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Vol. 17 No. 1 January 2017

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From the Publisher's Desk

Happy New Year,

HOPE this letter finds you well and looking forward to 2017 with the same level of enthusiasm we have at *Concrete Decor*.

Maybe because I'm 54 or maybe it was the latest election, but having traveled and talked with people globally over the past several months there's a familiar impression of the U.S. they all share. We aren't the country we had aspired to become. I struggle with this because when I look at our great American flag or some money in my hands those symbols constantly lay claim to a country united. Watching the news,



the demonstrations and senseless acts of violence nationwide, it seems our problems have outgrown our control.

But, like our society's problems, all things start small before maturing into something good or bad. Affecting and changing ills in our society must have a starting point before they can take hold and lead to a healthier, happier place. But it must start with you and me. When we're moving in a good direction we know it because others eventually follow. It doesn't always happen as quickly as we'd like but it's important to remember that all good things take time.

I'd like to share a personal experience with you here but I'd rather you visit the *Concrete Decor* blog to read more about "job site safety." Believe it or not, it has only taken 16 years to get a decent foothold in the pages of *Concrete Decor*. A safe work environment takes time and ongoing effort before it can become a standard procedure. However, this is an area that I'd like the industry's help and support with in 2017. It'll determine what we can and cannot publish on these pages.

Why is this important? Aside from the fact that job site safety saves lives, it has a lot to do with our ability to influence the construction marketplace when our country needs positive changes. A visit to the new Decorative Concrete LIVE! event that *Concrete Decor* and the Concrete Decor RoadShow are hosting in the Silver Lot at World of Concrete will give you the opportunity to talk with and watch concrete professionals as they safely apply finishes to a simulated concrete residence.

Be one of the first 500 visitors to Decorative Concrete LIVE! and you'll receive a new hard hat or commemorative Decorative Concrete LIVE! T-shirt that communicates your commitment to safety.

We look forward to seeing you in Las Vegas in January. Until then, stay safe and God bless.

Sincerely,

Publisher

On the cover: In the many Lennar housing developments being built around Las Vegas, a waterproof decking system is an important component of the homes in the communities. Seen here, a subcontracting crew from Cooper Roofing installs the durable ALX system from Westcoat Specialty Coating Systems.

Photo by Michelle Hartley courtesy of Westcoat

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WELCOME TO THE FUTURE WITH DECORATIVE CONCRETE AUGMENTED REALITY

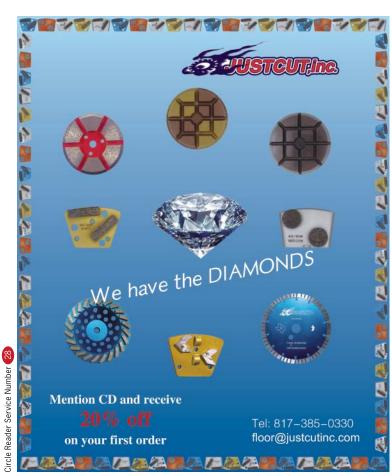
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EXPERTS



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Karen Keyes wears many hats at Denver-based Colorado Hardscapes Inc., including business development, marketing, sales, estimating and project management, with an emphasis on specialty rock construction. She can be reached at karen@coloradohardscapes.com. See Karen's article on page 18.



For more than 20 years, **Ashley Kizzire** has written for commercial markets, specializing in the concrete and construction industry since 2000. Based in Birmingham, Alabama, Ashley is a content writer and marketing specialist at Constructive Communication Inc. She can be reached at akizzire@ constructivecommunication.com. See Ashley's article on page 24.



Rick Lobdell, a classically trained artist with a master's in fine arts in painting from the Savannah College of Art and Design, has also studied math and drafting. In this series, the owner of Concrete Mystique Engraving in Tennessee will explain how he lays out his well-known designs. He can be reached at rick@ concretemystique.com. See his column, "Design Theory," on page 64.



David Stephenson owns Polished Concrete Consultants, based in Dallas, Texas. As a consultant, he offers decorative concrete programs for retailers and troubleshooting for a wide range of clients. Contact him at david@polishedconsultants.com. See his column, "The Polishing Consultant," on page 58.



USA

Chris Sullivan is vice president of sales and marketing with ChemSystems Inc. and a member of the Concrete Decor Hall of Fame. He has led seminars and product demonstrations throughout North America. Reach him at questions@concretedecor.net. See his column, "Concrete Questions," on page 56.

Explore our archive at ConcreteDecor.net

INDUSTRY NEWS

Smooth-On acquires Buddy Rhodes Concrete

Smooth-On Inc. in Macungie, Pennsylvania, has acquired the Buddy Rhodes Concrete Products Co. from Delta Performance Products in Covington, Georgia. The acquisition was effective Dec. 5.

Included in the acquisition are the BlueConcrete line of concrete products and the Buddy Rhodes Color Spectrum including "The Signature Color Series," "Custom Color" and "Pure Pigments." Buddy Rhodes Concrete Products will continue to offer cements, CSA, pozzolans, shrinkage reducers, set delay, fibers, polymer, sealers, tools and other related products through its dealer network worldwide.

Buddy Rhodes, Jon Schuler and Jeremy French, who have been key contributors to the success of the Buddy Rhodes brand over the last several years, will continue working with Smooth-On to develop and move the brand forward. Smooth-On's Ernie Dojack has been designated brand manager.

"We have been making dry blend formulations across different chemistries since 1895 and will integrate the Buddy Rhodes line of dry blend concrete products into our new facility," Dojack says. Smooth-On, which moved into a 370,000-squarefoot facility in 2015, will dedicate an entire wing of its production facility to producing Buddy Rhodes products.

In addition to continuing to support artisans around the world that offer training on using Buddy Rhodes products, Smooth-On will offer Buddy Rhodes product training at its 18,000-square-foot dedicated seminar space.

- (610) 252-5800
- 💲 www.buddyrhodes.com
- 💲 www.smooth-on.com

Correction

In the "Spirit Stone" story in the November/December issue, Julie and Bill Carl didn't place first at the fine arts festival at the Annmarie Sculpture Garden & Arts Center. They won that honor at Everybody's Day Festival in Thomasville, North Carolina.

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CSDA annual convention to be held March 14-18 in Puerto Rico

The Concrete Sawing & Drilling Association will hold its 45th Annual Convention and Tech Fair in the Caribbean, March 14-18, at the Gran Meliá Golf Resort in Rio Grande, Puerto Rico. Registration is now open.

As part of the activities planned for the convention, keynote speaker Nathan Schwagler will introduce his audience to a facilitated meeting, communication and problem-solving process. Participants will build their own 3-D model in response to the facilitator's questions using specially selected elements, which will serve as a basis for group discussion, knowledge sharing and decision making.

The keynote presentation will be followed by two highly focused workshops that will go further in depth with the concept — Lego Serious Play and Creative Thinking in Sales — using the visual, auditory and kinesthetic skills of participants to effectively apply the method in their business environment.

亿 (727) 577-5004

💲 www.csda.org

Mack, McNeilus donate truck, mixer for CIM annual auction at WOC

The Concrete Industry Management program, a business-intensive program that awards students with a four-year bachelor's degree, received its signature item for the annual auction at World of Concrete — a Mack Granite Axle Forward model mounted with a McNeilus 11-cubicyard Bridgemaster concrete transit mixer. The big-ticket items were donated by Mack Trucks Inc. and McNeilus Co., a division of Oshkosh Truck.

The annual auction will be held Wednesday, Jan. 18, in the North Hall Room N262 of the Las Vegas Convention Center. The silent auction will be held from 11 a.m. to 12:45 p.m. and the live auction begins at 1 p.m.

Once again this year, internet bidding is available on the Ritchie Bros. website, www.rbauction.com, but bidders must have registered in advance. Those participating in the auction at World of Concrete can register on site.

(713) 722-2969
www.concretedegree.com

CTS Cement remembers Jerry Hoyle

Jerry Hoyle, CEO of CTS Cement Manufacturing, passed away Oct. 31 at the age of 69.

Hoyle was president and CEO of CTS from 2011-2014. He relinquished his positon as president in 2014 and assumed the position of vice chairman of the board, while retaining his position as CEO. With more than four decades of experience in the cement industry, Hoyle was recognized worldwide as an expert in the industry.

He was a member of the American Management Association and a past board member of the Merchants and Manufacturers Association. He had a broad range of expertise within the mining/ manufacturing arena including mineralogy, quarrying, cement plant operations, multiple kilns

(wet to pre-calciner), finish grinding, product specifications, quality assurance programs and product applications.

His career path included managerial and operational experience to provide him with the necessary background to lead any business unit through strategic change that allows for higher performance and growth.

Bill McCormick, the former president of CTS and chairman of the board, will serve as the acting CEO until a successor is named.

🖉 (800) 929-3030

💲 www.ctscement.com



ASCC presents 2016 scholarships

The American Society of Concrete Contractors Education, Research and Development Foundation has awarded a \$5,000 scholarship to Daniel Greene, a student in the Concrete Industry Management program at Middle Tennessee State University in Murfreesboro, Tennessee.

To qualify for the scholarship, a student must be enrolled full time in the CIM program and maintain a minimum 2.5 GPA.

The ASCC Foundation was created in 1989 to fund education and research that advances the quality and productivity of concrete construction.

🗷 (866) 788-2722

💲 www.ascconline.org

Solomon Colors expands with production facility in Illinois

Continuing its 90-year tradition of innovation and development, Solomon Colors has recently completed a new decorative sealer production facility in Springfield, Illinois. This state-of-theart, automated plant will more safely and efficiently produce solvent-based sealers and liquid release.

During a tour of the new facility, production manager Dave Stade stressed the new safety features included in the building. The entire building was designed to be anti-static, with grounds, rubber coverings and special electronics. The bulk of the machinery is pneumatically powered to reduce static charge and sparks. All pumps, sensors and lights are Class 1/Division One explosion-proof certified.

Efficiency is a hallmark of this facility. The production area features two 1,000-gallon blenders for sealers and two 500-gallon blenders for liquid release. Automated packaging equipment makes it possible for only two people to manage the entire sealer plant. In a separate building, several highcapacity tanks hold raw materials. These tanks are continuously monitored with ultra-accurate radar level sensors and spill alarms. A basin was erected around the tanks to contain any spills and protect against external threats such as flooding.

The new sealer production facility underwent flushing in September in preparation of production. Full production commenced in October.

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NAWIC installs 2016-2017 board

The National Association of Women in Construction installed Connie Leipard, CIT, as its 62nd national president during its annual meeting and education conference in San Antonio, Texas, in August. Leipard, owner of Quality Drywall Construction, has been a member of NAWIC's Central Missouri Chapter since 1995.

NAWIC also installed officers President-Elect Catherine D. Schoenenberger, Granite State chapter, New Hampshire; Vice President Dove Sifers-Putman, CBT, Charlotte, North Carolina, chapter; Treasurer Anne Pfleger, CIT, Lima, Ohio, area chapter; Secretary Diane I. Mike, CBT, Fort Worth, Texas, chapter; and Immediate Past President Riki F. Lovejoy, CBT, CIT, Greater Orlando, Florida, chapter.

In addition to the officers, the NAWIC board is composed of a director from each of the association's eight regions. New directors installed include Midwest region director Vickie Nickel, CIT, Greater Kansas City, Missouri, chapter; North Central region director Jenny Mangas, Cincinnati, Ohio, chapter; Northeast region director Doreen Bartoldus, P.E., CCM, Lower Hudson, New York, chapter; and Pacific Southwest region director Elizabeth M. Teramoto, CIT, Las Vegas, Nevada, chapter. (2) (800) 552-3506 (5) www.nawic.org

ASCC bestows new safety award

Keith Wayne, president/CEO of Wayne Brothers Inc. in Davidson, North Carolina, was honored by the Safety and Risk Management Council of the American Society of Concrete Contractors with its ASCC Member Owner Safety Award at the association's annual conference in Minneapolis in September.

The new award's purpose is to annually recognize one owner/executive of a contractor member company that displays a clear focus and passion for safety, and provides the leadership that creates a best-inclass safety culture. It was designed to help keep with the ASCC's strategic plan's No. 1 goal to increase the number of contractor member owners who truly demonstrate a personal commitment to safety. (§ (866) 788-2722

🖲 www.ascconline.org

TRANSITIONS

Marco Roma has been appointed general manager of Mapei Inc., the Canadian subsidiary of the global chemical products manufacturer. Roma, now a member of the Mapei Americas



leadership team, will report directly to its president and CEO, Luigi Di Geso. Since April 2014, Roma has worked for Mapei as a corporate area manager and then interim general manager for Mapei's holdings in France, Belgium and the Netherlands. Before coming to Mapei, he worked for Materis Group, holding various executive positions in Italy, Asia-Pacific and Western Europe. He has a doctorate in mechanical engineering from Polytechnic University of Milan in Italy.

Paul Scheidmantel has been promoted to sales director of Arizona Polymer Flooring, overseeing the company's business development and expansion strategies and a team of nationwide sales representatives. He has nearly 20 years of experience in industrial coatings, concrete restoration, moisture vapor mitigation, decorative concrete, floor leveling and waterproofing.

Seymour Midwest, a family-owned global supplier to the specialty hand tools market, has appointed **Bob Vitoux** as the company's chief operating officer. He comes to the company



with a career that includes public accounting, automotive and orthopedic experience. Most recently, he served as executive vice president and chief financial officer of Steinway Musical Instruments based in Manhattan. Vitoux is a graduate of Manchester College and resides in Winona Lake, Indiana.

Chryso acquires Moderne Méthode, Béton Academy in France

The Chryso Group acquired Moderne Méthode and Béton Academy Nov. 18 to enhance its decorative concrete offerings.

Moderne Méthode, founded in 2003, is a French leader with an international span when it comes to decorative concrete applicators. The company has built its reputation and development on two pillars: a solid training program with the Béton Academy and innovative, robust and sustainable systems.

The Béton Academy comprises 11 training centers to the craft of decorative concrete applicators. It is approved and ISO 9001 certified. Moderne Méthode's areas of expertise includes stamped, polished and microtoppings, millimetric coatings including stabilized sand and metallics, as well as resins and stampable overlays.

Serving cement manufacturers, ready mix concrete plants, precast manufacturers and construction companies, Chryso distributes cement additives, concrete admixtures and construction systems. With this acquisition, the company enlarges its offering and proposes a large and effective range to the new construction and restoration markets.

The Chryso Group will intensify its technical and sales forces in France but plans to keep the present teams unchanged. The group's extensive network now includes 20 foreign subsidiaries and covers more than 70 countries through its distributors, licensees and agents. It employs more than 1,120 staff worldwide.

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SAVE THESE DATES: NOVEMBER 6-10, 2017





NOV. 6-10, 2017 PALM HARBOR, FLA.

ASCC publishes safety bulletin on crystalline silica dust rule

The Safety and Risk Management Council of the American Society of Concrete Contractors in St. Louis has published a new Safety Bulletin: OSHA's New Final Rule on Crystalline Silica Dust.

The new rule went into effect June 23, 2016, but allows a one-year leeway for the industry to fully comply. The ruling cuts the Permissible Exposure Level by half, a significant change that concrete trades need to prepare for. It also increases the amount of medical exams and recordkeeping required.

ASCC Safety Bulletins are brief discussions of the most severe safety issues facing concrete contractors and are published periodically. Contractors receive a complete set of bulletins when they join the organization. They are available for sale to nonmembers. 🥟

(866) 788-2722 📢 www.ascconline.org

EVENT CALENDAR

World of Concrete

Las Vegas Convention Center Jan. 16-20, Las Vegas, Nev. 💲 www.worldofconcrete.com

Decorative Concrete LIVE!

Las Vegas Convention Center Concrete Surfaces & Decorative Pavilion Jan. 16-20. Las Vegas, Nev.



