

It's Game Day

for UNC Charlotte's New Football Stadium



PHOTO BY EDDIE HARTMAN

BEA QUIRK
— The North Carolina Construction News

An old adage speaks of the wisdom of building on solid rock. But in the real world, you need to get rid of the rocks so you can build your foundation on solid ground.

That was exactly the case facing the Charlotte-based construction manager Rodgers Builders, Inc.; its joint-venture partners, PCL Construction Services, Inc. with U.S. headquarters in Denver; Atlanta-based H.J. Russell & Company; and the 45 subcontractors that constructed the UNC Charlotte football stadium in an intense 14-month period.

The rock didn't surprise the crews, as Rodgers has been constructing buildings on campus for over thirty years, including the Dale Halton Arena, track and field facilities, dorms and parking decks.

"UNC Charlotte is notorious for underground rock," says Jeff Whitten, senior vice president of Starr Electric, the project's electrical contractor. "There's always a lot of underground site work to be done."

The official groundbreaking ceremony was held on April 28, 2011, but actual work didn't begin until June. The field house and practice fields were handed over to the University in August 2012, about a year before the 49ers gridiron team plays its first game. The team's 85 players (30 on scholarship) held their first practice on August 27. The

rest of the complex was completed in October.

Funding for the \$45 million facility came from student fees, seat licensing and private donations.

The first construction challenge was blasting away the rock – including big boulders at the 50-yard line of McColl-Richardson Field. Rodgers PCL Russell had to give people on campus a 48-hour notification about the blasting, and then another re-

minder 30 minutes beforehand.

Careful due diligence was required to make sure the vibrations would not pose problems for the projects and experiments underway at nearby research buildings. Pathways to the area were closed during the entire construction period.

"Even though the geotechnical engineering firm drilled along a consistent grid pattern, we still managed to uncover large masses of rock," says John Neilson, UNC

Charlotte's associate director for capital construction who acted as owner's rep for the project. "On a 24 acre site, it's just not feasible to test drill every square foot."

By the end of the project, 160,000 cubic yards of dirt were moved.

Actually, the challenges began even before the actual construction – it was not a small or simple project.

It's not just a playing field. The complex encompasses a 24-acre site with a 15,306-seat below grade horseshoe-style stadium and 12 buildings, the largest the 46,000-square-foot Judy W. Rose Football Center (a field house named after the school's long-time athletic director). There are also two practice fields, a press box, TV and radio booth, coaches' offices, meeting rooms and a multi-use area that can be used for academic purposes, post-game interviews and as a hospitality deck. The field itself has been named in honor of Hugh McColl, the former head of Bank of America, and Jerry Richardson, owner of the Carolina Panthers.

The concrete contractor, Wayne Brothers, Inc. of Kannapolis, poured 10,000 cubic yards of concrete for the project. Helias Sports Construction from Austin, TX installed Matrix Artificial turf for the stadium's 97,712-square-foot surface.

Because the football players had to begin practicing in August, there was no



PHOTO BY SEAN BUSHIER IMAGERY

Football Stadium

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wiggle room for the completion date. "We had a very tight window in which to complete the work and the finish date could not move," Neilson says. "We couldn't miss a beat. To make up any lost time, the contractor worked longer hours and worked smarter."

For example, says Isaiah Wayne, project executive with Wayne Brothers, there were a lot of wet conditions during the winter of 2011, and the site had groundwater that required extensive dewatering. "So we worked overtime later on."



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Wayne Brothers also saved time by using ganged forms for the seating bowl part of the stadium. Using a crane, they were able to pour 10 rows at a time. "It helped speed things up," Wayne observes. The company had about 50 workers on site.

The need for that agility came right at the start with the redrawing of the site plan.

