INSULATED CONCRETE FORMS VS. CONVENTIONAL WOOD FRAMING

INSULATED CONCRETE FORMS

RESILIENT
ICFs create concrete walls that are reinforced with rebar, resulting in a structure that's strong, durable and can stand up to fire, floods and wind.[1]

EFFICIENT
ICFs create a solid concrete wall with continuous insulation that enhances energy-efficiency and makes it ideal for multi-residential, school and commercial buildings.

SAFE
ICFs are fire-safe, durable, mold and rot resistant—and the solid concrete construction provides air tightness which results in improved air quality and is also a barrier between you and dangerous weather.

FAST AND SIMPLE
Buildings made with ICFs can go up quickly and efficiently because they cover 6 steps in one. In many cases they can even go up faster than wood.

LOWER GREENHOUSE EMISSIONS
ICF buildings actually save 3-5% in reduced greenhouse gas emissions over the building's lifecycle compared to wood frame construction.[3]

CONVENTIONAL WOOD FRAMING

LIMITED DURABILITY
Wood can't stand up to natural or man-made disasters. Wood buildings burn, rot and are blown apart in tornadoes and hurricanes.

LACKS CONTINUOUS INSULATION
Wood framing has little thermal storage capacity and about half the insulation value of ICFs. You would have to build walls with 2x12s to get the same energy performance.[2]

RISKY
Wood burns quickly, leaving little time for occupants to escape. Wood frame is notorious for shrinking, warping and rotting with little protection from rain and wind.

FAST AND QUESTIONABLE
Wood frame may go up quickly, but it also requires more labor than ICFs, which can increase first costs.

SIGNIFICANT ENVIRONMENTAL IMPACT
Deforestation causes 12% of the world's greenhouse gas emissions.[4] Impacts of wood (forestry) are 250-325% higher than concrete.[5]

If you're not building with ICFs, it might be time to start.

Learn more at buildwithstrength.com

BUILD WITH STRENGTH

A COALITION OF THE NATIONAL READY MIXED CONCRETE ASSOCIATION

1. Safe Rooms for Tornadoes and Hurricanes: Guidance for Community and Residential Safe Rooms, FEMA P-361, Third Edition / March 2015; 2. Gajda, John, Energy Use of Single-Family Houses With Various Exterior Walls, CD026, Portland Cement Association, Skokie, IL, 2001; 3. Ochsendorf, J., et al., Methods, Impacts, and Opportunities in the Concrete Building Life Cycle, Massachusetts Institute of Technology Concrete Sustainability Hub, Cambridge, MA, 2011; 4. CO2 emissions from forest loss, G. R. van der Werf, et al. Nature Geoscience, VOL 2, November 2009; 5. Assessing the Relative Ecological Carrying Capacity Impacts of Resource Extraction, Athena Sustainable Materials Institute, August 1994.