



NATURALLY RETAINED

Precast walls provide aesthetic wall solution for high-end hotel.

By Lindsey Manthei O'Connor

Tucked into the mountains outside Rocky Mountain National Park outside of Estes Park, Colorado, the Della Terra Mountain Chateau is a uniquely beautiful setting for weddings and romantic getaways. So when the design of the Chateau called for several retaining walls, a typical cinder block look just wouldn't do.

Della Terra's owners focused on local designs and natural materials in the construction of the Chateau and wanted the look of the retaining walls to blend in with the natural beauty of the region. The design of the Chateau called for a 13-foot, 6-inch-tall retaining wall directly behind the main building. Because some of the windows of the Chateau face the wall, the owners of Della Terra needed a wall that would provide structural support, while matching the natural beauty of the views of Rocky Mountain National Park.

"We knew we were looking for a large block retaining wall when we called on Signature Stone in Greely. They asked, 'Have you seen this product called Rosetta? It's new.' The minute we saw it we knew we needed it," says Pam Amelang, co-owner and wedding site coordinator at Della Terra. "It's absolutely gorgeous and that's why we picked it."

PRECAST CONCRETE ELEMENTS

The Rosetta Hardscapes Outcropping Collection consists of large, precast concrete elements that weigh 200 to 2,000 pounds each and vary in height from 6 to 24 inches and in length from 2 to 6 feet. Each block has natural outcropping stone texture. The Rosetta forming system consists of steel forms lined with polyurethane molds taken from actual

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INFORMATION

For more on Rosetta, call 877.777.6558, e-mail, info@discoverrosetta.com, or visit www.discoverrosetta.com.

stones, with a custom vibration table to reduce the appearance of bug holes in finished blocks.

Sustainability also drove many of the design choices at Della Terra. By using Rosetta from local Rosetta precaster Signature Stone, Della Terra was able to save money on freight, as well as cut down on pollution. Rosetta was manufactured from natural precast concrete with aggregates extracted locally as well.

EXTENSIVE REINFORCEMENT

Shear Engineering of Fort Collins completed a design for the retaining wall behind the Chateau that included extensive reinforcement; however, the plans changed to incorporate huge precast concrete water tanks directly behind the wall that serve as a fire suppression water storage system. These six 10,000-gallon tanks act as the major support structure for the 13-foot, 6-inch retaining wall.

Brian Shear, P.E. with Shear Engineering explained that there was not enough room for geogrid behind the Rosetta components, so the design was modified to harness the mass of the water storage tanks as reinforcement. Because the storage tanks supported a majority of the load, the Rosetta wall was designed to retain the soil between the retaining blocks and the tanks.

Shear also designed a cutup swale above the water tanks to divert water runoff to either side of the retaining wall and keep it from pooling behind the wall. Since hydrostatic pressure is the number one cause of retaining wall failure, this was a critical step in keeping backfill materials dry and structurally sound.

The walls at the Chateau were installed by Hill Country Homes, a construction company owned and operated by Della Terra co-owners Darrell Amelang and Marty Miller.

“The walls went together beautifully,” Pam Amelang says. “The blocks were very easy to work with and stacked well. We worked on the walls only on the weekends and they went up very fast. The Rosetta stones went up way quicker than a regular retaining wall.”

WEATHERED LIMESTONE

The molds for the Rosetta block system are taken from heavily weathered natural limestone, which gives the blocks the look of natural stone with the dimensional consistency of a manufactured product. The blocks come in different shapes and heights—including a 6-inch-high block, a 12-inch-high block, an 18-inch-high block, and a 24-inch-high block—giving walls a random look but keeping design and installation easy. Rosetta is manufactured with integral color that can be matched to the local landscape.

To further enhance the look of the walls behind the Chateau, Hill Country installed a waterfall that cascades down the front of the retaining wall in one section. The waterfall creates a beautiful setting for wedding photos.

In addition to the retaining wall behind the 22,000-square-foot Chateau, the property required a retaining wall to create an amphitheater area for raised seating for outdoor weddings. The retaining wall supports raised tier seating similar to bleachers where wedding guests sit to watch wedding ceremonies. Seven rows of seating accommodate guests.

In total, 7,600 square feet of Rosetta retaining walls were installed at the Chateau. Signature Stone also manufactured a custom Della Terra retaining wall block to add an extra touch of elegance to the retaining wall behind the Chateau.

The Chateau opened on June 1, 2009, and by mid-August had already hosted 23 weddings. ■

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