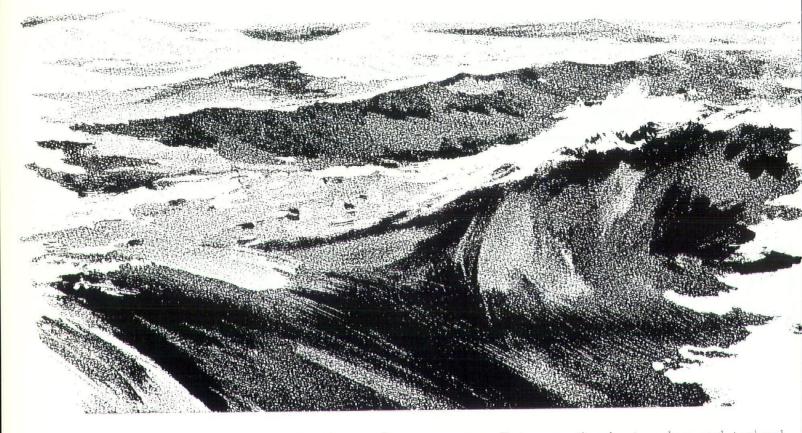
CONNECTICUS ARCHITECT MARCH-APRIL 1974

C.

Energy from the sea:

at least let us look for it.



Out there, way out there on the Outer Continental Shelf, there may be enough natural gas to supply East Coast cities with energy well into the next century.

But so far, we haven't even been allowed to look for it.

Instead, this nation must import energy from abroad at higher and higher prices. Why are we importing something that may be sitting right out there on our own Continental Shelf?

Part of the reason has been environmental

concern. But now, thanks to advanced technology, we can drill with virtually no risk of polluting the water or the air by men or machines.

Connecticut needs more natural gas. That's why the search for energy on the Outer Continental Shelf <u>must</u> begin at once. Let's not let millions of Americans suffer from an energy shortage while beyond our own horizon, natural

gas just sits there. On the shelf.



CONNECTICUT ARCHITECT

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Cover: The cover of the March-April issue of *Connecticut Architect* displays the sculptured forms of the teakwood and travertine marble lobby of the new tower at 101 Broad Street in Stamford. The 21-story structure, known as Landmark Plaza, is a cornerstone of Stamford's \$250 million urban redevelopment area. Photograph by Monica A. Wolff. For the story on "The Rebirth of Downtown," see page 11.

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...from the CSA

From the President

The questionnaire circulated to our membership last month revealed a reduction in the size of our average office of between 15% to 20% from 1969 to 1973 and an increase in the proportion of one- and two-man firms by about 25%. Second only to a full work load listed among the major problems in the questionnaire were the public's misunderstanding of the profession and the decline in professionalism.

Most saw the future of the architect more closely tied with the construction industry in design-build type projects and approximately half of those reporting had experienced one or more such efforts in the last few years.

Our Advisory Council, which meets every three months, has been swelling its ranks with those in construction related fields and, through their association,we've been learning that we are not alone in the business of building buildings.

Efforts are now under way to establish an *ad hoc* group, currently referred to as the Connecticut Construction Council, which will hopefully have representation from all of the construction related groups in Connecticut. In recent months, we have been meeting with these various groups in order to better understand some of the common problems which exist and are trying to establish a liaison which can be useful in solving our immediate problems, while plans are being laid for the future. In the next issue of *Connecticut Architect* there will be a feature article on the background and development of this consolidated effort.

David N. LaBau, AIA

From the Executive Director

The following is a comprehensive report from Peter H. Borgemeister, Executive Director of the CSA, on the recent activities of the Society's commissions and committees. An updated version will appear in each subsequent issue of this magazine.

Under Michael Buckley's leadership, the Commission on Education has developed a seminar program consisting of technicallyoriented clinics on such topics as "Rehabilitation of Urban Low and Moderate Income Housing" and "Energy Conservation." The seminars are held in the evening or prior to afternoon chapter meetings. Upcoming clinics: Glued Laminated Timber, April 24; Designing for Fire Prevention, May 1; Architectural Woodwork, May 14. The Education Committee, with Dr. Steven Messner of UConn as consultant, works on development of directions for the chapter's educational programs.

The **Committee on Legislative Activities** and the chapter's legislative representative, the firm of Updike, Kelly and Spellacy, have reviewed bills now under discussion in the General Assembly, which pertain to the selection process of architects. Bourke Spellacy explains that Bill 5594 proposes the creation of a study committee to examine the process of contracting for state work. Spellacy's report paralleled the formation of an Interprofessional Task Force on Designer Selection, which has taken on the responsibility of studying this question nationally and recommending improvements.

Locally, representatives from the **Commission on Government Affairs and Professional Practice** has been meeting with the State Department of Community Affairs to urge improvements in the DCA contract for architectural services. A conference has been slated for May 2 to afford an opportunity for architects and administrators of the DCA to scrutinize all phases of the contract.

The Construction Industry Services Association (**CISA**) recently announced the adoption of a new Group Life, Major Medical and Disability Income Protection Plan, underwritten by the Occidental Life Insurance Company of California. The CISA Board of Directors adopted this plan because it offers an excellent coverage/premium ratio and does not require a physical examination. In order for this program to go into effect, two hundred interested parties must sign up by April 30. Note: Membership in one of CISA's cooperating professional societies is not a prerequisite for membership in CISA and participation in its programs.

The **Program Committee** has announced its plans for the next chapter meeting, which has been scheduled for June 19 in New London. Cocktails and dinner in the Mohican Hotel roof garden will be preceded by a walking tour of Whaler's Walk, and will be followed by a presentation on this shopping mall by architects, landscape architects, and businessmen. The last two dinner meetings were highlighted with informal talks by Ulrich Franzen, FAIA, on aspects of design, and Donald Watson, AIA, and Everett Barber, PE, on solar energy.

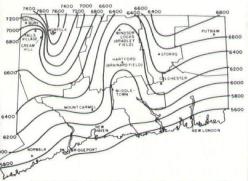
In connection with the **AIA National Con**vention, which will be held in Washington, May 19-23, the chapter is urging anyone interested in serving as a delegate to contact the CSA office. Serving in an official capacity does not preclude the delegate's attendance at educational and social events; and, according to the published program, there will be no conflict in time between those events and the business meetings which the delegate is required to attend.

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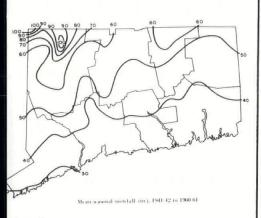


Figure 3

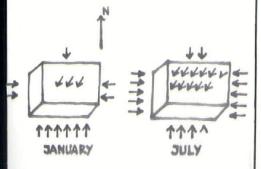


Figure 4

wise have been realized if it were not for a designer and/or client willing to take a chance on something that was different from and new to standard housing practice.

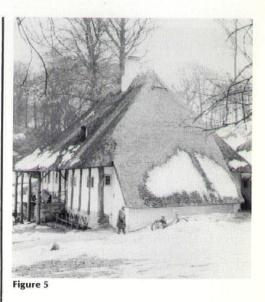
Architects do not normally have a voice in housing policy formation. But the evidence that their designs might provide for a high standard of privacy and community life in higher density and less mobile living paterns will help enormously in the merging changes in life-style implicit in energy conserving architecture.

March — April 1974

The Study of Climate. The strategy of this article is to review the climatic factors that impact on buildings in temperate zones such as Connecticut by reference to designs used in more severe climates which might be applied. We look for examples from the hot climates to learn ways of reducing the impact of summer heat gain and from the cold climates for ways of reducing winter heat loss. Design for climate in temperate zones may be more complex because a building is exposed to both extremes of hot and cold. Most interesting to the designer in a temperate climate will be those architectural devices that can be adapted to both conditions. Figure 2 lists some of the factors that must be considered in the four zones that characterize the climate of the United States. The major climatic impacts - thermal, sun light, and wind will be discussed individually below, as well as some of the architectural devices that meet the specific impacts.

