

Proposal Details

Zaida Darley

Proposal Title:	Lighting Controls at Cypress Halls
Organization:	Housing and Residential Education
Description:	At the Cypress Halls, RCA, RCB, RCC, and RCD; we are seeking to install lighting contactors and photocells to control various lighting circuits that are currently on 24 hours per day, 7 days per week. These lights are in stairways and entries where there is adequate day lighting to allow these fixtures to be shut off. The current situation is a glaring example to our students of wasted energy and something the residents of the Cypress Halls would see several times each day during their travels. After the project is completed and signs are erected, the students can see firsthand what something as simple as shutting of lights can save. We hope to add controls to shut off a total of 174 light fixtures that have 2-32 watt bulbs in each, saving 11,132 watts per hour. We have estimated a minimum savings per month of \$288. This will vary per month due to the daylight hours changing seasonally. The lighting will be controlled by photocells which will operate based on the sun's schedule. We will also experience a reduction in our mechanics time for their hours changing out defective bulbs, due to the longer bulb life as well as reduced cost of old bulb disposal. However, this would be more difficult to estimate a savings for the labor involved. While this is a rather small savings on the overall monthly electrical bills for the Cypress buildings, we hope to be able to compare the monthly utility bills and see if we can document a reduction.
Amount Requested:	\$12,430.00
Budget Justification:	We have enlisted the help of one of our electrical service providers to supply us an proposal for the equipment and installation of this project. They are proposing to install 6 lighting contactors in these four buildings that will be controlled by photocells mounted on the outside walls of the electrical rooms in close proximity to the existing lighting panels. The correct circuits will have the switch legs intercepted and routed through the appropriate contactor, allowing these circuits to be switched off and on by the photocells. The amount requested is the total proposal cost.
Resource Matching:	The project oversight and management will be provided by the Facilities area of Housing and Residential Education.
Timeline & Milestones:	This project could be started nearly immediately upon identifying a source of funding and should be able to be completed within three working days.
Evaluation Metrics:	The effectiveness of this project will be quickly noticed by the student residents in these buildings and we hope to receive comments upon the posting of descriptive notices describing this project and what we expect to save yearly. Our department's mechanics will also be asked to help evaluate any time savings for bulb replacement and reduced disposal of old, defective bulbs.
Plan for Sustainability:	The continuation of this project will be easily maintained by normal observance of the lighting operation and replacement of any photocells or contactors that may fail after their normal life expectancy is complete.
Annual Energy Savings:	40,080 kWh
Annual Cost Savings:	\$2,108.80

Annual Cost Savings:	\$7,700.00
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Added By	Vote
Stanley M. Kroh	Yes
Toufic Moumne	Yes
Margaret Rush rush@epchc.org	Yes
Mark Stewart	Yes
Mark Stewart	Yes
Mark Stewart	No
Nainan Desai	Yes
Jim Gray	Yes
Jim Gray	Yes
Jim Gray	Yes

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Added By	Comments
Stanley M. Kroh	Great project that will pay for itself in less than 3 years
Margaret Rush rush@epchc.org	Lighting controls are very good energy saving projects and this one has a very good payback timeframe of 3 years. I highly recommend this project.
Mark Stewart	A simple, effective and visible (at least for students) idea. Relatively low cost with continuing savings
Mark Stewart	A needed project to correct a deficiency in building design, but not particularly visible and with a low return on investment. Probably not appropriate for a student-funded project. It seems that if minor PECO dollars become available, this would be an appropriate project.
Nainan Desai	I support the project. Even at the estimated minimum savings, it makes good \$ense.
Susana Alvarado	I would like to see how the residents in Cypress would be involved in this (the educational component?).

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