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|  | **A drawing of a machine  Description automatically generated with medium confidence** | *Photos by Simpson Strong-Tie* |
| **Phase 1**  (*complete*) | **Phase 2**  (*testing Dec. 2023 - Jan. 2024*) | **Phase 3**  (*upcoming 2024*) |

*Detailed blurb:*

Funded by the National Science Foundation (NSF), the *Converging Design* project includes full-scale testing of a six-story mass timber building at the Natural Hazards Engineering Research Institute (NHERI) Large-High Performance Outdoor Shake Table. The project re-uses the bottom six stories of a 10-story mass timber building previously tested as part of the NSF Tallwood project. Shake table testing includes three phases featuring different seismic-force resisting systems aimed at achieving near damage-free post-earthquake performance, as shown in **Fig. 1**. Construction and testing can be monitored via the live webcam at <https://nheri.ucsd.edu/live-cams>.

The Converging Design team completed Phase 1 of testing in November 2023, which included post-tensioned mass timber rocking walls with steel U-shaped energy dissipators. The building exhibited no apparent residual drifts and minimal post-earthquake damage after 43 shakes, half of which consisting of severe ground shaking. Construction for Phase 2 re-using the six-story gravity system is currently underway, featuring post-tensioned mass timber rocking walls with Buckling-Restrained Braces provided by CoreBrace. Shake table testing for Phase 2 is expected to begin in December 2023. In the subsequent phase, Phase 3 will feature a combined mass timber gravity frame with a resilient lateral-force resisting frame provided by Simpson Strong-Tie using Simpson’s Yield-Link® moment connection and the Yield-Link® brace connection.

This work is part of the *Converging Design* project with collaborators from Oregon State University, Stanford University, Colorado State University, and Penn State University with support from the National Science Foundation ([#2120683](https://www.nsf.gov/awardsearch/showAward?AWD_ID=2120683), [#2120692](https://www.nsf.gov/awardsearch/showAward?AWD_ID=2120692&HistoricalAwards=false), and [#2120684](https://www.nsf.gov/awardsearch/showAward?AWD_ID=2120684)), USDA Agricultural Research Service, and TallWood Design Institute, along with several other industry partners listed on the project website [https://tallwoodinstitute.org/converging-design-partners](https://tallwoodinstitute.org/converging-design-partners/).

*Short blurb:*

Shake table testing of a six-story mass timber building will begin in December 2023 at the Natural Hazards Engineering Research Institute (NHERI) Large-High Performance Outdoor Shake Table. This is the second of a three-phase experimental program aimed at achieving near damage-free post-earthquake performance, as shown in **Fig. 1**. The building features post-tensioned self-centering mass timber rocking walls, with Buckling-Restrained Braces and all other materials provided by industry partners and sponsors listed on the project website, <https://tallwoodinstitute.org/converging-design-partners>. Construction and testing can be monitored via the live webcam at <https://nheri.ucsd.edu/live-cams>. This work is part of the *Converging Design* project with collaborators from Oregon State University, Stanford University, Colorado State University, and Penn State University with support from the National Science Foundation ([#2120683](https://www.nsf.gov/awardsearch/showAward?AWD_ID=2120683), [#2120692](https://www.nsf.gov/awardsearch/showAward?AWD_ID=2120692&HistoricalAwards=false), and [#2120684](https://www.nsf.gov/awardsearch/showAward?AWD_ID=2120684)), USDA Agricultural Research Service, and TallWood Design Institute, along with several other industry partners.