

**50<sup>th</sup>**  
**Annual Convention**



**Shirley-Savoy Hotel**

**Denver, Colorado**

**February 22-26, 1954**



THE STATE OF COLORADO  
EXECUTIVE CHAMBERS  
DENVER

DAN THORNTON  
GOVERNOR

January 12, 1954

Henry L. Kennedy, President  
American Concrete Institute  
18263 W. McNichols Road  
Detroit, Michigan

Dear Mr. Kennedy and Members:

As Governor of Colorado and on behalf of our citizens, it is my great pleasure and privilege to welcome you to our Mile-High State - colorful Colorado. It is a distinct honor for Colorado to be host to your outstanding organization for its' Golden Anniversary.

We have many opportunities for your enjoyment and we invite you to partake of them. Whether you prefer educational, cultural or recreational activities, Colorado has the best, and they are yours during your visit here. To those of you who enjoy outdoor sports, our mountain highways are open the year-round and lead to a veritable winter wonderland where our invigorating climate adds to the exhilarating experience of skating and skiing among the pines and peaks of our majestic mountains.

We also offer you our famous brand of warm western hospitality for which Colorado is noted. I sincerely hope that your visit here will be so enjoyable that it will be an invitation to return again and again. We extend to you a cordial welcome and say

"WELCOME PARTNER!"

Cordially,

*Dan Thornton*  
Dan Thornton



CITY AND COUNTY OF DENVER

OFFICE OF THE MAYOR

CITY AND COUNTY BUILDING  
DENVER 1, COLORADO

January 12, 1954

Mr. Henry L. Kennedy, President  
American Concrete Institute  
18263 W. McNichols Road  
Detroit, Michigan

Dear Mr. Kennedy:

We are honored that again you have chosen the Queen City of the Plains and Mountains for the Convention of the American Concrete Institute. As host for the people of Denver, I extend to your members a hearty welcome.

The nation will benefit through the progressive action taken by your conference. In Denver, where construction has risen to a new peak, we are especially interested in your deliberations.

Colorado citizens are proud of the contribution local members have made to concrete technology and of the reputation they maintain on a national basis.

Let us know if we can be of service to you in any way.

Best wishes for a successful conference.

Cordially,  
*Quigg Newton*  
Quigg Newton  
MAYOR

## BOARD OF DIRECTION

### President

HENRY L. KENNEDY

### Vice-Presidents

C. H. SCHOLER and CHARLES S. WHITNEY

### Secretary-Treasurer

WILLIAM A. MAPLES†

### Directors

F. BARONA DE LA O

A. ALLAN BATES

ARTHUR P. CLARK

JOSEPH F. JELLEY

JAY E. JELLYCK

VERNON P. JENSEN

J. W. KELLY

FRANK KEREKES

F. N. MENEPEE

I. E. MORRIS

WALTER H. PRICE

BAILEY TREMPER

### Past Presidents

FRANK H. JACKSON

HARRY F. THOMSON

A. T. GOLDBECK

## TECHNICAL ACTIVITIES COMMITTEE

(In charge of convention program and of technical publications)

DOUGLAS MCHENRY, *Chairman*

President HENRY L. KENNEDY (*Ex Officio*)

R. E. COPELAND

BRYANT MATHER

W. J. MCCOY

L. W. TELLER

L. H. TUTHILL

I. L. TYLER

WILLIAM A. MAPLES, *Secretary*

### †Address

AMERICAN CONCRETE INSTITUTE

18263 W. McNichols Road, Detroit 19, Michigan

## Program Time Table

### Saturday, February 20 and Sunday, February 21

Meetings of Finance Committee, Executive Committee, Technical Activities Committee, and Board of Direction

### Monday, February 22

- 9:00 a.m.—Technical Committee Meetings (see p. 8)  
Registration opens—Empire Room Lobby
- 10:00 a.m.—Exhibits open—Empire Room (see p. 20)  
Coffee for Ladies—Room 321—Brown Palace Hotel (see p. 19)
- 2:00 p.m.—Technical Committee Meetings (see p. 8)
- 8:00 p.m.—Anniversary Dinner—Lincoln Room—By tickets previously purchased (see p. 7)

