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## FROM THE editor's

#### Dear Readers,

Hello everyone! It's a new year, and with every new year comes resolutions, contemplation and changes. That's certainly been the case here at Concrete Decor so far.

We haven't made any major changes to the magazine for 2013, but we've tidied things up a bit. You may notice a new look to our pages, particularly in our departments. Or maybe you WON'T notice, and that's just fine by us. These small adjustments are designed to make an already good magazine even better. In 2013, we will do an even more thorough job revealing and discussing how decorative concrete professionals do their jobs well in the 21st century.

Our cover story this issue features recent, notable decorative concrete in Las Vegas. I know that many of our subscribers don't attend the World of Concrete convention in Las Vegas, but we hand out a lot of copies of the magazine there, and we like to give folks a reason to carry it around with them.

Las Vegas is a Mecca for decorative concrete of all kinds, and the Vegas stories in this issue reflect a range of quality work in all kinds of highly visible areas — a famous pawn shop, a Strip casino, an office building, even the big Las Vegas airport. There are small maps included with each story that show WOC conventioneers how to take small field trips to see good work in the real world, with all its challenges. Studying decorative concrete that someone got paid to do for a real customer can teach you things you'll never learn at yet another demo in a parking lot.

Speaking of learning from work in the real world, the crown jewel of our training at the 2013 Concrete Decor Show, held this March in Charlotte, N.C., is a makeover at the Charlotte Rescue Mission. These workshops are, again, not just demos. There is a real client standing right there, asking pointed, nervous questions, and a real preexisting slab underneath your feet with all kinds of flaws. You're not getting paid, so the pressure to succeed is all ours — you just learn and learn some more.

The projects we have planned at the Mission include textured walls, a fireplace surround, metallic-coated floors, polishing, stamping and more. We need your help with all of them. Get all the details at ConcreteDecorShow.com.

Strieder

Sincerely,

John Strieder Editor





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## concrete **DECOR**°

#### January/February 2013 Volume 13 · Issue No. 1

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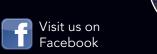
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On the cover: Jose Mendoza of OC Concrete Polishing Co., Orange, Calif., applies wax to a floor prior to polishing it at the Gold & Silver Pawn Shop on the Strip. For more about this project, see page 24.

Photo by Russell Hebert

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## concrete DECOR® EXPERTS



**Doug Carlton** operates Carlton Concrete Inc. in Visalia, Calif. He can be reached at carltondoug@comcast.net. See Doug's column, "Carlton's Corner," on page 14.



**Tommy T. Cook** is the founder of Gnomeadic Arts and cofounder of Seattle-area company Absolute ConcreteWorks. He is a trainer, consultant and artist in the precast industry. Reach him at tommy@tommytcook.com. See Tommy's article on page 32.



**Nick Dancer** has been active in the concrete construction business since 2005 and started his own company, CounterCrete, in 2007. That company grew into Dancer Concrete, which is based in Fort Wayne, Ind. Contact him at nick.dancer2@gmail.com. See Nick's article on page 40.



**Jennifer A. Faller** is vice president of operations for The Professionals, a polished concrete contracting company in Greensboro, N.C. Contact her at jfaller@pcpa.biz. See Jennifer's article on page 58.



**Allan Firestone** is owner of Castle Care Concrete Inc., a decorative concrete installation company in Santa Rosa, Calif. Castle Care also manufactures the CPR Concrete Staple. Allan can be reached at castlecare@castlecareconcrete.com. See Allan's article on page 66.



**Jeffrey Girard** is founder and president of The Concrete Countertop Institute and a pioneer of engineered concrete countertops. Reach him at info@concretecountertopinstitute.com. See Jeff's column, "Success with Concrete Countertops," on page 44.



**Bart Sacco** is the president of Kingdom Products and also owns and operates Concrete Texturing Tool & Supply and the Concrete Kingdom Training Center, based in Throop, Pa. He can be reached at bart@kingdom-products.com. See Bart's article on page 69.



**Chris Sullivan** is vice president of sales and marketing with ChemSystems Inc. He has led seminars and product demonstrations throughout North America. Contact him at trowelanderror@protradepub.com. See Chris' column, "Concrete Questions," on page 74.



**Virgil Viscuso** has 20 years of experience in the concrete surface preparation and polishing industry. He is founder and director of the Global Concrete Polishing Institute and president of Concrete Surface Xperts. He can be contacted at virgil@globalconcretepi.com. See Virgil's article on page 60.



**Jacob Webb,** MBA, is a small-business strategy consultant and co-founder and vice president of NewLook International Inc., where he is primarily responsible for business development, sales and marketing. Reach him at jacob@getnewlook.com. See Jacob's column, "Fundamentals of Business," on page 16.

Talk back! Weigh in online at ConcreteDecor.net



## **GET JOB LEADS**

Get new clients for local residential and commercial work with The Concrete Network – the most established online directory exclusively for concrete contractors.



#### **INDUSTRY NEWS**

#### Smooth-On buys Ball Consulting

Hiram Ball, president of Ball Consulting Ltd., has announced the sale of Ball Consulting Ltd. to Smooth-On Inc., of Easton, Pa. Ball Consulting is based in Ambridge, Pa., with an office in Tempe, Ariz.

For more than 30 years, Ball Consulting Ltd. has been supplying manufacturers around the world with specialty materials such as Forton VF-774, glass fiber and equipment to fabricate glass-fiber reinforced concrete and architectural precast concrete. Ball Consulting has also enjoyed significant success with a line of custom-blended cements and in advising customers on glass-fiber reinforced gypsum applications.

Ball Consulting has also offered moldmaking rubbers, casting resins, foams and other materials to life casters and sculptors.

- **(800) 762-0744**
- www.ball-consulting-ltd.com
- www.smooth-on.com



#### **American Society of Concrete Contractors hires decorative specialist**

Todd Scharich has joined the American Society of Concrete Contractors as a decorative concrete specialist. Scharich will answer a hotline for ASCC members



who have technical questions relating to decorative concrete. He will write and edit articles and publications as well as provide education and training.

Scharich started Decorative Concrete Resources, an integral color manufacturer, in 2001. He has trained concrete finishers for more than 10 years, most recently providing instruction on decorative concrete installation procedures throughout the Midwest. He has also supplied specialized training and job-site consultation on projects around the world.

- **(800) 331-0668**
- www.ascconline.org

#### **ACI** chapter honors projects

The Northern California and Western Nevada Chapter of the American Concrete Institute recently recognized four outstanding concrete construction projects. They are:

Architectural Category: U.S. Federal Courthouse, Bakersfield. Contractor: T.B. Penick & Sons Inc.; Ready-mix Supplier: Vulcan Materials Co.

Structural Category: Cal Memorial Stadium. Contractor: Webcor Concrete; Ready-mix Supplier: Cemex.

Construction and Green/Environmental Category: San Francisco Public Utilities Commission Headquarters. Contractor: Webcor Builders; Ready-mix Supplier: Central Concrete.

Unique Use of Concrete: Lange Twins Winery Chai and Hospitality Room. Concrete Contractor: F&H Construction/ Gosney Concrete Restoration; Ready-mix Supplier: 7/11 Materials Inc.

www.aci-ncawnv.org

#### Quikrete shotcrete saves fish habitat

The Quikrete Cos. provided Quikrete Fiber-Reinforced Shotcrete MS for a river restoration in Washington state. The material was used to fill channels and create weirs to help return the Spokane River to its natural flow pattern in downtown Spokane, Wash. Prior to the restoration, that section of the river was mostly empty during hot, dry months because of manmade channels dating back more than a century.

The undulating riverbed is 150 feet deep and 300 feet wide in some areas, so the Quikrete Shotcrete MS was pneumatically pumped dry through a hose to each predetermined weir location, in some cases more than 500 feet. Water was then added to the mix at the nozzle during the spray application process.

In addition, the shotcrete was customized to match the color, texture and shape of the natural basalt riverbed as well as the surrounding geology and landscape.

The American Society of Landscape Architects recognized the restoration with an award in 2012.

www.quikrete.com

#### **Dur-A-Flex's Vietnam distributor**

Dur-A-Flex Inc. has announced the appointment of Hiep Hiep Phat Trading Co. Ltd., Ho Chi Minh, Vietnam, as the exclusive distributor and contractor for the supply and installation of Dur-A-Flex systems in Vietnam.

www.dur-a-flex.com

## event calendar

#### **Concrete Decor Show**

March 11-15, Charlotte, N.C.

- www.concretedecorshow.com
- **(877) 935-8906**

#### VIBCO CEO featured in book

In the new book "Anatomy of a Lean Leader," author Jerry Bussell discusses Karl Wadensten, president of Vibco Vibrators, among other CEOs.

Bussell describes Wadensten's evolution from command-and-control to servant leader. The book intends to illustrate how great leaders understand and use their influence to guide people toward finding the right answers on their own.

www.busselllean.com

www.vibco.com

#### **Landscape Forms acquires Meld USA**

Landscape Forms has acquired Meld USA. Founded in 1998, Meld USA is an industry leader in materials innovation and the design, development and manufacture of products made out of very highperformance concrete.

With the new partnership, Meld USA founder Peter Bustin joins the Landscape Forms management team, reporting to Rick Utting, director of strategic initiatives.

Landscape Forms will operate Meld USA from its North Carolina production facility, serving the current customer base. Landscape Forms is planning additional investments in Meld USA's research and development efforts and manufacturing facility. In the coming months, new concrete site furniture will be launched under the Landscape Forms brand.

www.meldusa.com

www.landscapeforms.com

#### **Ardex Canada opens training facility**

Ardex Canada celebrates the grand opening of the Ardex Canadian Training Academy, a new technical training center in Mississauga, Ontario. Free seminars will be conducted covering Ardex product lines.

www.ardex.ca

#### Laticrete Supercap jobs in Texas

Laticrete Supercap LLC has announced its newest applicator, Intertech Commercial Flooring, based in Texas. Intertech is a leading provider of commercial flooring products and services throughout Texas and the Southwest.

www.laticretesupercap.com

www.intertechflooring.com

#### JoeCrete's new distribution partnerships

JoeCrete has entered a distribution partnership with CETCO Oilfield Services, a subsidiary of AMCOL International Corp., a publically traded mining and manufacturing company. JoeCrete was awarded master distribution rights in the U.S. for CETCO Slurry and Excess Water Management Solutions' polymer-based flocculent that absorbs slurry and separates water and cementitious material.

IoeCrete has also entered into an exclusive master distributor agreement with Ermator for its Ermator W2000 Wet Vac System. Ermator's wet-vac system allows wet slurry processing at a rate of 55 gallons of water per minute to provide continuous slurry dewatering. It provides a constant flow of clean, gritless water.

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#### PRODUCT NEWS

#### **Dust extraction vacuum automatically cleans filters**

CS Unitec's new wet-dry vacuum for dust extraction, model CS 1435, automatically cleans its filters without interrupting suction when it detects decreased airflow. The vacuum's Electromagnetic Pulse Cleaning System maintains maximum suction by automatically shaking the filters to remove debris.

Weighing only 33 pounds, the CS 1435 is a rugged vacuum with a 6.6-gallon capacity. It boasts capacity of 130 cubic feet per minute plus 99.93-percent filtration efficiency of particles up to 0.3 microns. Connect a power tool directly to the CS 1435 and the vacuum will automatically turn on when you power up the

Additional features include an automatic shut-off sensor and a volume flow display.

www.csunitec.com

#### MCR Safety introduces Alycore gloves

MCR Safety has introduced Alycore gloves, which the company claims are the most cut- and puncture-resistant gloves available in the market today.

Alycore gloves are available in ForceFlex, Memphis Multi-Task and Ninja Flex lines for an assortment of industry applications. All Alycore styles provide cut performance levels that exceed CPPT and CE



level 5 ratings. Different cut and puncture protection zones are available.

www.mcrsafety.com

#### **Cordless fan from Makita**

Makita has released a new 18V LXT Lithium-Ion Cordless Fan, model BCF201Z.

The new BCF201Z has two settings (1,200 and 1,700 rounds per minute) for optimal air velocity control, with up to three hours of continuous run time in low speed with a fast-charging 18-volt LXT battery. The three-stage automatic timer offers one-, two- and four-hour power-off selections.

The durable design and protective bumpers are engineered to withstand a job-site environment. The large carrying handle is included for easy handling, and the 45-degree adjustable platform allows for a full range of fan positions.

👣 www.makita.com

#### **New managing director at Laticrete Supercap**

Laticrete Supercap LLC has promoted John Sacco to the position of managing director. He will be directly responsible for building the firm's brand while developing a national network of elite Laticrete Supercap applicators. Additionally, he will guide the company's international expansion programs.



www.laticretesupercap.com

#### General Equipment names national sales manager

General Equipment Co. has appointed Phil Scudder as national sales manager. In his new position, Scudder will be responsible for the development and coordination of sales and marketing for national and independent accounts in the construction-related marketplace. He will also oversee General Equipment's network of sales representative organizations in North America.



www.generalequip.com





#### CARLTON'S CORNER

## **Accurate Project Records Today Get You Work Tomorrow**

■ OME things in life a person can bluff their way through but, unfortunately, decorative concrete is not one. I found this out the hard way early on in my career when a customer from the previous year called



by Doug Carlton

asking to add more decorative stamping. She said they loved the work previously installed, and now she wanted to add a pool deck to match the patio right down to the colors and pattern. No problem, right? Wrong.

In my haste, I had committed one of the biggest decorative sins in the business. I didn't record the color hardener, release colors or mix design I had used to create what she wanted more of.

This life lesson taught me something that has led to hundreds of thousands of dollars of new work over the years.

All decorative contractors must store accurate records in order to accomplish two

First, you will be able to confidently

match old work when a customer calls with new work. Remember, guys, the best source for new work is past customers who already know and trust your business.

Second, you will be able to prove proper materials or techniques were used at the time of placement, installation and protection — according to real-time weather and job conditions.

Concrete artisans now have more product choices and better training than ever before. But with an increasing number of manufacturers comes a problem that few who use multiple suppliers or manufacturers consider. Product compatibility, or lack of, often contributes to a failed decorative project.

When this happens, the contractor usually blames the manufacturer and the manufacturer blames the contractor. Unfortunately, in these circumstances, the customer and decorative industry have the most to lose, and only because of a lack of recordkeeping and accountability.

Accurately recording color ratios and mixes will help eliminate product compatibility mistakes. A crew keeping good records usually follows the

manufacturers' installation instructions closely. It is hard to argue that a crew taking time to record project data cut corners during installation or chanced incompatibility.

#### How to get started

The suggestions I'm making today need not be viewed as complex or timeconsuming. Accurate record-keeping should be considered just as necessary as color, sealer or labor, since recording job-specific items and procedures is no longer optional.

Accounting software programs such as Intuit QuickBooks are no longer limited to creating invoices or tracking sales. You can integrate your bookkeeping system by adding job-specific items, including colors, patterns, sealers, stains and so on along with typical accounting information.

If computer-based record-keeping isn't for you, create an old-fashioned paper form that covers all job-specific items. Make a few dozen copies and use this form to record everything job-specific for each project. This simple system has saved my firm countless hours searching for information or just guessing colors, patterns and seal dates.





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I recommended you create a job file (either on computer or paper) that includes the following information:

Accurately list customer, contractor and project name along with contact information.

Record job-site sample colors, materials used, and the date the sample was installed.

Keep a record of all submittals and jobrelated correspondence.

Log information when requesting underground utility locates.

Record estimated start date, delays and work progression.

Record the **ambient temperature** or anything unusual that could affect quality.

Record date of installation, decorative detailing and sealing.

Take **photos** that prove the job was wellprotected, barricaded, or taped off with caution tape.

Compare the actual colors and patterns to the original plan, and record all changes.

Most importantly, record all change orders. Don't forget to have all change order agreements signed prior to installation.

Detail, copy and share a maintenance **plan** along with a list of information the customer could find helpful.

#### Monetary benefits

Business-minded individuals easily equate a new tool with increased profit but can have difficulty wrapping their minds around practices like record-keeping that offer the same monetary reward. Because of this, I want to explain how diligence rewards those willing to make an extra effort.

Properly recorded job information establishes that contractors are more willing to call repeat customers back. Organization creates confidence.

Properly recorded job information eventually leads to another layer of profitability as the maintenance side of your business grows. Not only is this extra work profitable, but your jobs will always look their best.

