



Temburong Bridge, Brunei CC3 Navigation Bridges and Associated Viaducts

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Abstract

The new 30 km Cadangan Projek Jambatan Temburong (Temburong Bridge Project) in Brunei will connect the relatively isolated district of Temburong with the more developed Brunei-Muara district. The project is procured under several different construction contracts. Contract CC3 involves construction of 2 cable stayed bridges over cross navigation channels within Brunei Bay and connecting structures at the Brunei-Muara shoreline.

Despite the differences in span arrangements and deck widths, the 2 concrete deck cable stayed bridges adopt similar details which not only provides a unified theme to the crossing, but also facilitated efficient design methods and construction planning. The towers adopt Islamic architectural principles by incorporating pointed arch shapes and symbolising the physical connection between the four districts of Brunei.

Precast segmental connecting bridges carry the main alignment through towards the Mentiri ridge in Brunei-Muara, whilst on and off ramps connect down to the existing shoreline road.

Construction planning is well advanced for the cable stayed bridges and the connecting structures.

Keywords: Brunei, cable stayed bridge, concrete ladder-beam deck, precast segmental viaduct, Islamic architecture, construction methods.

1. Introduction

Following completion of the Feasibility Study [1] for the 30 km long Brunei Temburong Link, the project was divided up into several construction packages [2]. Contract CC3 includes the most prominent structures on the route - the 2 cable stayed bridges which cross navigation channels in Brunei Bay. The Brunei Channel is a domestic waterway serving Brunei which allows vessels to enter the estuary of Sungai Brunei leading to the capital Bandar Seri Begawan. Eastern Channel is

an International waterway allowing bigger vessels to navigate further southwards towards Bangar and Limbang in Malaysia.

Considerable effort was spent selecting the shape of the towers for these bridges, which draw on Islamic architecture and will be unique forms.

CC3 also includes connecting bridges where the route links into Brunei-Muara district. The main alignment continues north-west through the Mentiri ridge, and ramps link down to Jalan Kota Batu – the existing shoreline road.