



POLISHED CONCRETE REPORT

Despite some issues and misconceptions, polished concrete is growing steadily.

■ By Beth Miller

ENV design firm specified polished concrete for its CMM Certified Public Accountant office project in El Segundo, California.

For the last decade or so, polished concrete has been quietly displacing traditional floorcoverings in the commercial arena across a range of sectors. Once seen as only something fit for home centers and back-of-house applications, polished concrete has since become a sought-after flooring for its aesthetics, sustainable profile, perceived ease of maintenance and affordability.

There is a misconception that polished concrete is more affordable than most flooring, though in fact it can get expensive. While sealing concrete costs a bit more than, for instance, total installed costs for decent carpet tile, polishing can cost twice as much as sealing. And an overlay—a thin decorative layer applied to the surface of an existing slab made up of any combination of cement, sand or other additives blended with polymer resins—can run double the cost of polished concrete. In addition, concrete applications can bring a number of challenges, including poor acoustics, cracking, increased slip and fall risk, and discomfort underfoot.

A GROWING SEGMENT

The best estimates for the polished concrete market in the U.S. reveal that it accounts for close to 5% of total commercial hard surface flooring, or just over 80 million square feet. And even if all that polished concrete were at the lower end—basic Home Depot-style concrete as opposed to, say, fashion-forward Silicon Valley-style corporate concrete—it still adds up to at least a \$300 million industry.

In recent years, flooring contractors and designers across all sectors have become more familiar with polished concrete. Flooring contractors have started investing in this flooring

segment, while designers are continually coming up with new ways to use polished concrete as a design element. Jeff Knoll, senior associate and design director with New York-based Ted Moudis Associates, reports that approximately 40% to 50% of the flooring specified for the firm's projects—not including raised access flooring—is concrete. The corporate sector makes up 95% of Ted Moudis Associates' portfolio. Working primarily in the retail and corporate sectors, Rodney Stone, president of Environetics (ENV), a design firm based in Los Angeles, California, says polished concrete makes up 10% to 15% of the flooring specified for ENV projects.

At the top of the list of flooring categories displaced by concrete are carpet tile and resilient flooring, but it's impacting most categories to varying degrees. Mike Patton, owner and CEO of DSB Plus, a union flooring contractor based in the San Francisco Bay Area, says that in his region, he sees the tenant improvement sector as the biggest market for polished concrete. He notes that it is often combined with carpet tile, adding, "A lot of circulation corridors, high profile areas, and lobbies are going with polished concrete, and where the employees live and work are islands of carpet tile. Number two is higher education, and I would say equal to that is retail. Retail here on the West Coast has embraced the polished



Design firms like ENV are specifying more and more polished concrete in projects like Speedo's Los Angeles headquarters.

concrete look." Retail has traditionally been a strong market for carpet.

Knoll and Jenifer Colon, design director with Ted Moudis, see polished concrete displacing primarily carpet in the corporate sector. However, they also see it moving into functional spaces and back-of-house applications. As for front-of-house spaces, Knoll and Colon see it in reception areas, elevator spaces and lobbies.

According to Kevin Monroe, project manager and surfaces prep specialist with MasterCraft—a union flooring contractor in Plymouth, Michigan—the use of concrete was originally sparked by the green movement. It is considered a sustainable product and can even earn LEED points related to its long life cycle, neutral impact on indoor air quality and positive impact on lighting costs as a result of its reflectivity. At the end of its life, it can simply be overlaid with another floorcovering, rather than sent to the landfill.

While the sustainability story is an important one, aesthetics is the number one reason polished concrete is trending. Patton refers to the trend as "industrial chic." But even this trend is beginning to change. The concrete look is no longer considered only industrial, says Knoll, adding, "I think just being industrial depends on how you design the rest of the space. It can go in that industrial vibe, or it can go to a much more sophisticated and refined look. It's become a more universal material."

Whether working with an existing floor or a new pour, there are lots of available design options with polished concrete. The typical finish is simply a choice in sheen level with polish ranging from 400-grit (satin finish) up to 3000-grit (highly polished). A high polish produces a sheen that allows for reflectivity of lighting as well as provides a more sophisticated look. Stains can be used to produce different looks, like marble or even wood. Stains can provide some color variation, and color can also be added to the mix in a new pour. Concrete overlays offer the biggest selection of design options, including a monolithic, uniform look.

