CONCRETEREPAIR May/June 2017 Vol. 30, No. 3 BULLETING

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CRB EDITORIAL DEADLINES

July/August 2017 – May 1, 2017 Theme: Sport Facilities

September/October 2017—July 3, 2017

Theme: Bridges and Highways

November/December 2017 - September 1, 2017

Theme: ICRI Project Awards



ON THE COVER: Historic Pizitz Building in Birmingham, Alabama. See page 16.



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NOTE FROM THE EDITOR



As the 2017 Construction season begins, ICRI is continuing to concentrate on Education and Development in the Concrete Repair Industry. This issue of the Concrete Repair Bulletin will focus on Updates to the Building and Repair Codes.

ACI 562-16 Code Requirements for Assessment, Repair, and Rehabilitation of Existing Concrete Structures and Commentary was updated last year. ACI 562 was developed to provide a standard for existing concrete structure assessment and durable repair design. Development of a concrete repair code was a key goal of the Vi-

sion 2020 program which identified strategies to improve concrete repair practice.

ICRI has developed and released *Guide Specifications for Structural Concrete Repairs* for engineers and designers to use with ACI 562 which is available to all members for free on the ICRI website.

The ICRI Certification Programs for Concrete Slab Moisture Testing and Concrete Surface Repair Technician are continuing to grow and are being held at various locations. New Certification Programs are being developed by the ICRI Certification Committee.

The 2017 Fall Convention will be held in New Orleans, Louisiana, this November and will have the theme of *Docks, Locks and Canals*. I strongly recommend that you attend the Convention and participate in the networking, technical and committee events. Being an active participant in ICRI at the local and national level can lead to increasing your knowledge, further career development, and many networking opportunities.

Jerry Phenney Editor, CRB

PRESIDENT'SMESSAGE



BRIAN DALEY

I am very lucky to live and work in a fantastic part of South Florida between Miami and West Palm Beach, so I am largely able to forget and ignore the challenges of winter weather. A stark reminder of Jack Frost's fickle behavior was provided to me and others who attended the ICRI Spring Convention in Montreal the third week of March. Some of us were fortunate to arrive ahead of

the snow storm which impacted much of the eastern US and Canada that week, but others were stranded in Cleveland, Toronto and even in the Montreal airport while in transit to the convention. Regrettably, these travel complications delayed some and prevented others—exhibitors and registered attendees—from making the convention at all. I'd like to express my deep appreciation to all those who endured challenges in their travels to attend the convention. I can tell you that the energy and enthusiasm of those many exhibitors and hundreds of attendees who did make the Montreal convention were fantastic and, ultimately, we had a hugely successful gathering. Attendees enjoyed multiple presentations focused on the convention theme *Bridges and Highways* and much good work was done in committee meetings on a variety of activities.

Applause is due to the Quebec Province Chapter that organized and hosted the Montreal social activities. A curling competition on Wednesday afternoon elicited much laughter and good-natured trash-talking, and we all knew there was a ringer in the mix when ICRI Past-President Garth Fallis showed up with his own personal curling broom. The Thursday evening dinner entertainment show, highlighted by a man doing a handstand ten feet in the air while playing the theme song from the movie *Top Gun* on a guitar shaped like a jet, set a standard for ICRI events that future convention



hosts will be hard-pressed to surpass. Like most ICRI member companies that work in northern climates, our organization found a way to deal with the winter weather and still succeed. Thanks are due as well to the entire staff of Ewald Consulting, and particularly to ICRI Executive Director Mike Levin and Convention Manager Erin Babarskis, who handled untold challenges resulting from the weather and allowed the convention to proceed nearly seamlessly.

As has been discussed for nearly two years, the four pillars of ICRI's Strategic Plan are Industry Leadership, Organization Strength, Professional Development and Organization Credibility. Most of us are in the process of ramping up our businesses to begin work on our backlogs for the spring, summer and fall of 2017, so our attention is pulled in many directions. However, it is critically important that in our rush to start projects and to generate billings, we do not overlook safety in all our workplace activities. In South Florida, there have been at least four construction jobsite fatalities in separate incidents during the last six months, as well as one highlypublicized event broadcast live on multiple Miami television stations where a swing stage collapse left a concrete repair contractor's worker hanging by his lanyard on the side of a building until the fire department was able to rappel down to him to effect an emergency rescue. Luckily that worker survived, but others have not, and their loss could almost certainly have been prevented. ICRI's Safety Committee contributes to multiple pillars of our strategic plan with its publications 120.1-2009, Safety in Concrete Repair Industry, as well as publication 120.1-2009S, the Spanish language version of that same guideline. Other ICRI guidelines, such as 410.1-2008, Evaluation of Masonry Façade Structures, discuss safety aspects of various building accessment methods as an integral part of the subject discussion. Guideline 320-5R-2014, Pictorial Atlas of Concrete Repair Equipment, and the Spanish-language version of the same publication provide safety instruction concerning choosing the right tool for a job. The safety of the workers performing concrete repair and related restoration work, the safety of the consultants and municipal inspectors evaluating that work, the safety of the residents and of guests of the structures where the work is being performed, and the safety of the surrounding community are all impacted by the attention to detail given to safety at the start of each project and at the beginning of every day. ICRI's safety guidelines and many other guidelines are available FREE in PDF version to ICRI members, so you are encouraged to use the ICRI online store to take advantage of these resources to educate yourself, your supervisory staff and all those who work in the field on concrete repair projects about safe jobsite practices.

Continued on page 4...President's Message





The new Simpson Strong-Tie® stainless-steel Titen HD® screw anchor delivers all the benefits of our high-strength Titen HD anchor and can now be installed in exterior and corrosive environments. Its innovative carbon helical-coil thread effectively cuts the concrete while significantly reducing the carbon steel in the anchor to maximize corrosion resistance.

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SIMPSON

Strong-Tie

Another ICRI activity toward our Strategic Pillars is the continued expansion of the certification programs (Professional Development). In addition to our long-successful ICRI Slab Moisture Testing Certification program, ICRI Technical Director Ken Lozen is coordinating with nearly 100 persons so far this year to take the new online ICRI Concrete Repair Technician Certification program. ACI 562 Concrete Repair Code addresses certification of persons involved with concrete repairs, so far-sighted companies and individuals are getting ahead of the requirement prior to the code becoming law by acquiring ICRI's Surface Repair Technician certification now.

Toward our pillar of Organizational Leadership, ICRI officers and staff are expanding outreach to create partnerships and cooperative efforts with numerous organizations with related interests and possible synergies. By the next publication of the CRB, I hope to be able to announce specifics on cooperative efforts with a number of other organizations and associations for information-sharing as well as possible joint initiatives which will continue to add value to ICRI membership.

More and more, building owners, managers and design professionals whose buildings require concrete repair and restoration services see the benefits of working with ICRI member companies. The guidelines and standards created by ICRI, the safety information published by ICRI, the education and certification of skills provided by ICRI—all contribute to superior projects. Demand for services by ICRI member companies has resulted in an increase of more than 10% in our membership in the last year. As we enter what for most of us is the busiest time of our year, ICRI publications, products and services can help improve each member's market position. Here's wishing all of you a safe and successful Summer of 2017.

Respectfully,

Brian Daley 2017 ICRI President

ICRIINFORMATION

UPCOMING ICRI DATES & EVENTS

UPCOMING CERTIFICATION CLASSES

Concrete Slab Moisture Testing Certification Program

• September 27-28, 2017 - Baltimore, Maryland area

2017 PROJECT AWARD ENTRIES

Submissions Due

• June 1, 2017

2017 ICRI FALL CONVENTION

November 15-17, 2017

Theme: "Docks, Locks and Canals"

Hyatt Regency New Orleans, New Orleans, Louisiana *Call for Presentation Deadline:* June 30, 2017

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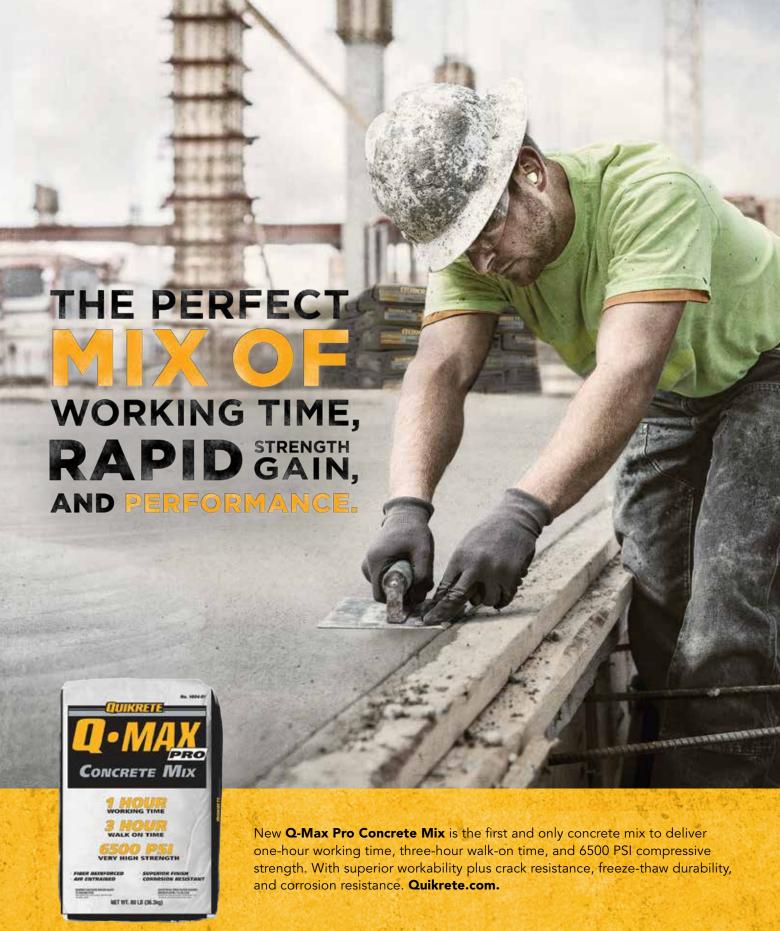
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ICRI would like to thank all of our Supporting Members, whose dedication to ICRI is greatly appreciated. Their continued support has greatly enhanced programs both within ICRI and the concrete repair industry as a whole.

TACTALK

CAUSEWAY: ICRI'S NEW COMMITTEE SOFTWARE



FRED GOODWIN

ICRI has introduced a new software tool to assist with management of our technical activities called Causeway. Causeway is a platform that allows secure collaboration for the International Concrete Repair Institute, including balloting, secure document repositories for file sharing, email distribution lists, discussion boards, calendars, wikis, polls, and more. Access to Causeway for technical committee members is very simple (provided you are a technical committee member). From the ICRI site homepage, http://www.icri.org/, select **Committees** below the ICRI logo. In the dropdown list, you will see a selection **ICRI Committee Work Access**. Click on this text. You will be directed to another page "Member Login." If you've never created an ICRI account and this is your first time logging onto the ICRI website, take a moment to register as a user. If you have already reg-

istered on the ICRI website, then just enter your email

address in the Username field and your existing ICRI password in the password box. Click **Remember Me** to avoid having to reenter everything the next time you use the site. Note that access is currently for technical committee members and the Secretariat, but will likely be expanded to include administrative committees and the Board of Directors soon. If you are not currently a member of an ICRI technical committee, you can select **Join a Committee** in the dropdown list under **Committees** to complete an application for joining a specific committee.



Again, clicking on the dropdown **ICRI Committee Work Access** link, you will also find links to a webinar for training on how to use Causeway, as well as a PowerPoint presentation showing some of the features of the program. After going through the training, you can click the yellow button **Committee Work Access** and this takes you to the Causeway site. In the Causeway site, the first thing to do is click on **User FAQ**. Here you can find the needed information to complete or edit your profile (appears in the fine print **My Profile** on the top of the web page) that was downloaded from the ICRI website. After verifying the information or changing to suit your preferences, click the button **Home**. On the left scroll box is a list of committees where you are a member. Clicking on any of the listed committees brings you to that committee's page.

When the committee page opens (each committee is listed with the name and number, along with subcommittees), you will see boxes labeled *Committee Documents*, *Committee Discussions*, *Committee Calendar*, *Committee Voting*, *Committee Tasks*, and *Committee Details* (see below). Each of these boxes has a list of the most recent contents as well as buttons to "do things" at the bottom of each box.



Continued on page 23...TAC Talk

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SECRETARIATUPDATE



By now you have likely heard of the new group within ICRI called the Secretariat. We were formed to improve your ICRI experience by supporting ICRI national committees through improved communication as well as making the national ICRI organization open and accessible to all ICRI members with our new IDEA submittal program.

The IDEA program is the cornerstone of the Secretariat's efforts. The IDEAS are recommendations, thoughts, or simply ideas on how we can better the organization and the repair industry. Currently, any ICRI member can access the IDEA form on the ICRI website under the Secretariat tab found in the Committee section. In order to submit an IDEA, all you need to do is fill in the blanks for the two-page document and click submit. The IDEA form goes directly to our emails. We then place that IDEA on the agenda for our next monthly meeting. The hope is that the submitted IDEA becomes an INITIATIVE for the Secretariat to introduce to the ICRI organization on behalf of the submitter. A Secretariat member is assigned to each INITIATIVE to ensure the proper ICRI committee or committees follow through until

completion. While we cannot guarantee every IDEA becomes an INITIATIVE, we can guarantee that all IDEAS will be heard and anyone who submits an IDEA will receive a written response from the Secretariat. We believe that all members should have a say in the direction of the organization. Through the IDEA program, we can ensure that everyone now has a voice.

Currently, the Secretariat has 18 initiatives running through the ICRI committees. After the last convention we received an additional 9 ideas to review at our next conference call. A few of those ideas include:

- Developing a New Safety Award for our Awards Committee
- Creating a Master ICRI Calendar for all educational projects in development within ICRI committees
- Creating a Social Media Plan for promoting ICRI

We look forward to receiving many more IDEAS from our fellow ICRI members. If you have any questions regarding the Secretariat or the IDEA program, please feel free to contact any of the Secretariat members.

Sincerely, your ICRI Secretariat









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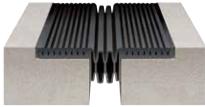




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ACI 562-16: The ACI Concrete Repair Code

BY KEITH KESNER AND KEVIN CONROY

INTRODUCTION

In 2006, an American Concrete Institute (ACI) technical committee began working on the development of a building code for the repair of existing concrete structures. The committee published the first version in 2013 (ACI 562-13), and an updated version (ACI 562-16¹) in 2016 (Fig. 1). The Code Requirements for Assessment, Repair and Rehabilitation of Existing Concrete Structures, was

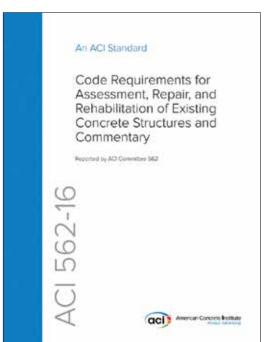


Fig. 1: Cover of ACI 562-16 document

developed by design professionals, repair contractors, material suppliers and academics to provide a standard for existing concrete structure assessment and durable repair design. Development of a concrete repair code was a key goal of the Vision 2020² program which identified strategies to improve the concrete repair practice.

ACI 562-16 was developed to be integrated with the current US general building codes for existing structures, such as the 2015 Inter-

national Existing Building Code (IEBC 2015³), and the current ACI code for design of new concrete structures (ACI 318-14⁴). To provide a clear delineation between new and existing construction, ACI 562 defines an existing structure as a structure for which a legal certificate of occupancy has been issued.

Some of the challenges in the development of a concrete repair code included:

 Development of rational standards to identify when existing structures are unsafe or in need of strengthening;

- Development of code provisions that improve the performance of repaired structures without limiting solutions;
- Development of a code supported by design professionals, contractors and other code users:
- Integration of the ACI 562 code with existing general building codes; and
- Adoption of the code by reference into the general building codes.

DEVELOPMENT OF ACI 562-16

The process of creating the ACI 562 Repair Code started with the selection of a performance-based code in lieu of a more traditional prescriptive framework. A performance-based document allows design professionals creativity and flexibility in the assessment and repair design process, while providing necessary levels of structural reliability. A second major consideration was to create a standard that works both in jurisdictions with the IEBC and functions as a stand-alone code where no general existing building code exists.

The IEBC is the most commonly adopted general existing building code in the US and provides general requirements that specify when an existing structure needs to satisfy current code requirements or can be repaired. ACI 562-16 provisions were developed to be consistent with these requirements.

Because ACI 562-16 is a performance-based code, the detailed commentary provides guidance and references to the user on how to satisfy the intent of the provisions. The following sections describe some of the requirements, unique to ACI 562-16, that supplement requirements contained in the 2015 IEBC.

The development of ACI 562-16 included a review of terminology for consistency with documents produced by the American Society of Civil Engineers (ASCE) and the International Standards Organization (ISO). The terminology changes adopted into ACI 562-16 (Stevens and Kesner, 2016a⁵) were intended to provide code users a consistent framework when working with documents from different sources.

Unsafe Structures

A key question in the assessment of damage to existing structures is, when should an existing structure be considered unsafe and in need of immediate shoring or other measures to protect the public? The obvious definition of an unsafe condition involves situations where loose materials are present and represent a falling debris hazard. Situations can also exist where the extent of damage to the structure (from deterioration, design errors or construction defects) is sufficient to create an unsafe condition under service loads. To provide clear direction to design professionals in these situations, a demand / capacity ratio was developed, using reliability principles, to determine when a risk of collapse exists under service load conditions (Stevens and Kesner, 2016b6).

Assessment of Existing Structures

Assessment of existing structures can be a significant challenge, particularly when limited or no information is available regarding the as-built construction. In ACI 562-16, the assessment requirements are performance-based and take into account the in-situ condition of the structure. Investigation and structural evaluation are required when the structure exhibits signs of deterioration, damage, or behavior inconsistent with available design and construction documents. The performance basis of the provisions allows the design professional to determine the extent of evaluation required. In many durability-driven repair projects, when the capacity of the structure is not in question, a structural evaluation may not be required.

To assist design professionals in the evaluation of in-place concrete compressive strength and reinforcing steel yield strength, historic material properties (adopted from ASCE 41-13⁷) are included in ACI 562-16. These generally conservative values are determined based upon the structures initial construction date, and are intended to provide values to be used in preliminary analyses or to help reduce costs associated with material testing. ACI 562-16, consistent with Chapter 27 of ACI 318-14, does allow for higher strength reduction factors (providing higher capacities) when in-place geometry and material strengths are confirmed by testing.

As an alternative to (or to supplement) traditional analyses, load testing in accordance with ACI 437.2-138 is permitted by ACI 562-16 to evaluate the strength of existing structures. The ACI 437.2 standard was selected as it was specifically developed for use on existing structures and includes criteria for acceptance based upon either monotonic or cyclic testing results.

Design of Repairs

ACI 562-16 requires design professionals to satisfy strength requirements and to consider durability in repair design. Design of structural repairs using ACI 562-16 is based upon traditional concepts of satisfying minimum strength and serviceability requirements. The required design strength for a repaired structure or member will be based upon the requirements of the design basis code. The design professional determines the design basis code during the initial phases of the assessment; it is typically the ACI 318 version that is in effect during original construction. The user also has the option to design the repairs to comply with the current version of ACI 318. ACI 562-16 is the first document that permits the use of fiber reinforced polymer (FRP) materials in repairs, when the FRP is designed in accordance with ACI 440.6-089.

