I have been looking forward to this issue of Concrete News for a while. Let’s face it: we have a problem in this country with concrete durability. With all the advancements of concrete and cement technologies, concrete is still “fabricated” on site. Each job brings its own challenges: A new crew, a new weather pattern, a new unknown. And while experience will mitigate some of the risks of unforeseen challenges in the field, many times we have to ask ourselves, are we really learning? Those 30 years of experience that you are so proud of – are they 30 years of continuous learning? Or are your guys simply repeating their first year over and over? Groundhog Day, so to speak, only it’s our business we are talking about.

This issue of Concrete News brings problems and solutions with concrete durability front and center. While some solutions are product related, these answers involve many steps. The process includes the right mix design, the right water cement ratio, protection from the elements during placement, proper curing, and lastly, products designed to improve the inherent weakness of concrete against its operational conditions, including abrasion and freeze/thaw protection. No single one thing brings home the best concrete. Good concreting requires a commitment, a discipline to the details. Whether it is residential or industrial construction, new or renovation, concrete fundamentals apply and must be respected. We know how to do it—but are we willing to do what it takes?

As always, we are happy to contribute to the ever-growing body of knowledge available to you, the concrete professional. Articles regarding surface durability, surface appearance, surface safety, and surface protection fill these pages. In addition, since we have been one of the first companies to promote polished concrete worldwide, our experienced installers continue to lead the pack and delight us with outstanding, award-winning installations on new and renovated polishing projects. We’ve included a few profiles in this issue for you to see how we are stretching your concrete expectations.

Thank you for your continued interest in LATICRETE® L&M™ products. We are happy to help you make your next concrete project your best—with knowledge, dedication and proper materials.

Greg Schwietz
ACF Distribution, Inc. is a 35 year-old building materials distributor that focuses on servicing installation professionals, designers, property management professionals, and architects. The company has a 6,000 sq ft warehouse fully stocked and ready to serve its customers. ACF’s main product focus is on self-leveling materials, toppings, and micro-toppings. Additionally, they deal in stone-based products. Anything to do with the flooring trade, ACF Distribution has it. ACF has an outside technical sales team and an inside technical sales team. The company serves New York’s five boroughs, northern and central New Jersey, and lower Connecticut.

We talked with Phil Emond, President and Owner of ACF Distribution about its customers, its markets, and its relationship with LATICRETE.

Before becoming involved in the flooring materials business, Phil was in business turnaround management with a background in industrial engineering. After many years of working in the turnaround area, he grew tired of being a paid mercenary. In 2004, he decided to get involved in the building materials space and buy ACF Distribution. He picked this business for a variety of growth reasons. He has a history of running big manufacturing companies, and now applies those skills to ACF.

**ACF’S EXCELLENCE IN TECHNICAL SUPPORT**

Phil says the ACF team prides itself on technical support. Phil ensures his team is well trained and provides exceptional customer and product support. They are available for job estimates and to help at final installation. The entire sales staff can handle anything on-site. Phil makes sure that his salespeople know the product lines as they bring them on-board. Also, they’ll extend business hours well beyond the norm to take care of people. As Phil says, “We’re not a Home Depot here. We provide technical solutions and products that match the solutions.”

He continues, “We maintain a number of lines. These lines solve specific problems. All of ACF’s sales staff are trained and have extensive backgrounds in the industry. We also ensure we maintain strong partnerships over the years. Our reputation on serving customers’ needs is outstanding. If we need to be open in the middle of the night if somebody needs something, we’ll do it.”

ACF Distribution has earned an excellent reputation for quality and service. Phil recently had an emergency job in Manhattan on a Friday night in one of the financial district buildings. There was an infrastructure issue that needed repaired before opening back up to traffic first thing Monday morning. The repairmen called Phil late Saturday night, saying they needed product by 6 AM on Sunday morning to start repairs. Phil’s team loaded the truck at 3 AM on Sunday morning, and had the product delivered by 6 AM that same morning. That’s the level of service ACF provides to their customers.

**ACF DISTRIBUTION’S RELATIONSHIP WITH LATICRETE**

When Phil took over the business, it was 90% oriented to the retail-type trades. Now, ACF Distribution is 80% commercial and 20% retail. They’ve switched around their markets. Additionally, the company has switched more toward specified-type of products, like those offered by LATICRETE.

Phil states, “LATICRETE has an outstanding reputation. We’ve had nothing but success with any of their divisions we’ve worked with. Whether it is DRYTEK®, SPARTACOTE®, or L&M™, we’ve received outstanding support from these guys. We got on with SPARTACOTE most recently, and their technical team got ACF’s sales team trained immediately. The SPARTACOTE guys’ level of professionalism was incredible. The LATICRETE® product line is broad, and allows us to offer more to our customers. Much bigger things are coming over the next couple of years.”

