



COUNTY OF CARROLL

OFFICE OF THE COMMISSIONERS

Administration Building
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1/14/2021

Siemens Project Overview

Over the last two years, Carroll County has been working with Siemens Building Technologies to conduct an energy review of our facilities, and design/build a series of improvements that directly affect energy consumption. Upon final completion and turnover of the project, Siemens is contracted for three years to conduct Verification and Measurement of the proposed energy savings. If benchmarks of energy savings have not been realized (provided that variables aren't changed), Siemens will be writing a check to Carroll County for the difference.

Included in these Improvement Measures are:

Admin Building:

- LED lighting upgrades to building and parking lot.
- Replacement of outdated building automation controls with Siemens controls w/demand ventilation (CO2 monitoring).
- Installation of VRF (variable refrigerant flow) heat pump/air conditioning system.
- Replacement of propane boilers with high efficiency condensing boilers.
- New roof (with roof insulation).
- Weatherization of air gaps in walls, ceilings, and doors.
- Installation of humidification system in vaults.

Mountain View Community:

- LED lighting upgrades to building and parking lot.
- Adaptation of Siemens HVAC automation controls to existing control system, including upgrade to demand ventilation.
- Upgrade control system to eliminate potential simultaneous heat/ac operation in resident rooms.

Annex:

No improvements made.

DOC:

- LED lighting upgrades to building and parking lot.
- Adaptation of Siemens HVAC automation controls to existing control system, including upgrade to demand ventilation.
- Installation of heat pump/ac systems to Laundry, Kitchen, and Control Room.
- Replacement of propane boilers with high efficiency condensing boilers.
- Replacement of multiple outdoor ac units, and replace with single chilled water cooler.
- Weatherization of air gaps in walls, ceilings, and doors.

These improvements are 99% complete. Outstanding is humidifier startup and HVAC automation work. The holdups on these two items are mistakes in engineering that are currently being rectified. Final payment is being withheld until 100% completion. Siemens is expected to finalize engineering and complete modifications by end of February.

Note: I wish to express my pleasure with Siemens and its representatives. In a project this large, it is not unreasonable to expect a few bumps in the road. We certainly have had a few. However, Siemens has been upstanding in their efforts to smooth out these “bumps”, and I fully expect that Carroll County will be the recipient of exactly what they paid for, if not more. Covid-19 certainly had an effect upon timely completion. Restricted building access, shortage of materials, etc. all played a part in delay.

Once completed, formal Measurement and Verification can begin, which will give the County a detailed report of annualized energy savings. Without formal Measurement and Verification processes in place, only a basic overview and extrapolation of energy savings can be outlined. In preparation for submittal of the 2021 budget, I have reviewed the last two years of propane and electric consumption, and determined (albeit, conservatively) that it is fair to estimate:

Electric Savings - 10% (-\$40,608)

Propane Savings - 25% (-\$81,602)

This equates to a combined savings of **\$122,210.00**, which is consistent with Siemens projected annual savings of \$124,160.00.

Siemens had projected \$92,609.00 in incentives returned to Carroll County. Carroll County realized rebates as follows:

R-110819-676	22066	77,474.61	LIGHTING INCENTIVES
R-110819-676	22071	1,575.00	PSNH REBATE MVC
R-110819-676	22072	6,810.00	PSNH REBATE MVC
R-110819-676	22073	11,170.00	PSNH REBATE ADMIN
R-112019-674	22105	26,288.00	PSNH - ENERGY REBATE MVC
12/24/2019	22164	29,265.00	PSNH Rebate Energy Eff-MVC
12/24/2019	22165	19,684.00	PSNH Rebate Energy Eff-Admin
12/24/2019	22166	21,607.00	PSNH Rebate Energy Eff-Jail
R-122719-731	22173	802.40	USOURCE REBATE
		\$194,676.01	

Respectfully submitted,

Bob Murray
Director of Maintenance
Carroll County Facilities

Matthew Plache
Vice Chairman

Terry McCarthy
Chairman

Kimberly Tessari
Clerk