Thesis '77
A Multiuse Facility
for Ball State University

David Kreie
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The following survey was issued to senior and graduate students currently living in residence halls at Ball State University. One hundred and fifty questionnaires were handed out of which fifty one were returned. Its purpose is to aid the designer in better understanding the wants and needs of students in residence hall living.
What type of room do you live in presently?

- 30% Single
- 70% Double

**Student comments**
The single room has the advantages of added privacy with no roommate conflicts.

The added companionship of a roommate plus the lower cost of the room were the primary reasons for choosing a double room. But, of the group selecting a double room 26% chose it because it was the only room available.

What type of room would you prefer to live in?

- 70% Double
- 30% Single

**Student comments**
The single most prevalent reason for preferring a single room is for the need of privacy. Other reasons mentioned for preferring a single room were; having additional space and not having a roommate who is bothersome.

Of the 30% preferring a double room 67% chose so because of companionship while only 2% chose so because of cost.
Would you prefer coed living?

6% No
94% Yes

If yes, would you prefer separation by room or by floor?

9% By floor
91% By room

Would you prefer to live in a highrise or a lowrise housing facility?

29% Highrise
71% Lowrise

Students comments

Reasons for preferring highrise housing vary from being removed from ground level noise, to allowing more ground space and preferring elevators.

The primary reasons for living in a lowrise were that it provides a more personal, humane feeling, with a dislike of elevators restricting movement.
Personal observation

Graduate students, for the most part, come from various parts of the country and the world and are removed from family life. They are looking for housing which will give them the feeling of living at home. To provide a more humane and personal style of living than which is presently offered at Ball State. A majority of the students prefer lowrise housing as compared to highrise housing. They do not want the time delay caused by elevators or long flights of stairs. They enjoy looking out at ground level and not being bothered by outside noise. They should be able to identify with their housing and it should be designed to provide several levels of interaction among residents.

While a majority of students now live in double rooms this survey has shown that a large majority would prefer single rooms. However, double rooms should be provided to accommodate students who prefer this type of living. Quieterness, privacy, and adequate space should be provided for both types of rooms.

An extensive majority of students prefer coed living and the separation should be by room rather than by floor.

ROOM EQUIPMENT

Do you have sufficient desk space?

36% No

64% Yes

Student comments

Of the students answering no the main complaint was for lack of work space. Other needs mentioned were: additional file storage, typewriter space, drafting table, better access to bookshelves, and more drawer space.

Do you have sufficient bookshelf space?
Student comments: Those answering no mentioned a need for file storage.

Do you have sufficient clothes closet space?

- 52% No
- 48% Yes

Do you have sufficient clothes dresser space?

- 19% No
- 81% Yes

Do you have sufficient miscellaneous storage space?

- 31% No
- 69% Yes
Do you have a sufficient number of electrical outlets?

31% No  
69% Yes

Student comments: A recurring comment was the inefficient spacing of the electrical outlets.

Which of the following floor surfaces would you prefer to have in your room?

21% Tile  
79% carpet

Student comments: The primary reason for selecting carpet was that it will soften the environment both acoustically and visually. In addition, it will also provide a soft surface on which to lounge. It was also mentioned that carpet will provide a warmer surface in the winter.

The only reason mentioned for preferring tile was that it could be easily cleaned.

Do you have sufficient light levels in your room for reading?

39% No  
61% Yes
Although a majority of the students indicated they had a sufficient amount of room equipment there was a large enough minority to warrant an increase in size of certain items.

The choice of carpeting by a large majority is characteristic of the students wishes to have a non-institutional room.

**RECREATION LOUNGE**

When in the recreation lounge how many people are you usually with?

- 1-2: 41%
- 3-4: 39%
- 5-6: 2%
- More than six: 16%

List the activities which you do in the lounge.

**Student comments**

Activities listed from most to least used: television, ping pong, reading, conversation, special events, studying, playing cards, eating, piano, paper work.

**Personal observation**

The recreation lounge must be flexible enough to accommodate a variety of different size groups and a variety of activities.

**STUDY HABITS**

Where do you do most of your reading?

