

DUAL BOILER INSTALLATION ATOP A HIGHRISE URBAN BUILDING

BOILER CASE STUDY

Equity Office

San Jose, California
New Boiler System

CUSTOMER APPLICATION AND KEY CHALLENGES

Equity Office owns and manages a portfolio of more than 59 million square feet of office space, with a high percentage of signature properties in leading gateway markets throughout the United States. Many of their properties contain boilers under 5 and 10 million BTUs. These relatively small commercial use boilers were previously not regulated by the air district, but with the new and tougher air quality control standards smaller boiler systems must now meet certain levels of emissions as well as operating and maintenance standards.

R.F. MacDonald Co. was approached by Equity Office regarding several specific building systems that did not meet the BAAQMD requirements. In many cases like this one, the process begins with a detailed site survey to assess the existing equipment, the anticipated needs, the surrounding environment and the options available for each specific site to comply with the current district regulations.



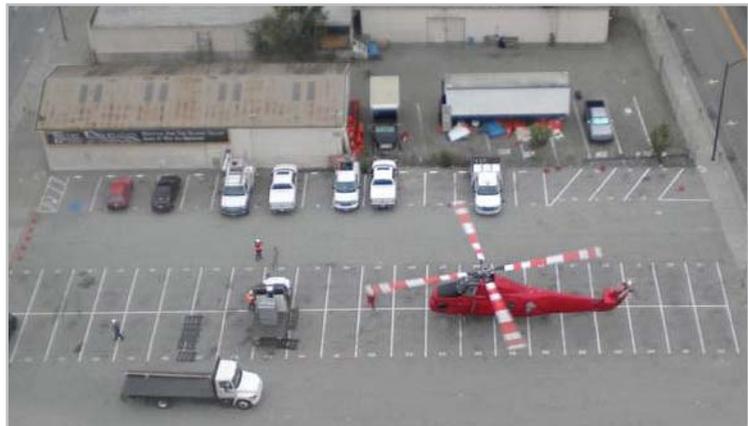
Equity Office high profile portfolio - the highrise in this case study is on the far left

THE R.F. MACDONALD CO. ANALYSIS & SOLUTION

Equity Office had an existing Ajax atmospheric boiler that could not meet the NOx emission requirements and due to age and cost of upgrading, a replacement strategy was recommended. The single Ajax boiler would be replaced by 2 Camus Dynaflex Hydronic Heating units that would occupy the same footprint as the old boiler. The use of two smaller boilers allows their operation to be staggered and turned off during low usage, resulting in lower overall gas costs and more efficient operation.

The location of the boilers atop a 14 story building and the surrounding urban area posed several challenges. The building was located in downtown San Jose, near the San Jose airport and across the street from the HP Pavilion arena. In building-top installations the use of a crane is the traditional method for pick and place, but the height of this building along with traffic and pedestrian flow control made it a cost prohibitive option. The use of a helicopter significantly reduced costs and streamlined the entire delivery process.

The procedure was planned for a weekend to help decrease traffic in the area and the office building was evacuated. All installation equipment was pre-positioned on flatbeds and all the equipment being removed was prepared on the roof.



A view of the ground crew in the staging area

BOILERS

PUMPS

SYSTEMS

SERVICE

PARTS

CORPORATE

25920 Eden Landing Road
Hayward, CA 94545
510.784.0110

BAKERSFIELD

P.O. Box 71528
Bakersfield, CA 93387
661.363.6225

FRESNO

88 N. Hughes Avenue
Fresno, CA 93706
559.498.6949

LAS VEGAS

3111 S. Valley View Blvd., Ste. E120
Las Vegas, NV 89102
702.220.6680

LOS ANGELES

10261 Matern Place
Santa Fe Springs, CA 90670
714.257.0900

MODESTO

1549 Cummins Drive
Modesto, CA 95358
209.576.0726

RENO

8565 White Fir Street, unit B2
Reno, NV 89523
775.356.0300

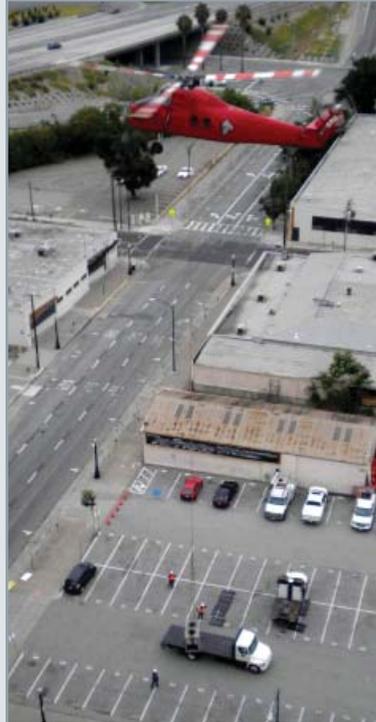
SONOMA/NAPA

642 Martin Avenue, Suite B
Rohnert Park, CA 94928
707.586.9234

SAN DIEGO

14781 Pomerado Road
PMB 184
Poway, CA 92064
858.538.5877

www.rfmacdonald.com



Removal of old boiler onto the flatbed



Dual Camus Boilers being picked

There was a strong emphasis on safety requirements and communications between all the teams was well defined.

The entire planning and preparation took months to orchestrate, but the actual helicopter lift was almost anti-climactic – smoothly taking only about 25 minutes.

This seemingly complicated installation was made smooth and seamless through the preparation, permitting and planning of our entire team. The emission levels were easily met while saving money due to increased efficiency of the new boiler system.



Final installation of dual Camus Boilers