



Key achievements

- Several of the 12 foot diameter shafts were drilled using a custom built, low clearance rig with a drill attachment in order to clear the 45 foot height limitation.

The project

As part of the Burlington Camden Reliability Project, existing transmission circuits were to be upgraded from 138kV to 230kV to support New Jersey businesses and residents. Seventeen foundations were required to support new towers at four existing sub/switching stations.

The challenge

The majority of the foundations were installed during short outages of the lines directly overhead and required working several weekends at multiple locations simultaneously. The reinforcing cages had to be set as once piece except at locations where the overhead limitations required the splicing of the cage over the hole.

The solution

The installation of the drilled shafts was accomplished with a variety of drill rigs, including a low clearance rig for the vertically restricted shafts. All of the shafts used a polymer drilling slurry and had concrete placed using tremie methods. Thirteen shafts ranged in diameter from 10-12 feet and were about 47 feet deep. Four 8-foot diameter drilled shafts were installed under a 44' x 44' x 5' square pad with a 12 foot diameter pedestal extending above grade. Upon completion, the slurry was either moved to the next drilling location for reuse or disposed of offsite.

Application

Deep Foundations

Technique

Drilled Shafts

Market

Power – Transmission & Distribution

Owner

PSE & G

Main contractor

Henkels & McCoy Inc.

Engineer

URS Corporation

Keller business unit (s)

Case Foundation Company