Knoll reports that Ted Moudis Associates does not utilize color and design in overlays very often. "In New York, everybody loves grey!" Knoll says. "We mostly use overlays to provide the same color and look as polished concrete minus the blemishes and unlevel floor."

Colon adds, "There are so many options with concrete. You can have something that's honed or heavily aggregated that

creates a little more of a non-slip texture. You can trowel-cut patterns in the floor. We can insert brass or zinc strips to create patterns. Also, they are casting the floors with materials such as wood, so you can have a textured wood floor in concrete. We see that more in walls, but you can also do that on flooring."

In the Southwest, color and staining are very popular, according to Emily Allen, principal with DPS Design, headquartered in Albuquerque, New Mexico. She notes that in order to fulfill a design request that uses color or staining, it's a lot of work on the part of the designer to ensure the quality of the design. "The challenge for us with colored concrete in any capacity is the preciseness of it," Allen says.

THE COST OF POLISHED CONCRETE

At first glance, it might seem more cost-effective to polish an existing concrete floor rather than, say, cover it up with carpet. However, carpet is not only inexpensive, but, along with many other floorcoverings, it can be installed with minimal tools compared to those used to polish concrete, which requires costly machinery for buffing and polishing.

Since the cost of polished concrete is directly related to the unique conditions of each slab, contractors and designers both agree that a definition of what constitutes a polished concrete floor must be established beforehand. Randy Weis, president of RD Weis Companies, a commercial flooring contractor headquartered in Elmsford, New York, says, "I think the biggest issue with concrete is that everyone's got a different definition of polished concrete. So, the polished concrete floor you see in a Home Depot might be \$2 per square foot, but, the one at Whole Foods, it might run \$12 per square foot." Clients must decide if what they want is simply a topical polish like what is found in stores like Home Depot, a traditional polish with a wide range of sheen levels or an overlay that can produce a guaranteed look. With each step up, there is a significant cost increase.

The cost associated with an overlay is double that of polished concrete. Stone adds, "Just sealing is expensive. In L.A., [sealing cost] is around \$4 to \$5 per square foot, which comes out to be \$36 a square yard. Polished runs about \$8 a square foot; that comes out to be \$72 per square yard. Putting in a decent carpet tile runs about \$32 a square yard."

Repairing gouges, holes and cracks can leave an existing concrete floor covered in patches. Overlays can be a viable solution for a damaged slab, but, in the case of cracking, even if an overlay is applied, it will eventually succumb to cracking.

Managing clients' expectations when discussing concrete must be done on the front end. Allen adds, "The owner has to have a very reasonable expectation of what the concrete floor is going to look like. Just like any other floor, you can have a bad installation, but with concrete, you can't rip it up and do it again." You can cover over it, however.

Colon says, "Some of our clients are okay with [marks and stains]. It's all about managing their expectations if they decide not to level the floor or not to put that nice clean top-coating on it. Some like the history behind the [existing

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floor]. Some clients still have markings from the construction on the floor.”

According to Stone, some clients think that polishing concrete will produce the same color grey throughout. “That’s the beauty of concrete,” he says. “It’s the beauty of natural stones. It has these imperfections that make it wonderful.”

Flooring contractors are tasked with this same discussion. In the case of an existing slab, flooring contractors will mark off a 10’x10’ area to polish. While this does provide the building owner with an idea of what the finished product will look like, concrete is poured in sections, so the look could change only 100’ away. Says Jeff Bennett with Business Flooring Specialists, a flooring contractor located in the Dallas-Fort Worth area, “You have to tell [owners], ‘This is an existing concrete floor. None of us have any idea how thick the slurry is on top and where the aggregate sits. The aggregate may be a 1/5” or an 1/8” under the slurry. It may be a 1/16” underneath the slurry. As we polish it, some areas may show a lot more aggregate where it looks like a terrazzo floor and other areas may have a salt and pepper look.”

