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Group Practice Center

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GROUP PRACTICE CENTER

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A MULTI-SPECIALTY, HOSPITAL-BASED GROUP PRACTICE PROVIDING PRIMARY CARE AND OUTPATIENT SERVICES FOR GREENVILLE COUNTY AND TRAINING RESIDENTS IN THE MEDICAL EDUCATION PROGRAM OF THE GREENVILLE HOSPITAL SYSTEM.

GREENVILLE HOSPITAL CENTER
GREENVILLE, SOUTH CAROLINA

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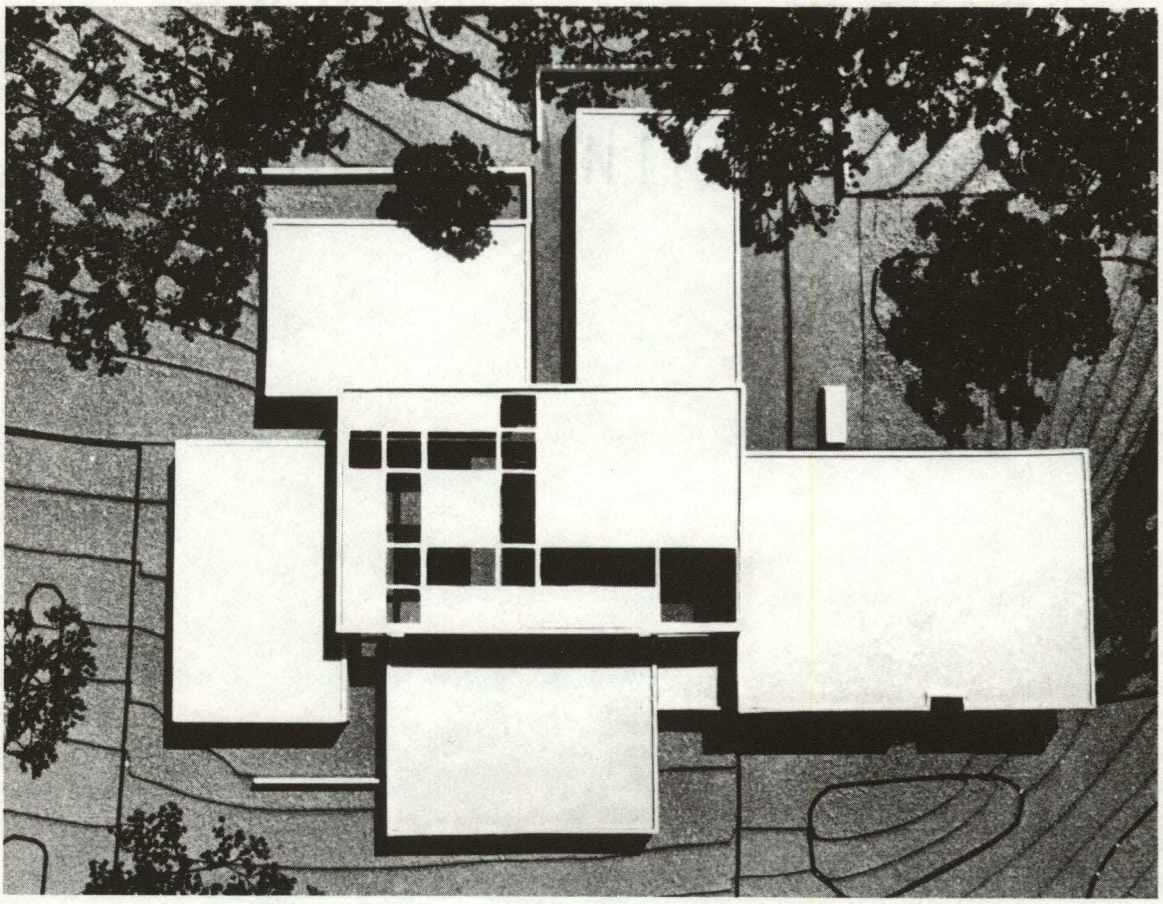
ABSTRACT

The provision of primary care and outpatient services, especially for the medically indigent, is one of the greatest problems facing community hospitals in this country today. Historically, much of the primary health care for the indigent was provided by private physicians in the community who assumed this service as a part of their responsibility as physicians. As the local hospital became more and more the focus of health care in a community, it in many cases absorbed that responsibility by providing services to the indigent in "Outpatient Clinics." An increasingly significant number of outpatients also have been treated in hospital emergency rooms especially "after hours," a very episodic and expensive means of delivering primary care.

In recent years, however, the expense of providing primary care to the indigent at the community hospital has become too great to absorb even by teaching hospitals who were writing off the cost as a necessary expense of training residents. As a result, many institutions, including Greenville Hospital System, are engaged in efforts to reorganize their outpatient clinics or primary care services to the indigent in order to make them more financially independent. A multi-specialty, hospital-based group practice model has accomplished this goal in several locations not only by upgrading the organization and physical setting of the clinics, but also by improving the quality and continuity of care offered there. The result has been the attraction of enough "private" paying patients to make the centers largely self-supporting. Essentially, the model is an organization of physicians (residents and teaching physicians in the case of a teaching hospital) practicing at, or adjacent to, a hospital in several specialties -- family practice, pediatrics, obstretrics, and internal medicine, for example.

As the Greenville Hospital System embarks on its new expansion program at the Hospital Center, the potential exists for establishing such a facility which, with the Family Practice Center, would provide a

recognizable and accessible location of comprehensive primary care and outpatient services for all the people of Greenville County as well as enhancing a growing residency program for the Greenville Hospital System. Though the proposed solution is not unique, the project nevertheless represents a departure from traditional approaches and offers the designer an opportunity to produce innovative responses to community needs and patient demands.



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To Jane,

for understanding, for helping, for caring

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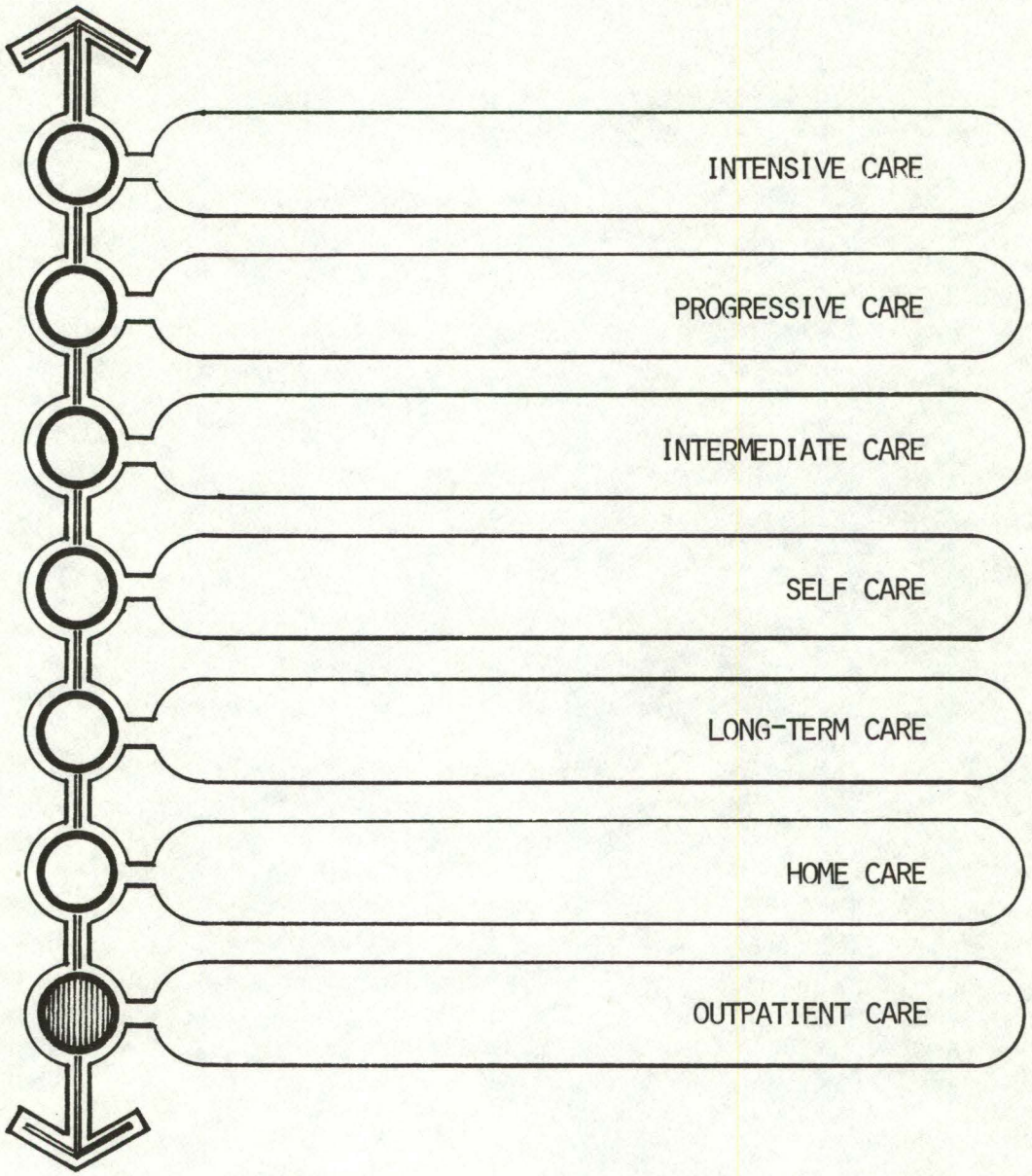
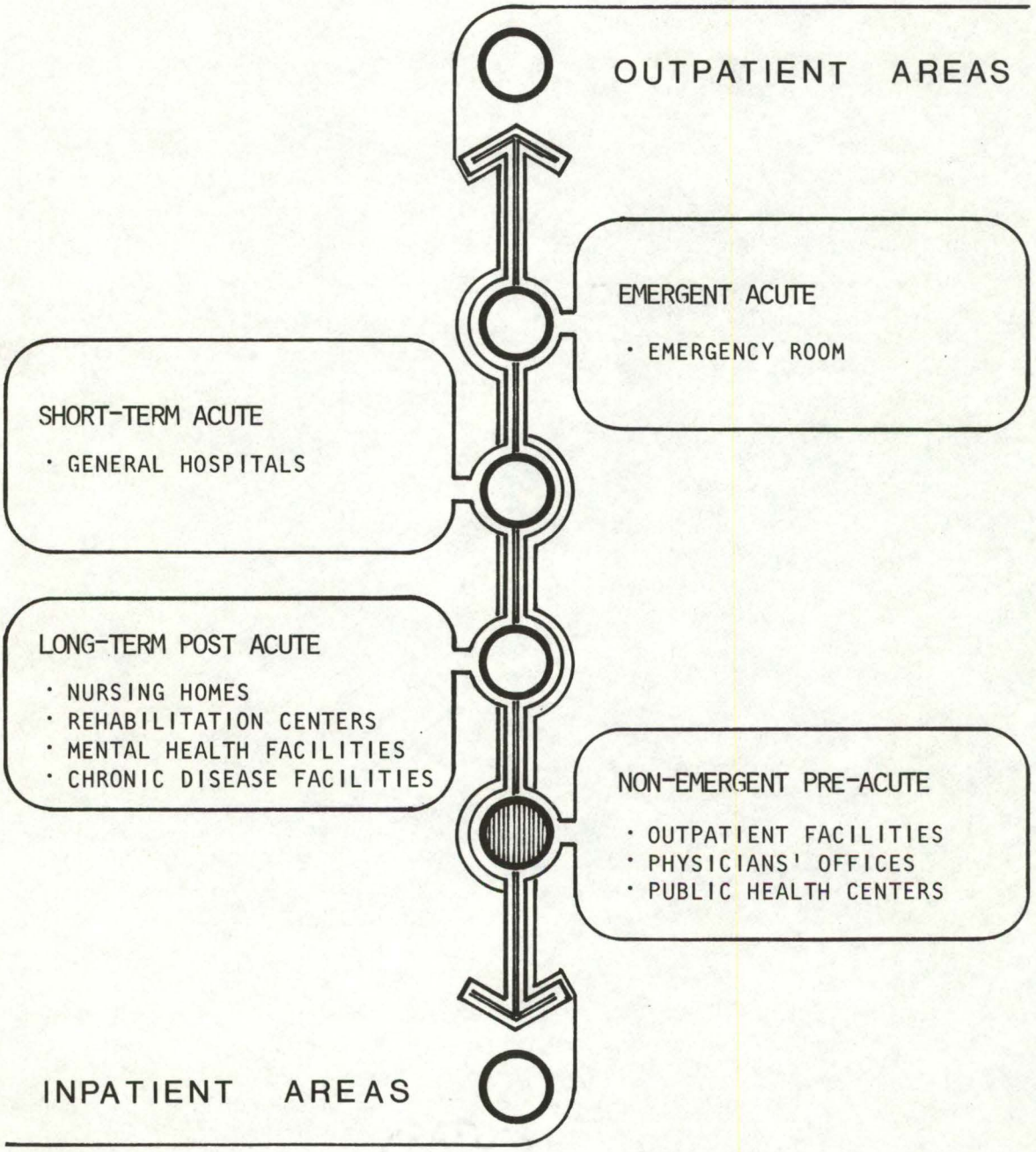


LEVELS OF PATIENT CARE

Outpatient care services represent one of seven levels of patient care under the Progressive Patient Care concept.

AREAS OF HEALTH CARE DELIVERY

The Group Practice Center falls under the heading of NON-EMERGENT PRE-ACUTE care in this representation of the health care delivery system.



OUTPATIENT CARE · AN OVERVIEW

As federal officials plan National Health Guidelines and programs for National Health Insurance, provisions for preventive medicine and outpatient services are sure to be included. Officials point out that such care is less expensive than hospitalization, as well as being more effective, because disease is being diagnosed in its early stages before expensive acute care is required. Hospitalization has been called "the major cause of the rapidly rising cost of medical care," and it has been estimated that a reduction of just one day of hospitalization for each patient admitted to a hospital in a year would result in a savings of two billion dollars.[1] As a result, many more hospitals are taking advantage of preadmission testing and even outpatient surgery in an effort to cope with rising costs and the demand for hospital beds.[2]

It should not be surprising to note, however, that many health providers are not as concerned with the rising costs of providing health care as with the current levels of health of the American population. In 1970, the United States ranked fourteenth in infant mortality, twelfth in maternal mortality, and eighteenth in male life expectancy.[3] This picture becomes even worse in South Carolina where figures show a higher than national average incidence of cancer, stroke, neo-natal mortality, fatality after accidents, hypertension, and mental retardation.[4] The problem arises not because Americans are not capable of producing excellent health care, but because we have not devised a system to adequately deliver those services to the whole population, especially to the indigent.[5]

Some health providers, primarily physicians, point out that the health care industry currently has the capacity to meet the needs of all the consumer population if the public can be educated on how to use it properly. This observation may be accurate, but the task of consumer education would be lessened considerably if a recognizable point of access to primary care was available. Historically, the central institution for the delivery of health care has been the community hospital; yet, in many

locations, the great majority of outpatient care has been provided in the emergency department. At some institutions, visits to emergency departments have grown several hundred percent since World War II with two-thirds of those patients being classified medially non-emergent.[6] Various reasons have been given for this trend:

"1. Physicians are not available at night, on weekends, or over the holidays.

2. The public is aware that the hospital is open twenty-four hours per day.

3. The number of accidents, primarily automobile, have increased.

4. The emergency room is being used for services previously performed in the physician's office.

5. Third party payment is available for emergency room care.

6. Population growth has increased the need for the emergency room.

7. Patients wish to economize by by-passing the private doctor's office.

8. Increased population mobility leaves many families without family doctors.

9. Industry, schools, police and fire departments tend to refer sick or injured patients to the emergency room.

10. The number of general practitioners is decreasing as specialists increase.

11. Private physicians refer more to the emergency room.

12. The large concentration of low-income groups in metropolitan areas utilize the emergency room.

13. Transportation to the emergency room is no longer a problem.

14. Patients try to avoid disturbing their private physicians.

15. Full-time private doctors in the emergency rooms are attracting more private patients."[7]

The difficulty in locating primary care "after hours" is a good indication of the general shortage of primary care physicians.

> "While approximately sixty percent of patient visits to physicians are for basic, general, or primary medical care, only one percent of the hospital residencies available in 1970 offered specific training in general or family practice."[8]

Though the number of primary care residencies and of family practice programs has enjoyed a steady growth recently, the availability of primary care physicians continues to be a major concern.

As a result, many individuals in the health care industry are looking to the hospitals to supply a greater percentage of primary care services in the future.[9] The recent preoccupation with rising health costs has only added to the emphasis on outpatient care services. One estimate showed that the number of visits to hospital outpatient departments in the United States more than doubled in the decade between 1964 and 1974.[10] Unfortunately, the current demand for outpatient services has not produced appropriate responses in many locations; the proper setting for coordinated and responsible outpatient services is not the emergency room. Health planners and providers must create a system that makes high quality, comprehensive primary care available and accessible to the whole population at a reasonable cost. Following its 1968 conference on hospital outpatient care, the American Hospital Association reported,

> "The hospital of the future should become an ambulatory care center with inpatient beds attached, rather than a concentration of beds with outpatient facilities attached."[11]

An old idea that has recently gained new momentum, the health maintenance organization (HMO), has similar priorities. The HMO is an organization which agrees to supply virtually total health care to those individuals who contract for medical services with it on a prepaid basis. Typically the HMO takes the form of a prepaid group practice, but it may simply require a contract with local physicians to provide the necessary primary care services in their own offices for those members of the "plan" (for example, the North Central Plan of Employers of Wassau).[12] In addition, the HMO may or may not be hospital-based, but the nature of its commitment to provide total health care means that it must either run its own hospital or contract with an existing one for the provision of inpatient

services. The emphasis of the HMO is on "preventive care and early detection and treatment of disease" to reduce the amount of hospitalization required.[13] HMO's have gained much attention lately from the federal government because of their potential to change the incentives of the health care industry toward containing costs because of the nature of the prepaid health care plans. Traditionally, health care charges have been on a cost-plus basis, so that the natural incentive is to provide more services in order to increase revenue.[14] The prepayment of monthly dues gives the HMO a known budget on which to operate. Obviously if unnecessary services are provided and the cost of providing those services exceeds revenue, the HMO will lose money -- hence, the incentive to control costs and to avoid unnecessary procedures. The average monthly dues, approximately 65 to 75 dollars for a family in 1974, are slightly higher than the average health insurance premium, but the coverage is more comprehensive.[15]

In 1973, Congress passed a law that required all companies employing twenty-five people or more to offer their employees membership in the HMO, where a qualified one is available, as an alternative to nromal company medical insurance such as Blue Cross. The law also provided 375 million dollars for grants and loan guarantees to HMO's. Between the time that the bill was first proposed to the time it was signed into law, the number of HMO's operating had grown from 50 to 128.[16]

Despite the attractiveness of the HMO concept, however, it still fails to meet the health care needs of at least two major areas: "the rural regions, where there are not enough people to support such an elaborate facility, and the urban ghetto where there is no one who can afford it."[17] Successful prepaid group practices like the Kaiser-Permanente plan, based in Oakland, California, draw most of their members from large industrial plants or other large employee groups who offer the plan as an alternative to health insurance.[18] It has also been noted that the preventive medicine purportedly practiced by the HMO has been largely ineffective. The consensus of physicians in this area is that most consumers prefer the flexibility and freedom to choose physicians provided by the traditional health care delivery system.[19]

OUTPATIENT SERVICES OF THE GREENVILLE HOSPITAL SYSTEM

Following the nationwide trend, the Greenville Hospital System has experienced a significant growth recently in the instances of outpatient care. The total number of visits to the Outpatients Clinics at Greenville General Hospital has increased by twenty percent since 1973. Clinics staffed under residency programs are currently being provided in the fields of pediatrics, obstetrics-gynecology, internal medicine, orthopedics and surgery, and additional facilities are available for eye, ear, nose and throat, and dental care at the hospital. Present facilities are over-crowded and woefully inadequate. Organization is a problem as the thirty-two examination rooms occupy a floor of a former nursing residence hall as well as a clinic structure adjacent to the emergency unit which was quickly outgrown soon after completion. It is not surprising that a great majority of those patients seeking care in the Outpatient Clinics are from the lower income groups. Patient compliance with suggested treatment programs and scheduled appointments is a major problem in the clinics which presents residents with a somewhat distorted practical training for private practice.

