

The Heritage

- New York City
- 680,000 SF
- 600 apartments
- 3 mixed income multifamily buildings built in 1975



Fully occupied mixed income property gets a face lift

The Heritage is a 3-building mixed-use development with 600 mixed-income residential units located in Manhattan's East Harlem neighborhood on the northeast corner of Central Park. These buildings have an aging infrastructure with poor insulation, and high utility bills due to inefficient electric resistance heating baseboards and gas-fired domestic hot water heaters.



L+M takes advantage of the recapitalization cycle of the Heritage to upgrade its infrastructure and include decarbonization measures to meet its climate goals while improving tenant comfort.

The outdated design and age of the property made it an ideal candidate for a deep carbon reduction project, focused on envelope improvements, high efficiency heat pumps, and an integrated design approach to minimize tenant disruption.

Project Team:



Steven Winter Associates, Inc.

Inglese Architecture
+ Engineering

Cosentini
A TETRA TECH COMPANY



DEXTALL
Prefabricated Exterior Walls

ICE AIR
World Class Comfort

NYSERDA Investment

\$5 Million

Private Investment

\$14 Million

Disclaimer: The project plan outlined in this presentation is in its early design stage and can be subject to potential changes in the future.

The Heritage

demonstrates how a well-planned façade upgrade enables decarbonization with less tenant disruption



Re-skin the exterior: improving the building envelope and reduce energy load

Re-cladding of the 3 buildings is estimated to avoid \$10 million of LL11 compliance costs between now and 2046. One portion of the project is using pre-fabricated external wall panels from Dextall to minimize installation time and therefore tenant disruption.

Heat Pump Technology: take advantage of higher efficiency

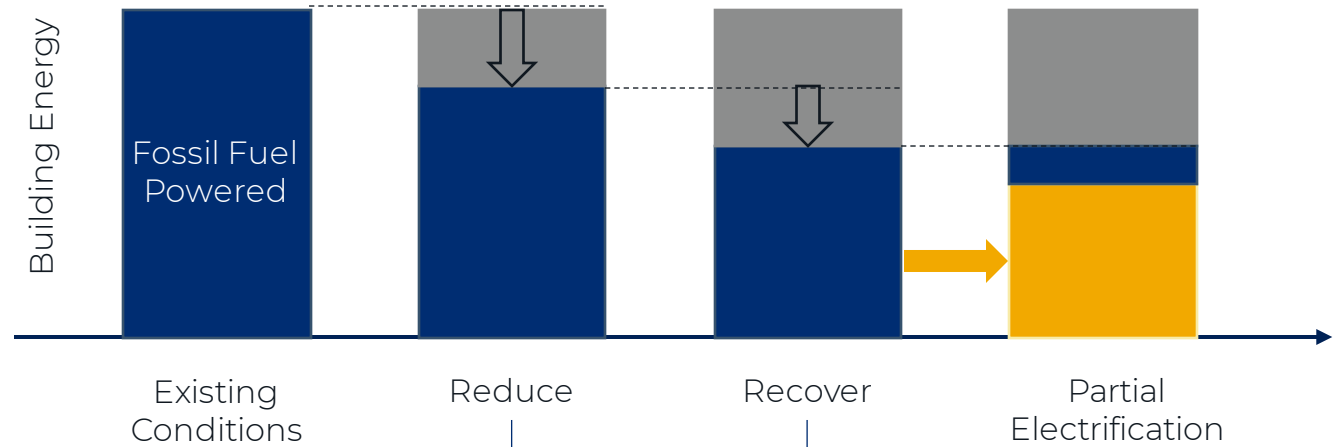
Replacing apartment electric resistance heating baseboards and sleeve air conditioning units with modular Packaged Terminal Heat Pumps (PTHP), and installing CO₂-based heat pumps for Domestic Hot Water (DHW) production will significantly increase system efficiency and reduce energy use and costs. The PTHP installation work is coordinated with the panelized external wall system to integrate necessary electrical upgrades and condensate lines and minimize installation time as a result.

2019 Baseline	Expected by 2030	
77 kBtu/SF/yr	45 kBtu/SF/yr	↓ 42%
35% Natural Gas + 65% Electricity	100% Electricity	
3,414 tCO ₂ e/yr	1,072 tCO ₂ e/yr	↓ 69%
\$34,424 /year of LL97 fines starting in 2030	\$0 LL97 fines starting in 2030	

Resource Efficient Decarbonization (RED):

An incremental methodology and integrated design process combined with strategic capital planning creates a path towards carbon neutral buildings.

A holistic approach and phasing can make decarbonization technically and economically feasible.