Colon and Knoll also work to find a balance in the flooring specified for a project. Colon says, “When we specify materials, they all have to be in appropriate areas. We also have to think about the balance because concrete floors are a hard surface, so we have to make sure we balance that out with acoustical finishes.”



Business Flooring Specialists’ polished concrete mockup gives building owners an idea of what the finished product will be.

Additional costs must be considered when trying to remedy acoustical issues. According to Natalia Garcia, project designer with ENV, the costs associated with elements like baffles and acoustical ceiling tiles “would most likely not be necessary if another flooring were used.” And Knoll suggests, “If you’re looking for a budget project, carpet is probably still going to be cheaper.”

MAINTENANCE PERCEPTIONS

There is a perceived ease of maintenance with concrete that is appealing, although many in the industry admit that keeping concrete looking clean is not as easy as one might think. Eric Boender, director of Starnet Floor Care, says, “If you put together the annual cost of maintenance, I think what people think about is either the deep cleaning for carpet or the refinishing for vinyl floors [like VCT], but people forget to take into account the daily maintenance. You have to auto-scrub stained concrete or do some sort of mopping on a daily basis. Whereas with carpet, it’s more forgiving. The little specks and so forth can be hidden by carpet. With hard surface, it’s there. You can’t hide it. So, if you take the annual cost of maintenance, concrete is certainly not less than carpet. It would be more. Then, when you have to do the resurfacing, it’s quite expensive.”

And, again, it’s important that this factor be explained to

end users up front. Stone says, “Even though we are a design firm, we lean toward a practical approach, and budget is a concern with most of our clients. Very rarely do we have a client that’s concerned with the look and not as concerned with the budget.”

INVESTMENT CONSIDERATIONS

The demand for polished concrete has pushed flooring contractors beyond subcontracting the work or, in the case of smaller contractors, renting the necessary equipment for the duration of the project. In order to remain relevant and competitive in this growing segment, flooring contractors are taking the necessary steps to invest in higher quality equipment and skilled tradespeople. But this transition is not as simple as picking up a few pieces of polishing equipment and hiring a few workers.

According to Patton, his company took the necessary steps to build a concrete division that focuses on polishing, moisture control systems and floor leveling in order to keep up with the growing demand. Initially, DSB Plus subcontracted these services. Patton says, “Six or seven years ago, we experimented with subcontracting and quickly found that we could not control the quality and tempo by partnering with smaller service providers.” So the firm invested about \$200,000 in equipment, training and manpower.

Bennett followed the same path as Patton and came to the same conclusion, noting, “Subcontracting is a good way to test the waters in a local market area to gauge the overall demand before you commit a couple hundred thousand dollars to the effort.” Business Flooring Specialists ultimately took the plunge into concrete polishing, investing six figures in each of its Houston and Dallas-Fort Worth locations. “It’s been worth it; it’s been a very profitable market segment for us,” he adds.

The start-up costs for a contractor to enter the concrete finishing business can range from \$50,000 to \$250,000, depending on the scale of the operation. Recently, OSHA passed a regulation that requires contractors to protect their employees from silica while on the job or face steep fines. This ruling forced employers to invest in protective gear and new and safer equipment. Bennett notes that the regulations cost DSB Plus about \$40,000 to retrofit its equipment to meet the new standards.

Then there is the continual investment in training. MasterCraft’s Monroe reports that only approximately 10% of flooring contractors who participate in the polished concrete business go to the trouble to properly train and invest in their workers. Weis points out that the necessary skills required to pol-

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ish concrete can be gained in six months. However, it can take three years to reach what Patton refers to as "stasis"—meaning that the firm has in place a core team of skilled, trained workers that can be relied on day-in and day-out.

With the lack of interest by the younger generations in entering into a skilled trade, flooring contractors are challenged to come up with solutions that will turn potential candidates into skilled workers. MasterCraft, a union flooring contractor firm, visits high schools and recruits students into the business. According to Monroe, MasterCraft pays for the four-year apprenticeship, and students have the potential to make more than a typical college graduate once they enter the job force. In addition, the students graduate with no debt.

