

StitchDog™

Carbon Fiber Grid Stitch Crack Repair System

Case Study

Hawaii AIPA Parking Deck



EPOXY SET CARBON FIBER STITCHES

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MADE IN THE USA

Project Overview

Location – Honolulu, HI

Project Problem: Failure of topping slab on a high traffic parking structure. The crack pieces of concrete failed so badly that you could slightly move them by hand. Project managers were considering removing and replacing which would have been very costly and time consuming.

Project Solution: Perform a structural crack repair addressing all the cracks with the *StitchDog™ Carbon Fiber Grid Stitch (CFGs) Crack Repair System*. Many cracks had multiple CFGs repairs because the failure was so extensive and needed to have enough strength to handle high volumes of automobile traffic. Final coating was the *Miracote MPC Park Deck System*, a polymerized, two-component, cementitious protective and waterproof coating.

Project Distributor: Honsador Lumber & Building Supply (Honsador.com)

Project Contractor: CPSC - Central Pacific Specialty Contractors (CPSChawaii.com)

Project Summary: CPSC with the technical support of Professional Construction Products (PCP) prepared a mock up area to test over several months. The *StitchDog™ CFGs Crack Repair System* was used to structurally repair a 2500 sq. ft. test area which included part of the drive lane and parking stalls. The test area had 385 *StitchDog™ CFGs* installed. The *StitchDog™ CFGs* were installed with the *StitchDog™ 4000 Hi-Temp Structural Adhesive Epoxy*. After the *StitchDog™* repairs were fully cured, the *Miracote MPC Park Deck System* was installed according to the manufacturer's installation guidelines. This repair method was approved by AIPA engineers for a test area to measure the performance of the *StitchDog™ CFGs System* as well as the *Miracote MPC Park Deck System*.

Project Conclusion: After 7 months of moderate to heavy traffic use over the test area, the *StitchDog™ CFGs System* and the *Miracote MPC Park Deck System* were successful and had no visible cracking. The project was deemed a success and was restored to a solid structural integrity. The project has been approved and will be implemented in all future parking deck rehabilitation for the AIPA parking structure.

Case Study Image 1



StitchDog™ Carbon Fiber Grid Stitches being installed after cracks were prepped, cleared of loose concrete and area cleaned and vacuumed. Saw cuts are made perpendicular to cracks using a standard circular saw with concrete blade. Because of the failure was so extensive, some of the StitchDog™ CFGS are covering multiple crack lines.

Case Study Image 2



After all of the cracks were repaired with the StitchDog™ CFGS System, the test area was allowed to cure for 24-hours to ensure no degassing of the epoxy would affect the overlay system. This image shows the surfaced prepped with a grinder to a profile necessary for the park deck coating system.

Case Study Image 3



The Miracote MPC Park Deck System being installed. The two-component system consists of a unique rubber-like polymer liquid which is mixed with a proprietary cement and aggregate blend. Typically, the Miracote MPC Park Deck System is applied by hand trowels, magic trowels, brush or spray. Please note that the Miracote MPC Park Deck System allows for the transmission of inherent moisture vapor within the concrete.

Case Study Image 4



Finishing up the project test area. This test area included parking stalls and part of a drive lane. During the 7-month test period, the project test area received moderate to heavy automobile traffic.

Project Product Information & Resources

StitchDog™ Resources

www.StitchDogs.com

[Click here](#) for more information on the StitchDog™ Carbon Fiber Grid Stitch Crack Repair System

[Click here](#) for the StitchDog™ 4000 Hi-Temp Structural Adhesive product data sheet

[Click here](#) for the StitchDog™ Carbon Fiber Grid Stitch product data sheet

[Click here](#) for the StitchDog™ CSI Specification Sheet

Miracote Resources

www.Miracote.com

[Click here](#) for more information on the Miracote MPC Park Deck System

[Click here](#) for the Miracote Learning Center

Professional Construction Products Resources – “Let’s Do This”

www.ProfessionalConstructionProducts.com

Established in 2006, Professional Construction Products is a Multi-Line *Professional Manufacturer Representative Agency* who specialize in concrete repair, restoration, concrete coatings, and waterproofing products. Along with representing quality manufacturers, our team of highly skilled and multi-faceted field reps can guide you through the installation process and offer valuable input on installation best practice. Since 2006, PCP has created an extensive network of manufacturers, contractors, and architects who are familiar with our valued reputation and the

“Lets do this” motto!

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