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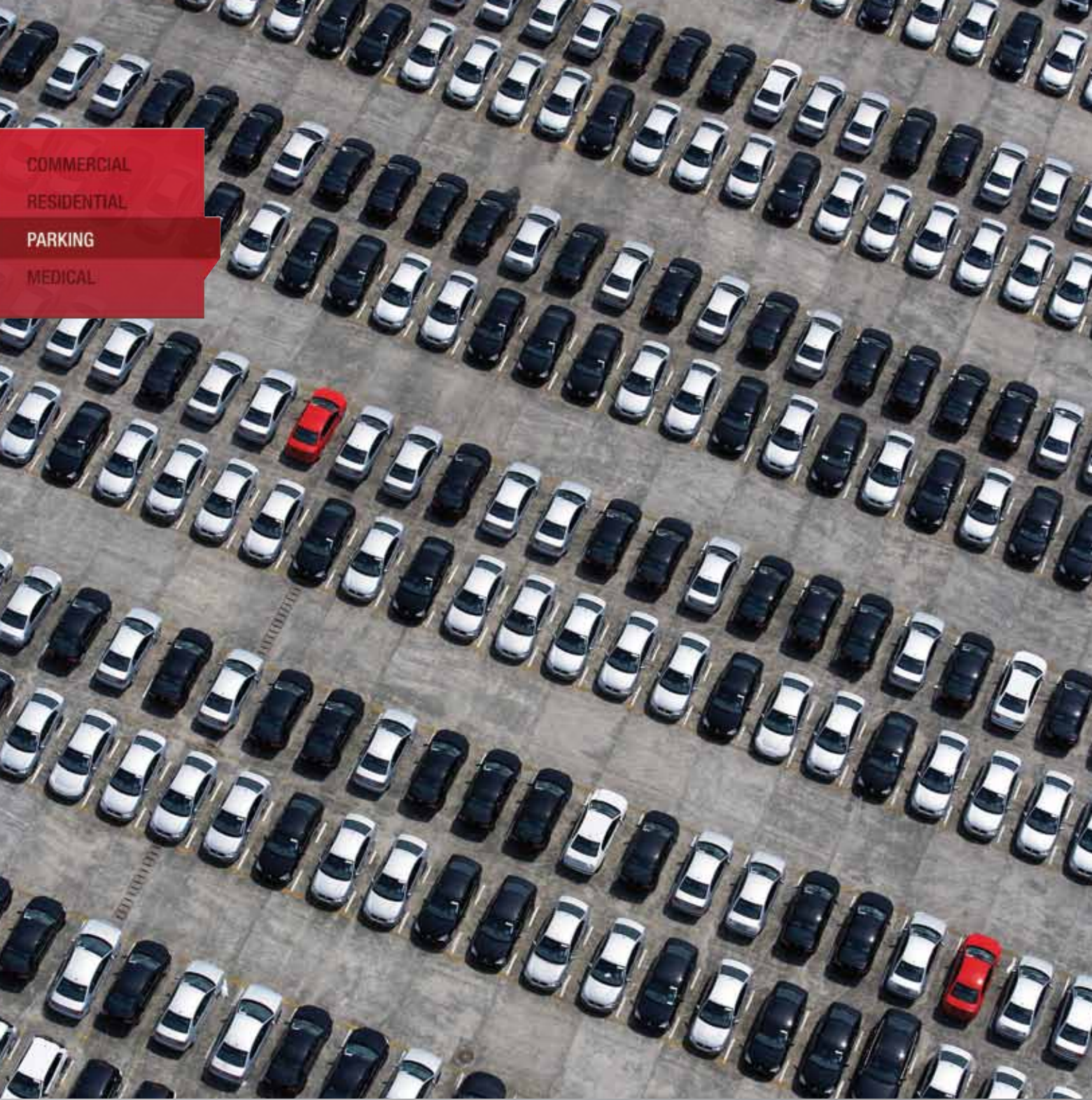
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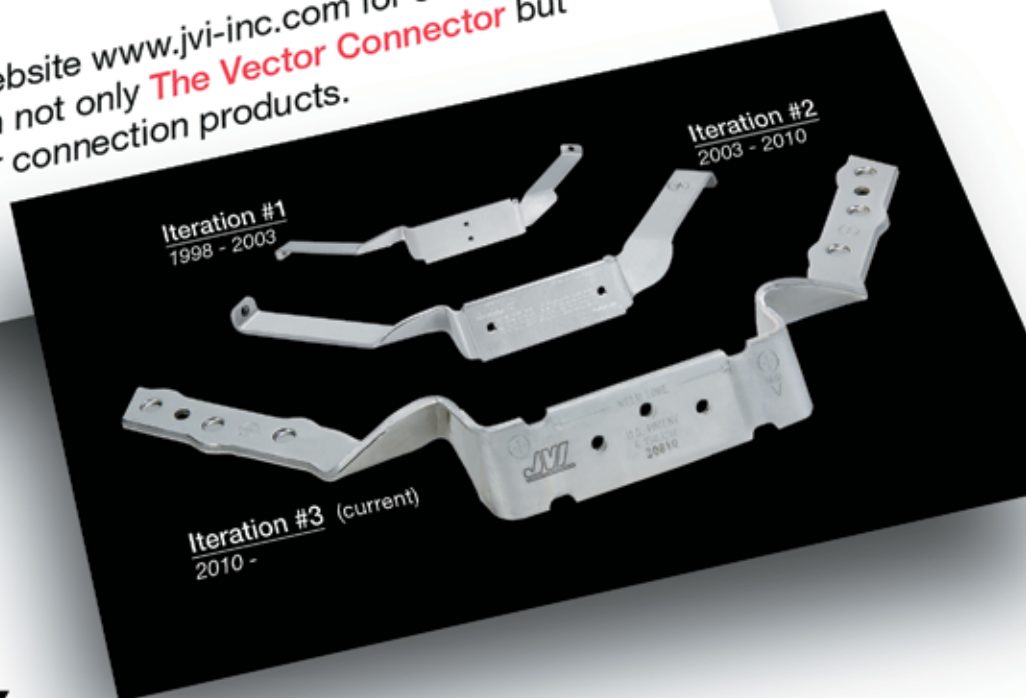
To: Precasters, Design Firms, All interested parties
From: JVI, Inc.
Re: Nomenclature clarification

The third iteration of **The Vector Connector** has rendered previous iterations obsolete. Appropriately, these previous versions of **The Vector Connector** are hereby retired with a hearty "well done"! Henceforth, this third iteration, which until now has been called **The Mid-V**, will now be called - simply - **The Vector Connector**.

Along with **The Vector Connector**, JVI also offers **The Mini-V**, a scaled-down version of **The Vector Connector** for thinner applications.

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Ascent is a publication of



p. 13

Feature Evolution in Innovation

Highlights of the 50th annual PCI Design Award-winning projects



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State-by-state directory of PCI-Qualified & PCI-Certified erectors, including a guide to erector classification and a guide specification for reference in projects



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50 Years of Award-Winning Innovation



Brian Miller,
P.E., LEED AP
Executive Editor
bmiller@pci.org

For 50 years, the Precast/Prestressed Concrete Institute has honored innovation and creative design techniques in its Design Awards competition. The program has expanded since its first awards in 1963 to encompass more categories and more types of designs. That expansion indicates that innovation continues, as designers push the material in new directions—and precasters respond to the challenges.

In that first competition, one winner and eight honorable mentions were singled out. In 1993, the competition honored nine buildings. In 2012, we highlight 18 buildings, as designers use precast concrete in a more diverse array of building types in new and creative ways that deserve the spotlight.

Precast concrete is being used more and more to help projects meet, and exceed their program goals: during design, construction and operation. Designers turn to precast concrete due to its range of capabilities, and its ability to be optimized and integrated with other systems. Some of those most often mentioned capabilities in awards entries are:

- **Unique colors and textures.** Precast concrete's aesthetic versatility continues to expand, with this year's judges awed by some of the capabilities they saw.
- **Detailing.** The capability to cast multiple colors and textures into one panel, as well as create dimension and textures with formliners, continue to grow. This detailing provides aesthetic detail that would destroy budgets if tried with other materials.
- **Accelerated construction.** Entrants often cite precast concrete's ability to be erected quickly. Being able to continue erection during the winter, or other inclement weather also kept many of the projects on schedule.
- **Precast concrete structural systems.** PCI introduced the All-Precast Concrete Award in 2004 to honor projects that used both precast concrete structural and architectural systems. The synergy creates multiple benefits unavailable any other way and makes this a growing approach for designers.
- **Economy.** The variety of cost savings precast concrete provides in the short term, through accelerated construction, jobsite safety, and precise scheduling, combine with long-term savings from lowered life-cycle costs and long-term durability.
- **Energy efficiency.** Precast concrete insulated sandwich wall panels often are cited by designers for their capabilities in providing continuous thermal insulation while also producing a finished interior wall that eliminates drywalling.
- **Sustainable design.** PCI introduced the Best Sustainable Project Award in 2006 because designers were often citing the owner's desire to integrate sustainable-design concepts and achieve LEED certification as the reasons that precast concrete was specified.

New techniques and concepts are making these benefits even stronger, ensuring that designers will continue to turn to precast concrete when challenges arise.

The question is: Are you helping that push? Do you consider the possibilities that precast concrete can offer in each project? Do you reach out to precasters with design challenges to learn what solutions they can provide to achieve the most cost-effective, quickly constructed, and aesthetically pleasing project?

Our goal with this magazine, and with the resources available at www.pci.org, is to help you achieve success and meet owners' growing needs. We hope the projects in this issue will inspire you to greatness and to earning your own PCI Design Award.

ASCENT

On the cover: 50th annual PCI Design Award-winning projects (see page 13)

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Thermomass® Announces New Hire and Promotion

BOONE, IOWA



– Miguel Branco

Thermomass®, a manufacturer of concrete building insulation systems, announced Miguel Branco has joined the company as a structural engineer and will provide technical support for overseas sales.

Additionally, Garrett Burkhart has been promoted to Product Development Technician. Burkhart will have the primary responsibility of overseeing the areas of product development. He will also head endeavors in research, development and testing.

Submit your headline news for consideration in a future issue of *Ascent* to Whitney Stephens at wstephens@pci.org.

MidState Precast L.P. Awarded Contract for the 710 Highway Precast Concrete Replacement Project

CORCORAN, CALIFORNIA

Schmick/Meyers and Sons JV has awarded **MidState Precast L.P.** the contract for the 710 Highway Precast Concrete Replacement project the scope of work includes producing 4,123 precast/prestressed concrete pavement (PPCP) panels for a total of 831,000 square feet and 27,000 cubic yards of concrete.

Set upon fully engineered subgrade surfaces, the panels are interlocking through post-tensioning and grouting. This system allows for continuous and intermittent replacement of the previously existing pavement, which speeds up the erection schedule. Combining shorter construction duration with the longevity of precast concrete allows for the highway replacement to be cost effective for Caltrans and the tax payers of California with minimum impact to traffic congestion. To date, this is the largest precast pavement replacement in the United States. Precast work is expected to be completed in September 2014.

California ISO Headquarters Wins National Award from the Design Build Institute of America

CORCORAN, CALIFORNIA

The **California ISO Headquarters** project received a National Design-Build Award for best office building. The 278,000-square-foot facility is comprised of three distinct wings – public, office and mission critical – each created with a different structural system. Through early collaboration and a phased permitting process, the team reached substantial completion nearly three months ahead of schedule – just 21 months after the Notice to Proceed. MidState Precast, L.P. was the precaster for the project. This project also won a 2012 PCI Design Award.

Clark Pacific Expands Its Structural Precast Concrete Offerings

WEST SACRAMENTO, CALIFORNIA

Clark Pacific, a supplier of architectural and structural precast concrete solutions, has completed the acquisition of the California assets of Hanson Structural Precast, a division of Hanson Building Products North America, part of Lehigh Hanson, Inc. and the HeidelbergCement Group.

The assets acquired include an 80-acre industrial-zoned property in Adelanto, Calif. and the existing plant operations in Irwindale, Calif. The Irwindale facility, in continuous operation since 1968, will become Clark Pacific's fourth precast concrete production facility in California. The acquisition will expand the company's overall manufacturing capacity and it will significantly enhance its structural precast concrete product offerings for the Southern California and Nevada construction markets, particularly for parking structures and office buildings.

Spillman Company Now Represents Teksam in U.S. and Canada

COLUMBUS, OHIO

Spillman Company now represents Teksam as a sales agent in the U.S. and Canada (except for the province of Quebec). Founded in 1979 in Hantsholm, Denmark as an engineering company, Teksam supplies machinery and technology to the precast concrete industry worldwide.

Concrete Industry Management Program Seeks Donations for World of Concrete Auction

LAS VEGAS, NEVADA

The **Concrete Industry Management** (CIM) program – a business intensive program that awards students with a four-year Bachelor of Science degree in Concrete Industry Management – is seeking donations for their eighth annual auction to be held at the World of Concrete. The auction is scheduled for Wednesday, February 6 at the Las Vegas Convention Center. The silent auction will be held from 11 a.m. to 1 p.m. and the live auction begins at 1 p.m.

The money raised will benefit the NSC and support the CIM programs at Middle Tennessee State University, Arizona State University, New Jersey Institute of Technology, Texas State University and the California State University - Chico. The 2012 auction raised over \$617,750.

Those interested in making a donation should contact CIM Auction Committee Chairman Michael Philipps at (713) 722-2969.

Free Exhibits-only Registration to the World of Concrete

LAS VEGAS, NEVADA

PCI is offering free exhibits-only registration for the **2013 World of Concrete**, taking place February 4 – 8 in Las Vegas. The World of Concrete is an annual international event dedicated to the commercial concrete and masonry construction industries. Use the code A34 when registering online for free registration compliments of PCI. Additionally, make sure to stop by our booth, #N337, while at the event.

Spancrete® Hires Scott Galke as Director of Operations in Valders

WAUKESHA, WISCONSIN



– Scott Galke

Scott Galke is now the director of operations for **Spancrete's** Valders, Wisconsin plant.

Galke recently served as the director of operations at Metromont Precast in Greenville, S.C. Prior to his tenure at Metromont, Galke was the operations manager at Shockey Precast Company in Virginia and also held other general manager roles.

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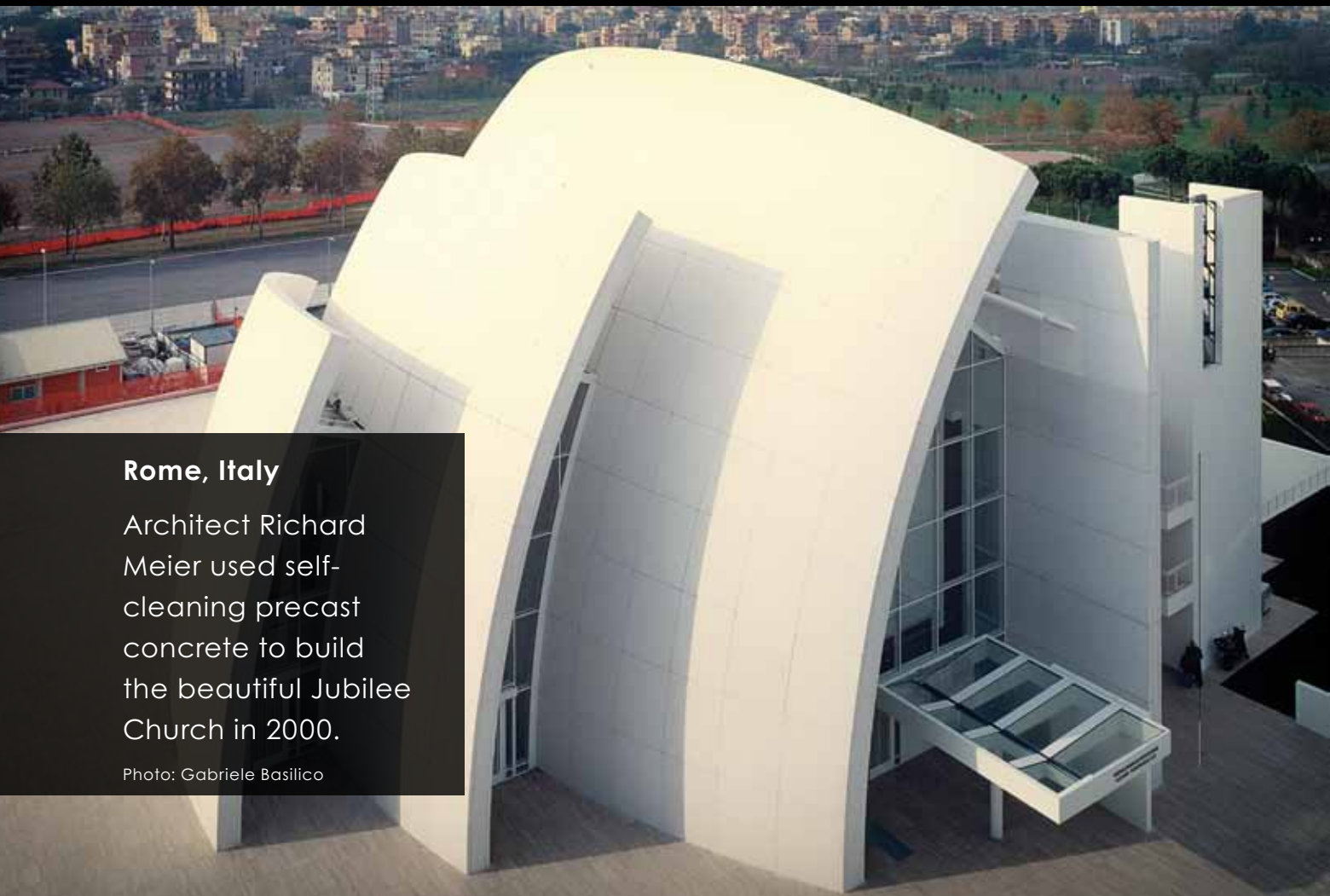


Wilmette, IL

Completed in 1953, the Baha'i House of Worship showcases the intricate details that can be achieved with precast concrete.

