Eighteenth Annual

PCI Award Program Winners

A distinguished jury of architects and engineers have named nine award winners in the 1980 PCI Awards Program.

The purpose of the PCI Awards Program is to recognize excellence in design using precast, prestressed, and 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.

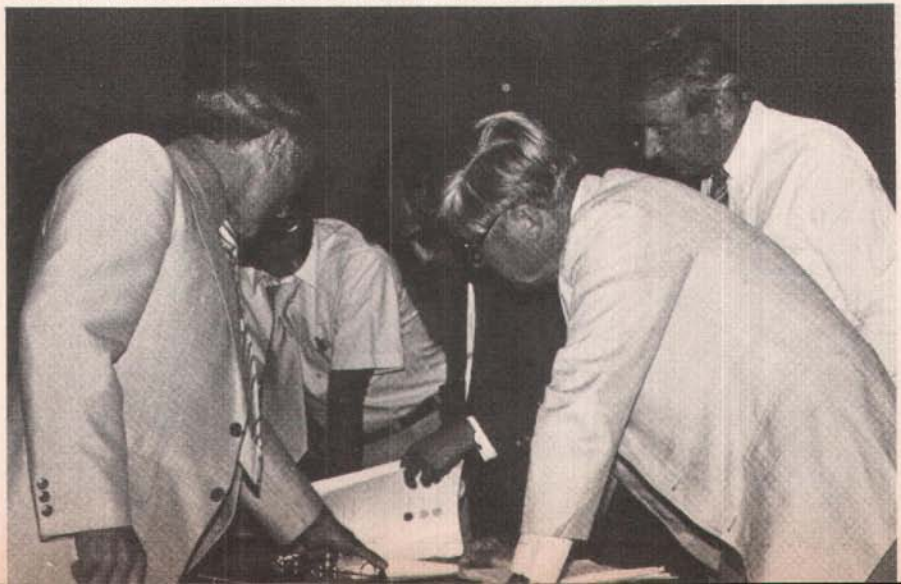
From almost 200 entries, six buildings/structures and three bridges were chosen for awards. They include: three bridges, two office buildings, a library, a post office, a vocational center and a floating breakwater structure.

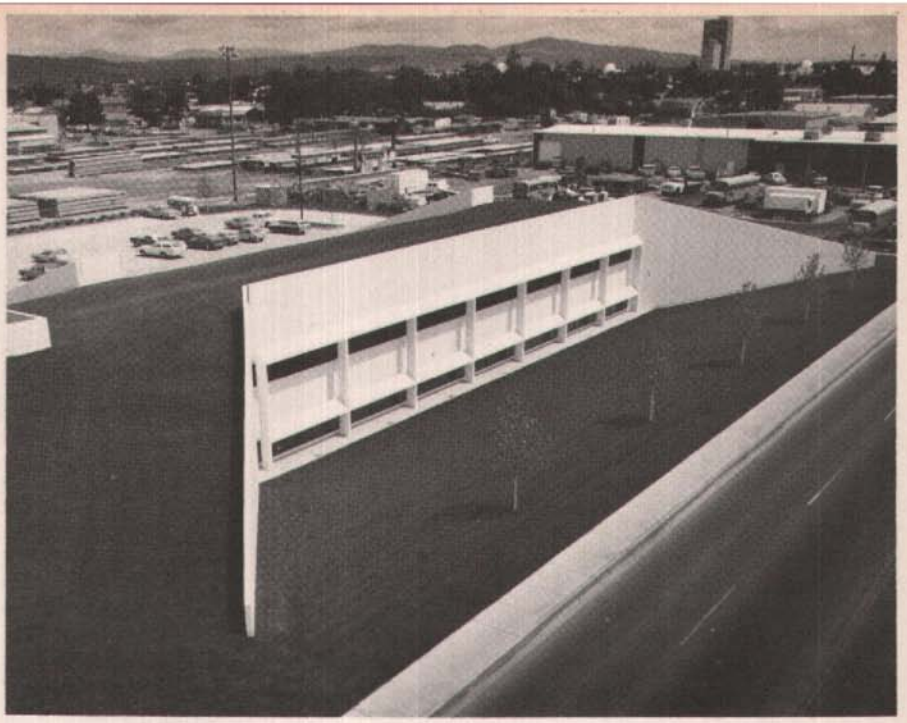
This year's jury was chaired by **Charles E. Schwing,** FAIA, president, The American Institute of Architects, and principal of Charles E. Schwing & Associates, Inc.

