

## High Speed Train Railway Line Viaducts Madrid to Levante (Villena-Sax)

The stretch between Villena and Sax of the Madrid - Levante High Speed Railway Line includes the construction of two great length viaducts: The Viaduct over the Acequia del Rey and the Viaduct over the Cordel de Sax. The first has a total length of 1,394m broken down into 44 sections with the following span lengths: 25m+42x32m+25m. The Viaduct over the Cordel del Sax has a total length of 1,458m broken down into 46 sections with the corresponding span lengths: 25m+44x32m+25m.

The adopted layout to resist the horizontal forces in the two structures consisted in the placement of fixed points in the three central piers and the use of STU's in both abutments. Track expansion devices are also placed in both abutments.

The deck is composed of a lightened post-tensioned concrete slab which is executed span by span employing a movable scaffolding system (MSS). Construction was fulfilled starting from the centre and advancing simultaneously towards the abutments.



### Spain /2011 Project data

Structural Type:  
Lightened post-stressed slabs  
Location:  
Villena (Alicante)  
Opening Date:  
2011  
Proprietor:  
Ministry of Public Works  
Construction:  
2010  
Scope of Works:  
Construction Project and  
Technical Assistance to the Constructor