

# HercuWall® Building Science

## The HercuWall® Net Zero Method

The building envelope provides the barrier between the interior conditioned space and outdoor environment. Its elements determine a building's energy requirements based on the climate where it is located. These elements include the walls, roof, floor, windows and doors. A properly executed, **energy efficient building envelope is the most cost effective method** of maximizing the overall efficiency of a building structure and will continue to reduce energy usage and costs for the lifetime of the structure. The high performance wall system chosen is one of the most important components of the building envelope.

Two primary issues need to be addressed in the design and construction of an energy efficient home: **insulation and infiltration**. HercuWall®, combined with an air resistive insulation barrier in the attic and energy efficient windows and doors, directly addresses these issues.

A HercuWall® home requires a smaller capacity air conditioning and heating system and will cost much less to heat and cool year after year. Because the envelope is so efficient, a much smaller solar system is required to attain net-zero (if that is the goal). Additional benefits include a quieter, more comfortable home that is cleaner and easier to maintain. All of this at a cost comparable to conventional construction.

## HercuWall® Is The New Standard

HercuWall® technology meets the requirements of production builders with industry experts recognizing HercuWall® as the first concrete wall solution to do so. HercuWall® does not require highly skilled installation crews. HercuWall® comes to the building site in the form of a kit consisting of numbered panels manufactured according to the building plans with pre-built corners and window and door panels with openings blocked out and in place.

Panels are manufactured to the height of the wall. Multiple stories can be stacked. Crews simply set up the numbered panels in the correct order, tie the system together with top and bottom channels, place rebar into the integral hooks and guides, and then fill the system with concrete. After the concrete has cured, the window and door block-outs are removed revealing straight, accurate, and clean openings.

HercuWall® is The Lowest Cost - Fastest to Install - Highest Performing name brand pre-engineered reinforced concrete wall construction system available today. HercuWall® provides significant savings in both labor and concrete costs as well as construction timelines, yielding a high quality, high strength, long lasting, energy efficient structure. Website: HercuWall.com

## THE BUILDING SCIENCE:

Properly Sized HVAC with All Air Ducts Run in Conditioned Space

Conditioned Attic Space with Spray-in R-30 Foam Insulation



R-30 HercuWall® Reinforced Concrete Wall Building System

Double Glazed Energy Efficient Windows & Doors

## Net Zero HercuWall® Concrete Home