

COLORADO RED MOUNTAIN PASS

OURAY, COLORADO

ROCKFALL

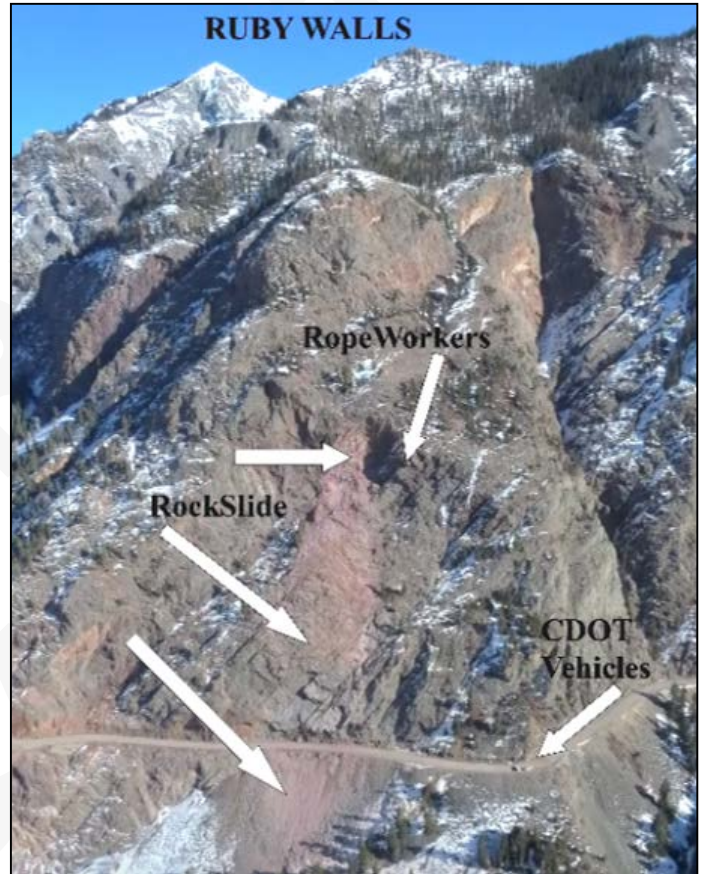
Product: [HEA PANELS](#)

Problem

On January 12, 2014 the Colorado Highway 550 between Silverton and Ouray was closed at night due to rockfall. The rockfall had occurred 2 miles south of Ouray. The crew cleaned the road during the night, and the next day at 4:30 pm due to continued rockfall. After investigation from a Colorado Department of Transportation (CDOT) expert, the rocks were coming down from a new source at 900 feet above the road. A rock slab, 15-ft thick and the size of a football field had come down the mountain. The loose rocks were resting on a slope of 35 to 45 degrees above the highway. Yenter Companies started scaling the rocks on January 16 from the top of the slope. The scaling continued during the Martin Luther King holiday weekend.

Solution

The highway was closed for a week. Due to the high instability of the loose rocks, it was too dangerous for the Yenter scalers to work on the lower section of the slope. CDOT contacted Maccaferri on to advise what material in stock



Client:

COLORADO DEPARTMENT OF TRANSPORTATION

Main Contractor:

Yenter Companies

Designer:

Colorado Dept. of Transportation

Products used:

Maccaferri HEA Panels

Date of Construction:

JANUARY 2014





Rolls of HEA Panel are rolled out for loading onto helicopter for installation

could be used to help stabilize the loose rocks. CDOT was looking for material with high tensile and punch strength, good flexibility, and high weight that could contain further rock movement.

Maccaferri suggested its High Energy Absorption (HEA) Cable Net Panels pre-attached with double twisted mesh in rolls of 12ft x 72ft. The Maccaferri HEA Hybrid Barrier System was chosen because it outperformed all other hybrid barrier systems recently tested by the Colorado Department of Transportation full-scale testing.

Due to the extreme urgency of the situation, Maccaferri had a truck load of HEA panels loaded on Sunday morning and delivered to the jobsite in Colorado by Monday afternoon. With the high risk due to the unstable loose rock, the rolls of HEA Panels were laid on the slope by the helicopter allowing the workers to work on top of the netting for lacing operation.

A total of 32 HEA panels were installed on the slope in three days, allowing the scaling of the slope to proceed with a lesser risk of accidents. On January 31st, the highway was reopened partially on one lane only after being closed for almost 3 weeks. A temporary custom-made barrier with HEA panels was installed at the toe of the slope for extra protection for the open lane. On February 10th, the road was fully reopened on one lane using traffic signal. The road had been close for almost 1 month and the total cost of the intervention was \$670,000.

Click here to contact our technical department for assistance on your project.

Maccaferri, Inc. Headquarters
9210 Corporate Blvd, Suite 220
Rockville, MD 20850
T: 301.223.6910
www.maccaferri.com/us