Nineteenth Annual

PCI Awards Program Winners

A prominent jury of architects and engineers have named twelve award winners in the 1981 PCI Awards Program.

The purpose of the PCI Annual Awards Program is to recognize excellence in design using precast prestressed concrete and/or architectural precast concrete. Because of the diverse design problems which architects and engineers face, no first place award is given, but all awards express equivalent recognition of a high level of excellence.

From a record number of entries, nine buildings/structures and three bridges were chosen for awards. They include: three bridges, two office buildings, a police station, a shopping mall, a multi-event student athletic center, a hospital, a bank, a mass transit center, and a warehouse showroom.

This year's jury was chaired by **R. Randall Vosbeck,** FAIA, president, The American Institute of Architects, and principal VVKR Incorporated.

Other jurors included **T. Z. Chastain,** president, American Concrete Institute, and principal of Chastain & Tindal, Inc.; **David H. Hambleton,** president, Royal Architectural Institute of Canada, and principal of Wagg & Hambleton, Architects; **George S. Hammond,** senior vice president, Welton Becket Associates; and Dr. **James R. Sims,** president-elect, American Society of Civil Engineers, and Herman and George R. Brown, Professor of Civil Engineering, Rice University.

The winning buildings/structures and bridges are listed on the next page. Brief descriptions (together with jury comments) of each project follow on pp. 16-27.

Jury for the PCI Awards Program: (from left) T. Z. Chastain, Dr. James R. Sims, R. Randall Vosbeck (jury chairman), George S. Hammond, and David H. Hambleton.

1981 PCI Awards Winners

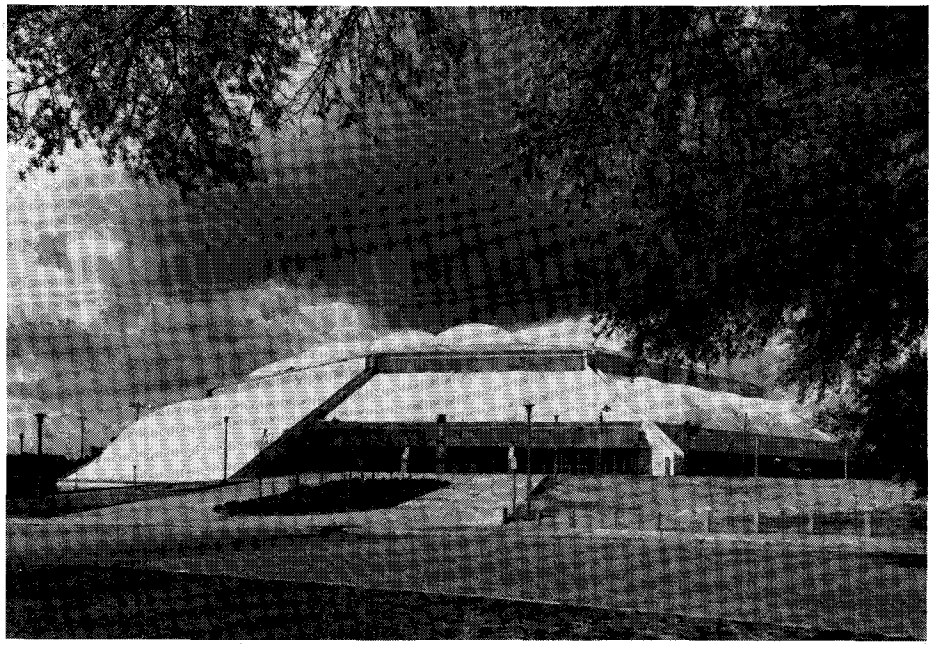
The following is a listing of the 1981 PCI Awards Program winning buildings/structures and bridges.

