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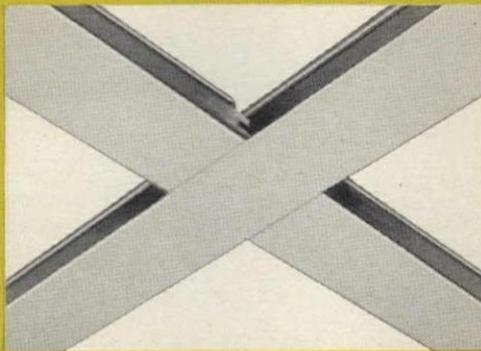
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VIEWS

Education vs. Enthusiasm

Dear Editor: Regarding the colleges and architectural education (MARCH 1967 P/A): Bob Dylan's comment seems appropriate, "Colleges are like old age homes, except for the fact that more people die in colleges than old age homes." Whatever spark is there in the beginning has generally been extinguished by graduation. This has to do with teachers, not teaching, since facts can be gotten from books and computers; enthusiasm and dedication can be gotten from enthusiastic and dedicated teachers, as Don Mochon said. It somehow seems much more basic and less involved than all the honorable gentlemen so eloquently state.

Architecture still has more to do with people, their physical and emotional needs, than all the space-age gimmicks and technological advances mentioned — at least, I hope so. Maybe real architecture cannot be learned in school, as life cannot.

CLAUDE SAMTON
New York, N.Y.

[As Bob Dylan also said, we'll leave it to the "princess and the prince to discuss what is real and what is not". — Ed.]

The Time, Finally, Is Right

Dear Editor: I have read with interest your report on architectural education. It is well-written and documented, and you are to be congratulated on a fine piece of reporting.

It has been the apathy of all but a few in the past that has contributed to our failure to keep up in the field of education. With many now sparking interest, it appears the time is right for an effective revolution.

WALTER SCHOLER, JR.
Chairman, Commission on Education and Research, AIA
Washington, D.C.

Congratulations

Dear Editor: Our entire faculty and staff have been made aware of P/A's important report on the Revolution in Architectural Education and wish to congratulate you on it.

EDWARD J. ROMIENEC
Chairman, School of Architecture
Texas A & M University
College Station, Tex.

Grateful to P/A Guru

Dear Editor: It is an injustice to go on continuously reading your Editorials,

which contain such strong insights into the architectural profession, without paying you respectful comments on your many commendable efforts. Your Editorial "themes" are not only highly informative; they are also most provocative and very inspirational to many professional practitioners. In this sense, your contribution to the profession is much accepted and very much appreciated. We are extremely grateful.

ANDREW C. YANOVIK, JR.
Philadelphia, Pa.

Titular Error

Dear Editor: I write to set the record straight on the table of organization of the New York City educational "bureaucracy." My title is Assistant Administrative Director in the Division of School Planning and Research. The Administrator of the division is Adrian Blumenfeld.

AUGUST GOLD
Board of Education
City of New York, N.Y.

[Our source for the title as printed in the article was the Board of Education, whom we phoned in a routine confirmation of title designations. In any case, we regret the error. — Ed.]

Prejudging the Venerable Board

Dear Editor: Much of what you state in the article "Urban School Design" (MARCH 1967 P/A) is true; some is a misunderstanding; some is wrong. Since I am an architect with the New York Board of Education, allow me to present our side of the school construction problem.

As architects for the board, we work under exactly the same conditions as private firms (including competitive cost to the city). The survey by Eugene Hult that you quote is slanted and would never hold up under real scrutiny. Aside from that, we are also, as you write, "dedicated officials and architects who engage the bureaucracy," as we have the same bureaucracy to face.

And just what is that bureaucracy? You never really did say, except to mention custodial habits and suggest (via Mr. Hult) that supervision be given to private firms. As for supervision, consider that both schools — F.D.R. High School and P.S. 45 in Brooklyn — were supervised by the same people, one resulting in an excellent job, while the other had "gratuitous architecture contributed by the contractor in order to cover mechanical equipment." In fact, the architect's plans for P.S. 45 were incomplete and necessitated these additions to his uncoordinated plans.

You might even come over here before prejudging us. We, too, have excellent schools worthy of publication.

GEORGE EARLY
Architect for the Board of Education
New York, N.Y.

[We called the Board of Education and asked to speak to some of their architects. We were told (by a man who was introduced to us as the head of their design department) that this was impossible and we could speak only to Mr. Hult. Talk about what bureaucracy is! — Ed.]

Minimal Gobbledygook

Dear Editor: Last year, with Malcolm Wells, you wanted to go underground. Now, in the article on "Minimal Interiors" (MARCH 1967 P/A), you have gone to indoor starvation. What is this preoccupation with the anti-human that seems to preclude P/A's editorial curiosity?

Why do you espouse this poverty of vision, this hollow kingdom of pristinity [sic], this desert devoid of delight? To say that "the minimal aesthetic is now a clearly discernible direction" is to wear channelized blinders over dark glasses.

Archie Kaplan's gobbledygook might seem impressive to the pseudo culture-blinded status seeker who overlooks the obvious. Smaller furniture and smaller offices are the result of nothing other than economy — real or mislead.

The space capsule your reasoning so poorly analogized to minimal accommodations will be the salvation of our space problems. It will open vistas and environments undreamed of in our puny professional imaginations. Building standard venetian blinds, indeed! How trite!

LAWRENCE LERNER
Saphier, Lerner, Schindler, Inc.
New York, N.Y.

[To report is not to "espouse," and to discuss what we take to be a "clearly discernible direction" is not to be advocating that others besides Archie Kaplan pursue it (although they are). — Ed.]

The Architectural Press: Biggest PR Firm of All

Dear Editor: There are perhaps a dozen architectural firms that have had so much "free advertising" that they are newsworthy in and of themselves. As a result, any building they put up is likely to get published. This obviously perpetuates itself and builds an image in the mind of the large corporate client that is hard for a regional firm to compete with on

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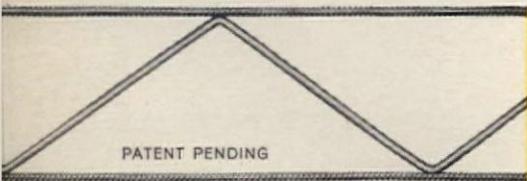


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Continued from page 6

the basis of real architectural ability. It all comes to a head when one of these nationally famous firms gets a job in the provinces, right out of the hands of the local architects. When there is justification in terms of superior design, there is usually very little local opposition. We may not like it, but we do not resent it. On the other hand, when the award is made on the basis of national reputation, by way of "public relations," resentment is very real, and, we feel, justified.

Nashville has recently seen two such occurrences; in one, the plans have been published locally. Not only is the design a virtual repeat of several past performances, but it is one that at least a dozen local firms could have produced, three or four of which have demonstrated they can do better. Although this particular building is competently designed, it is not unique enough in any way to warrant publication; but I will be very much surprised if it is not published simply because of the international renown of its authors.

By and large, most of what you publish deserves it. You should remember, however, that included in your responsibilities as journalists is the one that says to make sure any reputations you build are deserved.

I would urge the architectural press to get out of its Eastern Seaboard provincialism and look around the rest of the country. We have some good, newsworthy buildings down here, designed by local people. *Some* of the buildings are better than *many* we see in the journals.

FRANK ORR
Nashville, Tenn.

[Since we agree with what Mr. Orr has written, we assume he must not be referring to P/A, but some other architectural magazines. — Ed.]

Two Letters, Two Messages

Dear Editor [First letter, dated March 2]: I am truly delighted with how the article on my Camden project (FEBRUARY 1967 P/A) turned out. Thank you for excellent reportage. It was extremely fair . . . Shortcomings such as our inability to properly integrate the new project with its surroundings deserve to be pointed out.

THOMAS R. VREELAND
Albuquerque, N.M.

Dear Editor [Second letter, dated March 7]: I would appreciate it if you would correct certain inaccuracies that appeared in your recent article on the City

Continued on page 16

8 Views

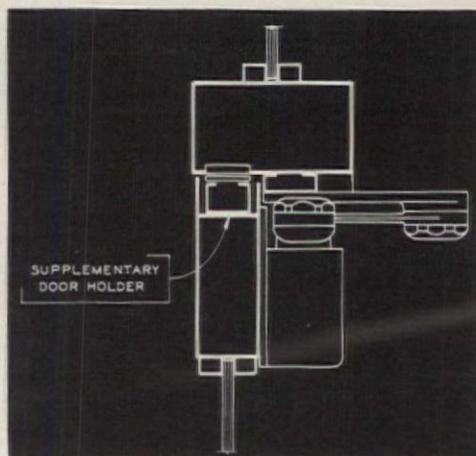
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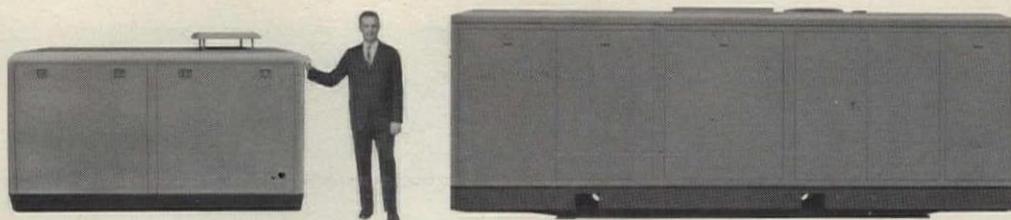
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For details and information on other Haws products—see your Haws catalogs on drinking fountains, emergency eye/face-wash fountains, drench showers and decontamination equipment; and dental fountain/cuspidor units.



On Readers' Service Card, Circle No. 356

Continued from page 8

Centre Urban Renewal Area of Camden, N.J. Although it is undoubtedly flattering to have been given primary responsibility for the project, I would like to set the record straight at once. My own role was a minor one, having been hired by the firm of Candeub, Fleissig & Associates, the prime contractors, as their urban design consultant . . . They, working in close cooperation with the Camden Housing Authority, the Camden City Planning Commission and the greater Camden Movement, developed the final plan, and credit for this achievement must be entirely theirs . . . The City of Camden is proud of its planning record, for which last year it received an award from the American Institute of Planners. The firm of Candeub, Fleissig & Associates can justly identify itself with this success.

THOMAS R. VREELAND
Albuquerque, N.M.

[Candeub, Fleissig and Associates were credited in the article.—Ed.]

Comments on Editorial

Dear Editor: Re the Editorial in the FEBRUARY 1967 P/A: As a PR practitioner for architects, I am frequently disturbed by how easy it is to "get space" in various media often with very little challenge of the ideas or materials we offer by the editors and writers for the publications involved. It is flattering to think that this ease is a simple, natural result of the value of the projects or articles that we are concerned with as a firm. It is even more flattering to think that publication is achieved because of our public relations skill in preparing and presenting material and ideas. But it is much more satisfying to know that our work and our presentations are subjected to scrutiny, question, and evaluation by an outside critical source. A compliant press is no service to the citizen in general news coverage. It is even less so in the professional field.

NANCY WILLIAMS
Public Relations Director,
Daniel, Mann, Johnson & Mendenhall
Los Angeles, Calif.

Old Traditions Still Alive?

Dear Editor: Students are perhaps best familiar with jury critics' statements that tend all too often to be inconsistent, biased, or just plain flippant. P/A is to be commended for publishing at least some of these remarks . . .

In contrast to the other winning projects, the non-motifal projects of Venturi and the humble CPI project by the Yale

Continued on page 18



Grassweave® Pattern

Bamboo® Pattern

Exotic new patterned glass "originals" from L·O·F

■ They're called Bamboo and Grassweave. We created them to complement oriental settings . . . or any modern styling that calls for imagination and excitement. Use them wherever you want glass walls or panels for light, with translucence for

privacy. American-made. L·O·F offers you 11 patterns from which to choose. All are readily available. See them at your nearby L·O·F distributor or dealer (listed under "Glass" in the Yellow Pages). Or call him for samples.

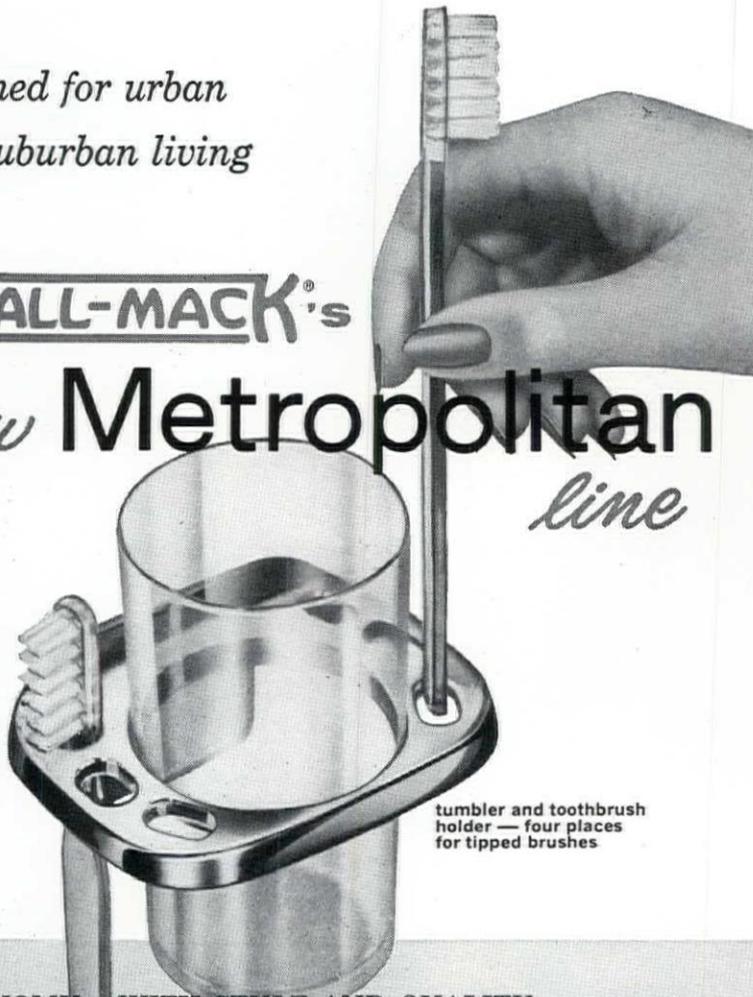
Libbey·Owens·Ford



Toledo, Ohio 43624

designed for urban
and suburban living

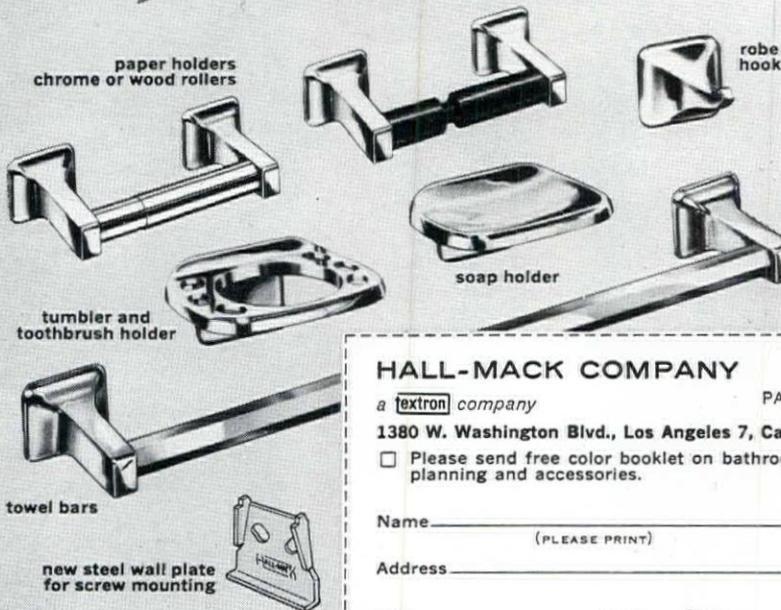
HALL-MACK's
new **Metropolitan**
line



tumbler and toothbrush holder — four places for tipped brushes

ECONOMY... WITH STYLE AND QUALITY Metropolitan's new styling was created to complement any decor... it was designed by Hall-Mack to meet current needs for low budget bathroom accessories. Each fixture is fashioned from highest quality Zamak metal which is first brilliantly polished, then finished in copper-nickel-chrome plate. Cleaning is quick and easy. Gleaming beauty is combined with solid sturdiness in these new accessories to satisfy luxurious tastes where economy is a factor.

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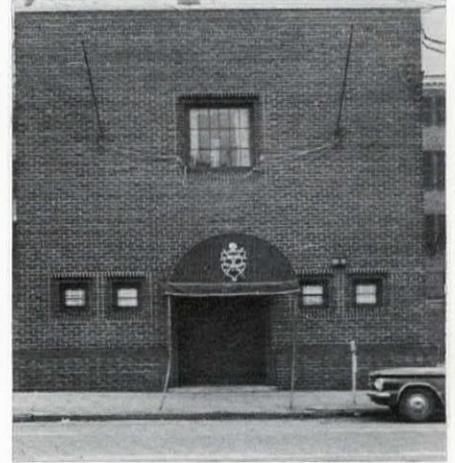
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On Readers' Service Card, Circle No. 427

Continued from page 16

group offer a refreshing change. Although Venturi's work derives from a developing theory of architecture, the CPI project is interesting because it comes from another very old architectural tradition: They cribbed it. I offer this photograph to show that, for all that



may be said about it, the CPI project remains above current fashion. The building is the Knights of Saint Patrick Building in New Haven and is, in fact, around the corner from the Arts and Architecture Building. "Depths to which the art world has fallen?" "All sorts of contrived dirty things?" "The whole sickness?" Such obvious modesty in choice of source inspiration indicates that these remarks by the unnamed jury member can only be a dart aimed in the wrong direction.

PETER C. PAPADEMETRIOU
Arts and Architecture School
Yale University
New Haven, Conn.

Still More Applause

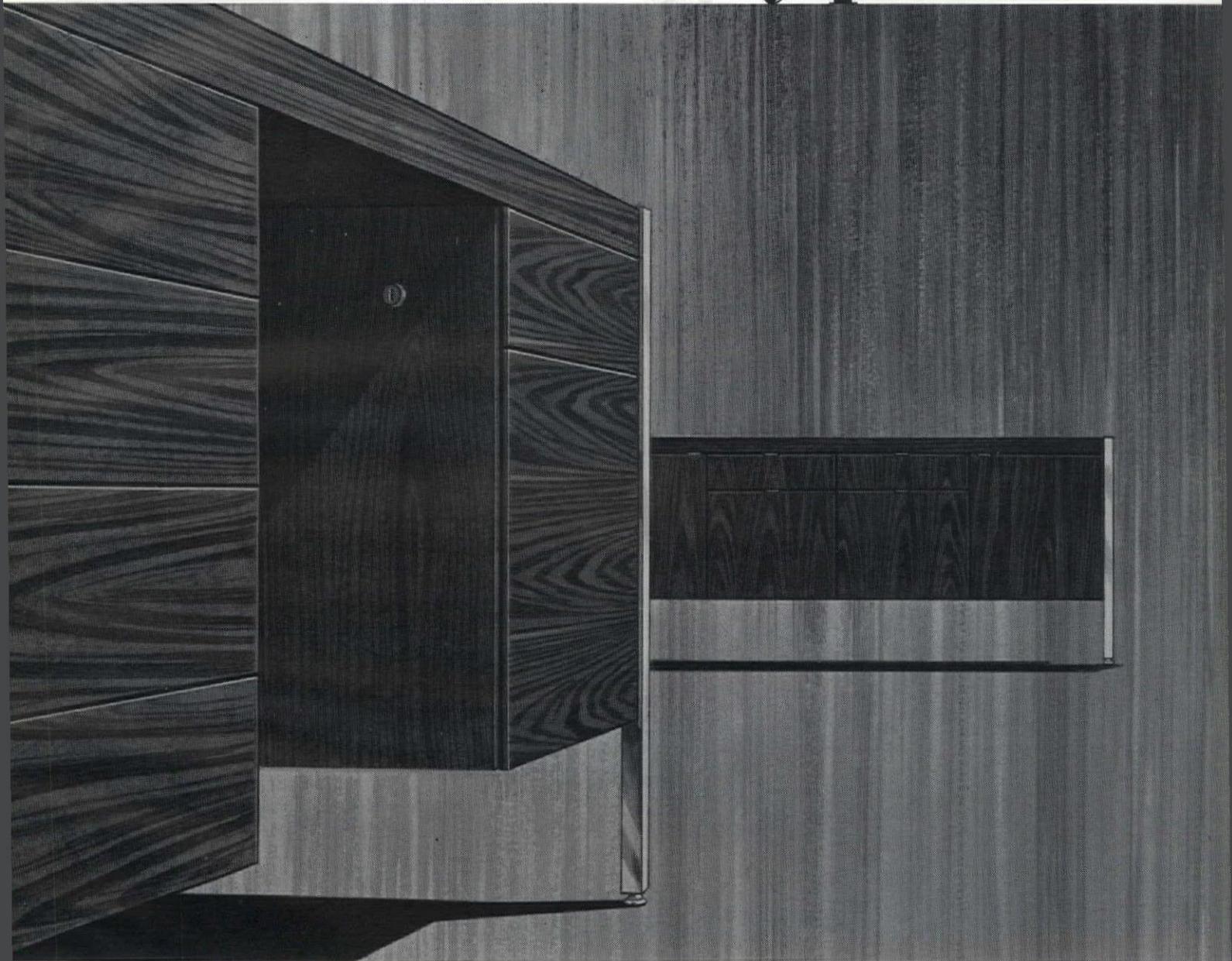
Dear Editor: Belated congratulations on the remarkable achievement of "Toward the Third Millennium" (DECEMBER 1966 P/A). It is more and more clear that those in the scientific and technological fields are convinced of the certainty of major changes. Indeed, this can be proved by extrapolation from present trends. I find it extremely encouraging that a magazine with such character as yours will provide the basic information required for architects to re-examine the sort of buildings and planning they ought to be doing.

ROBERT THEOBALD
Socio-Economic Consultant
New York, N.Y.

Dear Editor: This is to compliment you on your excellent scientific focus on the future in your December 1966 issue. It is by far the best I have yet read along these lines.

FRANK A. ELLIS
Management Consultant
Montreal, Canada

How to get ahead without any pull



All Myrtle 900 Series Executive Desks are made with mirror chrome drawer pulls. But, for some tastes, that's a little too much chrome.

So if you prefer the 900 without drawer pulls, we'll be glad to send it to you without. Or if you found some crazy pulls in some

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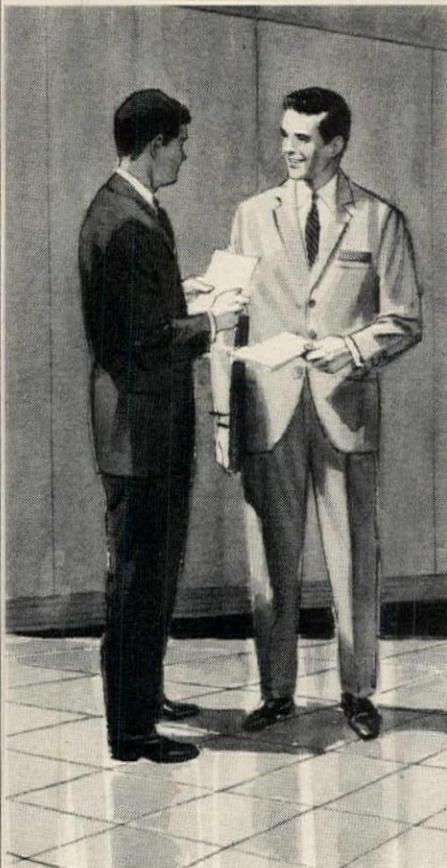


Architects: R. Buckminster Fuller, Fuller and Sadao, Inc.; and Geometrics, Inc., Cambridge, Mass.

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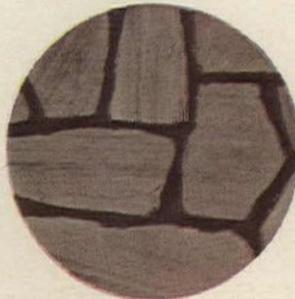
Erawan Garden Hotel, Palm Desert, California. 
W. C. Kruger & Associates, Architects and Engineers.



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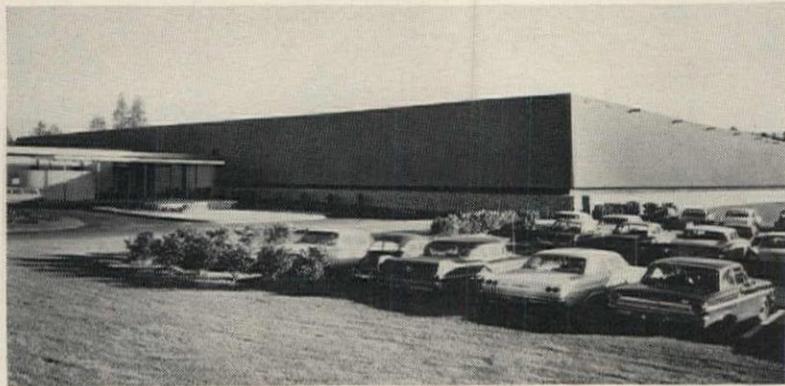
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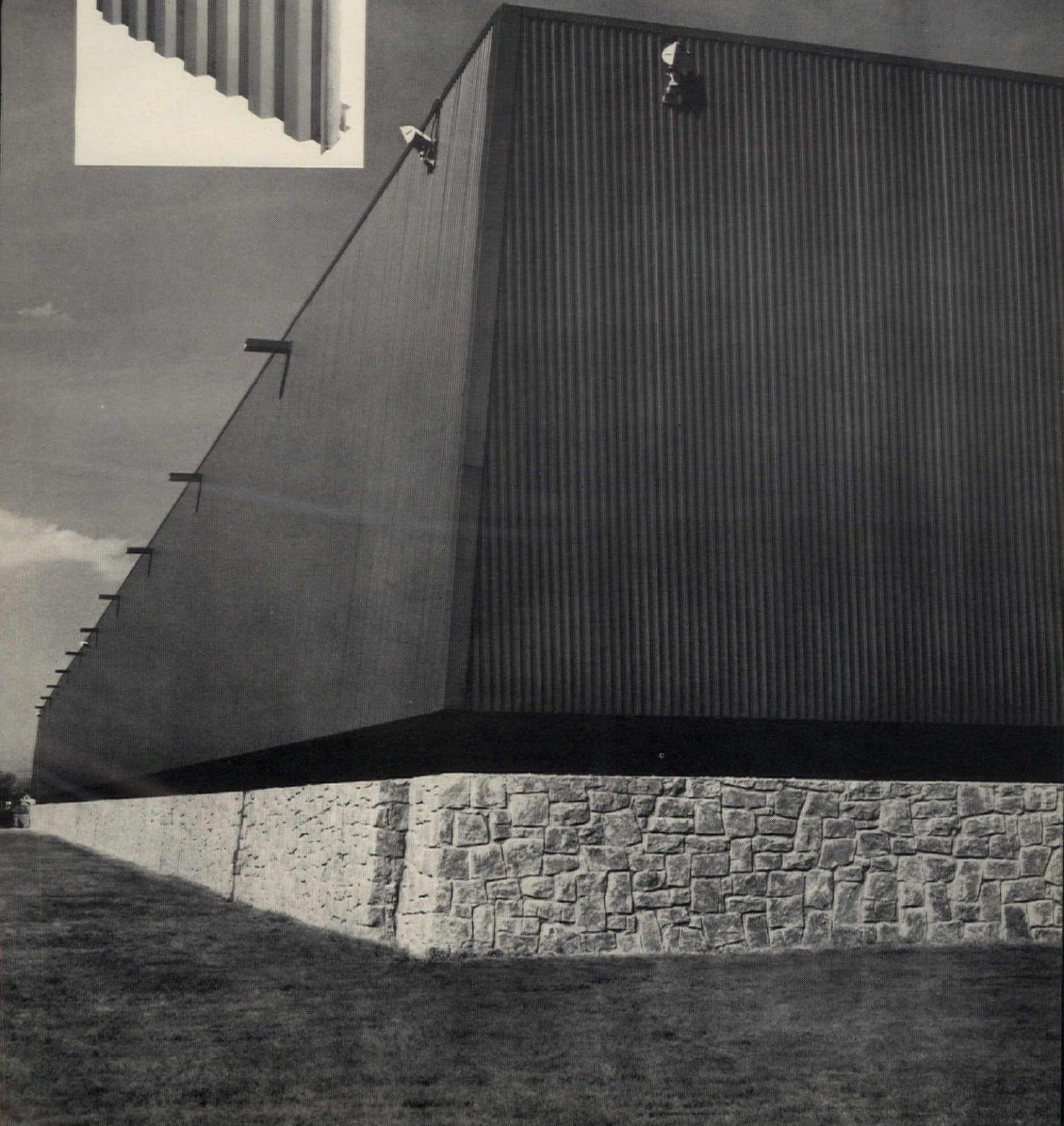
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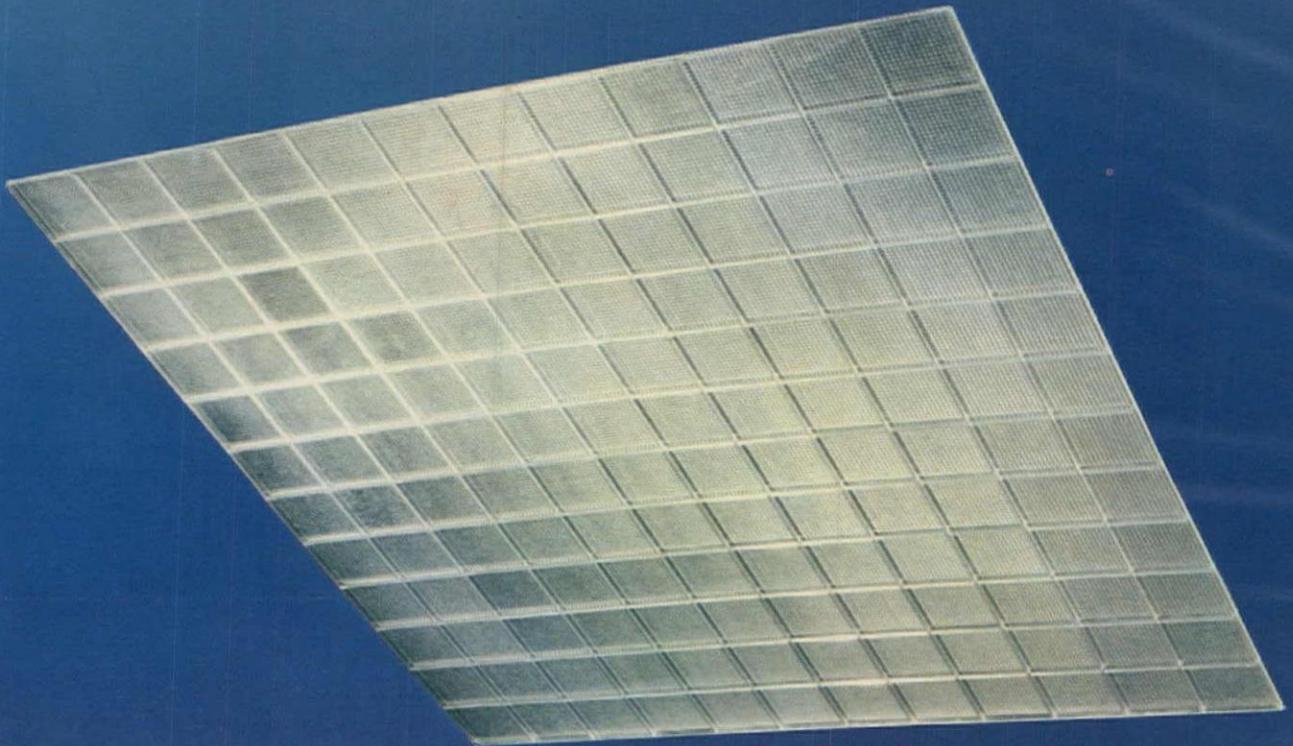
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Holophane's new Controlgrid Controlens[®] has a truly distinctive modular look. You can specify it in sizes up to a big 3'x3'—or in ANY smaller size.

Clean, crisp appearance. Controlgrid's rectangular grid pattern gives it the trim, lean, unobtrusive look so popular in contemporary interiors. The grid pattern of slightly raised ridges gives Controlgrid a unique modular look and helps keep the lens rigid no matter how large the lens area.

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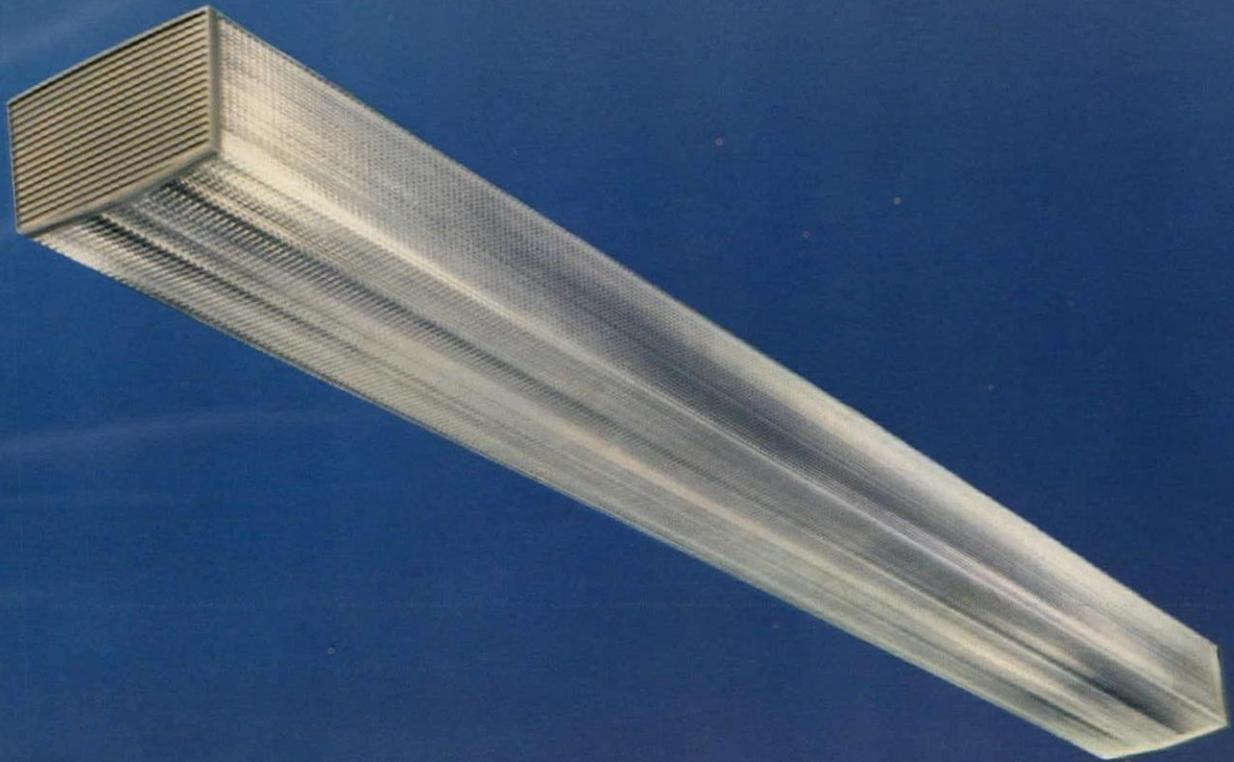
different lighting needs while keeping appearance uniform *throughout* your design.

Precision light control. Controlgrid's prismatic structure is carefully engineered to deliver the maximum amount of glare-free, prismatically-controlled illumination *uniformly* over horizontal surfaces. You get more light where you need it. And Controlgrid has exceptionally low and even lens brightness—it *never* intrudes on your design.

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Holophane's new 6100 Controlens has the slim styling and specialized performance you need for lighting corridors, library stacks and similar areas.

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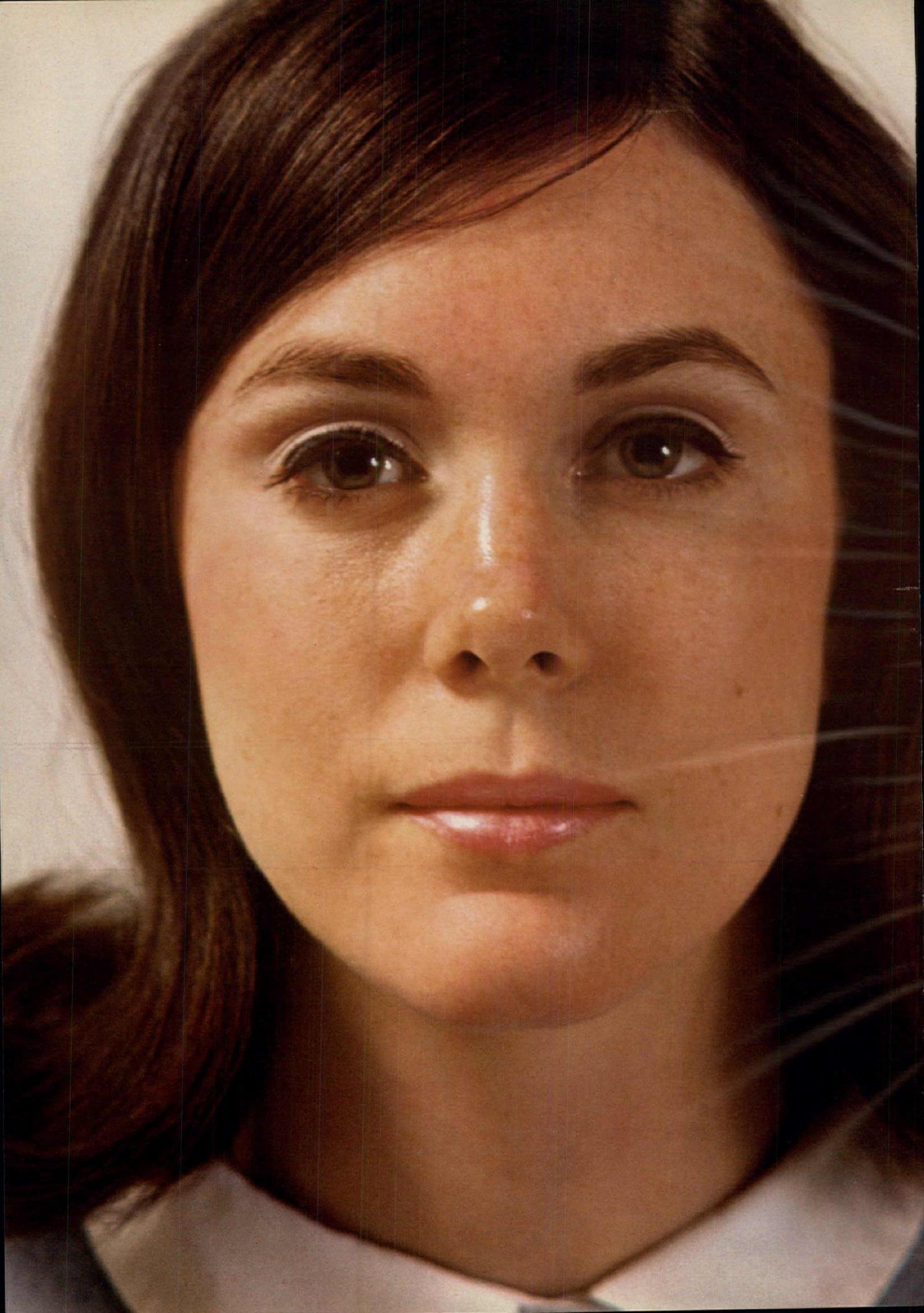
Low and even lens brightness. A unique configuration of linear prisms obscures the lamp, illuminates the lens evenly and unobtrusively. There's no socket or lamp-end darkness. And since the lens attaches to its fixture by its rugged endcaps, it functions like a frameless Controlens with no visible hinges to mar appearance.

You can specify both the Controlgrid and 6100 lens in the fixtures of dozens of leading manufacturers. For full information on these newest Holophane lenses, write: Dept. G-5, Holophane Company, Inc., 1120 Avenue of the Americas, New York, N.Y. 10036.

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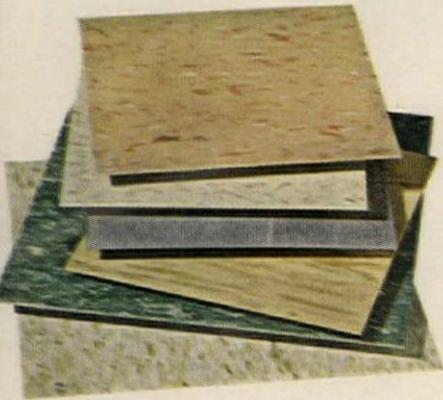
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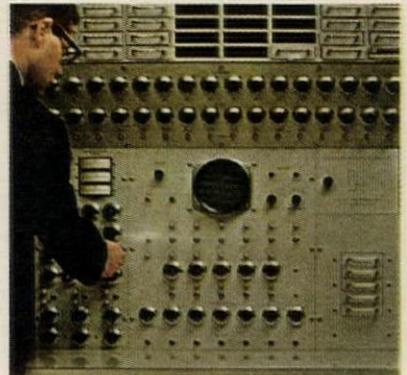
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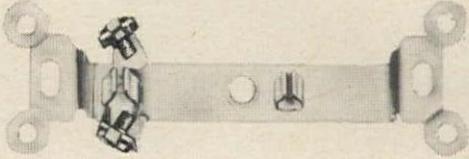
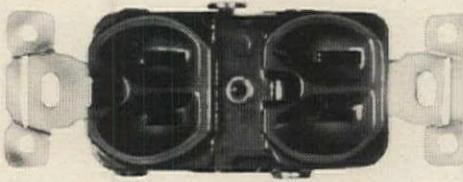
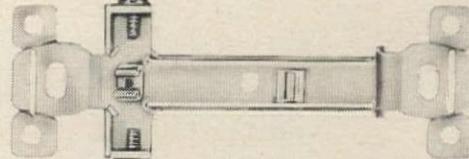
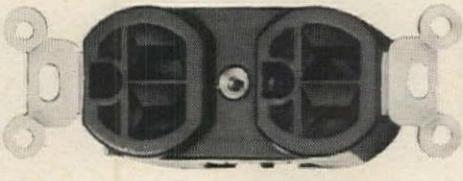
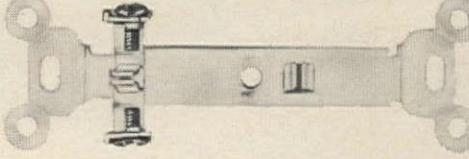
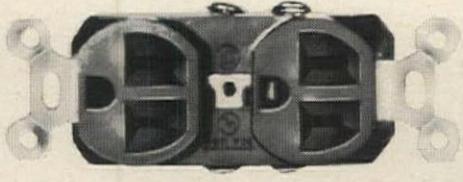
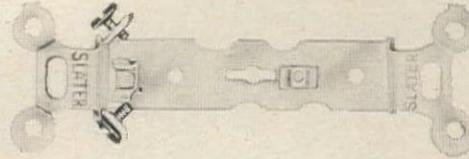
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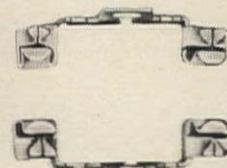
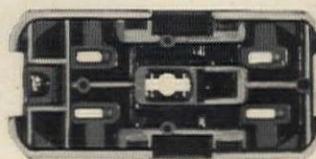
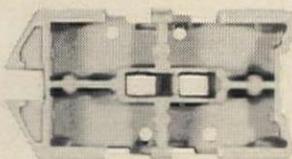
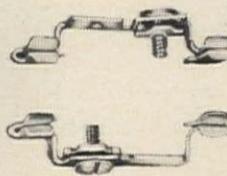
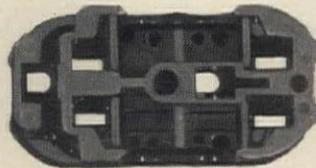
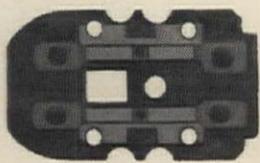
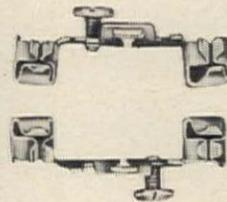
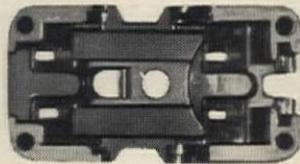
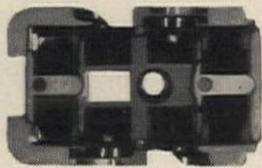
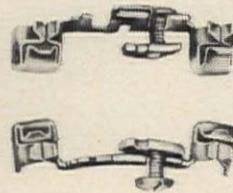
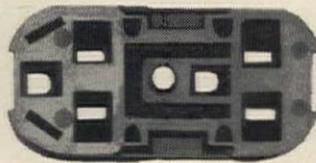
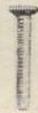
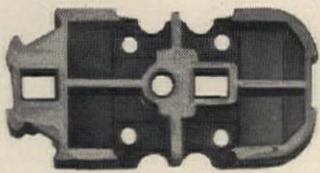
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When was the last time you took a wiring device apart to closely examine the components and the quality? Chances are not for some time. If you had, you would have discovered some very interesting things are happening in wiring device design, performance and capability. The comparative facts on the four leading brands of heavy duty, specification grade wiring devices are detailed above. See what we mean? Still skeptical? Write for free samples . . . take them apart . . . Then you'll know why Slater is the one to specify.



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The Blind Bind

(Or, how the few dollars
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The Blind Bind incubates slowly. You won't feel it the first year. Possibly not even the second. It may take 24 to 36 months before a building manager begins to feel the squeeze.

And even then, it starts with one or two isolated calls—a torn tape, a frayed cord, some slightly skewed slats. Minor annoyances. A few service requests. So you send up the maintenance man. That's what he's being paid for, isn't it?

The subtle shift

A little time passes and the Blind Bind quietly matures into Phase 2. More calls. Not enough to really worry about, still. But somehow, the crisp, bright "look" of the place has become imperceptibly dimmed. You get a few complaints about the window washing service. A sprinkling of new paint job hints. And then, the first *real* indicator—prospective tenants are writing, "New venetian blinds" on your leases.

Phase 3 is noisy

Blinds are "singing" in the breeze...and crashing to the windowsills. Pullcords are beginning to look like leftovers from a Boy Scout knot-tying contest. The Blind Bind has become more than a nuisance. You've already spent several times the money you felt so expansive about saving when you awarded the original blind contract. And you've suddenly realized that the only sensible way out of the Blind Bind is to expand your budget *and* your quality standards in the first place.

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We'll furnish some interesting cost analyses for your digit-boys—numbers that show how direct labor costs for *all*

blinds (measuring, cutting, installing, etc.) are almost identical. Without resorting to a computer, you'll see clearly how more expensive FLEXALUM Twi-Nighter blinds become less expensive as soon as you add in the higher maintenance costs and faster replacement rate of lesser blinds.

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P/A NEWS REPORT

Progressive Architecture's Monthly Digest of Buildings, Projects, People and Products

May 1967

Breuer to Design Wing for Cleveland Museum

CLEVELAND, OHIO. Following closely the success of Marcel Breuer's Whitney Museum in New York, an announcement was made last month that Breuer's firm will design an addition to the Cleveland Museum of Art. Although details of the design are not yet available, a spokesman for the museum says that the new wing will be designed to house the museum's educational activities and will include a TV studio, an auditorium, a special exhibits hall, and offices.

THE ROAD TO APATHY IS PAVED

MILWAUKEE, WIS. Apathy runs a lot deeper than beer in Milwaukee, or so it seems. Their beautiful lakefront threatened with the blight of 3.3-mile freeway extension, Milwaukeeans dribbled to the polls early last month and voted, in small numbers, for the blight.

No one seemed to care much, least of all the two newspapers, both owned by the same company, which carried hardly a mention of the referendum, then, after it was over, said the freeways had already eaten up 100 acres of Milwaukee parkland and that such waste should stop. It certainly should. But it won't, of course.

Milwaukee, like Mrs. Wentworth Brewster in the Noel Coward song, is off in search of excitement. After 30 years, during which construction activity in the downtown area barely stirred, it is awakening to a binge of building. The attitude seems to be that, if it is to be built, it must be all right — never mind how or where.

Strangest of all is the tale of the referendum. Last fall, 48,000 supposedly irate citizens signed a petition to bring the Lake Freeway to a vote. Last month, the vote was held and only 35,712 voters marked their ballots against

it. They were outvoted almost two to one. In Milwaukee, it is a lot easier to vote if someone brings the ballot to you.

Meanwhile, in New Orleans, the Bureau of Public Roads, which strikes with equal lugubriousness on many fronts, is revising its plans for the expressway, which will knife between the river and the Vieux Carré. For that particular stretch, it will outfit the expressway with a wrought-iron railing and connect its supports with concrete arches.

This flagrant cosmetic sop was thrown up in an attempt to bring a vocal New Orleans anti-elevated expressway group to heel. Although the vast misguided self-interests of downtown commercial groups, which are pushing the expressway, have much of the power in the palm of their hands (including the Mayor, the State Highway Department, and the local newspapers), a valiant band of resisters keeps sniping away with new studies and new alternate plans. Maybe they are gaining ground; they evidently have Washington a little worried.

Building Suppliers Form Mortgage Company

AUSTIN, TEX. Six major U.S. corporations have pooled resources to form a piggy-back lending organization, primarily for new homes. Known as Home Capital Funds, Inc., the corporation is backed, at this point, by Andersen Corporation, Armstrong Cork Co., Kaiser Industries, Masonite Corp., Reynolds Metals Co., and U.S. Plywood-Champion Papers, all suppliers of building materials. What Home Capital will do is participate in loans with an institutional mortgage lender to make possible a lower down payment loan than the institution can make alone. With this cooperation available to the borrower as a single package, down payments may be re-

duced to 10% of property value. Although lending volume during the first year is expected to be moderate, one spokesman for the group says, "This joint loan program will continually expand and eventually could be a substantial factor in the home mortgage field."

REFUSE: CIVILIZATION'S BY-PRODUCT



Melted and baled car bodies.

Yong Song Kim is one of the wealthiest, most powerful men in Uijong-bu, a small South Korean community about an hour's drive south of the 38th parallel. His home is constantly filled with persons seeking favors; his mahjong games last long into the night. Kim's wealth and prestige spring from a single fact: He has the trash concession at the nearby U.S. Army base. Almost everything the Army throws out and Kim collects — tin cans, bottles, waste paper, food scraps — is saleable to the sadly under-nourished Korean economy. Kim's situation, although exalted, is not unique, for the amount of salvageable waste thrown out in many parts of the world is reaching monumental proportions, bolstered by sometimes alarming gains in populations and prosperity. Even in New York City, an entire subculture of garbage scavengers exists — men and women who ravage trash baskets to scratch out a living by selling their findings. One such man told a news-

paper reporter not long ago that he could make \$100 a week if only he had a bicycle.

Perhaps if all the world's trash could be collected and resold by people like Kim, the gigantic garbage disposal problem, which literally threatens to engulf the U.S., would not exist. In New York City alone, which spends \$10 million a year more on trash collection than any other city in the world, it is estimated that 6 million tons of garbage are collected each year, enough to bury Manhattan Island 16" deep. This mass of trash is collected by an army of 9675 sanitation department workers — one trash collector for every 835 New York City residents.

Each U.S. resident disposes of 4.5 lbs of refuse a day. California collects 12 million tons of municipal refuse each year. Garbage and trash, of course, are not the only waste. In California, for instance, an estimated 3,300,000 tons of sewage is generated in a year. And throughout the U.S. the obsolete discards of an affluent society dot the countryside: car bodies, refrigerators, dishwashers, construction rubble.

Landfill — As the sheer bulk of our waste increases, so does the urgency of deciding either to do something about it or to live with it even more intimately than we do now. For many years, New York City and other metropolises have been using waste as landfill. Bottles, tin cans, and incinerator ash, layed in layers with earthfill covers between them, make adequate landfill. Kennedy International Airport and Lefrak City (the housing development for 40,000 people in New York) are built on landfill, for example. But space for landfill is not everywhere available. Despite a recent offhand remark by New York City Sanitation Commissioner Samuel J. Kearing, Jr., that "looking at infinity, the answer will of course be the Atlantic Ocean," Kearing himself predicts direly that the city will



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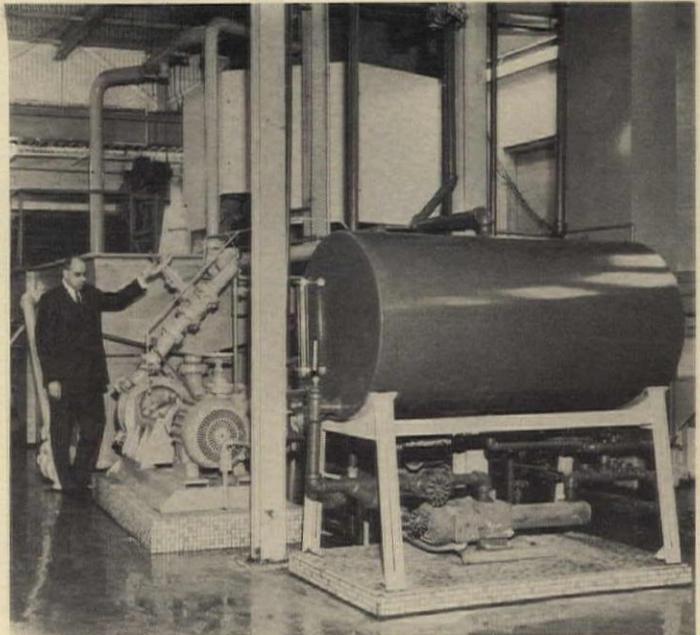
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The Melt-Zit Destructor.

run out of landfill space in eight years. For one thing, dumping at sea has been halted by a U.S. Supreme Court ruling since 1934. For another thing, any time a new landfill site is selected, a giant protest arises from conservationists and from people living in the area. Right now, five landfill sites are used regularly for refuse dumping in New York. When these are filled, no one knows what will happen. "New York," Kearing says, not entirely metaphorically, "is in a real crisis." So is San Francisco. Bay Area marshes are now being used for landfill there, with what many warn can be dire consequences to wildlife and even climate. In 10 years, these marshes will be filled if dumping continues at its present rate. By the end of the century, according to a Bay Area planner Robert Cornish, enough refuse will have been carted into the Bay to cover 50 square miles to a depth of 20'.

Chopping, Shredding, and Pulping — Obviously, something else must be done to rid us of the debris of our civilization. Fortunately, a handful of persons are beginning to worry about doing just that. Kearing, for example, is trying several things. He recently asked the U.S. Public Health Service for \$1,300,000 to build a prototype shredding plant to chop up bulky waste from demolition and con-

struction sites. It could handle timbers 18" or more in diameter and up to 80' in length, chopping them into predetermined, more manageable lengths, perhaps 2' to 3'. "We also must dispose of . . . discarded household furniture, including dressers, tables, sofas, etc.," Kearing goes on. "In the lumber products industry, there is a well-developed technology which can convert logs fresh from the forest to pulp. But we are presented with heavy timbers to which are fastened a variety of tramp materials, such as heavy spikes, concrete, metal lath and plaster." Sheared into manageable lengths, these items can be shredded into chips, then fed easily to an incinerator or carted away as fill.

From Trash into Electricity — Used infrequently in the United States, but much in use in Europe, are plants that burn refuse to generate steam. Cost of fuel in Europe, where oil and even coal must be imported, make these plants economical; and because of the double service performed, the attractiveness is heightened, even though garbage is not an efficient fuel, and although the residue ash (sometimes as much as 45%) still leaves a disposal problem. Cost of incinerating refuse is around \$6 a ton. In New York City, with costs of other fuels being what they are, it does not seem economically feas-

ible to burn garbage to create electricity.

Nonetheless, a delegation of representatives from the city Sanitation Department and the city's electric utility, Con Edison, recently completed a tour of refuse-steam-electricity plants in Europe, and a report of their findings is on Mayor Lindsay's desk. European plants in Rotterdam, Paris, Munich, Stuttgart, and Amsterdam burn refuse to generate electricity. One consideration that makes their operation especially attractive is the lack of sulphur in their smoke-stack fumes. For this reason alone, New York City Air Pollution Commissioner Austin Heller is pressing the idea. In the U.S., such plants have not always been so salubrious. In Atlanta, the Magnolia Street incinerator, which since 1939 has converted refuse into steam to be sold (500,000 lb of it a day) to the Georgia Power Company, is one of the city's worst sources of air pollution. Over the years, the plant has more than paid for its cost; this year, however the city is beginning improvements on it, including a complete filtration system that will cost about \$1,500,000.

The Diseases Have Side Effects — Pollution of both air



Furnace in France melts car bodies.

and water is a serious side effect of incinerators. Elmer Kaiser, a senior research scientist at New York University's School of Engineering and Science, has designed an incinerator which, outfitted with gas furnaces and an air blower, can achieve an efficiency of 90%. But if a water wash is added to form a slurry that is flushed down the drain

(an optional addition) not much has been achieved except the conversion of a large amount of one type of waste into a lesser amount of another.

Fly ash from incinerator chimneys is another obvious pollutant. Both Con Edison in New York and Detroit Edison have installations in which they collect fly ash from their chimneys electrostatically and convert it, under heat and pressure, into building blocks. There is, however, little market for these blocks, and fly ash will probably remain a by-product of waste disposal until we have stricter antipollution laws.

Stricter laws are about to take effect in New York. When they do, Sanitation Commissioner Kearing expects to collect 10 million tons of garbage a year instead of the present 6 million. (He feels that apartment houses and office buildings, no longer able to meet pollution requirements and unwilling to improve their incinerators because of the cost, will shut them down.)

A Possible Palliative — But in the midst of this rather bleak picture is an area of possible hope. The American Design and Development Corporation in Whitman,

Mass. has a pilot disposal plant that may be to waste disposal what the steel beam was to construction. According to the developers, the "Melt-Zit Destructor" acts a little like the Hulk, the current comic book favorite, who takes on all opponents and destroys them. It will, they claim, operate on any waste material, not just garbage. It will destroy glass, tricycles, refrigerators, rubber tires, and motor blocks, leaving only a 2% residue, compared to the 30% left by an ordinary incinerator. The secret of such efficiency is, of course, high temperatures. Operating above 3000F, the destructor will melt down anything that can fit through its 6'-sq receiving vault. The hard block slag that results can further be reduced in bulk by running it through a tank of water, where it precipitates out as sandlike granules. These are collected and perhaps can be used as sanitary fill, road construction material, or in shingle and brick manufacture. According to one estimate, a destructor capable of handling 600 tons of rubbish a day could be set up for \$2,500,000 — slightly less than the cost of a regular incinerator. And disposal costs would run about \$3 per ton. So far, no community has put a Melt-Zit into regular operation.

What Will the Future Think?

— In the meantime, the most attractive way to dispose of waste is still an incinerator that finds an outlet for its energy in some important task, such as the production of electricity. In Hempstead, L.I., a refuse-burning plant uses its energy to convert salt water into fresh water. Using a water-spray method of collecting fly ash, its operators claim to produce only half a pound of air pollutants per 1000 lb of flue gas. In Saudi Arabia, the government has let out bids for a sewage-disposal plant that will reclaim 20 million gal of sea water a day. Other waste disposal efforts now in use are at best spotty. Elmer Kaiser perfected a furnace that burns down car bodies, which are then baled (see photo) and sent off to steel companies for reuse. Some tin cans can be reused as metal base on which to precipitate copper in that metal's manufacture. And, occasionally, one hears from the poets of press agency that some client is doing his part to rid America of trash. He is, they tell us, using tire casings as the backing for carpets, or picking up wood scraps and making them into executive yo-yos.

It is probably not true that the degree of a nation's civilization is directly proportional to the amount of garbage piled up per capita. But American urban dwellers act as if it were. At the rate things are going, they may have claim to a degree of civilization that will make future historians sit in wonder.

POETIC INSIGHT

BOZEMAN, MONT. Located in the Rockies about 45 miles north of Yellowstone National Park, Bozeman, with its approximately 15,000 inhabitants, is far from an industrial center in both distance and fact. It has some string bean and pea canning, and some flour milling, but nothing that would mark it as a manufacturing hub. What little smoke does rise from the cannery stacks is soon swept away by the winds that whip through the mountains. One would imagine that the urban evils of air pollution would hardly ripple the thoughts of a Bozemanite. Not so. At least one citizen of this Gallatin County seat is troubled enough by it to turn to poetry. Mitch Olsen, an eighth grade student at Bozeman Junior High, calls his verse simply *Smog*. His English teacher, who was impressed by "his imagination, truth, humor and poetic form," sent it to us.

*The grit, the grime, the soupy fog
Make up the slime we now call smog.
People in cities have a grudge
Against this problem causing smudge.
The fumes and mist that make this solution
Cause industrial cities' air pollution.
The mills that produce this fabulous wealth
Are now endangering everyone's health.
Our physical well-being importantly priced
Is forgotten when we are so enticed.
Cities are now becoming enshrouded
When smoke and fog become too clouded.
Action must be taken or it will occur
That all our clean air will become a blur.*

ELECTRIC CAR PLUGS IN AT NIGHT



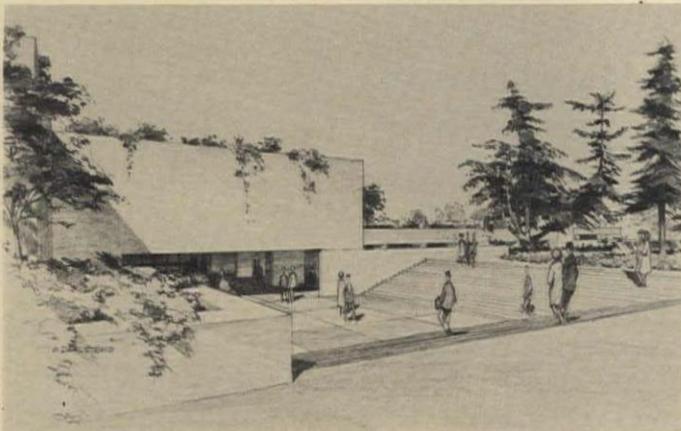
REOLINOS, CALIF. Westinghouse Electric Corporation entered the electric car stakes last month with the announcement of the availability of a homely, two-passenger, battery-powered car. Capable of trips up to 50 miles without a recharge at top speed of 25 mph, the car is being offered to the public as a means of dependable, short-range, urban transportation. According to Westinghouse the car, called the Marquette, should last for 10 years without a major repair, operating at a cost of about 1¢ a mile.

It is powered by a set of 12, conventional, 6-v lead acid

batteries, which are located under the rear package shelf. Weighing 66 lb each, the batteries should be good for a day's driving, and can be recharged by merely plugging the battery charger that comes in each vehicle into an ordinary 110-v electric outlet. Westinghouse maintains that each set of batteries can take up to 600 recharges without replacement, which would allow a Marquette owner to drive for about two years before sinking \$300 into a new set of batteries.

This year, Westinghouse plans to turn out only a few hundred of these vehicles.

LANDSCAPING STARTS AT OAKLAND MUSEUM



OAKLAND, CALIF. Landscaping, now under way at the newly constructed Oakland Museum, will turn the Kevin Roche John Dinkeloo & Associates-designed structure into a veritable cornucopia of verdure. With its three wings arranged on different levels, the roof of one becomes the garden terrace of the next. "It will be a warm friendly informal palace," comments

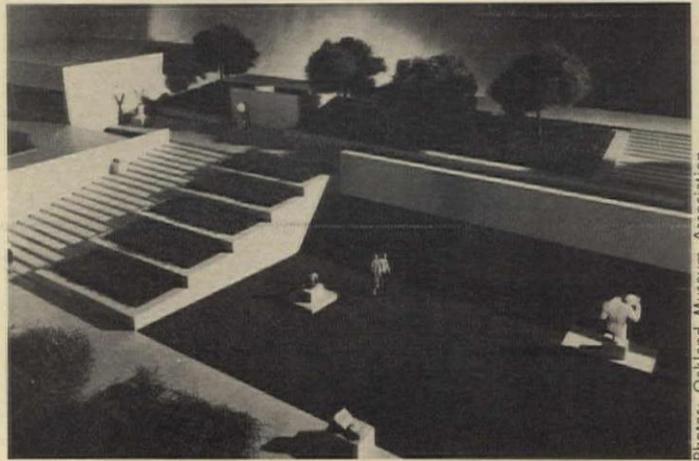
Roche. And it is probably, in great part, this concern for the land that led Arthur Drexler of New York's Museum of Modern Art to call it "The most brilliant concept of an urban museum in America."

Fronted by a large (200' square) garden plaza, with shaded walks and small courts, the museum will allow the visitors to pass directly

from galleries out into the garden, where they view sculpture in natural settings. Landscape architect Dan Kiley points out that "a definite landscaping aim is an overgrown effect of planting as soon as possible. This building won't be hurt by luxuriant growth." What Kiley plans is

a suffusion of groundcovers, flowering shrubs, flowers and, of course, trees. Already on the site are a cluster of 7 redwoods and 12 cedars.

The \$7-million museum overlooking Oakland's Lake Merritt is scheduled to open in 1968.



Photos: Oakland Museum Association

NEW P/A EDITORS

Two recent additions to PROGRESSIVE ARCHITECTURE'S editorial staff bring with them a sound background in architectural and engineering journalism.



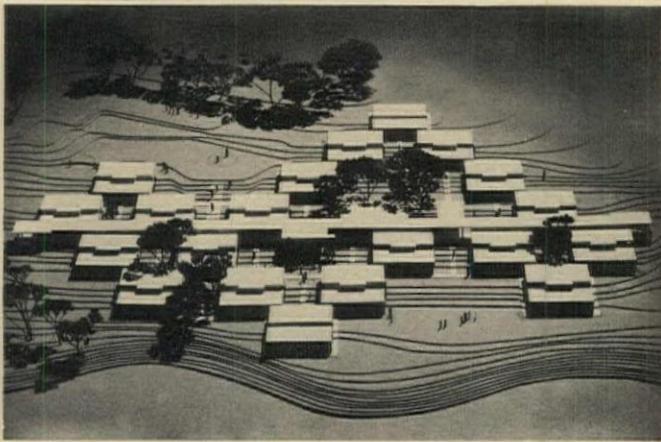
Walter C. Kidney comes to the P/A staff from Random House, where for six years he was an editor on the *Random House Dictionary*, in charge of architectural, building, civil engineering, and furnishings terminology. Kidney, who has a degree from Haverford College, also spent two years as an editor with H.L. Yoah & Company, industrial consultants. His active participation in architectural matters is long standing, and he is a member of the Victorian Society in America, the Society of Architectural

Historians, the Society of Architectural Historians in Great Britain, and the National Trust for Historic Preservation.

David R.W. Teviotdale, who will edit the Materials and Methods section of P/A, received a degree in mechanical engineering from the University of British Columbia. For the past four years, he has been an editor with the weekly construction news-magazine, *Engineering News-Record*, a McGraw-Hill publication. In addition to his editorial experience, Teviotdale served in the Army Corps of Engineers, was an application engineer for the Otis Elevator Company, and for a time was a management consultant.



CLUSTERS OF THE ELDERLY



ENFIELD, CONN. The first 4 apartments of a proposed 80 units of elderly housing are underway here in this small (15,000 population) town near the Massachusetts border. Arranged 4 apartments to a cottage, with the first 10 cottages clustered along a covered walkway (see site plan), the housing will consist of 75% efficiency apartments and 25% one-bedroom apartments. The clusters are so spaced that each three cottages share a garden. Also included in the clusters will be

a common room, opening off the covered walkway. Financing comes from the state under Connecticut's elderly housing law. But the housing will be administered by the local housing authority, which will charge a minimal rent, with the state making up any deficit.

Units will have brick exteriors over masonry fire walls. Cost for the first 40 units is \$420,000. The architects of the project are Olson & Miller of Hartford, Connecticut.

REPAIR, DON'T RAVAGE, SAYS TASK FORCE REPORT ON CAPITOL'S WEST FRONT

WASHINGTON, D.C. The annual battle between architects and non-architect J. George Stewart, who carries the title of "Architect of the Capitol," is usually reserved for the last months of the yearly Congressional sessions. This year, however, it got a sudden and powerful early boost with the issuance, early in April, of a report by a special five-man committee of the AIA. In effect, the report called for junking of Stewart's entire \$34-million plan for extending the Capitol's West Front (the side facing downtown Washington to provide nearly 4.5 acres of added space for restaurants, tourist accommodations, and committee rooms, and, incidentally, cover up the last remaining vestiges of the original building; see p. 61, AUGUST 1966 P/A).

The AIA committee recommended, instead:

□ Removal of the accumulation of more than 160 years of paint and other preservatives

on the admittedly crumbling sandstone outer walls, to show the honorable scars of years of service.

□ Replacement of such of the stonework as has cracked or deteriorated beyond repair — but with original material.

□ Strengthening of foundations and other areas, which admittedly show signs of damage from frost, weather, and settlement, by existing or new techniques, such as "needling" (use of temporary steel beams to carry load while other areas are repaired); drilling of diagonals through the old masonry foundations, and reinforcing them with grout and reinforcing bar and the like.

□ Provision of any extra space for Congressional activities in other buildings through preparation of a proper master plan for the whole of Capitol Hill.

The committee made no estimate of the cost or time that would be required to carry out its recommenda-

tions, though it recognized that "patience" is necessary, and would be necessary even if Stewart's plan for extension were carried out. (Testimony of engineers and others before a Congressional committee considering extension a year ago produced estimates ranging between \$20 and \$50 million, as cost of restoration rather than reconstruction.)

The five-man AIA committee was appointed last year — after it became apparent that Congress would take no action on Stewart's proposal — to make a study independent of any others previously conducted by AIA, and the more than 10 years of studies that have already been made. The committee included: Samuel E. Homsey of Wilmington, Del., who acted as chairman; Francis D. Lethbridge and John W. Stenhouse of Washington, D.C.; Louis Rossetti of Detroit; and Norman C. Fletcher of Lexington, Mass. Carl Hansen, a structural engineer, assisted the group.

After study of previous engineering reports, a one-day meeting, and a one-day visit to the site as a group, the committee found:

□ The West Front is in a state of disrepair. Numerous cracks are in evidence on the exterior, some window lintels and keystones have cracked and slipped; several of the architrave stones have sagged; the foundations, at some points, are not far enough below the finish grade to escape frost damage. "However," the report said, "none of the defects appears to indicate that danger of collapse is imminent or that correction is impracticable."

□ The recommendation to extend the West Front to provide members of Congress and visitors with additional space and facilities was made without first conducting an adequate survey to indicate need. "If modern facilities and office space are critical necessities, should a 19th-Century building be reshaped to meet 20th-Century needs?"

□ The West Front can be restored and its structural weaknesses corrected. "Admittedly," notes the report, "it will be a job requiring skill and patience. But if the decision to restore the Capitol is made, our building technology is

certainly adequate to meet the challenge. Restoration would be, however, a costly undertaking and would entail some inconvenience."

The committee found no direct evidence that lateral thrust in the present West Front has caused problems; the building is not out of plumb. Thus, while the structure is "experiencing" some vertical settlement, it is not "slipping down the hill."

The AIA's accompanying statement added that "doubt is cast on the need for a buttress, although this is one of the arguments made by those who favor an extension." And AIA President Charles M. Nes, Jr., noted: "The American Institute of Architects believes it would be a mistake to cover up the last remaining exterior portion of the original Capitol. We strongly urge that the greatest symbol of our country be preserved."

The committee, incidentally, disposed of the argument that the original sandstone was not a suitable material to begin with: "Though this stone is obviously inferior to some other stones for exterior use, so is marble. The difference is relative. The same quarry from which came the facing for the Capitol furnished the facing for the first wing of the old Patent Office (in downtown Washington, and now being restored as an adjunct of the Smithsonian Institution). There is no serious deterioration of that surface; however, the adjoining wings of marble are badly deteriorated. There is good reason to feel that inferior construction methods . . . contributed considerably more to deterioration than the facing material itself.

"The Task Force supports a program of preservation in the purest sense of the word. First of all, every bit of exterior paint should be carefully removed and the original stone exposed. Only those stones that are structurally unsound should be replaced, and those stones should be replaced with the same material as that of the original walls. It is not felt that a restoration of the West Front for 'cosmetic' reasons is either necessary or desirable. . . . After removal of the existing layers of paint

and replacement of damaged stones, it will then be possible to determine whether the wall should remain exposed or should for aesthetic or protective reasons receive a coating that will not entrap moisture as before — i.e., will allow the stone to breathe.

"It has been stated in support of the extension that no restoration of the existing building would be permanent. Very little is permanent, not even the proposed extension. Constant maintenance is the only safeguard against failure of any construction. . . ."

— E.E. Halmos, Jr.

It is doubtful that this latest flurry by the AIA will carry

any weight with the Capitol Architect, whose office has in the past been decidedly cool to informed professional comment. Already there are murmurs of pique about the irrelevance of a study based on two days of observation of actual conditions versus a plan for the addition worked out over a 10-year period. What the AIA is calling for, although belatedly, is the need for planning. Without it, any addition to the Capitol will merely be obsolete in 15 or 20 years, and covered by yet another addition. The nation's Capitol, it would appear to us, should be more than just another house that Jack built.

BATTERED SYDNEY OPERA TOTTERS TOWARD FINAL BELL

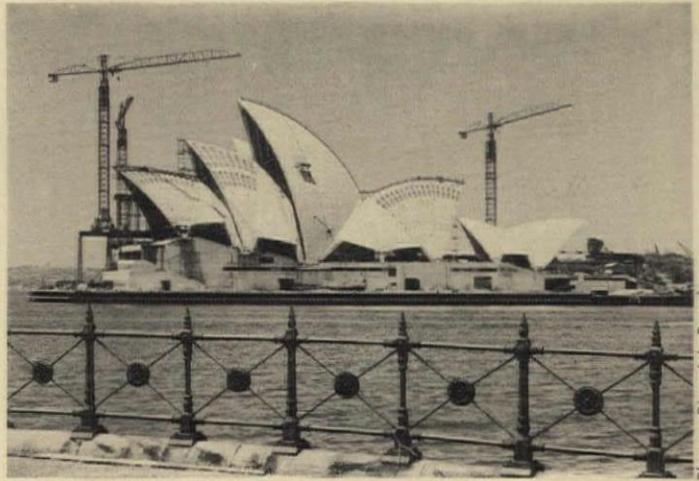


Photo: Pictorial Parade

SYDNEY, AUSTRALIA. Almost from the beginning, since Joern Utzon won a 1957 competition for the design of a House for Grand Opera to be built here, in beautiful Sydney harbor, the house's construction has suffered a barrage of blows from political infighters. Neither the Opera nor the politicians have benefited from the sparring, but it looks now as if the fight will go the distance. For a while, shortly after architect Utzon was fired or walked off the job, the future of the structure was in doubt (see p. 57, APRIL 1966 P/A). Construction problems on the curved, winglike slabs that make up the structure's roof were monumental; so were pressures from politicians who had backed what they thought would be a striking, but modestly scaled, culture symbol for Sydney. Because of these pressures, construction went ahead before sound plans were available, leading to confusion, waste, and ballooning costs. An original cost estimate of \$7,500,000 (U.S.) rose by early this spring to more than \$50 million.

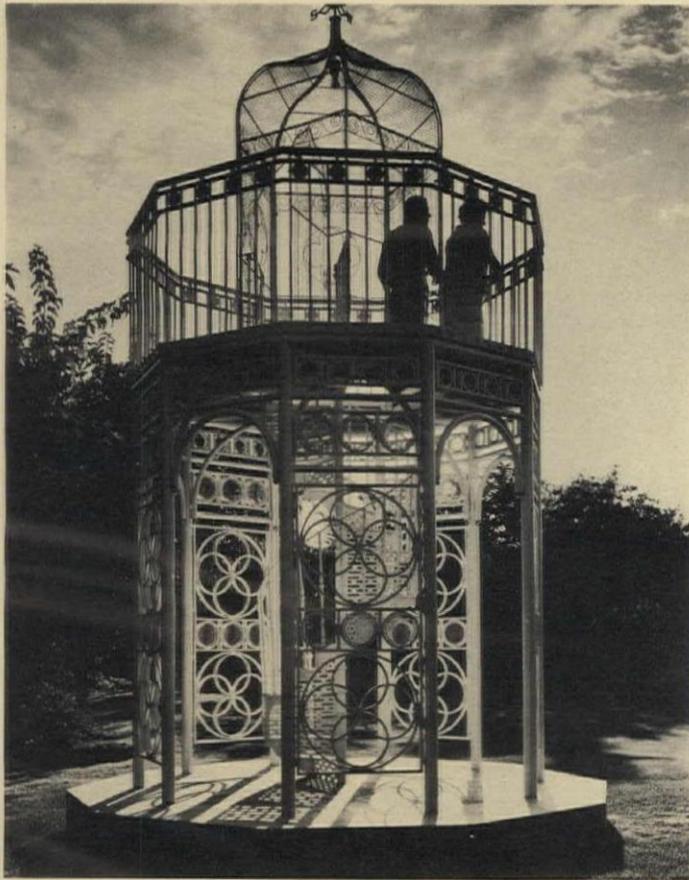
Latest cost boost came from a decision by the State Cabinet to use the 2800-seat main hall for concerts — not opera, as originally planned. Basis for the switch came from dissent among cultural groups in Australia about what cultural activity should take spatial precedence in the Opera House. Opera, it turns out, was down-graded. It will be staged in a smaller hall within the building, one seating 1500, despite protests by the opera company that it cannot afford to play to such a small audience. Further compounding

the opera's misery will be a stage, which, because of the narrowness of the space between the shell-shaped exterior walls, has practically no wings. Some \$5 million worth of equipment imported five years ago for use in the main hall will have to be scrapped — will it become landfill in Sydney harbor? — or sold, or used, in part, in the small hall. With some rearranging, experts feel the small hall's orchestra pit can be made to accommodate the 70- or 80-piece orchestra needed for grand opera.

