

# Commercial CONSTRUCTION

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## Polished Concrete Floors Can Help Reduce Maintenance Costs

Eneref Institute examines how a flooring system with an attractive aesthetic meets the sanitary requirements for Chipotle chain of restaurants.

As the shift towards earth friendly cleaning Products intensifies, consider that some floor surfaces will take to sanitary green cleaning more easily than others. But in today's economy building costs as well as maintenance costs play an even greater factor.

It's one reason why retailers and other building owners are replacing VCT tile with polished concrete floors. Not only does polished concrete require significantly less routine maintenance to stay sanitary and look shiny, but polished concrete can also take better advantage of new green cleaning technologies.

"Polished concrete has substantially improved our floor's sanitation in the restaurants' dining areas," said Steve Henderson, construction manager for Chipotle Mexican Grill. Henderson said that polished concrete floors are specified in the front of house dining area for three reasons: they reduce the floor's long-term upkeep, they increase the floor's durability and they offer a more attractive aesthetic.

In the back of house (kitchens and restrooms) Chipotle installs quarry tile. Initially Chipotle used stained and

sealed concrete flooring, but over time the floor developed a dull look and became more difficult to maintain.

"We had to polish our floors much more often at that time in order to

have a pleasing aesthetic appearance," Henderson said.

Like many owners, Chipotle has seen creeping increases in construction costs. As a result, the company is revisiting their interior dining room specifications looking for equal or alternate options. However since polished concrete flooring needs half the maintenance, and has a longer-lasting finish, Henderson says, the installation cost may be easier to justify than some other building products.

And polished concrete fits into Chipotle's sustainability thinking. Chipotle was green long before it was popular, seeking sustainable grown and naturally raised foods from farms that respect the animals, the land and



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the farmers.

VCT requires the laborious process of stripping the old wax off and then hours of buffing and shining the new wax.

“Over half of the floors we install are going from tile to polish concrete,” said Joseph Urbanic, president of Quest-Mark Flooring.

One reason that polished concrete is so sanitary is that the polishing technology itself adds to the sanitary benefits of the floor. The process is a multi-step, fine-grinding procedure that uses specialized high-tech resin diamond tooling, thereby reducing the surface area, or pores, that dirt can get trapped in. The floor has a very flat, smooth surface texture, so the dirt stays on top. It even requires less soap.

Many restaurants prefer polished concrete because it's more sanitary; while VCT can hold dirt and bacteria that hide in the joints between tiles.

Carpet requires hot water extraction equipment to maintain a sanitary condition. Bacteria and mould grow in carpet when organic material is introduced, like food spills.

Tile can be unsanitary if not cleaned well. The grout lines in ceramic tile col-

lect organic material because grout is porous if not well sealed. Tile also cracks. And tile has space underneath it that collects moisture under the floor, which contributes to mould growth. To be effectively sanitized, tile grout requires more dwell time than polished concrete - more contact time of the cleaner to the floor surface.

To maintain the high shine, customers are encouraged to stay away from the pads typical in the cleaning industry. Black pads can take the shine off the floor. Instead of the colored polishing and buffing pads, companies recommend a brush designed specifically for polished concrete, which does a better job and lasts much longer than pads.

For the best cleaning results, finding the right pH balance in a cleaner is crucial, Urbanic said.

“When we first got involved with polished concrete we experimented with pH neutral. It turned out that if you use a little bit higher pH product, it's a better cleaner. So now we are recommending a cleaner with a pH of nine.”

The floor is immediately accessible after cleaning so operations are not interrupted. There is no waiting time

for materials to cure such as with VCT waxes.

Both the installation and maintenance of polished concrete floors have positive environmental benefits. According to the Eneref Group polished concrete floors do not employ VOC materials, the sheen increases the room's ambient light, saving energy, and lastly, the technology increases the lifespan of the already existing concrete floors. ●



This article is an excerpt of the future Eneref report which assesses the impediments to building zero-energy urban communities in the US. A companion film documentary, The Eneref Project, will seek to demonstrate to key decision-makers how zero-energy communities can be commercially viable.