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psychiatric inpatient facility for patient treatment and student education

psychiatric inpatient facility for patient treatment and student education

A terminal project submitted to the faculty of the College of Architecture, Clemson University, in partial fulfillment of the requirements for the degree MASTER OF ARCHITECTURE.

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[redacted] Committee Member.

Kevin D. Crook.

May 1983.

To my fiancee, Miss Lauren Young, for our love.

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I would like to extend my appreciation to the following people:

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abstract

The following academic study is concerned with the area of psychiatric patient housing. More specifically, as a graduate project, the author has chosen to focus on a proposed psychiatric hospital at The Medical University of South Carolina, at Charleston, South Carolina. Therefore, this hospital must accommodate psychiatric patient housing as well as allow student education.

The scope of this graduate project encompasses the history of psychiatric hospitals, design criteria for sociological conditions in psychiatric hospitals, three case studies of existing psychiatric hospitals, user identification at the hospital, site and spacial analysis for the hospital, and the design determinants which created the hospital. The product of these issues results in a proposal for a psychiatric hospital at the Medical University of South Carolina at Charleston, South Carolina.

The purpose of this project, a PSYCHIATRIC INPATIENT FACILITY FOR PATIENT TREATMENT AND STUDENT EDUCATION, is to investigate the impact of architecture on the treatment methods and the educational processes in a psychiatric hospital. Therefore, the patient will be prepared to enter society and the student will be prepared to care for psychiatric patients.

introduction

DEFINITION OF PROBLEM

The "problem" is to design a building to house the functions of a PSYCHIATRIC INPATIENT FACILITY FOR PATIENT TREATMENT AND STUDENT EDUCATION.

The phrase "psychiatric inpatient facility" describes the type of patients who will utilize the building complex.

The phrase "patient treatment" describes the primary function of the facility. Patients admitted will receive a variety of treatments depending upon their diagnoses.

The phrase "student education" describes a parallel function which occurs in this facility. Students seeking a variety of professional degrees will advance their education by training in this facility.

In summary, this project is a design proposal for a facility to house psychiatric patients. These patients, with different age groups and psychiatric problems, are exposed to a variety of treatment methods. The objectives of the treatment methods are to "cure" the patient and to present students with a variety of psychiatric problems and therapies. Therefore, this facility will house patients with different psychiatric problems and provide space to accommodate various therapeutical techniques.

OVERVIEW OF PROBLEM

Mental illness has almost reached pandemic proportion in the United States. An epidemic occurs when 35.1% of the population has a disease. "Pandemic" refers to a national problem, versus a regional problem. For example, the percentage of psychiatric disorders among the adult population is between 15.9% and 25.3%. The percentage of the elderly popula-

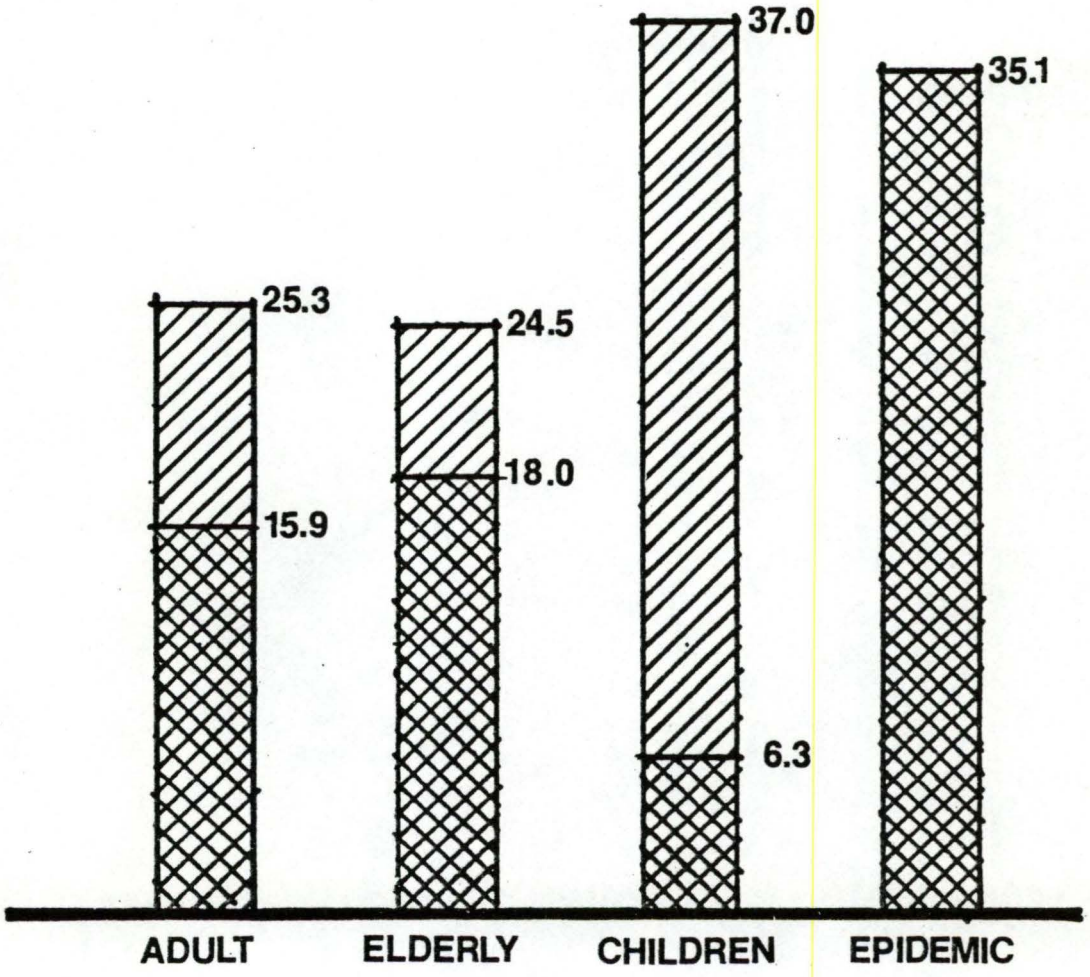

Figure 1. Percentage of people in the United States with Psychiatric Illnesses

tion with psychiatric disorders is between 18.0% and 24.5%. The rate of childhood maladjustments is between 6.3% and 37.0%. However, the most shocking statistic reveal that the number of people with psychiatric disorders who are not receiving treatment has reached 75%. Even more shocking, is the percentage of severe psychotic patients who are not receiving any care. Forty-five percent of severely psychotic people never receive treatment by any health care professional.[1]

In a modern society, why does such a major problem go unresolved? There are three main reasons. One is inadequate funding. A majority of public mental hospitals and clinics do not have adequate resources to build or staff psychiatric facilities. Second is treatment procedures. For most procedures, as the reasons for the cure of the patient are not known, treatment is for symptoms, not the cause. The field of psychiatric treatment is still recent. Finally, there is the problem of the buildings which house psychiatric patients. Many of these buildings are detrimental to the mentally ill. Instead of aiding in the recovery of the patient, the architecture henders the patient's recovery process. These three factors have allowed mental illness to become a rampant problem in the United States.

This terminal project involves the architecture that houses psychiatric patients. The following chapters will investigate design concepts which generate this psychiatric facility.

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1. Bruce P. Dohrenwend, Barbara S. Dohrenwend, Madelyn S. Gould, Bruce Link, Richard Neugebauer, and Robin Wunsch-Hitzig, Mental Illness in the United States, Epidemiologic Estimates (New York: Praeger, 1980), pp. 12,67,103,147.

OVERVIEW OF NEW FACILITY

Presently, the Medical University of South Carolina at Charleston (MUSC) houses psychiatric patients on the tenth floor of the Medical University Hospital. A project has been initiated to move the psychiatric patients to a new location. This project is to be financed by the MUSC and Psychiatric Institute of America (PIA) --- MUSC supplies the site and the

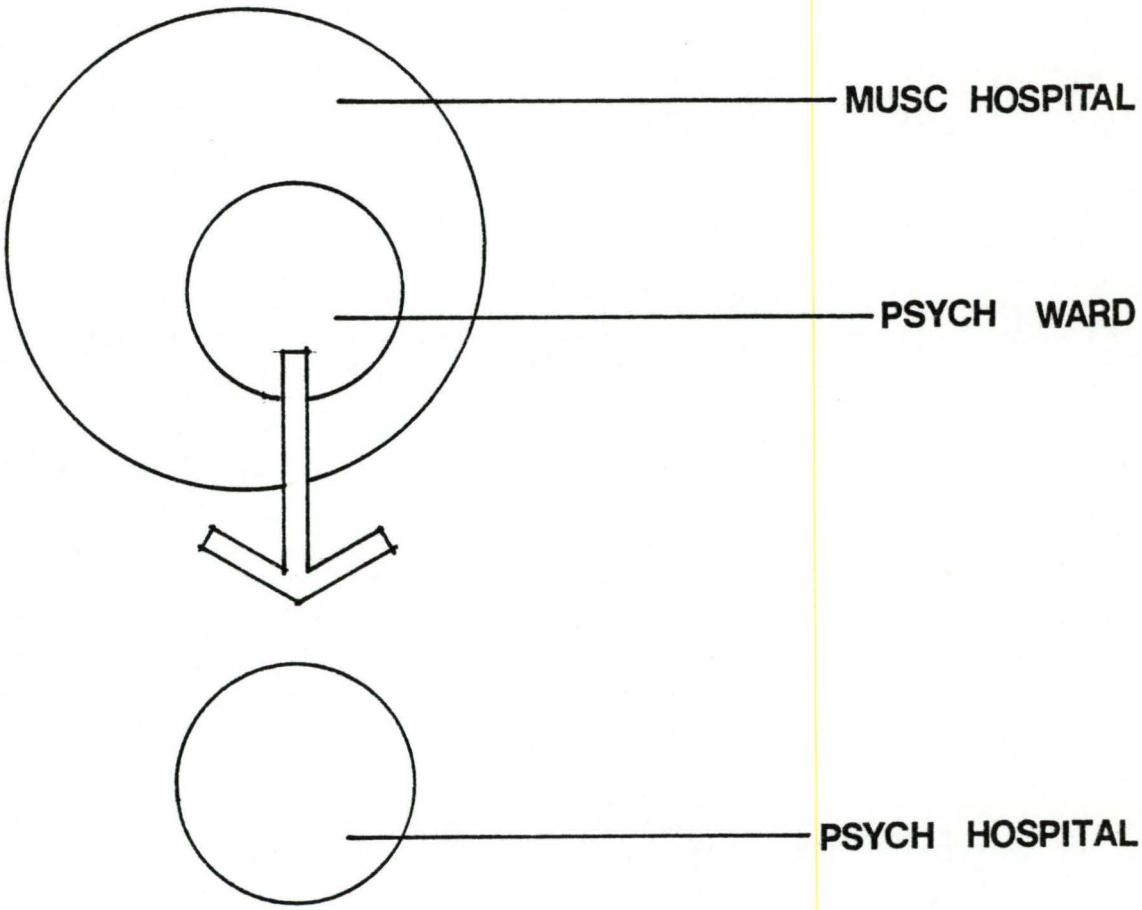

Figure 2. Relocation of psychiatric patients to a new building at a new site

staff, and PIA supplies the building and the administration. The new location should ideally be in a residential environment, create a non-institutional setting, and allow a strong relationship to the outdoors. This new psychiatric facility should be a lowrise building, since a midrise or highrise building is not appropriate for psychiatric rehabilitation in the opinion of current authorities.

However, the new psychiatric facility, while separate, should be closely related in its location to the Medical University Hospital. This would make possible optimum levels of patient care, professional development, and education. A close relationship to the hospital would also allow for an emphasis on the treatment of the whole individual. A patient could easily be taken to the main hospital for a diagnostic procedure not performed in the psychiatric facility. Also, the interaction between medical, surgical, and psychiatric students and staff wouldl be promoted. The proximity of the psychiatric facility to MUSC would encourage working, teaching, and educational relationships between psychiatry and other MUSC departments.

The existing patient load in the psychiatric ward of MUSC will change once the psychiatric facility is built. An increase of six patient beds will change the hospital's certificate of need to fifty-three patient beds. This change in number of beds corresponds with the number of beds identified as "needed" by the Palmetto Lowcountry HSA Plan. In addition to adult, children, and adolescent beds, behavioral science beds and intensive care unit (ICU) beds will be added. The behavioral science

beds will be used for mild psychiatric problems. The ICU beds are not of the type that are located in a general hospital. Instead, these beds house patients who need "intense" treatment. The ratio of staff to patients will increase for this group of beds. (See USER IDENTIFICATION for more information about the patient groups.) The new building will therefore house a total of fifty-three beds, adding new types of treatment methods and patients for education and rehabilitation.

history

GRECO-ROMAN PERIOD

During this period , medical treatment centers were exquisite in design. The psychological effect of surroundings was considered a major factor in the curative process. The Roman architect, Vitruvius, suggested that environmental variables be taken into account in the planning of health temples. Therefore, such temples were spacious, contained large open areas, gardens and courtyards. Such environmental concerns were influential in shaping health care facilities for many centuries.[2]

MIDDLE AGES AND RENAISSANCE

Hospital design was basically the same as Greco-Roman design, the major difference being a use of architectural forms which were particular to the differing cultural periods. The use of large, open spaces and rooms with high ceilings continued to be a basic design feature. Documentation shows that the majority of European hospitals for their time and place were "comfortable, spacious, well-staffed, and well-furnished."[3] Obviously, there were exceptions to the general humanistic designs (Bethlehem Hospital in London, 1377). However, it was not until the 1700's that the demise of health care design and treatment centers began to occur.

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2. Leonard Krasner, Environmental Design and Human Behavior (New York: Pergammon Press, 1980), p. 135.

3. Krasner, p. 135.

AMERICAN FACILITIES (1776-1861)

The first psychiatric hospital built in America exclusively for the care of the mentally ill was the Eastern Lunatic Hospital in Williamsburg, Virgina. Treatment was harsh --- chains and confinement. Then, in 1817, The Friend's Asylum was built in Frankford, Pennsylvania. This asylum became a "model" for housing the mentally ill from this time until the middle of the twentieth century. Asylum became massive institutions which served as central locations for the treatment of all types of mental disorders.

The type of patient treatment during this time period was called moral management.

> MORAL MANAGEMENT. This consists in removing patients from their residence to some proper asylum; and for this purpose a calm retreat in the country is to be preferred: for it is found that continuance at home aggravates the disease, as the improper association of ideas cannot be destroyed. A system of humane vigilance is adopted. Coercion by blows, strikes, and chains...is now justly laid aside. The rules most proper to be observed are the following: convince the lunatics that the power of the physician and the keeper is absolute; have humane attendants,...; tolerate noisy ejaculations; strictly exclude visitors; let their fear and resentments be soothed without unnecessary opposition; adopt a system of regularity..When convalescing, allow limited liberty, introduce entertaining books and conversation, employment of body in agricultural pursuits...; and admit friends under proper restrictions. It will also be proper to forbid their returning home too soon. By thus acting, the patient will 'minister to himself.'[4]

The goals of such treatment were to restore the patient's self-control

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4. Robert Gripp, Peter A. Magaro, and David J. McDowell, The Mental health Industry: A Cultural Phenomenon (New York: Whiley-Interscience Publication, 1978), p. 17.

and produce a person who was "acceptable" to society. However, moral treatment did not refer to moral goals. Instead, "it was thought that exposure to proper experiences alone would spawn a restoration of these moral faculties to their normal state."[5]

DOROTHEA DIX

In the 1840's, Dorothea Dix led a crusade exposing the conditions in existing county poorhouses (the buildings that were often used for mental hospitals). She publicized the use of shackles and iron chains, and the foul atmosphere and inhumane conditions. Dix argued that local government could not care for these mentally ill people and state government must assume their responsibility. Her campaign was successful --- state funded mental hospitals were built in 28 out of 33 states. Most of these hospitals were built according to the Kirkbride Plan (See THOMAS KIRKBRIDE), but they soon grew to enormous size and recreated inhumane conditions.[6]

THOMAS KIRKBRIDE

During the 1850's, Thomas Kirkbride (psychologist) and Samuel Sloan (architect) first distinguished mental health architecture as a specialized field. Four characteristics are part of the Kirkbride plan for a

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5. Gripp, Magaro, and McDowell, p. 28.

6. John A. Talbott, M.D., The Death of the Asylum, (New York: Grune and Stratton, 1978), p. 1.

mental hospital. These characteristics are location, site usage, building design, and number of patients. First, the site should be located in a pleasant countryside and be no less than 100 acres in area. A major portion of the site should be used for recreation, pleasure, farming, and gardening. The building should be designed with two major parts, the central core and patient wings. The central core housed the physical plant, offices, kitchen, storage areas, chapel, recreation areas, and visitor areas. Six patient wings, three adjoining each side of the central core, contained private patient rooms and each wing includes a dining room, bathroom, laundry room, parlor, and a ward for four or six patients. Finally, the number of patients at the hospital was limited --- a significant part of the Kirkbride plan --- to 250 patients. The Kirkbride hospital plan became mental hospital design criteria for the next 50-70 years.[7]

AMERICAN FACILITIES (1861-1918)

The tradition of psychiatric hospital design from the mid-nineteenth century into the first quarter of the twentieth century was based upon the Kirkbride plan. The Kirkbride plan was duplicated, however, the hospital was isolated from society, patient freedom was restricted, and the limited size advised by Kirkbride was ignored. Because of their

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7. Krasner, p. 151.

large size, these expanded hospitals became "human warehouses."[8] In 1865, New York State constructed the Willard Asylum. This was the largest asylum at that time --- 1500 beds. Soon, the Willard Asylum would be considered small when compared to Central Islip, Pilgrim, and Georgia State mental hospitals which would each house 10,000 patients. Moral treatment for the mentally insane became a part of the past. The thought during this time was that medical science would cure mental insanity. When penicillin was discovered to cure syphilus, the medical solution seemed reliable.[9] This period in history created the end of moral treatment, and the beginning of massive, alienated asylums.

AMERICAN FACILITIES (1918-1945)

This period of time marked the increasing dependence upon Freud's psychoanalytic theories of mans' behavior in treatment methods. Many psychiatrists began to abandon the mental asylums and turn to office treatment of upper and upper-middle class citizens. However, psychoanalytic theory was successfully brought to asylums by Adolf Meyer and William Alanson. These two men integrated psychoanalytic concepts and social concepts into several asylums. This achievement prepared the way for social psychiatry to become an important treatment method in the future.

