PROJECT NOTES

Sitter Family Hall, the home of the Geosciences and Physics & Engineering Departments, is the fourth LEED® (Leadership in Energy and Environmental Design) certified facility at Fort Lewis College. The U.S. Green Building Council's LEED® green building program is the preeminent program for the design, construction, maintenance and operations of high-performance green buildings. Pursuit of LEED certification for Sitter Family Hall is part of Fort Lewis College's overall commitment to sustainability and meets the requirements of the State of Colorado's High Performance Certification Program.

Durango, located in southwestern Colorado between the San Juan Range of the Rocky Mountains and the high desert, is at 6,513 feet in elevation and has a four-season climate. Fort

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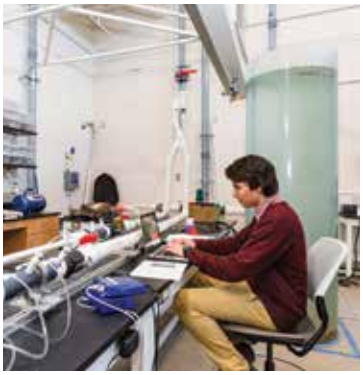
testing and research facilities. A rooftop research observatory with sliding roof and cutting-edge telescopes supports physics and astronomy classes. In addition to multiple student study areas, there are 22 faculty offices, a shared reception area, and other support spaces. The building occupies a footprint of 23,020 square feet with a gross square footage of 60,838. The new addition encloses the existing courtyard formed by Berndt Hall, with access to the east and a main pedestrian circulation spine of the campus.



The designers incorporated an aesthetic theme throughout the building and site that combined the missions of the building's two departments. Melding the study of our Earth in context of the universe, the building includes several unique functional art features including a Constellation Sky that depicts seven major constellations of the northern hemisphere, the multistory Geologic Wall of Time, which uses local rock to depict geologic development of 1.8 billion years, and a 235-pound Foucault pendulum, which shows the rotation of the Earth. Continuing this theme on the site, the centerpiece of the courtyard's native landscaping is a locally-constructed sundial. The grounds feature a Colorado's Art in Public Places installation called Geospinners, comprised of three suspended boulders meant to be spun by those walking by and a carved stone bench, all created from rock from the Four Corners region.

Sitter Family Hall incorporates numerous integrated green building strategies including heat recovery systems, hydronic and airside economizers that provide free cooling, LED light fixtures, dedicated demand controlled ventilation, high efficiency central plant equipment, a vegetated roof, a roof-mounted photovoltaic system, water conserving fixtures, and sustainable materials use. Below are some of the specifics of the project's green building strategies and features:

SUSTAINABLE SITES

- Site Selection: Development did not impact farmland, endangered species habitat, parkland, or wetlands.
- Community Connectivity: Located within a half mile radius of on-campus housing and at least 10 community services and amenities.
- Brownfield Redevelopment: Asbestos-containing materials abated in the existing section of Berndt Hall before demolition.
- Alternative Transportation: Measures taken included installing 30 bicycle storage spaces and two shower / changing rooms, continuation of a campus-wide Green Permit program for low-emitting and fuel-efficient vehicles, and not adding any new parking spaces.
- Open Space: Area preserved in the John F. Reed Natural Area equal to twice the building footprint, which doubled the requirement and earned an innovation credit for the project.
- Heat Island Effect: Roofing materials reject solar heat to reduce thermal gradient differences between developed and undeveloped areas minimizing impact on micro climate and habitat. A combination of a metal roof and grey pavers on the roof terrace with high solar reflectance and the vegetated roof serve to minimize the heat island effect.

WATER EFFICIENCY

- Landscaping: The project used mostly native and xeric plants and grasses, which are all suited to the Durango area. The planting scheme replaced areas previously planted with bluegrass turf with native grass species and native plant materials that will required very little supplemental wa ter once established. Planting design took into account microclimates resulting from building masses that affect shading and wind mitigation.
- Irrigation: No potable water was used for irrigation. The City of Durango Water Treatment Plant provides raw, untreated water to FLC for its irrigation needs. Irrigation systems serving the project are managed by the overall campus irrigation water and control system, which is based on real-time evapotranspiration (ET) data collected from a campus weather station. The irrigation system is properly zoned to serve the various landscape hydrozones and microclimates and employs appropriate, efficient delivery methods and equipment to serve the various plant material types.
- Water Usage in the Building: Selection of dual-flush toilets, ultra-low flow urinals, low-flow faucets, and low-flow showerheads resulted in more than 46 percent savings over baseline fixture performance requirements of the Energy Policy Act of 1992. Exceeding 40 percent reduction earned an innovation credit for the project.

ENERGY AND ATMOSPHERE

- Energy: Whole building energy simulation model indicates over 34 percent reduction in energy cost between the design building model and the base building model prescribed in ASHRAE 90.1-2004.
- Lighting: Lights are controlled by a combination of occupancy sensors, timeclock, daylight sensors, and manual dimmer switches for occupant override and controllability. At maximum usage, interior light fixtures consume .65 watts per square foot to efficiently meet the lighting needs of the building. To save additional energy, office lighting occupancy controls interface with the HVAC distribution system to reduce airflow when spaces are not occupied.
- Building Envelope: Double-glazed low-e windows, building overhangs and light shelves on the south facade, metal framed walls

- Daylight and Views: To provide a connection between indoor spaces and the outdoors, the team provided daylight and views for many spaces throughout the building including labs, classrooms, and student study areas. Located along the