Phil is an enthusiastic promoter of LATICRETE Technical Service Representative Tom Leahy. Phil says, “Tom is a fantastic guy. From a professional point of view, if I need Tom on the job site, he’ll be there. If I called him at 10 o’clock at night, and said I need him at 11:30 that night, he’ll make it happen. Tom is very well respected in the industry. Everyone has only positive things to say about him. Every time we turn around and need tech support, Tom is there. Tom jumps in and finds the answer and if he doesn’t know, he gets the right people on the phone and they help deliver the answer. I can’t say enough good things about him. He just says, ‘I’ll be there.’ In New York, that is really important.”

**If we need to be open in the middle of the night, if somebody needs something, we’ll do it.”**
Did you ever notice the nicest homes in the neighborhood are the ones that are highlighted with decorative concrete? A home’s value and aesthetics can be greatly improved by designing it to have durable, attractive features added to enhance the architecture of the structure. Decorative concrete is the fastest growing segment of the concrete industry, and people all over the country are learning what a valuable addition even a small accent can make.

My wife and I built a modest home in a new subdivision a few years ago. We wanted to make an aesthetical, decorative difference, but had a fairly tight budget. Looking at the other homes on the street, they all had one common theme: A plain concrete patio; a plain concrete driveway; and a plain concrete front porch. We hired an expert at colored, stamped concrete to create something different. We went with integral colored concrete and used a contrasting earth tone color highlight. The decorative contractor enlarged the back patio from 10’ x 14’ to 10’ x 24’ to allow for a future hot tub or more entertaining space. The extra investment was around $5,000. However, the appraised value on this house is now well over $25,000 higher than the neighbors’. Therefore, it was a wise investment.

The garage standards of today have changed dramatically in recent years. Today, almost every new home has a 3-car garage with every kind of organizational device imaginable to make the space a show place. Adding a SPARTACOTE® resinous floor coating to complete the look is money well spent. Check out the decorative flooring design possibilities that can be done in the garage, rec room or four season rooms. The design potential is unlimited.

Finished basements offer a low cost way to add more square footage to a home. Consider having your foundation walls poured with the use of decorative form liners. With very low additional cost, concrete forms can have liners added to them that create the look of brick, stone or stacked stone. If the wall contractor uses L&M ™ DEBOND GOLD™ to treat the forms, you will receive a wall nearly 100% free of bug holes or unsightly defects.

After the home is completed, the stone or brick look can be dyed or shaded using L&M VIVID DYE WB PLUS™ locked-in and protected with L&M LUMISEAL FX™ decorative sealer. This produces an aesthetically pleasing, durable, washable wall with an attractive color.

To complete that lower level living space, consider a polished concrete floor, especially if you have a walk-out basement. Installing LATICRETE® FLOOR HEAT and then using the L&M FGS PERMASHINE™ polished concrete system colored with L&M VIVID DYE™ creates a living space that is warm and inviting to family and guests.

Avoid problems before they happen…

Here are some things you should discuss with your homebuilder before construction begins in order to avoid problems arising later. Treat this list like a checklist and give them a copy. All too often, homeowners will reach out to our technical services department with issues of cracks, poor sealer performance, staining and scaling of outdoor flatwork.

Exterior concrete: Whether stamped or broom finished, make sure your concrete contractor applies a good quality cure & seal, such as L&M DRESS & SEAL™ and L&M DRESS & SEAL WB™, immediately after final finishing is completed. The exception to this rule is for concrete poured and placed in northern freeze / thaw areas after October 15th. Then, the installer should use insulated blankets for 7 days after the pour. When removed and allowed to air dry, the concrete will then have a chance to de-water and prevent scaling. Once dry, apply L&M AQUAPEL™ to the surface and your fear of scaling will go away.

Crack prevention: Concrete cracks for several preventable reasons, most of which can be avoided. First, make sure the sub-grade has plenty of gravel placed and properly compacted prior to placing the concrete. This provides good drainage and a sound foundation for the concrete. Next, make sure the contractor properly places saw cuts, called control joints, at the proper spacing as specified by the American Concrete Institute.

The weather plays an important role in a successful placement. Concrete requires suitable conditions created either by Mother Nature or by the contractor. The rule of thumb is, “if you are comfortable, the
concrete is comfortable” (meaning temperatures). Make sure this is discussed in a pre-pour meeting with your contractor.

**Concrete sealers** are highly effective in keeping your concrete looking and performing well for years. As mentioned earlier, **L&M AQUAPEL™** is best for exterior concrete as well as garage floors not receiving a **SPARTACOTE®** polyaspartic coating. **L&M AQUAPEL** protects concrete from water and salt damage dragged in by your vehicles. Treat patios and stamped concrete with **L&M LUMISEAL PLUS™** or **L&M LUMISEAL WB PLUS™**, both easily applied by roller. Do not over apply these decorative sealers—more is not better. One or two thin coats are better than one thick, heavy coat. Think, “Thin to Win.”

Whatever you decide to do with your residential concrete plan, LATICRETE concrete professionals are here to help with suggestions, methods and products. You can locate a technical service representative in your area at: [http://www.lmcc.com/contact-distributors.asp](http://www.lmcc.com/contact-distributors.asp).

