



**ENERCEPT**<sup>®</sup>

**STRUCTURAL INSULATED PANELS**  
THE FUTURE OF FRAMING





# Structural Insulated Panels

OSB Panel



EPS Foam  
5 1/2" - 12" thick

OSB Panel



## The Future of Framing

At Enercept we like to say structural insulated panels (SIPs) are “the future of framing”. In truth, the future is now. Enercept has been fabricating SIPs since 1981 and has built a solid reputation for delivering the most customized SIPs on the market. That commitment to quality has made us the “builders’ choice”. Earning industry respect and repeat business from builders doesn’t happen by chance; those relationships are developed over time by a conscientious team which brings their A-game to Enercept each and every day. At Enercept, producing a quality product and providing stellar customer service are always top of mind. Whether you are building a family home, a commercial building or an agricultural structure, Enercept offers cost-efficiency, energy efficiency, improved air quality – and the latest in green construction. The Enercept team, along with our network of dealers and builders are ready to bring environmentally friendly, worry-free framing and insulation solutions to you.





## Satisfied Clients Around the Globe



### South Pole - NSF Research Center

Enercept worked with the National Science Foundation's Research Station at the South Pole (Amundsen-Scott Station). The completed installation provides shelter and comfort to the scientists and support staff working in the coldest place on the planet. The massive structure – which boasts an impressive R-value of 50 – can withstand bitter cold, raging winds, blowing snow and minimal sunlight.

With successful project completions worldwide – from Antarctica to Greenland, Japan, Europe and at home in the United States – Enercept has the experience and ability to build quality, cost-efficiency and comfort into your next family home, light commercial or industrial building project.



Our unique approach to customized building lends itself to a variety of market segments.



## Residential

Whether you're in the market for a simple ranch style home, a sprawling family retreat or a multi-family/multi-story dwelling, SIPs can be a great fit for your project and your budget.



## Timber Frame

SIPs are a natural fit for enclosing a timber frame or post and beam structure, since they go up quickly and offer design flexibility as well as being an environmentally-friendly choice.



## Commercial/Developer

The quick construction of Enercept Structural Insulated Panels results in a faster return on your commercial investment. SIP construction will save time and money on your job site as well as reduce your HVAC requirements. Your building will be ready to finish sooner, and you'll be open for business in less time.





## Agriculture

Agriculture is a unique segment of the construction market, largely due to the varied functions of the structures found on ranches and farms. The need for storage, office space, shops and living quarters mean a variety of demands when it comes to the operation's buildings.



## Contractor/Sub Contractor

One of today's most pressing challenges for contractors is the ability to find, hire and retain skilled staff and subcontractors. Because Enercept's products are so easy to work with and custom-designed to each installation, contractors and subs save time, money – and frustration since less skilled labor is required than traditional builds.



## Architects/Light Construction

Enercept has been the go-to construction solution for a wide range of projects. Architects appreciate the flexibility in design that SIPs offer – tenants appreciate the comfort, low environmental impact and, best of all, reduced costs of operation.

# We're Driving Change

As building demands have dictated more from suppliers, Enercept has stepped up to meet those demands. Our systems approach to construction alleviates much of the cost, time and expense found in more traditional construction without sacrificing quality or sustainability.



## Systems Built

Labor savings abound when using SIPs – Enercept does the bulk of the work in a climate-controlled factory setting, which means less work in the field, fewer errors and fewer callbacks, all while maintaining high standards of quality.



The Enercept building system is the ideal fit for a range of markets and many client needs – from single family homes to apartment houses to strip malls, public buildings, office facilities, churches and even very large facilities, such as schools and casinos.

## Green

Starting with the materials we use, the manufacturing process and the final product, Enercept strives to impact the environment as little as possible. End users enjoy quality and comfort in a SIP structure which uses far less energy than its stick-built counterpart – all wins from a sustainability standpoint.

