

Retaining Walls Provide Repair for Flood-Damaged Roadway

In September 2013, floods ripped through Boulder County, Colo., massively damaging the roads.

A stream bank parallel to Lee Hill Road had seriously eroded and was threatening the stability of the roadway. Heavy trucks continued to use the road to deliver materials to other flood-damaged sites, and the city of Boulder needed a fast and permanent solution to fix the road.

"We had to get in and build a retaining wall that beat the spring runoff conditions. We were working against the clock on this and we needed a wall solution that we could build as quickly as possible," said Dan Beltzer, P.E., of Lois & Associates Inc.

After flooding in Boulder County, it is common for emergency temporary repairs to be put in quickly, with permanent repairs built later.

"On this project, Boulder County was interested in doing one repair, one time, and then being done with it," Beltzer said. "The Redi-Rock solution fit well for that, and we designed this gravity wall solution as a one-time fix [for] both the emergency and permanent repairs."

The Redi-Rock gravity system consists of 1-ton blocks that rely on their mass to retain the earth. The blocks stack

up like giant Lego blocks, making them easy to install quickly. Boulder's gravity wall consists of 28- and 60-in. blocks in the Ledge-stone texture. The wall reaches heights of about 12 ft and is engineered to withstand future flooding.

The Ledge-stone texture fit well with the natural surroundings. "Boulder County is sensitive [to using] wall solutions that are complementary to the natural area, and the Redi-Rock stones with this particular wall facing fit the bill," Beltzer said.



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COMMUNITY-FRIENDLY RETAINING WALLS

THE CHALLENGE:

Every day, stormwater professionals need to protect their communities while also keeping landscapes beautiful. This Santa Fe River project was able to accomplish both after river erosion started threatening nearby homes and businesses.

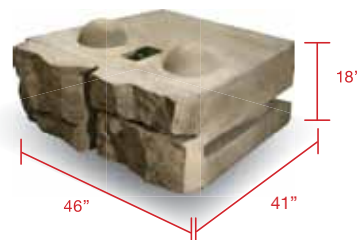


THE SOLUTION:

Nine-Inch Setback Redi-Rock® Ledge-stone walls were installed to match local stone and protect the community by creating a more gradually-walled slope.

"Redi-Rock was basically the only answer for the project. It fit all the aesthetic and structural requirements," said wall designer Don MacCornack, PE.

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5.75 square feet of face - 2247 pounds

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