

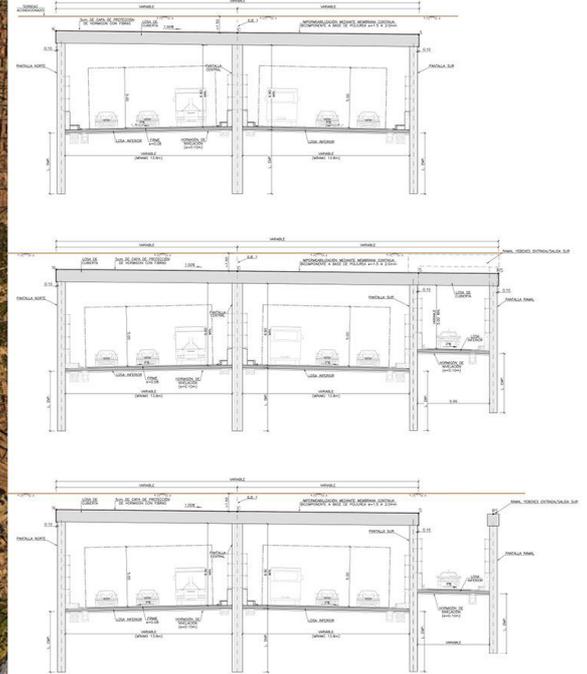
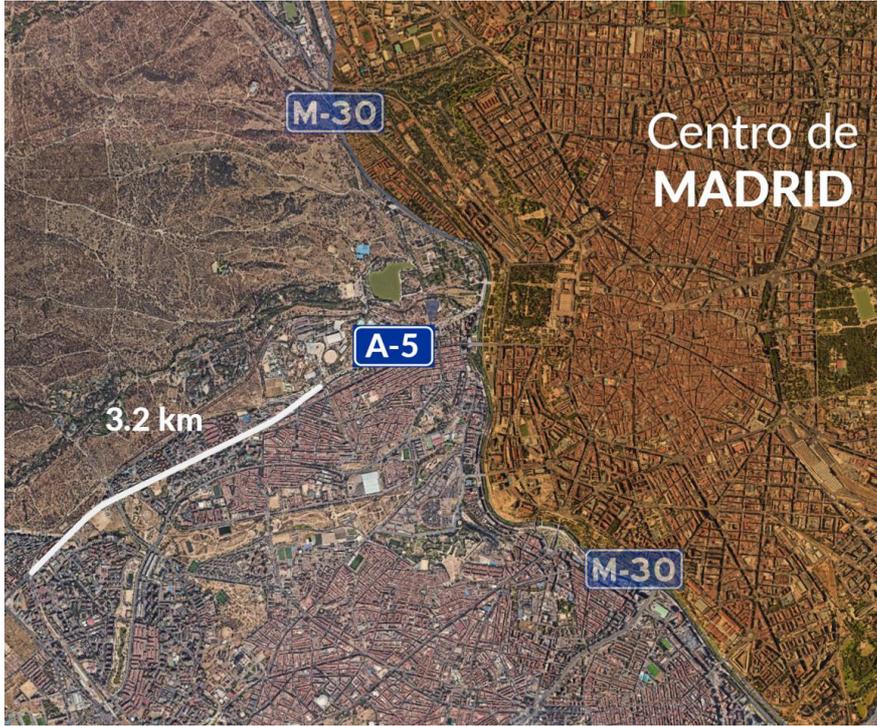


A-5 highway undergrounding project

Madrid, Spain / 2024-

Structural type
Characteristics
Owner
Client
Constructor
Scope

Cut & Cover Tunnel
Total length 3.2 km. Minimum width 30m to accommodate 3 lanes per direction
Ayuntamiento de Madrid
Lote 1 UTE Ferrovial-FCC, Lote 2 UTE Dragados-Acciona
Lote 1 UTE Ferrovial-FCC, Lote 2 UTE Dragados-Acciona
detailed design and construction support



The project consists of the undergrounding of the A-5 highway at its exit from Madrid over a total length of 3.2 km in an urban environment with numerous existing buildings located very close to the future tunnel. The main challenges are the maintenance of traffic during the construction with two lanes in each direction and the connection with the existing tunnel on Avenida de Portugal. A construction system has been chosen in which the top slab is cast against the ground, thus optimizing traffic detours and the execution time. The tunnel includes two carriageways of three lanes each, separated by a central wall. The two outer and the central walls are formed by drilled shafts with a typical diameter of 85 cm spaced 1.30 m, with other configurations depending on the particular conditions of each section. The walls do not require anchoring to the ground, as they are braced by the top slab and the bottom slab placed right below the pavement. The project also includes entrance/exit ramps, ventilation buildings, pedestrian emergency exits, crossings between tunnels and special areas for service crossings.



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