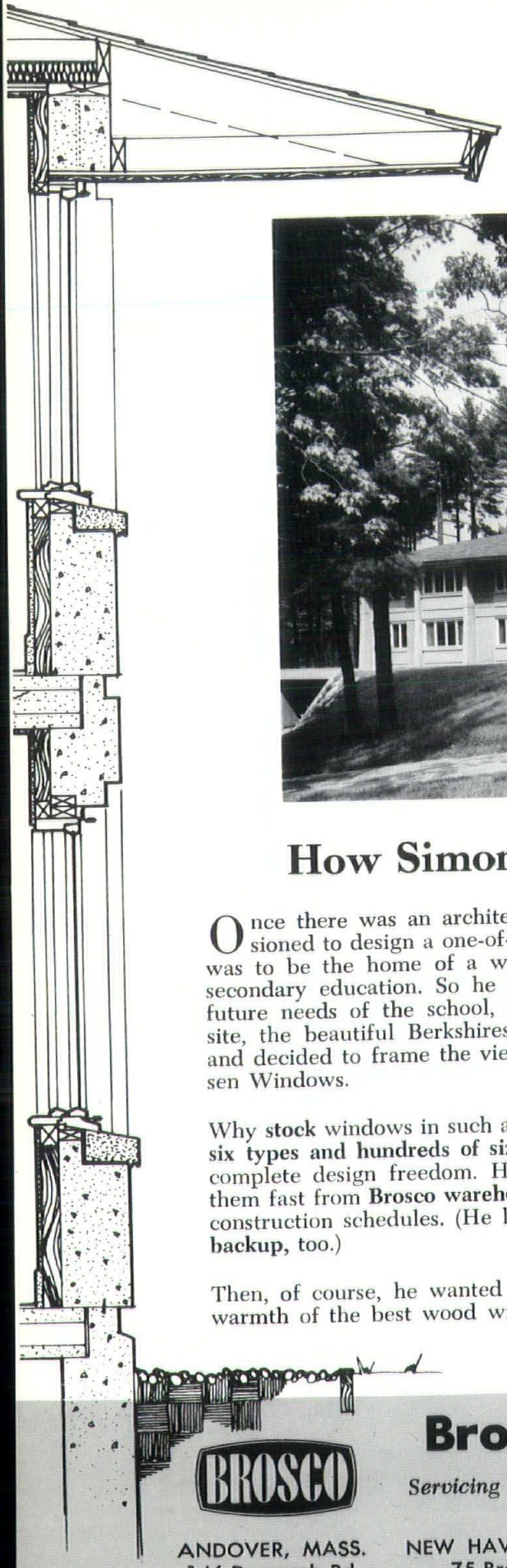
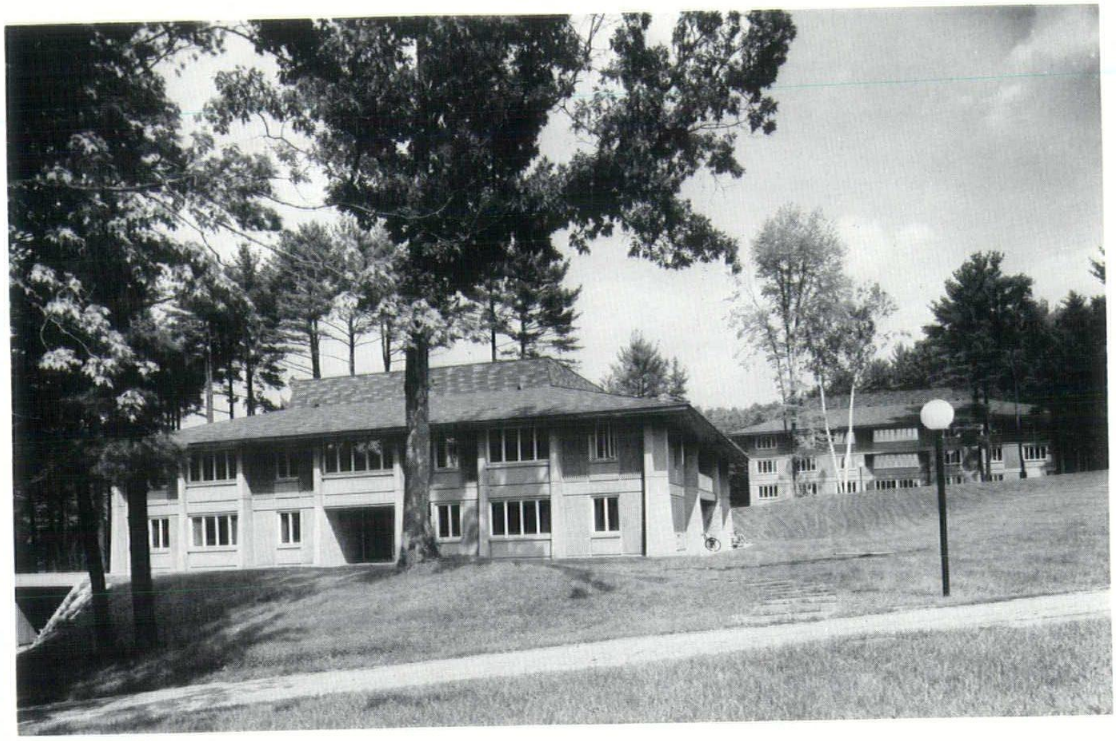
new england Architect

September 1971



Buildings: Simon's Rock School
Location: Great Barrington, Massachusetts
Architects: Morehouse and Chesley,
Lexington, Massachusetts



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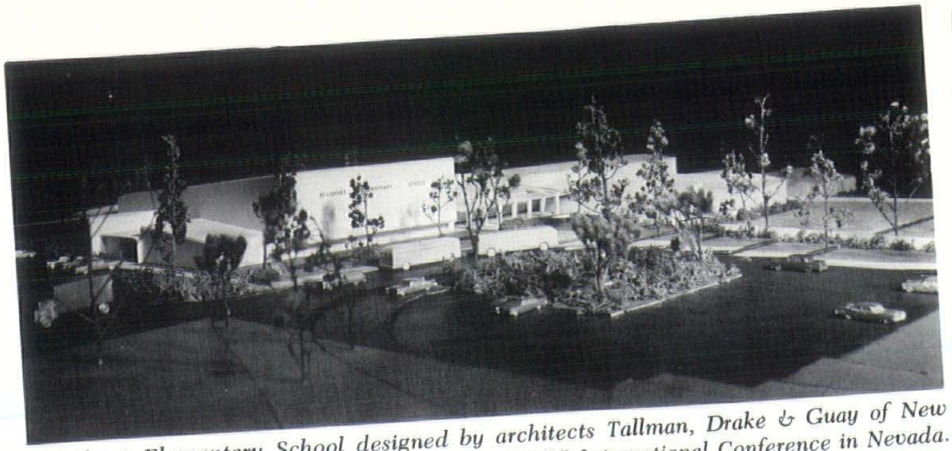

Acushnet Elementary School designed by architects Tallman, Drake & Guay of New Bedford, Mass., chosen for exhibition at the CEEP International Conference in Nevada.

NOTES & COMMENTS

Tallman, Drake & Guay Cited for School

The Acushnet Elementary School designed by Tallman, Drake & Guay of New Bedford, Mass., has been selected by the Council of Educational Facility Planners for exhibition in the 1971 Theatre of Planning at the CEEP International Conference in Las Vegas, October 3-6, 1971.

It is the third award received by the architects for design of the school which was published in the January '70 issue of BAY STATE ARCHITECT. The school was previously selected by the National School Boards Association for their exhibit in San Francisco in April and by the American Association of School Administrators last year.

Russell Gibson von Dohlen Acoustical Unit Added

Ralph H. Gibson, Jr.

Russell Gibson vonDohlen, West Hartford, Conn., architects, has established an acoustical consulting department. The department will be managed by Ralph H. Gibson, Jr.

According to Murray O. Gibson, a partner in the firm, this action was taken to provide more comprehensive service to clients. Said Mr. Gibson: "We are all more aware of acoustics than ever before. Terms such as 'noise pollution' are standard

(Continued on page 27)

New England Regional Conference of the American Institute of Architects

Colonial Hilton Inn, Northampton, Mass.

FRIDAY, OCTOBER 15, 1971

3:00-6:00 P.M.	Registration
5:30-7:30 P.M.	Cocktail Reception Party sponsored by the Host Chapter at Bay State West. The Architect, Eduardo Catalano, is expected to be present for a brief discussion. A guided tour will be available for those interested.
7:30 P.M.	Dinner (Individual Arrangements). A map on the conference flyer will point out 4 to 5 good restaurants which are on route back to the Inn from Springfield. Reservations can be made at registration time through our Registration Committee.

SATURDAY, OCTOBER 16, 1971

8:00-9:30 A.M.	Breakfast
9:30 A.M.	1.) Opening of Meeting — Introductions 2.) Keynote Speaker — Governor of Mass. Francis W. Sargent. 3.) Main Speaker — Robert Nash, Vice President of AIA (National) and Chairman of Human Resources Council.
10:30-10:45 A.M.	Coffee Break
11:00-12:00 A.M.	Unspecified
12:15-1:30 P.M.	Cocktails Informal Conversation Light Lunch
1:30-4:30 P.M.	Afternoon workshop — panel discussions concerning the workings of the Inner City. Panel to be composed of people of different professional, sociological, philosophical backgrounds.
(Alternate for Women) (12:00-4:30 P.M.)	Women's Lunch and Tour Program of Interest at Mount Holyoke College.
6:00-7:00 P.M.	Cocktails
7:00 P.M.	Dinner Dance. Black tie optional. Honor Awards to Laymen. One from each chapter.

SUNDAY, OCTOBER 17, 1971

10:30-11:30 A.M.	Brunch at University of Massachusetts
11:30-2:00 P.M.	Tour of Campus and Buildings
2:00 P.M.	Conference Ends

Honorary Chairman of the Conference is Hugh Jones, FAIA.

General Chairmen include Robert L. Tessier, AIA; Frederick Pugliano, AIA; and Ernest R. Sienkiewicz, AIA.

new england
Architect

September 1971 Volume 2 Number 5

features

departments

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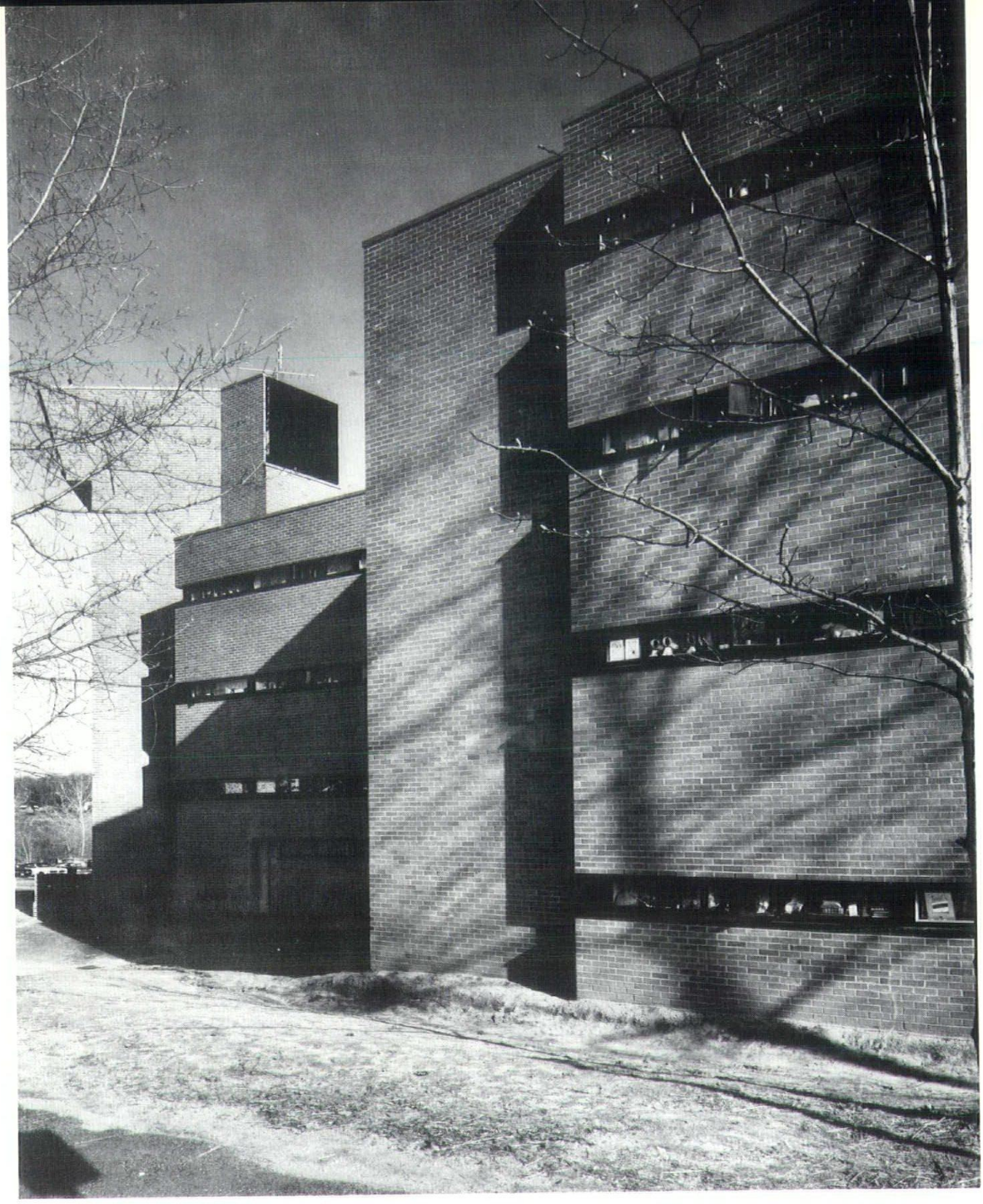


GULICK HALL

Springfield College

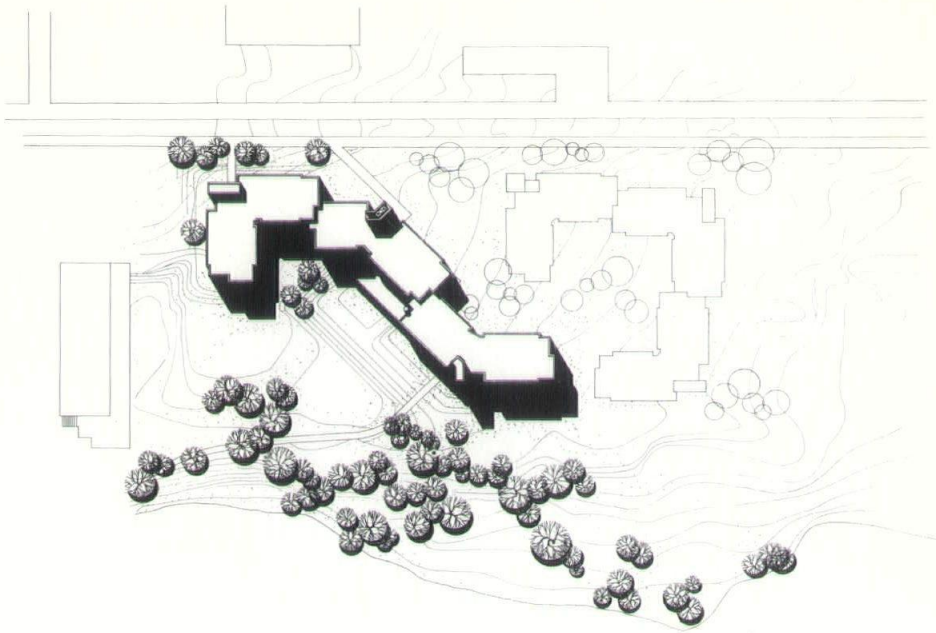
Springfield, Mass.

