

MARCH 2010

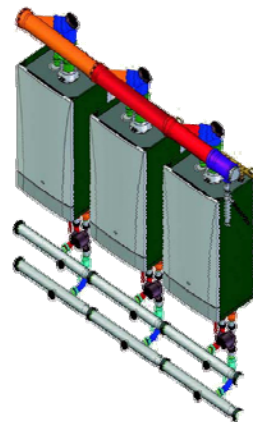
As part of the sustainable design-build condominium project AENA is completing on 120th Street across from Marcus Garvey Park, we are proceeding with the installation of mechanical systems that were designed to meet LEED Gold certification. AENA used our sustainable design-build development model to perform the design, the construction and the LEED certification of these condos. Utilizing efficient equipment and checking our assumptions with an energy model, we have been able to receive energy rebates through the NYSERDA program, in addition to delivering a sustainable design that will realize energy savings throughout the lifecycle of the building.

One piece of equipment that assisted in creating a high efficiency, sustainable building was the Baxi Luna 380. These on demand boilers and hot water heating systems are one of the innovative pieces of equipment that highlight the advantages of our Sustainable Design Build Development Service. Unlike traditional architecture firms, AENA's staff of architects and designers worked alongside our MEP engineers and installers from the project's inception to develop workable sustainable mechanical systems for the project. Once it was decided that the project would be LEED certified, the AENA team brought their experience and knowledge along with a company wide focus on sustainability to develop a number of ideas that would help create a LEED certified and efficient project.

By using our Design Build project delivery method, construction was able to commence before the design was finalized. A permit set was developed for approvals and work started almost immediately. As construction progressed the design was developed for site conditions and the specifications were finalized. Developing the design during construction allowed a close collaboration between the designers, the installers and the equipment manufacturers. Additionally, the ability to research the design's specifications while not delaying construction gave AENA's team of architects, designers, and MEP engineers more time to research and select equipment for the project that integrated the sustainable design goals, with the budget and schedule of the project.

High Efficiency boilers will be installed in every unit as well as the common area so as to provide individual controls for each owner to heat the space as well as provide hot water. The Baxi was chosen for this application for a number of reasons. The most important being its condensing nature. A condensing boiler captures the latent heat from the fuel burning process and allows it to reuse latent energy towards heating the space, instead of sending out the chimney. This 'second' pass, is what helps the boiler achieve its 98% AFUE rating. This high efficiency rating has a direct impact on the energy model; and makes it eligible for NYSERDA incentives. To take advantage of their efficiency, AENA fabricated a custom cabinet in our millwork shop to house the boiler, providing more usable space in the apartment while allowing maintenance access for the units.

The Baxi units emit 90% less carbon monoxide, and 80% less nitrogen, allowing utility bills and green house emissions to be cut in half while providing endless hot water on demand. AENA's integrated approach allows a high level of energy efficient design and innovation while implementing cost effective solutions for all our sustainable design-build projects. Our team based approach provides clients with the best design solutions in the most cost effective manner whether we provide traditional design services or utilize our sustainable design-build project delivery method.

*Rear Elevation.**Front Elevation.**Axonometric.**Front view of Baxi Boiler.***aena**

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