



# M4 LINE: LINATE-SAN CRISTOFORO

CONSTRUCTION OF THE METROPOLITAN RAIL LINE TO CONNECT THE CITY FROM EAST TO WEST IS ONGOING

The Blue Line, the colour used to indicate this underground railway line in Milan on transport maps and in stations, will have its two terminuses at San Cristoforo (south-west) and Linate (east).

The M4 Line will meet the M1 Line at San Babila station, the M2 Line at Sant' Ambrogio station and, in the station at Sforza Policlinico, will connect via a tunnel to the Missori station on the M3 Line.

It will also be connected to the "passante" transit line at the Forlanini FS, Dateo and San Cristoforo stations and with the Linate airport. It will be a light, driverless railway and, similar to the M5 Line, will have a capacity of around 50,000 passengers every hour. Once completed, it will be 15,2 km long and have 21 stations.

Last March the boring machine reached Piazza Tricolore from the Forlanini district, and broke through the last diaphragm for the excavation of one of the two tunnels, bringing the progress of work on the tunnels to 38%.

The next step will take place in July, with the tunnelling machine setting off from San Cristoforo to bore the tunnel up to Parco Solari.

In the second half of 2019, the tunnelling machine used to bore out the central section will set off from Piazza Tricolore.

Completion of all boring operations, with the two digs meeting in what will become the station at Parco Solari, is scheduled for the second half of 2020 and work is scheduled to be completed in 2023.

Mapei Technical Services has followed the work on site right from the very start and has been in constant contact with the suppliers of the concrete and, after carrying out tests in the laboratories, recommended the most suitable admixtures for the concrete to meet the requirements of such a complex site, which is still ongoing.

Amongst the products supplied were the super-plasticisers DYNAMON SR 912 and DYNAMON SR 914, the viscosity modifying admixture VISCOSTAR 3K, MAPEAIR LA/P and the acrylic super-plasticisers DYNAMON XTEND W400 N, DYNAMON XTEND W300 N and DYNAMON XTEND W300 R.

## TECHNICAL DATA

**Client:** M4 SpA

**General contractors:** Consorzio MM4 (Impregilo - Astaldi) and Consorzio Metro Blu Srl

**Concrete suppliers:** Holcim Italia, Monvil Beton, Monteverde Calcestruzzi, Colabeton, Betonrossi

**Mapei coordinator:** Andrea Siboni, Mapei SpA (Italy)

