PC Items

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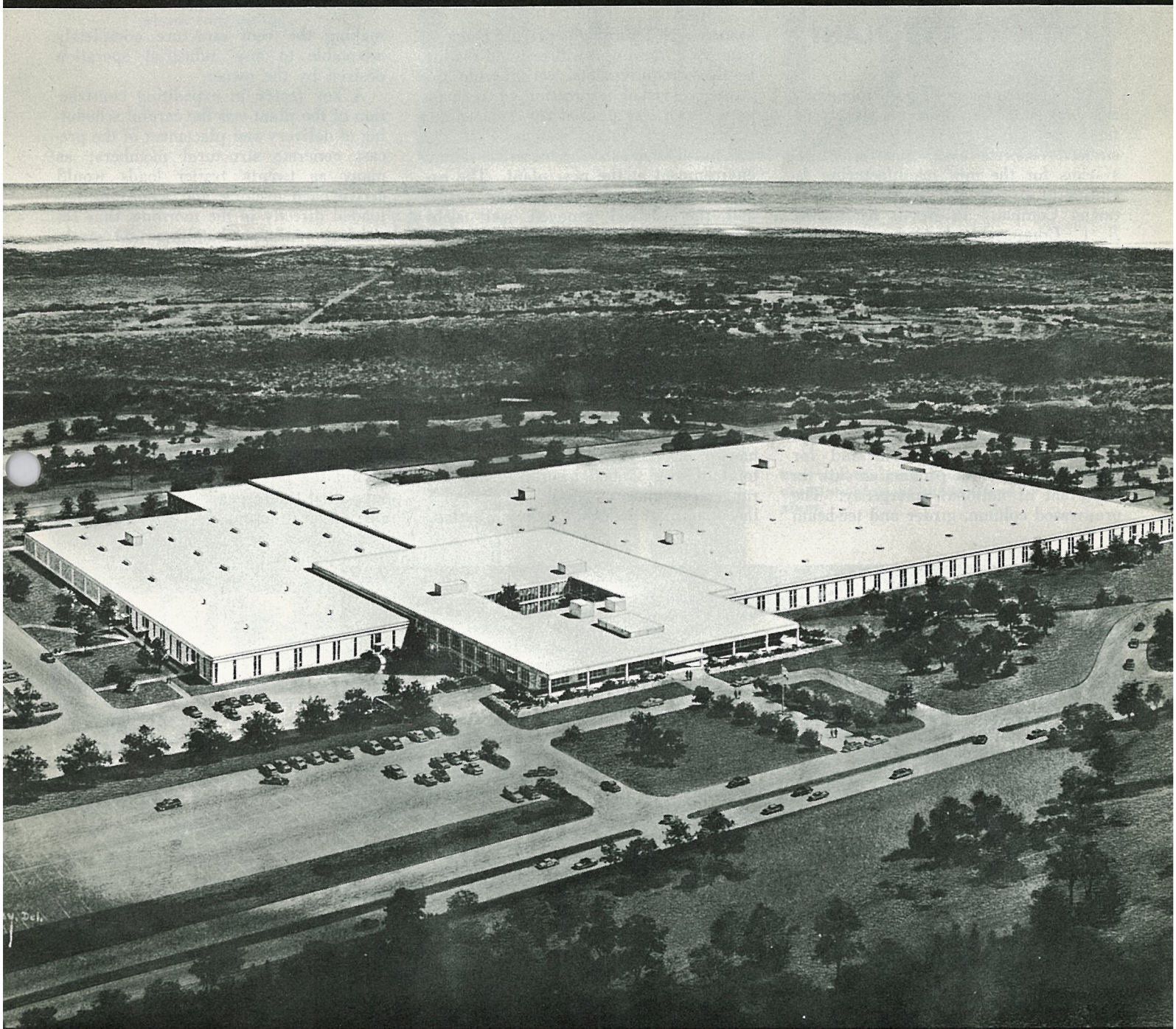


rchitect-Engineer: Fenton G. Keyes Associates (Charles E. Bishop, Architect); Prestressed Concrete: New England Concrete Pipe Corp.

PRESTRESSED CONCRETE INSTITUTE

Precision Park, Brown & Sharpe Manufacturing Company, North Kingstown, R. I., is the world's largest single story prestressed concrete structure built for industrial use.

THE USE OF PRESTRESSED CONCRETE IN INDUSTRIAL BUILDING CONSTRUCTION

RHODE ISLAND PLANT

An intensive study of both immediate and long-range requirements clearly defined the advantages of precast, prestressed concrete over other structural systems for the new manufacturing facilities of Brown and Sharpe Manufacturing Company in North Kingstown, R. I. Comparable layouts were made and bids taken on both concrete and steel systems. Maintenance, climate control, insurance rates, fire protection and many other factors indicated that the use of concrete structure, while slightly higher in initial cost, unquestionably offered the more economical system in terms of the overall building lifespan.

