Designed to replace the existing Vivekananda Bridge spanning the Hooghly River in Kolkata, this 880 m (2,890 ft) long bridge forms part of a 6.1 km (3.8 mile) toll highway with six lanes of traffic. The 29 m (95 ft) wide structure includes seven 110 m (360 ft) spans and consists of an “extradosed” precast segmental concrete box girder built in balanced cantilever, with three mid-span expansion joints. These joints are designed to allow for horizontal movement but resist bending due to concrete creep distribution and live loads.

The structure is a multiple-span “extradosed” bridge with a central plane of stay cables. The superstructure is monolithically connected to cast-in-place pier shafts supported on 45 m (148 ft) deep caissons or well foundations. The circular caisson caps are located at riverbed level to reduce scour.

Construction of the bridge superstructure was critical due to high current and flooding after the monsoon season.

This project received the American Segmental Bridge Institute (ASBI) 2007 Bridge Award of Excellence and the CELSOC 2008 Engineering Excellence Merit Award. Design-build project.