

# SULPHUR ROAD | road bridge over rail



**Client:** City of Kwinana

**Location:** Bertram WA

**Value:** \$1.64 million

**Completion Date:** March 2006

Commissioned for construction by the City of Kwinana, the bridge was constructed to provide access across the Perth to Mandurah Railway line to the new land development on the Eastern side of the rail corridor. Now a MRWA asset (Bridge No. 1580), it was constructed at the same time as the electrified railway line, involving moderately complex community and stakeholder interfaces with the Public Transport Authority, the contractors for the Perth to Mandurah railway and the Kwinana Train Station.

The single span bridge features a concrete footpath on both the Northern and southern alignment with a provision for road widening through the centre median. Due to the dual sided pedestrian access, electrification fences were installed on either side of the bridge, along with balustrade panels and four post guardrail.



## special features

- The bridge deck is composed of precast pre-stressed deck beams with a cast insitu concrete topping, supported on cast insitu concrete columns.
- The abutments were constructed of Mechanically stabilised Earth Walls (MSEW) panels assembled to form a curved face on the wings of the abutment wall. Backfilling works were carried out using select fill material.
- The foundation was composed of large spread footings
- All structural steel elements on the bridge were earthed and bonded to comply with the Public transport authority's specifications for structures adjacent to the electrified rail.
- Construction of the bridge was carried out over a railway that was, at that point of time, under construction.
- Earthworks associated with the bridge abutments included excavation in limestone cap rock.



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