

## PROJECT

Building 427  
Ft. Leavenworth, Kansas

## CLIENT

Gossen Livingston Associates, Inc.  
(now GLMV Architecture)  
Kansas City, Missouri



*Building 427 located in Ft. Leavenworth, KS*

## PROJECT DESCRIPTION

The apartment building is a 3-1/2 story masonry load-bearing structure. Meeting current building requirements without impacting the historic features of the building was the primary design challenge of the rehabilitation project. Atkinson-Noland & Associates was retained to investigate the existing conditions of the structural components of the building and perform in-situ material tests to determine material properties for structural analysis. Our engineers performed a seismic analysis of the building followed by a feasibility study of two different seismic strengthening methods: internal post-tensioning and fiber reinforced polymer (FRP).



*On-site flatjack deformability test*

## SERVICES PROVIDED BY ATKINSON-NOLAND

- Condition survey of exterior masonry walls to identify damage
- Flatjack testing to determine masonry compressive response and mortar bed joint shear strength
- Seismic analysis of existing structure
- Feasibility study of two different seismic strengthening methods: internal post-tensioning and fiber reinforced polymer (FRP)



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