📢 www.worldofconcrete.com

American Coal Ash Association Winter Meeting

Hyatt Regency Jan. 23-24, Jacksonville, Fla. 💲 www.acaa-usa.org



🚯 www.concretedecorshow.com

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Brawl in the Fall 2016 Competition in San Diego has both serious and fun sides

• VERYTHING about the Brawl in the Fall at the 2016 Concrete Decor Show in
San Diego was hot, hot, hot — from the record-breaking 100+ degree heat to the sizzling entries that shaped up in the outside lot during show time.

Now in its third year, the competition featured five artisans and their teams vying for the honor of being named top Brawler for 2016. Once again, the purse contained \$10,000 worth of products, equipment,



prizes and cash to be shared by the top three teams that got the most votes.

Show attendees received a ballot as they entered and were encouraged to visit the competition area outdoors to watch and question the artisans at work. Cast votes were tallied Thursday to help the judges pick the top three winners for 2016. The judges were Bent Mikkelsen of Concrete Decor, Jim Petersen of the Concrete Network, David Blasdel of Butterfield Color and other industry experts who want to remain anonymous.

Deco-Crete Supply once again emceed the event and awarded the prizes.

Rick Lobdell, an artisan based in Nashville, Tennessee, and a two-time Brawl contender, says the significance of the Brawl is far reaching. "It's a great way to show beginners and the industry overall how far you can take decorative concrete," he says. "We don't get many opportunities to do that in the public eye."

Whereas he concedes that it's very satisfying to get your name out there and

to show your peers what you do in your own unique way, the Brawl goes beyond that. "It shows what we are capable of doing as an industry. That's the bigger — and more important - picture to me."

year's Brawl involved seeing if

First place winner:

Vertical Concrete Creations,

(\$) www.verticalconcretecreations.com

judges choose the winners for this

A key element to help the

Dion Battles

Nampa, Idaho

competitors could mix different materials and techniques while also being creative. Dion Battles won the battle in San Diego, with his Halloween-inspired concrete creation that took everyone back to their childhood and garnered him first place.

Battles' inspiration was to "reach into everyone's inner child," he says. To achieve this, he used lumber to build the substructures including the entry gates, fence posts and the witch house. He used rebar and lath to create the monster tree and the ghoulish jack-o'-lantern. He used Type-S mortar and cement as the scratch coat and structure coat, and KirtBag Carving Mix as the carve coat.

Although it looked good in standard gray tones, the display was colored with flat exterior latex paint with varying techniques from spraying, air brushing and sponging to brushing and flinging. "People thought it was finished before it was even painted," says Battles of how impactful his creation was.

Several people viewing the installation remarked that it reminded them of Disneyland; others cited "The Nightmare Before Christmas." Either way, a childhood fantasy was exactly what Battles had in mind. His creepy creation, which took three and a half days to make, aimed to captivate people with its abstract and whimsical nature.







For the finishing touch, Battles and his team added artificial grass, erected wooden fence panels, mixed in Halloween accents, installed a smoke machine inside the monster tree, turned up the tunes that belted out of the pumpkin and let the lighting do its magic.

Vertical Concrete Creations backed the Brawl entry on its own without a major sponsor and provided almost all the project's materials, including 79 94-pound bags of Type-S Mortar. KirtBag Carving Mix, a company Battles co-owns with Jeff Kirt, supplied 65 15-pound bags of its highperformance carving mix.

"With record temperatures over 100 degrees in San Diego and an extremely short work schedule, KirtBag Carving Mix performed amazing!" Battles says.

This was Battles first time participating in the Brawl in the Fall but he has sponsored previous artists through KirtBag. He was assisted by Kirt, Toribio Gallues, Kevin McDonnell and his son, Kameron Battles. "I couldn't have pulled off this scale of project in such a short time without this incredible crew! We worked like clockwork together," Battles says.



Second place winner: Keefe Duhon

Concrete Revolution LLC, New Iberia, Louisiana

💲 www.concreterevolutionllc.com

The first place winner of last year's Brawl in Indianapolis with his depiction of a Louisiana swamp, Keefe Duhon turned his attention in 2016 to bring awareness to the horrors of modern-day slavery.

Inspired by an incident involving a 16-year-old girl from his neck of the woods that was almost abducted, he says, "No one is immune to being taken. It happens everywhere, not just in Third World countries." In fact, he adds, it's more common than drugs, reportedly the No. 1 money maker in the world of crime.

Central to his display was a concrete overlaid structure designed to look like an old hidden room under a large bridge or in a subway complex. It was coated with Surecrete's Elasto-Shield, a waterproofing liquid membrane. Surecrete's WallSpray was then applied as the scratch coat and covered with Surecrete's microtopping overlay to create a distressed look. Hands cast with Polytek Hydrogel grasp prison bars. Graffiti, drawn by Eugene Ortiz and Jaime Reyes, dominates the walls.



Inside, an octopus-like creature with far-reaching tentacles looks like it's trying to grab victims while a jarring video about human trafficking plays on a monitor and loud music and haze pumps through the room. In the middle of the room, there's a barred shaft with an image of a trapped young girl at the bottom.

Members of Duhon's team included Nate Morgan, Brandon Myers, Danny Dupre and



Kim Duhon. Rachel Knigge of Floormaps provided the stencils for some of the lettering and the image of Clint Eastwood.



Westcoat Specialty Coating Systems 800-250-4519 • westcoat.com



Third place winner: Kevin Brown

KB Concrete Staining, Eastvale, California **§** www.Kbconcretestaining.com

A first-time Brawl participant and third place winner of this year's Brawl in the Fall, Kevin Brown of KB Concrete Staining decided to take the plunge and present his talents firsthand by creating an underwater coral reef scene.

While he has been in the decorative architectural concrete business for 30 years, he has run his own business for the past six years and now mainly specializes in exterior and interior staining.

The idea for his project came from collaborating with NewLook International, a Salt Lake City-based company that sponsored him, and Allyson Wong, an artist who drew the group-inspired design and made the concept teem with life. Wong, Brown and his team all took part in applying the design to the concrete.

"The hardest part of the project was the decorative cutting and engraving," says Brown, with the bulk of that work resting squarely in his hands. He attempted to make the scene under the sea look as realistic as possible while still adding as many different textured elements as he could.

The decorative cutting and engraving tools he used were mostly from Engrave-A-Crete while the etching, staining and sealing products were from NewLook International.

As a first timer, Brown says he expects to be back in two years as he loved the competition, relished the competitors and appreciated everyone he connected with

2016 Brawl in the Fall Sponsors

Many thanks to the following companies that supported the Concrete Decor Show's annual competition:

Bon Tool: Texture mats, fan floppy mats Butterfield Color: Concrete bench mold system Deco-Crete Supply: \$1,000 in store credit DeWalt: Table saw and tool bag Engrave-A-Crete: Wasp Concrete Engraver Ezyscreed: Screed sets GelMaxx: Product package NewLook International: Products Preval: vFan Airbrush System kit Proline Concrete Tools: Stamp tools Quest Building Products: Metabo grinder Seymour Midwest: Multiple tools including spike shoes, Magic Trowels, squeegees Stone Edge Surfaces (formerly Flex-C-Ment): 4 sets of vertical stamps and product package Steelike: Training Surecrete: Cash prizes and products



during the event. "I had a great time," he says.

Brown has not won any awards in the past but is extremely passionate about his work and has contributed to articles that have appeared in *Concrete Decor* magazine and been posted on the Concrete Network.

Brown's team consisted of himself, Wong, Eric Garcia, Jim Madison and Alex Armitage.

Brian Adams

ArchLab 333, Dayton, Ohio

ኝ www.archlab333.com

Brian Adams, a former designer who now owns ArchLab 333, is very passionate about interior design and architecture. As one of the five contestants in this year's Brawl in the Fall and a first-time competitor, he was excited to have the opportunity to present his functional geometrics. He was assisted by Jon Bell, who was in the competition last year.

Adams specializes in geometrical columns and lamps that are structured in such a way that they don't need rebar for reinforcement. Instead, he uses the Steelike concrete mix design from Kulish Design, a company based in Northern Virginia that sponsored him at this year's competition.

Unfortunately, due to time constraints, a limited crew and his inexperience in a Brawl setting — not to mention the exhausting heat which took quite a toll on him — Adams says he was unable to reach the full height with his columns and presentation. The Steelike mix, which has a revolutionary 24,000 psi, had to cure for 24 hours before he could pull it out of the mold, leaving little time for anything else.

"Although I was a little disappointed I didn't get to show the columns at full height and scale, it just doesn't do any justice when they're only a couple feet tall,"



Adams says. "I won't ever let something like that happen again." In retrospect, he says, he should have used a faster-curing mix which would have allowed him to create a table and even a lamp to accompany it to showcase his patent-pending geometrics.

Even though his project was incomplete, Adams says he has a lot of new designs in the works. He plans to get his website up and running soon where he can feature his functional geometric designs in a manner which they deserve.

Rick Lobdell

Concrete Mystique, Nashville, Tennessee **\$ www.concretemystique.com**

Due to a last-minute cancelation by another contender, Lobdell found himself a contestant in this year's Brawl with less than a week's notice. He was also one of the workshop leaders for the 2016 Concrete Decor Show's pro bono project at the Bannister Family House so he was strapped for time all the way around. "I was teaching a class and didn't have as much time as everyone else to put into my entry or to plan it in detail ahead of time," he says.

His solution was to do a design he's well

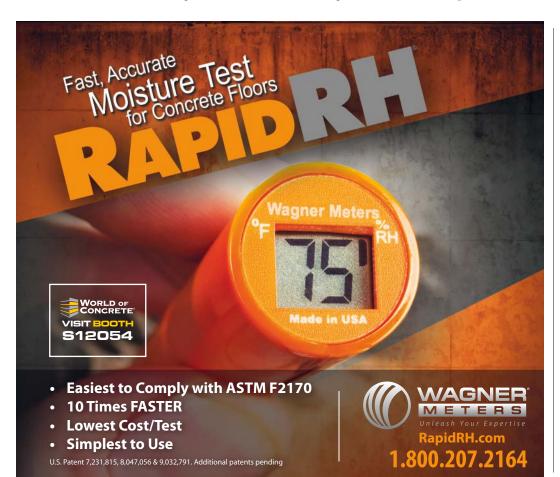


known for: 3-D vines and a central well instead of a pond. Rather than fish, which he says are time consuming to create, he included "a reaching hand to give the scene a scary, theatrical look."

Deco-Crete donated its house brand solvent-based exterior dye. Fellow workshop leader Warren Ness, who co-led the rock sculpting workshop along with Troy Lemon, pitched in as a team member, along with one of his workshop students, Vincent Cathcart of VC Studio Inc. "Vince was a huge help," Lobdell says. "He was awesome as he also has a background in art so he helped me out with the shading."

Lobdell, who competed in the first Brawl in Fort Worth Texas in 2014, says his project was based on actual jobs he had performed over the years. "Time management really factors into this competition," he says, because in the "real world" that's a really important element you've got to master.

He says he would "absolutely" enter a future competition and is eyeing Ness as a partner. With Ness' vertical prowess and Lobdell's handle on horizontal applications, he's certain they could be serious contenders next time around.



Moisture Measurement in Concrete Slabs Webinar

Wagner Meters is proud to offer "Moisture Testing of Concrete Floor Slabs," a webinar presented by Howard Kanare, a leading expert on concrete moisture issues. Kanare speaks about breakthrough scientific data that seriously challenge what we have believed regarding traditional methods for moisture testing of concrete slabs. This free presentation was created to bring you the most current information on accurate moisture testing of concrete slabs.

When: For times and dates, please visit online at: <u>www.moisturewebinar.com</u> or email <u>rapidrh@wagnermeters.com</u> or call (800) 207-2164.

Registration: This webinar is available by invitation only and online seating is limited. Please contact Wagner Meters today to reserve your seat for this groundbreaking presentation.

BUSINESS & INDUSTRY

Picture Perfect 5 tips for photographing hardscapes

by Karen Keyes

T HE beauty of decorative concrete comes from its versatility and stunning final results. Each project's unique traits help sell the next project. However, your future potential clients don't necessarily have access to your past projects, which is why photography is a crucial component of your marketing plan — regardless of your company's size. Whether you use the photography for a brag book, on your website, in brochures, on social media or with articles, you should always ensure you portray your work at its best. Here are five tips to remember:

Take photos of completed projects.

Our hardscapes show best when they're 100 percent complete and all the surrounding work is also done. Sometimes, it's difficult to go back to a project after you've packed up and left, but it's worth the effort to produce more professional-looking photos. Ideally, all furnishings should be in place. Just like selling a house, it looks best if the photos show the product in its useful state.

Do: For a stamped concrete pool deck, wait until the lawn chairs are out, grass is green and the pool is filled.

Don't: Have hoses across the deck or forms still in place.



A cloudy sky can provide even, diffused lighting without harsh shadows, improving the look of your project overall.

Ensure the area is clean. This may require using a broom to sweep the surface or hosing it down and waiting for the sun to dry it out, but it's worth the effort to show off your product at its best. Also make sure the surface is free from clutter. Your camera bag or an empty soda cup shouldn't be in the photo. To create this photo opportunity, offer to return and do a final cleaning after all other trades are done. Use that opportunity to not only clean the surface, but increase customer satisfaction and get great photos.

If you must take in-progress photos, make sure the job site is "safe" and no one is violating any safety regulations.



Although the concrete work is done, it doesn't show at its best because the surroundings look rough and shadows detract from the even tone of the concrete.



It was worth the time and effort to return to the job site to take this picture when the project was 100 percent complete, the landscaping was done and all the construction debris was carted away.



In this photo, the concrete looks dirty and the overall project is unappealing.



The flowing water and varied angle in this version make all the difference.

Do: Clean surface, pick up and dispose of trash, and make sure your notepad and camera bag aren't in the photos.

Don't: Let trash, dirt or clutter distract from your amazing work.

Choose the right time. This may not be possible for all projects, but if you have the freedom to control when you take your final photos, choose dawn or dusk. The natural lighting at these times of day usually provides excellent conditions to show the surrounding elements at their best. The lighting also tends to show off a pavement's texture and color.

If your concrete is in an area without hard shadows, a sunny day is also a good choice. If shadows are prevalent during most of the day, an overcast day will work to your advantage.

Do: Watch where shadows fall while you're working on your decorative concrete project and determine the best time of day and weather to show off your work. Shoot with your back to the sun if possible.

Don't: Photograph the work if there are harsh shadows that hide interesting features or if the light is so bright it washes out details. Make sure *your* shadow isn't in the photo either.

Include the project's surroundings.

Look around. As concrete contractors, we can appreciate a clean saw cut and beautiful consistency. However, our clients care more about the big picture. Be sure to photograph the hardscape in its setting in addition to the details which make it great.

Do: Take photos that include the adjacent building or the surrounding scenery. Even some great sky can add value to the overall picture.

Don't: Just focus on the concrete's great details.

Use your photos! Photos are a great yet often underused — marketing tool for our industry. Most of us take photos with our phones or cameras because concrete is such a visual medium. If you take photos, add them to your brag book, put them on your company's Facebook page and display them on your website. The more you can share the possibilities of decorative concrete, the more we expand knowledge, broaden opportunities and further innovations.

Do: Share your completed photos. **Don't:** Keep them on your phone indefinitely where they take up memory space and can only be seen by you.

These tips will help you build your portfolio and sell more work. Please continue to take progress photos for your own documentation. But marketing photos should primarily be finished projects. You may think some forming and progress shots are cool — but put yourself in your client's shoes. Most of them don't "get" concrete construction like we do. All they may see is a dirty job site or an unfinished project.

If you can afford it, invest in a nice camera and take the time to understand how it works. If you don't have the time or resources for nicer equipment, at least heed these tips. They'll up your game considerably.

Karen Keyes wears many hats at Denver-based Colorado Hardscapes Inc., including business development, marketing, sales, estimating and project management, with an emphasis on specialty rock construction. She can be reached at karen@coloradohardscapes.com.