Actually, changes in Utzon's plans will increase total seating in the house from 4000 to about 6500, partially by increasing the number of auditoria from four to six. In addition to the main concert hall and the opera hall, there will be a drama theater seating about 700 to 750, an experimental theater for 400, a movie house for 700 to 750, and a hall for chamber music, seating 450.

So frequent and confusing have been the changes that New South Wales Minister of Public Works, David Hughes, who took most of the responsibility for Utzon's departure, now says that he wishes everyone could have stuck to Utzon's plan in the first place. But gloom is not all-pervasive in Sydney. Already the International Dairy Congress has booked this as-yet-uncompleted monument to culture for a 1970 convention. And artist Mervyn Smith, who has watched construction since it began and who is now painting what is completed of the exterior shells from a vantage point across the harbor, says

"EVERY MAN SHOULD HAVE A GAZEBO"



SAN FRANCISCO, CALIF. Take a giant bird cage and a cast-iron spiral staircase. Put the cage on steel supports, with teak decking around it. Place the spiral stairs beneath it, so you can get up inside the cage, and from there out onto the deck. What you have is a moon-viewing platform. Architect Morton Rader of Chan-Rader & Associates built the one shown here, in the garden of the summer

home of a Bay Area client, who supplied the cage and the cast-iron stairs. From the top, you can see a lot more than the moon; you can see out over the shrubbery, lawns, and walnut orchard to the mountains beyond.

So pleasing is the platform that the American Iron and Steel Institute cited it last month for excellence in residential construction design in its annual awards program.

he loves the building. "No one could paint it," he points out, "who did not understand the structural aspects of the design — the tension and compression of the beams." Architecture and building are Smith's hobbies.

OBITUARY

Paul F. Pellicoro, senior member of the New York architectural firm of Rogers, Butler & Burgin, died in January at age 46. He was educated at Columbia University School of Architecture and Queens Royal College in Trinidad, W.I. For most of his professional career, he was associated with Voorhees, Walker, Foley & Smith. Later, he practiced independently and served as consultant to Columbia University, as well as other institutions.

PRATT ELEVATES INTERIOR DESIGN

BROOKLYN, N.Y. This fall, Pratt Institute will become the first major university in the U.S. to offer a master's degree program in interior design. It is not entirely accidental that the popular image of an interior designer is that of a hefty, middle-aged lady in a floppy hat. For, at present, any housewife, after completing a few courses in home economics, can, and too often does, call herself an interior designer. She can ostensibly compete with the architect who, after five years of professional training, chooses to specialize in interiors. There is no official distinction.

In part, the Pratt program is designed to define this gap more sharply. In no other field allied with architecture is there greater need for competent educational standards. If successful, the Pratt program should help improve, by example, existing educational standards in that field. Also, since Pratt is a traditional spawning ground for interior design teachers, a generation of better-trained teachers may lead to a generation of better-trained students.

Of the hundreds of U.S. schools offering interior design courses, only about a

hundred have curricula that provide graduates with membership requirements for the American Institute of Interior Designers (AID). Professor Arnold Friedman, associate chairman of the Pratt Interior Design program and president of the Interior Design Council, maintains that even this figure is 10 times too high. When pressed, Friedman can list about 8 schools that, in his opinion, now offer acceptable programs.

The professional practice of interior design is further muddied by a lack of licensing and by the existence of two professional societies that cannot agree on what professional standards should be.

Perhaps by establishing acceptable educational guidelines, the Pratt master's program can make arguments on licensing redundant, for it will take more than licensing to turn interior design into a noncontroversial profession.

C. W. (BILL) NESSELL



C.W. Nessel, one of the best-known figures in the heating and air-conditioning industry, died April 4 at the age of 72.

Nessel was top heating expert for the Honeywell Corporation for more than 30 years. His reputation for ability, warm personality, and gentle humor extended, throughout his career, to the several fields allied with his own.

Nessel's colorful career was marked by his lively and concerned interest in the welfare of others. Before joining the heating industry, he was assistant pastor of a church in Chicago. When illness induced him to leave the ministry, he studied engineering,

and, after obtaining his degree, he worked on the design of telephones until his invention of an usher-signaling device that was adopted by large theaters across the country led him to devote his time to his own business. During the Depression, business slacked off, and Nessel joined the Honeywell Corporation on a temporary basis. This temporary arrangement lasted until his death last month.

During World War II, Nessel served as liaison between the temperature control industry and the Government. Later, as chairman of the National Warm Air Heating & Air Conditioning Association, he did extensive research on residential heating and traveled widely through the U.S., gathering material for an industry-wide committee on this subject.

Nessel's books and dozens of magazine articles on heating and air-conditioning are considered authoritative works in the field.

WHAT THE ARCHITECT SAW



When we told you that TV has an architectural star in "Love on a Rooftop" (p. 80, OCTOBER 1966 P/A), we received a letter from an irate reader who complained that TV-hero-architects were never up to the mark of other professionals like Perry Mason or Ben Casey — the suave bachelor who solves everyone's problems. Architects either play second banana to a talking horse ("Mister Ed"), or are so professionally incompetent that they move into an apart-

ment with no windows ("Love on a Rooftop").

Well, the situation has been rectified somewhat with the debut of "The Invaders" on ABC. True, the architect hero (David Vincent, played by Roy Thinnes) is still something of a dummy: He can't seem to convince anyone that we are being taken over by the little green men from another planet; but at least he is handsome, single enough for a romantic alliance each week, and pretty handy with his dukes. Probably the situation of an architect being unable to convince others of impending doom will not be a new one to most professionals, but it makes for pretty much sameness of plot week to week.

In the episode we saw, Vincent found out that The Invaders were perfecting a species of carnivorous butterfly that would be released from all points of the country and head for dead center in Kansas, laying the United States waste as it went, a form of urban demolition not even Robert Moses has thought of. The architect managed to thwart this menace before the final commercial, but we know that *They* will pop up with a fiendish new device next week, just like a client. Makes you wish for the peaceful old days of Stanford White and Harry Thaw.

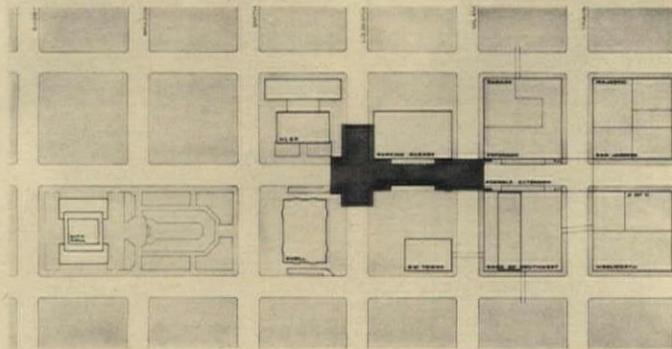
THE CONVERSION OF FLUSHING MEADOWS

NEW YORK, N.Y. Kenzo Tange, Marcel Breuer, and Lawrence Halprin, who were asked last fall to offer suggestions for turning Flushing Meadows into a sports and recreation center, submitted plans to the city late last month. Although drawings and other details have yet to be announced, a spokesman for the Parks Department said that the plans included an indoor basketball arena with seating for 5000 persons, indoor and outdoor swimming pools capable of holding 2500 swimmers, a ski and toboggan slide, a drag-racing track, several restaurants, a small theater, and an experimental complex of dance-rehearsal halls and arts-and-crafts rooms.

Flushing Meadows, site of the 1964-1965 World's Fair, has been slated for parkhood for some time. Since the Fair made no money, the city is putting up the \$81,500,000 thought needed for the conversion. Architects' fees of \$450,000, however, will

come from a Federal grant. In all, 620 acres will be turned to recreational use, and someday maybe, as former Parks Commissioner Hoving once hoped publicly, the site may become the home of a future Olympic Games.

MALL FOR HOUSTON



STREET LEVEL

HOUSTON, TEX. A feasibility study is underway here on the conversion of part of Main Street into an enclosed air-conditioned mall. The plan was originally put forward last year, as one proposal in "Blueprints for the Future," suggestions by the Houston Chapter of the AIA on the growth of the city.

A tentative design for the mall, prepared by local architects Wilson, Morris, Crain & Anderson, consists of excavating Main Street down to present basement levels, three stories below grade. Present ground-level facilities would be maintained and reached from a balcony. Another balcony on the second level would lead to more shops. All automobile traffic would, of course, be banned in the mall, which will stretch along Main from Buffalo Bayou to Pierce. Cross streets bridging the mall would continue to carry traffic, and perhaps shuttle buses would operate in the mall it-



self.

In the forefront of those expressing enthusiastic interest in the mall proposal is Mayor Louis Welch, who believes it would increase real estate values and shore up the tax rolls. Mayor Welch has noticed how people pay money just to go into the Astrodome and look around. The mall, he feels would offer much more to look at — for free.

CALENDAR

This year, the **International Design Conference at Aspen, Colo.**, has been scheduled for June 18-23. Program Chairman is Craig Ellwood. Arrangements for accommodations and registration may be made by writing to: International Design Conference in Aspen, P.O. Box 664, Aspen, Colo. . . . MIT's

School of Architecture and Planning will sponsor a five-day summer program, "**Plastics in Architecture**," to be conducted June 19-21 in cooperation with the Plastics in Construction Council of The Society of the Plastics Industry. Write to Director of the Summer Session, MIT, Room E19-356, Cambridge,

Mass. 02139 for application forms . . . **Colloquium '67 — The Design of Theatres: A Colloquium on the Architecture and Technology of the Theatre in Relation to its Artistic Aims** is the title of a conference planned for June 19-25. The session will be held at the Canadian Theatre Centre, 280 Bloor St. W., Toronto, Canada. Further information may be obtained by writing to that address . . . From June 19-28, the **Sixteenth Session of the International Commission on Illumination** will meet at the Shoreham Hotel in Wash-

ington, D.C. Attendance is by application only, through the Secretary, L.E. Barbrow, c/o National Bureau of Standards, Washington, D.C. 20234. In connection with the **First World Congress of Engineers and Architects**, the Association of Engineers and Architects in Israel has arranged a series of tours to Israel and other countries. The congress will run from June 20-27; tours will depart from New York from June 7-19. Information on both from Mrs. Z. Tennenbaum, 98-05 67 Ave., Forest Hills, N.Y. 11374.

NO MATTER HOW YOU ADD IT UP, IT STILL COMES OUT ZERO

WASHINGTON, D.C. Actual cost of the controversial Rayburn House Office Building on Capitol Hill will total \$99,205,685 — plus or minus more than \$1 million worth of outstanding, unsettled claims. The figure includes about \$8 million for a two-block subway to the Capitol.

That's a jump of more than \$35 million in total cost over the original estimates of \$64 million for completing the job.

According to a special report sent to Congress early in April by the General Accounting Office, the reason for the huge escalation of the costs is largely found in the more than 1450 changes in designs and specifications from the time the building was first put under construction — and in expenses caused by starting work on some segments of the structure before final designs were completed on others. The "changes" included such things as an \$880,000 cafeteria not included in original plans; \$490,000 for a gymnasium and swimming pool; and a \$665,000 item that reduced walking distance in the subway connection (at the Capitol end) by a total of approximately 80'.

□ **A-E Fees Criticized:** The accounting office's lengthy study turned up more than 1450 changes made in the designs and plans during the length of the construction period, and placed a cost of

more than \$8 million on them.

GAO's auditors found "no questionable aspects" in the solicitation and awarding of contracts for the construction; but did find that architect-engineer fees were "probably" too high, and that conformance to specifications left something to be desired.

That's the meat of a lengthy, extremely detailed report prepared by GAO (Congress' fiscal watchdog agency) on the eight-year construction of a building that has quickly won the doubtful accolade of Washington's ugliest.

The result of the decision of the Architect to proceed with segments of the construction — principally foundations — before plans for other sections had been completed, added \$2,200,000 to the cost. Despite the Architect's claim that this procedure saved construction time, GAO commented that "proceeding with some segments before plans for other sections have been finalized is a procedure not generally followed in construction."

□ **Construction Work:** In actual construction work, GAO found a number of points of failure to conform with specifications, and huge overruns of time in completing various segments of the work.

The report pointed out, for example, that the initial relocation of city sewers (necessary before foundation work

could begin) overran its allotted time by 446 days; foundation work overran by 511 days; structural steel work by 579 days. Although some of this overrun was attributable to natural conditions, most of it was due to changes in plans.

"Records indicate," commented the report, "that certain construction did not meet the standards in the superstructure contract.

"This involved the compressive strength of a reinforced concrete wall; the thickness of concrete slabs in the garage levels; uniform coloring of concrete walls in the garage levels; compaction of backfill; the condition of gypsum walls in some areas." The report included the Architect's contention that these aberrations were not structurally significant, but commented that inspection was slow, and that an inordinate amount of time seemed to have been devoted to settling disputes.

Among other things, the report chides Congress itself for its un-businesslike methods and its constant demands for reinserting matters not originally planned (or thrown out in early stages), suggests better accounting and better planning all around for the future.

Chances are that, outside of adding further fuel to the fire that some members of Congress like to keep hot under Architect of the Capitol J. George Stewart, little will come of the report.

— E. E. Halmos, Jr.

PERSONALITIES

Alfred Easton Poor has been elected president of the National Academy of Design. At the academy's annual meeting, architects **Francis Keally** of New York, **Nathaniel Owings** of San Francisco, and **Paul Thiry** of Seattle were elected to the Academy . . . California Governor Ronald Reagan has named architect **Charles Luckman** to the Educational Commission of the States. The organization was conceived by Congress in 1965 as a liaison between government and educators . . . **J.**

Carleton Jones was recently appointed director of information services for the AIA . . . On July 1, **John C. Anderson**, architect of Minneapolis, Minn., will take office as president of the Construction Specifications Institute . . . **Charles H. Warner, Jr.**, of the New York firm Warner Burns Toan & Lunde, has received the President's Medal for excellence awarded by the Alumni Association of the School of Architecture, Columbia University.

CITIBANK OFFICES ON MANHATTAN SKYLINE



NEW YORK, N.Y. The downtown Manhattan skyline, altered so radically by the construction of the headquarters building of the Chase Manhattan Bank, will receive another contemporary jolt from another bank. This time the tenant is the First National City Bank, which plans to lease three-quarters of the space (the first 17 floors and the twenty-fourth floor) in the 24-story building from the builder-owners, the Uris Buildings Corporation. To be constructed on a 49,000-sq-ft-site on Wall Street near the East River, the structure will have plazas on three sides and will have white precast concrete pilasters extending the full height of each façade. Between the pilasters will be tinted glass windows and spandrels. Citibank plans to maintain its downtown headquarters at 55 Wall Street, but will consolidate some operations facilities, such as the corporate trust department, in the new building.

In all, there will be 870,000 sq ft of space. The project, for which Emery Roth & Sons are the architects, will be completed in 1968.

WANTED BY THE FBI



George Ben Edmondson, alias Benny Edmondson, alias Alex Gadsdorff, is currently one of the FBI's 10 most wanted men. Following conviction for armed robbery, Edmondson, who will be 30 years old in August, escaped, and a Federal warrant has been out for his arrest since August 17, 1965. What makes Edmondson of interest to the architectural profession is that he has worked as a draftsman, and

may try to find that kind of work again. Among his other occupations, the FBI lists civil engineer, computer operator, electrician, office worker, and soil analyzer. Edmondson, who has a round scar on his outer right forearm and may have a mustache, has an avid interest in firearms. He is considered very dangerous. Anyone with information concerning Edmondson should inform his local FBI office.

THE TWO CULTURES



Photo: "London Daily Express"

When the above photograph arrived in P/A's offices, no one could quite place the city. With the well-lighted super-highways arching past the obviously new high-rise buildings, it could be Omaha, or Oklahoma City, or Newark, or even part of New York. It isn't any of these, of course; it's Moscow.

When Nikita Khrushchev came to the U.S. in the fall of 1960 to bang his shoe on a desk at the United Nations, he observed disparagingly that Americans tore down perfectly good buildings to put up new ones. He deplored, as almost everyone does, all the concrete in New York. Now, Moscow, it seems, is following the same

path. Although the wrecker's ball does not yet play the same role in the U.S.S.R. as it does in the U.S., the cityscapes are obviously becoming more and more identical. Muscovites are putting up high-rise buildings with the same frequency as they put up space satellites. In the foreground, work is proceeding on a 60-story building to house the Ministry of Power. A 30-story building at the right will house the Council of Economic Assistance. All that's missing is a jam of Detroit-designed traffic and a blur of neon signs reminding one of the delights of capitalistic products, like mouthwash, cigarettes, and detergents.

It might do the job at first. But gradually there's a loss of insulation efficiency in low-cost, water-susceptible insulation. Heating bills and cooling costs go up, and up, and up.

Here's what happens. The bargain insulation gets water-logged and loses its insulation value. Vapor barriers aren't enough. Movement of a building will split them, allowing moisture-laden air to penetrate the insulation. Moisture forms through

condensation, reducing insulation efficiency. What to do?

Specify STYROFOAM® brand extruded foam. It's the finest, most modern insulation you can buy. Never loses its effectiveness. Always stays dry. Requires no vapor barrier. Doesn't rot, mold or deteriorate. Flame retardant. Lightweight and easy to install.

As for application, you can use the

Miller System; apply paneling or decorative wallboard directly on it; use as a base for wet plaster; or as a perimeter insulation for foundations and slabs.

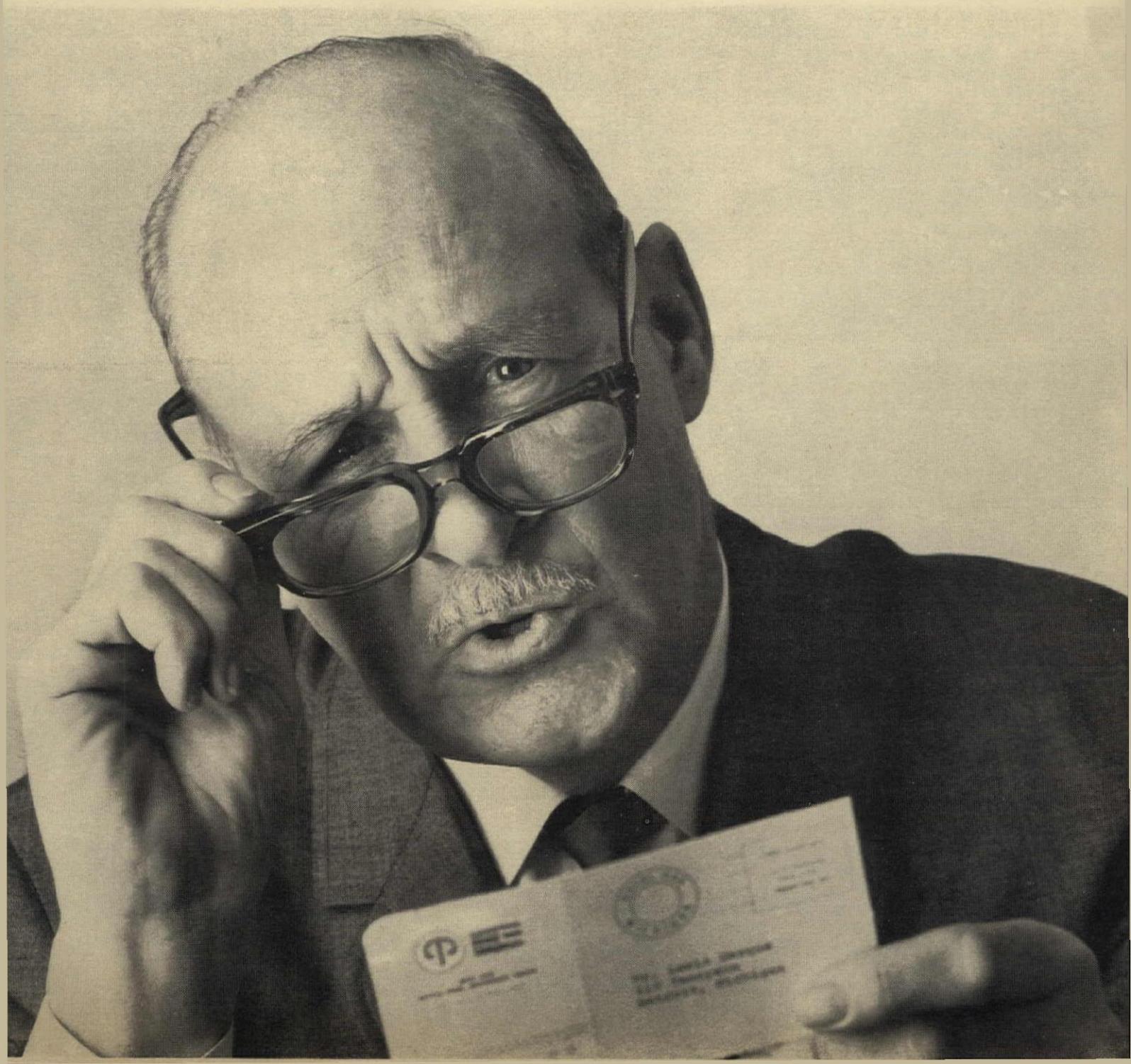
The next time why not specify STYROFOAM brand insulation... one of a family of rigid foam insulations offered by Dow. For more information, write to The Dow Chemical Company, Construction Materials Sales, Dept. 71300, Midland, Michigan 48640.



No one will know you installed bargain insulation.

(until the owner heats up)

On Readers' Service Card, Circle No. 338



WASHINGTON/FINANCIAL NEWS

by E.E. HALMOS, JR.

Regulation Tightening Affects Architects — The construction industry — particularly its professionals — wasn't through with a series of nasty surprises resulting from investigations by Federal agencies into practices of procurement.

As of the beginning of April, the industry was still awaiting a report from the General Accounting Office on the whole question of fee schedules for architect-engineers, and on whether or not existing law requires what amounts to bidding for such services (see p. 66, APRIL 1967 P/A).

Now the Army's Corps of Engineers added another worry: It decided that it had the authority to shift much of the responsibility for inspection and quality control to the contractor. Net result, it seemed, would be less "Title II" work for A-Es (who are hired under this title to aid the Corps in its inspections), and a shift of this function to the contractor, who will either have to place engineers and architects on his own staff, or employ consultants.

Actually, the requirement to place quality control responsibility on the contractor has been part of "ASPR" (Armed Services Procurement Regulations) since 1961, but has seldom been enforced. Early this year, however, the Corps issued a new regulation (I180-1-6), setting out details for "improved inspection and testing services by construction contractors."

Said Lt. Gen. W.F. Cassidy, Chief of Engineers: "Rather than wait for a Department of Defense directive . . . we issued [the] regulation requiring contracts to stipulate in detail what would be expected of contractors to carry out the intent of the ASPR provision. . . . We do not intend to stop our own inspection by any means. . . . We anticipate . . . that we may have fewer but higher-qualified inspectors, with perhaps greater emphasis on verification of the contractor's performance."

The regulation brought an immediate protest from some

professional groups.

Said the Consulting Engineers Council (in a letter to Cassidy): "We are concerned that the Corps' assignment of increased inspection responsibilities to the contractor places the [engineer] in the untenable position of being subject to the direction of the party which he is, in turn, expected to direct. . . . Can the Corps expect the same unbiased and objective viewpoint from an engineer on the contractors' payroll that it might receive from one of its own staff engineers, or from an independent consulting firm retained directly . . . ?"

CEC added that its members have already been approached by contractors, who want the engineer to quote a fee that the contractor can include in his bid; thus engineers are already being put in the position of bidding.

Another serious point: Staffs of engineering or architectural firms so employed might be forced into unions, once they become part of the contractor's organization.

With two other reports on construction practices also due (on the Rayburn House Office Building construction, and on implementation of Public Law 86-753, the "Truth in Negotiation" act), it promised to be an exciting spring for the industry and its professional members.

Government Pushes Systems Analysis — Pushing its attempts to provide a "systems" approach to building construction, the National Bureau of Standards has started work in an effort to develop performance criteria, rather than product specifications, for products, systems, or services purchased for the Federal Government in its office space program.

The work is being conducted by a new Building Systems Section under NBS' Building Research Division, headed by Robert W. Blake as section chief.

The criteria project is being funded by the Public Buildings Service of the General Services Administration, and industry is to be "in-

vited" to develop new designs and construction solutions for the required performance. Hopefully, the analysis is to be completed and performance specifications prepared by June 1967.

In the course of the work, NBS noted that a "number of key questions" were to be examined: What segments of the building products industry have research and development capability; what are general and specific requirements for manufacturers; what groupings of manufacturers might be possible for systems component development.

(The idea of applying "systems engineering" to other national problems, particularly that of full utilization of manpower, is embodied in a batch of bills already before Congress: notably S. 430, S. 467, and HR 20. Idea is "to mobilize and utilize the scientific engineering manpower of the nation to employ systems analysis and systems engineering to help fully employ manpower resources and solve national problems." This would be accomplished, among other things, by grants-in-aid to Governmental units with which to carry out studies.)

Procurement Policies Could Affect Architects — If Congress goes along with Senator Jackson's (D. Wash.) idea (S.1145) for a "Commission on Government Procurement," still another change in policies affecting employment of professionals by the Government, could result.

Jackson's point: With Government spending well over the \$100 billion a year mark — \$70 billion of which goes for "goods and services" — it is time for "a broad-scale, sweeping study of Government procurement policies and practices." The proposed "commission" would have a two-year life and report its findings and recommendations to Congress.

Tax Benefits? — Professionals would benefit in their tax payments and in their pension and welfare fund rights from two measures now before Congress.

The tax measure was introduced by Rep. Claude Pepper (D. Fla.), to "correct

an overzealous exercise of bureaucratic discretion." He pointed out that, under long-standing court decisions, "associations" of professional people may be considered corporations for tax purposes, so that the members may take advantage of corporate tax benefits. But, he added, the Internal Revenue Service issued new regulations in 1965, under terms of which most such professional service corporations lost their eligibility for special tax treatment. The bill spells out a requirement ordering IRS to consider such groups as bona fide corporations for tax purposes.

The second bill (S.1103) by Senator Jacob Javits (R. N.Y.), would establish a "portable pension" for all workers, making possible payment into a special fund to be maintained by a new "U.S. Pension and Employment Benefits Commission," so that workers could move from job to job, or area to area, without losing vested pension plan rights.

Financial — Key financial fact in Washington at the moment is the increasingly obvious fear of the Administration of a prolonged leveling-out period, or even a slight decline, in current economic conditions. Though it assigned "subsiding inflationary pressures" (not continuing Congressional pressure) as the reason for planning to release a very large share of highway money previously withheld, the Administration was rather obviously doing a little pump priming as well. Prospects of further reliance on construction spending to keep the economy on an even keel were brighter.

□ One reason for Washington's concern over the economy were Census Bureau figures on construction for February: Total put-in-place was set at \$4,300,000,000 — down 9% from Feb. 1966.

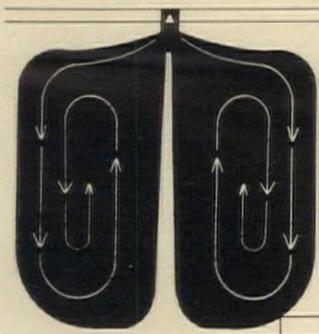
□ And, despite efforts to pump new money into the field, Housing showed another decline in February, running at a seasonally adjusted rate of 1,089,000 units, compared to 1,374,000 a year ago. Builders were inclined to blame a bad winter, rather than money shortages entirely, for the poor performance.

PRODUCTS

DESIGN INNOVATION IMPROVES AIR PATTERN



The critical component in a newly designed integrated ceiling system is the linear air diffuser. Its construction directs air flow uniformly into a room instead of throwing it forward in the direction of duct flow, as is the case with conventional slot diffusers. Air is turned down by a spine of small vertical vanes fixed above a center diverter, which then directs air out horizontally across the ceiling. This air pattern draws air up from the lower, or comfort, zone by aspiration, thus creating an even circulation and distribution of conditioned air. Vane height-to-spacing ratio is based on the theory of turning air in ducts that is presented in the ASHRAE



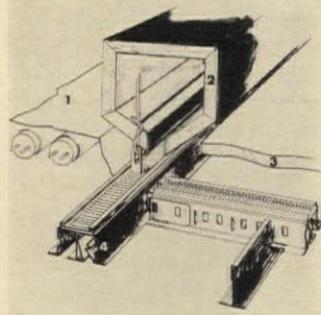
Guide. (Diagram shows vertical circulation pattern.)

The "Dimensionaire Ceiling System" has been tested in several large installations as well as in the lab, and has proved most economical and efficient in serving large open areas. The DCS system comprises the air bar, running wall to wall, and an interlocking grid of cross tees that support lighting fixtures and acoustical materials.

Air supply is through pen-

tagonal ducts fabricated from rigid Fiberglas that absorbs equipment noise and insulates against heat loss and gain. On air diffuser runs of up to 100', tests indicate little deviation in air delivery rates ranging from 10 cfm per lineal ft to 70 cfm/lf. Noise generated at 60-70 cfm/lf is 40-50 decibels — ASHRAE rated as satisfactory for supermarkets, large open office areas and light manufacturing plants. The pentagonal profile of the air tube permits installation in plenums as shallow as 12".

Ceilings can be troffered or flat, and will accept a variety of lighting fixtures and acous-



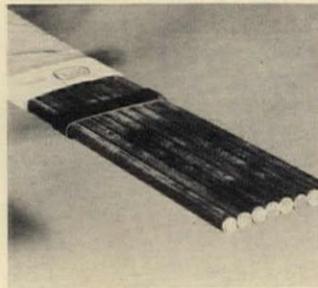
tical board (up to 4' x 8'). Spacing of air bars depends on room size and air delivery rates.

The DCS ceiling was installed in a 7000 sq ft university dining room (see photo), where it was substituted for a system that had already been bid. The original bid of \$2.07 per sq ft was lowered to \$2.04 per sq ft. It was felt, however, that the 3¢ saving would have been substantially greater had the system been originally specified. Operating results showed no drafts or dead air spots. Joseph Newman, spokesman for the builder (Tishman Realty and Construction Co. Inc.) commented, "It is not too often there is such good correlation between manufacturer's claims and factual performance."

Cutaway view shows: (1) light fixture; (2) duct; (3) ceiling board; (4) air diffuser with vanes above air diverter. Owens-Corning Fiberglas Corp., 717 Fifth Ave., New York, N.Y. 10022.

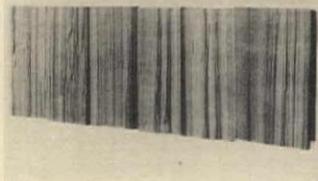
Circle 100, Readers' Service Card

CONSTRUCTION



Flat post-tensioning bundles save steel. "Prescon Type F" tendons are 1/4"-dia wires kept in a flat parallel pattern by clips spaced along the tendon length. These thinner tendons permit an increase in tendon drape as great as 3/4" over standard tendons while maintaining the same concrete cover. This increased eccentricity at points of maximum moment can save 10%-20% of prestressing requirements in flat slab design, reports manufacturer. The mastic coated tendons, sheathed in a double layer of asphalt-impregnated paper, come in bundles of up to eight wires. The Prescon Corp., 502 Corpus Christi State Nat'l Bldg., Corpus Christi, Tex. 78401.

Circle 101, Readers' Service Card



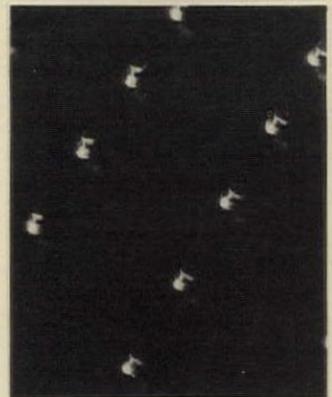
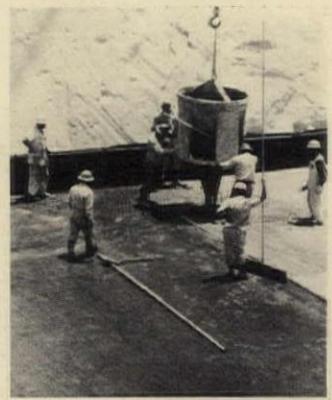
Shaking the exterior. Panels for use on exterior walls are made from hand-split shakes bonded to an asphalt impregnated backerboard. The panels, 46" long by 16" high, have shiplapped edges, and are factory finished. Choice of colors. Shakerstown Corp., Winlock, Wash.

Circle 102, Readers' Service Card

Plywood/fiber glass panels. High pressure molding process laminates plastic faces onto plywood panels for concrete form boards. Boards produce a smooth concrete surface, will not discolor concrete, require no mold release, and are more economical per pour than other form boards,

claims manufacturer. Among other suggested uses for "Lamiclad" panels are curtain walls, shower stalls, and counter tops for stores or labs. Standard panels are 4' x 8', white, with a choice of plywood and plastic facing thicknesses. Lamicor Plastics, 525 Davisville Rd., Willow Grove, Pa. 19090.

Circle 103, Readers' Service Card



Knobby waterproofing sheet locks into concrete. Polyvinyl chloride plastic is extruded with 3/8" knobs integrally molded into the material. Spaced 1 1/2" x 2 1/2" apart, these protrusions serve to lock the waterproofing sheet into the concrete of underground areas such as basements. "Nob-Lock" remains permanently flexible and has an elongation factor of 200%, thus giving it the ability to bridge cracks, says manufacturer. The 40-mil-thick sheets measure 44" x 54'7". Amercoat Corp., 201 N. Berry St., Brea, Calif.

Circle 104, Readers' Service Card

Solution to the covered-stadium problem. Three years of research (prompted by the problems of Houston's Astrodome) have produced a blue-tinted Plexiglas that will cut heat gain and glare from the sun, but will let through

enough of the right rays to grow a healthy turf. Researchers found that one particular grass, Windsor Kentucky bluegrass, grown under the manufacturer's acrylic plastic, while not as durable as that grown under full sunlight, can stand up to the wear and tear of professional sports. Only 40% of the sunlight is transmitted, making it easy on the eyes of the fly-ball watcher, but there is maximum transmittance in the blue regions needed for growing grass. Rohm and Haas Co., Independence Mall West, Philadelphia, Pa. 19105. *Circle 105, Readers' Service Card*

DOORS/WINDOWS



Hospital accessory. Push-pull door latches designed for hospitals and nursing homes allow personnel to open doors easily despite full hands. The "Series 115" is available in stainless steel and bronze. Sargent & Co., 100 Sargent Dr., New Haven, Conn. 06509.

Circle 106, Readers' Service Card

Power door. Motor-operated revolving doors are activated by a slight push at any point on a door wing, and turn at walking speed. The door then slows and comes to a stop with all wings in contact with the door enclosure. "Revolvomatic" drive mechanism fits into a 3" high x 8" x 25" long space and can be concealed above or below the door. Separate control panel permits adjustment of starting pressure and rotating speed. International Steel Co., Revolving Door and Entrance Div., 1321 Edgar St., Evansville, Ind. 47707.

Circle 107, Readers' Service Card

Matching beads for door and window frames. The popularity of bronze-anodized aluminum door and window frames has created the need

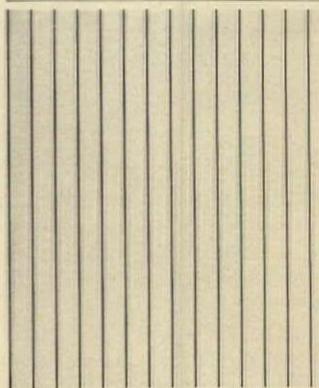
for matching glazing beads, but anodizing the thin beads proved difficult and costly. Manufacturer now offers a close match achieved by a special painted finish, said to be durable and weatherproof. The majority of manufacturer's stock glazing beads are now available with the dark bronzelike finish. Pemko Mfg. Co., 5755 Landregan St., Emeryville, Calif. 94608.

Circle 108, Readers' Service Card

FURNISHINGS

Plastics infinity. For today's vinyl scene, Amplast ("Almost everything in plastics") carries lucite (for tables, sculptures, and constructions), mylar in gold and silver (for walls and cushions), and assorted bubbles, bangles, and beads (for trim). Lucite tables are custom made to color and size specifications (18" cube is about \$55). Also available are solid blocks of plastic, and rolls of transparent acetates in lime green, hot pink, and tangerine tints. A metallic finish acetate (one side is silver foil, the other, rainbow metallic) gives a two-way mirror effect; one suggested use is for lampshades, since the rainbow comes through when light is turned on. Amplast, Inc., 359 Canal St., New York, N.Y. 10013.

Circle 109, Readers' Service Card



Pop vinyl upholstery. Although mostly for clothing, the patent vinyl at Deitsch Plastic can, in some cases, also be used for wallcovering and for upholstery. Solid patents come in black, dark olive, red, brown, school bus yellow, and coral. Patterned patent vinyls are pin-stripes (pictured), bold polka dots, "oppy" distended squares, a yellow tattersall, a bold check in navy and chroma, and an uneven stripe, all \$1.50 per yd.

Among the mylars are a gold moire, a gold-and-silver mixture, and various crinkly and nubby textures. Deitsch Plastic Co., Inc., 448 Broadway, New York, N.Y. 10013.

Circle 110, Readers' Service Card



Photo: Courtesy, "Seventeen" magazine

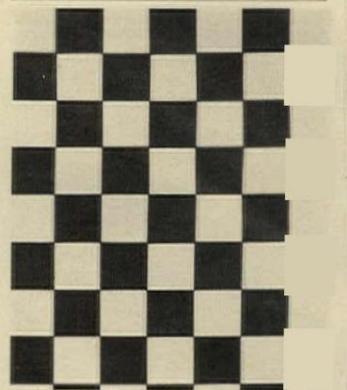
Invisible chairs. Designer Philip Orenstein's invisible "overstuffed" easy chair has a lucite base supporting four inflatable, clear plastic cushions. Completely clear or in transparent tints, the air cushions are individually replaceable to permit mixing and changing color schemes or in case they have been damaged. Ultimately, lucite bases (two styles) will also be available in wood, and the clear cushions in polka-dot plastics. Chair packs into flat carton for easy transportation. Price: \$80 retail. Another chair of inflated vinyl on a base of tubular anodized aluminum is said to be completely weatherproof and portable. In the works are: an inflatable bed, a hanging lucite chair (shown) and perhaps a vinyl suit, for men, with inflatable cuffs. Mass Art, Inc., 234 Fifth Ave., New York, N.Y.

Circle 111, Readers' Service Card

Patent vinyl upholstery. Especially suitable for upholsteries, Gilford's patent vinyl is backed with elastic to keep it from stretching out of shape. The collection of solid and patterned patents is also meant for wallcoverings. "Le Havre" (\$7.50 per yd) is solid patent available in about 15 shades and "St. Moritz" (\$8.85) is a two-tone patent that comes in more than 30 colors. Patterns (\$9.90) include "Tickertape," resembling a miniaturized Jackson Pollock "drip" painting, "Starfire," a gold splatter design, and "Acres of Gold," a gold splatter on darker gold.

Widths vary from 53" to 54". Gilford Inc., 979 Third Ave., New York, N.Y.

Circle 112, Readers' Service Card



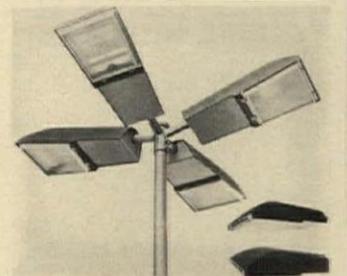
Shiny vinyl walls. Adams carries a line of patent vinyls suitable for wallcoverings and upholsteries that consists of two-tone solids and two patterns, both in many colors. The two-tone vinyl comes in 23 colors and costs \$9.70 per yd. Patterns are a two-color bright checkerboard (pictured) and a three-color vertical stripe, each in four colorways. All 54" wide. Adams Vinyls, Inc., 225 E. 57 St., New York, N.Y.

Circle 113, Readers' Service Card

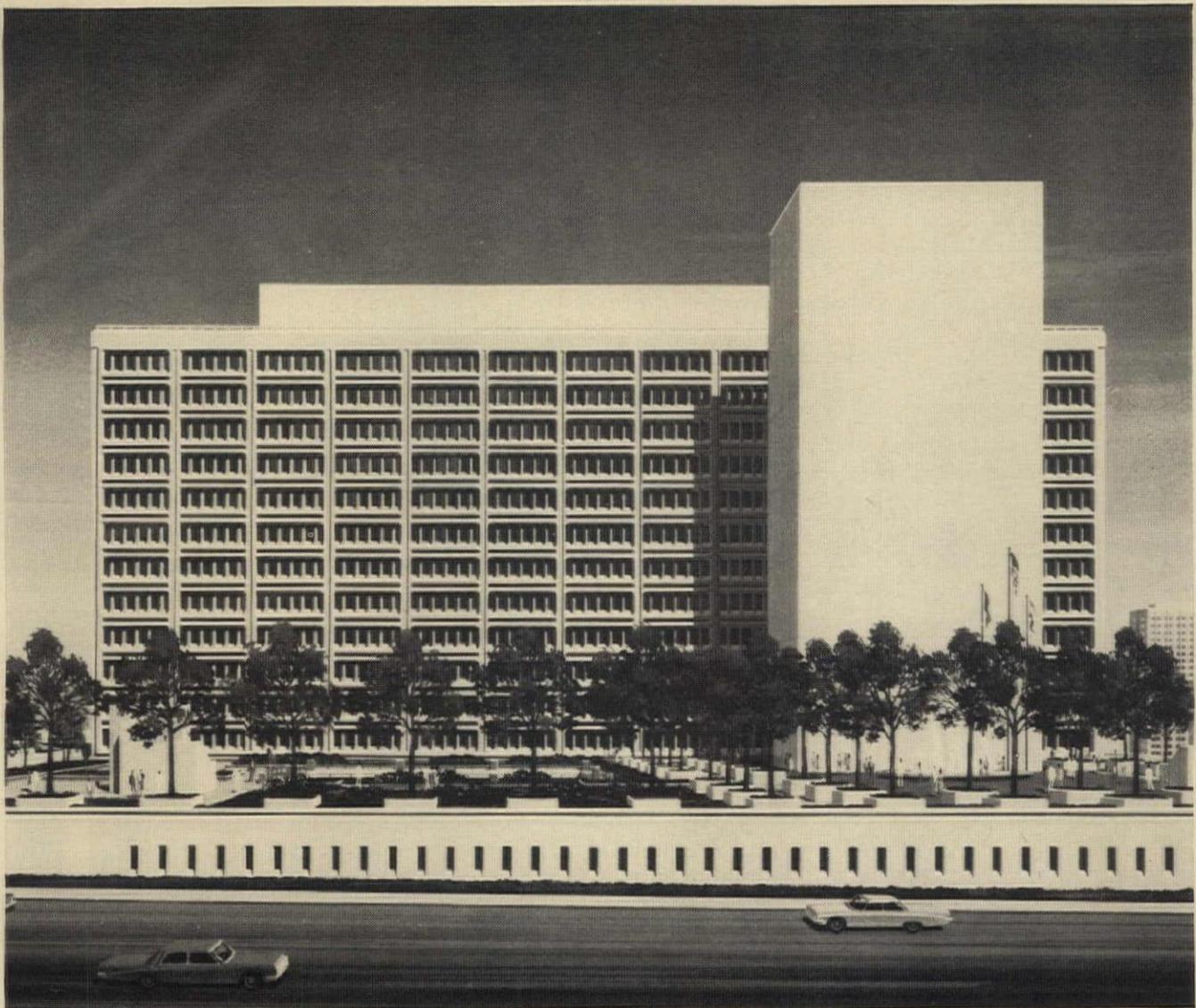
Psychedelicias. Ornamental diffraction gratings are thin, vinyl, iridescent mirrors that change appearance with the angle of light or of viewing. They produce an effect like kinetic sequins in the psychedelic idiom with their spectral colors and reflections. Used popularly for assemblages, sculptures, and jewelry, they give promise of more interior uses. The company has a workshop devoted to the technical and aesthetic development of experimental designs in diffraction mosaics. Designs to specifications will also be executed. The Diffraction Co., Inc., Riderwood, Md.

Circle 114, Readers' Service Card

LIGHTING



Four-point luminaire. Where high-level illumination is un-



Time-defying Eljer plumbingware chosen for new state office building in Pennsylvania

Decades from now, the plumbing fixtures inside this recently completed building in Harrisburg, Pennsylvania, will look and perform like they did the day they were installed.

That's because they bear the name Eljer, whose Master Crafting builds quality plumbingware. And whose design refuses to be outdated by the calendar.

No wonder more and more architects think Eljer when they think plumbingware. Too, they know that Eljer's full-line availability assures their client on-schedule delivery.

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Eljer, Dept. PA 7, P.O. Box 836,
Pittsburgh, Pa. 15230.

Recently completed, this magnificent, 16-million-dollar, high-rise office building will provide offices for 4,500 employees of eight state departments.
Owner: General State Authority. *General Contractor:* Consolidated Engineering Co., Inc. *Collaborating Architects and Engineers:* Altenhof & Bown; Eshbach, Pullinger, Stevens & Bruder; Jordan, McNee, Parnum & Yule.
Consulting Engineers: Urban Engineers, Inc.; H. F. Lenz Company.
Plumbing Contractor: Herre Bros., Harrisburg.



ELJER[®]
SINCE 1904 FINE PLUMBING FIXTURES

Eljer Plumbingware Division, Wallace-Murray Corporation

necessary, four-lamp "Area* Star" is lower in initial cost than other luminaires, claims manufacturer. Recessed light source and flat glass lens reduce glare, and patterned lens is tempered to resist impact. Unit takes 250w or 400w mercury vapor, or 400w metallic additive lamps. Steel or aluminum poles are available in 20' or 30' heights. Crouse-Hinds Co., Syracuse, N.Y. 13201.

Circle 115, Readers' Service Card

OFFICE EQUIPMENT

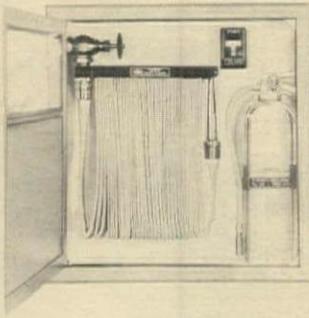


The run-about. Sturdy typewriter or business machine

stand is easily converted from stable to mobile unit by special "stick-shift" mechanism, says manufacturer. It incorporates sound-proofing insulation, and features a walnut-grained laminate top. Size: 34" x 20" x 26½" high. Interstate Industries, Inc., 7-103 Merchandise Mart, Chicago, Ill. 60654.

Circle 116, Readers' Service Card

SPECIAL EQUIPMENT



Shallow-wall cabinet. Fire extinguishers and hoses fit into cabinets that can be completely recessed in a 6" wall or semirecessed in a 4" wall. Cabinets accommodate a 10-lb dry-chemical fire extin-

guisher, and can be used with or without a fire alarm. Frames are steel, aluminum, or stainless steel. Potter-Roemer, Inc., 2856 Leonis Blvd., Los Angeles, Calif.

Circle 117, Readers' Service Card



Building maintenance. One-man window-washing scaffold is roof-mounted, and moves vertically, horizontally, and toward or away from the building face. Movement is controlled electrically by the operator. Electrical conductors are encased in steel hoisting cable, thus eliminating separate control cables. Lifting speed is 40 fpm; and horizontal speed is 48 fpm. Patent

Scaffolding Co., Div. of Harsco Corp., 38-21 12 St., Long Island City, N.Y. 11101. Circle 118, Readers' Service Card



Ring around the telephone. Acoustical privacy in the "Carousel Acousti-Booth" is aided by sound-absorbing material in the dividing walls. Available for either stand-up or sit-down callers, the 5'-dia unit has six coin telephone panels. Sit-down model (shown) is equipped with movable outriggers and rotating seats. Burgess-Day Inc., Box 350, Libertyville, Ill. 60048.

Circle 119, Readers' Service Card



DEMI-.5

The ONLY .5 mm pencil with these advantages:

1. **Stainless steel tip** (not brass). Won't bend or wear through.
2. **Nylon funnel** to guide lead into tip. No lead breakage from misalignment.
3. **Clutch positioned just behind the tip.** Gives lead a short travel distance—no bending and breaking.
4. **All metal feed and storage tube for leads** (not plastic). No flex—no lead breakage.
5. **Long or standard tips available.** Long tip on request.

Holder \$1.98. Set (with a dz. H and 2H leads) \$2.99. New stronger, blacker (more reproducible) .5 mm leads in HB, F, H, 2H, 3H, & 4H hardnesses: 50¢ per tube of 1 dozen leads.

Available wherever art and stationery supplies are sold.



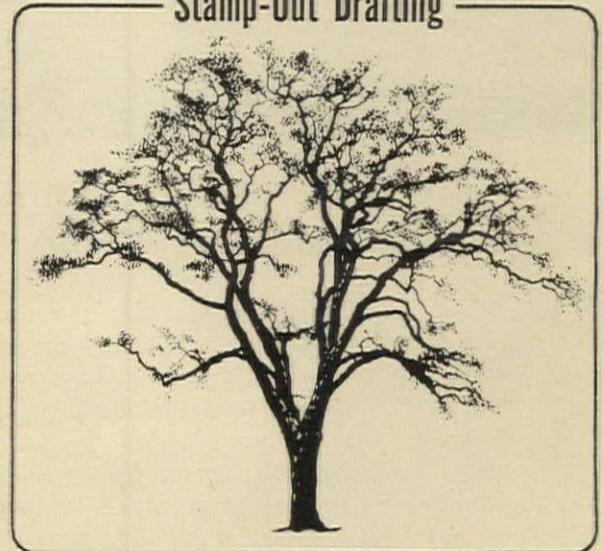
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24 CALIFORNIA ST., SAN FRANCISCO, CALIF. 94111

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On Readers' Service Card, Circle No. 405

Stamp-Out Drafting



A new line of rubber stamps is now available for the architectural draftsman. Trees, shrubs, people, cars, buses, trucks, planes, birds, nomenclature and arrows are made in scales from 3" to 1/16". Stamps are fabricated in both plan and elevation from over 600 different illustrations. For information circle reader service card number or write to:

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On Readers' Service Card, Circle No. 360



THE PRESCON MEMO NEWS

THE PRESCON CORP.: 502 CORPUS CHRISTI STATE NATIONAL BUILDING — CORPUS CHRISTI, TEXAS 78401

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PARKING GARAGE

58' SPAN WITH POST-TENSIONED 23" TUBE SLAB

Cost of this five level parking facility 304' x 174', including two large rental areas, added restroom facilities, mechanical, electrical, traffic control, and landscaping was \$6.20 per sq. ft. The structure uses Prescon positive end anchorage tendons for post-tensioning prestressed concrete and the Tube Slab System, a monolithic one or two-way concrete slab using uniformly spaced large diameter hollow paper or metallic tubes to create voids in the concrete.



New Britain, Conn., Parking Garage.

Designed by A. J. Macchi, Engineers, Hartford, Connecticut, it provides for one-way directional traffic with one spiral movement upward, one downward, and a level portion at the center common to both movements. The 58' spans use 20-wire Prescon tendons stressed to 165 kips. Where the slab is 174' (3 spans), 16-wire tendons were stressed to 133 kips. Tie tendons in bridging members transverse to tubes and tendons were placed at 1/3 span points.

The floor slabs are 23" deep with 18" round metal tube voids at 22 3/4" on center positioned approximately at mid-depth of the slab. This forms a 4 3/4" rib between voids and reduces dead load to 142 psf. With a 10' floor to floor height this gives 8' 1" clear headroom. Temperature steel is used at the top and bottom of the slab. Tubes were omitted at the periphery to form solid edge beams.

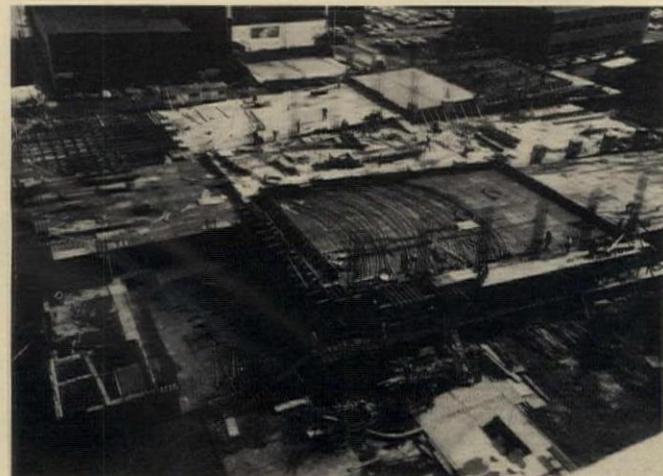
Three hundred piles were used in the foundation. The exterior columns are 1' x 4', and interior columns are 4' x 3'. Double columns were used at expansion joints. In level areas the slab forms were sloped a maximum of 3" for drainage. Basement walls and pile caps used 3000 psi

concrete; columns, slabs, and beams used 4000 psi concrete.

Two parking rows plus a 22' wide traffic aisle is provided at every level. Parking is at 60° to the traffic direction. Column-free areas facilitate self parking. Monthly patrons have separate access to parking space in the basement level.

Architectural treatment consisted of exposed aggregate precast concrete panels 3 5/8" thick for the facade. The exterior columns and stair towers concrete has a board marked finish.

This parking garage, scheduled to open in March 1967, was built for the City of New Britain, Connecticut. A. J. Macchi invented the Tube Slab System used in this project. Angelo Tomasso Inc., New Britain, Connecticut, is the general contractor.



Tendons have been uncoiled on slab forms in foreground; in upper right, part of the concrete placement has been completed with additional concrete being pumped into place.



Pumping of concrete to form the slab. Temperature steel and tubes can be seen in place. Tendons are positioned in ribs between the tubes.

PARKING GARAGE BROCHURE AVAILABLE. Colorful 12-page brochure pictures and describes several different parking structures, plus listing 87 other parking garages using the Prescon System. Write for your free copy today.

THE PRESCON CORPORATION

General Offices: 502 Corpus Christi State National Building
Telephone: 512-882-6571, Corpus Christi, Texas 78401

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B 67

On Readers' Service Card, Circle No. 386

MFRS' DATA

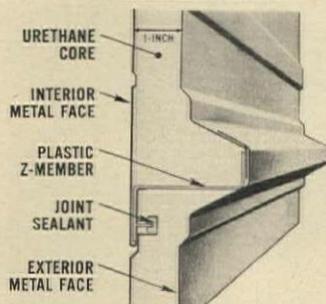
AIR/TEMPERATURE

Environmental primer. The basic facts of temperature control are spelled out in "The ABC's of Air Conditioning" under four major air-conditioning system types: all-air, air-water, all-water, and refrigerant. Subheads include heat pumps, centrifugal and reciprocating machines, etc. Well-organized booklet illustrates text with charts, diagrams, and photos. 24 pages. Carrier Air Conditioning Co., Carrier Parkway, Syracuse, N.Y. 13201.

Circle 200, Readers' Service Card

Quiet ducts. Pamphlet discusses insulating and other advantages of manufacturer's three "Micro-Aire" glass-fiber duct systems—preformed round with molded-in slip joints and plastic jacket, preformed round with embedded aluminum seal, and aluminum-faced duct board. Thermal and acoustical efficiency, cost, installation, and other factors are covered in text, charts, and pictures. 12 pages. Johns-Manville, Industrial Insulations Div., 22 E. 40th St., New York, N.Y. 10016.

Circle 201, Readers' Service Card



Cost report. An independent study forms the basis for a report comparing heating and cooling costs in buildings using manufacturer's "F-103" wall and roof panels with those built from conventional materials. The study shows savings in both operating and ultimate building costs, based on wall and roof maintenance over a 30-year period. The F-103 is the first pre-engineered, metal-faced panel with a foamed-in-place urethane core, reports manufacturer; panels have a U factor of .10. Suitable for

warehouses and other industrial applications. Charts, maps, text. 12 pages. Butler Mfg. Co., 7400 E. 13th St., Kansas City, Mo. 64126.

Circle 202, Readers' Service Card

CONSTRUCTION



WEATHER LOUVERS

Air louvers. Exterior louvers for air intake or exhaust may be specified under two general types—one for applications where appearance is important; the other for commercial and industrial applications. Innovation in blade and frame design enables the "3131 Series" to withstand velocities up to 680 fpm. Sizing charts, performance curves, scale drawings, and guide specs are included in catalog 66-L. 12 pages. The American Warming and Ventilating, Inc., 1017 Summit St., Toledo, Ohio 43604.

Circle 203, Readers' Service Card

On top. Built-up roofing manual contains information on seven roofing systems, and includes changes and additions to the 1966 manual. Extensive specifications, cutaway views, and flashing details. 44 pages. Allied Chemical Corp., Barrett Div., 40 Rector St., New York, N.Y. 10006.

Circle 204, Readers' Service Card

Wood truss specs. Truss plate manufacturers have compiled information based on tests by laboratories and universities as the basis for specifications for light metal-plate-connected wood trusses. So that test results may be better evaluated, a discussion of detailed test procedures is included. Specifications give information to be included on engineering drawings; definitions of steel types; and

species, grade, and quality control of lumber. 24 pages. Price: \$1.25, including postage. Truss Plate Institute, P.O. Box 253, Perrine, Fla. 33157.

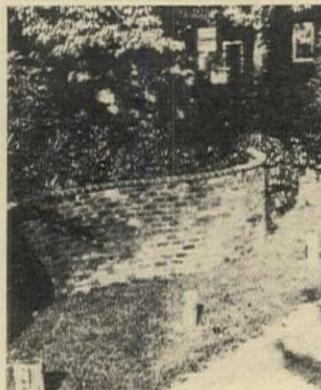
Steel joist data. Specifications for longspan steel joists cover LJ- and LH-Series. Effective January 1, 1967, the load table for the new LJ-Series provides slightly higher capacities than those tabulated for the earlier LA-Series; load table for the LH-Series remains unchanged. Specs and load tables for J- and H-Series open web steel joists are also given. 52 pages. American Institute of Steel Construction, 101 Park Ave., New York, N.Y. 10017.

Circle 205, Readers' Service Card



Wood on the side. Types and grades of wood siding, sizes and fastening methods are described in brochure that also includes tips on exterior staining and painting, and interior finishes. Color photos and charts. 4 pages. Western Red Cedar Lumber Assn., Dept. 18-L, 700 Yeon Bldg., Portland, Ore. 97204.

Circle 206, Readers' Service Card



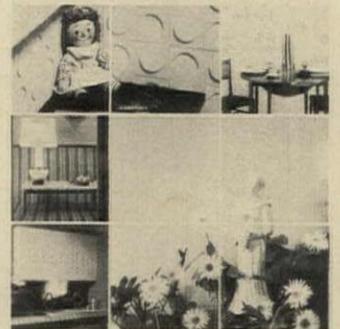
Garden walls. Brick in landscape architecture is the subject of a technical pamphlet that covers materials and

workmanship, design, and wall types (straight, pier and panel, serpentine). Drawings, and tables on steel reinforcing and pier foundations. Photo shows Thomas Jefferson's serpentine wall at the University of Virginia. 4 pages. Structural Clay Products Institute, 1520 18th St. NW, Washington, D.C. 20036.

Circle 207, Readers' Service Card

FURNISHINGS

Pomona Tile Ideabook



Ideas for tiles. New uses for tiles in living and dining rooms as well as in bathrooms and kitchens are suggested in Pomona Tile's "Ideabook." Primarily for clients who are looking for slightly different ideas for their homes or offices, the Ideabook shows installations of sculptured, patterned, mosaic, and quarry tiles as decorative walls, floors, and fireplace borders, in addition to more standard uses. Four-color. 8 pages. Pomona Tile Co., Pomona, Calif. 91766.

Circle 208, Readers' Service Card

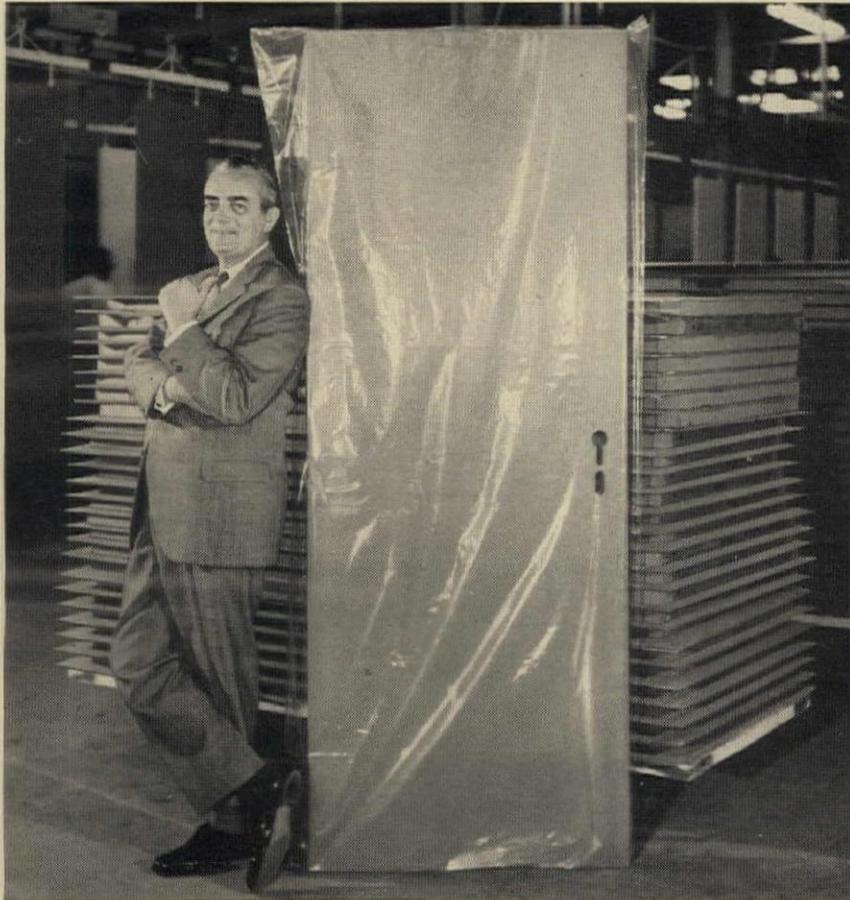
Accent. "Accent" office chairs come in eight models, with any of three bases, and a host of upholsteries. The seat is a bucket design with foam-rubber cushioning on the seat unit, as well as a separate cushion (an optional feature is an insert for lumbar support). Styles range from the high-backed and wide "Executive Swivel," to the "Companion" armless chair. Booklet gives details, including dimensions and pictures (some color). General Fireproofing Co., Youngstown, Ohio 44501.

Circle 209, Readers' Service Card

Desk Sets. "Executive Office and Building Accessories," a 20-page full-color catalogue,

What does Ceco do to help you deliver a pristine project?

Ships your doors in bags.



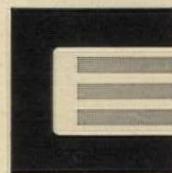
The reason for this is that somehow or other door handlers respect polyethylene. A bag made of it looks as if it might tear. So people seem to want to treat such a bag with kid gloves. Whatever's inside benefits. That's why we put your "Colorstyle" Décor Doors there.

We want these doors flawless in your building. So we encourage your contractor to erect them with the bags still on. That gives you beautiful doors in mint condition and, once the bags are off, adds to your stature with the client.

This is especially true when your doors are Colorstyle doors, prefinished with baked-on vinyl-type enamels. These doors come with a fine embossed finish that looks and even feels like leather. They come smooth, too.

Colorstyle Doors cost no more than primed steel doors painted on the job. That's about what wood doors cost installed. So they're competitive and entirely practical to specify.

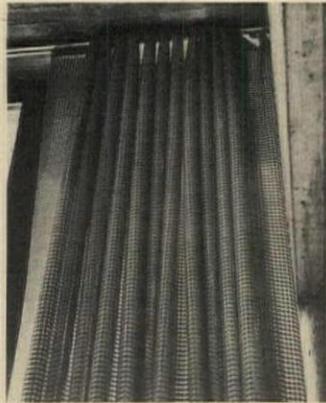
Better look into these doors now. Ask for catalogs. Or ask us to bring you a sample in a bag. The Ceco Corporation, general offices: 5601 West 26th Street, Chicago, Illinois 60650. Sales offices and plants in principal cities from coast-to-coast.



CECO
COLORSTYLE
STEEL DOORS

shows a collection of desk accessories as well as floor, wall, and table ash receptacles, waste baskets, and wardrobe units. Accessories vary in style from those best suited to executive offices, either modern or traditional, to those more at home on receptionist desks. Desk sets come in metal (14 finishes), naughahyde (20 shades), and leather (8 grains). Dimensions, prices, materials, and weight information is given for most pieces. Duk-It McDonald Products Corp., Duk-It Building, Buffalo, N.Y. 14210.

Circle 210, Readers' Service Card



Links to the future. Chain-Mail reference kit contains 20 cuttings of Probbler's five chain-mail patterns showing a

variety of the 9 available enamel colors (e.g., old copper, leafgold, statuary, and Roman gold.) Intended primarily for draperies, mail comes in aluminum or brass standard base metals (others on special order). Cuttings are mounted on cards that give name, metal, finish, and width. Brochure included in kit contains general information: history of Chain-Mail, its properties (fireproof, weather-resistant, reversible, maintenance-free), and details on finishes, sizes, installation, and price. Kit costs \$6, which is refunded with first order.

Harvey Probbler Showrooms, Inc., 155 E. 56 St., New York, N.Y. 10022.

Circle 211, Readers' Service Card



California customs. Berven of California offers architects and designers the custom service of executing rug designs submitted as sketches. A catalogue describing this capability also illustrates more than 100 suggested designs (variable in color or pattern to the designer's specifications). Catalogue includes examples of custom carving, accent tufting, textural combinations, and fringes. Full color. 24 pages. Berven of California, 2600 Ventura Ave., Fresno, Calif. 93717.

Circle 212, Readers' Service Card



THE INCREDIBLE BARRIER

A major discovery in polyurethane chemistry, new **Sanitile 550** is the modern vitreous coating so strong it meets the most rigid tile-like coating performance spec written: Federal Specification TT-C-550a.

How good is it? Read TT-C-550a. Blood, sweat, tears, impact, abrasion, moisture, mold, and a broad range of corrosive chemicals and cleaning compounds cannot penetrate the **Sanitile 550** barrier.

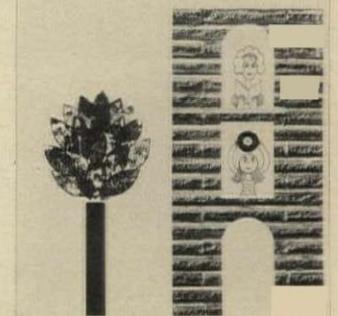
Sanitile 550 is the new, simply specified performance standard for tile-like coating. Created by The Master Mechanics Company, world's foremost developer and largest manufacturer of tile-like coatings.

Incredulous? Please write for SPEC DATA sheets and descriptive brochure, 4475 East 175th Street, Cleveland, Ohio 44128.



On Readers' Service Card, Circle No. 411

Living on campus



Quad squad makes the scene. Dormitory desks, wardrobes, dressers, bookshelves, and bunks by manufacturer of varied campus furniture (also for lab, classroom, and library) are framed in kiln-dried hardwood. Simple, clean-lined, modular units have a tough plastic veneer available in birch, teak, walnut, or cherry grains; core material is either hardboard, flake board, or plywood. Photos, dimensioned drawings, size charts, construction specifications, and sample layouts. Educators

The new, thin 319 slide packs the muscle to carry 150 pounds.



PHOTO COURTESY OF ALEXANDERS

Grant's 319. It has everything you need for drawers which must support very heavy loads. Requires but 1/2" side space. Provides full extension. 150 lb. load capacity. Part of the great Grant line. Get the facts today.

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anything **NEW**
IN KITCHEN
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The
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- No Filters – or removable parts
- Automatic Water Cleaning – Daily
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- Requires less air
- Removes grease, heat, odors
- 24 hour Automatic Fire Quenching
- Fire System thermostatically controlled
- Underwriters' Laboratories Inc. Listed National
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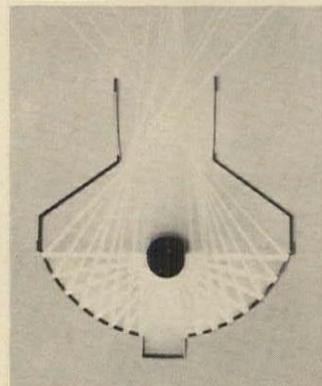
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SPECIAL EQUIPMENT

Help wanted. Remote station receiving panels for fire alarm and security systems can be installed in fire and police stations, and in central control locations of multibuilding complexes. Power requirements, transmission facilities, standard and optional features, and possible applications are described and illustrated. 8 pages. Notifier Corp., 3700 N. 56 St., Lincoln, Nebr. 68504.

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Fence file. Kit of specification sheets and drawings on aluminum-coated steel chain link fences has been compiled as a design aid. It includes testing and ASTM reports, gate designs, detailed engineering drawings, and brochure describing eight basic styles for rust-resistant protective fences in industrial, recreational, and institutional applications. Wire Products Group, American Chain & Cable, First and River Sts., Monessen, Pa. 15062.

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PROGRESSIVE ARCHITECTURE
NEWS REPORT

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NEXT MONTH IN P/A

Expo-De-O-Do

Everyone and his Canadian brother will be publishing views of Montreal's important Expo 67 this year. P/A, however, will bring you the exposition from the architect's point of view. The nitty-gritty of how most of the significant pavilions were put together, told by editors who visited the job sites many times; the story on how Expo started out as a one-structure, one-world concept and became the collection of individual concepts it is today; the on-the-spot opinions and impressions of the exposition and its architecture after opening day; the possible future influence of Expo 67 on architecture and planning — the real, professional story illustrated with photographs during and after construction, detail drawings, and maps. An informed, pertinent coverage of an outstanding event.

Moorish Chimneys: A portfolio of the exotic chimney-pots of the Algarve Province in Southern Portugal. Instant Interiors: Today's spreading use of color projection suggests to P/A's Interiors Editor a way to have the Sistine Chapel or a Maxfield Parrish sunset in your own home at your button-pushing beck. The Eye of the Bird: Italian and French villages seen in dramatic bird's-eye sketches that capture the town plans in the same way a fisheye photograph can make a model live. End Checking in Glued-Laminated Beams: An old problem solved. Plastic Structural Sections: A new process using glass-fiber-reinforced polyester. Tension Surfaces: James Leefe examines their potential and mathematical principles for roof shapes.

Another issue of P/A brimful of ideas, information, and opinions. Whether you are going to Expo, planning some skiing, or busy turning out architecture, the June P/A, like all the rest of them, will be your good right hand. Subscribe now by filling in and sending in the subscription card at the rear of this issue.



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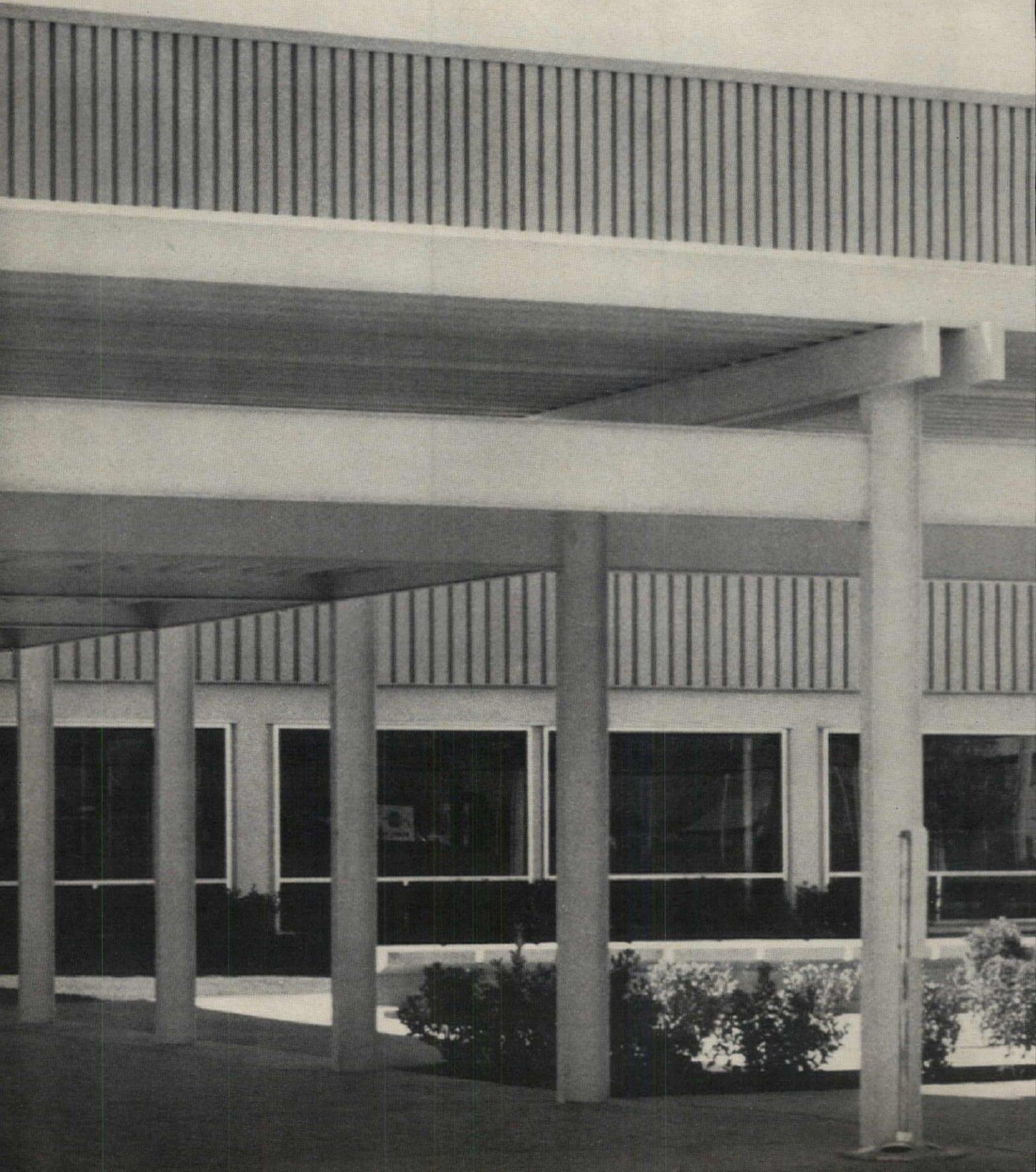
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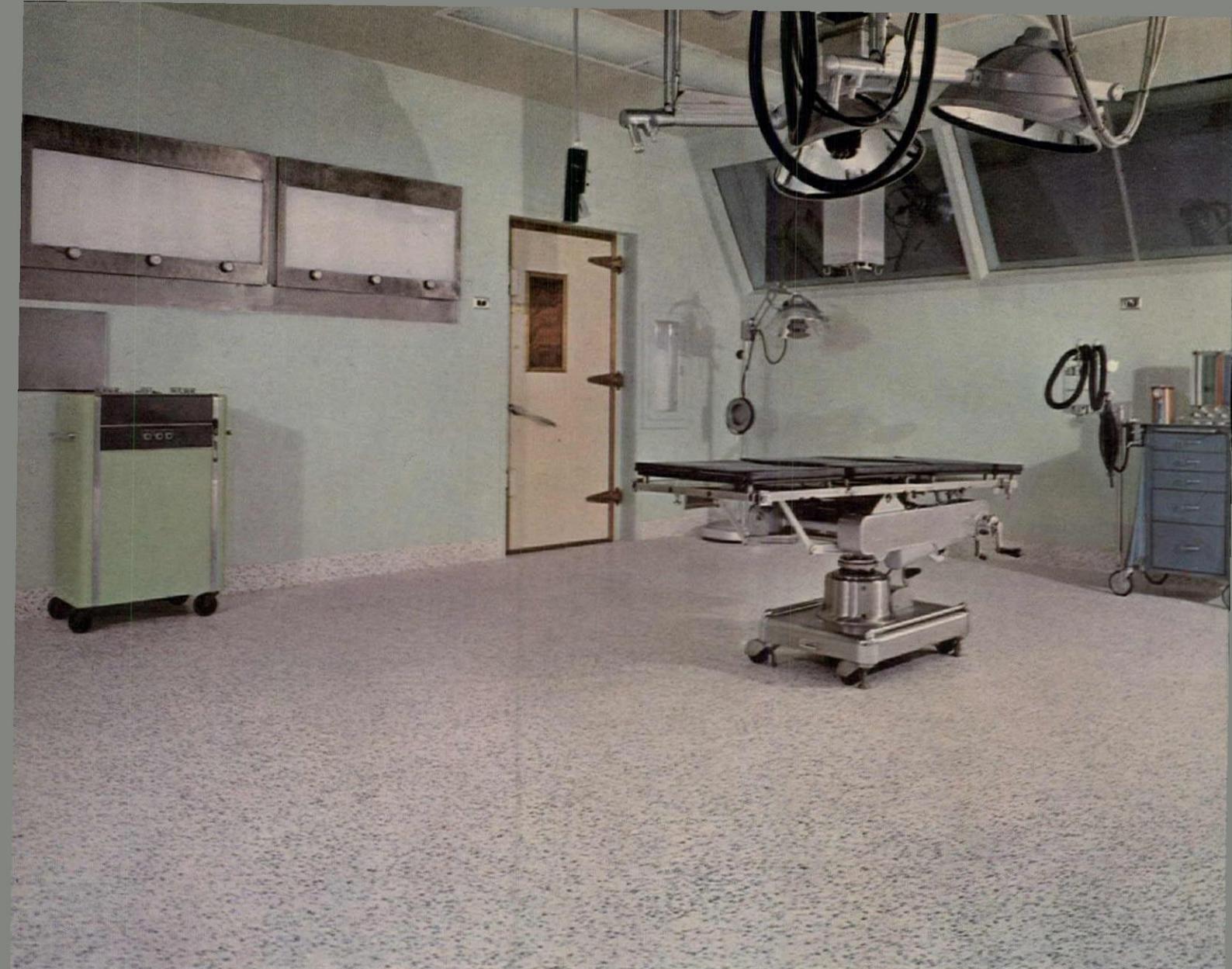


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“Literate man, civilized man, tends to restrict and enclose space and to separate functions, whereas tribal had freely extended the form of his body to include the universe. . . . The human body in Indian religious thought was ritually related to the cosmic image, and this in turn was assimilated into the form of the house. . . . Even in our present electric age, many people yearn for this inclusive strategy of acquiring significance for their own private and isolated beings.”

