

# Precast Press

Quarterly Newsletter for the Mid-Atlantic Precast Association

Summer, 2001



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## EXPANSION TEAM

Virginia Tech has been consistently ranked in the Top Ten in collegiate football in the past few years. As a result, Virginia Tech's Lane Stadium is receiving 65,000 square feet of new seating in an expansion of the south end zone.

The **Shockey Precast Group** will provide 680 pieces of architectural

and structural precast concrete elements, the products are split nearly equally between riser sections--mainly triple units-- and railings, stairs and walls. The architectural precast components for the project include a 24,000-lb wall panel with the "VT" logo cast into the concrete.

The expansion design team includes stadium designers HOK Sport, Thornton-Tomasetti and local architect Moseley



and structural precast concrete elements for the Lane Stadium addition. The components are scheduled to begin shipping at the year's end, with completion of erection targeted for late spring 2002.

Harris & McClintock of Virginia Beach. Shockey's precast subcontract was awarded after presentation of a "weighted" bid package which included both financial and technical proposals, each proposal carried equal weight in the evaluation of bids.



# Membership

Please welcome the following new associate member to MAPA:

**Axim Concrete Technologies, Inc.** manufactures and distributes admixtures for concrete from their home base in Middlebranch, OH.

For a complete member listing, contact MAPA for a 2001 Directory or visit our web page [www.mapaprecast.org](http://www.mapaprecast.org)

## Quotables

*“We judge ourselves by what we feel capable of doing, while others judge us by what we have already done.”*  
-Henry Wadsworth Longfellow

*“Difficulties strengthen the mind, as labor does the body.”* --Seneca

It is important to recognize that precise dimensional coordination must occur in sports facility design. Which makes it more critical to avoid the concerns that are encountered with mixed construction. The coordination among different contractors is eliminated with a single source supplier in a total precast system. The forming methods used and repetition of precast components create a consistent quality in a controlled environment. Designing, detailing, and producing one internally coordinated material streamlines erection of the structure.

Early communication with a precaster can help owners and designers understand the basic concept of total precast concrete from the ground up.

To obtain more solutions to your stadia design needs, contact MAPA at **800-453-4447** or via e-mail: [info@mapaprecast.org](mailto:info@mapaprecast.org) or grab a seat at [www.mapaprecast.org](http://www.mapaprecast.org).

## SPORTS PAGE: TOTAL PRECAST - TAKE YOUR FACILITY TO X-TREMES

Stadiums and arenas have grown increasingly customized and complicated - from luxury boxes to retractable roofs. The variety of structural elements that go into these facilities is also complex: support columns, raker beams, stadia seating units, tub seating units, stairs, vomitory walls, ADA camera platforms and cross aisle wall panels. One way to keep things simple is to utilize off-site, factory -controlled precast concrete -- put all the elements together and you have a total precast sports facility.

An additional benefit to quality precast concrete products, is a streamlined construction schedule. Compare mixed-construction (steel/cast-in-place/precast concrete) with those of a total precast system in the chart below.

### TOTAL PRECAST SYSTEM

Single source supplier

One schedule

Single field construction management

Minimized coordination conflicts

### MIXED SYSTEM

Various suppliers

Multilple, overlapping schedules

Complicated construction management

Coordination of several major trades

There are other issues to consider when selecting the construction materials and methods of sports facility. Designers should consider the following issues during the planning phase:

- How will the structural support steel match the precast units?
- Can we avoid field cutting the cast-in-place support structure for proper fit to other components?
- Will designing with two or three different materials impact our tight schedule?





## SUMMER PARK PLACE

Typical of Harrah's Atlantic-City-style-over-the-top approach to entertainment, their new garage is anything but ordinary. The primary structural

distinction results from the fact that the four-bay-wide deck is a valet-only facility. All parking (1,286 spaces or 395,000 square-feet) is at a 90-degree angle, with two-way traffic. Walker Parking Consultant vice president Mike Albers explains that there is a large, flat floor area between the stair/elevator tower at one end and an express ramp at the other. Ignoring the normal striping, the valets can park cars five to six deep, if needed. Walker Consultants had responsibility for structural engineering and design execution on the project.

To accommodate the need of the hard-working valets, the parking deck even includes a "jockey-lounge" where the car-park staff can relax until they're called.

Aesthetically, the Harrah's garage reflects its owner's distinctive sense of style. The parking structure resembles the existing casino, with an off-white, light-to medium sandblast finish. But architectural consultants The Friedmutter Group came up with a novel nautical theme, enhancing the panels of the seaside casino with a pattern of waves.