Other jurors include **Gilbert R. Beatson,** FRAIC, president of The Royal Architectural Institute of Canada, and principal of Beatson Finlayson & Partners; **William H. Kessler,** FAIA, William Kessler & Associates, Inc.; **Dr. Fazlur R. Khan,** Skidmore Owings & Merrill; and **Irvan F. Mendenhall,** president-elect of The American Society of Civil Engineers, and principal of Daniel, Mann, Johnson & Mendenhall, Inc.

The winning buildings/structures/ and bridges are described on the following pages.

Jury for Awards Program (from left), Gilbert R. Beatson, Charles E. Schwing (jury chairman), Dr. Fazlur R. Khan, William H. Kessler and Irvan F. Mendenhall.





Central Pre-Mix Concrete Company Corporate Headquarters Spokane, Washington

Architect/Engineer: Walker McGough, Foltz Lyerla, P.S. Spokane, Washington.
General Contractor: Lydig Construction Incorporated, Spokane, Washington.
Precast Prestressed Concrete: Central Pre-Mix Concrete Company, Spokane, Washington.

This corporate headquarters exemplifies how precast prestressed concrete can be used as a key component in energy efficient building design. Precast prestressed concrete beams and single tees support a 14-in. (356 mm) deep covering of sod, topsoil and drainage gravel placed on the roof. Architectural precast concrete sunscreens, along with solid wall panels, reinforce a strong design statement. The screens also allow for an unbroken horizontal expanse of glass across both levels of the facade. This met critical requirements for the proper use of solar energy and the provision of a view with minimal obstruction. The energy conscious passive solar design takes into account the thermal mass of the concrete. Over 90 units—prestressed single tees, double tees and beams, and precast wall panels and sunscreens were used in this small office building.

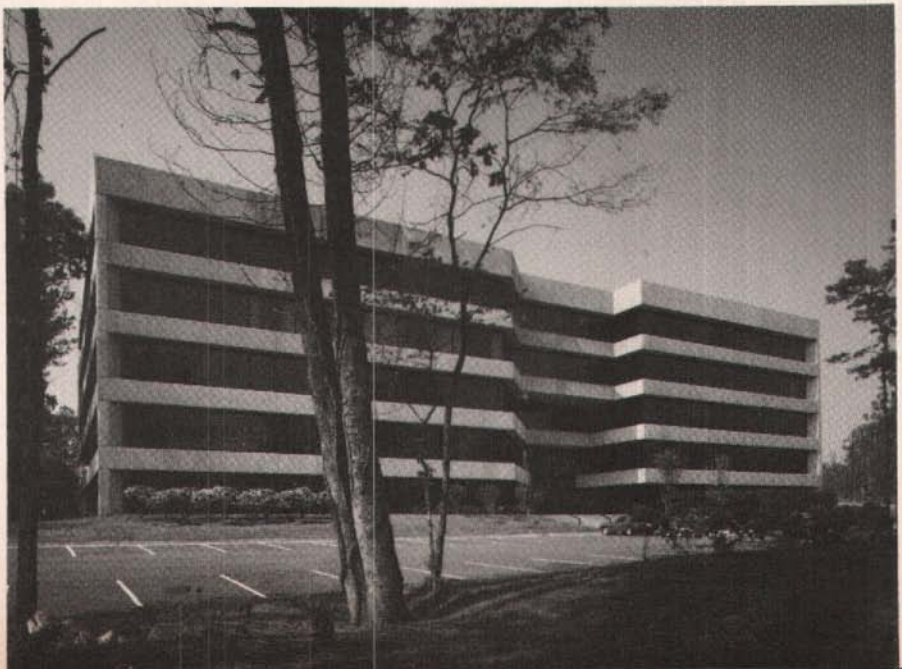
Jury Comment: *"A very innovative and beautiful solution for energy conscious design. Reflects the quality that can be achieved with precast prestressed concrete. The building fits unusually well into an industrial development."*