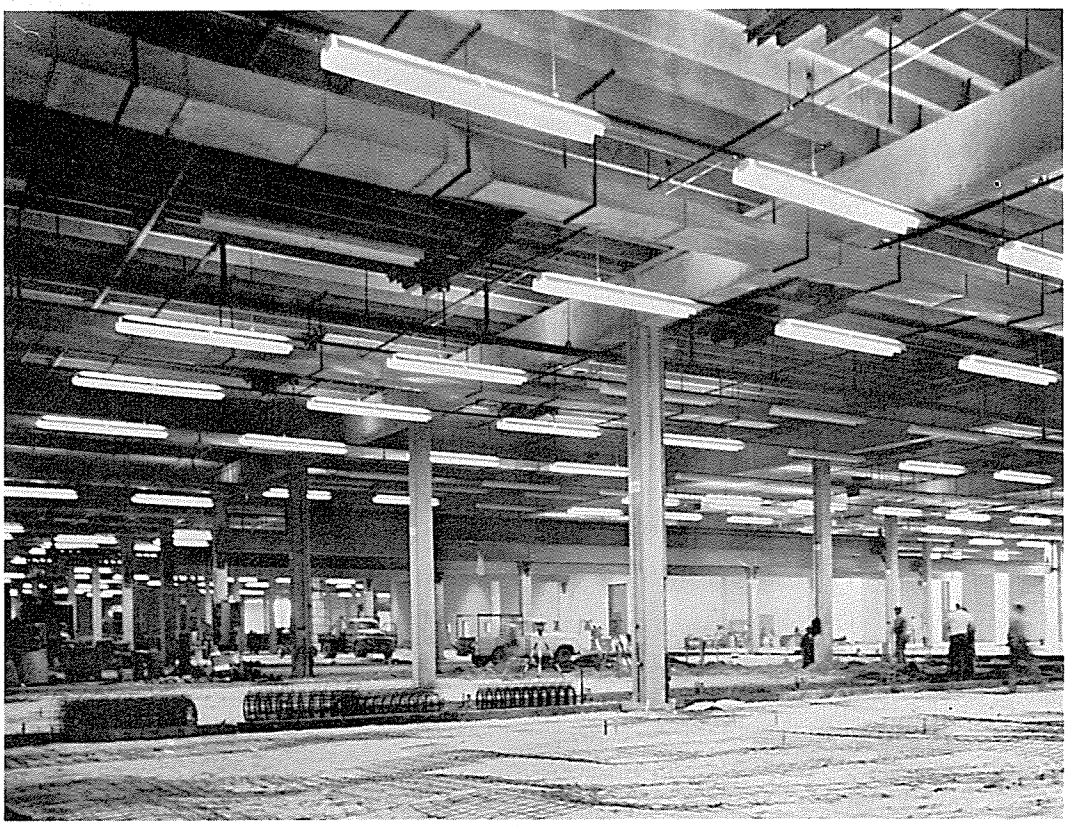
A master plan for company growth indicated a need for future expansion in virtually every direction, and for rapid changeover of production flow in the event of national emergency. The prestressed column, girder and tee-beam system with lightweight precast concrete exterior curtain wall will respond readily to these requirements, yet provide the attractive visual impression of permanence which was desired by the owner.

The clear, simple statement of the structural elements enhances the visual environment at the new plant. The exposed double tees, columns and beams and the vertical grooved wall slabs create an interesting, harmonious appearance not easily achieved with other framing methods. The natural light color and protective quality of the concrete eliminates the need for ceiling finishing. The pocketed ceiling surface created by the girder and tee system provides an additional benefit in sound dispersion in the manufacturing areas.

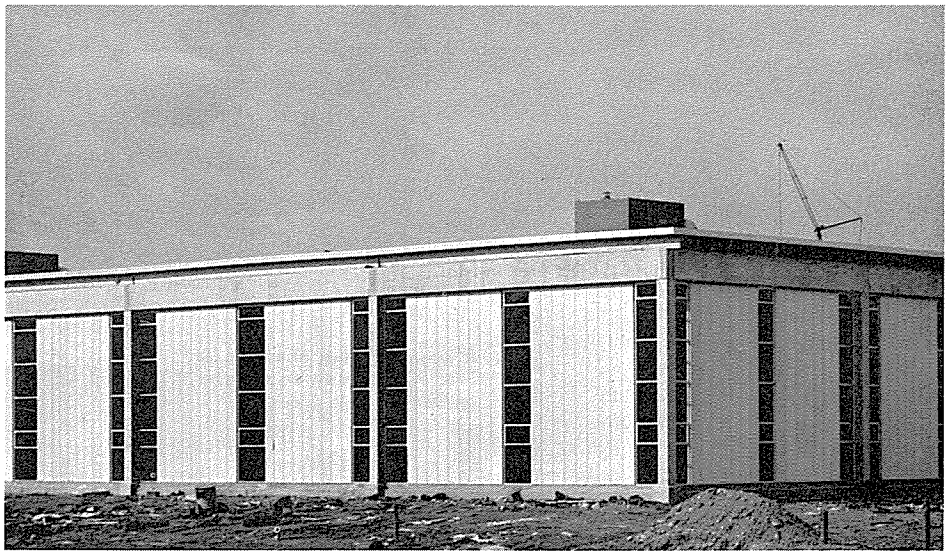
The use of prestressed concrete tees and girders permitted placement of hanger inserts every two linear feet (a total of over 25,000 inserts). This arrangement makes possible "shotgun" installation of hangers at *any* location, making the roof structure completely adaptable to any industrial operation desired by the owner.

