

# 2011 PCI AWARD WINNING PROJECTS USING LEHIGH WHITE CEMENT

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## Office Building Award – 4-6 Stories



### **JE Dunn Corporate Headquarters** Kansas City, Missouri

**Precaster:** Coreslab Structures, Kansas City, Missouri

**Website:** [www.coreslab.com](http://www.coreslab.com)

**Precaster:** Enterprise Precast Concrete, Inc., Omaha, NE

**Website:** [www.enterpriseprecast.com](http://www.enterpriseprecast.com)

Modern loft feel with an exposed structure and exterior bearing walls is achieved in this six-story, LEED Gold corporate office with integrated 780-car, precast parking deck. The fluid nature of precast concrete is demonstrated by the combination of gray architectural panels on lower levels and an acid-etched white cement look on upper levels. A custom form liner pattern was created that hid the repetition and seams and created a strong visual depth to blend with neighboring buildings. Panel widths vary. The resulting precast “kit of parts” was assembled in a way to make every façade different. Precasters worked together to provide insulated wall panels, hollow core planks, and the total-frame precast for the garage. More than half the garage was built below grade. The garage also required an expansion joint. Loadings were handled with interior precast litewalls and shearwalls. Vertical walls on the exterior support tees resist soil loads, and serve as shearwalls.

## Multi Family Building



### **The Carlyle (Century Wilshire Condos)** Los Angeles, California

**Precaster:** Clark Pacific, Fontana, California

**Website:** [www.clarkpacific.com](http://www.clarkpacific.com)

A kinetic, “pistoning” twin tower design, this luxury condo features a “boomerang” floor plan configuration consisting of outstretched arms that capture a facing boulevard scenic corridor. Plan setbacks increase in depth towards the upper level penthouses and each floor incorporates some 48 corners. To handle the design, the precaster had to create 5-ft-deep, cold-jointed corner column covers. Textured, architectural precast panels on the building’s tower achieve a random stone look to complement Egyptian limestone on the lower level base. The stone-on-precast base features unique joinery with overlapping stones, epoxied cornerstones, and 1-in. of recessed exposed precast backup on the horizontal stone joints. The 5-in.-thick precast skin on upper levels includes a 2 ft x 2 ft reveal and a random, light-heavy sandblast pattern. The building is capped with a fully-operational emergency helicopter pad and includes a four-level subterranean parking garage.

## Healthcare



### **Methodist Women's Hospital** Omaha, Nebraska

**Precaster:** Coreslab Structures (Omaha), Inc., LaPlatte, Nebraska

**Website:** [www.coreslab.com](http://www.coreslab.com)

This project highlights how the look of masonry can be replicated or even enhanced with thin-brick precast construction without having to deal with the challenges of weather and mason availability typically associated with field-laid masonry. Serving as a canvas to allow architects to stretch the limits of design, the embedded thin-brick on the precast panels for this hospital and medical office feature darker colored bricks in the reveal areas to produce shadow effects. Use of thin brick panels provide a clean look without through-wall flashing or weep holes. Here, a stack bond pattern was used to lessen the impact of the vertical joints between panels. The intricate, embedded thin brick reveals required precision during the manufacturing process. Corner and edge cap bricks are located around the recesses to create the dramatic reveal effect without exposing the concrete. Plane changes in several panels provide transitions from the buff panels to projected thin brick facing.

## Higher Education / Universities



### **Indiana University Innovation Center** Bloomington, Indiana

**Precaster:** High Concrete Group LLC, Denver, Pennsylvania

**Website:** [www.highconcrete.com](http://www.highconcrete.com)

Use of CarbonCast insulated precast concrete wall panels allow a university business park structure to fit the surrounding architectural context, meet an extremely aggressive schedule, and achieve LEED Silver certification. The building represents phase one of an information technology and technology transfer economic development zone and includes an innovation center that provides modular labs and offices to emerging companies. Buff-colored precast walls emulate the Indiana limestone of nearby buildings and counterbalance the structure's glass curtain-wall and dark brown metal panels. Reveals break up the precast panels. Curtain-wall mullions bleed across to continue the line established in the precast panel spacing. In one vestibule, the precast is turned inside to provide visual continuation and also a durable surface in a high traffic area. The precast sandwich panels feature a 3-in. layer of rigid XPS foam insulation and carbon fiber wythe ties and deliver an R-15 thermal rating with extremely low thermal conductivity.

## Stadiums/Arenas/Sports Facilities



### **Target Field–Minnesota Twins** Minneapolis, Minnesota

**Precaster:** Gage Brothers Concrete Products, Inc., Sioux Falls, SD

**Website:** [www.gagebrothers.com](http://www.gagebrothers.com)

**Precaster:** Hanson Structural Precast, Maple Grove, MN

**Website:** [www.hansonstructuralprecast.com](http://www.hansonstructuralprecast.com)

Honed and quarry creek rock-faced stone in various thicknesses is cast into the architectural precast concrete wall system for this major league baseball stadium. Casting in odd-size limestone blocks with non-uniform surfaces and thicknesses that varied by up to two inches presented a major manufacturing challenge. To accomplish this, limestone blocks were placed face down in the precast form with  $\frac{3}{4}$ -inch joints. Stainless steel ties were used to anchor the blocks to the precast. A bond breaker prevented concrete from entering the joints and allows thermal expansion of the dissimilar materials. The design also includes a gradation in stone color from darker stone at the base to lighter at the top. The superstructure consisted of a multi-level waffle slab floor system with concrete columns at random locations. Walls are battered a variety of degrees and corners seem to intersect at different angles. ESPN voted the venue as the best sports experience in all professional sports in the United States.

