

Unstable Wall Secured, Given Face Lift



Above: Once the wall was secured, large, steel plates were visible and stuck out along the length and height of the wall. The question was how to make the wall more aesthetically pleasing. An affordable and attractive design solution was to sculpt layers of architectural shotcrete to give a fractured, sandstone look to the wall, then applying a stain.

Left: To secure the creeping wall, eight-inch diameter holes were bored into the soil behind the wall, then 80-100-foot-long cables lowered into the holes and grouted. Flat-metal rings were installed over the holes. By pulling on the plates with a large machine the cables forced the retaining wall back into place. Large steel nuts were then attached over each plate to secure the wall's position.

aesthetically pleasing. An initial thought was cast-in-place concrete to create a new face to the wall. Such an effort was considered too time-intensive and expensive. A more affordable and faster solution was sought.

Boulderscape had been involved with the project from the beginning and had a long-standing relationship with Baldwin Construction. Steve Jiménez, vice president of commercial sales at Boulderscape proposed a sandstone finish with some natural looking cracks could make the wall appear as if it were a recently excavated slope.

Photo simulations done in Photoshop showed what the wall would look like with a custom designed shotcrete finish. The Wal-Mart executives liked what they saw and the face-lift began.

There were three key steps. First they installed an eight-inch layer of structural shotcrete to the wall face section by section. A second architectural shotcrete layer one to three inches thick was then applied. While the shotcrete was still wet, artisans free-hand sculpted a fractured, sandstone look. The final step was an application of stain, which brought the colorless surface to life. The makeover took six experienced team members 14 days, typically half the time it would have taken with other types of wall finishes.

"Our technique is 30-40 percent less expensive than traditional cast-in-place form or form-liner finishes," Jiménez estimates. "It's also 40 percent less than an architectural stone veneer."

A popular Wal-Mart store in Corona, Calif. was surrounded by a large, stacked block wall 1,400 lineal feet in length and more than 20 feet high. Unfortunately, movement was discovered in the wall and the safety of several homes above and behind the wall was threatened.

Baldwin Construction, a drilling contracting company from Carlsbad, Calif. was hired to anchor and stabilize the wall. A tieback system was employed. Multitude deep holes eight inches in diameter were bored into the soil behind the wall, then 80-100-foot-long cables lowered into the holes and grouted. Large, flat-metal rings were installed over the holes. A large machine pulled on the plates, which then slid the cables, forcing the retaining wall back into its proper position. To permanently hold the wall, large steel nuts were attached over each plate.

Homeowners and Wal-Mart were pleased the wall was secure, but the wall now had a raw, unfinished look. Large, ugly steel plates were visible everywhere, sticking out sometimes 10-12 inches throughout the entire length and height of the wall.

The folks at Wal-Mart wondered how such a significant architectural element surrounding the store might be made more