A key factor in expediting construction of the plant was the careful scheduling of delivery and placement of the precast concrete structural members; as many as twenty trailer loads would arrive each evening and would be unloaded directly in the morning, thus requiring minimum handling and stockpiling. In addition, the major portion of the 550 roof openings were built into the precast tees in the casting yard, thereby simplifying the field installation of mechanical equipment.

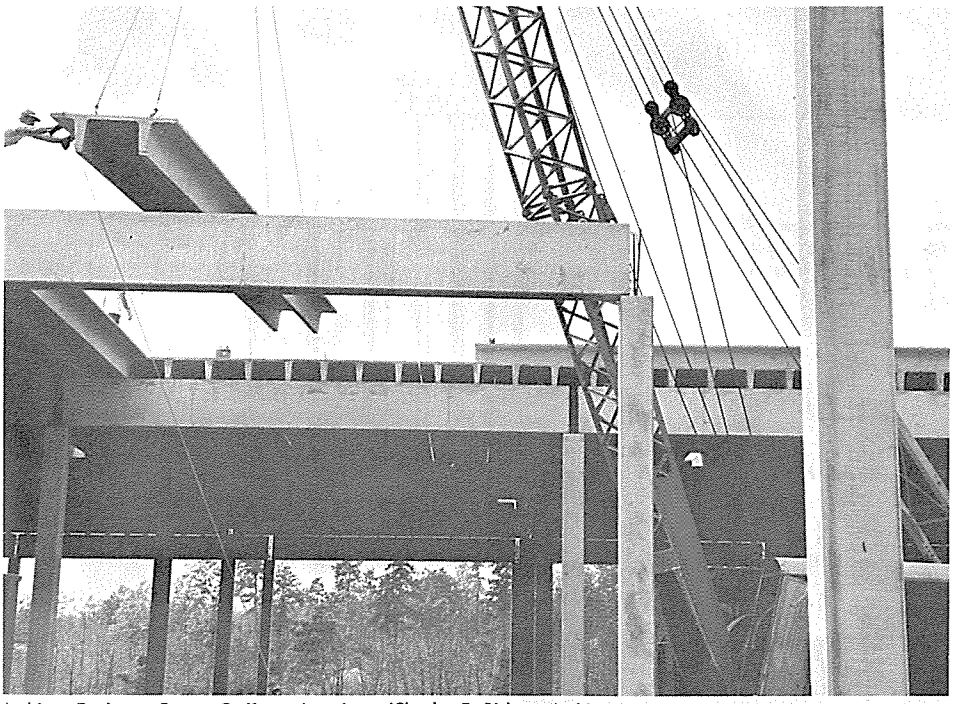
Production processes required the provision of over 100 bridge cranes, each with a capacity of 4 tons, and five larger cranes of 10 ton capacity. The prestressed tees accommodated the smaller cranes without increase in size, as did the precast columns. The latter supported the larger cranes which were carried on brackets.



View of Machine Tool Division of Brown & Sharpe plant while under construction.

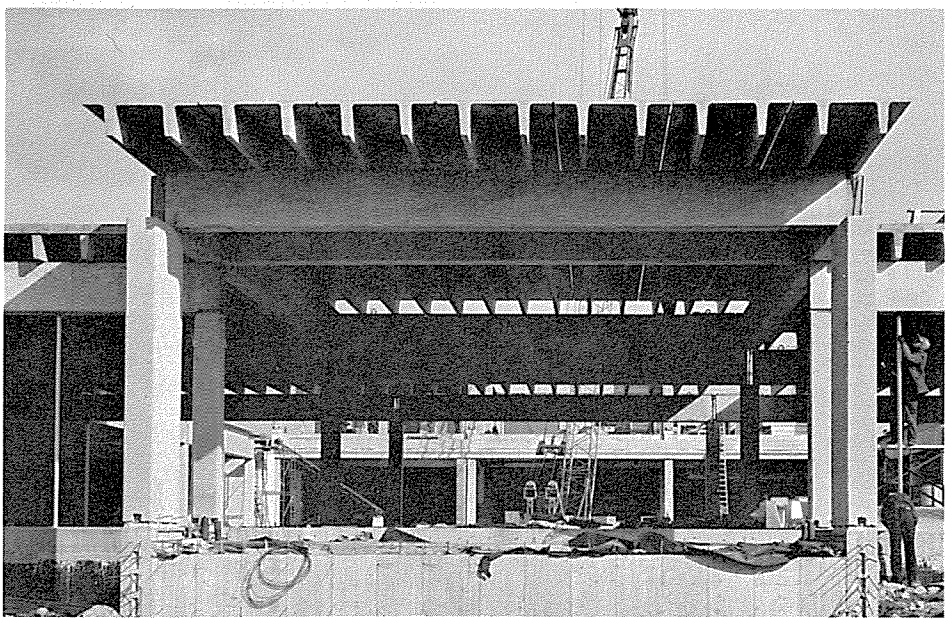


Moveable precast walls offer both ease of expansion and visual satisfaction.