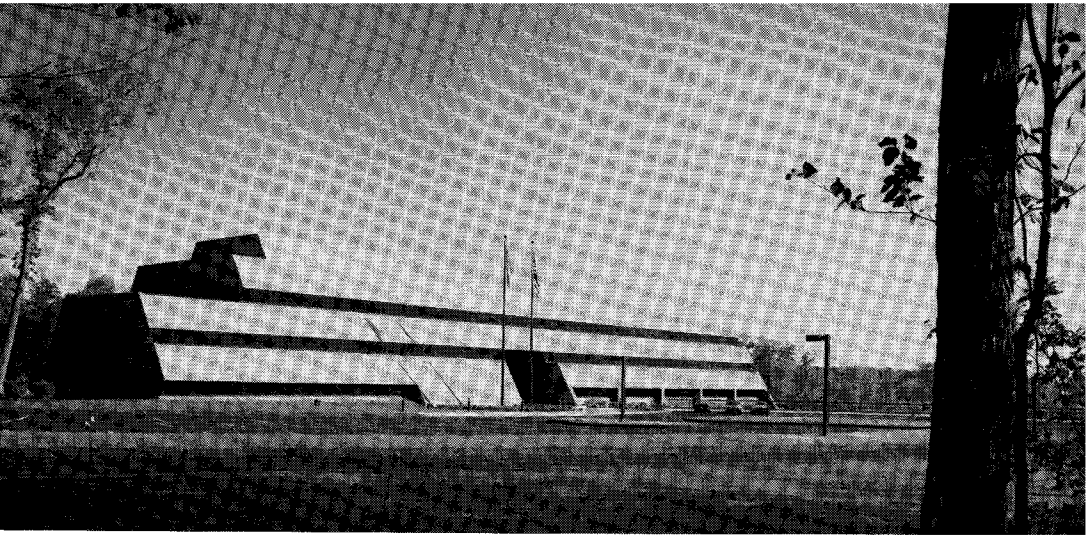
Stephen C. O'Connell Center
Gainesville, Florida

Architect: CRS, Inc., Houston, Texas.
Associate Architect: Moore May Graham Poole/Architects, Inc., Gainesville, Florida.
Structural Engineer: Geiger-Berger, New York, New York.
General Contractor: Dyson & Company, Pensacola, Florida.
Owner/Developer: State of Florida, Tallahassee, Florida.
Precast Prestressed Concrete: Dura-Stress, Inc., Leesburg, Florida.

Form and technology have come together in this mixed-use student activities center to produce a symbol for modern architecture. The designers have accomplished this by layering the event spaces within a central air-inflated roof structure and organizing smaller scale activities within the tension-supported perimeter "skirt." The basic concrete elements of this dynamic campus facility are a precast prestressed concrete compression ring and a surrounding system of precast concrete arches. Designed to withstand hurricane forces, the precast concrete framing also had the advantage of erection speed to match rapid roof construction.

Jury Comment: *"Modern architecture at its best. We are most impressed with this imaginative envelope and with the exceptional restraint shown in the precast framing."*



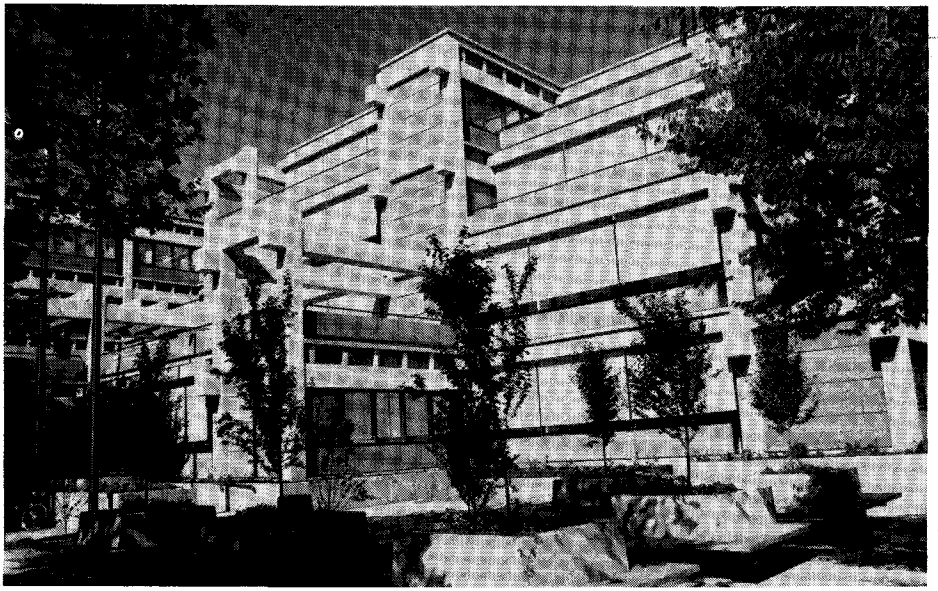


Security Insurance Group Corporate Headquarters Farmington, Connecticut

Architect/Structural Engineer: Russell Gibson von Dohlen, Inc., Farmington, Connecticut.
General Contractor: Development Consultants, Inc., Hartford, Connecticut.
Owner: Security Insurance Group, Farmington, Connecticut.