The greatest liability of the unit is its financial standing. Expenses for the Outpatient Clinics have doubled from 1974 to 1977, and the revenue generated by them has not kept pace. Several factors are responsible for the marked increase:

- Patient volume has grown by twenty-five percent.
- Indirect expenses have experienced a 100 percent growth, primarily due to an increase in the medical education allocation.
- Direct expenses have increased by fifty percent as a result of a fifty percent growth in the number of personnel staffed at the facility since 1974.

Operation of the clinics is based on a triad of management by administration (Assistant Administrator for Ambulatory Services), nursing (Clinical Director for Ambulatory Nursing), and physicians (Director of Medical

Education). In addition, individual medical directors have been salaried for the pediatrics, obstetrics-gynecology, and, most recently, the internal medicine programs in an effort to better coordinate and define those services. The existing organization of the Outpatient Clinics is such that the establishment of a Group Practice Center in their place would involve more of an evolution from the existing operation than a reorganization of it.

CONCEPT DEFINITION

THE MULTI-SPECIALTY, HOSPITAL-BASED GROUP PRACTICE

CASE STUDIES

With the growing emphasis on hospital outpatient services, many institutions are looking to hospital-based group practices to improve the quality of primary care and to reduce the costs to both the hospital and the patient. A survey of the American Hospital Association in 1975 which asked its member institutions if there was any consideration for developing a "'hospital affiliated group practice for providing continuing primary care to ambulatory patients'" showed that 15 percent of those responding were at "'the discussion stage,' three percent . . . the 'active planning stage,' two percent the 'implementation stage,'" and seven percent had such groups "'already functioning.'"[20]

Among the organizations committed to the concept is the Robert Wood Johnson Foundation which in 1975 initiated a program for awarding up to 30 million dollars of grants for the planning and development of primary care groups. There are many well-known models of hospital-based group practices, but three which appear to be most applicable to the Greenville Hospital System are the Genesee Health Service of Rochester, New York, the Beth Israel Ambulatory Care program of Boston, and Internal Medicine Associates at Massachusetts General Hospital in Boston.

GENESEE HEALTH SERVICE
GENESEE HOSPITAL — ROCHESTER, NEW YORK

The Genesee Health Service has organized from the outpatient clinics at Genesee Hospital into a multi-specialty group practice that is located in a professional office building adjacent to the hospital. Each of the three specialty groups (pediatrics, internal medicine, and obstetrics-gynecology) has its own receptionist and appointment desk. The Genesee Health Service was established with five goals:

" to offer mainstream medical care to the indigent

to serve a balanced population of indigent and middle-class patients

to work within the hospital system

to be financially viable (having a deficit no greater than the old Outpatient Department)

to attract and retain well-qualified physicians for the group practice."[21]

By 1975, the Genesee Health Service had grown to 14 physicians - internists, pediatricians, and obstetrician-gynecologists - and the number of outpatient visits had risen in five years from about 20,000 to 72,000 per year.[22] The Genesee Hospital Service also employs "a variety of health care professions including physician associates, nurses in expanded roles, a psychiatric social worker, and outreach workers."[23] At least one physician from each specialty group is on call 24 hours per day. A special feature of this group practice, which has encountered some criticism, is that it carries a lower rate for the working poor patient.[24]

Though the number of visits by indigent patients seeking primary care has increased 400 percent, they now account for only 35 percent of the "nonemergency ambulatory care load."[25] As a result, the Genesee Health Service is not managing to break even. Some doctors in Rochester viewed the Genesee Health Service both as a competitor for their patients and as a barrier to utilizing hospital beds and services. Most area physicians, however, felt that there was enough demand for primary care services in the Rochester area to keep everyone busy.[26]

BETH ISRAEL AMBULATORY CARE PROGRAM, BETH ISRAEL HOSPITAL — BOSTON, MASSACHUSETTS

The Beth Israel Ambulatory Care (BIAC) program, a hospital-based primary care group practice, was organized in 1971 to replace the general medical, obstetrics-gynecology, and pediatric clinics at Beth Israel Hospital. The stated goals of the group practice are:

" the elimination of second class status for the patient who depends upon the hospital outpatient department for primary care

the development of a constructive learning experience in primary care for health professionals

the development of new techniques in primary care for use in a variety of service settings; e.g., other outpatient departments, neighborhood health centers, private physician's offices, etc."[27]

Full-time physicians at BIAC include four internists, two obstetrician-gynecologists, one pediatrician, and the medical director. Primary care is provided by health care teams which typically include a secretary-receptionist, a nurse, aide, and physician. As individual cases warrant, "a nutritionist, social workers, or consultative psychiatrist may be added to the team."[28]

BIAC has emphasized "personalized contact" with the patient by advocating identification of each patient with a single primary care physician for the duration of medical care (including those instances when hospitalization is required), decentralized waiting areas, and increased utilization of nurse practitioners and aides. Residents in the field of general medicine and obstetrics-gynecology are "assigned to the same patient care session each week" to further enhance the level of personal care and the coordination of the various health care teams.[29]

Much effort has been devoted to making BIAC a financially viable program. The major thrust of this effort has been a complete analysis of all the factors influencing the financial stability of the program. The result has been a prospective operating budget for primary care services at Beth Israel Hospital for the first time.[30]

INTERNAL MEDICINE ASSOCIATES AND MEDICAL CLINICS COMPLEX
MASSACHUSETTS GENERAL HOSPITAL BOSTON, MASSACHUSETTS

In July 1972, Massachusetts General Hospital appointed a Board of Managers, consisting of physicians, nurses, and managers, and gave them the responsibility for running its Medical Clinics Complex. The Board was to have financial and operational control.[31] Among the initial goals of the Board was the improvement of outpatient services through a hospital-based teaching group practice, the provision of high quality primary care in the Medical Clinics Complex, the integration of clinic and private patients, and an expansion of primary care training and research activities.[32]

One of the first steps taken was a replacement of the visiting physician staff by a group practice, the Internal Medicine Associates (IMA). The new group of physicians is reimbursed on a salary basis, but the doctors are "encouraged to expand their practices by a financial incentive plan that rewards increased productivity with increased compensation."

The doctors function in health care teams that include nurse practitioners and other health professionals and are responsible for providing continuous care for patients assigned to them in the Medical Clinics Complex. Interns and residents are also responsible for an assigned group of patients during a two-year training period, and as part of their expanded role in the health care teams, nurse practitioners have their own "patient care session" at least once a week.[33]

The IMA has expanded the hours of service over what was previously provided in the outpatient clinics and features 24-hour physician coverage. An added benefit is their location in a newly renovated facility. Because of the success of the IMA, similar reorganizations are being considered for the pediatric and psychiatric clinics at Massachusetts General.[34]

GEORGE WASHINGTON UNIVERSITY CLINICS
GEORGE WASHINGTON UNIVERSITY MEDICAL CENTER WASHINGTON, D.C.

On March 20, 1969, a thirteen-story group practice clinic opened in Washington, D.C. promising

> "care for all comers, one-stop comprehensive medical service, a high quality staff and dedication to a preventive medicine education approach for patients as well as staff and university medical students."[35]

The George Washington University Clinic, an adjunct to the University Medical Center, provides primary care and outpatient services for both indigent and private patients, student health services for the University, and opportunities for research, diagnosis and treatment for teaching physicians and residents in general medicine and over 20 specialities (including radiology, pathology, vocational and physical rehabilitation, rheumatology, arthritis, cardiology, pulmonary, oncology, allergy, renal diseases, reproductive genetics, urology, psychiatry, cancer detection, dermatology, obstetrics, gynecology, opthalmology, orthopedics, and general and internal medicine).[36]

For the 88 physicians on the teaching faculty, the Clinic offers many advantages: an office easily accessible to both classroom and hospital duties, lighter administrative and medical testing burdens, peer accessibility for consultation and referral, and the guaranteed salaries and fringe benefits of a medical school faculty member. The potential for a more valuable training experience also has been improved as the range of

patient types has been broadened to include private patients as well as the indigent. As a result, residents are exposed to a greater range of illnesses as well as patients who tend to follow doctor's orders and keep appointments -- an experience more characteristic of their future practice. University officials also feel this feature of the Clinic is a drawing card for more and better medical students in the future.[37]

For the Clinic patient, the one-step medical center provides obvious advantages. At one location a full range of outpatient services is available, and if acute care is required, the George Washington University Hospital is readily accessible. Waiting time is reduced and significant improvement of the physical amenities is apparent over the typical outpatient clinic. Though the payment for services follows the general level of fee-for-service rates in the community, savings for patients may be realized through decreased hospitalization, an emphasis on preventive medicine, and the economies of scale and shared services. The major drawback at this time appears to be the availability of services "after hours;" currently the George Washington University Clinic is operating on weekdays from 8:30 to 5:00 and on Saturday morning. Until hours are expanded into the evening, the hospital emergency rooms will continue to serve an unnecessary number of non-emergency patients.[38]

POTENTIAL ADVANTAGES OF THE HOSPITAL-BASED GROUP PRACTICE

The hospital-based group practice has a tremendous potential for raising the quality of primary care. Initially, a commitment to upgrade the physical setting will attract a greater percentage of the private, paying patients and perhaps help to remove some of the stigma attached to hospital-based primary care services. In order to raise the level of health in the community, however, the hospital must also provide a continuity of care and the opportunity for follow-up treatment in its primary care services. The coordination of services for each patient that is characteristic of a group practice will provide a better continuity of care than is available in the traditional outpatient clinic.[39] A system which is critical to the success of that continuity of care is the unit or shared record, a continuous, chronological report of all health care practitioners who see a patient as well as consultants' reports, so that any members of the group who are treating the patient have an accurate record of all previous instances of care for him.[40] The use of non-physician health practitioners (nurses, aides, social workers, nutritionists) in health care teams increases the potential for a higher quality of primary care. A proper division of labor within the team produces a more efficient use of personnel and increases the effectiveness of their care.[41] An added advantage is that by assigning each patient to a particular team, the degree of personal care provided is also increased.

The grouping of several physicians in one location provides other advantages. The presence of other opinions and the communication of ideas means that a kind of peer review has automatically been set up, and the result has to be a higher quality of care.[42] Also, the proximity of physicians to each other produces smooth and effective specialty referrals and proper utilization of inpatient services.[43]

When talking about accessibility to primary care services, the greatest concern is the lack of a proper focal point for entry into the health care system.[44] By its location adjacent to the hospital, the group practice

can effectively complete a full range of health care services available to the patient at one location. Though the availability of primary care services may not be improved, certainly the recognition of where to find them would be. It has been stated frequently that new members of a community also turned to hospitals for primary care because they were not able to locate a family physician. Statistics in 1972, however, revealed no significant indication of that practice.[45] Perhaps this utilization of outpatient services would become more pronounced if the services were upgraded to the level of a group practice.

Another concern with the shortage of primary care physicians is the availability of physicians and the maximum utilization of their time for medical care. In the solution of these problems, the hospital-based group practice offers two advantages. Firstly, the economics of size in a group practice can mean that almost all non-medical chores (bookkeeping, billing, ordering supplies, etc.) are removed from the physician. This is a very significant factor as estimates are that "the average doctor spends more than 25 percent of his time on business."[46] Secondly, a further increase in physician efficiency can be realized by a reduction in the amount of physician commuting time between office and hospital.[47] According to the Chief of Staff at the George Washington University Medical Center, Dr. James J. Feffer,

> "'stretching the physician's time may well be the biggest contribution of group practice. It has been predicted that in group practice physicians could see 20 percent more patients and give high quality individual care for 20 to 30 percent less cost.'"[48]

Finally, at least one hospital has realized a significant increase in the recruitment of additional physicians as a result of organizing a hospital-based group practice. After the formation of the Family Health Center in James, New York, two new physicians located their practice in Jamestown and one doctor who previously was seeking relocation remained.[49]

For controlling costs, the hospital-based group practice offers three real opportunities. Its location adjacent to the hospital means that certain services offered by the hospital (management resources and expertise, data processing equipment and clerical personnel, ancillary services such as laboratory and radiology, housekeeping and maintenance services, etc.) can be utilized by the group practice.[50] Secondly, the more efficient

utilization of physicians' services along with a predictable patient schedule (over what might be encountered in an emergency room) can result in significant savings. The Family Health Center in Jamestown "has provided improved primary care services to the community at approximately thirty to fifty percent less than the same service would cost at the hospital (emergency department)."[51] Thirdly, the amenities of the group practice setting over a traditional clinical setting can mean an attraction of a much greater percentage of "private" paying patients and a subsequent increase in revenue. For example, the Genesee Health Service reported after five years of service that its patient load had increased three times over that of the old outpatient department while the budget was increasing five times.[52]

The prospects for attracting additional federal funding through Medicaid and Medicare by reorganizing into a group practice are not encouraging. A much greater benefit may be realized by reallocating certain indirect costs from outpatient to inpatient areas where the percentage of reimbursement is much higher.[53] Another method of realizing greater outpatient revenue is to "isolate outpatient-generated ancillary services and (assign) both the revenue and the cost of such services to the outpatient department."[54] In the first year this was done at Beth Israel Hospital, an additional revenue of 111 thousand dollars was realized by the outpatient department.[55] The best opportunity for the group practices to receive federal funds, however, is through grants for renovation and new equipment; additional grants for the initial reorganization may also be available from area foundations.[56]

CONCEPT DEFINITION - GREENVILLE

In October 1977, Trustees of the Greenville Hospital System voted to proceed with a substantial expansion of the Greenville Hospital Center by 1982. The program currently calls for 240 additional acute care beds, expanded diagnostic and treatment facilities, a new trauma center, and a facility for medical education to be constructed at that site. A subsequent reduction of services at Greenville General would leave only obstetrics, nursery, and elective surgery at that hospital with long-range plans calling for a complete removal of all services to the Hospital Center.

A program development and design proposal for the Medical Education facility at the Greenville Hospital Center are presented in the concluding chapters. Outpatient services will be provided in five specialty areas offering residency programs -- internal medicine, pediatrics, obstetrics-gynecology, orthopedics, and surgery (though in reality the obstetrics-gynecology clinics will continue to operate at Greenville General Hospital in conjunction with the remaining inpatient services) -- in addition to the dental, eye, and ear, nose, and throat clinics. The facility will operate as a multi-specialty group practice adjacent to Greenville Memorial Hospital, and as such will complete a comprehensive range of patient services available at the Hospital Center site.

Though the realization of a Group Practice Center for Greenville would not involve a significant reorganization of the Medical Education clinics, several changes or new features should be included in the new program. Perhaps the most important feature is the initiation of a patient education program. There is a growing consensus in this country, especially among provider groups, that the most significant progress to be made in streamlining the health care industry is the education of the public on better personal health care as well as the proper utilization of existing health care services and delivery systems. Currently the lack of patient compliance with treatment programs as well as their failure to return for follow-up care are serious problems in Greenville General's Outpatient

Clinics. Non-physician members of health care teams in the Group Practice Center have a great potential to alleviate these problems by providing educational services in conjunction with prepared videotapes and brochures for the outpatient. Videotapes shown on television screens in the waiting areas may be utilized to convey much general information to outpatients, while brochures will give the patient a written record of recommended personal treatment activities for future reference. An educational program for diabetes patients in the Outpatient Clinics has already demonstrated a significant improvement in patient compliance.

Physicians feel that the amount of time they have to spend with individual patients has a direct bearing on the quality of care provided. If the patient load on a given day is such that physicians are forced to shuttle patients through the clinics in assembly-line fashion, the quality of care as well as the level of personal care will obviously suffer. A reduction in the physician's average patient load and a more predictable appointment method are effective means of avoiding excessive demands for physician services and reducing patient waiting time. Individualized appointment systems or the scheduling of small blocks of patients at reasonably short intervals produces a more efficient operation than conventional block systems.[57] Health care teams are seen as a source of some relief if the responsibilities of the non-physician members of the team are carefully defined. Too often physicians are required to perform duties that other health professionals are better qualified to handle and do so at a lower cost. The difficulty with non-physicians involves a serious question concerning their legal liabilities as well as an exact definition of their roles. Because they are licensed professionals, nurses in expanded and extended roles are valuable assets to the health care team.

An increase in the hours of operation over standard "office hours" is a necessary feature of the Group Practice Center in order to make outpatient care truly accessible for the whole population. The alternative is an incorrect usage of emergency room services or the duplication of outpatient services in an "Emergency Annex." In either case, the care rendered is more expensive, less efficient, and of a poorer quality. Most physicians endorse the extension of services into the early evening and one day on weekends but are concerned that the convenience will be abused by members of the community. Unfortunately, there are individuals who

are unable to seek medical care during normal office hours, except in extreme cases, because of jobs, children, transportation, etc. A limited expansion of operating hours can absorb a high percentage of those patients if the public is educated to properly utilize the expanded services.

FACILITY OPTIONS

There appear to be three viable locations for the Medical Education Clinics or Group Practice Center at the Greenville Hospital Center site. The first option, presently under investigation, calls for the clinics to be housed in a vertical extension of the Cancer Treatment Center adjacent to Roger C. Peace Institute. This option purportedly offers a significant reduction of construction costs due to the virtual elimination of site preparation, but it may tend to reduce future expansion capabilities as well as place restrictions on current demands for space and desirable functional relationships within the clinics. This option would necessitate utilizing the ground floor of Peace Institute for the orthopedic and surgery clinics, because sufficient area is not available over the Cancer Treatment Center for the entire Medical Education program. Access to ancillary services in the hospital is possible, though very difficult, through the confusing corridors of Peace Institute; it would be almost mandatory to produce at least basic laboratory and radiographic services within the Medical Education facility. Finally, by locating in the same vicinity as the division of Medical Education for family practice, the scheduled outpatient traffic can be accommodated within one area of the Hospital Center site.