Before proceeding, it is useful to refer to climatic analyses of Connecticut, Figure 3 (2). Despite its small area, Connecticut witnesses a variation between shore and inland climate which may, in turn, warrant different design approaches. Insulation standards and snow protection deserve more attention in the inland and higher regions of the State where heating requirements can be as much as 20% higher than on the shore. Designs for natural ventilation can be particularly well accommodated where there are prevailing winds. Wherever one sites a building, there will also be considerable variation in solar radiation and breezes at the ground level that are effected by local topography, site orientation, and vegetation. For an energyconserving approach, microclimatic analysis becomes essential to any site design process.

Thermal Impact. The impact of solar radiation varies, of course, on each surface of a building, depending on its orientation. Figure 4 diagrams the relative amounts of BTU/ft sq./ day received by a rectangular building in a temperate zone (3). The south side receives nearly twice the amount of solar radiation in the winter as in the summer, as well as twice as much as a horizontal roof in winter. Thus, the south facade of a building always deserves special treatment for controlled heatgain devices. The north side of a building gains very little solar heat and therefore must be carefully fenestrated and treated for maximum insulation. Architects can compute the thermal impact of a given orientation and design the building shape and materials to balance the internal temperature differ-



ences and to use natural thermal gain to positive advantage. A recently demonstrated technique of thermographic analysis now offers a highly sophisticated means for analyzing complicated building shapes and building groupings to predict not only direct sky radiation, but also that which is reflected from adjacent building surfaces (4).

Indigenous buildings in northern climates reveal a natural adaptation to thermal impact, orientation, and insulation. Figure 5 is a farm building in Denmark with a roof that permits snow build-up in winter to provide added insulation and with major openings to the interior located on the south.

Underground Building. From the standpoint of thermal control, underground buildings have always been used to advantage in hot. dry climates. Examples include underground communities in China and desert habitations in North Africa (5). Figure 6 illustrates the sophistication that seemingly primitive architecture has attained. Troglodyte dwellings in Matmata, Tunisia, are arranged around community spaces that are open pits, from which two levels of cavelike rooms radiate, in some cases, two and three rooms deep, with each successive space showing a noticeably different temperature. In summer, when temperatures at the surface reach 125 degrees F. during the day, the earth still retains the cooling temperatures of the winter season. In winter, the ground's heat reaches the rooms, in effect after a six-month time lag. The advantages of using the ground as an insulator to moderate the extreme variations of temperature at the surface has been

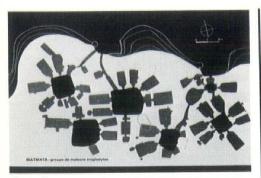


Figure 6

applied to buildings in other climates. An underground dwelling was completed last year on Cape Cod in Massachusetts, which has proven economical to construct and to heat (6). An elegant variation, both from land use and conservation standpoints, is a residence in Grasse, France by Finnish architect Kristian Gullichsen, excavated into an existing terraced orchard, *Figure 7* (7).

Sun Light. The best architects have long understood and used natural lighting, as illustrated in the work of Marcel Breuer and Louis Kahn. Nonetheless, the modern skyscraper with its uniform glass facades, despite the different climatic conditions on each orientation, has become the symbol of the air-conditioned nightmare and contemporary alienation from the natural world. Now, for reasons of energy conservation, architects will once again have to take up the skills of sun control and natural lighting. The direct sun that falls on window glass in summer adds a tremendous heat load to the interior for which shades on the inside have a negligible effect once the heat is conducted through the glass. To keep summer heat out of a building it is essential to shade glass surfaces on the outside, either by overhangs or by one of the innumerable sun control screens that could be devised for a given orientation (8). In temperate climates such sun screens can be dimensioned to block the summer sun and to admit winter sun. The use of south-facing window overhangs was publicized in the 1950's as "solar houses".

The placement of a window opening for maximum natural illumination is a study in itself, given the need to minimize glass area. *Figure 8* shows three alternatives for a given glass area. Which affords the best natural lighting? When the window is placed in the center of a wall, it creates a hard edge between light and wall with resulting glare

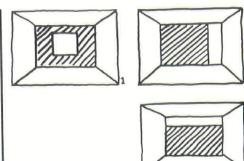


Figure 7

that requires some sort of curtain, which in turn reduces the amount of illumination. Better results are obtained by placing the window next to a wall which in effect makes the wall a reflective surface — and here there would be enormous improvement if the wall is a light reflective surface. The third alternative could be best of all since a high window admits light further into the interior. If there is a reflective surface on the outside bottom of such a window, then sunlight would bounce onto the ceiling of the room, making it a reflecting surface, an arrangement particularly well suited for classrooms (9).

From the point of view of light control as well as of natural ventilation, the design of window openings becomes an intriguing architectural problem, requiring various types of climate controls that in effect become like several layers of clothing. Factors which influence the design of a window opening include natural lighting and ventilation, thermal impact, precipitation and humidity, storm protection, insect control, views, architectural style, user customs, room functions, noise control, security, fire exits, cleaning, and (regrettably for the designer of sun screens in urban areas) pigeons! Heat loss through glass areas can be from 5 to 10 times greater than that through a well insulated wall. Here again, conventional draperies do little to prevent heat loss during the winter. The most practical device is an interior insulating shutter composed of from two to three inches of rigid insulation, lined with reflective material for superior results, and relatively air-tight around its edges.

Architects can easily study natural lighting in model form for a specific design. *Figures* 9 - 10 show just such an exercise directed toward the design of an interior light well (10). *Figure* 10 demonstrates the improvement in light level obtained by placing a reflective surface at the base of the well.



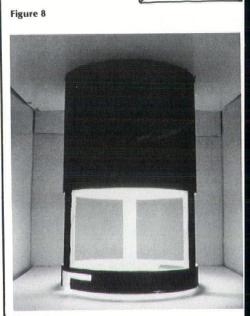


Figure 9

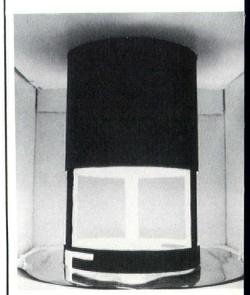


Figure 10

Connecticut Archited

Natural Ventilation. In the early 1950's, a Texas A&M research group completed a series of studies that are still basic to the understanding of air flow in and around buildings (9). Their research method principally consisted of photographing smoke traces in wind tunnel tests of architectural models. Accurate analysis does require sophisticated equipment, but rough approximations of air flow patterns through a given floor plan can be studied in similar model form using a smoke stick or simply a pack of cigarettes. Wind impact upon a building operates much like liquid dynamics. Air flow has the same characteristics of inertia and friction, and flows around an object in its path just as a liquid in accordance with the pressure differences that are built up. Of all the climatic factors, wind is most influenced by local features, such as topography and nearby buildings and planting. This was illustrated in the Texas studies by the effect of nearby trees, that caused the air to flow over a building and not through it as the designer intended and, as a result, created an air pattern in reverse of that which had been calculated. In addition, building shape, overhangs, position and size of openings, and the louver design all influence the pattern and speed of air movement through a building.

The size of the air inlet and outlet must be carefully calculated to achieve a desired pattern of air flow. Figure 11 shows two alternative arrangements, the first with the small opening to windward, the second with the large opening to windward. Contrary to the common conception that the large opening will catch the breeze, it is actually the first arrangement that provides the best air pattern and speed. Using the small opening, the air flow is increased, much like water at a spillway, with greater velocity on the inside of the room where it is needed for maximum cooling effect. In large buildings, there are differences in air pressure at various points on the surface, such as between the ground and upper floors or between the center and the edges of the side facing the wind. Accommodation for natural ventilation may, therefore, result in different types of ventilation controls depending on the window locations.

Even when external air pressure from wind is slight, air flow can be created in a building due to the "stack effect" of hot air which rises within the interior. If hot air is allowed to escape at the top, as in the traditional belvedere, then cooler air from the ground (or even better, from underground) can be drawn into the space. The stack effect can March — April 1974 thus be helpful in cooling a building on hot summer nights when there is relatively little outside breeze.

