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On Readers' Service Card, Circle No. 368 6 Views

YOUR POINT OF VIEW

Crash Programs Needed For Good Health

Dear Editor: I am proud to be a subscriber to a magazine that so forthrightly states the case for improved health care in the U.S. (FEBRUARY 1969 P/A). This is a subject that I have researched extensively; also, I have had a number of doctors as clients and have had, over an 8-year period, three medics working for me.

The most positive and farreaching solution to the wretched state of the medical profession is to double the number of dentists and doctors. There is no reason why we should not have the traditional supply and demand balance in medicine, as we have in architecture, engineering, law, chemistry, and so on. With the advent of competition in medical practice, there would result much improved service, less waiting, lower fees, and more emphasis by the individual doctor on preventive medicine because he would be judged on how effectively he keeps his patients healthy and out of hospitals. The latter result would be tremendous in its effect on hospital costs and overcrowding.

How do we increase the manpower supply in a short period of time? First, reduce the curricula to a reasonable level by eliminating many unnecessary, even if desirable, courses of study. There is no more need for three or four years of pre-med than for the same in the other professions. Second, through direct Federal Government aid and action, double the physical capacity of medical colleges. Crash programs built the facilities needed for space projects and the atomic bomb. So what is more vital than good health?

> ALLAN C. JOHNSON 151 Orange Drive San Luis Obispo, Calif.

A Matter of Credit

Dear Editor: In reading the article "Forms as Process" (APRIL 1969 P/A), small issues of errata occurred, but they are not truly important. There is one omission, however, that is. The staff working in evolving our work and in making it come to reality is too small to be anonymous. And more than the anonymity, it takes too much of a person's life not to have recognition on publication. Therefore, this note to acquaint you and the readers of persons involved:

■ St. Matthew Methodist Church has had the patient devotion of Arthur Muschenheim, Richard Franklin, Charles Duster and Will Rueter.

■ Northwestern University. The Biological Science Building should list James DeStefano, Alan Hinklin, and Robert Wesley. And the Core & Research Laboratory-Library should credit Robert Kleinschmidt for interiors.

■ Lindheimer Astronomical Research Center should credit Ralph Warburton (now in Washington, D.C.), Robert Peters, and Alan Hinklin.

■ The University of Iowa Basic Science Building should credit Maris Peika, Charles Barr, Dennis Kilper, Alan Hinklin and Robert Wesley.

■ University of Illinois at Chicago Circle should list Arthur Muschenheim, Jack Falkenthal, George Hays, Will Rueter, Robert Hutchins, George Osako, Andrew Smith, and Kenneth Wertz.

■ To complete P/A's credits for the movie, Krystyna Cianciara should be considered "Set" Designer.

> WALTER A. NETSCH Chicago, III.

JUNE 1969 P/A







North Elementary School, Waukegan, Illinois Architect–Swanson & Ladehoff



St. Christines-Industry, Pa. Architect-Kenneth Roos



Fort Crook School, Omaha, Nebraska Architect–Martin, Money and Assoc. Contractor–Butler Construction Co.

FENMARK Grid Wall System's Clean, Ultra-Thin Profile Brings The Outdoors Into School Classrooms

ARCHITECTS PREFER THE TOTAL DESIGN FLEXIBILITY OFFERED BY

FENMARK all-steel GRID WALL SYSTEM

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With the Core system, a variety of depths of faces and gutters permit significant design options and freedoms. Creative approaches to glazed aluminum framing systems are not hobbled by component limitations. You may choose a strong horizontal emphasis or the feeling of vertical strength. It's all the same to the Core system. And, flush snap locked faces put an end to appearance marring exposed screws, stops, and putty—plus, faster installation! Face members lock to gutters with an internal, invisible clip—an important detail. Core systems accommodate glazing for 1/4" to 1".

Core is available in Kawneer Permanodic[®] bronzes and black. These stable finishes are achieved with special anodizing processes, not dyes, and are almost twice the thickness and hardness of standard clear anodized finishes. Permanodic is non-fading, resists corrosion, abrasion, and dulling effects of time, weather, and industrial atmosphere.

For details on Core systems, contact your Kawneer authorized dealer or write Kawneer Product Information, 1105 N. Front St., Niles, Mich. 49120. *U.S. Patent No. 3,081,849

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THE KAWNEER CONCEPT: Attention to detail

- -----

the beautiful world of reinforced concrete is building fast... two floors a week!



That's right. Philadelphia's newest office complex climbed that fast. It's the thirty-two floor, Industrial Valley Bank Building. Cast in versatile, economical reinforced concrete. With slim columns. On 30' spacings. Offering approximately 30,000 sq. ft. of ultra-flexible office space per floor. Exterior panels are dramatically sculptured reinforced steel precast sections that run 30' wide and a full story in height. The IVB Building is another example of the many benefits high-strength reinforcing steels offer in modern concrete building design. Structures that get underway without long fabrication delays. That build fast. Offer greater utility. Less maintenance. And take less time and money to get the job done. With unmatched aesthetic excellence. Check it out. You'll find no other medium has more to offer.



Grade 60 Steels*. Here's new strength and economy in a one grade package. Ultimate Strength Design (USD) utilizes fully its 50% greater yield strength. Helps achieve slimmer columns. More usable floor space. Lowers overall construction costs. Let grade 60 help you meet the challenge of the 70's whatever you're building. Write for new Grade 60 Steel Brochure.

"Grade 60" the new term that describes ASTM specs for 60,000 psi reinforcing steels as upgraded in 1968.

Philadelphia's Industrial Valley Bank Building Architect: Charles Luckman Associates, 521 Fifth Ave., New York, N.Y. Consulting Engineers: Hertzberg & Cantor, New York, N.Y. Contractor: Tishman Realty & Construction Co., New York, N.Y.

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2-69 CONCRETE REINFORCING STEEL INSTITUTE 228 North La Salle Street • Chicago, Illinois 60601





Arkansas State Highway Engineering Building, Little Rock, Ark. Arch: Ginocchio-Cromwell-Carter & Neyland, Little Rock, Ark. Contr: Bush Construction Co., Hot Springs, Ark. Appli: Gene Walters.

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Finish and waterproof concrete without the high costs of labor and materials. An outstanding example of Thoro Products at work is this Arkansas building which had all concrete surfaces sprayed with THOROSEAL PLASTER MIX, a cement-base, waterproof coating. ACRYL 60 was added for superior bond. Now, this building is protected and attractive for years to come.

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It's a mercury vapor area light—as functional as it is beautiful.

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By day, it's a picturesque, charming post light that adds just the right note of welcome and hospitality.

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HEUGATILE LOOSE-LAID CARPET SQUARES... TOTALLY NEW CONCEPT IN CONTRACT CARPETING!

Revolutionary new Heugatile carpet squares are loose-laid ... remain securely in place without adhesive, tack-strip, or underpad. Thus, long-wearing Heugatile carpet squares can be rotated—as required—to equalize wear, retard the development of wear patterns, and keep the entire carpet young-looking longer. Heugatile ... the world's only totally-interchangeable, "rotatable" carpet squares!

At Stratfield Motor Inn in Bridgeport, Connecticut ...

Heugatile loose-laid carpet squares replaced terrazzo and ordinary carpet. Hard-surface terrazzo is cold, noisy, dangerously slippery, and costly to maintain (requires frequent sweeping and mopping). Ordinary carpets develop threadbare traffic paths. But Heugatile solves these problems. And more ...

- Long-wearing Heugatile carpet squares can easily be rotated to extend their life.
- Most stains are easily sponged off with warm water and mild detergent.

If a square is permanently damaged, just replace it in seconds. No cutting, matching, or patching as with ordinary carpets!

Heugatile drives maintenance costs down! A test installation of 108 sq. yds. of Heugatile in a busy hallway reduced maintenance time from 12 hours per week (hard-surface flooring) to 2 hours per week (Heugatile carpet squares)—a saving of \$29.75 per week in the test area alone!

Heugafelt—one of 4 Heugatile carpet-square products—is highly resistant to cigarette burns!

See why we call Heugatile "The Problem Solver"? Even the name is tough. Heugatile. ("You-Ga-Tile").

Heugatile carpet squares are unconditionally guaranteed to remain in place. Will not shift under foot, wheel, vacuum or cleaning equipment when installed according to installation manual.

See Heugatile "specs" in Sweet's 1969 Architectural & Interior Design Files.

When visiting the Summer International Home Furnishings Show and NEOCON, see all 4 Heugatile carpet-square products at: Chippendale Co., 325 North Wells Street, Chicago, Illinois 60654.



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When it comes to setting thermostats, the girls in Martin Dorm each do their own thing.

Midwestern Collège, Dennison, Iowa, is a brand-new coeducational school that began in October of '65.

Now, when you start off new like Midwestern did, you can have the latest of everything.

Take Martin Dorm, for instance. Wallto-wall carpeting, panelled walls in each room.

And to really spoil the gals, each room has its own GE Zoneline heating/cooling unit. So the coeds can set any temperature that pleases them. How's that for individuality?

But don't get the idea this is a rich kids' school. Not so. Midwestern is run on a taxpayers' budget. It's a gem of architectural efficiency.

That posh Zoneline comfort, for example, actually cost Midwestern a good bit less to install compared to traditional heating and air-conditioning systems.

True, any good zonal heating/cooling system could have done the job for Midwestern. So why was GE Zoneline the choice?

For one thing, GE service is nearby—a comforting thought to the building maintenance staff. Although with Zoneline you can keep a spare unit on hand for instant replacement. What could be easier?

The architects naturally considered GE exclusives in choosing Zoneline.

The GE rotary compressor, for instance, is much quieter than the reciprocating type generally used. Quiet enough to save a midnight complaint because of noisy air conditioning. For quietness, too, GE has a special low-speed blower.

Also nice to know, the unique GE Spinefin coils use continuous tubing to eliminate many of the brazed joints found in most air conditioners. Every brazed joint is a potential refrigerant leak. Who needs headaches like this?

Zoneline controls are prominently located on top of the chassis, and so simple, a coed's little sister can operate them.

For added reliability, GE keeps the electrical connections of each unit on the room side of the weather barrier. Why give weather a chance at them?

There are many more GE features the architects liked. The attractive grille, the washable air filter, the unique interior baffle, the positive seal air vent and so on.

Maybe the same features are what you're looking for in your next dormitory or office building. Find out, Check out a Zoneline application near you. Your GE Central Air Conditioning Distributor will tell you where.

Zoneline Cooling and Heating Systems.



A proposal for an expandable branch bank.

Architects: Zaik/Miller, AIA Interior Planning: George Schwarz

One of a series of design innovations commissioned by Weyerhaeuser Company.

640065



Weyerhaeuser Company has commissioned a number of leading architectural firms to create design innovations which highlight the potential of wood in public and commercial buildings. This original design by Zaik/Miller, AIA, Portland, Oregon, is the 17th in the series.

"There is a need in branch bank operations for structure that can respond to changing needs. Today, banks need buildings that can grow." "Branch banking is based on the soundest of principles: Take services to the customer instead of waiting for the customer to bring business to the bank.

"But in the rush to establish outposts in suburban shopping centers, industrial parks and outlying neighborhoods, a good many banks have outrun their architects. They've set up shop in make-do prefabs, old stores,



and even in converted mobile homes.

"The results range from unfortunate to costly. And only rarely does a starter bank reflect the image of permanence, trustworthiness, or neighborliness the parent institution would prefer.

"As a solution, we propose an expandable structure which, from the outset, includes all of the amenities of full service banking — and the appearance of it. We suggest not a partial bank, but a miniature one that can grow big gracefully as business expansion warrants it.

"The system is based on 20 x 20foot bays achieved with 2 x 2-foot prefabricated, wood-frame columns capped by 10 x 10-foot cantilevered inverted pyramids. The pyramids would be connected with 2 x 6 framing, and prefabricated roof components dropped over the framing to complete the structural system.

"The form is so designed that it can be expanded in any direction. Or, completely dismantled and reassembled on another site."

Saulzaik



The interior plan: Modular bank fixtures designed to fit the 20' bay layout. The site would be 200' square, preferably, and the starter unit 1200, 2400 or 3600 sq. ft.



The structural system is based on 2' x 2' prefabricated wood frame columns with inverted pyramid caps. Skylights, and/or light fixtures, are centered in each bay.

Interiors that provide a setting appropriate to a financial institution.

The interior, like the structural shell, is designed for expansion. Teller fixtures are plug-in units fabricated with oil finished hardwood plywood. Wheeled coin units are on a 4' module. Officers' furniture is built into a radiating screen wall fixture that fits the 20' bay module in a manner that provides necessary privacy for four officers in a minimum of space.

The basic interior theme is established by Craftwall® hard-

wood paneling — warm, inviting, yet distinctive and expressive of stability, and good taste. The ceiling panel design calls for Custom Craftwall with ¼-inch grooves, 1¼ inches on center. Column panels have ¼-inch grooves, 6 inches on center.

Based on criteria provided by banking institutions, the Zaik/ Miller expandable structure provides practical answers to complex architectural requirements. It draws on the best of current technology, yet retains warmth of tradition, never slipping into a mere technical exercise.

And this is the Weyerhaeuser approach. We emphasize technology, supporting the largest research establishment in the wood products industry. But we pursue technical innovation from a design standpoint.

Sign standpoint. For information, call your Weyerhaeuser Architectural Representative, or write to Box B-5761, Tacoma, Washington 98401.



Weyerhaeuser

(On reader service card: Circle No. 308.)



St. Charles.

CUSTOM KITCHENS....for individualists who like having things their own way!

Creativity has no limitations when you work with a St. Charles dealer-designer. He believes in giving people their own way—in *everything!* Concept, colors, materials, dimensions, textures—without you or your client having to make annoying concessions. He can also free you of numerous details and expedite your concept to completion — from the unique custom features you specify to the preferences (and even whims) of your client.

Space-saving storage wall dramatizes St. Charles design, planning, workmanship.

In this custom kitchen, rich antiqued cherry doors are accented by colorful textured cabinets.





CUSTOM KITCHENS

St. Charles Manufacturing Company, St. Charles, Illinois 30 YEARS OF LEADERSHIP IN CREATING CUSTOM KITCHENS · Write Dept. 100 for complete information On Readers' Service Card, Circle No. 379

25% more light thanks to U.





Keene's new family of 24" or 30" square fixtures give you 25% more light than similar units using straight fluorescents. You get high light output with complete interior design freedom. Reason: the new 40-watt U-shaped fluorescent just coming into use.

Being square and non-directional the new fixtures are ideal for modular construction and for large areas where the commonly used 1 x 4, or 2 x 4 linear fixtures would be disruptive to design or construction.

Use any U-tube

What makes our fixture truly one-of-akind, however, is that it uses any major manufacturer's 40-watt U-shaped lamps... the ones with the 6" leg spacing or the $3\frac{1}{2}$ " leg spacing... as demonstrated above.

Sliding sockets

This flexibility's possible because our unique fixtures have adjustable sliding sockets* that secure the lamp, provide the power. What's more each fixture needs only one standard 40-watt ballast versus the two expensive ones required on units that use straight fluorescents. A feature that saves on cost and lets the fixture run cooler.

You save on installation and maintenance as well. Recessed models feature a hinged assembly that puts all electrical components on one side. There are 3 types available: surface, air and non-air, recessed. Want us to shed more light on our new fixture family?

Write: Keene Corporation, Lighting Division, 4990 Acoma Street, Denver, Colorado. *Patent Pending



We've just begun to grow.

Mohawk's Whipcord II. Now with ANSO, the carpet fiber that makes dirt seem to disappear.

commercial carpet.

It gets scuffed, kicked, and wiped n. It lives in a world of dirt and dust nd grime. Yet, it's expected to look reat.

Impossible? Not to the people at ohawk. They use ANSO™ nylon, e carpet fiber that makes dirt seem disappear.

