"Before" (top) and "after" (bottom) photos show effect Pan Am Building has on Grand Central area.

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New First National Bank of Stoughton . . . sound planned

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The Pan Am Building: A Behemoth Is Born

The rightness or wrongness of the siting and position of the new Pan Am Building—and the subsequent traffic pattern—can, in this writer's opinion, be summed up very briefly. It's wrong.

The concept of vertical "stacks" of office workers in center cities has much, if not everything, to recommend it—if sufficient space between high-rise structures is provided. In the case of the Pan Am Building, however, "the world's largest commercial office building" has been jammed into a spot where day-to-day rush hour traffic already resembles one of the more delirious student demonstrations on Tokyo's Ginza. Now, according to the public relations counsel for the building, the permanent working population will be 17,000, and "some 250,000 persons will use its facilities or pass through the building daily." In addition, there is a 400-car parking garage. Enough said on that score.

The building itself is another matter. With a powerhouse of consulting design talent—Dr. Walter Gropius and Dean Pietro Belluachi—and, in control, the most knowledgeable firm in New York when it comes to commercial buildings—Emery Roth & Sons—Pan Am is an architectural design failure. Had lesser lights been involved, this could be overlooked and it would be a curiosity merely for breaking the
colored Mosai aggregate used for added texture on the walls. works are too prevalent. (On opening Approaching the building through the narrow streets, one loses sight of the structure as a visual composition and is overwhelmed by its square, ten­story base. From the ramp which brings Park Avenue around the site, fortunately, this observer found them occasionally inexcusably jarring: base, stainless-steel screen by Gyorgy Kepes tower, parking garage entrance, and (bottom, le/i) behind the elevator con­trol desk has a meretricious "1930'ish" look, and the flashy tile mural by Joseph Albers (bottom, over the exit to the station is too loud, adding yet another jarring note to the com­position. (A major sculpture by Rich­ard Lippold has not been installed yet.) On clear, sunny days—always at a premium in New York—the building’s octagonal shape reads. But when seen from even a short distance away on a hazy or smoggy day, it becomes one-dimensional.

Moving past the colonnaded entry (top, left) and into the lobby of Pan Am (top, right,) one sees that the taste for monolithism did not desert the designers here. The spaces are much too big and heavy-handed. Sur­facing materials are too numerous and varied, and lighting elements for general illumination and lighting of art works are too prevalent. (On opening day, someone remarked, "This looks like a gigantic architects’ samples bureau") Great care reportedly went into the selection of artists and art for the public areas, but, un­fortunately, this observer found them disappointing. The aluminum and stainless-steel screen by Gyorgy Kepes (bottom, left) behind the elevator control desk has a meretricious "1930'ish" look, and the flashy tile mural by Joseph Albers (bottom, right) over the exit to the station is too loud, adding yet another jarring note to the com­ position. (A major sculpture by Rich­ard Lippold has not been installed yet.) On the positive side, interesting areas may result if tower tenants fol­low the lines of the building in de­signing and dividing their interiors.

—the most impressive experience the building offers is to look at its neigh­bors from the upper floors!

—James T. Burns, Jr.
ARMORY SHOW RESTAGED ON 50th ANNIVERSARY

NEW YORK, NEW YORK Fifty years after Americans were stunned by their first large-scale view of modern art at the Armory Show of 1913 (above, more properly known as the "International Exhibition of Modern Art"), this show is once again enjoying record attendance. Joseph S. Trovato of the Munson-Williams-Proctor Institute in Utica, N. Y., the instigator of the anniversary exhibition, managed to reassemble an astonishingly high number of the works shown in the epoch-making 1913 exhibit. The 1963 edition opened in Utica on February 17, the birthday of the Armory Show. It is now in residence at its birthplace, New York's 69th Regiment Armory.

The show that introduced this country to contemporary art by Europeans, including Cézanne, Redon, Renoir, Monet, Duchamp, Brancusi, Picasso, Matisse, and Braque, and fellow-countrymen Ryder, Hartley, Marin, Kuhn, Sloan, and others, is still astonishingly fresh after a half century—indeed, it makes many present-day exhibitions seem feeble by comparison. Naturally, there are some artists who have not held up over the years, including, unfortunately, the guiding spirit of the 1913 show, Arthur B. Davies. Perhaps his efforts in creating that platform for modern art is a sufficient contribution for one man.
Elementary Schools as Rejuvenative Elements

Columbia University School of Architecture, which has gained a reputation for assigning student problems dealing with real communities in real situations, recently has done it again with a three-team, three-school problem concerning Camden, New Jersey. Working with school officials and planners from Camden, and with the consultation of Columbia Teachers College, graduate students under Professor Edward Romieniec and Associate Professor Alexander Kouzmanoff have designed three elementary school-neighborhood centers to act as catalysts for urban renewal.

Camden, long in need of redevelopment socially and physically, has embarked upon an ambitious program of rejuvenation and replanning. One example was the Cooper's Point project by Vreeland and Newman, which won a P/A Design Award (January 1968).

The decision has been made by planners and school officials to create as the core of each redevelopment section a neighborhood center containing a school with community facilities, a school playground, and a public park. With this as the basis of the program, the Columbia teams designed dual purpose elementary schools for three separate areas in Camden.

The Cassaday School, by Alvin E. Palmer, Kirby M. Keahey, and Danial P. D'Oliviera, features use of precast,
pre- or post-tensioned concrete units, which would make possible a high degree of flexibility in construction. As in all three schools, the public areas are distinct from the areas used by the children, making contact between pupils and townspeople unlikely. Play areas are furnished on the roof and at ground level (where an extra floor is created by excavating to the level of existing basements of old buildings now on the site).

The Central School, by John D. Haines, David A. Millard, and J. Daniel Spears, places the community hall at the center of the building, as in the Cassaday School. Two existing churches on the site are retained, and the space between them converted into a park. The four classrooms of each grade are grouped around a communal area, called a "living room." Flexibility in the use of present and future teaching methods is emphasized here.

The Bergen School, by Arnold G. Henderson, Richard E. Kaeyer, and Warren W. Yip, would be built in two stages: first the school, and then—replacing an adjacent, existing school—the community hall. A split-level plan locates all classrooms within one half-level of the entrances. Teaching auditoriums separate adult and children's areas, and permit adult classes to be held during the daytime.

The Columbia students have prepared an elaborate brochure that will be used in Camden to generate public support for redevelopment.
Yamasaki Hotel For Century City

Century City, the Alcoa-Zeckendorf Property Corp. (Webb & Knapp) redevelopment on the site of the old 20th-Century-Fox movie lots in West Los Angeles, is scheduled to get a hotel designed by Minoru Yamasaki.

The 800-room, 22-story hotel—and it is refreshing to see a hotel being called a hotel these days—will be one of the five largest hostelries west of Chicago. To describe a huge curve facing the Avenue of the Stars, one of the main streets in Century City, Century Plaza Hotel will rise from three-and-a-half acres of meticulously landscaped grounds over underground parking for 800 cars. Additional parking spaces will be provided nearby. In addition to pools, gardens, and terraces, the open spaces will feature shops, a putting green, and other recreational facilities. Each guest room will have a "lanai" with a view northeast to Beverly Hills, the mountains, and downtown Los Angeles, or southwest to the Pacific Ocean.

Yamasaki has provided an impressive entrance to the hotel, but has emphasized its resort-like aspects.

Progress Report: Sydney Opera House

SYDNEY, AUSTRALIA P/A's Australian ear-to-the-ground, Margaret Squire, reports that Joern Utzon's opera house is adhering much to the original, prize-winning scheme despite some vocal opposition from critics, ranging from artists who will perform therein (and who say the opera hall will be too small) to the man on the street who will listen therein (and who cannot get used to the shape of the building). Last summer one construction worker was so imbued with the spirit of the whole project that he was found scampering about the site one warm evening clad in nothing but joie de vivre (patriotic Sydneyite Squire points out that the gentleman was imported from Scandinavia).

When the soaring roofs of the building are finished, they will furnish a bold visual echo of the sailboats which race in Sydney harbor (right, below).

Progress photo (right, above) shows areas for main hall seating (1); machinery pit for opera stage (2); smaller hall seating (3); machinery pit for revolving stage (4); chamber music hall beneath (5); experimental theater (6); and restaurant (7).
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Their report states that after testing, there were no cracks, corner damage, loose bolts, broken welds or twisted rails. There was no damage, nor sign of wear to hinges and fastenings. Clearances at head, jamb and sill remained constant. Diagonal dimensions were unchanged—proof the 190 didn't sag. The lock-in glass stops were still tight.

Results of Dual-Moment Testing on Doors by Major Manufacturers. Another Independent Laboratory subjected the Kawneer 190 and eight well-known competitive doors to the torturous dual-moment lever arm and torque test... applying forces of common door failure. The corner of the 190 door held fast against a load of 200 pounds. The average performance of other doors tested was failure at 98.7 pounds load.