### Tuesday, February 23

- 9:00 a.m.—Registration Continues—Empire Room Lobby
- 10:00 a.m.—First General Session—Lincoln Room
- 12:00 noon—Institute Officers reception and luncheon for scheduled program participants (by prior invitation)—Centennial Room  
Ladies Luncheon—Broadmoor Hotel, Colorado Springs (see p. 19)
- 2:00 p.m.—General Session—Lincoln Room
- 8:00 p.m.—Motion Pictures on Concrete—Lincoln Room
- 8:00 p.m.—Meeting of Committee 318, Standard Building Code—Centennial Room

### Wednesday, February 24

- 9:00 a.m.—Design Session—Lincoln Room  
Materials and Construction—Colorado-Centennial Rooms
- 12:15 p.m.—Awards Luncheon—Lincoln Room
- 2:00 p.m.—Ladies' Ten—Wolhurst Club
- 2:30 p.m.—Precast and Prestressed Concrete—Lincoln Room  
Materials and Properties—Colorado-Centennial Rooms
- 6:30 p.m.—Cocktails (By tickets previously purchased)
- 8:00 p.m.—Dinner Dance (see p. 17)

### Thursday, February 25

All day at Denver Federal Center (see p. 18)

- 8:00 a.m.—Buses leave Shirley-Savoy Hotel (Obtain tickets at registration desk)
- 9:00 a.m.—Research Session—Auditorium
- 10:00 a.m.—Ladies' Coffee—Room 321, Brown Palace Hotel
- 12:30 p.m.—Barbecue Buffalo Luncheon
- 2:00 p.m.—Tour of Engineering Laboratories

### Friday, February 26

Inspection trips by bus for those making prior reservations (see p. 19)

## DENVER CONVENTION COMMITTEE

### Executive Committee

R. F. BLANKS, *Chairman*  
E. W. THORSON, *Vice-Chairman*  
ORLEY PHILLIPS, *Treasurer*  
W. H. PRICE, *Secretary*

### Arrangements Committee

|                 |                                |
|-----------------|--------------------------------|
| ORLEY PHILLIPS  | Finance and Exhibits           |
| S. H. POE       | Publicity                      |
| DAMON RUNYON    | Reception and Registration     |
| R. F. McCUNE    | Entertainment                  |
| A. G. HOYL      | Field Trips and Transportation |
| R. W. MORRIS    | Printing                       |
| E. C. HIGGINSON | Membership                     |
| L. P. WITTE     | Tickets and Programs           |

## LADIES

### Executive Committee

MRS. W. H. PRICE, *Chairman*  
MRS. R. F. BLANKS  
MRS. E. W. THORSON

### Arrangements Committee

|                      |                   |
|----------------------|-------------------|
| MRS. I. S. RASMUSSEN | Reception         |
| MRS. H. S. MEISSNER  | Coffee (Monday)   |
| MRS. J. R. FLOREY    | Luncheon          |
| MRS. L. P. WITTE     | Tea               |
| MRS. C. R. WILDER    | Coffee (Thursday) |

9 a.m.—5 p.m., DAILY  
MONDAY, TUESDAY, and WEDNESDAY  
FEBRUARY 22, 23, 24, 1954

## CONVENTION REGISTRATION

in charge of  
ETHEL B. WILSON, *Assistant Treasurer*

Registration fee—\$2.00

(All ladies and registered nonmember visitors are welcome at general sessions, Anniversary Dinner, Dinner Dance, and Barbecue Luncheon)

Buy your tickets for the Monday evening Anniversary Dinner by 2:00 p.m. Monday.

Buy your tickets for the Wednesday noon AWARDS LUNCHEON at time of registration.

Tickets for Wednesday evening Cocktails and Dinner Dance must be purchased by 2:00 p.m. Wednesday.

See bulletin board for special notices.

12 noon sharp, Tuesday—Luncheon for all scheduled program participants in the general convention sessions. (By invitation)

### Registration for Thursday Program and Friday Inspection Trips

For Thursday's Barbecue Luncheon and tours of Bureau of Reclamation laboratories (see p. 18), and Friday's sightseeing and inspection trips (p. 19), the Denver Convention Committee provides advance registration. Get your name on the lists so that bus space may be available for all who wish to participate in these interesting events.