Projecting a solid corporate image while staying within a tight construction budget were the owner's requirements for its new headquarters building. Lightly textured, dark gray precast concrete wall panels present a strong, sculptural appearance. The sloping south wall adds to the effect and also acts as a passive solar device. Recessed, backward sloping windows are shaded from spring through fall. Sunlight can enter the windows in winter months for passive heat collection. Preformed, lined gutters in the precast concrete wall panels below windows remove run-off rainwater from the sloped surfaces. All of the esthetic requirements were achieved within the budget using fast-tract construction to save time and money.

Jury Comment: *"The design flexibility of architectural precast concrete made the unusual window angles on the south wall possible. Sectional details are well handled and reflect the designer's ingenuity."*



Site 1A/Gregory Bateson Building Sacramento, California

Architect/Engineer: Office of the State Architect, State of California, Sacramento, California.
General Contractor: Continental Heller Corporation, Sacramento, California.
Owner: State of California, Department of General Services, Sacramento, California.
Precast Prestressed Concrete Beam Manufacturer: Concrete Technology Corp., Tacoma, Washington.

This state office building reflects both good design and concern for energy conservation. Thermal mass and shading techniques allow the building to use only 40 percent of the energy required by new conventional office buildings. According to the architects, their energy-conscious design could not have been accomplished without the use of precast and prestressed concrete. Prestressed concrete double tees and the supporting precast ladder frames, exposed to interior office spaces, contribute to the thermal mass effect used in the heating and cooling of the spaces. On the exterior, precast concrete components act as sun screens. The designer also used the exterior components to break the mass of the building into smaller elements.

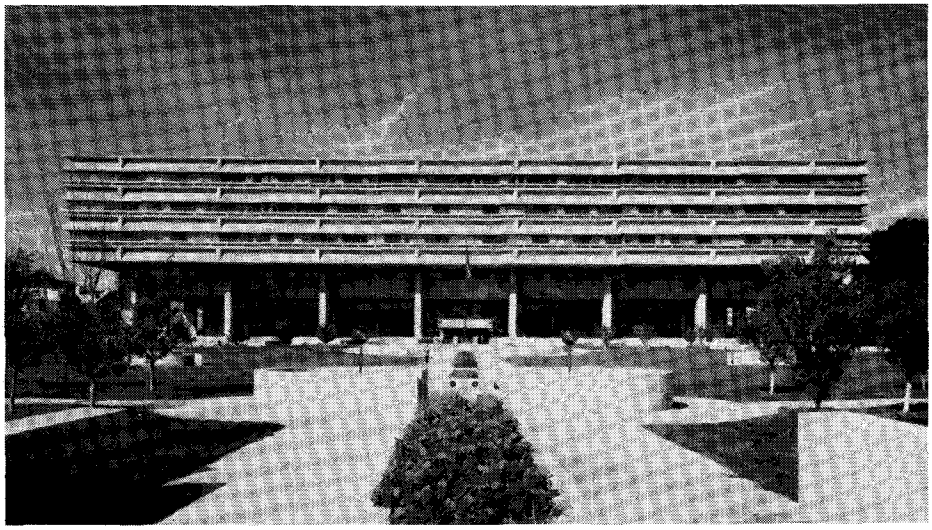
Jury Comment: *"The energy-conscious design makes good use of precast and prestressed concrete. Precast ladders and colorful shades express a feeling of playfulness, yet the overall design is solid and organized."*

Metropolitan Toronto Police Station #52 Toronto, Ontario, Canada

Architect/Engineer: Shore Tilbe Henschel Irwin Peters, Architects, Engineers, Toronto, Ontario, Canada.
General Contractor: Vanbots Construction Corporation, Scarborough, Ontario, Canada.
Owner: The Municipality of Metropolitan Toronto, Toronto, Ontario, Canada.

