



Project Overview

FRP REPAIR OF UOFA MIRROR LAB THIMBLE

Name: University of Arizona Mirror Lab Thimble
Type: Tower
Location: Tucson, Arizona
Completed: May 2008

PROBLEM

This unique thimble structure atop the University of Arizona Football stadium sits directly above the university's world-renown mirror lab where multi-million dollar mirrors are manufactured for observatories worldwide. The exterior insulation and finish system (EIFS) sheets were damaged during a storm, causing leakage of rain water on the mirror laboratory below. This was clearly unacceptable and prior repairs had also failed.

Furthermore, the roof top garden adjacent to the thimble is used as a pre-game entertainment area for major donors to the UA athletic program. So, it was necessary to ensure a high-quality and aesthetically pleasing finished repair that would be almost indistinguishable.



SOLUTION

QuakeWrap® FRP Repair System was selected since it would create a "one piece" structure that would be extremely strong, waterproof and resistant to wind loads.

Once scaffolding was set up, one inch thick EIFS boards were installed to cover the whole structure. QuakeWrap® VB26G fabric was then installed in one layer to provide strength, resistance to wind and waterproof membrane. A final textured coating was applied over the repaired structure to hide the texture of the fabric and the overlapping joints (see photo below).



This installation was completed in 5 days using a 4 man crew.

Technical Highlights

- FRP repair provided to waterproofing and resistance to wind loads.
- Wrapped in one layer of QuakeWrap® VB26G fabric.
- Coated and painted to resemble original structure.

Credits

Structural Engineer: QuakeWrap, Inc.
General Contractor: Lang Wyatt Construction
Repair Subcontractor: FRP Construction, LLC



"The FRP Retrofit Experts"