

North Tarrant Express in Texas, USA



Project details

Customer: North Tarrant Express

Date: 2018

Country: USA

Total investment:: \$2.525 billion

Area: Roads

Main Activity: Construction supervision

Supervision of the motorway reconstruction and extension

The North Tarrant Express (NTE) is 40.2 km long, including all the segments under the contract, and forms part of the Dallas-Fort Worth corridor in Texas, one of the busiest in the United States. NTE resolves the problems of congestion in its area of influence.

The project consists of the reconstruction and extension of the entire existing corridor by increasing the number of lanes from four to six and adding a four-lane tollway system. The side and secondary lanes included in the project will also help to increase current capacity, while congestion is likely to be reduced by approximately seven hours a day, offering fast, reliable and safe transportation.

The corridor has remained open to traffic at all times during the construction works to minimise the impact on daily commuters. NTE is a latest-generation motorway in terms of the design of its layout and advanced technology, which offers different travel alternatives to users, depending on the state of the traffic at the time.

Prointec's mission has focused on supervising the construction works and ensuring compliance with all the prerequisites for the infrastructure. The main tasks performed are as follows:

- Document management using a sophisticated GIS linked to a geodatabase.
- Review of the design, including the changes before and during the execution.
- Supervision and inspection of the construction works (technical advice, quality control and material testing, geometric control with GPS/total station).
- Testing and results analysis of deflections (FWD), surface regularity (IRI) and pavement friction resistance (SKID), as well as the retro-reflectivity of road markings.

The key project data are as follows:

- 1,500,000 tm of hot-mix asphalt
- 690,000 m³ of granular bed
- 1,850,000 m³ of lime-stabilised subgrade
- 8,125,000 m³ of earthworks
- 65,000 ml of reinforced earth walls
- 115,000 ml of drainage works in precast concrete with diameters between 0.60 and 2 m
- 132 isostatic structures with double-T beams in precast concrete:
 - Spans between 25 and 125 m
 - Lengths between 150 and 1,800 m
 - 500,000 m² of decks
- 4 rail structures in weathering steel box girders (ASTM A709 grade SOW). 5x4 m cross-section. 150 m length