

# Building Science Expert Trusts TRUFAST Fasteners for His Scottsdale, Arizona Home

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## CHALLENGE

**Internationally recognized construction consultant, Steve Easley, has spent his career solving building science-related problems.** With over 30 years of experience, Easley is known for his expertise in increasing construction quality, sustainability, and energy efficiency. In addition to his professional experience, he has educated thousands of industry professionals worldwide and served as a tenured professor at Purdue University.

**His latest challenge was the transformation of his own 4,400 sq. ft. home in Scottsdale, Arizona.** For the project, Easley and his wife Susan Raterman, an indoor air quality expert, were looking to transform the home into a model of energy efficiency and durability. Spotlighted by Green Builder Media as part of its VISION Houses Series, the project showcases cost-effective strategies for remodeling an existing home into a net-zero, all-electric, healthy, connected, resilient, solar-and storage-powered home.

**For their home, Easley said he wanted to move beyond net-zero energy to net-zero demand,** and has worked with local utilities on demand-side energy management systems that can shift loads by doing things like preheating spaces and water.

“When it comes to living in Arizona, the goal is to always beat the heat, but the challenge is doing that efficiently,” Easley said.





To ensure the home's energy efficiency despite the hot climate, Easley designed a high-performance building envelope comprised of 2x6 walls insulated to R35 with 3 inches of open-cell foam and 2 inches of closed-cell foam. A drainable weather-resistant barrier was applied to the home's exterior and topped with a 1.5-inch polyiso board as a continuous insulation layer. For the home's cladding, Easley and Raterman chose a synthetic stucco, which also required the installation of a wire lath system to the CI layer.

Ironically, the same Arizona climate that creates energy efficiency challenges also helped contribute to another challenge Easley faced with the project—labor shortages. Scottsdale, in part due to its climate, has seen a significant uptick in new residents, thus creating a higher demand for new construction projects. However, the supply of skilled labor is not keeping up with the demand.

**Easley knew he needed a high-performing fastening system** that could support the attachment of continuous insulation and lath for stucco cladding while minimizing the risk of air and water intrusion. Additionally, the system needed to streamline installation without adding any extra labor demands to the project.



## SOLUTION

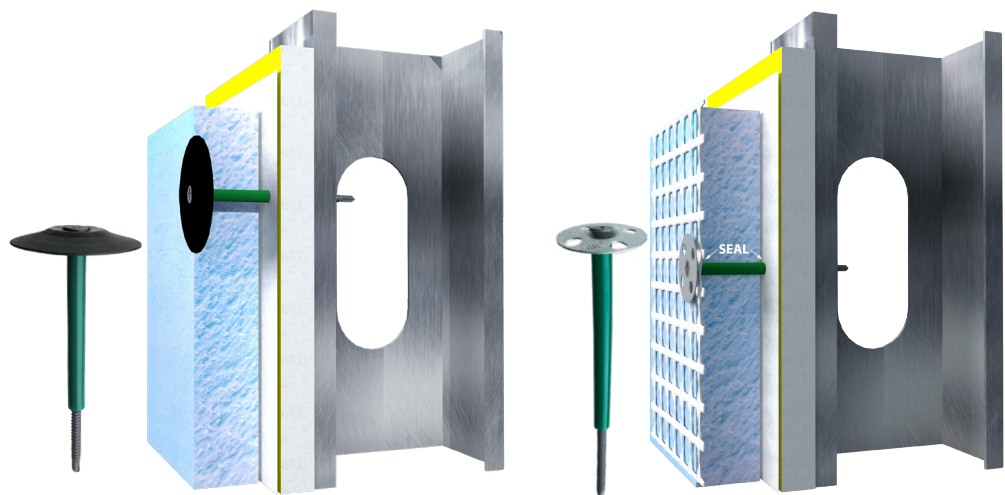
**Easley found what he was looking for with TRUFAST's innovative TubeSeal® self-sealing fasteners.** Having worked with the company on previous builds, he turned to the TRUFAST® team for reliable fastener solutions that tied every element of the building envelope together while preserving the intended functionality and performance of each layer. After some collaboration, they landed on an answer to the challenges he was facing—Thermal-Grip® TubeSeal® for the insulation attachment and Grip-Plate TubeSeal® for the lath attachment.

“I needed a product that would not only maintain the integrity of the building envelope but also something that would be easy to install and not be a strain on labor,” Easley said.

**Thermal-Grip TubeSeal is designed for insulation attachment over an air barrier or WRB.** Available in lengths for insulation nominal thickness from 1" to 4", in half-inch increments, Thermal-Grip TubeSeal ensures a tailored fit for various insulation needs. In addition to securely attaching insulation, it helps seal blind fastener penetrations of a WRB and/or air barrier, all while enhancing the overall air and water tight integrity of the building envelope.

Grip-Plate TubeSeal is designed to help seal blind fastener penetrations of a WRB or air barrier when mechanically attaching lath over continuous insulation and the WRB. It is available in multiple lengths for insulation nominal thickness of 1" to 4.5".

“In my opinion, Grip-Plate TubeSeal is the best product you can use to fasten lath, as opposed to crown staples, which can compress the lath,” Easley said.



The Thermal-Grip TubeSeal® and the Grip-Plate TubeSeal® fasteners were ideal solutions for this project. Both fasteners are UV-resistant for exposure during the course of construction, which suits Arizona's climate, and their proprietary self-sealing TubeSeal feature ensures a secure seal with each penetration through the building envelope layers, maintaining the insulation's integrity and minimizing the risk of air and water intrusion through the AWRB. Both fasteners come pre-assembled with self-drilling or HiLo screws for faster and easier installation into steel or wood substrates.

Reflecting on the project, Easley expressed his satisfaction with the performance and ease of installation of the TRUFAST fasteners. The collaboration with TRUFAST ensured the durability and performance of his home's building envelope, setting an example for best practices in the building industry.

"TRUFAST has developed an intuitive, innovative solution with its TubeSeal products. They work perfectly for insulation and lath applications," Easley stated. "Their effort in designing these products shows a deep understanding of building envelopes and the current state of the construction industry."



For more information on the products used in this project, please visit [www.trufast.com](http://www.trufast.com).  
For technical support, please call 616-454-3100 or email [wallssales@trufast.com](mailto:wallssales@trufast.com).