

Case Study

WestConnex

Roads and Maritime Services (RMS) appointed North Projects as a specialist Infrastructure Estimator to develop the cost estimates for WestConnex motorway through the options and Concept Design development stage.



Project Objectives

- △ Relieve road congestion to improve the speed, reliability and safety of travel on the M4, M5 and Central Business District (CBD)/airport/port corridors, including parallel arterial roads.
- △ Create opportunities for urban renewal, improve liveability as well as public and active transport improvements along and around Parramatta Road.
- △ Enhance the productivity of commercial and freight-generating land uses strategically located along the corridor.
- △ Provide an additional harbour road crossing and northern beaches motorway, the Western Harbour Tunnel and Beaches Link, which will be able to connect into the WestConnex motorway.
- △ Support improved connectivity between Sydney, the Sutherland Shire, and the Illawarra; with the ability for the 'Gateway to the South' project to connect into the WestConnex motorway.
- △ Cater for the diverse travel demands along these corridors that are best met by road infrastructure.
- △ Fit within the financial capacity of the State and Federal governments, in partnership with the private sector.
- △ Optimise user-pays contributions to support funding in a way that is affordable, equitable and fair.

Project Challenges

WestConnex motorway was originally developed as three separate connected projects, the M4-M5 Link, the M4 widening, and the M5 widening and tunnel duplication. The project had a tight timeframe, a large range of interfaces and was a key priority of both the Federal and State Governments.

During the concept design the final route was still being finalised. North was tasked with pricing multiple route alignments using cut and cover, tunnel Boring machines and road headers to determine the most efficient construction methods in terms of time available equipment and impact of the works on the local communities.

Case Study

WestConnex

Key Features

- △ 33 kilometres of a new motorway
- △ Approximately 16 kilometres of new tunnels
- △ Provision of Smart Motorway Technology
- △ Widening of approximately 7.5 kilometres of the existing M4 Motorway
- △ Duplication of the M5 Tunnels.



Results

The design development continued to evolve during the concept design stage. The project estimates were delivered by our project team in accordance with the client's timelines. A weekly cycle of design change meetings was implemented by RMS with North updating the estimate in time for the next meeting. The overall project was market-tested during the concept phase by six consortia.

North's cost plan estimate was given to the six consortia to provide RMS with industry feedback on the scope and agreement that the pricing was realistic and aligned with the market. The feedback confirmed concurrence with the proposed quantities and market pricing of the works.