MARSHALL MCLUHAN



EDITORIAL

A house, for some, is a home, because where you live, home is. The semantic mix-ups between the two words lead to many anomalies. Homebuilders, for instance, are not in the home market, but in the house market. A young man might end up in a House of Detention, but an older man in a Home for the Aged. When we try to be kind, we tend to use the word "home." Hence, the handicapped live in a Home for the Blind (or Deaf, or Mentally Retarded, or whatever), while I must be content in making my home in a mere Apartment House.

Be it homes or houses, for a planner they all end up as so many Living Units. Now, a living unit is one or more cells in which one lives, usually called rooms, sometimes areas, and occasionally chambers (in spite of the fact that all the chamber pots are by now in antique shops). Whatever you call them, a few rooms make up a living unit, a few living units a building, and a few buildings a housing project, or, at best, a housing development. For some unknown reason they are not called Living Centers. This, of course, makes living inferior to shopping, culture, government, narcotics, and religion. They are not even called Housing Parks, and so living is not yet up to industry and education. Perhaps because the word "project" is still associated with public philanthropy, public apathy, and public fear of public good — a psychological vestige of a by-gone era — we have the paradox of glamorous words being used in designs for industry, commerce, and institutions, but not in designs for living.

Since our affluent society is least affluent in housing accommodations, the production of a sufficient number of dwellings is already a major economic, social, and political problem. Although an architect thinks of it as an aesthetic problem, designing mass-housing is not the creation of magnificent spaces, or exciting spaces, or even interesting spaces. Palatial splendor of processional architecture was never available to the masses and probably never will be. Mass-housing is inevitably minimum housing, with differences only in the degrees of minima. Consequently, aesthetic experiences architects provide when creating housing, always end at the door of the dwelling itself. This is obvious when one examines all the award-winning as well as the run-of-the-mill housing designs.

If home is where one lives, home is the dwelling itself and not the building, or the project, or the development. So if architecture has to stop at the entrance door to a home, people are forced to create their own architecture at the very point where the architect left off. Which is why average dwellers, to "acquire significance for their own private and isolated beings," to use McLuhan's words, or to be "turned-on," to use Leary's words, must resort to interior decoration in order to make a home of the minimal, bland spaces that are fast becoming the natural habitat of the modern "affluent" man. ■

Jan C Rowan

Houses and Housing

This issue is concerned in large part with how people live within an architectural framework. It investigates four segments of the population: the students, the wealthy, the elderly, the designers. Each group has its own particular concerns and needs—social, psychological, physical, economical. The success of the architecture depends upon how well the architect and the group itself understand those needs and can solve them.

The Students



Harold B. Gores, President of Educational Facilities Laboratories, Inc., believes that the most striking change in the typical new dormitory stems from the recognition of "the student's needs as a person." Everywhere that new dormitories are being designed, the aim is to provide "companionship without being pressured to conform, and privacy without being isolated." The institutional look is anathema.

On the following pages are presented four dormitories by architects who have not only dispensed with the institutional look, but who have also been very much concerned with the proper balance between the individual and the group, and with the educational values that are built into a residential unit.

In dormitory planning, there is generally too little attempt to find out what values the students consider meaningful in dormitory life.

In this context, recent research by Sim Van der Ryn, an Associate Professor of Architecture at the University of California, is significant. Van der Ryn investigated the high-rise dorms at Berkeley and presented a paper on the work at the AIA Annual Research Conference in St. Louis in October 1966. The research, Van der Ryn reports, was carried out by observation, by interviews, by questionnaires, and by activity logs (student diaries). Four undergraduate architecture students assisted.

Among the most interesting points: A girl's world of personal space is bounded by her room (she dresses to go outside it, and knocks before entering another student's room), but personal space for boys "seems to include the entire floor"; bunk beds were found to be "highly undesirable," not because students did not want to sleep bunk-style, but because beds served as desk and storage space during the day; some students study and work mainly on the floor.

Their investigation was "frankly experimental," Van der Ryn reports, with the twofold objective of developing methods of analysis useful to designers and administrators, and obtaining "a rough picture of conflicts between student activity and a dormitory setting." With the development of dormitory construction as a major building type of the 1960's, the development of intelligent and sensitive attitudes toward their design is a vital necessity.

1/ Putney Students Build a Dorm



"This is one of the last hand-built buildings," says John B. Rogers; and among the hands involved in the dormitory construction were those of 90 student workers at the Putney School, who put in a total of 3340 hours during almost all phases of the two-year construction period.

Rogers is himself a product of The Putney School, class of '47, and was thus exceptionally qualified to understand the special requirements of a student residence at this exceptional private school. In addition, he had designed a dormitory for the school as his B.Arch. thesis for MIT, and although the two projects are not similar, his continued thinking about the problem undoubtedly adds to the maturity of this design.

The client, too, came to the project with a special background: Mrs. H.B. Rockwell, wife of the school's director, is architecturally trained (she attended the Smith Graduate School of Architecture, in Cambridge, Mass., which was later absorbed into the Harvard Graduate School of Design). And a local contractor, Arnold Lane, not only worked on the building as carpenter, but also instructed the student crews in all their trades: clearing the site, lumbering 3000 board ft of oak and hemlock from the Putney woods, cutting and notching timbers, framing the building, putting on roofing and siding, varnishing the finished building, grading the site. Lane estimates that their labor saved the school at least \$15,000. As an added dividend, the school proved that construction can be a valuable experience for the students, and can be done without compromising the quality of construction. (The school already had a substantial work program for its students, so there was no difficulty with unions. The students were not involved in foundation work, plumbing, electrical, heating, and finish carpentry.)

"The architect is not a maker," comments Rogers. "He merely finds the solution, which is in the problem all the time." About the school, he says, "Putney's spirit comes very much from this place. Putney is wandering to class and kicking a stone, letting the seasons come in, finding a glade of trees for a Saturday afternoon. Each dorm is a different experience, purposely so. This building is part of the whole school, and the whole school is part of it."

Rogers began his preliminary studies with a tree-house plan of rooms spiraling around a central common room. The key to the dormitory, he felt, would be the common-room space (distinct from the more formal living room), which would bring students together while at the same time giving them privacy. However, the linear character of the site made this approach inappropriate, and Rogers returned to a more conventional corridor plan. But his ingenious contribution is a corridor that *becomes* a common room, with students sitting on stairs and window ledges to talk. Also, the corridor is a *single* and unifying space; all rooms — ground floor and upper floor — open off it. Separate stairs go to each upper room, where entry is by trap door. (Corridor space is essentially the same as it would be for two small corridors, one above the other.)

Rogers is a canny student of authentic barn framing, and has used many traditional techniques (see exploded view showing notched members). One of the old connections he uses is the draw bore, where the dowel hole is sufficiently askew to make the entire assembly rigid when the dowel is inserted (an antecedent of prestressed concrete). Rogers has made his own contribution, too — such details as wedges tapped into the connection between beam and post, being tapped in further as the beam shrinks. Furthermore, the framing of the entire building is reversed: Heavy members (8 x 12's at the second floor) span the short width, while the lighter members run lengthwise; one advantage gained is that the small stairs fit between the 4 x 6 joists and do not require special framing.

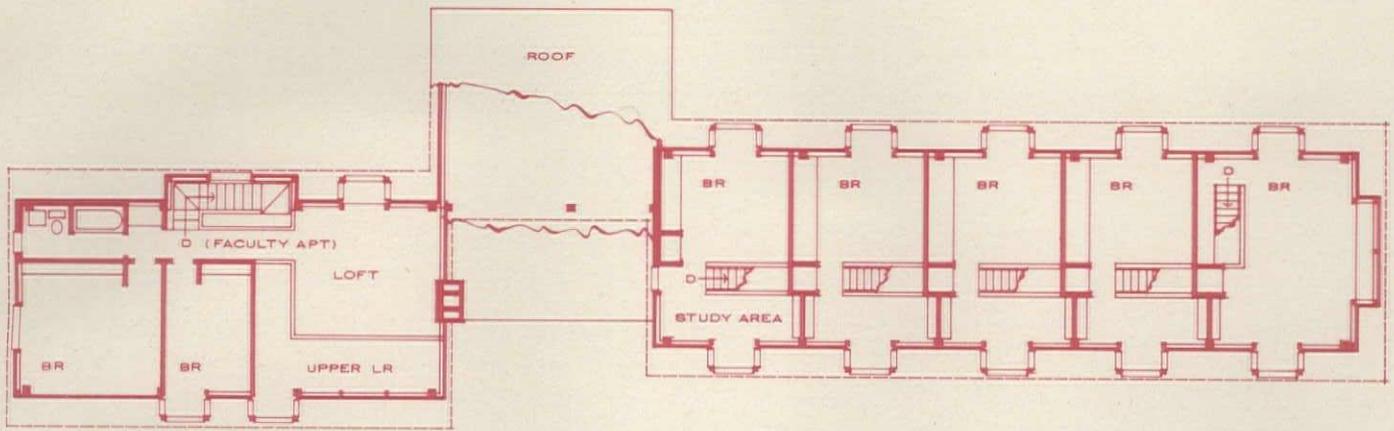
Door and windows are given the same New England scrutiny: Rogers has designed windows, trap doors, and exterior sliding doors with techniques that originated in sailing vessels and New England barns.

The result is unquestionably fun: The details are intriguing and there are unusual spaces for sitting and reading, such as the small bay windows in each bedroom, glazed to the floor; and the loft platforms at the entry. "I'll never be able to do it again," says Rogers, referring to the detailing, "but the grabbiest thing about the building for me is the way this big, strong, shaggy thing hugs you."

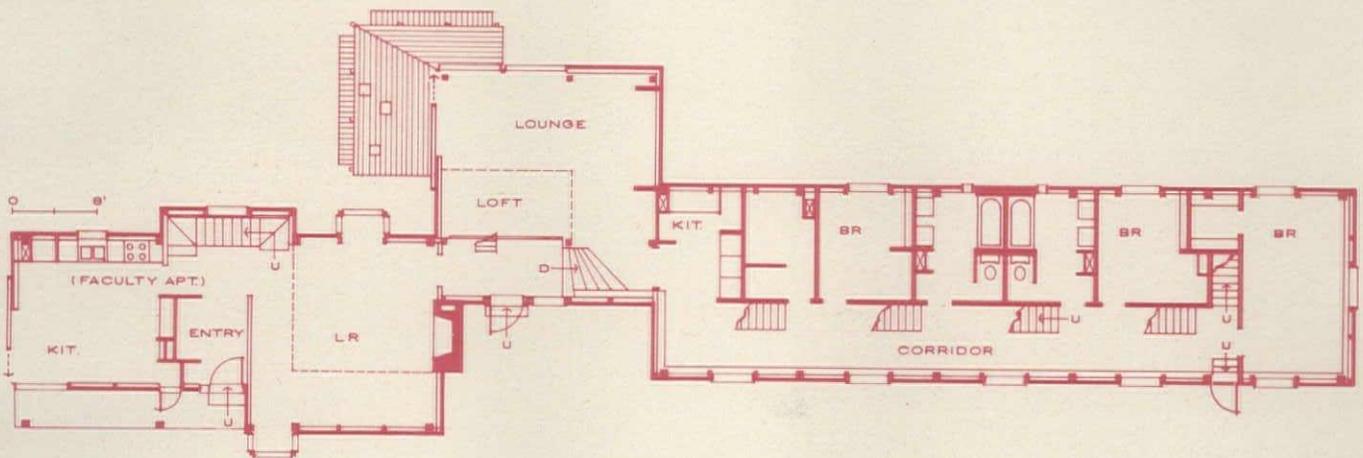
THE JOHN B. ROGERS DORMITORY, PUTNEY SCHOOL, Putney, Vt. **Architect:** John B. Rogers, of the firm Homer-Rogers, Associated Architects. **Site:** A steep linear site, covered with tall maple trees, yellow-orange in fall. Site is on the grounds of The Putney School, an open arrangement of buildings set into the Vermont hills. **Program:** A dormitory and faculty house, with domestic feeling and the faculty family in quasi-parental role. Rooms for 16 girls; maximum privacy with maximum opportunity for participation with others. **Structural System:** Post-and-beam construction, similar to old barn framing in New England. The instructive value of historical construction system and the desire to use student labor were decisive in the choice. Architect refers readers to books by Eric Sloane, particularly *American Barns and Covered Bridges*, for reference. **Mechanical System:** Hot-air heat, oil-fired. **Major Materials:** Various woods chosen for various specific uses: Douglas fir for framing, hemlock for subfloors and roof planking, oak for finish floors, pine for sheathing and exterior boarding, redwood window frames and sash; interior walls of sheetrock and homasote with vinyl wallcovering; carpet on corridor floor; corrugated aluminum roof, as on other local farm buildings; Thermopane glass throughout. **Cost:** \$69,000, or \$17.50 per sq ft; \$4600 per student. **Consultants:** Souza & True, Structural Engineers. **Photography,** except as noted: David Hirsch.

Single corridor (below) serves as a meeting place as well as a circulation for upper and lower rooms. Students gather in a corner of the common room (right, top). Unusual bedroom has double bunk (right, center); built-in closets and drawers are common to every room.

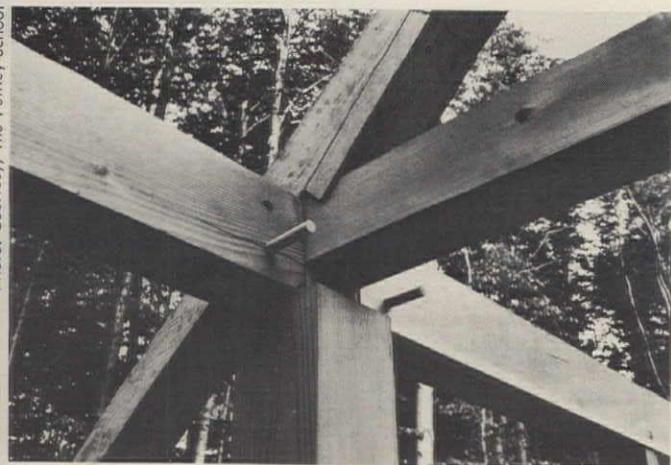




SECOND FLOOR PLAN

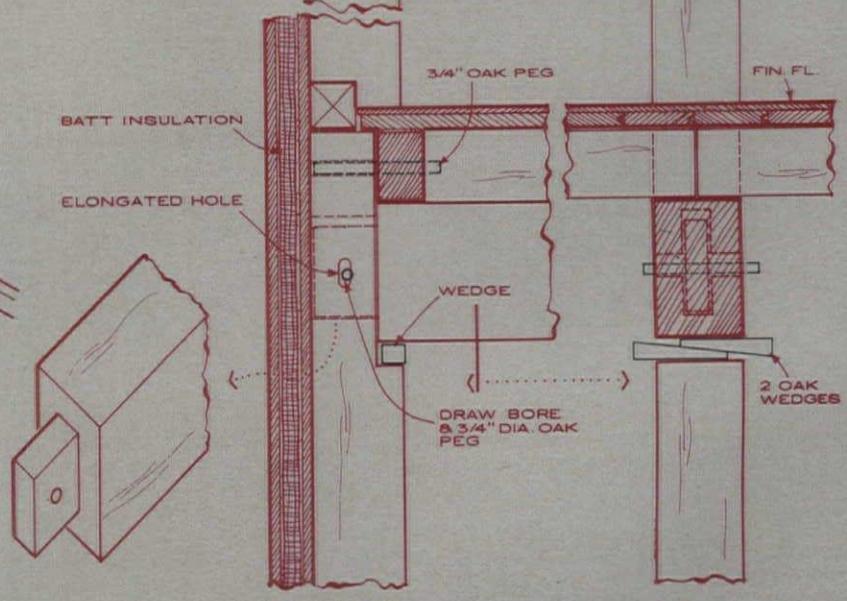
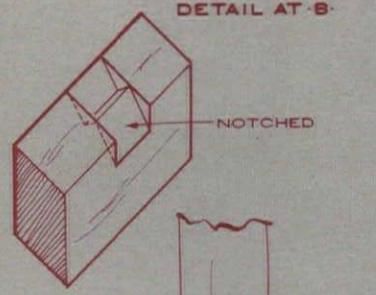
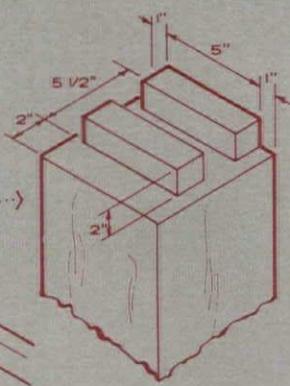
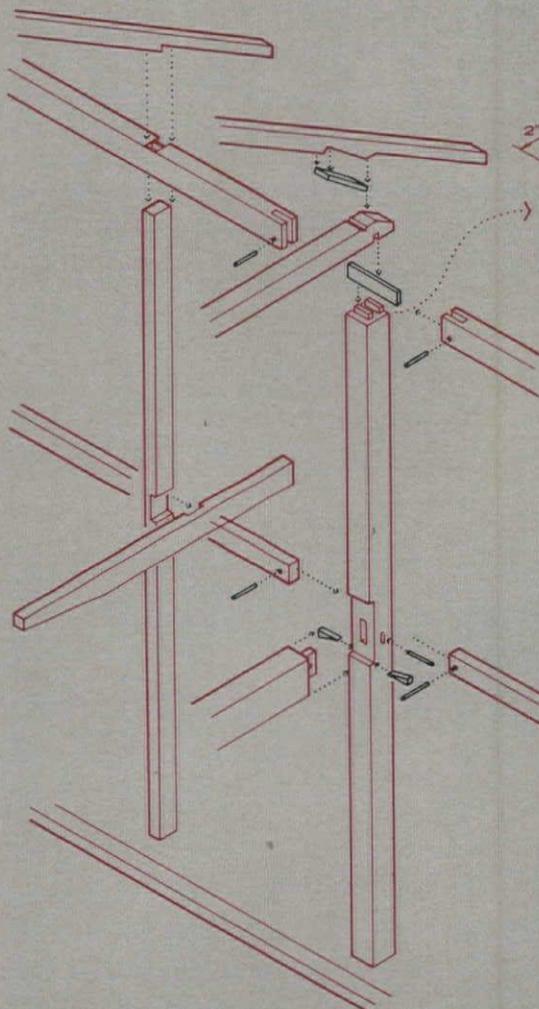
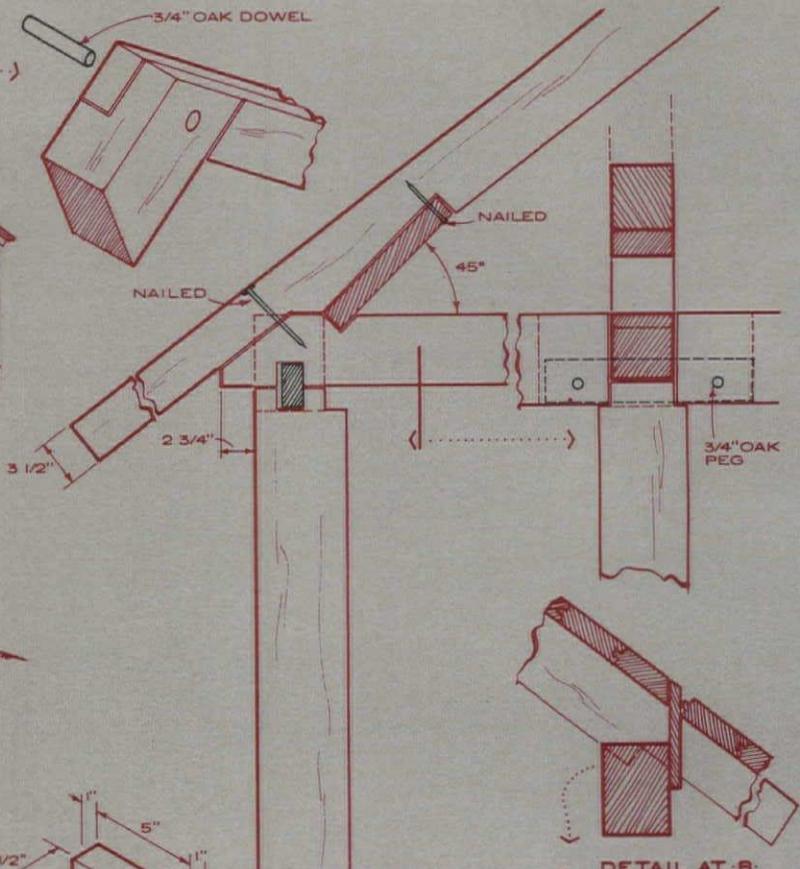
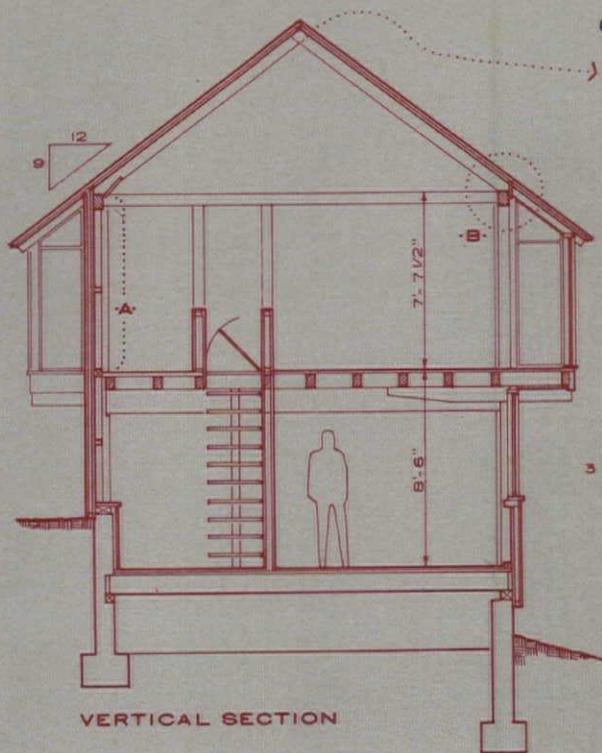


FIRST FLOOR PLAN



Typical joint (above) with wooden dowels; window casements (right) are used for intramural communication and reading.





VERTICAL SECTION DETAILS AT A · 3/4" SCALE

PUTNEY DORMITORY CONSTRUCTION SYSTEM

UNIVERSITY OF RHODE ISLAND DORMITORIES, Kingston, Rhode Island. **Architects:** Pietro Belluschi; Sasaki, Dawson, DeMay Associates; Kent, Cruise & Associates, in joint venture. **Program:** Residence halls and commons building for 1600 graduate and undergraduate students. **Site:** 14-acre, sloping, wooded site. **Design Solution:** Double rooms grouped into family suites of eight students with 45-50 students to a cottage, three or four cottages grouped together to form a hall. **Structural System:** Precast concrete panels chosen for low sound transmission, to meet code requirements and to minimize maintenance costs. **Mechanical System:** Each of three stages of project heat differently: one by steam, another by gas, and a third by electricity. **Major Materials:** Concrete and large size (12"x12"x4") terra cotta surfacing block. **Costs:** See table. **Financing:** FHA mortgage insured loan. **Consultants:** Kiely Izra Associates, Mechanical; Lloyd A. Wells, Electrical.

It's Better Than a Dorm

But it is a dorm—only, as one student aptly put it, you would never know it. The new housing complex at the University of Rhode Island by Pietro Belluschi, Sasaki, Dawson, DeMay, and Kent Cruise Associates provides apartment living for undergraduate and graduate students. The university requested that the dormitories be an integral part of the educational system. They were not to be a fun juxtaposition to the academic portions of the campus, but were to provide an environment suitable for study and be of such a nature that the students themselves would begin to assume some of the responsibilities of the good life, of non-institutional living. What is surprising is that apartment living was achieved with an extraordinarily small budget—\$5000 per student for the living unit, commons building, site development, and contingency fund. The complex for 1600 students was to be built in three stages; at this time, two are completed, with the first costing roughly \$2,820,000—or \$30,000 under the total budget of \$2,850,000.

The complex, which won the First Design Award in the Twelfth Annual P/A Design Awards Program (JANUARY 1965 P/A), divides the students into four basic social units: The first is the double room, which is part of a suite or "family" of eight students; these are grouped into cottages of 50 and halls of 250.

The explanation that follows is based on remarks by Kenneth DeMay, who sketched out the evolution of the plan from the conventional dormitory scheme.

He also describes how waste and gross space can be transformed into usable private space—all for less than the cost of the average dormitory.

The Double Room

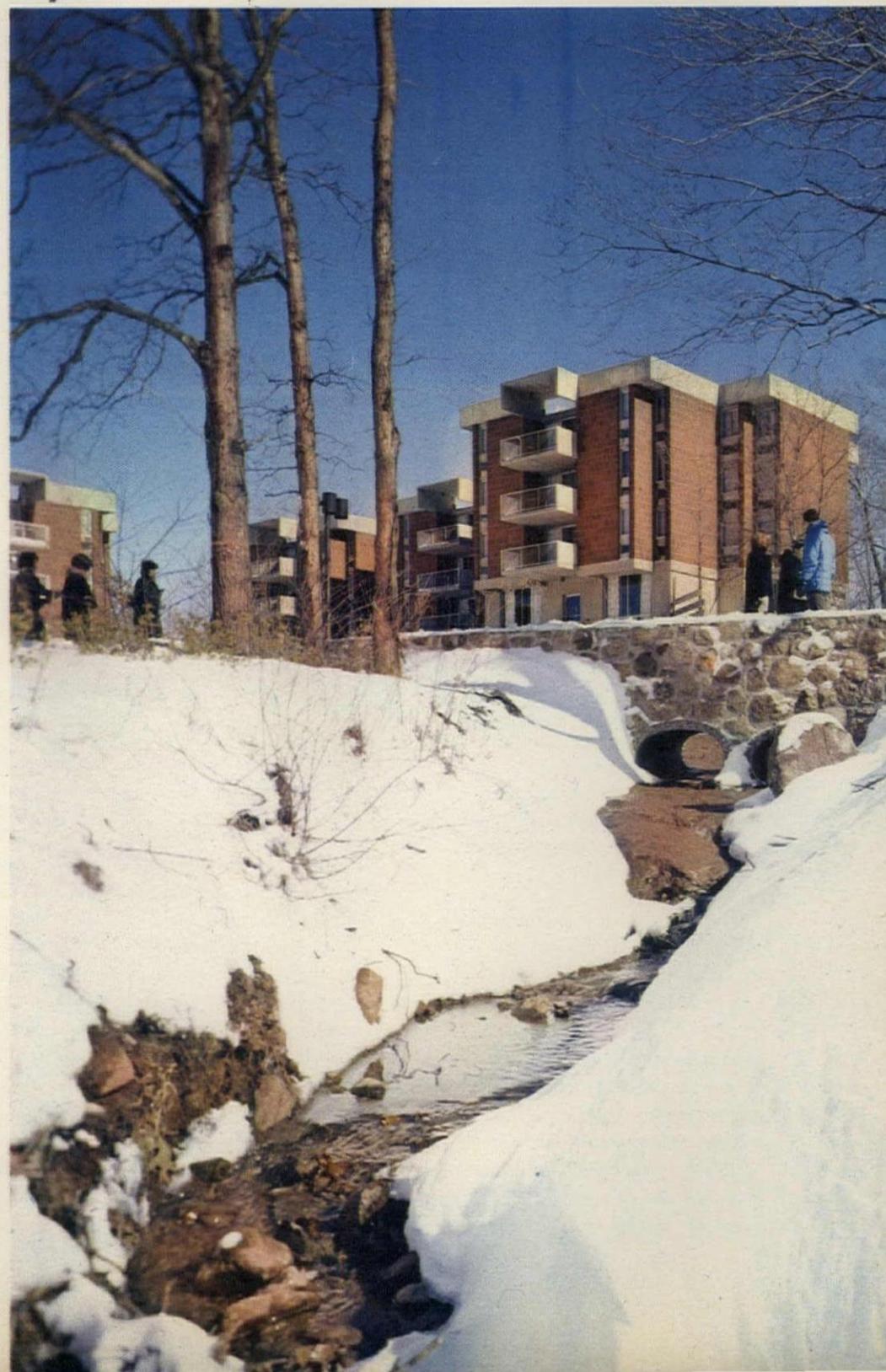
The smallest social unit, the double room, was chosen as the norm on the basis of URI research. The university had found that the double room may be the best living unit for an undergraduate student: Two students will use their room for study far more frequently than the sin-

gle. This seems to stem from the fact that, if an undergraduate studies alone, he is inclined to go wandering down the corridor at periodic intervals to find a friend and chat. By having another person in the room, he is much more inclined to stay put, feel less isolated and lonely, and more likely to study.

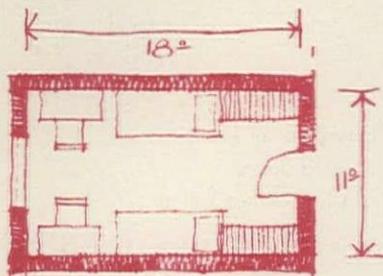
The Traditional Dumbbell Plan: Efficient, but Dull

The long and narrow room is an efficient use of space but the plan is tiresome, and

2/ The Good Life at U.R.I.



each person's area is the mirror image of the other.



Desks facing into a corner have the disadvantage of a confined environment. Also, people are seldom comfortable sitting back to back; they know someone is behind them, cannot see him, and have no warning when the other person may push back the chair, bump into them, and so on.

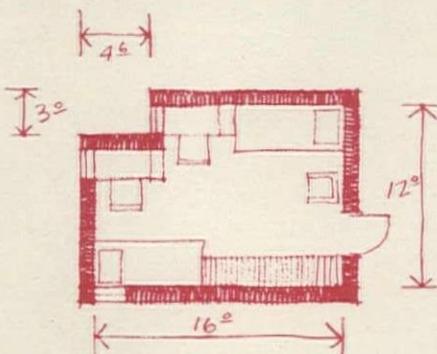
The main problem with the dumbbell plan is that both people occupy the same space.

There is little for them to do except sit on the bed and look at one another.

To enlarge the traditional room, the normal solution is to make the room longer, since broadening the space (and the outside wall) is about five times more costly than increasing the width.

Creating Varied, Individual Areas Within the Room

The architects' solution for URI was to make the room slightly broader than the absolute minimum, but notch out one corner, reducing the total area from 200 to 185 sq ft.

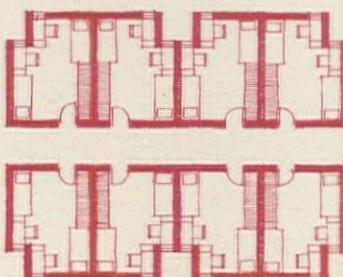


By doing this, several things were accomplished: Each student has his own space, a different space; desks are side by side but isolated from one another like library carrels, each desk having a short as well as a long view through its own window; light is brought further into the interior of the room; and, spatially, the volume is more interesting inside and out. A full-scale mock-up of the room was built and two students from the university tested it out, concluding that it was

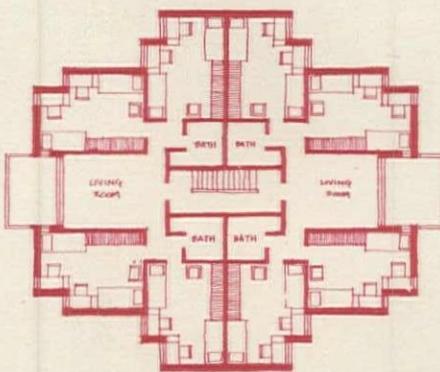
“great,” better than any room they had ever lived in. Also, as one reminded the other, “You have to remember that there is another room — a living room beyond, just a few steps away.”

Corridors Turned Into Living Rooms

Corridor space is wasted space, but it costs as much to build as usable space. Although several architects have tried broadening the hallway with study alcoves, no one really uses them: It turns out to be nobody's domain in particular, it is impossible to leave books there, and noise travels readily from one end to the other. The usual way to link dormitory rooms, even notched rooms, would be along a long corridor.



The alternative was to clip the corridor at both ends, convert horizontal circulation into a vertical staircase, and transform the public corridor flanked by cells into a private living room surrounded by a suite of rooms.



What used to be an institutional plan was changed into an apartment for “a family” of eight students. The living room gives the students their own place to study and relax. By running the window clear across the end, the area became quite different from the bedrooms, with their smaller apertures. Two small bathrooms complete the domestic unit.

Moreover, each apartment is carpeted and the houses are equipped with a central vacuum system and an outlet in each unit. Although the initial costs of the cleaning system, individual bathrooms,

and carpeting was more expensive, the university heartily endorsed the scheme: It emphasizes the “good life” and its responsibilities. Since the students have to maintain their own apartment, this cuts down on university maintenance. Finally, the suite of rooms provides the institution with appropriate living quarters for families attending summer conferences. (The latter provide a substantial contribution to the income of the university.)

Balconies That Work

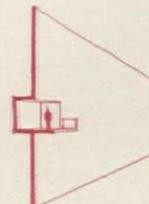
The apartment is embellished by a balcony that works. “Most balconies don't function,” comments DeMay, “for the simple reason that walls repel. There is a certain area in front of a wall that is uncomfortable.”



Most balconies are simply pasted on the fronts of apartments and the user is more aware of the wall of the building than the space of the balcony.



By indenting the balcony and setting the window glass back within the room, the balcony becomes a definite space, and the students have privacy from the side and below.



Psychologically, the balcony is a readily accessible portion of the outdoors that provides a change of experience — a good place for such things as a quick smoke, sun-bathing, laundry drying. It also functions as a fire escape, and as an escape hatch for youthful exuberance. When students wanted to let off steam during an exam period last year and threatened to riot, the faculty locked them in from below. The revellers promptly spilled out on the balconies and shouted their lungs out — in safety —

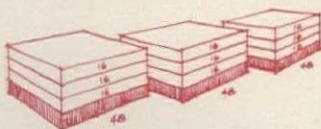
for half an hour. Architecturally, the balcony gives the building "volumetric positiveness," shadows, and lends the façade a residential, living room appearance, rather than an institutional, dormitory look.

Converting the Hall Into a Cottage Complex

The university, in its initial research, had established that students were naturally inclined to make friends on the same floor rather than elsewhere in the hall, and that, generally, floors holding about 50 students constituted the maximum size that a Resident Adviser could cope with adequately, and know each student individually. For administrative purposes, universities generally group the smaller units of 50 into halls of 150 or 200. This usually results in a long, monolithic hall:



At URI, the floor syndrome gave way to the cottage concept. Instead of horizontal circulation and horizontal loyalties, the group of 50 was stacked vertically: 16 students to a floor, for three floors, with one or two singles on the ground floor. Also on the ground floor are community facilities that support the residences above: This includes a kitchenette, which is used as soon as pork and beans are posted on the dining-room menu, and individual study and recreation rooms skillfully fashioned out of traditional corridor space. Under this scheme, vertical loyalties function just as effectively as the old horizontal ones. The cottages of 50 are then grouped into units or halls of 150 to 250.



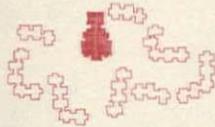
Besides breaking up the monolithic quality of the traditional hall, the small cottage units permitted the architects to stagger them down the hillside, and fit them into the irregular terrain.

Positive Empty Spaces

The architectural composition is largely determined by the natural characteristics of the site. DeMay explains, "Besides the trees on the southern half of the site, there were three dominant features we

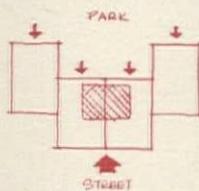
first noticed: a small brook that had been piped underground on the upper portion of the campus, an abandoned granite quarry whose stone was used in the original university buildings, and a two-acre swamp. We tried to make as much of these as we could. The brook was diverted so that it spilled over the edge of the old quarry into a small pond, making a waterfall near the main entrance and the Commons building. The stream then continues through the site to a larger pond created by dredging out the swamp.

The groups of three, four, and five cottages ring the area irregularly, surrounding the site and loosely defining three distinct open spaces. One series sur-



rounds the pond; others define an open field; and a third encompasses a wooded area to the south. "This informal grouping," claims Belluschi, "turns the open spaces into positive design elements."

As much as possible, the architects avoided grading and leveling, to preserve a maximum number of trees. The only architectural rule enforced was that, in each hall or group of cottages, two of the units were to be level so that an entry to the hall and a large common room could be located between them. Entrances to the halls are always from the exterior of the site; entrances to the individual cottages are from the park side.



The Commons building, where the 1600 students will eat, collect their mail, and deliver their laundry, was placed strategically in the center of the complex. The university at one time considered postponing construction of the Commons until the last stage, but the architects protested that it was an integral part of the living pattern of the dormitories, and to put it off would mean jeopardizing the success of the entire complex. The dining facilities are broken up into several rooms of different sizes, focusing on different views of the campus. There are also balconies for fair-weather dining. Although the architects claim they made an effort to scale down the Commons to

residential size, it is nevertheless a dominant element on the site.

Summing Up the Luxuries

It may be worth listing the features at URI which, in any other project, would be classified as luxuries:

- carpeted floors
- built-in vacuum system
- private living room, balcony, and bath
- telephone and TV wiring at each student desk
- kitchenette and multiple study rooms on the ground floor
- a parklike setting with no auto traffic

Some of the "luxuries" actually cost the same or less than ordinary dormitory features:

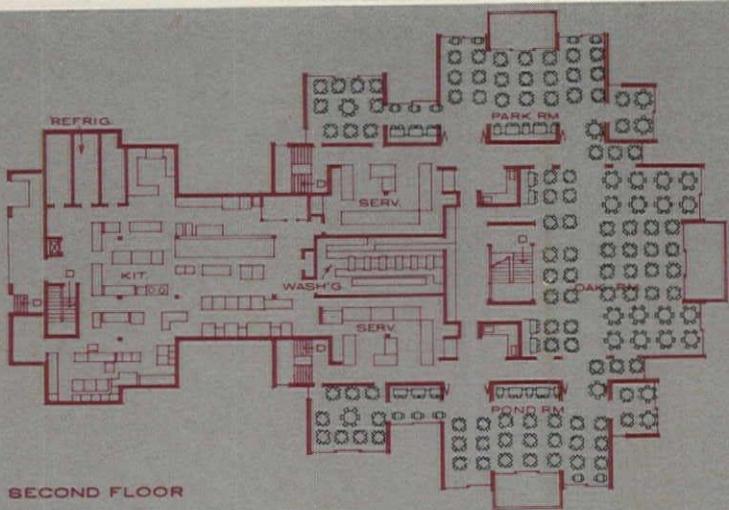
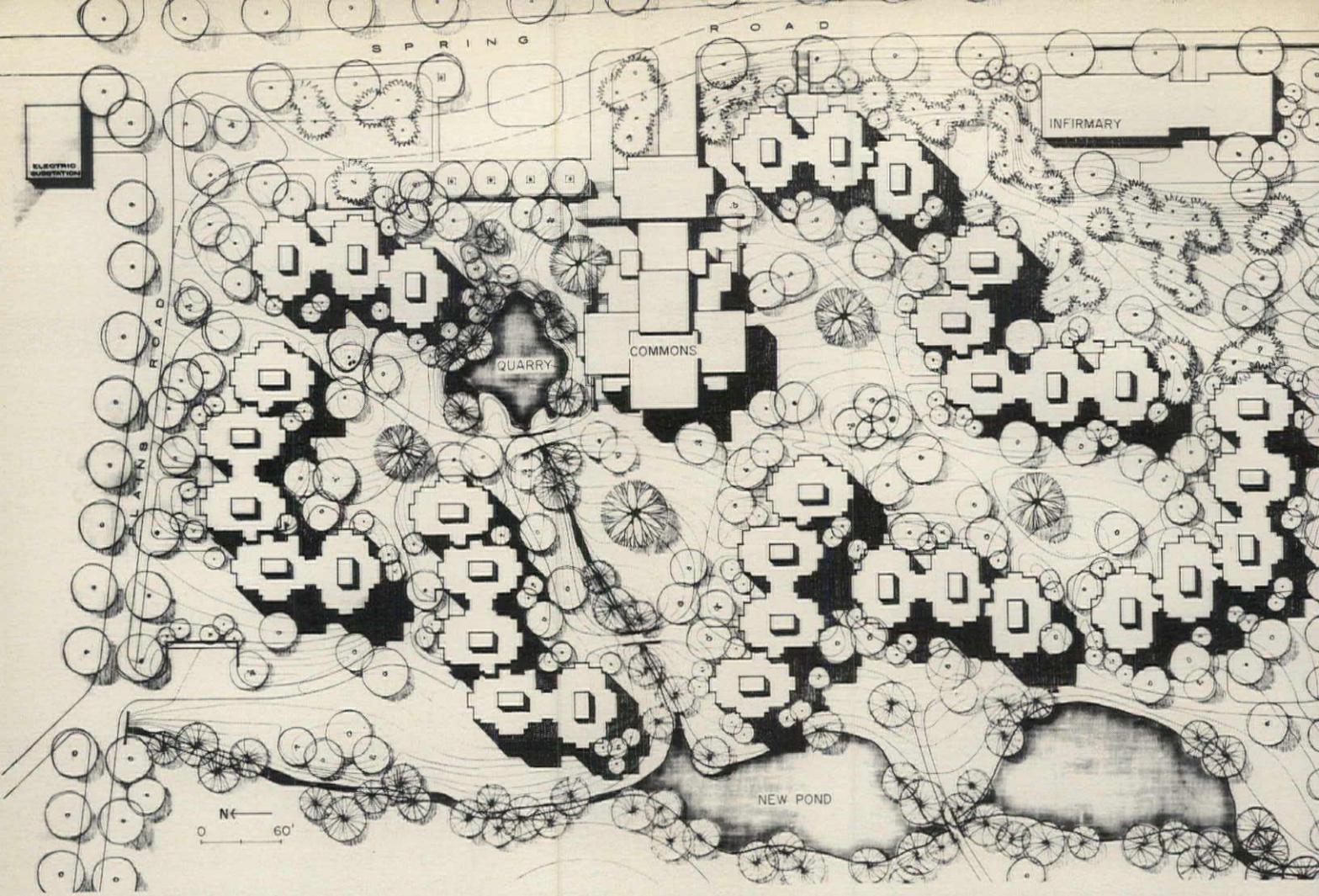
Carpeting, initially only slightly more expensive, is in the long run cheaper. URI carpeting cost \$1 per sq ft. By using it, acoustical tile becomes unnecessary. (Figures on a tile floor and ceiling add up to nearly the same amount: floor, 34¢ per sq ft; acoustic tile, 50¢; total, 84¢.) Maintenance costs also turn out to be less for the university. Although the initial cost for a central vacuum service was \$15,000, only one kind of equipment is needed, compared to the varied paraphernalia needed to strip, clean, and polish tile floors. Finally, carpets look and feel better; the students maintain their own suites, and university responsibility has been cut down.

Study spaces and living rooms are not so much extra luxuries as they are ingenious conversions of gross to net space.

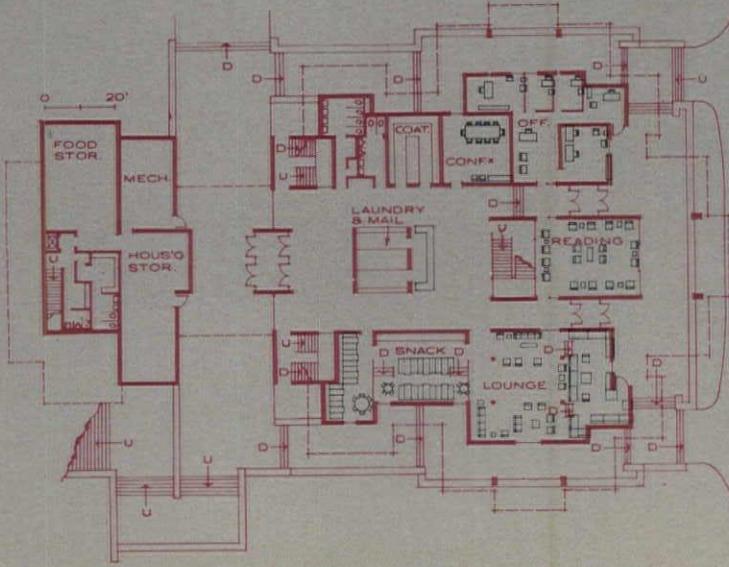
Construction costs on the dormitory were held to a minimum. For example, the large 12" x 12" x 4" brick costs less than regular brick. Moreover, the first floor of each unit is simply a continuation of the foundations, with a cantilevered floor on top carrying the dormitory units. The concrete base is cheaper, and aesthetically, serves to raise the over-sized brick block off the ground, minimize its superscale, and separate the red color from the green grass. The concrete base also serves to differentiate the social facilities from the residential units above.

Construction costs (including all site work, off-site utilities, on-site utilities, built-in equipment, but excluding movable furniture and fees) were as follows:

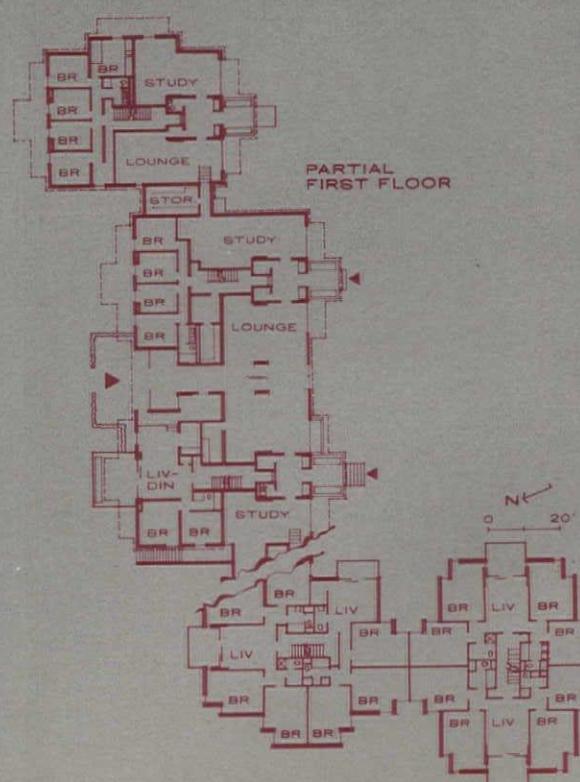
	Students	Square feet	Sq ft per student	Total cost	Cost per sq ft	Cost per student
Stage I	631	140,652	223	\$2,820,000	\$20.04	\$4469
Stage II	490	108,300	221	\$2,102,570	\$19.41	\$4292
Commons	1600	31,046	19.5	\$1,186,930	\$38.23	\$742



SECOND FLOOR



FIRST FLOOR



PARTIAL TYP. SECOND AND THIRD FLOORS



Stairwell (top, left) is all that remains of dormitory corridor; notched corner in student room (top, center) brings light into the interior; dining rooms in commons building (top, right) are broken up into several different spaces; living rooms in student suites (left) provide homelike study spaces; Commons building (below) is focal point for dormitory clusters.

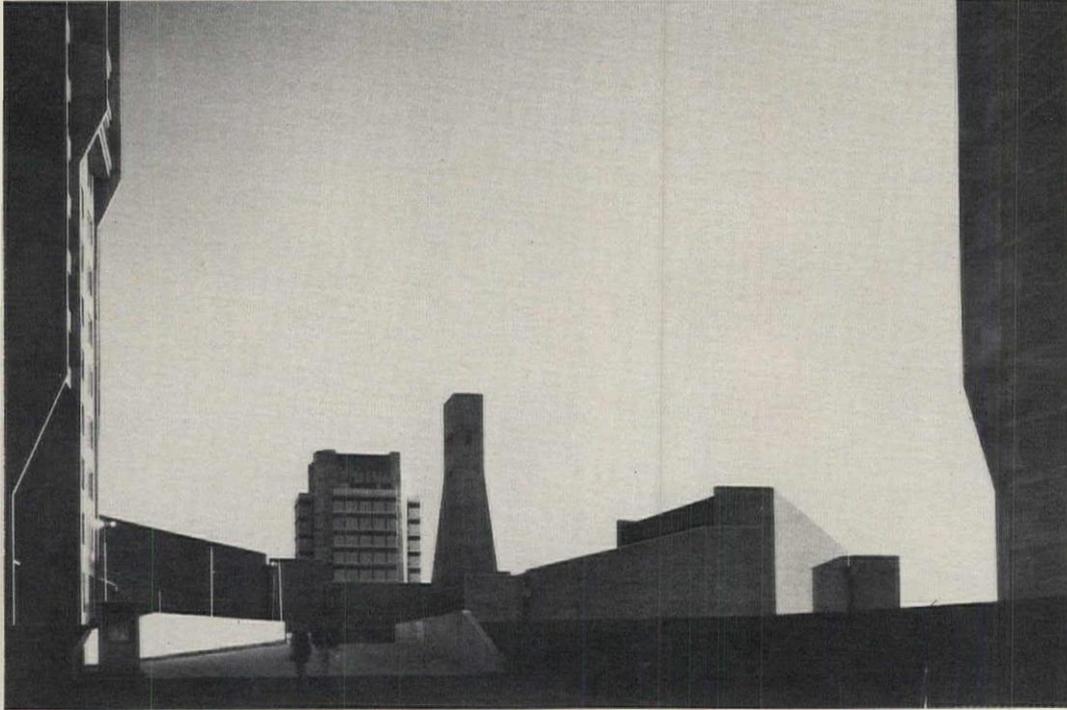


3/ Hofstra Towers on an Airstrip

DORMITORIES A AND B, Hofstra University, Hempstead, L.I., N.Y. **Architects:** Warner Burns Toan & Lunde; Hirsh Finkelstein, Job Captain. **Site:** Typical flat Long Island countryside, on the 88-acre site of what was previously Mitchell Field, recently closed

down as a military facility and its land zoned for "educultural" use, with the stipulation that plans be undertaken for this use within five years. Site is across Hempstead Turnpike from the older campus. **Program:** Separate dormitories for men and women, to

mark the university's first step into residential housing after 35 years as a commuter college. Dormitories to be integrated into new development comprising library, student union, and additional dorms (all now under construction). **Structural System:** Reinforced concrete, flat slab design. **Mechanical System:** All rooms air conditioned, with small fan-coil units on a two-pipe system. The units can also produce an acoustic hum to blanket out other noises. **Major Materials:** Concrete structure, with exposed formboard markings on the columns, and smooth finishing of the lintels; wall infills of tan-white brick, similar to older buildings on campus; built-up roofing with aggregate surfacing; two layers of 1/4-in. gypsumboard, surrounding an acoustical blanket, for walls; vinyl-asbestos tile for floors; carpet for corridors; acoustic tile for ceilings. **Cost:** \$2,380,000, or \$22.30 per sq ft; \$5230 per student. **Financing:** Tax-free, 30-year, municipal bonds, issued by the Dormitory Authority of the State of New York. **Consultants:** Severud Associates, Structural; Sinard, Piccirillo & Brown, Mechanical; Eberlin & Eberlin, Consulting Engineers; Ranger Farrell, Acoustical; M. Paul Friedberg, Landscape Architect. **Photography:** Jack Horner.



When Hofstra College became Hofstra University in 1963, it launched a building program that included a new library, student union, and dormitories for a student body that had grown to almost 11,000. The architects overcame an initial university sentiment in favor of low-rise units (which were thought to be cheaper and more homelike) by arguing that, in fact, such units would be more expensive and too homelike. The architects not only won this argument on the first pair of high-rise dormitories, but have also designed two other pairs of dorms (one is under construction, one is in working drawings). Future plans for infilling units are still under debate between those who favor three-story houses and those who favor six. (The architects would like some low-rise units on the site for aesthetic reasons.) Ultimately, there will be dormitory space for about one-half the undergraduate population, which now numbers 7000. The newer towers have 14 floors instead of 12, for 538 students per pair of towers, instead of 440 in towers A and B.

To avoid the long and noisy corridors of traditional dormitories, the architects kept the floor area to a low 3600 sq ft. The typical floor has a narrow corridor on each side of the elevator, each corridor serving 10 students (6 of them in single

rooms, some of which are interconnecting, and 4 in doubles). The basic social unit is thus the small one generally considered most desirable in a college residence.

According to the architects, the efficiency of the small tower floor is "amazing." The project was within the Dormitory Authority's standards, with an average of 240 sq ft of gross area per student, but each student has approximately 107 sq ft in the room itself, which is 15 per cent above the state average. Interestingly, the small floor area was not so efficient from the builder's point of view; there was often insufficient space for the necessary building trades to work.

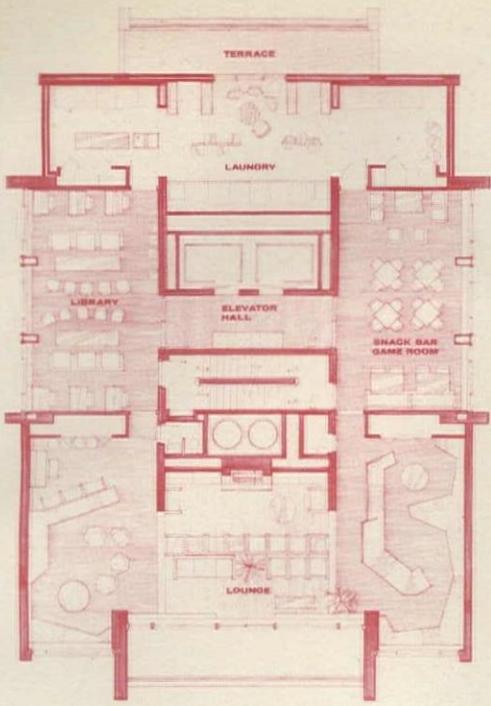
The architects did extensive research into existing dormitories during the design stage, and decided that "the true social and cultural center of dormitory life is the laundry, with its clothes-washing machines and vending machines." Instead of burying these in the basement, as is customary, the architects have placed them on the twelfth floor, along with a snack bar, study area, lounge (with wood-burning fireplace), and two terraces. From here, there are views overlooking the campus and the parking lots on Mitchell Field runways; there is the panorama of low-lying Long Island; and, on a clear day, the skyline of Manhattan is visible.

The mezzanine above is also special: high-ceilinged rooms for graduate students and "the academic elite." These rooms are interesting both from within, where some are as high as they are wide, and from without, where the pitched roofs are intended to "ameliorate against the 'Lefrak City' look."

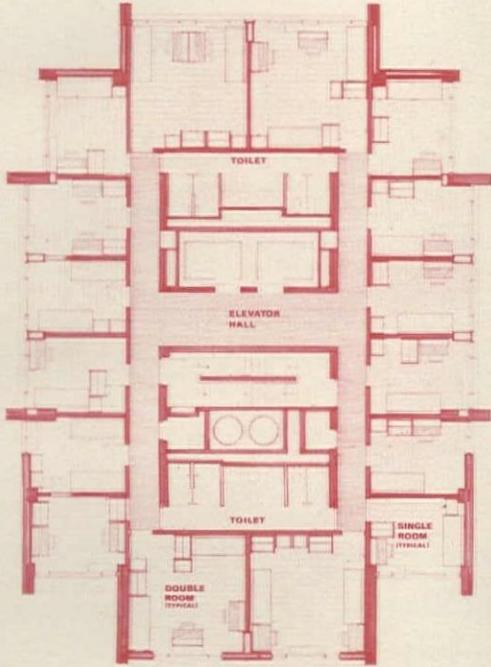
All furniture is movable ("We resisted our natural architects' proclivity for built-in furniture"), to answer student protest against uniformity. Even the wardrobes are free-standing. According to the architects, students change the furniture frequently, and "have discovered nearly all 10 schemes we worked out for furniture arrangement."

Whether, as hoped, students will react as grown-ups when confronted with high-rise living is debatable. The students at Hofstra so enjoy playing with the elevators that the university is thinking of pro-rating damage costs among all student residents in the future.

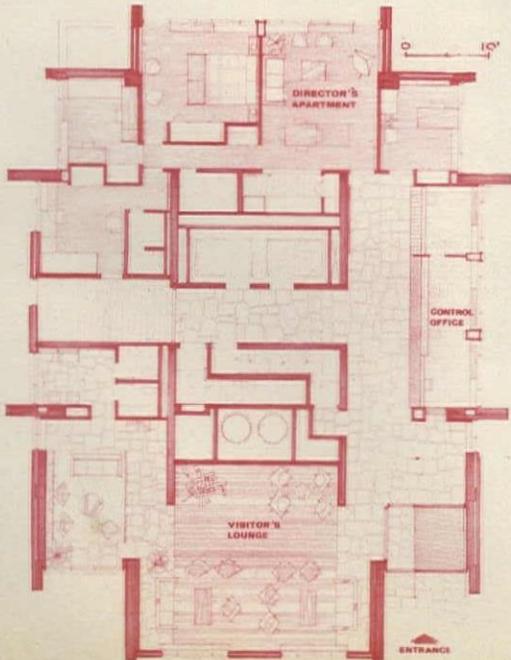
But the dorms have also received the mature acclaim of students, who enjoy the flexibility of room arrangements and the cohesiveness of their floor groups. And the dormitories (together with Hofstra's new library and the new footbridge across Hempstead Turnpike) have received the 1966 award in the New York area from the Concrete Industry Board



Top Floor Lounge.



Typical Dormitory Floor.



Ground Floor.

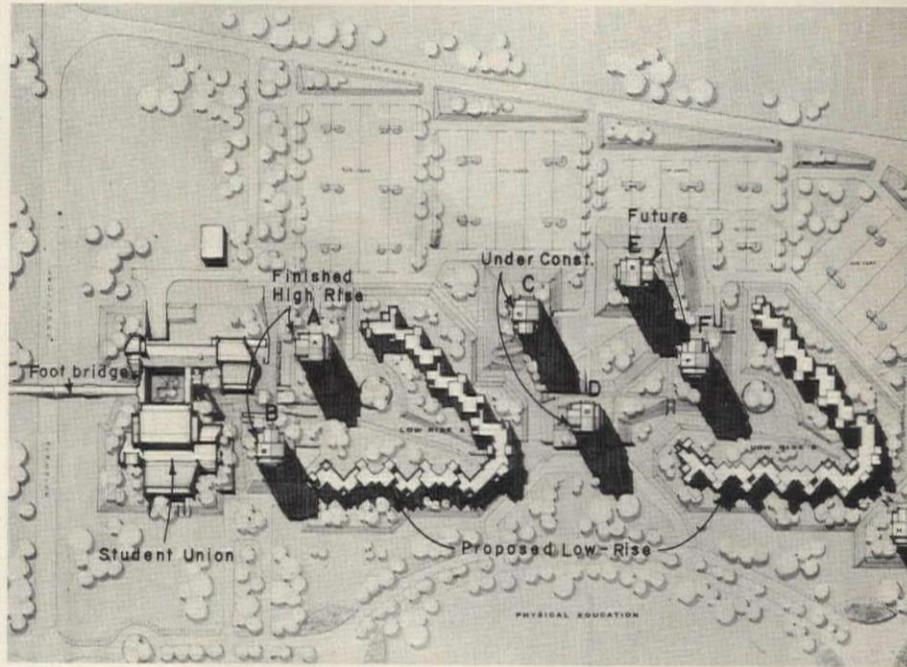
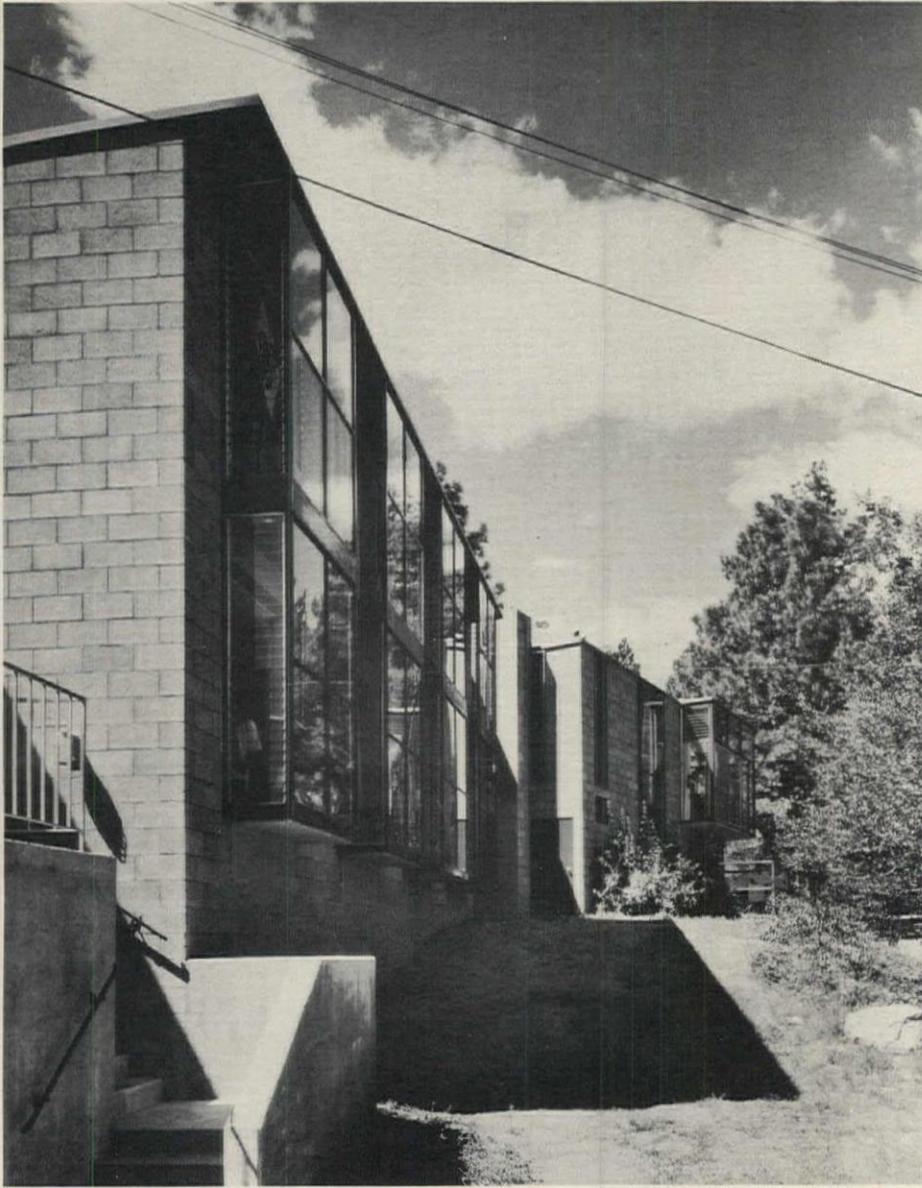


Photo: Ellen Perry Berkeley

4/ *View from Desert Sun*



BOYS' DORMITORIES, *Desert Sun School*, Idyllwild, California (near Riverside). **Architects:** Maynard Lyndon and Donlyn Lyndon. **Site:** Wooded knoll, northeast end of campus. Soil is disintegrated granite with outcroppings of bare rock and growth of pines, oaks, and manzanitas. **Program:** First of three dormitories, which together will house a total of more than 75 boys, each dorm to include private rooms (maximum of two students per room), communal rooms, and faculty housing (living-dining and porch space plus two bedrooms and a utility room). **Structure and Materials:** Concrete block supporting walls with concrete slab floors. Roof is wood beam system with tar and gravel surfacing. Window frames are wood, except for all operating sash, which are aluminum attached to wood frames. **Cost:** \$210,000; approximately \$19 per sq ft. **Consultants:** Joyce Early Lyndon, Landscape Architect. **Photography:** Julius Shulman.



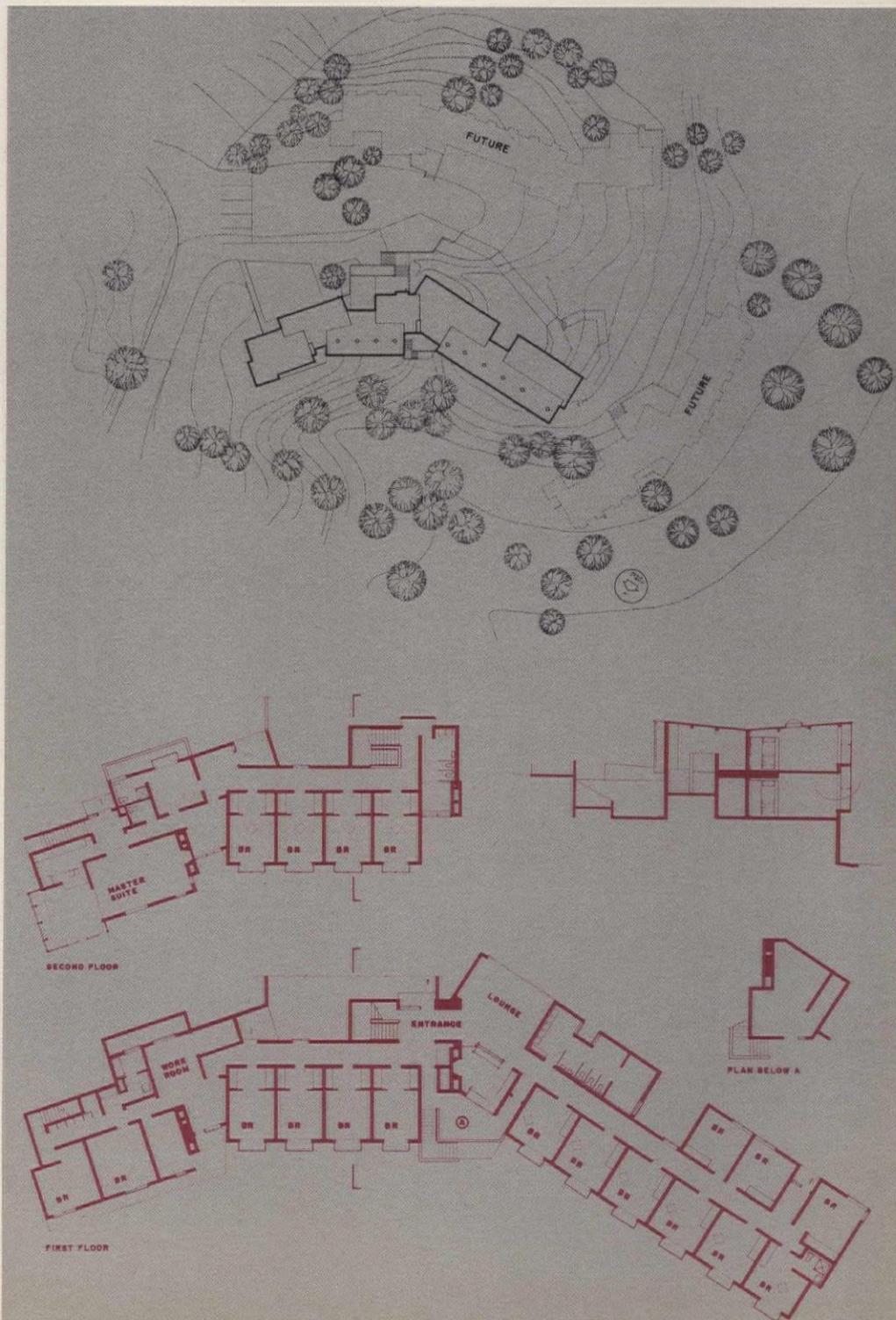
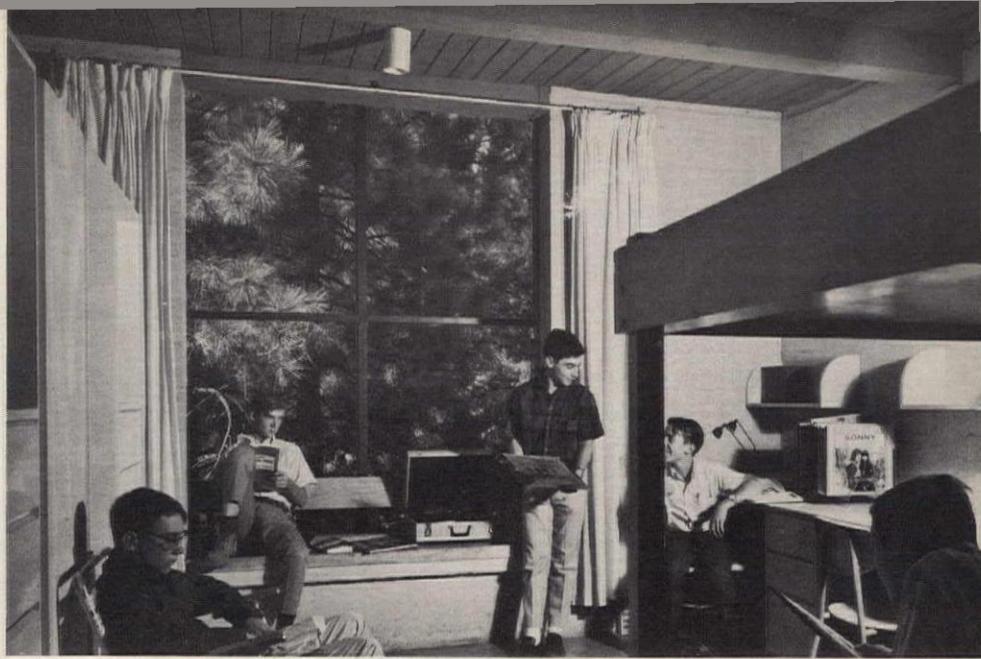
A knoll-side complex of three boys' dormitories is planned for the Desert Sun School in California. The three are so arranged as to leave the top of the knoll, with its spectacular view of a valley to the west, a common, open, activity space. The first dormitory to be completed, housing 30-35 boys, is tucked neatly into the slope of the hill, and opens each of its three levels to access by on-grade footpaths. Vehicular approach is at the highest level of the building.

An angular building, the dormitory combines boys' housing and faculty housing in a scheme that divides one area from another, yet allows each to take advantage of the site. The public spaces for the boys are positioned on the upward side of the slope toward the knoll's summit. Lounge windows, the sills of which are on grade, have actually become informal passageways for the adolescent boys, who like to swing casually in and out.

Bedrooms, the private spaces, occupy the side of the building facing down the wooded, more secluded part of the slope. Bay windows bring each of the bedrooms into the outdoors, as well as offering a cozy, intimate space with built-in seat for reading, talking, daydreaming. The sides of each bay window are louvered to provide screened ventilation without disrupting the view through the large center portion of the window. The windows are carried up to the edge of the roof, which, rather than continuing the downward slant of the site, reverses the direction and angles upward, permitting more trees and light to be encompassed in each bay. Skylights on upper floors provide further natural illumination.

The faculty apartment is contained in a corner of the upper-floor wing and has its own private glazed porch overlooking the hillside.

Colors are bright throughout: Wood window frames are painted royal blue; sunny yellow accents interior furnishings. The architects designed beds, cabinets, and built-in lounge seats, which, like the rest of the building, are simple, economical, and sturdy, almost inviting the rough wear they are destined to receive from the athletic inhabitants. Nevertheless, the dormitory's relationship to the site, particularly in the way that each bedroom is given its own scenic surround, is enough to make a poet out of the huskiest brute.



The Wealthy

Today, the rich are more peripatetic than ever, spending summers here, winters yon, alternating between pied-à-terres in London, Paris, San Francisco perhaps, and New York. But in spite of the growing fashion for little efficiency flats and town houses, the idea of a central homestead (as shown here) never seems to die.

Formerly, however, the rich American borrowed old clothes for his new wealth: Georgian, Tudor, French Renaissance and Venetian Palazzo styles were candidly and sometimes gracefully spread over the wilderness. To a certain extent, the old styles demanded an old way of life, with multiple gardeners, multiple footmen, doorbell-answerers, and so on. With the rising price of manpower, and the current do-it-yourself kick, the domestic servant is fast going out of style. What does a wealthy man and his architect do? It appears, from the two houses shown here, that there are at least two widely divergent alternatives.

In one case, the architect, I.W. Colburn, still believes in pomp and circumstance and provides a Palladian-medieval mix: classic plan, turrets, arches, and formidable walls (all at slightly reduced scale — and reduced manpower). On the other hand, Euine Fay Jones, architect for a wealthy chicken farmer in Tennessee, tactfully guided his client away from Georgian-mansions-mid-the-Ozarks to the rambling Midwestern teachings of Frank Lloyd Wright. Wright does well by the modern millions: Some cathedral-size spaces are ingeniously bungalow-sized into the terrain, and, on the interior, the banquet table flows quite gracefully alongside the kitchen counter for the do-it-myself-cause-I-like-it millionaire cook. By melding one space into another à la Wright, each space seems a great deal bigger than the budget might afford.

Vincent Scully once said, in contrasting the classic and Wrightian styles: "The Palladian plan is an excellent expression of a pre-Industrial, humanistic world where the human being occupied a fixed, central position. The Wright plan is an image of modern man, caught up in constant change and flow, holding on, if he feels he must, to whatever seems solid, but no longer regarding himself as the center of the world." It appears in some cases a man's world is still a static castle; for others, it is still a few thousand chickens moving around a rough and tumble mountainside.

Classic mansion by I. W. Colburn.



