

CONCRETE VS. WOOD FRAME

Which is better
in Florida?



Presented by Florida's Custom Home Builder

What is Wood Frame Construction?



The exterior walls of a wood frame home are constructed with 2x4 or 2x6 dimensional lumber. The lumber is spaced between 12" and 16" on center and is determined by required building codes. The wall is anchored from the bottom of the wall at the slab to the top of the wall. The wall sits on a pressure-treated 2x4 on top of a weather barrier that sits on the concrete slab itself.

What is Concrete Block Construction?

Concrete Block homes (CMUs) use cement blocks made from a mold. Typically a residential exterior wall made from CMUs measures 8" x 8" x 16" and is 80% hollow. The blocks are laid on top of the slab in an interlocking staggered method and mortar holds each block in place. Once the wall is constructed, some of the hollow block cells are filled with concrete that will hold the vertical rebar. The top of the wall consists of a "poured in place" concrete lintel that ties everything together.



What Are the Advantages of Each?

Both concrete and wood frame construction methods meet all current building codes which require the structure to withstand high wind loads.

On both constructions, the same wood roof trusses/rafters, sheathing and interior lumber are used.

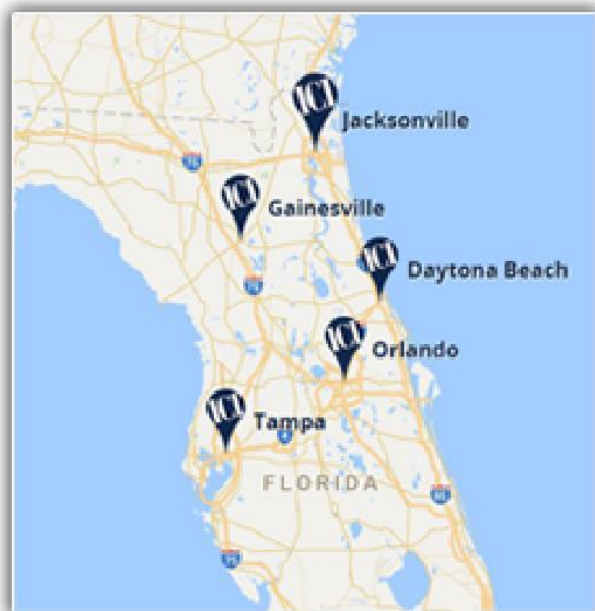
Concrete

- Better sound proofing
- Exterior walls are more durable during a hurricane
- Better protection from termites

Wood Frame

- More energy efficient
- Allows greater freedom in design
- Improved moisture protection

What Are Wind Speeds and Wind Loads?



Florida Building Code requires that any new structure be constructed to stand up to high wind speeds. But did you know that wind speed alone does not shape design requirements for new or renovated buildings? It is actually *wind loads* that determine building standards across the country.

Wind speeds are simply the speed of the wind, usually measured in miles per hour. Wind load is defined as the intensity of the force that wind applies to a structure. Based on the American Society of Civil Engineers Standard (ASCE 7-98), wind load provisions are measured using the "three-second peak gust" which is around 20 mph higher than the fastest mile wind.

ICI Homes Can Withstand 100-130 MPH Winds.

"Three-Second Gust" MPH	85	90	100	105	110	120	125	130	140
"Fastest Mile" MPH	70	75	80	85	90	100	105	110	120

The Code Provides Two Options For Building

Buildings can be "enclosed" or "partially enclosed."

Enclosed means the building envelope is completely closed and only a nominal amount of wind can escape through the doors, framing and windows.

Any other configuration allowing wind into the structure is considered "partially enclosed." In partially enclosed buildings, they must be designed to be capable of withstanding internal and external wind pressures if openings fail. Enclosed structures in wind borne debris regions must be protected by shutters or impact resistant glass.



ICI Homes - Florida's Custom Home Builder

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