PCI Central Region
PRECASTER
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phil@pci-central.org • 937-833-3900
www.pcicentral.org
Issue 23

Academy of World Languages

Cincinnati, Ohio

Precast concrete use is increasing in Ohio since its approval in 2004 for the construction of elementary schools and high schools. Ideally suited to tight construction schedules, budgets and demanding design goals, precast systems with thermally efficient precast sandwich wall panels provide performance and occupant comfort that's superior to traditional cavity wall construction.

Cincinnati's new Academy of World Languages K-8 school is designed in the international style, consistent with its focus as a magnet school for foreign languages. Its fun, colorful exterior draws the eye with multiple finishes and textures, lending a welcoming, kid-friendly atmosphere.

Working with a tight deadline and budget, the design team chose a precast system from High Concrete Group LLC for the 85,500 square foot structure. High Concrete Group produced the 173 architectural precast insulated exterior wall panels. Total Precast Solutions produced the structural precast including the interior walls and Hollowcore floors. The precast concrete components were fabricated off-site and delivered in a kit of parts for immediate erection.

Overall, the high performance insulated wall panels and the entire precast system saved time, reduced cost, improved durability and enhanced aesthetics. As a result, the Academy of World Languages is set to promote learning and reduce absenteeism for the kids who attend.

HIGH CONCRETE GROUP LLC
An Affiliate of High Industries Inc.
(800) PRECAST
www.highconcrete.com

TPS
(313) 962-9189
www.psi-hci.com

"We tried to keep the design simple, sleek and high-style. It could have been built anywhere in the world and still fit in."

Randy Merrill
McGill Smith Punshon, Inc.

Precasters: High Concrete Group LLC and Total Precast Solutions, LLC Architect: McGill Smith Punshon Engineer: M-Engineering

AIA/CES Registered

Lunch & Learn Programs

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Program #	*Program Title*
TOPRST	Total Precast Structures
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P10107	Basics of Precast/Prestressed Concrete
DAPC02	Aesthetic Possibilities and Design Economy
APC07	Architectural Precast Concrete
SCH07	Precast Concrete Design for Schools
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Full listing of programs with descriptions available at
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Any questions, please email
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Eastern Vault Co., Inc.
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Phone: (304) 425-8955

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Gate Precast Company
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Web: www.highconcrete.com

High Concrete Group LLC
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Hampton Inn

Pittsburgh, Pennsylvania

Using precast on the Hampton Inn stairs and landing systems with hollowcore flooring provided time and cost savings.

Castcon-Stone, Inc. had to address the hanger steel support in lieu of the suspension rods that were originally proposed. The integral landings on the precast stairs reduced the number of pieces to be erected (saving even more money). The biggest advantage with precast stairs is once in place, it is a finished product. Metal pan stairs with a similar riser count can take two men over a full day of work to assemble and then they still need to be poured with concrete.

The 90,500 sq. ft. of hollowcore manufactured and delivered by Pittsburgh Flexicore Co., Inc. allowed for increased durablity, fire safety and excellent value. The installation of the hollowcore started in August and was completed in October.

"The Hampton Inn project contained two separate stair towers. Both towers fit together extremely well. Precast concrete's flexibility in delivery times was a great help to completing the project on schedule."

Chuck McKee, Century Steel Erectors

CAST CON STONE INC.
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www.castconstone.com
(724) 352-2200

PITTSBURGH FLEXICORE CO. INC.

www.pittsburghflexicore.com
(724) 258-4450

Precasters: Castcon-Stone, Inc. Precaster: Pittsburgh Flexicore Co., Inc. Architect: Indovina Associates

Albion Bell & Clock Tower

Albion, Michigan

The Bell and Clock Tower at Abion College serves the purpose of identifying the main entrance to the Science Complex. It can be seen from a great distance on the campus and is a natural draw. The tower also serves as a timepiece with clock faces on all four sides and includes a programmable electronic chime system. The South face includes an analemma which uses the sun's rays to chart the solar equinoxes and solstices on the granite pavers at the base of the tower.

Due to site constraints, utilizing precast allowed the tower to be fabricated off site and allowed other trades to complete their work while the tower was being built. Precast concrete saved time and money over conventional block and brick veneer construction by not having to scaffold the fifty-foot structure. The precast concrete also allowed the College a convenient way to inscribe the seal of the school and the donor's name into the tower.

