



## Key achievements

- Completing the full scope of works under difficult soil conditions and exacerbated by access and program constraints with working around a major arterial route.
- This project was the winner of the Professional Services- Consulting Engineers Category at the KwaZulu-Natal SAICE Regional Awards.

### • The project

Piling, Lateral Support & Dynamic Replacement was required for the upgrade of the Mt Edgecombe Interchange. The main civil contract comprised of a four level interchange with the highest bridge being 1 600m long & 27m high with the next level to be 700m long & 18m high. There was a total of 8 bridges.

### • The challenge

Achieving tender productions was a logistics challenge working around and in between one of the area's busiest highways. In addition, lifting of the cages often occurs during extraction of the casings due to the tight tolerance between the reinforcement cage and the casing, and concrete workability period of only 1,5 hours. Mud rising in the casing due to back pressure also created serious challenges.

### • The solution

The scope of works consisted of 485 No 900mm diameter Bored Piles, 3 050m<sup>2</sup> of permanent & 4 200m<sup>2</sup> of temporary Lateral Support and 1 440 No Dynamic Replacement Stone Columns.

#### Application

Roads Infrastructure - Interchange

#### Technique

Bore Piles, Lateral Support & Dynamic Replacement

#### Market

Roads & Infrastructure

#### Client

SANRAL

#### Main contractor

CMC Ravenna

#### Contract Value

€ 3.4 million

#### Keller companies

Franki Africa – Central Region