- Room: 68%
- Study space: 10%
- Library: 10%
- Other: 10%
Student comments: The room was selected as the place where most of the reading was done because of the concentration it could provide and the easy accessibility of needed materials. It provides quietness along with a comfortable and familiar atmosphere.

The residence hall study lounge was a place where students could get away from the annoyances of their room such as phone calls, friends dropping in, and roommate distractions.

The University Library provides a place where research material is readily available and where a group of friends can study together.

A few graduate students have their own office in which to study, while others prefer to study in the lounge.

Where do you do most of your typing?

- 16% Other
- 84% Room

Student comments: The primary reason for typing in the room was the convenience of having reference material easily accessible.

A small percentage preferred to type in their office and the lounge.

When studying in your room, where do you do most frequently work?

- 61% Desk
- 29% Bed
- 9% Chair
- 1% Floor
Do you ever study in groups?

- 69% No
- 31% Yes

If yes, what size group do you study with?

- 26% 2-3
- 24% 4-5

Personal observations: The room still remains the primary place for studying. The room should have a comfortable atmosphere with privacy and quietness. Students will study at a variety of places in the room and lighting will have to be flexible to meet these needs. There should also be a study lounge to accommodate those who do not study in their room.

Cooking & Eating

Would you prefer to cook your own food or eat in a cafeteria?

- 19% Cook
- 81% Eat at cafeteria
The primary reason for preferring residence hall dining was the time factor. Students do not want to bother with buying food, preparing it, then cleaning up. They also prefer to socialize while eating.

Those who prefer to cook mention that the food tastes better, the meals are more balanced, and it is a means of self-expression.

If you prepared food only a few times a week how important is it for you to have the option to cook?

27% Very
48% Slightly
25% Not

If you had your choice how many people would you eat with?

23% 1-2
39% 3-4
30% 5-6
8% More than six

Who would you prefer to eat with; close friends, casual acquaintances or both?

12% Close friends
38% Both
A graduate student's time is very important. The time and trouble of preparing food is not needed, although facilities should be provided for preparing snacks. The seating should be designed to provide for a variety of groupings and to promote social interaction.

Would you prefer to share a bath with a small group of students or have a communal bath for a large group of students?

- 17% Large
- 83% Small

Would you prefer to have direct or indirect sunlight?

- 27% Indirect
- 73% Direct

If your answer was direct would you prefer to have morning, afternoon, or evening sunlight?

- 60% Morning
- 24% Afternoon
- 16% Evening
What should be the ideal time it would take you to walk from your housing unit to your classroom?

- 40% 5 Min.
- 59% 10 Min.
- 1% 15 Min.

What should be the ideal time it would take you to walk from your housing unit to the student center?

- 29% 5 Min.
- 43% 10 Min.
- 28% 15 Min.

What should be the ideal time it would take you to walk from your housing unit to the library?

- 53% 5 Min.
- 39% 10 Min.
- 7% 15 Min.
Do you have a car on campus?

27% No

73% Yes

If yes, do you ever require a place to do minor work on your car?

46% No

54% Yes
Ball State University is a state supported school located in Muncie, Indiana approximately 50 miles northeast of Indianapolis. Muncie has a population of approximately 61,000 of which 17,000 are Ball State students.

The University is located on the west side of Muncie (see figure 1). The downtown commercial-business district is approximately ten minutes away by car. Northeast of campus is an enclosed shopping mall which also takes approximately ten minutes to get to by car. Closer to campus is another shopping center approximately five minutes away by car and on the southern end of campus is a commercial area called the Village which is within walking distance for BSU students. Most of the stores are geared toward Muncie residents.

Approximately 8,000 students live in University owned
housing on campus. At the beginning of fall quarter the residence halls are drastically overcrowded. Student lounges become rooms for six or seven people. This condition normally lasts through winter quarter.

Currently there are two residence halls on campus for graduate and senior students over the age of 21. One of the halls, Elliott Hall, has a population of approximately 125 residents and is located on the southern end of campus (see figure 1). The other hall, Shively Hall, has a population of approximately 200 residents and is located on the north end of campus (see figure 1). Shively is one of nine halls in the LaFollette complex which has a total population of approximately 2000 residents. One of the complaints of Shively residents is the noise generated by the other eight undergraduate halls. Each fall quarter there is a waiting list of approximately 20-30 students wanting to get into each of these halls.

