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to
The University of Memphis
Center for Earthquake Research and Information (CERI)
Howard Hwang, Principal Investigator
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SEISMIC INSTRUMENTATION OF THE FIRST BASE-ISOLATED BUILDING IN MEMPHIS

NEHRP Program element: Predicting the Effects of Earthquakes III.2

NON-TECHNICAL PROJECT SUMMARY

A state-of-the-art strong-motion seismograph system has been installed in the newly constructed AutoZone corporate headquarters in Memphis, the first 'base-isolated' building east of the Rocky Mountains. Forty-three flexible base isolators supporting the building are designed to isolate building and contents from destructive earthquake shaking. Seismic sensors in and around the building are cabled to a PC-based data collection system, part of a regional seismograph network operated by the Center for Earthquake Research and Information (CERI) of The University of Memphis. Analysis of sensor data collected during a strong earthquake will help engineers determine if base isolation is an economical and effective technology for protecting buildings of the New Madrid seismic zone from earthquake damage. The seismic instrumentation project was jointly sponsored by the U.S. Geological Survey, AutoZone, and private companies involved in constructing the building.