

# concrete DECOR<sup>®</sup>

Vol. 19 No. 4  
May/June 2019  
[concretedecor.net](http://concretedecor.net)

## **Natural Drive**

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Stone Bond Epoxy



Aurora Epoxy Dust



Industrial Epoxy



Crystal Coat

McKrete™



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May/June 2019  
Volume 19 - Issue No. 4

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American Institute  
of Building Design



## Publisher's Letter



### Dear Readers,

When the Concrete Decor Show launched in 2010, we aimed to deliver the best education by the best trainers in the industry. We partnered with a nonprofit organization in Phoenix, Arizona, so we could use all the expertise, products, tools and equipment that exhibiting companies provided to ensure the best for the workshops and the nonprofit. Those workshops were truly on-the-job training that provided invaluable learning opportunities. It also gave the industry a boost with regional and national news coverage that pointed to the amazing transformations of the world's best building material, namely concrete.

This fall the Concrete Decor Show is doing something new. Instead of focusing our energy on a local nonprofit, we're focusing our entire effort on you. We don't want to discourage businesses to stop giving their time and resources, but we want this show to be 100% about satisfying your business and technical needs. We want to do this through in-depth learning opportunities, the best products and engaging networking events — along with something you won't find at any other tradeshow.

At this year's Concrete Decor Show, we're offering full-conference attendees a \$150 rebate. You can learn more about this rebate offer by visiting us online at [www.ConcreteDecorShow.com](http://www.ConcreteDecorShow.com).

In addition to this rebate, there will be even more opportunities to take advantage of special offers from our exhibitors at the show.

Discounted online registration for this year's full-conference pass is \$350 if you register by Aug. 15. After that, registration is \$435 online and at the door. The preregistration fee for an Exhibits Only pass is \$25 until Oct. 27. Admission is \$45 at the door.

Plan now to join us in Arlington, Texas, Oct. 28-31 for a day or two or four. You'll not only return home with information to grow your business, but you can do it with dollars Concrete Decor is giving back to help your business grow. Don't forget, the Concrete Decor Show only comes around once every two years, with the next show in 2021.

Enjoy this edition of *Concrete Decor* and do patronize the companies you see in our pages.

Sincerely,

Bent Mikkelsen  
Publisher



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**On the cover:** A penetrating sealer preserves the concrete without changing the look, allowing the exposed aggregate to retain its natural appearance and color.

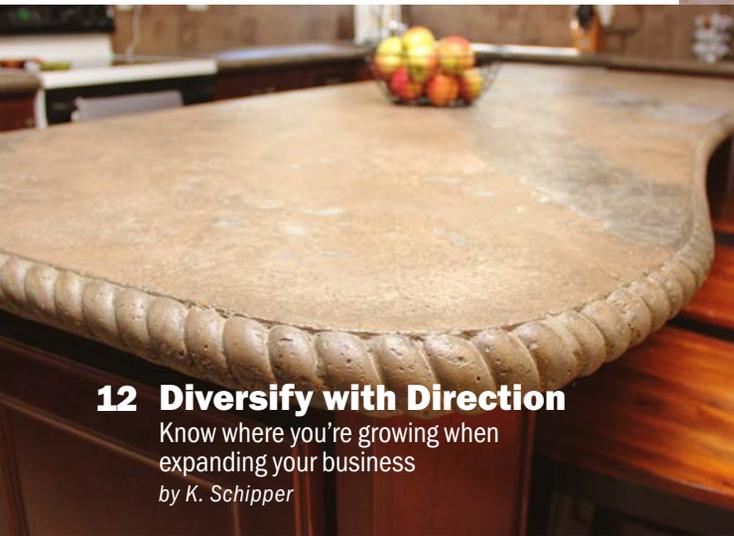
Photo courtesy of Stephens Concrete Sealing

# concrete DECOR®

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THE BROADCAST

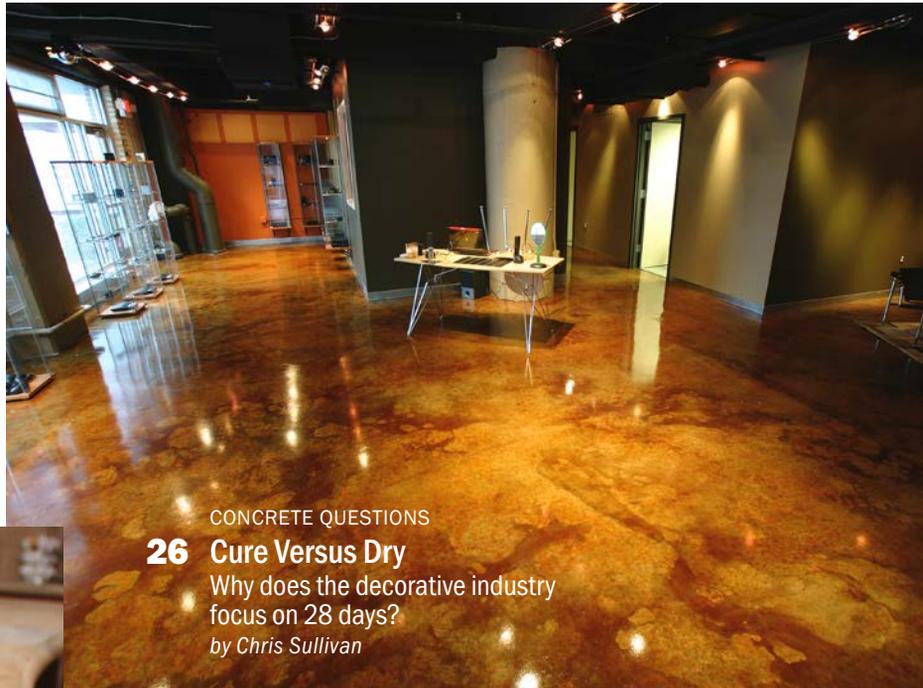
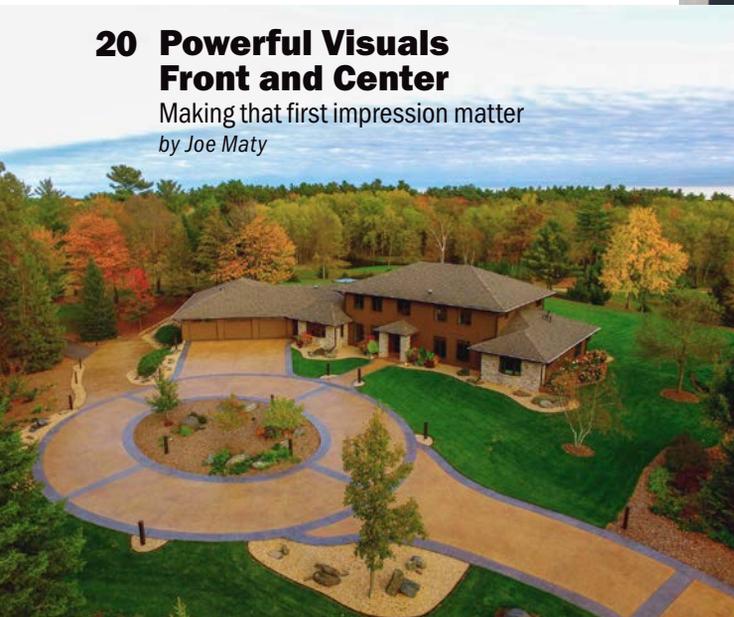
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## EXPERTS



**Greg Iannone** is area sales manager for Solomon Colors/Brickform. He has worked in the concrete construction industry for more than 30 years. He can be reached at (801) 376-6750 or [giannone@solomoncolors.com](mailto:giannone@solomoncolors.com). See Greg's article on page 10.



**Rick Lobdell**, a classically trained artist with a master's in fine arts in painting, has also studied math and drafting. In this series, the owner of Concrete Mystique Engraving in Tennessee will explain how he conceives his well-known designs. He can be reached at [rick@concretemystique.com](mailto:rick@concretemystique.com). See Rick's column on page 34.



**Tyler Stephens** is president of Stephens Concrete Sealing, a surface restoration, cleaning and sealing company in Indianapolis, Indiana. The family-owned company, founded in 2009, services both homeowners and businesses. Tyler can be reached at (317) 264-9781 or [tyler@stephensconcretesealing.com](mailto:tyler@stephensconcretesealing.com). See Tyler's article on page 18.



**David Stephenson**, based in Dallas, Texas, is president of Retail Polishing Management, a large national flooring installer. He can be reached at [david@the-rpm-group.com](mailto:david@the-rpm-group.com). See his column, "The Polishing Consultant," on page 36.



**Chris Sullivan** is vice president of sales and marketing with ChemSystems Inc. and a member of the Decorative Concrete Hall of Fame. He has led seminars and product demonstrations throughout North America. Reach him at [questions@concretedecor.net](mailto:questions@concretedecor.net). See Chris' column, "Concrete Questions," on page 26.



**Steve VandeWater**, a former decorative concrete contractor, is the creator of the Indiana Decorative Concrete Network website [www.indecorativeconcrete.com](http://www.indecorativeconcrete.com). He currently manages The Concrete Store at Sagamore Ready Mix in Fishers, Indiana. See Steve's article on page 30.

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**Aluminum membrane can be exposed longer**

New from W.R. Meadows comes Air-Shield Aluminum Sheet Membrane, a self-adhering air/vapor and liquid moisture barrier. This roll-type product made with aluminum bonded to specially modified asphalt is about 40 mils thick. Its aluminum properties allow for an extended 12-month exposure time.

The membrane is strong, durable and remains flexible when surface mounted. It will adhere to most primed surfaces at a minimum temperature of 40 degrees F. The membrane provides excellent protection and won't shrink, sag, dry out, crack, rot or easily puncture during installation.

[www.wrmeadows.com](http://www.wrmeadows.com)

**Cure-and-seal equipped with silane shield**

ChemMasters Inc. recently unveiled its Polyseal EZ Shield, a bubble-resistant, nonyellowing acrylic curing and sealing compound with a penetrating silane “shield” to beautify and protect decorative concrete. It is a low-VOC product formulated to meet the stringent regulations for volatile organic compounds in states requiring less than 350 g/L VOCs.

Polyseal EZ Shield forms a clear protective, UV-stable coating that meets ASTM C309 curing efficiency specifications and helps freshly placed concrete achieve its full design strength and durability. Its resistance to bubbling and “cobwebbing” makes it user-friendly during application under a wide variety of environmental conditions. Fortified with a silane “shield,” it has deep-down penetrating protection that doesn't detract from clarity, gloss or color development on stamped, exposed aggregate and other decorative concrete finishes.

Whether it's used to cure or seal concrete, the compound offers continued protection to exterior decorative concrete surfaces from fertilizers, salts, grease, oil, stains, alkalis and mild acids while minimizing spalling due to freeze/thaw cycles and de-icing chemicals. It can be applied to previously cured concrete.

[www.chemmasters.net](http://www.chemmasters.net)

(800) 486-7866



**Company launches new line of pigment-dosing machines**

The Davis Colors division of global chemical company Venator has launched three new advanced, automatic, pigment-dosing machines that can make the production of colored ready-mix concrete cleaner, more consistent and, in some cases, twice as quick.

The Chameleon-G, the Chameleon-GT and the Chameleon Bagging System are the latest additions to the Davis Colors



equipment range of PC-operated, ready-mix, automatic-color metering systems, which are engineered specifically for the construction industry. All three new machines work in combination with Venator's Granufin pigment technology — a range of high-quality, spray-dried microgranules, optimized for stability and dispersibility.

Notable for their size and sturdiness, the three new machines are compact, rugged and have a small footprint — with the G and GT models delivered in weatherproof containers for outdoor use. Standing at around 9-feet high, each machine is easily accessible, making the loading and refilling process safer to manage. The machines also function without the use of air-operated actuators or valves — meaning there are less machine parts to monitor and maintain.

