

Category: 6 – Best Building Project – Specialty Contractor (\$6 - \$10M)

Specialty Contractor: Weifield Group Contracting

Project Name: CSU Lory Student Center Project

“This place looks like a World War II battleground.” This comment was the only thing that Project Manager Russell Tafoya could think of to say to Weifield CEO Seth Anderson, as they stared at the sheer rubble that comprised the CSU Lory Student Center project site, last year.

The Colorado State University (CSU) Lory Student Center project, with Saunders Construction (General Contractor), was a LEED Gold design-build, three-level, 216,000 sq. ft. building remodel with two new additions – that started in December, 2012 and ended in August, 2014. It was the hardest project that Weifield Field Superintendent Troy Grant has worked on in his 28-year career. This was because CSU wanted to maintain much of the historic Student Center building (a landmark) while adding a significant amount of new construction. But tying the old to the new proved much more challenging than anyone could’ve predicted.

Solutions of Special Projects: Uncovering the Unknowns and Unforeseen Schedule Delays

The challenges started early. Because the Student Center was built in the late 50’s, in December 2012, Weifield started a four-month investigative process of the existing building to see what could be salvaged. Weifield opened the ceilings in areas where we could and Troy Grant applied what he thought he knew into the plans based on that research. However, when construction started in April, we found that we didn’t know as much as we thought; there were major discrepancies in the as-builts due to bad quality control from the original contractor. Turning circuits off so demolition could begin and not starting work right away proved to be useful, because the team was able to uncover raceways that were usable/not usable and design correctly, as well as rectify electrical distribution issues. Thankfully, Weifield was also able to salvage some of the existing mechanical equipment, which helped the owner save costs.

This was an enormous job of this type in terms of square footage, so most of the risks stemmed from the unknowns and tough working conditions caused from the job site, itself. At one point, huge downpours causing (televised) local flooding turned the entire job site into a mud pit, filling

elevator shafts and other low excavation points with water. Our team was working on installing the underground electrical distribution one-line in the basement during this time, and waded through deep mud to do it.

The biggest schedule delays were caused by CSU's enhancements to the existing structure, such as adding piers/columns and applying FRP to the ceilings and columns to strengthen them (FRP is a spray-on concrete that adds structural integrity to existing concrete), as well as adding a fireproofing solution to certain areas. This had to occur before any conduit could run on the concrete's surface, causing delays to Weifield. Wall framing also fell behind schedule. Finally, Saunders brought the major subcontractors together to reengineer the schedule for the remainder of the project.

CSU added many concrete columns to tie the old building to the new building, and there were structural concerns with that process. Two canals ran under the Student Center, so CSU had to drill micropiles to strengthen the underground columns; at times, they drilled down 60 feet. While drilling, they would cut into existing conduits that Weifield wanted to reuse—so we rerouted those conduits overhead and into the ground. Our plans changed as more conduits were hit.

Toward the end of the project, Weifield was also asked to complete the fire alarm system within 48 hours (the system had 250 fire panel trouble indications when we began the effort). Saunders doubted it could be done, but Weifield got organized with a phased installation plan and put in devices one-by-one while Saunders finished the floors/ceiling tiles. Our expert troubleshooting helped us successfully hit the deadline.

The average project might involve a couple hundred RFI's to address unplanned issues or roadblocks. This job had 1,300 RFI's, which reflects the scope changes involved with this project.

Project Execution and Management Excellence: Demanding Accountability Across the Entire Project Team and Executing Early Construction

Weifield knew that a team approach and superior project management/communication would be key factors in successfully completing this massive project. We appointed our best foremen and held weekly foremen's meetings to discuss issues. Saunders pulled in certain contractors who fell behind and had private meetings with them; Weifield was never in those meetings. The Saunders Superintendent even solicited Troy Grant's help to get others to fall in line, and Troy accepted—demanding accountability across the entire team. Troy required daily onsite meetings with all contractors to go over issues, one-by-one, which was a large factor in the project's success.

