



Design/Build: Teamwork Works

19 Months from Idea to Occupancy

With an adjacent project already underway, it was critical that a new 10-story, 130,000-sq. ft. patient tower be completed as quickly as possible. “Through the use of an accelerated design/build schedule, we more that cut the project schedule in half,” according to Ray Wilson, director of facilities with the United Medical Center in Cheyenne, WY.

“What originally drove the project was a need for an expanded cafeteria and additional meeting rooms,” Wilson explained. “Our original plan was to put the needed space on the first floor of a medical office building that was under construction on our campus. When the owner of the building turned us down, we needed to find an alternative.” In August of 1999, Wilson presented a plan for the new patient tower, which would not only provide the needed meeting rooms but also would alleviate a growing shortage of available bed space. The board approved the plan, and occupancy is expected in February of 2001, less than 19 months after Wilson first began assembling the project team.

“Typically, in a project this large we wouldn’t even go out to bid until 18-24 months after the design began,” explained Stephan Pappas, a principal with Pappas & Pappas Architects in Cheyenne. Speed was critical because of the need to mini-

mize disruptions on the medical campus. The goal, which initially seemed outrageous, was to have the new patient tower top out by the time the adjacent office building was completed—despite the fact that the office building had already begun erection and design hadn’t even begun on the patient tower. Amazingly, the goal was surpassed; the patient tower is now expected to open before the office building.

Coordination between the entire project team was critical for the project’s success. “On this project we were building right to the site line,” explained Rex Lewis, vice president of AISC-member Puma Steel, Cheyenne. “We had no laydown area and the erection was performed right off of trucks. In addition, our crane use was limited because we couldn’t have counterweights over occupied areas of the surrounding buildings.”

A lot of Puma Steel’s work is design/build. “The big advantage is speed,” Lewis said. “The availability of steel sections can affect a project schedule. In a design/build job we can sit down with the EOR to pre-order the steel as much as two or three months before final design.”

The fabricator and structural engineer also worked closely together on value engineering, according to Gary Olson, S.E., a partner with Olson & Schropfer, Casper, WY, the

project’s based structural engineers (along with Decco Structural Engineers of Cheyenne). “We met with the steel fabricator to help determine the least expensive connections,” he explained. “It was a team process and we came to agreement based on structural needs and ease of construction,” added Dave Schropfer, S.E., Olson’s partner.

Another big advantage of bringing the fabricator on board early was in the production of shop drawings. “As we designed members, they inputted them into a 3D model,” Olson said. “As the framing plans changed, they could quickly update their model. When it came time for construction to start, there was no delay between the time design drawings were issued and the shop drawings were ready.”

This same teamwork also extended to mechanical and electrical design. A full-scale patient room (which will actually be inserted into the finished project) was built off-site so that all of the mechanical and electrical layout would be clear upfront.

Added Lewis: “The big issue for us was that there were no big issues. Everything went smoothly. The relationship between fabricator, erector, architect, engineer, owner and contractor was excellent and was the key to keeping the job on budget and on time.”