Properly recorded job information creates an easy way to do database marketing and a strong referral base of satisfied customers.

Lastly, recording job information organizes a contractor, and this usually equates to more profit.

The recommendations mentioned today are not theoretical. I've used these options as tools to create satisfied customers, simplify my jobs and further represent the decorative industry in a favorable fashion. Accurate job-related records make for better decorative concrete contractors, end of story.

Doug Carlton operates Carlton Concrete Inc. in Visalia, Calif. He can be reached at carltondoug@sbcglobal.net.

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#### **FUNDAMENTALS OF BUSINESS**

## **Seven Strategies for Managing Working Capital**

HEN business is slow and credit is tight, you must do all you can do to preserve working capital, also referred to as operating capital. It's an important financial metric calculated as current assets (cash,



by Jacob Webb

cash equivalents, accounts receivable, inventory) minus current liabilities (accrued expenses, notes payable, bank loans). It's the difference between the money you've been paid and the cash you owe.

Decorative concrete businesses rely on short-term debt (such as credit card debt and short-term bank loans). Because of that, they benefit from cash-flow management strategies, especially in the off-season.

Depending on your current situation, here are seven strategies you might use to squeeze more working capital from your supply chain.

#### 1. Finance your operations using your supply chain

The supply chain is full of financing options, especially if you're one of the many professional installers who have begun offering credit terms to customers. And you can improve your working capital by offering them a discount for early payment. A common finance strategy, for example, is to offer a (small) percentage off the total bill if your customers pay within a short period of time. You're basically paying customers to provide you with short-term financing.

The cost may be considerable, however. A credit of "2/10 net 30" (a 2 percent cash discount if the amount due in 30 days is paid within 10 days) translates into a 37 percent nominal annual interest rate. Whatever the terms, they should be clearly spelled out before you begin working.

Another option for improving working capital is to obtain short-term financing from lenders by pledging your accounts receivables as collateral. This is called "factoring" and it's a source of fast cash

when you're unable to obtain short-term loans from a bank. Factoring companies give you an advance payment worth 70 to 90 percent of the total value of your receivables. They will give you the remaining balance (less a management fee) after your customers have paid the factoring company.

Factoring has increased in popularity as banks and other lenders have restricted their lending. But pledging your receivables is a relatively expensive source of financing — you'll likely pay up to 7 percent of your receivables because we operate in a high-risk, fragmented industry. Keep in mind the real cost is less substantial because the factoring company takes on all the risk of default by the customer.

#### 2. Shift your focus to the balance sheet

Normally, decorative concrete pros focus on profitability: increasing sales revenue (by bidding more projects) while strengthening the bottom line (by reducing expenses). Routine clerical work such as paying bills or calling on accounts receivables gets ignored. Granted, no one thinks back-office work is sexy. But savvy concrete pros are shifting their focus from the P&L statement to the balance sheet.

Some managers focus too much attention on managing inventory. Working capital includes other elements, too - payables and receivables. Minimizing the requirements of working capital necessitates a more synchronized approach to managing all three elements.

#### 3. Prioritize your financial constraints

Decorative professionals think a lot about the ongoing recurring activities involved in running their business. They worry about where their next job is going to come from, what products to use, and how to install those products. Too many ignore finance issues until suppliers start screaming for payment. As a result of this lopsided managerial philosophy, they purchase inventory based solely on customer

requirements, not financial constraints. These priorities should be reversed. Make working capital your primary constraint on inventory.

Again, this approach will require a balance between all three elements of working capital. It will make a dramatic impact on your procedures for managing the supply chain.

#### 4. Adopt important inventory management procedures

Inventory management is the science of balancing what you want with what you need. Even small decorative installers will benefit from inventory management. Many keep product material on hand to avoid delays. For example, many of NewLook International's loyal installers on the East Coast keep some of our stains or sealers in their garages so they can begin working on a project the moment they win the bid.

Stockpiling product like this is a risky financing decision since needed working capital is tied up in inventory. However, simply reducing inventory is not always the right strategy. It can have a damaging effect on your ability to provide legendary customer service.

Rather, sustainable cost reduction will most likely require improvements in project scheduling, customer demand planning and inventory policies. The savings may not be immediate. But these activities can dramatically increase your ability to compete in an economic downturn and position your decorative business for rapid growth when the economy rebounds.

#### 5. Stretch your payables (diplomatically)

Preserve working capital by taking longer to pay suppliers. I know. I'm opening a can of worms here. But waiting until the last minute to pay down your balances gives you more breathing room. It conserves available cash for more immediate needs. Keep in mind I'm not advising you to pay late.

Of course, I should insert a word of caution. This approach can potentially

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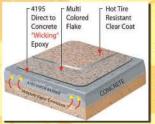
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compromise your relationships with suppliers. Worse, it could disrupt the efficiency of your entire supply chain by depriving partners of cash needed for operations, leading to quality problems or late deliveries. For example, NewLook has a few distributors who struggle to collect payment from contractors on account, especially during the winter season. This inhibits their ability to pay NewLook. When we don't get paid, our working capital is restricted. And when we have limited working capital, we risk not having sufficient raw materials on hand to fulfill orders. And guess who ends up suffering most from lack of product availability?

Perhaps you can see why so many distributors are now requiring cash or at least a down payment from even their most respected contractors.

If you can mutually establish norms of conduct that ensure reasonable profits for all players in the vertical supply chain, taking advantage of the full credit term

might be a reasonable option. Just do it intelligently.

#### 6. Get more rigorous about receivables

I just told you about stretching payments to your suppliers. But guess what? If you're one of the many decorative installers offering credit terms, your customers are thinking about doing the same thing to you. Focus on the payment performance of specific customers. Create a list of delinquent accounts and really work it over. Call or visit these customers frequently and encourage them to pay down their balance. Remember, timely and accurate invoicing is one of the most fundamental finance strategies you can adopt. You should also eliminate errors in your billing process that lead to costly delays in receiving payment.

#### 7. Swap fixed costs for variable costs

Scrutinize your costs of doing business to identify all your fixed costs. Then examine how they might be converted into variable

costs. Consider selling hard assets, such as a fleet vehicle or installation equipment, and leasing them back to raise needed working capital.

You can also expand your business to include contract work you wouldn't normally perform. For example, some veteran decorative installers are willing to train newcomers to the industry even though it means they're helping potential competition. Or perhaps you have extra storage space in your warehouse that you could lease out. While not always ideal, these are some of many solutions for raising emergency cash.

Jacob Webb, MBA, is a small-business strategy consultant and co-founder and vice president of NewLook International Inc., where he is primarily responsible for business development, sales and marketing. Reach him at jacob@getnewlook.com.

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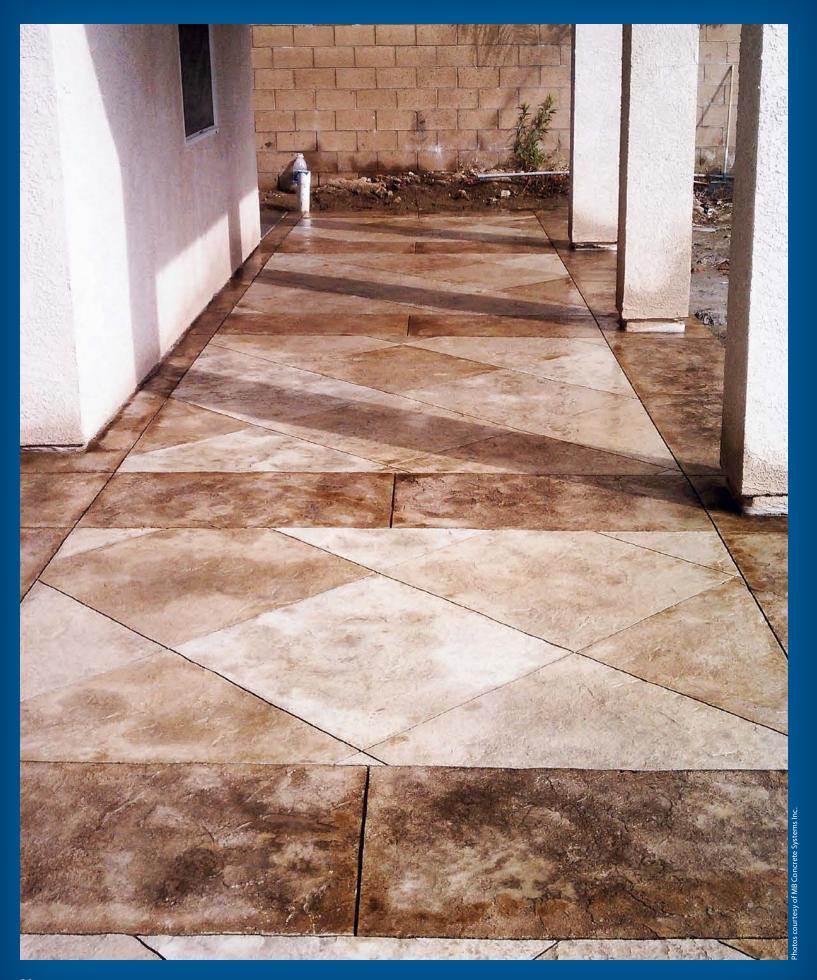














## Marshall Barabasch Sr. & Jr., MB Concrete Systems Inc.

Ontario, Calif.

by Kelly O'Brien

OR father-and-son team Marshall Barabasch Sr. and Jr., concrete is not just a job, it's a vocation. As president and vice president (respectively) of MB Concrete Systems Inc., they power their company with a shared passion for the business, craft and artistry of decorative concrete.

Just over three years old, MB Concrete is the Barabasches' first venture they've run together, but it's just the latest phase in a pair of storied careers. Marshall Sr., 55, began in concrete as a teenager, when his father-in-law, a cement mason from back east, started having him push wheelbarrows on the weekends. In short order, he had joined the local union as an apprentice.

On one of Marshall Sr.'s first jobs, a local contractor with Patterned Concrete Industries Ltd. had been subbed to do some stamping work, which piqued his interest. "I've always been artistic," he says, "I was tired of grey concrete, broomed stuff."

He talked the contractor into letting him work for them, and they hired him in 1977. He advanced through positions with a number of other big-name decorative concrete companies, which put him on the leading edge of stamping and staining techniques that were brand new to the market at the time. His interest in artistic experimentation quickly earned him a nickname among his crews: Dr. Frankenstein. "On the weekends and at night I'd go to my shop and throw spaghetti on the ground and spray over it," he says. "You know the bubbles they use in wrapping? I'd inject those with stains and drop weights on them to see if I could get the splatter marks right."

With a decade of experience and a well of creativity

to draw from, Marshall Sr. opened an Ontario, Calif., Patterned Concrete franchise in 1988 with two partners. After another decade, he moved on to a stint as director of architectural concrete for Peterson Brothers Construction, a large Southern California contractor for whom Marshall Sr. had been a regular union subcontractor. Finally, after about a dozen years with PBC, Marshall Sr. decided to open up his own shop again, this time partnering with his son.

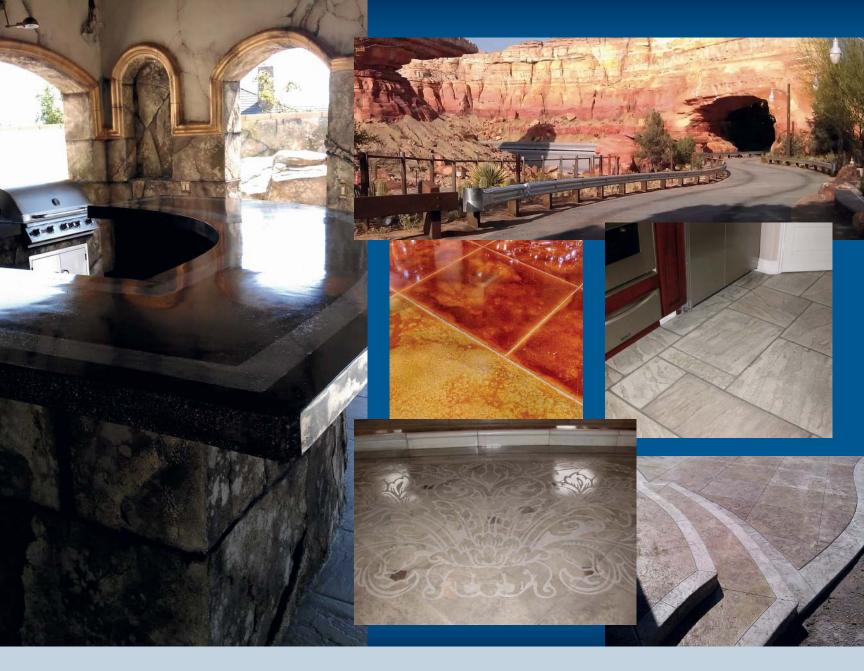
#### In his father's footsteps

Like his father before him, Marshall Jr. grew up pushing wheelbarrows and digging trenches on the weekends. "I kind of knew right away I was always going to do this," he says. "I like the trade, and I was always real aggressive wanting to learn and come up with new ideas and cool stuff." The minute Marshall Jr. turned 18, he started working for his father full time and took jobs on the side every day after work.

"A lot of people ask right away, 'You're 29. What can you possibly know?" says Marshall Jr. "But I feel like I got almost double those years because I worked double shifts my entire life, seven days a week."

Marshall Jr. started out with Patterned Concrete and PBC, working with his father's crews. At a certain point, though, he realized he needed "to get away from being Marshall Junior," he says.

Marshall Sr. totally agreed. "I told him, 'Marshall, you want them to call you for you.' You want them to say, 'I don't even know who his old man is — I want him because of what he can do."



Marshall Jr. moved through several brief stints at some big concrete outfits before really progressing on the decorative side, he says, at his own shop, Marshall Arts. Then, in 2009, having made a name for himself, he joined forces with his father to start MB Concrete.

#### No job too big

MB Concrete's project breakdown reflects well the passions and experiences of its founders. Typically the company has six or seven projects going at once, carried out by the experienced MB crew, who share the Barabasches' passion for the craft.

Their workload is usually divided in equal parts between extremely highdetail themed work — which allows both Marshalls to flex their creative muscles and simpler staining and flatwork gigs that keep them current and in practice with the

full range of services they offer.

This combination, says Marshall Sr., has been crucial to their success. "You gotta have both," he says. "I don't think you'll survive on the high-end, intense stuff unless you're constantly travelling."

That said, the "high-end, intense" jobs have definitely become a specialty for them — with Disney as one of their biggest clients. Marshall Sr. has been doing decorative work for the entertainment giant since he was running his Patterned Concrete franchise, and Marshall Jr. did some work in the parks at that time too. But even after years of completing successful projects, working for the Mouse presents unique challenges.

As you might expect, Disney's standards when it comes to art — whether animation or concrete sculpture — are the very

highest. "It can't look good," says Marshall Jr. "It's got to look the best." And just as their standards are non-negotiable, so are their timelines. "They have deadlines to open, and they ARE going to open," says Marshall Sr., "with or without you."

One of MB Concrete's recent projects, 36,000 square feet of elaborate handtooled rock faces and packed-dirt-looking horizontal finishes at the Cars Land area of Disneyland, is a perfect example of the Disney experience. For Marshall Jr., it was one of the most difficult, most complicated, and most rewarding projects of his career. "I was nervous as hell going into it," he says. "It was my first big high-dollar, high-profile job."

Fortunately, high-end work under tight production schedules is an area where MB Concrete excels. No matter that they had to work through the night to accommodate



events happening at the park during the day. No matter that, for the sake of stylistic consistency, Marshall Jr. had to personally hand-tool every crack in every inch of the packed-dirt finish they were doing while still managing the foremen for all three MB Concrete crews. No matter that lastminute change orders came through with a money-no-object attitude and no additional time. The mission stayed the same: Just get it done. "Somehow, someway we're pulling these things off," says Marshall Jr. "I don't know how we did it, but we did it."

#### No job too small

Of course, not every project on MB Concrete's plate is quite so high-intensity. The other half of their workload is more run-of-the-mill installations for schools, Department of Veterans Affairs hospitals, city development projects and so on. But even if they're less glamorous, these other jobs get the same treatment from MB Concrete. "Anything outside of Disney," says Marshall Jr. "is just as important as Disney."

