new england Architect

& NEW HAMPSHIRE ARCHITECTURAL REVIEW

AMERICAN INSTITUTE OF ARCHITECTS
September 1973

The new State Street South complex will demand more electricity in one day than the entire town of Hingham.

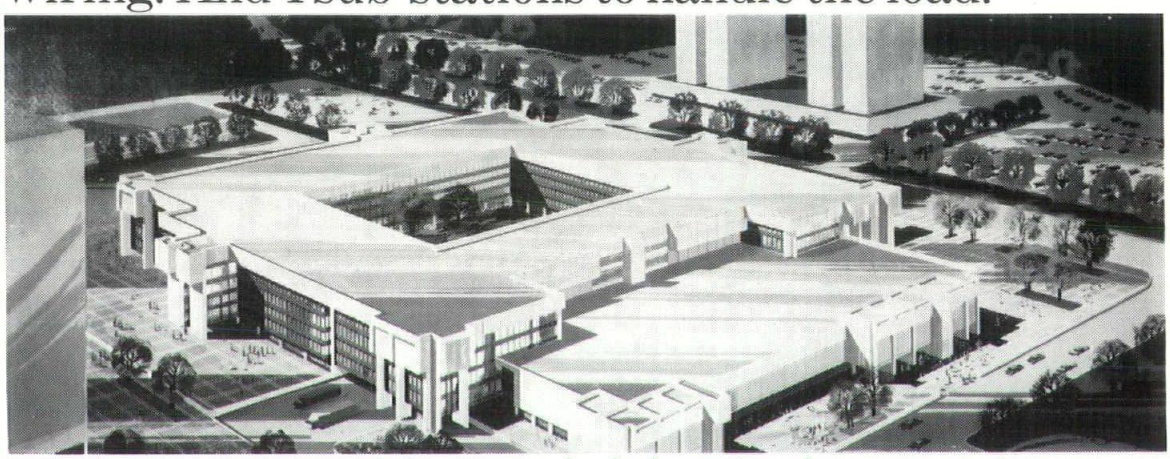
The new State Street South computer center will be opening in 1973.

And it will do so with a lot of power.

Up to 23,000 kilowatts of power by the end of the decade.

That's more electricity than many towns use.

And in the center, there will be some 380 miles of wiring. And 4 sub-stations to handle the load.



What this adds up to is jobs. And economic growth for Quincy—and the entire Metropolitan Area.

That's something to be proud of.

Boston Edison Company
Massachusetts Electric
Eastern Utilities Associates and Subsidiaries
New England Gas and Electric System Companies

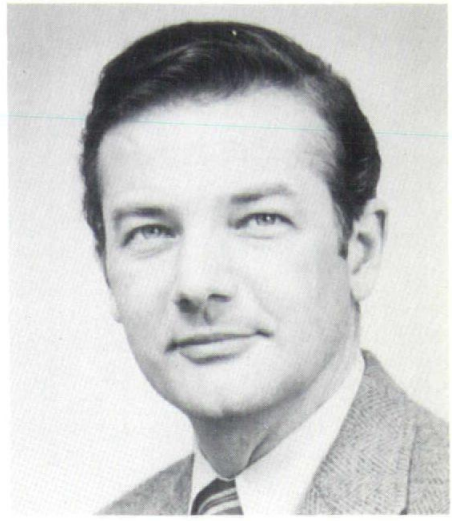
NEW DIMENSIONS OF DESIGN

It's a fact that BELDEN provides over 200 variations in color, texture and size of brick — the largest selection in the industry to free the imagination of the creative architect for limitless scope of design. ■ Your nearest BELDEN Dealer will gladly show you the facts in the form of samples, or write us at P. O. Box 910, Canton, Ohio 44701.

THE Belden Brick COMPANY / CANTON, OHIO

NOTES & COMMENTS

R. J. von Dohlen Named To Registration Board



R. J. von Dohlen

Robert J. von Dohlen, president of architects Russell Gibson von Dohlen Inc., has been appointed by Governor Meskill to the five-man Architectural Registration Board of the State of Connecticut. Von Dohlen's five-year term began July 1.

According to Section 20-289 of the General Statutes, the Architectural Registration Board "shall make regulations concerning professional ethics and conduct appropriate to establish and maintain a high standard of integrity and of dignity in the practice of the profession." The Board also makes rules for examinations of applicants for the certificate of registration.

To qualify for membership on the Board, a candidate must be an architect whose residence and principal place of business is in Connecticut and who has been engaged in the practice of architecture for at least ten years.

Von Dohlen, holder of Bachelor of Architecture and Master of Planning degrees from Cornell University, joined the firm of Russell Gibson in 1956 and became a partner the following year. With the incorporation of Russell, Gibson & von Dohlen at the beginning of 1973, he was named president of the new company.

A member of the American Institute of Architects, von Dohlen

(Continued on page)

new england
Architect
& NEW HAMPSHIRE ARCHITECTURAL REVIEW

September 1973 Volume 4 Number 5

features

departments

Photo Credits: Nathaniel Lieberman (Knight Campus), pages 8-11.

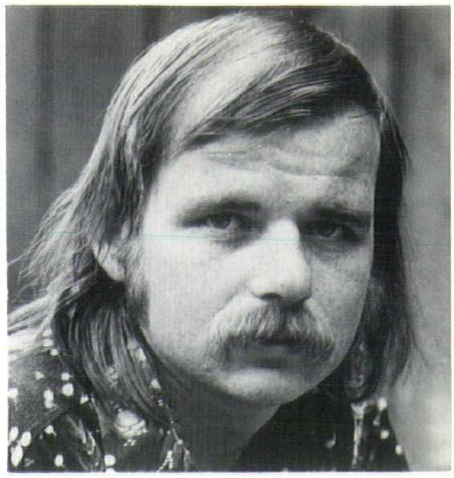
Editorial & Sales Office:
Three Sheafe Street
Portsmouth, N.H. 03801
Telephone: 603-436-4503

Published monthly by the Walsh Publishing Corporation, Three Sheafe Street Portsmouth, N.H. 03801.
Controlled circulation postage paid at Portland, Maine. Postmaster: Please send Form 3579 to NEW ENGLAND ARCHITECT, P.O. Box 900, Portsmouth, N.H.
Fifty Cents A Copy
Subscription: Five Dollars Per Year.

Publisher
James F. Walsh
Editor
James Bolquerin
Editorial Staff
Peter Randall
Mary H. Arnett
General Manager
Herbert F. Georges
Advertising Production
Anne Cullen
Art Director
Herb Rauh
Circulation Manager
Marjorie Henderson
Sales Representatives:
Ruth & Carll Downs
120 Manchester St.
Nashua, N.H. 03060
Phone: 603-882-6715

(Continued from page 2)
is a Registered Architect in Connecticut, Massachusetts, New Hampshire, Rhode Island and Vermont. He is chairman of the City of Hartford Board of Building Review and the New Uses for Old Buildings (NUFOB) Committee of the Connecticut Development Commission, and he is a member of the Urban Design Review Board of the West Hartford Redevelopment Commission.

Minges Heads "blue inc"



Blue Minges

"blue inc," a new firm specializing in all facets of custom design work, is now located at The Exchange in Talcott Village in Farmington.

Blue Minges, artist and designer who heads "blue inc," received his B.A. degree in architecture from Cornell University and holds an M.A. degree in sculpture from the University of California at Berkeley. After teaching sculpture at Berkeley and at Trinity College in Hartford,

(Continued on page 6)

A $10 billion umbrella.

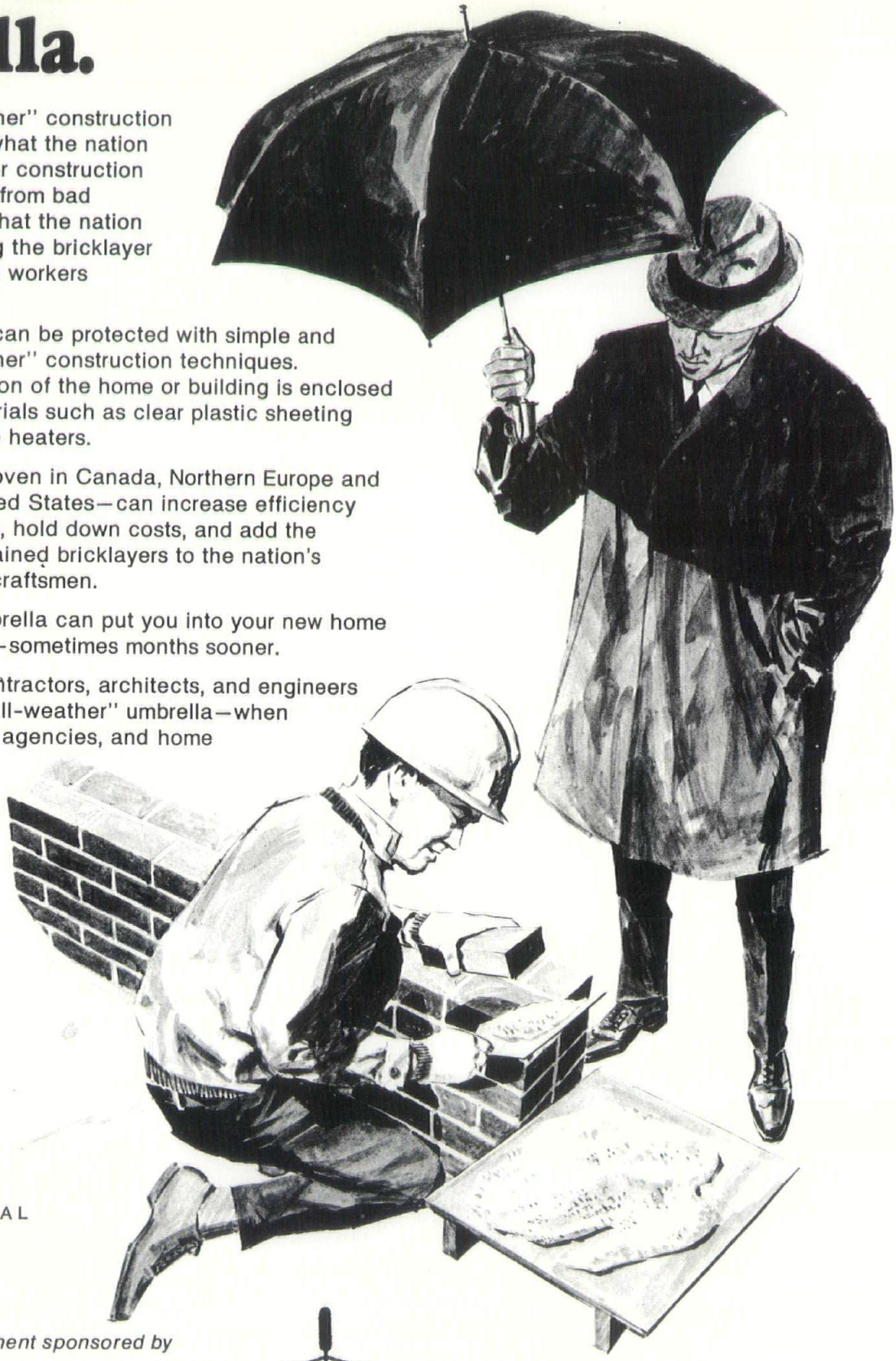
That's what "all-weather" construction is. $10,000,000,000 is what the nation pays year after year for construction "down time" resulting from bad weather. And that is what the nation can save by protecting the bricklayer and other construction workers from bad weather.

Any construction site can be protected with simple and inexpensive "all-weather" construction techniques. Basically, all or a portion of the home or building is enclosed with inexpensive materials such as clear plastic sheeting and heated with space heaters.

These techniques—proven in Canada, Northern Europe and some cities in the United States—can increase efficiency of the building process, hold down costs, and add the equivalent of 35,000 trained bricklayers to the nation's limited pool of skilled craftsmen.

The "all-weather" umbrella can put you into your new home or office much sooner—sometimes months sooner.

Building craftsmen, contractors, architects, and engineers are ready to use the "all-weather" umbrella—when building clients, public agencies, and home builders want them to. In building, time saves money. Save yourself some of both.



INTERNATIONAL MASONRY INSTITUTE

This advertisement sponsored by

MASSACHUSETTS MASONRY INSTITUTE

755 BOYLSTON STREET • ROOM 815

BOSTON, MASSACHUSETTS 02116

(617) 262-0020

(Continued from page 4)
he worked as a custom designer/builder in New York City. He was formerly Design Coordinator for Talcott Village Management Co.

Minges will have a staff of six in his new firm, including drafting experts, custom carpenters, a sign painter and a graphic artist. In addition, he will maintain a supporting staff of consultants in the art and communications areas.

"blue inc" will concentrate on specialty design projects for both business and residential properties, including custom interiors and renovations, graphic design, corporate identity and advertising display materials, signs, packaging and brochures.

Minges worked on the interior design and graphics for The Exchange before establishing his new firm. He designed the Talcott Village Co. office and the offices of such Exchange tenants as Schwartz & Nesbitt Public Accountants, Chirurg & Cairns Advertising, Home Life Insurance, Genesis One and Execu-Suite.

Turnkey Army Housing Under Construction

Now at the half-way point, construction of a $1 million residential complex consisting of 28 family housing units at the U. S. Army Natick (Mass.) Laboratories is expected to be completed by the end of the year.

According to R. Wendell Phillips and Associates of Boston, architects and planners of the development, the 12 buildings making up the complex were carefully sited to preserve existing trees and provide views of Lake Cochituate and a small pond nearby.

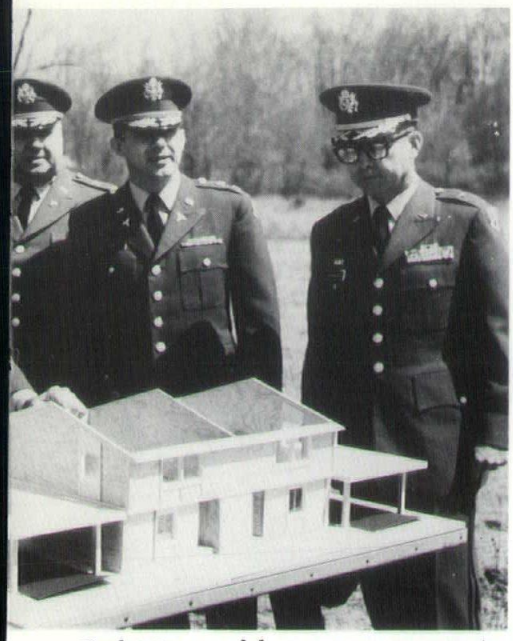
Project manager for the Phillips firm is Rudolph Pistacchio of North Providence, R.I. Chief representative of the general contractor is Stanley Sydney of Brookline, Mass., assisted by Martin Davey of Centerville, Mass. Landscape consultant is Olmsted Associates, Brookline.

Involved in the project as general contractor in a joint venture with Phillips is Sydney Construction Company of Newton Highlands, Mass. The two firms were granted the design-and-build, 42,000-square-foot turnkey project by the Army after competing with several other New England teams.

"The turnkey concept permits the contractor and his sub-contractors to work jointly with the architect and his consultants to provide the best quality construction within the constraints of the budget," stated principal architect R. Wendell Phillips, A.I.A., of Dedham.

