



Expanded Shale, Clay and Slate Institute  
Rotary Kiln Structural Lightweight Aggregate

# Sundial House

(Highlands Ranch, CO)



<b>LOCATION</b>	<b>Highlands Ranch, CO</b>	<b>ENGINEER</b>	<b>Fuhrmann Engineering Svcs.</b>
<b>OWNER</b>	<b>Shea Home</b>	<b>MATERIAL SUPPLIERS</b>	<b>Sunset Stone</b>
<b>DESIGNER/ ARCHITECT</b>	<b>Woodley Architectural Group, Inc.</b>		
<b>GENERAL CONTRACTOR</b>	<b>Waner Construction Company</b>		

Sunset Stone has worked with TXI for over a decade. Working with Miles Dee and the team at TXI and concrete expert Janet Owens-White PE, Sunset Stone developed a lightweight concrete mix that exceeded AC51, the ICC standard for ACMV. ICC's subsequent Evaluation Service Report, ICC ESR-2836, was provided after extensive testing and procedural reviews verifying conformance of materials, processes, and final product.

TXI's expanded shale product contributed to Sunset Stone's Built Green Certification and continues to help them maintain that status. The TXI expanded shale product used is pre-consumer recycled material that is an associated by-product of its intended production. This combined with Sunset Stone's use of recycled pallets, pre-consumer recycled pigments, recyclable packaging and Holcim (US) Inc's Envirocore™ cement, means the total product offering has over 80% recycled content.



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## The Project

The Shea Home's Sundial House in Highlands Ranch, Colorado was a unique challenge for Sunset Stone. The house was designed by Woodley Architectural Group, Inc. Highlands Ranch, CO; and Fuhrmann Engineering Services, Denver, CO. The General Contractor was Waner Construction Company, Highlands Ranch, CO. Sunset Stone worked with the General Contractor and JR Masonry for their portion of the project.

The owner wanted a dry stack appearance for the building, which typically calls for installation without mortar joints. There is potential for failure using a dry stack installation as a result of natural freeze-thaw cycles common throughout Colorado, therefore Sunset Stone advised against it.

In addition to the freeze-thaw challenge, the client also wanted a specific color scheme. Jonathan Babb, Vice President of Manufacturing for Sunset Stone stated: "One of the distinct advantages Sunset Stone provides vs. other manufacturers of ACMV is our ability to react to our customer's needs very quickly. Unique customizing of ACMV for specific project applications is a routine practice at Sunset Stone."

Sunset Stone's research and development team created a product that blended well with the existing community. It allowed for the high durability installation of a standard mortared product, but also gave the "dry stack" appearance desired by the owner. Their creative solution became an ACMV showcase on a beautifully designed building.

In the end, the Sundial House is the cornerstone of Shea Homes' Phase II in Highlands Ranch. Sunset Stone, Inc. is proud to be working with TXI and to be part of this project and many others across the nation.

## Photo Gallery





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