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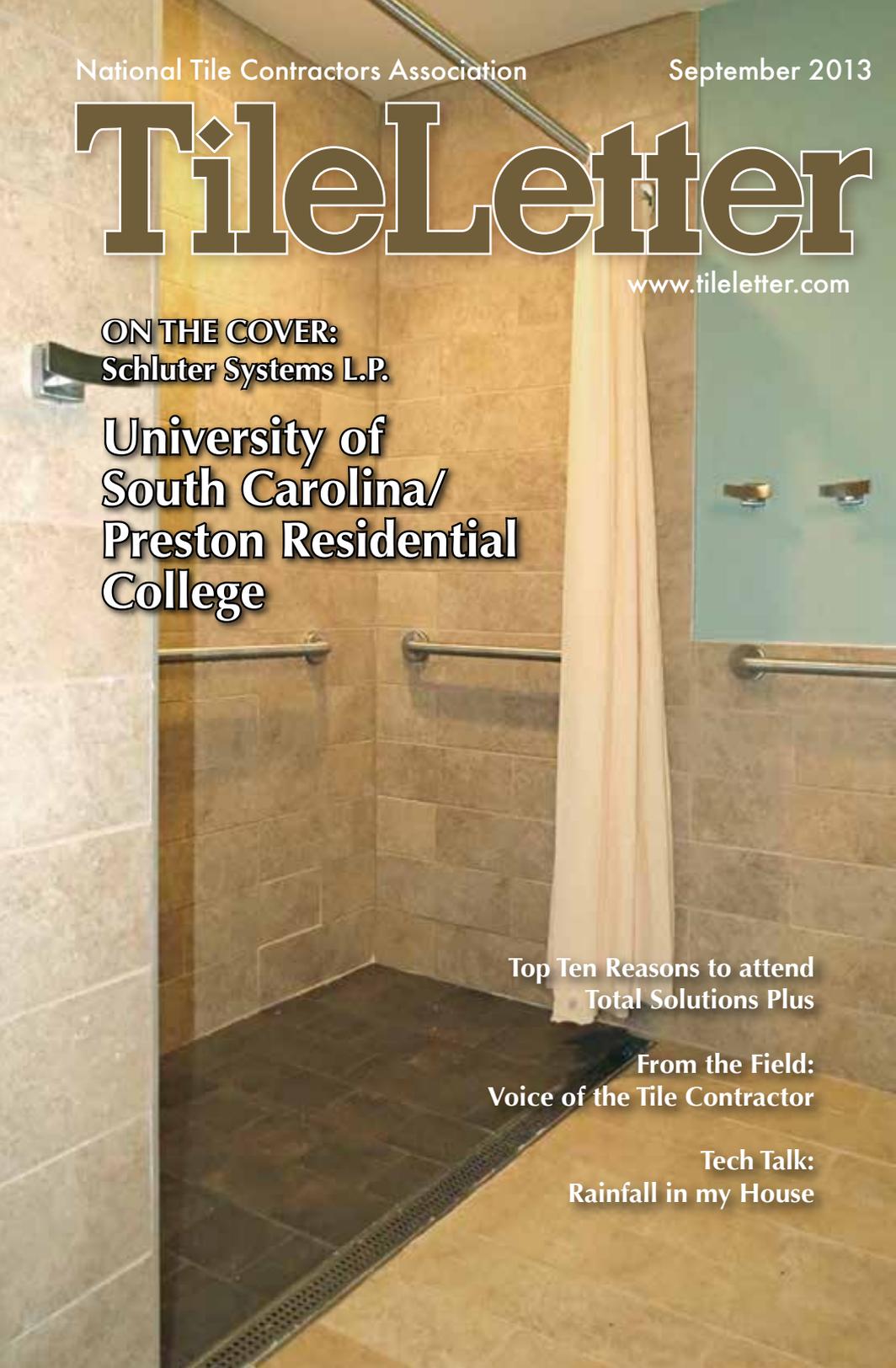
ON THE COVER:
Schluter Systems L.P.

**University of
South Carolina/
Preston Residential
College**

**Top Ten Reasons to attend
Total Solutions Plus**

**From the Field:
Voice of the Tile Contractor**

**Tech Talk:
Rainfall in my House**



Schluter products bring historical accuracy and modern efficiency to shower and bathroom renovations at the University of South Carolina/ Preston Residential College

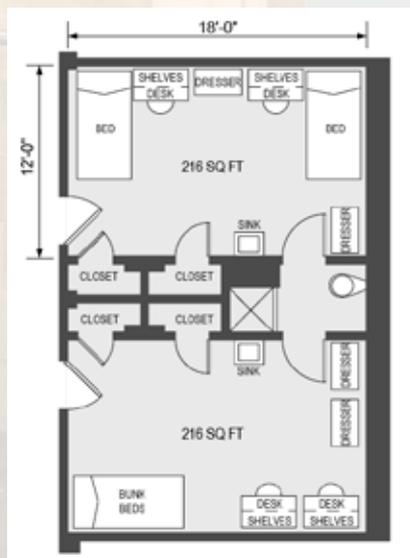
*By Sean Gerolimos,
technical director
Schluter Systems L.P.*

The University of South Carolina was founded in 1805 in Columbia, S.C., and has grown from a single building to offer over 300 degree programs to its 30,000-plus student body. Within the university, Preston Residential College provides a unique housing experience. The college is modeled after traditional residential colleges such as Oxford and Cambridge, with students, a live-in principal, and faculty advisors sharing living space, dining, educational and recreational activities.