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8. Charles E. Goshen, M.D., "A Review of Psychiatric Architecture and the Principles of Design," in Psychiatric Architecture, ed. Charles E. Goshen, M.D. (Washington: The American Psychiatric Association, 1959), p. 1.

9. Gripp, Magaro, and McDowell, pp. 36-41.

In 1908, Clifford Beers published his autobiography, A Mind That Found Itself. This book told of his experiences in mental hospitals (beatings, chokings, isolation, and straitjacketing) and laid out a plan to reform the asylums. The book was an instant success. In response to Beer's publication, the National Committee For Mental Hygiene was established in 1909 with Beers as its secretary. This committee founded the community health clinic concept, which involved communities in the prevention and promotion of mental health. Even though the mental hygiene movement enjoyed great success, any type of asylum reform failed.

The asylum population continued to grow. Asylum physicians began to report success with a variety of drastic treatment methods. Hydrotherapy became prevelent, insulin shock therapy was introduced (with the claim of an 88% cure rate), convulsion therapy was introduced, metrazol was used as a therapy (at a 100% cure rate in 1938), electric shock therapy replaced insulin therapy in the 1940's, and the most drastic therapy, prefrontal lobotomy, was stated to produce a 87% discharge rate. Fortunately, the initial claims for these treatment methods have been questioned and a majority of them have been abandoned.

During this time period, social factors were found to produce mental illness. For example, during World War II, doctors found that soldiers on the front line who were subject to prolonged battle suddenly became "mad." This resulted in a study of the relationship between the soldiers and their environment. Soon, psychiatrists generalized these findings to other types of mental illness. This discovery led to a

colaberation between the social sciences and psychiatry.[10]

AMERICAN FACILITIES (1945-PRESENT)

This period of mental hospital history begins with the Congress' passing of the National Mental Health Act (NMHA). The NMHA was passed as a result of testimonies in congressional hearings (which revealed the abysmal conditions in mental hospitals) and due to the recounting of men who were rejected from military service during World War II (those judged mentally unfit). The major effect which the NMHA had on mental facilities was the creation of community mental health centers. Ironically, and billions of dollars later, the asylums still exist in their dismal condition.

At present, there are three major theories of psychological treatment --- dynamic, medical, and social psychology. Dynamic psychology has experienced a rise and is now at a peak of dominance; however, by the 1950's psychoanalysis was no longer a prevelent method of treatment. Psychopharmacology became an effective method of treatment in the 1950's. The usage of stimulants, depressants, and psychoactive drugs became the major treatment in asylums. During the 1950's and 1960's, the newest approach to treating the insane was to reduce social conditions that produce mental illness. This treatment is reminisciencent of moral management.

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10. Gripp, Magaro, and McDowell, pp. 50-53.

Society accepted the social theory of madness. This became evident due to the Mental Health Act of 1952 and President Kennedy's address to congress in 1963. Both events suggested a "new" approach to the care and treatment of the mentally ill --- alleviate social conditions that produce madness. This approach is rather ironic since the madhouse in America was originally based on social theory. (See AMERICAN FACILITIES (1776-1861).) The basic theory was to remove the person from the "bad environment," place him in a "good environment," and release him once he is able to cope with the "bad environment."[11]

During the 1960's, milieu therapy was born. The major elements of milieu therapy were (1) that the patient be treated as an equal to the doctors and the staff, (2) that therapy depended on the patient taking an active role in treatment, and that (3) the patient be removed from the precipitating environment. Milieu therapy also involved patient interaction by creating group activities. There was never one milieu therapy. Since milieu therapy is an integration of psychodynamic theory and sociocultural processes, not a distinct mixture of each, the therapy would vary according to a facilities' staff members and total resources. This treatment method has been referred to as milieu therapy, the therapeutic community, and the therapeutic milieu.[12]

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11. Gripp, Magaro, and McDowell, pp. 63-65.

12. Gripp, Magaro, and McDowell, p. 78.

HUMPHREY OSMOND

The work of Humphrey Osmond (psychiatrist) and Kiyoshi Izumi (architect) is reminiscent of the Kirkbride Sloan mental hospitals. However, the linear design of Kirkbride has been replaced by a circular design. Osmond and Izumi propose that a circular building design promotes normal, stable, and personal relationships. How does the Osmond' plan produce these results?

A Humphrey Osmond plan addresses three areas of patient needs. The first area is sensory deprivation. A persons' senses can be effected by the environment. Perception can be effected by huge dayrooms and long corridors, while "personal space" (Sommer, 1969) is altered with institutionalization. Similarily, one's auditory sensation can be influenced by echos. Tactile perceptions are influenced by uniform clothing and environment. Also, a person's olafactory senses can be effected by poor ventilation --- kitchen and toilet smells. These examples illustrate some of the methods sensory deprivation can be produced in an environment. A second area which Osmond claims for patient needs is "changes in mood." Unlike a home environment, most psychiatric hospitals do not allow a variety of spaces to accommodate different patient moods. A patient must be offered private spaces as well as public spaces. The third area of patient need is "changes in the thought process." For example, a poorly designed environment can influence a person's thought processes. If a patient does not know the time of day, the weather, or his location in a building, then a decline in his thinking processes

will occur. These three areas of patient needs, sensory deprivation, changes in moods, and changes in the thought process, must be addressed in psychiatric hospital designs.[13]

Osmond's basic philosophy, for psychiatric design, is the promotion of stable human relationships. No environment which prevents or discourages stable human relationships should be designed for housing psychiatric patients.

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13. Krasner, pp. 174-175.

design criteria

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SOCIOLOGICAL STUDIES OF PSYCHIATRIC PATIENTS

> "Since the problem of being mentally ill is how to stop doing the things which alienate the person from society, the ill person is no longer a member of society but a person drawn out of it. Ergo, the patient is a social convention."[14]

From a sociological point of view, a person does not become mentally ill until other people identify him as such. It is assumed that when the psychiatric patient is taught proper social behavior, others will no longer view him/her as mentally ill. One of the solutions to aiding the mentally ill is to provide the treatment which can change a person's social behavior.

At the present, "mental hospitals are simply too useful to society."[15] Robert Edwalds describes the mental hospital as having two social functions---(1) a primary function, the hospital is demanded by society, and (2) a secondary function, the treatment and rehabilitation of the mentally insane. The primary functions includes two ideas. The first is public safety, remove all people from society who show disruptive behavior. The second is custodial care; institutions must care for mental patients who cannot care for themselves.[16] Despite societies' actions to remove the mentally insane from the "mainflow" of society, society is apathetic towards the mentally ill. Societies' apathy can be explained

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14. Coryl LaRue Jones, ed. Architecture for the Community Mental Health Center (New York: Mental Health Center, Inc., 1967), p. 27.

15. William A. Caudill, The Psychiatric Hospital As A Small Society (Cambridge: Harvard University Press, 1958), p. 175.

16. Caudill, p. 175.

in four parts. First, the public attaches a stigma to mental illness and; therefore, society is predjudiced towards the mentally ill. Second, society has an inability to identify positively and consciously with mental illness --- society supports cancer and heart disease research, but mental illness has few crusaders. Third is the lack of a natural constituency for mental illness. A relative of a mentally ill person is hampered by their stigma towards mental illness and their possible genetic problems which could be linked to mental illness. Finally, the mental health industry recieves little public exposure; therefore, there is "no constant irritant to produce a resultant scratch."[17] In conclusion, one of the main reasons for the creation of mental hospitals is that society fears these type of "sick" people and wants them removed from society.

In our modern society "a basic social arrangement...is that the individual tends to sleep, play, and work in different places, with different co-participants, under different authorities, and without an over-all rational plan."[18] However, this lack of relationship between differring activities does not occur in a mental hospital. Instead, (1) a patient's life occurs at the same place---under the same authority, (2) all daily activities occur with the same people which are treated equally and do the same activities, (3) all activities are scheduled, and (4) there is a single plan to fulfill the goals of the institu-

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17. John A. Talbott, M.D., The Death of the Asylum: A Critical View of State Hospital Management, Service, and Care (New York: Grune and Stratton, 1978), p. 3.

18. Talbott, pp. 5-6.

tion.[19] The lack of comparability in social arrangements of life between the "real" world and the "psychiatric hospital" world creates a difficult transition for a psychiatric patient to enter society.

When people enter a psychiatric hospital, they finds themselves in new social situations which will influence their behavior and progress. Therefore, life in a psychiatric hospital must be considered a therapeutic experience.[20] Once an individual enters a psychiatric hospital, he must maintain a firm sense of his own autonomous identity. This is necessary to establish meaningful relationships with other individuals. Without these relationships, it is almost impossible to treat the individual.[21] An "ideal" psychiatric hospital design would minimize the unreality of a hospital in contrast to the "real" world. A psychiatric hospital must provide an atmosphere that is as similar to the "real" world as compared to a world of make believe.[22]

> "It is the rare psychiatric hospital, or any other institution for that matter, whose architecture is flexible enough to change and accomidate to changes in patient needs and treatment resources."[23]

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19. Talbott, p. 6.

20. Caudill, p. 326.

21. Laing, M.D., The Divided Self (New York: Pantheon Books, 1960), pp. 45-46.

22. Caudill, p. 333.

23. Talbott, p. 51.

Flexibility is of importance in psychiatric hospital design. As treatment procedures change in the psychiatric field, the architecture must allow the building to accomidate them. Also, the architecture directly influences social conditions. For example, the instability of three-person groups can be eliminated by placing patient rooms and activity areas so that interaction of three individuals or even of three groups will be avoided. This will eliminate the coalition of two individuals or groups against the other.[24] Even though architecture can aid psychiatric treatment, the primary emphasis is on the treatment programs.

> "The success of the activity, and the resulting feelings of achievement or failure on the part of individual patients, depends to a great extent on how well these people were able to get along together."[25]

In conclusion, sociological issues and their inactment play a major role in the successful treatment of psychiatric patients.

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24. Caudill, p. 319.

25. Caudill, p. 323.

SOCIAL INTERACTION

A comparison of two dormitories illustrates successful levels of interaction. One of the dormitories is designed on a corridor concept. Thirty-five residents live in this dormitory and share a common bathroom, lounge, and hallway. The other dormitory uses a suite design. In each dormitory, the same number of students live in four or six person suites. Each suite contains bedrooms, a lounge, and a bathroom. How do these different dormitory designs compare when considering interaction?

To begin, we must compare the square footage per person in each building.

DORMITORY CONCEPTS	ROOM SIZE	CLOSET	BATH	LOUNGE	HALL	TOTAL
CORRIDOR	88 SF	10	9	15	33	153
SUITE	79 SF	8	7	24	38	156

As noted above, the corridor concept and the suite concept are approximately equal when comparing the amount of square footage available for each person.[26]

When comparing square footage per person, the assumption is made that each dormitory is as equally crowded or spacious as the other dormitory. However, suite residents were less likely to consider their environments

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26. Andrew Baum and Stuart Valins, Architecture and Social Behavior: Psychological Studies of Social Densities (New York: Lawrence Erlbaum Associates, 1977), p.23.

crowded when compared to corridor residents. In fact, corridor residents showed clear signs of social overload syndrome (crowding).

Another issue in interaction is group territory. Corridor residents do not have a suitable space to claim as group territory, since there is inadequate control over events occurring in the corridor. However, suite residents control interaction. The suite design shields residents from unwanted interaction --- suites allow privacy. Results of a survey illustrate that 40% of suite residents felt they had control over their group space (lounge), while only 12% of corridor residents felt they had control.[27] Therefore, group interaction occurs in bedrooms in the corridor design, instead of the bedroom acting as private space.

How can this information influence the design of a psychiatric hospital? Since part of psychiatric treatment is to develop normal social relationships with other people, this phase of treatment will be harmed if an environment that is conducive to interaction is not produced.

> "When interior spaces are inadequate or otherwise inappropriate for social interaction and group control, the development and maintenance of social networks may be inhibited."[28]

If the architecture does not enforce the patients interaction, then the social functions of the patients will be hindered. Therefore, a patient will require more time and treatment to allow his social functions to be restored. A psychiatric hospital must have spaces which reinforce social interaction.

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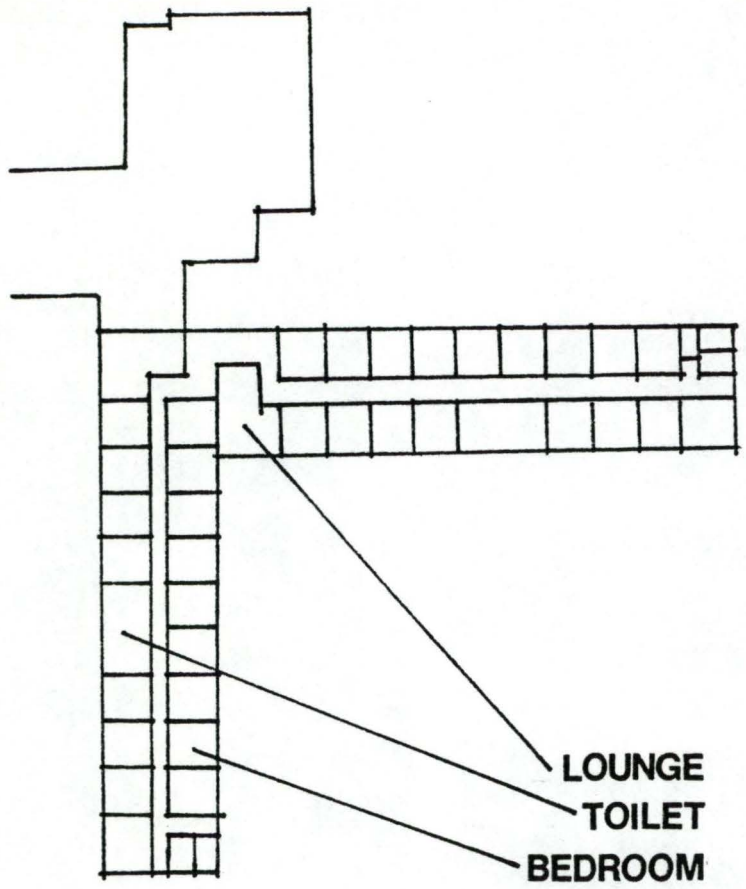
27. Baum and Valins, p. 25.

28. Baum and Valins, p. 24.



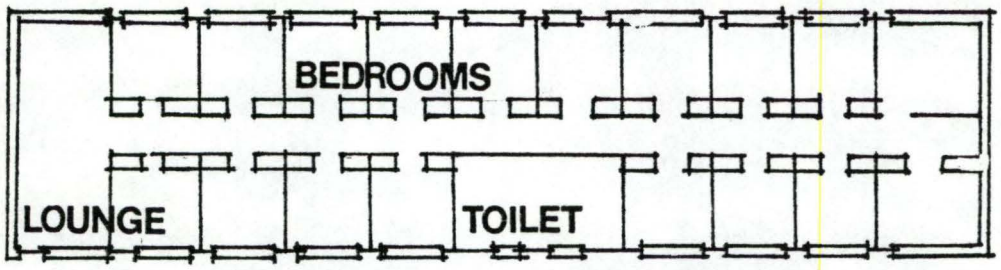
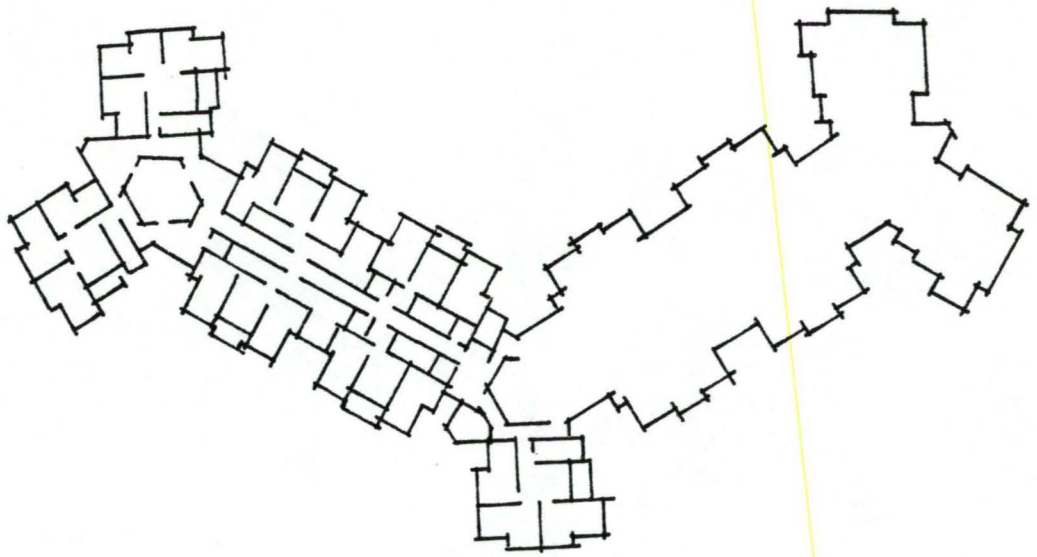


Figure 3. Corridor design and interaction.



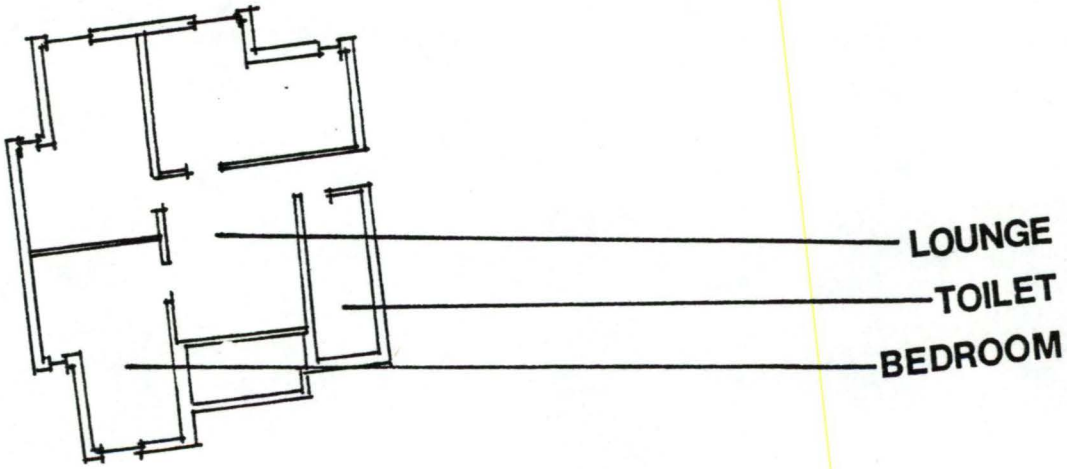


Figure 4. Suite design and interaction

HELPLESSNESS

Two dormitories at Trintity College use a corridor concept. One of the dormitories houses thirty-eight residents, while the other houses twenty-two residents. All the students are in either single or double occupancy rooms. The only significant difference between the two dormitories is the corridor length.