[www.daviscolors.com](http://www.daviscolors.com)

**Self-cleaning acrylic available in satin**

Specifically engineered for exterior, above-grade masonry, Loxon Self-Cleaning Acrylic Coating from Sherwin-Williams provides a clean, attractive look with high-performance protection. Its self-cleaning formula easily sheds dirt upon contact with rain or water for greater curb appeal.

Now available in a satin finish, it provides advanced durability, defends against wind-driven rain and inhibits the growth of mildew on the coating's surface.

[www.sherwin-williams.com](http://www.sherwin-williams.com)



## Tote bag protects and organizes

Bon's new Bull Float Tote Bag holds one bull float, a channel float or fresno with a bracket attached, and four handles.

The open-ended tote is constructed from durable nylon and is equipped with plastic feet that run the full length of the tote to help keep the items upright and stabilized. Tools stay secured, protected and organized for storing and transporting.



The tote closes securely with a full-length Velcro fold-over flap and two buckle closures. It's equipped with four interior and five exterior pockets and a tape measure clip. A "window" on the front of the tote allows the bracket to remain attached to the float when stored in the case.

The tote is available for purchase by itself or as part of Bon's new Bull Float Tote Kit which includes the tote bag, a 48-inch square-end bull float, a Rock n' Roll Bracket and 6-foot swaged handles.

[www.bontool.com](http://www.bontool.com)

## Battery delivers increased power, runtime

Upgrading your job site and doubling productivity just got easier with a battery that delivers on the promise of increased power. The Bosch GBA18V80 CORE18V Performance 18V Lithium-Ion 8.0 Ah Battery uses the latest high-power 21,700 cells to deliver twice the power and runtime of standard batteries.



The new battery provides high-capacity power and outstanding power-to-weight ratio at a practical 2.14 pounds. Thanks to cutting-edge engineering, this battery features advanced-cell technology that delivers great power with lower internal resistance. Instead of the 15 cells packed into much larger batteries, this 18-volt battery houses just 10 cells to deliver significantly more power in a lighter, more compact package.

The 21,700 cell provides 11 percent more power and 27 percent more runtime with the same number of cells as an 18V 6.3 Ah battery. This innovation enables the battery to efficiently transfer more power to the tool, which improves performance. It's designed to deliver the power and battery efficiency required by high-capacity tools, such as reciprocating saws, circular saws and rotary hammers.

The battery also features design elements that keep the battery cool. The CoolPack 2.0 technology manages the heat of the higher power-density cells and provides better cooling than the previous-generation system, extending battery lifetime by 35 percent.

[www.boschtools.com](http://www.boschtools.com)

(877) 267-2499

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## Polyaspartic is low in odor

Versatile recently launched a new polyaspartic, Ultra High Solids Polyaspartic Top Coat 5097.

With a solids content of 97% plus 3%, this new polyaspartic high-build topcoat allows film thickness to build in excess of typical standard systems with water-like clarity that leaves a mirror-like reflection with any object that sits upon it.

5097 has a much lower viscosity than the typical high-solids polyaspartic, which makes it very easy to apply while providing an even longer pot life. The user-friendly 5097 allows for a longer working time on the floor to “back roll” compared to standard polyaspartic.

The cross-linking of the 5097 series film in the cure makes this new top coat exceptionally tough and durable. It’s four times more abrasion resistant than standard epoxies.

As an added benefit, the VOC levels are below 50. Emitting a low odor while still maintaining a great resistance to chemicals is rare for a high-solids polyaspartic, making 5097 a great alternative for odor-sensitive installs. The dry time is between five and eight hours depending on the ambient temperature, allowing you to walk on the floor the next day.

Although installations are limitless, the coating works exceptionally well in garages, restaurants, commercial kitchens, kennels, warehouses, auto repair shops, retail shops, lockers, service bays and industrial applications.

[www.versatilebuildingproducts.com](http://www.versatilebuildingproducts.com)

## Rebar tying tool is fast

The BNT-40X Tiger Tier, with its one-piece CNC rigid nose, is the next generation rebar tying tool. Lightweight and compact with a glove-friendly grip, the easy-to-hold tool is well balanced and designed to tie rebars as fast as you can pull the trigger. It can tie up to two #6 (20 mm) rebars together.

Its 18-volt lithium-ion power pack quick-charge battery, which will give you more than 5,000 ties on a single charge, drives the tool’s brushless motors. Each tool comes with two batteries, a quick charger and four spools of wire in a tough molded plastic carrying case. BNT’s standard wire is zinc-plated to inhibit rust and corrosion.

The Tiger Tier weighs 5.8 pounds and has a one-year warranty.

[www.bnproducts.com](http://www.bnproducts.com)

(800) 992-3833



## Airlite Plastics Co. acquires Truegrid

Airlite Plastics, the company that manufactures Fox Blocks insulated concrete forms, acquired Truegrid in April, adding the permeable paving grid system to its line of environmentally sustainable construction products.

Truegrid high-performance pavers control runoff, create less thermal pollution and reduce waste for landfills. Made of post-consumer recycled high-density polyethylene, the pavers have revolutionized the construction industry with versatility, attractiveness and 100% permeability. They’ve been used for parking areas, streets, walkways and bike paths for projects that include Whole Foods, NASCAR, AutoNation, Super Bowl LI’s Club Nomadic and the New York City Ferry.

Truegrid joins the family of Airlite products aimed at innovating the sustainable construction market. The paving system is a natural complement to Airlite’s Fox Blocks brand of ICF building blocks.

Airlite Plastics is headquartered in Omaha, Nebraska. Truegrid will continue to operate in Houston, Texas, and sell under its Truegrid name.

[www.airliteplastics.com](http://www.airliteplastics.com)

## Digital design tool improves job quoting

WarmlyYours, a radiant heating manufacturer, has introduced a new digital tool to make online quoting for electric floor heating faster and easier.

The tool allows users to “draw” a digital version of their project to scale with fixtures like doorways, sofas, showers and vanities. The details were added to help increase accuracy during the quotation process.

Currently, users can access the design tool from within the Radiant Floor Heating Quote Builder, another online tool developed by WarmlyYours. The user is offered an optional “guided tour” of the tool’s features.

Once the drawing of the project is completed with the tool, users can get a side-by-side comparison of the various floor heating systems that would work for their project. This comparison includes pricing and product information.

Users can then opt to purchase the system or request a custom installation plan. This “SmartPlan” includes an itemized quote, an electrical plan and an illustrated installation plan, all of which can typically be delivered in one to two business days.

Currently, the design tool is desktop-only but a mobile version is expected for the future.

[www.warmlyyours.com](http://www.warmlyyours.com)

## Epoxy gel designed for small repairs

Thermal-Chem recently added a new product to its concrete repair and restoration line: 729 ArmorGel, a three-component, epoxy gel system designed for small concrete repairs.

Oftentimes in the field, contractors must make their own patch material using leftover epoxy and whatever sand or fill they have on hand. This can lead to inconsistent mixes that are too dry or too wet which can lead to wasted product or repair failures down the road. The 729 ArmorGel eliminates the guess work and provides a consistent and durable patch material every time.

When mixed, the gel has a peanut butter-like consistency that's perfect for filling cracks, joints, pits and other surface irregularities in concrete. Once hard, it can be ground smooth prior to the application of a coating. The versatile material can also be used as a cant cove material, to fill bug holes in cast-concrete, and to patch vertical and overhead concrete.

The gel is available in one- and three-gallon kits.

[www.thermalchem.com](http://www.thermalchem.com)

(800) 635-3773

### New topcoats are top of the class

Thanks to Sundek, commercial and residential consumers now have new options to enhance and increase the life of their decorative concrete with the company's new Premium and Premium Plus Finish Coat Systems.

To be applied with the Classic Texture, SunSplash, SunCoat and new SunLastic systems, these architectural colored acrylic topcoats feature the latest in resin and nano technologies. Cleaning and maintaining surfaces with them are much easier than conventional coatings, making them ideal for commercial pools, water parks, walkways and myriad residential applications.

These finish coat systems deliver extended powerful antimicrobial protection, which prevents mold and mildew from establishing itself on surfaces. Their high-performance pigments, which can precisely match exterior colors, include UV inhibitors to increase color retention.

On the green front, the topcoats have low VOCs, are fully compliant everywhere in the U.S. and can earn Leadership in Energy and Environmental Design (LEED) points. Through innovation and extensive product testing, Sundek has combined elements of a more expensive option typically reserved for industrial-only applications into these new topcoats.

[www.sundek.com](http://www.sundek.com)

(877) 478-6335

### Company expands decorative flooring to include metallic epoxy floors

For over 30 years, High Performance Systems has specialized in installing resinous floors. Recently, it expanded its robust catalog of products to include metallic epoxy floors.

An extremely popular choice within commercial and institutional facilities such as retail stores, restaurants, hospitals and educational institutes, metallic epoxy floors can be made to resemble marble, hammered metal or granite. The metallic powder creates depth and almost a three-dimensional feel. Visual effects can be created by mixing two or more colors and various techniques can add the illusion of craters, ripples and swirling rivers.

These floors, which have a 100% solids epoxy base, offer durability, stain resistance and ease of maintenance. Generally, a black base coat is used because it creates a "mirroring effect" that enhances the depth of the three-dimensional appearance. These floors are typically top coated with a clear, scratch-resistant urethane or polyaspartic coating. They will last a long time with minimal maintenance.

[www.highperformancesystems.com](http://www.highperformancesystems.com)

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[www.collomixna.com](http://www.collomixna.com)



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## Surtec's Bill Fields passes away

William "Bill" Fields, president and co-founder of Surtec Inc. in northern California, passed away April 11.

Together with his partner Don Fromm, he founded Surtec in 1975 as a manufacturer of janitorial and floor maintenance chemicals. Prior to that, he had amassed more than 17 years of sales and consulting experience with two national chemical manufacturing companies. His expertise was designing custom maintenance programs.



Fields' passion was to develop and manufacture superior products for the cleaning and maintenance industry that provide exceptional results while reducing costs and promoting green solutions. Under his guidance, Surtec was granted five patents, including one for a high-speed buffer with a vacuum

system that improves indoor air quality.

Fields served on the Tracy Chamber of Commerce board of directors and Executive Committee from 2004 to 2017. In 2015, Surtec was honored as California's Small Business of the Year, District 13, an award bestowed to 80 out of 3.3 million small businesses throughout California for their contribution to the state's economy.

Fields received many awards and accolades over the years, including the 2005 Business of the Year and 2013 Organization of the Year awards from the Tracy chamber, the 2009 P3 Stewardship Award: Policies, Practices & Purchasing from the Green Team San Joaquin, and the 2014 Small Business Award and the 2017 Business Person of the Year award from the Greater Stockton Chamber of Commerce.

In 2015, the state of California Small Business Day organization recognized Surtec's Adopt-A-Family volunteer program that Fields founded in 1991 to provide food and gifts to children of needy families at Christmas. To date, the program has helped 7,762 families and 21,832 children.

On a personal side, Fields was an ardent admirer and collector of classic cars and belonged to several car clubs in the Bay area. His pride and joy was his fully restored 1950 Ford convertible.

In lieu of flowers, please send contributions to the Surtec Adopt-A-Family program via [www.surtecadoptfamily.org](http://www.surtecadoptfamily.org) or mailed to Adopt-A-Family, c/o Surtec Inc., 1880 N. MacArthur Dr., Tracy, CA 95376.

## John Buser lost at sea

John Buser of Dust Collection Products was declared lost at sea in the San Diego area on April 20. He set sail on his sailboat April 17 and never returned. After his unmanned boat was found off the coast of Point Loma, an extensive search involving multiple agencies was launched. After three days, it was called off.



Buser, in his early 70s, was an avid sailor and an accomplished racer, a Navy pilot veteran and a past commodore of the Ancient Mariner Sailing Society.

