

Chapter Ten

Residence Hall Architectural Design and the First-Year Experience

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Architecturally, the residence hall is becoming one of the most complex buildings on campus. Students arrive on campus having very high expectations for their living environments. Campus administrators are looking to the residence hall to supplement students' changing academic needs. And top ranked universities are using new and better-equipped residence halls as recruiting tools to attract the best students. Advances in computer and communication technology have changed the way students access and share information, which requires new types of spaces on campus. Campus dining halls are also changing, as they become the centerpiece of living-learning neighborhoods and the community-gathering place for students in adjacent residence halls.

As institutions come to recognize the important role student housing plays in recruitment, retention, and successful transitions of their students, amenities and spaces for “front-loaded” academic support services (i.e., academic advising, tutoring, group study, classrooms, and faculty offices) are being included in facilities designed for new students. These spaces facilitate new student academic success and the academic mission of the university by providing an informal, student-friendly environment, designed to support new approaches to teaching and learning. The purpose of this chapter is to identify the housing needs of the incoming first-year students, describe some of the challenges that housing administrators face, and offer some examples of how colleges and universities are working to create an environment for the successful transition from high school to college.

Housing Millennial Students

In *Millennials Rising*, Howe and Strauss (2000) note that 70% of high school graduates born between 1982 and 2002 will plan to continue their education in some form after high school. As a group, Millennials are defined by seven traits: (a) a sense of their own specialness, (b) a sheltered upbringing, (c) confidence, (d) team-orientation, (e) values that are more conventional than their parents, (f) a heightened sense of pressure, and (g) a desire for achievement. These youths are also confident and optimistic, team- and rule-oriented, and very hardworking (Howe & Strauss, 2003). These students are changing the programmatic and physical makeup of college residences

by requiring more community space designed for team and active learning, multiple use flexibility, and increased privacy in residence rooms.

These new college students also mirror the population of the United States in that they are increasingly non-White and non-middle class. The decade since 1993 saw college enrollments grow by 15% to 16.6 million from 14.4 million, with minority students now making up nearly 30% of the total undergraduate population (SCUP, 2007). Minority students may also be less prepared for the rigors of college-level academics due to their lack of exposure to a college preparatory curriculum. As such, today's students are arriving on campus with different learning needs and are requiring different types of learning spaces. These alternate learning spaces will look different than the traditional classrooms and will include areas for small-group discussions, places where podcast lectures can be viewed, and spaces where students can study and research in teams. Spaces to support the academic demands of today's diverse students are being included in the planning and design of new residence halls.

Considerations Driving Residence Hall Design

Learning Outcomes

An important consideration in planning new construction or renovation projects is defining the learning and developmental outcomes that a residence hall should support. The architect can then suggest the amount of space, room proportions, and organization needed to facilitate the social and educational goals of the residence hall or residential community. For example, if the outcome is to increase student-faculty interaction, the design solution will provide spaces within the residential community either in the residence hall or in an adjacent area where faculty and students will feel comfortable meeting. This can be a study lounge, a coffee shop, or space on the ground floor of the residence hall separate from living areas and with easy exterior access. Increasing faculty and student interaction also has implications for site planning and building location on campus. For example, the hall should be easily accessible to the academic core of campus so that a faculty member does not have to travel far from his or her office or lab. Housing located away from the center of campus, even with appropriate public spaces and transportation, will be less likely to encourage student-faculty interaction.

Technology

If there is one word that sums up today's generation, it is "connected." Students maintain constant contact with friends and family through cell phones, instant messaging, and social networking sites. Yet, college housing administrators are concerned about the loss of community and the loss of a sense of place with all of this "screen" technology (Kenny, Dumont, & Kenny, 2005). As students rely more on technology to communicate, socialize, research, and attend class, administrators are strategizing ways to increase the student-to-student and student-to-faculty contact that researchers such as Astin (1993) suggests is necessary for academic success. While not entirely unfounded, such concerns may reflect a failure to understand the power of technology to keep this generation of students connected. Moreover, students are not necessarily sacrificing face time to stay connected electronically. A casual observation of food courts and coffee shops on campus show that students are gathering and interacting—often around the computer screen. As such, college campuses need to provide the types of spaces where students can work together with the aid of the computer and

monitors large enough for multiple viewers. These spaces can be available in residence halls or in a community center that is part of a living-learning neighborhood.

For example, the ability to view a lecture on a video screen the size of your palm or on a large screen television has changed the way information is delivered to students from the impersonal lecture hall of 250 or more students to a personal setting or place and time, to be determined by the student. A study group can gather around a video screen in a residence hall study area and watch the lecture. The students can pause the lecture to discuss points among themselves or e-mail questions to the professor. This small community learning experience encourages teamwork, dialogue, and provides a forum for even the shyest of students to communicate with the professor.

