



Historic Bridge Foundation Facebook Archives

Did You Know: Big Four Railroad Bridge

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Did You Know...

...That the Big Four Railroad Bridge in Louisville offers a beautiful colored light show every night?

The Big Four Railroad Bridge crosses the Ohio River between Louisville, Kentucky and Jeffersonville, Indiana. The existing bridge is a multi-span rivet-connected through truss bridge constructed in 1929, replacing a previous bridge dating to 1895. Its approach spans were demolished in 1974 and the bridge sat abandoned until after many years of planning and construction, new approach ramps were constructed and the bridge reopened to non-motorized traffic in 2013.

Today the bridge is one of the finest examples of historic bridge preservation. The bridge enjoys heavy use day and night and is a major area attraction, as well as an important functional crossing.

When the sun sets, the bridge offers even more for visitors to enjoy. A computerized, colored LED floodlight system enables any part of the bridge to be bathed in any color, and enables a full motion color light show. The use of this fully programmable colored lighting is not unique to the Big Four Bridge, however what is unique is the quality of the presentation. Color LED systems found on other bridges typically bathe large sections of bridge in a single color at any one time in the show. In contrast, the Big Four Bridge's lighting system is designed so that the outer sides of the bridge trusses which are primarily seen by those looking the bridge from a distance can be colored independently from the interior of the bridge trusses, and that different members on each truss span can even be colored independently. As a result, the experience seen while walking on the bridge can be quite different from the experience of viewing the bridge from a distance. The most unique aspect of the Big Four Bridge compared to other bridges with colored lighting is the incredible attention to detail with a focus on using the lighting to highlight and draw attention to the many details of the bridge trusses themselves such as rivets and lacing on built-up beams. Some lights are positioned so that rivets cast long shadows on the members. Other lights are actually positioned inside built-up beams so visitors see the rivets within, and so that lacing and lattice create a striking silhouette. This is a lighting system that isn't just a novelty for the sake

of having a light show, it is professionally designed to celebrate and increase appreciation for the bridge itself and its impressive construction details.

A field visit to this bridge reveals that the bridge is crowded with users both during the daytime and during the nighttime. What might have been dismissed as a useless structure and demolished has instead been turned into a very popular crossing for Louisville and Jeffersonville. The Big Four Bridge represents the best in historic bridge preservation.

Interested in this type of lighting for your historic bridge? The following details may be of use. The bridge lighting cost \$2.1 million and uses 1,472 LED lights. A very crude estimate that considers only the truss bridge length of about 2,550 feet results in a per-foot cost of \$823.53. The project was completed under the direction of the Waterfront Development Corporation of Louisville. The architect and programmer in charge of the lighting was Vincent Lighting Systems. Bright Focus Sales, Inc was the lighting representative. The actual type of LED lighting used is Philips Color Kinetics, using two light models: Colorburst Powercore, and Colorblast Powercore. The lighting array is controlled by Pharos Architectural Controls: LPC4 and TPC Control. The electrical installation was completed by Advanced Electrical Systems Inc. of Louisville.













