry Structure</td>
<td>206</td>
</tr>
<tr>
<td>10:00 AM-12:00 NOON</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• General Session (2 hrs)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mission Room</td>
<td></td>
</tr>
<tr>
<td>11:30 AM-1:00 PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>* 301 Structural Specifications</td>
<td>210</td>
</tr>
<tr>
<td></td>
<td>352 Joints (1-1/2 hrs)</td>
<td>207</td>
</tr>
<tr>
<td></td>
<td>359-2 Design</td>
<td>208</td>
</tr>
<tr>
<td></td>
<td>359-3 Mat'l. Const. &amp; Ex.</td>
<td>209</td>
</tr>
<tr>
<td></td>
<td>* 531-J Concrete Masonry Structure</td>
<td>206</td>
</tr>
<tr>
<td>12:00 NOON-12:30 PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Standards Presentation (1/2 hrs)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mission Room</td>
<td></td>
</tr>
<tr>
<td>12:30 PM-1:00 PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standards Board Committee (1/2 hr)</td>
<td>203</td>
</tr>
<tr>
<td>1:00 PM-2:00 PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lunch Break</td>
<td></td>
</tr>
<tr>
<td>2:00 PM-3:30 PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Board of Direction (4 hrs)</td>
<td>205</td>
</tr>
<tr>
<td></td>
<td>123 Research (1-1/2 hrs)</td>
<td>Centro A</td>
</tr>
<tr>
<td></td>
<td>215 Fatigue (3 hrs)</td>
<td>Centro C</td>
</tr>
<tr>
<td></td>
<td>301 Structural Specifications</td>
<td>210</td>
</tr>
<tr>
<td></td>
<td>304 Meas., Mix Trans/Placing (1-1/2 hrs)</td>
<td>204</td>
</tr>
<tr>
<td></td>
<td>313 Bins &amp; Silos (4-1/2 hrs)</td>
<td>Centro B</td>
</tr>
<tr>
<td></td>
<td>340 Design Aids (3 hrs)</td>
<td>203</td>
</tr>
<tr>
<td></td>
<td>359-2 Design</td>
<td>208</td>
</tr>
<tr>
<td></td>
<td>359-3 Mat'l. Const. &amp; Ex.</td>
<td>209</td>
</tr>
<tr>
<td></td>
<td>442 Lateral Forces (3 hrs)</td>
<td>207</td>
</tr>
<tr>
<td></td>
<td>532 Concrete Masonry (1-1/2 hrs)</td>
<td>206</td>
</tr>
<tr>
<td>2:00 PM-5:00 PM SESSIONS:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Applications of Ferrocement</td>
<td>Mission Room</td>
</tr>
<tr>
<td></td>
<td>Mission Room</td>
<td>Plaza A-B</td>
</tr>
<tr>
<td></td>
<td>• Control of Cracking Through Proper Construction Practice</td>
<td>Plaza C-D</td>
</tr>
<tr>
<td></td>
<td>• Nondestructive Testing (Part I)</td>
<td>River Room B</td>
</tr>
<tr>
<td></td>
<td>• ACI Certification of Concrete Construction Inspectors</td>
<td>River Room A</td>
</tr>
<tr>
<td></td>
<td>• State-of-the-Art Computer Applications (Part I)</td>
<td></td>
</tr>
<tr>
<td>3:30 PM-5:00 PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>* Board of Direction</td>
<td>205</td>
</tr>
<tr>
<td></td>
<td>215 Fatigue</td>
<td>Centro C</td>
</tr>
<tr>
<td></td>
<td>226-1 Fly Ash (1-1/2 hrs)</td>
<td>Centro A</td>
</tr>
<tr>
<td></td>
<td>226-2 Slag (1-1/2 hrs)</td>
<td>204</td>
</tr>
<tr>
<td></td>
<td>301 Structural Specifications</td>
<td>210</td>
</tr>
<tr>
<td>DAY/TIME</td>
<td>FUNCTION</td>
<td>ROOM</td>
</tr>
<tr>
<td>------------------</td>
<td>---------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>3:30 PM-5:00 PM</td>
<td>* 313 Bins &amp; Silos</td>
<td>Centro B</td>
</tr>
<tr>
<td></td>
<td>* 340 Design Aids</td>
<td>203</td>
</tr>
<tr>
<td></td>
<td>* 359-2 Design</td>
<td>208</td>
</tr>
<tr>
<td></td>
<td>* 359-3 Mat'l Const. &amp; Ex.</td>
<td>209</td>
</tr>
<tr>
<td></td>
<td>* 442 Lateral Forces</td>
<td>207</td>
</tr>
<tr>
<td></td>
<td>517 Accelerated Curing (1-1/2 hrs)</td>
<td>206</td>
</tr>
<tr>
<td>5:00 PM-6:30 PM</td>
<td>* 225 Board of Direction</td>
<td>205</td>
</tr>
<tr>
<td></td>
<td>301 Hydraulic Cements (1-1/2 hrs)</td>
<td>Centro C</td>
</tr>
<tr>
<td></td>
<td>* 313 Structural Specifications</td>
<td>210</td>
</tr>
<tr>
<td></td>
<td>523 Insulating &amp; Cellular (1-1/2 hrs)</td>
<td>207</td>
</tr>
<tr>
<td>7:30 PM-10:00 PM</td>
<td>* FORUM: Lightweight Insulating Concrete</td>
<td>Hilton, El Mirador/ La Condesa</td>
</tr>
</tbody>
</table>

**FRIDAY, March 27, 1987**

**8:30 AM-11:00 AM**  
Nominating Committee (CLOSED)  
Hilton, El Mirador West

**8:30 AM-1:00 PM**  
* 359-J Nuclear Vessels (4-1/2 hrs)  
Hilton, Las Espada

**10:00 AM-11:30 AM**  
Nominating Committee (CLOSED)  
Hilton, El Mirador West

**2:00 PM-5:00 PM**  
SESSIONS:  
* Fiber Reinforced Concrete  
VIP Room  
* Nondestructive Testing (Part II)  
River Room A  
* State-of-the-Art Computer Applications (Part II)  
River Room B

**NOTE:** All functions will be held in the Convention Center unless otherwise noted.
BOARD OF DIRECTION

President
WALTER E. KUNZE

Vice Presidents
T. E. NORTHUP
W. BURR BENNETT

DIRECTORS
MICHAEL P. COLLINS
RICHARD D. GAYNOR
PETER GERGELY
I. LEON GLASSGOLD
GEORGE C. HOFF
ROBERT F. MAST
JAIME MORENO
THOMAS J. PASKO, JR.
JOHN M. SCANLON
CHARLES F. SCHOLER
WILLIAM J. WILHELM
LORING A. WYLLIE, JR.

Past Presidents
NORMAN L. SCOTT
IGNACIO MARTÍN
EMERY FARKAS

Executive Vice President
GEORGE F. LEYH*

* American Concrete Institute
  P.O. Box 19150
  Detroit, Michigan 48219
  (313) 532-2600
TECHNICAL ACTIVITIES COMMITTEE

JAMES O. JIRSA, Chairman
SAMUEL J. HENRY, Secretary*
DAVID DARWIN
CHARLES HENAGER
JOHN M. HANSON
C. RAYMOND HAYS
JAMES R. LIBBY
V. MOHAN MALHOTRA
RICHARD C. MEININGER
FREDERICK L. MOREADITH
JOHN M. SCANLON
DEAN E. STEPHAN
RICHARD N. WHITE
LORING A. WYLLIE, JR.