ACI 562-16 also includes provisions that are unique to repair such as the evaluation of the interfacial bond of repair materials, repair detailing to minimize the potential for cracking, consideration of the repair sequence, and the interaction of the repaired areas with the non-repaired portions of the structure. These provisions were developed based upon the experiences of the ACI 562 committee members and various ACI and ICRI guide repair documents (referenced in the commentary to ACI 562-16).

Interfacial bond failure is a common cause of concrete surface repair failure. ACI 562-16 includes revised criteria for the interfacial bond strength provisions (Brewe, et al., 2016¹⁰) introduced in ACI 562-13. These provisions assess the required strength between a cementitious repair material and a concrete substrate. The ACI 562-16 provisions were developed from the horizontal shear strength provisions in Chapter 16 of ACI 318-14.

The provisions require the design professional to evaluate interfacial shear stress demand between a repair and substrate. Based upon the shear stress (v_u) , different levels of reinforcement and quality assurance testing are required as summarized in Table 1. At low bond stress demand levels, hammer sounding or other acoustic methods can be used to confirm repair bond integrity. At higher demand levels, quantitative methods such as tensile pulloff

Table 1: Bond Testing and Interface Reinforcement Requirements in ACI 562-16

Bond Stress (v _u)	Interface Reinforcement Required	Quality Assurance Required
Less than 0.21 MPa	No	Bond integrity testing
0.21 to 0.41 MPa	No	Quantitative bond strength testing
Greater than 0.41 MPa	Yes	Quantitative bond strength testing

bond tests (Fig. 2) are required. Bond testing requirements are waived when v_u is entirely resisted by interface reinforcement.

ACI 562-16 also requires consideration of durability in the design of repairs. Durability in new construction is obtained through prescriptive



Fig. 2: Pull-off bond testing equipment

requirements related to minimum amounts of concrete cover, air content and water/ cementitious materials ratios. In contrast, durability of repaired structures is a function of the characteristics of the repair materials, quality of surface preparation prior to repair, the substrate condition, and interaction of the repair material with the substrate.

sions is to reduce the

potential for future

deterioration (Fig. 3)

adjacent to the repair

areas (anodic ring

effect). Provisions

also instruct the

design professional

to consider the

impact of cracks,

concrete cover, and

surface treatments

on the expected

durability of

repaired areas. Sim-

ilar to the structural

design provisions,

the commentary provides a detailed

source of informa-

tion on how durable

repairs can be

obtained.

Ideally, the durability aspects of the repair design will include consideration of the desired service life of the repaired structure. However, the provisions are not intended to establish a minimum service life. A primary goal of the durability provi-



Fig. 3: Sacrificial anode installed within concrete repair area

Quality Assurance and Maintenance Requirements

General building codes contain special inspection requirements (distinct from quality assurance requirements) for testing of concrete materials in new construction, and these requirements typically include a number of concrete tests based on the volume of concrete placed. In addition to special inspection requirements, a quality assurance program is required to be included in repair construction documents. The commentary to ACI 562-16 provides a listing of items that the design professional can include as part of a quality assurance program. The design professional also has the ability to specify additional testing, such as tensile bond strength testing when required.

ACI 562-16 includes requirements for the design professional to document and notify the Owner of future maintenance requirements for the repaired structure. While the design professional has no control over the timing and frequency of future maintenance, these provisions are intended to make the Owner aware of the need for maintenance to prolong the life of existing structures.

CURRENT STATUS OF ACI 562-16 ADOPTION

In 2016, representatives of ACI and other industry organizations tried to get ACI 562-16 adopted by reference into the 2018 IEBC. Unfortunately, the proposal to adopt ACI 562-16 into the 2018 IEBC was not approved, despite broad support from the structural engineering and concrete repair community. The ACI 562 committee is currently working to incorporate feedback received during the code adoption process into the next version. The 562 committee is also working on adoption of ACI 562-16 into state and municipal building codes, and into the regulatory standards of other groups.

As a published standard, ACI 562-16 establishes a standard of care for design professionals involved with repair of existing concrete structures consistent with IEBC requirements. Use of ACI 562-16 in US concrete practice is expected to help design professionals develop sustainable solutions that improve the performance of existing structures and limit the cost of future repair programs.

GUIDE TO THE ACI 562-16 REPAIR CODE

To assist design professionals in how to use ACI 562-16, ACI/ICRI 562MAN-16¹¹, *Guide to the Code for Assessment, Repair, and Rehabilitation of Existing Concrete Structures* (Fig. 4) was jointly developed by ACI and ICRI. The guide provides plain language explanation and context to the provisions in the code, including how to work with the IEBC. The guide also includes five worked example

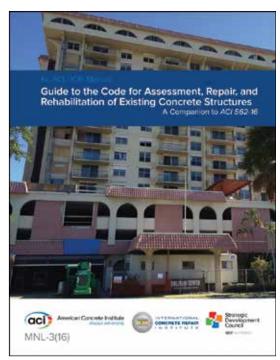


Fig. 4: Cover of guide for the use of the ACI 562-16 document

projects, which provide step-by-step descriptions of how to use the code from evaluation through construction quality assurance. The worked example projects were selected to represent common types of concrete repair projects.

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involved a range of material types, including cast-in-place, precast, and posttensioned concrete, granite, marble, steel, and timber. Kevin has led major projects involving structural rehabilitations, strengthening of existing systems, and repairs to existing building envelopes.

Conroy is a member of both ACI and ICRI. He is a member of ACI Committees 562, 546 Repair, and 364 Rehabilitation. He has served on ICRI Committee 150 Notes on the ACI 562 Repair Code and its subcommittee on Chapter 7 Design and Structural Repairs.

Repurposing and Repair of Historic Pizitz Building

BY RICK BROADHEAD

The Pizitz Building, with seven stories above ground plus a basement and sub-basement, was once Birmingham, Alabama's largest department store, occupying one-fourth of a block in the heart of the city (Fig. 1). A mezzanine around the perim-



Fig. 1: 1930s view of Pizitz Building (note trolley cars)

eter above the first floor provided restaurant space looking over the main shopping floor. The western half of the building was completed in 1923, and after demolition of the original Pizitz store, the eastern half was completed in 1925.

The structure was framed by rein-

forced cast-in-place concrete consisting of columns, beams, girders and pan joist floor slab system. The north and east exterior wall elevations facing public streets were veneered with architectural terra cotta masonry units (Fig. 2). These walls had numerous operable punched windows, as



Fig. 2: Ornate terra cotta corbels at roof line

shown in Figure 1. The south exterior wall elevation facing an alley and the west exterior wall elevation adjoining a twostory building (recently demolished) had brick masonry infill between the concrete structural frame, with no win-

dows. All floors were open spaces used for retail layout, with lateral (wind) load resistance provided by the concrete frame and exterior walls. A large tank on the roof near the west edge guaranteed water supply, and concrete beams below the tank were reinforced to support the additional loads. An elevated walkway crossed the alley at the 4th floor to an eight-story parking deck at the opposite corner of the block. As modern shopping centers were developed in the Birmingham suburbs, Pizitz closed this downtown store in the 1980s, after which it sat empty for nearly 30 years.

A new Owner purchased the building with the intent of converting it to condominium residential use, but the work was delayed by the 2008 recession. Work finally started in 2014, and was completed in early 2017 while tenants were already occupying the building.

As the building has been designed for mixed occupancy, it is a repurpose of use. The new design calls for the ground floor to include retail space, two restaurants, and an upscale bar, with food stalls on the mezzanine. Second through seventh floors will be condominium residential spaces, with two theaters squeezed into the second floor. To provide sunlight entry for the units, six structural floor framing bays in the center of the building were removed from the roof down to the second floor to create a light well that introduces natural light into the interior apartments. All the windows on the north and east sides were replaced to match as closely as possible the historical nature of the old windows. Large new windows with hints of the existing window architectural features were created for each apartment along the south (alley) side of the building, while numerous new windows were cut into the west side. Recreation facilities and meeting rooms are on the roof, along with a swimming pool placed where the old water supply tank was located. Several bays of vertical X and chevron-shaped bracing were added to resist codeprescribed wind and seismic lateral loads and enable the removal of the structure at the light well and the insertion of windows in the west and south exterior walls. The parking deck is also being repaired and will serve that same purpose for the new residents and visitors to the building.

A visual-only condition investigation of the building and parking deck was conducted during the design process. This survey revealed a number of cracked and missing pieces of terra cotta veneer (Fig. 3 and 4) and several locations of extensive spalls with exposed reinforcing steel in structural members (Fig. 5 and 6). Deficiencies in the terra cotta veneer, related water management systems, and structural concrete material had permitted water intrusion, which corroded column reinforcing that led to spalling in a number of structural members of the building and the parking deck. Accordingly, repairs to the deteriorated concrete members were designed; however, a more detailed analysis of terra cotta veneer cracking and support



Fig. 3: Cracked terra cotta above windows at north face



Fig. 4: Terra cotta face exploded by rusted anchor



Fig. 5: Spalled concrete column at northwest corner

connections to the existing structure was needed to provide further information and evaluation. This study revealed that the terra cotta and brick veneer units, both a clay material, had expanded over time due to moisture absorption, which is common after the kiln-drying process. Meanwhile, the concrete structure had experienced moisture loss during curing and dead load "creep," a shortening effect due to sustained loading. The terra cotta veneer was originally constructed without any horizontal or vertical expansion joints, which are needed to accommodate volume changes in clay masonry and thermal influences. Some of the cracking and spalling of the terra cotta and brick are a result of having no provision for volume changes in construction materials (differential movement).

As masonry units were removed, the existing terra cotta supports were observed. The vertical supports were located near the window heads at each floor level and typically consisted of continuous steel shelf angles fastened to the concrete frame with embedded anchors. The western half of the building utilized only shelf angles for direct support of the terra cotta veneer units, while the eastern half of the building utilized continuous steel angles to support hooked steel hangers and horizontal steel rods that provided a suspended support system. Several deficiencies were discovered in the existing terra cotta support systems that contributed to the deterioration of the terra cotta. Water intrusion introduced by terra cotta deterioration led to corrosion of steel supports that ranged from mild to severe in some locations (Fig. 7) throughout the two exterior elevations of the building.



Fig. 6: Spalled concrete girder at interior floor

It was also discovered that the reinforced concrete perimeter spandrel beams/girders were constructed with a 4-inch (102 mm) inward offset from the outer face of structural columns. This framing condition



Fig. 7: Corroded shelf angles supporting terra cotta veneer

created areas on each side of exterior building columns where the terra cotta veneer had no direct vertical support by the shelf angles. The result was stacking of terra cotta for five floor levels without relief from intermediate supports. Significant distress and spall of the terra

cotta units at the lowest floor level support was observed. Two options were proposed to remediate deficiencies in the terra cotta support systems. One option was to install specialty steel grouted anchors, which are designed for support of vertical and lateral loads. These anchors are installed by core-drilling through the structure and into the terra cotta units, then pressure grouted to fill a proprietary sock that expands for bearing support. A select number of anchors were designed and a construction mock-up was implemented to determine feasibility and gain insight into constructability. It was discovered that the existing concrete structural reinforcing steel was highly congested in many areas where the anchors were to be placed, and that moving forward with this method of support would result in higher remediation costs, including project schedule delays due to having to "fish" for adequate free space between rebar for the anchor holes. The second option was to remove terra cotta units, shore units above, and install new steel shelf angles. A typical shelf angle was designed for the remediation of supports at the column pilasters, and a mock-up was constructed. Based on results from the mock-up construction, it was decided to use the second option of supporting the terra cotta at column pilasters with new shelf angles (Fig. 8). Repairs were provided for minor damage to tiles and recast to match those terra cotta pieces that were too damaged to repair in place, including detailed and ornate friezes along the roof edge.

A complete third-party review of the roofing and building envelope design was also conducted for the building. Cracking and spalling was found in the brick masonry piers between windows on the



Fig. 8: New shelf angles supporting terra cotta veneer

north and east sides, which would have created problems with anchoring the new windows. Some of the window lintels also exhibited rebar corrosion and spalling of the concrete cover (Fig. 9). A remediation design was developed and details provided for constructing structural reinforcement for the head, sill and jambs (Fig. 10). Observation of roof and basement waterproofing installation was provided, as well as water and air testing of sampled window installations.



Fig. 9: Rusted rebar caused spalling at window lintel



Fig. 10: Repaired window lintel and brick pier

A team effort was required to provide the design, management and construction services to restore the Pizitz building and parking deck to its former glory for a completely new use, as shown in Figure 11. As residents purchase the condos and become acquainted with their new homes, and city residents and visitors find the international restaurant cuisine worthy of a destination visit, we expect another 90 years of wonderful service to its new "customers" in downtown Birmingham.

Pizitz Building Restoration and Reuse

Birmingham, Alabama

OWNER

Bayer Properties, Inc.

Birmingham, Alabama

ARCHITECTS

SCHEMATIC DESIGN:

Wisznia Architects

DESIGN DEVELOPMENT AND CONSTRUCTION MANAGEMENT:

KPS Architecture

Birmingham, Alabama

STRUCTURAL ENGINEER

LBYD Consulting Engineers
Birmingham, Alabama

SPECIALTY REPAIR AND BUILDING ENVELOPE ENGINEER

SKA Consulting Engineers

Birmingham, Alabama

GENERAL CONTRACTOR/CONSTRUCTION MANAGER

Brasfield & Gorrie

MASONRY AND TERRA COTTA SUBCONTRACTOR

Masonry Arts

Bessemer, Alabama



Fig. 11: Restored building just prior to completion



Rick Broadhead, PE, is director of SKA Consulting Engineers' Birmingham, Alabama office. He has spent 43 years as an engineer designing, investigating and managing construction in the structural, civil and building envelope disciplines for both new

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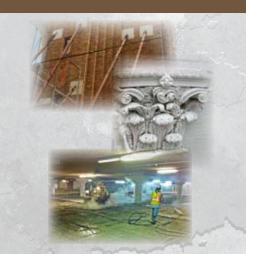
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Effective Bearing Area Estimation of Structural Grouts

BY SUE ISBLE AND FRED GOODWIN

Introduction

Machinery grouts, also known as "structural" or "base plate" grouts, provide the vital link between equipment bases and the concrete foundation in order to transfer static and dynamic loads from equipment into the earth. The concrete foundation cannot be made sufficiently smooth and level to accomplish direct load transfer, so a gap is commonly left between the base plate and the foundation. That gap is subsequently filled with machinery grout. To accomplish this filling, the grout must be able to flow into the gap and harden into a strong layer in intimate contact with both the equipment base plate and the foundation.

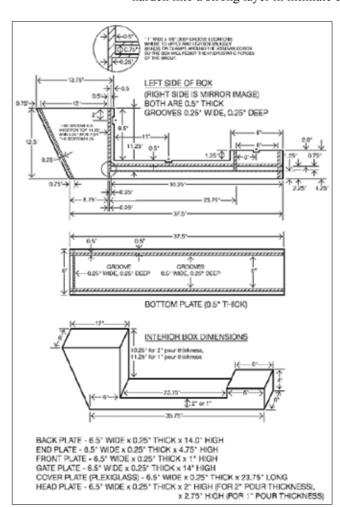


Fig. 1: ASTM C1339 flow box (dimensions are in inches). Reprinted, with permission, from C1339-02(2012) Standard Test Method for Flowability and Bearing Area of Chemical-Resistant Polymer Machinery Grouts, copyright ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428 (a copy of the complete standard may be obtained from ASTM, www.astm.org)

There are two common types of machinery grout based on either cementitious or polymer binders. Standard ASTM test methods may be used to determine the mixed consistency and strength development of either type of grout. Application simulation may be conducted using ASTM C1339, Standard Test Method for Flowability and Bearing Area of Chemical-Resistant Polymer Machinery Grouts.

The performance of this type of grout is determined using a measurement known as "effective bearing area" (EBA) that is usually determined visually, comparing to drawings from ASTM C1339¹. This article describes an improved procedure for more rapidly and accurately estimating the EBA using a photographic technique.

Test Method

ASTM C1339 is written with polymer-based grouts in mind, but can be adapted for cementitious grouts. Essentially a head box hopper is filled with a defined amount of mixed grout. After a resting period of 5 minutes, grout is permitted to flow under hydraulic pressure from the head box into a shallow plastic trough with a clear plastic cover plate. The time it takes for the grout to flow and completely contact the cover plate (fill time) and to contact the end plate of the trough (flow time) is measured. This simulates how grout would be installed under a base plate; the trough represents the area between the foundation, and the cover plate acts as the base plate. A drawing showing the ASTM C1339 test method is shown as Figure 1.

After determining the fill and flow times, the grout is allowed to harden. The hardened grout is then demolded by disassembling the flow box, and the surface under the clear cover plate is wire brushed to expose air bubbles and voids trapped at the grout surface. The percentage of contact area is visually estimated using drawings from ASTM C1339 for

comparison (Fig. 2). ASTM C1339 states, "Because of the limited accuracy of this determination, the suggested classifications are: high—greater than 85%, medium—70 to 85% and low—less than 70%."

It is obvious that a great deal of subjectivity exists in estimation of EBA using the method as described in ASTM C1339. For comparison, a photograph of an actual test specimen from ASTM C1339 is shown in Figure 3. What is your estimate of EBA for this specimen?

There are better methods to estimate the EBA. Gridding off the exposed area and performing a point count could be very precise depending on the fineness of the measurement, however, this is quite time consuming for a 6 in x 24 in (152 mm x 610 mm) area. Alternatively, after completing the wire brushing described in ASTM C1339, the exposed voids may be filled with a contrasting colored powder. This has been done to emphasize the voids in the photograph in Figure 3.

The exposed area can then be photographed. The photograph is opened in any software capable of displaying a histogram, and converted to a pure black and white image. (In this example, Photoshop Elements was used.) A histogram of the specimen from Figure 3 is shown as Figure 4 in the orange box and enlarged in the right hand photo. The histogram divides the range of gray into 256 shades graphed along the x axis, and the y axis shows the number of pixels in each shade.

The image is then adjusted to be pure black and white using the triangles below the histogram output levels or, alternatively, the eyedropper tools as shown in Figure 5. It is important to watch the photograph as these changes are made because shadows, reflections or other information may be interpreted incorrectly if these adjustments are not done with care.

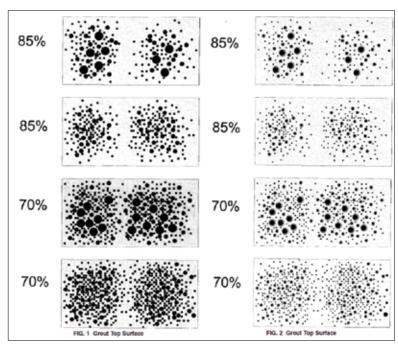


Fig. 2: Visual comparison guides for EBA estimation from ASTM C1339. Reprinted, with permission, from C1339-02 (2012) Standard Test Method for Flowability and Bearing Area of Chemical-Resistant Polymer Machinery Grouts, copyright ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428 (a copy of the complete standard may be obtained from ASTM, www.astm.org)



Fig. 3: Photograph of specimen for EBA estimation per ASTM C1339.

