Category: Meeting the Challenge of a Difficult Job - Specialty Contractor

Contractor: Encore Electric

Project Name: Wyoming Capitol Square Project

Modernizing any building is a challenge in construction, especially for an electrical construction company. When the building is 129 years old and the symbol of freedom and democracy for a whole state; however, special care needs to be taken to not only renovate, but restore and respect that space, as well.

Encore Electric worked with General Contractor partner JE Dunn and was honored to be a part of the historic renovation of the Wyoming State Capitol building and two other office buildings as part of the Wyoming Capitol Square Project, reopening to the public on July 10, 2019, after more than six years of construction. At the height of the project, more than 35 Encore Electric team members were working on the project.

When the capitol building was originally built, there was no electricity. Multiple times through different renovations, electricity was added. This time, all the electrical systems were upgraded in the capitol, and new technology was installed, including audio-visual equipment, lighting upgrades and LED retrofits, as well as a lightning protection system. All of the complicated, complex work was done with an eye toward ensuring this historic symbol was respected in every phase of construction.

“Our trades people had to channel the concrete and plaster walls to run the electrical through them,” said Jim Leidholm, project manager for Encore Electric. “You didn’t want to have any Junction boxes, or access holes in the historic building, so trying to find a way to get from point A to point B without any access holes in the area was a challenge.”

“For most of us, this is a once in a lifetime experience,” said Daniel Riepler, superintendent for Encore Electric. “You have to think outside the box on which methods you will apply on a daily basis.”

During construction, there were discoveries made by the electrical construction team.

“The coolest part is when we were demolishing spaces, there were walls that had a random door hidden behind them. (Previously) they just buried it,” said Andrew Cole, assistant project manager for Encore Electric.

The historical lighting in place also was restored and modernized. “Doing the old historical lighting was really cool because they took the old historical lighting that was here and had it retrofit into LED (lights) so they’re all modernized and looking really nice,” said Leidholm.

Finally, the lightning protection system brings the building into the 21st century, as well. “Nobody knows the difficulty of routing the lightning in a hundred-plus year old building to try and get it outside, and modernize the building. It’s really cool to see it, and it was really difficult to make the change,” said Cole.

Encore Electric electricians and engineers developed and installed other critical life safe systems like early smoke detection and an advanced fire alarm system to ensure safety of all employees and visitors inside the building in the event of a fire emergency. The egress out of the building in case of an emergency was very difficult, prior to the renovation. The new life safety systems allow everyone to leave the building in less than five minutes.

The project team from Encore Electric has completed their work on the capitol building, but work will continue on other buildings around the Capitol Square Project, including the Hirschler building, until completion.

A special event happened on December 10, 2018, when the Encore Electric team at the Wyoming State Capitol Square project put the spotlight on electrical construction career opportunities and helped nearly 20 students, faculty and staff from Laramie County Community College understand how electrical construction careers make an impact. The tour aimed to showcase the opportunities and relevance of careers in the trades as well as support Laramie County Community College as they begin to develop an associate’s degree program for electricians.

The project is a perfect example of the fact that choosing a career in electrical and other construction fields is an opportunity to do work that changes the skyline and impacts history as well as the future of the community where we live and work.

The student tour caught the attention of the local media, as the state of Wyoming is working to grow trade careers. In this segment from K2TV from Casper, WY and this segment from KGWN from Cheyenne, WY, reporters talked with students, professors and Encore Electric craftsmen. One of Encore Electric’s lead journeymen on the project, Michael Caperton, was featured in both news stories. He spoke enthusiastically with media about his career and his work with Encore Electric.

On the tour, Encore Electric Superintendent Daniel Riepler shared some details on what makes this project unique. “It’s a historic remodel, and it’s not your everyday commercial project. It was built back in 1888 so you really have to pay attention to the structural integrity and making sure the original design of the building stays intact,” said Riepler, “it’s really an iconic project, and I’m proud of the team for their work in meeting the needs of all of our customers in this project.”

Andrew Cole, Encore Electric project engineer added, “the design is the biggest challenge on this project. We had to open up walls and we’re up to 115 ASIs which are change documents for design, and that’s for the capitol building alone.”

The Wyoming State Capitol has 130 years of history. Not surprisingly, the team involved in the Wyoming Capitol Square Project restoration are the first to uncover long forgotten pieces of history as they work diligently to preserve the original integrity of the building. The project team has moved a 12,000 pound vault door, uncovered historic paintings hidden beneath a thick layer of green paint, and created innovative solutions to bring the building up to code.

The primary drivers behind the renovation of the three buildings were outdated electrical and life safety systems. For the Encore Electric team, this means installing all new life safety, technology solutions and electrical systems. Channeling through plaster walls and six-inch thick floor slabs and foundations took over a year, as great care was taken to preserve the historic nature of the building. Other project challenges include: removal and preservation of original light fixtures that were retrofitted with LED technology; and placement of access panels in locations that did not impact the historical integrity of the walls.

In its original form, light was provided to the Capitol by gas lamps and sky lights. Over time, fluorescent and incandescent lighting were added. The most recent renovation has 3,500 light fixtures (700 of which are either historic or historic replicas), and every light in each of the three buildings is now LED, including new LED stage lighting that illuminates the stained glass ceilings in the House and Senate chambers. The power for the three buildings in the project runs through enough conduit to cover 83 football fields. Also on the project there is enough wire to (almost) cover the distance from Cheyenne, WY to Fort Collins, CO!

This project meant so much to the people of the state of Wyoming, a state that although one of the least populated in the country, has so much pride in where they are from, what they do for a living and how they treat others and one another. This building stands as a symbol of what

democracy is meant to be - government by the people and for the people, and Encore Electric was proud to be among the contractors entrusted to renovate this iconic place.

There were so many new and interesting things that Encore Electric team members learned on this project. From restoring and maintaining original walls, lighting fixtures and art to understanding how to treat older buildings with a sense of history and updating them with new electrical construction and technology solutions, the team will take what they learned here and make sure to apply it to the most difficult, challenging historical jobs in the future.


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