## HONORABLE MENTIONS:

### **Parking Structures (0–999 Cars)–Craftsmanship**



### **Lancaster Central West Garage**

Lancaster, Pennsylvania

**Precaster:** High Concrete Group LLC, Denver, Pennsylvania

**Website:** [www.highconcrete.com](http://www.highconcrete.com)

A new seven-story, 504-space parking garage in this historic east coast city highlights the exceptional versatility of precast concrete. The town is one of the nation's oldest, graced by brick row homes that predate the American Revolution. To fit this context, the design team chose precast exterior panels with a 40-40-20 mix of red brick shades with black ironspot stippling. Buff-colored cast stone inserts, which correspond to the region's native limestone, project out beyond the face of the building and create depth.

## Custom Solutions



### **Indiana University Cook Men's & Women's Basketball Practice Facility**

Bloomington, Indiana

**Precaster:** High Concrete Group LLC, Denver, Pennsylvania

**Website:** [www.highconcrete.com](http://www.highconcrete.com)

Ten structural concrete arches span this basketball practice facility. Forming the base of the building is an enclosure of CarbonCast High Performance Insulated Wall Panels. The facility needed to integrate visually with the concrete and limestone finishes prevalent on campus. A precast soffit continues the design theme from the larger precast panel area in the east of the building, and brings it to a dramatic termination in the entrance area.

## Sustainable Design



### **DASH Bus Maintenance & Operations Facility**

Alexandria, Virginia

**Precaster:** High Concrete Group LLC, Denver, Pennsylvania

**Website:** [www.highconcrete.com](http://www.highconcrete.com)

A bus maintenance facility with rooftop parking, this total-precast, LEED-Gold design utilized CarbonCast insulated wall panels for thermally efficient walls. Roof top deck consists of double tees with field-applied rigid foam insulation and topping. Support for the 15-ft-wide double tees was accomplished using a combination pocket/corbel in the load bearing precast walls. Reveals in the panels on the two-story section help to break up the mass of the building and create subtle shadow lines.

## Stadiums/Arenas/Sports Facilities–Craftsmanship



### **TCF Bank Stadium**

Minneapolis, Minnesota

**Precaster:** Gage Brothers Concrete Products Inc., Sioux Falls, SD

**Website:** [www.gagebrothers.com](http://www.gagebrothers.com)

Home to the Golden Gopher football team and the University of Minnesota marching band, the TCF Bank Stadium houses a band rehearsal room, club rooms, restaurants, bars, and a 60-yd-long football-shaped Golden Gopher locker room. Use of precast panels with thin-set brick versus block and brick construction cut five months off the schedule. Stadium construction utilized over 1,800 pieces or 180,000 ft<sup>2</sup> of brick clad precast and 1,100 pieces or 60,000 ft<sup>2</sup> of architectural precast cladding, as well as precast concrete columns, beams, stadia risers, stairs, raker beams, and spandrels. The project earned LEED Silver certification.

## Public/Institutional Building



### **Rapid City Regional Airport Rescue & Fire Fighting Station**

Rapid City, South Dakota

**Precaster:** Gage Brothers Concrete Products Inc., Sioux Falls, SD

**Website:** [www.gagebrothers.com](http://www.gagebrothers.com)

Design requirements for this rescue station required that the new structure match an existing campus building, utilize durable materials, be energy-efficient and essentially maintenance-free, provide effective sound control, incorporate interior surfaces that withstand abuse, and be cost-effective. The existing structure consists of a form board cast-in-place concrete and exterior insulation finish system on steel studs. The total precast concrete solution features a structural precast wall system and a hardwall interior surface, with a corefloor concrete roof and mezzanine. Integrated architectural finishes include two concrete mix designs, custom wood grain formwork, form projections, and continuous insulation.

## Higher Education/Universities



### **University of Minnesota Science Teaching & Student Services Building**

Minneapolis, Minnesota

**Precaster:** Gage Brothers Concrete Products Inc., Sioux Falls, SD

**Website:** [www.gagebrothers.com](http://www.gagebrothers.com)

The architecture of the five-story building incorporates various building materials on the façade, which takes cues from the urban campus structures, the serenity of the museum and the fluidity of the winding river. Scalloped and curved architectural precast concrete components anchor the building into the river's bluff. The building's base echoes the warm ochre color of native limestone. The eastern façade utilizes striated brick-faced precast concrete wall panels and horizontal strip windows to link the structure to the orthogonal nature of the existing campus buildings.

## All Precast Solution



### Muensterberg Plaza & Clock Tower

Berne, Indiana

**Precaster:** Coreslab Structures (Indianapolis) Inc., Indianapolis, Indiana

**Website:** [www.coreslab.com](http://www.coreslab.com)

For the most cost-effective design, this all-precast clock tower features a square precast concrete tower “box” concept with internal floors and simple plank construction. The 165-ft-tall tower is part of an event plaza and park. It features integral color on the first 20 ft. An all-precast structure, the tower utilized twelve 12-in.-thick architectural precast panels at the base exterior, eight 8-in.-thick architectural precast panels at the base interior, 20 8-in. structural precast panels on upper floors, and 27 8-in. and 10-in.-thick hollow core planks.

## Multi Family Buildings



### The Century

Los Angeles, California

**Precaster:** Clark Pacific, Fontana, California

**Website:** [www.clarkpacific.com](http://www.clarkpacific.com)

This unique, elliptical-shaped, 42-story luxury high-rise contains 140 luxury condominium units with 368-car, subterranean parking. The design-build structure included an exterior comprised of 170,000 ft<sup>2</sup> of punched window architectural precast concrete and stone cladding—all produced on radius forms. The tower's detailing boasts fluted columns and pilasters and protruding eyebrow lintels. Due to the elliptical shape of the structure, all but 82 of the 1,147 precast panels were cast on convex or concave forms.