**“As with anything, there was a learning curve. But as we learned to work with the panels and figured out the best techniques for installation, our productivity improved. It was unique, so it took a lot of forethought and planning, but we were able to execute our plan and meet the schedule.”**

- E. Skott, Crestone builders





# Trav's Outfitter

Built with Enercept SIPs in Watertown, South Dakota





# Building Standards are Demanding More

Buildings use a vast amount of our natural resources, both in their construction and operation. Sustainable buildings use less energy, thus reducing carbon dioxide emissions. Green building plays an integral part in battling global climate change. Using those resources more efficiently is critical for a sustainable future.

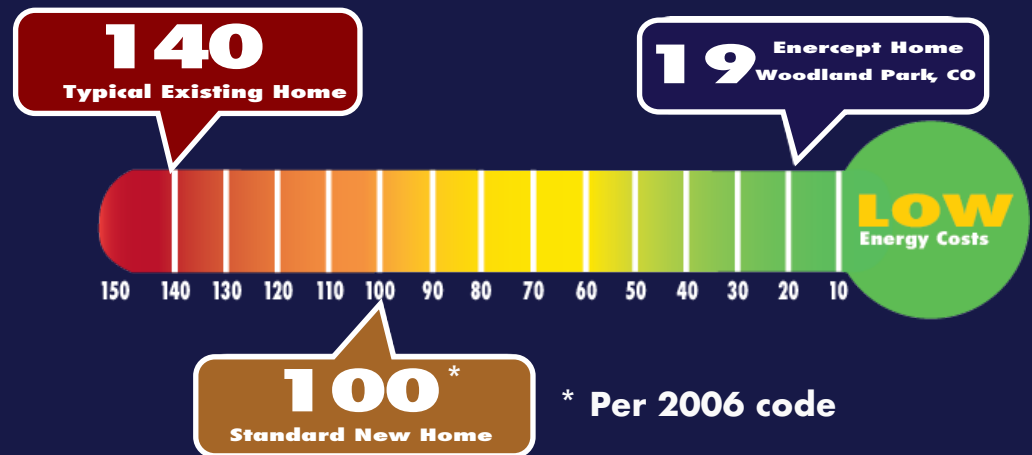


## Buildings with SIPs use up to **60%** less energy

Building with energy-optimizing SIPs plays an integral role in energy efficiency, using less energy to heat and cool a SIPs structure. It also allows for better control over indoor environmental conditions.

The superior insulating quality of the solid foam core also creates an air tight envelope with little or no thermal bridging and minimal air filtration for superior air quality.

When combined with the other measures, such as solar panels, it is not difficult to see how easy it would be to have very little environmental impact with your project and obtain a low HERS (a measure of a structure's energy use, much like the 'miles per gallon' on a vehicle) rating. You could even go to Net Zero.







LEED Platinum Home with HERS Rating of 19 ■





## Renovation Category First Place Winner 2018 Building Excellence Awards

Each year, the Structural Insulated Panel Association (SIPA) awards extraordinary projects with SIPA Building Excellence Awards. Enercept has been honored, proud and privileged to have had such awards bestowed upon projects in the Residential, Agricultural, Commercial, and Renovation categories over the last several years. Gathered Oaks, an event venue in Minnesota developed from an old barn, won First Place in the Renovations category.



# Enercept SIPs Exceed Building Demands

## Importance of Green Sustainable Building

Green building aims toward less energy use, better indoor air quality and a structure's reduced environmental impact. Enercept SIPs addresses those principles by providing 58% more R-Value, less air leakage and less thermal bridging than other construction methods. Sustainable building design and construction focuses on the wise utilization of resources to create high-quality, healthier and more energy-efficient homes and buildings, thus reducing their environmental impact. Minimizing pollution is critical to a sustainable future.

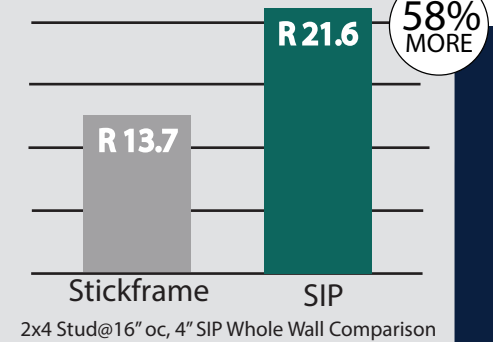
While LEED is identified as "going green", green building has been a hallmark of Enercept's building practices since 1981.

