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Issue 20

## University of Michigan Goes Precast

*Dearborn, Michigan*

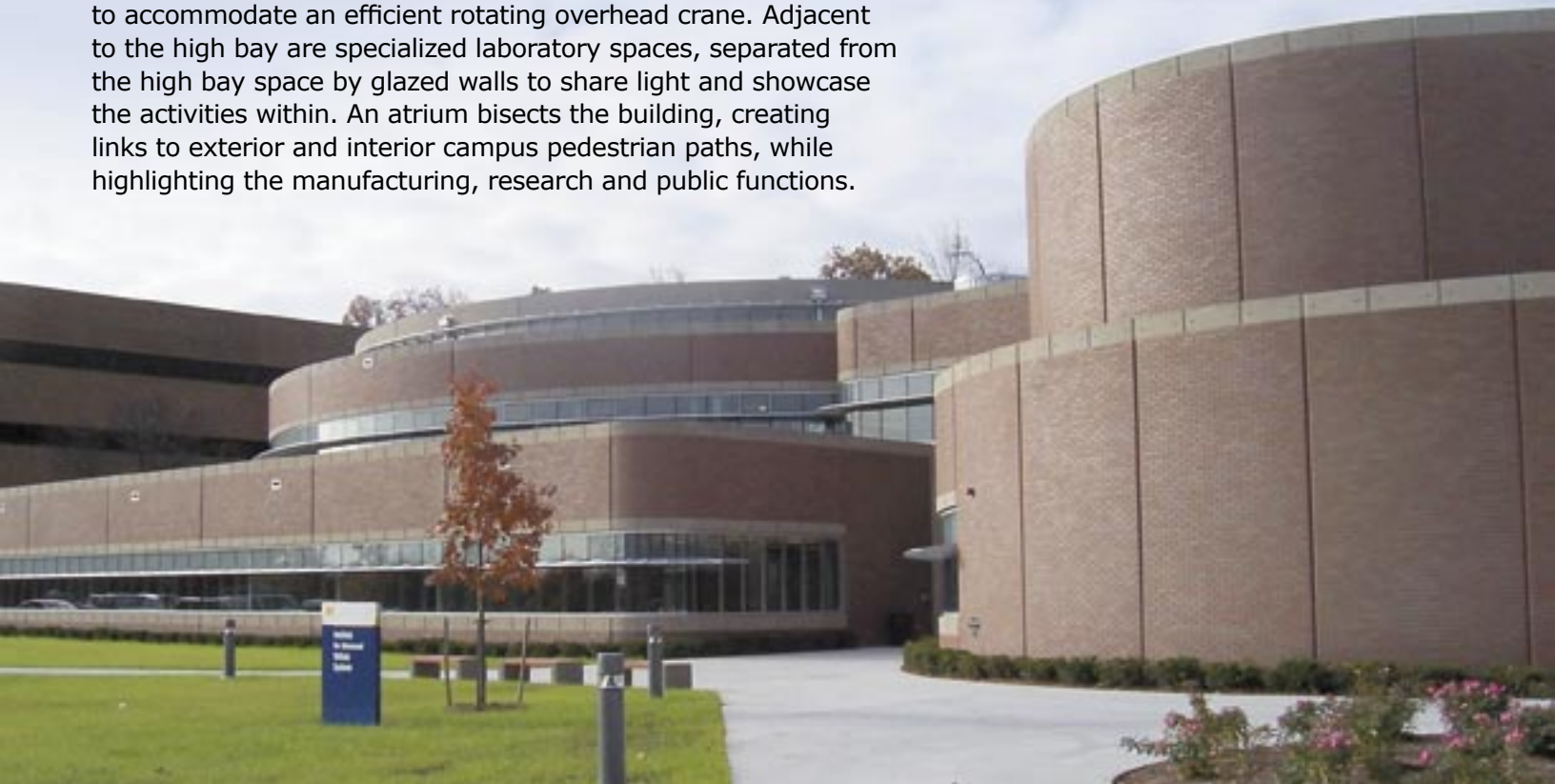
The University of Michigan – Dearborn College of Engineering and Computer Science (CECS)'s 46,000 sf building will house the Institute for Advanced Vehicle Systems (IAVS) dedicated laboratories for vehicle electronics, auto safety, ergonomics, electronic sensors, computer science and powertrains.

This precast structure includes a flexible open high bay to accommodate equipment used for teaching and research on manufacturing issues. These spaces will allow undergraduate students to design and assemble projects for national competitions and provide electronically mediated instruction.

The 30-foot-tall high bay space for the IAVS has a circular form to accommodate an efficient rotating overhead crane. Adjacent to the high bay are specialized laboratory spaces, separated from the high bay space by glazed walls to share light and showcase the activities within. An atrium bisects the building, creating links to exterior and interior campus pedestrian paths, while highlighting the manufacturing, research and public functions.