THE entire design for the Gulick Hall dormitory at this small four year college was directed at an attempt to resolve a multitude of social questions within what initially appeared to be an impossible budget. The College had virtually no endowment on which to fall back; its major funding efforts were directed towards a new library project; and the status of the alumni was such that large donations were improbable. Therefore, instead of transmitting a program in terms of square feet and total dollars, the College merely stated the number of students to be housed and the maximum rent each student was capable of paying.

The College would contribute the land but beyond that the cost of the building would be amortized out of the rents of the students (monies were loaned through a HUD program) and the size of the sleeping and living spaces were in turn balanced against their ability to carry the cost.

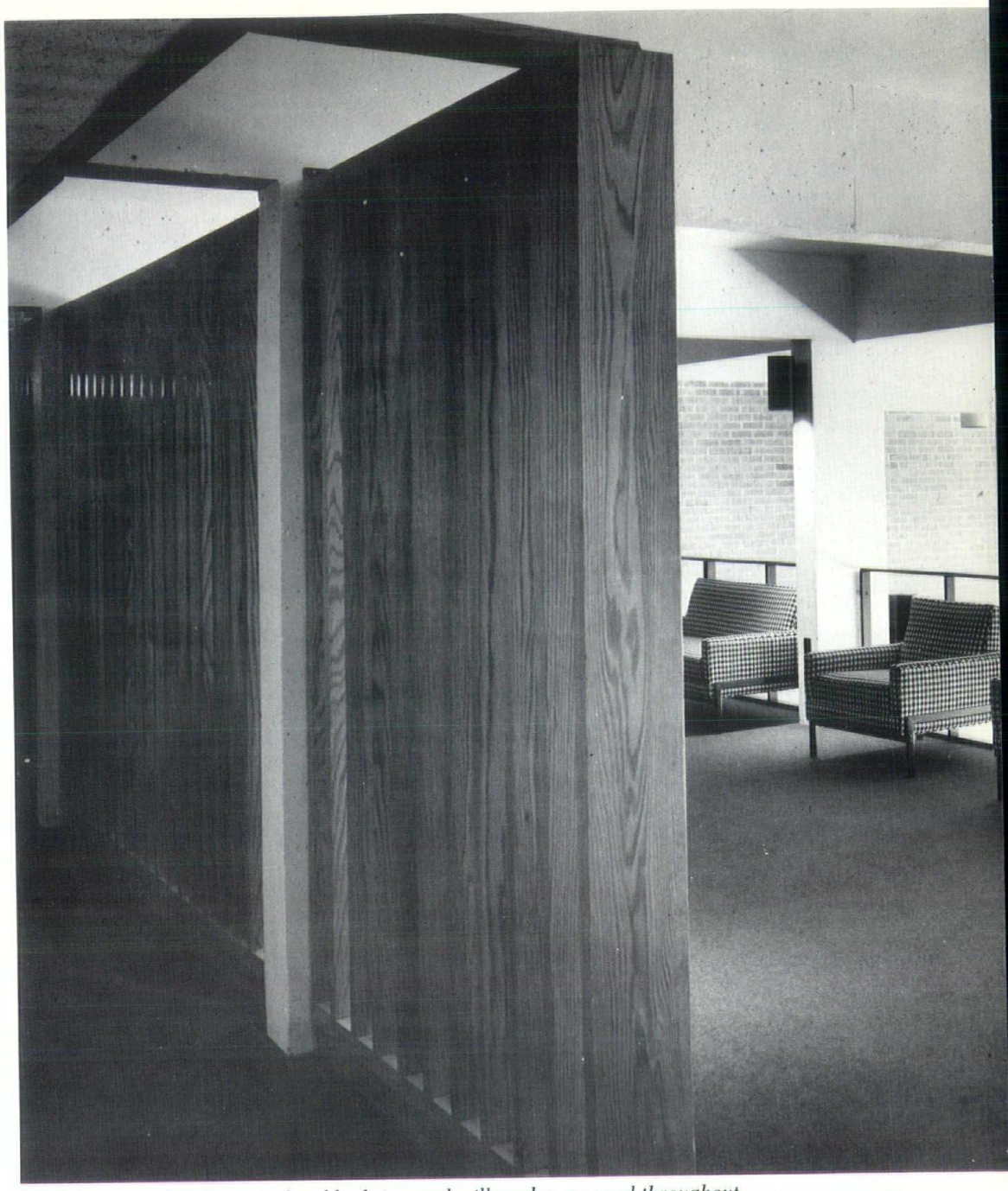
Working backward from what the students could afford per year ($405.00) the space program and allowable cost per square foot were determined; respectively these were 175 square feet per student at a cost of $20.50 per student. The information was then related to the social models worked out with the college committees.

It was decided that instead of devoting space to single rooms the double would be the basic unit, with the spaces normally designated to singles translated into increased social spaces. Six doubles were grouped around one toilet facility. Two groups of six doubles shared a



A concrete block bearing wall system with concrete flat slab was chosen because of budget, labor and privacy requirements. The exterior of the building was built of brick veneer with windows made up of horizontal steel and metal sill combinations.

Perry Dean & Stewart
Boston



Brick, concrete block, painted and built-in wood mill work were used throughout.

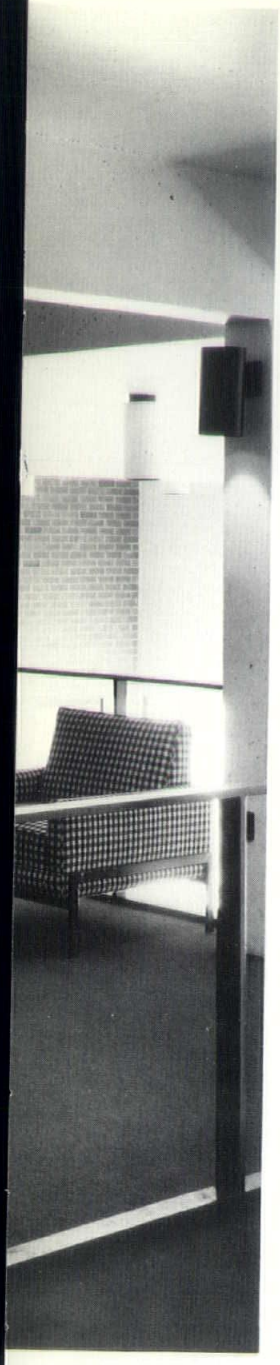
common living room and study lounge. In addition facilities were provided for housing one Senior Advisor. Four of these 25 student units were then stacked around a vertical stair, making the next grouping of 100. The total dormitory was made up of three of these 100 student groupings.

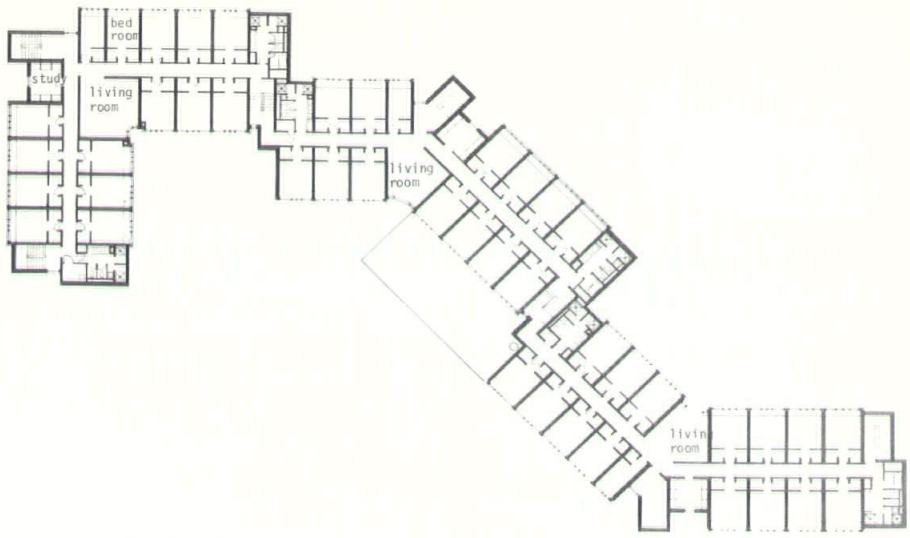
In addition to small social areas, there was also provided a large common facility split into two levels containing a two-story space large enough for big groups and a smaller space for television or talking. Other rooms were set aside for laundry, snacks, etc., and still others were given no definite function but are flexible enough to be used for a multitude of purposes.

Of particular interest was the window design. A bedroom is primarily a very low scale inward functioning unit in which most of the occupant's time is spent either at a desk or in a bed. It was therefore decided, from the life-size mock-up, to place the windows only 16" high, slightly above the desk height, and extending in a continuous line from one wall to the other. This would provide not only the most advantageous view but would give the building a more interesting and innovative appearance.

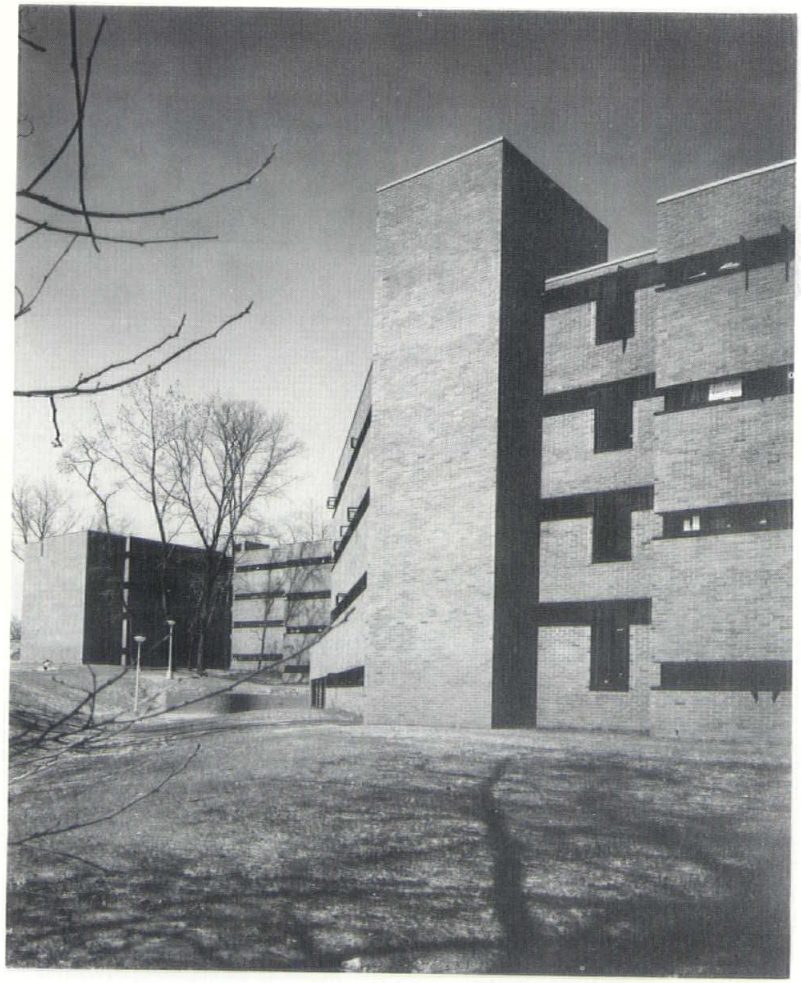
A concrete block bearing wall system with concrete flat slab was chosen because of budget, labor and privacy requirements. The exterior of the building was built of brick veneer with windows made up of horizontal steel and metal sill combinations. The consistency of brick, concrete block, painted and built-in wood mill work were used throughout. The building was completed in September 1969 at a total cost of $21.67 per student (including air conditioning.)

Total square footage: 56,400 square feet (196 square feet per student;





Two groups of six doubles shared a common living room and study lounge. In addition facilities were provided for housing one Senior Advisor. Four of these 25 student units were then stacked around a vertical stair, making the next grouping of 100. The total dormitory was made up of three of these 100 student groupings.



