

2020 SIPA Building Excellence Awards



Official Entry Form

APPLICATION DEADLINE: **January 23, 2021**

The Structural Insulated Panel Association (SIPA) is hosting the nineteenth 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 15-17 / ORLANDO FLORIDA

Winning entries will be showcased at the 2021 SIPA Annual Meeting and SelectSIPs EXPO.



Homes and commercial buildings completed between January 1, 2020 and December 31, 2020 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, 2020 and December 31, 2020

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 2021 SIPA SelectSIPs EXPO (Annual Meeting) March 15-17 – Orlando Florida (this is the projected date but with COVID19 there may be a change)
- 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 23, 2010. 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: _____

Contact Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____

Email: _____ Website: _____

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: _____

Address: _____

City: _____ State: _____ Zip: _____

Date completed: _____

Total cost of project (exclusive of land): _____

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

Asking price/purchase price (Affordable Housing only): _____

Total sq. ft. of conditioned space: _____

BUILT BY (if different than applicant)

Company Name: _____

Contact Name: _____ Phone: _____

Address: _____

City: _____ State: _____ Zip: _____

PANELS MANUFACTURED BY (SIPA members only)

Company Name: _____

Continued

SIPA Building Excellence Application (Page 2 of 4)



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:

How did SIP construction help you get this job?

SIP wall thickness and core material: _____

SIP roof thickness and core material: _____

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

Describe any innovative design elements or structural engineering involved:

Continued

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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:

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

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

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

Describe the HVAC system used on the project:

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)*

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

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

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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)*:

Any additional comments on the project:

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: _____

Date: _____

Entries that do not contain all required materials or are received after **January 23, 2021** 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**

[continued from page 5]Specially-designed joist seats were engineered to be compatible with the connection of the open-web joists to the ends of the timber columns. Special considerations were needed during erection; the tall timber columns were temporarily braced with masonry sway bracing and an 8ft tall “starter course” of SIPs around the base of the building. Carefully considering overhang dimensions and specifying typical column bay spacings of 8- and 12-feet allowed us to balance column sizes with allowing roof and wall SIPs to be unstiffened with internal lumber (even with high wind force demands on the panels), while virtually eliminating SIP panel waste, allowing the use of full-size 8ft x 24ft roof and wall panels throughout the majority of the structure. To increase the energy performance of the building, the owner chose to use thicker SIP panels than required structurally. Inside the building, a two-level enclosed structure measuring approximately 20ft x 20ft was built using conventional wood framing to house the mechanical equipment room, restrooms, offices, and a pre-flight plan room. A fire suppression system was provided. The hangar is located in a high-seismic region; moreover, with the very large door on one side, the structure was designed as a partially enclosed building. As a result, the design earthquake and wind forces on the structure are very high, requiring careful design and detailing to provide a load path for uplift and lateral forces. The lateral system is comprised of SIP roof diaphragm, SIP shear walls (on three sides of the building), and a steel joist moment frame around the door. The unique moment frame is comprised of a specially-designed and detailed open-web joist with double-pitched top chords (limited in depth to provide maximum door opening height), supported by large wide-flange steel columns (size W24x103). Wood struts were engineered to brace the end walls and moment frame joist, and continuous wood members were provided around the perimeter of the building, at the roof level, to act as diaphragm tension and compression chords. The large hangar door is a center-pivoting vertical-lift hydraulic door measuring 90ft wide x 27ft tall, by Higher Power Hydraulic Doors. This unique door system reduces the forces imparted on the structure, versus the out-swinging hydraulic door systems typically used on hangars. The door was heavily insulated with EPS foam placed between the steel framing members for energy efficiency, and covered with painted nailbase (single-sided SIP panel) to eliminate thermal-bridging and create the interior finish surface. The hangar slab was engineered to withstand stresses due to point loads imparted by large aircraft wheel loads. High-density EPS insulation was placed beneath the slab for energy-efficiency; the EPS was modeled as a stiff subgrade supporting the slab, to correctly capture the behavior of the materials. The insulated slab is particularly important due to the use of radiant floor heating. Compared to a manufactured steel building, which is the conventional building system for this type of structure, this SIP building has a number of advantages (in addition to those described above). Special inspection costs were greatly reduced, due to far fewer field-erected steel connections. Additionally, cost savings were realized through significant reductions in foundation size and complexity, and a small crew of carpenters/laborers required to erect the columns and SIPs. From the user’s standpoint, this building is architecturally more attractive, and provides more usable space than a similar-sized manufactured steel building, due to the use of smaller column and joist members. Notably, this architecturally-appealing and energy-efficient hangar design could be easily repurposed for use as an events center, gymnasium, emergency shelter, or similar facility, in place of a more traditional manufactured steel or CMU building. The large door opening creates an opportunity to provide an interior space connected to the outside, with the ability to close the large hydraulic door to protect the users from inclement weather.8