Circle Reader Service Number 34

PRODUCT NEWS

Worm drive saw designed for concrete

Skilsaw, a leader in woodcutting saws for more than 90 years, recently introduced a fully integrated worm drive saw designed to score and cut concrete. Until now, users had to create their own tool workarounds to score concrete by modifying a worm drive saw with costly third-party or homemade attachments, with less than ideal results.

Medusaw is the first worm drive concrete saw that delivers a complete concrete cutting system with legendary Skilsaw worm drive power and durability. Skilsaw engineered this saw with an integrated wet/dry dust management system to control dust, allowing for cleaner cuts and GFCI protection. Both features extend the life of the saw and protect the user.

It features a cut-ready adjustable

plunge lock that allows users to quickly and accurately set and make consistent plunge cuts. The saw also has an integrated rolling foot plate with



rubber wheels that help users move it smoothly across hard surfaces and rust-resistant brackets and fasteners to protect against corrosion. Finally, the tool includes a retractable front pointer that accurately guides the saw along the cut line and retracts for tight spaces.

Medusaw comes equipped with an onboard multifunction wrench, making it easy for users to change its blades, oil, brushes, water-feed attachment and wheels. It's available at World of Concrete in January 2017 and through industrial distributors nationwide afterward. Its suggested retail price is \$399.

🕼 (877) 754-5999

💲 www.skilsaw.com

Mix it up with mix m8

The new OX Tools' mix m8 is a truly unique nonporous mixing paddle that works with concrete, mortar, grout, stucco, plaster and, well, almost anything that needs mixed. Because of its unique 'rabbit ear' design, it produces smoother mixes faster and cleanup is easier, even with the stickiest solutions.

Unlike traditional steel paddles, mix m8 is a highly flexible and durable nonporous plastic mixing paddle that creates a whirling motion and its ribbed edges cut through materials while minimizing foam, bubbles and air entrapment. The helix pulls the dry material into the mix creating a smooth and consistent mix.

Working well with both cordless and corded drills, it is a musthave for job sites where no electricity is available and a cordless drill is the only option.

Where the traditional metal vein mixer is known for damaging buckets and leaving unmixed material, the mix m8 makes edge-toedge mixing easier and the smooth ends won't tear up the bucket.

Cleanup is fast and easy. Simply finish with a quick spin in a bucket of clean water or knock off dried materials afterward. (© (888) 850-6710

💲 www.us.oxtools.com

Two rotary hammers ideal for concrete

Hitachi Power Tools has expanded its growing commercial product line with the launch of two new SDS Plus



Rotary Hammers, the DH26PF and the DH28PFY.

Being ideal tools for drilling holes for anchors, drilling concrete for trade installations and small chipping jobs, they deliver higher durability than previous models and achieve faster drilling speed.

These rotary hammers deliver an 8-amp motor that produces a formidable 2.5 foot-pounds of impact energy. Both offer no-load impact speeds of 0-1,100 rpm and impact rates of 0-4,300 ipm.

Both rotary hammers are equipped with a D-shaped rear handle for better control in overhead applications. They deliver three modes of operation: drilling only, hammering only and hammer drilling, plus an angle adjustment position now controlled by a larger, mode selector dial located on the side of the tool for easier accessibility. (2) (800) 706-7337

ኝ www.hitachipowertools.com

Concrete buggy is versatile, affordable

LHD Machinery introduces its new LHD 7000S material handler. This rugged, rubber-tracked buggy features a .6 cubic yard high-density poly bucket capable of handling a 2,500-pound payload.



Measuring only 35 inches wide, the LHD 7000S can fit through narrow

gates to efficiently deliver concrete, stone or mulch to a confined space without significant lawn damage. What's more, it can dump material to the right or left for spot-on placement with less maneuvering. Although its frame is made of steel, the LHD 7000S is lightweight enough to be hauled with a single-axle trailer.

The LHD 7000S series is assembled in the USA and features a 20-horsepower Honda gas engine with electric start, two-speed hydraulic drive, and simple and intuitive independent drive controls. (© (888) LHD-7472

ኝ www.lhdmachinery.com

Measuring device redesigned, improved

Calculated Industries, best known for its line of specialized calculators, recently introduced a newly redesigned model of its DigiRoller measuring device, the DigiRoller Plus III.

The DigiRoller Plus III can measure lengths, widths and heights in either U.S. or metric units. Plus, it can calculate areas, volumes, perimeters and more. It has easy-to-use (and read) handle-mounted controls with a seven-digit backlit display. The gear drive is sealed for better protection and the centerline design gives it good balance and 99.5 percent accuracy.

The Digi Roller III has a kickstand for when you're "parked." It comes with a backpack/carrying case, a 9-volt battery, reflective safety tape, a wrist lanyard and a two-year warranty.

🕐 (800) 854-8075

ኝ www.calculated.com

Foam expansion joint filler offers choice

For the last century, concrete installers have been using asphalt-impregnated fiberboard as expansion joint filler. Today, installers have a new choice in Nomaflex, a closed-cell polypropylene foam expansion joint filler and form, which has been evaluated by

the American Association of State Highway and Transportation Officials.

With positive industry feedback from the product's initial introduction in select sizes last year, Nomaco is now introducing a full product line of 30 plank sizes in thicknesses ranging from ½ inch to 1 inch and widths from 3 ½ inches to 8 inches that are now available in sheet form.

Nomaflex extends the service life of concrete by acting as filler for full-depth expansion joints in sidewalks, streets, driveways, highways, airport runways and other applications. North Carolinabased Nomaco developed the product to solve common problems for installers, including concrete joint sealant failure, difficult installation, product breakage and ongoing joint maintenance challenges.

🖉 (800) 345-7279

💲 www.nomaco.com

Power distribution system converts 480-volts AC

Larson Electronics, an industrial lighting company, recently released a new portable power distribution system that converts 480-volts AC single-phase electrical current to 120- and 240-volts AC.

The MGL-25-480.3P-1X480.50A-4X120.20A-2X240.50A temporary power distribution system provides a safe and reliable way for operators in industrial settings to tap into and use power sources independently of the work area. This system lets operators safely tap into and distribute 480-volts AC power from a variety of sources including generators and direct-grid power. The transformer is designed to operate with 480 volts, three phases, which is then stepped down to 240- and 120-volts AC.

Ten feet of Soow line-in cable is included to connect the substation to a primary 480-volt power supply. On the primary side, a 125-amp main breaker provides protection for the 25KVA 480 to 120/240-volt single-phase transformer. On the secondary side, a 100-amp main breaker 120/240-volt panel provides protection for four 20-amp 120-volt 5-20R GFCI outlets and two 50A 240-volt outlets. A single 50-amp receptacle is also configured on this unit so operators can run a piece of 480-volt equipment.

The transformer and distribution assembly is mounted to a standard steel dolly cart-style frame resulting in an extremely stable, durable and mobile power distribution platform. Two rubber tires and a cart style-mounting platform provide easier substation mobility, and a center point lift eye allows easy lifting with cable or chain hooks. This power distribution system is NEMA 3R rated and ideal for many indoor and outdoor applications.

(800) 369-6671

💲 www.larsonelectronics.com

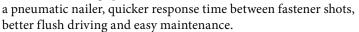


PRODUCT NEWS

Brushless finish nailers cut the cord

Hitachi Power Tools recently added more models to its finish nailer lineup with a new series of battery-powered cordless brushless tools: the NT1850DE 18-gauge 2-inch cordless brad nailer, the NT1865DM 16-gauge 2 ½-inch cordless straight finish nailer and the NT1865DMA 15-gauge 2 ½-inch cordless angled finish nailer.

All cordless nailers in this series feature Hitachi brushless motors for longer run time, less maintenance and increased durability. The driving system used is similar to Hitachi's pneumatic line featuring a unique air-spring drive system that uses compressed air to drive each nail. This results in zero ramp-up time, increased shooting speed, recoil that feels like



All Hitachi cordless brushless finish nailers come with a lifetime lithium-ion tool warranty, two-year lithium-ion battery warranty and one-year lithium-ion charger warranty for ultimate peace of mind. (C) (800) 706-7337

(\$) www.hitachipowertools.com



Rapid repair product can be used inside and outside

VersaFlex Inc., a leading supplier of polyurea coatings, linings, joint fillers and concrete repair products, recently launched Quick Mender X.O. concrete repair polymer, a specially formulated rapid concrete repair product for interior and confined spaces. In its basic low-viscosity



formulation, Quick Mender X.O. may be used in a variety of unique applications to repair concrete substrates, such as repairing spalls and cracks, pop-outs on horizontal surfaces and spalled control joints.

Quick Mender X.O. may be used with all VersaFlex rapid-curing polyurea sealants. It's designed for use in both interior and exterior concrete repair applications.

🕐 (913) 321-9000

ኝ www.versaflex.com

Measure film thickness faster

The nondestructive measurement of dry film thickness on concrete is now more accurate, faster and much easier than ever before, thanks to the new Elcometer 500 coating thickness gauge for coatings on concrete.

With all the features you've come to expect from an Elcometer designed and manufactured product, including ease of use, ergonomic design, menu-driven color display, user-selectable statistics, memory, USB and Bluetooth data transfer to PC or mobile devices, the new Elcometer 500 accurately measures the thickness of dry film on concrete and other cementitious substrates up to 10 mm thick.

The Elcometer 500 can be used in accordance with ASTM 06132, SSPC PA9 and ISO 2808.

🖉 (800) 521-0635

💲 www.elcometer.com

Demolition machine features increased power

Brokk, one of the world's leading manufacturers of remotecontrolled demolition machines, introduces the new Brokk 280. The machine features increased demolition power over its predecessor, includes the all-new Brokk SmartPower electrical system and incorporates additional hardened parts for extra durability. The improvements increase the reliability and versatility for Brokk customers working on harsh job sites in industries such as construction, metal processing, mining and nuclear.

The Brokk 280 features a 20-foot (6.2-meter) reach and weighs 6,945 pounds (3,150 kilograms). By generating as much as 25 percent more breaking performance — a combination of impact power and blow frequency — over its predecessor, the Brokk 280 delivers a significant boost in productivity. Beyond packing a harder punch and knocking out more breaker blows per minute, it features improved maneuvering capabilities with softer, smoother movements. It does this without sacrificing any of the compactness, precision and flexibility for which Brokk machines are known.

The new machine enters the upper mid-range of Brokk's line of nine core demolition machines.

🕐 (360) 794 1277

💲 www.brokk.com

SPONSORED PRODUCT NEWS

Rotary hammer delivers power and speed

The Bosch GBH2-26 1-inch SDS-plus Bulldog Xtreme Rotary Hammer provides outstanding power and speed to get the job done. One in a line of legendary Bulldogs, this hammer weighs only 6.4 pounds but features an upgraded 8.0-amp motor that provides outstanding performance — delivering 2.0 foot-pounds of impact energy and 0-4,000 impacts per minute.

The GBH2-26 offers 1-inch diameter capacity and three modes for maximum versatility: drilling only, hammer drilling and chiseling. The user can optimize the chiseling angle with Vario-Lock positioning. A pistol-style, ergonomic handle with a soft-grip provides superior user comfort.

It has a rotating brush plate that provides equal power in reverse and ensures long brush life. In addition, a variable-speed reversing trigger (integral clutch) offers accurate bit starting and removal of bound fasteners or bits so users can get the job done more quickly. The SDS-plus bit system allows for tool-free bit changes with automatic bit locking. The tool has a long power cord with flexible ball grommet that pivots 35 degrees to minimize cord wear and tear.

The rotary hammer's efficient airflow design optimizes air circulation for optimal motor cooling.
(C) (877) 267-8499
(S) www.boschtools.com



SpiderLath's Newly Patented Lath System

SPIDERLATH has recently received their patent on an innovative lath system that will change the way you think about lath forever. No more cuts or rust from metal lath. SpiderLath is a fiberglass lath with optional ¼" furring strips. They offer lath for decorative concrete, carving, stone, stucco, countertops, overlay, and many other applications. SpiderLath offers a time saving advantage over metal as well. The product comes in multiple sizes. One 300 sq. ft. roll of SpiderLath is equivalent to 19 sheets of metal lath, and it weighs only 19 lbs. To find more information or to shop online visit www.SpiderLath.com.

POURABLE CONCRETE HAT ROCKS!

Aggretex Systems, LLC is the innovator in pourable, embedded exposed aggregate concrete. Each bag of Aggretex gives you the ultimate in design flexibility, control, integral color and performance.

Aggretex is supported by our wet-on-wet patented installation system for huge time savings in new pours as well as being finished in place on existing concrete subfloors. Aggretex is perfect for interior topping slabs as well as exterior pours to create a seamless look inside and out. It can be polished or exposed using retarding agents revealing a wonderful combination of sands and small aggregates. You can even add thousands of decorative aggregates such as glass or rock to create the ultimate in Custom Concrete that Rocks!

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Top Marketing Trends for 2017 Focus on Websites, Newsletters and Social Media

by Ashley Kizzire

HE beginning of a new calendar year marks the time when many reflect on the past 12 months and set goals for the coming year. In the practice of marketing, we often examine what methods worked in promoting our company's products and services. To help us better understand what marketing practices have been helpful and what's coming for the industries we serve, Constructive Communication Inc. recently surveyed our clients in the construction, architecture, engineering, chemical and electronics sectors. Our purpose for the online survey was twofold: to identify challenges and determine how the marketing sector is responding.

The survey's results reveal an emphasis on digital strategies to address marketing challenges. The biggest of these challenges facing companies in 2017 include shrinking profit margins (27 percent) and finding qualified employees (24 percent). To overcome these challenges, 88 percent of respondents plan to maintain or increase marketing spending in 2017. And where do they plan to spend their time and money? Three of the most important marketing technologies follow.

Invest in technology

According to the CCI 2017 Marketing Trends Survey, technology is on the forefront of many marketers' minds. In 2017, 48 percent of respondents plan to invest in new marketing strategies, including technology. A key priority for technology investments is making updates to the company website.

This comes as no surprise, as many companies realize the increasing demand for mobile-friendly content. Reports such as SimilarWeb's State of the Mobile Web US 2015 have indicated that half or more of website visits come from mobile devices, and approximately 55 percent of all emails are read on mobile devices. Marketers are responding to these changing needs by developing more mobile-friendly websites and emails.

Other companies are simply realizing a need to update their websites for the sake of maintaining a current image. In the

fast-paced world of web design, a website developed just two years ago may have some features that appear outdated today.

Could your website use a refresher? A few of the most important best practices in today's web design include:

- Google algorithms currently favor sites with abundant content. Experts recommend a word count of 400 to 800 words for each page.
- Singular messaging is important, especially on home pages. In three seconds, explain what your company does. Put all messages on a fourth-grade level, even if your audience is very technical and highly educated. Keep the message simple, as Google favors simplification.

Companies can no longer ignore the importance of social media in marketing strategy.

- Rotating carousels are no longer in fashion. A number of studies have shown the "carousel" style of home-page messaging is distracting.
- Minimize the use of accordions, vertically stacked lists of items that when clicked on expand to show associated content.
- Current design styles incorporate bright colors and flat design.

Keeping your website design up to date and ensuring your site aligns with Google's current algorithm preferences will ensure your clients find your site in a search.

E-newsletters

Approximately 52 percent of respondents named newsletters as the most effective marketing tactic for their company in 2016. Many of these newsletter programs are digital. As companies continue or intensify their efforts in email marketing, remember the key to a successful newsletter program — whether email or print — begins with a clear strategy and defining your goals.

As you plan the content for your newsletters in 2017, the most important thing to remember is your content isn't about you — it's about your customer. In other words, don't tell your customers only what you want to say. Tell your customers what they want — and need — to hear.

Brainstorm and ask probing questions that will help you get inside your typical customer's thought processes. What problems do your customers face and how can you help solve them? Have you recently completed a unique project? Showcase your work in a case study. But even a case study can take a wrong turn if it's all about you. The case study has to pass the "so what" factor, with the customer's benefits clearly stated.