158 square feet per double room; 104 square feet per single room). Number of rooms: 155 doubles, 11 singles, 3 master suites. Number of students: 321 students.

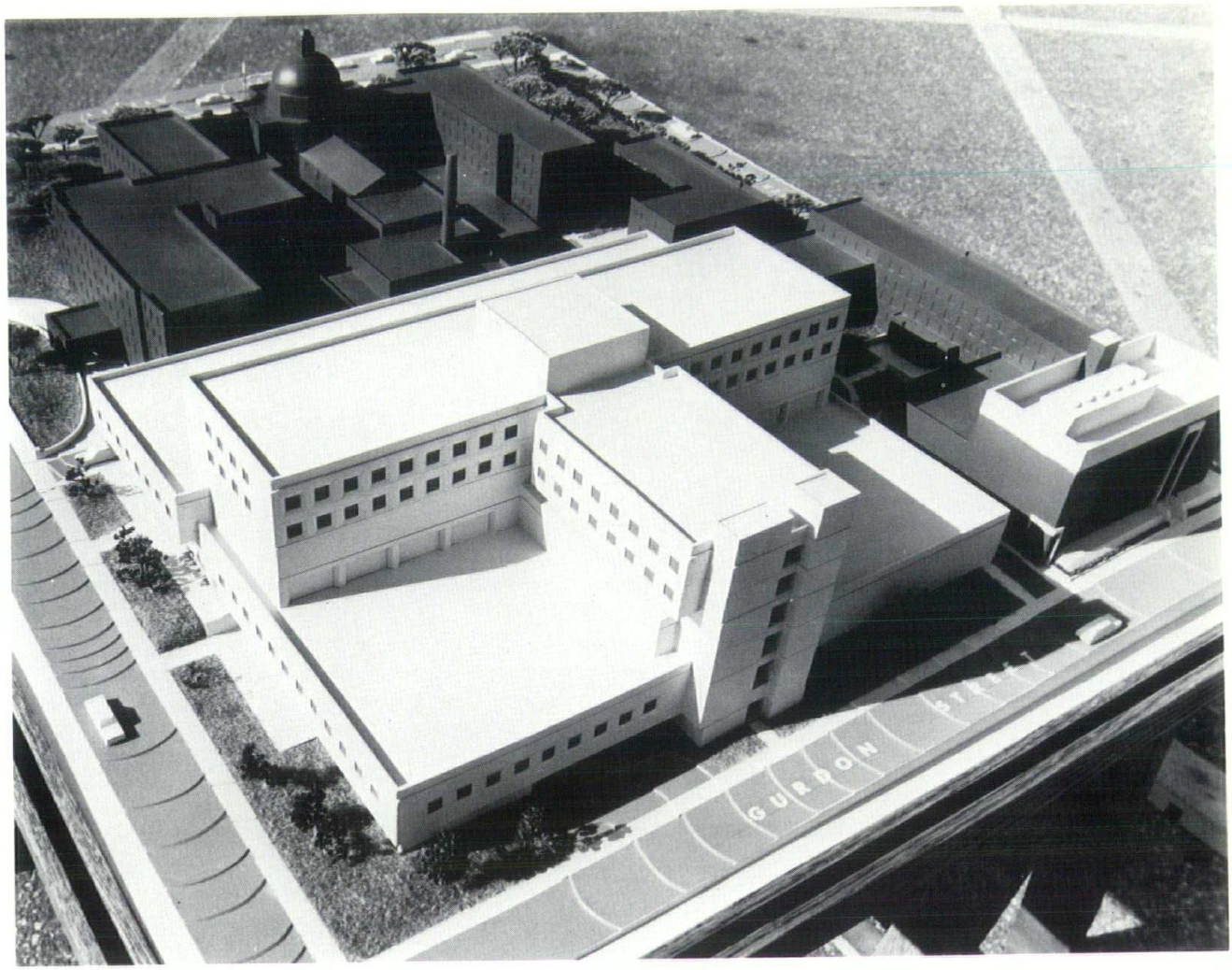
Total actual cost: $1,228,466.62.

Partner-in-charge: Robert DeVore.

Job captain: Gary Baker.

Contractors: General, A. R. Green & Sons, Inc., Boston; Plumbing and HVAC, Ivy Engineering, West Springfield, Mass.; Electrical, Collins Electric, Dorchester.

Engineers: Structural, Abraham Woolf, Boston; Plumbing, R. W. Sullivan, Inc., Boston; HVAC and Electrical, Borek Associates Inc., Boston.



ST. VINCENT'S

A new $19,000,000 core building, the principal structure of a $25,000,000 development program to rebuild St. Vincent's Hospital in Bridgeport, Conn., will consist of a four-story "podium" which will house all of the hospital's diagnostic, treatment, supporting and administrative services.

As funds are available a patient tower with 200 beds will be erected on top of the podium. This first phase of the Hospital's long-range development program, scheduled for completion in 1974, calls for a seven-story tower with three additional levels to be built over the next ten years as the need develops and funds are available so that all beds at the Hospital can be replaced.

The architects of the building program are Fletcher Thompson, Inc. of Bridgeport.

The purpose of the program is to replace obsolete bed areas while providing adequate space for clinical and supporting services, as well as to provide for the inclusion of new services which are needed but not now possible because of the critical limitations of space. There will be an increase of 60 beds when the program is completed, bringing the total number of beds at the Hospital to 400.

The new building will be completely air-conditioned and have many special features to provide the ultimate in patient care and comfort. One-third of the patient rooms will be private rooms and two-thirds will be semi-private. There will be

HOSPITAL Bridgeport, Conn.

no wards in the new Hospital.

The building will be constructed on a 2½ acre site behind the present Main Street facility on the corner of Hawley Avenue and Gurdon Street. Several older buildings have been demolished on the site to clear the way for construction.

Many of the revolutionary concepts of the internationally known hospital consultant, Gordon Freisen, have been included in the plans for the new Hospital.

The lowest level of the core build-

Fletcher Thompson — Bridgeport, Conn.
Project Manager: Ralph T. Rowland
Project Architect: Gordon Griswold

ing will house a supply processing distribution center incorporating such services as the pharmacy, patient supply, purchasing, stores, linen, equipment, print shop, housekeeping and maintenance. All supplies to the patient units on the upper floors will be transported automatically by vertical automatic cart lifts on high speed elevators. All patient supplies will be stocked in carts sent daily to the patient units.

The departments of nursing service, personnel and volunteer service and the employee health clinic will be located on the mezzanine.

The main level will contain all diagnostic, clinical and ambulatory services with the exception of the clinical laboratory and the blood bank. Facilies will include the radiology department, surgical and obstetrical suites, short-stay center, anesthesia department, recovery rooms, rehabilitation medicine center, out-patient department, emergency unit, cardiology, electrocardiography, blood gas laboratory, pulmonary treatment laboratory, hemodialysis unit and social service department. Also on this floor will be the admitting suite, business office, main lobby, information desk, switchboard, main entrances, gift shop and chapel.

On the third floor will be the administrative section, suites for chiefs of services, the medical education and community relations departments, medical records, library, laboratory, blood bank, the construction coordinator's office, dietary department and kitchen.

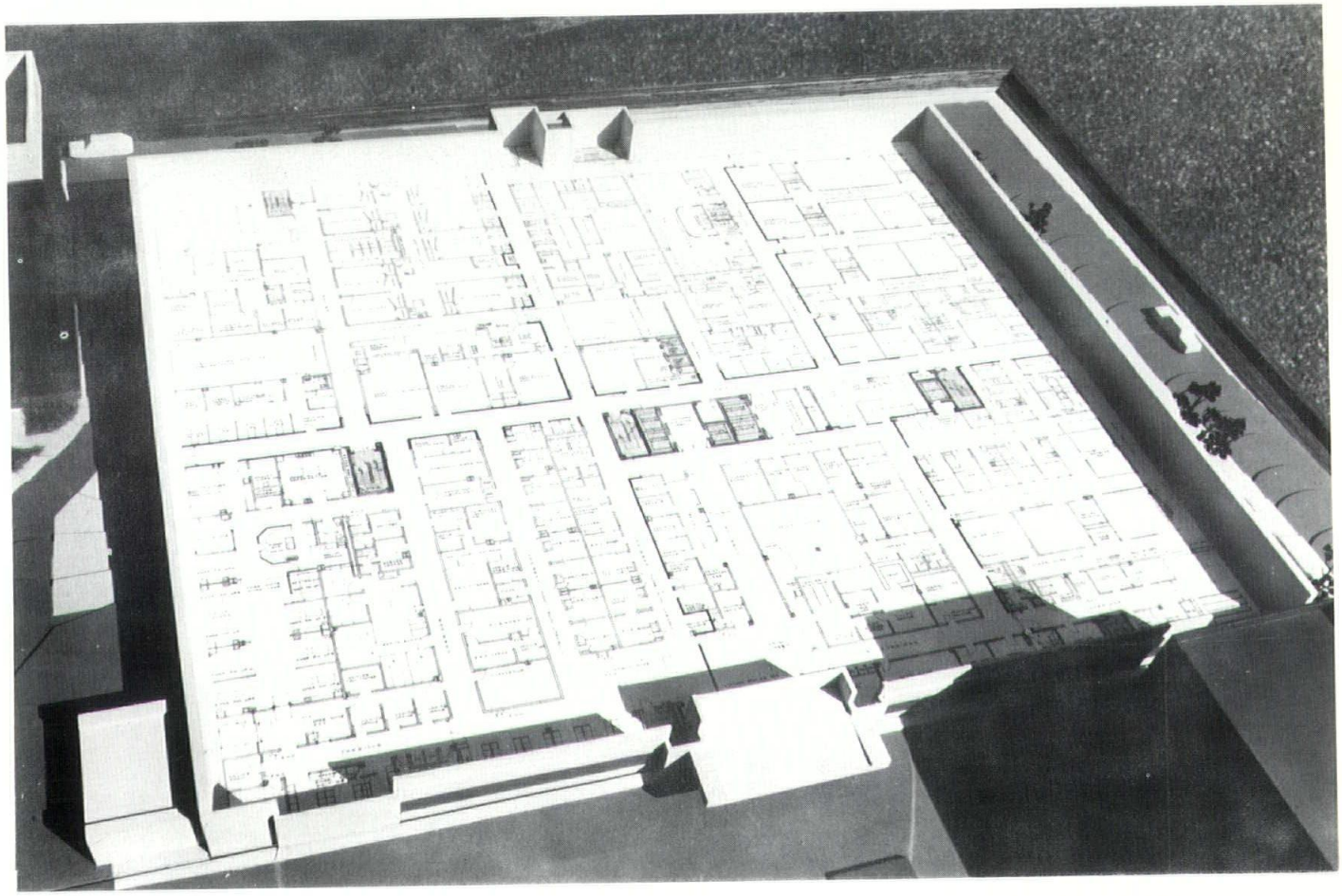
A 350-seat dining room and a snack vending room will be located on the fourth floor.

Beginning with the fifth floor, the building will be T shaped with patient bed areas in the North, East and South Wings. Specialty units, such as the premature, intensive care and isolation nurseries, an 11-bed intensive care unit and an 8-bed coronary care unit will be located in the East Wing. Medical, surgical, obstetrical, pediatric and psychiatric units will generally be located in the North and South Wings. There will be approximately 30 beds in each unit. Patient rooms will be located on the perimeter of each wing with treatment, service, supply, classroom, conference rooms and lounge facilities in the center areas.

An innovative feature of the patient rooms will be the nurserver cabinet with doors that open into the room and out into the corridor. All medications and supplies can be placed in the cabinet from the corridor without personnel entering the room.

Two mock rooms, which will be open to the public, have been built on the main floor of the existing Hospital to show how the rooms in the new Hospital will look and how they may be equipped.

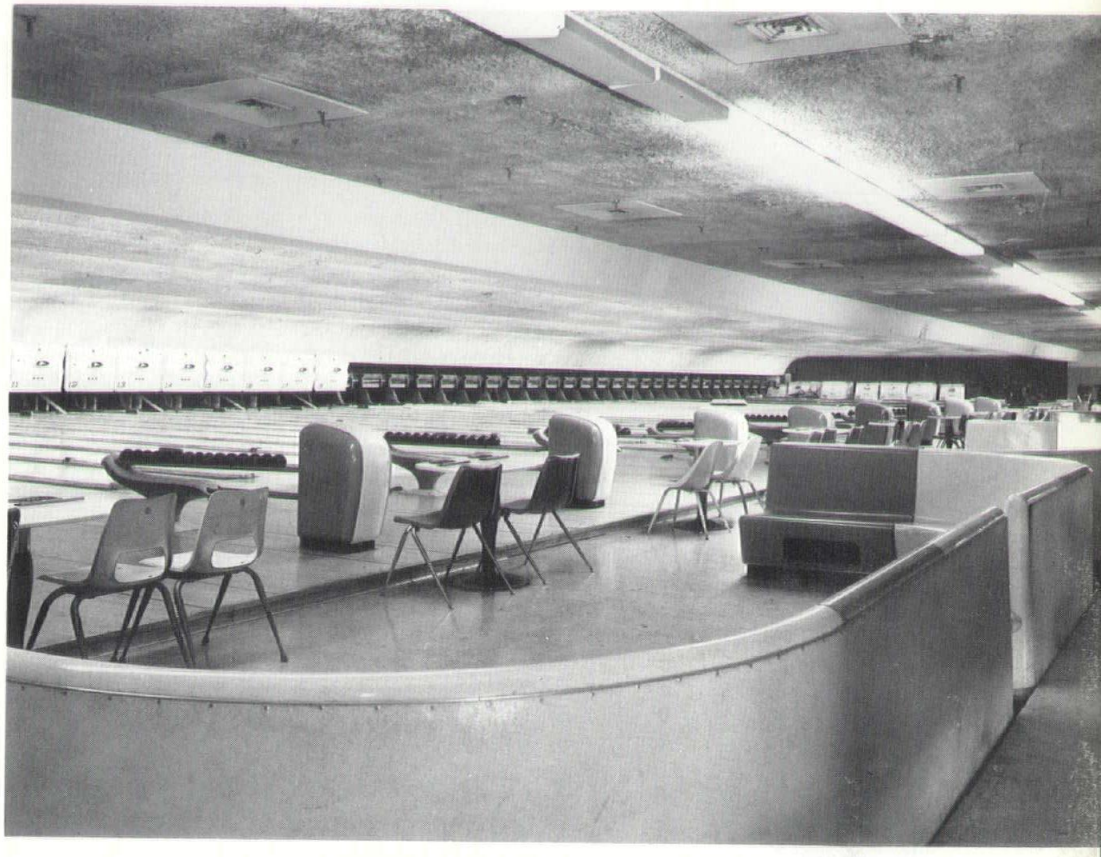
The development program also calls for construction of a new heating/cooling plant adjacent to the School of Nursing on the corner of Gurdon Street and Hawley Avenue, renovation of existing patient areas in the North and South buildings, a connection to the South building and demolition of the Main building.



