

Lyndon B Johnson (LBJ) Expressway, Texas, USA

As one of **the most complex highway projects of its kind in the country**, the LBJ Expressway delivered long-awaited improvements – relieving traffic congestion for millions of North Texas commuters each year through its **innovative managed lanes approach**. **Capacity was nearly doubled** with the creation of up to six new express managed lanes on IH-635 and four on portions of IH-35.



TxDOT



£1.98bn



2010
– 2015



PPP

The project is the largest Public-Private Partnership (PPP) of this nature in the history of the United States, with a concession period from 2016 to 2068. Cintra led the financing of the project, with construction capability provided by Ferrovial Construction, in JV with our sister company, Webber. We delivered innovative design solutions that minimised the need for additional land-take to accommodate the new running lanes, making efficient use of the existing footprint. This was a multi-level highway system - a new concept consisting of the construction of new free-flow, tolled lanes and the refurbishment of existing highway.

The scope of the project includes the construction of 21km of the new multi-level highway, six managed lanes within the footprint of the existing highway and reconstruction of over 21km of four-lane highway in each direction. We achieved minimal disruption to traffic with at least four lanes open in each direction at all times during works. Construction commenced in 2010 and was completed in 2015, three months ahead of schedule.

During design development, we also maximised opportunities for onsite manufacturing (OSM) solutions to deliver precast elements and accelerate the programme by three months.



ADDED VALUE

- We optimised the Dallas North Tollway crossing design during procurement. This eliminated the need for a tunnel structure, which helped reduce the consortium's public funds subsidy request by 29%
- We donated over 103,000m³ of fill to the City of Dallas, which was reused to convert brownfield land into a new football complex, saving the city over £800,000
- Working in collaboration with Cintra, we proposed an alternative design solution which incorporated additional tie-ins to the new toll road in order to increase traffic revenue, supporting the financial viability of the project
- The Federal Highways Administration has shared our LBJ Express Project Management Plan as best practice across its supply chain



This was a fantastic achievement that clearly demonstrates what can be achieved by working in a collaborative team delivering solutions that meets the client's value criteria. We optimised construction sequencing and logistics, explored alternative methods; challenged constraints; assumptions and solutions in design, and created a programme saving of three months. Our proven processes and procedures are structured to proactively manage risks, change, interfaces and deliver an optimised design.



Ignacio Navarro
Engineering Director, Ferrovial Construction

21km

of new multi-level highway works

6 managed toll lanes

on a multi-level highway arrangement

8 main lanes
online widening

90+ bridges

including multiple three level interchanges

330km

of precast beams installed during construction

52 years
concession