JAKE JABS COLLEGE OF BUSINESS & ENTREPRENEURSHIP

MONTANA STATE UNIVERSITY, BOZEMAN, MT

In 2012 Montana State University received a $25 million donation from American Furniture Warehouse CEO and MSU alumnus Jake Jabs for the purposes of transforming its business school into one of the top programs of its kind in the US. One of the first steps was to create for the college a new academic building with cutting edge teaching facilities, meeting areas, interactive learning centers, smart flexibility and informal meeting spaces. The building was designed around a central forum, which was developed as a campus destination and gathering place to encourage interaction and idea-exchange between students and faculty college-wide.

Completed in 2014 and expected to achieve LEED Gold status, Jabs Hall was designed as a campus-wide model of energy efficiency and sustainable construction, and a team comprised of Hennebery Eddy Architects, Portland, OR; Comma-Q Architecture and mechanical engineering firm Morrison Majerle, both of Bozeman, MT, worked with general contractor Dick Anderson Construction, MSU facilities staff and the State of Montana A/E Division saw the project through.

A passive solar wall was installed on the roof of the building, and college facility managers expect the building could pay for itself within 10 years, given the energy derived from the solar array. Also, 52 500-foot-deep geothermal wells were completed, each holding 1,000 feet tubing—surrounding the building with 10 miles of tubing and generating millions of BTUs to support the university's energy efficiency/reduction goals.

Working hand-in-hand with the building's geothermal and solar energy systems, the Jabs Hall façade was equipped with Knight Wall Systems' CI-System and MFI-System rain screens with exterior insulation for maximum energy efficiency. Knight's CI-System achieves ASHRAE 90.1 compliance for continuous insulation—a building envelope benchmark for energy savings. The MFI-System, designed to work with mineral fiber insulation, also installed on the outside of a building, achieves nearly the same energy efficiency ratings with ultra-sustainable mineral wool.

"By all accounts, the system was very easy to install. It allowed ample adjustment for an accurate installation of the terra cotta tiles while accommodating the construction tolerances of the substrate materials."

- Jon McGrew
Hennebery Eddy project architect

"The Knight system was completely new and foreign to us at the beginning of the project but the folks at KWS helped us understand how their system works, how it works with the facades that it supports and how best to install it," Jake Van Dusen, LEED® AP, project engineer for Dick Anderson Construction, said. "Moreover, as we eventually hit bumps in the road as one does with any new product/system and they were active and helpful in providing us what we needed to get the job done."

A gradient pattern of double-wall terracotta tile was installed as a façade over the MFI-System attachment system and 5" of mineral fiber insulation. With moderately high wind pressures and a 13 PSF cladding weight, the ThermaBrackets were still capable of spacing of 16" x 24". Vertically oriented zinc panels was the specified cladding for walls and parapets that employed Knight's CI-System with 3" of rigid polyisocyanurate foam insulation, which were used on perpendicular walls of the building.

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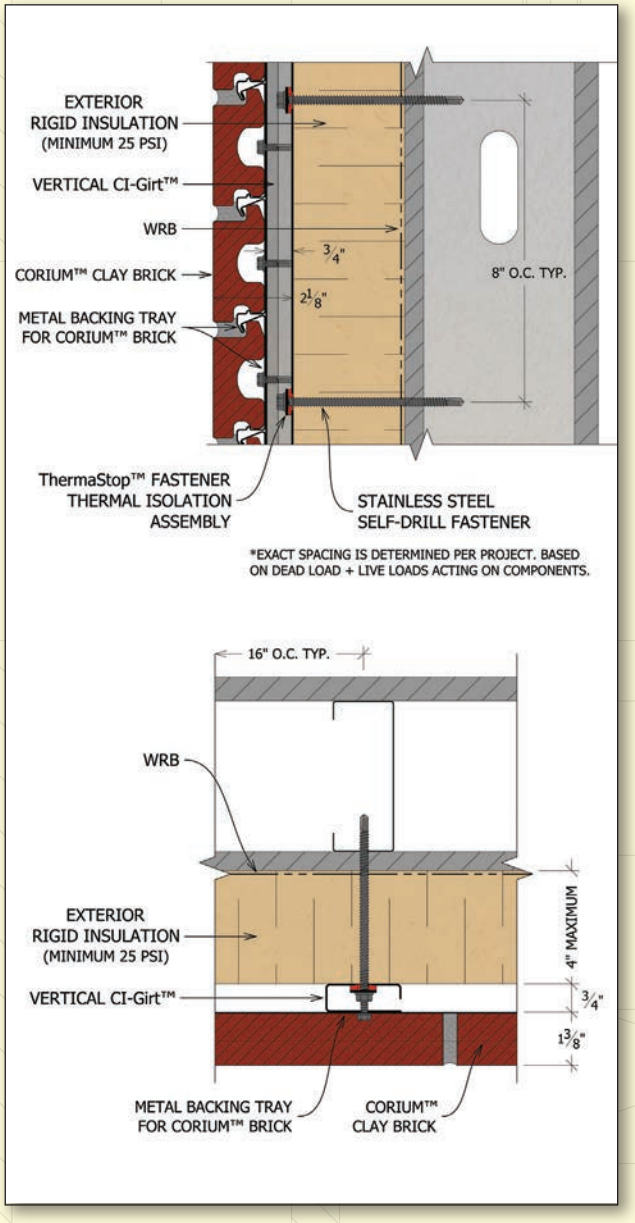

Project:
Jake Jabs College of Business & Entrepreneurship, Montana State University, Bozeman, MT

Architects:
Hennebery Eddy, Portland, OR; Comma-Q, Bozeman, MT

Engineers:
Morrison-Majerle, Bozeman

General Contractor/Installer:
Dick Anderson Construction, Bozeman

KNIGHT WALL CAN CONTRIBUTE TO THE FOLLOWING USGBC LEED CREDITS:

- Energy & Atmosphere (EA) Prequisite and Credit 1
- Materials & Resources (MR) Credits 4 and 5

ALL KNIGHT WALL SYSTEMS COMPONENTS ARE MANUFACTURED IN THE USA. (PATENT PENDING)

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