Level 2 Floor Plan

SIXTY-DAY CONVERSION From Bowling Alley to School

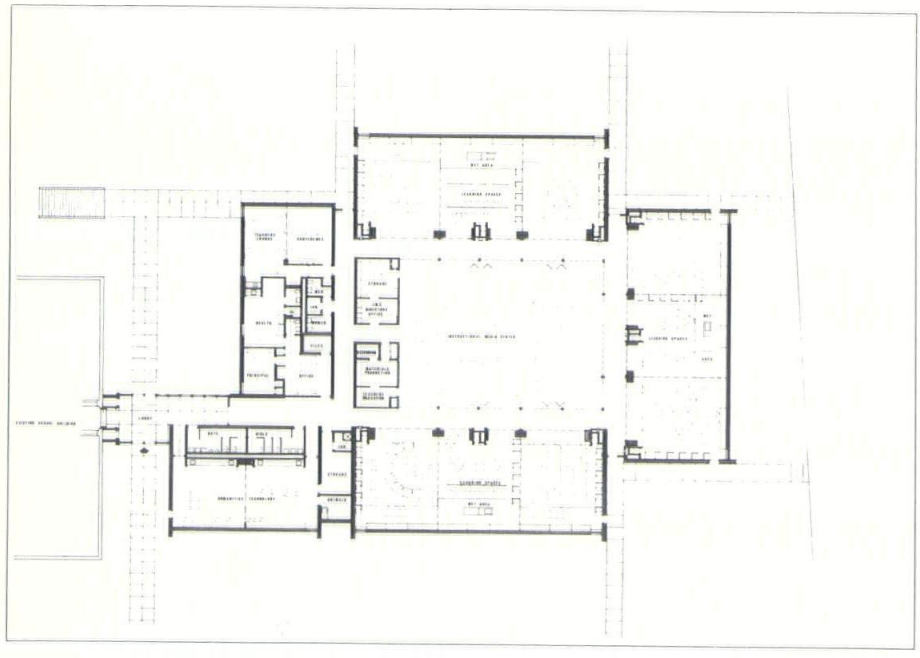
Coletti Brothers
Hingham, Mass.



BOSTON'S Mayor Kevin White formally opened the new Dennis C. Haley School in the Parkman District of Roslindale this month — well within the record-breaking time limit announced when Coletti Brothers Inc. of Hingham were commissioned to convert a 46-lane bowling alley into a 400-capacity elementary school in time for the Fall '71 opening school session.

According to Robert Vey, Director of the City of Boston Public Facilities Department, the Open Plan Learning Center was built at one-half the new construction cost in only 60 days to provide Fully Carpeted Open Learning Areas; A Cafetorium (Cafeteria, Kitchen and Auditorium); Art and Music Rooms; and Play Area (To be converted from current parking lot).

(above) Interior of the 46-lane bowling alley in the Roslindale section of Boston which has been converted into an elementary school. (below) Floor Plan of the 400-student facility.



"The 40,000 square feet of open space bowling alley lent itself naturally to an open plan learning center that would meet not only the immediate educational needs of the neighborhood but also provide a physical plant geared to the educational programs of the 80's," says Barry Coletti, Partner-Architect.

Coletti Brothers were selected for this unique assignment, Vey noted, because of the national recognition given to their award winning conversion of the L Street Bathhouse Section into a South Boston High School Annex in only 46 days.

SIMON'S ROCK

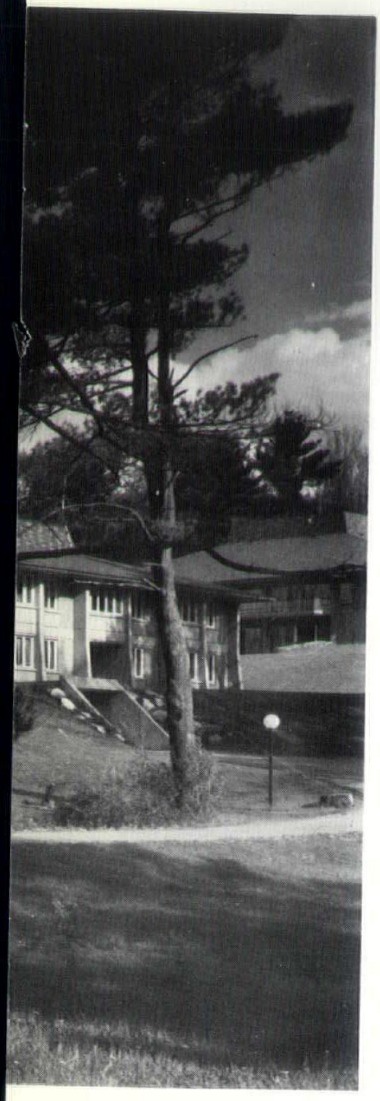
Great Barrington, Mass.

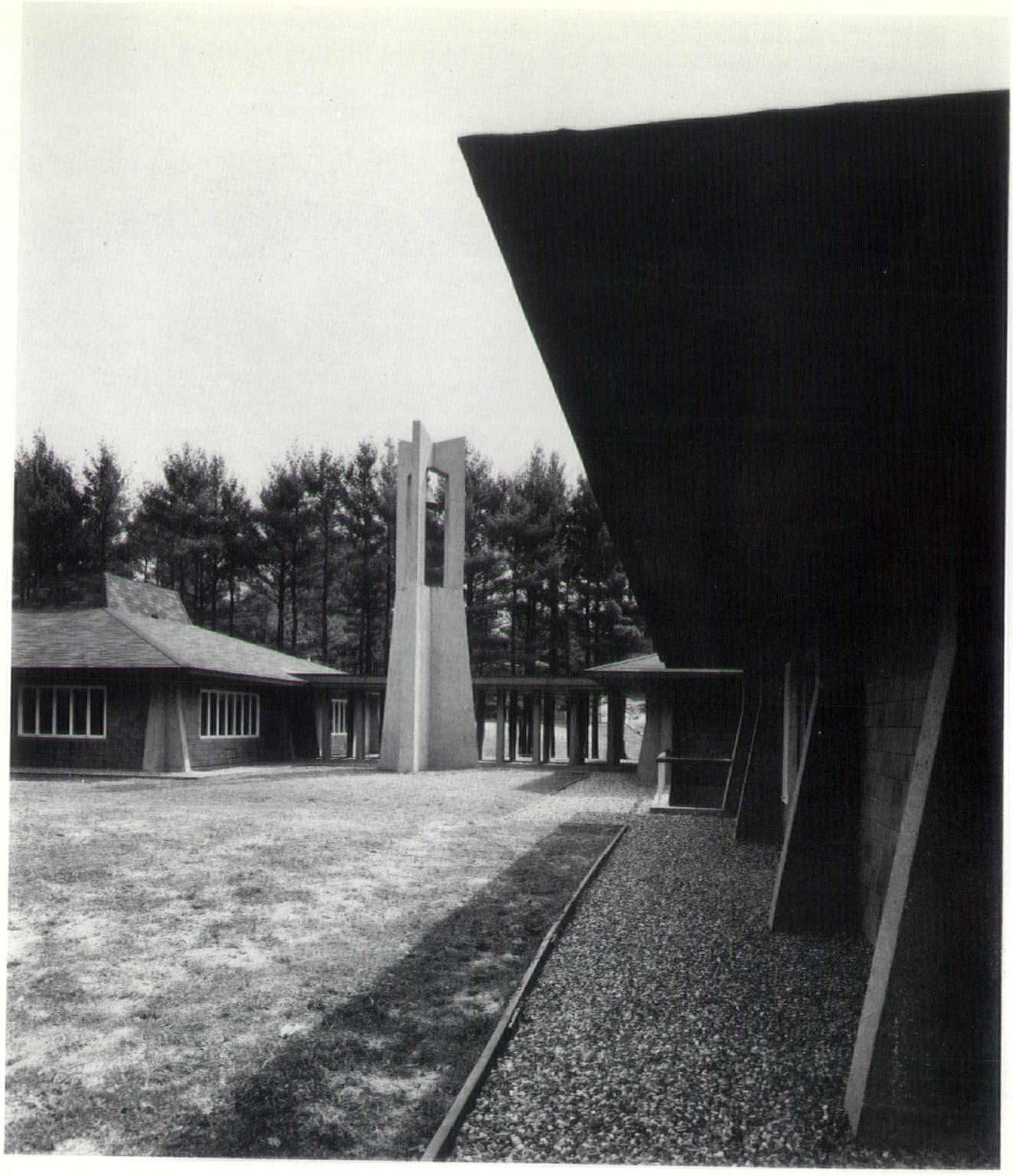
Architects:
Morehouse & Chesley
Lexington, Mass.

General Contractor:
Hans Tobiason & Sons
Arlington, Mass.

CONSTRUCTION last year of a Recitation Hall and a Library Building Addition at Simon's Rock in Great Barrington, Mass., marked the official completion of Phase I of an unusual academic and architectural venture — a four-year residential liberal arts college for young men and women who have successfully completed "college preparatory studies" through the tenth grade of high school.

The requirements for the building program at Simon's Rock were unique from several standpoints. The economic situation of an initial gift to act as the major financial resource for the founding and early growth periods dictated extreme economy in construction. The setting called for an aesthetic statement

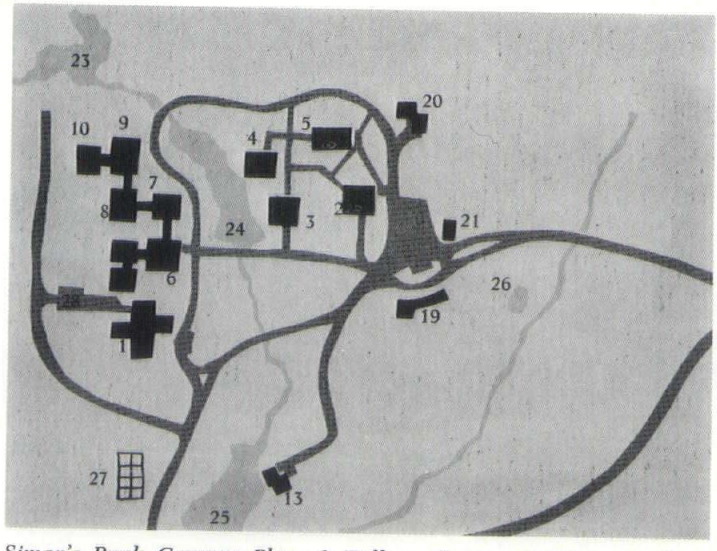




which would equal the beauty of the natural surroundings, and, most important, the innovative idea and exciting goals of the school had to be reflected in its physical being.

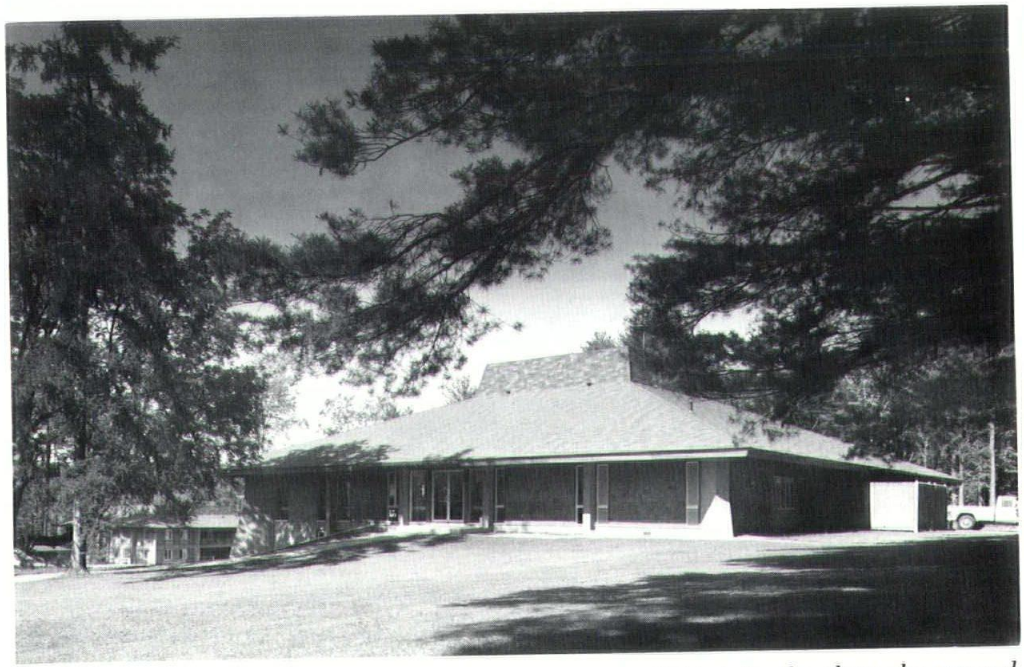
"Morehouse and Chesley have met the requirements peculiar to our particular situation," says Clarence W. Leeds, III, Chairman of Executive Council and Dean of Faculty, "and, in addition, have maintained the high standards dictated by contemporary educational thinking and techniques, recent developments in physical equipment, and a consideration of the visual psychological factors which affect the learning process."