According to Curt Thompson, president and CEO of AggreTex, a member of the Fuse commercial flooring contractor alliance, "These alternative materials—polished concrete, polished overlays, resins and floor systems—are consuming a significant amount of traditional flooring space, and the contractor market has been frustrated in how to deal with that." For flooring contractors, the decision to enter the concrete business comes down to weighing the cost of entry against the risks associated with using subcontractors, who may not complete the work up to their standards and thereby tarnish their reputation.

Thompson goes on to explain, "Many [flooring contractors] are not equipped to polish 400,000 square feet but do need a way to polish 20,000 square feet in the office building where they are putting in LVT, carpet tile and ceramic. They can't tell their client they can only do 70% of the work."

AGGRETEX: DECORATIVE CONCRETE

At the recent Fuse Alliance Annual Conference, Curt Thompson of AggreTex debuted the company's new commercial interior products. Located in Livermore, California, AggreTex is a concrete company that specializes in decorative concrete — and more recently, interior overlays.

According to Thompson, with the rise of the alternative materials such as polished concrete, overlays, resins and epoxies, the days of "shabby chic" (also known as the industrial look) are giving way to a more sophisticated Art Nouveau look. Enter AggreTex.

Thompson says, "I'm delivering a decorative product that is functional. That's where the overlayment world is really going, because polishing an existing slab even if it's freshly poured is not an exact science. There is significant variation in height, which results in different levels of aggregate exposure." So, in addition to providing a more monolithic and decorative product, the AggreTex overlay products provide solutions for flooring contractors in the polished concrete segment.

AggreTex offers color in the overlay products as well as aggregate options. Since all the variables in polishing concrete cannot be controlled, the AggreTex products offer consistent color and texture while not giving up the physical attributes of polished concrete. Also, due to the uniformity, contractors are able to learn how to polish the products consistently.

Launching soon, a line of concrete tiles, called Precast Concrete Surfaces, can be formed to any shape and can include any color or aggregate offered with the pourable products.

Full-service flooring contractors like DSB Plus, MasterCraft and Business Flooring Specialists listened to their customers and acted accordingly. All three will also say that polished concrete is a big investment and should be carefully considered before taking the plunge. Patton says, "As we've seen in the flooring business before, things become popular. We as an industry create an oversupply of a popular new floor finish. The margins erode and then that floor finish fades away. It's something we want to watch because we have so much invested in it."

ROOM TO GROW

For all of the issues involved with polished concrete, whether it's cracks and patches, unrealistic client expectations or acoustics, its use in the commercial interiors sector continues to grow. Flooring contractors and designers are unsure of its future; however, they do have insights into potential opportunities for growth and offer ideas for the next big thing.

Dan Ulfig, president of MasterCraft, says of the current polishing equipment progression, "We are seeing people still inventing products to make this [process] smoother and better, and quicker and faster." He says there is a lot of room for developing new and better products, especially with the recent OSHA silica regulation. And he warns against removing the worker from the tactile experience of working with "manned" equipment versus placing him or her into a large machine with a dashboard.

In the case of working with existing floors that were never meant to be exposed, Kate Barone Dimock, associate with DPS Design, notes, "That's been tricky in terms of looking for products that can help us revive an existing slab and make it viable as a floor as opposed to something that gets slapped with a different type of flooring." Ultimately, the general consensus among the designers and contractors interviewed is that concrete is best used in its natural state; however, staining and overlays are becoming more popular on the West Coast. DPS' Allen says, "I think the technical nature of how much work it takes to dye it and pattern it and do all of those things—I don't know that that's sustainable as a long-term solution for concrete."

The irony in the polished concrete trend is that other flooring types are coming out with concrete looks—in LVT, porcelain tile, laminate and even carpet. ENV's Garcia also points to Concrete modular concrete tiles as a solution for some applications. The tiles are pre-sized and can be installed much like porcelain tile. As far as cost is concerned, modular concrete tiles are cheaper to manufacture, since they can be mass produced in a factory as opposed to being created in the field.

As for more uses for concrete in the future, ENV's Stone says, "We may see more concrete used on the walls—much like Venetian plaster walls."

DSB Plus' Patton asks, "What will the demand be in five years? Will these be a passing fad because of issues with sound transmission, comfort underfoot, etc? Or is it here to stay?" ■