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WHAT DO THESE BUILDINGS HAVE IN COMMON?



Rome, Italy

Architect Richard Meier used self-cleaning precast concrete to build the beautiful Jubilee Church in 2000.

Photo: Gabriele Basilico



They all use
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versatility
of **precast**
concrete to
achieve their
b e a u t y

San Francisco, CA

Built in 1972, the iconic, 48-story, TransAmerica building is clad in beautiful precast concrete which is resilient enough to handle one of the highest seismic zones in the U.S.

Photo: Wayne Thom



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Will Your Building Stand Up to an Earthquake or a Fire?



PCI Announces New Publications

Seismic Design of Precast/Prestressed Concrete Structures, Second Edition (MNL-I40-I2)



This new manual assists in the design of precast concrete structures using the seismic design provisions of the 2006 edition of the *International Building Code*. These provisions are discussed in detail and illustrated with examples of typical building and parking structures located in regions of low-, moderate-, and high-seismic hazard.

Design for Fire Resistance of Precast Prestressed Concrete, Third Edition (MNL-I24-II)



This manual has been used by designers for almost 30 years, and much of it has been reproduced or referenced in the model building codes and the *International Building Code*.

This manual is the first PCI publication to be cobranded with the *International Code Council (ICC)*. In addition, it has been issued an evaluation report (ESR-I997) through the *ICC Evaluation Service*.

These manuals are available as electronic publications for easy viewing on your computer, Kindle, or other digital reading device. Visit www.pci.org/epubs for purchase and download.



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Evolution in innovation

by Craig A. Shutt

For 50 years, the Precast/Prestressed Concrete Institute has showcased innovative projects through the PCI Design Awards. The world has greatly changed since that first competition in 1963, but one thing has not: precast/prestressed concrete continues to evolve to meet new challenges and help create aesthetically pleasing, quickly constructed, and cost-effective structures.

Beginning only a few years after PCI's formation, the competition has allowed owners, architects, designers, engineers, contractors, and precasters to showcase the creative ways that they use precast concrete to overcome design and construction obstacles. In the first contest, the judges selected one winner—the St. Richard Church in Côte St.-Luc, Montréal, QC, Canada—and eight awards of merit.

In this year's competition, three juries singled out eighteen buildings and six bridges to win awards. This expansion shows that innovative precast concrete concepts are being developed for more types of structures to meet more challenges.

The awards judges were impressed by the entries overall. "What we saw is that the precast concrete industry provides faster construction, quicker delivery of product, and economical solutions," says Kevin Eisenbeis, the director of bridges for Burns and McDonnell in Kansas

City, Mo., and a member of the transportation awards jury.

"Precast concrete applications offer more than cost savings today", says Wanda Lau, an associate editor at Hanley Wood in Washington, D.C., and a member of the buildings awards jury. "I saw precast concrete being selected intentionally as a design material because of the versatility, the level of finishes, and the design possibilities. Some of the examples of the textures we saw are just unbelievable. It is so much more advanced."

Those innovations continue across North America, with this year's winners located in Canada, Mexico, and throughout the United States. PCI-certified precasters' techniques continue to evolve to highlight advantages that include strength, durability, span length, and aesthetic options.

New concrete mixtures, new form designs, and new delivery and erection techniques are all showcased in the winning entries.

"I was fascinated with how designers are pushing the envelope in the use of precast concrete," says Debra Kunce, an associate with Schmidt Associates Inc. in Indianapolis, Ind., and a member of the buildings awards jury. "It was a wonderful selection of materials. These projects show that designers should think of precast in new ways."



After 50 years, the PCI Design Awards continue to showcase the ways that precast concrete can adapt to solve new design challenges for buildings and bridges.



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Special Awards Jury



Dennis Andrejko, FAIA, is chair of the master of architecture program in the Golisano Institute for Sustainability at the Rochester Institute of Technology in Rochester, N.Y. His work centers on architecture and the built environment, renewable energy and high-performance build-

Dennis Andrejko

ings, and regional design and ecological literacy.

He also serves as principal of Andrejko + Associates in Buffalo, N.Y., and has been a professor of architecture at the University at Buffalo, State University of New York.

Andrejko was elected vice president of the National Board of the American Institute of Architects in June 2010, and he heads the Board Knowledge Committee that oversees the knowledge portfolio of the institute. He also has received the group's Richard Upjohn Medal.

He is the recipient of a number of other awards, most recently the AIA New York State President's Citation and the AIA New York State Matthew W. Del Gaudio Award for distinguished service.



Jeffrey R. Carlson, PE, SE, is executive vice president and chief operating officer for The Consulting Engineers Group Inc. in Mount Prospect, Ill.

Jeffrey R. Carlson

He is a Fellow in the International Concrete Repair Institute and a member of the International Parking Institute and the American Society of Civil Engineers.

As a member of PCI, he serves as vice chair of the Parking Structures Committee and as a member of the Total Precast Systems Committee.

Carlson received a bachelor's degree in civil engineering in 1979 and a master's degree in civil engineering in 1986, both from the Illinois Institute of Technology. He is a licensed structural engineer in Illinois, Nebraska, Nevada, and Oregon and a licensed professional engineer in Alaska, the District of Columbia, Illinois, Iowa, Minnesota, Mississippi, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Washington, and West Virginia.



Harry H. Edwards Industry Advancement Award and Best Theater:
Kauffman Center for the Performing Arts

Harry H. Edwards Industry Advancement Awards and Best Bridge
with a Main Span Greater than 150 ft (46 m):
I-25 Trinidad Viaduct Replacement



Gil Heldenfels is vice president at Heldenfels Enterprises Inc. in San Marcos, Tex., a manufacturer of precast, prestressed concrete structures for the highway, marine/industrial, commercial, and sports-construction markets.

Gil Heldenfels

He also is general manager of the company's Building Systems Division, which offers a variety of precast concrete building solutions.

Heldenfels serves as vice president of the Precast Concrete Manufacturers Association of Texas and is vice chair of the Patrons Committee for the Concrete Industry Management program at Texas State University in San Marcos.

His other activities include active membership in PCI, Association of General Contractors, and the Texas Association of Business.

He is a graduate of Texas A&M University in College Station, Tex.

Sustainable Design Award and Best University Project:
William H. Neukom Building at Stanford Law School

All-Precast Concrete Solution: CTA Beach Comfort Stations

The goal for the new performing arts center in Kansas City, Mo., was to create "the perfect instrument." That meant providing amazing acoustics and great sightlines. It also meant designing a structure that inspires visitors and gives them a sense of the ceremony inherent in attending a performance.

The project team achieved these goals and more with the help of architectural precast concrete panels as the building's cladding. "This project took the aesthetic, the design, and the architectural opportunities to create an evocative design that spoke the language of the performing arts," says Dennis Andrejko, one of the special awards judges. "Precast, because of its moldability, was an appropriate material choice. It gave them the flexibility to explore that design opportunity in a technological way."

The building features two standalone performance halls within a shell consisting of a glass roof and glass walls that provide sweeping views of the city. The geometry of the project was based on arcs, radii, and cones on both horizontal and vertical planes. There are few 90-degree angles.

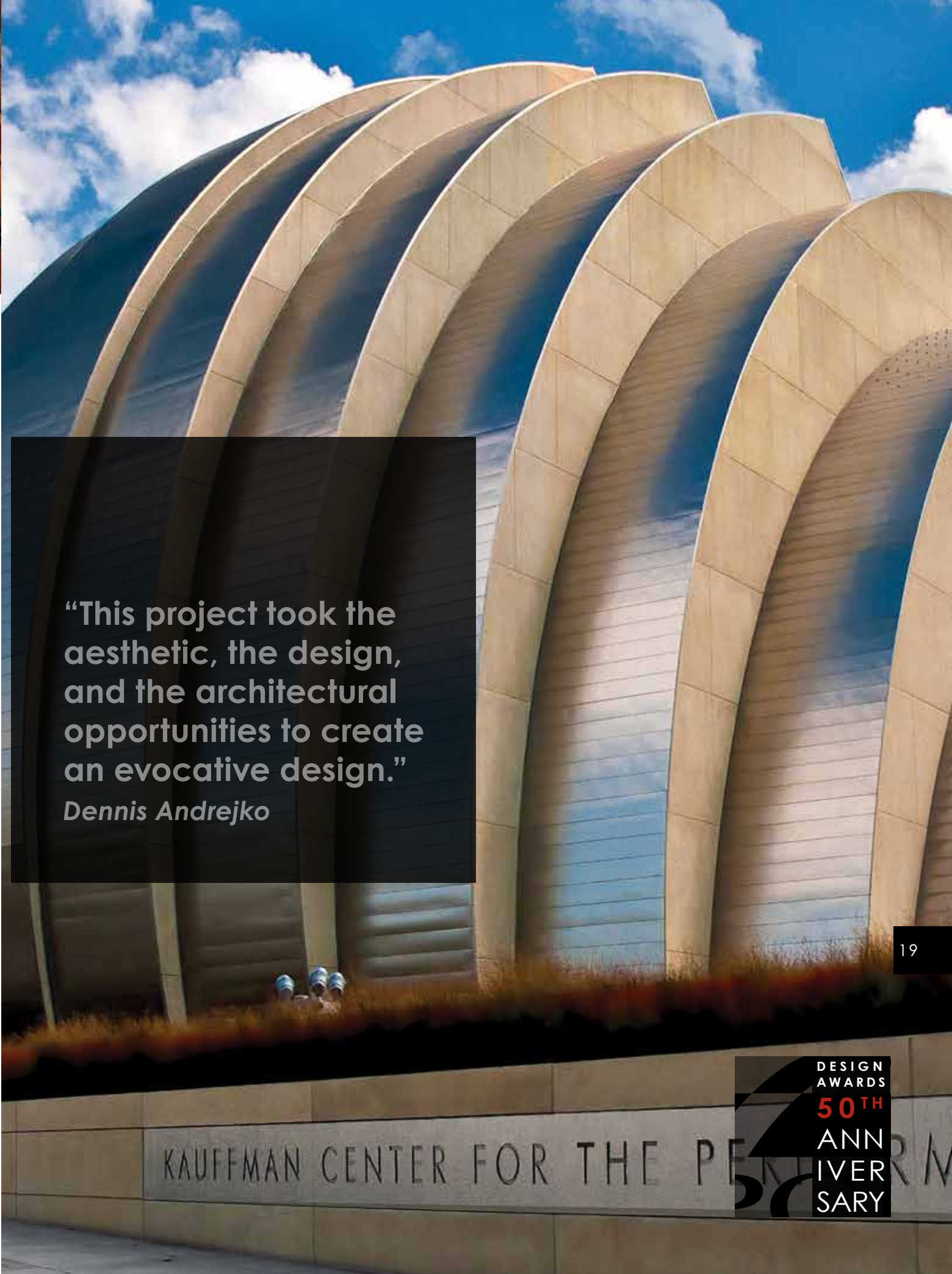
Approximately 89,000 ft² (8300 m²) of architectural precast concrete panels were cast as complex panels with little repetition. Most of the walls are straight but not parallel. The curved panels on the south facade were cast using one oversized form. Blockouts specific to each panel were placed into the form to achieve the desired shape and curvature.

Building information modeling (BIM) aided in designing the panels and served as the primary communication tool among the design architect in Massachusetts, the local design team, and all subcontractors.



- Owner: The Kauffman Center for the Performing Arts, Kansas City, Mo.
- Architect: Safdie Architects, Somerville, Mass., with BNIM Architects, Kansas City, Kans.
- Engineer: Arup, New York, N.Y., with Structural Engineering Associates, Kansas City, Mo.
- Contractor: JE Dunn Construction Co., Kansas City, Mo.
- Precaster: Enterprise Precast Concrete Inc., Omaha, Neb.
- Precast specialty engineer: Rupprecht Engineering, Omaha, Neb.
- Project size: 356,000 ft² (33,000 m²)
- Project cost: \$304 million
- Photos: Tim Hursley

Harry H. Edwards
Industry Advancement Award
and Best Theater
**Kauffman Center
for the Performing Arts**
Kansas City, Mo.



“This project took the aesthetic, the design, and the architectural opportunities to create an evocative design.”

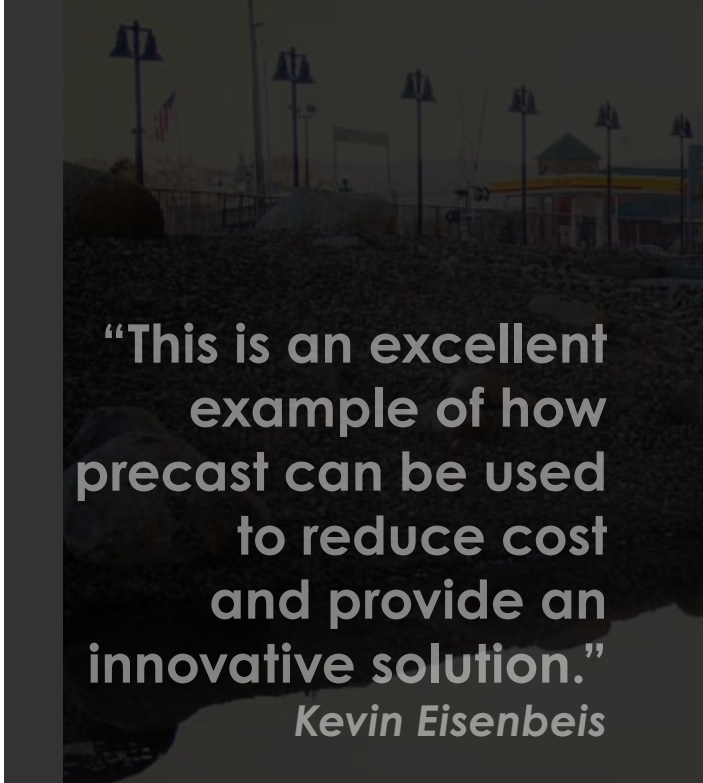
Dennis Andrejko

Replacing the Interstate 25 (I-25) Trinidad Viaduct in Colorado required spanning a variety of obstacles along a long, curved path. The resulting design used precast concrete tub girders and deck panels to span the Purgatoire River, three existing rail lines, a planned rail line, and four city streets.

The alignment required a variety of skewed substructure elements and reversing superelevated curves. The tub-girder design was selected after a second round of bids that was opened to alternative-structure designs. This design resulted in an \$8 million savings over the engineer's estimate. The design features four bridges over the river (two for the interstate mainline and two on/off-ramp bridges), two viaducts carrying the interstate over the city streets and rail lines, and two on/off ramps connecting into the viaducts.

The partial-depth, prestressed concrete deck panels played a key role in minimizing costs. The panels were used for both the interior panels and the deck overhangs, which varied by as much as 6 ft (1.8 m) between sections. They would have required costly formwork, especially for the deck portions within the curves. The overhang panels were supported over the exterior girder's two flanges while cantilevering to match the overhang length.

"Precast concrete overcame this project's challenges in a unique way," says Dennis Andrejko, a member of the special awards jury. "The fact that this project could use precast puts it at a stage where it can be competitive with other approaches that have been more traditionally used."



"This is an excellent example of how precast can be used to reduce cost and provide an innovative solution."
Kevin Eisenbeis

- Owner: Colorado Department of Transportation, Pueblo, Colo.
- Engineer: Tsiouvaras Simmons Holderness Inc., Greenwood Village, Colo.
- Contractor: Lawrence Construction, Littleton, Colo.
- Precaster: Plum Creek Structures, Littleton, Colo.
- Bridge length: 855 ft (260 m)
- Project cost: \$79.5 million
- Photos: Tsiouvaras Simmons Holderness (TSH) Inc. 2012





Harry H. Edwards Industry Advancement Award
and Best Bridge with a Main Span
Greater than 150 Ft (46m)

I-25 Trinidad Viaduct Replacement

Interstate 25 over the Purgatoire
River, Trinidad, Colo.