**High Concrete Structures** used special form liners to create the unique detailing. As well, a number of the precast panels on two sides of the structure are adorned with the familiar Harrah's logo set into a dramatic circle some 20-feet in diameter. "The logos are recessed so you can see shadow lines and at night are illuminated by light which shine up from ground level," says Albers. Along with providing the distinctive panels, High Concrete was able to compress its delivery and erection by several weeks to help facilitate the completion of the garage.

## MORE SUMMER AT THE JERSEY SHORE

The Wildwood Convention Center in New Jersey is an innovative building that is being constructed right on the beach, on top of a pier-like structure overlooking the Atlantic Ocean.

Project Architect Don McDonald of LMN Architects specified a structural steel frame with a precast concrete facade cast by **Universal Concrete Products**. "Precast is a good way to handle large wall areas on a building of this size. It's also an excellent material to combat the corrosive effect of the salt and other elements present at the beach."

Long term durability and ease of maintenance figured into his decision as well. The 557 precast panels (weighing up to 12 tons) will have a medium sandblast finish to expose the local

aggregates, which will complement the natural, seaside environment. A total of more than 60,000 square feet of precast panels will be created for the \$70 million convention center, which is slated to open in May, 2002. A series of 10-foot-diameter "portholes" will be cast into the wall panels above the Boardwalk, which will flood light onto the walkway at night, and provide for mechanical ventilation to the building as well.

"Also distinctive is the use of a

fabric roof-- the first time such an application has been used at a convention center," says McDonald. The dramatic-looking cover will permit daylight to filter into the building; at night it allows light from inside the center to be reflected back outside. Another enhancement will be the use of glass along the ocean-facing side of the structure, again, bringing the outdoors in. Visitors will be able to step out from the exhibit floor onto an oceanfront deck..



# THE PARKING SPACE: OUNCE OF PREVENTION

By selecting precast concrete construction you have already greatly enhanced the durability of your parking structure, but there are still specific and necessary steps you must take to keep your garage looking like new.

First, engage in regular housekeeping procedures, which include:

- Keep windows and booths clean and uncluttered.
- Check parking equipment, revenue controls and security systems.
- Sweep floors and clean up oil spills.
- Pick up trash. Use several small trash cans and empty frequently.
- Maintain and clean elevators.
- Restripe parking spaces.
- Brighten wheel stops. (*Safety yellow is best*)
- Clean and relamp light fixtures to keep areas safe and bright.
- Remove graffiti. The sooner the better.
- Clean, repair and maintain signs. Keep them concise.
- Check parking equipment, revenue controls and security systems.

Next, employ a systematic approach to preventive maintenance.

Be sure to have an engineer experienced in parking structures and their design do an annual inspection. This will help in early identification of any extreme wear.

Perform a washdown twice each year flushing with at least a 1 1/4" hose and seal any cracks.

Maintain caulking and floor sealers based on recommendations from the manufacturer.

Repair any floor surfaces that show excessive wear. Rout cracks so that sealant will bond and patch or level any low spots.

Inspect all joints. Traffic wear and snow plows can damage expansion joints and control joints. Repair as needed. Refrain from using metal snow plow blades that scrape the driving surface. They can cause damage to precast surfaces and joints.

Consider using an anti-graffiti sealer. This can save clean up time down the road.

Inspect and clean any rubbish or sediment from floor drains that could cause ponding or clogging.

Elastomeric traffic bearing membranes should be patched as soon as any ripping or excessive wear is visible. This will prevent expensive recoating before the expected life span of the membrane.

Check all grout joints, remove loose material and repair as needed.

Inspect all structural connections and surrounding concrete areas for cracks.

Inspect guardrails and parapets for impact damage.

