

## Ron & Lynda's Healthy Canadian Duplex

Forest, Ontario




Ron and Lynda are in their early 70's and decided to build a new, energy efficient, healthy duplex for their retirement years. The entire home is built with energy efficiency in mind, having double 2x4 outside stud walls with an R 38.5 insulation level, R 75 Cellulose in the attic, R28 insulation on the crawlspace and basement walls to the floor. The home also includes large, energy efficient windows with Low-E Argon to provide a beautiful view and bright living space. The duplex features an open concept floor plan with a 1280 square foot two-bedroom

rental unit and single car garage, and a 1570 square foot two-bedroom unit for the homeowners, including an office and one-and-a-half car garage. Each unit boasts large closets and an all-on-one-floor living area. The rental unit includes an insulated crawl space, while the main unit features a full basement for the mechanical equipment, a workshop and storage space. The couple chose to install geothermal because of its energy efficiency and long term utility savings.

### Project Details

<b>Building Size:</b>	3,744 sq. ft.
<b>Geothermal Equipment:</b>	3-ton GeoComfort YT Multi-Position Vertical Packaged System
<b>Loop Type:</b>	Vertical Loop
<b>Installation Date:</b>	November 2015

 CONSTRUCTION TYPE  
**New Construction**

 SYSTEM TYPE  
**Forced Air System**

 LOOP TYPE  
**Vertical Loop**

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## Project Details *(continued)*

**Installation Details:** The forced air geothermal system was properly designed, sized and installed based on a heating/cooling analysis program and a GeoComfort GeoAnalyst report. It includes a two-zone control system in order for each side of the duplex to have their own thermostat.

Along with the GeoComfort system, the home also utilizes a Geo-Flo Magna ECM flow center, EWC Zone control system, 105-gallon Marathon Preheat water tank, 105-gallon Marathon Water Heater and an Energy Recovery Ventilation (ERV) system. The loops are installed in eight 80' vertical bore holes with .75" loop pipe.

Since Ontario has the highest electric rates in North America (approx. 22 cents per kwh) and the home is on Time of Use rates, the homeowners installed a timer on the water heater to only heat water in off peak times.

**Other Features:** The home was built by the owners for senior living during their retirement years with all rooms on a single story. All doors are 3 ft. for easy access to each room, and an open concept floor plan makes it easy to get around. The Geo unit & the ERV run on low continuously to maintain a healthy, fresh, and comfortable living space.

**Geothermal Contractor:** Mid-Lam Heating & Cooling, Arkona, Ontario • (519) 828-3874



Exterior of the home



Geothermal installation in the home