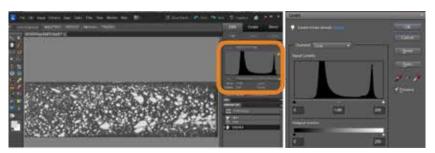


Fig. 4: Photograph of wire brushed ASTM C1339 specimen filled with contrasting color powder and histogram of shades of gray (the voids have been filled with white powder because the grout is dark gray)

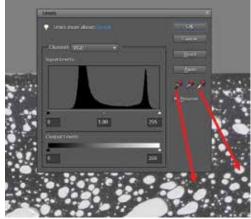


Fig. 5: The input levels or eyedropper icons can be used to select pure black and white areas

After adjusting levels, the peaks on the histogram are now at the far left and right of the graph; however, there are still some gray areas as shown on the left of Figure 6. Using the "Posterize" feature with two levels forces the image into pure black and white. If areas of voids disappear, reselect the black and white endpoints in Figure 5.

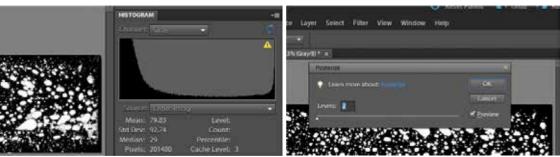


Fig. 6: Histogram after level adjustment (left) and Posterize function (right) with two levels selected

Once this is done, hover the mouse cursor over the leftmost point near pure black. The percentile is the EBA or percentage of black in the image (Fig. 7) where the cursor is about level 16. The percentile in this example is 66.09%, but probably should be rounded between 65% and 70% based on the authors' experience with different operators, repetition of photographs of the same sample, etc.

The above method, although believed to be more precise than the visual comparison of the images in ASTM C1339, is still subject to photograph quality and careful selection of the software parameters. Some examples of poor quality photographs are shown in Figure 8.

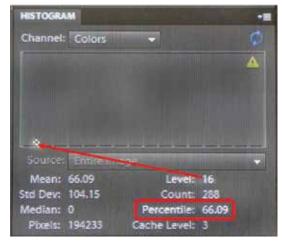


Fig. 7: Hover the cursor over the histogram near pure black (about level 16 in this example). Read the EBA in Percentile as shown in the red box

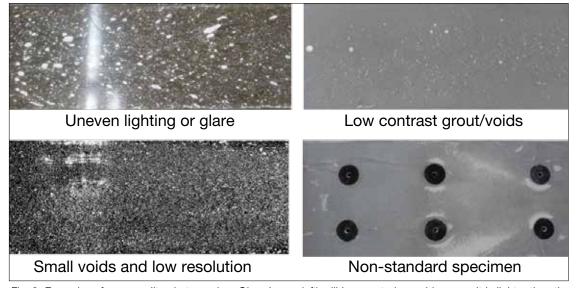


Fig. 8: Examples of poor quality photographs—Glare (upper left) will be counted as void area as it is lighter than the grout; Low contrast between the grout color and voids (upper right) will make it difficult to discern the difference between voids and grout; Low resolution photographs of small voids (lower left) create similar problems to low contrast; and Non-standard specimens (lower right) cannot be properly evaluated in their entirety

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Conclusion

In summary, this method for estimation of effective bearing area of machinery grouts seems to produce more objective results as well as provide a documented record of the results from the estimation in the form of a photograph. The equipment and software are in common usage and the techniques to manipulate the images are not difficult. This procedure will be described in detail in a document being developed by ICRI 320 Materials and Methods Committee, *Guideline for Structural Grouts Material Data Sheet Protocol*.

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Sue Isble is a Scientist in Product Development at BASF Construction Chemicals. She is a Chemical Engineer with over 25 years of experience in the construction chemicals industry, including product development, testing, and technical support of grouts, flooring, and concrete repair materials. She has been

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Fred Goodwin is a chemist with over 30 years of experience in the construction chemicals industry, has been with BASF and predecessors for over 28 years, and currently heads the BASF Construction Chemicals Global Corrosion Control Competency Center. He is a member of ICRI, ACI, ASTM, NACE, SDC, and

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TAC Talk continued from page 8

In *Committee Documents*, you can upload documents for posting (such as minutes and agendas), as well as view documents (including archived information from the old ICRI site dating back several years with folders for minutes, agendas, drafts, ballot results, and correspondence) by clicking on the *Committee Documents* title. Enter a revision number to a document being uploaded where both the old and new versions will be accessible.

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In *Committee Tasks*, you can assign tasks to committee members or subcommittees and have reminders sent. I will skip discussing the Wiki option for now, but the Secretariats are using it with more news to come on that feature later.

In Committee Voting, you can initiate ballots with several options for balloting (such as the Affirma-

tive, Affirmative with Comment, Negative, and Abstain) as well as multiple choice and Yes or No, etc. Unfortunately, at this time, all voting and consulting members are treated the same—so if you have an official ballot where you only want votes from voting members and only comments from consulting members, these will have to be treated as two separate ballots. One of the best features of Causeway is that nothing is ever completely deleted, and can be retrieved with a little help. Emails are also stored and sent.

In summary, Causeway is a useful tool for technical committees. It has features and functions that we have not yet completely explored, but the committees that have begun using it have responded favorably. Finally, if you want to explore, there is a TEST COMMITTEE where you can try things without creating any issues with your current committee page. Have fun and let me know if staff or I can be of assistance.

Fred Goodwin is Chair of the ICRI Technical Activities Committee (TAC).

CHAMPIONS OF SAFETY: Viewpoints from Leaders in the Concrete Repair Industry

BY ICRI Committee 120, Environmental Health and Safety



What is a Champion of Safety? Is it an individual or a company? Actually, it can and should be both. Individuals can be safety champions and foster a safety environment within their company, family and neighborhood. Companies should always instill a safety culture ensuring that their employees know

that safety is of upmost importance. Safety does not just stop when the workday ends or when a dangerous job is complete, but is a process of continuous improvement. Improvements are made by both companies and individuals, working together to create the safest possible environment.

Recently, the ICRI Environmental Health and Safety Committee asked representatives of three different companies a series of seven safetyrelated questions. The committee wanted to determine how these divergent companies viewed and valued safety. The three companies were: Wiss, Janney, Elstner Associates, Inc. (WJE); Structural Group Inc. (SGI); and Rampart Hydro Services, LP (RHS). WJE is an interdisciplinary consulting firm founded in 1956 to solve structural, architectural and materials problems in all types of new and existing structures. WJE professionals are routinely at a spectrum of client facilities, structures and active construction sites across the US and internationally. SGI is a group of specialty construction companies that build and maintain structures and infrastructure. With offices throughout the United States and some member companies founded in 1902, SGI provides services to a variety of industries. RHS is a specialty subcontractor performing hydrodemolition and surface preparation. Founded in 1987, RHS rehabilitates reinforced concrete structures throughout the United States and Canada.

Kevin Michols, Principal, provided WJE's perspective. Scott Greenhaus, Executive Vice President & Chief Risk Officer, provided answers for SGI. Patrick Winkler, Senior Vice President, answered for RHS.

Let's see how these three individuals responded to the following questions:

1. Why does your company place so much emphasis on safety?

Michols: There has been an emphasis on safety at WJE since the day the company was formed in 1956. Simply stated, providing staff with good safety information, proper techniques and appropriate equipment is the right and responsible thing to do. WJE is committed to creating an enjoyable and fulfilling work environment for each of its employees. A safe work environment is an essential element to an enjoyable work experience and a fulfilling career.

Another reason for our emphasis on safety is that while some of our projects and hazard exposures might be considered repetitive, we regularly perform a wide variety of work tasks under a very wide range of circumstances. The range of hazards we encounter are so diverse that simple or traditional sets of rules are often insufficient.

Therefore, we focus on awareness of potential issues in addition to rules and regulations.

Greenhaus: Safety is a core value at SGI. That means safety is a part of everything we do in the company and in our lives, in the office, in the field, and at home and play. As a company, we are only as successful as our people and for them to perform at their best, they need to know that they are cared about and that their well-being is never compromised. We believe we have a responsibility to ensure that all of our people go home to their family and friends, free from injury.

Winkler: We care about our employees at RHS and their families. We understand the cost of safety:

- · Reputation;
- Insurance rates/insurability; and
- Unable to work for customers due to poor safety record.

2. Was there anything in your career or company history that caused you to value worker safety higher than other values?

Michols: Going back to 1956, our history suggests that we've likely never valued anything above worker safety. As part of our business, WJE performs investigations of structural problems, collapses and other accidents. This kind of work—investigating and understanding the facts associated with misfortunes and tragedies—certainly causes one to pause and be reminded of the importance of safety.

Greenhaus: Having been in the construction business for 35 years, I have seen my share of the turmoil and pain that can be caused when safety is not held to the very highest requirement. The physical and emotional pain that is experienced with serious injury and workplace fatalities is extreme and can affect so many people in so many ways. In almost all cases, these incidents could have been prevented. It is our duty to do all we can to ensure that our people and their loved ones are protected. I have also learned that worker safety, productivity and high

quality work are inexorably intertwined. In order to have a safe jobsite, you must plan the work effectively and execute the plan. Therefore, if you plan for safety, you are planning to succeed.

Winkler: Safety has always been a key value for us. However, in 2007, we suffered a fatality on a project. The experience of losing an employee



...we have a responsibility to ensure that all of our people go home to their family and friends, free from injury. "?"

and friend was dramatic for us and the company. This event put employee safety at the top of our values. That experience never goes away, and with that experience always present in your thoughts, it is quick and easy to determine how to approach safety questions and issues. It is "Safety First," period.

3. What is the hardest thing to overcome for instilling the safety culture at your organization?

Michols: The hardest thing to overcome may be human nature. People always want to do things quicker, better, simpler, less expensively, and such ways are not always as safe as they might otherwise seem initially. A continuing challenge, particularly with new employees, is in gaining and maintaining trust with the staff. Trust that the safety department, as their primary function exists simply to help with safety issues, makes WJE a safer place to work. More specifically, any question can be asked and any assistance can be requested without fear of criticism or negative consequence.

Greenhaus: There are many hurdles, so it takes perseverance to be successful. Many construction workers have an "old school" mentality—"I've done it this way for 20 years and I haven't been hurt yet." Still others have a "bulletproof"

66 Safely must be part of the culture.

mentality—"I am exhilarated taking risks; skiing, skydiving. Work is work. I won't get hurt. That happens to the other guy." Getting people to understand the risks and to accept that it can and does happen to them, is critical to getting them to buy in to safety.

Winkler: Getting people to change the way they are used to doing things (routines). Complacency—the "it will not happen to me" syndrome. Convincing employees that they are responsible, not only for their safety, but the safety of those around them and acting accordingly. Geography—having jobsites across the country makes it hard for managers to visit sites often. Field technicians being gone for long periods of

Working safely is the right and responsible thing to do for the benefit of us all.

time makes it hard to ensure that everyone feels included. We must communicate via text, emails, and phone calls versus face-to-face. Is everyone on the same page and getting the same message?

4. How do you get employees to buy into the safety program?

Michols: One of WJE's core values is "Shared Destiny." As an employee-owned company, we are committed to working safely and to helping each other succeed in general. We believe that putting the greater good of the company ahead of personal gain ultimately ensures the greatest rewards for each of us. As applied to the subject of safety, the company will provide or allow for whatever is needed to do the job safely in terms of cost and schedule. The expectation is that individuals will not take risks with safety, there is no valid reason to do so. Working safely is the right and responsible thing to do for the benefit of us all.

Greenhaus: We don't approach safety as a program. We approach safety as a culture. A culture is a set of shared attitudes, values, goals, and practices that characterize an organization or group. The first thing we do is communicate that our safety culture is about caring for the individual and it is expected that each employee will show that same care about themselves and

their co-workers. It is a non-negotiable requirement of employment.

Winkler: Safety must be a part of the culture. It must be emphasized and brought to the employees' attention at every opportunity. From the top down, everyone views safety as the single most important activity each day. When safety is viewed as part of the culture, employees will think of their safety and the safety of those around them as part of their job. Safety needs to be everywhere within a company. Some of the safety activities include:

- Include employees in the safety conversation;
- New hire safety orientation;
- Annual meeting safety seminars;
- Hearing and respiratory programs and testing;
- Safety Committee meeting monthly to review accidents and near misses;
- Daily Job Safety Analysis (JSA);
- Reward employees for safety improvement ideas and implement their ideas;
- Quarterly safety bonus plan;
- Monthly newsletter article;
- Immediate reporting of safety improvements to everyone;
- Strict enforcement of the Department of Transportation (DOT) safety requirements;
- All employees are required to wear their Personal Protective Equipment (PPE) including their safety vest at all times while on a project;
- Safety equipment is provided at no cost to the employee when requested or required;
- Specialty safety devices tested and provided when requested by the employee; and
- Discussions of safety off the job (around the home).

5. By what metrics do you judge your safety performance? Are there any indicators (leading or lagging) that your company pays particular attention to? Why?

Michols: Currently, we have no formal procedures for measuring safety performance in terms of metrics. In terms of indicators, we most

66...we all have ownership of safety...?

certainly look at the number, types and causes of injuries we incur and react accordingly. We investigate every accident and recordable injury. The results of those investigations are shared with the company at large so that we may all learn from the experience.

Greenhaus: Safety is one aspect of industry that is very metric based. We measure all the common lagging indicators: Total Recordable Incident Rate (TRIR), lost time accident rate, lost day rate, automobile accident rates, total incident rates and on and on. We are required by regulation to track injury rates; we are held accountable to these rates by our customers, particularly those in the industrial market sector. However, we know that lagging indicators do not tell the story adequately and are not the key to improving safety. Other metrics we measure that are more indicative of leading indicators are site observations, the frequency and quality of planning meetings, training events attended with emphasis on comprehension as well as site assessments and audits

Winkler: Indicators and metrics include: number of accidents and severity; suggestions from employees; lost time; Occupational Safety and Health Administration (OSHA) incident rates; near miss incidents because they could lead to something worse; Experience Modification (MOD) Rate; DOT inspections; and Federal Motor Carrier Safety Administration's (FMCSA) Compliance, Safety, Accountability (CSA) score.

6. If you could do it all over again, how would you approach instilling safety in an organization differently?

Michols: We are always striving to speed up the process of individuals embracing our safety culture. It starts with hiring good people. People are vital to our success as a company and that success includes working safety. Doing things in a safe way has to be embraced as the accepted view by the people who do them. Forcing people to do things they don't believe in has little chance of success. Simply stated, at WJE, we all have ownership of safety, must trust each other that we are all trying to do the same thing, and must work in ways that are safe, practical and effective. When staff believes that the safety agenda of the firm, the guidelines, rules and safe practices make sense, you're on your way to a successful safety program.

Greenhaus: I would hope to come to the realization that safety is a cultural thing, not a programmatic thing, much sooner. It is so much more than rules, procedures and processes. This realization would have saved a lot of painful experiences.

Winkler: Safety starts at the top. Employees understand by the actions of the company leadership as to what is important. If bringing the job in on budget is the most important issue, then safety will take a backseat. Safety must be the number one core value and it must be demonstrated by the company leadership at all times.

7. If you were a safety professional working for a company that needed improvement, what advice would you give them to help them achieve success in securing executive participation?

Michols: In this day and age with the costs of accidents and injuries, media attention, the realization of potential lawsuits, and the value of a good reputation for safety, executives seemingly shouldn't need much impetus to participate. We would encourage active participation by everyone in the organization; this is absolutely an issue where everyone has a role to play and something of value to contribute.

Executives clearly need to lead the way, set the tone, set the example, establish and support that doing things safely is the expectation and that in the end, working safe and not having accidents benefits the company. If not intuitively obvious, tangible benefits can be explained rather quickly through safety news items and the real life experiences of others. Safety is good for business; it influences, among other things:

- · Company morale;
- Productivity;
- Insurance costs, the cost of doing business;

- The ability to qualify for work with certain clients and agencies; and
- Desirability as a preferred contractor.

Greenhaus: That safety is good business. A safe business is a profitable business. Why? As mentioned before, to be truly a safe organization, you must be committed to your people and to planning the work such that everyone knows what to do and how to do it in the right sequence all of the time. How can you not be successful if you are doing this well? If you have committed employees who feel cared about and who take ownership of their work and look out for each other, how can you not be successful?

Winkler: Accumulate statistics and gather data—show executives the Return on Investment (ROI). This can include insurance rates, Experience Modification (MOD) Rate, workers' compensation rates, but also costs related to having an injured employee (lost production, morale, cost of additional employee, etc.). Show the executive the personal side of safety—the employee and his/her family.

Summary

Clearly, these three companies are safety champions and their cultures encourage safety at all operational levels. Safety champions know that there is no time for complacency where safety is concerned. Champions are looking for ways to continuously improve safety policies and practices, while looking for new, better, and innovative ways to enhance workplace safety. They promote safety, act as role models, have a positive effect on those around them, and strive to create a safer workplace. Good companies work to balance the cost of safety with their bottom line. Great companies know that putting safety first enhances and protects that bottom line.



Kevin Michols, PE, SE, is a Principal and Director of the Janney Technical Center at Wiss, Janney, Elstner Associates, Inc. in Northbrook, IL. He has 36 years of experience in the evaluation of existing structures, rehabilitation and retrofit design, and troubleshooting construction related problems. Kevin holds

professional registrations in 16 states and is an active member of the International Concrete Repair Institute, American Concrete Institute, and Structural Engineers Association of Illinois. He is an ICRI Fellow and was previous chair of the ICRI Technical Activities Committee.



Scott Greenhaus is the Executive Vice President and Chief Risk Officer at Structural Group Inc., headquartered in Columbia, MD. Scott graduated with degrees in Civil Engineering (82) and an MBA (86) from the University of Maryland. He is a member of the University of Maryland Civil Engineering and

the Clark School of Engineering Board of Visitors. Scott has been on the Board of Directors of the Post-Tensioning Institute (PTI); International Concrete Repair Institute (ICRI), currently Treasurer on the Executive Committee; and American Society of Concrete Contractors (ASCC). He is a member of ASCE, ACI, ANS, and ASSE. Greenhaus was also the past president of PTI and has chaired many committees in trade and technical associations.



Patrick Winkler is Senior VP at Rampart Hydro Services, LP, Coraopolis, PA. Pat is a member of ICRI and has been directly involved in hydrodemolition and surface preparation for over 25 years. He is a past Chair of ICRI's Committee 310 Surface Preparation, and was one of the principal authors of ICRI

Guideline No. 310.3R, Guide for the Preparation of Concrete Surfaces for Repair Using Hydrodemolition Methods. Pat has also served on the ICRI Technical Activities Committee and was recently named an ICRI Fellow. Pat is also a member of ACI, and has served on ACI Committee 546 Repair of Concrete and ACI Committee E706 Concrete Repair Education. Winkler has a BA in Chemistry from Michigan State University, and an MBA from Rutgers University.



For the latest in safety guidelines and information visit the ICRI online bookstore at www.icri.org.

Waterproofing & Protection with MPC Park Deck

Two-component, polymer-modified, cementitious traffic-deck waterproof coating



THE 2017 ICRI SPRING CONVENTION

SCENES FROM MONTREAL

BY DALE REGNIER



With unmatched beauty and excitement, this historic cosmopolitan city in our neighbor to the north was well equipped to host the 2017 ICRI Spring Convention. However, Montreal and most of the Eastern one-third of the United States found themselves in the grip of a winter storm unlike anything seen during this lighter-than-normal season. To keep members busy all week were substantial committee work, several fascinating technical sessions, a group of energized exhibitors and the association's annual recognition luncheon. Although it felt as if Mother Nature herself was conspiring against many attendees, there were few cancellations. More than 200 ICRI members made it to the convention at the Westin Montreal. With cancelled flights, delays, and a few rental cars thrown in for good measure, the travel stories told by many as they arrived provided unexpected entertainment. Thanks go out to our gracious hosts, the Quebec Province Chapter for providing us all with a unique glimpse into local flavor and hospitality on Wednesday afternoon, and

again on Thursday evening. Attendance was surprisingly strong—proving the importance of ICRI does not waver with a pesky foot or two of snow.