1/ Classic Mansion

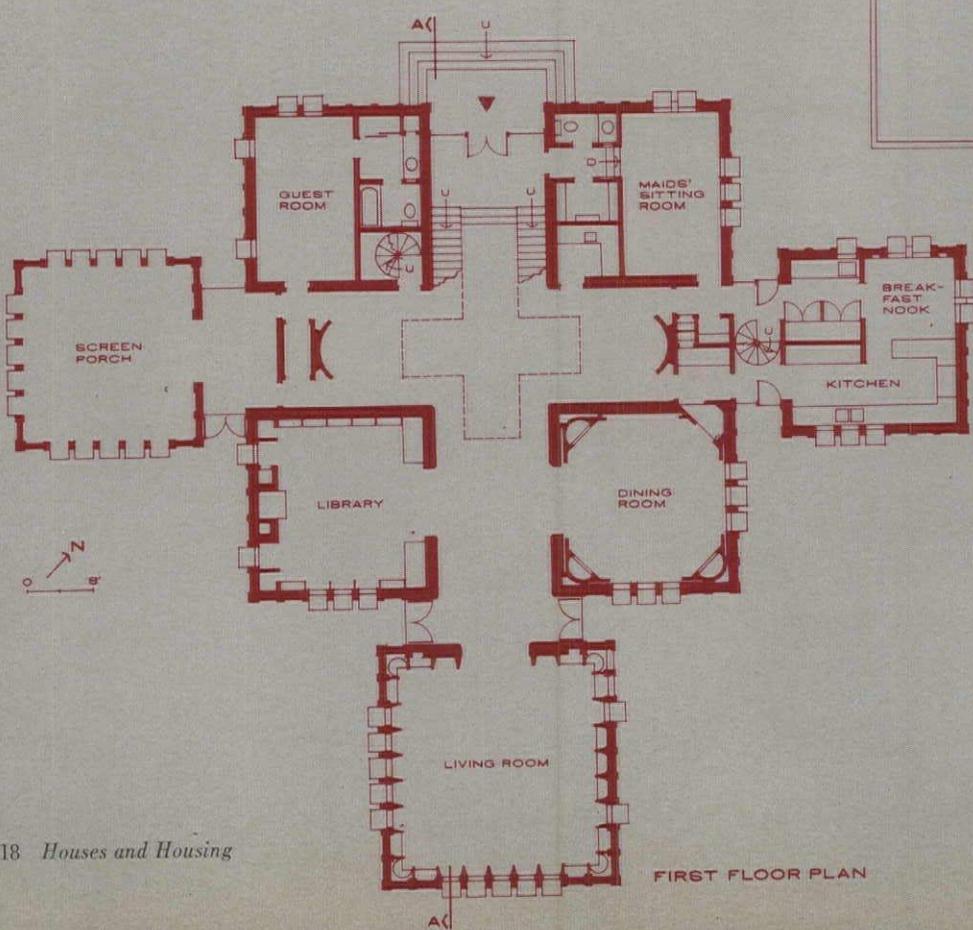
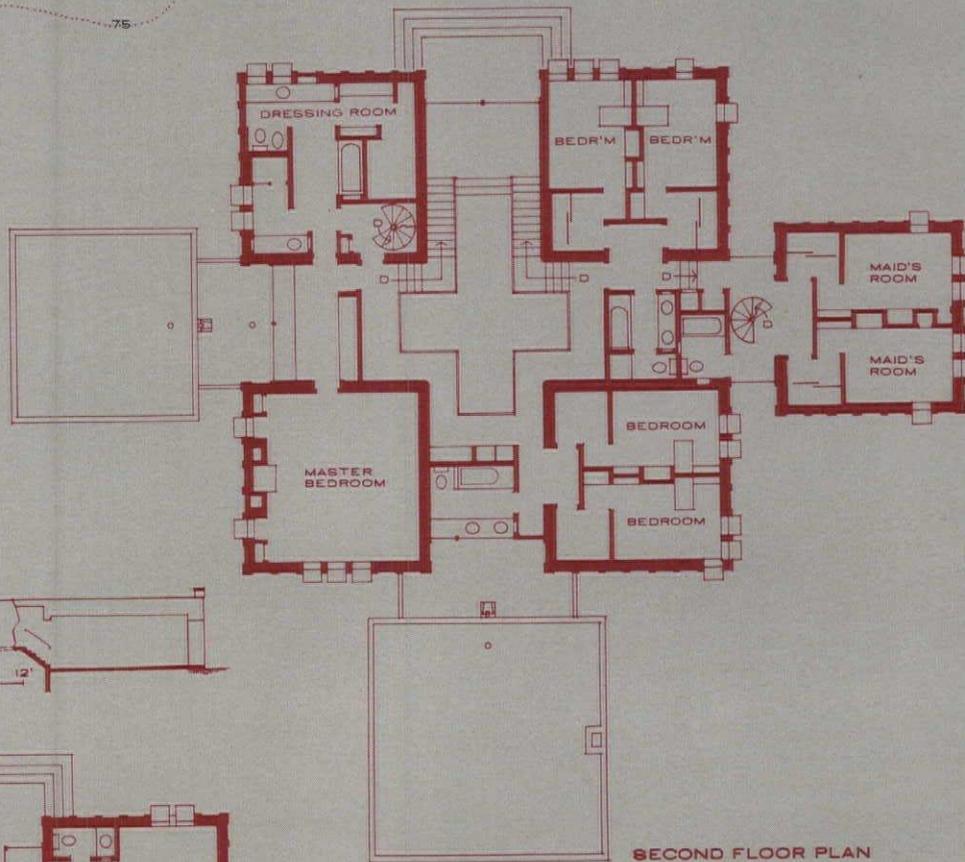
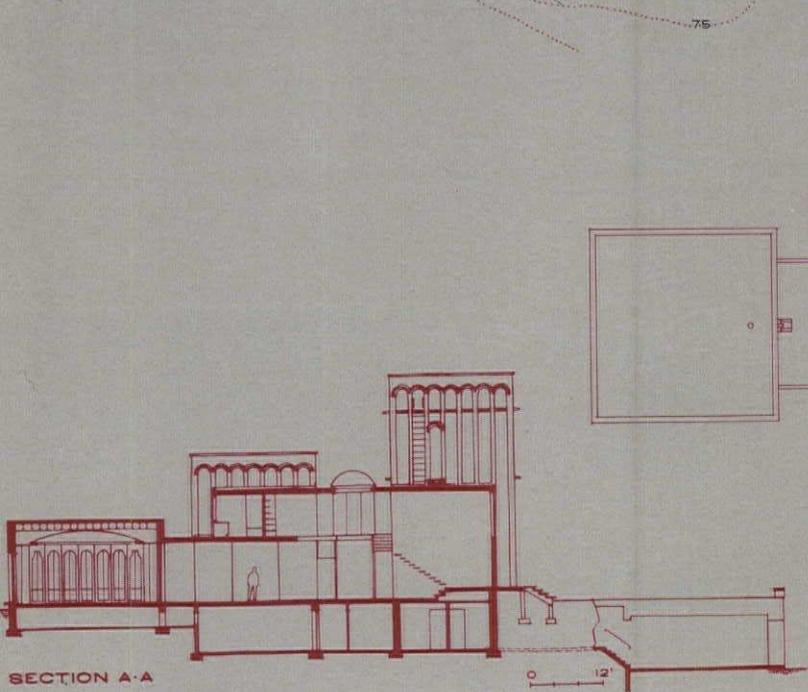
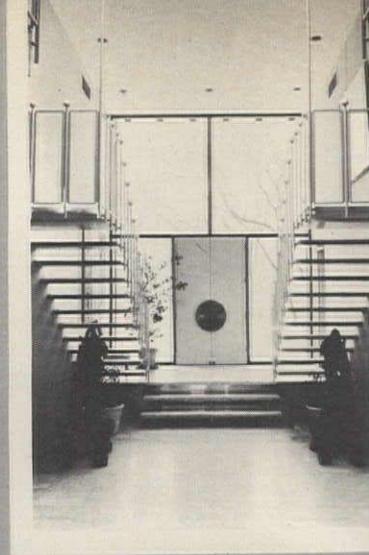
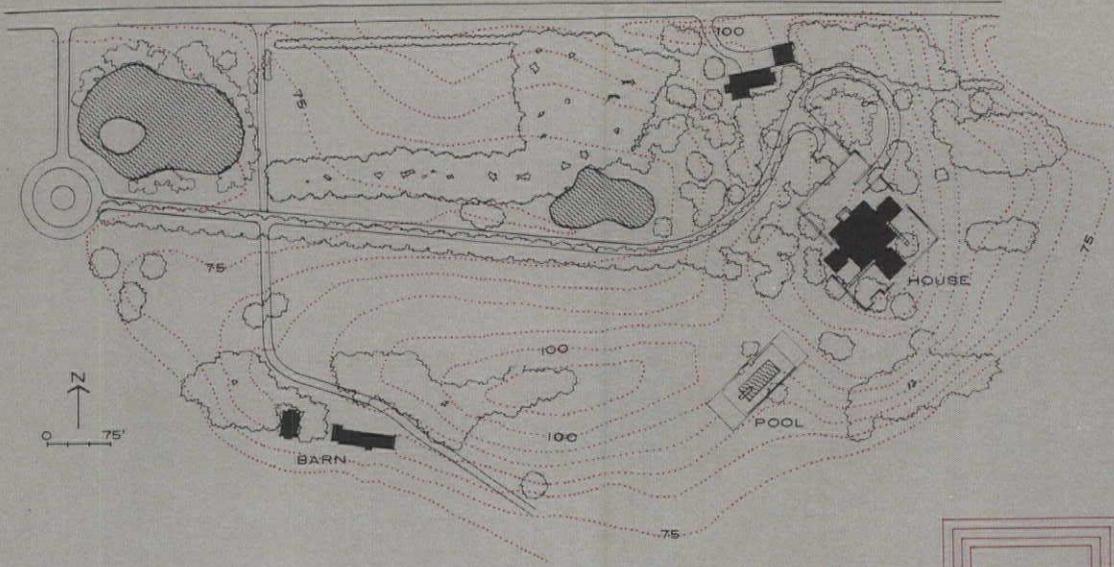
PRIVATE HOME, Wayzata, Minn. **Architect:** I. W. Colburn. **Site:** 70-acre estate of wooded, softly rolling hills not far from Minneapolis. Estate came equipped with stables, guest house, caretaker's house, tennis courts, and swimming pool—as well as the original main house that was replaced by Colburn's design. **Program:** A house for a family of six plus two live-in-maids. They wanted private rooms for each of the family members and the maids, with ample bath facilities. **Structure:** Independent units of load-bearing brick masonry are placed between arms and at head of Greek cross core space; all are connected by nonstructural links. Independence of each structural unit

is expressed by exterior massing; the terrace plan corresponds to this module. **Materials:** Brick bearing walls, floors of prestressed, precast concrete. Walls within finished with plaster, floors with marble and hardwood in principal rooms, glass mosaic and tile in others. **Mechanical System:** All air system for heating, cooling, humidifying, and dehumidifying; all accomplished with water as a medium. **Consultants:** Stageberg Architects, Inc., Associate Architects; Lewis D. Freedland, Consulting Engineer; Mayer & Borgman, Structural Engineer; Office of Daniel Kiley, Landscape Architect; Alexander Girard, Interior Designer. **Photography:** Warren Reynolds.

A home should strongly express man's emotional need for shelter, together with his potential for grace and glory. "Grace and glory, pomp and circumstance," according to the architect I. W. Colburn, "have been sadly neglected in the current preoccupation with functional design. The emotional potential of architecture has been rarely probed in the building of our time. This is a valid area, untouched and exciting."

To achieve a distinctive emotional impact, Colburn borrows from various tra-





ditional elements; the house shown here is a good example of his sources. The massive walls pierced by long narrow windows and the "watch tower" recall a medieval fortress; the blind arch motif on wall surfaces seems to be the vestigial remains of a Renaissance arcade. Although the broken exterior massing is as modern as Rockefeller Center, the plan harks back to Palladio's Villa Rotunda.

In accordance with classical rules, the plan is symmetrical, axial, rooms separated from one another, and nearly similar. The formality is further enhanced by placing the entrance at one end of the axis, and the living room at the other so that the guest gets the impact of the full length of the house before he can sit down. The procession is dramatized by the high vertical central space of the foyer, topped by a skylight.

The isolation of one room from the other has its practical advantages, says Colburn: "If one room is messy, you can simply close the doors. When spaces 'flow' into one another à la modern efficiency, it is difficult if not impossible to shut one area off from the other." He admits that a family without servants

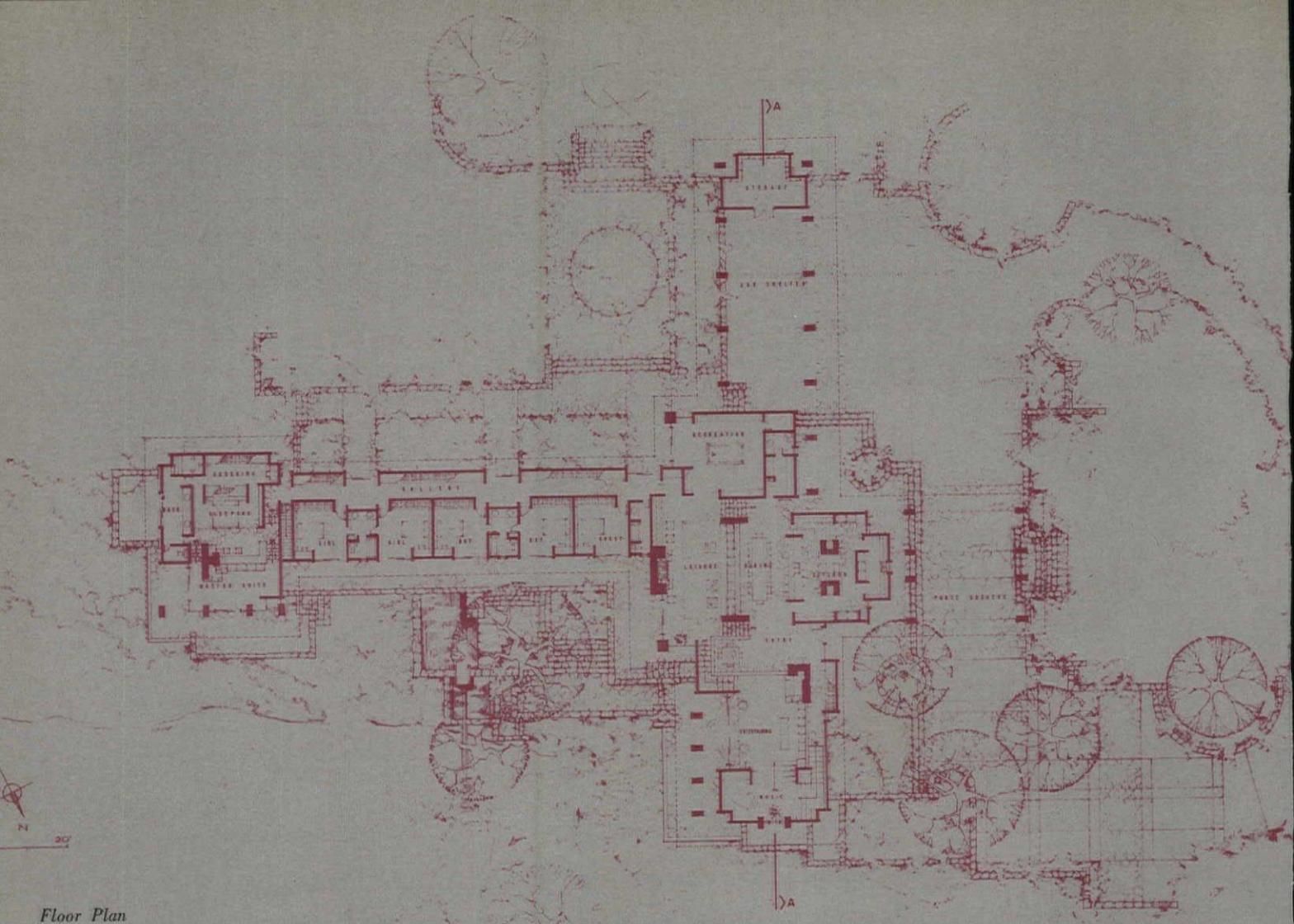
might find circulation difficult. Think of clearing away dinner dishes from the dining room to kitchen, or running from the living room to answer the doorbell.

When Alexander Girard was first approached to do the interior of the three main rooms, he was reluctant. "What do you do with three rooms, all the same shape and size? It is a very classic, static design. Today, everyone is thinking in terms of motion, assymetry." When he finally agreed to undertake the task, he decided that the only logical thing to do was to emphasize the order and formality, but introduce variety by making each room a different experience in color, texture, and light. The dining room was to be cool, silvery, with mirrors on the ceiling. The living room is warm, with reds and oranges, the library in a darker wood. In the dining room, the problem of positioning the kitchen door so that one would not see directly into the kitchen led to placing it diagonally across one corner. Girard then cut off all the other corners of the room to repeat the motif, giving the square room an octagonal shape; octagonally-shaped furniture emphasizes the form. In the living

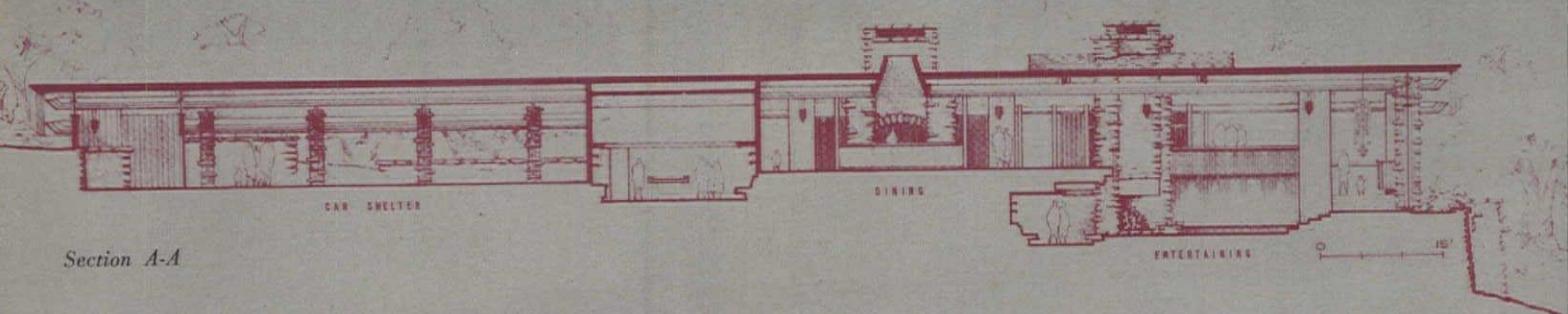
room, walls were already predesigned by the surrounding arched fenestration. Rather than veiling the architecture with wall-to-wall curtains, Girard chose to emphasize the arches with individual shutters. Instead of selecting large pieces of furniture in the stately manor house tradition, Girard uses low, small-scale pieces in order to complement the small-scale, narrow arches and prevent further diminution of space.

The result is a house that looks grand on the exterior because of its size. Yet, on the interior, spaces themselves are not large, and grandeur is achieved instead by the formality of the plan—the total arrangement of the small spaces. Thus, from the outside, the house is most awesome and seems to express man's potential for power and glory; inside, the small, enclosed rooms are protective, fulfilling his emotional need for shelter. Evidently, this housing concept is a rather successful expression for the wealthy; Colburn's houses are well liked by moguls and magnates everywhere—the Cabots have commissioned him to do a home in Boston, the DuPonts in Wilmington, and the Armours in Chicago.

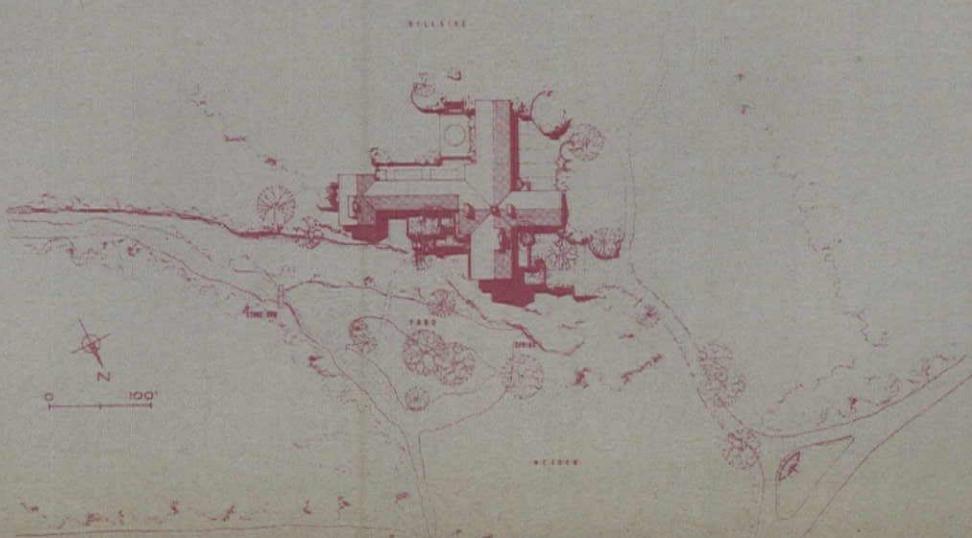




Floor Plan



Section A-A



Site Plan

2/ Palatial Rambler

GLENN PARSONS HOUSE, Springdale, Arkansas.

Architect: Euine Fay Jones. **Site:** 240-acre tract of land in Ozark hills. House is positioned on brink of wooded hillside with stone outcroppings, natural spring at base. **Program:** A large rural home for clients and their four children (all under 15). Each child was to have his own room with direct access to outdoors. There were to be recreation and leisure spaces, and the kitchen would be arranged and equipped for entertaining large numbers of people (four refrigerators, two ovens, two dishwashers, etc.). **Structural System:** Stone walls on concrete footings form the foundation; all floors concrete slab overlaid with flagstone. Stud frame bearing walls and stone columns and fireplaces support longitudinal roof beam system. By using a system of shorter lateral beams, counter to and supporting longer longitudinal beams, large spaces need no vertical supports rising from floor. No beam spans more than 24 ft. The frame bearing and non-bearing walls are covered with wood siding or paneling. The gable roof system is 2" x 6" wood rafters, each 16-in. o.c. covered with 3/4-in. decking and wood shakes. The sloping ceilings, throughout, are covered with 1/2-in. insulative sheathing painted gold with joints covered by wood battens. **Major Materials:** Floors, terraces, balconies covered with flagstone; inside wall finish is Philippine mahogany plywood paneling; outside finish is rough-sawn redwood boards applied vertically with batten-covered joints. **Mechanical System:** Butane fueled forced air system with minimal ductwork below slab. **Photography:** Balthazar Korab.

When the Parsons, a family with four children, decided they needed a larger house for themselves and frequent visitors, they had in mind the large, imposing Georgian classical homes found in Springdale, Arkansas. Nevertheless, they gave architect Euine Fay Jones complete autonomy in designing the house and all its furnishings on their 240-acre farm in

the Ozarks. As Glenn Parsons himself said: "I didn't fuss. If I tried to put some of my own ideas in, it would have messed it up. I knew he could do a better job than I could."

Jones was hesitant about using a formal symmetrical scheme for two reasons. First, a classical solution was more ideal for a flat plain rather than the hilly wooded site. Second, the life style of the Parsons—a large family that does a lot of entertaining but has no live-in help—lent itself to a more informal, practical expression. In adherence to a Wrightian union of architecture and nature, Jones wanted to create a large house, one that would seem grand once inside, but that would not disturb the bucolic repose of the setting. Jones succeeded. So deeply set into the hillside is the Parsons house that it seems withdrawn, asleep under its turtle shell of low-hipped roofs. Indigenous stone and wood materials, plus the long low horizontal lines of the design, underscore its simple, rustic quality. From the exterior, this is clearly not an expression of a wealthy person's house in the 19th-Century sense; no monumental façade, no awesome massiveness exists.

Yet inside, spaces convey a grandeur and size not apprehensible from the outside. Jones achieves this juxtaposition of informal low-scale exterior mass that blends with the site with interior size (7500 sq ft) and space first by positioning the house on the crest of a wooded, rocky hillside. Spaces extend away from the brink of the hill, with floors dropping to their logical levels and opening onto terraces and balconies. Thus, the most formal area, the living room, placed at

the back of the house, not only commands an impressive downhill view but has a strong vertical dimension of an almost Gothic cathedral quality not recognizable from the entrance approach.

Furthermore, size within is augmented by an open, continuous plan that allows spaces to borrow freely from each other and seem larger than they actually are. Spaces join, interlock, contract, expand, and open out to natural vistas; there is no separation of them along a static plan. As Jones says, "Who is to say where the kitchen ends and dining area begins, or where the dining area ends and the family area begins?" The house is divided into "zones"—recreation, entertaining, sleeping—defined to a large extent by variations in floor levels.

The union of the building with the site is further enhanced by Jones' use of the same materials on the interior as on the exterior: Flagstone covers interior floors as well as outside terraces; the field stone piers and walls outside are seen inside as piers and fireplaces; exposed beams of the roof system, originally rough-dimensioned lumber, are encased with the redwood that covers exterior walls. Elsewhere, interior walls are finished with Philippine mahogany plywood that blends properly with the other materials. All the furniture and lighting fixtures, also designed by Jones, echo in material, scale, proportion, and form the rest of the house. Colors are warm, natural.

This solution, then, becomes the total design prevalent in today's architectural thinking, where all the elements of the scheme are interlocked in a concept that unifies the client's style of life with the character of the site.







Low silhouette hides lofty living room (facing page); banquet table stands alongside kitchen counter (above); garden (below) is terraced; master bedroom (below, right) opens onto private sitting room.



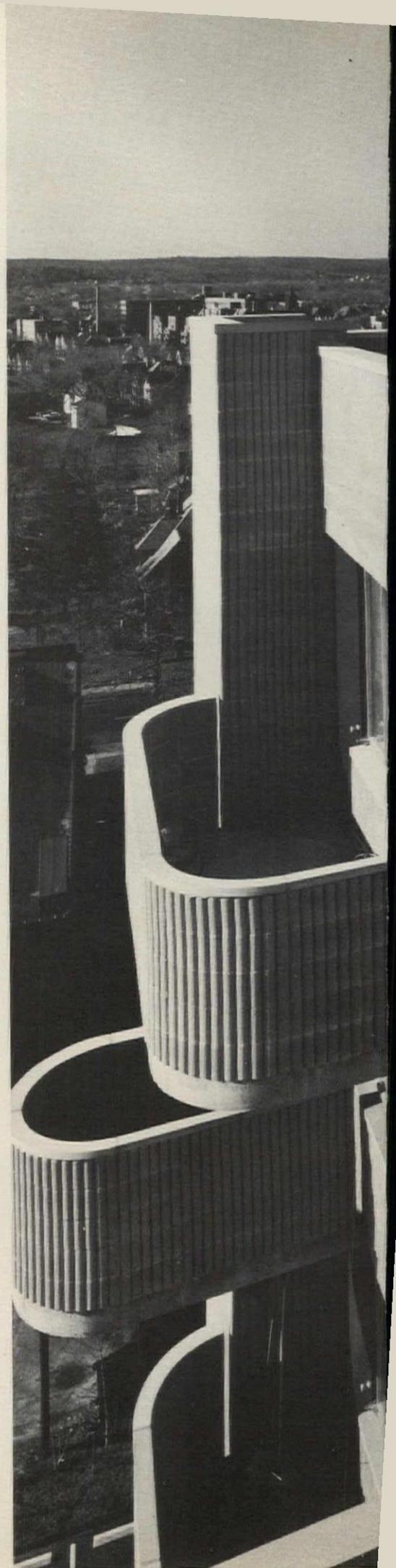
The Elderly



Until fairly recently, the average urban American devoted himself so mercilessly to work, and spent the larger part of his life-span so frenetically engaged in the pursuit of his livelihood, that the problems of retirement and growing old were always farthest from his mind. Today, however, the problem has become a national one. The elderly population has increased significantly. As statisticians are fond of reminding us, one out of every eleven persons in the U.S. is 65 or older; the projected total for the year 2000 is 28,500,000.

Until the 50's, the problem of housing the elderly remained largely untouched. It was not until 1956 that the U.S. Congress authorized the FHA to grant mortgage insurance to nonprofit rental housing for the elderly and opened public housing projects to those over 65. Since then, legislation has been continually enlarged to catch up with the needs of the elderly. In addition, practical standards have been evolved: wide doors, wheelchair-height stoves and fixtures, and so on.

Some of the more subtle problems — those of loneliness, idleness, and boredom — are not so easily solved. It is now becoming clear that the problems of the elderly are quite varied and that these are divided into several groups, ranging from those who cannot care for themselves physically to those who are perfectly healthy but do not know how to spend their leisure time. The projects presented here cover a wide range — from the nursing home, to the urban apartment house, to the country-club communities for the retired. Each represents some particular feature that is considered by architect or client to provide an adequate mental and physical environment for the elderly. In some cases, their decisions run counter to popularly held prejudices. It is becoming apparent, for instance, that, in contemporary American society, many old people prefer to be among their peers. That is, apartment houses or communities devoted solely to the needs of the elderly provide them with the means of establishing new friendships; it insures a social structure tailored to their leisure needs and problems of loneliness. Also, they are not so frequently reminded that they are old in the world of the young. Until the work-leisure patterns in the U.S. change to provide a more equal balance between personal pursuits and economic duties, creating separate and special worlds for the elderly may be the only solution.



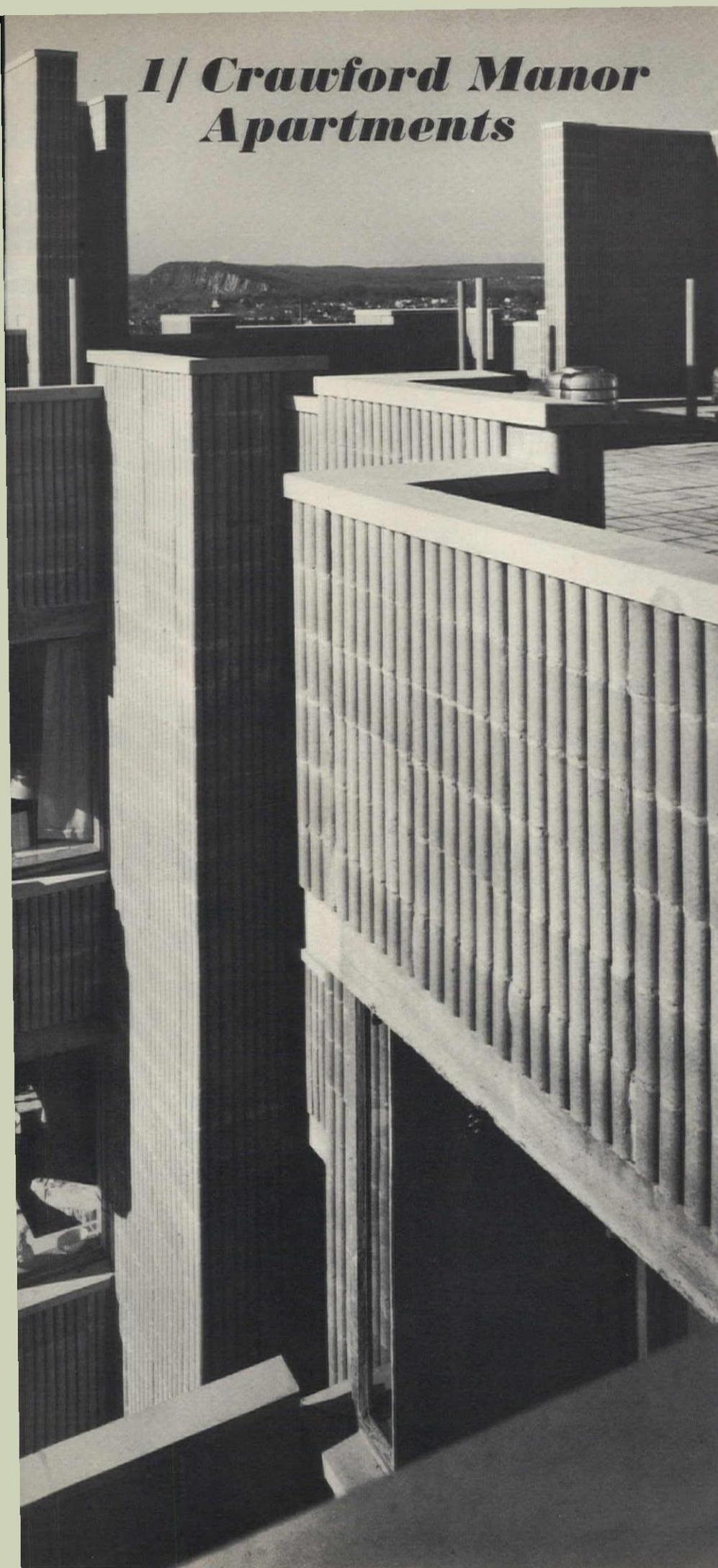
I/ Crawford Manor Apartments

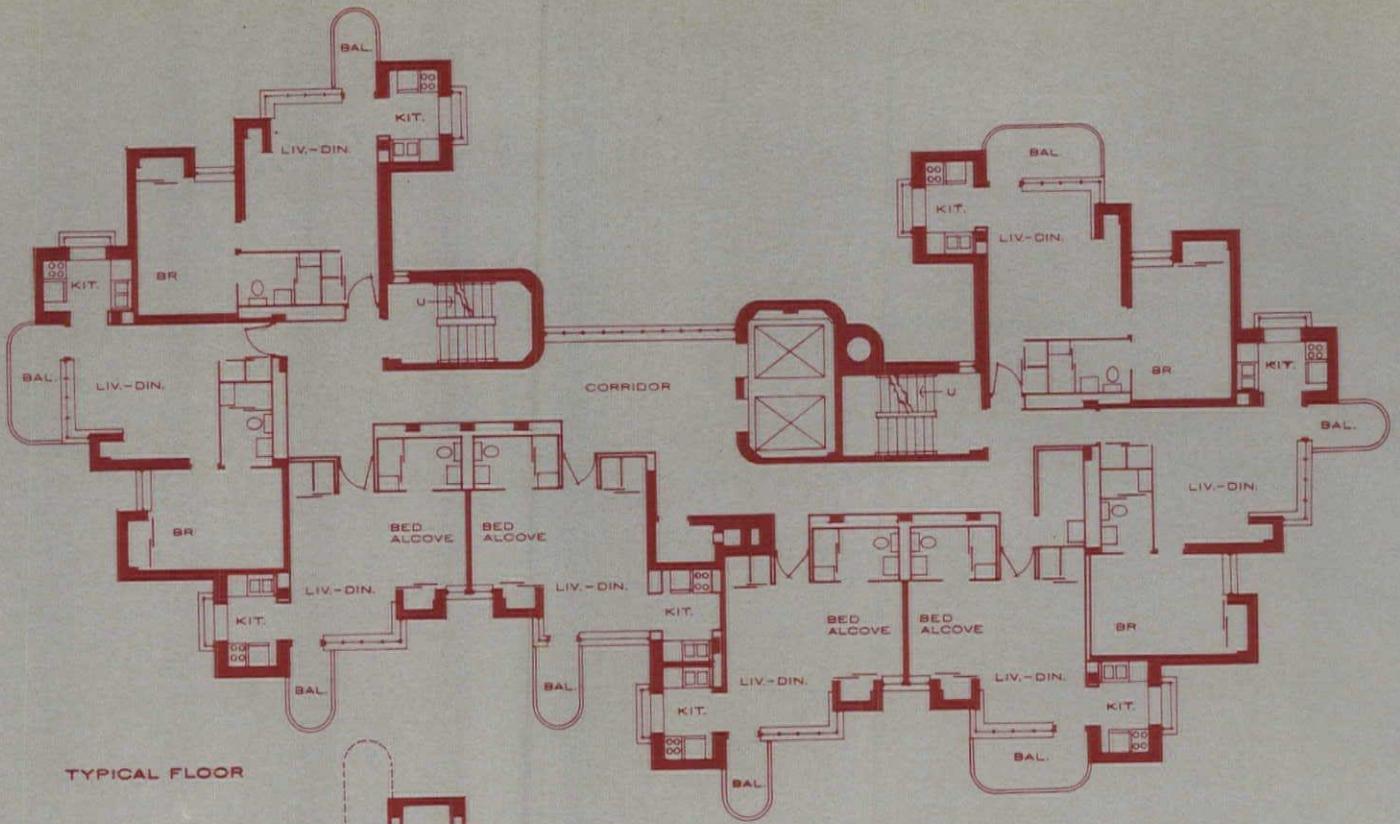
CRAWFORD MANOR PUBLIC HOUSING, *New Haven, Connecticut.* **Architect:** Paul Rudolph. **Site:** Urban street corner adjacent to proposed freeway, near downtown shopping and a medical center. **Program:** Design a high-rise apartment building for the elderly: 52 efficiency apartments, 52 one-bedroom, 5 two-bedroom units. All to be designed according to requirements and regulations of Public Housing Authority. **Structural System:** Reinforced concrete columns and flat slab construction. Columns located in irregular pattern so they are contained within the wall and do not project into the room. Eight-in. floor slab designed so that there are no dropped beams projecting into room. **Mechanical System:** Standard apartment heating and lighting. **Major Materials:** Fluted precast concrete surfacing breaks down scale of 8 x 8 block, and prevents run-off stains; water is channeled into the interstices while the front of block is exposed to cleaning. Interior stairs and elevator towers also finished with the fluted precast concrete units. **Cost:** \$1,386,000, including site work; \$16.55 per sq ft building only. **Consultants:** Hubbard, Lawless & Blakely, Mechanical; Milo Ketchum & Partners, Structural. **Photography:** Robert Perron.

Making Architecture Work for the Elderly in an Urban Environment

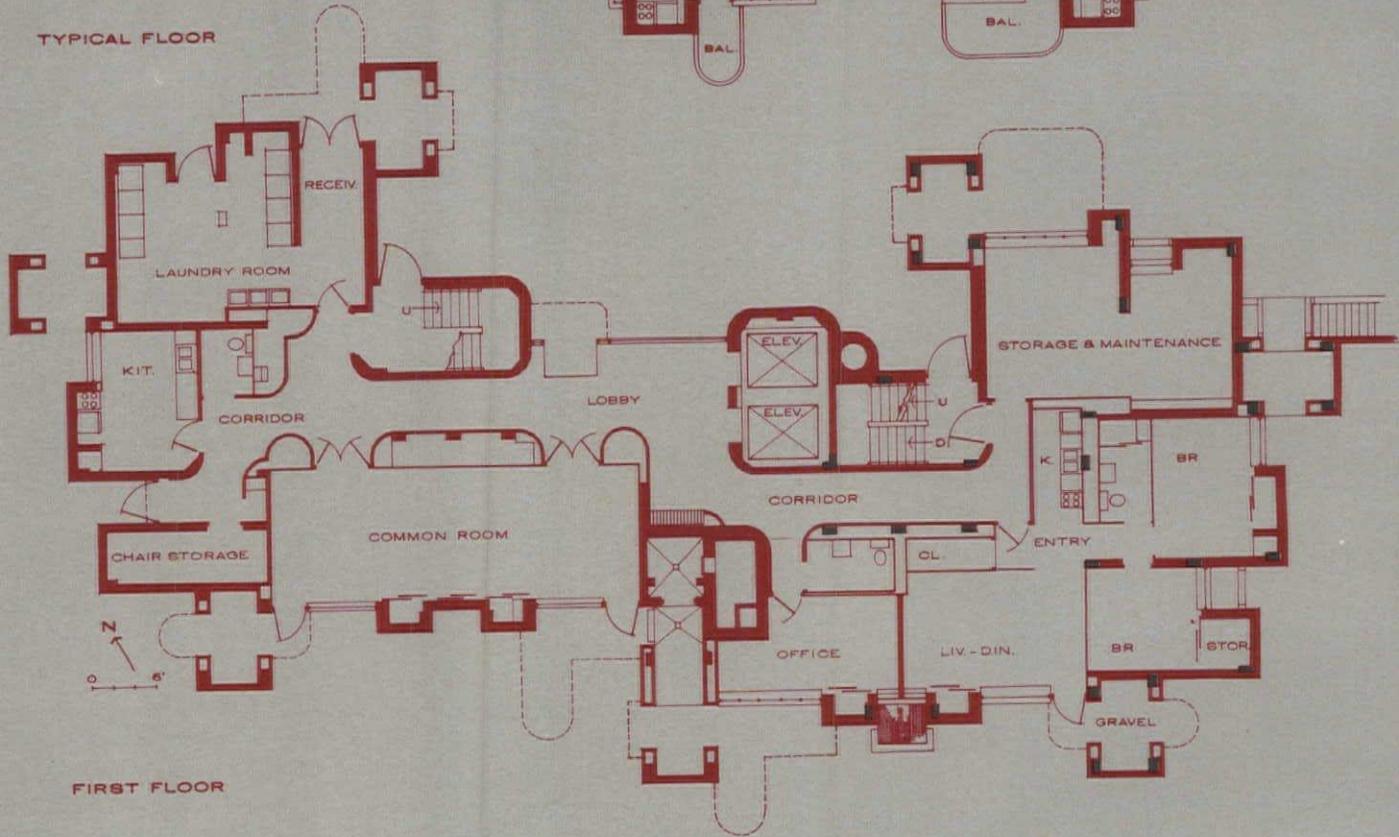
"I went from Hell to Heaven when I moved from the boarding house to Crawford Manor," comments one elderly resident. Paul Rudolph has pulled off an astonishing architectural tour de force in the public housing field: Crawford Manor works for the elderly, for the urban landscape and the nearby expressway. For once, architectural aesthetics and ingenuity are decidedly not superficial embellishments.

For instance, what concerns Rudolph, architecturally, about scale also concerns the resident. Viewed from the expressway, the building looms as a single entity: "It is a stalk, a landmark," comments the architect. For the resident who gets off the train, returning from a family visit, "the building is something I can point to and say that's home." Closer up, the scale breaks down, according to Rudolph, and the building becomes a series of piers separated by balconies. The articulation of the individual living units should help each resident identify his or her apartment. Although Rudolph feels this might have been more clearly expressed, it is evident that the structure is *not* an office building. Very close up, the giant 8" x 16" block is broken up into

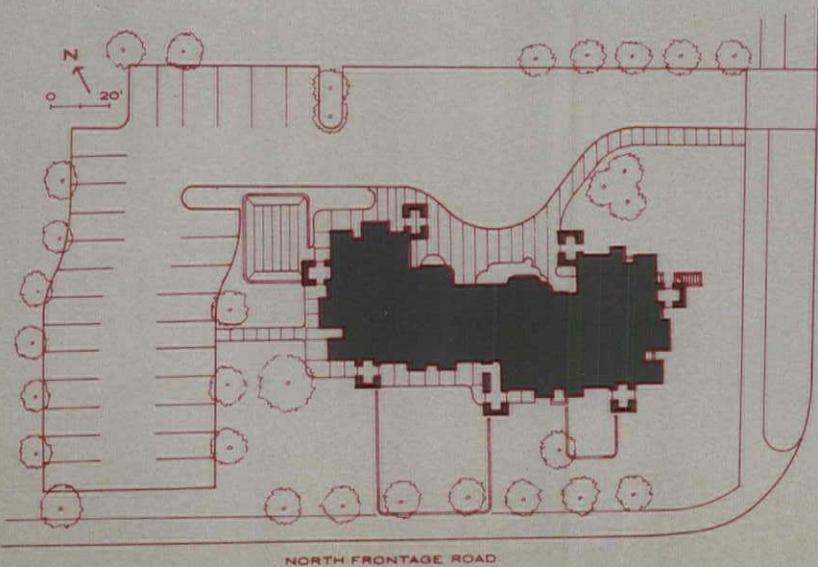




TYPICAL FLOOR



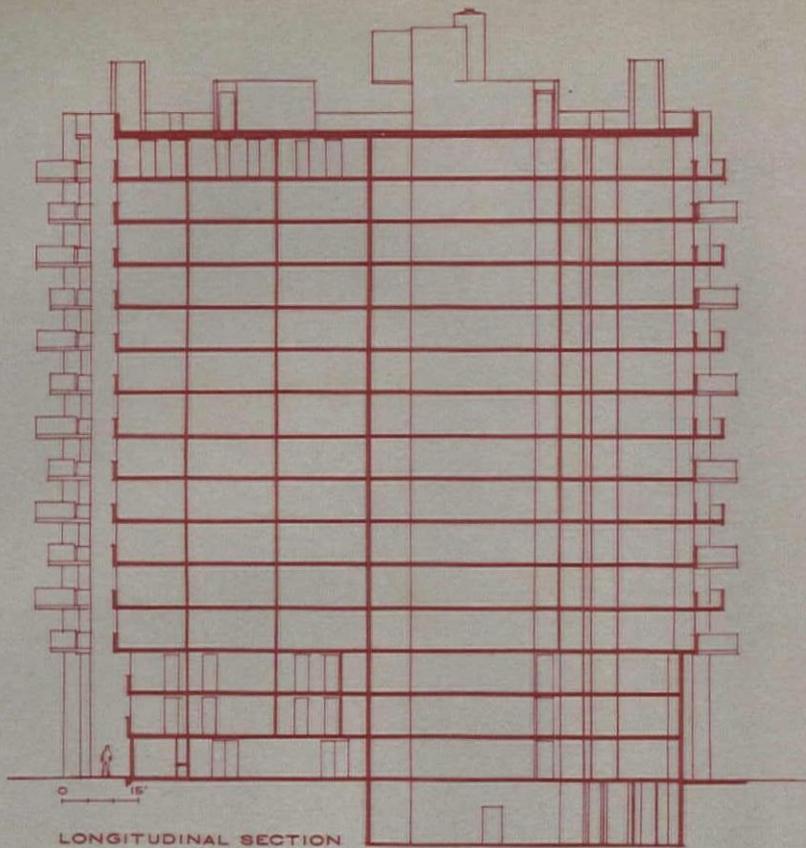
FIRST FLOOR



NORTH FRONTAGE ROAD

PARK STREET

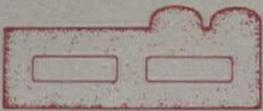
Individual rooms and alcoves at Crawford Manor are highly articulated, and the irregular plan is achieved by using differently-sized bays and unregulated column arrangement (color).



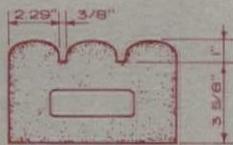
LONGITUDINAL SECTION



RADIAL BLOCK



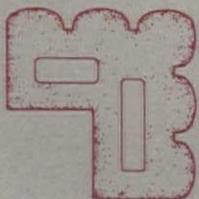
INSIDE CORNER & JAMB BLOCK



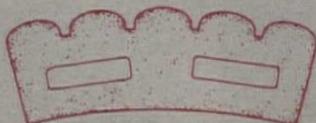
HALF BLOCK



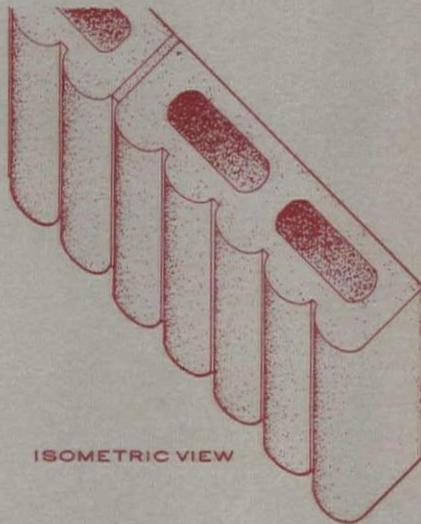
STANDARD BLOCK



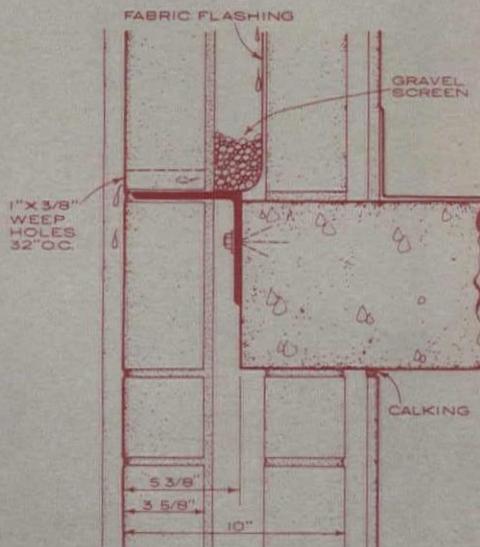
OUTSIDE CORNER BLOCK



RADIAL BLOCK
FLUTED BLOCK TYPES



ISOMETRIC VIEW



TYP. FLOOR FLASHING DETAIL

2½-in. fluting, and the soaring vertical lines are balanced by the horizontal lines of mortar. The entrance is inviting; the building wraps around it protectively and embraces the visitor.

Articulating a Residential Character

The plan and configuration of the building evolved from the layout of the individual apartments. Rudolph felt that even in the small apartment, areas of different activity should be articulated, separated. Although in some cases living, sleeping, and cooking facilities are combined in the space, nevertheless each is defined within a corner or alcove. This articulation, together with the desire to have as many windows as possible, leads to an irregular, multicovered plan. Rudolph, who is fervently against packaging people in simple boxes, claims corners are no more expensive than the straight facade. "It is difficult to think of something new, isn't it?" asks Rudolph wryly, "but if you repeat something often enough it is not so hard to think about. It's the same with corners: If you repeat them often enough, they are not so hard to build. In fact, the floor plan of most of these apartments is the same, only rotated around the core; once the pattern is established, continuing it is easy.

"The same principle applies to our thinking on the size of bays. Everyone assumes that *all* the bays should be the same size. This is not necessarily so. At Crawford Manor, the bays are varied to differentiate the different kinds of spaces they span."

Balconies: Crows'-Nests in the Sky

"The balconies go at right angles so the residents can play Romeo and Juliet," says Rudolph with a straight face. "Actually, the different directions of thrust follows Frank Lloyd Wright's Falling Water. The height of the railing was stipulated by Federal requirements; it didn't have to be all concrete, of course, but I think it works: Although you may not be able to see down, you can see the skyline, the sky, and you are sheltered. Balconies are nests high in the sky. Most people misunderstand their function; they are not places to sit for long periods of time, but rather a place you know you can go to if you want to, and take a breath of fresh air outside." One of the

younger residents did comment that the parapet blocked a good deal of the view, but most extolled the marvelous views of the skyline — at night; and the warmth of the balconies by day.

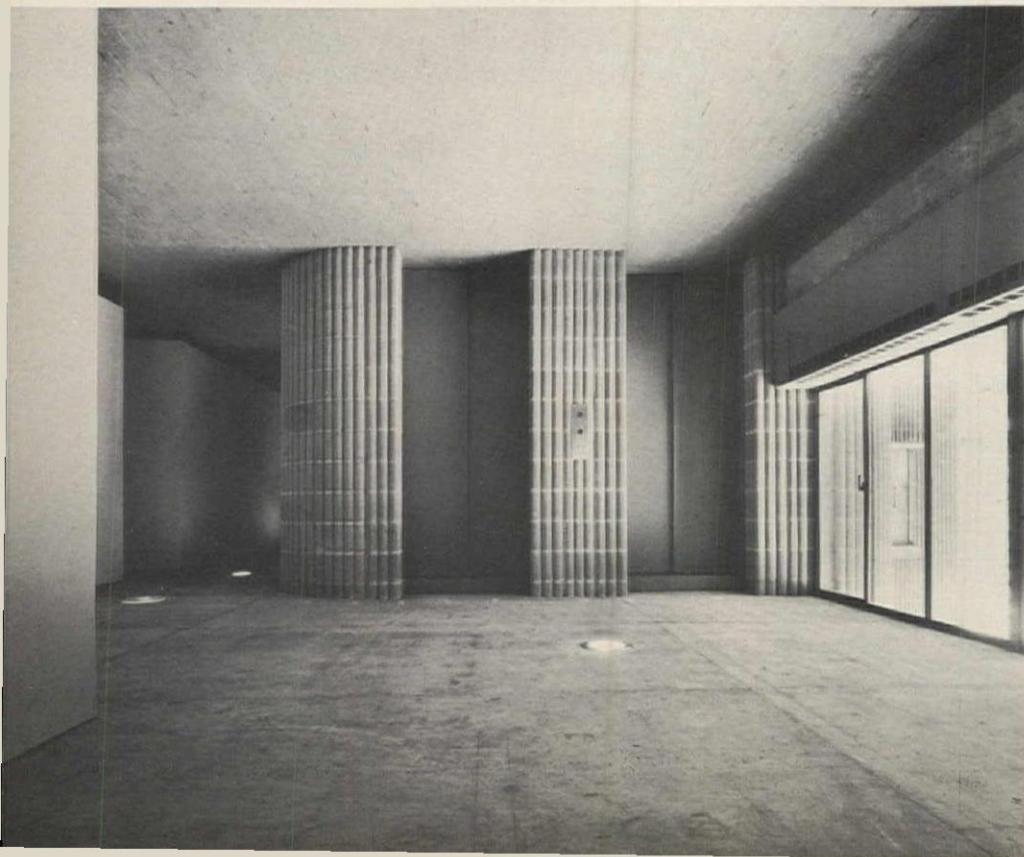
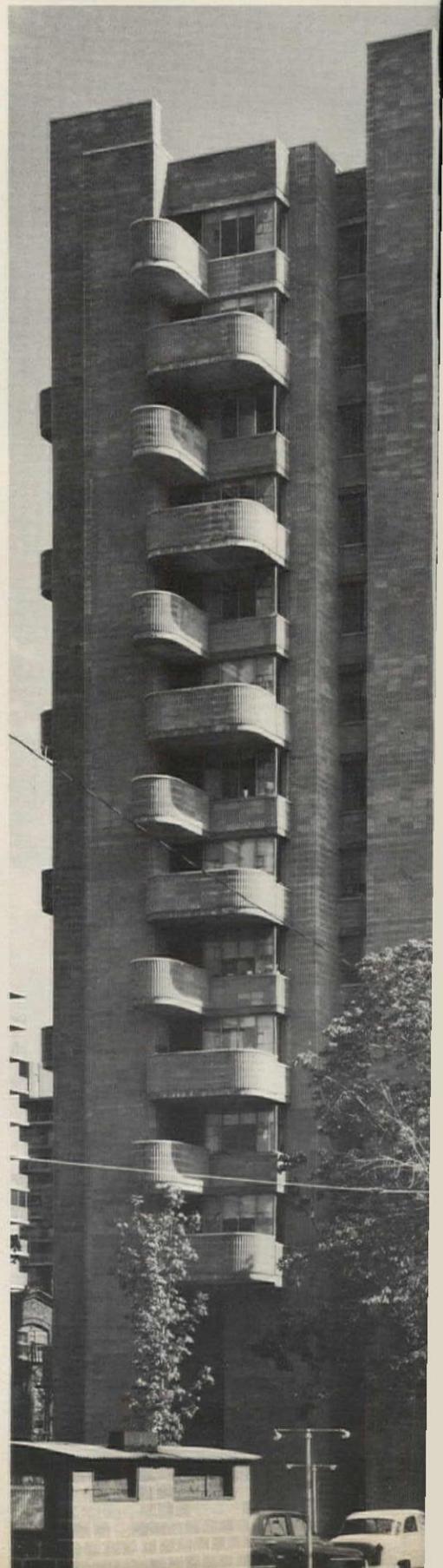
Social Circulation Falls Short of Needs of the Elderly

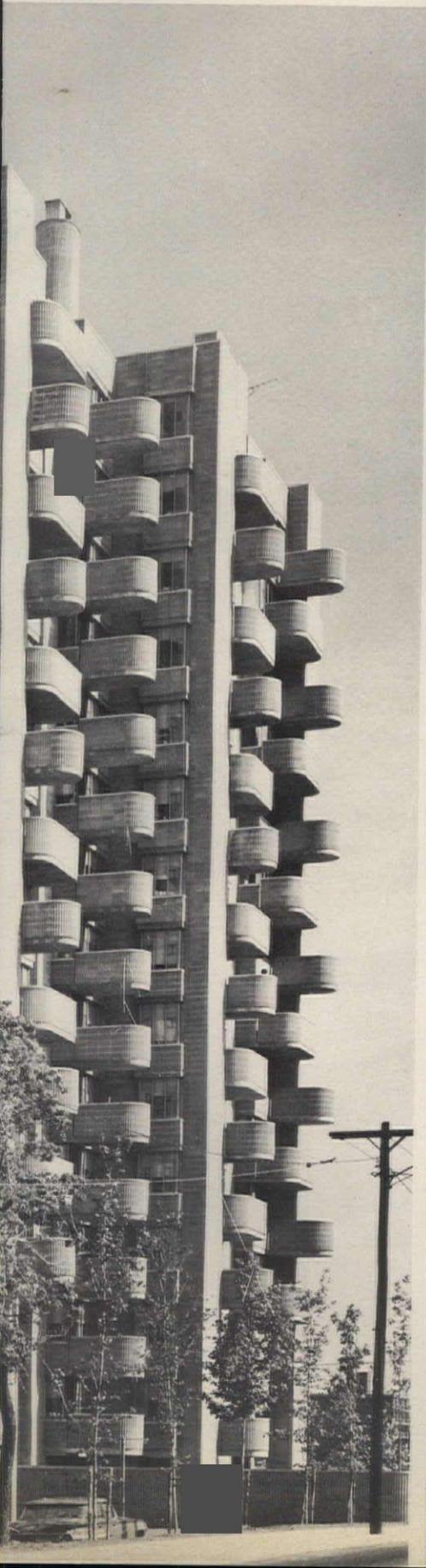
The irregular plan also leads to short, irregular corridors that are far better than the conventional long hallway. "I wanted daylight by the elevator entry," explains Rudolph. "This is very unusual. The adjacent space was also to be big enough for people to sit and chat in groups of a dozen or so on each floor. However, perhaps it would have been better to take those 16 separate spaces and put them up on the roof, where we originally had plans for TV and recreational rooms. The latter were cut due to the budget."

It is apparent from a visit that one of

the most popular spots in the entire building is at the entrance, where groups assemble to chat, joke, or watch others come and go. The spaces on the ground floor, however, are inadequate: The group rather awkwardly straddles the doorway of a small living room facing the entrance (see p. 124). One of the very few complaints by the residents is that this social room is also too small for most of the more formal gatherings.

The overwhelming opinion of the residents is that Crawford Manor is an exciting place in which to live. The garden to the rear will relieve some of the pressure for social space during the summer and the enclosure, with its handsome wall, provides a usable private green space in the middle of the city. In contrast to Venturi (p. 134), Rudolph seems able to grasp the more brutal components of city living — concrete, cars, and sky-high balconies — and turn them into positive, workable advantages.





2/ High-Rise in Hot Springs



TWO PUBLIC HOUSING PROJECTS, *Hot Springs, Arkansas*. **Architects:** *Wittenberg, Delony & Davidson, Inc.* **Site:** *Two steep, wooded sites, both initially composed of relatively low-density, substandard dwellings. The first site is 12 acres, bounded on the north by a national park, is bisected by a major street leading to the center of town; the second site is 12 acres and is more remote from the town.* **Program:** *To design a mixed (young and old) low-rent housing complex.* **Design Solution:** *Four major building types: a high-rise unit for the elderly; one-story row house for the elderly; one-story row housing for families; and family housing units with courts.* **Structural System:** *High-rise is cast-in-place concrete frame, with either glass or brick infill. Low-rise units are wood frame with brick veneer.* **Cost:** *High-rise, \$2,979,914; low-rise units (including site work, street utilities, landscaping, and management office building), \$1,818,352; each unit is \$10,000. Estimated cost of two projects is \$4,600,000.* **Consultants:** *Steward King, Landscape Architect; Metrailer & Associates, Mechanical; H. Price Roark, Structural.* **Photography:** *Earl Saunders.*

A design-conscious public-housing director in Washington (Marie MacGuire), an inspired local housing director (Ora Belle Rollow), and a persistent group of architects (Wittenberg, Delony, Davidson) produced two projects in Hot Springs, Arkansas, that are far above the level of most public housing. The projects, which combine housing for the elderly and for low-income families, are unusual for both the quality of architectural design and for the attention given to the social and living dynamics of each group. The design was so unconventional, in fact, that at least one year was devoted to persuading the regional public housing officials that it was sound planning. They had never seen anything like it before. Much of the credit for the existence of the project is due Mrs. Rollow, who guided the design from start to finish. She bought the two sites with FHA loans, and cleared the ground by auctioning off

all the existing houses to buyers who guaranteed to cart away the rubbish. She did not allow them to move the buildings intact, since that would have amounted to slum relocation.

The new projects consist of four building types: high-rise and one-story row housing for the elderly; row housing and courtyard units for low-income families.

From the standpoint of the elderly in Hot Springs, the high-rise unit is a major contribution to a major problem. Due to the famous resort facilities and spas in the area, the town is an important retirement center with a high elderly population. Most housing, however, consists of one- or two-story structures and boarding houses. Land around the center of town is expensive and well-developed. The two sites discovered by Mrs. Rollow were not too far from community facilities, but required some high-density housing to meet high land costs.

Site With a View of Activity

"The high-rise unit was located on the most logical piece of ground," comments project director Jack Michaels (now with Caudill, Rowlett, Scott). "It was the highest place on the site, adjacent to the national park to the north and overlooking the rest of the project to the south. The view over the project is an attractive, active one. It focuses on the courtyard housing complexes, which were carefully designed to promote small social groupings within the development, provide sheltered play areas, and encourage one family to prod the other into maintaining the enclosed site. The courtyard units are grouped casually around the irregular terrain. The similarity of design gives the view a cohesive quality; the minor variations made to adapt each courtyard unit to the site gives the over-all picture enough variety to avoid the monotonous appearance of most public housing. Every effort was made to preserve as many trees as possible, and the alternation between courtyard and natural surrounding terrain increased the attractiveness of the view. A single loaded exterior corridor on the high-rise provides a double view for each apartment: The private areas (bedrooms) were placed in the back overlooking the woods, and the social areas (dining and living rooms) arranged to the south overlooking the project and the town.

Movable Storage Wall

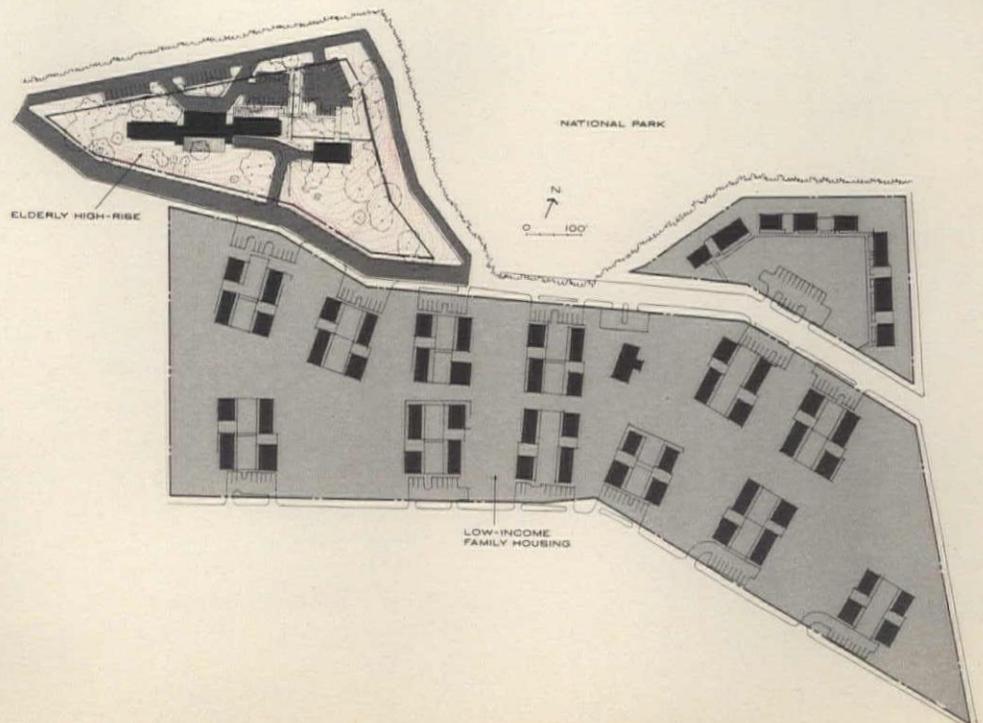
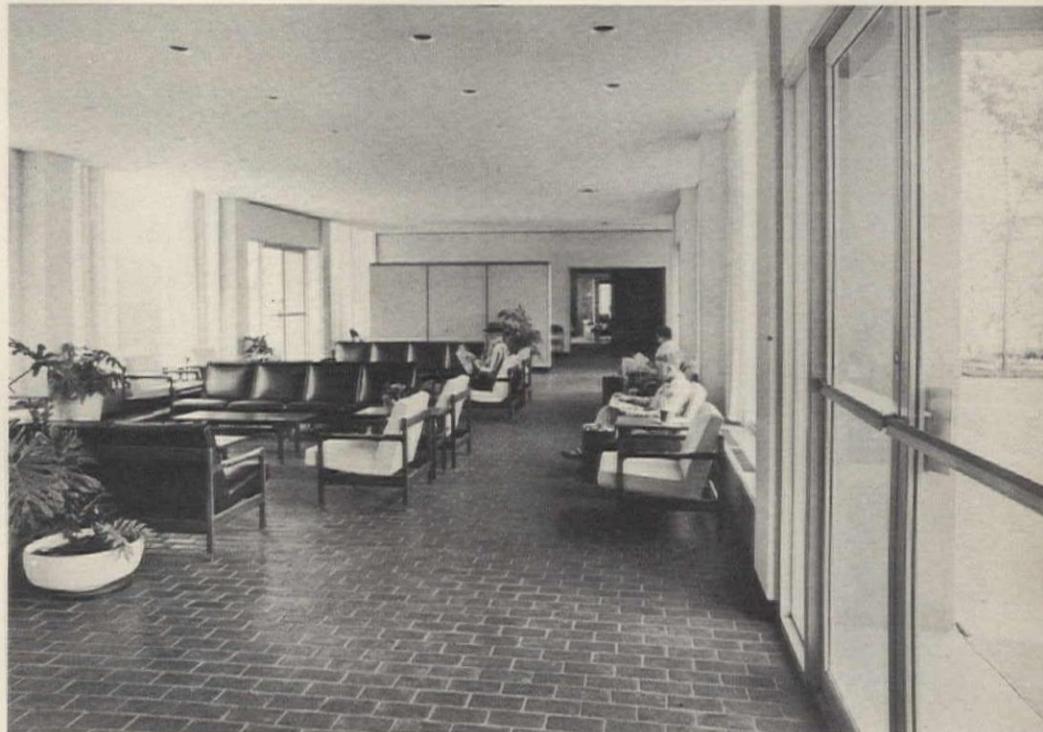
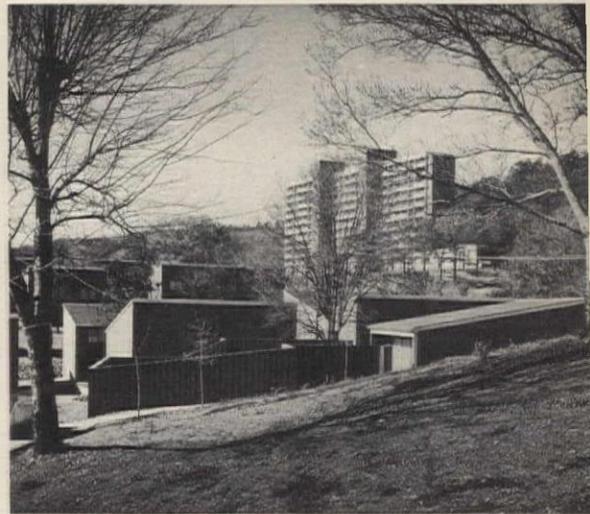
An ingenious feature of the apartments is a movable storage wall between the living room area and the bedroom in the rear. The movable wall solves a number of problems: It permitted the architects to make one large room out of the multiple small rooms specified by housing regulations; it allows the resident to favor the living room or the bedroom space; or, by moving the unit against the wall, the occupant can transform the apartment into a studio; finally, the free-standing partition allows good cross-ventilation through the apartments, which have no air-conditioning system.

Sidewalks in the Sky

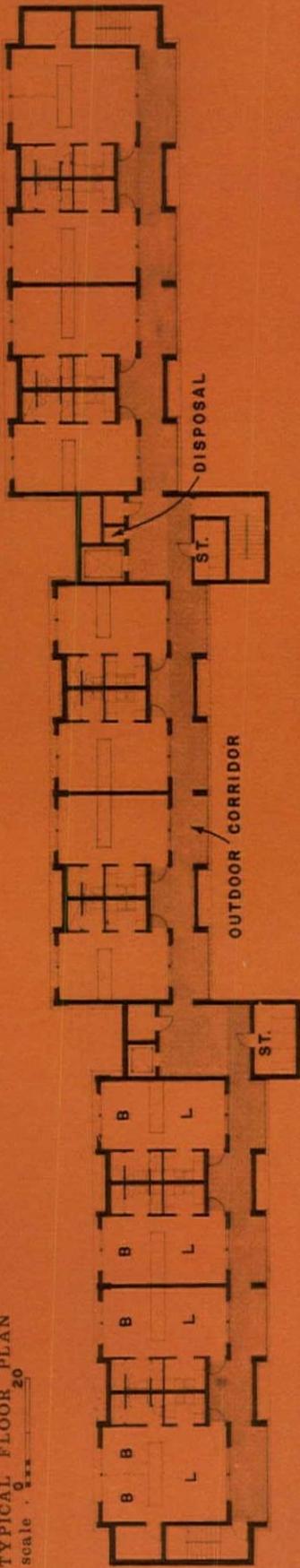
The pride of the project is the balconies and corridors along the façade. The spaces are carefully arranged so that each apartment has a "balcony" along the corridor, protected from its neighbors by narrow piers. In front, a dropped

beam and concrete curb increases the sense of enclosure and security, while at the same time a metal railing gives the resident a full view of the project below. The entrances to the apartments are located in the archways between the balconies, and also serve as sheltered outdoor spaces for sitting. The exterior corridors function as social sidewalks, permitting residents to casually drop in on each other's "balconies," and keep an eye on each other for reasons of safety.

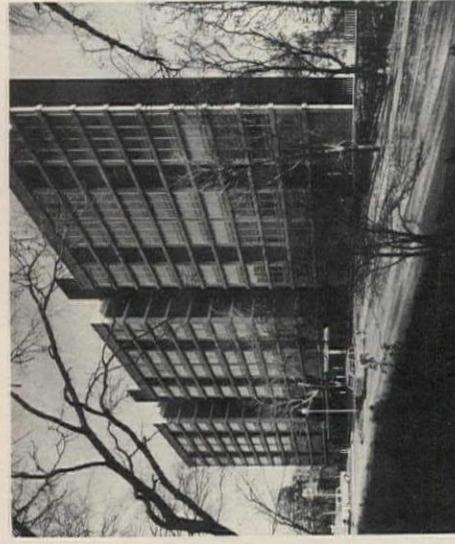
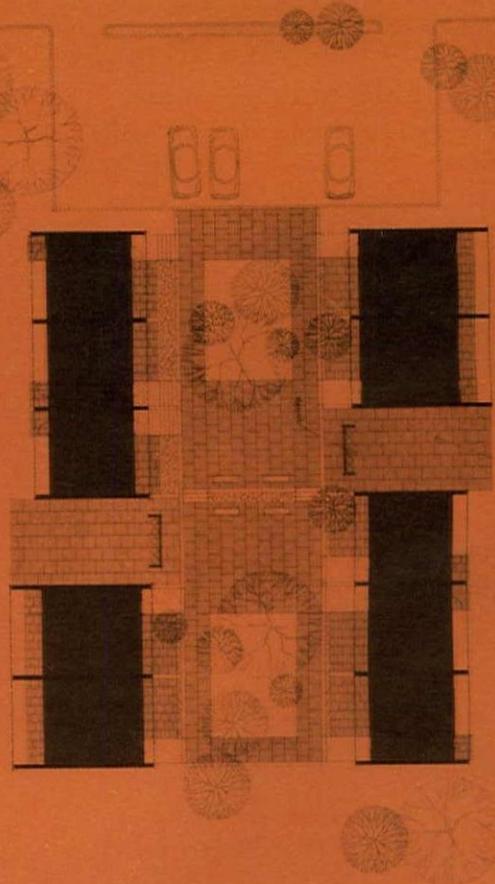
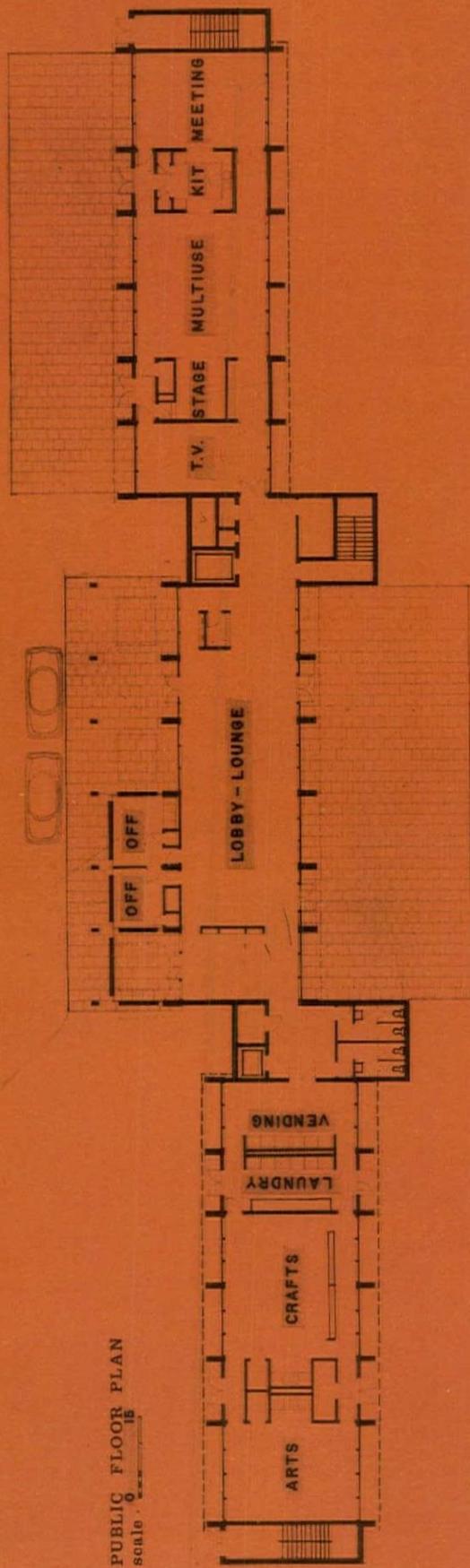
To prevent single residents from being isolated in untrafficked areas, the double rooms are always placed at the ends of the buildings, and the single rooms are



TYPICAL FLOOR PLAN
 scale 1" = 20'



PUBLIC FLOOR PLAN
 scale 1" = 10'



located in between. The position of the garbage incinerators and elevators always assures some circulation.

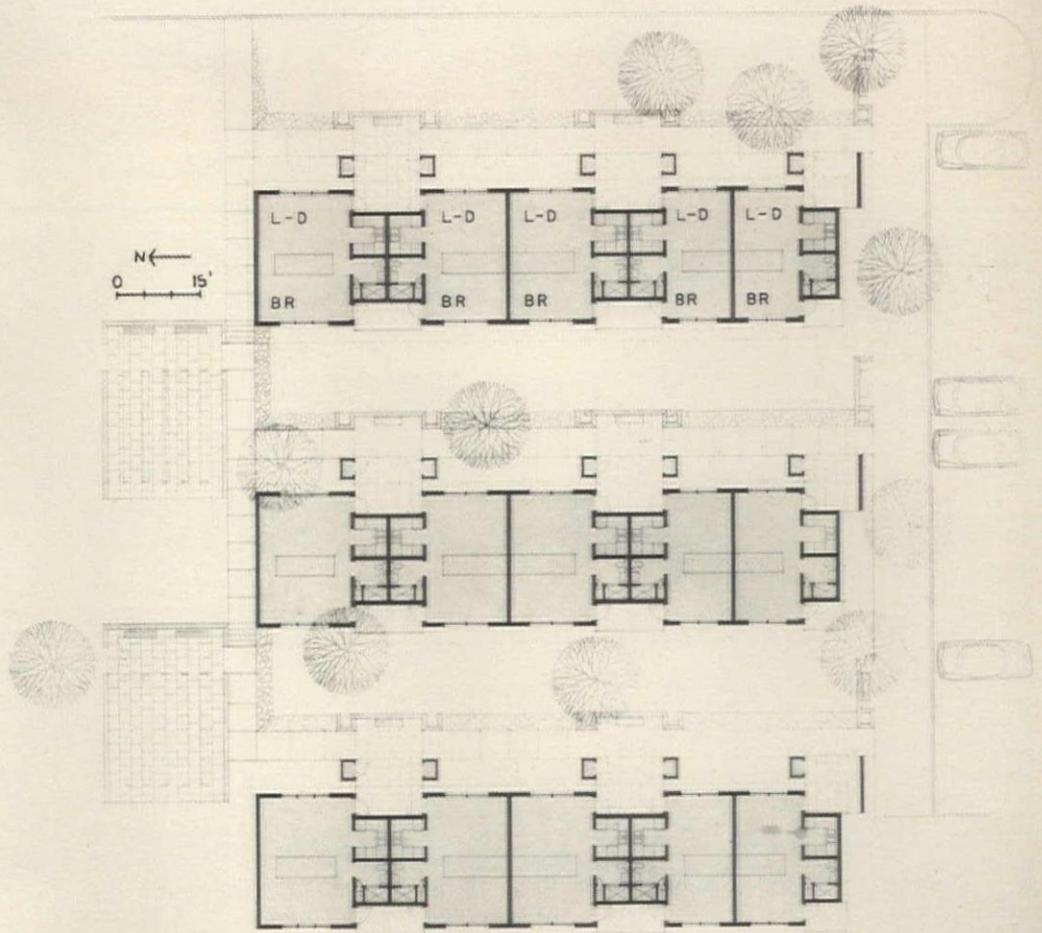
Casual and Formal Areas

The ground floor is entirely devoted to social activities and access is carefully planned. On one side of the main lobby are located the "dress-up" activities: the theater, library, and club rooms with kitchenette. On the other side is the more casual area, with vending machines, washing machines, and hobby and craft rooms. In accordance with this plan, the elevator services are split and located on either side of the lobby. In this way, a resident heading for the casual area will not have to traipse across the lobby in clothes he might not want to be seen in.

The lobby and the terrace to the rear are both general public areas to which a person can go if he is lonely, and sit, read, or watch people come and go. A specific area is set aside in front of the mailbox to provide a meeting point for an important daily event, which brings together both the shy and the extroverted.

The lobby also has a desk from which management can survey visitors and monitor a call system connected to each resident's bed, so that if someone is suddenly taken ill, management is notified. In case of emergency or sickness, residents can also open their apartment door with a buzzer at their bedside and let someone in.

The high-rise has been very successful: Apartments were rapidly filled, and there is a long waiting list of eager applicants. Although most of the residents were not familiar with apartment living, the social and physical environment of this particular structure suits their needs. Project designer Jack Michaels recently returned to visit the building and heard enthusiastic reports from the residents. On the main bulletin board he found an unusual item, a poem entitled "Ode to Our High-Rise." In Arkansas, "high-rise" is ordinarily a derogatory term.

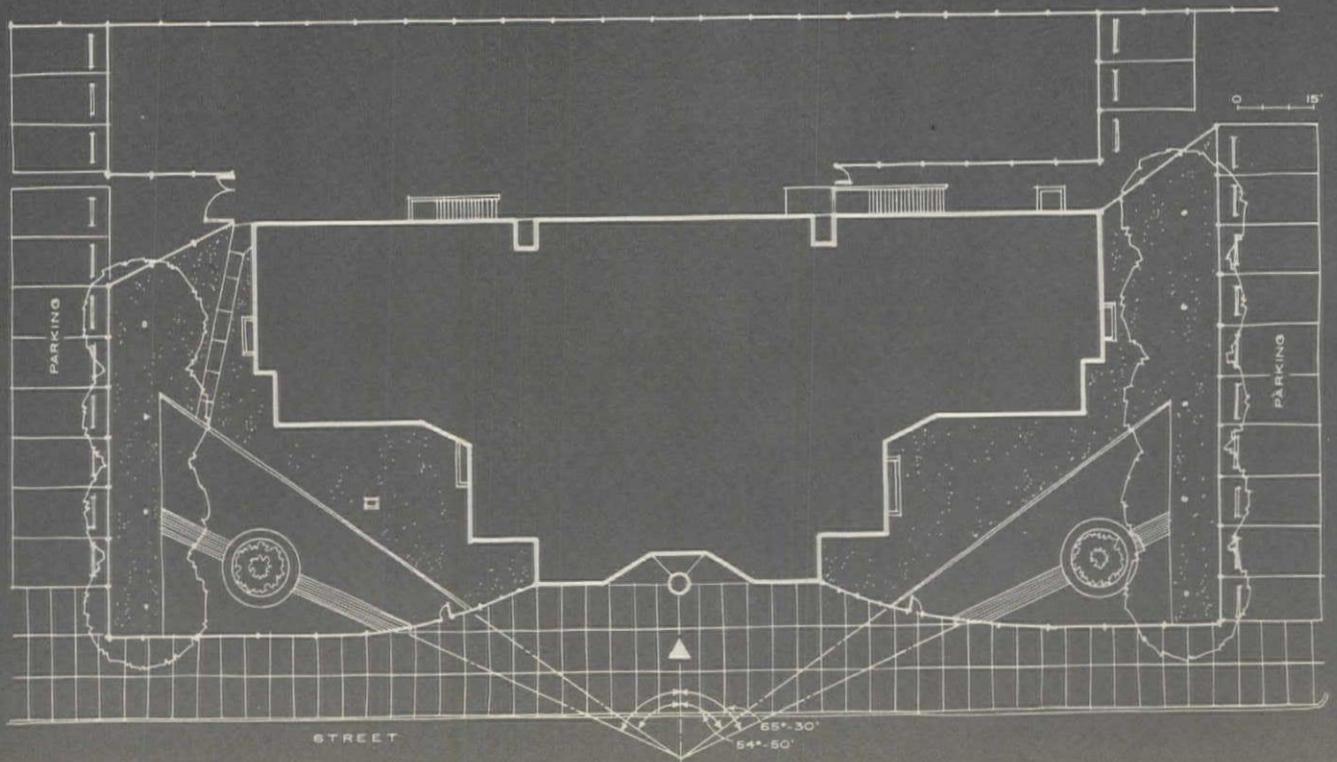


Single-story court units for the elderly.