As you plan your content, keep in mind that a simple structure is best. Your customers are bombarded by messages every day, and research from Constant Contact shows that most people only deem 14 percent of their email as something they must read immediately. The most effective e-newsletters are short and to the point.

Social media and LinkedIn

Marketers in the concrete industry continue to see social media as a necessary part of doing business. New for 2017 is a resurgence of interest in LinkedIn. The survey revealed that social media platforms businesses most expect to use in 2017 include LinkedIn (91 percent), Twitter (70 percent), Facebook (65 percent) and YouTube (57 percent).

As you plan your social media strategy for the coming year, here are a few items to consider:

- A content strategy is just as important in social media as in other forms of communication. Plan an editorial calendar in advance of topics to cover, with flexibility that allows adjustment for covering breaking news or trends.
- Videos and graphics are important to gaining reach.



• Unique content for social media typically comes in the form of an

constructivecomm

What do these trends mean for the future of your business? Visit us online at

ation.com or reach out to us at nunication.com to discuss.

65% 57%

- image. Take your own original photos and post them for the most engagement.
- Tag others when possible to increase reach.
- Reach tends to be best during off-business hours.
- LinkedIn has become a primary content portal post your original articles and content there.

Companies can no longer ignore the importance of social media in marketing strategy. An intentional social media strategy helps companies build brand awareness and reach their audiences where their audiences spend time.

Final considerations

CONSTRUCTIVE

As marketing plans are made for the coming year, it's important to take note of current trends. Reviewing survey data enables your company to evaluate its efforts against others in the industry. Such benchmarking practices increase effectiveness while identifying areas for improvement.

No matter the strategy employed, good marketing practices focus first on the customer's needs and pain points. Let your message always be about how you help customers solve their problems. 🦇

For more than 20 years, Ashley Kizzire has written for commercial markets, specializing in the concrete and construction industry since 2000. Based in Birmingham, Alabama, Kizzire is a content writer and marketing specialist at Constructive Communication Inc. She can be reached at akizzire@constructivecommunication.com.



Mi Casa es Su Casa

My house is your house, as the saying goes, and the newest addition to the World of Concrete 2017 — Decorative Concrete LIVE! will hang its welcome sign from a Putzmeister 36Z-meter truck-mounted concrete boom pump heralding all to stop by for a visit.

Sponsored by *Concrete Decor* magazine and the Concrete Decor RoadShow, Decorative Concrete LIVE! is making its industry-anticipated debut at WOC in Las Vegas Tuesday, Jan. 17, through Friday Jan. 20.

An arena full of innovation in the Concrete Surfaces & Decorative Pavilion, located across from the South Hall of the Las Vegas Convention Center, Decorative Concrete LIVE! will feature displays and ongoing demonstrations that show myriad ways horizontal and vertical concrete can be used in quality homes of any size and style. The homelike setting, which will be staged on a 40-by-40-foot concrete slab, will be sectioned off by ICFs from Fox Blocks. Projects on display will include a polished concrete

living room floor, an indoor/outdoor shower made from GFRC, a retaining wall that doubles as a seating area at the entry of the "home" and an aggregate-seeded entryway. The ICFs will also feature a variety of vertical decorative finishes.

Cindee Lundin, a renowned public

arts muralist from Tucson, Arizona, is among the artisans who will be showcasing their talents. She will be

found at the exhibit's entry carving a tribute to "Concrete Cares," a nonprofit organization that pledges to fight cancer "one yard at a time." Concrete Cares also has a station where



attendees can place their bids on some amazing products, with the proceeds going to Lamplighters of Las Vegas.

Other artisans at work will be building a fireplace with wood and stone features, a patio that looks like wood but is made from concrete, a terrazzo floor fit for a master bedroom and a stained concrete floor designed with an assortment of techniques. Others will demonstrate how to seed concrete with aggregates, design and carve profitable wall systems, apply

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26 www.ConcreteDecor.net · January 2017

a decorative waterproof finish over plywood and stamp a concrete patio.

To encourage hands-on interaction, *Concrete Decor* magazine is hosting an Artisan Sandbox where attendees



are invited to create their own unique finishes. Upon completion, a staff member will photograph your work and

upload it to *Concrete Decor's* Facebook page where the "most-liked" entries will win some great prizes. Artisans will demonstrate how colors and textures on concrete not only speed the building process but also reduce the need for traditional building finishes in new construction or rehabs. Throughout each day, visitors can

chat with the experts and discover the vast opportunities decorative concrete delivers to residential, commercial and public spaces.

Decorative Concrete LIVE!

TUESDAY – FRIDAY, JAN. 17–20, 2017 during Exhibit Hall hours, Las Vegas Convention Center in the Concrete Surfaces & Decorative Pavilion in front of South Hall

SCHEDULED DEMOS: Joshua Annis: Carving Concrete Fireplace Surrounds, Tuesday, Wednesday & Thursday, 10 AM; GigaCrete: Wall Finishes for ICFs (Interior & Exterior), Tuesday, Wednesday & Thursday, 11 AM; Westcoat: Decorative Concrete for Waterproofing Wood Surfaces, Tuesday, 1 PM; Walttools: Concrete Veneers for Exterior Walls, Tuesday & Wednesday, 2 PM; NewLook: Coloring Stamped Concrete, Wednesday, 10 AM; GoldenLook International: Epoxy Stone Patio Finish, Wednesday, 1 PM

ARTISANS AT WORK: Cindee Lundin: Concrete Art for the Home; **Joshua Annis:** Living Room Fireplace (wood and stone features with concrete); **Keefe Duhon:** Overlay Techniques for the Patio; **Julio Hallack:** Staining and Sealing Concrete Indoors; **Scott Kummer & Matt Blue:** Terrazzo for the Master Bedroom

PROJECTS ON DISPLAY:

Matt Walker: Trendy Finishes for Porches and Patios; Joshua Annis: Stone Facade for a Residential Entry; Joe Ayala: Polished Concrete for Interior Living Spaces; Glen Klassen: Building with ICFs (Fox Blocks); John Lamos: An Indoor/Outdoor Shower using GFRC; Nathan Giffin: Attractive Retaining Walls for the Home



Job site safety will be a key ingredient to this year's Decorative Concrete Live! as *Concrete Decor* has taken a "no exceptions" stance where safety is concerned. T.B. Penick & Sons' Byron Klemaske will help drive this message home through talks aimed at business owners and foremen on how to implement best practices for administering safety standards at their companies when they return home.

The Concrete Decor RoadShow trailer, the most well-fortified equipment trailer in the industry, will be an integral part of Decorative Concrete LIVE! This unique accouterment is equipped to handle any decorative concrete project imagined.

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ARTISAN IN CONCRETE

Jesse Escalera, Proscapes OC Huntington Beach, California

by Jacqueline Valle

• OR a guy who started from the bottom up, Jesse Escalera has managed to make a name for himself over the years through his backyard masterpieces.

With a "fake it 'til you make it" attitude, he is a selftaught handyman who started his own business at the age

of 16. To drum up customers, he advertised in the local penny saver. And to further his education, he read all the books on concrete that he could put his hands on.

"I'd go to Home Depot and read books until they would kick me out," says Escalera. "That's how I learned — just winging it." By the time he was 21, he began to dabble in concrete. And

somewhere along the line, his handiwork morphed into some amazing jobs.

After finishing one of his first concrete projects for a well-off man named John Alcantar, Escalera was asked what he thought of Alcantar's estate. Always outspoken, he gave his honest opinion about how he would change things. Fast forward to now — Escalera is 38 — and he's still tweaking that vision for his now long-term client.

Escalera quickly realized that successful individuals who are used to working with generally agreeable contractors valued his blunt and honest opinions. "My clients put a lot of money into these projects and they always know that they want something awesome, but they don't always know exactly what they want. They see value in my ability to tell them what they need in their space," says Escalera.

Clients come first

From there, his list of clientele began to grow as his reputation of being honest and opinionated gained momentum. Praise from his well-to-do clients went a long way in that circle as Escalera began to be known as an

> extravagant, outlandish, over-thetop artist who knew what he was doing.

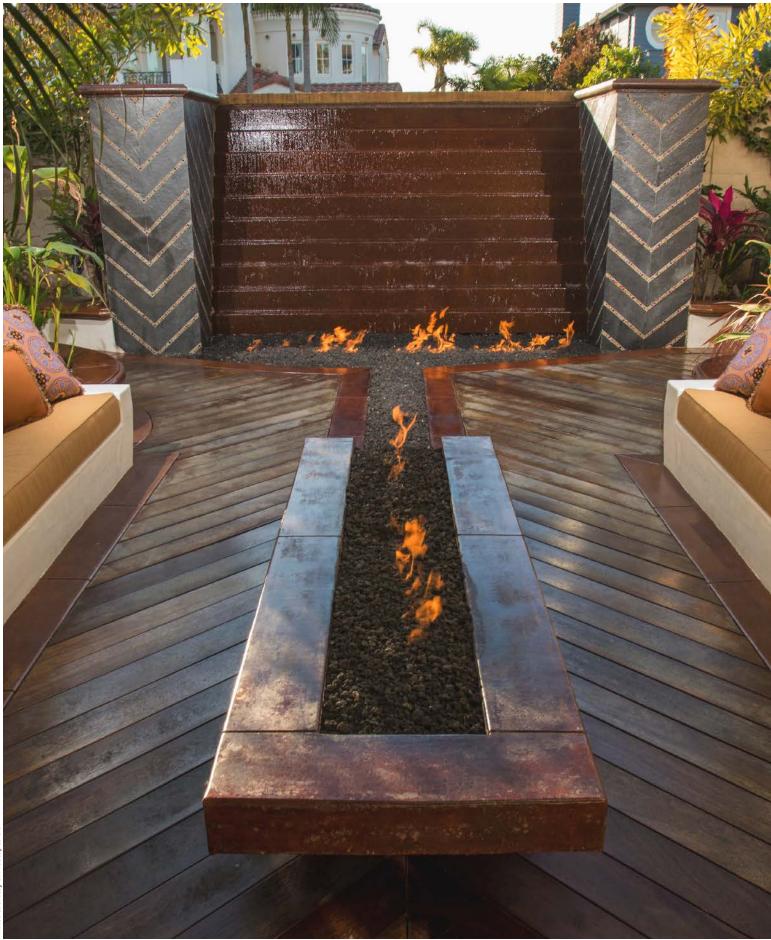
Now owner of Proscapes OC, a design and build firm in Huntington Beach, California, with a team of 20 or so employees, Escalera says his company is known for its unique design, quality construction, reliability and unmatched integrity. Although most of the projects

he works on are extensive makeovers, he relishes designing projects totally from scratch, from concept to completion. "I imagine it first, then sell it to the client and then figure out how I'm going to make it," he says.

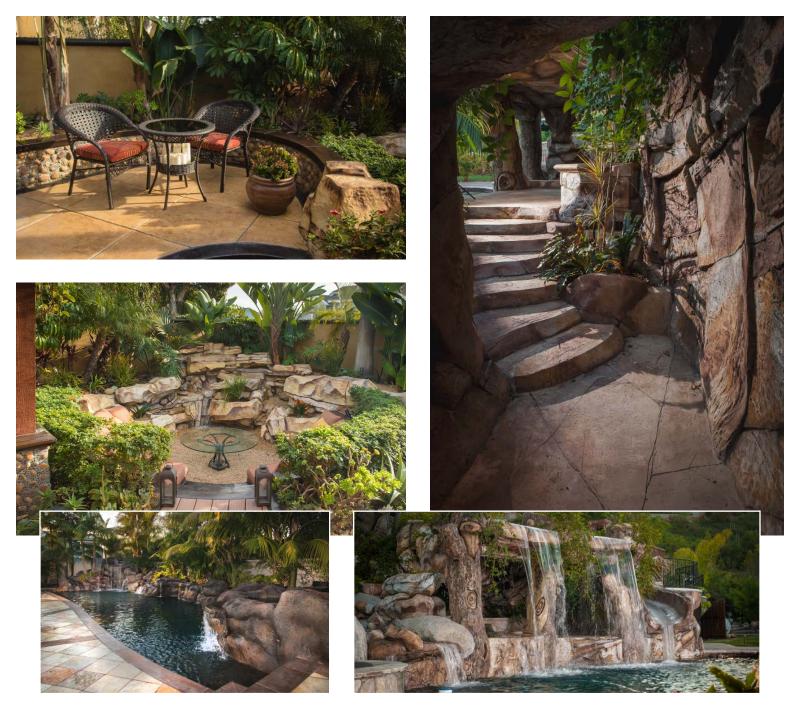
His company's projects run the gamut, he says, including those featuring RGB color-changing LED lighting, subterranean movie theaters and robotically controlled TV enclosures. Because Proscapes offers a wide variety of services besides decorative concrete, its employees run the gamut, from plumbers and electricians to masons and welders.

"Once you have become a Proscapes customer, you're taken care of," he says, no matter how small or seemingly insignificant the problem. "Even if it's just for a broken sprinkler head or some advice on what furniture to buy for your new backyard," someone will help you out.





ARTISAN IN CONCRETE



Out of the ordinary is the norm

Escalera says he has worked on more than his share of extraordinary projects that involve both horizontal and vertical surfaces. For starters, there was the concave-shaped waterfall that incorporated champagne bottles filled with LEDs designed to create the illusion that they follow or trace a person as they walk by. Another waterfall he did in Chino Hills was 16 feet tall and equipped with a water slide.

Wildly realistic rock work is another one of Proscapes' specialties. "One of my

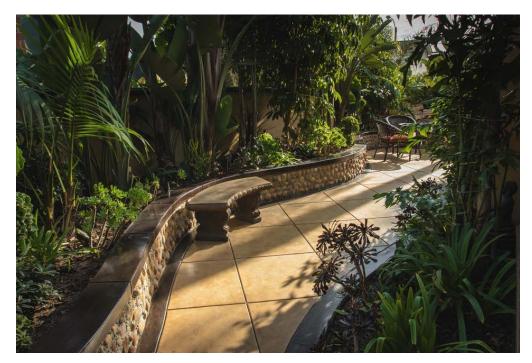
guys kept saying 'let me do rock work, I can do it,' so eventually I let him do it and the clients loved it," says Escalera. To round out that division, he hired a couple of other guys to help.

He says other notable projects his company has crafted include interesting subterranean rooms — also called safe rooms — made of concrete. "One we did was a theater that (doubled as) an underground bunker," says Escalera. "It kind of looks like an old train car with vaulted walls and crushed velvet detailing — all underground on a hillside." When it comes to countertops and wall caps, Proscapes casts them in place. Escalera says he doesn't believe in using fly ash to make a mix stronger. Instead, for decks or countertops, he likes to add a fortifier and typically uses seven sacks of portland cement per yard. "We never pour anything that's less than 3,000 psi mix," he says.

And if it comes down to traditional or progressive design, he'll pick the latter. "We just like doing things that are cool," he says. "We're known for our artistic nature."









Fire and water mix

Escalera says Proscapes does it "all" rockwork, flatwork, countertops, grottos, concrete trees. It has even made snakes and erected a tyrannosaurus rex in a backyard.

Two very noticeable elements that appear in his projects over and over are fire and water. When asked where the inspiration came from, Escalera says, "We were wired to be around fire when we were cavemen. No matter where you place it in a house, everyone wants to be around it. You're drawn to light and mesmerized by fire."

Running water, on the other hand, calms

people, he says. It's a welcoming sound that most everyone likes, even the neighbors. Proscapes usually tries to incorporate it whenever it can. It, too, is "part of our nature," says Escalera.

A firm believer

As a designer and contractor, Escalera says he has a unique approach as a true artist and visionary. He's usually unwilling to compromise and stands firm in his belief on how something should be done. That's what's gotten him where he is today, he says.

"Sometimes I have to argue with my

clients so they understand why I'm doing what I'm doing. I'm pretty convincing," says Escalera. "If I'm at their house they already know me and know my work. They have fallen in love with something else I've done." This makes his persuasion a little easier to go along with.

