

Large-Diameter Piles

Using large diameter piles as the foundations of overwater bridges, and off-shore marine structures offers many advantages in regions of high seismicity. By proper selection of diameter and wall thickness, an optimum balance between stiffness and strength can be achieved. Under strong seismic motion, the piles will deflect and bend so as to reduce the acceleration forces transmitted to the superstructure, while still limiting drift. A major advantage of this concept is that the mass of the footing block is significantly reduced from that of a conventional foundation or even a gravity base structure.

Large-diameter pile application:

- **Bridge Foundations**
- **Ports, Piers, Wharves & Berths**
- **Fish Bypass Structures**
- **Loading Platforms**
- **Fender Systems**
- **Offshore Platforms**



Large-diameter pile installation for the Benicia-Martinez Bridge, CA.



Installation of large-diameter steel piles for the new Carquinez Bridge, CA.

Ben C. Gerwick, Inc. has more than 50 years of experience with design and construction of large-diameter steel and concrete cylinder piles. Gerwick has pioneered the development and application of large diameter piling, including off-site prefabrication and over-water installation of large foundation-substructure elements. Ben C. Gerwick, Inc. offers unique capabilities for the cost-effective design and construction of foundations and sub-structures for bridges and a variety of marine structures.



Large-diameter internal drill.



Hammer for installation of large-diameter test casings for the Benicia-Martinez Bridge.