A second option would be to locate the clinics adjacent to the new diagnostic and treatment addition to Memorial Hospital, thus making the clinics immediately accessible to those services and avoiding duplication of laboratory and radiographic areas in Medical Education. In addition, all emergency, walk-in, and scheduled clinical patients could be triaged at a common point. Proper screening at the triage point would virtually eliminate use of emergency facilities by non-emergent patients; also, those patients incorrectly judged by themselves to be non-emergent would be referred easily to the trauma unit. This option would, of course, maintain the separation of the Family Practice Center from the remainder of Medical Education as well as making specialty referrals and professional

consultation between the two groups of residents more difficult. A substantial increase in vehicular traffic around the main entrance to Memorial Hospital could also be expected.

A third option would be consolidation of Medical Education through the construction of a facility adjacent to the Family Practice Center. By accommodating walk-in patients in this area, the emergence of a Group Practice Center for the outpatient care of all ambulatory, non-emergent patients can be realized. The nature of the care required for the walk-in patient and the need for follow-up care in the future seems to make the absorption of such patients by the Group Practice Center a more logical alternative than even an annex to the Emergency Unit. Expanded hours of operation in the clinics, however, would be necessary. The comprehensive Group Practice Center offers several obvious advantages:

- facilitation of specialty referral and professional consultation among all residents and teaching physicians in the Medical Education department
- separation of outpatient traffic from the inpatient and emergency traffic at Memorial Hospital
- less restriction on future expansion of services at Memorial Hospital

By physically separating the clinics from the hospital, it would be necessary to provide at least limited laboratory and radiology services within the Group Practice Center. Though duplication of these expensive areas is best avoided in most instances, it is warranted here. Laboratory and radiology areas are already being provided in the Family Practice Center and could be shared as they are currently underutilized. It seems possible that an elimination of the outpatient demand for such services in the hospital would enable those areas to reduce their planned capacity in the expansion program. At any rate, the revenue generated by outpatients utilizing ancillary services would be channeled properly to outpatient areas, thus augmenting the economic stability of the Group Practice Center. An often overlooked fact in the hospital is that "in private practice (ancillary) revenue is an important part of the profit picture."[58] Physical separation from the hospital may also serve to reduce the stigma attached to hospital-based primary care in the minds of potential users of the facility. Undoubtedly, this was a consideration in the location of the Family Practice Center.

Though each option offers certain advantages and disadvantages to the designer, it is my wish to proceed with the third option. A consolidated Group Practice Center seems to offer the greatest potential for a good solution given the limitations of time and accessibility to information of an architectural terminal project. At the same time, this project offers certain real advantages and opportunities to a student of health care facilities planning and design:

- It involves issues critical to the satisfaction of the needs of the local community and of current demands on the health care industry.
- It allows the designer to execute innovative concepts consistent with approaches presently mandated by federal authorities and embraced by health professionals.
- It provides the student with the complex parameters of an actual problem - traffic patterns, accessibility to services, and juncture with existing facilities and site conditions - which are present in most hospital planning projects.
- It offers the designer the opportunity to work within the program of a growing hospital system which is responsive to current trends and sensitive to its community's needs.

USER SYSTEMS

THE IDENTIFICATION OF PROGRAMMATIC NEEDS

USER GROUPS

The initial step in the identification of programmatic needs is the determination of the various groups who will be utilizing the Group Practice Center - patients, staff members and support personnel. By analyzing their functional demands to develop appropriate spatial responses and by grouping functions according to program goals and constraints, appropriate design solutions may be conceived and executed. For that purpose, users have been grouped into seven types which will be described briefly according to composition and activity in the facility: Patients, Administrative Staff, Professional Staff (physicians), Nursing Staff, Clerical Staff, Technicians, and Support Staff.

PATIENTS

The number of patients visiting the Greenville General Hospital Outpatient Clinics has increased by almost 28 percent since 1971 to a total of 42,711 in 1976. Of that number, over 45 percent must be classified as medically indigent and sponsored by the hospital; only 18 percent of the Clinic patients could finance their own primary care. The remaining 35 percent were funded by federal (Medicaid, Medicare), state, and county programs. It is no mystery why the Clinics are a financial burden to the Hospital System; there is some disagreement, however, on the solution to the problem. Most of those interviewed in the Hospital System agreed that a greater percentage of private patients would be attracted to the hospital for primary care services if the physical setting of the Clinics was improved. The attraction of private patients is seen not only as an opportunity to increase revenue, but also as a chance to expose residents to a wider range of patient types. With the very real possibility of a national health insurance program and a virtual elimination of the charity patient in the near future, it could be beneficial to attract the formerly indigent patient as well.

A recent study conducted by the Greenville Hospital System showed that approximately half of the Clinic patients lived in areas to the west and northwest of Greenville General Hospital (see Patient Origin Study, p. 76) and over 13 percent of those walked to the Clinics (an average of 11 per day). Though a fourth of the walking patients reside between General and Memorial Hospitals, within 1.5 miles of the proposed site, it will be necessary to find other means of transportation for the remainder of the pedestrian group. A small number of Clinic patients already utilize public transportation systems.

For the vast majority (80 percent) of Clinic patients who arrive by automobile, the move to the Hospital Center site will be a welcome change because of the ample supply of free parking immediately accessible to the new facility. It should be noted that most of these patients are being driven by someone else who must be accommodated in a visitor's waiting area.

At the present time, the greatest volume of patient visits is the Obstetrics-Gynecology Clinic followed by the Pediatrics and Internal Medicine Clinics. All ambulatory care programs can expect an accelerated growth with the improved services and setting of a new facility. As a result, future expansion must be an important consideration of the Group Practice Center program though a greater than 40 or 50 percent expansion would probably be counter-productive. A better alternative would be to initiate similar hospital-based ambulatory care programs at the suburban units of the Greenville Hospital System where they would be more accessible to outlying areas of the county. The Patient Origin Study already indicates significant clusters of Clinic patients within a 1.5 mile radius of Hillcrest Hospital (9 percent), North Greenville Hospital (5 percent), and Allen Bennett Memorial Hospital (5 percent).

ADMINISTRATIVE STAFF

The bulk of administrative responsibility for the Group Practice Center would be distributed in the existing organization of the Greenville Hospital System through the Assistant Administrator for Ambulatory Services. In addition to the Director and Associate Director, who are physicians responsible for program coordination and direction, the Division of Medical Education also has an Administrator, Financial Manager, and Clinic

Manager who supervise personnel and monitor the Medical Education and Ambulatory Care programs.

PROFESSIONAL STAFF

The professional staff can be grouped into three categories: full-time faculty, part-time faculty, and residents. Within the Health Care Teams who provide primary care in the Ambulatory Care Units, the residents are the principle practitioners. Residency involves three years of study and supervised practice in a chosen specialty; preferably the experience coincides as closely as possible with the practice a resident will initiate or continue following graduation from the program. The first-year resident takes on patients immediately, usually newcomers to the hospital-based Ambulatory Care program, and continues to "build his practice" throughout his experience in the Greenville Hospital System. Graduates who remain in Greenville may retain that complement of patients for their new practices.

The full-time faculty, responsible for the coordination of the Ambulatory Care programs as well as the supervision of the residency program, consists of the Director and Associate Director of Medical Education, the Director of Continuing Medical Education, five staff specialists, and the Directors of Internal Medicine, Obstetrics-Gynecology, Orthopedics, Pediatrics, and Surgery. In addition, specialists from the Greenville Hospital Medical Staff serve on a part-time basis to observe patient care techniques and review diagnosis and treatment procedures by residents in the Ambulatory Care programs. The Family Practice program also falls under the Division of Medical Education but will maintain some degree of autonomy from the remainder of the Ambulatory Care programs. Opportunities for consultation between the two groups, however, should be enhanced and encouraged.

NURSING STAFF

Nurses and Nurse Practitioners must assume two important roles in the Health Care Teams of each Ambulatory Care unit. The nursing program at the Group Practice Center will be administered by the Clinical Director of Ambulatory Care Nursing within the Management section of the facility. There also will be a staff member in each of the Ambulatory Care units

responsible for the floor administration of that program. At the initial level of service a Nurse Practitioner will be able to handle that responsibility; however, the anticipated expansion of the Ambulatory Care program probably will necessitate an additional Nurse Supervisor or Head Nurse at some future time. The Head Nurse as well as the Nurse Practitioner should be educated at the Master's Degree level with special training in the specialty area where they will be working.

The Nurse Practitioner is a nurse trained to do patient assessment in addition to traditional patient care who is working in an expanded role. In the Group Practice Center, the Nurse Practitioner will coordinate the Patient Education effort for each specialty as well. At a passive level, patients in waiting areas may view prepared videotapes concerning general diet, personal care techniques, utilization of health care services, etc. Personal counseling sessions conducted by the Nurse Practitioner will constitute a more active level of education. If more sophisticated audio-visual resources are desirable, a central patient education station may be utilized. A staff nutritionist and social worker will supplement activity at this station.

For traditional patient care procedures, three Nurses in addition to a Nurse Practitioner will staff an Ambulatory Care unit. These individuals should be educated on a Baccalaureate degree level.

CLERICAL STAFF

The Group Practice Center will require a full complement of clerks and secretaries. A secretarial pool for the full-time faculty and administration, a receptionist, and a secretary responsible to the Director will staff the Medical Education program. In the Ambulatory Care program a secretary will be provided for each unit along with a "ward secretary" or clerk who maintains patient charts and a receptionist who also schedules patient appointments. Secretarial support must also be provided in the Management section of the Ambulatory Care program.

Probably the most important clerical positions are those at the Central Reception station of the facility. This is to be the initial point of contact for patients entering the Group Practice Center and the control point for the entire facility. The receptionists will be furnished information as to the nature of each patient's visit and the tests to be

performed prior to his examination in order to be able to direct the patient to his proper station. Nearby the Central Reception desk will be the Cashier station where two staff members will collect over-the-counter payments or make the necessary arrangements for third-party reimbursement. A central business office in the facility along with the Earle Administrative Services Center will supply significant support for that station. The Cashier station must be located on the normal exit traffic lane as it should be the final step of the patient's visit to the Group Practice Center.

Finally the Medical Records and Patient Interview areas will require at least three clerical staff members, including a Medical Records Technician, to coordinate the record keeping effort. The Ambulatory Care program will be utilizing the transcription service at Greenville Memorial Hospital and at some future time can expect to take advantage of Hospital computer services for maintenance of patient medical records as well as financial records. Clerical staff services will be administered from the Management area of the facility by the Clerical Staff Supervisor.

TECHNICIANS

The Diagnostic Services area and the Audio-visual Resources Center will require a generous technical staff. Laboratory and x-ray technicians will be able to provide the basic services offered in the Group Practice Center as more sophisticated testing will be available at Greenville Memorial Hospital. Technicians will also staff the EKG, Pulmonary Function, and Audiology stations in the facility.

A Director of Audio-visual Resources and an Audio-visual technician will be responsible for creating and maintaining audio-visual material for both the Patient Education and Medical Education programs. An Audio-visual Studio, a Darkroom, an Audio Room, and an Equipment Storage and Maintenance area will be provided in the facility for their use. Videotape films of patient examinations and treatment in the Ambulatory Care units, made with the consent of the patients, will be used extensively in the Medical Education area, and jacks for moveable videotape cameras will be provided in each examination and treatment room.

SUPPORT STAFF

The bulk of the housekeeping staff will be supplied by the Greenville Hospital System. Small housekeeping stations will be provided within each Ambulatory Care unit in addition to a central maintenance and storage area. Housekeeping activities are to be performed after hours each day including the collection of soiled storage bins from each examination and treatment room. At least one dumpster will be provided in the service area for trash.

The General Storage area, supplied from the Greenville Hospital Center's Supply Distribution Center, will require at least one person to receive and stock the necessary items. Each examination and treatment room will also have the storage capacity for a day's supply of linen and materials which will be restocked at the beginning of each day.

PROGRAMMATIC NEEDS

Following an analysis of user groups and their daily activities and responsibilities, a program of functional groupings and spatial needs must be developed. Several factors will be addressed in the course of that organization: the need for adjacency, entry and exit sequence, utilization patterns, the desirability of natural light, the need for expansion, and vehicular and pedestrian access. A proper analysis and organization at this stage can easily be translated into architectural concepts at a later time.

Services of the Group Practice Center may logically be categorized under two major headings, the Medical Education program and the Ambulatory Care program, according to function or specialty (in the case of the Ambulatory Care units):

MEDICAL EDUCATION
- ADMINISTRATION
- AUDIO-VISUAL RESOURCES

AMBULATORY CARE
- CENTRAL RECEPTION
- MANAGEMENT
- DIAGNOSTIC SERVICES
- INTERNAL MEDICINE
- OBSTETRICE-GYNECOLOGY
- ORTHOPEDICS-SURGERY
- PEDIATRICS
- SUPPORT SERVICES

The total integration of these areas with site and architectural conditions will be explored as part of the development of architectural responses.

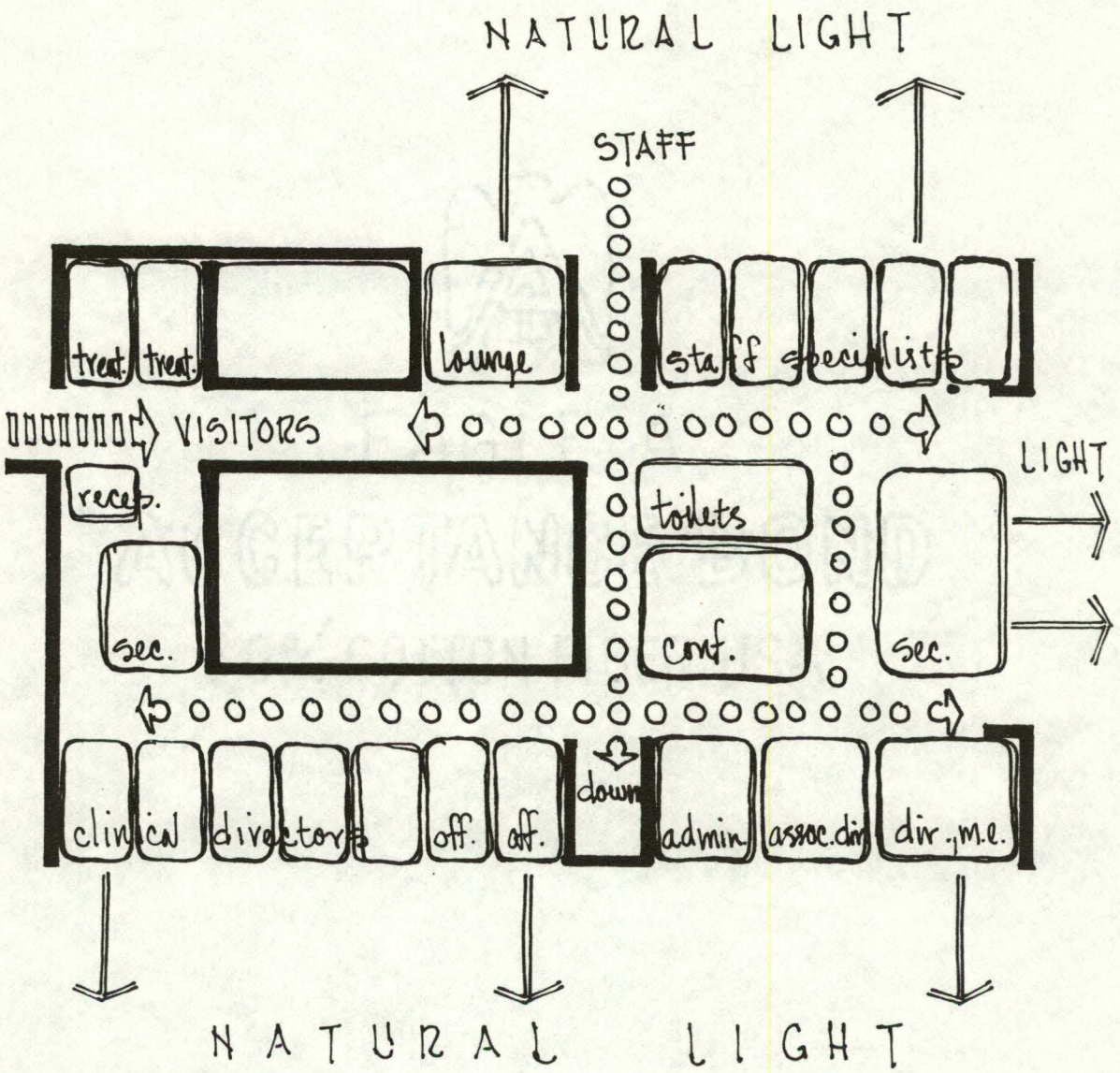
MEDICAL EDUCATION

ADMINISTRATION

Administration	Private offices and clerical support for general directors and administrators.	
	- Director of Medical Education	196 SF
	- Associate Director, Medical Education	140 SF
	- Administrator, Medical Education	140 SF
	- Financial Manager, Medical Education	120 SF
	- Director of Continuing Medical Education	120 SF
	- Secretaries, 3 @ 80 SF	240 SF
	- Central filing and storage	160 SF
	- Staff toilets, 2 @ 40 SF	80 SF
Reception	Reception and waiting area for visitors to Medical Education Administration separate from clinical Waiting areas.	
	- Reception desk	64 SF
	- Waiting area	200 SF
Conference	Adequate space for up to 20 persons in staff conference	
	- Conference Room	320 SF
Clinical Directors	Private offices and clerical support for directors of ambulatory care programs.	
	- Director of Internal Medicine	120 SF
	- Director of Obstetrics-Gynecology	120 SF
	- Director of Orthopedics	120 SF
	- Director of Pediatrics	120 SF

	- Director of Surgery	120 SF
	- Secretaries, 4 @ 60 SF	240 SF
Staff Specialists	Private offices and clerical support for full-time faculty specialists within the Division of Medical Education.	
	- Pulmonologists, 2 @ 120 SF	240 SF
	- Gastroenterologist	120 SF
	- Cardiologist	120 SF
	- Nephrologist	120 SF
	- Secretaries, 5 @ 60 SF	300 SF
Staff Lounge	Retreat and break area for all Group Practice Center staff personnel.	
	- Lounge	224 SF
Treatment Area	Generously equipped exam and treatment rooms, sufficient for full-time staff members to examine and treat their own private patients in the corporate area.	
	- Treatment rooms, 2 @ 120 SF	240 SF
Circulation		1,394 SF
	TOTAL ADMINISTRATION	5,378 SF

