

CFR The Commercial Flooring Report

For the Commercial Floor Covering Industry

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Specification, Qualification and Testing

Product and installation failure, as well as, environmental conditions compromising flooring materials are common occurrences. Despite the fact that the vast majority of floor covering materials get installed without incident, the small percentage that fail can have a devastating effect on a project. The costs of product and installation failure can reach into the millions of dollars on one job. Not the kind of problem you want to have.

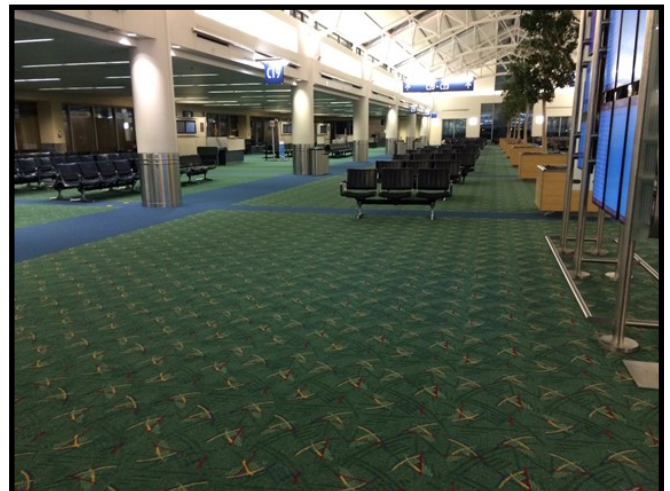


See Page 6 Wagner Meters introduces the Rapid RH® L6 system

As far as the product being able to perform - that's something that can be controlled but rarely is. Specifying flooring, regardless of what type, is generally the job of the designer or architect and a manufacturer's sales representative. The decision is most often based on aesthetics and not necessarily how well the product will actually perform. Thinking something will work doesn't make it so. Rarely thought of is whether the product is going to fail before it even has the opportunity to start its useful life. Virtually no one takes the time to find out whether or not a selected product for a project, be it soft or hard surface flooring or even polished concrete, is appropriate for an application. You certainly won't hear this from a sales representative, "Oh no don't use that product it will fail under those conditions." Other factors always seem to drive the selection process whether it's a relationship one has with a supplier or contractor, price, availability or the style and color of a product. All of these factors play into the selection but don't mean the product chosen is going to deliver the type of service one expects. Once the product fails it conjures up the response of "so what made you think you weren't going to have a problem with this product?"

The easiest way to prevent a complaint, claim or flooring problem and to be green is to make sure the right product is in the right place and it performs as expected, is capable of being maintained and will deliver the performance, appearance retention and longevity expected. This is a fairly easy prospect with carpet. With carpet you have control of the components that go into it, the construction characteristics that give it the structural integrity to build it to deliver whatever degree of performance is desired, the yarn type, coloration or dye method, the backing type, how it's constructed - whether tufted or woven - the style, whether cut, loop or cut and loop and the twist level in the yarn to bolster further the performance. Essentially, we can build a carpet to be virtually bullet proof.

We did that with the carpeting installed at the Portland Airport in Portland, Oregon (PDX). I was the consultant on that project that delivered a carpet made by J&J (EF Commercial) that is probably the most highly engineered textile floor coverings ever produced.



From design inception to modifying the finishing line to give us the physicals required in the backing lamination process, to creating an environment around the tufting machine, to inspecting every run of carpet coming off the line, lab testing it and then re-inspecting it for pattern alignment before shipping, to arranging for some of the most talented installers and flooring contractor in the region.



During the development process we worked with the colors and pattern and the yarn twist and pile height. This is a cut and loop product that typically shouldn't be used in an extremely high traffic environment that, because it was so highly engineered, performs like a truck. Not only that the pattern, which runs length, width and diagonal, is as straight as any you'll ever see. This folks is 13 plus acres of broadloom carpet, not carpet tile, but broadloom that is a one of a kind carpet product. From working on the project from the outset with the architects, and the Port of Portland and J & J we delivered a bespoke carpet designed, constructed and engineered to last 20 years. We even conducted a one day seminar for the Architects and Port on carpet construction before the project got started. This is the type of success that can be achieved when a project is understood, and all parties work together towards a common goal. Not only that, the carpet has become iconic and has its own website. But, it's Portland, Oregon, where there's a sign that says, "Keep Portland Weird" - we did just that.