Interchange Building
Atlanta, Georgia

Architect: Cooper, Carry & Associates, Inc., Atlanta, Georgia.
Structural Engineer: Harald Nielsen & Tamer Uzun, Structural Engineers, Inc., Atlanta, Georgia.
General Contractor: Laing Properties, Inc., Atlanta, Georgia.
Precast Prestressed Concrete: Macon Prestressed Concrete Co. (formerly Gifford-Hill Company, Inc.), Forest Park, Georgia.
Owner: A joint venture of Laing Properties, Inc., and The Landmarks Group Properties Corp., Atlanta, Georgia.

This five-story office building, sited for minimum environmental impact, uses the natural tones of precast concrete spandrel panels to harmonize with the wooded setting. Rich colored precast concrete wall panels used in the two-story lobby create a dramatic, inviting entry for employees and visitors. Prestressed concrete double tees in the floor and roof system cantilever to the edge of the building. A special notch in the tees helps to eliminate the use of miscellaneous steel bracing to support the precast concrete panels. Other components in the total precast concrete structural system are core beams, flat slabs, columns, inverted T-girders, L-girders, and rectangular girders, for approximately 800 precast structural and architectural units.

Jury Comment: *"The textured precast concrete interior creates a pleasant work environment and reflects the character of the exterior."*



Asheville General Mail Facility
Asheville, North Carolina

Architect/Engineer: Six Associates, Inc., Architects, Engineers and Planners, Asheville, North Carolina.
General Contractor: McDevitt & Street Company, Charlotte, North Carolina.
Precast Prestressed Concrete: Metromont Materials Corp., Greenville, South Carolina.
Owner: Field Real Estate and Building Office, United States Postal Service, Atlanta, Georgia.

On this project the design problem facing the architect/engineer was to miminize the impact of a large general mail facility on the natural beauty of the area and to provide an energy-efficient structure. Roofdeck parking, earth berming around office level, and precast concrete wall panels produced a visually acceptable, thermally efficient solution. Precast prestressed concrete double tees for the roof allow long, column-free spans at a minimal structural depth and provide capacity for parking loads. The double slab thickness reduces thermal peak loading to augment the heat sink characteristics of the earth beam. On the interior, the double tees act as the organizing element of the integrated lighting and HVAC system.

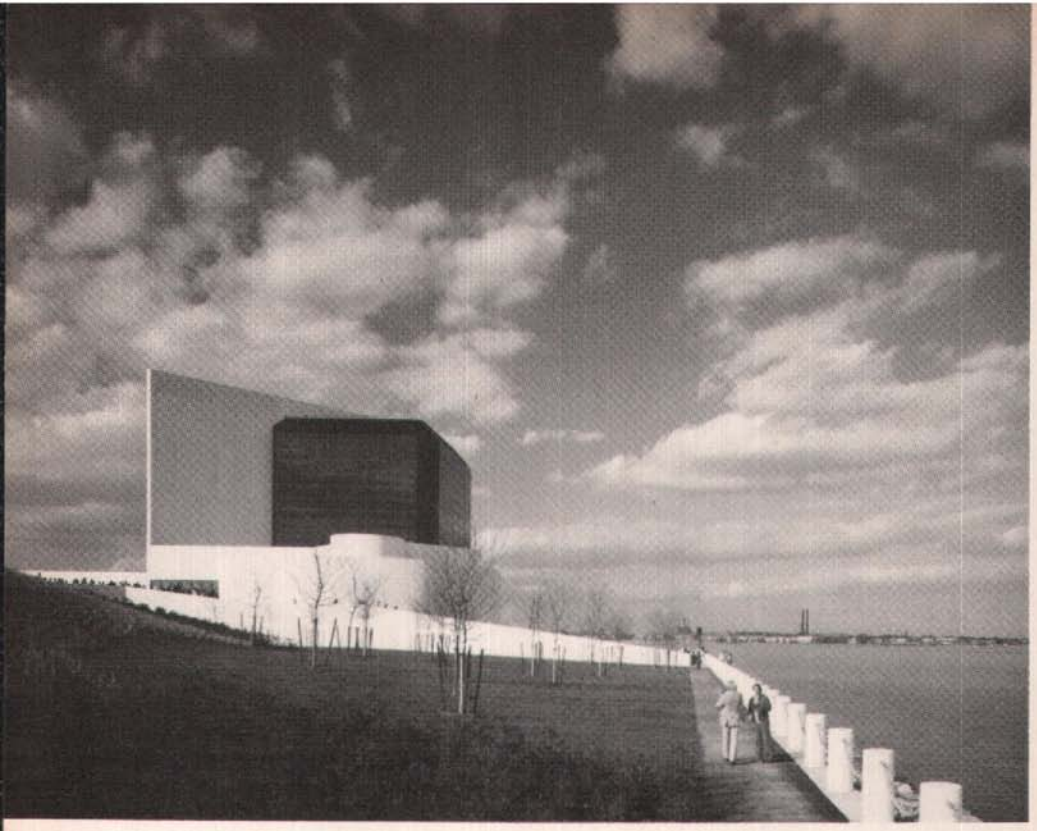
Jury Comment: *"Shows the achievement of good design in federal architecture. We were particularly impressed with the interior use of double tees to house ductwork and lighting systems."*

