

WOMMA ROAD BOX CULVERTS



LOCATION

Womma Road Penfield

CONTRACT VALUE

\$870,000

CONSTRUCTION PERIOD

July 2013 –
September 2013

FORM OF CONTRACT

AS2124-1992

CLIENT

DPTI/AV Jennings

PROJECT SUPERVISOR:

Luca Ragdona

REFEREE

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DESCRIPTION OF PROJECT:

T & J Constructions have completed a substantial amount of wetland and drainage work for the City of Playford and associated developers to ensure the long term successful drainage of the plains which have traditionally had significant flooding. This project required T & J Constructions to install box culverts under Womma Road within an existing inundated system.

PROJECT CHALLENGES:

1. Womma Road is a DPTI road and a B Double route and had to remain open (with two way traffic) throughout the process. T & J Constructions had to widen Womma Road, laterally shift the traffic to the newly installed road widening. Then we part built the culvert crossing, and backfilled to a trafficable surface over the newly installed culverts. Then we constructed the remaining culvert and downstream headwall. T & J Constructions completed a deep lift road reconstruction over the completed infrastructure.
2. The upstream swale has a significant catchment area and the works were completed during the wettest months. A temporary coffer dam was built to hold back water and pumping was required on several occasions to lower the water table.

KEY CONSTRUCTION PROCESSES:

Excavation for the twin cell box culvert was required at 4m from the road surface. Benching was required to ensure the excavation was safe and dewatering was required to ensure the subgrade was suitable for the poured box culvert slab. T & J Constructions poured the slab insitu to ensure an improvement in integrity of slab, smoother water flow and a better seal for the permanently inundated structure.

- Works involved in the project include;
- Complex Traffic Management
 - Service Protection in roads and Excavations
 - Deep lift Asphalt Pavements Pavement Construction
 - Cross and Longitudinal Drainage
 - Complex Environmental Risk Management
 - General Earthworks Exceeding 5m in cut or Fill
 - Mechanically Stabilised earth construction to a nominal 5m Height