



by Jeff Griffin ■ Senior Editor

Massive Slide Rail System Keeps POMA Project On Track

The \$64 million Point of the Mountain Aqueduct (POMA) project currently under construction will help meet the increasing demands for water in Utah's Salt Lake Valley.

To install the 60-inch-diameter pipe that will carry as much as 77 million gallons of water per day between two water treatment facilities, general contractor W.W. Clyde & Co. is using a custom-engineered slide rail trench shoring system that is one of the longest systems of its type ever used on a project.

The slide rail system, supplied by United Rentals Inc. trench safety branch in Salt Lake City, UT, was designed and manufactured by Efficiency Production.

Slide rail shoring systems are becoming increasingly popular with contractors and owners of projects requiring installation of long runs of large-diameter pipelines. These systems provide an effective alternative when installations must be made adjacent to existing utilities and structures, and when it is necessary for trenches to remain open.

Tim Badberg, United Rentals branch manager, said the company's trench safety branches frequently rent slide rail systems, but the one for the POMA project was purchased by the contractor because of the length of time it would be needed.

"The POMA project is one of the largest slide rail systems that a United Rentals branch has ever rented or sold," Badberg said.

Badberg said two linear slide rail systems – each with approximately 400 feet of panels – are being used at different locations along the 12-mile pipeline route. United delivered the systems and, with Efficiency Production personnel, assisted in the initial installations. After that, contractor personnel move and install systems as construction progresses.

Unique configuration

The manufacturer confirms that the POMA project is utilizing one of the longest linear slide rail configurations ever engineered. Each system is 8-feet wide and from 16 to 20 feet deep and is configured with 24 bays with lengths ranging 12 to 16 feet.

Three complete systems are in use enabling crews to work simultaneously in different locations along easements throughout residential neighborhoods, and also in many areas to shore trench around numerous cross-trench utilities.

Each is a component shoring system comprised of steel panels similar to trench shield side walls and vertical steel posts. It is installed simultaneously as the trench or pit is excavated by sliding the panels into integrated rails on the posts – either double or triple rails depending on needed depth – then pushing the panels and posts incrementally down to grade as the pit is dug. Slide rail systems can be used in a variety of configurations such as a four-sided pit or linear multi-bay application.



With the linear multi-bay configuration used for POMA, spreader pipes are pinned-in-place to a set of parallel beams with rollers that slide down slotted rails on the inside of two linear posts, providing the cross-trench support. The configuration also utilizes custom engineered external walers. These huge I-beams are clamped onto the outside of the system over a length of several bays, which allows the parallel beam-spreader assembly to be removed to accommodate the extra-long pipe without compromising the safety of the shoring. Slide rail is a universal system, compatible with other prefabricated shoring systems for cross-trench utilities.

Badberg said the four external walers and sacrificial members were used rather than

parallel beams and spreaders to accommodate the 44-foot-long lengths of pipe allowing the trench to be properly shored while remaining open and unencumbered by cross beams.

Landmark project

POMA is being constructed by the Metropolitan Water District of Salt Lake and Sandy and runs from the Point of the Mountain Water Treatment Plant in Draper to the Little Cottonwood Water Treatment Plant in Sandy. The route is within public right-of-ways along existing and future streets, and along a dry canal.

Construction began in November 2004 and is scheduled to be completed in December 2006 with the first water passing through the new pipeline expected to reach users by June 2007.

United Rentals, the world's largest equipment rental company operates more than 740 rental locations in 48 states, 10 Canadian provinces and in Mexico.

The company also has become one of the world's largest suppliers of trench shielding and shoring equipment operating 55 trench safety rental branches which offer the latest technologies in steel and aluminum trench shields, aluminum trench shores, steel sheet pile with modular walling systems, steel crossing plates and custom slide rail systems such as the ones used on the POMA project. The branches also carry confined space ventilators, detectors and other equipment and offer 24-hour emergency response and professional safety training.

For More Information:

Slide rail systems:

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