Dust Collection Products will continue to operate as usual. Mark James, who's been working with Buser for the last year and half, will manage the company. 🚣



Photo courtesy of Superabrasive

### Correction

On page 11 of the April 2019 issue of *Concrete Decor*, we mistakenly ran the wrong photo to illustrate Superabrasive's new Lavina Elite Series. The photo here is correct. We apologize for the mix-up.

shop

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- STAIN BLOCK
- INTEGRAL COLOR
- IRON-OXIDE PIGMENT
- CONCRETE STAINS
- COLOR HARDENER
- RESTORATION
- DYES

concreteDECOR  
MARKETPLACE

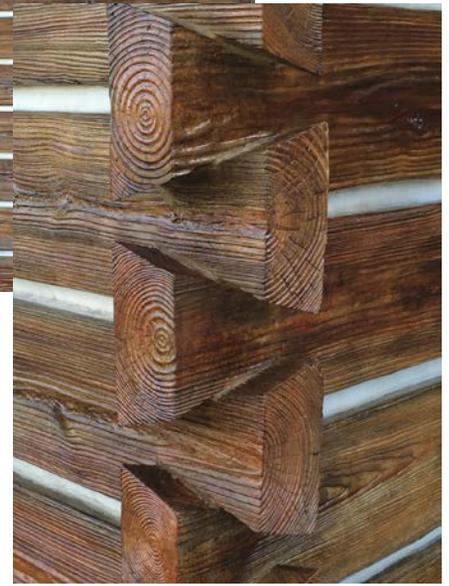
[store.concretedecor.net](http://store.concretedecor.net)

## Franchises now available for concrete log system dealers

Everlasting Concrete Logs, a family-owned and -operated business in Texas that developed a concrete log-cladding system for interiors and exteriors, is now offering franchise opportunities nationwide.

“We have designed every model and poured every mold to be unique,” says company founder, Jay Anderson, of the company’s wood replicas. “This franchise offers a product that is truly one of a kind.” Currently, the company is working on expanding the company’s offerings with new designs that will appeal to those who like contemporary designs as well as the rustic crowd.

Anderson, who has been involved in the log home industry for more than 25 years, and his wife, Lynn, have owned several log, timber-frame and wood-sided homes over the years. The couple knows firsthand about the upkeep associated with wood-clad homes and



that’s why he designed and developed Everlasting Concrete Logs.

The low-maintenance product, which he tags as “a modern convenience with a rustic appeal,” also caters to a green/eco-focused crowd and can be used in conjunction with insulated concrete forms (ICFs). It can be used to replace insect damaged or rotting wood on existing exteriors and is a good material choice for areas plagued with wildfires. The concrete cladding in lieu of combustible building materials will also lower homeowner’s insurance.

If you are an entrepreneur looking

for independence and an opportunity to get in on the ground floor of a promising business, visit [www.everlastingconcretelogs.com](http://www.everlastingconcretelogs.com) and join the team. For more information, call (231) 928-9282. 📞



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# Up Close and Personal

## New products deserve face-to-face time

by Greg Iannone

**T**HE more things change the more they stay the same. This is an adage I've heard my entire life without ever really giving it any serious thought. What does it even mean? Well, in the context of this article let's take a closer look.

The concrete industry has long been one of not only who you know but what you know. As manufacturers or dealers/distributors, how do we get our products into the hands of potential customers or consumers? Back in the "olden days" it wasn't uncommon to see the vacuum salesman going door to door to demonstrate his high-quality vacuum, hoping to make a sale to someone looking for a well-constructed machine that gets the job done.

In our industry, at least since the first World of Concrete in 1975 in Houston, Texas, we've attempted to bring customers to a single venue to meet with product manufacturers for the concrete construction industry. The World of Concrete was first held in Las Vegas in 1980 and this year the Vegas event was estimated to attract about 60,000 people and 1,500 exhibitors. WOC has proven to be an event where those seeking knowledge and information are able to meet with manufacturers, see ongoing demonstrations at exhibits such as Decorative Concrete LIVE! and participate in seminars with industry experts.

While some would argue with the viability of this "go to market" mentality in the 21st century, others still recognize it as a key marketing strategy for their company's brand awareness. They also see it as a place where they can meet with many customers from across the world in a single location over a very short time.

### Dealing with new products

In recent years, with the success of Amazon and other online retailers, a handful of concrete accessory dealers/distributors have tried, with varying



Photo courtesy of Unicon Concrete Specialties

During events that cater to vendor-direct sales, contractors/end users can see the product firsthand and talk to an expert about the product they're interested in buying.

degrees of success, to capture (if only for a few minutes) their audiences' attention through social media marketing, company online stores and other digital marketing initiatives. Some have managed to hold their customers' attention long enough for them to make a snap-decision purchase of an item or items that they regularly purchase.

What about "new" products though? If new products truly are the life blood of a company, then how do we ensure they get the needed exposure if things are trending toward an online experience?

Do we trust purchasing "new" products online when we're seeing them for the first time or where we personally haven't seen them demonstrated or been allowed to test ourselves? I totally get the notion of online shopping for products that have become commodities for us, staple products that have been around for many years with a proven track record.

Over the past number of years, I've seen a trend of bringing product manufacturers and experts back to the consumer. Thankfully, not quite

as up close and personal as the Kirby salesman coming into your home to throw dirt on the floor so he can demonstrate his vacuum's effectiveness, but up close nonetheless.

### Vendor product shows

I believe Farrell Equipment & Supply Co. Inc. out of Eau Claire, Wisconsin, was the first to produce a vendor product show. For the past four years, Bobcat of the Rockies of Denver, Colorado, has held the Colorado Concrete Expo and, even more recently, Unicon Concrete Specialties in Edmonton, Alberta, Canada, held its second vendor-direct sale.

These events take on a tradeshow-like atmosphere but with a local flavor all their own, as nearly all attendees are from the surrounding local market where the event is held.

Each of these events share many things in common — first and foremost, though, is that manufacturers and vendors have direct contact with the contractor/end user in the contractor's home market.

I've had the opportunity to

participate in several of these events including the Colorado Concrete Expo and the Unicon Vendor Direct Sale. Some of these events hold multiple product demonstrations put on by industry leaders to give contractors the opportunity to interact with manufacturers and vendors on a more personal level. It also allows them firsthand access to see new product offerings displayed or demonstrated.

### And the winner is ...

The real winner at these types of events, however, is the contractor. Vendors, as well as sponsoring dealers/distributors, typically come to these events armed with “Show-Stopper

Specials” or products that are deeply discounted only on the day of the event.

Same-day discounts have been previously arranged and vendors are given a “sell” price by host dealers/distributors. Consequently, each of the many vendors present becomes a local salesperson for the day and not only promotes their products but also writes the sales order. Several days after the event, each contractor is contacted by the host where pick-up and/or delivery terms are worked out.

I believe this is a welcome change in the way our industry does things. It’s the best of both worlds. On one hand, it’s like buying online as the order is placed immediately but with the

added benefit of being able to see the product firsthand, as well as talking to an actual expert about the product(s) you’re interested in buying. On the other hand, it’s also a throwback to the vendor coming directly to you without dirt being thrown all over your living room carpet. 🖱️

*Greg Iannone is area sales manager for Solomon Colors/Brickform. He has worked in the concrete construction industry for more than 30 years and has provided training seminars throughout the U.S. and Puerto Rico, as well as Mexico and Japan. He can be reached at (801) 376-6750 or [giannone@solomoncolors.com](mailto:giannone@solomoncolors.com).*

## Biennial Concrete Decor Show Focuses on Bringing New Products, Demos to the People

**B**ringing new products to the people is part of what the Concrete Decor Show is all about. The four-day event slated for Oct. 28-31 at the Arlington Convention Center in Texas will also emphasize demonstrating those new products using state-of-the-art techniques during exhibition days as well as at the show’s workshops and seminars.

“We’ll have representatives from four different supply stores doing live demonstrations indoors using products that are displayed on the show floor,” says Bent Mikkelsen, show organizer and publisher of *Concrete Decor* magazine. “There’s no other show of its kind in our business that offers the in-depth education in decorative concrete like we do.”

Besides offering classes and hands-on workshops that have a more intimate feel than those held during World of Concrete, the Concrete Decor Show hosts training sessions taught by “the best of the best,” Mikkelsen says. Some of these experts will also participate in panel discussions that address topics of current interest to help you stay abreast with recent finds.

Whether you are a novice or a veteran of the trade whose native language is English or Spanish, there

will be educational opportunities to help you hone your current skills and teach you new techniques. Advances in applications and uses of vertical products and tools are on the educational agenda, as well as the advantages of building with insulated concrete forms (ICFs) such as Airlite Plastics Co.’s Fox Blocks.

“We’ll have several educational seminars to address decorative concrete applications that emphasize taking the holistic approach to building with ICFs and concrete in general, and why concrete’s such a sustainable, energy-efficient and resilient material,” Mikkelsen says.

Workshops are slated to cover the fundamentals of carpentry for concrete forming, best practices in concrete repair and surface preparation, material applications, productivity and business success, among other things.

Covestro will sponsor a full-day workshop on coating technology which includes displays showcasing a range of coating applications on various types of concrete surfaces. The Hall of Fame induction and dinner is also on this year’s agenda.



Photo by Steven Ochs

The 2019 Concrete Decor Show has secured exclusive room rates (\$149 per/night) at the Sheraton Arlington Hotel, which can be reached at (817) 261-8200. The facility is located adjacent to the convention center and in the vicinity of the new indoor Texas Rangers stadium, the AT&T Stadium (home to the Dallas Cowboys), a new sports district called Texas Live and Six Flags amusement park.

Registration for the show begins June 15. For more information on how you can exhibit at the show and sponsor a workshop, call Mikkelsen at (877) 935-8906. For general information, visit [www.concretedecorshow.com](http://www.concretedecorshow.com).



# Diversify





(Here and on page 18) Bart Sacco's career has taken him to many different places in the decorative concrete world, from being the guy out in the field supplying the muscle, to educating others in the industry, to being a supplier and, now, a product manufacturer, as well. In each case, he's spent plenty of time weighing his next step and studying up before he's moved on.

with

# Direction



Photos courtesy of Kingdom Products and Concrete Decor Show

## Know where you're growing when expanding your business

by K. Schipper

**G**ROWING up, most of us think life will simply progress from school to job to retirement. Once we're in the workforce, though, we realize things aren't so tidy.

Questions begin to arise. Should I continue to work for someone else when it looks so attractive to be the boss? Clients keep asking for something I don't offer — should I add it? I never even thought about that aspect of the business — is it a better fit for me?

They're questions that don't always have easy answers. Fortunately, plenty of people have headed out in different directions within the concrete industry and found the journey has taken them to a pretty good place.

### The glue of education

Bart Sacco, owner of Scranton, Pennsylvania-based Kingdom Products, never thought he'd end up manufacturing and distributing

products to the decorative concrete industry when he started working as a concrete contractor almost 40 years ago.

However, what ties his story together is education, both his own and his clients'.

*“Educate yourself so you don't have problems.”*

Sacco had a couple of revelations early in his career that helped turn it in a different direction. One is that his body wasn't up to installing concrete forever. And, he also realized if he was going to support the industry, some of his competitors had to do a better job. That's when he moved into educating others.

Sacco explains he had grown up in what he calls a “masonry family.” His father had been an ornamental plasterer

and he and his brothers helped serve on the crew as his family built out a 68-home subdivision.

“A lot of the work looked terrible or they weren't doing things right,” he says of his early competitors. “I thought, ‘If you're going to do the work, do it properly.’ That was my driving motive. I just wanted to teach them and guide them properly so the work would look good in the community.”

Of course, good quality work also requires good quality products. As time went on, Sacco began distributing products, eventually building Kingdom Products' current property in Scranton and offering a mix of training and products.

“As we moved into distribution, I thought if somebody was going to purchase product from us, they weren't going to want us competing against them,” he says. So he got out of the contracting end of the business



Using a modified version of a Ben Ashby admix, custom color blends and paint pigments, Christina Arnall has perfected a method where she can recreate works of art or fashion her own images on thin panels that can be framed and hung on a wall.



completely and handed off jobs already booked to his better customers.

