THEME: Innovative Concrete

NOVEMBER 5-10, 1995
Bonaventure Hilton & Radisson
Gouverneurs Montréal, Québec

Post Convention Meeting
Québec City, Québec
November 10-12, 1995
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The American Concrete Institute and the ACI Eastern Ontario and Québec Chapter deeply appreciate their support.

Note: These were the sponsors as of September 29, 1995. Please check the sign at the Registration Area for additional sponsors.
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On behalf of all Montrealers, I would like to extend the warmest of welcomes to delegates and representatives of the American Concrete Institute. As you can see, Montréal is a modern city where concrete is widely used in buildings and infrastructures.

Montréal is proud of its prestigious buildings, such as the head office of IBM-Marathon, and other fine architectural achievements which rank among the most astounding works of art of our era. Included in that category is the Olympic Park, which houses the Olympic Stadium and the Biodôme, top-rated among the city’s tourist attractions.

Montréal is hospitable city with charm and character. I do hope that you will find the time to discover its people, as well as the many attractions it has to offer, and that you will appreciate the city’s unique architecture which combines old charm and the latest technologies and materials.

I thank you for having chosen Montréal as the site of your convention and I wish all delegates an enjoyable and most memorable stay.

Pierre Bourque
Mayor
I am pleased to offer my warmest greetings to everyone participating in the annual congress of the American Concrete Institute, being held in Montréal.

The goals of this gathering are both timely and far-reaching; the discussions and many activities which are planned will benefit greatly from your input and expertise. I am certain every effort has been made to ensure the success of your meeting. Not only Montréal but, indeed, all of Canada is delighted to welcome you.

Please accept my best wishes for a most enjoyable and informative week of deliberations.

Jean Chrétien

OTTAWA
1995
Mmes, Messieurs les congressistes,

Au nom des Québécoises et des Québécois, je vous souhaite la bienvenue à Montréal.

Au cours de votre séjour, je vous invite à visiter Montréal et ses alentours. Vous y trouverez des attractions pour tous les goûts : spectacles, pièces de théâtre, musées, expositions... Je vous invite également à profiter des inombrables restaurants qui vous proposent des cuisines du monde entier.

Lors de votre séjour, vous serez plongés dans une ambiance francophone qui se caractérise par la joie de vivre. Vous découvrirez une culture différente, solide et résistante... comme le béton.

Jacques Parizeau

Dear Delegates,

On behalf of all Québécois, I take pleasure in welcoming you to Montréal.

During your stay, I cordially invite you to visit Montréal and the surrounding area. You will discover a wide range of shows, plays, museums and exhibitions to satisfy every taste. I also encourage you to sample the city's numerous restaurants, which propose culinary delights from around the world.

Québécois are noted for their "joie de vivre". Their culture is unique and durable.

Yours truly,

Jacques Parizeau
Members and friends of the American Concrete Institute:

Welcome to Montréal, one of North America's most stimulating, interesting cities, and to another memorable ACI convention. Convention week provides us with another opportunity to acquire the knowledge necessary to keep abreast of current technology relating to concrete. But it is also a time to relax, enjoy the sights and surroundings, and to meet friends, old and new.

The theme for this meeting, ACI's first in Montréal in nearly 40 years, is "Innovative Concrete," a topic of immense interest to all of us who recognize the paramount need for concrete to maintain its competitive status with other building materials.

As always, this will be a busy week – committee meetings, technical sessions, symposia and forums, the General Session, the Concrete Mixer and other social gatherings, sightseeing tours – such events make for a crowded agenda and a hectic five or six days for us all. But that's the way it should be -- a great learning experience and another memorable ACI convention.

We hope you will enjoy this gathering in Montréal and can make the post-convention weekend trip with us to neighboring Québec City. The host committee and ACI's officers and staff will be available for assistance if such is needed during these convention events.

Marilyn and I look forward to greeting each of you personally and you have only to ask if we can be of help.

Enjoy!

Robert F. Mast
President
American Concrete Institute
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November 5-10, 1995
Montréal, Québec

Theme: INNOVATIVE CONCRETE

Post Convention Meeting
November 11-12, 1995
Québec City, Québec

Theme: HISTORICAL QUEBEC CITY AND MATERIAL TECHNOLOGY

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GENERAL INFORMATION

CONVENTION REGISTRATION INFORMATION
The ACI staff is eager to answer any questions you may have pertaining to the convention. Our Registration Desk in the Radisson Gouverneurs is open to serve you during the following hours:

Saturday ................ 1:00 PM - 5:00 PM
Sunday .................. 10:00 AM - 5:00 PM
Monday ................... 7:30 AM - 5:00 PM
Tuesday ................... 8:00 AM - 5:00 PM
Wednesday ................. 8:00 AM - 5:00 PM
Thursday .................. 8:00 AM - 5:00 PM

SEMINAR REGISTRATION
Outremont Room - Hilton
Saturday, November 4 ........ 8:00 AM - 9:30 AM

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

Member: White       Student: Blue
Nonmember: Peach    Guest: Beige
Fellow: White

Note: Badges will be required to attend all social events.

Flash photography can be disturbing to other attendees. Please refrain from this activity during sessions.

The Speaker Ready Room is located in the Radisson Gouverneurs - Bonsecours Room.

Moving Heavy Boxes: Should you require assistance in moving papers or other materials between hotels, the bell staff can assist you. You may, however, encounter some difficulty in moving heavy boxes between the Hilton and the Radisson because bell staff are not obligated to perform this function and are not covered by hotel insurance once they are outside hotel property.

Suggested Attire: For meetings, business attire. For the Concrete Mixer, business attire and for other evening social events, business or evening attire.

ATTENTION STUDENTS! LEGAL DRINKING AGE IS 18.
If you attend social events and you have not reached legal drinking age, please do not request any alcoholic beverages.
WHERE’S THAT MEETING ROOM?

Hilton

Cartier - Lower Lobby
Côte St. Luc - Lower Lobby
Frontenac - Lower Lobby
Fundy - Lower Lobby
Hampstead - Lower Lobby
Lachine - Lower Lobby
Lasalle - Lower Lobby
Longueuil - Lower Lobby
Mont Royal - Lower Lobby
Outremont - Lower Lobby
Portage - Lobby Level
Promenade - Lower Lobby
St. Lambert - Lower Lobby
St. Laurent - Lower Lobby
St. Leonard - Lower Lobby
St. Michel - Lower Lobby
St. Pierre - Lower Lobby
Trembles - Lower Lobby
Verdun - Lower Lobby
Westmount - Lower Lobby

Radisson

Auditorium - Mezzanine
Bonsecours - Level C
Cartier A - Level C
Cartier B - Level C
Les Courants - Mezzanine
Regency A - Level C
Regency B - Level C
Regency C - Level C
Royer - Level C
Salon 518-4 - 5th Floor
Salon 520-5 - 5th Floor
Salon 522-6 - 5th Floor
Salon 528-3 - 5th Floor
Salon 530-2 - 5th Floor
Salon 532-1 - 5th Floor
St. Charles - Mezzanine
St. Laurent - Mezzanine
Versailles - Level C1
Victoria - Level C1
Verriere A - Mezzanine
Verriere B - Mezzanine
Vitre - Level C
SPECIAL EVENTS

SUNDAY, NOVEMBER 5
BREAKING THE ICE DINNER
HILTON Westmount
7:00 PM
Join our host chapter, colleagues and old and new friends for dinner at the Bonaventure Hilton. ($32.00 US/person)

MONDAY THROUGH WEDNESDAY
COFFEE BAR
8:00 AM - 10:00 AM
Join your colleagues for a little socializing before your morning meetings begin. Coffee will be available in the foyers of both the Hilton and the Radisson.

MONDAY, NOVEMBER 6
STUDENT'S DAY LUNCHEON
HILTON Outremont
NOON - 2:00 PM
Encourage student participation in ACI! Join students and ACI convention attendees for lunch. Pierre-Claude Aitcin will be discussing "New Applications of High-Performance Concrete". See page 66 for more details. Please purchase tickets by NOON on Sunday, November 5. ($15.00 US/person)

MONDAY, NOVEMBER 6
WOMEN OF ACI
RADISSON
5:00 PM - 6:30 PM
This less-than-formal social event is a means for ACI women to network and get to know each other better, in an environment that is less structured than committee meetings and less populous than mixers. We will meet for soft drinks or wine, nibbles and camaraderie. It is free to anyone who wishes to attend. Bring your business cards. Check at the Registration Desk for the room number.

INCOMING CHAIRMAN TRAINING
By Invitation Only

Monday, November 6
Outremont
7:00 AM - 8:30 AM

TUESDAY, NOVEMBER 7
CONTRACTORS' DAY
HILTON Westmount
NOON - 2:00 PM
Join us for lunch. A speaker from the Canadian Highways International Corporation will be discussing "Toll Highway 407 Project". See pages 94, 95 and 102 for details. Please purchase your tickets by 10:00 AM on Monday, November 6. ($20.00 US/person)
SPECIAL EVENTS

WEDNESDAY, NOVEMBER 8
HILTON
CONCRETE MIXER
MONTREAL BALLROOM
6:30 PM - 8:00 PM
The ACI Eastern Ontario and Québec Chapter invites you to join your friends and colleagues in sampling the "Cuisine Regionale". Your ticket is complimentary with a full week’s registration fee.

ATTENTION CHAIRMEN AND SPEAKERS
FOR THE ACI FALL CONVENTION

Please join us for an informative training session on Tuesday, November 7 in Westmount from 7:00 AM - 8:30 AM. See page 85 for more details.

WEDNESDAY, NOVEMBER 8
HILTON
GENERAL SESSION
MONT ROYAL
10:00 AM - 1:00 PM
Come to the General Session and hear the keynote address "Creativity and Innovation" presented by Gaétan Morency of the Cirque du Soleil. Mete A. Sozen, Kettelhut Distinguished Professor of Structural Engineering at Purdue University, is our Phil M. Ferguson Lecture speaker. See page 108 for details.

GUEST PROGRAM

An excellent program has been planned by the ACI Eastern Ontario and Québec Chapter. Please purchase tour tickets in advance at the ACI Guest Registration Desk. See pages 19-26

NOTE: BADGES WILL BE REQUIRED FOR ALL SOCIAL EVENTS.
GUEST PROGRAM

REGISTRATION HOURS: SEE PAGE 14.

GUEST HOSPITALITY

Monday
8:00 AM - 11:00 AM
Radisson
Regency C

Tuesday & Wednesday
8:00 AM - 11:00 AM
Radisson
Tour de Ville

Thursday
8:00 AM - 11:00 AM
Radisson
La Terrasse

SUNDAY, NOVEMBER 5

FIELD TRIP: HISTORICAL CONCRETE STRUCTURES IN MONTRÉAL
10:00 AM - 3:00 PM

Join your colleagues for an educational and enjoyable trip to view the historical concrete structures. Highlights include the Canada Cement Co. building, the Habitat 67 (World’s Fair experimental housing), the Barwick Building (1905), Olympic Stadium, the Champlain Bridge, the Victoria Square building, the Unity Building using the Turner system (1912) and lunch at Les Primeurs in the restored, historic Rasco Hotel. $27 US per person

MENU

Choices include:
Creme of Vegetables or Tossed Salad
Turkey Roast with Mushroom Sauce,
Linguini Carbonara, or Toulouse Sausage
with Mustard Sauce
Compote de Pommes or Caramel Puffs

Tour buses for the guest tours will depart from the Radisson Gouverneurs Hotel on Rue St. Jacques at University Street.
GUEST PROGRAM

SUNDAY, NOVEMBER 5

BREAKING THE ICE...  
Hilton Outremont
7:00 PM - Cash Bar
7:30 PM - Dinner

Break the ice at the Bonaventure Hilton. Enjoy seeing old friends and colleagues and meeting new people. Along with good company, enjoy a nice dinner.
$32 US per person

MENU

Terrine of Game with Cranberry Sauce
Cream of Leek with Pink Shrimp
Filet of Salmon with White Wine Sauce
Rice Pilaf, Fresh Asparagus
Black Forest Cake
Coffee or Tea

MONDAY, NOVEMBER 6

OVERVIEW OF EVENTS  
Radisson Regency C
10:00 AM

Attend a presentation that will give you an overview of the week’s activities in Montréal and the post-convention trip in Québec City.

GRAND MONTRÉAL CITY TOUR  
11:30 AM - 2:45 PM

Tucked between the St. Lawrence River and Mount-Royal, Montréal is the second largest French-speaking city in the world. Montréal will truly enchant you with its combination of old world charm and modern urban architecture and its unique blend of French and English cultures. Your tour will include a visit to the historic Notre-Dame Basilica; a drive through the financial district, the residential areas nestled on the flanks of Mount-Royal, the University of Montréal and McGill University, and so much more. Lunch will be on your own in Outremont, an area which includes trendy boutiques and lovely cafes. $16 US per person
MONDAY, NOVEMBER 6

AFTERNOON TEA
3:00 PM - 5:00 PM

Take this opportunity to meet the wife of our new President, Marilyn Lamont, and enjoy a taste of local pastries and other refreshments.

TUESDAY, NOVEMBER 7

GOURMET TOUR IN ROUGEMONT/LES POMMES
9:30 AM - 12:45 PM

Enjoy the ride through the old country of rural Québec. Your tour guide will describe the colorful history. Upon your arrival, visit the "Vergers d'Émilie" apple orchards and view the demonstrations of the production of jams, juices, syrups and sauces. Sample fresh cider from the Michel Jodoin Cider Factory, which is made by the same method as used for champagne production. **$36 US per person**

**MENU**

Rougemont Soup, Apple Crepes
Omelette, Rougemont Ham
Chicken Breast with Strawberry Sauce
Veal Roast with Apples
Variety of Homemade Apple and Maple
Desserts, Coffee, Tea or Milk

OLYMPIC PARK AND BIODOME
1:00 PM - 5:00 PM

A motorcoach ride east on Sherbrooke Street takes you through one of Montréal’s oldest and longest streets. Your tour guide will escort you to the Olympic Park which was the site of the 21st Olympic Games. Following the Olympic Park, enjoy a tour of the Biodome! Combining a zoological and botanical garden with an aquarium, this is the world’s only international environmental museum. Four ecosystems of the American Continent are represented. **$29 US per person**
WEDNESDAY, NOVEMBER 8

MONTRÉAL MUSEUM DAY
10:30 AM - 3:30 PM

Enjoy docent tours of Pointe-A-Callière (Museum of Archeology & History) and Musée D'Art Contemporain de Montréal in the heart of Old Montréal’s historic sector. Then, enjoy lunch at L'Auberge Le Vieux St. Gabriel. It has been verified that the "Old St-Gabe" is North America’s oldest inn. A walk through the restaurant is, in effect, a walk through a Montréal of long ago. Lunch will be followed by a visit to the contemporary museum, which contains over 3400 works, including Canadian and foreign artists, 8 exhibit galleries, and events and activities for all to enjoy. $39 US per person

MENU
Green Garden Salad with French Vinaigrette
Beef Bourguignon
White & Wild Rice, Broccoli
Chocolate Mousse Cake
Coffee or Tea
Cash Bar

CONCRETE MIXER RECEPTION
Hilton
6:30 PM - 8:00 PM
Montreal Ballroom

Join the ACI Eastern Ontario and Québec Chapter and your friends and colleagues for a get-together at the Hilton and enjoy some of the typical food of the region, known in Québec as "Cuisine Regionale". Hot and cold hors d’oeuvres to be served.
THURSDAY, NOVEMBER 9

CATHEDRALS OF MONTRÉAL
9:00 AM - 2:00 PM

Concentrating on the churches, cathedrals and shrines of Montréal, you will see examples of various styles of architecture, from the modest beauty of Notre-Dame de Bonsecours, to the grand and ornate majesty of Mary Queen of the World, to the near gothic architecture of Christ Church Cathedral. Lunch will be served at Le Parchemin, which used to be the rectory of the Christ Church Cathedral. The tour also includes a visit to the world-renowned Shrine for Healing at the St. Joseph's Oratory. $31 US per person

POST-CONVENTION GUEST PROGRAM

SATURDAY, NOVEMBER 11

GUEST TOUR OF MUSEUM URSULINES
AND CHÂTEAU FRONTENAC
9:30 AM - 12:00 PM

Your first stop is the Museum Ursulines, which displays a collection illustrating life and education work of the Ursulines. Then, enjoy a guided tour of the hallways of the most photographed hotel in the world — Château Frontenac. $24 US per person
GUEST PROGRAM

SATURDAY, NOVEMBER 11

ATTENDEES/GUEST LUNCHEON  Québec Hilton
12:15 PM - 1:45 PM  Le Panorama Room
Topic: "Culture of Old Québec"  $18 per person

MENU

Potage Crécy
Eminc of Turkey Orleans
with Cranberry Sauce
Mousseline Potatoes/Fresh Green Beans
"Plaisir des Iles"
Coffee or Tea

FIELD TRIP AND CITY TOUR: HISTORICAL
QUÉBEC BUILDINGS AND FORTIFICATIONS
2:00 PM - 5:30 PM

Enjoy the old city, its fortresses, historical buildings, the
Museum of Civilization and Laval University. Tour
guides and ACI members will discuss the history as
well as renovations and construction on these historical
structures.  $20 US per person

SUGARING-OFF PARTY
BUSES DEPART AT 6:45 PM

L'En-Tailleur is a typical maple farm, a historic
attraction of Québec, located on picturesque Île
d'Orléans. Upon arrival, you will have the opportunity
to enjoy a talk about the lumbermen, and a
familiarization visit will explain the life of the first
Canadians: Indians, trappers and lumberjacks. During
and after dinner, enjoy folkloric animation and music.
$35 US per person

MENU

Pickled Vegetable Appetizers
French Pea Soup, Fèves au Lard
Tourtiere, Grilled Ham
Pommes de Terre, Vegetables
Country Style Bread
Traditional Maple Sugar Desserts
Cash Bar
SUNDAY, NOVEMBER 12

MONTMORENCY FALLS/STE-ANNE DE BEAUPRÉ
1:00 PM - 5:00 PM

Our first stop is Montmorency Falls, where you will see falls with a 274 foot drop surrounded by a cloud of colorful mist. Take the cable car to the top of the falls and tour the Manoir Montmorency. Visit the magnificent Ste-Anne de Beaupré Shrine, built in 1923. $25 US per person

DINNER AT CAFÉ DE LA PAIX
7:00 PM

Take a taxi and meet your ACI friends at one of the most famous restaurants in Québec. Known for its cuisine and fine service, you can say farewell over a memorable meal. $30 US per person

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MENU

Appetizer: Trio of Smoked Fish
Choices include:
Soup de Jour or Consummé or Mixed Salad
Veal Medallions with Mushroom Sauce or Filet Mignon Périgourdine
Seasonal Vegetables, Rice or Potatoes
Cake, Fruit Salad or Crème Caramel
POST-CONVENTION MEETING

MEETING AND EVENT SCHEDULE
Québec Hilton
Québec City, Québec

Friday, November 10
6:30 PM - WELCOME Le Panorama
8:00 PM RECEPTION

Saturday, November 11
9:00 AM - TECHNICAL SESSIONS:
9:30 AM -
NOON Historical Québec: Buildings and Fortifications
Use of Polymers in Concrete

Porte Kent
Porte Saint-Louis

Ursulines and Chateau Frontenac

12:15 PM - Guest Tour of Museum
1:45 PM Attendees/ Guest Luncheon
2:00 PM - Field Trip
5:30 PM and City Tour

6:45 PM Sugaring- Off Party

Sunday, November 12
1:00 PM - Montmorency Falls/
5:00 PM Ste-Anne De Beaupré

7:00 PM Dinner at Café De La Paix

Registration Hours
Friday, November 10 2:00 PM - 6:00 PM
Saturday, November 11 8:00 AM - 2:00 PM
Sunday, November 12 11:00 AM - 1:00 PM