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**About the Author:**

Bill Butler is a sales and tech rep for LATICRETE. He has worked in the concrete industry since 1976 and has been involved with ready mix trucks, concrete admixtures and construction products for the concrete industry. His approach to helping contractors and installers “do things right the first time” or when necessary, “doing things right the second time” is to ask good questions, be thorough, and learn from mistakes instead of repeating them.

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**Check out these informational links...**

For creative driveway ideas, check out the gallery of Northwest Concrete [www.nwconcretemt.com](http://www.nwconcretemt.com).

Go to: [https://www.hpspartacote.com/polyspartic-applications/residential-flooring/garages/](https://www.hpspartacote.com/polyspartic-applications/residential-flooring/garages/) and watch the slide show.

Watch the AQUAPEL installation video on YouTube: [https://www.youtube.com/watch?v=A0gzqP8mme8k](https://www.youtube.com/watch?v=A0gzqP8mme8k)


Re-working an existing polished concrete job is no easy task—let alone when it’s in a new, completed building. Not just any polishing contractor can pull off the project. The school’s floor design had very intricate dye patterns. There were thousands of linear feet of edging work to be re-done, and the entire floor had to be cut-down to the required aggregate exposure level. Several contractors, including the original low bidder that was awarded the job, turned down the general contractor’s request for proposal.

Freddie Gwynn, owner of Polished Concrete of Wyoming, walked the job with the contracting superintendent of the project and discussed the potential remedy. Gwynn said, “It’s not going to be cheap, but it will be right.”

Gwynn and the project manager agreed upon a ridged timetable to complete the work. In order to ensure proper execution, Gwynn brought in another highly qualified L&M™ FGS PERMA SHINE contractor, Shawn Weaver of Concrete Floor Systems based in Denver, Colorado.

Their first task was to cover and protect all of the walls and in-place fixtures throughout the building. Their crew put plastic down from floor to ceiling in order to minimize dust contamination and avoid damaging the finished, painted walls.

The edging work was perhaps the biggest task to tackle. Crews spent countless hours hand grinding and polishing right up to in-place carpeting and installed cove base.

The surfaces were all cut to the proper aggregate exposure. Due to impurities in the concrete sand in that area, a grout coat was necessary in order to fill all of the micro pitting in the surface. The floor was then ground to 400 grit levels followed by the first coat of L&M LION HARD® densifier. The crew then ground the floor to 800 grit levels and applied L&M VIVID DYE translucent concrete dye. They

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Who can forget the quote from the movie Armageddon when Steve Buscemi turns to Bruce Willis and says, “270,000 moving parts and all built by the lowest bidder? It really makes you feel good going into outer space on a mission doesn’t it?” Today’s construction business, unfortunately, isn’t much different.

Students and faculty at the Southridge Elementary School in Casper, Wyoming, were shocked when they were informed that their brand new school would not be ready for the August 19th start of the school year. The project managers cited many construction delays and quality issues, including the polished concrete floors deemed unacceptable by the architect. The building was 100% complete and ready to be occupied when the architect demanded the general contractor order a re-polish of the entire school.

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topped the **L&M VIVID DYE** with the second application of **L&M LION HARD** densifier to complete rejection to lock-in the dye. Final polishing steps brought the entire building up to the specified 1,500 grit level.

Rick Skatula, Principal of the Southridge School, was thrilled with Shawn, Freddie and their polishing crew. “They should be proud,” reported Rick, “we are very pleased with our floors and with the two contractors.”

The moral of the story is well summed up by the old cliché by Aldo Gucci where he says: “The bitterness of poor quality is long remembered after the sweetness of low price fades from memory.”

It is all too often in our quest for getting the job at all costs that we forget that the client really wants superior quality. It is the concrete polisher’s job to demonstrate that in their efforts both before and after securing the work, especially performing mock-ups prior to job acceptance. Always test.

Congratulations to Polished Concrete of Wyoming and Concrete Floor Systems of Denver for a job well done!
How Do You Know if Polished Concrete is Slippery?

According to the National Floor Safety Institute (NFSI), 55% of slips, trips and falls are caused by a hazardous walkway surface. Because of the high gloss produced by polishing concrete, many end users associate this with other polished surfaces and erroneously assume it is slippery. In some cases they are correct, but not always. Over the past 25 years, I have worked in the slip and fall prevention industry and I have yet to find a one-size-fits-all approach between the gloss level of a walkway and its slip resistance. Much of what our society has come to expect regarding the gloss level of a floor and its inherent safety comes by way of marketing. During the 1950’s, consumers were first introduced to high-gloss floor finishes which not only offered the benefit of ease of maintenance but that of the “wet-look” which was associated with the “clean look”. This trend grew through the 1960’s as manufacturers of vinyl floor coverings began to introduce high gloss, vinyl, no-wax floors and further grew in the 70’s and 80’s with gloss enhancing vinyl floor cleaners. In the end, we as consumers have come to associate a clean floor to that of a shiny floor. Unfortunately, these clean looking, high gloss floors are too often perceived to be as slippery as ice.

