

Project Brief

## Arkansas Studies Institute Slab Strengthening



Little Rock, Arkansas  
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This project involved the conversion of an existing building into a library for the Central Arkansas Library system. The existing building was not designed for the heavy loading that a library would experience. The entire structure was analyzed and Fibrwrap® was used to strengthen the critical elements.

Some of the columns had to be strengthened by 20 kip axial capacity and 20 kip-ft flexural capacity. Two layers of Tyfo® SCH-41 carbon composite were applied oriented vertically and one layer in the horizontal direction. Tyfo® Fibr-Anchors™ were used at the capital and floor for a tension connection. The slab had to be strengthened for an additional 65 psf live load (from 100 to 165 psf). Tyfo® UC Strips were used for both the negative and positive moment loading. Two strips were applied on each and in both directions for negative moment. The positive moment was handled with strips applied in both directions at all mid-slab locations.

This is an example of a Change in Use - the conversion of an existing building into a library and using fiber wrap for strengthening the columns and slabs. Tyfo® Fibrwrap® offered an aesthetically pleasing solution that did not impact headroom or storage space. The Tyfo® RR Finish system was then used to meet the UL Class 1 Flame and Smoke rating requirements for the project.

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