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COMMERCIAL APPLICATION

## Out in the Open: A New Approach in Extreme Conditions

BY JENNIFER FRAKES

PHOTOS COURTESY OF HARDIG INDUSTRIAL SERVICES

**W**hen coatings contractors arrive on the scene of a flooring job, exposure to the elements is usually the last thing on the team's mind. However, when the Hardig Industrial Services crew went to work on the floors of Element Eatery, because it was a newly constructed food hall in Cincinnati, Ohio, they were faced with a wide-open jobsite and below-freezing temperatures.

"We did the majority of [the] surface prep and polished the newly poured concrete in the winter, prior to the walls of the building going up. We'd never done anything like this before, but it actually ended up working out really well and allowed the most production possible prior to walls being built," said Kevin Kipp, co-owner and project manager of Hardig Industrial Services.

According to Kipp, this was not the only unique aspect of the 20,000-square-foot (1,858.1 m<sup>2</sup>) job, which won first place in *CoatingsPro's* 2023 Contractor Awards Program in the Commercial Concrete category. It also included two distinct flooring systems: a decorative resinous flooring system in the kitchen areas of the 14 or 15 eateries, covering about 5,000 square feet (464.5 m<sup>2</sup>), and 15,000 square feet (1,393.5 m<sup>2</sup>) of a polished floor in the dining and community areas, featuring 3,000 square feet (278.7 m<sup>2</sup>) of hand-painted designs. "Overall, this job was unique and challenging, and it allowed us to really showcase what our crew can do," stated Kipp.

### First of Its Kind

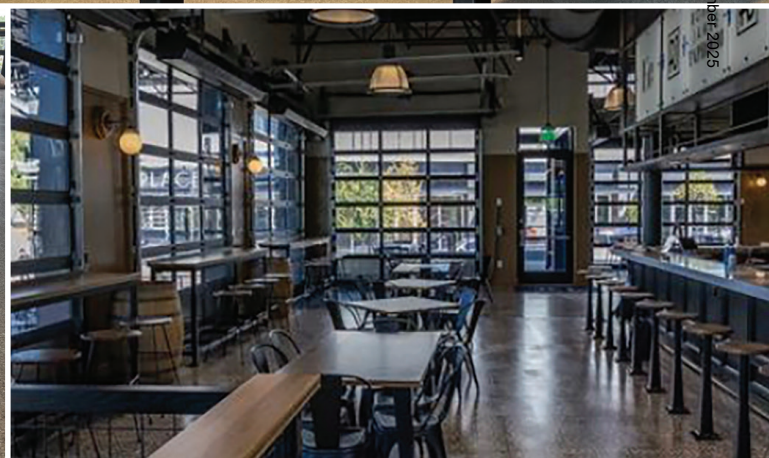
Food halls are becoming a staple in U.S. neighborhoods, giving people of all ages a place to gather and enjoy a wide variety of food and drink. According to Kipp, Element Eatery in Madison Square is the first one of its kind in Cincinnati,



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It took a 4- to 5-person crew from Hardig Industrial Services (depending on the task) to complete two different floor finishes at a new eatery in Ohio.



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## “Outdoor” Floor



The concrete was new, and it required different prep for the different systems. For the resinous areas, the floors would be shot-blasted to CSP 3–5. For the polished areas, the floors were ground.

and it's located in a new development in a vibrant area of town. “We've done several other projects in Madison Square. In fact, Element Eatery is the fourth phase of work for the client, Medpace, and Skanska, the general contractor, on this site,” revealed Kipp.

The building was ground up, new construction, with many trades onsite. It was decided that to expedite the flooring system application on the backend of the job, the Hardig crew would do the initial polish of the concrete substrate prior to the walls being built. “Prepping and polishing in the wide open was new territory for us, but now that we are comfortable with the process, we have done this on subsequent jobs,” said Kipp.

The team used a HYDRA 6 trowel from SlurryMonster and Duratiq RT8 remote grinders from HTC to prep and polish the concrete. “With the SlurryMonster [trowel], we wet polished the concrete. It is a large, comprehensive piece of equipment that allowed us to polish large areas quickly. We started with 40-grit pads, then moved to 80-grit, and finally 100-grit pads to bring the concrete to the gloss level specified for the job,” explained Kipp. The crew then sealed the polished concrete with their privately labeled product. “Our A1 Sealer was applied at a thickness of 2 mils [50.8 microns] using microfiber pads. A1 is designed to be film building; it is not a penetrating sealant,” said Kipp.