The architects were faced with the problem of creating an open but secure building for the police force that was also architecturally compatible with the nearby Art Gallery of Ontario. Architectural precast concrete wall panels in combination with large areas of glass block offer security while setting a human scale for the project. The exposed aggregate precast concrete panels, ribbed for added texture, are similar in appearance to the materials used on the art gallery. In addition, the precast panels also have a layer of insulation sandwiched between the outer layers of concrete, thus adding energy efficiency to the list of advantages for using precast concrete on this building.

Jury Comment: *"A delightful arrangement of architectural precast concrete. It's certainly a warm, friendly addition to the civic buildings of this city."*



Walter Reed General Hospital Washington, D.C.

Architect: Stone, Marraccini and Patterson, Architects & Planners and Milton T. Pflueger, Architect, a joint venture, San Francisco, California.
Engineer: Isadore Thompson & Associates, San Francisco, California.
General Contractor: Blake Construction Company and U.S. Industries, Inc., a joint venture, Washington, D.C.
Owner: Department of The Army, Commanding Officer of Walter Reed Army Medical Center, United States Army, Washington, D.C.

The U.S. Army's most sophisticated medical center facilities had to continue functioning during construction of the new 1280-bed hospital. Rapid enclosure of the building with architectural precast concrete wall panels enabled interior trades to begin work early and allowed continuous construction. The panels also achieve the clean, simple lines, and exterior finish required for compatibility with the older buildings in the complex. The seven-level, 1.1 million sq ft (102,190 m^2) facility has flexibility for future changes. Precast panels can be removed and replaced for access to interstitial spaces between floors containing all mechanical and electrical systems.

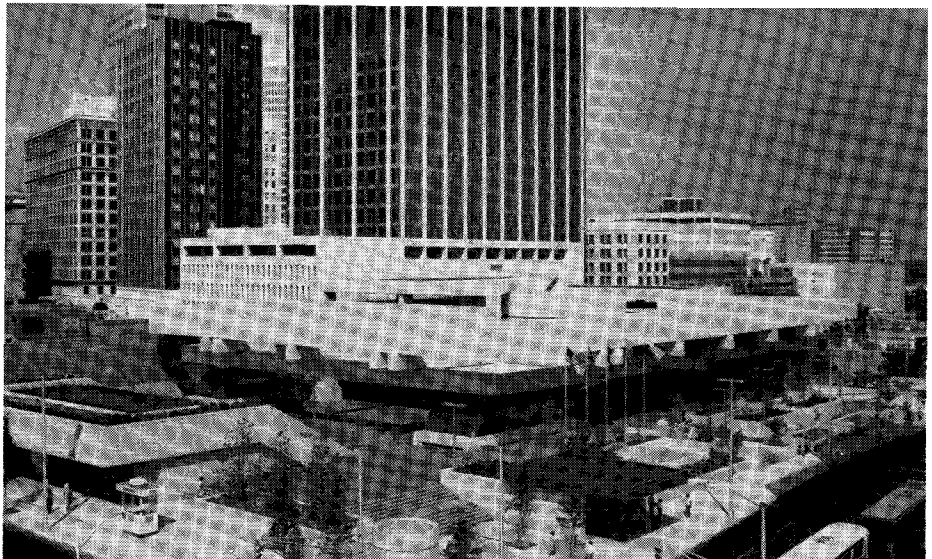
Jury Comment: *"The elegant use of architectural precast concrete breaks up the massiveness of the structure and defines the interstitial spaces. An excellent solution to a very challenging problem."*

