



## Passive House Residential Condo - 669 St. Marks

EP Engineering has teamed up with Cycle Architecture and Developer Masmak to design a ground up 15,928 square foot 5 story Passive House residential building. The building will be constructed to Passive House standards and will utilize energy saving measures such as an airtight envelope construction, high efficiency variable refrigerant heating and cooling, all-electric heat pump water heaters, and high efficiency energy recovery. This Passive House project is an innovative multifamily high performance building awarded \$238,920 by the New York State Energy Research and Development Authority (NYSERDA) Buildings of Excellence competition.

### Challenges:

- Coordinating Passive House requirements with new MEP systems to ensure the energy model meets the rigorous requirements for building certification. Considerable coordination of outside and exhaust air from in-unit energy recovery units ducted to each and every room and bedroom for continuous indoor air ventilation of each zone.
- Utilize electrical as the sole energy source for the building.

### Achievements:

- Passive House construction affords much greater level of comfort to occupants by providing consistent temperature throughout an apartment and better indoor air quality.
- Incorporation of Heat Pump Water Heaters eliminated the need for a gas-fired solution for domestic hot water. This allowed for an all-electric building.

### Award:

NYSERDA's Building of Excellence Award 2019

### Location:

669 St. Marks Avenue  
Brooklyn, NY 11216

### Building Size:

5 story  
12,000 SF