The convention began on Wednesday morning with our "Visit the Exhibits" continental breakfast, where our exhibitors showed off the newest products and services for the morning crowd. The theme of this convention, "Bridges & Highways," allowed for members of the Technical Activities Committee to recruit a variety of industry professionals to address issues like FRP applications, material evaluation trends, evaluation of shrinkage cracking, and post-tensioning inspection and repair for bridges. The typical convention schedule allows attendees to attend the technical presentations in the morning of the first day with no other scheduled meetings to compete for their attention.

Following the success of the Curling Tournament at the 2012 Spring Convention in Quebec City, Quebec Province Chapter leaders wisely chose curling for the Wednesday afternoon activity. Hosted at the Royal Montreal Curling Club—one of the oldest in all of Canada—close to 100 people signed up to participate in or watch the chapter curling event. Attendees learned all the necessary tips and tricks that allowed them to not only stay upright, but begin curling like they were born on the ice. They learned about the basics of the sport, sliding the stones, sweeping, and scoring. A great deal of strategy and teamwork goes into choosing the ideal path and placement of a stone for each situation and the skills of the curlers determine how



The oldest curling club in all of Canada—the Royal Montreal Curling Club



Readying the curlers for their time on the ice







Practice and concentration are key components to winning—just ask Mark LeMay! He has the distinction of being on the winning team for both ICRI Curling Tournaments, 2012 and 2017

close to the desired result the stone will come. Those who signed up gained an amazing new experience coupled with the gracious hospitality of the chapter and the curling rink personnel.

Much of what ICRI does as an industry association comes from the hard work of our technical committees. We broaden our knowledge base and expand the industry by working together in these committees. All of our Guidelines and important documents come out of the collaboration of our members in these committees. If you want to know what is happening at any time with any of our committees, you are encouraged to drop by the Technical Committee page of the ICRI website to view a description of what is being worked on right now.

The highlight of the Spring Convention is the Annual Recognition Luncheon. ICRI uses this opportunity to honor those who contribute the most to the success of this association. The honors began with the newest Fellows, George Reedy and Jacques Bertrand. Distinguished Service honors were then bestowed on Jim McDonald and Chris Lippmann. Chapters Committee Chair Mark LeMay handed out the 2016 Chapter Awards, honoring the great work of ICRI's Chapters. Included were the prestigious Chapter of the Year Award, given to the Florida West Coast Chapter as well as the Most

Improved Chapter, given this year to the Rocky Mountain Chapter. President-Elect Ralph Jones stood in for Past President Keith Harrison to hand out the Service Recognition Awards for TAC Service, Board Service, Technical Committee Chairs and Administrative Committee Chairs. The ICRI President for 2017, Brian Daley, wrapped up the afternoon with insight into what he would like ICRI to accomplish this year. He also introduced the 2017 Officers and Board of Directors. The rest of the afternoon included more committee meetings and the last of the technical presentations.

Thursday's busy schedule concluded with a dazzling evening at the beautiful Marché Bonsecours, a truly amazing historic building in the heart of the city. The Quebec Provinces Red Carpet Gala began in an upstairs hall beautifully decorated for this outstanding evening. After a polite cocktail hour, guests were seated for a delicious meal of authentic local cuisine. For the evening's entertainment, the Chapter chose the Painchaud Show—a local musical act that has to be seen (and heard) in order to be believed. Imagine 60 minutes of jaw-dropping entertainment featuring at least 11 stunning and world exclusive numbers such as the acrobatic Jet-Guitar, the fired-up bow, the six hands piano playing, and music; the beautiful music.



Registration at ICRI Conventions always comes with a smile and a friendly face



The Quebec Province Chapter was the chapter host for this Montreal convention



Networking with colleagues is a big part of all ICRI conventions

SCENES FROM MONTREAL

The convention closed Friday afternoon following the final "Visit the Exhibits" continental breakfast as well as a full day devoted to committee meetings. If you are not attending ICRI Conventions, you are definitely missing out on some interesting activities and entertaining networking opportunities. We hope to see everyone at the ICRI 2017 Fall Convention

in New Orleans, Louisiana. We'll be at the Hyatt Regency New Orleans, November 15-17, 2017. The theme for this event is "Docks, Locks and Canals," and you don't want to miss the 2017 Project Awards dinner and celebration—it's the 25th Anniversary of the awards! We are getting things done at ICRI and extend an invitation for you to get involved. Make the most of your membership and come to a convention.



The Technical Sessions were informative and well attended



The buffet is a great place to meet friends old and new



Marcia and Mark LeMay

Preparing for the Recognition

Lunch on Thursday





The ICRI Executive Committee on stage for the Recognition Lunch (left to right): Scott Greenhaus, Treasurer; Ralph Jones, President Elect, Brian Daley, President; Fred Goodwin, TAC Chair; and Mark LeMay, Secretary



Enjoying the Welcome Reception are (left to right): Tom McCann, Beth Newbold, Pat Winkler, and Sam Dickson, all with Rampart Hydro Services



Networking at the Welcome Reception



Committee Meetings are where the work gets done

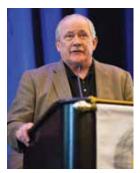


Monica Rourke, ICRI Past President, represented the Fellows committee to honor this year's ICRI Fellows



Presenting the 2017 Service Awards, Ralph Jones

SCENES FROM MONTREAL



2017 ICRI Fellow George Reedy



2017 ICRI Fellow Jacques Bertrand



Recipient of the ICRI Distinguished Service Award and current ICRI Vice President, Chris Lippman



Recipient of the ICRI Distinguished Service Award, Jim McDonald



Representing the Past Presidents during the "Passing of the Gavel" is Garth Fallis



The dining room at the Marché Bonsecours, ready for the revelers



Another scene from Marché Bonsecours



The Quebec Chapter was proud to welcome guests to their Red Carpet Gala on Thursday night



Quebec Province Chapter President (and host) Jacques Bertrand with his wife Barbara



The cocktail reception



Students from the New Jersey Institute of Technology



The evening's entertainers provided some music before dinner

SCENES FROM MONTREAL



Jacques Bertrand and Brian Daley prepare to give away some raffle prizes



Celebrating their Curling Tournament win (left to right): host Jacques Bertrand, with curlers Guylaine Tardif, Mark LeMay, Vincent LaPointe, and Garth Fallis



The lighting changed dramatically after dinner in preparation for the entertainment



Host Jacques Bertrand welcomed everyone on behalf of the Quebec Province Chapter, the city of Montreal, and all of Canada



The Painchaud Show takes the stage. The music was quite good. But that wasn't enough. Yes, he is playing the violin upside down



Have you ever seen a guitar player balance 15 feet in the air, on the guitar, while still playing? Just one of the spectacularly acrobatic, yet musical moves this group showed the crowd



Flaming violin!



Save the Date!

Share your expertise. Presentation submissions are now being accepted through June 30, 2017.

Go to www.icri.org for more information.

2016 ICRI CHAPTER AWARDS

BY DALE REGNIER



Ready to honor chapters with the 2016 Chapter Awards at the 2017 Spring Convention, Mark LeMay

The ICRI Chapter Awards Program gives recognition to our chapters that, through their operations, programs and activities, display a dedication to excellence and a commitment to success. The program is designed specifically to help each and every ICRI Chapter, no matter the size, create their own unique roadmap to success. By reviewing chapter activities and assessing chapter operations, each chapter can determine areas where they excel and where they might need to focus a bit more attention.

These awards are for activities during the 2016 calendar year and 22 chapters took the time to evaluate their efforts and strengthen their missions. There are three possible awards. Chapters achieving 76 to 100 points are considered Excellent. Chapters garnering more than 100 points are deemed Outstanding. And, the one chapter to achieve the highest number of points is named Chapter of the Year. As an added bonus, the ICRI Chapters Committee has added an award for "Most Improved," for the chapter that submits an awards application for a second year in a row and shows the greatest percentage of improvement.

The awards were presented at the 2017 ICRI Spring Convention in Montreal, Canada. ICRI is pleased and proud to share these winners with all of ICRI. After all, chapters are the lifeblood of this organization.

Excellents Chapter Award

New England

Term President: Todd Neal Submitted by: Jenny Grubb

Awards for Outstanding Achievement

Arizona

Term President: Rosa Dooley Submitted by: Dave Flax

Baltimore-Washington

Term President: Adam Hibshman Submitted by: Adam Hibshman

Carolinas

Term President: Paul Farrell Submitted by: Hayes Thompson

Chicago

Term President: Sean Meracle Submitted by: Sean Meracle

Connecticut

Term President: Tammy Gaherty Submitted by: Tammy Gaherty

Delaware Valley

Term President: Matthew Mowrer Submitted by: Matthew Mowrer

Georgia

Term President: Bryan Heery Submitted by: Thomas Andrews **Great Plains**

Term President: Jaime Gaumnitz Submitted by: Jaime Gaumnitz

Gulf South

Term President: Michael Davis

Submitted by: Michel Davis, Steve LeMay

Metro New York

Term President: Stephen Franks Submitted by: Alyssa Somohano

Michigan

Term President: James Keena Submitted by: Douglas Barron, John Kosnak, Andrew Lobbestael

Minnesota

Term President: Adam Bakeman Submitted by: Andy LeBarron, Kim Deibel

Northern California

Term President: George Lee Submitted by: Brad Kamin

North Texas

Term President: Patrick Jorski Submitted by: Mark LeMay, Pete Haveron

Northern Ohio

Term President: Jerry Phenney Submitted by: Jerry Phenney Pittsburgh

Term President: Bob Mason Submitted by: Mike Wuerthele

Quebec Province

Term President: Jacques Bertrand Submitted by: Eric Bellerose and Jean-

Francois Rondeau

Rocky Mountain

Term President: Jacob Holland Submitted by: Jacob Holland

Southeast Florida

Term President: Evan Swaysland Submitted by: Evan Swaysland

Virginia

Term President: Jamison Wilson Submitted by: Jamison Wilson

Most Improved Chapter Rocky Mountain

recent mountain

Chapter of the Year Florida West Coast

Term President: Michelle Nobel Submitted by: Michelle Nobel



Chapter representatives from around the country proudly display their chapter patches



Representatives from the Florida West Coast Chapter were the proud winners of the 2016 ICRI Chapter of the Year

2016 ICRI Personal Awards

BY DALE REGNIER

FELLOWS

Being named an ICRI Fellow is recognition of an individual's long-term, devoted and enthusiastic service to ICRI. An ICRI Fellow is responsible for many noteworthy contributions to ICRI and the concrete repair industry in general. Criteria for nomination includes the following: outstanding contributions to the production or use of concrete repair materials, products, or structures in the areas of education, research, development, design, construction or management; an individual shall have been an ICRI member for 5 consecutive years. Nominations are currently being accepted for 2017 and an application can be obtained by contacting the ICRI office.



Jacques Bertrand

With over 45 years of experience in construction on civil engineering projects and also in the concrete repair and protection industry, Jacques Bertrand's illustrious career presents as a unique blend of

practical hands-on experience, and one in which he is always found advancing our industry through his commitment to technical committee work and also in educating and inspiring students who express interest in our industry. As an example, he has been a technical advisor to students at five Ouebec Universities in the use of ICRI Guidelines and their intended applications in the world of structural concrete restoration and protection. Jacques has been actively involved in the Quebec Province Chapter for more than ten years and is currently Chapter President. It is largely through Jacques' efforts that the Quebec Province Chapter has grown and flourished in the course of his commitment to the chapter and to the Institute. In fact, it was just a few years ago (2012) that the Quebec Chapter hosted one of the more memorable Spring conventions in Quebec City. At the international level, many people have heard Jacques share his technical expertise and experiences at ICRI conference technical sessions. He has presented numerous times on the practical applications of both ICRI and ACI standards and guidelines. Chances are, if you have been at any number of ICRI technical or administrative committees, you have had the opportunity to work alongside Jacques as he is involved on quite a few committees. For his loyal and dedicated commitment to ICRI and his life-long efforts in promoting the concrete repair industry, the members of the association are proud to recognize Jacques Bertrand as a Fellow of the International Concrete Repair Institute.



George Reedy

As a Founding Member of ICRI, George has demonstrated, through his many years of dedicated service to the Institute, a life-long commitment to improving the quality and longevity of concrete

repairs through his technical and administrative committee work. Through his work with Technical Committee 320, Concrete Repair Materials & Methods; Committee 510, Corrosion; and Committee 710, Coatings & Waterproofing, George has been an integral part of the hard work required to publish the many ICRI Guidelines directly related to these committees. Work that not only benefited his fellow committee member, but our entire industry. Additionally, his work on the Education Committee from 2010 to 2015 helped create the program architecture for what is now the ICRI Concrete Surface Repair Technician Certification Program. George has been published in industry periodicals and is a frequent presenter at industry related forums at both the local and national levels. His leadership abilities and technical expertise are respected within our organization and industrywide. It is for such loyal and supportive dedication to the Institute at both the international and chapter levels over the years, and his special identity as a Founding Member of the Institute, that George Reedy is recognized as an ICRI Fellow.

DISTINGUISHED SERVICE AWARD

Acknowledging and recognizing significant contributions that have helped advance the overall mission of the Institute is one of the mandated responsibilities of the ICRI Fellows Committee. Each year, the committee is tasked with soliciting nominations from our membership to recognize individuals, committees, or "ad hoc" groups that have contributed to the Institute in a "service-above-self" manner. Those who have done so can be awarded the Institute's Distinguished Service

Continued on page 38...Personal Awards

Celebrating 25 Years of Outstanding Concrete Repair Projects



CATEGORIES

High-Rise

Historic

Industrial

Longevity

Low-Rise

Masonry

Parking Structures

Special Project

Sustainability*

Transportation

Water Systems

2017 ICRI Project Awards

ICRI conducts an awards program each year to honor and recognize outstanding projects in the concrete repair industry. Entries are received from around the world, and the winning projects will be presented during the Awards Banquet at the 2017 ICRI Fall Convention. Each winning project will be featured in an article in the *Concrete Repair Bulletin*.

New for 2017!

- All entries must be submitted using our new online submission form.
- Deadline for receipt of entries is Thursday, June 1, 2017, 5:00 pm CDT.

Entry Fee

• Submit your entry by June 1, 2017 and pay an entry fee of \$300.

Judging Criteria

Entries will be judged on uniqueness, use of state-of-the-art methods, use of materials, functionality, value engineering, and aesthetics. The panel of five judges—selected by the ICRI Awards Committee—consists of engineers, contractors, and manufacturers from all over North America.

Eligibility

The project must be either completed after January 1, 2015, or be substantially complete before March 31, 2017. The company submitting the entry must be an ICRI company member. The portion of the project performed by the submitting company must amount to at least 25% of the project cost. (This does not apply to design firms or owners.) A subcontract for the repair portion of a larger project will be considered as the project.

*Optional Sustainability Award Entry

Did your project incorporate sustainable repairs or modifications? To be considered as an outstanding sustainability project, in addition to your selected category, you will given the opportunity on your entry form to elaborate on sustainability considerations as set forth in the ICRI Sustainability for Repairing and Maintaining Concrete and Masonry Buildings White Paper.

Complete rules can be found at **www.icri.org**



ICRI Project Awards Phone: +1 847.447.1701 E-mail: awards@icri.org



Award. Nominees display meaningful and significant actions or activities which, at the local chapter level or the national level, have generated a positive influence on the health and mission of the Institute. An example might be the rejuvenation of a fledgling chapter. It might also include the impact a local or national committee has on the Institute by championing a certain initiative.

Chris Lippmann

Chris Lippmann has supported ICRI for many years and in many roles. Chris has served on the International Board of Directors for two terms and recently completed his second year as the Institute's Treasurer. Chris served on the ad-hoc Strategic Development Committee and then served as Chair of the Strategic Implementation Committee. In his roles on the SDC and SIC over the last several years, Chris has served tirelessly to help develop and implement the

vision of ICRI's future. As a result of his leadership several new initiatives have been established. The most notable are a renewed emphasis on education and certification institute-wide; the development of a new streamlined process for implementing new programs; and the creation of the new Secretariat position in ICRI. During this same period, in his role on the Executive Committee, Chris continued to serve as Treasurer providing financial oversight and leadership for the organization. Chris was also intensely involved in the process of reviewing management companies and the selection of Ewald as the management company. Positions on the Executive Committee are demanding and anyone who serves at that level of leadership in the organization has to expect a time commitment on another level. However, in his added roles as a member of the SDC and as Chair of the SIC, Chris went well beyond any level of expectation, frequently providing SIC updates at the chapter level throughout the country. Because of Chris' unwavering commitment to ICRI and the resulting benefits that will be realized for years to come, he was awarded this Distinguished Service award.



Jim McDonald

With his wealth of insight and experience, Jim McDonald, a Founding Member of ICRI, can certainly be considered one of the most knowledgeable people in the concrete industry. Those who have the opportunity to work with him understand what a pleasure it is as he shares his wisdom through his warm and engaging Southern charm. As a Fellow and an Honorary Member of ICRI, Jim has already been recognized on many levels for his commitment to

contributing to the advancement of our industry. The number of committee assignments, papers written, Guidelines published, and presentations given at the local and international level are too numerous to list. However, there is an area where, over the years, Jim has been a constant beacon of light, providing guidance, direction and a sense of stability—and that is in his unwavering support of the ICRI Technical Activities Committee. Jim commits long hours with TAC at conventions, and continues at home on assignments. The emails, conference calls, ballots, and ballot tabulations are just part of his volunteering. As an active participant in TAC in various capacities for more than 20 years, Jim has served as Secretary, Technical Advisor, and Review Chief for all technical documents. Jim completed the original draft of the ICRI Concrete Repair Terminology document in 1998, updated it all in 2005, and then again in 2016. In 1997 he drafted the original ICRI Task Group Manual which developed into the ICRI Style Manual in 2007 and is heavily used as a companion document to the ICRI Technical Committee Manual. All of this documentation was created to assist ICRI Technical Committees in producing concise, unambiguous, and well-written documents. Finally, as Secretary of the Coordination Committee, organized in 2010, Jim has guided the effort to streamline both technical and administrative document development within ICRI. For all these reasons, and many more, the Institute presented him with the ICRI Distinguished Service Award.



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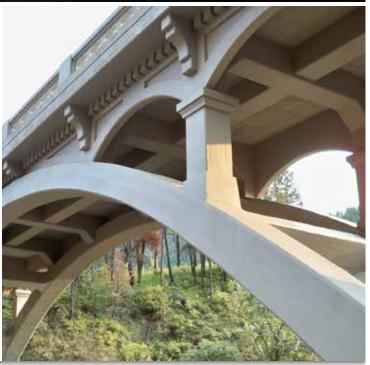
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CONCRETE **REPAIR** CALENDAR

JUNE 27-29, 2017

NACE Concrete Service Life Extension Conference Columbia University

New York, NY

Website: www.concrete.nace.org

SEPTEMBER 27-28, 2017

ICRI Slab Moisture Testing Certification

STRUCTURAL Facility Columbia, MD

Website: www.icri.org

NOVEMBER 15-17, 2017

2017 ICRI Fall Convention

Hyatt Regency New Orleans New Orleans, LA

Website: www.icri.org

INTERESTED IN SEEING YOUR EVENT LISTED IN THIS CALENDAR?

