

S-5-PVKIT[®] 2.0 Case Study — The Boulder JCC



At-A-Glance

Project The Boulder JCC

Location Boulder, Colorado

Roofing Contractor Douglass Colony

Solar Installer The Solar Revolution

Architect RB+B Architects

General Contractor Calcon Constructors

Roof Profile 22GA Firestone UC-3 Double Lock Standing Seam Roof Panel

Module Manufacturer LG Solar

Inverter Manufacturer Solar Edge

Industry Community

Situation

As an environmentally responsible non-profit organization, solar was a priority for the Boulder JCC. They needed to determine a cost-effective PV solution, which presented an ROI and would enable them to invest that return on future community programs.

The Result

The S-5-PVKIT[®] 2.0 maximized the surface area of the roof, reduced the collateral load on the roof, accelerated installation time, reduced installation costs and lowered the part count – simplifying assembly while reducing material costs. The non-penetration system did not compromise the roof integrity and eliminated the risk of voided roof warranties.

Stats

- Used S-5-PVKIT® 2.0
- 74.4kW of PV, with 50 kW mounted using PVKIT
- Roof including north-facing measured: 102' (E/W) 75' (N/S)
- · Roof pitch: varies due to curve
- Total S-5! products supplied:
 - S-5-S Mini clamp (378)
 - S-5-PVKIT (378)



The Project

The 52,444-square-foot Boulder Jewish Community Center's (Boulder JCC), while grounded in the past, is a contemporary interpretation of today's sustainable design.

This two-story educational community heritage center provides programs and

services based in Jewish values and traditions in a place where people of all ages and backgrounds gather to connect, exchange ideas, learn and grow together.

Designed and built by Colorado-based RB+B Architects and Calcon Constructors, they desired to create something beautiful, functional and unique. Construction included a wing for daycare and education, a gymnasium and fitness center, a full commercial kitchen, a community hall with a state-of-the-art stage, a library, administrative offices and a large outdoor gathering area, complete with a fireplace.

The Boulder JCC includes a 74.4kW PV array, installed by The Solar Revolution, located on multiple rooftops. The main rooftop is a highly visible and gently curved standing seam metal roof. In addition to solar on the main facility, a 7.2kW array is installed on the adjacent barn at the "Milk and Honey Farm." The farm is 100% powered by solar and serves as a valuable tool for the Boulder JCC's educational and preschool programs.

The Challenge

The Boulder JCC is a 501c3, non-profit organization. Sustainability, energy efficiency, and education are a priority for their members.

The challenge was to find a cost-effective PV solution that presented an ROI, which would make the project a no-brainer from a financial standpoint. Reducing their monthly operating costs would enable them to invest more money into meaningful community programs.

The Solution

Generous grants from the City of Boulder and Boulder County, aimed at helping non-profits go solar, made this project a reality. Visibility and educational opportunities afforded by the solar were important to both the Boulder JCC and the grant committees.

The Boulder JCC is designed to be 30% more energy efficient than standard construction, and a 74.4kW PV array further helps the Boulder JCC to achieve this. The center features a monitoring and informational kiosk located in the lobby, displaying specific project data, including CO2 savings, equivalent trees planted, etc.

The arrays are mounted on the roof using **S-5-PVKIT**[®] **2.0**, which provides a simple, secure, economical and penetration-free method for attaching solar modules. Designed with the installer in mind, its quick and easy installation minimizes the time installers spend on the roof.

The **PVKIT**'s pre-assembled components enabled installers to Direct-Attach[™] PV modules to the roof's standing seams using S-5! clamps and brackets, vs. a traditional rail mounting system. The **PVKIT** offers impressive savings across several metrics by which PV mounting systems are measured, while providing better load distribution.

The PV system reduces the Boulder JCC's monthly operating costs, enabling them to invest more money into meaningful programs. Socially, the highly visible PV system sends a strong message to the community where the Boulder JCC stands regarding environmental stewardship for future generations.

"The Solar Revolution has been utilizing the S-5-PVKIT solution since it first hit the market. Hands down, it is the best solar mounting solution for metal roofing of any description. Our projects using the PVKIT yield the fastest installation times, lowest material cost and best aesthetics bar none.

We've taken a close look at all the competitors' knockoffs, and they do not compare in quality or even in cost. S-5! has been creating innovative solutions for metal roofs far longer than anyone else, and their expertise is unmatched. We just won't use anything else on a metal roof."

- Doug Claxton, The Solar Revolution, Boulder, CO

How Did the S-5-PVKIT 2.0 Help?

- Cut material costs in half, including freight costs
- Cut installation costs in half by eliminating the assembly and installation required by traditional racking
- Improved aesthetics
- Eliminated the risk of a voided roof manufacturer warranty no holes/no damage



Long-Term Outlook

The PV system allowed the Boulder JCC to realize their sustainability goals, while reducing operating costs.

The PVKIT offers an aesthetically-pleasing, cost-effective PV mounting solution – saving the customer time and money on installation and materials.



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