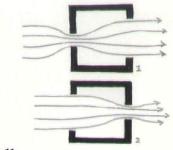
Designing for natural ventilation requires that the desired air flow pattern be carefully diagrammed, with the resulting openings and interiors all dimensioned to implement that circulation, with particular attention to avoiding "short-circuits".

The following examples illustrate not only an internal air flow pattern, but combine several energy-conserving devices that have been mentioned.

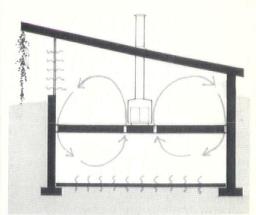
Sunnycave. Built in North Carolina by Wendell Thomas in 1958, this house reportedly maintains temperatures that do not exceed 75 degrees in summer or fall below 60 degrees in winter, with only a small stove as the heating element (11). The sides of the house are insulated by earth berms, with a large window area facing south that is shaded in summer by vines. In winter, the cold air from the outside walls drops down to the basement through "cold air drainage slots", Figure 12, where it is moderated by warmer ground temperatures and then drawn up through registers near the space heater. In summer, the hot air rises up the sloping ceiling and is evacuated by high ventilating windows.

Sun Monitor. Figure 13 shows the crosssection of a house alteration and is an example of a rehabilitation design for energy conservation (12). Its principal feature is a "sun monitor" which combines a long fourfoot by twenty-foot skylight to admit winter sun with a belvedere for controlling ventilation. The house is otherwise surrounded by a forest which will shade the summer sun. During winter days, an insulating panel (A) is open, then closed at night. A plexiglas panel (B) controls air flow between floors, overcoming the disadvantage of the types of vertical spaces that have been present in modern architecture since Le Corbusier. For summer cooling, both panels are opened and air is vented through the monitor (C). In situations where adjacent trees could not shield the summer sun, then an additional shade on the outside of the skylight may be called for. The section also illustrates that the summer sun is kept off the windows by an overhang, which has an additional provision of a roll-up shade on the outside (E). All of the large glass areas have interior insulating shutters (D).

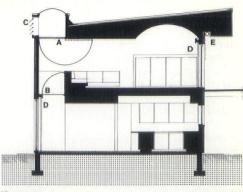
Earth Berm House. Figure 14 is a proposal by architectural designer Mac Godley for a













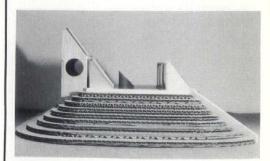


Figure 14

two-storied dwelling, with the upper floor formed by earth berms and the lower floor below ground. The roof slope will accommodate flat-plate solar heat collectors. On the underside of the slope, two tubes reach into the interior, one a combination light and ventilation shaft and the other, a periscope for reflecting the distant view down into the lower floor (10).

Ecolog Houses. Figure 15 shows an alternative house form for flat-plate solar collectors to provide partial or complete solar heating. Other energy conserving features include a sun monitor, a sun room, and a heat-retaining fireplace. The plans allow variation from two to five bedrooms and are dimensioned for rationalized construction to permit self-help assembly by the owner (12).

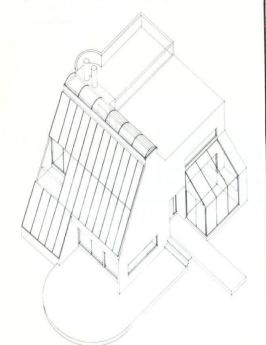
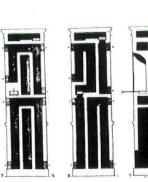
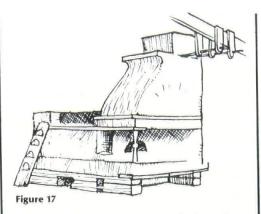


Figure 15







Fireplaces. Some fireplaces actually have the reverse effect intended by removing heat from an interior in creating convection currents up the chimney flue. One improvement is offered by the heat reflecting fireplace designs recorded in the 18th Century by Count Rumford, who observed the importance of a smoke shelf to set up a proper draft within the chimney (13). Another approach to the improved design of wood heating elements is offered by the Scandanavian fireplace/ovens wherein the masonry flue is extended through a labyrinthine distance inside the fireplace mass before connecting to the chimney. The maximum amount of heat is thereby retained by the firebricks which then radiate to the interior. Controlled by doors over the firebox to regulate the air flow to the fire, one fire is generally all that is required for a twenty-four hour period. Figure 16 shows ceramic ovens from a 1775 manuscript by architect Carl John Cronstedt and General Fabian Wrede of Sweden (14). Figure 17 is a traditional design from Finland which features a "grandmother's shelf" for sleeping (15).

Summary What lessons can be drawn from such a review of climate and design? Much of the material on climate was once familiar to designers and could once again be part of the architect's art. There are relatively simple ways in which architects could analyze individual projects during their design to test sun angles and natural lighting, heat loss and ventilation. The more complex methods of analysis could be used more generally in major design projects, as climatic factors once again claim a part of the architect's purview.

The responsibility of the architect has always been to create conditions for human life in balance with available resources. Long life, loose fit, and low energy consumption are the by-words for the architecture of the future. Buildings and products should be designed and built for long-term use, rather than with the throw-away mentality of the past decades. Building plans themselves will therefore have to be more generalized, with easy means of adaptation to changing functions. The energy budget of a building can now be accurately assessed with the technique of life-cycle costing as part of the design, specification, and construction bidding processes. In terms of energy conserved, many of the devices mentioned above, although adding to the first cost of construction, can be justified, even under present ten-year payoff projections. For example, an added insulation cost of \$500 would save \$50 per year in heating/cooling bills. When one begins to anticipate operating costs over the life of a building, then all of the efforts listed here to conserve energy are sound — not only ecologically, but economically as well.

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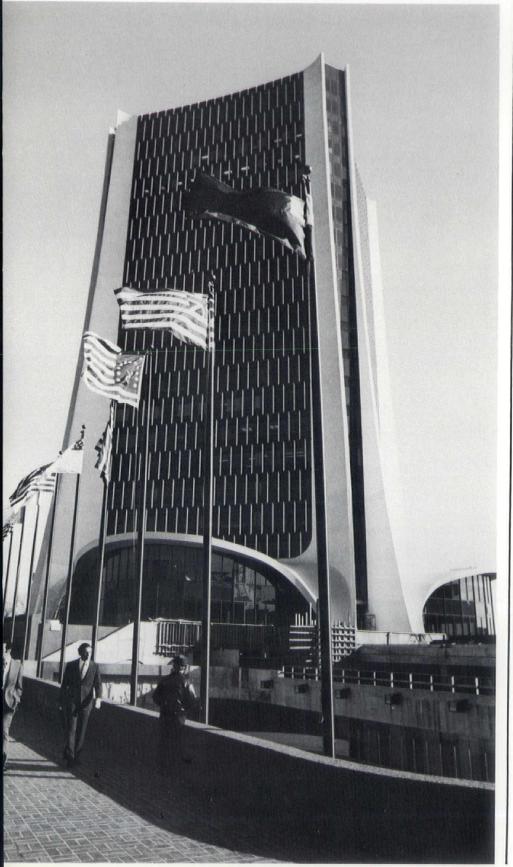
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10

Stamford, Connecticut THE REBIRTH OF DOWNTOWN



by H. Evan Snyder, Editor

Looking south from the offices of F.D. Rich Housing, Inc., on the 20th floor of the Landmark Plaza - 101 Broad Street - one has the vivid impression of a bomb-devastated city. Stretching toward Long Island Sound are vacant squares, many still containing the residue of rubble from buildings which have vanished. At the end of the expanse, bounded by the bustling Connecticut Thruway, stands the inverted, curtain-walled pyramid of the General Telephone and Electronics Company's World Headquarters. To the far left is New Hope Towers, a 1973 CSA/AIA Honors Award Winner, which is soon to be occupied by moderate-income families. There is little in between. Can this scene truly be rebuilt into a city that is envisioned as a major financial center of Connecticut in the future?

