



CASE STUDY

Canyons Water Tank | Parker, Colorado

BILCO Access Doors Help Colorado Community Confront Water Crisis

Nearly the entire state of Colorado wrestles with a shortage of water. A report in 2023 said that nearly half a million homes in the state could be without water by 2050. The 2023 Colorado Water Plan estimates a statewide supply gap of up to 740,000 acre-feet of water per year by 2050. "Colorado," the report said, "has been in a near-constant state of drought since the National Oceanic and Atmospheric Administration introduced the U.S. Drought Monitor in 2000."

One Denver suburb took a critical step toward keeping water flowing to its residents with a new five-million-gallon tank and pipeline. The Parker Water & Sanitation District's 13-month, \$14.5 million project in a region known as the Canyons had been in the planning stages since 2008.

"We need to meet our expanding service area and continuing water demand," said Project Engineer, Alex Sofranko. "It will provide additional storage capacity for the drinking water and will then go to our wellhouses and get pumped out to the tank and then into distribution."

Working with design engineering consultants, Providence Infrastructure Consultants (PIC), the focal point of the project was a 200-foot diameter, potable water storage tank and a 24-inch diameter welded steel supply pipeline that allows the tank to fully integrate into PWSD's distribution system. A nearby interconnect metering station was also incorporated into the system to facilitate water transfer between PWSD and neighboring Castle Rock Water.

The project's primary challenge was constructing the tank at the same elevation as an existing water storage tank in the district, located 10 miles to the east, to ensure proper functionality. PIC used triangulated satellite data to ensure accurate and matching elevations.

Among the important components of the project are four access hatches from BILCO. The project includes one hatch that is 7 feet by 12 feet and three that are 5 feet by 9 feet.

The hatches allow access to water quality probes, a tank mixer and level sensors, among other components, which are vital to the performance of the tank. Tank mixers, for instance, circulate water inside the tank to achieve water quality and consistent water temperature. By lowering the overall water temperature, mixing helps lower the tank headspace temperature and reduces



corrosion rates. Mixers can also blend variations in water quality going into water tanks to deliver consistent, stable water quality.

"We have tank mixers that are able to keep 5 million gallons of water mixing, so we needed large hatches for installation," Sofranko said. "Our contractor for this project selected the doors and they met the specifications for the project. We've used BILCO products in other projects and we've found them reliable."

The hatches include BILCO's engineered lift assistance for easy, one-hand operation despite the large size and weight of the covers. They also include automatic hold-open arms that lock the covers in the open position to ensure safe egress and are constructed with corrosion-resistant materials.

A BILCO Type KD floor access door was also included on this project which was secured by BILCO's manufacturer's representative, Dalco Industries.



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