

## **MEP Design - Multifamily Albany Housing Authority Electric Heat Conversion Albany, New York**

### **Program**

EME Group provided energy analysis and design for an energy performance contract at four developments managed by the Albany Housing Authority (AHA). The Authority was started in 1948 with a single development and has since grown to include 18 locations totaling over 1,900 apartments.

### **Scope of Services**

- Investment Grade Energy Audits
- Mechanical, Electrical and Plumbing Design for
  1. Central Boiler Plant Replacement
  2. Electric to Fossil Fuel Heating Conversions
  3. New Burners,
  4. New Domestic Hot Water Systems
  5. New Temperature Controls
- Construction Administration

### **Facility Size**

18 Developments, 1900 Units

AHA's portfolio includes a variety of building types including high-rise and low-rise developments. The building systems are a range of ages and condition. Steamboat Square was built in 1960 and is comprised of four 12-story buildings with 1,096 apartments. Lincoln Park was built in 1964 and comprises two 12-storey buildings and two 8-storey buildings containing 191 apartments. Yarborough High Rise is located at 260 and 270 North Pearl Street and includes two eight-storey buildings containing 224 units for elderly and handicapped residents. Yarborough Low Rise is bounded by North Pearl Street, Manning Boulevard Lark Drive and Livingston Avenue and consists of twelve slab-on grade, two and three storey wood framed buildings providing 179 family units.

The building envelopes are generally in good condition with insulated walls and roofs and double glazed windows. Heating at the different developments is provided by electric baseboard, central low-pressure steam and hydronic systems. Domestic hot water is generated by gas and electricity. Lighting includes a mix of fluorescent, incandescent and high intensity discharge fixtures.



### **Low Rise Apartment Complex**

The work at the Steamboat Square development is representative of the work that we performed on this project. The existing centralized plant included inefficient boilers and a leaking distribution system. EME Group designed individual plants for each building consisting of two Aerco Benchmark 2000 high efficiency hot water boilers and plate heat exchangers for domestic hot water to replace the existing systems.

The NYS building code requires two means of egress into a boiler room for health and safety requirements. Since the existing tank rooms only housed heat exchangers and condensate systems, they had only one hatchway into the space that was accessible by a ladder. In providing the second means of egress we also created the rigging path to bring the new equipment through so exterior excavation was not required, thereby minimizing the construction costs.

Venting the new equipment was another challenge. There were no existing chimneys and the tank rooms were located in close proximity to the sidewalks and apartment windows. We identified individual venting solutions for each building that met the National Fuel Gas Code minimum clearance requirements.