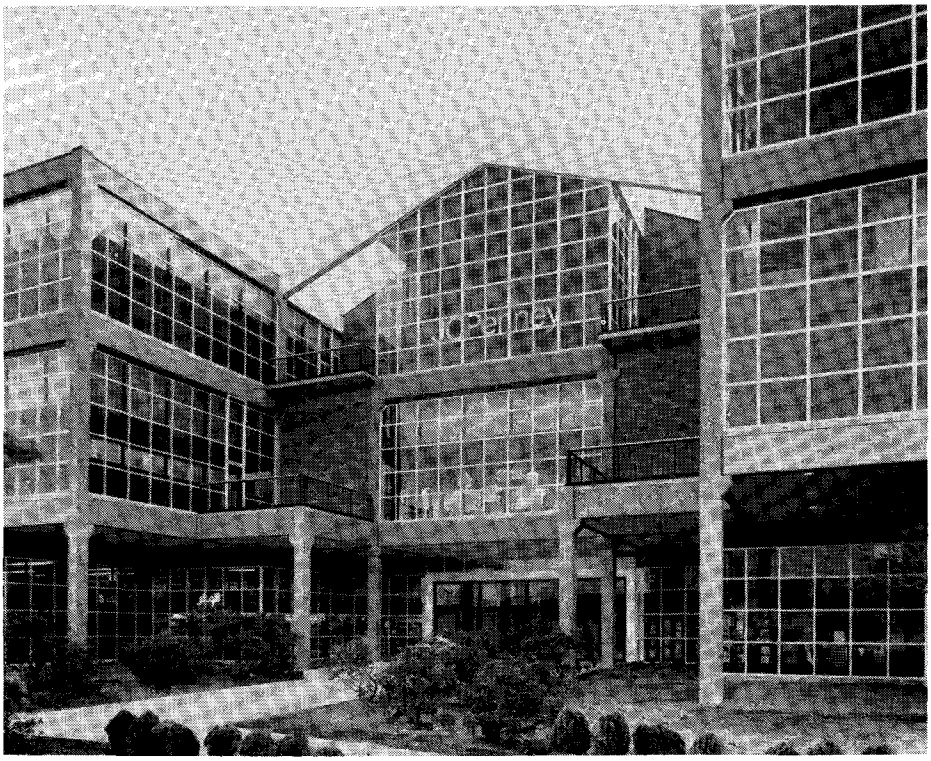
Five Points Station
Atlanta, Georgia

Architect: HEERY-FABRAP, Architects, Engineers & Planners, Atlanta, Georgia, a partnership of Finch Alexander Barnes Rothchild Paschal, Architects, Inc., and Heery International, Incorporated, Atlanta, Georgia.
Engineering Consultant, Construction Management, Civil and Structural Engineer: Parsons Brinckerhoff/Tudor, Atlanta, Georgia.
Structural Engineer for Roof Structure: Parsons Brinckerhoff Quade & Douglas, Inc., New York, New York.
General Contractor: Slattery Associates, New York, New York.
Owner: Metropolitan Atlanta Rapid Transit Authority, Atlanta, Georgia.
Precast Prestressed Concrete: Southeast Shockbeton, Inc., Lavonia, Georgia.

This important metropolitan transit station is set apart from others by its massive segmental precast concrete roof and the extensive use of precast prestressed concrete (2000 pieces) throughout the four-level structure. In plan, the roof measures 262 by 167 ft (80 by 51 m) and it is framed with 9 longitudinal and 11 transverse segmental beams. The huge beams consist of precast concrete segments 13 ft (4 m) long, match-cast, epoxy glued and post-tensioned. Beam ends support large hollow-beam fascia panels. At the center, supported on the beam-column framework, is a 66-ft (20 m) circular drum consisting of an inner and outer ring each with 16 concrete segments post-tensioned together. In total, the daring structural-architectural treatment is a highly visible concrete sculpture.

Jury Comment: *"The sophisticated, sculptural appearance is a welcome relief for transit facilities. Innovative use of massive structural elements produces an acceptable scale and a pleasant space to be in."*





Bellevue Square
Bellevue, Washington

Architect: Charles Kober Associates, Architects, Seattle, Washington.
Engineer: Robert Englekirk Consulting Structural Engineers, Inc., Seattle, Washington.
General Contractor: Baugh Construction Company, Seattle, Washington.
Owner: Bellevue Square Managers, Inc., Bellevue, Washington.

The architecture of this shopping mall is expressed by exposing the precast prestressed concrete structural frame in both the interior and exterior. Large window areas are emphasized by the beam and column framing. Extending the system three stories in the central court area provides natural lighting for the entire space. Shops are woven in and out of the framework for variety. Prestressed concrete beams are connected in a very direct manner to the columns by using a simple corbel cast onto the sides of each concrete column.