Another major success was Weifield's early installation of the branch conduits as soon as the FRP/fireproofing was completed; we installed conduit early before the duct work, cable tray or plumbing was installed. This early start helped our schedule—and our sense of urgency got the entire team moving.

Weifield had 47 team members at the height of the project. Our manpower changes were mainly due other contractors falling behind, however, we proactively communicated our need for additional manpower or overtime to the GC as soon as we were aware. We were able to close schedule gaps due to this predictive attention to manpower.

Construction Innovations/State-of-the-Art Advancement: Proactive Procurement Approach and Careful Coordination of Unique Installations

It was important to proactively communicate the procurement timing for major packages—Russell Tafoya ensured he communicated early and often if anything looked out of line per the procurement schedule. He worked backward from dates he had in a spreadsheet—if a fixture was needed in 12 weeks, he determined the drop-dead date he would need approval by in order to get the fixture in time. He communicated these timelines to the GC continuously and also proactively communicated potential budget overruns due to unscheduled project additions.

Innovative lighting design was incorporated throughout the Student Center, but especially in the ballroom/banquet rooms and other areas that CSU uses for recruiting/public events. One of the

high-end lighting requirements was for Weifield to install multiple large, custom-designed LED snowflake lighting fixtures in the ballroom. It was a two-man effort to install them in the 26-foot ceiling; delicate tentacles hung off of a cable, so they required the highest levels of care.

Other unique fixtures included polycarbonate long-stemmed angular rods with overhead lights, pendant fixtures made out of paper, and starlights—fiber optic point lights which were installed in framed cloud-like soffits to emulate the reflection of the starlit sky over Horsetooth Reservoir (individual fibers to each of the 377 lights spanned 80 feet). Weifield had to creatively find a way to drill the fiber for these fixtures through holes in the dropped ceiling. Self-darkening electrochromic glass was used in the ballroom, and 1,430 feet of decorative track lighting lit the entire building.

As a LEED Gold project, Weifield incorporated our environmental best practices into the design, including adherence to ASHRAE guidelines and usage of low-VOC components, LED fixtures, low voltage occupancy sensors, on-demand lighting, and more.

Environmental/Safety: Managing the Vast Safety Risks to Success

Weifield worked a total of 51,000 hours on the project and had zero lost time. This project was enormous—with so much going on simultaneously, the risk for safety exposures was high. However, Weifield mitigated this risk by shutting off areas as we worked in them; this involved over 28 electrical panel boards on-site. We also executed seamless lock-out/tag-out procedures to eliminate electrocution risk.

Weifield's goal of our Project Safety Plan (PSP) is to foster the concept of "Target Zero," or experiencing zero incidents and no zero injuries with work tasks. Our PSP outlines safety and health requirements developed by Weifield, focusing on relevant issues at the project. Weifield also adhered to our own as well as Saunders Construction's strict safety practices.

Excellence in Client Service and/or Contribution to Community: Achieving a True Monument for the CSU Community

The CSU Lory Student Center is a true landmark—by reusing the same building structure while incorporating a modern look, CSU has created an impressive monument that will be a source of pride for its community in the decades to come.

The onsite management team was highly pleased with Weifield's performance and especially the performance of Field Superintendent, Troy Grant. This is because Troy took personal accountability to be the single point of contact, keep things moving and rectify issues across the entire team. He is, quite simply, one of the finest field leaders Weifield has.

Saunders Construction was pleased with our ability to go above and beyond—they mentioned another area on an upper level that didn't need to be done, but it would be a bonus if we could do it. Weifield delivered that added area to Saunders, to their delight.

Weifield's ability to pull together as a team and make the schedule, despite all obstacles, was a true team win. We are very proud of our team for their valiant efforts toward the CSU Lory Student project!



01 – Weifield Group Contracting – CSU Lory Student Center Project



02 – Weifield Group Contracting – CSU Lory Student Center Project



03 – Weifield Group Contracting – CSU Lory Student Center Project



04 – Weifield Group Contracting – CSU Lory Student Center Project



05 – Weifield Group Contracting – CSU Lory Student Center Project



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09 – Weifield Group Contracting – CSU Lory Student Center Project



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