Insulated concrete forms, or ICFs, are forms or molds that include built-in insulation for accepting reinforced concrete. These hollow blocks are filled with reinforced concrete, resulting in a structurally-sound wall that is ready to accept final exterior or interior finishes. Since 1996, the ICF market share has increased almost sixfold. While previously used primarily in the residential marketplace, ICF construction is also rapidly growing in the commercial marketplace. In 1996, it accounted for less than 10% of the total ICF square footage, but that has quickly grown to more than 30% and it is continuing to rise.

Located in the heart of downtown Ottawa, a new six-story Marriot Residence Inn was recently built using ICF construction. The owner chose ICF due to several benefits, including energy efficiency, reduced noise, and termite, pest and mold resistance. In fact, ICF constructed facilities require an estimated 44% less energy to heat and 32% less energy to cool. ICF construction is also better able to resist wind, fire and other natural disasters.

Ideal for longer stays, the new Marriot features 120 studios and one- and two-bedroom suites fully equipped with kitchenettes and living and dining areas, as well as a business centre and a variety of amenities.

More than 700 electrical boxes were needed throughout the new hotel for power and data connections. In the past, there have been few choices for electrical box solutions for ICF construction, but INEXO’s electrical box designed specifically for ICF provides the easy installation and finished look that installers and building owners appreciate.

INEXO’s patented design allows the boxes to be easily installed anywhere on an ICF wall following concrete pour. With no special training or tools required, the INEXO electrical box is easily inserted into the ICF wall and the box’s “teeth” are pushed into place with an audible click to ensure the box is secure.

“Our other choice was to use standard electrical boxes for masonry construction, but we would have spent a lot of time figuring out how to position and fasten them
properly in place,” says Rich Charron, president of Anew Electrical Contracting responsible for installing the electrical systems at the new Marriot Hotel. “We chose to use INEXO boxes in hopes to save labor, and they were extremely quick and easy to use—we were able to just snap them into place with the patented teeth.”

Available in single, double and triple gang designs for both residential and commercial applications, the INEXO electrical box offers plenty of capacity for the latest applications. For a precise, professional and straight finish, the boxes provide a ½-inch drywall setback, laser level guides and a full flange that prevents the box from twisting and sinking into the foam. For easily positioning next to a tie, the INEXO boxes also include three screw holes and flanges on both sides for greater installation flexibility. All INEXO boxes are fully certified to CSA standards for use in ICF construction and can resist pull forces exceeding 100 lbs (twice the standard requirement).

“It was the first time we had dealt with ICF construction, and we were pleased to have an electrical box solution specifically designed for that environment,” says Charron. “The boxes were readily available in different configurations, and the project went very well. We are currently planning to use the INEXO boxes on another 10-story ICF project in Ottawa.”

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