In fact, for Marshall Sr., one of the most significant jobs of his career was a nonprofit endeavor. An old Disney contact reached out to Marshall Sr. for a project at a local continuation high school. The concept, says Marshall Sr., was to show these kids that "if you don't go to college, that doesn't mean you're going to flip burgers all your life. You can be successful. You can make money."

As a man who characterizes his early years as pretty wild, Marshall Sr. could relate to the kids and was happy to donate his time. Twenty students were selected based on essays they'd written about why they wanted to participate. The students

worked on a pour at the school with Marshall Sr. and his crew for two weeks. "They did some really nice stamp work and stain work," he says. "There were a lot of creative kids."

Marshall Sr.'s father-in-law was the one who sparked his passion for concrete, but his father passed along something too. "My father told me," says Marshall Sr., "'You can be a brain surgeon and you can make \$50,000 an hour or you can be a trash man and make \$1 an hour. But if you like picking trash up, then that's what you want to do. Whatever you do,' he said, 'you need to be happy with what you do and be the best at it." Clearly, this is a piece of family wisdom they've taken to heart.

www.facebook.com/pages/MB-Concrete-Systems-Inc/178241268961588







by Natasha Chilingerian

N a city where pawn shops are a dime a dozen, one pawn shop in particular is becoming legendary. Located off the Strip in downtown Las Vegas, the Gold & Silver Pawn Shop is the setting for the History channel's "Pawn Stars," a reality show documenting the antics of pawn business veterans Rick "The Spotter" Harrison, his father Richard "Old Man" Harrison, his son Corey "Big Hoss" Harrison and their family friend Austin "Chumlee" Russell.

This past July, the Gold & Silver Pawn Shop briefly closed its doors for a facelift — a new, shiny, black epoxy floor, complete with two attention-grabbing shop logos crafted from gold-foil flakes and white and grey-tinted epoxy.

Store owners assigned concrete coating manufacturer Classic



Coatings Systems to take charge of the floor renovation. The company's owners, Carlos and Judy Casanola, then hired Ryan Samford, of Epo-Floors LLC, in Franklin, Tenn., to help with the floor installation, and asked designers Rachel Bruce and John Campbell of Arkansas-based FLOORmap Stencil Designs to develop vinyl stencils to create the floor's logos.

Judy says she and Carlos fell upon the job opportunity earlier this year when they decided to pay a visit to the Gold & Silver Pawn Shop while in Las Vegas for the World

Project at a Glance Decorative Concrete Contractors: Ryan Samford, Epo-Floors LLC, Franklin, Tenn., and Classic Coatings Systems, Corona, Calif. Logo Designers/Installers: Rachel Bruce and John Campbell, FLOORmap Stencil Designs, Springdale, Ark. Project Specs: A 1,200-square-foot epoxy-coated floor with two 5-foot by 6-foot, stenciled epoxy and gold-foil logos **Project Timeline:** One week Materials Used: Classic Coatings Systems' CMB-416 Classic Moisture Block, CW-410 High Performance Epoxy, and Group 1 Color Pack 7000 Series in Jet Black, Light Grey and Snow White

of Concrete trade show.

"When we saw their floor looking faded and dull, we asked to speak to the manager, Theo Spyer," she says. "It was hard getting through all the gatekeepers, but I was able to solicit them in an appealing way. I told them we'd like to take on a project that would make their floor look amazing and at the same time would benefit us from a marketing perspective. Theo loved the idea and asked us to come back out with a sample."

She says Spyer and the men of "Pawn Stars" wanted a smooth, seamless, durable floor that wouldn't fade, plus iconic logos that guests could photograph to preserve memories of their visit to the shop. Samford adds that the clients chose black for the floor so the white, grey and gold logos would really pop.

The Casanolas flew Bruce and Campbell out to their office in California, where they all worked on mock-ups for the epoxy floor and logos. Once the group had their clients' approvals, Carlos and Judy hired Samford to help with installation and tapped a Vegas decorative concrete company, Chief Concrete Inc., to prep the floor for

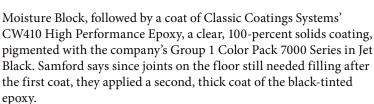
their work.

"When Theo saw the logo sample, he was so excited that he asked if he could keep it," Judy says. "To this day, it's hanging on the store's wall by the entrance. He also asked us to make more samples that he could sell as souvenirs."

Working together as a team, the group of five began the job by putting down a primer, Classic Coatings Systems' CMB-416 Classic







To add a hint of gold sparkle to the floor (it is Las Vegas, after all), they broadcasted gold-foil flakes onto the second coat of black epoxy while it was still wet — a decision that led the team on a wild goose chase, Samford says. "The gold foil was not easy to find. We ended up going to every Michaels and Hobby Lobby in Las Vegas and basically buying out the city's supply of gold foil."

The logo, which spells out "World Famous Gold & Silver Pawn Shop," was in use by the shop before the renovation project. To create their 30-square-foot-sized versions, Samford reports, Bruce and Campbell enlarged a small image of the logo, from which they modeled custom vinyl stencils. They applied the epoxy mixed with Classic Coatings Systems' color pack product in Light Grey and Snow White through one set of stencils for the lettering, then sprinkled a thick layer of gold-foil flakes through a different stencil onto black epoxy to create the logo's splashy background image.





The team made two mirror-image logos — one in the front of the store and one in the back. In gold-foil flakes beneath the logo at the front of the store are the signatures of Samford, Bruce and Campbell, as well as Classic Coatings Systems' logo. Beneath the second logo are the signatures of the four men of "Pawn Stars," also in gold-foil flakes.

Since the gold-foil flakes left a rough, sharp texture on the floor, they had to sand the entire floor using palm sanders prior to applying the logos, Samford says. The group finished the job with two coats of the clear epoxy.

While no major hiccups interrupted the installation process, Samford says challenges did arise related to scheduling, his lack of experience with the chosen epoxy product and the unfamiliar territory of Las Vegas.

"Being in another town, it was hard to find all the right tools," Samford says. "I'm used to having everything in my trailer. Also, our clients said they didn't want us to work during the day because of the fumes, so we worked mostly at night. And I hadn't worked with this particular product before, so there was a learning curve there."

Judy says the finished floor does just what the clients and project team intended it to do — attracts fans and makes the store even





more of a destination than it was before. The floor is located in the shop's primary showroom, which is used to display their featured items such as rare automobiles and antiques.





"After we completed the floor, I got a phone call from Theo, who said people were going crazy over it," she says. "He said they were taking photos while laying on the floor next to the logos, just like they were in Hollywood. He was so thrilled and thanked us for creating more exposure for them and bringing more customers through their store."

- www.epofloors.com
- www.classiccoatingssystems.com
- § floormapdesigns.com





## Carved Red Rock Walls at the CLM Developments office building

ETE Johnson, who founded the U.K. division of the stone-effect coating system manufacturer StoneCoat, traveled to Sin City from his home in Manchester, England, last November for a project inspired by the natural stone colors found in Nevada.

Texas-based StoneCoat invited Johnson to Las Vegas to teach an installation team at CLM Developments, a new StoneCoat distributor, how to apply the company's spray-on, limestone-based product. Instead of practicing the process on a CLM Developments customer, the team used its own office building as a guinea pig, applying approximately 900 square feet of coatings to the outside of the company's headquarters near the Strip over a two-day period.

Powder pigments can be added to StoneCoat's all-in-one mix prior to application, and for this project, Johnson chose to create brown, red, gold and pink stones against grey mortar lines — a nod to the similar-hued rocks of the desert region.

"I was taken for a ride around town to determine the best local rock style," Johnson says. "Having seen the red rocks that surround Vegas when I flew in a few days before, I was happy to see the pink-red used in the city. I took a few pictures and used them to choose the colors, patterns and mortar line colors."

StoneCoat's formula is designed to delay the product's drying process, which gives installers the time they need to carve the surface before it hardens completely, Johnson says. The team began the job by wetting the building's existing substrate

Visit this fine example of decorative concrete when you're in Vegas for World of Concrete. CLM Developments Las Vegas Convention Regulus Dr. E. Desert Inn Rd. Procyon St

and spraying on StoneCoat in a grey color as a base that would later become the wall's mortar lines.

Then they applied a second layer of the product in pink, followed by random patches in brown, red and gold. To create individual stones, they carved square and rectangle shapes into the wall, revealing the original layer of grey-pigmented StoneCoat, Johnson explains.

Johnson says the arid Las Vegas weather — a far cry from what he's used to in England — sped up StoneCoat's drying process, requiring him and his trainees to apply and carve individual sections within specific time frames.

"Due to the unique heat and wind conditions in Vegas, each coverage area had

to be regulated to a space we could blow and carve within the drying time limits," Johnson says. "In the U.K., of course, we have the opposite problem of long drying times due to wet, humid and cool days during most of the year."

www.stonecoat.com





## Main Valet Driveway at Caesars Palace

IKE any concrete surface that leads to the front entrance of a major Las Vegas hotel, the driveway at the main valet area of Caesars Palace is subject to all kinds of wear and tear. Constant vehicle and foot traffic had turned the 55,000-square-foot surface dingy and black in the 15 years since its installation. Michael Layne, owner of Vegas-based Excel Concrete & Coatings, recently restored the stone-textured driveway and returned it to its original slate grey and beigelike colors.

To allow space for vehicle and foot traffic during the work process, Layne and his crew divided the area into four sections, worked on one at a time over four five-day periods and took weekend breaks in between each section. They prepped each area by stripping off the existing sealer and caulking, pressure-washing the surface and repairing damaged spots with a concrete patching product.

Using materials supplied by Las Vegas-based Concrete Accessories Inc., they then applied Proline Concrete Tools' EZ-Tique



Water Based Acrylic Antiquing Wash to the surface's onetime slate grey portions, followed by Proline's Duracolor EZ-Accent water-based acrylic stain in Desert Tan to restore the formerly beige-green areas. Finally, they sealed each section with three coats of a polyurethane sealer from Arizona Polymer Flooring, broadcast a heavy layer of aluminum

oxide into each topcoat of sealer for slip resistance and allowed three days of curing time. A local subcontractor filled open expansion joints with caulking material.

Layne says the challenges of the four-week project did not stem from the work itself but from what was happening nearby. First, he had to work around the cast and crew of "The Hangover Part III," who happened to be filming at Caesars Palace during the driveway overhaul. Second, the work required shutting down a portion of the driveway, which created some congestion during peak traffic times.



"Until you shrink a driveway area to half its size, you don't realize how badly traffic can bottleneck," Layne says.

Layne and his crew completed the driveway just after Thanksgiving 2012. He says he considers the job a prime business opportunity for his company, which opened its doors in July 2012.



"This job really gave us the opportunity to get going," Layne says. "It's a stepping stone to bigger things for us."





## **Overlays** at McCarran International Airport

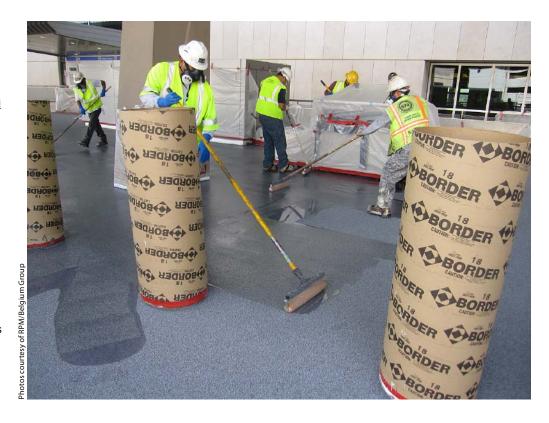
OR years, officials with the Clark County Department of Aviation knew Terminal 1 at the McCarran International Airport in Las Vegas was in need of a fresh concrete overlay job. Wide, deep expansion joints placed long ago posed dangers for travelers, and the airport was paying for it, according to Stephen Ziegler, sales and marketing manager for RPM/Belgium Group's Alteco Polymer Systems, a key material supplier for the project.

"Terminal 1's exterior concrete had some severe spider cracking. However, it was the 40-year-old joints throughout the concrete plazas (just outside the terminals) that were driving the Clark County Department of Aviation wild," Ziegler says. "It was breaking shoe heels, taking the wheels off of suitcases and sometimes causing bodily harm. The airport was compensating claims worth thousands of dollars every year with no end in sight."

The Department of Aviation requested a nonslip, monolithic acrylic overlay in a grey-blue color — 200,000 square feet of it, to go indoors and out. The project included surfaces in Terminal 1's parking lot connector bridges and exterior plazas, including the shuttle, limousine and car islands, as well as Terminal 3's exterior departure and ticketing area and lower parking-lot connector bridges.

Las Vegas-based Stuart & Sundell Concrete refinished the surfaces over a period of roughly six months, finishing in June 2012.





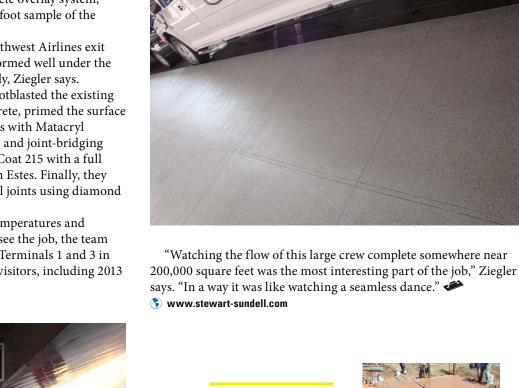


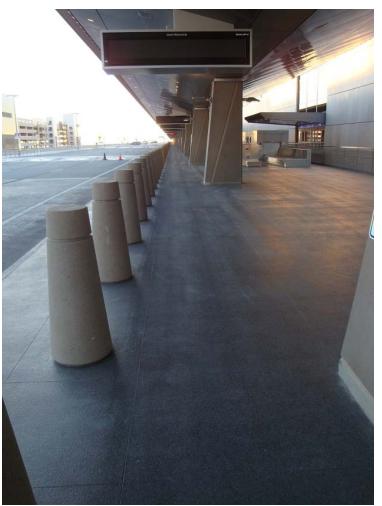
Using Alteco Polymer Systems' PUMA (polyurethane methylmethacrylate) resin Matacryl, a waterproofing, cracksuppression membrane system, and the manufacturer's acrylic MMA (methyl methacrylate) Monacryl concrete overlay system, Stuart & Sundell workers made a 200-square-foot sample of the proposed concrete overlay.

The sample was installed at the busiest Southwest Airlines exit door, and during a nine-month test run, performed well under the feet of an estimated 40,000-50,000 people daily, Ziegler says.

To execute the job, the installation team shotblasted the existing concrete, re-engineered the joints in the concrete, primed the surface with Monacryl Primer 101 and filled the joints with Matacryl LM. Next, they applied Matacryl 230, a crack- and joint-bridging membrane, and two coats of Monacryl Body Coat 215 with a full broadcast of trowel-grade colored quartz from Estes. Finally, they sealed the surface with Monacryl 319, recut all joints using diamond blades, and added another coat of the sealer.

Working amidst high winds, fluctuating temperatures and numerous engineers who were on-site to oversee the job, the team successfully got the concrete deck surfaces at Terminals 1 and 3 in tip-top shape for future swarms of Las Vegas visitors, including 2013 World of Concrete attendees.









## Free-Form Fabric Forming

by Tommy T. Cook

N THE November/December 2012 issue of Concrete Decor, I presented a simple process for casting a sink using fabric forming.

THE process for "free-forming" a fabric mold — for all kinds of creative, ripply results — is a little different but will include many of the same steps as basic fabric forming. The biggest difference is that you will be working on the outside of the mold first.

WE used fabric-forming to create a free-floating shelf. (You can see the end result above.)



#### THE ARMATURE

This was the easy part. As we were making a shelf, our armature only needed to be a flat platform raised high enough for us to drape the fabric over and achieve our desired height. We simply used a piece of melamine cut to the size desired for the shelf — 12 inches deep by 36 inches across — with 24-inch legs.

We then sealed the raw edges of the melamine with tape. Given that we will be adding a Bondo-resin mix to this surface and sanding, there was no need to worry about the lines from the tape transferring to the mold.

After applying the tape, we applied two coats of mold release wax, buffing both coats. This will ensure that we can remove the armature once the fabric has stiffened.

Note: You can ease or round your edges of the armature board if you do not want a crisp corner on the final top.





### **Another Way to Form with Fabric**

I recently had the pleasure of spending a couple of days with Alla Linetsky, of Concrete Elegance in Toronto, Ontario.