"We had several buildings to fit into a tight site," says Dan Van Dyke, senior associate and project manager for Jenkins-Peer Architects, the project's architects who worked in partnership with stadium designer, DLR Group. "Our first challenge was where to put the stadium and practice fields. The campus master plan called for the practice fields to be positioned alongside a primary campus axis, with the stadium sited in back along a heavily wooded area that included wetlands. But the stadium is the showpiece of the project - not the practice fields. So we brought the stadium front and center, right on the primary axis. Here, it's surrounded by academic buildings that make it seem even larger than life."

The stadium and the surrounding athletic buildings all feature the same "Morrocroft Special" brick used on the adjacent Charlotte Research Institute campus.

In addition, there was the issue of wetlands mitigation. By placing the practice fields in the back near the wetlands, no mitigation was required, saving UNC Charlotte both time and money. A 70-foot-long bridge connecting the practice fields spans the wetlands.

"It was easier to rearrange the site than build on the wetlands," Neilson says. "It's a long and uncertain process, and if there were appeals, it would have taken too much time."

Staying on budget was another ongoing challenge that was successfully met. But it meant delaying plans to build field lights, which are necessary for night games and dark days. With an eye to the future, the infrastructure is in place for them when the school has sufficient funds. The stadium has also been designed and built so it can be expanded to 40,000 seats.

Not only did we have a tight construction window, we also had a tight budget," Neilson comments. "We wanted to add field lighting - which was a little over \$1 million - but we just couldn't afford it."

Head Coach Brad Lambert made a few changes in the layout of the field house. "He put his stamp on the weight room," Van Dyke says, "and we worked together to lay it out."

As a construction-management-at-risk project, the architectural team was involved with construction on a daily basis. All the major players met every Thursday at 11 am. Rodgers and Jenkins-Peer and many of the subs had worked together before on and off campus, which made for smooth working relationships.

"We all worked well together and got along - we still do," Neilson observes. "It was a good experience, and we were fortunate in that regard."

Whitten agrees. "Rodgers is our largest customer, and the relationship goes back 40 years. It's not a typical contractual relationship - it's like working with friends. It's an open and honest relationship, and we appreciate that. When there are challenges, you all lay your cards on the table, arrive at a solution and move on."

The complex also used subs from all over the country. Comments Rodgers COO Eric Reichard, "Some had not been on campus before or were new to the North Carolina system. There was an educational process to assimilate them."

Many of the local contractors were not only Charlotteans, but UNC Charlotte alumni. So the project was special for them, and they were happy to provide tours for the board of trustees, donors, candidates for coaching slots and recruits.

"It was a once-in-a-lifetime opportunity to build something for our alma mater," says Reichard. "This will be a big part of the community for a long time."

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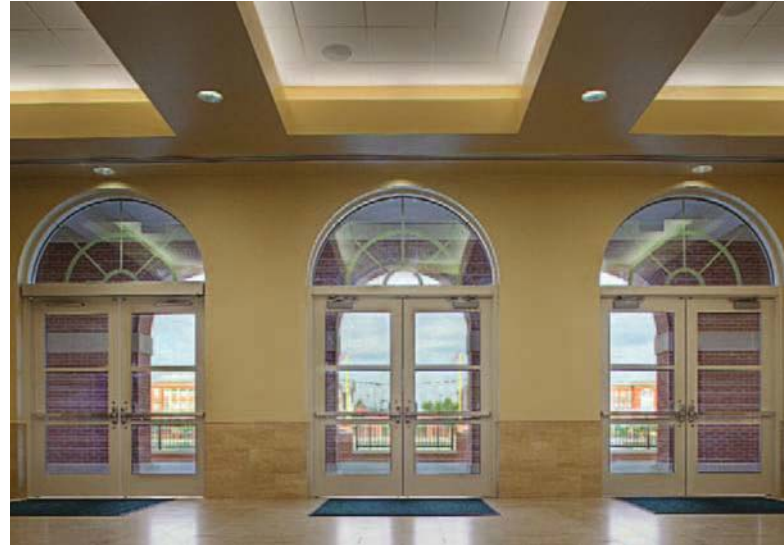


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