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<th>Dual-Moment Test—Lbs. Applied Before Failure</th>
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<td>Kawneer 190 ........ 205 lbs.</td>
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<td>Brand 1 ............ 55 lbs.</td>
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Affidavits of Independent Test Reports are available when request is submitted on your letterhead.

The Kawneer 190 door is better, competitively priced and installs faster. And now it is available in *Kalcolor (black, gold, amber) as well as Alumilite 204 A1 R1 finish.

Rack-proof... The strongest corner construction ever! Kawneer doors are welded four times at each corner with a secured reinforcement.

Dual-Moment Lever Arm and Torque Test... Simulates the most common, failure-causing loads submitted on door corners.

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Niles, Michigan • Richmond, California • Atlanta, Georgia • Kawneer Company Canada Ltd., Toronto, Ontario, Canada

For more information, turn to Reader Service card, circle No. 398
NEW YORK, NEW YORK Awards in the first Design in Steel Awards Program of the American Iron and Steel Institute were presented last month at a banquet in the Waldorf-Astoria. More than 640 entries from 39 states were judged for excellence of design and use of steel in eight categories: galvanized steel sheet; concrete reinforcing bars; welded wire fabric reinforcement; steel plate; drawn wire; steel bars; steel sheet or strip; and structural steel. Architectural award winners (above) were (1) a calibrating station tower by James J. Nargis & Edward S. Darden for galvanized steel sheet; St. Louis Priory Church by Hellmuth, Obata & Kassabaum (2) for welded wire fabric reinforcement; office building (3) by Smith & Williams for structural steel; vacation village by Spencer & Lee (4) for concrete reinforcing bars; and a folding pedestal table (5) by Hugh Acton for steel bars.


Jury included Architects Morris Ketchum, Jr., A. G. Odell, Jr., and Robert Anshen; Industrial Designers Leon Gordon Miller, Jay Doblin, and Arthur Pulos; and Engineers Edmund Freidman, Ronald B. Smith, and Dr. Robert Raudebaugh.
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The lights burn late at the Gold Bond Research Center, Tonawanda, N.Y.
Tensegrity Sculpture

A proposed minaret for a contemporary mosque in Karachi, Pakistan, is shown by designer Kenneth Snelson. The piece, which is part of an exhibit of Snelson's structures and sculptures shown at Brooklyn's Pratt Institute recently, will recall to many Bucky Fuller's tensegrity mast in his Museum of Modern Art show a couple of years ago.

Cantilevered Library

Main floor of the library proposed for Cedar Crest College, Allentown, Pa., will be the top floor. Designed by Bond & Miller of North Allentown, the building will utilize a campus hillside as its site, causing the main entrance to be approached via a bridge over a dry moat into the upper story reading and information areas. This floor will be cantilevered at the rear (as shown) over the stone retaining walls enclosing the lower areas. Library is the first of three new buildings in the college's 10-year development program.

HQ NEAR NORTHLAND

New headquarters for the Detroit Federal Employees Credit Union, designed by associated architects Lorenz, Paski, Begrow & Brown, will be situated near Northland Shopping Center on Detroit's "Gold Coast." Design features a wide, aggregate-surfaced fascia "floating" over the gray glass walls of the offices and public spaces, the whole standing on a concrete base in a well landscaped area. Access to the front entrance will be via a curved ramp leading from the gardens below. Parking areas will be depressed so as to be invisible from the street.

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Office Pavilion for Peninsula Suburb

Redwood City, Calif., which could certainly use it, will get a handsome small office structure designed by Chan-Rader & Associates of San Francisco. This will be a wood-framed, stucco building of classic proportions. The ground floor, with an evenly expressed rhythm of show windows and entrance openings, will be surmounted by an upper, rental floor featuring a band of narrow fixed glass windows punctuated by two larger windows above the entrances. To increase the pavilion-like feeling of the structure, it will be raised on a concrete base.

Honolulu Condominium

A $1,500,000 condominium apartment building scheduled to rise in central Honolulu. Continued on page 76
THE MELLOW CHARM OF BRICK

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Save Valuable Floor Space

The new Pittsford Plaza combines the charm of authentic Early American design, a one-stop selection of quality merchandise or services and over 30 acres of convenient parking for residents of Rochester's eastern suburban area. Thirty-two stores heat with top efficiency and economy. Ceiling-suspended Janitrol gas-fired unit heaters and duct furnaces turn the trick. These compact heating units with individual thermostatic control are sized to give fast, evenly-distributed heat in smallest shop or largest retail store.

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The Music Lovers' Shoppe at Pittsford Plaza is heated by Janitrol duct furnaces, ceiling-suspended in the rear storeroom. Heat is efficiently distributed to the retail area through inconspicuous, circular, ceiling outlets. Manager Vince Meleo reports, "During winter months our heat is turned down overnight. About 5 minutes after opening in the morning, temperature is back to the comfort stage."

In the Pittsford Plaza Sherwin-Williams paint store one compact Janitrol 67-Series gas-fired unit heater effectively heats the entire sales area. The ceiling-suspended unit uses no valuable floor space and its modern, functional design does not detract from the decor.

For more information, turn to Reader Service card, circle No. 378
Vault-like design, this sturdy new Weistyle hinge enhances flush appearance of compartment installation. Eliminates cut-outs, insets, covers, caps and projections above and below door line. Interior or exterior surface mounting allows up to 180° swing. Adjustable to stand in any position. Another Weis improvement.

Weis belongs where toilet compartments really take a beating
Honolulu has been designed by Morse & Tatom. The 11-story structure will have four two-bedroom and five one-bedroom units per floor. Ground-floor pool and garden spaces will be sheltered from the street by berms constructed of fill removed from the subsurface parking spaces. The building will be single loaded and oriented so as to give all tenants a view of Waikiki and Diamond Head (if the latter is still worth looking at, see p. 79, October 1962 P/A). Structure will be a system of precast wall and floor panels functioning as both structure and interior party walls. The 6"-thick wall panels will eliminate all columns, and the 4"-thick prestressed and precast floor planks will be made to appear monolithic with the walls by use of a composite topping. Exterior will feature exposed aggregate wall panels, gray glazing, and redwood slat jalousies. Elevator and stair towers will be cast in place. Structural Engineer: Alfred A. Yee & Associates.

Indian Penn Pals
Outrage over the forthcoming destruction of New York's Pennsylvania Station is not confined to the members of AGBANY and their supporters. A number of young architects in New Delhi, angered at the approaching vandalism, assembled before one of Delhi's principal shrines for the picture shown here. Should the Madison Square Garden Corporation see this, the architects may well repent their rash act when the Greater East Asia Square Garden rises on the mosque site.

At this writing, there seems to be no recourse except to anger and despair over the fate of the station. The two city agencies that could have thrown emery dust into the gears of the Madison Square Garden juggernaut instead granted the variances necessary for the construction of the project. With the Pan Am Building stuck behind Grand Central Station like a thermometer and the doom of Penn Station sealed, New Yorkers will have to go elsewhere to see the great portals created in a more spacious age.

Lunar Living
The Flight Accessories Laboratory of the Aeronautical Systems Division, Wright-Patterson Air Force Base, in Ohio, recently sponsored a design study of lunar shelters among the junior and senior architectural and industrial design students at the University of Cincinnati. Given a choice of such structural possibilities as inflatable structures, expandable honeycomb, expandable foam, and unfurlable packages, the students designed and built models of man-in-the-moon buildings to shelter 9 men on a 30-day mission. Solutions shown here are (top) a model colony of shelters with individual solar collectors, and (bottom) an expandable-pod shelter with solar collector.

KLING PROJECT GROWS LIKE TOPSY
Not long after the completion of the first, 276,000-sq-ft unit, the headquarters of the Government Employees Insurance Company in Chevy Chase, Md., will more than double its space with the addition of 319,000-sq-ft. Designed by Vincent G. Kling, as was the present building, the additions will feature an extension of the four-story office building, an eight-story office tower, and underground parking facilities. The tower will rise from a landscaped pallet sited on the roof of the parking garage. Materials—reinforced concrete, bronze-tinted glass in aluminum frames, and cream-colored porcelain-enamel spandrels—will match those of the existing structure. There has been talk of a large stylized eagle by sculptress Gwen Lux.
BETTER-BOND performs equally well when used on adhesive, thin or conventional mortar beds.

Up goes BETTER-BOND, 12 tiles at a time, with perfect joint alignment and positive bond with setting bed.

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Only the world's finest 4¼" wall tile—LEVEL-SET—is BETTER-BOND mounted. Its precise size provides a thin, uniform joint. Grout-lock design and ground edges without glaze flecks provide better grout adhesion and a more permanent joint.

BETTER-BOND is a better buy, too. It costs the same as ordinary tile with old-fashioned mountings. Yet, its “in-place” cost is less because it installs faster. Call your nearby Romany* Spartan distributor for more information and samples, or write: United States Ceramic Tile Company, Department PA-29, Canton 2, Ohio.
Continued from page 76

SYDNEY, AUSTRALIA This 45-story tower, designed for a square-block site "in what had hitherto been one of the city's most congested regions . . ." (surely it will win hands down now), clinches its resemblance to the far-off Pan Am by having an underground connection with Sydney's important WHynd Station.

