Dallas High Five Segmental Ramps

Dallas, TX

Faster construction and the ability to minimize impacts to traffic were key goals for the construction of concrete segmental ramps on the Dallas High Five project, which consisted of five ramps with span lengths up to 300 ft long.

The ramps are part of an overall upgrade of the LBJ/Central Expressway Interchange to eliminate bottlenecking, loop ramps, and confusing left-hand exits. It provides a five-level junction with an assortment of flyover ramps, highway widenings and high-occupancy vehicle lanes.

Precast concrete segments were match-cast offsite, allowing the contractors to complete the interchange faster with less traffic disruption.

The ramps were erected in a balanced-cantilever method using a specially designed rubber-tire segment erector on top of the cantilever. Two of the five ramps were opened to traffic early, with the other three completed on schedule. Beating the planned schedule reduced concerns about worker safety and minimized user costs by minimizing congestion or eliminating detours earlier.

Team

Owner:
Texas Department of Transportation Dallas District

Designer:
Parsons Corp.

Ramp Builder:
Zachry Construction Co.

Segmental Bridge Subcontractor:
Rizzani de Eccher/Zachry Construction, a joint venture

Total Project Cost: $100+ million

Photography:
TxDOT.gov