



PROJECT PROFILE

# Gillette Stadium

Structural Testing and Construction Issue Consulting | Foxboro, MA



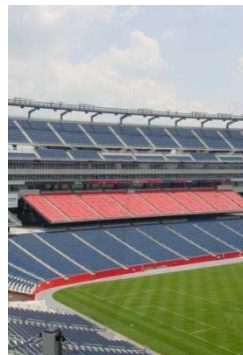
**CLIENT**

Barton Malow Company

**BACKGROUND**

Gillette Stadium is the home of the NFL's New England Patriots and MLS's New England Revolution. The stadium opened in May 2002, and was a design-build effort lead by Beacon-Barton Malow, JV. The 68,756-seat stadium is constructed with structural steel columns and rakers and precast concrete stands. Walking access to upper levels is provided by stairs and two signature switch-back ramp structures at the north end of the stadium.

Gillette Stadium partially opened on May 11, 2002. During early stadium events several construction and structural performance issues were noted. Barton Malow Construction, the stadium's general contractor, retained WJE to resolve issues that included vibration testing of pedestrian ramps, load testing of glass handrail supports, light gage metal wall framing installation issues, evaluation of expansion joints for water penetration, vapor barrier performance, and concrete slab cracking.



**SOLUTION**

WJE engineers assisted the structural engineer of record in developing stiffening repairs to alleviate vibration in the switch-back ramp structures as well as instrumented and monitored the ramp structures following implementation of the repairs. WJE concluded that the repairs had reduced accelerations below the perceptible threshold. These findings resolved the majority of the construction issues in time for Gillette Stadium's Grand Opening in September 2002, when the New England Patriots beat the Pittsburgh Steelers in front of a sellout crowd.