Modular, unit construction and re-use of forms for consecutive buildings resulted in a surprisingly low

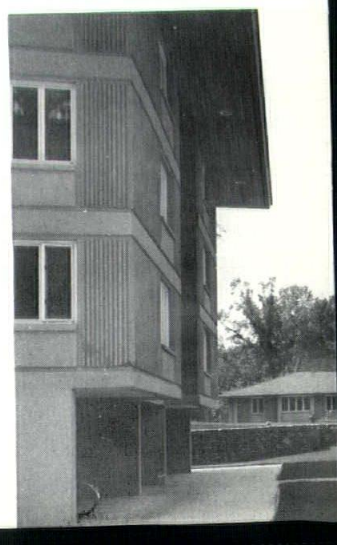


Simon's Rock Campus Plan: 1 College Center; 2 Dining Hall; 3 Kendrick House; 4 Dolliver House; 5 Crosby House; 6 Library Complex; 7-9 Classroom Buildings; 10 Lecture Hall; 19 Blodgett House; 20 Maintenance Complex; 21 Greenhouse; 23 Upper Pond; 24 Middle Pond; 25 Lower Pond; 26 Pool; 27 Athletic Fields and Tennis Courts; 28 Parking.

Identical formed, sand-blasted concrete bearing walls permitted successive re-use of custom wall forms.



The Dining Hall (above), completed in one summer, spotlighted for the client the unusual rapport existing between architects and contractor.



building cost, and helped the contractor to meet, beat, or come close to his completion deadlines. This, in turn, allowed for a smooth, scheduled operation of the school even as the plant grew.

The architects' original plan for the campus needed only slight revision as needs evolved, reflecting the understanding and insight which went into the early planning period.

The two major living and study areas of the campus and the natural park which separates them are visually unified, yet physically different.

"The open, protectively-linked plan of the one story classroom-library complex has proven to be stimulating physically and psychologically, and is largely responsible for the integration of the buildings with their original natural surroundings," Leeds noted.

"The buildings themselves function well, and are most rewarding aesthetically. The honest use of natural materials, the friendly, open scale and informal, flexible arrangement of the classrooms, the practical yet exciting use of the natural and artificial lighting, and the varied textures and spaces both inside and out all contribute to a visual atmosphere which reflects and encourages the excitement of the learning process.

"Aesthetics, function and economy are seldom found in equal measure, but such is the case at Simon's Rock."

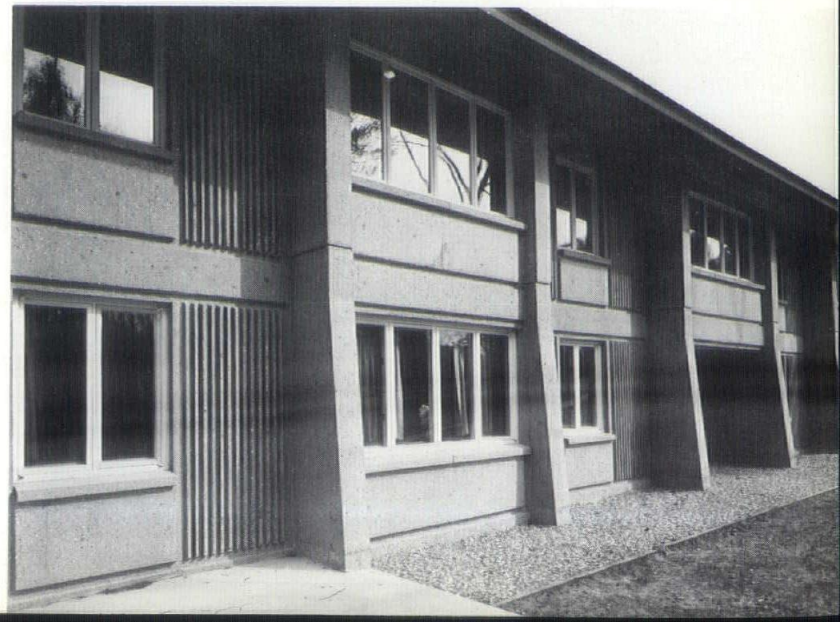
The campus is located on 200 acres of land formerly belonging to the estate of Thomas H. Blodgett. The entire estate, known as Great Pine Farms, included a large residence, a barn complex for 80 head of dairy stock, and seven tenant houses.

When Mr. Blodgett died in 1964, the property passed to Margaret Kendrick Blodgett, his wife, who subsequently deeded a substantial portion of the estate to a non-profit corporation called Simon's Rock, which was organized by her daughter, Elizabeth Blodgett Hall, for the establishment of an educational institution.

Formerly Headmistress of Concord Academy in Massachusetts, Mrs. Hall had envisioned a unique educational venture — an Early College — geared to the special academic and non-academic needs of young people "as a means to hastening the maturity the young must have if the raw power already theirs

The Bell Tower between the Library Building (right) and Classroom Building One (center) is actually a stack, a vent for the gas furnaces in the library complex.

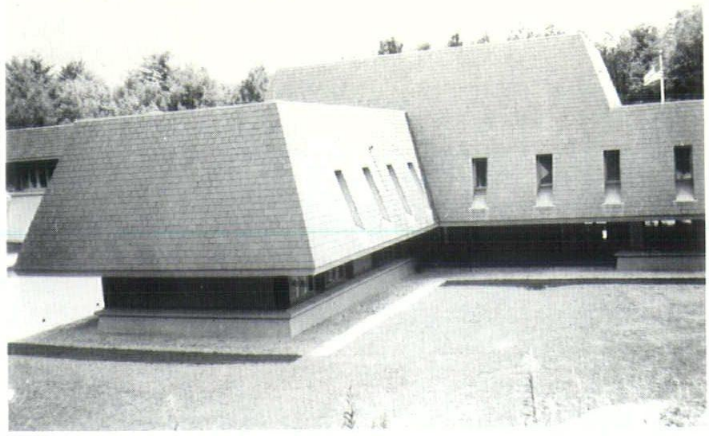
Both Dolliver Dorm (below, right) and Crosby Dorm (left) have rooms off corridors, unlike Kendrick Hall (center) which has student suites off a skylighted stairwell.

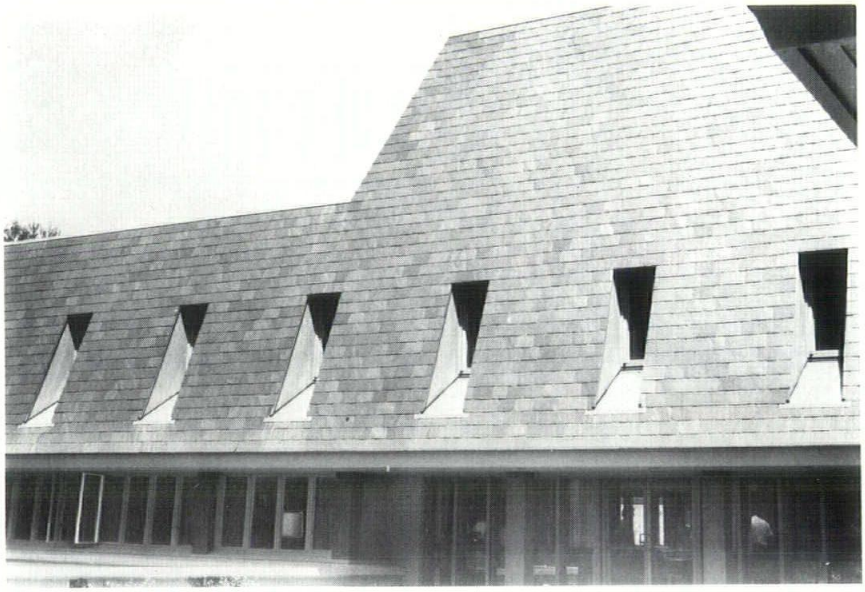


is to be guided by wisdom toward the service of all."

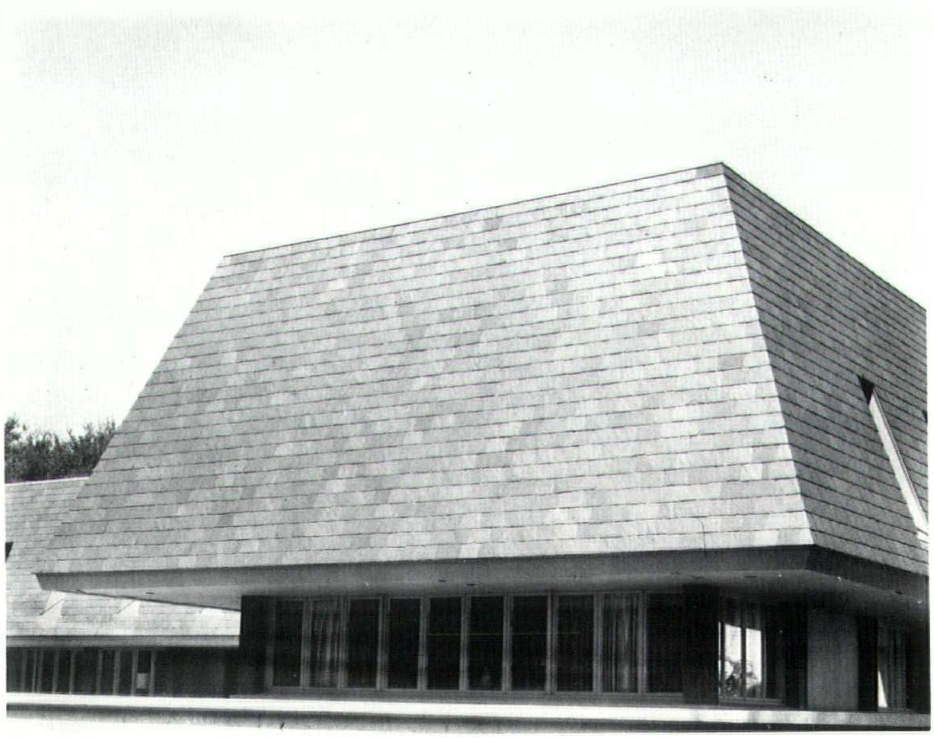
The name of the school derives from that of a huge boulder, left by a glacier high on the hillside above the family residence. It has been called "Simon's Rock" for as long as anyone now living can remember. When Mrs. Hall was growing up it was a place where the neighborhood children had a gathering place. In those days the hillside was open pasture, in contrast to its heavily wooded aspect today, and the rock commanded a fine view of the Alford Valley below.

It was a fine place for pretending to be grown up and learning in the process a lot about grown-up resourcefulness and responsibility, Mrs. Hall recalls. The name was strong, distinctive, and had associations that were both pleasant and symbolic . . . to Simon, called Peter, ". . . and upon this rock I will build . . ." (Matthew XVI).





The massive blue slate roof-walls of the Administration Building are actually parapet walls that drop down inside 5 to 6 feet to a flat roof. Parapets were used by the architects throughout the campus to conceal unsightly vents and air change hardware.



Funds to support the organization of Simon's Rock and the construction of a campus complex adequate to the needs of a beginning enrollment of 200 were already available from the Margaret Kendrick Blodgett Foundation set up by Mrs. Blodgett to serve as the initial source of financial support. Although it was considered generally desirable to plan for a total enrollment of 800 to 1000, it was stipulated that development of the campus to serve a larger number of students than the initial enrollment of 200 would have to be supported by others.

The "initial" enrollment of 200,

however, was still a few years off when architects Morehouse and Chesley of Lexington, Mass., were commissioned to design a Comprehensive Campus Master Plan for the college in 1964. Starting virtually from scratch, the school was designed for yearly 50-student increments over a four-year period for the first phase. Accordingly, successive dormitory unit buildings, classroom pods, dining facilities, library stacks, water wells and sewage disposal systems were to be expandable by increments.

The First Phase called for construction of 13 new buildings ranging in size from 5,200 to 21,000 square feet.

One dormitory, Kendrick House, the Library and one four-classroom unit were to be built during the first year.

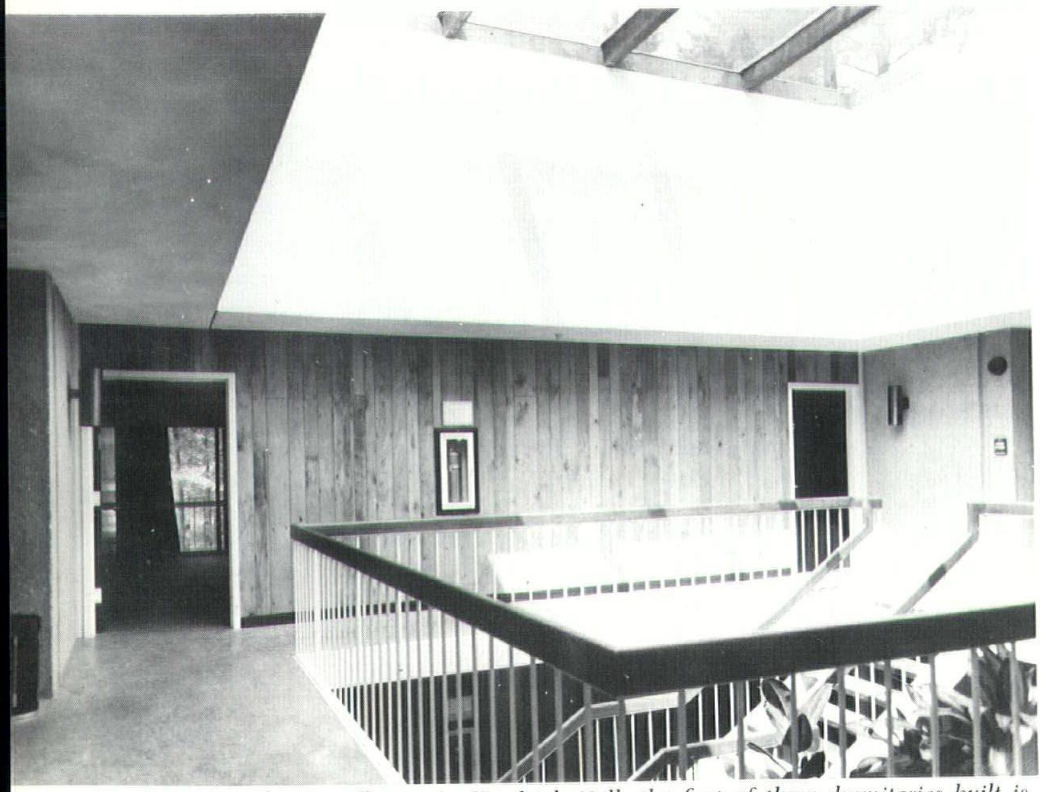
Identical, formed, sand-blasted concrete bearing walls permitted successive re-use of custom wall forms. Stock pre-cast plank floors were used throughout. Sand finish plaster interior walls were left unpainted. Square massed buildings indicated central skylights. Roof shapes conceal skylights, vents and air change hardware.

