

I-40 Rockslide Causes Mountains of Problems

by:

**Corry Goumans
and
Dwayne Wallace**

Pacific Blasting & Demolition Ltd.

ABSTRACT

On July 1, 1997, a rockslide occurred on the I-40 in Hayward County, North Carolina that completely blocked all lanes and disrupted traffic flow in the region. Remedial measures were undertaken immediately in order to open traffic, however on-going geotechnical investigation revealed stability concerns that necessitated closing the highway to ensure public safety. Access to the top of the slope was available only from the bottom of the slide on the Interstate I-40. Excavation and trim blasting started from the top and along the west slope of the failure, however, additional geotechnical evaluation indicated that slope stability remedial measures were required to support the western rock slope mass.

Pacific Blasting and Demolition Ltd. was contracted to provide slope stability services on this challenging rock face. Slope stability work consisted of rock scaling, additional rock blasting, rock bolt and dowel installation, drain hole drilling and the installation of Brugg net rock mesh. The challenge was to safely stabilize the slope in the quickest possible time frame using specialized equipment and techniques to accomplish this feat. Approximately 10,000 feet (3000 meters) of rock bolts, 2,000 feet (600 meters) of drain holes, 23,000 square feet (2070 square meters) of mesh and 6000 feet (1800 meters) of cable were installed on the slope. This paper discusses the challenging work conditions and highlights the work performed by Phillips & Jordan and the specialized equipment and techniques used by Pacific Blasting and Demolition Ltd. to successfully and safely complete this project.