• SEPARATE FEE
DAILY EVENTS

[(M) = Meeting (SC) = Subcommittee (TG) = Task Group]

FRIDAY, NOVEMBER 3rd

7:00P-10:00P
TAC  Technical Activities (M-1)  Portage(H)

SATURDAY, NOVEMBER 4th

8:30A-5:00P
EAC  Educational Activities (M-1)  Salon 532-1(R)

8:30A-6:00P
TAC  Technical Activities (M-2)  Lasalle(H)

8:30A-5:00P
- Educational Seminar:
  Troubleshooting Concrete
  Construction  Outremont(H)

NOON-1:00P
- Educational Seminar
  Luncheon  Portage(H)

2:00P-5:00P
359  Nuclear Vessels  Lachine(H)

SUNDAY, NOVEMBER 5th

8:30A-10:00A
CLC  Construction Liaison  Cote St. Luc(H)

8:30A-11:30A
E801  Student Activities Committee
  Ad Hoc Committee on
  Online Electronic
  Communications  Salon 532-1(R)

8:30A-1:00P
349-3A  Embedment  Versailles(R)

8:30A-5:00P
350-1  Environmental Structures (M-1)  St. Laurent(R)

8:30A-6:00P
TAC  Review Group 1  Verdun(H)
TAC  Review Group 2  Cartier(H)

- SEPARATE REGISTRATION FEE
SUNDAY

8:30A-6:00P
TAC Review Group 3 Trembles(H)
TAC Review Group 4 Longueuil(H)

10:00A-11:30A
364-1 General Requirements Cote St. Luc(H)

10:00A-1:00P
408 Bond and Development Portage(H)
442 Lateral Forces Mont Royal(H)

1:00P-5:00P SESSIONS
Recent Developments in
Deflection Evaluation of
Concrete Structures in
Honor of Dan Branson Regency A(R)
Student Program
and Competition McGill University

2:00P-3:30P
121 Quality Assurance St. Lambert(H)
305 Hot Weather Fundy(H)
364-3 Design Cote St. Luc(H)
Hot Topic Committee Frontenac(H)
503-A Polyurethanes Vitre(R)

2:00P-5:00P
CPC Certification Programs (M-1) Salon 518-4(R)
SCO Scholarship Council Salon 520-5(R)
E701 Construction Materials Salon 528-3(R)
201 Durability Versailles(R)
225TG Hydraulic Cements Task Group Salon 530-2(R)
309 Consolidation St. Leonard(H)
343 Bridge Design Regency C(R)
355 Anchorage Mont Royal(H)
364-4 Other Structures Dollar(R)
369 Seismic Rehab Verriere A(R)

2:00P-5:00P SESSIONS
Creep and Shrinkage
of Concrete La Salle/Lachine(H)
High-Strength
Concrete: Part I Outremont(H)
SUNDAY/MONDAY

2:00P-5:00P SESSIONS
  Short Duration Dynamic Loading  Westmount(H)
  State of the Art of Fiber Reinforced Plastics in Concrete Structures  Regency B(R)

3:30P-5:00P
  E705  Computer Activities  Fundy(H)
  549  Ferrocement  St. Pierre(H)
  552  Geotechnical Grouting  St. Lambert(H)
  Membership Committee  Frontenac(H)

3:30P-6:30P
  126-Ex  Executive Subcommittee  Salon 532-1(R)
  227  Radioactive Hazardous Waste Management  Salon 522-6(R)

5:00P-6:30P
  E905  Training  Salon 528-3(R)
  348  Safety  Regency C(R)
  364  Rehabilitation  Cote St. Luc(H)

7:00P
  - Breaking the Ice
  Dinner  Outremont/Westmount(H)

MONDAY, NOVEMBER 6th

7:00A-8:30A
  Breakfast Training Session Chairmen & Speakers  Outremont(H)
  TMC  TAC Metrication  Longueuil(H)

8:30A-10:00A
  C601-P  Plasterer Certification  Salon 528-3(R)
  118  Use of Computers  Fundy(H)
  213-B  Lightweight/Parking Struct. and Bridge Decks  Vitre(R)

- SEPARATE FEE
MONDAY

8:30A-10:00A
213-C  By-Prod. Lightweight Aggregates  Les Courants(R)
325-32 Jointed Pavement  Trembles(H)
440-C  FRP - SOA Report  Frontenac(H)
446-3  Finite Element Analysis & Fracture  Salon 518-4(R)
504  Joint Sealants  Lachine(H)
544-A  Steel Fibers  St. Charles(R)
544-B  Glass Fibers  Salon 530-2(R)
548  Ad Hoc on Student Activities  Salon 532-1(R)

8:30A-11:30A
E703  Construction Practices  St. Leonard(H)
212  Chemical Admixtures  Portage(H)
362-1  Document Review  Lasalle(H)
368  Earthquake Resistance  Verriere A(R)
445-1  State-of-the-Art Report  Salon 522-6(R)
515  Protective Systems  Victoria(R)
523  Cellular Concrete  Versailles(R)
546  Repair  St. Laurent(R)
548-E  Structural Design & Analysis  Verriere B(R)

8:30A-1:00P
209  Creep and Shrinkage  St. Lambert(H)
318  Building Code (M-1)  Regency B(R)
349-4  Repository Structures  Cartier A(R)
360-1  Slabs on Grade Sub  Longueuil(H)
543  Concrete Piles (M-1)  Cartier (H)
551  Tilt-Up Construction (M-1)  St. Pierre(H)

8:30A-5:00P
350  Environmental Structures (M-2)  Verdun(H)

9:00A-NOON SESSIONS
Research in Progress  Auditorium(R)
High-Strength Concrete: Part II  Westmount(H)
Aspects of Blast Resistant Design  Mont Royal(H)
* Composite and Hybrid Construction: Part I  Regency A(R)

10:00A-11:00A
GUEST OVERVIEW  Regency C(R)

10:00A-11:30A
C601  New Programs  Salon 518-4(R)
C610  Field Technician  Salon 528-3(R)

* THEME SESSION
### MONDAY

**10:00A-11:30A**
- E802  Teaching Methods & Materials  Salon 528-3(R)
- 213-A  High-Strength Lightweight  Salon 532-1(R)
- 213-D  Review of 213 Guide  Salon 530-2(R)
- 223-I  Components  Salon 520-5(R)
- 325-36  Pavement Strength  Trembles(H)
- 362  Parking Structures  Les Courants(R)
- 440-D  Research  Frontenac(H)
- 544-C  Synthetic Fibers  Fundy(H)
- 554  Bearing Systems  Lachine(H)

**10:00A-1:00P**
- THPC  TAC High Performance  St. Charles(R)
- 311  Inspection  Vitre(R)

**11:30A-1:00P**
- IIJRC  Int'l Joints/Bearings Res.  Lachine(H)
- C640  Craftsman Certification  Salon 520-5(R)
- E903  Convention Training  Salon 530-2(R)
- 124  Concrete Aesthetics  Salon 522-6(R)
- 211-D  High Strength  Verriere A(R)
- 213  Lightweight  St. Laurent(R)
- 230  Soil Cement  Victoria (R)
- 304  Meas/Mix/Trans/Place  St. Leonard(H)
- 315  Detailing  Salon 532-1(R)
- 325-33  Fast Track Pavements  Trembles(H)
- 440-E  Professional Education  Frontenac(H)
- 446-4  Dynamic Fracture  Salon 518-4(R)
- 544-E  SOA Report FRC  Fundy(H)

**12:00N-2:00P**
- Student Luncheon  Outremont(H)

**2:00P-3:30P**
- E702  Designing Concrete Structures  Portage(H)
- 126-1  Materials Database Subs  Longueuil(H)
- 225  Hydraulic Cements  Les Courants(R)
- 325  Pavements  Fundy(H)
- 349-1  Materials  St. Lambert(H)
- 440-G  Student Education  Versailles(R)
- 544-F  Testing  Cartier A(R)
- 548-A  Polymer Modified Concrete  St. Leonard(H)

**2:00P-5:00P**
- IAC  International Activities  Salon 532-1(R)
- RC  Responsibility  St. Laurent(R)
- TSC  Specifications  Frontenac(H)
- TTT  Technology Transfer  Regency B(R)

*SEPARATE FEE*
MONDAY

2:00P-5:00P
231   Early Age                Verriere B(R)
358   Guideways                Salon 522-6(R)
441   Columns                  Vitre(R)
533   Precast Panels           Trembles(H)
543   Concrete Piles (M-2)     Cartier(H)
551   Tilt-Up Construction (M-2) St. Pierre(H)

2:00P-5:00P SESSIONS
The Analysis and Design
of Mat Foundations and
Combined Footings

New Approaches to Parking
Structure Design and
Construction

High-Strength
Concrete: Part III

▲ HOT TOPIC:
Part I: Innovative and
Controversial Uses of Fly Ash
for Multiple Applications
Part II: The Oklahoma
Terrorist Bombing

2:00P-6:30P
228   Nondestructive Testing    Victoria(R)
302   Construction of Floors   Regency C(R)
318-A  General Concrete Construction Salon 530-2(R)
318-E  Shear and Torsion       Salon 528-3(R)
318-G  Prestressed Precast     Salon 518-4(R)
318-H  Seismic Provisions     St. Charles(R)
349-3B  Embedment               Verriere A(R)

3:30P-5:00P
211-C  No Slump                 Longueuil(H)
349-2   Design                   St. Lambert(H)
446   Fracture Mechanics        Les Courants(R)
544-G  Design & Structural Uses Portage(H)
548-B  Polymer Concrete Overlays St. Leonard(H)
558   Protective Coatings       Fundy(H)

3:30P-6:30P
440-F  Repair                   Versailles(R)

5:00P-6:30P
TCRC   TAC Construction Review  Salon 520-5(R)
116    Terminology and Notation Fundy(H)
211-F  Mixture Submittal       Longueuil(H)
235   Knowledge Based Systems  Portage(H)

▲ HOT TOPIC
MONDAY/TUESDAY

5:00P-6:30P
544-Ex Executive Subcommittee Salon 522-6(R)
548-D  Sulfur Concrete St. Leonard(H)

TUESDAY, NOVEMBER 7th

7:00A-8:30A
Breakfast Training Session for
ACI Committee Chairs -
By Invitation Only Westmount(H)

8:30A-10:00A
232  Fly Ash & Natural Pozzolans Regency C(R)
330  Parking Lots Fundy(H)
439-A Wire Reinforcement Versailles(R)

8:30A-11:30A
CAC  Chapter Activities St. Pierre(H)
C620 Laboratory Technician Trembles(H)
345  Bridge Construction Vitre(R)
357  Offshore and Marine Longueuil(H)
370  Dynamic & Vibratory Effects Hampstead(H)
548  Polymers Outremont(H)
550  Precast Concrete Structures St. Laurent(R)
Publications Committee St. Leonard(H)

8:30A-1:00P
EAC  Educational Activities (M-2) Salon 532-1(R)
117  Tolerances Portage(H)
318-B Reinforcement and Development Victoria (R)
318-C Serviceability/Safety Salon 528-3(R)
318-D Flexure and Axial Loads Salon 518-4(R)
318-F Two-Way Slabs Salon 520-5(R)
336  Footings St. Charles(R)
360  Slabs on Grade Verdun(H)
372  Circ. Prstd. Wire Wrap Cartier(H)

9:00A-NOON SESSIONS
Databases and Knowledge Systems
for Concrete and Related
Materials Verriere(R)

* Innovative Lightweight
Concrete Systems: Part I LaSalle(H)
Predicting Remaining
Service Life Lachine(H)

* THEME SESSION
## TUESDAY

### 9:00A-NOON SESSIONS

<table>
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<td>Innovative Research in Earthquake Engineering</td>
<td>Regency A(R)</td>
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<tr>
<td>Contractors’ Session: Part I</td>
<td>Regency B(R)</td>
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### 10:00A-11:30A

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<tr>
<td>Residential Task Group</td>
<td>Frontenac(H)</td>
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<td>Reinforcement</td>
<td>Mont Royal(H)</td>
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### 10:00A-1:00P

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<tr>
<td>Mass Concrete</td>
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<td>Corrosion</td>
<td>Les Courants(R)</td>
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<td>Ground Slag</td>
<td>St. Lambert(H)</td>
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<tr>
<td>Shear and Torsion</td>
<td>Versailles(R)</td>
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<td>Shotcreting</td>
<td>Cartier A(R)</td>
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<td>Fiber Reinforced</td>
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### 11:30A-1:00P

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<tr>
<td>Edit and Coordination</td>
<td>Trembles(H)</td>
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<td>Cold Weather</td>
<td>St. Leonard(H)</td>
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<tr>
<td>Reinforcement</td>
<td>Mont Royal(H)</td>
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### 12:00N-2:00P

- Contractors’ Day Luncheon   | Westmount(H) |

### 2:00P-3:30P

<table>
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<tr>
<td>Erosion/Hydraulic Structure</td>
<td>Salon 532-1(R)</td>
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<td>Trembles(H)</td>
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<td>Silica Fume</td>
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### 2:00P-3:30P SESSION

Educational Session - Part I: Realistic Capstone Design Courses

### 2:00P-5:00P

<table>
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<td>Fire Resistance and Fire Protection of Structures</td>
<td>St. Lambert(H)</td>
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<td>Cracking</td>
<td>Verdun(H)</td>
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<td>Architectural Concrete</td>
<td>St. Leonard(H)</td>
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<td>Formwork</td>
<td>St. Laurent(R)</td>
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<td>Nuclear Structures</td>
<td>Versailles(R)</td>
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<td>Fiber Reinforced Plastic</td>
<td>LaSalle(H)</td>
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<td>Adhesives</td>
<td>St. Charles(R)</td>
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<td>Convention Committee</td>
<td>Fundy(H)</td>
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</table>

- SEPARATE FEE
- THEME SESSION
TUESDAY/WEDNESDAY

2:00P-5:00P SESSIONS
Open Paper Session (until 5:25 PM)

* Innovative Lightweight Concrete Systems: Part II
  Verriere(R)

Design in Regions of Low and Moderate Seismicity
  Cartier A(R)

Contractors’ Session: Part II
  Regency B(R)

2:00P-6:30P
318    Building Code (M-2)    Regency C(R)
423    Prestressed          Mont Royal(H)

3:30P-5:00P
126    Materials Database    Longueuil(H)
C630   Construction Inspector    Lachine(H)

3:30P-5:30P SESSION
Educational Session - Part II:
  Report Writing    Regency A(R)

3:30P-6:30P
335    Composite and Hybrid Structures    St. Pierre(H)
342    Bridges & Bridge Elements      Cartier(H)
439    Steel Reinforcement          Outremont(H)

5:00P-6:30P
C630-T  Transportation Inspector    Lachine(H)
211-E   Evaluation and Adjustment    St. Leonard(R)
223    Shrinkage Compensating Conc.    Portage(H)
365    Service Life              St. Lambert(H)

7:30P-10:00P
Forum 123 - Industrial Support of
Concrete Research: Does It or
Should It Exist?    Auditorium(R)

WEDNESDAY, NOVEMBER 8th

10:00A-1:00P
General Session            Mont Royal(H)

1:00P-2:00P
Standards Board            Trembles(H)

* THEME SESSION
2:00P-3:30P
120  History of Concrete                Versailles(R)
122  Energy Conservation               Salon 518-4(R)
351-2 Dynamics                        Cartier(H)
531  Masonry Research                  Salon 530-2(R)
555  Removal/Reuse of Concrete         Frontenac(H)
556  Demolition                        Salon 520-5(R)

2:00P-5:00P
ConREF                                  Salon 532-1(R)
CPC Certification Programs(M-2)        Salon 522-6(R)
RCRC Reinforced Concrete Res. Council  Victoria(R)
215  Fatigue                            St. Leonard(H)
332  Residential                        Cartier(A)
341  Earthquake-Resistant Bridges      Les Courants(R)
350  Environmental Structures (M-3)    St. Laurent(R)
352  Joints                             St. Lambert(H)
435  Deflection                         Fundy(H)

2:00P-5:00P SESSIONS
* Proportioning Concrete Using
  Unusual and Innovative Materials and Methods Auditorium(R)

* Innovative Applications with
  Shrinkage-Compensating Concrete Regency C(R)

* Composite and Hybrid
  Construction: Part II Regency A(R)

Field Performance of Fiber Reinforced Concrete
Structures Over 10 Years Old Verriere(R)

* Innovative Concrete: Part I

2:00P-6:30P
214  Strength Tests                      St. Charles(R)
340  Design Aids                         St. Pierre(H)
373  Cir. Prstd. Tendons                 Salon 528-3(R)

* THEME SESSION
## WEDNESDAY/THURSDAY

### 3:30P-5:00P
- 229  Controlled Low-Strength Versailles(R)
- 351  Equipment Foundations Tremblay(H)
- 524  Plastering Salon 530-2(R)
- 555/556 Removal & Reuse/Demolition Salon 520-5(R)

### 5:00P-6:30P
- 221  Aggregates Fundy(H)

### 6:30P-8:00P
- Concrete Mixer Montreal Ballroom(H)

### THURSDAY, NOVEMBER 9th

#### 8:30A-10:00A
- 308S  Curing Concrete - Specifications Versailles(R)

#### 8:30A-11:30A
- CRC  Concrete Research Council Portage(H)
- 421  Slabs St. Lambert(H)
- 437  Strength Evaluation Cartier(H)
- 444  Experimental Analysis St. Leonard(H)

#### 8:30A-1:00P
- 211  Proportioning Outremont(H)

#### 8:30A-5:00P
- 301  Specifications St. Charles(R)

#### 9:00A-NOON
- Board of Direction (M-1) Hampstead (H)

### 9:00A-NOON SESSIONS
- * Innovations in Nondestructive Testing Lasalle(H)
- Controlled Low-Strength Materials Verdun(H)
- * New Approaches to Shear Design Lachine(H)
- * Innovative Concrete: Part II Regency B(R)

#### 10:00A-11:30A
- 308R  Curing Concrete - SOA Report Versailles(R)

#### 10:00A-1:00P
- 307  Chimneys (M-1) St. Pierre(H)

* THEME SESSION
### THURSDAY

**11:30A-1:00P**
- 123 Research
- 308 Curing Concrete
  > Salon 532-1(R)
  > Versailles(R)

**2:00P-3:30P**
- 363-1 High-Strength Subs
  > Portage(H)

**2:00P-5:00P**
- Board of Direction (M-2)
  > Hampstead (H)
  > St. Pierre(H)
- 307 Chimneys (M-2)
- 371 Pedestal Water Towers
  > St. Lambert(H)

**2:00P-5:00P SESSIONS**

- Innovative Technologies
  > Auditorium(R)
  - Response of Concrete Bridges During the Kobe and Northridge Earthquake
    > Verriere(R)
  - Concrete Instrumentation and Experimental Techniques: A State-of-the-Art Report
    > Cartier A(R)
  - Cold Climate Challenges
    > Regency B(R)

**2:00P-6:30P**
- 423-TG Prestressed Task Group
  > St. Laurent(R)

**3:30P-6:30P**
- 363 High-Strength
  > Portage(H)

* THEME SESSION
## NUMERICAL
### COMMITTEE LISTING

[(M) = Meeting (SC) = Subcommittee (TG) = Task Group]

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<td>THU</td>
<td>9:00A - Noon</td>
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<td>Evaluation &amp; Adjustment</td>
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**NOTE:** Committees not listed did not request a meeting at this convention or the committee has requested a closed meeting. Those committees having closed meetings have received a closed meeting schedule.