Robert Morgan Vocational-Technical Institute Miami, Florida

Architect: Perkins & Will, Architects, Chicago, Illinois.
Engineer: Gauthier, Alvarado & Associates, Falls Church, Virginia.
General Contractor: Metric Constructors, Inc., St. Petersburg, Florida.
Precast Prestressed Concrete: Meekins-Bamman Prestress, Inc., Hollywood, Florida.
Owner: Dade County Public Schools, Miami, Florida.

The extensive covered open-air mall between the one-story and two-story portions, and the long span precast prestressed concrete floor and roof systems, are distinctive design features of this vocational-technical institute. The 64 ft (20 m) double tees provide large open work areas and maximum flexibility in arrangement of classroom sizes. Quickly erecting components allowed the interior finishing trades to begin work on an accelerated schedule. Prestressed long-span spandrels and balcony units assist in conserving energy through light reflection, shading and slower heat transmission.

Jury Comment: *"A straight honest structural expression that works extremely well. The interior mall area is simple and delightful."*



John Fitzgerald Kennedy Library
Dorchester, Massachusetts

Architect: I. M. Pei & Partners, Architects, New York, New York.
Structural Engineer: Weiskopf & Pickworth, New York, New York.
General Contractor: Turner Construction Company, New York, New York.
Owner: General Services Administration, Washington, D.C. (During design and construction the owner was the John Fitzgerald Kennedy Library Corporation.)

This building, clad in architectural precast concrete, is a monument to a U.S. president and to the office of the Presidency. The panels, many of which are three-dimensional, measure up to 9 ft by 24 ft (2.7 x 7.3 m) at a weight of 8 tons (7.3 t), and produce the visual impact expected of monumental-type structures. The architects, faced with tight budgetary constraints, chose precast concrete for its comparative economy and its ability to enhance the light and shadow created by the large space frame window area.

Jury Comment: *"This outstanding design demonstrates the adaptability of precast concrete to monumental-type structures. A fine example of non-structural precast concrete in a grand scale."*

Bar Point Harbor Expansion Floating Breakwater Anchorage, Alaska

Engineer: Corps of Engineers, Alaska District, Anchorage, Alaska.
General Contractor: Dawson Construction Company, Bellingham, Washington.
Precast Concrete: Concrete Technology Corporation, Tacoma, Washington.
Owner: Corps of Engineers, Anchorage, Alaska.