She has a process she calls "flex fabric forming" in which she casts her concrete onto felt-backed tablecloth material, then allows it to harden just enough that she can flex it without breaking it. She then bends the tablecloth material to the desired shape.

This gave me an idea. I took some tablecloth material that Alla gave me, shaped it, and applied

resin to the felt side, brushing on just a couple of coats. I think I ran the resin too hot as it wrinkled the material a bit — not sure if this was from melting, shrinking or both. But it did get stiff and I was able to cast against it. It came out great! No Bondo-resin, no sanding. Quick and done.

I have not fully tested this method for larger projects, and the material, being already semistiff, was limiting to work with, but I can see great potential for numerous types of projects. Just thought I would share that. (Thanks, Alla.)

#### BASIC FABRIC-FORMING TOOL LIST

- ▶ 1-inch, 2-inch and 3-inch chip brushes.
- ▶ 1-quart and 2-quart plastic mixing buckets. You can get these at the box store, but you can find them cheaper at the auto-body supply shop.
- ▶ Rags or heavy-duty paper towels.
- ▶ Mixing sticks. Plastic is best as it will not absorb your hardeners.
- ▶ Organic respirator. A regular respirator will not protect your lungs from the smell of the resin. It needs to be an organic one.
- ▶ Palm sander or dual-action sander. There are two different types of backing for sandpaper: sticky-back and Velcro. Make sure that you get the right type of backing for your sander.
- ▶ **Upholstery stapler.** A simple pneumatic stapler that shoots T-50 staples is easy to get. A pneumatic stapler is better than a hand stapler, which will leave you with sore hands at the end of the day. Also, a broadhead stapler is better, as narrower ones tend to cut through the material and can allow tears when you're stretching.
- ▶ Boxes of vinyl gloves. Do not use latex, as they do not hold up well with the resin. The cheap vinyl ones are the best, as you will throw them away after each mix.
- ▶ Cup gun. This is not necessary for smaller projects, but it can be helpful for bigger molds. I would suggest getting used to the process before you run out and spend \$150 on this tool, unless you are planning on doing larger projects right away.

- ▶ A couple of pairs of all-metal scissors. You will want one for dry cutting and one
  - for cutting material that has resin on it. You can clean these with the acetone – just be sure to do it before the resin dries. Plastic-handle scissors may melt or soften from the acetone.
- ▶ Fiberglass rollers. These are also not necessary, but they are handy to have around for some projects.
- ▶ Metal and plastic Bondo knives. Get these at the auto-body supply shop or a tool store like Harbor Freight Tools. You'll pay way less than you would at the box stores.

#### **2** FORMING THE FABRIC

Now that the armature is ready, we prep to wet out the material. There are a couple of ways this can be done. You will need to have a few things ready when you do this method (beyond those in the Basic Fabric-Forming Tool List). Here is the process and the things you will need.

First, we will lay our fabric on the armature and cut it to the desired size and shape.

Allow it to drape about 3 inches longer than you intend the piece to be, in case you decide to cut the bottom of the cast piece to clean up any raw edges. This is not always necessary — the need to do it is determined by your mix and your ability to cast vertical surfaces. If you can cast vertically to a finished edge, make your piece the exact size you want. Then trowel to a finished state at the top of the mold.

Once your material is cut and ready, get all your tools ready for wetting the material, the next step. You will need a hot glue gun warmed up and ready to glue. You will also need extra armature pieces to help hold some of the drapery in place. You can use PVC pipe of different diameters or wood dowels — or anything, really — to hold your fabric in place. I prefer the PVC as it releases from the mold much more easily.



#### WETTING OUT THE FABRIC

Once all your pieces are ready, you will then wet out the fabric. There are two ways to do this. One is to use resin and the other is to use an acrylic polymer. If you use resin, you will only have a small

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amount of working time with the material before it stiffens up, so this is best reserved for smaller molds. Make sure you are ready with your design and your extra armatures, or you may be wasting material and starting over.

#### Wetting out the fabric using resin

To create our mold we mixed a quart of resin with 1 percent of a quart (about 10 cc) of MEKP hardener. This is critical to have



enough working time with the material.
Once the resin is mixed, we saturated the material in the resin, then draped it on the armature.



Once it was in place, we began to tug on the fabric in different areas to get our drape to the style we wanted. The weight of the resin (or polymer) is the trick here. The weight will pull the fabric down, giving you the draped effect.



You will now need to use the glue gun to tack your fabric in place to hold the shape. You can do this with the hot glue and your extra armatures. For our mold, we used the hot glue and tacked the fabric onto the armature that was already there.





For the flares on the fabric, the areas away from the armature, we glued PVC pipe to the base of the armature to hold the fabric in the place we wanted it.

Note: This is where the different sizes of PVC will come in handy. If you want a bigger curve, you will use a wider pipe. Also, remember to wax the pipe so that it releases from the mold.



Once the armatures were in place and the fabric in the basic shape we wanted, we did the final details.

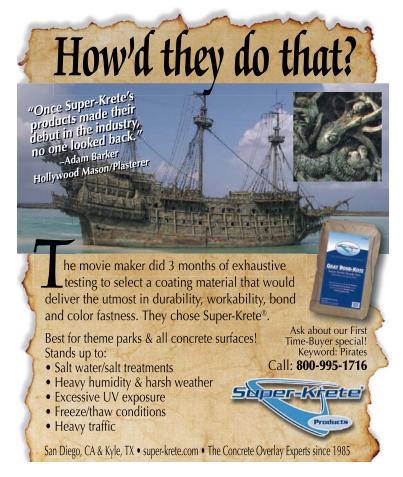
There are areas in your mold that will have wrinkles that you will not be able to cast into, either because they are too tight or too undercut. There are a couple ways to deal with this.

On the top of the mold, the part that will be the shelf, we cut the fabric and overlapped it on top of itself. We used a little extra resin here to make sure they bonded. We also used a little fiberglass matting here to ensure that the mold holds together.





For other areas that we could not manipulate without changing the design, we used Bondo in the mold to shape these wrinkles out. We also used Bondo where we cut the fabric and laid it over itself. Just a little bit of body work, so to speak.



Once the fabric had firmed up and we had locked in the shape, we applied two more coats of resin to make the fabric rigid. This was applied to the outside of the mold and the fiberglass matting in the cut areas.



Note: We also used the fiberglass matting in areas where the mold needed a little more firming up, such as the corners and the area we had cut on the top. Be careful about using matting in areas that may have undercuts. If the matting is pinched between two folds, you may have to break the mold to get it out of the cast piece.

We applied one coat of the Bondo-resin mix on the exposed area of the inside of the mold. This gave us a little more rigidity to ensure that the mold was solid enough to remove from the armature.



We also put a layer of matting on the flat part of the shelf along with a couple of 1-by-2 wood strips to hold the mold flat.



Once we removed the armature, we went through the Bondo-resin finishing steps that were laid out in the November/December issue (and can also be found online at ConcreteDecor.net), applying about four coats total and sanding to a 320-grit finish. After wax, we were ready to pour the concrete.



### Wetting out the fabric using acrylic polymer

Using acrylic polymer is easier but it takes a little more time, as the polymer takes longer to dry and stiffen up. Following the same process as you use with the resin, you will wet out and drape the fabric on the armature. It will take about one to three hours for the polymer to dry to a stiff form. Once it is stiff, you will need to apply several coats of resin to the fabric to get it to a more rigid state.

With this method, using the polymer, you will have time to work with the fabric and get it to the shape you want. However, be aware that the polymer will only stiffen the fabric to a firm state. Adding resin to the fabric will be necessary to make it rigid, and this can be a trick.

The fabric can wrinkle on you if you brush too hard while applying the resin, so be gentle. After the first coat of resin, your material should be firm enough to work with. Once it is firm (after two or three coats of resin) you can follow the usual resin-wetting procedures to finish.

Note: You can use just about any polymer to make the fabric stiff, but do a test on a small amount of fabric to make sure that the one you use will give you the firmness you want and will bond with the resin. A high-solids polymer is the way to go. There are also specialized products designed to stiffen material, and you can find these at your local craft store.

Tommy T. Cook is the founder of Gnomeadic Arts and cofounder of Seattle-area company Absolute ConcreteWorks. He is a trainer, consultant and artist in the precast industry. Reach him at tommy@tommytcook.com.

Tommy T. Cook will teach "Concrete Countertop Fabrication from Start to Finish" at the 2013 Concrete Decor Show. For more information, go to ConcreteDecorShow.com.







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### **How to Compete with DIY Garage Floor Kits and Win**

нар just finished measuring some outdoor stamped concrete for a proposal I was working on that included cleaning and resealing the outdoor surface. As I walked towards my vehicle with the prospective



by Nick Dancer

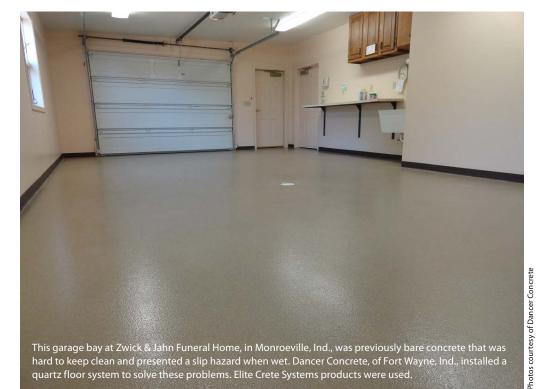
client, he asked if I could also take a look at his garage floor. I had sealed garage floors before and thought this would be no different — a simple approach to cleaning the surface, then applying an acrylic concrete sealer.

When we walked into the garage he explained that he wanted a long-term solution that would keep the concrete protected and easy to clean. The prospective clients actually parked their cars on cardboard sheets because he said the concrete was too difficult to keep clean. He had seen garage floor kits in home improvement stores and thought about completing the project himself, but he feared the product would fail as he had heard happened on a friend's project.

Up to that time, I had for the most part stayed away from using floor epoxies in my business. The horror stories of epoxy floors peeling up or failing always kept me at bay. But on this day I saw an opportunity to expand my business's offerings.

It just so happened that I had a quartz floor sample in my van. The quartz sample was made at a training seminar where I had learned that that this was one of the most durable systems that could be installed in a garage. I took the sample from the van, shared it with the client, and explained how this finished product would be very different from what his friends had completed.

As I explained the entire process and how different our process was, I noted the value that I brought to the situation. I was solving a problem for the homeowner — he no longer had to park his car on cardboard and



felt assured that our process would last.

And this is how I started competing and winning against do-it-yourself flooring kits.

Thanks to the marketing of garage floor kits, homeowners have become aware that to have a clean and safe garage you must apply a protective layer to the surface. Where the manufacturers of these systems fall short is following through with a long-lasting, durable product. Since a garage floor kit is sold to the masses it has to be very easy to install. The only way they can sell their system is to make the process seem as easy as painting a wall, and inherently you must use products that are of a simpler nature. They also have no control over whether their suggested installation instructions are followed.

So how do professionals compete in this market? How can we show the value of our processes and products as being superior to a box they saw in a chain store? It can be done. Garage floor coatings are now one

of my company's main offerings and we receive a premium price for our system.

So when you see a garage floor paint that is peeling up and looking dingy, don't get upset that the company is selling an inferior product. See it as a job opportunity for a client who is itching to have the work done

Let me share some of the ways I create value with my clients on our garage-floor coating jobs.

### Floor preparation

To prepare a concrete floor for any type of sealer or coating, the floor must first be free of contamination and bond-breaking deposits. This can be done in a variety of ways, such as acid etching or pressure washing, but I personally prefer to grind all of our floors. Homeowners understand that they can do an acid etch themselves or clean the surface with a pressure washer, but when you explain that you are bringing



### PRODUCT SHOWCASE









Using a Lavina 20N machine, a Dancer Concrete worker grinds the surface to remove the top layer of cement and contaminants.



Addressing cracks is part of any professional floor install. Help your client set expectations regarding why concrete cracks and how you will repair it.

in specialized equipment to prepare their surface it adds value to your service.

Note: Many homeowners fear concrete grinding as they imagine a lot of dust and mess. If you use a great vacuum system to contain the dust, make sure to mention this to the client.

#### **Products**

As I stated before, a home store kit is made to be easy. What this means is that the products that are sold are not as strong or durable as contractor-grade product. Can you imagine someone with no experience trying to put down a polyaspartic coating? The products we use on a residential garage floor are manufactured to hold up to industrial and commercial traffic. When you explain that training and experience are required to install certain products, you

again add value to your product and service.

### Repair

Most garage floors that we complete have been neglected for many years and require restoration such as patching of holes and cracks. This would add considerable time and more confusion for a homeowner wanting to complete work themselves. When you bring these items to their attention and include this work as part of your service, you are taking care of another concern the homeowner does not have to worry about.

#### Warranty

I offer a warranty on all of our garage floor projects. This is a no-hassle-to-thecustomer warranty that says we will repair or replace the surface if the product fails.

They don't have to do any work, wait on the phone or fill out any paperwork. They feel comfortable knowing that once they hire us to do the work, they can rest assured it will last and, if it doesn't, we will fix it.

### Understand your customer

If you want to install garage floor coatings properly and create a profit, you must understand that not everyone is your customer. The price tag on the kit in the box store has already created a perceived value or cost to complete the job in many customers' mind. By explaining the points above you will make your service unique and more desirable than that kit to the people you want to work for. Never sell yourself short on a job. There are many customers who want projects done right and are willing to pay to make sure that happens. 🥗

Nick Dancer has been active in the concrete construction business since 2005 and started his own company, CounterCrete, in 2007. That company grew into Dancer Concrete, which is based in Fort Wayne, *Ind., and primarily offers interior stained floors.* Contact him at nick.dancer2@gmail.com.



### PRODUCT NEWS

### New fast-drying polyaspartics from Versatile

Versatile Building Products has released 5100, a 100-percent

solids fast-drying polyaspartic, and 5197, a fast-drying ultrahigh-solids polyaspartic with low odor. Both low-VOC clear topcoats are designed for use over concrete and a wide range of other concrete floor coatings and stains.

Because 5100



is not flammable and has a very mild odor, it is ideal for where an offensive odor is an issue. It is suited for use on high-end residential applications, retail settings with high traffic and lowodor requirements, or food-service areas where stain resistance and cleanability are paramount. It offers a 30-minute pot life.

5197 has low viscosity, making it very easy to apply, and provides a 45-minute pot life and faster cure time.

www.garagecoatings.com

### NewLook develops new sundry tool

NewLook International has developed Roller EZ Kleen, a new sundry tool for cleaning sealers, stains, microtoppings and paint from 9-inch roller covers.

Simply attach the 24-inch Roller

EZ Kleen to a drill, slip your roller cover onto the other end of Roller EZ Kleen, and spin the soiled cover in a bucket to remove the paint, sealer, stain or any other coating. It is designed for use with a standard cordless drill and 5-gallon bucket, and it works for any standard 9-inch roller cover.

www.getnewlook.com

### Waterproofer, crack membrane from SureCrete

SureCrete Design Products' Elasto-Shield is a ready-to-use waterproofing and crack-prevention elastomeric liquid membrane. Although specifically created for SureCrete coatings, Elasto-Shield is also ideally suited for use with ceramic tile, stone, and EIFS applications. It forms a continuous waterproofing barrier — with outstanding adhesion — and reduces crack transmission in floors.

Elasto-Shield provides superlative flexibility and elongation. Upon cure, the membrane will not soften in high temperatures or become brittle in lower temperatures.

www.surecretedesign.com



### SUCCESS WITH CONCRETE COUNTERTOPS

### A Guide to Using Topical Sealers on Cast Concrete

N the November/ December issue of Concrete Decor, I discussed the types of penetrating treatments that are used to protect concrete countertops and other elements. The other divergent path to protection lies in



by Jeffrey Girard

topical coatings. There are more choices and considerations with coatings than there are with penetrating treatments, and I believe it's because of this that so many people are confused, frustrated and bewildered. In this article, I will clear up coating confusion.

Unlike penetrating treatments, topical sealers rely on the coating's properties to provide all of the protection. When the sealers are applied properly, the concrete is never exposed to stains or acid attack because nothing actually touches the concrete. The coating bears the brunt of wear, abrasion, heat, stains, chemical attack and other environmental hazards. And the coating gives the concrete creation its sheen, color depth, texture and appearance.