Events can be emailed to editor@icri.org. Editorial content for the Sept/Oct issue is due by July 3, 2017 and content for the Nov/Dec issue is due by September 1, 2017.



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Gary Carlson Equipment

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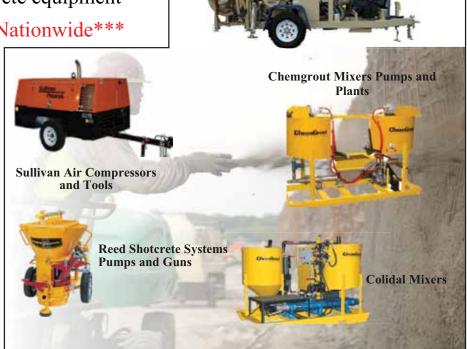


Gary Carlson Equipment Co.

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INDUSTRY NEWS

AMERICAN ENGINEERING TESTING, INC. OPENS SHERIDAN, WYOMING OFFICE BRINGING ENVIRONMENTAL, GEOTECHNICAL ENGINEERING, AND MATERIALS TESTING SERVICES TO THE AREA

American Engineering Testing, Inc. (AET), a leading consulting firm providing geotechnical, environmental, materials and forensic engineering, testing and laboratory services, announces the addition of its 21st office located in Sheridan, Wyoming. The office is led by Todd Ordahl, PG, who has worked in the Rocky Mountain Region as an environmental professional for over 30 years. Construction Materials Engineer Brian Freed, who has a Master's degree in civil engineering and experience working in the energy, transportation, and commercial industries, will join Ordahl.



The Sheridan team will lend its insight and hands-on experience to a spectrum of public and private sector clients in the commercial construction, aggregate and western mining and energy industries.

Todd and Brian can be reached via phone at 307-675-1862. The office is located just off Interstate 90 at 72 East Ridge Road in Sheridan, Wyoming. Find more information about AET's services and offices online at www.amengtest.com.

ROMCO EQUIPMENT CO. JOINS ATLAS COPCO CONSTRUCTION EQUIPMENT DEALER NETWORK

Atlas Copco Construction Equipment welcomes ROMCO Equipment Co. to its growing dealer network. The Texas-based company will rent, sell and service Atlas Copco compressors, generators and light towers to meet customer demands for portable energy equipment across the state.

ROMCO serves the heavy construction and mining industries in Texas. Expanding its line of equipment to include Atlas Copco compressors, generators and light towers allows ROMCO to serve additional industries, including oil and gas refineries and shipyards.



ROMCO Equipment Co. sells replacement parts and attachments as well as provides maintenance and full refurbishment for worn equipment.

Atlas Copco manufactures its equipment to be durable and cost-effective to operate. Its light towers and compressors, for instance, feature Atlas Copco's exclusive HardHat® polyethylene canopy that withstands corrosion, dents and fading to provide ongoing protection of the engine and overall unit while keeping the resale value high.

ROMCO's Texas branch locations include Austin, Buffalo, Carmine, Dallas, Fort Worth, Houston, Longview, Rio Grande Valley and San Antonio.

JQ, ONE OF TEXAS' TOP ENGINEERING FIRMS, ACQUIRES DALLAS-BASED STRUCTURAL ENGINEERING FIRM

JQ has acquired the Dallas, TX-based structural engineering firm, Baldauf Herrin & Associates, Inc. (BHA), according to JQ's CEO Stephen H. Lucy. The acquisition will enable JQ to grow its service capabilities in the Federal and corporate markets, while adding industry veterans to its senior leadership team.

Steve Baldauf and Tom Herrin will join JQ as principals and will office out of JQ's corporate headquarters in Dallas' Design District.

BHA clients are concentrated in the Federal and corporate markets—market sectors that JQ has targeted for continued growth. BHA clients are located primarily in Texas, but Federal work can take the firm anywhere nationally.

Over the years, some notable projects include: Harrison Hall Academic Building at Texas Christian University in Fort Worth, Texas; the Four Seasons Resort Villas and Pool in Irving, Texas; Hancock County Emergency Operations Center in Mississippi; the Volar Barracks renovation in Fort Hood, Texas; and numerous projects for a global telecommunications company.

Previously, Mr. Herrin was engineer of record for Exxon World headquarters and EDS World headquarters, and Mr. Baldauf was supervising structural engineer on the Superconducting Super Collider.





STEVE BALDAUF

TOM HERRIN

THE POWER OF PARTNERSHIP: KOSTER AMERICAN TEAMS UP WITH T&L DISTRIBUTING

KOSTER American Corporation is excited to announce its partnership with T&L Distributing. With this partnership, T&L brings a sales force of nearly 50 representatives to better service all its customers' needs.

The company's corporate headquarters is located in Houston, TX with several regional warehouse locations serving Texas, Oklahoma, Louisiana, Mississippi, New Mexico and Arkansas. In addition, T&L also operates several storefront locations, allowing customers to pick up last minute orders as well as all the tools necessary to complete their flooring application.

T&L brings over 40 years of experience. They distribute quality flooring products

INDUSTRY NEWS

and continue to be known for outstanding customer service, business integrity and a focus of representing over 20 product lines. For the past 3 years T&L Distributing has been ranked in the top 20 of largest flooring distributors by annual revenue in the United States.

T&L has outlived many industry competitors due to emphasis on conservative growth, customer service, and operational excellence while making a continuous effort to build long term relationships with customers and manufacturers.

KOSTER American Corporation and T&L Distributing are proud to join forces to bring its customers the absolute best customer experience.

MCCANN INDUSTRIES CELEBRATES ITS 50 YEAR ANNIVERSARY

Providing Heavy Equipment and Contractor Supplies in Illinois and Indiana

McCann Industries, Inc. is celebrating its 50th anniversary this year. The company was originally founded as McCann Construction Specialties Company in 1967 by Richard McCann to sell contractor supplies. Today, Jim McCann is president and CEO of the company his father started from a garage in Villa Park, Ill. The company now has seven locations throughout Illinois and Indiana and has expanded its contractor supplies business to include heavy equipment, representing some of the finest brands available, including CASE, Takeuchi, and Carlson Paving Products.

Richard McCann funded the original McCann Construction Specialties Company with a \$1,500 loan from his father-in-law. Within a year he expanded to a 3,000 square foot facility across the street, and two years later, he moved to Addison. In 1976 he built the current facility there, which was expanded by 20,000 square feet ten years later. McCann Industries, Inc. acquired three CASE construction equipment dealerships in 1995 to provide a full range of equipment, contractor supplies and services for the construction industry.

Jim McCann began working with the company as an outside sales representative in 1991 and has assumed progressively more responsibility over the past 26 years. Before he was named president in 2013 and CEO two years later, Jim served as rental manager, sales manager, and vice president, sales and marketing.



INDUSTRY NEWS

McCann Industries, Inc. now represents more than 400 suppliers and manufacturers. In addition to construction products and equipment sales, McCann Industries, Inc. also offers rental equipment, on-site and shop repair and maintenance services, and quick parts deliveries for any brand, any model.

MCCANN INDUSTRIES INC. NOW REPRESENTS CASE IN SIX INDIANA COUNTIES

Kevin Wolford Is Named Sales Representative for New Territory

McCann Industries Inc. recently announced that its territory as the exclusive dealer for CASE equipment has been expanded to include four additional counties in Indiana: LaPorte, Marshall, St. Joseph and Stark. All equipment sales, parts and service will be provided by McCann throughout this area from its location in Schererville, Indiana at 1133 Indianapolis Blvd. Kevin Wolford has recently joined McCann as the Account Manager for these counties.

Prior to joining McCann Industries Inc., Wolford was a sales representative for a heavy equipment dealer in Indiana. He earned a Bachelor's degree in business and economics from Manchester University in North Manchester, Ind.

In addition to offering the full line of CASE construction equipment at its Schererville location, McCann stocks an extensive inventory of parts for quick deliveries and provides on-site service for both routine maintenance and emergency repairs. An extensive rental fleet is available when extra equipment is needed for both short- and long-term needs. The company employs certified technicians who can work with any brand or model of heavy equipment. A wide selection of contractor supplies are available for pick up or delivery.

COMMERCIAL SPECIALTY TRUCK **HOLDINGS ANNOUNCES** FORMATION OF ONE SOURCE **PARTS**

Commercial Specialty Truck Holdings (CSTH) announced the creation of One Source Parts, a provider of OEM parts for

Continental Mixers and EZ-Pak Refuse Trucks, and a manufacturer and seller of parts and components for the ready mix and refuse industries.

After conducting extensive customer research, CSTH concluded a dedicated stand-alone company would best serve its customers with quality parts and expert service.

One Source Parts is the one source customers can turn to for parts, trusted expertise and personal commitment.

A dedicated team will serve customers and work to establish long-term partnerships. Because of its size, One Source Parts will enjoy close relationships with its customers, most of whom operate small to midsize businesses. They will benefit from direct access to the entire One Source Parts team and a responsiveness to their parts needs.

Along with a substantial investment in parts inventory, One Source Parts is also investing in three parts distribution hubs. The company is bringing together customer and manufacturer input, expertise in the ready mix and refuse industries and a commitment to being one, trusted source for parts.

CAVITYCOMPLETE® WALL SYSTEM ANNOUNCES PROSOCO AS JOINT MARKETING ASSOCIATE

New associate provides air and moisture barrier materials for innovative cavity wall systems.

CavityComplete®, the industry's top complete cavity wall system, announced PROSOCO as its new provider of air and moisture barrier products.

PROSOCO contributes category-leading components that have been tested and proven to work together with existing system solutions to help manage air, vapor and water movement. PROSOCO joins Owens Corning Sales LLC, Heckmann Building Products, Mortar Net SolutionsTM and Rodenhouse, Inc. in creating CavityComplete's comprehensive cavity wall system.

The CavityComplete® Wall System is the industry's foremost complete cavity wall system that includes components supplied by industry-leading manufacturers, supported by one of the broadest unified systems warranties available to reduce liability and allow architects and specifiers to design and specify with complete confidence. CavityComplete is the only wall system in which all components were tested together in an assembly to produce systemized codes and standards compliance data.

When combined, the components produce wall systems that provide thermal efficiency, continuous insulation, fire resistance, air and water management, vapor resistance and veneer anchoring. Each wall system in the portfolio is engineered to allow the designer options in continuous insulation and cladding choices, as well as to maximize performance by climatic region.

Based in Lawrence, Kan., PROSOCO is a national manufacturer of products for cleaning, protecting and maintaining concrete; making building envelopes airand water-tight; and cleaning, protecting and restoring new and existing masonry buildings.

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Email your industry news to editor@icri. org. Editorial content for the Sept/Oct issue is due by July 3, 2017 and content for the Nov/Dec issue is due by Sept 1, 2017.



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SEPTEMBER 27 & 28Baltimore, MD Area

ASSOCIATION NEWS

AMERICAN CONCRETE INSTITUTE HONORS OUTSTANDING CONTRIBUTIONS TO THE INDUSTRY

The American Concrete Institute (ACI) is pleased to recognize several professionals, groups, and companies for their outstanding contributions and dedication to ACI and the concrete industry.

The 2017 honorees include the induction of Honorary Members, ACI's highest honor, which recognizes persons of eminence in the field of the Institute's interest, or one who has performed extraordinary meritorious service to the Institute. The following four individuals are inducted as Honorary Members: David W. Fowler, Luis E. García, Satyendra K. Ghosh, and Koji Sakai.

ACI is also pleased to recognize 27 new Fellows for their outstanding contributions to the production or use of concrete materials, products, and structures in the areas of education, research, development, design, construction, or management. Go to Awards at www.concrete.org for a complete listing of the Honorary Members and Fellows.

The following medals and awards recognize exemplary achievement, ground-breaking research, and service to ACI and the concrete industry:

- ARTHUR R. ANDERSON MEDAL Zongjin Li
- ROGER H. CORBETTA
 CONCRETE CONSTRUCTOR
 AWARD
 Bruce A. Glaspey
- JOE W. KELLY AWARD David H. Sanders
- HENRY L. KENNEDY AWARD Republic of Colombia Chapter - ACI
- ALFRED E. LINDAU AWARD Cary Kopczynski
- HENRY C. TURNER MEDAL National Ready Mixed Concrete Association
- CEDRIC WILLSON
 LIGHTWEIGHT AGGREGATE
 CONCRETE AWARD
 Anton K. Schindler

• CONCRETE SUSTAINABILITY AWARD

Florian Barth

- ACI CERTIFICATION AWARD William R. "Rod" Elderton, Marc Jolin, G. Terry Harris, Sr.
- ACI YOUNG MEMBER AWARD FOR PROFESSIONAL ACHIEVEMENT Jason Draper, Raissa P. Ferron, Rémy D. Lequesne
- WASON MEDAL FOR MOST MERITORIOUS PAPER
 Yu-Chen Ou, Dimas Pramudya Kurniawan
- ACI CONSTRUCTION AWARD Luc Monette, N.J. (John) Gardner
- WASON MEDAL FOR MATERIALS RESEARCH Christof Schröfl, Viktor Mechtcherine
- CHESTER PAUL SIESS AWARD FOR EXCELLENCE IN STRUCTURAL RESEARCH Vesna Terzic, Božidar Stojadinović
- ACI DESIGN AWARD

 Michael P. Collins, Evan C. Bentz,
 Phillip T. Quach, Giorgio Talotti
 Proestos
- DELMAR L. BLOEM
 DISTINGUISHED SERVICE
 AWARD
 Tess Ahlborn, David W. Pittman,
 David Trejo
- CHAPTER ACTIVITIES AWARD Werner K. Hellmer, Brooke W. Smartz, Jason Thompson
- ACI STRATEGIC ADVANCEMENT AWARD

Frances T. Griffith

 WALTER P. MOORE, JR. FACULTY ACHIEVEMENT AWARD

Ryan L. Solnosky

ACI EDUCATION AWARD
 Ramón L. Carrasquillo, Lawrence
 C. Novak

ACI Foundation Awards:

• J.C. ROUMAIN AWARD Kamal H. Khayat

- ARTHUR J. BOASE AWARD Gustavo J. Parra-Montesinos
- ROBERT E. PHILLEO AWARD Chiara F. Ferraris

Learn more about each of the awardees listed above at www.concrete.org.

KHALED W. AWAD ELECTED PRESIDENT OF AMERICAN CONCRETE INSTITUTE

President, vice president, and board members elected

The American Concrete Institute (ACI) introduced its 2017-2018 president, vice president, and four board members during The Concrete Convention and Exposition in Detroit, MI.



Khaled W. Awad has been elected to serve as president of the Institute for 2017-2018, Randall W. Poston has been elected ACI vice president for a two-year term, and David A. Lange is now the

Institute's senior vice president, which is also a two-year term. Additionally, four members have been elected to serve on the ACI Board of Direction, each for three-year terms: H.R. Trey Hamilton, Joe Hug, William M. Klorman, and Tracy D. Marcotte.

AMERICAN CONCRETE INSTITUTE ANNOUNCES WINNERS OF STUDENT FIBER-REINFORCED POLYMER COMPOSITES COMPETITION

The American Concrete Institute (ACI) announces the winners of its 2017 Student Fiber-Reinforced Concrete Polymer Composites Competition. The competition took place at The Concrete Convention and Exposition in Detroit, MI.

During this exciting competition, students designed, constructed, and tested a concrete structure reinforced with fiber-reinforced polymer (FRP) bars to achieve the optimal load-to-cost ratio, predicted the ultimate load, and predicted the load that would result in a piston deflection of 3.5 mm (0.14 in).

ASSOCIATION NEWS

Structure Type 1 Category

1st Place: Universidad San Francisco de Quito—Santiago Bolaños, Danilo Garcia, Alejandra Leon Faculty Advisor—Francisco Játiva

2nd Place: Facultad de Estudios Superiores Aragón Team—Hernández de la Cruz José Eduardo, Olea Silva Juan Jesús, Ruiz Garduño Eduardo Andrés Faculty Advisor—Jose Paulo Mejorada Mota

3rd Place: Universidad De Cuenca Team—Alvaro Román Bacuilima Muñoz, Darwin Miguel Apolo Bustamante, Rubén Sebastián Guambaña Chérrez, Wilson Paúl Guillén Chima, Jasson Rubén Sánchez Calle

Faculty Advisor-Dr. Juan Fernando Zalamea León

Structure Type 2 Category

1st Place: Universidad San Francisco de Quito— Andres Rodriguez, Jose Eduardo Paredes, Milagros Jimenez, Juan José Tamayo Faculty Advisor—Francisco Jativa

2nd Place: Facultad de Estudios Superiores Aragón Team—González Cruz José Antonio, González Ramírez Juan Manuel Faculty Advisor—Jose Paulo Mejorada Mota

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ASSOCIATION NEWS

3rd Place: University of Puerto Rico at Mayaguez Team—Isabelle Martínez Rivera, Kaliam Y. Ortiz, Jaime Fuentes Ortiz, Manuel González Soto Faculty Advisor—Arsenio Cáceres

CMAA PRESIDENT & CEO BRUCE D'AGOSTINO ANNOUNCES RETIREMENT

Membership roster grew from 700 to more than 16,000 under D'Agostino's leadership

After serving association members and the construction industry for 18 years, Bruce D'Agostino, 67, president/CEO of Construction Management Association of America (CMAA), has announced plans to retire in 2017 once a successor has been chosen. Vetted Solutions, a Washington, D.C.-based executive search firm, is managing the nationwide search for his replacement.

The industry has seen marked change under D'Agostino's leadership, with construction management gaining increased notoriety as a profession. The Certified Construction Manager (CCM) certification program has grown from less than 200 certified professionals to more than 3000 and became ANSI accredited in 2007. D'Agostino has worked tirelessly with public and private owners to educate on the value that professional construction management services bring to their projects and this dedication has resulted in owners requiring CCMs to manage their construction projects, which in turn, would provide better control over cost, quality, and schedule.

D'Agostino has helped CMAA to take a leading role in defining the education of aspiring construction managers through his work with ABET, the lead society for the accreditation of undergraduate and graduate construction management programs. The Construction Manager in Training (CMIT) program, launched in 2010, provides a structured transition from the academic environment into the workplace and at present, includes more than 2200 CMITs.

During D'Agostino's tenure, CMAA's membership base has grown from 700 to more than 16,000 with approximately 25% representing owners in market sectors to include government, healthcare, education, power, transportation, commercial, utilities, and transportation.

D'Agostino has also crafted and nurtured growing relationships between CMAA and similar professional organizations representing similar interests in Europe, Asia, and Latin America. He was instrumental in forming alliances with both the Construction Industry Institute (CII) and



MCI®-2018 is 100% silane concrete sealer containing time-proven Migrating Corrosion Inhibitor (MCI®). The MCI® penetrates deep into concrete providing corrosion protection to reinforcing steel from water, chloride ions, and other contaminants. MCI®-2018 also provides water repellency by chemically reacting with the cementitious substrate under proper application, decreasing the ingress of additional aggresive materials.



the Society of American Military Engineers (SAME), which led to both organizations formally adopting the CCM as the preferred credential.

