



**Forever** *homes*  
*for* **Everyone**

## FAQ

### About the homes

**Q. *How are PHNX Homes™ non-combustible?***

A. PHNX Homes™ exteriors are constructed without wood or other combustible materials and are permitted as Type 1A construction—the same standards used for modern high-rise structures. The exterior walls are constructed with Insulated Concrete Forms (ICF), which have the highest level of non-combustible fire rating available. In short, on the exterior, there is nothing to ignite. PHNX co-founder and architect Laurie Fisher has invented a wood-free roof system that makes Type 1A construction, previously used almost exclusively for high-rise structures, feasible for single-family homes. While building with steel and concrete is not new, it was previously cost-prohibitive in single-family home construction. With the PHNX proprietary roof design, a PHNX Home is not any more expensive than a traditional wood-framed home.

**Q. *What is unique about the PHNX Home roof system?***

A. The PHNX Home roof system is a proprietary steel joist and insulated panel assembly that is able to span the entire home without structural sheathing. The ICF exterior walls are strong enough to bear the full structural load of the roof, eliminating the need for any interior load-bearing walls, making it fast and easy to frame all the interior walls with light gauge steel studs. To meet Type 1A requirements, all structural elements must be non-combustible; the PHNX patent-pending roof assembly is the “secret sauce” that makes building Type 1A homes no more expensive than standard wood construction. The PHNX roof beams are able to span up to 8 feet apart as compared to beams in a wood roof system, which span 1-2 feet. This leaves plenty room for utilities and a great reduction of needed coordination between the trades.

**Q. *How much does a PHNX Home cost?***

A. A PHNX Home is no more expensive than traditional, wood-framed construction, and in many cases it can be more economical. Prices will vary greatly based upon market, site conditions, and features desired by the homeowner. The most recent PHNX Home to break ground near Yosemite National Park in Groveland, CA has a construction cost of \$327 per square foot—which includes extensive site work, a solar/battery system, deck, covered patio and all finishes. In our estimation, that same home built of wood, would cost well over \$425 per square foot, and would not have the same noncombustible properties.

**Q. *How are PHNX Homes sustainable?***

- A. There are six key elements of a PHNX home that make it the best choice for homeowners wanting a sustainable, environmentally friendly home. There are:
1. **Net-zero energy** – PHNX is the only design/build company delivering single family homes that achieve full Net-Zero Energy status, as defined by the California Energy Code.
  2. **No fossil fuels** – PHNX Homes are all-electric, with state-of-the-art appliances that actually perform better than their ancestors.
  3. **Grid independent** – Every PHNX Home includes a full-capacity solar array and battery backup storage system. While codes still require homes in most areas to connect to the grid, a PHNX Home will not need it. Power will be maintained—even during a blackout.
  4. **Less construction waste** – The PHNX streamlined design/build method utilizes the best available proprietary, pre-engineered systems. Almost all of our building materials arrive on site pre-cut and ready to be assembled.
  5. **Concrete as “carbon sinks”** – What is a carbon sink? In short, it is anything that absorbs more carbon from the atmosphere than it releases. Typically, carbon sinks are natural environments like forests or oceans. But concrete also acts as a carbon sink, and, through a process called carbonation, absorbs carbon dioxide from the air over its lifetime. So instead of destroying our natural carbon sinks to build flammable homes, PHNX embraces the future of carbon neutral concrete. Carbon sequestration technology is here – now – and PHNX uses it in every home.
  6. **Easily maintained** – PHNX Homes are free from wood and other materials that are vulnerable to rot, insects, rodents, warping, and cracking. The lifespan of a PHNX Home can easily exceed three or four times that of a traditionally built home.

**Q. *How are PHNX Homes built more quickly than a traditional home?***

- A. The PHNX Home patent-pending roof framing system eliminates the need for any interior load-bearing walls, reducing the number of onsite trades needed to build the homes, as well as the frequency of inspections. A 2,500-square-foot PHNX Home can have interior wall framing done in three days because the structural shell is already complete, and the roof and walls are easier to assemble than traditional wood framing. Further, the PHNX MasterBuild™ process of fully integrating conceptual design and construction makes construction more innovative, while still highly predictable and easier to navigate.

**Q. *I don't live in a fire-prone area. Is a PHNX Home right for me?***

- A. A PHNX Home is a smart choice, no matter where you live. PHNX Homes are a true “Forever Home” – easily maintained, and free from wood and other materials that are vulnerable to rot, insects, rodents, warping and cracking. The lifespan of a PHNX Home can easily exceed three or four times that of a traditionally built home. They are built quickly, are cost effective, and are net-zero energy—operating independently of the grid.

**Q. *How do the roof and windows in PHNX homes improve safety during wildfires?***

- A. The non-combustible, standing seam metal insulated panels used for the roof, coupled with streamlined construction methods, minimize penetrations, greatly reducing the risk of ember intrusion. Additionally, the Sierra Pacific aluminum clad wood windows with tempered safety glazing withstand wildfire conditions without melting or deforming, effectively safeguarding a PHNX Home's interior from fire damage.

**About the technology**

**Q. *What is Type 1A Construction?***

- A. Type 1A construction is a building construction classification for materials and construction methods designed to provide the highest level of protection against fire hazards. This type of construction is typically found in high-rise buildings, hospitals, schools, and other structures where occupant safety is paramount. Type 1A structures are built with non-combustible materials such as steel, concrete, and brick, and must meet strict building codes and regulations to ensure the safety of occupants in the event of a fire. Additionally, Type 1A construction typically includes features such as fire-resistant doors, walls, and floors, as well as automatic fire suppression systems to further enhance the building's overall fire safety.

