It was especially nice to celebrate the 25th anniversary of the Concrete Executive Leadership Forum at Montage Palmetto Bluff in the “Low Country” of South Carolina. While certainly hot in July, the place is especially good at causing one to slow down and enjoy the good life.

We all were happy to hear from economist Anirban Basu that the building economy appears to be poised for a robust period for a couple more years at least, and perhaps longer. I think most of us would agree that these are good times to be in the business of constructing America with concrete. I believe the value of us collectively hearing these things, then cooperatively working to improve our individual businesses and the industry at large, is but one of the many benefits received when attending ASCC events. I left Palmetto Bluffs, reluctantly I might add, with a sense of confidence in future prospects for business growth, and more importantly improved profitability for all our members.

I would like to borrow one of the things I learned from speaker Chad Hymas and share it with those who were not there to hear his very emotional and incredibly impactful story. Chad says that “Fear” and “Confidence” cannot reside in your mind at the same time. I admit that I had never considered that possibility or the intended lesson that flows from this fact. When we fear our business is at risk, with the perception of not having enough work to sustain us, much less allow us to expand, we tend to act irrationally. When confidence replaces fear, we have the chance to act more rationally and plan our business growth with greater potential for success; investing in long term goals, building our staff and workforce. Simply expecting better times ahead tends to build our company’s ability to prosper from the work we do on an everyday basis, allowing us to build our financial reserves for the downturn when it does occur.

I hope all our members will build up their confidence in the future of concrete contracting and go forward with the authority necessary to lead their companies to greater places. Not just larger, but “Better” and more “Profitable.”

Gray Matters!!
**Director’s Message**

2018 marks the 20th anniversary of our Decorative Concrete Council (DCC). Not sure how we’ll celebrate as yet, but I would say there’s a lot to celebrate.

When Frank Piccolo brought the idea of a decorative concrete group to ASCC in 1998, Denny Ahal, Paul Albanelli, Rocky Geans, and probably a few others took their time to meet with Frank and his merry band, flesh out the hows and whys of the group, and mold it into ASCC’s first council.

The first council board was heavily weighted on the side of manufacturers, as they saw the group’s mission as selling more decorative concrete. Demos were done by guys in shorts and flip flops, but everyone crowded around to watch them stamp and stain.

The standalone Decorative Concrete Expo lasted until 2008 when it became incorporated into the Annual Conference. The first DCC Community Project was a triangular park site on Tchoupitoulas St. in New Orleans, just five short months after Katrina turned the city upside down. Mayor C. Ray Nagin wrote “Seeing this transformation take place has been a boost to our spirits.”

For many years I imagined a hotline just for calls about decorative concrete. We struggled to convince decorative contractors that the business seminars at WOC and the Annual Conference were just as important to them as the technical topics.

A lot of fits and starts, but always good people, moving forward. Past presidents like Frank Lewis, Chris Klemaske and Paul Schneider taking it to the next level. Our unbelievable good fortune to hire Todd Scharich as our decorative concrete specialist.

We will have a lot to celebrate next year. Please let me hear your ideas on the best way to recognize this outstanding group of ASCC/DCC members.

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**Decorative Concrete Safety**

Todd Scharich, Decorative Concrete Specialist

With summertime construction activity I have seen a rash of photos showing cars sitting in the middle of freshly poured concrete roadways. Blame it on distracted driving, or lack of common sense, either way it simply was the result of ignoring the signs. This point was reinforced at last week’s ASCC Leadership Forum where one of our guest speakers shared an unfortunate tale of “ignoring a sign”. Chad Hymas ignored a hydraulic fluid warning light on a tractor loader, ultimately leading to a 2,800 pound bale of hay crushing his body and changing his life forever.

In decorative concrete construction it is easy to ignore the signs because of many false premises: our jobs are different than the big guys, our sites don’t appear as dangerous, our equipment isn’t the same. Reality is, decorative concrete sites have many dangers, just different ones. Solvent fumes are obvious signs of danger, while the fumes from muriatic acid are not as obvious but equally dangerous. On a daily basis company leaders must be on the lookout for the signs of danger and take corrective action, not only for themselves but for their entire team.

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**Safety & Risk Management Council**

**Silica Rule Enforcement Date September 23**

Scott Greenhaus, Council Director

The OSHA Silica Rule enforcement date is scheduled for September 23, 2017. The SRMC is keeping abreast of developments in Washington DC regarding the rule and potential further delay. *At this time, it is not clear that the rule will be delayed further and therefore all members should be preparing for implementation of the rule no later than the enforcement date of September 23rd.*

The revised Action Level and Permissible Exposure Limit for respirable silica are 25 µg/m³ and 50 µg/m³ respectively for 8 hrs. exposure. The primary components of the Rule to ensure compliance are:

- Engineering Controls for common construction activities, described as Table 1 in the Rule. Table 1 provides guidance for selection of tools with silica mitigation designs and respiratory protection requirements for these activities. By following this table you will not be required to perform air monitoring.

- Performance Option- Exposures are to be assessed using any combination of air monitoring data or objective data sufficient to accurately characterize employee exposure to respirable crystalline silica for those tasks that are not performed as listed in Table 1 or if you choose not to use the strategies in Table 1.
Roman Concrete is NOT Better Than Today’s Concrete!