The unique educational program of admitting students following sophomore year of high school, thereby exposing younger students to the collegiate climate, influenced design of the buildings, as did the very physical scale of students, parietal control and their ties with home. Carpet virtually everywhere permits sitting, study and sprawling at almost all locations. Dormitory balconies provide additional small-scale study places.

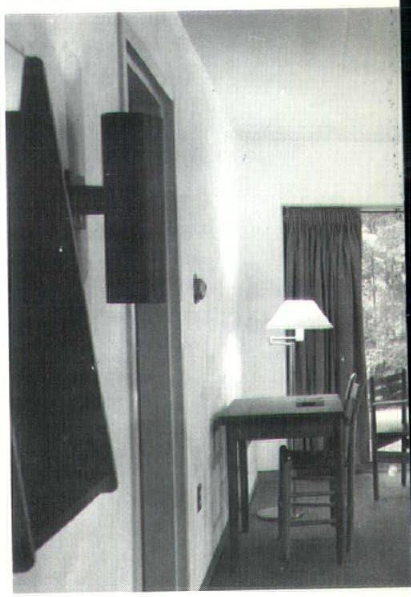
To retain the beautiful acreage as an integrated whole, Morehouse and Chesley with new partner, Peter Thomas, placed the living facilities apart from the learning areas, separated by a green strip with ponds. Natural color concrete, wood shingle walls and roofs live with tall white pines and brown pine needle beds. Local crushed stone beds around buildings take gutterless roof water and make foundation planting unnecessary.

"Our original thoughts were for an administrative dining facility in the form of an addition to the old Blodgett Mansion," recalls Dean H. Ensign, Business Manager at Simon's Rock. "We contacted the New Jersey architect who had remodelled the Mansion at one time, but he was unable to bring his sights into line with the school architecture we wanted. Consequently, we had to drop plans for the addition for the first year. We decided we could, by squeezing, handle the dining facilities in the old building without any alterations."

Construction last year of the Recitation Hall (above) marked the official completion of Phase I.



Central stairwell area in Kendrick Hall, the first of three dormitories built is brightened by skylight.



Living Room/Study Area in Kendrick Hall.

"But we hadn't reckoned with the fantastic cooperation that has existed between Morehouse, Chesley and Thomas, and the General Contractor Hans, Tobiason & Sons, Arlington, Mass.," Ensign explained. "Knowing we had dropped the administrative dining room addition to the old Mansion as a project, the architects and contractor got together themselves and decided they would design and build a dining facility that would be operable by the time the first dorm, library and classroom buildings were ready for use.

"When they came to us, we were skeptical. But we gave them the go-ahead. And they did it. Although the first shovelful wasn't taken out of the ground until April, we moved into the dining room building in September. The contractor himself worked night and day to get us into the new building in time."

According to Dick Morehouse, Hans Tobiason, the contractor, had one of his sons living in complete residence all the time; first, in a trailer which the school bought for his use and later in one of the faculty houses.

Work was started on a second classroom building and Dolliver Dorm during the first year of the school's operation. This second dormitory was designed to house 58 students and a faculty family.

During the second year, however, when work was started on Classroom Building Three and Crosby Dorm, it was decided that the dormitory should be larger than both Kendrick and Dolliver because rising building costs made it more practical to build a double capacity facility housing 100 instead of 50, even though half of it would stand empty for a year.

During the second year, however, when work was started on Classroom Building Three and Crosby Dorm, it was decided that the dormitory should be larger than both Kendrick and Dolliver because rising building costs made it more practical to build a double capacity facility housing 100 instead of 50, even though half of it would stand empty for a year.

The first Dormitory, Kendrick, the more elaborate of the three, included 7 student suites, each composed of a living room, bathroom, two single rooms and two doubles, with a central skylighted stairwell and no corridors. Dolliver and Crosby are more typical dormitories with rooms off corridors. Each has a large recreation room, in place of the individual sitting rooms.

The Bell Tower, which was a gift from the architects to the school, is actually a stack, a vent for gas furnaces in the Library Building, in keeping with the architects' concealment of unsightly exhaust pipes behind parapets on all the buildings.

Following completion of Crosby Dorm, work started on the Administrative Building, the most impressive facility on the campus, with its massive blue slate roof and expansive interior spaces. Named Hall College Center, it is the first building one sees on entering the campus, a large, imposing structure, in sharp contrast to the smaller units in the learning areas beyond. Despite its size, however, it doesn't falter as an architectural statement or digress from the overall concept. It is straightforward and functional and entirely in keeping with the aims of the Master Plan.

Whether future architectural requirements will parallel those of Phase I is unclear at this point, for Simon's Rock is now planning in terms of an enrollment jump from 200 to 500, rather than 50-student increments. The school has used up the funds received from the Blodgett Family and is now on its own; but its sights are still set on an 800-1,000 student school.

Engineers: Structural, Pierre Rumpf, Boston; Mechanical, Fitzemeyer & Tocci, Inc., Melrose.

Heating Consultant: Harland Foster, Great Barrington, Mass.

Dining Hall

ENGLISH

HOW to obtain the maximum utilization for educational purposes of a typically small parcel of urban property in a prime location, without interrupting the course of an existing educational program? This was the problem posed to the architects of the new English High School on Avenue Louis Pasteur in Back Bay, Boston, Massachusetts. The school, first unit of a multi-million dollar high school construction program underway in the City of Boston, will mark the first new high school built in the city in 36 years. The site, measuring 3½ acres including the existing school building, is located in the center of a concentration of Boston's academic and institutional buildings, where buildable land is in short supply and street parking space is highly restricted.

Early studies centered around possible additions and alterations to the existing 60-year old building, but architectural and engineering surveys and cost estimates coupled with State reimbursement formulas indicated that the optimum solution lay in providing a new educational plant geared to the needs of the future, rather than trying to rehabilitate the outdated, inefficient existing building. In addition to extensive structural deficiency in the wall bearing structure, for example, the school was mechanically and electrically inadequate, and was still operating with coal-burning boilers.

Due to an extreme shortage of high school classroom space in the city, it was imperative that the present school continue to function until the new building is completed. The present school straddles the 420-foot frontage on Avenue Louis Pasteur, leaving passages of 60 and 50 feet on either side. Blackfan Street, which forms the rear boundary, is a minor deadend street not suitable for access either during construction or on a permanent basis. The building envelope in this direction was restricted to a line 60 feet back from the street, pending completion of legal agreements for the use of the 60-foot parcel between the city and its owner. It is expected that the school will have eventual use of the 60-foot strip as much needed outdoor activity space.

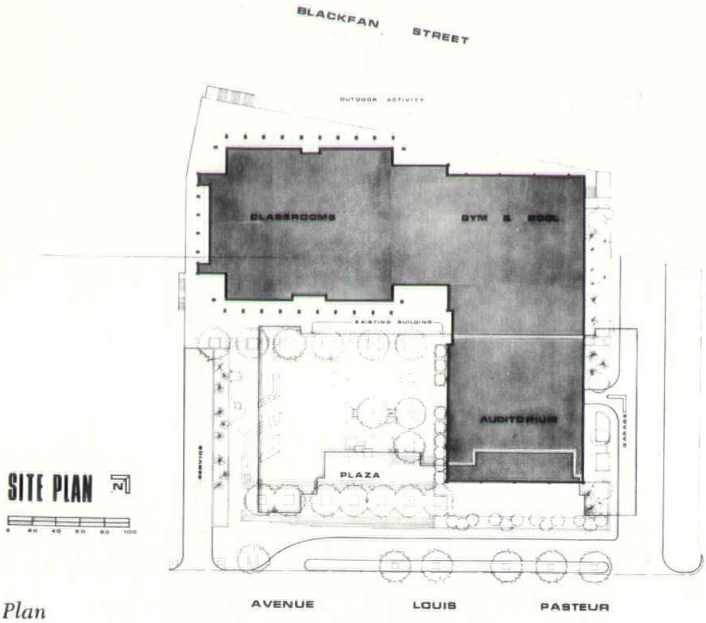
Against this set of site limitations was considered the educational specifications for the school. The program for the new school was drawn up originally by an educational consultant to the Public Facilities Department, developed later by the school department's Educational Planning Center, and administered through the Public Facilities Department, which is the City's construction arm. An original plan for 1600 students was later revised and increased to 2000. The nation's oldest public secondary school (1823), the enrollment has traditionally been all boys. In order to provide maximum potential for the future, however, provision has been made for facilities to house a co-educational system. A total of 97 teaching stations is required, including all elements of a comprehensive plan for

HIGH SCHOOL

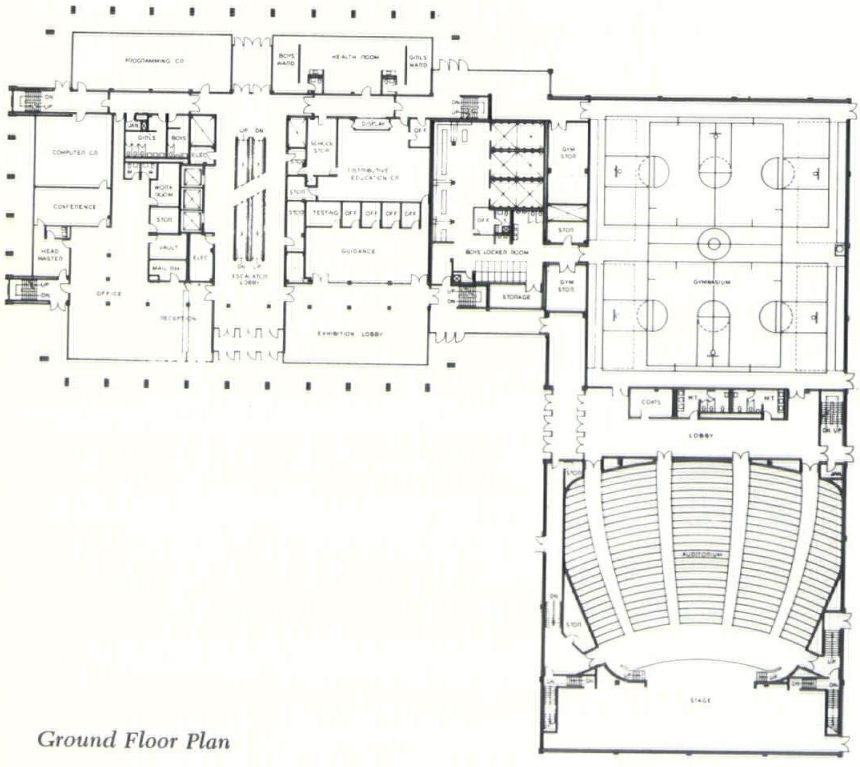
Boston, Mass.

Edward J. Tedesco Associates

Winchester, Mass.



Site Plan

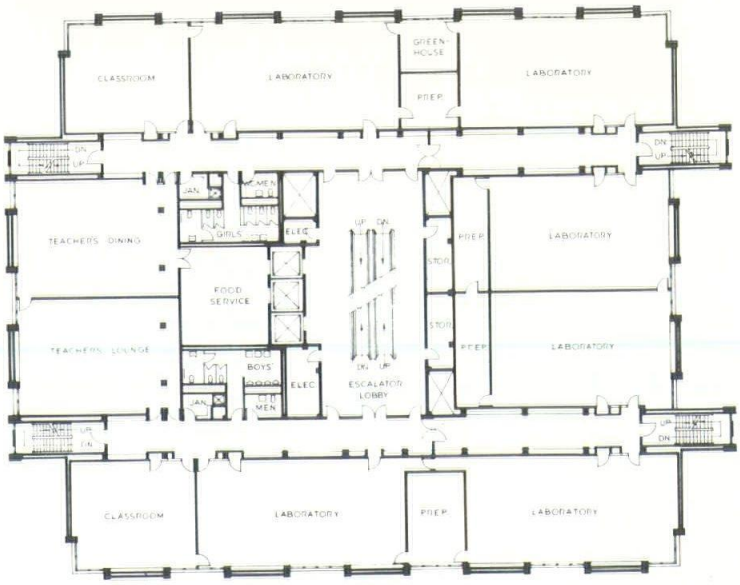


Ground Floor Plan

the sciences and humanitities, in addition to woodworking, metals, electronic and graphic arts shops. A complete set of physical educational facilities was required, with community usage encouraged. To compensate for the parking problem, it was required to furnish off-street parking for the school faculty.