Sacco might have stopped there, but the 2008 recession and housing bust prompted him to take yet another step. He moved into product manufacturing, and really stepped things up in 2010.

One thing that hasn't changed: Sacco is still busy educating himself and his staff. Early on, he says, he went just about anywhere a class was offered to gain knowledge on colorization or acid staining. Today his distribution staff is still benefitting from what he's learned.

"We train our staff according to whatever needs to be done," he says. "Most of the original data these folks learn are from the start of my business — things like surface preparation and how do to an overlay or clean for a new sealer."

In the meantime, Sacco says, he's able to offer his laboratory staff a different perspective because he knows how a product is supposed to feel and what the result should be.

In the end, he says, it all comes down to education and how you overcome your obstacles. "Educate yourself so you don't have problems," he says. "Don't go into anything you don't understand."

### Concrete-obsessed

That's advice that Christina Arnall and Jacqui Ortmann certainly echo. Both women got into the concrete industry because while their husbands were doing flatwork, they found their own strengths to expand their solid family businesses.

Arnall, who with her husband, Darin, operates D.C. Custom Construction Inc. in Quincy,

Washington, says concrete was always part of the company's business mix, but it took off after a large client wanted stamped concrete as part of a job.

"Darin was a little apprehensive, but I looked into it and no one around here was doing it," Arnall says. "I ordered some stamps and the other things we needed, watched some videos online, did a lot of research and thought we could do it."

The job was a success, and the Arnalls began improving their skills by attending classes and training events. It also left Christina Arnall feeling, as she puts it, "a little concrete-obsessed." While her husband continued to focus on the general construction side of their business, the downsizing D.C. Custom Construction experienced with the recession allowed her to focus more on decorative concrete.

"We started to offer countertops and I learned to carve concrete," she says.

As with the early steps the couple took into stamping, Arnall says she's relied heavily on the industry's educational opportunities. But, like her first stamping job, she did her first carving work at the request of a large client. She was successful through some telephone coaching and a lot of online tutorials.

After taking the introductory countertop class with Ben Ashby, Arnall says that aspect of the business really took off, too. And, the following year, the couple took Ashby's advanced countertop class, "and that's what led to the concrete shower business."

Today, D.C. Custom Construction does a mix of work. Darin Arnall still does general contractor work, the couple flips houses, and the artistic side



Photos courtesy of D.C. Custom Construction Inc.

Christina Arnall calls herself "concrete obsessed" but the more things she's learned to do, the more her business has expanded. In this case, a custom-made gas firepit helps set this patio apart from the neighbors.

of concrete continues to open doors for Christina.

"For instance, we're remodeling a pool area that we would never have done years ago," she says. "We're doing a concrete water slide and water features, which is all done with carving." The job also includes an outdoor kitchen with concrete countertops, and an outdoor shower with half-inch concrete panels.

Christina Arnall is using those same thin panels to create frameable pieces of art (<https://www.concretedecor.net/decorativeconcretearticles/vol-18-no-8-november-december/artisan-recreates-masterpieces-with-colored-concrete/>) and estimates she does at least two a week. The shower panels, which they sell online, have proven so popular the couple is adding a second facility just to produce them.

"It's definitely grown our business," she says. "But it also sets our business apart. That may be the biggest impact. We're able to offer some things that other contractors can't and don't, so even if we don't get a full job, we'll get called in to do specialty items as a sub."



Concrete shower panels have become a big part of Arnall's business. She and her husband are shopping for a separate facility in which to produce these popular items.



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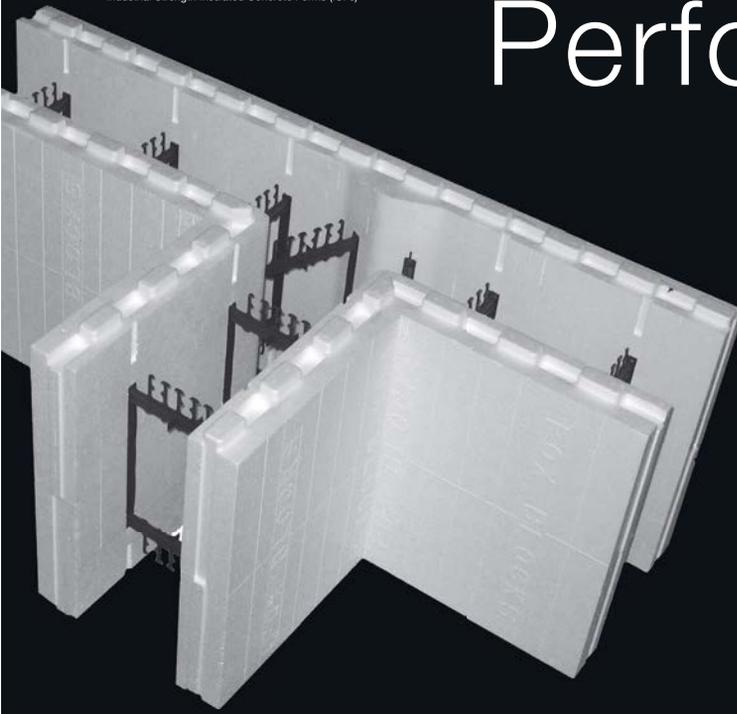
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Photos courtesy of Ortmann Concrete Inc.



When the recession hit in 2008, Ortmann Concrete expanded its offerings to include concrete countertops, which it markets under the name Bellatex. Now the company is developing a table line, too. Seen here is an 18-by-6-foot conference room table it made for Goodwin Brothers Construction, a large Midwest general contractor whose work includes mass concrete placement.

### An emphasis on quality

Jacqui Ortmann knows about the importance of setting a business apart from its competitors. She and her husband, Doug, have operated Ortmann Concrete Inc. from the St. Louis suburb of Arnold, Missouri, since 2003, when almost all its work was in new construction flatwork.

The recession changed that. Without much new construction going on, the couple decided to focus more on quality workmanship and decorative jobs. They started doing more stamped work and added concrete countertops, which Ortmann says were still a novelty in the middle of the country a decade ago.

The company's concrete countertops are made with its proprietary Bellatex system, a regular concrete mix that incorporates Ben Ashby's products. "We did some training (with Ben) and received certification in the program and that helped us solve some of the puzzle pieces we didn't quite have without that next level of engagement," she says. The name Bellatex, she adds, is derived from a combination of her kids' names.

Having good answers to their clients' questions is very important to the Ortmanns, who have translated that into two specialty client niches. They offer consultation contracts with property management and utility

companies in their area. And working with the property management firms led them into yet another market: distributing products.

"We were seeing a lot of pitting and popping on driveways, and we wanted to make sure we had a solid answer for our clients to help them protect their investment," Ortmann says. "We looked at different sealers and fell in love with the SealGreen line of products."

As with other areas into which they've expanded, the Ortmanns did their homework on the company, making sure they were comfortable with them. Now, they educate their property management clients on how

best to use the products and offer do-it-yourself videos and classes for homeowners to drive product sales.

One thing that sets the Ortmanns apart from their competitors is an office/showroom, which provides display space for the SealGreen products and a place where they can meet with prospective clients, whether they're looking for flatwork or a custom countertop.

"We have a shop manager who helps with the SealGreen inventory and has been trained for creating the forms with Bellatex," says Ortmann. "Right now, we're looking at adding a line of concrete tabletops in a mix of sizes, shapes and colors, but we're still trying to figure out how to do the bases. We're still trying to find that puzzle piece."

She admits there are also some things, such as installing overlays and epoxies, that the company doesn't do on a regular basis because "it takes us out of our everyday efficiency." And, after struggling with railings, the Ortmanns refer that work out to a sub.

She believes Ortmann Concrete has grown because it's paid close attention to what it's added and, as she puts



In response to the recession, the Ortmanns added stamped concrete to their business mix, in addition to countertops. And to make sure their concrete is properly cared for, they also distribute a line of sealers.

it, "made sure they're things that are producing and adding to the company, and not taking away."

As for others who might be thinking about diversifying their businesses, Ortmann advises to think beyond simply selling a product or service.

"If you're looking to provide a solution, that makes a lot more sense," she says. "And, it needs to be in your

wheelhouse. There's only so much time in a day, so you don't want to get too far away from what you're good at. It needs to be a strategic move that leverages your strength. You've got to be careful what you take on or you can diversify yourself right out of business." 🛠️

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Sealing exposed aggregate driveways can extend the life of the concrete as well as improve its looks.

Photos courtesy of Stephens Concrete Sealing

# Seal Exposed Aggregate Concrete to Enhance Driveway's Curb Appeal

by Tyler Stephens

**E**XPOSED aggregate concrete is a decorative concrete look that will enhance the curb appeal of driveways, pool decks, sidewalks and patios. It's achieved when the top layer of concrete has been removed to expose the rocks underneath.

A properly applied sealer will keep this finish in pristine condition so the concrete doesn't crumble or blemish over time. Sealers can be applied to new or existing surfaces and aren't just pleasant to the eye. They can extend the life of the concrete by protecting the surface from harsh winter freeze-thaw cycles and hot 90-degree summer days. Sealers also can block ultra-violet rays that cause fading and inhibit the growth of mold and mildew.

## Pick and choose

When it comes to sealing exposed aggregate, there are two types of concrete sealers that are most commonly used: penetrating and topical.

Penetrating sealers preserve the concrete without changing the look, allowing the exposed aggregate to retain its natural appearance and color. They seal the aggregate without leaving behind a visible surface film. On average they last from seven to 10 years and require little to no maintenance. Penetrating sealers won't secure loose stones or prevent stones from coming loose. If you need to secure loose stones, an acrylic sealer is a better choice.

The second and most common choice is a topical acrylic concrete sealer which preserves the concrete and

enhances it with a high-gloss finish often referred to as the "wet look." Eight out of 10 of our customers choose a honey brown-tinted high-gloss sealer for their exposed aggregate surfaces. It provides a semi-transparent brown tint that helps to bring out the natural characteristics of the aggregate below.

The high-gloss coating is UV resistant and helps to reduce concrete dusting, staining, hot-tire pickup, mold, mildew and efflorescence. The brown tint allows for a uniform look that darkens the exposed surface.

Another benefit of using an acrylic sealer is that it's topical. Instead of penetrating a 1/2 inch into the concrete, the sealer sits on top on the surface. It helps hold the aggregate pebbles in place, reduces pitting and extends the

life of exposed aggregate concrete. Depending on weather and traffic, when using an acrylic sealer exposed aggregate concrete should be sealed every 12 to 36 months.

### Clean and apply

Before applying either a penetrating or topical sealer, you must clean the exposed aggregate concrete. Pressure wash the dirt and grime off the surface, use rust remover to remove rust and a cleaner/degreaser to tackle tough oil spills. After the surface is cleaned, allow a day to dry.

Once the concrete is dry, begin the sealing process. Using a ½-inch roller and a pump-up sprayer, start applying the sealer. If the project is a driveway, start by the garage door entrance working toward the road making sure not to step in the sealer.

Apply sealer quickly to avoid any overlaps and roll marks. It's best to work in smaller 4-by-4-foot sections. The sealer should be applied at the manufacturer's spread rate. This is typically between 100 and 150 square feet per gallon.

Let the sealer dry for one to four hours for foot traffic and 24 to 48 hours for car traffic. If the sealer didn't dry evenly, apply a second coat to even out the appearance. 🛠️

*Tyler Stephens is president of Stephens Concrete Sealing, a surface restoration, cleaning and sealing company in Indianapolis, Indiana. The family-owned company, founded in 2009, services both homeowners and businesses. Tyler can be reached at (317) 264-9781 or tyler@stephensconcretesealing.com.*



Eight out of 10 of Stephens Concrete Sealing's customers choose a honey brown-tinted high-gloss sealer for their exposed aggregate surfaces.