Roof double tees being lowered into place at Rhode Island plant.

Architect-Engineer: Fenton G. Keyes Associates (Charles E. Bishop, Architect);
Prestressed Concrete: New England Concrete Pipe Corp.



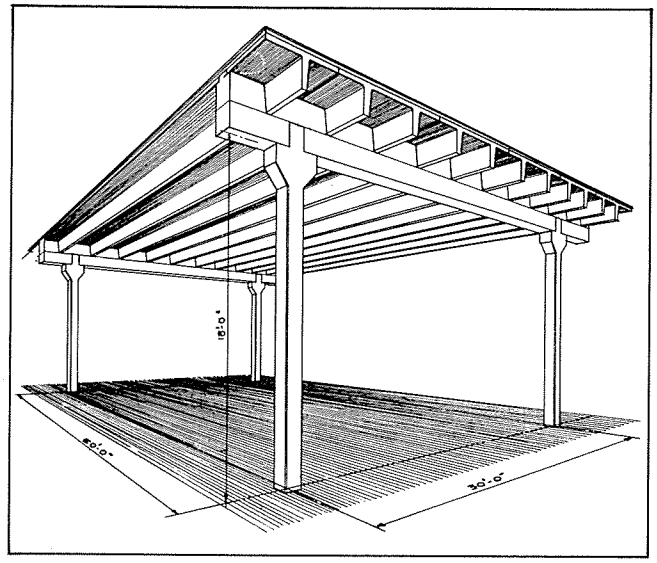
The clear, simple statement of structure enhances the visual environment at the Brown & Sharpe plant.

WORLD'S LARGEST P/C BUILDING

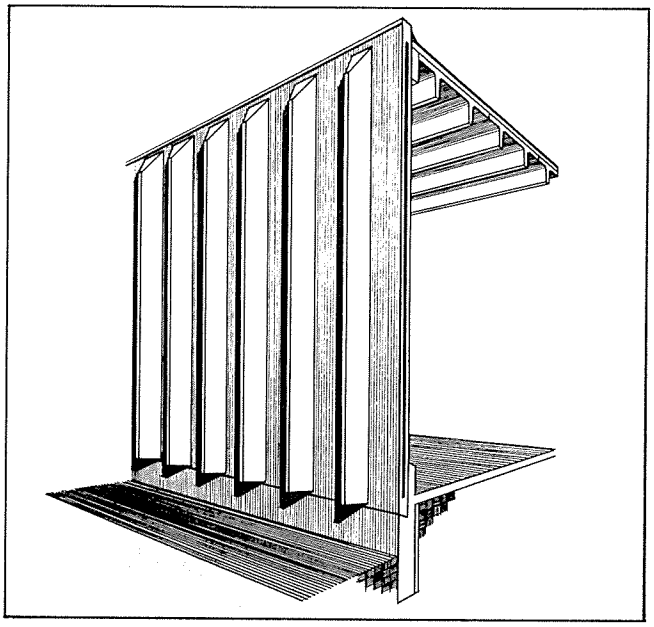
Under construction at Horseheads, N. Y., is the $18 million Quaker Maid Division Food Processing Plant of The Great Atlantic & Pacific Tea Company, Inc. The plant will have 35 acres, or 1,524,000 square feet, of floor space and, when completed, will be the world's largest prestressed concrete building.

Rust Engineering Company of Pittsburgh is the designer, as well as the constructor, of the new plant which is scheduled for completion in 1965.

The basic construction units, prestressed concrete double tee panels, 7½ feet wide and up to 50 feet long, are being manufactured by Dickerson Structural Concrete Corporation of Youngwood, Pa., on 18 acres of leased land in the town of Big Flats, which adjoins Horseheads. Roof, floor and insulated wall panels are designed to be cast in the same set of forms and will have cast-in-place connections. Walls will be exposed concrete with smooth interior surfaces and vertically ribbed exterior surfaces, as shown in the illustrations.

