

# SIPA Building Excellence Application (Page 1 of 4)



## PARTICIPANT INFORMATION

Company Name: Scott Homes, Inc

Contact Name: Scott Bergford

Address: 3016 10<sup>th</sup> Ave NE

City: Olympia

State: WA

Zip: 98506

Phone: 360-357-9167

Email: Scott@scotthomes.com

Website: www.scotthomes.com

## CATEGORY ENTRY (check one category)

☐ Single Family Homes (over 3,000 sq. ft.)

☒ Single Family Homes (under 3,000 sq ft.)

☐ Multifamily

☐ Agricultural

☐ Commercial/Industrial/Institutional Buildings under 10,000 sq. ft.

☐ Commercial/Industrial/Institutional Buildings over 10,000 sq. ft.

☐ Renovations

☐ Affordable Housing

## PROJECT INFORMATION

Project Name: Purtee Project

Address: 1021 Brood Rd

City: Moscow

State: Idaho

Zip: 83843

Date completed: April, 2015

Total cost of project (exclusive of land): \$450,496.00

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

First Floor, 50'x59', Second Floor, 40'x32'

Asking price/purchase price (Affordable Housing only):

Total sq. ft. of conditioned space:

2572 sq ft

## BUILT BY (if different than applicant)

Company Name:

Contact Name:

Phone:

Address:

City:

State:

Zip:

## PANELS MANUFACTURED BY (members only)

Company Name: Premiere Building Systems

*Continued*



**DESIGNED BY** (if different than applicant – SIPA will only recognize members)

Company Name: \_\_\_\_\_

Contact Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

**Please answer each question with as much detail as possible to help in the judging process.**

**Attach additional sheets if necessary.**

Describe the end use of the building:

The end result is a beautiful Swiss Chalet single family residential home with a total conditioned living space of 2572 sq ft. This extremely energy efficient 3 bedroom, 2 bath home is constructed from SIPs.

How did SIP construction help you get this job?

Our customers had spent years researching and designing their dream home. They were a retired couple, getting ready to build their last dream home. They knew they wanted High Technology and extreme Energy Efficiency, in the style of a Swiss Chalet. The home was to be constructed in a location where extreme weather differences occur each season. From an average low of 20 degrees in the winter, to average highs of 85 plus in the summer. The SIPs air tightness, and Indoor Air Quality were very important to the homeowners. The fact that SIPs contain no VOCs was added to the attractiveness for this type of construction. Along with the strength, and extremely high insulating values the panels bring, SIPs allowed us to achieve a net zero standard at a much more cost effectiveness than without using SIPs. The home was able to be constructed in a much quicker amount of time, and with less waste with a completion date just prior to the summer season. The homeowners were very pleased that in comparison SIPs were going to save them approximately 30% in construction costs compared to ICF or double wall construction.

SIP wall thickness and core material: 10.25" SIP walls = R40 Rigid Foam Insulation

SIP roof thickness and core material: 12.25" SIP roof = R49 Rigid Foam Insulation

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

Using locally made SIPs saved much time, labor and costs on this project. This home was to be constructed in the next state from our home office and would require the use of subcontractors that were not familiar with SIPs. The homeowners wanted a Swiss Chalet look. A design using a central ridge beam with SIP roof panels was the easiest to achieve high performance with minimal oversight from the head office. Use of SIP wall and roof panels, allowed a high performance shell on the structure. The ease of using SIPs on this design allowed the project to move along faster and our labor costs were below budget. SIPs were the most cost effective product on the market to allow us to achieve a Net Zero status for this home. ICF and double wall construction were projected to cost approximately 30% more than SIPs.

Describe any innovative design elements or structural engineering involved:

The use of multiple beams in the design enhanced the Swiss Chalet look and enabled us to use Insulated Structural "Super Splines" in the roof panel assembly, because of reduced engineered snow load weight requirements. A fully insulated slab floor system, eliminates crawl space, environmental varmints and also eliminates floor squeaks.

A hidden gun safe was designed and built behind the library shelves.





Please list any certifications the project received, such as ENERGY STAR, LEED, National Green Building Standard, or local green building programs. Only list certifications that are completed:

Energy Star Certified  
Indoor airPLUS Qualified Home

HERS Index (residential projects): 4

Blower door test results (ACH50) (residential projects): 1.12 ACH 50

Energy use intensity in kBtu/ft<sup>2</sup> (commercial projects): \_\_\_\_\_

Describe the HVAC system used on the project:

There is one outdoor Mitsubishi Ductless Heat Pump, MXZ 4B36NA, along with two indoor units, both MSZGE18NA, all used for heating and cooling the 2572 sqft home at about a 400% efficiency. A Venmar EK 01.5 Heat Recovery Ventilation (HRV) system was also installed. The HRV recovers approximately 75% of exhausted heat from the exhaust fan. These systems work together efficiently to provide even temperatures and clean indoor air throughout the home.