Three of the buildings are four-bedroom ranch houses to be as-

(Continued on page 35)

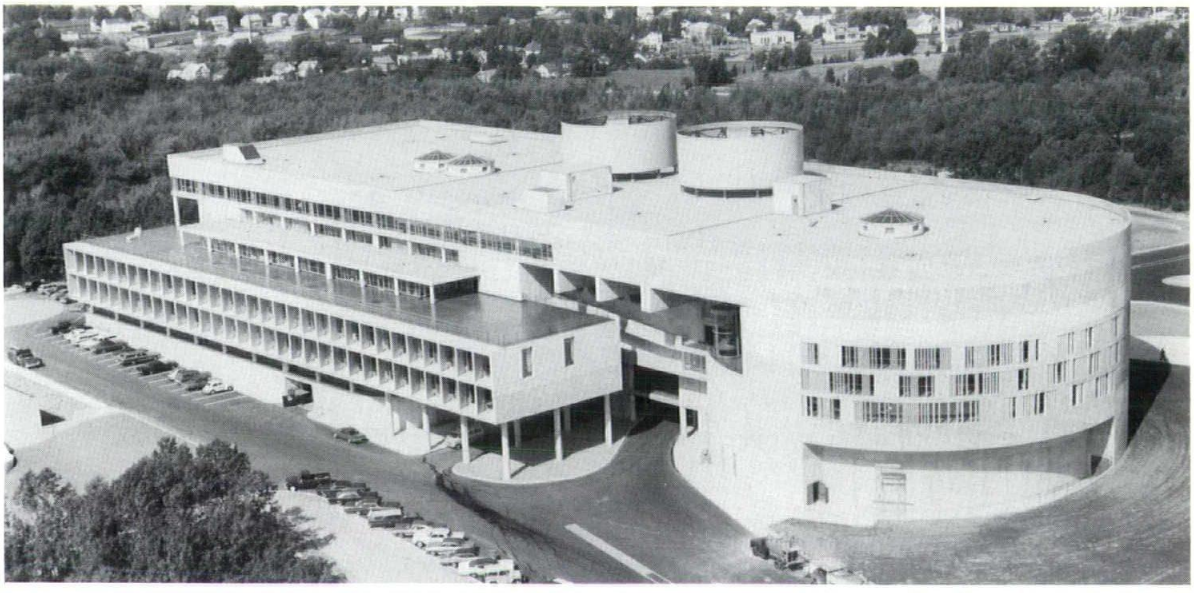


Explaining model at recent ceremonies was architect R. Wendell Phillips, A.I.A. Also participating were (left to right) Henry Weisgold, facilities engineer, Natick Laboratories; Stanley Sydney, general contractor; Col. Harry Corkill, commander, Natick Laboratories; Col. LeeRoy *Jones, commander, U. S. Army Research Institute of Environmental Medicine; and Brig. Gen. John C. McWhorter, Jr., former commander, Natick Labs.*

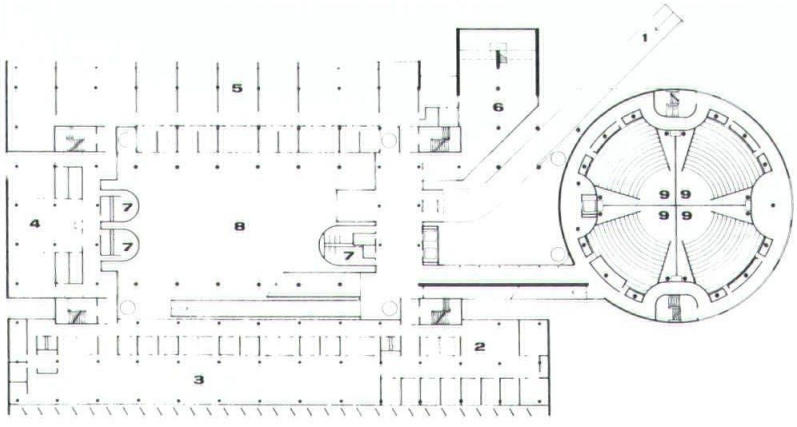
KNIGHT CAMPUS

RHODE ISLAND JUNIOR COLLEGE

WARWICK, R.I.



The all-in-one megastructure houses a two-year community college, providing programs for approximately 3,000 students.

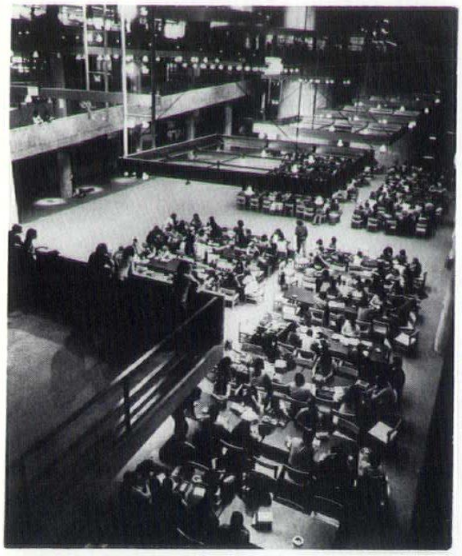


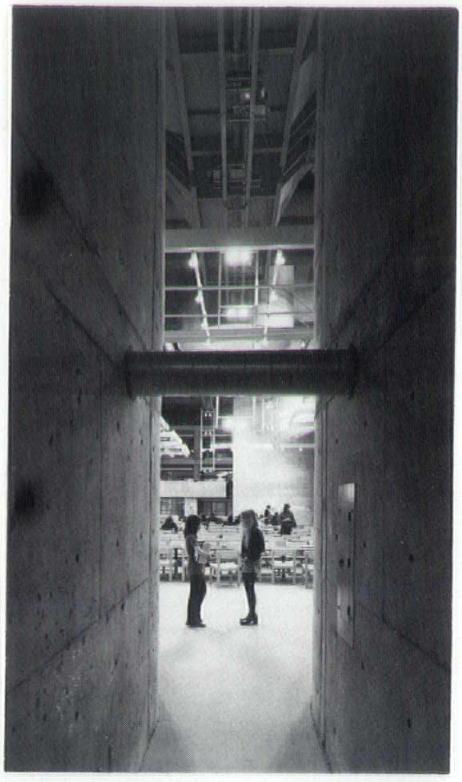
Knight Campus, Warwick R.I.

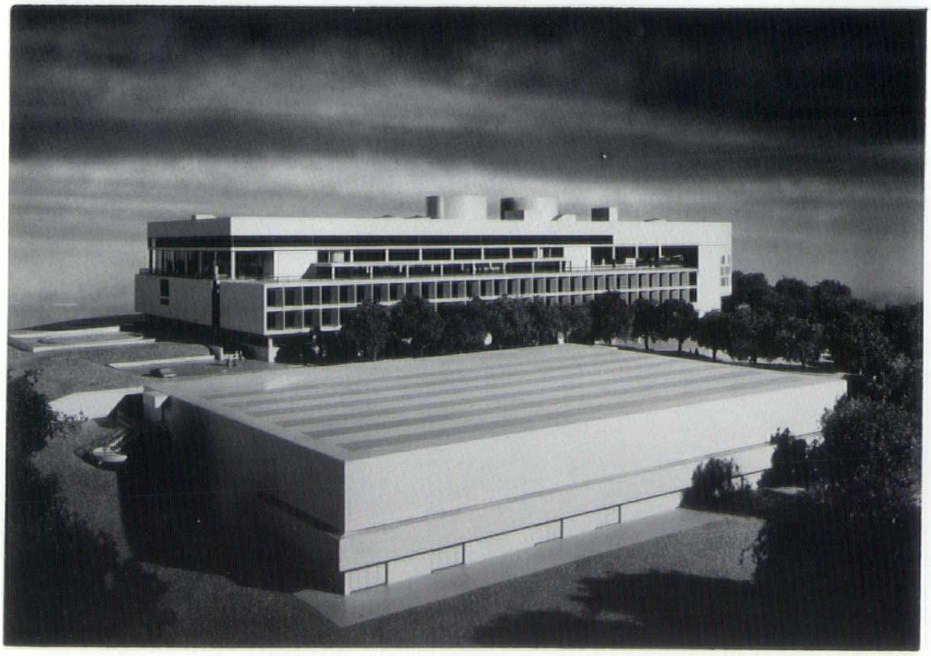
Second Floor Plan: (1) Main Entrance Ramp; (2) Administration; (3) Faculty; (4) Data Processing; (5) Laboratories; (6) Book Store; (7) Toilets; (8) Upper Part of Common Area; (9) Lecture Room.

Architects:
Perkins & Will Partnership, N.Y.
Howard Juster, AIA
Robinson, Green & Beretta, Providence, R.I.
Harkness & Geddes, Providence, R.I.

The focal point of the building is the huge 200-foot long, four-story commons (below). View of the commons (right) was taken through two of the concrete storage/ service cylinders.







Model of building with gymnasium in foreground.

THE all-in-one educational megastructure housing Rhode Island Junior College's Knight Campus in Warwick is a new type of college architecture responsive to a new college concept. Knight Campus is a two-year community college providing academic, vocational, and technical programs for approximately 3,000 commuting students of widely different backgrounds, interests, and aptitudes. Its special strength is the diversity of its curriculum and of its student population, and it required facilities designed to capitalize on this diversity.

Had Knight followed tradition, it would have scattered its buildings over the 204-acre site. But this, instead of taking advantage of Knight's unique potential for enriching the educational process by intermixing the college population, would have isolated groups of students and faculty within the buildings accommodating their own specialized fields of study. Such segregation was contrary to the college's goal of preparing students for an increasingly urban society where they must live and work with many people of varied interests. Moreover, since Knight's students all live off campus and, thus, make most of their contacts either in or going to and from classes, the result would have been a narrow college experience.

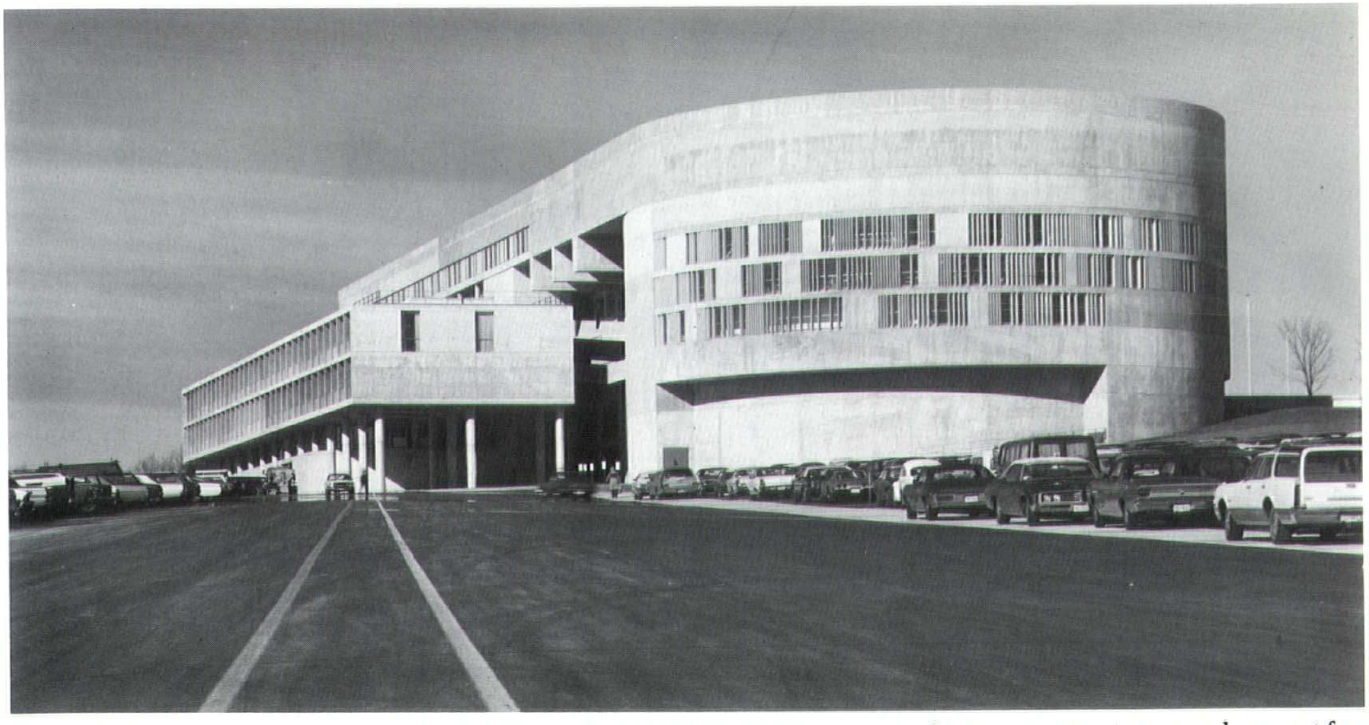
The campus design evolved by Perkins & Will and the associate architects reverses this trend. The design maximizes interaction of Knight's heterogeneous population by: (1) bringing all students and faculty together in one 500-foot long, six-story high structure: (2) grouping facilities by function rather than subject area so that academic, vocational, and technical students are intermixed: (3) locating activity spaces in a central interior court

The theater can seat 1,000 people for major events, or it can be divided into two, three or four lecture halls of 250 to 500 seats each.

shared by all: and (4) positioning pedestrian ramps to bring the total school population into contact and provide views of activities taking place throughout the college.

Dr. William F. Flanagan, President of Rhode Island Junior College and the Rhode Island Junior College State System, feels that the architects have responded to a strong educational philosophy and program with a unique architectural design. This design stimulates the intermix of all the college students which is an important part of the comprehensive aspect of the Junior College program.

Knight's massive single structure of functional exposed concrete is vastly different from colleges of the past and strongly urban in style and intent. Whereas colleges have traditionally sought after "sheltered



The megastructure is rectangular except for a circular section at one end containing a theater-in-the-round and library.

halls of ivy" and sprawling campuses, Knight, despite its rural setting, has concentrated its population and turned its academic and social forces inward. The building framework is both large enought to accommodate a college of Knight's size and diversity and centralized enough to bring about a high degree of interaction because it has been extended vertically as well as horizontally.

A vertical circulation spine of continuous ramps is strategically placed to meet circulation requirements and to serve as a unifying element by bringing the college population into more frequent contact. Fulfilling much of the function of a town's main street, the wide ramps — with the central commons visible from one side and the college's many types of instruction visible through glass walls on the other — encourage students to "window shop," learning more about the college and about each other's fields.

The ramps contribute to Knight's Space Age look, but, in fact, are immensely practical, being safer and less strenuous than stairs and more economical and convenient than a bank of elevators.

The focal point of the building is a huge 200-foot long, four-story commons around which all of the college's other facilities are located on different levels. This indoor "campus" is purposely used as the circulation link between the main entrance ramp and the ramp leading to the upper levels so that everyone in the college passes through. It is a continuously active place with provisions for cafeteria and snack-bar dining, studying, socializing, and other student activities; and it is used more extensively because it is so readily accessible.

The enclosed temperature-controlled commons is ultra modern with exposed pipes and ducts and with large funnel-like tubes coming down through the top floor to create skylights. But it is also ultra practical, for it gives the college an all-year meeting ground and insures that graduation exercises, exhibitions, dances and other events can take place on schedule regardless of the weather.

Throughout the building, exposed mechanical workings and constructional materials set a technical tone in keeping with the college's purpose of uniting the academic with the vocational. The structural design of the building incorporates spread concrete footings, reinforced concrete columns, slabs and roof, generally left exposed. Exterior walls are mostly reinforced concrete, left exposed, with double glazing in anodized aluminum frame, and with some areas with closely spaced concrete fins. Interior construction is generally of exposed concrete block partitions and exposed concrete ceilings. Carpeting is used over about 75 per cent of the floors. The building is totally air conditioned, using electrical energy for heating and cooling.