## TECHNICAL COMMITTEE MEETINGS

See p. 8 and 9 and bulletin board at registration desk for time and location.

## NOTES FOR PROGRAM PARTICIPANTS

- Participants in the program should not fail to leave with the stenotype reporter manuscripts from which papers or discussions are presented. The ACI Secretary will later provide opportunity for manuscript revision before consideration for JOURNAL publication.
- Upon recognition by the Chairman a discussor will please state his name and convention registration number distinctly and go to a microphone so he may be heard by all. If presented from manuscript, it should be left with the stenotype reporter.
- A "Convention Review" will be published in the News Letter section of the April ACI JOURNAL.

9:00 a.m.—Registration—Empire Room Lobby

**TECHNICAL COMMITTEE MEETINGS**

**SHIRLEY-SAVOY HOTEL**

Committee 208, Bond Stress Blue Spruce Room  
 Committee 315, Detailing R/C Structures Colorado Room  
 Committee 609, Compaction of Concrete Centennial Room

**BROWN PALACE HOTEL**

Committee 214, Evaluation of Field Tests Room 240  
 Committee 323, Prestressed Concrete (Steering Committee only) Tabor Room  
 Committee 324, Precast Concrete Stratton Room  
 Committee 612, Curing Wedgwood Room  
 Committee 616, Application of Paint Room 238

**COSMOPOLITAN HOTEL**

Committee 318, Standard Building Code Board Room  
 Subcommittee 2, Materials and Tests Empire Room  
 Subcommittee 3, Concrete Quality Governors Room  
 Subcommittee 6, Design Paddock Room  
 Committee 327, Ultimate Load Design

10:00 a.m.—Exhibits open—Empire Room

**2:00 p.m.—TECHNICAL COMMITTEE MEETINGS**

**SHIRLEY-SAVOY HOTEL**

Committee 323, Prestressed Concrete Colorado Room  
 Steering Committee, 1940 Joint Committee Report Centennial Room

**BROWN PALACE HOTEL**

Committee 209, Volume Changes and Plastic Flow Room 238  
 Committee 213, Lightweight Aggregate Concrete Stratton Room  
 Committee 332, Residential Concrete Room 321  
 Committee 613, Proportioning Concrete Mixes Tabor Room  
 Committee 617, Pavements and Bases Wedgwood Room  
 Committee 716, High-Pressure Steam Curing Room 240

**COSMOPOLITAN HOTEL**

Committee 212, Admixtures Directors Room  
 Committee 318, Standard Building Code Subcommittee 10, Flat Slabs Empire Room  
 Committee 327, Ultimate Load Design Paddock Room  
 See pages 9 and 12 for later technical committee meetings

8:00 p.m.—ANNIVERSARY DINNER—Lincoln Room

Activities listed on Dinner Program

**Lincoln Room**

President HENRY L. KENNEDY, Presiding

Opening remarks

Appointment of tellers to canvass annual election ballots

**STANDARDS**

Proposed Standard Specifications for the Design and Construction of Reinforced Concrete Chimneys

Report of Committee 505

E. A. DOCKSTADER, Chairman

See ACI JOURNAL, JANUARY 1953. Proposed standard gives criteria for the design of reinforced concrete chimneys and outlines construction procedures.

Proposed Recommended Practice for Selecting Proportions for Concrete

Report of Committee 613

WALTER H. PRICE, Chairman

See ACI JOURNAL, October 1953. Proposed as a standard to supersede "Recommended Practice for the Design of Concrete Mixes (ACI 613-44)."

**HISTORY**

History of the American Concrete Institute

RAYMOND E. DAVIS  
 Consulting Engineer, Berkeley, Calif.

**MOTION PICTURE**

"How to Transport, Place, Finish, and Cure Quality Concrete"

This second ACI-PCA film on proper techniques in handling concrete will be introduced by Prof. James A. McCarthy, Notre Dame University, Chairman of the ACI Film Advisory Committee which passed on the technical details of the film.