The Australia Square project consists of two buildings—the 625-ft office tower (to be the tallest building in Australia) and a 13-story companion office building. An open plaza "will provide a refreshing respite from the heavy congestion of buildings and traffic found elsewhere in the Inner City Area."

An earlier scheme was distinguished by a lower and more elegant tower, a larger and more open site, and twice as many architects (a noted American is no longer associated with the firm of Harry Seidler & Associates).

ALLEN as president of the California Council of AIA . . . President of the national Consulting Engineers Council for 1963-1964 will be Sanford K. Fosholt; Stewart H. Beall is new president of the Metropolitan Washington chapter . . . Jury for the 1963 Awards Program of the Prestressed Concrete Institute are: Harry Weese, Chairman, Architects Arthur Quentino Davis and John Graham, and Engineers Thomas C. Kavanagh and Fred N. Severud . . . Walter Burley Griffin, the U.S. architect who prepared the master plan for Canberra, Australia's from-the-ground-up capital, has been honored by the issuance of a commemorative Australian stamp bearing his name and likeness.

New Certification Program for AAMA

Architectural Aluminum Manufacturers Association has announced a strict new certification program for aluminum prime windows and sliding glass doors. Products passing the rigidly enforced program will bear a new "Quality Certified" label that reads: "The manufacturer guarantees by affixing this label that this window or door is a duplicate of samples found by independent test and physical inspection to comply with the specifications of Architectural Aluminum Manufacturers Association. Administration and inspection of the program will be handled by Electrical Testing Laboratories, Inc.

CALENDAR

Seventh annual convention of Construction Specifications Institute will be held in Detroit, May 20-22 . . . An Institute of Church Design, jointly sponsored by Carnegie Institute of Technology and the Pittsburgh Theological Seminary will be held in Pittsburgh, June 3-14; a special feature will be visits with Louis I. Kahn, Paul Schwelkh, and John Johansen; information from the Institute, 616 North Highland Ave., Pittsburgh 6 . . . Annual meeting of the National Society of Professional Engineers will be held in Cleveland, June 26-29.

OBITUARIES

Harry Ahrens, senior staff associate in the office of Vincent G. Kling, died last month at the age of 66 . . . The Rev. Michael J. McNerny, O.S.B., practicing architect-priest, died in March at age 86.
Create home interiors that stay in style for years with beautiful wash-and-wear Marlite Paneling

With versatile Marlite paneling, you can create modern interiors in any room in the home that take years of wear with just minutes of care. Marlite's soilproof plastic finish is baked on at high temperatures most materials can't stand. Unlike many other wall coverings, Marlite shrugs off grease, stains, mars—even heat. And the selection of Marlite colors and patterns is almost endless. You can choose from a complete array of beautiful colors, authentic Trendwood reproductions, distinctive marble and decorator patterns...all created exclusively for Marlite by American Color Trends to stay in style for years.

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L-M fabricated the lights and pole in this photo to the specifications of the architect and consulting electrical engineer.

L-M’s proposed design of a Transclosure® to house transformers and other electrical equipment. An example of the styling L-M can supply when the need arises.

L-M lighting equipment is styled to be attractive and designed to afford efficient lighting at night.
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Styled Outdoor Lighting and Outdoor Electrical Service Equipment gives you variety of design that is always attractive.

DESIGN FOR BEAUTY—Select equipment for function and know it will look good. Regardless of your power or lighting requirements L-M equipment will perform exceptionally well and afford a pleasant appearance.

PRODUCT STYLING—L-M equipment is designed for beauty as well as function; styled by Jean Reinecke, noted industrial designer. It is unobtrusive. It blends well into its surroundings. It can assist in creating a decor.

FLEXIBILITY—Whether you’re planning distribution of bulk power or power at utilization voltage L-M equipment offers a maximum degree of flexibility. Electrical service equipment supplying power to your center can be overhead or underground. Lighting ranges from high intensity to mood.

SPACE SAVING—Most L-M electrical service equipment can be installed outdoors to save costly indoor space. It is safe, tamper-proof, and above all, affords an attractive appearance.

DEPENDABLE—L-M has supplied utilities and industrials for over 50 years. The electric utility supplying your center probably has millions of dollars of L-M equipment. You can depend on the quality and long life of L-M equipment.

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For more information, turn to Reader Service card, circle No. 376
BEAUTY THAT ENDURES

in a superior new acoustical ventilating ceiling system with accessible air control

From Wood Conversion Company comes an important new approach to room air distribution and effective acoustical control, combining heating, cooling, and ventilating frequently at substantial cost-savings.

Jets of air project from control slots in Lo-Tone ventilating ceiling systems and entrain with room air above the occupied level. Each ceiling is designed to provide thorough circulation and air movement, achieving optimum comfort conditions.

Available in either regular mineral or Fire-Rated types. All Fire-Rated Lo-Tone ventilating tiles and ceiling boards are listed by Underwriters' Laboratories, Inc., and carry UL labels.

Lo-Tone ventilating ceiling systems employ control-splines to provide easy adjustment and balance of air flow from the underside of the ceiling. Room air induction takes place below the ceiling — this reduces the possibility of dirt being deposited on the ceiling surface which has a high light reflectance (75% or more).

The Lo-Tone acoustical ceiling sound absorption efficiency range of .65 to .85 is assured by the superior wet-felted process.

Lo-Tone ventilating ceiling installations cost no more than ordinary air-distribution systems, in many cases, considerably less. Large amounts of duct work are eliminated and plenum areas can often be fed with one stub duct.

Your ventilating tile and board requirements can be quickly determined with the special Lo-Tone Ventilating Design Calculator slide rule — free upon request. Wood Conversion Company, St. Paul 1, Minnesota.

LO-TONE
VENTILATING ACOUSTICAL CEILINGS

For more information, turn to Reader Service card, circle No. 368
The Pharaoh Tutankhamen and his wife — gilt and painted woodwork. Circa 1350 B.C. Cairo Museum.
BUILDING TECHNICAL MANPOWER

The attempt to find a sensible answer to the problem of providing enough scientific manpower to meet the nation's needs seemed to be making progress in Washington.

Some of the proposed solutions were reheashes of previous ideas, but one was concrete: a grant of $200,000 to the National Academy of Sciences—National Research Council from the Ford Foundation. Objective: to finance a broad examination of how the U.S. is using its scientific and engineering manpower.

The study may produce some answers to privately held opinions of many architects that there is no real lack of trained personnel; what's lacking is sufficient attraction in their chosen professions. It is well known, for instance, that a large proportion of civil engineering graduates never enter the profession; they go into sales or other more lucrative areas.

(Not a single architect or engineer, incidentally, is included in the member committee carrying on the study for NSF-NAS.)

The legislative approaches were principally two: a bill (S 816) to establish a "Hoover-type" commission to study Federal scientific programs and bring about economy and efficiency in these programs (a rehash of similar legislation proposed in the last three Congresses); and a House bill (HR 1946) to establish a "National Scientific Data Processing Center" in Chicago, which would codify and make available world-wide scientific information.

It should be noted, again, that when Washington talks about "scientific manpower," it seldom means architects or civil engineers. It means the "glamor" sciences connected with missile and space efforts, and chemists.

Legislation So Far

As to other legislation, there's little to say. Congress had managed to spend some two months in session, introduce more than 6240 bills of all types (as of March 1)—and pass nothing at all.

That's not a terribly unusual performance, but it does press a last-minute rush in July, and makes it obvious that only top measures will get real consideration at this session.

A steady stream of Presidential messages, of course, continued to flow toward Capitol Hill. These included a mental health and medical program that would involve many millions of dollars in hospital construction; and a $10 billion, five-year program of aid to the elderly, which included low-interest loans for group residences.

These measures—together with the already-argued tax bills, education programs, proposals for aid for mass transit in cities, and the whopping budget itself—will provide the points of debate for the rest of the year.

Of these, prospects look best for some reduction—but nothing else—in tax rates, and some token aid for transit.

New GSA Jobs

Architects will find ample work in prospect in that list of 74 new Federal buildings and major repairs to 49 others, sent up to Congress recently by General Services Administration.

Over-all expenditures involved would reach about $246.3 million; biggest single structure called for is a $330-million Federal office building in Detroit.

Anti-Noise Booklet

Federal Housing Administration has a new publication available entitled "A Guide to Impact Noise Control in Multifamily Dwellings." Publication can be obtained at no charge (while the supply lasts) from the Office of Public Information, FHA, Washington 25, D.C. Ask for booklet FHA 750.

Objective is to provide practical guidance for architects and builders in cutting down noise, particularly where lightweight materials are used.

