Subject	Executive design of r related to new «Medio P High Speed-Capacity section	ailway alignment (ACT Line) and civil works adana» railway Station AV (in Reggio Emilia) – Line (AV/AC) Torin-Naples, Milan-Bologna
Carried out by	ATI SGAI Srl of E. Forlani & C. – RPA Srl (Main Agent) – SETECO Ingegneria Srl	
Client	CIMOLAI S.p.A.	
Service length	2009 - 2013	
Value of works	€ 60'801'871,03	
Categories value	S.03 V.02	€ 14'066'071,86€ 2'154'933,64

The areas subject of the intervention are located near the urban area of Reggio Emilia, more precisely to the north of the A14 motorway in the Mancasale locality, extending for about 8000m². Given the strategic location of the site, a new railway station will be built reserved for High Speed lines, called «Medio Padana». Among the interventions envisaged in the executive project, there are also those relating to the modification of the plano-altimetric route of the local Reggio Emilia-Guastalla railway line (called ACT), which also provides for the construction of two new exchange tracks for the new stop in correspondence of the high speed pole. The plano-altimetric variant applied to the railway line has affected the line between km 25+330 and km 26+254, so as to allow:

- The exchange and the stop of the convoys on the special service binaries at the new railway station;
- Adapt the position of the standard switch diverters of the type S60 UNI/400/0.074, of connection and safety to guarantee the crossing of the rail alignments and of the adjacent motorway embankment;

In detail, the major design problems were encountered in the study and verification of the areas of attack and connection of the variant to the existing tracks due to interference with the structures of the new station and the highway embankment, whose adjacency required careful attention study of detailed surveys and positioning of safety and restraint binary sections.











ACT RAILWAY LINE – Modelling, interference and checks

The analysis and the study of the ACT railway line were carried out by 3D modeling the morphology of the terrain and the project infrastructure with the aid of a special railway design software (Bentley Moss MX Road - Ver. 08.11.09.845), thanks to which it was also possible to size and verify the plano-altimetric progress of the alignments, of the exchanges and the connection with the existing line. Thanks to the modeling carried out it was also possible to evaluate the interferences with the existing subservices, also foreseeing the appropriate works of restoration and water management.