There are fewer residents living in the short corridor dormitory, which allows positive interaction to occur more frequently than in the long corridor dormitory. A more important aspect is that long corridor residents experience frequent uncontrolled interaction. The resident's response to the negative interaction is described as helplessness. Helplessness occurs since the long corridor residents learn to avoid interaction. This is because of previous negative results with interaction with strangers on the corridor.[29] Therefore, in the design of a psychiatric facility, long corridors should be avoided. Psychiatric patients should develop positive confidence in themselves and should be allowed to develop positive social interaction. When long corridors are replaced with short corridors, normal social functions of psychiatric patients will develop at a faster rate.

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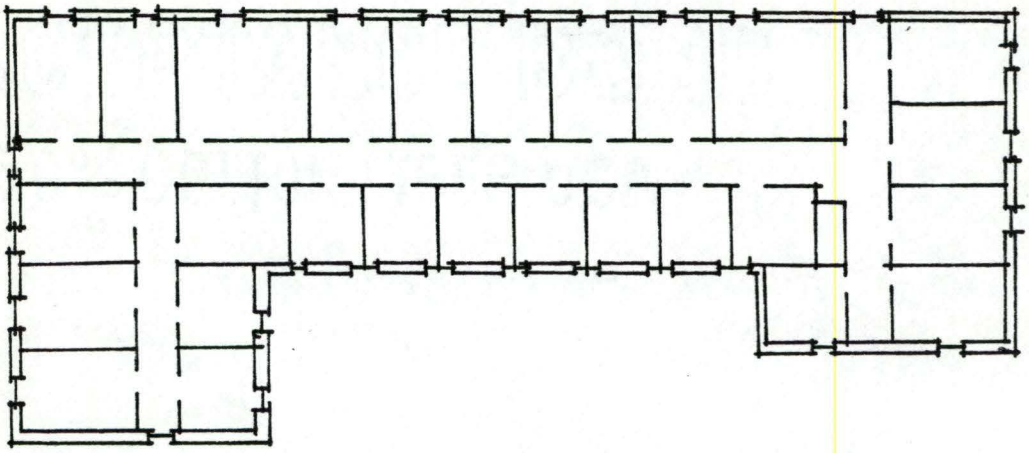
29. Baum and Valins, pp. 80-85.



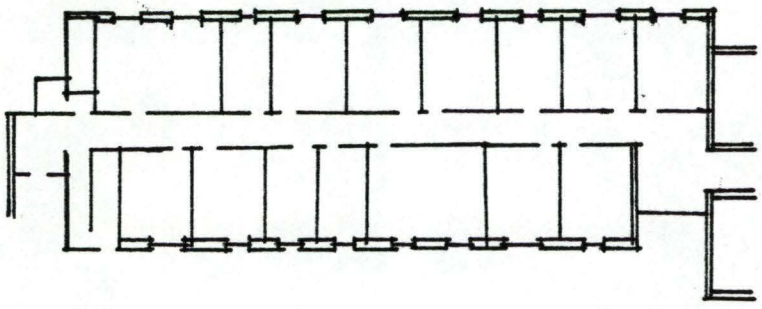


Figure 5. Helplessness: A comparison of human reactions occurring in long corridors and short corridors

case studies

PETERSBURG PSYCHIATRIC INSTITUTE

Project.....Petersburg Psychiatric Institute

Location.....Petersburg, Virgina

Patient beds.....116

Date.....1979

Architect.....Schmidt, Garden, and Erikson

The Petersburg Psychiatric Hospital is composed of three distinct groups of patients --- adult patients, adolescent patients, and drug dependent patients. Also, this hospital includes the support and service areas. The three residential areas (adult, adolescent, and drug dependent) are clustered around the support and service areas. Each residential area is separated from the other residential areas.

Major design issues in this building are:

1) Patient rooms are designed for double occupancy and each pair of rooms have a conversational alcove.

2) The nursing station consists of a small group of seats located across from the patient lounge, rather than the typical freestanding nursing station.

3) The facility is designed as a small community. Private residential areas (patient rooms) are separated from the public areas (dining, gym, library, and crafts) by a main street (connecting corridor).[30]

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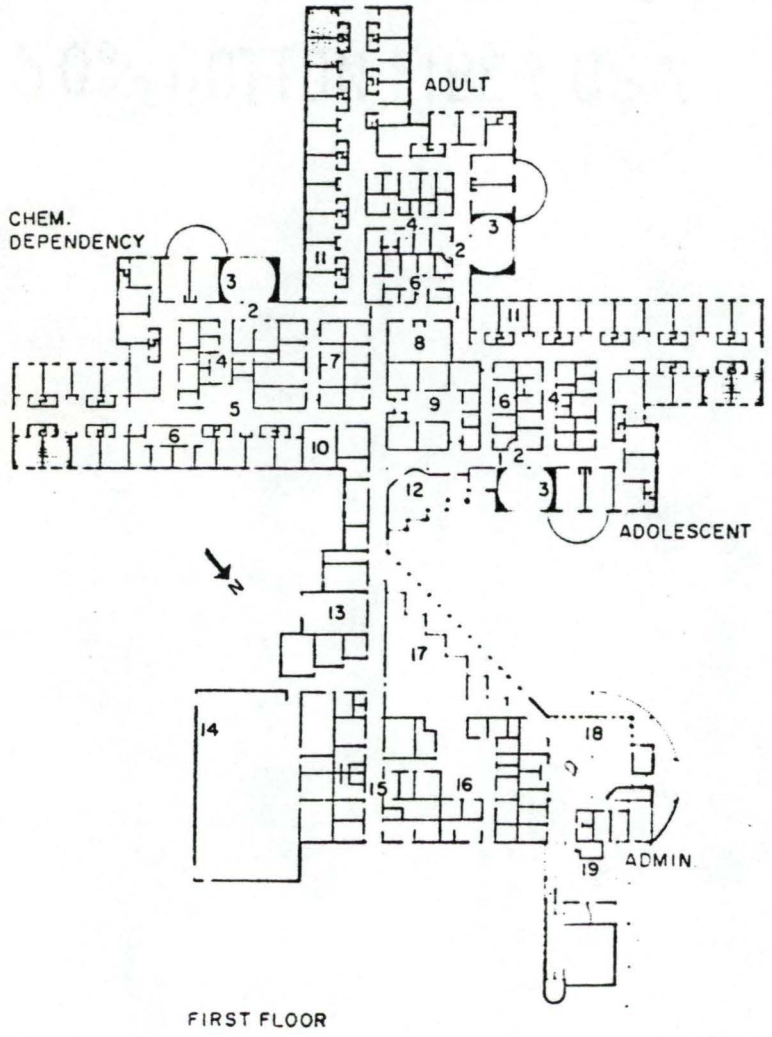
30. "Petersburg Psychiatric Institute," Architectural Record, Vol. 167, No. 5, May 1980, p. 120.

There are several psychiatric design problems in this facility. One of the problems is the fulfillment of the spacial program. For example, a "conversation alcove" is the door opening that is produced by inboard toilets. This space may be available for conversation, but unless the doors are removed, the space will never be used. Also, a limited number of treatment rooms are provided. Because of the few treatment areas, a regimented schedule to use these spaces will be necessary. Therefore, the patients will become involved in specific activities at specific times. A choice of activities is impossible since space is not available to house the activities. In this facility, the "nearness" of the three patient groups has the potential to produce negative social interaction. The possible mixture of drug dependent patients with adult or adolescent patients could create poor social conditions. Overall, this facility is a "typical" psychiatric hospital.



1 *Entrance to unit*
2 *Nurses' station*
3 *Lounges*
4 *Unit support*
5 *Detoxification suite*
6 *Unit doctors*
7 *Doctors' offices*
8 *Group therapy*
9 *Education unit*
10 *Pharmacy*
11 *Three swing rooms*
12 *Library*
13 *Occupational therapy*
14 *Recreational therapy*
15 *Building support*
16 *Food service*
17 *Dining room*
18 *Lobby*
19 *Administrative staff*
20 *Administrative directors*
21 *Conference room*

Figure 6. Petersburg Psychiatric Facility

MENTAL HEALTH UNIT

Project.....Mental Health Unit

Location.....Detroit, Michigan

Patient beds.....56 beds

Date.....1980

Architect.....Kaplin, McLaughlin, Diaz

This building is designed to provide living areas for fifty-six inpatients, offices for doctors and social workers, and space for community mental health services. The building is located on a congested urban site adjacent to the main hospital. The Mental Health Unit occupies 98% of the allowable zoning envelope. Therefore, the hospital is zoned vertically. Administration is on the ground floor, patient beds and living areas are on the next two floors, and community rehabilitation, with an outdoor terrace, is on the top floor.

"Institutional" qualities are not apparent when viewing the hospital. This occurs by the sensitive usage of exterior materials --- combinations of brick, glass, and concrete. Inside the building, residential qualities are apparent. The interior usage of residential furnishings, bright colors, and natural light allow this facility to appear non-institutional.[31]

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31. "A Mental Health Center Infills a Tight Urban Site," Architectural Record, Vol. 169, No. 10, Aug. 1981, pp. 92-93.

However, there are two major problems with this facility. The first problem is the site. The building is located on a congested downtown site where only limited outdoor activities can be performed. These activities would have to occur on the roof deck which is to small to allow most outdoor activities. Secondly, social interaction is a problem. The patient's rooms become the only available space for small groups to have private conversations. Small alcoves would have allowed the patients to have private discussions. Other than these problems, this facility has an environment which is conducive to psychiatric rehabilitation.

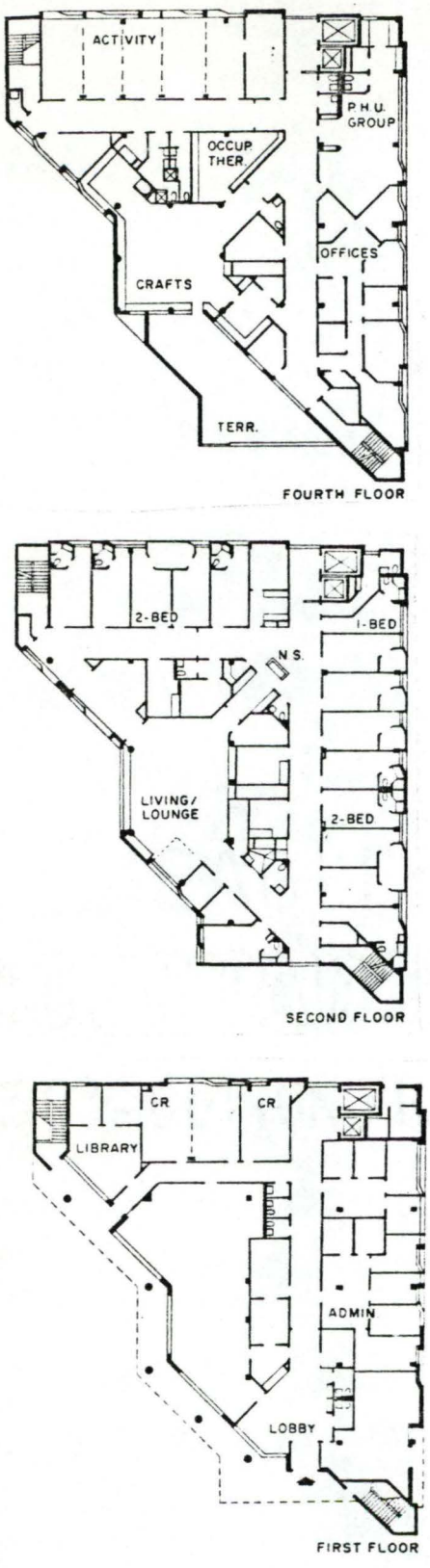

Figure 7. Mental Health Unit

VILLAGE "A"

Project.....Village "A"

Location.....Columbia, South Carolina

Patient beds.....304 beds

Date.....1972

Architect.....The Tarleton-Tandersley
Architectural Group

Village "A" is an architectural response to three design concepts whose emphasis is on continuity of care, flexibility, and opportunity for therapy.[32] These concepts are related to levels of progressive social interaction which are then translated into architecture.

In the village system, there are seven levels of interaction that occur as a person moves from privacy to interaction with a large number of people.

These seven groups are:

The individual.....One person
The sub-group.....Four people
The group.....Twelve people
Multiple groups.....Thirty-six people
A neighborhood.....Seventy-two people
The village.....Groups of neighborhoods
The village system.....Groups of villages[33]

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32. George C. Means and Raymond E. Ackerman, M.D. "South Carolina's Village System," Hospital and Community Psychiatry. Vol. 27, No. 11, Nov. 1976, p. 790.

33. Means and Ackerman, p. 791.

After a patient is "successful" with the seven levels of interaction, he is prepared for entering society as a responsible citizen.

The village system is built to resemble a residential environment. Patients are housed in homelike "lodges" that surround the village center. The village center contains shopping facilities and activity areas.

Village "A" was created by taking a major idea, progressive social interaction, and applying it to architecture. The strong concept makes this facility difficult to criticize, since the concept is successfully implemented. However, when creating a residential environment, variety must be stressed. In Village "A", all of the housing units are virtually identical --- interior and exterior. The duplication of building units allows cost to be decreased, but does not duplicate a "normal" neighborhood. A patient will not encounter any major differences when going from one residence to another. Also, the lack of variety can create confusion when a disoriented patient is going "home."

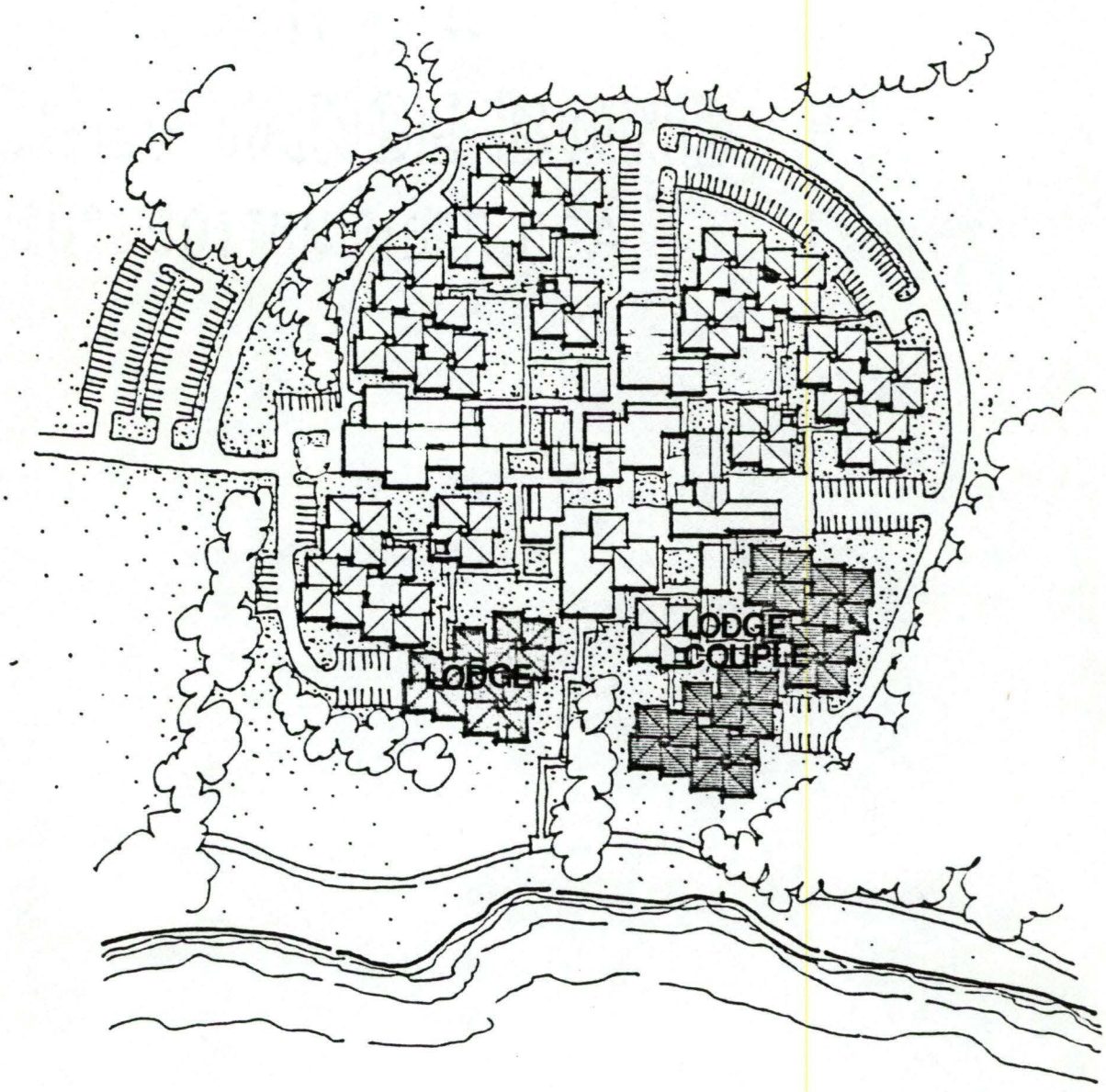


Figure 8. Village "A", Levels of interaction in the entire village complex

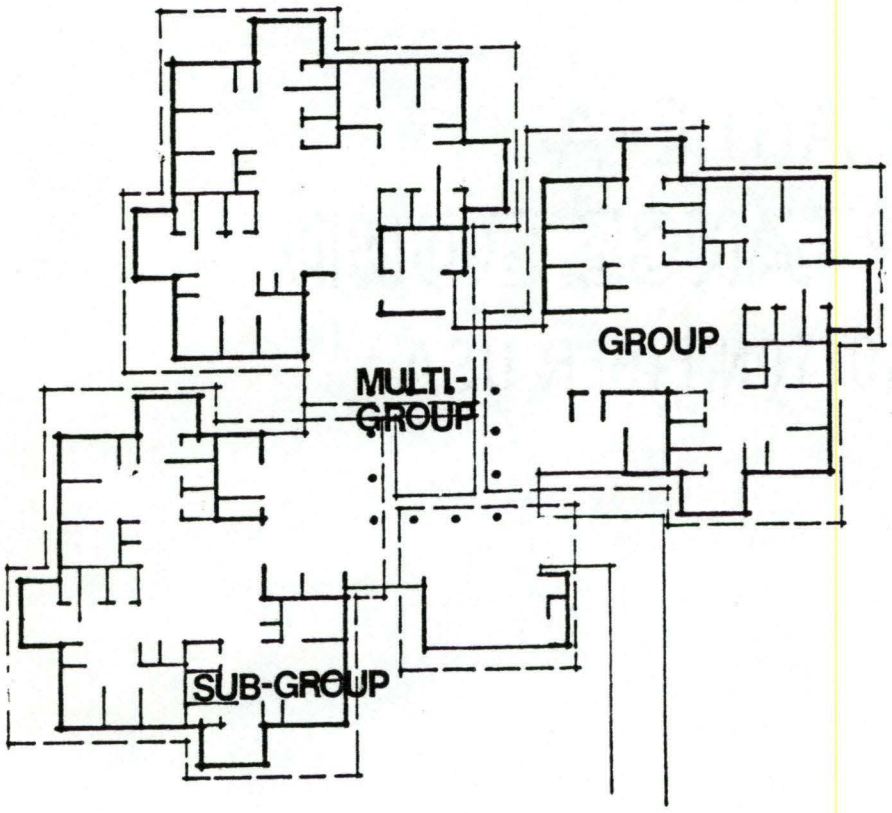
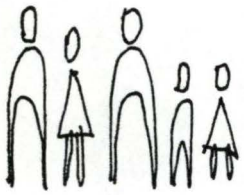


Figure 9. Village "A", Levels of interaction in the lodge unit

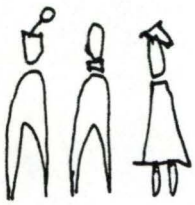
user identification

INTRODUCTION

In the PSYCHIATRIC INPATIENT FACILITY FOR PATIENT TREATMENT AND STUDENT EDUCATION there are three major groups of users. These groups are the patients, the staff members (including doctors), and the students. Minor groups of users are the patients' family and vistors. The following section will give information about the patients, staff members, and students. This information will aid in the determination of spaces and their functions. All of the preceding information is from the MUSC's Certificate of Need for the new building and Dr. Hal Curry, administrator of the existing psychiatric facility.