To counter this perception, manufacturers of floor finishes and polishes have relied upon the ASTM D-2047 (UL-410) standard for determining the slip resistant properties of their products. For decades, this test method divided products into two categories, those whose dry Static Coefficient of Friction (SCOF) was equal to or greater than a 0.5 value and those who SCOF were below the 0.5 value. Products that met the 0.5 or greater value were “Classified” as “Slip Resistant”, while products whose SCOF was below the 0.5 value were simply not classified. For many, this pass-fail approach created the perception that products meeting the 0.5 value were “safe” while those that did not were “un-safe.” This perception is in fact not true and has created the myth that a dry floor that fails to meet the 0.5 threshold is unsafe, rather than it is simply not slip resistant.

Unfortunately, many people erroneously apply the D-2047 standard to floors other than those coated with a commercial floor polish, even those surfaces that cannot be laboratory tested. Because the James Machine is the exclusive test device for the D-2047 and cannot be used outside of a laboratory setting, this makes the application of this standard to surfaces like polished concrete impossible.

Since approximately 80% of all slip and fall claims occur on wet floors, it only seems reasonable to test walkways under wet conditions rather than dry. In December 2009, the NFSI/ANSI B101.1-2009 “Test Method for Measuring Wet SCOF of Common Hard-Surface Floor Materials” was published, establishing the first ever wet test method for walkway surfaces.

Rather than the pass-fail approach established by the ASTM D-2047 method, the ANSI/NFSI B101.1-2009 standard identifies three individual risk categories or “Traction Ranges” to which each range describes the risk potential for a slip-and-fall. Surfaces whose wet SCOF is 0.6 or greater are referred to as “High-Traction.” Walkways whose wet SCOF is below a 0.6 but greater than a value of 0.4 are defined as “Moderate Traction” and walkways which posses a wet SCOF of less than 0.4 are defined as “Low Traction.” High Traction surfaces present the least amount of risk for a slip-and-fall claim while Low-Traction surfaces present the highest risk.

In 2012, the ANSI B101 main committee published the ANSI/NFSI B101.3 “Test Method for Measuring Wet DCOF of Common Hard-Surface Floor Materials” standard. Like the B101.1 standard, the B101.3 standard provides both a test method and table by which the user can interpret the resultant COF data. Walkways whose wet DCOF value is equal to or above 0.42 are defined as “High-Traction”, while values between 0.30 and 0.42 are considered “Moderate Traction” and values below 0.3 are ranked as “Low Available Traction.”

When tested to either the ANSI/NFSI B101.1 or B101.3 standards, most polished concrete surfaces, regardless of grit size used, will typically fall in the High-Traction range. This raises the question: which standard should the polished concrete industry use? Wet SCOF per the B101.1 standard or wet DCOF per the B101.3 standard?

Unlike the B101.1 standard, which is prohibited for use on highly polished surfaces, the B101.3 standard specifically applies to surfaces such as polished concrete and states this in the standards Scope statement. In short, the B101.3 standard is the only nationally recognized standard for measuring the slip resistance of polished walkway surfaces, like that of polished concrete, in an installed condition. Shortly after its publication, the Concrete Polishing Association of America (CPAA) published the following position statement:

“... in the absence of a prescribed methodology for measuring the slip resistance quality of a bonded abrasive polished concrete floor and the lack of a coefficient of friction regulatory requirement, CPAA takes the following position:
Bonded abrasive polished concrete floors shall be tested for slip resistance by measuring the wet dynamic coefficient of friction using an approved tribometer according to ANSI/NFSI B101.3 Test Method for Measuring Wet DCOF of Common Hard Surface Floor Materials and shall achieve a Slip Resistance Potential rating of Acceptable (not less than 0.30 for level or inclined surfaces).

It is the belief of CPAA that the Dynamic Coefficient of Friction method is the appropriate method of measuring slip resistance of bonded abrasive polished concrete floors because the method holds floors to a tighter tolerance than the Static Coefficient of Friction method.”

CONFUSION GROWS WITH THE INTRODUCTION OF THE CERAMIC TILE INDUSTRY’S A137.1 STANDARD

As members of the ANSI B101 committee and B101.3 sub-committee, the Tile Council of North America (TCNA) was one of the architects who crafted the B101.3 wet DCOF standard. The TCNA is a trade association and lobbyist for the ceramic tile industry and is also the secretariat of the ANSI A108 committee which authors the ceramic tile industry’s quality control standards, including the A137.1 “Standard Specifications for Ceramic Tile.” The ANSI A137.1 standard has been in publication for many years and according to its scope statement “…serves as the basis for acceptance and methods of testing [ceramic tile] prior to installation.” Prior to the most recent 2012 version, all previous versions of the A137.1 standard referenced the ASTM C-1028 Standard Test Method for Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull-Meter Method.

In 2014, the C-1028 standard was withdrawn as a valid standard and was not replaced. However, when the A137.1 standard no longer referenced the C-1028 test method, it did not reference the B101.3 DCOF standard but instead created a substitute DCOF test method they call the “Acutest.”

