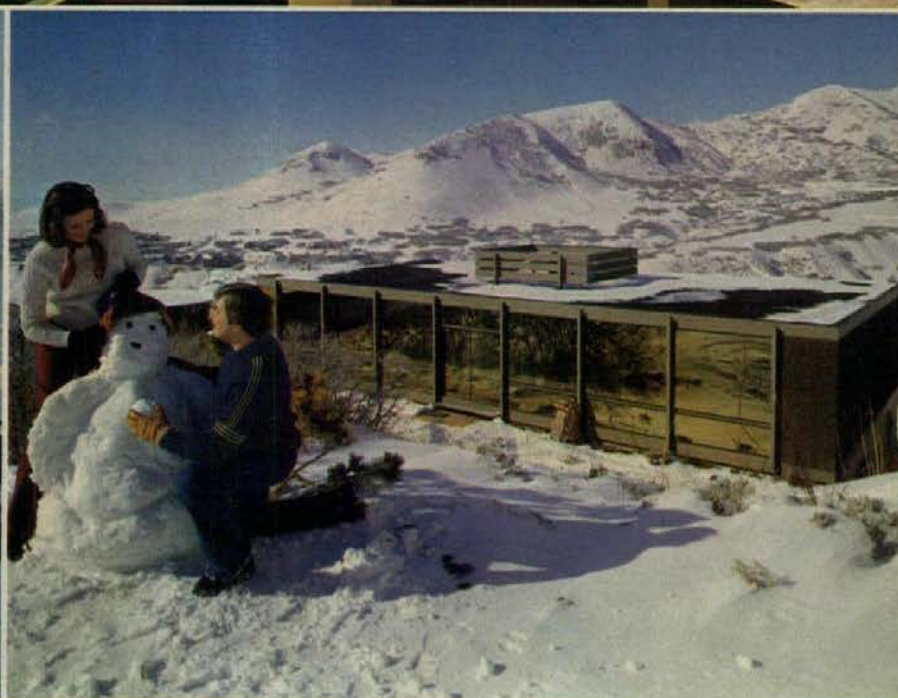


INSULATION SEE THROUGH

Salt Lake City residence. Architect: Dee Wilson.



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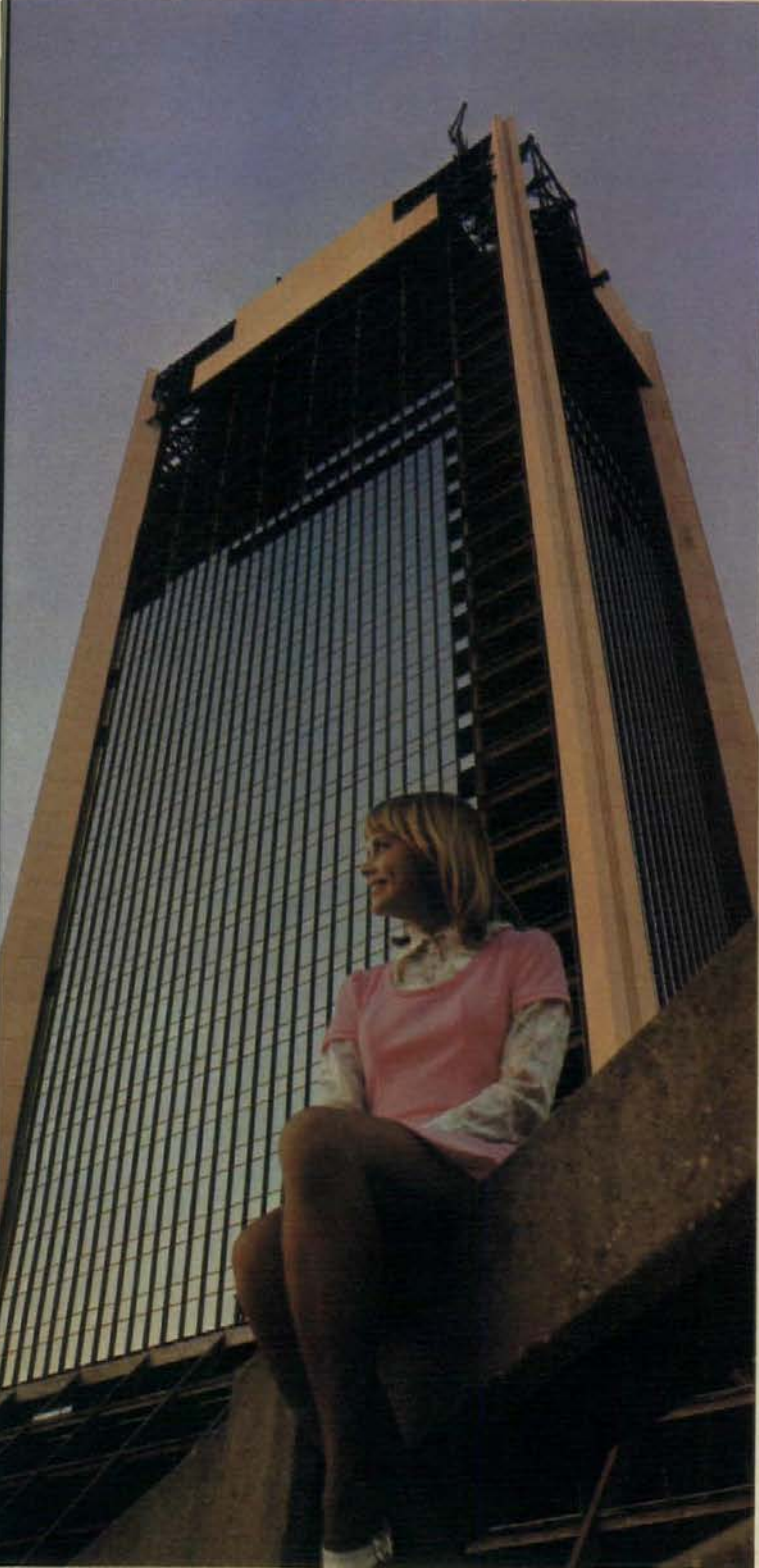
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Independent Square, Jacksonville, Fla., to be completed February, 1975.
Architect: Kemp, Bunch & Jackson. Project Architect: Warren C. Hendry, Jr.
Owner: Independent Life Insurance Co.

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RUSSWIN

How weathering affects building materials

Harold J. Rosen, PE, FCSI

Environmental elements must be taken into consideration when specifying building materials. A knowledge of the effects these elements can produce is a prerequisite.

A building material's durability is affected by the environment to which the material is subjected. With natural materials such as wood and quarried stone and some man-made materials such as steel and concrete a history of their resistance to weathering in specific geographical areas has developed over the hundreds of years these materials have been used. As a result, architects and specifiers have sufficient data to successfully use these materials. The effect of weathering on more recent man-made synthetic materials, however, is not so well understood.

Geographical environment produces a weathering process that can alter and affect color, composition, form, and texture, eventually producing degradation, disintegration, or a failure to perform as intended. The environmental elements producing weathering are sunlight, precipitation, temperature, gases, wind, and bacterial life.

Sunlight produces radiation at the earth's surface, which is composed of ultraviolet light, and synthetic organic building products if not properly formulated can be subject to UV degradation. Radiation in the form of ultraviolet light possesses a certain amount of energy which can cause chemical changes in organic building products thereby affecting their physical properties. Such materials can become hard and brittle. Flashing materials can crack in flexing and paint materials can fail as a result of cracking and chalking.

Precipitation—rain, snow, hail, and moisture—generally has less effect on organic building products than it has on those that are inorganic. Some organic coatings swell in the presence of water, and blisters can form behind coatings subjected to water vapor pressure. Where moisture is present, metals can corrode unless properly coated or protected. Concrete and masonry products that are porous can be affected by the freezing action of water. Hail, depending upon size and severity can cause structural damage unless special precautions are taken to guard against this possibility. Snow loads where applicable, must be taken into account to assure structural adequacy.

Temperatures can produce two distinct effects: fluctuating

temperatures cause physical changes due to thermal expansion and contraction; elevated temperatures produce chemical changes, especially in organic building products, due to the accelerated rate of reaction and oxidation process. Thermal expansion and contraction produces physical changes in sealants, metals, concrete, and virtually all building products. Thermal shock may occur when the change in temperature is abrupt, especially in materials having poor conduction, since the temperature of the outer surface can be markedly different than the temperature of the inner mass and this may result in cracking.

