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Cradle to Grave: Flooring Contractor Restores Historic Cincinnati Gym

BY **BEN DUBOSE**

PHOTOS COURTESY OF **HARDIG INDUSTRIAL SERVICES**

Elder High School is best known as a college-preparatory high school in the Price Hill neighborhood of Cincinnati, Ohio. The school has been in existence for nearly 100 years, and it is a diocesan school operating within the Archdiocese of Cincinnati.

Kevin Kipp, co-owner of Hardig Industrial Services, has a long history with the school and its athletic programs. So when he heard about a restoration project involving Elder's gym, he knew he wanted to be involved and help out — based largely on its personal significance. "I've got family that teaches at the school and coaches at the school," Kipp said. "I've got family that has gone to school there and kids that will be there. The story behind it is great."

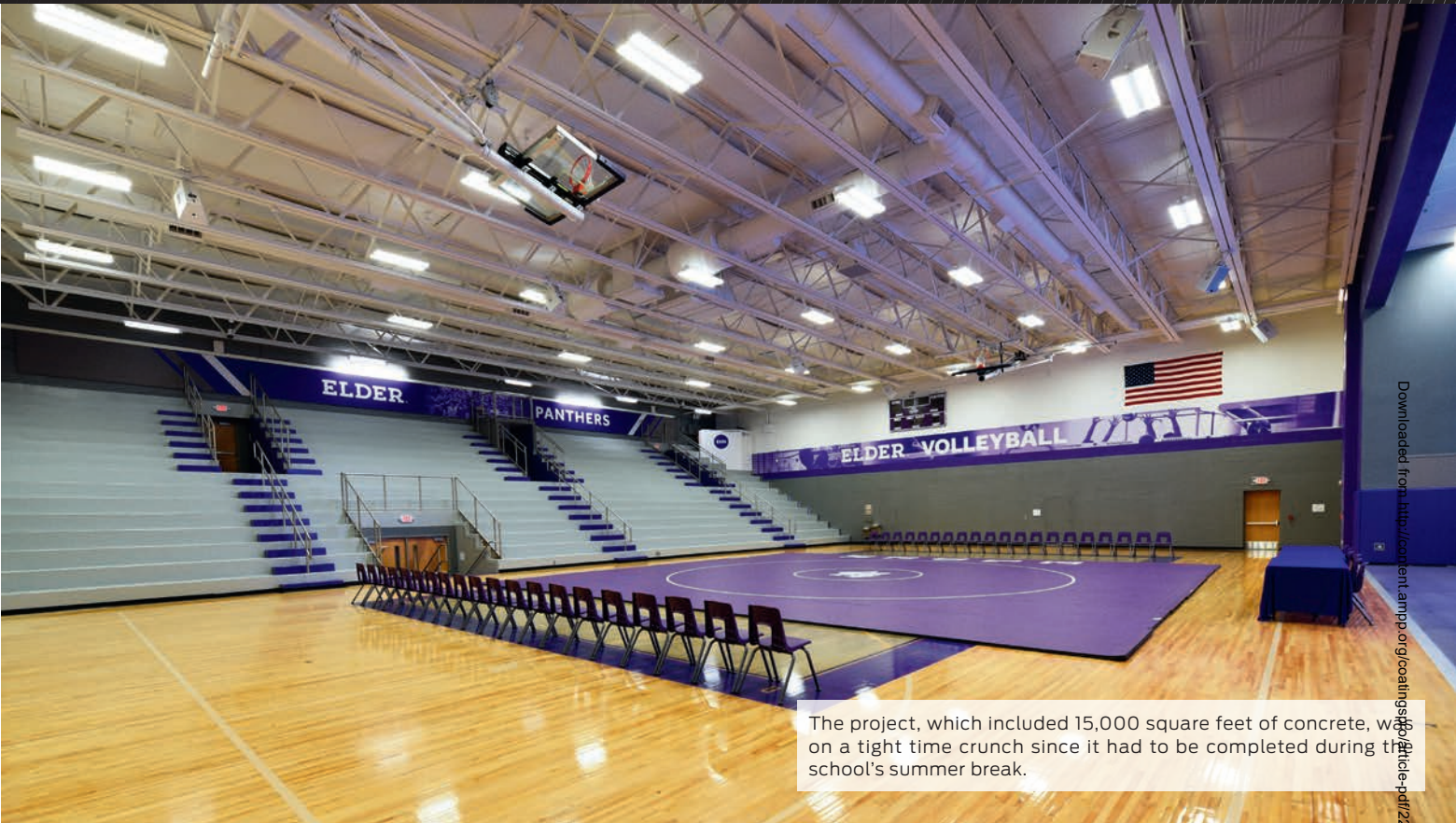
In early 2021, Kipp began working with the owner's representative, architect, and general contractor (GC) on the design and deployment of an appropriate system to restore the concrete bleachers, which were approximately 75 years old, and limited portions of terrazzo patching and refinishing an epoxy quartz flooring. He also selected the necessary gray and purple colors to match the school's color scheme.

