

The Anchorpanel® Permanent Perimeter Foundation

Overview of the System as Installed with Factory-Built Homes

The Anchorpanel® foundation is comprised of structural panels that are simply attached about the perimeter of a home, and then cast into a concrete footing. The result is a permanent-perimeter-foundation with a continuous grade beam, that sustains two-story loads and wind, seismic, or flood forces. It provides the benefit of a conventional perimeter foundation, but with improved anchorage, continuous perimeter support, easier and faster installation, and much lower cost.

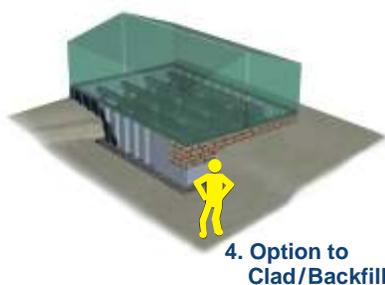
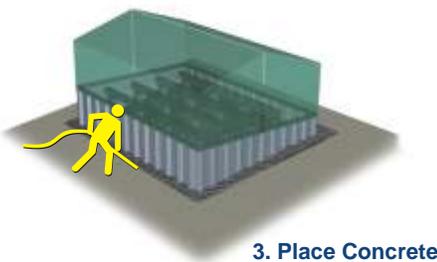
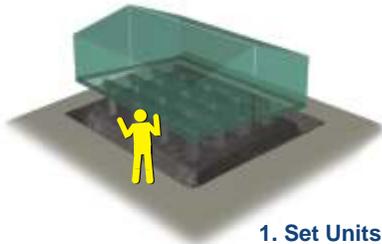
The code-required permanent perimeter enclosure is also very efficiently utilized for all the bracing anchorage and perimeter support requirements, thus avoiding any interior brace or tiedown systems, and saving significant cost in both labor and materials, while meeting all major building codes (IBC, IRC, UBC, HUD, etc), lender requirements (FHA, etc), and FEMA disaster mitigation provisions.



Hide the Foundation: Panels can backfill 3' for a site-built look.

The Installation Process for Manufactured Homes:

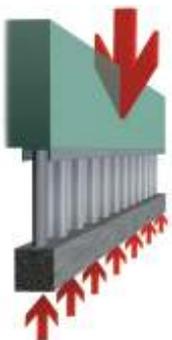
Off-frame modular homes can install with or without a crane in a process similar to this.



Our new cast-stone cladding system.

A stenciled-brick stucco finish.

The heavy galvanized corrugated-steel foundation-wall panels are typically attached to a home already set upon interior supports. The panels are fabricated in heights to match each home installation, according to a simple CAD routine that also creates a layout plan. Panels “wrap” the home perimeter, making easy work of complex footprints or sloping sites.



Load-spreading I-beam provides continuous support.

In combination with the concrete footing and the home above, this permanent perimeter serves as a very efficient I-beam, spreading concentrated loads, and minimizing settlement in poor soils. Panels can be backfilled, to create surface runoff away from the home, to meet frost depth requirements, or for the many reasons to low-set a home.

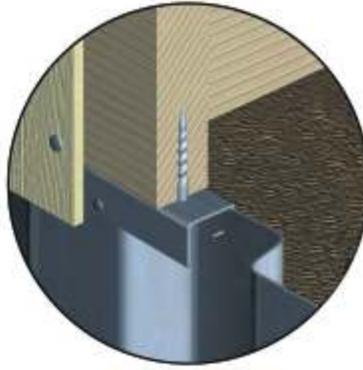
Panel finish is typically G210 galvanizing, with an emulsified tar or cementitious coating, or with low-cost cementitious cladding, applied over the panels at installation. Other architectural finishes are easily applied, including our own beautiful cast-stone cladding. Concrete slabs and landings can pour directly against the panels.



Placing concrete for a 2-story home.

Winds:

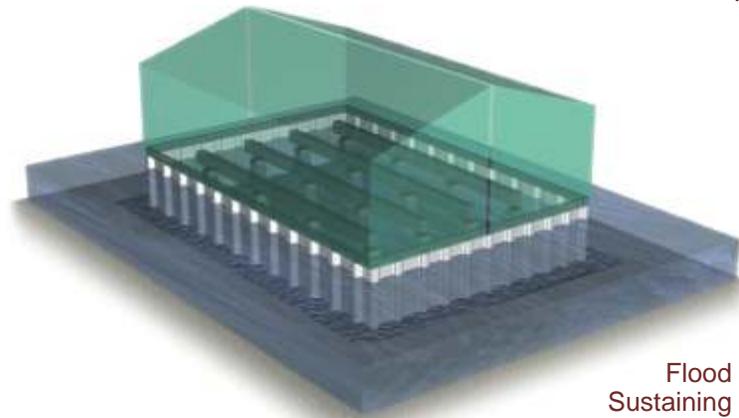
This foundation creates a solid connection to earth that resists forces from wind right where homes need it. A continuous line of lag-screw attachment stoutly anchors the home to the foundation, along the exterior wall lines, and so is better aligned to resist uplift and racking forces, and is better connected to the home, than are the steel beams (used to attach homes to tie-downs). The Anchorpanel system complies with design wind speeds up to 140 mph per ASCE-7.



Top Connection



Bottom Anchorage



Flood Sustaining

Floods:

With walls of solid galvanized-steel that sink in water while protecting from flood forces, the system offers durable wind anchorage and lateral stability, even after soils are deeply saturated and significant erosion has occurred. The footing excavation can be made deeper where necessary (for scour); this trench does not have to be filled with more concrete, less expensive panel material can simply extend down further. This system meets the new FEMA-85 multi-hazard design criteria for floods combined with high winds.

Earthquakes:

The Anchorpanel perimeter resists seismic forces while providing safe support during earthquakes. Because this system is continuously anchored into a trenched-perimeter concrete footing, it provides the maximum stability from overturning possible. Testing shows the panels to exceed the shear strength of conventional wood-framed walls four times over, and to have a deep range of ductility and energy absorption. This system is routinely used for efficient, affordable foundation retrofits of two-story buildings in seismic zone 4.



ICC-ER Combined-Loads Testing Setup



Plaster going over the panels - on a 3-story home in a 140 mph wind zone.

Testing and Listings:

The Anchorpanel system has completed rigorous full-scale destructive testing through the ICC according to ASTM E-72, modified to be more severe by applying loads from all three axis' simultaneously, rather than just separately. Panels 6' tall sustained loads averaging over 18,500 pounds per lineal foot. The lowest test results for shear strength were over 3000 pounds per lineal foot. The allowable shear strength is generally limited by the amount of fasteners put into the home; it can exceed 1700 pounds per lineal foot. As well as meeting the major model building codes for conventional construction, this foundation is pre-approved as a foundation system for manufactured housing in a growing list of states. It was reviewed by HUD-FHA and found to comply with their permanent foundation requirements, and so complies with all major mortgage underwriter requirements in the US. We are happy to supply technical, engineering and installation information as required for your project.



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