Support Spaces Within the Residence Hall

The shift toward a greater academic role by the departments of residence life has created a greater emphasis on and required more public space in residence halls. A significant portion of the ground floor of new and renovated residence halls is now dominated by classrooms, computer rooms, faculty offices, student organization meeting spaces, seminar rooms, and multi-purpose gathering spaces. The ground floor of these residence halls can be used by the campus community for classes, services such as counseling and tutoring, and dining facilities. The upper, more private residence floors are also expanding their community spaces with a mix of small- and medium-sized meeting spaces and hallways that are irregular with open spaces and exterior views, for impromptu student gatherings.

A good example of this is the new Honors Hall at the University of South Carolina, where the ground floor includes study lounges and multi-purpose rooms, a game room, a dining center, administrative offices, the residence director's apartment, and a residential wing (Figure 10.1). The corridor shift on upper floors creates distinct living areas for 12 to 14 students (Figure 10.2). Student lounges are open to the corridors to shorten them and bring natural light into typically dark hallways. The upper residence floors have 12 lounges varying in size and shape to accommodate community needs.

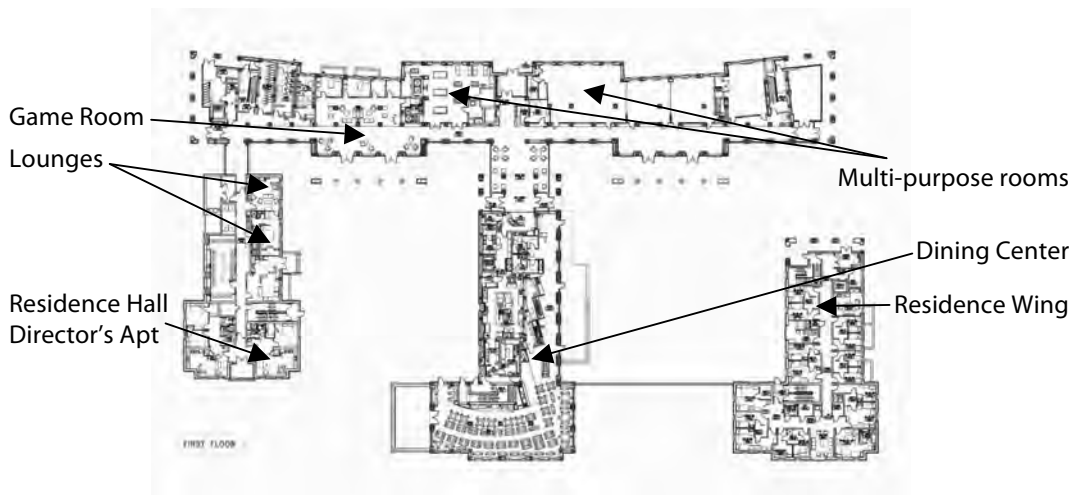


Figure 10.1. Honors Hall, University of South Carolina. By Garvin Design Group in Columbia, South Carolina.

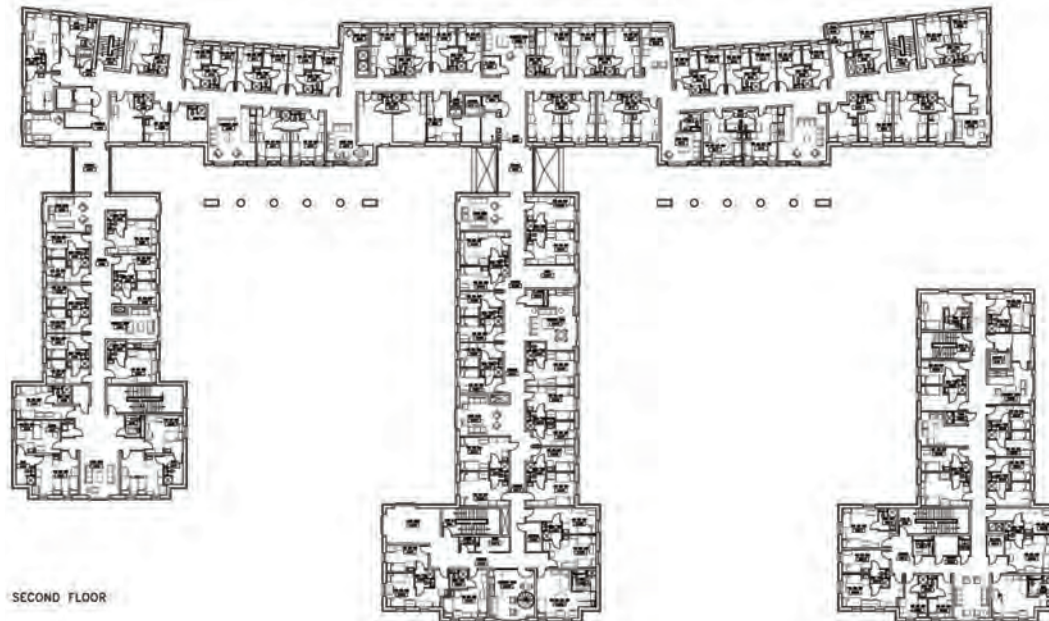


Figure 10.2. Typical residence floor, Honors Hall, University of South Carolina. By Garvin Design Group in Columbia, South Carolina

