



Beautiful Durability

Colored, stained or stamped, concrete finds its style

By Scott T. Shepherd
PATH Partners

Warm. Inviting. Inspiring. These words are not what clients think of when envisioning concrete – but maybe they should be.

“People have always thought of concrete as plain gray, but now there are so many design options available,” says Bev Garnant, the executive director of the American Society of Concrete Contractors, based in Dallas.

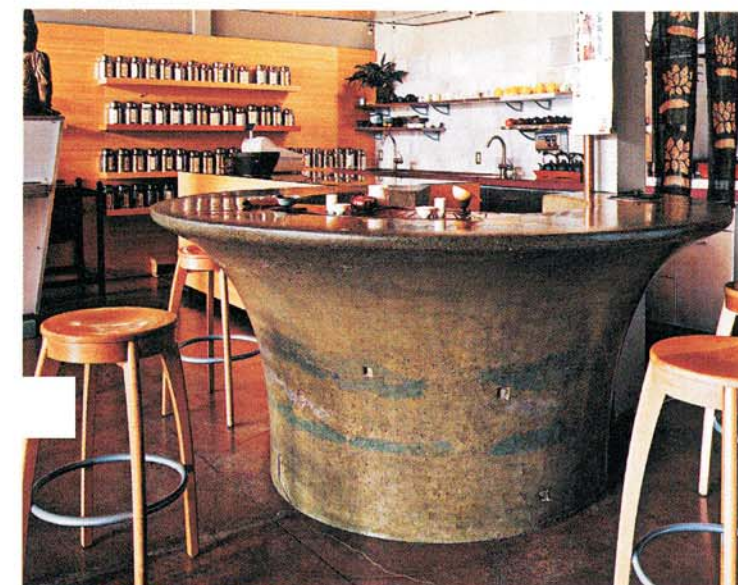
Concrete can be treated with stains or colorants to create a rich variety of hues and textures, or stamped with patterns to mimic natural surfaces from marble to wood planks. Applying decorative designs to existing concrete or new slabs brings new life to floors, walls, counters, walkways and patios. Combining beauty and creativity with economy and durability makes concrete a more appealing choice in non-traditional applications.

“Decorative concrete is growing at a rampant rate,” says Bob Harris, president of the Decorative Concrete Institute of Douglasville, Ga. “It’s no longer considered a niche market. It’s a mainstream market.”

Harris estimates that architectural or decorative concrete comprised about 3 to 5 percent of the poured concrete industry in 2004. He expects that number to reach 7 to 8 percent by 2007.

A look for everyone

Concrete design can be as simple as coloring walkways to match the surroundings, or as detailed as creating a surface that replicates granite, slate or terra cotta tile.



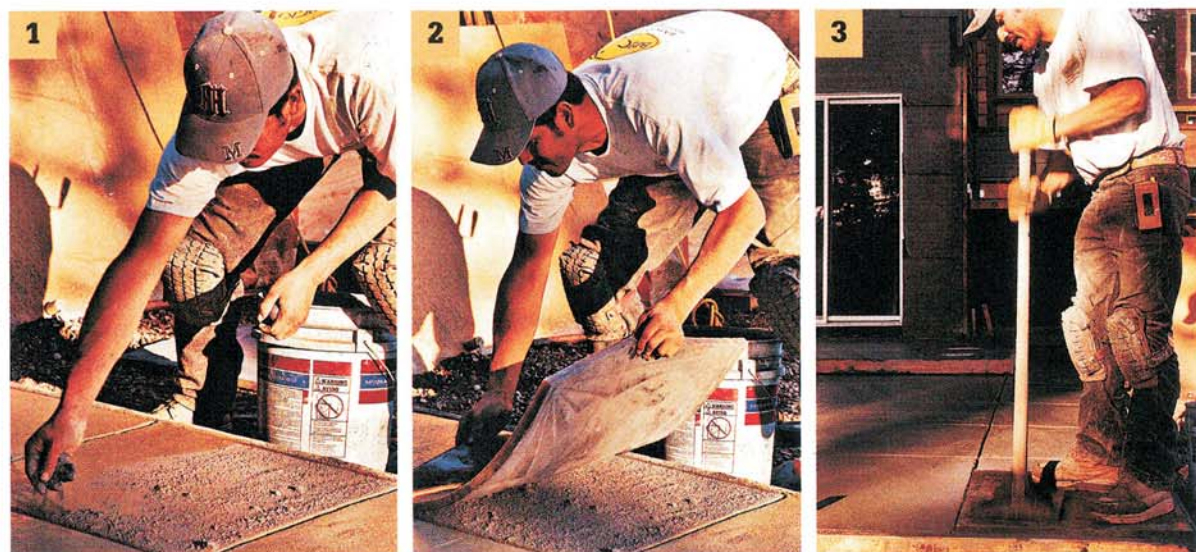
Concrete floors and counters, including the tea bar, unite this tea room in Albany, Calif.

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Scoring concrete with a circular saw and other tools can create geometric designs like this floor medallion at an Indianapolis home.

Photo by L.M. Scofield Company 2005



1. Spread the release agent before stamping. **2.** Position the stamp carefully to avoid scattering the release agent to the adjacent concrete. **3.** Distribute weight evenly to produce a uniform impression when stamping.

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Imperfections are far less detrimental to the appearance than they are to most other surfaces. Rather than concealing cracks or patches, contractors often leave them exposed to add character.