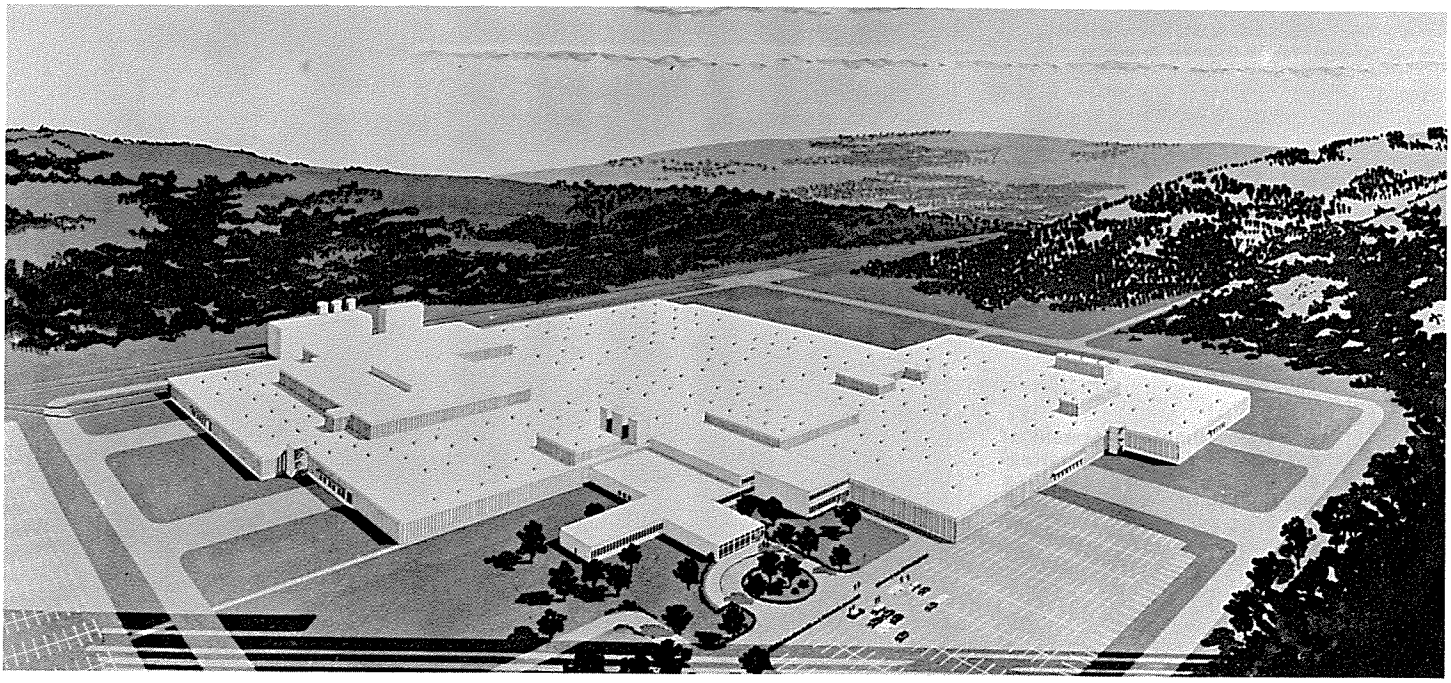


Line drawing showing A & P precast concrete roof system.



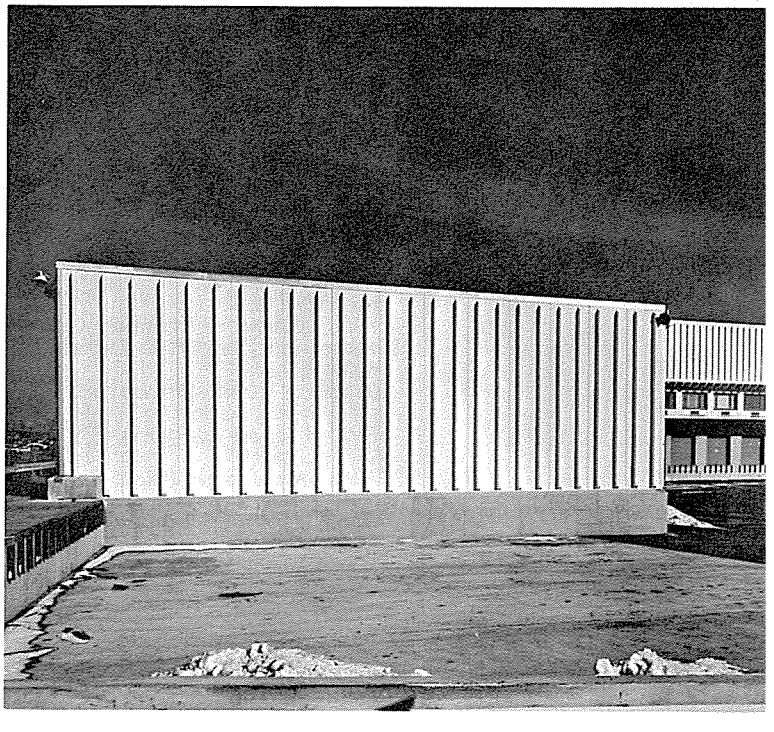
Line drawing showing A & P precast concrete wall system.

Artist's rendering showing aerial view of the A & P Food Processing Plant.



Architect-Engineer: A. Epstein & Sons, Inc.;
Prestressed Concrete: Material Service

The Sara Lee Bakery, recently completed in Deerfield, Illinois, has Dynacore prestressed concrete roof and wall units in the freezer-warehouse and bakery plant portion of the building. (See the February, 1963 PCItems for construction details and pictures.)



