



SOUTH MILAN BARRIER

A1 Motorway – Italy, 1992

PROJECT CHARACTERISTICS

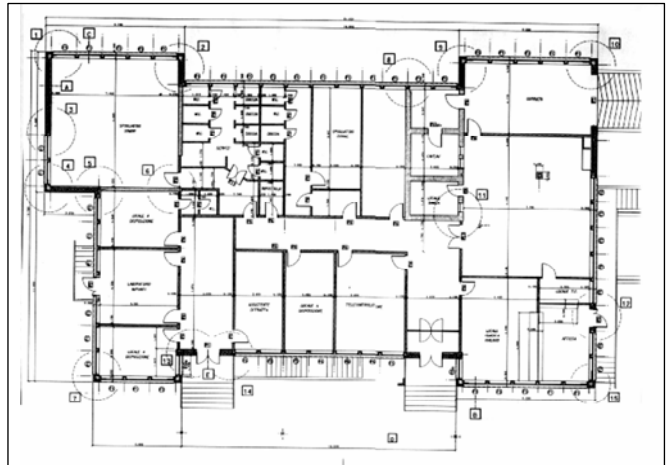
Works: flyover abutment, foundation, foundation and parts of the elevation of the barrier service building, foundation of the cantilever roofing for the tollgate and foundation of light towers.

Purpose: upgrading of the South Milan barrier on the A1 Milan - Rome motorway to accept a larger traffic volume and to install automatic tollgates.

Dimensions:

- Barrier service building: 22 x 36 m
- Height above ground level = 6 m
- Maximum depth below ground level = 4 m
- Flyover abutment height: 8 m

Project Costs: 1.5 million US \$



PROFESSIONAL SERVICES PERFORMED

Detailed design and construction drawings. Assistance during construction.

The foundation for the barrier service building was redesigned as a reinforced concrete mat of 22 x 36 m and 0.7 m thick. A PVC geomembrane, 2 mm thick and protected by 2 geotextiles, was installed to isolate the building from groundwater table which occasionally can rise above the basement grade.

A complete drainage scheme was implemented together with the lining. The building steel frame was modified to fit a modular concrete-glass facade.

A modified design of a flyover abutment, based on cast in place large diameter piles, built through the existing approach embankments, allowed reducing excavation volumes and construction times.

A modified foundation for the cantilever roofing of the tollgate and for 35 m high light towers, were part of the assignment. Such foundations included small diameter piles, 19 m long, reinforced with steel pipes, connected to concrete plinths.