Gases which have a deteriorating affect on materials are oxygen, ozone, and sulfur dioxide. Oxygen levels are generally consistent all over the world, but levels of ozone at the earth's surface depend upon geographical location with certain areas having higher concentrations than others. Sulfur dioxide, a product of industrial plants, is concentrated in the atmosphere in relationship to industrial activity. Oxygen can cause oxidation of organic building products especially in sealants, coatings, plastics, and roofing, resulting in discoloration, hardening, and cracking. This phenomenon can be reduced by proper formulation of synthetic products to provide chemical linkages that resist oxidation. Oxygen similarly affects inorganic building products, especially metals, resulting in corrosion unless special coatings or films are used. Since ozone is an unstable modification of oxygen its reaction with metals and organic products is even more severe. Sulfur dioxide in the atmosphere combines with water, forming sulfuric acid, which in turn has deleterious affects on certain products as a result of chemical reactions. The city of Venice has suffered more damage from this in the last 50 years than it has in the previous 1000 years.

Wind velocity varies in all parts of the world. Engineers must consider wind bracing in the design of structures and architects must take into account air infiltration and water penetration through all exposed elements. The weather bureau has statistics on wind velocities and frequencies which should be used to design properly.

Bacterial life, especially the lower forms such as fungus and bacteria are a product of the environment since these organisms either thrive or lie dormant depending upon temperature and moisture. These organisms usually produce mildew and wood decay which can be controlled by the selection of proper coatings.

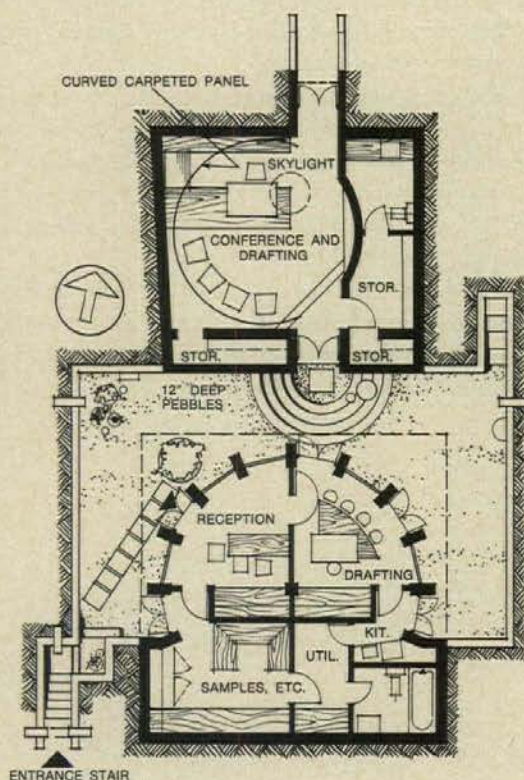
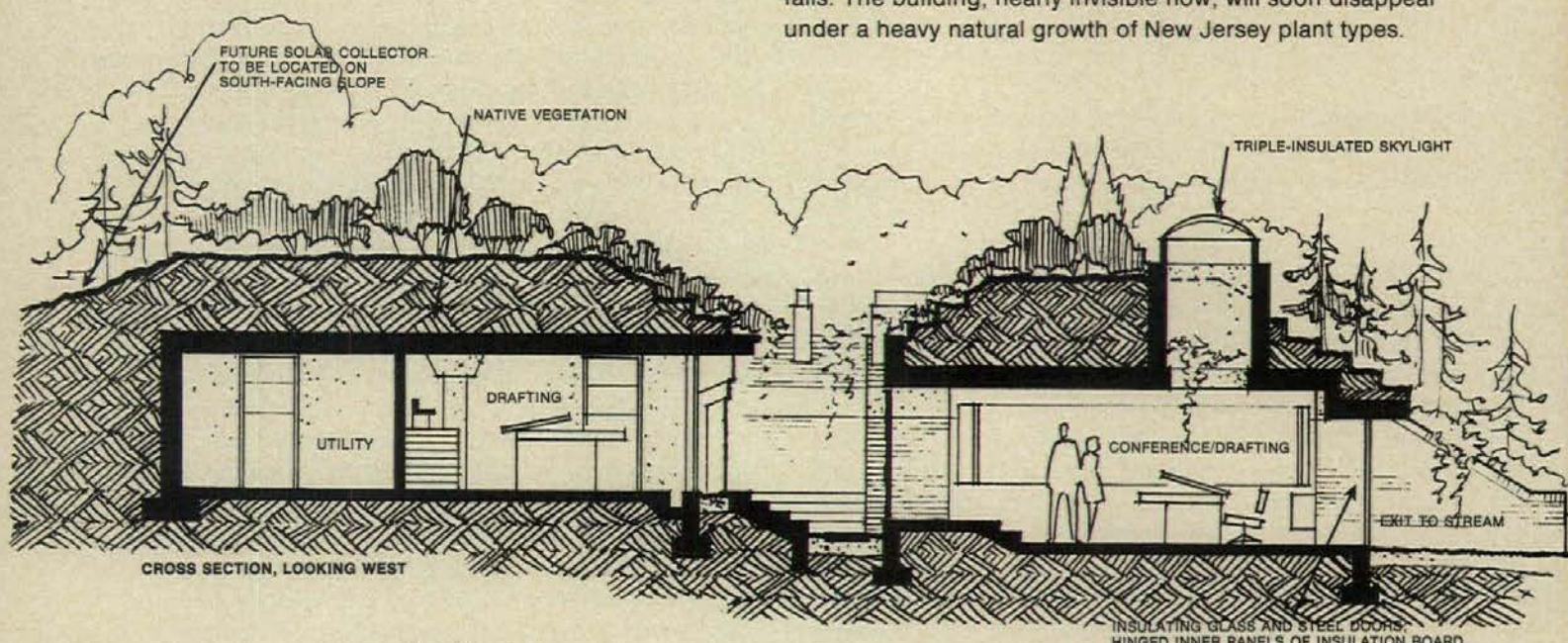
To overcome these environmental problems the designer and specifier must be selective, choosing those products that can perform with the least amount of vulnerability under the conditions to which they will be subjected.

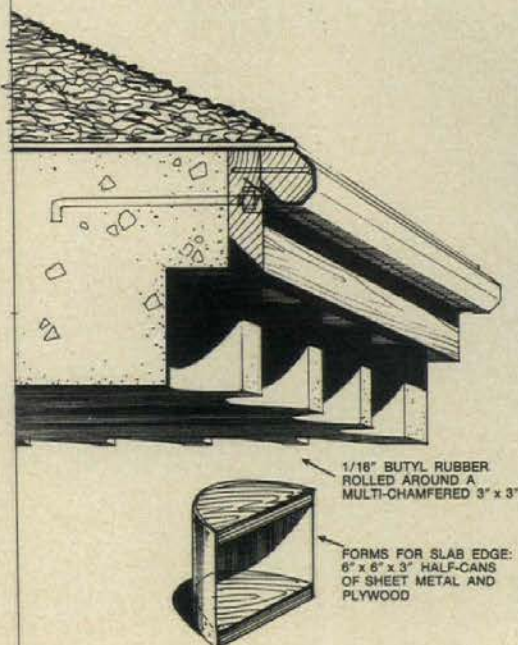
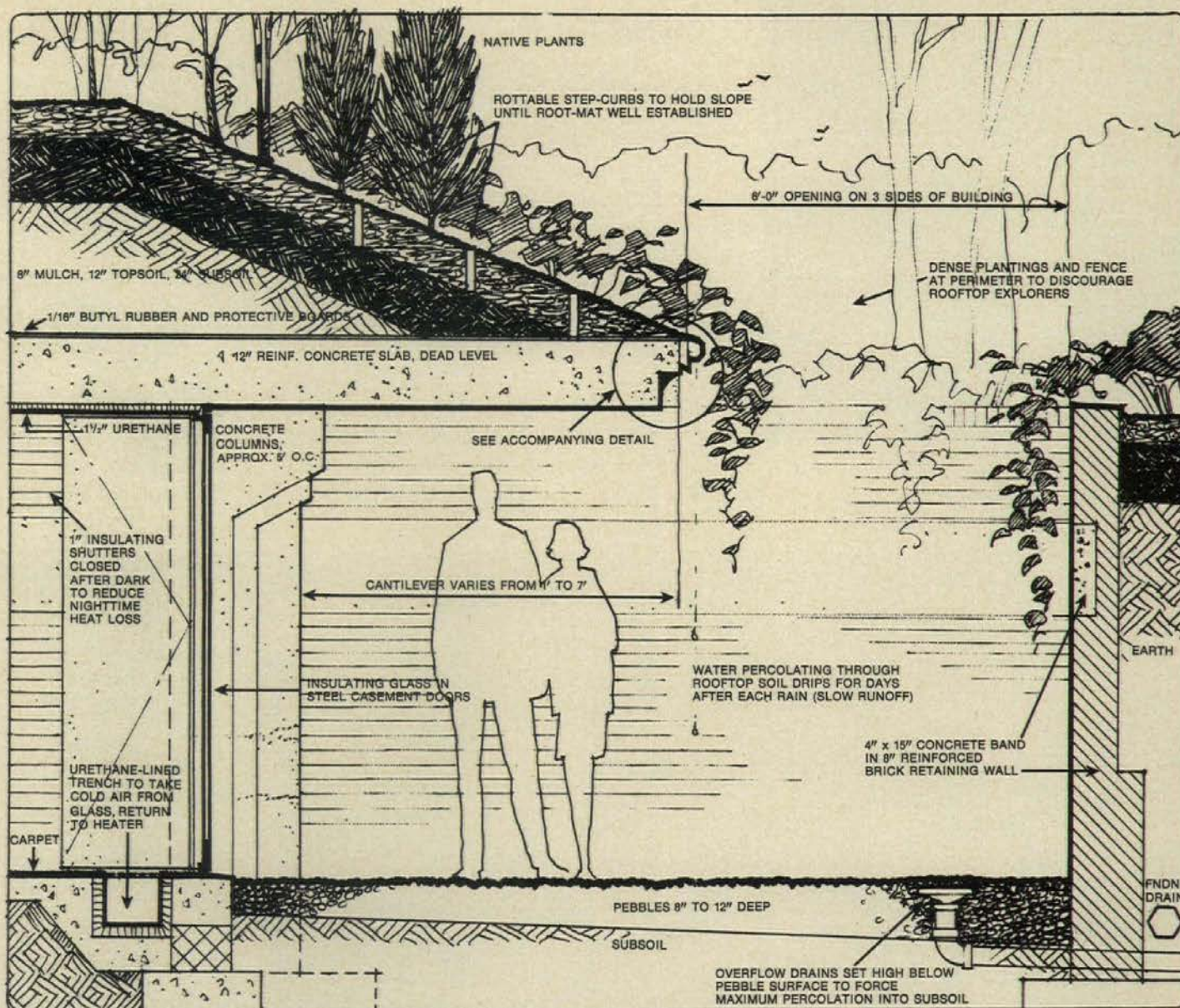
Author: Harold J. Rosen is an independent construction specifications consultant in Merrick, New York.

