

CROSSROADS GARDEN OFFICE BUILDING — 1800 30TH STREET

Boulder, CO



Rating and reporting energy use provides insight into tenant use and efficiency opportunities

Constructed in 1972, Crossroads Garden opened as a tennis and sports center complex and was later converted to an office building. During the years, the building has undergone several renovations, including a partial LED lighting upgrade for parking and common use areas, and additional LED upgrades are planned.

In partnership with the city’s Boulder Building Performance program (BBP), the owner of Crossroads Garden received support to interpret the energy metrics, such as energy-use intensity (EUI), derived during the rating and reporting (R&R) process and to identify no- and low-cost efficiency measures based on building energy use data.

Review of the R&R results and monthly energy data revealed that although recent LED lighting upgrades had lowered energy use, Crossroads Garden had higher than usual baseline electric use as compared to other buildings of similar type, size and use. The report also revealed that a single tenant accounted for more than one-third of the building’s energy use.

The building energy use data review identified opportunities for no- and low-cost energy efficiency measures such as occupancy sensors and adjusting, fixing or upgrading inoperable or missing common space energy controls to improve scheduling. The most energy-intensive tenant has committed to working with the building owner to improve energy efficiency moving forward.

Planned lighting upgrades and implementation of the recommended measures are estimated to increase Crossroads Garden’s ENERGY STAR score from its current 67 to a 78. In addition to cost savings from improved efficiency, a score of 78 would be high enough to apply for ENERGY STAR certification and would result in an exemption from the remaining BBP ordinance requirements. A complete list of recommended no- and low-cost efficiency measures as well as their anticipated results are reflected on the right.

BUILDING DATA

- Gross floor area: 53,971 square feet (sf)
- Site EUI: 78 kBtu/sf
- National median EUI: 67.3 kBtu/sf
- Building type: Office
- Tenants: Over 50
- ENERGY STAR® score: 67

BENCHMARK ANALYSIS

- ENERGY STAR® score indicates opportunity to save energy
- Monthly energy data correlation to Boulder climate shows higher than usual electric baseline – leading to identification of high-use tenant
- Rating and reporting results combined with building walkthrough identified potential lighting and schedule control measures

RECOMMENDED MEASURES

- Add or include lighting occupancy sensors for meeting rooms, restrooms and other intermittent use spaces
- Convert analog thermostats to digital programmable thermostats with scheduling capability
- Vending machine energy controller
- Continued engagement with city business sustainability advisors
- Adjust, fix or upgrade common space energy controls to improve scheduling
- Special attention to high-use tenant space to find additional savings

ANTICIPATED RESULTS

- Current electric use: 840,000 kWh/yr
- Estimated energy savings: 76,500 kWh/yr
- Estimated savings percent: 9%
- Estimated cost savings: \$9,200
- Estimated measure cost: \$11,000
- Simple payback: 1.2 years
- ENERGY STAR score: 78