June 10-12, 2019 NeoCon	I'll be presenting again this year at NeoCon. Hope to see you there!!
NeoCon - June 10-12, 2019 / The Mart – Chicago, Illinois	
Program Title: Substrate and Flooring Failures	
Session Code: [M113]	
Date/Time: Monday, June 10, 2019 / 11:00 a.m. - 12:00 p.m.	
Room - 6-129 located on the sixth floor.	



THE COMMERCIAL FLOORING REPORT
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specialize in consultation, correction and resolution for flooring complaints, claims, installation and performance issues.

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We are now posting the CFR on LinkedIn. Just click the image below or search under Lew Migliore and let's connect!!



Page Layout By: Anita S. Drennon

On another project, just completed, we worked with the client on a 400,000 square foot carpet tile job where three separate manufacturers submitted products, in square and rectangular shapes, for testing, evaluation and analysis to determine which of the submissions delivered the best performance. We looked at color, construction, appearance retention, pattern, stain resistance and stain hiding, soiling and cleaning, tuft bind and edge ravel. We reviewed the lab test reports, retained the tested samples, evaluated each product submission by manufacturer and then between them, to determine which of the carpet tile products looked the best overall among all the tests and which would deliver the best performance and appearance retention. All of the test data was put on a spread sheet, studied and then compared to the actual products tested. The results of the lab testing alone that we commissioned doesn't necessarily tell you which of the products is the best performer. The key is to then take all the data and the actual test samples and do a comparison, knowing what the end user expects and then whittling it down to which product will actually deliver the best service. No one we know of provides this type of service to clients to insure they'll get the very best possible product.

We don't only do this with carpet but hard surface flooring as well. Because we know where the product is going and how it will be used, we can actually emulate the exact type of traffic and conditions the product will receive and the conditions it will be subjected to. We also gain an understanding of what the end user expects. One of the components of this service is often taking a product to failure. We want to see how much abuse the flooring material can take before it dies on the job. From that we learn what has to be modified with the product to have it constructed to perform or eliminate a flooring product from the mix because it won't work. We can do this with any type of flooring material. If that's not enough, we can review project specifications and make corrections or write them. We've done this recently with several concrete specs on huge projects.

Let me now share with you some failures that have occurred in the last year because the wrong product got installed on a project because no one was paying attention to the consequences of their decisions. We often say you can't just look at the flooring material to determine how it will perform, you have to look at where it's installed and take in several influencing components and conditions.

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U.S. Patent 7,231,815, 6,047,056, 9,032,791 & 9,588,092. Additional patents pending.

LGM and ASSOCIATES
HOTLINE

BEFORE YOU START YOUR NEXT PROJECT

CONTACT US FOR GUIDANCE ON SELECTING THE APPROPRIATE FLOORING MATERIAL AND SUBSTRATE SPECIFICATIONS SO WE CAN HELP KEEP YOU OUT OF TROUBLE.