Escalera has been featured in *Coast Magazine* and in the TV series, "Flip or Flop."

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PROJECT PROFILE

Masivo! Acid Stain Jobs Don't Get Much Bigger Than This Rinconada Margaritas, Zapopan, Mexico

by Joe Maty UY Grande! Yes, very big, in Spanish or any language.

Massive, huge, humongous - pick your superlative, as any or all can be applied to the Rinconada Margaritas high-rise residential development in Zapopan, Mexico.

A few numbers from Servicios Proconsa S.A. de C.V., the decorative concrete contractor that brought color and texture to the building exteriors, give some perspective on the mind-boggling size of this project.

We're talking 350,000 square feet of exterior vertical facades on the three towers, involving preparation and application of two acid stain colors and a penetrating water repellent. Oh, and there were windows to mask — nearly 4,400 of them consuming something like 100,000 feet of tape. And let's not forget the 750 or so brushes used before it was all over.

Engineering the hanging scaffolding system for the project was a major undertaking and involved an interconnected web of steel cables assembled on the roof of each building.

Project at a Glance

Client: Rinconada Margaritas high-rise residential towers, Zapopan, Mexico

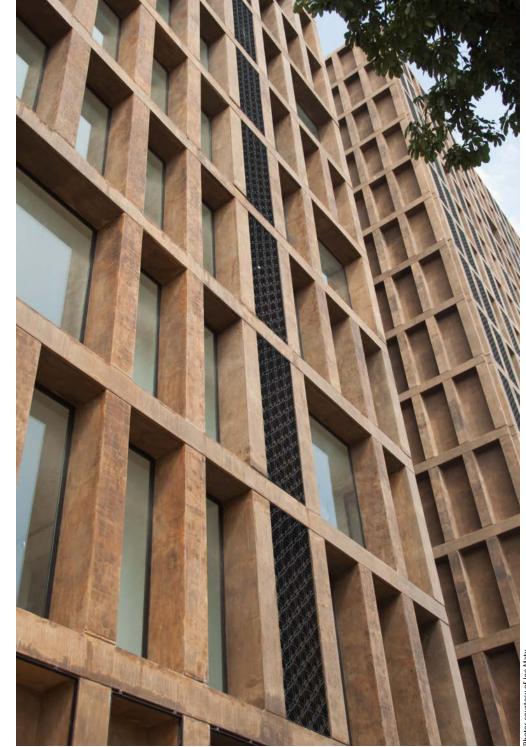
Decorative Concrete Contractor: Servicios Proconsa S.A. de C.V., Monterrey, Mexico

Owner: Grupo Cube, Guadalajara, Mexico

General Contractor: Constructora Anteus Architect: Luis Aldrete

Key Challenges: Sample and review process of materials and colors, including construction material for nonstructural columns and acid stain colors for exterior facades; weather delays during region's rainy season; engineering, assembly and moving of massive, complex hanging-scaffold system (14 scaffolds); masking of 4,372 windows; surface preparation, including removing release agent on structural concrete columns; brush application of acid stain on all cementitious surfaces, including window recesses.

Materials: Kemiko Stone Tone acid stain in Cola and Ebony; Forza silane/siloxane water repellent.



If all went well, the whole process of moving the scaffolding and the material application spanned approximately one month for one of the development's three buildings. That's if the weather is playing along. And in this part of Mexico — the southwestern region's Jalisco state — dry weather can be hard to come by during the rainy season extending from about May to November.

"In a 90-day period we had only 34 working days," says Mauricio Zambrano, ownership partner of Servicios Proconsa and





head of the company's commercial national distributorship division. And a dry surface is essential for stain application, he adds.

In the design and color themes for the tower complex, architect Luis Aldrete sought a connection to the site's geologic and geographic environment, with a terracotta pigment shade for the stained concrete exterior, seen as providing balance in the lush green surroundings. A combination of two acid stain colors were used to produce the hue sought by the design team.

In addition to minimizing the building's

footprint on the site by creating "svelte" structures, Aldrete says the irregular geometry of building location and alignment allows views for 87 percent of the residential apartment units and produces "crossways ventilation" for 100 percent.

"The atmosphere is conserved at all times," Aldrete notes about the buildings' design and surrounding setting. "The color green prevails." Daylight is filtered through trees, ponds and stone, making stunning views of the city and surrounding plateau landscape "the guiding axis across the project."





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PROJECT PROFILE

The project architect, in charge of the construction for owner Grupo Cube of Guadalajara, is Diego Quirarte.

The scaffold system, including design and operation, was directed by Javier Uribe, installations manager for Servicios Proconsa. The company, based in Monterrey, specializes in concrete stain work. It also is the Kemiko distributor in Mexico.

Three buildings, one tall order

The Rinconada Margaritas project thundered onto the radar screen of Zambrano and business partner Federico Jasso in early 2014. Initial samples of color and texture were produced, and the design team sought an exterior material that would seamlessly integrate the towers' concrete structural columns and nonstructural, parallel columns that framed the buildings' expansive windows. This was integral to creating a monolithic impression of the three towers emerging from the central Mexican plateau like a tectonic extrusion.

The construction team first considered installing precast panels to build the nonstructural columns.

Differences in surface tone from the structural columns and other construction issues forced them to scrap that plan and switch to ceramic brick covered with a troweled-on polymer cement. The work would be done by a subcontractor.

Troweling of the polymer cement



When hit with sunlight (left) the lighter stain tone is dominant. In the shadows (right), the color appears darker.

was adjusted to reduce gloss in samples submitted to the design team, says Jasso, general manager of Servicios Proconsa and head of the company's installation division.

The sampling and review process for materials and colors took place from April 2014 to April 2015, with a final OK coming in June 2015. Servicios Proconsa got to work immediately, and essentially completed the project in December 2015.

Rising to the challenge

With the scaffold engineering plan devised and in place, work got underway in mid-2015, starting with the largest of the three 12-story towers. The process went section by section, floor by floor, with surface preparation and acid stain application performed with 6-inch paint brushes. A light-colored Kemiko basecoat stain (Cola) went on first, followed by a black (Ebony) to produce a color exhibiting yellow and chocolate effects. Zambrano and Jasso liken this hybrid earth tone to the region's prevailing morphology — the soil and geology of this mountain and plateau province, situated some 5,000 feet and up in elevation.

When hit with sunlight, the lighter stain tone is dominant, while in the shadows the color appears darker, Zambrano says.

With the project scaffolding program, a battery of 14 hanging scaffolds scaled the sides of the buildings. Crews applied the polymer cement, followed by the acid stain. Then they cleaned away the residue











and applied a penetrating silane/siloxane water repellent.

For the complex's larger building, all these tasks were carried out on one side of the facade — four days to apply acid stain, one day to clean up the residue and two days to apply the water repellent. Then, the crew disassembled and moved the extensive scaffolding system, which took four to six days. It took 11 to 13 days to complete one side of the building.

For the two smaller buildings, the crew worked on two sides of the facade before taking the scaffolding apart and moving it to the next section.

Massive in scale or not, Zambrano and Jasso say Servicios Proconsa always pays

attention to details and follows proper procedures. For this project, that meant painstakingly removing the residual release from the structural columns' surface to make sure the stain penetrated and reacted properly. The manual cleanup of the residual acid stain with water and cheesecloth was very demanding.

Even with such measures, sanding the structural columns still left traces of release agent in crevices and other recesses. Fortunately, Zambrano says, the design team viewed the resulting variation of colors as a positive — it was much like the variegated colors found in natural stone.

Also part of the quality assurance package was the enormous job of masking

the 4,372 windows that measured 3-by-9 and 7-by-9 feet. The recessed window design, Zambrano says, added complexity to the stain-application process. "This kind of care is what differentiates us," he says.

These little details add up to one big, successful execution of the designer's vision. If not the largest such stain project anywhere on the planet, Zambrano and Jasso figure it's got to be in the running.

Gigante? Giant-sized, for sure. Gigantesco — gigantic, without question. By any measure, it's realmente asombroso.

That's really awesome south of the border.



PROJECT PROFILE

From Standard to Challenging: Custom pervious mix elevates project's difficulty

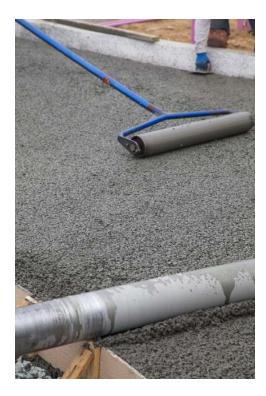
by Erik Pisor

.B. Penick & Sons is accustomed to getting its way.

When taking on pervious paving contracts, the San Diego-based contractor's mix design is typically accepted by clients following mock-up, as custom blends can significantly increase a project's difficulty. Yet, there are always exceptions, with the most recent being the California Department of Transportation (Caltrans).

In the city of Chula Vista, just south of San Diego, a Direct Access Ramp at East Palomar Street is part of a \$1.1 billion effort to create a modern new transportation backbone for San Diego's South County. It offers carpoolers and transit a convenient way to enter the Express Lanes on I-805 and access the East Palomar Transit Station.

As part of the DAR project, T.B. Penick was tasked by the state agency to install more than 130,000 square feet of pervious concrete at a new, 345-space park and ride, a large job but nothing new to the company. The catch: Caltrans requested the pervious blend incorporate 50 percent fly ash, a byproduct of coal.





Coping with the blend

"The mix design had never been used before," says Frank Klemaske, executive vice president at T.B. Penick. This factoid was discovered halfway through a 400-square-foot mock-up, when the contractor questioned Caltrans about the mix's previous applications.

Following mock-up, T.B. Penick convinced Caltrans to lower its fly ash

Project at a Glance

Client: California Department of Transportation (Caltrans)

Concrete contractor: T.B. Penick & Sons Scope of project: Installation of more than 130,000 square feet of pervious, fly ash-heavy concrete to pave two parking lots; and placement of approximately 21,000 square feet of Lithocrete at parking lot sidewalks and crosswalks.

Products used: Pervious concrete (40 percent fly ash), Lithocrete (minor concrete - Type 2 seeded aggregate), Class 4 aggregate rock, reinforcing steel

Most challenging aspect: Working with Caltrans' required pervious mix design in lieu of a standard blend.

incorporation threshold to 40 percent. This high volume of byproduct substantially increased the difficulty of what was a relatively standard paving job.

"We've done tons of pervious concrete going back 10 years. Our biggest challenge was there was no (mix) consistency from truck to truck," Klemaske says.

One day the contractor could receive three "good" trucks from a ready mix supplier followed by a truck with a dryer mix that if blended onsite with water could ruin the batch.

"When you're trying to pour 4,000 square feet a day and you're not getting consistency it's challenging," he laments, adding trucks occasionally had to be sent back. "Most ready mix suppliers dislike pervious concrete because it's not part of the normal flow of the plants."

Accessibility was a challenge

Another challenging aspect of the installation was accessibility. Both parking lots featured 4-foot-thick, 1.5-inch aggregate storm water storage beds, which made it



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difficult for ready mix trucks to drive over without getting stuck. "Once you put down 5 feet of stone, it's not something you want to be driving on," Klemaske says.

Plus, because of twists and turns in the drive aisles, trucks couldn't get to certain parts of the lots. Subsequently, the contractor used a Telebelt, a telescopic belt conveyor system with a 220-foot reach, to complete half of the job.

While challenging, the contractor placed a total of 3,259 cubic yards of pervious concrete in 28 days, according to Marla Devoe, Caltrans resident engineer for the project.

At parking lot one, the average pour was 103 cubic yards per day. Progress at the second area was 96.5 cubic yards per day. Both lots feature a structural section consisting of 0.67 feet of pervious concrete on top of a 1.5- to 3-foot-thick layer of Class 4 aggregate rock. Man-powered rollers and pneumatic roller screens were used throughout installation.

A decorative side

In contrast to incorporating a never-before-used mix, T.B. Penick also worked with a familiar paving system during the project.

Spanning 18 days, the contractor placed nearly 334 cubic yards of Lithocrete (minor concrete with Class 2 seeded aggregate) at parking lot sidewalks and crosswalks, Devoe says.

"The enhanced Lithocrete paving was used to delineate a pedestrian and bike pathway that connects through the project to community features such as schools, parks and the YMCA, and will feature scale lighting and street furniture," says Jason Avila, executive marketing assistant for T.B. Penick.



Upon completion, the crosswalks were 6 inches thick with reinforcing steel on top of a 10-inch Class 2 aggregate base. The sidewalks were 4 inches thick without reinforcing steel.

An influential project

The effectiveness of the fly ash-heavy pervious mix currently can't be evaluated, as the park and ride has yet to open to the public. "You're not going to see any performance until you start trafficking it," Klemaske says.

Once open, Caltrans will monitor the surface intensely, as mandates call for the use of fly ash-heavy pervious concrete at all large parking lot projects statewide moving forward. Abiding by this mandate may be trying, as Southern California is currently in the midst of a fly ash shortage.



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A dual-paddle mixer is not only more efficient, but it also will keep the bucket from spinning out of control. It's a popular setup for people mixing small batches of concrete.



THE RIGHT MIXER AND PADDLE CAN BE THE PAIRING FOR SUCCESS

by K. Schipper

UST as a good cook knows when to use a stand mixer with bread hooks and when to get out the hand mixer with a whip, there are a mixer — and a paddle or blade design — for just about every size job in the decorative concrete industry, as well.

Although many small contractors try to get by using a half-inch drill for their mixing needs, it's not necessarily the best use for that tool in terms of ergonomics, power and durability. And, if you're going beyond something that can be mixed in a 5-gallon bucket, it might be time to consider a batch mixer, which is typically on wheels and offers some sort of pour spout, which can be critical both in terms of weight and products with heavier viscosities.

Viscosity is also one of just several factors to weigh when choosing the right blade for a given job. Also critical is whether something should be mixed from the top down or the bottom up, inducing the correct amount of air to the finished mix, and even encouraging chemical reactions to take place.

For anyone doing more than a little onsite mixing, be it an epoxy, an overlay or something else, the right mixer cannot only mean success but happier employees, as well.

No simple answer

There are numerous ways of looking at what's the best mixer for a specific job or a given product. Getting just the right tool can involve some shopping around and asking plenty of questions. For instance, Al Karraker, president of the Milwaukee-based Collomix North America, stresses the buyers of his Germanmade products are often those who require small batch mixing, whether it's in a bucket or larger mixer.

"We generally define that as being between one and four bags of material," he says. "I believe that's also 3.5 cubic feet. Our world is full of guys who will use a drill and buy a paddle when they're mixing small batches. My job is to change that to a mixer."

Ryan Donaldson, the concrete regional sales manager for supplier Jon-Don in Roselle, Illinois, says it's really a matter of each company's needs.

"We have specialty mixers that are meant for epoxy coatings," he says. "We have others that are very good for mixing concrete. We have bulk mixing equipment that's used for a variety of different materials, including epoxy, polyurethane, cement overlay systems, as well as overlayments and underlayments."

As to how large things can go, Donaldson asks — and not rhetorically — "How big do you need it?"

Jon-Don's overall goal is to make sure its contractors find the right solutions so they're getting the most out of their products.

On the other end of the spectrum, Ed Kientz, president of Wickenburg, Arizonabased BN Products, says for the company mixing only one or two batches a week, it's not surprising that a drill-and-paddle looks like a good solution.

"One of the things that got us into this was that so many of our contractor friends were using drills," Kientz says. "That's great for drilling holes, but mixing is usually designed to happen over several minutes, and when you're in a high-viscosity material, you're burning up the motor of the drill."

Not surprisingly, BN Products' first mixer was also a half-inch drill, but with two handles for stability and a high-torque motor to avoid burning it up mixing epoxies and overlays.