I've written in-depth articles on the differences in the chemistries available: acrylics, epoxies, urethanes, polyureas and so on. Rather than list chemistries and their behaviors, this time I'd like to take a more practical approach to selecting the right coating for the job. First, think about what the requirements are, and then select a coating that meets these requirements.

Then I'll cover a few common issues to be aware of, so that you can prevent problems common to coatings.

### Where to use topical sealers

**Kitchen countertops** are by far the most demanding application for any sealer. Kitchen countertops are exposed to a multitude of staining agents, plus acids, oils, cleaners and water. Homeowners commonly abuse their countertops in a number of ways: cutting on them with knives, putting hot pots on them, dropping heavy objects



Jeff Girard applies a water-based urethane sealer with an HVLP spray gun.

such as cast iron skillets on them, dragging heavy pots across them, even standing on them to reach something in an upper cabinet. It's no wonder that sealing concrete for kitchen countertops is a challenge.

Unfortunately there is no topical sealer that meets all of these challenges. Any topical coating can scratch, so you need to advise your clients not to cut on the countertops.

However, I don't believe that this drawback warrants choosing a penetrating treatment over a coating in the kitchen. Many coatings have phenomenal stain and acid resistance, and this is the most important need in a kitchen. Most homeowners will accept not cutting on their countertops, but all homeowners are bound to spill some food on their countertops, no matter how fastidious they are.

For kitchen countertops, I recommend a high-performance coating such as a urethane. Urethanes provide good scratch

resistance and excellent resistance to stains and acid. When installed properly, they never need to be reapplied. However, urethanes do not bond well to concrete so they usually need an epoxy primer coat. Getting a perfect finish requires skill and practice, often requiring the use of an HVLP spray gun. Surface preparation is also extremely important, as with any coating, to prevent problems like delamination. I will delve more into surface preparation later.

Concrete kitchen sinks present an even bigger challenge. They have all the issues of kitchen countertops, with the addition of the certainty of being subjected to concentrated and frequent impacts from heavy pans and dropped knives and other sharp utensils, as well as daily exposure to food, cleaners, and running and standing water. For these reasons, I do not recommend concrete kitchen sinks at all. I've always managed to talk clients out of them, but if you have a client who insists, make sure they sign a

disclaimer about cracking and damage.

**Bathroom countertops** are almost as challenging as kitchen countertops. They are also subjected to many staining agents such as makeup, and even harsher chemicals than in the kitchen, such as nail polish remover. And bathrooms tend to have more intensive water issues, given the extrahumid environment. Generally acids are not a problem in bathrooms, however, so despite the chemicals and humidity, I relax my sealing requirements a bit for bathroom countertops and will even use a simple acrylic.

Acrylics are inexpensive and very easy to apply. Acrylics wear off, and the client will need to reapply an acrylic eventually, but this is relatively easy for them to do. Clients should be cautioned to wipe up makeup, toothpaste or any other staining agents immediately, as acrylics do not provide very good stain or acid resistance. If a stain does occur, I've found that the easiest way to remove it is to apply bleach. However, some sealers are damaged by bleach, so exercise caution.

Many concrete countertop makers apply wax over acrylics. I do not recommend this. Wax creates the need for much more frequent maintenance because it wears off so fast, and I don't think the nice sheen it gives is worth the extra maintenance inflicted on the client.

Concrete bathroom sinks present a bigger challenge than bathroom countertops, because sinks are used frequently and are exposed to running and standing. Relative to concrete, water is mildly acidic, and long-term exposure to running water in bathroom sinks will erode away the relatively soft cement paste between the sand and aggregate. So for sinks, I recommend a highperformance coating such as a urethane or an epoxy. Not all urethanes are suitable for wet environments — I do not recommend UV-cured coatings for use with standing water or constantly wet environments, due to reported delamination issues related to water that got under the UV coating.

This brings me to **concrete showers** and tubs. This is the most water-intensive application of concrete (besides concrete fountains). I believe that these should be treated like bathroom sinks. Besides the sealers for the surface, the major issue with showers and tubs is waterproofing. While this subject is beyond the scope of

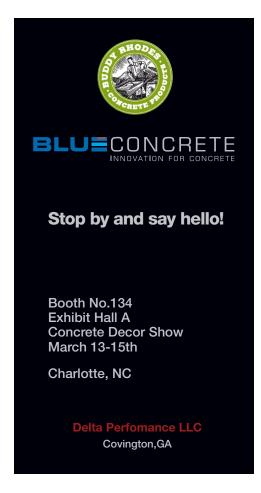


this article, the sealer used on the concrete should never be relied upon as the sole means of waterproofing, especially in the case of showers.

Many contractors think that the heat generated by **fireplaces** presents a challenge. Actually, the construction of fireplace surrounds, mantles and hearths compliant to building code ensures that the surrounding area is not too hot, and surface temperatures of materials within the combustible material zone are usually below 200 F. Any sealer would do fine with temperature low enough to not burn skin or boil water. (Only wax would be affected, since waxes have relatively low melting points.) All that said, since fireplaces generally have no staining or scratching issues, I actually don't bother with a coating and just use a simple penetrating treatment such as a densifier.

Outdoor concrete creations such as tables, lounge chairs and outdoor kitchen countertops each have their own unique protection requirements. An outdoor kitchen countertop would be exposed to a lot more staining agents than a lounge chair. But they all share challenges that are not issues with indoor concrete: ultraviolet light exposure, thermal heating from sunlight, and freeze-thaw temperature changes (depending on climate). Rain and humidity can also be an issue with outdoor applications. The best thing to do with

outdoor applications is to ask the sealer manufacturer whether the sealer can handle the conditions unique to your application and climate.





In this photo, the matte layer of a sealer has peeled off to reveal the shiny undercoat.

Some coatings definitely are not suitable. For example, epoxy yellows in UV light, so it cannot be used outdoors. The exception to this is an epoxy primer covered by a urethane coating that has UV blockers in it.

### When to apply your sealer

Many contractors are scared of coatings because they've heard horror stories about callbacks due to delamination. Assuming there is not a manufacturer defect, delamination never has to occur if you know how to prepare the surface and apply the coating correctly. There are several considerations when doing this.

Many coatings are very sensitive to any moisture in the concrete when they are applied. Applying most coatings to wet concrete would be a disaster. Unfortunately, it is hard to tell whether your concrete is really dry enough, especially if the coating manufacturer doesn't provide guidance as to tolerable moisture levels for their product.

Do not confuse drying with curing. It is still essential to wet-cure your concrete for a certain amount of time for it to develop strength. Only once the concrete is cured to the desired strength should you start the drying process.

Temperature affects drying rates. Colder temperatures slow evaporation rates, so estimating dryness levels based only on time can pose problems if your shop temperatures are low.

Temperature also affects how fast and how well the coating dries or cures. Many sealers have minimum temperature limits that you must comply with.

### The right surface texture

Hone only to 200 grit when preparing concrete for a coating.

It is a waste of time to polish concrete to which you plan to apply a coating. Coatings will not adhere to a super-smooth surface such as polished concrete. There is not enough "tooth" in the surface for the coating to grab onto. Plus the coating itself will provide the feel of a finished surface, not the concrete.

Coatings will also not adhere to a surface that is dusty, dirty or oily. Even the oil from your skin can affect the bond between coating and concrete. Before applying a coating, wipe the surface with acetone using a clean, lint-free cloth, and do not touch it again.

### **Application methods**

There are many application methods for applying coatings: wipe-on, roll, spray. Regardless of your application method, it is extremely important to follow the manufacturer's instructions exactly and to practice, especially with more challenging methods such as spraying.

The manufacturer's instructions may

involve measuring and mixing components. If so, measure carefully using accurate tools such as graduated cylinders. The instructions may involve mixing components and then waiting a certain amount of time for the components to begin reacting. This is called induction. Use a stopwatch or timer to ensure you wait exactly the amount of time specified. The instructions may involve waiting a certain amount of time between coats and then doing some sort of surface prep like scuffing with a 220-grit sanding pad. Don't get impatient and recoat too quickly without proper preparation.

Most of the problems I've seen with coatings have been due to not understanding or not adhering to the manufacturer's instructions. Improper surface preparation is a close second.

Another common cause of problems is jumping to the latest "sealer du jour" that everybody is talking about on discussion forums when you've been using a sealer for years that you and your clients are happy with. Moving to a new sealer usually entails a much steeper learning curve than most people realize, and the time required is often not a good business investment. Unless there is a compelling business reason to change, such as client dissatisfaction with your current sealer, stick with what works for you and your clients.

By following instructions, practicing, selecting the right coating for the job, and sticking with what works, you will be able to give your clients high-quality and high-performance work that keeps them happy for years to come.

Jeffrey Girard is founder and president of The Concrete Countertop Institute and a pioneer of engineered concrete countertops. He can be reached at info@concretecountertopinstitute.com.



Jeffrey Girard will teach
"Step-By-Step Instructions for Creating GFRC
Countertops" at the 2013
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"Since I started using the System 1 Admix, slurring pinholes is no longer part of my procedure."

### **PRODUCT NEWS**

#### Products made with bent concrete

ECO Elegant concrete has announced Forma, a line of bent concrete products. The product line is a result of a long study that ended in a mix formula and manufacturing technique that allows the company to bend flat concrete slabs into almost any form.



ECO is a design and manufacturing studio established in 2010 that specializes in advanced concrete manufacturing mixes and techniques.

💲 www.elegantconcrete.co.il/english

#### A new name for a popular mix design

Countertop Solutions has changed the name of its GFRC Admix blend to Ashby Admix SR. The blend remains basically the same but now contains extra additives for super-reinforced (SR), enhanced properties. The cost per pail remains the same.

The mix is Countertop Solutions' most popular and most durable for pouring regular or lightweight precast concrete countertops. It requires no rebar or other reinforcing in most situations and can be poured as thin as 1/2 inch and up to 2 inches thick. Ashby Admix

SR is a proven mix design that has been used successfully for many years to produce concrete countertops, fireplaces, restaurant tables, bar tops, outdoor barbecues and more. It is also used to create indoor and outdoor patio furniture.

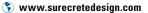
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### SureCrete releases new countertop sealer

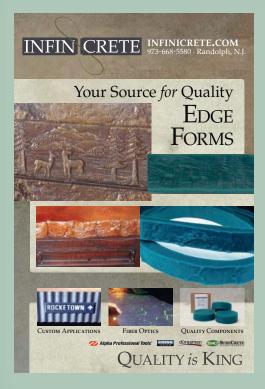
SureCrete Design Products' XS-PC12 is a specially formulated hybrid solvent-based polyurea coating designed for application over completed concrete surfaces such as concrete countertops, cement-based terrazzo and GFRC.

XS-PC12 provides a low-VOC (400 grams per liter), penetrating, film-forming, color-enhancing, high-gloss surface. Although suitable for residential applications, XS-PC12 delivers commercial-grade abrasion resistance for SureCrete Xtreme Series projects and all concrete countertops, fireplace surrounds, shower panels, floor tiles and wall panels.





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### PROJECT PROFILE

### A Grand New Entrance at a Texas Football Stadium Founders' Plaza at TCU Stadium, Fort Worth, Texas

by Chris Mayo

EXAS Christian University's football program has emerged as a national power over the past few years, and for a smallish university (enrollment under 10,000) that's quite an accomplishment. It stands to reason that a big-time football program would want to play in a big-time stadium.

When the University embarked on a two-year renovation of venerable Amon G. Carter Stadium immediately following the 2010 football season, the stated goal was to enhance the game-day experience for every

That enhanced experience begins as fans work their way from the parking lot to the renovated stadium. Many of them cross the new Founders' Plaza, which feature bronze plaques honoring key donors, tributes to university pioneers, and a huge decorative concrete depiction of the environs of Fort Worth, Texas, the town in which the University is located.

How does one depict the look and feel of a town in concrete, you ask? Bring in Texas Bomanite.

Scott Balch, president of Texas Bomanite, based in Dallas, describes the TCU job as "a very large project." Chandler Balch, senior estimator for the company, calls it "complex." Large and complex is a





fair description of what Texas Bomanite specializes in. The company's resume includes work on the Dallas Cowboys stadium, the Texas Rangers stadium and the largest mall in the Dallas area.

"We were involved with the Founders' Plaza part of the job from the design side of things pretty much from the beginning," says Chandler Balch.

Newman, Jackson, Bieberstein Inc., (NJB) the landscape architecture firm tasked with designing the plaza, consulted with Texas Bomanite about different finishes. That led to meetings with the university and Austin Commercial LP, the general contractor on the project, Balch says. "Initial meetings focused on how to accomplish the look they wanted with pavers ... and then gray concrete and topical stains."

The architectural team, consisting of NJB and the stadium redevelopment's lead architectural firm, HKS, wanted to depict

an accurate representation of downtown Fort Worth in 1930, when the original Amon G. Carter stadium was finished, says NJB associate Megan Abernathy. "We had a 1930s map that included streets, the Trinity River and railroad tracks, all the intricate details we needed. Initially we were thinking about using pavers because we could get the colors we wanted that way. When we decided that the pavers might not quite get us there, we contacted Texas Bomanite. We met with Chandler Balch and that's when the brainstorming began."

The initial collaborative efforts led to a noncompetitive bid, and Texas Bomanite began working on the details of how to accomplish the work by the deadline — the first football game of the 2012 season.

### Inlays in the heat

One of the problems coming out of the gate was that the plaza area was the main

route for contractors working on other parts of the stadium. "We were significantly delayed by almost two months, because we had to wait until starting our job wouldn't slow down other aspects of the renovation," says Balch.

Once they began, Texas Bomanite worked with single-minded purpose. That's not to say there weren't other obstacles to work around in the Texas heat. "The weather made things more difficult," says Balch. "In the summertime, Fort Worth gets pretty hot by nine in the morning and blazing hot by noon. Normally, we would have moved our daily start time to very early in the morning, but because there was a neighborhood nearby, we couldn't start working until six in the morning. We spent mornings pouring concrete and afternoons stripping forms, building forms for upcoming pours, and tying rebar."

Other issues had to do with the scope and complexity of the job. The crews started by pouring 1-foot-wide bands depicting the grid of Fort Worth's 1930 streets. The resulting grid served as the baseline from which all the other concrete pours would be placed. "The bands had to be dead-on straight with lots of expansion joints," says Balch. "We knew if we got those right, we'd be okay on everything else. Another band of concrete, representing railroad tracks, curves through the grid of streets, and that had to be perfect too."

Each "street" included stainless steel letters inlaid to identify the street names. The inlays were placed in a mud bed and integrally colored concrete was poured around them. Solar lights (\$400 apiece) were

### Proiect at a Glance

**Decorative Concrete Contractor:** Texas Bomanite,

Client: Texas Christian University, Fort Worth, Texas Founders' Plaza Architect: Newman, Jackson, Bieberstein Inc., Dallas

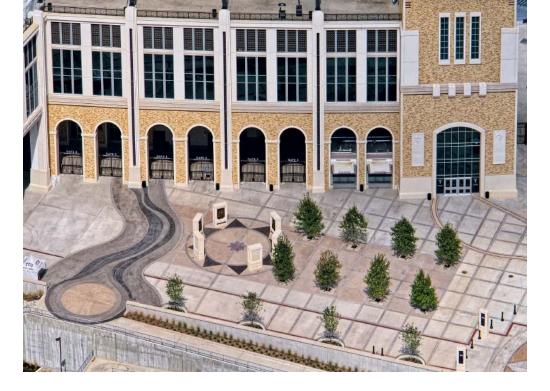
Lead Architect: HKS Inc., Dallas

**General Contractor:** Austin Commercial LP, Austin,

**Products Used:** Bomanite Sandscape Texture; Bomanite Imprint System; Bomanite Con-Color penetrating stain in Shale Gray, Brick Red, Sonora Tan, Brownstone and Café Au Lait; Bomanite integral color in Gobi Desert, Coal Gray and Seal Gray

Project Description: Hardscapes at Amon G. Carter Stadium redevelopment project

Challenges: A complex design due to the layout and the number of finishes, scheduling



inlaid at each intersection — more than 90 of them in all. "The most important thing was making sure that they would be perfectly even with the concrete so there wouldn't be a tripping hazard," says Balch.