INTERESTED IN SEEING YOUR **NEWS IN THIS COLUMN?**

Email your association news to editor@icri. org. Editorial content for the Sept/Oct issue is due by July 3, 2017 and content for the Nov/Dec issue is due by Sept. 1, 2017.



The Biggest Projects. The Largest Stocking Inventory.

Over the past ten decades, A.H. Harris and Kenseal Construction Products, A Division of A.H. Harris have built trusted relationships with the industry's top manufacturers and have become two of the largest suppliers of specialty materials along the East Coast. Our recent partnership has further expanded our product portfolio and as a combined team we are proud to offer some of the most complete lines and largest selections of Division 3 and Division 7 specialty products in the industry.

We have what it takes to make your urban mega projects a mega success.

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PEOPLE ON THE MOVE



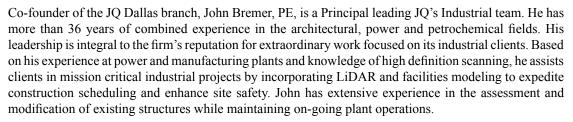
The ChemQuest Group, Inc., a leading business strategy firm in specialty chemicals, announces the addition of Stephen Chase as Senior Consultant.

With a career spanning over 35 years, Stephen Chase is well known by manufacturers, distributors and installers of floor covering and accessory products. Since 1978, Mr. Chase has held various technical roles including marketing/sales, strategic planning, product education & training, quality control, product litigation consulting and product management. Mr. Chase's career was launched as Congoleum Corporation's Junior Chemist in R&D Operations.

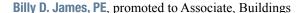
Stephen Chase holds a BA (chemistry major) from The College of New Jersey (TCNJ), a teaching certificate in chemistry and physics, with various graduate level credits in business management and nuclear physics (NSF grant) and as a continuing education instructor.

JQ has promoted John Bremer, PE to Principal, Industrial; Billy D. James, PE to Associate, Buildings; Luis Soto to Associate, Industrial; and Matt Smart to Associate, Geospatial.

John Bremer, PE, promoted to Principal, Industrial



John earned a degree in Architectural Engineering from the University of Texas at Austin and a Master of Business Administration from Southern Methodist University. John belongs to the Structural Engineers Association of Texas and American Concrete Institute.



Billy has a diverse background in structural engineering spanning 40 years. His comprehensive knowledge and experience through a wide variety of projects including infrastructure, municipal, institutional and commercial clients give him the depth of expertise to serve as JQ's Engineering Technical Lead, providing Quality Assurance | Quality Control across a range of projects.

In this role, Billy keeps close coordination through periodic meetings and technical reviews with project team personnel. He also provides constructability reviews to assure that what is designed can be efficiently built. Billy earned his Bachelor of Science in Architectural Engineering from The University of Texas at Austin.



John Breme



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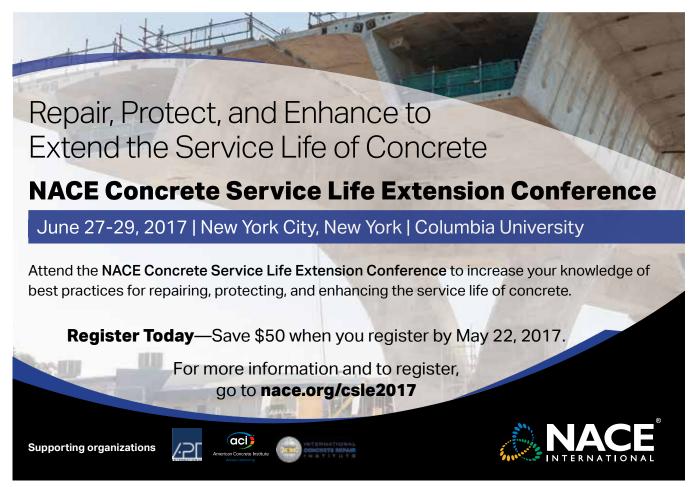
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link; take a look at the list and download those ICRI Technical Guidelines you would like to have in your digital library. Hard copies must be purchased in the Bookstore. The free Technical Guidelines are only available through the special secure section and you must be logged in as a member.

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PEOPLE ON THE MOVE



Luis Soto



Matt Smart



Jesse Osborne



Rishikesh



Charlene Bryant

Luis Soto, promoted to Associate, Industrial

Luis Soto serves as Senior Technician in JQ's Industrial team. He has extensive experience with a variety of software platforms, specifically Revit, Leica Cyclone, Bentley MicroStation and Bentley Structural. Luis is highly skilled in the art of modeling, laser scanning/registration, modeling from laser scans and custom Revit family creation. He uses that knowledge to lead JQ's LiDAR modelling group, implementing documentation and technical improvements firm wide.

Matt Smart, Promoted to Associate, Geospatial

As JQ's senior Survey Crew Chief, Matt Smart brings more than 15 years of industry experience to the geospatial team. In addition to performing boundary, topographic, and design surveys, Matt also has experience with LiDAR laser scanning. He has performed survey and laser scanning services on everything from buildings and utility tunnels to the Top o' Texas Tower ride at the State Fair of Texas.

MAPEI has named Jesse Osborne as the new general manager for its MAPEI/GRT concrete admixtures and cement additives division, which is headquartered in Eagan, Minnesota. Osborne will report directly to Luigi Di Geso, President and CEO of MAPEI North America. He will also interact closely with MAPEI's Global Liquid Admixture Group—headed by Walter Nussbaumer—and the Research & Development Center in Milan, Italy, as MAPEI/GRT adds new product offerings to its portfolio. Plans are also in the works for a new concrete admixtures R&D department at the MAPEI plant that is being built in Logan Township, New Jersey. Osborne comes to MAPEI/GRT with 37 years of experience in the industry, having previously worked for BASF and Euclid Chemical.

Structural Preservation Systems, a Structural Group Company is pleased to announce the addition of **Rishikesh** to the Structural PE program in Hartford, CT. Rishikesh is a recent graduate of the University of Illinois with a Master's in Construction Management. Rishikesh received his B.S. degree in Civil Engineering from S.D.M College of Engineering in Dharwad, Karnataka, India.

Peter Battisti is the new general manager and VP of business development for Prime Resins Inc., a leading manufacturer of infrastructure repair chemicals. Battisti oversees day-to-day operations of Prime Resins and is focused on accelerating the company's steady year-over-year growth. Battisti is a veteran of the industrial chemical business with more than 30 years' experience. He served the last 22 years as general manager and vice president of business development for Chemence Inc., whose brands include Rubex, Ritelock (since sold to 3M), AnaSeal, Krylex, KwikFix, HammerTite, Liquid Skin and others. He served a previous term with Chemence (1989-1992) as the first employee of the U.K. company's expansion into the United States.

Manganaro Midatlantic, the award-winning subcontracting firm specializing in quality masonry, drywall, acoustical ceiling work, concrete, and masonry restoration in commercial buildings, is pleased to announce Charlene Bryant as Business Development Manager, Restoration Division. Charlene's project manager experience allows her to interact and understand clients on a technical level while utilizing her strategic relationship building and collaborative background to help grow and facilitate client relationships in the development of the Restoration Division. Charlene is an affiliate of ABC, ICRI, NAWIC and many more.

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Email your People on the Move announcements to editor@icri.org. Editorial content for the Sept/Oct issue is due by July 3, 2017 and content for the Nov/Dec issue is due by Sept. 1, 2017.

Are you looking to become qualified as a concrete surface repair technician and inspector?

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The ICRI Concrete Surface Repair Technician Certification Program



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 Control of Concrete
 Control of
 - Example of SME Demonstration



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- Includes five online training modules, an online knowledge exam, and performance exam (either video recorded or live at an on-site location)
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"The ICRI CSRT program has assembled a vast amount of information...an individual can learn best practices that typically take 5 to 10 years to accumulate. Whether you are new to concrete repair or experienced...this program has something for everyone."

Jacob Borgerson, Paradigm Consultants, Inc., Houston, TX Certified Concrete Surface Repair Technician-Grade 1

Certification Program Development Resulting from Industry Demand and Code Language



For more information go to WWW.iCri.org

CHAPTER MEETINGS&EVENTS

ARIZONA

May 5, 2017

CHAPTER OUTING

TopGolf Facility Scottsdale, AZ

May 17, 2017

JOINT LUNCH MEETING

Meeting with ACI Arizona State University Campus Tempe, AZ

BALTIMORE WASHINGTON

May 4, 2017

CHAPTER DINNER MEETING

Topic: University of Maryland Concrete Canoe Team Gaithersburg Marriott Washingtonian Center Gaithersburg, MD

BRITISH COLUMBIA

June 24, 2017

CHAPTER SUMMER SOCIAL

Vancouver Canadians Baseball Scotiabank Field at Nat Bailey Stadium Vancouver, BC

CAROLINAS

July 20-21, 2017

CHAPTER SUMMER MEETING

Asheville, NC

CENTRAL FLORIDA

May 10, 2017

CHAPTER MEETING

Topic: Corrosion in Structures Red Lobster Sanford, FL

CHICAGO

June 8, 2017

CHAPTER GOLF OUTING

White Pines Golf Club Bensenville, IL

CONNECTICUT

May 10, 2017

CHAPTER DINNER MEETING

Best Western Plus North Haven, CT

DELAWARE VALLEY

May 23, 2017

CHAPTER DINNER MEETING

Topic: Chemical Cleaning and Protection of Masonry Speaker: Steve Long, ProsoCo Maggiano's King of Prussia King of Prussia, PA

June 9, 2017

CHAPTER SUMMER SOCIAL

Lehigh Valley Clay Shoot

FLORIDA WEST COAST

May 12, 2017

CHAPTER GOLF OUTING

TPC Tampa Bay Lutz, FL

June 7, 2017

CHAPTER DINNER MEETING

Topic: Carbon Fiber Holiday Inn Clearwater Clearwater, FL

GEORGIA

May 22, 2017

CHAPTER GOLF TOURNAMENT

Northwood Country Club Lawrenceville, GA

GREAT PLAINS

May 11, 2017

CHAPTER MEETING

Topic: CSRT Certification from ICRI Hilton President Hotel Kansas City, MO

GULF SOUTH

May 4, 2017

CHAPTER SOCIAL AND MEMBERSHIP DRIVE

Offices of JJ Moreley & Regions Field Birmingham, AL

June 22, 2017

CHAPTER LUNCH MEETING

Topic: OSHA Crystalline Silica Standards Birmingham, AL

MICHIGAN

May 10, 2017

CHAPTER MEETING

Topic: Joint Meeting with ACI Pi Banquet Hall Southfield, MI

MINNESOTA

May 2, 2017

SUMMER TECHNICAL SESSION

Topic: Coating Failures BASF Eagan Location Eagan, MN

July 18, 2017

CHAPTER GOLF OUTING

Edinburgh USA Brooklyn Park, MN

METRO NEW YORK

May 17, 2017

CHAPTER TECHNICAL MEETING

Topic: Hidden in Plain Sight Speaker: Mary Jablonski, Jablonski Building Conservation Club 101, Park Ave. New York, NY

June 15, 2017

CHAPTER FISHING TRIP

540 Guy Lombardo Ave Freeport, NY

NEW ENGLAND

May 9, 2017

CHAPTER DINNER MEETING

Topic: OSHA Regulations for Silica Granite Links Golf Club Quincy, MA

June 19, 2017

ANNUAL NE GOLF CLASSIC

Granite Links Golf Club Quincy, MA

NORTHERN CALIFORNIA

June 20, 2017

CHAPTER LUNCHEON & MEETING

Topic: Presentations from the 2017
Project Awards
HS Lordships Restaurant
Berkeley, CA

NORTH TEXAS

June 8, 2017

CHAPTER MEMBERSHIP MEETING

Mattito's Tex-Mex Restaurant Dallas, TX

NORTHERN OHIO

May 12, 2017

CHAPTER GOLF OUTING

Bunker Hill Golf Course Medina, OH

June 13, 2017

CHAPTER TECHNICAL SEMINAR

Topic: OSHA Silica Guidelines Speaker: Julie Weis, Compliance Specialist Crowne Plaza Hotel Independence, OH

ROCKY MOUNTAIN

May 11, 2017

CHAPTER MEMBERSHIP EVENT

Breckenridge Brewery Littleton, CO

SOUTH CENTRAL TEXAS

May 3, 2017

CHARITY TRIVIA EVENT

Crowne Plaza Holiday Inn Fort Myers, FL

SOUTHWEST FLORIDA

May 16, 2017

GENERAL MEMBERSHIP MEETING

Crowne Plaza Holiday Inn Fort Myers, FL

TORONTO

June 13, 2017

CHAPTER TECHNICAL MEETING

Cluny Bar/Bistro Toronto, ON

FOR UPDATED CHAPTER ACTIVITIES AND FULL DETAILS ON THOSE LISTED HERE, VISIT WWW.ICRI.ORG.

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FLORIDA WEST COAST HOSTS PROJECT DISCUSSION



The Florida West Coast Chapter hosted a meeting with attorney Steven Lesser. Steven is a shareholder with the firm Becker & Poliakoff, and is Chair of Construction Law and Litigation. His program, "My Favorite Mistakes in Bidding Projects," was a hit with the members and volunteers in attendance

ARIZONA ON SURFACE PREPARATION AND SILICA





The Arizona Chapter hosted a program on Surface Preparation in March. The speaker was local member Bob Swan from the Euclid Chemical Company. Bob's presentation used many references from ICRI Guideline 310.2R-2013, Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair

In April, the Arizona Chapter hosted a program providing attendees with valuable information on Silica Regulations. Jim Rogers and James Harrald, both members of the Association of General Contractors (AGC) who serve on that organization's subcommittee on the silica rule, joined members of the Arizona Chapter to give this informative presentation







The volunteer leaders of the Arizona Chapter

ROCKY MOUNTAIN LUNCH & LEARN ON EPOXIES

The Rocky Mountain Chapter held its first Lunch & Learn Presentation of 2017 at the ViewHouse in Centennial, Colorado, on Thursday, February 16, 2017 with 34 members and 13 guests in attendance. The topic of the Lunch & Learn was "Concrete Repair Epoxy Technologies & Repair Mortars." Matt Hansen with Euclid Chemical Company started the luncheon by discussing the various epoxy technologies available for the repair of concrete and where the use of each epoxy repair is appropriate. Mark Tharnish with SIKA Corporation followed up the luncheon on the use of the various concrete repair mortars that are available and their appropriate uses.



47 attendees listen to Mark Tharnish from SIKA Corporation present on repair mortars



At the Lunch & Learn (left to right) are: Mark Tharnish from SIKA Corporation; Angela Echols with Procoat Systems, the Rocky Mountain Chapter Vice President; and Matt Hansen from Euclid Chemical Company

HOUSTON HOSTS EXPANSION CONTROL PROGRAM

On March 16, 2017 the Houston Chapter hosted a speaker event with Jim Anderson from Watson Bowman Acme who gave a presentation on expansion control systems. The meeting was held in the upstairs conference room at the Park Shops and the chapter welcomed 23 attendees. The event began with a social hour at 6pm and the presentation at 7pm. Dinner and drinks were served.

Mr. Anderson has been successfully engaged in the non-residential construction market for over 35 years. Having served in various technical, executive sales and marketing, operational

management, and business development positions, Mr. Anderson has been broadly involved with bridge & highway infrastructure, commercial architectural building, and parking structure markets through specialty engineered construction products, and professional engineering consulting services. Mr. Anderson introduced the "winged expansion joint" concept to the Parking Garage market and developed the WBA Factory Trained Applicator program with both the product concept and contractor program highly regarded and used as a benchmark to this day.



Jim Anderson from Watson Bowman Acme presenting on expansion control systems for the Houston Chapter on March 16, 2017 at the Park Shops

FLORIDA FIRST COAST HAS SUCCESSFUL FUNDRAISER

On September 26, 2016 the Florida First Coast Chapter of ICRI hosted its third annual golf tournament at Deer Creek Country Club. This event raises money for student scholarships at the University of North Florida College of Computing, Engineering, and Construction. With such a successful turnout at this event, the chapter was fortunate to be able to donate a check in the amount of \$2,000 to Dr. Mark Tumeo, Dean of the UNF College of Computing, Engineering, and Construction on behalf of the UNF Foundation for the CCEC Scholarship. The \$2000 Scholarship has been designated to an Engineering Scholarship for 2017.



Members of the Florida First Coast Chapter were thrilled to be able to donate \$2,000 to the University of North Florida College of Computing, Engineering, and Construction. Dr. Mark Tumeo (second from right) accepts the check

DELAWARE VALLEY FATIGUE FAILURE SEMINAR

At the Delaware Valley Chapter Dinner Meeting for February 2017, Lawrence Keenan of Hoffman Architects presented an analysis of fatigue failure of precast double-tee connections due to high cycle vehicular loading to a packed house. The presentation included an in depth look at why welded tee-to-tee flange connections are poorly configured to withstand highcycle vehicular loading and violate Building Code requirements for fatigue resilient design. Attendees learned how to identify fatigue failures and examine Building Code requirements and industry standards as they apply to high-cycle fatigue performance of commonly used details. Parameters discussed included connection configuration, cycle analysis, weld type, effective weld size, Allowable Stress Range, Stress Category, crack initiation point, and allowable design capacity. The most commonly used connection detail, consisting of fillet welds on a flat erection bar, was analyzed to demonstrate application and implications of AWS and AISC Code provisions. Scanning electron micrograph images of fractured welds were analyzed to demonstrate fatigue failure mechanism. Consequential effects of fatigue failure and considerations for optimized fatigue-resistant connection design were also discussed.



Lawrence Keenan of Hoffman Architects presented at the Delaware Valley February meeting and helped attendees learn how to identify fatigue failures and examine Building Code requirements and industry standards as they apply to high-cycle fatigue performance



The Delaware Valley Chapter welcomed a packed house for the February dinner meeting

2017 CHAPTER NEWS DEADLINES

JULY/AUGUST SEPTEMBER/OCTOBER

May 10, 2017 July 10, 2017

NOVEMBER/DECEMBER

September 10, 2017

Send your Chapter News to Dale Regnier, Chapter Relations Director, at daler@icri.org

FLORIDA FIRST COAST HOSTS EXPANSION JOINT MEETING

On Thursday, March 30, 2017, the Florida First Coast Chapter of ICRI held a luncheon at the University of North Florida. The meeting started at 12:00 pm. The presentation, *Expansion Control—Resealing the Building Envelope*, was presented by David Poulter of Product Resource Consultants. David's presentation was focused on issues associated with removal and replacement of expansion joints in the building envelope and open air structures. David also touched on why buildings leak, joint sealing, joint sealant product types, foam joints and mechanical joints, specifying for performance, and constructability issues.



Guest speaker David Poulter from Product Resource Consultants gives a presentation to the Florida First Coast Chapter on Resealing the Building Envelope



GEORGIA HOSTS MEETING ON EXPANSION JOINT DESIGN

The Georgia Chapter of ICRI held its monthly luncheon on February 23, 2017, at Maggiano's in Perimeter Mall. A total of 37 attendees were part of the luncheon meeting sponsored by Styro Systems. The meeting started out with Chapter President Josh Lloyd introducing the meeting sponsor and then the featured speaker, David Sorrells, Emseal Joint Systems, LTD. David Sorrells has 30 of experience in the specification and marketing of construction products and services. He began his career with Sherman International, which at the time, was the largest producer of concrete and concrete products in the southeastern United States. His responsibilities included quality assurance, quality control, design, testing, and sales.

