

# Disney's Polynesian Resort receives rapid reflooring

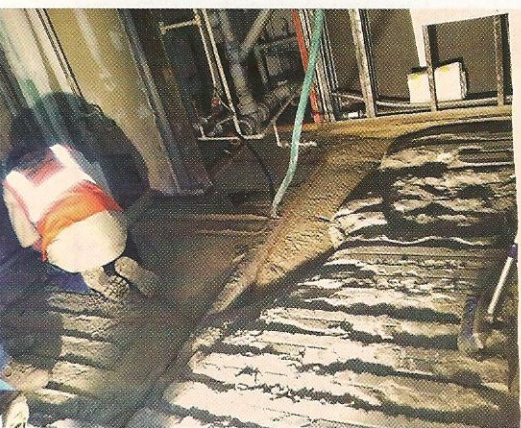
**At the Disney Polynesian Resort in Orlando, Florida, upgrades are a frequent occurrence to keep the resort updated for its continuous stream of visitors. Earlier this year, repairs were needed to the restroom floor areas of 162 ground-level rooms at Disney's Polynesian Resort, one of the original Walt Disney World resorts.**

*Jose Ruiz, CTS Cement Manufacturing Corporation, Cypress, California, USA*

The rooms were originally constructed approximately 40 years ago with a concrete slab on metal deck. Concrete was poured underneath the metal deck, which did not allow for even distribution of the concrete. As such, numerous problems have occurred through the years.

Approximately ten years ago, Disney cut out the metal in the living/sleeping areas and rebuilt the floors. At that time, the bathroom floors were believed to be fine. However, tile flooring in the bathrooms simply masked the rusting metal deck underneath that could no longer support the floor. As such, the bathroom floors needed to be replaced and Cornerstone Construction Services of Orlando was brought in to perform the repair.

*Below: Removal of old metal deck floor.*



## The repair procedure

The repair began in February 2013 to replace the ground-level bathroom floors in eight buildings. After the initial demolition of the floors, Cornerstone Construction's crews began work, with crews of ten men working day shifts completing six to 12 rooms per day. The repair involved saw cutting the existing metal out, cleaning up the concrete and then pouring new floors.

Known for its customer-oriented service, Walt Disney World has many unique requirements for construction work on its property.

Disney desired a fast schedule to complete the upgrades before the peak of the busy summer tourist season. Due to the project's fast schedule, use of traditional Portland cement was not possible.

As such, the team selected Rapid Set LevelFlor, a hydraulic cement-based self-levelling underlayment manufactured by CTS Cement Manufacturing Corporation (and distributed in Europe by German firm Korodur). LevelFlor allows for traffic to commence within requirements of the project.

"We chose LevelFlor because of our relationship with CTS Cement and our experience with previous Rapid Set products," says Jason Gonder, vice-president, Cornerstone Construction.

"We knew from using previous Rapid Set products that LevelFlor would hold up and be easy to use."

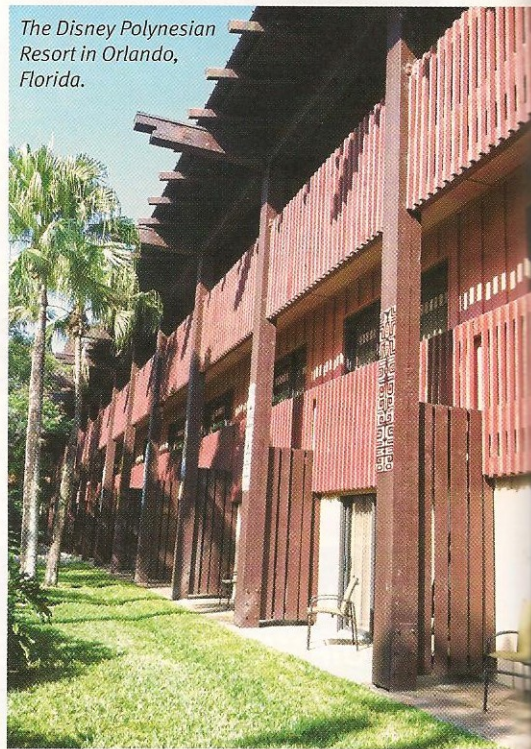
## Self-levelling

Cornerstone Construction is planning on using 4000 bags of LevelFlor for the project. LevelFlor is a hydraulic cement-based self-levelling underlayment (screed) that can be used both indoors and outdoors. It rapidly levels, maintains workability for 30 minutes and produces a smooth, strong surface with high bond strength. It is designed for fast-track application, so it can accept foot traffic in approximately four hours and be coated in six hours at 70°F (21°C). Cornerstone is using approximately 50 bags per room.

"Everything is scheduled by the hour, on an extremely tight schedule," says Gonder. "The plumbing contractor comes in immediately after us, as soon as they can stand on the floor, within 24 hours or sometimes less now that the hotter weather is speeding up reaction time."

After the old floor is removed, the voids in the floor vary anywhere from 1/4 to 5 inches

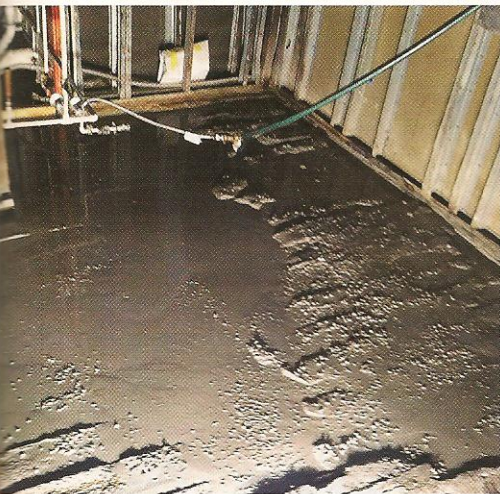
*The Disney Polynesian Resort in Orlando, Florida.*



*Mixing the screed.*







*Placing the screed.*



*Completed floor.*

(6–125mm) deep. A ratio of one 50lb (23kg) bag of LevelFlor extended with 25lb (11kg) of washed pea gravel is mixed in a portable mixer and poured in the deeper areas. The last inch (25mm) is a pure LevelFlor pour.

“Once you pour out the material, it self-levels,” says Gonder. “After that, we run a smoother tool on top. It’s a pretty simple operation.”

As per Walt Disney World’s requirements,

materials are stored in the parking lot, and all equipment is located in the hallways. Cornerstone Construction’s crews have transferred materials by hand to the rooms, unlike other projects where materials can be stored close to the worksite.

What’s more, Walt Disney World requires all construction work to be completed during daytime hours from 9am to 5pm, with special noise requirements.

Even though the project has been fast-track with limited working hours, the schedule has been maintained. Cornerstone Construction anticipates completion of the repair in Summer 2013.

“Tile will go on top of the new concrete floor, but once the product hardens you don’t realise we did anything,” says Gonder. “When it’s there, it looks like a concrete floor that’s been there forever.” ■