Reduce Energy Load

- **Envelope Improvement:** Install exterior wall and roof insulation (overclad and panelized EIFS), and replace windows
- **Heat Pumps:** Replace electric baseboard heating with Package Terminal Heat Pumps (PTHPs) for apartments and install VRF system for common areas
- **Submetering and Control Optimization**

Recover Wasted Heat

- **Energy Recovery Ventilator (ERV):** install ERV unit into exhaust risers to recapture exhaust heat and preheat fresh air

Partial Electrification

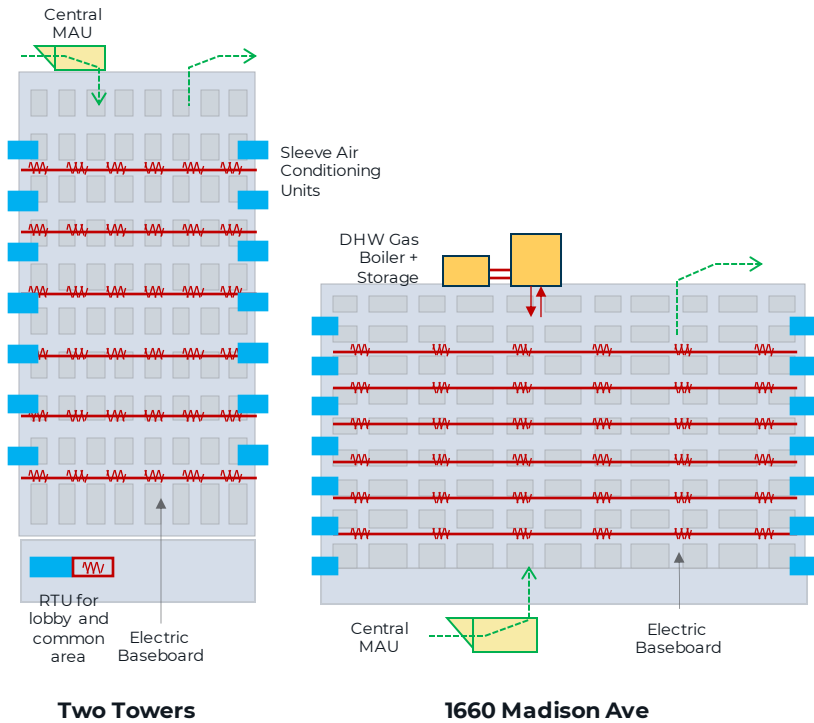
- **Domestic Hot Water:** CO₂ Air Source Heat Pump (ASHP) for DHW production
- **Laundry appliance**

The Heritage Decarbonization Plan

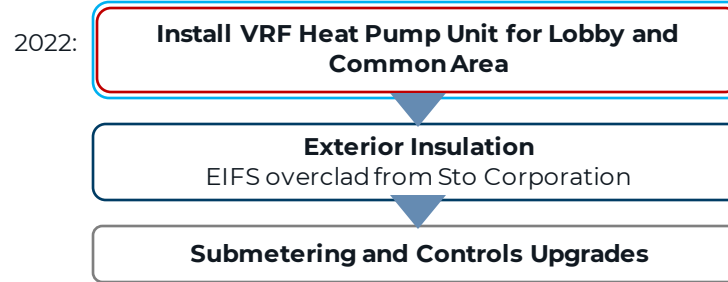
Heating
Cooling
Ventilation

Key Takeaways: Affordable Housing Recapitalization, Tenant Total Cost Reduction, Failing Envelope

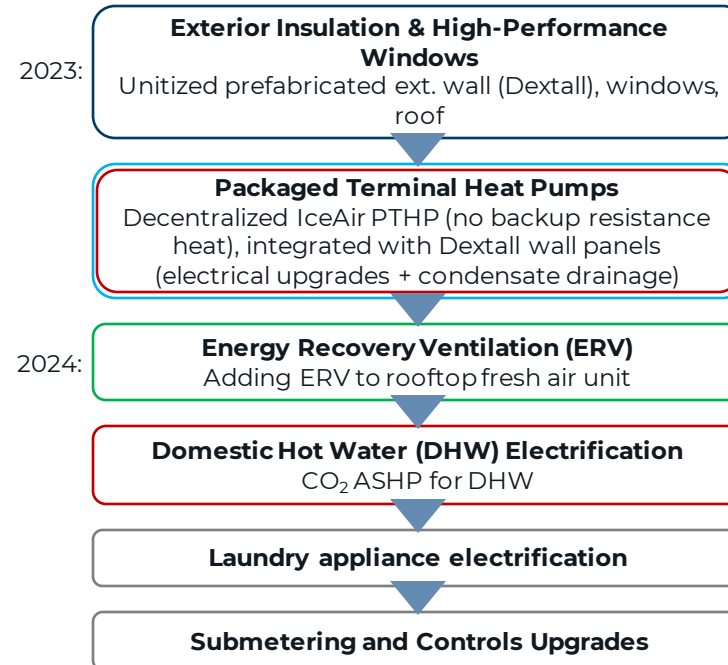
BEFORE



Two Towers (1295 & 1309 Fifth Ave):



1660 Madison Ave:



AFTER