This doubt may be shared by many people in Stamford, as they contend with the inconveniences associated with this \$250 million reconstruction process; but according to Robert Rich, president of the F.D. Rich Construction Company which is responsible for the rebirth of downtown Stamford, the reaction is a perfectly normal one. "People in the community tend to share the enthusiasm of the urban redevelopment process as it is beginning," he points out, "but then, as they see nothing but torn down buildings for awhile, they begin to wonder whether the redevelopment of Stamford is really going to happen."

For nearly ten years, the section of the city which was to be the "new downtown" has been enough of an eye sore and a traffic hazard to shake the faith of even the most dedicated disciple of urban redevelopment. Indeed, there have been several instances in which opponents of the undertaking have brought suit against the developers and the Redevelopment Authority. Settlements of these cases were reached out of court, however, and now that several of the architecturally impressive structures which form the cornerstones of the redevelopment area have been completed, there has been a noticeable upturn in the town's enthusiasm curve.

For all its problems, the rebirth of downtown Stamford has had several unique advantages in its favor. One of these was the decision taken in 1959 to engage one firm as developer of the entire program — then a fairly modest effort encompassing a strip of land along the Thruway and several other inland blocks.



(Above left) The architect's model shows downtown Stamford as it will appear when the redevelopment project is completed. Landmark Square, in the foreground, is composed of a sculptured, tower office building surrounded by low-rise office buildings and retail space. An enclosed shopping mall, with luxury apartments above, will connect this area with the GT&E headquarters, at the upper right, and with a 300unit motor hotel and office building in Stamford Forum.

(Below left) The Stamford urban renewal area as it looks today. The Connecticut Thruway and the GT&E building are on the left, Landmark Tower on the right, and New Hope Towers at bottom center.



That firm was the F.D. Rich Construction Company. With funds supplied by a Federal grant (through the forerunner of the presentday HUD agency), the city of Stamford and the State, land acquisition began in the mid-1960's.

Unlike the usual pattern in urban redevelopment, under which the city plans the project and then markets individual parcels to various developers, the Stamford program was planned by the Rich Company at its own expense. In return, the company was given the right of first refusal in the reconstruction of the entire area. They have chosen to exercise this right in all but the New Hope Towers area.

The Rich Company engaged the services of California-based architect Victor Gruen to create the overall plan for redevelopment the plan which formed the basis for the application for \$25 million in Federal funds, made available in 1963. It is interesting to note that, with the exception of the grant for New York's Lincoln Center, this was perhaps the largest single funding for an

12 individual project ever to come from the

HUD program, and certainly the largest grant ever made to a city of Stamford's size.

From that time until the present, the continuity of the redevelopment program has rested squarely on the shoulders of one man. When this reporter was researching the possibilities for an article on Stamford's transformation, the statement was often heard, "There's only one man to talk with if you want the story, and that's Robert Rich."

As the principal figure who has been involved with the program since its inception, Rich has outlasted six of Stamford's mayors, as many city governments, and an even larger number of Redevelopment Agency personnel. Under the terms of the agreement with the City, the organization known as the Stamford New Urban Corporation - a wholly-owned subsidiary of F.D. Rich Company — is the main private participant in the redevelopment process. In this role an enviable one or not despite its economic advantages, depending on one's point of view - Robert Rich has called most of the shots in the creation of the "new downtown's" skyline. His is, therefore, a decidedly singular

position in the annals of urban rebirth, for he has been chiefly responsible for the architectural style and shape of the Stamford of the future.

The second unique — although perhaps not surprising — aspect of the rebirth of Stamford's downtown is the length of time over which the project has been taking shape. Or perhaps "evolving" would be a better word. At the project's inception, everyone involved anticipated that it would require no more than five to seven years for completion. Now, some 14 years later, the first five-year program of actual construction is just nearing completion, totaling some \$90 million, with an additional \$90 million in building projected over the next five years.

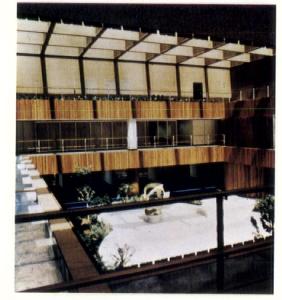
Thus the "new downtown" will require 20 years or more for its completion. What has happened to the original concept for the redevelopment area is a considerable change as new factors came into play. For example, the area now known as Stamford Forum, where the G.T. & E. building is located, was originally scheduled for light industrial development. Now it will house additional



Photography: Tracy D. Connors

(Top) A cornerstone of the redevelopment area is the General Telephone and Electronics headquarters building. The top two levels feature a two-story courtyard (right). GT&E is the first major corporation to relocate in a downtown urban renewal area.

(Below) Three imposing circular buildings comprise St. John's Towers, 352 apartments for moderate income familiies.





office building and a large, 300-unit motor hotel. The motor hotel, on which construction is about to begin, was originally conceived as a small, 100-unit structure. Another significant addition to the original plan is the creation of a 1,000,000 square-foot enclosed shopping mall with two major department stores and many small shops, designed as a regional center for Fairfield and near-by Westchester communities. The final stage of the project will be the construction of a high-rise apartment complex above the enclosed mall and parking areas for 5,000 cars. Landmark Square, the complex of office buildings and shops around the base of the recently completed tower, is envisioned as an integrated downtown activity center with shops, two theaters and restaurant facilities.

The major contributing factor to the tremendous expansion of the redevelopment plan has been the great change in the nature of the population of the city of Stamford. At the root of these changes is what has been called the "Corporate Headquarters Phenomenon" - the relocation of an increasing number of major corporations and many smaller firms to the Stamford area. As late as 1965, the Stamford-Greenwich area was absorbing about 25,000 square feet of new office space each year. In the past nine years, that figure has jumped to over 1,000,000 square feet. With the shift in the nature of Stamford's business from an industrial to a management/service orientation have come tremendous pressures, both for office facilities and for living space for the new work force. Zoning in the surrounding towns, with the exception of Greenwich, has discouraged commercial development, and new regulations have been passed to preserve much of the undeveloped acreage remaining. Thus Stamford's "new downtown" remains the most viable area for new commercial and higher-density residential development.

The high quality of architectural design in the sections of the "new downtown" already completed is attributable to the talent of the second architect associated with the project, Victor H. Bisharat, AIA. Born in Palestine, he received his architectural training at the American University of Beirut and at the University of California at Berkeley. Bisharat first worked with F.D. Rich Company when he was commissioned to design the Jordanian Pavillion at the 1964 New York World's Fair. Until the past year, his Stamford firm has been the exclusive design group for all the F.D. Rich projects, both in the redevelopment area and in High Ridge Park, a magnificent 40-acre development containing the headquarters of five major U.S. Corporations and a division of CBS Laboratories. The first of his designs to be built was St. John's Towers, a complex of three cylindrical apartment towers for 352 low-to-moderateincome families adjacent to the commercial redevelopment area. Raised esplanades connect the structures to each other and to a separate building which houses an indoor recreation area with a gymnasium, exercise

rooms, and a five-lane swimming pool. Financed by a 100% Federal mortgage, the project is owned and managed by the Diocese of Bridgeport. The G.T. & E. headquarters building on Stamford Forum and the sculptured Landmark Tower building are also his designs.

Moshe Safdie, designer of Montreal's Habitat, was engaged by the Rich Company in late 1972, to complete the overall plan for the redevelopment area, and the final phase of building will reflect his style in the use of a new system of precast concrete boxes known as the HABSystem. HABSystem, for which both U.S. and foreign patents have been granted, utilizes factory-cast, reinforced concrete modules as box beams spanning the width of a building and supported by poured-in-place concrete columns. The boxes, which are lighter than those used in conventional systems, are more easily shipped by rail or truck and are easier to lift into position. Air space between each unit provides sound insulation, both horizontally and vertically, throughout the structure. The new motor hotel and the high-rise apartment complexes which will be built in the program's final phase will employ HABSystem construction.

