

UCHealth Greeley Hospital

Category 7: Best Building Project - Specialty Contractor (Over 10M)

Ludvik Electric Co.

The City of Greeley has experienced a boom in population and economic prosperity in the last several years. Prior to the construction of the new UCHealth Greeley Hospital, the residents requiring health care services went to outdated facilities in Greeley or needed to drive outside the city limits for more modern facilities. To keep pace with the growth, Ludvik Electric was honored to have been selected for the construction of the new UCHealth Greeley Hospital. We were the preferred contractor because of our proven record of success in similar sized projects, including hospitals. The new UCHealth facility now boasts approximately 315,000 square feet of new construction and state-of-the-art accommodations. The project is comprised of a central plant with utility, stand-by generators and UPS power; a three-story medical office building with an acute care center, and a four-story hospital. The hospital alone includes a fully-equipped emergency department; a comprehensive radiology department with MRI, Cath/IR, Endo, Ultrasound, Gamma and CT Scan labs; more than forty prep, PACU, triage and exam rooms; Operating, C-Section and other procedures rooms; over fifty patient, ICU, labor/delivery and post-partum care rooms; a state of the art pharmacy; rehabilitation department with a gym; and a full kitchen/cafeteria--just on the first three floors, as the facility is prepared to grow on the fourth floor in the future. This beautiful building is designed to match the aesthetic of the local landscape. The structure is steel with poured concrete decks enclosed in brick, stone, glass, and metal finishes with a full site parking lot that also houses a helipad.

While most projects face challenges, the UCHealth Greeley Hospital project experienced unique issues of its own, including extensive design changes, end-user requests, site logistics, schedule impacts and disruptions, all created by a multitude of factors. However, effective use of front-end planning; partnership with the owners, the design team and the other trades; and diligent coordination at every phase of the project led to the ultimate success and completion of this magnificent facility, which provides comprehensive, life-saving services to the growing community. As every challenge presented itself, we recognized it as an opportunity and pursued

effective solutions to provide quality electrical installation based on pro-active approaches, value-added proposals, and a high-level commitment to safety.

Greeley itself is located roughly sixty miles north of the Denver metropolitan area, which presented logistical challenges such as manpower, adverse weather conditions, transportation, and material delivery. To address these, we provided shuttle services for our employees to ease the burdens of the distance from home, especially during the winter months. We partnered with other subcontractors who provided local labor and equipment for the site lighting scope of work, and solid progress was achieved within the tight schedule, while simultaneously fostering solid and continuing relationships between our companies. In coordination with a local distributor, we developed and instituted a VMI, Vendor-Managed Inventory Solutions system, for common materials to ensure that a minimum level of those materials would always be available on site in addition to regularly pre-scheduled deliveries. The VMI plan included the local distributor providing stage and store services for our pre-purchased materials, allowing for just in time deliveries as needed, as well as a distributor-provided storage container with select materials that they inventoried regularly and kept stocked with minimum/maximum quantities established by us.

Construction outpaced design from the start of the project because it began based on Design Documents. To provide perspective on the extensive design changes, over one hundred drawing revisions (ASI's, CCD's, etc.) and over sixteen hundred RFI's were ultimately issued throughout the thirty-plus month life of the project. This could understandably lead to assumptions about the final design and becoming susceptible to missing changes in the work, but Ludvik worked to provide an integrated-delivery and collaborative approach with the entire team, including the engineer, the general contractor, and the owners. We proposed revisions to the design, inclusive of value-added options for the project, to ensure that the design intents would be met, and costs would be considered.

A high-level BIM coordination effort at the beginning of the job helped identify design issues that were able to be addressed prior to install and that contributed to the successful use of prefabrication. For the level of complexity and accuracy required, we carefully managed our BIM efforts to provide and assist with BIM deliverables. We worked with designs that changed multiple times as construction was already proceeding. We attended weekly BIM meetings and maintained open communications with all parties. The BIM model was used to create accurate shop drawings and Trimble Files for precise layouts, installations, and an accurate final as-built document.

We efficiently planned and utilized prefabrication of common assemblies, panel racks, and conduit bends in all areas. Innovative ideas like a fully prefabricated underground generator crib represented effective methods of installation, saving time and labor. The crib held the feeder conduits for three generators and was constructed off-site, delivered, and crane-set into a large excavation as one piece.

The large excavations early on, hard weather including heavy rains and snows, and a large-scale construction project with hundreds of workers across multiple trades presented safety concerns that we take extremely seriously. We utilized our comprehensive company safety program and worked to maintain adherence to it with respect to the general contractor's and owner's protocols. In the end, with careful preparation of pre-task plans and MOP's (Methods of Procedures), and prioritization of everyone's safety, we worked nearly two hundred thousand hours with zero lost time accidents.

The project schedule was tight for the enormous amount of coordination and work required for a facility of this scale; however, we brought solid contributions to pull planning sessions which were utilized for each area of work prior to starting. We monitored the schedule for any disruptions, communicated with the general contractor in a timely manner, and helped with pull planning sessions and other scheduling meetings to ensure that the project stayed on track. Weather, specifically the rainstorms during the halfway mark prior to building enclosure and a

permanent roof, was the single most detrimental challenge the project faced, but we all rallied together to recover the schedule (widely accepted to be a ninety-day disruption) and keep pushing to the end.

Due to our efforts and contributions, the hospital opened for business (with a AAA+ rating from JCAHO) while the last of the construction changes were still being completed. High level planning and direct supervision were key throughout, and we brought experienced and trusted leaders to this project. Moreover, new leaders emerged, and a new generation of field leadership was born within our ranks, as the team's skills and professional development progressed along with the project. Ludvik Electric consistently strives to provide diligent service, professional commitment, and high quality; and the team (the family that came together over two and a half years to rise above the challenges with passion, diligence, and solutions-based thinking) remains proud of our contribution to the construction of the new facility that provides the essential medical services for the expanding and growing community of Greeley.