Teaching facilities are grouped according to function with classrooms occupying the entire sixth floor, all laboratories together in one section four stories high, and faculty offices concentrated rather than scattered according to department. Robert G. Henderson, Dean of Administration and the college official responsible for the planning and development of the campus facilities, believes that students in the many varied junior college programs should be encouraged to elect courses outside their own discipline. Students in vocational programs should be encouraged to take courses in the arts and humanities if they so desire and students in liberal transfer programs should be encouraged to investigate skills. All should at least obtain an awareness and an appreciation of disciplines not directly related to their chosen field. The grouping of facilities by function encourages this interaction.

This arrangement, in addition to achieving the desired intermixing of students in different fields of study, permitted the use of modular construction with the consequent advantages of construction economy and provision for change and growth. The teaching modules are flexible to permit changes in curriculum, and non load-bearing interior walls will allow class space to be expanded or contracted.

The megastructure is rectangular except for a circular section at one end containing a theater-in-the-round and library. The theater can seat 1,000 people for major events, or it can be divided into two, three or four lecture halls of 500 to 250 seats each.

Other facilities provided include a three-story library-resource center, book store, student union, television studio, and parking lots. A novel, but highly convenient, feature is the use of three plain concrete cylinders resembling gigantic columns which extend through the building, making rest rooms and service storage space available in a set location on every floor. The gymnasium, the only facility not incorporated in the main structure, is situated just below it and can be reached by an underground tunnel.

Another strong point of the master plan for Knight Campus is the far-sighted use of land. The college is situated in the center of its extensive grounds with fields and woods surrounding it. This provides a buffer between the college and the rapidly urbanizing suburb in which it is located and insures capacity for any future growth.

Structural Engineers: Wiesenfeld & Leon.

Mechanical & Electrical Engineers: Segner & Dalton.

General Contractor: Dimeo Construction Company, Providence, R.I.

Burlington Associates

Architects & Planners

Burlington, Vt.

Charles J. Hubbard, AIA

Editor's Note: Burlington Associates is a relatively young firm founded in the early sixties by Charles J. Hubbard and William C. Linde. The name of the original partnership, Linde-Hubbard Associates, Inc., was changed in 1971, three years after Mr. Linde's death. The firm added "planners" to the name because it had over a ten-year period been involved in a great deal of physical planning. Its members have planned urban, recreational, and educational projects and worked on renewal projects, Model City conceptional planning projects, and even had a hand in laying out a modest ski resort. Principals include Project Architects Don Allen Albertson, Thomas V. S. Cullins, Willem I. de Groot, Melvin B. Frank, Arthur Norcross and Economist Howard Bouchard. Other members of the firm are Draftsmen Ernest H. Bessent, Milton E. Copping, Wayne S. Sornberger and Martin S. Tierney; Landscape Architect Michael E. Lawrence, and Secretary/ Office Manager Patricia L. Rogers.

N.E.A. — Can you tell me how you got started?

B/A — When we — my wife and I — came to Burlington in '55, we had not made up our minds where we intended to put out our shingle, but of all the places we looked Burlington seemed the best place to live. I remember discussing the economic future of Burlington with several local bankers. They painted a pessimistic future for the area, but I decided it had only one way to go, and that was up. Subsequent events have since proven that my optimism was justified. Still, in certain respects the bankers were right. Although this area is a great place to live, it's still, economically speaking, a difficult place in which to practice architecture.

N.E.A. — Why do you say difficult? It looks as if your firm has done a lot of work.

B/A — Yes, I guess it appears that way. But, actually even a medium-size firm with ten to twelve men, such as ours, requires a rather large flow of work. The alternative is to hire and fire. We're reluctant to do that; for we think the quality of work would suffer under such a policy. We could increase the volume of work we do without adding substantially to the staff.

N.E.A. — I understand you have people other than architects in the firm; would you care to comment on that?

B/A — Several years ago, we reassessed the future role of the architect and it seemed to us that there were irresistible forces afoot which would make it increasingly difficult to practice architecture in the traditional way. The Federal government, for example, was pushing "turnkey." We decided to find out something about this strange sounding name and discovered some interesting things. After watching a local contractor "sell" a turnkey housing project to a local agency we were struck by the enormity of it all. First, the local agency did not ask what the building looked like, nor did he seem to care. Secondly, the drawings that impressed the agency were completely inadequate. The whole thing dumbfounded us. The rational process of architectural practice was coming apart at the seams — and the force for this peculiar process was the Federal Government through its HUD agency. Rather than fight the process we decided to play the game. That was one of the reasons we decided to add to our staff an economist knowledgeable in the field of real estate.

N.E.A. — Would you say you were successful in your new approach?

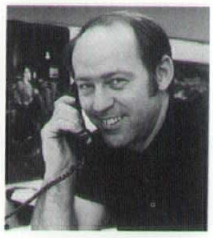
B/A — We started off with a bang. We put our first elderly turnkey proposal together in ten days and won. We came up with a site, a design, and a price within that short time. Our price had to include many other items besides construction costs, and our economist was especially helpful. Since that first project, we

Melvin B. Frank

Thomas V. S. Cullins

Arthur Norcross

Don Albertson



Willem I. de Groot

Howard Bouchard

Wayne Sornberger

Patricia Rogers

Mike Lawrence

Martin Tierney

Ernie Bessent

Milt Copping

have gained a tremendous amount of experience in areas that we would not normally have considered. This experience has led us into a variety of projects. It was not a diversity of architecture that turnkey encouraged but of different ways of involvement. In order to get some projects going, we have had to participate in the "front end" costs and thereby become part owners. It was either participate this way, or not do a project. Our economist has been especially helpful in providing us as well as our clients with valuable understanding. He has been a liaison between the drafting board and economic realities. He understands, though he is not entirely sympathetic to our architectural problems, and he has the confidence and understanding of the financier. It is not an easy role to play.

N.E.A. — What advantages do you see in turnkey or design/build?

B/A — Perhaps we are biased, but we don't see any real advantage to the Owner. We think the owner is not getting a better deal, and the architect to varying degrees abdicates his traditional role. We doubt that architects would participate if it were not for the scarcity of jobs. The long and short of it all is that such projects are only as good as those involved. That is why we have encouraged other architects with philosophies similar to our own to participate. If architects do not, we will lose our influence in the construction field at a rate greater than is already happening. If quality is to be maintained, architects must be in a position of influence.

N.E.A. — You mentioned that you had an economist on the staff; are there any other non-architects in your office?

B/A Yes, a talented landscape architect has joined us. We find the close interrelationship of design disciplines a great help. In our firm, where we are particularly concerned with the conceptional part of design, we find it extremely valuable to have people in the firm who have experience and knowledge in the field of land planning and natural environment. We think this in-house capability more relevant to our type of firm than providing, for example, in-house engineering services. We think the advantages of ease of coordination and the smaller expense to the architect are out-weighed by the benefits resulting from the selection of the best engineering consultants available. The best engineers are usually those who have established their own practice, and these firms can bring the skills and knowledge based on a wide range of experience that would be impossible to duplicate in the practice of a single architectural firm.

N.E.A. — In going through your portfolio of work, it appears that you have been quite diversified. Would you care to comment on this?

B/A — First, it would be quite hard to be a specialist in Vermont. A few firms have done a preponderance of the public schools, for example, but we think this is due more to the architectural selection committee that assumes repetition perpetuates competence, rather than to any concerted desire to be known as "school architects" or "resort" or "housing" architects, etc. We think that diversity is the spice which adds to the flavor of a firm's experience. Actually, diversity is really the yeast which brings to a project originality and interest. We couldn't imagine anything more stultifying than restricting one's practice to one or two specialties. Many leading firms do an amazing variety of projects, and when they tackle a project that lies ordinarily in the realm of a specialist, hospitals for instance, they usually introduce a new approach that freshens tired solutions. The important thing for an architect is to understand a client's problem thoroughly and use his talents and experience to solve the problem as

harmoniously as possible.

We have done quite a few public buildings and enjoy doing them, but we have also done other more modest projects such as industrial buildings, low-cost housing projects, and minor additions and alterations. We have also laid out ski trails, prepared economic feasibility studies, land-use and urban design proposals. The greater the diversity, the greater the experience and conceptional thinking one can bring to a project. We think diversity is an asset. But, we also know that previous experience with a particular building type carries a lot of weight with an architectural selection committee. As mentioned earlier, we have actively sought new ways of putting a project together.

N.E.A. — With all the variety of projects you have worked on and your exploration of different ways of putting a project together, it would appear that practicing in Vermont would be quite rewarding.

B/A — If you mean "financially" rewarding, then I would have to say that, regretfully, Vermont is not the place for that. There's only 430,000 people in the State, and a great many architects. If we had more work, we could easily attract the finest talent available. It is amazing how many talented people we have to turn down. The rewards must come from other directions. However, this difficulty of practicing in a small community has been a factor in our actively seeking ways to reach out beyond our borders. That was one of the motives behind our interest in "turnkey." At least that program gave us an opportunity to do work elsewhere. Many firms are in the same boat. I am afraid that New England is a tough place to practice architecture. Consider, for a moment, the fact that more than fifty per cent of the housing starts in New England were trailers. It gives one cause to wonder.

N.E.A. — Which of your projects has given you the greatest satisfaction?

B/A — Probably our work at Johnson State College was the most gratifying, for several reasons: We were involved in many aspects besides architectural design. We influenced the programming, did the master planning, and landscape, and selected the furniture. We were given a wide range of responsibility and authority which enabled us to control the design throughout. State purchasing departments rarely allow architects to carry through their design so thoroughly.

Of course, winning an important design competition like the Cathedral Church of St. Paul was very gratifying. We were pleased to have been one of six firms chosen to compete and were, naturally, happy to have come out on top.

N.E.A. — Your firm's concern for design is pretty well established, but haven't you been interested in other factors of construction as well?

B/A — Yes, we have. Some of the impetus for studying different construction methods was due to our interest in turnkey housing. Several of our men researched various housing systems in Europe as well as here. We designed our Rutland Elderly Highrise around the Bison System, but after much investigation found that poured-in-place concrete was the cheapest method. The Johnson Faculty and Married Student Housing was a by-product of our research into factory built modular housing. We prepared two different sets of drawings for that project, one for "stick building" in the field and another set for factory construction. It turned out that panelizing the units in a plant was the least expensive. We were pleased to see that these units were assembled with little difficulty in the field. Our research has indicated that every system has bugs, and there is no panacea for every solution.

N.E.A. — Would you care to comment on your own philosophical approach to architecture?

B/A — It is impossible to be objective about one's own work. We feel that projects have to speak for themselves. But, our aims are to, first, fully understand the client's requirements, and then solve the problems in the most harmonious manner possible within the allowable budget.

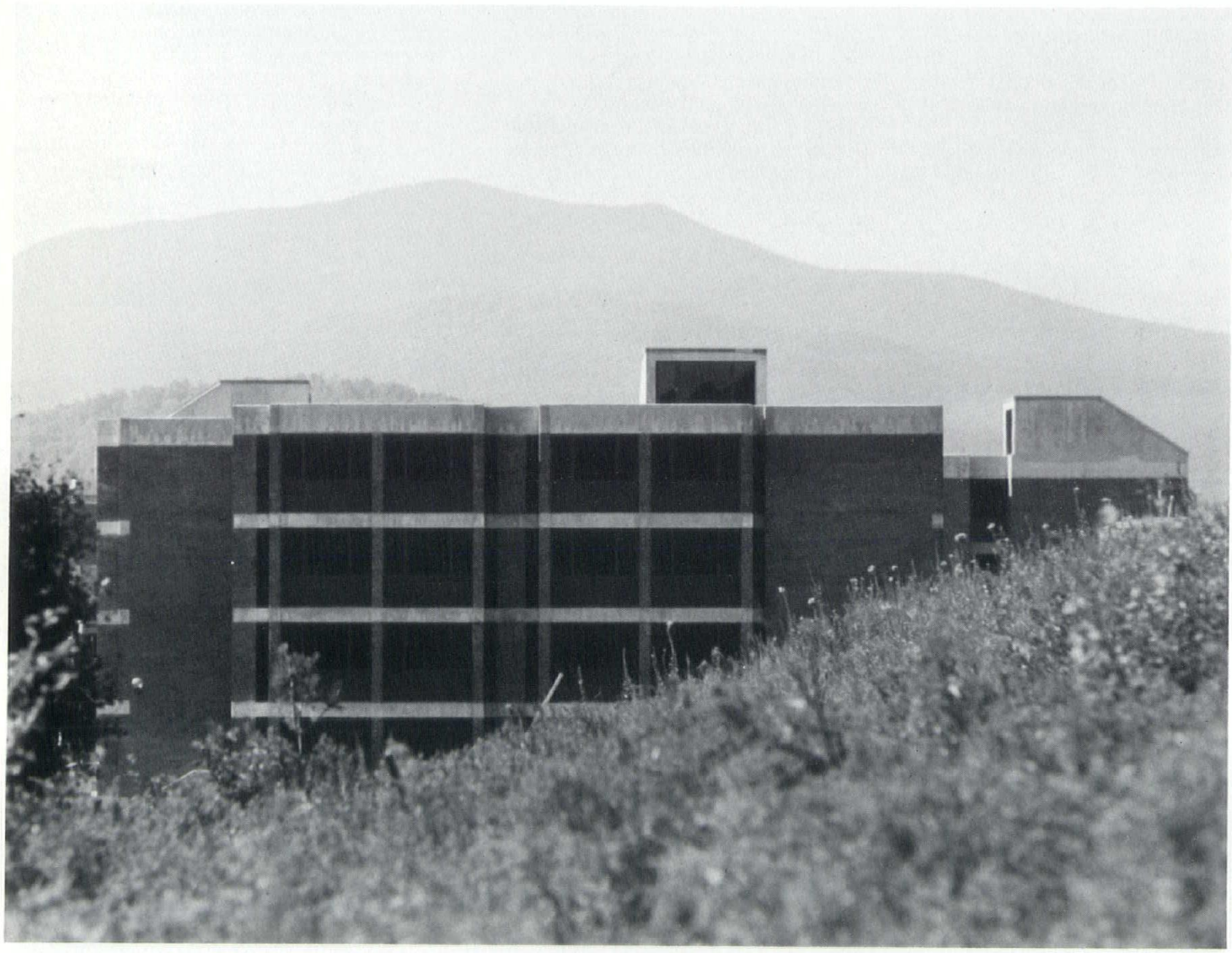
N.E.A. — There has been a great deal written about the problem of sewage disposal in Vermont and the fact that the state has taken the leadership in preparing legislation to protect the natural environment. Is it a problem that has concerned your firm in any way?

B/A — As a matter of fact, it has — in many ways. In our endeavor to keep up or ahead of the problem of human waste disposal, we have been doing research on various waste disposal systems. Obviously, solving this problem is a critical factor in planning and has architectural implications as well.

The number of different systems that have been developed is startling. We followed up on one system that reportedly solved all of our problems, and took the time and effort to talk to the inventor, the promoter, and bought one unit for testing purposes. We did not wish to recommend a human waste disposal system, which produced no effluent, without first being convinced that it worked. We tested our experimental unit for several months, and decided it was not what it was cracked up to be. But, we discovered another system that works on a different principle than the first one we tested.

