

CASE STUDY

Bayside Rail Project (BRP) – Caulfield Covered Walkways Project

LOCATION:	Caulfield Railway Station, Melbourne, Australia
CLIENT:	Metro Trains Melbourne (MTM)
DATE COMPLETED:	December 2016



Introduction

As part of Metro Trains Melbourne's (MTM) on-going programme to improve the railway network, Global Rail Australia (Global Rail) was awarded the contract to deliver the installation of the new covered walkway structures at Caulfield Railway Station.

After a very competitive tender process, Global Rail was awarded the contract in Mid-2016, for commencement on site in August 2016. The works formed a key project milestone for the overall Bayside Rail Project.

The scope involved the various complexities with working around a live railway environment. Caulfield Railway Station is one of the busiest in the Metropolitan system in Melbourne, with –up to 25,000 commuters a day passing through the station. Works involved a mixture of day and night shifts to minimise impact on the station, which was required to remain fully operational at all times.

Global Rail undertook to provide two new Heritage-approved walkway cover structures, fabricated and installed to provide weather-proof covering to the existing access ramps (north and south sides) to the underpass at the station, including all associated mechanical and electrical (M&E) services to the structures. The provision of modern state-of-the-art lighting was a key feature of the project.

Having a multi-disciplinary workforce including rail, civil and structural installation expertise, M&E, and general construction capabilities, along with in-house project management, allowed Global Rail to provide a compelling bid, deliver on programme to the client's expectations and produce a high-quality final finish to such a visible and keynote project for MTM.

The Deliverables

Global Rail provided a fully managed programme of works, effectively coordinating with station staff and all other stakeholders to achieve full compliance with all relevant quality, safety and railway standards, based on the following scope of activities:

- ① full project risk management, including coordination of relevant risk workshops with client and stakeholder involvement, prior to commencement of works on site;
- ① preparation of a detailed programme of works to take into consideration the requirements of after-hours working and non-standard work shifts, along with the specific coordination and communication requirements with MTM's station operational staff and their rail corridor safety personnel;
- ① site mobilisation including the erection of all relevant delineation, fencing and on site amenities. Delineation of the work site was a key component of the works due to the station being fully operational at all times;
- ① service location, survey and site investigation works;
- ① installation of the specialised "screw pile" foundations for the canopy structures;
- ① erection of two fully enclosed scaffold tunnels and working platforms. This formed the basis of the methodology for undertaking the works, as it provided full safe delineation between the public and commuters, and the working platform areas above;
- ① off-site fabrication, and delivery to site of the structural steel components for both canopies;
- ① erection and rigging of structural steel canopy frames;
- ① on-site painting of structural steel components;
- ① installation of roofing, gutters and downpipes;
- ① installation of all relevant service runs for lighting, communications and OCS;
- ① installation of state-of-the-art architectural ceiling finishes;
- ① installation of new state-of-the-art lighting; and
- ① provision of all quality and as-built documentation.

Challenges and Solutions

The major challenge on this project that required a huge amount of attention at all times was the interface with the public and commuters. The project was to be undertaken in a busy railway station, with constant interaction with the public. The safety of both the public and the workers was of paramount importance.

In consultation and agreement with MTM, a bespoke methodology and works staging plan was developed for the project including all relevant site access management arrangements.

For the southern canopy location (off Normanby Road), a fully enclosed scaffold tunnel with working platform above was first constructed so as to provide full delineation between the construction site and the general public.

This had to be done first up, as there was no alternative route for commuters into the station underpass on the southern side. The major steel erection works were undertaken on night shifts so as to minimise any risks with interaction with the public, and for ease of delivery and lay-down of the steel.

For the northern canopy side (off Sir John Monash Drive), the methodology was slightly different. The steel was to be erected first on night shifts, with the scaffold tunnel and working platforms installed afterwards. During day shift works, only staged closing of the access ramps was allowed, and this required particularly detailed planning and coordination.

Due to the close proximity of the canopies to existing overhead power lines, some temporary isolations were used. Specialised mobile cranes were used during steel erection to provide a dynamic and adaptable methodology for the works.

Challenges and Solutions

To ensure that standards in these regards were maintained, Global Rail undertook regular audits of their systems, documents and site housekeeping to maintain the health, safety and wellbeing of all those coming into contact with the project.

By managing internal and subcontractor resources carefully and on an hour by hour basis, day to day risks associated with the ever-changing live rail environment were managed and mitigated.

Attention to detail is something that Global Rail prides itself on. This project has been no exception, seeing quality control of the highest level. All works have been delivered to the highest standard. This was critical to the success of the project, and the continuation of the relationship between MTM and Global Rail.

The Benefits

By appointing Global Rail as a single point of contact for the project, MTM was again provided with the surety of a contracting organisation that would fully manage the project and the complex interfaces on its behalf.

Global Rail, with its multi-disciplinary workforce and in-house project management, provided a compelling bid, delivered to the client's expectations, and produced a high-quality final finish on such a keynote project for MTM.

Employing a contracting organisation deep-rooted in the railway industry aided the planning and understanding of the unique complexities of working in a live rail environment.

The completed project will leave a lasting legacy on the Caulfield rail precinct and the surrounding area, and will play a key part in MTM's plans for reinvigorating the rail precinct in the future.