An underground office

It is all very easy to give lip service to environmental concern in architecture. But Malcolm Wells is not given to lip service; his concern is being expressed by his own office building. While he admits that the structure does not satisfy all of his stringent requirements, Wells has plans for a future solar collector and a waste pulper. In the meantime, he is monitoring the building's daily energy use, based on temporary electric heating system.

The details of the building are not complicated, although they are what put the "gentle" in Wells' "gentle architecture." Earth and mulch are not the standard roofing or roof load conditions, hence the details for dealing with them are crucial. Nor has Wells overlooked the finer details, such as a masonry paver (opposite page, bottom right) which will serve as a porous parking surface, retaining water where it falls. The building, nearly invisible now, will soon disappear under a heavy natural growth of New Jersey plant types.





Project: architect's office
Architect: Malcolm Wells
Site: highway embankment, Cherry Hill, N.J.
Structural engineers: Rothbaum and Davis.
Builder: Tallmen Construction Co.
Costs: \$40,000 (includes drive)
Photography: Norman McGrath



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Universality of architects' problems

Bernard Tomson and Norman Coplan

The Third World Congress of Engineers and Architects in Israel points up the need for a worldwide pooling of ideas and the enactment of uniform licensing laws.

In December 1973 one of the writers of this column (Judge Tomson) attended the Third World Congress of Engineers and Architects in Israel. Despite the uncertainties attendant on the Israeli-Arab hostilities, there were approximately 3000 participants in attendance, some 1000 of them from 68 foreign countries, including countries in Africa, Asia, Europe, Australia, as well as the Americas.

The subject of the Conference was "Dialogue in Development—Natural and Human Resources." In addition to sessions that were concerned with architecture and future training of architects, the panel sessions covered a wide range of subjects, some of which were: "Energy in Developing Countries"; "Environmental Quality"; "Transportation"; "Population Explosion and Urban Migration"; "Education Manpower Resources"; "Housing"; "The Role of the Technical University in a Developing Country—The Israeli Experience" (at Technion in Haifa); "The Planning of Jerusalem" and some 20 other titles.

It has always been our thesis that the concerns of architects in the United States are quite similar, regardless of the state or states in which they practice, and that although the laws of the 50 states differ in respect to the practice of architecture, there is nevertheless a common set of problems which must be approached and resolved on a countrywide basis. At the Conference discussions of architects' problems of such diverse countries as Israel, Australia, Romania, Turkey, etc., reveal the fact that the problems of architects worldwide are also surprisingly similar. For example, the architectural profession in the United States has been concerned with the inconsistency and differences in registration and licensing laws in the various states of the Union and there have been recommendations that a uniform statute be adopted by all states. An analysis of similar laws in foreign countries indicates that this problem is international in scope.

In Israel, the licensing statute is entitled "Engineers and Architects Law." It was passed by the Knesset in 1958. In form, it is a "title" statute restricting the use of the title "architect," except to those duly registered, but this statute does not

directly prohibit the *practice* of architecture by those not duly licensed. The Israeli statute is similar to that found in a minority of states in the United States (see *Architectural and Engineering Law* by the authors of this column, second edition, part 2) and states:

"Exclusivity of Title

"2. A person shall not use the title 'Registered Engineer' or 'Registered Architect' or any title so similar to it as to be misleading, or hold himself out to be a registered engineer or architect, unless he is registered in the Register of Engineers and Architects."

However, the Israeli statute provides a procedure whereby the practice of architecture may be limited to licensed architects. The statute is quite unusual in its approach. It provides:

"Reservation right to carry out operations

"12. The Minister may by regulation, after consultation with the Council, reserve the right to carry out certain operations to licensed engineers or architects; where the right . . . has been so reserved, a person shall not carry it out unless he is the holder of a license under section 11."

The Minister referred to is a designated member of the government. The Council consists of the Minister, 4 representatives of the Israel Institute of Technology, 13 governmental appointments and 9 engineers and architects appointed as follows:

" . . . by the Minister upon the recommendation of the organization representing the greatest number of persons, registered in the Register of Engineers and Architects; however, the engineers and architects appointed as members of the first Council shall be appointed upon the recommendation of the Association of Engineers and Architects in Israel."

In commenting upon the universality of the problems of the architectural profession at the Conference, with particular reference to registration laws, Judge Tomson said:

"The universality of architects' and engineers' problems, *vis-a-vis* the client, the public, and the registration laws, has increasingly been impressed upon me. Particularly with respect to registration-law problems facing these professionals throughout the world, there is a crying need for the development of an integrated approach to the pooling of information, for the exchange of ideas, and for the development of a 'uniform' statute. This should be initiated as soon as it can be arranged by a conference called to acquaint those struggling with the problem that the difficulties are not local in character, but international; that the problems in California are the problems in Michigan; that the problems in Georgia are the problems in Wyoming; that the problems in Colorado are the problems in Oklahoma; the problems in the United States are the problems in Israel."

The Israeli Conference was quite successful and Mr. El Hanon Peles, President of the Association of Engineers and Architects in Israel, who was responsible for its organization, well deserved the praise he received. Similar conferences, can do much to benefit the profession.

Authors: Bernard Tomson is a County Court Judge, Nassau County, N.Y., Hon. AIA. Norman Coplan, Attorney, is Counsel to the New York State Association of Architects, Inc. AIA.

