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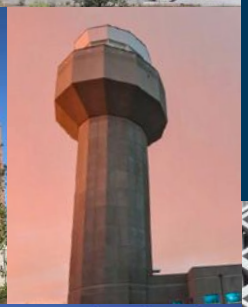
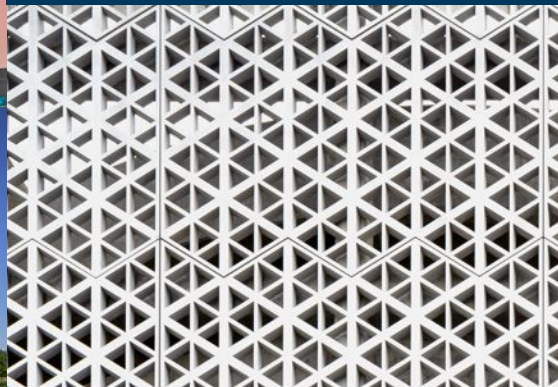
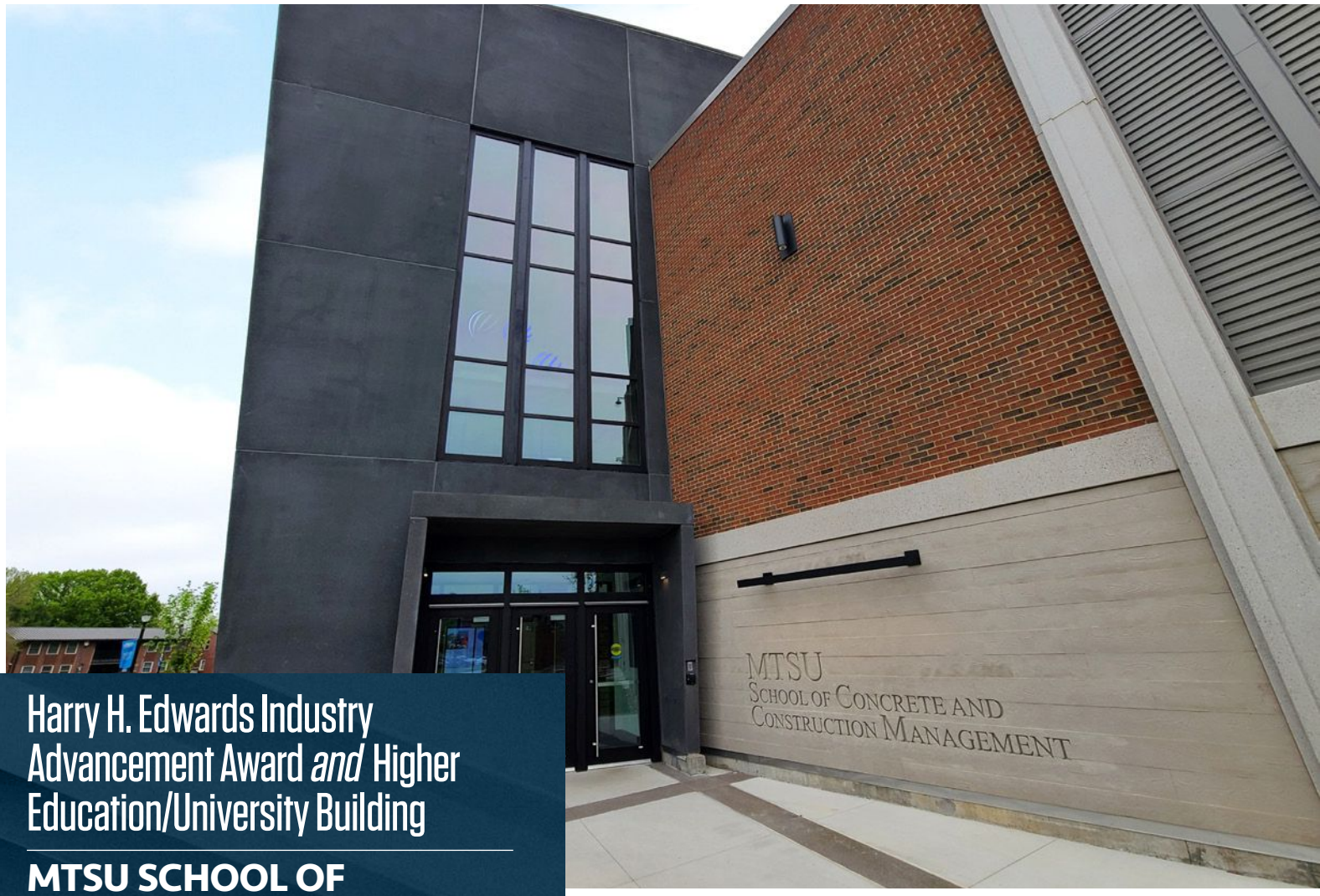
SPRING 2025

