

# AFFORDABLE, NET ZERO ENERGY URBAN LIVING

CASE STUDY MULTI-FAMILY RESIDENTIAL



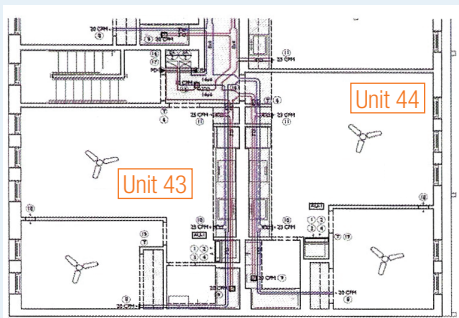
## URBAN FLATS INNOVATE WITH ENERGY & DESIGN

The co-founder of this architecture/development/construction firm describes this project as their “most-challenging- to-date.” In addition to meeting the Passive House standard, this 25-unit multifamily building will aim for Net Zero Energy performance, with the assistance of a geothermal ground loop for heating/cooling and hot water; and an 83kW solar array. Passive House is “about 80% better than code,” and this building should have an EUI of about 15 kBtu / ft<sup>2</sup> / year. Many other design-build firms might say the Passive House standard is out of reach for new low-income housing, but this firm has made it the norm for their projects. They estimate in a recent article that this can be achieved with an incremental increase in construction costs of as little as 2%, while ensuring monthly affordability and comfort for generations to come. An EUI of 15 is only 35% of expected EUI in New Construction “Reference Buildings” for this climate zone. Ventacity Systems is excited to be considered for this project, not only for energy conservation, but also because of the firm’s inspiring dedication to historic Philadelphia neighborhoods.

## INSTALLATION FACTS

<b>Building Construction Year</b>	New Construction
<b>Occupancy Type</b>	25 Unit Multi-Family
<b>Number of Stories</b>	4
<b>Conditioned Area</b>	Approx. 13,000 ft <sup>2</sup>
<b>Ownership</b>	Private

### FOURTH FLOOR MECHANICAL PLAN



### HVAC FACTS

<b>Fuel Source</b>	<b>Heat:</b> Electric with Geothermal <b>Cool:</b> Electricity
<b>HVAC System</b>	VRF Electric with Geothermal Components; VS1000 RT units with ducting into 25 individual units
<b>CFM</b>	TBD
<b>Tons</b>	TBD

### HVAC ENERGY USE INTENSITY

