

# State Farm Center



**Building Gross Sq.Ft.:** 315,821

**Retrocommissioning Team Visit Period:** January 2021 - August 2021

**Principal Building Use:** Events, offices, concourses & team areas

## Building & Occupant Overview

The State Farm Center is a large dome-shaped 15,544-seat indoor arena constructed on a truly massive scale in every respect. The 400-foot diameter of the building reaches its peak at 128 feet above the center floor. During construction a special horizontal-wheeled tractor was borrowed from missile silo work to wind 614 miles of 1/5" steel wire around the dome's edge, circling the dome 2,467 times. This placed more than 130,000 pounds per square inch of tension on the concrete.

Highlights include:

- \$60M Renovation in 2014 with the building reopened in 2017.
- Athletics and venue offices, locker rooms, concessions areas; premium seating, suites and box seating areas and a 15,544 seating arena.
- The HVAC systems are massive and include 26 AHU's throughout multiple zones with various uses/needs and run times.

## Retrocommissioning Specifics & Results

Reviewed and optimized all Siemen's programming

Shut off Ahu's and run in floor mode which only runs 2-4 units

Reduced half of the operating units during unoccupied hours

Shut off perimeter hot water heating systems for entire summer

Educated users and occupants on operating modes of operation

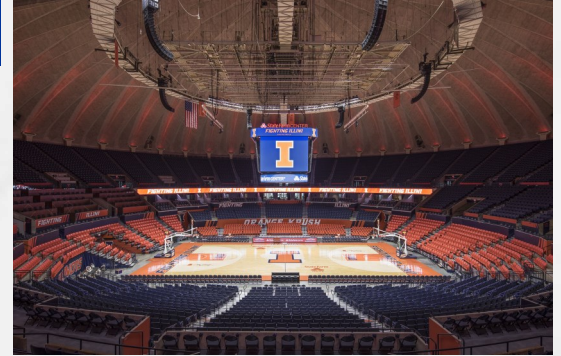
Reduced Outside Air exhaust where possible to pressurize the building

Old controls from previous project were restored to operating conditions

Replaced failed Siemens occupancy, CO2 & CO sensors

Reviewed and optimized all 26 AHU operations

*Overall reductions are \$214k thus far, which is over 20% of the utility consumption costs at the start of the project.*



## Project Highlights

- Summer shut down of perimeter hot water heating systems
- Calibrate AHUs, check freeze stats, fix LL-40 discrepancies
- Calibrate VAVs, check CO2 control, increase heating airflow
- Fixed economizer mode on multiple air-handling units
- Resolved temp calibration issues so adjacent units work in unison
- Reduced/controlled exhaust in mechanical rooms
- Removed 3-way valve wasting CHW
- removed OA that could have frozen a CHW coil