EDUCATIONAL ACTIVITIES COMMITTEE

WILLIAM J. WILHELM, Chairman
HAROLD W. GILLEY, Secretary*
JOHN A. BICKLEY
EUGENE H. BOEKE, JR.
DOUGLAS W. DENO
RUSSELL S. FLING
RONALD H. HALL
DOV KAMINETZKY
KENNETH H. MURRAY
CHARLES G. SALMON
ROGER E. WILSON

CONVENTION COMMITTEE

PETER D. COURTOIS, Chairman
ANN K. BRUTTELL, Secretary*
JOHN A. BICKLEY
KENNETH D. CUMMINS
EDWIN A. DECKER
DOUGLAS W. DENO
RAMON F. GUTIERREZ
GEORGE C. HOFF
FREDERICK L. MOREADITH
CHARLES F. SCHOELER
CLAUDE B. TRUSTY, JR.
JOHN T. VAN DEURZEN
WILLIAM J. WILHELM
LORING A. WYLLIE, JR.

* American Concrete Institute
  P.O. Box 19150
  Detroit, Michigan 48219
  (313) 532-2600
CONVENTION SPONSORS

Ace Supply Co.
Alamo Cement Co.
American Constructors, Inc.
Browning Construction Co.
Capitol Cement
Component Sales and Service
Consulting Engineers Group
Cooper Supply Co.
Crow American Development
Cutler-Galloway Services
The Dabney Group, Inc.
Danysh-Lundy & Assoc.
Dayton Superior Corp.
Martin K. Eby Const. Co., Inc.
Exposaic Wire Co.
Featherlite Building Products
Fiber Products Inc.
Gifford-Hill Chemical
Hamilton Form Co.
Heldenfels Bros., Inc.
Industrial Lubricants Co.
J.V.I.
Lloyd W. Jary, AIA
Lyda, Inc.
Malcolm Pirnie, Inc.
Manco Prestress
Markle Manufacturing Co.
Master Builders, Inc.
McBride-Ratcliff & Assoc.
Project Control of Texas
Redland Worth Corp.
Schoenfeld Materials
Southwestern Laboratories
Stanley Structures
Structural Engineering Assoc., Inc.
Sunbelt Stud Welding, Inc.
Texas Concrete Co.
Texstar Construction Corp.
Toltec Steel Products, Inc.
Tricon Ready Mix
Vulcan Materials
H. B. Zachry Co.

The American Concrete Institute and the ACI San Antonio Chapter greatly appreciate their support.
1987 Fall Convention
November 8-13
Seattle Sheraton
Seattle, Washington

1988 Annual Convention
March 20-25
Marriott's Orlando World Center
Orlando, Florida

1988 Fall Convention
October 30-November 4
Hyatt Regency—Houston
Houston, Texas

1989 Annual Convention
February 19-24
Atlanta, Georgia

Note: The convention preview will be distributed to ACI members three months prior to each convention. Others may receive a copy by contacting Institute Headquarters.

SUSTAINING MEMBERS OF THE AMERICAN CONCRETE INSTITUTE

Master Builders
Cleveland, Ohio

Portland Cement Association
Skokie, Illinois

W. R. Grace & Company
Construction Products Division
Cambridge, Massachusetts

Post-Tensioning Institute
Phoenix, Arizona

The Phoenix Corporation
Honolulu, Hawaii
TECHNICAL SESSIONS

MONDAY, March 23, 1987
2:00 PM-5:00 PM  Room: Fiesta D Convention Center

RESEARCH IN PROGRESS
Sponsored by Committee 123

Session Chairman:  Menashi D. Cohen
                     Professor
                     Northeastern University
                     Civil Engineering Dept.
                     Boston, Massachusetts

Freezing and Thawing Durability of High Volume Fly Ash Concrete
V. M. Malhotra, Head, Construction Materials Section, Mineral Sciences
Laboratories, CANMET/EMR, Ottawa, Ontario, Canada

Development of Laboratory Testing Methods for Roller Compacted
Concrete
Sandor Popovics, Professor, Civil Engineering Dept., Drexel University,
Philadelphia, Pennsylvania; Scott D. Brown, Civil Engineering Dept.,
Drexel University, Philadelphia, Pennsylvania; John A. Nawn, Dept. of
Civil Engineering, Drexel University, Philadelphia, Pennsylvania; Vince
M. Vangrossi, Dept. of Civil Engineering, Drexel University, Philadelphia,
Pennsylvania

Flexural Behavior of Confined Concrete Columns While Subjected to
Large Axial Loads
C.C. Yeh, Graduate Student, Dept. of Civil Engineering, University of
Houston, Houston, Texas; Shamim A. Sheikh, Associate Professor,
Dept. of Civil Engineering, University of Houston, Houston, Texas

Set Time Control Studies of Polymer Concrete
Robert G. Mathey, Materials Research Engineer, National Bureau of
Standards, Gaithersburg, Maryland; James M. Pommersheim, Pro-
fessor, Dept. of Chemical Engineering, Bucknell University, Lewisburg,
Pennsylvania

U.S. - Coordinated Program for Masonry Building Research
J.J. Noland, President, Atkinson-Noland & Assoc., Inc., Boulder,
Colorado

(continued next page)
RESEARCH IN PROGRESS (Continued)

A New and Simple Apparatus to Measure the Air Content of Fresh Concrete
K.W. Nasser, Professor, Dept. of Civil Engineering, University of Saskatchewan, Saskatoon, Saskatchewan, Canada; B.D. Whaley, Graduate Student, Dept. of Civil Engineering, University of Saskatchewan, Saskatoon, Saskatchewan, Canada

Lithium Salts as Set Accelerators for Concrete
Thomas Novinson, Research Chemist, Materials Science Division, Naval Civil Engineering Laboratory, Port Hueneme, California

Experimental Investigation of Earthquake Resistant Squat Walls
Z.F. Wasiewicz, Graduate Student, Dept. of Civil Engineering, University of Ottawa, Ottawa, Ontario, Canada; C.F. Pilette, Graduate Student, Dept. of Civil Engineering, University of Ottawa, Ottawa, Ontario, Canada; M. Saatioglu, Associate Professor, Dept. of Civil Engineering, University of Ottawa, Ottawa, Ontario, Canada

Effects of Strain Rate on Cement Paste and Mortar in Compression
David Darwin, Professor, Civil Engineering Dept., University of Kansas, Lawrence, Kansas; Shen Zhenjia, Visiting Scholar, Civil Engineering Dept., University of Kansas, Lawrence, Kansas; Shraddhakar Harsh, Research Assistant, Civil Engineering Dept., University of Kansas, Lawrence, Kansas

Shear Strength of Plain High-Strength Concrete Deep Beams Subjected to Axial Compressive Stresses
Yook-Kong Yong, Assistant Professor, Dept. of Civil and Environmental Engineering, Rutgers University, Piscataway, New Jersey; Manoj Sethi, Graduate Student, Dept. of Civil and Environmental Engineering, Rutgers University, Piscataway, New Jersey

Durability of Portland Cement/Condensed Silica Fume in Sulfate Solutions
Menashi D. Cohen, Professor, Dept. of Civil Engineering, Northeastern University, Boston, Massachusetts; Arnon Bentur, Associate Professor, Dept. of Civil Engineering, Building Research Station, Technion, Israel Institute of Technology, Technion City, Haifa, Israel
TECHNICAL SESSION

TUESDAY, March 24, 1987
9:00 AM-12:00 NOON
Room: Fiesta B Convention Center

GOOD CONCRETE MIXTURES UNDER DWINDLING SUPPLY OF GOOD QUALITY AGGREGATES
Sponsored by Committee 211

Session Chairman: Donald E. Dixon
President
Chastain Forensics Corporation
Tucker, Georgia

Expanding Concrete Market for Do-It-Yourself Application
George R. U. Burg, Division Engineer, Master Builders, Inc., Cleveland, Ohio

Coal Combustion Waste Concrete
Jerry G. Rose, Associate Professor of Civil Engineering, University of Kentucky, Lexington, Kentucky; Charles E. Jones, Research Chemist, Kentucky Energy Cabinet Laboratory, Lexington, Kentucky; Alan E. Bland, Program Director, Kentucky Energy Cabinet Laboratory, Lexington, Kentucky; Marvin N. Jarrett, Environmental Engineer, Tennessee Valley Authority, Chattanooga, Tennessee