“What really got our attention was precast’s help in achieving the Architectural 2030 goal for 2015.”
Jeff Carlson



Sustainable Design Award and Best University Project

William H. Neukom Building at Stanford Law School

Palo Alto, Calif.

Owner:	The Board of Trustees of the Leland Stanford Junior University, Palo Alto, Calif.	Precaster:	Walters and Wolf Precast, Fremont, Calif.
Architect:	Ennead Architects, New York, N.Y.	Project size:	65,000 ft ² (6000 m ²)
Engineer:	Degenkolb Engineers, Oakland, Calif.	Project cost:	\$40 million
Contractor:	Dome Construction, South San Francisco, Calif.	Photos:	Walters and Wolf

Prominently sited south of the existing law school complex at Stanford University, the 65,000 ft² (6000 m²) expansion creates a new focal point along the principal circulation route linking the campus's residential and academic precincts.

The building's appearance, designed to maintain continuity with the university's master plan, features architectural precast concrete panels for its cladding. The panels helped achieve the project's goals of minimizing the energy footprint with their thermal mass and of maximizing the building's aesthetic uniformity by combining limestone-clad and exposed-aggregate precast concrete panels.

"We selected this project due to its many sustainable aspects," says Jeff Carlson, a member of the special awards jury. "The precast concrete offered high thermal efficiency to help the building control heat gain and other sustainable-design concepts. What really got our attention was precast's help in achieving the Architectural 2030 goal for 2015."

The 153 panels feature pieces of limestone from the St. Maximin area in France, which were integrated into the large panels.

The stone pattern was created using surface stones and blockouts to fit the available stones. The projecting stones were then hand set into blockouts by the precaster.

To continue the limestone appearance on the interior, stone-clad precast concrete panels were installed on both the exterior and interior sides along the window system, with limestone hand set at the intersections.

"The jury was quite impressed with the level of finish and detail," says Dave Craddock, a member of the special awards jury. "The precast allowed the designers to express themselves artistically and achieve a high level of finish."



“This project was an excellent example of an all–precast concrete solution.”
Gil Heldenfels

All-Precast Concrete Solution CTA Beach Comfort Stations Biloxi, Miss.



Having seen seven comfort stations destroyed by Hurricane Katrina, officials at the Coast Transit Authority in Gulfport, Miss., leveraged federal funds to create four structures that improve on the existing amenities and resist storm-force winds and surge.

"This project was an excellent example of an all-precast concrete solution," says Gil Heldefels, a member of the special awards jury. "It helped meet challenging design requirements while providing a functional and attractive building for the beach-going public."

The new stations include handicapped-accessible restrooms, waiting areas, decks, bicycle racks, and covered areas for beach use (provided by the new height requirements).

The stations feature hip roofs with different pitches, which were cast with an integral terracotta color. The integrated roof battens feature an acid-etched finish to create a sugar-cube appearance on front and back surfaces.

The large number of molds needed to cast the 52 precast concrete elements resulted from each station's variety of shapes. These included hip roofs, archways with recessed trim, and wall panels with integral cornices and windows.

Upkeep will be minimal regardless of weather conditions. No painting is required, and no roofing or siding will need to be replaced if high winds occur, which often happens with other designs.

"Precast provided the durability and the resiliency to sustain this design concept in the future and help the owner meet its need for comfort stations while still withstanding all the environmental conditions," says Jeff Carlson, a member of the special awards jury.

Owner: Coast Transit Authority,
Gulfport, Miss.

Architect: Eley Guild Hardy Architects,
Biloxi, Miss.

Engineer: Simpkins and Costelli,
Gulfport, Miss.

Contractor: Roy Anderson Corp.,
Gulfport, Miss.

Precaster: Gate Precast Co., Hillsboro,
Tex.

Project size: 20,000 ft² (1900 m²)

Project cost: \$4.8 million (\$1.2 million per
station)

Photos: Gate Precast Co.

Building Awards **Jury**



Tom Brock, AIA, is the principal at Thomas Brock Architect in Chicago, Ill., and associate studio professor at Illinois Institute of Technology (IIT) in Chicago, where he has taught since 1999.

Tom Brock He teaches advanced and graduate-level design studios, thesis studios, and advanced technology courses. In 2011, he was appointed director of IIT's master of integrated building delivery degree program.

His firm, now in its 12th year, produces work for a variety of residential, institutional, and commercial clients.

His association with PCI began in 2008, when he submitted a proposal to conduct the first PCI Foundation Studio. The program promotes classes in building design using precast concrete as the principal material. PCI has since funded four studios at IIT and has expanded the program to five other universities. In 2010, he was named PCI's Young Educator of the Year.

Brock holds a bachelor's degree in architecture from the University of Cincinnati in Ohio and a master's degree in architecture from the University of Pennsylvania in Philadelphia.



David Craddock, Ontario Architects Association (OAA), Fellow of the Royal Architectural Institute of Canada, is a project manager with NORR Ltd. Architects Engineers Planners in Toronto, ON, Canada, with more than 33 years of experience as an architect. He is the 2012 president of the Royal Architectural Institute of Canada/Architectural Canada. In 2007, he served as president of OAA.

David Craddock

He is an expert in design, contract documents, and contract administration in the sectors of restoration, renovation, and adaptive reuse. Many of the restorations he has been involved with helped rehabilitate heritage buildings. He joined NORR in 2008 after serving as principal at his own firm for 27 years.

His experience includes a range of projects in categories that include commercial properties, educational facilities, sports and entertainment centers, residences, and renovations.

He holds a bachelor's degree in business administration from Pennsylvania State University in University Park and a bachelor's degree in architecture from the University of Toronto.



- Best Parking Structure (0–999 Cars): New York Botanical Garden
- Best Parking Structure (1000+ Cars): Ruppert Plaza Garage and Macombs Dam Rooftop Park
- Best Office Building (Low-Rise 1–3 Stories): PBS 39 Public Media and Education Center at SteelStacks
- Best Office Building (High-Rise 4+ Stories): Place de l'Escarpement
- Best Retail Facility: Paseo Altozano
- Best Mixed-Use Building: City Creek Center
- Best K–12 School: Exelon Gymnasium



Debra Kunce, FAIA, LEED AP, is an associate with Schmidt Associates Inc. in Indianapolis, Ind., which provides planning, design, and construction services to the K-12, higher-education, and urban markets. She works in program management, serving clients through the

Debra Kunce

execution of large capital programs. She is also responsible for the strategic and daily coordination of the Schmidt Strategies division of the firm.

Kunce has been active in the American Institute of Architects for more than 16 years. She served as Ohio Valley regional director to the AIA national board from 2009 to 2011 before her election as 2012-2013 vice president. She also served as treasurer for the Indiana Architect Political Action Committee.

She earned bachelor's degrees in architecture and environmental design from Ball State University in Muncie, Ind. In 2011, she was recognized by Midwest Construction as one of the top 20 young professionals, and in 2010 she was awarded the Edward D. Pierre Award for civil leadership by AIA Indiana.



Wanda Lau, LEED AP, is an associate editor at Hanley Wood in Washington, D.C. She covers technology, products, and design for *Architect*, *Eco-Structure*, and *Architectural Lighting* magazines.

Wanda Lau

Her experience spans the fields of architecture, engineering, and media. She has worked as a building owner's representative, consulting building and construction engineer, and communications director.

She holds a bachelor's degree in civil engineering from Michigan State University in Lansing; a master's degree in building technology from the Massachusetts Institute of Technology in Cambridge, where she was a Presidential Fellow; and a master's degree in journalism from Syracuse University in Syracuse, N.Y., where she was a Newhouse Minority Scholar.



Bob Powers, AIA, LEED AP, is a senior associate with HOK Architects in St. Louis, Mo. He has more than 30 years of experience working on projects both in the United States and abroad. His work includes the design of healthcare, science, academic, museum, hotel, and commercial facilities across the country.

Bob Powers

In addition to his professional practice, Powers has frequently been a guest critic for the Architecture School at Washington University in St Louis.

Best Justice and Correctional Structure: U.S. Federal Courthouse

Best Government or Public Building: Perot Museum of Nature and Science

Best Military Project: 711th Human Performance Wing Complex

Best Religious Structure: Kansas City Temple

Best High-Tech or Laboratory Facility: Lorry I. Lokey Stem Cell Research Building at Stanford University

Best Hotel: The Crash Pad: An Uncommon Hostel

Best Data Center: SV5 Data Center

Best Custom Solution: Cityplace Uptown Station

Best Parking Structure (0–999 Cars)

New York Botanical Garden

New York, N.Y.

To preserve valuable landscape at the New York Botanical Garden in the Bronx, designers located the new all-precaster concrete parking structure and intermodal facility just outside the facility's walls. The designers combined precast concrete with channel glass featuring a metal-trellis infill to create a vertical garden on all four sides.

A series of forked elements, symbolic of a branch, envelops the building, forming an overall enclosure and vertical trellised landscape. Interstices between the forked elements are covered with a wire trellis planted

with flowering vines. These design elements are accented by ribbed precast concrete panels that form the base of the building.

The structure features 1159 precast concrete components. Due to the unusual shape of the site, which features only one 90-degree corner along the perimeter, standard forms could be used only in a few locations.

Many of the precast concrete elements had to be modified at the ends to adjust to the irregular geometry and to produce an efficient layout that accommodated 825 parking spaces. A light well brings day-



“We liked this entry because it exhibited a very strong, structural statement that will basically improve over time.”

Dave Craddock

Owner:	The New York Botanical Garden, New York, N.Y.	Precast concrete specialty engineer:	Stango Consulting Engineers, Chesterton, Md.
Architect:	Ennead Architects, New York, N.Y.	PCI-certified erector:	Jemco Erectors, Shamong, N.J.
Architect of record and engineer:	Desman Associates, New York, N.Y.	Project size:	300,000 ft ² (28,000 m ²)
Construction manager:	E.W. Howell, New York, N.Y.	Project cost:	\$35 million
Precaster:	Unistress Corp., Pittsfield, Mass.	Photos:	Aislinn Weidele/Ennead Architects

light into the center of the building.

For the three-dimensional forked components, the precaster designed adjustable hinged steel forms to provide the appropriate mirrored shape for each leg.

"This parking structure had a nice balance of the structural aspect of precast concrete with a nice, delicate application that allowed the precast to become ornamental," says Debra Kunce, a member of the buildings awards jury. "This is a new way to look at precast on parking structures."



A variety of challenges arose in creating a parking structure that encompassed nearly 1 million ft² (93,000 m²), provided 1700 parking spaces on three supported levels, and was capped by a 7-acre (2.8 hectare) rooftop park.

The original concept called for a steel-frame structure, but the design-build team quickly recognized that an all-precaster concrete structural solution better met the design needs and construction schedule.

The rooftop park is a key reason for its unobtrusiveness, but it also created a number of challenges, including the need to design for heavier loads and to upgrade waterproofing and fire separation. The site is wedged between subway lines, Interstate 95, a bridge, and local street traffic. Despite these obstructions, construction continued even during the World Series.

Spandrels were custom designed to suggest a grove of trees. Embedded thin brick in four shades of green was laid into the forms. A contrasting gray was used for the spandrels to suggest tree trunks.

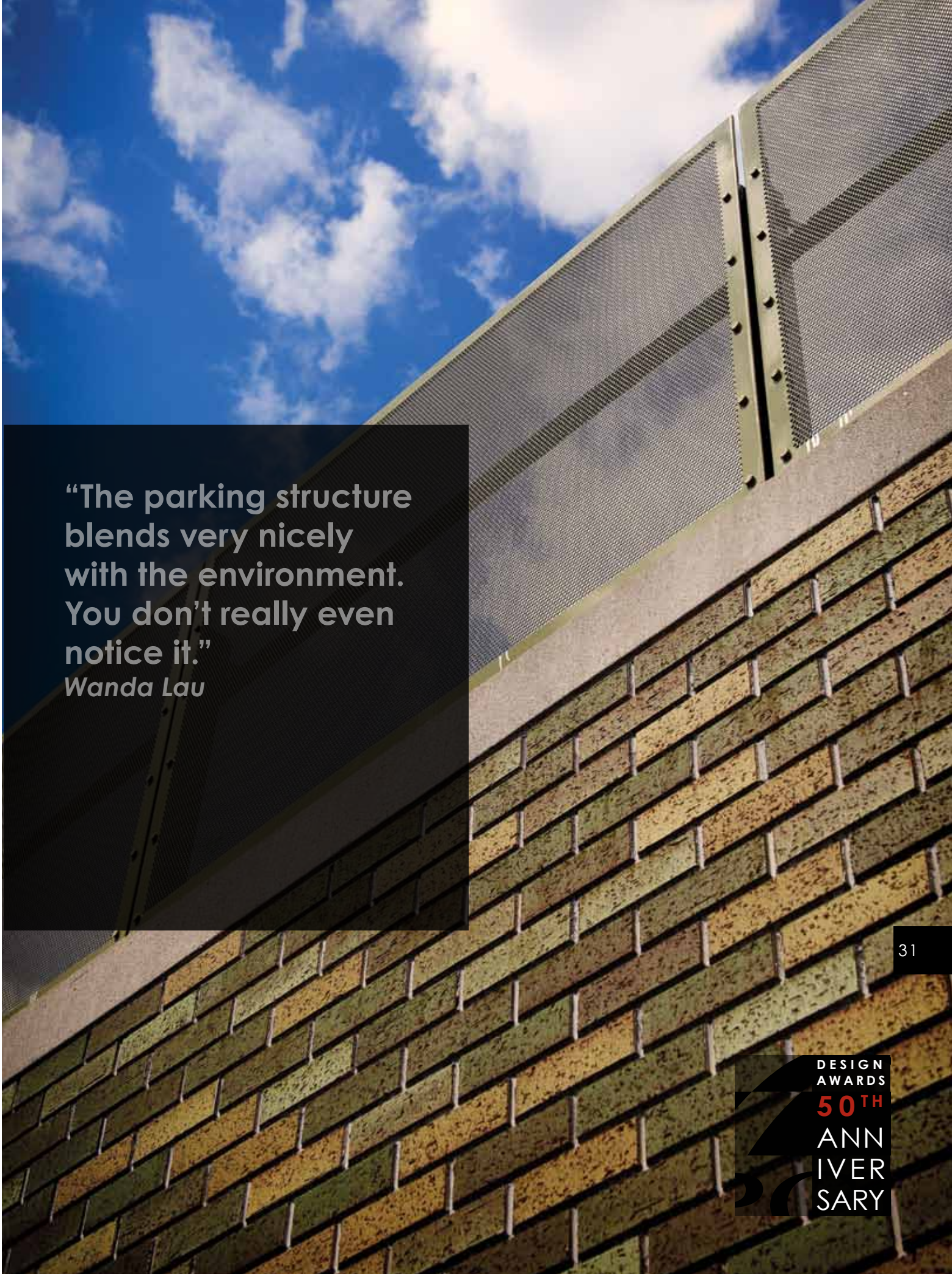
The spandrels were designed to cover only the ends of the tees, allowing thin cables to stretch from column to column. This maximized daylight that entered the building. The cables were posttensioned through the precast concrete columns.

"We were most impressed with the care taken to select the four colored bricks and the obvious integration of those into precast panels," says Dave Craddock, a member of the buildings awards jury. "It offers a graceful and elegant solution to the programming needs. It is very much a piece of art in the final installation."



Owner:	New York City Department of Parks and Recreation, New York, N.Y.
Architect:	Clarke Caton Hintz, Trenton, N.J.
Engineer:	Fay Spofford Thorndike, New York, N.Y.
Contractor:	Prismatic/Hunter Roberts, Fairfield, N.J.
Precaster:	Unistress, Pittsfield, Mass.
Precast concrete specialty engineer:	Hoch Associates, Fort Wayne, Ind.
Project size:	914,760 ft ² (84,980 m ²)
Project cost:	\$157 million
Photos:	Jeffrey Totaro for Clarke Caton Hintz Architects

Best Parking Structure (1000+ Cars) Ruppert Plaza Garage and Macombs Dam Rooftop Park New York, N.Y.



“The parking structure
blends very nicely
with the environment.
You don’t really even
notice it.”
Wanda Lau

Best Office Building: Low-Rise (1–3 Stories)

PBS 39 Public Media and Education Center at SteelStacks

Bethlehem, Pa.

Locating this new broadcast facility and office building on the site of a former steel mill provided a strong symbol for the residents of Bethlehem, Pa.

“This was a relatively simple program that could easily have been just a box,” says Tom Brock, a member of the buildings awards jury. “They were very clever in how they articulated the form, breaking it up so it related to its surroundings in a better way than a box ever could. The way precast played into that was the cleverest part.”

The interior sides of the precast concrete, along with the building’s steel frame, were designed to be left exposed. Backlit graphic panels accent the space.