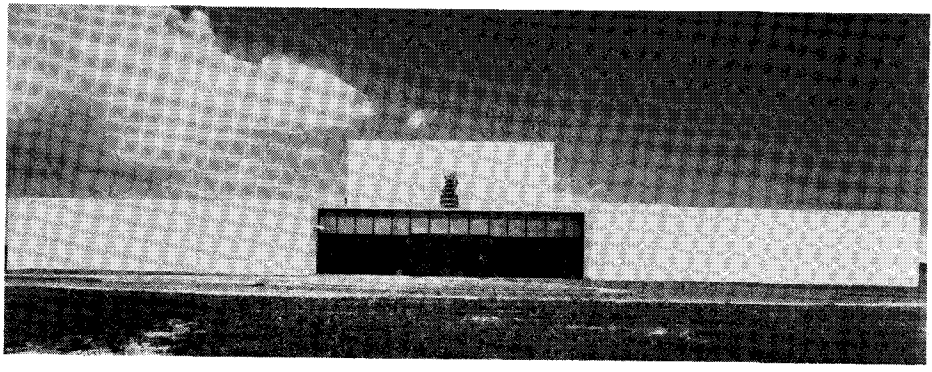
Jury Comment: *"An exciting concept for modern shopping areas. The exterior treatment, proportions and human scale are quite exceptional."*

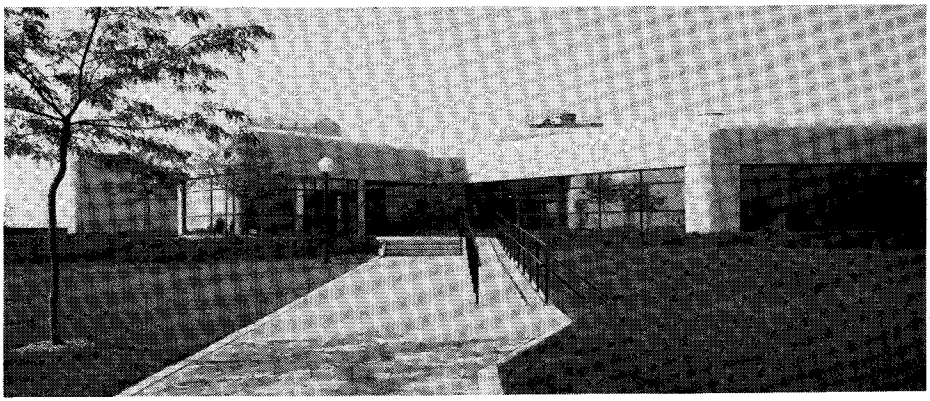
Miami Free Zone
Miami, Florida

Architect/Engineer: Ferendino/Grafton/Spillis/Candela, Architects, Engineers, Planners, Coral Gables, Florida.
General Contractor: Frank J. Rooney, Inc., Coral Gables, Florida.
Owner: Miami Free Zone Corporation, Miami, Florida.

A combination of load bearing and non-load-bearing architectural precast concrete wall panels create a distinctive exterior for this warehouse/showroom facility. Selected for speed and economy of fabrication and erection, the precast and prestressed concrete components also produced a highly fire resistive structure. The 867,892 sq ft (80,627 m^2) facility used nearly 2000 precast prestressed concrete joists in the floor and roof system.

Jury Comment: *"This building really is a work of art that exhibits both design sensitivity and a keen sense of structure. A striking facility for its use."*



