



Trimble's Broad-Based High Performance Workplace

By Rick Petersen, AIA, LEED AP



"High-performance" is commonly used today in reference to energy use in sustainably designed buildings, but at Trimble Navigation's Rocky Mountain Headquarters, the term encompasses all aspects of this company's major asset, from employee wellbeing and evolving workplace function to the construction process itself.

Designed by OZ Architecture and constructed by JE Dunn, this 125,000-square-foot office building, located in Westminster's Westmoor Office Park, will be home for 540 employees and is targeted for LEED Gold certification.

Early in their approach to achieving this broad-based performance, the design and construction team creatively sought synergies through an open, collaborative process that is defining how architects and contractors can achieve optimum results together.

Energy use is fundamentally reduced through basic decisions about building massing and orientation.

For this project, the floorplate is elongated and oriented east-west to minimize solar gain from the west.

A synergistic benefit of this relatively long, narrow building is the ability to control and optimize daylighting, using shading strategies that are specific to each of the building's four facades. For example, the limited western exposure is tempered by vertical shades, while the southern exposure benefits from horizontal exterior shading in combination with internal light shelves that extend daylighting deep into the workspace.

In addition to creating an inspiring environment of daylight, this approach also reduces the demand of electrical lighting, reducing both the initial investment in the size of the air handlers, and Trimble's yearly cooling costs. Together with lower cooling costs, the building's east-west orientation yields spectacular views of the Flatirons and Plains, available to all employees regardless of their location within the building.

In turn, employees share an increased sense of well being by becoming more visually connected to their environment. Internally, fitness is encouraged in vertical movement through wide stairways lined with wall graphics that tell the Trimble story. Beyond mere emergency egress routes, these stairs will encourage daily use to add movement to the workday and foster collaboration between floors.

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Trimble
Director of Real Estate and Facilities



THOUGHT LEADERSHIP



Two of these stairs flank a centrally located glass-lined gym to support well-being during inclement weather.

“As a key location in our U.S. real estate inventory, creating a working environment for our employees that took advantage of the natural surroundings of Denver’s Front Range setting was a primary goal,” said Angela Williams, Trimble’s Director of Real Estate and Facilities. “By creating a naturally lit, open work space, we are encouraging open collaboration and creativity – continuing Trimble’s rich heritage of innovation.”

In changing weather, covered outdoor terraces arranged along the ground floor are furnished with a variety of seating to encourage both reflection and collaboration.

For good weather days, pedestrian paths link these terraces through a creative arrangement of landscaped open-space recreational trails that surround the Trimble property. This landscaping, anticipating the Front Range’s increasing water resource challenge and popularity of urban agriculture, is irrigated by reclaimed water and is comprised of drought-tolerant and even edible species.

Indoors, workplace performance is maximized through flexible, open planned workstations that accommodate Trimble’s ever-evolving needs. Here, the typical array of enclosed perimeter offices give way to large, column-free spaces, with centrally located meeting rooms and shared, temporary “touch-down” work areas. This easily adaptable arrangement will not only suit Trimble far into the future, it gives this pragmatic company a sound exit strategy, ensuring the project will be as useful to a potential new owner.

Finally, a high-performance Construction Process resulted from the early integration of subcontractors into the design process and their use of key Trimble products that are used to enhance efficiency throughout the construction industry.

Early in the project, a flow chart that was linked to the schedule was utilized to visualize the interfacing of the various technologies. This resulted in a Technology Communication Plan that was communicated to and embraced by key stakeholders. Part of this plan included the development of the structural model in Tekla Structures, which was combined with MEP models in Tekla BIMsight, to create a comprehensive coordination model. MEP trades were able to upload their specific models weekly through the use of Trimble’s Connected Community, which housed all project documentation. On-site mobile technology was used in the form of kiosks and tablets to view drawings and coordinate work in the field, which resulted in improved efficiency in coordination and construction activities.

Taken together, these broadly conceived yet interdependent aspects of building performance guarantees a facility that will be a valuable asset not just today, but for the entire life of the building – and that is the ultimate measure of sustainability.

