

RESILIENT RINGS

A VISIT WITH 2018 AMERICAN CONCRETE PIPE ASSOCIATION CHAIRMAN MARK OMELANIEC

Scenes of failed metal or plastic drainage systems in the wake of flooding and wildfires that defined 2017 as a year of natural disasters contrast sharply with the American Concrete Pipe Association's assurance: "Reinforced Concrete Pipe...It is rugged, rigid, and resilient."

In his first 2018 letter to members and their public or private construction customers, ACPA President Russell Tripp, P.E., noted last year's 16 events that represented \$1 billion or higher in repair and rebuilding costs, plus post-disaster reports of irreparably damaged pipeline systems or culverts of construction other than concrete. "Designers of pipeline systems and culverts have choices of when to specify structural concrete pipes, flexible thermoplastic conduits, or corrugated metal conduits," he concluded. "When considering total installation and life-cycle costs, site conditions, structural bedding/embedment materials, hydrostatic pressures, and hazards caused by nature or humankind, reinforced concrete pipe and boxes are the clear choice. Where the threat is obvious to health and safety and the economy of an entire region or city through critical buried infrastructure, why would anything other than concrete pipe and precast boxes be specified?"

Tripp and ACPA members have a seasoned leader in 2018 Chairman Mark Omelaniec, president of British Columbia-based Langley Concrete Group, to convey the "rugged, rigid, resilient" message as part of a campaign promoting engineer knowledge and independence; proper drainage system installation methods; follow up inspection of drainage systems, regardless of material specs; and, the technology and integrity at work in concrete pipe and precast operations across North America.

"I want to focus on leadership training, mentoring and promoting the industry and association participation to the next generation," says Omelaniec. "There is huge potential growth for our businesses by developing young people who are examining career options. The successful people in this industry are the ones who have passion. We can develop that passion in the next group of leaders."



Mark Omelaniec

ACPA leadership is familiar turf for Omelaniec, who served as 2010 chairman and accepted the nomination for this year's term after a peer member resigned his vice chairman's post in transition to a concrete division outside of pipe & precast but under the same parent company. During this year's term, he, fellow members and staff will set an example for future leaders by stressing the core ACPA function of assisting public agencies and private owners in pre and post-construction matters.

"We see a lot of departments of transportation working with ACPA state or regional engineers to review, standardize and strengthen their drainage system specifications," notes Omelaniec. "Producer member and ACPA engineers are finding good opportunities to guide customers or their representatives on drainage basics, and remind them of the importance of standard installation requirements and longer-term inspection. We need to show our product against the competition on a fair and level playing field."

ENGINEERING ALLIANCES

Beyond guidance in product specification and best installation/inspection practices, he adds, ACPA members and staff confront an evolving challenge rooted in state-by-state interpretation of a predecessor to the FAST Act, which funds the federal highway program through 2020. Language in SAFETEA-LU

sowed confusion, ultimately favorable to concrete drainage system competition, surrounding a perceived need for agencies to "study" the type of materials their engineers specified in highway drainage contracts. The FAST Act maintains a clarification in SAFETEA-LU successor, MAP-21, under Section 1525 "State Autonomy for Culvert Pipe Selection." It directs the Transportation Secretary to ensure that states have the autonomy to determine drainage system materials and types without federal interference.

Concrete pipe and culvert competitors responded to Section 1525 with state-level campaigns for "materials preference" legislation. "We now see a shift to more municipal level activities and promoting ordinances with the claim of improving competition," Omelaniec affirms. "We don't feel taking away the rights of engineers to determine the appropriate material and method for a drainage system is good practice. We need to make sure engineers have freedom of choice, as they are the ones who have to sign off on a project. I don't think we should subject them to political influence to change their specifications or designs."

FOUNDATION RESEARCH

In 2017, the association formally chartered the ACPA Research and Education Foundation as a separate 501(c) (3) organization dedicated to advancing manufactured-concrete drainage products, structures and methods. ACPA Vice President of Operations Kim Spahn, P.E., serves as Foundation president. Topping projects she oversees is one quantifying the negligible effect of micro-cracking (< 0.01 in.) in concrete pipe and box culverts.

To address concerns some agencies have raised on structure durability and service life, University of Texas at Arlington Structural and Applied Mechanics Professor Seyedali Abolmaali is leading an investigation to a) classify the most common types of cracks developing in concrete drainage structures; and, b) test reinforcing steel corrosion potential in crack-bearing specimens. Testing is staged near the UT Arlington campus and involves specimens from multiple ACPA producer plants. Investigators are studying

performance of pipe sections housed in individual shipping containers with tightly controlled environmental conditions.

"We have always acknowledged that stress-rooted cracks can occur in concrete pipe, and can prove that they do not affect drainage system performance or service life," notes Mark Omelaniec. "Competitors have convinced certain agencies that cracks in concrete pipe are a sign of failure. Our research will counter that claim."

Alongside the crack-classifying investigation, Dr. Abolmaali and his UT Arlington team are testing thin wall specimens with an eye to identifying site and soil conditions to which lighter than conventional concrete pipe products are suited—and competitively positioned against lesser alternatives. Thin wall pipe testing represents the second phase

of a 2016 ACPA research project confirming the engineering basis for synthetic or steel fiber replacement of conventional cages in certain concrete drainage structures.