We are confident that this unit will work because the promoter has not made claims to its universality, the manufacturers seem reputable, and its recommended application restricted to certain specific uses such as vacation homes, camps, and remote locations. Though its application is restricted, it definitely would have significant planning and architectural implications. This unit also produces no effluent and presumably no pollution, but we intend to make tests to satisfy ourselves. If it works, we are considering setting up a company to distribute these units. If it works, every cottage, which currently dumps human waste into a body of water should have one.

I guess you might say that our diversity of interests and curiosity leads us down strange paths from turnkey, renewal projects, to toilets. Obviously, practicing in Vermont forces one to be versatile if nothing else.



Johnson State College
Johnson, Vermont

In 1965 the State of Vermont selected an architectural firm for each of its four State colleges. Burlington Associates was picked for Johnson State College, Johnson, Vermont. The work to be done included programming, site planning, landscape, interiors, as well as four major buildings which included an auditorium with supporting facilities, an arts and science building, a dining hall/student union, and a dormitory complex for 335 students.
Credit for the insistence of a quality environment for these State Colleges must go to the Provost, Dr. Robert S. Babcock, who stated, "Any architectural program which did not take advantage of its site, especially one blessed with a superb view, would rightfully be condemned by future generations as having wasted resources or used cheap taste. The architecture does not stop at the entrance to the building, but encompasses its mass relation to other buildings, the startling breakthrough of vista from enclosed patio to a glimpse of the mountains, and not the least, the pathways, archways, ponds, and gardens.
To make a great campus requires planning — trying to foresee the ultimate demands and therefore not placing some buildings in a location, on a crash basis, which five years later one would wish were somewhere else . . . a great campus also means remembering that in the confines of such a place something special is going on: a two or four year pursuit of something elusive, out of the pathways and pressures of ordinary life. The setting in which this occurs is as important as the library, to both the student and the teacher."

1

Governors and Senators Dormitories.

Each floor was limited to twenty-five students with its own lounge and separate spaces for quiet study. Provision was made for future closed circuit audio/visual media. Teaching and seminar spaces were incorporated within buildings to provide a living/learning environment.

2

Dibden Auditorium

Dibden Auditorium was designed primarily for music; drama requirements were considered secondary. In addition to a 600 continental type seat auditorium, practice rooms, office studios, and classrooms were provided. The main lounge area doubles as a teaching space. Provision was made for a future underground passageway to connect to an outdoor arena should one be built. This proposed arena would overlook a pond and a magnificent view of mountains to the south.

3

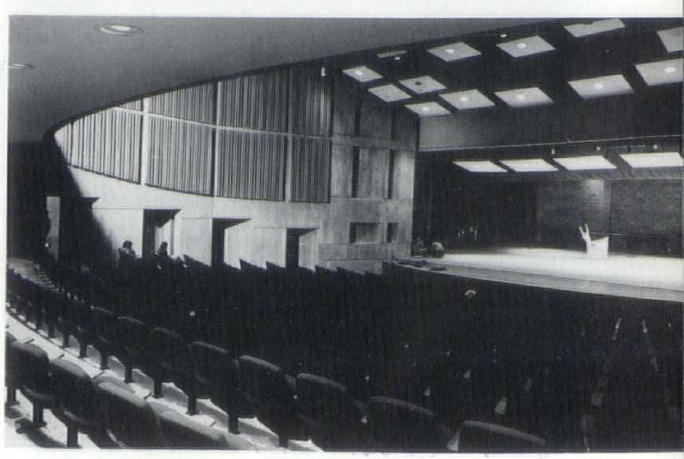
Stearns Hall, dining and student center.

Seating capacity for 450. Emphasis placed on a congenial atmosphere to encourage student-faculty interaction. A scramble system of food service to allow easy food selection and reduce regimentation. Spaces provided for student activities, bookstore, post office, rathskeller, and four seminar rooms. This building receives constant and varied uses by all members of the college.

1

3

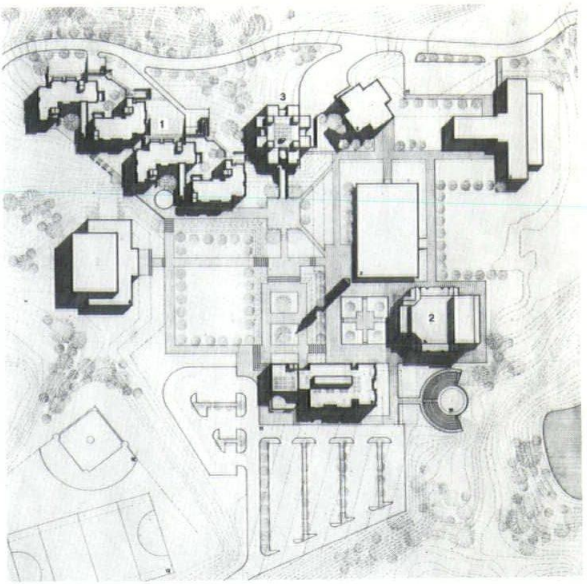
2

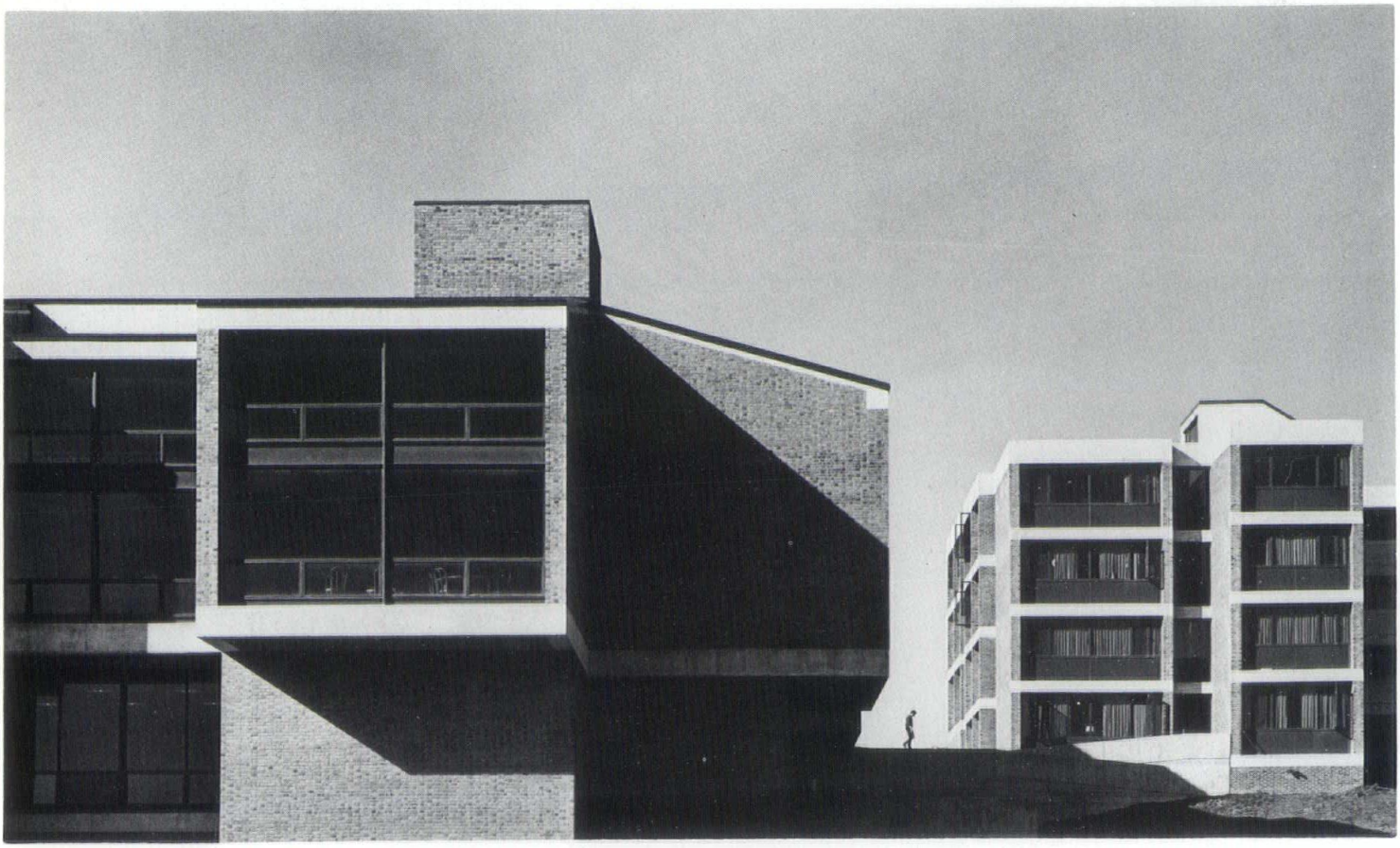


1 **Governors and Senators Dormitories.**

2 **Dibden Auditorium**

3 **Stearns Hall, dining and student center.**





1

Burlington District Court Office Building

This State office building was the initial building in Burlington's eight-acre urban renewal area. The 34,000 sq. ft. structure is square shaped with a two-story courtroom in the center of the top two floors with offices surrounding it. The stairs seen in the photograph lead from the main entrance lobby up to the waiting area outside the courtroom at the second level. Court-oriented facilities occupy the remainder of the second floor. First and third floors provide bulk office space for various other State offices. A basement floor extending beyond the building at either side to form landscaped plazas provides fifty parking spaces for the building occupants.

2

Rowan Court Nursing Home
Barre, Vermont

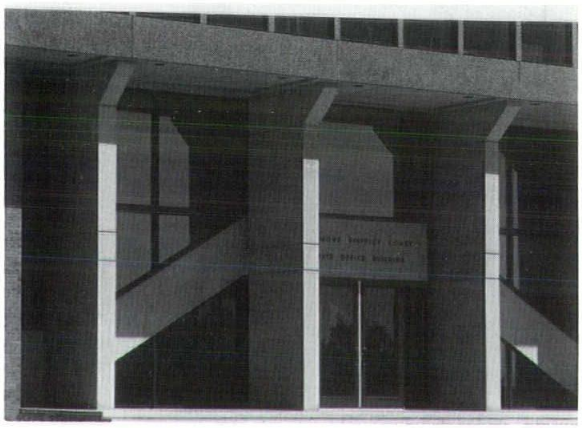
This 100-bed facility, overlooking the Green Mountains, was designed for a family-run organization with a budget of $10,000 per bed. The Owner/Administrator demanded a pleasant living environment as well as an inexpensive and/or financially successful building. A square doughnut shaped building was designed, with patient rooms either looking out at the surrounding countryside or inward toward an open interior courtyard. This courtyard allowed privacy, discreet control of patients by nurses, and provides shade trees and benches for reading and relaxation. Lounges and nursing stations were located at the corners of the building for better views to the outside, as well as interior visual control of corridors and patient rooms.

3

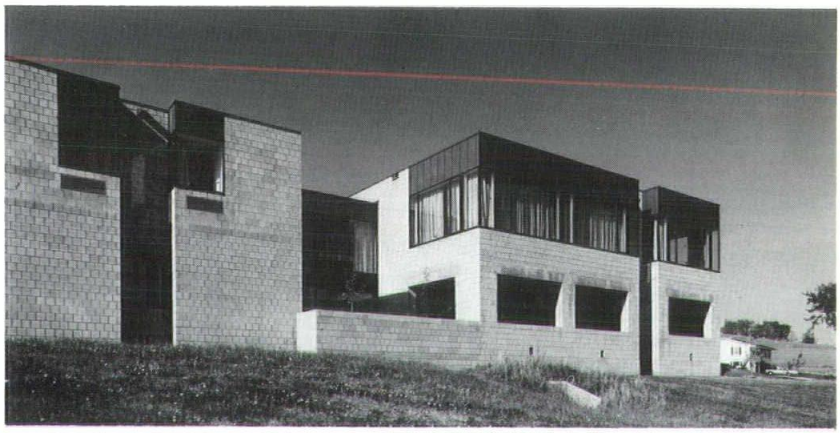
Laconia Savings Bank Renovation Proposal
Laconia, New Hampshire

This model shows the proposed renovation to an existing brick bank in Laconia, New Hampshire. It was located in a central location in an on-going urban renewal area. The proposed design capitalized on the existing bank's 24 foot square skylight that allowed natural light to penetrate all three levels through an opening in each floor. The converted structure was to contain small shops at street level with office space on the upper two levels. Although an exciting possibility, the financing and leasing could not be arranged and the building was demolished.

