

# Building Winners Showcase Aesthetics, Speed, Flexibility



*Designers use an array of techniques to create aesthetically pleasing and innovative designs for a wide range of buildings*

**C**atching the judges' attention in this year's Design Awards competition were a wide spectrum of building types. Key reasons entrants noted for the choice of precast components — and reasons that judges singled them out as winners — included:

**Aesthetics:** Virtually all of the winning projects cited the aesthetic potential of precast concrete as a key reason for specifying it. At **Brighton Landing** in Massachusetts, the use of a panelized system allowed inventive detail without



## ◀ *Best Office Building (Co-Winner)* **Brighton Landing, Brighton, Mass.**

**Architect:** ADD Inc., Cambridge, Mass.

**Engineer:** McNamara/Salvia Inc., Boston

**Precaster:** Bolduc, Beauce, Quebec, Canada

**General Contractor:** Dimeo Construction, Providence, R.I., and O'Connor Constructors Inc., Canton, Mass.

**Owner:** B.V. Development LLC, Brighton, Mass.

**Precast Solution:** Architectural precast panels clad the two office buildings in this campus, while a total-precast parking structure with ground-level retail space was created nearby. The designers needed a skin that provided aesthetic flexibility to create images that reflected both “urban gateway” and “local landmark.” Precast’s plasticity allowed designers to create larger concepts using multiple panels while articulating inventive details within each panel, without resorting to smaller unit pieces. The material provided the flexibility in form, color, cost and construction the owner needed.

*Judges' Comments: “This office building has a crisp, clean presence. It’s very well done in a disciplined way, very balanced but not dull. The architect developed a strong design and then determined how to use precast to build it rather than going about it the other way around.”*

*Photo: Warren Jagger Photography Inc.*





◀ *Best Office Building (Co-Winner)*

**Merrill Lynch Hopewell Campus, Pennington, N.J.**

**Architect:** TVS, Atlanta

**Engineer:** Kling Lindquist, Philadelphia

**Office Building Precaster:** Universal Concrete Products Corp., Douglassville, Pa.

**Parking Structure Precaster:** High Concrete Structures Inc., Denver, Pa.

**General Contractor:** Hunt Construction Group Inc., Princeton, N.J.

**Owner:** Merrill Lynch Hopewell LLC, Pennington, N.J.

**Precast Solution:** This eight-building, 1.5-million-square-foot campus brought together numerous disparate company offices. To meet a wide range of goals and create a unified expression, designers used thin-brick insets on architectural precast panels for the façade on all of the buildings. The panels provided a basic “kit of parts” that could be combined in different floor-plan configurations and building heights to achieve the diversity of sizes and shapes of facilities required. The panels also clad four parking structures and all support buildings, all of which were constructed in record time.

*Judges’ Comments: “This is a good example of how precast can be used with brick inlay to achieve the richness and character of masonry in an economical and streamlined process. This was the only way the designer could afford to achieve a masonry feel, yet it’s very rich and expressive.”*



*Best Public/Institutional Building* ▶

**Salt Lake City Public Library, Salt Lake City**



**Design Architect:** Moshe Safdie and Associates Inc., Somerville, Mass.

**Architect of Record:** VCBO Architecture, Salt Lake City

**Precast Specialty Engineer:** McNeil Engineering, Midvale, Utah

**Precaster:** Pretecsa, S.A. de C.V., Mexico City, Mexico

**Construction Manager:** Construction Control Corp., Salt Lake City

**General Contractor:** Big-D Construction, Salt Lake City

**Owner:** Salt Lake City Public Library

**Precast Solution:** The dramatic, three-building library facility, which emphasizes mountain views in all directions, is clad with architectural precast panels. The largest and most demanding portion involved the 400-foot-long crescent building, which uses panelized precast components to create the appearance of a flowing, curved and leaning structure. Each of the 1,300 custom-fabricated panels warps from one column to meet at a different angle at the next column. As a result, each spandrel panel has different radii at top and bottom.

*Judges’ Comments: “This project features absolutely fantastic forming in the complexity of the pieces and the way they were handled by the precaster. Although civic buildings can so often be underwhelming, this one brings life to the community as a real focal point.”*

resorting to small unit pieces. The details and texture achieved with precast would not have been possible with brick or folded metal, the designers said. Similarly, at the other office winner, the **Merrill Lynch Hopewell Campus**, architects used inset thin brick with smooth-textured accents on all eight office buildings as well as support facilities. The use of brick-faced panels to provide a “kit of parts” that could be combined in so many ways allowed the huge campus to be finished in record time.

The amazing range of options provided by precast also can be seen in both Public/Institutional winners. At the **Salt Lake City Public Library**, a crescent wall built of curved and warped precast panels offers a focal point, but other unusual shapes and textures also create visual interest.