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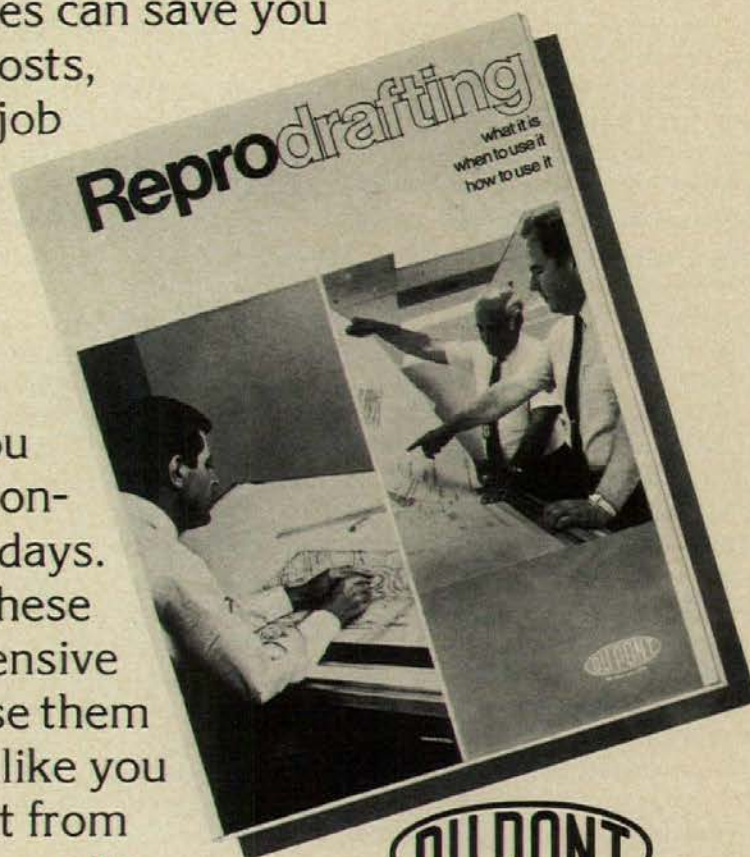


Photo Products



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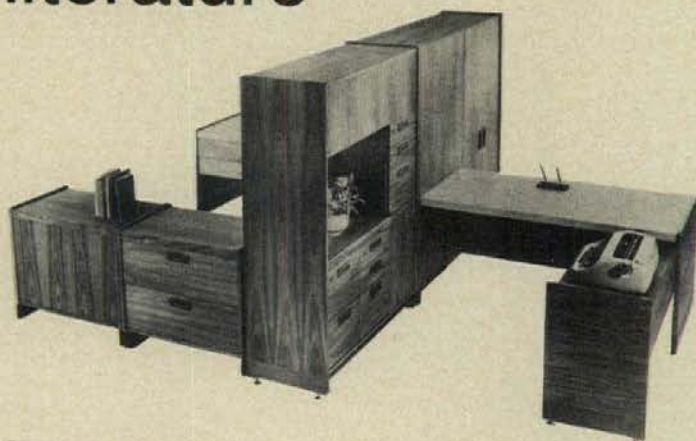
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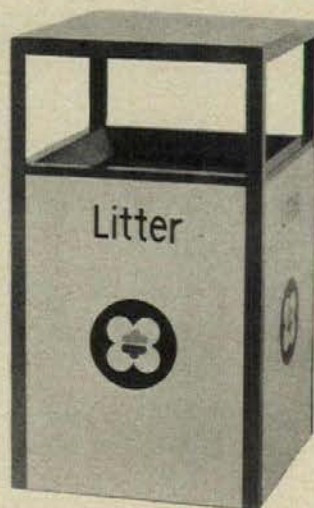
Products and literature



Executive furniture



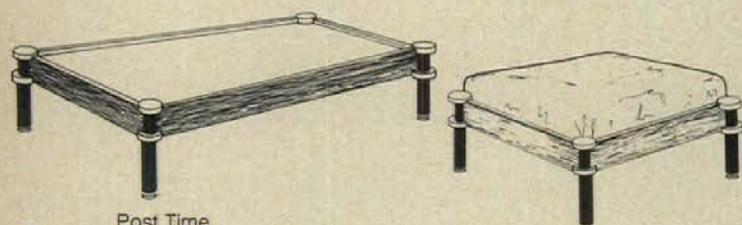
Axminster carpet



Litter receptacle



Signage



Post Time

Executive furniture in walnut or oak consists of coordinated desks, cabinets, and wardrobes. Three desk sizes are available in four styles: single or double pedestal, secretarial or work tables. Many configurations are possible. Jens Risom Design, Inc.

Circle 101 on reader service card

Axminster carpet pictured is "Antilles," available in two-ply nylon yarns in a series of patterns and colors. Test results give carpet a flame spread rating of 75 and a fuel contribution rate of 60. Lees Carpets.

Circle 102 on reader service card

Litter receptacle. Open on all four sides with no doors to push, it is available in choice of color and logo combinations and can be coordinated to individual environments. Choice of aluminum, 45-gal capacity or steel, 35-gal capacity. Jackson Co. Mfg.

Circle 103 on reader service card

Portable projection screen. Aluminum frame to which front or rear projection screen surfaces can be mounted is especially suited for use in photographic or television studios, schools, conference rooms. Available with translucent surface for rear projection, folding mat white surface for front projection, or two-way white translucent material; in 72-, 84-, and 96-in.-sq sizes. Da-Lite Screen Co., Inc.

Circle 104 on reader service card

Signage. Direction, identification, and information dissemination signs are molded from fiberglass-reinforced polyesters and coated with weather-resistant glycol based gel and offer flexibility in size, shape, form, and color with durability and vandal resistance, maker states. Available in virtually any shape. Architectural Graphics, Inc.

Circle 105 on reader service card

Modular lounge furniture called "Post Time," consists of posts which serve as legs of tables, sofas, and planters and are also the units that link the various pieces of furniture to one another. The posts are made of a black PVC plastic with aluminum caps and an adjustable glide. Top cap unscrews to permit the various pieces of furniture to be linked, then tightens down to hold them together. Furniture has been designed on a basic 30-in. module, with additional 60-in. units to increase flexibility. Table tops are plastic laminate; rails are either white oak or American black walnut; planters are of white acrylic. Seating can be upholstered in any of the wide range of vinyls, leathers, or fabrics. Shipped knocked-down. The Gunlocke Co., Inc.

Circle 106 on reader service card

[continued on page 123]



Circle No. 339, on Reader Service Card →

Light fixtures. A seamless, cast-in-one-piece, multi-faceted, vandal-resistant sphere, it is available in translucent white, transparent clear, bronze, and gray. Two sizes, 18 in. and 22 in. diameters accommodate either incandescent or mercury vapor lamp sources. Unit can also be provided with various refractors for light diffusion and is available for indoor or outdoor mountings on post units, wall brackets, and pendant units. Habitat.

Circle 107 on reader service card

Outdoor drinking fountain. Designed especially for use by persons in wheelchairs as well as the general public, it has a sculptured receptor mounted on a 19¼-in. extension with two lever handle valves for right- or left-hand operation and automatic stream regulation. Constructed of aluminum finished to a dark bronze tone. Haws Drinking Faucet Co.

Circle 108 on reader service card

Papillon collection consists of a settee, sofa, arm and pull-up chairs, high back man's chair, ottoman, and a corner unit with or without arms. All pieces are tufted over polyurethane padding, seats and backs have spring construction on hardwood frames. Arms and backs are reinforced with tubular steel, legs are molded of high impact plastic. Upholstery fabrics include cotton checks, velours, patchprint cotton, and leathers. Contemporary Design International.