### LESS THERMAL BRIDGING



Unlike stickframing, SIPs provide continuous insulation required by new codes.

### HIGHER R-VALUE

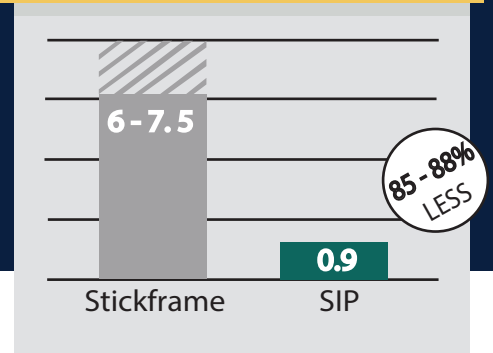


### SIPs R-VALUE CHART

Insulation Thickness	5 1/2"	7 1/4"	9 1/2"	11 1/2"
R - Value	23	30	38	46
Weight	3.75	4.2	4.6	4.9

"R" means resistance to heat flow. The higher the R-value, the greater the insulating power.

### LESS AIR LEAKAGE



# Systems Built Construction is the Future of Framing



## Seaport Pier

New Jersey Shore

"This was our first Project with Enercept and the experience was great. Enercept provided detailed support and the product was erected quickly and safely in a challenging environment at the Jersey Shore on the beach. The Owner/Developer was very satisfied with the overall performance. We hope to work with Enercept again!"

- Lee Rossner, Owner of CLARK Associates

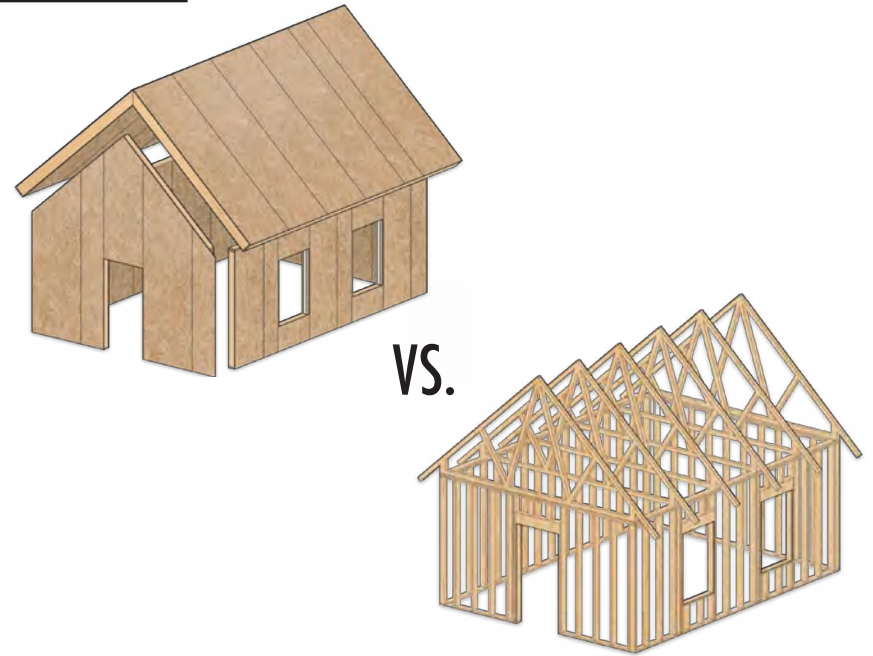


# Design Efficiency Engineered Strength

Building with Enercept panels affords architects, builders and homeowners the advantage of applying systems approaches to project development, design and construction. This saves considerable time and costs without sacrificing quality or sustainability.

Integrating work completed in our factory with what's being accomplished on the job site is essential and our clients reap the advantages of that coordination.

With Enercept SIPs, homeowners, builders, commercial developers, architects and agri-businesses realize a wide range of considerable benefits. Those benefits – most notably efficient construction and labor savings – translate directly to your bottom line.



## Highly Skilled Workers

Our manufacturing team makes panels, day in and day out. They are experts, ensuring your panels are built exactly to your specifications, right down to the rough openings for windows and doors.