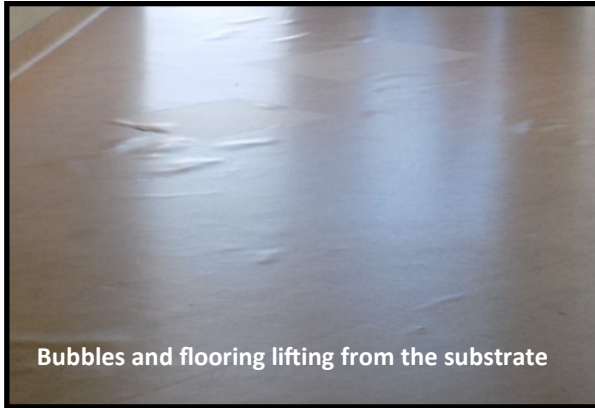
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In one case a linoleum flooring with a jute backing was installed on concrete substrate that was about 14 inches thick. The slab was mitigated for moisture but being as thick as it was there was still an overwhelming amount of moisture vapor emission to deal with. To specify a flooring material that is non-permeable with a backing that is a plant fiber that loses strength when exposed to water or moisture is to ignore the obvious conditions. In this case the jute was decomposing, causing the flooring material to debond from the substrate creating bubbles in the flooring causing an installation failure. Why would you specify a product with a backing that is susceptible to moisture on a substrate that is known to have moisture and expect it not to fail? You may think that because the flooring and the backing are “green” this was a good idea. In hindsight this was the exact reason the flooring installation failed. This product should never have been used in this application.



Bubbles and flooring lifting from the substrate

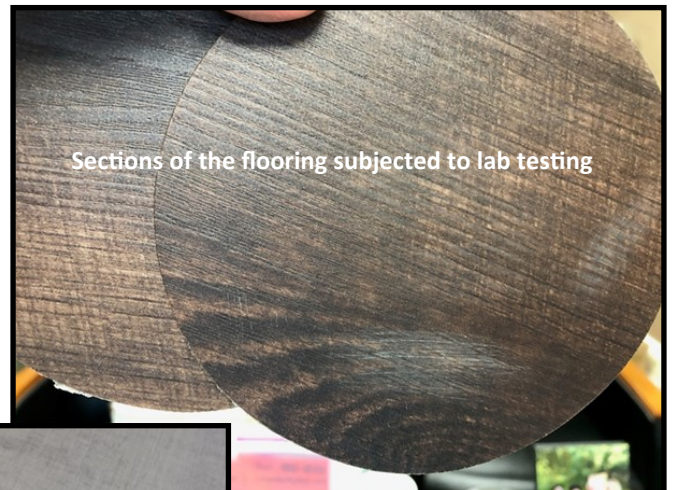


Flooring cut open—decomposed jute and pulverized cementitious leveler/patch as well a complete loss of adhesion

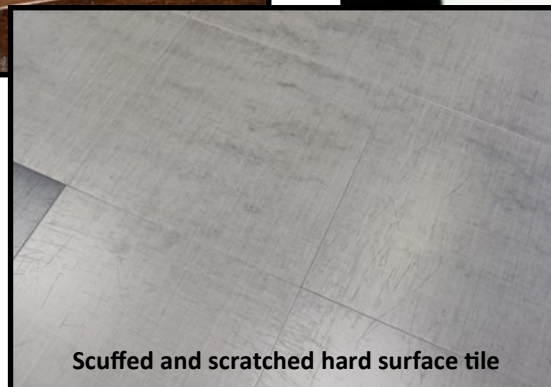
The next failure is a hard surface flooring material, actually installed in two locations at different ends of the country, that is supposed to be capable of withstanding scratching. Unfortunately, not only did it scratch and scuff badly but it did so immediately after being put into use. The testing done revealed the weaknesses in the material but did not replicate the actual damage seen on site. To replicate the damage, we resorted to some tests that are not standard for flooring material. One is a test for automotive carpet that, with one back and forth pass, the scuffing seen at the one site was perfectly duplicated. On the other site just taking a corner of one of the uninstalled flooring tiles and pushing it across the surface of the flooring, put big scratches in the flooring. On this job the flooring was not even put into use yet and looks terrible. By understanding the types of flooring being proposed for a project and having knowledge of their potential shortcomings, failures like this can be avoided.



