

# Market

Stadiums

# Application

Concrete Repair &amp; Protection

# Focus

Corrosion &amp; Surface Erosion

**Project:** The Cotton Bowl  
**Owner:** The City of Dallas  
**Engineer:** Jaster-Quintanilla Dallas, LLP  
**Contractor:** Charter Builders/L.S. Decker  
**Year:** 2008

## The Problem



The Cotton Bowl is located in the National Historic Landmark District known as Fair Park in Dallas, TX. This structure was originally constructed in 1930. The 46,200 seat stadium was known as "Fair Park Stadium," and, at the time, was the largest stadium in the South.

In 2006, as part of a unique and cooperative effort with the City of Dallas, the State Fair of Texas pledged \$20 million to fund the first phase of the renovation of the Cotton Bowl. This phase included the removal and replacement of the seating, concrete repair and waterproofing, a new

scoreboard and video replay screen. The concrete repair and waterproofing portions of the work were scheduled to begin immediately upon completion of the Cotton Bowl Classic on January 1, 2007. All work had to be completed in time for the opening of the State Fair of Texas in mid-September.

## The Sika Solution

Years of "wear and tear," coupled with a failure to provide adequate funding for maintenance and repair, had taken its toll on the oldest sections of the Cotton Bowl – the original "lower bowl." Cracks, spalls, and inadequate repairs were visible everywhere. Severely eroded steps in aisle ways and unevenness across expansion joints in the seating areas were potential trip hazards for patrons. Unsealed expansion joints allowed water to penetrate into critical service areas such as concession stands, food storage areas, and restrooms.



The Sika logo, featuring the word "Sika" in a stylized, bold font with a registered trademark symbol (®) to its right. The logo is set against a red triangular background.



Horizontal repair of concrete less than one inch depth and the cementitious overlay were done with SikTop 122 Pus - a two component polymer modified material with an integral corrosion inhibitor. Horizontal repairs which were greater than one inch depth were completed with a prepackaged rapid setting SikaQuick 1000 repair material. SikaQuick was extended with 25 pounds of 3/8 gravel for these deep repairs. Vertical members in need of concrete repairs were patched with SikaTop 123 Plus. Cracks in concrete were pressure injected with Sikadur 52, a low viscosity injection resin. A flexible urethane traffic deck membrane was installed on the elevated sections. An anti carbonation

water based acrylic coating was used to restore the walls, columns and front, rear and side walls of the upper deck of the Cotton Bowl.

## Sika Products Used

**SikaTop® 122 Plus** is a two-component, polymer-modified, portland-cement, fast-setting, trowel-grade mortar. It is a high performance repair mortar for horizontal and vertical surfaces and offers the additional benefit of Sika FerroGard 901, a penetrating corrosion inhibitor.

**SikaQuick® 1000** is a 1-component, rapid hardening, early strength gaining, cementitious, patching material for concrete.

**SikaTop® 123 PLUS** is a two-component, polymer-modified, portland cement, fast-setting, non-sag mortar. It is a high performance repair mortar for vertical and overhead surfaces, and offers the additional benefit of FerroGard 901, a penetrating corrosion inhibitor.

**Sikadur® 52** is a 2-component, 100% solids, moisture-tolerant, epoxy adhesive. It is a low-viscosity, high strength adhesive formulated specifically for grouting both dry and damp cracks. It conforms to the current ASTM C-881 and AASHTO M-235 specifications.

**Sikagard® 670W** is a water dispersed colored, acrylic, protective coating. Sikagard 670W prevents moisture ingress, is water vapor permeable and provides an excellent carbonation barrier.



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