ANSO does strange things with

light. Turns it around to reflect the beauty, color, and texture of a carpet. it's worth it, because ANSO looks But not the common dirt a carpet has to put up with.

ANSO is specially engineered to resist ugly soiling and extreme wear, which makes it ideal for commercial carpeting. Whipcord II is fortified with metallic copper wire and it is permanently static-protected. ANSO

costs more than ordinary nylon. But new. Longer.

ANSO. Mohawk welcomes it.



For details, write: Mohawk Carpets,







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COOKSON Rolling Grilles and Side Coiling Grilles are the Answer.



This Cookson Side Coiling Grille protects 44-ft. of visual display on a 2-sided opening for this store.



And an increasingly important answer to architects and designers involved with the trend

toward open, controlled climate shopping malls where the need for weathertight closures has been eliminated yet the need for security remains.

Combining round-the-clock merchandise display, tight security and great visual appeal, Cookson Rolling



and Side Coiling Grilles can close openings without diminishing air circulation or blocking light sources.

> For more complete information on Cookson Rolling Grilles, Side Coiling Grilles, "Servire" Fire Doors, Counter Fire Doors, Cookson Steel Rolling Doors and Counter Doors, write for Bulletin 6901, or see us in Sweet's.

"Best Way to Close an Opening"

700 Pennsylvania Ave. San Francisco, California 94107

THE COOKSON COMPANY

Literally so, in the new Beneficial Plaza Building on Wilshire Boulevard in Los Angeles.

Designed by Skidmore, Owings & Merrill, San Francisco, the structure blends the warmth of bronze glass and the cool of classic California granite into a striking example of "contemporary renaissance" architecture.

L-O-F hi-performance glass plays a big part in this welcome addition to the downtown skyline. Besides keeping up outward appearances, the bronze-tinted plate glass softens sky brightness, keeps out approximately 44% of



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On Readers' Service Card, Circle No. 361

sun heat transmission, and reduces the cost of heating and air conditioning.

L-O-F has developed many kinds of hi-performance glass. We now offer such versatility in appearance and function that a look at Sweet's is hardly enough. Why not get in touch with an L-O-F Architectural Construction Specialist? Libbey-Owens-Ford Company, Toledo, Ohio 43624.

To California granite add bronze glass. It's beneficial.

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A logical storage One of the problems building designers system for your clients often face is seemingly illogical that of providing adequate storage space. Often, using ordinary storage methods, space problem.

needed for other functions or storage space is reduced to an inadequate size. Result: a compromise with which neither architect or client is wholly pleased.

The answer? Design in Lundia FULL'SPACE, the modern, practical storage systems that provide at least 40% and up to 60% savings in storage space!



Lundia FULLSPACE movable wood units enable you to convert what would be normally inefficient storage areas into neat, compact, well-organized storage and filing systems that make anything stored extremely accessible . . . without hidden or hard-to-reach corners. For new construction, expansion or remodeling, Lundia FULLSPACE is the most logical storage system available —anywhere! Get complete details, suggested plans, layouts and estimates now. Mail the coupon today!



LOGICAL STORAGE SYSTEMS FOR SEEMINGLY ILLOGICAL SPACE PROBLEMS







Put a Bally A Walk-In Cooler/Freezer in the kitchen. Airborne diners like their food fresh, fancy, and on time. Qualify with flying colors by equipping flight food centers with dependable, clean Bally Walk-In storage. Insulated panels can be assembled in any size or shape to fit the most challenging locations. Learn about other features from our 32-page booklet and urethane wall sample.

> There's an evolution in the kitchen



Form and finishthe result of concrete with POZZOLITH



Quality concrete and fine craftsmanship combine to create the well-defined bas relief on the precast wall panels and the graceful molding above the corner vestibule.

Owner: City of Vancouver. Architect: Gerald Hamilton & Associates. Consulting Engineer: Phillips, Barrett, Hillier, Jones & Partners. General Contractor: Imperial Construction Ltd. Pozzolith Ready-Mixed Concrete: Deeks-LaFarge, Ltd. Pozzolith Precast Concrete: Bordignon Masonry Ltd.

The focal point of this four-building complex is a planetarium — a circular structure 130 feet in diameter measuring 165 feet to the apex of its cone-shaped roof. Every surface is curved, sloped or shaped—and the construction material is concrete. Surrounding buildings are constructed from precast panels with moulded surfaces set on reinforced slabs.

From every viewpoint, the \$3.5 million complex exemplifies the inherent advantages of concrete — strength, economy, design flexibility, and reproduction of fine architectural detail.

To achieve maximum results from the concrete, POZZOLITH was the specified admixture in all the mixes. It improved workability of the jobplaced concrete, contributed to the high ultimate strength of precast members, and controlled setting time during placement of the sloping roof and floor slabs.

The use of POZZOLITH on this job, is further proof of a well known fact. POZZOLITH is the specified admixture whenever predictable concrete performance is vital. Your local Master Builders field man can tell you why. Call him or write Master Builders, Cleveland, Ohio 44118.



Gracefully arched wndow frames, precast of PozzoLITH concrete, overlook landscaped interior courtyards.

> The circular planetarium dominates the cluster of museum buildings. Inside, a prefabricated aluminum hemisphere functions as projection dome and ceiling. The auditorium seats 300 people.



THE LARGE SCALE REVOLUTION IN CERAMIC TILE JUST STARTED. RIGHT HERE. RIGHT NOW.

INTRODUCING ...

New 12" x 12" x 1/2" sculptured tiles for floors and walls

You're looking at an actual-size photo of a nominal 12" x 12" x ½" Terra Vitra tile, including an allowance for a joint approximately ¼" wide. This is one of the 15 beautiful designs in American Olean's new line of large scale relief tiles.

Look closely. Here is the beauty of light playing over richly textured surfaces. Here is the soft glow of deep, translucent glazes. Here is a revolution in ceramic tile.

Terra Vitra gives you complete creative freedom. There are six high relief designs for walls, nine low relief designs for walls and light duty floors. And there's a palette of eight matte glaze colors. That means 120 color and design combinations to choose from. Terra Vitra is also available in a 9" x 9" x $\frac{1}{2}$ " size.

Terra Vitra can be used indoors and outdoors. The body of a Terra Vitra tile has less than ½% moisture absorption. It's frostproof and won't crack or craze from sudden temperature changes. And Terra Vitra's durable glaze is highly resistant to wear and impact.

See for yourself the design possibilities of Terra Vitra. Send for our full-color booklet. It shows the entire Terra Vitra line and gives you complete specifications and technical information. Write: American Olean Tile Co., 1280 Cannon Avenue, Lansdale, Pa. 19446.

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A Division of National Gypsum Company









One thing to remember about the upkeep of bare USS Cor-Ten Steel Siding is, you can forget about it.

Bare USS COR-TEN Steel is now being used for building panels—and it's a natural. Once it's up, all you have to do is watch it grow more handsome. It doesn't need paint.

Nature "paints" it with a dense, attractive oxide patina that seals out the atmosphere and retards further corrosion. If the surface is scratched, it heals itself. COR-TEN steel is one of the few man-made materials that grows more handsome with age, and its 50,000 psi minimum yield point makes it more damage-resistant than other metal siding.

USS COR-TEN Steel is one of the most economical, maintenance-free architectural metals on the market today. Check your local panel manufacturer for cost information.

USS COR-TEN Steel is being used for its natural beauty, self-maintenance and strength in buildings, bridges, transmission towers and many other applications in all parts of the country. That's why it's a natural for your next industrial siding project.

For a copy of our new booklet on bare COR-TEN steel, contact a USS Construction Marketing Representative, check Sweet's Architectural or Plant Construction File or write to: U. S. Steel, P. O. Box 86 (USS 6045), Pittsburgh, Pennsylvania 15230. USS and COR-TEN are registered trademarks.







View through a horizontal slit window from above the dance floor (photo, above). One of the *hutches-for-two* (below right), which are so popular that waiting time is unendurable, is reflected in the glass through which the above photo was taken. Below left, is pictured the computer sound-light console.



Fish-Eye Architecture

Hold a fish-eye lense to one eye, a kaleidoscope to the other, and any 1920's ballroom might look somewhat like the newly renovated Electric Circus, designed by architects Gwathmy and Henderson.

The Circus, nightly home of bopping, New York teenies, originally opened to dancers in 1967 and has since become so popular that its owners decided to invest another \$500,000 to create a totally total-environment. Gwathmy and Henderson, who have done, among many beautiful things (1968 A.I.A. House Award), some swell curves in the vertical plane, were commissioned to design them into all planes, creating an environment without reference points.

The results are beautiful, sculptural, permanent, and formal in tone. But in spite of lasers slicing through space, slides flashing on all surfaces, and music pulsing every atom, the tactility quotient of space defined by such formal perfection is zero. On opening night, more than one dancer remarked that the super-white walls and carefully sculpted spaces left him cold — "loose music in an uptight room."

In a period when mutability is all — the present — the permanence and, more important, the feeling of permanence created by the interior materials (stucco on wire lath) clashes with the changing tastes of the young. The owners feel that by changing slides, music, and kids, the place will constantly update itself. This would be true if the architecture itself were not such a strong statement-and one incapable of changing. In other words, the Electric Circus is a beautiful total environment, only not a totally total one.



Art museum (at right) is connected to office structure (left) by a two-story arcade.

New Weese Buildings Create a Downtown Complex

A new office building that connects with an existing office structure and a small art museum has been designed by Harry Weese for a downtown redevelopment site in Cincinnati.

The new, 14-story building, approximately 100,000 sq ft, abuts the Mercantile Library Building with matching cornice line and floor heights. Both buildings are joined on all floors for leasing advantages as well as mutual use of facilities.

In keeping with one of the principal features of the redevelopment of Cincinnati's core area an integrated pedestrian walkway system — the Weese building will be connected to the Contemporary Art Center (also by Weese) by a two-story arcade. Consisting of a main floor and mezzanine, the arcade will house a variety of small shops and restaurants under a glass roof.

With steel frames now in place, the structures, costing approximately \$6 million, are expected to be completed by February 1970.

Exterior materials will be travertine marble, bronze aluminum, and solar-bronze glass. Weese will also do the interiors of the museum and some of the office space.





Photo (left) shows front façade of Performing Arts Building. Steps lead to large fountain-pool. Main-floor plan (above) contains both arena and proscenium theaters.

Performing Arts Center Completes Ithaca College Campus

ITHACA, N.Y. The Ithaca College Performing Arts Center, dedicated on April 12, marks the last major academic building to be constructed on this new \$36-million campus. The \$3,800,000 building houses the Departments of Drama and Speech and Radio-TV, and the Instructional Resource Center.

Though the Performing Arts Building tends to be aesthetically overambitious, physical requirements have been carefully considered. Both a proscenium theater and an experimental arena theater are incorporated within the same auditorium. The proscenium theater has rough, bush-hammered concrete walls, setting off the redwood ceiling and rich red carpet. The arena theater is "architectur-

ally negative," to focus on the performers in the center. House circulation works well, and sound control is excellent. The steeply banked audience chamber insures that every seat is the best in the house. The larger-than-normal proscenium opening permits the staging of ballet, but it can be reduced by means of an electrically operated wood-coil wall that unwinds from either side of the stage and rides out on tracks toward stage center. A special lighting switchboard enables the operator to program lighting changes in advance; at the proper moment, a master switch effects the entire complex change.

The lower level of the structure contains radio and TV studios, Instructional Resource Center and film laboratories, and office space. The upper level contains a dance studio, scene design and stagecraft spaces, two large dressing rooms, and a performers' lounge.

In front of the Center, a large reflecting pool with 40'-high fountains provides a focal point for the entire campus, while the building itself serves as a visual stopping point to the main walkway that runs through the campus.

Thomas Canfield, professor of architecture at Cornell University, is the designer. Tallman & Tallman, architects, carried out the Canfield sketches under the direction of Peter Brellochs of Tallman & Tallman. Personious, Wadsworth & Molter, is the consulting engineer; Ranger Farrell is the acoustics consultant.

Bright idea

Corridor-installed Bradley Washfountains make supervision a snap, save money in schools! They get students out of toilet rooms quickly. There's no reason for loitering and possible horseplay. And one teacher can supervise wash-up and monitor the corridor at the same time. What's more, Washfountains serve up to 8 people with one set of plumbing connections. So they reduce installation costs up to 80%. In 36 and 54-inch diameter circular and semi-circular models. Available in widest choice of colors and materials. Corridor-installed Washfountains. A bright idea you can use – from Bradley! For complete details, see your Bradley representative. And write for latest literature. Bradley Washfountain Co., 9109 Fountain Drive, Menomonee Falls, Wisconsin 53055.

from Bradley

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The section shows various levels within the space simulator.

Osaka World's Fair Mushrooms

If you are not up to eating mushrooms to achieve a far-out experience, then plan a trip to the mushroom-shaped Hitachi space simulator pavilion at the 1970 Osaka World's Fair.

Designed jointly by the Tonichi and Obayashi-Gumi Construction Companies, the \$5,500,000 pavilion will handle 128 people per 20minute space-trip.

Visitors will take a glass-enclosed escalator to a sky lounge, where they will transfer to a double-deck elevator, which will descend through the stem to the "liftoff pads" in the simulation hall. Here, 16 individual spacecraft, each carrying 8 visitors and a pilot, will take off on the 20-minute journey.

Each of the spaceships is actually a computerized flight simulator, complete with instrument panel and controls. During the flights, visitors will be given an opportunity to take over the controls under the pilot's guidance. Rear-screen film projection visible through windows will depict one of several possible destinations to be selected by the passengers. Sound effects and projected light patterns will increase the over-all effect to the point of NASA reality. Before leaving the pavilion, visitors will also see the giant laser beam color television developed by Hitachi. The screen measures 13' wide by 10' high, and should be a trip in itself.



Beetles Killed in Westminster Hall, London

Insecticidal smoke wafts up to the beams of historic Westminster Hall in the photo above. The smoke is part of an attempt by the Ministry of Public Buildings and Works to smoke out deathwatch beetles that have been eating away the old timber beams. The fumes remain effective long enough to kill the nasty bugs as they emerge.

photo: John L. Nuzza

Sculpture Invites Our Participation

The kind of sculpture that makes one feel needed is being shown in Manhattan this month at the Ahda Artzt Gallery. Sculptor Michael Secter's steel and aluminum pieces, each containing some hidden ball-bearings - the secret of the pieces' success - turn, twist, and vibrate when touched. Tensions of the touch are equaled as one stands back while friction plays its game: Just how, and most important, at what instant will that slowly turning piece stop? One can always remember that no matter when it stops, it needed a hand to make it go.



Expo '70 Building Uses Chinese Approach to Space

The Government of Taiwan competition for the Chinese pavilion at the 1970 Osaka World's Fair was won by Atelier Cambridge, a group of young Chinese architects originally formed at Cambridge, Massachusetts.

The winning design, judged by, among others, I.M. Pei, is based on the principle of Chinese approach to space organization, which includes a series of accents and spaces that seem endless (never a climax), and avoid straightness and symmetry.

The Taiwan pavilion will contain an opera house, restaurant and garden, and the traditional exhibition of national wares.

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P/A NEWS REPORT/JUNE 1969



Circulation within BPC will follow the essentially north-south spine.

Another City for New York City

Daily, after 6 P.M., and on weekends, the narrow, empty streets of lower Manhattan make excellent sites for bicycle races and fashion photographers looking for spectacular, unpopulated backdrops for their models. The quiet canyons have served well the few who have made use of them during off-hours, but in a city of 8 million it seems ludicrous that any large area be used only eight hours a day, five days a week.

With the unveiling of the master plan for the \$1,100,000,000 Battery Park City last month, lower Manhattan was promised 24-hour life.