Mr. Sorrells' presentation, *Expansion Joints: Design, Types & Analysis Description*, provided members with 1 PDH or 1 AIA credit. His presentation ensured that the end user would have a better understanding of expansion joints' contribution to creating a watertight and energy efficient design, as well as the proper techniques to detail, specify, bid, erect, manufacture and install expansion joint systems.



The ICRI Georgia Chapter hosted a presentation by David Sorrells, Emseal Joint Systems, who brought the attendees up to speed on expansion joint design

NORTHERN CALIFORNIA HOSTS PROGRAM ON HISTORIC BUILDING

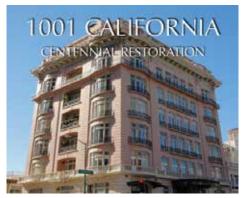
The Northern California Chapter of ICRI hosted its March meeting on March 21, 2017 at HS Lordships Restaurant in Berkeley Marina. Prior to the main program, the Board of the Northern California Chapter honored the chapter's most recent past president, George Lee, with a recognition award for his years of service and dedication to the chapter. The board happily reports that George will continue to serve as a member of the Board of Directors as his guidance and wisdom have helped to grow the chapter and he is a valued member.

The guest speakers for the program, Lee Woolsey from Neumann Sloat Arnold Architects and Emile Kishek with Alpha Restoration & Waterproofing, described for the attendees the

challenging, multi-year restoration of 1001 California Street Centennial, an iconic Beaux-Arts structure perched on top of Nob Hill in San Francisco, California.



Northern California President Cruz Carlos (left) presents a recognition award to past president and valued member, George Lee (right)



The restoration of the historic building at 1001 California Street in San Francisco was the topic of the March meeting of the ICRI Northern California Chapter

METRO NEW YORK HOSTS SEMINAR ON CONCRETE SLAB TECHNOLOGY

On Wednesday, March 22, 2017 the Metro New York Chapter of ICRI hosted a meeting with friends, colleagues, and industry associates at Club 101 on Park Avenue in mid-town Manhattan. The technical speaker for the evening was Matthew Sherman, PE, Principal with Simpson Gumpertz & Heger, Inc. of Waltham, Massachusetts. He was recently named a Fellow of the American Concrete Institute. He also serves on the Technical Activities Committee of the International Concrete Repair Institute. Mr. Sherman has over 20 years of experience in consulting and heavy con-

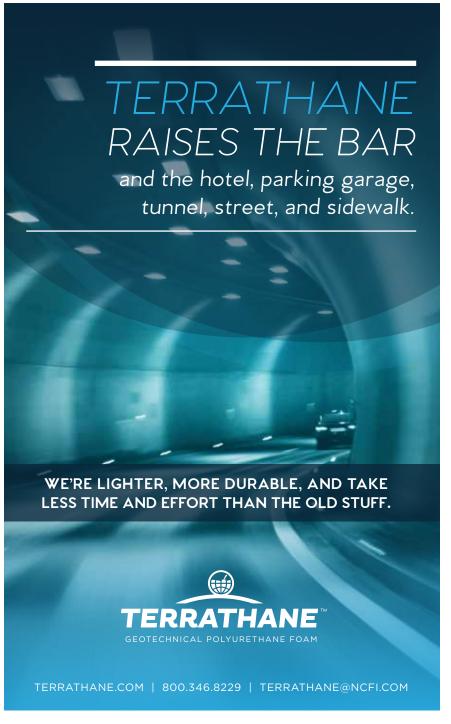


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struction throughout the United States. His specialties include concrete materials, thermal and durability simulation, nondestructive testing, corrosion mitigation, and concrete repair.

For this presentation Mr. Sherman provided the attendees with information about the different types of slabs used in building technology applications to allow them to better understand the behavior and requirements for successful concrete slabs related to waterproofing. The presentation reviewed the different demands on slabs in service and provided a methodology for designing the slabs, with an emphasis on the design and performance of paving slabs used to support traffic and other heavy loads over waterproofing. In addition, attendees were instructed on how to properly specify the slabs for different typical exposures and conditions and to identify and plan for construction and quality related items to avoid last minute problems.



At the Metro New York Meeting, technical speaker Matthew Sherman is seen here addressing the attendees



Matthew Sherman (left) from Simpson Gumpertz & Heger, Inc., is with Metro New York Chapter President Stephen Franks (right) from Blok-Lok Limited

GULF SOUTH HOSTS ALL-DAY PROGRAM

The Gulf South Chapter kicked off 2017 with an all-day program, "Concrete: Renewed and Improved," held at the Pensacola Bay Center on March 9, 2017. The premier sponsor for this event was Coastal Construction Products along with

Simpson Strong Tie and Neogard Construction Coatings, making this a very successful event. The event also drew several table-top exhibitors who were there to provide product awareness to all that attended this event.

The day began with a presentation on the major restoration project going on at the Pizitz Building located in Birmingham, Alabama, built in 1923. Architect Jules LeGarde presented the restoration process from start to finish and then introduced attendees to John English, who is with the restoration contracting company BRAWCO, Inc. John was able to provide some additional details on the Pizitz Building's major concrete repairs including information on the carbon fiber reinforcement of major structural elements.

Next up was Troy Wayman, the Vice President of the Mobile, Alabama Chamber of Commerce and Director of Mobile Economic Development. Troy provided the audience insight on what is driving the Gulf Coast economy and what segments are offering future growth opportunities. Next, Carl J. "Chuck" Larosche, PE, principal of Wiss, Janney, Elstner Associates, covered the upcoming Concrete Repair Code and what it will mean for the concrete repair industry. Closing the day was a joint presentation from Jerrub Hammrich with Structural Group, Inc., and the return of Chuck Larosche, PE These two professionals teamed up to cover Best Practices for Scoping and Contracting Concrete Repairs.



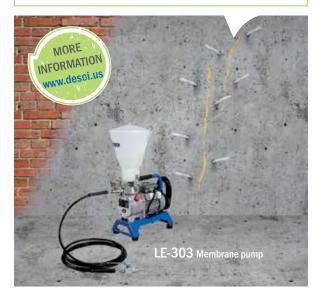
Gulf South Chapter leader Bryan Wood is seen here speaking to the group regarding the chapter's preparations to solicit student applications for Gulf South Chapter scholarship



One guest presenter for the Gulf South program was architect Jules LaGarde, AIA

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GREAT PLAINS HOSTS TRAFFIC DECK SEMINAR

The ICRI Great Plains Chapter hosted a very successful all-day seminar, "The Uses and Different Technologies of Traffic Deck Protection Systems" on February 23, 2017. The chapter was able to offer continuing education credit and boasted more than 83 attendees. The chapter hosted the event at the Hilton in Kansas City. The event was created to be a day of education on a very important topic in the concrete repair industry, and a chance to mingle with other professionals in this field.

Topics covered during this event included: Single Component Urethane Systems by Bill Raymond, Neogard; Migrating Corrosion Inhibitors by Tim Gillespie, Sika Corporation; Penetrating Sealers & Water Repellants presented by Ray Jaegers, BASF; Epoxies Coatings with Scott Bain, Dayton Superior; and Cementitious Coatings by Jim Rowe, Miracote.



The Great Plains chapter gathered a large crowd in Kansas City for an all-day seminar on traffic deck protection systems



At the Great Plains all-day seminar were (left to right): Matthew Carter, Dayton Superior; Tim Gillespie, Sika Corporation; and Bill Raymond, Neogard

GREATER CINCINNATI HOSTS DEMO AND SEMINAR

The ICRI Greater Cincinnati Chapter recently hosted a day filled with demonstrations and presentations on "Critical Joint Sealant Technologies for Building Facades, Stadiums, Warehouse Distribution, Bridge/Pavement & Industrial Applications."



First up was a presentation from Eric Muench and Sean Gallagher with Sika Corporation



Hands-on demonstrations on Rapid Cure Silicone demonstrated by Eddie Baas of American Facade Company



Attendees (left to right) Mark Eggenschwiller, Henry Frondorf, and Sherry Mallot enjoy the Sealant Demonstration





Andy Perduk checks out Professional Sealants Company demonstrating sealant technologies at the two component urethane and polyurea work station area

QUEBEC PROVINCE HOSTS DUAL WINTER MEETINGS

The Quebec Province Chapter was successful in holding two meetings in February. The first was a breakfast meeting on February 14, 2017 that brought in more than 40 participants. Professor Omar Chaallal, PEng, PhD, gave a presentation on the design of external reinforcement of concrete structures using composite materials. The meeting was very successful and greatly appreciated by all attendees. The chapter hopes to repeat this presentation at a coming fall meeting in the Montreal area.

The second event, February 20, 2017, was on "Bonding of concrete repairs: design considerations, factors influencing bond and evaluation." This event was held to commemorate the 15th Anniversary of the scientific cooperation between Laval University in Québec and University of Liège in Belgium and highlighted the progress and scientific advances that have been made by the two universities working together over the past 15 years. Attendees heard from the following three presenters: Benoit Bissonnette, PEng, PhD; Luc Courard, Dr.-Ir.; and Andrzej Garbacz, PhD. Their presentations gave the participants a better understanding of the mechanism and the factors influencing the bonding of concrete repairs. The evening concluded with a cocktail reception hosted by the Walloon-Brussels delegation, representing the University of Liège in Belgium, where the 30 participants enjoyed the rare opportunity to network and exchange views on concrete repairs in their respective countries.



Professor Benoit Bissonnette giving his presentation during the February 20 meeting

MINNESOTA HOSTS TRADE SHOW EVENT

On February 24, 2017, the ICRI Minnesota Chapter held its third annual Trade Show event at Cement Masons Training Hall in New Brighton, Minnesota. This was a chance for local sponsors to showcase their services and products by providing hands-on demonstrations. The event was free to attendees and they were served a lunch of hot dogs and chips. As in the past, the Cement Masons Training Hall provided plenty of space for all of the demonstrations and the chapter welcomed more than 60 attendees. The demonstrations included different ways to perform concrete testing with both destructive and nondestructive methods shown. Several vendors showed off some new materials they will introduce to the industry this year. There were also several demonstrations that provided information on dustless, dust-free and dust reducing systems and materials. With new silica dust standards on the verge of taking effect, this was a particularly important topic for the trade show. The Chapter would like to give a special thanks to Terry Babcock for all his hard work to make this event a huge success.



There were several different demonstration areas through the Cement Masons Training Hall for attendees to visit, discuss, and participate in hands-on activities

RECENT ICRI NATIONAL EVENT

The ICRI Quebec Province Chapter was proud to sponsor 31 students from École de Technologie Supérieure for a breakfast before the technical sessions on Friday morning at the ICRI Spring 2017 Convention in Montreal. Special thanks to Paul Hébert, PEng, for encouraging his students to attend the convention and get exposure to ICRI and its members as well as attending the technical seminars. The chapter would also like to report that two students from Africa (currently interning with QP Chapter member Daniel Dargis) were able to attend the Wednesday morning technical sessions at the Spring 2017 National Convention because of their affiliation with the chapter. The two students were Rakesh Kumar Bheemul from Îles Maurice and Nouridine Zakari from Togo.



Proudly displaying their counties' colors are (left to right): Daniel Dargis, Quebec Province Director, with the Quebec Province flag; Rakesh Kumar Bheemul with the flag from Îles Maurice; Nouridine Zakari with the Togo flag; Jacques Bertrand, Quebec Province Chapter President, with the Canadian flag; and Blake Finger, ICRI staff, with the flag from the United States

CHAPTERS COMMITTEE CHAIR'S LETTER



JOHN McDOUGALL Chapters Chair

Oh quel bon moment—Oh what a great time! Montreal and the Quebec Chapter were gracious hosts for the 2017 Spring Convention. It is noteworthy to mention the hard work and dedication of Jacques Bertrand, 2017 Quebec Chapter President, as well as the entire Quebec Chapter. Their planning spanned nearly 24 months and they managed to deliver every detail as planned—almost.

A pop-up storm blew through the Midwest and Northeast sections of the United States in the days leading up to the convention. The storm dropped upwards of 24 inches of snow in Montreal and almost a foot in New York City, Chicago, Toronto, Boston and a few other significant airport hubs. One overwhelming takeaway from meeting with many of the attendees were the travel stories. While only a few had to cancel entirely, there were stories of rental cars from Toronto, members stranded in airports across the Unites States and Canada, as well as many delays and cancellations. Despite the difficulties, almost 300 attendees made the trek to Montreal. It is a testament to the dedication of our membership that so many folks braved the journey to participate in the Convention.

During our Spring event we announcd the winners of the ICRI Chapter Awards. The awards are designed to help chapters see their strengths and define where they can improve. This year, 22 chapter participated in the program. We were pleased to announce the Florida West Coast Chapter as the 2016 Chapter of the Year! Their chapter leadership is among the most active in the association, serving on several ICRI committees. They are always happy to host the Southeast Area Chapter Roundtable when it comes to town every two years. Great work!

In Montreal we heard presentations from several chapters hoping to host a convention in the coming years. The British Columbia, Delaware Valley, Baltimore-Washington and Georgia Chapters made their case as to their ability to host ICRI in 2018 and beyond. If you are part of a chapter that would like to host, please reach out to me or Ingrid Rodriguez (chair of the ICRI Conventions Committee) for guidance. The Conventions Committee would like to offer interested chapters

time to present at the next Conventions Committee Meeting. That meeting will be held in New Orleans this fall, November 15-17, 2017.

At the Chapters Committee meeting we discussed the potential of two new chapters to add to our family. There is interest in a third chapter in the great state of Ohio, specifically in the Columbus area, and one in my home town of Halifax, Nova Scotia. Both areas have interested volunteers to move it along and they are currently in the early stages of chapter organization. As a group we are definitely looking forward to seeing these two new chapters develop and have the ability to serve the local membership in both the Columbus, Ohio, and Maritime Provinces areas.

If you are in a region not supported by a local chapter, and have both the energy and support to start a chapter, please reach out to me or Dale Regnier, our Chapters Director, to discuss next steps and get the tools you need to get something started. As an organization, we have recently seen several chapters blossom through the dedication of local members and leaders who are willing to step up and rally the local troops.

As always, please keep Dale Regnier abreast of all chapter developments, meetings, and updates. We want to share your chapter celebrations with the entire Institute and our membership by way of the Chapter News Section in this *Concrete Repair Bulletin*.

The CRB, as well as your own chapter's page on the ICRI International website, are two great (and free) tools for promotion of your chapter. The ICRI Chapters Committee encourages you to use these tools to communicate directly to your members, as well as those people throughout the organization who travel frequently. They look at the ICRI website for upcoming events, programs and seminars to see if they coincide with the time and place of their next trip. Use the tools at your disposal to promote what your chapter is doing. And if you need help, simply reach out to me or Dale and we can make sure you are on line and successful.

See you on Bourbon Street!

John McDougall

ICRI Chapters Committee Chair



For the latest ICRI Chapter information visit www.icri.org.

NEW PRODUCTS

ASV OFFERS RT-30 COMPACT TRACK LOADER FOR VERSATILITY IN TIGHT AREAS

ASV LLC, an industry-leading manufacturer of all-purpose and all-season compact track loaders and skidsteers, offers the Posi-Track RT-30 compact track loader as a heavy-duty commercial machine in a small package. The radial lift loader is the industry's smallest sit-on model yet features the same productivity-enhancing qualities as larger ASV machines. This includes highly efficient hydraulics and cooling systems as well as best-in-class low ground pressure. In addition, the RT-30 provides a safer, more productive alternative to walk-behind and sit-on mini skidsteer loaders. The ASV unit's small size makes it ideal for contractors, rental centers and homeowners looking for a commercial-quality, compact machine for work in tight spaces for applications such as landscaping, snow removal and construction.



The 3,600-pound RT-30 is 48 inches wide and has an 8.4-foot lift height. Its compact size and 10 inches of ground clearance minimize risk of property damage or damage to the machine while working in hard-to-reach areas, whether clearing snow on sidewalks and through alleys or while completing landscaping or construction work in high-density housing areas.

The machine's size also optimizes it for the rental market as the compact track loader is easy to transport on a trailer pulled by a pick-up truck. It is simple to operate, making rental customer training easy, including homeowners who can use it in backyards and eliminate manual labor. In addition, the RT-30 features easy serviceability as a result of a single-door system that allows fast access to the engine, filters and other daily checkpoints. This means faster rental turnaround and less downtime for contractors.

The RT-30 offers a safe alternative to similarly sized walk-behind and stand-on skidsteer loaders. The ASV unit's cab provides rollover protection and protects the operator from outside elements. The cab's seat also eliminates the fatigue that comes from standing. In addition, the compact track loader also features more ground clearance and lower ground pressure than similarly sized machines on the market.

The RT-30 features a rated operating capacity of 665 pounds and a tipping load of 1,900 pounds. Standard joystick controls make operation easy and intuitive. Operators can choose from a full line of attachments built for the RT-30 and its quick-attach plate, such as buckets, snow blades, snow blowers, augers, trenchers and pallet forks. In addition, buyers can fit the unit with an adaptor plate to accept standard skidsteer attachments. An optional turf track allows for operation on highly manicured surfaces, such as golf course greens, with minimal risk of damage.

For more information on the RT-30 and available options, visit ASV LLC's websites: www.asvllc.com or www.positrack.com.

BLASTCRETE EQUIPMENT COMPANY OFFERS SOLUTION TO OSHA'S NEW REGULATIONS

Blastcrete Equipment Company's dust suppression system limits silica dust exposure in industrial, construction and mining applications. The patent-pending Dust-Away system consists of an innovative bulk bag design that attaches to a mixer to contain dust as the mixer fills. The bag's dust ruffle encapsulates airborne particles, helping to control respirable dust. Dust-Away helps businesses meet new OSHA regulations for crystalline silica dust by controlling dust to within OSHA-permissible exposure limits, or PELs.

The DustAway system is the first system of its kind and will fit securely around mixer openings. The flexibility of the system allows for customers using material packaged in paper bags to convert to small bulk bags to address these new OSHA directives. For larger mixers, companies can work with Blastcrete to design a removable lid that will be available to fill the space where silica dust can escape.

Blastcrete will offer a variety of DustAway bulk bag sizes ranging from 500 to 3,000 pounds and customizable lids to fit new and existing machines, whether from Blastcrete or another manufacturer.



OSHA's new regulations, which take effect in June 2017, limit permissible exposure limits to 50 micrograms per cubic meter of air over an eight-hour shift. This level is roughly 50 percent of the PEL set 45 years ago for general industry and about 20 percent of the previous PEL for construction and shipyards.

Blastcrete has been manufacturing safe, reliable and user-friendly solutions for the refractory and shotcrete industries for more than 60 years. With a complete product line consisting of concrete mixers, pumps and related products, the company serves the commercial and residential construction, ICF and SCIP building systems, refractory and underground markets. More information: Blastcrete Equipment Company, 2000 Cobb Ave., Anniston, AL 36202; 800-235-4867; fax 256-236-9824; info@blastcrete.com; www.blastcrete.com.

BROKK INTRODUCES POWERFUL BROKK 500 DEMOLITION MACHINE

Brokk, the world's leading manufacturer of remote-controlled demolition robots, introduces the new Brokk 500, which features 40 percent more demolition power than the Brokk 400 as well as the Brokk SmartPower™ electrical system, a more powerful breaker, extended reach and industry-leading serviceability. And, it adds a portion of good looks to the worksite as well.