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# POWERFUL VISUALS

Making that first impression matter

# FRONT AND CENTER

by Joe Maty

**W**ANT to impress your next multimillionaire (or billionaire) client?

Well, just take a look at what Alchemy Concrete came up with in the way of decorative concrete inspiration for a mega-upscale residence in Stevens Point, Wisconsin.

As Judah Haas, Alchemy Concrete president, tells it, this project involved completely reconstructing the surface of the residence's winding, 1/4-mile (or more) asphalt driveway, and expanding the front driveway entrance with a turnaround and landscaped courtyard.

Not visible in this major front entrance redo is the pavement heating system under some 30,000 square feet of driveway, with foam insulation underneath.

Alchemy Concrete used different shades of integral concrete coloring, two types of stamp textures, and extensive decorative sawcuts to produce the highly diverse, decorative driveway surface. For the center of the driveway, a sandstone color and slate texture were used, while the pavement border features a charcoal color and a Butterfield Color texture called Hadley Creek Shale. The decorative sawcuts in the border give the impression of a hand-laid stone surface, Haas says.

Additional highlights were added with three different colors of waterborne stain, and Butterfield's Perma-Tique antiquing agent was applied to the entire surface for increased variegation. A clear joint filler was used in all joint cuts, and two coats of a solvent-borne acrylic sealer completed the surface treatment.

A major feature of this dramatic new entrance is a decorative, curvilinear retaining wall, fashioned with the same integrally colored concrete and stamped stone pattern used for the driveway border.

Haas collaborated with the landscape design firm Rettler Corp. and the owner to formulate this major redesign and installation project, which involved sampling extensive colors and decorative patterns in the evaluation and approval process. Tom Dunbar, Alchemy Concrete director of design, also played a key role in designing the project.

The project won a 2017 first-place award from the American Society of Concrete Contractors Decorative Concrete Council for cast-in-place stamped concrete, over 5,000 square feet.

Alchemy Concrete followed this award-winning entry with another honor, a 2018 award for a second phase of decorative concrete work in the backyard of the Stevens Point residence. This project encompassed reconstructing a pool complex, with waterfall and concrete colors and textures that continued the themes of the redesigned front entrance.



Photo courtesy of Intricate Concrete

This front porch had a concrete surface to begin with and was rejuvenated with an overlay colored and sculpted to look like wood planks.

## Getting the 'wood' treatment

It might be said that the imaginative redo of a concrete front porch of a modest residence in Seneca, South Carolina, lands on the opposite end of the scale from Alchemy Concrete's sprawling decorative masterpiece in Stevens Point.

But both projects share the concept of decorative concrete treatments that speak to the natural surroundings, and both are the result of creative interpretation and visual artistry.

Intricate Concrete of Bay City, Michigan, trekked hundreds of miles south to work its magic on the residential front porch in the Palmetto State. Jason Holsapple of Intricate Concrete says he sought to do a "one of a kind thing" with the porch project, as opposed to a conventional stampable concrete update.

He also envisioned a rustic treatment that reflected the wooded setting and traditional regional architecture of the home. The result is a surface with the appearance of wood planks but the composition of concrete.

To achieve the faux-wood effect, Intricate Concrete got things rolling by grinding the surface's aged and degraded sealer, using 40-grit diamond tooling. This was followed with applying a bonding agent, then troweling on a cementitious skim coat. The same overlay material was subsequently applied between 1/8 and 1/4-inch thick, troweled in the same direction to produce an irregular parallel texture evoking a wood-grain surface.

After the concrete dried, Intricate Concrete used a carbide scribe tool to sculpt the grooves to make the surface look like wood planks.

Finally, Holsapple used a palette of waterborne stain colors to complete the picture — a combination of brown and amber shades blended to render the highlights and darker tones seen in a stained, wood-plank floor.

Intricate Concrete installs overlays on a regular basis, Holsapple says, but creating the faux-wood porch floor was "something new. It's a good fit for the house and the setting."

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## What a grind

The inherent decorative qualities of concrete itself often take center stage in exterior restoration projects taken on by Concrete Contracting Solutions of Columbus, Ohio.

A recent concrete porch job offers an illustrative case study of the company's trademark "grind and seal" technology, says Chris Paisley, founder and president. In that instance, a scaling and flaking surface was removed using a hand-grinding tool with a dust-collection system. It took 3 to 4 millimeters off the pitted surface to expose the concrete's larger aggregate. A decorative concrete sealer was then applied — a high-solids, acrylic, glossy clear finish that accentuates the aggregate colors.

This grind-and-seal approach, says Paisley, offers a cost-effective alternative to tearing out the existing, degraded concrete or installing a resurfacing material.

"Only the surface was in bad shape," Paisley says of the porch project. The



If a slab is in good shape except for the surface, Concrete Contracting Solutions favors a grind-and-seal approach to remedy the problem.

grind and seal, he says, "is the best option for the money, in our view."

The process has been used on driveways, walkways, patios and other exterior surfaces, in addition to porches, Paisley says. Variations on the grind-and-seal theme include the addition of a color — grind, stain and seal — or combinations.

Paisley cites a project where a decorative stamp installation went wrong and he was called in to devise a fix. He removed the stamp pattern by grinding it to expose the aggregate and stained a border strip to add color. A clear sealer was applied, resulting in a decorative, colored and exposed-aggregate creation.

Paisley cites the geographic diversity of aggregate as a source of decorative gems exhibiting varied colors and shapes. Examples include red rock and black granite in the Rocky Mountain region; the black, white and crystalline composition of granite in New England; limestones and sandstones from the Ozarks; seashells in Florida; pink granite from the Appalachians; and quartz from multiple corners of the continent.

This multifaceted aggregate palette serves as a centerpiece of the grind-and-seal approach favored by Concrete Contracting Solutions.

"We're green. We emphasize the natural look with native stone," Paisley says.



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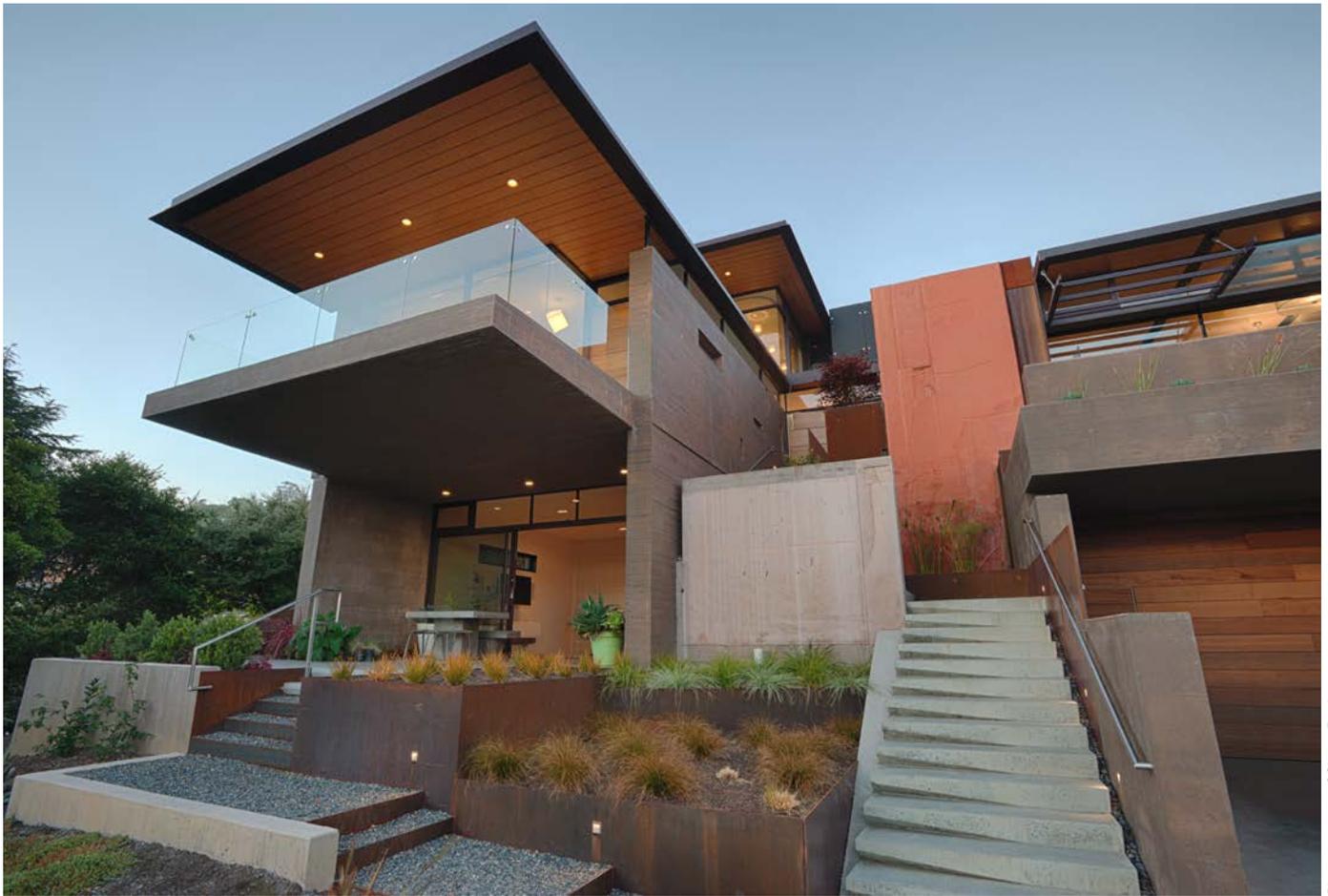


Photo courtesy of Cheng Design

The entryway of this custom home in Tiburon, California, was designed to emulate a short canyon hike up a narrow rock-outcrop path flanked by sheer rock face walls.

### A canyon beckons

Integrally colored concrete, combined with striking geometries and sculptured forms, produce the powerful visuals of the custom home in Tiburon, California, pictured here.

FuTung Cheng, of Cheng Design, says the steel and concrete elements are integrated with the building itself to create a palette of colors and shapes. Inspiration comes in part from the noted 20th century Italian architect Carlo Scarpa, whose designs reflected the work of artists and craftsmen.

This isn't simply a dramatic residential entryway. It's an invitation to experience an interpretation of natural phenomena.



“The necessity of a 50-foot vertical rise from street-side curb to front door set the design idea in our minds: reflect the experience of a small canyon hike up a narrow rock outcrop path flanked by sheer rock face walls, under the canopy of an occasional tree,” says Cheng.

“Precast, carved-out concrete steps, flanked by tall, board-formed walls lead the way up the sculptural ascension walk. Like a concrete canopy to a modern cave, the underside of the massive cantilevered second-floor deck shelters from sun and rain.”

Cheng adds: “The integrally colored walls are homages to the work of the late Italian architect, Carlos Scarpa. They are embossed with modern, petroglyph-like relief designs from molds made in our casting fabrication shop.

“The textured concrete exterior walls have resonance throughout the house interior with our proprietary, ultra-smooth, crafted concrete countertops, vanities, sinks and wall surfaces.

“The almost nature-walk feeling of moving through the spaces permeates down to the finest tactile details and everyday surfaces of the architecture.” 🗝️

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After allowing concrete to properly dry and cure, a surface can be stained and sealed with stunning results.

Photo courtesy of Chris Becker

## Cure Versus Dry

### Why does the decorative industry focus on 28 days?

by Chris Sullivan

**T**HE 28-day curing time is standard in the concrete industry and comes into play on almost every project. “Wait 28 days before application” or “Concrete requires a 28-day cure before this or that can take place” — including the application of most decorative sealers, coatings, stains and toppings — is a common tag line. Is that because the concrete needs to have a certain strength, or is there something else going on?

The 28-day standard comes from decades of testing that’s determined concrete achieves 99% of its strength in 28 days. The American Concrete Institute, ASTM International and Portland Cement Association all

reference the 28-day time frame as the accepted standard for measuring compressive strength. Really, it’s an arbitrary number based on concrete cylinder tests.

