

Lake Travis Raw Water Intake Tunnel

Austin, United States

Drilled shaft completion for new Texas water treatment plant



The project

A 30 foot by 30 foot raw water intake tunnel was planned for Lake Travis' new Water Treatment Plant. Keller drilled the shafts to allow pipe piles to support the structure.

The challenge

The main challenge was working from an offshore oil rig type platform, perched almost 70 feet above water and drilling down to a final depth of 263 feet.

The solution

Using a Wirth pile top reverse circulation drill rig, Keller drilled a 12 foot, 6 inch diameter shaft 90 feet into the bedrock stratum, with an overall depth of 263 feet from the drill platform to the tip of shaft. An IMT AF220 drill rig was used to drill 8 relief shafts, each with a 2 foot, 6 inch diameter to allow 3 foot heavy wall pipe piles to be driven 40 feet into the bedrock stratum. The installation procedures included the general contractor installing a 195 foot long, 13 foot diameter temporary steel casing through 100 feet of water and sealed 3 to 4 feet into rock. Beneath the casing, a 90 foot deep rock socket was removed using reverse circulation drilling techniques.

Project facts

Owner(s)

City of Austin

Keller business unit(s)

Keller North America

Main contractor(s)

Manson Construction & Engineering Co.

Solutions

Heavy foundations

Markets

Infrastructure

Techniques

Bored piles / drilled shafts