Project overview

Preston Residential College was built in 1939 and accommodates 232 residents, with student living

spaces organized in suites. Each four-student suite is comprised of two 12' X 18' bedrooms, which



*Student living space layout – credit
University of South Carolina*

share a bathroom, including a shower stall. Renovations, spear-headed by Compass 5 Partners, LLC (see sidebar) included replacing the tiled showers, floors, and walls in each of the 80 student bathrooms.

Educational facilities have specific requirements with respect to renovations. In general, student housing must provide a clean and healthy environment. Ceramic tile is the ideal surface covering for these applications, particularly in bathrooms. However, it is essential that applications are properly designed and executed to ensure that the benefits of using tile are fully realized. Furthermore, scheduling and performing renovations can be difficult since the housing is typically occupied during all but the summer months. Therefore, this project required a reliable, durable, and fast installation method, which was found in the Schluter®-Shower System.

Application

The Schluter®-Shower System is a family of bonded waterproofing components that together form a completely-sealed system directly behind the tile covering to manage water in both its liquid and vapor forms. The integrated system eliminates leaks, reduces the potential for efflorescence and mold growth, and reduces installation time.

The existing showers, constructed using the traditional pan-liner



Shower prior to renovation

method – including floated mortar over masonry walls – were torn out and replaced. Floating walls with mortar offers tile setters great control over the final surface to be tiled. However, this skill is not commonly held by today's tile setters. Furthermore, it can be time-consuming and requires the additional step of waterproofing the surface if a sealed system is desired.

The Schluter®-KERDI-BOARD XPS foam waterproof building panel was chosen as an alternative to floating the walls. The panels were spot-bonded to the masonry walls to allow for adjustment during installation to achieve plumb wall surfaces and square corners. Once the panels were installed,

Architect's perspective

"During a 75-day summer construction period, the University of South Carolina renovated 80 residence hall bathrooms in Preston College using a comprehensive set of pieces from Schluter Systems, including Schluter®-KERDI-BOARD, Schluter®-SCHIENE, Schluter®-KERDI-LINE 5' linear drain, and Schluter®-DILEX," said Maryellyn Cannizzaro, AIA, NCARB, LEED AP, president & CEO of Compass 5 Partners, LLC. "Built in 1939, the concrete frame structure of the building included terracotta block and aerated concrete block as substrate for the new Schluter installation," Cannizzaro continued. "Deteriorated plaster finishes were removed along with multiple layers of the renovation from the past 75 years. Even in quirky conditions, the Schluter System installed easily to create modern, yet historically-respectful, bathrooms/showers that restored the superlative tile finish similar to the original and will last a lifetime."

Compass 5 Partners, LLC is a consulting firm that serves healthcare and education clients, specializing in planning, launching, management and design of construction projects. Their experience ranges from hospitals and related healthcare facilities to offices, residence halls, research labs, libraries, teaching facilities, ambulatory surgery centers, senior care facilities and much more. www.compass5partners.com

seams were sealed with Schluter®-KERDI-BAND waterproofing strips to create fully waterproof walls. Using this process enabled Watford Tile of Chapin, S.C. to bridge the gap between traditional mortar methods and modern bonded-waterproofing applications and meet the strict time constraints of the project.

Shower bases were constructed using either the Schluter®-KERDI-DRAIN point drain or the Schluter®-KERDI-LINE linear drain and corresponding prefabricated EPS foam shower trays. Both drains feature an integrated bonding flange to allow for connection to the waterproofing membrane at the top of the assembly. The linear drain allows for the shower base to be sloped on single plane, thus enabling the use of large-format tile.

A unique feature of the shower bases was the use of the KERDI-BOARD building panel to fabricate custom footrests and curbs. The shower compartments were relatively small and could not reasonably accommodate a full shower seat. However, a small corner foot rest (8" x 8" x 20") was designed to provide utility without taking undue space. The shower footprint was also maximized by using a 3" – wide curb. The panels were pre-cut offsite in controlled conditions to ensure consistency and minimize installation time.

The floors surrounding showers are routinely subjected to water

exposure. The rest of the bathroom floor may also be exposed to significant amounts of water in the event of overflowed toilets or ruptured sink supplies. As a result, the Schluter®-KERDI membrane was continued from the shower compartment throughout the bathroom floors and walls to provide comprehensive waterproofing.

Once the waterproofing system was installed, the showers were finished with porcelain tile. The Schluter®-SCHIENE profile with satin anodized aluminum finish was used to provide a clean edging for tile at outside corners in lieu of ceramic trim. In addition,

Schluter®-DILEX profiles were used at all inside corners to provide maintenance-free movement joints instead of using sealant.

Conclusions

“Preston College proved to be challenging, with the infusion of the new Schluter products and large format porcelain tiles in a historic structure,” said Steve Baker, Watford Tile Inc., a family-owned and operated business (watfordtile@aol.com). “With a great team on this project – from Maryellyn with Compass 5 partners, Chris with Penn Contracting, and Steve and Darryl with Schluter



Custom fabricated KERDI-BOARD footrest



Setting tile with profiles.

Systems – the project was completed with ease.”

The Preston Residential College bathroom renovation project is an excellent example of how ceramic tile can meet the specific requirements of an educational facility when installed with the right system. The comprehensive moisture management of the Schluter®-Shower System, combined with the customization and control of KERDI-BOARD, and clean finishing achieved with profiles, enabled this project to be successful in terms of both time and quality.