Circle 109 on reader service card



Light fixture



Patchprint chair

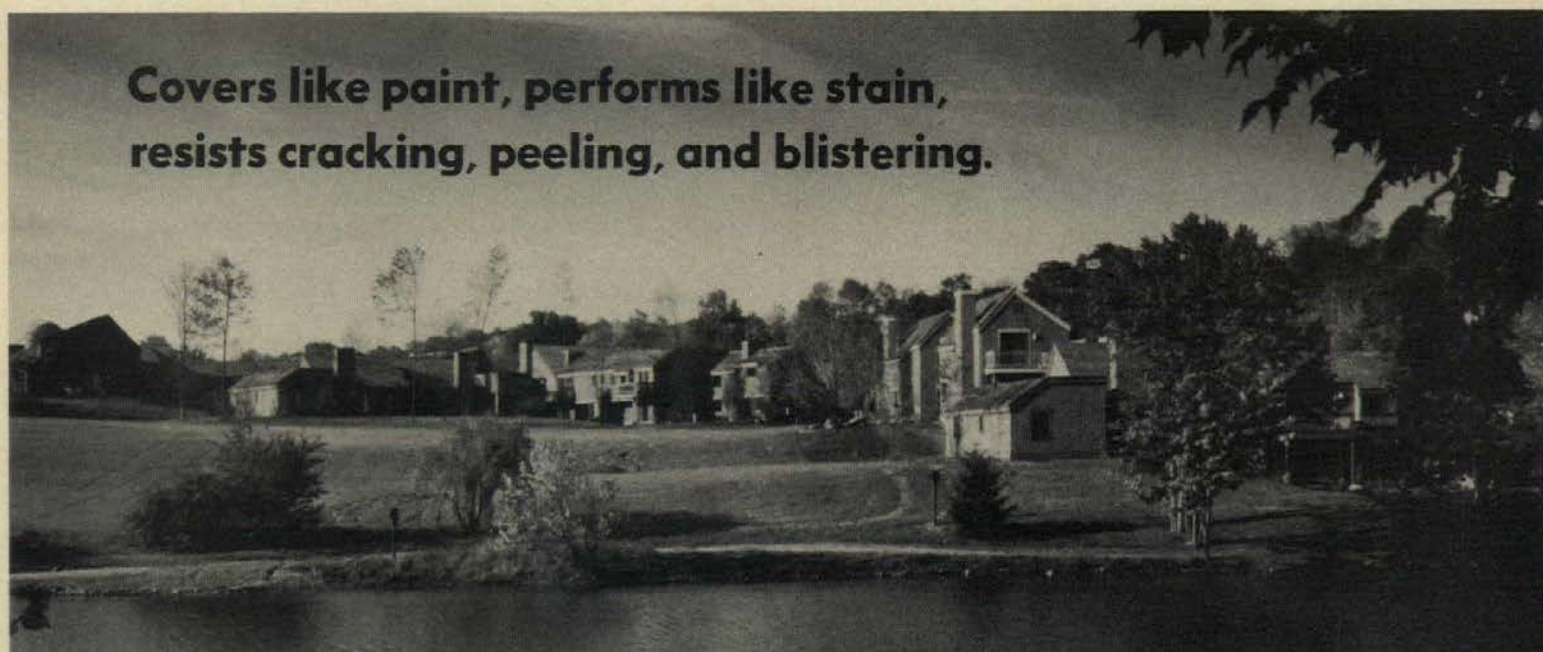
Outdoor fountain

Fluorescent lamp. Said to consume 20 percent less electrical energy but maintain 90 percent of original light output, "Watt-Saver" is an 8-ft, 60-watt lamp designed to replace 75-watt tubes in the same fixture. Using krypton gas, the lamps produce 95 lumens per watt and are said to save 30 watts per two-tube fixture. Duro-Test Corp.

Circle 110 on reader service card

[continued on page 124]

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Products and literature continued from page 123

Concrete picnic table and benches are separate units which provide walk-in type of seating. Designed for permanent installation on a concrete slab, they are one-piece castings reinforced with steel and are available in several colors. Surface is treated with an acrylic sealer which waterproofs the surface and prevents staining, according to maker. Table is 7-ft long and benches are 6-ft long. Form, Inc.

Circle 111 on reader service card

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Circle 114 on reader service card

[continued on page 128]



Van Keppel-Green chair



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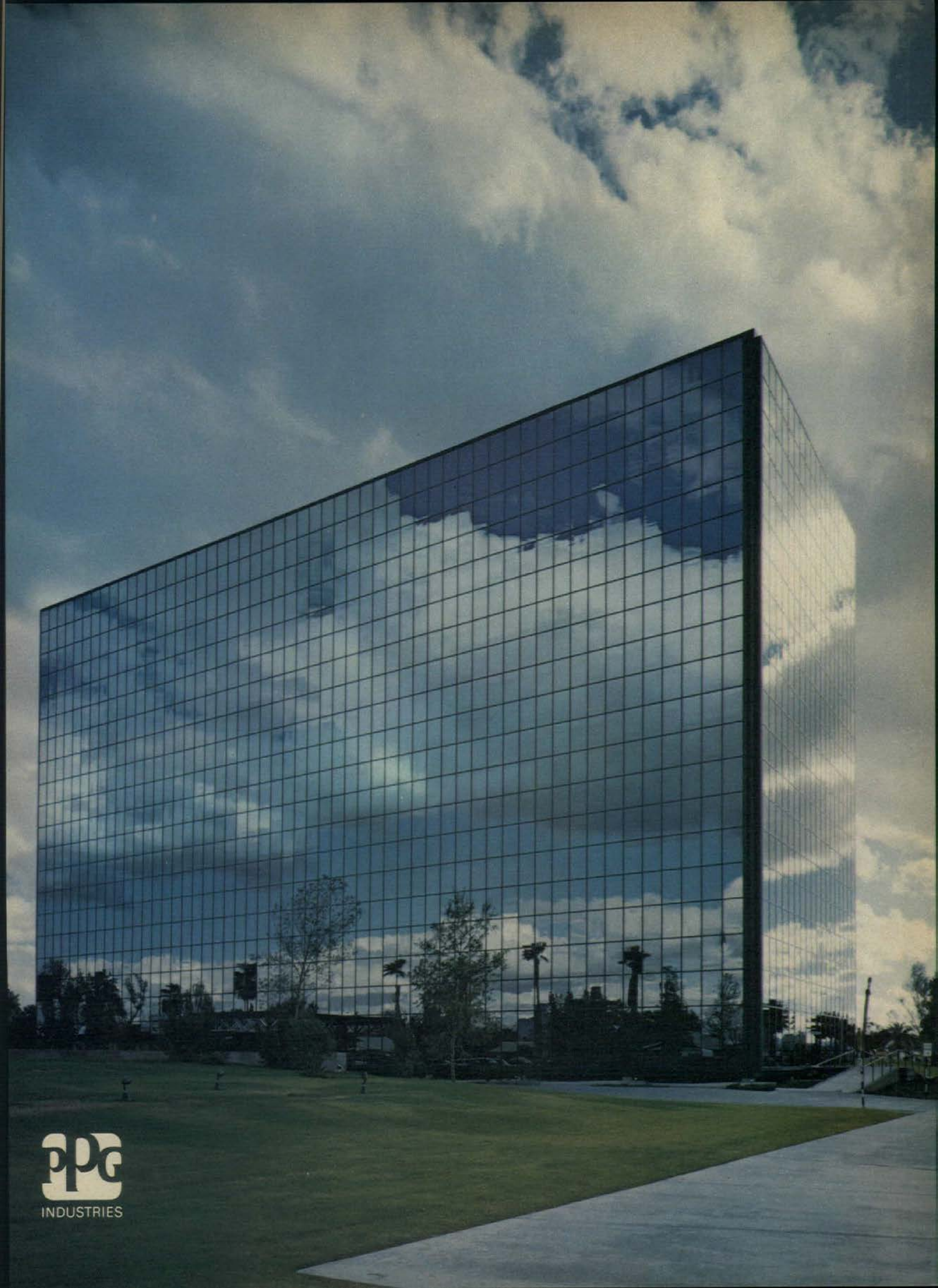
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Products and literature continued from page 124

Grass pavers. Cast in the form of a concrete grid with nonslip characteristics through which grass is able to grow yet it withstands the weight of heavy vehicles. It also is said to prevent mud and provide erosion control. Applications include construction sites, parking lots, road shoulders, parks, and schoolyards. Grass Pavers Ltd.

Circle 115 on reader service card

Literature

Noise control. Catalog describes products, gives functions, applications, and installation information. Product line includes absorbers, barriers, dampers, isolators, silencers, and composites. These off-the-shelf noise control measures are said to provide solutions at the noise source, along its path, and at the receiver. Lord Corporation.

Circle 201 on reader service card

Metal spires and ornamental roofs are described and illustrated in brochure. Methods of construction, specifications, and case histories of renovation and restoration are also given. Overly Manufacturing Company.

Circle 202 on reader service card

BlocBond. A mix that combines 1/2-in.-long alkaline-resistant glass fibers and a water-resistant agent with Portland cement. When mixed with water and applied to exterior and interior surfaces of dry-stacked concrete block walls, maker states it dries to a hard coating eliminating the need for mortar above the first course. Walls can be finished with paint or stucco or any other conventional facing such as drywall or brick. Needs no prime coat. Brochure shows construction and application details, surface finishes, code approvals. Owens-Corning Fiberglas Corporation.

Circle 203 on reader service card

Architectural renderings. Illustrated, full-color brochure describes professional design service. Kinsey Architectural Arts.

Circle 204 on reader service card

Technical/visual film. Five different products are available to cut time and costs in graphic work by eliminating repetitive steps in design, drafting, engineering, and architectural work plus visual presentations and office procedures. Products consist of a transparent acetate or polyester film with a receptive coating on one side, a pressure-sensitive adhesive coating on the other side, and a peel-off backing sheet. Often-used symbols can be preprinted. Brochure. Saga, Inc.

Circle 205 on reader service card

Energy conservation is the subject of guide. Illustrated handbook contains many tested ideas on how to save on heating, cooling, lighting, and ventilating; how to schedule power loads and how to shed them to avoid high electrical-demand charges; how to cut energy costs with a centralized control in large buildings and with time-shared building automation in medium-size buildings. Honeywell.

Circle 206 on reader service card

[continued on page 133]



Weldwood Fire Doors. A lifetime of beauty. An hour of protection.

Weldwood® Fire Doors offer a substantial margin of safety by reducing fire spread and providing a low rate of heat transmission.

For instance, even after an hour's exposure in a test furnace reaching 1700°F, the temperature of the unexposed side of our 1 hour rated door is low enough not to harm anyone passing by it. (The unexposed side of some hollow metal doors will reach as

high as 1000°F in only 30 minutes of test.)

