

REPLACEMENT BRIDGE NO. 791 OVER DUEY RIVER

San German, Puerto Rico



- **Owner:**
ACT – Local Highway Authority, San Juan, Puerto Rico
- **General Contractor**
TAMRIO, Mayaguez, Puerto Rico
- **Technique(s) Utilized:**
Drilled Shafts

Nicholson installed 33 drilled shafts for the foundation system of a new bridge in western Puerto Rico. The two new two-span bridges replaced the old three-span bridge. The drilled shafts are 36 inches in diameter and reach depths of 40 feet. The shafts were drilled using a Casagrande B130 machine. Shaft excavation was carried out using casing for the first 20 feet due to the presence of sands and gravels and using polymer slurry for the next 20 feet of excavation.

The pile testing included an Osterberg Cell load test resulting in a maximum sustained load of 606 kips. The soils at the test shaft location consisted primarily of alluvial soils underlain by varying strengths of weathered rock.

The work also included the extension of the piles up to the cap beam elevation.