

structurally
sound

RENOVATING WRIGLEY



Thornton Tomasetti

WRIGLEY FIELD, HOME OF THE CHICAGO CUBS (winners of the 2016 World Series!) is currently undergoing a multi-year renovation and rehabilitation project. Some of the most complex work includes strengthening the existing grandstand structure to support future programming additions. Built in 1928, the upper grandstand and rear roof structures include trusses with riveted chords and web members attached to $\frac{3}{8}$ -in.-thick gusset plates. Proposed additions of an upper concourse and additional amenities induce significant load on the trusses, exceeding the capacity of the existing gusseted connections. To avoid obtrusive gusset plate extensions, Stantec Architects and structural engineer Thornton Tomasetti devised gusset clamp plates that are made to nest in the existing connections (above photo). Removing existing rivets allows the new plates to seat against the existing truss members. The existing rivet holes were reused for high strength A490 bolts. The configuration of the new connection effectively doubles the number of shear planes in the connection. The new plates—designed to support the full loads of the connection—are 1-in.-thick 60-ksi plate material. ■