



Covering Paris' Ring Road: To reduce pollution and restore urban continuity

Michel MOUSSARD
Business Practice Leader
Arcadis ESG
Paris, France
mmoussard@arcadis-fr.com

Michel Moussard, born 1950, received his civil engineering degree from engineering schools ECAM and CHEBAP in Paris. He is presently the head of the French delegation at *fib*.



Dimitri FRANK
Bridge Engineer
Arcadis ESG
Paris, France
dfrank@arcadis-fr.com

Dimitri Frank, born in 1980, graduated from ESTP civil engineering school and ENSAPLV architecture school in Paris.



Summary

The 410 metres long cover of Paris Ring Road highway at *Porte de Vanves* is part of a national urban planning scheme which represents more particularly a first step, with other similar projects, of a global plan aiming at covering large parts of the Ring Road. This major artery around Paris is perceived as a “border” symbolising a sociologic, economic and cultural fracture between Paris and its suburbs. The objectives of covering it are to reduce the harmful effects of the traffic in this dense urban area and to improve the quality of the environment.

This paper presents the environmental aspect of the project, through the creation of 10,000 m² of parks and the reduction of traffic pollution (particles and gas, noise, visual). It also explains the adaptation of existing structures in this particular area as part of a global project.

Keywords: Paris, Ring-Road, Safety, pollution, noise reduction, sustainable development, urban environment.



1. Introduction

Paris Ring Road, “le Boulevard Périphérique” (referred to as BP in our paper), was built between 1957 and 1973, using a wide stretch of land around Paris, where the last fortifications had been built between 1841 and 1844.

As early as 1982, local authorities established a large programme of noise protection along the artery, which were built between 1983 and 1994.

More recently the concept of covering this infrastructure was promoted by local authorities as an opportunity not only to reduce pollution but also to restore urban continuity. In a first phase this concept is applied to sections where the roadway is below ground level, in a trench, for practical and economical reasons.

2. Main features of the operation “Porte de Vanves”

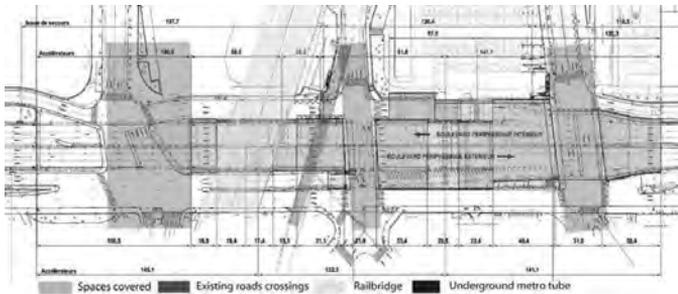


Fig 1: Plan view with main crossings

It was decided to fully cover this artery over a total length of 410 metres, along which three crossings existed already, with respective widths of 100, 20 and 30 metres. A total length of 260 metres had therefore to be covered (Fig 1).

3. Main steps and figures of the project

Planning, design, public hearings and administrative procedures took from 2000 to 2005.

The works were performed in two steps:

- preliminary works from September 2005 to march 2006;
- main works from June 2006 to February 2008.

Main figures:

- 10,000 m² covered;
- investment of 58.4 millions Euros including VAT;

4. Conclusion

This cover is now fully operational for the roadway traffic and ready to receive public equipments, gardens, playgrounds and small community buildings. Thanks to the full devotion of all participants, owners, designers and contractors, it has been carried out in 8 years from early planning to completion, which is very short for such a complex project in a dense urban environment.

It opens the way, alongside with the two other projects, to other covers of the “Boulevard Périphérique”, a key issue of the greater Paris for the decades to come.



Fig 2: View of accomplished civil works