



Gautrain – A modern transit project in a progressing country, South Africa

When a systematic value management is combined with a rigorous coordination then the Client will benefit of the real objective for « value for money ».

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Summary

Gautrain Rail project is the most important project ever developed and built by Bouygues Travaux Publics. It is the fourth largest in the World in terms of single construction projects. It consists of developing, designing, constructing, operating and maintaining a 77km long railway line to provide domestic and airport train services, together with a dedicated bus network servicing a radius of 10km around each of the 10 stations, and 9,000 specific parking spaces within the station precincts. In this comprehensive and complex project, Bouygues TP is ensuring the technical leadership and, in association with local groups Murray Roberts and Strategic Partners Group, is implementing the construction of the civil infrastructure. Bombardier and SPG are supplying the rolling stock and railway systems and RATP, M&R and SPG will manage the 15 years of operation and maintenance with Bombardier being heavily involved in the maintenance of the railway.

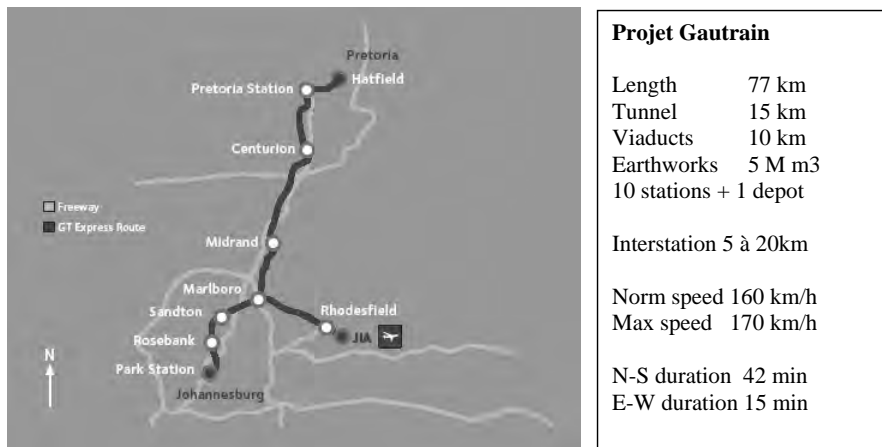


Figure 1 – The project layout and the principal project data

This article presents the intermediate design phase that develops the project between the Letter of Intent and the Financial Closing and is specific to Concessions and PPP. This phase is essential to validate the conceptual design provided with the offer and to launch the detailed design on solid technical grounds. It is described in terms of objectives, and organisation. The schedule of development is presented below. It illustrates the new trends for fast track project on limited early data. A “preliminary design stage” needs to be inserted between conceptual design at tender and detailed design for construction.

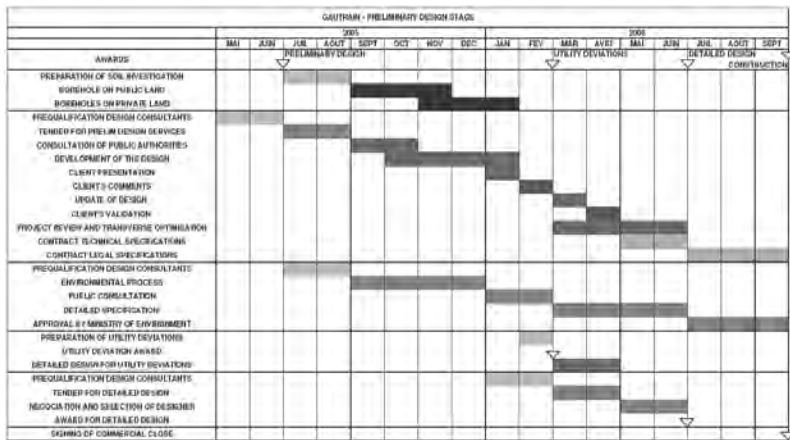


Figure 2 – Schedule of the preliminary design

Fast track is not synonymous to anaesthetic and standard design. Sandton station is built as a cavern. It is a concentrate of technology, modern station planning, economical construction and is especially suited to the integration into the site and the geological complex conditions.

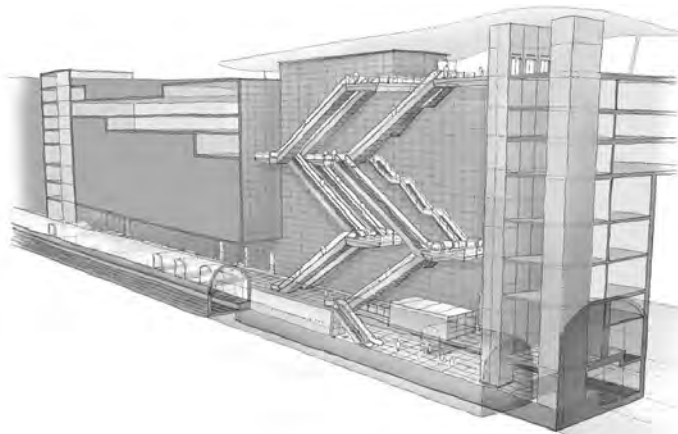


Figure 3 Perspective of underground station

Keywords: railway, tunnel, bridge, stations, high speed, preliminary design, project integration, operation and maintenance.