"I worked a lot up front to help come up with what the scope of work was actually going to be," Kipp recalled. "One of the reasons to be proud of this project was the cradle-to-grave aspect. I was involved with the design element and was able to work through finding materials and a look they would like and one that would work well with a school. Then, I was involved with managing it — color selection, installation, and the technical side."

It also helped that Hardig had previously worked with the architect and GC, Monarch Construction, on other school projects in the Cincinnati area, including one that won second place in the Commercial Concrete category of *CoatingsPro Magazine's* 2020 Contractor Awards ("Seton High School Cafeteria"). According to Kipp, that history helped the



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The project, which included 15,000 square feet of concrete, was on a tight time crunch since it had to be completed during the school's summer break.



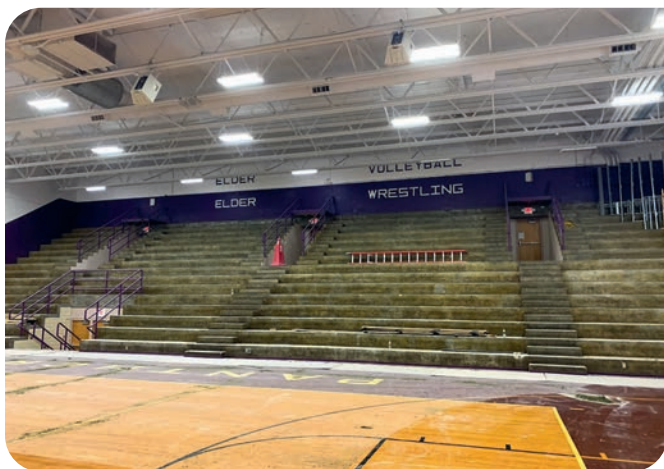
Hardig won 1st place in *CoatingsPro's* 2022 Contractor Awards Program in the Commercial Concrete category. Two years earlier, they won 2nd place for another school, and that history helped.



The project was divided up into three sections. The system, from Sherwin-Williams, was finished with a topcoat in gray and purple to match the school's colors.

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First-Rate Entertainment Facility



Surface prep started with diamond grinding to achieve CSP 2-3. The crew then used putty knives to epoxy patch, followed by a regrinding.

stakeholders trust the Hardig team with such a comprehensive job.

Summer Break, or Lack Thereof

One of the first challenges at the Elder gym project was timing. Hardig's four-person crew had to contend with the tight time crunch of summer break, meaning the job needed to be completed prior to the return of students for the fall semester. They also had to coordinate with other trades and adapt to a coating material shortage, which they sorted out with the manufacturer.

"A lot of the other trades that we were really juggling with were the painting contractor, the hardwood floor contractor, and some of the drywall and finishing trades," Kipp said. The painting contractor was tasked with recovering the walls, door frames, and ceilings, while Hardig's crew handled the flooring-based portions. "Ours were more industrial coatings, whereas theirs were basic commercial coatings," Kipp said of the distinction between contractors. "They were using single-component wall products."

Kipp credits good communication between the GC, client, and various subcontractors for the project's eventual success. "My foreman, Nick, worked really well with the [painting contractor's] foreman, Bruce. They just kind of collaborated every morning and said, 'Hey, this is what we're going to be doing up until this point,' and they did a very good job of balancing and working around each other. If other trades had to get something done over the top of our work, there was a bucket lift on site. So if they needed to get up and above us, they could do that."

The Hardig crew knew they were being watched closely since the primary driver for the indoor project was aesthetics. "It was mostly cosmetic with some essential upgrades for acoustics," Kipp said of the 15,000-square-foot (1,393.5 m²) job. "There was some asbestos abatement as well as tearing down some walls and opening things up. They needed

the expansion."