Limerock Crusher - Run and Tailing In Compaction Concrete for Pavement Applications
Antonio Nanni, Assistant Professor, University of Miami, Dept. of Civil and Architectural Engineers, Coral Gables, Florida; Mukhlis A. Shahrou, Graduate Assistant, University of Miami, Coral Gables, Florida

Production of High-Strength Concrete in Costa Rica
Juan A. Pastor, Chief of Laboratory of Materials and Structures Models, University of Costa Rica, San José, Costa Rica

Use, and Quality Control of Concrete in Central America and the Caribbean
Antonio J. Guerra, A.J. Guerra - Consulting Engineers, Santo Domingo, Dominican Republic

Two Types of Concrete for Mexico City
José Nieto, General Director, Instituto Mexicano Del Cemento Y Del Concreto, A.C., Mexico City, Mexico
# Personal Log
## 1987 Annual Convention

**Delegate's Name**

**NOTE:** All functions will be held in the Convention Center unless otherwise noted.

### Sunday, March 22, 1987

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 AM</td>
<td></td>
</tr>
<tr>
<td>1:00 PM</td>
<td></td>
</tr>
<tr>
<td>5:30 PM</td>
<td></td>
</tr>
<tr>
<td>7:00 PM</td>
<td>Opening Reception</td>
</tr>
<tr>
<td></td>
<td>Hilton - Corte Real Room</td>
</tr>
</tbody>
</table>

### Monday, March 23, 1987

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 AM</td>
<td></td>
</tr>
<tr>
<td>8:30 AM</td>
<td></td>
</tr>
<tr>
<td>8:30 AM</td>
<td></td>
</tr>
<tr>
<td>10:00 AM</td>
<td></td>
</tr>
<tr>
<td>11:30 AM</td>
<td></td>
</tr>
<tr>
<td>11:30 AM</td>
<td></td>
</tr>
<tr>
<td>1:00 PM</td>
<td></td>
</tr>
<tr>
<td>1:00 PM</td>
<td></td>
</tr>
<tr>
<td>2:00 PM</td>
<td>Lunch Break</td>
</tr>
<tr>
<td>2:00 PM</td>
<td></td>
</tr>
<tr>
<td>5:00 PM</td>
<td></td>
</tr>
<tr>
<td>5:00 PM</td>
<td></td>
</tr>
<tr>
<td>6:30 PM</td>
<td></td>
</tr>
<tr>
<td>6:30 PM</td>
<td></td>
</tr>
<tr>
<td>8:00 PM</td>
<td></td>
</tr>
<tr>
<td>8:00 PM</td>
<td></td>
</tr>
<tr>
<td>9:30 PM</td>
<td></td>
</tr>
</tbody>
</table>

### Tuesday, March 24, 1987

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 AM</td>
<td></td>
</tr>
<tr>
<td>8:30 AM</td>
<td></td>
</tr>
<tr>
<td>8:30 AM</td>
<td></td>
</tr>
<tr>
<td>10:00 AM</td>
<td></td>
</tr>
<tr>
<td>9:00 AM</td>
<td></td>
</tr>
<tr>
<td>9:30 AM</td>
<td></td>
</tr>
</tbody>
</table>
Tuesday, March 24, 1987 (continued)

9:00 AM
12:00 NOON

Sessions:
- Concrete Construction Forum
  Fiesta A
- Good Concrete Mixtures Under Dwindling Supply of Good Quality Aggregates
  Fiesta B
- Seminar for Educators/Students
  Fiesta C

10:00 AM
11:30 AM

10:00 AM
5:00 PM

Film Session (All Day)
Fiesta D

11:30 AM
1:00 PM

12:00 NOON
5:00 PM

Poster Session (Runs through Thursday)
200 Corridor

2:00 PM
3:30 PM

2:00 PM

Lunch Break

3:30 PM
5:00 PM

2:00 PM

ACL 318

5:00 PM
6:30 PM

ACL 318

Student Concrete Beam Contest
Room 208

6:30 PM
8:00 PM

7:30 PM
10:00 PM

8:00 PM
9:30 PM

Wednesday, March 25, 1987

7:00 AM
8:30 AM
Wednesday, March 25, 1987 (continued)

8:30 AM -
10:00 AM

9:00 AM -
12:00 NOON

Sessions:
- Mexico Earthquakes
  Fiesta D

- Evaluation of Concrete Strength Test Results
  (Part I)
  River Room B

- High-Strength Concrete (Part I)
  River Room A

10:00 AM -
11:30 AM

11:30 AM -
1:00 PM

1:00 PM -
2:00 PM

- Lunch Break

2:00 PM -
3:30 PM

2:00 PM -
5:00 PM

Sessions:
- Chile Earthquakes
  Fiesta D

- Evaluation of Concrete Strength Test Results
  (Part II)
  River Room B

- High-Strength Concrete (Part II)
  River Room A

3:30 PM -
5:00 PM

5:00 PM -
6:30 PM

6:30 PM -
8:00 PM

Concrete Mixer
Convention Center
River Court

8:00 PM -
9:30 PM

Thursday, March 26, 1987

7:00 AM -
8:30 AM

8:00 AM -
10:00 AM

Awards Breakfast
Centro A-D

10:00 AM -
12:00 NOON

General Session
Mission Room
Thursday, March 26, 1987 (continued)

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:00 NOON</td>
<td>Standards Presentation</td>
<td>Mission Room</td>
</tr>
<tr>
<td>12:30 PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1:00 PM</td>
<td>Lunch Break</td>
<td></td>
</tr>
<tr>
<td>2:00 PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:00 PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2:00 PM -</td>
<td>Sessions:</td>
<td></td>
</tr>
<tr>
<td>5:00 PM</td>
<td>Applications of Ferrocement</td>
<td>Mission Room</td>
</tr>
<tr>
<td></td>
<td>Control of Cracking Through Proper</td>
<td>Plaza A-B</td>
</tr>
<tr>
<td></td>
<td>Construction Practice</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nondestructive Testing (Part I)</td>
<td>Plaza C-D</td>
</tr>
<tr>
<td></td>
<td>ACI Certification of Concrete Construction Inspectors</td>
<td>River Room B</td>
</tr>
<tr>
<td></td>
<td>State-of-the-Art Computer Applications</td>
<td>River Room A</td>
</tr>
<tr>
<td></td>
<td>(Part I)</td>
<td></td>
</tr>
<tr>
<td>3:30 PM -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5:00 PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5:00 PM -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6:30 PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6:30 PM -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8:00 PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7:30 PM -</td>
<td>FORUM:</td>
<td></td>
</tr>
<tr>
<td>10:00 PM</td>
<td>Lightweight Insulating Concrete</td>
<td>Hilton - El Mirador</td>
</tr>
<tr>
<td>8:00 PM -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:30 PM</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Friday, March 27, 1987

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 AM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8:30 AM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8:30 AM -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:00 AM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:00 AM -</td>
<td>Sessions:</td>
<td></td>
</tr>
<tr>
<td>12:00 NOON</td>
<td>Fiber Reinforced Concrete</td>
<td>VIP Room</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nondestructive Testing (Part II)</td>
<td>River Room A</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>State-of-the-Art Computer Applications</td>
<td>River Room B</td>
</tr>
<tr>
<td></td>
<td>(Part II)</td>
<td></td>
</tr>
<tr>
<td>10:00 AM -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:30 AM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:30 AM -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1:00 PM</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
EDUCATORS/STUDENTS PROGRAM

TUESDAY, March 24, 1987
9:00 AM-7:00 PM

SEMINAR FOR EDUCATORS/STUDENTS
Sponsored by Committees E702 and E801

Co-Chairmen: R. John Craig
Professor
Civil & Environmental Engineering Dept.
New Jersey Institute of Technology
Newark, New Jersey