Perhaps the most significant aspect of the rebirth of downtown Stamford, however, is the fact that the process has never been done in this manner on this large a scale before and, unless major changes occur in the direction of federal funding in the area of urban redevelopment, is not likely to happen again in just this way. The phenomenon of a single redeveloper — in this case F.D. Rich Company and the Stamford New Urban Corporation — and the architect or architects of their choice being presented with the opportunity of completely changing the skyline and the entire ambiance of such a city harks back to the Italian Renaissance when the Church performed a similar role. Whether such an approach to urban redevelopment is beneficial to the community and its people only time will tell. The advantages of the partnership between the Urban Redevelopment Commission and the single redeveloper are entirely favorable in that they insure the continuity necessary in such a mammoth undertaking. From the city's point of view, the advantage is that, with the project only half completed, it is already beginning to reap more in tax revenues than were provided by the entire area prior to redevelopment. Finally, if the rebirth of downtown Stamford is to have a beneficial impact on the people who live and work there, it will - in the words of the Redevelopment Commission's charter -"... revitalize Stamford's historical center," and halt the scattering of such facilities over the open countryside which remains.

Note: The Editors wish to express particular thanks to Mr. John Mitnick and Mr. Harry Harris of the Stamford Area Business and Industry Association (SACIA) and to Mr. Robert Rich and the staff of F.D. Rich Construction Company for their helpful assistance in the preparation of this article.

14



If the cost of living has you feeling poor, here's how to feel rich.

THE GOOD NEWS

The good news is that you're worth more than you think you are. If your house is worth \$35,000 and your car \$3,200 and you have stocks valued at \$41,000 and savings accounts with balances of \$14,200 your net worth is \$93,400. That's a lot of worth.

THE BAD NEWS

The bad news is that all of this will be taxed someday by Uncle Sam. Perhaps more than it should be. But there are ways to avoid needless taxes on any estate. It's called planning and it's a particular specialty of the First New Haven National Bank Trust Department. Call soon, to arrange an appointment.

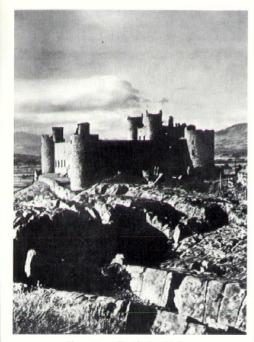
Estate planning isn't just for the wealthy. Estate planning is for everyone who has an estate. And that's you.



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Architecture is Power

by Robert H. Mutrux, AIA



Chepstow Castle in Wales

Vincent Scully coined this provocative phrase during a recent conference on the arts, and I have been analyzing it ever since. It is pervasive truism, evoking an endless pageant of visual definitions, each one more significant than the last. However, in order to be fully appreciated, the phrase deserves to be qualified.

For example, one might say that architecture is the symbol of power. All of history bears this out, beginning with the Egyptians. They were made aware quite early of the psychological impact of architecture by their grey eminences, the priests, and of course, a few self-serving architects. The pyramids and temples of the times are a massive orchestration of defiance against the vast context of the Nile Valley. This is sheer power, well illustrated in the pyramid of Cheops by the compressive strength of 2-1/2 million five-foot cubes of limestone. An appropriate resting place for a pharaoh, however, need not have challenged the heights of Rockefeller Center and the breadth of eight football fields!

The tableau of power later moved to Athens, whose mayor, Pericles, frankly stated that the Parthenon was erected not so much to honor the virgin Athena as "to remind the Athenians of their former grandeur." Its scale and its site together, even today, make the point very clear.

The procession of Roman Emperors followed in due course, and there is no more forceful statement than the marble of the forums and coliseums to boast to posterity that "right is might" and that might is peculiarly and permanently Roman.

The same stage sets in a different form appeared in the Middle Ages. The faith that could move mountains did so, literally, by transforming millions of cubic feet of stone into a panorama of churches and cathedrals from Aix-la-Chapelle to Zaragoza.

The Black Plague claimed some 25 millions in the fourteenth century, but man's appetite for power continued. The Crusades and the Renaissance ushered in a new generation of human dynamics in the nobility. Their selfimage was expressed first in the supposedly impregnable feudal castle, and then, when China's gunpower replaced the longbow by the fashionable and ostentatious chateau. The image of power through wealth went to their heads, and its representation brought on the French, the American, and the Russian Revolutions. But the persistent appetite for power survived, as witnessed in more recent centuries by the proliferation of residences of the robber barons, who lacked the lineage but none of the vigor of their historic prototypes. Today, the obvious architecture of power lines the thruways from one end of the country to the other, embodied by our wellknown corporations' headquarters.

Architecture may also symbolize someone else's power. One need only cite Hadrian's 75-mile project separating the Roman empire from the nameless, faceless Picts and Scots; or China's 2500-mile wonder of the world, breached by the Manchus and more recently by the Nixons. The list includes the Maginot Line, the Berlin Wall, and the protective screening and planting at San Clemente. This is the architecture of fear. Whenever it occurs, it is an abject, yet concrete, expression of uncertainty and hence, an open invitation to invasion by superior forces.

And what is the symbol of power for the future? Is it the power of reason and the intellect, as evidenced in our schools, colleges, and universities? Is it the force of art or mankind, as suggested by the growing proliferation of cultural centers, from Lincoln to Kennedy to Dallas?

Or is it the surge of science which, within two paltry decades, has been able to defy gravity where Icarus failed because he lacked the staying power of Elmer's glue? Will it be our \$1.6 billion Skylab which, after providing a "good home" for three fine young men for eighty-four days and proving, as a surprising statement in TIME magazine noted that "there are no practical kits on how long man can live in space", is destined to burn up in five years?

The answer is, "No." Today's power is the spark of fire that we have been arguing about for the past months, and that we have taken for granted since the first recorded words "Let there be light" were uttered by "the God of power and might." It is the spark of fire that Prometheus stole from Mount Olympus — an act for which, today, in order to get even, the Gods threaten to turn off the spigot. It is the spark that allowed us to see, to move, to act, and to create.

Its symbol is the *power plant*, pure and simple. It is as pure as the waterfall, as simple as the windmill, and as complex as the breed reactor (code name Rabbit, by the way) and the solar reflector.

Without these there will never be any more temples, cathedrals, palaces or princes, and no more peasants to create them. Without them there will be no more weaving, no metal work, no automobiles, no news media, no pro football.

And if we contemplate that disaster for a while, we may not mind having a power plant in our back yards. We might even move closer to it and sell tickets for a view of it through our triple-glazed picture windows, and thus help pay our Light and Power bill.

15

The 1974 Burlington Awards

by Natalie Korsheniuk, Assistant Editor

The "Spirit of '76" motif triumphantly brightens Mrs. Gilbert Young's kitchen, a Burlington House Award recipient remodeled by architect John Damico of Waterbury.



A Connecticut architect and two schools in the State received 1974 Burlington Awards in the residential and institutional categories, according to Raymond E. Kassar, executive vice-president of Burlington Industries.

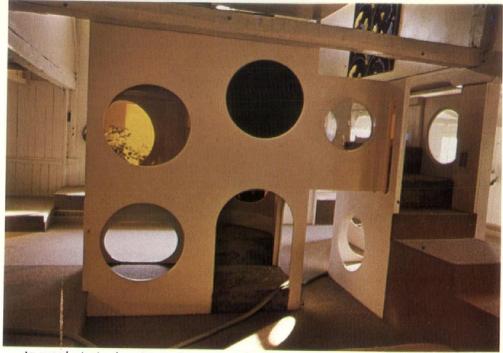
At the Merchandize Mart Press luncheon on January 7, which officially opened the International Home Furnishings Market in Chicago, Kassar presented Waterbury architect John Damico with two House Awards for his design of the home of Mr. and Mrs. Robert Zappone and the kitchen in Mrs. Gilbert Young's home, both of Waterbury. The Boston firm of Curtis-Smith Associates was honored as a double winner in the institutional category for the design of the Montessori School in Newtown and the Mother of God Academy in Stamford. Both firms were cited for their taste, imagination and inventive solutions to common decorating problems.