About 90 acres (of the 118-acre site of BPC along the shore of the island) will be created in the Hudson River by a landfill operation now underway. The remainder will consist of air-rights structures built over the existing West Side Highway, which will be depressed.

Three hexagonal towers, 60-, 50-, and 40-stories high, will contain 5 million sq ft of office space. The tallest tower will stand at the southern end of the site, and will serve as a "symbolic lighthouse" at the foot of Manhattan. In order to preserve a view of the water for all tenants, the towers were designed in hexagonal shape.

Housing will be provided in several apartment structures containing 19,000 units for an estimated 55,000 persons. An additional 5 million sq ft will be used for schools, commercial, cultural, and parking facilities.

Major features of the plan, conceived jointly by the offices of Harrison & Abromovitz, Conklin & Rossant, and Philip Johnson Associates, are: recognition of the river as a design element, use of an internal north-south transportation system, multilevel circulation system that excludes all automobiles from the surface, 24hour use, and the creation of its own land which obviates the need for tenant relocation.

A central mall, running northsouth, will become the spine of this essentially linear development. The mall will be covered and will contain shops, community facilities, and, hopefully, if funds permit, every planner's dream for transportation — a monorail. Pedestrian links will connect with Manhattan streets, as well as with the adjacent World Trade Center now under construction.

Plans now call for a construction start on the apartments by mid-1971, with office tower construction to begin in early 1972; 1500 housing units will be built each year thereafter. Full operation of Battery Park City is expected in the early 1980's.

Two hang-ups the plan must face are a suit by the International Longshoremen's Association, which charges that the "preconceived plan" will "destroy or seriously damage the City of New York as a commercial shipping port," and a hassle over the income-mix of the rentals of the housing units. Presently, of the 19,000 units, 6334 will be subsidized public and middle-income housing. The remainder will be privately owned, and taxable.

Battery Park City Authority, the agency handling the development, listed the following estimated costs: housing, \$500 million; offices, \$300 million; depressing of highway, \$100 million; planning and administration, landfill (some of which came from the excavations for the Trade Center), site preparation, and public and civic facilities \$150 million.

Calendar

AIA-Royal Architectural Institute of Canada joint convention: Palmer House, Chicago, Ill., June 22-26. Ludwig Mies van der Rohe will be host chairman. Transportation, urban and economic problems facing architects is the theme.... National Exposition of **Contract Interior Furnishings:** Merchandise Mart, Chicago, Ill., June 22-27. Architect participants: Charles Luckman, Dan Morganell, William Snaith.... The American Society of Landscape Architects' annual meeting: St. Louis, Mo., June 15-20. Theme: conservation and urban land problems. . . . International Design Conference: Aspen, Colo., June 15-20. . . . The Building Science Forum of Australia, Northern Division Conference: Wentworth Hotel, Sydney, July 28 and 29. The program: "Building for Performance." Registration-Building Science Forum of Australia, Suite 39, 72 Pitt St., Sydney, N.S.W., Australia.



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Vegas.

Interior Designer: Luss Kaplan and Associates Ltd., New York.



These high-style, sculptured lavatories are Eljer Brenda #3329 for countertop or cabinet installation. Because of their unique self-rimming feature, there are no dirt-catching metal rims. Fittings are factory-mounted. For this rest room, the architect selected Eljer's Luxury brass with brushed chrome finish.

The new Eljer Auburn #6720 water closets were used because of their quiet efficiency and large water area. They mount above the floor to allow easy and economical floor cleaning.

The modern design washout urinals are Eljer's New Correcto #8105. This wall-hung style provides an unobstructed floor surface for easy cleaning. And features an integral flushing rim for greater sanitation.



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Nixon Administration Attacks Inflation

By E. E. Halmos, Jr.

Despite the distracting issues of crime, student unrest, and foreign developments, the Nixon Administration is hewing closely to its decision that inflation is the country's No. 1 problem — and to its own ideas of how to attack that problem.

Unfortunately, but not surprisingly, construction will take a heavy share of the consequences of a concerted attack now being debated in Congress — a reduction of some \$3 billion in Government spending in Fiscal Year 1970 (of which about \$1 billion is in construction work); repeal of the 7% incentive tax write-off granted businessmen early in the decade for new plant and equipment spending; moves to bring down prices of materials.

In themselves, the cuts recommended by President Nixon seem to hit most strongly at the "heavy construction" segment of the industry: the rivers and harbors and flood control work represented by the projected \$141 million cut in the \$1,200,000,000 budget request for the Corps of Engineers; the \$38 million reduction in the Bureau of Reclamation's original \$200 million request.

General Services Administration would lose only \$4 million out of \$56 million; the Model Cities program, \$75 million out of an original \$750 million. The \$4,500,-000,000 highway program would lose virtually nothing (cuts here, however, will virtually eliminate the "beautification" program).

Biggest cut, outside these areas, is \$128 million in school construction funds (more than half of the \$228 million sought by the Office of Education).

But the effect of the cutting, if Congress goes along (and it apparently will, after much public anguish over home-district projects) will begin to be felt within the current calendar year, since the new Fiscal Year begins July 1.

This is true particularly if the

ually eliminate 'program). the ide these areas, fee chool construc- co

drop in Government spending is coupled with the probable effect of chopping off the 7% tax writeoff (as President Nixon has suggested) as of April 21. This taxbreak is credited with generating more than \$400 billion worth of new plant and equipment purchases over the past 8 years. The incentive is viewed in Washington as one of the chief elements that has fueled the inflationary trend.

Finally, there are moves in one particular area — lumber — to bring down costs (by hastily ordering an additional 1,100,000,-000 board-foot "cut" in Federal forests) that may presage others.

The total effect must be a slowdown in the dollar-volume of the construction industry (which was booming along at better than an indicated \$90 billion total in the first two months of the year), since there is, first, a considerable "ripple effect" from direct Government spending, and, second, businessmen have already given some indication that they will modify their expansion plans toward the end of the year.

Actually, Congress has before it a couple of schemes that might partially restore some of the effect: a spate of proposals for "trust funds" (for airports, urban transit, forest management, and so on); a dozen or more bills that would offer tax incentives to firms that build air- and waterpollution control works, or employ and train hard-core minority group members.

Even if approved, it is doubtful that these schemes could take effect this year; and they are, of course, much more highly selective than the broad 7% write-off the Administration seeks to end.

The program will spur Congressional interest in such schemes as those being propounded by HUD Secretary George Romney, who says he's attempting to evolve some sensible goals for the housing program, and bring private interests and local governments heavily into the housing program.

Douglas Commission Turns Fiscal

"A glance at the trends in housing costs makes it clear why so many Americans with low incomes are condemned to substandard housing," notes Paul H. Douglas, chairman of the National Commission on Urban Problems, in the commission's report, How the Many Costs of Housing Fit Together, which was released last month.

The report, which was prepared by Elsie Eaves, a New York civil engineer and cost analyst, states that "reduction of housing costs is one of the imperatives for reaching the goal of enough decent housing for low-income families. This is true whether one pursues the subsidy route, the private route, or both."

By plotting the dollar and percentage increases for the whole list of cost items — site acquisition, taxes, and operating expenses — the report offers a basis for coming to grips with the problem.

Highlights of the commission's findings include: land prices have provided the most powerful upward thrust to housing costs, up 259% since 1948; and the wholesale costs of lumber have jumped 15.5% in the last two years. The cliffhanger in housing these days is the continuing rise in interest rates and the devastating effect of these rates on the monthly debt service.

Summing up, Douglas stated that the commission's report did not indicate any pessimism about slowing down spiraling housing costs or about finding ways of reducing costs. Instead, he emphasized, "It shows that progress is being made through prefabrication, including mobile homes. The remarkable low construction costs by large cooperatives and the economics of scale practiced by them could be more widely copied with advantage to the housing consumer."

The report is available from the Government Printing Office for \$1.



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PRODUCTS



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Solutions to 15 specific in-plant air-pollution problems are described in an 8-page brochure. Solutions cover such airborne industrial contaminants as plastic, glass-fibers and particles, pharmaceutical powders, tire retreading dust, masonry powders, welding fumes, metal particles, industrial mists and woodworking dusts, chips and shavings. Rated efficiencies of the manufacturers fabric-filter and cyclonetype dust collectors are detailed. Brochure No. 169. The Torit Corp., 1133 Rankin St., St. Paul, Minn. 55116

Circle 200, Readers' Service Card

Hot Water Systems Brochure Features Five Series of Boilers

Hot-water supply boilers and package systems are described in a new brochure. Five different series of boilers, with capacities up to 4 million Btuh, are described

and detailed with weights and dimensions, tables on recovery rate, and rate of flow and pressure drop. Six package systems, including dual and triple temperature systems, are diagrammed. Brochure No. 210. Raypack Co., 2430 Chico Ave., El Monte, Calif. 91734

Circle 201, Readers' Service Card

Fluorescent Emergency Lights

Ten individual booklets describe emergency lighting requirements for schools, hospitals, stores, offices, industrial plants, and jails. Included are emergency code requirements and product information. Also, advantages of fluorescent over incandescent emergency lights, data on light distribution patterns, mounting information, details and technical information, and much more. H.E.L.P. Ten-Brochure Library. Mobilite Div., Woodbro Corp., 13620 Saticoy St., Van Nuys, Calif. 91402.

Circle 202, Readers' Service Card



Furniture System Permits Easy Rearrangement of Space

"Action Office II," a system based on the need for quick, easy rearrangement of office layout and/or work spaces, is described in a brochure. Diagrams and photographs show how work surfaces, shelves, and file bins are hung from easily moved free-standing panels to define individual work stations in an open area. The system is said to save money while providing more space by eliminating fixed walls. Herman Miller Inc., Zeeland, Mich. 49464 Circle 203, Readers' Service Card

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JUNE 1969 P/A



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JUNE 1969 P/A

On Readers' Service Card, Circle No. 367



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P/A News Report 55 On Readers' Service Card, Circle No. 386 ▶









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On Readers' Service Card, Circle No. 388

MFRS' DATA

Architectural Louvers Feature Noise Control

An illustrated brochure describes a series of "highly efficient and architecturally attractive Noishield Louvers" that permit free-flow of air while serving as a noise shield. Technical details about performance, selection, and installation. 7 pages. Bulletin 1.0502.1. International Acoustics Co., 380 Southern Blvd., Bronx, N.Y. 10454 Circle 204, Readers' Service Card

Preliminary Considerations for Elevator Planning

Manufacturers planning guide includes all data required to prepare preliminary plans for elevators in almost any building. The booklet includes information about electric traction and hydraulictype elevators, special lifting equipment, and passenger elevator door and entrance details. 15 pages. Dover Corp., Elevator Div., 1055-A, P. O. Box 2177, Memphis, Tenn. 38102

Circle 205, Readers' Service Card

Metal Rolling Doors Detailed

A complete line of rolling doors, fire doors, counter shutters, rolling grilles, and other metal doors are detailed in manufacturer's bulletin. Components are described, and construction and operation are illustrated. Complete specifications are given for all products. 25 pages. Bulletin 154. Kinnear Corp., 1191 Fields Ave., Columbus, Ohio 43216 Circle 206, Readers' Service Card

Down-to-Earth Furniture Helps Solve Space Problems

Conference room furniture, foldables, banquet facilities, training areas, and the like, are featured in a new brochure. Detailed are such units as study carrels, stacking and folding chairs, folding tables in many shapes, and methods of moving and storing this equipment. 29 pages. Catalog No. gc 968. Howe Folding Furniture, Inc., 360 Lexington Ave., New York, N. Y. 10017

Circle 207, Readers' Service Card



Your Steelcraft Fact File on steel fire doors and frames is a concise reference on almost everything you need to know about fire doors. Included is a handy fire door selection guide, an explanatory section on the various rating services, do's and don'ts, and other inside information designed to make specifying fire doors and frames simple and easy. Fill out and mail the coupon above and your Steelcraft Distributor will deliver your Fact File immediately.



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For more nuts and bolts, specs and costs, write Mr. William J. Davis, Building Products Division, Alcan Aluminum Corp., 100 Erieview Plaza, Cleveland, Ohio 44114.

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1



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Vectra® olefin fiber is manufactured by Enjay Fibers and Laminates Company, Odenton, Maryland, a division of Enjay Chemical Company, Odenton: (301) WO 9-9000. New York: 350 Fifth Avenue, (212) LO 3-0720. Charlotte: One Charlottetown Center, (704) 333-0761. Enjay makes fiber, not carpets.

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Some recent WASCO installations are shown on this page. Others, equally unique, are under construction. On Readers' Service Card, Circle No. 394



What are your plans for the coming year? Will you rage, rage?

OR ARE YOU ONE THAT WILL GO GENTLE?

For further information on WASCO Skydomes and Sky Windows refer to Sweet's Architectural File $\begin{bmatrix} 22a \\ w \end{bmatrix}$ or write . . .



JUNE 1969 PROGRESSIVE ARCHITECTURE

"Our environment in brief has been revealed to us; not only in its present disorder, but also in its potential beauty. I should like to think that Landscape played a part in this general enlightenment. Certainly what I enjoyed most in the work was the seeking out and encouraging of writers who had something fresh and valuable to say about our relation with the American environment. . . . For better or worse, America has chosen to see the environment and our modifications of it almost exclusively in terms of problems - very urgent problems in need of investigation by ecologists, sociologists, psychologists, economists, and planners.... The landscape as an object of contemplation in both senses of the word seeing and pondering — has yielded to the landscape as a set of problems to be solved."

> J.B. JACKSON, former editor of Landscape, in Postscript Editorial, Winter 1969

EDITORIAL

THE SINGLE-FAMILY HOUSE is the smallest architectural unit the designer can undertake with absolute control. It is a project he can conceive without consultants, convince his client about personally, and, if need be, construct himself. In the scale of architecture, the house is a modest exercise, satisfying to both architect and client. It is doubtful that more significant social conclusions can be drawn from its design and construction. However, the architect who designs a single-family house is often blamed for a host of sins: ignoring the total environment, the national housing shortage, demise of open land, slums; in short, the entire urban condition. It is as if, by exercising skills to design a small part of the environment over which he has control, he were guilty of ignoring that larger section over which he has none.

> "Residence is Transient" is what C. Ray Smith chose to title his introduction to this housing issue. An apt label for housing in a nation in which home "ownership" lasts on the average of less than five years and in which one-fifth of the population lives in mobile homes. Individually designed houses have little to do with total environment or urban blight.

> Architects usually design houses as a single highculture artifact set amid vernacular, industrial, or mass-culture neighbors—environmental happenings
over which the design professions exercised no control and that are no more permanent to their site than the house or its occupants.

Because architects are designers of buildings, and because they follow an essentially joyous profession - that of building - they are not morally derelict in performing tasks they perform best, and housing is one of these. The danger is in drawing more conclusions from the design of such modest structures than they warrant.

It should have been generally realized by now that architectural design quality can neither change nor permanently assure a way of life. Would that it could. In the Middle Ages, the Colosseum was used as a tenement; during the Napoleonic wars, horses were stabled in cathedrals; and today's urban poor often live in better housing than the affluent suburbanite. The disadvantaged are crowded into the finely detailed, competently constructed, decaying, rat-infested mansions. It is the affluent middle class that lives in immaculate, developer-designed, jerry-built, suburban "ticky-tacky."

Individual house design represents an attempt to solve one of the most difficult of all problems - that of the human variable. If the single-family house does not express the full range of eccentricities of its

occupants, then what other value it does possess belongs not to architecture but to other disciplines and should be judged on the basis of other criteria.

In this respect, the developers' solution to housing. despite its design shortcomings, answers a specific need. Housing today cannot be judged on historic architectural terms. Versailles, after all, was not designed to appear on the realtors' "multiple listing" every five years.