## Faster Construction

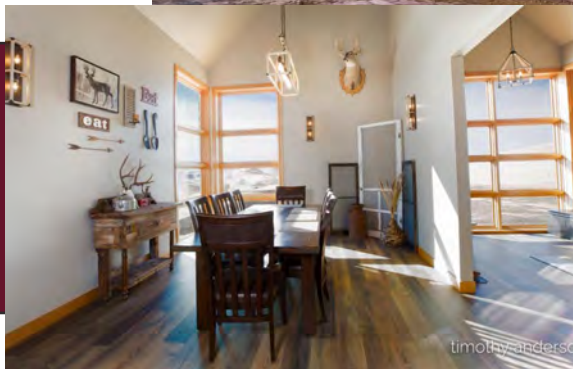
Framing, insulating and sheathing are combined in one step – structures can be dried-in much faster than with conventional stick built construction.

## Lower Labor Costs

According to studies, SIPs construction requires one-third of the construction time found in traditional building methods. Less on-site labor means more money in your pocket.

## Less Waste

The waste from a typical Enercept home project can often be removed from the building site in a single 55-gallon container.



## Runner Up Single Family Homes Over 3,000 sq ft. 2018 Building Excellence Awards

This unique home is built into the side of a hill, which required special engineering to develop the best means to adequately support the structure. Twelve to 14-foot foundation walls were built and back-filled to reinforce the home. During construction, severe storms with large hail, strong winds and tornadoes ripped through the area, destroying another large building on the property. This home, still under construction, sustained no wind damage.





# Blue Wave on The Bay

Built with Enercept SIPs in Ashland Wisconsin

SIPA Award winner 2016 Commercial Building under 10,000 sq. ft.





# The Enercept Advantage



Explore our selection of foundations, basements, floors, walls and roofs, customized to your specifications with a level of fit and finish like no other as well as features you won't find elsewhere.