The design called for the concrete on the plaza to be 7 inches thick rather than the more traditional 4 inches. Balch says the reason for the added thickness is that vehicles will sometimes be driving on the surface.

Because there were so many inlays, nearly all the concrete (650 cubic yards) was placed using wheelbarrows rather than a pump. "We did a lot of 3- to 5-yard pours," says Balch.

### Installing the river

The Trinity River skirts downtown Fort Worth, so an accurate portrayal of the city had to include a river. "One of the reasons we wanted Texas Bomanite to do the job

was that we saw pictures of how they're able to mimic a river and riverbank," says Abernathy. "The way they had done it before was with hand-troweling, but that method is labor-intensive and expensive. Texas Bomanite designed a special set of stamps to create the texture and look that we wanted. It came out perfectly, and just as importantly, it fit into the budget."

"They aren't your typical stamps," explains Balch. "Essentially they represent the ripples and lines you might see in running water, as well as the water- and wind-swept sandy bank of a river. They aren't designed to line up with each other like typical stamps, so there is still a lot of craftsmanship involved on the part of the person doing the stamping — they have to be lined up by eye. When it is done right, there is a natural-looking flow to the texture. We've added these stamps to our inventory and I'm certain we'll use them again.



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"A nice touch to the river is that we embedded rope lights through it," he adds. "It looks great at night."

### All kinds of finishes

Texas Bomanite used a variety of finishes, stains and decorative saw cuts to highlight the work. The river itself consists of a band of seeded aggregate down the middle, flanked by stamped banks.

A fire lane required by city code threatened to not blend in with the other work. Ultimately the city agreed to allow the team to dress things up with Bomanite Con-Color stain, decorative saw cuts and sandblasting.

In most of the areas between the grids of the streets, workers used heavy-seeded exposed aggregate and integral colors. The circle in the area with the monuments in honor of the founders, plus another circle at the beginning of the river, were finished with Sandscape Texture, a proprietary Bomanite finish. Topical stains were used as accents to pop colors.

Patrick Mucker, project manager, TCU physical plant, says using integral color for the bulk of the concrete provided a better appearance than staining would have. "Integral color was the best way to bring attention to the Founders' Plaza while providing an elegant look to honor our donors," he says.

### A satisfying result

The team effort seems to have paid off, producing a beautiful concrete spread as well as some lasting professional bonds.

Ben Austin, project manager for Austin Commercial, says he looks forward to working with Texas Bomanite again. "Once we knew we wanted Bomanite finishes on the Plaza, the choice to hire Texas Bomanite

was easy. Those guys were on top of the job from the start. And most importantly, TCU was happy with the end result."

Mucker of TCU is impressed as well. "We had a very large plaza area and a tight schedule to complete the work before our first game — our schedule was the biggest challenge," he says. "I didn't realize the complexities of the work until it was complete. People expect

a typical concrete plaza to go in quick, but this is not a typical plaza and to get it done the right way took some time. Austin and Bomanite did a great job managing the work with major construction activities finishing in adjacent areas."

"Had we not been able to connect with Texas Bomanite, I don't think we would have ended up with the great result they were able to achieve," says Abernathy of NJB. "They took our design team's idea of what we wanted the Founders' Plaza to look like and they made it happen.

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### PRODUCT NEWS

#### New infrared thermometer

The new Infrared Thermometer from Wagner Meters is designed to provide precise data to determine the readiness of your concrete slab for flooring installation.

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lightweight, pistol-style thermometer that allows the concrete or flooring professional to rapidly assess the temperature



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#### Lythic tests, unveils troweling aid

Dayl, a new type of troweling aid and curing agent from Lythic Solutions, extends concrete finishing time and reduces surface drying. The product's performance has been verified in tests performed at Middle Tennessee State University by staff and students of MTSU's Concrete Industry Management Program.

Day1 is applied to the slab in small quantities during troweling and allows the finisher to close the slab more easily without needing to add water to the surface. Day1 inhibits drying due to heat, wind or other adverse conditions and does not weaken the concrete. The current test series may prove that, in fact, Day1 actually strengthens the surface.

Based on ecofriendly colloidal silica, Day1 is a liquid that is sprayed in small quantities onto the concrete during finishing. Day1 chemically reacts with the concrete to close the pore structure, which slows evaporation. It also lubricates troweling - when Dayl was sprayed on

during the MTSU test, the power trowel could be heard speeding up.

Dayl is packaged as a concentrate.

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### **PROJECT PROFILE**

### Polishing in a Second-Story Condominium **Hubartt Condo, Indianapolis, Ind.**

by Joe Maty

or Dancer Concrete, a recent polished concrete project on the second floor of a former school building in Indianapolis posed a tough test of skill and, thanks to some challenging logistics, strength.

But Dancer Concrete owner Nick Dancer and site supervisor John Marcey have aced the test, in the view of condominium owners Ion and Natalie Hubartt.

"To bring a design feature like that into the home was a little different approach, and it adds value to our place," says John Hubartt, who gives Dancer Concrete high marks for efficiency and top-notch job execution.

This wasn't your average polished concrete assignment, Dancer says, reviewing the circumstances that presented him with the opportunity — and challenge — of transforming the floors of the upper-story condo's living room, bathroom and kitchen.

The school, built in the 1930s, had been converted to condos some 30 years ago. The site is located in the Broad Ripple Village area, a vibrant neighborhood on the north

side of Indianapolis flavored by a mix of nightlife, art galleries, microbreweries, restaurants and specialty shops.

Dancer says the project marked a departure for his polished concrete portfolio in a couple of ways — the residential setting and the role played by social media. A neighbor of the Hubartts saw that they had posted photos of their condo unit on Facebook,

accompanied by an inquiry about the polished concrete option. The neighbor was familiar with Dancer Concrete and referred the Hubartts to Nick Dancer.



Task number one at the job site for Dancer and Marcey was plowing their way down to the concrete, which had been covered with sheet flooring for who knows how long. The Hubartts had removed the VCT tile on top, but Dancer and Marcey were looking at a heavy layer of "black glue" — old tile adhesive that remained on top of the concrete subfloor.

Glue removal was no simple chore and entailed methodical and arduous use of a hand-held razor scraper. Then Dancer and Marcey could move to the actual grind phase using 30-grit diamond abrasives to remove any residual glue and start the work of prepping the concrete surface for densification and polishing.

Getting the weighty grinding equipment up to the second floor presented a stern test of strength. Dancer and Marcey



used furniture-moving straps to haul the approximately 400-pound Lavina 20N grinding machine up the stairs. Luckily, the equipment breaks down into two parts.

The concrete surface was in pretty good shape, but small nail holes were present in areas where carpet had been installed. Those holes, and some minor cracking, required patching and repair.

The initial grind was done dry, as a wet

#### **Project at a Glance**

**Decorative Concrete Contractor:** Dancer Concrete, Fort Wayne, Ind., Nick Dancer, owner

Site Supervisor: John Marcey, Dancer Concrete Clients: Jon and Natalie Hubartt, Indianapolis, Ind.

Materials Used: TruShine Lithium Densifier and TruGuard Lithium Silicate Finish Coat from SpecTru

Tools Used: Lavina 20N grinding machine with Superabrasive diamonds, Joe Due Blades and Equipment grinding pads, CDCLarue Industries vacuum

Tools Used for Edge Grinding: 5-inch Dust Avenger and 7-inch Dust Avenger from Joe Due Blades and Equipment, Chicago Electric Power Tools multipurpose tool with diamond pads

Photos courtesy of Dancer Concrete

grind that normally might be employed was out of the question due to the second-floor location and the need to avoid any water problems down below. Dust control for the dry-grinding process was handled with the use of a concrete vacuum, employing HEPA (high-efficiency particulate air) filters for handling of ultrafine dust particles.

Following the initial 30-grit grind, Dancer and Marcey moved through the 70- and 120-grit grind stages using metalbonded diamond abrasives, with patching work done after each grind stage.

The process moved on to 50-, 100and 200-grit grinds with resin-bonded tooling, followed by a wet scrub. Then came spray application of the hardenerdensifier. Polishing was completed with passes employing 400- and 800-grit resin diamonds, followed by application of the guard finish coat, wiped in with a microfiber mop. The concrete was then burnished using a hogshair buffing pad.

Smaller edge grinders in three sizes were employed to deliver the same grind and polishing treatment for edges and the floor of the bathroom, Dancer says.

#### Going natural

Delivering on the owners' preference to play up the inherent materiality of the original concrete, Dancer Concrete used no colorants on the job. Dancer customblended the patch material used for minor repairs to match the existing concrete. The patch material is a cementitious mixture Dancer has formulated himself, using a combination of white and gray cement in proportions that produce the needed color and shade.

Dancer also retained a small area of terrazzo flooring in the unit's kitchen, a remnant from the building's original function as a school.

"We polished it like we did the concrete, and they (the Hubartts) liked how it brought the character of the school into the home," Dancer says.

### Selling the polished package

While polished concrete can't be considered the economy-branded label for flooring options, Dancer says the Hubartts appreciated how polished concrete, done right, offers significant upside over the long haul — both aesthetically and in ease of



maintenance and long-term durability.

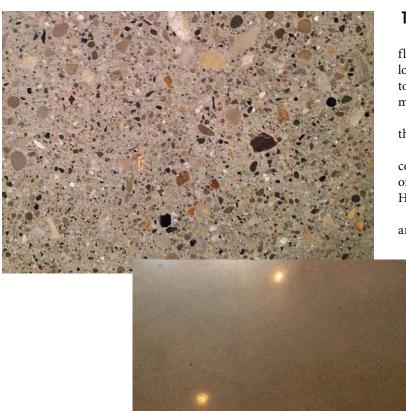
"The Hubartts pretty much knew what they wanted to do. On something like this size job, it has to be sold at a higher price, due to the detail work involved," he says, noting the tight dimensions and the labor

involved in the edges and corners.

"It's a higher-end option, and that's how I marketed it."

Polishing also served the objective of retaining some of the character of the original schoolhouse, Dancer says.





### The look gets a like

Jon Hubartt says he and Natalie went with bamboo flooring for a good portion of their new dwelling, but after looking at the concrete, they decided it would be a shame to cover it up. "The look was a big sell. It's true to the actual material, which is a big plus for me.

"The amount of shine you get is pretty astounding, and that brought additional light into the room," he notes.

Polishing minus color treatment emphasizes the varied color of the concrete aggregate and the contrast with the gray of the cement while also preserving the vintage terrazzo, Hubartt says.

"With Nick's consulting, we decided we didn't want to do anything to change that either," he says. "We decided to let

> the character and the history of the building shine through."

Also a major key in securing the job for Dancer was turnaround, and he delivered. "He was in and out in two days, which was incredible," Hubartt says.

"Then you add the quality of the work, and the price was definitely worth it."

nickdancerconcrete.com



### **PRODUCT NEWS**

### Coffee-table book on polishing

Xtreme Polishing Systems is releasing "Over the Top: Polished Concrete and More, Vol. 2." A limited release will be available at World of

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release occurring later this spring. The book is a one-of-a-kind collection of stunning photographs covering a



wide variety of locations, themes, effects and application techniques for the concrete polishing industry. It offers informative text, color charts, and an FAQ section.

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### Developing Effective Polishing Specifications for a School

ECENTLY an architect who was writing the polished concrete specification for a school district contacted me when he recognized that he did not know enough. The good news is that he asked for help in crafting an informative



by Jennifer A. Faller

and realistic specification that allows educated bids with room for profit.

The architect started with an old specification provided by a contractor. We discussed objectives such as use and durability requirements, flatness, concrete mix design, and curing, along with the design aspects, such as the "reveal" (amount of aggregate, sand, or cream to expose), color options (topical and integral), level of

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Hosted in Check Us Out! Booth #**031353** Outdoor Silver Lot February 5-8th 2013 Contact us for Samples, Training, and Distributor Opportunities shine, and maintenance. After two hours, the architect had much to discuss with the school district and their designers.

Next, we concentrated on trying to fit the new durability and appearance decisions into the existing spec. This took seven hours over three days. He was truly interested in learning how the district's expectations could be achieved.

He understood that this could be accomplished, not by finding the best warranty, but by writing the 03 30 30 Cast in Place and the 03 35 43 Polished Concrete Finishes specs with clear details regarding schedule, the experience level required for the contractors, and specific products that would be used to accomplish the performance objectives.

I agreed to rewrite the 03 35 43 specification from scratch, using some acceptable sections from the original, and sent the draft to the architect for review. This time he marked up the spec and sent it back. Now he understood the importance of the details, and he wanted clarification so he could add specific requirements for this unique building design.

At this point, a pair of flies were found in the ointment. First, the school's interior walls were CMU block to be installed after the slab pour. The architect grasped the significance of this detail when he learned that heavy CMU blocks would damage the concrete when dropped, so we added special slab protection to the interior block spec. This alerted the GC and installer to this

extra amount of work, cost and scheduling.

Second, when a block wall is built, mortar becomes smeared onto the face when detailing. An acidic cleaner is required to remove mortar smears, and any unspent acid will etch the floor upon contact. So instead of going with curing by other methods, we specified a high-solids cureand-seal to help protect the concrete surface from the acid. We also changed the "reveal" level to "Exposed Aggregate," allowing for an aggressive first cut that would fully remove the cure-and-seal from the surface without chemicals.

This is where education and experience pay off.

A decade ago I was involved in a similar school situation with CMU walls and polished concrete. Back then, I did not have the level of understanding I do now, and neither did the architects or contractors. Muriatic acid was used to remove mortar smears, and naturally, the acid ran down the walls and onto the floor. The concrete surface was deeply etched.

With neither time nor money in the budget to expose aggregate, the school opened with the floors unfinished. For months, the contractor polished during nights and weekends. It became a major point of contention with lots of blaming and finger-pointing. During summer break, to cure the roughness, the entire school floor was coated with clear epoxy. What a waste! It was an expensive lesson, but that education helped us in this current project.



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With the new 03 35 43 spec almost complete, we started adding details to the 03 30 30 spec so that the slab would be flat, protected with high-solids cure-and-seal, and finished without the burn to allow deep, rapid cutting. With these details in mind, the district agreed to hire a concrete testing company to monitor each pour and report results the same or next day, so that any issues could be caught early and remedied quickly.

Communication and education continued. The architect interviewed general contractors from the invited bidders list. He described their added responsibilities and encouraged the GCs to bid accordingly. This process continued down the food chain. Concrete contractors were informed of the expectations and told to reflect them in the bid. Certified concrete polishers knew that they would be polishing a flat, unburnt slab that had been cured with sealer, and that full aggregate exposure was expected.

Prior to breaking ground and building the foundation, the architect met with the school district's representative, GC, concrete contractor, polishing contractor and me. We reviewed the schedule and continued to educate about the particulars. We painstakingly explained tiny details, and sometimes the discussion became heated some contractors had overlooked certain parts and were complaining. The architect and owner's rep stood their ground, and in the end each contractor agreed to the scope of work and schedule.

This project is now underway. The concrete has been poured, cured, and protected. The team is off to an educated start! There will be a walk-through with the construction team prior to starting the polish. Once polishing is underway, if issues arise, all parties can refer to the original notes and specification, rather than simply blaming the polishing contractor. We are working hard to achieve properly managed expectations that will build respect among all parties.

Is this a lot of work? Absolutely. But the benefits are clear. The next job this architect specifies will be much less time-intensive,

the school board will build its next school with polished concrete, and the general contractor should be on schedule and on budget.

Most importantly, the certified polishing contractors will get paid and have a project that they are proud to call theirs, and most likely they will polish the next school with the same educated team.

Jennifer A. Faller is vice president of operations for The Professionals, a polished concrete contracting company in Greensboro, N.C. Contact her at ifaller@pcpa.biz

Jennifer A. Faller will teach "The Science Behind Polishing" at the 2013 Concrete Decor Show. For more information, go to ConcreteDecorShow.com.



### **Discussing Trends in Architectural Polishing**

E all are aware of how important a role architects play in our industry. They are the ones advising municipalities and every type of building owner. As architects learn more about what we can do with



by Virgil Viscuso

a concrete surface they are becoming very intrigued with how much they can do.

I have a company that sells polishing tools and I am director of a polishing training school, but I figured it would be pretty smart to discuss trends in architectural polishing with an actual architect. I decided to contact Tim Jewett, AIA, from Dykeman, a Seattle-area firm. Tim is the managing principal for Dykeman and has a lot of experience specifying polished concrete and designing polished floors for installation.