Luke M. Snell
Professor
Dept. of Engineering
Southern Illinois University
Edwardsville, Illinois

Moderator: Kenneth H. Murray
Engineer
Gilbert Associates, Inc.
Reading, Pennsylvania

9:00 AM-12:00 NOON Room: Fiesta C Convention Center
Promoting Concrete Activities at the University
Ringo C. Boyd, Professor, University of Cincinnati, Cincinnati, Ohio

Using Lotus 1-2-3 in Teaching Reinforced Concrete Design
Charles G. Salmon, Professor, University of Wisconsin-Madison,
Madison, Wisconsin

Innovative Approaches in Concrete Education
Luke M. Snell, Professor, Dept. of Engineering, Southern Illinois
University, Edwardsville, Illinois

Student Concrete Projects-Schools and ACI
R. John Craig, Professor, Civil and Environmental Engineering Dept.,
New Jersey Institute of Technology, Newark, New Jersey

Careers in Concrete Construction and Structures

Technical Presentation

Student Presentations
12:00 NOON-2:00 PM
Lunch on your own

2:00 PM-5:00 PM Room: see pages 39, 40 & 41
Attend ACI Technical Sessions
(Refer to pages 39, 40 and 41 for details.)

5:00 PM-6:30 PM Room: 208 Convention Center
Student Concrete Beam Contest

SESSIONS
TECHNICAL SESSION

TUESDAY, March 24, 1987
9:00 AM-12:00 NOON Room: Fiesta A Convention Center

CONCRETE CONSTRUCTION FORUM
Sponsored by TAC Ad hoc Committee

Moderator: Joseph F. Camellerie
Construction Manager
Ebasco Constructors Inc.
Huntington, New York

Constructibility: Engineer's and Contractor's Responsibilities
Michael Neese, President, CONTEK/Concrete Technical Specialists,
Reno, Nevada

Types of Plywood Used in Concrete Forming: Differences, Uses, and
Quality of Resulting Concrete
John V. Gould, Associate Director of Product Development, Simpson
Timber Company, Shelton, Washington

A Proven Method of Concrete Quality Assurance
Clifford Gordon, Concrete Consultant, Eastern Infrastructure Group,
CRS Sirrine, Inc., New York, New York; Salvatore J. Vitale, Senior Vice
President, Eastern Infrastructure Group, CRS Sirrine, Inc., Baltimore,
Maryland; Tarun R. Naik, Associate Professor of Civil Engineering,
University of Wisconsin at Milwaukee, Milwaukee, Wisconsin; John
Quadrozzi, President and Chief Executive Officer, Quadrozzi Concrete
Corp., Arverne, New York

Pumping Architectural Concrete Walls From the Bottom Up
James Bullock, Project Manager, Algernon Blair, Inc., Montgomery,
Alabama

Floor Flatness Testing
Robert F. Ytterberg, President, Kalman Floor Company, Evergreen,
Colorado
**FILM SESSION**

**TUESDAY, March 24, 1987**
10:00 AM-5:00 PM  
Room: **Fiesta D Convention Center**

<table>
<thead>
<tr>
<th>TIME</th>
<th>FILM</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Showing</td>
<td>Second Showing</td>
</tr>
<tr>
<td>10:00 AM</td>
<td>2:00 PM</td>
</tr>
<tr>
<td>10:30 AM</td>
<td>2:30 PM</td>
</tr>
<tr>
<td>11:00 AM</td>
<td>3:00 PM</td>
</tr>
<tr>
<td>11:30 AM</td>
<td>3:30 PM</td>
</tr>
</tbody>
</table>

12:00 NOON-2:00 PM  
4:00 PM-5:00 PM

- Lunch Break  
- Open for Special Film Requests

---

**ACI ACCESSORIES**

At the ACI convention registration desk you may place an order or purchase the following accessories:

- **ACI Fellow Pin/Tie Tac**  
  Our ACI emblem and Fellow designation in 10k gold  
  **$11.25**

- **ACI Members Pin/Tie Tac**  
  Our ACI emblem in blue enamel & rhodium  
  **$10.75**

- **Necktie**  
  Dark blue or maroon, embroidered with "American Concrete Institute"  
  **$11.75**

- **Golf Hat**  
  Dark blue with ACI logo  
  **$6.95**

- **ACI Key Tag**  
  Ring mesh, with a pewter finish  
  **$3.95**

- **ACI Desk Pen Set**  
  Walnut base with ACI Symbol laser engraved in concrete - gold-tone ball point pen  
  **$26.25**
POSTER SESSION

TUESDAY, March 24, 1987  12:00 NOON - 5:00 PM
WEDNESDAY, March 25, 1987  8:00 AM - 5:00 PM *
THURSDAY, March 26, 1987  8:00 AM - 12:00 NOON

Room: Registration Area (200 Corridor) Convention Center

POSTER SESSION
Sponsored by TAC Ad hoc Committee

Session Chairman: James R. Libby
                  President
                  James R. Libby and Associates
                  San Diego, California

1. Design of Reinforced Concrete Haunched Beams under Shear
   E.I. Ei-Niema, Associate Professor, Civil Engineering Dept.,
   Khartoum University, Khartoum, Sudan

2. Computer Spreadsheet for Concrete Quality Control
   Kenneth W. Day, Senior Engineer, Concrete Pavements, Aerodrome
   & Road Engineering Branch, Australian Government, Dickson,
   Australia

3. ACI On-Line Index
   Lawrence Kaetzel, Computer Specialist, National Bureau of
   Standards, Gaithersburg, Maryland

4. Construction with Reinforced Fiber Concrete
   R. John Craig, Professor, Civil and Environmental Engineering
   Dept., New Jersey Institute of Technology, Newark, New Jersey

5. Student Concrete Projects through ACI
   Committee E-801; Student Concrete Projects; R. John Craig

6. Microscopy - Important Tool for Concrete Quality Control
   A. Jornet, LPM Inc., Testing Laboratory, Amsee, Switzerland

* Presenters will be with their poster displays during the hours of
  12:00 NOON - 3:00 PM on Wednesday, March 25, to answer any
  questions you may have.
TUESDAY, March 24, 1987
2:00 PM-5:00 PM
Room: Fiesta A Convention Center

ADVANCES IN CONCRETE TECHNOLOGY
Sponsored by Construction Liaison Committee

Session Chairman: Paul Sommers
Chief Engineer
Algernon Blair, Inc.
Montgomery, Alabama

Introduction
Paul Sommers, Chief Engineer, Algernon Blair, Inc., Montgomery, Alabama

Cost Effective Use of Superplasticizers
Tom G. Guennewig, Vice President and General Manager, MAC-USA, Plano, Texas

Fiber Concrete: Applications and Techniques
Dan Biddle, Sales Director, Forta Corp., Grove City, Pennsylvania

High-Early-Strength Concrete
(Speaker to be announced)

Polymer Concrete
David Fowler, Professor, Dept. of Civil Engineering, University of Texas, Austin, Texas

Inflated Forming Alternatives
Mary K. Hurd, Senior Editor, Concrete Construction Magazine, Farmington Hills, Michigan

Changes to ACI 347 Recommended Practice for Concrete Formwork
Randy Bordner, Vice President of Engineering, Dun-Par Engineered Forms Co., Raytown, Missouri
TECHNICAL SESSION

TUESDAY, March 24, 1987
2:00 PM-5:00 PM
Room: Fiesta C Convention Center

NEW TECHNIQUES IN PROPORTIONING
Sponsored by Committee 211

Session Chairman: Ramon L. Carrasquillo
Associate Professor
University of Texas at Austin
Ferguson Structural Eng. Lab.
Austin, Texas

Mix Proportioning - What's on the Horizon?
Donald E. Dixon, President, Chastain Forensics Corp., Tucker, Georgia

Mix Proportioning to Meet Construction Needs
James M. Shilstone, Sr., Shilstone and Associates, Inc., Dallas, Texas