A spin on power

Certainly, the need for a separate power source for running a paddle in a 5-gallon pail is open to debate. Collomix's Karraker,



Many contractors use a drill for mixing. Just about every crew has at least one, but it doesn't offer the durability or ergonomics of a mixer dedicated to just mixing. Even a second handle can make some difference.

for instance, says the big problem with using a drill is simply that it isn't designed for mixing.

"If you're drilling through a 2-by-4, you can do it in 10 seconds or less," he says.

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"Mixing, if done properly, is several minutes long. We like to say that a drill is for drilling and a mixer is for mixing."

Nor does a drill offer other options that a hand mixer can. One is a soft-start feature, which Kientz says can keep liquids from splashing all over if the job involves something such as stucco, where the solids tend to migrate to the bottom of the bucket before mixing.

"The idea is that it can start out slowly and then pick up speed, making it much easier to control," says Kientz. "For instance, our BNR6400 has a dial on one side of the handle that controls the speed and on the other side it has a button so you can lock the trigger on."

And, Jon-Don's Donaldson says product manufacturers often include both speed and paddle recommendations with their materials.

"For example, epoxy resins for floor coatings need to be mixed at a lower speed just so you don't whip air into the material," Donaldson says. "You don't want to create bubbles that can result in blisters in the finished product."

Donaldson says there are other reasons

for leaving the drill for drilling and getting a power source designed for mixing. One is that by getting a device with a higher amperage, the mixer will not only last longer, but also reduce the possibility of it burning out in the middle of a job.

"Also, a higher amperage will typically be able to mix heavier sand-modified mixtures without burning out so quickly," he says. "If you're mixing paint, there's a lower amp draw from the tool itself. But, if you get into some cementitious mixes, it's a heavy-duty application where you need something that's going to draw more amps."

Then, there's the matter of ergonomics. Mixing with a drill often leaves the person doing the work bent over a 5-gallon bucket.

"If they're spending eight hours a day mixing, you don't want them bent over," Donaldson says. "You want them to have a decent posture so you get maximum performance and they're more effective at what they do without any long-term physical fatigue."

In those cases, it might also be wise to consider something larger — and Jon-Don sells batch mixers on wheels and with a pour spout.

A cut at blades

The other ingredient to a successful mixing job, regardless of what you're making, is the right paddle. Even if you continue to use a drill for mixing small jobs, the correct paddle is a must.

Joann Dooley, sales and marketing manager for Jiffy Mixer Co., in Corona, California, says that company makes paddles in eight different sizes capable of serving everything from laboratory beakers to 100-gallon batch mixers.

"Seven out of the eight sizes we make are used with concrete and epoxy," says Dooley. "A lot of epoxy manufacturers actually spec our mixers."

The reason, she explains, is that Jiffy offers blades with three-way action, as well as two guard rings on them to keep the blade from damaging the container in which they're mixing.

"The action on the blade on the top holds the material down, the blades on the side hold the material in and the blade on the bottom pulls the material up," she adds. "That three-way action reduces the mixing time without the encapsulation of any air."

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- « 3-head planetary drive system; holds 18 tools

Q & A: What you should consider about mixers, pumps and decorative concrete

ere are some facts and advice in the form of questions and answers that may help you maneuver the market if you're interested in learning more about mixers and pumps, courtesy of Jim Farrell, CEO of Blastcrete Equipment Co.

What should contractors look for before purchasing a mixer? How does size and application play into the mix?

There are five types of mixers suitable for decorative concrete projects: pan or turbine, paddle, spiral, rotary drum and continuous. If liquid polymers are a part of the mix design, or if retention time in the mixer is required, this eliminates continuous mixers. If the mix design includes aggregate larger than 3/8 inch in diameter, this eliminates a spiral mixer. Determine the capacity of the mixer based on the largest anticipated batch size for the job.



Pumping equipment, like this Blastcrete RD6536 Skid Steer Pump attachment, is compatible with any skid steer.

What are best practices for using a mixer in decorative concrete?

For decorative concrete, select the best type and size of mixer for the specific application. Always keep the mixer clean and well maintained tol ensure the longest life and best return on investment. Additionally, know the mixer's capacity and be sure to never overload it. Also, work to control respirable dust from the materials while working with a mixer.

Are you seeing any industry trends in concrete attachments?

We've seen the popularity of concrete pump attachments grow over the past 10 years because a pump attachment is the least expensive way to enter the pumping business. It gives contractors the ability to expand their service offerings with little expense and also opens the door to new contractors seeking a fast ROI. Mixer attachments have been available for a decade but have not gained the popularity of the pump attachments. Many decorative concrete material requirements have historically been too small to justify a mixer or pump attachment.

Pumps differ in this industry. What types of pumps do decorative concrete contractors use and what are the features/benefits?

The concrete material pumping industry is huge. That being said, pumps for decorative concrete projects would be considered the smallest capacity category of concrete pumps, with an output capacity up to 5 cubic yards per hour or less. These include squeeze pumps, which are also called peristaltic pumps and rotor stator pumps.

Squeeze pumps safely pump aggregate up to 3/8 inch in diameter and can even pump in reverse to remove blockages or obstructions without damaging the pump. Operators also clean them quickly by simply pushing a sponge ball through the pump. Rotor stator pumps typically wear fast when used for material with aggregate that's larger than 1/8 inch. They cannot be run dry of material

without

causing

damage to the stator. Rotor stator pumps offer about 30 percent more pumping pressure than a squeeze pump. When choosing a pump for an application, it's more important to focus on sizing rather than pump speed.

What types of preventative maintenance and servicing should be done on pumping and mixing equipment, and how regularly should it be done?

Overall, it is very simple: Keep the pumps and mixer clean and maintained after each use.

When it comes to each type of pump, knowing a few guidelines goes a long way in getting the most out of your equipment for years to come.

Hydraulic peristaltic pumps only have one wear part: the rubber pumping tube, which makes for easy maintenance. Not only that, but rubber pumping tubes are nearly half the cost of rotors and stators. Try to keep a log of the amount of material pumped through each pumping tube to further reduce maintenance costs. Use the sponge ball technique for simple cleaning.

Look into the mechanical seal maintenance requirements manufacturers offer for rotor stator pumps. It's important to select a model that gives operators the ability to perform mechanical seal maintenance without taking apart the rotor and stator. This drastically reduces labor expenses, keeping equipment where it's profitable: on the job site. Rotor stator

> Decorative concrete professionals can use equipment, such as Blastcrete's D6528 Mixer/Pump, for aggregate concrete mixes up to ½ inch.



There's only one primary wear part on peristaltic pumps, the rubber pumping tube, which makes these the most simple/economical concrete pumps to own.

manufacturers recommend cleaning the machine by flushing the pump and delivery system with water.

Cleaning a continuous mixer is much faster than a batch mixer. Unlike a batch mixer, material is constantly entering a continuous mixer so operators avoid having to clean the mixer after each batch; operators simply clean the mixer once at the end of the day. It's also important to regularly check and change out the blades to avoid any unwanted changes in the composition of the concrete produced.

What changes have you seen in this industry? Any predictions on what the future will bring in terms of types and sizes of jobs or new product developments?

The decorative concrete market has not had a history of using equipment requiring larger mixers and pumps. It's obvious the market is growing, and typically if a market continues to mature, there will be more and more opportunities for higher production mixing and pumping equipment.

On the other hand, we're seeing more specialty work in homes and hard-to-access areas. As a result, we're developing small, wheeled squeeze pumps that will easily pass through a 28-inch-wide doorframe to give decorative concrete contractors an easy-to-maneuver solution for completing their jobs. Once it's completed in 2017, it will be the most compact, lowest-volume pump that we have ever developed.

What is next in terms of product development for your company?

The small squeeze pump for the decorative concrete market is coming in 2017, and we are working on a new mixer/pump combination for the gypsum flooring and concrete overlay market, as well. Jiffy is also happy to help customers choose the best one for a specific need. Additionally, it's important not to undersize or oversize, Dooley says.

"Not only do you waste space, but you might not have enough depth to mix the product well," she says. "If you only fill a 5-gallon bucket a quarter of the way up and put a larger blade in there, it won't mix thoroughly because it won't be immersed in the material."

BN Products' Kientz says for many people a single paddle will do. However, they need to make sure they're getting the right configuration.

"There are all kinds of different paddles and they're all designed for different types of materials," he says. A two-handled mixer and the right blade for the product being mixed can provide more comfort for the person doing the work, a more thorough mix and a more consistent mix from batch to batch. Photo courtesy of BN Products

"One is great for adhesives, and another is just for paint. Different paddles have different functions, and then some of it is personal preference."

He adds that his staff is happy to advise people on the best paddle for a given use, based on what they're mixing, including the pros and cons of different designs.

Collomix's Karraker echoes Kientz. He says anyone looking to buy a mixer shouldn't hesitate to call and ask for advice.

"We always ask, 'What are you mixing, how much and how often?" he concludes. "That way we can direct the person to not only the right machine for their particular job, but also the right paddle."



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System offers solution to OSHA's new regulation

By K. Schipper

Sometimes the solution to a problem is only an imaginative Sthought away.

That's what Jim Farrell, president of Blastcrete Equipment Co. in Anniston, Alabama, found when called on to bid a job that required keeping dust to a minimum. And, it's an issue other contractors must consider as the calendar moves into 2017.

Farrell's brainstorm of what he calls a "dust ruffle" to



suppress dust and consequently limit silica dust exposure in industrial, construction and mining applications came after being told that the grout plant needed for construction of a nuclear power facility being built in northeast Georgia



would have to be virtually dust-free.

"In our discussions of how we were going to monitor the dust and keep it to a minimum — if not eliminate it — I called a friend of mine over in Birmingham (Alabama), who manufactures bulk bags," Farrell says. "I asked him if he could sew a skirt to the bottom of the bag and if it would have enough flexibility in the diameter to where we could make it larger than the actual bag itself."

Assured he could, Farrell went ahead and included the design in his quote, noting he would eliminate dust in the transfer of the material from the bulk bag into the mixer before the water is added.



"After we found out it could be done, we went ahead and applied for a patent on it," Farrell says, expecting the patent to be issued around press time.

Being marketed as the DustAway system, the bag has a dust ruffle that encapsulates airborne particles, helping to control respirable dust. That's going to become more critical in 2017 as the federal Occupational Safety and Health Administration begins enforcing stricter limits on silica dust exposure starting in June.

The new regulations limit permissible exposure to 50 micrograms per cubic meter of air over an eight-hour shift, or about 20 percent of the previous level for construction.

"It's clear in the new rules that employers will have to monitor their employees, and report the results of tests," says Farrell. "This is an ongoing thing."

While Farrell is glad to say that the DustAway system can easily be customized for just about any type of bulk mixer, it's not necessarily a product that's going to help smaller contractors. The reason: Farrell doesn't believe it's practical for batches smaller than 500 pounds.

"From our discussion with the manufacturer, you have to be able to pick the bags up from the top and the bottom," he says. "To pick up a 500-pound bag, you're going to have to have a forklift, and there are a lot of applications for decorative concrete where a forklift isn't in the equation."



With OSHA getting ready to crack down on silica dust exposure, the problem of dust from products being poured into a mixer will only increase. The DustAway, which keeps dust from escaping, can be adapted to most large batch mixers.

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Sealing the Deal on Waterproofing Solutions

Technology advances expand the range of options for concrete projects

This ALX waterproof coating system from Westcoat can be used outdoors to waterproof decks and indoors on plywood surfaces. It's a versatile system that can be customized in any color or finish. Photo by Michelle Hartley courtesy of Westcoat

by Joe Maty

WHETHER the objective is keeping water in — like a pond, tank, pool or reservoir — or keeping it out — such as a foundation or entire building waterproofing looms large in concrete installations.

For concrete contractors, designers and specifiers, the waterproofing facet of the project begins with deciding what's best for the task. Making that call, of course, hinges on a working knowledge of the technologies and systems on the market — including the latest advances and newest arrivals to the marketplace. *Concrete Decor* looks at some of these systems in this two-part report.

Shoring up a sieve

So, let's say the objective is the former keeping the water in. Such was the case for Redstone Arsenal, a sizeable U.S. Army base in Huntsville, Alabama.

The brass at Redstone had a decision to make: repair or scrap a working, 5-milliongallon water tank built in 1941. Though still structurally sound, the aging concrete tank had developed hundreds of cracks and leaks, and was losing water at a significant rate. The tank's storage of treated water for potable use added to the expense hit the Army was taking.

Contracting and Materials, a specialty coatings contractor in Decatur, Alabama, was enlisted to shore up the tank. Redstone Arsenal had attempted a fix on several occasions, C&M notes, using a liner of one type or another.

The effectiveness of a polyurea waterproofing material on a smaller water-storage pond adjacent to the Redstone reservoir led to the decision to go with a similar approach — applying a polyurea coating. The product, VersaFlex 405, is approved for potable water in water temperatures up to 140 degrees F.

According to VersaFlex, the twocomponent, 100-percent solids, spray-applied waterproof coating creates a seamless, durable lining that prevents leaks and actually strengthens the integrity of the storage structure. The coating also can withstand freeze-thaw cycling and wide temperature variations for the long term, is very flexible



A WaterFX worker applies the VersaFlex FSS 45DC polyurea to the interior of an outdoor planter box made from highly porous sandstone. The durable, monolithic coating prevents moisture from permeating the stone and causing efflorescence.

and is capable of bridging cracks.

The company's aromatic polyurea products are formulated for the heavyduty, industrial segment of the market such as water tanks, secondary containment, transportation/infrastructure, water and power, and other demanding environments.

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Knowing the limitations

The challenge of dealing with water in vapor form is a primary concern of Paul Frankel, president of William M. Perkins Co., a San Diego painting and coating company with an extensive project portfolio that includes decorative and protective coatings on concrete.

"I learned early on that moisture was going to be the thing to make or break the business," Frankel says, adding that failure to address this challenge has led to the demise of many San Diego companies. "Every concrete project I do involves moisture mitigation in some form."

A product that has grown to become a key weapon in Frankel's moisture-control strategy is Drytek, a moisture-barrier formula from Laticrete International Inc. The product can be effective in a single coat, applied thin or thick depending on the job, is tintable and chip-broadcast compatible, Frankel says. He also employs measures he's devised on his own, but prefers to keep those close to the vest as "proprietary."

Jeff Bonkiewicz, specialty products division manager with Laticrete, says Drytek was formulated in response to market demand for a system to deal with moisture vapor transmission related to installing self-leveling underlayments. The product also can be used as a basecoat for self-leveling overlays, epoxy floor systems and polyaspartics, he says.

Drytek is a one-coat, two-component, 100 percent solids epoxy coating. Ease of use was a priority in development, Bonkiewicz says, citing the premeasured amounts of the two-coating components in their respective "Part A" and "Part B" containers. One component is simply poured into the other and mixed when applied.

Frankel says that although Laticrete and other manufacturers have made great strides in developing products for waterproofing and moisture mitigation, contractors who hope to succeed must acknowledge the limitations of any coating or waterproofer where moisture is pervasive. These situations are fairly common in construction that dates prior to 2004-2005 in California, he says. That's when the state building code required builders to install vapor barriers below structures.

But for concrete surfaces that were built before 2005, moisture below the surface continues to lurk. A concrete surface with visible efflorescence (blooming) signals that moisture vapor transmission is occurring, and any kind of coating or moisture barrier applied will likely fail.

"Some slabs I walk away from,"

Frankel says. "Even with a coating, I'm not helping that client. My coating may hold, and the system may work initially. But eventually, because the moisture can't escape from the slab, the concrete will deteriorate. Certain slabs should not have a moisture-control system — it's just too wet.

"A lot of guys in my business have the philosophy that you can put a coating on anything now. My experience has shown that this is not always the best decision or approach for a customer."

Frankel says he thinks back to his experience with horizontal concrete at his home some years ago, before his own concrete-coating business was started. When the coating system failed, the contractor said he wasn't responsible, citing the fine print — warranty language exclusions.