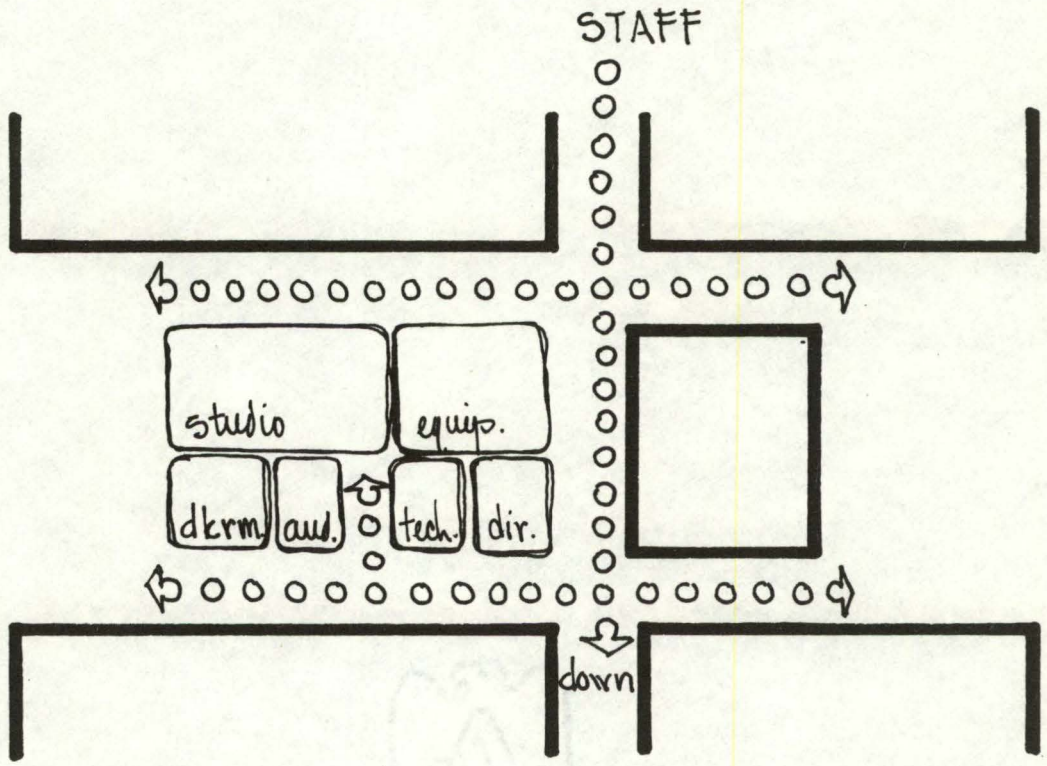
ADMINISTRATION



AUDIO VISUAL RESOURCES

Audio Visual Staff	Private offices for the Audio Visual production staff	
	- Audio Visual Director	120 SF
	- Technician	100 SF
Studio	A studio for the in-house production of videotapes and photographic aids which will be used extensively in both the medical education and patient education programs.	
	- Studio	352 SF
Audio Lab	A sound-proof cubicle for the monitoring and control of audio material during videotaping sessions.	
	- Audio Lab	80 SF
Dark Room	Facilities adequate for the development of videotape and photographic film.	
	- Darkroom	110 SF
Equipment Storage	Sufficient area for storage and maintenance of audio visual equipment.	
	- Equipment room	256 SF
Circulation		356 SF
	TOTAL AUDIO VISUAL RESOURCES	1,374 SF

AUDIO VISUAL RESOURCES



TOTALS FOR MEDICAL EDUCATION:

ADMINISTRATION	5,378 SF
AUDIO VISUAL RESOURCES	1,374 SF
TOTAL GROSS MEDICAL EDUCATION	6,752 SF

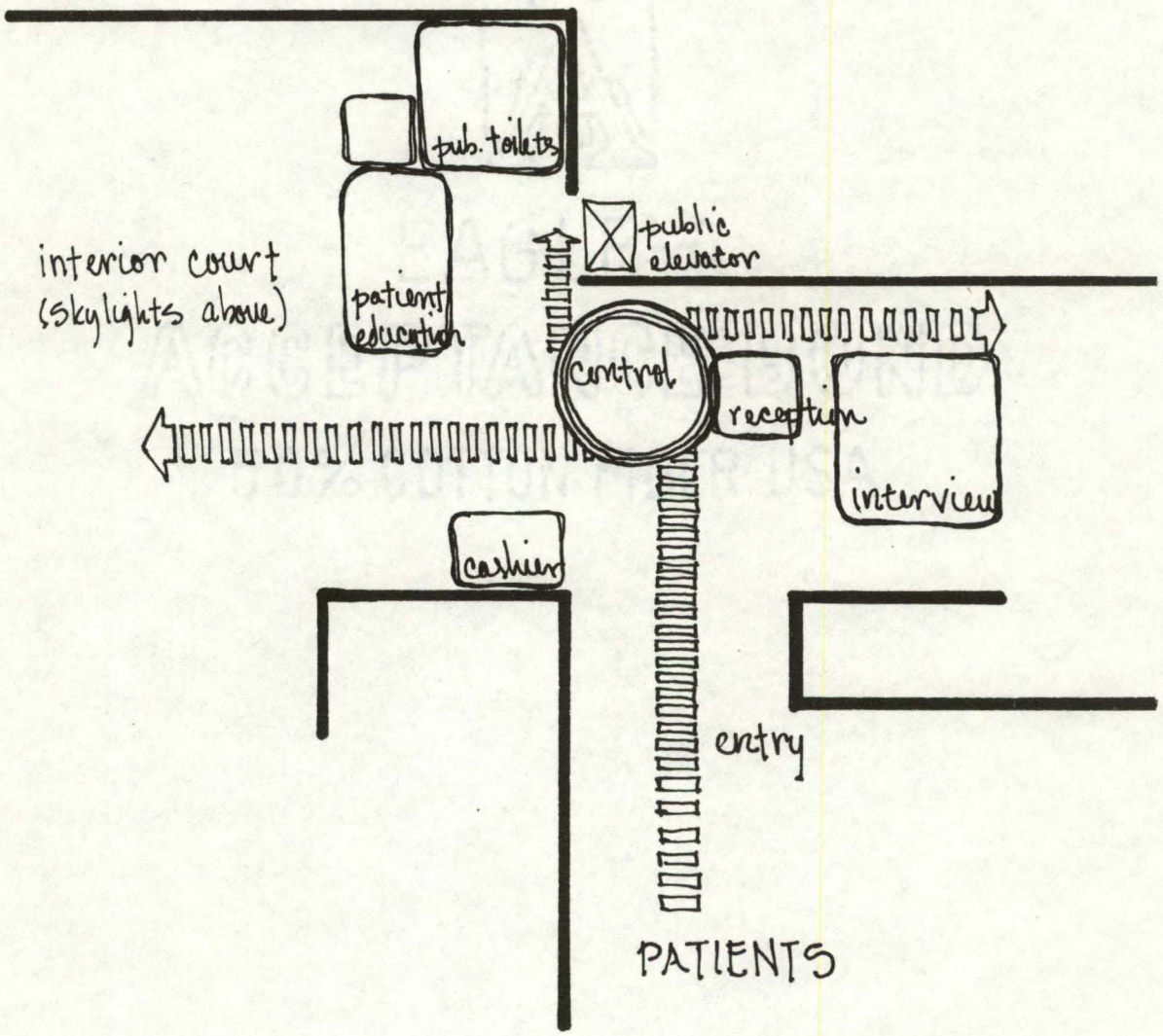
AMBULATORY CARE

CENTRAL RECEPTION

Entry	Patient entrance lobby for the ambulatory care program.	
	- Lobby	200 SF
	- Patient elevator	192 SF
Patient Registration	A central point for the reception and processing of all Group Practice patients; also serves as an orientation and control point for the facility.	
	- Reception	80 SF
Interview	Cubicles for interviews or financial counseling with new patients; may include machine for acquiring patient history information.	
	- Interview rooms, 3 @ 80 SF	240 SF
Waiting	Central Waiting area for family and friends who may be accompanying or transporting patients to the Group Practice; this major space is to serve as the unifying element of the facility.	
	- Interior Court	2,000 SF

Patient Education	Space for personal counseling of out-patients by the staff nutritionist and/ or social worker; to include facilities for viewing and storage of prepared audio visual material.	
	- Health education room	240 SF
	- Audio visual storage	64 SF
Cashier	A central cashier station adjacent to the point of exit for all Group Practice Center Patients.	
	- Cashier	100 SF
Circulation		1,090 SF
	TOTAL CENTRAL RECEPTION	4,206 SF

CENTRAL RECEPTION

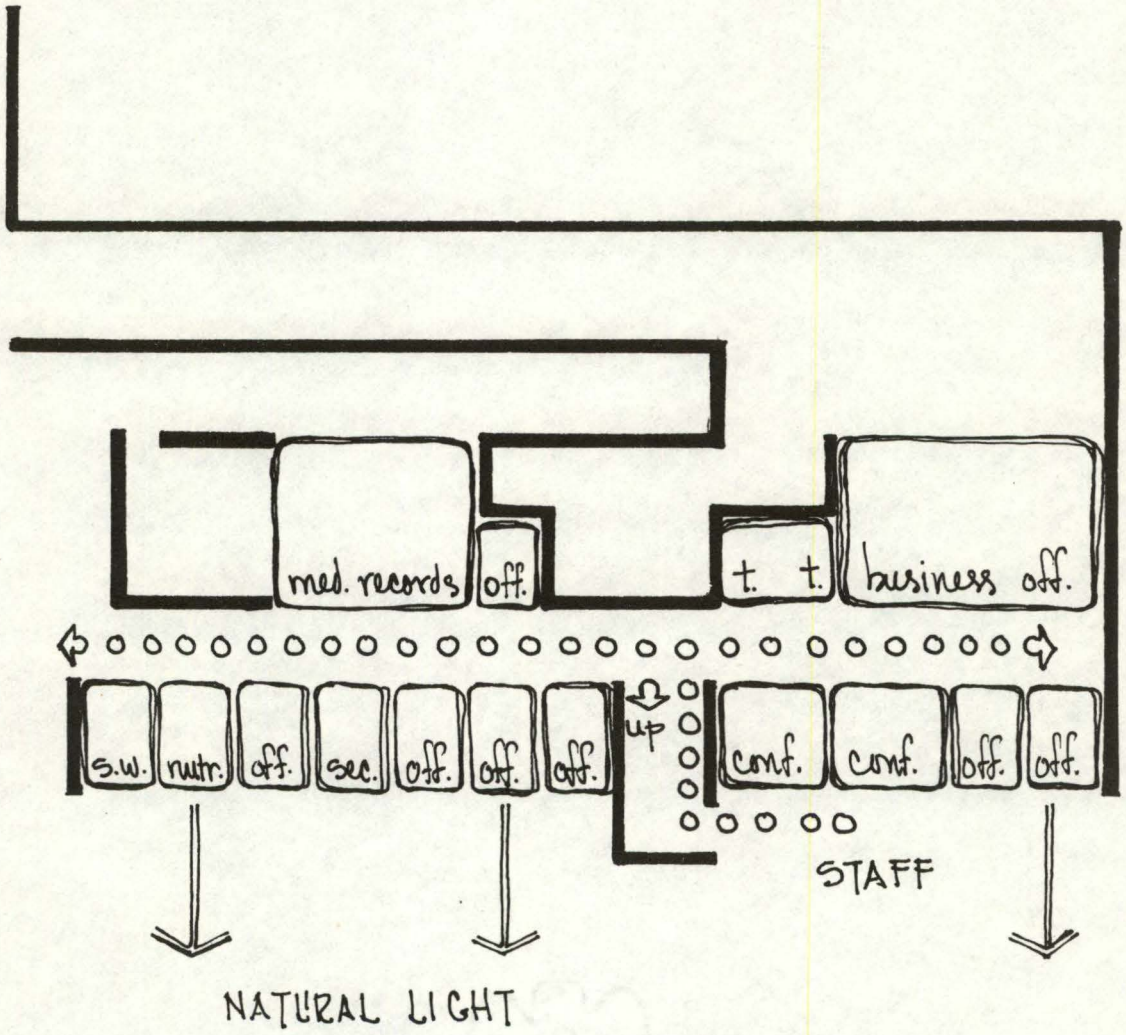


MANAGEMENT

Medical Records	Filing and work area adjacent to interview rooms for storage and maintenance of medical records for all Group Practice Center Patients; transcription service is centralized at Memorial Hospital; files for individual patients will be delivered to the appropriate nurse station prior to their appointment time.	
	- Record storage	280 SF
	- Records inspection station	48 SF
	- Records technician's station	100 SF
Staff Supervisors	Private offices and clerical support for supervisors of staff personnel in the Group Practice Center.	
	- Clinic Manager	100 SF
	- Clerical Supervisor	100 SF
	- Clinical Director of Nursing	100 SF
	- Secretarial area	100 SF
	- Staff toilets, 2 @ 40 SF	80 SF
Staff Counselors	Private offices for the staff nutritionist and social worker who will supplement important patient education programs.	
	- Nutritionist	100 SF
	- Social worker	100 SF

Conference	Spaces to be utilized for conference and consultation sessions among staff as well as classrooms for residents; rooms should be equipped for viewing of prepared audio visual material.	
	- Conference rooms, 2 @ 150 SF	300 SF
Business Office	Centralized work and storage area for physicians' billing and accounting functions; complete records maintenance and accounting services will be centralized at the Earle Administrative Services Center.	
	- Work/Storage	504 SF
	- Offices, 2 @ 100 SF	200 SF
Circulation		740 SF
	TOTAL MANAGEMENT	2,852 SF

MANAGEMENT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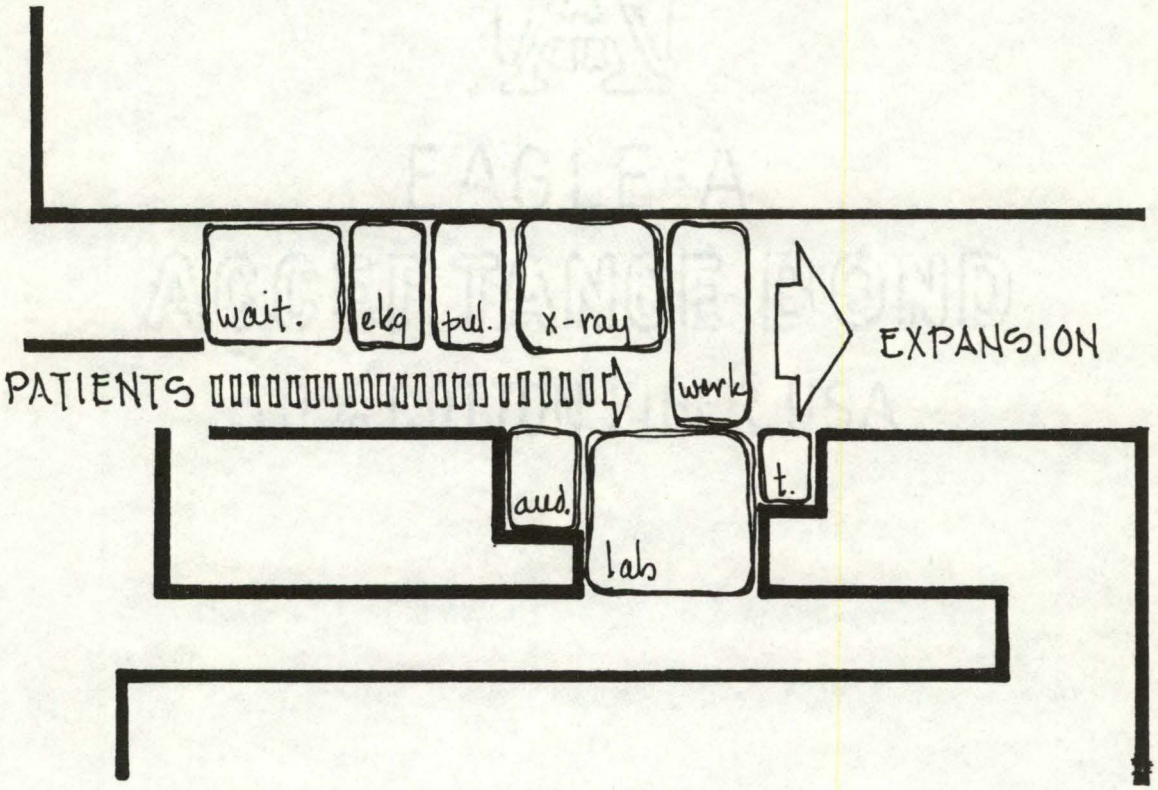
STAFF
NATURAL LIGHT

DIAGNOSTIC SERVICES

Waiting	A satellite waiting area suitable for stretchers and wheelchairs as well as ambulatory patients.	
	- Waiting area	224 SF
Laboratory	Central work space for basic laboratory services within the Group Practice Center; more sophisticated lab work will be available at Memorial Hospital if required.	
	- Laboratory	200 SF
	- Specimen collection station	80 SF
	- Toilet	40 SF
Radiology	A radiographic room and darkroom for basic x-ray procedures within the Group Practice Center; further radiology services will be available at Memorial Hospital if required.	
	- Radiographic room	224 SF
	- Darkroom/Film processor	40 SF
	- Film storage	80 SF
	- Viewing alcove/Work space	80 SF
Cardiology	A private cubicle equipped to perform an electrocardiogram.	
	- EKG room	100 SF
Audiology	A sound-proof cubicle equipped for audiology testing.	
	- Audiology room	80 SF

Pulmonary Function	A private cubicle for the diagnosis and treatment of cardiopulmonary or respiratory disorders; should include oxygen and suction outlets and built-in storage capacity.	
	- Pulmonary room	100 SF
Circulation		437 SF
	TOTAL DIAGNOSTIC SERVICES	1,685 SF

