

Yale Acres Modernization and Energy Improvements



The Yale Acres Modernization project includes the substantial rehabilitation of 162 units. Conversion from public housing to mixed-income housing, modernizing the apartments with significant energy improvements. The project is sponsored by The Meriden Housing Authority, to be developed by Maynard Road Corporation and construction by a local developer, Carabetta Brothers, Inc. Renovation will include all units expanded with bump-outs for additional bathroom and extra space. Project includes replacement housing for the Mills Memorial Apartments.

Energy upgrades at Yale Acres include adding insulation and new windows and doors for a tighter building envelope. Energy Star Appliances will be installed which will provide at least a 25% savings compared to conventional appliances. Energy efficient LED lighting includes Energy Star fixtures with compact florescent bulbs which will be installed throughout the project.



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The current source of heat (oil) will be converted to Geothermal Heating and Cooling which will provide a 70% savings in utility costs, as well as, significant maintenance savings. The renewable energy that is to be created at Yale Acres will provide much of the energy the residents will use. The heating and cooling plants are energized by pumping geothermal water through a closed loop system of ground source bore holes that take the energy from the geologic formation around the property through water to air heat pumps to provide adequate heating and cooling to all the units. This geothermal heating and cooling plant uses no fossil fuels and is driven only by electric pumps. Water heat pumps will also provide hot water to the electric hot water heaters.

Solar PV or integrated solar roofing panels will be installed which meets the majority of the building's energy needs. Electricity will be partially generated through standard roofing and has solar PV panels added. These standard roof panels are state-of-the-art solar collectors and are expected to produce as much as 400 Kw of power to be used by the residents once the building is completed. The steel roof will have a 50 to 100 year life span.

Additionally, sustainable landscaping, using rain gardens and other natural storm water mitigation systems, will reduce the capital cost of storm water handling for the project.

An Energy Star Model Building was completed in 2013 which provides for a 70% energy savings.



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The energy improvements provided workforce development. MHA's work crew were all trained in geothermal and solar installation, including solar carports and integrated LUMA Solar Roofs.



District Geothermal System

