

# Project Profile

## Road and Bridge construction from Tom Price to Karratha (Stage One –Tom Price Section)

**Providing the first section of the new connecting road between Karratha and Tom Price in the West Pilbara region of Western Australia**

### PROJECT DESCRIPTION

Karratha is a City close to the port of Dampier in the Pilbara region of Western Australia. Originally developed in the 1960s it has undergone unprecedented growth due to the resources boom, fuelled by the iron ore and natural gas industries. Located some 100 km from Karratha (as the crow flies) is the mining town of Tom Price, home to FIFO workers and locals working predominantly at the Hamersley Iron Mine owned by Rio Tinto.

Prior to the Project's completion, the only sealed road between the two locations incorporated a long detour via the Great Northern Highway with average journey times of between 6 to 7 hours door-to-door. The more direct route was a rough unsealed road, primarily used by Pilbara Iron to access the railway between Tom Price and Dampier.

This Project represented the first of a number of stages of work to build a more direct sealed route for use by the general public and heavy haulage industries. It included the construction of a 25km section of road from Tom Price townsite to Nanutarra – Munjina Road and a new dual-lane bridge over Pilbara Iron's Railway.

### SCOPE OF WORKS INCLUDED:

- Earthworks (including rock excavations and fill), road construction and drainage for a 25km single carriageway road;
- Construction of a new \$2.4 million single span composite steel beam bridge over the Hamersley Iron Rail (on alignment approximately 600m north west of the Mine Road underpass) including reinforced earth abutments;
- Construction of side roads including portions of Hamersley Iron Access Road, Tom Price Spur Road, Nanutarra – Munjina Road, High Vehicle Detour, Mine Road, and an access road from the main alignment to Killawarra Drive;
- Construction of a concrete floodway with scour resistant concrete protected batters;
- An extensive drainage and culvert program;
- Connections to existing public and private roads;
- Stopping bays and rest areas; and
- Guard rails and fencing.

### CONTRACT

C498/01

### CONTRACT TYPE

Construct only

### CLIENT

Main Roads WA

### TIMEFRAME

Jan 2003 – Dec 2003

### PROJECT VALUE

\$21.6 million  
(includes \$2.4 million  
for bridge construction)



## SPECIAL FEATURES AND CHALLENGES

- Preparation and presentation of a rail safety plan to Rio Tinto and continued and extensive stakeholder liaison during works;
- Careful management of drilling and blasting adjacent to the railway line;
- Management of the work through the harsh cyclone prone season – a concrete battered floodway and extensive culvert program was built to counteract the potential for flash flood in this cyclone prone area;
- Development of a drilling program to identify water sources;
- Highway Construction designed the reinforced earth substructure for the bridge;
- Development of Aboriginal heritage site protection methods (including the protection of 12,000m<sup>2</sup> area of rocks);
- Excavation of 250,000m<sup>3</sup> of rock including drilling and blasting over 150,000 m<sup>3</sup> up to 18m depth; and
- Movement of 850,000 m<sup>3</sup> of fill with embankments up to 20m high.

### Awards and Accolades:

The project standard of work was highly commended by our construction industry peers.