Developers give the people the transient housing they want. At least, people want it more than they want to live in the cities and want it less than they desire an architecturally designed house. Not everyone can afford an architect or is lucky enough to have an architect friend who will drive up from Texas and build them a house, even if he does build it on its side. as is the case of the house shown on p. 104.

It has been said that the individually-designed house is an anachronism. Perhaps this is correct, but then, of course, so are individual people. People as generalized abstractions are so much easier to cut and trim to make them fit generalized solutions. The single-family house, anachronism or not, will not change the world — only that part of the transient world that it houses. Farrest Wilson

1003







RESIDENCE IS

BY C. RAY SMITH

Residential environments — the most urgent architectural need of our age (perhaps of every age) — still present multiple facets that challenge the simplistic idea we have formerly held of the genus "houses and housing." Even disregarding the differences in scale between planning and design, the many subcategories of residential environment, which are not immediately considered as housing, make it difficult to see the problem as a single entity. Residential environments also include transient residences, for example.

Financial, aesthetic, and social matters also cloud this over-all view. Social considerations, in particular, have recently fostered the idea that the single-family house is not a valid architectural problem for our day. Clearly, though, we must recognize that, regardless of how successful we may eventually become in producing an adequate number of adequate prefab units for the poor, there will always be men who want, can afford, and will commission lavish, jewel-like settings that they can call home.

A comprehensive and realistic view will accept the totality of man's need for residences as a single problem — with subcategories. Whether he lives palatially on Pinkgravel Drive or minimally in Apartment 221d3, whether he has his pad in a student *dorm* or hangs his hat in old-age housing, whether he camps in a mobile home or darts around to several separate dwellings, man has a common need for a combined base, sanctuary, sleeping pad, and territorial extension of himself.

The traditional, limited architectural view of housing may have prevented us, at times, from











TRANSIENT

designing primarily for this basic need of man. In several areas, it has certainly diverted designers to some secondary goal: for example, to designing hotels as commercial buildings (within the traditions of hotel management) rather than as residences for transients.

To broaden our "inclusive" view of the residential environment then, and also to provide insights into hotel design, this issue on Houses and Housing includes a hotel that is more "residential" in concept than many. Incidentally, hotels also are interesting as a design problem today because they have ambivalent duality in their permanent-transient and public-private aspects, and because the function of a hotel as a transient residence is inherently contradictory.

Also in this issue is a spectrum of other

houses and housing. First is a group of urban rowhouses: one showing the power of paint to enliven our drab urban environments (an idea that is only beginning to be accepted for its economy of materials); others showing more harmonious public facades that shield idiosyncratic interiors. Next is a group of houses in the country, where personality and whim can more graciously run rampant - either as simple, provincial wood-carvings or as more nearly priceless stone sculptures. Then follow two recent ideas in construction systems that may advance the production of mass housing, which is our most critical residential area. The issue concludes with a condominium for retired farmers and two residences in foreign countries. All these represent facets of our residential environment.

EVERYMAN'S MEXICAN HOME

A hotel in Mexico City by architect Ricardo Legorreta shows the fascinating ambivalence of such transient residences.



A giant celosia, the traditional Mexican screen, encloses the hotel's entry court, where a 33-ft diameter pool splashes like a washing machine during the day and jets its orchestrated streams at night.

Mexico City's Camino Real Hotel looks as though Mies and the Aztecs got together as a design team. From all accounts, this *Miestec* combination was no mistake: The hotel is booked solid in advance, and the average length-of-stay per resident (or "guest") is increasing from one-and-a-half days to the three-day goal.

A duality in hotel design image is no innovation, however. Most hotel architects and designers have included modern, homelike conveniences familiar to travelers and also have concocted the "romantic distance" evoking foreign atmospheres; but the homey modernity has been evident mainly in guest rooms and the "atmosphere" mainly in restaurants (or on showfronts, as at Las Vegas). For the Camino Real Hotel, architect Ricardo Legorreta and his associates — including consultants architect Luís Barragán and sculptor Mathias Goeritz, together with Knoll International as interior designers — aimed at a more consistent balance.

What they achieved is a distinctive blend that epitomizes 20th-Century Mexico at its best and makes the Camino Real a traveler's dream of a residence however transient — in Mexico.





SITE PLAN AND GROUND FLOOR













The \$24-million Hotel Camino Real is sited on 320,000 sq ft — an unusually large parcel acquired between downtown and suburban Mexico City. As a result, the 90,000 sq ft building is a horizontal scheme (built of sun-dried brick faced with local stone on the battered walls and stuccoed elsewhere), which was more economical and speedier to construct in Mexico than the vertical schemes traditional downtown. Here, several separate five-story and six-story blocks are planned around garden courts: on the left of the plan, a 570-car garage, atop which are the expensive duplex suites and the Presidential Suite, all overlooking gardens on the garage roof; in the middle is a block of public spaces, including the reception desk, lobbies, four restaurants, seven bars, two clubs, and a ballroom large enough for 1500 people; and, to the right, 750 guest rooms spread out in five wings, which are called "Missions."



Throughout, Camino Real is Minimal in its approach. Exterior and interior surfaces are plain and unarticulated. Door and window openings are severely sliced into them — frameless, trimless, and revealless; crisp, incisive, and austere. Rectilinear, almost square balcony openings have virtually invisible railings, which consist of a single 1-in.-thick clear acrylic panel. This Minimal approach is due in part, no doubt, to the influence of architect Luís Barragán, who consulted on the project with his long-time friend Legorreta; for Barragán, surely, represents the purest refinement of the Minimal Style in architecture.

But, further, Legorreta has developed the Minimal toward today's idiom by the use of the diagonal — as in the battered walls of the guest room wings — and by an explosive superimposition of plane on plane in the composition of his elevations. For the interior, he chose the designers and contract furnishings that are most immediately associated with an elegant, modern, Miesian image.

In addition, the traditional qualities of Mexico's



In the public spaces, the stair is broadened and treated as a multi-level lobby. From the entry, one goes down to the reception desk (left in photo above) or straight into the lobby (below left). Up another half level is a mural by Mathias Goeritz (below right). The lobby has leather sofas designed by Mies along with copper planters and ash urns. Goeritz's mural is a texture of gold leaf on hammered and perforated steel.



ancient heritage are conjured up. Battered walls, for example, also suggest the configuration of Aztec pyramids; and masking the bridges that connect guest wings are the *celosias* or screens that are so *traditional* in Mexico. Brilliant hot colors — reds and pinks and oranges — along with silver-and-gold textures, such as Mathias Goeritz's mural, are both as modern and traditional as Mexico itself. The graphics by Lance Wyman and Peter Murdock provide overtones of Mexico's Indian cultures. And, finally, a few antique pieces of furniture (such as "Mexican Chippendale" chairs and several old mirrors) are in-

tegrated into the texture — in the way that reminders of the past constantly occur in modern life.

With this dual image, Camino Real meets the revised concept of the 20th-Century hotel. It is a concept that has changed markedly since the not-toodistant days when travel from continent to continent took so long that hotel guests needed homelike sanctuaries in which to rest after lengthy travel. Now, the jet set buzzes about so quickly, and businessmen, conventioners, and tourists stay for such comparatively short periods, that they do not need all the familiar comforts of "a home away from home" — the







Other art works include a great red stabile by Alexander Calder (left, above) and a pyramid-motif tapestry by Annie Albers, which is in the lobby bar (left). The mixture of Miesian furniture and Minimal detailing together with antique and reproduction Mexican pieces and the battered walls of the building give the hotel a special air for a transient home in Mexico.



SCHEMATIC SECTION THRU PUBLIC SPACES



The Camino Real guest bedrooms are designed as junior suites with sitting areas at the balconies, which overlook garden courts or the surrounding city. Otherwise there are no refinements in the guestroom program, either in terms of placement or types of furnishings. The dressing areas are not separated from the sleeping areas, as in more refined plans where closet, suitcase rack, and shelf and drawer space are in one compact area; as a result, the bed areas have the traditional chest of drawers instead of more useful table space. By manipulation of architectural finishes, colors, and accessories, "the rooms achieve a Mediterranean or Latin quality," according to project interior designer Peter Andes, despite the use of entirely modern furniture. Finishes are rough plaster throughout and stone floors in the sitting area; the sleeping areas are carpeted. Four color schemes are used: red, pink, and orange; blue and green; brown and gold; and brown and beige.



TYPICAL GUEST ROOM

philosophy that gave rise to the international circuit of grandly identical "European" hotels of a generation ago. No longer do they need so large a guest room or so copious a closet condition. They have taken less time to get there; they will stay a shorter period than before; and, consequently, they have probably brought fewer personal belongings with them.

The 20th-Century hotel, then, is a much more transient residential environment than its predecessors. And because of this shorter duration of hotel residency, travelers are often prevented from fully exploring and absorbing the culture and atmosphere of their foreign surroundings. The hotel, as a consequence, must provide some idea of *genus loci*, of the romantic distance that the traveler sought. Camino Real provides such an image of Mexico. It is a clean, open, healthy, and uncomplicated series of environments. Interior designer Peter Andes has said that it is "simple, strong, gutsy and has lots of open space and sunlight. In this respect it is typical of Latin architecture — the architecture of the Mediterranean and Mykonos rather than the baroque Latin architecture — and this is the root of Mexico."

Yet to the man in the street in Mexico (admittedly the man in his Mercedes in the street), the Camino Real Hotel is somewhat foreign. Explanations have it that this is because the class of Mexican who would normally visit such a luxury hotel is known to prefer "French furniture."

Other criticisms have been that the visitor has to



walk too far from wing to wing. Architect Legorreta explains that the intention was to create a different kind of hotel and that he "had in mind to revive the pleasure of walking." In any case, this was dictated by the horizontal scheme, which was also influenced both by the speed and economy of construction achieved with brick and by the earthquake and subsoil conditions, which suggested a five-story maximum height. What the "too-far-to-walk" critics miss is the luxurious spaciousness that the architect has provided because of that very condition and the great variety of indoor and outdoor environments that enliven the long walks. Inside, in the public spaces, for example, the stairs themselves have been treated as broad lobbies with artworks at various lev-







In its planning, the hotel is turned inward to create its own stage setting of modern Mexico. Dining rooms and most guest rooms face onto the gardens, which provide the serene silence that is such a luxury in urban living; other guest rooms face outwards onto the street so that the hotel environments accommodate varied personal temperaments. The battered walls rise from pools, some splashing with fountains. Pink walls and pink screens and five-story-high giant cylinders enliven the gardens as sculpture as well as artfully controlling the views outward from the hotel's luxuriously spacious retreat.



els to make the vertical circulation a refreshing experience. Outside, the gardens are enriched by brightly colored walls and by screens of artful invention, such as one of the 5-story-high cylinders.

Peter Andes remarks proudly, "There is no interior design in this project. When you look at the general public spaces, you don't think interior design. It looks like architecture." This happens not only because of the massive cubes of copper and fine woods and the chunky geometric pieces of furniture, but also, as designer Andes says, because the various consultants were working "on a very basic level in collaboration with the architect as if they were part of his office."

Hotel Camino Real shows this consistency of process in its finished result. And when the President of Mexico visited, he thought it so fine as to suggest Mexico should give a gold medal for architecture as well as for the Olympics. Hotel Camino Real deserves one. —CRS



CAMINO REAL HOTEL, Mexico City, Mexico. Client: Western Hotels'of Mexico, José Brockman, president. Architects: Ricardo Legorreta; Associates: Carlos Hernandez, Ramiro Alatorre, Noé Castro. Interiors: Knoll International, Peter Andes, project director; Charles Sevigny, consultant; Barbara Rodes, Textiles. Consultants: Leonardo Zeevaert (foundations); Bernardo and José Luis Calderon (structural); Ingenieria Panamericana (mechanical). Luís Barragán, Mathias Goeritz (landscaping and art); Wheel-Garon Inč. (lighting). Lance Wyman, Peter Murdock (graphics). General Contractor: Constructora Ballesteros. Cost: \$14 million (exclusive of land, fees, and furnishings). Photography: Jon Naar, courtesy Knoll Associates.

JUNE 1969 P/A



BRIGHT SPOT IN THE CITYSCAPE

A Victorian dowager daubed with polychrome paint provides a welcome accent point to an otherwise drab neighborhood.

Facades play an important role in row housing, for they must be relinquished to the street and to society. The facades on Steiner Street, which is in an unpretentious area not too far from the Haight-Ashbury district of San Francisco, harmoniously flow in and out down the street like a concerto: varying in tone, marking the beat with variations in the window details, reinforcing the rhythm with cornices until the climatic crescendo is reached at the Rainbow House.

The following description was written by the owner of the Rainbow House — and one of its painters — David Zack:

We chose a Victorian. Those Victorians may have been prudish. But they knew how to live expansively. With 15-ft ceilings you never have to worry about stretching dangerously when you wake up in the morning. They also had taste in fireplaces and windows.

We found 17 rooms, which cost less to buy than the rent on our old four. This is one of the many lovely mysteries of America.

Another mystery, not lovely, is redevelopment agencies. They're part of a dull conspiracy to turn the whole world beige. Our house is in the midst of a slum. So the redevelopments were hot to beige it up.

Both Maija [Zack's wife] and I are very unbeige. She has dedicated her life to painting bright beasts, all different and unique, on every handy surface. These bright beasts are very friendly. They smile. Against them, beige hasn't a chance.

We got busy painting the outside rainbow. Enamels are very bright indeed. They haven't faded yet.

Once we got scaffolding up and started putting on red, orange, green, blue and yellow, many people discovered a life-long ambition to paint a house rainbow. Some joined in. We spent an interesting summer. Learned bright colors make everyone smile like Maija's beasts.

After the scaffolds came down, Maija finished the lower reaches with murals of the sun and earth, all bright beast patterned. I wrote a book about rainbow housepainting, called *Rainbow House*.



Owner polychromed the façade of Victorian house near the Haight-Ashbury District of San Francisco.



Colorful beast-patterned murals enliven the interior.





37 WINCHESTER ST

Looking up from central space: Sun from skylights stripes interiors of semi-shell.



THE SHELL GAME

Filling the shells of old buildings scores points for architects Hardy Holzman Pfeiffer Associates.





35 WINCHESTER ST

Looking up between stairs and rear wall of grooved plywood: True shell (house gutted by fire) imposed fewer design rules and limitations.

Whatever else shell architecture may be — irreverent, perverse, ambiguous — it seems to be great fun for its practicing proponents. The exercise is a natural for Hardy Holzman Pfeiffer Associates, whose diagonal zapping and intricate volumetrics are guaranteed to put new life into an old building. The two adjacent storefronts that set up the rules of the game are in a mixed commercial-residential area near downtown Boston and the Common. It is a district that has been recently rezoned for eventual phase-out of all but residential use, and there is a general refurbishing drive underway, including the installation of gas lights. Predictions are that the area will soon rival Beacon Hill in fashionability.

The client's home, at No. 37 Winchester Street, is a narrow block-through building with more than a century of mixed uses — originally a carriage house, it was most recently a theater supply company. No. 35, next door, was also a small commercial building that had been gutted by fire; it was designed as a guest house. Above the first floor, façades remain intact (except for new windows), but plate glass fronts were bricked in, to conform to the architects' designs.

Brick walls of the larger house were left rough and



Galley perch over living room, and below skylight, overlooks roofscape through window.

35 WINCHESTER ST

Small landing forms entry; stairs are squeezed up and down to get to other interior spaces.

unretouched inside. "We wanted to set up the old building as the real thing, and then press our geometry against it," Malcolm Holzman explained. Existing floor structure was also preserved, except for the stair/light well that pierces the building below two skylights. The flat planes of the ceilings, however, have been substantially altered (see photos).