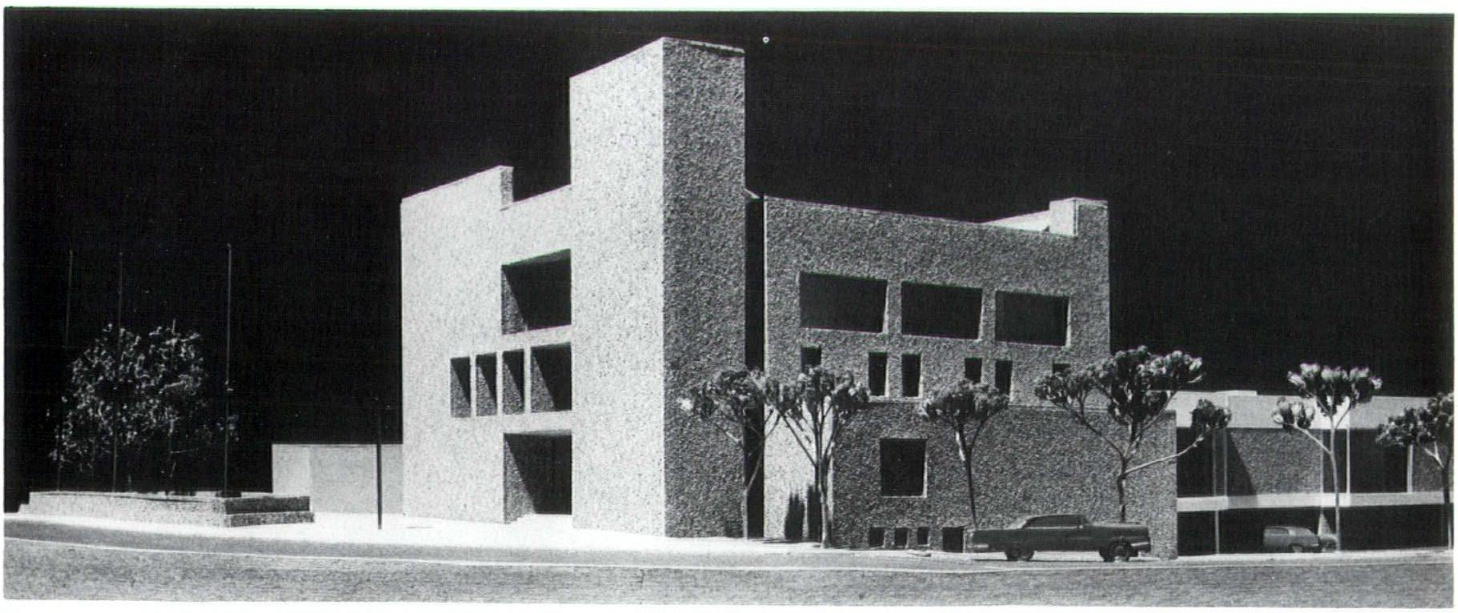
1



2

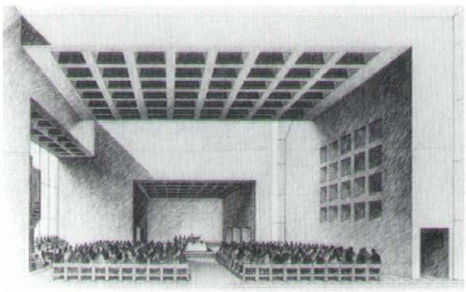


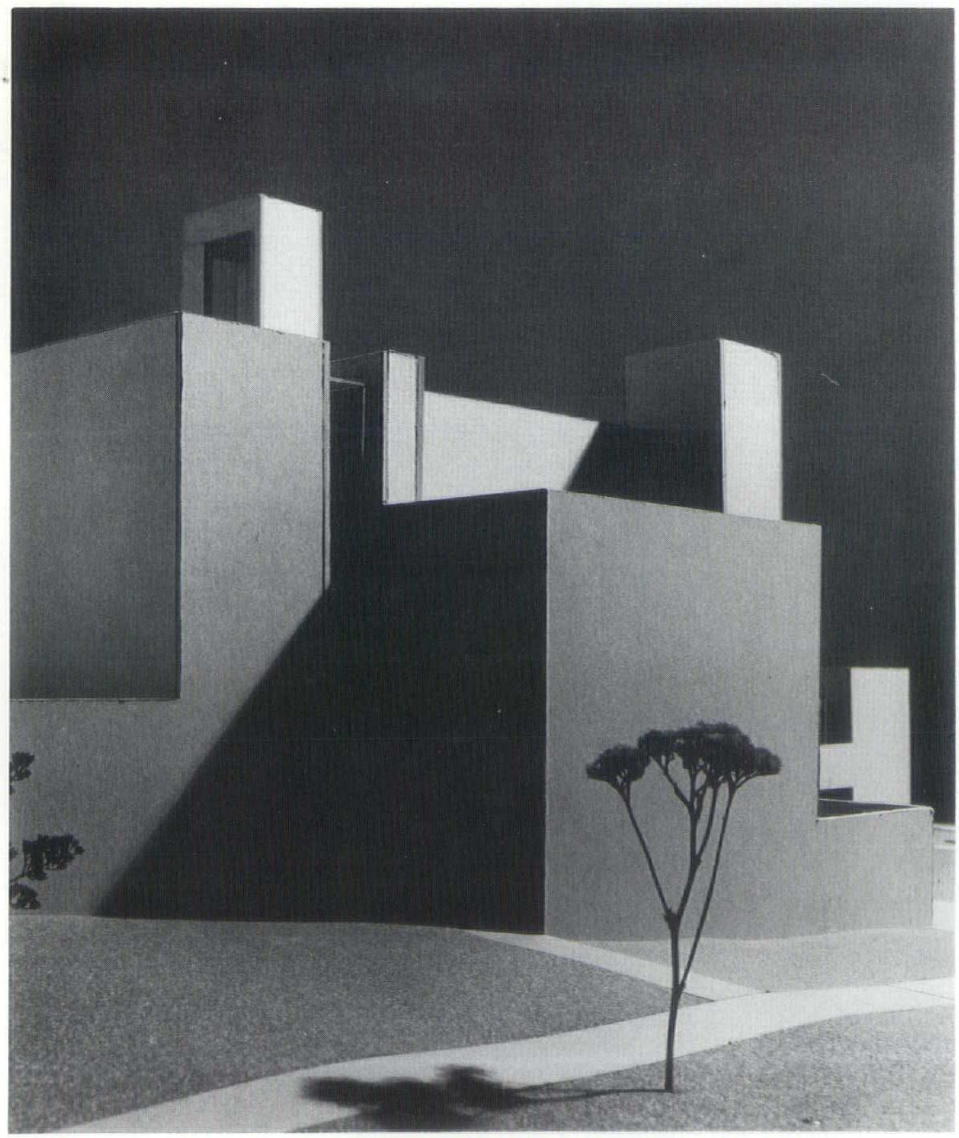
3

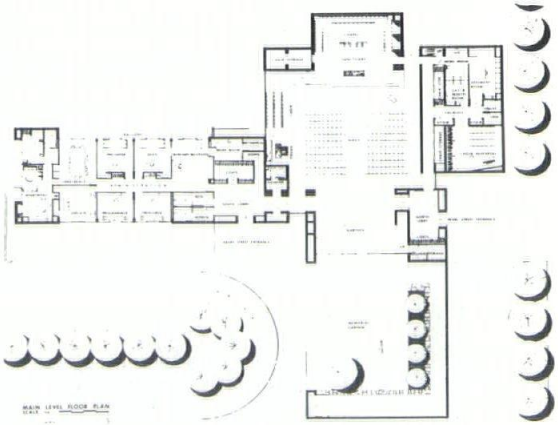


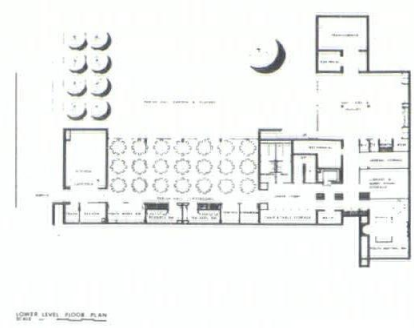
The Cathedral Church of St. Paul
Burlington, Vermont

On February 15, 1971, a fire completely destroyed the 150 year old English Gothic Cathedral of St. Paul in Burlington. A short time after the fire, the cathedral held a competition among six architectural firms of the New England-New York region for the design of a new cathedral on a new site in Burlington's urban renewal area. The design program reflected the parishioners' desire to occupy a building that would be responsible in strengthening the city's urban core and provide flexible space for various community activities. Burlington Associates won the competition with this 20,000 sq. ft. exposed concrete design.

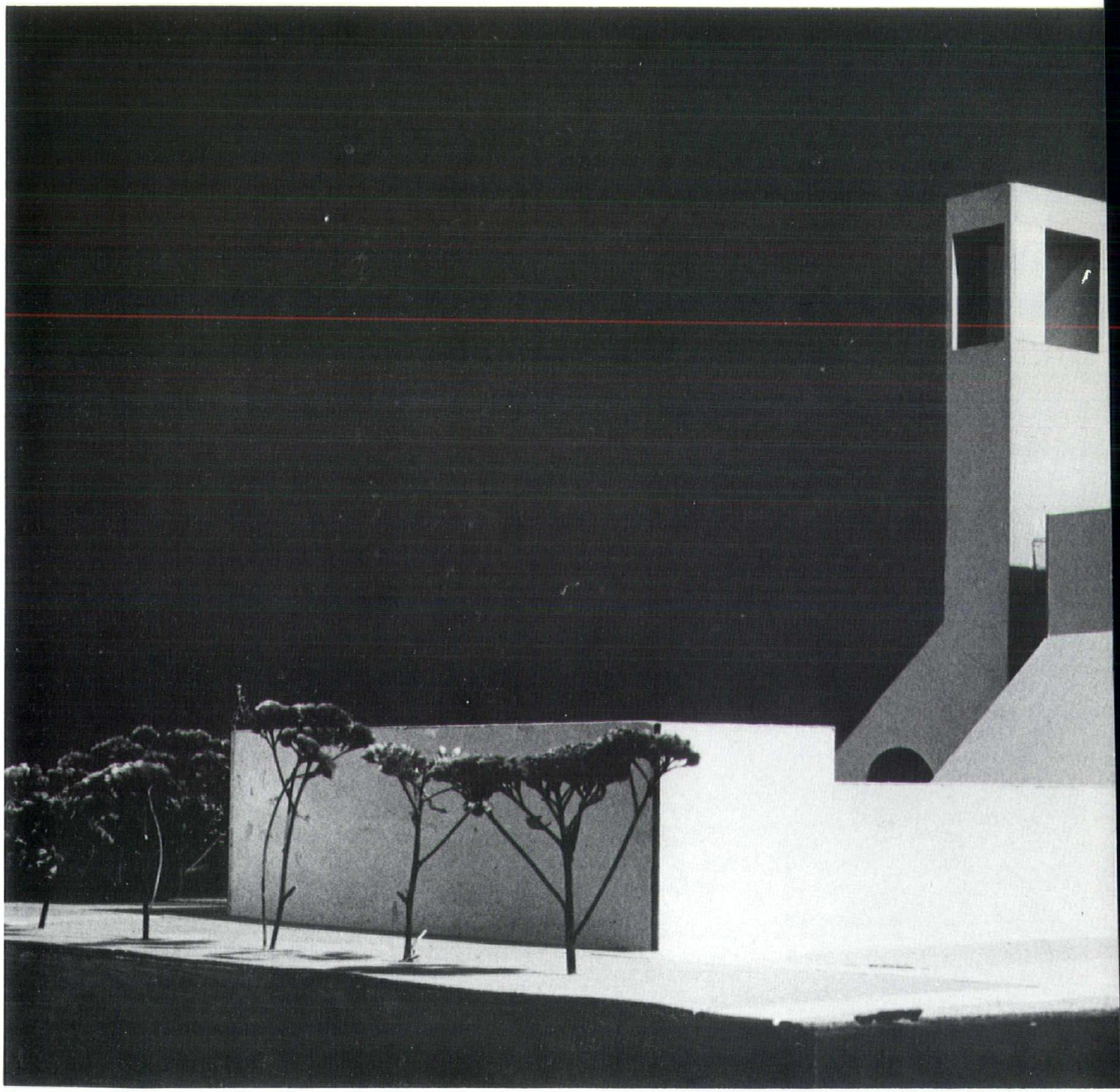


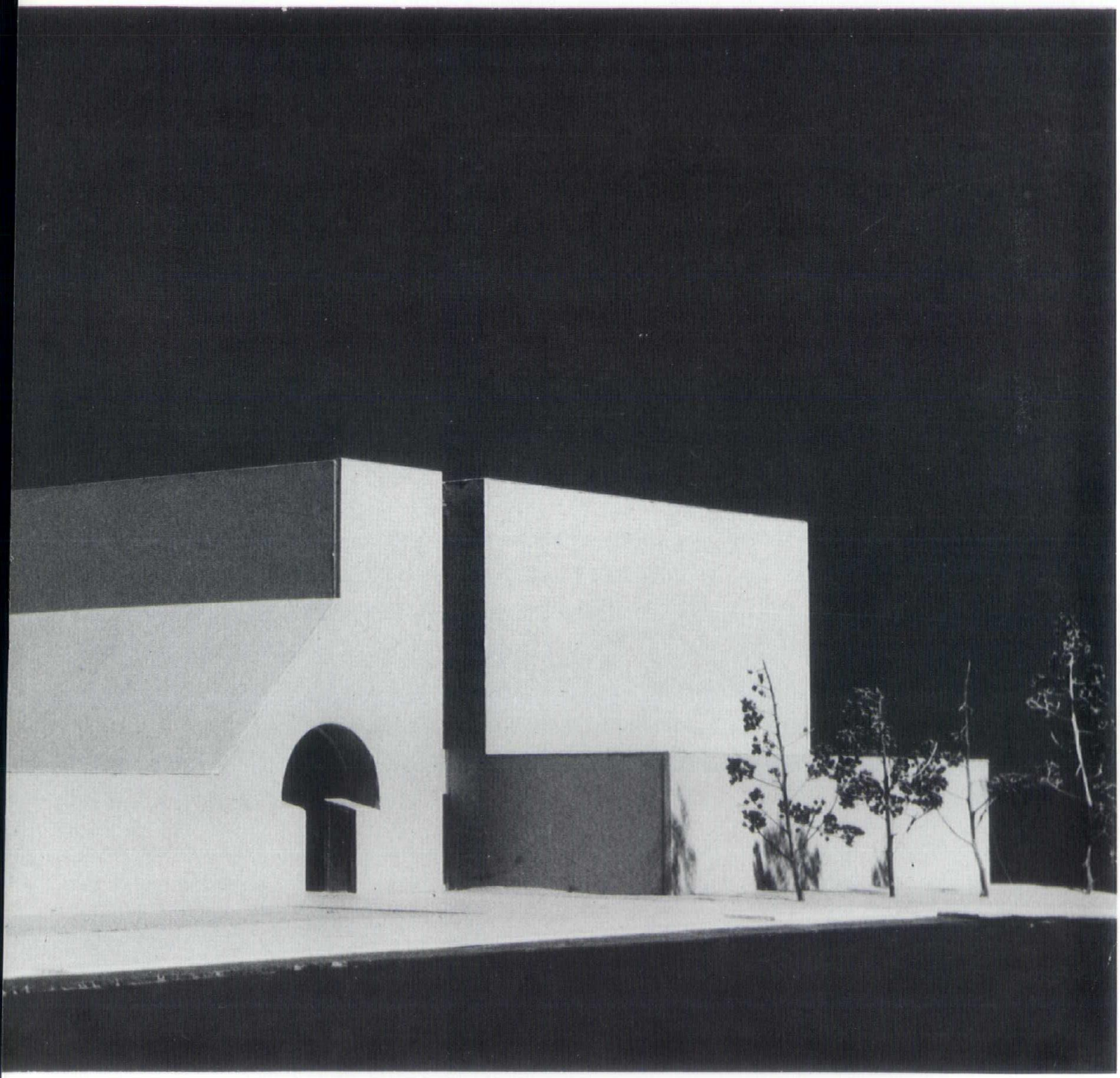






The Cathedral Church of St. Paul





Residence,
Mr. & Mrs. Charles R. Ross
Hinesburg, Vermont

Built on a two hundred acre estate, this house overlooks its own private valley and a range of mountains beyond.
The main living spaces are oriented to the East and South and there are terraces off the Living and Dining rooms on those sides. In addition to the main living spaces there are two bedrooms, the master bedroom and a guest bedroom on the ground floor. The second floor consists of three children's bedrooms.
The clients are native Vermonters and sympathetic to the area's indigenous building forms, hence the simple barn-like forms with steep roofs.

1

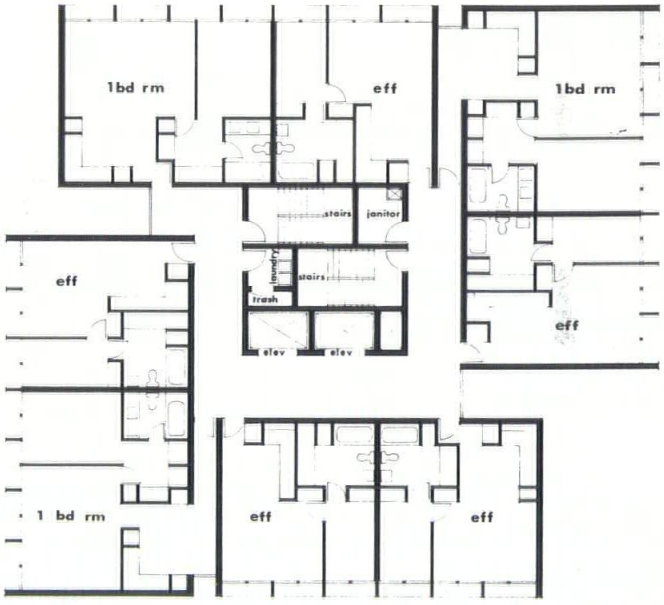
2-3

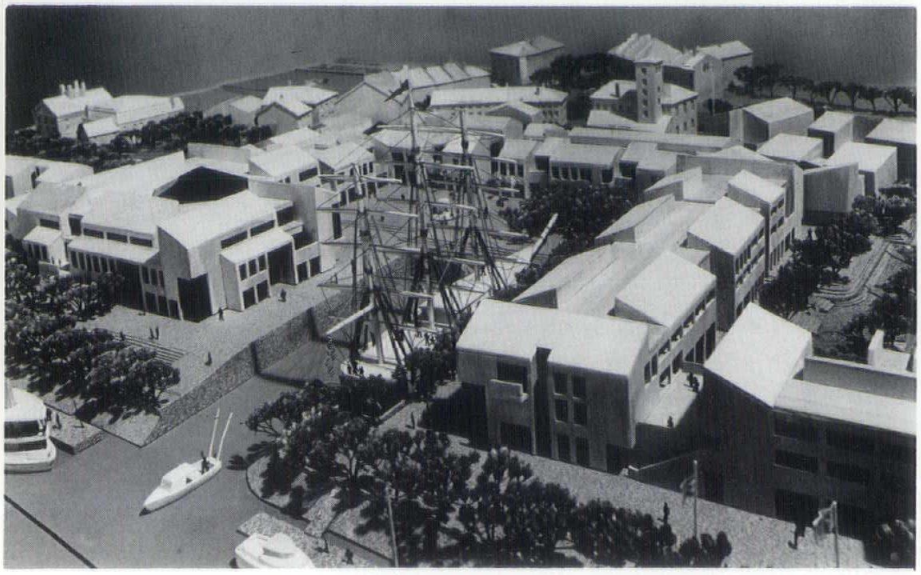
Rutland Housing for the Elderly
Rutland, Vermont

This building was constructed under the HUD "Turnkey" program. It consists of 46 efficiency and 29 one-bedroom apartments. A community room with a kitchen was included for lounge and recreational purposes. Attention was given to limiting the number of apartments per floor to eight. Large glass areas were designed to give natural light and a view from corridors and at the elevator location on each floor. The apartments all have generous glass areas with spectacular views of the surrounding city and mountains.