"Tempos" To Go At Last

After years of debate, the General Services Administration and the National Parks Service will finally begin demolition of some of Washington's "tempos." Slated for removal within the next 18 months are a string of unsightly structures that have cluttered the south side of the Mall between the Lincoln Memorial and the Washington Monument for more than 20 years.

When the buildings have been removed—and old Washington hands don't really believe it, since there are still "temporary" buildings in use dating back to World War I—new drives and scenic roadways will be placed in the area.

FINANCIAL

Real puzzler for architects and others who watch the business aspects of the construction industry was a mixed bag of indicators that turned up in mid-March. Some were apparently warnings, others indicators of an improving situation. Net effect, however, was to impose a note of caution on forecasts for the construction season.

On the side of caution were these pointers: The Bureau of Public Roads' highway construction cost index showed a jump of 2.9 per cent for the fourth quarter of 1962, this getting within an uncomfortable two-point proximity of its all-time high in 1957. This index has a long history of very slight fluctuations; this three-per-cent rise is being watched. Excavation costs—up 12 per cent in the quarter—were principal cause of the over-all rise.

A second point was the fact that prices for sale of FHA-insured new-home mortgages rose again in January, after a one-month levelling-off period in December—an indicator of continuing tight money.

And the Census Bureau's monthly reports on value of new construction put in place showed an 11 per cent drop in January (from its December level), to $4.3 billion. That's about the normal seasonal decline, but cause for a close watch.

On the optimistic side were these indicators:

The Investment Bankers Association reported that voters had approved more than 70 per cent of all public works bond issues in December (a total of $265.4 million), continuing strong support of school construction, water and sewerage projects.

Planning for construction of privately owned industrial plants closed out 1962 with a strong upturn, and planning of public works projects was up. Housing seemed to be holding at about last year's levels.

There were some efforts in Congress, too, to ease the money markets. One measure (S 810) would set up a sort of "Fannie Mae" (Federal National Mortgage Association) to handle secondary paper on non-Federally-financed mortgages; another (S 829) would permit banks to invest in bond issues secured only by prospective revenues (as for toll bridges and other facilities)—but not by general revenues of a Governmental unit. They are barred from such investments at present.

For more information, circle No. 369.
Products to be Exhibited at AIA Convention

Featured in this month's P/A NEWS REPORT Products and Manufacturers' Data pages are selected new products and technical literature which will be shown in exhibitors' booths at the AIA Convention next month in Miami. P/A hopes in this way not only to alert architects who plan to attend the Convention to the new developments they may expect to encounter there, but also to give non-conventioneers an opportunity to see and send for product and data information they might otherwise miss.

Dylite for Wall Panels

Wall system made of precast-concrete panels designed by Deeter & Ritchey for University of Pittsburgh dormitories provides both interior and exterior finish with an insulating core of foam plastic board. Foam plastic board is molded from “Dylite” expandable polystyrene (which also is used for cold storage rooms, freezers and warehouses). Panels are 5" thick: 1½" Dylite foam board and 1¾" each for exterior and interior concrete facings. Steel wire reinforcing gives them high strength-to-weight ratio. Due to Dylite's low water absorption, no water barrier is required between insulation and concrete. Board is not brittle and can be molded or cut to any size or shape. Koppers Company, Inc., Plastic Division, Koppers Building, Pittsburgh 19, Pa.

New Impenetrable Sealant

An impenetrable sealant has been developed on the West Coast. Features include simplicity of installation and no special cleaning of joint surfaces, resulting in substantially reduced labor costs and "in place" economies. When sealant is compressed, it constantly strives to return to its original shape and size. It does not require back or filler and can be applied under extreme climatic conditions. Pacific Sealants, 15430 Yukon Avenue, Hawthorne, California.

New Telephone Booths

New all-glass telephone booths will be exhibited, together with cutaways of underfloor and cellular floor concealed telephone wiring for commercial buildings. Concealed facilities serving high-rise apartments will also be shown. American Telephone and Telegraph Company, 195 Broadway, New York 7, N.Y.
Soundproof Operable Wall

An operable wall said to provide a better sound barrier than a fixed wall of 8" concrete block has been placed on the market. Door is sealed horizontally with multiple separate contacts, and locked vertically with 5" jamb travel. Panel-door is available in wide range of colors and textures, is easily operated, and requires low maintenance. New Castle Products, Inc., Box 353, New Castle, Indiana.

On Free Data Card, Circle 103

Prefab Wall Surfacing System

Complete new prefab wall surfacing system is now available that includes laminate-faced panels, each 15 1/2" wide, 7/16" thick, over-all, in lengths of 8' and 10', plus finished molding strips, and unique spline system that acts as securing and hidden-nail device. Wall system is easy to install, with minimum upkeep. Formica Corporation, 4614 Spring Grove, Cincinnati 32, Ohio.

On Free Data Card, Circle 104

Slab Systems for Floors and Roofs

Two new precast floor-slab systems have been developed. The first consists of fire-resistant, 4" x 24", multiple-span, precast-concrete slabs, which have hollow-cell raceways for electrical and telephone wiring, and are designed for electrified floors and roofs. These hollow cells run the length of each slab and reduce weight to about 50 per cent of solid concrete slabs without sacrificing strength. Second system is a high-stress unit using high-tensile, seven-wire, stress-relieved strands to produce fully prestressed slabs, permitting longer clear spans and greater load-carrying capacity. Flexicore Manufacturers Association, 297 South High Street, Room 504, Columbus 15, Ohio.

On Free Data Card, Circle 105

On Site Turbine Systems

Natural-gas turbine "On Site Energy Systems" are available that provide complete energy requirements, 60- and 420-cycle electrical power and steam or hot water for heating and air conditioning for a building or complex of buildings. The 60- and 420-cycle systems are directly generated. The 420-cycle power is generated for operating high-efficiency, high-frequency fluorescent lighting systems and high-speed motors. Operating features are modular construction permitting matching of power generated to load demand, paralleling controls, dual alternator, automatic controls, and exhaust heat recovery. Thompson Ramo Woolridge Inc., 25555 Euclid Avenue, Cleveland 17, Ohio.

On Free Data Card, Circle 106

New Tile Colors

New series of glazed and unglazed color ceramic tiles for industrial and commercial structures and public buildings include a wide variety of types and textures. These can be combined in many ways to create various design patterns for floors, exterior and interior walls, etc. Stylon Corp., Milford, Mass.

On Free Data Card, Circle 107

Wall Drinking Fountain

Recently developed is a new 18-gage, stainless-steel, multiple bubbler wall drinking fountain. Lower apron is electroplated steel with paint-grip finish for painting to match surrounding decor. Fountain has easy-action, push-button, slow-closing valves for each of the three bubblers. Fountain heads are cast brass, hard-anodized to muted bronze color, permanent and abrasion-resistant. Bubblers are shielded, have raised angle stream, and are locked to receptor with vandal-proof lugs. Haws Drinking Faucet Co., Fourth and Page Streets, Berkeley 10, Calif.

On Free Data Card, Circle 108

Resilient Flooring

Two new resilient floor coverings will be shown in Miami. First is a 6"-wide, 1/8"-gage, floor covering for hospitals, schools, offices, or other uses where a minimum of dirt-catching seams are desirable. Second one is 1/4"-gage, heavy-duty decorative linoleum floor covering for commercial and residential use. No permanent indentation remains from loads up to 200 psi. Congoleum-Nairn Inc., 666 Fifth Ave., New York 19, N.Y.

On Free Data Card, Circle 109

Movable Plywood Walls

New movable plywood wall system has been developed in single modules to simplify initial installation and subsequent changes. Various face and core materials—from wood veneers on an incombustible core to solid gypsum board panels—are available. These walls meet requirements of most codes, including mandatory one-hour fire rating for walls in public corridors, elevator lobbies, and between tenants in multitenant floors. United States Plywood Corp., 55 West 44 St., New York 36, N.Y.

On Free Data Card, Circle 110

Flashing Accessories

Metal water-stop with flexible neoprene bellows has been developed for expansion joints. Included with this flashing is a chloro-sulfonated polyethylene material for roof construction where white marble chip or aggregate is used. Another type is standard neoprene product with metal flashing on one side only. Flashed side is set into masonry, while neoprene side is cemented to neoprene sheet membrane.
WAREHOUSES, SCHOOLS, HOSPITALS, SHOPPING CENTERS, FACTORIES, SUPERMARKETS... THESE AND MANY OTHER TYPES OF BUILDINGS CAN BE DESIGNED FOR MORE OPEN FLOOR SPACE WITH MACOMBER ALLSPANS. ALLSPANS ARE AVAILABLE UP TO 152 FEET IN LENGTH IN ROOF CONSTRUCTION, GIVING YOU GREATER DESIGN FLEXIBILITY AND A MORE FUNCTIONAL INTERIOR. ALLSPANS ARE NAILABLE (PATENTED V-SECTION) FOR FAST DECKING. THE RESULT, IN ADDITION TO A LESS CLUTTERED DESIGN, IS A CONSIDERABLE REDUCTION IN BUILDING COSTS.