PIPE SCHOOL, SHOW, WEEK

Eight Langley Concrete Group managers and plant staff ventured in mid-January to Middle Tennessee State University, Murfreesboro, for the 2018 ACPA Pipe School and Pipe Show. Home to the charter Concrete Industry Management degree program, the Middle Tennessee campus drew a solid crowd from across North America for the third installment of ACPA's annual education and trade exhibit.

"We had a record participation at the 2018 Pipe School and Pipe Show—440 attendees, including 45 state or municipal agency guests," Omelaniec affirms. "The

School program had 30 to 40 percent new attendees, and was filled with great training exercises; marketing, management and education tracks; and a first-time offering, production management certification. Strong Pipe Show interest from producer and associate members proved the industry's commitment to capital investment and quality. The entire event was filled with productive activities and had very encouraging engagement of younger people."

Pipe School participation reflects the success ACPA has realized with its nine-member state and regional engineer and allied association network, he adds, plus a harmonizing of activities with the Canadian Concrete Pipe and Precast Association (CCPPA). The latter

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LANGLEY CONCRETE GROUP AT-A-GLANCE

A fixture in drainage construction for more than six decades, Langley Concrete Group produces pipe and standard or custom precast structures for Pacific Northwest markets from two British Columbia operations: the flagship Langley Concrete LP, with a 110,000 sq. ft. facility in Chilliwack, and Lombard Precast LP in Victoria. Permitting and site work are under way for an advanced facility on Vancouver Island to serve as the new Lombard Precast home.

Dry or wet cast concrete offerings from the two plants include pipe, manhole, box culvert, catch basins, headwalls, vaults, oil interceptors and the Stormceptor product line. Langley Concrete Group holds American Concrete Pipe Association QCast Plant Certification and in recent audits has scored among top performers in the program's Full Plant, Box Culvert and Manholes, Storm and Sanitary Sewer Pipe, and Precast Structures categories.



Langley Concrete Group delivered precast concrete box culvert and headwall structures from its QCast-certified operations for a British Columbia Ministry of Transportation contract aimed at improving road safety and drainage system capacity.

AMERICAN CONCRETE PIPE ASSOCIATION AT-A-GLANCE

Founded in 1907, ACPA is a nonprofit organization of concrete pipe and precast concrete box culvert producers and allied equipment manufacturers, material suppliers or service providers. Member companies are located throughout the U.S., Canada and 40-plus overseas countries. As the voice of the industry, the association provides a wide range of research, technical and marketing support materials to promote and advance the use of concrete pipe and precast boxes for drainage systems and many other applications. Archives on the www.concretepipe.org site, coupled with ACPA's social media network, embody a wealth of information, knowledge and document download offerings.

Members account for 90 percent of U.S. concrete pipe shipments. Through ACPA, they advance knowledge of sound drainage strategies and deliver education programs focused on all aspects of pipe and drainage structures. The annual Pipe School and Pipe Show are oriented to member company staff plus drainage system engineers and other stakeholders at federal, state and local agency levels. Rigorous in content delivery, the School encompasses concrete pipe and precast box courses, training and certification for graduates, member-hosted plant tours, and quality sessions. Course developers are especially mindful of the mechanical, electrical and computer competencies that managers and production employees need to maintain and operate modern concrete pipe and precast plants.

Ongoing education for ACPA members and their customers or prospects continues across the calendar through webinars on technical, marketing and sales topics. ACPA regional engineers and state association counterparts deliver additional education and training to agency personnel and drainage system specifiers.

2018 CHAIRMAN

Mark Omelaniec
President
Langley Concrete Group
Chilliwack, British Columbia

IMMEDIATE PAST-CHAIRMAN

Darren Wise
V.P., Operations, Central Region
Forterra Drainage Pipe & Products
Grand Prairie, Texas



Marked growth in Concrete Pipe Week participation was evident last year, thanks especially to the efforts of Mountain States Concrete Pipe Association and peer groups from coast to coast.



shares offices with the Ontario Concrete Pipe Association, and has seen field engineer ranks grow from four to six across the lower provinces in the last two years. CCPPA serves Langley Concrete Group and fellow members with engineering support mirroring that of ACPA. Recent agency outreach has yielded a contract for the first use of jacking concrete pipe in British Columbia—spotlighting a capability of reinforced concrete pipe not associated with competing materials.

To parallel the ACPA QCast Plant Certification program, CCPPA recently teamed with the Canadian Precast/Prestressed Concrete Institute to designate an independent entity “for an enhanced and expanded third-party administered and audited certification program for both prestressed and non-prestressed precast concrete manufacturing facilities across Canada.”

At the urging of Langley Concrete Group and fellow members, CCPPA is also examining the prospect of a companion to ACPA's widely subscribed Concrete Pipe Week, themed “Every Day Matters” in a nod to the Federal Highway Administration's “Every Day Counts” initiative. Scheduled the third week of August, last year's event was formally recognized by governors, legislators, regulators and mayors in 32 states representing more than 75 percent of the population. Concrete Pipe Week 2017 statistics, ACPA notes, coupled with the popularity of concurrent plant tours and related outreach activities, plus education and training events, prove how the industry is continuing to build trusting relationships with state and local officials and private construction interests.