♦ Friday, November 3
(H) Bonaventure Hilton
(R) Radisson Gouverneurs
SATURDAY, NOVEMBER 4  
6:30 AM - 8:00 PM  
MEET AT  
HILTON ENTRANCE

FIELD TRIP TO THE JAMES BAY

Sponsored by the ACI Eastern  
Ontario and Québec Chapter

Coordinator:  
J. R. Maurice Marcil  
Civil Engineer  
Consultants Sodexcon Inc.  
Laval, Québec

Join your colleagues for a visit to a major civil engineering achievement in the Canadian wilderness. A field trip to the James Bay hydroelectric project some 600 miles (1000 kilometers) north of Montréal, where you will see the La Grande-2 dam, 1.7 miles (2.8 kilometers) long by 530 feet (162 meters) height, the most powerful generating station in Canada (7326 MW and the fourth in the world, next to the Grand Coule (9700 MW), which is located some 450 feet (137 meters) under the mountain, the "giant staircase" or spillway where its capacity is twice the flow of the St. Lawrence River 574,919 c.ft. ~ second (16,280 cm~ sec) and the Northern Québec taiga forest where it takes one hundred years for a black spruce to become a 4 inch (100 mm) tree. At this latitude, 54 degrees north, November is a surprising month; it might be cold, 10°F (-12°C) or mild 30°F (0°C) and sunny. Warm clothing is a necessity, there might be snow.

A bus is scheduled to depart from the Bonaventure Hilton Hotel entrance at 6:30 AM and will return by 8:00 PM. Breakfast will be served on the plane, lunch will be taken at the Auberge Radisson and dinner taken on the plane on our way back to Montréal. $300.00 U. S. per person
TROUBLESHOOTING CONCRETE CONSTRUCTION

Learn practical solutions to everyday problems as:

- How to place slab reinforcement
- How to detect delaminations
- Making functional construction joints
- What cracks can tell you
- How to properly vibrate concrete
- How to prevent most cracks

Sponsored by the Eastern Ontario and Québec Chapter and the ACI Education Department

Session Chairman: Marc A. Charlebois
Vice President
Marketing and Technical Services
Anti-Hydro Canada, Inc.
St. Laurent, Québec

Registration Opens 8:00

Session I starts 8:30

Lunch (included in your registration fee) NOON

Session II starts 1:00

Questions and Answers 4:30

continued
EDUCATIONAL SEMINAR

SATURDAY, NOVEMBER 4  ROOM: OUTREMONT
8:30 AM - 5:00 PM  HOTEL: HILTON

TROUBLESHOOTING CONCRETE CONSTRUCTION

Sponsored by the Eastern Ontario and Québec Chapter and the ACI Education Department

continued

Armand H. Gustaferro - Armand H. Gustaferro is a consulting engineer with the Consulting Engineers Group, Mt. Prospect, IL. He has had an illustrious career as a researcher, design engineer, speaker, and author. He has investigated many problems involving concrete structures and slabs on grade.

Jerome H. Ford - Jerome H. Ford is National Dealer Sales Manager with Symons Corp., Des Plaines, IL. He provides guidance in the proper use of forms and advice on how to prevent or solve problems with formed concrete. He was a general contractor for ten years and has been employed by form manufacturers for the last twenty plus years.

Registration for this seminar is not included in the convention registration fee. There is an additional fee of $179 (U.S.) for ACI members and convention attendees; $199 (U.S.) for nonmembers. Included in the registration fee is the cost of the seminar course manual (SCM-22), normally sold for $59.50

• SEPARATE REGISTRATION FEE
FALL 1995 SEMINARS CALENDAR

One - Day Seminars

Concrete Slabs on Grade
Atlanta, GA
November 30, 1995

Durability
Philadelphia, PA
November 16, 1995
Jacksonville, FL
November 30, 1995
San Francisco, CA
December 5, 1995

Troubleshooting Concrete Construction
Montreal, Quebec
November 4, 1995
Dallas, TX
November 16, 1995
Indianapolis, IN
November 28, 1995
Baltimore, MD
December 5, 1995

Seismic Retrofit
Portland, OR
November 16, 1995
Los Angeles, CA
December 5, 1995

Concrete Site Paving
New Orleans, LA
November 29, 1995

Two - Day Course

Basics of Concrete Design
Richmond, VA
Nov 30-Dec 1, 1995

One - Half Day Seminar

Metrization
Tampa, FL
November 16, 1995
ACI/PCA 318 BUILDING
CODE SEMINARS

LEARN ACI 318 THE EASY WAY!

Fifty seminars covering significant changes to the ACI 318 Building Code will be held in 1996 throughout the United States. Sponsored by the American Concrete Institute and Portland Cement Association, these seminars are held every six years coinciding with each major Code revision.

The instructors are members of the ACI 318 Building Code Committee, the people responsible for the Code changes. Participants will be guided step by step through the revisions and find out how to implement the changes necessary for every day design and construction activities.

The 318 seminars will begin in March 1996. Specific dates and locations will be released in early January.
SUNDAY, NOVEMBER 5  
12:30 PM - 5:00 PM  
McGILL UNIVERSITY  
McDonald Building  
Structural Laboratory

CONCRETE CUBE COMPETITION

Sponsored by Committee E801 and the Eastern Ontario and Québec Chapter

Session Chair: Kelly M. Page  
President  
Concrete Enterprises, Inc.  
Buffalo Grove, IL

Session Co-Chair: Richard Gagné  
Assistant Professor  
Department of Civil Engineering  
Université de Sherbrooke  
Sherbrooke, Québec

Students interested in walking to McGill (approximately 10 minutes) with the group are to meet at the Eastern Ontario and Québec Chapter Hospitality Desk located near the registration area at the Radisson Hotel.

Welcome by McGill University Host  
(Denis Mitchell)  
1:00

ACI and Convention Overview  
Kelly M. Page, President, Concrete Enterprises, Inc., Buffalo Grove, IL  
1:15

Mentor Program Overview  
Richard Gagné, Assistant Professor,  
Department of Civil Engineering,  
Université de Sherbrooke, Sherbrooke, Québec  
1:30

Cost Analysis of Hot Weather Concrete  
Douglas R. Flath, Senior Construction Student, Southern Illinois University at Edwardsville, currently employed by Korte Construction Co., Highland, IL. Mr. Flath won first place in this year's student concrete projects competition.  
1:45

continued
CONCRETE CUBE COMPETITION

Sponsored by Committee E801 and the Eastern Ontario and Québec Chapter

continued

Test Concrete Cubes  2:00
Soft drinks and snacks will be served during the concrete cubes competition.

Return to Hotel  5:00

Note: For those who wish to attend and will not be walking, activities will take place in the Structure Laboratory, McDonald Building (ground floor) at McGill University.
TECHNICAL SESSION

SUNDAY, NOVEMBER 5
1:00 PM - 5:00 PM
ROOM: REGENCY A
HOTEL: RADISSON

RECENT DEVELOPMENTS IN DEFLECTION EVALUATION OF CONCRETE STRUCTURES IN HONOR OF DAN BRANSON: PART I
(1:00 PM - 3:00 PM)

Sponsored by Committees 435 and 421

Session Chair: Edward G. Nawy
Distinguished Professor
Department of Civil and Environmental Engineering
Rutgers, The State University of New Jersey
Piscataway, NJ

Session Co-Chair: Debrethann R. Cagley
Structural Engineer
Cagley & Associates
Rockville, MD

Introduction
Edward G. Nawy, Distinguished Professor,
Department of Civil and Environmental Engineering, Rutgers, The State University of New Jersey, Piscataway, NJ

Deflection of a Concrete Beam and Slab Roof
Russell S. Fling, Consulting Engineer, Columbus, OH

Deflection and Minimum Thickness Requirements in the EC2 and ACI Codes
Himat Solanki, Civil Engineer, Southwest Florida Water Management District, Sarasota, FL

Analytical Representation of Flat Plate Structures under Vertical and Lateral Loads
Ian N. Robertson, Assistant Professor,
Department of Civil Engineering, University of Hawaii, Honolulu, HI, and Clinton J. Ambrose, Design Engineer, SSFM Engineers, Inc., Honolulu, HI

continued
TECHNICAL SESSION

SUNDAY, NOVEMBER 5
1:00 PM - 5:00 PM
ROOM: REGENCY A
HOTEL: RADISSON

RECENT DEVELOPMENTS IN DEFLECTION
EVALUATION OF CONCRETE STRUCTURES
IN HONOR OF DAN BRANSON: PART I
(1:00 PM - 3:00 PM)

Sponsored by Committees 435 and 421

Deflection Analysis of Reinforced Concrete Members Using Finite Element Method
Maria Anna Polak, Assistant Professor, Department of Civil Engineering, University of Waterloo, Waterloo, Ontario; Andrew Scanlon, Professor, Department of Civil and Environmental Engineering, The Pennsylvania State University, University Park, PA; and David V. Phillips, Senior Lecturer, Department of Civil Engineering, University of Glasgow, Glasgow, Scotland, UK

Effects of Deflection on Pounding of Reinforced Concrete Buildings
Y. L. Mo, Associate Professor, and H. C. Lai, Graduate Student, Department of Civil Engineering, National Cheng Kung University, Tainan, Taiwan, China

Non-Contact Deflection Measurements in Structures Using Diffraction Gratings
Peter L. Fuhr, Associate Professor; Dryver R. Huston, Associate Professor; and Adam J. McPadden, Research Assistant, Intelligent Structural Systems Institute, College of Engineering, University of Vermont, Burlington, VT

Discussion

continued
TECHNICAL SESSION

SUNDAY, NOVEMBER 5
1:00 PM - 5:00 PM
ROOM: REGENCY A
HOTEL: RADISSON

RECENT DEVELOPMENTS IN DEFLECTION
EVALUATION OF CONCRETE STRUCTURES
IN HONOR OF DAN BRANSON: PART II
(3:00 PM - 5:00 PM)

Sponsored by Committees 435 and 421

Session Chairman: Satyendra K. Ghosh
Director
Engineering Structures/ Codes
Portland Cement Association
Skokie, IL

Session Co-Chairman: Hershell Gill
President
Hershell Gill Consulting
Engineers
Coral Gables, FL

Load-Deformation Relationships for High- Strength Concrete Beams Reinforced with Prestressed Prisms as Main Reinforcement
Benxian Chen, Structural Engineer, Parsons Brinkerhoff - FG, Inc., Princeton, NJ, and Edward G. Nawy, Distinguished Professor, Rutgers, The State University of New Jersey, Piscataway, NJ

Effect of Openings on the Deflection and Strength of Reinforced Concrete Slabs
M. Ashghar Bhatti, Associate Professor, and Baizhong Lin, Graduate Student, Department of Civil and Environmental Engineering, University of Iowa, Iowa City, IA; and J. P. Idelin Molinas Vega, Lecturer, Department of Civil Engineering, Catholic University of Asunción, Asunción, Paraguay

continued
SUNDAY, NOVEMBER 5
1:00 PM - 5:00 PM

ROOM: REGENCY A
HOTEL: RADISSON

RECENT DEVELOPMENTS IN DEFLECTION
EVALUATION OF CONCRETE STRUCTURES
IN HONOR OF DAN BRANSON: PART II
(3:00 PM - 5:00 PM)

Sponsored by Committees 435 and 421

CONTINUING

Controlling Deflection Serviceability by 3:36
Span-Depth Limits and Long-Term Deflection
Multipliers for Reinforced Concrete Beams
Noel J. Gardner, Professor, and Jiehong
Zhang, Research Assistant, Department of
Civil Engineering, University of Ottawa,
Ottawa, Ontario

Prediction and Control of Deflection in 3:54
Partially-Prestressed Post-Tensioned Beams
with Unbonded Tendons
Pinaki R. Chakrabarti, Chairman, Department
of Civil Engineering, University of California
at Fullerton, Fullerton, CA

Long-Term Deflections of High-Strength 4:12
Concrete Beams and One-Way Slabs
Rajadurai Ganeswaran, Research Associate,
and Vijaya B. Rangan, Professor and Head,
School of Civil Engineering, Curtin
University of Technology, Perth, Western
Australia

Analytical and Experimental Comparison of 4:30
Elastic Deflections in Steel Fiber Reinforced
Thin Concrete Slabs
Tat Seng Lok, Professor, and Jinsong Pei,
Research Scholar, School of Civil and
Structural Engineering, Nanyang
Technological University, Singapore

Discussion 4:48
TECHNICAL SESSION

SUNDAY, NOVEMBER 5  ROOM: LASALLE & LACHINE
2:00 PM - 5:00 PM  HOTEL: HILTON

CREEP AND SHRINKAGE OF CONCRETE

Sponsored by Committee 209

Session Chairman: Chung C. Fu
Associate Professor
Department of Civil Engineering
University of Maryland
College Park, MD

Creep and Shrinkage of Normal, Medium, and High-Strength Concretes during Hydration
Arshad A. Khan, Doctoral Candidate;
William D. Cook, Research Engineer; and
Denis Mitchell, Professor, Department of Civil Engineering and Applied Mechanics,
McGill University, Montréal, Québec

The Proposed Japanese Standard Prediction Method for Creep and Shrinkage
Kenji Sakata, Professor, and Toshiki Ayano, Lecturer, Department of Civil and Environmental Engineering, Okayama University, Tsushima-naka, Okayama, Japan; and Tada-aki Tanabe, Professor, Department of Civil Engineering, Nagoya University, Chigusa-ku, Nagoya, Japan

Experimental Investigations of Creep Deflections in Prestressed Concrete Beams
Issam E. Harik, Professor, Head of Structures, and Le-Nong Zhou, Visiting Professor,
Department of Civil Engineering, University of Kentucky, Lexington, KY

continued
SUNDAY, NOVEMBER 5  ROOM: LASALLE & LACHINE
2:00 PM - 5:00 PM  HOTEL: HILTON

CREEP AND SHRINKAGE OF CONCRETE

Sponsored by Committee 209

continued

Long-Term Behavior of PPC Beams with Variability of Creep Properties 3:00
Katsuhiko Takami, Associate Professor, and Sumio Hamada, Professor, Department of Civil Engineering, Yamaguchi University, Ube, Yamaguchi, Japan

The New AFREM Code-Type Model for Creep and Shrinkage of HPC 3:20
Robert Le Roy, Research Engineer, and François de Larrard, Head, Concrete Mix-Design and Rheology Section, Laboratoire Central des Ponts et Chaussées, Paris cedex, France

Extrapolation of Short-time Shrinkage and Creep Data and Prediction Model B3 3:40
Zdeněk P. Bažant, Professor, and Sandeep Baweja, Graduate Research Assistant, Department of Civil Engineering, Northwestern, University, Evanston, IL

Shrinkage and Creep Equations for Design 4:10
N. John Gardner, Professor, Department of Civil Engineering, University of Ottawa, Ottawa, Ontario
HIGH-STRENGTH CONCRETE: PART I

Sponsored by Committee 363 and Concrete Canada

Session Chairman: Pierre-Claude Aïtcin
Professor, Department of
Civil Engineering and
Scientific Director, Concrete
Canada
Université de Sherbrooke
Sherbrooke, Québec

Introduction
Pierre-Claude Aïtcin, Professor, Department
of Civil Engineering, and Scientific Director,
Concrete Canada, Université de Sherbrooke,
Sherbrooke, Québec

High-Strength Concrete in Japan: History and Progress
Shigeyoshi Nagataki, Professor, Department
of Civil Engineering, Tokyo Institute of Technology, Meguroku, Tokyo, Japan

Application of High-Strength Concrete in Norway
Steinar Helland, Vice President, Concrete Technology Department, Selmer A. S., Oslo, Norway

High-Performance Concrete: Custom Designed Concrete — A Review of the French Experience and Prospects for Future Development
Yves Malier, Professor, Ecole Normale Superieure de Cachan, Cachan, Cedex, France, and Pierre Richard, Research Director and Senior Vice President, Bouygues Group, Cachan, Cedex, France

continued
SUNDAY, NOVEMBER 5       ROOM: OUTREMONT
2:00 PM - 5:00 PM          HOTEL: HILTON

HIGH-STRENGTH CONCRETE: PART I

Sponsored by Committee 363 and Concrete Canada

continued

High-Strength Concrete: Technology  3:50
Practice and Design in Germany
Gert Koenig, Professor, and Rainer Grimm,
Research Assistant, Department of Civil
Engineering, Technical University of
Darmstadt, Darmstadt, Germany

High-Strength Concrete in the Netherlands  4:25
Joost Walrauen, Professor, Department of
Civil Engineering, Delft University of
Technology, Delft, The Netherlands
SUNDAY, NOVEMBER 5       ROOM: WESTMOUNT
2:00 PM - 5:00 PM         HOTEL: HILTON

SHORT DURATION DYNAMIC LOADING

Sponsored by Committee 370

Session Chairman: Sam A. Kiger
Chairman and Professor
Department of Civil and
Environmental Engineering
West Virginia University
Morgantown, WV

Session Co-Chairman: Robert L. Hall
Research Engineer
Structures Laboratory
U. S. Army Engineer
Waterways
Experiment Station
Vicksburg, MS

Introduction 2:00
Sam A. Kiger, Chairman and Professor,
Department of Civil and Environmental
Engineering, West Virginia University,
Morgantown, WV

Design Criteria for the Use of Reinforcing 2:05
Steel Splices in Blast-Resistant Concrete
Structures
William H. Zehrt, Jr., Structural Engineer,
and Robert E. Hasse, Structural Engineer,
Huntsville Division, U. S. Army Corps of
Engineers, Huntsville, AL

Numerical Modeling of Reinforced Concrete 2:30
Subjected to Impulsive Loads
Robert L. Hall, Research Engineer; James T.
Baylot, Research Engineer; and Photios P.
Papados, Research Engineer, Structures
Laboratory, U. S. Army Engineer Waterways
Experiment Station, Vicksburg, MS

continued
SUNDAY, NOVEMBER 5   ROOM: WESTMOUNT
2:00 PM - 5:00 PM   HOTEL: HILTON

SHORT DURATION DYNAMIC LOADING

Sponsored by Committee 370  

continued

Shock Strength of Reinforced Concrete Slabs: Validity of Some Simplified Design Methods
Francois Toutlemonde, Research Engineer, and Pierre Rossi, Research Manager, Laboratorie Central des Pontes et Chaussees, Paris Cedex, France  

Shock Absorbing Structural Elements
James E. Tancreto, Research Structural Engineer; Kevin Hager, Research Structural Engineer; and Javier Malvar, Research Structural Engineer, Naval Facilities Engineering Services Center, Port Hueneme, CA  

Punching Shear Strength of Reinforced Concrete Slabs Subjected to Dynamic Loadings
Himat T. Solanki, Consulting Engineer, Sarasota, FL  

Development of an Innovative Standard Explosives Storage Magazine
Joseph M. Serena III, Structural Engineer, Huntsville Division, U. S. Army Corps of Engineers, Huntsville, AL  

Response of Buried Structures Subjected To Ground Shock Loads
Thomas R. Slawson, Structural Engineer, Applied Research Associates, Vicksburg, MS, and E. C. Ting, Professor, Department of Civil Engineering, Purdue University, West Lafayette, IN
STATE-OF-THE-ART OF FIBER REINFORCED PLASTICS IN CONCRETE STRUCTURES

Sponsored by Committee 440

Session Chairman: Mohammad R. Ehsani
Associate Professor
Department of Civil Engineering
University of Arizona
Tucson, AZ

Introduction
Mohammad R. Ehsani, Associate Professor,
Department of Civil Engineering, University
of Arizona, Tucson, AZ

Fiber Reinforced Plastic Materials
Antonio Nanni, Associate Professor,
Department of Architectural Engineering,
The Pennsylvania State University,
University Park, PA

Analysis and Design of FRP Reinforced Concrete Structures
Charles Goodspeed, Associate Professor,
Department of Civil Engineering, University
of New Hampshire, Durham, NH

Analysis and Design of FRP Prestressed Concrete Structures
Sami H. Rizkalla, Professor, Department of Civil and Geological Engineering, University of Manitoba, Winnipeg, Manitoba

Repair and Rehabilitation with Composite Materials
Hamid Saadatmanesh, Associate Professor,
Department of Civil Engineering, University
of Arizona, Tucson, AZ

Discussion/Questions and Answers
EDUCATIONAL SESSION

MONDAY, NOVEMBER 6    ROOM: OUTREMONT
7:00 AM - 8:30 AM    HOTEL: HILTON

BREAKFAST TRAINING SESSION FOR SESSION
CHAIRS AND SPEAKERS - By Invitation Only

Sponsored by Committee E903

Session Chair: Roger E. Wilson
Manager
Industry Programs
Portland Cement Association
Skokie, IL

Continental Breakfast for First 50 Attendees 7:00

Who Is Responsible for Improving the 7:20
Content and Presentations at Convention
Sessions?