DIAGNOSTIC SERVICES



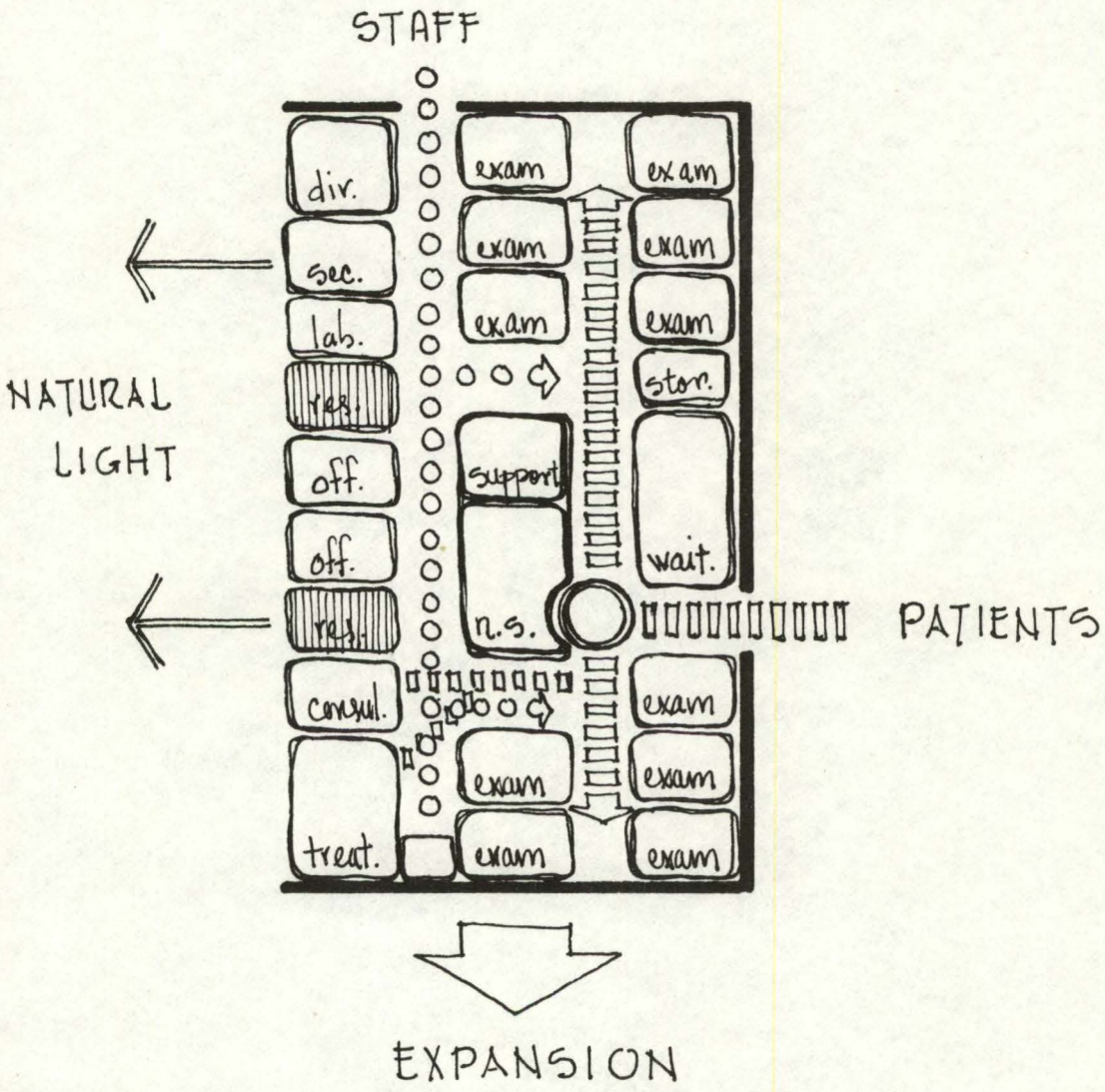
INTERNAL MEDICINE

Reception	A receiving point for all Internal Medicine patients; also responsible for supervision of the waiting area.	
	- Reception desk	60 SF
Decentralized Waiting	Satellite waiting area for Internal Medicine patients; should include provisions for wheelchairs and stretcher patients.	
	- Waiting area	288 SF
	- Patient toilets, 2 @ 40 SF	80 SF
Examination	For patient check-ups, examination rooms to include an examination and treatment table, a patient's changing area, a physicians's desk, a lavatory, and appropriate casework for built-in supply storage.	
	- Exam rooms, 11 @ 100 SF	1,100 SF
Special Procedures	A generously sized space for special treatments, such as proctoscopies and endoscopies, requiring priot work-ups; to be equipped with a proctoscopy table, a lavatory, and appropriate casework and storage capacity and provided with an adjacent toilet.	
	- Special procedures room	192 SF
	- Patient toilet	36 SF

Floor Administration	A working area for nursing personnel including storage areas and medication preparation and a clerical station for maintenance of patient records.	
	- Nurse station	160 SF
Doctor's Dictation	Station or alcove for the dictation of doctor's orders; tapes will be collected and transcribed at the Central Records area.	
	- Dictation booths, 2 @ 24 SF	48 SF
Full-time Staff	Private office and clerical support for the Director of Internal Medicine.	
	- Office	120 SF
	- Secretary	80 SF
Part-time Staff	Shared offices for the part-time teaching staff in Internal Medicine.	
	- Shared office	100 SF
Residents	Shared offices for two Internal Medicine Residents each; may be used for limited patient counseling.	
	- Shared offices, 2 @ 100 SF	200 SF
Nurse Administration	Private office space for the Internal Medicine Head Nurse/Nurse Practitioner who is responsible for supervising and coordinating nursing activities as well as patient education efforts.	
	- Office	100 SF

Consultation	A private cubicle for consultation and education sessions with Internal Medicine patients primarily by the Nurse Practitioner in the unit.	
	- Consultation room	100 SF
Staff Lab Work	Limited laboratory area and counter space with a sink and a dual microscope to be used by house staff for teaching purposes.	
	- Lab area	80 SF
Wheelchair/ Stretcher	Storage alcove for wheelchairs and stretchers.	
	- Wheelchair/Stretcher alcove	80 SF
Housekeeping	Limited storage and work facilities for the housekeeping staff within the Internal Medicine unit.	
	- Janitor's closet	20 SF
Storage	Storage closets for general supplies adjacent to the examination areas.	
	- Storage	60 SF
Circulation		1,016 SF
	TOTAL INTERNAL MEDICINE	3,920 SF

INTERNAL MEDICINE



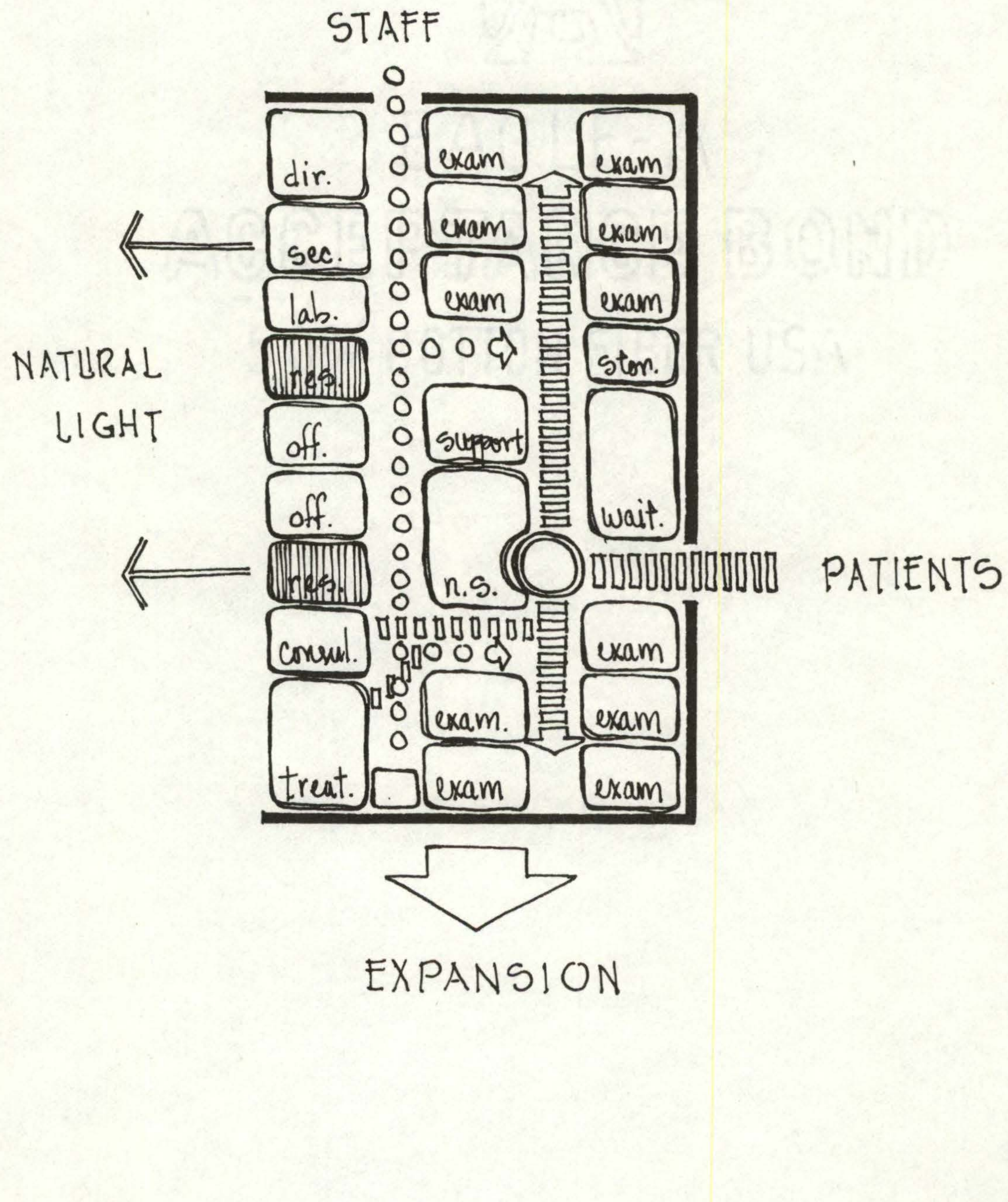
OBSTETRICS/GYNECOLOGY

Reception	A receiving point for all Internal Medicine patients; also responsible for supervision of the waiting area.	
	- Reception desk	60 SF
Decentralized Waiting	Satellite waiting area for Internal Medicine patients; should include provisions for wheelchairs and stretcher patients.	
	- Waiting area	288 SF
	- Patient toilets, 2 @ 40 SF	80 SF
Examination	For patient check-ups, examination rooms to include an examination and treatment table, a patient's changing area, a physician's desk, a lavatory, and appropriate casework for built-in supply storage.	
	- Exam rooms, 11 @ 100 SF	1,100 SF
Special Procedures	A generously sized space for special procedures, wuch as biopsies, implacement of birth control devices, and treatment of inflamed areas, requiring prior work-ups; to be equipped with an examination and treatment table, a lavatory, and appropriate casework and storage capacity and provided with an adjacent toilet.	
	- Special procedures room	192 SF
	- Patient toilet	36 SF

Floor Administration	A working area for nursing personnel including storage areas and medication preparation and a clerical station for maintenance of patient records.	
	- Nurse station	160 SF
Doctor's Dictation	Station or alcove for the dictation of doctor's orders; tapes will be collected and transcribed at the Central Records area.	
	- Dictation booths, 2 @ 24 SF	48 SF
Full-time Staff	Private office and clerical support for the Director of Internal Medicine.	
	- Office	120 SF
	- Secretary	80 SF
Part-time Staff	Shared offices for the part-time teaching staff in Internal Medicine.	
	- Shared office	100 SF
Residents	Shared offices for two Internal Medicine Residents each; may be used for limited patient counseling.	
	- Shared offices, 2 @ 100 SF	200 SF
Nurse Administration	Private office space for the Internal Medicine Head Nurse/Nurse Practitioner who is responsible for supervising and coordinating nursing activities as well as patient education efforts.	
	- Office	100 SF

Consultation	A private cubicle for consultation and education sessions with Internal Medicine patients primarily by the Nurse Practitioner in the unit.	
	- Consultation room	100 SF
Staff Lab Work	Limited laboratory area and counter space with a sink and a dual microscope to be used by house staff for teaching purposes.	
	- Lab area	80 SF
Wheelchair/ Stretcher	Storage alcove for wheelchairs and stretchers.	
	- Wheelchair/Stretcher alcove	80 SF
Housekeeping	Limited storage and work facilities for the housekeeping staff within the Internal Medicine unit.	
	- Janitor's closet	20 SF
Storage	Storage closets for general supplies adjacent to the examination areas.	
	- Storage	60 SF
Circulation		1,016 SF
	TOTAL OBSTETRICS/GYNECOLOGY	3,920 SF

OBSTETRICS / GYNECOLOGY



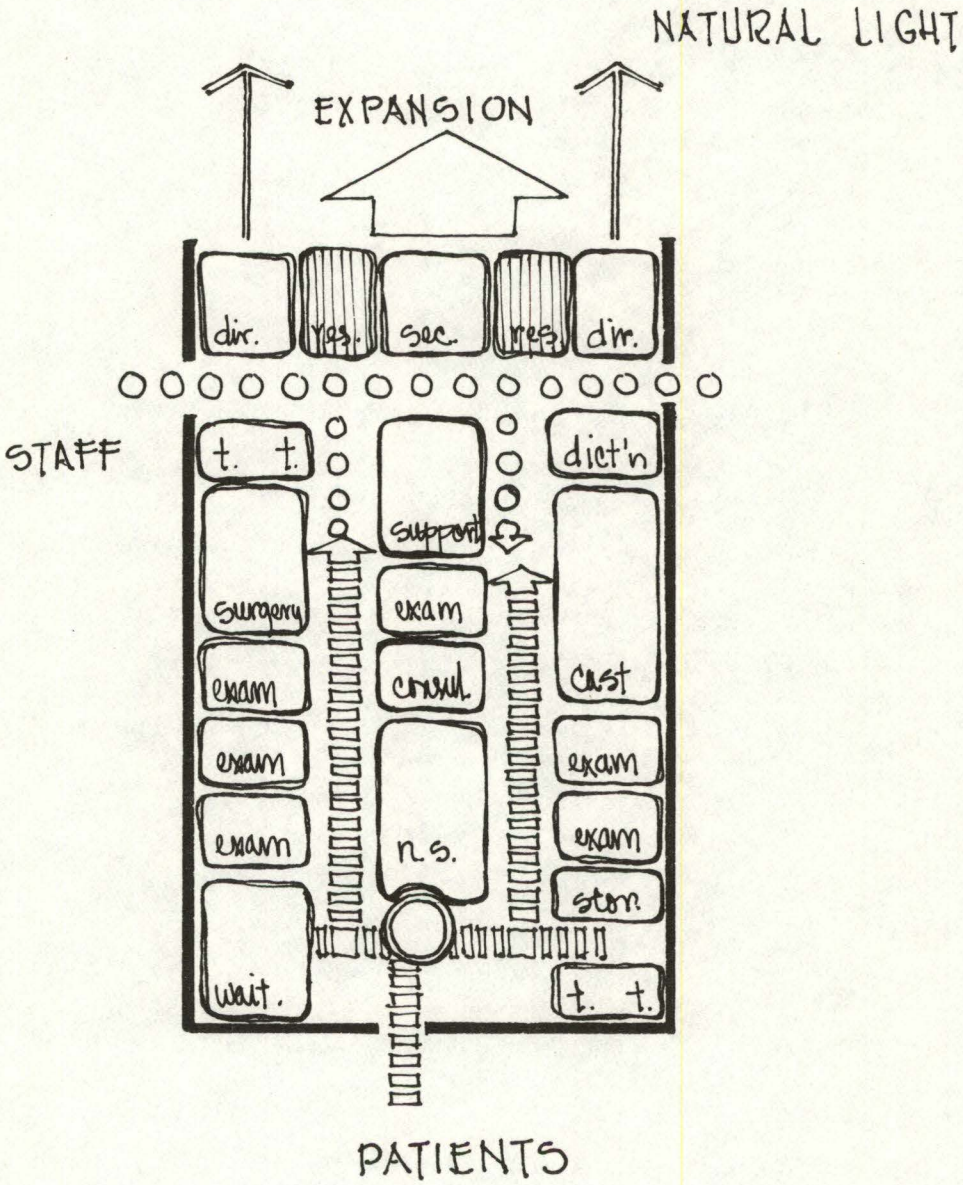
ORTHOPEDICS/SURGERY

Reception	A receiving point for all Orthopedics/ Surgery patients; also responsible for supervision of the waiting area.	
	- Reception desk	60 SF
Decentralized Waiting	Satellite waiting area for Orthopedics/ Surgery patients; must include provisions for wheelchairs and stretchers.	
	- Waiting area	300 SF
	- Patient toilets, 2 @ 40 SF	80 SF
Examination	For patient cheçk-ups, examination rooms to include an examination and treatment table, a patient's changing area, a physician's desk, a lavatory, and appropriate casework.	
	- Exam rooms, 6 @ 100 SF	600 SF
Minor Surgery	A specially equipped area for very minor surgery which generally requires only local anesthesia; instruments will be sterilized and supplied from Memorial Hospital each day.	
	- Minor surgical procedure room	192 SF
	- Clean instrument room	36 SF
	- Soiled instrument room	64 SF
Cast Room	Special facilities for the forming and removal of casts with the capacity to handle two Orthopedic patients at once; to include built-in storage of equipment and supplies, two examination and	

	treatment tables and utility sinks with plaster traps.	
	- Cast room	288 SF
Floor Administration	A working area for nursing personnel including storage areas and medication preparation and a clerical station for maintenance of patient records.	
	- Nurse station	160 SF
Doctor's Dictation	Station or alcove for the dictation of doctor's orders; tapes will be collected and transcribed at the Central Records area.	
	- Dictation booths, 2 @ 24 SF	48 SF
Full-time Staff	Private offices and clerical support for the Director of Surgery and Orthopedics.	
	- Offices, 2 @ 120 SF	240 SF
	- Secretaries, 2 @ 72 SF	144 SF
	- Staff toilets, 2 @ 36 SF	72 SF
Residents	Shared offices for 2 residents each in Surgery or Orthopedics; may be used for limited patient counseling.	
	- Shared offices, 2 @ 100 SF	200 SF
Nurse Administration	Private office space for the Head Nurse/ Nurse Practitioner who is responsible for supervising and coordinating nursing activities as well as patient education efforts.	
	- Office	100 SF

Wheelchair/ Stretcher	Storage alcoves for wheelchairs and stretchers.	
	- Wheelchair/stretcher alcoves	80 SF
Housekeeping	Limited storage and work facilities for the housekeeping staff within the Orthopedics/Surgery unit.	
	- Janitor's closet	24 SF
Storage	Storage area for general supplies.	
	- Storage	24 SF
Circulation		950 SF
	TOTAL ORTHOPEDICS/SURGERY	3,662 SF

ORTHOPEDICS / SURGERY



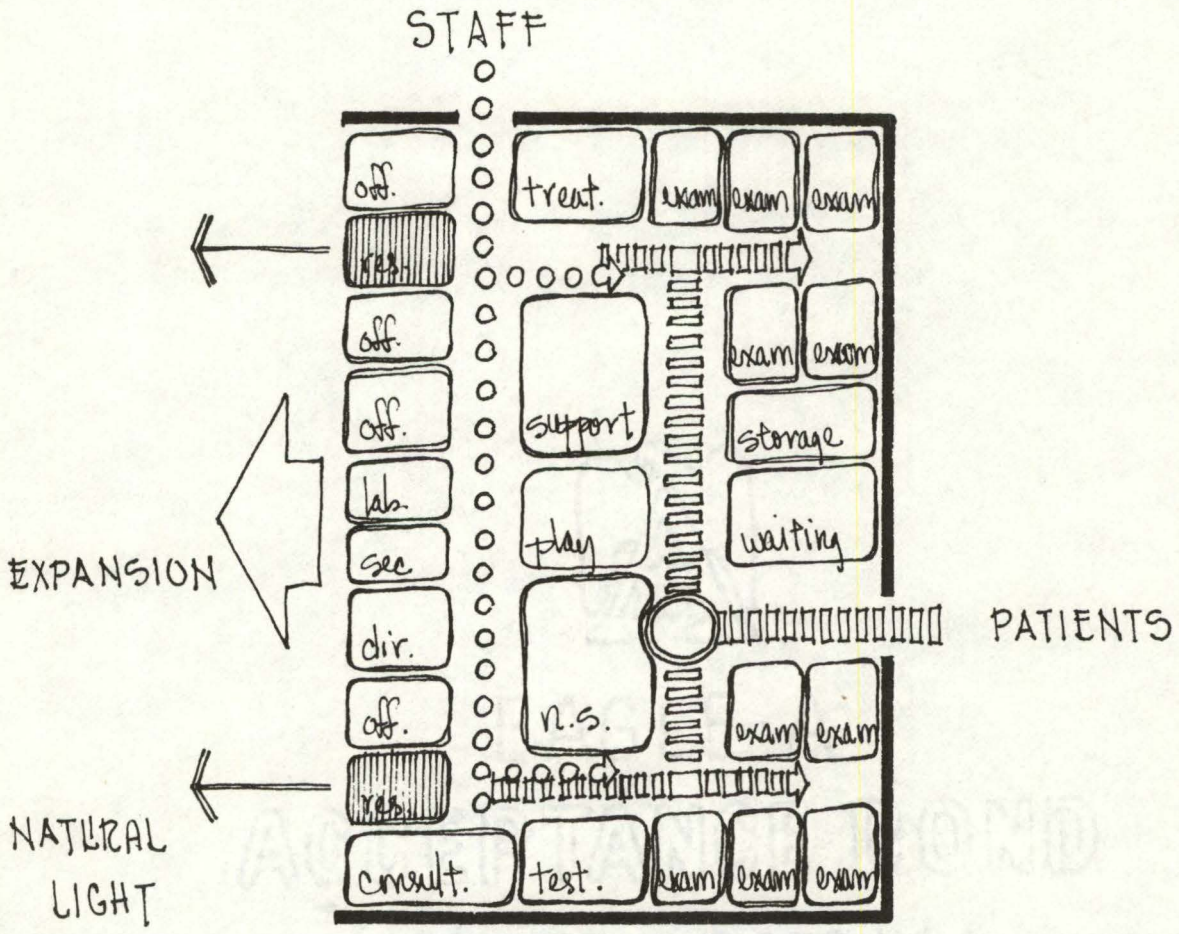
PEDIATRICS

Reception	A receiving point for all Pediatric patients and family; also responsible for supervision of the waiting area and children's play area.	
	- Reception desk	60 SF
Decentralized Waiting	Satellite lounge area for family and older Pediatric patients.	
	- Lounge area	192 SF
Playroom	A children's play area for younger Pediatric patients while waiting; to include scaled-down furniture and possibly observation panel for evaluation of well children.	
	- Play area	168 SF
	- Patient toilets, 2 @ 40 SF	80 SF
Examination	For patient check-ups, examination rooms to include a child's examination and treatment table, a physician's desk, a lavatory, and appropriate casework for built-in supply storage.	
	- Exam rooms, 10 @ 80 SF	800 SF
Therapy	A treatment area for procedures requiring special work-ups to include a child's examination and treatment table, a lavatory; appropriate casework, and a 4-by-4 raised tub for bathing.	
	- Treatment room	140 SF