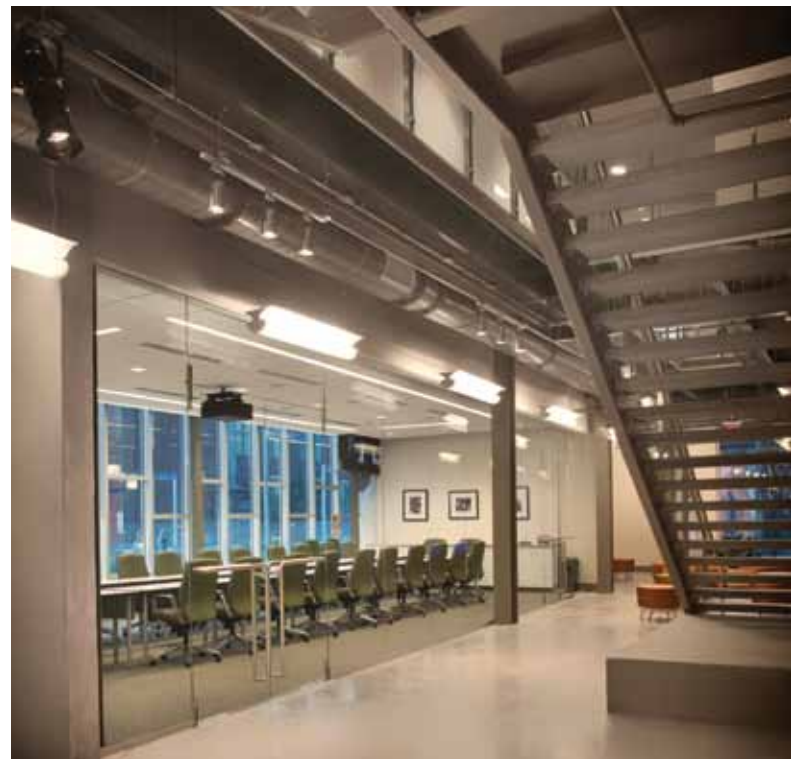
Specifying precast concrete allowed the designers to provide strong aesthetics while remaining within the budget required for a

nonprofit media organization. Thirty-five load-bearing, insulated precast concrete composite sandwich panels were used for the walls of the broadcast studios, while 57 panels were used to construct the nonstudio exterior walls.

The insulated panels provide continuous insulation and high thermal mass while offering durability, quick erection, and low maintenance.

The composite construction and mass of the precast concrete panels also helped achieve the required sound transmittance reduction needed for the broadcast studios.

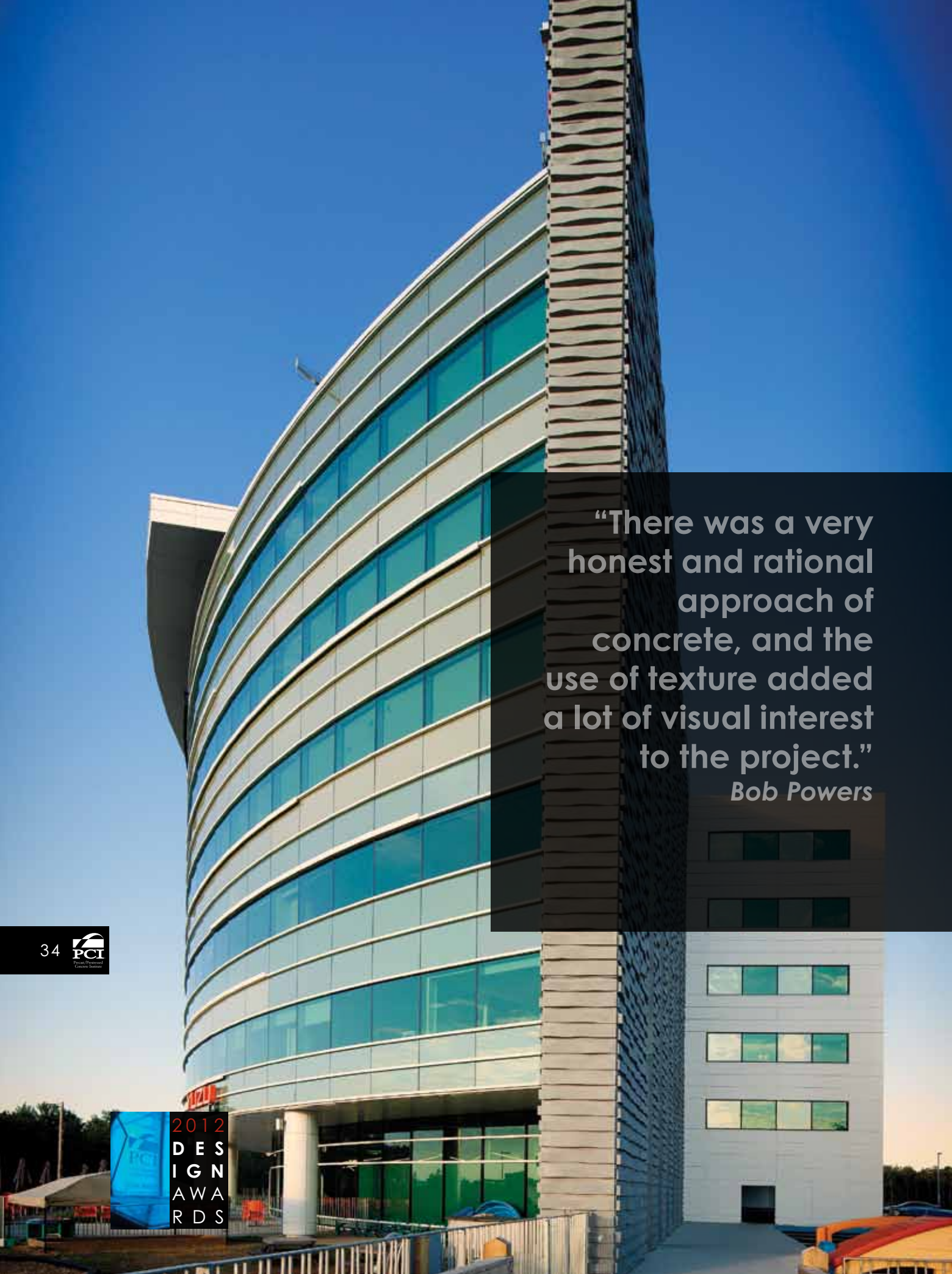
“We especially liked the building’s sophisticated use of finishes,” says Wanda Lau, a member of the buildings awards jury. “The designer juxtaposed the precast against other finishes and, by doing so, showed that precast can be used as a very elegant finish material.”



Owner: PBS 39, Bethlehem, Pa.
Architect: URS Corp., Columbus, Ohio
Structural and electrical engineer: URS Corp., Columbus, Ohio
Fire protection and mechanical engineer: Brinjac Engineering, Allentown, Pa.

Contractor: Alvin H. Butz Inc., Allentown, Pa.
Precaster: High Concrete Group LLC, Denver, Pa.
Project size: 28,488 ft² (26,800 m²)
Project cost: \$8.8 million
Photos: Maguirephoto.com

“They were very clever in how they articulated the form, breaking it up so it related to its surroundings in a better way.”
Tom Brock



“There was a very honest and rational approach of concrete, and the use of texture added a lot of visual interest to the project.”
Bob Powers

Best Office Building: High-Rise (4+ Stories)

Place de l'Escarpement

Quebec, QC, Canada



Employee satisfaction was a key goal for the owners of this commercial building in a newly developing area of Quebec. So were achieving LEED-NC gold certification and a strong, aesthetically pleasing appearance.

The designers worked closely with the precaster, using building information management software to devise the shapes and depths to create the undulating pattern. The software allowed the architect, engineer, and precaster to make adjustments as needed.

An artist collaborated with the designers and precaster to achieve the best look for the waves. The shapes were created with formliners, and the panels were cast with large joints to create the final look. Gray concrete with black pigment and a light sandblast added contrasting shades.

"What we all liked was the very strong planar qualities of the precast concrete," says Bob Powers, a member of the buildings awards jury. "It provided a nice contrast to the curving glass forms."

The precast concrete panels also helped achieve LEED certification, thanks to their high thermal mass, local manufacture, and recyclability.

The project won the ENERGIA award from the Institute of Urban Development and became the first commercial building in Quebec City, QC, Canada, to be certified LEED-NC gold. The building was designed to reduce energy consumption by 50% in relation to the national code of energy for commercial buildings.

"The program aimed from the beginning to make a great working environment," says Dave Craddock, a member of the buildings awards jury. "From a visual and artistic point of view, this building is a great success."

Owner: Immostar, Quebec, QC, Canada

Architect: Pierre Martin Architecte, Quebec, QC, Canada

Engineer: Cime Consultants, Quebec, QC, Canada

Contractor: Ogesco Construction, Quebec, QC, Canada

Artist: Florent Cousineau, Quebec, QC, Canada

Precaster: Bétons Préfabriqués Du Lac, Alma, QC, Canada

Project size: 295,600 ft² (27,462 m²)

Project cost: \$35 million

Photos: BPDFL

For this 1.45 million ft² (135,000 m²) shopping mall, designers used a variety of colors and finishes on more than 2500 architectural precast concrete panels. The design created a series of independent-looking buildings while maintaining the high quality and uniformity of a single construction system.

The precaster used a variety of forming techniques and aggregate mixtures, as well as several finishes (acid etched, chiseled hammered, polished, and stained).

The slate finish was achieved with rubber molds cast from concrete flooring pieces discarded from the precaster's plant. The resulting shapes were manually tinted with penetrating acid-based stains of various colors in every slate block.

"We selected this project because of the quality and craftsmanship in replicating the stone finish, which is unbelievable," says Wanda Lau, a member of the buildings awards jury. "The innovation behind the precast is quite amazing. We've seen textures done before but never to this level of quality and craftsmanship. It shows that precast can be a very viable alternative to much more expensive, much more energy-intensive finish materials."

The smooth casting procedure and rapid erection process allowed the project to be completed ahead of schedule.

"We were really drawn to the use of precast to portray a variety of natural building materials," says Bob Powers, a member of the buildings awards jury. "The use of color and special formliners allowed the precast to create a very realistic look of natural slate and granite. They allowed the architect to achieve the aesthetic look of natural stone."

"We've seen textures done before but never to this level of quality and craftsmanship."
Wanda Lau

Owner:	Grupo FAME, Morelia, Mexico
Architect:	Taller Único de Arquitectos, Mexico City, Mexico
Engineer:	Postensados y Diseños Estructurales, Mexico City, Mexico
Contractor:	Grupo Altozano, Morelia, Mexico
Precaster:	Preteca, Atizapán de Zaragoza, Mexico
Project size:	1.45 million ft ² (135,000 m ²)
Project cost:	\$150 million
Photos:	Fotos En Concreto





Best Retail Facility
Paseo Altozano
Morelia, Mexico



Designers needed to project a high-quality image for a new mixed-use project in Salt Lake City, Utah. The 1 million ft² (93,000 m²) complex features a blend of residences and upscale retailers. To achieve this, 5726 architectural precast concrete panels were used to clad the exterior, featuring detailed geometrics and ranging in size from 0.42 to 179 ft² (0.039 to 16.6 m²).

"The precast concrete on this project was amazing," says Dave Craddock, a member of the buildings awards jury. "It offered a lot of attention to detail with stone projections and recesses. It allowed the designers to have a very enriched palette of materials and textures."

Considerable manual work was required to form each multisectional mold, which combined several smaller pieces to create the proper shape. Several forms combined curved and straight portions.

Despite the long distance from the plant in Atizapán de Zaragoza, Mexico, to the site in Salt Lake City, the operation ran smoothly. Dynamic crating and a bar-code tagging system permitted rapid loading, unloading, and permanent location identification at the site.

The precast concrete panels also contributed to the LEED silver certification through energy savings, waste management, recyclability, and other factors, but it was the detailed aesthetics that put this project over the top.

"We were really attracted to the complexity of the facade," says Bob Powers, a member of the buildings awards jury. "There is a lot of depth and shadow, a lot of interaction of light and shadow. All of the precast components have a lot of three-dimensional characters."

Best Mixed-Use Building

City Creek Center

Salt Lake City, Utah

Owner: City Creek Reserve Inc.,
Salt Lake City, Utah

Architect: Hobbs + Black Architects,
Ann Arbor, Mich.

Engineer: Magnussen Klemencic
Associates, Seattle, Wash.,
and Jacobsen Construction,
Salt Lake City, Utah

Contractor: Jacobsen Construction,
Salt Lake City, Utah

Precaster: Pretecsa, Atizapán de
Zaragoza, Mexico


Precast
coordinator: HHI Corp., Farmington, Utah

Project size: 1,001,880 ft² (93,080 m²)

Project cost: \$1.5 billion

Photos: Karen Weber, Fotos En Concreto

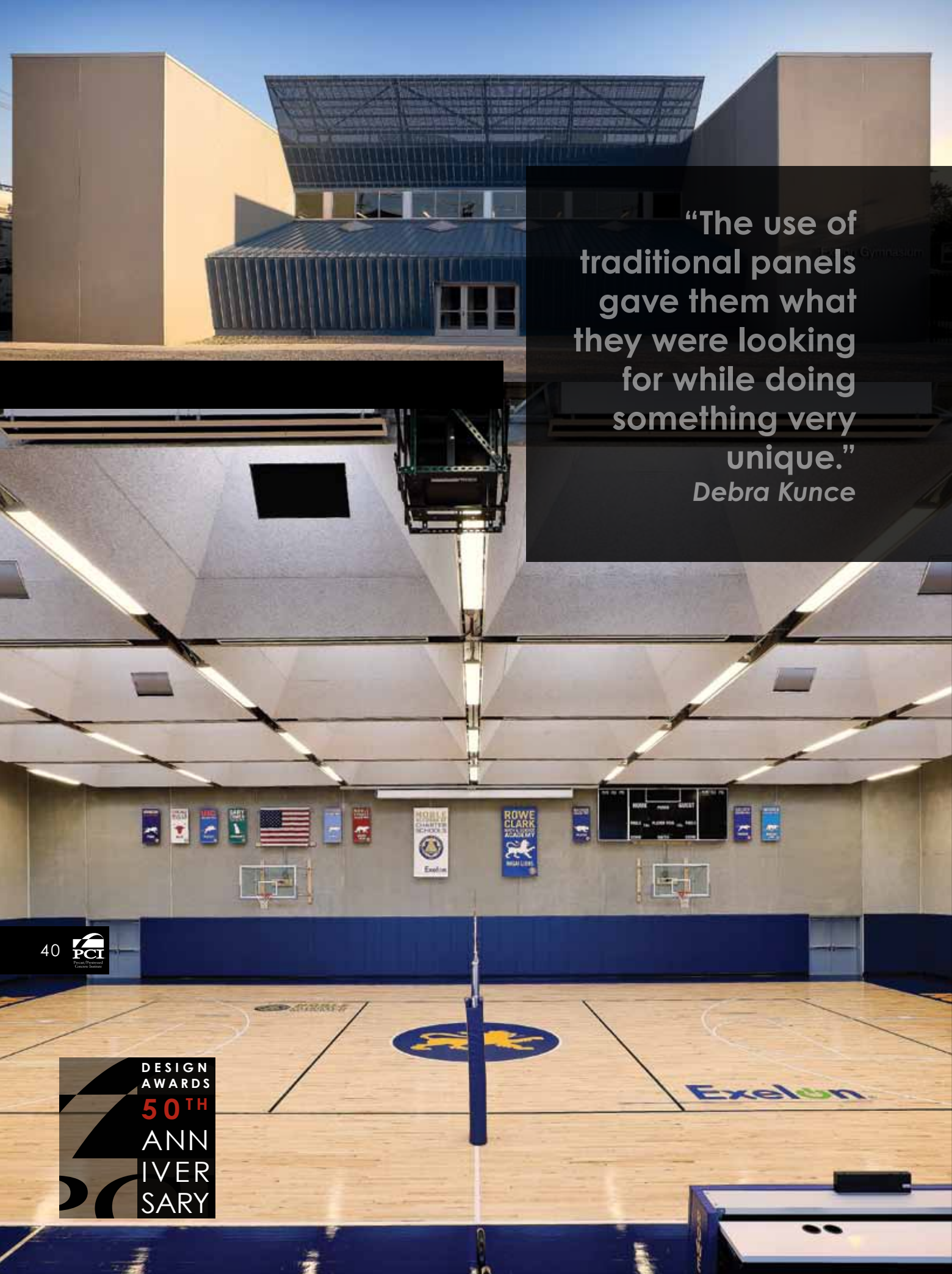




**“The precast concrete
on this project was
amazing. It offered a
lot of attention to detail
with stone projections
and recesses.”**

David Craddock

PRIVATE PROPERTY
CITY CREEK
EST. 2012



“The use of traditional panels gave them what they were looking for while doing something very unique.”

Debra Kunce



Best K–12 School

Exelon

Gymnasium

Chicago, Ill.

Owner: Noble Network of Charter Schools, Chicago, Ill.

Architect: Wheeler Kearns Architects, Chicago, Ill.

Engineer: Thornton Tomasetti, Chicago, Ill.