Describe any other energy-saving materials used in the building envelope other than SIPs. List U-values of windows used and the R-value of any Insulation materials.

The windows used on this home are Plygem Pro Series 1" HP3MAX Triple Pane Windows: All fixed hung have a U-value of 0.20, Casement & Awning have a U-value of 0.21, Single Hung & Slider have a U-value of 0.23, and the Sliding Glass Door Has a U-Value of 0.22

The Slab is also 100% insulated to a R20 value, vertically and horizontally

Please list any energy-efficient products or design features, such as lighting, hot water heating, appliances, passive solar:

The homeowners chose 100% LED light fixtures throughout the entire home.  
Every appliance is Energy Star rated. The only exception is the Insta-Hot, and the hot tub.

The homeowners also chose a solar thermal system for their hot water. A Rheem model RS80-48BP Sol Pak was installed. This includes a double roof panel, 80 gal solar storage tank with backup electric & pumping station, controls and insulated Piping.

The insulated slab is passive solar. The solar orientation of the window wall allows the slab to be a passive solar feature.

Suntouch heat cable Radiant floor heating was used in the bathrooms and utility rooms for comfort

Were any solar panels installed on the project? If so, indicate the size of the system:

The homeowners chose a 5.5kW Photovoltaic Array that has been placed on the southern facing part of their acre. It is mounted on a standalone SunModo Ground Mount System fixed rack. It has 20 panels, each rated for 265 WATT, 60 cell, high efficiency mono crystalline PV modules. The PV panels are manufactured by LG and the inverter is a Sonny Boy SB 5000 TL US 22, and Siemens 200A Meter/Main loadcenter.

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## SIPA Building Excellence Application (Page 4 of 4)



Please list any sustainable materials or design features not listed above, such as recycled materials, low-VOC finishes, landscaping, etc.:

The homeowner's choices of flooring were all in line with sustainable materials. Trex decking was used on the upper porch and in the hot tub room. They chose cork for easy maintenance and comfort in the kitchen. The rest of the house is in Timberlake Laminate flooring with attached pad, guaranteed for 30 years. With the anilin locking system, there was no glue needed. No VOCs. The bathrooms and utility room have marmoleum over Suntouch heat cable. The countertops are Wilsonart Laminate with the exception of the farmer's sink in the utility room that had to be set in marble.

The home sits in the middle of 20 acres of land. 19 of those acres have a Forest Stewardship plan sanctioned by the Idaho Department of Lands. The remaining one acre is around the house and shop/barn. It is fenced to encourage large animals to wander past, rather than through the yard to protect pets and establish a limit for landscaping. The goal is for low Maintenance, native landscaping with minimal water usage. Solar powered gate openers aid in keeping animals out and Pets inside the one acre area. All plants chosen for the gardens and flower beds were chosen based on the low maintenance and drought resistance qualities. See Attached for the homeowner's letter of Landscaping improvements.

Any additional comments on the project:

This homeowner was more than happy to provide stats and information about their home and the choices made. Please see attached for:

Landscaping Improvements

Energy Efficiency and Life Style

Shop/Barn Area

Rheem Solar Hot Water System

Solar Power

PV System monthly production/purchased/use graph

HERS Index Certificate, Blower Door Test Results, Indoor airPLUS Qualified Home Certificate

AHRI Certificate of Ratings, Rheem Solaraid Water Heat specifications, Venmar HRV Specifications

Photos

### CHECKLIST

- ☒ My company is a SIPA member. Panels for this project were
- ☒ manufactured by a SIPA member. I have answered ALL the questions completely
- ☒ I have enclosed the two required electronic images of the completed project meeting the requirements stated in the SIPA Building Excellence Awards guidelines
- ☒ I have indicated the HERS Index as determined by a RESNET certified home energy rater (residential projects)

**PLEASE CONFIRM:** I have read and understand the rules for this competition. This entry is structural insulated panel construction as defined in the SIPA Building Excellence Awards guidelines. I understand by making this submission that my pictures will be used by the Structural Insulated Panel Association (SIPA) to promote the use of structural insulated panels. I hereby give permission to SIPA to use the enclosed pictures for any use they see fit in that endeavor. I understand that where possible, SIPA will give credit for pictures used to my company as listed above.

Signature:

A handwritten signature in black ink, appearing to read "K. S. Sykes".

Date:

3-3-16