My proposal for student housing is to let Shively Hall become an undergraduate hall to aid in alleviating the overcrowdedness in other undergraduate halls and then to provide a new graduate student housing complex.

Ball State students have a lack of places on or near campus for social interaction. Also, considering a student population of 17,000, the commercial establishments near Ball State are lacking in number and variety. I propose to provide commercial facilities to promote social interaction and meet the needs of students, faculty, staff, and Muncie residents.
The trend today in student housing is to provide apartment type living where a small homogeneous group of students share living and cooking facilities. Ball State students prefer this non-institutional type of living with one exception, they do not have the time nor do they want the trouble of preparing their own meals.

This graduate student housing project should be designed to accommodate 250 students of varying backgrounds and cultures. It should be coeducational by rooms and students should have accessibility to them without the need for elevators.

Social interaction among students of varying backgrounds and cultures could provide a unique learning experience for the residents. There should be several levels upon which the residents can interact. The first level would be the student
room. In the room friends would be able to interact on an informal, private basis. The second level of interaction would be amongst members of a homogeneous group. This level would be an identifiable grouping of several private rooms upon which close ties with each other could be made. So as not to encapsulate one homogeneous group from another the third level of interaction would be amongst the complex as a whole composed of the homogeneous groups.

The housing project will be owned and operated by Ball State University. It will be financed by a 40 year bond issue. 40% of the rates go towards paying off the housing and the remaining 60% goes toward the dining facility. Of the 60% for dining one-third goes for food, one-third for labor and the remaining one-third for reduction of indebtedness.

The atmosphere should be of a family type rather than an institutional one.

There should be several levels at which students can interact and socialize.

There should be a variety of indoor and outdoor recreation and interaction spaces.
The student room is the basic unit of the housing complex. It should be able to accommodate a variety of furniture configurations and be a place where a student can comfortably do a variety of activities in an informal surrounding while not bothering or be bothered by other students. 70% of the rooms should be single occupancy and the remaining 30% should be double occupancy.

Each homogeneous group should be provided with a living room in which a variety of activities can comfortably take place in an informal atmosphere. The space should be flexible enough to allow for a variety of furniture configurations. It should be secured when not in use and available to outside friends when in use by someone in the homogeneous group.
Toilet/Shower: One toilet/shower room facility should be provided for approximately three students.

Kitchenette: The kitchenette should be a place where students can fix snacks. There should be approximately forty residents for each kitchenette and they should be within 75 feet walking distance of the student room.

Laundry Room: Students should be able to wash, dry, and iron their clothes in the laundry room. There should be approximately forty residents for each laundry room and they should be within 75 feet walking distance of the student room.

Trash Room: Residents should be able to transfer the trash in their rooms to a convenient trash room from which janitors periodically collect and take to a central removal area.

Sink Room: This room is for the storage of mops and buckets to be used by the janitor and the residents.

Front Desk: The front desk should be an information center for the residents. Recreation equipment, periodicals and newspapers, and additional student use items will be stored behind the desk. All student mail will be brought to the front desk then sorted into individual student mail boxes also at the front desk. A typing area should be provided behind the desk to be used by the staff and the director.

Activity Lounge: The activity lounge is for the use of the residents and their friends only. A student should be able to relax and take a break from studying while playing pool, ping pong, cards or any other similar activity.

Quiet Lounge: In this space a student should be able to comfortably read a book, periodical or newspaper, or converse with a friend. The quiet lounge should also be waiting area where friends and relatives of residents can meet.

Study Lounge: The study lounge should be a space where students can remove themselves from the interruptions of their rooms for the purpose of studying.

Piano Lounge: The piano lounge should be open to residents at any time of the day. A resident should be able to play the piano without bothering or being bothered by other students.
Director's Apartment

The director's apartment will be the permanent living quarters for the director of the complex. The director should be able to enjoy his privacy and also be able to converse with students having problems or on a friendly basis.

Cafeteria

To do a thorough program for a residence hall cafeteria a food service consultant is needed. One needs to know the type of food service, the hours of service, the style of service, menu pattern, in what form the food will be purchased and how often, and what equipment and capacities will be required for preparation and service of the menu. For the purpose of this program, personal observation and rules of thumb will be utilized.