Contractor: Bulley and Andrews LLC, Chicago, Ill.

Precaster: Advance Cast Stone, Random Lake, Wis.

Project size: 1,500 ft² (1070 m²)

Project cost: \$3.5 million

Photos: Mark Ballogg, Ballogg Photography

Built on a vacant lot in Chicago, Ill., the Exelon Gymnasium has changed the daily lives of the 590 students at the Rowe Clark Math and Science Academy.

The use of precast concrete panels helped meet the tight \$300/ft² (\$3200/m²) budget and the compressed schedule. "This project used very traditional precast panels in a way that supported the unique design," says Debra Kunce, a member of the buildings awards jury. "Schools are constantly challenged with budget and schedule, so the use of traditional panels gave them what they were looking for while doing something very unique. Schools can have good, strong design with glass and precast."

The wall panels feature a 2 in. (50 mm) outer architectural wythe and an 8 in. (200 mm) interior structural wythe sandwiching 3 in. (75 mm) of polyisocyanurate insulation. The combination of insulation and thermal mass provided high energy efficiency for the building envelope, as well as a durable finish for both interior and exterior walls. The energy efficiency allowed designers to downsize the HVAC system.

Casting the building's load-bearing walls, insulation system, and interior finished walls at the plant simultaneously with site preparation helped to speed construction. The building was ready for occupancy less than 10 months after the start date. The City of Chicago was so pleased with the results that it has encouraged using this technique on campuses in other neighborhoods.

The project, which nearly achieved LEED platinum certification, will save more than 40% of the energy consumed by a comparable, traditional structure. in all professional sports in the United States.

Nineteen federal agencies share the new 413,000 ft² (38,400 m²) U.S. courthouse in Jackson, Miss. With a need to meet a variety of federal security standards while providing an impressive aesthetic design, designers clad the exterior with two-story precast concrete architectural panels.

The efficiencies created by using architectural precast concrete panels in nontraditional ways helped limit the cost to just over \$350/ft² (\$3700/m²). The two-story, posttensioned, E-shaped panels were erected vertically. The sawtoothed patterned surfaces and projecting sills, along with deep recesses for the windows, were built into the wall panels at the plant, facilitating erection.

"The articulation of the exterior surface was a key reason we selected this project," says Tom Brock, a member of the buildings awards jury.

Designers also used precast concrete to achieve a variety of curving, rounded shapes. The building has no 90-degree corners, with obtuse and acute corners creating 10 angles at which the panels had to connect. Casting these pieces monolithically allowed precast concrete to do the job that otherwise would have required several materials.

The large, all-in-one panels also minimized the number of joints, reducing maintenance costs. Casting the components in a controlled environment enhanced the pieces' quality and allowed tighter tolerances. This was especially important in providing uniformity for the integral color.

"This project had a lot of requirements for blast resistance, but it also had to be a public space," says Wanda Lau, a member of the buildings awards jury.



Owner:	United States General Services Administration, Atlanta, Ga.
Architect:	H3 Hardy Collaboration Architecture, New York, N.Y.
Engineer:	Walter P. Moore, Houston, Tex.
Contractor:	W.G. Yates Construction, Jackson, Miss.
Precaster:	Gate Precast Co., Monroeville, Ala.
Precast concrete specialty engineer:	DC Engineering PC, Ashland, Va.
Project size:	413,000 ft ² (38,400 m ²)
Project cost:	\$136.1 million
Photos:	Chris Cooper

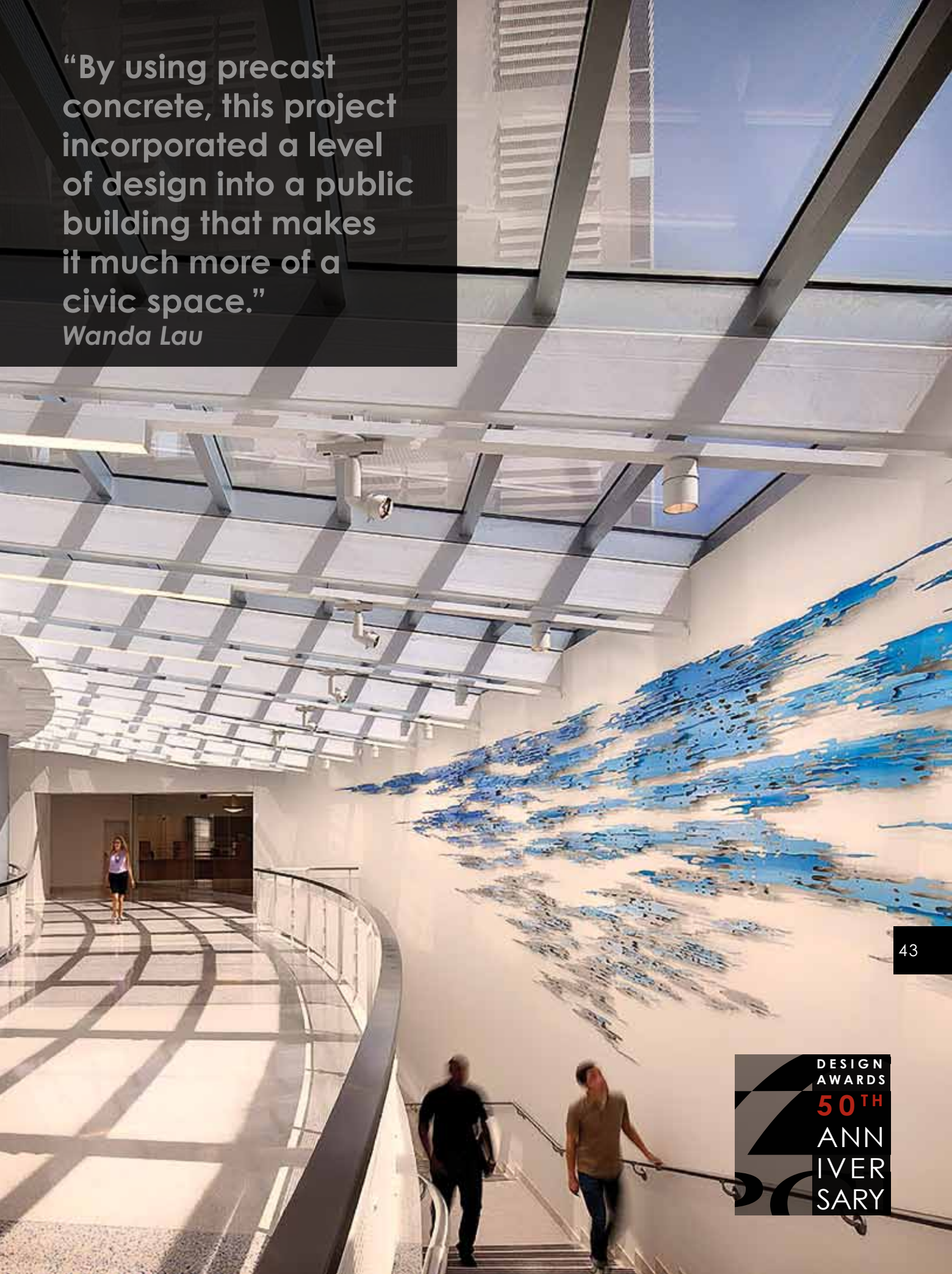
Best Justice and Correctional Structure

U.S. Federal Courthouse

Jackson, Miss.

“By using precast concrete, this project incorporated a level of design into a public building that makes it much more of a civic space.”

Wanda Lau



The architectural precast concrete wall panels used to clad the new Perot Museum of Nature and Science used a system of casting that maximized modularity, interchangeability, and strong aesthetics for the facade.

Panel prototypes were organized into categories of projections and shapes from which rubber molds were created. These categories then were pulled apart and rearranged after each concrete placement. Each mold was reused up to 50 times.

"What makes it strong is that they allowed precast to be used in a new way, with a nice undulation and softness that you don't see every day. It was wonderful," says Debra Kunce, a member of the buildings awards jury.

On the plinth and atrium, 9 out of every 10 panels have some type of curve, either concave or convex, in either their face or top. A number of panels were straight for some distance before they curved, and some started plumb in the direction they were being erected only to cant away from the structure by 12 degrees. Some panels both canted and curved.

The panels were designed with a nominal 6.5 in. (170 mm) thickness, allowing for 2 in. (50 mm) and 3 in. (75 mm) projections. Additional projections, extending 8 in. (200 mm), were created separately and were hand applied to the panels before shipping.

"The dynamic nature of the massing made this project a clear winner," says Bob Powers, a member of the buildings awards jury. "It's almost like frozen liquid in space. This project really highlights the versatility of precast."

Best Government or Public Building

Perot Museum of Nature and Science

Dallas, Tex.

Owner:	Museum of Nature and Science, Dallas, Tex.
Architect:	Morphosis, Culver City, Calif.
Engineer:	Datum Engineers Inc., Dallas, Tex.
Contractor:	Balfour Beatty Construction, Dallas, Tex.
Precaster:	Gate Precast Co., Hillsboro, Tex.
Project size:	180,000 ft ² (17,000 m ²)
Project cost:	\$92 million
Photos:	Gate Precast Co.



“It’s almost like frozen liquid in space. This project really highlights the versatility of precast.”
Bob Powers

“Erasing 89 days
off the construction
schedule is a really
admirable thing.”

Tom Brock



Best Military Project

711th Human Performance Wing Complex

Wright-Patterson Air Force Base, Ohio

Owner: U.S. Army Corps of Engineers, Louisville District, Louisville, Ky.

Architect: Cannon Design, Arlington, Va.

Engineer: THP Limited Inc., Cincinnati, Ohio

Contractor: Archer Western/Butt Construction Joint Venture, Chicago, Ill.

Precaster: High Concrete Group LLC, Denver, Pa.

Project size: 680,000 ft² (63,000 m²)

Project cost: \$194.5 million

Photos: Brad Feinknopf

The new testing and training complex at Wright-Patterson Air Force Base comprises two major buildings and ancillary facilities that house laboratories, medical facilities, offices, and a range of equipment. To meet the 24-month construction schedule, designers chose architectural precast concrete panels to enclose the buildings.

Designers persuaded the Corps of Engineers that precast concrete panels embedded with thin brick would meet requirements better than laid-up brick veneer. Precast concrete also proved to be more economical.

"Erasing 89 days off the construction schedule is a really admirable thing," says Tom Brock, a member of the buildings awards jury. "For a huge facility, three months off of a project is nothing to scoff at."

The designers wanted to match the brick color of adjacent buildings and provide the look of hand-laid brick. They worked with the pre-caster to find the appropriate color in a 5/8 in. (16 mm) thick brick. Some areas also used exposed architectural panels in a buff color with a light sandblast finish.

The precast concrete panels provided a level of quality control and uniformity above expectations for a huge project that would have been a challenge for local masons, the designer said.

"The designers presented this project as being about the schedule savings that they got, but I think it goes beyond that," says Debra Kunce, a member of the buildings awards jury. "They took a big box, broke it down, and used precast concrete with color and form to create an aesthetically pleasing building."



Owner: The Church of Jesus Christ of Latter-day Saints, Salt Lake City, Utah

Architect: FFKR Architects, Salt Lake City, Utah

Structural engineer: ARW Engineers, Ogden, Utah

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

Precaster: Gate Precast Co., Ashland City, Tenn.

Project size: 32,000 ft² (3,000 m²)

Photo: Scot Pacer Proctor

Best Religious Structure

Kansas City Temple

Kansas City, Mo.

“The level of craftsmanship that could be achieved using precast versus stone saved this project a tremendous amount of money, time, and energy.”
Wanda Lau

48



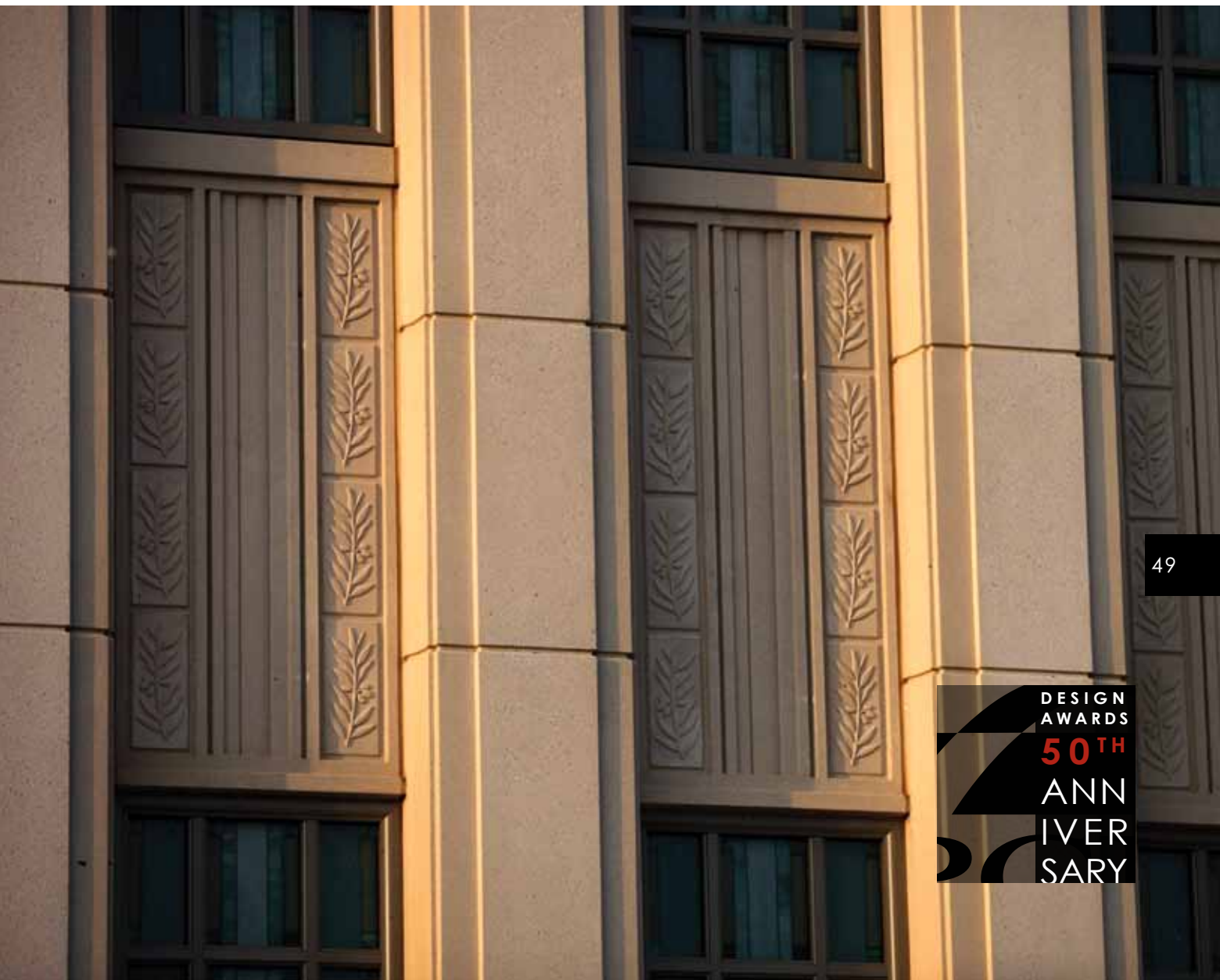
The temple of the Church of Jesus Christ of Latter-day Saints in Kansas City, Mo., offers unique design and detailing. These qualities were especially noticeable in the architectural precast concrete panels used to clad the exterior.

"The level of craftsmanship that could be achieved using precast versus stone saved this project a tremendous amount of money, time, and energy," says Wanda Lau, a member of the buildings awards jury, "but the quality of the project is still amazing. From the articulation of details to the placement of joints and the use of the olive branch motif that occurs throughout the building, we were impressed."

The olive-branch detail was carved by hand, and then pliable rubber molds were made from it. Multiple negatives were created and placed in molds at desired angles.

Two finishes were used for the 406 panels, which included glitter sand in their concrete mixture. A medium sandblast was used as the predominant finish, but acid etching was applied as a secondary finish for contrast.

"This project is an excellent example of precast concrete's versatility," says Tom Brock, a member of the buildings awards jury. "This church has a very distinctive character to it. The precast panels allowed the architects to create large sections of the building and minimize the number of joints, so from a distance it reads as a stone building, but the closer you get, the more abstract that surface gets. I wish we would see more of this type of use of the material."





“Precast concrete allowed the designers to use the same materials as neighboring buildings and apply them in their own unique way.”
David Craddock

50



DESIGN
AWARDS
50TH
ANN
IVER
SARY

Owner: The Board of Trustees of the Leland Stanford Junior University, Palo Alto, Calif.

Architect: ZGF Architects LLP, Portland, Ore.

Engineer: Rutherford and Chekene, San Francisco, Calif.

Contractor: Whiting-Turner Contracting Co., Pleasanton, Calif.

Precaster: Walters and Wolf Precast, Fremont, Calif.