Guidelines for Determination of the Required Average Compressive Strength for Mix Proportioning
James E. Cook, Gifford-Hill & Co., Inc., Dallas, Texas; Ramon L. Carrasquillo, Ferguson Structural Engineering Laboratory, University of Texas at Austin, Austin, Texas

High Quality Concrete from Marginal Sands
Kenneth W. Day, Senior Engineer, Concrete Pavements, Aerodrome & Road Engineering Branch, Australian Government, Australia

Use of Statistics in Mixture Proportioning
James M. Shilstone, Jr., Shilstone and Associates, Inc. Dallas, Texas

Panel Discussion on New Techniques for Mix Proportioning

Moderator: Ramon L. Carrasquillo
Panelists: Donald E. Dixon
James M. Shilstone, Sr.
James E. Cook
Kenneth W. Day
James M. Shilstone, Jr.
OPEN PAPER SESSION

Sponsored by TAC Ad hoc Committee

Session Co-Chairmen: 
Catherine W. French  
Assistant Professor  
University of Minnesota  
Minneapolis, Minnesota  

Ahmad J. Durrani  
Assistant Professor  
Rice University  
Houston, Texas

Concepts in Concrete Design Applicable to Sealing a Nuclear Waste Repository in Basalt 
Robert D. Allen, Staff Engineer, Rockwell Hanford Operations, Richland, Washington; Harold L. Biny, Senior Engineer, Rockwell Hanford Operations, Richland, Washington

Behavior and Design of Slab-Column Frames in Seismic Regions 
Jack P. Moore, Associate Professor, University of California at Berkeley, Berkeley, California

Effects of Fly Ash on Concrete — A 20 Year Summary of PCA Research 

Development Length for Epoxy Coated Reinforcing Bars in Concrete 
Saeed Daniali, Assistant Professor, Dept. of Civil Engineering, Lamar University, Beaumont, Texas

Roller-Compacted Concrete Pathing at Conley Terminal - Boston 
S.D. Tayabji, Manager of Transportation and Development Dept., Construction Technology Laboratories, Inc., Skokie, Illinois; G. Whittle, Project Engineer, Whitman and Howard, Inc., Boston, Massachusetts; U. Inbal, Supervisor of Materials Laboratory, Massachusetts Port Authority, Boston, Massachusetts

Evaluation of Present Codified Design Criteria for Fixed Offshore Concrete Structures 
Dimitris Diamantidis, Senior Research Engineer, A.S. Veritas Research, Hovik, Norway

Analysis and Behavior of Reinforced Concrete Buildings During September 1985 Earthquake in Mexico City 
Roberto Meli, Professor, Universidad Nacional Autonoma De Mexico, Instituto De Ingenieria, Mexico City, Mexico
MEXICO EARTHQUAKES
Sponsored by Instituto Mexicano Del Cemento Y Del Concreto, A.C.

José Nieto
General Director
Instituto Mexicano Del Cemento Y Del Concreto, A.C.
Mexico City, Mexico

Structural Aspects of Damaged Buildings
Roberto Meli, Investigador, National University of Mexico, Mexico City, Mexico

Comments on the New Regulations for Construction in the Federal District
Perez Caballero, Investigador, Instituto Mexicano Del Cemento Y Del Concreto, A.C., Mexico City, Mexico

Strengthening of Reinforced Concrete Structures
Horacio Ramirez, Asesor Tecnico, Instituto Mexicano Del Cemento Y Del Concreto, A.C., Mexico City, Mexico

Repair of Damaged Structures
Victor M. Pavon, General Director, Consultores del Concreto, Ciudad Satelite, Mexico

Concrete in the Reconstruction of Low-Cost Housing
Jaime Lezama, Jefe de la Division de Diseño Y Edificacion, Escuela Nacional de Estudios Profesionales, Naucalpan, Mexico

Quality Index of Earthquake-Resistant Structures
Hector Gallegos, Professor,Pontificia Universidad Catolica del Peru, Domicilio Conocido, Lima, Peru

Venezuelan Specifications for Reinforcing Steel in Structures
Joaquin Marin, Professor, Instituto de Materiales y Modernos Estructurales, Caracas, Venezuela

Rebuilding High-Rise Structures: Two Examples
Ignacio Holtz, General Director, Constructora Serna, Mexico City, Mexico
EVALUATION OF CONCRETE STRENGTH TEST RESULTS (PART I)
Sponsored by Committee 214

Session Chairman: John A. Bickley
Vice President
Concrete Division
The Trow Group, Ltd.
Rexdale, Ontario, Canada

The Complete Quality Control Report
Vladimir Novokshchenov, Senior Research Engineer, Construction Technology Laboratories, Inc., Skokie, Illinois

Quality Assurance Program for Volume, Batched, High-Strength Concrete used in the Alex Fraser Bridge Deck Overlay

In-Place Bond Test of Concrete
Kal R. Hindo, Principal, Neyer, Tiseo & Hindo, Ltd., Farmington Hills, Michigan

Statistical Evaluations of Flexural Strengths using Spreadsheet, Database and Graphics Features of PC Software
Ronald L. Dilly, Assistant Professor, College of Technology, University of Houston, Civil Technology Dept., Houston, Texas; Vahid Beizai, MRA/Materials Engineers, Inc., Houston, Texas; Woodward L. Vogt, President, MRA/Materials Engineers, Inc., Houston, Texas

Statistical Parameters for Flexural Strength Concrete
Wilbur Charles Greer, Jr., Assistant Vice President, Law Engineering Testing Company, Atlanta, Georgia

NOTE:
Part II will be presented on Wednesday, March 25, 1987 at 2:00 PM - 5:00 PM in River Room B in the Convention Center.
TECHNICAL SESSION

WEDNESDAY, March 25, 1987
9:00 AM - 12:00 NOON  Room: River Room A Convention Center

HIGH-STRENGTH CONCRETE (PART I)
Sponsored by Committee 363

Session Chairman: Henry G. Russell
Director - Structural Development Dept.
Construction Technology Labs., Inc.
Skokie, Illinois

Optimization of the Way of Introducing the Admixture in High-Strength Superplasticized Concretes
A.M. Paillère, Head, Mat. Durability Section, Laboratoire Central des Ponts et Chaussées, Paris, France; M. Buil, Research Engineer, Laboratoire Central des Ponts et Chaussées, Paris, France

Reevaluation of the Ultimate Shear Behavior of High-Strength Concrete Prestressed I-Beams
M.K. Kaufman, Graduate Research Assistant, Purdue University, West Lafayette, Indiana; J.A. Ramirez, Assistant Professor, Purdue University, Civil and Structural Engineering Dept., West Lafayette, Indiana

Evaluation of the Use of Current Concrete Practice on the Production of High-Strength Concrete
P.L. Musser; R.L. Carrasquillo, Dept. of Civil Engineering, University of Texas at Austin, Austin, Texas

Flexural Ductility of Ultra-High-Strength Concrete Members

Influence of Temperature Rise on the Compressive Strength of Very High-Strength Concrete
Pierre-Claude Aitcin, Professor, Université de Sherbrooke, Faculty of Applied Sciences, Dept. of Civil Engineering, Sherbrooke, Quebec, Canada; Nahiha Riad, Former graduate student, Université de Sherbrooke, Faculty of Applied Sciences, Dept. of Civil Engineering, Sherbrooke, Quebec, Canada

Effects of Elevated Temperatures on High-Strength Concrete

NOTE:
Part II will be presented on Wednesday, March 25, 1987 at 2:00 PM - 5:00 PM in River Room A in the Convention Center.
TECHNICAL SESSION

WEDNESDAY, March 25, 1987
2:00 PM-5:00 PM
Room: Fiesta D Convention Center

CHILE EARTHQUAKES
Sponsored by TAC

Session Chairman: Mete A. Sozen
Professor, Civil Engineering Dept.
University of Illinois
Urbana, Illinois