Another important concept that affects the types of learning spaces required is the shift to student- or learning-centered pedagogies, which changes the size, number, arrangement, and mix of classroom types needed on campus (Kenny et al., 2005). For example, academic units increasingly need classrooms for small-group activities and interactive seminars. Residence halls designed for living-learning programs can provide alternative classroom space in a student-friendly environment. Further, residence life departments can support the academic mission of the university by forming partnerships with academic departments and providing spaces for initiatives that use innovative pedagogies (e.g., learning communities).

At the University of Michigan in Ann Arbor, each residence hall had a satellite library that was connected to the main campus library. The libraries are now being converted into learning resource centers (Figure 10.3). The resource centers offer a variety of seating and technology options to enhance team learning. Individual and group seating in soft chairs with tablets or in straight-backed chairs around rectangular or round tables provide network connections for laptop computers. The area also features small, private rooms and low privacy walls to facilitate group work. This room provides the space, technology, and flexibility to support a variety of learning activities.

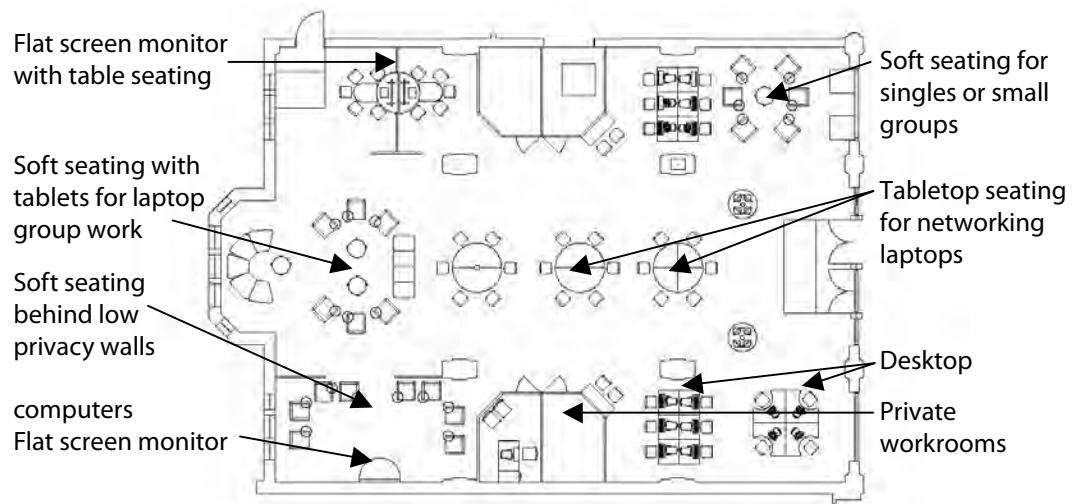


Figure 10.3. Learning Resource Center at the University of Michigan's West Quad housing complex.

Room Configurations

The current housing types available for students vary widely as do the philosophies about the degree to which the housing experience should support educational objectives. At one end of the continuum, is college housing that is outsourced to independent construction and management companies and that operates like a commercial apartment complex. At the opposite end, are halls that embrace the academic mission of the university by providing staff, intentional programming, and spaces designed to facilitate interaction among students, faculty, staff, and administrators (Pica, Jones, & Caplinger, 2006). Regardless of who is responsible for the construction and management of student housing, two common, but seemingly conflicting goals, for residence life are to build community and offer residents privacy. The room types for first-year students help institutions achieve both these goals in varying degrees.

Traditional double. The traditional double, like the ones recently constructed at the University of Oregon (Figure 10.4), is a simple box repeated in a line on both sides of a double-loaded corridor. This room type is the most efficient and cost-effective way to house students. There is no plumbing in the room, and the furniture, including the closets, is movable and can be configured in a number of ways. The beds can also be bunked. Because students are forced to use the public spaces and shared bathrooms, this type of hall is arguably the best layout for creating community among first-year students. During a focus group conducted by Angelini & Associates Architects at Idaho State University, a group of sophomore students who live in a new apartment style hall said they were glad they lived in a traditional hall with a central shared bathroom during their first year because they would never have met so many people in their current living situation.



Figure 10.4. A traditional double room (13' x 16') completed in 2006 at the University of Oregon. Designed by Zimmer Gunsul Frasca Architects, Oregon.