Brokk unveiled the Brokk 500 during CONEXPO-CON/AGG in Las Vegas and at www.brokk.com.

NEWPRODUCTS

The new Brokk 500 adds 40 percent more breaking power than its predecessor, the Brokk 400. The machine delivers 1,086 foot-pounds (1,472 joules) with each blow of the 1,510-pound (685-kilogram) Atlas Copco SB 702 hydraulic breaker. On top of that, it adds more length to Brokk's signature three-part arm system, now reaching 24.3 feet (7.4 meters) vertically and 23 feet (7 meters) horizontally, making it ideal for work where extra reach is important.



Still, the Brokk 500 retains most of the compact proportions of the Brokk 400. Weighing 11,464 pounds (5,200 kilograms), it is only slightly heavier, and the width of the machine is the same. It also is "backward compatible," so all the tools and attachments used for the Brokk 400 can also be used on the new Brokk 500.

The Brokk 500 comes with Brokk's new intelligent electrical system, Brokk Smart-Power, which is a key part in creating the machine's performance improvement. It maximizes the power output of the machine at any given time based on both environmental and operating factors.

The Brokk SmartPower system is uniquely designed for the extremely tough operating environments of a demolition robot. Its components are either designed by or modified by Brokk to withstand the demolition forces over time. In addition, it helps the operator start the machine on a poor power supply while at the same time it protects the Brokk machine from any harmful faulty power.

The Brokk 500 incorporates the industryleading reliability and serviceability that Brokk has become known for over the years. New on this machine is that operators can complete all daily and weekly maintenance without having to lift the covers of the machine. Replacing any damaged hydraulic hoses is now simpler than ever. Add other items, such as the strengthened new Brokk machine design, the reinforced casted details, and the new headlight protections, and the result is a machine truly hardened for the tough Brokk environment

The Brokk 500 will be available beginning May 2017.

10" FLOOR SCARIFIER TACKLES DEMANDING MATERIAL REMOVAL APPLICATIONS

Tackle the most demanding surface preparation and material removal applications with CS Unitec's Trelawny™ Floor Scarifier. Powered by an 8 HP Honda GX240 gas motor, the TFP 260 Model 326.2000T removes coatings and corrosion from concrete and steel surfaces, removes painted lines, roughens concrete and creates a keyed or grooved profile for waterproofing and non-slip surface applications. The TFP 260 is also available with an electric motor, Model 326.2006T.



The TFP 260 has a 10" cutting width and 1/4" maximum cutting depth per pass. Depth control enables removal of surface materials without damaging the substrate, maximizing performance and extending cutter life. Other features include a quick-lift drum lever for operator control and integrated vacuum connection for dust-free scarifying.

CS Unitec offers a selection of cutters for a variety of applications. Tungsten Carbide Tipped cutters are ideal for roughing concrete and heavy corrosion removal, as well as grooving roadways for non-slip surface. Beam cutters remove light paint and corrosion with minimal damage to the substrate. Star cutters are optimal for mastics and rubberized coatings.

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LARSON ELECTRONICS RELEASES A 10 WATT LED HAND LAMP WITH 30' OF CORD ON A RETRACTABLE REEL

Larson Electronics, a leader in the industrial and commercial lighting industry, continues its commitment to providing high grade lighting equipment to specialty markets with the release of a 10 watt LED drop light equipped with 30' of cord on a retractable reel.



The VPLHL-7WLED-PC-GR30 LED trouble light from Larson Electronics is waterproof and vapor proof and is constructed to prevent the intrusion of water and moisture into the handle and head when used in wet locations. The 10 watt LED bulb included with the drop light produces 1,050 lumens of light with an operating temperature of only 55°. The solid state LED lamp has no filament, making it resistant to damage from impacts and dropping. The drop light features a rubberized, insulated handle to provide a safe and secure grip and a stainless steel wire guard enclosure to protect the polycarbonate lens. These LED drop lights have improved qualities compared to the incandescent models with higher foot candle light output, cooler operation and better light quality. The cool operation, good light color and evenness of coverage make these lights ideal for a wide variety of close quarter work and inspection activities.

The cord reel is designed for a lift/drag of up to 30 feet of 16/3 AWG SOOW round cable. An additional two feet of cable provides adequate length for safety wrap and power connection. A slip ring enclosure is built to NEMA standard, is 600 volt

NEW PRODUCTS

rated and has three conductors. The reel is UL listed and is constructed of durable steel with a white powder coat finish. The reel includes a ball stop and a ratchet with a lockout feature. The LED hand lamp is capable of illuminating an area approximately eight feet wide in all directions, is certified waterproof and vapor proof and suitable for use in wet areas.

Larson Electronics carries an extensive line of LED light towers, portable power distributions, explosion proof lights for hazardous locations, portable work lights and industrial grade LED area lights. You can view the company's entire line of lighting by visiting them on the web at Larsonelectronics.com. You can also call 1-800-369-6671 to learn more about their products or call 1-214-616-6180 for international inquiries.

LARSON ELECTRONICS LLC **RELEASES NEW EXPLOSION** PROOF EVAPORATIVE COOLER

Larson Electronics LLC, a leading industrial lighting company, has announced the release of a new explosion proof evaporative cooler. This explosion proof galvanized air chiller combines a non-sparking fan and dry mist technology to cool Class 1, Division 1 work areas that do not have access to traditional air conditioning.



With a fan unit running at 8723 RPM, this explosion proof evaporative cooler (EPF-AC-300-GLVD) can chill down any industrial or commercial space in need of a cool down. This evaporative chiller is designed to be self-maintaining and prevents operators from interrupting their work to replace pads or clean the nozzles. It comes equipped with a 34 gallon tank and 2 separate water filters to cool the work area for up to 8 hours.

To learn more about Larson products call 1-800-369-6671 or 1-214-616-6180 for international inquiries.

INTRODUCING MM1018 ON-SITE REPAIR PRODUCT FOR HIGH LOAD **BEARING BRIDGE PROJECTS**

Stronghold Coatings introduces MM1018, a polymeric metal material that provides 100% force fit gap compensation for the repair of concrete and steel bridges, power plants and utility construction projects, offshore drilling rigs, wind turbines, and other demanding high-load, critical environments. This high performance repair product provides 100% volume restoration inside the gap between bearing and construction without machining of back plate and face plate. It combines high compressive and shear strength, excellent vibration damping, and long-term corrosion protection in extreme service conditions (vibration, temperature extremes, etc.), and is resistant to weathering and aging, as well as gasoline, oils, coolants, acids, lye and more. It is easily applied onsite, even at height, using casting or injection. This allows significant repair cost savings versus conventional disassembly/rebuild methods. It is ideal for concrete and steel bridges, railways, waterway locks, other critical infrastructure projects.



MM1018 was originally developed in Germany for the repair of steel and steel composite bridges, where materials are subject to the highest loads and stresses. More than 1000 bridges worldwide have been repaired using this proven technology. Ideally suited for use in corrosive saltwater environments like on oil rigs,

offshore wind farms, canal water gates, and other corrosive environments.

Stronghold Coating Systems is the exclusive North American supplier of DIA-MANT products, the world's "gold standard" in structural repair for critical applications. MM1018 was developed by DIAMANT and is manufactured in the USA by Stronghold in their centrally located Franklin, OH facilities which includes an extensive testing lab. For additional information visit www. StrongholdOne.com, contact them at Stronghold Coating Systems, 100 Shotwell Drive, Franklin, OH, 45005, call (513) 808-1695, or via e-mail at strongholdone@ cs.com.

AIR-SHIELD™ TMP OFFERS SUPERIOR LIQUID MEMBRANE AIR BARRIER PROTECTION

AIR-SHIELD TMP, part of W. R. MEADOWS' air barriers line, is a waterbased air/liquid moisture barrier that cures to form a thin, tough, seamless, elastomeric membrane. AIR-SHIELD TMP exhibits excellent resistant to air leakage.



AIR-SHIELD TMP has been specifically formulated to act as an air and liquid moisture barrier, allowing vapor to pass through it. It may be applied to most common surfaces and integrated into various wall systems. AIR-SHIELD TMP is suitable for both new construction and retrofit applications.

This user friendly, single-component, liquid-applied membrane allows for a safe and simple sprayable application on rough or smooth surfaces as well as easy cleanup. AIR-SHIELD TMP is highly flexible and bridges cracks with ease

NEW PRODUCTS

while excellently adhering with a firm bond even over damp surfaces.

AIR-SHIELD TMP is available in 5 gallon pails or 55 gallon drums.

For more information, visit www. wrmeadows.com.

BOSCH GBH2-28L 1-1/8" BULLDOG™ XTREME MAX SDSPLUS® ROTARY EXPERIENCE TOUGH YET FLEXIBLE WATERPROOFING WITH HRM 714 FROM W. R. MEADOWS

HRM 714 from W. R. MEADOWS is hotapplied rubberized asphalt waterproofing membrane that is comprised of 100% solids blend of asphalts, synthetic rubber polymers, and filler formulated to provide toughness with flexibility and low moisture vapor permeance.

HRM 714 is hot-applied to form a continuous elastomeric membrane. It is ideal for waterproofing bridge, parking, plaza, or promenade decks; tunnels; pedestrian concourses; and similar types of construction where a monolithic waterproofing membrane is desirable.



HRM 714 comes in a 50 lb. (22.7 kg) carton in the form of two 25 lb. buns.

Newly available is a cured sample that shows the toughness and flexibility of the product after application. For more information on HRM 714, and to request promotional materials and samples, call (847) 214-2100, e-mail info@wrmeadows.com, or visit www.wrmeadows.com.

GCP APPLIED TECHNOLOGIES SHOWCASED A RANGE OF INNOVATIVE CONCRETE TECHNOLOGIES AT CONEXPO

GCP Applied Technologies Inc. (NYSE: GCP), formerly the Grace Construction

Products division of W.R. Grace, exhibited several new technology platforms at CONEXPO-CON/AGG 2017 in Las Vegas, Nevada, including Verifi® Intransit Concrete Management system, ConceraTM Admixtures for Control Flow Concrete, Clarena® Aggregate Management Solutions, TYTRO® Shotcrete System, and its new SintaTM synthetic microfiber brand.

The Verifi® In-Transit Concrete Management System is the first of its kind to monitor, measure and manage concrete properties in transit. It offers a new level of concrete quality control and helps increase product consistency, increasing jobsite efficiency and minimizing costly project delays.

The patent-pending Concera[™] Admixtures for Control Flow Concrete impart conventional mix designs with unconventional performance. Concera[™] admixtures enable the production of Control Flow Concrete, a new category of highly flowable segregation resistant concrete using conventional mix designs.

Designed with ready mix and aggregate producers in mind, the Clarena® Aggregate Management Admixture portfolio helps to mitigate the negative effects of poor quality aggregates on concrete performance.

The GCP's TYTRO® Shotcrete System, a complete state-of-the-art admixture solution, makes shotcrete for underground construction better, faster and less expensive than conventional systems available today.

The company also presented its complete portfolio of durability admixtures, including the industry-leading STRUX® macrofibers product family and its new SintaTM microfibers brand. GCP durability products enable owners, engineers, contractors, and producers to extend the service life of concrete.

BOSCH GBH18V-26 1" SDS-PLUS® BULLDOG EC BRUSHLESS ROTARY HAMMER DELIVERS BIG POWER WITH ADDED LAYER OF SAFETY

Powerful 1.9 Ft.-Lbs. of torque in a tool that weighs only 7.7 pounds; features Bosch vibration control and proprietary

KickBack Control to reduce potential injury on the job.

The rotary hammer is the workhorse of any construction site, providing the power and torque to drill and chisel in concrete and masonry materials. But the real differentiator among these power tools is putting all of that performance in a package that delivers great power at low weight—and that's the story of the Bosch GBH18V-26 1" SDS-plus® EC Brushless Rotary Hammer.

The Bosch GBH18V-26 rotary hammer delivers 1.9 Ft.-Lbs. of torque in a tool that weighs only 7.7 lbs. The ergonomic L-shape design offers great horizontal power transmission. Combined with a Bosch 6.0 Ah 18V lithium-ion battery, this is a power tool that will drill longer and hit harder than bigger tools with more weight.

The advantages of 2x motor life and less maintenance come with the tool's lighter weight and the reduced-size Bosch EC brushless motor. Bosch electronic precision control ensures soft-start (70 percent) to help avoid walking or skating.

The Bosch GBH18V-26 rotary hammer also features an integrated dust extraction attachment, GDE 18V-16 Professional. The attachment has its own motor that draws power from the rotary hammer battery and has on/off functionality. The Bosch GDE 18V-16 Professional attachment automatically starts at the same time as the rotary hammer and continues to operate for two seconds after drilling is ended. An integrated HEPA filter provides reliable dust protection.

More Safety Features

The Bosch GBH18V-26 1" SDS-plus® EC Brushless Rotary Hammer features proprietary KickBack Control, an integrated acceleration sensor that virtually stops the drill's rotation during bit bindup situations. It's designed to reduce potential arm and wrist injuries. In addition, the tool includes industry-leading Bosch vibration control for added user safety and ease of use.

NEWPRODUCTS

To learn more about the Bosch GBH18V-26 1" SDS-plus® EC Brushless Rotary Hammer or to find a local dealer, visit www.boschtools.com or call 877-BOSCH-99. Check out www.bethepro.com for additional tips and videos.

BLASTRAC HAS DEVELOPED ATTACHABLE TRANSPORT DOLLY FOR RIDE-ON SCRAPERS

There is a new innovation for Ride-On Scrapers, the Blastrac attachable dolly. A simple two step installation is all it takes to have instant faster movement and mobility over rough terrain that also makes loading and unloading easy.



You can buy and get further information online at www.blastrac.com.

NEW STAINLESS-STEEL TITEN HD® SCREW ANCHOR FROM SIMPSON STRONG-TIE COMBINES CUTTING ABILITY WITH IMPROVED CORROSION RESISTANCE

Simpson Strong-Tie, the industry leader in engineered structural connectors, fasteners, anchors and building solutions, has launched the next era of stainless-steel screw anchors for concrete and masonry. The new stainless-steel Titen HD® heavyduty screw anchor (THDSS) delivers a new standard of performance in exterior applications, even in severely corrosive environments. The introduction of THDSS offers a state-of-the-art screw anchor solution that combines the corrosion resistance of Type 316 stainless steel with the undercutting ability of heat-treated carbon-steel cutting threads.

The THDSS screw anchor's cutting ability comes from a proprietary bi-metal design that uses a carbon-steel helical-coil thread brazed into the shank of the anchor. These serrated carbon-steel threads undercut the concrete allowing subsequent threads to securely interlock with the concrete.

Other stainless-steel bi-metal anchors are made by welding a full carbon segment onto the end of the anchor to facilitate cutting. Over time, however, carbon steel is vulnerable to corrosion, which can cause the steel to expand and crack the surrounding concrete. In the stainless-steel Titen HD, the carbon steel is confined to the helical-coil thread so as to limit concrete damage when it corrodes. For comparison, a ½" x 5" THDSS screw anchor contains less than 1% carbon steel while other stainless-steel screw anchors of the same size can contain up to 18% carbon steel.

Key features and benefits of the THDSS screw anchor:

- Ideal for exterior applications and corrosive environments
- Type 316 stainless steel
- Minimized carbon steel for less corrosion expansion
- Installs with an impact wrench or a hand tool

For more information about the THDSS screw anchor, visit strongtie.com/titenhdss.

CONCRETE CURING & SEALING COMPOUND

ChemMasters, Inc. has announced the introduction of "Silencure™ DOT", a single-step white pigmented wax emulsion curing compound with integral penetrating silane sealer. Silencure DOT is formulated to meet stringent state Department of Transportation specifications for curing new highway pavement, with long-term silane protection from damage caused by freeze/thaw cycles and deicing chemicals.



Silencure DOT cures concrete to ASTM C309 standards. Its white pigmentation provides a minimum 65% light reflectance to keep concrete cool as it cures, while integral silane meets most state DOT requirements for reduction of water and chloride ion penetration per NCHRP Report Series II & Series IV.

Silencure DOT replaces the time consuming and costly process of separate curing, removal and sealing steps traditionally associated with placement and sealing of new highway pavement. It reduces lane closures and exposures of workers and the traveling public to hazardous traffic conditions and detours. Fewer steps, less labor and lower traffic control expenses result in project cost savings.

ChemMasters, Inc. is a 60-year-old manufacturer of specialty concrete chemicals used to improve, repair and protect concrete and masonry. The company is the acknowledged leader in the formulation and manufacturing of low-VOC solvent-based products for use in the states that require them. A state-of-the-art research and development facility is operated by ChemMasters to advance the science of concrete improvement.

ChemMasters, Inc. is located at 300 Edwards Street, Madison, OH 44057. Telephone: 800-486-7866, Fax: 440-428-7091 Email: info@chemmasters.net Web: www.chemmasters.net.

INTERESTED IN SEEING YOUR NEW PRODUCTS IN THIS COLUMN?

Email your new product information to editor@icri.org. Editorial content for the Sept/Oct issue is due by July 3, 2017 and content for the Nov/Dec issue is due by September 1, 2017.



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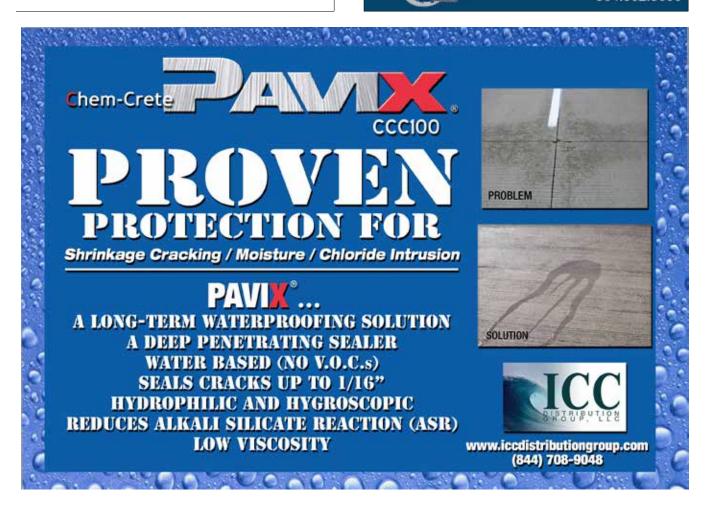
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ICRI Certification Manager

The International Concrete Repair Institute (ICRI) is seeking a Certification Manager, a newly created full-time position with the association's management company. ICRI is the primary organization for repair; providing education, certification, networking, and leadership to improve the repair, restoration, and protection of concrete and other structures.

The Certification Manager will manage and market ICRI certification programs to increase awareness and participation, and ensure an efficient and effective implementation and maintenance of all aspects of ICRI certification programs. Tasks and responsibilities include promoting and managing existing and new certification programs, coordinating scheduled certification classes, and assisting in the development of new certification and education products. The complete position description is available at www.icri.org/certificationmanager.

Prior experience in the concrete repair/restoration industry is a must. Individual can be located anywhere in the United States (no international locations considered). Extensive travel and a flexible time schedule are required. Excellent interpersonal, communication, writing, and computer skills are also required. Compensation will be commensurate with experience and qualifications.

Applicants should submit a cover letter stating why they are interested and qualified for the Certification Manager position with their current salary/salary expectations and availability to start, and include a current résumé to certificationmanager@icri.org.

Application screening will begin upon receipt of cover letters/resumes and will continue until the position is filled. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability or veteran status.

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