"As far as opening things up... my guess, in the city of Cincinnati, there's a lot of decent Catholic schools," Kipp explained. "This school has to stand out. They want to bring in talented volleyball and wrestling players and students, so they wanted to upgrade their facilities. A lot of it was just about aging facilities. It was kind of dingy, and they had just upgraded their workout gym and athletic center next to it. So, it was definitely time."

Staying Cool

For both the crew and client, one benefit of Elder's indoor gym project was that the system did not have to be as thick as it would have needed to be if it were exposed to the outdoor elements.

"We had talked about a few different options," Kipp said. "A lot of their options, other than coatings, were much more costly. They were looking at wrapping the concrete with a different substrate or going back with wood or bench-style seating or metal seating. The money came from fundraising and endowments and things like that, so they had to be prudent with their resources and make sure they could get everything done. Coatings became a pretty good option."

"They have coatings in their football stadium," Kipp added. "I think it was actually rated as one of the top-10 high school stadiums to see a football game at, and it's all coated using a pedestrian traffic-type system. It sees more exterior use. They wanted a similar look [for the gym], but they didn't need that thick, heavy-body urethane system that you would put out for an exterior waterproofing project."

With those considerations in mind, the Elder gym stakeholders agreed to use a three-coat system from Sherwin-Williams — two layers of a polyamide epoxy mastic followed by a high-solids polyurethane topcoat. "It really fit their needs for brightening up the space and giving them a nice

PPE included Tyvek suits, spray socks, and 3M respirators. Grinding was completed using equipment with HEPA vacuums.



JOB AT A GLANCE

PROJECT:

Upgrade facilities by restoring 75+ year old concrete bleachers at a historic high school sports gymnasium

COATINGS CONTRACTOR:

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

SIZE OF CONTRACTOR:

25 employees

PRIME CLIENT:

Elder High School
Cincinnati, OH
(513) 921-3744
@ElderHighSchool
www.elderhs.com

SUBSTRATE:

Concrete

SUBSTRATE CONDITION:

Aged

SIZE:

15,000 sq. ft.

DURATION:

6 weeks

UNUSUAL FACTORS:

- » This project was on a tight time crunch since the entire project had to be completed during the school's summer break.
- » The coatings contractor had to coordinate regularly with other trades, manufacturer, and architect to ensure proper access, to ensure continual supplies, and to develop the project's scope and budgeting, respectively.
- » The crew sped up the prep process by using small platform grinders.

MATERIALS/PROCESS:

- » Divided the jobsite into three sections and diamond ground each area using HTC grinders to achieve CSP 2-3
- » Used putty knives to apply Florock's FloroGel epoxy patching system to entire substrate; reground with a lighter-grit diamond
- » Used Titan Tool's Impact 1040 electric airless paint sprayer to apply two coats of Sherwin-Williams Macropoxy 646 polyamide epoxy mastic at an average of 8 mils DFT per coat
- » Backrolled with 9-inch or 18-inch rollers to ensure proper DFT
- » Applied coatings by squeegee and backroll for flat areas close to court
- » Sanded using 120-grit sandpaper after each coating layer
- » Applied 3-5 mils of Sherwin-Williams Hi-Solids Polyurethane as finish coat in gray and purple to match the school's colors
- » Installed Sherwin-Williams ceramic carpet system at 1/8-inch thickness with a double broadcast in a custom purple blend of epoxy quartz flooring using Midwest Rake Easy Squeegees and backrolling each coat

SAFETY CONSIDERATIONS:

- » Wore Tyvek suits, spray socks, and 3M respirators to spray indoors
- » Completed grinding operations using 3M equipment with HEPA vacuums

abrasion-resistant, good-wearing system," Kipp said.

The good news about working indoors during the summer is that crew members didn't need to be overly concerned about the effects from hot temperatures. But since the job involved spraying coatings in a confined space, Hardig's crew members wore Tyvek suits, spray socks, and 3M respirators as personal protective equipment (PPE). And surface preparation operations were completed using equipment with attached high-efficiency particulate air (HEPA) vacuums.

"Everybody had to wear respirators, and they had ventilation," Kipp said of PPE requirements. "We were pulling clean air in the room and/or in the space and blowing air out... just to keep air circulating since we were using high-solvent epoxies."