Suite style. The adjoining suite-style room, like the ones recently constructed at Arizona State University, is made up of two double sleeping rooms, an entry/closet/vanity area, and a shower and toilet room shared by four students (Figure 10.5). Like a hotel room, the sleeping area is buffered from the corridor by the closet entry area, making it feel more private and reducing sound transmission. The furniture can be lofted to maximize floor space. The toilet and shower room is accessed by separate doors from the closet/vanity area, but this type of door-locking arrangement can be problematic for privacy and access. A better solution is to have separate shower and toilet rooms, each with privacy doors.

The adjoining suite style is currently a very popular option for first-year residence halls, and some institutions are converting older halls to a similar configuration. Because the layout fits neatly in a rectangle, it can be used efficiently in buildings designed with double-loaded corridors. The shared room is not oversized so students will be inclined to use the building's public spaces, which will encourage community building.

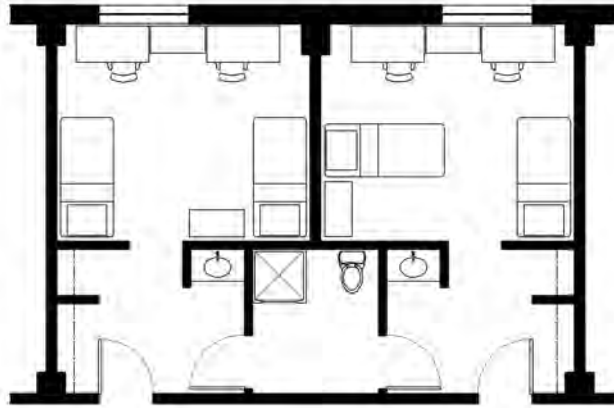


Figure 10.5. Adjoining suite-style construction (room dimensions 12' x 14'; closet/vanity dimensions 8' x 10') completed in 2006 at Arizona State University. Designed by Machido and Silvetti, Boston, MA.

Single semi-suites. A single semi-suite is a cluster of four single rooms sharing a semi-private bathroom off a private corridor (Figure 10.6). Each room includes a closet with shelves, a three-drawer chest, desk with study carrel and mobile pedestal with two file drawers, a wall-mounted corkboard, and a full-length mirror. The shared bathroom and hall help create smaller communities within larger residence halls. As such, this design transitions well from a first-year only hall to one that can accommodate sophomores and juniors who want to remain on campus. For the amount of privacy provided this is a very efficient plan that could be used in a double-loaded corridor or a cluster layout.

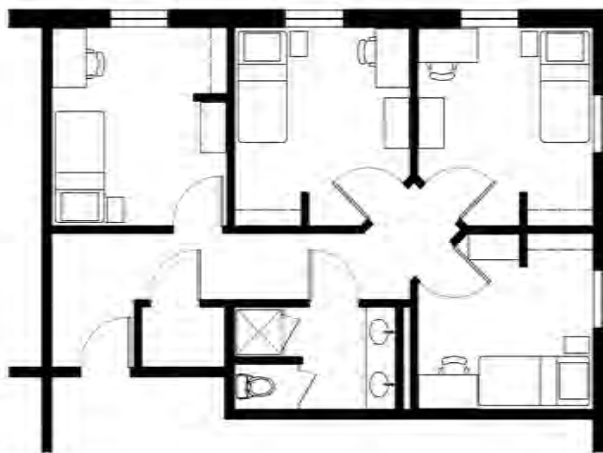


Figure 10.6. Grouping of four single rooms (12' x 10'6") in a suite designed for the University of Missouri, College Avenue Housing. Designed by International Architects Atelier, Majid Amirahmadi Architect of Record.

Apartments. Many campuses are adding apartment-style residence halls to their housing options. Figures 10.7 and 10.8 illustrate two- and four-bedroom apartments designed to be in a double-loaded corridor or a cluster arrangement in a residence hall. The apartments feature kitchens with full-size refrigerators, a cook top, double sink, and eating area. Stackable washer and dryer units are also included. This hybrid apartment building offers students the privacy of apartment living with the convenience and safety of living in a residence hall on campus. The entrance to the building is centrally located on the ground floor near learning community amenities including a front desk, administrative and faculty offices, class and meeting rooms, lounges, and recreational spaces.

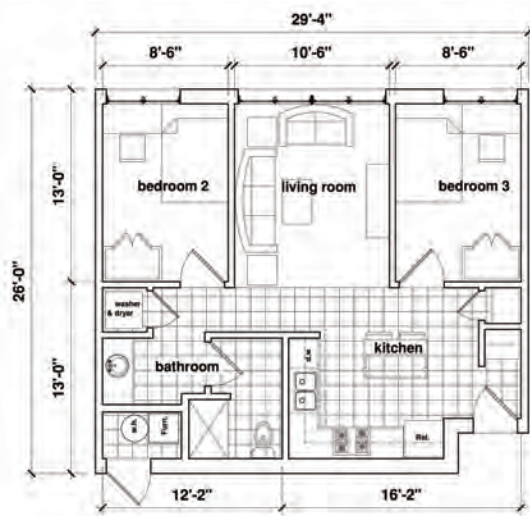


Figure 10.7. Two-bedroom apartment designed for Northern Arizona University as part of a housing master plan. Angelini & Associates Architects, Ann Arbor, MI.