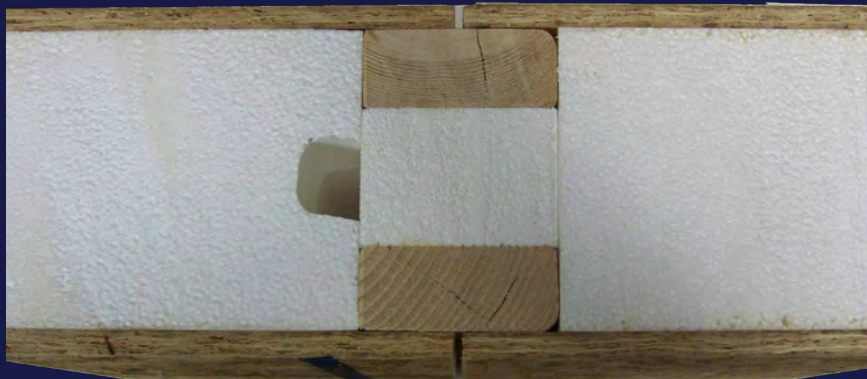




## Thermal Post

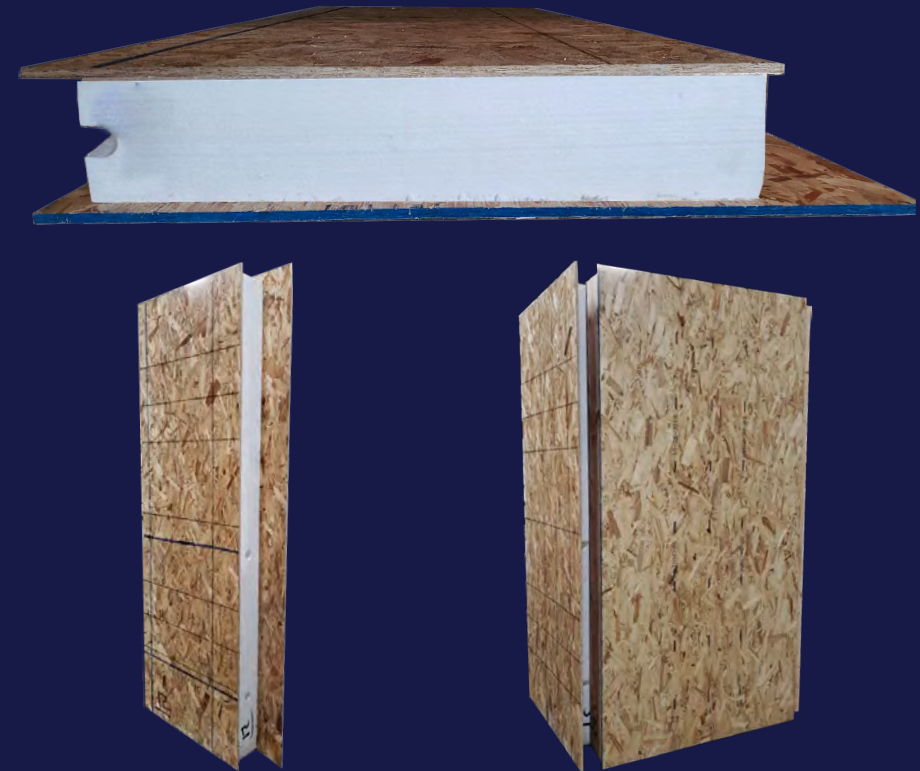
Enercept's Insulated Connecting Posts are unique, and this inventive SIPs system results in a solid envelope of insulation where even the connection posts have a foam core. Therefore, Enercept SIPs have the ability to provide continuous insulation to virtually eliminate thermal bridging.

Not only do they afford greater energy efficiency, the hand-beveled edges of the lumber in the post makes for easy installation. The panels slide into the next adjoining panel smoothly in a tongue-and-groove fashion.



## Fly By Corner

Enercept's wall panels feature another innovative feature: fly-by corners. In short, the OSB on the exterior of each corner panel extends beyond the EPS insulation. This allows installers to trim the OSB (and the foam, if needed) to fit precisely even if the foundation or floor deck have imperfections.



# Components

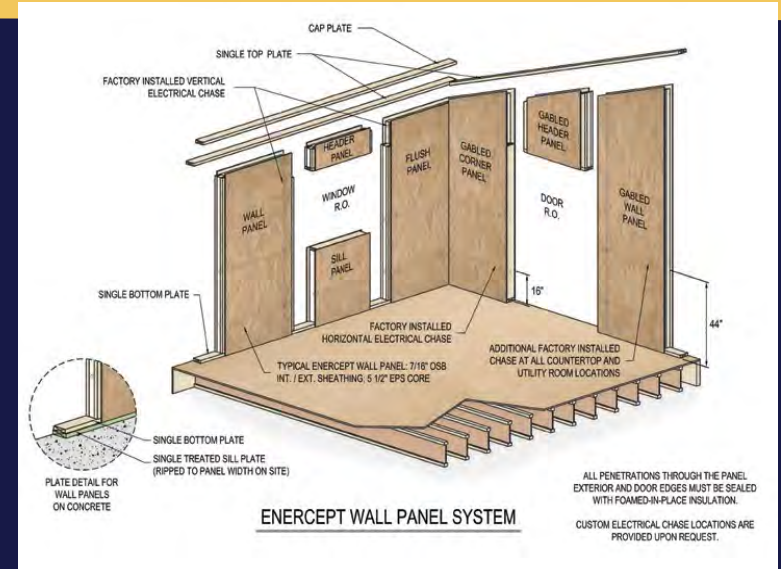
SIPs construction includes many of the same components as traditional construction, but offers the benefits of a stronger structure, increased energy efficiency, faster installation and overall, a more cost-effective project.

## Wall System

Enercept wall panels are comprised of EPS insulation laminated between two oriented strand board (OSB) skins. The four-foot panels install quickly and easily with our originally patented Insulated Connecting Posts. Even builders who've not used SIPs before marvel at the simplicity of the process.

All rough openings (windows and doors) are precisely cut and factory framed. Electrical chases are factory installed using heat for smooth interior surfaces, allowing for ease in wiring.

