

Vail Valley Medical Center Phase I West Wing – Encore Electric

Category: 2 – Meeting the Challenge of a Difficult Job – Specialty Contractor

Contractor: Encore Electric

Project Name: Vail Valley Medical Center Phase I West Wing

Hospital construction work is touchy work. Not only are there all kinds of project-critical considerations to be taken into account – safety, power and downtime to mention a few – but there are also considerations that are vital to the correct operation of a facility. One small hiccup in the hospital's operation could mean the very real difference between life and death.

Take all of that, add in one of the most world-renowned athletic health facilities anywhere and throw in a dash of the logistical considerations that come with working in an isolated mountain town. Now you have the Vail Valley Medical Center (now Vail Health) Phase I West Wing project, undertaken by Encore Electric in Vail, Colorado as a partner of GE Johnson. The new space is now open, and was introduced along with a rebranding campaign to unveil the new Vail Health name.

This 71,675 square foot project itself consisted of:

- Carefully understanding all systems to ensure that Encore knew with certainty that when the team shut something off, who, what and how it would affect systems in the building – and developing a plan to support the hospital during those times.
- Adding a fourth floor to the top of a three-story building while all three stories were still running at full capacity with no disruption of service to patients.
- Creating new electrical systems for that fourth floor.
- Installing a new mechanical yard and a new back-up generator, with carefully planned and minimized downtime, while ensuring back-out procedures that allowed the hospital to not divert their Trauma 1 Status to another hospital.
- Moving of all mechanical systems from the roof on the third floor to the new roof on the fourth floor without any effect to patients or hospital staff.
- Remodeling a lobby on the third floor.

As with any hospital project, there are considerable issues to work around and manpower/logistics to coordinate. But there were a number of things that made this project in particular stand out from a normal hospital project:

- As a Trauma 1 facility, Vail Valley Medical Center (now Vail Health) serves the surrounding area in life or death emergencies every single day. Encore Electric was

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required to work with a total lack of disruption to the facility, including operating rooms, emergency rooms, patients and staff.

- All Encore Employees on the job were healthcare certified – extra training that they take so they understand all the intricacies of hospital operations.
- The utility transformers that serve the hospital also had to be relocated. The project team first had to roll up two generators, connect them without disruption to the power supply to the hospital, then had a 36 hour long outage to move the transformers and reconnect them to the hospital.
- As a hospital project, a great deal of off-hours work had to be completed for the project to finish on its schedule and to accommodate operating room activity and patient needs. This included many man hours both after hours and on the weekend. For example, the hammer drills could only be operated at certain hours during the day. In total, Encore Electric worked safely - 45,286 man hours on the job with zero lost time accidents.
- All work had to be coordinated with hospital staff 24 hours a day. That means that Encore Electric had to interface and collaborate with each department of the hospital to make sure they understood what was to happen and when – and include them in the decision making process so we could understand the requirements, as well.
- In particular, coordination with the emergency department was paramount. Emergency Rooms operate with some level of uncertainty every day – that is why they are the ER. However, a plan was developed to create minimal disruption to the important work that they do, including the development and sign off by hospital staff of Methods of Procedures and back-out process.
- It is interesting to note that even though the work that ER staffs do day-to-day can be unpredictable, there are times that the ER staff knows there will be a surge in traffic to the department - at the beginning of a ski season or during times of heavy vacationer traffic. By planning around those times and making the best accommodation possible, Encore Electric was able to minimize impacts to the ER during construction.

The work on the new fourth floor consolidated the activities of the Steadman Clinic of Sports Medicine and Orthopedic Surgery into one area. In addition to a new area, all the existing Steadman Hawkins facilities were moved onto the fourth floor.

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The clinic is world-class and known to have the best set of doctors for athletes in every sport anywhere. If you name it, they do it at the Steadman Clinic. Founded by Dr. J. Richard Steadman, “the clinic's treatment techniques are on the leading edge, utilizing progressive programs designed to achieve optimal results with physician, patient and therapist working as a team toward the goal of full recovery.” Because of this, many high-profile athletes and celebrities come through the doors every day – and our Encore Electric team maintained the highest levels of professionalism throughout the project.

The Steadman Clinic and Philippon Research Institute cover 26,000 square feet and includes new patient rooms, physician offices, the surgical skills lab, a robotics lab, regenerative medicine lab, and biomotion lab.

Like any project that takes place in the high country during the winter, weather played a huge factor in the timeline and schedule of this project. While wiring up the new air handlers, there was a series of snow storms that moved across the Vail Valley. Work had to continue, however. So Encore Electric craftsmen had to shovel small paths in the snow, often four feet deep, to get from one piece of equipment to another to work on them.

Speaking of ice – the Biomotion Lab part of the work that took place at the project was to relocate the plastic ice portion of the facility. This facility is used by hockey players to determine skating techniques and help doctors determine the best course of care for them, and then is converted to help a volleyball player, football player or other athlete. That included not only the power, but also more advanced technology like cameras, high tech controls and building integration.

Another important system that was worked on by Encore on this project included fire alarm. The fire alarm crew had perhaps the craziest hours of any craftsmen or craftswomen on this project. They needed to cause the least amount of disruption – whenever the crew needed to do some work or testing in the hospital after hours, especially when the crew had an impact on the electrical system. The crew always had to wait until after surgeries were done, and always had to check the caseload of surgeries to tweak when they worked. Sometimes, they were installing systems at 2 a.m.!

One particular problem of note that was overcome by the Encore Electric team related to getting material into the building so it could be installed or worked on. After sitting down with

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the general contractor, Encore was informed that the only way we could move material into the building was using the elevators – and only between 5am and 6am!

Instead of having to change every single schedule or plan, Encore and GE Johnson came up with the idea to set up scaffolding on the outside of the building and cut a hole in the side of the building so there was no disruption to the hospital. We essentially made our own entrance into a working hospital. Obstacles like this were encountered every single day. So coordination between hospital staff, the GC and Encore Electric was paramount. Pete Palmgren, director of Colorado Mountains, would always tell our on-site team, “It doesn’t matter what you touch. Everything you touch in some way impacts a patient.” It might be a printer for printing a prescription, a monitor at a patient’s bedside, or even the lights in the breakroom for the tired medical staff. It was incredibly important that this project did not impact the service of the hospital, and most importantly did not impact the patients.

Vail Valley Medical Center (now Vail Health) is locked between the mountain and ski resort on one side, and Interstate 70 on the other side. This was another reason why coordination was critical. From the busing of Encore electricians from remote parking sites to the just-in-time delivery of material, every day was a challenge of organization. There is no street parking in Vail and the parking garage is \$25 per day. That organization paid off, as the project is at the end of its 26-month schedule. From a peak of 23 men and women working on the project to now, Encore Electric has maintained the highest levels of professionalism and quality in order to bring Vail Health the best of all things power, technology and energy.

Here, there are no snow days and world-class healthcare deserves world-class construction.

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