

# BANNER THUNDERBIRD



## AT A GLANCE

- 5555 W Thunderbird Road  
Glendale, AZ 85306

## PROJECT SIZE

- 866,000 ft<sup>2</sup>, 5250 tons

## ANNUAL SAVINGS

- 803,100 kWh/year
- **\$64,248/year**

## CORRECTIVE MEASURES

- Low chiller refrigerant replacement
- Evaporator tube fouling
- Increased chiller condenser water flow

Banner Health was looking for ways to maximize the results (long term) from a chiller plant energy project at their Thunderbird campus. The chiller plant serves the 5 buildings on campus comprised of 6 York YK chillers with VFDs and a waterside economizer piped in parallel to the chillers.

ETC Group provided chiller plant testing and analysis using ClimaCheck on 3 chillers at Thunderbird Medical Center. Engineers coordinated with operations staff to determine prior maintenance and design specifications. This testing method uses thermodynamic evaluation to produce accurate and unbiased performance analysis. The system is brought to full load and data is collected and analyzed (COP, capacity, compressor efficiency, approach temperatures, and other vital performance parameters).

Our report identified that the chillers were operating less efficiently than designed and recommended measures to improve performance. Corrective measures included refill refrigerant (low), evaporator tube fouling and increased chiller condenser water flow.