Ward Malisch, Concrete Construction Specialist

Perhaps you saw the news release posted in early July 2017. The headline says it all: “Why 2,000 Year-Old Roman Concrete Is So Much Better Than What We Produce Today.” It gets worse: “Battered by sea waves for 2,000 years, these [harbour structures] are still around while our modern concoctions erode over mere decades. Now scientists have uncovered the incredible chemistry behind this phenomenon, getting closer to unlocking its long-lost recipe. As it turns out, not only is Roman concrete more durable than what we can make today, but it actually gets stronger over time.”

That last part shouldn’t have been too startling to any concrete technologist. Roman concrete was made with a cementing material made with volcanic ash and hydrated lime, plus sand, volcanic rock, and water. Modern concrete is made with portland cement, often including supplementary cementitious materials similar to volcanic ash, sand, many types of rock, and water. When continuously exposed to water, both Roman and modern concretes get stronger over time. That’s because water will eventually reach any of the cementing material that hasn’t yet hydrated, forming new calcium silicate hydrates in the concrete matrix.

All of the “can-you-believe-this” hoopla in several similar articles is based on a study published in American Mineralogist. In the study, researchers drilled cores from several remnants of Roman marine structures that had been fully or partially immersed in seawater. Thin sections from the cores were examined using X-ray microdiffraction and Rayman spectroscopy to learn more about the structure of crystals in the cementing medium. The researchers hypothesized that the cement in Roman concrete grew aluminous tobermorite over thousands of years, after the initial reaction of volcanic ash and hydrated lime had ceased. Now they want to “reverse engineer” the products studied so modern concretes can grow aluminous tobermorite to achieve Roman concrete durability in marine structures.

We need to pause here, and note two facts that might explain the long-term performance of the Roman structures without any need for reverse engineering.

- Roman concrete structures contained no reinforcing steel. Gjørv said it best: “...it is not the disintegration of the concrete itself but rather chloride-induced corrosion of embedded steel which poses the most critical and greatest threat to marine structures.” Without reinforcing steel corrosion damaging the concrete, the service life would be expected to be longer.
- The structures were in a sub-tropical climate. That means no cycles of freezing and thawing—a common cause of concrete deterioration.

Finally, there’s a logical flaw in the study called “survivor bias.” It occurs when researchers concentrate on Roman concrete structures that made it past 2,000 years, and overlook those that did not, probably because of lack of visibility. As an example, during World War II, researchers from the Center for Naval Analysis conducted a study of damage done to aircraft that returned from missions. In order to minimize loss of aircraft, they recommended that armor be added to areas that showed the most damage. A statistician noted that the study considered only the aircraft that had survived their missions—the aircraft that had been shot down were not present for the damage assessment. The holes in the returning aircraft, then, represented areas where a bomber could take damage and still return home safely. He proposed that the Navy reinforce areas where the returning aircraft were unscathed, since those were the areas that if hit could cause the plane to be lost.

According to David McRanney: “When failure becomes invisible, the difference between failure and success may also become invisible.” Based on this observation, a different approach could be used to test the hypothesis that the presence of aluminous tobermorite was responsible for longevity of Roman concrete marine structures. Use information from ancient historians to locate sites of Roman marine structures that are now invisible. Then search the ocean floor at those sites to find remnants of Roman concrete. Examine the remnants for presence of aluminous tobermorite. If it’s found, the hypothesis may be incorrect, and a better one is needed. And if no aluminous tobermorite is found, it helps to support the researchers’ theory, but still doesn’t prove that Roman concrete was better than modern concrete, for reasons I’ve already mentioned.

References
5. https://youarenotsosmart.com/2013/05/23/survivorship-bias/
Connect at the ACI Concrete Convention and Exposition, Anaheim, CA

More than 2,000 engineers, architects, contractors, educators, manufacturers, and material representatives from around the world are expected to convene at the Disneyland® Hotel and Disney’s Paradise Pier® Hotel, Anaheim, CA, USA, October 15 – 19, 2017 for the American Concrete Institute’s Fall Concrete Convention and Exposition. Technical and educational sessions will provide attendees with the latest research, case studies, best practices, and the opportunity to earn Professional Development Hours (PDHs).

The Southern California Chapter of ACI is proud to host the convention this fall, as an opportunity to showcase the companies, projects, current events, and landmarks that inspire the convention theme of “Making Connections.”

Convention highlights include:

- Ward R. Malisch Concrete Construction Symposium
- International Workshop on Structural Concrete: Technology Advancement and Adoption in the Americas
- 13th International Symposium on Fiber-Reinforced Polymer Reinforcement of Concrete Structures
- International Lunch with special guests Jae-Hoon Lee and Hong-Gun Park
- Student Egg Protection Device Competition
- Inaugural Student Eco Concrete Competition
- NASA Centennial Challenge Demonstration
- Contractors’ Day Lunch with speaker Kent Estes
- 10th Anniversary ACI Concrete Sustainability Forum
- Third-Annual Excellence in Concrete Construction Awards Gala

Throughout the convention, ACI will hold over 300 committee meetings, 30+ technical sessions, an industry trade exhibition, networking events, and more. Registration is open online through September 25, 2017 and discounted rates are offered until September 17, 2017. To learn more about the ACI Convention and to register, please visit www.aciconvention.org.

Carolinans’ Construction Leaders Honored

Keith Wayne, CEO, Wayne Brothers, Davidson, N.C. was recently added to the Carolinas AGC Hall of Fame, honoring those who make extraordinary contributions over their careers to Carolinas AGC, the construction industry and the community.

Congratulations Keith!

Members no charge. Non-members $35; MC, Visa, Amex only. Call 866-788-2722 to register.