**COMMITTEE MEETINGS**

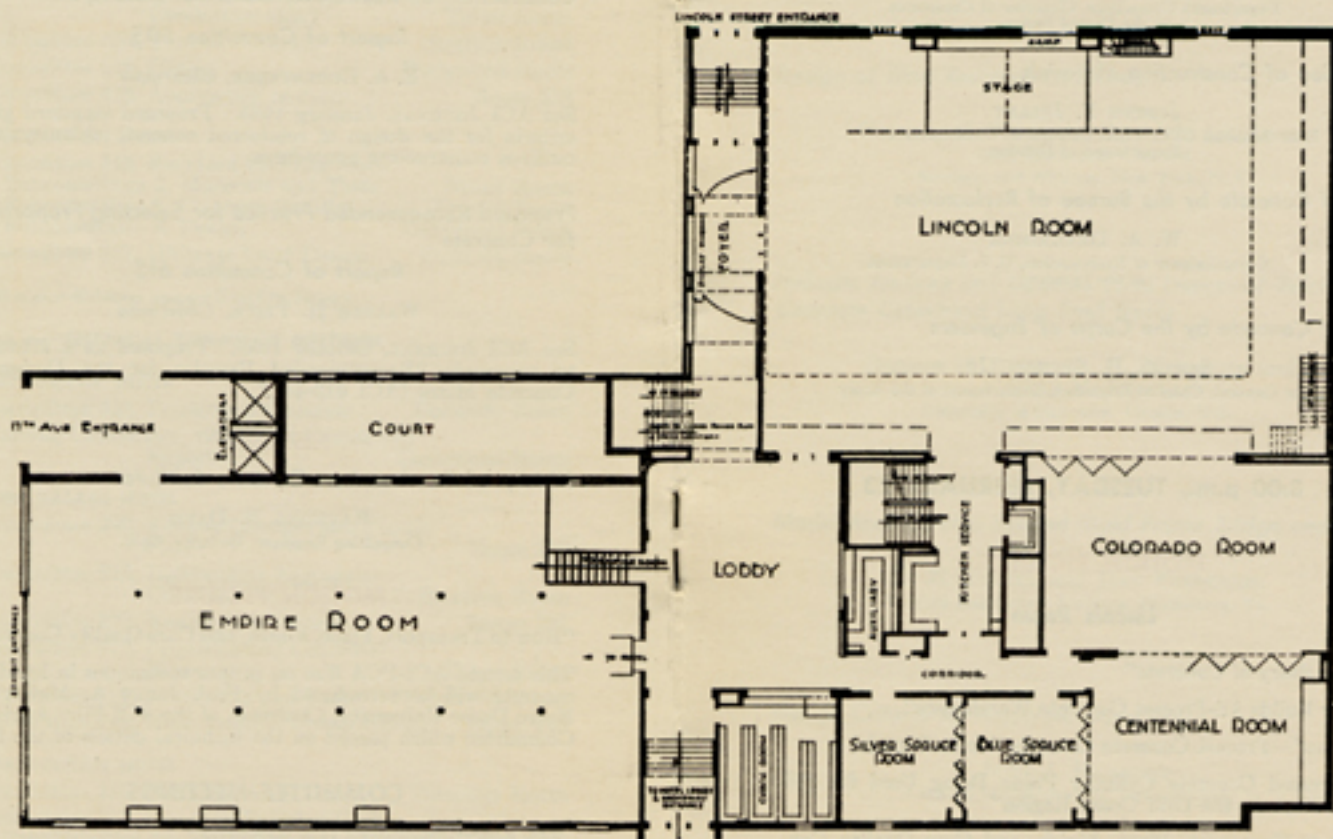
9:00 a.m.—Committee 115, Research (Executive Group only) Colorado Room  
 Committee 318, Standard Building Code Subcommittee 8, Shear and Diagonal Tension Centennial Room

10:00 a.m.—Committee 318, Standard Building Code Subcommittee 11, Columns and Walls Blue Spruce Room

# ACI CONVENTION AREA

## SHIRLEY-SAVOY HOTEL

DENVER



2:00 p.m., TUESDAY, FEBRUARY 23

**Lincoln Room**

President HENRY L. KENNEDY, *Chairman*

**GENERAL**

**Economic Trends Affecting Concrete Construction**

NORMAN P. MASON

Chairman, Construction and Civic Development  
Department Committee, Chamber of Commerce  
of the United States

**Selection of Construction Materials**

JOSEPH F. JELLEY

Rear Admiral, CEC, USN, Director of Construction,  
Department of Defense

**Use of Concrete by the Bureau of Reclamation**

W. A. DEXHEIMER

Commissioner of Reclamation, U. S. Department  
of the Interior

**Use of Concrete by the Corps of Engineers**

SAMUEL D. STURGIS, JR.

