

Bynum Island Bridge in Washington Park

Reconstruction Design

Chicago, Illinois



CLIENT

Chicago Park District

CHALLENGE

Following the partial collapse of the north limestone abutment for this historic bridge, it was evident that major repairs were needed and that full bridge replacement might be warranted. Important rehabilitation objectives included preservation of the historic limestone wing walls and dredging of the channel under the bridge.

STRUCTURE

The Bynum Island Bridge is in Washington Park on the south side of Chicago. The bridge was constructed in the late nineteenth century to provide access to an island in the center of a man-made lagoon. Although intended primarily for pedestrians, the bridge is occasionally used by park maintenance vehicles. The original bridge abutments were limestone masonry on rubble foundations, which, at first, supported an iron and wood span. In the mid-1900s, the original span was replaced with a steel and concrete span.

SOLUTION

WJE assessed the condition of the existing structure to determine the full extent of the damage. Based on our findings, we prepared a feasibility study including cost estimates of various alternatives for a new bridge, which led to the selection of precast concrete for the new span. Our design for the new bridge included new concrete abutment structures supported on the original rubble stone footings, a precast concrete span, steel railings, and asphalt paving. We prepared construction drawings and specifications for the work and developed details to retain the historic limestone wing walls and integrate new limestone cladding on the abutments to replicate the original appearance. We also provided construction observation services as the restoration was implemented.