With the concrete polished and sealed, it was time to roll out the Skudo HT (Heavy Traffic) Commercial Mat System. According to Kipp, these fire-rated mats kept the newly

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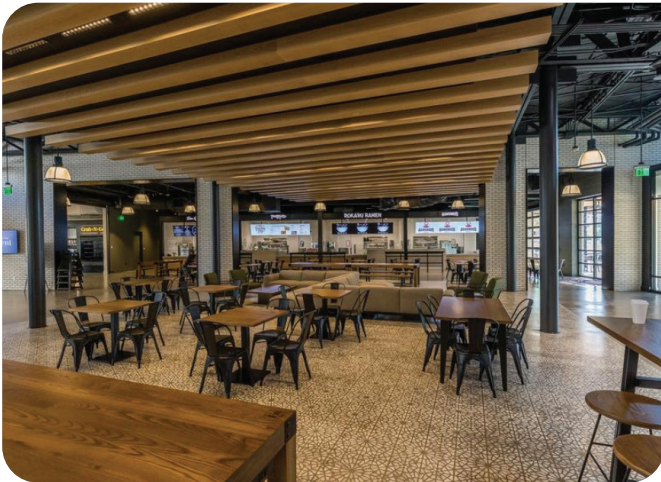
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# JOB AT A GLANCE



In total, the crew covered 20,000 square feet of flooring for Element Eatery. Getting the new-build done meant an active jobsite, so communication between trades was key.

polished concrete floor protected from any damage that may occur during the construction process as well as from the weather. “These mats were a game changer for us during this job. They allowed us to do prep work and polish the concrete during the preconstruction phase. The walls were then built around the protected floors, and when it was time for us to come back and finish the job, we were able to remove the mats and pick up where we left off. Approaching the project this way cut weeks off of the schedule,” said Kipp.

However, that does not mean that the Hardig crew did not face challenges during this phase of the project. The cold weather was an obstacle the team had to overcome, as was navigating the crowded construction site. “For us, working in the below-freezing temperatures was a big challenge. We had issues with the water needed for the SlurryMonster equipment freezing, so we worked with the general contractor to get the building tented with 6-mil [152.4 microns] plastic

The crew, which wore hard hats, gloves, boots, and hi-vis vests, used Skudo HT Commercial Mat System after polishing the concrete. The mats were removed before continuing with the surface finishes.



## PROJECT:

Install two different flooring systems for Element Eatery, a food hall

## COATINGS CONTRACTOR:

Hardig Industrial Services  
Cleves, OH  
(513) 873-3448  
LI: Hardig Industrial Services  
www.hardigindustrial.com

## SIZE OF CONTRACTOR:

30–50 people

## SIZE OF CREW:

4–5 crew members

## PRIME CLIENT:

Medpace Inc.  
Cincinnati, OH  
(800) 730-5779  
LI: Medpace  
www.medpace.com

## SUBSTRATE:

Concrete

## CONDITION OF SUBSTRATE:

New

## SIZE OF JOB:

20,000 sq. ft. total

## DURATION:

3–4 months collectively

## UNUSUAL FACTORS/CHALLENGES:

- » At times, work was done in below-freezing temps when walls weren't up.
- » The large, active construction site meant coordinating with other trades.

## MATERIALS/PROCESSES:

- » For the polished concrete:
  - » Prepped and polished using a Slurry Monster HYDRA 6 trowel and HTC Duratq RT8 remote grinders; sealed with A1
  - » Rolled out a Skudo HT Commercial Mat System over the polished concrete; removed before resuming the job
  - » Used interlocking pattern of stencils to hand paint the design using Sherwin-Williams' Multi-Surface Acrylic
  - » Sealed with another 2 mils of A1
- » For the resinous flooring:
  - » Prepped using a Blastrac shot blast machine to achieve CSP 3–5
  - » Applied Sikafloor-24 NA PurCem using Midwest gage rakes and squeegees, then broadcast sand
  - » Trowel-applied Sikafloor-293 cove material at 1/8-inch thickness
  - » Squeegeed Sikafloor-264 epoxy at 12–16 mils, then broadcast flake
  - » Scraped off excess flake and applied Sikafloor-511 using squeegees and backrollers to achieve a thickness of 12–16 mils
  - » Sanded and applied a final 6–8 mils of 511