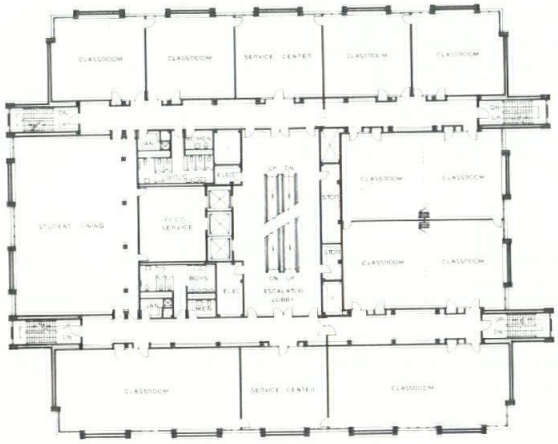
Given the above requirements and site restrictions, early studies indicated that the only viable solution lay in some type of a high-rise building. The main elements of the design scheme are the academic tower, expressing the classroom module, and the contrastingly low auditorium-physical education wing, clear-spanned and containing a double gymnasium with bleachers and Olympic-size swimming pool below. Linking the two main elements is a unit housing locker and shower rooms. Across the entire forward part of the property, occupying space now taken up by the present building, will be service access to the building, and underground staff parking for 100 cars. A raised landscaped plaza, paved and planted, and containing well-defined areas for play, connects all elements, and forms an outdoor reception area, with direct access to the academic building and, for community use (a major consideration in all of the city's new construction), separate entrances to the 1000-seat auditorium, gymnasium, and swimming pool.

Having opted to house the bulk of the teaching spaces in an academic tower, the architects in conjunction with the Educational Planning Center addressed the task of providing the most efficient arrangement of the spaces. For a student body of this size, a house plan was chosen in

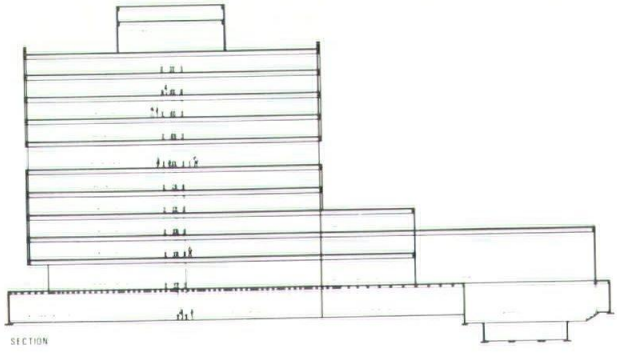


TYPICAL LABORATORY FLOOR

Escalators were selected as the best means of vertical transportation for a school with 2000 students (Typical Laboratory Floor, above) because they can be reversed to serve heavy incoming and out-going peaks (Typical Classroom Floor, right).

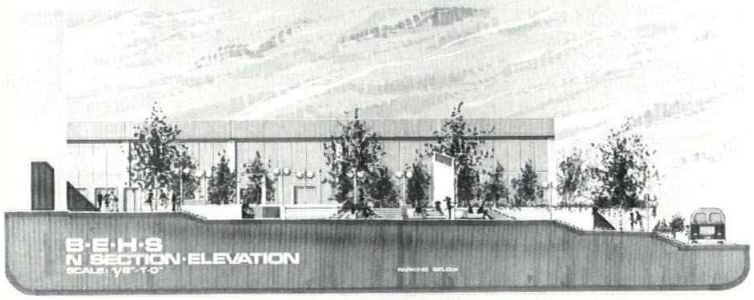


TYPICAL CLASSROOM FLOOR



SECTION

Each "house" has a laboratory floor, grouping science facilities of all types. (left) For facilitating mechanical runs, the two floors are grouped together on levels 5 and 7. Underground staff parking (below) will be provided for 100 cars.

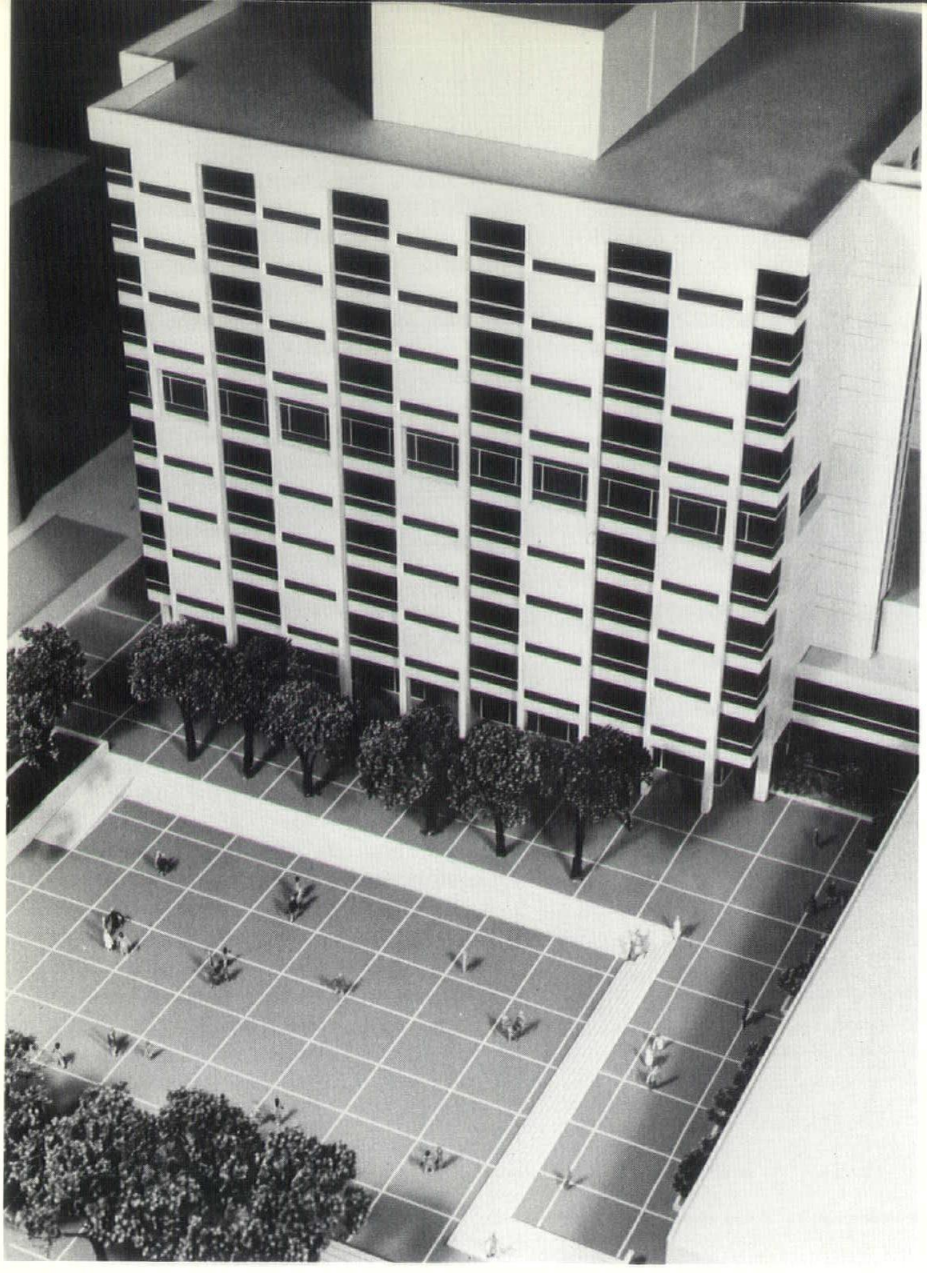


order to provide the maximum identity for the individual in a 2000-student group. Two identical houses of 1000 students were formed, and are arranged on levels 2 through 5, and 7 through 10. Each of the houses has an administrative suite for housemaster and supporting personnel. Each house has a laboratory floor, grouping science facilities of all types. For facilitating mechanical runs, the two floors are grouped together on level 5 and 7. Interchangeable classrooms are distributed throughout the other floors with administrative service centers included to provide office and research space for each department of the teaching staff.

In order to integrate a full scale food preparation and serving system into the tower, it was decided to locate a central kitchen at the tower basement level, convenient to deliveries, and to distribute via hot food carts and a separate elevator to four dining areas, on levels 2, 4, 8, and 10. Each of these areas has a serving counter in a supporting room which can be closed off from the dining room and enables the dining spaces to be used throughout the day for study rooms. In addition to minimizing vertical circulation during the critical feeding schedule, the four decentralized dining rooms will encourage student identification and sociability and permit improved supervision by the staff. By adopting a disposable tray system, the dishwashing operation has been eliminated at each of the four dining levels. Compactors are provided in each of the food service rooms, and separate elevator service connects central kitchen, dining rooms and penthouse incinerator.

Forming a quiet zone between the two houses and located for optimum appeal to the student body, is the level 6 Media Center. A central reading room will house 50,000 volumes, seating for 175 and audio-visual carrels for 20. A separate suite is provided for an in-house television studio.

A major consideration in the design of the 10-story academic tower was the vertical circulation system. Extensive research was conducted into the options available. The four basic modes of vertical travel available are stairs, fixed or moving ramps, elevators and escalators (moving stairs). The ordinary stair forms the basic means of vertical circulation



Two identical houses of 1000 students were formed, and are arranged on levels 2 through 5, and 7 through 10.

in a multi-story school building and could, up to four stories, handle most of the circulation. Beyond that height, it is generally accepted that students become weary, distracted and tardy in attempting to circulate between classrooms by this method entirely. But the stair is tested, familiar and proven as a circulation means, and has its application to student trips of one, two or three stories, even though it may be supplemented by another means for "long distance" vertical travel. A successful transportation solution within a multi-story scheme should combine a basic stair system for one or two story trips, and a mechanical vertical transportation system for six, eight, or ten story trips. The ramp or inclined plane is an acceptable means of moving a large amount of people, but has the drawback of requiring a considerable horizontal run to accomplish floor to floor travel.

It was evident that the mode of travel to be used for long trips was either the elevator or the escalator. In the classroom buildings, vertical transportation demand is the most severe during the time alloted to change classes. During the peak 5-minutes of the class change period as much as 50 percent of the student population may seek vertical transportation. For a school of this size, eight to ten elevators would be required to give everyone floor-to-floor service. The usual approach would be to have elevators stop only at every other floor and have about half the students walk a floor. With up-and-down escalators everyone can ride, and the average trip requires no more time than the average elevator trip. In addition, the cost of the escalator arrangement plus additional elevators for handicapped and freight service amounts to the same or less than equivalent elevator service, depending on prevalent equipment costs. One of the prime advantages of an escalator system over elevators is the visibility of the students during changing of classes, thereby discouraging "hijinks" which would be a major concern behind the closed doors of a series of elevators. The fact that the elevator cab is a concealed room invites vandalism to finishes, equipment and even other students, which might not otherwise occur if the student were in an open space, exposed to view. Escalators are by far the best means of vertical transportation for a school with 2000 students. They provide service to every floor, can be reversed to serve heavy incoming and out-going peaks and eliminate any requirement of an attendant to control usage and maintain order. In view of the limited data available regarding performance of an escalator system in a high school, it was decided during the design stage to work out some time-distance examples of actual daily trips that students would be making from class to class, from class to assembly, etc., in order to demonstrate the performance to be expected from the system. As plans progressed and specific classroom and meeting areas found their location within the total scheme, a travel formula was developed and applied to the population distribution figures. Results of the studies indicate that a nominal time of six minutes between classes can be tried, with an adjustment to five minutes after student experience factor is considered. Assembly periods are the periods of longest travel time. Staggering by floors will relieve heavy points of congestion, and calculations show 7.8 minutes for the Upper House to get to the auditorium area, and 6.25 minutes for the Lower House.

At the opening of school day, both banks of the criss-cross scheme can be set to run in the up direction, by operating a key switch located at the head of each unit, and conversely, if traffic develops at the close of the school day, all units can be run in the down direction.

Escalators will not be used during fire drills, since the escalator system

does not constitute a part of the approved fire exit system. The four fire stair towers located at the ends of the corridors will serve this purpose, in addition to accommodating short 2 or 3 story trips during the normal operation of the school.

Elevators are provided for use of the handicapped as well as the school staff, and for freight. As noted, the third elevator will be used exclusively for food service.

The tower building is a steel-frame, concrete fireproofed structure, supporting concrete slabs on metal deck. The exterior facade will have precast concrete infill panels in a ribbed texture. Floor to ceiling window units consist of a fixed-metal panel to sill height, with double glazing above. The lower three floors of the building are equipped with vandal-resistant glazing.

The group-activities wing is concrete frame with a roof supported on precast tee beams. Precast infill panels with block backing form the exterior walls.

Interior finishes are chosen to provide maximum durability with a minimum of maintenance; partitions are concrete block, painted, with those in the corridors and other heavy-duty areas receiving a glazed finish. Circulation areas will receive a ceramic granular terrazzo flooring, while general classroom and library areas will be carpeted. Ceramic tile will be used for the swimming pool lining and deck finish, and as a decorative finish in the escalator wells. The double gymnasium will be floored with synthetic turf.

Acoustical treatment is included in all areas and varies from suspended ceiling in teaching areas and corridors to special absorbent panels in the gymnasium, and reflective acoustical clouds in the auditorium.

In keeping with the Public Facilities Department's practice, an allowance has been made in the budget for the integration of art work and sculpture into the project. As the construction proceeds, proposals will be considered for outdoor sculptural pieces as well as interior mural treatments. Contributions by the student body will be encouraged.

To facilitate expected community usage and possible twelve-month schooling, the entire school plant is air-conditioned making use of all-weather unit ventilators in the teaching spaces and HVAC package unit and ducted systems in the larger spaces. Mechanical equipment spaces are provided in the tower and connecting link penthouses as well as in basement areas. The school will use electrical energy as a fuel source, and is insulated accordingly.

An important part of the design study involved the planning of phases of construction, working within the physical limits of the site and respecting the need to keep the school plant in continuous operation. Since the new school would be able to function for a limited time without the auditorium it was decided to locate this unit within the area of the present building, and defer its construction as well as the staff parking and plaza to a second stage. Piles for the tower building were driven during the summer under a separate contract, and capped, ready to receive the basement walls and columns.

