

# Hollowcore Plank in Residential Construction

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Hollowcore plank is one of the most popular choices in the construction industry. It's efficient and versatile and offers structural and architectural design flexibility. Precision-manufactured plank is effective in both commercial and residential construction. These precast forms are made from high-strength concrete, have voids in the center and are **ideal for both simple and complex** residential and commercial buildings. The residential use of hollowcore plank includes single-family homes, multistory residences and buildings with multiple units like duplexes.

Construction businesses are big fans of hollowcore plank in residential construction, and many use it for its high efficiency and quality.

## What Is Hollowcore Plank?

Hollowcore slabs — also known as concrete planks, hollowcore plank and voided slabs — are **precast and prestressed concrete** slabs with a characteristic void in the center. The openings are often round but can be shaped depending on the project's needs.

Hollowcore plank is made from zero-slump concrete and manufactured in a controlled environment using a detailed extrusion process. Once slabs are manufactured, they are cut to length to ensure a smooth finish and accuracy of dimensions.

Although traditionally associated with floor construction, hollowcore plank can be used as vertical structures. They're perfect for walls and noise barriers. Hollowcore plank is an **energy-efficient and lightweight solution** with many applications and is a staple in the construction industry.

## Applications of Hollowcore Plank in Residential Construction

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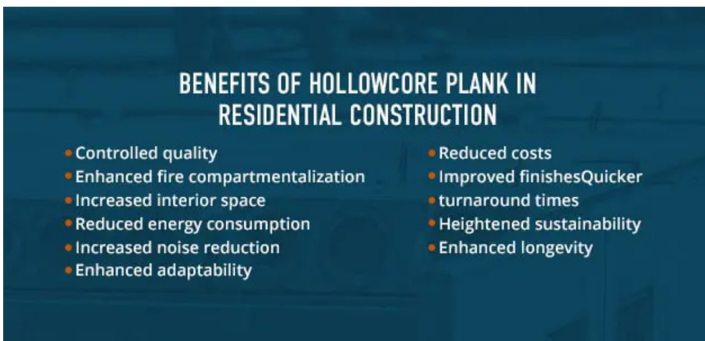
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Hollowcore is versatile and robust, making it **suitable for many construction applications**. While often associated with multistory commercial construction, hollowcore plank for residential use is gaining traction thanks to its fire-compartmentalizing properties, durability and reduced weight. Hollowcore plank in single-family homes is affordable, safe and robust, making it an excellent choice for residential use. Hollowcore plank applications in residential construction also include accessory dwelling units (ADUs), duplexes, townhomes and condos.

Within these property types, hollowcore plank is used for the following applications:

- Floors and subfloors
- Mezzanine floors
- Exposed ceilings
- Noise barriers
- Dividing walls
- Outer walls

In general, hollowcore plank is an excellent choice for cost-efficient construction. It's also compatible with many residential amenities, including air conditioning, heating systems, plumbing and electrical.



## Benefits of Hollowcore Plank in Residential Construction

Using hollowcore plank in residential construction has many benefits, making it an increasingly popular option for construction businesses. Some of the many benefits of residential hollowcore plank include the following:

- **Controlled quality:** Hollowcore plank is constructed in a quality-controlled environment, making corrosion, weathering and abrasion resistance uniform throughout your project. The high-quality production process makes it practically maintenance-free.
- **Enhanced fire compartmentalization:** Hollowcore contains natural fire-compartmentalizing properties. It can **achieve a fire rating** of up to two hours, which you can improve by adding thickness, topping and strand cover.
- **Increased interior space:** A reduction in floor-to-floor height and open clear spans provide more interior space, which is always sought after in cost-efficient residential construction, especially in single-family homes.
- **Reduced energy consumption:** Hollowcore plank is an energy-efficient option, as it has low heat transmission properties. Saving on energy costs is excellent for the occupants of the residence, but from a construction standpoint, it also saves money on extra insulation costs.
- **Increased noise reduction:** Due to its enhanced insulation properties, hollowcore plank is also an excellent noise barrier, making it a more comfortable option for multistory houses and buildings with multiple units.
- **Enhanced adaptability:** If you're looking for precast concrete that can adapt to almost any structural requirements, hollowcore plank is an excellent option. The slabs can be supported on practically all structural systems.
- **Reduced costs:** **On-site casting** can be challenging, labor-intensive and expensive. Precast cement, like hollowcore plank, eliminates these challenges, saving time and construction costs.
- **Improved finishes:** Hollowcore planks boast a smooth underside surface, which users can paint to provide residential homes with aesthetically pleasing finishes on their walls and ceilings.
- **Quicker turnaround times:** Precast concrete like hollowcore plank saves transportation and project time as operations associated with wet concrete are eliminated. Your construction business can expect fewer delays, which is excellent for your bottom line and reputation.

- **Heightened sustainability:** Hollowcore planks are a sustainable construction option. They require less metal and cement to produce, as the voids in the slabs provide better material efficiency. The slabs are lighter, which decreases transportation costs.
- **Enhanced longevity:** When building a residence, you must consider the structure's longevity. Hollowcore slabs have weather-resistant properties and won't crack under service loads. All the reinforcements are embedded, protecting them from corrosion.

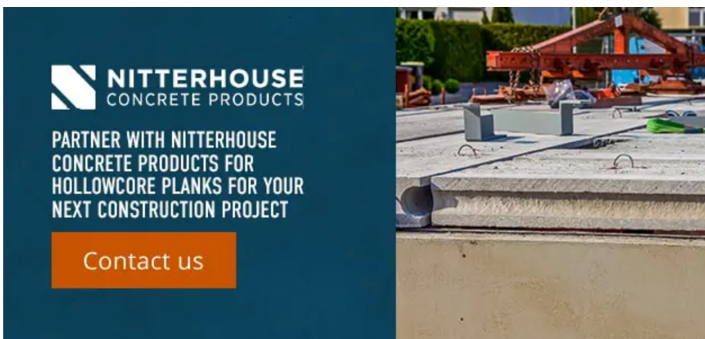
## Why Use Hollowcore Plank in Residential Structures?

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Hollowcore plank is an excellent solution for residential construction for many reasons. It's a versatile and durable product that provides construction experts with innumerable options. Some of the key reasons to use hollowcore plank in residential structures include the following:

- **Fire resistance:** We all know how quickly a fire can spread through a residential area. It becomes even more of a hazard in multifamily housing applications, where units are built next to one another.
- **Earthquake safety:** Hollowcore plank's durability and ability to withstand pressure make it a safe option for residential construction, especially in areas likely to experience earthquakes.
- **Energy consumption:** Heating and cooling costs are always challenging in residential construction. Built-in insulation lowers construction costs and provides residents with enhanced comfort in their living space.
- **Floor area:** Use of floor area is paramount, especially in single-family homes. Hollowcore plank allows some flexibility in design and construction and provides residents with space to use in their day-to-day lives.
- **Foundations:** As hollowcore plank reduces the weight of the construction, the foundations are smaller and more cost-effective.
- **Material usage:** Hollowcore plank is prestressed, reducing the steel and concrete required to maintain structural integrity. They require little support, decreasing the need for supporting frame elements.
- **Residential amenities:** The natural cores or voids in hollowcore plank make the perfect openings for electrical cables, plumbing and other residential necessities, making installation cheaper and more accessible.
- **Load-bearing:** Hollowcore plank has a long span and can hold a considerable load.
- **Sound and vibration:** Due to the natural sound attenuation, **hollowcore plank dampens noise**, which is ideal for a residential environment.

Hollowcore plank is the perfect fit for residential construction in many ways. For construction businesses to be competitive, they need to keep delays to a minimum, which is easier with prestressed and precast concrete. Regardless of the application, hollowcore plank provides construction companies with the versatility, flexibility, speed and quality that are challenging to replicate with other materials.



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