

Avila Engineering & Construction LLC.

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The Smart Construction Technology

Happy New Year!

Avila Engineering & Construction wishes you a 2018 full of health, work and prosperity to you and your loved ones. We wish for a year filled with positive news, a safer world and peace. All the best for all of you!

Bearing Walls

Load Bearing Walls or a Bearing Wall is a wall that carries the loads of the building above, in addition to its own weight. This type of structural element is thickened in proportion to the forces it has to resist: its own weight, the dead and live loads, as well as the lateral forces (wind, earthquake, impact & hydrostatic).

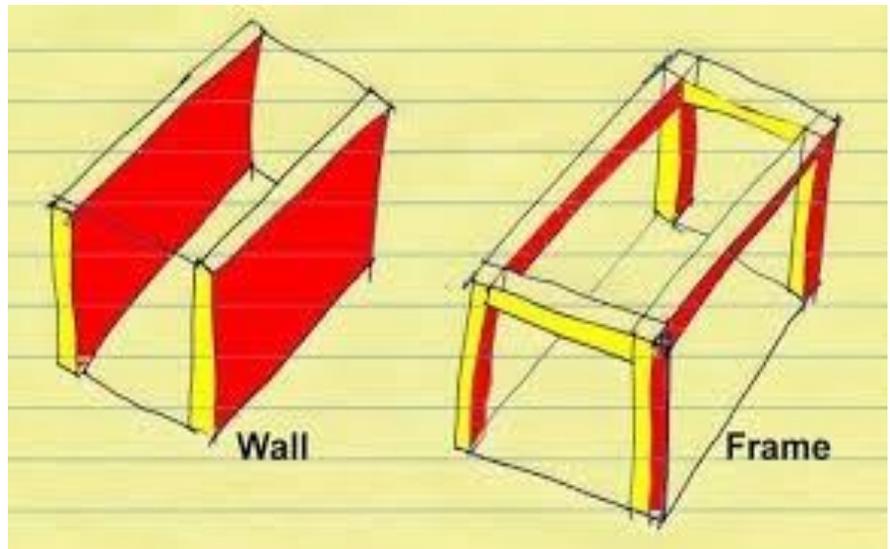
Please talk to your structural engineer to consider this structural element in your upcoming projects and the use of ICF to save time and money.

ICF vs. CMU

ICF walls are monolithic concrete walls without joints and are significantly stronger than those built with concrete blocks.

Our ICF panels are 1 foot tall and 4 feet long creating the same size at 4.5 CMU blocks, lighter, ICF panel weighs 7 pounds versus conventional CMU at ~35 pounds each, faster to stack. Not only the light-weight nature of ICFs help speed the construction time, it also creates a much safer environment for workers.

ICF technology combines strong and long-lasting concrete and steel reinforcement with the superior insulation of Expanded Polystyrene (EPS).



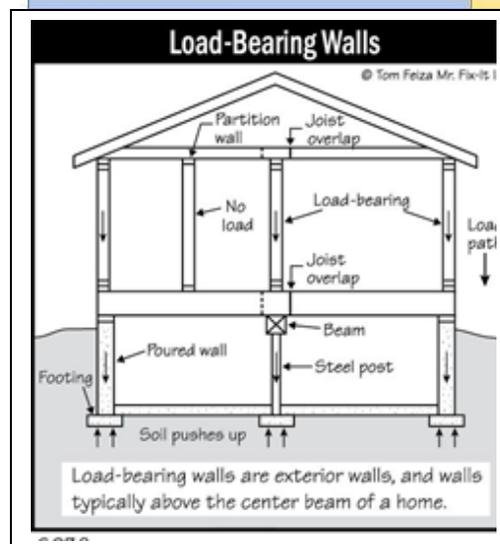
Pro & Cons

Bearing Wall Structure w / ICF

- Cost Less.
- Faster Construction.
- Take less activities (Panels, reinforcement steel, concrete).
- Walls could be thicker in lower levels, floor area could be reduced, but insulation is included in the system, walls are ready for Dry-wall or exterior finishing.
- Higher R-value (more than R-28)
- Not possible to alter position of the walls after construction.

Framed Structure & CMU

- More labor & time =>Cost more.
- Slower construction.
- More construction activities (columns, beams, wall & insulation).
- Walls are thinner, hence more floor area could be available, however insulation is not included in the wall finishing.
- Lower R-value (R-13)
- Position of the walls may be changed, whenever is necessary.



Insulated Concrete Form (ICF) is quickly becoming a fundamental building technology for multi-family residential, hotels, warehouses, schools, government and commercial buildings due to its strength, energy efficiency and quick build ability. **CONTACT US to find out what makes ICF your best choice for your next building project.**

Energy Efficient,
Smart & Valuable
Construction
Solutions



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LEED CONTRIBUTION

LEED v4 has put more emphasis on building systems performance than products to construct a building with lower environmental impact and more energy efficiency.

LEED v4 BD+C includes 8 building types:

1. New Construction & Major Renovation
2. Core & Shell
3. Schools
4. Retail
5. Data Centers
6. Warehouses and Distribution Centers
7. Hospitalities
8. Healthcare

A minimum of 40 points are required to achieve LEED v4 certification:



LEED v4 BD+C includes 8 categories. Each category may vary in point based on the building types. The categories total 109 possible LEED points plus an additional point under “Integrated Process”.

1. Location & Transportation (16 points)
2. Sustainable Sites (10 Points)
3. Water Efficiency (11 points)
4. Energy & Atmosphere (33 points)
5. Material & Resources (13 points)
6. Indoor Environmental Quality (16 points)
7. Innovation (6 Points)
8. Regional Priority (4 Points)

ICF Contribution

The categories where ICF can potentially contribute to gain LEED points are items 2, 4, 5 and 6. The potential LEED Point Contribution when using ICF are:

BUILDING TYPE	CONTRIBUTION
New Construction and Major Renovation	34
Core & Shell	32
Schools	32
Retail	34
Data Centers	34
Warehouse & Dist. Centers	34
Hospitality	34
Healthcare	35



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CONSTRUCTION ASSOCIATION
 OF SOUTH FLORIDA



Avila Engineering & Construction LLC (AE&C) is a private company certified to sell and install Quad-Lock products in South Florida. Quad-Lock is a Canadian ICF manufacturer. The newsletter articles are compiled by AE&C with the objective to inform and educate about ICF construction system, other energy efficient & cost-effective construction solutions and to provide updates about the company performance.