Game Prep

To maximize efficiency and work around other trades, the Hardig crew effectively divided the Elder gym project. "We kind of split the stands into three sections," Kipp said. "Once we had prepped the first section of the three, we had a couple guys fall back. They patched that section while the crew went to the furthest section away and started grinding that section. They then brought it all together in the middle. That way, everything was kind of falling in sequence, and we weren't on top of each other."

The existing concrete had anchored wood bleachers attached, so the substrate needed to be diamond ground and patched. Since time was of the essence, the crew sped up the surface prep process by using small platform grinders that could be lifted to various levels on the bleachers. This allowed them to grind the width of the seating, which Hardig's co-owner said could not have been done if they were using their normal hand grinders.

"Typically, we're used to larger areas for prep," Kipp said. "We're usually running 30-inch [76.2 cm] machines with shot-blasters or large equipment. In order for us to

An airless sprayer was used to apply two coats of Macropoxy 646, which was then backrolled.



First-Rate Entertainment Facility



Areas adjacent to the court were coated using a squeegee-and-backroll method instead of spraying. Other trades were onsite, too.

execute this project, we ended up using a 20-inch [50.8 cm] HTC grinder that could be broken down into multiple pieces and lifted safely from level to level — without having to be concerned about an injury, or the grinder not fitting, or falling or pulling off. It was a logistical challenge.”

VENDOR TEAM

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www.sherwin-williams.com

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Equipment manufacturer
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Safety equipment manufacturer
Richmond, VA
(800) 441-7515
@DuPont_News
www.dupont.com

Each area was methodically prepped to achieve International Concrete Repair Institute’s (ICRI’s) Concrete Surface Profile (CSP) 2–3, though the geometry certainly complicated things. “Half of the area was vertical,” Kipp said. “It’s not like we were just going in and grinding a large, flat area. We were grinding a flat area [and then] up 2 feet [61.0 cm], then [another] flat area and up 2 feet.”

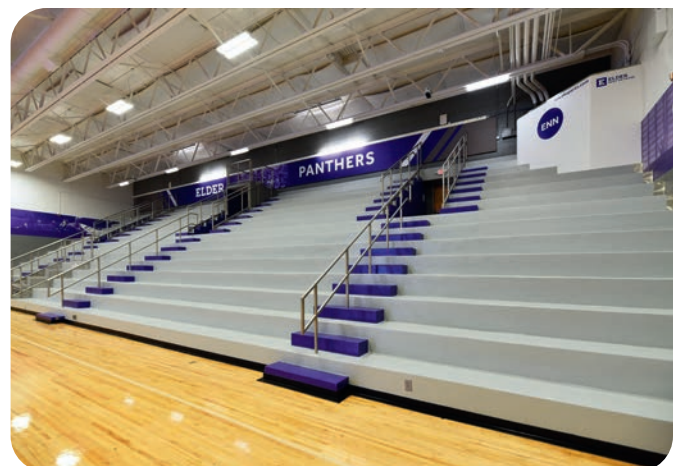
After an initial round of grinding, crew members used putty knives to apply Florock’s FloroGel epoxy patching system to the entire substrate. The thickness of the patching system varied, depending on whether it was specifically over a bolt hole. From there, they reground all areas using a lighter-grit diamond to ensure that the patching was smooth and level.

“The way these were designed, there were bolts fastening old-wood bleachers on the entire substrate,” Kipp explained. “So as the bleachers were pulled out, the bolts were cut down as close to flush as possible. We then beat them down into the concrete below the surface and patched every hole. Instead of patching 5,000 holes, we patched the entire square footage. That’s why we were using epoxy with a CAB-O-SIL mix. Because we were able to thicken it up and get that peanut butter or creamy consistency... to use it like a spackle.”

Three-Point Play

When it came to the three coating layers, the project’s vertical components often forced Hardig’s crew to step out of its comfort zone. “We went a little bit out of our wheelhouse as flooring contractors,” Kipp said. “We typically put everything down with squeegees, and then we backroll. We actually sprayed the majority of this project.” The only exceptions were flat flooring spots at the base of the bleachers and adjacent to the main gym floor, which were squeegeed, and areas of epoxy quartz flooring. Using Midwest Rake’s Easy Squeegee and backrolling each coat, those areas received a Sherwin-Williams

The crew experienced a material shortage during the project, which was overcome by working with Sherwin-Williams.



ceramic carpet system at 3/8-inch (0.3 cm) thickness, complete with a double broadcast in a custom purple blend.

