

Eastern Transportation Corridor

A HOCHTIEF Company

Owner

Foothill/Eastern Transportation Corridor Agency

Location

Orange County, CA

Value

\$803,400,000

Market

Design-Build - Highways & Interchanges

Start - Completion Dates

10/1994 - 9/1998

- 25.4-mile limited access toll road with 69 cast-in-place box girder bridge
- Removal of 67 million cubic yards of dirt and rock
- Development of a 214-acre site to create coastal sage scrub
- Electronic roadway sensors to collect traffic data

Project Description

Delivered via the design-build method, Flatiron completed this \$803-million, 25.4-mile limited-access toll road below budget and over one full year ahead of schedule. The four-to-six-lane road winds through mountainous, environmentally sensitive terrain as well as urban areas where structures span 12 active highway lanes. Anticipating future transportation requirements, space was reserved in the median for HOV lanes and transit options. The design-build method resulted in early completion of the toll road's major segment, which opened to traffic in October 1998, 14 months ahead of schedule.

The toll road includes four freeway-to-freeway interchanges, five interchanges for access to local streets, 69 bridges, three tunnels and 10 toll plazas. It also features a sophisticated traffic management system along with a state-of-the-art toll collection and violation enforcement system including full-speed electronic toll collection. It was approved under the Federal Highway Administration's Special Experimental Project (SEP-14) as a design-build project.

Earthwork operations accommodated an extensive owner archaeological resource recovery program. Flatiron safely removed 30,000 prehistoric specimens, some dating back over 100 million years, including camel, mammoth, mastodon, and dinosaur remains. The \$80 million environmental mitigation program included the development of a 214-acre site to create coastal sage scrub and a 50-acre wetland habitat. Flatiron also constructed five wildlife bridges for large animal crossing and 26 culverts for small animal crossing.

To illustrate the project's massiveness, at its peak there were more than 2,500 people working. The team moved 67 million cubic yards of earthwork, placed 450,000 cubic yards of structural concrete, paved 140 lane miles, placed 1.5 million tons of asphalt concrete, and built 1.7 million square feet of structures. They obtained over 1,000 permits, relocated 150 major utilities, and processed hundreds of multiple-agency design approvals.

Company Role

Flatiron managed this joint venture.



Awards

- American Concrete Institute Southern California Chapter – Engineering Design Award, 1999
- American Consulting Engineers Council (ACEC) – National Honor Award, 1999
- American Public Works Association – Environmental Enhancement Program Award, 1999
- American Road and Transportation Builders Association (ARTBA) – Globe Environmental Award, 2000
- American Society of Civil Engineers – Project of the Year, 2000
- Associated General Contractors (AGC) – AON Build America Award, 1999
- California Transportation Foundation – Tranny Award, 1999
- Consulting Engineers and Land Surveyors of California (CELSOC) – Kenward S. Oliphant Memorial Award for Excellence in Engineering, 1999
- Consulting Engineers and Land Surveyors of California (CELSOC) – Project of the Year, 1999
- Design-Build Institute of America (DBIA) – National Design-Build Award for Major Civil Project, 1999
- McGraw Hill's California Construction Link Magazine – Design-Build Project of the Year, 1998
- Orange County Engineering Council Engineering – Project Achievement Award, 1999