3/ New-Old Guild House Apartments



Guild House is only two blocks from its sponsor, the Friends' Neighborhood Guild. The more immediate context of Guild House, however, is Spring Garden Street, a major thoroughfare that divides two urban renewal areas.

The East Poplar area, behind Guild House, has been in the process of upgrading for 15 years; Friends' Neighborhood Guild, in fact, sponsored the country's first urban-renewal redevelopment for residents, with the self-help cooperative that opened in East Poplar in 1952. (That project was also the first interracial project guaranteed by the FHA.) The Franklin redevelopment area across the street from Guild House is scheduled for almost complete rebuilding for wholesalers and light industry. The site for Guild House was not the first choice of the Friends, reports Francis Bosworth, Executive Director of Friends' Neighborhood Guild, but was given to them by the Philadelphia Redevelopment Authority.

Ironically, although the neighborhood is in a process of change, Guild House has been designed to "fit into its context." Ironically, too, although the architecture of Robert Venturi is considered "controversial," it is probably the neighborhood and not the architectural design of Guild House that is responsible for the slow occupancy during this first year. Only about one-third of the apartments are rented. This is a nationwide problem, maintains Venturi: If a tenant can pay the rent, his income is often too high for the project. Francis Bosworth reports that the Guild has just been given rent supplements of \$9000 a year, enabling 18 families to live here at lower rents — the first assistance in rental supplements given to housing for the elderly.

The design of the apartment house is pared to a minimum in many respects: materials, room sizes, site development, public facilities such as lobby (minimal) and circulation (only one of the two elevators has been installed; the height is not economical for an elevator building in the first place, but was limited to six stories by agreement with the tenants to the rear). But residents have a large community room on the top floor (usually such facilities are in the basement), and an additional room in the basement, as yet unused (usually such space is scrapped altogether). And, says Bosworth, "We resisted flattening out the building into a crackerbox."

Venturi speaks of the "spatial demands

of the street," and the necessity of maintaining the street line, at least at the center of the building. The façade steps back in a series of Victorian jogs, giving many apartments a diversity of views. Street-watching is a leisure activity of many apartment-dwellers, particularly among the elderly.

The tenants are not infirm; all have their own independent apartments, and there are no facilities for nursing or central food service. The few items specially designed for the elderly are grab-bars in the bathrooms, elimination of thresholds, wider-than-normal doors to accommodate those in wheelchairs, and lever handles instead of door knobs to aid arthritics.

One of the earliest projects to be built under Section 202 of the Housing Act of 1959 (Francis Bosworth had testified in Washington on behalf of the provision), Guild House is unusual for a Federal project, according to the architects. Venturi reports, "We were given a relatively free hand in design. They were eager to get something built, so they were unusually cooperative. They were the most un-bureaucratic bureaucrats."

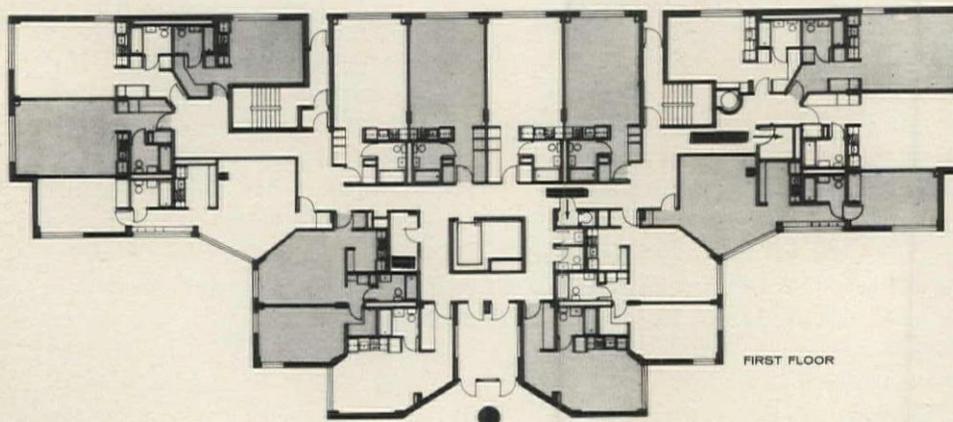
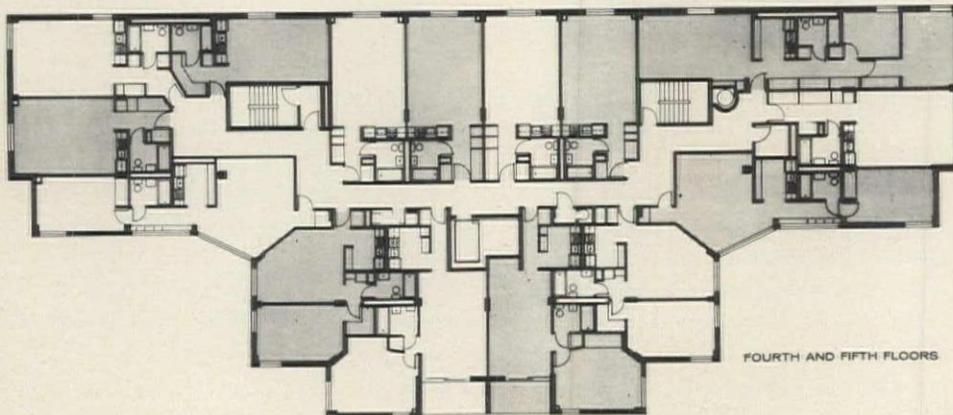
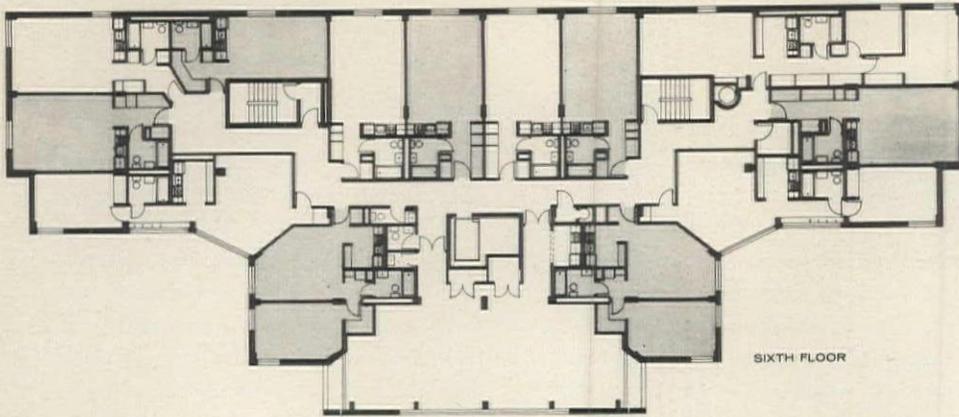
Out of the simplest materials, the architects have sought to make subtle design. Scale is a major technique. The brick is an inexpensive red clay, matching an adjacent warehouse, but the brick nearest the sidewalk is of a different size from brick where the façade is set back from the street. There are subtleties of scale in the cyclone fencing, too — spacing of uprights quickens towards the entry. The specially-sized windows, too, are differently scaled, according to distance from the street.

The façade is pure Venturi. The white strip near the top is intended to recall the tradition of a building with bottom, middle, and upper portions. The bottom story is emphasized at the entry with white glazed brick. The central column (a single, nonstructural piece of granite) recalls the elaborate entryways of older apartment houses, although it leads here into a minimal, no-nonsense lobby of mailboxes.

The rear, by contrast, is plain — purposely boring, claims Venturi. But it is not monotonous; he points to a difference in plan on the three upper floors that is reflected in the different window pattern of these floors. The rear yard is undeveloped — due to lack of sunshine in the area and a limited budget.

Throughout the project are reminders

GUILD HOUSE, Friends' Housing for the Elderly, Philadelphia, Pa. Architects: Venturi & Rauch; Cope & Lippincott, Associated Architects. Site: Between two urban renewal areas and within view of downtown. Program: Rental apartments for persons 62 or over. A total of 91 apartments for those who want to remain in their old neighborhood. Budget limited the spaces and materials to the most economical solutions. Structural System: Flat-plate construction, economical because of frequent use in Philadelphia, and permitting the irregular framing of the intricate plan. Mechanical System: Hot-water baseboard heating, gas-fired. Sleeves installed for optional through-wall a-c units. Major Materials: Concrete framing; brick facing; 5-ply built-up roofing; metal lath and plaster walls and ceiling; wood-block flooring; aluminum double-hung windows. Cost: (includes site work but not land cost, furnishings, or fees): \$1,075,000. Cost per sq ft: \$16.35 (excludes site work, includes basement at one-half). Financing: Fifty-year, 100 per cent mortgage at 3½ per cent interest under Community Facilities Administration, Housing and Home Finance Agency, Department of Housing and Urban Development, under Section 202 of the Housing Act of 1959. Consultants: Keast & Hood Co., Structural; Pennel & Wiltberger, Mechanical and Electrical. Photography, except as noted: Rollin LaFrance.



of older architecture—the large windows (frequently low-silled) and the meandering hallway, like apartments of Victorian times; the raised planting mounds, like old-fashioned planting beds. Venturi points to the château at Anêt for further parallels with the Guild House façade (cf., antlers with “TV antenna”) and he is fond of the Italian Annunciation paintings, which have an arched window and central column, like Guild House. The large letters and numbers inside the building and on the sign in front are borrowed from the commercial signs throughout the neighborhood.

Is the building a parody? In the sense of making fun, no; but in the sense of building on previous symbols and ways, yes, says Venturi. “All architecture is eclectic; after all, the modern movement looked toward industrial buildings,” he says, and he is pleased to consider himself an eclectic. He is sympathetic to such varied influences as Sir Edwin Lutyens, the Italian Renaissance, Victorianism, and Pop art.

How do people react to the vulgarity of the large lettering, the institutionality of brick and cyclone fencing? It is hard to tell. Do people read the subtleties of Anêt Château in the façade? Doubtful, says Venturi, but they sense the familiarity and down-to-earthness of the building. No matter what the conscious and far-flung derivations, this is vernacular architecture—not without humor, but certainly without pomposity. It is a comfortable building, in the same way that the furniture and indeed the attitude and personality of the elderly might be often called comfortable.

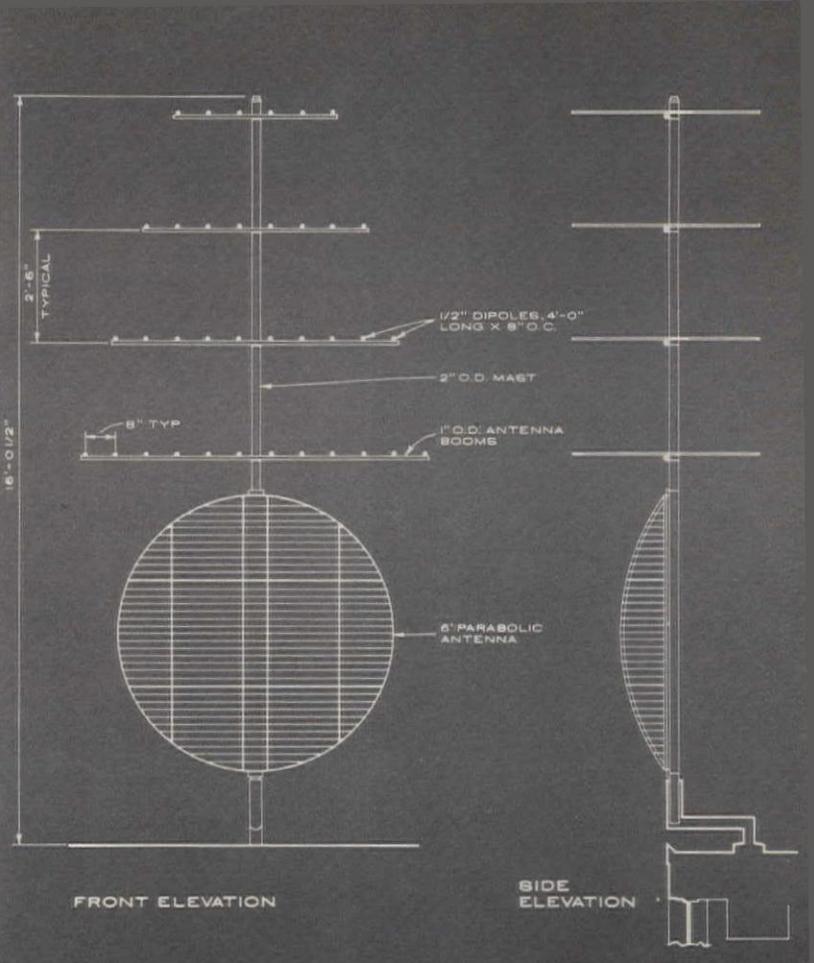
To some architects, the design of the building is questionable. To Friends' Neighborhood Guild, it is a difficult financial proposition in these early years (interest rate for newer projects is now reduced to 3¼ per cent), but Bosworth is hopeful that it will eventually be a profitable enterprise for the Friends' Neighborhood Guild and a real home for Friends and others who want to remain in this neighborhood.

Discussing the building, Venturi comments: “Brown brick walls, with double-hung windows, recall traditional Philadelphia row houses or even the tenement-like backs of Edwardian apartment houses. Their effect is uncommon, however, because they are subtly proportioned and unusually big. The change in scale of these almost banal elements contributes an expression of tension and a quality to these facades which now read as both conventional and unconventional forms at the same time.” The gold anodized “TV antenna” (facing page) is a symbol of the age (20th Century) and of the elderly who spend a good deal of time at the set. Details are inexpensive throughout. The halls are splattered for a dado effect, and colorful tiles were made by children at the Friends' Neighborhood Guild. Community room (facing page, bottom) is a pleasantly irregular space illuminated by arched window.





Photo: Ellen Perry Berkeley



FRONT ELEVATION

SIDE ELEVATION

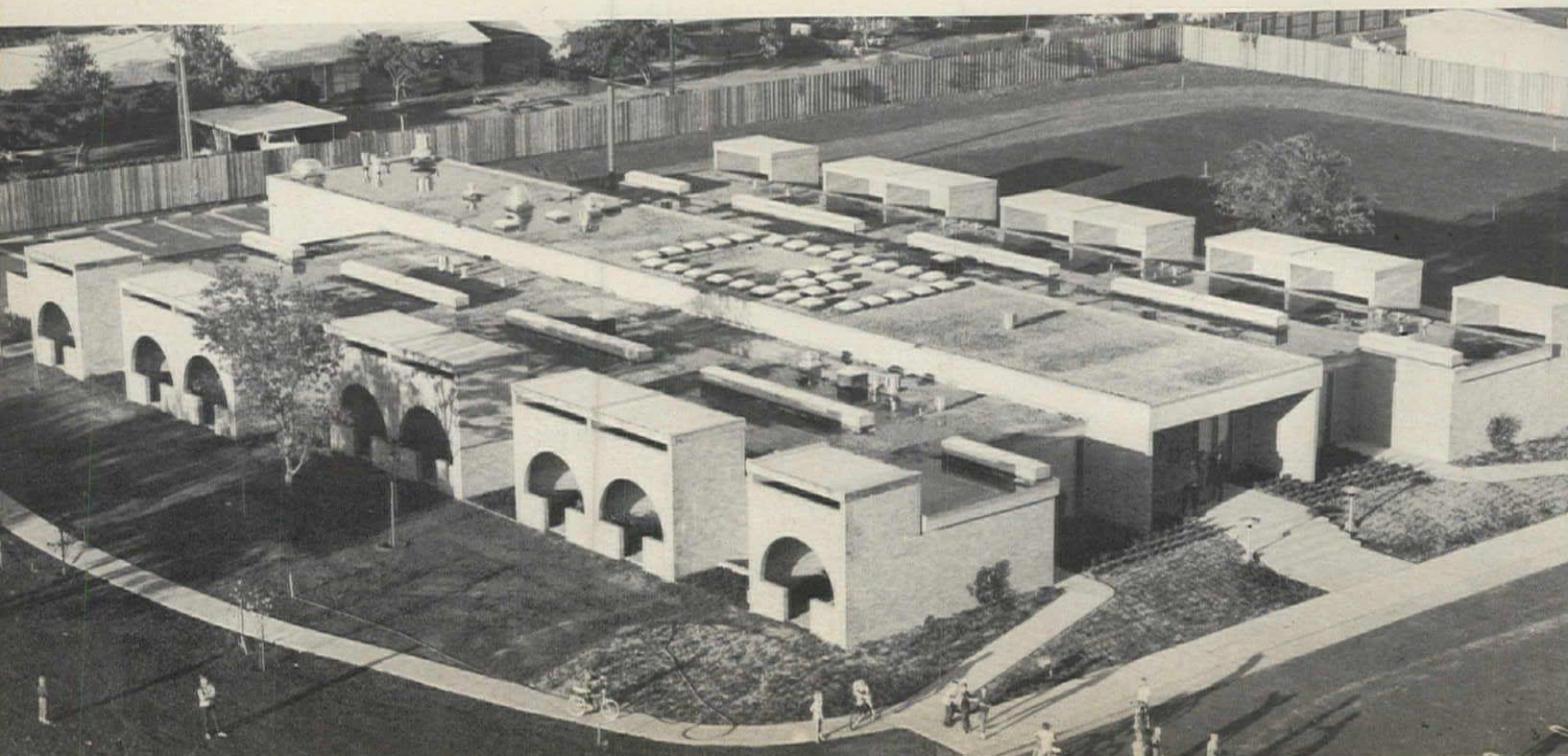
TV ANTENNA

When an electronics manufacturer offered to donate a TV antenna, Venturi offered to design it. The manufacturer was dubious about Venturi's ability to make it function, and he was right: It doesn't work. So Venturi had his design custom-made (above), while the donor supplied three antennas that do work and that were installed to the rear.





4/ The Leaves: Convalescent Home



THE LEAVES, Richardson, Texas. **Architects:** Woodward, Cape & Associates. **Site:** 8-acre lot in suburban Richardson. **Program:** Design an intensive nursing sanatorium for Christian Science students. **Solution:** See text. **Structural System:** Wood roof resting on masonry bearing walls. **Major Materials:** Brick. **Mechanical System:** Each patient's room has individual air-conditioning unit. **Cost:** Bid, \$286,852.00; actual, \$289,361.71; \$19.77 per sq ft. This includes building construction, drives, sidewalks, and parking area. **Consultants:** Richard B. Myrick & Associates, Landscape Architects; Crawford Dunn Associates, Graphics Designer; J. Burwell Harrison, Nursing Home Consultant.

The Leaves is not a terminal care home for the aged but rather an intensive care sanatorium for students of Christian Science. The project, however, shares many of the practical problems of the conventional nursing home, and, psychologically, it seems to have gone one step further than most.

The client's primary concerns were that the patients' rooms provide an appropriate

environment for healing and that the working conditions for the staff be "pleasant and conducive to their satisfaction and mental buoyancy as they proceeded with their tasks."

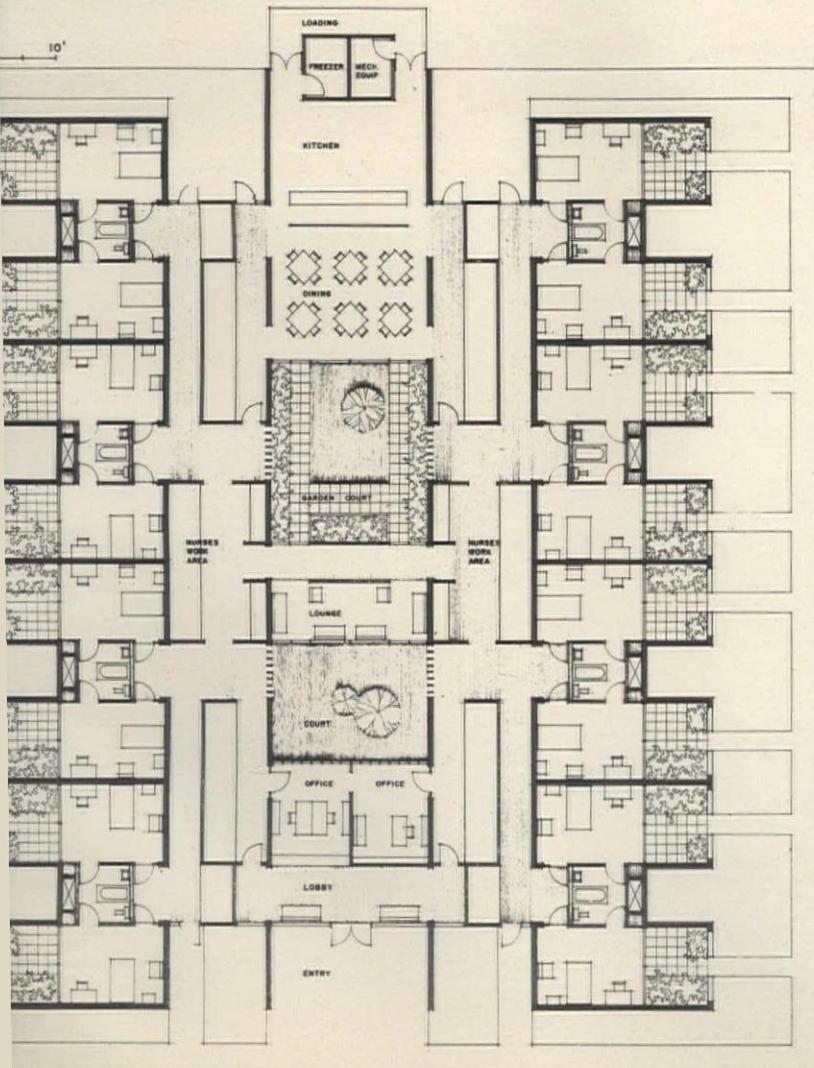
The site of the building, an 8-acre lot in suburbia, offered a quiet setting but little natural greenery or attractive landscaping.

For the patient's room, the architects' solution was to provide a constantly changing play of natural light. A small courtyard that adjoins each room serves to block the direct rays of the sun but catches the light bouncing off the side walls. According to the architects, "The rays of the sun, as they move across the walls of the courtyard, reflect the seasons and time of day, and provide a dynamic changing atmosphere instead of the static sameness of the usual dreary sick room." The light chimney to the rear of the room counterpoints the brighter light in the courtyard and creates a pleasant level of natural light throughout.

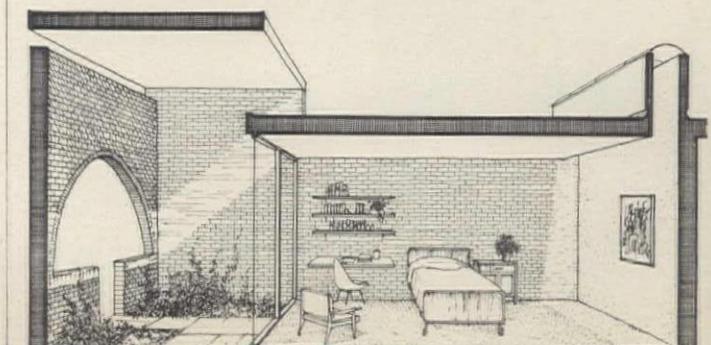
The environment in which the staff works is influenced primarily by the interior landscaped and skylighted garden court. The nursing stations, lounges, offices, and dining room are all positioned so that they benefit from the interior gardens.

The structural system was designed for patient comfort: The masonry bearing walls between each room assure the patient of acoustical privacy, and individual air-conditioning units prevent odor and sound transference between rooms. These units are located in the space beneath the floor, so that they can be serviced without disturbing the patients or nursing staff.

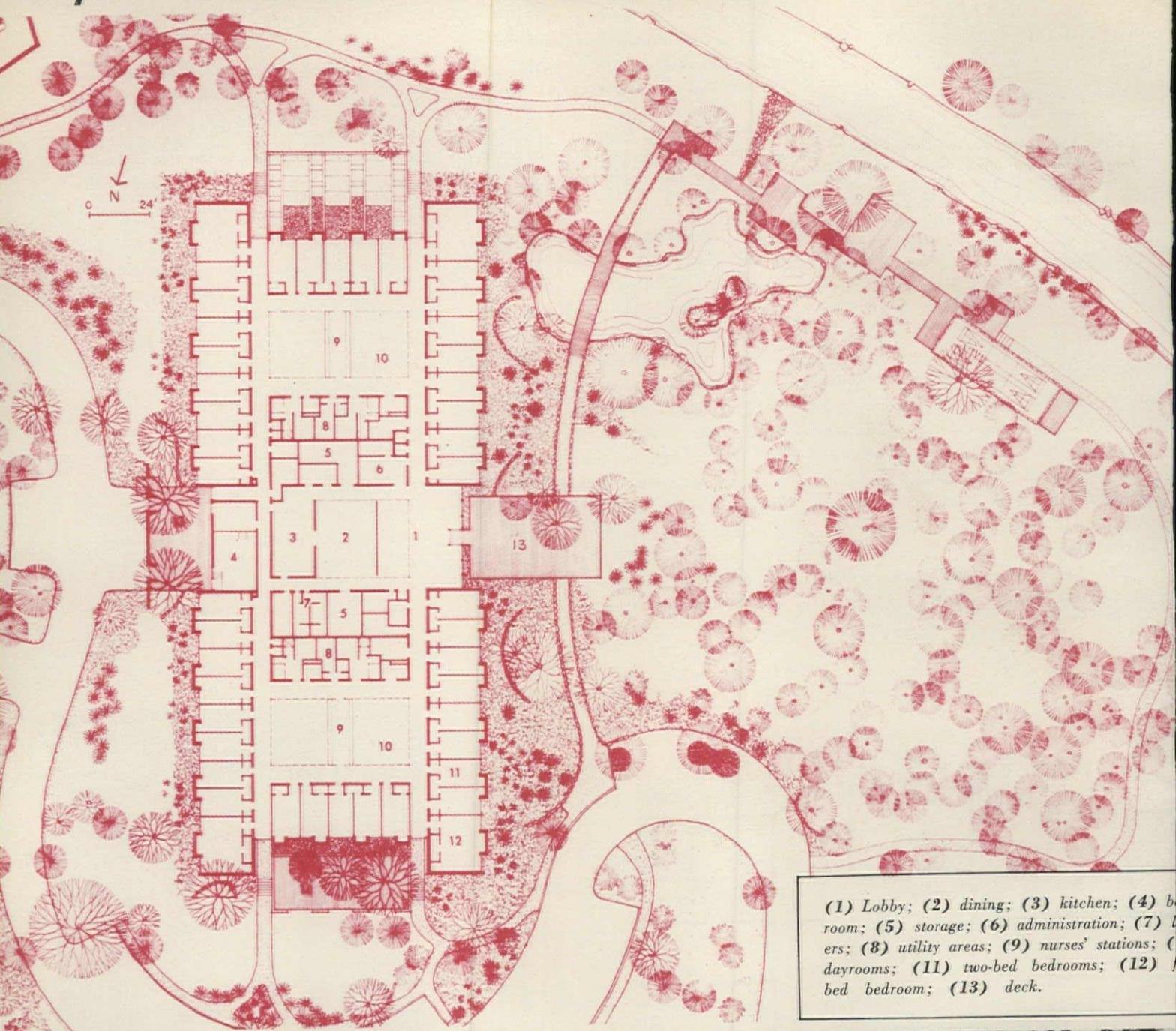
On the interior, the architects avoided the institutional look as much as possible by carpeting most of the floors, and providing residential furniture for the dining and patients' rooms. Even the beds, which are electrically operated, disguise their hospital apparatus under homey headboards.



Administrative office.



5/ Glenside Nursing Home



GLENSIDE NURSING HOME, *New Providence, New Jersey. Architects: Kuhn & Drake; Walter J. Hessberger, Associate. James Howell, Interior Designer. Site: Seven acres of woods and stream in a residential section of town. Program: Design a 96-bed nursing home on a site that occasionally floods during storms. Solution: See text. Structural System: Brick and block bearing walls with structural steel roof framing and metal roof deck. Floor construction: concrete slab on compacted fill. Major Materials: Brick. Interior finishes: vinyl asbestos flooring, acoustical plaster ceilings, vinyl fabric and gypsumboard walls and natural oak trim. Mechanical System: Hot water, fin and tube convactor heating. Costs: Bid and actual, \$850,000; per sq ft, \$25. Consultants: John Rahenkamp & Associates, Landscape Architects; James Howell, Interior Designers; Morrison, Zimmer & Bordon, Mechanical; Goldreich, Page & Thropp, Structural. Photography: Bert Hillebrand.*

The trees, stream and marshes on a plot of land in a residential section of New

the wild nature of the grounds, the architects have, in effect, preserved a bond that links the elderly with the neighboring community.

In contrast to the woods and natural environment, the interior of the nursing home is planned around two enclosed living rooms. The logic behind the scheme is to provide an interior court, surrounded by patients' rooms that can be handily monitored by a nursing station. This type of planning is superior to the traditional corridor layout of most nursing homes, where supervision is more difficult. In addition, it provides a living-room space directly adjacent to the patient's bedroom, so that it is not difficult to move the patient to another environment. In the traditional nursing home, the exceedingly long corridors between bedroom and lounges discourage both the patient and the staff from getting the elderly person out of bed and on his feet, or into a

the Housing Authority is apparently accepted with tolerance by the elderly.

Interestingly, Kuhn commented that, without the Federal regulations controlling the project, the architects probably would not have been able to accomplish as much, particularly in the area of landscaping. "Once the plans were approved, they had to be carried out as they appeared." The project was also helped by the dedicated interest of the client, who was not only involved in it as a business venture, but was also concerned that the very best environment be created for the patients.

The interiors, designed by James Howell, strive for a noninstitutional appearance. The colors of the furniture upholstery are bright and cheerful, and the walls are painted a light yellow. One of the unusual aspects of the interior is a series of drawings and paintings borrowed from a local gallery. Although the



boardwalks.



Centralized nursing station.

Providence used to be the favorite playground of the neighborhood kids, and still is. Even though the site has been used for a nursing home, the architects, Kuhn & Drake, have left most of the landscape intact. In order to cope with occasional storms that flood the area, the building and adjacent land were raised above the high-water level with 5 ft of compacted fill. But contrary to the initial ideas of the client, who requested that the home be visible from the road, the architects set the architecture behind a screen of trees. Outdoor decks, terraces, a pond, bridges and pathways thread through the woods to provide varied environments for the elderly. They also serve as good fishing posts for the young; on a warm day, it is not uncommon to see a youngster getting instructions on flies and fishin' from older, wiser experts. By preserving

wheelchair. Although the room is rather pleasantly lit by clerestory windows, the State Housing Authority objected to the enclosure and refused to credit it as public space. The architects claim, however, that the two rooms provide a necessary sense of security, and that if a patient wishes to go to a living room with an exterior view there is a large lounge with glass windows at the entrance to the home.

After the home had opened, the Authority also objected to the fact that it was possible to see into the patient's room from the court. Feeling that this was an invasion of privacy, it stipulated that screens be placed in front of all the doorways. The patients, however, strongly objected, since they liked to look out and really did not mind others looking in. What may embarrass a young man from

entire series was initially loaned (for the small sum of \$100 a month), it has proved so successful that the nursing home is gradually purchasing prints for a permanent collection of its own. Surprisingly enough, when a large, colorful, abstract painting was removed from the dining room area, the residents objected so strongly that the painting was returned.

Within three months of the opening, all 96 beds of the home were filled. This is most unusual, but both patients and their families are pleased with the environment, and the nurses and other help find that supervisory methods are good, and that patient care has been simplified. The local community, which at first objected to the project (they did not want a lot of old folks around), now considers it an attractive addition to the neighborhood.

6/ Constructing Low-Cost Housing



WILDER RESIDENCES, Saint Paul, Minnesota. **Architects:** Ralph Rapson; Richard Morrill, Kay Lockhart, Associates. **Site:** Relatively flat terrain overlooking downtown Saint Paul. Many community facilities, including a branch library, are within walking distance and the site is serviced by public transportation systems. **Program:** Design low-cost, low-income housing for the elderly (62 years and over). **Solution:** First design consisted of one-story houses that proved too expensive to construct. Final design is two three-story

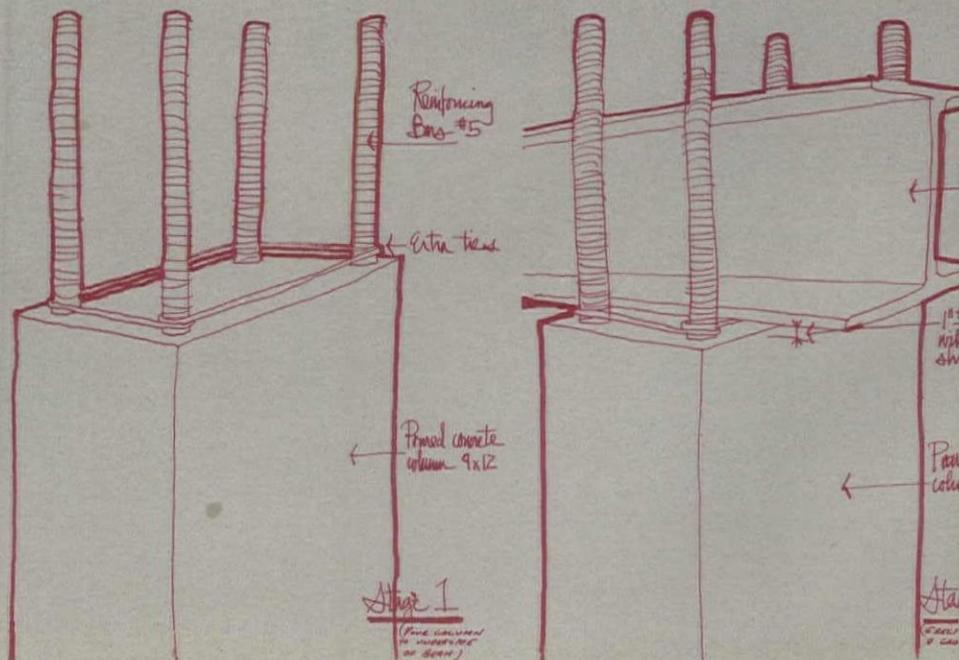
apartment houses with 81 living units. **Structural System:** Low-cost combination of reinforced concrete columns and steel beams (see text). **Mechanical System:** Hot-water convector heat with individual thermostats. **Major Materials:** Dark brick, concrete block. **Costs:** Bid, \$1,017,000; actual, \$1,029,467; per sq ft, \$10.50. **Consultants:** Charles Wood, Landscape Architect; Gausman & Moore, Inc., Mechanical and Electrical; Donald Olsen, Structural. **Photography:** James Mulcahy.

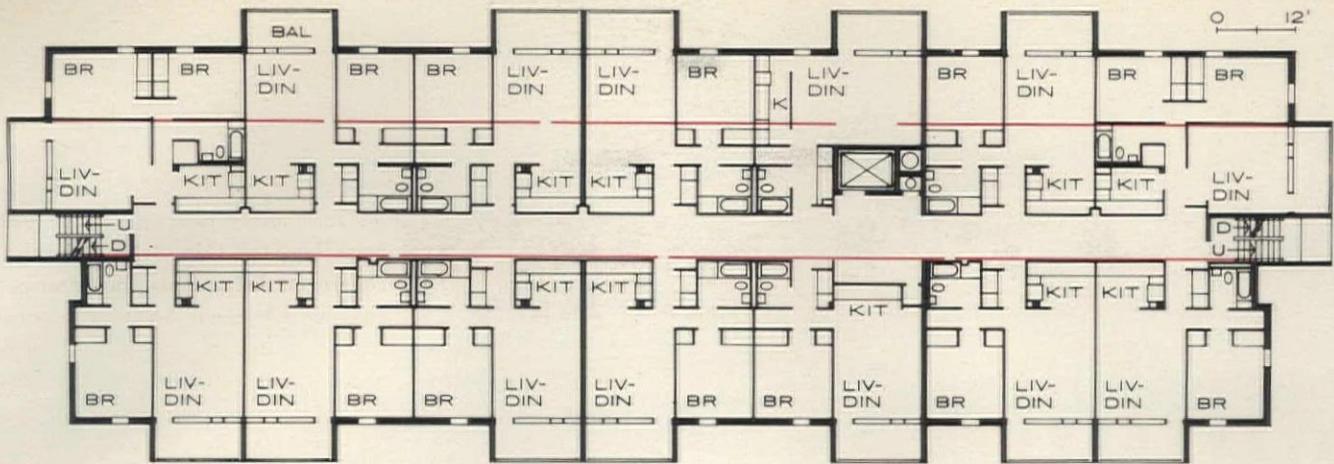
Two apartment houses called the Wilder residences are part of a complete complex for the elderly ranging from a nursing home/hospital (for the semi-invalid) to congregate living units (dormitories with communal kitchens for those who cannot or do not wish to cook for themselves) to one-story town houses of the most active, and a centrally located recreational facility. At this stage, the nursing home, two three-story apartment buildings, and one communal living unit have been completed. The entire project is sponsored by the Wilder Foundation of St. Paul, a charity organization established at the turn of the century by the Wilders, a wealthy railroad and lumber family.

The two apartment buildings by Ralph Rapson featured here were designed for low-income elderly persons who are still self-sufficient, but find apartment-house elevator living more manageable than houses with stairs. The rents range from \$67 for an efficiency to \$78 for one-bedroom apartments and \$88 for two bedrooms. To qualify for admission, the incomes of the first group cannot exceed \$250 a month; the second, \$300; and the third, \$400.

Although the program called for a noninstitutional, residential quality, the architects had to manage on an extremely low budget. In order to provide spacious, comfortable quarters and still meet the budget, Rapson resorted to a unique structural system and inexpensive materials.

Structural system (drawings, right), devised by Donald Olson, seeks to make the most efficient use of steel and concrete. By using a combined system of steel beams and concrete columns, Olson capitalizes on the tensile and compressive strengths of the two materials. Instead of joining beams at each column (which requires numerous cuts and heavier steel), Olson used the longest possible beams and joins them at the point of zero moment. Although most builders resist the idea of using concrete columns with steel beams, Olson felt this was a natural material to use for a member requiring compressive strength. Olson does not claim that this system is the only method of joining the two materials, but at Wilder it was a very workable solution.

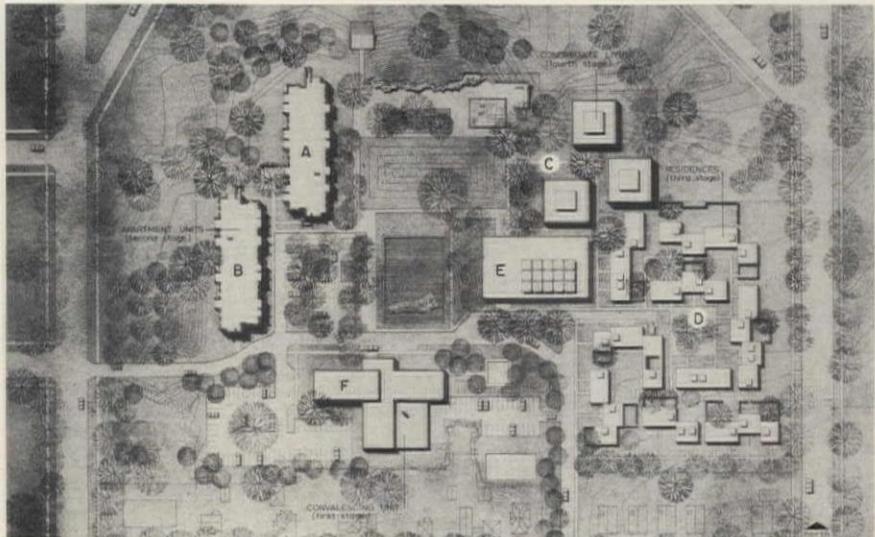




TYPICAL FLOOR PLAN

The structural system, devised by engineer Donald Olson, employs two interior 10-in.-deep wide flange beams running longitudinally across three bays. Extra long steel beams (35 ft to 56'-6") are connected end-to-end at points of zero moment, unpainted at the column for bond. The concrete columns were poured to just below the bottom of each intersection; then the beams were set, grouted under, and concrete poured around the beam and continued upward. Twelve-in.-deep steel joists span the transverse direction of the building; permanent corrugated steel forms are welded to the joists and support a 2½-in. concrete slab. The system has numerous advantages: The continuous steel beams are upward of 30 per cent more efficient in weight for given depth than simple beams; concrete columns are cheaper than steel; steel columns would have required additional fireproofing.

Materials were inexpensive, but dark

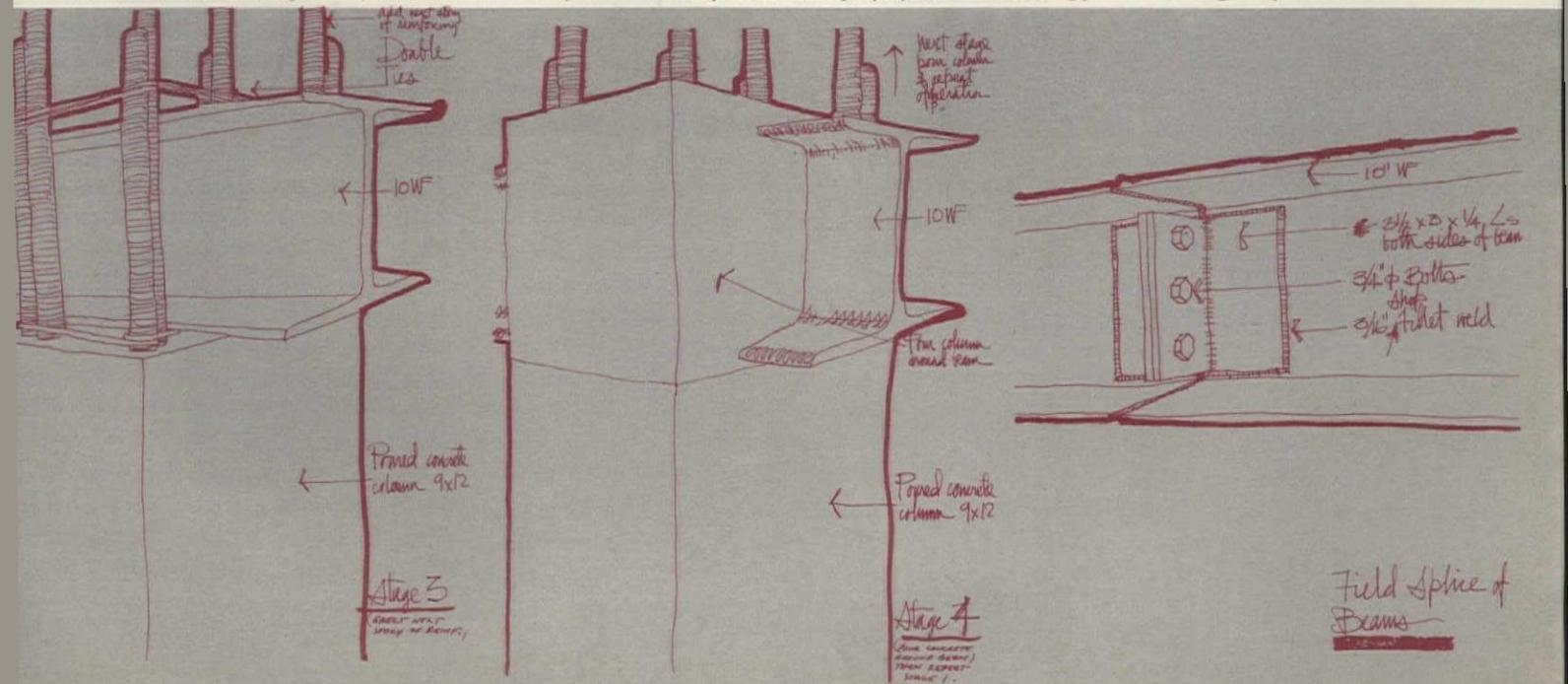


Site plan for Wilder community includes two apartment houses (A and B), three congregate living units (C), one-story town houses (D), a recreational facility (E), and convalescent home (F).

brick was used to contrast with the natural concrete block to give the buildings a quiet residential character. Interior partitions within each apartment are 2-in.-thick plasterboard, and the interior finish is plaster directly over the polystyrene

foam insulation.

The total cost of the project came to \$10.56 per sq ft, an admirable low. With their balconies and varied façade and materials, the units achieve the residential appearance sought by the client.





7/ Rossmoor Leisure Worlds

Within the last decade, 49-year-old Ross Cortese has built himself a multimillion dollar empire of retirement communities. At present, there are five Rossmoor Leisure Worlds in operation: three in California, one in Maryland, and one in New Jersey. A sixth is under construction outside Chicago, and Cortese is presently dreaming of communities in Hawaii and Switzerland. The statistics on Rossmoor Leisure Worlds are impressive:

Date	Title	Acres	Units	Pop.	\$ Value	Location
1961	Seal Beach	541	—	11,000	—	Los Angeles
1964	Laguna Hills	—	18,000 manors	30,000	375 mil.	Near Laguna Beach
1964	Walnut Creek	—	10,000 apts.	18,000	250	Near Berkeley
	Maryland	950	9,500 manors	17,000	250	Olney, near D.C.
	New Jersey	3000	30,000	50,000	500	Cranbury
	Illinois	—	30,000	50,000	500-600	Near Chicago

More impressive, however, is the building saga of Cortese himself. The Cortese legend starts Horatio-Alger style with a small boy peddling fruit on the streets of Los Angeles, buying a lot in Culver City and putting one house on it, then moving up to building some small developments in Long Beach, California; then finally striking it big with the Walled City of Rossmoor at Los Alamitos in 1957, where he sold 3500 single-family units in four years. Today, he finds his headquarters in a Yamasaki-type palace at Laguna Leisure World—a far cry from his early construction shack, which he fondly keeps nearby. The country club tower and the executive china bear the

Cortese coat of arms. And, last but not least, he is FHA's biggest customer.

Communities, Not Homes

With the Walled City of Rossmoor, Cortese hit upon an important key to the successful development. Architecturally, the development looks no better than the row upon row of sprawling Los Angeles suburbs, but the wall around it made a big difference. People responded to the idea of an enclosed community—a symbol of security and prestige. From his experiences at the walled city, and from observing the older buyers, he concluded there was a substantial segment of the population ready for a new kind of housing. It was clear that people were retiring earlier, with more leisure time, more money, and that they did not quite know what to do with it. Young people led separate lives, and had little time for the elderly. Cortese consulted with Cardinal MacIntyre of Los Angeles, then set out to do some original research. He found that, around age 52, many people felt unwanted. They had paid off the mortgage on the house that was too big for them, they did not want to move to a totally new area, but also did not want to rock themselves into the grave. His solution was the Leisure World.

Perhaps the best way of describing a Leisure World is that it is like living at your local country club free from ordi-

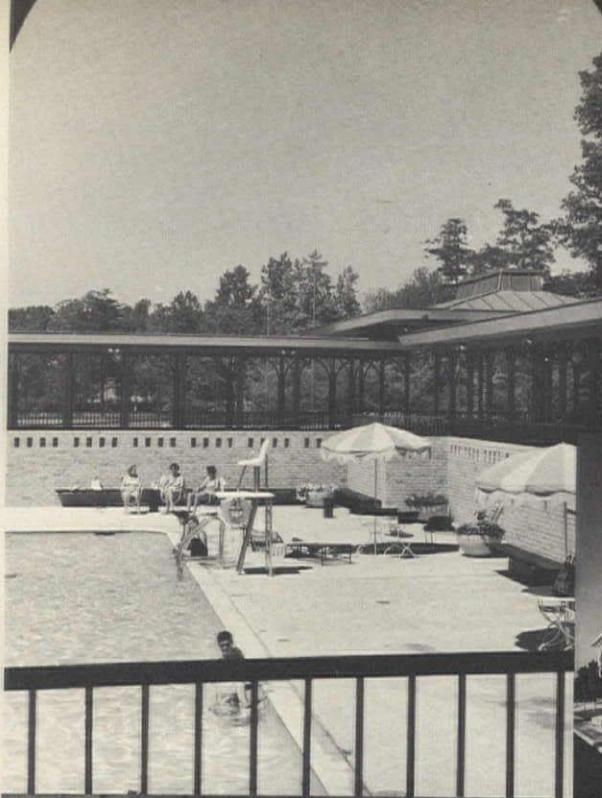
nary pains: For a single monthly payment, each resident is assured of getting 10 basic "freedoms" with his house. He is assured of freedom from: (1) boredom (there are numerous clubhouses and recreational activities); (2) from costly exterior maintenance (buildings, grounds, and streets); (3) from appliance worries (lifetime replacement); (4) from noise and nuisance (walls, guards); (5) from high medical bills; (6) garden chores; (7) from loneliness (everyone is 52 or older); (8) from transportation worries (internal bus system); (9) from tiresome shopping trips (everything is available on location, including a stockbroker's office); and, finally, (10) freedom from heavy cleaning chores (easily maintained surfaces). Cortese is, in fact, offering a living package. Each Leisure World has a full complement of community facilities, which, unlike many developments, are provided in the initial stages of construction. By the time a World has been completed, there are several swimming pools, clubhouses with billiard rooms, entertaining rooms with kitchens, hobby shops, banquet halls.

The monthly payment covers all the facilities and the house. Under the financing system at Leisure World, the occupant never actually buys his house outright. On one model, selling for \$23,143, he pays a down payment of \$2423 and a monthly rate of \$221.50,

*Fountain of
Youth symbol.*



*Swimming
Pool, Md.*



*Headquarters,
Laguna Hills.*



*Homey hearth
at the Country
Club, Md.*



Apartments, Md.



Ross Cortese.

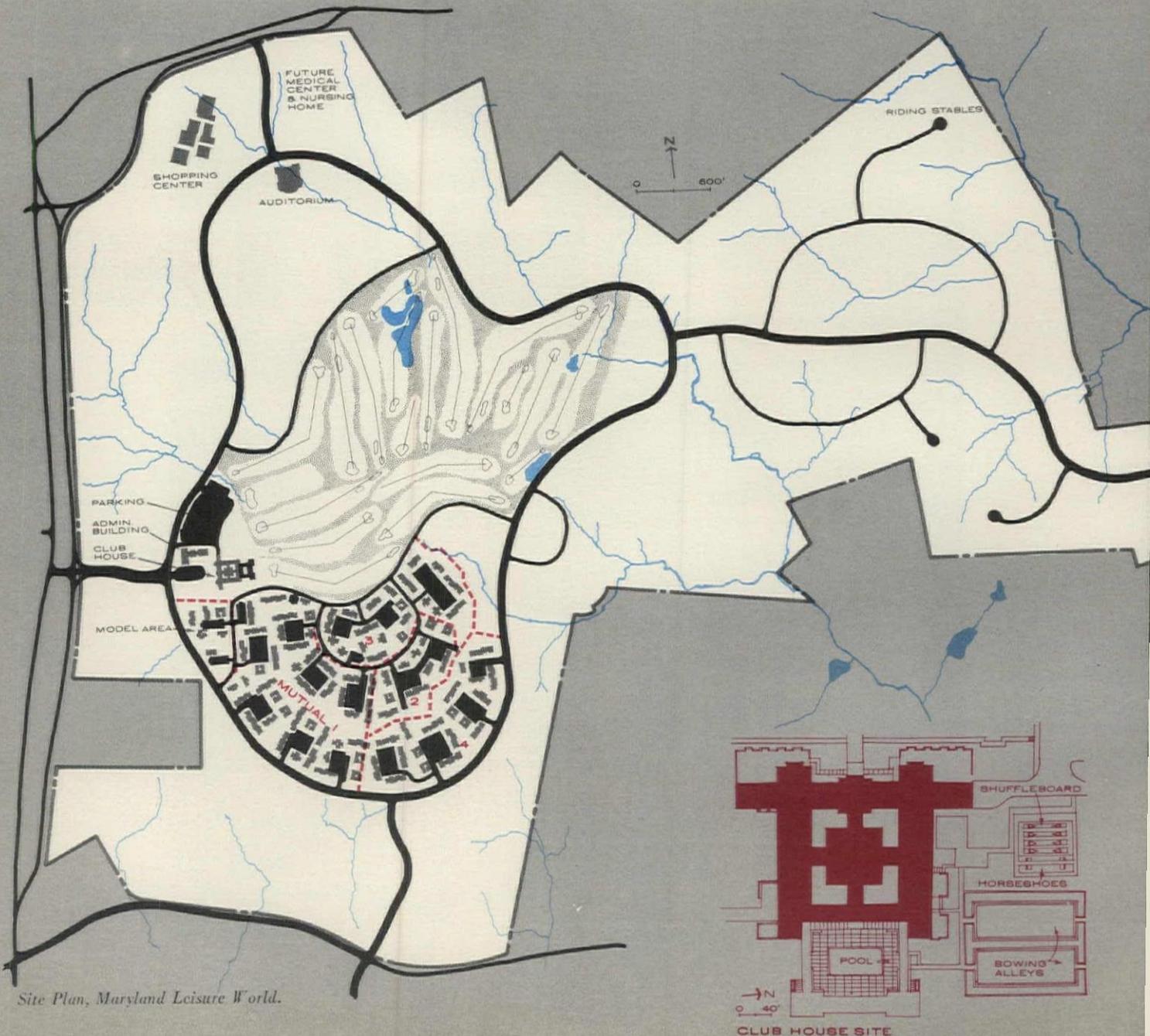
which breaks down as follows: \$115.60, principal and interest; \$34.92, taxes; \$16, medical plan (for two); \$26.60, administration and operation of cooperations; \$8.33, replacement and reserves; \$12, comprehensive insurance; \$8.05, recreation.

At death, the house can be willed to heirs, who can move in, if they are eligible (52 years or older), or resell it. Actually, the house never passes out of the hands of the corporation, and all residents are screened on application.

The Rossmoor Organization

Rossmoor is composed of several different organizations. The Rossmoor Corporation, headed by Cortese, is a profit-making company that develops, designs, and builds the Leisure Worlds. The Leisure

World Foundation is a nonprofit corporation that sponsors, merchandises, administers, and manages what is sold at Leisure World. The foundation sets up a mutual corporation for each new neighborhood (175-400 residents). When 90 per cent of the units are sold (an FHA requirement), the corporation purchases the land from Rossmoor Corporation and contracts with it to build the unit. After the units are occupied, a residents' meeting is called and they elect their own officers to replace the foundation's group. This ostensibly makes each mutual independent of the other, and self-governing. It would conceivably permit the owners of one mutual to decide not to cut the grass for three months while the adjacent mutual keeps the yard tidy. Due to the nature of the community and organization, this is unlikely to happen. However,



Site Plan, Maryland Leisure World.

the development of the community on a piecemeal basis is sometimes misleading. At first glance, the initial residents of the Maryland development are moving into a lovely community surrounded by trees. It is not until the applicant takes a closer look that he realizes that much of the surrounding greenery is eventually going to be turned into housing.

The Architectural Organization

The Rossmoor Corporation has its own 30-member architectural staff, headed by Jack Walling.

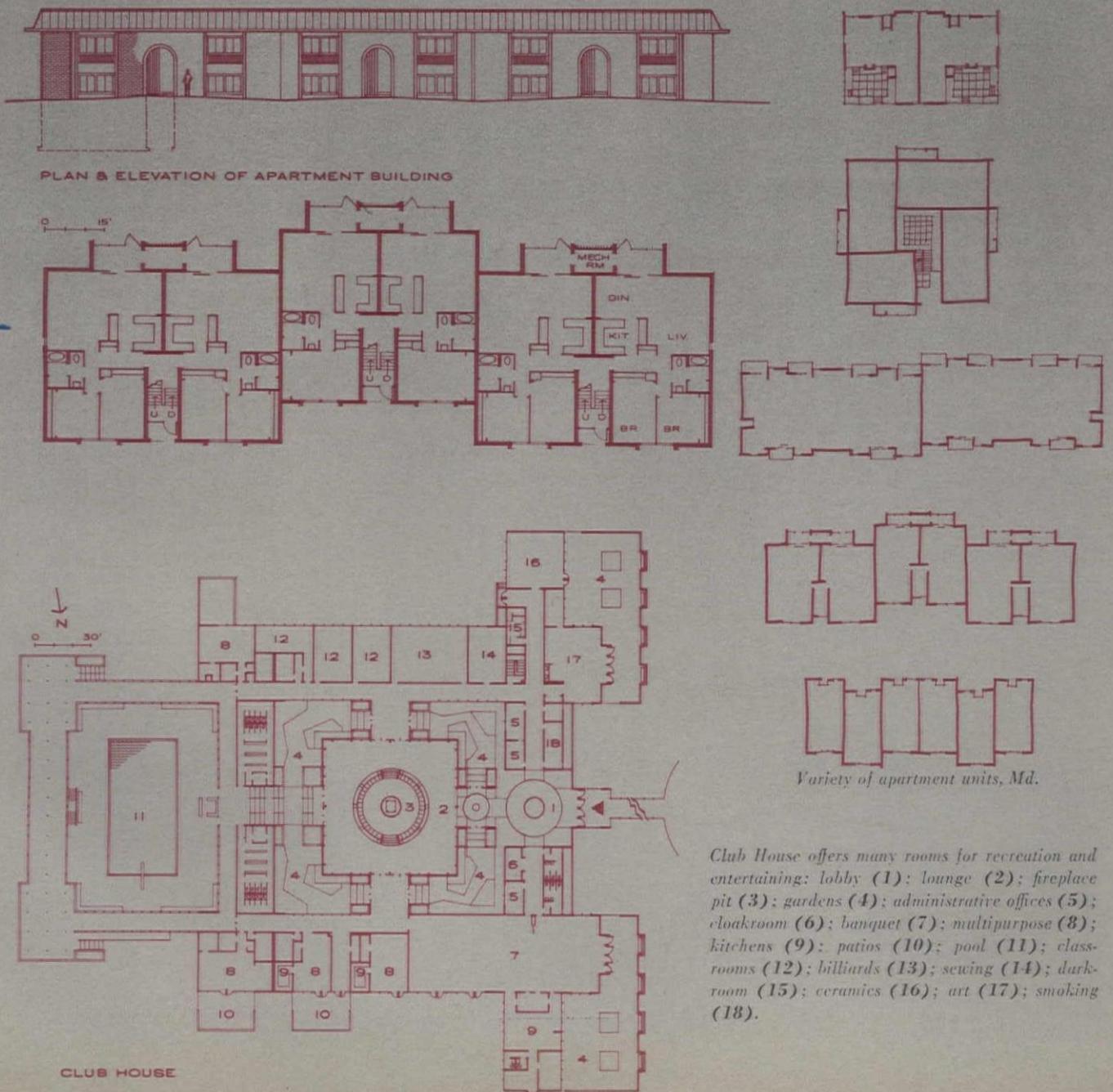
Architecturally, the Leisure Worlds have come a long way. The first development, Seal Beach, is fairly much a sea of bungalows on traditional suburban streets, but the later Leisure Worlds have progressed to more sophisticated cluster

housing and a better use of open space. The corporation also hires outside architects: For the Walnut Creek complex, Cortese hired J. Warren Calister; for Maryland, Collins & Kronstadt; for New Jersey, Richard Wills.

The architectural policy of the corporation is to capitalize on a local style of architecture, which in part dictates the choice of architects: Callister produced a modernized version of the Bay Area style for Walnut Creek; Collins and Kronstadt created a Georgian town house medley for Maryland; and Wills reinstated New England clapboard for New Jersey. Spanish stucco characterizes the Laguna Hills projects and Ye Olde Williamsburg is going to be evoked for Chicago. In some cases, the theme song is more successful than in others. It depends in large part on the inventiveness of the architect

in elaborating and departing from specific styles. The more faithful the design, the more stultifying it seems to be. In the New Jersey project, for instance, Wills was freely allowed to develop his passion for New England architecture, and although he has captured the original volume and details, the over-all effect is that it is too accurate. Living there would be somewhat similar to acting out the last years on a stage-set for "Yankee Doodle." At its best, and even at its worst, the similarity of the designs provides the neighborhood with a cohesiveness and dignity lacking in most developments.

One of the both curious and admirable aspects of the Rossmoor architecture is that it always strives to combine several houses or duplexes into one unit. This gives the complex a bigger scale than it would normally have, and creates a def-



Club House offers many rooms for recreation and entertaining: lobby (1); lounge (2); fireplace pit (3); gardens (4); administrative offices (5); cloakroom (6); banquet (7); multipurpose (8); kitchens (9); patios (10); pool (11); classrooms (12); billiards (13); sewing (14); dark-room (15); ceramics (16); art (17); smoking (18).

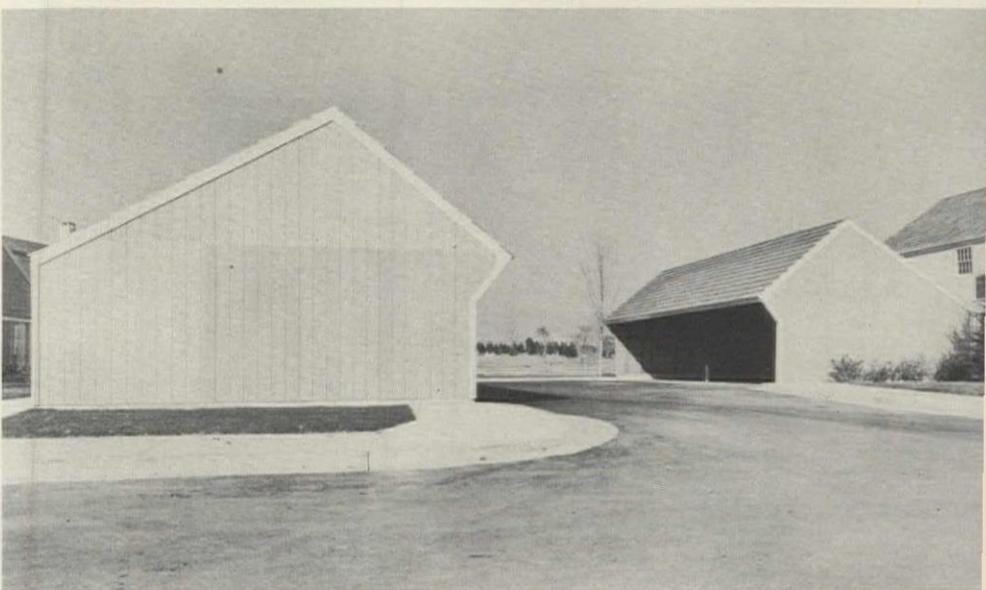
inite architectonic quality. In New Jersey, for instance, Wills has taken the modular aspect of New England architecture and combined several units into one rambling, add-on colonial house.

Psychologically, the effect is excellent: People look as though they live in *big* houses, even though they may occupy only parts of them. On the other hand, it looks like a Cox and Box comedy routine with two residents converging on two front doors to the same house. In being so faithful to the original style, there also is a striking discrepancy between the exterior and interior. What appears to be a well-proportioned house with big old spaces turns out to be a series of efficiency apartments on the interior.

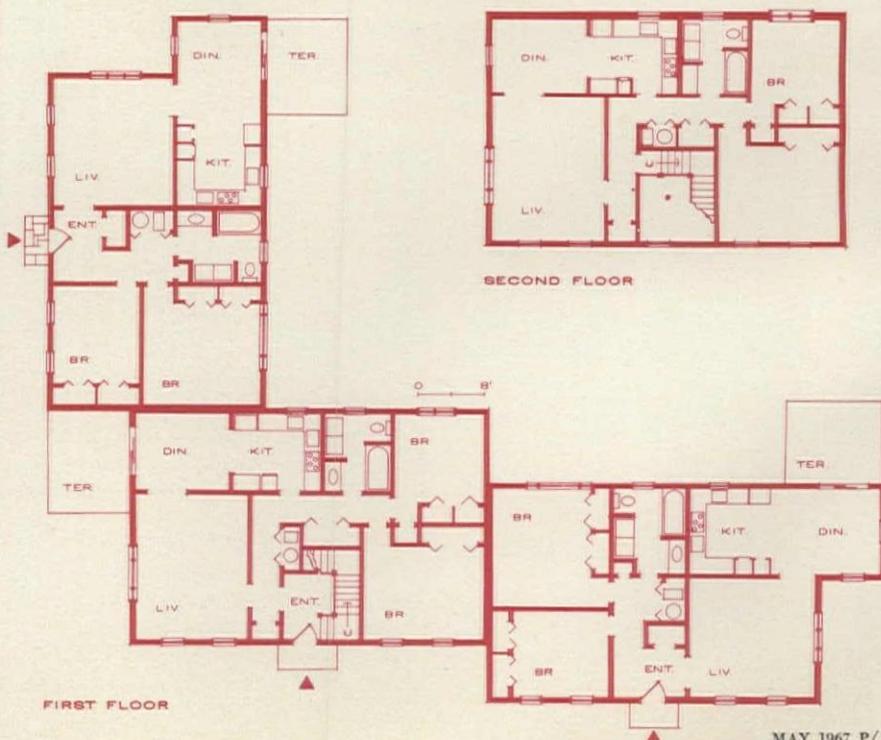
More successful is an apartment unit at the Maryland Leisure World that places the units on either side of a main entry court. Other novel elements of architectural design include community laundry huts, in balmy California climate, and the large recreational facilities. The clubhouses at the Leisure Worlds are really extensions of the homes, since many living units are quite small and a considerable amount of entertaining takes place in private rooms (with kitchens) at the clubhouses.

There is no doubt about the success and popularity of Leisure Worlds on the West Coast, where the name Ross Cortese is well known in the building field. On the East Coast, the New Jersey enterprise had more difficulty. This is partly because retirement communities are less familiar to the Northeast. Many of those attracted to the Leisure World type of community would probably move to Florida. There also seem to be two basic reactions to the retirement community: some people love it; others find it awful. In order to offset the stigma of "old age" communities and create a more lively, youthful image, the corporation recently decided to drop the "Leisure World" tag and simply call the developments Rossmoor, Md., Rossmoor, N.J., and so on. There remains little doubt, however, that they are Leisure Worlds and that the age limits have not dropped.

In terms of comprehensive planning, Leisure World is not so far removed from the New City concept—from the Restons, Columbias, etc. All share the common belief that the responsibility of the builder is not simply to provide housing, but a total environment for a dynamic community.



New Jersey apartments (top) and parking garages (above).



The Designers

Question: How many architects and designers work all day to create functionally efficient environments for clients and then go home at night to a world planned primarily for visual effects?
Answer: Most of them.

It is one of the beautiful paradoxes of architectural reality that the private worlds of architects and designers have always been laboratories for endless visual experiments — and legitimately so, since they need satisfy only the volatile whims of a combined designer-client. As a consequence, some of those worlds appear structurally insubstantial or temporary, and it is almost axiomatic that the apartments and houses of architects and designers are never finished, since the ideas come too fast.

Yet aesthetic breakthroughs often occur first in their residences, and some of the designers' homes being brought to crystallization now indicate the emergence of a new design school.

Fast on the wave of action comes the tide of reaction: As soon as the purest distillation of Minimal Interiors is achieved — the last refinement of the International Style (MARCH 1967 P/A) — a counter approach waggishly raises its elaborately ornamented head.

The new aesthetic happening evidences an interest in spatial ambiguities, confusion, and distortion. What is of interest is a nebulous area between precise perception and the hallucination of infinity. (It is also a treacherous area between design and faddish display.) The new direction approves a permissive, realistic economy of means and a rigorous irreverence toward established architectural principles. It corresponds to current psychedelic investigations, perhaps, by aiming at expanded spaciousness.

If baroque man saw himself at the center of his universe, contemporary man has a double vision that also puts him above the earth — in orbit, as it were — looking down on it from the viewpoint of some extraterrestrial architect studying an earthbound model.

This is the space-expanding vision of the new architecture, which might well be called Supermannerism.

Today's architects have all sorts of devices to provide a platform for this giant's viewpoint. Three of those devices — the all-white vanish, the silver panic, and giant furniture — are seen in the designers' homes on the following pages.

All-White Rooms have been around, popping up, off and on, throughout history since at least the days of Gabriel and Boffrand in the 1700's, returning with

the Mackintoshes around 1900, and again with Syrie Mingham in the 20's. But today's all-white room — whiter than ever before and easier to maintain — is with us because it is more of less. The all-white room is maximally minimal. Its white-on-white intaglio effect, along with transparent glass and plastic furniture and the floating quality achieved by illumination, all lead to an immaterialization of the envelope and its elements. By making the envelope vanish, a dramatic emphasis is placed on growing, changing things — and on people, who take on a hypnotic air in the almost weightlessness of the all-white orbit.

Silver Interiors, like all-white rooms, are no new fad either. From the time of Louis XIV's legendary silver furniture, through Cuvilliers' silver-leafed rococo decoration, and down to what Alexander Girard calls "the silver panic of the 20's," this white shimmering surface has shown sporadic flashes. Yet, today, the silver wall is especially pertinent, since it is also ideally suited to the current search for spatial ambiguities. As a flat wall surface, it leaves clean definition of the planes yet produces a soft reflection that duplicates the statement and extends the space, confuses the image, and makes it discontinuous yet interdependent. Less specific than mirror, the silver surface (silver mylar, of course) may become the symbol of our age of ambiguities.

Giant Furniture is the newest space-extending device of all. Huge boxlike constructions that function as furniture and sometimes are rooms within rooms provide a scale that seems to extend the surrounding spaces where those constructions stand. Sometimes giant furniture is only implied — by painted emblems. In this technique, segments of geometric forms, either flat or solid, are painted on interior surfaces to suggest that the complete form — circle, cube, or cone — continues beyond the volume of the room into the outer space of a bigger world. This makes the viewer feel part of that bigger outer space beyond — a major effect of the Supermannerists.

Not all of the residences illustrated are of the same school, but together they show a progression toward it. Primarily, they are interior treatments in apartments or in houses that have not been renovated much on the exterior, but they are strong statements — or, as today's designers might say, strong non-statements. For it is a double-visioned, almost polarized view that is swinging into focus. — CRS



1/ Floating Platforms



Photos, except as noted: Louis Reens

Paul Rudolph conceived his all-white apartment as a "floating platform" suspended in space above a sweeping river view. Within this panoramic orbit, low cantilevered platforms surrounding the living area are lifted off further by incandescent lighting beneath their translucent white plastic plane. Also, this shelf serves as a base for legless, vinyl patent leather seating units and as a step to a small outdoor terrace of white steel grating, which is like a gantry from nowhere to the floating room.

An overdoor air-conditioner contrasts with the lightness of the terrace and reads as a plastic-encased directional indicator to the inside. Complementing the slick, glossy textures are hides of white

kid fur on the floor, a contour map behind the sofa, and castings of Sullivan panels.

At the windows, hundreds of disk mirrors (suspended on invisible nylon wire) reflect the interior brilliance against the evening sky; in daytime, the mirror image is reversed by a nearly invisible lucite dining table. A cylindrical, translucent pedestal lighted underneath is a "plastic antique," Rudolph says. Next to it hangs Will Ryman's layered plastic sculpture.

In contrast to this minimal, all-white environment, Rudolph has placed a huge grand piano across the entry; one squeezes past this black funnel into a liberating whiteness.

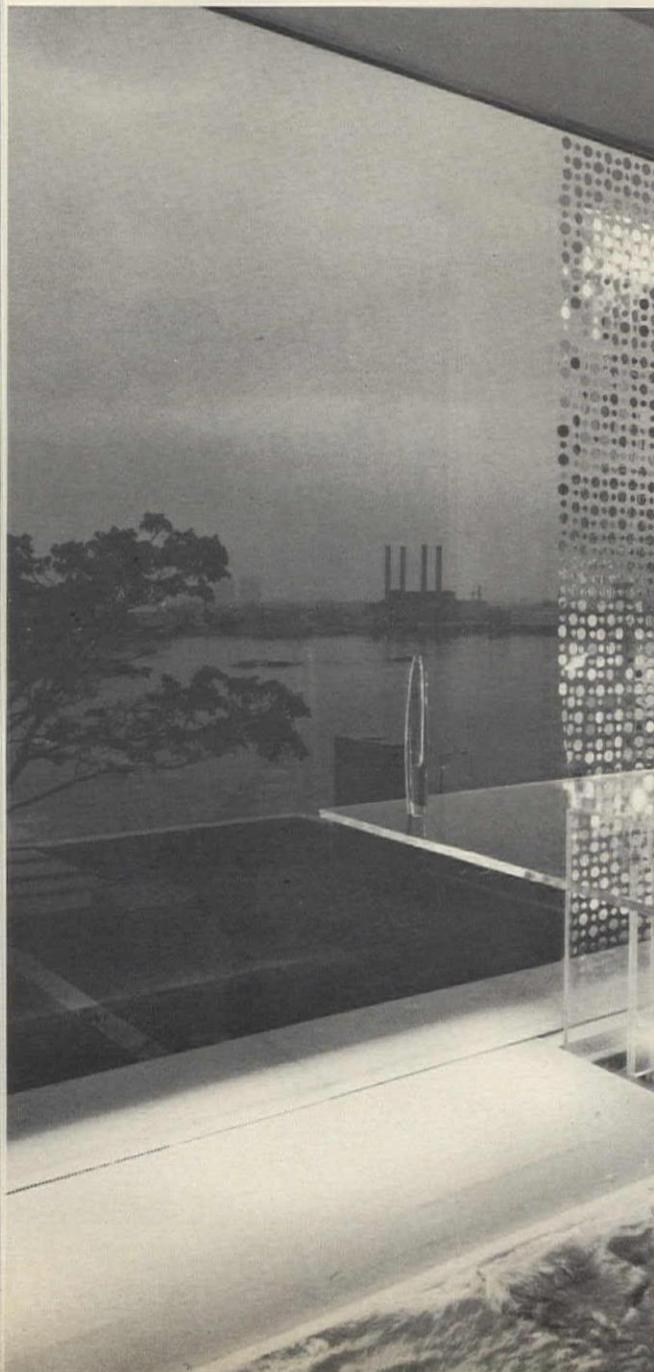
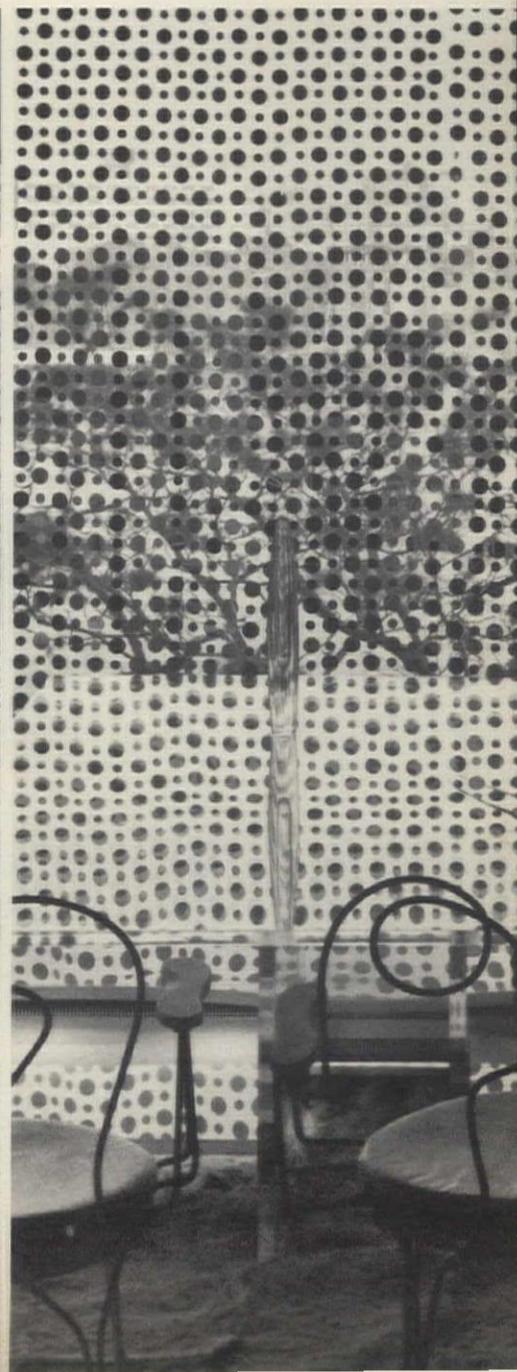


Photo: William Grigsby





2/ White-and-Silver Orb

Peter Hoppner's hallway is a silver happening of five swinging doorways and a swiveling panel cum closet that closes down the archway entry to the main room. The crazy-mirror funhouse of the hallway opens onto a calmer, white-and-black room, on one side of which is a massive box that has a bed on top. "I like big furniture," Hoppner explains. "Movable furniture in a small space clutters it, whereas things that are big, instead of destroying the space, make it seem bigger." The big box also helps to partition the room from the drafting table behind it. In addition, the unit is a room within a room: Inside it is a black dog-house-like storage space. Perhaps as architects become less object-oriented about their buildings, as they are doing now, they get more object-minded about bits and pieces in their interiors. Hoppner says, "The whole spirit of today is like the spirit of the 20's. And people are using silver because they are tired of all white and natural colors. Also, architects are gradually getting interested in the same horrible colors and textures that sculptors are doing today — as opposed to the old purist business. It is in the air."