The Quincy Market, Cold Storage & Warehouse Company's building in Gloucester, Massachusetts which features the use of 8" deep double tee wall panels. Floor and roof are constructed of prestressed concrete double tees and beams.

Northeast Concrete Products, Inc.

THE TENTH ANNUAL PCI CONVENTION PROGRAM

Final arrangements are being completed for the 10th Annual Convention of the Prestressed Concrete Institute. World leaders in the architectural and engineering applications of prestressed concrete, together with manufacturers and contractors, will be meeting at the Mayflower Hotel in Washington, D. C. September 20-25th.

Program

SATURDAY, SEPTEMBER 19

9:00 A.M. to 5:00 P.M.
Board of Directors Meeting

SUNDAY, SEPTEMBER 20

12:00 Noon to 6:00 P.M.
Registration
12:00 Noon to 5:00 P.M.
Technical Committee Reports

MONDAY, SEPTEMBER 21

8:00 A.M. to 6:00 P.M.
Registration
8:00 A.M. to 10:30 A.M.
PCI Members' Breakfast and Annual Business Meeting
All member classifications invited
11:00 A.M.
Opening General Session
Chairman: David L. Chaney
Welcome: Elmer D. Clark, President, Prestressed Concrete Institute
Keynote Address:
Hon. Bernard L. Boutin,
Administrator, General Services Administration

TECHNICAL SESSION I
DESIGN AND CONTROL OF PRESTRESSED CONCRETE

Chairman — William J. Bobisch,
Assistant Director, Engineering Division,
Bureau of Yards and Docks,
Washington, D. C.

1:30 P.M. — **Design of Prestressed Concrete Pressure Pipe,**
Harold V. Swanson,
Manager of Civil Engineering,
International Pipe & Ceramics Corp.,
East Orange, N. J.

1:55 P.M. — **Allowable Stresses or Service Load Behavior Criteria?**
George W. Vaught,
Concrete Masonry Corp.,
Elyria, Ohio

2:20 P.M. — **Work of the FIP-CEB Joint Committee,**
Dr. E. Hognestad,
Manager, Structural Development Section,
Portland Cement Association,
Skokie, Illinois

2:40 P.M. — Break

3:00 P.M. — **Practical Methods of Minimizing Differential Camber,**
Dr. A. R. Anderson,
Concrete Technology Corp.,
Tacoma, Wash.

3:25 P.M. — **Design and Use of Prestressed Concrete Columns,**
Raymond Itaya,
Vice President
T. Y. Lin and Associates,
Van Nuys, Calif.

3:50 P.M. — **Shortcuts for the Shear Analysis of Standard Prestressed Concrete Members,**
Paul E. Mast, Structural Engineer,
Structural Bureau,
Portland Cement Association,
Chicago, Illinois

4:15 P.M. — Adjourn

6:30 P.M. — Get Acquainted Party

TUESDAY, SEPTEMBER 22

7:30 A.M. — Active and Associate Members' Breakfast

TECHNICAL SESSION II
PRESTRESSED CONCRETE IN MULTI-STORY BUILDINGS

Chairman — Neil A. Connor, Director,
Architectural Standards,
Federal Housing Administration,
Washington, D. C.

9:00 A.M. — **Behavior of Prestressed Concrete Structures During the Alaskan Earthquake,**
Walter E. Kunze
Director of Promotion Planning and Engineering Services,
Portland Cement Association,
Chicago, Illinois

9:25 A.M. — **Armed Forces Training Center in Tacoma, Washington,**
Arthur Forbes,
Worthen, Wing, Seifert & Forbes,
Tacoma, Washington

9:50 A.M. — **Integrating Mechanical and Structural Systems in Multi-Story Apartment Buildings,**
Jack H. Perlmutter,
Prestressed Concrete of Colorado,
Denver, Colorado

10:15 A.M. — Break

10:35 A.M. — **Five-Story Brigham Young University Building,**
Allan Flandro,
Executive Vice President and General Manager,
Utah Prestressed Concrete Co.,
Salt Lake City, Utah

11:00 A.M. — **Use of Prestressed Concrete in Prefabricated Buildings in England,**
A. J. Harris
Harris & Sutherland,
London, England

11:25 A.M. — **The Domino System for High-Rise Buildings,**
Alfred A. Yee,
Alfred A. Yee and Associates,
Honolulu, Hawaii

11:50 A.M. — Adjourn

12:00 Noon — Awards Luncheon

TECHNICAL SESSION III
PRESTRESSED CONCRETE IN DAMS AND HEAVY CONSTRUCTION

Chairman — Richmond P. Hobson, Chief,
Structural Branch,
Engineering Division,
Department of the Army,
Office of the Chief of Engineers,
Washington, D. C.

1:30 P.M. — **Considerations in Design of Prestressed Concrete Anchorages for Large Tainter Gates,**
Keith O. O'Donnell,
Structural Engineer,
Office of the Chief of Engineers,
U.S. Army, Washington, D. C.

