



PROJECT PROFILE: Green Globes® Boosts Integrity of Montana Tech's New Student Center

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DENNIS GREENO
Principal, OZ Architects

PROJECT RATING:

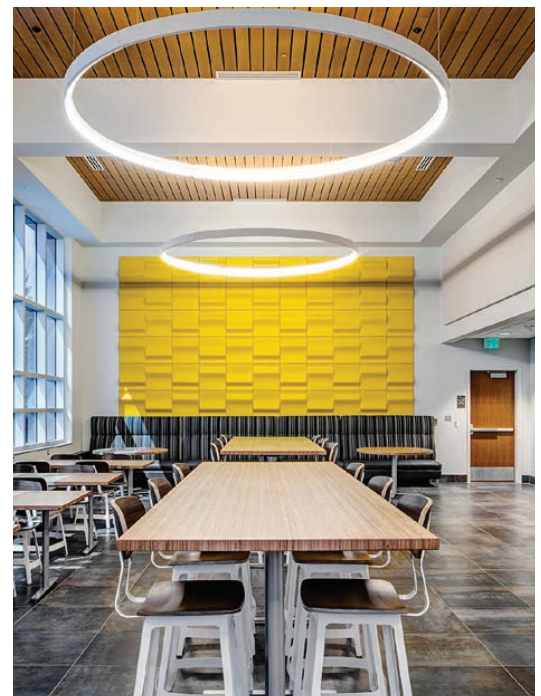


With a strong heritage in engineering, science, and technology, Montana Technological University (Montana Tech) knew it could make its new Student Success and Living Learning Center a model for campus. The center combines a 166-bed residence hall with student services and collaborative/social spaces open to all students. As the largest capital project in Montana Tech's history, the center was required by the State of Montana to achieve a Two Green Globes level of certification. Determination, innovation, and Green Globes' support helped Montana Tech exceed that goal.

"Once the review process started, we got feedback from the Assessor that was really helpful," recalls Dennis Greeno, principal at OZ Architects. "He gave us recommendations on things to improve and helped lift our rating to the next level. In the end, we attained Three Green Globes."

Starting the certification process early not only offered project suggestions, it also made for a smoother coordination. "If you keep up on the needed paperwork and track the information as you go, it's a pretty easy process," notes Kevin Forbes, project manager with Swank Enterprises. "You never want to be in the position of having to go back and find documentation."

The center was Greeno's first Green Globes project. Rather than hire a consultant, he wanted to gain the experience, so he took on the process himself. "I found Green



Globes to be very hands on and relatively straightforward,” he recalls. “While doing the research, I was surprised how many manufacturers actually offer Environmental Product Declarations (EPDs). Selecting materials where that documentation existed helped our rating.”

The team realized its sustainable objectives by providing:

- 94.5% EPD/third-party documentation for Core & Shell materials and 60% for the interior fit-out, not including furniture.
- Paints, wall covering, floor materials, and sealants with minimum VOC levels.
- Items that offer a 52.1% reduction in annual CO₂ compared to the references base building.
- A definitive water reduction of 44.0%.
- Waste management that recycled 5,421 tons of waste during the 82,220-square-foot project’s construction for a diversion rate of approximately 94%.
- A solar-panel-ready roof for when funds become available.



State-of-the-Art Applications

Because Butte, Montana experiences frigid temperatures in winter but still gets significant sunlight, the building’s southern exposure includes a solar wall, composed of metal siding with a cavity behind it where air is preheated for the building. The center also has a significant number of East- and West-facing windows to optimize daylighting and views for occupants. On those large fenestrations, the team incorporated electro-chromatic glass that shades automatically in response to the sun’s intensity.

“Electro-chromatic glass is very effective at limiting solar heat gain, which improved our mechanical system’s performance as well,” explains Greeno. “And being a technical college, it made sense to use the building to feature technology.”

The Assessor had the opportunity to see these and other strategies firsthand on his project walkthrough, which Forbes appreciated. “It’s always good to have someone who’s been a part of the process come and actually see what’s been done,” he says.

Greeno believes that understanding your goals upfront and doing what’s needed to achieve them is important. Even post-certification, Greeno reached out to the Assessor to see how they might improve the next time. “Addressing your project from a sustainable standpoint and validating it is something I would recommend to both clients and other professionals. It’s easy to say we are sustainable architects, designers and contractors, but in the end, it’s useful to have your philosophy truly measured.”

GREEN GLOBES RATINGS:

After the final assessment is verified by a third party, properties achieving a score of 35% or higher receive a Green Globes rating based on the percentage of total points achieved (up to 1000).



85-100%

FOUR GREEN GLOBES

Demonstrates world-class leadership in resource efficiency, reducing environmental impacts, and improving occupant wellness.



70-84%

THREE GREEN GLOBES

Demonstrates outstanding success in resource efficiency, reducing environmental impacts, and improving occupant wellness.



55-69%

TWO GREEN GLOBES

Demonstrates significant achievement in resource efficiency, reducing environmental impacts, and improving occupant wellness.



35-54%

ONE GREEN GLOBES

Demonstrates a strong commitment to resource efficiency, reducing environmental impacts, and improving occupant wellness.