

Case Study

Richmond / San Rafael Bridge Toll Overlay 1 Richmond, CA

FAST FACTS

Customer

Richmond / San Rafael Bridge

- Connects Richmond and San Rafael
- 5.5 miles (29,040 feet) long

Location

Richmond, California

Owner

California Department of Transportation
(Caltrans)

Industry

Department of Transportation

Project Completion

October 2009



PROJECT OVERVIEW

Existing patching/overlay materials on concrete toll lanes were experiencing severe delamination caused by heavy vehicular traffic, lack of adhesion, and natural elements encountered near the pacific ocean.

CHALLENGE

Caltrans' engineering staff determined that based on traffic use, expected life of the bridge, and cost and length of downtime during repair a quick and permanent solution was needed. The required product needed to become an integral part of the concrete, remain bonded, provide a long term wear surface that resists cracking and salt air, and be installed and open to traffic with minimal downtime.

SOLUTION

A collaborated effort between Caltrans engineering staff, Res-Tek's Sales and Technical team, along with CFC Coatings presented Res-Tek's RT-05 Polymer Concrete System. One of the key components to the success of this project was ensuring complete removal of all existing patching/overlay materials; exposing the original concrete slab. This turned out to be easier than expected due to the lack of adhesion of the existing material. Once removal was completed the surface was scarified in a crosshatch pattern.

RT-710 penetrating primer was applied forming a sealed surface that provided an anchor for the RT-05 Polymer Concrete. The installed system was completely cured in one hour after application of the RT-05 Polymer Concrete. This enabled the toll lane to be reopened to full traffic just 8 hours after the onset of removal. The use of Res-Tek's fast curing MMA based acrylic products provided a permanent solution, and minimized lane closure time.