



Client
Translink

Year
2015

Value
\$2m

Location
Brisbane, Queensland,
Australia

Ernie's Roundabout Bus Layover and Driver Facilities

CIVIL & ENVIRONMENTAL / GOVERNMENT / HYDRAULICS

Brisbane, Queensland, Australia

ADG identified that there was no architectural finishes information provided as part of the data transfer and followed up with Translink to avoid reinventing the wheel.

ADG identified that the building class was 10A and therefore meant that the requirements that we need to meet were significantly less onerous than Translink thought / had used previously.

ADG highlighted that an Environmental Scoping Report needed to be undertaken at the site. This identified significant issues that needed to be closed out. The ADG early identification meant that the design program milestones were all still met.

ADG collaborated with Energex to identify that the existing site power supply was insufficient to power the facility but came up with an alternative power supply arrangement resulting in significant cost savings for the client.

Due to flooding issues associated with the site, the bus driver facility was required to be raised which had not been done before.

ADG were able to move away from the specified design recommending a different flooring arrangement to be adopted, eliminating formwork erection saving significant time and money for the client.

ADG incorporated lighting and entry door designs that were again a departure from specified design.

ADG identified that the 50mm step down between the lunch room and the AC/Comms room was not required resulting in time and cost savings due to enabling a significantly simpler construction methodology to be adopted.

ADG were able to add significant value in their role as the lead consultant on this multidisciplinary project in one of the busiest locations in the Brisbane Road Network.

With no existing water and sewer property connections in place, ADG came up with innovative low cost solutions that were approved by the relevant authority to enable the connections to occur.

Understanding the amount and concentration of existing services in the road and the road verge on Bowen Bridge Road based on the as constructed information, ADG were able to collaborate with the client to agree on the critical importance and potential extents of the potholing required to provide robust design documentation.



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ADG identified that if buses were to circumnavigate the roundabout, this opened up the full length of the available area hence enabling more bus parking to be realised.

ADG also identified that storm water treatment (quality) is not providing any real benefit, and therefore again collaborated with the client to agree to significantly scale back on this item in the design to save the client significant cost.

ADG were able to accommodate the hydrologic conditions imposed by TMR into the bus driver facility design with minimal changes. As the building was now required to impose little or no impedance to flow and change to existing adjacent afflux levels during flood events, while catering for debris loading, ADG changed the structural support system from blockwork to a minimum number of 100 x 100 SHS's with cross bracing on screw pile foundations. To enable to make this happen, ADG also changed the above floor level cladding to a lightweight alternative to minimise dead loads imposed on the structure, but still meeting the maintenance minimisation, hardwearing criteria outlined by the client.

The ADG team also introduced timber poles and overhead catenary into the design for the bus layover lighting and underground electrical services susceptible to impacts of tidal/flood water inundation to negate corrosion and maintenance of hot dipped galvanised iron poles and associated infrastructure. Similarly, the ADG team came up with the idea of extending the existing CCTV network on the adjacent overpass structure for the same reasons.

ADG identified that the existing asphalt pavement depth, integrity and extents are in accordance with our layout requirements and therefore with a minimal amount of corrective work, further cost savings are available to which Translink agreed. Although the existing roundabout pavement and storm water protection elements are piled, the ADG team identified alternative solutions again saving the client a significant amount of money.

To avoid potential abortive and expensive rework iterations, the ADG team also identified that there are a number of ambiguities/unknown in the as constructed electrical information provided for the design and therefore initiated a series of site visits with the relevant organisation representatives to close these out to ensure that the design is done right first time and to avoid potential delays to the Energex approvals process.