

Activities & Recreation Center #0118



Building Gross Area: 340,000 sq.ft.

Retrocommissioning Team Visit Period: Apr. 2015– Sep. 2015

Principal Building Use: Recreational Facility

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Building & Occupant Overview

The Activities and Recreation Center was originally built in 1971. With latest additions, it is a 340,000 sq.ft. facility housing 4 gyms, 12 racquetball courts, two Olympic swimming pools, an indoor track, sauna, hundreds of weights and exercise machines, 9 multi-purpose rooms, 150 seat auditorium, wellness center, massage center and athletic training center. There are 20 air-handling units (AHU) serving the building and the building space could be divided into east and west sections. There are three air-handling units serving the East Gymnasium/Basket-ball court area, while the other 17 AHU's serve all other spaces in the building.

Retro-commissioning Specifics & Results

Most air-handling units were scheduled to turn off during unoccupied hours, reducing consumption from the previous operation of running 24 hours daily. Programming changes were made to fix the issues and optimize the air handling units. Occupancy sensors were installed in several areas of the building including the multi-purpose rooms. Demand control ventilation was implemented to manage outside air intake depending on the space CO2 levels. Infiltration through the building envelope has been reduced greatly by improving building pressurization (by better control of exhaust fans). There are three air-handling units serving the East Gymnasium/Basket-ball court area; now only one AHU runs most times to provide the necessary space conditioning and the other two units comes on when necessary.



Project Highlights

- Scheduled air handling units (AHUs) off during unoccupied hours.
- Air handling unit issues were fixed and the operation was optimized through programming techniques.
- Occupancy sensors controlling both lights and HVAC were installed in several areas including the multi-purpose rooms.
- Demand controlled ventilation: The air handling units brings in outside air depending on CO2 level in the space.
- Infiltration through the building envelope has been reduced greatly by improving building pressurization (by better control of exhaust fans).
- There were 3 air handling units serving the East Gymnasium/Basket-ball court. Now, only one of those AHU runs providing the necessary space conditioning and the other two units comes on whenever necessary.