3/ Portable Silver Capsules

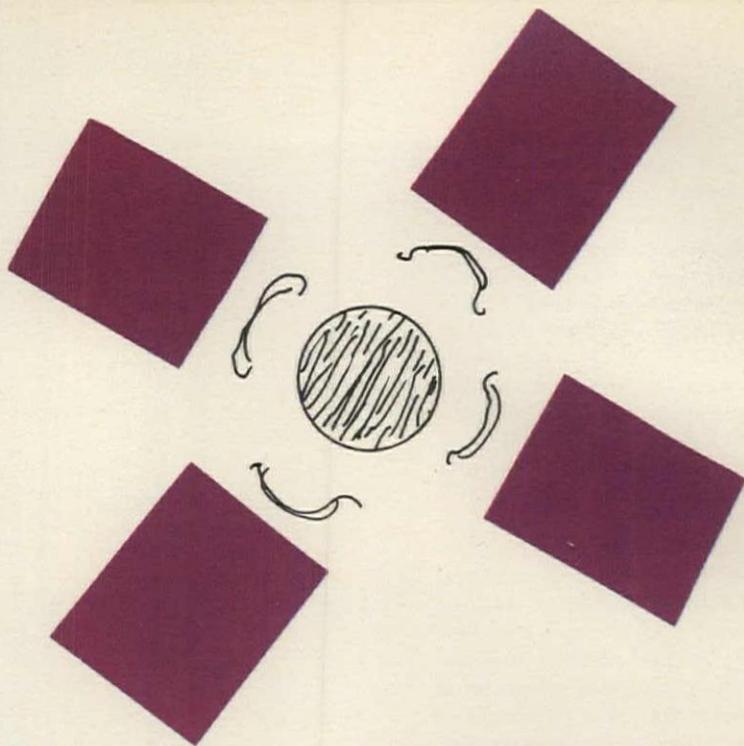
Yale-Architecture trained Frederick Romley and his wife Elizabeth have adopted giant furniture, with a twist, as well as the white-and-silver idiom. The shape of the hallway was "very specific," Romley felt, and matte silver walls was an appropriate means of giving it a more ambiguous appearance. Besides, silver interested him as something beyond all white, and because it provides a continuity of background with chrome and steel pieces. This is gleamingly demonstrated in the kitchen, where the stainless equipment looks more consistent than in any other surrounding. Aluminum painted woodwork melds the two metallic surfaces. In the family workroom, Romley has four pillar-like closets — silver painted and mirror doored — that provide a mannerist's scale. The closets were originally built in and were removed from the walls of the apartment to tidy the plan, but they had to be retained to meet the landlord's requirements. Now, these pieces of giant furniture move even further toward ambiguity by being instantly rearrangeable on their roller bases.

The effect for parties is special, sometimes menacing, sometimes magical.

"Silver environments are used differently in each age," Romley observes. "We have a freedom now and look into anything that we think will work. So we sometimes find that we are using the same things that the fashion people are using."

"And the greater durability of the vinyls that dress designers are using makes them suitable as upholsteries," Elizabeth Romley adds.

"What makes silver seem like a fad," Frederick Romley concludes, "is that silver or aluminum foil seems like a superficial throw-away material that is as quickly used up as the designs of Seventh Avenue. What we do lasts longer."

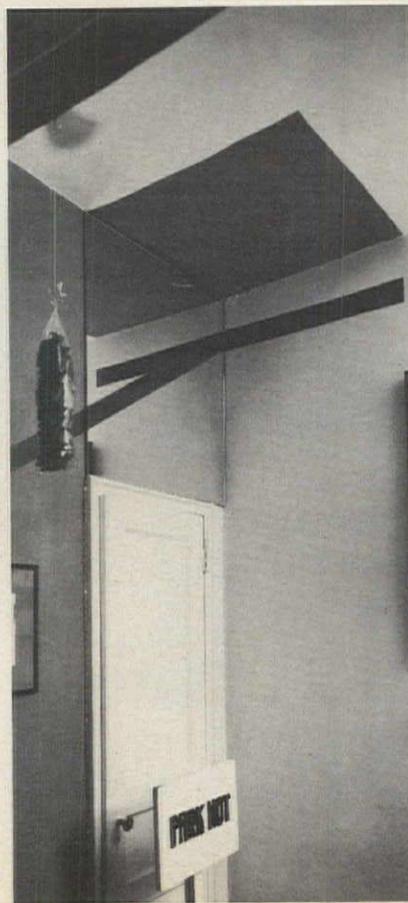
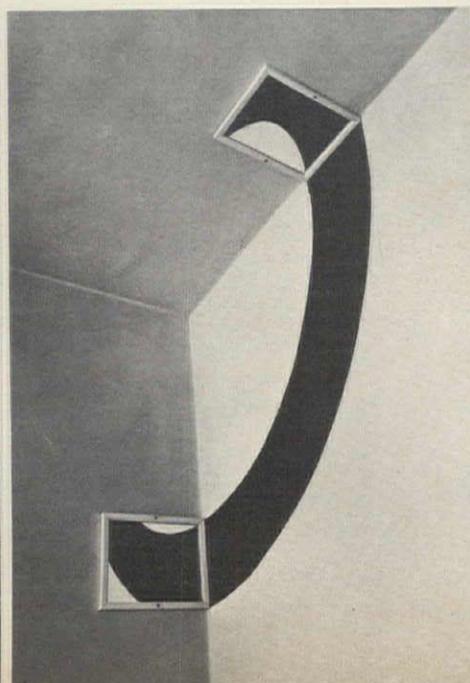


Photos: Louis Reens

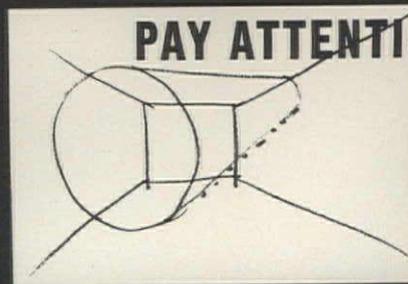




4/ Sections of Supermannerism



Photos: Louis Reens

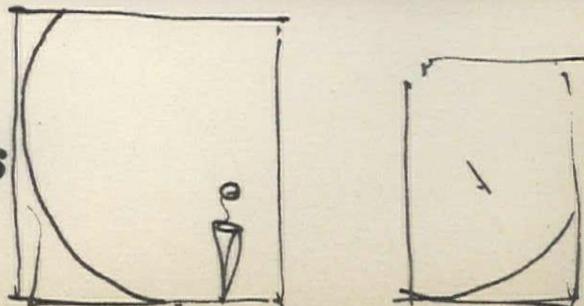


Hugh Hardy and his wife, both of them architects, started painting a stripe to jazz up their apartment kitchen. "But then," Italian-born Tiziana Hardy says, "the stripe went her own way." Two things happened: First, the stripes in the kitchen and living room became the lines of cuts through the room, like diagonal sections. The effect is to put the viewer in mind of some giant Gulliver looking down into an architectural model. Second, in the bedroom, the stripe implies the outline of a huge, three-dimensional cone that extends beyond the room and outside the building (see sketch). The violent space-extending effect of this imprint on entering the room is immediate and aggressively physical. Hardy is interested that "what is on the surface is the result of something that is left over when the cone goes through." And he feels that the contrast of the bold black and red stripes in the white rooms "helps to make the cubes disappear even further and literally alters the volume with paint." "You need a good geometrical mind for this," Tiziana Hardy points out, "and the outline for the cone is not entirely accurate." But it works. The stripes also are combined with mirrors to complete them in the plane beyond (facing page, bottom left), and when the stripes are painted right onto the mirror (facing page, bottom center), they produce odd, three-dimensional effects.

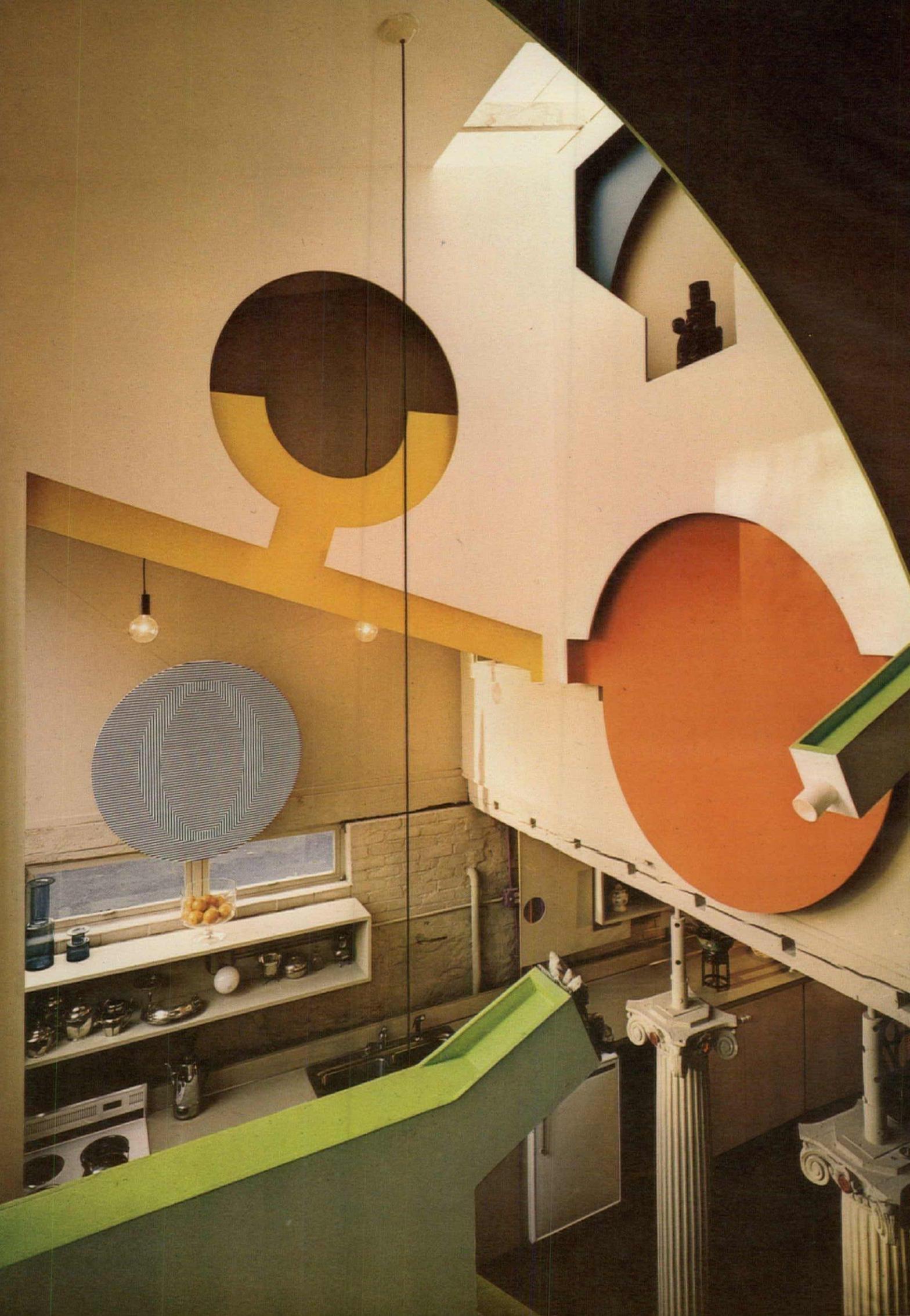
"It will be increasingly difficult to make a distinction between design and fad in the future," Hardy states. "It is academic to say that what is popular is not important. I thought we had been through all that. Why can't something that is important for the present also be important for all time? Anyway I suspect that 'for all time' will be an increasingly meaningless thing. Today, we are interested in the simultaneity of the two. And we recognize that the hierarchical establisher who says today that the popular is superficial is speaking from just as superficial a pose."

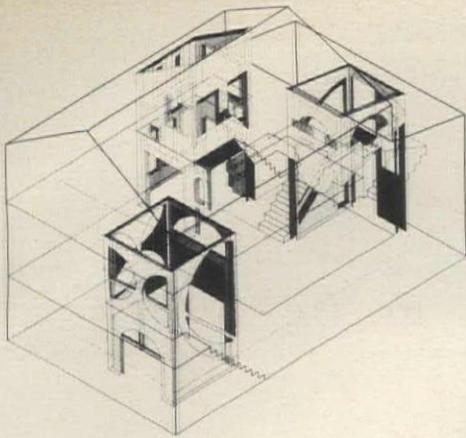


5/ Implications of Giants



Sketch: Charles Moore





Charles Moore's 18th-Century house in New Haven has three great eyelet-work "tubes" inserted to link the space in the vertical dimension and to carry light into the interior from new directions. Standing independent of both the original structure and its interior, the thin constructions are envisioned by Moore as "flimsier than architecture and more like giant new furniture inside the dinky house."

The three-story, one-room interior in which this furniture stands is uniformly painted a bland "eye-ease" green, and the outsides of the tubes are the same color. Inside, the tubes are white, with the interstices of the $\frac{3}{8}$ -in.-plywood construction painted in wild colors.

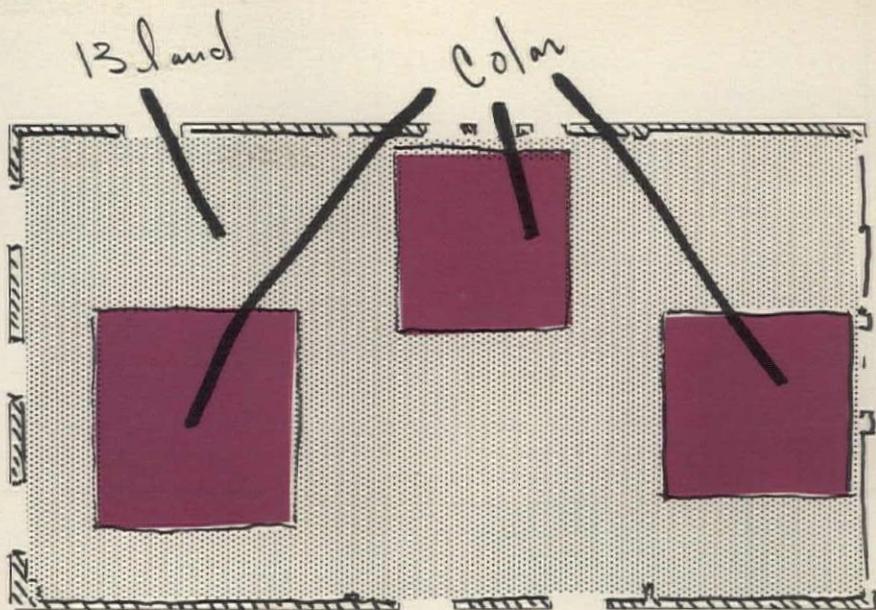
In the eyelet-like cutouts, Moore has placed his collection of Mexican and Egyptian objects. "The tubes are like giant whatnot shelves," he observes.

In some ways, the cutout work was shape-making for its own sake, but that was thought legitimate in a house that was already there and was to be altered outside as little as possible.

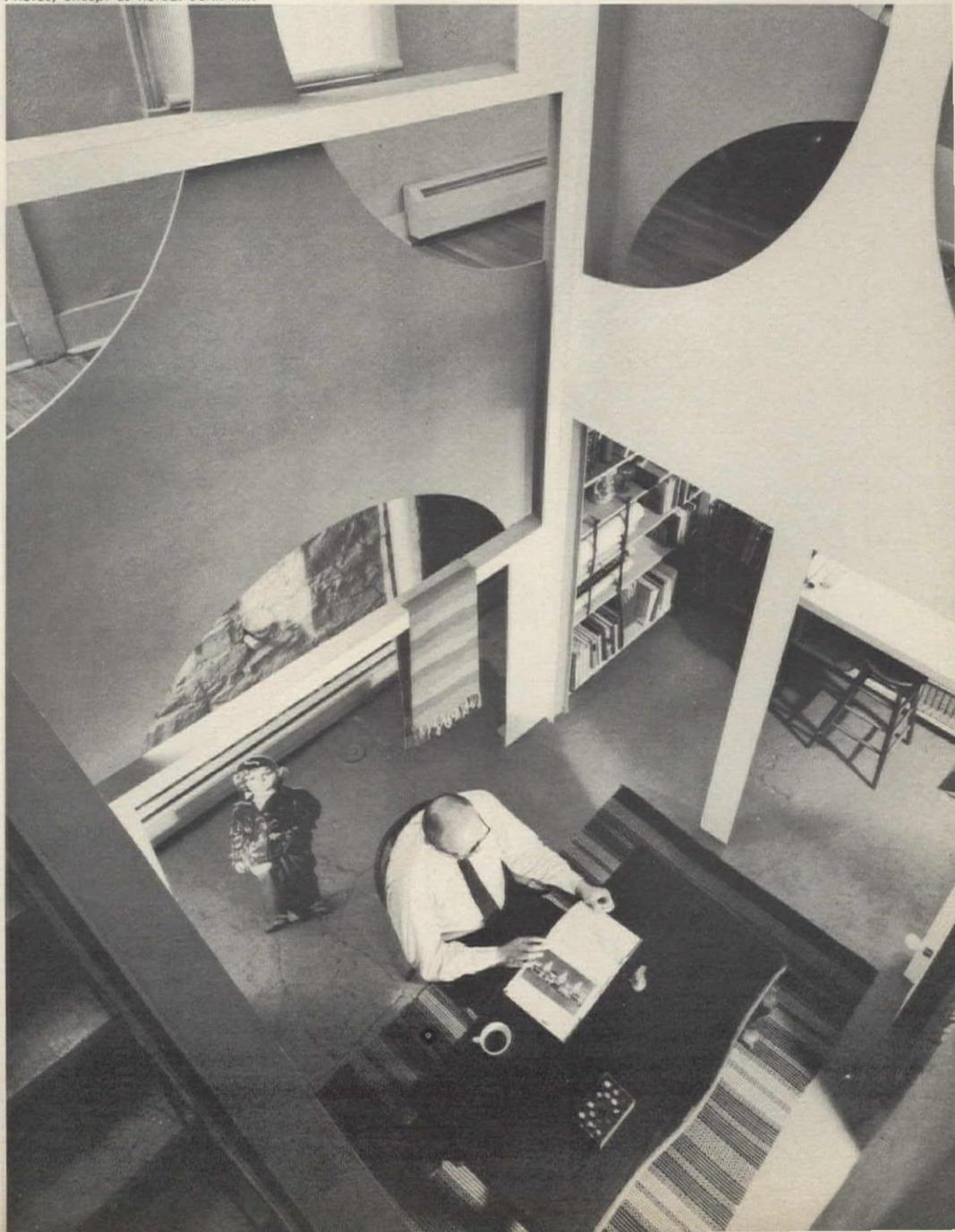
Besides, the tubes, which seem to partition the small house more than ever, also act like screens to confuse the open-plan space, making it less claustrophobic. They thereby act as space extenders.

There are nominal extensions to the tubes, too. One is named Howard, after a dog in New Orleans; the center tube is Barengaria, who was the wife of Richard I; and Ethel is the tube over the kitchen.

Among the cutout designs, Howard's arcs imply two enormous circles extending way beyond the volume of the tube and beyond the house itself (see sketch). "It is the biggest piece of furniture you could get in a house this size," Moore explains. "I wanted these graphics to seem like part of an even bigger world. It is a latter-day manifestation of a Piranesi complex," he continues. "The 18th Century got its kicks by drawing the people too small, and I thought I could get mine by making the graphics twice too big. These are like



Photos, except as noted: John Hill



pieces of great wheels rolling around and grinding over you."

This is supermannerism, and, like Venturi's, is derived from Kahn — "as everything is," Moore observes. "But it's a generational thing that our shapes are more irreverent. I don't think it evil to puncture whatever architectural balloons I can find lying around."

One balloon is that everything in architecture must be "clean and pure." Moore's "irreverent" attitude permits him to include the entire range of things that goes on in architecture — such as elements not fitting, artifacts from our daily Pop world, not expressing structure unnecessarily, economy of means rather than of visual effects, horrors, and "the things that happen in the cracks." As Moore explains, "It is an inclusive, T.S. Eliot-like view of life." That is the Olympian view of the supermannerists.



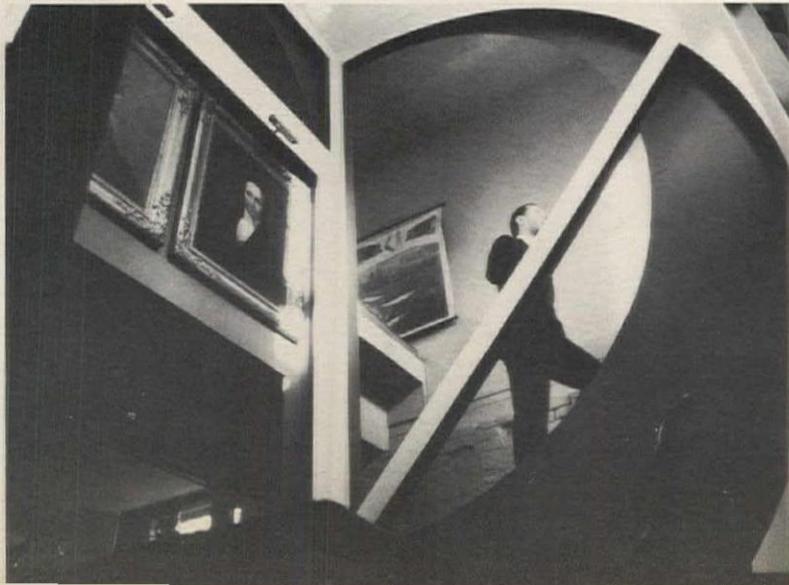
Photo: Charles Moore

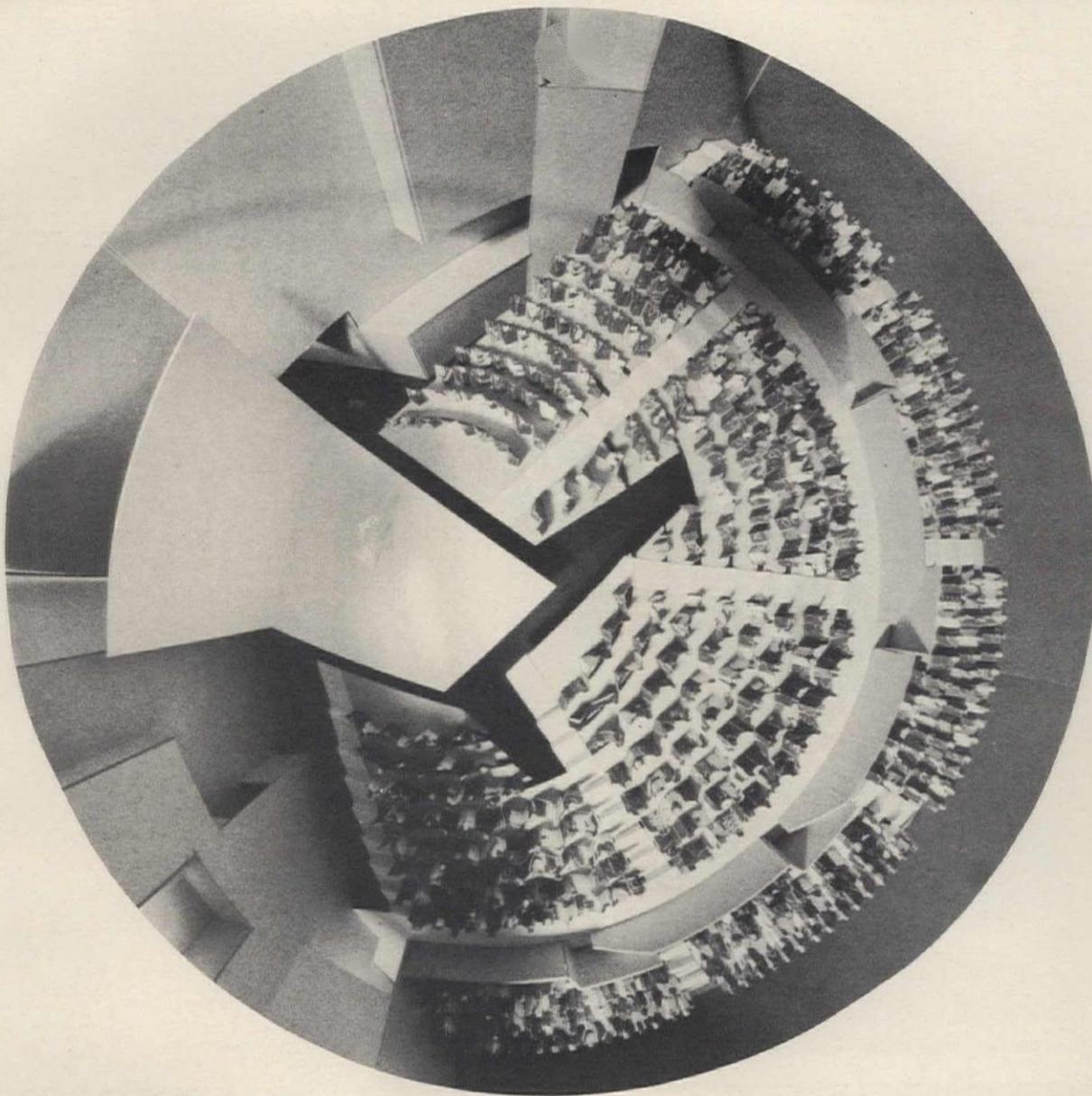


Photo: Maude Dorr



Photo: Maude Dorr





CINCINNATI ONE-UPS LINCOLN CENTER

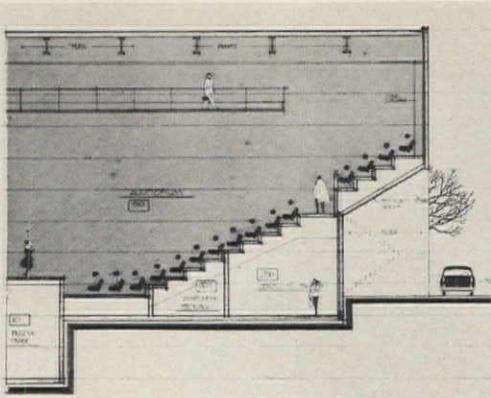
Cincinnatus was a Fifth-Century B.C. Roman patriot who used to leave his farm and go into the city every time it needed him to put down some enemies or get things back in shape governmentally. In a kind of reverse pattern, Hugh Hardy comes riding out of the East (New York) occasionally to help Cincinnati, Ohio, house its admirable regional theater program. In 1965, Hugh Hardy & Associates designed the renovation of an existing Victorian pavilion on Mount Adams in Eden Park for the use of the theater group (pp. 204-

205, OCTOBER 1965 P/A). Now, Hardy has designed the final phase of the project with a 650-seat theater and a plaza between the two buildings.

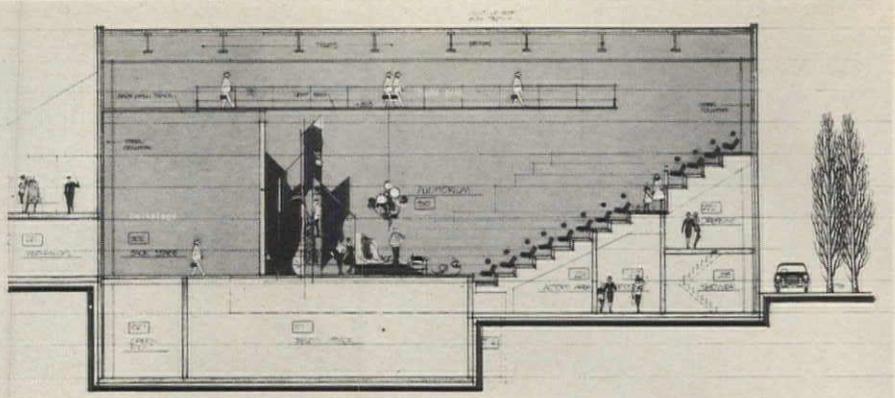
Admirers of Cincinnati have long held a brief for it as one of the most culturally advanced cities of the Midwest, and with good reason. Its place in art, music, and higher education have long been undisputed, and the more recent program to establish a permanent drama group has met with enthusiasm and success. Now, in his design to house the troupe more adequately, Hardy has

brought to Cincinnati a very *au courant* style of architecture that will keep the city secure in its position as a regional cultural arbiter.

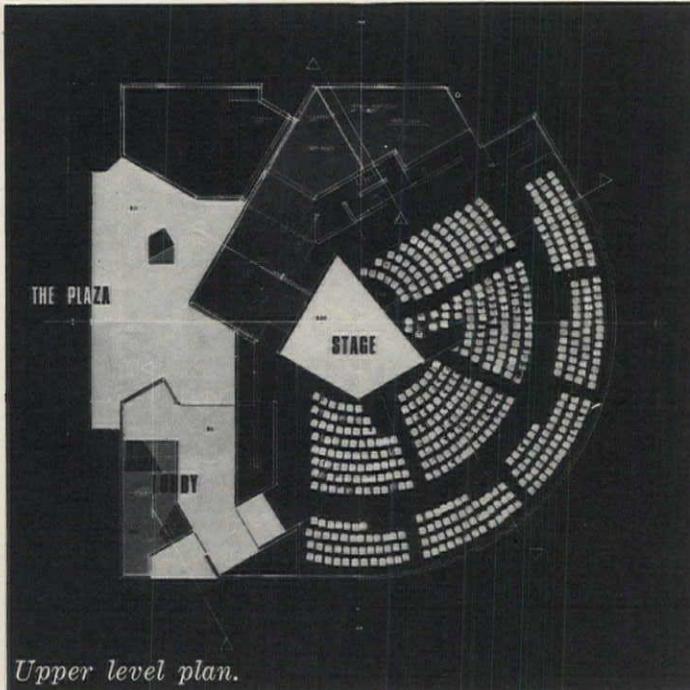
The theater will be seen as the exterior envelope of the auditorium and the stage facilities, wrapped in concrete block walls, and, on the plaza side where the angular shapes of lobby, shops, and backstage articulate themselves, sheathed with wide-angled stainless-steel roofs dipping low to the ground. The plaza will be alive with random patterns of airport runway lights, posters for



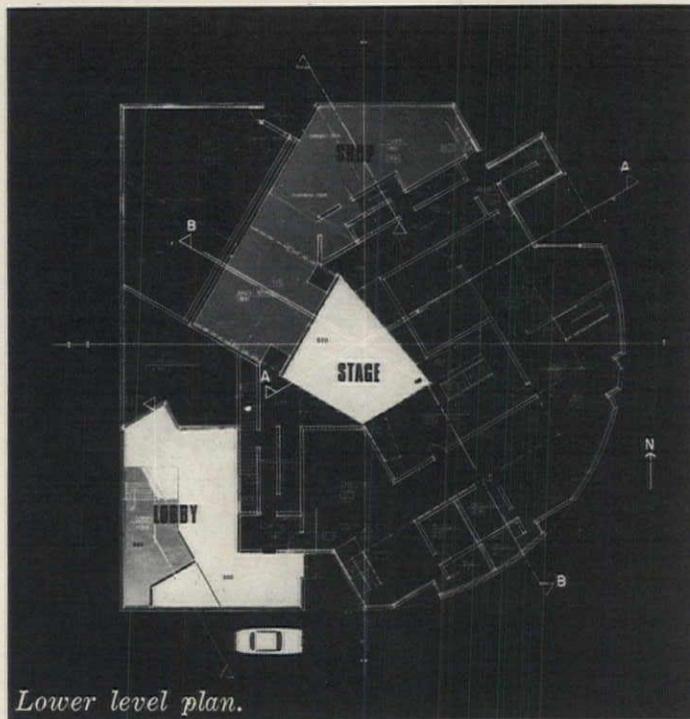
Section A.



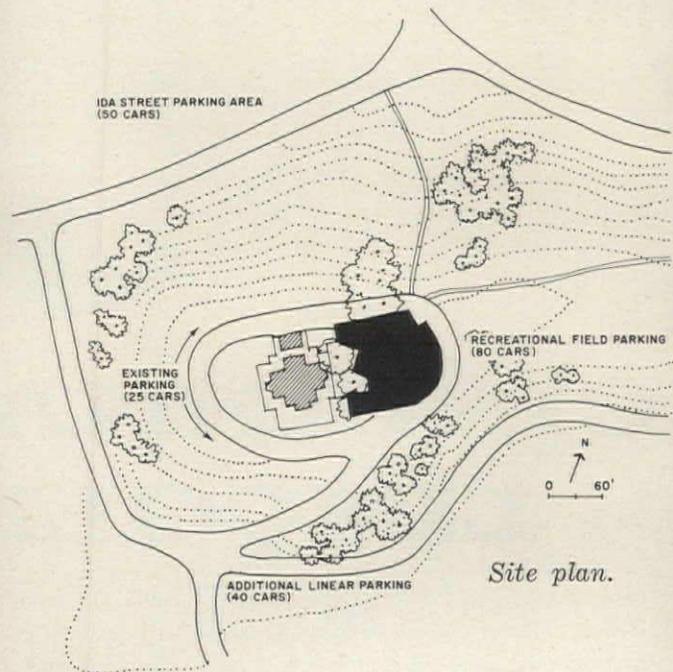
Section B.



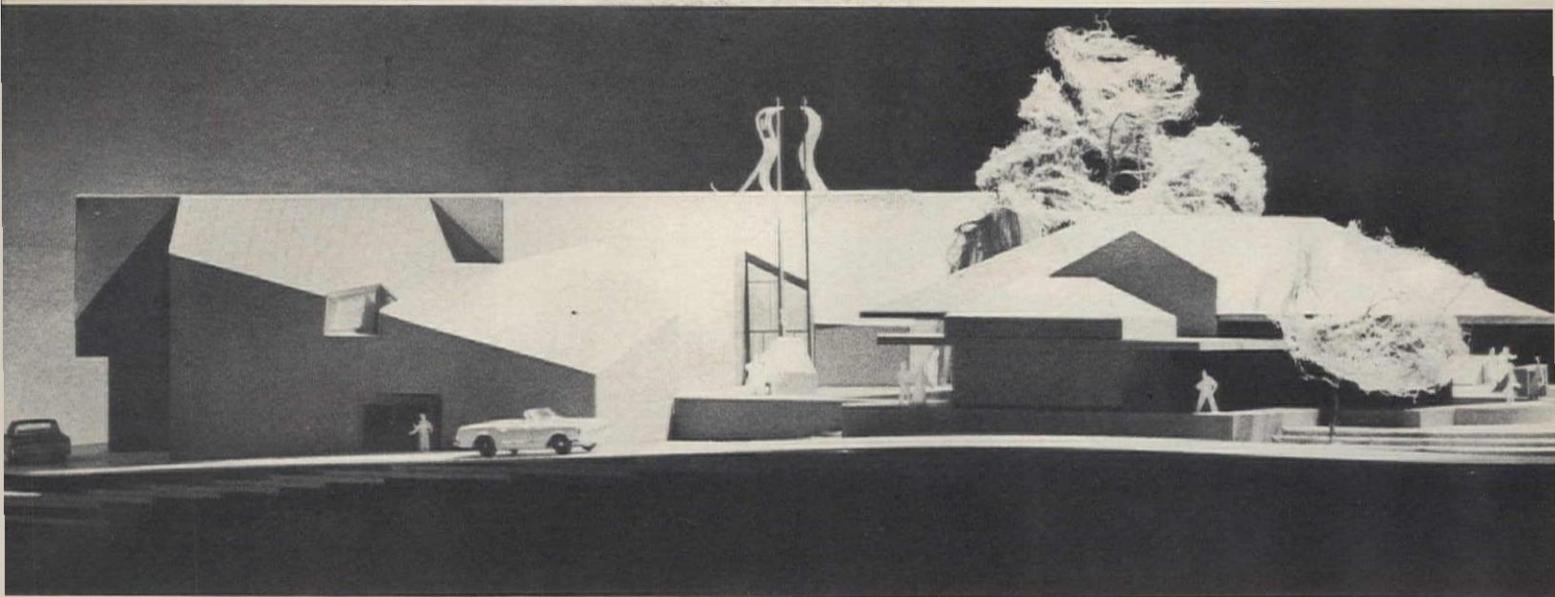
Upper level plan.



Lower level plan.



Site plan.



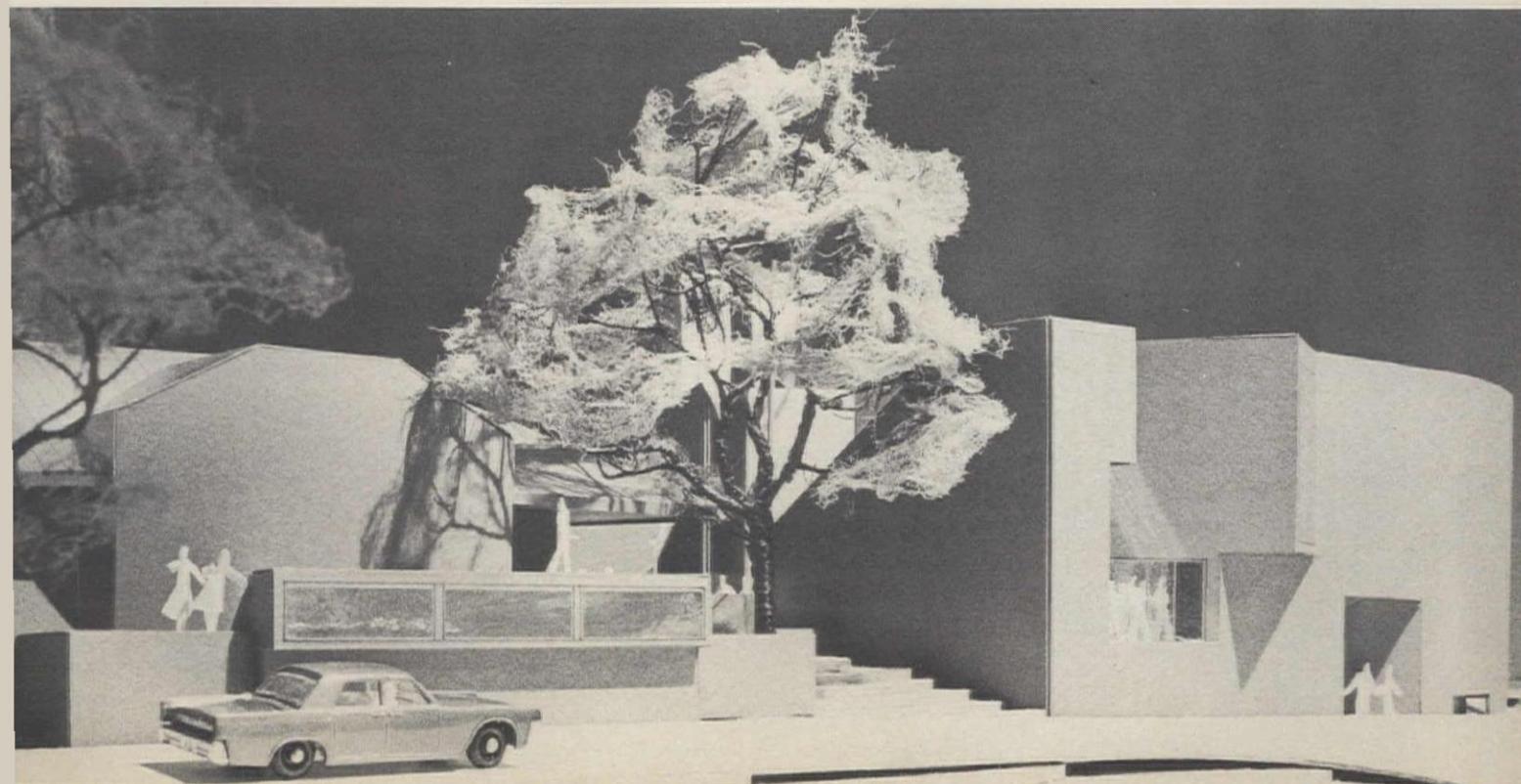
coming attractions, various outdoor performances, and the interplay between the shapes and volumes of the new theater and the old Victorian building already there.

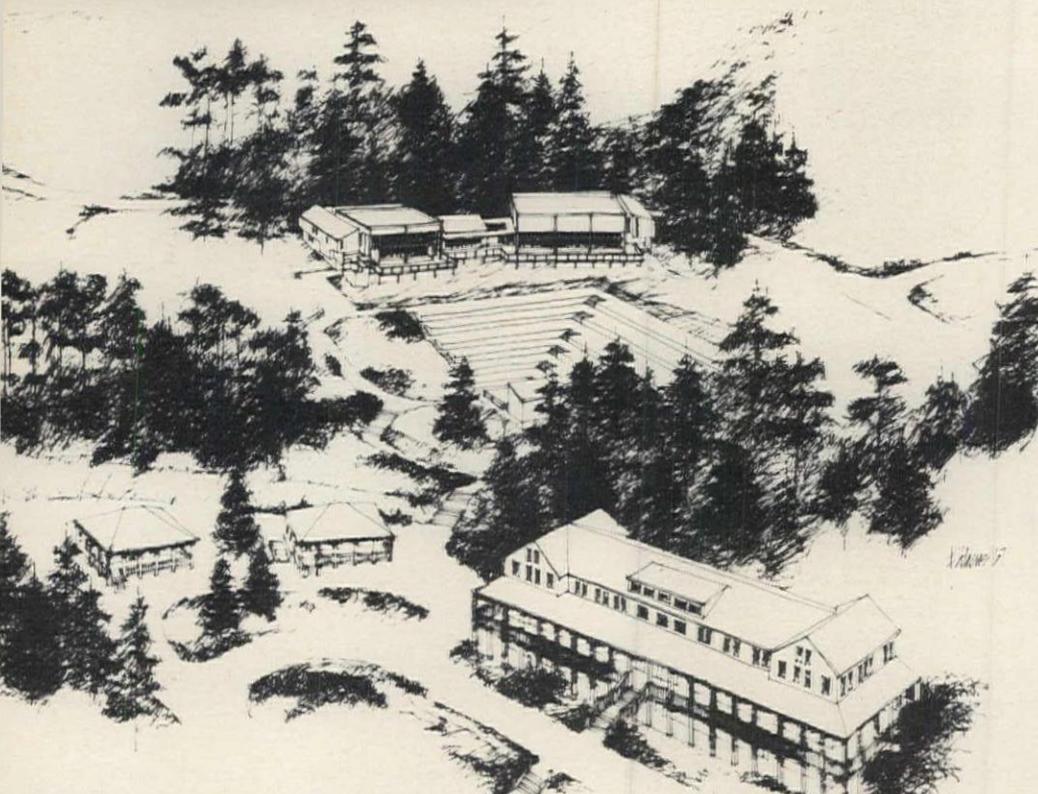
Inside, unnecessary spaces and materials have been kept to a minimum. The lobby will be a minimal vertical space off a stair (Hardy hopes to have a tile wall adorned with graffiti of donors in this area), and spectators will enter the auditorium at the main aisle, to ascend or descend to their seats. The architect says that "there will be no opportunity to 'ham it up' with the florid excesses of marble, gold, and crystal." Drama will come from the drama itself, and from the audience itself. The seating will embrace the thrust stage, with entrances and playing area for actors

occurring from below the audience, along the walls of the theater, and at the rear of the stage, where there will be a pivoting wall on a light structural frame that can support scenery, a neutral background, or disappear entirely. The ceiling will have its structure, lighting and mechanical equipment, and catwalks exposed.

Shops will be located on stage level, and dressing rooms and additional shops will be on the lower level (shops will also serve the smaller theater, which will continue to house various presentations). A loop road will be enlarged around the two-theater complex, and most parking will be along this road and the main park road, with additional parking for 80 cars in the sports field at the rear of the auditorium.

The seemingly eccentric exterior angles (which occur because there is an activity on the other side of the wall), the playful use of airport and industrial lights, the playing of the Victorian pavilion against the slanting flash of stainless steel, the unexpected happening such as a tiny intermission balcony or a quick view onto the main stair or into a scenery shop, will probably make the Playhouse in the Park an architectural showplace of Cincinnati as well as its drama repository. Economy helped the architect emphasize exciting spaces and amusing forms rather than depend on the candy-box cover-ups of Lincoln Center froufrou. An understanding and equally creative client did not hurt at all, either, we imagine. Any ham here is likely to occur on the stage or in picnic hampers.





Administration (Marconi Building), right; recreation-assembly building, center.

In the decade since it began with 10 people in an abandoned store, Synanon, the organization dedicated to the treatment of drug addiction, has grown from a local California group to a national "family" of more than 700 and a budget of about \$1 million. Emphasis, formerly on the survival of the group and its methods of treatment, has now shifted to the best means of carrying out the Synanon programs and of housing its people in a proper manner.

Across Tomales Bay from the Point Reyes National Seashore reserve just north of San Francisco are 62 acres of hills and gullies that slope spectacularly down to the bay. Here will be the new learning and teaching center of Synanon, master planned by the San Francisco firm of Kaplan & McLaughlin. Presently on the site are the "Marconi Buildings," erected in 1916 as part of an attempt to establish radio-telephone communication between Hawaii and the

mainland. These sturdy, reinforced concrete structures will be utilized as the administrative quarters of Synanon (presently, they are used as dormitories). The master plan will be implemented as funds permit. Eventually, there will be a community of 1000 inhabitants, and facilities for housing, recreation, education, industrial shops, and seminars. The main recreation center, by Kaplan & McLaughlin, is now under construction.

The recreation-assembly building (to be joined in the future by a gymnasium) is the first all-new construction ever undertaken by the Synanon Foundation, and consequently has a somewhat symbolic character. Though complete funds are not yet available for the whole building, construction nevertheless will proceed, with the basic space enclosures (using variations on the California SCSD system) to act as visible indications of Synanon's confidence in the future and to secure aid in the form of donations, building materials, and volunteers to work with Synanon's own crews in the erection of the building. Since education and community dialogues are the bases on which the group's philosophy is founded, the building — and the master plan as a whole — reflect the ideal of what Synanon's leaders call "communiversity," or a constantly teaching and learning, interdependent group of people living together under similar aims and circumstances. Provision will be made in the recreation building for meetings of groups ranging from 30 to 250 people, both from within the community and from the surrounding Bay Area (a schedule of visiting teachers, artists, performers, and seminarists is part of the program).



Master site plan: (1) administration (Marconi Building); (2) acoustical center; (3) staff housing; (4) information center; (5) recreational-assembly center; (6) gymnasium-theater; (7) outdoor theater; (8) residential units; (9) convention and visitor housing; (10) children's center; (11) seminar-classrooms; (12) library; (13) maintenance shops, gas pumps, auto repair; (14) parking; (15) athletic fields; (16) sewage disposal; (17) cistern; (18) well; (19) greenhouse; (20) barn; (21) horse pasture.

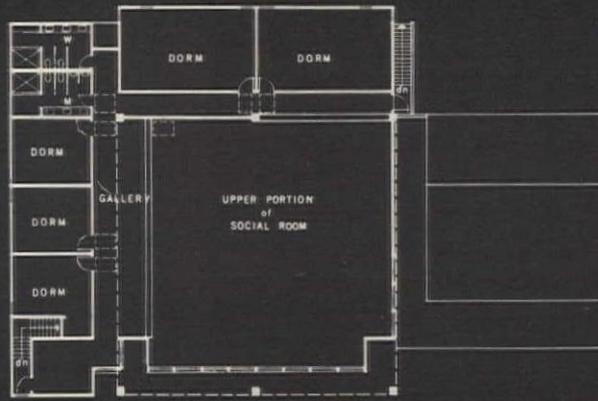
In the future, housing clusters will be erected to accommodate new arrivals in their first two years at Synanon, employees who have been with the community from two to seven years, and for the administrative staff. In addition, the plan provides housing for the children of Synanon members. Each housing unit is designed to accommodate a minimum of 36 single and 24 married or a maximum of 64 single and 13 married members.

There will be limited vehicular access to the site, controlled by a gate house at the entrance. The architects have kept all parking strictly controlled, and residents and visitors will proceed on foot almost everywhere on the rolling site. The cluster nature of the plan also is intended to conserve the natural forms and growths of the terrain, which the architects describe as "one of the great meeting places of land and water in northern California."

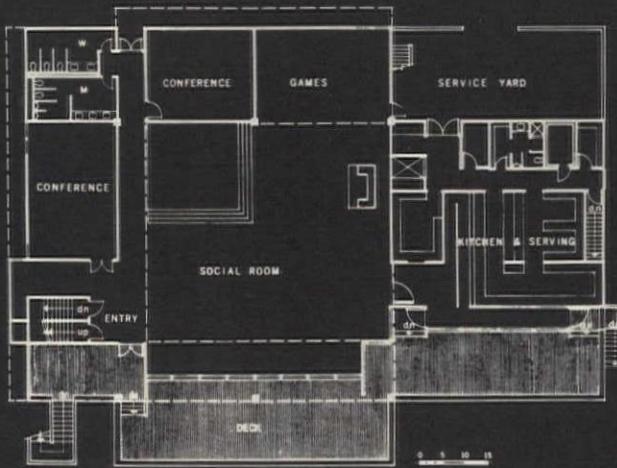
In addition to creating the master plan and designs, the architects have assisted the community in setting up its own field office for construction at Tomales Bay. In charge is Ron Silva, Synanon's Director of Buildings and Facilities and himself an ex-addict. His participation and interest in the planning and construction have been so intense and rewarding that Kaplan & McLaughlin are attempting to establish him as a trainee in their office, using State Vocational Training funds. So, even before it is a reality, Synanon at Tomales Bay has opened career possibilities for one of its members.

It has been the fate of Synanon to be ostracized and militated against by some of the communities in which it has sought to establish quarters. The auguries for the Tomales Bay community and its growth seem very good right now, given increased funds in the future. And the architects have seized the opportunity presented by a splendid natural site to work it into the inspirational nature of Synanon's curative processes.

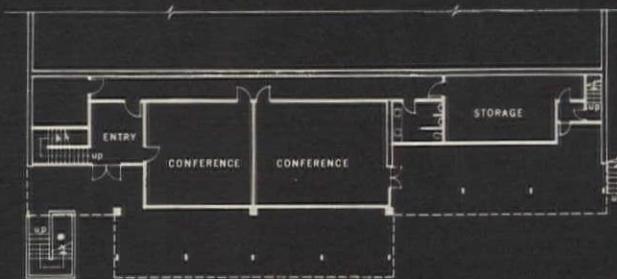
Consultants were Douglas Baylie, landscape architect; Rutherford & Chekene, structural engineers; Yanow & Bauer, mechanical consultants.



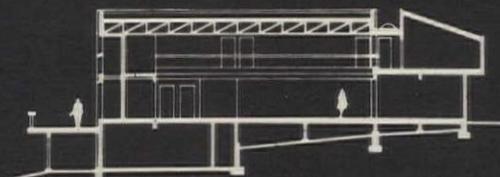
Second floor.



First floor.



Ground floor.



Recreation-assembly building: Section.

"The Kelly & Gruzen design was the one entry in the competition that showed the greatest respect for the landscape of Central Park," said Mayor John V. Lindsay. "It is great community architecture," he added.

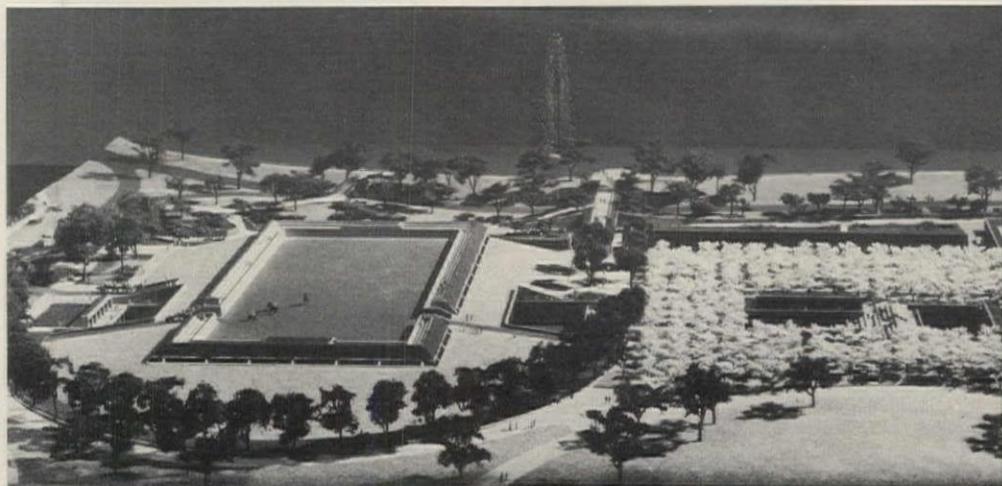
"This establishment, if built, will constitute the largest single invasion of the park in its history: seven acres of thinly disguised building will involve 370 horses . . . well over 600 people, not counting riders and spectators, on a site as big as that of Penn Station," commented Richard Edes Harrison, chairman of Save Central Park Committee.

The expected controversy concerning the competition proposing a combined police precinct headquarters and police-public stable complex in Central Park (p. 64, MARCH 1967 P/A) was not long in materializing. Noted cartographer Harrison, perhaps suffering from an occupational preoccupation with only two dimensions, labeled the winning design by Kelly & Gruzen a "Lincoln Center for Horses," and the suggestion was bandied about that richnik polo players were getting public parkland to play their degenerate aristocratic game. The then-Parks Commissioner Thomas P.F. Hoving rallied to the design's defense, having already called it "the most important architectural happening since Olmsted and Vaux won the competition to design Central Park a hundred years ago." Harrison scored publicly with the polo accusation, for the city nervously began to see what could be done about getting a perfectly legitimate (and probably valuable) open-air public riding ring under cover where, presumably, people would not care what kind of equine high jinks take place.

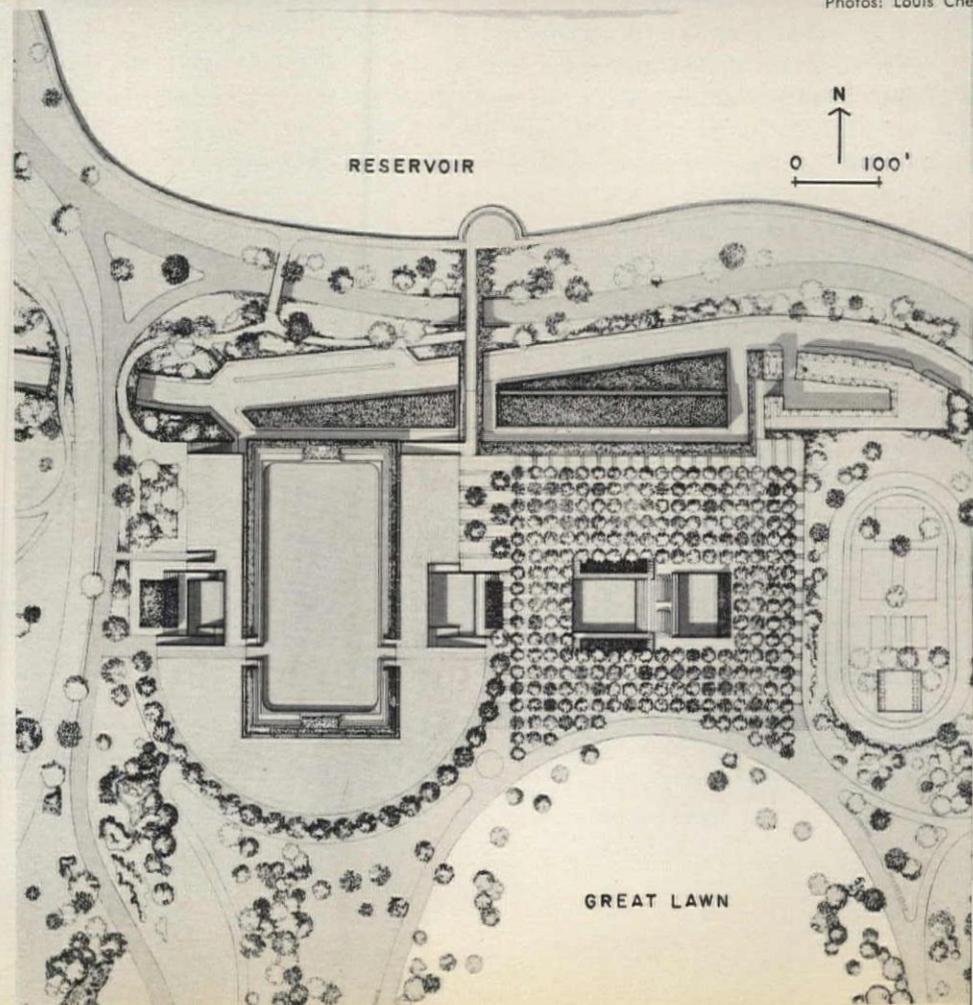
The whole brouhaha, which is not over at this writing by any means, had the effect of giving a malodorous tinge to a very good attempt on the part of the city administration (and the competition sponsor, Urban America, Inc.) to try to get some superior architecture for the voters for a change. For years, Central Park has been the goal, often successful, of persons wishing to donate sidewalk cafés, swimming pools, skating

rinks, kiddy zoos, statues, musical clocks, playgrounds, and any number of projects to be named for themselves or for various decedent relatives. The design quality of these creations has ranged from mediocre on down — way down. Hopefully, the city will not knuckle under to conservationists of the Harrison stripe who cannot distinguish a creative and sympathetic design for the park from the WPA-Disneyland kind of things that passed for improvements just a matter of months ago. For the station-stable competition has had the healthful effect not only of resulting in a fortunate winning design, but also of getting four other

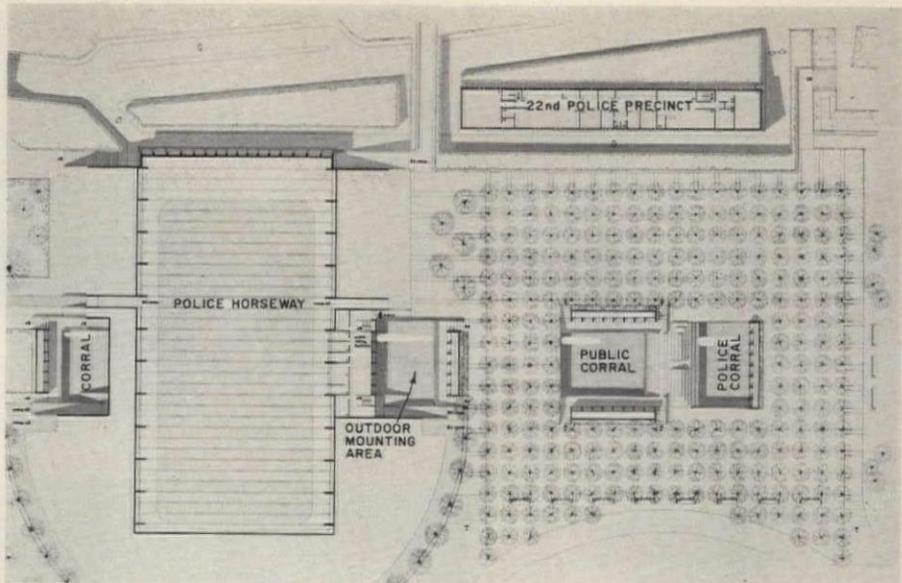
noted local firms directly active in submitting designs for "city work." In addition to Kelly & Gruzen, second-place winner Whittelsey, Conklin & Rossant, third-place winner Philip Johnson & Associates, and non-winners Edward Larrabee Barnes and Marcel Breuer all worked long and hard to design rather elaborate competition entries. It is not often that you see people like Barnes and Breuer finishing out of the money, and it is a good thing for a city to feel rich enough in that kind of talent to have it to turn down. For years, New York has been turning down its top talent simply by ignoring it. This is a giant step.



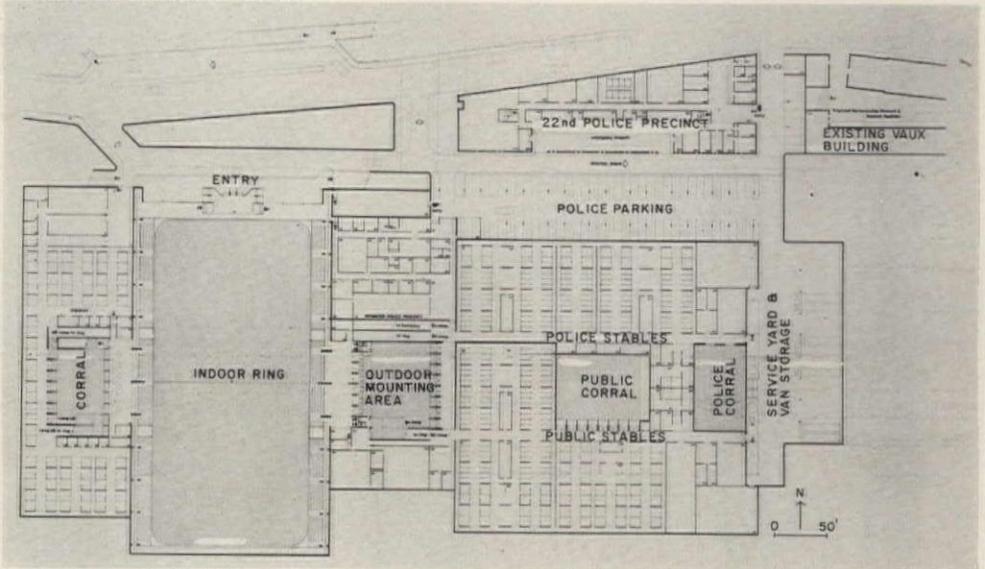
Photos: Louis Che



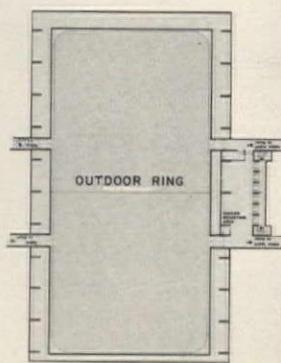
The Kelly & Gruzen design all but buries the entire complex under orchards of crabapple trees, mounds of wild roses, and banks of grassy slopes. The controversial outdoor riding ring (which is ingeniously placed over an interior ring) would not be visible except as an earth form covered with grass and wild roses. The crabapple orchard would occur atop stables for police and public horses, punctuated with three outdoor corrals open to the spectator above. Police Precinct 22 would be housed in a linear building along the existing 86th Street Transverse, clad in the granite of the present transverse walls and, like them, topped with grass and shrubs. Strollers could walk from Olmsted's Great Lawn at the south through the new landscape created by the stable complex, and across a new pedestrian bridge over the transverse to a look-out platform in the existing reservoir (Kelly & Gruzen have also proposed a *jet d'eau à la Lac Léman* here). The jury thought this design showed "considerable sensitivity and respect for Olmsted's park, and has done as little as possible to intrude upon it." As for the famous "polo" ring, the jury stated: "The use of the roof area over the enclosed ring so as to create a second (outdoor) ring that might provide additional recreation facilities of many different kinds was considered an ingenious solution." This was also the only entrant P/A has seen that proposed a use for Calvert Vaux's adjacent transverse buildings — as a hippic museum.



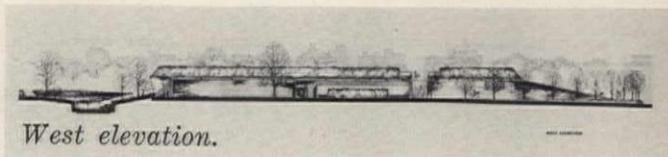
Plan at orchard level.



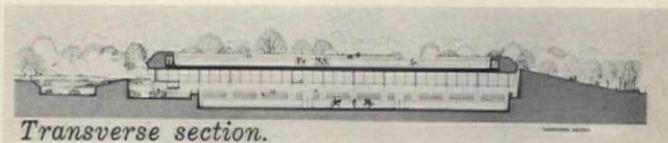
Plan at stable level.



Ring level.



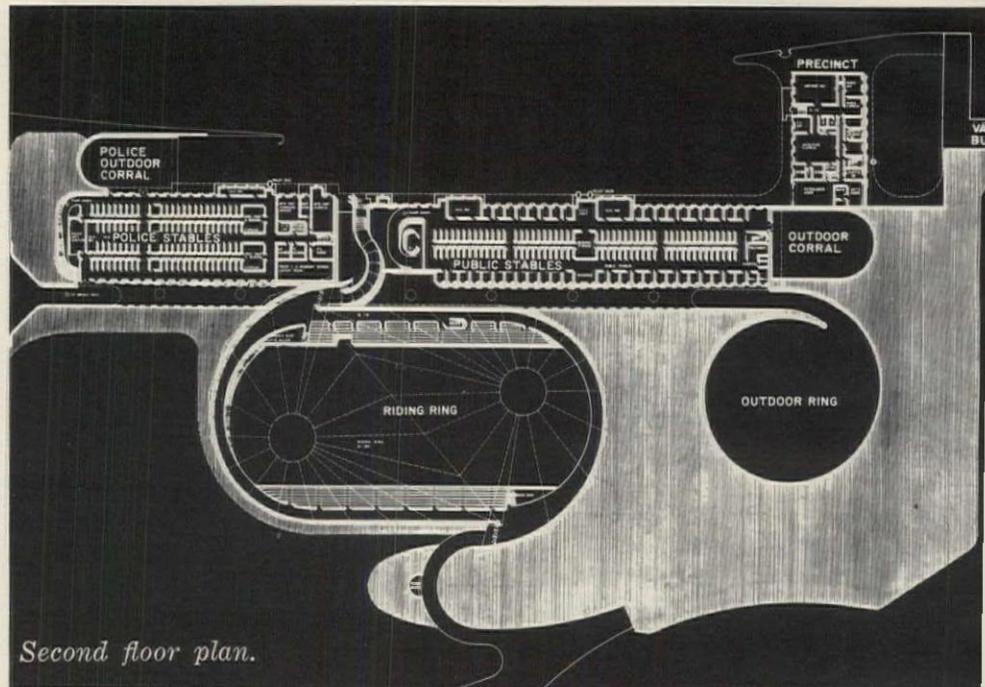
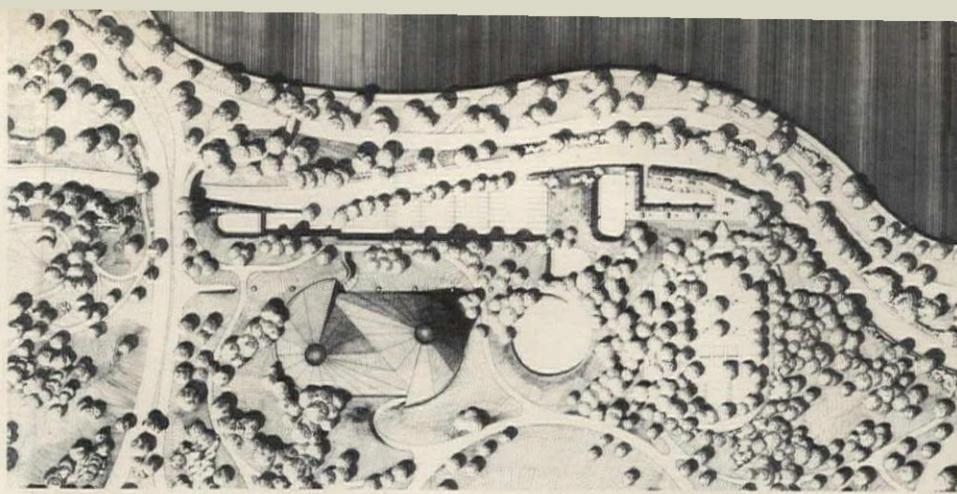
West elevation.



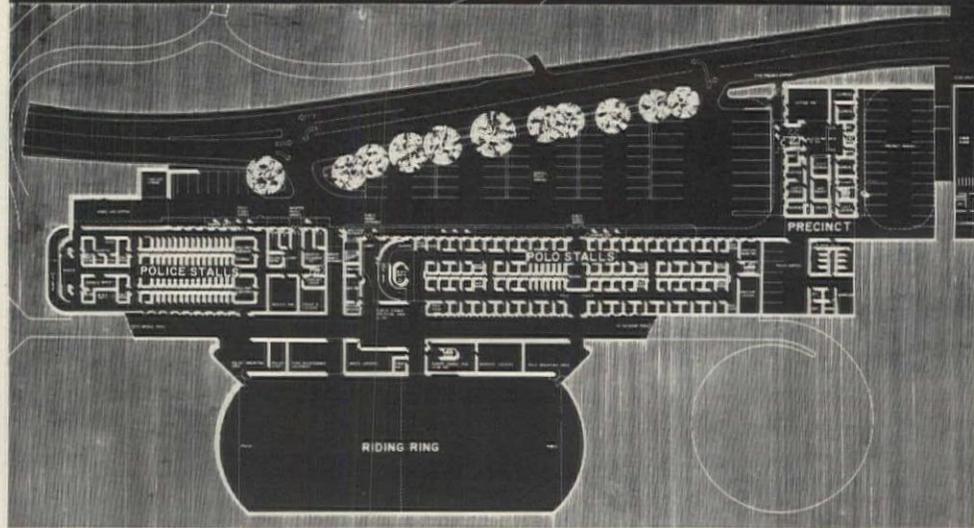
Transverse section.



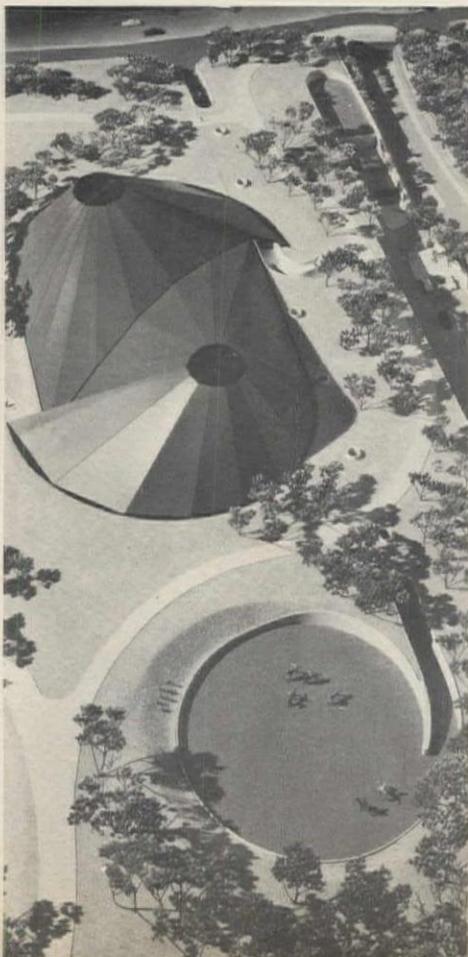
Had the design by Whittlesey, Conklin & Rossant won first prize (one juror *did* vote it number one), the chairman of Save Central Park Committee probably would have really hit the fan. The second-prize winner places virtually all the "architecture" on the 86th Street Transverse traffic level, except for high, paired cones of slate that would roof the police and public riding rings. The rest of the site is treated in curvilinear land forms that surround a large outdoor ring and two smaller corrals. The jury found this plan very sympathetic to Olmsted's geometry, and approved the form of the building "suggesting, as it does, a slate-covered outcropping of rock formations." Although the jury felt that this indicated an understanding of the park's topography, it found the double-cone structure "quite arbitrary and unrelated to what it housed." Objection was also made to the building façade on the transverse as too busy and suggestive of "an absurd emphasis on monumental food storage facilities," and failure to relate to the reservoir was mentioned.



Second floor plan.

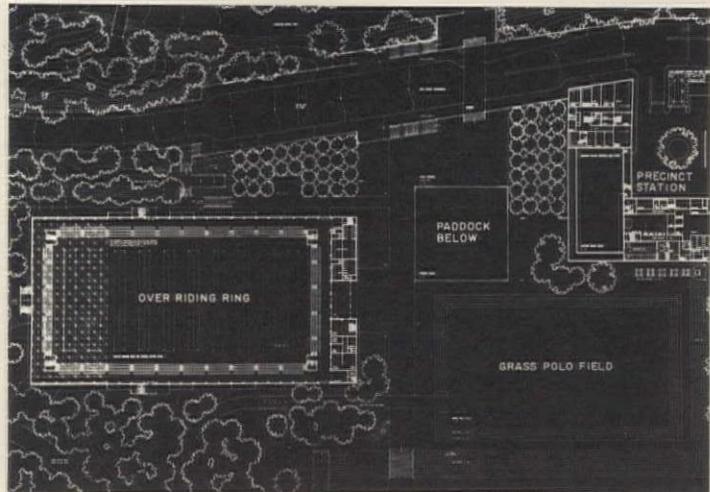


First floor plan.

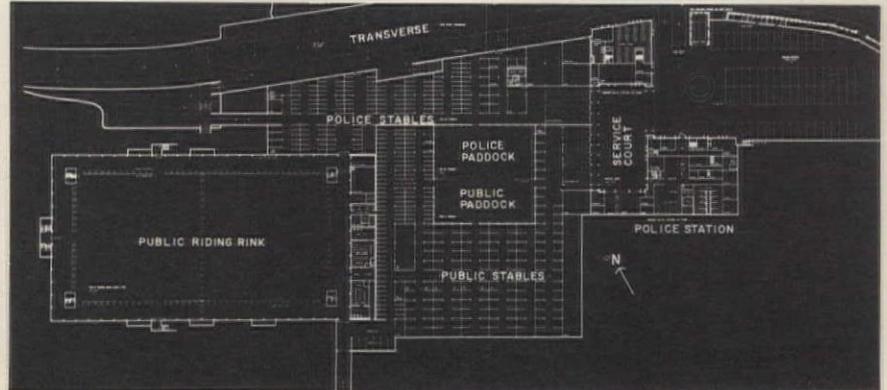


A formal pedestrian way from the Great Lawn over terraces placed atop the stables and across a bridge to the reservoir characterized Philip Johnson's third-prize winner. The jury noted that this aspect and the placement of some of the facilities below grade showed that the architect was sympathetic to Olmsted's park. This scheme also features pedestrian viewing of horsemanship by providing open-air paddock and polo field (Johnson actually called his a polo field on his drawings). The station, riding ring, and other structures were to be clad in bush-hammered brick, and the jury objected to the ring structure as "a massive brick barn that would severely intrude upon Olmsted's park." Johnson's entry stated that "the façades, mansards, and dormers, all that is valuable of the Vaux buildings, are preserved in our design." The jury saw this as a "proposal to retain the Vaux buildings as a sort of 'stabilized ruin'" (which is the same thing Johnson proposed for the Ellis Island buildings), and found this "a slightly ludicrous way of preserving a historic landmark." The formal geometry of the Johnson plan was felt to be too rigid to relate well to the original plan of Central Park.

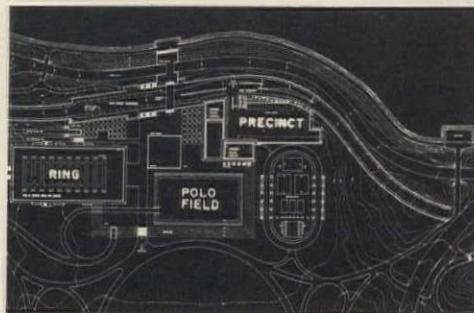
The entries of Barnes and Breuer, which are not shown here because the architects took them back from the Parks Department following the judging and asked that they not be released to publications, both merited praise for various aspects of their plans, but were felt by the jury to represent unsympathetic treatments in relationship to the park.



Plan at park level.



Plan at transverse level.

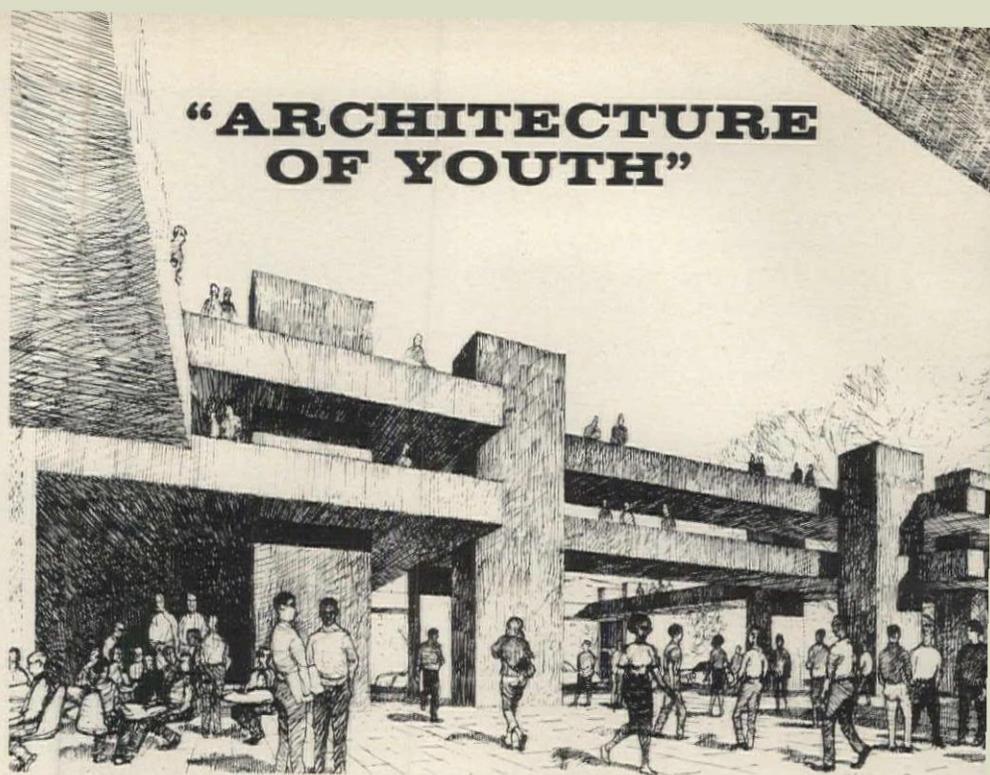


Mayor Lindsay said the first-prize winner "provides for a modern police precinct and a police and public riding facility that has the happy virtue of being inconspicuous and understated. The architects repressed any desire to make an individualistic and jarring splash in favor of adhering to the principles of park design laid down by Olmsted and Vaux." Even more refreshing than having five such notable firms participate in a design competition for a police station-stable complex is the experience of hearing an elective official talk with such architectural savvy. Maybe we can really go somewhere from here. — JTB



A block-long site between the Brooklyn campus of Long Island University and Fort Green Housing Project, a typically depressing public housing group, might bloom into an extroverted, raw concrete youth center if designs by young New York architect Myron Goldfinger can be passed through the Stygian mazes of municipal bureaucracy, needs of local residents, and requirements of the university community.

