Lincoln Park Passerelle: Rainbow Bridge

AS seen by approaching motorists on Chicago's Lake Shore Drive, the "Rainbow Bridge" appears as if it's crossing the 6–lane roadway with a graceful leap worthy of a ballet dancer. To people crossing the bridge, its gentle rise provides comfortable access to a popular beach and recreational parkland at edge of Lake Michigan.

By Tim Samuelson

SINCE its completion in 1940, the pedestrian bridge popularly known as the "Rainbow Bridge" has become a familiar feature of Chicago's cityscape. But in its early years, it also gained recognition as a structure of innovation and beauty. Within four years, it was selected by New York City's Museum of Modern Art as one of the best structures in the United States—putting it in the same company with the Golden Gate Bridge, and other major public works projects of the late 1930s era. Other expressions of appreciation soon followed.

It was heady recognition for a bridge of relatively modest size and origins. Its creators were a team of relatively unknown engineers working as employees of the governmental agency in charge of Chicago's park system, and the bridge itself was relatively small—a structure designed to carry beach–bound citizens traveling by foot, bicycle and stroller.

But its unexpected notoriety was consistent with Chicago's reputation for making pragmatic solutions to urban challenges that achieved beauty in their unpretentious directness. It was a tradition that could be seen in the late 19th century when the city's architects and engineers solved a lack of downtown commercial space by using the local availability of steel and cleverly adapting existing technologies to evolve the modern skyscraper. The resulting buildings were not only tall, but their honesty of expression also gave them presence—and often beauty.

Chicago's creative ingenuity was certainly evident in solving multiple challenges presented by the Rainbow Bridge project. For pedestrians, it needed to provide comfortable access across the highway to the beach, keeping in mind that many users would be toting chairs, picnics and children. For the unimpeded flow of traffic on the highway below, it needed to cross the highway without intermediate supports. And its prominent location—rooted in popular park, and set on the lakefront between the urban skyline and nearby exclusive homes—required visual compatibility with these features.

Modernism driven by technology offered a logical solution, drawing on the creative *momentum* established Chicago's popular 1933–34 "A Century of Progress" world fair.

< View of bridge. Photo from the Chicago History Museum.

A low rigid metal frame arch spans the entire roadway, with slightly stylized concrete abutments at each end incorporating pedestrian access by stairs and gently inclined ramps. Users above on foot, bicycle or in child strollers are given a picturesque and comfortable journey as cars maneuver freely below. And the span's gentle low–rise curve and delicate stairs and ramps of buff–colored concrete merge comfortably with the natural landscape of surrounding parkland and Lake Michigan vistas. As a whole, it creates an expressive gateway to those approaching the city skyline, and a transitional passage for those leaving.

From initial concept to finish, the project was under the direction of the Chicago Park District, the municipal agency responsible for the city's parks. Early citations credit the department's Chief Engineer, Ralph H. Burke for designing the project, but his role was most likely administrative. A surviving sketch in Chicago Park District archives suggests architect Maurice J. Glicken as the originator of the design concept, and other materials indicate Lyman C. Riggle as structural designer, and C. Thomas Kelly as structural engineer.

Fabrication of the metal superstructure was contracted to the American Bridge Company, located in the nearby steel manufacturing city of Gary Indiana. Actual construction was done under the supervision of the Chicago Park District staff, with some of the funding coming from the Works Progress Administration job incentive program established by the United States government during the 1930s depression era.

A contemporary description of the span provided by Chicago Park District described it as "a three hinged, tubular arch built–up of angle irons and flush steel plates." The structural arch spanned 187 feet across the roadway, with a height of approximately 25 feet. To address concerns about using such a relatively new technology for such a wide span, staff engineers subjected the frame to an extensive barrage of structural tests over a period of several months and seasonal climate changes. Among these, a test load of 185 T was placed a mid–span along the crown, far exceeding loads anticipated for actual usage.

The bridge attracted considerable public attention and curiosity by the time of its completion in late 1940.

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But it soon received another level of appreciation beyond local beachgoers, motorists and area residents. Its inclusion in the Museum of Modern Art's 1944 "Built in the USA" exhibit and catalogue was followed by its publication in Architectural Forum magazine in the same year. Critical recognition from MOMA came again in 1949 with its inclusion in a book devoted to modern bridge design. It was documented as part of the Historic American Engineering Record in 2001.

The bridge became a popular favorite in Chicago as well, and regarded as a distinctive component of the city's urban fabric. The bridge continued to be monitored for structural stability, requiring minor structural adjustments over the years, the most significant being the addition of diagonal bracing after a 1990 engineering study recommended additional strengthening to accommodate people crowding the bridge to watch nearby lakefront airshows and festivals.

A competition was held to create a replacement bridge in 2005, the entries including one proposal to replicate the existing bridge with only minor modifications. An entirely different contemporary design was ultimately selected. The proposal to demolish the existing bridge raised considerable outcry in the Chicago preservation community. Lack of funds halted the proposed replacement of the historic 1940 bridge, but its long–term survival remains uncertain.

Notes

1. Chicago Park District: Ralph H. Burke, chief engineer; Maurice J. Glicken, architect; Lyman C. Riggle, structural designer; C. Thomas Kelly, structural engineer. Erected, 1939–40.

Tim Samuelson

Cultural historian for the City of Chicago, has been instrumental in celebrating and protecting Chicago's past for more than 25 years. He is highly regarded for his stewardship of the cultural and architectural history of the city at the Commission on Chicago Landmarks and the Chicago Historical Society. He obtained an English degree from Roosevelt University and a fellowship at Harvard's Graduate School of Design and worked on architect John Vinci's restoration projects.

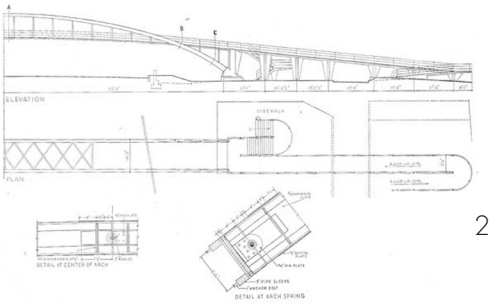
Figure 1. View of arched span. Photo by Hedrich Blessing studio from Chicago History Museum.

Figure 2. Detail of footbridge.

Figure 3. Footbridge detail. Photo by Hedrich Blessing studio from Chicago History Museum.

Figure 4. Frontal view of footbridge. Photographer unknown.

Figure 5. Lincoln Park Passarelle at present.
Photo from HistoricBridges.org by Nathan Holth.



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