2025 PCI DESIGN AWARDS







Harry H. Edwards Industry Advancement Award *and* Higher Education/University Building

MTSU SCHOOL OF CONCRETE AND CONSTRUCTION MANAGEMENT

MURFREESBORO, TENNESSEE

PROJECT TEAM

Owner: Middle Tennessee State University, Murfreesboro, Tenn.

PCI-Certified Precast Concrete Producer:
GATE Precast, Ashland City, Tenn.

Precast Concrete Specialty Engineer:
GATE Precast, Springboro, Ohio

Architect: Orcutt & Winslow Architects, Nashville, Tenn.

Engineer of Record: ARUP, Houston, Tex.

General Contractor: Hoar Construction, Brentwood, Tenn.

PCI-Certified Erector: Precision Stone Setting Company, Hiram, Ga.

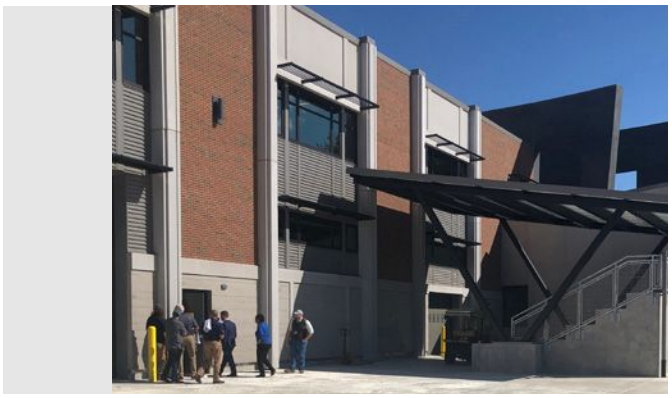
PCI Associate Suppliers: US Formliner, Athens, Ga.; Architectural Polymers Inc., Palmerton, Pa.; Dynamic Color Solutions Inc., Milwaukee, Wis.; JVI Inc., Lincolnwood, Ill.; CONAC, Duluth, Ga.; Master Builders, Beachwood, Ohio

Project Size: 54,000 ft^2

Described as a "true living laboratory" by officials at Middle Tennessee State University (MTSU), the MTSU School of Concrete and Construction Management is an ode to concrete as a building material. The 54,000 ft^2 building, which was designed by Orcutt & Winslow Architects, is a functional, modern facility that showcases the tremendous value of precast concrete in construction. Incorporating a mixture of cast-in-place concrete, hollow-core, and precast concrete elements, the new building will provide benefits for students, faculty, and MTSU for generations to come.

A PURPOSE-BUILT SCHOOL

Prior to the construction of the new facility, MTSU's School of Concrete and Construction Management was confined to about 9,000 ft^2 inside the university's Engineering Technology building. This setup was insufficient for the concrete industry management and commercial construction management students hoping to make their mark on the construction industry. GATE Precast, Orcutt & Winslow, and university officials came up with a design for a facility that not only would incorporate various forms of concrete to showcase the material's innovation and flexibility, but also would encompass roughly six times the square footage previously dedicated to the school.



Photos: *GATE Precast and orcutt/winslow*

The new facility includes classrooms, labs, and offices, and the exterior is designed to complement the surrounding architecture on campus. More than 340 precast concrete panels were installed on the project, including six 60-ft-wide, 10-ft-tall panels on the building's exterior that depict a construction jobsite. This striking scene was made possible using a state-of-the-art formliner consisting of an ultra-thin plastic sheet with varying levels of surface retarder on the areas where the image is displayed. The specialized plastic sheet was affixed directly to the formwork with a double-sided tape adhesive. Then, the concrete was poured directly on the image, and after a 24-hour cure period, the concrete was removed from the mold with no additional release. The result is an image that is aesthetically pleasing, durable, and resilient.

