

2020 SIPA Building Excellence Awards



Official Entry Form

APPLICATION DEADLINE: **January 11, 2020**

The Structural Insulated Panel Association (SIPA) is hosting the eighteenth annual Building Excellence Awards to recognize association members that build exemplary projects using structural insulated panels (SIPs). The competition allows SIPA members to showcase their best work while demonstrating the design flexibility, sustainability and energy efficiency possible with SIP construction.



**Structural Insulated
Panel Association**

**SelectSIPs
EXPO** 
A Better Way to Build

MARCH 2 - 4 / PHOENIX, ARIZONA

Winning entries will be showcased at the 2020 SIPA Annual Meeting and SelectSIPs EXPO.



Homes and commercial buildings completed between January 1, 2019 and December 31, 2019 are eligible.

Award Categories:

- High Performance (*any size or use category - judged only on special High Performance features or certifications*)
- Single Family 'Small House' under 900 sq. ft.
- 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 (*residential or commercial, includes additions and retrofit insulated panels*)
- Affordable Housing (*excludes multifamily, home ownership cost must be at or below 30% of median income for location*)

Who is Eligible?

- The submitting company must be a current SIPA member in good standing
- Structural insulated panels must be used on a minimum of 50% of the building envelope, determined by square footage of exterior walls and roof
- The SIPs used on the project must be provided by a SIPA member manufacturer
- Installers, designers or other parties involved in the project who are not SIPA members will not be recognized in awards materials. However, builders or architects may apply for membership with their entry, but must be full members in good standing prior to the closing date for the entry to receive recognition.
- Project must be completed between January 1, 2019 and December 31, 2019

Winning Entries

- One winner will be chosen from each category. From the category winners, an Overall Competition Winner and a Runner-Up will be named.
- Judges may hand out Honorable Mentions at their discretion
- Winners will be recognized at the 2020 SIPA SelectSIPs EXPO (Annual Meeting) in Phoenix, Arizona, March 2-4, 2020.
- SIPA will promote the winning entries on the SIPA website and issue a press release to outside media

Guidelines

- Member companies may make multiple entries, but a separate entry form must be completed for each entry (except for same project also submitted to High Performance category)
- SIPA has the right to use the photos to promote SIPs to the construction industry. All entries will be displayed on the SIPA website.
- The deadline for entries is January 11, 2020. All entries must be received at the SIPA office on or before that date.

The following information and documentation is REQUIRED. Entries without the required items will not be considered.

- Completed and signed application
- A minimum of two photos showing different views of the completed project
- Photographs must be submitted in digital form and be at least 2400 x 3000 pixels, or 8" x 10" at 300 dpi
- Residential projects are encouraged to have a HERS Index calculated by a RESNET certified home energy rater. High Performance category projects must present a HERS Index with blower door data. Commercial High Performance projects must provide other documentation of energy efficiency.

Additional documentation is not required but is highly recommended to give the judges a clear picture of the project's overall design, sustainability, systems integration, and energy efficiency.

- Additional photos showing the construction process and SIP installation
- Documentation of energy efficiency, such as a HERS report, blower door test results, utility bill data, or infrared thermography
- A thorough description of energy-efficient technologies other than SIPs, as well as other innovative or sustainable features
- Comments from the building owners regarding their satisfaction with the building
- A floor plan of the project. A single page line drawing no larger than 17" x 22" in size is sufficient. Please do not send full blueprints.

Judging Criteria

Each entry will be judged on the following criteria:

- Design and structural engineering innovation
- Creative use of SIP construction
- Environmental sustainability

New High Performance Category criteria:

- Projects can compete both here and in specific building type category
- Only features pertaining to eco-efficiency, health, resilience, and renewable energy are considered here
- Energy efficiency (quantified by HERS Index, blower door and other data)





PARTICIPANT INFORMATION

Company Name: **Moonlight Design Studio, LLC**

Contact Name: **Andy Roehl**

Address: **1149 Settlemire Rd**

City: **Lebanon**

State: **OH**

Zip: **45036**

Phone: **513-305-7712**

Email: **andy@moonlightdesignstudio.net**

Website: **www.moonlightdesignstudio.net**

CATEGORY ENTRY (check one category)

☐ Single Family 'Small House' under 900 sq. ft.

☐ 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

☒ High Performance (multiple category entry permitted)

PROJECT INFORMATION

Project Name: **Perks Residence**

Address: **1309 Red Brick Rd**

City: **Garner**

State: **NC**

Zip: **27529**

Date completed: **05/14/2019**

Total cost of project (exclusive of land): **\$320,000**

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

Basement: 2,390 sq. ft. (Unconditioned) Main Level: 2,222 sq. ft. Front Porch: 170 sq. ft.

Attic: 600 sq. ft. (Conditioned) Garage: 415 sq. ft.

