

# Weingarten - Citadel Plaza

## Heat Recovery Chiller Solution



### COMMERCIAL

“We were grateful for the unique solution provided by Hunton, as well as the level of dependability and quality of work throughout the project. Our longstanding partnership is one we truly appreciate. ”

– **Mario Sarreon**  
Chief Engineer

#### PROJECT AT A GLANCE:

**- Total Project Cost:**

\$201,362.00

**- Payback:**

\$11,000 to \$13,000 per year in efficiency savings vs. New Boiler Installation with an efficiency savings of \$2,000 per year.

### *A custom solution with a 5-year payback*

#### ◆ CHALLENGE

Weingarten is one of our oldest customers. They have been a substantial customer for over 20 years and hold mechanical and controls contracts on two buildings. They came to us with the original request to replace two boilers. Due to new code requirements, the exhaust for new boilers would have to be moved to the roof and a new, dedicated room for boilers would have to be created. These challenges added cost to the project, and the client was interested in hearing what other concepts we could propose. Due to the age and design of the building, they must provide hot water to the HVAC system year round.

#### ◆ SOLUTION

To study the summertime operation of the boilers, the Hunton team placed an ultrasonic flow meter and temperature probes and left them in place for approximately two weeks to gather operating data. Additionally, the buildings' gas bills were analyzed to extrapolate the year-round HVAC boiler usage. After studying this data, our team's solution was not to replace the boilers, but to instead add a heat pump chiller to the system. Instead of tying the condenser bundle into the cooling tower loop, it was integrated into the heating water loop and designed to deliver hot water capable of keeping the building comfortable during all but the coldest of Houston weather. While the heat pump's control system is programmed to maintain a leaving hot water temperature, it still produces chilled water; during a site visit in April 2017 it was producing all of the hot water and half of the chilled water required for the building.

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## PROJECT TIMELINE:

2017-

Two weeks of on-site work, with no disruption to building operation during normal business hours.  
One week of pre-fabrication.

## ◆ RESULTS

Calculated payback is \$11,000 to \$13,000 per year in savings, resulting in about a five year payback, with an expected operating life of 20 years. Measured savings are ongoing and will be available soon.

## ◆ WHY CHOOSE HUNTON SERVICES?

In addition to world-class systems and innovative solutions, The Hunton Group is known for its expert and reliable people - the team that delivers energy efficient HVAC systems, top-notch facility service and parts support, sophisticated open control systems, and energy optimization.

## ◆ FOR MORE INFORMATION, CONTACT:

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