

MAKING BUILDINGS BETTER



OAK LAWN COMMUNITY HIGH SCHOOL

Owner: Oak Lawn District 229

Mechanical Engineer: Metro Design

Customer Challenges:

Oak Lawn Community High School was nearly fifty years old and required mechanical renovations and upgrades. The district looked to Metro Design to upgrade the HVAC systems and bring the facility back to current comfort and ventilation standards. The project was a large undertaking, a 100% renovation of the HVAC system, and it had to happen fast. District 229 needed the renovation to happen in two phases, and most of the work had to be completed over the summer of 2008.

Trane Solutions to the Challenges of the Project:

The engineers at Metro Design created an HVAC system to update the educational building. The design team utilized Trane Chillers in conjunction with Calmac Ice tanks to cool the building. It is a partial ice storage system with the ice tanks buried below ground to conserve space. The tanks require very minimal maintenance, and reduce the required capacity of the chillers. The chiller makes ice in the Calmac tanks at night. During the day, the chiller operates at a reduced capacity and consumes less energy. The renovated system distributes a 38° F water-glycol mix to the Trane Earthwise Unit Ventilators located in the class rooms around the building. The low temperature distribution reduced required pipe sizes for the system.

The HVAC system is coordinated and monitored through the Trane Tracer Summit Building Automation System. The Tracer control system keeps the building running as efficiently as possible. In addition, it is simple to operate using graphical displays from a centralized workstation.

Trane Chicago worked closely with the construction team and our factories to coordinate quick shipments of the equipment. The renovation work was mostly squeezed into one summer, and there was no time to waste. Trane fulfilled the time requirements and the renovation was completed on time and within budget.

General Description of the Building:

Oak Lawn High School, home of the Spartans, was first built in 1952 to serve the areas of Oak Lawn and Hometown. The building holds nearly 1800 students in grades 9-12.

Trane Equipment/Controls: Trane Air-Cooled Helical Rotary Chillers, Trane Earthwise Unit Ventilators, Calmac Thermal Energy Storage Tanks, Trane Tracer Summit Controls with wireless zone sensors.

EDUCATION