Major General, Chief of Engineers, Department of the Army

8:00 p.m., TUESDAY, FEBRUARY 23

**MOTION PICTURES**

**Lincoln Room**

"Inside Story of Concrete"

"Navy Builds All-Precast Concrete Warehouses"

"Namao"—Precast Concrete Construction in Canada

"Prestressed Concrete Cylinder Piling Being Used for Off-Shore Work in the Gulf Coast Region"

"How to Transport, Place, Finish, and Cure Quality Concrete" (second showing)

**Centennial Room**

Meeting of Committee 318, Standard Building Code

9:00 a.m., WEDNESDAY, FEBRUARY 24

Concurrent sessions will be held morning and afternoon in the  
Lincoln Room and Colorado-Centennial Rooms

**Lincoln Room**

Vice-President CHARLES S. WHITNEY, *Chairman*

**DESIGN**

**Design of Blast Resistant Structures**

CHARLES S. WHITNEY, BOYD G. ANDERSON  
and EDWARD COHEN

Ammann and Whitney, New York, N. Y.

**Inelastic Analysis and Ultimate Load Design of Reinforced  
Concrete Cylindrical Long Shell Roofs**

GEORGE C. ERNST, R. R. MARLETTE and  
GLEN V. BERG

University of Nebraska, Lincoln, Neb.

**Model Analysis of a Skewed Rigid Frame Bridge and Slab**

D. H. PLETTA and DAN FRIEDERICK

Virginia Polytechnic Institute, Blacksburg, Va.

**Design Criteria for Concrete Dams**

JOHN J. HAMMOND

Bureau of Reclamation, Denver, Colo.

**Flat Slab Solved by Model Analysis**

GERALD BOWEN and R. F. SHAFFER

Presson Corp., Los Angeles, Calif.

9:00 a.m., WEDNESDAY, FEBRUARY 24

Concurrent sessions morning and afternoon in Lincoln Room and Colorado-Centennial Rooms

**Colorado-Centennial Rooms**

Vice-President CHARLES H. SCHOLER, *Chairman*

**MATERIALS AND CONSTRUCTION**

*Design and Construction of a Folded Flat Plate Roof Structure*

MILO S. KETCHUM

Ketchum and Konkol, Engineers, Denver, Colo.

*Structural Applications of Hyperbolic Paraboloids*

FELIX CANDELA

Architect, Cubiertas "Aha," S. A., Mexico City, D. F.

*Combined Form and Reinforcement for Concrete Slabs*

BENGT F. FRIBERG

Consulting Engineer, St. Louis, Mo.

*Cellular Concretes*

RUDOLPH C. VALORE, JR.

National Bureau of Standards, Washington, D. C.

*Factors Influencing the Strength of Concrete as Revealed by a Six-Year Record of Concrete Control*

JOSEPH J. WADDELL

Palmer and Baker, Inc., New Orleans, La.

12:15 p.m., WEDNESDAY, FEBRUARY 24

**AWARDS LUNCHEON**

**Lincoln Room**

Presentation of Awards

President Kennedy on behalf of the Board of Direction

LEONARD C. WASON MEDAL for the "Most Meritorious Paper" of *ACI Proceedings V. 49* (April 1953 JOURNAL) to

DAVID WATSTEIN

for his paper

"Effect of Straining Rate on the Compressive Strength and Elastic Properties of Concrete"

LEONARD C. WASON MEDAL for "Noteworthy Research" to

PHIL M. FERGUSON and J. NEILS THOMPSON

for the work reported in their paper (*Proceedings V. 49*, March 1953 JOURNAL)

"Diagonal Tension in T-Beams Without Stirrups"

American Concrete Institute CONSTRUCTION PRACTICE AWARD for a "paper of outstanding merit" on concrete construction practice to

ALDEN M. KLEIN and J. H. A. CROCKETT

for their paper in the *ACI JOURNAL* (January, 1953) entitled

"Design and Construction of a Fully Vibration-Controlled Forging Hammer Foundation"

*Announcement of election to Honorary Membership:*

RAYMOND E. DAVIS

*Report of Tellers and Introduction of New Officers*

*Recognition of Retiring Directors and Officers*

*Retiring President's Address*

HENRY L. KENNEDY

Dewey and Almy Chemical Co., Cambridge, Mass.