What We May Learn from the Chile 1985 Earthquake
Mete A. Sozen, Professor, Civil Engineering Dept., University of Illinois, Urbana, Illinois

Development of the Art of Earthquake-Resistant Design in Chile
Rafael Riddell, Catholic University of Chile, Santiago, Chile

Reinforced Concrete Structures in Vina del Mar: Evaluation of Proportions and Stiffness
Sharon Wood, University of Illinois, Urbana, Illinois

Reinforced Concrete Structures in Vina del Mar: Evaluation of Details
James K. Wight, University of Michigan, Ann Arbor, Michigan

Reinforced Concrete Structures in Vina del Mar: Evaluation of Dynamic Response
Jack P. Moehle, University of California, Berkeley, California

Masonry Structures in Chile
Richard E. Klingner, University of Texas at Austin, Austin, Texas
TECHNICAL SESSION

WEDNESDAY, March 25, 1987
2:00 PM-5:00 PM  Room: River Room B Convention Center

EVALUATION OF CONCRETE STRENGTH TEST RESULTS (PART II)
Sponsored by Committee 214

Session Chairman:  V. Mohan Malhotra
Head, Construction Materials Section
CANMET/EMR
Ottawa, Ontario
Canada

Introduction to ACI 214
V. M. Malhotra, Head, Construction Materials Section, CANMET/EMR,
Ottawa, Ontario, Canada

Variation in Strength
Tarun R. Naik, Associate Professor, University of Wisconsin, Milwaukee, Wisconsin

Analysis of Strength Data: Statistical Approach
Robert E. Phillipp, Consulting Engineer, Annandale, Virginia

Criteria For Strength Requirements
J. Derle Thorpe, Associate Professor, Utah State University, Logan, Utah

Quality Control Charts
Steven F. Gebler, Senior Research Engineer, Construction Technology Laboratories, Inc., Skokie, Illinois

Tests and Specimens Required
Kenneth R. Lauer, Professor, Notre Dame, Indiana

Closing Remarks
V. Ramakrishnan, Professor, South Dakota School of Mines & Technology, Rapid City, South Dakota
WEDNESDAY, March 25, 1987
2:00 PM-5:00 PM
Room: River Room A Convention Center

HIGH-STRENGTH CONCRETE (PART II)
Sponsored by Committee 363

Session Chairman: Paul Zia
Professor and Head Civil Engineering Dept.
North Carolina State University
Raleigh, North Carolina

Economic Feasibility of High-Strength Concretes in Columns
F.N. Rad, Professor of Civil Engineering, Dept. of Civil Engineering,
Portland State University, Portland, Oregon; G.J. Smith, Project
Engineer, S.J. Groves & Sons Company, Contractors and Engineers,
Loomis, California

Mix Proportioning Guidelines for High-Strength Concrete
R.L. Carrasquillo, Associate Professor of Civil Engineering, University
of Texas at Austin, Austin, Texas; J.E. Cook, V.P. Technical Services
Division, Gifford-Hill & Co., Inc., Dallas, Texas

Twelve Years of Deformations in Water Tower Place
H.G. Russell, Construction Technology Laboratories, Inc., Skokie,
Illinois

Proportioning High-Strength Concrete to Control Creep and Shrinkage
T.M. Collins, Civil Engineer, Twin City Testing Corp., St. Paul,
Minnesota

Utilization of Steel Fibers for Improving the Ductility of Very High-
Strength Silica Fume Concretes
A.M. Paillere, Head, Durability Section, Laboratoire Central des Ponts
et Chaussees, Paris, France; M. Bull, Research Engineer, Laboratoire
Central des Ponts et Chaussees, Paris, France; J.J. Serrano, Senior
Technician, Laboratoire Central des Ponts et Chaussees, Paris, France

Seismic Response of High-Strength Concrete Frames
Mohammad R. Ehsani, Assistant Professor, University of Arizona,
Dept. of Civil Engineering, Tucson, Arizona
AWARDS BREAKFAST

THURSDAY, March 26, 1987
8:00 AM-10:00 AM
Room: Centro A-D, Convention Center

AWARDS BREAKFAST
Cost: $12.00

Come meet the awardees. Have fun, enjoy a good breakfast, and watch the multi-media awards presentation. Please purchase tickets before Wednesday.

AWARDS

Honorary Membership
Bertrand Goldberg
Jean M. Muller
Thomas Paulay

Henry C. Turner Medal
J. Leon Glassgold

Arthur R. Anderson Award
John E. Breen

Charles S. Whitney Medal
Stewart C. Watson
Joe W. Kelly Award
William J. Wilhelm

Roger H. Corbelia Concrete Constructor Award
Paul H. Sommers

Henry L. Kennedy Certificate
Joseph A. Dobrowolski

Alfred E. Lindau Award
James R. Clifton
Robert G. Mathey

Construction Practice Award
James M. Skullstone, Sr.

Raymond C. Reese Structural Research Award
Vitalio V. Bertore
Ahmet E. Aktan
Finley A. Charney
Richard Sause

Wason Medal for Materials Research
William C. Stone
Bruce J. Giza

Wason Medal for the Most Meritorious Paper
Arthur H. Nilson

Chapter Activities Award
George C. Hoff

Maurice P. van Buren Award
Joseph S. Grossman

Delmar L. Bloem Awards for Distinguished Service
James L. Cope
David G. Manning

Reinforced Concrete Research Council
Arthur J. Boase Award
John E. Breen
GENERAL SESSION

THURSDAY, March 26, 1987
10:00 AM-12:00 NOON

GENERAL SESSION

Session Chairman: Saul Shenkman
General Chairman
1987 Annual Convention
San Antonio Chapter

Welcome to San Antonio
Saul Shenkman, General Chairman, 1987 Annual Convention, San Antonio Chapter

Presentation of Certificates of Appreciation for the 1987 Annual Convention

Introduction of International Visitors

Recognition of Chapter Officers

Recognition of Retiring Officers

Recognition of Past Presidents Present

Proposed Revision of Article X of the ACI Bylaws

Presidential Address:
Walter E. Kunze, President, Construction Technology Laboratories, Inc., Skokie, Illinois

Tellers Report

Presentation of Memento to Retiring President

Closing Remarks
THURSDAY, March 26, 1987
12:00 NOON-12:30 PM  Room: Mission Room Convention Center

STANDARDS PRESENTATION

Session Chairman:  T.E. Northup
Manager, Engineering Dept.
GA Technologies, Inc.
San Diego, California

Proposed ACI Standard: "Specification for Cold Weather Concreting (ACI 306.1)"
Nicholas J. Carino, Chairman ACI Committee 306, National Bureau of Standards, Gaithersburg, Maryland
THURSDAY, March 26, 1987
2:00 PM-5:00 PM  
Room: Mission Room Convention Center

APPLICATIONS OF FERROCEMENT
Sponsored by Committee 549

Session Chairman: Gordon Batson
Professor
Civil and Environmental Engineering
Clarkson University
Potsdam, New York

Guide to the Design, Construction and Repair of Ferrocement
Antoine E. Naaman, Professor of Civil Engineering, University of Michigan, Ann Arbor, Michigan; R. Zollo, Professor, Civil Engineering Dept., University of Miami, Coral Gables, Florida; M. Iorns, Ferrocement Consultant, West Sacramento, California

Construction and Testing of Ferrocement Hypars Reinforced with Fiberglass
Evan H. Curtis, U.S. National Park Service, Vienna, Virginia

Ferrocement Shelter Making Technique
Mikhail Linestsky, Inventor, Willowdale, Ontario, Canada

Study of the Flexural Behavior and Design of Ferrocement I-Beams and Hollow Box Beams
Ghazi J. Al-Sulaimani, Assistant Professor, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia; S. Farooq Ahmad, Structural Engineer, Mushtaq and Bilal Consulting Engineers, Karachi, Pakistan; Islem A. Basunbul, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia

Design Criteria for Ferrocement: Recommendation and Design Aids
Antoine E. Naaman, Professor of Civil Engineering, University of Michigan, Ann Arbor, Michigan

Analysis of Ferrocement Plates
K.V.G. Praksha, Research Student, Civil Engineering Dept., Cambridge University, Cambridge, England; S.R. Adidam, Professor, Dept. of Civil Engineering, Indian Institute of Technology, Kanpur, India

In-Plane Shear Strength of Ferrocement
Gordon Batson, Professor of Civil and Environmental Engineering, Clarkson University, Potsdam, New York; Michael Zicko, Engineer, Fort Miller Co., Inc., Fort Miller, New York
CONTROL OF CRACKING THROUGH PROPER CONSTRUCTION PRACTICE

Sponsored by Committee 224

Session Chairman: Grant T. Halvorsen
Associate Professor
West Virginia University
Morgantown, West Virginia

Curing Control by Microcomputer
Steinar Helland, Vice President, Selmer-Furuholmen A/S, Oslo, Norway

Cracks in Parking Structures
Vladimir Novokshchenov, Senior Research Engineer, Construction Technology Laboratories, Inc., Skokie, Illinois

Analysis of Factors Related to Shrinkage Cracking in Reinforced Concrete Structures
Masatoshi Nakanishi, Institute of Technology, Shimizu Construction Company, Ltd., Koto-Ku, Tokyo, Japan

Crack Resistance of Polymeric Fiber Reinforced Concrete
Gary L. Vondran, Director of Research and Development, Fibermesh, Inc., San Jose, California

Control of Flexural Cracking with Epoxy-Coated Reinforcement
Grant T. Halvorsen; K. Emman Nwobi; Pericles C. Stivaros; Dept. of Civil Engineering, West Virginia University, Morgantown, West Virginia
NONDESTRUCTIVE TESTING (PART I)

Sponsored by Committee 228

Session Chairman: Philip T. Seabrook
Vice President
B.H. Levelton and Associates
Vancouver, British Columbia, Canada

Nondestructive Testing of In Situ Concrete for Properties Other Than Strength
Kenneth R. Lauer, Professor, Dept. of Civil Engineering, University of Notre Dame, South Bend, Indiana

Laboratory and Field Studies of the Impact-Echo Method for Flaw Detection in Concrete
Mary Sansalone, Research Engineer, National Bureau of Standards, Gaithersburg, Maryland; Nicholas J. Carino, Research Engineer, National Bureau of Standards, Gaithersburg, Maryland

Ultrasonic Pitch-Catch and Pulse-Echo Measurements in Concrete
A. Michel Alexander, Research Physicist, USAE Waterways Experiment Station, Vicksburg, Mississippi; Henry T. Thornton, Supervisor, Research Physicist, USAE Waterways Experiment Station, Vicksburg, Mississippi

Evaluation of Concrete Using Radiation Attenuation
Michael A. Taylor, Dept. of Civil Engineering, University of California, Davis, California

Diagnostics of Cracks in Concrete Based on Acoustic Emission
Masayasu Ohtsu, Associate Professor, Dept. of Civil Engineering, Kumamoto University, Kumamoto, Japan

Application of Acoustic Emission and Laser Holography to Study Microfracture in Concrete
S.P. Shah, Professor, Dept. of Civil Engineering, Northwestern University, Evanston, Illinois; A.K. Maji, Graduate Assistant, Dept. of Civil Engineering, Northwestern University, Evanston, Illinois

NOTE:
Part II will be presented on Friday, March 27, 1987 at 9:00 AM-12:00 NOON in River Room A in the Convention Center.
ACI CERTIFICATION OF CONCRETE CONSTRUCTION INSPECTORS

Sponsored by Committees E902 and 311

Session Chairman: Russell T. Flynn
Technical Service Manager
General Portland, Inc.
Tampa, Florida

A New Guide for Concrete Inspection Programs
Roger Wilson, Manager, Education and Training, Portland Cement Association, Skokie, Illinois

Batch Plant Inspection and Field Testing of Ready-Mixed Concrete
Claude E. Jaycox, President, Municipal Testing Laboratories, Inc., Hicksville, New York

The ACI Certification Program
Ronald H. Hall, Partner, Concrete Solutions, Inc., Salt Lake City, Utah

Certification of Concrete Construction Inspectors - Grade II
Russell T. Flynn, Technical Service Manager, General Portland Inc., Tampa, Florida

Training Materials - Panel Discussion
THURSDAY, March 26, 1987
2:00 PM-5:00 PM  Room: River Room A Convention Center

STATE-OF-THE-ART COMPUTER APPLICATIONS (PART I)
Sponsored by Committee 118

Session Chairman:  Victor E. Saouma
Assistant Professor of Civil Engineering
University of Colorado
Boulder, Colorado

Computer-Aided Design Tools in the Corps of Engineers for Concrete Structures
N. Radhakrishnan, Supervisor, Research Civil Engineer, USACE Waterways Experiment Station, Vicksburg, Mississippi

Computer Analyses of Time-Dependent Behavior of Continuous Precast, Prestressed Bridges

Prediction of Shear Failure Modes in Concrete Structures Using Nonlinear Finite Element Analysis

Substructure Modeling of Two-Way Slab Systems
Fernando E. Fagundo, Associate Professor, University of Florida, Gainesville, Florida; Marc Hoit, Assistant Professor, University of Florida, Gainesville, Florida; Trey Hamilton, Structural Engineer, Bodo & Associates, Inc., Gainesville, Florida

A Graphics Preprocessor for IDECS
C. Penquena; F. Fagundo; Dept. of Civil Engineering, University of Puerto Rico, Mayaguez, Puerto Rico

NOTE:
Part II will be presented on Friday, March 27, 1987 at 9:00 AM-12:00 NOON in River Room B in the Convention Center.
FORUM: LIGHTWEIGHT INSULATING CONCRETE
Sponsored by Committee 123

Session Chairman: Robert Henry
Consultant
Wiss, Janney, Elstner Assoc.
Arlington, Texas

Moderator: Leo Legatski
President
Elastizell Corp. of America
Ann Arbor, Michigan

Cellular Concrete and Living Comfort
George Ford, Consultant, Florida Celcore, Inc., Fort Lauderdale, Florida

Precast Panel Applications
Lester Gorsline, Owner, Neopor Inc., Half Moon Bay, California

Housing Applications in Malaysia
Ron Vogt, Owner, R.W. Vogt & Associates, Melbourne, Australia

A Cast-In-Place Wall System
Leo Legatski, President, Elastizell Corp. of America, Ann Arbor, Michigan
FRIDAY, March 27, 1987
9:00 AM-12:00 NOON
Room: VIP Room Convention Center

FIBER REINFORCED CONCRETE
Sponsored by Committee 544

Session Co-Chairmen: Gordon Batson
Professor
Civil Engineering Dept.
Clarkson University
Potsdam, New York

Surendra P. Shah
Professor
Civil Engineering Dept.
Northwestern University
Evanston, Illinois

A Fundamental Study of the Mechanism of Hybrid-Type Fiber Reinforced Concrete
Masatoshi Nakanishi, Chief Research Engineer, Institute of Technology, Shimizu Construction Company, Koto-Ku, Tokyo, Japan

An Experimental Study of Synthetic Fiber Reinforced Cementitious Composites
Y. Wang, Graduate Student, Mechanical Engineering, Massachusetts Institute of Technology, Cambridge, Massachusetts; Victor C. Li, Professor of Civil Engineering, Massachusetts Institute of Technology, Cambridge, Massachusetts; Stanley Backer, Professor, Mechanical Engineering Department, Massachusetts Institute of Technology, Cambridge, Massachusetts

Properties of Lightweight Fiber Reinforced Concrete
P. Balaguru, Associate Professor of Civil Engineering, Rutgers University, Piscataway, New Jersey; V. Ramakrishnan, Professor of Civil Engineering, South Dakota School of Mines and Technology, Rapid City, South Dakota

