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DESIGN-BUILD OFFERS VARIETY WITH STUDENT HOUSING

BY DAVE BALZ

Jacksonville University (JU) is perched on a rolling bluff, nestled on the banks of the St. Johns River in Jacksonville, Fla. The campus follows the curves, elevation changes and oak hammocks that make the land both beautiful and valuable. The challenge for JU was to upgrade an aging portion of student housing inventory to compete not only with other universities, but also with the surrounding private apartments. One of the objectives was to bring more of the student population on campus; another was to provide attractive housing that would more closely match the character of the many new buildings on campus.

Along with the University of North Florida, the two northeast Florida schools have accomplished blending realities of budget and schedule with the effect of the facility on lifestyle and social fabric of the university. They both have done it using design-build.

JU is a private university and attracts students from around the county who come for the small class sizes and well regarded arts, business, medical and sci-

ences programs. With a student population of approximately 3,100, the university has a small- to medium-size college feel but broad curriculum offerings. So how to attract those students?

JU opted for new housing through a design-build competition. As a private university, procurement latitude allowed them to use a general program of information with an invited list of proposers. The competition required the proposers to develop a design, price and schedule. Each team presented its solution to a selection panel that included the university president, director of residence life, facilities staff and trustees. Much of the winning proposal hinged on site utilization and a plan to design, permit and demolish existing housing and also build new housing within 14 months. A particular challenge in this project was the proximity of remaining structures, one of which is less than 60 feet away from the new structure. Another was the careful configuration of the building to take advantage of a meandering bluff with historic oak trees

overlooking ball fields. An added benefit was the design-build team's consideration of the views of the St. Johns River afforded by the five-story design.

ACCOUNTREMENTS

Design decisions for living areas are driven by the patterns of social interaction desired by the university as well as budget. In college many students experience roommates for the first time. JU sought to enhance student life by creating a 500-bed facility using a program with suites of four students. Each suite contains two double-occupancy bedrooms connected by a shared vanity room, shower room and toilet room. This arrangement is not atypical in university housing and establishes an orderly, cost-effective building program. Easily stackable plumbing and rhythmic fenestration combine to allow cost-effective structure. Unique to student housing is the approach to grouping the suites into smaller "neighborhoods" where students interact with their neighbors and gather to study or socialize in the buildings' lounges. The JU

student housing facility is technically a single structure, but lives like four buildings, each averaging 25 students per floor with supervision by resident advisers. The buildings are connected by study lounges that are splayed, allowing the facility to “bend” along the bluff. Services such as a snack bar, meeting space and laundry are located on the first floor.

ENGINEERING EFFECTS

Engineering the structure for the JU building was a model design-build process. With all stakeholders in the charette process, consideration was given to any number of constraints: time, budget, site configuration, saving the oaks and blending with campus architecture. The structure is steel frame with composite deck wrapped in exterior metal studs and stucco. Brick accents the entrances and stair towers providing visual cues for entrances. The four-building effect gave rise to sequencing opportunities. Key specialty contractors assisted in planning, allowing a maximum amount of work to occur simultaneously. Early buy-in from the specialty contractors was necessary to ensure that the work be completed and furnished by students on their move-in day. Another key in project planning was heavy involvement of the owner in detailed design meetings to ensure that finishes, fixtures and owner-provided furnishings were coordinated.

As the whirlwind schedule came to a close, students arrived and were eager to move into their new home, appropriately named Oak Hall. For them the initial question, “Where will I live?” was answered. But it gave rise to another, “Will I really want to leave?”

CAVES AND COMMONS

Not far from JU’s private university campus is another higher education community — the University of North Florida (UNF). Beginning in the late ‘60s as a two-year public institution, UNF has developed a broad array of four-year baccalaureate and graduate degree programs and has grown to more than 16,000 students, and houses about 3,000 of them on campus. However, through design-build, that number will increase by one-third in the fall of 2009. New facilities

JU New student housing at Jacksonville University was designed to bring students on campus.

