



### Country

France

### Client

Communauté  
d'Agglomération Orléans  
Val-de-Loire

### Date

2007-2011

### Total cost of works

€8,986m exc. VAT

### Sogreah's services

- ▶ Project supervision

### Context

The Orléans urban area is to be provided with a second tram line running east-west. In order to free some or all of the area under the track bed, considerable subsurface development works are to be carried out and the various utility networks may be affected by the construction of the track bed along the 14 km route.

Consequently, extensive diversions need to be made along the sewerage networks (200 to 1,400 mm dia. pipes, oval drains and box culverts).

The works are to be carried out in the historic centre of Orléans, a dense urban area. The utility networks are also very dense and constraints linked with the track bed considerable.

The Orléans urban area council therefore commissioned a consortium consisting of Sogreah Consultants and SEAF to carry out design studies for the network diversions and various development works (reinforcement by means of concrete slabs, rehabilitation without excavating trenches, etc.) and to supervise the works. Two of Sogreah's offices, Paris and Tours, were involved in this project.

### Technical characteristics

- Sewer diversions:
  - 200 mm dia.: 370 m ;
  - 300 mm dia.: 835 m ;
  - 400 mm dia.: 489 m ;
  - 500 mm dia.: 1,005 m ;
  - 600 mm dia.: 405 m ;
  - 800 mm dia.: 552 m ;
  - 1200 mm dia.: 75 m ;
  - 1300 mm dia.: 171 m ;
  - 1400 mm dia.: 390 m.
- Concrete slab reinforcement: 1500 m.
- Rehabilitation without trench excavation: 1,000 m.
- Management of over 150 manholes.