PATIENTS



STAFF

STUDENTS

Figure 10. User identification at Psychiatric Inpatient Facility

PATIENTS

ADULT PATIENTS

Number of beds	Twenty-two patient beds for the agegroup 16+. (*)
Referral	1. Medical University Department of Psychiatry In-Intake System 2. Intensive Care Unit (from this facility) 3. Psychiatrists in the region and the community 4. Other patients in the region and the community 5. Members of the Department of Psychiatry at MUSC
Commitment	Occassional commitment by MUSC psychiatrists
Length of stay	Average length of stay---21-25 days
Patient Characteristics	Disorders encompass all psychiatric problems---including phobic, psychotic, schizophrenic, schizoaffective, paranoid, affective, anxiety, psychosexual, impulse, sleep, adjustment, and personality disorder
Treatment	A wide variation of treatments---medication, occupational therapy, recreational therapy, behavioral therapy, dynamic psychotherapy, family therapy, group psychotherapy.

* Age may vary depending on patients mental age.

INTENSIVE CARE PATIENTS

Number of beds	Seven beds for agegroup 16+ (*)
Referral	1. Medical University Department of Psychiatry In-

Intake System

2. Adult Section (from this facility)
3. Emergency from physicians in the area
4. Charleston County Emergency Room and other emergency rooms in the area
5. Psychiatrists in the region and the community
6. Members of the Department of Psychiatry at MUSC

Commitment	None
Length of stay	Average length of stay---3-10 days
Patient Characteristics	Disorders encompass all psychiatric problems of adult section plus organic mental disorders. These patients cannot function in an open therapeutic community. ICU patients respond to higher treatment intensity and stimulation.
Treatment	A wide variation of treatments---psychopharmacology, electroconvulsion therapy, behavior modification, activity therapy, and restraints and seclusion.

* Age may vary depending on patients mental age.

BEHAVIORAL SCIENCE PATIENTS

Number of beds	Six patient beds for the agegroup 16+ (*)
Referral	1. Medical University Department of Psychiatry In-Intake System 2. Adult Section (from this facility) 3. Psychiatrists in the region and the community 4. Other patients in the region and the community 5. Members of the Department of Psychiatry at MUSC

Commitment	None
Length of stay	Average length of stay---3-10 days
Patient Characteristics	Disorders encompass psychiatric problems of adult section but---primarily deals with headaches, hypertension, psychophysiologic gasroenteritis, chronic pain syndrome, obesity, smoking, habit tics, and stuttering.
Treatment	A wide variation of treatments---behavior assessment, biofeedback training, contingency management, relaxation therapy, assertive training, and cognitive training.

* Age may vary depending on mental age.

CHILD PATIENTS

Number of beds	Nine patient beds for the agegroup 13-birth. (*) (Youngest child admitted was 26 months old.)
Referral	1. Youth Division Outpatient Clinic 2. Physicians at MUSC or the area 3. Charleston Department of Social Service 4. State Social Service Agencies 5. Charleston Mental Health Service 6. Local schools systems 7. Juvenile courts in S.C.
Commitment	None
Length of stay	Average length of stay---1-2 months
Patient Characteristics	Patients cannot be adequately treated on an out patient basis. Patients may have a full array of psychiatric problems, behavioral problems, or ser-

	ious medical problems, if emotional problems are significant.
Treatment	A wide variation of treatments---direct care of psychiatrist or psychologist, occupational therapy, recreational therapy, behavioral therapy, school, individual psychotherapy, parent meetings, and medication. * Age may vary depending on mental age.

ADOLESCENT PATIENTS

Number of beds	Nine patient beds for the agegroup 14-16 (*)
Referral	1. Youth Division Outpatient Clinic 2. Physicians at MUSC or the area 3. Charleston Department of Social Service 4. State Social Service Agencies 5. Charleston Mental Health Service 6. Local schools systems 7. Juvenile courts in S.C.
Commitment	None
Length of stay	Average length of stay---6-8 months
Patient Characteristics	Patients cannot be adequately treated on an out patient basis. Patients may have a full array of psychiatric problems, behavioral problems, or serious medical problems if emotional problems are signifigant.
Treatment	A wide variation of treatments---medication, recreational therapy, school, multi-family therapy, family therapy, and individual psychotherapy. * Age may vary depending on mental age.

STAFF MEMBERS

ADULT PATIENTS	Two clinical multidisciplinary teams --- each is composed of a psychiatrist, clinical psychologist, psychiatric social worker, head nurse, psychiatric nurses and assistants, occupational therapist, recreational therapist, and students.
ICU PATIENTS	Multidisciplinary team composed of a high ratio of nursing staff:patient, unit director, psychiatrist, social worker, occupational and recreational therapist, psychologist, and students.
BEHAVIORAL SCIENCE PATIENTS	Multidisciplinary team composed of unit director, nurses, social worker, psychiatrist, occupational and recreational therapists, psychologist, and students.
CHILDREN AND ADOLESCENT PATIENTS	Multidisciplinary team composed of psychiatrist, psychologist, social workers, special education teachers, head nurse, psychiatric nurses and assistants, physical therapist, recreation therapist, and students.

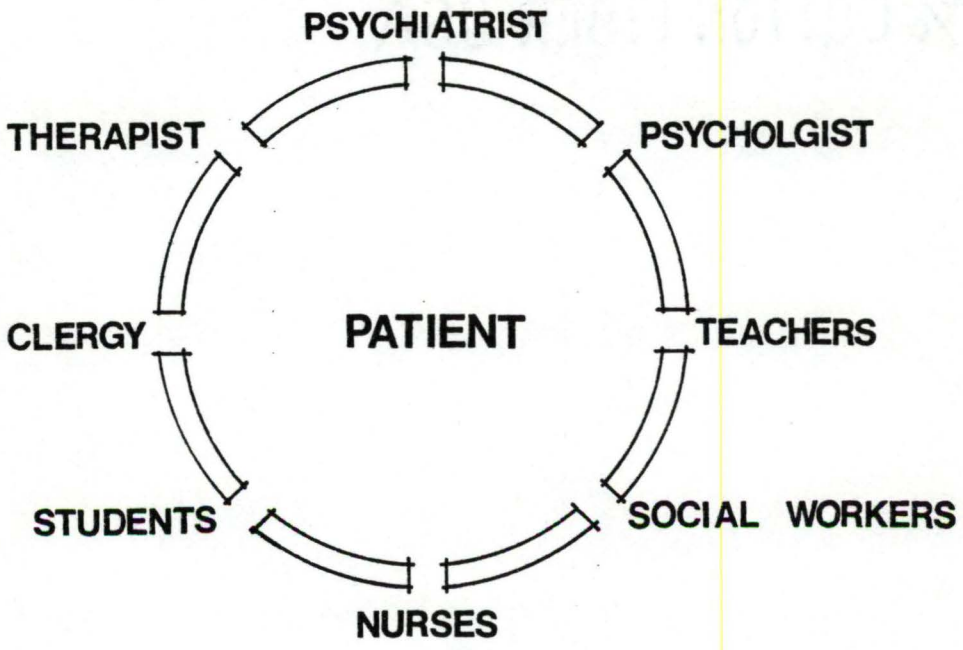


Figure 11. Multidisciplinary team at Psychiatric Facility for Adult Patients.

STUDENTS

STUDENTS	EDUCATIONAL TRAINING	NUMBER IN FACILITY
MEDICAL STUDENTS	Freshman year---lectures and seminars	
	Junior/senior year---rotations	8
PSYCHIATRIC RESIDENCY PROGRAM	First year---emergency room	
	Second year---rotations	2 - 4
	Third year---rotations	1 - 2
	Fourth year---rotations	1 - 2
NURSING STUDENTS	Entire class	2 - 3
PSYCHOLOGY INTERNS	One year program	4
TOTAL STUDENTS		18 - 23

RATIO OF STUDENTS TO PATIENTS - 2 : 5

site analysis

SITE INVESTIGATION

The author has elected to use Perkins and Will's Master Plan to aid in the selection of a site. This master plan was implemented in 1981 by the Medical University of South Carolina at Charleston. Since this time, several buildings have been erected at the location that was recommended by the master plan. Also, variations to the Perkins and Will's proposal have occurred.

The master plan will enable a site to be selected that is useful at the present time period, as well as in the future. Therefore, a site must allow staff, students, service, and visitors to circulate to the psychiatric facility now, not only after completion of the master plan.

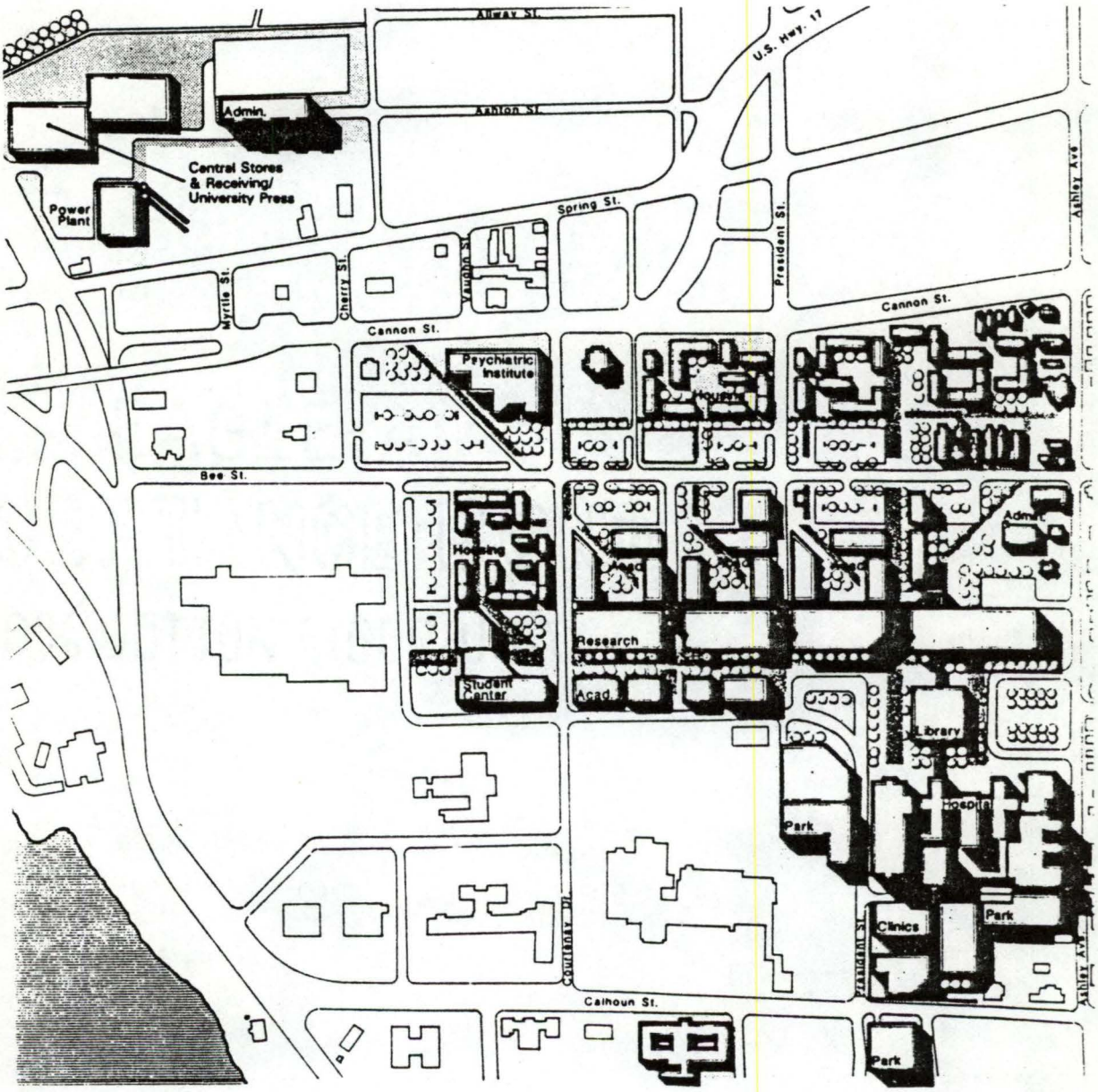


Figure 12. Perkins and Will's Master Plan proposal for the Medical University of South Carolina at Charleston

SITE SELECTION

To begin with, a study of property that is owned by the MUSC must occur. After locating property that is owned by the Medical University and reviewing Perkins and Will's Master Plan, a study is made to determine the location of the PSYCHIATRIC INPATIENT FACILITY FOR PATIENT TREATMENT AND STUDENT EDUCATION.

Perkins and Will's Master Plan locates the new psychiatric hospital northwest of the Medical University Hospital. This site is presently used for extramural programs and continuing education. The site is surrounded by busy streets---Cannon Street on the north, Courtenay Drive on the east, Bee Street on the south, and Cherry Street on the west.

This site was determined to be a poor site for a psychiatric hospital for the following reasons:

1. Distance from MUSC Hospital, staff, students, and services---located two blocks from the main hospital,
2. Busiest road in downtown Charleston is located directly north of site---noise pollution and safety hazard, and
3. Proximity to community---location on Cannon Street (crosstown) enforces negative attitudes the community has towards psychiatric patients.

A further investigation of the master plan illustrates the other

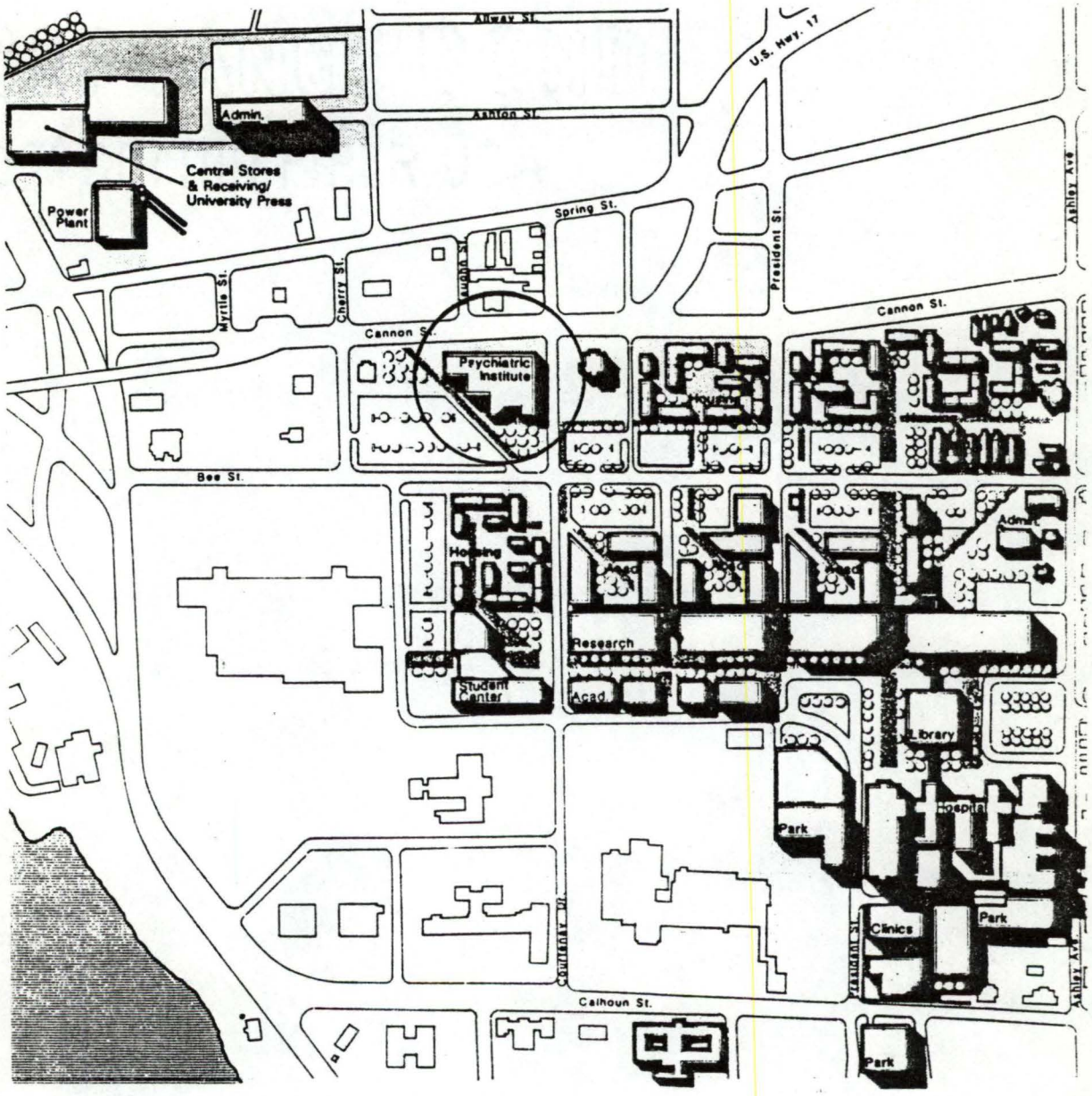


Figure 13. Perkins and Will's location for the proposed Psychiatric Hospital.

possible locations for the psychiatric hospital. From this information alternate sites are proposed. After reviewing these alternate sites, site (1) was picked. This site is located on the corner of Bee Street and President Street. The site can act not only as a therapeutic environment, but can also act as a generator for the master plan. Qualities of this site are:

1. Location in educational spine in Perkins and Will's master plan---the facility is to be used for education as well as treatment of psychiatric patients,

2. Proximity to Medical University Hospital---near to students, staff, services, and diagnostic facilities,

3. Environment is located in a teaching and a residential setting---north of site is residential area and other sides are bordered by teaching facilities, and

4. Produces an operable facility for the MUSC at the present as well as during the future.

This site is selected as the location for the PSYCHIATRIC INPATIENT FACILITY. The following section lists more information about site characteristics.