Damico solved the site challenge of a rocky slope on the Zappone property by the construction of a contemporary house with seven levels, plus a tower to capture the panoramic easterly view. Working within a tight budget, pre-fabricated rooms were designed to radiate from a mechanical core. Windows frame the east and south sides, while the west side, which faces the neighboring properties, is solid, with earth berms providing additional privacy.

In remodeling Mrs. Young's kitchen, Damico gave free reign to his colorful imagination in creating the "Spirit of '76." Using a vivid color scheme of red, white and blue in dramatic lines and shapes throughout the area, he transformed a small kitchen which had never functioned properly into an efficient and spirit-lifting unit. Though no space was added or subtracted, the kitchen appears larger because of more cupboard space and brighter work centers illuminated by undercupboard lighting. The shinyl-vinyl floor coverings were selected first, and then the paint colors were carefully blended for a perfect match. Due to budget restrictions, the striking result was achieved through the use of standard materials.

The learning environments of the Montessori School and the Mother of God Academy were designed and built by Paul Curtis and Roger Smith, whose approach to educational design grew out of their individual teaching experiences in England and America. Having observed how quickly children become bored and frustrated in a haphazard atmosphere with scrap materials as toys or in the strict atmosphere of an adult-controlled classroom, Curtis and Smith developed a philosophy that the design of a learning environment should reflect their conviction that learning is fun. According to the designers, "[learning] must be presented in a way that inspires children to explore its potential.'

Thus, in both award-winning schools, Curtis-Smith Associates created a variety of places and moods for exploration by inquiring young minds, such as tunnels, towers, bridges, large spaces, closed spaces, and dark March — April 1974



An award-winning learning environment in the Montessori School of Newtown, designed by Curtis-Smith Associates.

and bright spaces, reinforced by vibrant colors, varying textures, a four-speaker sound system, and a lighting system with dimmer switches.

Entries for the Burlington competition are submitted throughout the year by the press and by individual designers. This year's selections were judged in October, 1973, by a board of nationally prominent women, under the chairmanship of Mrs. Lyndon B. Johnson. Letitia Baldridge, project coordinator for the Awards program and a former White House social secretary under the Kennedy administration, gave the visual presentation of the 37 winning houses and nine institutions during the luncheon. Commenting on the award recipients, Kassar said have this year's selections exhibit, "...a good representation of many different budgets, lifestyles and geographic regions."



Damico won a second award for his design of the multi-level residence of Mr. and Mrs. Robert Zappone in Waterbury.



THE LIMITED PERSPECTIVE

A high-frequency oscillating needle has been used to remove the soft lens from glaucoma patients — an effective alternative for the debilitating corneal surgery often required. The national magazine which carried the news of this medical innovation also noted that over 1,000 physicians attended week-long seminars to learn the technique.

The Connecticut Society of Accountants sponsors 30 post-graduate, professional development seminars. The accountants have further agreed to require attendance at a set number of professional programs each year.

The American Management Association produces a series of intensive and expensive management seminars, exploring a variety of subjects and techniques, ranging from marketing to managerial dynamics.

It is often argued that the medical, accounting and managerial professions can afford professional education because of the swiftlychanging nature of their environment. The argument goes that, in fact their skills *require* re-sharpening and re-directing on a periodic basis. However, since the architectural profession exhibits no apparent concern for reeducation, it seems to follow that architectural skills do not require sharpening or re-focusing, and further, that there exist no new techniques to be acquired, no innovations in practice or service that can be transmitted in an organized, post-graduate professional education format.

This peculiar attitude is sanctioned totally in the university environment, where, at my last inquiry, no school of architecture in the United States offered a course in Marketing Professional Services. Tenured professors in Structures were legion; Byzantine courses titled "Professional Practice" were offered; but Profit-Planning, New Business Development, Joint Venture Arrangements and Negotiating Techniques courses did not exist.

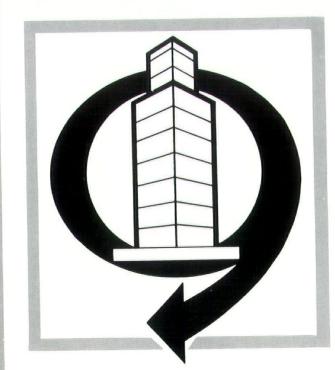
It is remarkable that, in this age of dwindling stature and markets for architectural services, resistance to an organized method of information and technique transfer could be maintained. Yet, offices commonly object to releasing employees for professional seminars. The fees that physicians, accountants and managers willingly pay for post-graduate education are viewed as irritations to architects.

In order to examine the present and potential role of professional education in the architectural world, the CSA Education Commission hosted a breakfast meeting at the Hartford Hilton in March. Attending were Messrs. M. Buckley, P. Borgemeister, D. Baerman, N. Baier, T. Bellingrath, J. Edwards, E. Jeter, Jr., J. Lunt, B. Sapienza, R. Sharpe and Steve Messner from the University of Connecticut School of Business.

A surprising range of opinions emerged betraying the need for a coordinated and cumulative education program. The discussion was centered on the view that the time has come for architects to recognize their educational needs. Furthermore, whatever the duration of an education program, it must become an integral part of the employee's future. It was also speculated that one of the problems which would be resolved through re-education is the lack of communication within the office, as low performance levels and staff inefficiencies are left unresolved, and among colleagues, who know very little about each other's activities, especially on the management level. In addition, the architect should be trained in techniques of financial analysis and sales behavior.

The variety and extent of these discreet points should demonstrate to the architectural profession the necessity of escalating an attack on its particular weaknesses and lethargy. At worst, the profession would be a beneficiary of the Heisenberg Uncertainty Principle, which maintains that any process will be changed by the mere act of observing it closely. Michael P. Buckley, AIA

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News

News

people

The construction industry needs both union and non-union contractors and with this competition, significant savings in construction costs are possible, **David N. LaBau**, CSA President, told members of the New England Chapter of the Associated Builders and Contractors (ABC).

Speaking at a recent Chapter Meeting in West Haven, LaBau suggested that "under the merit shop philosophy the two can work together, and it is not unusual for a job run in this way to be completed under budget."

Looking toward future growth in the industry in Conn., LaBau suggested that leading institutions are missing a real opportunity by not including an annual on-site review of completed projects by the architect and contractor as part of the original mortgage agreement. "Most of us have almost a paternal feeling towards the buildings we design and would welcome the opportunity to provide an annual inspection service."

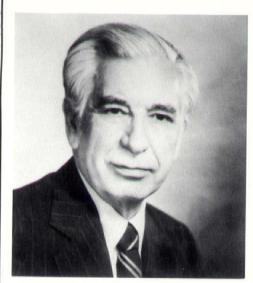
According to LaBau, there is too much stratification in the industry today. "Most projects require close team effort by the architect, contractor, suppliers and labor alike," LaBau said. "If groups become polarized, the end product suffers. Under the open shop, for example, each man is free to do what he does best without artificial restrictions."

The New England Chapter of Associated Builders and Contractors represents over 600 industrial and commercial contractors in New England.

Charles DuBose, executive director of the Hartford architectural and planning firm of DuBose Associates, will represent the United States at the Milan session of the International Union of Architects (UIA).

DuBose is the American member of UIA's Urban Planning Commission, and, beginning April 15, this select group of international experts will explore "the myth of interdependence" between technology and development.

n a position paper to be delivered at the conference, the Hartford architect predicts that "the world . . . is threatened by the explosive expansion of population." Articuating the sense of urgency characterizing his Milan meeting, he adds that international cooperation and the exchange of planning echniques is crucial to the solution of renarkably similar world-wide problems.



Charles DuBose, FAIA

DuBose is a Fellow of the American Institute of Architects and member of the National Academy of Design. Constitution and Founders Plazas are only two examples of his design achievements in the Hartford area.

Michael R. Hough announces the formation of MRH Associates in Newington, Conn. The new company will offer management consulting services to architectural, engineering and planning firms, specializing in the areas of marketing, organization and salary administration, management information, and merger investigation.