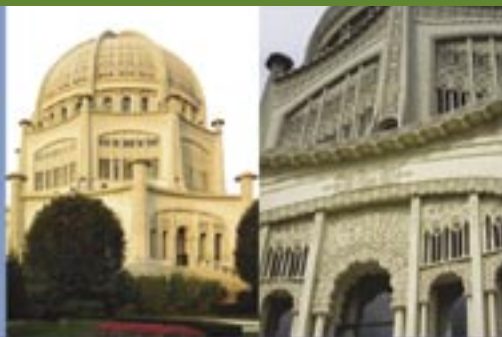


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Aesthetic  
Possibilities  
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- Oct. 11 .....Cincinnati, OH
- Oct. 17 .....Grand Rapids, MI
- Oct. 18 .....Detroit, MI
- Dec. 5 .....Nashville, TN
- Dec. 6 .....Louisville, KY
- Dec. 12..... St. Louis, MO



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Registration is free. However, seating is limited.

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REGISTRATION 8:30-9 a.m.  
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## Walgreens

*Holland, Michigan*

This small retail facility proves that precast wall panels aren't only for large buildings, but make sense for small boxes too! This Walgreens features 11,124 square feet of precast insulated backer panels with dovetail slots. The precast panels were erected in 4 days allowing other trades to begin construction on the interior much quicker than a traditionally built building. The steel roof was erected by the precaster/erector to improve coordination and speed. The outside of the building was later bricked.

"Precast concrete was chosen for our Walgreens project because of the speed of installation and ease of construction. Many retail projects like Walgreens have short construction schedules and the 2 to 3 weeks we can gain by using precast makes a huge difference in our turnover dates. The precast panels also help us avoid many of the steel connection and bearing issues we encounter with masonry block walls. We'll definitely keep using precast panels for these projects!"

*Kara Slater, Project Manager, GDK Construction.*

Precaster: Kerkstra Precast    General Contactor: GDK Construction    Certified Erector: Kerkstra Precast    Architect: Rogvoy Architects

## St. Rt. 664 Bridge over the Hocking River

*Logan, Ohio*

ODOT replaced a steel truss bridge with a three span, 276' long prestressed, precast concrete composite box beam design for the bridge superstructure. This bridge is heavily traveled on a daily basis and it was very beneficial to keep any traffic interruptions to a minimum and get the project finished as soon as possible.



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"The selection of precast concrete allowed for quality bridge beams and the quick turnaround kept the project moving."

*John Coen, ODOT District 10 Bridge Engineer*

Precaster: Sidley Precast Group/Carr Concrete Corp.    Designer: ODOT - District 10



# MJR Theater

*Sterling Heights, Michigan*

The Prestressed Group supplied 28,460 sf. precast bleachers, 11,000 sf. of 8" hollowcore slabs, 4,000 sf. of solid planks, and 1,500 sf. of precast wall panels for the new MJR Theater in Sterling Heights, Michigan. Prestressed precast concrete was chosen because of its superior on-site speed of construction, as well as the ability for site work to be undertaken while the design and manufacturing process associated with precast components were completed off site. The site and the precast products were ready simultaneously, resulting in little or no down time at the job site.

Prestressed precast products were completely designed, manufactured, and delivered to the job site within eight weeks of the order being placed.

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“The precast stadium (seating) platform construction allowed for the early and complete installation of the stadium seating construction platforms during the structural steel erection, saving valuable time on the interior finish portion of the construction schedule.”

*Dennis Bishop, P.E., Sr. Project Manager,  
Roncelli Construction*



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# Centralia High School

*Centralia, Illinois*

Centralia High School's decision to utilize Gate Precast's Architectural Precast High Performance Wall System to achieve a distinctive look allowed them to not only meet the design goals but to maintain the budget and accelerate occupancy.

The superior thermal qualities of the sandwich panel system offer an unbroken thermal insulation envelope. Incorporating thin brick into the face of the precast offers speed of construction and drastically reduces the amount of brick required. Durable precast wall panels offer interior finish options eliminating studs and sheetrock. Integration of electrical systems into the panels during fabrication eliminated the need for unsightly surface mounted materials.



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“When you think of concrete, the last thing you think of is flexibility yet this system is extremely flexible. We found this product to give the most freedom to design a building that would truly reflect the community it was surrounded by.”

*Steven Scoville, Centralia Designer  
VP currently with Odle McGuire & Shook*



# HFL Apartments Building "A" and "B"

State College, PA



The HFL Apartment Buildings have a mix of structural precast columns and beams for the first floor retail areas and the rest of the building is hollowcore plank. Building A consists of 103,000 square feet of 8" HCP (7 stories), two arched precast panels for entry/exit to the parking area, 76 structural precast lintels and 28 structural columns for the parking area.

Building B consists of 22,272 square feet of 8" HCP, 19,000 square feet of 10" HCP, 14 structural precast columns and 17 structural precast beams. The use of structural precast columns and beams were used to create a solution for underground parking and to accommodate street level retail space below the apartment levels.

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Precaster: Pittsburgh Flexicore

Architect: Frederick J. Fernsler AIA

Engineer: Jesse E. Smith Jr. P.E.

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