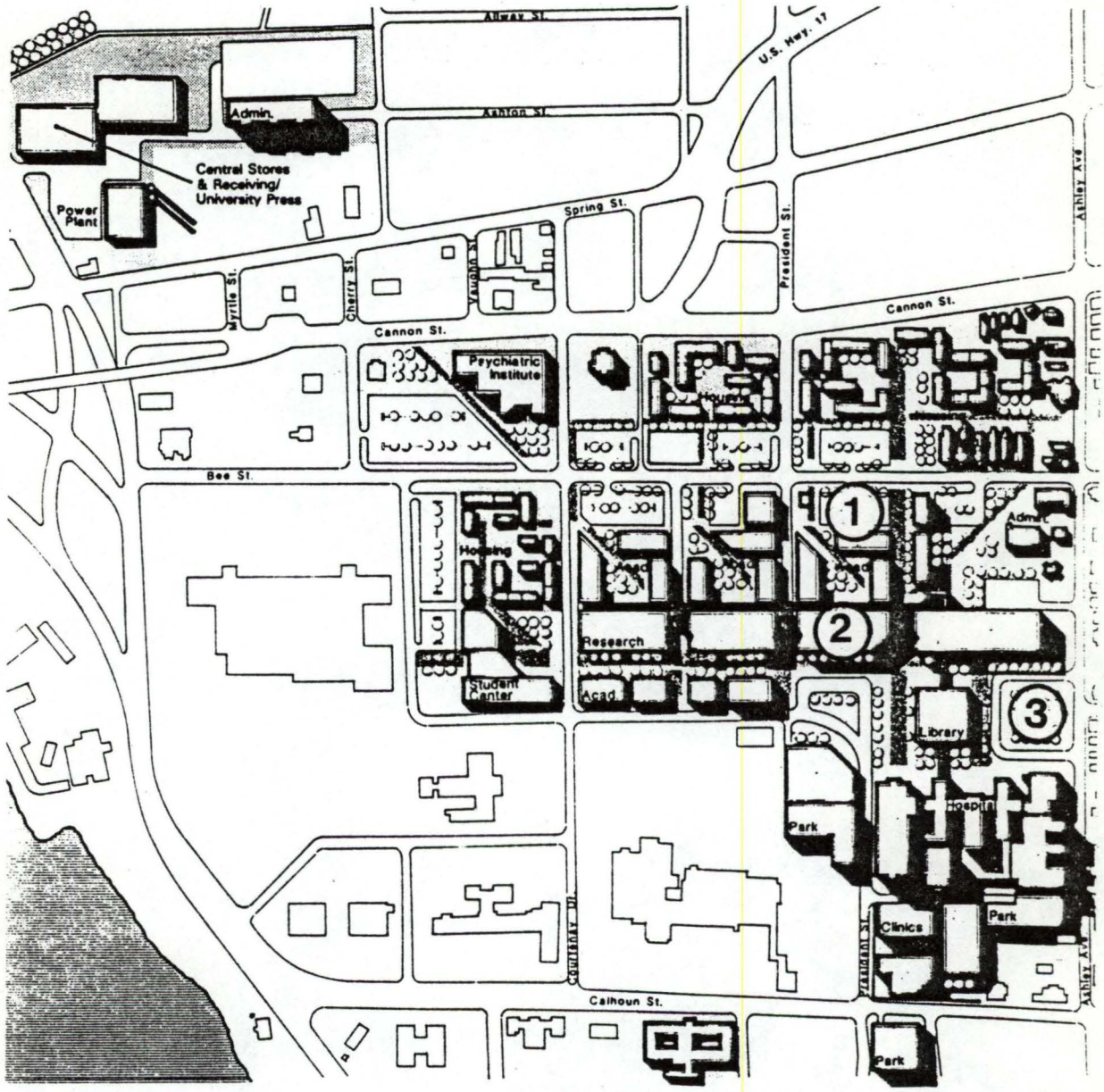


Figure 14. Alternate site locations for the Psychiatric Hospital.

SITE ANALYSIS

This site dictates certain design decisions. For the Psychiatric Facility to merge with the master plan the following requirements are necessary:

1. A pedestrian axis running north to south on the east side of the site,
2. A diagonal pedestrian axis connecting the northwest corner of the site to the southeast corner, and
3. An minor emphasis on the pedestrian link that is between the educational spine and the research spine.

The master plan influences the location of the building, as well as the location of entrances. Different entrances to the building should be located at:

1. Bee Street---the public entrance, since Bee Street will allow vehicular access presently as well as in the future,
2. Bee Street---the service entrance, since a service entrance on President Street will cross a pedestrian axis, and
3. South-east corner---the student/staff entrance, since this portion of the site is located near the hospital, academic buildings, and research buildings.

With this site information, a site has been determined. Also, the site analysis has determined the building form and the entrances. The generator of this site location was the master plan. Perkins and Will's mas-

ter plan led to the location of the building and to the shape of the building.

space analysis

INTRODUCTION

The SPACE ANALYSIS is taken from Perkins and Will's Psychiatric Institute, a proposal for a psychiatric hospital that was done in 1977 for the Medical University of South Carolina at Charleston. Since 1977, MUSC has modified this building program to fit budget cuts and different treatment programs. The following changes were made by MUSC.

1. Eliminate the research division of the Psychiatric Institute.
2. Eliminate the outpatient division of the Psychiatric Institute.
3. Eliminate the drug abuse patient section of the Psychiatric Institute.
4. Add ICU patient beds to the facility.
5. Add Behavioral Science beds to the facility.

The following spacial analysis takes the above changes into consideration. Also, after interviews with Dr. Hal Curry, the administrator at the present psychiatric facility, the square footage proposal of Perkins and Will is the building program that is being used for the new psychiatric facility.

To aid in a treatment program, several minor changes have been added to

the Perkins and Will program. The only variations from the Perkins and Will's program are:

1. Patients dining areas---instead of one large dining room, small eating areas are proposed.

   Pro---therapeutic environment is created by small dining areas. (homelike atmosphere)

   Con---either duplication of food handling personel or slightly different serving times for patient groups.

2. Patient lounge areas---instead of many lounges located in the activity areas, each patient group will have a lounge space.

   Pro---would allow the space to act as lounges as well as therapeutical spaces.

These changes have both been added to suppliment the treatment program. The preceding section is the building program for the PSYCHIATRIC INPATIENT FACILITY.

SPACE ANALYSIS

ADMISSION AND ADMINISTRATION UNIT

TREATMENT FUNCTION	SPACE	EXPLANATION	SQUARE FOOTAGE
Admission Unit	Patient processing	Provide space to receive medical insurance information.	
		Interview rooms 2 @ 100 SF	200 SF
	Clinical Laboratory	Provide space for blood gas tests, venipuncture, necessary storage, sink, and a water closet.	300 SF
	Reception/ Waiting	Provide a lobby area which is controlled by a receptionist; furnish toilets and wheelchair storage.	
		Lobby 420 SF	
		Public toilets 2 @ 90 SF	
		Receptionist 100 SF	
		Wheelchair storage 60 SF	670 SF
Office Unit	Administrator	Provide work space for administrator.	240 SF
	Secretaries	Provide space for three secretaries; allow space for work stations and storage of materials.	300 SF
	Volunteer's Office	Provide space for community volunteers to work.	100 SF
	Doctor's Dictation	Provide dictating area for psychologists and psychiatrists.	100 SF
	Nursing Office	Provide space for nursing director; space for working and storage.	120 SF
	Conference Room	Provide space for meetings between staff, administration, or guests.	240 SF

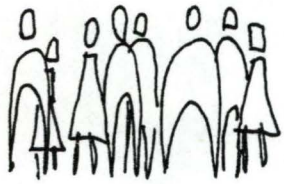
	Medical Records	Provide record storage space and work space for two people.		
		Record storage	380 SF	
		Work area	120 SF	500 SF
	Staff Lounge	Provide space for staff to relax and converse.		
		Staff lounge	250 SF	
		Staff toilet	30 SF	280 SF
Maintenance	Janitor's Closet	Provide space for cleaning supplies and mop sink.		80 SF
Circulation		Provide adequate movement from space to space.		1260 SF
TOTAL				4390 SF

ADULT SECTION: LIVING, SLEEPING, AND ACTIVITY AREAS

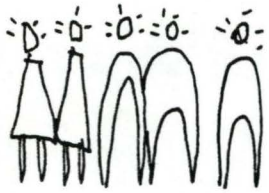
The adult section of this facility is divided into three different types of patients. These three groups are referred to as:

1. Adult patients.....22 patients
2. Intensive care patients.....7 patients
3. Behavioral science patients....6 patients

These three patient groups have separate sleeping/living areas, but they share an activity area. (See USER IDENTIFICATION for more information about the patient groups.)



ADULT



INTENSIVE CARE

BEHAVIORAL SCIENCE

Figure 15. Adult patient groups at the Psychiatric Facility

ADULT SLEEPING/LIVING AREA

TREATMENT FUNCTION	SPACE	EXPLANATION	SQUARE FOOTAGE
Patient Living	Sleeping Area	Two groups are formed with eleven patients; one patient per sleeping unit; sleeping units provide space for dressing, storage, and personal interaction.	
		Patient rooms 22 @ 200 SF	4400 SF
Personal	Bathroom	Provide one per sleeping unit; contains water closet, lavoratory, shower, and storage.	
		Bathroom 22 @ 40 SF	880 SF
Therapy	Cooking Therapy	Provide an area where patients may prepare food; includes storage, refrigerator, and oven; provide staff control over space.	
		Cooking therapy 2 @ 200 SF	400 SF
	Laundry Therapy	Provide area to wash and dry clothes; includes washer, drier, and table; patients are allowed to launder their personal belongings.	
		Laundry 2 @ 100 SF	200 SF
	Activity Areas	Provide area for group activities, sub-group activities, lounge, and eating areas.	
		Activity areas	4380 SF
Physical/ Mental	Central Nursing Station	Provide centralized area which contains seclusion room, tub room, nursing lounge, clean and dirty utility, medication storage, record storage, doctor dictation, and work area; provide a waiting area for visitors; provide offices for supervisors.	
		Seclusion room	120 SF
		Tub room	200 SF
		Nursing lounge	460 SF
		Lockers 280 SF	
		Lounge 120 SF	
		Toilet 60 SF	
		Clean utility	200 SF

		Dirty utility	120 SF	
		Medication room	100 SF	
		Doctor's dictation	50 SF	
		Record Storage	100 SF	
		Work area	150 SF	
		Waiting area	200 SF	1820 SF
Education/ Therapy	Individual Therapy	Provide space for therapy to occur between staff and a patient.	3 @ 200 SF	600 SF
	Group Therapy	Provide space for therapy to occur between staff and a group of patients.	2 @ 300 SF	600 SF
	Family Room	Provide space for family members to visit with patient.		400 SF
Maintenance	Janitor's Closet	Provide space for cleaning supplies and mop sink.		80 SF
Circulation		Provide adequate movement from space to space.		4660 SF
TOTAL				18,420 SF

INTENSIVE CARE SLEEPING/LIVING AREA

TREATMENT FUNCTION	SPACE	EXPLANATION		SQUARE FOOTAGE
Patient Living	Sleeping Area	One group is formed with seven patients; one patient per sleeping unit; sleeping units provide space for dressing, storage, and personal interaction.		
		Patient rooms	7 @ 200 SF	1400 SF
Personal	Bathroom	Provide one per sleeping unit; contains water closet, lavoratory, shower, and storage.		
		Bathroom	7 @ 40 SF	280 SF

Physical/ Mental	Nursing Station	Use central nursing station in the adult sleeping/living area.	
Circulation		Provide adequate movement from space to space.	530 SF
TOTAL			2210 SF

BEHAVIORAL SCIENCE SLEEPING/LIVING AREA

TREATMENT FUNCTION	SPACE	EXPLANATION	SQUARE FOOTAGE
Patient Living	Sleeping Area	One group of six patients is formed; One patient per sleeping unit; sleeping units provide space for dressing, storage, and personal interaction; balcony space for each pair of rooms.	
		Patient rooms 6 @ 200 SF	1200 SF
Personal	Bathroom	Provide one per sleeping unit; contains water closet, lavoratory, shower, and storage.	
		Bathroom 6 @ 60 SF	360 SF
Therapy	Eating	Provide space for patients to dine.	150 SF
	Lounge/ Therapy	Provide area for group therapy, interaction area, and lounge.	
		Lounge/therapy 2 @ 200 SF	400 SF
Physical/ Mental	Nursing Station	Use central nursing station located in adult sleeping/living.	
Circulation		Provide adequate movement from space to space.	1000 SF
TOTAL			2810 SF

ADULT PATIENT ACTIVITY AREAS

(For adult, intensive care, and behavioral science patients.)

TREATMENT FUNCTION	SPACE	EXPLANATION		SQUARE FOOTAGE
Patient Therapy	Occupational therapy	Provide space for occupational therapy, supervisor's office, staff offices, and storage; therapy includes arts and crafts, home economics, construction, and secretarial training.		
		Work room	1150 SF	
		Supervisor's office	100 SF	
		Storage room	200 SF	1450 SF
	Recreational therapy	Provide space for recreational therapy, supervisor's office, staff offices, and storage; therapy includes passive activities, card playing and, other table games.		
		Activity room	910 SF	
		Supervisor's office	100 SF	
		Storage room	200 SF	1210 SF
Personal Hygiene	Toilet	Provide space for water closet and lavatory.		120 SF
Maintenance	Janitor's closet	Provide space for cleaning supplies and mop sink.		80 SF
Circulation		Provide adequate movement from space to space.		1050 SF
TOTAL				3830 SF

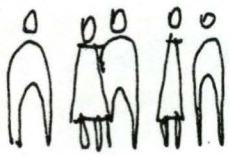
CHILDREN/ADOLESCENT SECTION: LIVING, SLEEPING, AND ACTIVITY AREAS

The children/adolescent section of this facility is divided into two different types of patients. These two groups are referred to as:

1. Child patients.....9 patients
2. Adolescent patients.....9 patients

These two patient groups have separate sleeping/living areas, but they share an activity area. (See User Identification for more information about the patient groups.)

CHILDREN



ADOLESCENT

Figure 16. Children/adolescent patients at Psychiatric Facility

CHILDREN SLEEPING/LIVING AREA

TREATMENT FUNCTION	SPACE	EXPLANATION		SQUARE FOOTAGE
Patient Living	Sleeping Area	One group is formed with nine patients; one patient per sleeping unit; sleeping units provide space for dressing, storage, and personal interaction.		
		Patient rooms	9 @ 200 SF	1800 SF
Personal	Bathroom	Provide one per sleeping unit; contains water closet, lavoratory, shower, and storage.		
		Bathroom	9 @ 40 SF	360 SF
Therapy	Cooking Therapy	Provide an area where patients may prepare food; includes storage, refrigerator, and oven; provide staff control over space.		200 SF
	Laundry Therapy	Provide area to wash and dry clothes; includes washer, drier, and table; patients are allowed to launder their personal belongings.		200 SF
	Activity Areas	Provide area for group activities, sub-group activities, lounge, and eating areas.		
		Activity areas		1700 SF
Education/ Therapy	Individual Therapy	Provide space for therapy to occur between staff and a patient.	3 @ 200 SF	600 SF
	Group Therapy	Provide space for therapy to occur between staff and a group of patients.	2 @ 300 SF	600 SF
	Family Therapy	Provide space for family members to visit with patient.		400 SF
Physical/ Mental	Central Nursing Station	Provide centralized area which contains seclusion room, supervisors, nursing lounge, clean and dirty utility, medication storage, record stor-		

		age, doctor dictation, and work area; provide a waiting area for visitors;		
		Seclusion room	120 SF	
		Supervisors offices.	200 SF	
		Nursing lounge	460 SF	
		Lockers 280 SF		
		Lounge 120 SF		
		Toilet 60 SF		
		Clean utility	200 SF	
		Dirty utility	120 SF	
		Medication room	100 SF	
		Doctor's dictation	50 SF	
		Record Storage	100 SF	
		Work area	150 SF	
		Waiting area	200 SF	1500 SF
Maintenance	Janitor's Closet	Provide space for cleaning supplies and mop sink.		80 SF
Circulation		Provide adequate movement from space to space.		2600 SF
TOTAL				10,140 SF

ADOLESCENT SLEEPING/LIVING AREA

TREATMENT FUNCTION	SPACE	EXPLANATION		SQUARE FOOTAGE
Patient Living	Sleeping Area	One group is formed with nine patients; one patient per sleeping unit; sleeping units provide space for dressing, storage, and personal interaction.		
		Patient rooms	9 @ 200 SF	1800 SF
Personal	Bathroom	Provide one per sleeping unit; contains water closet, lavoratory, shower, and storage.		
		Bathroom	9 @ 40 SF	360 SF
Therapy	Cooking Therapy	Provide an area where patients may prepare food; includes storage, re-		

		frigerator, and oven; provide staff control over space.	200 SF
	Laundry Therapy	Provide area to wash and dry clothes; includes washer, drier, and table; patients are allowed to launder their personal belongings.	100 SF
	Activity Areas	Provide area for group activities, sub-group activities, lounge, and eating areas. Activity areas	2680 SF
Physical/ Mental Maintenance	Nursing Station	Use central nursing station in the children sleeping/living area.	
	Janitor's Closet	Provide space for cleaning supplies and mop sink.	80 SF
Circulation		Provide adequate movement from space to space.	1700 SF
TOTAL			6920 SF

CHILDREN/ADOLESCENT ACTIVITY AREAS
(For children and adolescent)

TREATMENT FUNCTION	SPACE	EXPLANATION	SQUARE FOOTAGE
Patient Therapy	Classrooms	Provide space for classrooms; include adequate space for teaching, class activities, and work space for the teachers. Classrooms 2 @ 500 SF	1000 SF
Personal Hygiene	Toilet	Provide space for water closet and lavatory. 2 @ 100 SF	200 SF

Circulation	Provide adequate movement from space to space.	1400 SF
TOTAL		2600 SF

OFFICE AREAS

TREATMENT FUNCTION	SPACE	EXPLANATION	SQUARE FOOTAGE
Student Offices	Resident Office	Provide space for student to work or to consult patient or family.	570 SF
	Intern's office	Provide space for several interns to work or consult patients.	400 SF
	Nursing office	Provide space for nursing students to work or consult patients.	480 SF
Staff Offices	Faculty office	Provide space for faculty members to consult students, peers, patients, and family members. Faculty offices 9 @ 150 SF	1575 SF
Circulation		Provided in activity areas.	
TOTAL			3325 SF

SUPPORT AREA

TREATMENT FUNCTION	SPACE	EXPLANATION	SQUARE FOOTAGE
Patient Supplies	Central Storage	Provide area to store supplies which patients and staff use.	300 SF
	Loading	Provide space for the loading and unloading of trucks.	100 SF

	Clean and Dirty Supply	Provide storage space for clean supplies and dirty supplies.	200 SF
Circulation		Provide adequate movement from space to space.	260 SF
TOTAL			860 SF

PSYCHIATRIC INPATIENT FACILITY

(Totals includes circulation.)

