

THE CHRIST HOSPITAL JOINT AND SPINE CENTER

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 2019 PCI HARRY H. EDWARDS
HONORABLE MENTION

Owner

The Christ Hospital
Health Network
Cincinnati, OH

PCI-Certified Precast Concrete Producer

High Concrete Group
Springboro, OH

Architect + Engineer of Record

Skidmore, Owings & Merrill
Chicago, IL

General Contractor

Messer Construction Company
Cincinnati, OH

Project Cost

\$280 million

Project Size

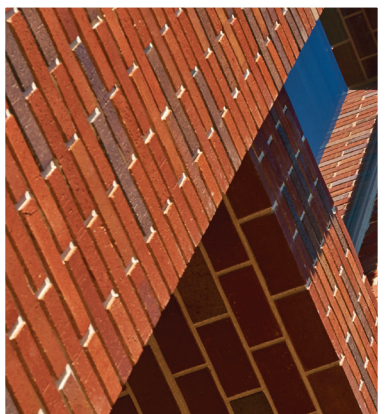
381,000 ft²

Precast Cost

\$7.1 million

Precast Size

137,000 ft²



Above: The Christ Hospital Joint & Spine Center, Cincinnati, Ohio
Left: Close-up of precast concrete panel with thin brick veneer

Key Project Attributes

- Precast concrete cladding provides a watertight building envelope.
- The modular brick veneer was applied using a rubber form liner in a raked pattern, with contrasting panels designed to look like limestone, using a medium acid-etched finish.
- The project achieved LEED Silver certification.

In 2012, the Christ Hospital Network in Cincinnati, Ohio, decided to add an orthopedic center of excellence to its already nationally renowned healthcare facility. The owners worked with an architect to design the seven-story, 381,000 ft² LEED Silver-certified Joint & Spine Center, which links directly to the hospital's existing surgical and imaging areas.

As part of the broader master plan, the client and architect agreed that the design for the Joint & Spine Center needed to reflect the historical red-brick vernacular of the other campus buildings, but it also had to meet strict budget restrictions, deliver a watertight building envelope, and meet the high-performance goals set for the new building. All of these requirements could be met with a precast concrete design.

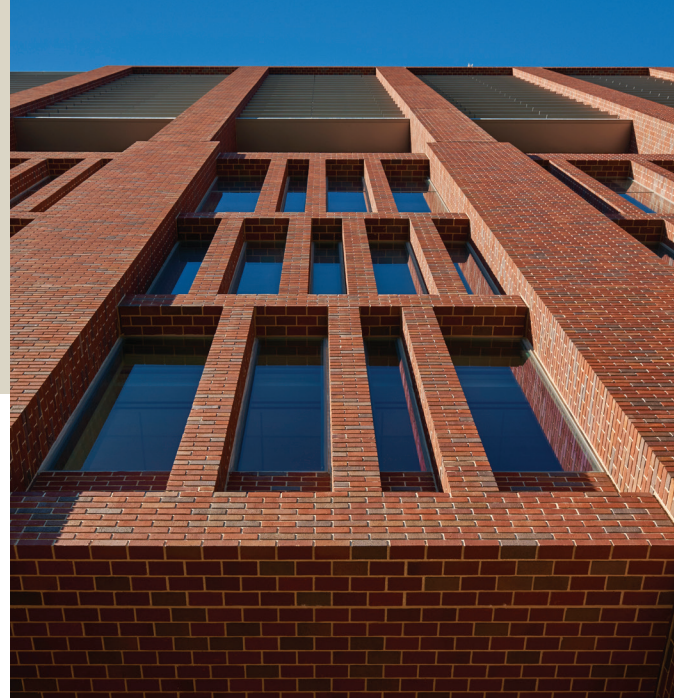
Light the Lanterns

For the exterior of the new center, the designers used precast concrete panels with a thin brick veneer to rapidly and cost effectively achieve the desired red-brick design. The modular brick veneer surrounds large, open windows that fill the building with natural light, supporting the building's sustainable goals and inspiring well-being in visitors to the center.

The massing incorporates a projected precast concrete "lantern" element with a limestone appearance at the main entrance, which provides contrast to the brick veneer and further reflects the campus's historic cupolas. Acid etching was used to complement the modular brick and windows and as a surround for the lantern element, further connecting the building with the campus's master plan. Internally, the building features a cast-in-place structure on the first two floors and steel frame on the four stories above; however, the precast concrete fabricator was able to upsize the panel design on the exterior to decrease the number of panel joints and optimize their location. This technique reduced the number of crane picks and caulked joints and expedited the precast production schedule.

The precast concrete design also delivered increased efficiency to site logistics, which was important because the new structure was erected with an active traffic lane along one side, a situation which limited the amount of construction to only two sides of the site at any given time.

The final result underscores how precast concrete construction delivers multiple scheduling, budgeting, and performance benefits without sacrificing architectural vision, especially if supported by a comprehensive communications and process control plan.



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