Category #6 Best Building Project—Specialty Contractor ($6 - $10 Million)
Contractor: Dynalectric Company, Gina Cullen, gmcullen@emcor.net or 303.205.5565
Project Name: Adams County Human Services Center
Project: $7,740,000 Schedule: 2/2016 – 9/2017

Innovation and Collaboration Build the Adams County Human Services Center

Adams County sought to redefine how clients experience human services, and Dynalectric helped create a human services center that allowed the County to do just that. With the integration, 500 employees were relocated to the new 315,000 square foot Adams County Human Services Center, allowing the County to centralize its human services function and support its mission to "responsibly serve the Adams County community with integrity and innovation."

"Dynalectric's willingness and ability to come on board early in a design/assist role for the electrical and mechanical systems directly equated to success on the project," stated general contractor Saunders Construction Project Manager Kyle Radar. "Because they were on the project early, they knew the plan intimately and could adapt on the fly."

The Adams County Human Services Center project was filled with challenge and opportunity. Dynalectric tackled the challenges head-on, resulting in a well-executed state-of-the-art facility that Adams County Human Services is proud to call home.

Coordination and Collaboration Led to Successful Project Execution

"From the office to the field, Dynalectric did an incredible job coordinating systems, and I was very happy to have them as part of the team, "said Radar. "They directly attributed to the success of this project."

The Dynalectric team tackled what could have been project-crippling changes with ease that comes from experience and preparation.

One-line changes—changes to the overall diagrammatic layout of large sections of power distribution—are not typical for a project of this size and often result in a delayed construction schedule. So, when there were one-line changes as the project was nearly 75% complete, that

meant the distribution gear had to change. And, the wiring, as well as installed loads and equipment –all downstream conduit—had to change.

Dynalectric aggressively approached each change. Through proper planning, coordination with the general contractor, other trades and engineers, as well as the expertise gained in the design/assist process, Dynalectric reacted quickly and professionally to accommodate the one-line changes. The team reviewed new drawings and integrated the changes without significant downtime.

Saunders and Dynalectric enjoy an excellent working relationship, having worked together on 19 projects to date. Therefore, Saunders trusted and accepted counsel from Dynalectric regarding schedule creation and management. Dynalectric was able to make the schedule changes necessary to accommodate the one-line changes and maintain the project schedule. Dynalectric also recommended schedule revisions that Saunders implemented for other trades to allow for the most efficient electrical installation possible. Through collaboration, the general contractor and Dynalectric shifted priorities and maintained a strict schedule with enough flexibility to respond to the demands of the changing jobsite conditions.

Innovation Through Prefabrication and Cloud-based Documentation

A combination of prefabrication and cloud-based software provided the innovation Dynalectric needed to excel on the Adams County Human Services Center project. Dynalectric's team prefabricated the walls, as well as power and lighting control material for the project.

Dynalectric's CAD department, utilizing Bluebeam software, laid out all of the wall equipment and required connections. The team prefabricated and joined the material together in the shop and then transported the completed items to the field. Because much of the work was completed in a weather-resistant warehouse prior to jobsite arrival, the onsite electricians could efficiently hang the assemblies with a few screws, avoiding the uncertainties and delays that often come with performing electrical connections, sizing material, measuring and lifting in the field.

Dynalectric utilized a pneumatic duct hoist instead of ladders for hanging the prefabricated assemblies, which increased the speed of installation and reduced the labor needed to hang material. What was typically a two-person job became a one-person job.

Specialized job kitting was another prefabrication key to success on this project. For each room, Dynalectric created a required bill of material—the "job kit" for the room. The team assembled each job kit onto designated carts in the warehouse prior to delivery to the jobsite. Each area had its own cart with all the material and design information needed for installation. By job kitting, the Dynalectric team minimized downtime at the jobsite.

In addition to logistical efficiencies, job kitting allowed for environmental efficiencies. The kits used less space because they were shipped without the new-material packaging. Dynalectric's team could pack more material per delivery, saving gasoline and related transportation burdens to the environment. Also, job kitting reduced the amount of paper needed for identifying, ordering and tracking deliveries.

Dynalectric also prefabricated the power and lighting control material. Power and lighting are typically approached and installed as two separate systems. Dynalectric's innovative idea to treat the two items as one total electrical system increased project efficiency by cutting labor costs. The process also allowed for smooth lighting control implementation and simple power-on for a control system that worked right the first time.

The Dynalectric team employed other innovative project efficiencies, including use of a newly-created design superintendent position, as well as Field Installation Drawings specific to the team's work, instead of general contract documents. Dynalectric's design superintendent and team compiled all pertinent information needed to install each type of work into one document per work area—the Field Installation Drawings. The team avoided the tedious work of referencing general contract documents that contain notes for all trades, to complete each portion of the project. Unless it was relevant to the Dynalectric work, other trades' often-distracting measurements were not shown on the Field Installation Drawings. This innovative practice saved time and increased accuracy.

Streamlined Safety Practices Yield Excellence

Dynalectric utilized extensive Lockout-tagout (LOTO) procedures on this project. Lockout-tagout (LOTO) is a safety procedure used to ensure that dangerous equipment is properly de-energized and not able to be started up again without proper authorization.

For this project, Dynalectric utilized panel lockout bars for complete panel control. A standard LOTO is a label or lock placed on a breaker or downstream piece of equipment indicating that the load is hot or there are unsafe working conditions. A panel bar is an additional piece of safety equipment that is employed to lock out the entire distribution panel, and not just a single breaker. This panel bar enhances safety for all workers at the jobsite, as no loads can be switched on.

Dynalectric's team took safety several steps further by using Bluebeam Project software as a collaborative communication tool to give all foremen detailed and accurate LOTO information. This real-time system showed who requested the lock-out, who issued the lock, and what area, load and distribution was affected. Dynalectric's practice reduced the risk of electrical shock injuries and streamlined the LOTO process.

Dynalectric completed this project in 52,000 manhours with no recordable injuries.

"This building is unbelievable and it's because of the collaboration with the team – especially Dynalectric," shared Radar.


ADAMS COUNTY
PETE MARIELLE
HUMAN SERVICES CENTER


EXIT


DANGER
ELECTRICAL EQUIPMENT
IS ENERGIZED
AUTHORIZED PERSONNEL
ONLY


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