



## Amman bypass

Analysis of the geotechnical design studies  
2019



JORDAN - Amman

Client

WORLD BANK

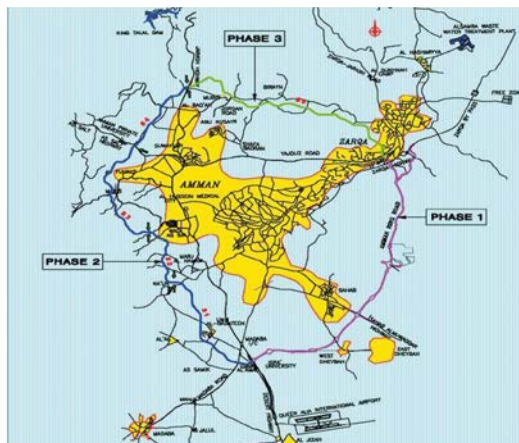
Setec partner  
Setec International

Terrasol's services  
fees

15 637 €

### Highlights

50-km long distance  
6 tunnels twin tubes  
14 viaducs



### The Project

The Amman Development Corridor project involves building an expressway located 10 to 25 km from the capital to connect the airport in the south to the Jerash Highway in the north, via the Dead Sea Road and adjacent towns.

The project aims to free up urban traffic, reduce pollution, facilitate the transfer of goods and promote economic development of the regions that are served.

The World Bank has commissioned the Setec Group to provide technical assistance in a Value Engineering approach on phase 2 located to the west. A site visit and a critical analysis of the existing studies were followed by the assessment of (technical and financial) solutions leading to project optimizations in order to consolidate the tender documents.

### Our Services

Terrasol was responsible for analyzing the geotechnical design studies for the 6 tunnels and the 14 viaducts structures planned over a 50-km long distance.

The tunnels are twin-tubes with an excavated surface area of 100m<sup>2</sup> per tube, and a cover thickness that can exceed 100 m. They will be excavated using the traditional method with occasional use of explosives. The lengths of the viaducts crossing the wadis will vary up to as much as 500 m, with 50-m high pillars. Two foundation systems are proposed: shallow foundations or deep caissons.

The assumptions, calculation methods and design choices were reviewed by taking the local geological environment into consideration. Alternatives to the project were then studied to reduce the number of required structures and consequently, the overall budget.

### Key features

- Analysis of the geotechnical design studies for the tunnels and the viaducts
- Review of the assumptions and design choices