Weldwood Fire Doors are more than fire barriers; they're a handsome addition to any interior. They can be faced beautifully with rich, hardwood veneers or beautifully colored with plastic laminates.

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rust or dent; or under extreme conditions they won't buckle into an inoperable position.

To find out more about our full line of ½, ¾, 1 and 1½ hour Weldwood Fire Doors, contact your local U.S. Plywood Branch Office. Or, send for our new detailed brochure.

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- Apartments • Banks

A unique blend of Dow-Badische yarn . . . combining the abrasion resistance and long wear life of nylon with the fine, natural aesthetic value of Zefran acrylic . . . this blend is optimal in accomplishing maximum beauty and performance. Depth of color is a strong characteristic.



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Zefran® is the trademark of the Dow
Badische Company

I. V. Chandler, President, Patcraft, and Eddie Mathews, Atlanta Braves, shown in training room, Atlanta Stadium.

General purpose control. A complete listing of control devices ranging from products that start, switch, and sense to those that count, indicate, and operate through pre-programming are contained in this 328-page indexed catalog. Photos, applications, technical data, and detailed dimensional drawings on each product are given. General Electric Co.

Circle 207 on reader service card

Steel accessories. Details on uses, sizes, styles, and weights for various steel accessories for construction of drywall and plaster assemblies are given in 36-page catalog. United States Gypsum Co.

Circle 208 on reader service card

Insulated panels feature interlocking tongue and groove aluminum extrusions on the panel edges and are offered in a choice of porcelain enamel, aluminum, or aggregate facings in a variety of colors and textures, single- or double-faced for combination exterior-interior walls or for interior use as movable wall partitions. Joint covers have finishes to match. Panels have standard cores of UL-approved noncombustible moisture-resistant perlite or polyurethane. Product literature and data is available from Kaiser Mirawal.

Circle 209 on reader service card

Doors. Catalog features 29 doors in color. Six series—Knot Block, Old Wood, Barbie's Blocks, New Wood, Armijo Art, and Painted Wood—are available in a wide range of sizes and finishes. Whittlewood Corp.

Circle 210 on reader service card

Curtain walls and entrance systems are covered in two color catalogs offered to architects and builders. Technical data, details, and features of the products are included. The Alumiline Corp.

Circle 211 on reader service card

Wallcoverings. A sample book designed especially for architects and builders contains a wide assortment of samples—shiny vinyls, burlap, grasscloths, silk appearing "moire" finishes, embossed solids, mansard shingles, cork and more. United-DeSoto, Inc.

Circle 212 on reader service card

Luminaires. Brochure describes luminaire which uses high-pressure sodium and other HID light sources for roadway, commercial, industrial, and institutional lighting applications. Included are charts, color photos, and photometric data. McGraw-Edison Company.

Circle 213 on reader service card

Automatic irrigation systems. 1974 catalog provides sections on sprinklers for residential, commercial, and institutional building grounds and large turf area applications, describes controllers for both hydraulic and electric systems, commercial rotary sprinklers. Also covers installation tools and accessories. Gives recommended applications, specifications, spacing, water pressure and volume, spray radius and spray pattern. The Toro Company.

Circle 214 on reader service card

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We're also in Sweet's Architectural Catalog, File Section 11.28

Circle No. 340, on Reader Service Card

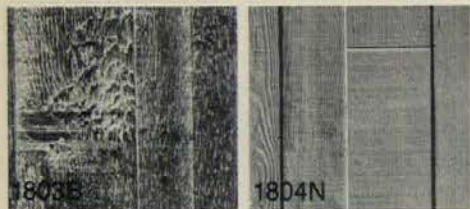
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Progressive Architecture

Notices

Appointments

Robert Blumin, AIA was named vice president, business development of Maxwell Starkman & Associates, Beverly Hills, Calif.

Saggus, Vaught, Spiker & Associates is now Saggus, Vaught, Spiker & Howell, Atlanta, Ga., with the addition of Harry W. Howell, AIA as a general partner.

Raul F. Trujillo has been appointed vice president of Alsbrooks & Associates, Inc., Atlanta, Ga.

Norman Cates, AIA has been elected vice president and manager, architectural division, of VTN Consolidated, Inc., Irvine, Calif.

Richard R. Klein has been named associate architect of Jones/Mayer & Associates, St. Louis, Mo.

Arthur H. Silvers, AIA has joined the Los Angeles office of Daniel, Mann, Johnson, & Mendenhall.

Thomas A. Hooker, AIA has been named director of architecture of Deems/Lewis & Partners, San Diego, Calif.

Sewa Barmi has been appointed an associate of Sigmund Blum, Vaporciyan & Mitch, Inc., Detroit.

The following have joined Ralph Hahn & Associates, Springfield and Chicago, Ill.: Steven E. Bishop, Robert W. Dawson, Ronald W. Eimer, Lourdes T. Knepler, Robert W. Power, Jr., and Larry L. Vieley.

Mart Ojamaa and Robert Y.C. Hsiung have been elected vice presidents of Jung/Brannen Associates Inc., Boston.

The following have been elected partners of The Eggers Partnership, New York City: Robert L. Bien, AIA; Bernward U. Kurtz, AIA; Thomas H. Price, Jr., AIA; and Robert H. Welz, AIA.

John R. Rickey, AIA has been named marketing director of Ellerbe, Bloomington, Minn.

Charles G. Gable, AIA has joined Gin Wong Associates, Los Angeles, as vice president and executive architect.

Sandor A. Marton and Edwin M. Denson have been appointed associates of The Office of Mies van der Rohe, Chicago.

Larry L. Upton has been appointed manager-environmental engineering in the Architectural and Engineering Systems Group of Commonwealth Associates Inc., Jackson, Mich.

Joe R. Milton has joined William T. Can-

[continued on page 138]

How to ship small packages in a big hurry.

DELTA'S DASH

DELTA AIRLINES SPECIAL HANDLING

On DASH shipments Delta guarantees delivery on the flight or routing you specify between most Delta cities.

Packages accepted up to 50 lbs. with length plus width plus height not to exceed 90" total, with only one dimension exceeding 30".

Deliver to Delta's ticket counter or airport air freight terminal at least 30 minutes prior to scheduled departure time. Shipments may be picked up at either location 30 minutes after flight arrival.

Delta's exclusive "Dashboard" control procedure insures constant tracking of your shipment from delivery to pick-up.

DASH charges are nominal. Check Delta reservations for charges between specific points. Pay in cash, by company check, most general-purpose credit cards, special credit arrangements or on government shipments by GBL. **DELTA** The airline run by professionals