## SAFETY CONSIDERATIONS:

- » Wore hard hats, safety goggles, gloves, boots, and high-visibility vests
- » Wore 3M half-face masks with respirators during portions of surface prep

## “Outdoor” Floor

and then brought in propane heaters. This helped the process and kept us from having to shut the job down due to the cold weather, but we still were slowed down a bit on really cold days. The productivity of the crew was definitely affected when the temperature took a dip into the teens and twenties [~9 to -4 °C],” stated Kipp.

In addition, the Hardig team worked diligently with the general contractor and other trades to ensure that the work flowed efficiently. The crew communicated regularly with the other trades and worked in phases on sections of the concrete floor to maximize productivity and keep downtime to a minimum.

### Back to Work

Once the walls were built, the Hardig crew returned to the jobsite to complete the project and install the resinous flooring system as well as finish their remaining work on



In the resinous flooring areas, the crew trowel-applied the 4-inch integral cove base, using Sikafloor-293 cove material at 1/8-inch thickness.

the polished concrete. “We came back several months later, removed the protective mats, and were ready to get back to work on the project. Although there was a big break in the work, when you look at it collectively, our portion of the job took between three and four months to complete,” said Kipp.

Throughout the duration of the job, safety was the top priority, whether the crew was working out in the open, prepping and polishing the floors, or was applying coatings to the concrete. “Working for Skanska always requires a high level of execution pertaining to safety,” said Kipp. “Our crew did very well keeping consistent and compliant with PPE [personal protective equipment], DHAs [daily hazard analyses], and Stretch and Flex [exercises]. One of our crew members was even asked to lead the daily safety meeting the week our Cincinnati Bengals were in the Super Bowl. After Stretch and Flex, he was able to teach the jobsite his favorite

The coving was completed on the perimeters before Sikafloor-264 epoxy was applied at 12–16 mils. That layer included broadcast flake.



## VENDOR TEAM

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www.htc-floorsystems.com

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LI: SlurryMonster  
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touchdown celebration — ‘the Griddy,’” said Kipp.

As far as PPE was concerned, as it was a large, active construction site, the crew wore hard hats, safety goggles, gloves, boots, and high-visibility vests. “We also wore 3M half-face masks with respirators during portions of surface prep, especially any areas that needed hand grinding,” said Kipp.

### Multi-Layer Coating System

For the resinous flooring portion of the job, which included 5,000 square feet of concrete floor and 1,200 linear feet (365.8 m) of integral cove base, the team first prepared the substrate by using a Blastrac shot blast machine to achieve a concrete surface profile (CSP) 3–5. At that point, the substrate was ready to receive Sikafloor DecoDur Flake UEF, a multi-layer moisture control and decorative flake floor system.

The first layer of the system creates a moisture/vapor-tolerant barrier between the concrete and finished coating system that consists of a self-leveling, three-component, cementitious urethane slurry. The second layer is an aesthetic, easy-to-clean, seamless floor using epoxy binder that is broadcast with a colored vinyl flake blend and sealed with a clear, ultraviolet (UV)-stable topcoat. “We’d installed this same flooring system for Skanska at 5/3 Arena for the University of Cincinnati. The floor system had years of use in a large, high-traffic food service area and was performing very well. Given our history with the general contractor and the client, it was easy to convince the client to upgrade their specified flooring to the Sika system,” explained Kipp.

That first step in the coating process was to apply Sikafloor-24 NA PurCem using Midwest gage rakes and squeegees. This coating is self-leveling, easy to apply, is blister resistant, and combines superior polyurethane/

Squeegees and backrollers were used for the resinous flooring system, which also included Sikafloor-511 applied in two layers at 12–16 and 6–8 mils, respectively.



According to Hardig’s Kevin Kipp, the polished part of the job “was really creative.” The resinous flooring went in the kitchens of the 14 or 15 eateries and the polished went in the community areas.

cement technology. “It is great for new concrete and self-levels to 160–180 mils [4,064.0–4,572.0 microns]. Once we laid down the PurCem 24 NA, we then broadcast silica sand for texture and to allow for recoating outside of the recoat window,” said Kipp.

