Micropiles

Micropiles are 12-inch or less in diameter and constructed using high-strength steel casing and/or threaded bar. Micropiles are designed to carry compressive or tensile loads and can exceed depths of 200 feet with loads over 200 tons. The micropile casing typically ranges in diameter of 5 to 12 inches and is made of high-strength N-80 steel. The casing extends to the top of the bond zone or it can be plunged several feet into the bond zone to provide a stiff cross section and limit elastic deformation of the pile under load.

Condon-Johnson & Associates (CJA) uses the latest technology and equipment for limited access micropile installation for virtually any location and every ground condition with minimal vibration and disturbance. Generally, micropiles are used when there is a relatively high tensile load requirement since grouting techniques allow much higher bond stress than conventional drilled or driven piles, excessive variation in the depth to soil or rock targeted for bond zone, and/or limited headroom. Our micropile drill rigs allow for installation in areas with low headroom and restricted access with minimal disturbance to normal facility operations. Micropiles are often additionally used to underpin existing buildings or to increase the bearing capacity for building upgrades or seismic retrofit.

CJA offers design/build services for micropile installation and works closely with engineers, contractors, and owners to ensure a pile cross section that meets the performance requirements of the structural engineer and an installation method that achieves the necessary capacity while minimizing the disturbance to building occupants and existing foundations.

Micropiles can be used to offer a cost effective way to provide tensile capacity to seismic upgrades, tensile and compression capacity to increase load carrying ability of new and existing footings, tensile and compression capacity to limited access work areas, and underpinning solutions for your earth retention challenges. For more information on the cost saving benefits, design build options, and CJA’s expertise on micropiles, please contact our nearest office location.