The Acutest is a wet DCOF test method that is substantively different from the ANSI B101.3 wet DCOF test method. This change in the A137 standard has drawn much attention and has created a lot of confusion since its publication in 2012. Because the “Acutest” utilizes only one half the amount of surfactant in the wetting agent, the coefficient of friction readings are necessarily higher than the ranges outlined in the B101.3 standard when tested on the same test surface. This is unfortunate as many assume they are using the same test method because they both test wet dynamic coefficient of friction. However, the fact that both standards utilize wet DCOF is where any similarities end and the major differences begin.

Going back to the Scope statement of the A137.1 standard, which serves as a description of the standards limits, the reader finds that the “Acutest” applies only to ceramic tile which has not been installed as a floor but only to tile produced at the factory which has yet to be shipped to the customer and installed. The A137.1 standard is simply a manufacturer’s quality control standard and is limited to pre-installed ceramic tile. Any measurement of COF is not to be construed to imply a basis of safety. Contained in the A137.1 standard is a “Notice of Disclaimer” which in-part states that: “This information does not purport to address safety issues or applicable regulatory requirements associated with its use.” Again, affirming that the standard is not a safety standard and should be cited with caution.

WHAT DOES THIS HAVE TO DO WITH POLISHED CONCRETE?

This past February, the polished concrete industry was lobbied at the World of Concrete convention to discontinue the use of the B101.3
standard and adopt the A137.1 standard as its endorsed test method. It is unclear as to what course the polished concrete association will take, but the continued campaign of confusion being waged by the ceramic tile industry does not benefit the polished concrete industry. One example of the confusion being brought is in the area of litigation. Standards can be very confusing to a layperson but can become critically important in matters of litigation. Misapplied or improperly referenced safety standards can dramatically affect the outcome of a lawsuit.

Sadly, it is often under questioning from a skilled plaintiff’s attorney that business owners discover that the industry standard they reference for testing is actually incorrect, creating additional problems. Once a skilled plaintiff’s attorney learns that the defense is founded on an improperly cited industry standard, the case will often swing to the Plaintiff’s favor. Slips and falls are a big problem for customers of polished concrete and ceramic tile alike and utilizing the appropriate safety standard plays a vital role in preventing slip and fall events as well as building a viable defense when sued.

WHAT ABOUT NFSI CERTIFIED PRODUCTS?

For more than a decade, the National Floor Safety Institute (NFSI) has been certifying products per the ANSI/NFSI standards. These products include a wide range of polished concrete products and application systems. Many of the manufacturers of the products that are used within the polished concrete industry are NFSI certified whereby a growing number of end users, including architects and specifiers, have come to rely on the NFSI certification program and often include such in their specifications. If the polished concrete industry chooses to abandon the use of the B101.3 standard and adopt the A137.1 standard, the benefits gained by the NFSI Certification process will be negated. Additionally, since the NFSI certifies products to ANSI B101 standards and not to the A137.1 standard, polished concrete products bearing the certification label will no longer apply and will not be accepted by the architectural industry. In short, when you are sued, an experienced attorney will ask why is it that you no longer use the safety standard for polished concrete but rather use a quality control standard for uninstalled ceramic tile.

Many slips and falls occurring on polished concrete are the result of its highly reflective surface, which often makes it difficult to see a wet hazard. Ultimately, polished concrete surfaces, like that of all walkways, should be kept clean, dry and free of hazards. Long-term benefits are gained through proper maintenance protocols and frequent inspections, all of which should be communicated to the end-user. Walkway testing and product certification enhance the long-term success for both contractors and customers but because of its smooth surface, it is vitally important that polished concrete be kept free of dry contaminants like paper dust, sand, or other small particulates. Falls aren’t funny and neither are lawsuits. Having and implementing the appropriate slip resistance safety standards protects everyone.

Russell J. Kendzior

As the Founder and Chairman of the Board of the National Floor Safety Institute, Russell Kendzior is recognized worldwide as one of the leading safety experts specializing in slip, trip-and-fall prevention. As President of Traction Experts, Inc. Mr. Kendzior has consulted with numerous fortune 500 corporations and has been retained as an expert witness on more than 600 slip, trip-and-fall lawsuits.

Mr. Kendzior is the Secretary of the ANSI B101 Committee For the Prevention of Slips, Trips, and Fall’s and is a past member of the Board of Delegates of the National Safety Council. Mr. Kendzior has been an active member of eight ASTM committees, and is a member of the American Society of Safety Engineers, the American Society of Mechanical Engineers, and a past member of the International Code Council.

Sought nationwide as a safety consultant, public speaker, and expert witness, Mr. Kendzior is the author of the best selling book on accident prevention entitled, “Slip and Fall Prevention Made Easy”, and in 2010 authored his second book “Fall’s Aren’t Funny.” Mr. Kendzior has written a wide range of articles on the subject of floor safety. Mr. Kendzior has appeared on numerous nationally televised programs including: Inside Edition, Good Morning America, CBS News” and “ABC News Primetime “What Would You Do”

Mr. Kendzior is the author of the “OSHA Self-Inspection Checklist” (A.M. Best Company, 1997-current) and has written numerous articles on slip-and-fall accident prevention for such industry publications as Chain Store Age, ISSA Today, Services Magazine, Texas Lawyer, Attorney at Law, and Professional Retail Store Maintenance Magazine (PRSM).

