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ORCHID GLEN SUBDIVISION, EDMONTON



Orchid Glen is a residential estate located in the township of Edmonton, approximately 18km from the Cairns CBD situated in a World Heritage area. The most recent stages under construction comprised of a culvert crossing over Blackfellow Creek and 25 residential lots. The scope of work included:

- Preliminaries
- 16,000m³ earthworks
- Revegetation works
- 4,800m² roadworks
- Stormwater drainage
- 600m water reticulation & trunk main
- 750m sewer reticulation
- Installation of electricity, lighting and telecommunications
- Soil and water management

Project opportunities and challenges included:

- **3m x 2.7m reinforced Concrete culverts**

These required extensive planning and consultation due to the onset of the wet season and interface with existing services. Sewer, electrical and communications service crossings had to be installed under the base slabs which necessitated a collaborative approach with the design team to accelerate the construction of these. The culverts themselves were constructed following extensive consultation with various environmental stakeholders including the Department of Fisheries and Cairns Regional Council environmental staff. Fgf constructed two separate base slabs with a rock filled central channel which would facilitate fish movement during high flows – an eco-friendly solution in an environmentally sensitive area. Adherence to a tight construction program resulted in minimal weather impacts despite site being subjected to significant flows at times.

- **Trunk Water Main**

The trunk water main involved connection to the existing 300mm and 200mm trunk mains, installation of a 300mm aerial crossing and significant input into the design solutions for these and the their interface with the other structures and services installed on site.

- **Earthworks**

The bulk earthworks for the project required fill to be sourced from future stages to remediate an existing borrow pit. By working closely with the engineers, fgf identified areas where excavation effort was able to be maximized. Fgf were also able to suggest changes to batters to maximize lot values for the client.

Location:

Cairns

Client:

Private Client

Civil Engineering

Consultant:

Jacobs

Duration:

September 2014 –
March 2015