For most of the job, the crew used Titan Tool's Impact 1040 electric airless paint sprayer to apply two coats of the Sherwin-Williams Macropoxy 646 at an average 8 mils (203.2 microns) dry film thickness (DFT) per coat. To ensure proper DFT, crew members backrolled with 9-inch (22.9 cm) or 18-inch (45.7 cm) rollers. After each initial coating layer, which was generally left to cure overnight, they sanded using 120-grit sandpaper before applying the subsequent coat.

"We typically had about two guys per area while they were prepping and patching and doing different phasing," Kipp recalled. "When we got to coating, we kept three guys on the application part, with one guy doing ancillary stuff and monitoring equipment. Really, you needed one guy spraying and two guys backrolling and brushing."

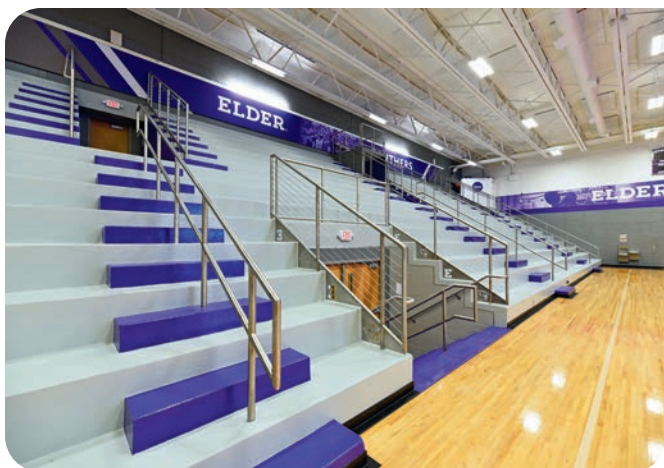
Finally, the topcoat consisted of 3–5 mils (76.2–127.0 microns) of the Sherwin-Williams Hi-Solids Polyurethane applied in gray and purple to mesh with the school's color scheme. "The purple colors were all custom colored and selected specifically for this project," said Kipp, who managed to blend the color scheme successfully with adjacent areas.

Ultimately, Hardig's ability to pick out the specific Sherwin-Williams materials as part of the cradle-to-grave process helped make the crew more efficient. "When I can choose products that I'm comfortable working with or that my guys are comfortable working with, it gives us more assurances that the project is going to go right," Kipp explained.

Rave Reviews

In the end, the Hardig crew completed its portion of the Elder high school gym project in approximately six weeks during the 2021 summer months. That allowed the larger project to stay on schedule and for the gym to open up for student use in the

"Our part of the project was probably the biggest visual transformation," Kipp said. "When it was all tied together with the new floor, and all the new lighting and a brighter ceiling, it just made the space look fantastic."



"It's kind of cool to have schools right next to each other that have both been award-winning projects," concluded Kipp.

'21–22 academic year.

"It's been holding up great," Kipp said. "Everybody was really astounded after we finished. Our part of the project was probably the biggest visual transformation. When it was all tied together with the new floor, and all the new lighting and a brighter ceiling, it just made this space look fantastic."

"I think the turning point was the stands," Kipp recalled. "That set the ball in motion for folks to say, 'Oh, wow, this is really going to be a big, drastic change.' Now it is, and spectators have been really happy with the space."

For Kipp, the best part of the Elder job is that he will personally get to reflect on and enjoy its success over the coming years. "Both of my sons play volleyball, and they have played in this gym since," he explained. "So I actually get to go watch my boys, along with my nephew and friends of the family. I get to watch them play, and it's really special. Because you're sitting there and you know that your team did the work. You were involved in the project, and you can be proud of it. It's also cool that so many of my friends and family know that we were involved, and we did a big part of it."

The Hardig crew went on to win first place for this project in the Commercial Concrete category, sponsored by Tnemec, at *CoatingsPro's* 2022 Contractor Awards. Coincidentally, this job is right across the street from where they won second place two years earlier.

"It's kind of cool to have schools right next to each other that have both been award-winning projects," concluded Kipp, who now gets to enjoy the fruits of his labor by watching his family and friends use many of those revamped facilities themselves. **CP**