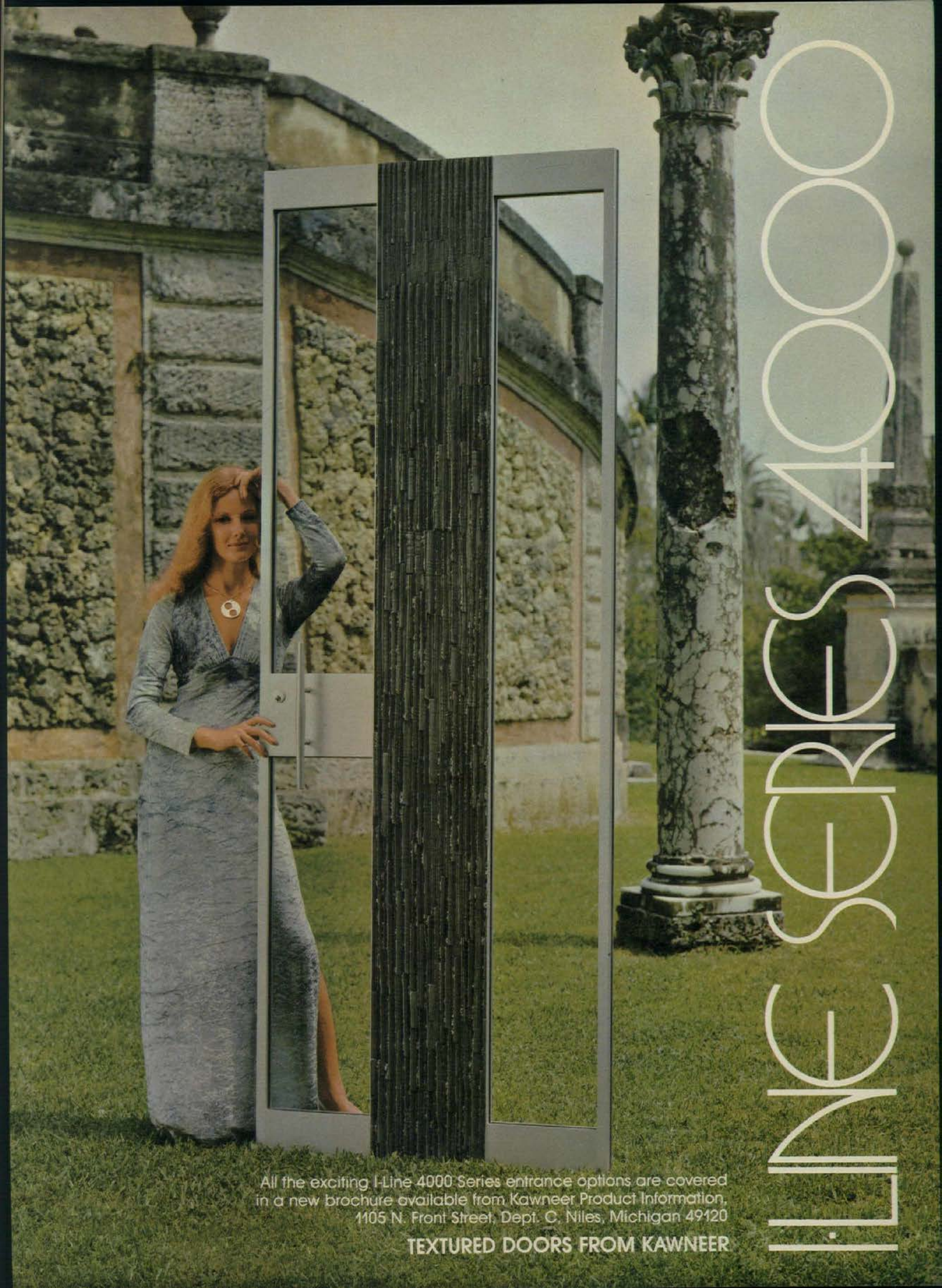
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Boston-Miami	\$26.25
Cincinnati-Louisville	\$21.00
Cleveland-Phoenix	\$26.25
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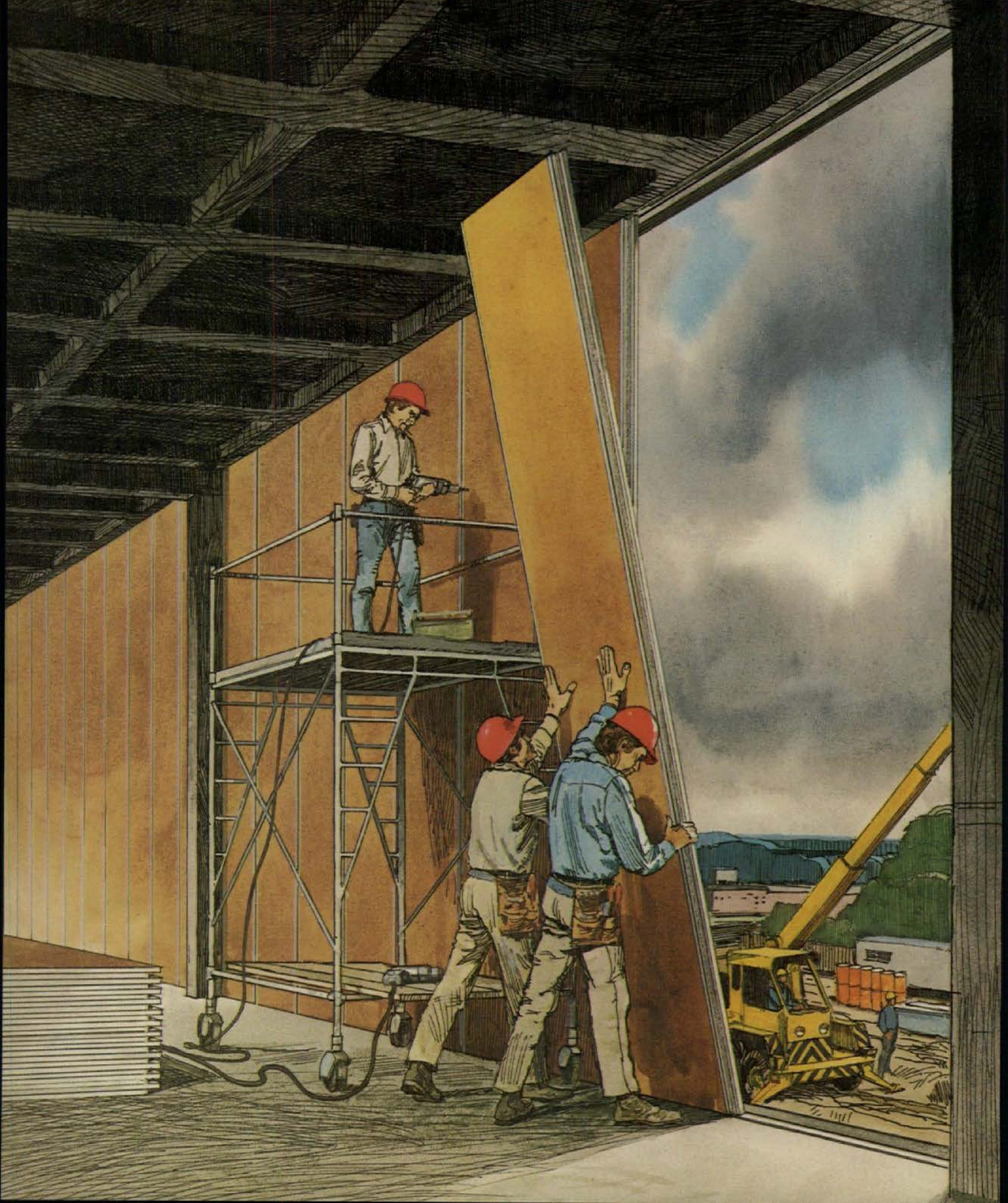


I-LINE SERIES 4000

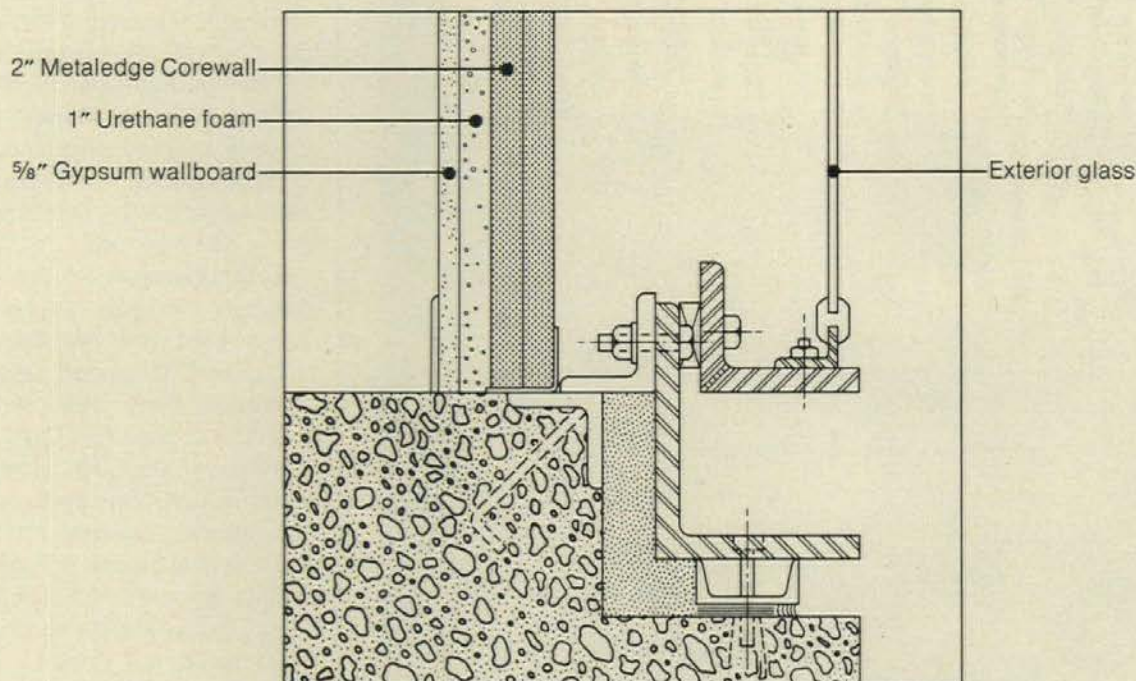
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We created Metaledge Corewall for one use. Now, architects are finding new ways to use it.



