

Concrete . . . the New Carpet

By Bev Garnant

It used to be that all industrial floors were bare concrete, and all other concrete surfaces were covered with ceramic tile, wood, sheet vinyl, or VCT (vinyl composition tile). That was the scenario in offices, retail establishments, entertainment venues, schools and most other commercial and institutional facilities.

That is no longer the case. For several reasons, bare concrete is now being considered as a flooring option alongside “traditional” floor coverings.

Unlimited Choices

One reason for this new thinking is the myriad of options for “decorating” concrete: color, stain, polishing, incorporating logos and other designs into the floor, overlays, and much more. One California contractor offers clients over 800 colors of concrete. Colors can be customized, unlike carpet or tile. Contrasting colors can be used to designate different areas within a space, to meet ADA requirements. Different colors and textures can be mixed and matched for graphic interest and excitement.

Decorative concrete has numerous applications for both new and existing surfaces. If you must live with an old concrete floor, staining is an option. Or, you might consider an overlay (topping) that can be colored, stained, stamped, or stenciled.

Another option is to combine concrete with another floor covering to manage areas with specific needs, such as those receiving high traffic. An office lobby, for example, might be concrete overall, with an area rug in the guest seating space.

Low Maintenance

For the most part, concrete offers less maintenance than most floor coverings. Wal-Mart® has converted the specs for many of its stores from VCT to integrally-colored concrete. One of the major reasons is the ability to clean the floor with water and scrubbing rather than having to consistently re-wax.

Concrete can be colored, stamped and/or textured to mimic many other materials

Wal-Mart uses a sodium silicate treatment on the surface to provide easy clean-up and reduced maintenance. Pat Harrison with Structural Systems, Inc., Dallas, a concrete consultant working with the retailer, says they are investigating other surface treatments that may work even better. Wal-Mart has also found that they have fewer slip-fall claims with their concrete floors, another significant benefit.

Other retailers and restaurants are also finding exposed concrete to be a viable alternative to covering it up. Kroger®, the nation’s largest grocer, is changing from VCT to integrally-colored concrete in the majority of its stores. Chili’s restaurants have done the same in all of their public areas.

Environmental Concerns

Another benefit of bare concrete is the potential environmental and health issues that can surface with floor coverings. Carpet comes with indoor air quality issues from the chemicals in the carpet and those used to clean it. Carpet also harbors dust mites, animal hair, and other substances that can elicit allergic reactions. Concrete is an allergen-free substitute.

In addition to minimizing environmental problems, using concrete offers several inherent advantages. Durability is a significant sustainable attribute because concrete will not rust, rot or burn, thus requiring less energy and resources for repair or replacement. Concrete generates little waste because it is prepared and delivered for each specific project and can be readily recycled.

Reducing Fast Track Complications

Fast track, the construction delivery system used to complete building construction on an accelerated schedule, often causes other problems when a floor covering is applied before the concrete has an adequate time to dry. Problems range from claims for construction-schedule delays to lawsuits related to floor covering failures and loss of facility use during removal and replacement of the floor covering. Designers must contend with the moisture-emission potential of the concrete slab, protection of the slab from external water, and compatibility of the concrete’s moisture and pH with the specified floor covering and adhesive. Eliminating the floor covering eliminates these issues.

It also removes the potential problem of floor tolerance issues, particularly when hardwood or a resilient flooring is specified as the floor covering. Division 3 specifications for concrete floor flatness and Division 9 specifications for concrete floors to receive floor coverings are not compatible. Due to curling, floor flatness changes over time.

When the time comes to install the floor coverings, and the flatness measurement does not meet the Division 9 requirements (for Division 3 flatness is measured within 72 hours of concrete placement), the arguments begin over who will grind or patch the floor to bring it into Division 9 tolerance requirements, and who will pay.



Logos, designs, words and more can be etched into concrete

Cost Issues

It almost goes without saying that removing the floor covering step also shortens the construction schedule and often reduces the cost. In his book, *Bob Harris' Guide to Stained Concrete Interior Floors*, the author includes a cost chart comparing stained concrete with other architectural flooring options.

Harris shows that advanced stain applications using faux techniques and complex sawcut patterns are comparable to wood flooring and many ceramic and quarry tiles. Adding advanced decorative sandblasting or engraving to the stain application is competitive with lower-priced slate, terrazzo, and marble. A basic, one-coat application of stain with sealer compares in cost to the most inexpensive tile and carpet.

Meeting Concrete Appearance Requirements

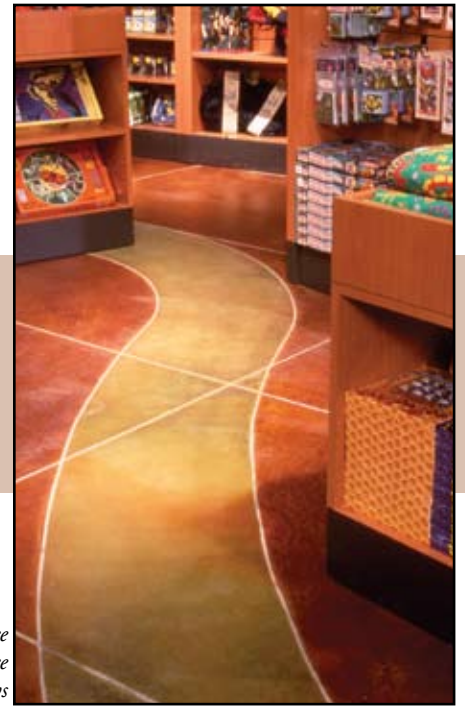
One challenge to using concrete as the finished floor has been the ability of contractors to meet the expectations of the owner and the architect. The best way for all parties to agree on appearance expectations is to construct a field mock-up and obtain approval prior to construction. Color variations for architectural slabs should be expected due to many causes, including: non-uniformity in mix proportions, subgrade preparation, choice of curing product, changes in age of placement, and job site conditions. A field mock-up provides the best method of converting specification language into visual acceptance criteria.

Concrete as a floor-covering option offers many benefits: shortened schedule, lower cost, easier maintenance, fewer environmental/health issues, and fewer trade conflicts, among others. Major construction buyers have recognized these advantages, and have changed their thinking to recognize concrete as flooring, not just as something to support it. ■

Bev Garnant is the Executive Director of the American Society of Concrete Contractors. The ASCC is a non-profit organization dedicated to enhancing the capabilities of those who build with concrete, and to providing them a unified voice in the construction industry.

All pictures are courtesy of Ahal Contracting Co., Inc., St. Louis, MO

More and more retail establishments are recognizing the easy maintenance that bare concrete allows



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