This Ain't No Stick Build

Welcome to The Terraces Of Ertler Lane, owned and operated by:

Ertler Lane Homes Inc. Built By trusted and renown Huntsville builder,

Tarion Registered - Algonquin Homes Inc.

Tarion registered builders are approved by the Provincial government and are registered as authorized builders who are obligated to abide by its' policies for Consumer protection. As stated in the Ontario New Home Warranties Plan Act, all Ontario builders and vendors must be registered with Tarion to build and sell homes legally in Ontario. In addition, all new homes must be enrolled prior to construction.

Structural ICF Walls

The Terraces of Ertler Lane are 5 Townhome buildings, 3 semi-detached, and two are tri-plex format. There are a total of 12 individual freehold townhomes. While majority homes and townhomes are built with concrete foundations, in a lot of cases the rest of the exterior the separating walls are finished with wood frame structures, commonly called a "stick build". We are proud to say that; every wall that separates adjoining homes, as well as the foundation, and all exterior walls will be built of solid ICF (Insulated Concrete Forms) This method of building is superior to wood framed houses in terms of strength, insulation, maintenance, and building efficiency.

(Please read "Advantages Building With ICF" below)

Heating System

Hydronic Heating (hot water radiant heat), is one of the oldest and time-tested home heating methods, dating as far back as the Roman Empire. This is a very efficient and cost effective heat source for households. It eliminates the need for a forced air furnace. The lack of a forced air heat source reduces airborne dust and allergens.

(Please read "Advantages On demand Hyrdronic Heating" Below)

Domestic Hot Water: The on demand hot water system also supplies the household hot water use. On demand hot water heating, heats the water as it is being drawn to the taps, as needed; this saves on having to have a water tank, constantly heating the water that may be needed during the day, creating a significant energy savings, in heating hot water.

Floor Joists

Many homes are built using I-joists, for supporting the floors of the buildings, not us, we use Open Web Floor Joists. They have an advantage suited to complex and more rugged construction.

Open web joists are helpful during construction, and can accommodate almost any kind of HVAC, Electrical, and Plumbing configuration while allowing greater flexibility during installation. This is a time and money-saving characteristic. Open web joists eliminate the need for space taking and unsightly bulkheads through the living spaces, creating more headroom and open space.

Roof:

Dryguard High performance enhanced OSB structural Sheathing is **superior to plywood, i**t has an improved moisture resistance that protects against swelling, thickness, water-related issues Its enhanced nail holing ability, stiffness and strength, as well as, the black/blue edge seal, helps prevent moisture intrusion.

ADVANTAGES OF BUILDING WITH ICF

Insulating concrete forms (ICFs) are a method of construction using components manufactured from expanded polystyrene (EPS). The forms are stacked, steel-reinforced, and then filled with concrete. When completed, ICF walls provide a solid monolithic structure. The material offers a variety of benefits for residential, commercial, medical, educational, and multistorey construction.

The continuous insulation, thermal mass of the concrete, and airtight envelope all combine to offer energy efficiency in warm and cold climates. Further, the steel-reinforced concrete cores in ICF buildings are resistant to fire, hurricanes, and tornadoes; they can be engineered for all seismic conditions. The foam and concrete structure of ICFs also means the homes and buildings are quiet, draft-free, and do not enable mold.

For builders, ICFs roll six separate construction steps into one simple process:

- concrete;
- steel reinforcement;
- insulation;
- air barrier;
- vapor barrier; and
- furring strips.

COMPARISON TEST

This particular ICFMA initiative marks the first time a fully Standards Council of Canada (SCC) and International Accreditation Service (IAS) testing facility has been commissioned to evaluate a realistic side-by-side comparison of the two types of wall assemblies within a single study. It quantifies the benefits of both thermal mass and the continuous insulation properties of ICF technology in comparison with traditional code-compliant wood-framed cavity insulated systems. The studies were undertaken at CLEB Laboratories (formerly Air-Ins Industries Inc.) in Varennes, Qué.