For example, the perimeter wall system of this Illinois Bell Telephone equipment building designed by Chicago architects Holabird & Root. In it, 24,000 square feet of Metaledge Corewall replaced conventional nonload-bearing construction in perimeter walls as well as elevator shafts. Because Metaledge Corewall goes up fast, the building would be enclosed rapidly to protect massive electronic equipment which had to

be installed before the walls were completed. And with a minimum of dust and dirt which could damage sensitive equipment.

For tight humidity and temperature control, a special wall system was designed. Our Metaledge Corewall was insulated with urethane foam and finished with our Sta-Smooth® gypsum wallboard. This wall system was also designed to be removable for planned expansion.

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LENWALL Specialty Wall Products

Notices continued from page 134

nady, AIA, Houston, Tex.

Victor L. Cohen has been named senior vice president of Heery & Heery, Inc., Atlanta, Ga. and New York City.

The following have been appointed associates of Albert Kahn Associates, Inc., Detroit: Floraluz S. Macaraig, PIA; Robert P. Maggid; Charles T. Robinson; Heinz L. Bensele, PE; Harvey Schneider, PE; Donald R. Gwin; Joseph J. McDonald; Patrick J. Lindsay; Wayne E. Vicklund, PE.

Frank LaRosa, RA has been appointed associate of Hamby, Kennerly, Slomanson & Smith, New York City.

Robert Pereslele has been named vice president and design director of Design Enterprises, Inc., Anaheim, Calif.

Charles E. Defendorf has been elected president of Seelye Stevenson Value & Knecht, Inc., New York City.

William M. Gaul, AIA has been named senior vice president of Hague-Richards Associates, Ltd., Chicago.

Ewing Cole Erdman & Eubank, Philadelphia, is now Ewing Cole Erdman Rizzio Cherry Parsky with the addition of Nicholas J. Rizzio, Jr., AIA, Robert V. Cherry, PE and Robert M. Parsky, AIA as partners.

R.L. Reins has been named executive vice president, and Arthur J. Meyer, Jr. assistant vice president of Henningson, Durham & Richardson, Omaha, Neb.

Dayton Meyer, Thomas Benedict, and William Walker have been appointed associates of Walter Richardson Associates, Costa Mesa, Calif. Richard G. Munsell has joined the firm as director of community planning.

Jon T. Lang, AIA has been elected to the board of directors of The Environmental Research Group, Philadelphia.

Peter Randall Stark has been appointed vice president/development for Max O. Urbahn Associates, Inc., New York City.

Clovis Heimsath Associates, Inc., Houston and the Johnson Space Center, Tex., has announced the following appointments:

Charles F. Stephens, AIA, vice president; James B. Gaffney, Jr., AIA and Jerry Mendenhall, AIA, senior associates; Robert W. Bainbridge, AIA, Robert A. Warrick, AIA and Emmett H. White, AIA, associates.

Clark P. Halstead, Jr., AIA has been named vice president of James D. Landauer Associates, New York City.

R. Lawrence Dunlap, RA has been appointed a partner of The Cannon Partnership, Buffalo and Niagara Falls, N.Y. Mark R. Mendell, AIA was named director of design.

[continued on page 141]



AT ORONOQUE VILLAGE, 1200 FAMILIES ARE GOING TO LIVE UNDER THE SAME ROOF.

In Oronoque Village, a condominium community in Stratford, Connecticut that will stretch for over 300 acres, GAF Timberline® Asphalt Roof Shingles is the only roofing being used.

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Timberline's woodlike texture comes in 6 authentic shades. All with that rich, varied shadowing that

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Split Systems Reduce High And Low Voltage Problems With Flexible 187 To 264 Volt Operation

Notices continued from page 138

Goetz Hallenbeck & Goetze, Inc., San Francisco, Alameda, and Oakland, Calif., has announced the following appointments: Ildefonso Chamorro, AIA and Donald A. Neptune, AIA, senior associates; Will F. Harrison, Kuo-Ren Lin, Jadia D.J. Ng, Benard W. Savant, Terrence G. Schilling and David G. Stow, associates.

Richard L. Lang, Robert B. Lincoln, Fen Ching Ong and Robert L. Ratte have been named vice presidents of Lockwood Greene Engineers, Inc., New York City.

E. Fletcher Davis has been named director of urban and regional planning for Saunders-Thalden & Associates, Inc., St. Louis, Mo. Louis Bechtold has been appointed head of production in the landscape architectural division.

New addresses

LK & Associates, formerly Lay, Koski & Associates, are now at 594 West Ave., Tallmadge, Ohio 44278.

Alley Friends, 115 N. 34 Front and Vine, Philadelphia 19106.

M.L. Mitchell Associates Inc. and Mitchell/Ross-Worthy, 6406 Georgia Ave., N.W., Washington, D.C. 20012.

Howard Brandston Lighting Design Inc., 141 W. 24 St., New York City 10011.

Ellis/Naeyaert Associates, Inc., Warren Plaza, 30400 Van Dyke, Warren, Mich. 48093.

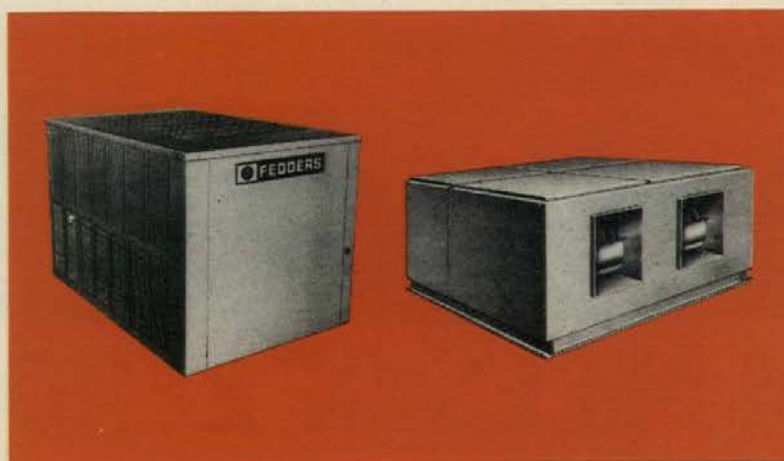
New firms

Wayne G. Carson, PE has formed Carson [continued on page 149]

New Fedders Lodestone condensing units have heavy duty industrial type compressors with hermetic motors designed to operate from 184 volts to 264 volts. Compressors are automatically unloaded in direct response to changing load conditions to provide lower operating costs. Matching air handlers 10 ton and larger are dual circuited to permit use of two condensing units for maximum flexibility

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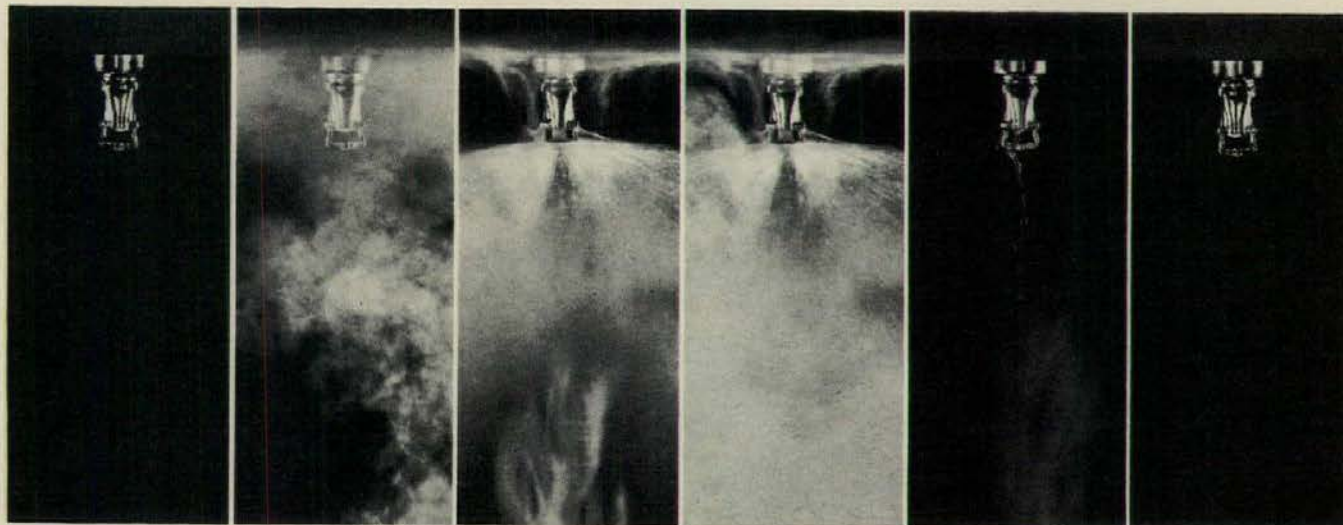


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