Cafeteria Dining Room

The dining room should be able to seat 125 students in an atmosphere conducive to eating and socializing. Upon entering the cafeteria a student should enter the serving line, from there to a dining table and when finished the student should take his tray to a conveyor belt to be washed. These circulation patterns should not impede upon each other.

Cafeteria Kitchen

The kitchen area of the cafeteria should be organized, efficient, and clean. Approximately 14 workers and 40 part time students will be employed. This total of 54 employees will not be working at the same time though. There will be two shifts of full time employees and the part time student employees will be working only at meal times with roughly 15 working per meal.

There should be three basic food preparation areas; a pastry area, a meat and vegetable area, and a salad area. A long term food storage area should be provided from which food will be taken to a short term food storage area adjacent to the food preparation area. Perishable foods will be stored in walk-in refrigerators and freezers.

Kitchen utensils and soiled dishes and silverware will be cleaned in the dish washing room. The utensils will be stored adjacent to the food preparation areas. Dishes and silverware will be kept available for the next meal.

Once food is prepared it will be placed in either a warmer or a refrigerated unit located immediately behind the serving line to be taken out and used when needed.

The manager of the kitchen should have an office overseeing all food preparation areas.

1West, Bessie; Wood, Levelle; Harger, Virginia, Food Service in Institutions, John Wiley & Sons, New York, 1966, P. 531.
<table>
<thead>
<tr>
<th>Outdoor Recreation</th>
<th>This area should provide residents with the option for more rigorous exercise.</th>
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<tr>
<td>Servicing</td>
<td>Servicing for the housing complex should provide a minimum of interruptions in the daily activities of the residents.</td>
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<tr>
<td>Parking</td>
<td>Parking for the residence hall should be within 500 feet walking distance of the complex. Parking for the dining service employees should also be within 500 feet walking distance of the cafeteria.</td>
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Commercial establishments and places for social interaction are both minimal and removed from Ball State students. The Village (see figure 1) provides the only commercial establishments within walking distance for Ball State students. The Village consists of approximately 20 shops, two bars, two eating establishments, one bank, and two gas stations.

A market study would be needed to determine the commercial requirements for the Ball State area. For the purpose of this project I will assume that Ball State can support an increase of 100% in the number of stores in the Village. This would amount to approximately 30,000 square feet in commercial facilities accommodating a variety of shop sizes. The facilities should relate closely to the students living in residence halls north of Riverside. There should also be a strong connection
between the 250 students in the proposed housing complex and the proposed commercial. This will provide a readily available source of customers for the shop owners.

While the commercial facilities will be directly related to Ball State students Muncie residents should not be excluded. The facilities should be easily accessible to residents providing them with additional commercial outlets and to promote interaction with Ball State students.

The commercial facilities should relate to the pedestrian and the automobile. Spaces should be provided for programmed and impromptu happenings in any type of weather. Travel between stores should also be environmentally protected. A pedestrian should have the option of passing directly by the stores or stopping and meandering through the stores. The stores should be able to open and close at anytime the owners choose.

The commercial facilities will be owned by Ball State University and individual store spaces will be leased to private interests.

Servicing of the stores should be accomplished with minimal conflict between both pedestrian and vehicular traffic.

Parking for the commercial facilities should provide easy access to the stores from the car.

Provide areas for social interaction among students.

Provide a strong connection between the commercial and the proposed housing.

The commercial should be easily accessible within walking distance to Ball State students.

There should be a variety of shops and activities to meet Ball State's needs.

The commercial facilities should also be accessible to Muncie residents.
1 Students should have easy access from one room to another, but the rooms should be acoustically separated from each other.

2 Each homogeneous group should have its own physical identity but they should be easily accessible to one another.

3 The laundry should be within 75 feet walking distance from the student rooms and acoustically separated from them.

4 The kitchenette should be within 75 feet walking distance from the student rooms and not more than one flight of stairs away.

5 The toilet-shower rooms should be very accessible to the student rooms.

6 The trash room should be easily accessible to students from their rooms.

7 The sink room should also be easily accessible to students from their rooms.

8 The study lounge should be removed from the student rooms to provide a place for students to study without the interruptions found in their room.

