



Classic Competition



Custom Family Lodge

Custom Family Lodge



Participant information

Enercept, Inc.
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Category: Single Family Homes (over 3,000 sq. ft.)

High Performance: No

Project information

Custom Family Residence
Williams, AZ 86046

Date Completed: 10/2017

Dimensions of building (all floors of multi-story building):

134' x 163' main floor
134' x 124' second floor
53' x 28' basement approximate
55' x 33' garage loft

Total sq. ft. of conditioned space:

18,363 sqft livable space in the home
1,801 sqft in detached garage

Built By (if different than applicant)

Harmony Builders
Kevin Baltzall
417 North Agassiz Street, Building 2 Suite B
Flagstaff, AZ 86001

Panels Manufactured By: Enercept, Inc.





Custom Family Lodge

Designed By (if different than applicant - SIPA will only recognize members)

Nostdahl Liptack Architects (SIPA member)

Dan Nostdahl / Glen Liptack

3033 North Central Avenue Suite 420

Phoenix, AZ 85012

Total sq. ft. of conditioned space:

18,363 sqft livable space in the home

1,801 sqft in detached garage

Describe the end use of the building:

This high-end home is a custom, multi-generational family retreat and lodge.

How did SIP construction help you get this job?

The owner, being energy conscious about this project, was investigating several different energy efficient building methods. He did not want to burden future generations of his family with heavy energy bills. After initially panning for another spray foam insulated home, his Architect suggested he consider SIP construction. He researched the benefits of SIPs in cold weather climates and learned of a well known/respected development company in his area using SIPs. The owner then decided to embrace the use of SIPs for his family's lodge. At first, his builder was also hesitant to build with SIPs. After talking to the Architect and understanding the benefits of SIP construction, he was eager to work with this building method.

SIP wall thickness and core material: 6" EPS foam wall panels

SIP roof thickness and core material: 10" EPS foam roof panels

Describe the benefits of using SIPs on this project. Did SIPs help save time, labor, construction costs, or energy?

The complexity and size of this home necessitated efficiencies in labor and time. The labor savings were obvious from the beginning as framing, insulating and sheathing happened more quickly than anticipated. Building with SIPs offered much more flexibility in design and gave the family more usable living space in the home and garage loft. Energy savings are anticipated with the tight building envelope as the home-retreat is expected to be passed down for many generations to come.

Describe any innovative design elements or structural engineering involved:

This majestic home features 16 bedrooms, numerous bathrooms and lavatories, a 28' x 19' in-home theater with a tiered floor on the second level, front and back stairs to the second level, two large gathering areas on the main level with open loft in third gathering area on the second level. There is also a game room above the detached garage and exercise area in the lower (basement) area. Structural beams and supports were engineered for both the first and second levels of the home.

Any additional comments on the project:

The home has five Energy Star rated propane water heaters. Aspen windows were used throughout the home and detached garage. Windows all have U-Factors from 0.33 to 0.36. Natural stone was used for fireplaces in the two main floor gathering areas and outside trim and fire pit. The home is oriented to take advantage of natural light with large windows and covered porches to protect from hot summer sun during the warm months.

Aerial view

Custom Family Lodge



Theater

Custom Family Lodge





Exterior front

Custom Family Lodge



Kitchen

Custom Family Lodge



Layout

Custom Family Lodge

