

## North Central Reliability Project

New Jersey

Keller implemented and followed stringent environmental protocols due to work occurring in residential neighborhoods as well as many wetland areas.



### The project

PSE&G planned to convert the existing 138kV transmission line to a 230kV transmission line between the West Orange Substation, Roseland Switching Station, and the Metuchen Switching Station. In order to do this, foundations needed to be installed to support the upgrade.

## The challenge

Almost all of the new foundations were installed under the energized 138kV line. The length of the project was approximately 30 miles and included a variety of drilling conditions, requiring rock excavation techniques, polymer drilling fluid, temporary and permanent casing, and dry-hole excavation.

## The solution

Keller installed 186 foundations for the project, consisting of 156 drilled shafts ranging in diameter from 7 to 14 feet with depths between 19 and 115 feet. The remaining 30 foundations were 10-foot thick concrete caps between 10 feet by 10 feet to 28 feet by 28 feet with 24-inch diameter rock anchors approximately 15 feet long each. The installation of the drilled shafts required low headroom equipment.

## Project facts

### Owner(s)

PSE&G

### Keller business unit(s)

Keller

### Main contractor(s)

Keller

### Engineer(s)

URS Corporation

### Solutions

Deep foundations

### Markets

Power

### Techniques

Drilled shafts

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