

## Replacement of the Viaduct of *Marly Le Roi*

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### 1 Abstract

The viaduct of Marly Le Roi was built in 1884 between the railway stations of Saint-Cloud and Saint-Nom-la-Bretèche. During that time, the French engineer Gustave Eiffel (later known for its tower) had largely encountered successes with the design and construction of riveted puddled iron structures. Belonging to these types of structures, the viaduct of Marly Le Roi is carrying more than 16.000 travelers every day.

Lately, the demand in transportation lead the client (SNCF) to increase the capacity of their suburban trains. The bridge could not be retrofitted for these new loads. In addition, the expansion of the city under the structure was raising issues such as noise reduction that could not be answered by the client due to the structure type. Therefore, it has been chosen to replace this historical monument by a composite twin-girder bridge.

The new structure was designed by Baudin Châteauneuf. The design and operations to move the two structures and dismantle the existing bridge were carried out by Freyssinet.

**Keywords:** heavy lifting, construction sequence, skidding, de-launching and removal of viaduct