ADMISSION AND ADMINISTRATION UNIT	4,390 SF
ADULT SLEEPING/LIVING AREA	18,420 SF
INTENSIVE CARE SLEEPING/LIVING AREA	2,215 SF
BEHAVIORAL SCIENCE SLEEPING/LIVING AREA	2,810 SF
ADULT PATIENT ACTIVITY AREAS	3,830 SF
CHILDREN SLEEPING/LIVING AREA	10,140 SF
ADOLESCENT SLEEPING/LIVING AREA	6,920 SF
CHILDREN/ADOLESCENT ACTIVITY AREAS	2,600 SF
OFFICE AREA	3,325 SF
SUPPORT AREA	860 SF
VERTICLE CIRCULATION	3,320 SF
MECHANICAL AREA	2,270 SF
TOTAL GROSS SQUARE FOOTAGE	61,095 SF

design determinants

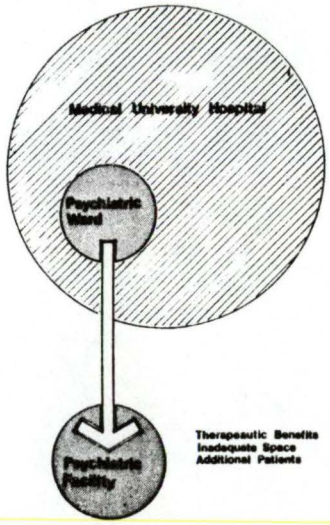
In the PSYIATRIC INPATIENT FACILITY FOR PATIENT TREATMENT AND STUDENT EDUCATION there are three design determinants which influence this design proposal. These design determinants are created by the Perkins and Will MUSC Master Plan (pedestrian axes and location of facility) and the treatment philosophies for psychiatric care (control/observation and indoor/outdoor relationships).

site concepts

control/observation

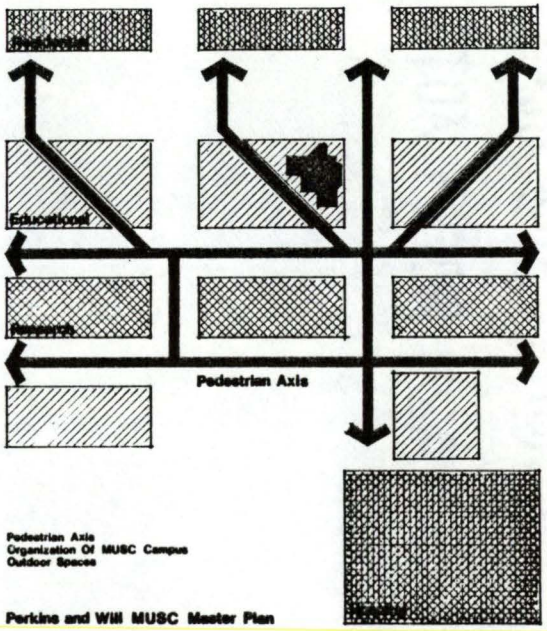
indoor/outdoor relationships

design proposal



Therapeutic Benefits
Inadequate Space
Additional Patients

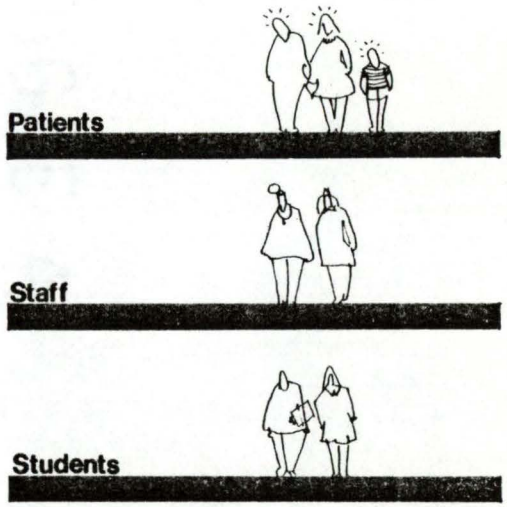
WHY ?



Pedestrian Axis
Organization Of MUSC Campus
Outdoor Spaces

Perkins and Will MUSC Master Plan

WHERE ?

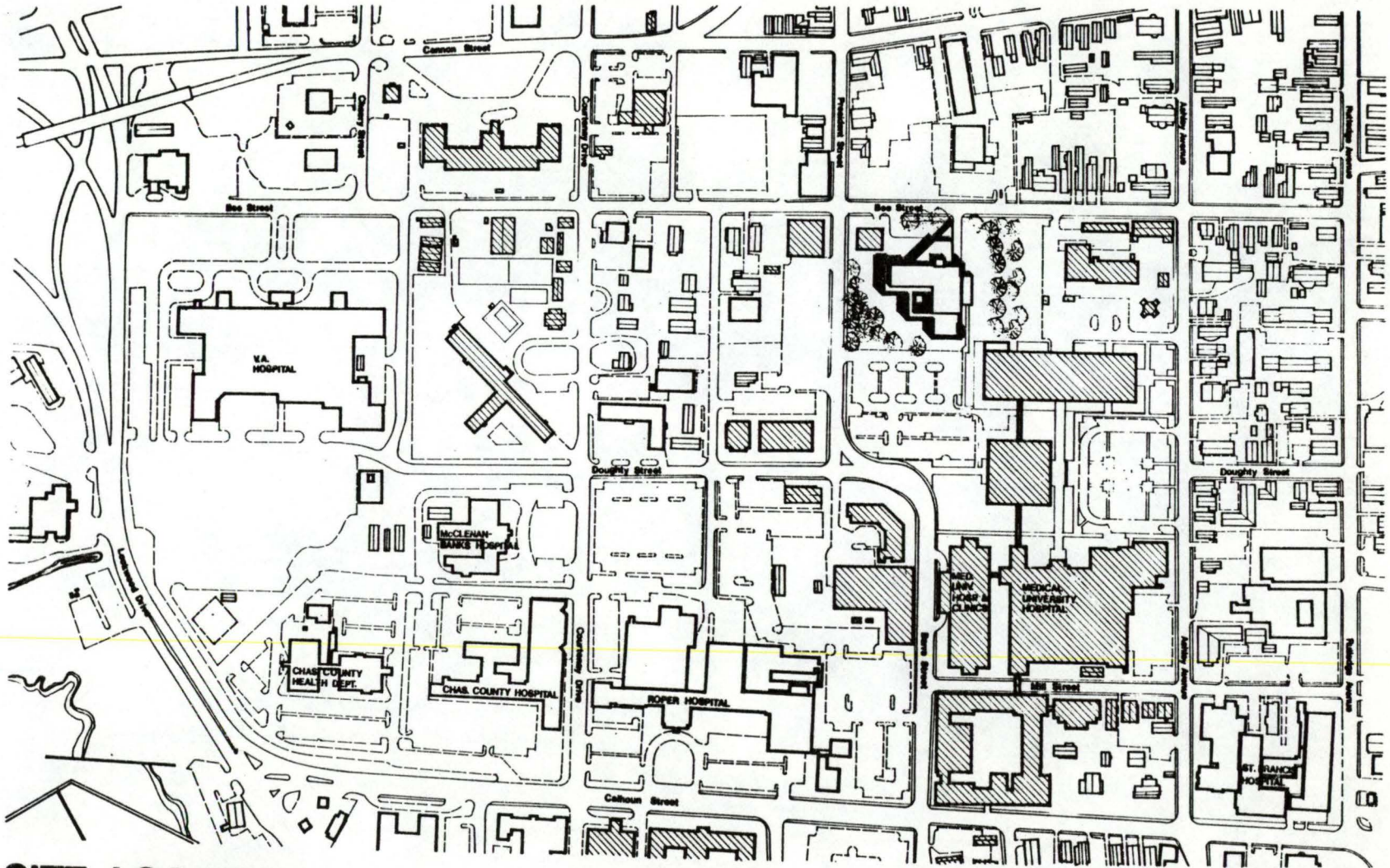


Patients		Students	Staff
Children	9	Residents	Multi-disciplinary
Adolescent	9	Interns	Team
		Nurses	
Adults	22		
Behavior Science	6		
ICU	7		

FOR WHOM ?

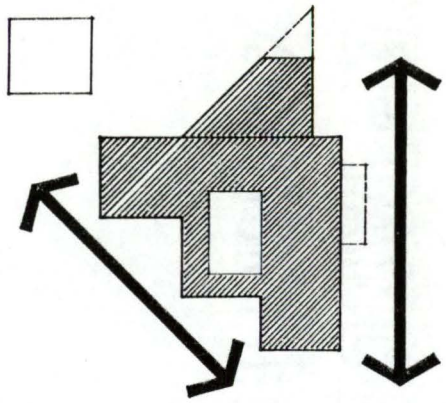
A PSYCHIATRIC INPATIENT FACILITY FOR PATIENT TREATMENT AND STUDENT EDUCATION

A Terminal Project
Spring 1983
Kevin Daniel Crook
Health Care Facilities Planning and Design Studio



