

\$20,000
IN
ANNUAL SAVINGS

SUSTAINABLE CPC: A STUDY IN SAVINGS

Gut Renovation Complete with Solar | Low-Rise, Mixed Use



BUILDING PROFILE

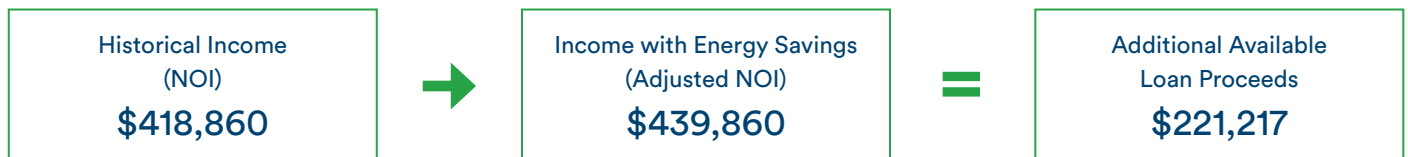
Year Constructed	1920
Size	8 Buildings, 3 Floors, 40 Apartments, 130 Rooms, 44,358 Gross Square Feet
Commercial Spaces	9 Units (Retail) – 11,952 Square Feet
HVAC System	Ground Source Heat Pumps
Utilities Provided by Owner	Ground Water for Heat Pumps, Hot Water, Water & Sewer

This property was renovated with partial funding from a city initiative to revitalize blighted areas of the community. The highlight of several green features is a 5 kilowatt (kW) solar photovoltaic (PV) array on the roof, which generates electricity for the common areas and is net-metered to the utility, allowing the owner to sell excess energy produced by the system back to the grid. Residential areas are served by efficient heating and cooling from a ground source heat pump system, which circulates groundwater from 21 wells under the parking lot.

PROJECT PROFILE

Loan Type	Permanent Loan
Loan Offering	\$4.4 million

ADDITIONAL LOAN PROCEEDS SUPPORT ENERGY AND WATER EFFICIENCY



SAVINGS SNAPSHOT

Compared to a conventionally designed building of similar size, the subject property saves 39% on total utility expenses.

The ground source heat pump and solar PV panels help offset the costs of this thoroughly renovated, energy efficient building.

UTILITY	CONVENTIONAL PROPERTY ANNUAL EXPENSE (\$/APARTMENT)	SUBJECT PROPERTY ANNUAL EXPENSE (\$/APARTMENT)	EXPENSE DIFFERENCE
Electricity & Gas	\$796	\$499	-37%
Water & Sewer	\$498	\$285	-43%
Total	\$1,294	\$784	-39%

SCOPE OF WORK

- 5 kW solar PV array serving common areas, net metered to utility
- Ground source heat pump heating and cooling
- Thermally insulated windows
- Rainwater collection systems

MEASURE HIGHLIGHT: SOLAR PV SYSTEMS

Solar photovoltaic systems are an attractive opportunity to provide buildings with clean, renewable energy and reduce electricity costs—as well as display the owner’s commitment to sustainability. Cost and payback factors include the efficiency of the panels used, the mounting system required, the complexity of the installation, and the adequacy of the

existing electrical system. Once installed, solar PV installations are durable, with a lifetime of up to 40 years, and are nearly maintenance-free. Solar installations should be coordinated with an experienced solar installer and a roofing contractor to avoid compromising the roof or roof warranty.

USEFUL TERMS

Net metering

Allows excess energy generated to be transferred to the grid for credit from the utility. Not available in all municipalities and applications.

Distributed generation

Power generation by smaller-scale technologies at or closer to the point of consumption. Bypasses inefficiencies in distribution and transmission associated with traditional, centralized power generation.

IS THIS UPGRADE RIGHT FOR YOU?

If any of the following apply, then yes!

- ✓ High electrical loads during the daytime
- ✓ Flat, unshaded, not currently utilized roof area
- ✓ Roofs that are new or due for replacement
- ✓ Space for a ground-mounted system

