Notes From The Director

As the summer of 2017 comes to an end our thoughts are with those impacted by Hurricanes Harvey and Irma. The devastation created by these storms reminds us of the resiliency of the human spirit to carry on but also the vulnerability of our nation’s infrastructure and the need to continuously improve stormwater systems and the structural integrity of buildings to withstand extreme flooding and extraordinary winds.

We also thank the many first responders, National & Coast Guard forces, and the countless volunteers working to assist in the recovery from these catastrophic events. Please consider donating to legitimate organizations involved in the relief efforts. Help is going to be needed for a long time.

Warmest Regards,

Ronald E. Thornton, P.E.
Jackson Avenue Culvert—Town of New Windsor

Submitted by Bob Willis of LHV Precast Corp

This culvert is part of the rehabilitation of a 2.8 mile stretch of Jackson Avenue between the Town Line and State Route 207. The culvert span is 14ft with a 10ft rise and is approximately 36’ along an 8 degree skew. Note that the precast wingwalls are set parallel to the roadway. The headwalls are 3’-8” wide with guiderail anchor plates cast in so that guiderail posts along the approaches did not have to be mounted to the wingwalls. The heaviest pick was approximately 24 tons and all pieces were set in one day.

The culvert was designed for AASHTO HL-93 loading and rated for the NYSDOT standard permit vehicle. The guiderail test level is TL-4, which required that the mechanical draw connectors remain in place for the outer 2 end sections at both the inlet and outlet. The invert of the culvert was set 1ft below stream bed.

Project Credits:
Owner: Town of New Windsor, NY
Engineer-of-Record: HVEA Engineers, Beacon, NY
Specialty Precast Engineer: Concrete Engineering Solutions, LLC
Contractor: Kubricky Construction Corp., Wilton, NY
Precast Manufacturer: LHV Precast, Inc. Kingston, NY

View through culvert. Workers are preparing closure pour between wingwalls and box culvert.

14’ span x 10’ rise box culvert with precast wingwalls and headwalls
Concrete Mixing—Precast Does it Better

Contributed by Soren Pederson of Haarup North America, Inc.

For most of us, the concept of mixing concrete conjures a vision of ready-mix trucks arriving at a job-site with large rotating drums. In a dry-batch operation, raw materials are dumped into the drum and the truck does all of the blending. Some ready-mix plants have central mixers which completely blend the concrete materials before loading the truck. In either case, the truck drum will continue to rotate during transit in order to keep the mix agitated and, hopefully, prevent segregation.

Precast plants today use a much more efficient technology for mixing concrete. Pan style mixers blend materials together with rotating paddles in batches that are typically 3 cubic yards or less. Counterflow mixers are an advanced form of pan mixer that utilizes a number of mixer arms/shovels that rotate around a center vertical axis creating an intense countercurrent mixing action to ensure a homogeneous and consistent quality from batch-to-batch. Mix consistency is particularly critical with higher-tech concretes such as SCC (self-compacting concrete).

Automated batching systems with load-cell equipped scales ensures the accuracy of material quantities in each batch. Batches can be cycled in as little as every 90 seconds to provide a continuous supply of concrete during casting operations. Moisture probes continuously monitor the percentage of aggregate moisture and automatically adjust the amount of batch water, sand and stone in real time.

We should also mention that today’s mixers have sophisticated dust collection systems that protect our environment as well as plant employees.

Haarup North America, Inc. is an Associate Members of PCANY. Check out all of our members in the PCANY Buyer’s Guide located on our website.
Fall PCANY Meetings Scheduled...
For 9:30am Thursday, Nov 2 at AGC Headquarters 10 Airline Dr., Albany 12205. Our joint meeting with NYSDOT Materials and Structures Bureaus will be in the same room beginning at 1:30pm.

Statewide Conference on Local Bridges
PCANY Director Ronald Thornton will be presenting “Innovative Uses of Precast Concrete in Accelerated Short Span Bridges” at the Holiday Inn, Syracuse on October 26. (Information & Registration)

ACI-CNY to host dinner & presentation...
By Dr. Ken Hover on the topic of “The Good and Bad of Concrete in Cool and Cold Weather” on Wednesday, Sept. 20 at the Doubletree Hotel in East Syracuse. (Registration)