Results from the test

Quantitative results from the test led to the following conclusions.

The tested ICF wall assembly provided 58 per cent better effective R-value/RSI than the tested 2 x 6 wall assembly.

The former offered a standardized thermal resistance of R-24.1, while the wood-frame assembly was a standardized thermal resistance of R-15. (For the study, the tested wood-frame wall assembly met the *National Building Code* of Canada [*NBC]* for above-grade residential walls and the 2015 *International Residential Code* [*IRC]* in the United States for climate zones 1-5.)

The tested wall assembly generated up to 60 per cent energy savings compared to the tested 2 x 6 wall assembly.

The reported results comparing the two wall assemblies show the ICF assembly took nearly 324 hours to reach steady-state performance under an exterior air temperature of −35 C (−31 F) whereas the wood-frame wall reached steady state within 60 hours of the start of the test. (Steady state is the point at which the amount of heat being delivered to condition the interior space was exactly equal to the rate of heat transmission that was going through the wall.)

The CLEB studies illustrated when comparing the amount of energy required to maintain both walls at steady state over this same 324-hour period, the wood-frame wall consumes 149 per cent more energy than its ICF counterpart. Even after both walls attained steady state under the test conditions, the ICF wall consumed 60 per cent less energy than the wood-framed wall specimen to maintain temperature.

More information can be found on the link below, to the Construction Cananda website:

https://www.constructioncanada.net/quantifying-the-benefits-of-icfs/

ADVANTAGES OF ON DEMAND HYDRONIC HEATING

1. **Hydronic Heating Systems are Cleaner**
   Heating systems, in themselves, do not create dirt. Dirt results from cooking, air infiltration and tracking it in from the outside. However, warm-air heating systems create turbulence because they operate with a blower. Rapid agitation of the air causes dirt particles to be deposited on walls, furnishings, curtains and drapes. Even filters cannot effectively control this situation, inasmuch as they trap only larger particles of dirt.
2. **Hydronic Systems are Cleaner and Healthier**
   Hydronic heating provides warmth using natural convection and radiation, eliminating drafts or hot spots. It's also powered by water and natural gas and is dust/allergen free. For these reasons, it's preferred by medical facilities and homeowners with allergies.
3. **With a hydronic system, heat is gently circulated uniformly and without sudden on-and-off cycles that create turbulence. This fact, plus the fact that a hydronic system operates at relatively low temperatures, allows you to keep a cleaner home.**
4. **Hydronic Systems are Quiet**
   With a warm-air system, heated air is conducted through sheet metal ducts that

expand and contract as the air temperature rises and falls. This results in noise from the heating ducts. Another major noise factor with a warm air system is the sound of the blower when the furnace is operating. Hydronic systems are generally quieter than warm-air furnaces.

5. **Hydronic Systems Control Humidity Better**
   Radiant hydronic heat doesn't dry out your home as much as forced air, because the heat is not moving briskly or suddenly, which ultimately sucks moisture out of the air.
6. **Hydronic Systems are Cost effective**
   While upfront cost may be a bit more, hydronic heating system will cost around 20 percent less to operate than a ducted system in a house with average ceiling heights. The larger the homes and higher the ceilings the more the savings.
7. **Hydronic Systems can be Used for More Purposes**
   Radiant heating can be run under floors and tiles are warm on your feet—and your pets'—in the heart of winter. These systems can also be designed to act as towel warmers.
8. **Hydronic Systems Allow for More Versatile Installation**
   Hydronic heating allows homeowners to design a system around their needs. No matter the fuel source, there is a hydronic boiler that works. Piping can be placed in the walls and easily routed around the home, unlike traditional systems that require extensive ductwork and return air systems with large chases.

https://www.weil-mclain.com/news/added-benefits-hydronic-heat

The above link is the source, as written, for the following information.