The Myrtle Avenue Youth Center will be in three basic units: an arts and crafts center; a "communications center," including experimental theater, film studios, library, audio-visual rooms, and radio-TV labs; and an athletic center consisting of community gymnasium, indoor track, rooftop swimming pool, and related indoor and outdoor sports facilities. Between the sports and communications elements will be an open square called Meeting House Commons, which will act as a "gate" between the university and the community. From this plaza, bridges will

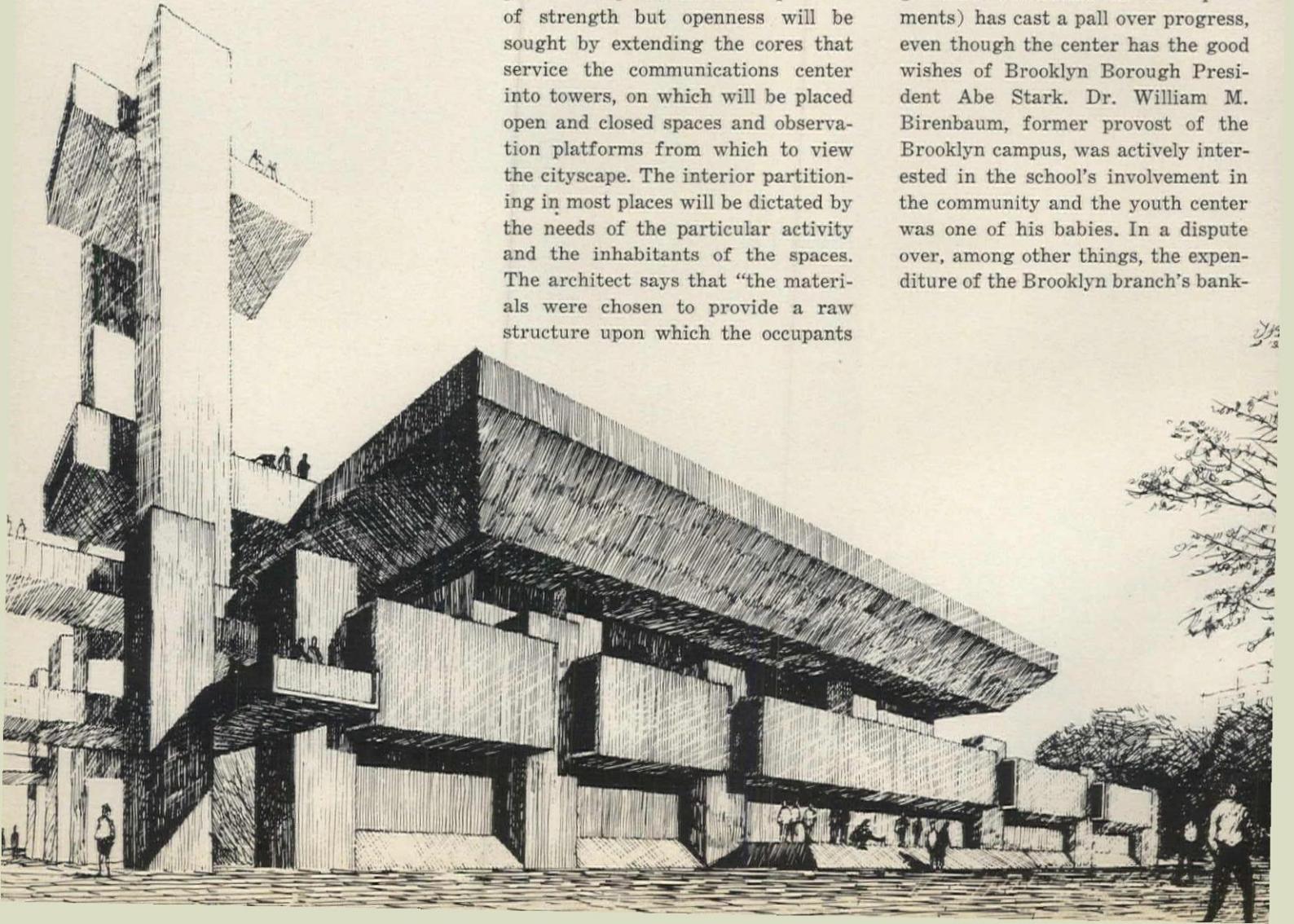


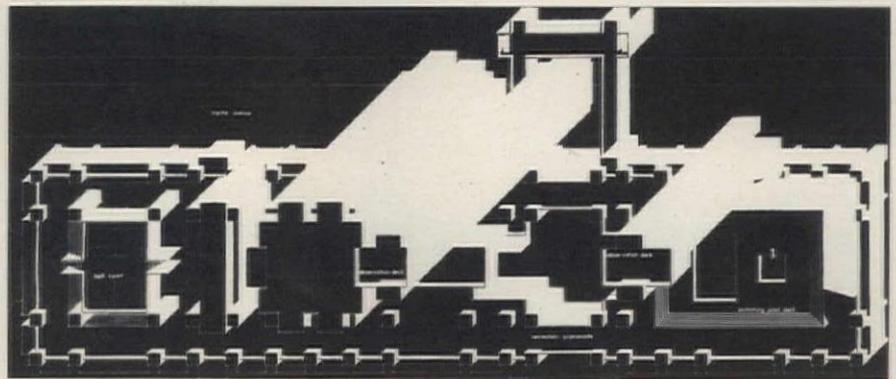
cross Myrtle Avenue to connect with the housing project.

The exposed, reinforced, cast-in-place and precast concrete structure of the youth center will make a muscular demand for attention in the neighborhood. Goldfinger says he is trying for the effect of "an unfinished, experimental architecture of youth" to symbolize the center's purpose and aspirations. An impression of strength but openness will be sought by extending the cores that service the communications center into towers, on which will be placed open and closed spaces and observation platforms from which to view the cityscape. The interior partitioning in most places will be dictated by the needs of the particular activity and the inhabitants of the spaces. The architect says that "the materials were chosen to provide a raw structure upon which the occupants

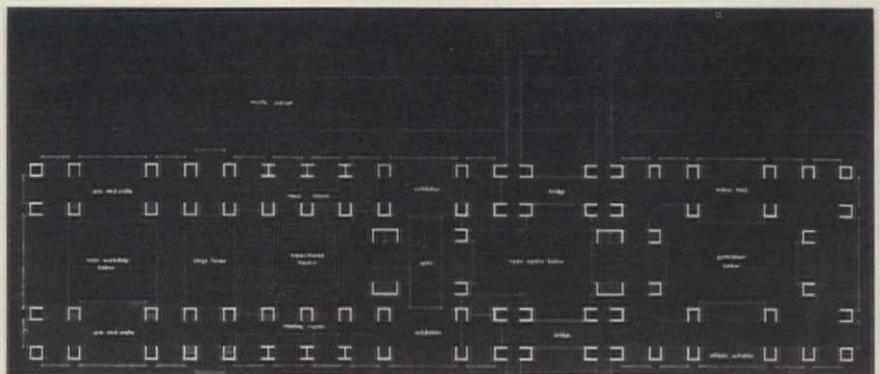
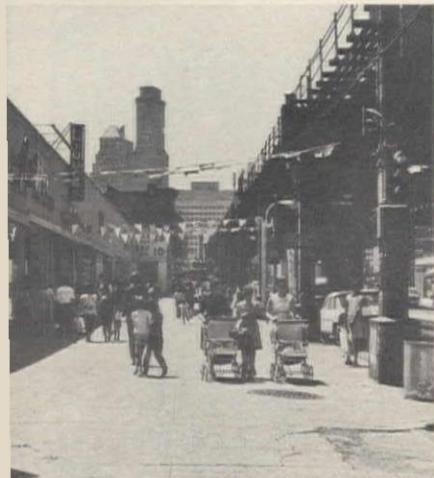
would leave their imprint," and observers of graffitied public surfaces in New York can be assured that such ornamentation will not be long in appearing, both from the young community and the university contingent.

Unfortunately, the involvement of the university in the project (both faculty and students would be used as guidance counselors in all departments) has cast a pall over progress, even though the center has the good wishes of Brooklyn Borough President Abe Stark. Dr. William M. Birenbaum, former provost of the Brooklyn campus, was actively interested in the school's involvement in the community and the youth center was one of his babies. In a dispute over, among other things, the expenditure of the Brooklyn branch's bank-



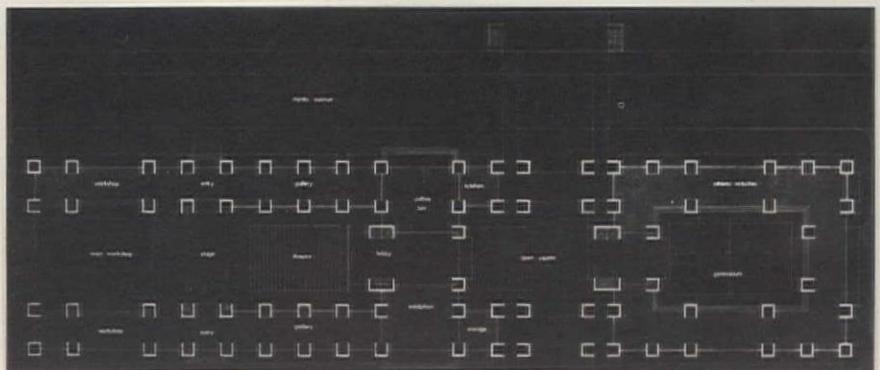


Roof plan.

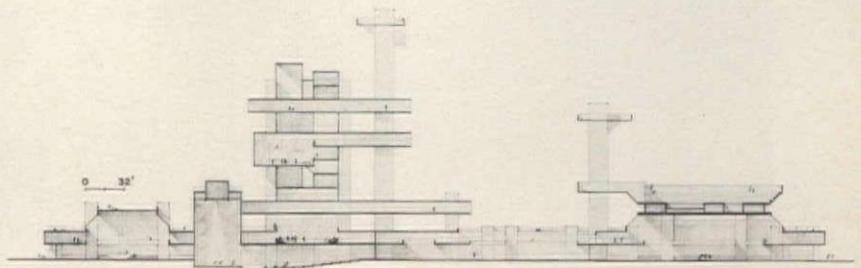


Second floor plan.

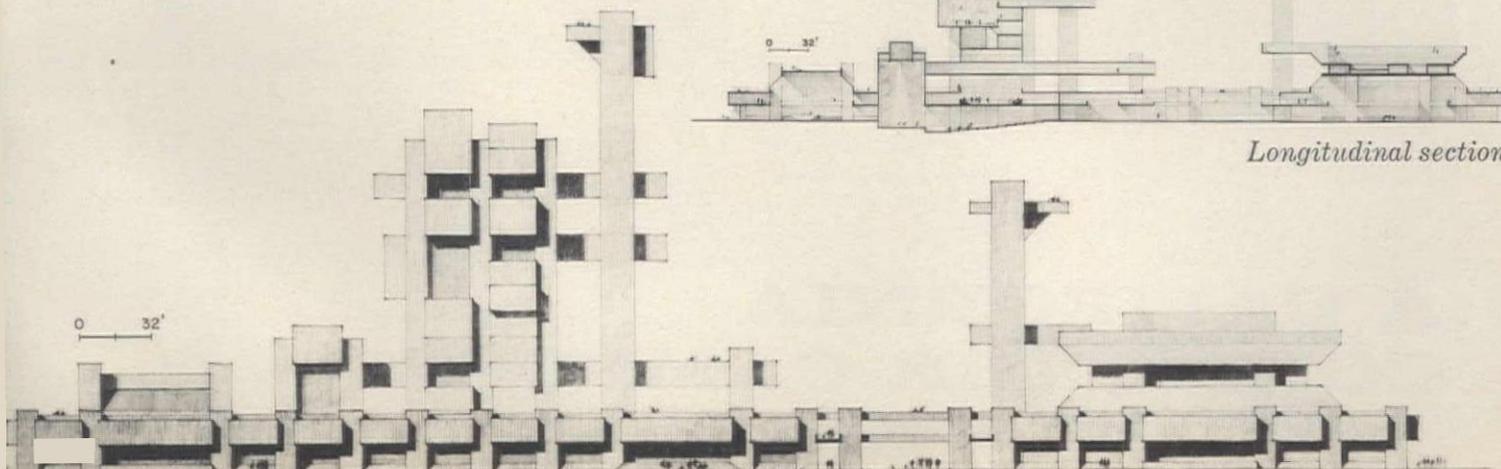
roll on other areas of Long Island University, Chancellor R. Gordon Hoxie forced Birenbaum to resign. Majority faculty and student opinion (evidenced last month by class strikes) is behind Birenbaum, but at this writing Hoxie is obdurate even to the mediating influence of the board of trustees under chairman William Zeckendorf, Sr. Meanwhile, the neighborhood youth suffer from lack of a guidance center and the social potential of the faculty and student body of the Brooklyn campus goes to waste. Evidently Hoxie has no moxie.



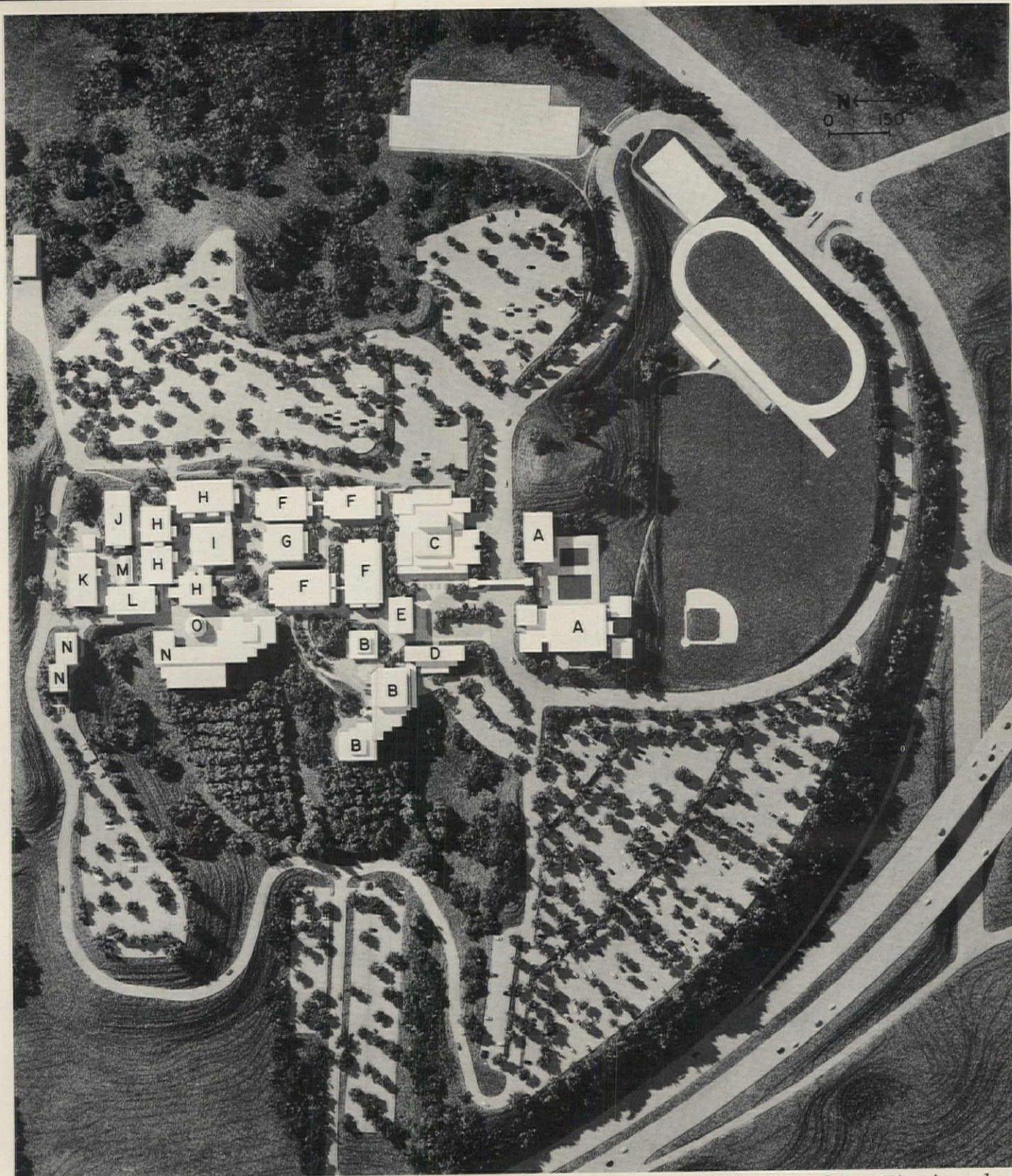
First floor plan.



Longitudinal section.



Elevation.



Ultimate Phase Plan: (A) gymnasium; (B) campus center; (C) performing arts; (D) fine arts; (E) administration; (F) academic classrooms; (G) forums;

(H) science labs; (I) science lecture; (J) technical; (K) automotive engineering; (L) engineering; (M) greenhouse; (N) vocational; (O) planetarium.

A CALIFORNIA COMMUTER CAMPUS....

The College of San Mateo, which got under way with the central campus by John Carl Warnecke & Associates a few years ago (pp. 190-195, APRIL 1965 P/A), is moving into gear with release of plans for Cañada College, the South Campus of the junior college system, which will eventually add another one or two campuses.

Cañada College has been planned and designed by Chan-Rader & Associates in a joint venture with Welton Becket & Associates. Both Morton Rader and Lun Chan were involved with the initial project and master planning of San Mateo, and were logical choices as the architects of the South Campus. It is pleasing to report that the architecture indicated in the new designs has taken on a decidedly more substantial attitude toward masculine structure and gutsy outdoor space relationships than the tony, Stoney h-p arches, arcades, and patios of the central campus.

The new college will occupy 131 acres of wooded slopes near a rural, residential community 30 miles south of San Francisco. First phase plans for 1968 will provide for 2000 students, to increase to a student body of 8000 in the second phase. The completed campus of 21 buildings will leave about 35 per cent of the site in a state of nature. Most of the mature trees on the site will be preserved, and 700 olive trees from former



Painting court.

groves have been moved to new locations. The major campus buildings will be on sites cut in terraces from the land, which at points has slopes of 30 per cent or more. Ground level changes within the college will be utilized for a sense of changing relationships by use of courts, ramps, bridges, stairs, and covered walkways. A series of nodal courts are being developed with landscape architect Douglas Baylis to give a sequence of emphasized exterior spaces to the plan. They will be located at the entrance, where performing arts, gymnasias, student buildings, fine arts, and administra-

tion buildings occur to form a rather public space, and at the more cloistered areas focusing on the academic center, the science complex, and the vocational group. Ground surfaces not devoted to planting will be covered in warm-tinted asphalt, with additional use of brick and exposed aggregate concrete at entrances and plazas.

Probably the most interesting building on campus will be the student center. Prevented by existing oak groves from bringing grading equipment to this section of the site, the architects designed the center as a series of three pavilions stepping down the slope and connected by a core structure housing mutual services. The interweaving of spaces and levels seems at its most creative here, and it is too bad that the whole campus, interesting as its sequence of outdoor experiences promises to be, was not (for obvious economic reasons) realized in this manner.

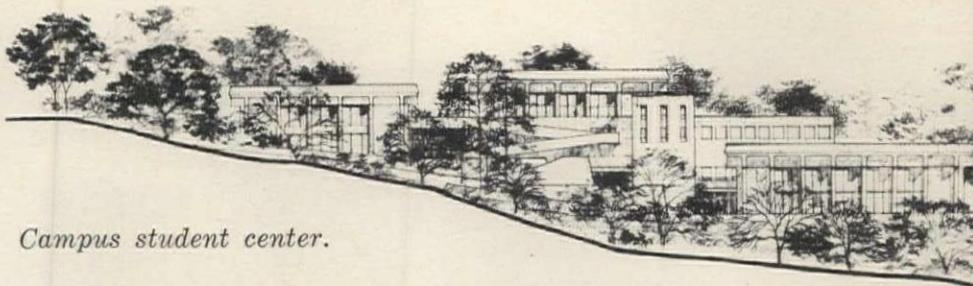
Similarly, it is easy to deplore the dedication of the crown of the hill site to parking, as well as a large parking lot on the way to the campus entrance and a couple of other, smaller on-grade parking areas, but Morton Rader says that siting and land-forming considerations made it unfeasible to have the parking elsewhere. Since this is a commuter campus, provision for many cars close to the center had to be made, and the



Views from swimming deck.

architects and landscape architect have made the best of it, preserving vistas into a natural grove at the lower portion of the site, to athletic fields to the east, hillsides to the west, and, hopefully, generously treed parking areas where they occur.

Buildings will be exposed board-formed reinforced concrete. Columns will support beams formed in a "squared arch" motif beneath overhanging roofs featuring copper-covered parapets. Typical classroom buildings will have double-loaded central corridors on the first floor and exterior balcony access to classrooms on the second floor. This leads to what looks like a curvy design conceit — in these stages, at least — that provides a very dim recall of the cosmetics of the earlier San Mateo campus. We hope that the aggressiveness of the concrete construction, the varied spatial treatments and levels of the campus, and the different architectural treatment of buildings like the student center and the gymnasium, will make this a trivial complaint. At any rate, Dr. Julio Bor-tolazzo, president of the College of



Campus student center.



San Mateo, reports that the citizens of the area are "eminently pleased with the plans for the college and are preparing to welcome the new facilities as a real asset to the community." With the sympathetic care

taken to get all this activity as unobtrusively as possible onto a prime natural site and housed in naturally-hued, largely undecorated structures, the townspeople have reason for their confidence.

... AND A COMPACT CHURCH COLLEGE

Six-hundred-thirty miles north of the Cañada College site, Columbia Christian College is planning to move out of its present run-down buildings in Portland, Oregon, and build a new campus by Portland architects Wolff-Zimmer-Gunsul-Frasca on a 300-acre site of hills, woods, meadows, and splendid views outside the city limits. The architects not only have designed a close-knit college complex that will grow from 300 students in phase one to 2000 at some so-far-unknown future date; they have also "zoned" the rest of the site best to contain future development of single-family and multifamily housing, a church site, a site for an academy for pre-college schooling, athletic fields, and future commercial facilities. Generous open reserve land for the college remained after these needs were plotted.

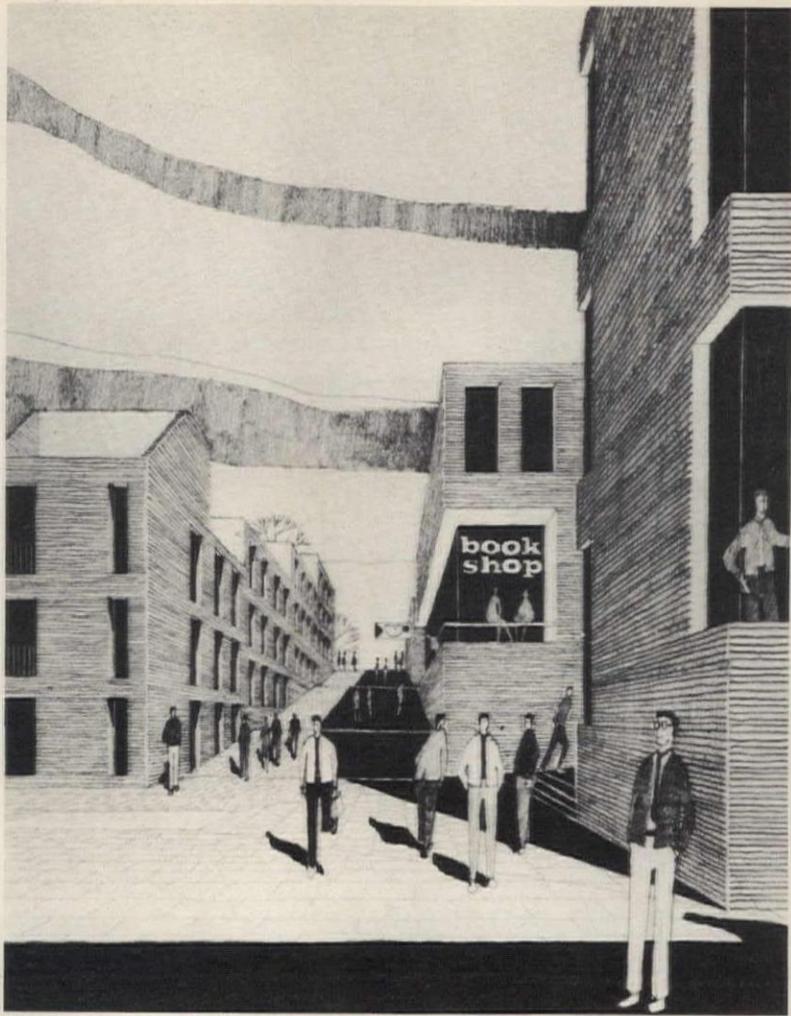
The campus itself will find all academic and commons areas arranged

on a pedestrian street system around clusters of three-story student housing. A chapel will be at the southwest corner of the campus, and parking on a lower level below the hilltop college group. The pedestrian streets enlarge into open areas at points between gyms and student center, academic buildings and dormitories, and, for a "main quadrangle," next to the administration wing (actually a square with nothing but a good view on one end, relating the site to the urban feel of the compact plan).

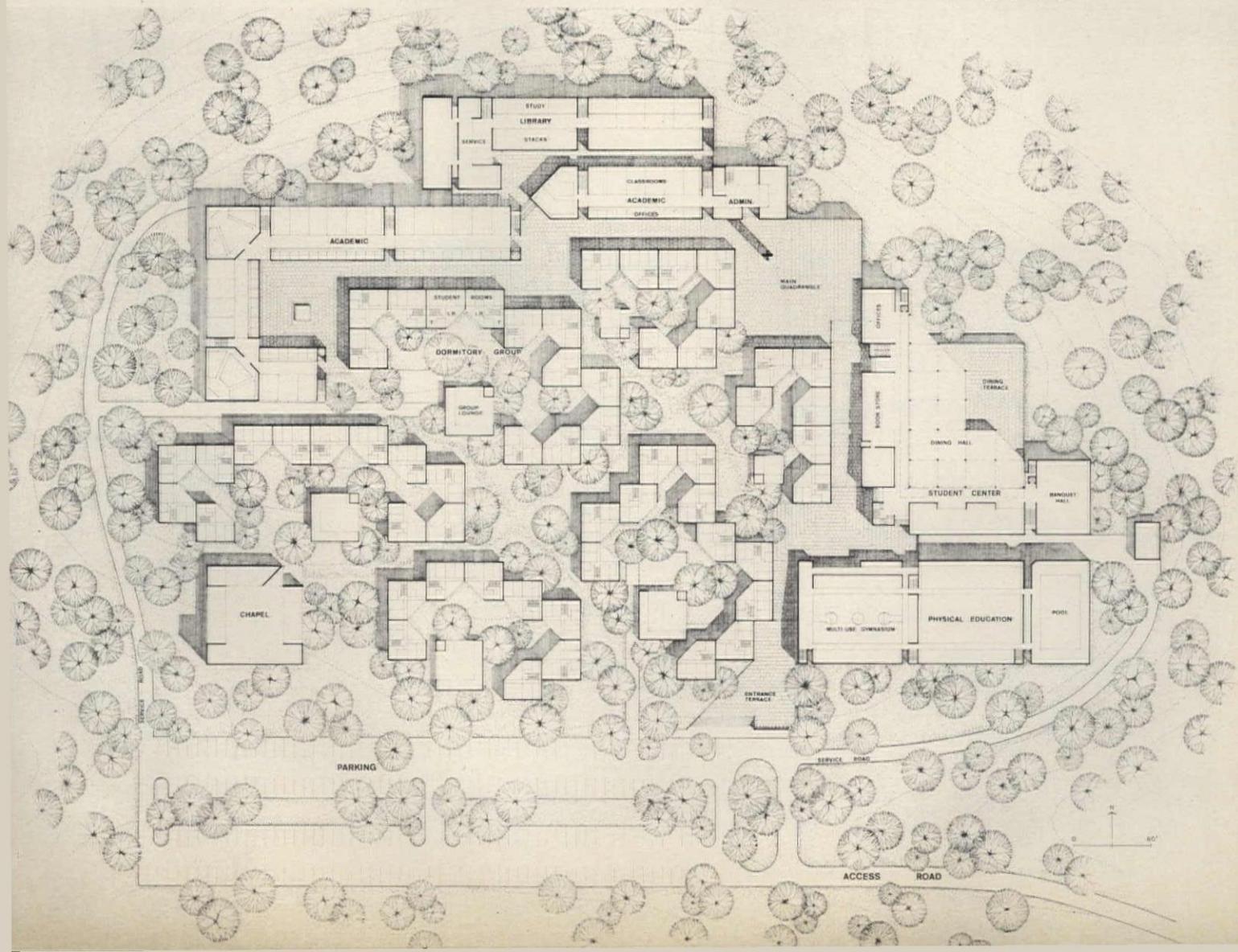
In plan, the campus is a sensitively arranged system of squares and rectangles interrupted or lopped off at angles in some places where diagonal housing elements join or the dining hall opens out onto a viewing terrace or a large lecture hall is placed in with more regulation-shaped classrooms. This manipulation of the angle is seen again in

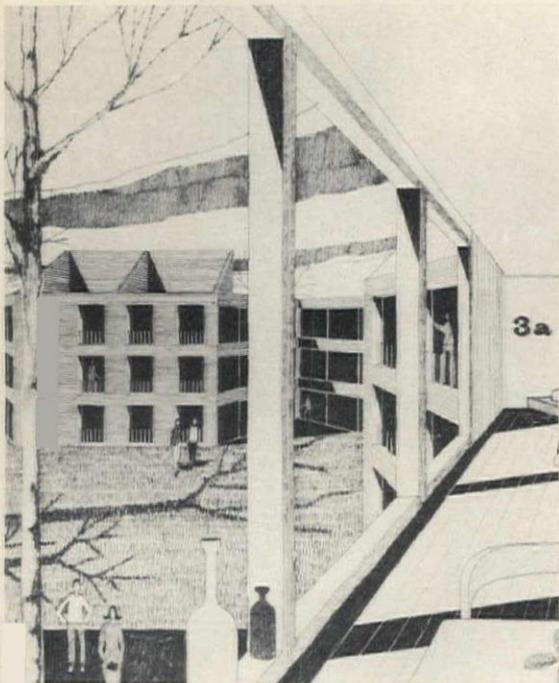
elevation, where windows are cut out of the corners of the student center or little triangular living rooms occur at every floor of the dorms, or — a very good touch — diagonally-cut walls on the dorm roofs act as wind screens or heat traps for sunbathing.

Beside the more formal act of walking through the paved open spaces along the pedestrian streets, there will also be the possibility of wandering up to the academic buildings through the woodland open places between the housing clusters. These clusters will consist of three-story, five-sided units containing 27 students each arranged and grouped to take advantage of views, accommodate grades, and create a variety of shapes and sizes of interior courtyards. At the opening of each courtyard will be an activity building



Pedestrian way between student center and housing group.





Housing court from a living room.

serving that particular cluster. Each floor will have four double rooms, a single room, and common toilet facilities and the triangular living room. Structure of all buildings will be reinforced concrete and brick.

Robert Frasca says that by starting the college at its eastern end and working west in three phases, the architects hope to have "a 'sense of

place' even after the initial phase." That this will happen is probable. It is also very likely that, given the inventive handling of a modest palette of forms and materials and the sensitive planning of formal and informal outdoor movement, Columbia Christian College will be graced with a serene ambience for studying and living. — JTB



Natural pathways between housing groups.

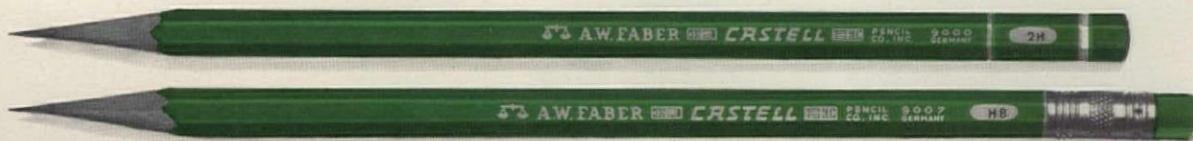


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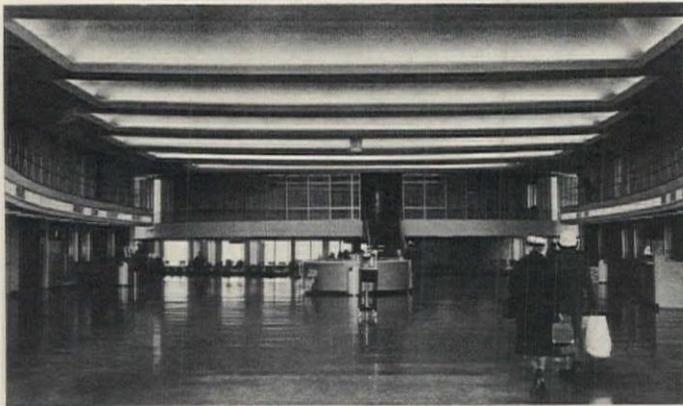
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PERFORATED CEILINGS ELIMINATE REGISTERS

BY WM. J. MCGUINNESS
Random perforations in overhead plenums allow uniform distribution of air to spaces below. McGuinness is a practicing mechanical engineer in New York City.



A recently developed technique for distributing air for cooling and heating has been successfully applied at an airport terminal building. This building, at the MacArthur Airport, a facility owned and operated by the Town of Islip, Suffolk County, Long Island, New York, has ceilings in its concourse and offices that deliver

air from plenums through perforations in the ceiling's surfaces.

Some advantages are architectural simplicity, quieter operation, lower air velocities, uniform air distribution, and lower cost.

Terminal Building Installation

The architects' desire to eliminate registers from the ceiling prompted the engineers to select and develop this method. In the concourse area, long-span trusses suggested a coffered ceiling. The rectangular coffers, between trusses, extend up to the level of the top chord of the trusses (see photo). The sides and ends of these recessed rectangles are splayed and surfaced with perforated acoustical tiles of mineral fiber that double for sound reduction and air delivery. Diffusing glass block at the roof level and continuous fluorescent cove lights at the lower perimeter of the coffers provide lighting by day and night.

The lower chords of the trusses are about 20 ft above the floor level in the concourse area. This creates a height of

two stories, which extends laterally into two levels of offices and adjunct facilities. In the surrounding rooms, which have normal ceiling heights, level ceilings using the perforated panels are employed.

At concourse coffers and in low-ceiling areas, air is delivered to overhead plenums by short stub-ducts. Pressure

above the ceilings quickly equalizes there and delivers a uniform blanket of air to the spaces below. The air is drawn back for reconditioning through conventional return grilles at low positions in the walls.

Pressure Replaces Gravity

One is inclined to cling to the impression that cool air dropped, instead of blown, into a space will descend to its effective level, whereas warm air will not. There are two reasons why this is not the case: First, pressure across the space from inlet perforations to return grilles is sufficient to overcome the effect of varying air density. Second, these density differences are not great in modern practice, in which air is delivered for heating at temperatures closer to 110F than to older standards of about 160F.

Indoor Climate Moderated

By this method, large volumes of air can be passed through the building by the "ventilating" tiles, achieving silence, milder air temperatures, absence of drafts, and the elimination of dead spots that could be caused by sluggish air movement.

Quality of the Ceiling

Perforations add to the value of acoustical absorption. The holes in the fiber tiles selected for this design were small, located in a random pattern, and lost in a flecked finish in this "fissured" style. They could not be easily detected even in an 8-ft ceiling. The material is resistant to fire and water, and can be painted without closing or reducing the area of the holes.

Lower Cost

The engineers found that the omission of diffusers, shorter

ducts, and lower frictional resistance made this system 8 to 10 per cent lower in cost than more conventional methods.

Research

Experiments relating to effectiveness and comfort in the general use of air-distributing ceilings is now in progress at Kansas State University. Results of this work, sponsored by the American Society of Heating, Refrigerating and Air-Conditioning Engineers, are expected in January 1968. They will add to the present knowledge of ceilings that are used as the source of air for conditioning.

The Terminal Building at MacArthur Airport was designed by Dobiecki & Beattie, architects; Seelye, Stevenson, Value & Knecht were the consulting engineers.



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INSURANCE: PART 1

BY HAROLD J. ROSEN

Types and amounts of insurance that the contractor should be required to furnish and those that the owner will carry are reviewed in the first of two articles. Rosen is Chief Specifications Writer for Skidmore, Owings & Merrill, New York.

There are many risks and liabilities involved in the construction of a project that are of concern to the architect. The AIA General Conditions (Tenth Edition), Article 11, deals with some insurance requirements, but does not include amounts or many other insurance coverages that may be necessary to safeguard the interests of the parties to the contract, including the architect. Obviously, the contractor has the prime responsibility, but the owner and

the architect may have contingent liability and to safeguard them, they may be added to some insurance policies as additional insureds.

In amending the AIA General Conditions article pertaining to insurance, the architect should ask the owner to consult with his attorney and his insurance advisor to assure that the insurance provisions adequately protect the contractor and architect as well as the owner. The AIA General Conditions should be modified to include the types and amounts of insurance that the contractor should be required to furnish and those that the owner will carry. These limits will vary with the size and character of the project and with its location, and should be consistent with the inherent risks involved.

Article 11 of the AIA General Conditions may be modified as follows in the Supplementary Conditions:

Article 11 INSURANCE

Par. 11-1 Contractor's Liability Insurance

Add the following subparagraphs:

11.1.4 The Contractor shall not commence work under this Contract until he has obtained all the insurance required hereunder and such insurance has been approved by the Owner, nor shall the Contractor allow any subcontractor to commence work on his subcontract until all insurance required of the subcontractor has been so obtained and approved. Approval of the insurance by the Owner shall not relieve or decrease the liability of the Contractor hereunder. Each and every contractor and subcontractor shall maintain all insurance required under this article during the life of the contract, and for no less than one year thereafter.

11.1.5 A true copy of all policies specified shall be filed with the Owner to which shall be attached a certificate of in-

surance AIA Form G705. Any certificate filed with the Owner which shall be found to be incomplete or not according to form, or to which a true copy of the policy or policies is not attached, will be returned as unsatisfactory. Rejected certificates of insurance and copies of policies shall be corrected as necessary and resubmitted until approved.

11.1.6 Each and every policy shall contain an endorsement stating that the insurance company will not, prior to the completion of the project or any policy expiration date shown on the policy and certificate, whichever occurs first, terminate the policy or change any coverage therein without first mailing, by registered mail, written notice of such action at least fifteen (15) days prior to the termination or change, to the Owner at whose request the policy and certificate are issued.

11.1.7 The insurance required is as specified below and in the amounts indicated:

1. *Workmen's Compensation and Employer's Liability Insurance*
 - a. *Statutory:* Amounts and coverage as required by law of the place of building
 - b. *Employer's Liability*
\$ _____ each person.
\$ _____ each occurrence.
2. *Comprehensive General Liability Insurance*
 - a. *Public Liability:* Including Premises, Elevator, Products, Completed Operations, and Contractual
 - (1) *Bodily Injury Liability*
\$ _____ each person.
\$ _____ each occurrence.
 - (2) *Property Damage Liability:* Including XCU (Explosion, Collapse, and Underground Damage)
\$ _____ each occurrence.
\$ _____ aggregate.
3. *Comprehensive Automobile Liability Insurance*
Including owned, non-owned, and hired vehicles.
 - a. *Bodily Injury Liability*
\$ _____ each person.
\$ _____ each occurrence.
 - b. *Property Damage Liability*
\$ _____ each occurrence.
\$ _____ aggregate.

11.1.8 Contractor shall maintain Completed Operations

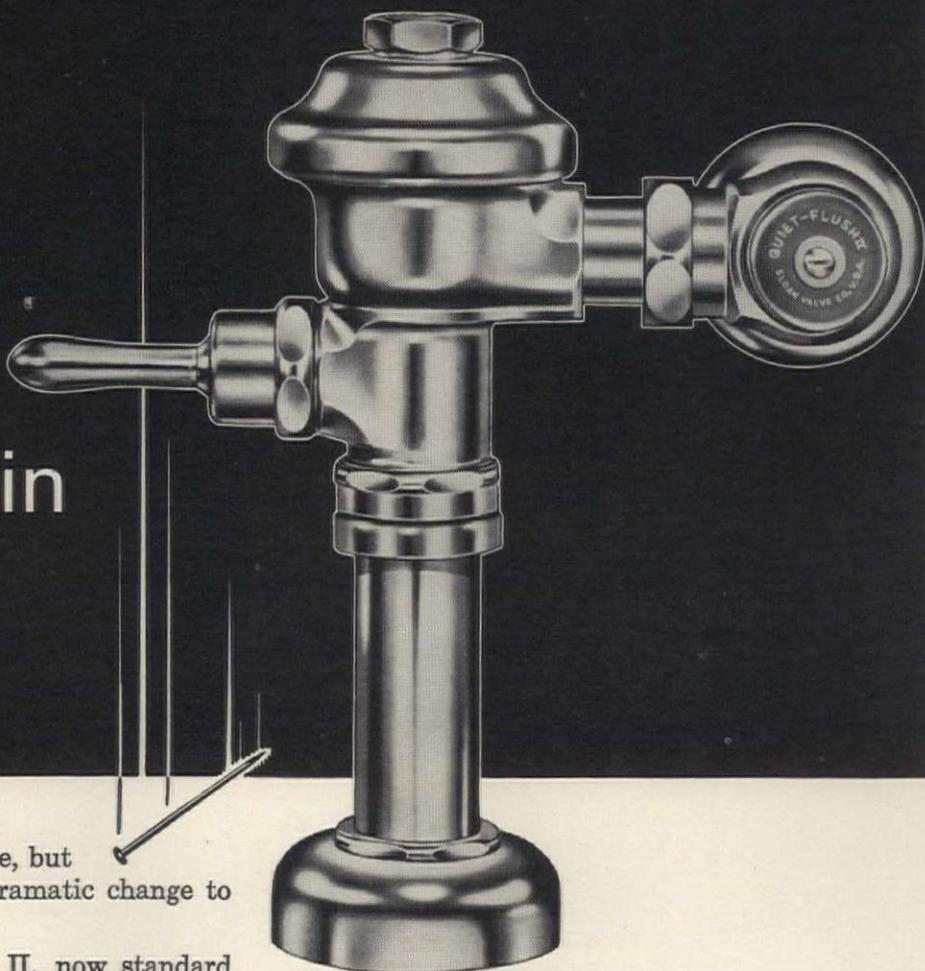
Insurance for a period of two (2) years after final acceptance of Contract.

11.1.9 Bodily injury and property damage coverage under both Comprehensive General and Comprehensive Automobile insurance policies shall include the "Occurrence" basis wording, which means an event, or continuous or repeated exposure to conditions, which unexpectedly causes injury during the policy period.

11.1.10 Coverage shall include liability arising from water damage, property in care, custody and control of Contractor and broad form personal injury endorsement for the Contractor, his subcontractors, and any and all other tradesmen engaged on the project.

11.1.11 Each contractor agrees to assist in every manner possible in the reporting and investigation of any accident, and upon request, to cooperate with all interested insurance carriers in the handling of any claim by securing and giving evidence and obtaining the attendance of witnesses as required for any claim or suit.

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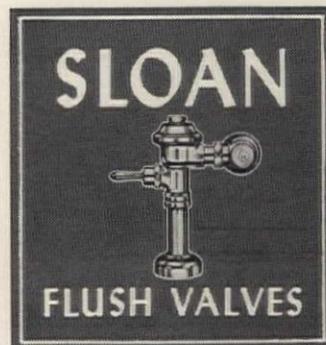
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THE ARCHITECT'S LEGAL LIABILITY

BY BERNARD TOMSON
AND NORMAN COPLAN

P/A's legal team discusses judicial interpretations of the architect's legal liability in several European countries, as well as the AIA's attempt to protect the profession in the U.S. through the provisions of the 1966 Edition of the General Conditions of the Contract for Construction.

The legal responsibility of an architect is the subject of current interest not only in the United States, but in most European countries. In the United States, the profession's concern is reflected in the discussions and controversy that

arose in connection with the "indemnification" or "hold harmless" clause contained in the 1966 Edition of the AIA General Conditions of the Contract for Construction. Although the status of an architect in such European countries as Italy, England, and Sweden differs from that of his U.S. counterpart, the question of legal liability is of pressing concern to professionals in both continents.

In Sweden, for example, there are general rules for architects and engineers that are generally used by all owners in retaining such professional services. Under these rules, the architect or engineer is not only responsible to the owner for damages the latter sustains through the fault or negligence of the architect or engineer, but it is expressly provided that the architect and engineer shall be responsible to third parties. This responsibility is stated as follows:

"The engineer shall likewise be responsible for damages to a third party through faults or acts of neglect by the engineer and shall be additionally responsible for the indemnity liability of the client toward a third party as a consequence of the measures taken by the engineer in connection with the execution of the works, except in cases where damages could not reasonably have been avoided."

An even broader rule of liability is reflected under the laws and applicable rules for building contracts in Italy. There, the rules governing criminal and civil responsibility in connection with building projects are set forth in the penal and civil codes. "Negligence" or "imprudence" or "lack of professional skill" on the part of an architect, which is reflected in the failure to observe laws and regulations relative to con-

struction, can be a criminal violation of law. The standards for determining negligence, imprudence, or lack of professional skill do not appear to be well-defined, and the judge determining such questions is allowed wide discretion. The rule of the Italian penal code is that, when one does not prevent an event that one has the legal obligation to prevent, it is the equivalent of causing the event to occur. In the context of the architect's supervisory duties and his status as the so-called "master builder," the areas of both criminal and civil liability would appear to be great.

In Italy, an architect can function as a "director of works" or as a "works manager." In the former capacity, it is the architect's duty to inspect the work on behalf of the client and to verify that the project is being built in conformance with the plans and specifications. The works manager, on the other hand, actually supervises the construction and is responsible for the procurement of materials and the execution of the work. The Italian courts often do not make a distinction between these functions, and, as a result, the rules of liability are somewhat confused. Thus, the Italian courts tend to regard the director of works as responsible for all defects and all accidents occurring at the project site, despite the fact that his function in this capacity is similar to that of a supervising architect in the United States.

In 1964, a commission was established in Italy to study the question of the responsibility, both civil and criminal, of the architect in his capacity as either a director or manager of works. It has been recommended that the professional law now in force be modified to define the differences in function and liability, so that responsibility is not charged to an architect for damage or ac-

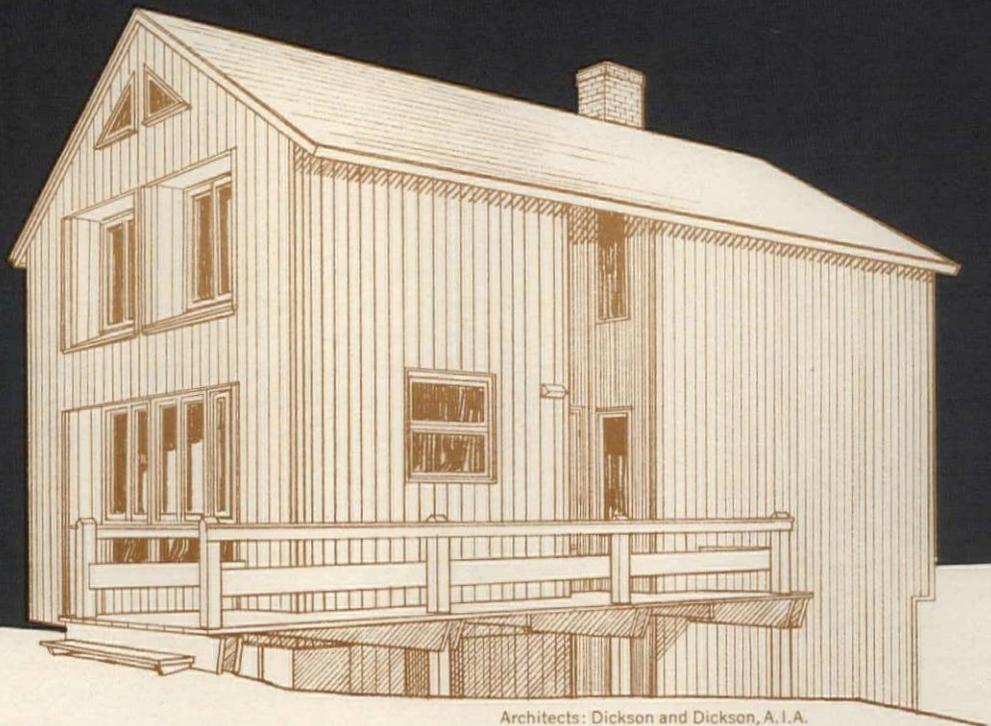
cidents occurring during the execution of the work performed by employees who are not subject to the architect's control or who are not his responsibility.

The objective of architects in the U.S. to protect themselves from claims that may be asserted against them, but that basically arise from the contractor's negligence, culminated in the provisions of the 1966 AIA Edition of the General Conditions of the Contract for Construction, which provide that the contractor shall hold both owner and architect harmless against claims and losses resulting from the negligent performance of the work by the contractor. The original 1966 edition further provided that such obligation of the contractor did not extend to any claim attributable to a defect in the plans and specifications prepared by the architect. However, objections by the Associated General Contractors persuaded the AIA to modify that language, to exclude the application of the indemnification provision not only from a claim arising from defects in plans or specifications, but to those claims arising from the "giving of or failure to give directions or instructions by the architect . . . provided such giving or failure to give is the primary cause of the injury or damage." The Institute is of the opinion that, although this language does not change the substance of the hold harmless agreement, it is a clarification. However, in face of recent decisions that an architect may be liable for failing to stop the contractor's work where the contractor has created a hazardous condition on the site (see IT'S THE LAW, OCTOBER-DECEMBER 1966 P/A; JANUARY 1967 P/A), the change in language in the indemnification provisions acceded to by the Institute may open the door to uncertain judicial interpretation.

News from the Potlatch Timberline

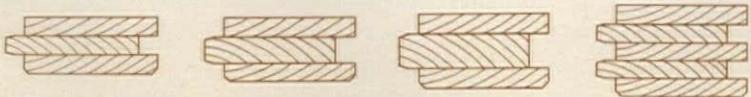


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SIZING UP THE ESTABLISHMENT

P/A asked six members of the new architectural generation to review books on some of the profession's established designers, thus providing a platform not generally available to them. Although these reviews may shock some of our readers, they may also, hopefully, provoke some hard thinking.

Nasty, But Perceptive

BY MICHAEL O'HARE

PHILIP JOHNSON: ARCHITECTURE 1949-1965. By Philip Johnson. Introduction by Henry-Russell Hitchcock. Holt, Rinehart & Winston, 383 Madison Ave., New York, N.Y., 1966. 115 pp., illus., \$15. The reviewer is completing degrees in architecture and structural engineering at Harvard University, and is in addition working as a research consultant for Simpson, Gumpertz, & Heger, Consulting Engineers in Cambridge, Mass. This summer and fall, he will work as a designer with Kelly & Gruzen, Architects and Engineers, New York City.

The history of this book has reached a satisfying completeness with a review (in *Architectural Forum*) in which Johnson, the author and subject, discussed the book and found it excellent. Since this cosmic symmetry does not invite tampering, and since Johnson's review accurately described the book (which is certainly as well printed and designed as he says), this reviewer is free to discuss the architecture it presents.

It is always painful to witness a downhill trend in the development of an artist, but in Johnson's case it is less agonizing because he designs with such confidence and his development is so clear that we can be certain no lapse of skill or loss of ability to bring his intentions to a concrete result is involved. The failure that his later buildings exhibit clearly is caused by an attitude, expressed with subtlety and force, which requires the critic to choose sides on the basis of issues beyond mere buildings. Either you are with him or against him; I'm against him.

In the years when Johnson's designs acknowledged a close link with those of Mies, the sterility and inhumanity of his work appeared to be a natural consequence of the intense discipline of form on which his vocabulary depended. In visual terms, his early work had the clarity of Mozart, with none of that master's warmth; had he continued in that vein, we would have seen him recorded as a superb technician, notable for his consistency with which he carried out purely visual concepts, and a source of the kind of inspiration we receive from an expert cabinet-maker. But, as we all know, Johnson has for the past 10 years been freeing himself from the rigid discipline of the Miesian ideal, so we might expect some innate humanity to begin to express itself in his buildings, once the architect freed himself from

purely formal restrictions.

No such luck. What we have seen has been less human and more sterile (if that is possible), because, though there is even a kind of humanity in a perfectly executed, perfectly controlled building with a single idea, even this has tended to disappear. Not only are his newer buildings sterile and cold, but Johnson has now acquired a taste for deception and what can only be called petty cruelty. That there is almost nothing in the promenade of the New York State Theater, and that the people on its balconies are screened behind an insistent pattern of grillework, are typical of the sterility to which I refer, as are the monumental stairs. But the fact that even the things that *are* in the space (the huge sculptures) add nothing, that the balustrades on the stairs, though filleted to invite holding, are too wide to grasp by several inches, that the draperies which might have provided psychic warmth are made of metal keychain, that the faceted glass lighting fixtures are sodden and lifeless — all these frustrations of the initial reaction are simply irritating, rather like a person who, lacking the ability to communicate emotionally with others in a healthy fashion, can only make contact by being nasty.

The tendency to treat each building as a sacred and self-sufficient entity as exemplified by the two laboratory towers at Montefiore Hospital in New York and at Yale, with unity of feeling provided by a brutally forced symmetry, is nothing new: Johnson designs jewel boxes no matter what the intended contents are. If they are small, precious, pre-Columbian artifacts, as at Dumbarton Oaks, or families who dress for dinner and have no children, very well; it is less satisfying for laboratories full of animal cages and dirty glassware.

Johnson is typical of the ar-

chitect lost in architecture and out of touch with its users. To design three laboratories — monuments, we would hope, to independent inquiry coupled with honest work — with the absurd preciousness and totalitarian uniformity in every direction of the Moses Institute, the Kline Center, or the Epidemiology Building, is to announce yourself either ignorant of, or unconcerned with, the essential nature of the human beings who will occupy your buildings. The petty but diabolically perceptive irritations Johnson offers lately suggest that he is not ignorant, and that he might even be concerned about human nature. If this is true, then he must have a very different conception of man than I have, and this is where I simply have to take a stand on basic principles.

Henry-Russell Hitchcock, in his introduction to this book, provides a carefully reasoned and generously footnoted (with historical references) discussion of the work Johnson chose to present. Since he feels quite differently about Johnson's position than I do, and since he has long ago established his position as a critic worth listening to, I feel obliged to contend with him. However, I find so little correlation between his text and what I see in the buildings that I feel fairly helpless; for example, he sees the museum in Fort Worth as a brilliant example of the processional concept in Johnson's work and lets it go at that. Of course; but what kind of people go to see art in processions? It seems much more important to me that the building is so assertive, so grand, and so desperately inflated in concept as to completely distract anyone trying to look at art, and certain to disappoint the visitor at the trivial result of such imperial sequence, especially if his dignity has already been attacked by having him

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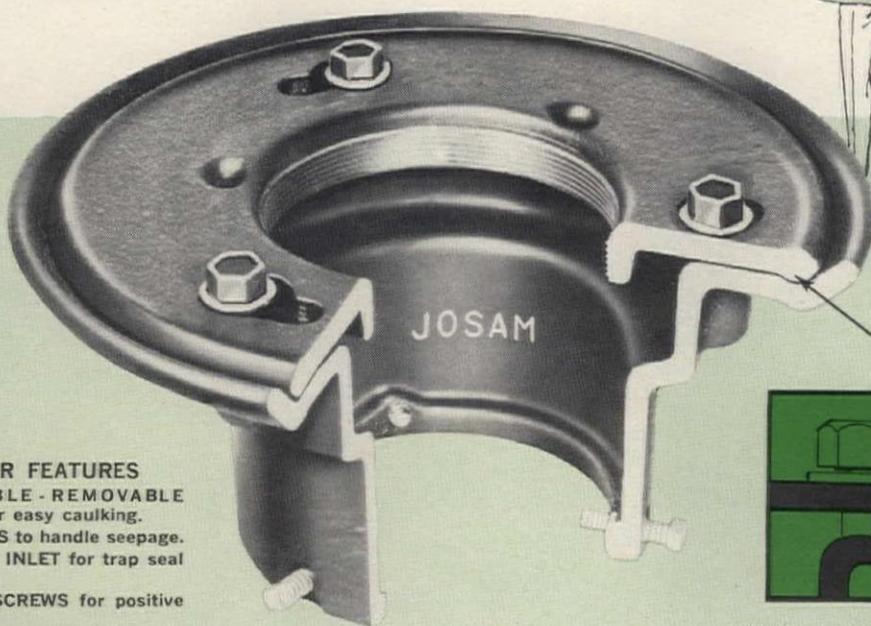
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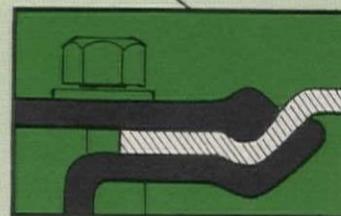
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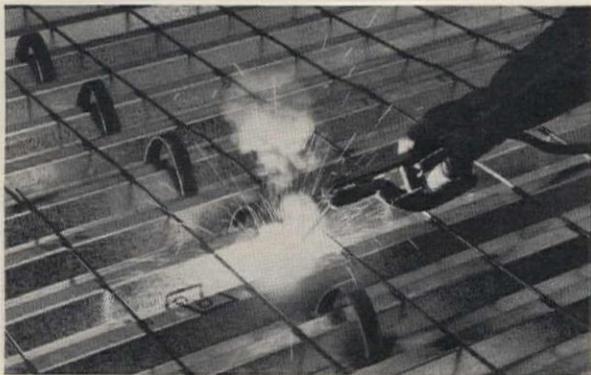
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IMAGINATION IN STEEL



Continued from page 184

approach the building like a kneeling pilgrim on his way to confront the deity.

A Lifeless Serenity

BY CHARLES D. HOSFORD

VILJO REVELL: WORKS AND PROJECTS. Edited by Kyosti Alander. Frederick A. Praeger, Publishers, 111 Fourth Ave., New York, N.Y., 10003. 1967. 119 pp., illus., \$10. The reviewer graduated from Yale School of Architecture in 1964 and was in Finland on a Fulbright Fellowship in 1964-65, where he visited nearly all the

buildings shown in the book under review. He is currently completing a ski lodge in Maine, which he designed and built as a speculative venture.

The book is a photographic essay, with brief explanatory notes, covering the work of Viljo Revell. He was educated in the 30's amid the birth of the Bauhaus and the hypnotic rationalism of the time, a man who endured the war in forced artistic hibernation only to emerge with strong convictions about the future of architecture through the implementation of industrial methods fortified by the power of rationalist logic. The book thoroughly

documents pictorially a period of Finnish architectural history. My reactions to it are twofold.

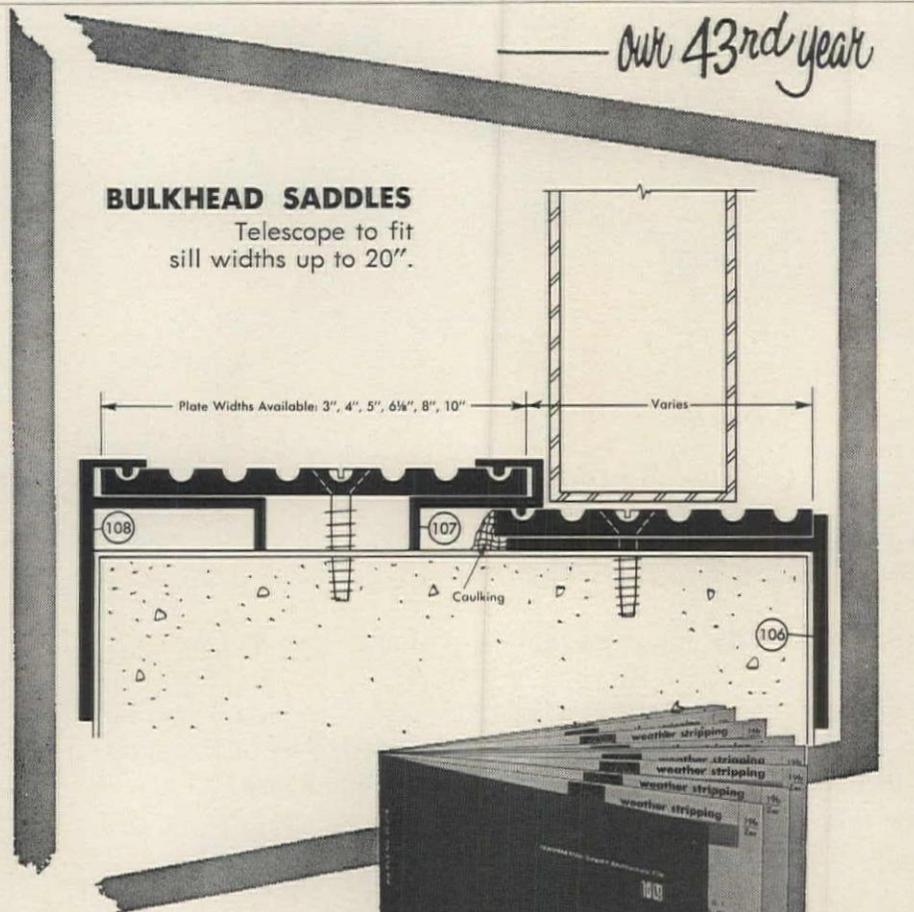
First, I have a great urge to crumple those heavy Bemis paper bags or tear up Manhattan phone directories, a reaction elicited by the docile, meticulously controlled presentation of a man's creative production. It is like going to a zoo and having all the baboons, obscene monkeys, and urinating elephants removed. It is a chronicle that eulogizes the architect (Revell was, in large part, responsible for the choice and arrangement of photographs and text) with no "bad guys," no pernicious influences, and never an imperfect detail. Throughout, one finds technically superb photographs of houses without occupants, schools without children, a factory without workers, and military barracks without soldiers. In short, it is a portfolio for a Nobel Prize in architectural serenity—a work most valid but with little vitality.

Second, Revell's work displays instances of great competence. The Palace Hotel of 1952 is a very compatible neighbor to the Senate Square buildings by Carl Engel, who preceded Revell by 130 years. The sheathing of prefabricated concrete elements and fenestration are manipulated with a thorough understanding of the scale and proportions of the adjacent buildings. It recognizes and deals with the classic problem of introducing a new building into an old complex without mockery or ruination of what exists. Thus, in spite of its mid-20th-Century peculiarities, it is not uncomfortable amid its ancestors and, indeed, not without individual expression in detail.

At the other end of Revell's productive career is his project for the Peugeot Building in Buenos Aires of 1962. This is the one instance, it seems to me, where Revell makes a sincere investigation of the technological forces that have relentlessly bombarded architecture in the last two decades. The building explores a system of concrete columns joined by huge curved beams with groups of 14 normal floor slabs suspended from these beams by prestressed cable nets. Ironically, however, Revell seems to disregard the surrounding scale of the urban environment that he handled so sympathetically in his early work in a blind fascination with new techniques, treating them like toys.

Some apparent differences between Revell as an "older generation architect" and myself as a "younger generation architect" seem to be worth probing, with the risk of immature exposure, perhaps arrogance, or even gut-rumbling humor.

Continued on page 192



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Continued from page 188

First, I feel the pressures of a marvelously exciting world that force the exploitation of uncertainties, the incessant desire to know, to dissect, to reconstruct, and the courage to pursue the intuitive moment. To Revell's generation, this appears as irrational floundering or emotional immaturity. Because of that celebrated doctrine, "Less Is More," complexity was instantly neutralized and the architect had the built-in machinery to be highly selective in determining which problems to solve. In Revell's case, this led to the timidity of using only the accepted vocabulary of

rationalism stifling fruitful and extensive exploration. Oversimplification of this sort is dangerous and unproductive. This does not imply, however, that the "younger generation" has developed the arcana against this sort of intimidation.

Second, I belong to a world that is capable of instant self-destruction, while it is simultaneously on the point of conquering outer space. This sort of paradox, strangely enough, appears to reinforce an optimism concerning the destiny of man. We have voluntarily chosen to involve ourselves in the mainstream of political power so that we can feel the pulse of society,

administer advice, and offer innovations and renovations. The "older" generation nurtured no such companionship, for fear of disease and dilution of its ideals.

Third, this book on Revell indicates the concern of his generation for cosmetic acceptability. There are no aggressive, masculine outbursts, no intentional gestures of sheer delight. My generation is perhaps capable of a more mature exploration that accepts and deals with contradictions and uncertainties without the use of an "automatic pilot." This notion explains in part the conspicuous absence of any real architectural heroes, for each particular problem reveals its own logic, and demands a unique solution.

Less Becomes — At Last — Less

BY DAVID SELLERS

MIES VAN DER ROHE: THE ART OF STRUCTURE. *Werner Blaser. Frederick A. Praeger, Inc., 111 Fourth Ave., New York, N.Y., 1966. Illus., \$25. The reviewer is an entrepreneur, contractor, craftsman, and designer of houses in Sugarbush Valley, Vermont.*

Mies' famous dictum, Less Is More, in all its variations over the last 40 years, appears to have influenced almost everybody. In fact, even to the casual observer, it is possible to see in this book the core of most of America's "modern architecture." That an architect can make so powerful a statement through his buildings that his work is copied and mimicked throughout the world is rather overwhelming. To be copyable may even be a sign of greatness. The special greatness of Mies is that what he has done solves so many problems clearly that others of lesser talent can understand the value and produce likenesses and variations that are acceptable. This then transforms itself into a so-called style.

A second major contribution of Mies that is made obvious through the abundant documentation in this book is the same contribution being made by some aircraft designers, sailboat manufacturers, and racing-car designers. It has to do with the capacity to collect available requirements, establish their relations, and produce something in which all these act in concert as one object. The photographs illustrate very well the integration in Mies' buildings of all the parts that make the whole. The problems involved in achieving this have to do with the insight required to collect *all* the requirements and establish the relations between them that produce



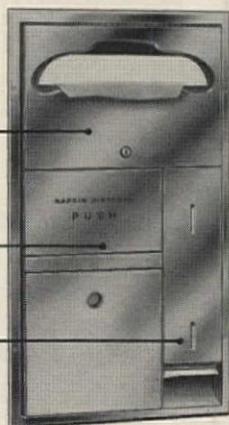
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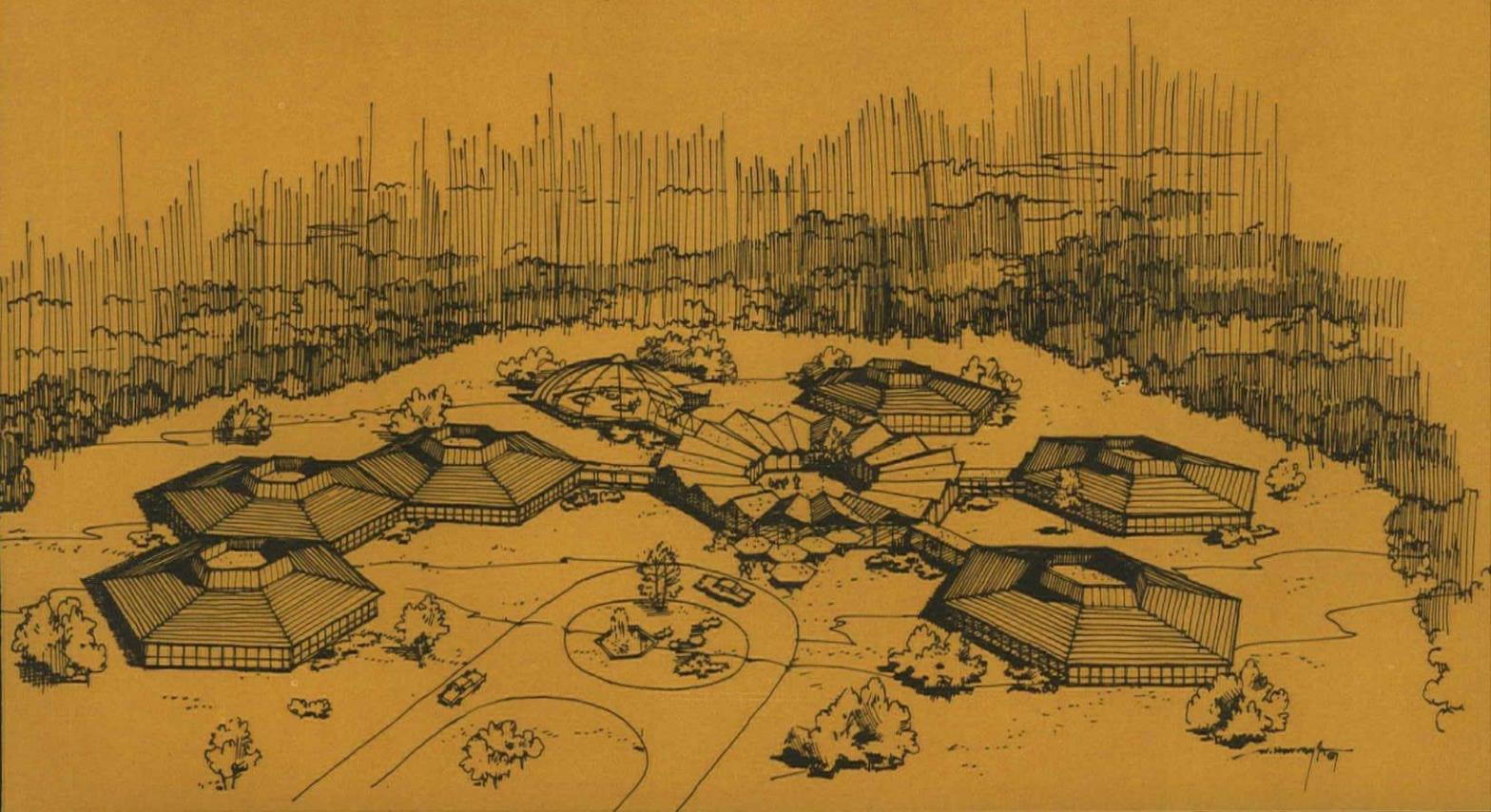
Continued on page 200

A CONVALESCENT HOSPITAL FOR THE 1970'S

Arnold Lawrence, A.I.A., combines site, concept and materials to serve the needs of the patient and the expanding role of the nursing home, in this cluster type extended care facility.

A design project commissioned by **American**
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CERAMIC TILE



Arnold Lawrence, A.I.A., is a specialist in the design of medical, convalescent and geriatric facilities. He has designed numerous such installations in many parts of the country.

Ceramic tile works with other materials to create a "recovery environment," keep maintenance costs low.

Arnold Lawrence's design reflects the convalescent hospital's growing role as a supplement to the full-service hospital. It offers an environment for recovery and rehabilitation for convalescent patients of *all* ages.

"The basic concept," says Lawrence, "is several modular satellite buildings clustered around a ring-shaped administration building. The look is inviting, *unclinical*—tent-roofed, wood-shingled buildings set on a rolling, wooded site."

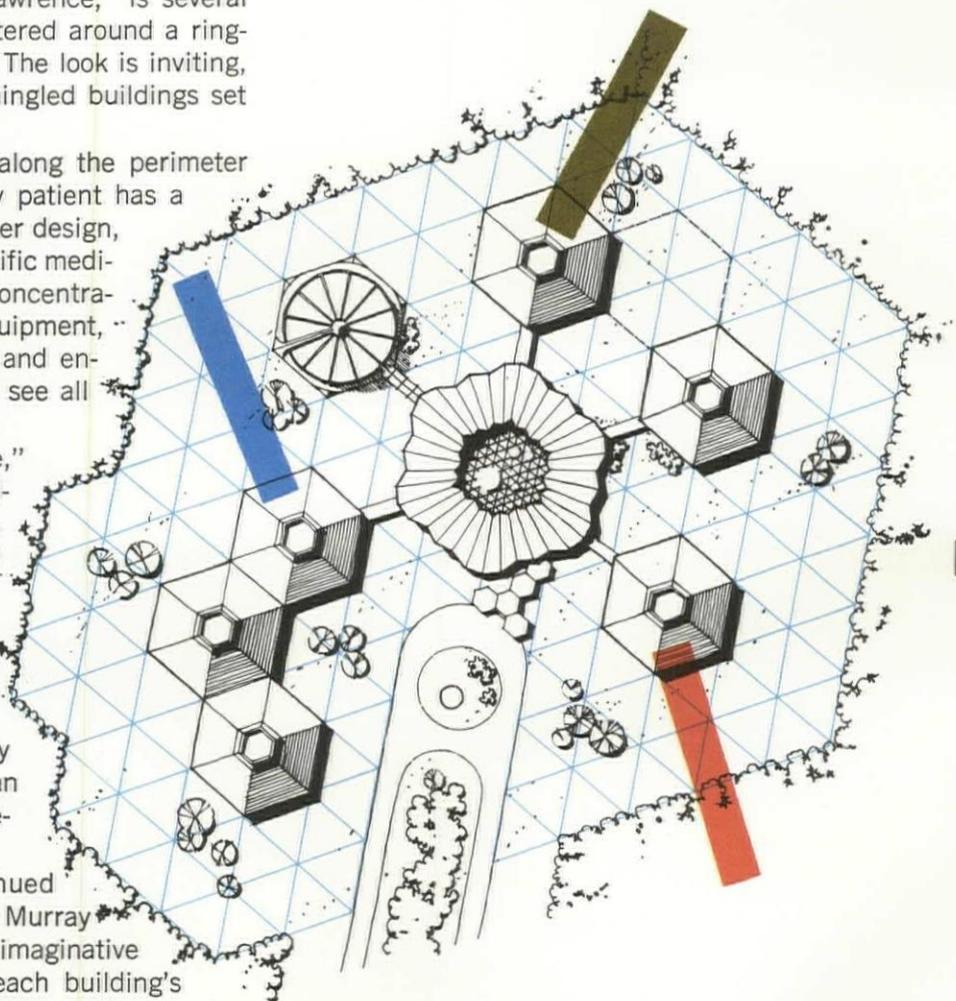
Patients' rooms are located along the perimeter of each satellite building. Every patient has a pleasant outdoor view. The cluster design, with each wing devoted to a specific medical specialty, also allows for the concentration of specialized medical equipment, permits intensive patient care, and enables nonresident specialists to see all their patients in one stop.

"The modular hexagon shape," says Lawrence, "permits the addition of future units to any wing. Expansion can take place in a number of directions.

"Color," he points out, "plays an important psychological role in patient recovery. Since ceramic tile offers a broad color palette and is highly functional as well, it makes an ideal surfacing material for a recovery environment."

Colorful glazed tile, subtly-hued ceramic mosaics and rich, warm Murray quarry tile are used to achieve imaginative design effects appropriate to each building's function. The mixture of tile colors, textures and sizes creates a lively feeling of variety throughout the interior. And, because it is so durable and easy to clean, ceramic tile helps keep maintenance costs low.

Aquarium. An undersea pattern of green and blue ceramic mosaic tile sets off the aquarium in this restful patient lounge. Semi-circular seating arrangement encourages social contact among patients. Floor of Fawn Gray Murray quarry tile contributes to the relaxed mood.



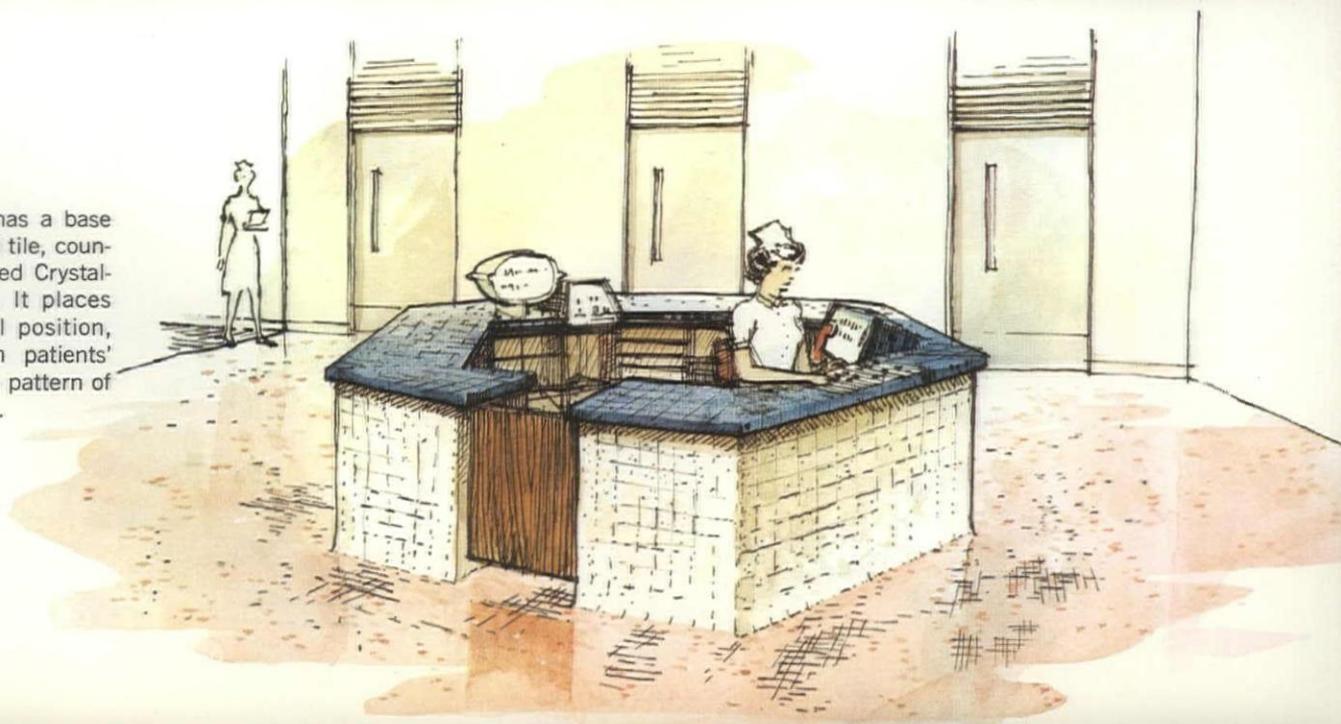
CERAMIC TILE
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Arts and crafts—integral parts of the rehabilitation process—take place at clusters of specially designed tables. Configuration allows several patient groups to work from one model set-up. Table tops of matte finish glazed tile permanently resist stains and scratches. Table bases are tiled in varying pastel shades.



Nurse's station has a base of smooth glazed tile, counter top of textured Crystalline glazed tile. It places nurse in central position, equidistant from patients' rooms. Floor is a pattern of ceramic mosaics.

