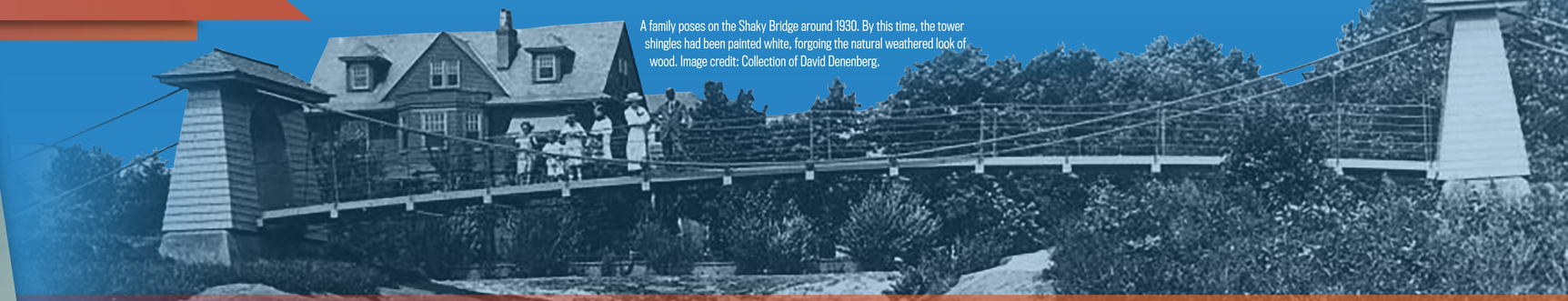
The Shaky Bridge

Driving by on Route 29 or pausing on a stroll in the park, this little bridge must strike you as an historical oddity. Indeed, the Shaky Bridge has a curious past. Built by John A. Roebling's Sons Company, the world-famous, Trenton-based manufacturer of long-span suspension bridges, it is one of the few surviving features of the former Mahlon Stacy Park, created piecemeal between 1904 and 1914 along the left bank of the Delaware River from the Assunpink Creek to "The Island."



A family poses on the Shaky Bridge around 1930. By this time, the tower shingles had been painted white, forgoing the natural weathered look of wood. Image credit: Collection of David Denenberg.

A Bridge in Miniature

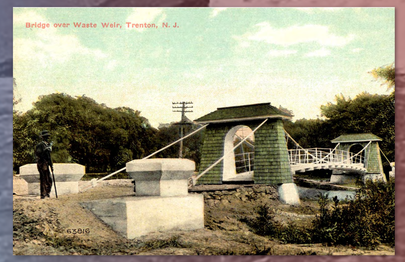
In 1908, the City of Trenton proposed installing a footbridge to cross the Perdicaris waste weir, an artificial channel that drained excess water from both the Delaware and Raritan Canal and the Trenton Water Power, a transportation canal and industrial power canal, respectively, constructed in the early 1830s.

The Roebling company, in part as a promotional exercise and in part as a good corporate citizen, offered to construct a bridge of its own design at a greatly discounted cost. The bridge was loosely modeled after the Niagara River Suspension Bridge, one of John A. Roebling's best-known bridges, which, from 1857 to 1896, spanned the chasm below the great falls on the U.S.-Canadian border. The Shaky Bridge is almost exactly one eleventh the scale of its larger forerunner.

For almost three decades, the Shaky Bridge served as a vital link in the two-mile long, riverside Mahlon Stacy Park. However, with the curtailing of the Trenton Water Power in the 1930s and its eventual replacement with Route 29 in the 1950s, and the concurrent expansion of the nearby water filtration plant, the chain of parkland was broken and the bridge's original purpose was rendered obsolete. It survives today as an echo of Trenton's distinguished bridge-building heritage.

The official dedication party for the Shaky Bridge poses in front of the anchor cables. August 10, 1908. A crowd of 600 people attended the ceremony. Image credit: Trenton Public Library, Trentoniana Collection.

The Shaky Bridge was reported by a Trenton newspaper to be an "exact reproduction" of Roebling's Niagara River Suspension Bridge, the first in the world to carry trains. Judge for yourself how faithfully the Shaky Bridge captures the spirit of this great bridge. Image credit: Currier & Ives, 1856, Library of Congress.



This postcard of about 1910 refers to the "Bridge over the Waste Weir." It was not colloquially called the Shaky Bridge until some years later. Many pedestrian suspension bridges share the name. Image credit: New Jersey State Library.

This early aerial view of Trenton from June 16, 1928, captures the Shaky Bridge's original riverside park setting. The bridge is barely visible but its location is clear from the reflection of the white water tumbling over the weir. The concrete arch was a footbridge over the Trenton Water Power at the foot of Perdicaris Place. Image credit: Dallin Aerial Survey Company Photographs, Hagley Museum & Library.

Shake, Rattle & Roll

A suspension bridge is unique in that it uses cables stretched over towers to carry the combined weight of the bridge and anybody or anything crossing it. It is hard to walk on cables, as anyone who's tried a tightrope knows, so hanging a deck from them makes sense. Even so, the cables tend to vibrate whenever the wind blows or any traffic moves across the deck. This vibration is where the Shaky Bridge gets its name.

Suspension bridges only need a pier and a tower at each end, so they are usually a good option for very long spans. The massive weight and stiffening deck of a big suspension bridge will dampen its tendency to become too wobbly; or, like here, they make good lightweight pedestrian bridges where walkers can easily adjust their steps to the bouncing they feel under their feet.

Over the years, bridge builders have used vines, ropes, iron chains and steel wires to fashion cables. The oldest documented suspension bridges were constructed over 1,200 years ago in China. The modern era of suspension bridges began almost 200 years ago when John Augustus Roebling (1806–1869) established his eponymous company to make steel wire in Trenton in 1848. The Roebling company went on to build some of America's first and most famous examples of wire cable suspension bridges, among them the iconic Brooklyn Bridge.

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Jerry Harcar served as the City of Trenton's Historic Preservation Specialist for more than two decades, all the while serving on the Trenton Historical Society's board of directors. Saving, protecting and preserving buildings was his job, but his vocation was saving, protecting and promoting city history.