2:30 p.m., WEDNESDAY, FEBRUARY 24

Concurrent sessions in Lincoln Room and Colorado-Centennial Rooms

**Lincoln Room**

Past President R. F. BLANKS, *Chairman*

**PRECAST AND PRESTRESSED CONCRETE**

*Sandwich-Type Precast Concrete Construction*

F. THOMAS COLLINS  
F. Thomas Collins and Associates, San Gabriel, Calif.

*One Hundred Thirty Foot Span Precast Concrete Hangar*

OTTO SAFIR  
Safir Engineering Consultants, Ltd., Vancouver, B. C., Canada

*Practical Aspects of Plant Produced Prestressed Concrete*

ORLEY O. PHILLIPS  
Phillips, Carter, Osborn, Inc., Denver, Colo.

*Formulas for the Rapid Design of Continuous Prestressed Concrete Members*

E. J. FISENDEISER  
Illinois Institute of Technology, Chicago, Ill.

*Static and Fatigue Tests of Partially Prestressed Concrete Members*

P. W. ABLES  
Consulting Engineer, London, England

2:30 p.m., WEDNESDAY, FEBRUARY 24

Concurrent sessions in Lincoln Room and Colorado-Centennial Rooms

**Colorado-Centennial Rooms**

Director WALTER H. PRICE, *Chairman*

**MATERIALS AND PROPERTIES**

*Admixtures*

W. T. MORAN  
(Chairman, ACI Committee 212)  
Bureau of Reclamation, Denver, Colo.

*Effect of Age of Concrete on its Resistance to Scaling Caused by Using Calcium Chloride for Ice Removal*

W. C. HANSEN  
Research Laboratory, Universal Atlas Cement Co.,  
Burlington Station, Gary, Ind.

*Void Spacing as a Basis for Producing Air-Entrained Concrete*

T. C. POWERS  
Portland Cement Ass., Chicago, Ill.

*Fundamental Factors in the Drying Shrinkage of Concrete Block*

GEORGE L. KALOUSEK  
Owens-Illinois Glass Co., Toledo, Ohio

*Method of Estimating the Water Content of Portland Cement Concrete at the Time of Hardening*

JAMES S. BLACKMAN  
University of Nebraska, Lincoln, Neb.

**EVENING**

**Lincoln Room**

6:30 p.m.—Cocktails

8:00 p.m.—Dinner

9:00 p.m.—Dancing

Enjoy an evening of entertainment—no speeches—a get-together just for fun!

Tickets must be purchased by 2:00 p.m. this date.

## THURSDAY, FEBRUARY 25

Buses will leave the Shirley-Savoy Hotel, at 8 a.m. for the Denver Federal Center, 8 miles west of the city. A buffalo barbecue luncheon will be served at the Bureau of Reclamation laboratories following the Research Session. After the luncheon, open house will prevail throughout the laboratories. There will be guided tours covering all of the laboratories, but those who wish to devote more time to specific phases of the laboratories may feel perfectly free to do so. Special guides will be provided to conduct visitors to specific points of interest. Buses will return to the city by 4:30 p.m. Transportation and luncheon tickets must be purchased by 2:00 p.m. Wednesday.

### 9:00 a.m.—Theater, Bureau of Reclamation Laboratories, Denver Federal Center

#### ANNUAL OPEN SESSION OF ACI COMMITTEE 115, RESEARCH

STEPHEN J. CHAMBERLIN, *Chairman*  
GEORGE W. WASHIA, *Secretary*

This convention feature differs from general sessions in that the information is not released for publication. Request is made that proceedings be regarded as CONFIDENTIAL. A group of short papers will be presented on research techniques and preliminary results.

