Installation, Test and Commission PDH Transmission Systems for the Perth City Link Rail Project

The Challenge

The Perth City Link Rail Project is a $360 million rail project which is part of the overall $609 million Perth City Link infrastructure project. The rail project involved:

- Sinking of approximately 600m of the Fremantle line between William and King/Lake Streets in the Perth CBD
- Creating a new platform at Perth Station adjacent to Roe Street
- Creating a new tunnel under the northern end of Barrack St bridge to service the new platform at Perth Station
- Extending the existing Joondalup line tunnel roof from Lake to Milligan Street to be in line with the new Fremantle Line tunnel
- Creating a new pedestrian underpass connecting the Perth Underground Station to all the platforms at Perth Station

To support the radio services installed to provide coverage to the new Fremantle line tunnel and various parts of Perth station, a transmission system was required to carry voice circuits from the Public Transport Centre in East Perth to the Perth Station. Titan ICT Consultants were engaged to install, test and commission a PDH transmission system in order to support the voice mobile radio system.

The Result

Titan provided an experienced project team to deliver the following services for the project:

- Challenges
  - Project management, installation, test and commissioning of a PDH transmission system to support voice circuits provided for radio coverage of the new 600m Fremantle rail tunnel.

- Solution
  - We provided a telecommunications transmission system to seamlessly integrate with the current operational network to cater for the requirements of the new tunnel associated with the sinking of the rail line.

- Benefits
  - Provided PCLRA with the technical expertise and past experience with PTA required to successfully commission and deliver the communications transmission system. This enabled PCLRA to integrate all systems and deliver the opening of the Fremantle rail tunnel with minimal disruption to the general public.
Procurement including all transmission equipment and associated materials required to successfully integrate the system to the existing Public Transport Authority (PTA) network.

Project management services including compliance with the project HSE requirements, project quality assurance requirements, mobilisation of personnel and materials, project reporting and liaison with the final user (i.e. PTA) and other Contractors on site.

Installation and configuration of the transmission system equipment to PTA communications standards. Included the integration of the system to existing PTA network management and SCADA monitoring systems. Titan performed the configuration of the existing network management system to include the new nodes.

Production of test and commissioning documentation to satisfy the quality requirements of PCLRA and technical requirements set by PTA.

Provision of a commissioning engineer to manage and perform all tests to PTA communications satisfaction and overall bringing of the equipment into service.

Production of handover documentation including site handbooks to meet PCLRA quality assurance requirements

Conclusion

Titan provided the necessary resources to provide engineering, procurement and project management services during the implementation phase of the project. The project involved tight time restraints as it was expected by the end user that the rail tunnel become operational during a five day public rail system shutdown.

Titan successfully commissioned the transmission system prior to the shutdown enabling PCLRA and other Contractors to complete their parts ensuring the shutdown was successful with minimal disruption to the public.

For more information contact

Mike Stegena on 08 6467 0600 or
titanict@titan.net.au