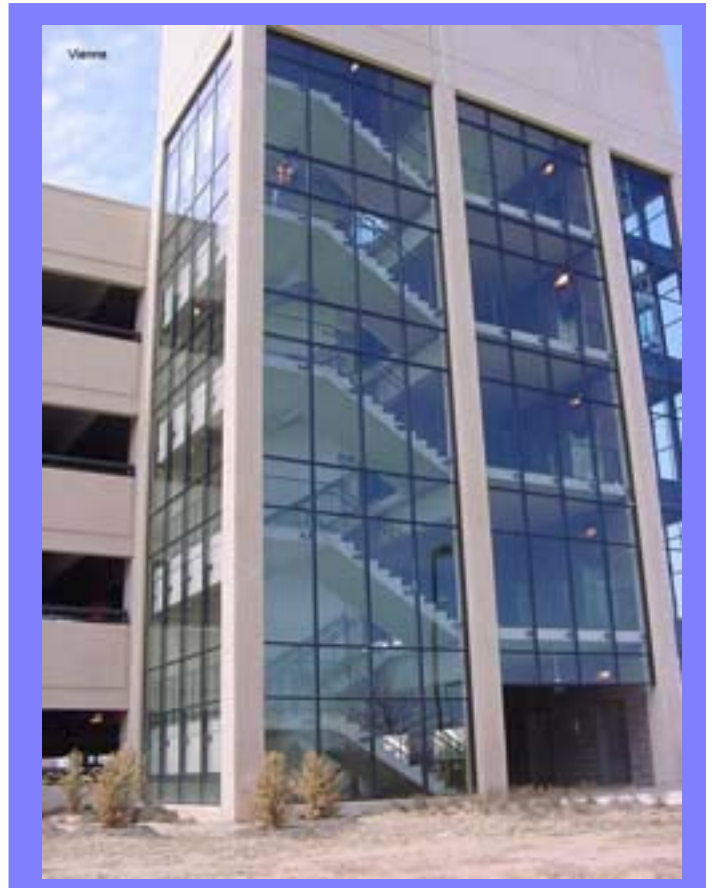
Check for any rust, water leakage, staining, mineral deposits or corrosion by-products. Any of these are an indication of moisture intrusion. Clean and recoat all exposed metals with epoxy

or zinc rich coating.

Finally, make any significant repairs as soon as possible. An ounce of prevention is worth a pound of cure when it comes to parking garage maintenance. Costly repairs are typically only required when regular preventive measures have not been taken. Remember that a clean, well kept, well lit deck generates more revenue than one that people avoid. Consistent preventive measures and proper housekeeping can also greatly reduce claims for slips and falls.

You have a beautiful new parking garage and now you can keep it that way!

Would you like a free copy of the PCI Maintenance guide, which contains easy to follow maintenance and housekeeping schedules? Would you like to learn more about precast/prestressed parking structures? Call MAPA at 800-453-4447 or find a parking space at our web page: [www.mapaprecast.org](http://www.mapaprecast.org).



## Learning Experiences

*The Architectural Precast Committee will host Plant Seminars again this year. Earn 6 AIA learning units! Mark your calendars for September 13th in Chambersburg, PA or October 17th in Fredericksburg, VA.*

*Contact us about registration.*

**MAPA STUDENT DAY!**  
All MAPA manufacturing facilities will open their doors to engineering and architectural students for one special day! Plan on taking a road trip on Wednesday, September 19th, when our designers of the future will get a hands on learning experience about precast/prestressed concrete. Professors should contact MAPA for more information.

*In response to your requests for more info: MAPA has introduced **FAQ (Frequently Asked Questions)** to provide a forum for questions and answers about Architectural Precast Concrete. MAPA will entertain your questions too, just contact us via email: [info@mapaprecast.org](mailto:info@mapaprecast.org)*

## Cladding Corner: FAQ: The Approval Process

For the architect to develop and select the color and texture for precast concrete requires a combination of art and skill. The same is true of the precaster who must translate these requirements into workable concrete mixes and the proper finishing techniques.

To begin this cooperative process the precast concrete manufacturer will prepare a 12" x 12" sample of the required color and texture as specified by the architect. Initial samples are to be reviewed for color and texture only. Upon written approval of the 12" x 12" sample the precast manufacturer will begin production of a mock-up panel.

The mock-up panel shall incorporate the approved color and texture of the sample and reflect a shape relationship to the actual casting. The size of the mock-up shall reflect the relationship between materials, finishes, shapes and casting techniques, such as mold types,

orientation of exposed surfaces during casting and consolidation procedures. Mock-ups shall incorporate all required finishes for a project and be clearly identified.

During the mock-up review, the project architect or owner's representative is invited to the precast manufacturing facility. At least three mock-up panels should be prepared to demonstrate range of acceptability with respect to color and texture variations, uniformity of air voids distribution, surface blemishes and overall appearance. Mock-ups shall be viewed at a distance consistent with their position on the structure but no less than 20 feet. Approved 12" x 12" samples should also be compared to the mock-up to make sure original intent has not been lost. During the mock-up review the precaster will request the architect or representative to inspect and approve (*sign and date*) mock-up panels.

Approved mock-ups will be stored at the plant and positioned to allow comparison with production units. They shall be stored adjacent to each other to allow exposure to sun

and shade for daily comparisons of the production units for finish and exposure. At least one mock-up panel may be shipped to the jobsite for comparison to erected panels.

*For more information on samples and mock-ups contact MAPA via the web site:*

*[www.mapaprecast.org](http://www.mapaprecast.org)  
or in person 800-453-4447.*





## OFFICE SPACE

The task of designing the 180,000-square-foot office building at 1000 Chesterbrook Boulevard in Berwyn, PA on a narrow, awkwardly shaped site fell to David F. Ertz, partner with Cope Linder Architects of Philadelphia.