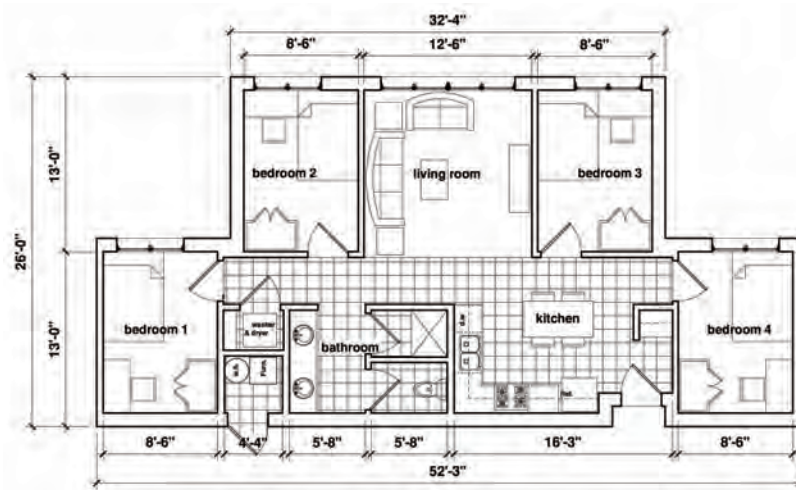


Figure 10.8. Four-bedroom apartment designed for Northern Arizona University as part of a housing master plan. Angelini & Associates Architects, Ann Arbor, MI.

Colleges and universities are feeling pressure to build apartment-style housing based on the demands by incoming students for more space and privacy; however, this is not an ideal model for first-year students where student-to-student interaction and the building of social communities are goals. A 2005 ACUHO-I/EBI Residence Assessment confirms this, finding that the number one factor for overall student satisfaction with the residence hall experience is the ability to interact with others in the hall (Pica et al., 2006). The overwhelming majority of chief housing officers responding to a similar survey believed that traditional housing with multiple occupants in one room is the most conducive to interaction and engagement, while a large majority (76%) considered the single-occupancy apartment undesirable for interaction and engagement. However, these same chief housing officers felt that a single in the super suite was the best (82%) housing option for recruitment purposes while a traditional, shared room was seen as a liability (Pica et al.).

On each campus, the decision to build a particular hall and room type is based on the goals and objectives of the institution's administration. When planning first-year housing, the primary goal should be to create an environment that supports community through student-to-student interaction and public spaces that promote group and team learning. Smaller student rooms with semi-private spaces on each residential floor and public spaces on the ground floor is the best way to provide a balance between privacy and community.

Furnishing and Configuring the Room for Flexibility

A key to satisfaction among residents is the ability to personalize their rooms. Major residence hall furniture suppliers are developing innovative ways to accomplish multiple room layouts and maximize storage using modular, interchangeable furniture parts to create personalized spaces. Something as simple as the loft bed with the desk tucked in below maximizes space and provides students with a sense of privacy. Additionally, some models allow the desk area to be personalized and decorated with changeable panels for hanging posters or artwork, shelving, task lighting, and even a flat-screen television or computer monitor.

Taking the idea of personalizing the room one step further requires not only flexible furniture but also moveable walls. For example, Angelini & Associates Architects developed a proposal for rooms with pivoting walls as part of a new construction project at the University of Arkansas. The idea is to have one wall that can slide and pivot within a modular space of fixed walls. The overall construction module is approximately 30' x 24' and includes a bath area, sink area, and small living area outside of the bedrooms. The module can sleep two, three, or four students depending on the configuration.

The Residential Neighborhood

Part of the decision-making process for students who are looking at schools today is the type of amenities offered outside the classroom. In 2000, 64% of the \$9.4 billion spent on facilities construction at colleges and universities was on non-academic facilities including improving recreational facilities and building larger and more luxurious housing and dining. While "luxurious housing" options, quite often apartment-style halls, aid recruitment and build enrollment, these halls do not necessarily build the community that leads to student satisfaction (Kenny et al., 2005).