Both parking structures also relied on precast’s aesthetic diversity. At the **Resurrection Medical Center Southeast Parking Structure** in Chicago, the combination of smooth and closely ribbed spandrels creates a contemporary look in keeping with the medical center. At the same time, the all-precast design for



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### ▲ Best School

#### Highland Park High School Addition, Highland Park, Ill.

**Architect:** Legat Architects, Waukegan, Ill.

**Engineer:** Larson Engineering of Illinois, Naperville, Ill.

**Precaster:** Lombard Architectural Precast Products Co., Alsip, Ill.

**Precast Specialty Engineer:** McCluskey Engineering Corp., Naperville, Ill.

**General Contractor:** Boller Construction Co., Waukegan, Ill.

**Owner:** Township High School District 113, Highland Park, Ill.

**Precast Solution:** This high school addition needed to preserve the scale and quality of space in the existing school while integrating into the man-made and natural landscape. A façade featuring architectural precast panels with a limestone look joined with brick to create the color and texture required. Both wall panels plus sill panels that accent the brick were incorporated.

*Judges’ Comments:* “This school provides an excellent use of masses and materials to respond to a very large complex adjacent to a residential area. The project stood out because of its simple, modern composition that doesn’t appear institutional.”



### ◀ Best Multifamily Housing

#### Trinity Place, Boston

**Architect:** CBT/Childs Berman Tseckares Inc., Boston

**Engineer:** McNamara/Salvia Inc., Boston

**Precaster:** Artex Systems, Concord, Ontario

**General Contractor:** Turner Construction, Boston

**Owner:** Raymond Properties, Boston

**Precast Solution:** Architectural precast panels allow this 240,000-square-foot, 18-story building to blend smoothly into its neighborhood adjoining Boston’s Back Bay and South End. The panels create a prefabricated window anchor system, creating multiple visual elements. On lower floors, window boxes protrude from the façade, while deep window recessions on other floors, especially on the tower, created deeper shadow lines. A strong pilaster expression enhances the building’s vertical planes.

*Judges’ Comments:* “The building does a remarkable job of reflecting the limestone structure. There is a uniqueness in the context of the city that creates a striking image on the skyline. It maintains its presence very well alongside some of the other buildings. It blends very comfortably into the fabric of the neighborhood, and yet it has its own modern identity.”

Photo: ©Edward Jacoby



the **Saks Parking Structure** in Kansas City features form liners, reveals and an integrally colored mix that complements tile mosaics and large metal panels inset into punched windows to create a new building that fits the context of the Country Club Plaza, the first suburban shopping center in the country.

At the **Highland Park High School**, designers met the challenge of matching a new addition to the existing facility made of brick and limestone by using precast architectural panels. A limestone-like finish blended with laid-up brick to fit into the campus.

And the striking faux-slate design for the “**Casa Club**” **Bosque Real** in Mexico City is a tribute to precast’s ability to replicate any design imagined by an architect. The textures were achieved with rubber form liners sculpted from actual slate pieces in nearby quarries, turning the molds with each panel to increase the randomness of the pattern.

**Design Flexibility:** Precast’s ability to mimic stone and embed masonry into the panels’ faces played a key role in several projects, including the **Merrill Lynch** campus. Its ability to fit into a wide range of neighborhoods was advantageous for the **Trinity Place** in Boston, where precast panels helped the residential building fit into the juncture of the well-known Back Bay and South End neighborhoods.

Precast’s flexibility aided **Trinity Place** further by creating a prefabricated window anchor system throughout the building, which allowed the designers to create a variety of visual elements. On lower floors, window boxes enhance the streetscape, while deep window recesses higher up create pronounced shadow lines. Precast details also were added along the terraced areas of the upper floors, further enhancing the tower. Pilasters emphasize the building’s vertical planes, which join with the recessed windows to create dimensional interest.

Precast’s long-span capability met designers’ needs on the **Saks Parking Structure**, where long double tees provided the flexibility to create efficient parking spaces on upper floors and column-free retail spaces at ground level.

**Speed of Construction:** The rapidity with which precast concrete components can be erected, and their ability to continue construction through the winter, make them a strong choice for

### ▼ *Best Parking Structure (Co-Winner)* **Saks Parking Structure, Kansas City, Mo.**

**Architect:** Gastinger Walker Harden Architects, Kansas City, Mo.

**Parking Consultant:** Walker Parking Consultants, Elgin, Ill.

**Engineer:** Structural Engineering Associates Inc., Kansas City, Mo.

**Precaster:** Rinker Materials Inc., Marshall, Mo.

**Precast Specialty Engineer:** PEC, Waukesha, Wis.

**General Contractor:** JE Dunn Construction Co., Kansas City, Mo.

**Owner:** Highwoods Properties, Kansas City, Mo.

**Precast Solution:** A total-precast concrete structural system allowed this parking structure, with first-floor retail, to meet a tight nine-month construction deadline. Architectural precast panels, cast using form liners and including reveals and an integrally colored mix, helped the structure fit in with the surrounding neighborhood. Ornamental iron infill was used over openings to ensure ventilation and add a decorative touch.

