

Engineers to seismic test wood townhouse

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University of Buffalo engineers are beginning unprecedented seismic tests on a full-scale, three-bedroom, wood-frame townhouse.

The 73,000-pound, 1,800-square-foot house -- the largest wooden structure to ever be involved in such testing in the United States -- will undergo a series of tests that culminate in November with the most violent shaking possible in a laboratory, mimicking an earthquake that occurs only once every 2,500 years.

The landmark testing at UB's Structural Engineering and Earthquake Simulation Laboratory is part of a \$1.4 million international project called NEESWood, funded by the National Science Foundation.

To gather data, researchers are equipping the townhouse with 250 sensors and an extensive array of video cameras that will provide detailed information about how each area behaves during each simulated earthquake.

The research is based on the premise that if more were known about how wood structures react to earthquakes, then larger and taller structures could be built in seismic regions, providing economic, engineering and societal benefits.

Wood-frame construction accounts for 80 percent to 90 percent of all U.S. structures, but fewer than 10 percent of civil-engineering students are required to study wood design.

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