

County Road 17 (CR 17) is more than a rural roadway. It serves as a critical lifeline route connecting residents, businesses, visitors, and emergency responders to the City of Ouray when U.S. Highway 550 is closed due to rockslides, flooding, wildfire, severe weather, or other emergencies. At Corbett Creek, recurring debris-flow events repeatedly threatened the reliability of this essential transportation corridor.

The existing crossing consisted of two 48-inch culverts that were unable to safely convey the extraordinary debris flows generated in the steep mountain watershed. Massive volumes of mud, sediment, trees, and boulders large enough to rival small vehicles routinely blocked the crossing, creating safety hazards, maintenance challenges, and roadway closures. In extreme events, CR 17 became impassable, jeopardizing one of the region's only alternative routes into Ouray.

KLJ Engineering partnered with Ouray County to develop a resilient, long-term solution. Through detailed hydraulic modeling, roadway design, environmental permitting, and FEMA Hazard Mitigation Grant Program support, the team replaced the undersized culverts with a 20-foot by 10-foot reinforced concrete box culvert designed to safely pass debris-laden flows while improving roadway resilience.

Today, the improved crossing reduces closure risks, lowers future maintenance demands, and strengthens emergency access to the community. More than a drainage improvement, the project transformed a vulnerable hazard location into dependable infrastructure, ensuring that CR 17 remains a reliable lifeline when it matters most.

CR 17 CORBETT CREEK CROSSING IMPROVEMENTS

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Debris flow at Corbett Creek blocked the roadway, requiring several days of cleanup before reopening.



Two 48-inch culverts at the Corbett Creek crossing were unable to safely pass debris flows and typically required replacement after each event.



The new 20-by-10-foot concrete box culvert will safely carry floodwaters and debris under the road, helping keep this emergency route open during major storms.