A report and discussion from the chair
of the Ad hoc Committee on Improvement
of Convention Sessions.

Kenneth C. Hover
Professor
Department of Civil
Engineering
Cornell University
Ithaca, NY

Evaluation and Adjournment 8:20
MONDAY, NOVEMBER 6
8:30 AM - 2:00 PM

ACI and the Eastern Ontario and Québec Chapter are hosting a special day for the future leaders of our industry.

**Mentor Program**
8:30
Students and mentors will meet at the Eastern Ontario and Québec Hospitality Desk located near the registration area in the Radisson Hotel.

Registered students will be assigned a mentor with similar interests to attend committee meetings and technical sessions. All technical meetings are open to students.

**Students to accompany their individual mentors to their morning convention activities.**
9:00

**Luncheon**
NOON
The luncheon will be held in the Outremont Ballroom at the Bonaventure Hilton.

**Program Commences**
1:00
Announcement of winners and plaques given for the ACI cubes competition.

**New Applications of High-Performance Concrete**
1:15
Pierre-Claude Aitcin, Professor, Department of Civil Engineering, and Scientific Director, Concrete Canada, Université de Sherbrooke, Sherbrooke, Québec

**Return to Convention Activities**
2:00

---

**Menu**
- Minestrone Soup
- Meat Ravioli
- Italian Mixed Vegetables
- Garlic Bread
- Cassata with Chocolate Sauce
- Coffee, Tea, Iced Tea

Please purchase tickets by 5:00 PM, Sunday if you plan to attend.

$15.00 US
GET ANSWERS TO YOUR
CONCRETE QUESTIONS ...... fast!

THE ELECTRONIC ENCYCLOPEDIA OF
CONCRETE TECHNOLOGY

The ACI Manual of Concrete Practice is available on compact
disc. The CD-ROM uses sophisticated yet easy-to-use search
and retrieval software to enable you to instantly access the
most comprehensive set of documents available on concrete
technology. The CD-ROM enhances the value of ACI's
Manual of Concrete Practice. Waste no time looking for an
ACI document that's referenced in project specifications.
Imagine instantly retrieving every reference that exists on
your subject!

INSTANT ACCESS TO THE MOST COMPREHENSIVE
SET OF DOCUMENTS AVAILABLE
ON CONCRETE TECHNOLOGY

The MCP CD-ROM contains all of the ACI documents you
need to answer your questions about code requirements,
specifications, tolerances, concrete proportions, construction
methods, evaluations of test results and many more topics.
Over 4600 pages contain 180 of the most used documents
on concrete technology. The CD-ROM includes an additional
600 pages of information not included in the print
edition. When time is of the essence, paging through the
Manual of Concrete Practice represents hundreds of lost
hours each year. With the MCP CD-ROM, information is a
few keystrokes away!

DEMONSTRATIONS SCHEDULED DURING
THE CONVENTION

See how quickly the MCP CD-ROM will provide you with
the solid information found in the Manual of Concrete
Practice. Demonstrations have been conveniently scheduled
during the convention in the St. Laurent Room at the Hilton.
Please note that space in limited.

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ATTEND A DEMO AND GET A FREE ACI MOUSE PAD!
MONDAY, NOVEMBER 6  
9:00 AM - NOON  
ROOM: AUDITORIUM  
HOTEL: RADISSON

RESEARCH IN PROGRESS

Sponsored by Committee 123

Session Chairman:  Jan Olek  
Assistant Professor  
School of Civil Engineering  
Purdue University  
West Lafayette, IN

Session Co-Chairman:  Houssam A. Toutanji  
Assistant Professor  
Department of Civil Engineering  
University of Puerto Rico  
Mayagüez, PR

Introduction  
9:00  
Jan Olek, Assistant Professor, School of Civil Engineering, Purdue University, West Lafayette, IN

Performance Criteria for Durable Concrete Repairs  
9:05  
Randall W. Poston, Principal, Whitlock Dalrymple Poston & Associates, Inc., Manassas, VA; James E. McDonald, Research Civil Engineer, Concrete Technology Division, Structures Laboratory, U. S. Army Engineer Waterways Experiment Station, Vicksburg, MS; and Alexander M. Vaysburd, Director of Research and Development, Structural Preservation Systems, Inc., Baltimore, MD

Field Installation of Sacrificial Anode Cathodic Protection System on Bridge Deck  
9:20  
Mohamad A. Nagi, Research Engineer, and David A. Whiting, Senior Principal Engineer, Construction Technology Laboratories, Inc., Skokie, IL; and John P. Broomfield, Corrosion Consultant, West Wimbledon, London, England, UK

continued
Bridge Concrete Columns Confined by Fiber Reinforced Plastic Tubes
Michael S. Samaan, Graduate Student, and Amir Mirmiran, Assistant Professor, Department of Civil and Environmental Engineering, University of Central Florida, Orlando, FL; and Mohsen A. Shahawy, Chief Structural Analyst, Structures Research Laboratory, Florida Department of Transportation, Tallahassee, FL

Microstructure and Mechanism of Bond in Masonry
David A. Lange, Assistant Professor; Harvey D. DeFord, Graduate Research Assistant; and Asif Ahmed, Graduate Research Assistant, Department of Civil Engineering, University of Illinois, Urbana, IL

Ductility of Fibrous Reinforced Concrete Beams
P. N. Balaguru, Professor, and Andrew J. Foden, Graduate Student, Department of Civil and Environmental Engineering, Rutgers, The State University of New Jersey, Piscataway, NJ

Progress of Experimental Studies on High-Strength Concrete Structural Components at the University of Southern California
Yan Xiao, Assistant Professor, Department of Civil Engineering, University of Southern California, Los Angeles, CA

Confinement Effect of Double Head Studs in Concrete Columns
Walter H. Dilger, Professor, and Amin Ghali, Professor, Department of Civil Engineering, University of Calgary, Calgary, Alberta

continued
TECHNICAL SESSION

MONDAY, NOVEMBER 6
9:00 AM - NOON
ROOM: AUDITORIUM
HOTEL: RADISSON

RESEARCH IN PROGRESS

Sponsored by Committee 123

**Durability and Bond of AFRP an CFRP**

Rajan Sen, Professor, Department of Civil and
Environmental Engineering, University of South
Florida, Tampa, FL; Mohsen A. Shahawy, Chief
Structural Analyst, Florida Department of
Transportation, Tallahassee, FL; Jose Rosas, Structural
Engineer, David Volkert & Associates, Tampa, FL;
and Satya Sukumar, Structural Engineer, American
Engineering Co., Land O'Lakes, FL

**Pretensioned Elements**

10:50

**Linear Correlation of Bond Strength and**
**Contact Electrical Resistivity Between Steel**
**Rebar and Concrete**

Xuli Fu, Graduate Student, and Deborah D. L.
Chung, Niagara Mohawk Professor, Composite
Materials Research Laboratory, State University of
New York at Buffalo, Buffalo, NY

**Bond Strength of Reinforced Sulfur**
**Concrete**

Mujahid T. Ali, Senior Design/Research Engineer, and
Tasnim Uddin, President, Tasnim Uddin & Associates
International, Inc., Miami, FL

**The Effect of Controlling the Mixing Process on**
**Ready-Mix Concrete Trucks on Concrete Production**
**Variability**

Daniel Assh, President; Cristine Lemay, Researcher;
and Annie Roy, Researcher, D. S. S. Automation
Systems, Hamel Ouest, Québec; Michel Guillot,
Professor, Department of Mechanical Engineering,
Université Laval, Sainte-Foy, Québec; and Peter R.
Ramsay, Technology Advisor, Toronto
Construction Association, Mississauga, Ontario

**New Developments in Acrylate Modified**
**Epoxy-Amine Cure Coatings**

C. Richard Costin, Technical Manager, and Michael
A. Bailey, Senior Application Chemist, Specialty
Monomers & Oligomers, Sartomer Co., Inc., Exton, PA

continued
MONDAY, NOVEMBER 6       ROOM: WESTMOUNT
9:00 AM - NOON           HOTEL: HILTON

HIGH-STRENGTH CONCRETE: PART II

Sponsored by Committee 363 and Concrete Canada

Session Chairman: Yves Delagrave
Network Manager
Department of Civil Engineering
Concrete Canada
Université de Sherbrooke
Sherbrooke, Québec

Introduction
Yves Delagrave, Network Manager, Department of Civil Engineering, Concrete Canada, Université de Sherbrooke, Sherbrooke, Québec

Transmission of High-Strength Column Loads Through Normal Strength Floors
Scott D. B. Alexander, Assistant Professor; Carlos E. Ospina, Graduate Student; and James G. MacGregor, Professor Emeritus, Department of Civil Engineering, University of Alberta, Edmonton, Alberta

Early-Age Temperature Developments in a High-Performance Concrete Viaduct
Mohamed Lachemi, Post-Doctoral Fellow; Michel Lessard, Research Engineer; and Pierre-Claude Aïtcin, Professor, Department of Civil Engineering, and Scientific Director, Concrete Canada, Université de Sherbrooke, Sherbrooke, Québec

Diffusion of Chloride Ions in High-Strength Mortars
Jacques Marchand, Assistant Professor; Anik Delagrave, Doctoral Candidate; and Michel Pigeon, Professor, Department of Civil Engineering, Université Laval, Sainte-Foy, Québec

continued
TECHNICAL SESSION

MONDAY, NOVEMBER 6  ROOM: WESTMOUNT
9:00 AM - NOON  HOTEL: HILTON

HIGH-STRENGTH CONCRETE: PART II

Sponsored by Committee 363 and Concrete Canada

continued

Five Year Monitoring of Creep and Shrinkage  10:50
in High-Performance Concrete Columns
Buquan Miao, Assistant Professor, Department of Civil
Engineering, University of Moncton, Moncton, New
Brunswick, and Pierre-Claude Aitcin, Professor,
Department of Civil Engineering, and Scientific
Director, Concrete Canada, Université de Sherbrooke,
Sherbrooke, Québec

In-Place Strength of High-Strength High-
Performance Concrete  11:20
F. Michael Bartlett, Assistant Professor,
Department of Civil Engineering, University
of Western Ontario, London, Ontario, and
James G. MacGregor, Professor Emeritus,
Department of Civil Engineering, University
of Alberta, Edmonton, Alberta
TECHNICAL SESSION

MONDAY, NOVEMBER 6       ROOM: MONT ROYAL
9:00 AM - NOON            HOTEL: HILTON

ASPECTS OF BLAST-RESISTANT DESIGN

Sponsored by Committee 370

Session Chairman: Theodor Krauthammer
Professor
Department of Civil and
Environmental Engineering
The Pennsylvania State
University
University Park, PA

Session Co-Chairman: Stanley C. Woodson
Research Structural Engineer
Structures Laboratory
U. S. Army Engineer
Waterways
Experiment Station
Vicksburg, MS

Introduction 9:00
Theodor Krauthammer, Professor, Department of Civil
and Environmental Engineering, The Pennsylvania
State University, University Park, PA

Hazards, Loading Environments, and 9:05
Design Philosophy
Kirk A. Marchand, Manager, Protective Structures,
Structural Engineering Department, Southwest
Research Institute, San Antonio, TX, and Theodor
Krauthammer, Professor, Department of Civil and
Environmental Engineering, The Pennsylvania State
University, University Park, PA

Computational and Simulation Capabilities 9:30
David W. Hyde, Research Structural Engineer,
Structures Laboratory, U. S. Army Engineer Waterways
Experiment Station, Vicksburg, MS

Structural Concrete Element Design 9:55
Paul M. LaHoud, Chief, Civil/Structures
Division, and William H. Zehrt, Structural
Engineer, Huntsville Division, U. S. Army
Corps of Engineers, Huntsville, AL

continued
ASPECTS OF BLAST-RESISTANT DESIGN

Sponsored by Committee 370

Blast-Resistant Design for Industrial Facilities
William L. Bounds, Principal Design Engineer, Department of Structural Engineering, Fluor Daniel, Inc., Sugar Land, TX, and Madhav G. Nene, Director, Department of Civil and Structural Engineering, Fluor Daniel, Inc., Irvine, CA

Blast-Resistant Closures
Timothy S. Blackburn, Manager, Design Group, Overly Manufacturing Co., Greensburg, PA, and David R. Coltharp, Research Physicist, Structures Laboratory, U. S. Army Engineer Waterways Experiment Station, Vicksburg, MS

In-Structure Shock and Content Survivability
William H. Gaube, Chief, Hardened Structures Design Section, Special Projects Branch, Engineering Division, Omaha District, U. S. Army Corps of Engineers, Omaha, NE

Overview, Assessment and Future Developments
Stanley C. Woodson, Research Structural Engineer, Structures Laboratory, U. S. Army Engineer Waterways, Experiment Station, Vicksburg, MS, and James E. Tancreto, Structural Engineer, Waterfront Structures Division, Shore Facilities Department, Naval Facilities Engineering Services Center, Port Hueneme, CA
MONDAY, NOVEMBER 6  ROOM: REGENCY A
9:00 AM - NOON  HOTEL: RADISSON

COMPOSITE AND HYBRID CONSTRUCTION:
APPLICATIONS, CODES AND RESEARCH, PART I

Sponsored by Committee 335

Session Chairman: Roberto T. Leon
Professor
School of Civil and
Environmental Engineering
Georgia Institute of
Technology
Atlanta, GA

Session Co-Chairman: Bahram M. Shahrooz
Associate Professor
Department of Civil and
Environmental Engineering
University of Cincinnati
Cincinnati, OH

Introduction  9:00
Roberto T. Leon, Professor, School of Civil and
Environmental Engineering, Georgia Institute of
Technology, Atlanta, GA

U. S. Design Codes for Composite Construction  9:05
Gregory G. Deierlein, Associate Professor, School
of Civil and Environmental Engineering, Cornell
University, Ithaca, NY, and Roberto T. Leon,
Professor, School of Civil and Environmental
Engineering, Georgia Institute of Technology,
Atlanta, GA

Behavior of CFT Column-WF Beam Moment
Connections Under Seismic Loading  9:30
James M. Ricles, Associate Professor; Le Wu Lu,
Professor; Took K. Sooi, Research Assistant; and
Garry W. Vermaas, Research Assistant,
Department of Civil Engineering, Lehigh
University, Bethlehem, PA

★ THEME SESSION  continued
TECHNICAL SESSION

MONDAY, NOVEMBER 6
9:00 AM - NOON

ROOM: REGENCY A

HOTEL: RADISSON

COMPOSITE AND HYBRID CONSTRUCTION:
APPLICATIONS, CODES AND RESEARCH, PART I

Sponsored by Committee 335

Development of Steel-Concrete Composites for Offshore Platforms
George C. Hoff, Senior Associate Engineer,
Mobil Research and Development/Offshore Engineering,
Dallas, TX

Mixed and Composite Design and Construction Projects in the Far East
Leslie E. Robertson, Director, Design and Construction, and Saw-Teen See, Managing Partner, Leslie E. Robertson Associates,
Consulting Structural Engineers, New York, NY; and Isao Kimura, Structural Engineer,
Nippon Steel Corp., Tokyo, Japan

Cyclic Response of Composite Coupling Beams
Bahram M. Shahrooz, Associate Professor;
Bingninan Gong, Research Assistant; and
Arnol J. Gillum, Research Assistant,
Department of Civil and Environmental Engineering, University of Cincinnati,
Cincinnati, OH

Performance of Composite SRC Column Buildings in Kobe, Japan Earthquake
Atarod Azizanamini, Associate Professor,
Department of Civil Engineering,
University of Nebraska-Lincoln, Lincoln, NE

★ THEME SESSION
EDUCATIONAL SESSION

MONDAY, NOVEMBER 6   ROOM: MONT ROYAL
                      2:00 PM - 5:00 PM   HOTEL: HILTON

THE ANALYSIS AND DESIGN OF MAT
FOUNDATIONS AND COMBINED FOOTINGS

Sponsored by Committee E705

Session Chairman:  David G. Kittridge
                   Principal Engineer
                   Boyle Engineering Corp.
                   Orlando, FL

Introduction  2:00
David G. Kittridge, Principal Engineer,
Boyle Engineering Corp., Orlando, FL

Geotechnical Background and Soil/
Foundation Interaction  2:10
Edward J. Ulrich, President, Ulrich
Engineers, Houston, TX

Classical Method Using NAVFAC DM-7.2  2:40
David G. Kittridge, Principal Engineer,
Boyle Engineering Corp., Orlando, FL

PBE12, A Privately Developed FEA  3:20
Bernardo Deschapelles, Principal, Molina,
Garcia & Associates, San Juan, PR

Mat Foundation Design Using a
Commercially Available Program   4:00
Javier F. Horvilleur, Vice President,
Houston, TX

Questions and Answers  4:45
NEW APPROACHES TO PARKING STRUCTURE
DESIGN AND CONSTRUCTION

Sponsored by Committee 362

Session Chairman: Carl A. Peterson
President
Carl Peterson and Associates, Inc.
Wilmette, IL

Synopsis of ACI 362 Guide on the Design of Durable Parking Structures
Carl A. Peterson, President, Carl Peterson and Associates, Inc., Wilmette, IL

2:00

Parking Structures for Theme Parks on Two Coasts
Anthony P. Chrest, Senior Vice President, Walker Parking Consultants/Engineers, Inc., Kalamazoo, MI

2:15

Parking Structures With Mixed Uses
Employing Mixed Materials
Thomas J. D’Arcy, President, The Consulting Engineers Group, Inc., San Antonio, TX

2:35

Performance and Durability of Various Parking Garage Structural Systems
James P. Donnelly, Senior Engineer, Wiss, Janney, Elstner Associates, Inc., Northbrook, IL

3:00

A New Material for Reducing Reinforcement Corrosion in Parking Structures
Yan Fu, Graduate Student, and Jian Ding, Graduate Student, Department of Civil Engineering, University of Ottawa, Ottawa, Ontario; and James J. Beaudoin, Research Officer, Materials Laboratory, Institute for Research in Construction, National Research Council, Ottawa, Ontario

3:20

continued
MONDAY, NOVEMBER 6
2:00 PM - 5:00 PM
ROOM: LASALLE
HOTEL: HILTON

NEW APPROACHES TO PARKING STRUCTURE
DESIGN AND CONSTRUCTION

Sponsored by Committee 362

continued

Design of Modern Parking Structures
Mohammad Iqbal, Corporate Chief Structural Engineer, and Richard Lansu, Elgin Chief Structural Engineer, Walker Parking Consultants/Engineers, Inc., Elgin, IL