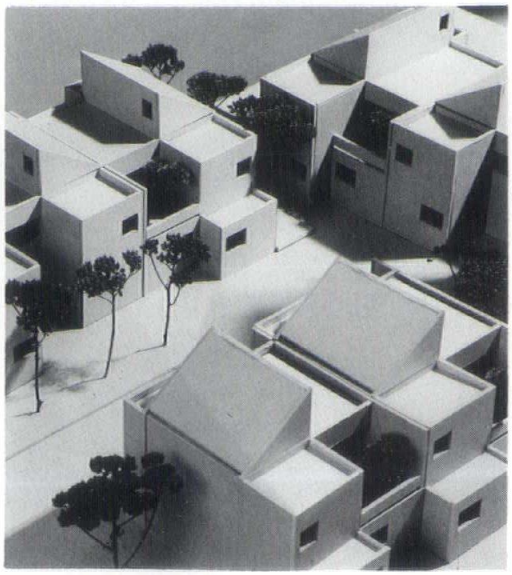
Newburyport Renewal Proposal
Newburyport, Massachusetts

A five to seven million dollar proposal for developing the Newburyport, Massachusetts historic waterfront site. This proposal consisted primarily of small commercial shops, an eighty-room motel with supporting facilities, and housing. The project was scaled to carefully fit into the fabric of the surrounding historical buildings and provide visual as well as public access to the waterfront.





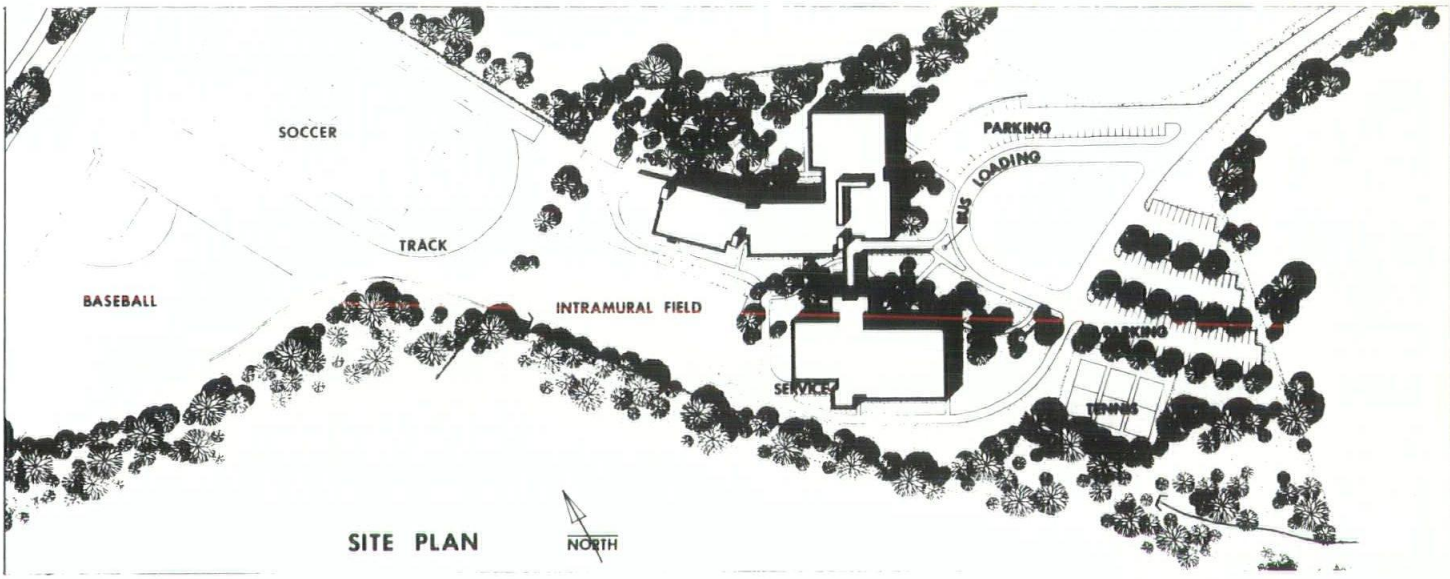
3



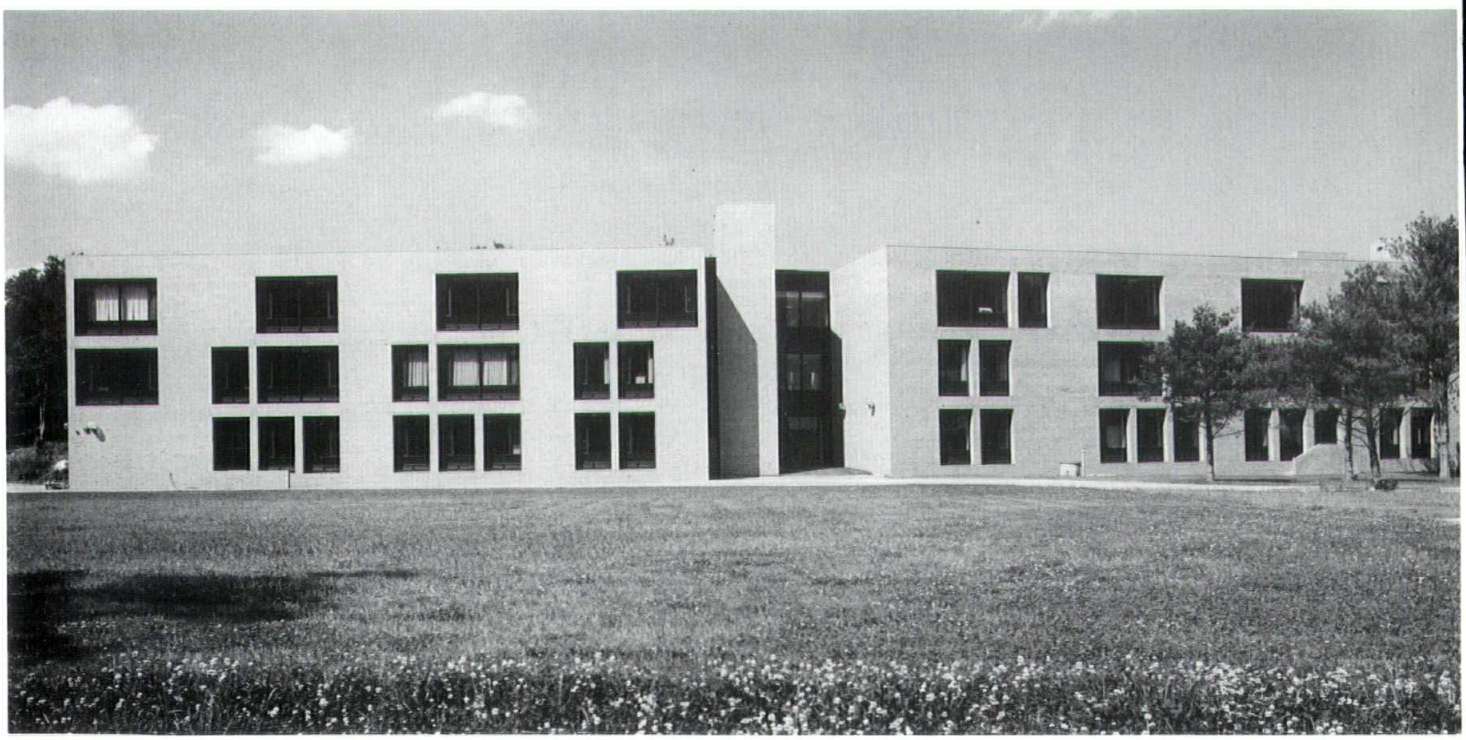
Green Mountain Union High School
Chester, Vermont

This junior-senior high school was designed as an 800-pupil core facility with a 650 pupil initial enrollment. It is located on a 166-acre site, with 10 acres developed for the building and related recreational and parking facilities.

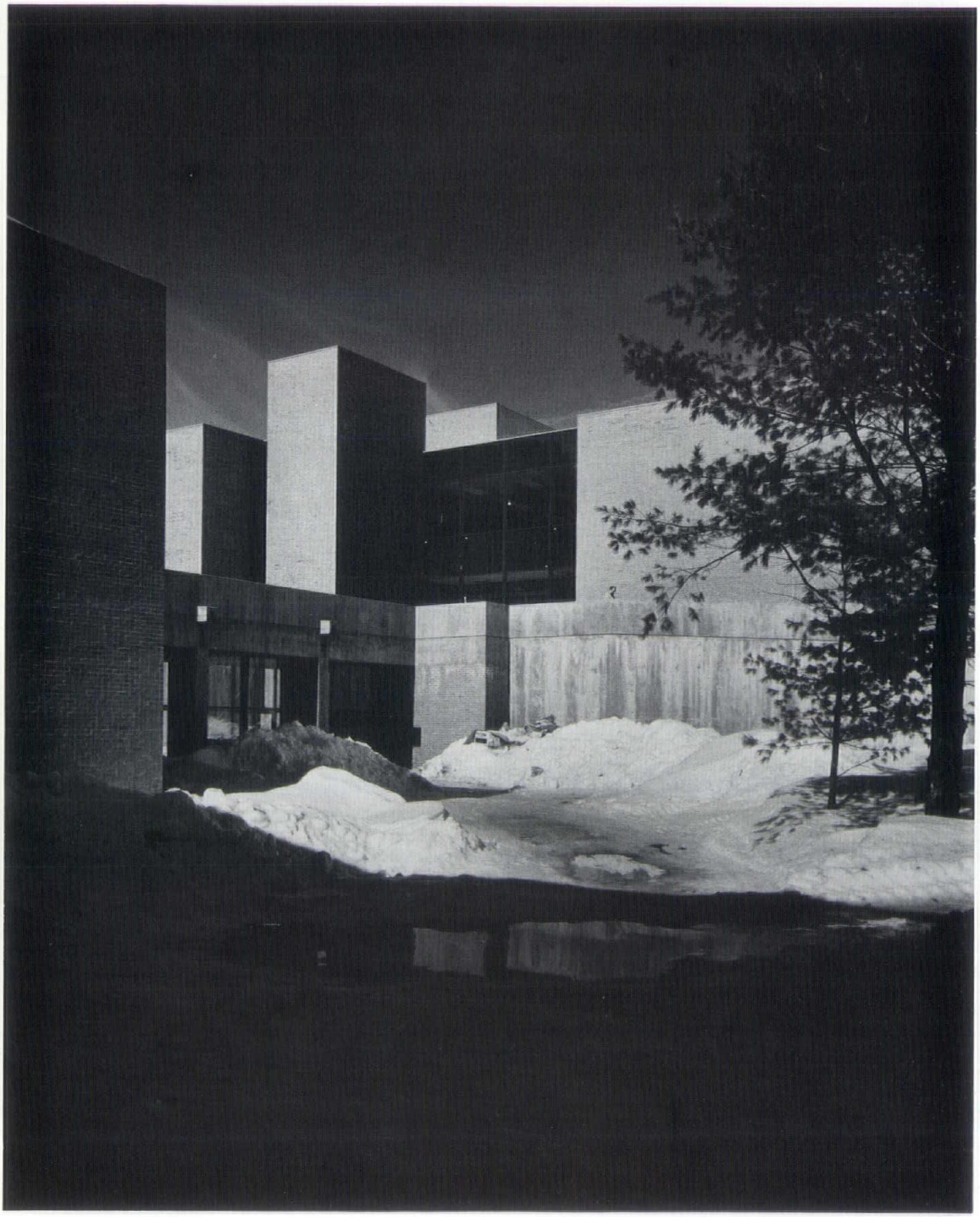
One of the most outstanding aspects of the design concerns the adaptation of the building to the topography. "Bending" the building, both horizontally and vertically to the contours of the land, while preserving as many trees as possible, the natural wooded site enables a large school to appear as a modest scaled building. This bending has allowed the interior spaces to become more interesting, visually eliminating long corridors and providing a constant change of interior and exterior spatial relationships.



SITE PLAN



Another important aspect of the design concerned the programmed relationship between the junior and senior high school age groups. A certain degree of separation is provided through specific assignment of classrooms, locker and shower rooms, but an overlapping usage of certain areas (such as the library, gymnasium, science labs, industrial arts, and home economic rooms) allows an intermingling of age groups where desirable.



1

Fire Station Competition — Stockbridge, Massachusetts
Third Prize

In the fall of 1970, this small rural town organized a competition to architects registered in Massachusetts. Over fifty entrants were submitted for this small project. A site was chosen which, though offering pleasant views of hills and fields, created difficult site problems. This design attempted to organize the building in relationship to amenities of the site, the drama of fire fighting equipment, and still meet the parking and access requirements.

2

Tupper Hill Wildlife Sanctuary Reception Center
Monson, Massachusetts

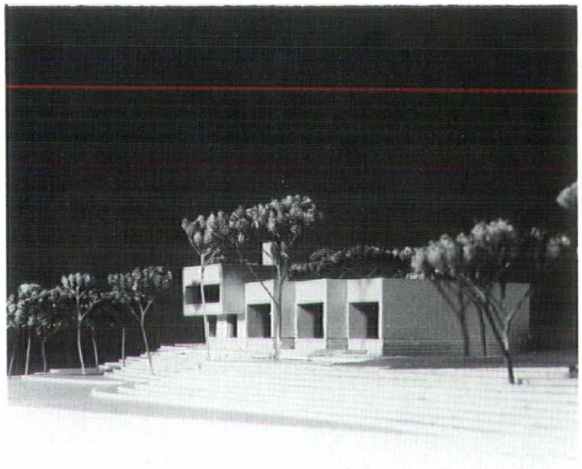
The site is an abandoned farm including old maples, small fields and pleasant views characteristic of the region. Visitors approach from parking to the north. The center includes display space, a film-lecture room and office space.
Effort has been made to introduce the visitor to the wildlife sanctuary through the structure itself. To minimize the sense of the structure as a building, an earth berm and arbor were designed as the entry, planted to reflect the varied planting programs of the sanctuary. Immediate and distant aspects of the wildlife sanctuary were dramatized from within the structure thereby attracting visitors to the nature trails and nearby phenomena.