Asking price/purchase price (Affordable Housing only):

Total sq. ft. of conditioned space:

2,773 sq. ft. (Main Level + Attic only, basement and garage areas not included)

BUILT BY (if different than applicant)

Company Name: **Homeowner**

Contact Name: **Mr. Kevin Perks**

Phone: **(336) 269-5973**

Address: **1309 Red Brick Rd**

City: **Garner**

State: **NC**

Zip: **27529**

PANELS MANUFACTURED BY (SIPA members only)

Company Name: **PFB America Corporation (Insulspan, Michigan)**

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

Company Name: **Moonlight Design Studio, LLC**

Contact Name: **Andy Roehl**

Phone: **513-305-7712**

Address: **1149 Settlemire Rd**

City: **Lebanon**

State: **OH**

Zip: **45036**

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:

Private residence for the property owner.

How did SIP construction help you get this job?

I was retained after responding to an online SIPA inquiry request. The property owner had researched SIPs and was wanting to work with someone with SIP design experience. My primary practice is focused to SIP / high performance construction design only.

SIP wall thickness and core material: **House: 6.5" overall with 5.5" core. Garage: 4.5" overall with 3.5" EPS core**

SIP roof thickness and core material: **House and Garage: 10.25" overall with 9.25" EPS core.**

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

SIPs assisted the project to achieve the level of energy efficiency and durability the homeowner wanted. This home was designed with "aging in place" (Universal Design) in mind as being the homeowners last place to live. Having low energy costs with reduced mechanical sizes and low maintenance were important concerns of the homeowners to be able to sustain the remaining years as well as accessibility to the living space. It also helped having less subcontractors and material on-site on a tight lot since the project coordination on-site was preformed primarily by the homeowners.

Describe any innovative design elements or structural engineering involved:

Extensive southern exposure with venting (awning) clerestory windows and overhangs designed for shading in the summer (passive solar and ventilation) while providing reflected indirect lighting in the main living space. Overhangs were designed and constructed using embedded members within the SIP roof and T&G planking providing a thinner overhang profile. Basement constructed using insulated precast concrete panels (Superior Walls) providing continuous insulated envelope from basement slab to roof peak. Insulated root cellar / storm shelter under front porch. Rainwater falls into a gravel french drain which is collected in a cistern for reuse. The gravel pre-filters the water.

Continued



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

RESNET HERS Index.

HERS Index *(required only for High Performance Category and recommended for residential projects):*

RESNET Registered (confirmed) 48. See attached reports.

Blower door test results (ACH50) *(required only for High Performance Category and recommended for residential projects):*

0.83 ACH50

Energy use intensity in kBtu/ft² *(required only for High Performance Category and recommended for commercial projects):*

10.6 Btuh/ft² heating (@47°F) / 10.38 Btuh/ft² total cooling

Describe the HVAC system used on the project:

Main level is conditioned using ground source heat pump, 4.8 COP / 24.1 EER (Geothermal System) while basement is naturally ventilated using casement windows and double man door with no heating or cooling unit installed. Basement and main level separated by insulation barrier. Main level and Attic are mechanically ventilated with Energy Recovery Ventilator (ERV) providing 70 CFM continuously. System designed by ACCA HVAC Design Consultant (see attached Manual Calcs).

Describe any other energy-saving materials used in the building envelope other than SIPs. List U-values of windows used and the U or R-value of any insulation materials. *(judged only for High Performance Category)*

- Insulated precast concrete foundation walls (Superior Walls) R-Value: 12.5
- Sunrise Windows Omega 12 (EnergyStar) U-Factor: 0.26 ; SHGC: 0.19 (insulated frames with integral brick mould for tighter installation).
- Energy Star shingles, prepared for solar panel installation.

Please list any energy-efficient products or design features, such as lighting, hot water heating, appliances, passive solar *(judged only for High Performance Category):*

- 100% LED lighting.
- Passive solar heating and ventilation.
- Geothermal heating and cooling.
- Rheem Marathon electric water heater with geothermal assistance.
- Natural daylighting. - Rainwater harvesting design.

Were any solar panels installed on the project? If so, indicate the size of the system *(judged only for High Performance Category):*

No solar panels installed at final inspection, however the project is solar-ready. Panels anticipated to be installed within the next year. South roof plane exceeds area needed for Net-Zero.

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Please list any sustainable materials or design features not listed above, such as recycled materials, low-VOC finishes, landscaping, etc. (judged only for High Performance Category):

- All low-VOC interior finishes. - All trim and cabinets built using birch harvested from building lot.
- Rainwater harvesting system collecting filtered water from foundation drain tile.
- No rain gutters. Runoff falls directly into french drain (naturally filtered) collected by rainwater harvesting system usable for potability.

Any additional comments on the project:

- SIP walls and roof installed by SIPA Member Al Cobb (Panelwrights)
- SIP engineering and project consultant engineering by Tom Moore (Pinnacle Engineering)
- Average monthly utility bills (all electric energy) per month (12 months)
Heating = \$10.58/month ; Cooling = \$11.50/month ; Water Heating = \$12.83/month
Lights/Appliances = \$64.50/month ; Service Charges = \$8.00/month
Total = \$117.33/month.

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

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 blue ink, appearing to read "John P. Ruff".

Date: 01/16/2020

Entries that do not contain all required materials or are received after **January 11, 2020** will not be considered

Complete application and submit electronically to info@sips.org

Or send hard copy applications to SIPA office: P.O. Box 39848, Ft. Lauderdale, FL 33339



**Structural Insulated
Panel Association**