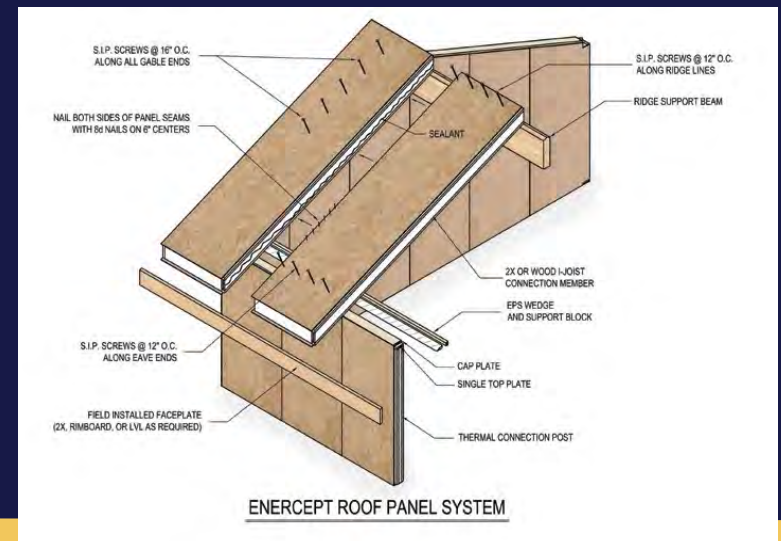
Bottom sill plates, top plates and panel sealant are all included with the wall package.



## Roof System

Our roof panels provide superior insulation, durability, connect easily and provide continuous insulation. Enercept roofs are pre-cut to your specifications, eliminating concerns about cutting and complex angles. Compound angles and valleys are no problem with our roof panels.

Roof panel thickness will vary depending on the load, R-value requirements and local building codes. In cold climates, SIP roofs can withstand snow loads up to 260 pounds per square foot!

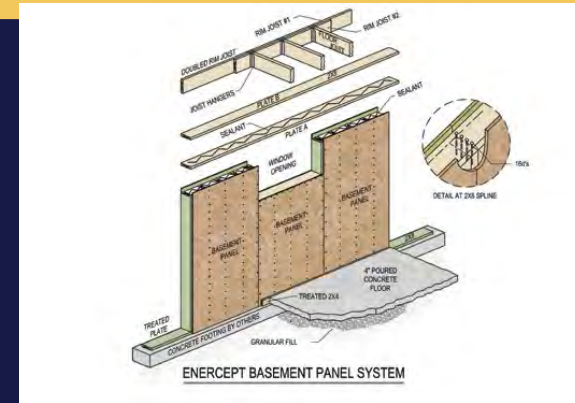




# Basements

Using Enercept basement panels offer a warm, dry basement with the feel of main-floor comfort. Our pre-built basement system allows for fast construction and eliminates the need to fur-out the walls.

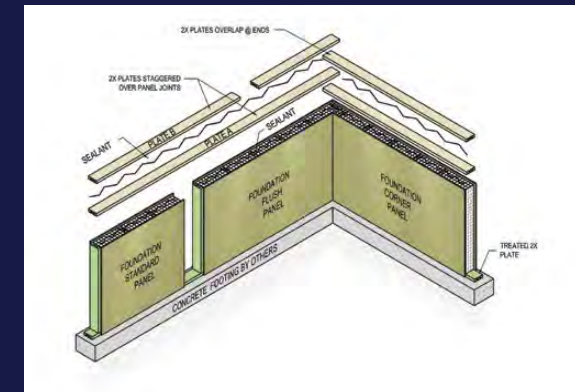
Basement panels feature .60 retention treated plywood sheathing on the exterior and OSB on the interior and are placed on CCA treated lumber. Panels connect by pre-installed treated studs which fit into the recessed edge of the adjoining panel. Onsite labor is kept to a minimum with electrical chases cut into each panel and window openings precut and framed in the factory.