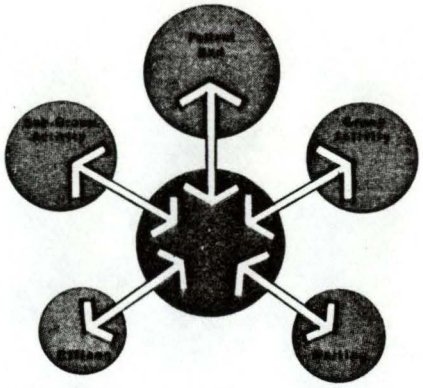
SITE LOCATION

SITE PLAN

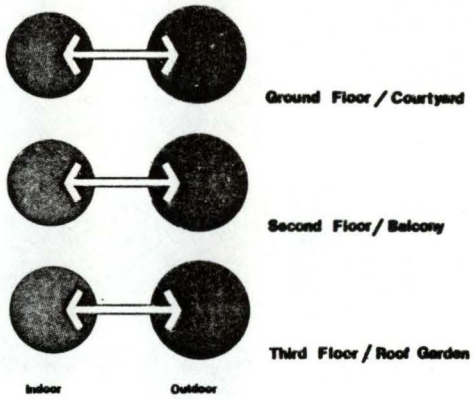


PEDESTRIAN AXIS

DESIGN CONCEPTS



OBSERVATION/ INTERACTION



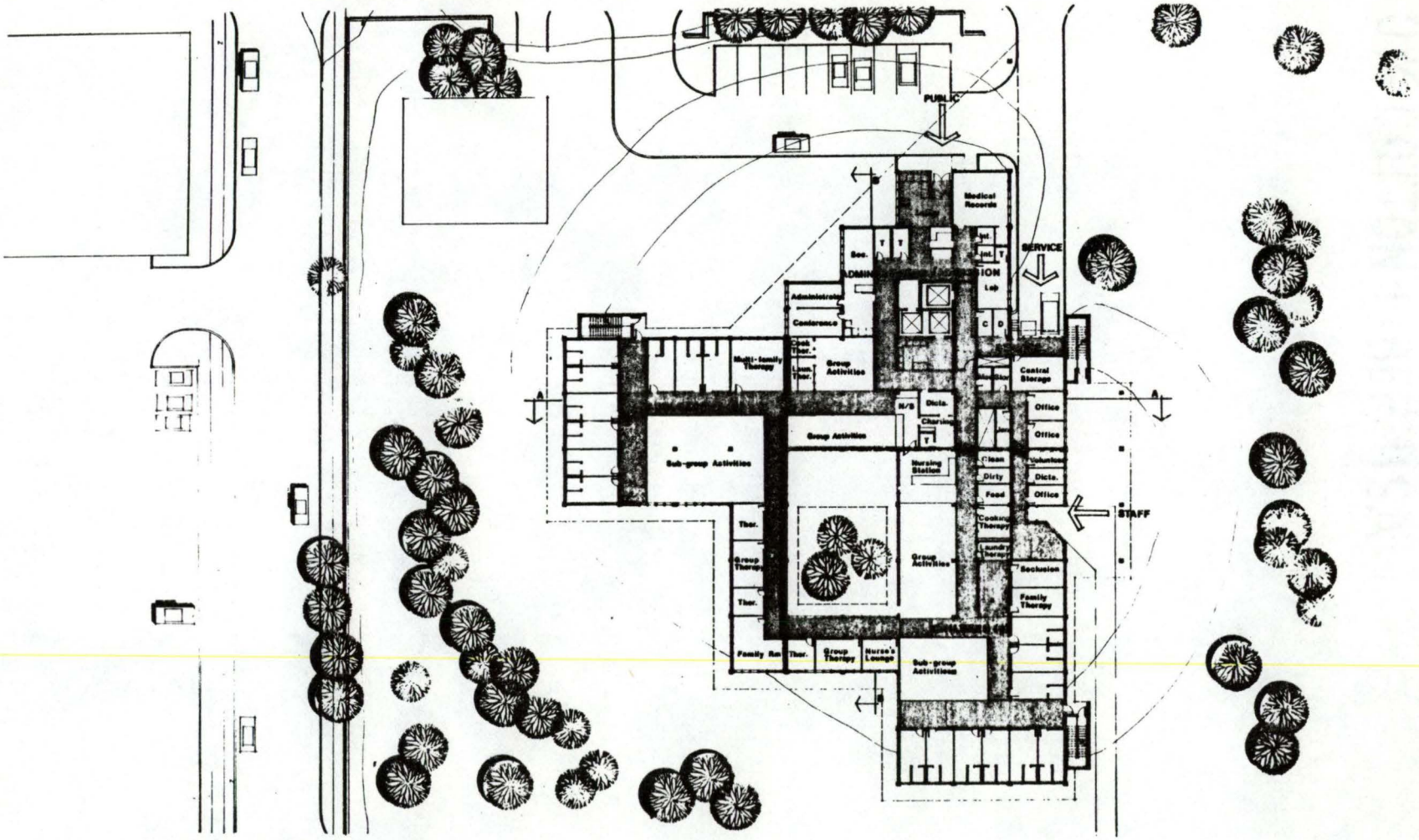
INDOOR/OUTDOOR RELATIONSHIP

UNITED STATES

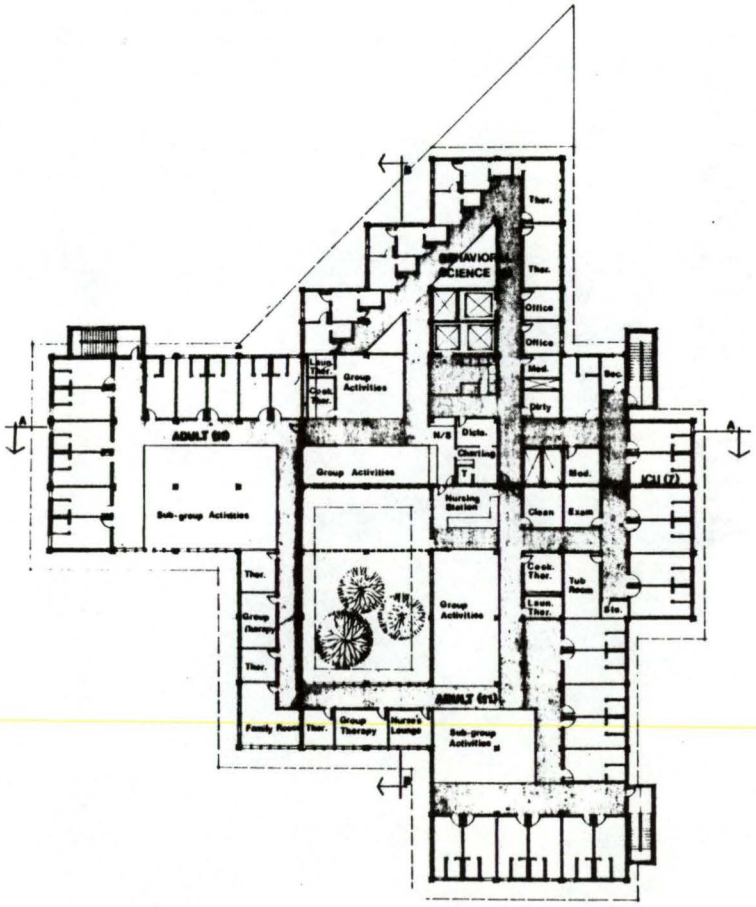
LOCATION

SOUTH CAROLINA

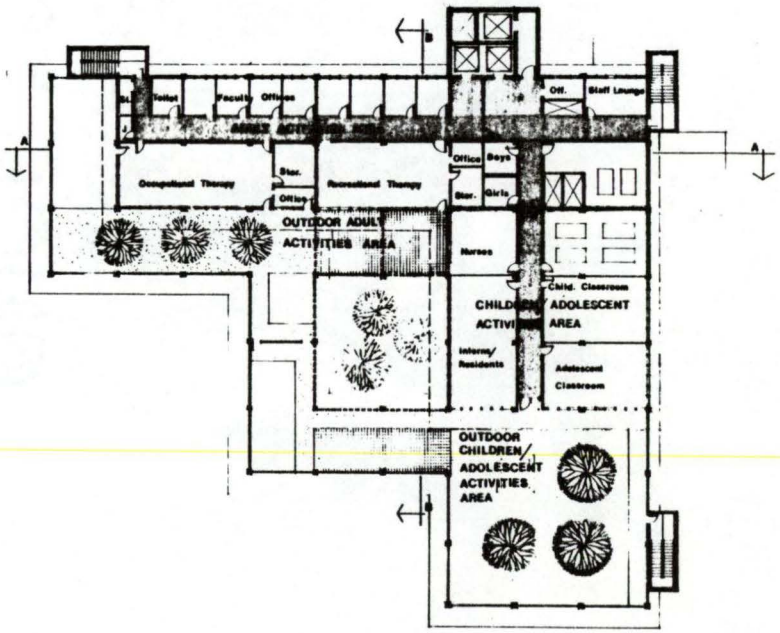
CHARLESTON



GROUND FLOOR PLAN

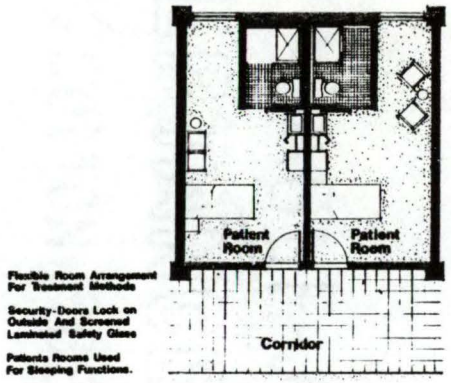


SECOND FLOOR PLAN



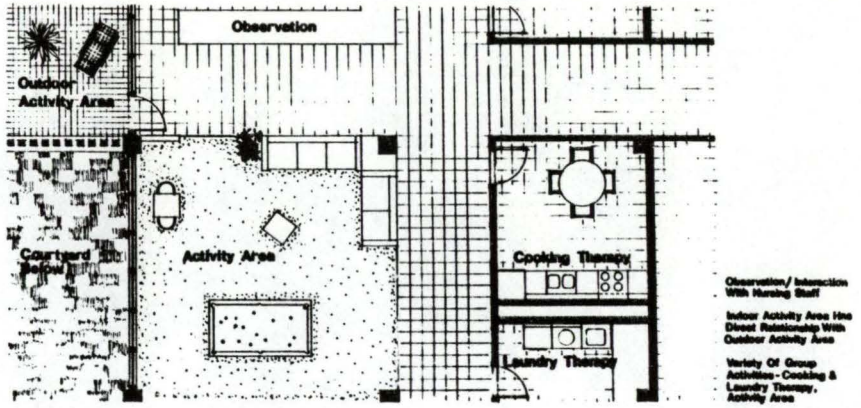
THIRD FLOOR PLAN

FLOOR PLANS



TYPICAL PATIENT ROOMS

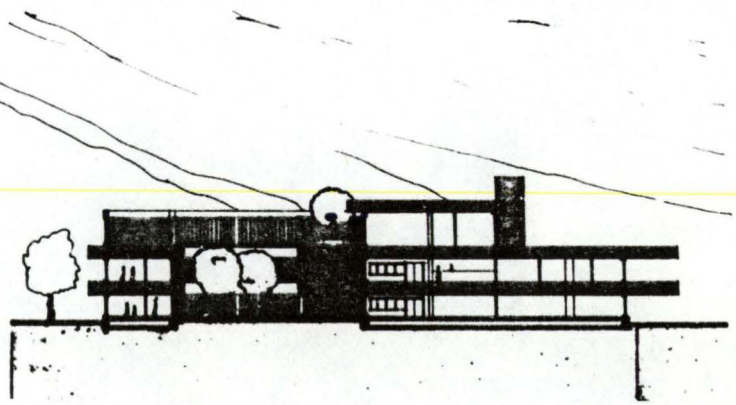
PLAN DETAILS



TYPICAL GROUP ACTIVITY AREA

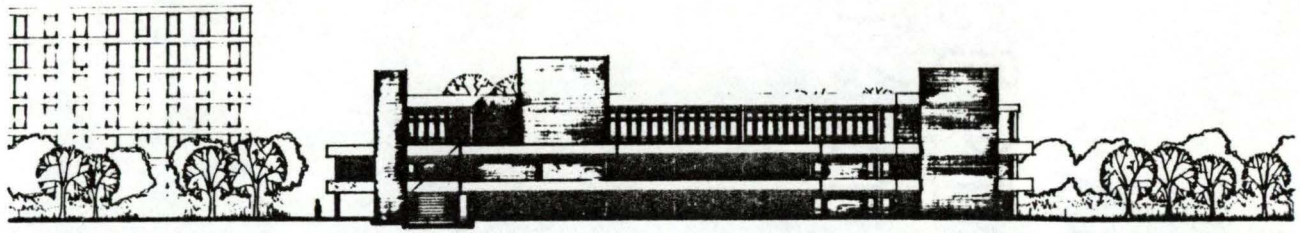
SECTION 'AA'

BUILDING SECTIONS

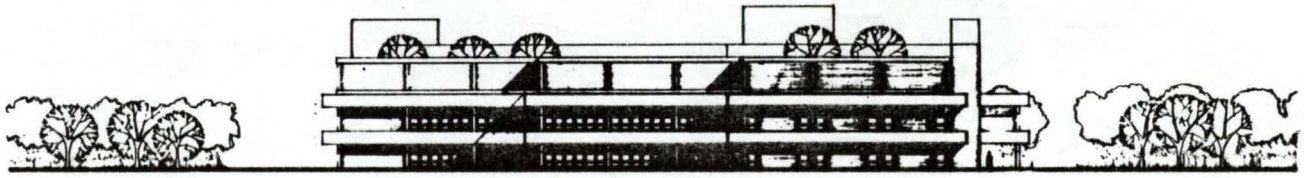


SECTION 'BB'

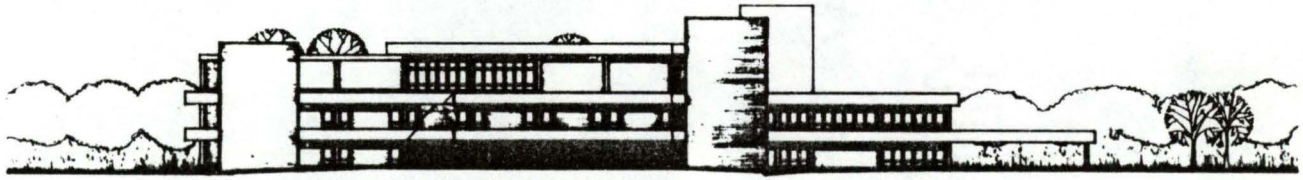
NORTH ELEVATION



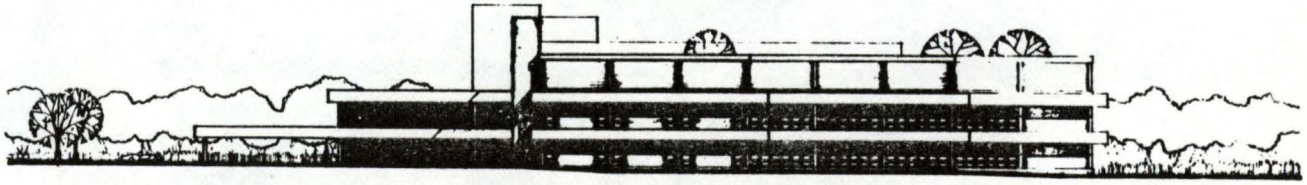
SOUTH ELEVATION



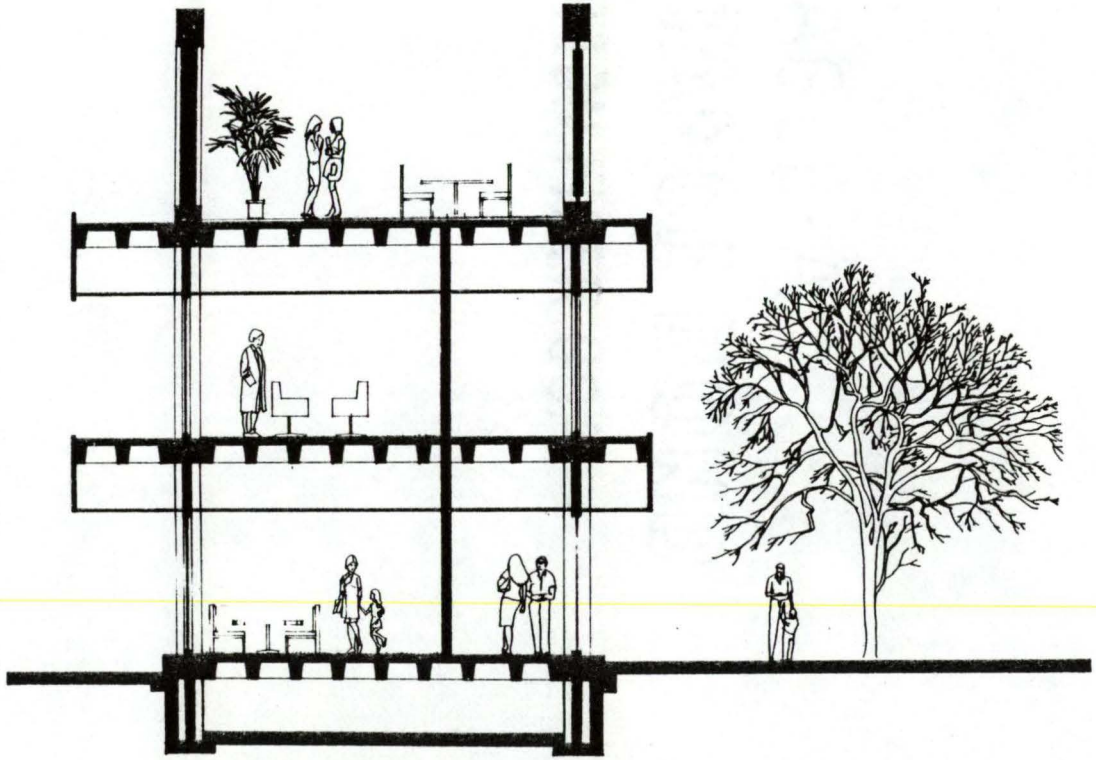
EAST ELEVATION

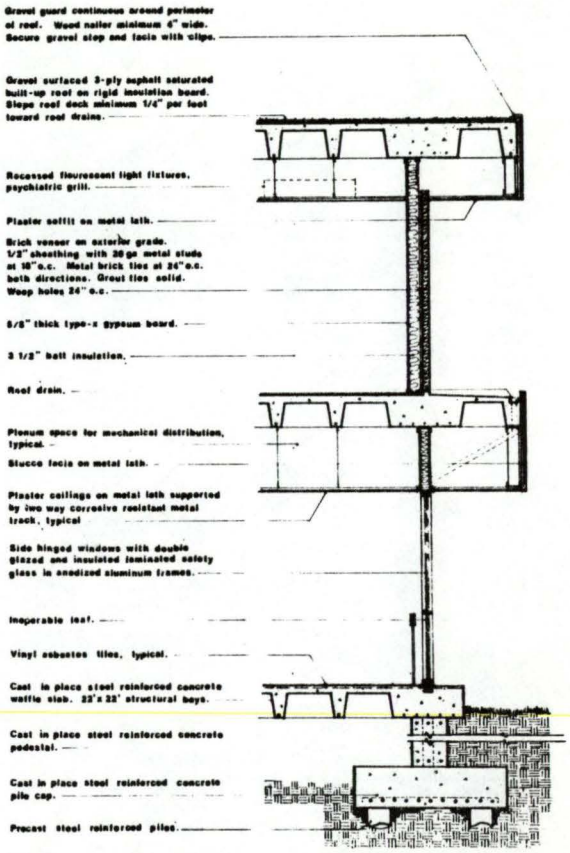


WEST ELEVATION



ELEVATIONS





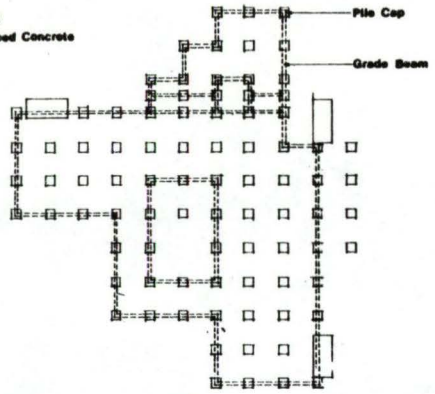
DESIGN SECTION

SECTIONS

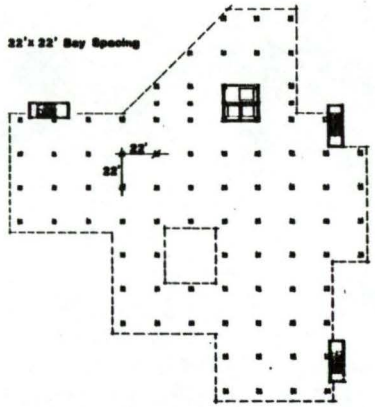
WALL SECTION

Structural Concept

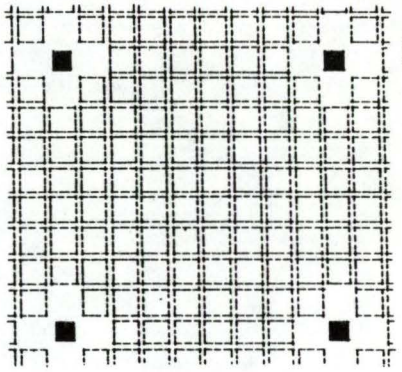
Poured In Place Reinforced Concrete
Friction Bearing Piles



FOUNDATION PLAN



TYPICAL FLOOR

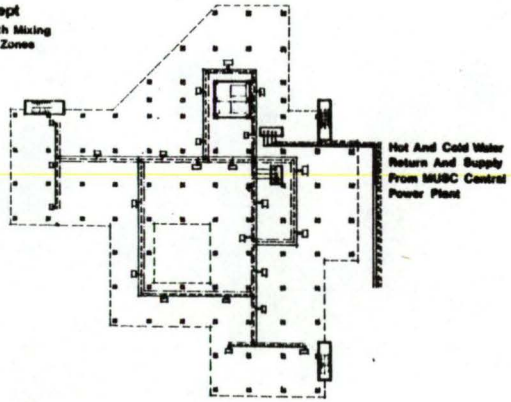


WAFFLE SLAB

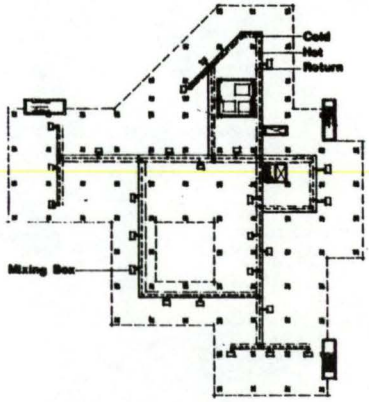
STRUCTURAL PLANS

Mechanical Concept

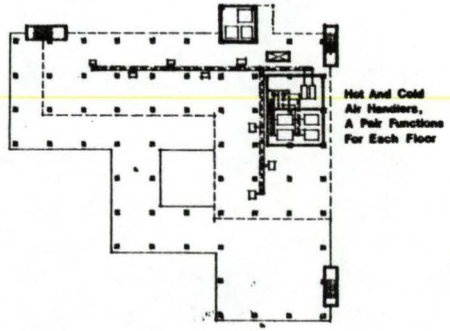
Dual Duct System With Mixing
Boxes For Different Zones



