

ON THE ROAD AGAIN

DEVELOPER : Major Road Projects Victoria
MAIN CONSTRUCTION COMPANY : BMD Constructions
CONSTRUCTION VALUE : \$207 million



The \$207M Thompsons Road Upgrade includes duplicating Thompsons Road between Dandenong-Frankston Road and Berwick-Cranbourne Road, construction of new signalised intersections at Western Port Highway, McCormicks Road and Evans Road, building more than 10km for shared walking and cycling path, the removal of the Thompsons Road level crossing, a six-lane bridge to be built over the railway line, and major service relocations and upgrades including power, stormwater, sewer and drainage.

The Thompsons Road Upgrade project is a \$207 million investment by Major Road Projects Victoria which involves the upgrading and duplication of a 12km stretch of Thompsons Road between Dandenong-Frankston Road and Berwick-Cranbourne Road, as well as two new bridges over a railway line, a bridge over a local creek and the upgrading of three roundabouts to signalised intersections.

“Stage 1 involved grade separation, removal of boom gates and 1km of roadworks at either end,” said Daniel Rose, Project Manager at BMD Constructions, the main contractor for the project. “Stage 2 started in December 2017 and involved 10km of roadworks. Both stages ran concurrently from December 2017.”

The remaining sections of new lanes on Thompsons Road were opened in June 2019 which saw the end of major construction activities, with landscaping and works to replace an additional roundabout at Frankston-Dandenong Road ongoing.

The project involved significant infrastructure works in a busy location near Melbourne and as such posed challenges in minimising disruption to the surrounding communities. “The Western Port Highway/Thompsons Road intersection was a 2-lane roundabout and was being converted to a signalised intersection while still retaining traffic flows,” said Daniel. “This required complicated planning and night works. We diverted traffic in the evenings over a three week period to complete all the asphalt works. At the end of each night we opened it back up to traffic.”

Another challenge involved minimising the impact of the works on railway operations. “We built two new bridges over the railway line which were part of the Victorian Government’s level crossing removal programme and we had to build them with minimal timetable disruption,” said Daniel. “We worked at nights and on weekends and also tried to coordinate shutdowns with other projects happening on the network to maximise the available working time and minimise the effect on the travelling public.”



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The removal of the level crossings along the busy thoroughfare has made a big difference to motorists who no longer have to wait at the boom gates, especially during peak periods. BMD Constructions worked with their subcontractors to bring innovative approaches to the project and achieve a superior result.

“Our subcontractor Fulton Hogan, used electronic averaging beams on the asphalt pavement to take out irregularities and bumps and ensure good rideability,” said Daniel. “They also used live bottom trucks which have a conveyor belt in them. When you deliver the asphalt it comes out on a conveyor so you get less starts and stops and a smoother ride.”

BMD Constructions offer civil and industrial construction services to the transport, water, rail, port, resources and energy sectors.

They operate nationwide as a sole principal contractor, managing contractor or in joint venture with other partners.

The successful result of the project is testament to the positive way in which BMD Constructions managed the works. “One of our strengths is working collaboratively with the client,” said Daniel. “That’s important in these projects due to the amount of stakeholders involved. Three different local councils were affected by this project as well as local businesses, residents and the travelling public.”

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Below Dalton Consulting Engineers designed a staged relocation of water and sewer assets for both stages of Thompsons Road.

Below Elite Crossings designed, fabricated and installed the require components for two multi-span pedestrian bridges on the project.



Dalton Consulting Engineers (DCE) is proud to have designed the relocation of water and sewer assets affected by the **Thompsons Road Upgrade project**. DCE were engaged by BMD Constructions for both stages of the project which involved grade separation and duplication of Thompsons Road.

DCE designed a staged relocation of all South East Water assets, Trility Recycled Water assets and several private sewer assets, as well as carrying out site supervision during construction. There were nine separate stages of sewer and water relocation works across the two road packages, involving the relocation of over 2km's of water and sewer assets.

A key aspect of the project was relocating services prior to commencement of major construction works. "We had to shift priorities to get some works done so others could start," said Jonathan McGrath, Senior Associate of DCE.

"Our role was to look at the assets and how they were being impacted by the project. There were a few water authority stakeholders and other gas and telco services were also competing for space in the road reserve," Jonathan added.

"The main challenge was maintaining a continuous supply of water to customers," said Jonathan. "We had to put temporary measures in place, so customers still have access to water."

DCE are building on the success of the Thompsons Road Upgrade project with other infrastructure projects including the Yan Yean Road Upgrade with BMD, the Chandler Highway Upgrade and the Mordialloc Freeway Upgrade. In addition to infrastructure projects, DCE also specialise in land development; industrial and residential, as well as sporting projects.

The successful delivery of the Thompsons Road Upgrade project has further cemented DCE's reputation as a leader in civil engineering design and project management. With their commitment to world's best practice, DCE are well placed to maintain their position as an industry leader in technological innovation.

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Elite Crossings are an open space infrastructure design and construct company, constructing all types of pedestrian bridges, boardwalks, shade structures, road bridge barriers and balustrading to name a few.

For the Thompsons Road Upgrade, they provided a full service from design and engineering, right through to fabrication and onsite installation. Elite Crossings scope included the installation of two multi-span galvanized steel pedestrian bridges including fibre reinforced plastic (FRP) mesh decking, balustrades and handrails. They also excavated and installed the reinforced concrete abutments over steel screw piles.

The project had numerous challenges including installation adjacent to the roadway and beneath live power lines which necessitated the use of shorter screw piles and other innovative techniques. There was also the need to meet different sets of statutory and client specifications.

"Melbourne Water have their waterway protection guidelines and a pre-start approval process," said Scott Nish, Commercial Builder and Director of Elite Crossings. "We deal with these authorities on a weekly basis. VicRoads also have stringent D&C specifications and the

Bridge Code is always adhered to. We are VicRoads prequalified and so are the design engineers we outsource our engineering to."

The company completed their work on the project in 2018. "We delivered a quality project on time and on budget and our client seems really happy which is great," said Scott. "We handled the whole project ourselves which was a big advantage for a contractor like BMD who could get on with the balance of the project."

Elite Crossings offer a full design and construct service from concept to completion and are 3rd Party ISO9001, 14001 & AS4801 accredited. The company's mission is to provide innovative design and construct infrastructure solutions with skill and passion that benefit their customer, their people and their communities.

"We are a one-stop shop for this type of thing and would like to think we are a market leader," said Scott. "We are a specialist contractor with 20 years' experience and a highly valued and loyal group of clients."

For more information contact Elite Crossings, Factory 2, 2-6 Wanrua Street, Cheltenham VIC 3192, phone 0439 630 975, email sdnish@elitecrossings.com, website www.elitecrossings.com