Humes

Strength. Performance. Passion.

AirportlinkM7, Brisbane

HumeSlab® bridge decking panels

Case study

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HumeSlab® bridge decking enables tight curves on AirportlinkM7 project

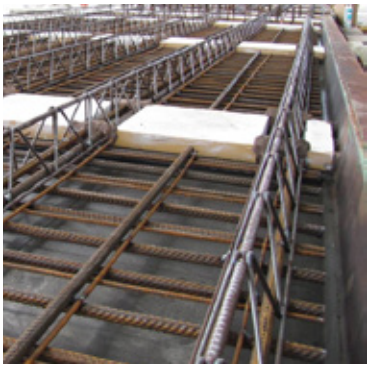
Project
AirportlinkM7, Brisbane

Products supplied
7,000 m² of HumeSlab® bridge decking panels

HumeSlab® bridge decking has demonstrated its adaptability by catering to complex curves and non-standard shapes for three cantilever bridges in Brisbane's AirportlinkM7 project.

AirportlinkM7 is a 6.7 km toll road, mainly underground, connecting the Clem 7 Tunnel, Inner City Bypass and local road network at Bowen Hills to Brisbane airport and northern arterials.

HumeSlab® bridge decking was specified in some of the flyover structures on tight radii at Bowen Hills and Kedron. In each case, steel beams with HumeSlab® panels and cast in-situ deck were used, because the radius of the roadway was too tight and/or the spans were too long for the economic use of prestressed girders. By stipulating HumeSlab® panels, the bridge designers could accommodate a range of non-standard shapes in the design of the suspended bridges.



3D models and 2D panel shop drawings were submitted to the client for matching of shear studs, connection plates and safety rails. The complexity of the panels, being on both a horizontal and vertical curve, provided significant modelling and drafting challenges. Hundreds of thousands of shear studs had to be aligned with the HumeSlab® panels, and all conformed.

The HumeSlab® panels were modified during manufacturing to enable a temporary safety rail to be attached prior to installation. The addition of the safety rail enabled other work to proceed on site in a timely fashion while also improving site safety.

Approximately 500 m² of HumeSlab® panels were delivered to site each day and quickly installed. The rapid installation of the panels had the extra benefit of creating a platform, which provided continuous access for other trades working on the site, thus speeding up the overall construction process.

HumeSlab® bridge decking is a unique system with a design that combines precast concrete panels and an in-situ concrete topping, minimising the cost of constructing bridge decks.

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