Providing "luxury" housing also comes with a high price tag. In 1998, the median residence hall room had 300 square feet and cost \$37,662 per student to build. According to a construction and renovation survey conducted in the fall of 2003 by ACUHO-I, the median residence hall had 338 square feet per student configured in super suits at a cost of \$50,025 per student. Apartments offered 343 square feet of living space at a cost of \$52,629 per student (interpolated

from data provided by Balogh, Grimm, & Hardy, 2006). The price for this type of housing is not only monetary: it also affects lifestyle. The more luxurious and amenity-packed the room, the less likely that a student will have the need to share space. With food, TV, cable, Internet access, and podcast lectures available in the room, there is little reason to use campus common spaces. This is not unlike what has happened in our American suburbs as the front porch was replaced by the backyard deck and the public park was replaced by the backyard pool, driveway basketball court, and basement exercise room. The residential neighborhood has been divided into a collection of private domains.

Thus, the question for residence life professionals is whether the public spaces in residence halls can be designed to be so inviting that students will want to leave their rooms? One way to accomplish this is to think of campus housing in terms of neighborhoods as proposed by a group of campus housing professionals during the 2006 21st Century Project Summit. A block is made up of approximately 30 students. A residence advisor lives on the block, knows each student by name, and acts as an advisor and confidant. Relationships among the block residents are face-to-face and on a first-name basis. Yet, there is a limited amount of community space on the block, and its adjacency to private spaces makes quiet study the most likely and acceptable activity. An occasional block party may be planned, and residents may engage in group activities, (e.g., intramural sports) and may have the same major and share classes (Millennia Consulting, LLC, 2006).

At the neighborhood level, the interaction is similar to a traditional residential neighborhood that shares public spaces and amenities. The neighborhood is made up of approximately 150 students and also includes administrators and faculty. The common public spaces may include public lobbies, dining facilities, a café, small retail shops, and postal facilities. Classrooms, computer labs, meeting spaces, and offices may also be in the neighborhood. Like the Union Drive Neighborhood at Iowa State University (described below), the neighborhood level is the primary locus for social activities. Name and face recognition among residents of the neighborhood is high, and interactions are frequent. Local identity and loyalty is strong (Millennia Consulting, LLC, 2006).

Residence Life and Campus Master Planning

The foregoing considerations should all be part of a campus master plan for housing. Developing a master plan provides a decision-making framework for determining how and where first-year students will be housed on campus. It also provides housing administrators with the necessary information to make informed decisions on topics including facility conditions, space requirements, financial health, and program needs (Kenny et al., 2005). Thus, a master plan is a tool to evaluate how well the existing housing facilities and programs are serving students. A master plan also serves as a benchmark for future analysis, beginning with an evaluation of the present condition through program, facility, and financial reviews. The master planners then analyze that information to recommend future decision making, using tools such as vision confirmation, a gap analysis, program development, financial modeling, and site and building planning. Examining the current physical condition of the existing halls and comparing these to facilities at peer institutions provide important information for recommendations on the renovation, demolition, and construction of new residence hall facilities. In this way, the master plan becomes an important tool in helping residence life departments meet their goals and objectives. By making cost projections and proposing project phases, the plan ensures that the goals are achievable given the self-supporting nature of residence hall budgets.

The master plan also encourages housing professionals and campus administrators to take a macroview of residence life rather than focusing on individual buildings. A single residence hall

can no longer provide all the amenities, programming, and services that are expected by today's students. The trend in housing master planning is to consider adjacent residence halls, dining and athletic facilities, and classroom buildings as a neighborhood or living-learning community. A first-year neighborhood, or community of learners, will provide the programming, amenities, and services that new students require to make a successful transition and establish a foundation that will support a successful college career. The examples that follow demonstrate how this neighborhood concept is evolving on a number of campuses.

Iowa State University

A housing master plan produced for Iowa State University determined that Hesler Hall, an older hall with little architectural character and a long list of maintenance problems, should be demolished and replaced by three new halls. Friley Hall, a nearby first-year hall housing 1,200 students, and an intramural athletics building would—along with the three new buildings—form the core of a first-year residential academic community designed to help to ease the transition from a supportive home community to a campus where students know few, if any, people. A central dining hall/community center would also be constructed and would be the first building completed as part of the Union Drive Neighborhood (Figure 10.9).



Figure 10.9. Union Drive Neighborhood, Iowa State University. Site planning by Sasaki Associates, Boston, MA.

The Union Drive Neighborhood provides services in one location, which aid first-year students in their academic success. In addition to three new suite-style residence halls, spaces and programs are provided for academic advising, tutoring, study skills workshops, counseling, and academic classes. The new 58,000 square-foot community center provides multiple dining options including themed food stations with made-to-order dishes, a bakery, and a nonalcoholic sports bar. The community center also has a convenience store, game and exercise rooms, and a post office (Figures 10.10 and 10.11). The new residence halls and the community center have a covered arcade at their base to unify the buildings and are arranged around a large open space that is surrounded by the community of buildings.

