



GeoExchange and LEED Project Experience

Canfield Lofts

Detroit, MI
55,000 sq. ft., 35 Residential Condominiums

Installed in 1998 this vertical closed loop system utilizes 42 vertical wells with a depth of 205 feet each. This redevelopment project was one of the first of its kind in the City of Detroit. The lofts offer in-city living in Midtown Detroit, near the Detroit Institute of Arts, Detroit Public Library, Wayne State University, Detroit Symphony Orchestra Hall and the Detroit Medical Center.



Canfield Lofts

Henry L. Brown Municipal Building

Coldwater, MI
30,000 sq. ft. Office Building

This vertical closed loop system utilizes 50 vertical wells with a depth of 300 feet each. This GeoExchange system also serves a snow melt system at the building entrance. Indoor energy recovery units temper building ventilation air. Twenty four water source heat pumps serve the heating and cooling needs of the building.



Henry L. Brown Municipal Building

Eagle Creek Academy

Oakland, MI
50,000 sq. ft. Elementary School

This GeoExchange HVAC system utilizes a closed loop vertical well-field coupled with ground source heat pumps to provide space conditioning. Eagle Creek Academy is a private educational facility with 14 classrooms, cafeteria, gymnasium and media center.



Eagle Creek Academy

Oddfellows Hall

Detroit, MI
15,000 sq. ft. Cultural and Community Center

This vertical closed loop system utilizes 45 vertical wells with a depth of 250 feet each. The project was awarded a Cool Cities designation from the State of Michigan. The building was originally constructed in 1917 and originally was the Detroit branch of the Oddfellows, a fraternal group of do-gooders that migrated to the U.S from their native England in 1819.



Oddfellows Hall

Lenox Township Hall

Lenox Township, MI
16,000 sq. ft. Municipal Office Building



This recently completed project is pursuing LEED certification. The vertical ground heat exchanger consists of 36 vertical wells with a depth of 300 feet each. Sustainable design concepts such as geothermal heating and cooling, zero storm water runoff, rainwater capture, reduced site impact, a rain garden, day lighting controls, indoor air quality management and energy efficient design are all incorporated into this project.



Lenox Township Hall

Lapeer Community Schools Irwin Administration Building

Lapeer, MI
20,000 sq. ft., School District Offices

A former elementary school was converted to the administration offices for Lapeer Community Schools. The vertical ground heat exchanger is comprised of 35 vertical bores spaced twenty feet apart. Two 1" HDPE pipes were inserted into each 5" diameter bore hole to a depth of 300'. The void between the pipes is backfilled with a thermally enhanced grout. SES provided formation thermal conductivity (FTC) testing for this project.

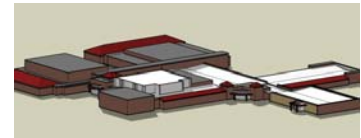


Irwin Administration Building

Lapeer Community Schools Woodside Middle School

Lapeer, MI
118,000 sq. ft. Middle School

SES has provided schematic design horizontal and vertical type ground heat exchangers for this project. Each system was also provided with a hybrid option where the system would utilize a small boiler for the coldest hours of the year. Considering the available space for new athletic fields a horizontal system will likely be the best geoexchange investment minimizing first cost yet still providing significant energy savings over a conventional system.



Woodside Middle School

Strategic Energy Solutions

Berkley, MI
13,400 sq. ft. office



Strategic Energy Solutions recently purchase a building to renovate into their new offices. The brownfield site is the former home of Ann Arbor Machine Co. Plans call for a geoexchange HVAC system and LEED NC certification.



Strategic Energy Solutions

Rouge Woods Apartments

Detroit, MI
24,000 sq. ft. 25 residential units

This inner city apartment complex will utilize a vertical closed loop ground heat exchanger to minimize vandalism and provide a return on investment for the developer renovating this fire damaged complex. A common ground heat exchanger will be shared by all of the residential units.



Rouge Woods FTC Test

Blue Cross Blue Shield Parking Deck

Detroit, MI
24,000 sq. ft. 25 residential units



The nine-story Blue Cross Blue Shield of Michigan parking structure at its downtown campus has officially been LEED certified by the United States Green Building Council. It is the first such structure to earn this designation. Significant features include a green roof and storm water recycling. Sustainable design concepts such as geothermal heating and cooling, zero storm water runoff, rainwater capture, reduced site impact, a rain garden, day lighting controls, indoor air quality management and energy efficient design are all incorporated into this project.



BCBS Parking Deck

Youthville

Detroit, MI
81,000 sq. ft. youth education and recreation center



Youthville

SES provided design and commissioning services to meet LEED NC requirements. Energy efficient rooftop HVAC equipment was utilized to exceed minimum energy efficiency requirements.

Affirmations Community Center

Ferndale, MI
17,000 sq. ft., community center



Affirmations

SES provided consulting services to meet LEED NC requirements. LEED certification is expected in early 2008.

As the name implies, Strategic Energy Solutions is committed to being recognized as an industry leader in the implementation of practical and efficient energy systems. SES has been providing sustainable energy systems design since our inception ten years ago. We designed and implemented our first geexchange HVAC system in 1998 before “green” was an industry buzzword. The strength of our team, our recognized leadership, and commitment have contributed to our success. We take a holistic and analytical approach in providing design and consulting services to our clients. Although we are most recognized for our leadership and passion in geexchange HVAC systems, we are also committed to furthering our knowledge and experience in wind, solar, and biomass energy systems. We firmly believe that economically sound and environmentally responsible energy systems are the future of our business.



Member: United States Green Building Council



Member: International Ground Source Heat Pump Association



Member: Geothermal Heat Pump Consortium

GEOEXCHANGE®



Member: American Society of Heating and Air Conditioning Engineers