9,11 A student should have the option of going to the rooms without traveling through the living room.

10 The living room should be easily accessible from the student rooms, but it should be acoustically separated.

12 There should be an identifiable, easy access to the homogeneous groups from the outside.

13 The cafeteria dining room should be removed from the homogeneous groups but easily accessible from them.

14 The front desk need not be close to the homogeneous groups but it should be easily accessible for student mail.

15 The activity lounge should be removed from the homogeneous groups and be a place to get away from studying.

16 The quiet lounge should be removed from the homogeneous groups.
The piano lounge should be removed from the homogeneous groups.

Access from the homogeneous groups to the outdoor recreation area need not be direct but a view towards the area would be desirable.

The director's apartment need not be close to the homogeneous groups but should be easily accessible from them.

Parking for the residence hall should be within 500 feet walking distance of the complex.

Service for the cafeteria kitchen should be direct without interrupting other activities of the complex.

Travel from the kitchen to the serving line should be direct and efficient for the movement of people and food.

Access to the cafeteria dining room for non-residents should be through the front desk area.

The front desk should have access to the outside for mail deliveries and visitors.

The front desk should be close to the activity lounge for easy access to recreation equipment.

The quiet lounge should be close to the front desk for waiting visitors and residents who wish to read newspapers and magazines from behind the front desk.

The piano room should be accessible from the front desk area.

The director's apartment need not be immediately adjacent to the front desk but the apartment should be easily accessible from the desk.

The parking area for the commercial facilities should be easily accessible to Muncie residents.

The commercial facilities should be easily accessible from the parking area although it need not be immediately adjacent to the facilities.

The service area for the commercial facilities should be easily accessible from the street without interrupting other
activities of the complex.

32 The commercial facilities should be easily accessible to Ball State students, especially to the students living on the north end of campus.

33 The students in the homogeneous groups should have easy access to the commercial facilities.
The following plans are a synthesis of the description of the functional components. As a data gathering technique a tracing paper overlay was given to the client asking him for corrections and comments.

It should be understood that the plans reflect circulation, equipment placement, and functionality only in determining their two dimensional quality. Window placement, views, connections between components and forces generated by the site will play an important part in further shaping the form of the components.
CAFE-TERIA DINING ROOM
1/8" = 1'-0"

126 SEATS @ 1305 sq ft

FOOD PREPARATION AREA
1/8" = 1'-0"
The following diagram categorizes the basic options for the arrangement of the functional components (i.e., the toilet-shower room can be connected to the student room in four basic ways; separated pods, directly attached pods, a decentralized area, and a centralized area). From these basic configurations, several compatible concepts can be derived.
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<td>Front Desk &amp; Lounge Area - Homogeneous Groups</td>
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At this point in time a decision was made to totally develop the area between the College of Architecture and Bracken Library, rather than develop only a student housing project. The following facilities were programmed into the project to supplement the total development.
Married Student - Faculty Housing

Approximately one hundred apartment units should be provided for Ball State faculty and married students. As in the graduate student housing there should be a hierarchy of groups. The basic unit would be the apartment. A small group of apartments situated around a common outdoor space would provide the next level of interaction in which friendships could be made. The third level would provide easy circulation to and from each of the small groupings. Support facilities to be used by both the graduate student housing and the faculty - married student housing would include a laundry, a community room for large gatherings and a day care center.

Art Department

A facility for an art department of approximately 80,000 square feet should be provided. Both classroom and studio facilities should be included along with an art museum. The studio facilities (painting, sculpture, etc.) should be observable from the general public passing by. Approximately forty faculty offices should be provided for the art department. The offices should be easily accessible from the classroom facilities and also be able to be secured at night.

College of Business

A facility for the College of Business of approximately 120,000 square feet should be provided. Along with the classroom facilities there should also be approximately eighty faculty offices. The offices should be easily accessible from the classroom facilities and also be able to be secured at night.

Parking

Parking facilities with approximately 800 parking spaces should be provided for Ball State students. There should be easy pedestrian access from the parking facility to the classroom and commercial facilities.