FOR DETAILS ON OUR STANDARDIZED PRE-ENGINEERED PRODUCTS FOR THE CONSTRUCTION INDUSTRY, WRITE TO US. WE WILL MAIL YOU OUR DESIGN MANUALS ON ALLSPANS AND OTHER MACOMBER PRODUCTS.

MACOMBER INCORPORATED
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SUBSIDIARY OF SHARON STEEL CORPORATION

For more information, turn to Reader Service card, circle No. 335
in water-stop construction. Also to be exhibited at AIA Convention is new and heavier strip for improved bonding on long continuous runs. Lamont & Riley, Inc., 300 Cutoff, Worcester 7, Mass.

On Free Data Card, Circle 111

Moisture-Resistant Roof Insulation

An incombustible, moisture-resistant roof insulation manufactured from perlite ore, a type of volcanic glass, is now available. This roof insulation offers resistance to water absorption, is adaptable to all roofing systems and roofing membranes, resists compression under foot and wheeling loads, and provides excellent bond to deck and roofing felts. The Celotex Corp., 120 S. LaSalle Street, Chicago 3, Ill.

On Free Data Card, Circle 112

Prewired Ballast

New prewired ballast has been developed which converts old precast fixtures to modern quick starts. The ballast does not drip or leak tar, uses standard lamps, and saves 10 wiring connections. The case, core, and coil are permanently bonded into one solid unit, which is easily installed. Jefferson Electric Company, 25th Avenue and Madison, Bellwood, Illinois.

On Free Data Card, Circle 113

New Type Ceiling and Wall Paint

Synthetic cellulose wall and maintenance paint will not break, even at bends of 180 degrees, and is said to have lower fire rating than any other paint. One coat is equivalent to five coats of standard paint. Paint is odorless, dries overnight, and any paint contractor or experienced maintenance man can apply it. Paint is applied with spray gun, keeping labor cost low, and will bond to wood, cement, plaster, dry wall, cement-block, alumi-

num, steel, etc. Fasercit of America, Inc., 6676 Biscayne Boulevard, Miami 38, Florida.

On Free Data Card, Circle 114

New Floor Tile

“Pebbled Terrazzo,” made with fine chips of marble encased in translucent vinyl, gives the appearance of a solid vinyl surface and has installation advantages of vinyl asbestos backing. It is recommended for installation in residential and medium-traffic commercial areas. Product is grease-proof, stain- and alkali-resistant, and can be installed on, above, or below grade over concrete or wood surfaces. It is available in 9” x 9” or 12” x 12” sizes, 1/4” gage, and in four colors. Azrock Floor Products, P.O. Box 531, San Antonio 6, Texas.

On Free Data Card, Circle 115

Steel Prime Windows

Five types of steel prime windows made of hot-dipped, galvanized, tubular steel, and finished with factory-applied, baked-on epoxy enamel in 19 colors will be exhibited at the AIA Convention. Special features of the five types of windows include inside removable panels and inside glazing, and maximum ventilation, while retaining flexibility of customized interior and exterior castings. Rusco Industries, Inc., Box 387, Pendora, Ohio.

On Free Data Card, Circle 116

Emergency Lighting Unit

An emergency lighting unit that requires no addition of water throughout the life of its battery provides protection against hazards of power failure. Unit uses lead-acid storage battery that is completely maintenance-free, nonleaking, nongassing, and is sealed in a high-impact, heat-resistant plastic container. It operates instantaneously if normal power fails, and shuts itself off when power is re-restored. Exide Industrial Electric Storage Battery Company, Philadelphia 20, Pa.

On Free Data Card, Circle 117

Automated Chute Systems

Recently introduced linen, rubber, and dust chute equipment will be exhibited to point out to architects that linen collection in hospitals can now be automated by use of up-to-date chutes and conveyors. Wilkinson Chutes, Inc., 619 E. Tallmadge Ave., P.O. Box 3538, Akron 10, Ohio.

On Free Data Card, Circle 118

Metal Roofed Structures

Roofed structures made of an alloy of lead and tin on a base of sheet steel will be shown at AIA Convention. Roof metal is described as “superior to other roofing metals in economy, color-adherence, heat-reflection, permanence, workability, and low coefficient of expansion.” Metal is produced in 50 linear ft seamless rolls for maximum design applicability and ease of installation. Rollinsbee Steel Corp., Rollinsbee, West Virginia.

On Free Data Card, Circle 119

Insulating Methods

Three materials will be exhibited by Dow Chemical Company: (1) Styrocel large-cell foam, which has both light transmitting and insulating qualities; (2) a method of laying up Styrofoam and gypsum wallboard in masonry construction without need for nails or bracing by using a high initial tack adhesive; (3) and a method of providing quality insulated roofs at competitive costs by slightly altering the method of application. After Styrofoam is laid over the deck, a coated base sheet is placed, dry,
New Hi-Stress Flexicore Slabs Combine Longer Spans, Greater Loads, Improved Structural Performance

PARTS DEPARTMENT FLOOR: In garage was designed for 125 psf superimposed load. Two inches of concrete topping on Hi-Stress floor gave a composite design to adequately handle this load on the 23' clear span. Standard Flexicore slabs were used on the roof.

TYPICAL LOAD AND SPAN combinations for 8 x 16 Hi-Stress Flexicore slabs. Superimposed loads shown may be increased with composite design.

ONE-STOREY COMMERCIAL BUILDING ROOF DESIGN requires only a steel frame on each side of the building to carry 8-inch Hi-Stress units on long clear span. Design can be repeated in any direction for larger building. Underside of slabs was exposed for neat, maintenance-free ceiling.

Floor or roof slabs erected quickly

New 8” x 16” Hi-Stress units are fully prestressed slabs (f_p, 175,000 psi) cast in steel forms, with stress-relieved strands tensioned before concrete is poured. Appearance is similar to standard Flexicore slabs which use pretensioned intermediate grade steel bars.

For more information on these projects, ask for Hi-Stress Flexicore Facts 2, 4 & 5. Write The Flexicore Co., Inc., Dayton, Ohio, the Flexicore Manufacturers Assn., 297 S. High St., Columbus 15, Ohio or look under “Flexicore” in the white pages of your telephone book.
New from Abolite

New decorative luminaires combine smart styling with maximum lighting

Here's a smartly styled aluminum fixture that provides maximum lighting for churches, schools, libraries, and the like. These Abolite luminaires are supplied complete with aluminum upright units for 300 to 1500 watt incandescent or 400 watt mercury vapor lamps. They're available separately for use with R40 and R52 incandescent and mercury reflector type lamps. Subdued light sparkling through perforations adds to over-all beauty. Self-cleaning open top design cuts maintenance. Baked enamel finish—white interior with your choice of exterior colors. Louvers, guards, aligners, other accessories available. Our catalog is yours for the asking. Just write Dept. PA-4, Abolite Lighting, West Lafayette, Ohio.

For more information, turn to Reader Service card, circle No. 328

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Where impact and shock resistance must be evaluated for specific mirror installations in hospitals, schools, institutions and other locations — specify FM framed tempered plate glass mirrors. Impact resistance is eight times greater than ordinary glass. Under terrific impact, the glass will shatter, but disintegrates into blunt fragments — not sharp. Available in a wide range of framed sizes.

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1961. 8½ x 10½. 624 double-column pages. 1,046 tables, charts, diagrams, and photographs. $20.00

Reinhold Book Division Dept. M-315, 430 Park Ave., N. Y. 22
coated side down; subsequent hot moppings bring about a firm bond. Dow Chemical Company, Midland, Michigan.

On Free Data Card, Circle 120

Knoll Adds Stripes

Several fabrics in the Knoll collection are now available in stripes; colors coordinate with the original solid-color materials. Bangkok Stripe (top) comes in fiery red-and-orange combination, cool blue-and-green, and handsome gold-and-copper combinations. Nylon Homespun is available in stripes of black-olive and royal-fire. “Linea” (bottom), a stripe pattern printed on Belgian linen, varies a combination of three colors and white so that there is no repeat. Two fabrics illustrated designed by Suzanne Huguenin. Knoll Associates, 320 Park Ave., New York 22, N.Y.

On Free Data Card, Circle 121

Hardy Floor Tile

New vinyl asbestos floor tile with nondirectional pattern penetrating from top to bottom is designed for commercial use where heavy wear and tear could mar surface of ordinary tile. Tile is 9” x 9”, 1/8” thick, and is available in 11 colors. B. F. Goodrich Company, 800 Second Avenue, New York 17, N.Y.