It’s also important because it sets a standard and establishes consistency in testing. Mix design and curing conditions have more to do with strength than a set number of days. According to “The 28-Day Myth” published by the National Precast Concrete Association, it’s estimated that concrete reaches 75% of this 28-day compressive strength in seven days, and its strength will remain stable or even increase over time.

Use a Type III-high early cement in

your mix and you can achieve 3,000 psi concrete in 24 hours. Most ASTM testing lists a 24-hour, 7-day and 28-day time frame. All three are important milestones and provide information on how materials are performing compared to a standard. So why does the decorative concrete industry focus on 28 days?

#### Moisture content matters

The answer is simple. Dry time! In decorative, as well other concrete industries, when applying a material to new concrete dry is more important than strong.

A great example is a liquid-applied curing compound or cure-and-seal. These materials are applied to green

concrete as soon as finishing is complete. The concrete is only hours old and has very little strength. It is, however, loaded with water. The reason these curing materials can be applied while other products require 28 days is chemistry. They are designed to work in a wet environment, while sealers, coatings and most post-applied colorants are not.

It comes down to moisture content and occupying space. In the case of sealers and coatings, moisture can affect a product's chemistry. In some cases a reaction with water takes place resulting in unwanted byproducts.

Polyurethane coatings are a great example. The isocyanate portion of a polyurethane will react with water and produce CO<sub>2</sub> gas. These tiny gas bubbles can become trapped in the coating resulting in permanent white spots. Other coatings and sealers, like acrylics and epoxies, don't react with water, but instead will trap moisture in and under the coating creating what is known as blush or haze.

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Photos courtesy of Chris Sullivan

While acrylic sealers don't react with water, they can trap moisture which creates what's known as blush or haze.



Excess water caused problems that resulted in haze and unwanted foam trapped below the surface.



Excess black dye caused sealer failure. Colorants such as stains, dyes and color washes fill the pores in concrete's paste layer. If water or another contaminant is already occupying that space, there's no place for the color to go.

## No vacancy

The other issue with excess moisture has to do with occupying space. Most post-applied colorants such as stains, dyes and color washes occupy space. They fill microscopic voids and pores in the concrete's paste layer. If these spaces are occupied by water, there's no place for the color to go, resulting in lowered color intensity.

The other factor to consider is hydrostatic pressure and equilibrium. As concrete cures, mix water evaporates. If a colorant is applied to concrete that's still drying, not only will the color intensity be reduced because water is occupying those voids, but ongoing evaporation will carry color out of the slab.

This is the same process that

occurs when dye is applied to polished concrete that's been ground wet in a room with little air movement. The air above the concrete becomes saturated with moisture from all the water used in the polish process.

The floor and the air find equilibrium regarding humidity, which slows or stops the process of drying. Dye is applied to what appears to be dry concrete, but it's actually a wet slab. Everything looks good until the HVAC is turned on. Then the dye suddenly fades or ends up as a dry dusty powder as the evaporating water carried it to the surface.

## Test to be sure

Dry time is not black and white. Environmental conditions have a

significant impact on how fast concrete dries. This holds true for both newly placed concrete and an old slab being power washed for resealing.

Visual inspection is not always a good indication. Surface-saturated dry is a phenomenon where the concrete is saturated with water, but the surface appears dry. Other methods for moisture evaluation may be needed.

Following the weather, especially humidity and dew point, can help determine moisture levels in concrete. This is especially true during spring and fall where large swings in temperature can take place. On larger-scale projects inside, I always recommend running some type of moisture test.

Next time you see a reference to waiting 28 days, it probably has more to do with allowing concrete to dry than strength. Understanding this can provide insight into how products work and when you may be able to push the hot dry conditions to allow for faster turnaround when drying comes into play.

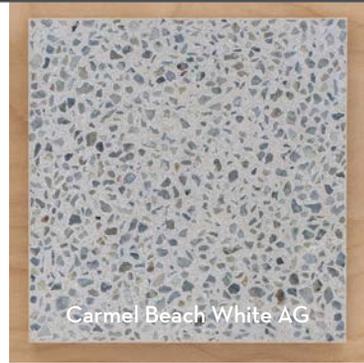
Cooler temperatures with higher humidity can slow the process, even past the 28-day mark. It's always better to spend a little time and run a test then rush into a project hoping for the best. 📱



Photo courtesy of Chris Becker

Waiting 28 days before applying coatings such as sealers and stains on concrete is a standard practice among concrete contractors. The real reason for the wait time has more to do with ensuring the concrete is dry rather than strong enough to be finished.

*Chris Sullivan is vice president of sales and marketing with ChemSystems Inc. and a member of the Decorative Concrete Hall of Fame. He has led seminars and product demonstrations throughout North America. Reach him at [questions@concretedecor.net](mailto:questions@concretedecor.net).*



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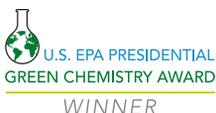


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Put away those rose-colored glasses ...

# Set Realistic Expectations for Integrally Colored Concrete

by Steve Vandewater

**W**HEN choosing to use colored concrete on a project, there is very often a discrepancy between the owner's expectations and the reality of the finished job. Two major reasons for this are that manufacturers' color charts cannot possibly show the true color, and most contractors fail to adequately explain this to the customer.

I'm sorry ... that last sentence may have been an overstatement. Color charts can show your project's exact color. However, if you're lucky enough to achieve that, you should rush out immediately to purchase a lottery ticket!

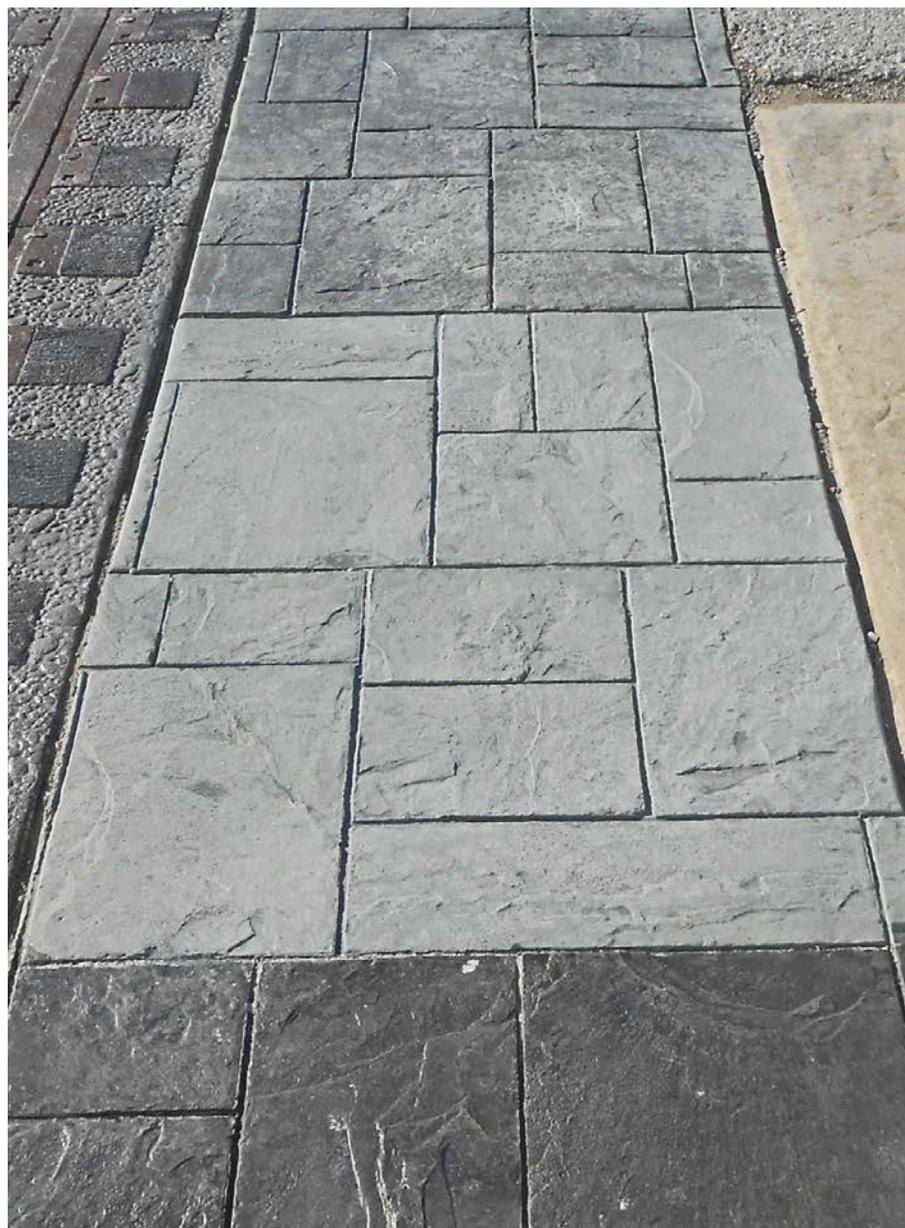
You may be surprised to hear about the inaccuracy of color charts. However, you shouldn't be if you've ever read their fine print. Almost all color charts have disclaimers stating that there are many factors that determine concrete's final color. They often state that the chart is based upon mixing their color with "medium gray cement" or some similar wording. However, "medium gray" is a very subjective term.

## Iron oxide pigments

First off, please realize that the pigments produced by major manufacturers are strictly quality-controlled. Color is the manufacturers' bread and butter, and their business depends upon uniformity. It's in their best interests to assure that each batch of pigment is the same. Consequently, inconsistent pigment is almost never the problem.

Now consider that if a certain weight of that pigment is added to a certain volume of a pure white base, then the final color will be consistent. That's how paint is made and it's the reason paint color charts can be highly accurate regardless of where they're made. Unfortunately, the same cannot be said for colored concrete.

Concrete is made up of diverse materials that vary by locale. The stone,



Three different types of sealer yield different colors on this stamped concrete sample.

sand, water and cement powder used to make concrete is mined, quarried and otherwise obtained from very different sources. These ingredients are not the same from location to location. Concrete in Indianapolis isn't the same as concrete in Evansville, Indiana, and certainly not the same as concrete made

in Los Angeles, California, or upstate New York.

If one were to add an exact amount of the same pigment to two batches of concrete produced in different locations, the final colors would almost certainly not match. Not only would they not be an exact match but

Photo courtesy of Steve Vandewater

depending upon how different the color of the raw concrete is, the colored loads could differ by several shades!

This is one major reason that actual concrete color almost never matches the color chart. There are simply too many variables that affect concrete's final color.

Besides differences in raw materials, some other factors that affect concrete color include:

**Slump of the concrete** – Slump is a measure of viscosity. The more water added to concrete, the lighter the color is likely to be. Concrete placed and finished at a lower slump (drier) will usually turn out darker and a closer match to the color chart.

**Weather and site conditions when the concrete is placed** – Relative humidity, dampness of the substrate, sun or shade, and windy conditions can all affect finishing practices and the final color.

**The concrete contractor's finishing practices** – Dampening a finish broom

to get a more even finish will result in striping and uneven color. Hard-troweling a slab will result in dark burnish marks. In short, floating versus troweling, brooming versus stamping and hand versus machine finishing all affect color.

**Timing of finishing operations** – Concrete finished late in the setting process will yield a darker color than concrete finished while still highly plastic.

**Moisture on the surface** – Both during and soon after finishing, additional moisture on the surface, followed by evaporation, will cause the color to become a lighter shade.

**Adding a second antiquing color** (for stamped concrete) – The secondary color used to antique stamped concrete yields several more shades of color which fall somewhere between the base color and the antiquing color.

**Curing methods used** – Water curing, curing beneath plastic sheeting, applying a cure-n-seal product or

not regulating curing at all can dramatically affect the final color. Covering fresh concrete with plastic or plastic-clad curing blankets will result in tiger stripes and a wildly mottled surface when the slab is uncovered.

**Sealer choice** – Sealers have a huge effect on final color. Solvent-based acrylic sealers generally provide a higher gloss and can dramatically darken colors. Water-based acrylic sealers, on the other hand, generally look more natural, less glossy and don't darken the concrete as much. Penetrating sealers typically don't change the appearance of concrete at all. The sealed surface appears virtually the same as unsealed colored concrete.