Mr. Kendzior frequently lectures various trade and professional associations including: The National Restaurant Association, The International Textile Rental Association, and the International Sanitary Supply Association. He has also spoken before numerous manufacturing groups representing the floor mat, floor care, and the floor coverings industries.

For more information about the NFSI or ANSI B101 standards please feel free to visit www.nfsi.org. Mr. Kendzior can be contacted at:

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An interview with Phil McKeone, founder and owner of Daedalus Construction located in Omaha, NE.

Phil McKeone, President and Owner of Daedalus Construction was born in Nebraska in 1952. Phil graduated from Creighton Prep in 1970 and began working in concrete construction. From there, he went on to attend Creighton University until 1973, when he left early. He then founded Daedalus Construction in 1977. In 1987, he became the president and sole stockholder of the company. Phil handles all the daily operations of the company and is active on all projects.

JB: Please give us a little background on your concrete contracting company and what markets Daedalus focuses on.

PK: We handle a lot of diverse types of concrete work. Some of our markets are residential, commercial, structural, civil, and repair work. We’ve done lots of work on the roads in Omaha, rehab road work. We’ve done various parts of Dodge street. But what we really like are the structural concrete jobs, specifically parking decks. Those are right in line with the type of work we shoot to get.

JB: How far back does your relationship with L&M go? Can you tell our readers about its origins?

PK: We go back 33 years with Greg and Larry. They have had some amazing guys over the years. L&M was always our go-to construction chemicals manufacturer because if we didn’t know a solution to a concrete problem, those guys would come out and help us. Like the L&M™ EMARYPLATE™ floor we once did. We ran into sagging issues and they came out and helped troubleshoot it. We had put 7 million pounds of concrete onto those wooden shored floors. Eventually the wood fatigued. It was the L&M guys that helped us figure it out. That’s the kind of relationship we have with them. L&M has been a great source for us throughout the years.

JB: How has the concrete industry changed over the years?

PK: Look, this is hard work. This is one of the hardest jobs a guy can do out there. The labor force has always been tough to maintain and the competition’s wages dropped quite a bit. It can be tough to compete with that. Maybe some of the quality went down, too. The economy has come back quite a bit, though. We had a great 2014.

JB: How does Daedalus differentiate itself from the competition? What actions have you found that make you guys successful?

PK: We try to keep it really focused. We like to do footings and structural concrete. And we like to do parking decks. We like to go up in the air. We consider ourselves more of an urban concrete contractor. That’s just where you find the more structural type of jobs. They aren’t typically out in the suburbs. I don’t do suburban work if I don’t have to.

JB: What’s your favorite part about the concrete business?

PK: It’s a great life. I love it. My town is great. Concrete’s been great to me. I get to work out on our pours. I’m doing bids, but I don’t like doing the bids as much as I like pouring.

JB: What’s your least favorite part about this business?

PK: People problems with customers and employees. Learning how to compromise. Unrealistic schedules are painful.

JB: Daedalus has had lots of success with L&M’s salt and water repellent, L&M AQUAPEL™. Can you tell us how you use the product and some creative applications perhaps not known to other users?

PK: We are very big on sealing joints with L&M AQUAPEL. I try to get OPPD & MUD [Omaha area electric and water utilities companies, respectively] to just use the product, to get 3 drums of L&M AQUAPEL™ and start spraying. L&M AQUAPEL causes water beading on the concrete surface.
Concrete Arts and L&M™ DURAFLOOR TGA™ repair material rescue new construction expansion at Hudson Hospital

L&M™ DURAFLOOR TGA project profile: Hudson Hospital

General Contractor: McGough Construction
Concrete Contractor: Concrete Arts
Floor Age: New and existing concrete
Owner: Hudson Hospital
Location: Hudson, WI
Total Sq Ft: 3,500 sq. ft. in the lobby, hallways and waiting areas
Worked performed in 2 phases: each phase finished in 2 weeks.

Hudson, WI – The Hudson Hospital expansion project called for new administration and clinical wing construction, including hallways, lobby, waiting room, and stairs.

McGough Construction was the general contractor on the job. Concrete Arts, a decorative and polished concrete firm local to the Hudson area, has had an existing relationship with McGough for years, and they hired on Concrete Arts for their expertise in polished concrete craftsmanship and design. The project scope included dyeing and polishing both new and existing concrete floors in the lobby, hallways and waiting areas, as well as creating and polishing structural stairs.

CONCRETE REPAIR PROBLEM

There was just one problem: the link between the old and the new concrete needed new mechanical trenches dug through the concrete. These trenches were needed to accommodate new electrical and plumbing runs. Based on that, Graf decided the floor was not a good candidate to polish. Also, the project schedule was tight, and the owners were looking to occupy the new spaces by mid-fall.

Graf analyzed the job and recommended L&M™ DURAFLOOR TGA™, a decorative, polishable overlay wear topping designed specifically for such concrete repair situations. This versatile product could be placed in both new and damaged spaces in the lobby and the hallways—all high foot traffic areas—with fast turnaround time.