On Free Data Card, Circle 122

Long-Lasting Coating for Variety of Materials

New polyurethane-based “Bostik Architectural Coating” gives superior protection to a wide range of materials: concrete of all types, masonry, cement-asbestos board, hardboard, and plywood. As shown here, it covers all exposed-concrete surfaces of Newton Savings Bank, Newton, Mass., designed by Bastille Halsey Associates, Architects. The coating is applied with a special three-nozzle gun: center nozzle emits a stream of dry aggregate (sand, stone chips, or gravel), while the flanking nozzles direct a spray of the polyurethane solution into the aggregate. Mixed in midair, the conglomerate cures to a durable, tough film. Among performance characteristics of the coating are its excellent resistance to weather, its “breathability” (ability to transmit moisture vapor out through the material from within a building), and its retention of original appearance and uniformity. Service life is expected to be ten years. Finish is applicable to interior or exterior surfaces, new or existing. Texture may be varied from fine to two sides of the entryway during the day; others allow the grille to fold into a slot, disappearing and reducing to a width of 1’ to 2’. They are sold only on architectural specification and basically on a custom-designed plan. Morris Kurtzon, Inc., 1420 S. Talman Ave., Chicago 8, Ill.

On Free Data Card, Circle 124
April 1963

**Pole System for Desk/Partition Units**

To accommodate additional staff members under existing leasing conditions, a combination pole, movable-partition, and desk unit has been introduced in the recently renovated IBM Chicago West Branch Office. More people can be comfortably accommodated within a given area. This unit costs less than individual desks, chairs, and two drawer units. Free-standing pole units are double channels carrying both phone and power lines through overhead feed. Desk unit is 6' on pole center. Counter is steel sandwich panel surfaced with laminated plastic showing no recognizable deflection, with 200 lb weight applied at center of span. Special chair by Herman Miller has 180° of action and center-spring homing device. Detroit Partition Company, 15850 Wyoming St., Detroit, Michigan.

On Free Data Card, Circle 126

**Tufted, Wilton Carpets**

"Timely," the tufted carpet illustrated, is one of six new carpet designs introduced by Downs Carpet Co. Made of DuPont continuous filament nylon, Timely has a textured effect and is available in 16 colors. One other carpet of the group is of tufted design; the other four are all-wool jacquard wilton carpets. Each of the wilton patterns is available in five to ten colors. Retail prices range from $8 to $22 per sq. yd. Downs Carpet Co., Inc., A Street and Indiana Ave., Philadelphia 34, Pa.

On Free Data Card, Circle 128

**Special Framing for Dulles**

Unique glass-framing had to be specified for the areas between the great sweeping columns of Eero Saarinen's Dulles International Airport. The system evolved used 33 different types of hollow, semihollow, and solid aluminum extruded shapes by Revere Copper & Brass, Inc. The mullions were kept to a very thin line, so as not to interrupt the glass flow between panels. A special alloy permitted superior application of the gun-metal-color porcelain enamel with which the mullions are finished. A single area between columns in the terminal is approximately 40' wide by 50' high. Neoprene gaskets seal the joints between the mullions and the 1/2" plate glass and the steel framework. Revere Copper & Brass, Inc., 220 Park Ave., New York 17, N.Y.

On Free Data Card, Circle 129

**Developer-Printer Units for Wall Mounting**

New diazo print developer called "Roto-lite Thermomatic" features a heated roller that increases the action of the ammonia developer and produces for the first time on low-cost whiteprinters completed development on black line prints and sepias. Thermomatic prints up to 42" wide and at a rate of 48" per minute, which is 10 times faster than tube method of developing. Weighing 80 lb, the developer is designed for wall mounting as well as for use on desks. Along with the Thermomatic is the "Roto-lite Expeediter Diazo Whiteprinter," which produces anything printed, written, or drawn on translucent materials. The Expeediter also mounts on the wall. All copies, including first prints cost about 1¢ for letter size or 1½¢ per sq ft. Sizes range according to models. Roto-lite Sales Corporation, Stirling, New Jersey.

On Free Data Card, Circle 130
six floors in six weeks

... formed with CECO steelforms and centering service

a floor a week!... from first floor to roof. That's six floors of monolithic reinforced concrete construction in six weeks! It was "construction on schedule" when Ceco had full responsibility for supplying, placing and removing centering and steelforms for the new Carondelet East Building in Clayton, Missouri.

Concrete joist construction formed by Ceco steelforms creates a reinforced unit of joists, integral with beams and supporting columns. Advantages: unsurpassed rigidity, less concrete needed than for other systems, meaning less weight and savings in columns, footings and foundations—also more economical than structural steel.

Specially trained Ceco crews and large stocks of Ceco steelforms are available from coast to coast... ready for your job on short notice. More facts? Ask for Bulletin 4002-E.
HEATING-COOLING DESIGN PRIMER

With the need for a more explicit approach to the problems of heating and cooling control in building design, a 65-page technical primer entitled "The Economics of Sensible Heat Control" has been published by the Owens-Corning Fiberglas Corporation. The chief purpose of the booklet is to make the architectural profession cognizant of the problems of air-conditioning, and to show how the application of the basic principles of thermal performance can reduce initial costs and also effect long-range operational savings for the building owner.

Previous to the preparation of the booklet, calculation charts were devised by Owens-Corning to enable the architect to create the best possible design solution in relation to building shell cost and air-conditioning. Following the compilation of this information, David W. MacCurdy was engaged as a consultant to enlarge the scope of the project. MacCurdy decided to include further information on the fundamentals of heat flow through the building shell, a discussion on the problems of heat gain and heat loss, and a systematic method of evaluating these factors as they applied to the initial and annual costs of air-conditioning systems.

The study is divided into two parts: Part I deals with theory of heating, and Part II with economic factors related to the thermal performance of the building shell. There are discussions on the use of glass, the effects of the opaque-to-glass ratio of the walls on the air-conditioning tonnage, the best possible location for occupancy in areas requiring maximum amounts of daylight, and whether interior or exterior shading devices should be used. The booklet contains 60 illustrations that clarify the formulas discussed and that demonstrate the economic factors involved. The booklet also contains a bibliography of over 100 references including the American Society of Heating, Refrigerating and Air-Conditioning Engineers Guide and Data Book as well as numerous articles written over the last 10 years. In this manner, the people responsible for the booklet hope to provide the architectural profession and students of architecture with simplified techniques for establishing better design criteria earlier.

The sponsors hope that this project will create a better relationship between economics and technology, and architects and engineers, as well as afford the owner a better-designed air-conditioned building at a lower cost.

Booklet is available free of charge to persons having a legitimate interest in this subject. Requests should be made for Pub. No. 5—IN—2460 (P/A) on office letterhead and addressed to: David W. MacCurdy, Owens-Corning Fiberglas Corp., 717 Fifth Avenue, New York 22, N.Y.

Insulation for Mechanical Systems

A guide book on insulating the piping and equipment of nine basic types of air-conditioning and refrigeration systems has been published by Armstrong's Insulation Div. The 28-page book describes the operation of the various mechanical systems and discusses the proper insulation to prevent excessive heat loss or gain and to stop condensation and frost. Among the Armstrong insulating materials are "Armiflex" pipe covering, a flexible foamed plastic with smooth black surface; rigid Armiflex for use at pipe hangers or wherever compression may be encountered; ventilating acoustical ceilings in tile and panel form, which let air into a conditioned area through thousands of small perforations; and "Armaglas" jacketed duct. Insulation Div., Armstrong Cork Co., Lancaster, Pa.

On Free Data Card, Circle 200
Data To Be Available At AIA Convention

Specially Designed Kitchen Units

Specially designed kitchen units are described in 19-page booklet. Different types of electric and gas ranges, ovens, electric refrigerators, deep bowl sink, faucet units, and upper cabinets are discussed. Included are color illustrations, details, and specifications. Dwyer Products Corp., Calumet St., Michigan City, Indiana.

Acoustical, Ventilating Ceiling Board and Tile

Illustrated, 42-page catalog of new ceiling products by The Wood Conversion Company includes its new "Lo-Tone" mineral, acoustical, ventilating ceiling board and tile. Included is an introduction pointing out the three major problems of modern sound control; applications and methods; details; specifications; charts; and technical data. Wood Conversion Co., First National Bank Building, St. Paul 1, Minn.

Flat Glass Line

Six illustrated booklets describe plate, sheet, patterned, and special glasses. Booklets describe characteristics, specifications, heat and light transmission, and applications. Plate glass folder lists recommended wind loads. Sheet glass brochure covers single and double-strength window glass and heavy sheet glass. Patterned glass booklet contains photos and data on 24 designs including information on heat-absorbing, glare-reducing, tempered, and wired products. Spandrel-glass folder shows color samples and design requirements. Laminated-glass folder includes specifications for clear, tinted, opaque white, and sound-reducing glass. Special glass products booklet describes chemical and mechanical treatments used to change appearance and properties of almost any glass. American-Saint Gobain Corp., P. O. Box 929, Kingsport, Tenn.

Protective Roof Systems

An illustrated folder has just been published to show a new H/D Portiko line of building marquees, walkway covers, entrance shelters, store-front sunshades, loading-platform roofs, and parking-lot canopies. Bridgeport Brass Co., 30 Grand Street, Bridgeport 2, Connecticut.

New Patterns in Plastic

New moire and stipple patterns in acrylic plastic are shown in illustrated folder. Patterns cover a wide range of size specifications and are used for partition and window glazing, pool enclosures, shower doors, decorative lighting, skylighting, patio covers.