Severe scratching under the chairs in the dining room



Sections of the flooring subjected to lab testing



Scuffed and scratched hard surface tile

A major concern to hospitals is the failure of sheet vinyl flooring under rolling beds that cause indentations. We've talked about this before but it's worth mentioning again. The pointed wheels on the beds exert far more pressure than just the wheel itself. No one takes this into consideration. When looking at the specs on the sheet vinyl for indentation load the allowable weight can easily be exceeded by the bed wheels. When indentations then appear, and the flooring specs are reviewed it was obvious from the start that the flooring specified would not withstand the weight of the bed. The blame often falls on the flooring contractor for using the "wrong" adhesive or for some form of floor prep. The fact is the flooring was never capable of withstanding the loads it was going to be subjected to. This is a specification issue and one that can also be tossed back to the flooring manufacturer for not knowing their product is incapable of withstanding indentations from the crown of the bed wheels.



Wheel of bed with crown in the center



Indentation impressions

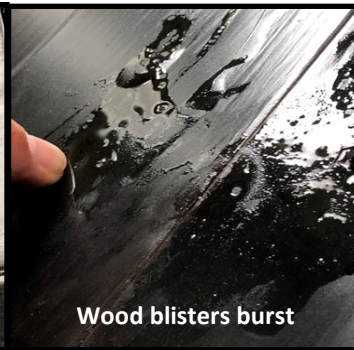


Indentation impressions in adhesive on back of vinyl plank

Important to mention is the use of wood on a substrate that contains any moisture whatsoever which would be concrete at any stage of its life. Concrete always contains some moisture and its always in a state of flux. To think wood won't be affected by moisture is to believe in the tooth fairy. Not that it will always fail but at some point, on some project it's going to happen.



Wood failure over wet slab—Blisters



Wood blisters burst

To not heed and understand what flooring products can and will do in any situation that can compromise their performance, integrity and installation is to think that at some point the empty chamber on the game of Russian Roulette is never going to come up on you. I've built a business on those poor souls who

suffer from the chambered bullet. The phrase, "this has never happened to us" is heard several times a week in our business. For us it's common practice.

At LGM we have the capability to help you on any project to pick the right product and put it on a substrate that will accept it. We are associated with the finest testing lab in the industry and have ready access to others that can perform specialized testing. We have brilliant people who understand flooring products, concrete, science, chemistry and physics. We're also located in Dalton, Georgia, the flooring capital of the world where there are no secrets. To think we don't know what's going on with any product or technology is foolish because at some point we have been involved in it or know the people who have. We can keep you out of trouble at the outset of a project or tell you why you got into trouble in the first place.

We have never had a project we've consulted on at the outset go bad because the product failed to deliver or because the substrate was bad. If you need help with a commercial flooring project, before or after installation, anywhere in the world, we can assist you.

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Wagner Meters Introduces the New Rapid RH[®] L6 System with Total Reader[®]

By Wagner Meters

Rogue River, OR ([May 13, 2019]) – Wagner Meters introduces the Rapid RH[®] L6 system, an enhanced version of the already popular Rapid RH system, which consolidates many concrete moisture testing features into a simpler process while featuring advanced technology that makes reporting faster, easier, and more reliable, even in concrete with higher relative humidity (RH).

The new L6 Smart Sensor incorporates an enhanced design capable of providing concrete moisture readings up to 100% RH. In addition, each L6 sensor includes an onboard memory device capable of storing 512 time-stamped measurements. Readings are recorded and saved with each sensor, it is possible to come back years later, retrieve an embedded sensor, and recover the historical data.

The DataMaster L6 app helps you manage and report your concrete RH testing data inside a simple, user-friendly interface that runs on both Android and iOS devices. It allows the user to input specific information like job name, address and hole depth. The DataMaster L6 app can store pictures of blueprints that can be used to create a graphical overlay of the moisture sensor test site locations. Moisture readings can then be saved to the specified locations on the picture allowing for clearer visual representation of the testing report.

“The Rapid RH L6 system is a complete data collection, storage, and reporting system that provides fast, easy testing and comprehensive data integrity,” says Jason Spangler of Wagner. “The Rapid RH L6 system enables the fastest, simplest to use testing for ASTM F2170 compliance.”

The new Rapid RH L6 system is currently released in two kits: the Concrete Moisture Test Starter Kit+ and the WFP400+ Rapid RH[®] L6 Professional Flooring Installer Kit.