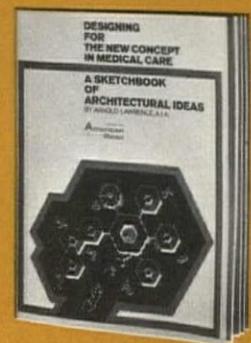


A sunken garden domed for year-round use

A retractable plastic dome makes this sunken garden a year-round haven for patients. It provides them with a pleasant setting for conversation or recreation, and prevents them from roaming unattended. A floor of Murray quarry tile in Canyon Red establishes the warm, relaxed mood. A relief mural of ceramic mosaic tile adds to the visual interest.

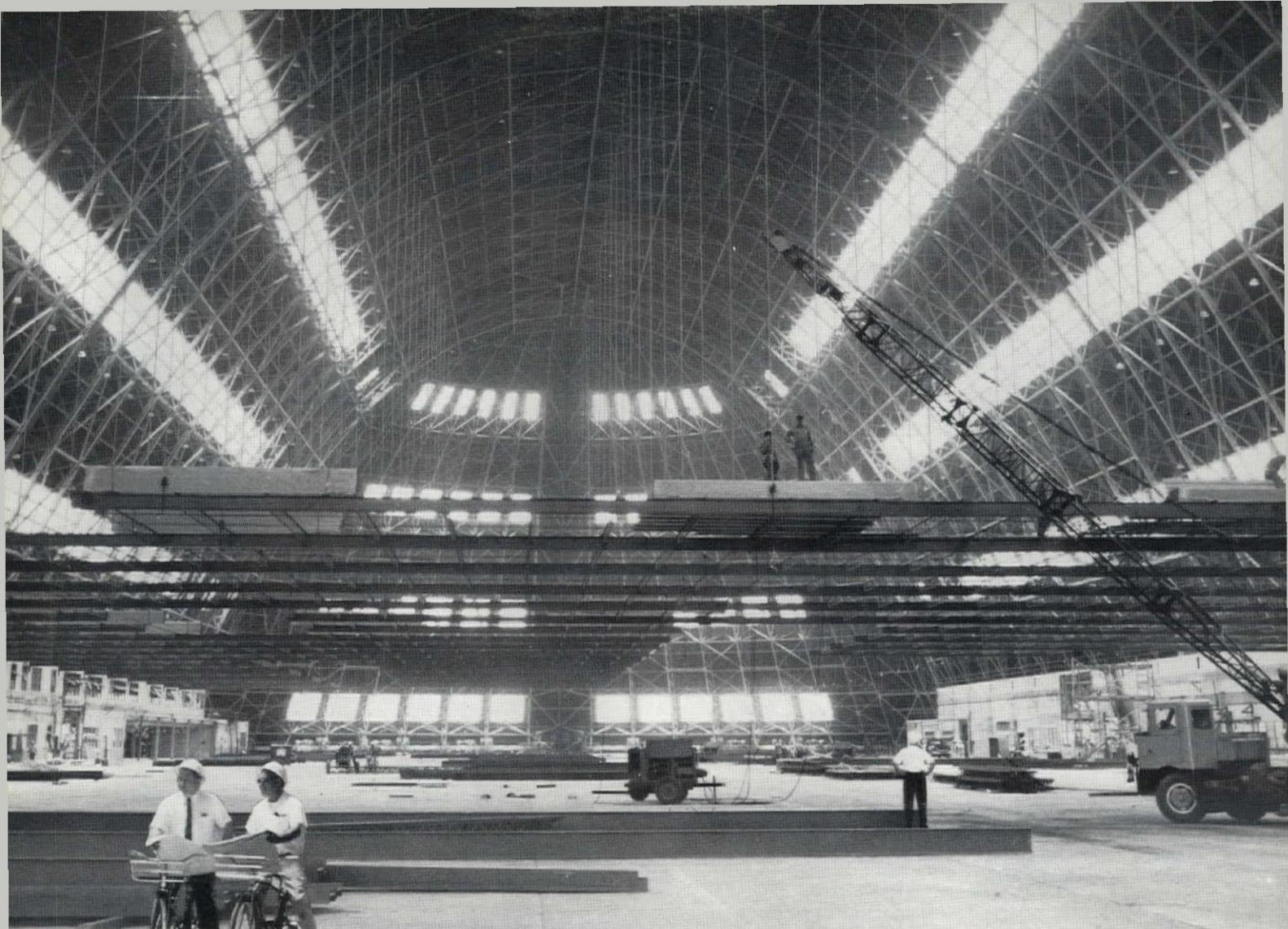


This extended care facility is one of three designs executed by Arnold Lawrence under commission from American Olean. The others are a high-rise convalescent hospital and a retirement home. A "Designer Sketchbook," illustrating and describing all three, is available free from American Olean. Write for your copy today. American Olean Tile Company, 1091 Cannon Avenue, Lansdale, Pa. 19446.



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Cable-roof suspended inside blimp hangar permits conversion to cabinet factory.

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The problem was solved with a plan devised by architect-engineer, Wiley & Wilson. They suggested the *interior* cable-suspended roof which now "hovers" 24 ft above the floor of the entire hangar. The roof actually hangs from the arched roof of the main structure on 214 Bethlehem cable assemblies, which vary in length to match the curves of the arches.

"Building a real roof, instead of simply an inner ceiling," the architect-engineer explained, "was less expensive than trying to maintain . . . completely weatherproof conditions . . . in the entire hangar."

The cable assemblies required 25,000 ft of $\frac{5}{8}$ -in. extra-high-strength, galvanized strand with swaged clevis terminals on each end. And the actual roof is a grid of 14-in. steel beams and joists covered with steel roof deck, rigid insulation, and two plies of felt and asphalt. Bethlehem supplied all 251 tons of structural steel beams.

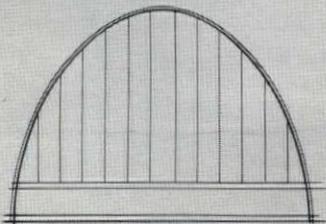
Another immediate need was speed, for the quicker the roof was up, the earlier the plant could be in production. This design, as installed by the general contractor, Basic Construction Co., fulfilled that need.

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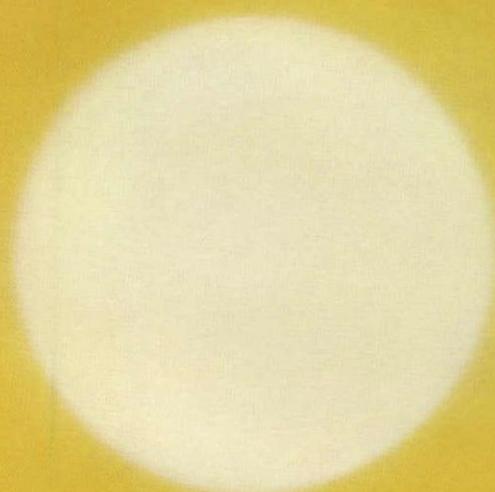
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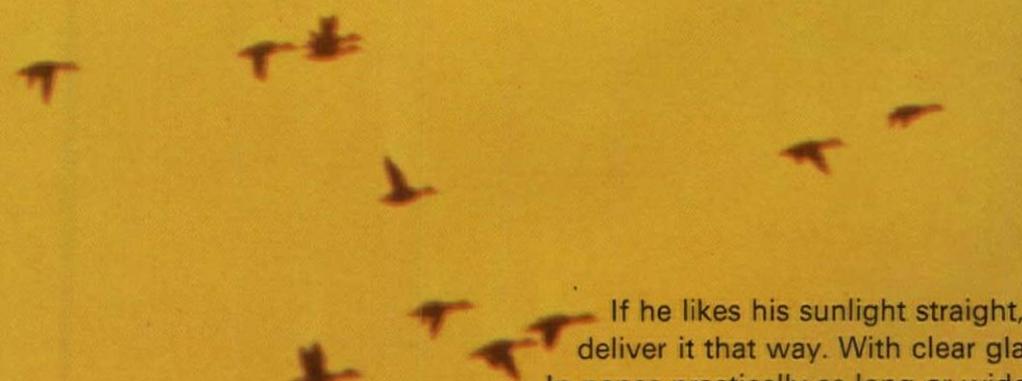
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Continued from page 192

optimum results. Then the act will necessarily be unitary.

Given the things Mies was trying to do, he has succeeded with aplomb. But it seems as though today there are more things to try to do: By eliminating or ignoring them, less becomes, at last, less. A major factor here seems to be that, unlike airplanes, boats, and cars, all the variables of architecture are in flux and thus there is no easy empirical standard by which to judge performance; in fact, performance is a moot point.

The struggle today on the part of many of the younger architects is to insert those variables that attempt to answer—or at least to ask—new questions. As our knowledge of the universe changes, so does our perception of ourselves, and thus our relation to the universe. As this becomes more and more true, human needs replace one another and the problems to be coped with architecturally become more complex and obscure. Single building types are being replaced by composites and totally new types seem to be springing up. This somehow means that the works of Mies

van der Rohe, as aptly summarized in this book, have their true meaning in the relation between them, and not in the works themselves. And each man determines this relation for himself.

Superwright

BY HUGH HARDY

FRANK LLOYD WRIGHT: HIS LIFE, HIS WORK, HIS WORDS. By Olgivanna Lloyd Wright. Horizon Press, 156 Fifth Ave., New York, N.Y., 1966. 224 pp., illus., \$7.50. After experience in the planning of performing arts projects (University of Toledo, JANUARY 1967 P/A), the reviewer has become increasingly interested in the origins of planning for both academic and community institutions. Hardy plans publication of a book about expanding urbanization and the resultant changes in environmental order.

Discussion of Frank Lloyd Wright, the architect, is obscured by prejudice about Frank Lloyd Wright, the man. A book about this controversial figure by his wife, Olgivanna, could therefore assist in delineating the man and make the accomplishments of this arrogant loner more fully understood. But Olgivanna Wright has chosen to purify the standard deification rituals of Wright enthusiasts and abstract for us a figure so garishly Good that the resultant hero becomes a comic-book caricature.

The evil "they," against whom Wright's battles for recognition and acceptance were fought, are given no substance, and his accomplishments therefore wither to outlined postures. The formal images of order that led to the exclusion of Wright from central prominence are not mentioned. Yet they *must* be understood if his work is to represent authority. Instead of insight, we are given clichés: "He knew no obstacles" . . . "His principle was never to turn back" . . . "He was possessed of tireless energy." In short: Superwright.

The dialogue between super-hero characters seems appropriate for Prince Valiant: "When he was introduced to the King of Iraq in Baghdad, the royal aide announced: 'Mr. Wright, His Majesty the King of Iraq.' 'And here,' Mr. Wright said as he bowed, 'is His Majesty, the American Citizen.'"

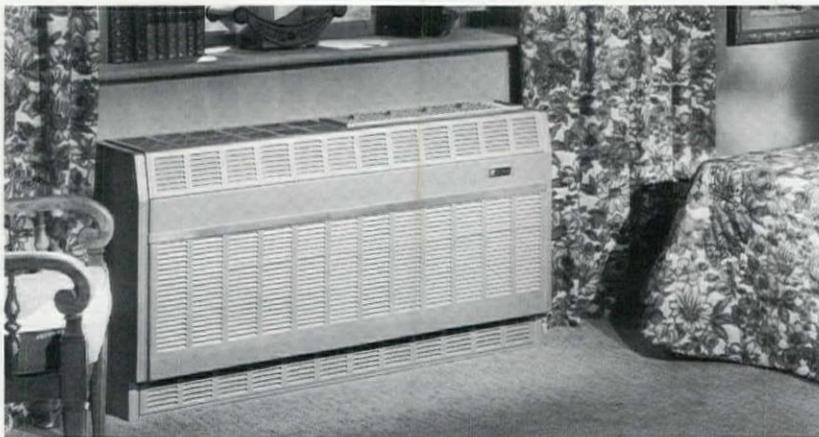
Aside from her failure to give flesh to the man, the author is peculiarly superficial in the presentation of Wright's work. Except for one project (Unity Temple), no plans are included for the buildings discussed, and despite paragraphs acknowledging the limitations and distortions of still photography, almost all

Continued on page 208



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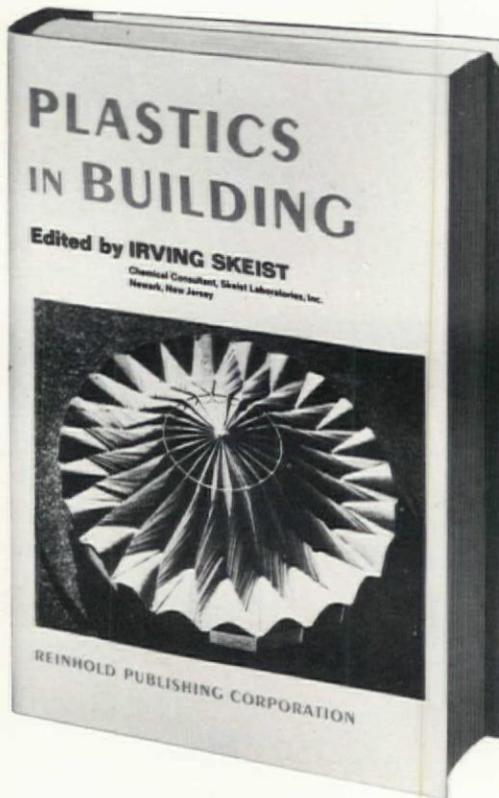
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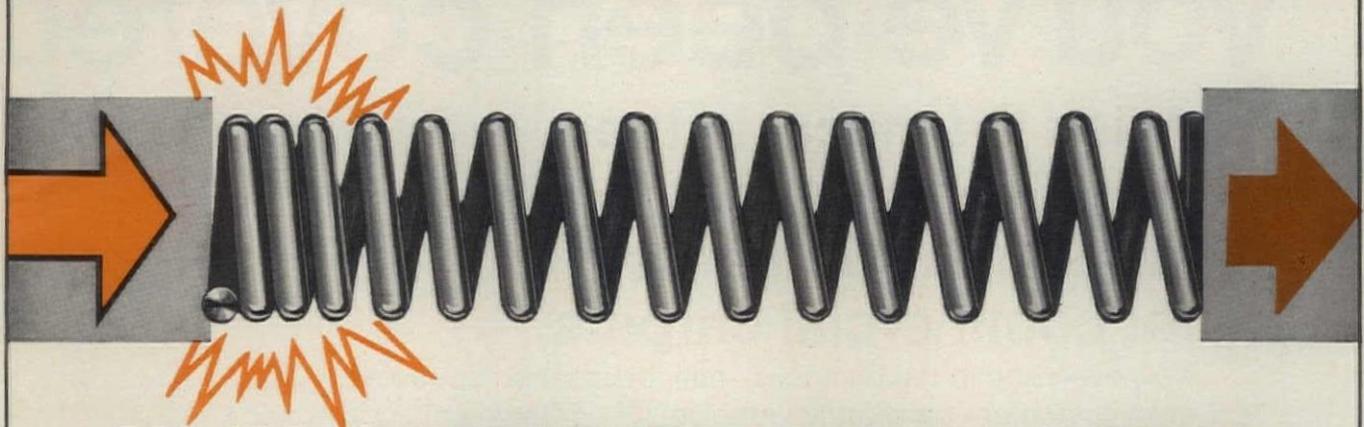
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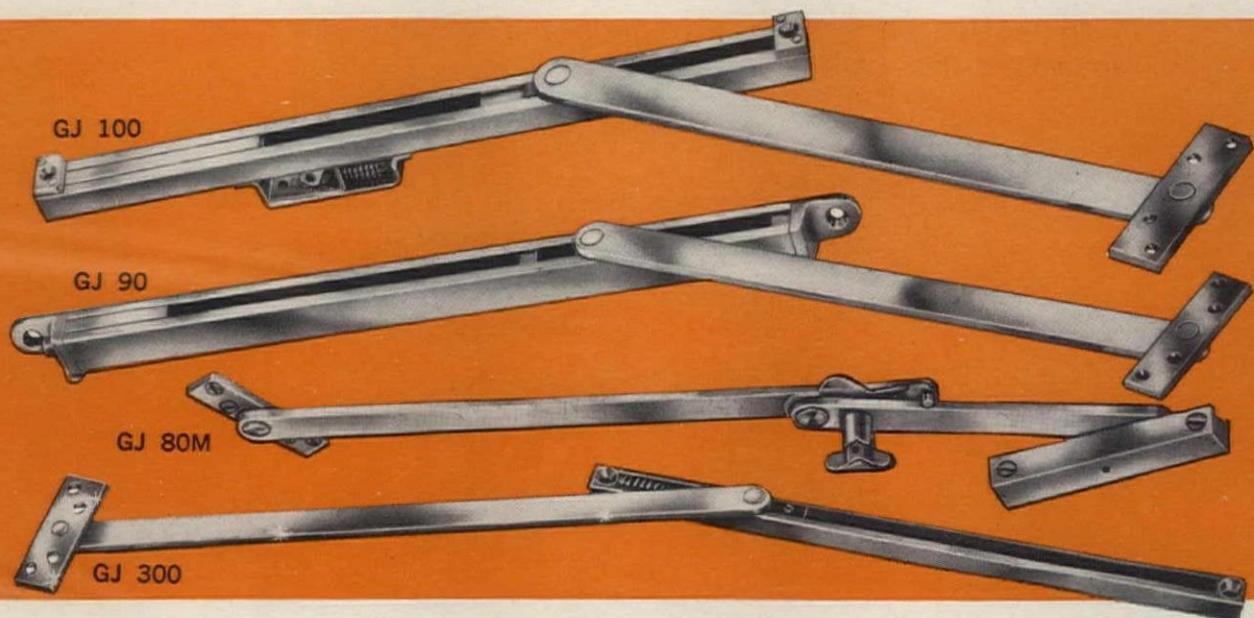
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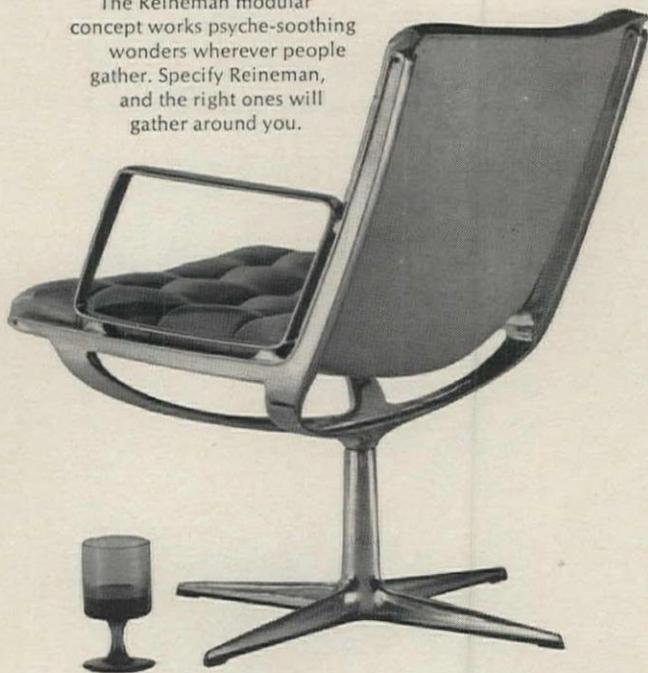
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Continued from page 200

illustrations are the products of the camera (some so familiar that they pass by almost unnoticed).

The Tokyo Hotel is once again reviewed as structurally sound and once again survives when all about is reduced to rubble; but of what value were Wright's innovative structural ideas to construction techniques in Japan? The columns of the Johnson's Wax project are once again loaded beyond imagined capacity and once again triumph over a parochial building code; but what of the building they shelter? What does it contribute to the administrative operation of this corporation?

The words of the man are in most cases literal translations of public lectures—badly in need of editing. Although they are a more helpful key to understanding Wright, the garbled pantheism of these word-pictures is not specifically illuminating. For instance: "When you become a pencil in the hand of the infinite, as near as any of us will come to God, this thing we call good design begins and never has an end."

The book is both disappointing and dangerous. It is disappointing because the substance of Wright's ideas, although they still have great relevance, is submerged in cant. The book is dangerous because it implies that architects are central to the creation of buildings and that buildings alone are central to the development of architecture. Clients and the society itself are given no importance as healthy generative forces. All flows from the Creator, the Architect, the Master Builder. This posture, if adopted by the profession, would soon reduce architects to inert totems in a bewildering landscape of technological change.

International Irrelevance

BY ARTHUR A. KLIPFEL

RICHARD NEUTRA: 1961-66. Buildings and Projects. Edited by W. Boesiger. Frederick A. Praeger, Publishers, 111 Fourth Ave., New York, N.Y., 1966. 256 pp., illus., \$20. The reviewer is currently working for Paul Rudolph on a low-income housing project for Washington, D.C. He is involved with a group that is studying a concrete prefabricated housing system to be used in New York City and is also working on drawings for a vacation community to be built in Sugarbush Valley, Vermont.

This book is primarily a picture survey of the work of Richard Neutra between the years 1961 and 1966. It also contains a brief introduction that includes a letter written by the architect to the editor. The photographs are artfully taken and the book is in general a pleasure to look through.

What the book lacks, however, is the hard content that might cause another architect to question his own views or stimulate new ideas in him. The introduction alludes to Neutra's concern for human values in an architecture dictated by machine technology. This is a very relevant concern, but the text accompanying the photographs does little to elaborate on this idea.

Perhaps the photographs of Neutra's buildings are in themselves an elaboration. The projects presented are often situated on beautiful sites and the architect achieves a harmony with the land that is laudable. Neutra is one of the few architects committed to the International Style who succeeds in this difficult game. Le Corbusier, for example, never valued this harmony; he separated his buildings from the site with mounds or stilts and let the building form stand in juxtaposition to the surrounding land. Frank Lloyd Wright achieved harmony with the site, but his buildings were not designed with the cold hard lines of the International Style. Neutra's siting successes, however, make no great statement about human values in a technological age.

The problem of human values in architecture is complicated and has not yet been completely defined. The scope of architecture has been vastly broadened by our increasing awareness of the urban problem. We begin to see that architecture involves the interrelationship of all parts of our environment, none of which want to stand still long enough to be measured or analyzed. For example, a building on Park Avenue is an extension of the commuter trains arriving in Grand Central Station. It is also a source of income to some group of investors and a vertical extension of a certain piece of property along the avenue. It is a definer of space. It is the end product of a particular design process in a particular architect's office. It is something that can be drawn with a T-square and triangle at a drafting table. It is all this and much more.

If human values are to be reintroduced, we must do more than wait for a humanistic style to be invented by the genius architect, because a style is not the answer. The solution lies in an acceptance, understanding, and positive manipulation of all the factors that are affecting our environment.

We cannot demand that every book published within the architectural discipline come to grips with this complex problem. But any book that ignores the problem must run the risk of being called irrelevant. The relevance of Neutra's work will remain a question until it is presented within the context of current concerns.

Credo and Cult

BY BART KALTENBACH

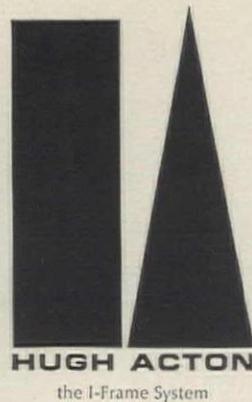
THE ARCHITECTS COLLABORATIVE INC. *Edited by Walter Gropius and Sarah P. Harkness. Published in Switzerland by Arthur Niggli Ltd. Distributed in U.S. by Hastings House Publishers, 151 E. 50 St., New York, N.Y., 1966. 300 pp., illus., \$26.50. The reviewer, who was job captain on a dormitory complex at Clark University when he left TAC a year ago, is now working on design and development of low- and moderate-income housing in Connecticut and Massachusetts with Don Stull at Stull Associates Inc., Boston. He is also experimenting in the Roxbury section of Boston with low-income housing rehabilitation and community planning.*

The Architects Collaborative is a successful firm. It has a unique history of satisfied clients, and a reputation that suggests to potential clients that they will get their money's worth—perhaps even more than their money's worth. There is a kind of predictability about TAC, an assurance that many different types of building can be approached with the same thoroughness and still reflect current solutions; an assurance that buildings can be very modern and still not that controversial, at least not in a way that causes much discomfort.

The book that TAC prepared for Arthur Niggli (in English and German) is as predictable as the firm itself: a carefully organized and honest presentation of what TAC feels it has been in the past and is today. An impressive volume and diversity of work is presented with a well-articulated method of approach and a kind of standard of excellence that exists very much on its own terms.

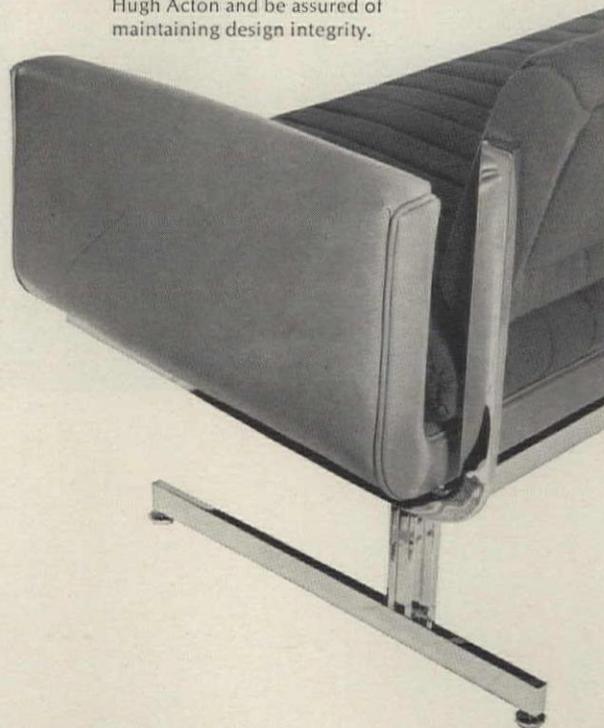
Someone who has been in and around TAC for a while finds himself trying to make connections between what TAC says and what TAC does, in much the same way a reader of the book is inclined to compare the text and graphic materials. Significant questions about TAC arise from this comparison about the kinds of work they choose to accept and the relationship between a method of approach and the results. It is hard to find embodiment of statements such as the following in buildings like the John F. Kennedy Federal Office Building in Bos-

Continued on page 212



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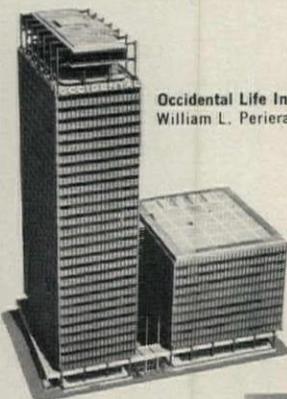


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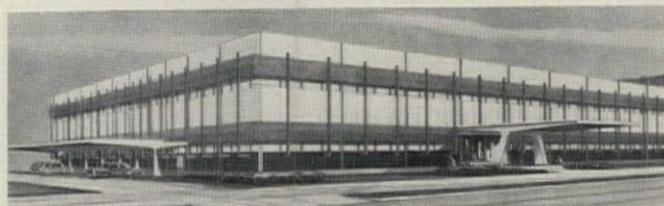
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Continued from page 209

ton and the Pan American building in New York: "A special concern for human and social significance" . . . "The concept of total architecture . . . concerns the whole of our environmental development" . . . "Consistent search for fundamental solutions" . . . "We aim at correlating opposites—the inward with the outward, the solid with the void, unity with diversity."

The verbal presentations of Gropius and others at TAC suggest that the major architectural problems of our time are concerned with cities—in America, primarily with unplanned, poorly organized and decaying cities. They are basic problems: of establishing criteria, developing and interconnecting systems, mass housing, transportation, and scale; problems that probably call for an interdisciplinary approach, a collaboration of specialists. However, in spite of their stated philosophy, the majority of TAC's clients, especially in recent years, have been universities and similar large institutions. In this respect, they differ very little from many large architectural firms, who do not presume to articulate such an extensive credo.

Three projects presented in the book seem to come closer to the stated architectural goals of TAC. Redwood City, the I.B.M. Complex, and the University of Bagdad all share relatively strong planning ideas, notions of social organization, and scale characteristics that are developed very much in terms of human needs and perceptions. Perhaps the success of these projects is related to the fact that all three are isolated complexes, organized around ideas and programs that TAC participated in developing with the clients.

Over the 20 years of TAC's history, the work of one man has developed in a strong direction of its own. Benjamin Thompson's projects, significantly contrasted with his vacuous poetics, have clarity of organization, strong and refined composition, and definite continuity. It is difficult to see how a single vocabulary of materials and technology is universally relevant, but then Thompson, whose projects are limited almost entirely to educational and dormitory complexes, is interested in achieving "a calmness of expression and a strength expressed with harmony and restraint." (It may be significant that Ben Thompson left the Collaborative in 1966.)

Perhaps the 20 years that have passed since TAC came together to practice architecture as a group have seen a change and growth in the complexity of architectural problems that the group was not

Continued on page 216



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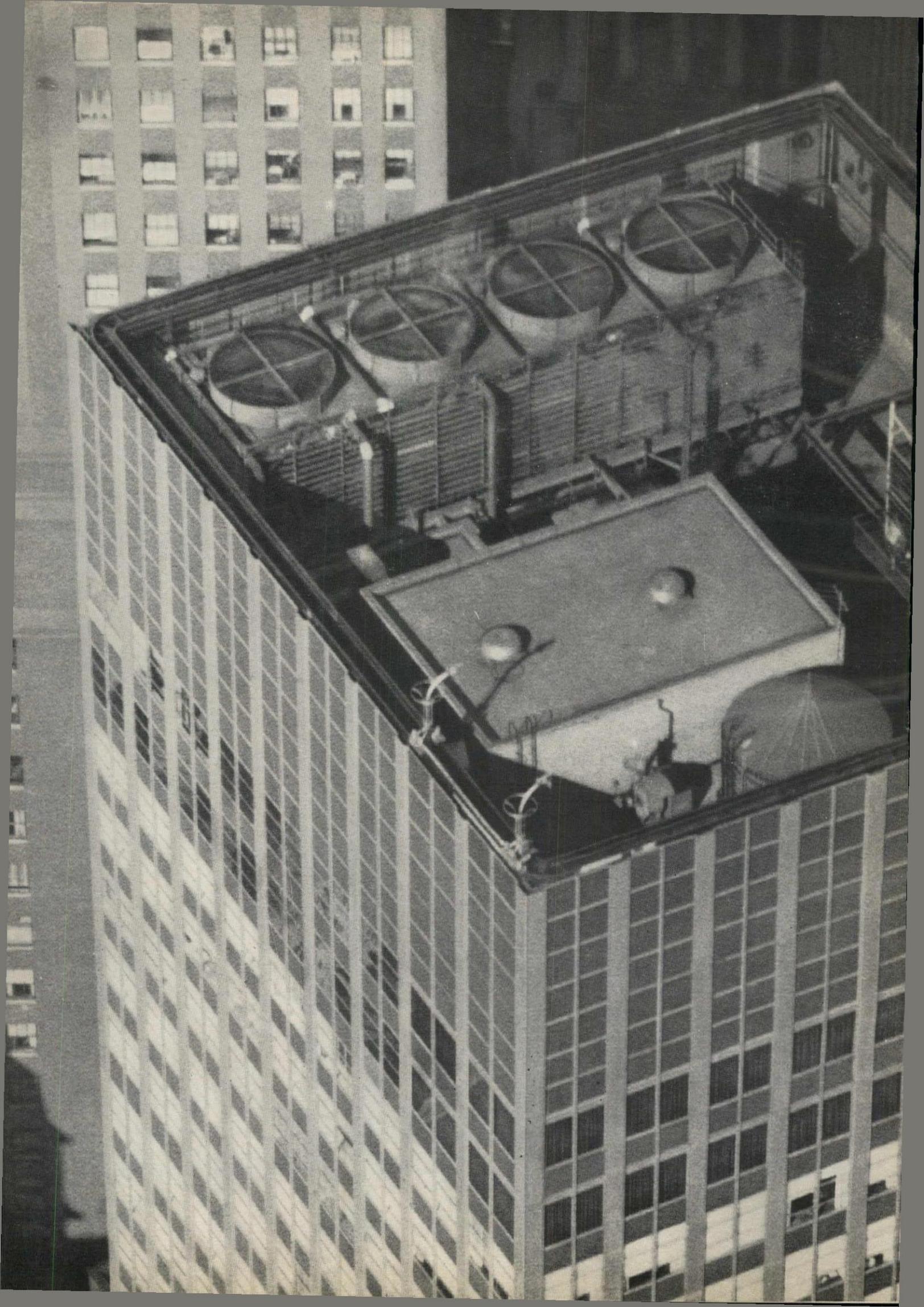
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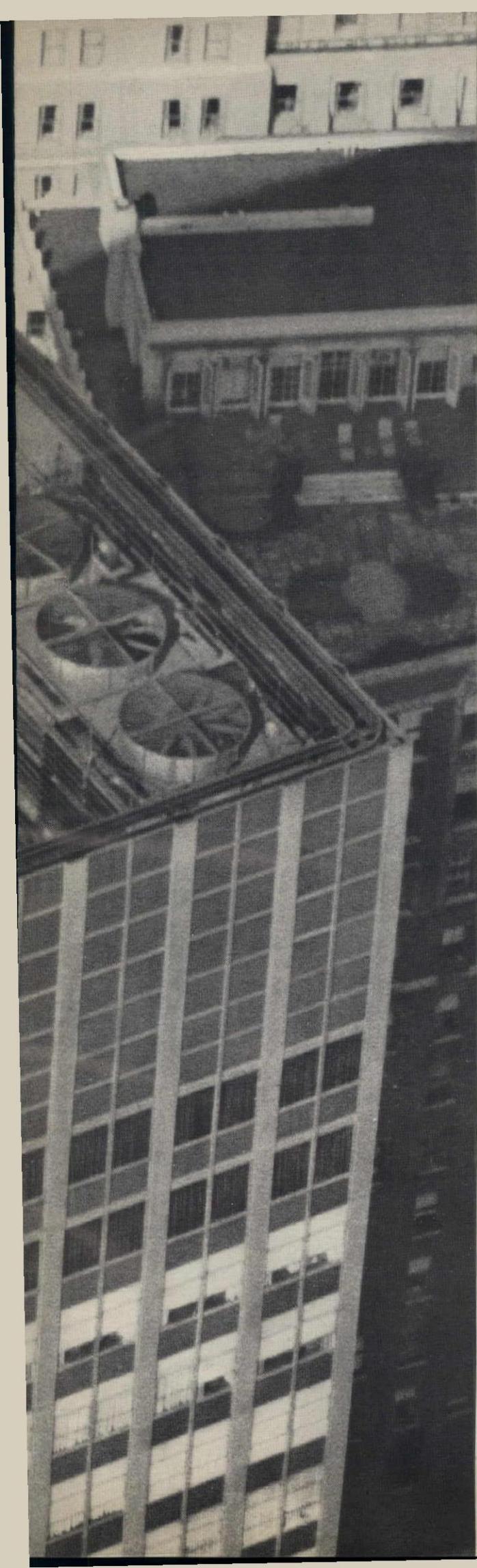
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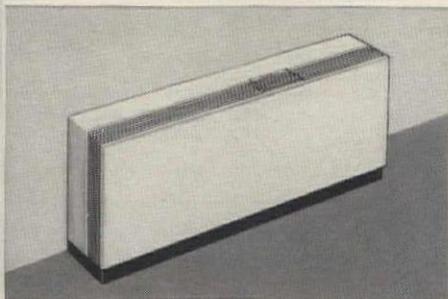
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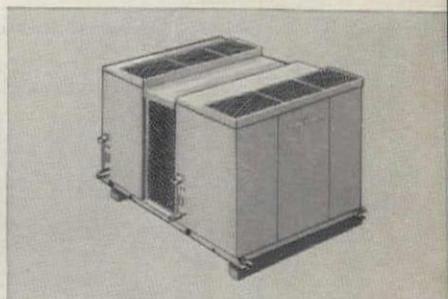
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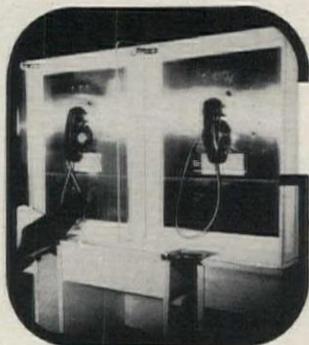
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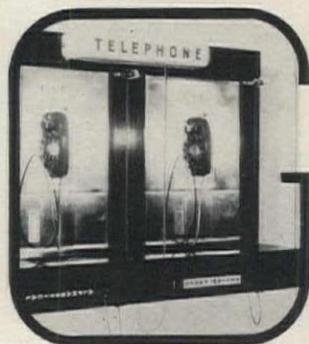
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Continued from page 212

flexible enough to deal with. One wonders if the partners at TAC have not become so concerned with their approach to solving architectural problems as a way of life, a narrow utopian ideal, that they cannot risk asking many of the questions that should be asked, or making some of the statements that should be made.

BOOK NOTES

Building Physics: Acoustics. By H. J. Purkis. Published by Pergamon Press, Inc., 44-01 21st St., Long Island City, N.Y. 11101. 1966. 141 pp., \$2.96.

Coefficients for Analysis of Four-Span Beams of Constant Moment of Inertia. Stanley Engineering Co., Stanley Building, Muscatine, Iowa 52761. 1966. 190 pp., \$15.

Design of Welded Structures. By Omer W. Blodgett. Published by the James F. Lincoln Arc Welding Foundation, P.O. Box 3035, Cleveland, Ohio 44117. 1966. \$7.

Fastener Standards. Fourth Edition. Industrial Fasteners Institute, 1505 East Ohio Gas Building, 1717 E. 9th St., Cleveland, Ohio 44114, 1966. 401 pp., \$7.50.

I.E.S. Lighting Handbook. Fourth Edition. Publications Office, Illuminating Engineering Society, 345 E. 47 St., New York, N.Y. 10017. 1966. \$15.

The International Style. Henry-Russell Hitchcock and Philip Johnson. With a new foreword and appendix by Henry-Russell Hitchcock. W.W. Norton & Co., 55 Fifth Ave., New York, N.Y. 1966. 255 pp., illus., \$2.95 (paper).

Originally published in 1932 as The International Style: Architecture Since 1922, and now re-issued in paperback.

Living Architecture: Ottoman. By Ulya Vogt-Goknil. Photographs by Eduard Widmer. Preface by Jurgen Joedicke. Grosset & Dunlap, 51 Madison Ave., New York, N.Y., 1966. 192 pp. illus., \$7.50.

Includes an historical essay, and chapters on the Mosque, the Kulliye (the complex of Mosque buildings), religious and domestic buildings of the era, and the baths and caravanserais (similar to inns) with black-and-white photographs, plans, and sketches.

New Architecture in New Haven. Don Metz and Yuji Noga, The M.I.T. Press, 50 Ames St., Cambridge, Mass. 1966. 81 pp., illus., \$2.95 (paper).

Thirty buildings by 15 top architects are shown, usually with one photograph apiece and one plan, accompanied by a sentence or two of brief explanation. One-page statements by Mavor Richard C. Lee and Yale President A.W. Griswold appear in the front and a numbered map of New Haven in the back that shows the locations of the buildings pictured.

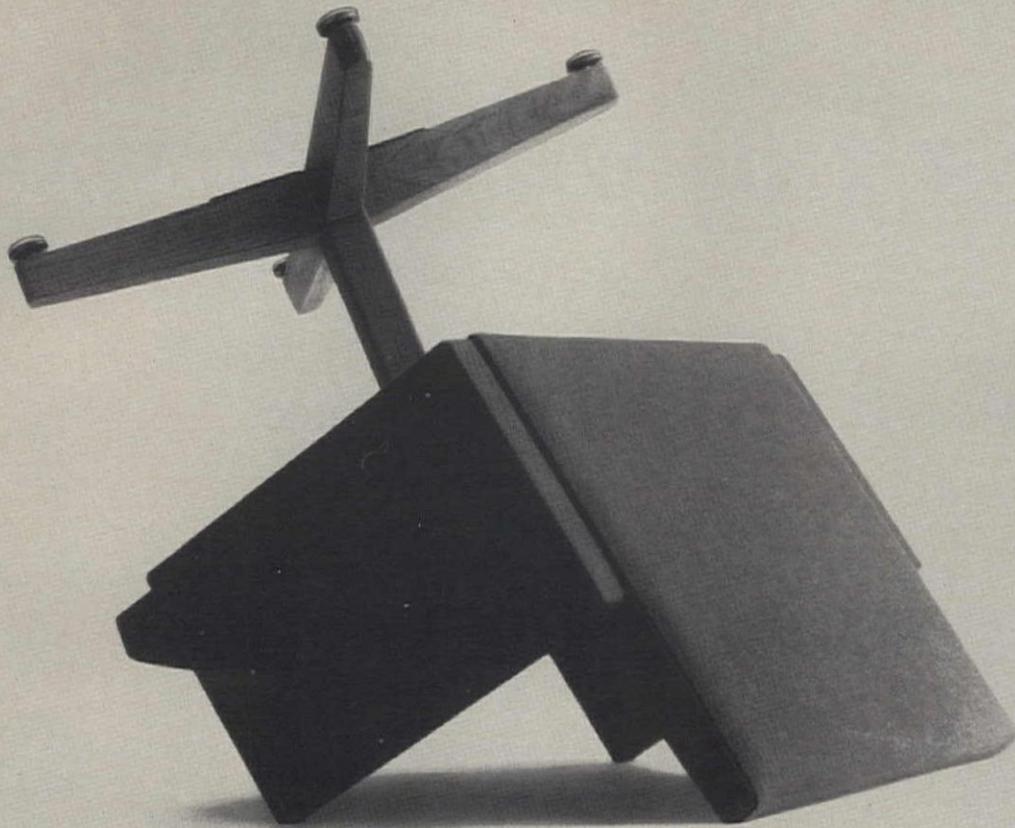
NOTICES

New Addresses

BAYLESS, CLOTFELTER & JOHNSON, Architect and Engineer, 556 North Broadway, Lexington, Ky. 40508.

RANCER FARRELL & ASSOCIATES, Theatre Consultants, Irvington-on-Hudson, N.Y. 10533.

Continued on page 222



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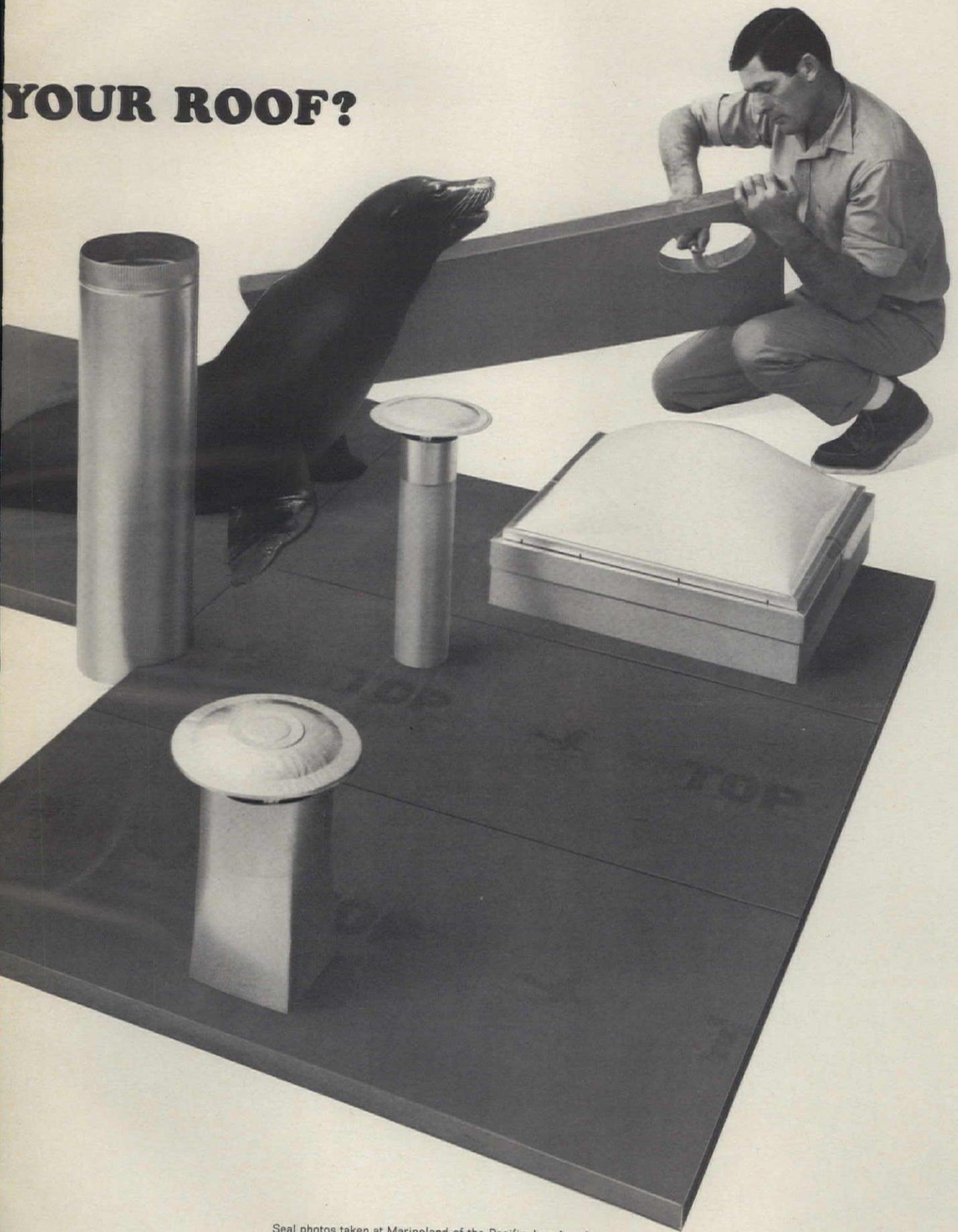
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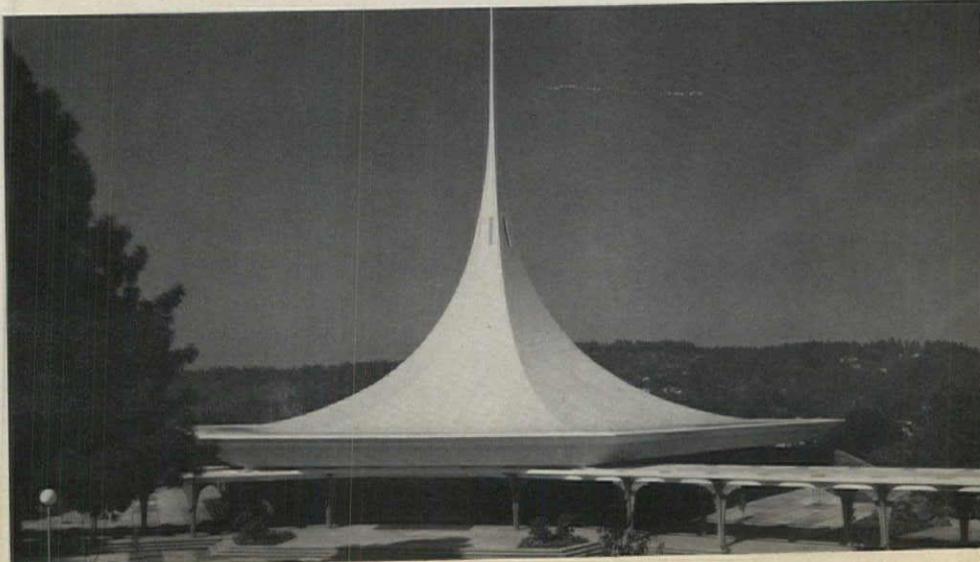
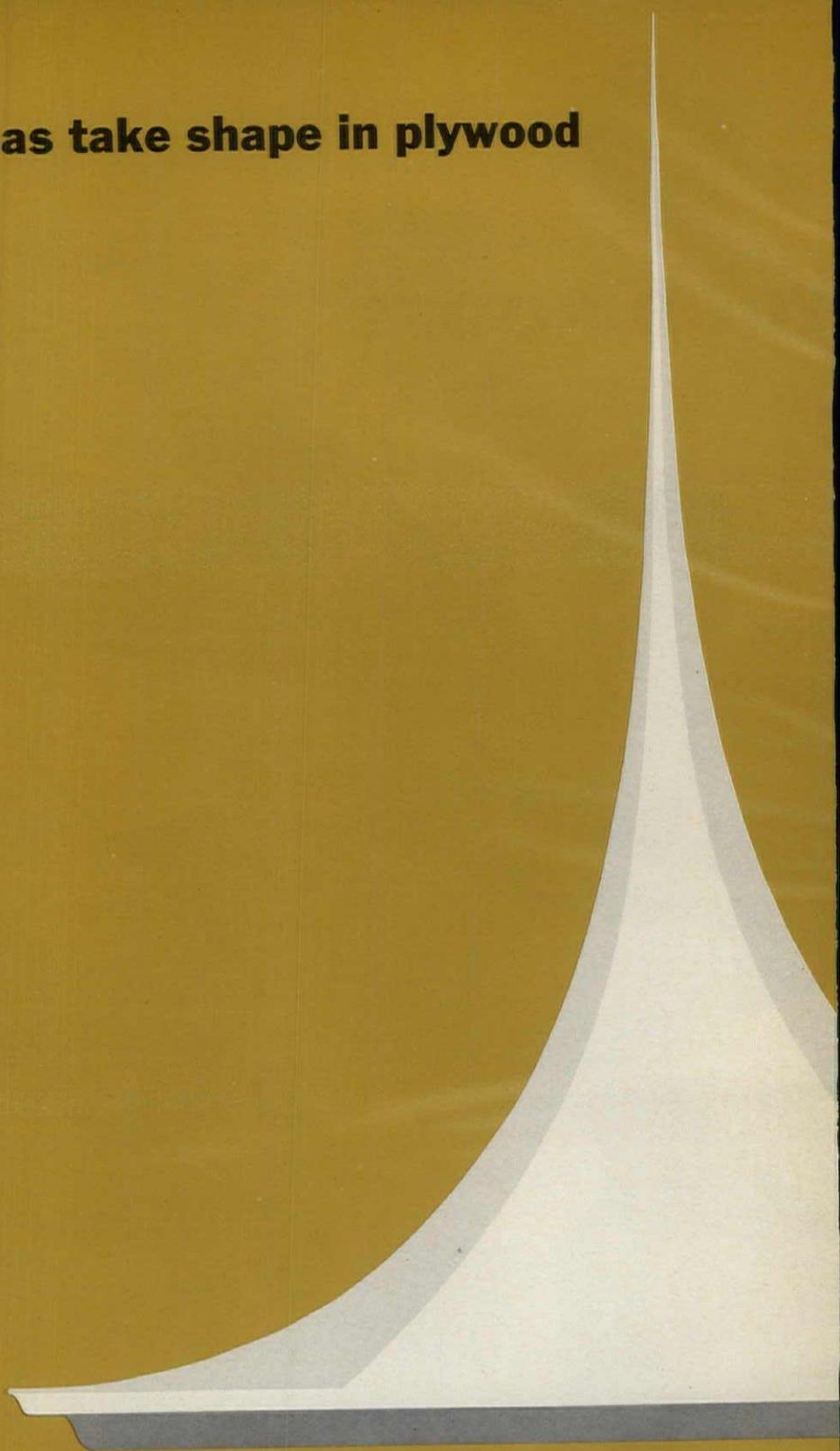
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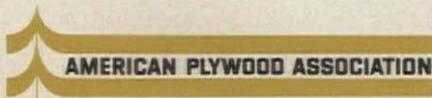
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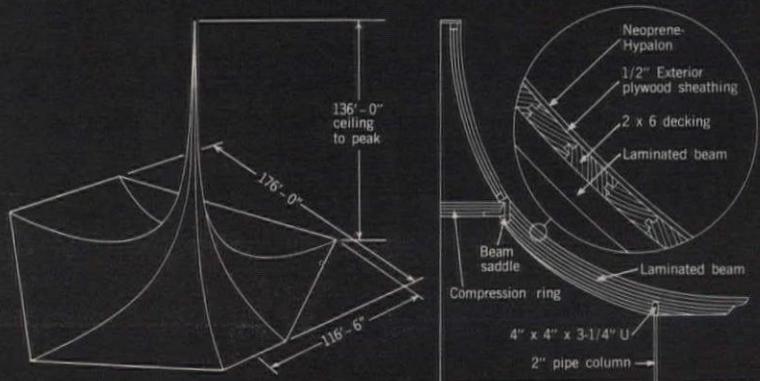


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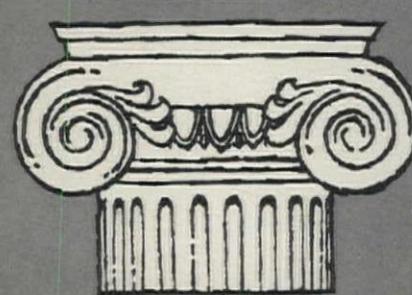


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Continued from page 216

EDGAR ROBERT FIRANT, Architect, 353
Atlas Ave., S.E., Grand Rapids, Mich.

GOODMAN LOWE & ASSOCIATES, Architects,
8 Waterloo Road, Kingston 10, Jamaica,
W.I.

ROBERT HAIN ASSOCIATES, Designers, 725
Park Ave., East Orange, N.J. 07018.

HUGH HARDY & ASSOCIATES, Architects,
257 Park Ave. South, New York, N.Y.
10010.

WIN HOFFMAN, Architect, 600 Hempstead
Tpke., West Hempstead, N.Y. 11552.

HUNT-MARCOTTE & ASSOCIATES, Design
Consultants, 2635 Roosevelt Rd., Kenosha,
Wis.

ISD INC., Interior Space Designers, 866
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New Firms

FANNING & HOWEY, Architects-Engineers,
P.O. Box 71, Celina, Ohio 45822.

GUERNSEY & WATKINS, Architects-Engi-
neers, P.O. Box 53247, 2701 N. Oklahoma,
Oklahoma City, Okla.

IRWIN B. LEFKOWITZ, Architect, 100
Stevens Ave., Mount Vernon, N.Y. 10550.

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632 Pirates Alley, New Orleans, La. 70116.

JONAS VIZBARAS, Architect, 518 Willis
Ave., Bronx, N.Y.

New Partners, Associates

WALKER O. CAIN & ASSOCIATES, Archi-
tects, New York, announce the admission
to partnership of JOHN GRAY FARON and
JOHN J. FARRELL.

FREDERICK G. FROST JR. & ASSOCIATES,
Architects, New York, N.Y., announce the
appointment of P. WHITNEY WEBB as an
associate in the firm.

GOLEMON & ROLFE, Architects, Houston,
Tex., have named JASON WILLIAM FRYE
a senior associate.

HOLFORTY WIDRIG O'NEILL & ASSOCIATES
INC., Consulting Engineers, Troy, Mich.,
have named CALVIN J. SAARI an associate
in the firm.

JAMES M. HUNTER & ASSOCIATES, Archi-
tects, Boulder, Colo., announce the addi-
tion of JOHN A. THACKER and JEREMIAH
P. WHITE as associates of the firm.

Elections & Appointments

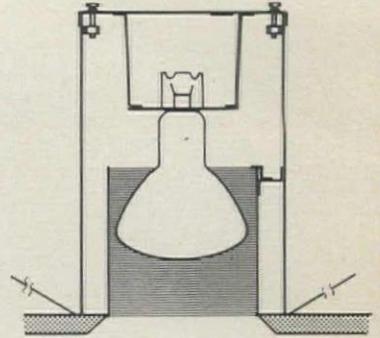
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neers, Architects, and Management Con-
sultants, Jackson, Mich., have announced
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dent and chief executive officer.

NEW YORK BOARD OF TRADE announces
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tect, to the board of directors.

P & W ENGINEERS, INC., Chicago, Ill., an-
nounce that ARTHUR C. HAUSWALD has
joined the firm as vice-president of struc-
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Continued on page 226

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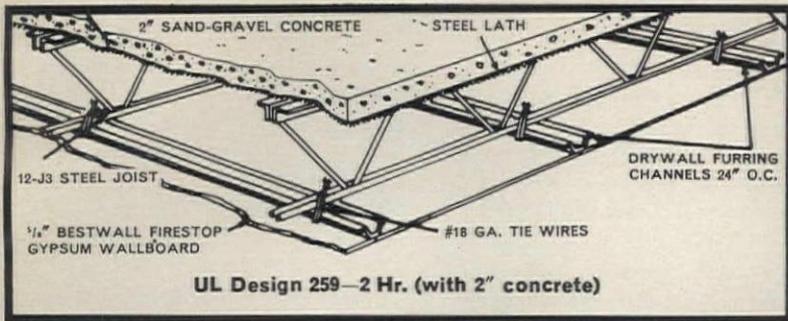
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Continued from page 222

SAPHIER, LERNER, SCHINDLER, INC., Space Planners and Designers, New York, N.Y., have named FRED BLOCH design and technical director.

WELLS M. SQUIER ASSOCIATES, INC., Interior and Environmental Designers, Lauderdale-by-the-Sea, Fla., have named RICHARD DOLAN vice president in charge of design.

THE UNIVERSITY OF TENNESSEE, Knoxville, has appointed ROBERT B. CHURCH, III, to the faculty of their School of Architecture.

Name Changes

BASS, ELLISTON & ASSOCIATES, Architects and Engineers, Nashville, Tenn., upon the formation of a partnership; formerly, ROBINSON NEIL BASS.

BOOZER, JENKINS, ARCHITECTS, INC., Anniston, Ala., upon the admission to partnership of JULIAN WELDON JENKINS; formerly, S. DAVID BOOZER.

BURKE, KOBER, NICOLAIS & ARCHULETA, Architects and Engineers, Los Angeles-San Francisco, Calif., upon the admission to partnership of MILLARD J. ARCHULETA, JR.; formerly, BURKE, KOBER & NICOLAIS.

WALKER O. CAIN & ASSOCIATES, Architects, New York, N.Y., upon the retirement of MILTON B. STEINMANN; formerly, STEINMANN & CAIN.

DECKER, KOLB & STANSFIELD, Architects, Seattle, Wash., upon the formation of a new partnership; formerly, RALF E. DECKER.

DRAYTON & LINDSAY, Architects, Crystal Lake, Ill., upon the admission to partnership of FREDERICK B. LINDSAY; formerly, ROBERT J. DRAYTON.

HENRY DREYFUSS & ASSOCIATES, Industrial Designers, New York, N.Y., upon the admission of associates JAMES M. CONNER, NIELS DIFFRIENT, and DONALD M. GENARO; formerly, HENRY DREYFUSS.

KING & ARIEV, Architects, Hartford, Conn., upon the admission to partnership of THEODORE ARIEV; formerly, CHARLES A. KING.

LAMBERSON, PLUNKETT & SHIRLEY, Architects, Atlanta, Ga., upon the reorganization of the firm to include ROBERT B. PLUNKETT and EDWARD H. SHIRLEY as partners, and R.L. WOODDALL, JR. as an associate; formerly, BODIN & LAMBERSON.

THE MOORE & HUTCHINS PARTNERSHIP, Architects, New York, N.Y., upon the addition to the partnership of GILLET LEFFERTS JR., and WILLIAM R. EVANS; formerly, MOORE & HUTCHINS.

RUSSELL-MELTON-ASSOCIATES, Architects, Miami, Fla., upon the admission to membership of HOWARD IVY MELTON, JR.; formerly, T. TRIP RUSSELL & ASSOCIATES.

SAUER & DEVITO, Architects, Philadelphia, Pa., upon the formation of a partnership; formerly, LOUIS SAUER.

EDWARD DURELL STONE & ASSOCIATES, New York, N.Y., upon the formation of a partnership with STANLEY TORKELSEN, WILLIAM B. SMITH, VINCENT FURNO, and JOHN C. HILL; formerly, EDWARD DURELL STONE.

THOMAS, KOLBE, THOMAS, POPONI, Architects, Pennsauken, N.J., upon the admission to partnership of NESTORE POPONI; formerly, THOMAS, KOLBE, THOMAS.

Miscellaneous

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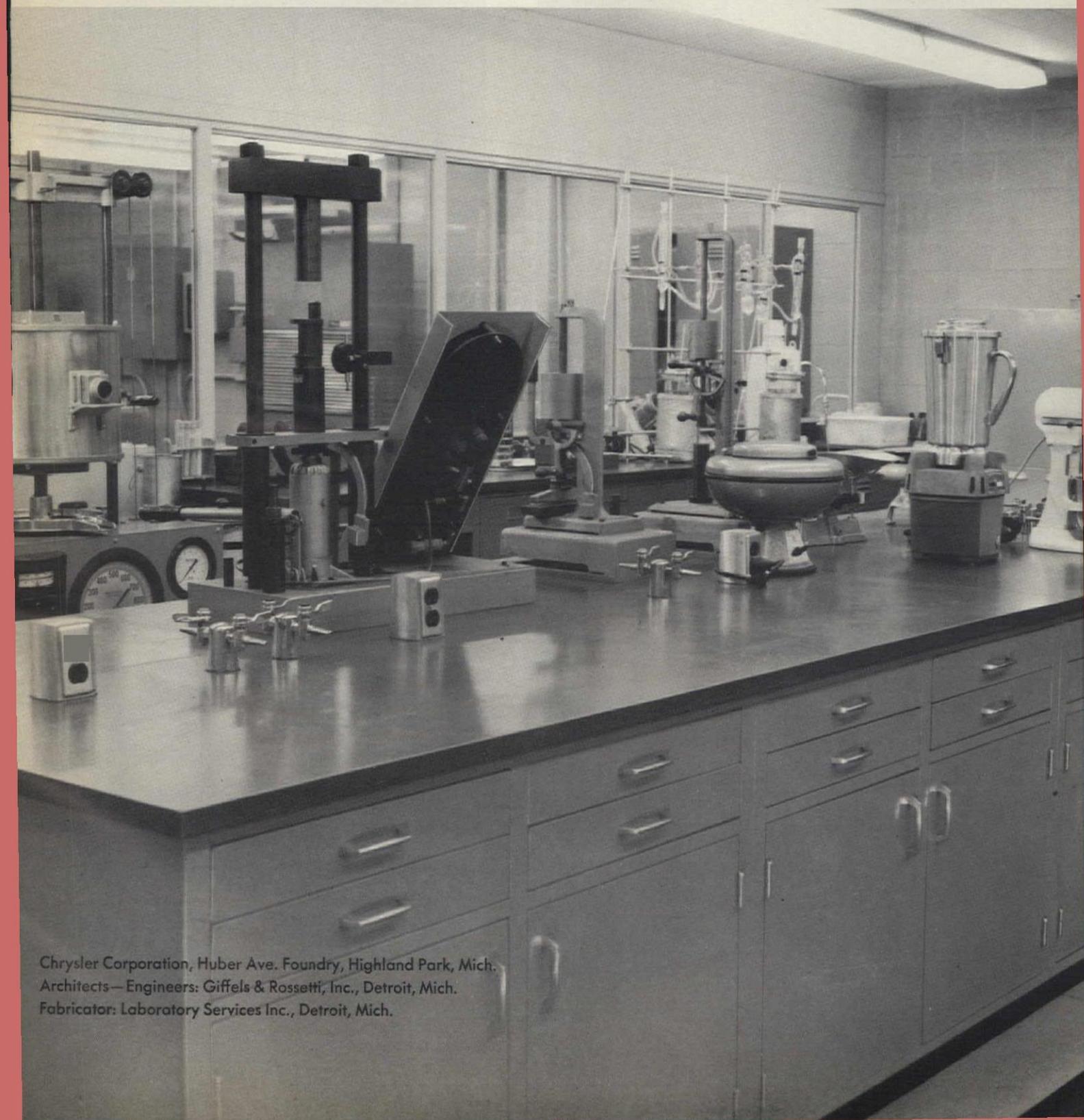
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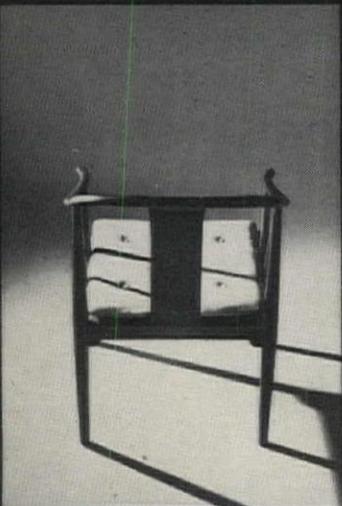


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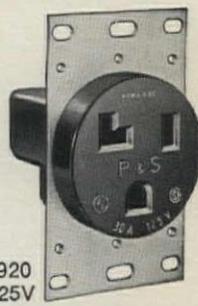
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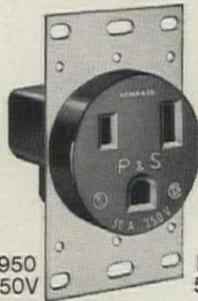
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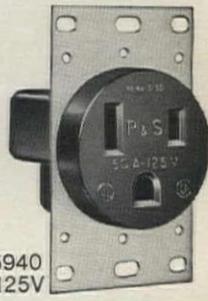
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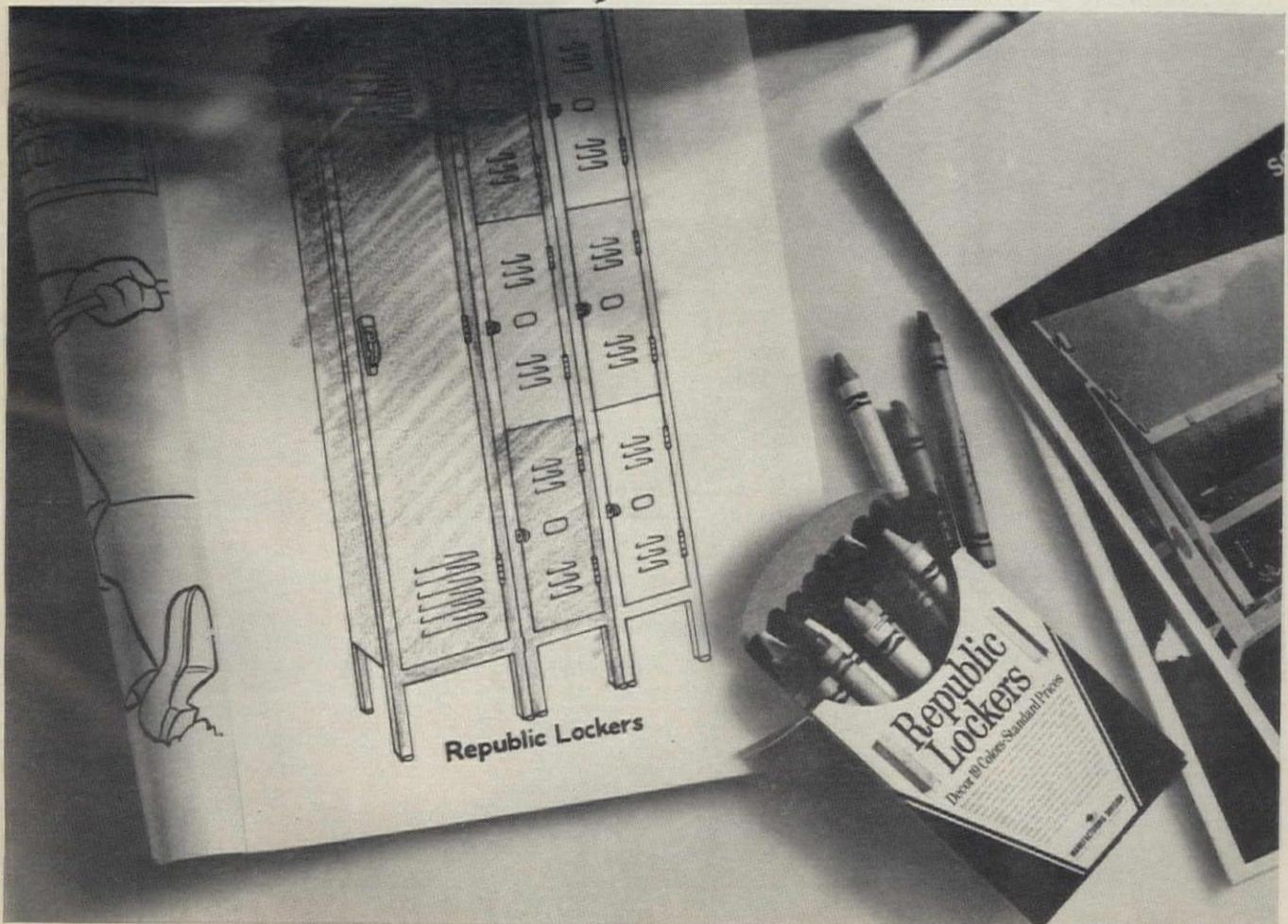
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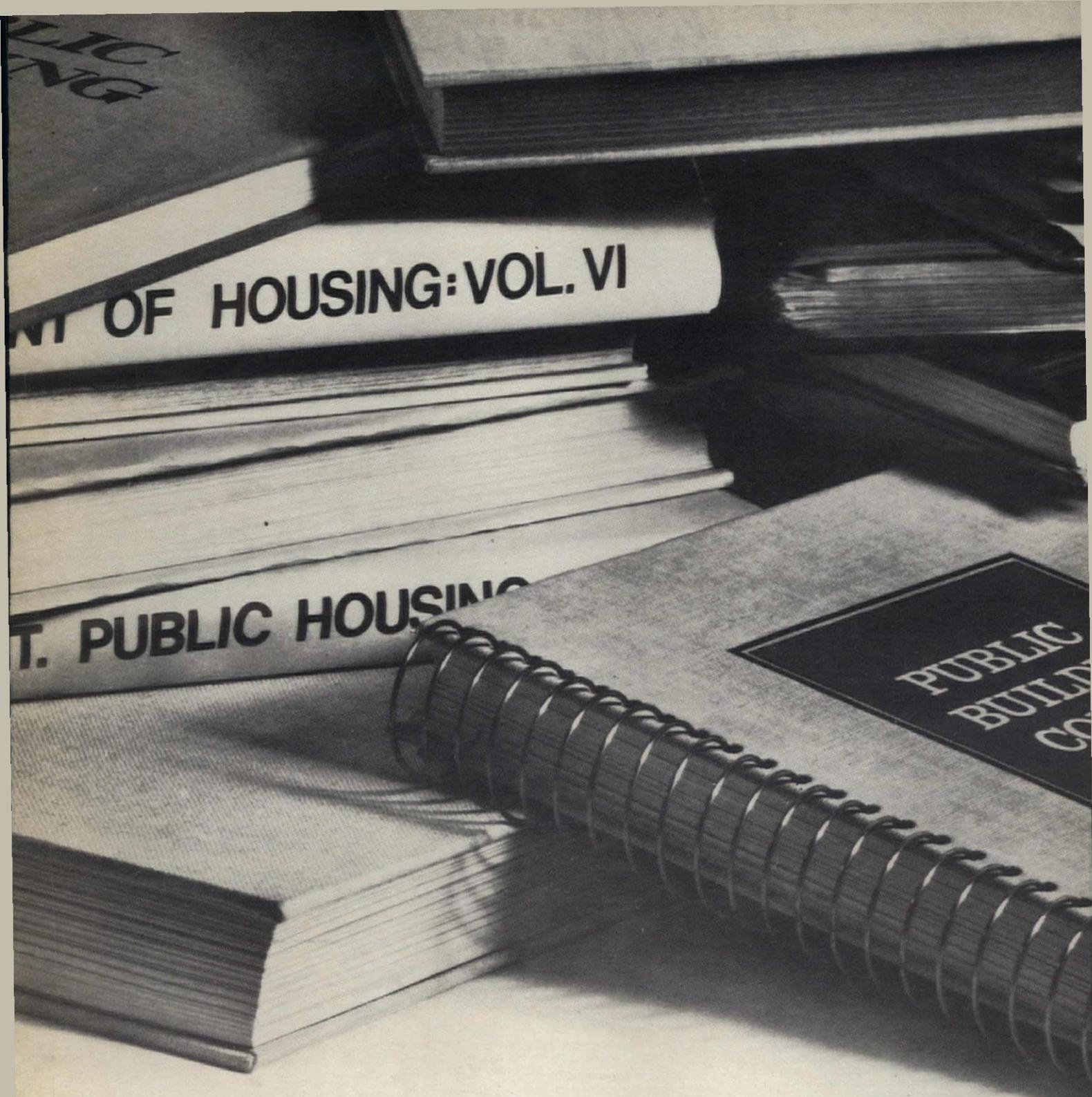
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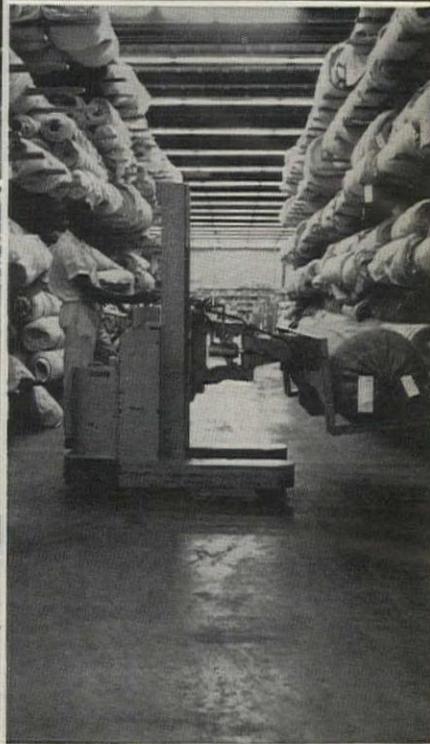
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MASTERPLATE's malleable aggregate absorbs impact without fracturing. The dense surface is non-dusting,

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MASTERPLATE is backed by over 55 years of engineering and manufacturing experience, and proven through use on over one billion sq. ft. of industrial floors.

Specify MASTERPLATE for your next job. It's industry's toughest floor. For details call your local Master Builders field man, or write Master Builders, Cleveland, Ohio 44118 and Toronto 15, Ontario.

MASTERPLATE[®]
manufactured by
MASTER BUILDERS

For modern luxury, nothing beats Acrilan.[®] Nothing

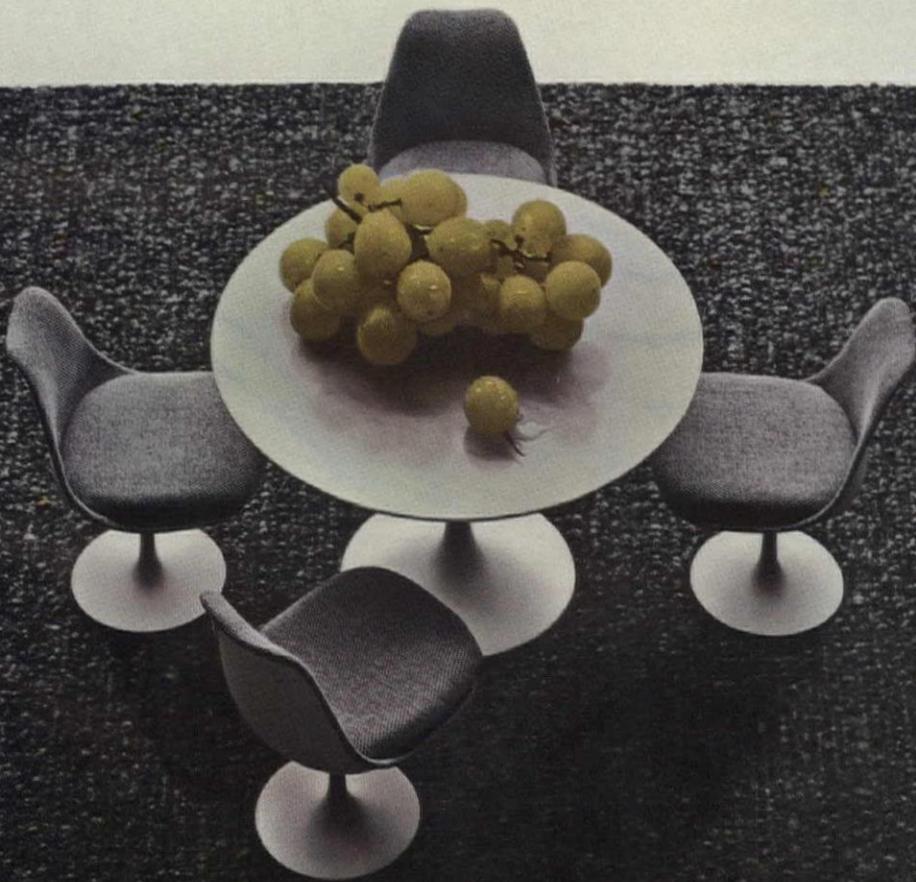
Acrilan acrylic has two kinds of luxury. The kind you see with your eyes and feel through the soles of your feet.

And the luxury of not having to be treated as if it were a tapestry. A carpet of Acrilan is made to retain its luxurious appearance in the face of repeated punishment.

It actually bounces back after being stepped on by thousands of feet. And it's simple to clean.

A carpet made with Acrilan[®] acrylic fiber in the pile is also mothproof. Mildewproof. Non-allergenic. You see, like all good modern things, Acrilan is functional as well as beautiful.

Which is the utmost in luxury for your client, isn't it?



Monsanto Textiles Division, New York, N.Y. 10001.



On Readers' Service Card, Circle No. 313



KenCove Vinyl Wall Base colors: 10. Heights: 2½", 4", 6". Length: 48".

These hands can cost your clients as much as \$8.20 per hour.*

Shouldn't they install the quality wall base?

Since labor can account for more than half the installed cost of a wall base, it's just good sense to use high-quality KenCove® Vinyl Wall Base. With KenCove you avoid costly call-backs. No shrinkage problems. Corners can't get kicked off—they're formed right on the

job, as part of the base itself, not separate pieces. KenCove is 1/8" thick—hides wall irregularities. Yet it costs only a penny or two more than thin, lightweight bases. Call your Kentile® Representative for samples and additional information.

*Bureau of Labor Statistics, U.S. Dept. of Labor. Figure includes normal markup of contractors. (Labor rates vary from region to region.)

KenCove full-thickness
Wall Base from the makers of

KENTILE
FLOORS