Full-Court Press

Flooring Professionals Work Around Active Campus for Cincinnati Arena Renovation

KEVIN KIPP, HARDIG INDUSTRIAL SERVICES

The University of Cincinnati's Fifth Third Arena, originally built in 1989, recently underwent a $90 million renovation that was completed just before tip-off of the 2018-19 NCAA basketball season.

The university hired Skanska USA and Megen Construction for the project, with Hardig Industrial Services as the primary flooring contractor responsible for resinous flooring, polished concrete, polished concrete overlay and self-leveling underlayment under the permanent wood basketball court.

The scope of the project included the installation of Sika Purcem Decoflake UEF, medium finish polished concrete, Rapid Set Tru PC polishable overlay and self-leveling underlayment placed under the permanent basketball court. ALL PHOTOS: HARDIG INDUSTRIAL SERVICES

PROJECT AND LOGISTICS

The scope of the project included 30,000 square feet of the installation of Sika Purcem Decoflake UEF, 60,000 square feet of medium finish polished concrete, 25,000 square feet of Rapid Set Tru PC polishable overlay with a integrally poured Bearcats logo and 35,000 square feet of self-leveling underlayment placed under the permanent basketball court totaling 150,000 square feet.

The project was a moving target from the start and included constant design changes and difficult site access. The arena sits in the center of an active campus in an urban area of Cincinnati. Moving equipment and more than 200 skids of material in and out the facility during school hours was a challenge.

All substrates we coated were concrete—a varied mix of existing and new. All the existing concrete was extremely rough from demo of existing floor treatments and the demo of the majority of the interior walls to create 360-degree concourses and seating. The new-pour concrete was extremely challenging to polish due to it being a lightweight mix on a metal deck. Floor flatness and floor level created extreme challenges during the polish process.

UNIQUE CHALLENGES AND SAFETY

Hardig was tasked to install an underlayment under the permanent wood basketball court. The floor required an FF 50 for flatness. The 30,000-square-foot area was first scanned with a thermal laser to create a heat map of the topography of the floor, allowing us to identify areas that needed to be milled down prior to the installation of Sika Level 125 to achieve the floor flatness needed.

Cont. p. 4

"Full-Court Press," cont. from p. 3

Another unique portion of the project was the integrally poured and polished logo overlay. During the early design phase of the project, the owner's architect had asked for a stained logo in the main concourse. As the project manager, I voiced my concerns for the longevity of the stained option with the expected traffic. We then partnered with CTS Rapidset to discuss pouring an integrally colored logo, despite never having done something of this magnitude before. Hours and hours were spent developing a plan, working with specialty pigment manufacturers to match Pantone colors in concrete, working with drafters to develop forms on a waterjet and screwing up a few mock-ups to create a 35-foot-by-25-foot, half-inch-thick seamlessly poured and polished logo.

This project was one of the highest profile construction projects in Cincinnati and happened to start for us soon after the implementation of the new Occupational Safety and Health Administration silica standards. This created a sensitive environment for dust control and environmental/safety concerns on the site.

Our OSHA silica plan was enforced and a major part of planning for preparation, with Skanska putting a major emphasis on safety as well.

While on site, daily stretch and flexes were completed at 7 a.m. prior to starting work. Daily DHA and tool box talks were required prior to the job start and outlined potential hazards for the operations planned daily.

It was a site requirement to wear hard hats, safety glasses, high-visual vests or shirts, steel-toed boots and cut-resistant gloves at all times. All employees were fit-tested, required to have OSHA 10 minimum and have passed COATS drug testing prior to starting on the site. PPE: 3M Respirators and N95 dust masks, face shields when grinding or chipping, dustless shrouds and vacuums were also used for OSHA silica compliance.