The crew then trowel applied Sikafloor-293 cove material at 1/8-inch (0.3 cm) thickness to create a 4-inch (10.2 cm) integral cove base. Sikafloor-293 is a thixotropic binder resin specifically designed for cove and vertical applications.

The next step for the Hardig team was to apply Sikafloor-264, an epoxy coating used for broadcast overlayments. The crew used squeegees to apply the epoxy at a thickness of 12–16 mils (304.8–406.4 microns) and then broadcast the flake. “After broadcasting, we scraped the excess flake and applied Sikafloor-511 as a grout coat. We squeegeed and backrolled to achieve a thickness of 12–16 mils. Then, we sanded the floor prior to applying the final seal coat of 511 at a thickness of 6–8 mils [152.4–203.2 microns],” said Kipp.

Sikafloor-511 is a two-component, solvent-free, high solids, low-viscosity, high strength, polyaspartic resin system designed to be used as a finish coat over a flake broadcast system. It is a quick cure, flexible, and UV-resistant coating.

### The Creative Side

For the polished concrete portion of the Element Eatery job, the four- to five-member Hardig crew was able to demonstrate their individual talents and abilities. “This part of the project was really creative,” Kipp said. “There was 3,000 square feet of integrated hand-painted stencil design that was meticulously thought out and executed. We were able to marry the guys’ skills to the part of the process that best suited them. For example, the crew members with the

## “Outdoor” Floor



Hardig completed mockups of the stenciling to look at opacity and tone. They decided on an antiqued look with reusable stencils and an interlocking pattern.

most artistic strengths hand-painted the design, and the guys with excellent analytical and organizational skills laid out the stencils and figured out the geometrical/mathematical side of the process. It was really cool to be able to do that and use the guys’ strengths to create something so intricate and beautiful on such a large scale.” Kipp also revealed that when he first started college, he aspired to be an art teacher. This was a match made in heaven!

Prior to laying down the stencils and painting the design, Hardig was asked to develop the scope of the interior floor finishes, including mock-ups of the stencil and the opacity and tone of the paint. “We settled on an antiqued, vintage look for the design on the polished floors, and then bought reusable stencils that were 6–8 feet [1.8–2.4 m] in size,” said Kipp. To create the intricate design, the crew would set up the stencils, interlocking the pattern, tape down

The crew members with the most analytical skills figured out the math side of the process. The stenciled floor was completed using Sherwin-Williams’ Multi-Surface Acrylic and A1 sealant.



the stencils, hand-paint the design, layout the next stencil, tie it into the previous stencil, pull the stencils, and repeat the process all over again.

The crew used Sherwin-Williams’ Multi-Surface Acrylic to paint the intricate design. This coating is self-priming, has excellent adhesion to slick and glossy surfaces, and is abrasion resistant. Once the crew had completed the design on the polished concrete, the substrate was sealed with another 2 mils of A1 sealant.

### A Project to Showcase

According to Kipp, this commercial concrete project stands out for Hardig Industrial Services. “The job was design-build, so we were able to help the client choose flooring systems that met their expectations and allowed our team to share its talents. The systems selected were highly functional, aesthetically pleasing, and — with the intricate stenciling — very custom and one of a kind,” said Kipp.

And while the crew was definitely out of their comfort zone during the initial wide-open prep and polish, it ended up being a real game changer. “Utilizing the SlurryMonster system and Skudo mats prior to the walls being installed was a really innovative process that saved the project both time and money. Overall, this approach created some additional time in the schedule later on for us to really pay attention to details during the long, arduous stenciling process,” said Kipp, who credits Johnny Lacker, the project foreman, with keeping the project going even through all of the challenges.

Kipp is also proud to be able to share Hardig’s work on this project with friends and family. “We don’t often get to showcase our work when it’s in food plants or other industrial spaces. Jobs like the Element Eatery allow us to share our work with friends, family, and the public, which is really cool,” said Kipp. **CP**

Now that the walls are up — much of the prep and polish work was done in sub-zero temperatures without walls — the Hardig crew can share their success on this project with friends and family.

