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Drilling to the Finish Line

The reconstruction of Runway 7R/25L at McCarran International Airport in Las Vegas involved paving a new runway, drilling 59,000 dowel holes, and epoxying the dowel bars into place in a little over six months' time. No small feat for any company, but ACME Concrete Paving Inc., Spokane, Wash., took on the challenge in partnership with Las Vegas Paving Corp., Las Vegas, the contractor in charge of overall site preparation.

The project, commissioned by the Clark County Department of Aviation, involved replacing the asphalt surface with a 10,500-foot-long, 150-foot-wide concrete pavement. Four separate 37½-foot runs were paved until the runway's total width reached 150 feet. The \$61.8 million contract also included work on associated taxiways and installation of a perimeter duct bank segment.

"This is a very large job and very fast paced," says Steve White, equipment manager for ACME Concrete Paving.

ACME used three Guntert & Zimmerman, Ripon, Calif., pavers to place the concrete pavement, as well as

Resting atop the concrete, the drilling equipment bores four holes at a time.



Pneumatic-powered concrete drills made it possible to drill the dowel bar holes without causing delays to the construction schedule. PHOTOS: ACME CONCRETE PAVING INC.

four belt placers from both Guntert & Zimmerman and Gomaco, Ida Grove, Iowa. However, paving was only a small portion of the project.

After the more than 210,000 cubic yards of concrete were placed, the dowel hole drilling began. ACME crews drilled 1¾-inch holes using six pneumatic-powered concrete drills from E-Z Drill, Stillwater, Okla. These four-gang slab rider drills rest on top of the concrete as they drill four holes at a time.

"When you get into a project like this, production is the key element," says White. "If you're not getting adequate performance, you need to go out and find another tool that will. We've been using the drills for about eight years now. They've been very productive and reliable, so we stick with them and continue to add more units to our fleet as needed."

After the dowel holes were drilled, 20-inch-long, 1½-inch-diameter dowel bars were installed with epoxy.

"Because of the extreme number of holes we had to drill, drilling and dowel bar placement was one of our biggest concerns going into the job. But that outlook changed pretty quickly. Everything has gone really well and the drilling turned out to be among the least of our concerns. Our drills have helped keep us in a good rhythm at a good pace," says White.

Once the runway was closed on Nov. 1, 2008, ACME and Las Vegas Paving had six months to complete the project by the May 1, 2009 deadline. With more than 100 people working two shifts day and night, ACME tackled the accelerated construction schedule. Most of the hole drilling took place at night, freeing up daylight hours for production tasks. **CC**