The construction schedule calls for the General Contractor to first complete the tower structure as well as the basement swimming pool and the gymnasium and locker areas, generally working to a line parallel to the rear of the existing building and at its closet point 10 feet from the building. Upon the completion of the above phase, the Owner will occupy the completed areas, and the Contractor will proceed with the demolition of the existing building and the construction of the auditorium, underground garage and plaza above.

The CPM schedule calls for the completion of the first phase by February 1973, and the completion of the entire project one year later. A General Contract in the amount of $17,400,000 has been awarded to Blount-Fountaine, Inc. (a joint venture) and includes a complete construction package of building and site development, and built-in equipment for the 340,000 square foot school and the 40,000-square-foot-garage.

Client: City of Boston; Mayor: Hon. Kevin H. White; Director of Public Facilities: Robert J. Vey.

Partner-In-Charge: Frank P. Orlando; Project Manager: Harry A. Coe.

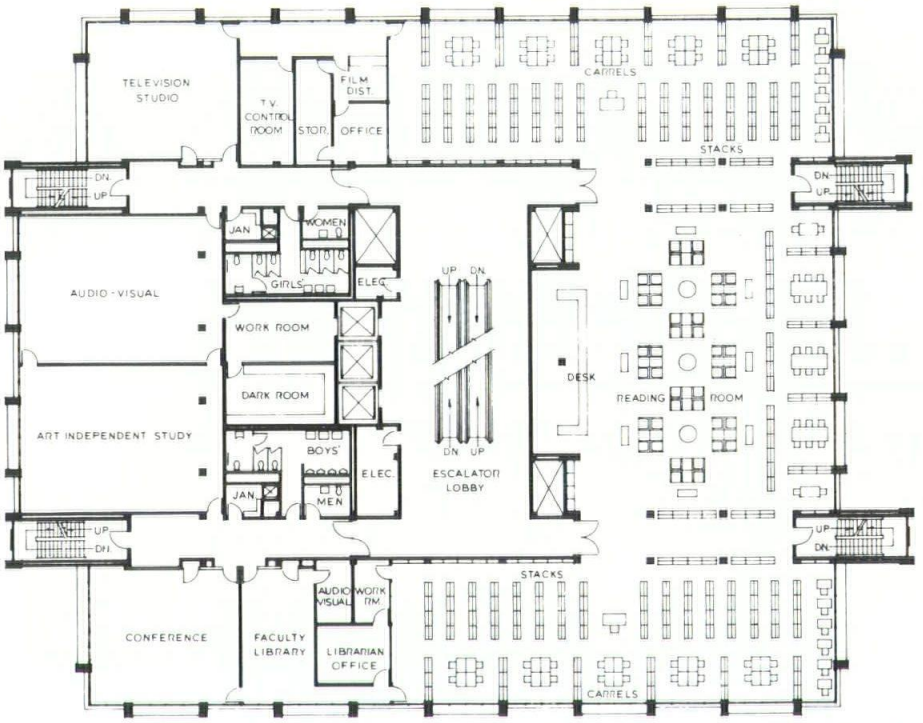
Landscape Architects: Moriece & Gary, Inc., Cambridge.

Structural Engineers: Souza & True, Inc., Cambridge.

Mechanical & Electrical Engineers: Greenleaf Engineers, Cambridge.

Food Service Consultant: Murphy & Lindsey, Inc., Medford.

Acoustical Consultant: William J. Cavanaugh, Natick.



Forming a quiet zone between the two houses and located for optimum appeal to the student body is the Media Center on Level 6.

Notes *(Continued from page 2)*

phrases and concepts — and with justification. People are increasingly aware of the environment, including sound — and standards for the quality of sound are commanding greater attention."

In addition to providing service for all Russell Gibson vonDohlen projects, the acoustical department will be available for consultation to other architectural, engineering, and associated firms. Basic services will be consultation in room acoustics, sound isolation, and noise and vibration control.

Ralph H. Gibson, Jr., holds a bachelor's degree in architecture from Massachusetts Institute of Technology, where he specialized in architectural acoustics. In addition, he studied at MIT's Civil Engineering Graduate School/Building Engineering and Construction Division.

Prior to joining Russell Gibson vonDohlen, Mr. Gibson had been employed by architectural and acoustics consulting firms. He was a staff consultant in architectural acoustics for Goodfriend-Ostergaard Associates, and for Bolt, Beranek and Newman, Inc. He has had extensive experience in architectural design and production management with architectural firms.

Mr. Gibson has been a member of the Acoustical Society of America/American Institute of Physics since 1963.

Transportation and Urban Noise Course Slated

An intensive six-day course on Transportation and Urban Noise will be held for urban planners; engineers and architects; city, state, and federal officials; and others concerned with growing problem of noise in the urban environment at the Red Jacket Beach Motor Inn on Cape Cod, Mass., October 24 through 30, according to Dr. Richard H. Lyon, a partner of Cambridge Collaborative and Professor of Mechanical Engineering at the Massachusetts Institute of Technology.

The course format will consist of a combination of six morning lectures and five afternoon workshops. Special evening presentations and events are also planned. Topics for the lecture and workshop sessions include a description of urban noise problems resulting from the operation of aircraft, airports, trains and rapid transit, trucks and automobiles, construction equipment, factories, and other urban noise sources . . . physical and legal procedures for

noise control . . . and appropriate noise criteria for each source of urban noise.

The lectures will be given by Richard H. Lyon and other nationally known experts from government and industry. Among the list of lecturers will be Tony F.W. Embleton, Division of Physics, National Research Council of Canada; Karl D. Kryter, Stanford Research Institute; Edgar A. Shaw, Division of Physics, National Research Council of Canada; Daniel R. Flynn, Office of the Assistant Secretary for Science and Technology, Department of Commerce; George E. Winzer, Chief, Urban Development; and Mr. Robert L. Paullin, Chief, Regulations and Standards Division, Office of Noise Abatement, Department of Transportation. Representatives of B & K Instruments, Inc. and General Radio Company, Inc. will discuss techniques and instrumentation for noise measurement.

Attendees will be divided into smaller groups for afternoon problem-solving workshops under the direction of Dr. Jerome E. Manning and Mr. William J. Cavanaugh, co-directors of the course and recognized authorities in acoustics and noise control. Specific subjects involving the principal urban noise sources and physical, legal, and economic procedures for noise control will be treated in detail. A panel discussion on economic, legal, and social aspects of the urban noise problem will conclude the course.

System Ecologic Report Available

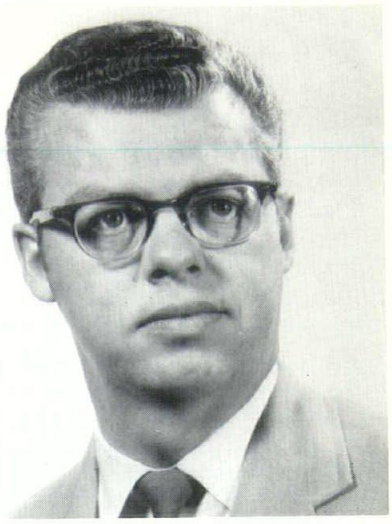
The President's Commission on the Fine Arts, the National Endowment for the Arts, has sponsored a research report on a transitional housing system in the United States.

The report, "SYSTEM ECOLOGIC," is a 100-page book designed to act as a "kit of parts" for the user. Its basic underlying principal is that a combination of building elements existing now and presently on the market can be made in such a way as to provide housing with design and functional flexibility. It is said that this design concept is a viable alternative to the mobile homes as the major producer of housing in the United States.

Data for the report was gathered through research undertaken at Harvard University, Massachusetts Institute of Technology, and by ECODESIGN, INC. of Cambridge.

Copies of the report are available through ECODESIGN at a cost of $7.50 plus postage.

Main Appointed Chief Draftsman

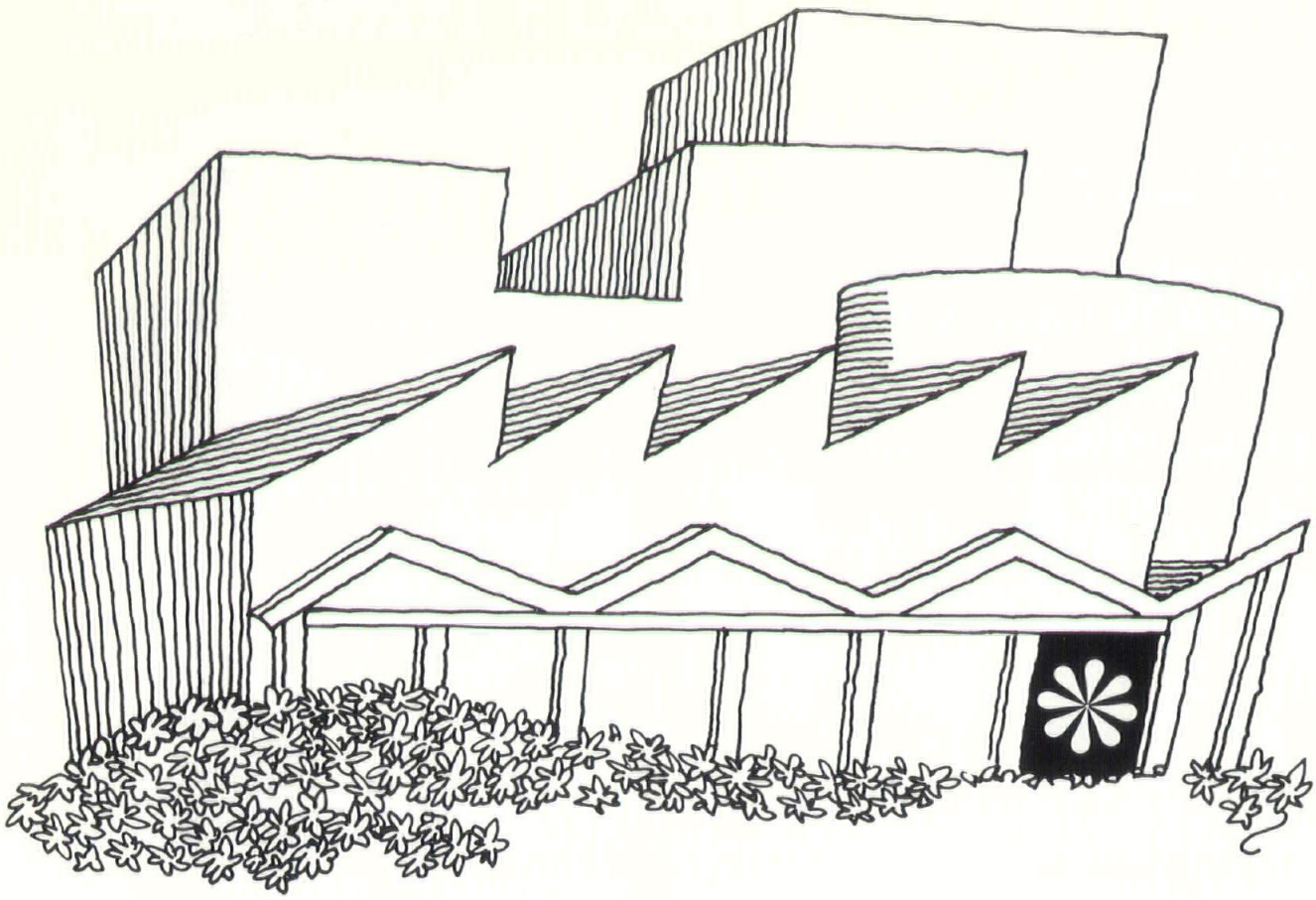


Clifford G. Main

Clifford G. Main has been appointed chief draftsman at Russell Gibson vonDohlen.

In his new role at the West Hartford architectural firm, Mr. Main will be responsible for the direction and coordination of all drafting room personnel and activities.

Index To Advertisers



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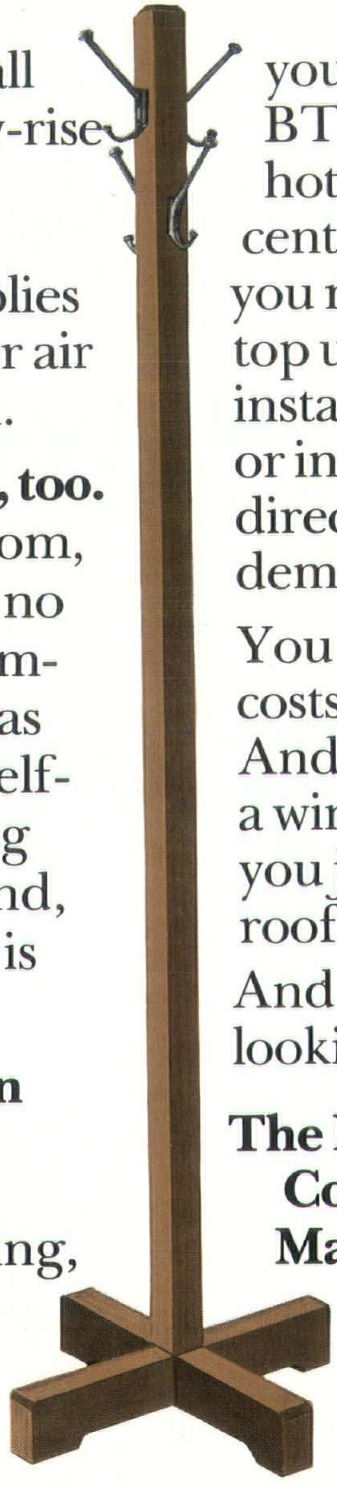
The less you spend on distribution, the less you spend on fuel. In a spread-out building, you can lose a lot of BTU's just getting the hot or cold air from a central source to where you need it. So these rooftop units are unitized for installation in multiple — or individually located directly over each demand area.

You can save ductwork costs and ductwork losses. And, if you want to add on a wing at some later time, you just add another rooftop unit on the wing. And they're a lot better-looking than most hatracks.



The Natural Gas Companies of Massachusetts