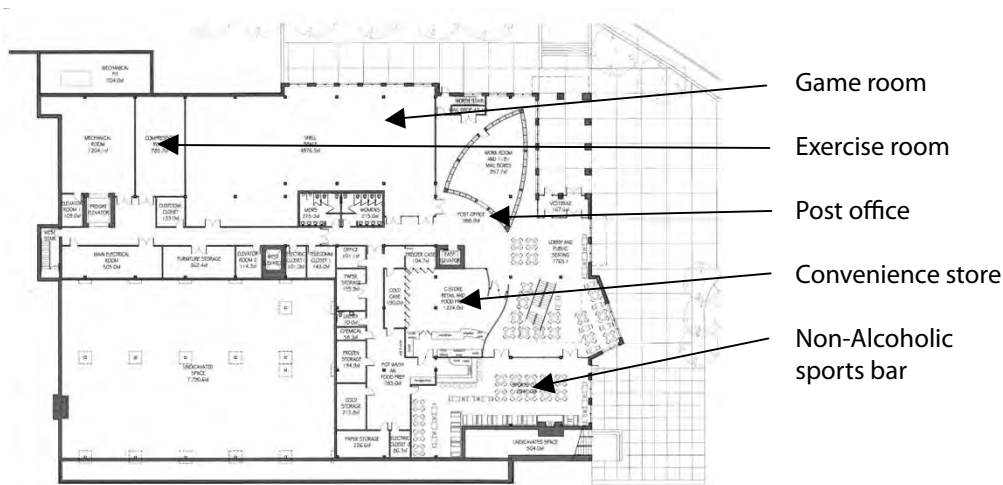


Figure 10.10. Lower level of dining/community center, Iowa State University. Designed by Angelini & Associates Architects, Ann Arbor, Michigan and Baldwin White Architects, Architects of Record, Des Moines, IA.

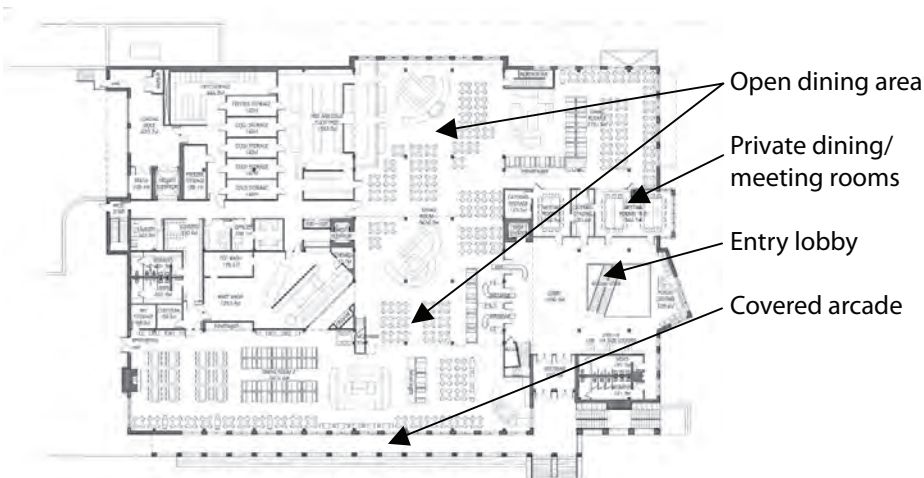


Figure 10.11. Ground level of dining/community center, Iowa State University. Designed by Angelini & Associates Architects, Ann Arbor, Michigan and Baldwin White Architects, Architects of Record, Des Moines, IA.

Arizona State University

The Hassayampa Academic Village at Arizona State University is a 565,000 square-foot, 1,928-bed residential community being built in two phases. The buildings anchor the southeast corner of campus and are adjacent to the Law School, the Student Recreation Complex, the Physical Education Building, and outdoor intramural sports fields. A cluster of five buildings completes a community of 980 students. Both four-story (housing 156 - 172 students) and seven-story (housing 246 - 308 students) buildings are part of the complex. The floor plans are “C”-shaped, double-loaded corridors. The student rooms are four-bed semi-suites or two rooms with a shared bathroom (see Figure 10.5, for example). Double suites, accessible rooms, and residence advisor rooms are also available and are distributed throughout the building. The room furniture is loftable allowing the students more options for personalizing the room arrangement.

The public spaces in the halls are designed to support the three first-year living-learning communities: (a) the Mary Lou Fulton College of Education, (b) the College of Liberal Arts and Sciences CLAS Learning Communities, and (c) the Living Well Residential Community. The Living Well Residential Community is well suited to this location due to the adjacency of the Student Recreation Complex, the Physical Education Building, and the outdoor intramural sports fields. The spaces provided for these communities include offices for on-site advising and preregistration, meeting spaces for community involvement with youth programs, and classrooms for education faculty seminars and workshops. Spaces are also provided for on-site tutoring and peer mentoring, life skills workshops, ice cream socials, movie nights, and weekend pizza and barbecues as well as dinners with the dean. The activities take place in four-person study rooms, two-story community lounges, classrooms, tutoring facilities, coaching rooms, and conference rooms. The two-story community lounges feature kitchenettes, a television-viewing area, and wireless Internet. Because the lounges are open to two floors, the possibilities for community development are greatly expanded. The community also shares a dining facility, a central mail center, a UPS store, and a convenience store.