**Q. *What are Insulated Concrete Forms (ICF)?***

- A. Insulated concrete forms, or ICFs, are a construction material system known for their energy efficiency and durability. ICFs are hollow foam blocks or panels that are stacked together to form the walls of a building. The blocks are then reinforced with steel rebar and filled with concrete, creating a solid and well-insulated structure. The foam insulation on both sides of the concrete core helps to regulate the temperature inside the building, keeping it cool in the summer and warm in the winter. Additionally, ICFs provide superior soundproofing and are resistant to fire, wind, and moisture, making them a popular choice for commercial construction projects.

**Q. *ICF construction in homes is not new. How are PHNX Homes different?***

- A. The PHNX Home is the only single-family residential product that is structured without any wood or other combustible material and meets code for Type 1A non-combustible construction. Other ICF homes likely have wood framing and decking, particularly in the roof. The proprietary, patent-pending roof on a PHNX Home is all steel, and will not catch fire. Additionally, the roof on a PHNX Home is stronger than a traditional wood-framed roof. Because it is steel, it can span the entire structure, eliminating the need for any complex load bearing framing on the interior. This would be impossible to achieve in wood without expensive custom engineering, which is not feasible for a typical single family home budget.

**Q. *What is the PHNX MasterBuild™ process?***

- A. The PHNX Development MasterBuild™ process approaches projects not as an architect or as a contractor, but rather as a master builder—a practice that is rooted in the 12<sup>th</sup>-16<sup>th</sup> centuries and was used to build Europe’s Gothic Cathedrals and other architectural masterpieces. Master builders were multi-skilled craftspeople with architectural, structural and construction knowledge. They were true innovators, traveling from city to city to erect these grand structures—many of which still stand today and are some of Europe’s most popular tourist attractions. PHNX Development is the first mass market home builder to take the master build process and apply it to homebuilding. This results in a fully integrated conceptual design and construction process that makes homebuilding innovative, more predictable, and easier to navigate than the traditional home building process.

**Q. *How is the PHNX Development design process different from the standard home design-build process?***

- A. The PHNX MasterBuild™ process integrates Component-based Design, a proprietary methodology that optimizes construction efficiency by utilizing engineered structural building components manufactured off-site. This approach ensures stability in pricing and allows for rapid customization, seamlessly integrating advanced Building Information Management (BIM) technology. By starting with a basic cost and quickly adjusting estimates for additional features like bedrooms, offices, or bathrooms, PHNX Homes delivers precise cost estimations within a week.

This innovative method not only ensures streamlined installation and tighter control over design but also facilitates the optimal utilization of resources, resulting in highly predictable outcomes. By adhering to consistent materials and methods, reducing structural complexities, and selecting premium products readily available on the market, the PHNX MasterBuild Process guarantees a quicker, more efficient construction experience without compromising quality. Furthermore, its adaptable nature allows for continuous innovation to meet evolving needs and technological advancements, ultimately delivering superior homes with predictable budgets.

**Q. *Is solar a smart choice, financially? Will I have to pay for sending electricity back to the grid (Net Energy Metering 3.0)?***

- A. Electric utilities continue to reduce the financial advantages of solar through new rate structures, which charge homeowners to send their excess solar energy back to the grid. To minimize or eliminate these costs, homeowners must install battery storage at significant expense. Since PHNX Homes include battery storage as part of the build, owners of PHNX Homes never have to worry about selling excess energy back to the local utilities.

**About the company**

**Q. *Why was PHNX Development established? What was the impetus behind its founding?***

- A. PHNX Development was born in 2019 from its founders’ experience with homeowners who experienced the emotional and financial devastation of losing homes to wildfires, and the nearly insurmountable challenges they faced when rebuilding. Their solution was to develop and

market the industry's first non-combustible single-family home that could be built faster and more economically than a traditional home. They wanted to build a home that people would feel safe living in. The PHNX Development approach prioritizes custom-designed homes tailored to individual families, whether for wildfire survivors or those seeking a new, sustainable "Forever Home." By integrating innovative techniques like Type 1A Non-Combustible Construction and Insulated Concrete Forms, PHNX Development's proprietary PHNX Home™ offers resilience against disasters, while prioritizing sustainability and design excellence. Through a commitment to transparency, predictability, and a trauma-informed approach, the company rebuilds not just homes, but lives as well.

**Q. *How does the PHNX Development franchise model support climate resilient infrastructure on a larger scale?***

A. The PHNX Development franchise model not only promotes climate-resilient infrastructure but also addresses the housing crisis by offering innovative solutions at scale. By expanding its reach through franchising, PHNX Development can provide sustainable and affordable housing options in communities facing housing shortages and is an ideal solution because the homes can be built much more quickly than traditional stick-built construction. The franchise model allows for the adaptation of PHNX Development's efficient building practices to meet the specific needs of different regions, thereby increasing access to quality housing. Additionally, by incorporating features like Net-Zero Energy Use and reduced construction waste, PHNX Development franchises contribute to environmentally friendly and cost-effective housing solutions. Overall, the PHNX Development franchise model plays a crucial role in advancing both climate resilience and affordable housing initiatives on a larger scale.

**Q. *How can the PHNX Development franchise model be utilized to address our current housing crisis, particularly with infill development?***

A. The PHNX Development franchise model is particularly suited for supporting infill development since it addresses the key barriers preventing the construction of single/small lot developments. Traditional methods often result in prohibitively high design and construction costs for such projects, while zoning regulations and site development costs remain relatively straightforward. By simplifying design and construction processes and prioritizing efficiency and affordability, PHNX Development franchises can overcome these barriers, making infill development more feasible and accessible. This approach enables the creation of high-quality housing solutions in urban areas where land availability is limited, contributing to the alleviation of the housing crisis while revitalizing neighborhoods.