RMA’s Expressway Parking Deck:
Specialized Design Meets Unique Challenges
Ronald W. Stehman, Director of Parking Services, HNTB Corp., Alexandria, VA, and John G. Burgan, Project Manager, HNTB Corp., Milwaukee, WI

What’s New in Parking Structure Design in Canada
Norman R. Webster, President, Read Jones Christoffersen, Calgary, Alberta

Bonded Post-Tensioning in Parking Structures
Keith W. Jacobson, Branch Engineer, VSL Corp., Raleigh, NC
MONDAY, NOVEMBER 6  ROOM: AUDITORIUM
2:00 PM - 5:00 PM  HOTEL: RADISSON

HIGH-STRENGTH CONCRETE: PART III

Sponsored by Committee 363 and Concrete Canada

Session Chairman:  Henry G. Russell
                   Engineering Consultant
                   Henry G. Russell, Inc.
                   Glenview, IL

Introduction  2:00
Henry G. Russell, Engineering Consultant,
Henry G. Russell, Inc., Glenview, IL

Application of Maturity Functions for
High-Strength Concrete
Roberto C. A. Pinto, Doctoral Candidate,
and Kenneth C. Hover, Professor, School
of Civil and Environmental Engineering,
Cornell University, Ithaca, NY

Development of Reactive Powder Concrete
Products in the United States Construction
Market
Edward F. O’Neil, Research Civil Engineer,
U. S. Army Engineer Waterways Experiment
Station, Vicksburg, MS; Scott K. Gilliland,
Project Engineer, HDR Engineering, Inc.,
Omaha, NE; and Christian E. Dauriac,
Materials Engineer, Scientific Division,
Bouygues S. A., St. Quentin en Yvelines,
France

The Effect of Elevated Temperatures on
the Behavior of Moisture in Normal and
High-Performance Concretes
Naysan Khoylou, Research Student, and
George L. England, Professor, Department
of Civil Engineering, Imperial College of
Science Technology and Medicine,
London, England, UK

continued
TECHNICAL SESSION

MONDAY, NOVEMBER 6  ROOM:  AUDITORIUM
2:00 PM - 5:00 PM  HOTEL:  RADISSON

HIGH-STRENGTH CONCRETE:  PART III

Sponsored by Committee 363 and Concrete Canada

continued

Effect of Binder Type and Curing on Early-Age Strength Development for High-Strength Concrete 3:25
R. Sri Ravindrarajah, Senior Lecturer, School of Civil Engineering, University of Technology at Sydney, Sydney, NSW, Australia

High-Strength Concrete Slabs Post-Tensioned with Unbonded Tendons 3:50
Bernard Espion, Lecturer, and Pierre Halleux, Professor, Department of Civil Engineering, Brussels Free University, Brussels, Belgium

Effect of High-Strength Concrete on Prestressed Frames 4:15
Yi-Lung Mo, Professor, and W. L. Hwang, Doctoral Candidate, Department of Civil Engineering, National Cheng Kung University, Tainan, Taiwan, ROC

Discussion 4:40
PART I: INNOVATIVE AND CONTROVERSIAL USES OF FLY ASH FOR MULTIPLE APPLICATIONS

Sponsored by Hot Topic Committee and Convention Committee

Session Chairman: Peter G. Snow
Director
Marketing/Technical Services
Western Aggregates, Inc.
Boulder, CO

Session Co-Chairman: Steven R. Close
Principal
JHC Consulting Engineers
Denver, CO

Introduction 2:00
Steven R. Close, Principal, JHC Consulting Engineers, Denver, CO

Overview 2:05
V. Mohan Malhotra, Head, Concrete Technology Section, Canada Centre for Mineral and Energy Technology, Ottawa, Ontario

Film "Fly Ash: Mining The Sky" 2:15
Natural Resources Canada

Questions and Answers 2:50
V. Mohan Malhotra, Head, Concrete Technology Section, Canada Centre for Mineral and Energy Technology, Ottawa, Ontario

continued

▲ HOT TOPIC
PART II: THE OKLAHOMA CITY TERRORIST BOMBING

Sponsored by Hot Topic Committee and Convention Committee

Session Chairman: W. Gene Corley
Vice President
Construction Technology Laboratories
Skokie, IL

Session Co-Chairman: Steven R. Close
Principal
JHC Consulting Engineers
Denver, CO

Introduction 3:10
Steven R. Close, Principal, JHC Consulting Engineers, Denver, CO

The Oklahoma City Bombing: Structural Failure Modes Observed On-site 3:15
Eve E. Hinman, Senior Staff Engineer, Failure Analysis Associates, Inc., Menlo Park, CA

Blast Resistance Effectiveness of Neighboring Structures 3:45

Structural Concrete Inside the Crime Scene 4:15
R. C. Cornforth, Structural Engineer, Cornforth Associates, Oklahoma City, OK

Retrospective and the Future 4:45
A group discussion.

△ HOT TOPIC
ACI PUBLICATIONS
ON SALE!

Stop by the ACI Publications display next to the convention registration area. See what ACI has available for sale. Purchase the technical publications that you need.

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Publications will be on sale during the registration hours (see Page 14). You may purchase your selection with cash, check, travelers checks, VISA, MasterCard, or use your membership line-of-credit and we’ll bill you. All publications are available on a first come first served basis so stop by early and purchase the publications you want!
EDUCATIONAL SESSION

TUESDAY, NOVEMBER 7  ROOM: WESTMOUNT
7:00 AM - 8:30 AM  HOTEL: HILTON

BREAKFAST TRAINING SESSION FOR ACI
COMMITTEE CHAIRS

Sponsored by Committee E903

Session Chair: Roger E. Wilson
Manager
Industry Programs
Portland Cement Association
Skokie, IL

Continental Breakfast for First 50 Attendees 7:00

How Can Your Committee be Involved in ACI
318-2001?

James R. Cagley
President
Cagley and Associates
Rockville, MD

Discussion 7:45

Mr. Cagley, chairman of ACI 318-2001, will present guidelines on how all ACI
committees can become involved with
ACI 318, particularly in the area of
assessing new technology.

Evaluation and Adjournment 8:20
TECHNICAL SESSION

TUESDAY, NOVEMBER 7
9:00 AM - NOON
ROOM: VERRIERE
HOTEL: RADISSON

DATABASES AND KNOWLEDGE SYSTEMS
FOR CONCRETE AND RELATED MATERIALS

Sponsored by Committee 126

Session Chairman: William F. Kepler
Civil Engineer
Materials Engineering and Research Laboratory,
U. S. Bureau of Reclamation
Denver, CO

Introduction 9:00
William F. Kepler, Civil Engineer,
Materials Engineering and Research Laboratory, U. S. Bureau of Reclamation,
Denver, CO

Concrete Process Control: Making the Most of Your Information 9:10
James M. Shilstone, Jr., President, The Shilstone Companies, Inc., Dallas, TX

The Use of Tabular Knowledge-Base Format in Knowledge Acquisition and Organization for Concrete Construction 9:35
Awad S. Hanna, Assistant Professor, The University of Wisconsin at Madison,
Madison, WI

Materials Databases for Aggregate Properties 10:00
Kurt F. von Fay, Civil Engineer, Materials Engineering and Research Laboratory, U. S. Bureau of Reclamation, Denver, CO

Barriers to Knowledge Transfer 10:25
David F. Schulz, Director, Infrastructure Technology Laboratory, Northwestern University, Evanston, IL

continued
TECHNICAL SESSION

TUESDAY, NOVEMBER 7
9:00 AM - NOON

ROOM: VERRIERE
HOTEL: RADISSON

DATABASES AND KNOWLEDGE SYSTEMS
FOR CONCRETE AND RELATED MATERIALS

Sponsored by Committee 126

continued

The Role of the Wholewide Web in Knowledge Distribution: A Case Study of the Infrastructure Technology Institute
Renee E. McHenry, Infrastructure Librarian, Infrastructure Technology Institute, Northwestern University, Evanston, IL

Concrete Knowledge-Based Systems in the Year 2005
Lawrence J. Kaetzel, Computer Specialist, and James R. Clifton, Leader of Inorganic Building Materials Group, Building Materials Division, National Institute of Standards and Technology, Gaithersburg, MD
TECHNICAL SESSION

TUESDAY, NOVEMBER 7
9:00 AM - NOON

ROOM: LASALLE
HOTEL: HILTON

INNOVATIVE LIGHTWEIGHT CONCRETE SYSTEMS:
PART I

Sponsored by Committee 213

Session Chairman: Theodore W. Bremner
Professor
Department of Civil Engineering
University of New Brunswick
Fredericton, New Brunswick

Introduction
9:00
Theodore W. Bremner, Professor, Department of Civil Engineering, University of New Brunswick, Fredericton, New Brunswick

Production of High-Performance, Modified Density Concrete for Severe Marine Environments
9:05
George C. Hoff, Senior Associate Engineer, Mobil Research and Development Corp., Dallas, TX; Rolf Wallum, Quality Control Coordinator, Hibernia Management and Development Co., Bull Arm, Newfoundland; and Roberto A. Nunez, Research and Development Engineer, Carolina Staylite Co., Salisbury, NC

Accommodation Mechanisms in Concrete Containing Fine Lightweight Aggregate
9:40
Thomas A. Holm, Vice President/Engineering Department, Solite Corp., Richmond, VA; Valentina F. Stepanova, Head of Laboratory, Materials Research Institute of Concrete and Reinforced Concrete, Moscow, Russia; and Theodore W. Bremner, Professor, Department of Civil Engineering, University of New Brunswick, Fredericton, New Brunswick

continued

★ THEME SESSION
TECHNICAL SESSION

TUESDAY, NOVEMBER 7
9:00 AM - NOON
ROOM: LASALLE
HOTEL: HILTON

INNOVATIVE LIGHTWEIGHT CONCRETE SYSTEMS:
PART 1

Sponsored by Committee 213

continued

The Achievable Strength and FG of Lightweight Aggregate Concrete
Tsong Chen, Professor; How-Gi Chen, Lecturer; and Kai-Zong Huang, Graduate Student, Department of Civil Engineering, National Chung-Hsing University, Taichung, Taiwan, ROC

Design and Construction of a Lightweight Prestressed Concrete Crane
Alberto Gomez-Rivas, Associate Professor, and Bryant B. Rogers, Student, Department of Engineering, University of Houston - Downtown, Houston, TX

Ultra-Lightweight Concrete for the Industrialized Construction of Modular Housing
Virgilio A. Ghio, Assistant Professor, and Guillermo Thenoux, Professor, Pontificia Universidad Catolica de Chile, Santiago, Chile

★ THEME SESSION
TECHNICAL SESSION

TUESDAY, NOVEMBER 7
9:00 AM - NOON

ROOM: LACHINE
HOTEL: HILTON

PREDICTING REMAINING SERVICE LIFE

Sponsored by Committee 365

Session Chairman: Paul C. Hoffman
Associate Professor
Department of Civil and
Environmental Engineering
Villanova University
Villanova, PA

Introduction 9:00
Paul C. Hoffman, Associate Professor,
Department of Civil and Environmental
Engineering, Villanova University,
Villanova, PA

Methods for Predicting the Remaining
Service Life of Concrete 9:05
James R. Clifton, Leader, Inorganic Building
Materials Group, National Institute of Standards
and Technology, Gaithersburg, MD

Estimating Service Life and Remaining
Service Life of Concrete Bridges in
Chloride-Laden Environments 9:30
Richard E. Weyers, Professor, Department of
Civil and Environmental Engineering, Virginia
Polytechnic Institute and State University,
Blacksburg, VA, and Paul C. Hoffman, Associate
Professor, Department of Civil and
Environmental Engineering, Villanova University,
Villanova, PA

Service Life of Danish Bridge Structures
Exposed to Chloride 9:55
Carsten F. Henriksen, Bridge Maintenance
Specialist; Vagn Johansen, Chief Consultant;
and Per Goltermann, Senior Structural
Engineer, RH & H Consult, Ramboll,
Hannemann & Hojlund A/S, Copenhagen,
Denmark

continued
TECHNICAL SESSION

TUESDAY, NOVEMBER 7
9:00 AM - NOON

ROOM: LACHINE
HOTEL: HILTON

PREDICTING REMAINING SERVICE LIFE

Sponsored by Committee 365

continued

In-Service Evaluation of Nuclear Power Plant Concrete Structures for Continued Service
Pranab K. Mukherjee, Senior Engineer, and Edward J. McCollm, Senior Engineer, Ontario Hydro Technologies, Toronto, Ontario; and Dan J. Naus, Senior Development Staff Member, and Charles B. Oland, Development Staff Member, Oak Ridge National Laboratory, Oak Ridge, TN

Service Life Prediction and its Application in Marine Structures
Samuel X. Yao, Project Engineer, and Ben C. Gerwick, Chairman, Ben C. Gerwick, Inc., San Francisco, CA; and David Ovadia, Director, and Arun Sudhakar, Civil Engineer, Pacific Gas and Electrical Co., San Francisco, CA

Service Life Prediction of Marine Structures
Steinar Helland, Vice President; Magne Maage, Professor; and Jan Erik Carlsen, Project Manager, Selmer a.s., Oslo, Norway

Prediction of Lifetime of Concrete on the Basis of Damage and Cracks Modelling
Leon Michnaevsky, Professor, Aerospace Academy of Ukraine, Institute of Advanced Materials and Technologies, Kiev, Ukraine
TECHNICAL SESSION

TUESDAY, NOVEMBER 7         ROOM: REGENCY A
9:00 AM - NOON                HOTEL: RADISSON

INNOVATIVE RESEARCH IN EARTHQUAKE
ENGINEERING

Sponsored by Committee 368

Session Chairman: T. Russell Gentry
Assistant Professor
Department of Civil Engineering
The Catholic University
of America
Washington, DC

Introduction 9:00
T. Russell Gentry, Assistant Professor,
Department of Civil Engineering, The
Catholic University of America,
Washington, DC

Experimental Study of the Behavior of
Wide Beam-Column Slab Subassemblies
Subjected to Lateral Earthquake Loading
James M. LaFave, Doctoral Candidate;
Carlos G. Quintero, Doctoral Candidate;
and James K. Wight, Professor, Department
of Civil Engineering, University of Michigan,
Ann Arbor, MI

Column Confinement with Welded
Reinforcement Grids 9:30
Murat Saatcioglu, Professor, and Mongi
Griba, Research Assistant, Department
of Civil Engineering, University of
Ottawa, Ottawa, Ontario

Seismic Performance of Reinforced High-
Strength Concrete Beam-Column
Connections 9:55
Sayed Attalla, Research Assistant, and
Mihran Agbabian, Professor Emeritus,
Department of Civil Engineering, University
of Southern California, Los Angeles, CA

continued

★ THEME SESSION

92
TECHNICAL SESSION

TUESDAY, NOVEMBER 7
9:00 AM - NOON
ROOM: REGENCY A
HOTEL: RADISSON

INNOVATIVE RESEARCH IN EARTHQUAKE ENGINEERING

Sponsored by Committee 368

continued

Retrofit of Non-Ductile Frames Using Precast Wall Panels
Robert J. Frosch, Graduate Research Assistant; Wanzhi Li, Graduate Research Assistant; Michael E. Kreger, Associate Professor; James O. Jirsa, Professor and Janet S. Cockrell, Centennial Chair in Engineering, Department of Civil Engineering, Phil M. Ferguson Structural Engineering Laboratory, The University of Texas at Austin, Austin, Texas

Displacement-Based Design of Structural Walls: Experimental Studies
John W. Wallace, Associate Professor, and John H. Thomsen IV, Research Associate, Department of Civil Engineering, Clarkson University, Potsdam, NY

Implications of Inplane Floor Flexibility on Seismic Design of Concrete Buildings
Sashi K. Kunnath, Assistant Professor, Department of Civil and Environmental Engineering, University of Central Florida, Orlando, FL and Nader Panahshahi, Assistant Professor, Department of Civil Engineering, Southern Illinois University at Edwardsville, Edwardsville, IL

★ THEME SESSION

93
CONTRACTORS' DAY

TUESDAY, NOVEMBER 7   ROOM:  REGENCY B
9:00 AM - NOON   HOTEL:  RADISSON

INNOVATIVE APPROACHES FOR CONTRACTORS TO EXPAND THEIR CUSTOMER BASE: PART I

Sponsored by the Construction Liaison Committee and the ACI Eastern Ontario and Québec Chapter

Session Chairman: Normand Tétreault
President
Soconex General Contractor, Inc.
Montréal, Québec

Introduction 9:00
Normand Tétreault, President, Soconex General Contractor, Inc., Montréal, Québec

Bidding System in France and New Approach with HPC Projects 9:05
Didier Brazillier, Department Manager, Services des grands travaux, Bourges Cedex, France

Contractor’s Viewpoint 9:40
Stéphane Roi, DALLA VERA, France

ISO 9000: Local Contractor Experience 10:05
Michel Biard, Director, Ciments Lavallée Ltd., Laval, Québec

Nonshrink Backfill (A 0,4 MPa CLSC) for Utility Trenches: Town of Montréal’s Experience 10:40
Gérald Pelletier, Technical Consultant, and Richard Morin, Civil Engineer, Department of Engineering Service, City of Montréal, Montréal, Québec; and Claude Lupien, Director, Department of Civil Engineering, Université de Sherbrooke, Sherbrooke, Québec

continued
CONTRACTORS’ DAY

TUESDAY, NOVEMBER 7  ROOM:  REGENCY B
9:00 AM - NOON  HOTEL:  RADISSON

INNOVATIVE APPROACHES FOR CONTRACTORS
TO EXPAND THEIR CUSTOMER BASE:  PART I

Sponsored by the Construction Liaison Committee and
the ACI Eastern Ontario and Québec Chapter

continued

Problems of Soil Excavation under a
Masonry Cathedral:  The Contractor’s
Viewpoint
Thomas Egli, Structural Engineer, Quinn,
Dressel and Associates, Montréal, Québec

CONTRACTORS’  ROOM:  WESTMOUNT
LUNCHEON  HOTEL:  HILTON

Time:  NOON - 2:00 PM
Topic:  "Toll Highway 407"
Speaker:  John M. Beck
          Canadian Highways
          International Corporation
          Mississauga, Ontario

Menu

Vegetable Beef Soup
Chicken Marsala
Parisienne Potatoes
Carrots and Yellow Squash in
Honey Butter
Chocolate Cheesecake
($20 U.S.)
EDUCATIONAL SESSION

TUESDAY, NOVEMBER 7
2:00 PM - 3:30 PM
ROOM: REGENCY A
HOTEL: RADISSON

EDUCATIONAL SESSION - PART I:
REALISTIC CAPSTONE DESIGN COURSES

Sponsored by Committee E702

Session Chairman: T. Michael Baseheart
Associate Professor
Department of Civil and
Environmental Engineering
University of Cincinnati
Cincinnati, OH

Introduction
T. Michael Baseheart, Associate
Professor, Department of Civil and
Environmental Engineering, University
of Cincinnati, Cincinnati, OH

Multidiscipline Within Civil
Engineering
Mohammad R. Ehsani, Associate Professor,
Department of Civil Engineering,
University of Arizona, Tucson, AZ

Construction Project
David W. Johnston, Professor, Department
of Civil Engineering, North Carolina State
University, Raleigh, NC

Multi-Semester Project
Donald E. Milks, Professor, Department
of Civil Engineering, Ohio Northern
University, Ada, OH

Structural Project
Warner T. Clark, Structural Engineer,
Alabama Concrete Association,
Montgomery, AL

2:00
2:05
2:25
2:45
3:05
EDUCATIONAL SESSION

TUESDAY, NOVEMBER 7  ROOM:  REGENCY A
3:30 PM - 5:30 PM  HOTEL:  RADISSON

EDUCATIONAL SESSION - PART II: REPORT WRITING

Sponsored by Committee E702

Session Chairman:  Luke M. Snell
Professor
Department of Construction
Southern Illinois University at Edwardsville
Edwardsville, IL