Flexural Fatigue Strength of Steel Fiber Reinforced Concrete
V. Ramakrishnan, Professor of Civil Engineering, South Dakota School of Mines and Technology, Rapid City, South Dakota; Gary B. Oberling, Structural Engineer, DMJM Phillips-Reister Haley, Inc., Denver, Colorado
NONDESTRUCTIVE TESTING (PART II)

In-Place Methods for Determination of Strength of Concrete
John A. Bickley, Vice President, Concrete Division, The Trow Group Ltd., Brampton, Ontario, Canada

In-Place Evaluation of Shotcrete
Ramond Schulz; Materials Consultant, Waupun, Wisconsin

Comparative Evaluation of Nondestructive Test Methods for In-Place Strength Determination
Choul Ho Yun, Head of Structural Systems, Dept. of Nuclear Safety Center, Korea Advanced Energy Research Institute, Daedukdanji, Chung-Nam, Korea; Kang Ryong Choi, Researcher of Structural Systems, Dept. of Nuclear Safety Center, Korea Advanced Energy Research Institute, Daedukdanji, Chung-Nam, Korea; Young Chul Song, Senior Researcher, Dept. of Civil/Architectural Engineering, Korea Electric Power Corp. Research Center, Dea Jeon City, Korea; Sang Yun Kim, Researcher of Structural Systems, Dept. of the Nuclear Safety Center, Korea Advanced Energy Research Institute, Daedukdanji, Chung-Nam, Korea

The Use of Simultaneous Nondestructive Tests to Predict the Compressive Strength of Concrete
George Teodoru, Professor, Institute of Tropica Technology, Cologne, Koln, West Germany

Nondestructive Use in Evaluating the Form Removal Time for a Large Diameter Tunnel Concrete Lining
Roy Harrell, Senior Engineer, Southern Electric International, Inc., Birmingham, Alabama

A Statistical Study of the Correlation between Field Penetration Strength and Field Cylinder Strength
P. Zoltanetzky, Jr., Chief of Plant Operations, Dept. of Environmental Protection, New York, New York; H.P. Lim, Senior Vice President, Chief Executive Officer, Michael Baker Jr. of New York, North White Plains, New York; Clifford Gordon, Consultant, CRS Srrine Inc., New York, New York
FRIDAY, March 27, 1987
9:00 AM-12:00 NOON         Room: River Room B Convention Center

STATE-OF-THE-ART COMPUTER APPLICATIONS (PART II)
Sponsored by Committee 118

Session Chairman: Victor E. Saouma
Assistant Professor of Civil Engineering
University of Colorado
Boulder, Colorado

Computer Aided Design of Reinforced Concrete
Michael Jones, Graduate Research Assistant, University of Colorado,
Boulder, Colorado; Michael Sikirotin, Graduate Research Assistant,
University of Colorado, Boulder, Colorado

Elastic Foundation and Circular Tank Design
R. Sheth, Project Engineer, Kupper Associates, Piscataway, New Jersey

An Automatic Quantitative Image Analysis System for Cement and Concrete Research
Dexiang Shi, Civil Engineering Dept., Purdue University, West Lafayette, Indiana

A Three-Dimensional Stability Analysis/Design Computer Program for Concrete Monolithic Structures
Fred T. Tracy, Chief, Computer Science Group, Information Technology Laboratory, Vicksburg, Mississippi

The Maintenance and Implementation of an Expert System for Durable Concrete
Lawrence J. Kaetzel, Computer Specialist, National Bureau of Standards, Center for Building Technology, Gaithersburg, Maryland;
James R. Clifton, Group Leader, Inorganic Materials, National Bureau of Standards, Center for Building Technology, Gaithersburg, Maryland

A Short History of the NSPE/PEC Bulletin Board
John Pepper, Vice President, Gopman-Pepper Associates, Inc., North Miami Beach, Florida
SPouse PROGRAM

Spouse Hospitality Room — La Vista - Hilton Hotel

Welcome to the ACI 1987 Annual Convention. The ACI San Antonio Local Chapter is looking forward to meeting you in the Spouse Hospitality Room: La Vista. Join us for coffee and pastries sponsored by the San Antonio ACI Chapter.

SUNDAY, March 22, 1987
1:00 PM - 5:00 PM Spouse Registration — 200 Lounge Convention Center
5:30 PM - 7:00 PM Opening Reception — Hilton - Corte Real
Sponsored by the ACI San Antonio Chapter

MONDAY, March 23, 1987
8:30 AM - 3:00 PM Hospitality Room — Hilton - La Vista
A hostess is available to register new guests and to answer your questions. Coffee and pastries served from 8:30 AM to 10:00 AM.

10:00 AM - 11:00 AM Orientation Program — Hilton - La Vista

3:00 PM - 5:00 PM Spouse Wine & Cheese Open House — Hilton
Hosted by Mrs. Frances Kunze in her hotel suite. Please check with the hostess for exact location. We are unable to publish suite numbers in advance.

TUESDAY, March 24, 1987
8:30 AM - 3:00 PM Hospitality Room — Hilton - La Vista
Coffee & pastries served 8:30 AM to 10:00 AM

8:00 AM - 6:00 PM * "South of the Border"
Meet: Hilton - La Vista
Join us for a light breakfast on the bus as we head for an enchanting getaway to Old Mexico. Enjoy a scenic drive to the fun shops and quaint plazas of Nuevo Laredo, Mexico. A local guide will help you find the best buys and recommend luncheon locations (Lunch on your own). On your way home you will enjoy refreshing margaritas! (U.S. citizens need proper proof of I.D. Non-U.S. citizens need a multiple entry permit & passport.) $28.00 per person

10:00 AM - 1:00 PM * "Mission and Heritage Tour"
Meet: Hilton - La Vista
Enjoy the history of San Antonio. Visit Mission San Jose, the Alamo, and the city of La Villita. You will also stop at the Mexican shopping market, El Mercado, before returning to the hotel. $12.00 per person
WEDNESDAY, March 25, 1987
8:30 AM-3:00 PM  Hospitality Room — Hilton - La Vista
Coffee & pastries served 8:30 AM to 10:00 AM

9:00 AM-12:30 PM * “Historical San Antonio Tour”
Meet: Hilton - La Vista
A morning of discovery! Visit the Fort Sam
Houston Quadrangle (birthplace of military aviation), King William residential district
(elegant 19th century homes), Lone Star Brewery (see the Buckhorn Hall of Horns),
the Yturri Edmonds home (simple life of centuries past), and the Institute of Texan
Culture. $15.00 per person

6:30 PM-8:00 PM  Concrete Mixer —
River Court Convention Center

THURSDAY, March 26, 1987
8:30 AM-3:00 PM  Hospitality Room — Hilton - La Vista
Coffee & pastries served 8:30 AM to 10:00 AM

8:00 AM-10:00 AM  Awards Breakfast —
Centro A Convention Center

10:00 AM-12:00 NOON  General Session —
Mission Room Convention Center
All are invited to attend this business meeting
of the Institute

1:00 PM-2:30 PM * “Lunch on the River Barge”
Meet: Hilton - La Vista
The serene little San Antonio River that
meanders through the heart of downtown is
the setting for a delightful lunch with friends.
$18.00 per person

FRIDAY, March 27, 1987
8:30 AM-10:00 AM Hospitality Room — Hilton La Vista
Coffee & pastries served 8:30 AM to 10:00 AM

* NOTE: Please congregate for all tours in the spouse hospitality room at the Hilton Hotel.
FLOOR PLAN
HILTON HOTEL
(Palacio del Rio Hilton Hotel)

MEZZANINE LEVEL
(4th Floor)

CONFERENCE CENTER (22nd Floor)

FLOOR PLAN
MARRIOTT HOTEL

BALLROOM LEVEL

Note: Austin Room is located on the Pool level.