Fort Lewis College

Fort Lewis College in Durango, Colorado has a very interesting cluster of residence halls, the Bader Snyder Complex, built in the 1950s. Their unique design offers ideas that can be implemented in new residence hall construction. The complex is made up of six two-story buildings each housing 40 students for a total of 240 residents. The halls are freestanding and form an informal courtyard with a picnic shelter at the center. The basic floor plan is a “U” shape of rooms surrounding an interior rectangular community lounge with a centralized skylight. The residence hall is entered through a lobby at the narrow end of the community lounge. There are eight, five-person suites, four on each floor (Figure 10.12). A residence advisor’s room is located on the second floor of each building, and a residence director apartment is in one of the six buildings. Two of the halls have basements with a game room, computer lab, laundry, and storage.

While the design has some flaws based on today’s standards, its strengths lie in the centralized two-story community space, the double/single room options, and the small-scale community identity. The community lounge is ideally sized for 40 students to hang out, have a class or meeting, invite guest speakers, and to live and learn in a community. This is an efficient solution where both circulation and community space work as one. Students also experience the open skylight space each time they come and go from their rooms.

The five-person suite also provides opportunities for flexibility. The single room can be available for second-year students who are interested in staying in the halls and participating in the

living-learning community environment. The ability to mix first- and second-year students in the living-learning community provides an opportunity for programming that is not possible with a first-year only class.

The learning communities housed in the complex include Outdoor Experience, Life House, and Hungry Mind Learners. The cost for additional stairs, elevators, and exterior materials required for this construction are balanced by the buildings' smaller size and savings for structural requirements and mechanical systems.

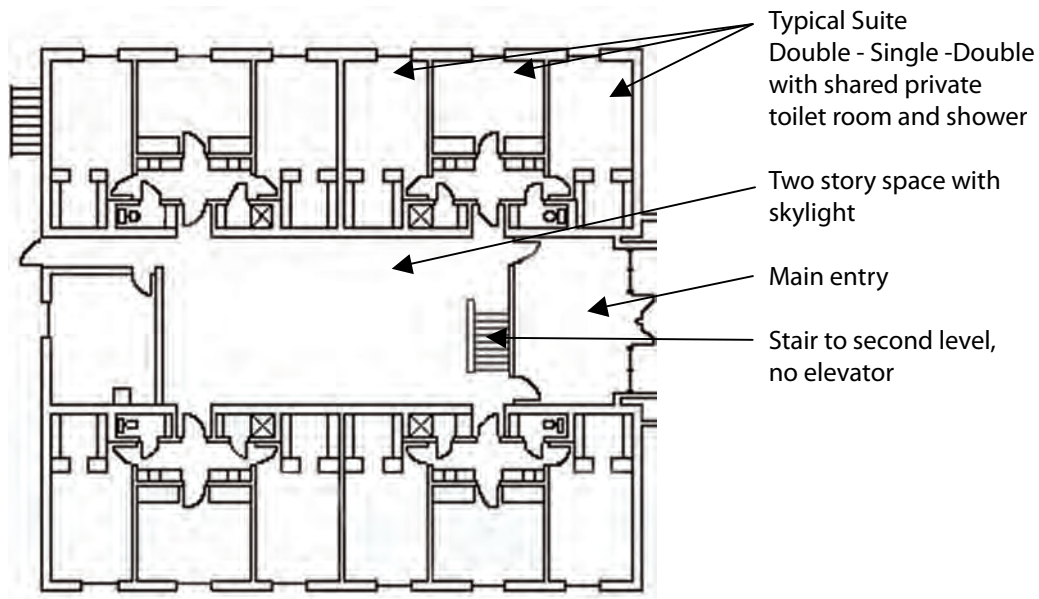


Figure 10.12. Ground floor of a residence hall in the Bader Snyder Complex, Fort Lewis College in Colorado.

Conclusion

Having positive and frequent interactions with one's peer group is the number one indicator of student satisfaction with the living environment (Pica et al., 2006). Successful residence hall design will facilitate student interactions and promote a strong sense of community. A living environment for first-year students also needs to provide academic and personal support, including programming for academic success, opportunities to meet new people and to make friends, and space to develop emotionally and become more independent. An important opportunity that living on campus allows is the ability to meet students who have different interests, backgrounds, and majors. It is important to provide spaces in and adjacent to residence halls where these interactions can occur both formally and informally, especially when students are in a living-learning community with a single academic focus. The new emphasis on the residence hall as a community of learners is transforming the physical space of housing from a place removed from the classroom to a place that is the center of academic life and student success.

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