Session Co-Chairman:  Robert P. Barnett
President, Bob Barnett, P.E.
Cropwell, AL

Introduction
Luke M. Snell, Professor, Department of Construction, Southern Illinois University at Edwardsville, Edwardsville, IL

Take a Tip From the Poets: Writing a Readable Report
Shirley L. Brander, Vice President, and Merle E. Brander, President, Brander Construction Technology, Inc., Green Bay, WI

What Happens When Mother Reads Your Field Reports?
Robert P. Barnett, President, Bob Barnett, P. E., Cropwell, AL

Role Playing in the Classroom to Develop Report Writing Skills
Luke M. Snell, Professor, Department of Construction, Southern Illinois University at Edwardsville, Edwardsville, IL

Getting Published: What the Editor is Looking For
William J. Semioili, Editor/Associate Publisher, Concrete International, American Concrete Institute, Detroit, MI

Closing Comments
Robert P. Barnett, President, Bob Barnett, P. E., Cropwell, AL
TECHNICAL SESSION

TUESDAY, NOVEMBER 7  ROOM: AUDITORIUM
2:00 PM - 5:25 PM  HOTEL: RADISSON

OPEN PAPER SESSION

Sponsored by TAC

Session Chairman:  T. Russell Gentry
                    Assistant Professor
                    Department of Civil Engineering
                    The Catholic University
                    of America
                    Washington, DC

Is Your Precast Concrete Facade Safe?  2:00
Repair of Precast Concrete Facade
Panels and Their Connections
Predrag L. Popovic, Principal, Wiss, Janney,
Elstner Associates, Inc., Northbrook, IL

Short Duration Tests for the Quick Assessment
of the Moisture Accumulation Risk in Concrete
Structures
Kazumasa Watanabe, Research Director;
Ilya Shligersky, Research Fellow; and
Yasunobu Ashie, Research Engineer, Fire Safety
Division, Building Research Institute, Tsukuba, Japan

Punching Shear of Reinforced and Prestressed
Concrete Flat Slabs  2:40
N. John Gardner, Professor, Department of Civil
Engineering, University of Ottawa, Ottawa, Ontario,

Sulfur Polymer Concrete Goes Global  3:00
Alan H. Vroom, President, Sulfurcrete Products,
Inc., Calgary, Alberta

Packing of Aggregates: An Alternative Tool
to Determine the Optimal Aggregate Mix  3:20
Per Goltermann, Senior Structural Engineer,
G. M. Idorn Consult A/S, Virum, Denmark

continued
TECHNICAL SESSION

TUESDAY, NOVEMBER 7
2:00 PM - 5:25 PM
ROOM: AUDITORIUM
HOTEL: RADISSON

OPEN PAPER SESSION

Sponsored by TAC

continued

Microstructural and Mechanical Effects of Latex, Methylcellulose, and Silica Fume on Carbon Fiber Reinforced Cement
Pu-Woei Chen, Graduate Research Assistant; Xuli Fu, Graduate Research Assistant; and Deborah D. L. Chung, Niagara Mohawk Professor, Composite Materials Research Laboratory, State University of New York at Buffalo, Buffalo, NY

Bond and Development Length in Prestressed Concrete Piles
Nur Yazdani, Professor, Department of Civil Engineering, Florida A&M University, Tallahassee, FL, and Jacques Registe, Structural Engineer, JMI Engineering, Tallahassee, FL

Bond Strength of Reinforced Sulfur Concrete
Mujahid T. Ali, Senior Design/Research Engineer, and Tasmin Uddin, President, Tasmin Uddin & Associates, Miami, FL

The Effect of Curing Temperature on the Strength and Performance Properties of Concrete
Joseph G. Cabrera, Professor, and B. A. Gaafar, Department of Civil Engineering, University of Leeds, Leeds, England, UK

A Study on the Earthquake Response of Liquid Storage Tanks Including Hydrodynamic and Soil Interaction Effects
Hideaki Nakamura; Sumio Hamada, Professor; and Shingo Morikawa, Department of Civil Engineering, Faculty of Engineering, Yamaguchi University, Ube, Japan

99
TECHNICAL SESSION

TUESDAY, NOVEMBER 7
2:00 PM - 5:00 PM
ROOM: CARTIER A
HOTEL: RADISSON

DESIGN IN REGIONS OF LOW AND MODERATE SEISMICITY

Sponsored by Committee 368

Session Chairman: Murat Saatcioglu
Professor
Department of Civil Engineering
University of Ottawa
Ottawa, Ontario

Introduction
Murat Saatcioglu, Professor, Department of Civil Engineering, University of Ottawa, Ottawa, Ontario

Moderate Seismic Zone Design of Reinforced Concrete Structures: U. S. Practice
S. K. Ghosh, Director, Engineering Services Codes and Standards, Portland Cement Association, Skokie, IL

Canadian Practice in Moderate Seismic Zones
Denis Mitchell, Professor, Department of Civil Engineering and Applied Mechanics, McGill University, Montréal, Québec

Moderate Seismic Zone Requirements for Reinforced Concrete Buildings
Luis E. Garcia, Civil Engineer, Proyectos Y. Disenos Ltd., Bogota, Colombia

Seismic Resistance of Horizontal Joint Connections in Precast Shearwalls
Arturo E. Schultz, Research Structural Engineer, National Institute of Standards and Technology, Gaithersburg, MD

continued
TECHNICAL SESSION

TUESDAY, NOVEMBER 7  ROOM:  CARTIER A
2:00 PM - 5:00 PM  HOTEL:  RADISSON

DESIGN IN REGIONS OF LOW AND MODERATE SEISMICITY

Sponsored by Committee 368

continued

Seismic Performance and Retrofit of Nonductile Concrete Frame Structures
Yahya Kurama, Graduate Research Assistant;
Stephen Pessiki, Assistant Professor; and
Steven Snyder, Associate Professor,
Department of Civil and Environmental Engineering, Lehigh University, Bethlehem, PA

Advantages on the Application of a Pendular Base Isolation System on Concrete Structures
Federico Garza-Tamez, Director, GT Implementacion Antisismica, Monterrey, Mexico

Seismic Rehabilitation of a Historic Nonductile Soft Story Concrete Structure Using Fluid Viscous Dampers
H. Kit Miyamoto, Chief Engineer, Marr Shaffer & Associates, Sacramento, CA, and
Roger E. Scholl, President, Counter Quake Corp., Redwood City, CA
CONTRACTORS' DAY

TUESDAY, NOVEMBER 7        ROOM:    REGENCY B
2:00 PM - 5:00 PM            HOTEL:    RADISSON

INNOVATIVE APPROACHES FOR CONTRACTORS
TO EXPAND THEIR CUSTOMER BASE: PART II

Sponsored by the Construction Liaison Committee
and the ACI Eastern Ontario and Québec Chapter

Session Chairman: Normand Têtreault
President
Soconex General Contractor, Inc.
Montréal, Québec

Introduction
Normand Têtreault, President, Soconex
General Contractor, Inc., Montréal, Québec

Nonconventional Bridge Rehabilitation Projects in Belgium
Robert Degeimbre, Director, Université
de Liège, Liège, Belgium

Numerous and Innovative Potential Application for RCC
Claude Gou, Project Manager, DESSAU,
International Ltd., Montréal, Québec

Markets in Development: China, Hong Kong, Taiwan and Singapore
Pierre R. Turcotte, Professor, Administration
Faculty, Université de Sherbrooke, Sherbrooke, Québec

Negotiation of Overseas Contracts
David R. Hamilton, Vice President, DESSAU,
Ltd., Montréal, Québec

Demolition and Recycling of Concrete: Latest Tools
Yvon Cloutier, Sales Director, Pro-Quip,
Ancienne-Lorette, Québec

2:00
2:05
2:40
3:15
3:50
4:25
CA QuickSearch delivers coverage of international literature, reporting developments in concrete technology as in the bimonthly periodical Concrete Abstracts. The CD-ROM covers thirteen years (1982-1994) of international literature. Each year the CD-ROM is updated to include an additional year of literature. The annual subscription service offers each current issue on floppy disk coinciding with the print publication. The search software is easy to use with context-sensitive online Help designed for first-time users.

Each article, report, or book covered is assigned an abstract number and includes the document title, original language of publication (if other than English), keywords, bibliographic information, abstract, and abstract credit. Each floppy disk issue contains 250 abstracts. The 13-Year CD-ROM offers instant reference to 20,000 documents.

Call ACI Member Services Department at (313) 532-2600. Demo disks are available for $25, which will be credited toward the purchase of any CA QuickSearch package.
TECHNICAL SESSION

TUESDAY, NOVEMBER 7
2:00 PM - 5:00 PM
ROOM: VERRIERE
HOTEL: RADISSON

INNOVATIVE LIGHTWEIGHT CONCRETE SYSTEMS:
PART II

Sponsored by Committee 213

Session Chairman: Theodore W. Bremner
Professor
Department of Civil Engineering
University of New Brunswick
Fredericton, New Brunswick

Introduction
Theodore W. Bremner, Professor,
Department of Civil Engineering,
University of New Brunswick,
Fredericton, New Brunswick

2:00

By-Product Lightweight Aggregates
Bruce W. Ramme, Operations Manager,
Port Washington Power Plant, Wisconsin
Electric Power Co., Port Washington,
WI; Tim Nechvatal, Vice President,
Minergy Corp., Milwaukee, WI; and
Taran R. Naik, Director, and Henry
J. Kolbeck, Assistant Director, Centre
For By-Product Utilization, University
of Wisconsin, Milwaukee, WI

2:05

A Novel High-Performance Lightweight
Concrete
Ping Xie, Graduate Student, and Ping Gu,
Graduate Student, Department of Civil
Engineering, University of Ottawa, Ottawa,
Ontario; and James J. Beaudoin, Research
Engineer, Institute for Research in
Construction, National Research Council,
Ottawa, Ontario

2:45

continued

★ THEME SESSION

104
TECHNICAL SESSION

TUESDAY, NOVEMBER 7
2:00 PM - 5:00 PM

ROOM: VERRIERE
HOTEL: RADISSON

INNOVATIVE LIGHTWEIGHT CONCRETE SYSTEMS:
PART II

Sponsored by Committee 213

Lightweight Aggregates: More From Thermal Power Plant Bottom Ash
Irina L. Kondratova, Research Assistant,
Department of Civil Engineering, University
of New Brunswick, Fredericton, New
Brunswick; Lev N. Gorchakov, Director,
Togliatti Power Plant, Togliatty, Russia;
and Victor P. Petrov, Head, Lightweight
Aggregate Production Laboratory, Samara,
Russia

3:25

Durability of Reinforced Concrete with Natural Porous Aggregates
G. Nersesian Nikita, Chief, Department of Corrosion, Armenian Earthquake Engineering Research Institute, Yerevan, Republic of Armenia

4:05

★ THEME SESSION
TUESDAY, NOVEMBER 7  
7:30 PM - 10:00 PM
ROOM: AUDITORIUM  
HOTEL: RADISSON

INDUSTRIAL SUPPORT OF CONCRETE RESEARCH: 
DOES IT OR SHOULD IT EXIST?

Sponsored by Committee 123

Session Moderator: Jan Olek  
Assistant Professor  
School of Civil Engineering  
Purdue University  
West Lafayette, IN

Co-Moderator: David C. Seagren  
Chief Engineer  
Charles Pankow Builders, Ltd.  
Altadena, CA

Introduction  
7:30
Jan Olek, Assistant Professor, School of Civil 
Engineering, Purdue University, West Lafayette, IN

Practical View of Industry Involvement  
7:40
George C. Hoff, Senior Associate Engineer, Mobil 
Research and Development/Offshore Engineering, 
Dallas, TX

Contractor's View  
7:50
Thomas D. Verti, Vice President, Charles Pankow 
Builders, Ltd., Altadena, CA

The Canadian Perspective on Industrial  
8:00
Support for Concrete Research
Yves Delagrange, Network Manager, Department of 
Civil Engineering, Concrete Canada, Université de 
Sherbrooke, Sherbrooke, Québec

Educator's View  
8:10
Herman Yost, Director of Industrial Programs, 
National Science Foundation Center for Science and 
Technology of Advanced Cement-Based Materials, 
Department of Civil Engineering, Northwestern 
University, Evanston, IL

A Washington D.C. Perspective  
8:20
William H. Plenge, Director, Washington, 
D.C. Operation, American Concrete Institute, 
Pasadena, MD

Discussion  
8:30
ACI Concrete Research and Education Foundation

A nonprofit organization formed within ACI which receives, administers and expends funds for educational research and scientific purposes. Three separate councils under ConREF include:

Concrete Research Council (CRC) - identifies research needs and provides funding and technical support to researchers.

International Joints and Bearings Research Council (IJBRC) - advances the knowledge of joints and bearing systems by identifying and encouraging research and development investigations.

Scholarship Council - administers twenty-eight graduate/undergraduate scholarships.

Your financial support of ConREF to provide funds for the Foundation is encouraged and is tax-deductible to the full extent of U.S. law. Contributions may be made to ConREF or to individual councils by sending your check to ConREF, P.O. Box 19150, Detroit, MI 48219.
GENERAL SESSION

WEDNESDAY, NOVEMBER 8
10:00 AM - 1:00 PM
ROOM: MONT ROYAL
HOTEL: HILTON

GENERAL SESSION

Session Chairman: Marc A. Charlebois
Vice President
Marketing and Technical Services
Anti-Hydro Canada, Inc.
St. Laurent, Québec

Welcome to Montréal
Marc A. Charlebois, Vice President, Marketing and Technical Services, Anti-Hydro Canada, Inc., St. Laurent, Québec

Phil M. Ferguson Lecture
"Bring Me Someone Who Has Fallen Off a Roof"
Mete A. Sozen, Kettelhut Distinguished Professor of Structural Engineering, Purdue University, West Lafayette, IN

Certificates of Appreciation

Introduction of Officers of International Associations

Introduction of International Visitors

Recognition of Chapter Officers Present

Capital Campaign Report

Recognition of Past Presidents Present

continued
Keynote Address
"Creativity and Innovation"

Gaétan Morency is Vice-President of Planning and Development at Cirque du Soleil, an enterprise whose annual turnover has grown in ten years from $1.7 to $100 million in reinventing one of the oldest forms of live entertainment, the circus.

Creativity and innovation are the very essence of the culture of Cirque du Soleil and Mr. Morency will share with us what they have learned in trying to preserve that culture while becoming a large-scale organization.

The creativity and innovation reflected in the end product of an organization are not the result of random factors. They are embodied in the manner in which power is distributed throughout the business and in the relationships that exist between its pools of expertise. In addition, this must employ creative engineering to tap into their multi-talented employees. In order to achieve this the leader must empower them to come forward.

Closing Remarks
Now Available...

The NEW ACI 318
BUILDING CODE

The new ACI 318-95, Building Code Requirements for Structural Concrete and Commentary, provides engineers and designers with a wealth of information that cannot be found elsewhere.

All Code chapters have been updated. The most notable change in the new Code is that references to "reinforced concrete" have been changed to "structural concrete". This modernizes the Code and reflects changes in the state-of-the-art.

Chapter 16 titled Precast Concrete has been rewritten to provide detailed requirements for structural integrity. Also, new Chapter 22 has been created which contains the ACI 318.1 Building Code Requirements for Structural Plain Concrete.

Additional Major changes include: expanded guidance for slender columns, new provisions for torsional design of reinforced and prestressed concrete, a simplified equation for development length of deformed bars and deformed wires in tension, and an expanded chapter for precast concrete. Included are contractor responsibilities for developing shoring and reshoring plans. Two new appendixes are introduced. The first concerns unified design provisions for reinforced and prestressed concrete flexural and compression members; the second specifies an set of new strength reduction factors compatible with the ASCE 7 load factor combinations.

Throughout the Code the use of permissive language has been minimized. The relation of the ACI 318-95 Code to the legally adopted general building code is clarified.

The combination of the Code and Commentary under one cover provides an easy to use format. The Commentary presents background details, intent of various sections and suggestions for carrying out code requirements. Both are printed in parallel columns, with the Commentary sections adjacent to the corresponding Code sections.

As the world's most sought after and used structural design code, you cannot afford to be without your own individual copy.

Order your copy at the publication sales table in the convention registration area or call in your order to the ACI Member Services Department, (313) 532-2600.

ACI Building Code Requirements for Structural Concrete and Commentary
1995, soft cover, 369 pages
$92.75 (ACI members $51.25)
Available November 7, 1995
TECHNICAL SESSION

WEDNESDAY, NOVEMBER 8
2:00 PM - 5:00 PM
ROOM: AUDITORIUM
HOTEL: RADISSON

PROPORTIONING CONCRETE USING UNUSUAL
AND INNOVATIVE MATERIALS AND METHODS

Sponsored by Committee 211

Session Chairman: Robert S. Jenkins
Corporate Materials Consultant
Law Engineering, Inc.
Atlanta, GA

Introduction
Robert S. Jenkins, Corporate Materials
Consultant, Law Engineering, Inc., Atlanta, GA

Proportioning Concrete by Computer
Kenneth W. Day, Director, Concrete Advice Pty
Ltd., Croydon, Victoria, Australia

Novelties in Computerization of Concrete
Proportioning
Sandor Popovics, Professor, Department of Civil
and Architectural Engineering, Drexel University,
Philadelphia, PA, and John S. Popovics,
Assistant Research Professor, Center QEFIP,
Northwestern University, Evanston, IL

Concrete Mixtures Using Treated-Ash-Pellet
Aggregates: Proportioning Considerations
and Mixture Properties
Terry L. Viness, Senior Engineer, Law
Engineering, Inc., Atlanta, GA

Concrete Mixture Used in Ultra Thin
Overlay/Inlay Applications
James E. Lunsford, Marketing Services Manager,
Signal Mountain Cement Co., Chattanooga, TN

continued

★ THEME SESSION
WEDNESDAY, NOVEMBER 8  ROOM: AUDITORIUM
2:00 PM - 5:00 PM  HOTEL: RADISSON

PROPORTIONING CONCRETE USING UNUSUAL AND INNOVATIVE MATERIALS AND METHODS

Sponsored by Committee 211

continued

Designing a Low-Shrink Concrete Backfill for a Tunnel Steel Liner Water Main
Nausherwan Hasan, Consulting Engineer, Raytheon Infrastructure Services, Inc., New York, NY

Innovative Approach in Mixture Proportioning Thanks to Mathematical Modeling and Computer Technology
François de Larrard, Head, Concrete Mix-Design and Rheology Section, Laboratoire Central des Ponts et Chaussées, Paris, France

Proportioning Normal Concrete Mixes for Durability
P. A. M. Basheer, Lecturer in Structures and Materials; Graeme Herderson, Research Student; and Adrian E. Long, Professor, Department of Civil Engineering, The Queen’s University of Belfast, Belfast, Northern Ireland, UK

"SmartPlant": An Expert System for On-Line Process Control
James M. Shilstone, Jr., President, The Shilstone Companies, Inc., Dallas, TX

★ THEME SESSION
TECHNICAL SESSION

WEDNESDAY, NOVEMBER 8
2:00 PM - 5:00 PM
ROOM: REGENCY C
HOTEL: RADISSON

INNOVATIVE APPLICATIONS WITH
SHRINKAGE-COMPENSATING CONCRETE

Sponsored by Committee 223

Session Chairman: Henry G. Russell
Engineering Consultant
Henry G. Russell, Inc.
Glenview, IL

Session Co-Chairman: Robert J. Gulyas
Manager
Sales/Marketing -
Technical Support
Construction Products
Division
Master Builders, Inc.
Cleveland, OH