We discussed architectural polishing trends and what he and his team are doing these days. This is what we observed.

The easiest trend to recognize is the use of color dyes. The simplicity of using translucent penetrating dyes with polished concrete has been a great marriage. Many architects are finding the use of color on the floor can add excellent and unique effects. Dye can be used in schools to highlight areas with school colors, in commercial structures to direct the flow of traffic, and in retail environments, residential environments and everything in between.

As with anything there are some challenges. UV light can cause fading so some care must be used to select the correct products. Also, a lot of dyes use acetone as the carrier of the product. Acetone is quite flammable, but it is an exempt product and has no negative bearing on LEED points. There are also some quality water-based dyes on the market. The ability to

successfully dye concrete has made many architects lean towards using color.

The use of color has lead to another trend that is gaining more and more ground, the use of graphics. Graphics and color dye have opened the door to just about anything from a simple one-color logo to multicolored, intricately designed pieces of art. Imagine a Persian rug dyed into the entrance of your home, a multiple-color company logo in a commercial building, a ribbon of phrases in a long municipality hallway. Graphics and color dye with polished concrete has given the ability to designers to run with their imagination.

Just about any design you can think of can be cut into a stencil. Every time I have showed architects the abilities we have with stenciling and dyeing they become enthused. They have the tools they need to create.

Tim and I also spoke of how to install a better-than-terrazzo polished concrete

### PRODUCT SHOWCASE







surface. I was lucky enough to work on such a project with a polished concrete installer I was consulting for, Lundeen Simonson, based in Spokane, Wash.

The project was for Columbia Basin College, in Pasco, Wash. They wanted to have a polished concrete surface with all the polished concrete benefits, but grinding down the surface to expose aggregate was not what they were looking for. They wanted a uniform and specific mix similar to terrazzo. Working with the architect, a design was put together utilizing an integral-color dye and a multicolored mix of trap rock. The dye was added to the concrete mix and the stones were broadcast at the time of placement. There was no need for a topping slab or an additional material like epoxy or engineered cement. No extra weight and no exuberant costs.

#### The value of education

While we were speaking, Tim mentioned something I have noticed as well. The trends in architectural polishing have been directed by education. What I mean is, if someone explains to the firm what can be done, they can incorporate it. If the only knowledge the architect has is the basic knowledge of polished concrete, that is all he can work



Trap rock in a polished floor at Columbia Basin College, Pasco, Wash. Work by Lundeen Simonson, Spokane, Wash.

with. If the same architect is educated on color, graphics, decorative cuts and so on, his design capabilities are endless.

Take a moment and follow how the architect came to specify polished concrete. Everything starts from the presentation

that is given to the architect from someone, usually a chemical company representative. They are the source who educates the architect. That person's knowledge level and what he or she is trying to sell directly drives what the architect will learn. Trends







in architectural polishing are started at this point.

It is funny that just now, while I was writing this article, I received a call from an architect in eastern Washington. The call was about a polished project that has been done in two phases separated by a control joint. One phase was done by my former company and another phase by the lowest bidder for that section. The question was, why does one side looks very nice and the other not very good? They are both

the same spec and the same system placed by certified applicators. The architect has spoken to the chemical company about the issues and they have explained the issues are not the chemical but the quality of installation. The quality and appearance of the polished floor is determined by the polishing professional, not the chemical.

This architecture firm has a good concept of concrete polishing but has come to the realization that they need a lot more information. There are many factors

involved in a successful project such as the condition of the concrete (a subject on its own) and especially the skill and experience of the craftsmen. Only they can deliver a successful outcome.

This leads to what I think is the most important trend in architectural polishing. the need for installation information from sources who are not selling a product.

Architects are hungry for polishing organizations and professional installers to teach them how to deliver a successful project. They want to learn how to write a clear and proper specification. What factors determine a well-placed and finished pour, and how should that pour cure? What techniques for grinding are best and how many steps should be taken? What happens when steps are skipped and guard is dumped on the surface? What's the difference between a sweeper with a diamond brush or pad and a professional machine using proper tools?

The architects who are specifying a project want to deliver a great product for their client — so everything starts with the education of the architect. The more design firms know, the more they can do. If we put effort into building our industry from the starting point we will receive the benefits in the end. Can you imagine working on projects where the architects specified great concrete placement and wrote clear specifications?

As an industry we need to stop complaining so much about poor specifications, poor concrete placement and lack of understanding of the process — and while we're at it, the issue of burnished. pad-polished and brush-polished concrete versus true professional polished concrete. The way to stop the dumbing down of the industry is through proper education at the beginning. To change this, we need to put effort into the front end instead of waiting for the back end. The time has come for you to stop relying on someone else and get out and educate.

Virgil Viscuso has 20 years of experience in the concrete surface preparation and polishing industry. He is founder and director of the Global Concrete Polishing Institute and president of Concrete Surface Xperts, which sells polishing equipment. He can be contacted at virgil@globalconcretepi.com.



### PROJECT PROFILE

## **Custom Floors for a Growing Food Service Chain**

**Potbelly Sandwich Shops, New York and New Jersey** 

by Stacey Enesey Klemenc

PRESENCE on the Internet has paid off for concrete flooring product supplier Düraamen by attracting new business from Potbelly Sandwich Works, a delicatessen chain growing its presence in the greater New York City market.

Düraamen general manager Victor Pachade says Potbelly representatives turned to him for a flooring system for new Potbelly Sandwich Shops in Manhattan and outlying areas where laws restrict use of the acid stain they normally use in other parts of the country. In place of acid staining, they had tried polishing and sealing but were unhappy with inconsistent results.

They had been searching for a system where they could produce the same consistent look store after store. One of their general contractors looked around online and told the Potbelly project manager he thought the Düraamen overlay products would be a good fit.

"The project manager for the New York City area called us and said he wanted to try our products" in a Manhattan store on West



14th Street that had a floor with a plywood base, Pachade says.

### Project at a Glance

**Decorative Concrete Contractors:** Diversified Decorative Finishes, Brooklyn, N.Y. (Potbelly shops on 14th Street, Manhattan, and at Exchange Place, Jersey City, N.J.), Mirage Finishes, Valley Stream, N.Y. (Shop on Park Avenue South, Manhattan)

**Client:** Potbelly Sandwich Works, Chicago

**Project Description:** Finish floors in sandwich shops in the greater New York City area in a manner that produces the same look each time.

Number of Stores: Three in 2012, with more

**Area Involved:** The Potbelly stores are between 1,200-1,500 square feet

Materials Used: Düraamen's Param 5500 selfleveling concrete, Sgraffino microtopping with Colorfast integral colors, Perdüre E32 water-based epoxy primer coat, Perdüre E12 epoxy glaze and Perdüre U45 water-based polyurethane topcoat

**Time and Crew Involved:** Five to six days to complete each job with a crew of four to five people

### The system that satisfied

Pachade recommended the Düraamen system that starts with a layer of Param 5500 self-leveling concrete poured over the top of metal lath. "This layer is calcium aluminate-based so there's less shrinkage and cracks," Pachade says, noting that it's a great choice for distressed substrates.

Next, two coats of Sgraffino overlay mixed with Colorfast integral-color powder were put down to create a handapplied concrete appearance. The layer of microtopping is about 1/16 inch thick and is colored by a custom blend made from three or four grays, Pachade says. "We had to submit several samples to the client before we landed on a concoction of grays that produced the color they were looking for."

After drying overnight, the Sgraffino layer was burnished with a 100-grit sanding machine and sealed. Pachade recommended three coats of sealer for the Potbelly projects: a primer coat of Perdüre E32, a water-based epoxy; a coat of Perdüre E12, a 100-percent solids UV-stable epoxy; and a final coat of Perdüre U45, a water-based polyurethane that produced the matte finish Potbelly wanted.

"In most cases, we usually recommend sealing with a combination of E32 and U45,"



#### **OVERLAYS** & TOPPINGS

Pachade says, "but the finish tends to wear off and show traffic patterns in a couple of years." Potbelly opted for three layers of sealer that included a high-build middle layer between 10-12 mils thick to increase the finish's durability and longevity. "It probably won't show traffic areas for four to five years."

Düraamen also helped Potbelly find installation contractors. Gabby Yifrah, project manager for Potbelly shops in the greater New York City area, asked Pachade for a list of contractors who worked in the city and knew how to use Düraamen products. He recommended three, and Diversified Decorative Finishes, based in Brooklyn, was hired to do the floor.





#### More to come

In addition to the store on West 14th Street, a new Potbelly shop on Park Avenue South in New York and another on Exchange Place in Jersey City feature the Düraamen floor system with the custom gray. (Diversified did the Jersey City store, and Mirage Finishes, Valley Stream, N.Y.,



did the Manhattan store.)

"The self-leveling concrete is not always required," Pachade says. "The store on 14th Street needed it because the floor had a plywood substrate. On Park Avenue, it was needed because the floor was so unleveled. But in Jersey, the floor was in fairly good condition and only need three coats of our microtopping."

Pachade says a concrete overlay system has several advantages over polished concrete. For starters, it offers consistency in appearance and an initial quick turnaround. "From start to finish, our system can be completely installed in five to six days. If you pour fresh concrete, you have to wait 28 days before polishing it." Not to mention, he adds, "not all concrete is polishable."

Overlay systems can also be used to create a branded look that's the same in every store, regardless of the makeup of a particular region's concrete, he says.

In addition to the three stores already completed, Pachade expects to supply the products for many more down the road.

According to Jennifer Starr, senior design manager for Potbelly Sandwich Works in Chicago, her company chooses durable products that look a certain way for their stores nationwide. Which products they use for what is determined on a site-by-site basis. "It all comes down to cost, timing and a combination of things," she says. "The (Düraamen) products are certainly an option. We've been having consistent success with them."



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### How I Invented a Way to Staple Cracked Concrete

by Allan Firestone

THE Concrete Staple is my invention, an engineered piece of metal that bridges cracks to hold two pieces of concrete together. Overlay can be installed right over the top.

It works while other methods generally fail because it addresses the specific problems of cracked concrete.

The Staple is made from steel with a highyield strength to overcome the incredible weight and pressures of 4-inch and 5-inch thick slabs of concrete. It's placed across the crack to not only hold the existing crack together but also to keep the adjacent microcracks from failing and opening up.

It has right angle bends on each end to grip the concrete on either side of the crack. As a result, it does not have to depend on friction only to hold the two pieces of concrete together.

When installed, the Staple bonds the concrete together to counteract against the multidirectional forces that concrete slabs are subject to.

Finally, it's factory-made from high-yield material. The angled ends have the needed sharp bends to counteract springiness and are precisely lined up so the stresses are balanced.

### **Critiquing the competition**

One way to understand how and why my Staple works is to understand why competing methods eventually fail.

Take the fiberglass tape approach as an



This Santa Rosa, Calif., patio was previously a series of concrete slabs and pavers. After the pavers were removed and new concrete was poured between the older slabs, Concrete Staples were used to join new and old.

example. Concrete is extremely heavy. One yard of 4-inch thick concrete (about 9 by 9 feet) weighs more than 4,000 pounds. Concrete and the ground under it contract and expand with heat and cold, moisture and extreme dryness. Driveways are also subjected to thousands of pounds of vehicles going over them. How can we expect a

small piece of fiberglass tape to hold all that weight together? When you think about it, common sense tells you fiberglass tape could not possibly work. And yet, even though it continually fails, some makers of overlay products are still telling contractors to use fiberglass tape.

What about epoxy? Epoxy is superstrong, how could it fail? Once again, with a little knowledge of how concrete breaks and some common sense, you can understand the problem.

When trying to use epoxy to glue concrete together, we have to face some obvious facts. Not only is it nearly impossible to get the crack clean enough for good adhesion, it is very difficult to avoid having hollow areas in the epoxy between the two pieces of concrete.

However, even if you could overcome these problems, epoxy still doesn't work consistently. Why? Because when concrete does break under pressure, creating a





The Santa Rosa, Calif. project after removing the pavers.



Concrete staples combine the new and old concrete.

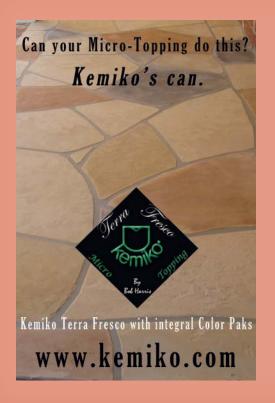
crack, there are a number of microcracks created by that same pressure, running parallel along the visual crack. The epoxy won't actually fail, but adjacent microcracks will fail, usually on both sides, and it will appear as though the epoxy

How about stitching with pieces of rebar? Like epoxy, stitching is a step in the right direction. It just doesn't address all the problems you need to overcome to keep a crack in concrete from coming back. Stitching depends totally on friction. The epoxy and the piece of rebar have only friction to hold them from slipping. Over the years it has not proven to be consistently adequate.

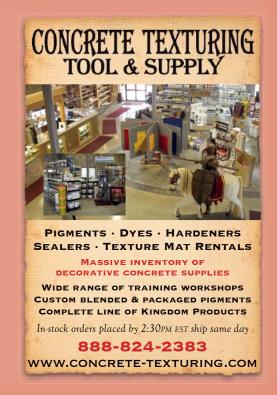
#### The secret of the bends

Our Concrete Staple has a sharp bend on each end that acts like a double-ended foundation bolt. It doesn't depend on friction only. In order to match the strength of those ends with friction only you would need a considerable length of rebar on either side of the crack. Trying to match the strength of the Concrete Staple with long

### PRODUCT SHOWCASE







pieces of rebar would be too expensive and require too much work.

The Staple locks both the visual crack and the microcracks together. Like stitching, it goes across the crack, and we still advise using epoxy during the staple installation and in the crack itself. The Staple not only keeps the concrete from pulling apart, it also addresses the side-toside, lateral and heaving pressures concrete slabs are subjected to. In short, it ties the concrete back together.

Why not simply bend rebar into the same shape and use that? We tried that. When I first thought of the idea of a steel rod with a bend at both ends, I went to the store to buy one. I was sure something like that had already been thought of. However, no one had them or had ever heard of anything like it. So I went to a steel fabricator and had them made. The fabricator decided we needed a very strong piece of metal with high-yield strength to do the job. They worked perfectly. However, they were rather expensive.

So when we ran out of the ones they had made, we decided to make our own out of 3/8-inch rebar. When those failed, we went to 1/2-inch rebar. They also failed. Working with a testing laboratory, we discovered the reasons for the failures.

It turns out schedule 40 rebar doesn't have the needed yield strength to do the job and grade 60 was too difficult to work with. Yield strength determines when the steel begins to stretch. When it stretches under



pressure naturally, the crack opens up again.

There was also a physical problem with the bends. When you hand-bend rebar, the bend is rounded. This roundness allows for more stretch, which only helps the crack reopen under pressure. We were also advised that if the bends were not lined up with the preciseness of a factory

right-angle bend you would lose even more efficiency of yield.

The final answer was to get a factorymade staple using a high-grade, high-yieldstrength metal. Our Concrete Staple tests out at a higher yield strength than grade 60 rebar.

Allan Firestone is owner of Castle Care Concrete Inc., a decorative concrete installation company in Santa Rosa, Calif. Castle Care manufactures the CPR Concrete Staple. Allan can be reached at castlecare@castlecareconcrete.com.

### **PRODUCT NEWS**

### Stonhard introduces Stonshield QBT

Stonhard has added Stonshield OBT to the Stonshield line.

With slip-resistant texture, bacterial prevention through lack of seams, durability and custom coloring, Stonshield QBT is a trowel-based mortar system that provides impact resistance and can be applied over rough and even substrates. Available in two solid colors and 10 tweed patterns, the color-quartz broadcast layer results in an attractive floor surface that is textured for safety.

Stonshield QBT is specifically designed

for health care, light manufacturing and commercial applications. Their easy-toclean surfaces are ideal for hospitals, schools and supermarkets.

www.stonhard.com

### A guide for overlays over asphalt

The Ready Mixed Concrete Research & Education Foundation has released a new tool that will assist with designing concrete overlays for existing asphalt parking lots and will educate contractors on best practices for constructing them.