SURFACE PREP – MILLING THE CONCRETE

Concrete Arts’ crew had to mill down the concrete surface 3/8” in order for the substrate to accept the L&M DURAFLOOR TGA repair material, which was very time consuming. They then filled and repaired all cracks with L&M RESTORE™. Next, the team re-saw cut and honored all existing joints and filled them with L&M JOINT TITE 750™.

From there, they applied DRYTEK™ Epoxy Primer™ onto the properly prepared surface and seeded it with silica sand to rejection. After allowing the sanded epoxy to dry, the excess aggregate was vacuumed and broomed from the surface.

After surface prep was complete and the sanded epoxy cured, Concrete Arts’ crew then mixed and placed the DURAFLOOR TGA™ polishable overlayment. After allowing the freshly placed topping to cure for about 16 hours, the surface was ground through the diamond chain to a 1,500 grit full polish, with 2 coats of L&M VIVID DYE™ applied to match the existing concrete’s color. The crew locked-in the dye and densified the overlay with L&M LION HARD® hardener densifier. Finally, the crew applied L&M PERMAGUARD™ as a stain protector for the newly polished surface.

The project scope included dyeing and polishing both new and existing concrete floors in the lobby, hallways and waiting areas, as well as creating and polishing structural stairs.

L&M DURAFLOOR TGA™ CONCRETE REPAIR MATERIAL VERSATILITY

Since the stair treads offered by competitors did not match up with the newly polished floor, L&M DURAFLOOR TGA’s versatility enabled the Concrete Arts’ crew to pre-fabricate the stairs to an exact match of the polished concrete floor. Cranberry glass aggregate seeded into the polishable wear topping created the stair treads. The structural stairs were polished on three sides spanning 6.5 feet each. The front portion of the stair treads were sandblasted for slip resistance.
The solution provided the hospital owners with a near-perfect link between the existing concrete floors and the new L&M DURAFLOOR TGA™ floors. It exhibited a homogenous look and feel of approximately 3,500 sq ft of flooring space.

Hudson Hospital administration and the McGough project managers were very happy with Concrete Arts’ work. Their double shifts paid off by showing the results of a beautiful, durable, near-match of the existing decorative concrete.

By recommending, placing and polishing the versatile L&M DURAFLOOR TGA wear topping, Concrete Arts’ crew turned-over the Hudson Hospital project on time. Speaking to the distinctiveness of the polishable wear topping and its unique repair material qualities, Graf states that there is no other cementitious flooring product on the market that resembles such attractive, durable, decorative concrete.

Hudson Hospital’s new addition opened in October 2014.

The solution provided the hospital owners with a near-perfect link between the existing concrete floors and the new L&M DURAFLOOR TGA™ floors.
The Culture of Residential Concrete:
Fighting the Good Fight

In the harsh winter of 2009 - 2010, many residential homebuilders experienced failed driveways in the Midwest. The concrete they had placed prior to the winter freeze scaled, and they wanted answers. Some complained that driveway failures were as high as 30% that spring, an unusually high number. These projects were so numerous they were brought to the attention of Jereme Montgomery, Executive Director for the Nebraska Concrete and Aggregates Association, for analysis.

As a result of these residential driveway issues, Jereme got together with the local Ready Mix producers, a few residential concrete contractors, and some passionate homebuilders, and created a working cross-industry group. This group’s mission was to assess the driveway failures and to seek a resolution.

TAKING CONCRETE INDUSTRY GUIDELINES TO THE HOMEBUILDERS

Jereme went in front of a Midwest homebuilders’ group that spring to address these concerns and failures, and to communicate minimum industry requirements regarding durable concrete. He quoted concrete industry guidelines straight out of ACI’s manuals on maximum water-cement ratios, proper curing methods, durability in freeze-thaw environments, not over-finishing the concrete, proper air requirements, and so forth. To say most of the audience was rather suspicious to his testimony is an understatement.

Despite the tough crowd, he soon discovered that some of the builders listened and changed the way they constructed driveways. They took him up on his advice on selecting higher quality concrete mixes. They maintained proper water-cement ratios. They started curing the concrete after placement. Some even began to protect new residential driveways from water and salt intrusion with penetrating water repellents, such as L&M™ AQUAPEL™.

Despite having newly minted concrete standards promoters in residential building, Jereme isn’t wildly optimistic that residential driveways will be properly placed and finished in the future. He thinks driveway scaling will continue because the finishers placing the residential concrete are not getting paid to place quality concrete. They’re getting paid to “finish it and forget it.” Jereme stresses to the builders that if they want better quality driveways, the concrete laborers have to be paid to produce quality work. To change this environment requires a cultural shift, a new perspective in the way residential builders think about and sell concrete driveways.

OFFER THE HOMEOWNER CHOICES

Homebuilders ought to consider the following questions as an alternate way to sell concrete to the homeowner: “Do you want to upgrade your driveway’s concrete? Do you want a more durable mix? Do you want a salt and water repellent applied to make your driveway last even longer? Do you want some customization in to your driveway? Do you want color?”

