



Project Overview

FRP REPAIR OF CONCRETE BEAMS IN CONDOMINIUM BUILDING

Name: Oceans One Condominium
Type: Condominium Building
Location: Daytona, Florida
Completed: May 2006

PROBLEM

The parking structure of the Oceans One Condominium in Daytona, Florida was experiencing corrosion damage and shear cracking in many of its beams.

Corrosion had worn away at the structure, and was threatening its integrity. In addition, shear cracks had appeared and the building needed to be strengthened. To complicate the repair, several bolted steel plates were protruding from the beam, making a smooth wrap more difficult.



SOLUTION

QuakeWrap® FRP Repair System was selected since it could be installed quickly with minimum disturbance to building residents. QuakeWrap® composite carbon fabrics were used to wrap the beam and seal all corroded areas while providing additional shear reinforcement.

Bolted steel plates were present on the bottom face of the beams and obstructed FRP fabric installation. To solve the problem, a coating of epoxy was applied, bringing the bolts to a uniform elevation.

QuakeWrap® FRP Systems are air tight and therefore interrupt the oxygen feed required for the corrosion process to take place. Once the corroded area is repaired and sealed with our system, a maintenance free solution for corrosion is permanently in place.



Technical Highlights

- A total of eight beams were strengthened against both shear and corrosion.
- Work was completed quickly, at minimal cost
- Beams were painted after being wrapped to match the rest of the structure



Credits

General Contractor: Premier Corrosion Protection Services, Inc., Tampa, FL.

“The FRP Retrofit Experts”