Considering these factors and more, it's impossible for anyone — whether he or she is a manufacturer, concrete producer or contractor — to guarantee that the concrete's final color will match the color chart.

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The advertisement features a collage of images showcasing different concrete finishes and products. On the left, a wooden deck is labeled 'STAMPS'. In the center, a sidewalk with a tree is labeled 'COLOR'. On the right, stone steps are labeled 'FORM LINERS'. At the bottom, a spiral staircase is labeled 'STAINS'. The Butterfield Color logo is prominently displayed at the bottom left, with the text 'A SIKA BRAND' underneath. Social media icons for Facebook, Google+, Twitter, Pinterest, Instagram, LinkedIn, and YouTube are located at the bottom right, with the text 'FOLLOW US' above them.



Photo courtesy of K&M Concrete

This patio's base color (above) is Gull Gray. Note how much lighter it is than the color depicted in the color chip (below). The pattern was created with Gilpin's Falls Bridge Plank stamps from Butterfield Color.

## Read and heed the disclaimers

It's for these reasons that color charts contain disclaimers that recommend making a job site sample or mock-up prior to the actual concrete pour. Only by creating such a sample with the same materials, techniques and even manpower that'll be used on the real job can one determine what the final color is likely to be.

Unfortunately, the idea of making a job site sample has pitfalls. First, it can be expensive. The cost of mixing and delivering a single yard of concrete can be several hundred dollars, and that's not including labor. Who pays for this?

On a commercial job with a large budget, the added cost is a tiny fraction of the overall budget and may be absorbed by either the contractor or the owner. On a residential patio, however, the cost of making a color sample is a much larger percentage of the overall budget. If a job site sample is required, it should be communicated to the contractor prior to bidding or be renegotiated as an addition to the contract.

Another potential problem with requesting a mock-up is that contractors are very busy. The time it

takes to make a small sample is time taken away from doing an installation where they can be making money.

Sometimes owners, after seeing the sample, decide they don't like that color after all. In this case the contractor must make another sample, incurring more expense. This is likely to be reflected in a higher price for the customer. It can quickly turn into an expensive nightmare for everyone involved.

If colors don't match, why even have a chart?

To show all possible shade variations of a color would require a chart of infinite size. However, manufacturers must provide something to use as a frame of reference, and printed color charts are the best option.

Charts are small, portable and relatively inexpensive to produce. Manufacturers choose the colors on their charts based upon their own experimentation using their pigments mixed with locally sourced cement. Therefore, the chart represents one possible outcome.

While printed charts are often unreliable, even worse are online color charts. Differences in computer monitors and electronic screens render



Gull Gray color chip.  
Photo courtesy of  
Butterfield Color

online charts practically worthless.

Online charts can be good for narrowing down preliminary choices, but one should never choose a final color for a project based solely on an online chart. It should also be noted that a self-printed online chart isn't remotely the same as a professionally printed chart from a manufacturer.

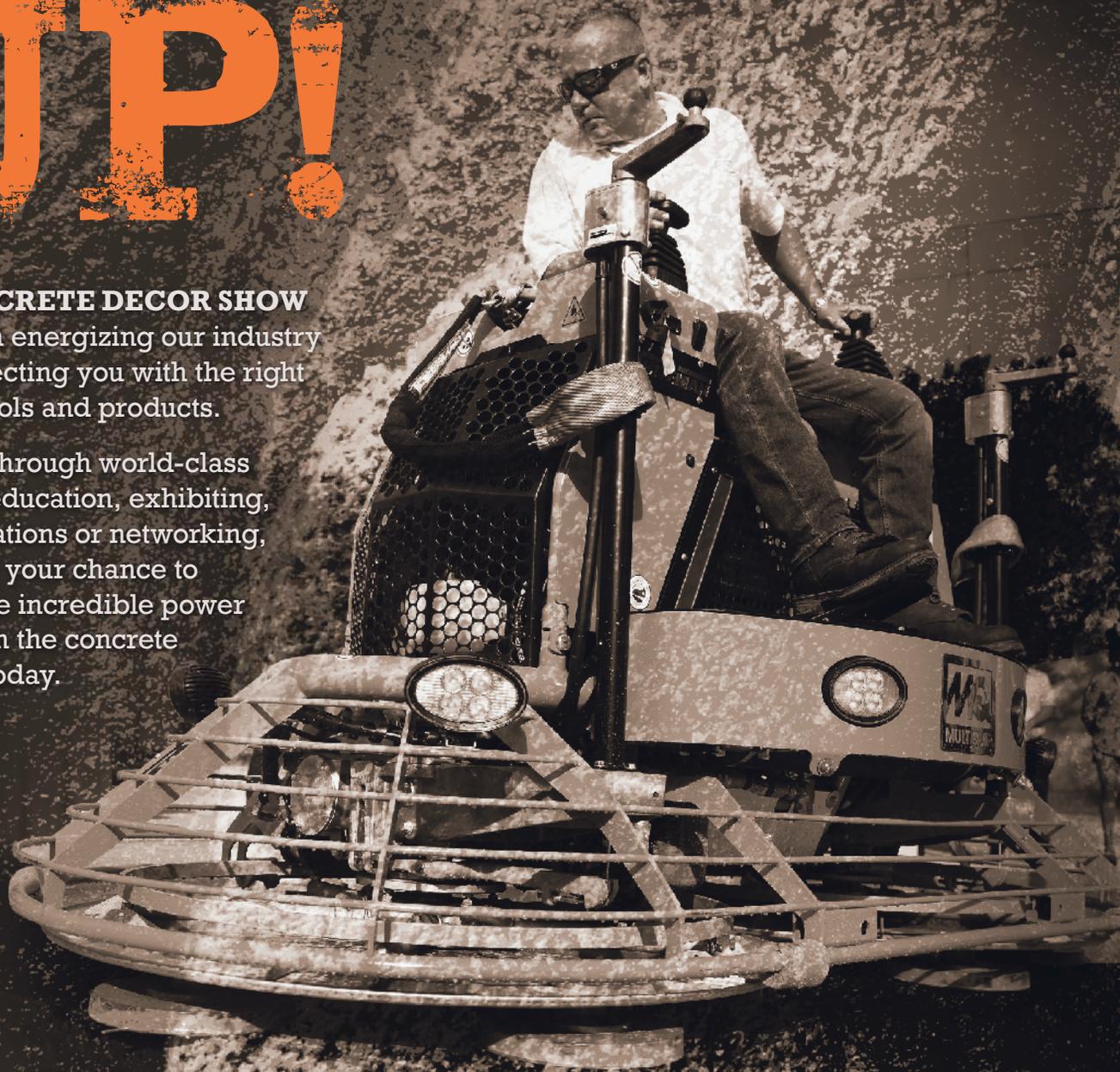
If you're feeling discouraged about choosing a color for your concrete project, take heart. Charts do give an approximation of color, so you can be confident that your project will fall into a certain spectrum. Just don't get too caught up on exact shades or you'll likely be disappointed. 📱

*Steve Vandewater, a former decorative concrete contractor, is the creator of the Indiana Decorative Concrete Network website [www.indecorativeconcrete.com](http://www.indecorativeconcrete.com). He currently manages The Concrete Store at Sagamore Ready Mix in Fishers, Indiana. Steve may be reached at [Svandewater@sagamorereadymix.com](mailto:Svandewater@sagamorereadymix.com).*

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# Part 3: Hand Brushing Don't Stop at Intersections

by Rick Lobdell

**I**N Part 1 of my hand brushing series, you learned how to save time by brushing acid stain on borders. In Part 2, I proved that you can successfully brush acetone dye. In Part 3, we'll move on to the more complicated task of brushing unique designs because not all designs are just a simple border around a room.

Many of us are tackling more intricate designs, such as 3-D tile patterns with multiple borders. With patterns like that, there's no concrete (pardon the pun) stopping point for hand brushing. Expansion joints help create stopping points but outside of that how can we brush large designs without the glaring brush marks?

If you watch my time-lapse videos on YouTube, you'll see me hand brushing everything. You'll also hear me repeating how you need to learn to use a brush and save a ton of time on job sites. It has taken me years to figure out how to hide the brush marks on detailed designs. You can do this, too, but it's not as easy as brushing a basic border around a room. But you can get there with patience, practice and a good technique.

## Start with the basics

Let's break down my technique. In Part 3, I'm using acid stain again but you can apply the same technique when using any type of stain.

First, decide where to start. Pick a corner of the room or patio. If there is an expansion joint, start there



Photos courtesy of Rick Lobdell

instead of the corner. Also, if there's an expansion joint, brush that entire area before you move onto the next expansion joint.

With multisectional borders, I prefer to stain the outside border first and work my way into the design. As I'm staining the outside border, I brush a little stain into each section of border that branches off. It's up to you as to how far you brush down the border before returning to brushing the outside edge. Don't leave a straight brush line where the interior and outer border intersect. That straight line will never go away and the point to all of this is to never leave a straight line.

Before you start brushing let's review how to use a brush. First hold the brush like a pencil or a pen. Second, stop the dip before you reach the metal part of the brush. Third, aggressively drop the brush twice to stop the drips. Fourth, when brushing use your entire arm to move the stain around as you go. Just using your wrist will cause the stain to flick all over the place.

## Mottled edges are a must

As you brush into the interior borders, create a stopping point by leaving an edge that looks like the mottling of the stain. No straight lines; just a meandering edge. This will help



you match the brush strokes when you return to complete staining that area. Since there's no real stopping point, stay focused on the outside border. Repeat this process with each interior border that intersects the outside one until the outside is completely colored.



Once you finish brushing the outside border, begin to work your way inward and apply the same technique. Instead of stopping at the intersections, go past each one by a few inches and create that meandering mottling look.



Now you can finish all the leftover sections of the border. Lightly go over each start and stop point with a few brush strokes. This helps the stain blend into itself a little better. After everything dries and finishes reacting, you may still see a couple transition points you made. After neutralizing and sealing the border, the transition points usually don't distract from the overall design.

Like I say with everything, I didn't



start doing this yesterday. You'll want to practice this a couple of times to get used to the technique. It took me a long time to figure out how to achieve the least amount of brush marks on unique designs. I'd rather see a couple of transition points than waste so much time masking. When you get down to it, it's a personal time-saving choice, but — hey — time is money 🚗

See a video of this project at  
<https://bit.ly/2WpA8zf>

*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 conceives his well-known designs. He can be reached at [rick@concretemystique.com](mailto:rick@concretemystique.com).*

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Photos courtesy of David Stephenson

When this crack (left) eventually breaks it will leave a round delamination, while this one (right) will leave an elongated one.

## Here's the 411 on Delaminations in Polished Concrete

by David Stephenson

**T**HERE'S a lot of misinformation and confusion surrounding delaminations in concrete. To help clear up things, let's review different types of delaminations and associated repair options so you can use this information to better plan, manage or correct delamination issues.

In its simplest form, delamination occurs when the surface paste or top layer of cement on a concrete slab lifts and separates from the body below. Essentially, delaminations are blisters in the concrete. Just like a blister, the top layer of skin isn't significantly changed.

There are two main causes for

delaminations — air-related issues and water-related issues.

### Air-related issues

The first question you should ask when you're looking at a new slab is, "What is the air content?" as all concrete contains some air. Naturally occurring air, caused by small bubbles getting trapped by the aggregate spinning in a concrete truck's drum during transport, is called "entrapped air." Additional air injected into the concrete is called "entrained air."



Trapped air can form blisters that will almost always result in spherical-shaped delaminations.

Entrained air on exterior slabs creates voids that allow moisture room to expand when it freezes without breaking the concrete. Entrained air should never be used on power-troweled interior slabs.

When looking at a specification,

make sure the entrapped air content is 3% or less. If the air content is below 3%, you typically won't have any issues.