This is a great way to go about changing residential concrete specs because everybody gets paid. Additionally, the average homeowner simply lacks concrete education. If the typical homeowner were given choices about their driveways and patios in the design phase, they’d seek further education on the subject, prompting good questions about concrete quality, longevity, customization, and so forth. These are choices most homeowners don’t even know they have.

DURABILITY IN MIX DESIGN

In Nebraska, most of the residential market concrete mixes are sand and gravel mixes, which are inexpensive due to the state’s natural surplus. However, this doesn’t mean that the mix is freeze thaw durable. For example, a concrete contractor wouldn’t place a grout mix in driveways. In a mix design comparison, sand and gravel mixes are one step above grout. It takes a lot of water to get to a 4” to 5” concrete slump with a sand and gravel mix. The current industry standard is nothing more than 0.45 water-to-cement ratio. This is the maximum water content allowed according to ACI 332-14 for concrete subject to moisture and de-icing. In standard sand and gravel mixes, the water-cement ratio ranges may exceed industry requirements. The mix design plays a huge part in concrete durability right from the start.

COMPARING THE RESIDENTIAL CONCRETE MARKET TO THE HEAVY HIGHWAY CONCRETE MARKET

It is interesting to compare the heavy highway concrete market to the residential concrete market. In heavy highway, they have very tight specs. Everyone is expected to bid according to the specification. They test for concrete strength by doing core samples. The heavy highway market has quality assurance. Contractors get fined if their work is not up to certain standards. In short, the heavy highway concrete market is highly controlled and standardized. Unexpected things still happen, but are minimized through proper quality assurance programs. Conversely, most residential concrete markets have none of these standards, no regulations, improper specs, nothing to ensure quality concrete in driveways.

Despite these residential concrete challenges, higher quality standards are currently trending. According to Randy Stark of Consolidated Concrete, “while the residential market quality has gone up, it is an ongoing process [of changing the culture]. The most success we’ve had is having a sit-down with admix producers and have them present to the flatwork guys what’s going on. Through NC&AA and the ready mix producers, we’ve offered training to flatwork customers.”

Stark continues, “We like to have concrete professionals like LATICRETE L&M teach our customers about the importance of curing and sealing concrete, and its fundamentals.”
Best Practices for Exterior Concrete Mixes
(e.g. driveways, sidewalks, stoops, steps, and patios)

Use the right mix. Concrete finishers should order a concrete mix called the Exterior Residential Mix. Ask specifically for this mix when you order your concrete. This mix contains limestone, is air entrained, and has a water reducer added. It is formulated to be workable with the water/cement ratio not exceeding .45. The exact mix may vary from producer to producer.

- Cure all exterior residential concrete with a curing agent complying with ASTM C 309 standards. Apply curing compound just after brooming per manufacturer’s instructions.
- Proper curing products and methods, and a water/cement ratio not exceeding .45 are both critical for all exterior concrete.
- Garage floors: 3,500 lb mix (per code), air entrained, 5” slump, and cured just after final finishing.
- Basement slabs: Use the concrete mix specified by the IRC code.

About the Author:
Jereme Montgomery has a Bachelor of Science degree in Construction Management from the University of Nebraska. He has over 18 years experience in concrete. Since 2006, he has promoted concrete and aggregate products as the Executive Director for the Nebraska Concrete & Aggregates Association. He is also past President for the American Concrete Institute-Nebraska Chapter and current member of the Construction Industry Advisory Council for the Durham School of Architectural Engineering & Construction. He runs a concrete industry podcast called Concrete Garb. To subscribe to his podcast, visit: http://www.concretegarb.com/thebirdsnest/

L&M™ AQUAPEL™ does a tremendous job of sealing the joints and the areas surrounding the joints. We have made great headway in concrete parking lots. People could do it themselves with this fabulous product — L&M AQUAPEL is just that easy to put down. I’ve told them how important it is to protect those joints and their new parking decks. Some listen, others don’t want to make the tiny investment in their multi-million dollar parking deck.

We applied L&M AQUAPEL to every one of the saw joints on a million dollar repair job. No one does anything about paving maintenance. I put it on the Roncalli high school parking lot. You can’t ruin the joint if the salt doesn’t get into it. I see a lot of joint damage here in Omaha. It’s everywhere.

JB: What made you want to go into concrete?
PK: I just loved it. I always thought it was great. I thought I couldn’t afford to do anything else. I thought, “This is such a tough job, who would ever want to do this?”

I started out as a laborer in 1971. I wanted a job where I would always have work. I always swore I’d never get into sales, because my dad was in sales, and now I’m in sales. [Laughs.] We started fixing driveways in 1977, and I’ve been selling concrete since then.

Protect your parking lot from salt and water penetration with L&M™ AQUAPEL™.

continued from page 11.

The Contractor’s Soap Box
continued...
Find the hidden image to Win an Apple® iPad mini!

Find the NFSI circle graphic hidden within the photo below. Then, go to www.lmcc.com/contest to enter your coordinates and contact info. Correct responses will be entered into our contest to win an Apple® iPad mini! Random drawing of correct winners to be held on September 18, 2015.

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