Frankel says he didn't want to see his own company follow shortsighted business practices like that, knowing it would catch up to the company in the long run. He set out determined to do his homework, becoming something of an expert on the concrete moisture issue in local construction circles.

"I didn't want to make excuses or hide behind a cleverly worded warranty," he says.



Visual assessments to determine the presence of moisture can be important but only if you know what you're looking for. Even the presence of efflorescence doesn't point to a current moisture issue, as the efflorescence may have occurred previously and the slab may no longer have excessive moisture. All three slabs seen here have similar high levels of moisture and hydrostatic pressure. A "splotchy" appearance suggests that a moisture problem is present but to accurately assess levels of moisture in a substrate, you should use an approved ASTM test.

Reflecting pools in Vegas

GelFlex, another polyurea waterproofing product in VersaFlex's portfolio, is geared more toward decorative concrete projects such as reflecting pools and others with water features. Based on aliphatic polyurea chemistry, the material has strong color-retention properties.

It was the polyurea system of choice for a reflecting pool at the New York-New York hotel/casino on the Las Vegas Strip. WaterFX, a builder and renovator of dramatic pools, spas, water features and thematic props, tackled the job.

The VersaFlex polyurea system beat out plaster, epoxy, tile and fiberglass as it proved to be a faster-turnaround alternative for reflecting-pool installations — one that delivers a spray-on waterproof, protective, seamless surface. A plaster-type material is typically used to line pools but applying it is time consuming and color consistency can be difficult.

Visually, the project's dark topcoat makes the pool look much deeper than its safety-regulated 18 inches. Tim Singleton, WaterFX project manager, says the VersaFlex polyurea system offers a wide range of UV-stable topcoat colors that deliver "the look of multiple epoxy coatings in a single, seamless, durable waterproof topcoat without all the work and hassle."

The GelFlex topcoat is an aliphatic, UV color-stable, 100 percent solids, chemical-resistant polyurea, typically applied over an aromatic polyurea basecoat that serves as the main waterproof membrane. The seamless basecoat creates a waterproof, durable protective liner that strengthens the integrity of the entire structure.

The polyurea materials' physical properties include high elongation,



At the New York-New York in Las Vegas, a crew applies VersaFlex's FSS 45DC polyurea basecoat to the reflecting-pool feature. This follows application of a modified polyurethane primer.

crack bridging, hardness, tensile strength, and resistance to wide fluctuations in temperature and humidity. Thanks to quick setting and curing, the polyurea surface can be walked on in minutes, allowing projects to be returned to service a few hours after the topcoat is applied. The topcoat delivers color stability, gloss and distinctness of image.

A plural-component spray gun connected to a long, heated hose and pump machine is used to spray the polyurea basecoat



and topcoat. The polyurea components are mixed in the spray-gun nozzle during application, with no pre-mixing needed and no waste produced in the process.

"The polyurea topcoat can customize the design and color of swimming and decorative pools, ponds, fountains, water walls, waterfalls and water features," Singleton says. "It is fun, for instance, to match the bright colors of kids' water-toy structures with complementary designs and colors in pools."

Singleton says WaterFX initially checked out polyurea materials about six years ago, but back then designers and owners were largely unfamiliar with these products in waterproofing applications and were hesitant to try them out. That has changed as polyureas have been used in other infrastructure and building applications.

In a decorative project such as the New York-New York reflecting pool, Singleton says installation began with thoroughly cleaning and inspecting the concrete substrate, and patching cracks 1/8 inch or wider with a polyurethane repair material — Sikaflex 1a in this case. Then the system primer - VersaFlex VF 20 modified urethane — was spray applied in a thin mist coat and rolled with a short-nap roller to enhance penetration. The surface was



The completed reflecting pool and Statue of Liberty replica is situated amid a stunning Las Vegas Strip setting.

covered to prevent any moisture, debris or other contamination prior to applying the waterproofing basecoat the following day. The basecoat — the primary

Major player builds on North American product lineup

ajor global industry player Mapei Corp. set its sights on new market frontiers in North America for its below-grade waterproofing portfolio when it introduced these waterproofing systems last year.

The product line includes: Mapeproof sodium bentonite geotextile waterproofing membrane is constructed of a layer of woven and nonwoven puncture- and tear-resistant polypropylene fabrics. Encased within the fabrics is high-swelling, self-sealing sodium bentonite. The membranes are offered in a standard-grade version (Mapeproof HW) and an alternate grade designed specifically for sites where contaminated or salt groundwater is present (Mapeproof SW).

Mapethene self-adhering,

rubberized-asphalt sheet waterproofing membrane is constructed of a 4-milthick, impact-resistant, cross-laminated, high-density polyethylene film laminated onto a proprietary 56-milthick rubberized-asphalt compound. The membranes are offered in hightemperature (Mapethene HT) and lowtemperature (Mapethene LT) versions.

Also part of the product introductions are the waterproofing accessory products **Mapedrain** — a group that includes seven different three-dimensional drainage composites engineered for specific site and drainage requirements and **Mapebond**, a group of contact adhesives designed to meet varied site conditions and various local VOC regulations.

waterproofing membrane — was spray applied at approximately 60 mils, using VersaFlex FSS 45 aromatic polyurea. Due to rapid cure of the polyurea basecoat, the decorative polyurea topcoat was immediately applied. The topcoat — in this case VersaFlex GelFlex 115 aliphatic polyurea — was applied at 20 mils dry film thickness.

To ensure proper adhesion, the primer shouldn't cure more than 24 hours before recoating with the basecoat, Singleton says.

Compared to waterproofing systems that combine a rubberized coating and fabric membrane, the polyurea system is "harder to get wrong" because of the seamless membrane that's created, Singleton says. He adds, however, the substrate surface must be completely dry and free from all dirt, debris and moisture or imperfections can form in the membrane. During application, any moisture on the surface will convert to vapor due to the applied polyurea's heat. It will be trapped under the coating, causing blisters or bubbles.

Singleton says use of the polyurea waterproofing is beginning to draw broader appeal as designers and specifiers gain familiarity with its use in other facets of construction, such as infrastructure and wall reinforcement.

Big-game assignment for cold-applied material

Turning to the matter of keeping water out, W.R. Meadows is looking to drum up interest in its Hyrdralastic 836, a coldapplied, solvent-free, one-component, low-VOC material that stands up to temperature extremes. Uses include interior and exterior concrete surfaces in horizontal and vertical applications such as plaza decks, planter boxes and parapets, and for positiveside waterproofing for foundations and between slabs.

A big-game test for this new player in the waterproofing arena came at the new Vanier Family Football Complex at Kansas State University's Bill Snyder Family Stadium in Manhattan, Kansas.

Topeka, Kansas-based Restoration & Waterproofing Contractors Inc., the waterproofing subcontractor for the Vanier complex, looked for an equivalent alternative to the hot-applied sealant in the architect's specifications, citing safety concerns.

The subcontractor's job primarily focused on 50,000 square feet of split-slab waterproofing for the concourse area. The process involved applying a 90-mil coat of



the Hydralastic 836, followed by placing reinforcing fabric and another 90-mil coat of the cold-applied waterproofing.

Also used in the project were W.R. Meadows' Mel-Rol waterproofing membrane for below-grade applications such as elevator pits and the hydrotherapy pool area, Sealmastic solvent to reduce dampness and moisture infiltration, and BEM one-component waterproofing



A cold-applied waterproofing material and reinforcing fabric was put on a 50,000-square-foot concourse at the Vanier Football Complex at Kansas State University's Bill Snyder Family Stadium in Manhattan, Kansas. The cold-applied waterproofing is solvent-free, low in VOCs and resistant to temperature extremes, says manufacturer W.R. Meadows Inc.

membrane for sealing around conduits, rebar and brackets.

Russ Snow, W.R. Meadows product group manager for building envelopes, says Hydralastic's key features, besides its cold-applied characteristic, is that it can be applied to green concrete and asphalt, and it doesn't require any special application equipment.

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CONCRETE QUESTIONS

Use of Penetrating Sealers is on the Rise

by Chris Sullivan

T HE decorative industry grew up on the "one size fits all" high-gloss sealer which was the go-to coating for decades. While high gloss is still widely used, low-gloss and natural finishes in the decorative concrete industry have been gaining momentum as homeowners, architects and designers seek more ecofriendly, green and natural-looking sealing options.

In some cases, the demand has less to do with the sealer's environmental impact and more to do with people wanting a "natural appearance" while the sealer still protected the substrate. The best way to achieve this look, while still providing protection, is to use a penetrating sealer.

Penetrating sealer is a catch-all or umbrella term used to describe multiple chemistries and hundreds of products. What these various chemistries have in common is that they all penetrate the surface, provide some level of stain resistance and don't leave a film. This lack of a film means there won't be any gloss or shine, and the concrete, not a sealer film, will be the wear surface.

This last point of wear protection is especially important in the decorative world because there are color systems that require a sealer film to "lock in" the color and provide abrasion and wear protection. Stain and dye systems come to mind as the two big markets where this is important. It's also important to note that some decorative systems look better with a highgloss coating, like metallic epoxy coatings and certain stains and dyes. Overall, the decorative market has been more about gloss and color enhancement, and less about performance when it comes to sealers.

While relatively new to the decorative industry, penetrating sealers have been used successfully in other markets for decades. Originally developed for the stone, masonry and concrete flatwork industry, penetrating sealers primarily resist water and stains, while not changing the substrate's appearance. Their primary functions have been salt and acid resistance, efflorescence control and water resistance.

The characteristic of not changing the substrate is a drawback to using penetrating sealers in our industry, as many decorative finishes have historically relied on a sealer to



Light architectural exposed aggregate and stamped concrete are popular decorative finishes for penetrating sealers.

enhance and darken the color, known as the "wet look." The good news is there are now multiple penetrating sealers that provide some level of enhancement and darken the substrate without forming a film.

The other relatively new development is the use of certain penetrating sealers in conjunction with traditional thin filmforming sealers. In some cases, solventbased penetrating sealers can be applied before or after an acrylic thin-film sealer is applied. This combines the surface darkening and protection of a film former with the internal stain resistance and deep protection of a penetrating sealer.

So, here's our question:

How does a penetrating sealer work?

A penetrating sealer reduces a substrate's ability to absorb water or stains at the molecular level. Imagine the concrete surface as a series of microscopic doors (pores) set end to end. Without any kind of sealer, those doors are wide open, allowing easy entry for water or stains. In physics and chemistry, this is referred to as having a high level of energy (surface tension for liquids). Every surface in the universe has one.

A penetrating sealer's goal is to reduce



A solvent-based penetrating sealer applied in conjunction with a solvent-based acrylic filmforming sealer provides water resistance and gloss.

the energy level of the substrate to below the energy level of the staining material. Basically, it's a battle between substrate and stain, with the lowest level of energy winning.

Once the sealer is applied, those doors aren't open as wide, which keeps the stain from getting into the surface. Note the doors don't close completely, which allow vapor and gas to move through the substrate, but they don't allow larger molecules with higher energy to pass through.

This is what differentiates a water-resistant, breathable penetrating sealer from an impermeable waterproof coating. Variables like the stain's particle size and surface tension, the substrate's finish and density, and environmental conditions such as temperature and humidity all play a part in this complex battle occurring at the molecular level.

Wide range of choices

Here's a quick overview of the common types of penetrating sealers and how they're used in the decorative concrete industry. This list is based on the key active ingredients found in each type. It's important to note that many penetrating sealers are blends of various ingredients. Read the technical data sheets and safety



A new generation of color-enhancing penetrating sealers darkens the substrate without adding any gloss or creating potential issues associated with film-forming sealers.

data sheets. And don't be afraid to talk to the manufacturer if you have questions about a specific product and application.

Silicone – Depending on who you talk to, silicone-based sealers may be considered penetrating or film forming. In this instance, we'll consider them penetrating, even though they are shallow penetrators. They offer excellent water and oil resistance, but often have a life span of a year or less due to poor UV stability. They can darken the substrate and are a good choice for colored concrete or exposed aggregate finishes where water, stain and graffiti resistance is required.

Silane – This type has the smallest particle size which allows for deep penetration into dense substrates. It bonds with cementitious material to reduce porosity and resists water and oil very well. To be fully effective, it must saturate the surface, which increases the cost per square foot. However, it has a life span of 5 to 8 years. Whereas it doesn't enhance color much, it's a good choice for stamped concrete, colored concrete, exposed aggregate finishes and overlays.

Siloxane – This type has the largest particle size which prohibits deep penetration. Its weak bond with cementitious material reduces porosity and it's used most often to help porous substrates improve water resistance. Since most of the material is near the surface, it has a short life span of 1 to 3 years. It doesn't enhance color and can be used on broom-finished colored concrete, stamped concrete, exposed aggregate finishes and concrete pavers.

Silicate – This one's small particle size makes for good penetration. Silicate salts (lithium silicate, sodium silicate, potassium silicate) form calcium-silicate-hydrate crystals which densify the surface of the concrete. It provides some water and oil resistance, but is noted for its crystallization, long life span and hardening properties when used in conjunction with diamond polishing.

Siliconates – This sealer has mediumsized particles that form an internal crosslinked membrane which greatly reduces porosity. It provides excellent water and oil resistance, has a long life span and doesn't enhance color. It performs best on porous substrates like broom-finished colored concrete, stamped concrete, exposed aggregate finishes and concrete pavers.

Hybrids – These sealers are combinations of penetrating sealers and/or other resins (acrylic) designed to provide a specific type of protection or substrate enhancement. A common hybrid would be a silane/siloxane blend to take advantage of the properties of both materials. Penetrating sealers that enhance color are usually blends of penetrating molecules and resins like acrylic.

Try them, you may like them

Where is this growth of penetrating sealers in decorative concrete coming from? Polished concrete has created a demand for natural-looking concrete with an aesthetic beauty without any type of film or coating. The other reason is 20+ years of decorative concrete sealer issues and complaints are finally taking their toll. Year after year, the biggest single source of complaints in the decorative concrete industry continues to be issues with film-forming sealers.

Where and when a penetrating sealer can be used in place of a traditional filmforming gloss sealer on a decorative project will come down to the client's demands, the type of decorative finish and the installer's comfort and experience applying these types of sealers.

If you're not familiar with penetrating sealers, do some research and try them out. You may be surprised how easy they are to use, as well as the benefits you can achieve by not creating a film.

Chris Sullivan is vice president of sales and marketing with ChemSystems Inc. He has led seminars and product demonstrations throughout North America. Chris was inducted into the Decorative Concrete Hall of Fame at the 2015 Concrete Decor Show. Reach him at questions@concretedecor.net.

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The Polishing Consultant Color Repairs Explained in Black and White

by David Stephenson

O VER the last few months I've had multiple projects with issues related to color. I feel it will benefit *Concrete Decor* readers to understand the process for corrections as well as some simple tips and tricks for achieving desired results.

As a consultant, one of the things I enjoy is helping and training contractors. I'm satisfied when I feel I have taught something new to a contractor or field crew that will impact the quality of their future work. In this article, I'll talk about several different issues illustrated with project photos. I hope you get as much benefit from reading this article as I have gotten by writing it.

Always expect residue

The first issue I want to discuss is residue. When applying dye, there'll be residue *every single time*. This isn't something that happens if you put way too much color down but is inherent in the application process because no two concrete slabs are exactly alike. Every concrete slab has a different amount of porosity which affects the amount of liquid that can be absorbed into its surface.

Because of this, all dye or coloring products are overengineered to make sure that slabs of all varieties can be colored. As a manufacturer, you assume dilution rates of your color to meet the demands of the most porous surface, then you add about 10 to 15 percent more color. As a contractor, this just means you'll have residue on every project. Sometimes you'll have more than others based on you guessed it — the porosity or the slab.

Residue is normal and something to be considered on every project. It needs to be removed or it can cause issues on issues. The easiest removal method involves an auto-scrubber with pads (not brushes). Dye residue is easy to see because the pattern visible on the surface looks speckled and spotted.

