



Life Time Fitness Center

Location: Lakeville, Minnesota

Architect: FCA Construction

The Situation:

Life Time Fitness had plans to open its 23rd Twin Cities location in Lakeville. The plans mapped out a state-of-the-art health club experience, designed to boast one of the regions finest indoor tennis facilities. The tennis facility was to house 12 courts, a spectator viewing area and a retail shop. To create the ideal comfort level for the facility, Life Time expressed a desire to utilize groundsource heating and cooling. With 24-hour access to the club and being a large multi-sport complex, there were also many concerns regarding energy use.

The [engineous*]:

Thermal comfort for the club's guests is one of the highest priorities that led to the creation of a system of ground source heat pumps. This required the installation of 150 vertical wells, all 200' deep and located under the parking lot. Through the facility, building pumps circulate fluid through the ground heat exchanger and 21 geothermal heat pump units. As for the energy usage of the facility, a generator load shedding system was designed to provide full backup for the entire building. It will also offer the owner a utility interruptible rate, which saves the club almost 30% on energy costs. Energy conservation was incorporated into the facility mechanical systems by utilizing custom energy recovery units that temper incoming outside air with energy harvested from the exhaust of both the pool and locker rooms. This process is monitored and tweaked by a digital control system, which creates a simple structure for low maintenance thermal regulation. Guest comfort and an energy conservation system came out on top in this design that celebrates EP's long-term relationship with Life Time Fitness.

For more information on the Life Time Fitness Center project please contact:

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