Notes From The Director

Recently I had the opportunity to represent PCANY at an ACI-CNY dinner meeting in East Syracuse. The speaker was Cornell University Professor Dr. Ken Hover who enlightened us on the potential benefits and pitfalls of “performance” vs. “prescriptive” specifications. A performance spec defines the end product objective whereas a prescriptive spec tells the supplier how to do it.

It occurred to me that precast specifications are largely performance based already (although some cannot seem to resist the temptation to add unnecessary prescriptive requirements). The objective is a quality product designed to meet the structural and environmental conditions of the project. A well written specification calls out the applicable ASTM standard for the product along with the necessary loading requirements. The precaster designs the products and fabricates it to the ASTM standard, which contains all of the necessary prescriptive elements to ensure a quality product. Both NPCA and PCI have guideline specifications to help ensure that you get the right products for your project.

For more information about specifying precast products, please contact me or one of our member companies.

Warmest Regards,

Ronald E. Thornton, P.E.
Leon Bridge No. 1 County Road 44 (Flatiron Road)

Rapid bridge deck replacement is key to the upkeep of our transportation infrastructure while minimizing the impact to local traffic, particularly for emergency response vehicles and school buses. Precast slabs are now the system of choice for many of these projects including this one in Cattaraugus County. The project, which was installed in July of this year, included nine (9) 33’ wide x 4’-7 1/2” long units that varied in thickness from 7” at the outside edge to 9” at the road center line. Each piece was cast to conform to the skew of the bridge.

Grout pockets were cast to fit over shear studs located on the steel girders to lock them into place.

**Project Credits:**

*Owner:* Cattaraugus County, DPW  
*Contractor:* Cattaraugus County, DPW  
*Precast Manufacturer:* Kistner Concrete Products

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**Lifter Selection and Placement**

Particular attention must be paid to the lifting and handling of precast elements to ensure the safety of those in proximity to the units and to the integrity of the unit itself. OSHA requires that lifting devices cast into precast elements have a minimum safety factor of 4:1 and that lifting and rigging hardware, so-called "Below-the-hook" devices, have a minimum safety factor of 5:1.

The precast element itself must be analyzed for various stages on manufacturing, yard handling, shipping, and installation. This analysis determines the appropriate lifting devices to use and where best to place them in the product. Both local and global handling stresses need to be considered. Local stress includes shear and breakout at the lifter location. Global capacity is the ability of a slab to resist bending when suspended by the lifting devices. Thinner slabs often require multiple lift points to control handling stress and prevent cracking.
Rehabilitation of Hooper Road (CR33) Bridge over Route 17C

Hooper Road is a heavily travelled road for residents and businesses in the Hamlet of Endwell and alternate routes during the replacement of a bridge over Route 17C are inconvenient at best. For this reason, Broome County limited the closure of traffic to 21 days, which could not have been accomplished without incorporating precast concrete into the design. Not only were the deck slabs precast, but the piers caps and approach slabs as well. 33’-3” wide deck panels were cast with a 4” built-in camber, integral curbs and exposed bar for a closure pour between the units.

Two massive 46 ton precast pier caps were a major time saver for the project. These units were simply lowered onto an exposed reinforcing cage from the existing columns. The connection was filled with Lafarge Ductal grout leaving the piers immediately prepared to support the steel girders.

Project Credits:
Owner:  Broome County, DPW
Engineer: McFarland Johnson, Binghamton, NY
Contractor: Economy Paving
Precast Manufacturer: Binghamton
Welcome New PCANY Member

We are pleased to welcome Gary K Munkelt & Associates., LLC as a Professional member of PCANY. Gary and his staff, from North Wales, PA, provide specialty engineering services for precast concrete products as well as other structural design services. Contact Gary at gmk2001@verizon.net or Joe Pajrowski, PE at joe.pajrowski@gmkassoc.com.

ABCD Western NY Conference

ABCD will hold its annual conference on Bridge Design and Construction on Friday, October 10th at the Millennium Airport, 2040 Walden Ave., Buffalo. Up to 7pdh credits are available for professional engineers.

PCANY/NYS DOT Fall Meeting Scheduled

Please mark your calendars for the fall 2014 PCANY meeting and joint NYS DOT meeting on Wednesday November 5. The morning session will be held at the AGC Conference Room, 10 Airline Dr., Albany. The afternoon joint meeting with NYS DOT will be held in the first floor conference room at 50 Wolf Road, Albany.

Contact Us

Give us a call for more information about our services and products

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Visit us and find a complete listing of our member companies on the web at: www.pcany.org

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