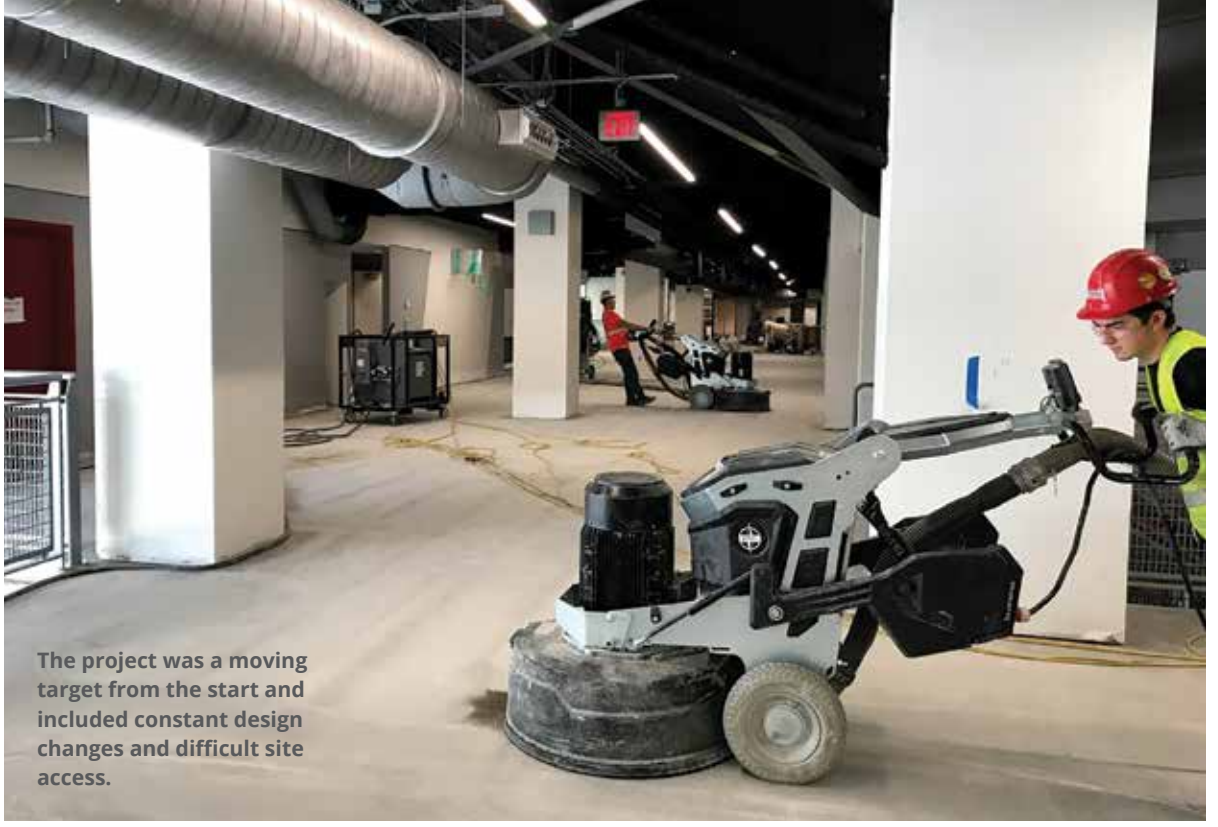
WRAP-UP

The entire project duration was two years, which included a complete gut of the interior of the facility removing all the existing interior structures and creating wraparound concourses and 360-degree seating. The project had an average of 190 contracted employees working in the building at all times.

Hardig was involved with the project from the early estimating and design stages to the execution of the project, with an average crew size of 8-10 people on site for approximately eight months.

ABOUT THE AUTHOR

Kevin Kipp is the Project Manager for Hardig Industrial Services and has been in the coatings industry since 2001. While in the industry, he's held various positions including technical sales, coatings and linings sales representative and project manager. Kipp is a NACE Level 2 Coatings Inspector.



