

## Development of Flexible Concrete Joints for Deck Structures with Deteriorated Mechanical Joints and Corrosion Damage

**Principal Investigator:**  
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**Project Sponsor:**  
Paul Santo

**Need:**  
Hawaii's bridges have mechanical expansion joints that can cause infrastructure deficiency and result in high maintenance and repair costs. This deterioration is caused by the accumulation of debris within the expansion joints, corrosion of deck reinforcement, spalling, and corrosion of girders or girder bearings.

**Objective:**  
To develop a repair system that uses a ductile cement based composite in combination with Fiber Reinforced Polymers that will strengthen deck structures

**Duration:**  
January 1, 2007 – December 31, 2009

**Cost:**  
\$295,794