Bath Enclosures

Bath enclosures are described and illustrated in a brochure featuring layouts to suit all installation possibilities, hinged doors, by-pass doors and fixed panels, optional tubular
JOHNS-MANVILLE ANNOUNCES **LAST-O-ROOF**... **THE NEWEST DEVELOPMENT IN MEMBRANE ROOFING**

Now, you can design a “skin-tight” roof in any configuration, any slope, and in white or colors... with new **LAST-O-ROOF**!

Here’s the newest development in a roof that conforms to any configuration or slope of the most imaginative roof design... and in color, too! New Johns-Manville LAST-O-ROOF is a one-ply plastic elastomer roof designed for one-step cold application... a roof that gives monolithic protection and lasts for years.

LAST-O-ROOF is light in weight,
SIMPURITY IS THE PRINCIPAL FEATURE OF LAST-O-ROOF

Last-O-Bestos, the one-ply roofing membrane, is the main component of Last-O-Roof... consists of a weathering surface supported by an asbestos reinforcement. These are combined by a method that makes them inseparable so they form a true, one-ply membrane. Black in color, the weathering surface is a tough, durable polyisobutylene film. The light-colored supporting reinforcement is made of plastic-elastomer-bonded asbestos. Last-O-Bestos is applied in ribbons of Last-O-Bestos Cement, a pourable polyisobutylene adhesive that sets in a short time and gives a lasting bond. Side and end laps of Last-O-Bestos are sealed with Last-O-Lap, a brushable polyisobutylene adhesive reinforced with asbestos fibers for flow control. For use as through-wall flashing and at parapets, eaves or skylights, the one-ply membrane Last-O-Flash is provided. It has a weathering surface consisting of a heavy polyisobutylene film supported by a woven glass scrim and is adhered with Last-O-Flash Cement, an adhesive of heavy consistency. For roof projections such as vent pipes, Last-O-Film provides an elastic polyisobutylene film which is easily stretched and shaped to give a tight, weatherproof fit.

Last-O-Lume, the reflective surface finish, is an elastomer-based coating, formulated for compatibility with all Last-O-Roof membranes and adhesives. It's available in durable aluminum, white and metallic pastel colors to harmonize with any building design. The highly reflective surface will aid in lowering roof and interior temperatures.

Get the full details on this newest development in membrane roofing. Ask your J-M man about LAST-O-ROOF. Or call or write Johns-Manville. Dept. PA 4, Box 111, New York 16, N. Y. Cable: Johnmanvil.

actually stretches to accommodate normal stress and distortion. And, it's a roof that's reflective and colorful, too. LAST-O-ROOF is made up of compatible components based on the elastomer, polyisobutylene and this roof is approved by Underwriters Laboratories, Inc., for Class A construction.

What's more, it's a roof that can be speedily applied to permit quick building closure. The result is a smooth, water-tight, completely homogeneous roof that will not crack, blister or shrink under extremes of heat and cold.

JOHNS-MANVILLE

For more information, turn to Reader Service card, circle No. 326
Manufacturers' Data

COMPLETE and detailed information on material specifications, sizes, safe anchors, joist hangers, split rings, shear plates, truss plates, floor bridging, plywood supports, post caps, angles, toothed rings, spike grids, clamping plates, and grooving tools. Special attention is paid to new-type rafter anchors and connectors for cantilevered floor framing. A valuable reference for wood fastener specs. Timber Engineering Company, 1619 Massachusetts Avenue, N.W., Washington 6, D.C.

On Free Data Card, Circle 206

Structural Wood Fasteners

New 12-page illustrated catalog points out an entire line of structural wood fasteners. The catalog contains complete and detailed information on material specifications, sizes, safe anchors, joist hangers, split rings, shear plates, truss plates, floor bridging, plywood supports, post caps, angles, toothed rings, spike grids, clamping plates, and grooving tools. Special attention is paid to new-type rafter anchors and connectors for cantilevered floor framing. A valuable reference for wood fastener specs. Timber Engineering Company, 1619 Massachusetts Avenue, N.W., Washington 6, D.C.

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ERECTA-SHELF HAS THE VERSATILITY ARCHITECTS NEED!

Versatile Erecta-Sheelf adopts efficiently to fit any floor plan or wall space. Freestanding units combine with wall mounted shelving for continuous, unbroken storage. Saves floor space—uses wasted wall areas. Erecta-Sheelf is easily assembled — no nuts, bolts or special tools. It can be disassembled, or re-assembled with new units added to fit any floor plan now or in the future. Entire units fasten end-to-end, back-to-back, right angles, or stock for extra height. Chrome plated or stainless steel in a variety of sizes with accessories to add even greater usefulness. Shelves have unlimited adjustability and load test to 1000 lbs. each. Specify Erecta-Sheelf for any service — it's approved by the National Sanitation Foundation and can be hosed down. Additional information is filed in Sweets Catalog, or write us today.

Price Sheelf on Wheels — Combines storage with movement. Saves time! Rolls in or out of refrigerators. It's ideal for materials handling.

HOSPITAL STERILIZATION ROOM — From autoclave to Erecta-Sheelf Open rod construction dissipates condensation — doesn't collect dust like flat shelves.

RETAIL STORE DISPLAYS — Erecta-Sheelf has a clean, modern look—just right for retail displays. Its bright finish reflects light and open rod shelving lets light pass through.

REFRIGERATED STORAGE — Heavy chrome plate finish or stainless steel, permits thorough circulation. Ideal for walk-ins, freezers and ice cream hardening rooms.

SCHOOL ROOM STORAGE — Freestanding Erecta-Sheelf combines with wall mounted shelving for continuous, unbroken storage around doors, over sinks, heating ducts, etc.

GENERAL STORAGE — Erecta-Sheelf is uniquely braced and load tests to 1000 lbs. per shelf. It’s ideal for warehouses. Inventories are easier due to “see-through” construction.

For more information, turn to Reader Service card, circle No. 341

Functional and efficient, Erecta-Sheelf is ideal for retail displays. Its bright finish reflects light and open rod shelving lets light pass through.

ARCHITECTURAL METAL WORK

Two brochures describe aluminum sculptured modulants and screens, bronze tablets, special cast letters, various grilles, and architectural sculpture. Included are photographs, specifications, and installation procedures. Armento Architectural Arts, P.O. Box 474, Buffalo 5, New York.

On Free Data Card, Circle 208

FIRST CITIZENS BANK

Aluminum Curtain Walls, Doors, and Windows

Four-page brochure shows various types of aluminum extrusions, curtain-wall and panel units, doors, frames, and preconstructed store fronts. Included are illustrations and details. Facade, Inc., P.O. Box 30218, Dallas 30, Texas.

On Free Data Card, Circle 209

New Color Patterns for Laminates

Grouping of 28 solid colors and an open design library of 28 silkscreen patterns, available in any Formica color or woodgrain combination for background or overprint, are to be exhibited at AIA Convention. New series includes standard colors with wide range of solid-color shades and tones to meet current design resurgence of bright accent colors and brings ready-stocked silkscreen motifs to specifiers seeking distinctive decor touches with lami-
Prudential takes out “insurance” against vibration . . . with lead

Main-line railroad trains create vibration adjacent to the new 52-story office building now being erected in Boston by The Prudential Insurance Company of America. That vibration, however, never reaches the pleasant plazas surrounding the building. Where the plaza floor slabs rest on their supporting walls, they are bedded on a double layer of one-inch lead pads. These pads (cut section shown below) are a laminate of lead, asbestos, and steel sealed in lead sheathing. They stop vibration in its track.

Other modern buildings which muffle subway, railroad, or highway vibration with lead pads include the Pan Am Building, the Waldorf-Astoria Hotel, and many, many others.

Look into lead whenever you have a problem from heavy machinery, cooling towers, or any other source of severe vibration. For complete technical information relating to your area of interest, write today. Lead Industries Association, Inc., Department N-4, 292 Madison Avenue, New York 17, N. Y.
Q. HOW CAN YOU GET FULL INSULATION ON ROOF DECK SHAPES LIKE THESE?

A. Permalite insulating concrete, with 'k' factors from 0.77 to 0.51, is easily applied to any shape roof deck with standard equipment. Weighs only 3 1/2 to 6 1/2 lbs/sq. ft., 2" thick, with compressive strengths to 500 psi. Permanent. Rot-proof. Fire-proof.
Experienced applicators in major metropolitan areas.

THIN SHELL PARABOLOIDS
GEOMETRICAL TRUSS
CORRUGATED STEEL DECKS
BUTTERFLYS
BARREL VAULTS
DOMES
FOLDED PLATE
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Permalite
Largest Selling Perlite Aggregate in the World.

LIGHTWEIGHT INSULATING CONCRETE
Permalite Expanded Perlite is Produced by Licensed Franchisees from Perlite Ore Mined by Great Lakes Carbon Corp.

