MIDLAND HIGHWAY

South Sections

CIVIL CONTRACTORS FEDERATION EARTH AWARDS

Date: **Aug 2021 to Feb 2024** Principal: **Dept of State Growth** Project Value: **$84.5M**

TASK

Following on from a successful Early Contractor Involvement (ECI) process, Shaw was engaged by DSG to complete the safety upgrades to the Midland Highway in two sections near Ross and Oatlands. The works included the generation of a new road configuration to allow for the installation of wire rope down its centre. Over 32km of the Midland Highway were upgraded by these works.

Works centred around the widening of the Midland Highway to generate a larger median and to support formalised overtaking lanes. Poor ground approach conditions were encountered for significant portions of the works which required innovative solutions to manage the volume including the use of lime stabilization in lieu of subgrade replacement. Supplementary structures such as Reinforced Concrete Box Culverts were required as well as interfacing with existing bridge structures. Over 58km of wire rope and guard rail safety barrier was installed along with over 480,000m^2 of new seal applied to the project.

CHALLENGES

This project was subject to a significant volume of compulsory acquisitions to permit the road widening. Shaw had to work closely with DSG and relevant landholders to resolve these issues with the works. While DSG could use its legislative powers to complete this activity, Shaw engaged a landholder management strategy such that this was completed sensitively and without further disquiet from landholders. Additional to this issue was the requirement to liaise with TasNetworks to see the relocation of significant volumes of their assets. These relocations took significant time to negotiate and Shaw needed to work cooperatively with both TasNetworks and DSG to ensure delays did not materialise.

The works needed to be completed whilst the road was under traffic. Shaw was able to deliver innovations to project delivery which meant that traffic could be maintained under seal for the majority of the works. That notwithstanding, the works needed to be completed over long distances which had the potential to significantly slow traffic times along the Midland Highway.

CHALLENGES Cont'd …

A strict time delay protocol was put in place for the works and Shaw was able to implement traffic management solutions which maintained these requirements. Furthermore, Shaw was able to accelerate the works such that works sections were completed in advance of anticipated timeframes. By increasing operational speeds earlier, delays experienced by road users were minimised.

The works required the widening of significant areas of the Midland Highway over the nominated sections. In many cases, the subgrades were not of a requisite standard to immediately accept embankments and pavement layers. Whilst the traditional method of subgrade replacement was specified and completed for sections of the highway, Shaw sought alternate methods for subgrade improvement. One of these included the use of lime stabilisation which meant that existing materials were not removed rather reconditioned. Whilst this mitigated the subgrade removal requirement it also reduced the volume of truck movement required to remove and replace materials. Shaw also worked with DSG to meet a materials balance on the project. There were significant volumes of cut experienced on the site which were transferred to embankment fills across the project site. Reducing importation of materials not only reduced traffic volumes to the Midland Highway, but also reduced the project's environmental footprint.

OUTCOMES

The works were successfully delivered across the 32km footprint of the project. While at times there have been significant impacts to traffic along the Midland Highway with respect to travel timeframes, Shaw's expert delivery programming and construction strategies has meant that these impacts have been minimized including the earlier than anticipated delivery of sections of the Midland Highway.