1:55 P.M. — **Internal Stresses Induced by Post-Tensioning Forces in Large Mass Structures** — Paul Knowles,
Structural Engineer,
U.S. Army Corps of Engineers,
Walla Walla District

2:20 P.M. — **Prestressed Concrete in Sub-Aqueous Tunnel Construction,**
Graham Earle,
Armand Couture,
and Per Hall,
Senior Design Engineer,
Principal and Senior Partner, respectively,
Per Hall & Assoc.,
Montreal, Quebec

2:45 P.M. — Break

3:05 P.M. — **1300-Ton Capacity Prestressed Anchors Stabilize Dam,**
A. Eberhardt and J. A. Veltrop,
Principal Civil Engineer and Head of Structural Dept., respectively,
Harza Engineering Co.,
Chicago, Ill.

3:30 P.M. — **Nuclear Reactor Pressure Vessels at Oldbury Power Station,**
A. J. Harris,
Harris & Sutherland,
London, England

3:55 P.M. — **Long Span Bridges Built by Cantilever Methods,**
Jean Muller,
Enterprises Campenon Bernard,
Paris, France

4:20 P.M. — Adjourn

CONCURRENT PRODUCER'S SESSION

1:30 P.M. — **Labor Cost Controls,**
Paul H. Coleman,
Booz Allen Methods Service, Inc.
New York, N. Y.
2:20 P.M. — **Management Training for the Prestressed Concrete Industry,**
Richard L. Pinkerton,
Coordinator Marketing and
Sales Program Management Institute,
University of Wisconsin,
Madison, Wisconsin
3:00 P.M. — Break
3:15 P.M. — **Profit Potential for Prestressed Concrete** — William Avery,
Concrete Construction Publications, Inc.,
Elmhurst, Illinois
3:55 P.M. — Adjourn

WEDNESDAY, SEPTEMBER 23

TECHNICAL SESSION IV
DESIGN, CONSTRUCTION AND INSPECTION OF OUTSTANDING NEW PRESTRESSED CONCRETE STRUCTURES

Chairman — Arthur I. Westrich,
Chief Structural Engineer,
Public Building Service,
General Services Administration,
Washington, D. C.
9:00 A.M. — **Largest Prestressed Concrete Building in America — A & P's New Food Processing Warehouse.**
Design and Inspection:
Dr. N. V. Campomanes
Structural Engineer,
Rust Engineering Co.,
Pittsburgh, Pa.
Fabrication and Erection:
W. Logan Dickerson,
Dickerson Structural Concrete Corp.
Youngwood, Pa.
9:50 A.M. — **Prestressed Concrete Bridge Over the Columbia River at Kinnard, British Columbia.**
Design, Construction and Inspection:
George Woodburn,
Choukalos, Woodburn & McKenzie, Ltd.,
Vancouver, B. C.
10:40 A.M. — Break
11:00 A.M. — **The North Carolina Mutual Life Insurance Company Building — A New Concept for Precast Prestressed Construction** — Architectural Concept:
Karl Schwerdtfeger,
Project Designer,
Welton Becket & Associates,
Los Angeles, Calif.
Structural Design Features:
Ira Hooper, Associate,
Seelye, Stevenson, Value & Knecht,
New York, N. Y.
Manufacture and Erection:
Peter J. Verna,
Concrete Materials, Inc.,
Charlotte, N. C.
11:50 A.M. — Adjourn

CONCURRENT PRODUCER'S SESSION

9:00 A.M. — Panel: **Present and Future Trends in Automation for the Prestressed Concrete Industry** — Mr. Kinnard
Breeko Industries,
Franklin, Tenn.
Mr. Sellers
Spiroll Corp.,
Winnipeg, Manitoba, Canada
Mr. Nagy,
Spancrete, Inc.,
Milwaukee, Wisconsin
Mr. Reigel,
Commodore Prestressed Machinery Co.,
Nashville, Tennessee
10:00 A.M. — **Efficient Plant Layout**
Mr. Mac Nigels,
Dura-Stress, Inc.,
Leesburg, Florida
10:30 A.M. — Break
10:50 A.M. — **Preparation of Bid Documents for Prestressed Concrete Piling,**
William A. Zink,
U.S. Army Corps of Engineers,
Philadelphia, Pa.
11:30 A.M. — Adjourn
12:00 Noon — Luncheon
2:00 P.M. — Boat Trip-Potomac River to Mount Vernon, George Washington's Home