A graduate of Manhattan College, Hough received his M.B.A. from the University of Connecticut in 1974. Prior to founding his own firm, he worked for the Federal Highway Administration, U.S. Department of Transportation, and as project manager for the first Master Transportation Plan for the State of Connecticut.

A former vice chairman of the Citizens Advisory Committee for Newington's Community Development Action Plan (CDAP), Hough is a registered professional engineer in Connecticut and New York, and a member of the American Management Association and the Newington Development Commission.

announcements

Flexibility in design, which has been difficult to maintain under most prefabricated building systems, was not sacrificed in the recent construction of the Holiday in Stamford, because the **Bison System** allows for custom-designing, according to Walter J. Douglas Associates, a West Hartford architectural/engineering firm.

The Bison System, which was developed in the 1950's by Concrete Limited of Great Britain, was used in Stamford's new luxury retirement center of 176 living units overlooking Long Island Sound. C.W. Blakeslee & Sons is the sole New England licensee for the precast concrete system.

A spokesman for Douglas Associates notes that not only can the architect work with the system's standards to design an aesthetically pleasing structure, but he also is afforded the unique opportunity of inspecting the progress of production during the factory stage. He continues, "Initially, the apparent irregular shape and space allocations made the precast fabricators reluctant to even consider the project." However, "after several design sessions, the basic system was established and cost data... proved that the project could be built within the budget constraints."

Another housing project for the elderly in New Haven will employ the Blakeslee-Bison System. The architects of Herbert S. Newman Associates opted for Bison after studying several pre-engineered building systems with the project's developer and general contractor. On the outset, the builders were confronted with two major problems — low budget restrictions of a federally sponsored program and an extremely restricted site area. The advantages of the System, namely short erection time in the field and flexibility in design, convinced them to choose Bison.



Workers erecting Bison precast concrete walls for Stamford's new retirement center.



Toby Street Elderly Housing, Providence, R. I. Developer: Urban Development Company and Associates, Baltimore, Md. Architect: Morris H. Steinhorn, Baltimore, Md.

30% LESS CONSTRUCTION TIME... FEWER MAN HOURS REQUIRED Concrete Reasons For Using the Blakeslee Bison Wall Frame System

The Providence Housing Authority took advantage of Bison time-saving benefits for this 16-story, 198-unit apartment building for low-income elderly citizens. All of the building's precast concrete interior and exterior walls, floor and ceiling panels were manufactured by Blakeslee, the largest precast-prestressed concrete producer in the Western Hemisphere. The Blakeslee Bison System assures a more substantially built structure, better fireproofing and soundproofing, and low maintenance.

"If older construction methods were used, it would take another six to nine months to complete this housing," says David Joyce, executive director of the Providence Housing Authority. "Reduced erection time means savings in construction costs and less over-all development time."

Get the facts on Bison cost-savings and Blakeslee capabilities in design assistance, delivery and erection of factory-built concrete housing. Call or write:

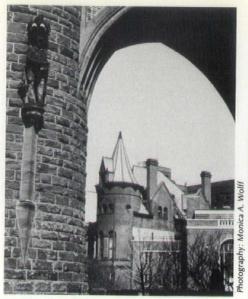


C. W. BLAKESLEE & SONS, INC. Box 1844 - New Haven. Conn. 06508 • 203, 772 -2500 New York Office Bo L. 420d ST., N.Y., N.Y. 10017 • (212) 889-7190 A Subsidiary of WESTINGHOUSE As one object of their continuous efforts tumbles to the ground, the members of the Hartford Architecture Conservancy rally around another preservation cause. Although the organization did not succeed in dissuading the YMCA board of trustees from demolishing the 1890 structure on the corner of Trinity and Pearl Streets, HAC again gathers its steady stream of new members and begins work on a new project to save one of Hartford's parks.

The destruction of the YMCA began in early April, and will result in another surface parking lot for downtown Hartford. However, unlike most parking lots, this one will be adorned with a small plaque commemorating the razed Romanesque building which originally had been designed to complement the Civil War Memorial Arch on Trinity Street.

Most recently, HAC is opposing the joint effort between the State Department of Transportation and the City of Hartford to dig a tunnel through Bushnell Park for a planned highway connector. According to HAC member and architect Tyler Smith, the park is a registered national landmark and defacing it in such a manner could lead to court action.

HAC held its first annual meeting on April 18 at the Wadsworth Atheneum, with about 50 members in attendance. After ratifying the charter and by-laws, the organization approved the appointment of 17 directors who, in turn, will appoint the officers. The filing of the



Looking through the Civil War Memorial Arch at the YMCA building, which, despite HAC's protests, is currently under demolition.

charter is a necessary step in attaining a taxexempt status for the non-profit corporation. According to the document, HAC will strive "to preserve and revitalize the uniqueness of Hartford" and will hold in trust, lease or mortgage buildings of "architectural, historical, educational and general cultural significance," which it pledges to repair. To date, the organization lists 65 paid members.

Not only has the Wadsworth Atheneum provided the Conservancy with a meeting place, but it has also designated exhibition gallery A107 for primary use by HAC. Intending the gallery as a forum for increasing public awareness of the area's architectural heritage, HAC opened its first exhibit on March 21, consisting of old architectural photographs organized by Perry Harlow of the Connecticut Historical Society. For further information about the organization, visit HAC's office at 15 Lewis Street in Hartford.

State Public Works Commissioner Paul J. Manafort reports the signing of two construction contracts in March, in addition to the retention of the Waters Construction Company of New Milford as lowest bidder for UConn Health Center's expansion.

Waters will work on the first of three phases of an addition to the Center's laboratory facilities, which will provide sixteen students with multi-discipline labs next fall. Two more additions are planned for the fall of 1975 and one for 1976.

The State Commissioner went on to announce that the H.S. Tourtellotte Construction Company of Tolland will handle the renovation of the Knight Hospital Building at the Mansfield Training School. Architects for the job will be the West Hartford firm of Walter Douglas Associates.

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Manafort also contracted this month with the J.S. Nasin Company of Willimantic to construct a student union building, designed by Olson and Miller, Hartford architects, for Eastern Connecticut State College. Completion is scheduled for next spring.

The Fairfield University Campus Center, which was designed by the firm of **Fletcher-Thompson, Inc.**, received the 1973 Carlson Award for Architecture of Community Significance.

This annual award is endowed by Mrs. Ruth Carlson Horn in memory of her father, William Carlson, and is administered by the Bridgeport Association of Architects and the Cultural Affairs Committee of the Chamber of Commerce.



EXPO 8, a one-day construction industry exposition sponsored by the Connecticut Building Congress, will be held on Thursday, May 23, at Hartford's Hotel Sonesta.

The eighth annual exhibition will feature presentations by engineers and architects of their Connecticut projects and display booths of products and services for the building industry.

Professional exhibit co-chairmen, Robert A. Sapack, AIA, of Stein, Sapack & Ames, Architects, Waterbury, and William Dwyer, AIA, of W.J. Megin, Inc., Naugatuck, have selected evaluators representing the various facets of the construction industry to view the 22 projects and select those to be awarded recognition for their contribution to environmental quality.

The evaluators will be Donald Banta of the Travelers Indemnity Company, Hartford; Joseph Cermola, P.E., of Cardinal Engineering Associates, Meriden; Kenneth Froeberg of George B. H. Macomber Company, New Haven; David LaBau, AIA, of Golden, Thornton & LaBau, Architects, West Hartford; Richard Stein, FAIA, of Richard G. Stein & Associates, New York City; Stuart Tillinghast, AIA, of Blanchard & Tillinghast, Architects, New Haven; and Kenneth A. Wood, Jr., Assistant Commissioner, Environmental Protection Agency, Hartford.

The program will consist of two panel discussions, focusing on the energy crisis and its effect on construction practices. An awards luncheon will be held to honor the winners of the professional exhibit competition, in addition to a dinner banquet for members, wives and guests.