# Foundations

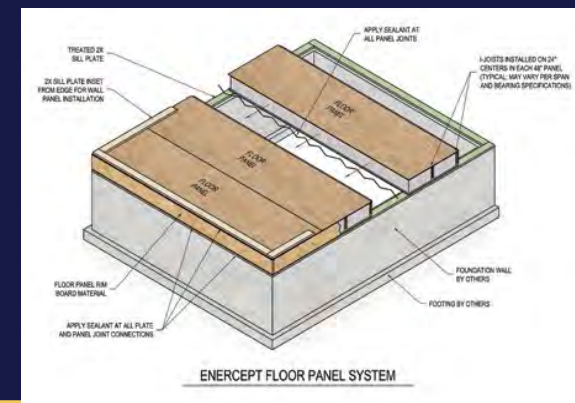
Enercept's EPS insulation foundation system protects plumbing from freezing in cold climates and offers optimal energy efficiency. To achieve the same thermal efficiency as an Enercept foundation panel, a concrete wall would have to be at least 12 feet thick!

Typical foundation panel height is four feet, unless otherwise specified. Our foundation panels are treated plywood on both interior and exterior surfaces and connect to each other with treated studs.



# Floors

SIP's floors are essentially roof panels laid flat. Featuring a solid core of EPS with intermediate structural members, Enercept's floor panels can be fabricated to fit a wide range of designs. Floor panel thickness varies upon design spans and R-Value requirements. A typical floor panel is designed to carry normal residential loads, though higher load capacities are possible when necessary.



# The Facts

**MYTH: SIPs are a new, untested building component.**

**FACT:** SIPs are certainly not a recent invention! In fact, they've been around for more than 70 years. SIP development began in the late 40s. A test structure was built using several different materials and was the forerunner to current SIPs construction.

**MYTH: Building with SIPs is too expensive.**

**FACT:** Building with Structural Insulated Panels (SIPs) is actually an excellent way to save money in several ways: labor costs, job site waste, energy savings and material costs.

**MYTH: All building panels are SIPs.**

**FACT:** Some pre-fabricated panels are non-structural or have no insulation. True SIPs are a building panel comprised of an insulating core sandwiched between two layers of structural board. Materials used for the layers can vary, from different wood products to a variety of less common materials. Our panels feature sustainably-grown Oriented Strand Board (OSB), which offers strength and durability.

**MYTH: SIPs can ONLY be used in pre-fabricated designs.**

**FACT:** Because Enercept's panels are flexible and customized, they can be used for nearly any building design. Their strength also allows for myriad design options which might not be able to be achieved efficiently using more traditional building methods.