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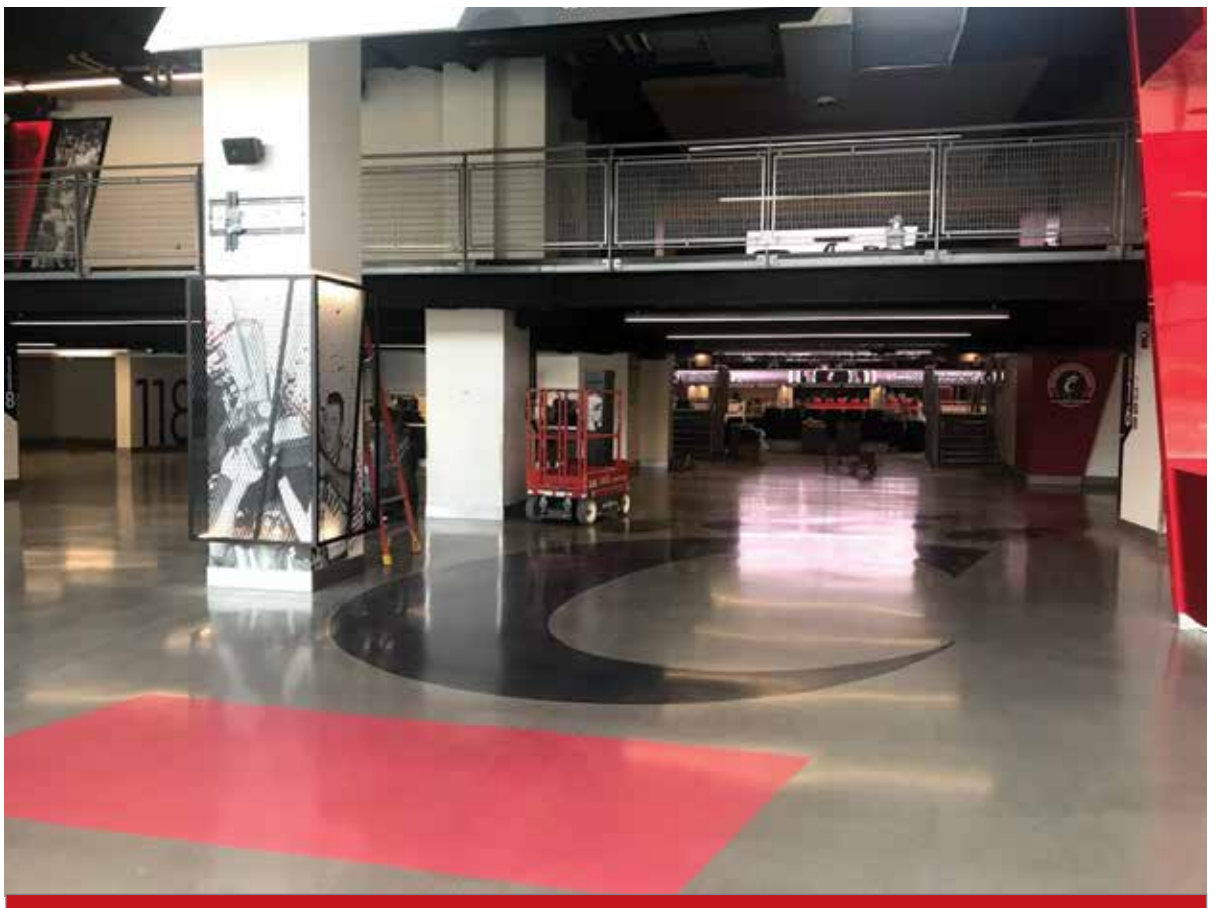

BY THE NUMBERS	
Resinous Flooring	Shotblasted existing and new concrete substrates to CSP 4-6 with a Blastrac 10 D
	Installed ¼-inch Sika PurCem 22 Urethane Cement Basecoat and broadcasted Sika 509 Aggregate
	Installed Sikafloor 264 Black 100% solids epoxy and broadcasted ¼ Custom Flake
	Installed Sikafloor 217 Clear as Grout Coat
	Installed Sikafloor 510 LPL with Barefoot 20 Aggregate
Polished Concrete	Polished new and existing concrete to a medium finish utilizing HTC Duratiq RT8 and T8 Grinders and Metabo 5- and 7-inch hand grinders
	Joints were filled with Metzgers McGuires RS 88 Polyurea installed using a US Saws Joint pump
	Diamond tooling was provided by HTC and Runyon Surface Prep
	Densifier and guard were provided by Prosoco (LS/CS and Polishguard)
Polished Overlay and Logo	All areas receiving polished overlay were prepped by a combination of shotblasting with a Blastrac 10 D and running HTC Ravenger Bush Hammers with a Duratiq RT8 Remote Controlled Grinder
	All areas were then primed with CTS TXP Epoxy Primer and broadcasted with 20/40 mesh sand
	Tru PC was then installed at ½-inch-thick gauge raked using a Midwest Cam Rake
	All TRU PC was mixed in Unitec Hippo Mixers and transported in Unitec Pelican Carts
	The TRU was then polished using HTC and Runyon Surface Prep Tooling densified with Prosoco LS/CS and Sealed with Prosoco Polish Guard

All 150,000 square feet were covered and protected throughout the construction process with a custom printed Floorshell by Triamco with our company logo printed on the product.