If the air content is higher than 3%, these small bubbles will start to merge in the slab during placement while the concrete is still in a wet state. When troweling occurs and the surface paste is tightened up and closed, these larger air voids get trapped under the surface skin. As you can imagine, this trapped air forms a blister covered with just a thin skin of portland cement paste.

### Water-related issues

The second major cause of delaminations is related to moisture trapped in slabs. Recently, I was called to a project where the concrete was placed in multiple smaller pours on a huge building. We're lucky that the site had cameras that recorded the place-and-finish operations because without the video, I'd never have guessed the main cause for these delaminations was the contractor routinely getting on the slab early and trapping bleed water consistently across most of the pours.

The concrete was placed in the Northeast during winter. Each pour was setting up extremely slowly because of the temperature and the building process that called for the building's walls and roof to be built before the slab was



If you look closely, you can see the curvature of the concrete that's a blister that hasn't broken yet.

placed. This prohibited the concrete from being exposed to the sun or the wind.

The placement contractor got tired of waiting for the slabs to finish releasing bleed water and got his guys on the concrete early. This helped him get the job done while saving a bunch of money in labor not having crews sitting around getting paid to wait. There were 24 pours of between 10,000 and 20,000 square feet apiece. Evidence shows that all but two pours had early entry troweling.



Although the crew used a standard technique and a 2-by-4 to screed the surface, their mistake was they got on the slab too early with the trowels. The areas that were troweled where the screed had already consolidated the concrete closed slightly more, trapping the water below. This led to the delamination in the shape of the screed pressure.

By getting the power trowels going early like this, the contractor, using friction to create heat, flash-evaporated the water in the surface's top 1/16 inch. Once this water evaporated, the surface could be troweled tight creating a skin. As the slab was naturally still trying to push out water, this bleed water became trapped under the skin creating blisters. Over time the water dissipated leaving the blister with a void — that's a delamination waiting to happen.

### Identifying delaminations

At the start of a project, delaminations aren't easy to identify. The skin looks consistent with the surrounding slab. Typically, these blisters don't delaminate until a combination of traffic and cleaning causes the collapse of the surface skin layer.

During construction that may mean that delaminations don't become noticeable until the store starts to get merchandised or starts to receive significant traffic. Once the blisters break, there's a distinctive cracking pattern typical for delaminations. These cracks begin to look more radial as the edges of the blisters collapse.



Trapped water-related delaminations come in all shapes and sizes. They can be roundish (*left*) in one spot and long and rectangular (*right*) in adjacent areas.

The two different causes of typical delaminations exhibit in different ways. Trapped air-related delaminations will almost always be spherical. They aren't always perfect circles, but they will always be somewhat round.

Trapped water-related delaminations come in all shapes and sizes. There's not a specific pattern to water-related delaminations. They can be roundish in one spot and long and rectangular in adjacent areas. These delaminations can be affected by things like screeding or people walking on the slab while the concrete is still wet.

Other than spotting the radial cracking, which is an easily identifiable indicator, the only realistic way to determine delaminations is to tap or "sound" the concrete. Blisters or delaminations will have a distinctive hollow sound. I've dragged large chains across the floor but unless the

delamination is very large, this doesn't work as well as other methods.

My favorite method for testing is to use a 5-foot-long section of steel or metal bar (these can be found at any hardware store) so you can stand on it and tap the surface to determine an affected area. This allows you to identify smaller delaminated areas where you can identify the distinctive cracks, but the area is too small to identify with a chain-drag technique.

### Repairs can vary

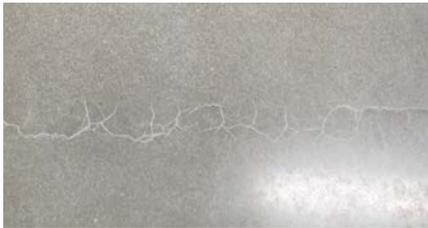
Based on the facility and its use, there are multiple ways to treat delaminations. For industrial or warehouse-type projects, an epoxy injection may work. With this option, multiple holes are drilled in the delamination area. Epoxy is injected into these holes to fill in the delamination area and make it more solid.

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Seen here is a delamination with telltale cracking (top) and the same area (bottom) post-epoxy injection repair. Note how many holes are necessary even for this thin delaminated area.

This process isn't very attractive as the drill holes are very noticeable. The epoxy will always set up darker than the existing concrete. The epoxy will seep through the slab and come back through every crack. This darker appearance also highlights the drill holes and any cracks in the area.



Seen here are drill holes that have been injected with epoxy which has leached back through the concrete. Note how much wider the delamination area extends beyond the crack lines.

A second repair process, which is better for polished concrete floors, is to cut the concrete in the delaminated area and install a polished overlay in its place. If polishing isn't needed this repair can be done with a standard concrete repair mortar. When using a concrete repair method, you must determine the edges of the delaminated area and extend your repair 6 inches on all sides past the recognizable edge.

I've seen many repairs where the contractor followed the exact edge they could identify. Unfortunately, the paste at the edges is usually separated as well, but since the edge is close to being sound, it doesn't sound hollow when testing. Extending the repair 6 inches past the visible or sounded edge ensures that



The concrete repair was not taken beyond the visible cracking edges, so when the overlay was polished the delamination surfaced.

you'll cover the entire delaminated area.

Once the cut size is determined and the 1/2-inch depth is achieved, you must remove all the delaminated concrete regardless of the depth. Most delaminations are in the top 1/8 to 1/4 inch of the slab but I've seen some that occur a bit deeper.

After removal, follow the manufacturer's requirements for installation and if necessary polish to match the surrounding area. It's important to let your customer know that the repair material probably won't perfectly match the color of the base slab. It will have the same texture and the same maintenance but the color may be a bit different.

A third option is more invasive and is typically only used for new higher-end buildings with multiple delaminations. Earlier, I told you about the project with the early-entry troweling that trapped bleed water. In that large project (slightly more than 150,000 square feet) there were about 1,500 delaminations ranging in size from 3 inches in diameter to 10-by-10-foot areas.

To provide a consistent finish, the only option was to shave 1/4 inch off the top of the entire slab and then repolish everything. This allowed the surface in the entire building to be removed evenly throughout. This was an important feature because all the doors and interior fixtures were in, and the customer and the architect needed assurance that they wouldn't have to remove, redesign and reinstall all these interior details. The resulting finish was a consistent exposed aggregate that polished up beautifully.

This repair took care of all the random-sized delaminations without having to measure, cut, overlay and polish more than 1,500 separate areas. The customer was much happier because the floors, with the large aggregate exposure, look like they were intended to appear like a terrazzo floor. This option also removed warranty liability from repair material manufacturers and the involved contractors.

## Test for air content

Delaminations are never fun to repair and can be found in new buildings or existing structures. When a grinder goes over the surface, it will force the blisters to break on 80% to 90% of all delaminated areas. The sound of grinding areas with delaminations also changes and is a dead giveaway to any experienced polishing contractor.

One way to help eliminate half of the potential delamination issues is to have the concrete coming out of the truck tested for air content at the time of placement. This can be done at the same time the slump is tested, a test normally required for commercial building projects. The same testing agency can perform both tests.

At least this variable can be removed from the equation. The bleed water-trapped issue requires an experienced contractor that can look at the slab and determine if there is still water ponding on the surface or if this process has stopped before starting the troweling process. 

*David Stephenson, based in Dallas, Texas, is president of Retail Polishing Management, a large national flooring installer. Prior to his position with RPM, he helped as a consultant with retail polishing programs and troubleshooting concrete issues for companies around the globe. Throughout his career, David has owned contracting companies that installed floors as well as manufacturing companies that made products that changed the industry. He can be reached at david@the-rpm-group.com.*



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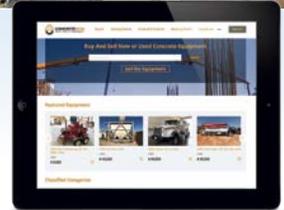
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# A Must-see in Berlin

by Stacey Enesey Klemenc

**I**n rather ordinary gray concrete, Berlin's Holocaust Memorial makes an extraordinary statement.

Situated near Brandenburg Gate on a stretch of land once referred to as the "death strip" where the formidable Berlin Wall once loomed, the Memorial to the Murdered Jews of Europe was built to commemorate the 6 million Jewish victims of the Nazi genocide during World War II.

The memorial, which has no signage telling visitors and passers-by what it is, is near many foreign embassies, including the United States', as well as the Reichstag, the home of the German parliament, whose glass dome can be seen in the distance.

On the southeast side of the memorial, there's an easily missed underground information center accessible via two flights of stairs. The center houses documents about Jewish individuals and families, as well as recordings and information about memorials throughout Europe.

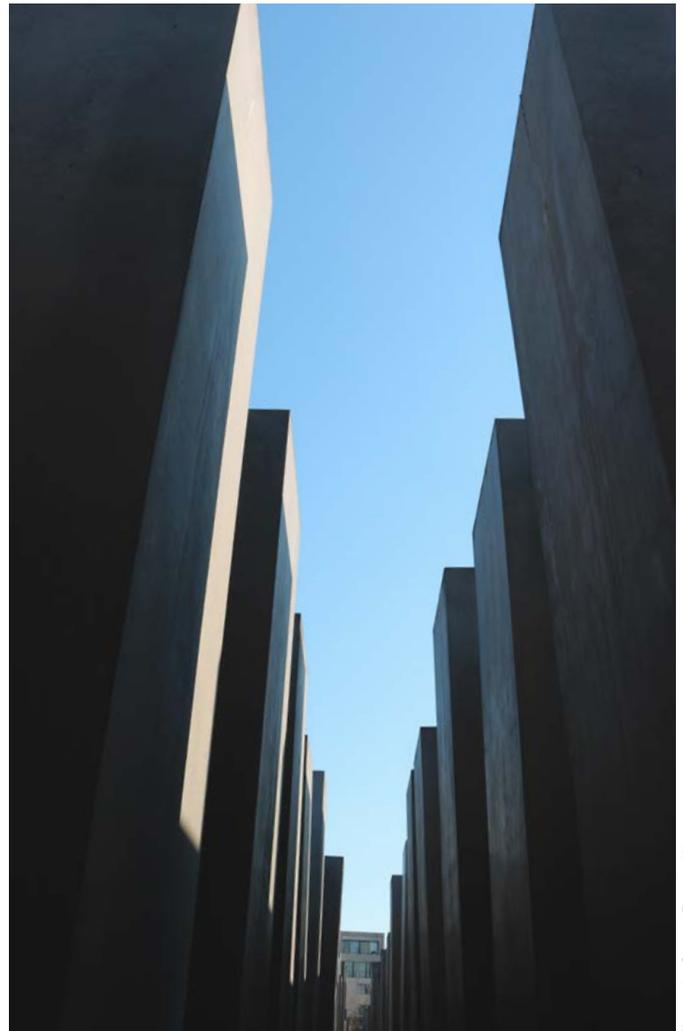
The Holocaust Memorial was designed by American architect Peter Eisenman and completed in 2005 on a nearly 5-acre site. Originally conceived to contain 4,000 rectangular

blocks of concrete, also called "stelae," the memorial was scaled down to 2,711. Both numbers are random and have no symbolic significance. There are 54 rows going north to south and 87 arranged from east to west.

According to Eisenman's project

description, the stelae are designed to emit an uneasy, confusing atmosphere, even though they are built in a grid pattern, albeit a bit askew. The ground undulates and the seemingly endless rows of gray matter consist of concrete rectangles measuring 7 feet 10 inches long, 3 feet 1 inch wide and varying in height from about 8 inches to almost 15 ½ feet. Toward the center as you descend into the memorial, the stelae get taller and taller until the ground gradually ascends and they begin to shrink in size.

Overall, some say the arrangement reminds them of coffins laid end to end. Others contend they resemble tombstones in a very orderly cemetery. But few will argue — the site is thought-provoking and unsettling but something you should see if you visit Berlin. 🖋️



Photos by Stacey Enesey Klemenc

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