Project size: 204,640 ft² (19,000 m²)

Project cost: \$133.8 million

Photos: Bernard Andre Photography

Best High-Tech
or Laboratory Facility

Lorry I. Lokey

Stem Cell

Research

Building

at Stanford

University

Palo Alto, Calif.

The new stem-cell research building at Stanford University reflects the administration's goal of creating a modern medical-research environment. Flexibility, cost effectiveness, and collaboration were enhanced by the use of limestone-veneered architectural precast concrete and glass-fiber-reinforced concrete (GFRC) wall panels to clad the building's exterior.

To maintain consistency among the buildings on the campus, limestone veneer was attached to the panels in some locations. Using this precast concrete panel system dramatically shortened the schedule and reduced costs. GFRC covers were used on minor columns to complement the limestone-veneered architectural precast concrete wall panels and curtain-wall system.

The large atrium features precast concrete along its facade, fronted by a glazed curtain-wall system. The atrium promoted privacy for research labs while maximizing transparency and integration of indoor and outdoor community spaces. Special attention was paid to minimizing panel joints to create visual continuity from exterior to interior faces.

The building was designed to exceed requirements for LEED silver certification. This included sun shades on east, west, and south facades, which were attached to the precast concrete panels. The precast concrete components also helped achieve certification through their energy-efficient thermal mass, local manufacture, control of construction waste, and recyclability.

"This project showed the interesting way that precast concrete can relate with other materials," says Tom Brock, a member of the buildings awards jury. "The designers used precast as the general structural material and repeated that over and over, and then juxtaposed that against metal panels. The proportioning, detailing, and overall articulation was universally appreciated by the jury."

Best Hotel

The Crash Pad: An Uncommon Hostel

Chattanooga, Tenn.

Providing an uncommon twist on the traditional hostel required an innovative approach to its architecture. Designers did this by using precast concrete load-bearing wall panels and hollow-core slabs for the ceiling/second floor. The structural envelope played a key role in the facility's ability to target LEED platinum certification.

"The precast concrete helped make this a very fun and engaging place where I would love to stay," says Wanda Lau, a member of the buildings awards jury. "This project is a great example of how precast can be integrated with other materials."

The 12 in. (300 mm) thick panels included 4 in. (100 mm) of expanded polystyrene insulation between two wythes of concrete tied together with carbon-fiber shear grid. This provided an R-value of 20. The panels' thermal mass and insulation helped create a design that was more than 50% more energy efficient than a standard building. They also helped create sound-isolating interior spaces.

Offsite fabrication of the panels allowed the building to be erected quickly and prepared the interior for work by other trades. Construction took only six months, with the precast concrete structure erected only two months after groundbreaking.



"The precast concrete helped make this a very fun and engaging place where I would love to stay."

Wanda Lau

Owner: The Crash Pad LLC,
Chattanooga, Tenn.

Architect: River Street Architecture,
Chattanooga, Tenn.

Engineer: Kinnaman Consulting,
Chattanooga, Tenn.

Contractor: Collier Construction,
Chattanooga, Tenn.

Precaster: Metromont Precast Building
Solutions, Hiram, Ga.

Precast
concrete
specialty
engineer: PTAC Consulting
Engineers Inc., Pensacola, Fla.

Project size: 4320 ft² (401 m²)

Project cost: \$1.1 million

Photos: Mandy Rhoden

"What the judges liked most about this hostel was that it used the structure to help educate and inform its guests," says Debra Kunce, a member of the buildings awards jury. "So many of the things in our buildings are hidden. By using precast, they were able to showcase it and highlight it. It's a nice design."



Best Data Center

SV5 Data Center

San Jose, Calif.

Given one year from notice to proceed to occupancy of this data center, architects used precast concrete wall panels to clad the building and provide a distinctive, random-looking exterior.

The building was designed around modules consisting of a one-story computer room, two-story electrical-equipment bar, and a series of offices. The precast concrete panels provide durability and the required hardened shell.

Two types of panels were used to achieve the distinctive contrasting pattern. Panels 8 × 52 ft (2.4 × 16 m) tall featured formliner finishes, while 10 × 35 ft (3 × 11 m) panels had a solid black integrally colored finish. Panels were either 7 or 8.5 in. (180 or 220 mm) thick.

The panels required close attention to quality control to ensure uniformity. Metakaolin was used to reduce efflorescence and improve appearance and performance.

Reinforcing bar dowels protruding about 10 in. (250 mm) from the bottom of the panels were used to slide the panels into cast-in-place concrete embeds consisting of a corrugated duct mounted to a thin plate. The precaster used a PVC sleeve on the reinforcing bar to connect to rock even after the duct was grouted.

"This is an example of the designers going the extra mile," says Tom Brock, a member of the buildings awards jury. "Nine times out of ten, it is a box, but they very cleverly broke the mass up and then differentiated between the materials of the resultant masses. It's quite beautiful the way the whole project comes off. It speaks to the aesthetic versatility of precast."

Owner: Equinix, Redwood City, Calif.

Architect: Sheehan Partners Ltd., Chicago, Ill.

Engineer: Paradigm Structural Engineers, San Francisco, Calif.

Contractor: Turner Construction, San Jose, Calif.

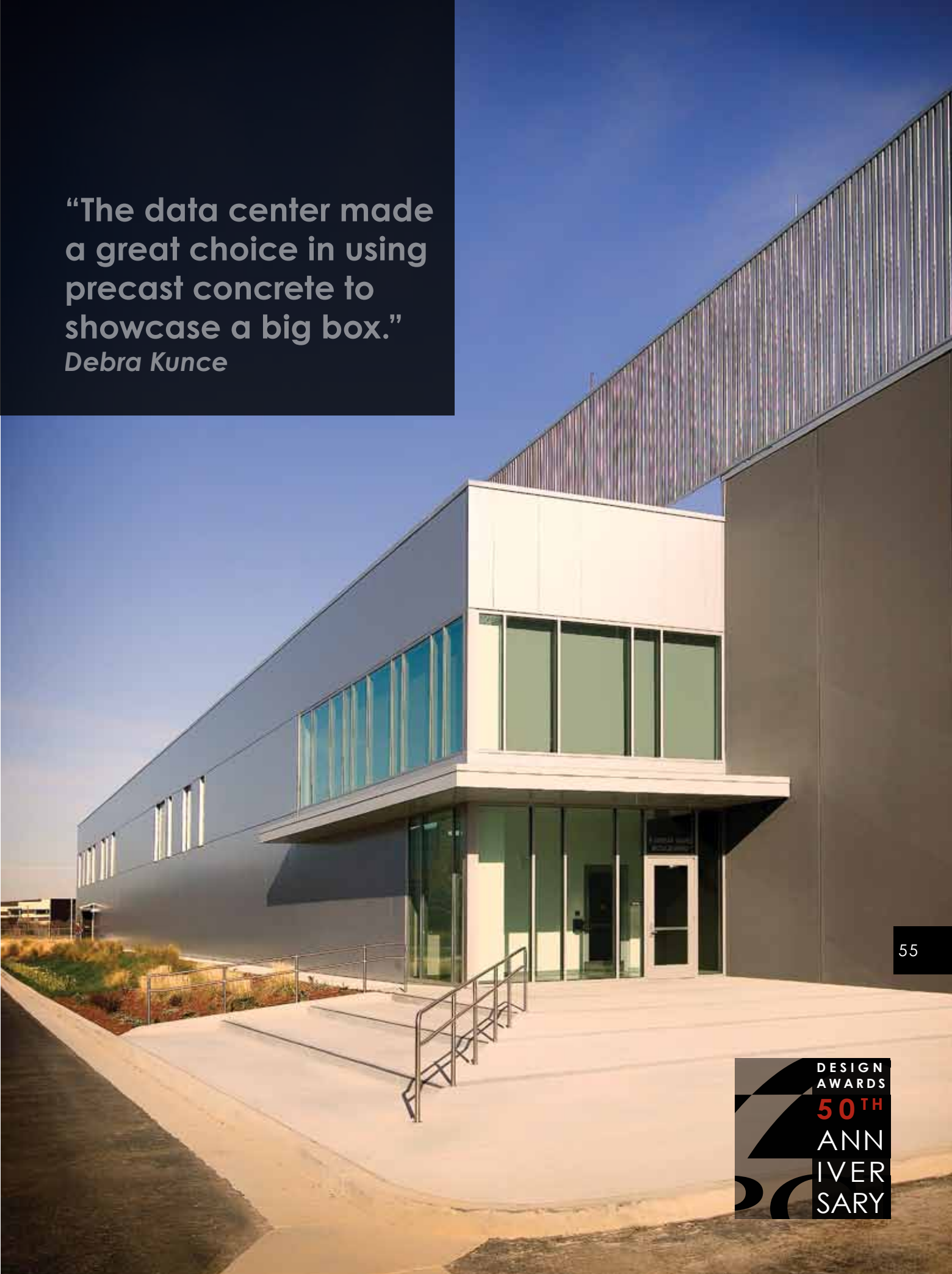
Precaster: Clark Pacific, West Sacramento, Calif.

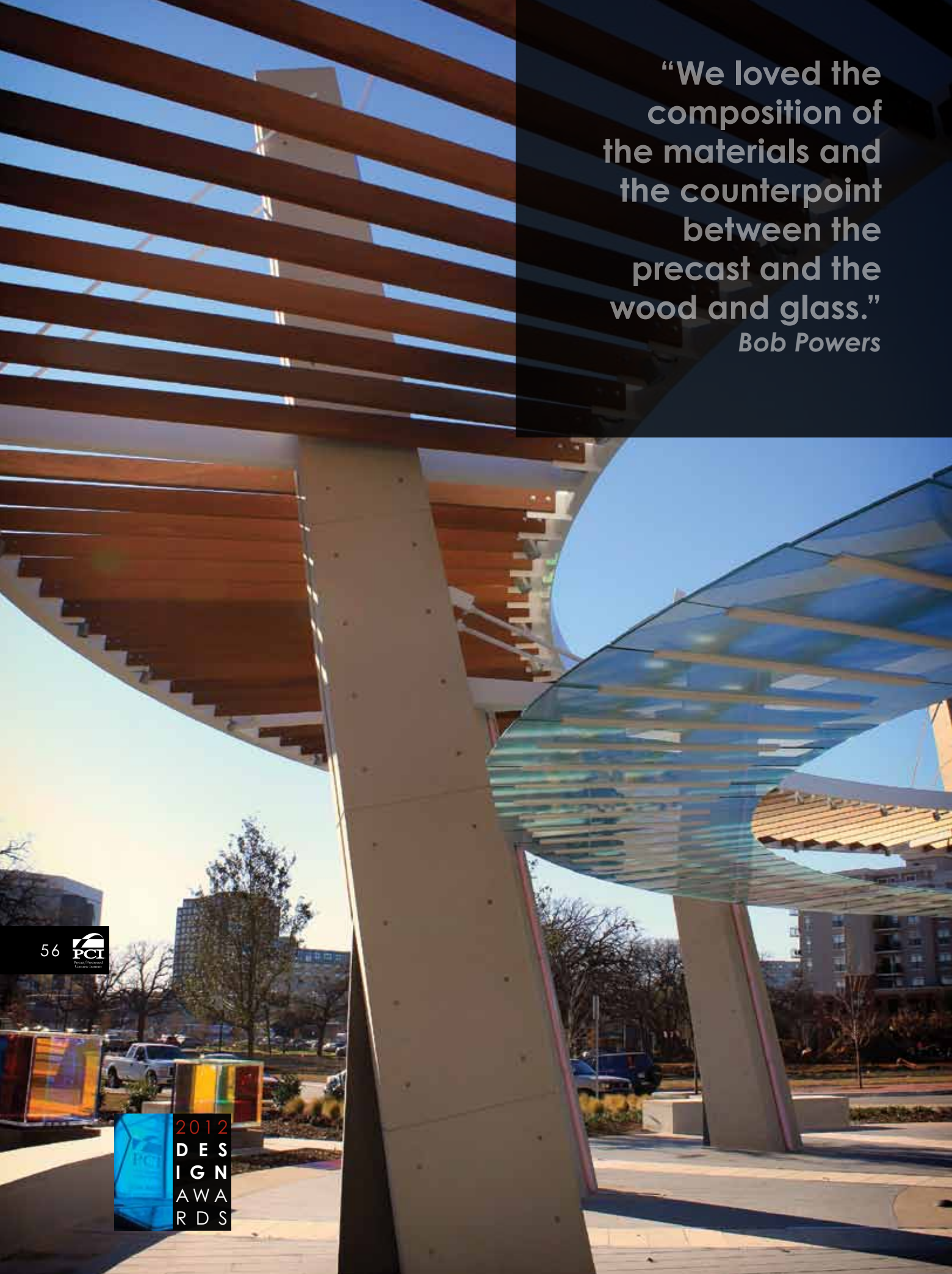
Project size: 126,569 ft² (11,759 m²)

Photos: www.jonnu.com



“The data center made a great choice in using precast concrete to showcase a big box.”
Debra Kunce





“We loved the composition of the materials and the counterpoint between the precast and the wood and glass.”
Bob Powers

Best Custom Solution

Cityplace

Uptown Station

Dallas, Tex.

To improve the speed of turnaround, designers created a unique trolley turn at the intersection of two streets in Dallas, Tex.

"This was one of the favorite projects of the jury," says Bob Powers, a member of the buildings awards jury. "We loved the composition of the materials and the counterpoint between the precast and the wood and glass. This project is a great example of how you can integrate precast with other materials."

Producing the high quality needed for the columns, which can be approached on all four sides by the public, required a special casting process. The panels were cast on their sides in forms 30 ft (9 m) long, 4 ft (1.2 m) deep and 2 ½ ft (760 mm) wide. They were given a medium to heavy acid-etched finish.

Each column was designed to lean away from the center by 14 degrees. A hollow steel bracket was bolted to each footing to keep the columns from pulling away from their positions at the base while maintaining their angle.

The columns were lowered into the bracket and welded in alternating sequences to avoid excessive heat on the concrete. Erection of the pieces took just under one month.

"The judges were excited to see this nice urban solution," says Debra Kunce, a member of the buildings awards jury. "The trolley station is very light and airy. ... The precast columns just soar through other materials. This offers a new way for designers to think about precast and for those on the street to see precast."



Owner: Cityplace, Dallas, Tex.
Architect: Good Fulton and Farrell, Dallas, Tex.
Engineer: Brockett Davis Drake Inc., Dallas, Tex.
Contractor: EMJ Corp., Irving, Tex.

Precaster: Gate Precast Co., Hillsboro, Tex.
Project size: 30,000 ft² (2800 m²)
Project cost: \$3 million
Photos: Gate Precast Co.

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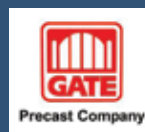
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PCI-Certified Plants

(as of September 2012)

When it comes to quality, why take chances? When you need precast or precast, prestressed concrete products, choose a PCI-Certified plant. You'll get confirmed capability—a proven plant with a quality assurance program you can count on.

Whatever your needs, working with a PCI plant that is certified in the product groups it produces will benefit you and your project.

- You'll find easier identification of plants prepared to fulfill special needs.
- You'll deal with established producers—many certified for more than 30 years.
- Using quality products, construction crews can get the job done right the first time, keeping labor costs down.
- Quality products help construction proceed smoothly, expediting project completion.

Guide Specification

To be sure that you are getting the full benefit of the PCI Plant Certification Program, use the following guide specification for your next project:

“Manufacturer Qualification: The precast concrete manufacturing plant shall be certified by the Precast/Prestressed Concrete Institute Plant Certification Program. Manufacturer shall be certified at time of bidding. Certification shall be in the following product group(s) and category(ies): [Select appropriate groups and categories (AT or A1), (B1,2,3, or 4), (C1,2,3, or 4), (G)].”

GROUPS

GROUP A – Architectural Products

Category AT – Architectural Trim Units

Wet-cast, nonprestressed products with a high standard of finish quality and of relatively small size that can be installed with equipment of limited capacity such as sills, lintels, coping, cornices, quoins, medallions, bollards, benches, planters, and pavers.

Category A1 – Architectural Cladding and Load-Bearing Units

Precast or precast, prestressed concrete building elements such as exterior cladding, load-bearing and non-load-bearing wall panels, spandrels, beams, mullions, columns, column covers, and miscellaneous shapes. This category includes Category AT.

GROUP B – Bridges

Category B1 – Precast Concrete Bridge Products

Mild-steel-reinforced precast concrete elements that include some types of bridge beams or slabs, sheet piling, pile caps, retaining-wall elements, parapet walls, sound barriers, and box culverts.

Category B2 – Prestressed Miscellaneous Bridge Products

Any precast, prestressed element excluding super-structure beams. Includes piling, sheet piling, retaining-wall elements, stay-in-place bridge deck panels, and products in Category B1.

Category B3 – Prestressed Straight-Strand Bridge Members

Includes all superstructure elements such as box beams, I-beams, bulb-tees, stemmed members, solid slabs, full-depth bridge deck slabs, and products in Categories B1 and B2.