*Judges’ Comments: “This project very successfully integrates the commercial storefront into the parking structure itself. It hangs together as a composition more than many of those that just put their best foot forward and then stop. Some of the detailing is actually quite playful as well as successful.”*





many projects where deadlines are critical — and that accounts for more and more projects every day.

The time crunch many projects face can be seen in the **Saks Parking Structure**. Located in a dense urban area, the project could not begin construction until January, to avoid disrupting holiday shopping vital to the local economy. But it had to be completed by the next Thanksgiving for a special holiday ceremony that draws visitors from hundreds of miles. The answer was to create an all-precast structure that could begin fabrication while foundations were poured and site work began. When the foundation was ready, precast could begin erection immediately with columns, beams and long-span double tees.

Speed also was critical at the **Merrill Lynch** campus, where the eight office buildings, four parking structures, four assembly buildings and various other support facilities had to be built “in record time,” designers say. “The key to

### ▲ *Best Parking Structure (Co-Winner)*

#### **Resurrection Medical Center Southeast Parking Structure, Chicago**

**Architect:** Loeb Schlossman & Hackl, Chicago

**Engineer:** Walker Parking Consultants/Engineers Inc., Elgin, Ill.

**Precaster:** Concrete Technology Inc., Springboro, Ohio

**General Contractor:** Power Construction Co LLC, Schaumburg, Ill.

**Owner:** Resurrection Healthcare Corp., Chicago

**Precast Solution:** Architectural precast panels were chosen to clad this parking structure, which features a cast-in-place, post-tensioned structure, due to the crisp, visual appearance they could provide. Precast column covers provided an economical way to increase the scale of the columns supporting the large covered cantilevered planters. Interlocking and returning of panels at corners provided a continuous appearance, concealing the structure.

*Judges' Comments: “This is an elegant, simple parking structure that features a good transition. The curve is very powerful and simple in a way that connects the new with the old. There is a wonderful simplicity in the form and use of material. Nothing is clichéd and nothing is added onto it.”*

meeting the budget and schedule was getting the buildings dried-in quickly to cut the overall construction time,” they noted in their entry submission. The precast thin-brick panels achieved that, with construction on the first building beginning in the spring of 1999 and finishing by the end of 2000. The final building was completed in 2002.

**Creativity:** Innovations continue to spring forth when designers work with precast concrete, and these projects show that creativity at work. True innovation led to the cladding of the crescent-shaped building at the **Salt Lake City Library** with precast concrete panels to create a flowing, curved, leaning and warping structure. Nearly 400 feet long, the building starts plumb at five stories, leans to a 15-degree angle and then returns to its original angle while bending around the adjacent triangular-shaped building. Each of the 1,300 custom-fabricated panels warp from one column to the next at a different angle and offers a different angle of inclination.

Ground-breaking techniques, including the precaster’s invention of an adjustable mold that could adapt to the specific and unique requirements of each panel, ensured quality fabrication in an economical and timely manner.

**Seismic Control:** The “**Casa Club**” sports facility not only shows off the dramatic textural finishes possible with precast concrete, but it also showcases precast’s strong seismic qualities. The use of panelized components with a slate finish, rather than actual stone, provided more seismic control, with connections offering a 1¼-inch gap for differential movement between any two adjacent stories.

These attributes — as well as many not mentioned here, such as fire resistance, reduction of site congestion, all-weather erection and low maintenance — show the potential for precast architectural and structural components in a wide range of building types. These projects are only the latest in a long line, with many more to come, that take full advantage of precast concrete to achieve design success. ■

— Craig A. Shutt



### ▲ *Best Sports Facility*

#### “Casa Club” Bosque Real, Huixquilucan, Mexico

**Architect:** Sordo Madaleno y Asociados S.C., Mexico City, Mexico

**Engineer:** Postensa, Mexico City, Mexico

**Precaster:** Pretexsa S.A. de C.V., Mexico City, Mexico

**Construction Manager:** Constructora Funtanet, S.A. de C.V., Mexico City, Mexico

**General Contractor:** Grupo Inmobiliario y Constructor M, S.A. de C.V., Mexico City, Mexico

**Owner:** Constructora Bosque Real, S.A. de C.V., Mexico City, Mexico

**Precast Solution:** Although natural slate stone was originally specified for the cladding on this 330,000-square-foot country club, the designers selected architectural precast panels due to the speed they offered, the economy available and precast’s ability to provide the desired slate look. Molds were made from nearby slate quarries and used to fabricate the panels, rotating them occasionally to avoid repetition. The panels include deep reveals that imitate the joints between modular hewn stones, which match the joints between panels.

*Judges’ Comments: “This has a beautiful surface you just want to touch. The designer took a simple idea and elegantly detailed it. The planes and the way the masses interact are cleverly crafted and yet disciplined. The use of color is restrained and doesn’t become overwhelming.”*

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