

# 84.51° CENTRE AT 5TH & RACE STREET

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 2016 PCI AWARD BEST MIXED-USE BUILDING

## Owner

Fifth & Race LLC and  
Dunnhumby USA  
Cincinnati, Ohio

## PCI-Certified Precast Producer and Precast Speciality Engineer

High Concrete Group  
Springboro, OH

## Architect

Gensler  
Chicago, IL

## Engineer of Record

THP Limited Inc.  
Cincinnati, OH

## General Contractor

Turner Construction Company  
Cincinnati, OH

## Project Cost

\$140 million

## Project Size

280,000 ft<sup>2</sup>

## PrEcast Cost

\$2.8 million

## Precast Size

44,000 ft<sup>2</sup>

## Precast Concrete Elements

74,452 ft<sup>2</sup> of  
insulated cladding  
in 810 pieces



Above: 5th & Race Street Building, Cincinnati, OH

Left: Detail of the ventilation on the garage level that integrates and unifies the overall facade

## Key Project Attributes

- Exposed precast concrete interior gives office space an industrial feel.
- Insulated precast concrete sandwich panels provide thermal insulation with no additional interior finishes.
- Use of precast concrete enabled an accelerated construction timeline.

The new mixed-use structure at 5th & Race Street in Cincinnati, Ohio, gives visitors the impression that they can see right through the building. Designers of the 280,000 ft<sup>2</sup> facility, elegantly merged broad windows and precast concrete panels to create a light and elegant building that reflects the blue sky during the day, and golden street lights at night, while giving residents a strong, open space for their offices and retail.

84.51° Centre, includes a 1,000-space, four-story parking garage at the base topped by four stories of commercial space. Precast concrete was chosen to achieve the owners' durability, accelerated timeline, and aesthetic goals. By using architectural precast panels High Concrete was able to provide the dark color and avoid the repetitiveness of patterns, while limiting erection time. The dark color of the precast concrete was created by combining black granite course aggregate with black sand in the mix. The panels were acid etched to provide a soft texture, sometimes referred to as sugar cube texture. The acid etch finish also enables the sand to sparkle in the sun, providing glints of light and visual interest to passersby.

"The use of precast to provide ventilation on the garage level helps camouflage the fact that the lower levels of the building are a garage and it creates a unified facade," says Michael Zensen, Associate Vice President, CannonDesign, one of the judges of the 2016 PCI Awards committee. The horizontal reveal pattern provided the desired modern, industrial look, and random non-symmetrical window openings combined with reveal accents added visual interest.

### Precast Solution

While the precast concrete exterior of the building is among its most striking attributes, one of the biggest challenges that High Concrete Group's team faced was design precast for the interior of the project. The owner wanted the precast to be exposed inside the final office space to achieve an industrial look like an old warehouse structure. All precast connections had to be exposed to view, so special consideration had to be taken to ensure that connections within reach of personnel were both safe to be around and tamper-proof, as well as attractive.

Since the precast concrete was the only shell between the inside and outside air, all of the panels on the office tower were insulated to achieve thermal performance goals. With no interior finishes there was no other way to provide insulation. The precast concrete elements are striking both on the exterior and the interior - 72,452 ft<sup>2</sup> of cladding insulated using C-GRID™ in 810 pieces create this stunning structure. The utilization of C-GRID™ as part of the insulated panels helped the panels be lighter, and to meet the thermal goals of the building.

The result is a durable, attractive, high-performing structure that meets the needs of residents while creating an attractive addition to the urban landscape. The 5th & Race Street Development has been praised for the project's positive economic impact and the forecasted benefits it will have on the west side of the central business district in Cincinnati.

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*"THIS PROJECT IS STUNNING IN ITS  
CONSISTENT, SUBTLE TEXTURE."*

*– Michael Zensen,  
Associate Vice President, CannonDesign,  
2016 PCI Awards Committee Judge*