In order to overcome the shut-in feeling of an urban row house, the architects have used light and



movement. "If you can force people to move around, [the space] seems bigger," Hugh Hardy believes. "We've got it so you don't squeeze all the juice out of the orange until you've gone around the maze." The maze of the large house is a result of turning a rectilinear interior at a diagonal to the existing rectilinear container. In the small house, the spatial game is played with differently sized boxes at various levels.

In both houses, tension revolves around vertical



WORKING DRAWINGS

Only the gray areas have been added to aid the reader. Otherwise, the drawings on this page (minus brief notes for which there was not room) are drawings from which the contractor worked. Levels are indicated by -'s and +'s, 0 being street level. On sections, white is the plane closest to section line, while black is the furthest.

1. Top level of both houses is bedroom floor.

2. Entry floor: Study in No. 35 forms bridge cut off front and rear by vertical spaces.

3. Below grade interrupted only by landing (+4).

4. Cross section shows boxes-within-boxes design of three-level guest house.

5. Longitudinal section shows two of four skytubes that supplement skylights.

6. Longitudinal section through guest house shows open bedroom and box section of study.



2.







SECTION 37 WINCHESTER ST







37 WINCHESTER ST

Although basic floor structure was maintained, it is pierced by light wells and altered by dropped ceilings that will house projection and sound equipment.



37 WINCHESTER ST

Mirror behind Tudor chair reflects mirror in entry (at center between two candles). From entry, mirrors look through kitchen door.



35 WINCHESTER ST

Art-object air duct is major decorative element over dining room (and below study "bridge"). In background, round window in façade frames a sign across the street.

Like the work of a giant auger, portholes in study walls, front (right) and rear (above, top) "bore" straight through to the upper window in façade.

space and the way it is experienced on the staircases. In the larger house, the stairs angle in and out of sight of the central space. In the small house, the stair at the rear rises directly up beneath the skylight. Skylights capture a maximum amount of light in both houses, since they are slanted against an interior wall that projects above the roof line. Bouncing light off the interior walls changes its color and quality, and gets it into many corners of the accordion spaces that expand and contract around the stairwells. "Everything is 'hung' from the skylights," Holzman explains. "They make those spaces seem twice as large because you can see up into them from the lower levels." —AR

A. JOHNSON HOUSE, Boston, Mass. Architects: Hardy Holzman Pfeiffer Associates. Site: Downtown area of Boston, mixed commercial and residential. Two small brick commercial buildings. Program: To renovate commercial buildings for residential use: large one for home of client; small one for client's guests. Major Materials: Fir board ceilings, gypsumboard, industrial-green terrazzo floors. Mechanical System: Gas-fired warm-air heating. Cost: No. 37, \$32,000; No. 35, \$21,000. Photography: Norman McGrath.





SOCIETY HILL GOSSIP

Behind a façade that conforms to its Society Hill neighbors, architect Louis Sauer has created a lively, spacious interior.

Continuity of form is an important design element in row housing. But, in the 20th Century, how does one fill a hole in a uniquely intact wall of late 18th Century colonial row houses?

The hole in the wall is a 24' x 90' slot defined by two solid masses of late 18th-Century row houses in the historic Society Hill district of Philadelphia. This wall of row houses is under the aesthetic jurisdiction of the Design Review Board of the Society Hill Redevelopment Authority, the same group that prevented an environmental catastrophe by preserving the beauty of this unique enclave of historical architecture. After months of insisting that Louis Sauer's town house proposal for the slot was "pretty goofy," the Design Review Board finally realized the seriousness of the design when Sauer decided to sue them, not on the basis of the validity of the Board, but on the basis that his aesthetic judgment was as good as theirs. "I was going to run the credentials game . . . getting down to the point that it is purely an artistic decision."

The entire debate focused on the facade, the only part of the house that had to be relinquished to the street and to Society Hill. Therefore, Sauer designed it so that very little of the house comes in contact with the façade, and, as in the colonial idiom, the pattern of windows has nothing to do with what is behind it. The problem was to relate the new house to the two adjacent town houses in scale: the one on the east with a high cornice, and the one on the west with a low cornice. This led to the compositional arrangement on the rooftop (see photos). With this arrangement and the bay protrusions, the building "stands like a fine business suit for the public, and when you walk in and take off your suit you see a very personal thing." By using the existing walls to delineate the inner space as a positive part of the architecture, Sauer created a private world behind the facade entirely different in character from the Society Hill environs.

Thus, behind this "false" façade, there is the true expression of the town house's personality, a successful attempt to create a circumstantial space within this neutral slot. The front door opens to a narrow passageway leading to an open court, which produces a striking contrast to the street by creating a sense of spaciousness within the physical confines of the site. To intensify the feeling of an "exploding space," the roof is sloped up to receive more sunlight and the walls are mirrored to expand the boundaries even further. Sauer assigns to this court some of the normal functions of a street — point of entry and playground of activity — and therefore emphasizes the sense of a private world within.

The court evolved through the program requirements, which were the most minimal that Sauer has ever encountered. "It is nice to have strong attitudes as a point of departure, but there weren't any." The client merely selected the architect and said that he



View toward the children's wing. The stairs bordering the stucco outline of the original house lead to the upper deck.

Roof deck at front of house overlooks the historic Head House, and, in the other direction, the Delaware River.







The section reveals a separation between the parent's wing (left) and the children's wing (right).

Interior view of living room with study on gallery above.











0 10'

BASEMENT

FIRST

SECOND

THIRD

ROOF



and his wife wanted to be isolated from the children. Sauer explained that the client, a young couple with three offspring, have a unique attitude toward children. "They felt that the period of time that a child requires intimate care is really short, in terms of the total life of the house. And that it is better for the children to have their own space."

"The key architectural problem," states Sauer, "was to take a neutral space and make it as circumstantial as possible. In other words, to make everything noncategorical. A living room. Not a living room. This living room here. But I think I carried it out a bit too far." Feeling pinched for space from the beginning because "the open court creates many little circumstantial spaces that yearn for one large space," Sauer reevaluates the court, "If I could do it over again, I would skylight the court." Nevertheless, during the summer months, the court functions extremely well as a large space that expands to the roof decks.

Unfortunately, the architecture is too refined for the client. It is a pristine piece of sculpture that demands a certain amount of care, and it does not accord with the client's life-style. "Essentially, the parents have no discipline for the children." Already the house bears traces of a child acting like a child : scratching, pounding, painting, and the filling of the bathroom with water. "How can I anticipate this?" Sauer regretfully admits, "I should have designed the children's quarters as indestructible as possible. But how does one produce architecture that doesn't look bad when it is destroyed?" — PBB

McCLENNEN TOWN HOUSE, 127 Pine Street, Philadelphia, Pa. Architect: Louis Sauer & Associates. Site: Historical Society Hill District. Program: Residence for a young couple with children. Structural System: Masonry bearing walls with wood joists. Mechanical System: Split forced-air system. Major Materials: Brick and stucco. Consultants: Collins & Du Tot Associates, land scaping; Joseph Hoffman, structural; Vinokur & Pace, mechanical. Contractor: Edwin J. Barrett. Photography: David Hirsch.



View from the open courtyard to the living room of the parent's wing. Master bedroom window overlooks skylight of study.

View from the upper deck looking toward sun deck and the Society Hill Towers.





THE HOUSE BUILT ON ITS SIDE

A residential happening is turned on its ear by Houston designers Southcoast Team No. 1. "Oh baby baby, you are not going to believe this one," crows Houston's design group, Southcoast Team #1.

"Say, man," piped up a kid who climbed up to the site, "why did you build it on its side?"

Both were rapping about a house on Maple Hill outside of Plainfield, Vermont. Like a cracker box floating on one edge, the house is a fully three-dimensional exploitation of the diagonal. It is the diagonal gone cubic.

Inside, too, it is topsy-turvy — and completely dis-



Designers of the house for Mr. and Mrs. Paul Nelson were Houston's Southcoast Team #1 (left to right): Richard Jost, Kelly Gloger, John Gilbert, Lydia Jones, and Kenneth Carbajal.





Windows set on the diagonal are cut en filade through the house (gray tones of diagram) so that one can see through all spaces to the outside at both ends of the structure. orienting, ambiguous. One's senses of relativity and direction are confounded; diagonal walls and ceiling, with both horizontally and diagonally laid siding, make it hard to tell which way is up, what is wall or ceiling — or floor. When you lean back against the outward sloping wall and look up, suddenly the wall is going the other way, soaring inward to a 24-ft ridge.

The house was another of those architectural happenings — a summer project done last year by several University of Houston graduates and students, who call themselves Southcoast Team #1. They built it in two months, so that Mr. and Mrs. Paul Nelson could have a base for his new appointment to teach poetry writing at Goddard College in nearby Plainfield.

"On July 5, we cleared the trees with axes," says project designer Kenneth Carbajal, "and on September 1, Paul and Judy moved in." During those two months, Carbajal and his teammates — John Gilbert, Kelly Gloger, Richard Jost, and Ellsworth H. Hults IV — coped with living on the site, sleeping in sleeping bags, and fending off racoons. They were sheltered by a clear polyethylene tent and cooked for by Lydia Jones.

In the construction process, the tyro-architects say, they freely followed the will of the materials available, including some $8 \ge 8$ oak timbers from an old barn that Paul Nelson had pulled down. They had





Furniture in the "eat-live" and study spaces is simple — mostly seating platforms and found objects — but the walls and voids are decidedly unsimple. A 6-ft square void searing through the entire volume shapes the top of the doorway.



If you think you see rafters supporting a ridge beam supporting a flat roof in the photo at right, you're mistaken. Nevertheless, Judy Nelson feels that this print-making studio is a fine space to settle down in.





no plans or sections, no working drawings, only a cardboard model to follow. (Drawings reproduced here were made for P/A.) "So we were always dealing with just the real thing," Carbajal observes, "and we began to develop a feeling for what was actually happening."

The designers' main goal was to produce a tour de force demonstrating the merits of "mobility," by which they mean mobility of practice — the ability to pick up from Houston and go to Vermont, and the ability to build their own designs in such a free, loose, unprogrammed manner.

Their clients' requirements were: a large studio for Judy Nelson, who is a painter and printmaker; and a study for Paul Nelson's writing. An indoor shed was required for their four German Shepherd dogs. Otherwise, the rest of the house was to be totally open, informal, and rustic to suit their life-style. They did not want what Carbajal calls "a grandiose, Hollywood-musical version of a playpen" — that is, a static, slick mechanized ski-house.

Also, the Nelsons wanted a house so close to nature that the branches could brush across the windows. Southcoast Team #1 located the house on the site — 10 acres of fairly dense, flat woodland with no long-distance views — so that there would be no views to the access road.

A basic determinant of the house design was the annual snowfall in Vermont, which made a steep pitched roof mandatory. The hackneyed A-frame idea was rejected because the designers wanted people to be able to come up close to the house and touch it at arm's length, then step up onto it, or get under it. So they angled the lower part of the sloping roof back toward the center of the house. In addition, extensions to the 16-ft basic volume also project the house out into the wooded site. The walls were built of fir studs, with 4-in. insulation batts and a black polyethylene vapor barrier, and rough-cut fir 1 x 6's, which were laid horizontally on the long sides and diagonally on the ends. Windows are fixed $\frac{1}{4}$ in. plate glass panels and a few operable panels of plexiglass on piano hinges. Floors are of 2 x 6 rough cut fir. As a result, the finish of the house is as rustic as a New England barn — just what the Nelsons wanted, and they love it.

Details, devised as the designer-contractors went along, indicate the choice of what they considered "the simplest, most straightforward execution" and at the same time the most inspirational fun. "When we were deciding where to put a nail," Carbajal explains, "we said, 'Well, nobody's looking, so we'll just put a whole circle of nails around .' " Also, they spent a day chiseling out corners so that the forced hot-water heating running in exposed copper tubing with exposed fins would be finished to meet specific situations. Judy Nelson elected, as her own design thing, to staple on the exposed black rolex electrical wiring for the system worked out by Don King. Mrs. Nelson also decided to paint the white refrigerator silver. So grew the permissive design accidentals that enliven the Nelsons' environment.

In the new design idiom, the house has an interesting place: it appears somewhat transitional between the old and the new. The exterior, on one hand, can be claimed to suggest diagonal packaging — that is, it looks like a box set on one edge. This is a paradoxical approach for a generation so opposed to packagers and so dedicated to exploding the box, although the section was not arrived at by adopting such a preconceived envelope and then stylishly "diagonalizing" it. On the other hand, the interior, with its remarkable effects of disorientation, is clearly a product of the new generation.





Manipulation of the diagonal at the front door area (top) and the greenhouse window of the studio (above, left) reiterates the diagonal disorientation of the hallway openings (right). The kitchen (facing page) is an indoor-outdoor activity area.

The ambivalence between inside and outside is not singular to the Nelson house; other houses by young designers have fairly comprehensible exteriors and interiors with riots of interesting, discoverable effects. A critic might be tempted to claim that, so far at least, the work of the new generation has been strongest and most detailed on the interior. Small reflection on history tells us that this has always been so, however.

What, then, can we learn from the Nelson house? Carbajal answers for the Southcoast Team #1. "That all the working drawings and busy work that an architectural office feels it has to go through is a waste — and the client has to pay for it. That this busy work is only something to give an architect confidence and to produce a better image for his audience. That working drawings should not be necessary for small projects if an architect supervises closely and if he knows his contractor."

Well, not everybody is going to believe that one, either. But the time may come when contractors have involved themselves in enough do-it-yourself activities, such as the Nelson house, that the spontaneous, unprogrammed architectural happening will be backed up by a basic national craftsmanship. — CRS

Photos: Norman McGrath









The cardboard flatness of this Montauk vacation house facade is exaggerated by the deep undercut at the entry.

CUTOUT FAÇADE

"This first house by a beginning architect, reflecting the Philadelphia School approach to architecture, especially that of his mentor, Robert Venturi, will be one of the most dramatic and 'far out' statements of the latest thinking in architecture." - Philip Johnson on Robert Stern in the "40 Under 40" Exhibition Catalog.



Robert Stern's Montauk monument is indeed a dramatic architectural statement — one that has quite honestly been influenced by a mixture of styles from the late 19th Century right up to the Now Generation. There is a marked kinship between the house and Venturi's Chestnut Hill house, both of which were in the "40 Under 40" exhibition a few years ago. But Stern's design takes the "cardboard aesthetic" several steps further by emphasizing the twodimensional quality of the façade and overstating its scale in proportion to the relatively modest vacation house that hides behind it. It is a device that was part of the vernacular of Western frontier towns where, Stern points out, "fronts created the scale of the town and whatever was behind them was of a scale appropriate to their use."

The rationale for the monumental façade, as it turns out, has much the same logic behind it. The house is sited at the crest of one of the highest hills on Long Island and is clearly visible from a consid-



erable distance along the highway between the Amagansett and Montauk. The façade was designed as an architectural beacon whose prominence and natural surroundings required a scale of substantial proportions; the house behind it was designed to fit the needs of the family who live there. "It is, after all, only a house," the designer freely admits.

In addition, the house owes an historical debt to the "shingle style" of the last century, of which there are several examples by Stanford White in the area. "I love the shingle style house," Stern says. "To me, it is the richest regional architecture." The style is not only suitably at ease in its regional surroundings, but the horizontal bands of hand-split shingles serve the important function of visual staves holding the







Arches form open canopy over third-level sun deck.

Rear-view jigsaw expresses flow of interior spaces.





Small vista is glimpsed beyond chimney in living room toward stairs to sun deck in background.

Side windows of living room overlook the Atlantic.

building together at the tenuous points of its improbable geometry.

Behind the typical gable-shaped frontal arch, various pieces were carved out: fenestration, outdoor decks, and the curved portion of the house that expresses circulation from kitchen to living area. The arch ties together the openings and reconciles the conflict of scale between the large living room windows and the strip windows of other spaces. And it tricks the eye into perceiving an even grander scale than exists. From the arch atop the façade, everything folds downward: roofs pitch to the side and back, and break down into an articulation of exterior decks and interior spaces.