Eye Test	An alcove or booth of sufficient area for a vision testing machine.	
	- Vision testing machine	60 SF
Audiometry Test	A sound-proof booth with the equipment to conduct audiometry testing.	
	- Audiometry testing booth	80 SF
Floor Administration	A working area for nursing personnel including storage areas and medication preparation and a clerical station for maintenance of patient records.	
	- Nurse station	160 SF
Doctor's Dictation	Station or alcove for the dictation of doctor's orders; tapes will be collected and transcribed at the Central Records area.	
	- Dictation booths, 2 @ 24 SF	48 SF
Full-time Staff	Private office and clerical support for the Director and Full-time Staff member of Pediatrics.	
	- Office, Director	120 SF
	- Office, Full-time staff	120 SF
	- Secretary	80 SF
	- Staff toilets, 2 @ 30 SF	60 SF
Part-time Staff	Shared offices for four part-time staff members of Pediatrics.	
	- Offices, 2 @ 100 SF	200 SF
Residents	Office space for work, study, and consultation to be shared by 4 or 5 residents.	
	- Offices, 2 @ 100 SF	200 SF

Nurse Practitioner	Private office space and consultation area for the Pediatric Nurse Practitioner who will be providing limited primary care in an extended role as well as coordinating parent education.	
	- Office/Consultation area	144 SF
Nurse Administration	Private office space for the Pediatric Head Nurse who is responsible for coordinating and supervising nursing services in Pediatrics.	
	- Office	100 SF
Staff Lab Work	Limited counter space including a sink and a dual microscope to be used by house staff for teaching purposes.	
	- Lab alcove	48 SF
Storage	Storage area to house limited supply items as well as special articles such as toys and books for children's enjoyment.	
	- Storage	164 SF
Housekeeping	Limited storage and work facilities for the housekeeping staff within the Pediatrics unit.	
	- Janitor's closet	64 SF
Circulation		1,080 SF
	TOTAL PEDIATRICS	4,168 SF

PEDIATRICS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storage
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waiting
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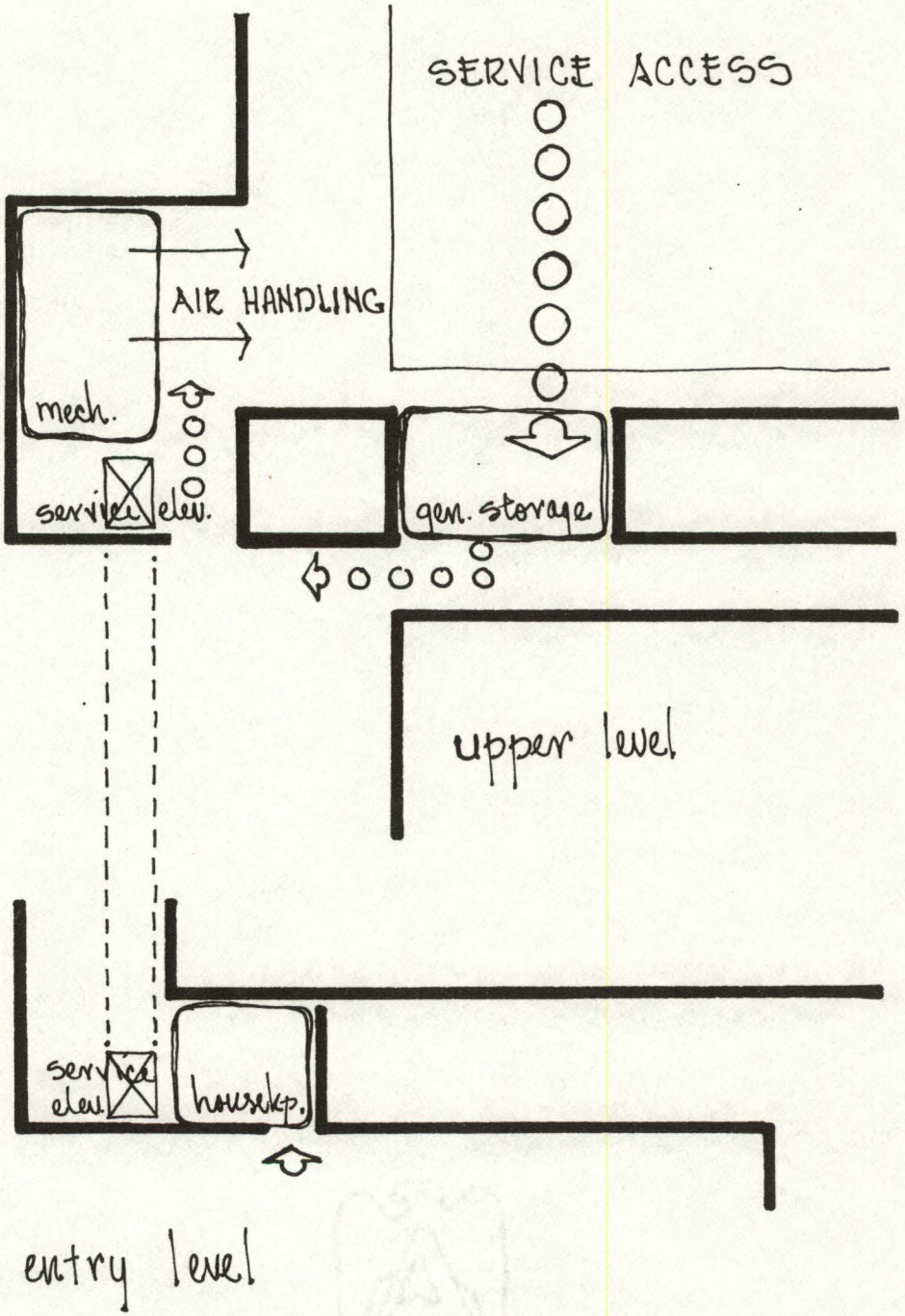
EXPANSION
NATURAL LIGHT
PATIENTS

SUPPORT SERVICES

Housekeeping	Adequate storage and work space for housekeeping staff with access to service elevator; soiled linen items will be collected from the examination and treatment areas at the conclusion of each day and stored here until taken to the central laundry.	
	- Housekeeping	224 SF
	- Service elevator	80 SF
Mechanical Equipment	Sufficient area to house the central heat converter, chiller, and fan units; heat is supplied through steam from the central boiler at the Hospital Center; the air-water system is boosted by induction terminals at the ambulatory care units.	
	- Mechanical equipment rooms	400 SF
General Storage	Space for bulk storage of supply items for the ambulatory care units; individual examination and treatment rooms will be stocked at the beginning of each day with necessary linen and supply items; bulk storage is maintained by the Hospital System's Supply Distribution Center.	
	- General storage	336 SF
Circulation		364 SF
	TOTAL SUPPORT SERVICES	1,404 SF

SUPPORT SERVICES



TOTALS FOR AMBULATORY CARE:

CENTRAL RECEPTION	4,206 SF
MANAGEMENT	2,852 SF
DIAGNOSTIC SERVICES	1,685 SF
INTERNAL MEDICINE	3,920 SF
OBSTETRICS/GYNECOLOGY	3,920 SF
ORTHOPEDICS/SURGERY	3,662 SF
PEDIATRICS	4,168 SF
SUPPORT SERVICES	1,404 SF
TOTAL GROSS AMBULATORY CARE	25,817 SF

TOTAL GROSS AMBULATORY CARE	25,817 SF
TOTAL GROSS MEDICAL EDUCATION	6,752 SF
TOTAL GROSS FACILITY	32,569 SF

PHYSICAL DESIGN SYSTEMS

THE DEVELOPMENT OF APPROPRIATE ARCHITECTURAL RESPONSES

SITE RELATIONSHIPS

The area chosen for the location of the Group Practice Center is already, in many respects, an ambulatory campus (See Facility Options, p. 22). All three facilties existing on the site, Roger C. Peace Institute with its physical therapy department, the Family Practice Center, and the Cancer Treatment Center, have substantial outpatient populations. By locating north of the Family Practice Center, it not only will be possible to consolidate the Medical Education program, but also to maintain and expand existing parking areas and utilize existing traffic patterns. The Group Practice Center entry plaza will take advantage of both the pedestrian and vehicular nodes created by the Family Practice facility. The southern orientation of the facility also will be enhanced by the existing slope of the site and the existing tree cover to the north.

Visual recognition of the Group Practice Center will be difficult from the major vehicular approach on West Faris Road because of the severe grade change between the two points, but Group Practice patients will be following the same route as visitors to the Family Practice Center. A two-story mass also will be helpful for visual access to the facility.

A drop-off will be provided for automobiles and buses, and cover will be provided at the main entrance. Parking on the site will be expanded to include a larger visitors' parking area south of the facility as well as a new staff parking lot to the west of it. The principle staff access will be at the west end of the Center for both staff vehicular traffic and staff pedestrian traffic from Memorial Hospital and Peace Institute.

Service access will be located to the rear (north) of the facility at a point one full floor above the main entry level. General supply and linen distribution as well as trash collection will be accomplished at this station shielded from the public by the building and existing tree cover.

The facility concept has been developed in accordance with the goals of the Group Practice Center that have been established through the

research of this project. The following goals are restated to reinforce the design solutions that have resulted from this investigation.

GOALS OF THE GROUP PRACTICE CENTER

ACCESSIBILITY TO PRIMARY CARE

To provide an available and easily recognizable point of entry to the health care delivery system in Greenville, especially for the lower income groups of the population; proper utilization of an ambulatory care program would reduce the current demand on Emergency Services as well as the cost of hospital-based primary care for both the Hospital System and the patient.

QUALITY OF PRIMARY CARE

To coordinate ambulatory care programs with acute care services in the Hospital System in order to avoid duplication of services; improve maintenance of patient records, and enhance the opportunity for proper follow-up care.

HEALTH EDUCATION OF THE COMMUNITY

To initiate patient education programs at the Group Practice Center utilizing staff consultation, prepared videotape programs, and written brochures to improve patient compliance with treatment programs and foster efficient utilization of health care services by the Greenville community.

ATTRACTION OF 'PRIVATE' PATIENTS

To provide an image and setting comparable to that of a private physician's office in an effort to attract additional 'private' patients for financial support and educational training.

CONSOLIDATION OF THE DIVISION OF MEDICAL EDUCATION

To establish an ambulatory campus for the Hospital System's Medical Education programs in Family Practice, Internal Medicine, Obstetrics-Gynecology, Pediatrics, and Orthopedics-Surgery in order to facilitate faculty consultation, coordinate program planning, and effectively utilize existing services at the Hospital Center site.

EXPANSION CAPABILITY

To allow for an independent but orderly expansion of the ambulatory care programs in anticipation of the increased demand for hospital-based primary care services in Greenville County.

FACILITY CONCEPT

In keeping with these goals, the form of the proposed facility should originate from the character of its site and the centralized nature of its function. Each specialty group will occupy one of four Ambulatory Care units which will spiral up and around an interior court. The stepping nature of these units will facilitate an on grade expansion of each specialty group and provide at least two on grade egresses from each unit. A ramping corridor will tie the units together and allow patients and staff to circulate outside the patient care areas; a hydraulic elevator will be provided for the use of Internal Medicine, Orthopedics, and Surgery patients.

The openness of the project will enable patients and visitors to orient themselves easily in the Center and will facilitate supervision of their activity by a relatively small group of staff members.

As was mentioned in the description of clinic patients, approximately 60 percent of those persons needing Ambulatory Care services will be driven to the Center by someone else. The interior court will provide ample waiting areas for these persons outside the Ambulatory Care units while allowing visitors to maintain visual contact with their friends or family members.

Services will be organized around the Patient Care Sequence (see Concept Development, p. 78) to enable a patient to utilize the diagnostic or patient education services without having to go through an examination and treatment area. The Central Reception desk will serve as the central control and orientation point. In the Ambulatory Care units, an effort will be made to separate patient and staff areas. The association of a shared resident's office with a group of five to six examination rooms will attempt to duplicate the private physician's office as much as possible in each unit. Nursing and support services will be centrally located for availability and control. There will be an access to the staff area for staff members who do not wish to walk through a patient area going to or from their offices.

All management and support services for the Center will be located in the two-story unit on the east end of the facility. A close proximity

of staff offices in this area will facilitate program coordination and enhance the opportunity for staff consultation. The administrative area is also easily accessible to the staff of the Family Practice Center.

Finally, there are several additional elements that are expressed in the following design solution and will be discussed briefly.

STRUCTURE

The structural system will be a composite one, making extensive use of steel joists and beams to support a poured roofing system with concrete slab on grade comprising all floors except the upper administrative level. The upper floor will be a steel joist and deck system supported by continuous channel girders which will cantilever over the entry plaza. Tubular steel columns will transmit a majority of the roof and floor loads to spread footings. The doffered ceiling over the interior court will be supported by a rigid system of fabricated steel trusses.

MATERIALS

Because of the location of Group Practice Center, the exterior treatment should respond to the existing buildings on the Hospital Center site. As a result, a face brick will be utilized in combination with precast concrete panels and stucco over concrete block.

GLAZING

Natural light is desirable for all the office areas which will be oriented primarily to the north and south away from the harsh morning and evening sun. Glass will be recessed at office areas so it will be shaded on all exposures except the east and west. For that purpose, space is provided for interior shading devices.

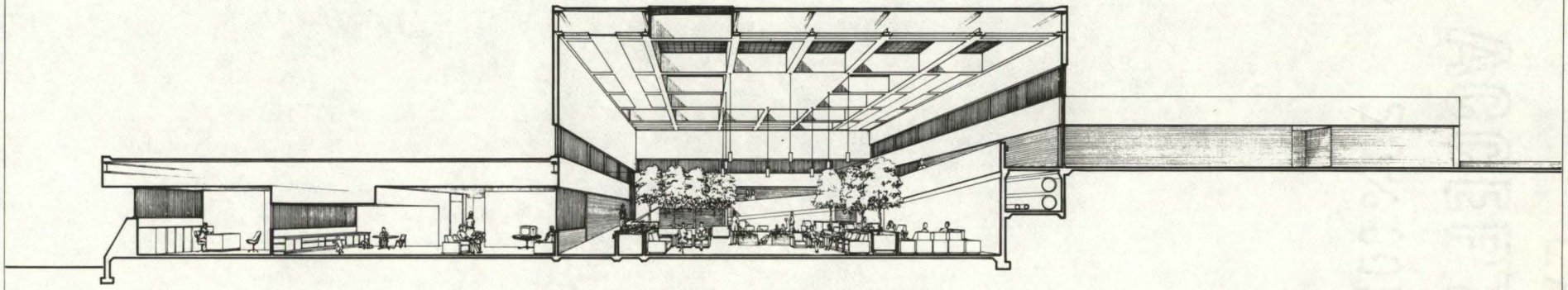
In the interior court, double-pane glass will be required because of the absence of shading for these openings. Skylights will be composed of glass block which will serve to diffuse the light and minimize heat transmission to the interior space.

MECHANICAL

The heating and cooling system will be a combination air-water system which will convert steam from the central Boiler Facility for heat. High

frequency air and hot or cold water will be piped through a mechanical chase beneath the ramping corridor to induction units dispersed through the Center. The units will supply air through ceiling diffusers to interior or exterior zones in the facility. The primary return of air will be accomplished through the interior court space.

GROUP PRACTICE CENTER



A MULTI-SPECIALTY HOSPITAL-BASED GROUP PRACTICE PROVIDING PRIMARY CARE AND OUTPATIENT SERVICES FOR GREENVILLE COUNTY AND TRAINING RESIDENTS IN THE MEDICAL EDUCATION PROGRAM OF THE GREENVILLE HOSPITAL SYSTEM

STEPHEN A. MCCALL, H.C.F.S.