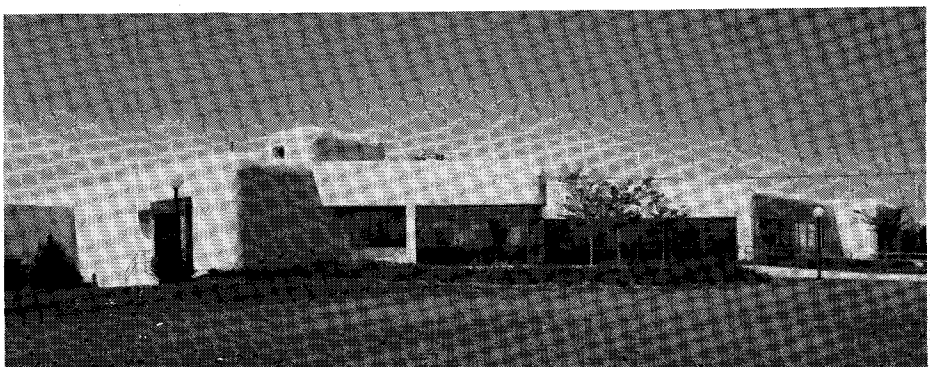


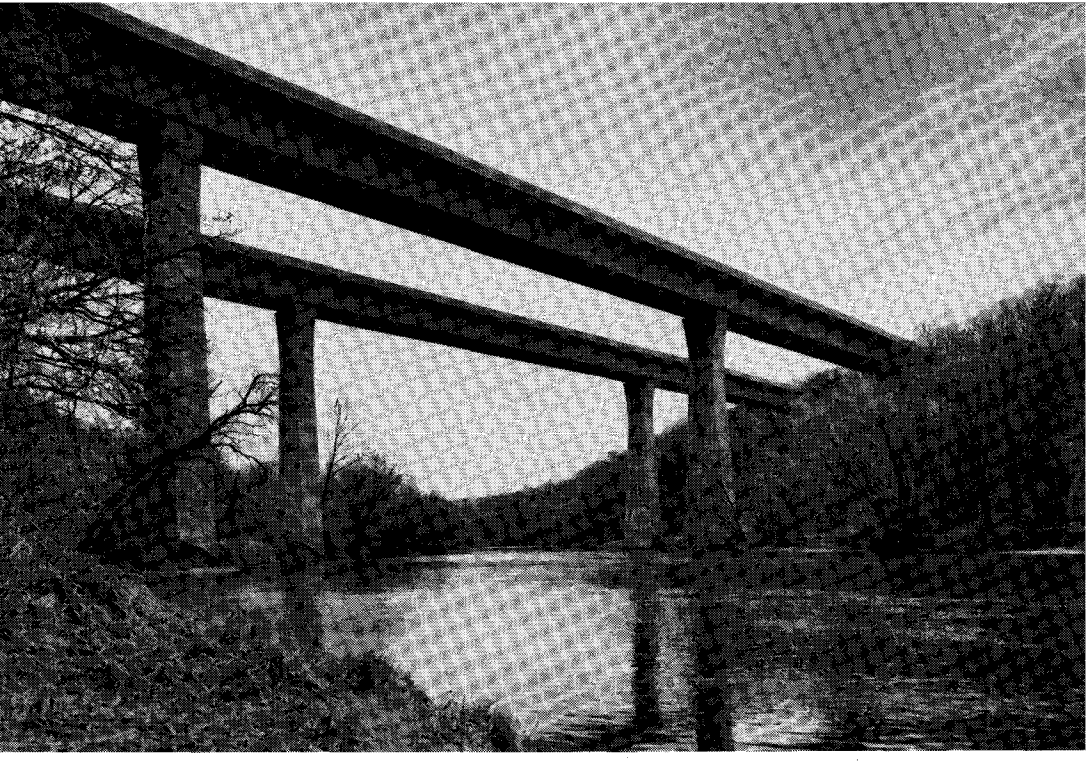
Canadian Imperial Bank of Commerce Ontario, Canada

Architect/Engineer: Shore Tilbe Henschel Irwin Peters, Architects, Engineers, Toronto, Ontario, Canada.
General Contractor: Eastern Construction Company Limited, Toronto, Ontario, Canada.
Owner: Canadian Imperial Bank of Commerce, Toronto, Ontario, Canada.

The architectural philosophy of this office building is expressed in many ways. The white, curved and flat precast concrete wall panels with a lightly textured finish represent the owner's progressive attitude toward the architecture of its new buildings. Corporate colors used throughout the building inventively reinforce the bank's image. Exterior windows were minimized as part of an energy-conscious design. Natural light enters offices through a centrally located skylit atrium.

Jury Comment: *"The curved roofline provides interesting character. Great discipline is reflected in the consistent detailing of exterior precast concrete cladding."*





Kishwaukee River Bridge
Winnebago County, Illinois

Owner: Illinois Department of Transportation.
Designer: Alfred Benesch & Co., Chicago, Illinois.
Segmental Special Consultant: BVN/STS Consulting Engineers, Indianapolis, Indiana.
General Contractor: Edward Kraemer and Sons, Inc., Plain, Wisconsin.
Precast Concrete Fabricator: J. W. Peters & Sons, Burlington, Wisconsin.
Post-tensioning System, Equipment and Redesign Engineering: Dywidag Systems International, USA, Inc., Lemont, Illiniois.