Design-Build DATELINE — June 2008





Lazy University of North Florida student housing will feature a pool and “lazy river.”

under construction will provide a new dimension to the university. The current inventory of student housing is arranged in a variety of suite and building styles, including some with exterior corridors, others with day rooms and still others as garden apartment communities. Developed over the past two decades, they are offered in double- and triple-occupancy arrangements.

UNF’s new 1,000-bed facility will provide almost all of the students with their own bedrooms. The philosophy of “caves and commons” was part of the design language. It means that students want to have commons where they socialize or study together. But they also want “caves” where they can have privacy and uninterrupted study. The term *almost* is used because the suite arrangement is generally four single-occupancy bedrooms to a suite. There are a limited number of six-person suites that include two double-occupancy rooms. Suites contain shower, vanity and toilet rooms, as well as a small gathering kitchen.

Similar to JU, the UNF project is five stories. But in the case of UNF, the size of the project, the site configuration and its location relative to the high wind zone, drove a different structural system decision. Jacksonville’s eastern portion lies in a designated high-wind zone. UNF is in that zone, and the structures must meet a 120 mph wind design. The system selected is a five-story site cast tilt-wall which uses a hollow-core floor system. Windows are high-impact glass.

THE COMPETITION

The owner selected the solution from among a variety of submittals in a technical and price design-build competition. Florida’s design-build statutes (FS 287.055)

permit a public entity to select a design-build team based on either a qualifications-based selection process or a competitive-proposal process. The latter, selected by UNF, involved the university first selecting a design criteria professional to work with the university staff to develop project parameters. Competitors then developed their best solutions and prices to meet the owner’s requirements.

As with JU, after the team was selected, a myriad of details were considered and finalized. Through a series of meetings with the residence life staff, the facilities department and the owner’s design criteria professional, construction documents were complete and the project is now underway. The beauty of design-build is that the critical path through site and structure were permitted to begin before the final decisions on amenities such as the pool, “lazy river,” and 800-foot boardwalk to the main campus were complete. Another part of the magic of design-build was the involvement of the field management team in the design. The project superintendent, a 30-plus year veteran, saw right away that the benefits of the tilt-up and hollow-core solution might be negated in the schedule if the constructability of the details were not carefully considered. He solved a key problem of the structural system steel bearing components while the structural design was at the 15 percent completion status. Had he not been involved, the project might have required three additional months in the field. Similarly, the architectural team worked closely with the owner’s representative and the facilities maintenance staff to create a sixth-floor mezzanine for HVAC equipment that will make the buildings readily serviceable.

Security and LEED certification were two additional considerations for the new facility. One of the most important aspects of security was the circulation pattern for the buildings. The design utilizes a five connected building complex; four housing buildings and a commons building. Housing buildings are five stories and the commons is two stories. For security, all students will enter and exit the building from one of two points in the commons building. Both points are in line of sight and close proximity to the security desk.

Students will use an electronic “swipe card” to access their individual buildings.

LARGEST EVER

As the largest project in the history of UNF, the student housing is at the center of attention for its LEED® certification. The team worked with the owner to develop a comprehensive plan of actions, systems and submittals to comply with LEED requirements and to educate specialty contractors who might be new to the requirements. Today, visitors to the site will see the structures being erected, site work well underway, and they will see staff dedicated to achieving LEED certification. As one example, 95 percent of all the waste generated on site is being sorted and recycled. Care has been taken to preserve the neighboring wetland environment which separates the student housing site from the main campus. The 800-foot board walk to the main campus will provide a unique transition from the academic intensity of the campus core to the more relaxed environment of the student housing community. As students walk or bike back to their housing, they will be greeted by the pool and lazy river, pass through the commons building and return, if they choose, to the privacy of their “cave.” UNF has a phrase “No one like you. No place like this.” Certainly that will be true of their new student housing which will be known as Osprey Fountains.

So, design-build delivery is being used to solve the challenges of student housing. Whether that challenge is an unusual site, an accelerated schedule or simply to create a unique solution, design-build is helping prospective students answer the question, “Where will I live?”

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Enhancement JU’s addition includes a 500-bed facility with student suites.