Walter Smith, education studio leader at Orcutt & Winslow, explained why precast concrete was given a critical role in the building's design. "Precast concrete was chosen for this project to showcase innovative uses of the material; to demonstrate its versatility in terms of color, texture, and shape; and to illustrate that precast concrete is a suitable envelope material for higher education projects," he said. "As this building serves an academic purpose related to concrete and construction management, it was important to feature precast concrete as a prominent element, embodying the material the students will work with and study."

Sargal Ghazi, project manager for GATE Precast, emphasized the constructability and aesthetic advantages of precast concrete. "Precast concrete is a product that can save time in construction while providing a multitude of finishes and colors that mimic masonry, wood grain, and other textures," he said.

Smith agreed, noting that "the quality control achieved through factory production resulted in a highly consistent finish and a high level of detail and precision. Precast concrete provided greater flexibility in terms of available finish options, allowing us to incorporate a variety of textures and visual effects."

The new building now serves as an inspirational facility for concrete and construction management students at MTSU eager to learn about the industry. For decades to come, the building will support both the university's commitment to excellence in education and the career goals of aspiring students.

KEY PROJECT ATTRIBUTES

- The new School of Concrete and Construction Management building at Middle Tennessee State University encompasses 54,000 ft^2—six times the space previously designated for students at the school.
- The wide variety of concrete components featured in the building's design will help students understand the versatility and durability of the building materials that will be important in their future careers.
- The facility features a 200-seat lecture hall, basic materials and building labs, a dedicated mechanical electrical plumbing classroom, a covered amphitheater, and more.

PROJECT AND PRECAST CONCRETE SCOPE

- More than 340 precast concrete panels of various sizes were installed on the project.
- Six 60-ft-wide, 10-ft-tall precast concrete panels were used to create an mural depicting a construction jobsite on the side of the building.
- Precast concrete erection spanned the course of just four months, from October 2021 to January 2022.

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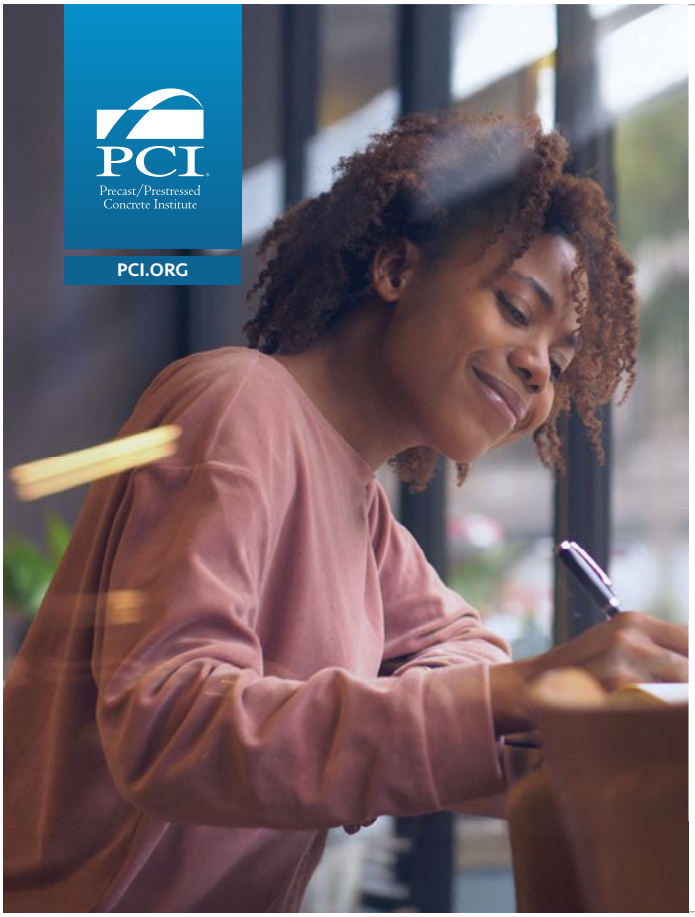

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