The Guide for Concrete Overlays of

Asphalt Parking Lots was prepared by the National Concrete Pavement Technology Center with review and input from a Technical Advisory Committee. The guide includes information and guidance in areas such as assessing the integrity of the existing pavement, selecting project candidates, pavement design principles and design life, managing parking lot drainage, and dealing with entry evaluations of adjacent buildings. The guide also incorporates aspects of ACI 330R, Guide for Design and Construction of Concrete Parking Lots.

www.rmc-foundation.org

### Differences Between Integral Colors and Color Hardeners

by Bart Sacco

URING a training workshop that we recently conducted, our students got into a discussion as to what is better, integral color or color hardener. I feel contractors' creative abilities can really flow once they have mastered the use of both products. This will allow them to produce some really unique, realistic-looking recreations of stone, brick or tile.

There is absolutely nothing wrong with selecting either or both of the products for decorative concrete work. But they are completely different in nature and usage. They provide different looks to the concrete, the finished product performs differently, and both require a completely different installation process. There are also huge cost differences.

Color hardener is the more cost-effective and also the more labor-intensive to install. It would be fair to say there are pros and cons to each method.

Also, the two are sometimes combined to obtain the look needed or to gain additional strength or wear resistance in high-abrasion areas. Integral pigments will provide color only, while color hardeners will provide additional wear resistance for a surface that is expected to receive a high degree of abrasion from foot or vehicle traffic.

#### Integral color

Integral iron oxide pigments come in several different forms. The material is manufactured in basically three different types or formats. They are standard dry powder pigment, liquid pigment and granulated pigment.

The strength of the iron oxide pigments will vary from manufacturer to manufacturer, and you can easily tell if someone is diluting your product with fillers. Just take a sample of your iron oxide pigment and add some muriatic acid. If it fizzes and foams up all over the place, you have filler mixed in with the product you are using. If you add the muriatic acid and it does nothing, you're dealing with pure iron oxide pigment.

It is always best to have a custom blending



facility blend and package your iron oxide so it is ready to go on the job site. All colors are derived from blends of yellow, black, orangetoned red, blue-toned red, white, green and blue. The first four mentioned are the most commonly used and most cost-effective, while the white, green and blue pigments all have a premium cost associated with them.

The use of integral pigments is simple. Just add it to your ready-mix truck upon arrival. Have the driver blend it into the mix and pour as usual.

One thing to keep in mind — know the color your customer wants prior to bidding a job with integral color. You have factors to deal with, such as knowing what dosage rate of pigment makes a particular color. This affects your cost of installation drastically. Also, the ready-mix producer will most likely charge you a mixer clean-out fee for each truckload of concrete pigmented, which adds up on large jobs.



#### Color hardener

Color hardener is a completely different product, and cost, usage and installation techniques are completely different as well. Color hardener produces a much wider palette range of color than what could normally be produced with using integral color. Jobs that are done with color hardener have bright, intense, crisp-looking color. The surface looks kind of like the shell of an M&M candy.

The color hardener creates a much more durable, vibrant and wear-resistant surface than standard concrete. Hardener actually provide our surfaces with better abrasion resistance, color vibrancy and performance.

The color-hardened surface will also



### **Integral Color Application Tips**

- 1. Always use high-quality pigments. Never use carbon black pigment in outdoor applications.
- 2. Make a test pour utilizing the concrete and technique that will be used on the job site to determine the exact color you will get. Proportion differences between raw materials will modify your color shade.
- 3. Maintain a consistent slump from truck to truck when adding pigments. Varying water content could cause color consistency issues.
- 4. Always ask your ready-mix supplier to start from a clean truck. The half yard remaining in the belly of the mixer from a previous delivery could cause you color-shade problems.
- 5. Never sprinkle or apply water to the surface of colored concrete during finishing. This will cause discoloration.
- 6. Avoid late finishing or burnishing of the surface to avoid discoloration.
- 7. Do not add calcium chloride to your colored concrete.
- 8. Always follow manufacturer recommendations for curing colored concrete.
- 9. Do not cover colored concrete with plastic or burlap before curing. This may cause permanent discoloration.
- 10. Be consistent with your placement, finishing and curing techniques for best results. Do not change methods or ready-mix sources in the middle of a job.

provide you with a surface that will decrease "permeation," or water intrusion. In freeze-thaw regions, this actually helps the concrete reduce or eliminate the problems associated with the freeze-thaw actions of the environment, producing much more durable concrete surfaces in the long run.

The color of the slab you are working on can be changed instantly from one color to another simply by changing the color of the hardener being applied. This is especially helpful when doing borders or creating bands of color to provide life or unique artistic flair to the work. Another huge benefit of color hardener is that the cost is consistent throughout the color spectrum except for shades of blue.

You can also make samples for the next job you are doing if you have the proper colors with you and a little leftover concrete from your pour.

I also feel the way dry-powder antique release agents take to a color-hardened surface is different from the look of standard concrete with integral pigments. This allows you to produce some very realistic-looking stone, brick or tile effects

Repairing a damaged color-hardened surface is much easier than trying to match integral pigments. Ask any well-seasoned professional who has been in the trade a long time. Those who use color hardener also won't have to pay any mixer washout fees to have the ready-mix producer wash out their mixer truck, unlike with integral pigments.

The uniform cost associated with all the colors available except blue will be a big advantage over the integral pigment method. Color hardener also allows the installer to obtain shades of color not obtainable using integral pigments alone.

### Applying the color hardener

Mastering the installation of color hardener is not magical. It is all in the timing of your work and the approach you take while doing the job.

First of all, you should work with a concrete mix design that allows you to have a workable slump but does not have so much water added that it promotes bleed water. When we lay down our mud properly, it really does not bleed that much.

Prior to the pour, arrange your pails of color hardener around the job site to make access to the material easy. Remove the lids



from the product and pre-fluff the material in the pails to loosen up any compacted material in the bottom of the pails. This will save you time when you need it the most, during the pour. It is advisable to split the volume of color hardener into another pail so it is easy to move the bucket and handle during the application procedure.

Upon arrival of your concrete truck you should be ready to go. Sometimes weather conditions such as heat or wind really push your limits, and the more prepared you are beforehand, the more working time you will have to actually do the work. I always tell everyone, "Failing to prepare is preparing to fail."

When the ready-mix arrives, place, screed, bull-float and edge your concrete in an efficient manner. While placing the concrete, keep in mind that the flatter you place and screed the concrete, the easier it will be for you apply and work in the color hardener with bull floats. If you have any skinning over or see a slight color change of the concrete prior to application of the hardener, run your float over the slab to wake it up. You may have moisture in the slab, but it's very possible that with the "slight skinning over" of the surface you are a membrane away from the moisture you need to activate the hardener. Running your float over the slab wakes up the concrete and also helps remove any edger marks or float lines from the first bull-float pass.

Once this step is completed, broadcast the pre-fluffed hardener across the slab surface. You want to apply the material

in a uniform layer, evenly across the slab, applying at different angles. Beware of applying large piles of color hardener,

because they will fight you when you are working the material into the surface.

Once the slab is covered with the color









Color hardener was used to make this step border a lighter shade of color than the placed concrete.

hardener, the material will look like a dry powder on the surface. Let it sit undisturbed for about two minutes. It will go from a dry powder to a moist-looking powder as it soaks and wets out on the surface.

Now, without delay, work the color hardener into the surface with your hand float and bull floats, edge the slab and remove your edger marks.

If your timing is correct, the color hardener should work into the surface of the concrete with no problem. If you apply

### **Color Hardener Application Tips**

- 1. Monitor your weather conditions on the job for future reference regarding how they affected your pour. Keep notes.
- 2. Pre-fluff your color hardener before the pour and split the volume of material into multiple pails for ease of application.
- 3. Pour at a slump that's workable but does not promote bleed water.
- 4. Remove float lines and edger marks. They will show through in your finished work.
- 5. Apply your first and second application of hardener as soon as possible so you have adequate moisture available in the concrete to activate the color hardener.
- 6. Do not apply water to activate the hardener. All moisture to activate the hardener should be from the concrete itself.
- 7. Evaporation reducers or retarders are OK to use, but they should be restricted to proper usage. Use after screeding and before the first floating. Do not cheat and use the evaporation retarder to activate your color hardener on the surface of the concrete.
- 9. Pour a piece of manageable size for your crew to do comfortably. Remember quality, not quantity, is your main goal and objective.
- 10. Avoid covering a fresh pour with plastic. This may cause discoloration.

too little material in the first application and the product seems to work into the surface and dissipate upon application, you did not apply enough material in the first application. Apply a second application of hardener without delay and repeat the above steps.

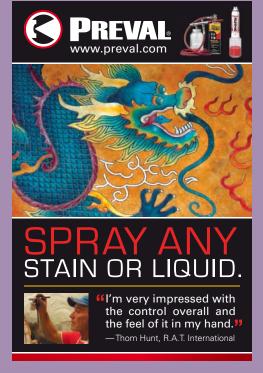
Keep in mind that you will experience

the hardening effect as well as the color with this process. With integral pigment you have no hardening effect added, only color.

The main variable you will be working with is weather conditions. The rate of evaporation will either speed up or delay your installation process. This rate changes daily with the weather.

### PRODUCT SHOWCASE







Windy days can be a handful, sucking moisture from the slab.

Variables such as the concrete mix design you're working with and the slump you normally pour at will also dictate your day's timing. 🥗

Bart Sacco is the president of Kingdom Products and also owns and operates Concrete Texturing Tool & Supply and the Concrete Kingdom Training Center, based in Throop, Pa. He can be reached at bart@kingdom-products.com or (570) 489-6025.

Bart Sacco will teach "Color: It's Not Just An Artistic Decision" at the 2013 CONCRETE (Decor SHO) Concrete Decor Show. For more information, go to ConcreteDecorShow.com.





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### CONCRETE QUESTIONS

### **How Should You Color Your Stamped Concrete?**

OLOR selection for stamped and textured concrete is always at the top of the list of issues people question me about. My goal when answering questions like this has always been to try and provide good advice



by Chris Sullivan

on color selection so no one has to come back and ask about color correction. Here is a question that recently came across my desk that is a good example of someone looking for advice on color selection for an upcoming stamped concrete project.

Question: We are going to have a 4,200-square-foot stamped concrete driveway installed. The pattern will

be a large ashlar slate. What coloring method should we use and why?

The first thing that strikes me with questions like this is the lack of information the author provides me while expecting a detailed answer in return.

Details on where, when and how aside, the question remains — what are the coloring options for stamped concrete?

The two most common methods are integral color and color hardener, also known as dry-shake color. Personally, I am a color hardener fan. There is nothing wrong with integral color, and it is by far the more popular coloring option, but color hardener offers some distinct advantages.

Color hardener is a blend of cement, sands, color and, in some cases, admixtures such as wetting agents and dispersants.

The two big advantages it has over other coloring options are surface strength and color intensity.

Color hardener is applied to the surface of the concrete after screeding and floating, but while the surface is still wet. The sand and cement in the color hardener increase the strength of the surface paste, increasing the overall surface strength of the concrete by as much as 1,500 psi. The strength advantage is also evident in the increased durability the extra sand and cement bring to the party.

The hardened surface is also richer in color, since all the color remains in the paste and is not diluted in the concrete. The color is more consistent, too, as any variations in the base concrete mix are never in play. Yes, there can be an issue if the concrete is chipped and the underlying gray concrete

### PRODUCT SHOWCASE







color comes shining through, but in all my years in the business I have only witnessed this on a few occasions.

The downside to color hardener is that is adds an extra step, skill is required in knowing how and when to apply it, and it can be a dusty mess if the wind is blowing or it is misapplied.

Integral color, the other coloring option, has become the hands-down favorite among stamped concrete installers in recent years, mainly because it is easy and has become readily available. When I started selling pigment in the decorative concrete industry almost 20 years ago, colored concrete was rare and very few ready-mix installers offered it, let alone promoted it. Today, larger ready-mix producers have an automated color-dispensing system and at a minimum sell and promote colored concrete. In today's fast-paced world, ordering concrete pre-colored from the ready-mix producer has become commonplace. It's easy and for the most part consistent.

There are also many contractors who will throw the color into the back of the ready-mix truck when it arrives on-site. If you are considering adding your own color to the truck on-site, always check with the ready-mix supplier to make sure they don't have policies against this practice. Also, be prepared to pay extra, as some readymix suppliers have surcharges and fees for adding your own color.

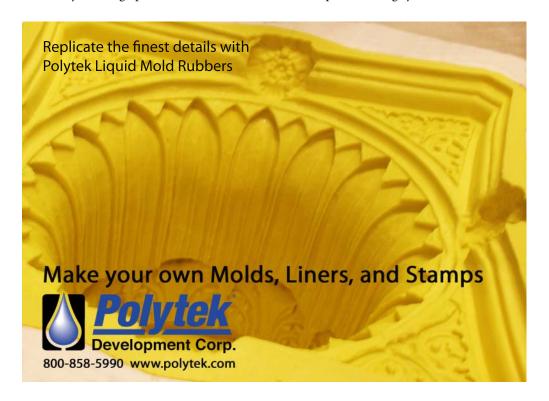
The downside to integral color is the possibility of color inconsistency, especially on larger jobs. Since the color is added to the concrete, any inconstancies in the gray base concrete will be reflected in the final colored concrete. Batch-to-batch consistency and how the concrete is handled and placed at the job site become critical. Applying water during finishing and other poor finishing techniques are the top issues leading to color problems when integral color is used.

Color selection for stamped concrete does not stop here. Base color attained with color hardener or integral color is important, but the secondary color can be almost as important. The secondary or antiquing color is what gives stamped concrete the look of stone, tile or wood. Without secondary color, stamped concrete looks artificial and unattractive.

While base coloring options of color

hardener and integral color have remained fairly constant over the last 30 years, secondary coloring options have seen some significant changes in recent years.

The most recent change has involved the use of "post-coloring systems." These are





pigment-based washes that are applied to the concrete a few days after stamping. The fundamental concept for all these systems is the same. The concrete is stamped using a clear liquid release. Then, the colored liquid is sprayed or broom-applied to the concrete. The colored wash seeks out the low areas of the stamped and textured surface, pooling in these areas. The liquid carrier evaporates, leaving the colorant behind and resulting in

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a naturally highlighted and fairly realistic-

looking surface. Very little cleaning is required, and the process is quick and easy.

The one downside with this process is the possibility of overapplication of the post-coloring material, which can lead to premature sealer failure down the road. This process of post-coloring using premanufactured color wash systems has replaced older post-coloring methods using stains that require long cure times and intensive water cleanup.

Lastly, the time-tested and field-proven use of release powder is still the go-to method for post-coloring stamped concrete. Most stamped concrete craftspeople will agree that powder release provides the most realistic and consistent look. If aesthetics and long-term color durability are your primary goal, release powder is, and will continue to be, the product of choice for secondary-coloring stamped concrete. Of course, the downside to release powder remains the ever-present possibility that

more of the product will end up on you and your crew than on the ground.

Note: When handling any of the powder and color products noted in this article, steps should be taken to minimize skin contact. Dust masks, gloves, long-sleeve shirts and long pants should always be worn. 🥗

Chris Sullivan is vice president of sales and marketing with ChemSystems Inc. He has led seminars and product demonstrations throughout North America. Contact him at trowelanderror@protradepub.com.

Chris Sullivan will teach "Solving the 10 Most Common Decorative Installation Problems" at the 2013 Concrete Decor Show. For more information, go to ConcreteDecorShow.com.

### **PRODUCT NEWS**

### Proline's new stamp pattern

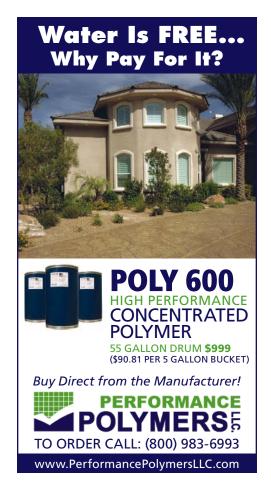
Proline Concrete Tools has introduced the Lorenzo stamp pattern.

Conceptually designed by Andre Plouffe, of California-based decorative concrete company Designs in Concrete, for The Lorenzo housing project near the University of Southern California, the Lorenzo pattern features stones of up to 40 inches. The stone shapes are mostly rectangular and laid out in a linear pattern to give the pattern a unique look. The stamp offers a very coarse travertine texture complete with veins for a natural feel.

The Lorenzo stamps are 40 inches by 27 inches in size.

👣 www.prolinetools.com





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