

CONSIGLI CONSTRUCTION UTILIZES INSULATED CONCRETE FORMS FOR BANGOR PROJECT

Great energy efficiency and cost savings arrived at the new medical office building under construction for St. Joseph's Healthcare in Bangor in the unusual shape of insulated concrete forms. The use of these sandwich-like forms made of polystyrene foam and concrete will save St. Joseph's \$10,000 annually on heating and cooling costs.

Consigli Construction Co. Inc., the project's construction manager, is building the 22,000-square-foot, single-story structure, scheduled to open in June. Consigli introduced the innovative use of Insulating Concrete Forms (ICFs), among other green initiatives on the project.

ICF construction (manufactured concrete forms embedded with foam insulation and used as the walls) is rarely adapted for commercial buildings. The use of these layered forms provides a tight seal against extreme temperatures. Most commonly employed on

residential buildings, these forms are ironically under-used and under-appreciated in cold weather climates, where saving potential is highest.

"The improved thermal protection gained by incorporating ICF at St. Joseph Healthcare enabled the heating and cooling system to be downsized significantly compared to what would be needed on a traditional building of this size," said David Thomas, Consigli Project Executive. The smaller heating and cooling system saved about \$70,000 in construction costs, Thomas said, an additional savings beyond annual heating and cooling costs.

The Consigli team, working to promote this energy-efficient and under-valued technique in the Northeast, is hopeful that, with the powerful example of savings they created for St. Joseph's, this may not be an under-used technique for commercial construction for long.

Other benefits of ICFs include:

- Drywall can be attached directly to such walls without interior framing, saving time and money.
- The insulating properties of the ICF panels enable construction to proceed in cold weather without the need to spend additional time and money to erect a tent to heat the construction area. Forms are shipped to the site, stacked in place, then concrete poured into them to complete the installation.
- The panels also provide sound dampening qualities, a plus for patient privacy in a healthcare environment.
- The exterior cladding can be attached directly to the walls to display a pleasing design aesthetic.



PHOTOGRAPHY BY CHRISTOPHER BARNES

A construction worker installs an insulated concrete form at the new medical office building under construction for St. Joseph's Healthcare in Bangor. Consigli Construction introduced the innovative ICFs for the new 22,000-square-foot building.