3

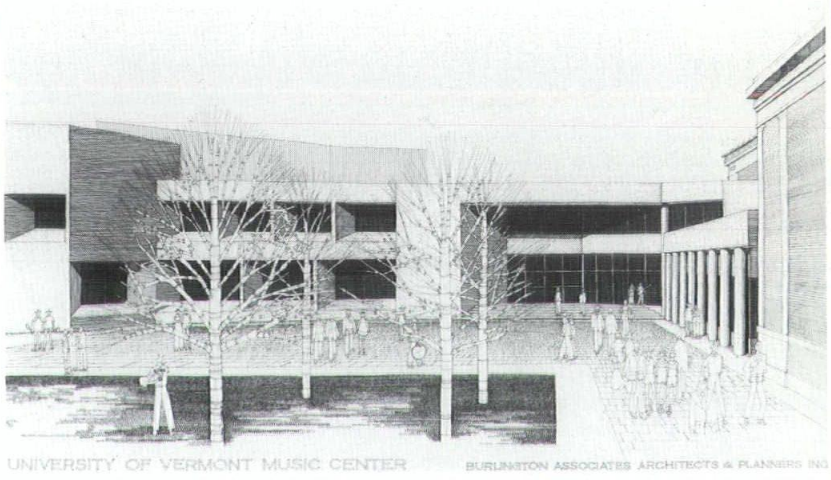
Music Center, University of Vermont
Redstone Campus, Burlington, Vt.

This 22,000 sq. ft. addition to an existing women's gym at the University of Vermont will accommodate a 300-seat recital hall, studios, practice rooms, and offices. The existing gym will be renovated into additional music practice rooms and large open areas for ballet and musical rehearsals.
An outdoor courtyard was created to the west and a natural amphitheatre to the east for outside musical performances. This facility will not only act as the center for the music school of the university, but will become an important music hall for the Burlington community.

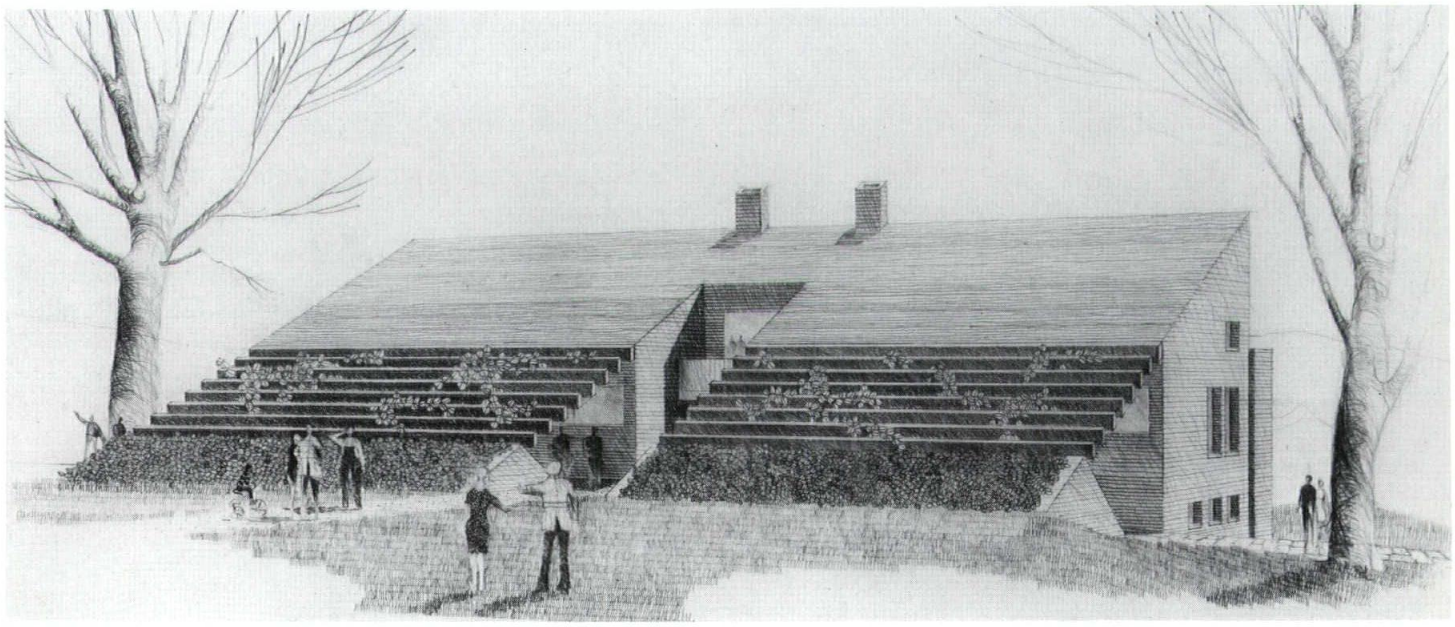
1



3



2



Photographs

Sanders Milens
236 South Winooski Ave.
Burlington, Vermont

Clemens Kalischer
Main Street
Stockbridge, Massachusetts

Governors and Senators Dormitories

General Contractor:
Wright & Morrissey, Inc.
Structural Consultants:
Nicolet Dressel Mercille Limited
Mechanical Consultants:
Jennison Engineering, Inc.
Cost: Phase I — $1,218,000
Phase II — $1,516,000
Year Completed: Phase I — 1968
Phase II — 1970

Stearns Dining Hall/Student Union

General Contractor:
Wright & Morrissey, Inc.
Structural Consultants:
Nicolet Dressel Mercille Limited
Mechanical Consultants:
Jennison Engineering, Inc.
Cost: $982,000
Year Completed: 1969

Dibden Auditorium

General Contractor:
Secant Construction Company, Inc.
Structural Consultants:
Nicolet Dressel Mercille Limited
Mechanical Consultants:
Jennison Engineering, Inc.
Acoustical Consultants:
Bolt, Beranek & Newman, Inc.
Cost: $1,177,000
Year Completed: 1970

Rowan Court Nursing Home

General Contractor:
Kenclif Construction Company, Inc.
Mechanical Consultants:
Pierre deGuise and Associates
Cost: $900,000
Year Completed: 1972

District Court State Office Building

General Contractor:
Pizzagalli Construction Company, Inc.
Structural Consultants: Zoldos & Meagher
Mechanical Consultants:
Jennison Engineering, Inc.
Acoustical Consultants:
Bolt, Beranek & Newman, Inc.
Cost: $1,409,200
Year Completed: 1968

University of Vermont Music Center

General Contractor: Reed & Stone, Inc.
Structural Consultants:
LeMessurier Associates, Inc.
Mechanical Consultants:
Robson & Woese, Inc.
Acoustical Consultants:
Bolt, Beranek & Newman, Inc.
Cost: $1,128,000
Under Construction

Green Mountain Union High School

General Contractor:
H. P. Cummings Construction Company
Structural Consultants:
Nicolet Dressel Mercille Limited
Mechanical Consultants:
Jennison Engineering, Inc.
Acoustical Consultants:
Cambridge Acoustical Consultants
Cost: $2,896,000
Year Completed: 1971

Rutland Housing for the Elderly

General Contractor:
Vermont Construction Inc.
Structural Consultants:
Nicolet Dressel Mercille Limited
Mechanical Consultants:
Pierre deGuise and Associates
Cost: $1,200,000
Year Completed: 1972

Residence for Mr. & Mrs. Charles R. Ross

General Contractor: Howard J. LeBoeuf
Cost: $123,000
Year Completed: 1969

The Cathedral Church of St. Paul

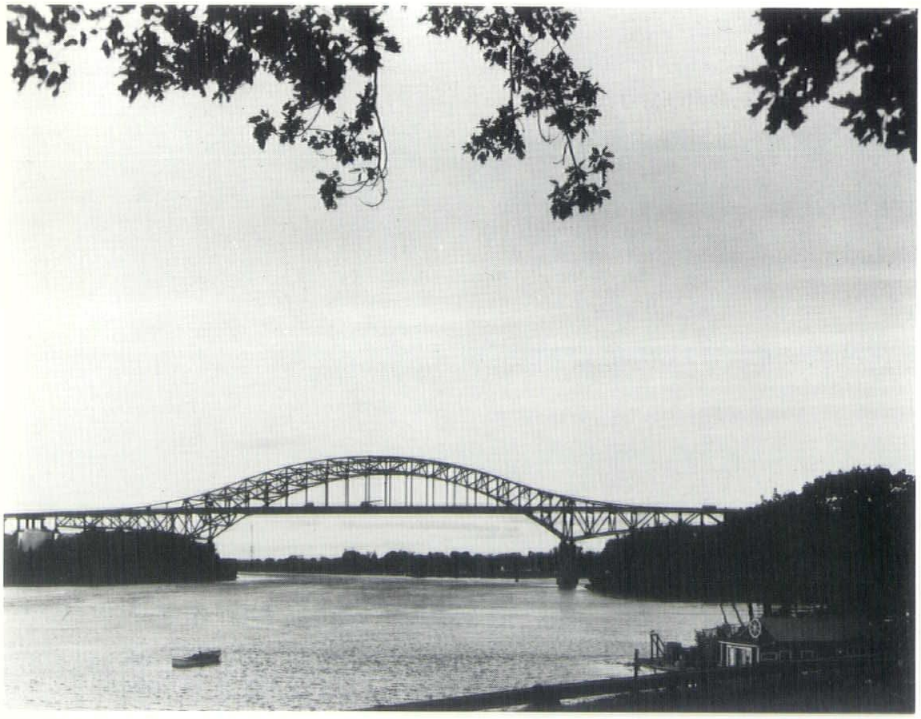
General Contractor:
H. P. Cummings Construction Company
Structural Consultants:
LeMessurier Associates, Inc.
Mechanical Consultants:
Robson & Woese, Inc.
Acoustical Consultants:
Bolt, Beranek & Newman, Inc.
Cost: $1,164,587
Under Construction

AISC MERIT AWARD

New Hampshire Architectural Review

PISCATAQUA RIVER BRIDGE

PORTSMOUTH, N.H.



THE Piscataqua River Bridge from Portsmouth, N.H. to Kittery, Maine, has received an Award of Merit as one of the "18 most beautiful steel bridges" opened to traffic during 1972.

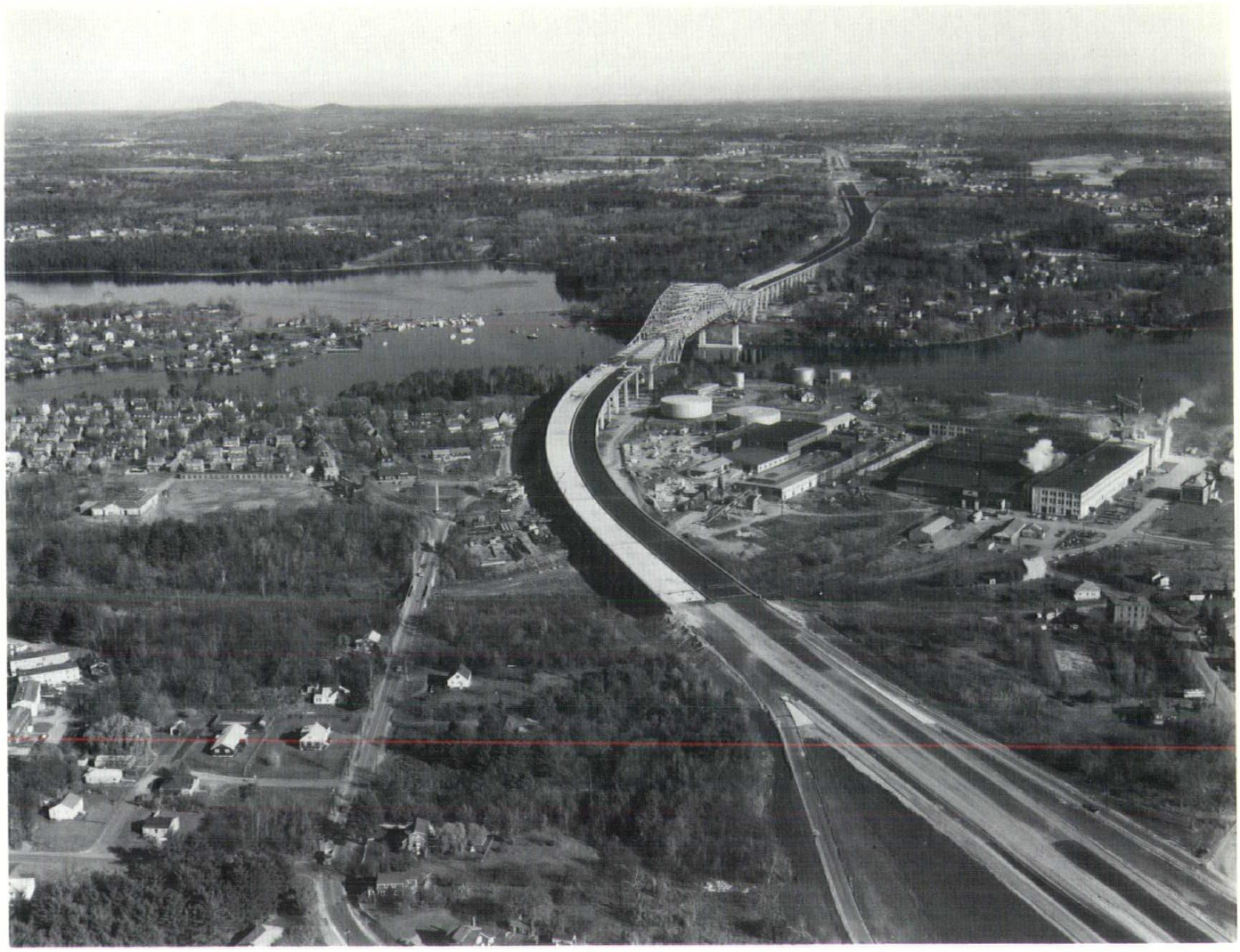
The bridges were selected from 121 entries from coast to coast in the 45th Annual Price Bridges Competition of the American Institute of Steel Construction, the national association representing the structural steel fabricating industry.

The competition, started in 1928 and conducted annually since then, was judged in eight classifications: long span; medium span, high clearance; medium span, low clearance; short span; highway grade separation; elevated highways or viaducts; movable span; and special purpose bridges.

The jury selected seven "Prize Bridges" and named eleven "Award

Designer: Hardesty & Hanover, New York, N.Y.

General Contractors: Bethlehem Steel Corporation, Bethlehem, Penna.
Cianbro Corporation, Pittsfield, Maine



The new highway bridge soars high over the Piscataqua one-half mile upriver from the U. S. 1 bypass bridge (a three-land vertical lift structure).

of Merit Bridges."

Including approach spans, the new Piscataqua Bridge stretches a total of 0.8 mile and involves extensive approach work on both sides of the river. It is the largest such project ever undertaken in either state. It provides a toll-free, non-stop link between the expressway systems of Maine and New Hampshire.

