

SOUTH STREET | pedestrian overpass



Client: Main Roads Western Australia
Location: Leeming, WA
Value: \$3.26 million
Completion Date: June 2007

Built to provide safe passage to pedestrians across South Street, a major arterial road in the Perth suburb of Leeming, the bridge comprises of prestressed precast box girder beams with a cast-in-situ deck and a complex geometric cast-in-situ spiral ramp. The bridge was designed to be both aesthetically pleasing and functional to pedestrians and cyclists.

The bridge is easily identified by the yellow column supporting the footbridge in the median strip, the large spiral ramp on the northern approach to the footbridge and the straight leg ramp on the southern approach. The two alternative approaches were selected due to space constraints, leading to a challenging ramp geometry. A staircase was provided as an alternative on the southern approach but was avoided on the northern approach due to the compact geometry of the spiral ramp.



The cast-in-situ concrete spiral ramp built on the northern approach





special features

- The superstructure comprises of cast-in-situ concrete ramps on the two approaches and precast T-Roff beam spans over South Street
- A high degree of hog deflection was induced into the T-Roff beams spanning South Street in order to give the bridge a smooth appearance at the connection between the two spans
- The substructure comprises of cast-in-situ concrete columns and footings founded on bored reinforced cast-in-situ concrete piles
- Complex geometry of the spiral ramp required detailed formwork
- On South Street, the existing three lanes in each direction were kept operational during all works, with an exception to the beam erection. A complete closure of each carriage was required during the beam installation. This road closure required extensive traffic management including the use of detours and public notification advertising. Pedestrian safety was a key factor in the traffic management, requiring a temporary footpath to service the public at all times
- Other works comprised drainage, service relocation, lighting, fencing and landscaping.

south street - pedestrian overpass | page 3

BOCOL CONSTRUCTIONS PTY LTD

suite 13/7 kintail rd applecross wa 6153 / po box 80 applecross wa 6953
t (08) 9316 1148 / e reception@bocol.com.au / w bocol.com.au
ACN 008 904 005 | ABN 82 008 904 005