

JUNE/JULY 2009

ROADS

AUSTRALIA'S ROAD MANAGEMENT AND CONSTRUCTION MAGAZINE

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BRIDGES & CULVERTS

funded by the Federal and Tasmanian Governments.

Federal Infrastructure Minister, Anthony Albanese, says replacing the bridge is the first of many projects included in the package which is designed to upgrade roads across north east Tasmania.

"The Australian Government is committed to investing in road and rail projects which will improve freight transport supporting the forestry, mining, manufacturing and agri-food industries that are essential to Tasmania's economy.

"The bridge will provide a critical link for the forestry freight network in the region," Mr Albanese says.

The bridge contract is being managed by Dorset Council and construction work is being undertaken by VEC Civil Engineering. The project is expected to be completed by mid-2010.

BARWON HEADS BRIDGE RECONSTRUCTION

Work has started on the \$40 million reconstruction of the Barwon Heads

Bridge at one of Victoria's most popular tourist destinations.

The original bridge, crossing the Barwon River between Barwon Heads and Ocean Grove, was opened in 1927.

State Roads Minister, Tim Pallas, says the reconstruction will preserve the iconic status of the bridge as well as ensuring it provides a safe and practical solution to traffic needs in Barwon Heads.

"This bridge has served the community well so far, but it is close to the end of its life. In 2006, it was assessed to have only four to six years remaining. We need to act now so the bridge remains a safe gateway to this beautiful part of Victoria, with any further delays potentially jeopardising the main link between Ocean Grove and Barwon Heads."

A new architecturally designed pedestrian bridge is being built alongside the reconstructed road bridge to allow people to ride and walk safely across the Barwon River.

Mr Pallas says VicRoads has tried to ensure the upgraded bridge balances its

historic appeal with its role as a key road link.

"We are delivering the two bridge option because a single bridge could not incorporate the heritage features with the structural improvements needed to make the bridge safe.

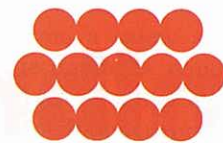
"We will also make sure the local environment is protected, particularly the Ocean Grove Spit, with measures such as fencing off areas to protect flora and restricting construction vehicle access to the beach and foreshore dunes."

The reconstructed bridge is expected to be completed by the end of 2010.

PRECAST CONCRETE CULVERTS REPLACE STEEL PIPES

The Reinforced Earth Company (RECO) recently designed and supplied precast concrete culverts to Gosford City Council to replace former steel pipe culverts at Piles Creek and Leask Creek at Somersby, near Gosford.

The road embankment and corrugated steel culvert at Piles Creek had failed following heavy rain in June



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TechSpan® precast concrete arch segments are used to construct a new culvert for Piles Creek, Somersby



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2007. Inspection of other culverts in the catchment found that a similar steel culvert at Leask Creek also needed to be replaced.



During investigations into reinstatement of the road embankment, Gosford Council determined that concrete arch culverts, with concrete headwalls would provide the most durable solution for the culvert replacement.

The two new culverts were designed and supplied by RECO using its proprietary TechSpan precast concrete arch system. Suitable moulds for the arches were already available from a previous project, and required only minor modification to meet the particular design

requirements of the new culverts at Somersby.

RECO's Engineering Manager, Chris Lawson, describes the TechSpan system as a "bridge in a box", as the components are easily transported and easy to assemble. TechSpan arches can be adapted to suit specific project requirements in terms of spans, heights, loading and longitudinal tunnel geometry such as curvature and grades. The arch system can also be seamlessly combined with concrete-faced reinforced earth retaining walls.



On the construction side of the project, RECO project coordinator, Bryan Stralow, found the project scheduling to be a challenge due to tight time limits between precasting and

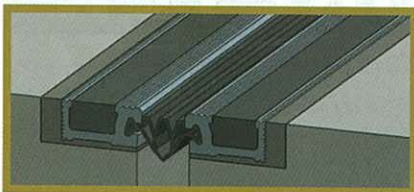
delivery. This was complicated by the thoroughness of site preparation where rock levels had to be adjusted so that the stormwaters would flow exactly according to the design. Due to the sensitive nature of the project, the client required a full time site presence by RECO personnel. As such, Project Technician, Patrick Webb, was based on site for the duration of construction at Leask Creek and oversaw the arch installation and backfilling, working closely with council's construction contractor. Mr Webb's involvement helped ensure the design and construction specifications were being met.



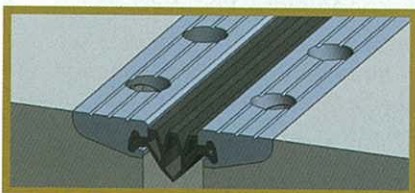
The TechSpan system has a range of applications in road, rail and mining infrastructure. TechSpan offers advan-



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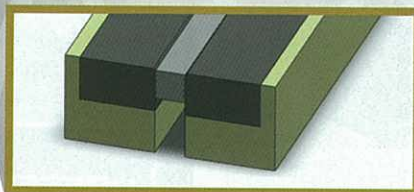
BJ1 - Bolted In Bridge Joint



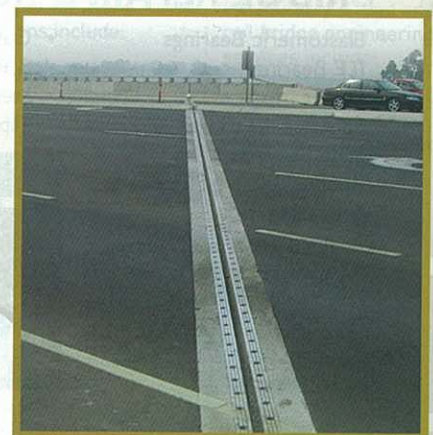
BJ6 - Cast In Bridge Joint



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