

GREEN STUDENT HOUSING SOLUTIONS

AMERICAN CAMPUS COMMUNITIES (ACC)



OVERVIEW

As a long-term owner and operator of residential communities, American Campus Communities (ACC) sees the integration of sustainable building and operational features into their properties as a critical component of delivering the best student living experience. ACC found themselves with a need to find a partner that—with an understanding of the unique needs of student housing—could offer a product solution that continues to help ACC meet their ESG goals.

THE APPROACH

Evolution's first step was to review utility data for ACC's entire portfolio. ACC provided two years of usage from their UEM platform and a summary profile for each property, including key building details such as unit count, occupancy, construction type, and facility system makeup. Collectively, the teams agreed on The Summit at University City, a 351-unit, 1315-bed concrete high-rise developed by ACC in 2015 to be the pilot property for the partnership.

Evolution's next step in the process was to perform an ASHRAE Level II Audit. A Level II audit reviews the building's utility usage and rates, lighting and mechanical schedules, MEP drawings, equipment lists, and examines the building energy systems in detail to identify potential energy conservation measures (ECMs). After all surveys and data analyses were complete, Evolution provided ACC with a write-up summary of its recommended ECMs, including installation costs, timeline, projected usage and cost savings, rebates, return on investment, and additional non-financial benefits.

ECM RECOMMENDATIONS

- **LED Lighting Upgrade**
The Summit at University City lighting systems included more than 130 existing fixtures comprised primarily of linear fluorescent tubes. Evolution upgraded the interior and exterior lighting to high efficiency LED lighting, significantly improving light quality while dramatically reducing energy consumption and maintenance and replacement costs.
- **Flow Rate Balancing**
With the information collected from the on-site water audit, Evolution calibrated the property's Ideal Flow Profile – to maximize the water flow efficiency of each fixture based on design specifications to meet compliance standards and acceptable resident satisfaction.
- **Intelligent Occupancy Based Thermostats**
Typical student apartments can be vacant up to 70% of an average day. Evolution proposed installing intelligent, wireless thermostats which utilize both motion and infrared to automatically adjust based on the occupancy. Motion-activated setback technology provides significant energy savings while maintaining tenant comfort, Evolution delivered a customized solution to meet ACC's needs.

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FINALIZING THE PROJECT

Upon review of the proposal and savings analysis provided by Evolution, ACC elected to move forward with the installation of all three ECMs. In December 2021, Evolution began installing smart thermostats in every unit at The Summit. Installation was completed within a week.

The thermostat project is projected to save more than 575,000 kWh of electricity annually, equivalent to 1.5 million pounds of CO₂, with an ROI over 30%. Installation of the flow rate limiters will commence in February 2022 and is projected to save more than 4 million gallons of water annually with an ROI over 75%.



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THE RESULTS

- Total annual savings from the three ECMs exceed \$120,000.
- Free utility rebates exceed \$20,000 and Evolution will accept the rebates on the customer's behalf to reduce the upfront cost of the project.
- The net project cost to implement the combined project is \$308,271 after utility incentives.
- Project pay back in under 2.56 years.
- Implementing this project will reduce the property's carbon footprint by more than 1.5 Million pounds of CO₂ annually.

As part of American Campus' Environmental Management System, ACC will utilize data from the company's UEM platform and the property's BAS to measure and verify results of the retrofit. Upon verification, ACC plans to continue its partnership with Evolution to conduct more energy audits across the portfolio to identify additional energy conservation measures.

Drive your sustainability goals and reduce your carbon footprint.

For more information about Evolution's services, contact us at 877-280-4655 or info@evolutionep.com.



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