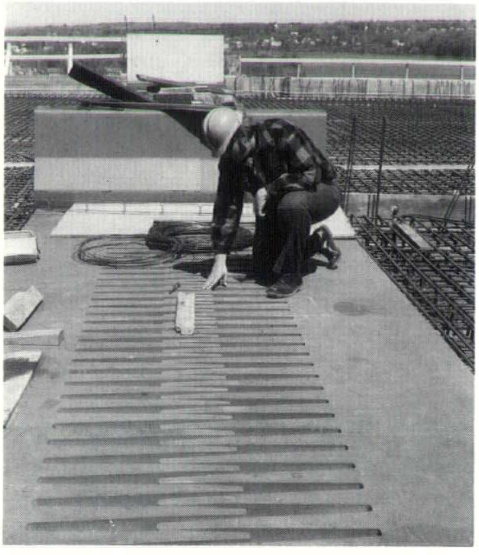
The main river span is a through truss consisting of welded box members connected by A-325 high-strength bolts. The vertical under-clearance is 135 feet above mean high water with the roadway approximately 150 feet and the top of the truss 251 feet over the river. The truss has three spans of 294 feet, 756 feet, 294 feet between the end bearings. The roadway has three 12-foot travel lanes plus a 10-foot breakdown lane in each direction with a median barrier between, creating an overall width of 108 feet center to center of trusses.

The New Hampshire approach consists of 19 spans of welded girders with a portland cement concrete deck and a bituminous concrete surface. The overall length of this approach from the centerline of abutment bearings to the connection with the truss is 1,810 feet. This approach is complicated by a four-degree horizontal curve and a variable width roadway near the abutment to provide for off ramps to an interchange immediately south of the structure. The roadway varies from a curb to curb width of 101 feet for the Maine approach, the river bridge and most of the New Hampshire approach to 139 feet, 4 inches at the New Hampshire abutment.

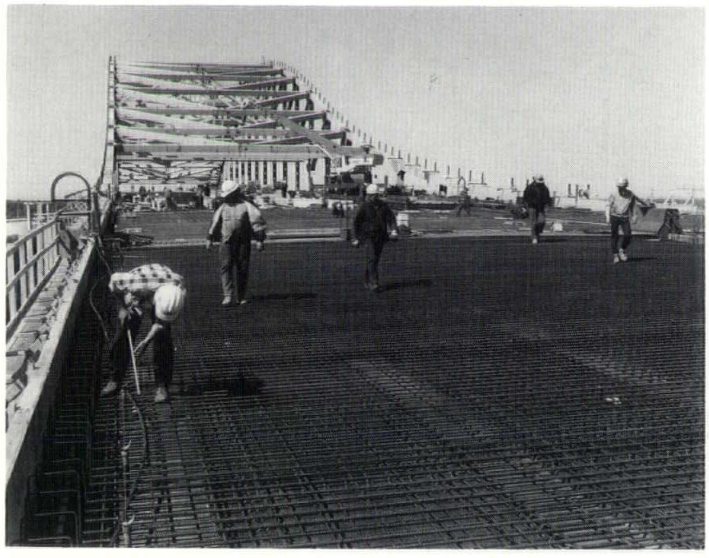
The Maine approach has 14 spans of welded girders with the portland cement concrete deck and bituminous concrete surface for a length of 1,344 feet. The overall length of bridges between centerline of bearings at the abutments is 4,498 feet or 0.8 mile.

Thirty-one approach piers (18 in New Hampshire and 13 in Maine) were constructed during Phase I, in addition to four river bridge piers and two abutments. This included approximately 23,000 c.y. of

Carpenters building forms for the placement of the concrete deck. Concrete was poured without a joint over the entire 104-foot width of the deck.



Inspecting massive expansion dam is Jon Whitten, resident engineer for the Maine Department of Transportation. The plates are four inches thick and weigh over 60 tons.



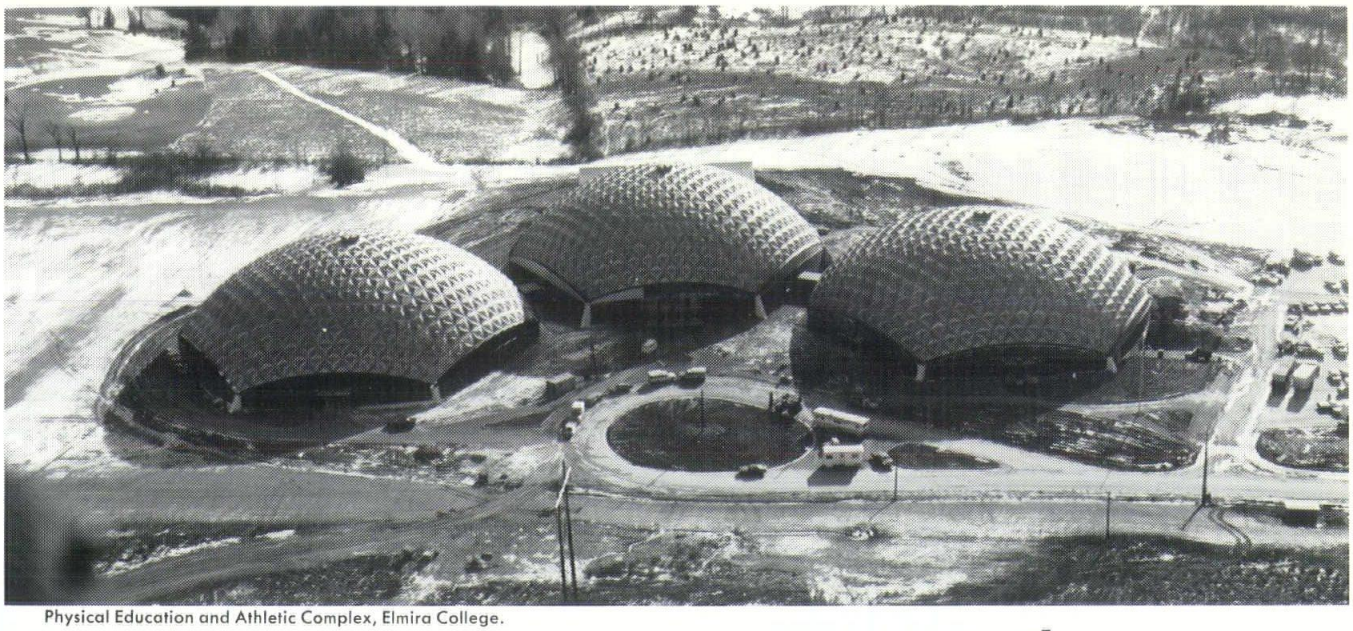
Reinforcing steel being inspected prior to placing concrete deck.

structural concrete, 70,000 c.y. of structural excavation and 5,000,000 lbs. of reinforcing steel along with incidental items. All piers are founded on solid rock with the abutments on steel H-beam piling driven through embankment to ledge refusal. The approach piers consist of four columns on separate footings with a split concrete cap across the top. These columns are 4 feet, 6 inches square at the top with ⅛ inch to the foot batter to reduce the appearance of extreme slenderness. The caps are split and separated by 3 inches to reduce the transverse stresses created by expansion and contraction due to temperature changes.

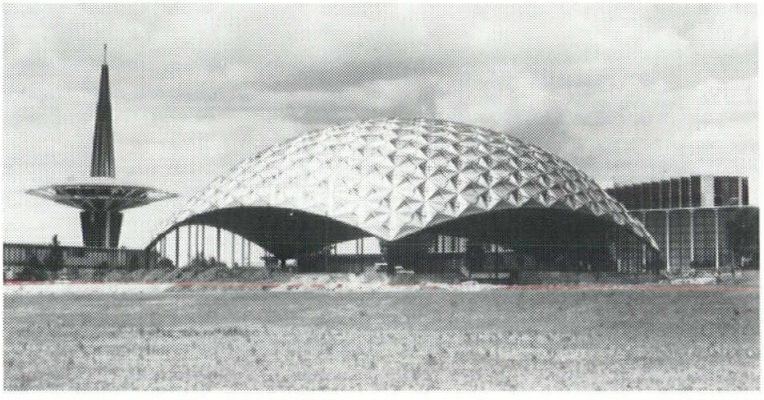
The river bridge piers consist of two columns upon which the trusses rest. The most complex of these piers is the so-called North Main Pier which is located approximately 50 feet off the Maine shoreline and the only pier located in the water. The foundation of this pier is a 167 foot X 41 foot underwater seal on solid rock containing 3450 c.y. of structural concrete, which was placed on November 8 and 9, 1968. Upon this seal is located a 7-foot-thick distribution slab followed by a 20-foot-high plinth. This plinth is faced with lead caulked granite facing to protect the concrete within the tide range. The two columns extend 70 feet to a top area of 15 feet square upon which the bearings are placed. This pier contains approximately 8,600 c.y. of structural concrete and 2,000,000 lbs. of reinforcing steel.

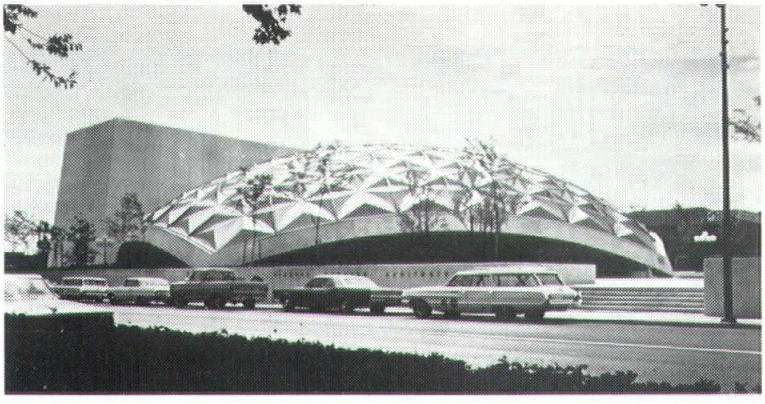
The standard size of pier column on the approach spans with variations only in height and therefore bottom dimensions lent itself to the use of prefabricated steel forms which were used throughout the contract. The tallest column on the Maine approach is 85.8 feet and on the New Hampshire approach 95.6 feet ranging downward to approximately 20 feet in height.

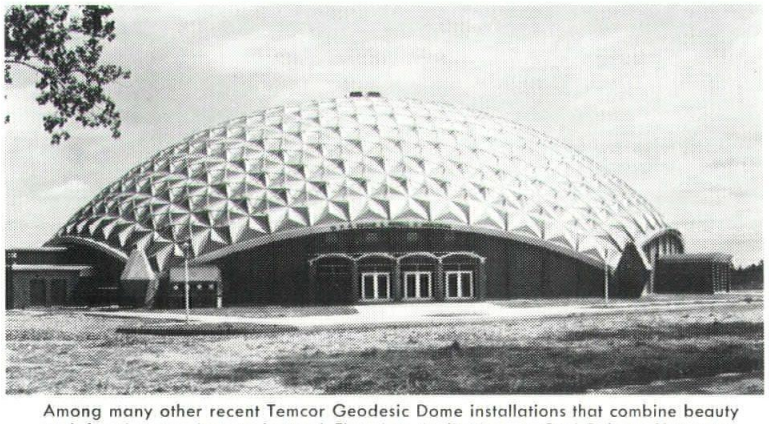
The total structural steel weight in the river bridge is in excess of 10,000 tons. The steel was fabricated in the Chicago plant of Bethlehem Steel and shipped to the site by railroad.



Physical Education and Athletic Complex, Elmira College.







Among many other recent Temcor Geodesic Dome installations that combine beauty and function are (top to bottom) Fine Arts Auditorium at Oral Roberts University, Tulsa, Okla. (under construction); Pioneer Theater Auditorium in Reno, Nevada; and new Physical Education Facility in Ogdensburg, N.Y.

(Continued from page 6)
signed to general and senior officers. They are of wood frame, with grey cedar shingles and white trim.

The other structures, nine duplexes built in a cluster, provide 25 housing units for company-grade and field-grade officers and their families. These units, ranging in size from two to four bedrooms, have green aluminum clapboard siding and green prefinished board and batten siding over their wood frames. Other features are red brick end walls and white trim.

Other residential developments designed and built for the military by the Sydney and Phillips firms include 300 units of U. S. Naval Housing in Groton, Conn., and a 150-unit complex for the Navy in South Weymouth, Mass.

✦✦✦✦

Weather Dynamic Division Headed by Dr. Ian McLaren

Mt. Auburn Research Associates (MARA) of Newton, Massachusetts, has announced its establishment of a full-time Weather Dynamics Division, headed by Dr. Ian McLaren.

The new division, according to MARA President Sheldon L. Kahalas, is designed to predict undesirable wind effects that can result from new construction. Help can be provided in alleviating severe adverse climate conditions that may already exist at projects where no precautions had been taken. The division also deals with surface wind problems developing from natural topography or surface construction such as highways.

Dr. McLaren joined MARA from the Massachusetts Institute of Technology in 1970 and has been involved in directing weather studies for the firm since then. Full time staff members working with Dr. McLaren include Dr. Hillyer Norment, Jr., a theoretical physicist and meterologist, and Dr. Robert Zalosh, a mechanical engineer. Consultants from nearby M.I.T. also are employed by the Weather Dynamics Division.

Among the division's current contracts are a study of wind problems around high rise buildings in Boston for Cabot, Cabot and Forbes, and a study of wind effects on pedestrians and on the Boston Public Garden due to the proposed Park Plaza urban renewal project, which would abut the Garden.

Index To Advertisers

Insulation is conservation. In the midst of growing concern about energy conservation, a timely reminder that New England Insulation has been in just that business since 1904. Keeping cold or heat in or out conserves energy, and NEI does the job. Wherever it's needed: From ultra-high temperature systems at New England Power and the Pilgrim Station nuclear power plant to cryogenic LNG piping at Boston Gas. And Fiberglas* underground storage at fuel oil tank farms everywhere.

Saving energy saves resources, so *it saves your dollars too.* NEI can demonstrate the savings. On your pocketbook as well as your environment. Whatever your mechanical system, whatever the size and kind of your project. From a skyscraper you may be planning, to plant maintenance or repair, we have the product, and we know how and when to use it. Call us.

New England Insulation®

155 Will Drive, Canton, Mass. 02021, Phone: 617/828-6600
498 Fore Street, Portland, Maine 04111, Phone: 207/772-7481

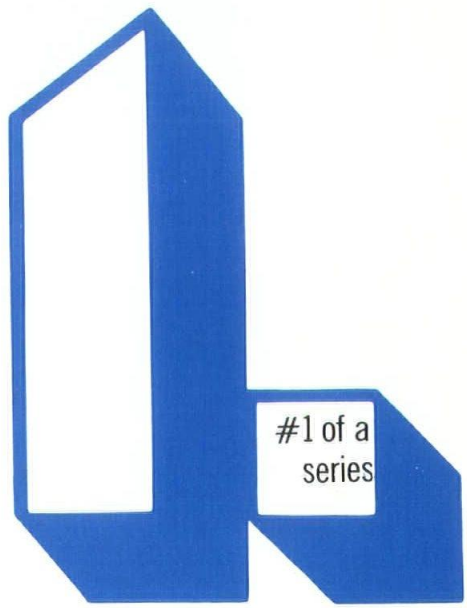
*Trademark Registered Owens-Corning Fiberglas Corporation

How to conserve and save money.

Use your Natural Gas Equipment more efficiently.

By doing so, you not only conserve natural gas for yourself and everybody else, but you save yourself money too. Try following these three simple things that will save everyone natural gas. And *you* money.

1. Rearrange schedules to utilize process equipment for continuous periods of operation. 2. Shut down or idle equipment at holding temperatures whenever production is interrupted (especially weekends).
3. Reduce temperatures inside buildings to reasonable comfort levels when occupied, to practical levels at other times.



The Natural Gas Companies of Massachusetts

Your Gas Company representative will be glad to consult with you on any of these projects.