NATIONAL PRECAST, INC.

www.nationalprecast.com
(586) 294-6430

Precaster: National Precast, Inc. Architect: McLachlan Cornelius & Filoni, Inc. Engineer: Robert Darvas Associates

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Web: www.nationalprecast.com

National Precast Structural, Inc.
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www.stressconindustries.com

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Nucon Schokbeton
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Strescore Inc.
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Web: www.strescore.com

United Precast
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Phone: (740) 393-1121
Web: www.unitedprecast.net

Turtle Creek Casino & Hotel

Traverse City, Michigan

Turtle Creek Casino & Hotel in Traverse City Michigan utilizes a precast truss system that has been used on only a handful of construction projects in the United States. The truss system reduces column penetrations and provides column free space on alternating floors. Turtle Creek utilizes 14 precast trusses, 34 precast columns, 39 precast beams, 78,900 square feet of hollowcore, and 21,000 square feet of solid precast panels for stair and elevator shafts.

The building was originally designed as a poured in place building, however when precast entered the picture it was quickly realized that time and money could be saved by utilizing precast rather than poured in place. By using precast the owner and contractor were able to save over 4 months of construction time! Precast was able to begin erecting in winter conditions when poured in place would have had to wait until much later.

"By fabricating the structure off site, it gave us more time to design and install the foundations prior to having to start on the vertical structure. Also, since we would have been pouring concrete vertically in the middle of winter, it adds to the cost of the concrete and precast ended up being more economical."

Bart Bodway, PCL Construction

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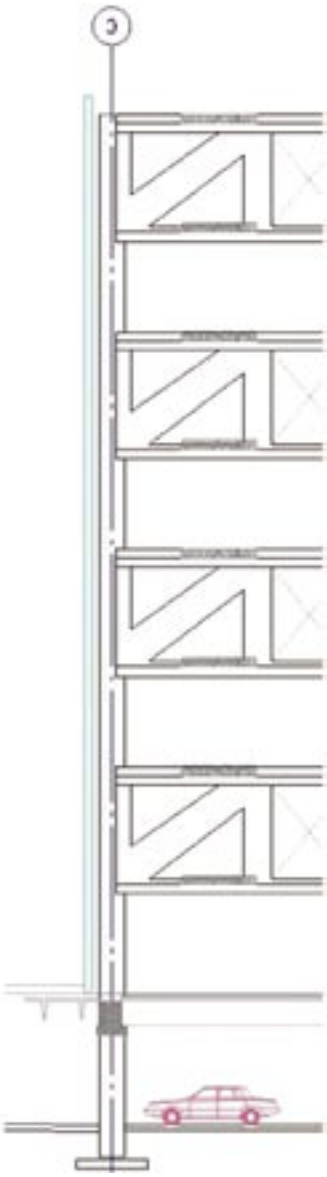

Precaster: Kerkstra Precast Engineer: Ericksen Roed & Associates Architect: Walsh Bishop Associates

Motor City Casino Hotel

Detroit, Michigan

THE PRESTRESSED GROUP
www.psi-hci.com (313) 962-9189

International Precast Solutions, LLC

Prestressed Systems, Inc.

TOTAL PRECAST SOLUTIONS, LLC

The third to fifteenth floors of the new Motor City Casino Hotel each consist of approximately 15,500 square feet of 10" hollowcore plank and 3,600 square feet of 10" solid slabs.

The structure is a combined system of structural columns, trusses, and precast planks. The precast planks were utilized to stabilize the columns and to act as a diaphragm for each floor.

Approximately 4,000 square feet of hollowcore were shipped to the job site per day, resulting in the structure being completely installed in fourteen weeks.

"The use of precast helped to stabilize the structure by tiering trusses together, which created a safe working platform as steel was erected. Keeping the same crew for steel and precast erection allowed better control over the site and eliminated unnecessary coordination and delays."

Robert Rea, Metro Steel Fabricators Inc.

Precaster: Total Precast Solutions, LLC Architect and Engineer: Giffels, Inc.

PCI Central Region
Chapter of PCI
9626 Upper Lewisburg Salem Road
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