GROUND FLOOR

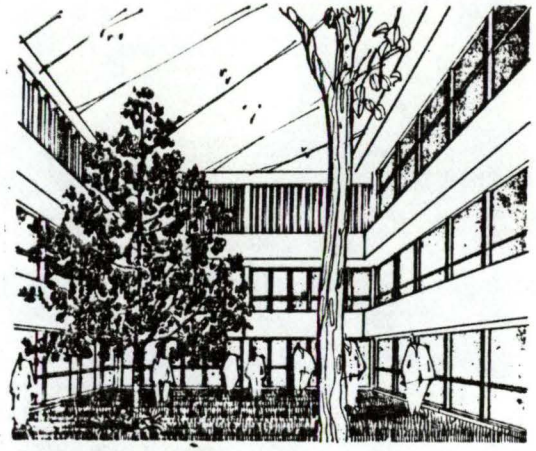


SECOND FLOOR

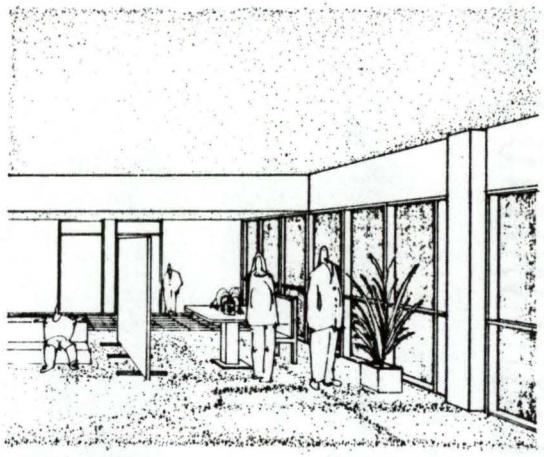


THIRD FLOOR

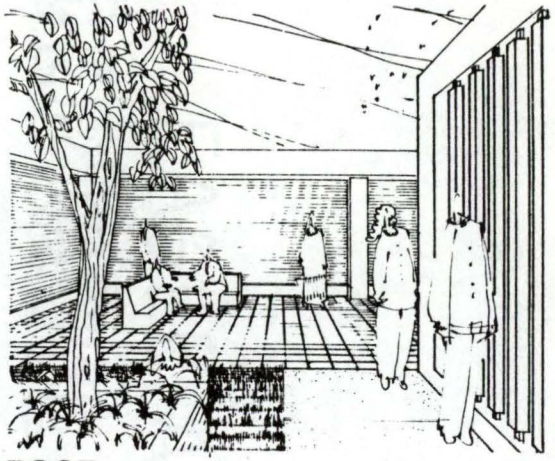
MECHANICAL PLANS



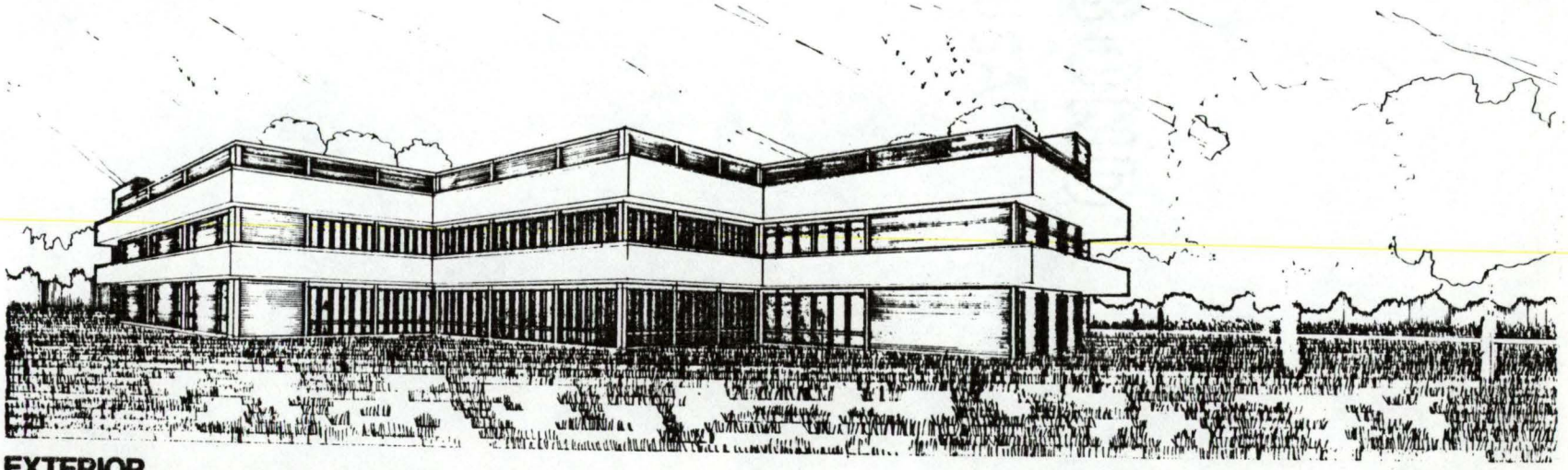
COURTYARD



INTERIOR

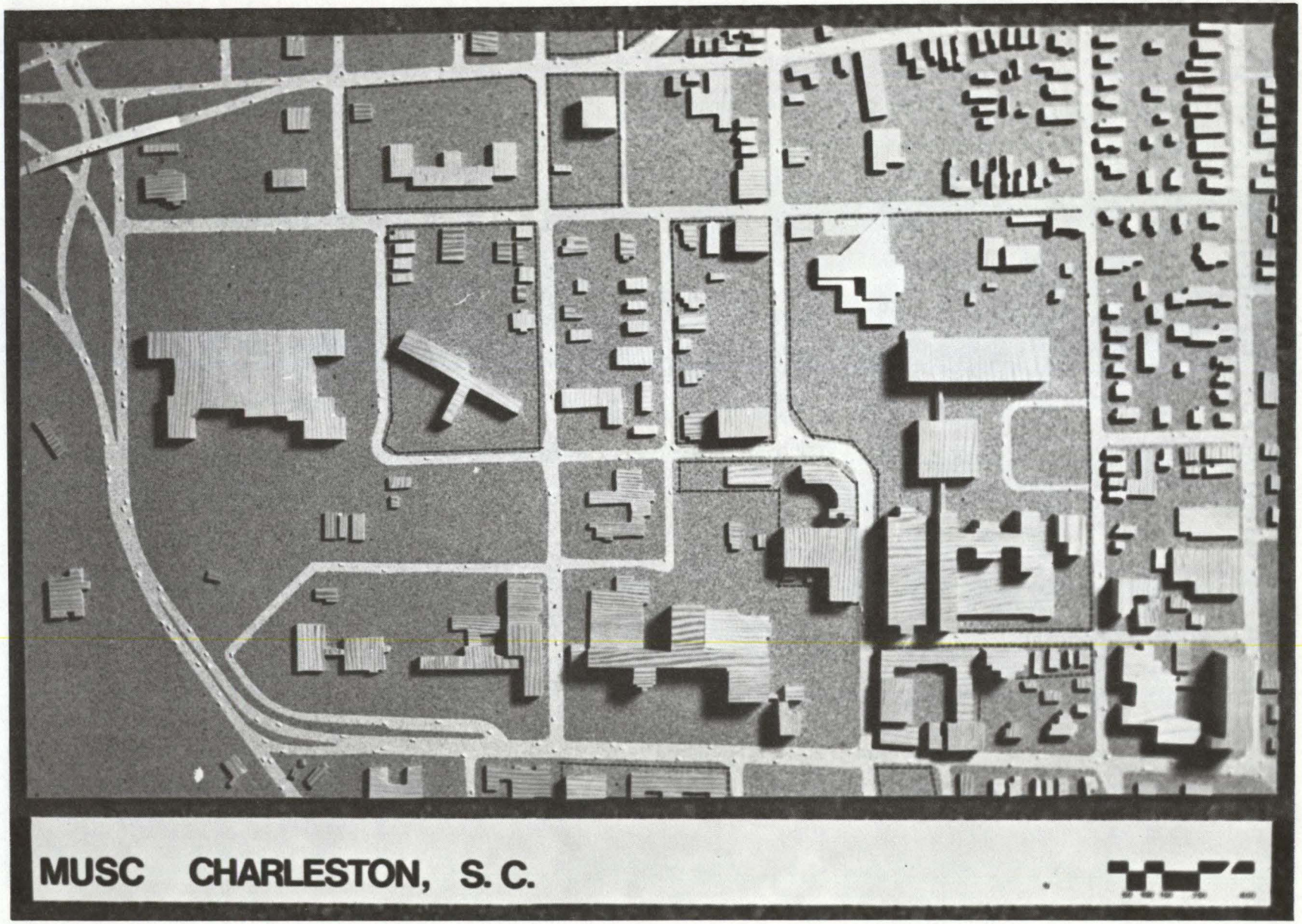


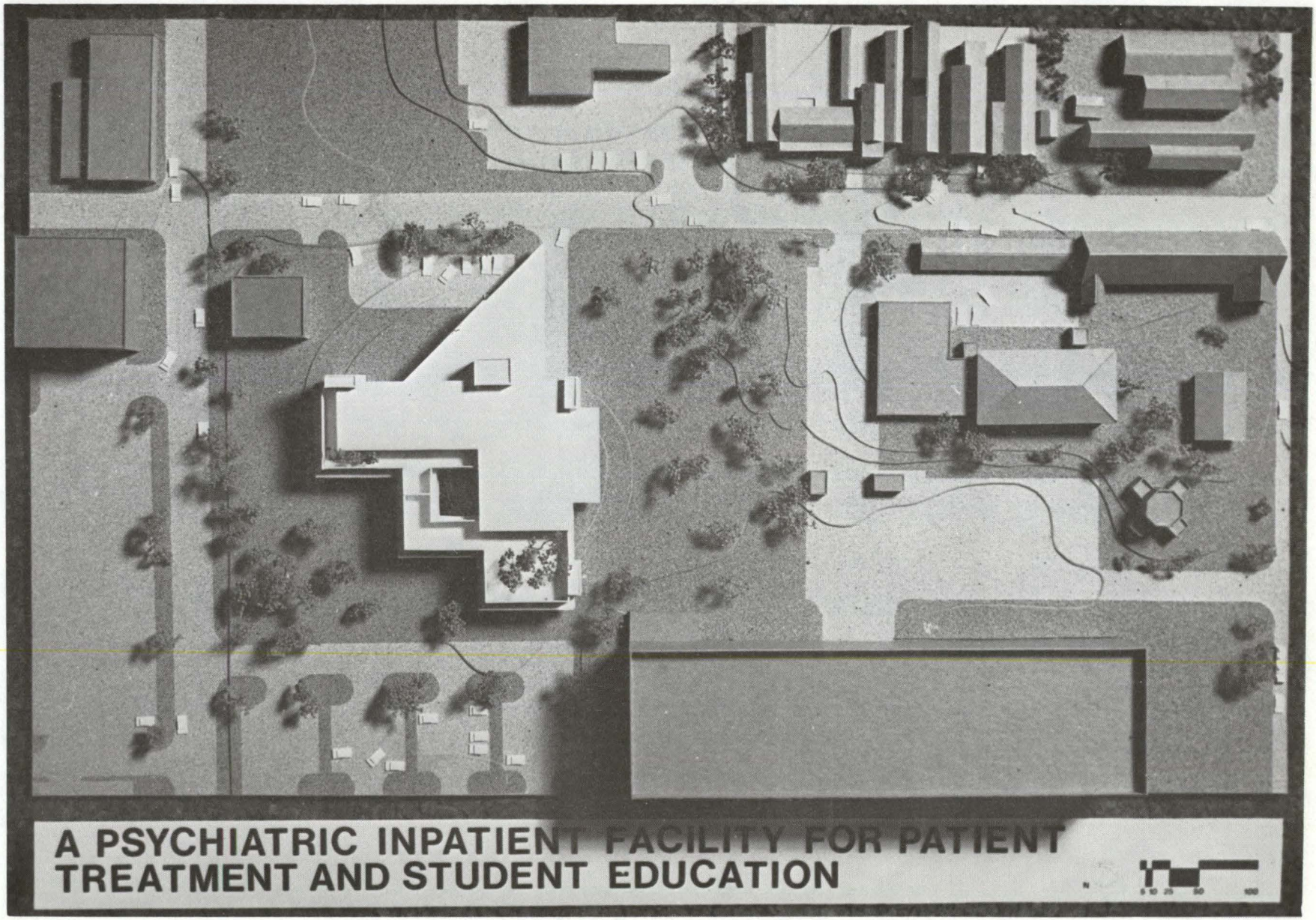
ROOF

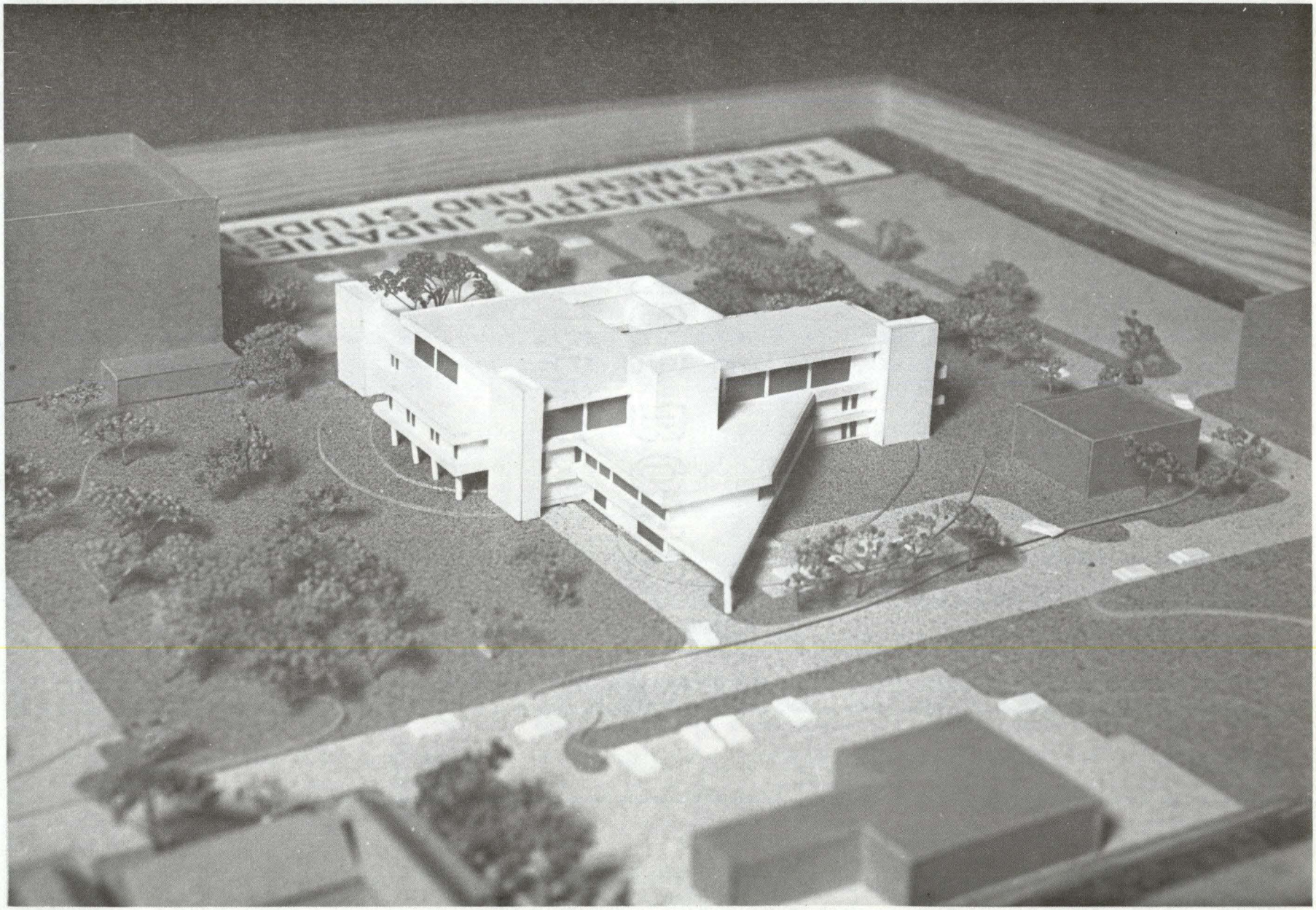


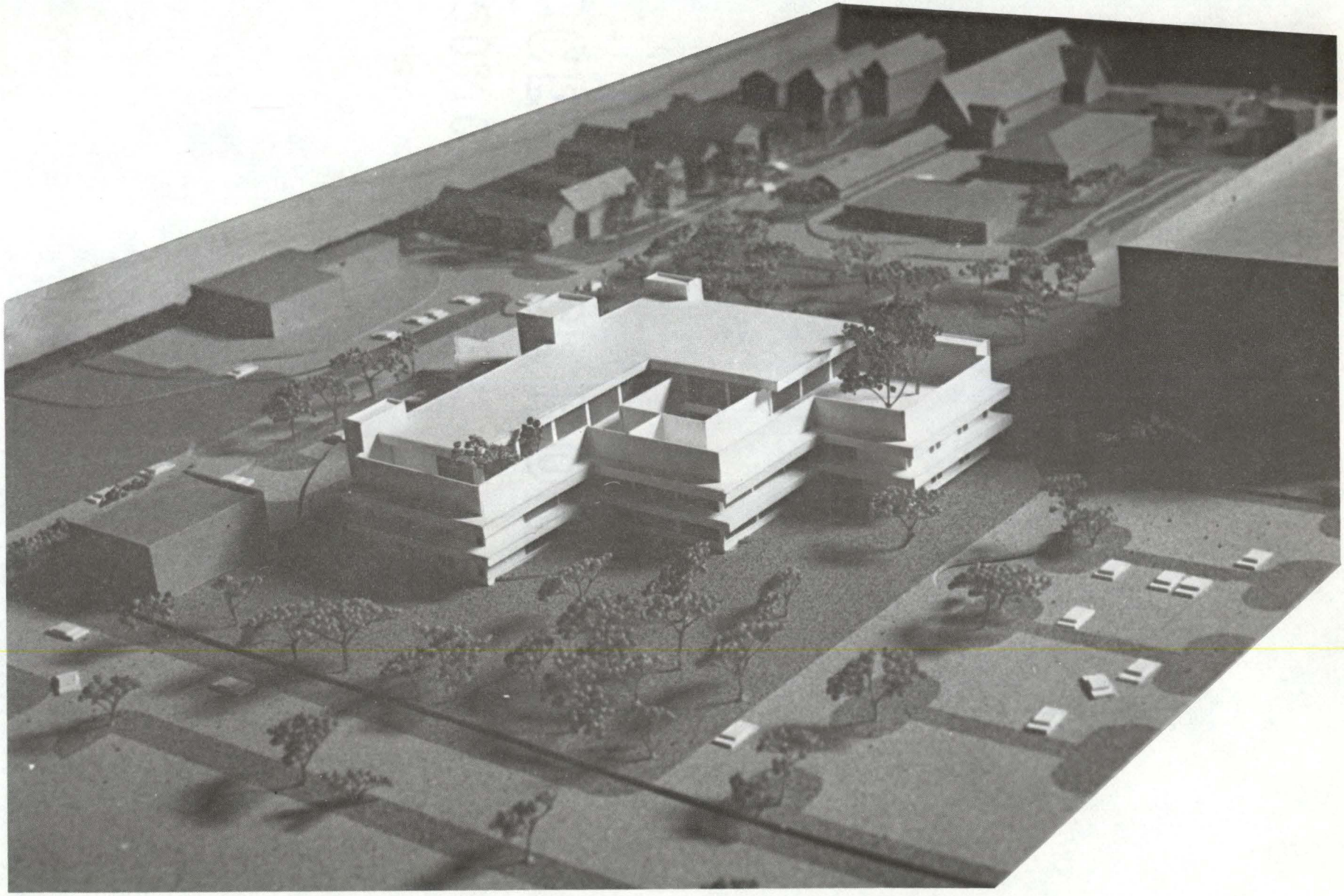
EXTERIOR

PERSPECTIVES


MUSC CHARLESTON, S. C.


A PSYCHIATRIC INPATIENT FACILITY FOR PATIENT
TREATMENT AND STUDENT EDUCATION





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