

Jakarta MRT: Haji Nawi, Blok A & Sisingamangaraja stations

CLIENT: Obayashi Corporation

LOCATION: Indonesia

YEAR OF COMPLETION: 2019

The new MRT system in Jakarta is Indonesia's first, providing much-needed relief to the existing road network by offering an alternative transport mode through the city.

Hewson provided detailed structural design for 4.7km of bridge works and four stations along package CP103 on the Red Line phase 1.

Three of the stations, at Haji Nawi, Blok A, and Sisingamangaraja, are of similar form.

Station structures span the existing road, allowing traffic to continue below. Reinforced and prestressed concrete provides the structural frame from ground to first floor (concourse) level. Steel-concrete composite platforms support a lightweight steel frame roof. The viaduct box girders continue through the station, simplifying construction and providing continuity of structural form.

Entrance structures extend either side of the station, to pavement level below. These are reinforced concrete structures with steel frames to support entrance glazing and roofs.

The structure is designed to resist substantial seismic loading, determined via a site-specific assessment of earthquake risk and magnitudes.

Architect: PT Arkonin

KEY FACTS:

- Reinforced and prestressed concrete
- Lightweight steel roof support
- Viaduct continuity through station