The topic of the 10:30 morning session will be "Equitable Adjustment Due to Energy Shortages," to be discussed by a panel of contractors, engineers, business executives, and Architect Roger E. Galliher, AIA of Galliher and Schoenhardt in Simsbury. As of this writing, the subject for the afternoon's discussion has not been announced. For further information, contact Linda Priestley at the Connecticut Building Congress Office, 2377 Whitney Avenue, Hamden.

The second annual **Aluminum Building Products Design Competition** encourages builders, architects, contractors and remodelers to submit their ideas for creative uses of aluminum products for cash prizes and national recognition.

The co-sponsors, Architectural Aluminum Manufacturers Association (AAMA) and Aluminum Association (AA), have established two areas of competition — (1) new construction and (2) remodeling and rehabilitation. Within these two categories, there are also two classes — residential (one and two family houses less than three stories) and commercial and industrial (structures not more than five stories).

According to the five-man jury of magazine editors and remodeling executives, projects will be judged on July 24 on the basis of aesthetics and versatility in the use of aluminum products for construction, rather than on the basis of cost or size of the structure. The winner in each category and class will receive \$1,000 and a trophy. Runners-up will also be honored with an aluminum plaque.

Entries, accompanied by an official entry form, will be accepted until July 15, 1974. For entry blanks and further information, write to the Architectural Aluminum Manufacturers Association, 410 North Michigan Avenue, Chicago, Illinois 60611.

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A Bucket of Oil: The Humanistic Approach to Building Design for Energy Conservation, by William W. Caudill, Frank D. Lawyer, and Thomas A. Bullock; Cahners Books, Boston, 90 pp., \$10.95.

All three authors, as members of Caudill Rowlett Scott, an architectural-planningengineering firm in Houston, Texas, have for years explored various ways of achieving "maximum results with minimum means" in building design. With the use of over 100 photographs and drawings, their book offers examples of successful energy-saving techniques and considers the trend toward multipurpose buildings, car-less downtown areas, and large-scale town planning.

Energy Conservation Design Guidelines for Office Buildings, by the AIA Research Corporation, Dubin-Mindell-Bloome Associates, and Heery and Heery Architects; General Services Administration, \$2.00.

This study contains more than 185 ideas for achieving an energy budget of 55,000 BTU's per square foot per year, focusing on such technical aspects as site selection, building planning and orientation, power and lighting requirements, solid waste disposal, and heating, ventilation and air conditioning needs. Copies can be obtained by writing to any GSA Business Service Center.

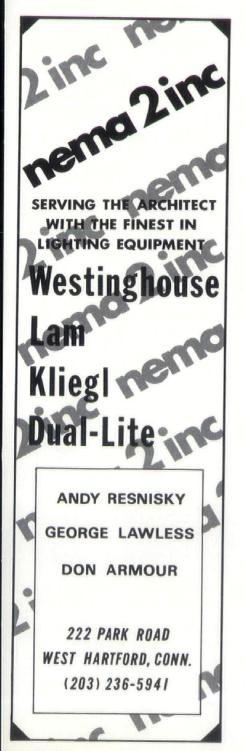
Environmental Impact Statement: A Reference Manual for the Architect/Planner, by Kaiman Lee, AIA, Environmental Design and Research Center, Boston, 265 pp., \$52.00.

Lee's manual explains in detail the procedure and requirements for writing an environmental impact statement. The book discusses four areas of concentration; namely, inventory, goals, analysis and evaluation, in addition to proposing techniques for consideration by the planner.

Workbook of an Unsuccessful Architect, by Harris Stone, Monthly Review Press, London, \$8.95.

This autobiographical account of an architect's struggle for success allows the reader to examine the author's reasons for his eventual disappointment in himself and his country. The handwritten and illustrated text is divided into four essays, which reveal Stone's hopes and fears about architecture. Drawing upon his experiences in New Haven and abroad, the Harvard-educated architect discusses New Haven's growth into a Model City, the significance of traditional architectural elements in day-to-day living, the progressive alienation of the architect from his work, and the image versus the reality of architecture. Residental Designs: How to Get the Most for Your Housing Dollar, by David E. Link, Cahners Books, Boston, 163 pp., \$14.50.

Illustrated with original design contributions by Architect John D. Bloodgood, this book examines design ideas, ranging from land planning to kitchen and bathroom interiors. The author takes an environmental approach to residential planning and offers suggestions for building variety into the basic low-cost exterior. Link also reveals several methods for remodeling a house or apartment to add sales appeal.



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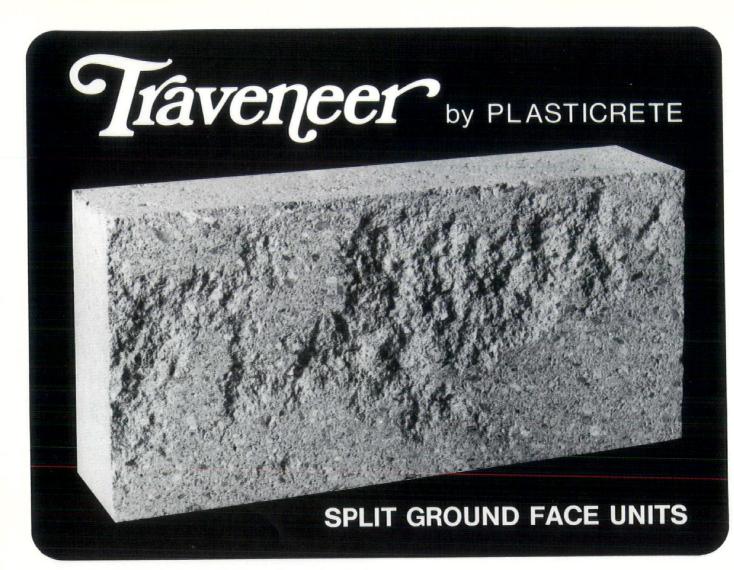
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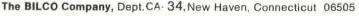
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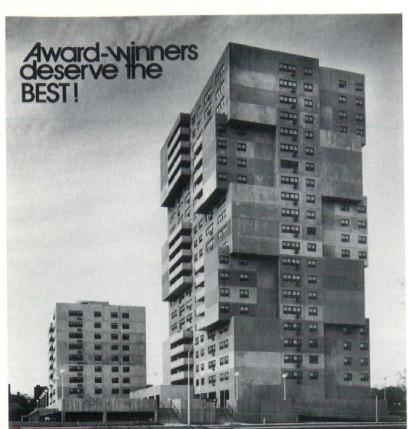




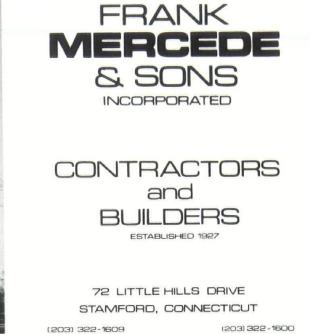


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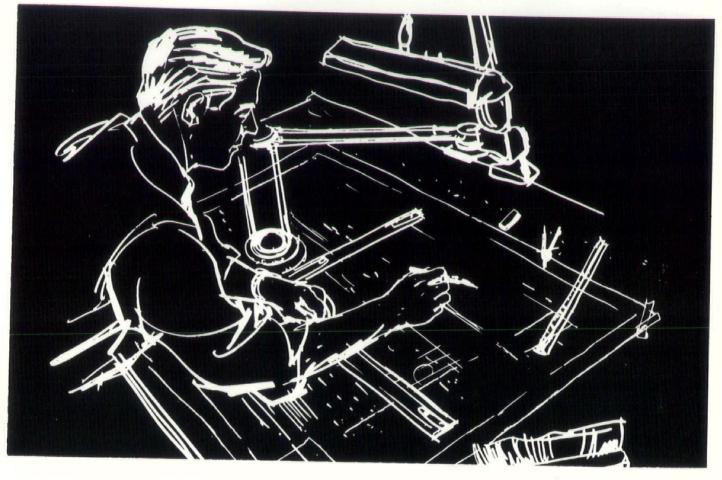


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