Imagine a heating and air conditioning system in your home that would:

• Save energy and slash your utility bills
• Cut greenhouse gas emissions
• Improve your year-round comfort
• Eliminate outdoor noise from A/C units

Now it’s all possible, with geothermal heating and cooling systems at The Bridges residential neighborhood.

A quick look at how geothermal systems work

Geothermal technology uses the earth’s natural thermal energy—a renewable resource—to heat your home. While outdoor temperatures fluctuate substantially with the seasons, subsurface ground and water temperatures remain relatively constant year-round. A geothermal loop, running underground or underwater, capitalizes on these constant temperatures.

In the winter, fluid circulating through the loop absorbs heat and carries it indoors where it is compressed to a higher temperature and distributed throughout your home. In the summer, the system reverses, pulling heat from your home and using the loop to deposit it in the cooler earth or water.

After installation, your only operational cost is for the small amount of electricity used to operate the unit’s fan, compressor, and pump. So, unlike conventional systems, geothermal systems do not burn fossil fuels to generate heat—they simply transfer heat to and from the earth or pond.

Find out more at geoexchange.org

If you are interested in learning more about the science, technology, and environmental benefits—or to determine your savings with a unique savings calculator—we encourage you to visit a website with all the details: geoexchange.org.
Geothermal advantages

Low utility bills
Geothermal systems generally cut utility costs 30 to 70% when compared to ordinary systems. There is currently no other system on the market that gives you lower operating costs.

Positive cash flow
While a geothermal system will have a higher installation cost compared to a conventional system, it will usually pay for itself within three to five years through reduced utility costs. Incorporating the cost into your home mortgage will result in immediate monthly savings. Plus, a variety of local, state, and federal tax and utility credits are available to homeowners who install a geothermal system.

Improved comfort
Geothermal systems heat and cool homes uniformly—even in the basement. Geothermal heat feels warm, unlike traditional heat pump air, and it eliminates the hot and cold blasts of air often experienced with conventional systems. The system also dehumidifies the air during summer months.

Quiet and out of sight
Geothermal systems are as quiet as your refrigerator or freezer. Plus you eliminate noise from an outdoor unit.

Clean and safe
Geothermal units do not use fossil fuels such as natural gas or propane, so there is no worry about flames, fumes, odors, or carbon monoxide.

Lower maintenance
Geothermal systems are practically maintenance free. When installed properly, the buried loop will last for generations. And the other half of the operation—the unit's fan, compressor and pump—is housed indoors, protected from the harsh weather conditions. Periodic checks and filter changes are recommended.

Longer life
Equipment life is prolonged since geothermal components are located indoors, protected from outdoor elements. Geothermal systems typically last more than 20 years if properly maintained.

Environmentally friendly
Geothermal is recognized by the United States Environmental Protection Agency as the most environmentally-safe, cost-effective heating and cooling system on the market. Even the liquid used in the system is friendly to the environment. Installing a geothermal system is equivalent to planting 750 trees or taking two cars off the road.

Estimated annual costs of heating and cooling*

<table>
<thead>
<tr>
<th></th>
<th>Medium size home (4-ton system)</th>
<th>Large size home (5-ton system)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geothermal heating/cooling system</td>
<td>$ 525.00</td>
<td>$ 665.00</td>
</tr>
<tr>
<td>Standard heat pump</td>
<td>$ 985.00</td>
<td>$1,250.00</td>
</tr>
<tr>
<td>Electric furnace with A/C</td>
<td>$1,350.00</td>
<td>$1,720.00</td>
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<tr>
<td>80% propane furnace with A/C</td>
<td>$1,745.00</td>
<td>$2,225.00</td>
</tr>
</tbody>
</table>

*Estimated seasonal energy costs as calculated by Norris Public Power.

The Bridges has selected Carrier®/ClimateMaster® high-efficiency water-source heat pumps and Slim Jim® Geo Lake Plate® heat exchange units as the key components for this geothermal development.

Underwater closed-loop system
Every lot adjacent to a pond in The Bridges development has loop piping built into the lot, ready to accept a pond loop system. When your home is built, a stainless steel plate frame heat exchange unit is placed in the pond and a closed-loop connection runs to the house.

Underground closed-loop system
For homes not adjacent to ponds, underground systems are the answer. Closed-loop piping is placed underground on your lot to tap into nature’s most dependable, economical heating and cooling system—geothermal.