

## ABC Campus Center / ABC Building Project

CMAA Sustainability Project Spotlight submitted by: Jeffrey Bowling, AECOM, Program Manager

### Project Team

- » **OWNER:** [Kern Community College District \(KCCD\)](#) – [Bakersfield College \(BC\)](#)
- » **OWNER'S REPRESENTATIVE:** AECOM
- » **AE:** Ordiz Melby Architects, Inc.
- » **BUILDER:** S.C. Anderson, Inc.

### Project Statistics

- » **USE:** Administration Offices, Lecture Halls, Bookstore, Cafeteria, Ballroom
- » **SIZE:** Three stories. Total building area: 69,205 square feet
- » **CONSTRUCTION VALUE:** \$38 million
- » **CERTIFICATION(S):** BC seeking BREEAM certification

### What is the most exciting sustainable feature of your project?

The Kern Community College District (KCCD) – Bakersfield College (BC) ABC Campus Center project stands out for



its multifaceted approach to sustainability, incorporating several innovative features that collectively contribute to its environmental and social value. Among the most exciting sustainable aspects of the project are the embodied carbon reduction achieved by reusing significant portions of the existing structures and the strategic use of metal shade canopies to minimize solar heat gain on the south side of the new three-story building. These canopies, in conjunction with high-performance windows and entry vestibules designed to mitigate temperature fluctuations, exemplify a holistic approach to energy efficiency.

Further enhancing the project's sustainability credentials are the low-flow plumbing fixtures and very low water usage landscaping, which address water conservation critical in the arid local climate. The outdoor courtyard areas and decks on

multiple levels of the three-story building not only provide shaded, comfortable spaces for occupants, but also promote natural ventilation, reducing the reliance on mechanical cooling systems. The inclusion of a service kitchen in the Culinary Arts department on the third floor for onsite food preparation for events eliminates the need for offsite catering, thereby reducing transportation emissions and supporting local food production.

Moreover, the creation of the Renegade Ballroom as a community resource demonstrates a commitment to social sustainability, providing an accessible and much-needed public space for gatherings in an underserved area of Bakersfield. This, along with the project's proximity to public transportation, enhances community connectivity and accessibility while contributing to emission reductions. The comprehensive LED lighting strategy, coupled with the building's orientation and envelope design, further aligns with California's stringent energy standards, showcasing an exemplary commitment to sustainable building practices. Collectively, these features underscore the project's innovative approach to sustainability, blending environmental responsibility with community engagement and energy efficiency.

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### **What was the biggest challenge your team faced and how did you overcome it?**

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The biggest challenge our team faced during the construction of the ABC Building Project was addressing the unforeseen condition of the existing concrete structures, which were found to be spalling and contained voids underneath certain areas. These issues posed significant risks to both the project timeline and budget.

To overcome these challenges, our team employed innovative construction techniques and materials. For the spalling concrete walls, we undertook additional surface preparation and utilized specialized coatings to ensure a durable and aesthetically pleasing finish. For the voids discovered beneath the concrete slab, we conducted careful excavation and filled these gaps with a high-strength, lightweight grout to stabilize the foundation without adding excessive weight.



**Office of Student Life**



**Ballroom**

These solutions not only addressed the immediate structural concerns, but also ensured the longevity and safety of the renovated spaces, demonstrating our team's ability to adapt and solve complex problems effectively.

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## What was the most interesting sustainable feature that didn't make it into the final project?

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One of the most interesting sustainable features that did not make it into the final project was the incorporation of perforated metal canopies designed for window shading on the east elevation. These canopies, along with planned green spaces in the courtyard, were envisioned to further reduce heat gain within the building, thereby decreasing the reliance on mechanical cooling systems.

The decision to exclude these features was primarily budget-driven, as they were considered add alternates. Despite their exclusion, the project still achieved significant sustainability milestones through other measures. However, the perforated metal canopies and additional green spaces would have added an extra layer of energy efficiency and aesthetic value to the project, enhancing the environmental benefits and the overall user experience of the campus center.



Dining Commons / Cafeteria

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## What impacts will this project have on the environment and community?

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This project is seeking BREEAM certification for the project. Some of the most exciting features focus on:

- » **Embodied carbon reduction** by reuse of buildings and structures
- » **Operational carbon reduction** by utilizing onsite cooking to reduce transportation
- » **Interconnected transportation** available to reduce operational carbon from car trips
- » **Energy efficiency** by means of building orientation, shading, and high-performance building envelope design
- » **Minimized solar heat gain** by reused structures creating shade
- » **Natural ventilation** from courtyard decks on multiple levels
- » **Significant water reduction** at fixtures
- » **Local indigenous vegetation** for ultra-low landscaping water use sensitive to local climate
- » **And much more!**

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## About the Project

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CMAA has created the Sustainability Project Spotlight as a regular focus given to member projects nationwide that are building the way to a better future.

[The Kern Community College District \(KCCD\) – Bakersfield College \(BC\) ABC Campus Center](#) project stands out for its multifaceted approach to sustainability, incorporating several innovative features that collectively contribute to its environmental and social value. Collectively, these features underscore the project's innovative approach to sustainability, blending environmental responsibility with community engagement and energy efficiency.

*The CMAA Sustainability Subcommittee is actively seeking to spotlight your projects! Please email us at [communications@cmaanet.org](mailto:communications@cmaanet.org) with a project name and person to contact.*

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