



# Cuatro Caminos Tunnel

Madrid, Spain / 2003-2004

Structural type  
Characteristics  
Owner  
Client  
Constructor  
Scope

tunnel between retaining walls  
two parallel tunnels with 500m each and 18m diameter  
Ayuntamiento de Madrid  
UTE ACS Proyectos y Obras - FCC Construcciones  
acs proyectos obras y fcc construcciones  
detailed design



The subterranean roadway is composed of two independent twin tunnels which have two lanes in each direction, connected by emergency exits every 100m.

The new subterranean dual carriageway is 500.00m long and 18.00m wide.

The construction of this underpass has meant the demolition of the flyover which was present in Cuatro Caminos since 1969. This flyover was dismantled bit by bit, totaling 105 pieces, each one weighing approximately 25 tonnes.

The entrances and exits of the new tunnel are in the same positions as the entrance and exit ramps to the old flyover were: on the Avenida Reina Victoria and the Calle Raimundo Fernández Villaverde. It is estimated that around 80,000 vehicles will circulate through the new tunnel per day.

The excavation of the tunnel was a complicated task due to the fact that the subsoil was plagued with existing installations: two underground lines very close to the surface, lines 1 and 2; another underground line, line 6 which was slightly deeper; water, gas and electricity pipes as well as drainage systems. In fact, the excavation works forced the closing of Line 1 in November, for a period of five days, due to the fact that the distance between the new tunnel and this one was barely two meters.



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