Introduction  2:00
Robert J. Gulyas, Manager, Sales/Marketing -
Technical Support, Construction
Products Division, Master Builders, Inc.,
Cleveland, OH

Airfield Taxiway Construction Using
Fibrous Concrete with Shrinkage-
Compensating Cement  2:05
Stanley M. Herrin, Manager, Airports
Department, Crawford, Murphy & Tilly,
Inc., Springfield, IL

Architectural Shrinkage-Compensating
Concrete  2:35
Edward H. Rubin, Senior Consultant,
CTS Construction Materials Consulting
Group, Inc., Cypress, CA

continued

★ THEME SESSION
TECHNICAL SESSION

WEDNESDAY, NOVEMBER 8  ROOM: REGENCY C
2:00 PM - 5:00 PM  HOTEL: RADISSON

INNOVATIVE APPLICATIONS WITH
SHRINKAGE-COMPENSATING CONCRETE

Sponsored by Committee 223

Bridge Decks: Wisconsin DOT Experience and Practice
Gerald H. Anderson, Chief Structural
Design Engineer, Wisconsin Department of Transportation, Madison, WI

Utilizing Type K Cement in Waste Containment Structures
John W. Baker, Head, Department of
Civil Engineering, Martin Marietta
Energy Systems, Oak Ridge, TN

Atlanta Bonded Warehouse – Minimizing Parking Lot Joints, Cracks, and Curling
Jerry A. Holland, Structural Engineering Consultant, Lockwood Greene Engineers, Atlanta, GA

Atlanta Bonded Warehouse – Minimizing Parking Lot Joints, Cracks, and Curling
Jerry A. Holland, Structural Engineering Consultant, Lockwood Greene Engineers, Atlanta, GA

Comparative Testing Procedures for Sulfate Resistance with Type K Cement
Robert J. Gulyas, Manager, Sales/Marketing and Technical Support, Construction Products Division, Master Builders, Inc., Cleveland, OH

★ THEME SESSION
TECHNICAL SESSION

WEDNESDAY, NOVEMBER 8
2:00 PM - 5:00 PM

ROOM: REGENCY A
HOTEL: RADISSON

COMPOSITE AND HYBRID CONSTRUCTION:
APPLICATIONS, CODES AND RESEARCH, PART II

Sponsored by Committee 335

Session Chairman: Gajanan M. Sabnis
Professor
Department of Civil Engineering
Howard University
Washington, DC

Session Co-Chairman: Arturo E. Schultz
Research Structural Engineer
Building and Fire Research Laboratory
National Institute of Standards and Technology
Gaithersburg, MD

Introduction 2:00
Gajanan M. Sabnis, Professor, Department of Civil Engineering, Howard University, Washington, DC

Development and Usage of Composite and Hybrid Building Structures in Japan 2:05
Hiroyuki Yamanouchi, Director, Department of Structural Engineering, and Isao Nishiyama, Coordinator for International Research Cooperation, Building Research Institute, Tsukuba, Japan; and Jun Kobayashi, Senior Research Engineer, Taisei Corp., Tokyo, Japan, and Takahiro Kei, Chief Researcher, Takenaka Corp., Tokyo, Japan

★ THEME SESSION

continued
TECHNICAL SESSION

WEDNESDAY, NOVEMBER 8
2:00 PM - 5:00 PM

ROOM: REGENCY A
HOTEL: RADISSON

COMPOSITE AND HYBRID CONSTRUCTION:
APPLICATIONS, CODES AND RESEARCH, PART II

Sponsored by Committee 335

continued

Composite Construction: A Review of Current Pacific Rim Projects
Ron Klemencic, Vice President, Skilling Ward Magnusson Barkshire Inc., Seattle, WA

Composite Construction in Underground Structures in Barcelona, Spain
Lawrence G. Griffis, Vice President, Walter P. Moore Associates, Houston, TX

Seismic Resistance of Composite Structures in European Practice
Amr S. Elnashai, Professor, Engineering Seismology and Earthquake Engineering Section, Imperial College, London, England, UK

Puerta de Europa Twin Leaning Towers
Monica V. Svojsik, Structural Engineer, and Richard Zottola, Structural Engineer, Leslie E. Robertson Associates, Consulting Structural Engineers, New York, NY

U.S.-Japan Cooperative Research Program on Composite and Hybrid Structures
Subhash C. Goel, Professor, Department of Civil and Environmental Engineering, University of Michigan, Ann Arbor, MI

★ THEME SESSION
WEDNESDAY, NOVEMBER 8       ROOM: VERRIERE
2:00 PM - 5:00 PM       HOTEL: RADISSON

FIELD PERFORMANCE OF FIBER REINFORCED
CONCRETE STRUCTURES OVER 10 YEARS OLD

Sponsored by Committee 544

Session Chairman: Venkataswamy Ramakrishnan
Professor
Department of Civil Engineering
South Dakota School of Mines and Technology
Rapid City, SD

Introduction
Venkataswamy Ramakrishnan, Professor, Department of Civil Engineering, South Dakota School of Mines and Technology, Rapid City, SD

Performance of a Thin SFRC Lining on an Embankment
Gary R. Mass, Consulting Concrete Engineer, Littleton, CO

Innovative Industrial Application of SFRC: SFRC: A Perspective After 10 Years
Lloyd E. Hackman, President, and Mark R. Farrell, Marketing Manager, Ribbon Technology Corp., Gahanna, OH

Polypropylene Fibers Have a Positive Long-Term Track Record
Robert C. Zellers, Executive Vice President, FORTA Corp., Grove City, PA

Field Performance of GFRC: Buildings 10 - 20 Years Old
Hiram P. Ball, Jr., President, Ball Consulting Ltd., Ambridge, PA

continued
FIELD PERFORMANCE OF FIBER REINFORCED
CONCRETE STRUCTURES OVER 10 YEARS OLD

Sponsored by Committee 544

continued

Exterior Concrete Fabric-Formed
Structures Reinforced Internally
and/or Externally with Various
Synthetic Fibers
George O. Bergemann, Vice President,
Construction Techniques, Inc., Richmond,
VA, and Kevin L. Slattum, Senior Product
Specialist, Fibers Division, Allied
Signal, Inc., Petersburg, VA

Steel Fiber Concrete in Marine
Environments
Peter C. Tatnall, Product Manager,
Bekaert Steel Wire Corp., Marietta, GA

Performance of Steel Fiber Reinforced
Shotcrete Repairs to Berth Faces at the
Port of Saint John
Dudley R. Morgan, Chief Materials
Engineer, AGRA Earth & Environmental
Ltd., Burnaby, British Columbia;
Paul J. Gilbride, Manager, Maintenance
Department, Saint John Port Corp., Saint
John, New Brunswick; and Theodore W.
Bremner, Professor, Department of Civil
Engineering, University of New Brunswick,
Fredericton, New Brunswick
WEDNESDAY, NOVEMBER 8  
2:00 PM - 5:00 PM  
ROOM: REGENCY B  
HOTEL: RADISSON

INNOVATIVE CONCRETE: PART I

Sponsored by the ACI Eastern Ontario and Québec Chapter

Session Chairman:  
Michel Pigeon  
Director  
Interuniversity Research Centre on Concrete, Université Laval, Ste-Foy, Québec

Introduction  
Michel Pigeon, Director, Interuniversity Research Centre on Concrete, Université Laval, Ste-Foy, Québec  
2:00

Conversion of the Olympic Velodrome to the Biodome: The Challenge  
Gilles Michon, Director of Construction Projects, Régie des installations olympiques, Montréal, Québec  
2:05

First RCC Dam, Lake Robertson Project in Québec Quality Assurance of Air-Entrained RCC  
François Robitaille, Senior Engineer, Hydro-Québec, Montréal, Québec, and Jacques Beaulieu, Director, Laboratoire de béton, Montréal, Québec  
2:45

Draft Tube with Concrete Form at LA-1 Generating Station  
Louis Chapdelaine, Project Director, Les Entreprises Kiewit Ltée, Boisbriand, Québec  
3:25

Belgian and European "Recognition" Systems for the Conformity and Quality of Products and Techniques for the Protection and Repair of Concrete Structures  
Robert Degeimbre, Director, Department of Civil Engineering, Université de Liège, Liège, Belgium  
3:45

Development of Durable Dry Shotcrete  
Daniel Vézina, Chief, Concrete Division, Laboratoire des chaussées, Ministère des Transports du Québec, Sainte-Foy, Québec  
4:05

★ THEME SESSION
CALL FOR PAPERS

One of the major objectives of the American Concrete Institute is the rapid dissemination of new concrete technology to ACI members and its associates. To meet this objective, in 1991, ACI introduced a new activity — to sponsor international conferences on emerging technologies. The first such conference was held in Hong Kong in 1991 and the second conference was held in Singapore during 1994. Both highly-successful conferences were co-sponsored by various other international concrete-related organizations, and regional ACI chapters. The purpose of this Third International Conference is to disseminate new information in the rapidly developing areas of high-performance concrete, and concrete technology where major advances are taking place and new materials, methodologies and techniques are being developed. It is hoped that this conference, like its predecessors, will meet its objective in bringing researchers, practicing engineers and technologists together to exchange new information and to explore new areas of needed research.

Original Papers - High-Performance Concrete Design and Materials Related Topics:
Case Histories in the Use of H.P.C.
Chemical Admixtures, Including Superplasticizers for H.P.C.
Design-Related Papers
Durability Aspects of H.P.C.
H.P.C. for Tropical Climates
H.P.C. Versus High-Strength Concrete
In-place Strength Development for H.P.C.
Lightweight H.P.C.
Mechanical Properties of H.P.C.
Proportions of H.P.C.
Problems Associated with the Production and Placing of H.P.C.
Related Research Needs
Role of Blended Cement for H.P.C.
Role of Fly Ash, Slag, Silica Fume in Development of H.P.C.
Special Material Requirements for H.P.C. Mixture
Special Testing Methodology for H.P.C.
Specifications Requirements for H.P.C.
Volume Stability of H.P.C.

Original Papers - Advances in Concrete Technology Topics:
All Aspects of Corrosion
Cellular Concrete
Cement Technology
Chemical and Mineral Admixtures
Coatings for Concrete
Computerized Mixture Proportioning
Crack Measurements
Expansive Cements

(continued)
(continued)
Fatigue of Concrete
Ferrocement
Fiber Reinforced Concrete
Flexural Mechanics
Grouting Technologies
Heavy-Duty Floors
High-Performance Reinforcing Materials
Latex-Modified Concrete
Lightweight Aggregate and Concrete
Non-Destructive Testing
Paving Techniques
Polymer Concrete
Pumping Methodology
Quality Assurance/Control
Radioactive and Hazardous Waste Management
Recycled Concrete
Repair & Rehabilitation Materials
Roller-Compacted Concrete
Shotcrete
Specification Writing
Testing Methodology
Tests for Alkali-Aggregate Reactivity

CONFERENCE DEADLINES

Submission of 200-word abstract
December 15, 1995

Acceptance of abstracts and notification of authors:
February 15, 1996

Submission of draft manuscript for review by ACI:
July 15, 1996

Acceptance of papers and notification of authors
October 1, 1996

Submission of final manuscripts typed on camera-ready paper to be supplied by ACI:
February 1, 1997

Send 6 copies of your abstract to:

William R. Tolley
American Concrete Institute
22400 W. Seven Mile Road
Detroit, MI 48219-0150

aci
ACI Certification is now as easy as **point and click**!

ACI and Sylvan Technology Centers® (part of the Sylvan Learning Network) have teamed up to begin offering ACI Certification exams on Sylvan's state-of-the-art computer-based testing (CBT) system across the U.S. This makes ACI Certification even more available and convenient!

To see how the system works, stop by the Sylvan display booth near the ACI registration desk and put your knowledge to the test!

These national organizations participate (cooperate) with ACI in programs to improve the quality of concrete construction:

American Society for Concrete Construction
American Society for Testing and Materials
Concrete and Concrete Reference Laboratory
Concrete Construction Magazine
National Ready Mixed Concrete Association
Portland Cement Association
U.S. Army Corps of Engineers
Over two million dollars!

The Capital Campaign for ACI's headquarters building is still alive. We need your support to reach $3M this year. Contribute now!

A complete list of contributions will be published in CI after the convention.
TECHNICAL SESSION

THURSDAY, NOVEMBER 9

9:00 AM - NOON

ROOM: LASALLE

HOTEL: HILTON

INNOVATIONS IN NONDESTRUCTIVE TESTING

Sponsored by Committee 228

Session Chairman: Mary J. Sansalone
Associate Professor
Department of Structural Engineering
Cornell University
Ithaca, NY

Session Co-Chairman: Stephen P. Pessiki
Assistant Professor
Department of Structural Engineering
Lehigh University
Bethlehem, PA

Introduction

Mary J. Sansalone, Associate Professor,
Department of Structural Engineering,
Cornell University, Ithaca, NY

Recent Experiences with Nondestructive Evaluation for Condition Assessment of Concrete Structures

Randall W. Poston, Principal; A. Rhett Whitlock, Principal; and Keith E. Kesner,
Project Engineer, Whitlock Dalrymple Poston & Associates, Inc., Manassas, VA

continued

★ THEME SESSION
TECHNICAL SESSION

THURSDAY, NOVEMBER 9
9:00 AM - NOON
ROOM: LASALLE
HOTEL: HILTON

INNOVATIONS IN NONDESTRUCTIVE TESTING

Sponsored by Committee 228

continued

Determining Highway Pavement Thickness 9:30
Using the Impact-Echo Method
Mary J. Sansalone, Associate Professor, and
Jiunn-Ming Lin, Graduate Research Assistant,
Department of Structural Engineering, Cornell
University, Ithaca, NY; William B. Streett,
Vice President, Impact-Echo Consultants, Inc.,
Ithaca, NY; Nicholas J. Carino, Research Civil
Engineer, National Institute of Standards and
Technology, Gaithersburg, MD; and Gary L.
Crawford, Project Engineer, Federal Highway
Administration, Washington, DC

Nondestructive Testing and Repair of
9:55
the Concrete Shell at the Kingdome
Thomas J. Rowe, Consultant, Wiss, Janney,
Elstner Associates, Inc., Irving, TX;
Aldo O. Delahaza, Project Engineer, Wiss,
Janney, Elstner Associates, Inc., Northbrook,
IL; and Gary J. Weil, Vice President, EnTech
Engineering, Inc., St. Louis, MO

Three-Dimensional Visualization of Concrete 10:20
Structures
Michael D. A. Thomas, Assistant Professor,
Department of Civil Engineering, University
of Toronto, Toronto, Ontario; Hermenegildo
Caratin, Senior Research Engineer and
Scientist, Concrete and Geo Technologies
Group, Ontario Hydro Technologies, Toronto,
Ontario; and Diana Wiese, President, MDC
Geological Consultants Ltd., Toronto, Ontario

continued

★ THEME SESSION

125
INNOVATIONS IN NONDESTRUCTIVE TESTING

Sponsored by Committee 228

Development of an In-Situ Chloride Migration Test 10:45
P. A. M. Basheer, Lecturer; Peter Gilleece, Research Student; Alaa A-H Sha’at, Research Assistant; and Adrian E. Long, Professor, Department of Civil Engineering, The Queen’s University of Belfast, Belfast, Northern Ireland, UK

Application of Pull-Off Test to Assess the Durability of Bond Between New and Old Concrete Subjected to Deicer Salts 11:10
Gregory C. Frantz, Professor; Shigen Li, Graduate Research Assistant; and Jack E. Stephens, Professor Emeritus, Department of Civil Engineering, University of Connecticut, Storrs, CT

Interpretation of Radar Test Results 11:35
John H. Bungey, Professor; Stephen G. Millard, Senior Lecturer; Marcus R. Shaw, Research Associate; and Cledwyn Thomas, Lecturer, Department of Civil Engineering; and Brian A. Austin, Senior Lecturer, Department of Electrical Engineering and Electronics, University of Liverpool, Liverpool, England, UK

★ THEME SESSION
THURSDAY, NOVEMBER 9
9:00 AM - NOON
ROOM: VERDUN
HOTEL: HILTON

CONTROLLED LOW-STRENGTH MATERIALS

Sponsored by Committee 229

Session Chairman: William R. Hook
Manager
Marketing Department
Holnam, Inc./Colorado Region
Denver, CO

ACI Committee 229 Report on CLSM
Wayne S. Adaska, Director of Public Works, Portland Cement Association, Skokie, IL

Abandonment for Substandard Bridges
Don A. Clem, Marketing Director, Colorado Ready Mixed Concrete Association, Englewood, CO

New Foaming Agent for CLSM
Charles K. Nmai, Technical Manager, Master Builders, Inc., Cleveland, OH

Boston's Central Artery Project Utilizes CLSM
Richard W. Sullivan, Marketing Manager, Pozzolanic International Inc., Albany, NY

Flash Fill: A New Flowable Fill
Charles C. Cassell, Jr., Manager, Civil Engineering Laboratory, American Electric Power Service Corp., Columbus, OH

Development of Strength, Bearing, Diggability and Subsidence Relationships for Regular and Quick-Set Flowable Fill
Larry L. Kerns, Special Projects Engineer, City of Tulsa, Oklahoma, Tulsa, OK

Chemically Reactive CLSM for Radionuclide Stabilization
Christine A. Langton, Fellow Scientist, Savannah River Technology Center, Westinghouse Savannah River Co., Aiken, SC
NEW APPROACHES TO SHEAR DESIGN

Sponsored by Committee 445

Session Chairman: James G. MacGregor
Professor Emeritus
Department of Civil Engineering
University of Alberta
Edmonton, Alberta

Current Design Approaches
Julio A. Ramirez, Associate Professor, School of Civil Engineering, Purdue University,
West Lafayette, IN

Compression Field Approaches
Michael P. Collins, Professor, Department of Civil Engineering, University of Toronto,
Toronto, Ontario

Shear Friction
David M. Rogowsky, Professor, Department of Civil Engineering, University of Alberta,
Edmonton, Alberta

Truss Analogy with Shear Friction
Karl H. Reineck, Professor, Institut fur Tragwerksentwurf und konstruktion, University of Stuttgart, Stuttgart, Germany

Members without Transverse Reinforcement
Perry E. Adebar, Assistant Professor, Department of Civil Engineering, University of British Columbia, Vancouver, British Columbia, and Karl H. Reineck, Professor, Institut fur Tragwerkentwurf und konstruktion, University of Stuttgart, Stuttgart, Germany

Design Using Strut-Tie Models
Denis Mitchell, Professor, Department of Civil Engineering and Applied Mechanics, McGill University, Montréal, Québec
TECHNICAL SESSION

THURSDAY, NOVEMBER 9
9:00 AM - NOON

ROOM: REGENCY B
HOTEL: RADISSON

INNOVATIVE CONCRETE: PART II

Sponsored by the ACI Eastern Ontario and Québec Chapter

Session Chairman: Pierre-Claude Aitcin
Scientific Director of
Concrete Canada
Université de Sherbrooke
Sherbrooke, Québec

Introduction
Pierre-Claude Aitcin, Professor, Department of
Civil Engineering, Université de Sherbrooke,
Sherbrooke, Québec

Seismic Behaviour of Concrete Dams:

Essential Issues
René Tinawi, Professor, and Pierre Léger, Professor,
Department of Civil Engineering, École
Polytechnique de Montréal, Montréal, Québec

Laboratory Assessment of Potential for
Future Expansion and Deterioration of
Concrete Affected by AAR
Marc-André Bérubé, Professor; Annie Pedneault,
Student; and Jean Frenette, Department of Geology
and Geological Engineers, Université Laval,
Sainte-Foy, Québec; and Michel Rivest, Senior
Engineer, Hydro-Québec, Montréal, Québec

