

## **Category: 4 – Best Building Project – Specialty Contractor (Under \$2 Million)**

**Contractor: Greiner Electric**

**Project Name: The Colorado Health Foundation**

The Colorado Health Foundation is devoted to the idea that all Coloradans have a basic human right to good health. This concept was the driving principle behind the creation of the foundation's new building at 1780 Pennsylvania Street in Denver. The three-story, 50,124-square-foot medical office structure was built from the ground up over the course of nine months with a focus on "health-positive" design and development, including the incorporation of natural ventilation and daylight.

Attaining LEED Platinum certification—as well as Gold certification from the International WELL Building Institute—mandated a paperless project. This required the use of CMiC project management and control software, which was used for all project communication: RFIs, submittals, subcontracts, and changes. The entire field management team utilized project documents viewed on iPads and shared via BIM 360.

The use of 3-D BIM modeling was also instrumental in coordinating material deliveries. All of the trade partners on the project had to deal with the constraints of a very compact project site on busy streets in the heart of Denver's uptown neighborhood. To minimize disruption, delivery vehicles had to be tightly and precisely orchestrated.

But these were far from the only challenges Greiner Electric overcame. The health-positive building metrics called for extremely intricate design, both structurally and electrically, that required multiple systems. For example, the building features power distribution systems that not only monitor the typical electrical items, such as voltage and power usage, but they also monitor water and gas usage. In addition, the cubicle receptacles used are automatically turned off by the lighting control system as an energy-saving measure.

As mentioned earlier, integrating natural light was a top priority on the project. This required very intricate controls for the building's predominately LED lighting. These controls, among

other functions, monitored the ambient light levels coming in from outside and, as a result, adjusted the levels of the artificial lighting at those affected areas for maximum energy efficiency. Control changes also are made via user interface at touch pads, which are located at various locations around the building and are interconnected with other building automation systems.

Controls were also necessary for managing multiple essential subsystems, such as the fire alarms and communication and security system pathways, many of which were added well after construction was underway.

In patient rooms, lighting can be dimmed as well as color adjusted to help create a soothing atmosphere. Exterior lighting highlights the rooftop decks, outdoor gardens, and contemplation areas around the building. The centerpiece of this organic design is a three-story living wall, which is illuminated by grow lights recessed in a custom western cedarwood ceiling above the grand staircase.

The entire project adhered to an especially demanding schedule, which required many long days and weekend shifts to fulfill the promise of moving the owner in on time. In addition, multiple design changes were implemented as construction was ongoing, equaling almost 20% of the original budget. To respond to these challenges, weekly coordination meetings were held with the design and installation teams to ensure all work was completed accurately while design and construction were taking place simultaneously.

Throughout the project, safety was a top priority. The project ended after 14,000 man-hours and zero lost-time accidents. This was achieved by scheduling mandatory weekly job-wide safety meetings and discussions as well as daily trade meetings to discuss and coordinate the activities of all trade partners on the jobsite, all of which was integral to keeping everyone safe—and healthy.















