

Building the viaduct over major roads, railways, rivers, and antique houses simultaneously with 6 pairs of form traveller.



▲ VSL form traveller launched over a major road at Bridge No. LER36.

Kaohsiung Metropolitan Rapid Transit System is an important infrastructure in Southern Taiwan. In this project, Red Line CR7 starts from Kaohsiung downtown and extends to Chio-Tao in the North of Kaohsiung county.

CR7 viaduct was constructed using various methods including full span pre-cast, cast-in-situ and free cantilever. Free Cantilever Method (FCM) is utilised to build all the bridges across major roads, railways, rivers and the antique houses.

With reputation of good engineering expertise, VSL

Taiwan was awarded to build all the 8 bridges. Total 6 pairs of form traveller were provided by VSL for this project.

Each bridge consists of 2 end spans and 1 mid-span. In the launching direction, the segments were built in length of 4m, 4.5m or 5m. The shortest bridge LER42 contains 17 segments; the longest bridge LER36/LER45 contains 37 segments. The heaviest segment was 160 ton. Deck width varies from 5.2m to 12.5m. Such variation in type of viaduct cross-sections were actually very challenging to our engineering staff, site supervisors and operatives.

For the engineering works, VSL was responsible for the FCM detail method statement, pre-camber calculation and shop drawing.

For the operation on site, VSL was responsible for the assembly and commissioning of the form travellers, its launching and eventual dismantling.

In summary, 8 bridges in a total of 212 segments were successfully built. The Client was very happy with the job done within time and budget.



▲ VSL form traveller crossing antique houses.

Scope of works performed

- Construction engineering
- Shop drawings for superstructures
- Pre-camber calculation
- Provision of form travellers
- Site Supervision for form traveller erection, launching and eventual dismantling.

OWNER
Kaohsiung Rapid Transit Corporation

MAIN CONTRACTOR
Ta Chen Construction & Engineering Corporation

ENGINEER
China Engineering Consultants, Inc.

VSL ENTITY
VSL Taiwan Ltd