**MYTH: Wiring a SIP home is difficult.**

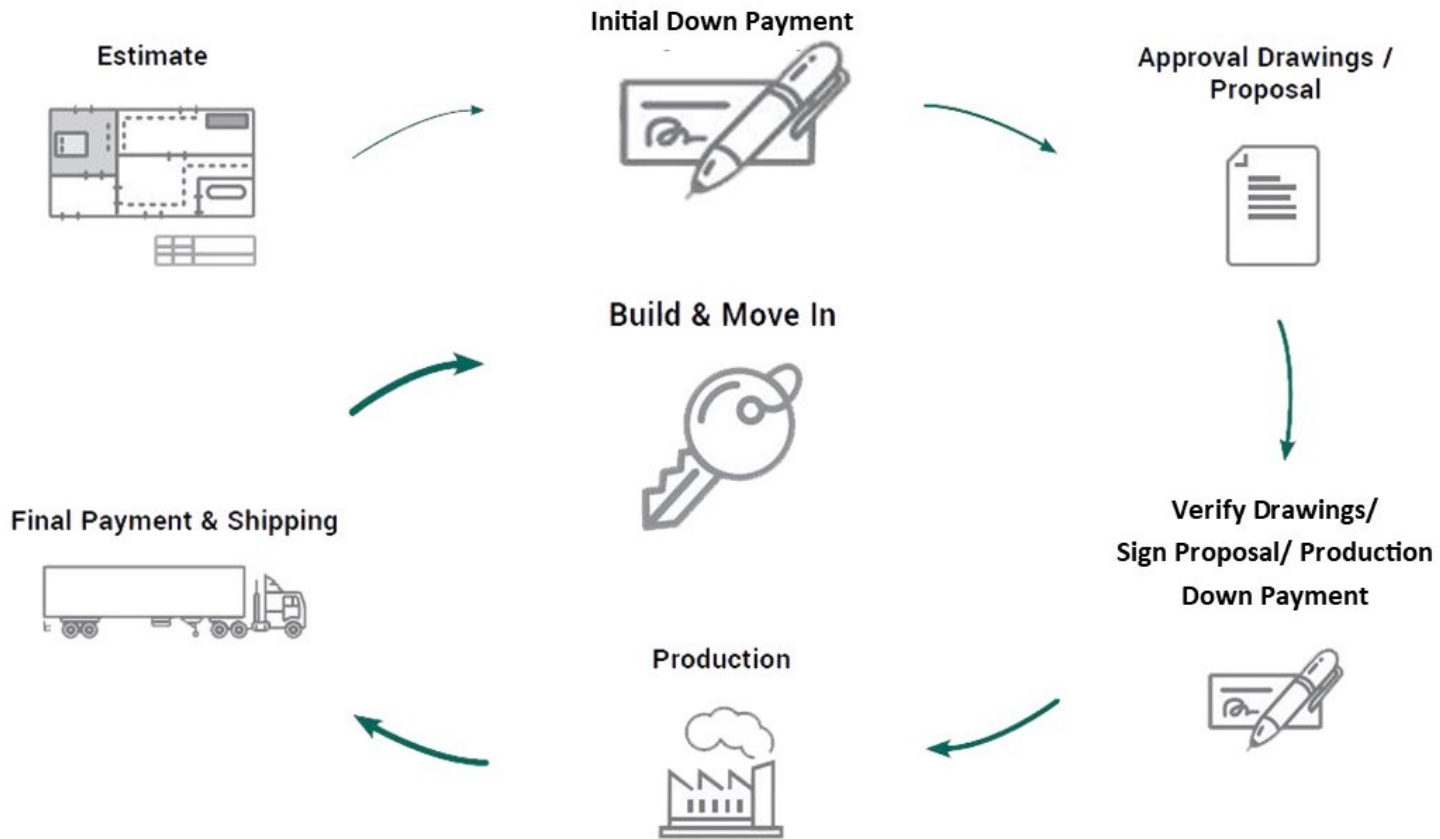
**FACT:** Skilled electricians can wire a SIP home quickly, easily and cost-effectively using Enercept's innovative factory-installed electrical chases.

**MYTH: All SIP Panels are 4ft Panels**

**FACT:** Enercept 8-foot wide jumbo wall and roof panels are custom made with the same great features of the Enercept 4-foot wide panel. Enercept jumbo Panels have been third party tested by NTA, Inc. Enercept 8-foot wide panels can be engineered to meet your specific requirements. Either way Enercept panels are built to fit your needs.



# Optimizing Time and Costs for Maximum Efficiency



Once you've decided on the perfect plans, the drafters at Enercept will work with you on a Structural Insulated Panel (SIP) layout that works. Your project will be drawn and panelized by experienced drafters utilizing state of the art CAD software. With Enercept, your SIPs will be custom made to meet your blueprint specifications. Our skilled drafters give you the one-on-one attention you deserve throughout the process. Process times vary depending on the size and complexity of your project.



"Our average bill should be about \$4,000 each month for a conventional building and AC system with no solar. But because of how we designed with SIPs, plus all of our other energy reducing elements and 163 kVA of solar, our bills have been zero to \$995 per month."

— Carl Schaffer, Principal at Ideation Design Group







## Commercial Industrial Institutional Category First Place Winner 2017 Building Excellence Awards

This Ideation Design building was designed and built to serve as an example to potential clients, of the simplicity, wisdom and long term value of a super-insulated, solar-assisted, high efficiency building, done right. The south-facing roof surface was designed to optimize solar gain with low-profile, surface mounted solar panels. Each employee also has natural light to his/her workspace. The ideation building was built to meet LEED Platinum Standards. The November 2016 Electric Utility bill was only \$168 for 142,330 Cu. Ft.





# STRUCTURAL INSULATED PANELS DRIVE CHANGE



(605)882-2222

[Enercept.com](http://Enercept.com)

3100 9th ave SE

Watertown, SD 57201