TERMINAL PROJECT SPRING 1978


PLANNING STUDY
PROVIDE A RECOGNIZABLE POINT OF ENTRY
TO THE HEALTH CARE DELIVERY SYSTEM
I-185
EARLE ADMINISTRATIVE
SERVICES BUILDING
CHILDREN'S
PROGRAM
SUPPLY DISTRIBUTION CENTER
RECREATION
CENTER
BOILER FACILITY
MARSHALL I. PICKENS
HOSPITAL
3
ROGER C. PEACE
INSTITUTE
FAMILY PRACTICE
CENTER
GROVE ROAD
MEMORIAL HOSPITAL
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1
CANCER TREATMENT
CENTER
potential locations
WEST FARIS ROAD
greenville hospital center
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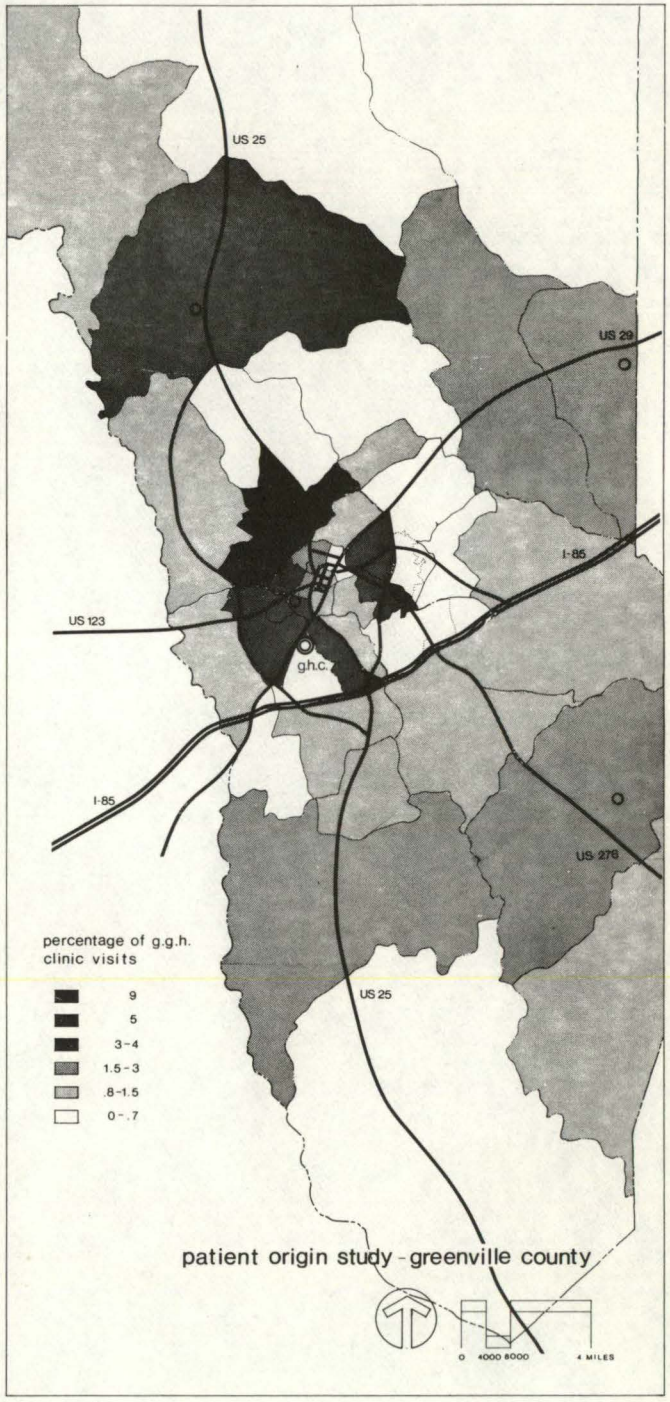
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percentage of g.g.h.
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patient origin study - greenville county
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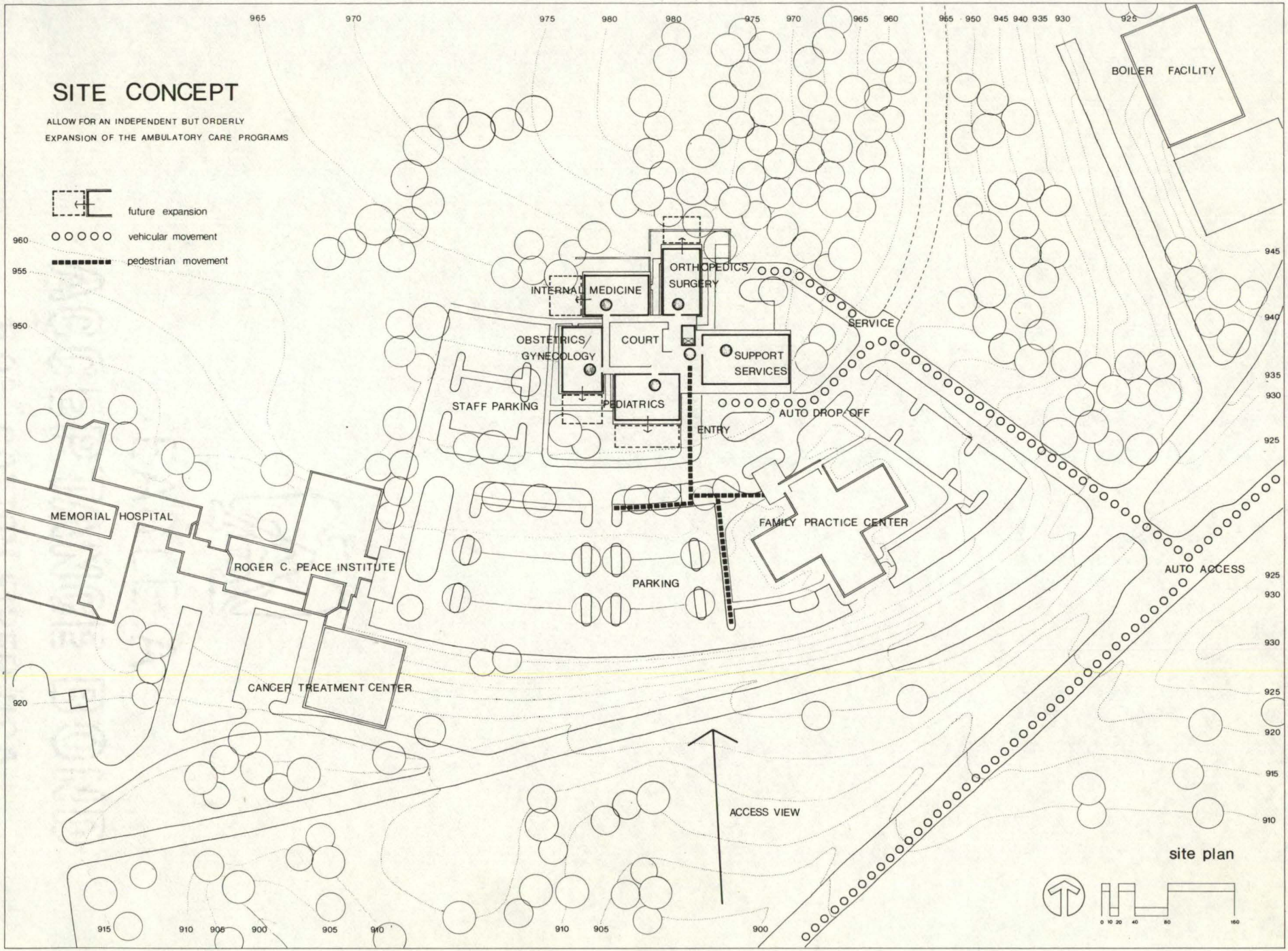
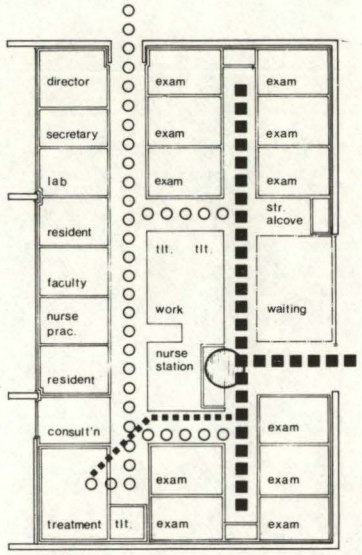

SITE CONCEPT
ALLOW FOR AN INDEPENDENT BUT ORDERLY
EXPANSION OF THE AMBULATORY CARE PROGRAMS
future expansion
vehicular movement
pedestrian movement
BOILER FACILITY
ORTHOPEDICS/
SURGERY
INTERNAL MEDICINE
SERVICE
OBSTETRICS/
GYNECOLOGY
COURT
SUPPORT
SERVICES
STAFF PARKING
PEDIATRICS
AUTO DROP-OFF
ENTRY
MEMORIAL HOSPITAL
FAMILY PRACTICE CENTER
ROGER C. PEACE INSTITUTE
PARKING
AUTO ACCESS
CANCER TREATMENT CENTER
ACCESS VIEW
site plan
0 10 20 40 80 160

CONCEPT DEVELOPMENT

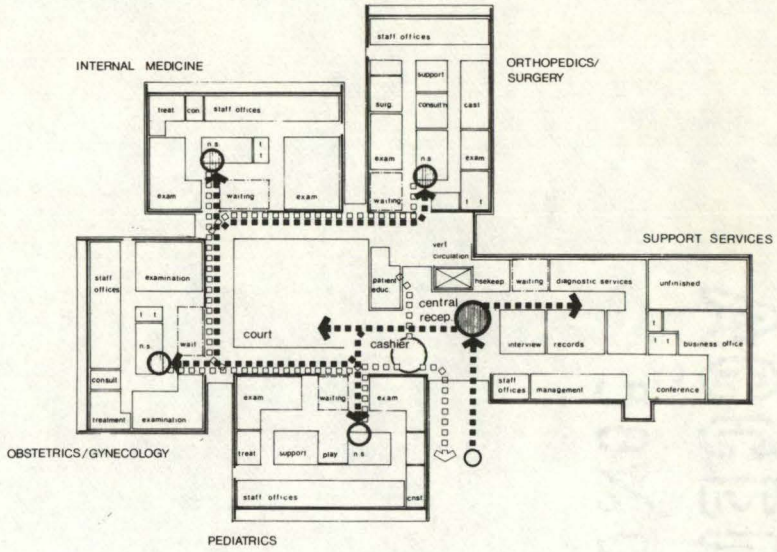
REINFORCE THE PROGRESSION OF ACTIVITIES IN THE PATIENT CARE SEQUENCE WHILE PROVIDING A SETTING AND ORGANIZATION COMPARABLE TO THE PRIVATE PHYSICIAN'S OFFICE.



typical unit circulation

patient ■■■■

staff ○○○○

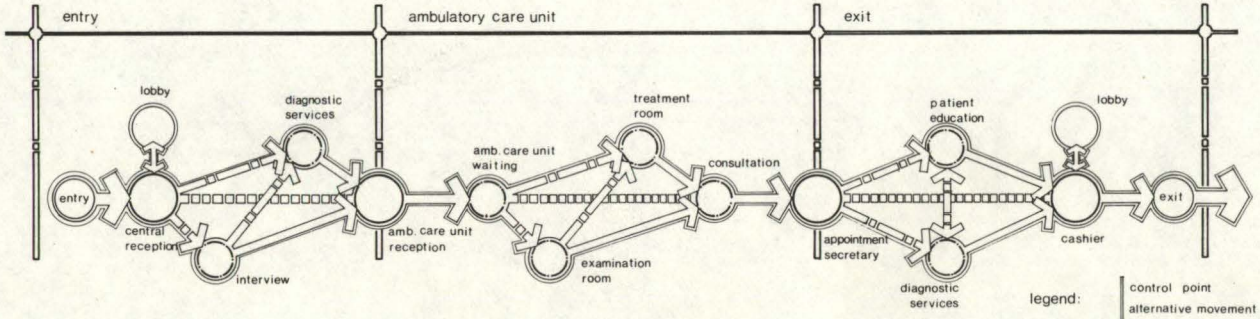


general circulation-ambulatory care program

entry process ■■■■■

exit process □□□□□

patient care sequence



legend:

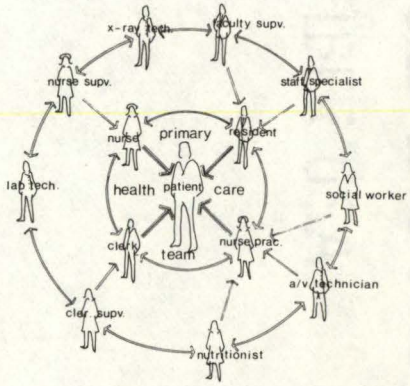
control point

alternative movement

required movement

directional flow

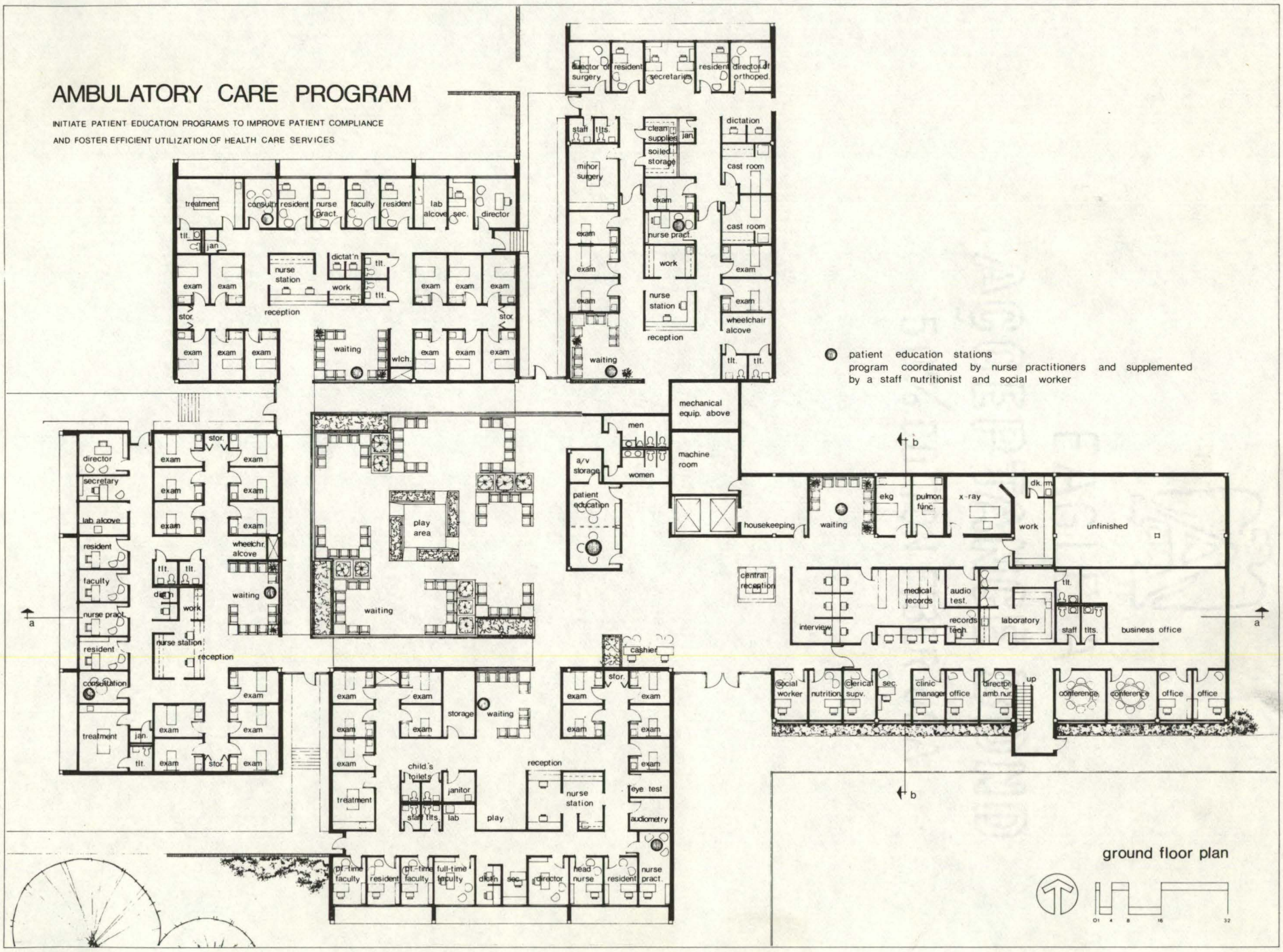
process station



ambulatory care treatment team

AMBULATORY CARE PROGRAM

INITIATE PATIENT EDUCATION PROGRAMS TO IMPROVE PATIENT COMPLIANCE
AND FOSTER EFFICIENT UTILIZATION OF HEALTH CARE SERVICES

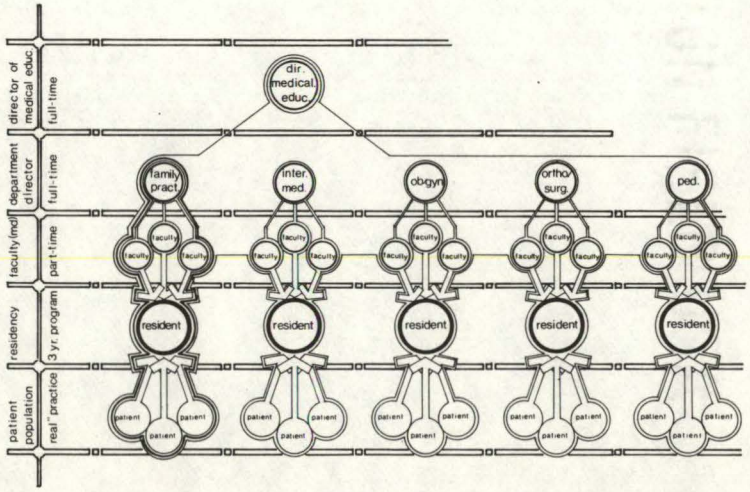


patient education stations
program coordinated by nurse practitioners and supplemented by a staff nutritionist and social worker

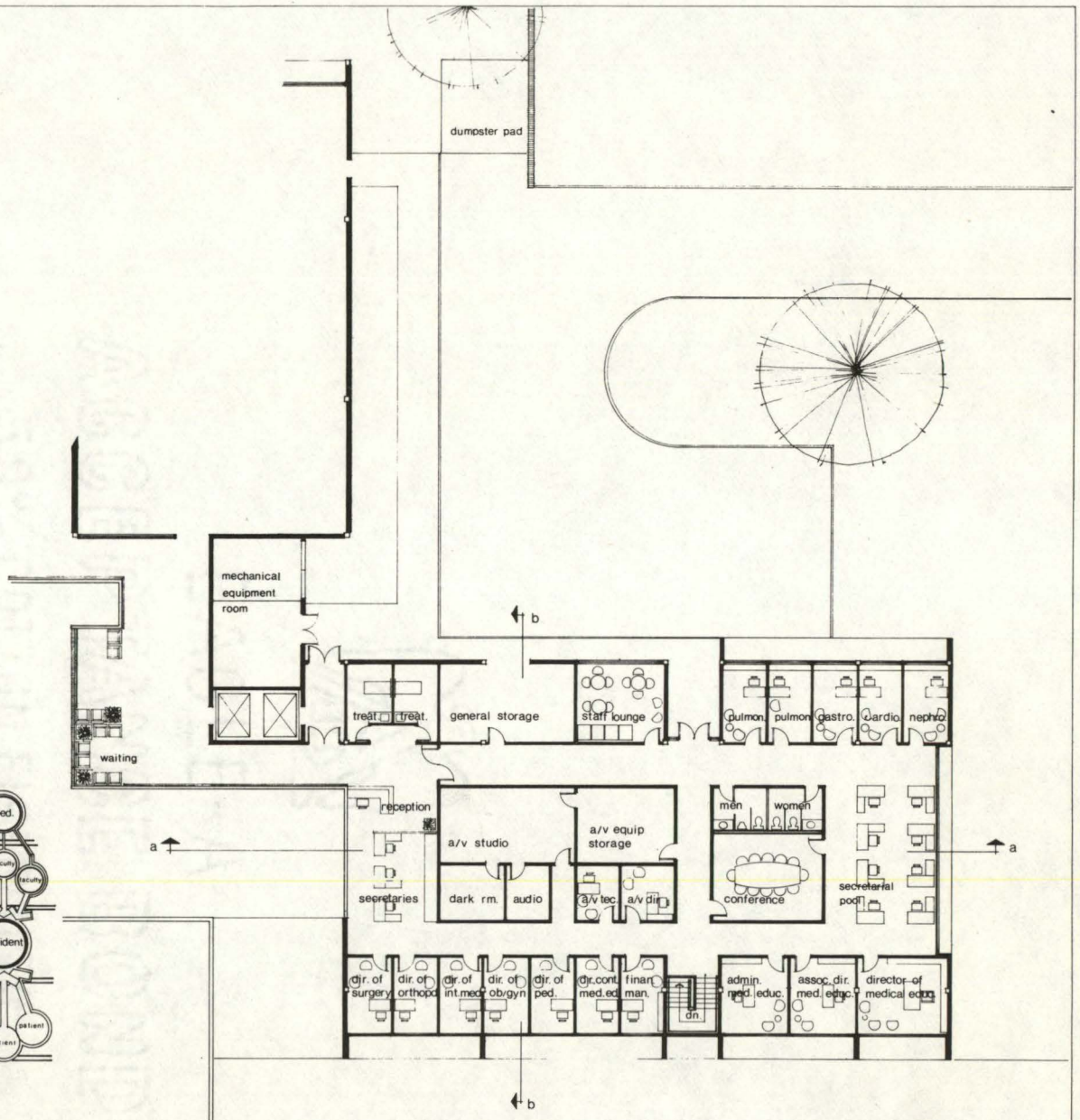
ground floor plan

MEDICAL EDUCATION PROGRAM

ESTABLISH AN AMBULATORY CAMPUS FOR THE HOSPITAL SYSTEM'S MEDICAL EDUCATION PROGRAMS IN ORDER TO FACILITATE FACULTY CONSULTATION, COORDINATE PROGRAM PLANNING, AND EFFECTIVELY UTILIZE EXISTING HOSPITAL SERVICES.



