

Project Brief

Dearborn Housing Structural Strengthening



Chicago, IL
June 2008



The three, six and nine-story buildings experienced severe cracking at the beam/column joints. These cracks were diagonal and varied in width depending on the floor level. The problem appeared to be more prominent at the higher levels. It was determined that the cracking was caused by insufficient steel confinement around the vertical column steel.

Fyfe LLC performed calculations to determine the amount of Fibrwrap® material required to provide the equivalent to the missing steel. The column was wrapped 24" above the beam and floor elevation, and the spandrel beam was wrapped outside and inside. Due to lack of space, fiber anchors were used on the outside of the beam for development. All the cracks were injected prior to the application of the Fibrwrap® material.

The FRP solution was the only practical solution to the problem. The decorative stone was being placed at these joints and any other solution would have impacted the architectural finish of the buildings. This was a fast-paced project that involved an appearance before the Chicago Committee of Standards. Since Fibrwrap® is not in the local building code, the application required approval by the committee. This approval is now the 7th one issued by the City of Chicago.

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