

CASE STUDY

Bio 1 / Bio 2 - Solomon Islands



Overview

Located on the Auki-Fouia Road in Malaita Province, Solomon Islands.

- Dimensions: Single span bridges, each spanning 12.1m and 13.7m with a width of 10m.
- Client: Ministry of Infrastructure Development, Solomon Islands Government.
- Contractor: Reeves Envico.
- Bridge Design: Bridge Knowledge, Kramer Ausenco and SMEC.

About

This is InQuik's first exportation project. The replacement of two aging bridges aims to bolster community safety, streamline travel along Malaita's northern road, and improve climate resilience, using our lightweight components reinforced with E-grade seismic-ready rebar.

After shipping from Brisbane to Honiara, the bridge components arrived at Auki on a barge. The Solomon Islands Roads and Aviation Project (SIRAP) was funded through credit from the World Bank, with additional support from the Solomon Islands Government.

Challenges

The state of the old bridges was a cause of concern: narrow width, structural deterioration, and with the absence of safety rails and pedestrian accessways.

During wet periods, the surfaces of these bridges became slippery, posing a considerable risk to road users. This hazardous situation was especially precarious for vehicles carrying passengers and presented an additional danger for pedestrians, particularly young children.

How We Helped

InQuik's top-down construction protected the waterway during construction, keeping the water clean and safe for local usage.

The lightweight components and the ability to pour the bridge in-situ allowed for the flexibility of smaller cranes.

The new InQuik bridges provide permanent integral structures, ensuring long-term connectivity and safety.

Key Project Points

- Replacing these bridges improve access to healthcare and education for Malaita residents, fostering community growth.
- Designed for two traffic lanes and a separate pedestrian lane, with seismic structural design using E-grade rebar for increased resilience to natural disasters.
- InQuik bridge components, versatile and lightweight, were transported by ship from Brisbane to Honiara, then transferred to Auki via semi-trailer and barge.
- Installation was able to utilise local labour completed in a short period of time by a skilled five-person crew, showcasing project efficiency and proficiency.
- Utilizing Magnelis® steel in the bridge design ensures outstanding corrosion protection and durability, providing a long-lasting, low-maintenance solution.

