Metro Grand Paris Express

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Abstract

This article traces out the different issues encountered while designing two underground stations on the Grand Paris Express Metro project. It also describes how our engineering team deals with urban and technical constraints, specific to confined areas all around Paris.

Keywords: Metro station; diaphragm wall; concrete slabs; excavation; urban site.

1 Introduction

The new "Grand Paris Express" project (i.e. the new Metro Network in Paris urban area) consists of 205 km of new driverless automatic metro line including 72 new stations and 2 million passengers.

The main aim of the project is to increase Paris' public transport network in order to be able to face the mobility needs that the future decades will request to all global cities. In particular the Grand Paris Express will directly connect different suburbs around the center of Paris which will be then relieved from the transit passengers. Moreover the road traffic (one of the main Paris's area problem) is expected to be significantly reduced by the construction of the new metro network.

Groupe Ingérop was awarded by the Société du Grand Paris in association with Setec TPI and six different Architecture Firms, the conception of 12 km of tunnel (excavated with 3 Tunnel Boring Machines) together with 8 main stations of the new line n. 15 in the South of Paris from Pont de Sèvres to Villejuif Louis Aragon.

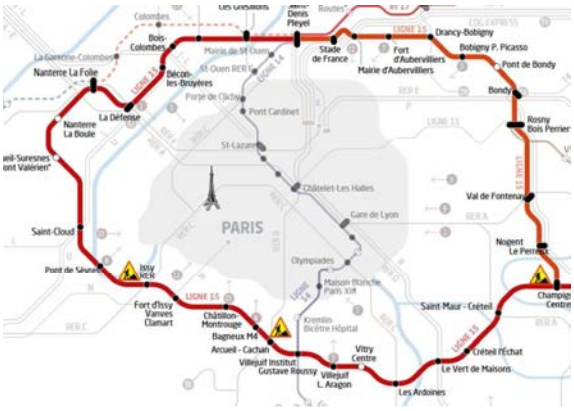

Figure 1. Map Metro Line n.15

Since the basic design to the current detailed design phase, Groupe Ingérop has been particularly involved in the design of two underground stations: Pont de Sèvres and Issy RER. The next project step will be the invitation to tender

These two underground stations have been especially conceived not only in the full respect of the environmental codes but also integrating green technologies such as geothermic diaphragm walls.

The full integration of the Architects in the structure design team has been the key to obtain

https://doi.org/10.2749/222137815818359357