Diagnosis of Infrastructure Deterioration
Problems: Latest Tools
Saeed Mirza, Professor, Department of Civil
Engineering and Applied Mechanics, McGill
University, Montréal, Québec

Rehabilitation Measures for Champlain and
Jacques Cartier Bridges
Glen P. Carlin, Senior Engineer, Jacques
Cartier and Champlain Bridges Inc.,
Longueuil, Québec

Surface Applied Corrosion Inhibitors
Bernard Malric, Research and Development,
Locher and Cie, Genève, Switzerland, and
Gilles Auvray, President, Krytex Ltd.,
Boucherville, Québec

★ THEME SESSION
THURSDAY, NOVEMBER 9  ROOM: AUDITORIUM
2:00 PM - 5:00 PM  HOTEL: RADISSON

INNOVATIVE TECHNOLOGIES

Sponsored by Committee TTT

Session Chairman: Thomas J. Pasko, Jr.
Director, Advanced Research
Federal Highway
Administration
Annandale, VA

New Product Evaluations at the Highway  2:00
Innovative Technology Evaluation Center
Jack R. Croteau, Project Manager, Civil Engineering
Research Foundation, Washington, DC

CONAD: A Computerized System to Reduce  2:30
Variability in Concrete Production
Kenneth W. Day, Director, Concrete Advice Pty Ltd.,
Croydon, Victoria, Australia

Evaluation of the Air Void Analyzer  3:00
Donald D. Magura, Senior Structural Engineer,
Construction Technology Laboratories, Inc.,
Washington, DC

Expanded Glass Aggregate, Self-Insulating  3:30
Concrete
W. James Sharbaugh, Consultant, Advanced Building
Technologies, Newport Beach, CA

Construction of Two Experimental Bridges  4:00
Using High-Performance Air-Entrained Concrete
Louis-Georges Coulombe, Head, Concrete Department,
and Claude Ouellet, Design Engineer, Ministry of
Transport of Québec, Québec City, Québec

The Use of High-Strength Concrete in  4:30
Prestressed Concrete Bridge Girders
Henry G. Russell, Engineering Consultant,
Henry G. Russell, Inc., Glenview, IL; Jeffery S. Volz,
Design Engineer, Construction Technology
Laboratories, Inc., Skokie, IL; and Robert N. Bruce,
BOH Chair in Civil Engineering, Department of Civil
Engineering, Tulane University, New Orleans, LA

★ THEME SESSION

130
TECHNICAL SESSION

THURSDAY, NOVEMBER 9
2:00 PM - 5:00 PM
ROOM: VERRIERE
HOTEL: RADISSON

RESPONSE OF CONCRETE BRIDGES DURING THE NORTHRIDGE EARTHQUAKE

Sponsored by Committee 341

Session Chairman: M. "Saiid" Saiidi
Professor
Department of Civil Engineering
University of Nevada
Reno, NV

Session Co-Chairman: Robert G. Sexsmith
Associate Professor
Department of Civil Engineering
University of British Columbia
Vancouver, British Columbia

Introduction 2:00
M. "Saiid" Saiidi, Professor, Department of Civil Engineering, University of Nevada, Reno, NV

Northridge Earthquake Influence on Bridge Design Code 2:05
Ray Zelinski, Design Engineer, Caltrans, Sacramento, CA

Lessons Learned from Bridge Performance during the Northridge Earthquake 2:35
Frieder Seible, Professor, Department of AMES, University of California at San Diego, La Jolla, CA

continued
RESPONSE OF CONCRETE BRIDGES DURING THE NORTHridge EARTHQUAKE

Sponsored by Committee 341

Shear Strength of Reinforced Concrete Piers Subjected to Earthquake Effects
Colleen M. Konwinski, Graduate Assistant; Mete A. Sozen, Kettelhut Distinguished Professor; and Julio A. Ramirez, Professor, School of Civil Engineering, Purdue University, West Lafayette, IN

Improvement of Seismic Performance of Gavin Canyon Bridge Using Energy Dissipating Systems
Wei F. Chen, Research Associate, and Maria O. Feng, Assistant Professor, Department of Civil Engineering, University of California, Irvine, CA

Implications of Spatial Variation in the Ground Motion on the Performance of the South Bound Separation and Overhead at the 15/SR14 Interchange
Ian G. Buckle, Professor; Andre M. Reinhorn, Professor; and Vassil K. Simeonov, Graduate Assistant, National Center for Earthquake Engineering Research, State University of New York, Buffalo, NY

Investigation of Performance of Bridge Abutments in 1994 Northridge Earthquake
Raj Siddharthan, Professor; Mahmoud El-Gamal, Graduate Assistant; and Manos A. Maragakis, Professor, Department of Civil Engineering, University of Nevada, Reno, NV
TECHNICAL SESSION

THURSDAY, NOVEMBER 9
2:00 PM - 5:00 PM
ROOM: CARTIER A
HOTEL: RADISSON

CONCRETE INSTRUMENTATION AND
EXPERIMENTAL TECHNIQUES:
A STATE-OF-THE-ART REPORT

Sponsored by Committee 444

Session Chairman: Kirk A. Marchand
Manager, Protective Structures
Structural Engineering Department
Southwest Research Institute
San Antonio, TX

Session Co-Chairman: John R. Hayes, Jr.
Supervisory Structural Engineer
U. S. Army Construction Engineering Research Laboratory
CECER - FME
Champaign, IL

Introduction 2:00
Kirk A. Marchand, Manager, Protective Structures, Structural Engineering Department, Southwest Research Institute, San Antonio, TX

Design for Instrumentation 2:10
T. Russell Gentry, Assistant Professor, Department of Civil Engineering, The Catholic University of America, Washington, DC

Static Load Measurements 2:35
K. Nam Shiu, Senior Engineer, Wiss, Janney, Elstner Associates, Inc., Northbrook, IL

continued
TECHNICAL SESSION

THURSDAY, NOVEMBER 9
2:00 PM - 5:00 PM

ROOM: CARTIER A
HOTEL: RADISSON

CONCRETE INSTRUMENTATION AND EXPERIMENTAL TECHNIQUES:
A STATE-OF-THE-ART REPORT

Sponsored by Committee 444

Deflection, Rotation, and Curvature Measurements
Cheng-Zu Thomas Hsu, Professor,
Department of Civil Engineering,
New Jersey Institute of Technology, Newark, NJ

3:00

Strain Measurements
Richard H. Scott, Professor,
School of Engineering, University of Durham, Durham, UK

3:25

Dynamic and Shock Load Measurements
Kirk A. Marchand, Manager, Protective Structures, Structural Engineering Department, Southwest Research Institute, San Antonio, TX

3:50

Temperature Measurements
Moussa A. Issa, Senior Structural Analyst, Structures Research Center,
Florida Department of Transportation, Tallahassee, FL, and Mohsen A. Issa,
Assistant Professor, Department of Civil and Materials Engineering,
University of Illinois at Chicago, Chicago, IL

4:15
TECHNICAL SESSION

THURSDAY, NOVEMBER 9
ROOM: REGENCY B
2:00 PM - 5:00 PM
HOTEL: RADISSON

COLD CLIMATE CHALLENGES

Sponsored by the ACI Eastern Ontario and Québec Chapter

Session Chairman: Gilbert Haddad
Chief Specialist
Concrete/Materials Department
SNC Lavalin Inc.
Saint-Laurent, Québec

Introduction
Gilbert Haddad, Chief Specialist,
Concrete and Materials Department,
SNC Lavalin Inc., Saint-Laurent, Québec

2:00

Concreting of the La Grande Hydroelectric Complex: 20 Years' Experience
Gilles Verville, Chief, Structure Division,
and Ali Biner, Senior Structural Engineer,
Société d’Énergie de la Baie James, Montréal,
Québec; and Jacques Beaulieu, Director,
Laboratoire de béton, Montréal, Québec

2:05

Thermal Behavior and Protection of Concrete Dams in Northern Regions
Mario Veilleux, Senior Engineer, Dam Safety Department, Hydro-Québec,
Montréal, Québec, and Pierre Léger,
Professor, Department of Civil Engineering, École Polytechnique de Montréal, Montréal, Québec

2:45

continued
THURSDAY, NOVEMBER 9
2:00 PM - 5:00 PM
ROOM: REGENCY B
HOTEL: RADISSON

COLD CLIMATE CHALLENGES

Sponsored by the ACI Eastern Ontario and
Québec Chapter

continued

Underwater Concrete Repairs: 3:25
St. Lawrence Seaway
Marie Gaudreault, Bridge Civil Engineer,
St. Lawrence Seaway Authority, Montréal,
Québec, and Kamal Khayat, Assistant
Professor, Department of Civil Engineering,
Université de Sherbrooke, Sherbrooke, Québec

Evaluation of Test Methods for Selecting 3:55
Surface Repair Mortars
Jahangir Mirza, Scientific Researcher, and
Benoît Durand, Scientific Researcher, IREQ,
Hydro-Québec, Varennes, Québec

Restoration of Historical 4:25
Chambly Canal Locks
Claude Ruel, Project Engineer,
DESSAU Inc., Laval, Québec
POST-CONVENTION TECHNICAL SESSION

SATURDAY, NOVEMBER 11
9:00 AM - NOON
ROOM: PORT SAINT-LOUIS

TO BUILD OR NOT TO BUILD IN HISTORICAL QUEBEC

Sponsored by the ACI Eastern Ontario and Quebec Chapter

Session Chairman: François Saucier
Attaché de recherche
Department of Civil Engineering
Université Laval
Sainte-Foy, Québec

Introduction  9:00
François Saucier, Attaché de recherche,
Department of Civil Engineering, Université Laval,
Sainte-Foy, Québec

Museum of Civilization: The Successful Integration of a Modern Museum on a Historical Site  9:05
Marie-Claude Dubois, Graduate Student,
and Jacques White, Architect, School of Architecture, Université Laval,
Sainte-Foy, Québec

The Place D'Youville Skating Rink  9:45
Luc Jolicoeur, Civil Engineer/Team Coordinator, Department of Engineering,
Ville de Québec, Québec City, Québec

The Old Arsenals Parkade: How to Conciliate Traffic with a Historical Site  10:25
Marc des Rivières, Urban Planner/Parking Coordinator, Ville de Québec,
Québec City, Québec
SATURDAY, NOVEMBER 11  ROOM: PORTE KENT
9:00 AM - NOON

USE OF POLYMERS WITH CONCRETE

Sponsored by Committee 548

Session Chairman:  D. Gerry Walters
Senior Research Associate
Reichhold Chemicals, Inc.
Research Triangle Park, NC

Session Co-Chairman: Floyd E. Dimmick, Sr.
Technical Director
Thermal Chem Division
Armitage Industries, Inc.
Elk Grove Village, IL

Introduction  9:00
D. Gerry Walters, Senior Research Associate,
Reichhold Chemicals, Inc., Research Triangle
Park, NC

Polymers Reacted During Use: As Adhesives and Binders for Concrete  9:15
Floyd E. Dimmick, Sr., Technical Director,
Thermal Chem Division, Armitage Industries,
Inc., Elk Grove Village, IL

Break  10:15

Polymers Formed Before Use: As Adhesives and Modifiers for Concrete  10:30
D. Gerry Walters, Senior Research Associate,
Reichhold Chemicals, Inc., Research Triangle
Park, NC

Review, Questions and Answers  11:30
PERSONAL LOG
1995 FALL CONVENTION

Delegate's Name ________________________________

SATURDAY, NOVEMBER 4, 1995

8:30 AM  •  Educational Seminar: Troubleshooting Concrete Construction
5:00 PM  •  Educational Seminar
NOON    •  Luncheon
1:00 PM  •  Portage (H)

SUNDAY, NOVEMBER 5, 1995

8:30 AM  •  -
10:00 AM  •  -
10:00 AM  •  -
11:30 AM  •  -
11:30 AM  •  -
1:00 PM  •  -
1:00 PM  •  SESSIONS:
5:00 PM  •  Recent Developments in Deflection Evaluation of Concrete Structures in Honor of Dan Branson
          •  Regency A(R)
          •  Student Program and Competition
          •  McGill University
2:00 PM  •  -
3:30 PM  •  -
2:00 PM  •  SESSIONS:
5:00 PM  •  Creep and Shrinkage of Concrete
          •  Lasalle/Lachine(H)
          •  High-Strength Concrete: Part I
          •  Outremont(H)
          •  Short Duration Dynamic Loading
          •  Westmount(H)

• SEPARATE REGISTRATION FEE

REFER TO PAGE 15 FOR MEETING ROOM LOCATIONS
SUNDAY, NOVEMBER 5, 1995

2:00 PM - **SESSION:**  
5:00 PM  State of the Art Fiber Reinforced Plastics in Concrete Structures  Regency(R)

2:00 PM -  
5:00 PM -  
3:30 PM -  
5:00 PM -  
3:30 PM -  
6:30 PM -  
5:00 PM -  
6:30 PM -  
7:00 PM  • Breaking the Ice Dinner  Outremont(H)

MONDAY, NOVEMBER 6, 1995

8:30 AM -  
10:00 AM -  
9:00 AM - **SESSIONS:**  
Noon  Research in Progress  Auditorium(R)

   High-Strength Concrete: Part II  Westmount(H)

   Aspects of Blast Resistant Design  Mont Royal(H)

   • Composite and Hybrid Construction: Part I  Regency A(R)

10:00 AM - **GUEST OVERVIEW**  Regency C(R)

10:00 AM -  
11:30 AM -  
11:30 AM -  
1:00 PM -  

• SEPARATE REGISTRATION FEE  
• THEME SESSION
### MONDAY, NOVEMBER 6, 1995

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<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tr>
<td>NOON</td>
<td>Student Luncheon</td>
<td>Outremont(H)</td>
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<td>Student Luncheon</td>
<td>Mont Royal(H)</td>
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<td>3:30 PM</td>
<td>Student Luncheon</td>
<td>Lasalle(H)</td>
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<td><strong>SESSIONS</strong></td>
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<td>5:00 PM</td>
<td>The Analysis and Design of Mat Foundations</td>
<td>Auditorium(R)</td>
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<td>New Approaches to Parking Structure Design</td>
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<td>Construction</td>
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<td>High-Strength Concrete (Part III)</td>
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<td><strong>HOT TOPIC:</strong></td>
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<td>Fly Ash: Mining in the Sky</td>
<td>Regency A(R)</td>
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<td>Oklahoma Bombing</td>
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<td>Student Luncheon</td>
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<td>6:30 PM</td>
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### TUESDAY, NOVEMBER 7, 1995

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<tr>
<td>8:30 AM</td>
<td>Student Luncheon</td>
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<td>10:00 AM</td>
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<td>9:00 AM</td>
<td><strong>SESSIONS:</strong></td>
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<tr>
<td>NOON</td>
<td>Databases and Knowledge Systems for Concrete</td>
<td>Verriere(R)</td>
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<td>and Related Materials</td>
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<td>Innovative Lightweight Concrete Systems:</td>
<td>Lasalle(H)</td>
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<td></td>
<td>Part I</td>
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<td></td>
<td>Predicting Remaining Service Life</td>
<td>Lachine(H)</td>
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<td></td>
<td>Innovative Research in Earthquake</td>
<td>Regency A(R)</td>
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<td></td>
<td>Engineering</td>
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</tbody>
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- **SEPARATE REGISTRATION FEE**
- **HOT TOPIC**
- **THEME SESSION**
**TUESDAY, NOVEMBER 7, 1995**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event Description</th>
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<tbody>
<tr>
<td>9:00 AM</td>
<td><strong>SESSION:</strong></td>
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<tr>
<td>NOON</td>
<td>Contractors’ Session: Part I</td>
<td>Regency B(R)</td>
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<td>NOON</td>
<td><strong>Contractors’ Luncheon</strong></td>
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<td><strong>SESSION:</strong></td>
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<tr>
<td>3:30 PM</td>
<td>Educational Session - Realistic Capstone Design Courses</td>
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<td><strong>SESSIONS:</strong></td>
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<td>5:00 PM</td>
<td>Open Paper Session (until 5:25 PM)</td>
<td>Auditorium(R)</td>
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<td>2:00 PM</td>
<td>Innovative Lightweight Concrete Systems: Part II</td>
<td>Verriere(R)</td>
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<td>5:00 PM</td>
<td>Design in Regions of Low and Moderate Seismicity</td>
<td>Cartier A(R)</td>
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<td><strong>SESSION</strong></td>
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<td>5:30 PM</td>
<td>Educational Session - Part II: Report Writing</td>
<td>Regency A(R)</td>
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<td>7:30 PM</td>
<td><strong>FORUM 123</strong> - Industrial Support of Concrete Research: Does It or Should It Exist?</td>
<td>Auditorium(R)</td>
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- **SEPARATE REGISTRATION FEE**
- **THEME SESSION**
WEDNESDAY, NOVEMBER 8, 1995

10:00 AM - General Session Mont Royal
1:00 PM

2:00 PM -
3:30 PM

2:00 PM - SESSIONS:
5:00 PM

£ Proportioning Concrete Using Unusual and Innovative Materials and Methods Auditorium(R)
£ Innovative Applications with Shrinkage—Compensating Concrete Regency C(R)
£ Composite and Hybrid Construction: Part II Regency A(R)
£ Field Performance of Fiber Reinforced Concrete Structures Over 10 Years Old Verriere(R)
£ Innovative Concrete Part I Regency B(R)

3:30 PM -
5:00 PM
5:00 PM -
6:30 PM

6:30 PM - Concrete Mixer Montreal Ballroom (H)
8:00 PM

THURSDAY, NOVEMBER 9, 1995

8:30 AM -
10:00 AM

9:00 AM - SESSIONS:
NOON
£ Innovations in Nondestructive Testing Lasalle(H)
£ Controlled Low-Strength Materials Verdun(H)

* THEME SESSION
**THURSDAY, NOVEMBER 9, 1995**

<table>
<thead>
<tr>
<th>Time</th>
<th>Sessions</th>
<th>Location</th>
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<tbody>
<tr>
<td>9:00 AM</td>
<td><strong>SESSIONS:</strong></td>
<td>Lachine(H)</td>
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<tr>
<td>NOON</td>
<td>* New Approaches to Shear Design*</td>
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<tr>
<td>2:00 PM</td>
<td><strong>SESSIONS:</strong></td>
<td>Auditorium(R)</td>
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<tr>
<td>5:00 PM</td>
<td>* Innovative Technologies*</td>
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<td>Response of Concrete Bridges</td>
<td>Verriere(R)</td>
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<td>During the Kobe and Northridge Earthquake</td>
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<td>A State-of-the-Art Report</td>
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<td>Cold Climate Challenges</td>
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* THEME SESSION*
ATTENTION
ACI ATTENDEES!

The 1996 ACI Spring Convention in Denver will begin on Thursday, instead of the usual Sunday pattern. This change in schedule is due to the Con-Agg/Con-Expo Show in Las Vegas which will be held immediately following our convention.

We hope to see you in Denver in a few months!
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ACI
FUTURE
CONVENTIONS

1996 Spring Convention
March 14-19
Denver Marriott
Hyatt Regency Denver
Denver, Colorado
Convention Theme:
Infrastructure Durable: A Concrete Investment for the Future

1996 Fall Convention
November 3-8
Hyatt Regency New Orleans
New Orleans, Louisiana
Convention Theme:
Disaster Mitigation

1997 Spring Convention
April 6-11
Seattle Westin Hotel
Warwick Hotel
Seattle, Washington
Convention Theme:
Concrete and the Environment

1997 Fall Convention
November 9-14
Atlanta Hilton & Towers
Atlanta, Georgia
Convention Theme:
Durability

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Thank you for attending the
ACI 1995 Fall Convention.
See you in Denver!