Fatigue and impact of prestressed concrete beams

Investigation of shear strength of concrete frame members without shear reinforcement

Analysis of full-scale precast prestressed concrete bridge members under repetitive loads

Study of early strength of concrete

Volume change and stress-strain characteristics of concrete

Investigation of fiber glass tension members as reinforcement in prestressed concrete

Effect of alkalis released by pozzolans on alkali-aggregate reaction in mortar

Tests to determine the effect of steam curing and of period of vibration on concrete durability

Use of bonded-wire resistance strain gage in measuring transient and residual dimensional changes in concrete during freezing and thawing

Jet blast resistant concretes

ATTENDANCE AT THE SESSION IS THE ONLY SURE WAY OF BEING IN ON THESE PREVIEWS OF FUTURE DEVELOPMENTS IN CONCRETE.

12:30 p.m.—Buffalo Barbecue Luncheon

2:00 p.m.—Tour of Bureau Laboratories

## FRIDAY, FEBRUARY 26

### INSPECTION TRIPS

#### 8:00 a.m.—Climax Molybdenum Co. Mine, Climax, Colo.

An all-day trip leaving Shirley-Savoy Hotel at 8:00 a.m. and returning about 4:00 p.m. The Climax Mining Co. has developed a method of underground mining in which concrete plays an important part. Excellent scenery enroute. This trip is limited to 40 and is for men only.

#### 8:00 a.m.—Denver's Reservoir No. 22 Dam, South Boulder Creek

A half-day trip, leaving Shirley-Savoy Hotel at 8:00 a.m. to see the Denver Water Board's dam under construction on South Boulder Creek. Aggregate processing, materials handling, and concrete placing equipment will be inspected in addition to the dam.

#### 9:00 a.m.—Berthoud Pass Scenic Trip

An all-day trip, leaving Shirley-Savoy Hotel at 9:00 a.m. and returning about 3:00 p.m. See some of Colorado's scenic areas and watch the skiing at Berthoud Pass.

#### 9:00 a.m.—Denver area, Concrete construction projects

A half-day trip, leaving Shirley-Savoy Hotel at 9:00 a.m. Visits interesting concrete construction projects in the Denver area. Prestressed concrete structures, a prestressing plant, and other unique concrete applications will be featured.

Tickets for all trips must be purchased in advance at registration desk by 5:00 p.m. Wednesday.

#### FOR THE LADIES

Monday, 10:00 a.m. —Coffee, Room 321, Brown Palace Hotel

Tuesday, 9:00 a.m. —Leave Brown Palace Hotel by Travel Coach for Luncheon, Broadmoor Hotel, Colorado Springs, Colorado

Wednesday, 2:00 p.m.—Tea, Wolhurst Club

Thursday, 10:00 a.m. —Coffee, Room 321, Brown Palace Hotel

*Don't fail to examine the exhibit area—a 1954 Convention feature, sponsored by The Denver Convention Committee*

## **EXHIBITORS**

### **1954 ACI CONVENTION**

Autolene Lubricants Co.  
Baldwin-Lima-Hamilton Corp.  
Centennial Engineering Co.  
Cen-Vi-Ro Manufacturing Co.  
Colorado Builders Supply Co., The  
Dart Manufacturing and Sales Co.  
Felker Manufacturing Co.  
Gar-Bro Manufacturing Co.  
Granco Steel Products Co.  
Hunts Process Co.  
Instant Moisture Control Industries  
(Division of Pre-Mix Concrete Co.)  
K. C. Construction Supply Co.  
Kelley Machine Division, The Weissner-Rapp Co.  
Long Construction Co.  
Maginniss Power Tool Co.  
Master Builders Co., The  
Preload Construction Corp.  
Prestressed Concrete of Colorado, Inc.  
Prestressing, Inc.  
Quickway Clamp Co.  
Richmond Screw Anchor Co.  
John A. Roebling's Sons Corp.  
Sika Chemical Corp.  
Sonoco Products Co.  
Superior Concrete Accessories, Inc.  
Symons Clamp and Manufacturing Co.  
Techkote Company, Inc.  
Thompsons Water Seal  
Universal Form Clamp Co.  
Viber Co.  
Water Seals Inc.  
Western Waterproofing Co.

**AMERICAN CONCRETE INSTITUTE**  
**18263 W. McNichols Road**  
**Detroit 19, Michigan**