“One of the nice things about concrete is that it’s not perfect. You are going to have divots, you are going to have characteristic marks, you are going to have hairline cracks,” says Barbara Sargent, the owner of Kemiko Concrete Products in Leonard, Texas. “It takes on a character of its own.”

Coloring concrete: Colorant should be added during the mixing process to provide consistent and uniform tinting. Paints have a relatively short life expectancy applied to concrete. Stain, however, becomes permanent by lightly etching and bonding color to the slab. The effect is not always predictable due to lime leaching, weathering, surface texture or exposure to other chemicals.

There are three basic versions of concrete pigment: liquid, dry powder and granular. The liquid variety is often added to bags of ready-made concrete, while the powder and granular varieties are more common in larger projects because they can be affordably ordered from a mixing plant.

“By taking a basic tan and simply adding more or less of the pigment, you end up with different shades of that same color value,” says Harris. “You can also intensify the pigment by adding white cement to the mixture.”

Scoring: Skilled subcontractors can score the concrete, making shallow cuts (usually less than 1/8 inch) in the surface with a circular saw to replicate tile patterns or create

geometric patterns. The patterns can then be highlighted with contrasting stains.

“The scoring is nothing more than a saw cut in the floor to make an illusion of inlaid stone,” Sargent says.

She recommends that contractors place a border a few inches from the wall to prevent scoring lines from reaching the edge. This provides an even edge all the way around the room, and assures there is no damage to walls or other vertical surfaces.

Stamping: Using rigid or flexible patterns, textures of stone, brick, tile, wood planks, slate or other natural-looking paving materials can be imprinted into the freshly cast concrete surface. Many manufacturers offer 10 to 20 different patterns.

The imprinting tools range in size. You can mimic small, single stones or stamp patterns as large as 2x4 feet. Imprinting tools can cost up to \$300 each, and some manufacturers sell only to contractors they have trained in specific application techniques. Some techniques require that the surface remains workable for a few hours longer than usual.

“First, you color the concrete, and then you have to apply either a liquid or powder release agent before putting your stamp mats down,” Harris says.

The release agent – a combination of pigment, solvents and water repellent – acts as a bond breaker between the fresh concrete and the mold, ensuring that the concrete will not stick unevenly to the imprint and mar the design. The agent also can provide additional color contrast to the imprint.



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“For example, you could go with a light beige concrete base, then a much darker brown or black release agent,” says Harris. “When you stamp the pattern in, it gives the concrete a marbled look.”

Powdered hardening agents enhance surface durability from 3,000 to 4,000 PSI for standard 4-inch concrete to 7,500 PSI. In addition, a colored hardener sprinkled onto freshly placed concrete will concentrate the colorant into the top layer, creating a more intense hue than integrally colored concrete.

Sealing and waterproofing: The final step is to seal and waterproof the concrete surface. Manufacturers offer a broad range of products for different applications, from buffing waxes for interior floors to industrial sealers for high-traffic exterior settings.

Choosing a matching color wax or sealer for integrally colored concrete can intensify the hue and add gloss. Much like staining, adding a clear coat can bring out the depth and luster of the antiquing sheen or the diverse colors in the surface from chemical staining. Depending on how heavily a surface is used, sealers or waxes may need to be periodically renewed or reapplied. For an interior floor, maintenance might be as simple as occasionally mopping with floor wax.

Inexpensive, durable, versatile

Concrete design can be an inexpensive way to make a remodel really stand out.

“Some of the applications have a huge cost savings relative to other building-related materials such as slate, tile and granite,” Harris says. “With other applications, it’s either comparable or in some cases more expensive, depending on how elaborate the design and the color scheme you choose.”

Plain gray concrete costs about \$1 a square foot. Installed, it costs \$1 to \$2 per square foot depending on

Resources

- ▶ American Concrete Institute, www.concrete.org
- ▶ American Society of Concrete Contractors, www.asconline.org
- ▶ “Concrete at Home,” by Fu-Tung Cheng with Eric Olsen, Taunton Press.
- ▶ The Concrete Network, www.concretenetwork.com
- ▶ Portland Cement Association, www.cement.org/decorative
- ▶ ToolBase Services, www.toolbase.org



At this Lafayette, Ind., home, decorative concrete was cut to replicate bricks for the walkway. Photo by L.M. Scofield Company 2005

the volume of the project. You can purchase stain and wax for as little as \$0.25 per square foot, but special stain colors may cost \$1 or more. More complex projects may require a specialty subcontractor or a skilled artisan.

Pattern stamping costs also vary according to the complexity of the pattern and finishes. Stamping a simple pattern onto colored concrete may add \$2 per square foot to a patio or driveway, but may require the use of a specialist. A project involving specialized admixtures, complex patterns, color hardeners, release agents and grout joints might increase the cost of a slab by \$15 per square foot.

But on average, stamping and finishing increase job costs by \$6 to \$8 per square foot – which is still only one-third to one-half the cost of slate or granite. And unlike carpet, vinyl or wood floors, concrete does not tear, fade or dent.

It’s also very easy to keep clean, which makes it a great choice for allergy sufferers. One of Harris’ clients recently hired him to install decorative concrete flooring throughout her entire 3,000-square-foot home.

“The main reason she chose polished concrete is that she has serious allergies toward pet dander and dust mites. Concrete is a super clean floor,” he says.

For all these reasons, Sargent dismisses the perception of decorative concrete as just a trend.

“Economics is not trendy. Easy maintenance is not trendy. Practicality is not trendy,” she says. “Decorated concrete is here to stay.” **PR**

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