Category B4 – Prestressed Deflected-Strand Bridge Members

Includes all products covered in Categories B1, B2, and B3.

GROUP BA – Bridge Products with an Architectural Finish

These products are the same as those in the categories within Group B, but they are produced with an architectural finish. They will have a form, machine, or special finish. Certification for Group BA production supersedes Group B in the same category. For instance, a plant certified to produce products in Category B2A is also certified to produce products in Categories B1, B1A, and B2 (while it is not certified to produce any products in B3A or B4A).

GROUP C – Commercial (Structural)

Category C1 – Precast Concrete Products

Mild-steel-reinforced precast concrete elements including sheet piling, pile caps, piling, retaining-wall elements, floor and roof slabs, joists, stairs, seating members, columns, beams, walls, spandrels, etc.

Category C2 – Prestressed Hollow-Core and Repetitive Products

Standard shapes made in a repetitive process prestressed with straight strands. Included are hollow-core slabs, railroad ties, flat slabs, poles, wall panels, and products in Category C1.

Category C3 – Prestressed Straight-Strand Structural Members

Includes stemmed members, beams, columns, joists, seating members, and products in Categories C1 and C2.

Category C4 – Prestressed Deflected-Strand Structural Members

Includes stemmed members, beams, joists, and products in Categories C1, C2, and C3.

GROUP CA – Commercial Products with an Architectural Finish

These products are the same as those in the categories within Group C, but they are produced with an architectural finish. They will have a form, machine, or special finish. Certification for Group CA production supersedes Group C in the same category. For instance, a plant certified to produce products in Category C2A is also certified to produce products in C1, C1A, and C2 (while it is not certified to produce any products in Groups C3 or C4A).

Group G – Glass-Fiber-Reinforced Concrete (GFRC)

These products are reinforced with glass fibers that are randomly dispersed throughout the product and are made by spraying a cement/sand slurry onto molds. This produces thin-walled, lightweight cladding panels.

Product Groups and Categories

The PCI Plant Certification Program is focused around four groups of products, designated A, B, C, and G. Products in Group A are audited to the standards in MNL-117. Products in Groups B and C are audited to the standards in MNL-116. Products in Group G are audited according to the standards in MNL-130. The standards referenced above are found in the following manuals:

- MNL-116 *Manual for Quality Control for Plants and Production of Precast and Prestressed Concrete Products*
- MNL-117 *Manual for Quality Control for Plants and Production of Architectural Precast Concrete*
- MNL-130 *Manual for Quality Control for Plants and Production of Glass-Fiber-Reinforced Concrete Products*

Within Groups A, B, and C are categories that identify product types and the product capability of the individual plant. The categories reflect similarities in the ways in which the products are produced. In addition, categories in Groups A, B, and C are listed in ascending order. In other words, a plant certified to produce products in Category C4 is automatically certified for products in the preceding Categories C1, C2, and C3. A plant certified to produce products in Category B2 is automatically qualified for Category B1 but not Categories B3 or B4.

Please note for Group B, Category B1: Some precast concrete products such as highway median barriers, box culverts, and three-sided arches are not automatically included in routine plant audits. They may be included at the request of the precaster or if required by the project specifications.

ALABAMA

Gate Precast Company, Monroeville (251) 575-2803..... **A1, C4**
Hanson Pipe and Precast Southeast, Pelham (205) 663-4681..... **B4, C4**
Standard Concrete Products, Theodore (251) 443-1113..... **B4, C2**

ARIZONA

Coreslab Structures (ARIZ) Inc., Phoenix (602) 237-3875..... **A1, B4, C4A**
CXT Concrete Ties, Tucson (520) 644-5703..... **C2**
Royden Construction Company (*), Phoenix (602) 484-0028..... **B4**
TPAC, Phoenix (602) 262-1360..... **A1, B4, C4A**

ARKANSAS

Coreslab Structures (ARK) Inc., Conway (501) 329-3763..... **C4A**

CAIFORNIA

Bethlehem Construction, Inc., Shafter (661) 391-9704..... **C3A**
Clark Pacific, Fontana (909) 823-1433..... **A1, C3A, G**
Clark Pacific, West Sacramento (916) 371-0305..... **A1, C3A**
Clark Pacific, Woodland (916) 371-0305..... **B3, C3**
Con-Fab California Corporation, Lathrop (209) 249-4700..... **B4, C4**
Con-Fab California Corporation, Shafter (661) 630-7162..... **B4**
Coreslab Structures (L.A.) Inc., Perris (951) 943-9119..... **A1, B4, C4A**
CTU Precast, Olivehurst (530) 749-6501..... **C3**
Hanson Structural Precast, Irwindale (626) 962-8751..... **C4**
KIE-CON, Inc., Antioch (925) 754-9494..... **B4, C3**
Mid-State Precast, L.P., Corcoran (559) 992-8180..... **A1, C3A**
StructureCast, Bakersfield (661) 833-4490..... **A1, B3, C3A**
Universal Precast Concrete, Inc., Redding (530) 243-6477..... **A1**
US Concrete Precast Group /dba Pomeroy, Perris (951) 657-6093... **B4, C2A**
Walters & Wolf Precast, Fremont (510) 226-5162..... **A1, G**
Willis Construction Co., Inc., San Juan Bautista (831) 623-2900..... **A1, C1, G**

COLORADO

EnCon Colorado, Denver (303) 287-4312..... **B4, C2**
Plum Creek Structures, Littleton (303) 471-1569..... **B4, C3A**
Rocky Mountain Prestress LLC, Denver (303) 480-1111..... **B4, C4**
Rocky Mountain Prestress LLC, Denver (303) 480-1111..... **A1, AT, C3A**
Rocla Concrete Tie, Inc., Denver (303) 296-3505..... **C2**
Stresscon Corporation, Colorado Springs (719) 390-5041..... **A1, B4A, C4A**

CONNECTICUT

Blakeslee Prestress Inc., Branford (203) 481-5306..... **A1, B4, C4A**
Coreslab Structures (CONN) Inc., Thomaston (860) 283-8281..... **A1, B1, C1**
Oldcastle Precast, Inc./dba Rotondo Precast, Avon (860) 673-3291 **B2, C1A**
United Concrete Products Inc., Yalesville (203) 269-3119..... **B3, C2**

DELAWARE

Concrete Building Systems of Delaware, Inc., Delmar (302) 846-3645..... **B3, C4**
Rocla Concrete Tie, Inc., Bear (302) 836-5304..... **C2**

FLORIDA

Cement Industries, Inc., Fort Myers (239) 332-1440..... **B3, C3**
Colonial Construction, Concrete, Precast, LLC, Placida (941) 698-4180..... **C2**
Coreslab Structures (MIAMI) Inc., Medley (305) 823-8950..... **A1, C4A**
Coreslab Structures (ORLANDO) Inc., Orlando (407) 855-3191..... **C2**
Coreslab Structures (TAMPA) Inc., Tampa (813) 626-1141..... **A1, B3, C3A**
Dura-Stress, Inc., Leesburg (800) 342-9239..... **A1, B4A, C4A**
Finrock Industries, Inc., Orlando (407) 293-4000..... **A1, C4A**
Florida Precast Industries, Inc., Sebring (863) 655-1515..... **C2**
Gate Precast Company, Jacksonville (904) 757-0860..... **A1, B4, C3A**
Gate Precast Company, Kissimmee (407) 847-5285..... **A1, C2**
Metromont Corporation, Bartow (863) 440-5400..... **A1, C3**
Oldcastle Precast, Jacksonville (904) 768-7081..... **C1**
South Eastern Prestressed Concrete, Inc.,
West Palm Beach (561) 793-1177..... **B3, C3**
Stabil Concrete Products, LLC, St. Petersburg (727) 321-6000..... **A1**
Standard Concrete Products, Inc., Tampa (813) 831-9520..... **B4, C3**

GEORGIA

Atlanta Structural Concrete Co., Buchanan (770) 646-1888..... **C4A**
ConArt Precast, LLC, Cobb (229) 853-5000..... **A1, AT, C3**
Coreslab Structures (ATLANTA) Inc., Jonesboro (770) 471-1150..... **C3A**
Gulf Coast Pre-Stress, Inc., Jonesboro (228) 234-7866..... **B4**
Metromont Corporation, Hiram (770) 943-8688..... **A1, C4A**
Standard Concrete Products, Inc., Atlanta (404) 792-1600..... **B4**
Standard Concrete Products, Inc., Savannah (912) 233-8263..... **B4, C4**
Tindall Corporation, Conley (800) 849-6383..... **C2A**
Tindall Corporation, Conley (800) 849-6383..... **C4A**

HAWAII

GPRM Prestress, LLC, Kapolei (808) 682-6000..... **A1, B3, C4**
GPRM Prestress, LLC, Puunene (808) 682-6000..... **C4**

IDAHO

Hanson Structural Precast Eagle, Caldwell (208) 454-8116..... **A1, B4, C4**
Teton Prestress Concrete, LLC., Idaho Falls (208) 523-6410..... **B4, C3**

ILLINOIS

ATMI Precast, Aurora (630) 896-4679..... **A1, C3A**
AVAN Precast Concrete Products, Lynwood (708) 757-6200..... **A1, C3**
County Materials Corporation, Champaign (217) 352-4181..... **B3, B3-IL**
County Materials Corporation, Salem (618) 548-1190..... **A1, B4, B4-IL, C4**
Dukane Precast, Inc., Aurora (630) 355-8118..... **A1, C3**
Illini Concrete Company of Illinois, LLC, Tremont (309) 925-5290... **B3, B3-IL**
Illini Precast, LLC, Marseilles (708) 562-7700..... **B4, B4-IL, C3**
Lombard Architectural Precast Products Co., Alsip (708) 389-1060..... **A1**
Mid-States Concrete Industries, South Beloit (608) 364-1072... **A1, B3, B3-IL, C3A**
Prestress Engineering Corporation, Blackstone (815) 586-4239... **B4, B4-IL, C4**
Spancrete of Illinois, Inc., Crystal Lake (815) 459-5580..... **C2**
St. Louis Prestress, Inc., Glen Carbon (618) 656-8934..... **B3, B3-IL, C3**
Utility Concrete Products, LLC, Morris (815) 416-1000..... **C1A**

INDIANA

ATMI Indy, LLC, Greenfield (317) 891-6280..... **A1, C2A**
Coreslab Structures (INDIANAPOLIS) Inc., Indianapolis (317) 353-2118.. **A1, C4A**
Hoosier Precast LLC, Salem (812) 883-4665..... **B3, C1A**
Precast, LLC dba Precast Specialties, Monroeville (260) 623-6131..... **A1**
StresCore, Inc., South Bend (574) 233-1117..... **C2**

IOWA

Advanced Precast Co., Farley (563) 744-3909..... **C1A**
Andrews Prestressed Concrete, Inc., Clear Lake (641) 357-5217..... **B4, C4**
Cretex Concrete Products Midwest, Inc.,
Iowa Falls (515) 243-5118..... **A1, B4, B4-IL, C4A**
MPC Enterprises, Inc., Mount Pleasant (319) 986-2226..... **A1, C3A**
PDM Precast, Inc., Des Moines (515) 243-5118..... **B3, C4**

KANSAS

Coreslab Structures (KANSAS) Inc., Kansas City (913) 287-5725..... **B4, C4**
Prestressed Concrete, Inc., Newton (316) 283-2277..... **A1, B4, C4**
Stress-Cast, Inc., Assaria (785) 667-3905..... **C3A**

KENTUCKY

Bristol Group, Inc., Lexington (859) 233-9050..... **C3**
de AM - RON Building Systems LLC, Owensboro (270) 684-6226..... **B3, C3A**
Gate Precast Company, Winchester (859) 744-9481..... **A1**
Prestress Services Industries LLC, Lexington (260) 724-7117 **B4, B4-IL, C4A**
Prestress Services Industries LLC, Lexington (859) 299-0461..... **A1, B4, C4A**
Prestress Services Industries LLC, Melbourne (859) 441-0068..... **B4, C3**

LOUISIANA

Boykin Brothers, Inc./Louisiana Concrete Products,
Baton Rouge (225) 753-8722..... **A1, B4, C3A**
F-S Prestress, LLC, Princeton (318) 949-2444..... **B4, C3**
Fibrebond Corporation, Minden (318) 377-1030..... **A1, C1A**

MAINE

Oldcastle Precast, Auburn (207) 784-9144..... **B2, C1**

MARYLAND

Atlantic Metrocast, Inc., LaPlata (301) 870-3289..... **B3, C1**
Larry E. Knight, Inc., Glyndon (410) 833-7800..... **C2**
Oldcastle Precast Building Systems Div., Edgewood (410) 612-1213... **A1, C3A**

MASSACHUSETTS

Oldcastle Precast, Inc./dba Rotondo Precast, Rehoboth (508) 336-7600... **B4, C3**
Unistress Corporation, Pittsfield (413) 499-1441..... **A1, B4, C4A**
Vynorius Prestress, Inc., Salisbury (978) 462-7765..... **B3, C2**

MICHIGAN

International Precast Solution, LLC, River Rouge (313) 843-0073 **A1, B3, C3**
Kerkstra Precast Inc., Grandville (800) 434-5830..... **A1, B3, C3A**
Nucon Schokbeton / Stress-Con Industries, Inc.,
Kalamazoo (269) 381-1550 **A1, B4, C3A**
Stress-Con Industries, Inc., Detroit (313) 873-4711 **B3, C3**
Stress-Con Industries, Inc., Saginaw (989) 239-2447 **B4, C3**

MINNESOTA

Crest Precast, Inc., La Crescent (507) 895-8083 **B3A, C1A**
Crete Concrete Products Midwest, Inc., Maple Grove (763) 545-7473..... **B4, C2**
Fabcon, Savage (800) 727-4444 **A1, B1, C3A**
Hanson Structural Precast Midwest, Inc., Maple Grove (763) 425-5555... **A1, C4A**
Molin Concrete Products Co., Lino Lakes (651) 786-7722 **C3A**
Wells Concrete Products, Albany (320) 845-2299..... **A1, C3A**
Wells Concrete Products Co., Wells (507) 553-3138..... **A1, C4A**

MISSISSIPPI

F-S Prestress, LLC, Hattiesburg (601) 268-2006 **B4, C4**
Gulf Coast Pre-Stress, Inc., Pass Christian (228) 452-9486..... **B4, C4**
J.J. Ferguson Prestress-Precast Company, Inc., Greenwood (662) 453-5451..... **B4**
Jackson Precast, Inc., Jackson (601) 321-8787 **A1, C2A**
Tindall Corporation, Moss Point (228) 435-0160..... **A1, C4A**

MISSOURI

Coreslab Structures (MISSOURI) Inc., Marshall (660) 886-3306. **A1, B4, C4A**
County Materials Corporation, Bonne Terre (573) 358-2773 **B4**
Mid America Precast, Inc., Fulton (573) 642-6400 **A1, B1, C1**
Prestressed Casting Co., Ozark (417) 581-7009 **C4**
Prestressed Casting Co., Springfield (417) 869-1263..... **A1, C3A**

MONTANA

Missoula Concrete Construction, Missoula (406) 549-9682 **A1, B3, C3**
Montana Prestressed Concrete, Billings (605) 718-4111 **B4, C3**
Montana Prestressed Concrete - MT City Plant,
Montana City (406) 442-6503..... **B4**

NEBRASKA

Concrete Industries, Inc., Lincoln (402) 434-1800..... **B4, C4A**
Coreslab Structures (OMAHA) Inc., LaPlatte (402) 291-0733 **A1, B4, C4A**
Enterprise Precast Concrete, Inc., Omaha (402) 895-3848 **A1, C2A**
Stonco, Inc., Omaha (402) 556-5544..... **A1**

NEW HAMPSHIRE

Newstress Inc., Epsom (603) 736-9348..... **B3, C3**

NEW JERSEY

Boccella Precast LLC, Berlin (856) 767-3861 **C2**
Jersey Precast, Hamilton Township (609) 689-3700..... **B4, C4**
Northeast Precast*, Millville (856) 765-9088..... **B2, C2**
Precast Systems, Inc., Allentown (609) 208-1987..... **B4, C4**

NEW MEXICO

Castillo Prestress, Belen (505) 864-0238 **B4, C4**
Coreslab Structures (ALBUQUERQUE) Inc.,
Albuquerque (505) 247-3725..... **A1, B4, C4A**
Ferri Concrete Structures, Inc., Albuquerque (505) 344-8823..... **A1, C4A**

NEW YORK

David Kucera Inc., Gardiner (845) 255-1044 **A1, G**
Lakelands Concrete Products, Inc., Lima (585) 624-1990..... **A1, B3A, C3A**
Oldcastle Precast Building Systems Div., Selkirk (518) 767-2116..... **B3, C3A**
The Fort Miller Co., Inc., Greenwich (518) 695-5000 **B1, C1**
The L.C. Whitford Materials Co., Inc., Wellsville (585) 593-2741 **B4, C3**