Designed to reduce a 4-ft (1.2 m) maximum wave to an acceptable 1-ft (0.305 m) wave inside the boat basin, this precast floating breakwater was an economical alternative to standard systems. Preliminary cost studies indicated the precast system to be less costly than steel boxes, and also more durable and resistant to corrosion in salt water. The 963 ft (294 m) long main breakwater, and 160 ft (49 m) long adjacent structure, were segmentally precast and post-tensioned into 40 ft (12 m) long by 23 ft (7 m) wide modules aboard an assembly barge. These modules, with open interior cells, were placed in the water and post-tensioned together to form 240 ft (73 m) sections, which were connected longitudinally by stressing cables but separated by 12 in. (306 mm) thick neoprene bumpers. The structures are anchored in the 130 ft (40 m) water depth by galvanized anchor chain.

Jury Comment: *"An imaginative use of precast prestressed concrete. Its low profile in relation to the rest of the boat basin was of particular interest."*

Athabasca Falls
Vehicular and Pedestrian Bridges

Engineer: Ried, Crowther & Partners Ltd., Calgary, Alberta, Canada.
Consulting Architect: Stevens Graham MacConnell, Milton Partners, Calgary, Alberta, Canada.
General Contractor: D. J. Manning Construction Ltd., Vancouver, British Columbia, Canada.
Precast Prestressed Concrete: Con-Force Products Limited, Edmonton, Alberta, Canada.
Owner: Parks Canada, Calgary, Alberta, Canada.

Compatibility with the rugged beauty of this mountain area was the challenge faced by designers of this vehicular and pedestrian bridge combination. Using warm tone cement and exposed aggregate in single span precast prestressed concrete bridge components, and in architectural precast concrete guard rail sections, the designers created bridges that reflect the character of the quartzite rock formations. The highway bridge consists of two 3 ft 6 in. (1.1 m) deep trapezoidal box sections 102 ft (31 m) long. The 50 ft (15.2 m) pedestrian bridge consists of a single flanged box girder. Their shapes and dimensions completely complement each other.

Jury Comment: *"Precast prestressed concrete warmly reflects the color of surrounding rock formations. The bridges relate beautifully one to the other. A solution that successfully matches the character of the terrain."*

Interstate 55
LaPlace to Ponchatoula
Elevated Highway Structure

Designer-Owner: Louisiana Department of Transportation and Development, Office of Highways, Baton Rouge, Louisiana.
General Contractor: Brown and Root, Inc., Houston, Texas.

The world's largest precast, prestressed concrete causeway—twin structures stretching 23.3 miles (37.4 km) and part of I-55—was built by floating components by barge to the job site through lakes, rivers and a man-made construction canal. The central casting yard produced more than 3200 full width, 70 ft (21.3 m) long precast prestressed concrete spans, 255 tons (231 t) each, 3000 precast pile caps, 55 tons (50 t) each, and 7000 precast, 54-in. (1.4 m) diameter cylinder piles.

Jury Comment: *"A straightforward, simple approach to a repetitive system. The monumental use of precast prestressed concrete components solved an ecologically sensitive problem."*

KY 676 (East-West Connector) Over the Kentucky River Frankfort, Kentucky

Engineer: American Engineering Company, Consulting Engineers, Lexington, Kentucky.
Segmental Consultant: BVN/STS Consulting Engineers, Indianapolis, Indiana.
General Contractor: S. J. Groves and Sons Company, Springfield, Illinois.
Precast Concrete: Construction Products Corporation, Prestressed Concrete Division, Henderson, Kentucky.
Owner: Bureau of Highways, Division of Bridges, Kentucky Department of Transportation, Frankfort, Kentucky.

An esthetically pleasing bridge was economically achieved through the use of precast, segmental bridge construction by the balanced cantilever method. Precast concrete sections with cantilevered deck slabs were plant-cast, using the long-line match casting technique, and then either trucked or barged to the site depending on the size and weight of the units. Units were post-tensioned as they were added to the cantilevers from piers and abutments, and finally when all units were in place. Depth of boxes varied from 8 to 16 ft (2.4 to 4.9 m). Two rows of parallel boxes provide a deck width of 86 ft 4 in. (26.3 m). Center span is 323 ft (98.5 m) and the two side spans are each 228 ft 6 in. (69.7 m). The large span-depth ratio met clearance requirements and led to the very satisfactory appearance in a highly sensitive area.

Jury Comment: *"The utter simplicity of a straightline design solution. Achieves construction economies while respecting the river crossing site extremely well."*