The transportation department's main requirement during construction of these twin structures was minimizing the impact on the surrounding environment. Precast concrete segmental box girders, using a launching truss system for erection, were chosen to meet the environmental demands. The 1090-ft (332 m) long bridges integrate well with the surroundings and allow the river to flow uninterrupted between the piers. Vegetation on the bluff appears almost undisturbed and the rock outcroppings are unchanged.

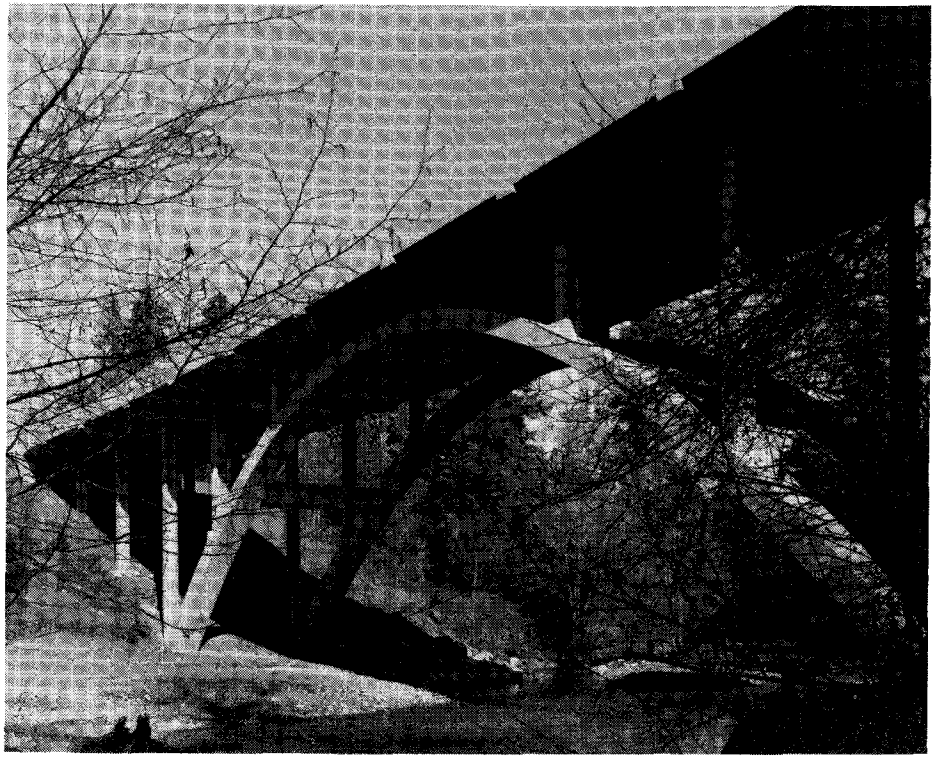
Jury Comment: *"A simple, no nonsense structure that reveals the value of precast concrete for long span bridges. The use of twin bridges avoided what could have been an overpowering structure."*

Fairoaks Bridge
Sutherlin, Oregon

Engineer: OBEC Consulting Engineers, Eugene, Oregon.
General Contractor: Stach Construction Company, Grants Pass, Oregon.
Owner: Douglas County, Oregon.
Precast Prestressed Concrete: Morse Brothers Prestress, Inc., Harrisburg, Oregon.

Standard precast concrete power poles used as columns to support a cast-in-place bridge deck and prestressed concrete arch ribs combine to give this county bridge its graceful appearance. The 256-ft (78 m) long bridge has four arch rib segments and 20 spandrel columns.

Jury Comment: *"This structure enhances the surrounding environment. The intersections of the columns with the arch ribs are handled particularly well."*



Railroad Avenue Overhead Richmond, California

Architect/Engineer: California Department of Transportation, Office of Structures Design, Sacramento, California.
General Contractor: Novo-Rados Corporation, Chino, California.
Owner: State of California, Sacramento, California.

This bridge consists of two separate structures. Precast prestressed concrete girders are used for the two main spans over the railroad tracks and cast-in-place concrete box girders for the remaining spans. The use of precast prestressed concrete on the middle spans allowed railroad traffic to continue during construction. Falsework, needed for outer spans, was not required for the precast sections. The trapezoidal box section reduced the number of girders in the bridge span and produced a pleasing, sloped exterior surface that blends together the precast and cast-in-place sections.

Jury Comment: *"The design is clean cut and efficiently solved the railroad's traffic problems."*