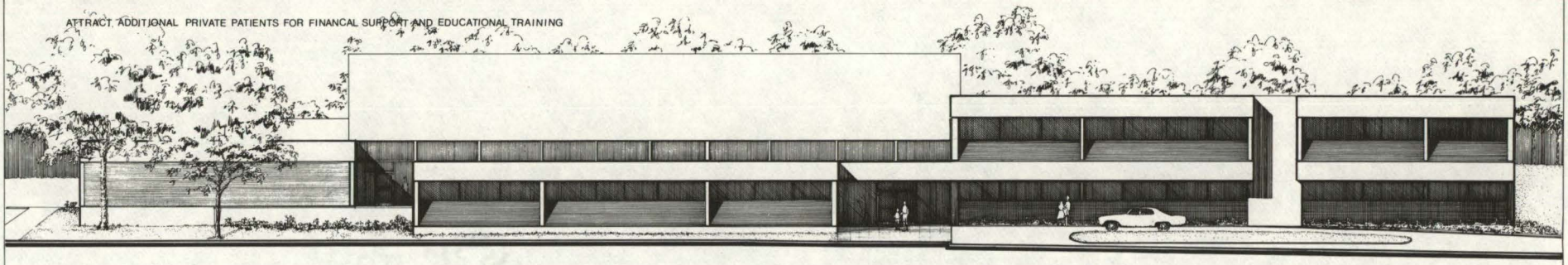
medical education residency, g.h.s.



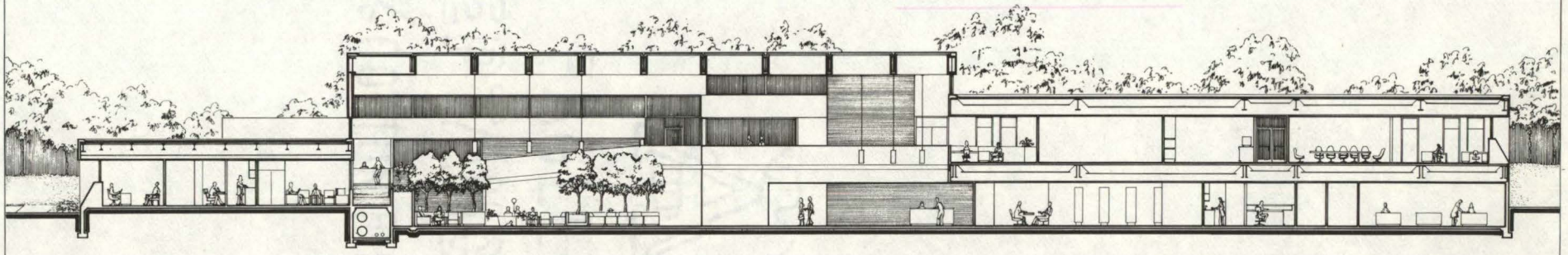
upper level plan

IMAGE

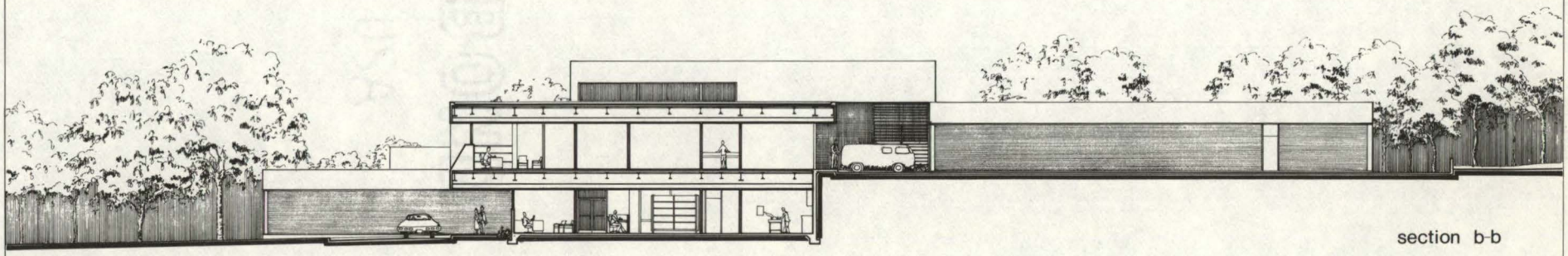
ATTRACT ADDITIONAL PRIVATE PATIENTS FOR FINANCAL SUPPORT AND EDUCATIONAL TRAINING



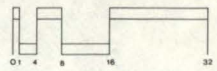
south elevation



section a-a



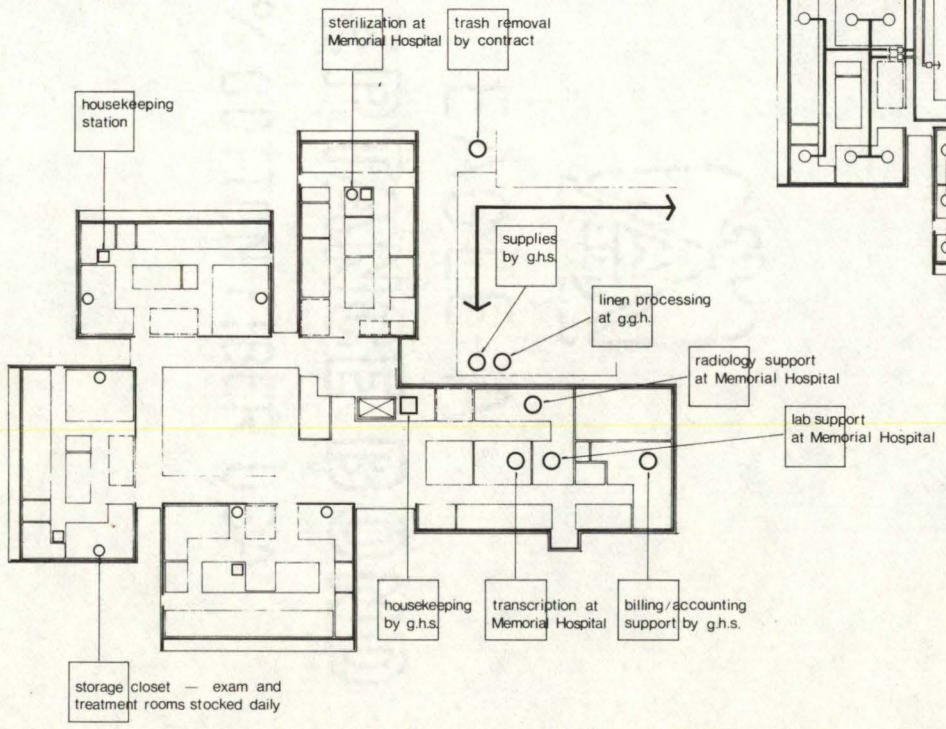
section b-b

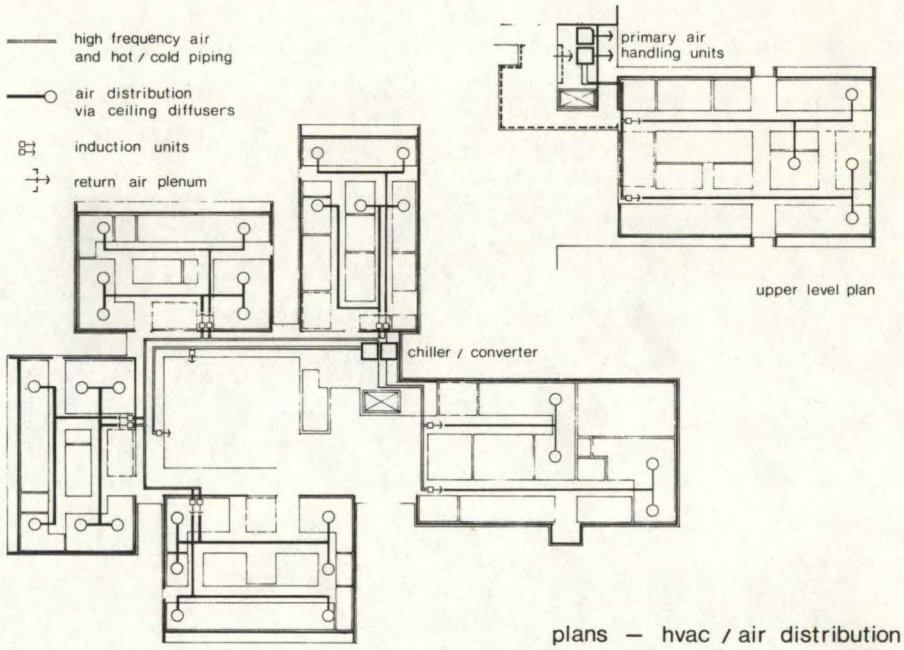


SUPPORT SERVICES

COORDINATE AMBULATORY CARE PROGRAMS WITH EXISTING SERVICES IN THE HOSPITAL SYSTEM IN ORDER TO AVOID DUPLICATION, IMPROVE MAINTENANCE OF PATIENT RECORDS, AND ENHANCE THE OPPORTUNITY FOR FOLLOW-UP CARE

distribution of services





plans — hvac / air distribution

STRUCTURE

bar joists

wide flange beam

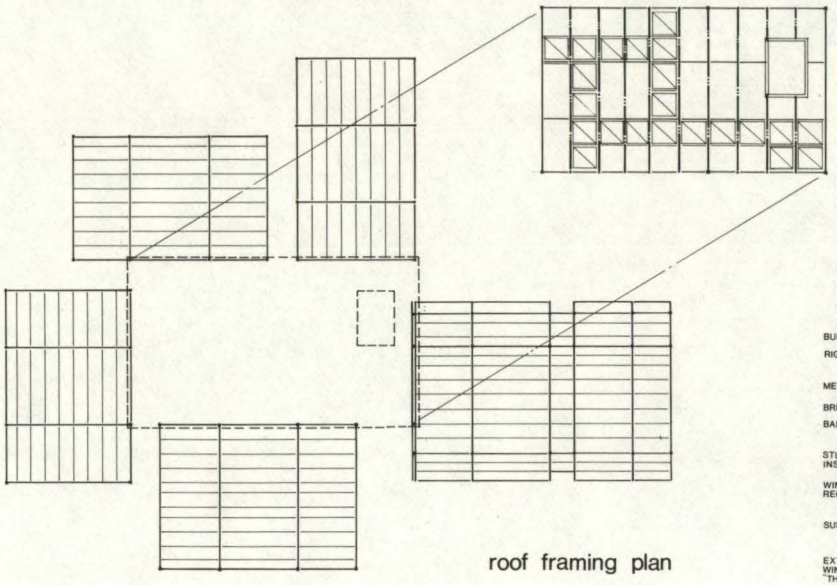
tube columns

channel girders

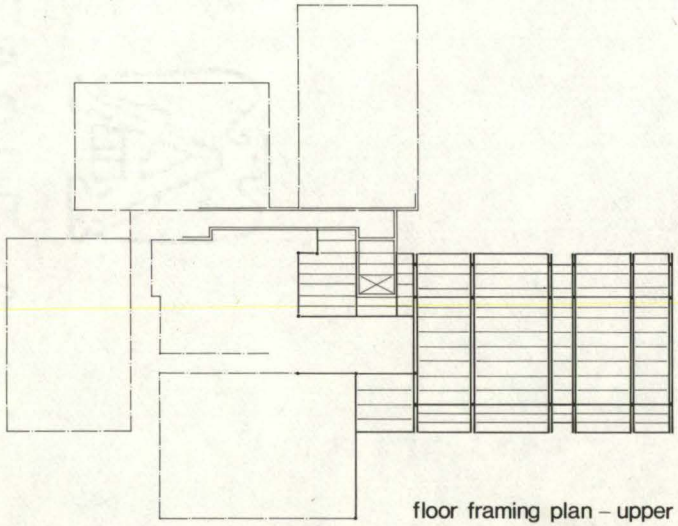
fabricated long span trusses

pipe columns

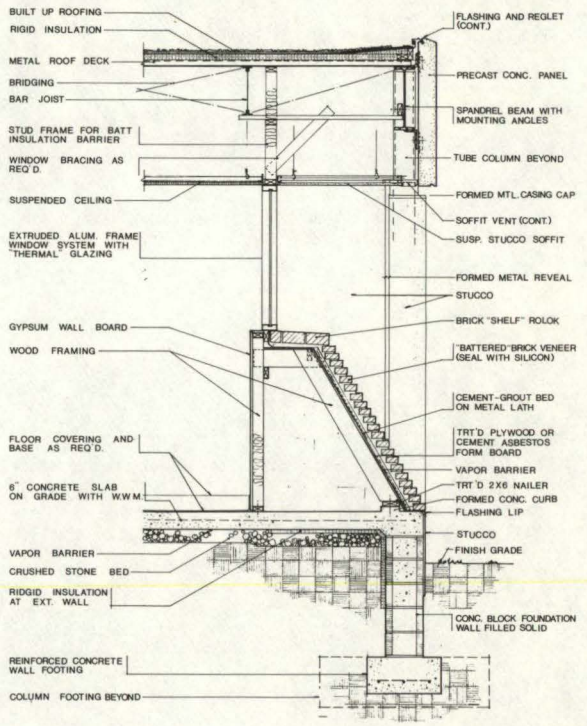
glass block skylights



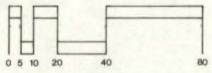
roof framing plan

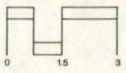


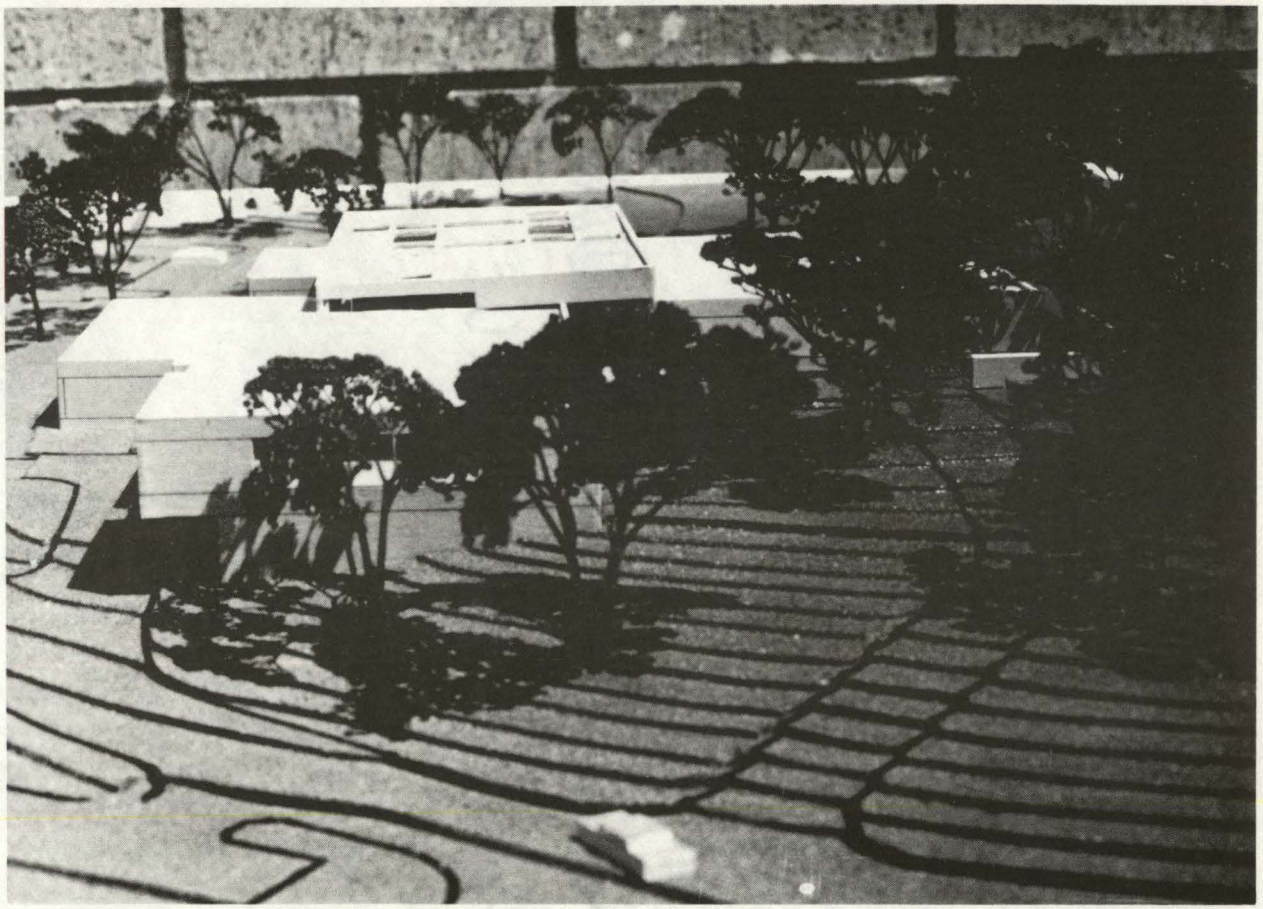
floor framing plan – upper level



typical wall section







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FOOTNOTES

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[3]"Change Begins in the Doctor's Office," Fortune, LXXXI (January, 1970), 130.

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[9]Ronald J. Fryzel, "Hospital Based Group Practice Provides Accessible, Less Costly Primary Care," Hospitals, J.A.H.A., L (September, 1976), 109.

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