

# 2026 ASCE Utah PROJECT OF THE YEAR UNDER \$10M



## SL TEMPLE RETROFIT MEASURE LLC

“Dustin Engineers (now Measure LLC) delivered a civil engineering instrumentation program that safeguarded a 19th-century landmark during deep excavation and base-isolation construction, giving engineers and contractors real-time data to manage risk, protect workers, and preserve the Temple's historic fabric.”

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“The Salt Lake Temple Seismic Retrofit: Civil Engineering Instrumentation and Monitoring is a landmark civil engineering achievement conceived, designed, and delivered by Dustin Engineers (now Measure LLC), a Utah civil engineering firm established in 2006. By continuously tracking how a 185-million-pound, pre-code unreinforced masonry structure situated above an active fault responds while excavation and underpinning proceed around and beneath it, including through the 2020 Magna M5.7 earthquake during active construction, the project sets a new benchmark for civil engineering risk management to iconic structures.

On this project, instrumentation drove decisions. Real-time geotechnical and structural data gave the owner, designers, and contractor a continuous, ground-truth picture of Temple response throughout excavation, underpinning, and base-isolation work. This validated pre-construction models against real-world conditions and enabled construction sequencing and support measures to be optimized against actual observed behavior rather than analytical predictions alone.

The Salt Lake Temple presented an exceptional combination of constraints: a structure with a desired service life measured in centuries, 98 base isolators installed through complex underpinning, a constricted downtown site with severe access limitations, and continuous occupancy of adjacent facilities throughout construction. Measure’s engineers designed and operated an instrumentation system capable of sustained, high-precision performance across six years of harsh construction conditions, delivering the reliability and resolution that contractors, engineers, the architect, and the Owner required to make consequential decisions with confidence.

The system raised the level of safety for workers, the public, and adjacent infrastructure by turning subtle structural and ground movements into clear, actionable information. Even small, unexpected trends triggered investigation and timely intervention before conditions could escalate. At the same time, early detection of differential movement gave the project team the information need to make informed decisions about protecting the temple’s historic stone fabric and finishes: accepting measured risk where construction demands required it and intervening where damage thresholds were approached.

The project demonstrates that a Utah civil engineering firm can conceive, deliver, and sustain a monitoring program of this complexity on one of the most consequential construction projects in the Intermountain West.

The methodology developed for the Salt Lake Temple has since been deployed on 150 historic structures at Al Balad, a UNESCO World Heritage Site in Jeddah, Saudi Arabia, with an additional 500 scheduled for completion in 2026.”