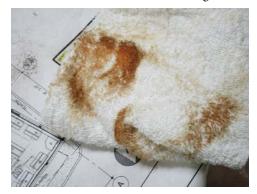


When you're moving across the floor, the reflected light will almost have a metallic look in areas of excessive residue. Wiping

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the floor with a damp cloth will reveal if there's substantial residue remaining or not.



Each application of color will leave residue. If you're applying multiple coats of color, there's no need to remove the residue in between, but it's important to remove excess residue before you continue polishing. If you don't, the dye particulates will build up on your resin diamonds. As the diamonds heat up from friction, a small cluster of dye particles will melt into their surface. Additional particles will then be caught up until you get what's called an "ember." This ball of hardened dye particulates will cause major scratches in the surface of your polished concrete floor and damage the diamonds so that they're unusable.



Ember scratches (below) are very difficult because they're usually deep enough that you must drop back several steps in the grinding process to get them out. These scratches had



to be removed with a 150-grit metal-bond diamond, which added significant work and time to the project.

Residue is easy to remove with water and a

scrubber. If you don't have an auto-scrubber, you can use a swing buffer with water and a soft pad. Then you can squeegee and shop vac up the water with the residue suspended in it. I've found polished concrete cleaner removes residue best because it holds the particulates in suspension better than water alone. You need some liquid or the residue won't come loose from the slab's surface.

As a side note, here's a tip. When doing multiple colors next to each other, always do the darker color first. After you've dyed the darker color successfully, clean the

residue well along the edge of the color transition. Then paper and tape the edge of the already-applied color and apply your densifier to the colored area.

The densifier will help keep any additional color from bleeding into the lighter colored area. There is no feeling worse than having a perfect color application with red and blue next to each other and then going to clean the floor and having the edge of both colors turn purple because of residue transfer. Cleaning and specifically densifying the darker color first will help with this issue.



Regarding color: The mistake I see contractors make repeatedly is not removing the residue and then stain protecting over the top of the remaining residue on the floor.



Since the residue isn't bonded to the concrete, it acts as a bond breaker by holding the stain protection off the surface. With cleaning and traffic, the stain protection — as well as the color residue will come off in spots, creating unattractive dull spots and a headache for the customer.



If there's too much stain protection over the top of dye residue, with a few cleanings you'll get dull spots where the residue and stain protection came off.

Resolve color issues first

One extremely important thing: Don't apply stain protection to a floor unless all color issues have been resolved.

When you apply stain protection, it acts like a microscopic sealer. This is great for keeping liquids out, including additional color that may be needed for blending or repair purposes. After you've stainprotected a floor, it's extremely difficult to correct anything or make any repairs.

There are basically two options for repairs after stain protection has been applied. The first is to regrind the floor to get below the sealer application. This usually requires a transitional grind if not a metal bond. Basically, you must redo about 75 percent of your work. The second option, and the one I recommend more often, is to use a chemical to remove the stain protection.

AmeriPolish has a stain protection stripper I recommend because it doesn't damage the color that's in the concrete. The clear product will chemically remove the stain protection, as well as any dye residue on the surface. Note the color of the liquid stripper. The brown dye residue you see is



the result of the stain protection removal process. The standard application of dye is still in the concrete and this is the residue that should have been removed before the stain protection was applied.

After chemical removal, the floor can be repolished or, in rare cases, just burnished and then stain protection can be reapplied. No matter what repair you need to make, the stain protection must be removed. It is much, much easier to perform repairs or get additional color in if you do the work before sealer is applied.

Applying more and blending colors

Among the many repairs that can be done, the two most common are applying more color and blending colors. Sometimes concrete takes color differently in areas. This is usually a result of how the concrete was troweled when it was placed and how tight the surface's paste is. The tighter the pore structure, the harder it is to get color into the floor.

With a standard application, these tighter areas just don't take as much color, resulting in a lighter appearance in spots. Additional color can be added just by applying more coats but this doesn't always do the trick.

Most color manufacturers offer some version of penetrating agents. These chemicals are designed to keep the color in liquid suspension on the floor longer so that more color can be carried into the concrete pore structure. I've found solvent-based dyes generally penetrate better because the liquid molecule structure is smaller in solvents than water. The downside to solvents is that they evaporate faster than water. Penetrating agents are specific solvents engineered to remain liquid longer, allowing more color particulates to penetrate the surface.

If a project is complete, including stain protection, the typical repair would go something like this: Chemically strip stain protection, scrub the floor to neutralize the stripper and carry dye, sealer and stripper residues off the surface. Reapply color in its standard form or use manufacturerrecommended dye and penetrating agent mixtures to darken the floor's color. Scrub to remove dye residue, burnish to remove any water or scrubber marks, reapply stain protection and burnish per manufacturer's recommendations.

If you are adding color, don't stop your application at a distinct line. The darker color will be extremely obvious if you do. It is much better to fade the color application to nothing over a random area. The natural shading and variation of the concrete will make the blend virtually invisible.





Blending at cold pour joints

Another extremely common issue is blending at "cold pour" joints, which are joints where different pours meet. For various reasons, a concrete slab can be broken into several different pours. These pours can be different colors due to cement, sand, aggregate, admixtures, age since placement, curing methods or how they





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were finished. There's an endless variety of reasons why concrete pours can be different colors. There isn't much affect overall of these varying shades except right at the point of transition. The lighter or darker shade is extremely noticeable where the slabs meet.

Often the responsibility for blending these slabs becomes the decorative contractor's issue. Dye is an extremely forgiving product to work with but most contractors are scared to try blending colors. This issue is easiest to deal with before applying the main color. I usually recommend using a heavily diluted black to darken the lighter concrete along the edge and let the darker color fade out to nothing 10-15 feet away from the joint.

As an example, let's assume you're using a chocolate brown dye. I recommend using a 20 percent strength black dye along the lighter pour edge to darken the concrete base before applying the brown dye. With the diluted black, it's easy to apply light coats until the base colors are a closer match. When the gray concrete is close shade-wise, apply the brown color evenly across the entire area.

If the color transition is not stark and clearly defined with straight edges, most





customers won't notice it. The fading color doesn't draw the eyes.

The issue is a little bit more difficult when color has already been applied. You must look closely at the color variation and determine what additional color is needed to get the finish closer. I always recommend using darker colors and diluting them so you can apply light coats until you have a close match.

As an example, let's refer to the cold pour photo. I looked at the light brown color of the lighter pour and felt that a black, even diluted, would be too dark. So, we stripped the stain protection and protected the darker side of the joint. Then we used a 20 percent strength walnut dye and lightly sprayed the joint, fading the spray out about 10 feet back. The first application was still too light so we applied a second coat of the diluted walnut color. The result, while not 100 percent perfect, is now an extremely close match *(see photo above)*.

After scrubbing to remove any residue, we stain-protected and burnished the area. What was a large issue for the customer is now a minor color change where the two concrete pours meet. The customer was happy with the work since the stark color change didn't stand out any longer.

Take-aways for all

There are several things to take away from this article.

- Always remove dye residue before additional polishing or applying stain protection.
- If additional color is needed, try using the manufacturer-approved penetrating agents. They will help get more color into the floor.
- Check each area closely prior to applying stain protection. It's simpler to conduct repairs before stain protection has been applied.
- Always try to chemically remove stain protection rather than grind it off. There is much less work and a better overall product with a chemical strip.
- Straight lines or stark transitions are much more noticeable than randomly fading out color from repairs.
- When trying to blend darker and lighter colors, use light coats of diluted dye to match the colors as closely as possible. Remove all residue from the surface before continuing your polish or applying stain protection.

David Stephenson owns Polished Concrete Consultants, based in Dallas, Texas. As a consultant, he offers decorative concrete programs for retailers and troubleshooting for a wide range of clients. Contact him at david@polishedconsultants.com.

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Border Variation: A ribbon runs through it

by Rick Lobdell

BORDERS can be used in many ways, not just to frame a room and make our engraving easier than cutting all the way to a wall. Usually 6-10 inches wide around the edge of a space, they can also be used as their own design element.

One of the styles I like to use I call a ribbon border. These borders don't touch walls and are skinnier than typical edge borders. You can use them to create basic shapes and make it appear as if there's a rug in the middle of a room. Whereas 6- to 10inch borders tend to make hallways appear smaller, ribbon borders work great through hallways. They don't cause a walkway to shrink visually.

I've done plenty of these floating ribbon borders in my projects over the last 10 years. Some became complicated designs but were still part of the borders. One became a beautiful floating ribbon around a small condo. They can be simple, delicate and easy — or complicated and intense (a route I often choose).

In "Star Wars: Episode III – Revenge of the Sith," the hallways and large rooms have great simple versions of ribbon borders where they are used to outline spaces. Look at this screenshot where Anakin and Padma are having an important discussion and



Screenshot from "Star Wars: Episode III – Revenge of the Sith

notice how the borders accent each area and make the room look huge. They don't make the space busy. Instead the borders look clean, sophisticated and modern.

Simple yet effective

Let's look at a couple of projects where I used ribbon borders to my advantage. One



In this issue's GoPro video, Rick Lobdell creates a small replica of this ribbon design he made for one of his clients.

of my clients in Nashville had just purchased a condo and he wanted more than just a recoat on the floors. It wouldn't have been cost effective to remove the coating and start over so I came up with an idea that simply involved a traveling ribbon border.

I started with a sketch to visualize how a border could meander through the small condo space because I didn't want it to take over the room or make it feel smaller. The cool thing about this idea was that I could

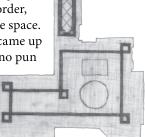
remove the sealer from just the ribbon, change the color only on the border, and recoat the entire space. While sketching, I came up with a clever twist, no pun

intended, to the design. As always, I used a square, tape measure

and straight edge to lay out the border. With these basic tools, I could make the border travel to create a subtle weave of squares. This brought a little flare to the design without adding too much to the space. It was quick and easy, and I have a very happy client still to this day.



First, I cut my design so I knew where to strip and I made the border wide enough to simplify scraping. Then I carefully scraped. Since the floor was incredibly smooth, I easily scraped the sealer off the surface. After the sealer was removed, I applied a walnut color acid stain by hand with a brush.





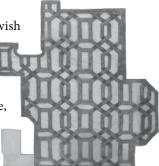
The next day, I cleaned the border thoroughly and neutralized it. I waited a couple of days for the water to evaporate and then I sealed the entire floor with a sealer similar to the solvent-based one originally used. It took four days to accomplish this task over a six-day period because of dry times.

This is a good example of a subtle way to use ribbon borders to help spice up a small condo.

A bit more complicated

Now let's look at a more complicated design that you may think is more geometric. But looks are deceiving. I drew the design for the Mialo residence in much the same manner as I did for the small condo.

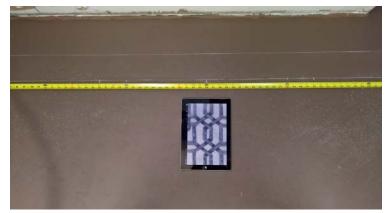
I began with a normal 12-inch border around the outside edge. In hindsight, I wish I would have created a ribbon around the room. Instead, I made a series of ribbons that traveled through the room in a pattern. As the ribbons cross paths through the space, they twist and turn as in the condo but exponentially more often. This design is much easier to produce than it looks. It took longer for me conceive the idea and draw it on paper than it did to lay out.



In this issue's GoPro video, I create a small replica of Mialo's floor to show you how easy this can be. As usual, first I create the outside border. This time, however, I measure 6 inches and 10 inches simultaneously and then chalk both lines around the room.



I then find the center between the inside of the borders. Next I measure out where I think I want the lines to start. Be sure to



measure the exact same distances on all four sides. As there is no set rule for the exact scale on this design, you

must visualize what you expect to see. Because my drawing room is square, it appears to be easy to lay out this design. I know I move very fast in the video, since it is time lapse, but watch how much my head turns back and forth so I can make sure I get all my measurements right. This design was a lot

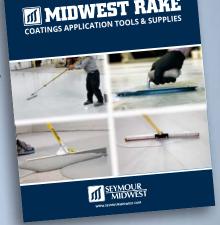


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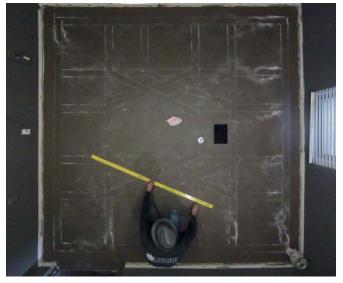
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room than it was on 1,200 square feet. It also almost took me as long to draw.

Once I lay out the outside measurements, I chalk the lines connecting them all. It will look like a bizarre tile pattern with borders around the tiles. I end up erasing a lot of those lines.



Next, I start in the center, trying to connect the ribbons in a mathematical way. This is confusing for the first area but

once you get the layout right the rest goes very fast. After I connect all the different directions with the ribbons, I wipe away the extra lines I don't need. I use white or a very light-colored chalk because it wipes off easily, unlike blue chalk.



Post script

As a side note: While I was drawing the design for this article and filming, I realized I was off on my measurements, which rarely happens anymore. It just goes to show that you must step back and look at your design — no matter how simple or complicated it is — to see if something is off.

Luckily, it only took a couple of minutes to fix my mistakes. The center of my design was off by almost 3 inches. Plus, after I fixed that and thought I was done, I realized I had erased the wrong ribbon in one place. I can't emphasize enough how important it is to step back throughout the process and look for mistakes. They will happen. No one is perfect ... not even me.

See a video of this project at https://youtu.be/hDQ4Epasq3I

Rick Lobdell, a classically trained artist with a master s in fine arts in painting from the Savannah College of Art and Design, has also studied math and drafting. In this series, the owner of Concrete Mystique Engraving in Tennessee will explain how he lays out his wellknown designs. He can be reached at rick@concretemystique.com.

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Hardly Soft

by Stacey Enesey Klemenc

T first glance, you'd think you were looking at a distinguished upholstered bar done in a style that many attribute to a sofa designed for the fourth earl of Chesterfield, Philip Stanhope (1694-1773), that featured the now iconic buttoned leather look.

But with just the bump of a knee, you'd discover the plush-looking upholstery was hard as a rock. To be more precise, make that hard as concrete.

The concrete-clad bar in the Rooftop Terrace Bar at the Twickenham Film Studio in London, England, is the handiwork of Vladimir Jansky and Bart Pomerleau, directors of Setworkshop Ltd. The company has two workshops — one in London, where it makes furniture and more complex molds, and another in Daventry, 60 miles north of London where it works on larger projects.

Jansky met Anna Romanenko from Barbarella Design Ltd. at a trade show in 2014. The following year, Romanenko contacted the company and asked if it could make a concrete cladding that looked like the classic Chesterfield pattern for the Rooftop Terrace bar. Since most of Setworkshop's work involves custom-made designs — which essentially means doing a design the first time most of the time — they figured, "Why not?" and made some samples.

"Firstly, we tried to make rubber molds



from upholstery panels that we made but it didn't work out. We then decided to digitally design the pattern which we could then make using MDF (medium-density fiberboard) and a CNC (computer numeric control) router. That way we could make seamless joints between panels and we needed only three molds — (one for the) ends, (one for the) corners and one for the rest of the panels," says Pomerleau.

The final design involved a from-scratch glass-fiber reinforced concrete mix using



portland white cement and upholstery material such as buttons and faux leather.

One of the project's biggest challenges, says Pomerleau, was "getting the molds less perfect so the casting showed the detail of the texture and resembled the look of real upholstered leather." One of the panels most compelling attributes is that they look like one continuous piece, instead of seven individual pieces. "It was especially tricky, taking into consideration the working with patterns."

Weight was also a factor, as the bar is located on the roof, he says. "Considering the contours of the cushion varied by nearly 2 inches, the panels had to have varying thickness, ranging from less than a ¼ inch to 1½ inches."

The panels were installed at the beginning of 2016.



From left to right: Microtopping, Nuvolato floor, Stamped concrete floor, Acid Stain







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