To take advantage of views, Stern has reversed the normal order of a multistory house. Bedrooms are on the first floor with a close-up, protected view of trees. And as the house rises, the view unfolds, the living/ dining floor comes as a surprise with a first glimpse of the ocean, and the third level roof deck offers a panoramic sweep. Close by are the woods and beach of Hither Hills State Park, a preserve that will not be built on. In the distance, Gardner's Bay is visible to the north, the Atlantic to the south; and the lights of the Connecticut shore can be seen on very clear nights.

Manipulation of interior volumes creates a strong three-dimensional quality that comes as something of a surprise and *non sequitur* to the flat façade. Stern's concern with the "interior landscape" has produced a design that is knit together by a number of horizontal and vertical space bridges offering "mini-glimpses" from one room to another. "I tried to produce as many alternatives of size, shape, vista, and space as is possible in a small house," Stern explains. "Although the rooms are contained spaces, and not flowing space as in 1920's architecture, there is always a vista through to another room. So you have both the advantage of spatial continuity and the feeling that you are in a *place*." The interior, like the exterior, is complex enough to intrigue but not so complex as to be incomprehensible. As an outstanding example of "the latest thinking in architecture," the house shows a refreshing disregard for the onceunbreakable rules of form and function. — AR

HOUSE FOR MR. AND MRS. SAMUEL U. WISEMAN, Montauk, N.Y. Designer: Robert A.M. Stern. Site: Prominent hilltop overlooking beach and wooded state park. House is oriented toward views while turning its back on close-by pre-fab house. Program: Vacation house for couple and two small children. Structural System: Wood frame. Major Materials: Rough-hewn, hand-split shingles. Gypsum-board interiors. Mechanical System: Electric baseboard heating, fireplace. Cost: \$35,500. \$17.40/sq ft (1967). Consultants: Robert Silman, consulting engineer; Erling Justad, general contractor. Photography: Hans Namuth, courtesy "House Beautiful."

Slight cantilever over playroom gives a sense of place without complete enclosure by living room.


TRUSSED WALLS STRUCTURE STRONGER BOXES

Architect Lamont Langworthy's concept for prefab boxes provides greater flexibility in the design of wall openings.

A deep-wall Warren truss system is used in the "Concept Structure" of architect Lamont Langworthy in place of the usual stress-skin construction that modular homes inherited from the mobile-home industry; thus, Langworthy's boxes look more like homes than "immobilized" trailers.

It all began three years ago, when Langworthy built a truss house on-site to span a 40-ft crevasse. The concept, as shown here, was evolved for factory construction; to date, four prototypes have been built. Two of the structures were manufactured by Dual-Wide Corporation, and two by Golden West Mobile Homes. The latter was selected as the prime contractor for mass production, and Concept's marketing manager, Tom Lyster, envisions a capacity of 1200 units annually.

Langworthy's Concept system has the advantage of requiring support in relatively few places; it can be mounted on piers and cantilevered, so there is no need for expensive perimeter foundations. If the unit is elevated, the space below can be used for parking and storage. One of the advantages of the module's "inner strength" is the variety and ratio of openings possible. An ordinary stress-skinned box is supported structurally by its glue-nailed walls; any windows cut in such a wall will weaken it if they are too large or there are too many of them. In Langworthy's module, however, the Warren truss is its structural skeleton, and the entire box could be enclosed in glass or left open without weakening it. Langworthy says his Concept Structure "is made to be lived in," with flexible space arrangement to "reflect user needs rather than reflecting conventional engineering constraints."

Redwood is used extensively in the Concept Structure: rough-sawn, sandblasted, stained, and waterrepellent on exteriors for no maintenance, and rough-sawn for interiors. Drywall has also been used on interiors. Prototypes have had built-up shed roofs, but a pitched roof with shingles is possible.

Current factory cost of a 1440-sq-ft house is \$16,-600. This includes two units containing three bedrooms, two baths, wall-to-wall carpeting, built-in range and oven, full insulation, a hot-water heater, and a heating system with provisions for air conditioning. Because site conditions may vary, the price is exclusive of other site improvements.

Units can be sited side-by-side, staggered, stacked, or even floated on pontoons as houseboats. Each of the prototypes in existence is an example of differing placement conditions. A residence in Laguna Beach, California, fits into the front of a steep, uphill site,





using the space between its supporting concrete block pillars as a carport. The residence in the Highland Park section of Los Angeles proved the system's transportability to a remote area up a steep, winding road, where the owner wanted it sited on an existing pad. In the Watts district of Los Angeles, where a pilot unit was approved for the Mead Foundation, the unit was to be placed on a flat urban lot, resting on six piers and using a cantilevered overhang as its carport. One unit has been delivered to the Butterfield County Recreational Park, a mobile home development in the 110,000-acre Rancho California, joint venture of Kaiser Industries and the Penn Central's Macco Realty subsidiary.

Kaiser-Macco ordered the unit and had Langworthy prepare a site plan to study feasibility for large development of 700 units. But this was stymied by an intransigent stand by FHA, which insists on rigid adherence to densities. "I wanted the Concept Structure to be a compromise between a regular single-family home and a unit in a mobile home park," Langworthy says. He planned for a density of $7\frac{1}{2}$ units per acre, with some of the lots as small as 4000 sq ft. But FHA was not considering compromises; it wanted minimum 6000 sq ft lots, or a conventional mobile home park. And there the matter stood at last report.

FHA is not the only Government agency to balk at the Concept Structure. One Los Angeles building official temporarily held up approval of the Watts house with questions about the truss, even after another official in the same department approved siting of the Highland Park house. "The truss met code requirements," Langworthy says, "but the official was wary of something he hadn't seen before."—R.A.W.

MODULAR HOME PROTOTYPES, various sites in California. Architect: Lamont Langworthy. Program: To design sectional modular homes with a variety of interior arrangement and siting not possible in conventional units of this type. Units must have configuration acceptable for road transportation. Structural System: Deepwall Warren trusses (see text). Consultants: Frederick M. Lang, landscape architect; Maurice Martinè, interior designer; Sherrer & Baumann, structural engineers. Photography: Larry Frost and "American Home" magazine.

LESSER MATERIALS, MORE LABOR

Architect John Zemanek's "timeless" house uses unfussy building products and extra care to make them work.

Architect John Zemanek, who teaches at the University of Houston, Tex., finished plans for his own home in 1956, but did not build it for 11 years. He filled in details and completed the elevations only as the start of construction approached, and, as he says, "I was surprised myself that I made no real changes in the design after all that time."

The resulting house has some surprising anomalies: It has an excessive ratio of exterior wall length to total square footage — 300 linear feet surrounding 1500 sq ft — but, at \$20 per sq ft, it still came in well under prevailing Houston rates. Two-thirds of the cost is for labor, compared to a nearly 50-50 labor and materials breakdown on the average custom-designed home. Two factors contribute to this: only finish carpenters worked on the house; and low-cost materials, unfinished for the most part, are used extensively throughout.

Every room in the house has four exterior walls. It is really a combination of three buildings, or activity areas, that meet at the entry hall. The kitchen is one building, the two-story den and bedroom is another, and the living room is a third. The entry hall serves the house's physical plant space, using a 16-ton airconditioning/heating unit mounted on its roof. Supply ducts are contained in the entry's dropped ceiling, and return air flows to the unit through slots in the entry floor and into an exposed duct located on the outside wall. Zemanek believes that this duct should be visible.

There are no doors inside the house, which Zemanek designed for one-person occupancy: "It's a house in which *I* will thrive," he says.

Zemanek admires the timeless quality of rural sheds and barns and hopes he was able to recreate this in the house. "To reach for the desired quality," he says, "I wanted to coordinate the structural systems and use of materials without regard to current design trends." The house is built with 6" X 6" fir posts supported on concrete piers. The columns were bolted to a poured ¹/₂-in. lead plate on top of the piers to insure a dry, level surface. The posts are connected to pressure-treated laminated pine floor beams with split-ring connectors. Floor and wall sheet materials are all on a 4-ft module. The materials - somewhat unusual for a home, but appropriate for a shed — include a corrugated metal roof, asbestos cement exterior walls, particleboard interior walls, and fir plywood floors. The floors, which have four coats of plastic varnish, are the only finished surface in the house. "And they're like a sheet of glass," Zemanek explains proudly. "You can't even see the joints."

Because there are no finishes to the interior work, carpenters had to take great care with the construction details of the rough materials they were working with. The foreman and one helper both were finish



Low-cost asbestos cement and corrugated steel panels enclose house. Old concrete roof tiles surface courtyard, later enclosed with slatted fence similar to window screens. Exposed bolts (below) connect posts and beams both inside and outside.







Paneled fence provides privacy at sides and rear of house.



Shoji screens slide in tracks next to patio door frames.







SECOND FLOOR



SECTION A.A



Concrete piers support lumber posts carrying laminated timber beams.



Vents for return air to cooling unit are cut in the plywood floor of entry hall.

carpenters, and did the framing and all work except plumbing and electrical. Fir board cabinets are installed in the kitchen, baths, and bedroom, with laminated plastic tops. Wood dowels are used for towel rods, coat hooks, shower curtain rods, and so on.

The interior has a decided Japanese aspect, using sliding Shoji screens and fixed glazing looking out on small planted areas. Wood decks are screened from the outside by vertical $2'' \ge 2''$ fir strips. The entire site is fenced, using 8-ft-high asbestos sheets around three sides and a 5'-6" fence in front made of $2'' \ge 2''$ strips. Cement roof tiles from the building demolished to clear the site are used to pave a front courtyard.

Zemanek says he may have built the first new house in his area in two or three decades. "It's an old part of town," he says, "a residential area gradually being rebuilt with commercial buildings, apartments, and so forth." (Houston has no zoning ordinance.) The 50' x 125' lot has a 5-ft side setback requirement, so Zemanek was held to a 40-ft front. Future plans include a possible, but no means definite, extension of the corrugated roof material to side the house. Zemanek would also like to build a tree house in a large oak in his backyard. —R.A.W.

ARCHITECT'S RESIDENCE, Houston, Tex. Architect: John Zemanek. Site: 50-ft lot in single-family residential area. Program: Residence for single person's occupancy, to use simple materials with nothing finished except the interior floor. Structural System: Wood post and beam. Major Materials: Simple, inexpensive materials (see text). Consultants: J. R. Hobbs, mechanical engineer; Karl Krause, structural engineer.



Polystyrene foam insulation is exposed on the exterior under the eaves, as well as inside the house.



Old ice cream parlor fan helps make real the breeziness suggested by high windows.

Views set the design tempo for Jorge del Rio's neatly scaled condominium.

VALLEY SHELTERS

St. and

Against a rich tapestry of green in the Puerto Rican countryside, Jorge del Rio has set the dazzling white shapes of a housing cluster for retired farmers. Sited at the crest of a hill overlooking the small town of Cidra and miles of relatively untouched rural landscape, the architect has taken full advantage of views and a mild climate to weld the 16-unit complex together with a series of public and private outdoor spaces closely following the designs that won the project a Citation in P/A's Design Awards Program two years ago (p. 124, JANUARY 1967 P/A). The two main plazas are part of a progression of narrow and wide pedestrian spaces that are skillfully designed to capture and release the views. The first plaza, approached via a narrow "street" running between two of the double-unit houses, is wide open to the view. On leaving it, the pedestrian is again shut off from his natural surroundings by a narrow walk that leads to the second major exterior space. This second plaza is almost entirely surrounded by buildings, but fragments of the view are framed by small open porches connecting the houses. These picture-

RETIREMENT VILLAGE



View from bandshell toward entrance to "village" will gain in hospitality as planting matures. From the opposite direction, the drawing shows strong vertical of incinerator stack that is yet to be built.

frame glimpses of trees and hills contrast with the sweeping openness of the first plaza and with narrow interior windows.

Exterior spaces proceed along a straight axis from the entrance at the parking area to a contemporary adaptation of the public bandshell that is the traditional center of town plazas in Latin countries. As it now stands, the bandshell is an unsatisfactory culmination of the carefully planned axial vista; the long approach needs a stronger shape to stop the eye. However, after a tall incinerator stack is added just behind the low, flat bandshell (as originally planned), the combination of the two shapes will provide a unifying focal point for the small "village."

A set of enclosed, semi-enclosed, and open "components" make up private living spaces, and the grouping of two-unit buildings along the main axis defines public spaces. Materials and shapes are elemental—of a scale and vernacular that should be comfortable to its occupants. Flat roofs are relieved by boxes with jutting tops that act as ventilators over kitchens and open-sided porches. Rough white stucco and smooth white plaster are used to frame walls of board-formed concrete. Dark red clay grilles and deep cobalt blue doors punctuate the white and again recall the Spanish heritage of the island. Floor-





(10) Incinerator area

Shaded porch (beyond door) adds outdoor space to living area.

(5) Open mall









Open porches around the edges of the main plaza frame views of near-by trees or faraway hills (facing page).

to-ceiling adjustable louvers keep out sun and rain, and although original plans called for dark walnut, the jalousies are aluminum painted white.

The former husbandmen who tenant the small houses are 65 years old or over and pay a rent of \$75 per month per unit. Their transition from tillers of the soil to men of leisure has been taken into account by the Sociedad Agricola de Agronomos and Farmer Home Administration, which provided 500-sq-ft gardening plots on the slopes of the hillside site. —AR RESIDENTIAL PROJECT FOR THE ELDERLY, Cidra, Puerto Rico. Architect: Jorge del Rio. Job Captain: Eduardo Lopez. Site: Hilltop outside small town of Cidra in the Puerto Rican interior. Program: To provide a social community offering both privacy and places for congregating. Structural System: Cast-in-place concrete and block walls. Major materials: White plaster and stucco, pierced terracotta block, concrete. Cost: \$158,000; \$15.80/sq ft. Photography, except as noted: Francisco Vando.

Simple but highly articulated forms are capped by crisp shed-roof ventilators that draw up the warm Puerto Rican air.







ANTIQUITY TAKES TIME

Time and moss will complete English architect Peter J. Aldington's group housing at Townside, Haddenham, Buckinghamshire, in the south of England. Only after the algae growth in the damp climate helps mellow the terra-cotta color of the Redland Delta tile roofs (so that they more nearly match the traditional corrugated pantiles of the village) will the group lose its Spanish flavor and blend into the village aspect, as Aldington desires.

"The intention," notes Aldington, "was to create a modern expression of village housing that would fill 20th-Century needs, but have enough of the intrinsic character of the old village to fit happily into its surroundings." Haddenham is a centuries'-old village, clustered linearly along a one-mile stretch of road. The original houses are constructed of blocks made of a local clay called "wychert," which form the 15-in. thick walls surrounding and linking them. Wychert is also stucced on the outside face of the block walls. The site on which the three Aldington houses are built was bounded on three sides by the original walls, and, where possible, these have been incorporated into the final design.

Aldington decries the developers' approach of building "detached" houses and wished to build a small group of three homes on a single site. He was able to persuade relatives to join him in the venture, and evolved a single plan that could be altered as needed for each family. Aside from the character of the existing wall, the site orientation — sole access in the southwest corner — dictated an important so-



New tile roofs contrast with old wall cap.

lution: In order to retain southwest sunlight, yet obtain needed privacy, it was necessary to adopt a courtyard formation. The houses themselves are built untypically with the kitchen-dining complex as a primary focal point of the home. Rather than the ordinary "small room facing north at the back of the house as it so often happens," Aldington's central kitchens face due south, are the first rooms to be entered, and become part of the courtyards when window walls are opened completely. High windows are used on the east elevations to catch the morning



English architect Peter Aldington will wait for moss to age his house complex to match its centuries'-old environment.





