

# Project Profile

## Great Northern Highway Widening & Upgrades (Stages 1A1, 1A2, 1B & 2)

### Upgrades to a major road transport link from the City to the mid-west and north of WA

#### PROJECT DESCRIPTION

Over the course of three years, Highway Construction undertook the reconstruction and widening of 8.5km of the Great Northern Highway in Upper Swan from Lennard Street to Apple Street.

Representing a major transport link to the mining regions of the Mid West, Gascoyne and Kimberley regions, completed works increased overall efficiency for heavy haulage vehicles and travelling public, by providing several overtaking opportunities, turning pockets, medians with sealed shoulders, as well as a signalised traffic intersection at West Swan Road.

With more than 150 adjacent access roads/driveways, works were delivered in staged sections to minimise disturbance to motorists in this highly trafficked semi-urban area.

- Section 2 (West Swan Road to Apple Street) January 2008 - June 2008;
- Section 1B (Haddrill Road to West Swan Road) October 2008 - May 2009; and
- Section 1A1 and 1A2 (Lennard Street to Haddrill Road) June 2009 - December 2010.

In some areas, the road was realigned providing a safer and improved journey for the general public and heavy haulage vehicles. The installation of off-road drainage and the construction of culverts also allowed improved water flow around the highway.

#### KEY COMPONENTS

- Reconstruction and widening of 8.5km of highway;
- Construction of 200,000m<sup>2</sup> of high strength pavements including HCTCRB, cement stabilised ferricete, and Full-Depth Asphalt;
- Installation of over 10,700m of stormwater pipe network with associated pits;
- Installation of street lighting and traffic signals at West Swan Road;
- Construction of medians, traffic islands, dual use paths and cycle paths;
- Construction of two special Spill Capture Units at either end of Swan River Bridge;
- Landscaping and environmental rehabilitation; and
- Treatment of soft ground conditions characterised by a high water table.

#### CONTRACT

291/07 (Stage 1A1 & 1A2)  
158/04 (Stages 1B and 2)

#### CONTRACT TYPE

R4, construct only

#### CLIENT

Main Roads WA

#### LOCATION

Upper Swan, WA

#### TIMEFRAME

Jan 2008 – Dec 2010

#### PROJECT VALUE

\$41 million  
(291/07 - \$24M)  
(158/04 - \$17M)



## SPECIAL FEATURES AND CHALLENGES

- Traffic management strategies due to high volumes of traffic (including heavy haulage) included the use of:
  - ◆ traffic controllers to allow plant to access the site and separate machinery from motorists and pedestrians;
  - ◆ temporary traffic signals and controllers at West Swan Road intersection during peak hours to maintain traffic flows;
  - ◆ traffic controllers at the Upper Swan Primary School to facilitate the arrival and departure of parents, teachers & children before & after school;
  - ◆ TL2 and TL4 rated barriers during construction to separate traffic from works and protect excavations;
  - ◆ constant management of numerous high wide loads and high percentage of heavy vehicles (20%) through the restricted worksite; and
  - ◆ night works to perform critical reconstruction activities at the West Swan Road bridge and asphalt operations.
- Rail safety management deployed:
  - ◆ a special three-stage construction process; and
  - ◆ use of accredited rail flag persons during construction at the West Net rail crossing north of West Swan Rd intersection (including using thick lift asphalt) to maintain two way traffic flow and rail safety clearance requirements.
- Substantial proactive community stakeholder engagement was used to manage disruption to landowners, a local primary school and road users through regular meetings held on site with stakeholders, the local Member of Parliament, and the school to ensure community needs were satisfied.
- Extensive liaison with landholders and businesses was also necessary throughout the construction period including the management of works to accommodate numerous events at Belvoir Amphitheatre.

## PROJECT REFEREES

Arthur Phillips, Superintendent, Main Roads WA

Mike Griffin, Superintendent's Representative (1B & 2)

Upali Don, Superintendent's Representative (1A1 & 1A2)

