

Geothermal Experience

Geothermal heat pump is a concept and system that generates a great deal of interest in today's construction marketplace. At this time geothermal continues to be more expensive to implement than many other HVAC choices available to the design engineer. However, this added expense is often offset by significant annual operating savings due to the exceptionally high efficiencies that can be obtained with a properly designed geothermal system.

Geothermal heat pumps use the Earth's relatively constant temperature as a heat sink to heat and cool buildings at greatly reduced energy usage. This is made possible by the very high Coefficient of Performance (COP) offered by today's heat pumps. In effect we are using stored energy from the earth to condition our buildings.

As elegant as a geothermal system sounds the design of a successful system does require a high level of expertise. At Fredericksen Engineering we adopted geothermal processes early and have been influential in their implementation for many years. We believe that more and more applications will be appropriate for geothermal systems in the years ahead and we will continue to be leaders in this regard.

The following represent some of the one million plus square feet of construction that we have designed using geothermal systems.

Sisters of St. Francis – Elderly Living Center	Dubuque, IA	2009
Concordia University – Center for Environmental Stewardship	Mequon, WI	2008
U.S. Customs & Border Protection	Rangeley, MN	2008
Sun Prairie Middle School – Creekside	Sun Prairie, WI	2008
Sun Prairie High School	Sun Prairie, WI	2007
Mosinee Elementary School	Mosinee, WI	2007
Holy Wisdom Monastery	Middleton, WI	2007
Sun Prairie Elementary School – Horizon	Sun Prairie, WI	2007
Horicon Bank	Horicon, WI	2006
Monona Grove Middle School	Madison, WI	2006
Three Pillars Senior Living	Dousman, WI	2004