

Sunshine Skyway Bridge

TAMPA BAY, FL

SUBMITTED BY SIKA CORPORATION

The Sunshine Skyway Bridge is one of the most recognized structures in the United States. With its signature bright yellow stay cables, the bridge resembles a sailboat, with its towers holding up the triangular sails across Tampa Bay.

At the time of construction, it was the longest bridge in the world that has a cable-stay main span. The overall length is 5.5 miles (8.9 km), the main span is 1,200 ft (366 m), and the vertical clearance is over



190 ft (58 m). Built at a cost of US \$244 million, it opened to traffic in 1987. The current cable stay bridge is a replacement for the previous steel, cantilevered truss bridge that was tragically struck by a freighter back in 1980 when a 1,200 ft (366 m) span collapsed into Tampa Bay, killing 35 people. It took seven years before a signature replacement bridge could be built.



The Sunshine Skyway Bridge is comprised of the main span, the high level approach, and the low level trestle spans. Shear cracking was observed during routine inspections of the trestle span girders. Repairs included epoxy injection of all cracks having a width exceeding 0.012 in (0.3 mm), repairing spalls, and filling uneven surfaces with a leveling mortar and all bugholes and smaller cavities with an epoxy paste. A clear protective sealer was applied to protect the concrete further from moisture and chloride intrusion. It was also determined that the deficient girders needed to be structurally strengthened to carry additional loads and a carbon fiber system was installed.

Despite difficult working conditions as a result of having to work off a barge, often under very hot and humid conditions, the project was a success. The repairs were made underneath the bridge without having to take out even one lane of traffic during the entire process.

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SUBMITTED BY

Sika Corporation

Lyndhurst, NJ

OWNER

Florida Department of Transportation

Tallahassee, FL

PROJECT ENGINEER/DESIGNER

SDR Engineering Consultants, Inc.

Tallahassee, FL

REPAIR CONTRACTOR

Intron Technologies, Inc.

Jacksonville, FL

MATERIALS SUPPLIER/MANUFACTURER

Sika Corporation

Lyndhurst, NJ