“The site was hemmed in by a highway on one side and by a heavily used road on the other. We didn’t want the building to be surrounded by parking and roads, so we used the large footprint to create a series of garden spaces somewhat sheltered from the other elements,” he says.

Precast concrete panels cast by **Nitterhouse Concrete Products, Inc.** contribute to a natural “outdoorsy” appearance. Panel detailing in the garden areas features a combination of medium sandblast, exposed aggregate and rock-faced panels created with special form liners at the Nitterhouse plant. The rock-faced panels helped break up the horizontal mass of the three-story structure.

Adds Ertz: “The owner and developer, Realen Properties and Brandywine Realty Trust, wanted a high-end look. We selected precast because it is a high-quality material. It also afforded us the opportunity to use the larger scale elements with very fast erection and good quality control.” The project called for 219 precast concrete spandrels and 70 column covers.

The finished project is quite striking with attention-getting features like bluestone paving that extends from the garden fore-court, though the lobby of the U-shaped building and to the back to an informal garden. Originally developed as a spec building, 1000 Chesterbrook is now the executive headquarters of the Provident Mutual Insurance Company.

## Producer Members

### Architectural Precast, LLC

Middleburg, PA

contact: George Dupes 570-837-1774



### Concrete Building Systems, Inc.

Delmar, DE

contact: Jay Ewan 302-846-3645



### High Concrete Structures, Inc.

Denver, PA

contact: Tom Holmes 717-336-9300



### Newcrete™ Products

Roaring Spring, PA

contact: Bob Brown 814-224-2121



### Nitterhouse Concrete Products, Inc.

Chambersburg, PA

contact: Larry Shoemaker 717-267-4505



### Oldcastle Precast, Inc.

Hatfield, PA

contact: Mark DiPietro 215-822-3341



### Schuylkill Products, Inc.

Cressona, PA

contact: Dennis Campbell 570-385-2352



### The Shockey Precast Group

Winchester, VA

contact: Jeff Boehm 540-667-7700



### Strescon Industries

Towson, MD

contact: Bob Adams 215-945-9880



### Universal Concrete Products Corp.

Doulassville, PA

contact: Donald Faust, Jr. 610-323-0700



## WALL STORIES

The Merritt Athletic Club in Eldersburg, MD needed to meet their own New Year's resolution have their doors open by their deadline date. The choice to use precast concrete not only met the construction schedule with ease, but also lowered costs by providing an interior finished wall in many areas.

The owners wanted to construct the building as quickly as possible while retaining the tight budget," says Shellie Curry, principal at Fishman-Curry & Associates, Architects in Owings Mill, MD. The designers originally looked at CMU, he adds, "But it was coming out very expensive and it was going to be difficult to get the block we needed." Switching to insulated precast panels, he says, saved both erection time and overall project schedule for the three-story 70,000 square foot facility.

The wall panels were produced by Strescon Industries and featured an antique-white color and sand-blast finish. "The building has a high-tech look, with exposed columns and concrete," Curry explains. "Using precast allowed us to express the architecture of the building and provided both the interior and exterior wall with no extra finishing, which saved money and time."

The erection process took only five days. That fast completion for the shell allowed the interior trades to begin work faster to ensure the schedule was met. "We've used precast panels in the past on buildings, and they work well," says Stuart Foard, PE, project manager for the Merritt Properties, LLC, the general owner and contractor. We were able to dry in the building substantially faster and work on the interior finishes quick using the panels.

### Director's Chair



MONICA SCHULTES  
EXECUTIVE DIRECTOR

In our fast-paced, high-tech world of cellular phones, pagers, and PDA's it's easy to assume that our educational efforts must also be cutting edge to be effective. Yes, we utilize CD-ROM, video and internet based learning opportunities. But there are times when nothing beats on-the-job-training. It is one of the oldest methods and certainly very low-tech, yet OJT is an excellent way to pass on the wisdom of veteran employees and to build new skills and a sense of belonging in younger workers.

MAPA will be doing just that with future engineers and architects of our construction industry when we host Student Day on September 19th. The abbreviated OJT for students is very effective yet requires very little investment in the terms of equipment, supplies or technology-aids. What it lacks in glitz it more than makes up for in relationship building and mentoring to our future rookie employees.

I have had the privilege of talking to a wide range of students about the precast/prestressed concrete industry from Columbia University to West Virginia University. What they all had in common was an interest in getting a first hand look at a manufacturing plant. I know that all those who participate will take something away with them.





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