Concrete block room divider supports kitchen roof. Ladder leads to loft used as sewing room.





sun, on the south to provide light during the day; window walls into the courtyards are oriented south and west to catch sunlight during the day and late in the afternoon.

Since Aldington wished to have his architectural studio incorporated into his home, a separate building faces the courtyard of his residence, making it into a virtual atrium. Architecturally, the office is an extension of the house to the west of Aldington's and serves as well as support for a carport "deliberately constructed to be reminiscent of local farm lean-to sheds, in the belief that it would acceptably house the cars and be a strong enough form to prevent them from dominating the forecourt." Aldington's house and the one to the west have loft space, accessible by ladder, above their living rooms; the third house has a simple monopitch roof over the living room.

Structurally, the houses use loadbearing, lightweight concrete block walls 9 in. thick, stuccoed as are the wychert walls of the village. The walls carry $5'' \ge 10''$ Douglas fir purlin beams, which in turn support $3'' \ge 5''$ European redwood rafters. Internally, the blockwork is exposed and painted white. Floors in the living areas are 12-in.-square red quarry tiles with electric floor heating beneath them. Bedrooms have floors of softwood and are heated by a central electric heater ducted to each room. —R.A.W.

GROUP OF HOUSES, Haddenham, Buckinghamshire, England. Architect: Peter J. Aldington. Site: Large lot surrounded on three sides by an existing wall. **Program:** Three connected houses with individual private courtyards, to duplicate materials and appearance of traditional houses in the area, yet provide the amenities of 20th Century dwellings. One house (architect's own) to have a separate building for an office. Structural System: Concrete block walls and wood beams. **Mechanical System:** Radiant electric heat and fan assisted electric storage heater. **Major Materials:** Concrete block, wychert (see text), and tile roofs. **Photography:** Brecht-Einzig Limited.



Part of the original 19th Century farmhouse complex.



METAMORPHOSIS OF A FARMHOUSE

In Italy, American architect Theodore Waddell converts a stern image of humanity into a villa in the modern idiom.

An abandoned 19th-Century farmhouse sited high on a slope of an isolated valley in the rugged Apennine farmlands in Italy, not more than 20 minutes' drive from the Duomo in Florence, has been redesigned and rebuilt by American architect Theodore Waddell as a villa in the modern idiom.

Since the farmhouse is not within sight of Florence, it is not under the actual jurisdiction of the *Soprintendente delle Belle Arti*, an agency committed to the preservation of buildings of historic interest, and one so powerful that, in architect-owner Waddell's words, "it is practically impossible to change even the size of a window, let alone the roof line or other structural characteristics."

Waddell, in redesigning the building, decided to cut the ties to the past, to divest the building of its historic if somewhat melancholy fascination, and to shape it instead in the modern idiom, suited to the style of an architect thinking and living in the 20th Century. As he explains it: "The modern life, of course, is not a farm life, where economic, structural, and mechanical limitations made for windowless walls and small, chopped-up spaces. The occupants of true restorations must be willing to live an unmodern life — a museum kind of life."

Accordingly, Waddell razed the interior of the farmhouse, and, within the remaining structural framework, created a year-round villa suited to his family's needs. He was careful, however, not to obliterate entirely the rustic charm of the existing walls, maintaining the simplicity of materials, building within this structure modern spaces in glass and reinforced concrete."

Today, the Villa Rio Torto dominates its site with







The courtyard is paved in the same stone as the house walls. The 16-in. depth of the original stone walls serve as sunshades for the deeply recessed windows.



an impressive elegance: It sits atop a huge retaining wall (26 ft high and 150 ft long) that is the culminating point of a system of retaining walls leading to the steeply terraced olive groves below.

The solemn strength of the villa is captured in its stone walls and is reinforced by the backdrop of the rustic hills. "Practically no landscaping was necessary," notes Waddell. "The planting of the anonymous farmer-architects was done with great sensitivity, which time has only improved. On top of the great wall is a grove of walnut trees, giving shade and containment to the villa. The side of the house away from the courtyard is bounded by a huge grove of dark, pointed cypress trees." In areas where land-





Floor-to-ceiling glass walls expose the two living rooms to a view of the valley.











Large glass areas in the new wing contrast with the stone walls of the original building (see photo p. 134).

scaping had to be provided — as in the courtyard, for example — the approach was "to minimize the suburban-garden look and to maximize the sense that this house is part of a whole system of built walls and constructed Tuscan farmland."

The architect has created a continuous dialogue between exterior and interior spaces. The two-level living space is essentially open, connecting three separate and distinct areas: bedroom area, children's area, and service area. Half the valley-end of the house is anchored in vertical masonry, offering only two small windows to look down from each of the flights of stairs far into the olive groves below. The other half is glass and balconies.

"The contact with the surroundings attempts to

offer the widest possible choice," notes architect Waddell. "Orientation toward the spectacular is often deliberately broken: the entire visual direction of the master bedroom area, built right on top of the huge retaining wall, is deflected toward the intimate calm of the shady nut trees." — PBB

VILLA RIO TORTO (House of the Architect), Fiesole, Florence, Italy. Architect: Theodore Waddell. Site: On the slope of a valley in the rugged Apennine farmland, 20 minutes from the Duomo of Florence. Program: Residence for the architect and his family. Structural System: Reinforced concrete. Mechanical System: Forced-air system. Major Materials: Limestone shale, concrete, hand-made brick, and plaster. Consultants: Lucio Rocco, structural; G. Petrelli, mechanical. Photography: Theodore Waddell.



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The CSI Section Format

A recently published specifications format will help bring uniformity to construction documents and reduce omissions and duplication of specifiers' work. Rosen is Chief Specifications Writer for Skidmore, Owings & Merrill, New York City.

At long last, the Construction Specifications Institute has a nationally approved format for providing guidelines for the arrangement of information within a technical section of the specifications. These guidelines offer a concise and orderly method for specifiers to follow.

After reviewing many studies on the subject of technical section organization, the CSI promulgated Document No. 001b, "The CSI Section Format" in January 1969, setting forth a recommended arrangement. Prior to the publication of this standard, architects, engineers, and specifiers arranged the information within their technical sections in accordance with their own formula, and in many cases without any specific method. In many instances, the lack of organization resulted in duplication of information. The new standard is an important step toward providing a uniform approach. It will permit easier access to information by manufacturers, contractors and inspectors; provide a checklist for the specifier to reduce omission of information; and provide standardization for possible use in connection with computerization and information retrieval.

One of the more unusual aspects of the CSI Section Format is that it provides for the arrangement of information under three separate parts. Part 1, General, is concerned with the ground rules under which the work is to be performed. Part 2, Products, is intended for descriptions of materials, equipment and fixtures. Part 3, Execution, is intended for a detailed explanation of workmanship, erection, installation, and application.

Under each Part, the CSI assigned several standard paragraph headings following a more or less chronological order. Obviously, each paragraph heading may not be pertinent for every technical section, and would not be used where not applicable. In addition, where paragraph heading titles would be forced, they should be retitled to be consonant with the work intended under a specific heading. For example, under Part 3, Execution, there is a paragraph entitled "Installation." Under a section for "Earthwork," this title could be changed to "Excavation." Under "Structural Steel," "Installation" could be changed to "Erection."

The paragraph headings also take into account certain requirements normally found in civil engineering specifications and in mechanical and electrical specifications. For civil engineers involved in contracts based upon unit prices, Part 1 contains a paragraph entitled "Measurement and Payment," which allows for description of these units. For mechanical and electrical engineers, there are paragraphs en-titled "Descriptions of Systems" and "Adjusting," which permit the engineer to fully describe involved systems under Part 1 prior to specifying its accomplishment. Specifications for balancing the heating and ventilating systems or other mechanical and electrical items can be described under "Adjusting.'

Another recommendation in the CSI Section Format is the nomenclature to be used with respect to major portions of the section. Before this publication, these portions have been called articles, clauses, paragraphs, items, and so on. But the CSI document recommends that these portions should be entitled paragraphs for the sake of uniformity in calling attention to them in addenda, correspondence, and conversation.

Another recommendation concerns the internal numbering of the section paragraphs. The CSI document recommends the following numbering system:

1-01 PARAGRAPH TITLE

a. Subparagraph

1. Subparagraph

(a) Subparagraph

(1) Subparagraph

With this arrangement, an addendum can refer to the very last paragraph as follows: Paragraph 1-01 a.1. (a) (1).

The 3-Part Section Format has this broad basic outline:

PART 1-GENERAL Scope **Description of Systems Requirements of Regulatory Agencies Oualifications** Submittals Mock-Up Product Handling **Environmental Conditions** Protection **Operating Instructions** Extra Stock Alternates Measurement and Payment PART 2-PRODUCTS Materials Mixes Equipment Fabrication Source Quality Control PART 3-EXECUTION **Condition of Surfaces** Preparation Installation Field Quality Control Adjusting Patching Cleaning Schedules

For a comprehensive discussion of the above material and for illustrations of sections prepared under this system, copies of CSI Document 001b, The CSI Section Format, can be obtained from the Institute at 1717 Massachusetts Avenue NW, Washington, D.C.



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IT'S THE LAW BY BERNARD TOMSON AND NORMAN COPLAN

Liability due to spec changes

If, during construction, an architect confirms a change in spec to the contractor, is the architect or the contractor subject to liability for defects in a project?

If a contractor complies with the plans and specifications of an architect, he would generally incur no liability for defects that may appear in the project, unless caused by defective workmanship or materials. A contractor, however, by seemingly guaranteeing a particular result, may engender a claim of liability even though he has not deviated from the plans and specifications. Such was the situation in the case of Bradford Const. Co., Inc. v. Mikvah Israel of Boro Park Inc., (N.Y.L.J. February 28, 1969, P. 2).

The contractor in that case had entered into a contract in the approximate sum of \$300,000 for the construction of a ritualarium, or mikvah. This facility consists of several immersion pools used by certain members of the orthodox Hebrew faith at certain times of the year. The immersion pools are adjacent to pits or chambers, and are connected by an aperture between the walls to permit the water to enter from the pits into the pools. The pits contain "kosher water," which is a mixture of rain water and drawn water.

The absence of leakage in the pools or adjacent pits is essential from the point of view of the orthodox Hebrews, since the water in the immersion pool must be "still." To insure against leakage, the construction contract provided that "the building shall not be considered to be completed if the individual immersion pools are not in perfect condition." The contract further provided that there was to be added to the concrete mix a substance manufactured by a waterproofing company that would render the concrete impermeable. The waterproofing company was to furnish a five-year guarantee against leakage.

The plans and specifications were prepared by architects who were furnished with a document that set forth a digest of religious laws controlling the modern methods of constructing mikvahs. This document specified the minimum quantity of water the pools must contain, detailed drawings of the size and relationships of the mikvahs, chambers, and troughs, and stated the restrictions in mixing the waters collected in the troughs. The document also provided for a monolithic concrete pouring method, without reinforcement of any type. Approved waterproofing was limited to any ground or liquid substance, excluding metal or glass-fiber strands, and the pools were to be so constructed as to eliminate settling and cracking.

The construction contract did not include this document as part of the contract, but did provide that concrete be poured monolithically so that there would be one continuous pouring or placement, thereby avoiding seams or construction joints. However, during the course of construction, the architects confirmed to the contractor, in writing, that the immersion pools were to be constructed in accordance with shop drawings that had been submitted, except that the concrete was not to be poured monolithically but in stages, in accordance with the specifications of the waterproofing company that was to furnish the five-year guarantee against leaks. The reason for this change was the waterproofing company would not furnish the guarantee unless the product were poured in stages, according to their specifications.

This method of pouring required construction joints. In order to keep the mikvahs and auxiliary facilities watertight, the contractor formed a keyed construction joint between the upper and lower portions of the pits servicing the ladies' mikvahs.

The pits and pools were tested before tile was applied and were found to be watertight. After the tiles were applied and the ritualarium was open for services, it was discovered that water was leaking out of the construction joints. The key joint was unsuccessful in preventing the leaks because a high head of pressure had formed due to the water in the pools. Neither the contractor nor the waterproofing company was successful in repairing the mikvah to prevent the leaks, and the owner refused to pay the balance of monies to the contractor under the construction contract.

The Court concluded that the letter of the architects constituted an amendment to the plans and specifications and that the contractor therefore was not subject to liability for failing to make a monolithic pour. The owner further argued that the contractor had guaranteed that he would furnish a leakproof facility. In rejecting this contention, the Court quoted from a case involving a similar issue. The Court said:

"The agreement is not simply to do a particular thing, but to do it in a particular way and to use specified materials, in accordance with the defendant's design, which is the sole guide. The promise is not to make [it] watertight, but to make [it] watertight by following the plan and specifications prepared by the defendant, from which the plaintiff had no right to depart, even if the departure would have produced a waterproof cellar."

The Court, although rejecting the owner's claim against the contractor, charged the architects with liability for creating a risk of leakage by permitting the concrete to be poured in stages rather than insisting upon a monolithic pour. The Court held that the architects should have known that pouring in stages would not be safe against risk of leakage unless it were done in conjunction with the use of certain materials that could not be used because of religious restrictions. The Court concluded that the architects were in error in relying upon a guarantee furnished by a supplier rather than adhering to their original specification.



BOOK REVIEWS / Saving Slab City

BY EDWARD K. CARPENTER

URBAN DESIGN MANHATTAN. Prepared by Rai Y. Okamoto and Frank E. Williams, Urban Design Consultants. The Viking Press, Inc., 625 Madison Ave., New York N.Y. 130 pp., \$17.50. The reviewer is a former Associate Editor of P/A.

The appearance of Urban Design Manhattan is what the poets of press agentry would call a "publishing event." It is the first time one of the Regional Plan Association's studies of the future of the New York metropolitan region has been published by a commercial publisher, making it available, easily and quickly, to a wide audience. Indeed, one of the first things that strikes one about this beautifully presented book is that it is going to appeal to everyone - not just the professional architect or planner, but to the politician in Milwaukee, the commuter in Seattle, the civics student at Rapid City High; in short, to anyone who wants to know how cities should work. It could and should be used as a college textbook, yet it is written with an emphasis on fact and clarity that precludes jargon and cant.

What planners Okamoto and Williams (who prepared this report for the Regional Plan) have done is taken a fresh look at Manhattan Island from 61st Street south to the Battery. Although their planning concepts are not entirely new (they acknowledge a debt to Sant' Elia, Le Corbusier and Eugene Henard, among others), it is the first time these principles, applied to an ideal case study, the country's most complicated, fascinating city, have been presented in a book. Simply stated, they wanted the city to become a more pleasant place in which to live and work, a place in which light and air would replace dimness and dinginess, where openness and ease of movement would replace the cattle-like herding of persons, crowding off commuter trains and subways into cramped, dimly lit corridors.

"The underground world is totally isolated from the world above ground, and the narrow rat-holes of subway stairways are designed to disturb the street surface as little as possible," lamented the planners.

In Manhattan, where 77 per cent of the persons arriving at work come by underground train, how do you save the patient? It's easy. You cluster office buildings around open plazas, formed below street level by opening up the subway platforms. Commuters can walk directly from their trains to elevators, a physical linkage that Okamoto and Williams call an "access tree." With two notable exceptions - Grand Central and Rockefeller Center - Manhattan's office buildings wall out the subways, forcing pedestrians to climb to the street, compete with trucks, buses, and taxis for foot room, and then circle back into a building that may be directly above the station they just left. Even Rockefeller center, which, 38 years ago, saw the wisdom of the access tree, is now denying it. New buildings added to the Center along Sixth Avenue are walling out the subway. "It seems incredible that the Transit Authority excavated what amounted to a mezzanine over the Sixth Avenue subway tracks while extending the subway north — and then filled it with earth instead of pedestrians and shoppers. Contemporaneously, great new buildings plus a major hotel were built on the Avenue, each isolated from the other and from Rockefeller Center."