NORTH CAROLINA

Gate Precast Company, Oxford (919) 603-1633..... **A1, C2**
International Precast Inc., Siler City (919) 742-3132..... **A1, C3A**
Metromont Corporation, Charlotte (704) 372-1080 **A1, C3A**
Prestress of the Carolinas, Charlotte (704) 587-4273..... **B4, C4**
S & G Prestress Company, Wilmington (910) 763-7702 **B4, C3**
Utility Precast, Inc., Concord (704) 721-0106..... **B3A**

NORTH DAKOTA

Wells Concrete, Grand Forks (701) 772-6687 **C4A**

OHIO

DBS Prestress of Ohio, Huber Heights (937) 878-8232..... **C3**
Fabcon LLC, Grove City (614) 875-8601 **C3A**
High Concrete Group LLC, Springboro (937) 748-2412 **A1, C3A**
KSA, Sciotoville (740) 776-3238 **C2**
Mack Industries, Inc., Valley City (330) 483-3111 **C3**
Prestress Services Industries LLC, Grove City (614) 871-2900..... **B4, C1**
Prestress Services Industries of Ohio, LLC, Mt. Vernon (800) 366-8740..... **B4, C3**
Prestress Services Industries of Ohio, LLC, Mt. Vernon (740) 393-1121..... **B3, C1**
Sidley Precast, Thompson (440) 298-3232 **A1, C4A**

OKLAHOMA

Coreslab Structures (OKLA) Inc. (Plant No.1), Oklahoma City (405) 632-4944..... **A1, C4A**
Coreslab Structures (OKLA) Inc. (Plant No.2),
Oklahoma City (405) 672-2325..... **B4, C1**
Coreslab Structures (TULSA) Inc., Tulsa (918) 438-0230..... **B4, C4**
Tulsa Dynaspan, Inc., Broken Arrow (918) 258-1549..... **A1, C3**

OREGON

Knife River Corporation, Harrisburg (541) 995-6327 **A1, B4, C4**
R.B. Johnson Co., McMinnville (503) 472-2430 **B4**

PENNSYLVANIA

Concrete Safety Systems, LLC, Bethel (717) 933-4107..... **B1A, C1A**
Conewago Precast Building Systems, Hanover (717) 632-7722..... **A1, C2A**
Dutchland, Inc., Gap (717) 442-8282 **C3**
Fabcon East, LLC, Mahanoy City (570) 773-2480..... **A1, C3A**
High Concrete Group LLC, Denver (717) 336-9300..... **A1, B3, C3A**
J & R Slaw, Inc., Lehighton (610) 852-2020 **A1, B4, C3**
Newcrete Products, Roaring Spring (814) 224-2121 **B4, C4**
Nitterhouse Concrete Products, Inc., Chambersburg (717) 267-4505... **A1, C4A**
Northeast Prestressed Products, LLC, Cressona (570) 385-2352 **B4, C3**
Pittsburgh Flexicore Company, Inc., Donora (724) 258-4450 **C2**
Say-Core, Inc., Portage (814) 736-8018..... **C2**
Sidley Precast, Youngwood (724) 755-0205 **C3**
Universal Concrete Products Corporation, Stowe (610) 323-0700... **A1, C3A**
US Concrete Precast Group Mid-Atlantic, Middleburg (570) 837-1774..... **A1, C3A**

SOUTH CAROLINA

Florence Concrete Products, Inc., Sumter (803) 775-4372..... **B4, C3A**
Metromont Corporation, Greenville (864) 295-0295..... **A1, C4A**
Tekna Corporation, Charleston (843) 853-9118 **B4, C2**
Tindall Corporation, Fairforest (864) 576-3230..... **A1, C4A**

SOUTH DAKOTA

Gage Brothers Concrete Products Inc., Sioux Falls (605) 336-1180. **A1, B4, C4A**

TENNESSEE

Construction Products, Inc. of Tennessee, Jackson (731) 668-7305... **B4, C4**
Gate Precast Company, Ashland City (615) 792-4871..... **A1, C3A**
Mid South Prestress, LLC, Pleasant View (615) 746-6606..... **C3**
Prestress Services Industries of TN, LLC, Memphis (901) 775-9880... **B4, C3**
Ross Prestressed Concrete, Inc., Bristol (423) 323-1777 **B4, C3**
Ross Prestressed Concrete, Inc., Knoxville (865) 524-1485..... **B4, C4**
Sequatchie Concrete Service, Inc., Chattanooga (423) 867-4510..... **C2**

TEXAS

Coreslab Structures (TEXAS) Inc., Cedar Park (512) 250-0755..... **A1, C4A**
CXT, Inc., Hillsboro (254) 580-9100..... **B1, C1**
Eagle Precast Corporation, Decatur (940) 626-8020 **A1, C3**
East Texas Precast Co., LTD., Hempstead (936) 857-5077 **C4A**
Enterprise Concrete Products, LLC, Dallas (214) 631-7006 **B3, C3**
Gate Precast Company, Hillsboro (254) 582-7200..... **A1**
Gate Precast Company, Pearland (281) 485-3273 **C2**
GFRC Cladding Systems, LLC, Garland (972) 494-9000 **G**
Heldenfels Enterprises, Inc., Corpus Christi (361) 883-9334..... **B4, C4**
Heldenfels Enterprises, Inc., San Marcos (512) 396-2376..... **B4, C4**
Lowe Precast, Inc., Waco (254) 776-9690..... **A1, C3A**
Manco Structures, Ltd., Schertz (210) 690-1705..... **B4, C4A**
North American Precast Company, San Antonio (210) 509-9100..... **A1, C4A**
Rocla Concrete Tie, Inc., Amarillo (806) 383-7071 **C2**
Tindall Corporation, San Antonio (210) 248-2345 **A1, C2A**

UTAH

Hanson Structural Precast Eagle, Salt Lake City (801) 966-1060.. **A1, B4, C4A, G**
Harper Contracting, Salt Lake City (801) 326-1016..... **B2, C1**
Owell Precast LLC, Bluffdale (801) 571-5041 **B3A, C3**
The Shockey Precast Group, LLC, Harriman (540) 667-7700..... **C3**

VERMONT

Dailey Precast, Shaftsbury (802) 442-4418..... **A1, B4A, C3A**
J. P. Carrara & Sons, Inc., Middlebury (802) 388-6363..... **A1, B4A, C3A**
S.D. Ireland Companies, South Burlington (802) 658-0201..... **A1**

VIRGINIA

Atlantic Metrocast, Inc., Portsmouth (757) 397-2317..... **B4, C4**
Bayshore Concrete Products Corporation,
Cape Charles (757) 331-2300 **B4, C4**
Bayshore Concrete Products/Chesapeake, Inc.,
Chesapeake (757) 549-1630 **B4, C3**
Coastal Precast Systems, LLC, Chesapeake (757) 545-5215..... **A1, B4, C3**
Metromont Corporation, Richmond (804) 222-8111..... **A1, C3A**
Rockingham Precast, Inc., Harrisonburg (540) 433-8282..... **B4, C3**
Smith-Midland Corporation, Midland (540) 439-3266..... **A1, B2, C3**
The Shockey Precast Group, Fredericksburg (540) 898-1221..... **A1, C3A**
The Shockey Precast Group, Winchester (540) 667-7700 **A1, C4A**
Tindall Corporation, Petersburg (804) 861-8447 **A1, C4A**

WASHINGTON

Bellingham Marine Industries, Inc., Ferndale (360) 676-2800..... **B3, C2**
Central Pre-Mix Prestress Co., Spokane (509) 533-0267..... **A1, B4, C4**
Concrete Technology Corporation, Tacoma (253) 383-3545 **B4, C4**
CXT, Inc., Spokane (509) 921-8716 **B1**
CXT, Inc., Spokane (509) 921-7878 **C2**
EnCon Northwest, LLC, Camas (360) 834-3459 **B1**
EnCon Washington, LLC, Puyallup (253) 846-2774..... **B1, C2**
Wilbert Precast, Inc., Yakima (509) 248-1984..... **B3, C3**

WEST VIRGINIA

Carr Concrete Corporation, Waverly (304) 464-4441..... **B4, C3**
Eastern Vault Company, Inc., Princeton (304) 425-8955..... **B3, C3**

WISCONSIN

Advance Cast Stone Co., Inc., Random Lake (920) 994-4381..... **A1**
County Materials Corporation, Eau Claire (800) 729-7701 **B4**
County Materials Corporation, Roberts (800) 426-1126..... **B4, C3**
International Concrete Products, Inc., Germantown (262) 242-7840. **A1, C1**
MidCon Products, Inc., Hortonville (920) 779-4032..... **A1, AT, C1**
Spancrete, Inc., Valders (920) 775-4121 **A1, B3, C3A**
Stonecast Products, Inc., Germantown (262) 253-6600 **A1, C1**
Wausau Tile Inc., Rothschild (715) 359-3121 **AT**

WYOMING

voestalpine Nortrak, Inc., Cheyenne (509) 220-6837..... **C2**

CANADA

BRITISH COLUMBIA

Armtec Limited Partnership, Richmond (604) 278-9766..... **A1, B4, C3**

NEW BRUNSWICK

Strescon Limited, Saint John (506) 633-8877 **A1, B4, C4A**

NOVA SCOTIA

Strescon Limited, Bedford (902) 494-7400..... **A1, B4, C4**

ONTARIO

Artex Systems Inc., Concord (905) 669-1425..... **A1**
Global Precast INC, Maple (905) 832-4307..... **A1**
Prestressed Systems, Inc., Windsor (519) 737-1216..... **B4, C4**

QUEBEC

Betons Prefabriques du Lac Inc., Alma (418) 668-6161 **A1, C3A, G**
Betons Prefabriques du Lac, Inc., Alma (418) 668-6161 **A1, C2**
Betons Prefabriques Trans. Canada Inc.,
St. Eugene De Grantham (819) 396-2624 **A1, B4, C3A**
Prefab De Beauce, Sainte-Marie De Beauce (418) 387-7152 **A1, C3**

MEXICO

PRETECSA, S.A. DE C.V., Atizapan De Zaragoza (000) 000-0000 **A1, G**
Willis De Mexico S.A. de C.V., Tecate **A1, C1, G**

PCI-Qualified & PCI-Certified Erectors

(as of September 2012)

When it comes to quality, why take chances? When you need precast or precast, prestressed concrete products, choose a PCI-Qualified/Certified Erector. You'll get confirmed capability with a quality assurance program you can count on.

Whatever your needs, working with an erector who is PCI Qualified/Certified in the structure categories listed will benefit you and your project.

- You'll find easier identification of erectors prepared to fulfill special needs.
- You'll deal with established erectors.
- Using a PCI-Qualified/Certified Erector is the first step toward getting the job done right the first time, thus keeping labor costs down.
- PCI-Qualified/Certified Erectors help construction proceed smoothly, expediting project completion.

Guide Specification

To be sure that you are getting an erector from the PCI Field

Certification Program, use the following guide specification for your next project:

"Erector Qualification: The precast concrete erector shall be fully qualified or certified by the Precast/Prestressed Concrete Institute (PCI) prior to the beginning of any work at the jobsite. The precast concrete erector shall be qualified or certified in Structure Category(ies): [Select appropriate groups and categories S1 or S2 and/or A1]."

Erector Classifications

The PCI Field Certification Program is focused around three erector classifications. The standards referenced are found in the following manuals:

MNL-127 *Erector's Manual - Standards and Guidelines for the Erection of Precast Concrete Products*

MNL-132 *Erection Safety Manual for Precast and Prestressed Concrete*

GROUPS

Category S1 - Simple Structural Systems

This category includes horizontal decking members (e.g., hollow-core slabs on masonry walls), bridge beams placed on cast-in-place abutments or piers, and single-lift wall panels.

Category S2 - Complex Structural Systems

This category includes everything outlined in Category S1 as well as total-precast, multi-product structures (vertical and horizontal members combined) and single- or multistory load-bearing members (including those with architectural finishes).

Category A - Architectural Systems

This category includes non-load-bearing cladding and GFRC products, which may be attached to a supporting structure.

Certified erectors are listed in blue.

ALABAMA

Masonry Arts, Inc. (*), Bessemer (205) 428-0780.....A

ARIZONA

Coreslab Structures (ARIZ), Inc., Phoenix (602) 237-3875S2, A
TPAC, Phoenix (602) 262-1360S2, A

ARKANSAS

Coreslab Structures (ARK) Inc., Conway (501) 329-3763S2

CALIFORNIA

Coreslab Structures (L.A.), Inc., Perris (951) 943-9119.....S2, A
Walters & Wolf Precast, Fremont (510) 226-9800.....A

COLORADO

Encon Field Services, LLC, Denver (303) 287-4312.....S2
Gibbons Erectors, Inc., Englewood (303) 841-0457S2, A
Rocky Mountain Prestress, Denver (303) 480-1111S2, A
S. F. Erectors Inc., Elizabeth (303) 646-6411S2, A

CONNECTICUT

Blakeslee Prestress, Inc., Branford (203) 481-5306.....S2
Jacob Erecting & Construction LLC, Durham (860) 788-2676S2, A

FLORIDA

Concrete Erectors, Inc., Altamonte Springs (407) 862-7100.....S2, A
Finfrock Industries, Inc., Orlando (407) 293-4000S2, A
Florida Builders Group, Inc., Miami (305) 278-0098S2
Florida Precast Industries, Sebring (863) 655-1515.....S1
Gate Precast Erection Co., Kissimmee (407) 847-5285.....A

James Toffoli Construction Company, Inc., Fort Myers (239) 479-5100 S2, A
Pre-Con Construction of Tampa Inc., Tampa (813) 626-2545S2, A
Solar Erectors U. S. Inc., Medley (305) 825-2514S2, A
Specialty Concrete Services, Inc., Altoona (352) 669-8888S2, A
Structural Prestressed Industries, Inc., Medley (305) 556-6699S2
Summit Erectors, Inc., Jacksonville (904) 783-6002.....S2, A

GEORGIA

Big Red Erectors Inc., Covington (770) 385-2928S2, A
ConArt Precast, LLC, Cobb (229) 853-5000S2, A
Jack Stevens Welding LLP, Murrayville (770) 534-3809.....S2
Precision Stone Setting Co., Inc., Hiram (770) 439-1068S2, A
Rutledge & Son's, Woodstock (770) 592-0380S2

IDAHO

Precision Precast Erectors, LLC, Worley (208) 660-5223S2, A

ILLINOIS

Area Erectors, Inc., Rockford (815) 562-4000S2, A
Creative Erectors, LLC, Rockford (815) 229-8303.....S2, A
Mid-States Concrete Industries, South Beloit (800) 236-1072S2
Spancrete of Illinois, Inc., Crystal Lake (815) 459-5580S2
Trinity Roofing Service Inc, Blue Island (708) 385-7830S1

INDIANA

Stres Core Inc., South Bend (574) 233-1117S1

IOWA

Cedar Valley Steel, Inc., Cedar Rapids (319) 373-0291S2, A
Topping Out Inc. / dba Northwest Steel Erection, Des Moines (800) 247-5409S2

Visit www.pci.org for the most up-to-date listing of PCI-Certified plants.

KANSAS

Carl Harris Co., Inc., Wichita (316) 267-8700..... **S2, A**
Crossland Construction Company, Inc., Columbus (620) 429-1414..... **S2, A**
Ferco, Inc., Salina **S1**
Topping Out Inc. / dba Davis Erection Kansas City,
 Kansas City (800) 613-9547..... **S2**

MAINE

American Aerial Services, Inc., Falmouth (207) 797-8987 **S1**
Cianbro Corporation, Pittsfield (207) 679-2435 **S2**
Reed & Reed, Inc., Woolwich (207) 443-9747 **S2, A**

MARYLAND

DLM Contractors, LLC, Upper Marlboro (301) 877-0000..... **S2, A**
E & B Erectors, Inc., Pasadena (410) 360-7800 **S2, A**
E.E. Marr Erectors, Inc., Baltimore (410) 837-1641 **S2, A**
L.R. Willson & Sons, Inc., Gambrills (410) 987-5414 **S2, A**
Mid Atlantic Precast Erectors, Inc., Baltimore (410) 837-1641 **A**
Oldcastle Building Systems Div. / Project Services,
 Baltimore (518) 767-2116..... **S2, A**

MASSACHUSETTS

Prime Steel Erecting, Inc., North Billerica (978) 671-0111 **S2, A**

MICHIGAN

Assemblers Precast & Steel Services, Inc., Saline (734) 429-1358..... **S2, A**
Devon Contracting, Inc., Detroit (313) 221-1550 **S2, A**
G2 Inc., Cedar Springs (616) 696-9581 **S2, A**
Pioneer Construction Inc., Grand Rapids (616) 247-6966..... **S2**

MINNESOTA

Amerect, Inc., Newport (651) 459-9909..... **A**
Fabcon, Inc., Savage (952) 890-4444..... **S2**
Hanson Structural Precast Midwest, Inc., Maple Grove (763) 425-5555 **S2, A**
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