THURSDAY, SEPTEMBER 24

TECHNICAL SESSION V
CONNECTION DETAILS FOR PRECAST PRESTRESSED CONCRETE

Chairman — James Lefter, Chief,
Structural Division,
Office of the Assistant
Administrator for Construction,
Veterans Administration,
Washington, D. C.
9:00 A.M. — **A Survey of the Behavior of Beam-to-Column Connections in Precast Concrete Structures,**
Thomas A. Hanson,
Thomas Hanson & Associates,
Richmond, Va.
9:20 A.M. — **Investigations of the Strength and Design of Column Corbels,**
Charles H. Raths,
Associate Development Engineer,
Structural Development Section,
Portland Cement Association,
Skokie, Ill.
9:50 A.M. — **Cutting the Cost of Detailing,**
Laurence Cazaly,
Cazaly Associates,
Toronto, Ontario
10:15 A.M. — Break
10:35 A.M. — Panel Discussion: **What Research on Connection Details Has Done and Should Do.**
Moderator: Norman L. Scott,
General Manager,
Wiss, Janney, Elstner & Assoc.,
Des Plaines, Ill.
Research: Dr. M. A. Sozen,
Professor of Civil Engineering,
University of Illinois,
Urbana, Ill.
Paul H. Kaar,
Senior Development Engineer,
Structural Development Section,
Portland Cement Association,
Skokie, Ill.
Industry: Robert A. Matthews, President,
Precast Industries, Inc.,
Kalamazoo, Mich.
George Duecy,
Associated Sand & Gravel,
Everett, Wash.
12:00 Noon — Adjourn

TECHNICAL SESSION VI
RESEARCH ON PRESTRESSED CONCRETE

Chairman — David Watstein, Chief,
Structural Section,
Building Research Division,
National Bureau of Standards,
Washington, D. C.
1:30 P.M. — **The Effect of Reinforcement on Anchorage Zone Cracks in Prestressed Concrete Members,** — Peter Gergely,
Professor of Structural Engineering,
Cornell University,
Ithaca, N. Y.
1:50 P.M. — **Effects of Long-Time Loads on Prestressed Concrete Beams,**
R. A. Breckenridge and S. L. Bugg,
Structural Research Engineer, and Head of Civil Engineering Department, respectively,
U. S. Naval Civil Engineering Laboratory,
Port Hueneme, Calif.
2:10 P.M. — **Studies of Through-Voided Box Beams for Railway Bridges,**
Freeman P. Drew,
Research Engineer,
Structures, Association of American Railroads,
Structural Research Laboratories,
Chicago, Ill.
2:30 P.M. — **Properties of Composite Prestressed Beams Based on the "Split-Beam" Concept,**
L. F. Skoda,
Structural Research Engineer,
Structural Engineering Section,
Building Research Division,
National Bureau of Standards,
Washington, D. C.
2:50 P.M. — Break
3:10 P.M. — **Moment-Curvature Relationships of Prestressed Concrete,**
Dr. Joseph Warwaruk,
Department of Civil Engineering,
University of Alberta,
Edmonton, Alberta
3:30 P.M. — **Durability of Prestressed Concrete Beams,**
Edwin C. Roshore,
Research Materials Engineer,
Concrete Division,
U. S. Army Engineers Waterways Experiment Station,
Jackson, Miss.
3:50 P.M. — **Probable Fatigue Life of Prestressed Concrete Beams,**
R. F. Warner and C. L. Hulsbos,
Research Engineer and Research Professor of Civil Engineering, respectively,
Lehigh University,
Bethlehem, Pennsylvania
4:10 P.M. — **Studies of Permissible Crack Widths and Increasing Deformation Under Sustained and Fatigue Loading,**
Dr. P. W. Abeles,
London, England
4:30 P.M. — Adjourn

ADVANCE REGISTRATION and HOTEL RESERVATION FORMS

Prestressed Concrete Institute Convention
Washington, D. C.
September 20-25

Advance Registration

Registration fees include all sessions, Get Acquainted Party, Breakfasts and Luncheons

		No.	Total
Registrations	$35.00	_____	$_____
Ladies Registration	$15.00	_____	$_____
TOTAL			$_____

Names of Registrants

_____

_____

_____

Please make checks payable to:
PRESTRESSED CONCRETE INSTITUTE

Hotel Reservations

MAYFLOWER HOTEL

Date Arriving_____Hour_____a.m. p.m.

Date Departing_____Hour_____a.m. p.m.

		No. of Rooms
Single	$13.00	_____
Twin	$18.00	_____
Suites	$36.00	_____

Please try to make your reservations as early as possible. Rooms will be held until 6:00 p.m. of arrival date, unless a later hour is requested and confirmed.

Name_____
Firm_____
Address_____
City_____
State_____

Mail registration and reservation forms to:
Mr. David L. Chaney, *General Chairman*
PCI Convention
837 National Press Building
Washington, D. C. 20004

DESIGN SEMINAR SCHEDULED

A design seminar on prestressed concrete is planned for October 5-9, 1964 by Leap Associates, Inc., in Lakeland, Florida. The classes, designed for graduate engineers, non-graduates and draftsmen, will cover Fundamentals of Prestress Design, Production Methods, Ultimate Design of Reinforced Concrete, and Marketing of Prestress. Further information may be obtained by writing to Leap Associates, Inc., 201½ E. Lemon St., Lakeland, Florida.

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Concrete Materials, Inc.
P.O. Box 5247
Charlotte, N. C.

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1634 Cambridge Drive
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PRESTRESSED CONCRETE INSTITUTE

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Return Requested

August, 1964