Almost wistfully, the book then describes how San Francisco is offering builders floor area for office buildings that provide direct rapid transit access through a subway mezzanine. New York's codes and zoning regulations encourage the growth of what the book calls "slab city," the endless array of similar glass and steel boxes, standing tall behind similar setbacks. They face one another up and down the avenues, identical in height and cluster, so that no one gets enough light and air, so that a secretary looking up from her desk can see through the curtain walls to the clock of a building six blocks away.

Through tax and other incentives, the Regional Plan would place taller buildings to the north of their clusters around subway stops, shorter buildings to the south, letting through the sunlight. Between clusters would be low-rise buildings, housing the many amenities, restaurants, shops, and markets that provide the diversity and convenience of urban life. Possibly the top floors of some buildings would hold apartments. Possibly there would be four major clusters of apartments at the four corners of mid-Manhattan. But the emphasis is on office space. According to the Regional Plan, Manhattan will need 100 million sq ft of new office space by the year 2000. It already has 160 million sq ft, so, in the next 30 years, office construction should boom. What little manufacturing still takes place in Manhattan will gradually be replaced by office work, the authors feel, until, by the year 2000, there will be 500,000 new office jobs in the limited space of mid- and Lower Manhattan. If the principles of access and clustering put forth are followed, the transition could become a happy transformation. If not, the city will become a giant slab — or, as a planner we know who has trouble with vowels says, slob.

To accommodate this influx of additional office workers, the plan calls for additional subway and rail approaches. At least two of these suggestions — a subway along Second Avenue and crosstown lines at either 48th or 59th Streets — are being implemented by the City Planning Commission. And there is some hope that rail linkage of Pennsylvania Station on the West Side and Grand Central on the East can be accomplished. (Continued on page 146)

JUNE 1969 P/A

Harmonic lighting, second movement



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(Continued from page 142)

It is significant that the report goes beyond its basic proposals to show how the waterfronts can be reopened to plants and people, and how architectural landmarks can and must be preserved.

It is implicit that the best planning is meaningless unless implemented, and a final chapter suggests means of doing so. It requires "the planning, the construction, coordination, and civic concern of a Philadelphia, a San Francisco, or a Toronto. This report will merely add to the literature of urban design, unless New York overcomes its giantism and moves ahead on a more human and three-dimensional scale." Suggested are strong administration of planning proposals, a mid-Manhattan Association, patterned after the businessman, politician, real estate associations of other cities, incentive zoning, and, of course, tax incentives.

It is a proposal that should not be ignored — by New York, or by any other city, small or large.

A word should be said about the unusually fine diagrams and drawings that tell this story with as much clarity and color as the text. And it is indicative of both the quality and the value of the book that the photographs will show you Manhattan, its conditions and its contrasts, with a freshness that is startling. Photographers



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146 Book Reviews

D.J. Acheson, Louis B. Shlivek, and their editors avoided cliché shots for ones that capture with equal appeal both the excitement and the drabness of a great city.

Urban Design Manhattan may well turn out to be one of the truly significant statements about cities in the 20th Century.

A SOLDIER OF THE REVOLUTION

BY SHEILA CUNNINGHAM

EL LISSITSKY: LIFE, LETTERS, TEXTS. New York Graphic Society, Ltd., Greenwich, Conn., 1968. 394 pp., illust., \$30. The reviewer is a former editor of Middle East Forum in Beirut, Lebanon.

Although Lazar (El) Lissitsky was a friend and colleague of most of the avante-garde artists of the 20th Century - Chagall, Kandinsky, Malevich, Arp, Schwitters, Moholy-Nagy, Zadkine, Mondrian, and Gabo - he is relatively unknown in the West. The reason, perhaps, as Herbert Read suggests in his introduction, is that he returned to work in the Soviet Union after the Revolution and from 1925 "ceased to be an artist in the Western bourgeois sense of the word." That is to say, he lived up to his revolutionary principles in trying to use his art to serve the people and the state. He recognized that creating beautiful things for private enjoyment was a thing of the past.

In recent years, there have been two exhibitions of Lissitsky's work in London. Now, from East Germany, we have this beautifully printed book, compiled by his widow, documenting the impressive variety of his work as architect, designer, typographer, photographer, and abstract painter. This is not a critical study; in the opening biographical statement, composed largely of letters, Madame Lissitsky-Kuppers emerges as a paragon of artists' wives. She adored him, submerged her life in his, and managed everything. The work itself, illustrated in nearly 250 black-and-white and color plates, is a fascinating and peculiarly Russian chronicle of the period between the wars. The concluding section consists of Lissitsky's theoretical writings and (Continued on page 150)

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(Continued from page 146)

tributes to him by his contemporaries and later critics.

Lissitsky was born in Russia in 1890. He grew up in Jewish Vitebsk, the town that is memorialized in Chagall's paintings. Refused by the Petrograd Academy because he was Jewish, he left for Germany in 1909 to study architecture at the technological university at Darmstadt, then a stronghold of Art Nouveau. In his holidays, he toured Europe on a bicycle, and wrote at the age of 21: "I don't know which I admire most, the David of Michelangelo, the Demon of Vrubel, or a door artistically studded with nails which I saw in the 'Black Chapel,' the work of an unknown master."

In 1911, he went to Paris, where he was thrilled by the Eiffel Tower, an image that recurs in his writing. Lissitsky passed his exams and made it back to Russia as World War I broke out. From that moment on, art and revolution were inextricably linked in his life. He designed the first flag for the Central Committee of the Communist Party. He later wrote: "In Moscow in 1918 there flashed before my eyes the short circuit that split the world in two. That single blow pushed the time we call the present like a wedge between vesterday and tomorrow. My efforts are now directed to drive that wedge deeper. . . . I roll up my sleeves and start the work of todav."



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He turned his hand to whatever was needed in the new society: He taught furniture design, metal work, designed exhibitions to publicize the achievements of socialist culture and economy, planned recreational and cultural parks, and decorated town squares for festivals. He considered every piece of work to be an invitation to action — "to follow the general line of forming a classless society.

In 1919, he accepted Chagall's invitation to teach architecture and applied arts at Vitebsk. Malevich was a colleague at the school and his theory of Suprematism rejected natural shapes for new forms in order to "form something independent of any conditioning factor." While Malevich's paintings were completely flat, the architect Lissitsky evolved the Proun (an abbreviation for the Russian words meaning project for the establishment of the new art). It was the basic idea on which he built all his work: "The painter's canvas was too limited for me. . . . [so] I created the Proun, the interchange station between painting and architecture.

... The static architecture of the Egyptian pyramids has been superseded — our architecture revolves, swims, flies. We are approaching a state of floating in air and swinging like a pendulum. I want to help discover and mold the form of this reality." The Proun was a kind of cosmic puzzle consisting of three-dimensional geometric forms floating in infinite space and held together by tensile force.

In 1921, Lissitsky went to Moscow, where, inspired by "the beauty of technical progress," he founded the Constructivist movement in collaboration with Tatlin, Rodchenko, and Gabo. They saw that the speed, dynamism, and fragmentation of modern life had changed man's way of seeing the world. They tried to invent an art as impersonal as the machine.

That same year, Chagall and Kandinsky left Russia. Madame Lissitsky-Kuppers observes, "Both the artists were unable to acknowledge the significance of the new political subject matter in relation to their own particular problem of form." Lissitsky went to Berlin, and, with Ilya Ehren-(Continued on page 158)

JUNE 1969 P/A

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This Great New

(Continued from page 150)

burg, produced the first pro-Soviet periodical dedicated to strengthening the bonds between artists and writers in Russia and Western Europe. Contributors included Prokofiev, Charles Chaplin. Le Corbusier, Ozenfant, Gino Severini, Pasternak, and Theo van Doesburg. The latter introduced Lissitsky's work to the Bauhaus. Mies van der Rohe published a periodical called G (short for Gestaltung, Form) for which Lissitsky wrote an article, "Wheel: Propeller and What Follows." It now seems a Golden Period, with everyone rushing about issuing manifestos, starting magazines, fired with enthusiasm for the new technology and the great experiment that was taking place in Russia. Lissitsky was also impressed by George Grosz and John Heartfield, who together had invented photomontage and were using it for bitter political satire.

Lissitsky designed a Proun room for the Great Berlin Air Exhibition in 1923. "When the desire is to obtain the illusion of life within the enclosed space, this is how I do it. I hang a sheet of glass on the wall; it has no painting behind it, but a periscopic device which shows me what is happening at any given moment in true color and with the real movement." An optical background for paintings in an exhibition room had "thin lathes perpendicular to the walls at intervals of 7 cm., painted white on the left side. black on the right side, and the wall itself gray, so you see the wall grav from the front, white from the left and black from the right." The whole ceiling was in effect a skylight of stretched calico.

In 1923, the Russians in Berlin went to Paris. There, Lissitsky contracted tuberculosis, which he was to fight for the rest of his life. The next two years he spent in Switzerland, supporting himself with a brilliant series of advertisements for Pelican Ink. He collaborated with Arp on a book called The Isms of Art. His guarrels with Arp and Moholy-Nagy are fascinating gossip; Lissitsky thought Moholy a shameless plagiarist and resented Moholy's claim that everything that happened before 1920 was simply (Continued on page 166)



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The Insulation People





(Continued from page 158)

grist for the Bauhaus mill. What he really seemed to resent was the ego of these two men.

In 1925, he returned to Russia and, between bouts of illness, worked unstintingly for the revolution. He wrote, "The opinion has continued to prevail even up to the present time that Art is something that is created for all eternity, which therefore must be indestructible, heavy, massive, hewn in granite, cast in bronze. The Pyramids at Cheops. The Eiffel Tower is not monumental, for it is not built to last forever, but as an attraction for a world's fair: it is not a solid, unbroken mass, but a tapering column in open construction. . . . But for us, monumental does not imply a work that will stand for a year or a hundred years or a thousand years but the perpetual expansion of human achievement."

We do not know what compromises Lissitsky had to make with the Stalinist regime, which, from 1930 on, was officially and completely hostile to his artistic principles. Certainly his influence was more crucial in Western Europe than in Russia. But, until the end of his life, Lissitsky was a good soldier of the revolution. His last work in 1941 was a photomontage poster, "Make More Tanks."

NOTICES

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B. A. BERKUS ASSOCIATES, designers and land planners, 2062 M Street, Georgetown, Md.

JAMES T. BURNS, JR., AIA, formerly senior editor of P/A, 157 East 35th Street, New York, N.Y. 10016.

CAMPBELL AND PATTERSON, Architects, 507 West 14th, Austin, Tex. 78701.

THE CANNON PARTNERSHIP, Architects and Engineers, Georgetown Square, 5225 Sheridan Drive, Williamsburg, N.Y. 14221.

RAYMOND LOEWY/WILLIAM SNAITH, INC., 110 E. 59th Street, New York, N.Y. 10022.

MICHAEL ROUNDS METCALF, Architect, 1133A Main Street, Stevens Point, Wis. 54481.

(Continued on page 173)



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(Continued from page 166) MITCHELL/GIURGOLA ASSOCIATES, Architects, 170 W. 97th St., New York, N.Y. 10025.

SAM RESNICK, Architect, 20 North Main St., South Norwalk, Conn.

SANCHO/KENNEDY, Architects, 223 Second Avenue, New York, N.Y. 10003.

H. ROBLEY SAUNDERS, Architect, 9 Whitingham Terrace, Milburn, N.J. 07041.

SCHAEFER SCHIRMER & EFLIN, Architects, Engineers, and Planners, 200 S. Hillside, Wichita, Kan. 67211.

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NEW FIRMS

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CAYWOOD, NOPP, TAKATA, HANSEN, WARD, Architects, 1435 Alhambra Boulevard, Sacramento, Calif.

DCI-DESIGN CONSULTANTS, Specialists in Architecture, Engineering and Planning, 6150 Mission George Road, San Diego, Calif. 92120.

JAMES DOWER, Architect, 3201-E. Cains Hill Place N.W., Atlanta, Ga. 30305.

ROBERT H. FOWBLE & ASSOCIATES, Inc., Architects & Planners, 1215 Cushman Ave., San Diego, Calif. 92110.

ROBERT H. GANTNER, Architect, Wrights Mill Road, Conventry, Conn.

GWATHMEY-DUKE, Architects, 6625 Backlick Rd., Springfield, Va. 22150.

JAMES T. KNOX, Architect, 335R First Street, Pittsburg, Pa.

DAVID LEASH, Architect, 66 Haight Street, San Francisco, Calif. 94102.

POLLAK, BARSOCCHINI & ASSOCIATES, Architects, 439 So. La Cienega Boulevard, Los Angeles, Calif. 90048.

QUINTON-BUDLONG, 812 W. Eighth Street, Los Angeles, Calif. 90017.

WM. R. SINGELIS, Architect, 3030 Euclid Ave., Cleveland, Ohio.

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(Continued on page 176)



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(Continued from page 173) NEW PARTNERS, ASSOCIATES

HARRELL & HAMILTON, Architects/Planners, Dallas, Tex. have named J. STUART TODD chief administrative officer.

CLOVIS HEIMSATH, Architect, Houston, Tex., has announced that HAROLD CARL-SON has joined him as an associate.

GALE A. HILL & ASSOCIATES, Architects, Creve Coeur, Mo., have added WAYNE W. SHAW to their staff as associate-designer.

MCDOWELL-GOLDSTEIN, Architects, Madison, N.J., have announced the appointment of EMANUEL J. CRISCIONE, RAY-MOND NADASKAY and CHARLES R. REM-ICK as associates.

PARSONS, BRINCKERHOFF, QUADE & DOUGLAS, Consulting Engineers, Architects and Planners, New York, N.Y., have named JAMES O. KING an associate.

I.M. PEI & PARTNERS, Architects, have named three associate partners: LEON-ARD JACOBSON, JAMES INGO FREED and WERNER WANDELMAIER. THEO-DORE J. MUSHO, JAMES P. MORRIS and ROBERT LYM, JR. will replace them as senior associates.

HENRY A. PFISTERER & ASSOCIATES, Consulting Engineers, New Haven, Conn., and New York, N.Y., have named ABBA A. TOR senior associate. WALTER D. SHA-PIRO has been named senior associate. The firm's name has been changed to PFISTERER, TOR & ASSOCIATES.

The OFFICE OF MIES VAN DER ROHE has announced five associates: JOHN BOW-MAN, PETER CARTER, DOUGLAS JOHN-SON, GERALD JOHNSON and ARTHUR SALZMAN. Three former associates, JO-SEPH FUJIKAWA, BRUNO CONTERATO and DIRK LOHAN, have become partners in the firm.

S.C. SMILEY & ASSOCIATES, Architects, Minneapolis, Minn., have announced the appointment of WAYNE R. NORDGREN and PETER KRAMER as new associates.

SMITH, HINCHMAN & GRYLLS ASSOCI-ATES, INC., Architects, Engineers and Planners, Detroit, Mich., have named JACK GREENBERG and HENRY REPIN-SKY associates of the firm.

FREIDEN STUDLEY ASSOCIATES, LTD., Architects and Planners of New York, N.Y., have appointed NORMAN CHAN associate in charge of project planning, technical projects, and technical production.

LEWIS B. WALTON, JR., is withdrawing as partner of WALTON & WALTON, ARCHI-TECTS, 626 Grove St., Evanston, III. The practice will continue under the same name with LEWIS B. WALTON remaining as principal.

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Please Turn to Page 6, Col. .

Chicago Tribune he will receive the sound of Acousta-Voices Campbell Hall

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Riordan went on to say that not only do the people at the Tribune enjoy it, but the many thousands of visitors are also impressed and that the Trib has received many compliments.

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Continued on page 184

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JOBS AND MEN

Continued from page 180

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