

Project Profile

Gt Northern Hwy Big McPhees Bridge Replacement

Bridge replacement and associated roadworks in remote regional Western Australia

PROJECT DESCRIPTION

Delivered on time and on budget, the HAJV (Highway Construction and Albem Operation Joint Venture) successfully delivered this construct only contract involving the replacement of a bridge over Big McPhees Creek on the Great Northern Highway, 100km south of the remote regional town of Kununnurra, Western Australia.

KEY COMPONENTS

- Demolition and removal of the old single lane bridge;
- Construction of the new dual lane bridge (no.1306) on the same alignment; and
- Construction of 1.5km of bridge approach road on the Great Northern Highway.

SPECIAL FEATURES AND CHALLENGES

A major challenge included a critical time delivery to avoid the wet season. As a result the project was delivered within a very short timeframe.

Other features included:

- A local camp facility;
- A remote concrete batching facility;
- Installation of a raked piling system;
- Use of naturally occurring basecourse;
- Precast bridge girders were manufactured and transported from Brisbane;
- Specialist piling tools and equipment was used to form rock sockets at the pile bases; and
- Asphalt application to the bridge deck used a 'local' Darwin supplier.

PROJECT REFEREES

Arthur Phillips, Superintendent, Main Roads WA
Etienne van der Merwe, Superintendents Rep, Main Roads WA

CONTRACT

91/11 , construct only

CLIENT

Main Roads WA

LOCATION

Kimberley, WA

TIMEFRAME

July 2012 – Dec 2012

PROJECT VALUE

\$18.5 million

Bridge Statistics

- 3 x 21.6m long inner spans and 2 x 21.24m long outer spans (total bridge length – 108m) with an 8.2m width between kerbs;
- 4 precast prestressed concrete T-Roff beams per span;
- an insitu concrete deck supported on reinforced concrete headstock;
- 4 x 1200mm diameter steel-cased bored and reinforced concrete piles; and
- 4 x 1050mm diameter rock sockets per pier/abutment and concrete approach slabs.