GREAT LAKES CARBON CORPORATION / 612 So. Flower St., Los Angeles 17, Calif.
Send me Bulletin C-63, on Permalite Lightweight Insulating Concrete in Roof Deck and Floor Fill Applications.

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Firm
Address
City
State
Zone

For more information, turn to Reader Service card, circle No. 391.

Sunken Baths
Three "Roman" sunken baths are illustrated in a color folder. All three baths are porcelain-enameled cast iron, come in eight colors including white, and are available in either right- or left-hand models. Crane Co., P.O. Box 780, Johnstown, Pa.

New Acoustical Panels
Acoustical, three-dimensional panels are described in four-page brochure. Two new panels—a textured vault and an inverted vault—have a painted surface that costs only one half of the original panel's facing of glass-fiber fabric. All three panels are acousti-
cally efficient, flame-resistant, and easy to install. Lay-in panels are 24"x24" and supported by suspended grid system. Johns-Manville, 22 East 40 St., New York 16, New York.

Aluminum Screen Systems
Architectural aluminum components for decorating, solar screening, and modernization are introduced in 12-page catalog that includes illustrations, details, and specifications. Modular interlocking, vertical stack, and vertical-T systems are also explained. Architectural Manufacturing Company of America, P.O. Box 20202, Station N, Atlanta 25, Georgia.

Red Cedar Shingle Data

Ceramic Tile
An illustrated, 35-page booklet on ceramic tile is available, which includes information on large-size glazed, crystalline, scored, and decora-

The design and construction of custom industrial and commercial doors to meet your esthetic and functional requirements is a specialty with Richards-Wilcox. From Ark Doors, Industrial and Fire Doors, Blast Doors, Radiation Doors, Straight Doors, Curved Doors, Large Doors, Small Doors, whatever type you want—R-W can supply them plus all of the necessary hardware and electric operators where required. When remodeling remember that the use of custom-fit doors can provide greater economy than rebuilding openings to accommodate standard doors.

Your local R-W Applications-Engineer is a specialist in this field—he would appreciate the opportunity of consulting with you in regard to your door problems.
LIGHT
Natural and artificial, can be filtered, colored, directed, controlled.

Photo—St. Louis Airport Building, Hellmuth, Yamasaki & Leinweber, Archs. Rambusch lighting fixtures. Conceived, color corrected mercury lamps, properly engineered, produce this masterpiece of comfortable indirect light.


Stained Glass Mural Wall affects the building's light and color, inside and out, day and night.

Rambusch specializes in light and color, their characteristics and effects; and contracts to make devices to control both natural and artificial light.

Properties of Acrilan Carpeting

Unique properties of acrylic carpeting are explained in an 8-page booklet illustrated in color. Acrylic carpeting, a man-made chemical textile fiber, reduces noise, offers lower maintenance costs than hard wood floors, resists mudding and crushing, and does not absorb water or stains because of its hydrophobic properties. It is moth-proof, vermin-proof, and nonallergenic, as well as color fast and fade-resistant, easily washable, and quick-drying. Chemstrand Co., 350 Fifth Avenue, New York 1, New York.

For more information, circle No. 347
Pre-Fabricated Metal Walk-In Coolers, Freezers, or Combinations

6 FT. x 6 FT. TO 12 FT. x 12 FT., in one-foot increments

Easily and quickly assembled on the job with only a light hammer

The new Norris walk-in coolers, freezers, and cooler-freezer combinations featuring modular, all-metal construction—no wood parts to absorb moisture—offer complete installation flexibility. Ideal for every commercial, industrial, and institutional application, with a full selection of normal and low-temperature refrigeration equipment. Bonderized steel in grey baked enamel or optional stainless steel exteriors. Traditional Norris quality, too. Write for detailed specifications and descriptive literature.

YOU CAN TELL WITH THIS ONE

P&S SUPER 6200 three-wire grounding outlet provides maximum safety under the most rigorous conditions. This outlet LOOKS its part. Hold it in your hand—it FEELS like the heavy duty device it is. Plug a cap in it, not once but many times—you can tell it is built to take years of rough usage at its full rated capacity.

For complete information on P&S Super 6200, write Dept. PA 463.
ASTM A325 Bolts, adopted by the Research Council on Riveted and Bolted Structural Joints, is available from IFI. These Specifications were first issued in 1951, and most recently revised in 1960. Major revision of the new 1962 edition is that hardened washers can be eliminated when tightening is by the turn-of-nut method, and when using heavy hex structural bolts in combination with heavy hex nuts. Two new economies result: cost of washers is eliminated, and shorter bolts can be used to connect the same thickness of material.

New 8-page catalog illustrates and describes 31 different construction and maintenance products. Included are a cold-glazed cement wall surfacing, epoxy systems for waterproofing, a sprayed-on vinyl covering, and coatings for wet or dry masonry surfaces and for previously painted surfaces. There are also Preco coatings for transparent, solid-color, multicolor, or}

Industrial Fasteners Institute, 1517 Terminal Tower, Cleveland 13, Ohio.

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FINISHERS/PROTECTORS

Protective Coatings

New 8-page catalog illustrates and describes 31 different construction and maintenance products. Included are a cold-glazed cement wall surfacing, epoxy systems for waterproofing, a sprayed-on vinyl covering, and coatings for wet or dry masonry surfaces and for previously painted surfaces. There are also Preco coatings for transparent, solid-color, multicolor, or
New Latitude in Washroom Design

In planning institutional and commercial washrooms you secure pleasing design and functional layout by specifying Bobrick washroom equipment: for soap, paper towels, toilet seat covers, feminine napkins, and waste receptacles. Unique "Bob-Recessed" models combine various accessories in single stainless steel units. Please ask for AIA File 29 J and make full use of Bobrick's architectural services available nationwide and in Canada.

Bobrick Dispensers, Inc.,
503 Rogers Ave., Brooklyn 25,
New York; 1839 Blake Ave.,
Los Angeles 39, California

For more information, turn to Reader Service card, circle No. 316

Modern Aluminum Racks
Tailored to Fit Your Exact Specifications

- Built to your specified length
- Models to fit your multiple-shelf requirement
- All racks are adjustable in height
- Can be wall mounted, ceiling hung or floor to ceiling mounted
- Continuous inside or outside corners
- Models with hanger bar or double pronged hooks

Vogel-Peterson Co., Elmhurst, Ill.
For more information, turn to Reader Service card, circle No. 364

For the Driftwood Look

SINCE 1906 THE FIRST NAME IN WASHROOM EQUIPMENT

For more information, turn to Reader Service card, circle No. 316

Specify Cabot's

#241 BLEACHING OIL

Mildew Resistant

- actually bleaches exterior woodwork
- can be used on any kind of new wood
- gives a natural, silver gray weathered effect in 6 months
- high content of refined creosote prevents decay — permits painting over later if desired
- provides both beauty and protection with minimum upkeep

A quality product from Cabot Laboratories
...manufacturing chemicals since 1877

Samuel Cabot

For more information, turn to Reader Service card, circle No. 314
textured finishes for interior or exterior use. Bulletin further describes floor surfacing products, concrete and mortar admixtures, bonding agents for applying new concrete floor toppings or thin-set terrazzo, and caulkng sealants. Peco Chemical Corp., 589 Main St., Westbury, Long Island, N.Y.

On Free Data Card, Circle 219

Aluminum Coating Supplements Anodizing

Folder describes new "Protectalume" coating for aluminum that is not designed to replace anodizing but to supplement it by increasing the number of years the aluminum surfaces will have a "brand new" look. The material is a water-clear plastic that can be applied by brush, dip, or spray, at a cost of less than 1¢/sq ft. The tough coating protects exterior aluminum surfaces against pitting, corrosion, seacoast salt-spray, humidity, ultraviolet rays, etc., for a minimum of two years; inland and nonindustrial areas can anticipate five or more years of protection. Protectalume is also recommended for bronze, chromiunm, and stainless steel, on new or ex-isting installations. O'Keeffe's, Inc., 75 Williams Ave., San Francisco 24, Calif.

On Free Data Card, Circle 220

INSULATION

3-D Acoustical Ceiling

"Acousti-Shell" three-dimensional acoustical panel, which was introduced last year by J-M, is now available in two new forms—a textured vault and an inverted vault. The original panel has a facing of glass-fiber fabric; the new styles, as shown in 4-page brochure, come with a painted surface, at approximately one-half the cost. All three types are acoustically efficient, flame-resistant, and easy to install. The lay-in panels, 24" x 24", are supported by a suspended-grid system. Johns-Manville, 22 E. 40 St., New York 16, N.Y.

On Free Data Card, Circle 221

Troffter Selection

New 32-page Troffer Lighting from Lighting Products Inc. features a fold-out cover that shows the five types of LPI fixtures—flange, lay-in, snap-in, hook-on, and flush—for quick and easy selection of the proper unit. This information is always visible when referring to more specific data on inside pages. With this catalog system, it is a simple matter to find the LPI troffer that gives the proper combination of width, length, number of lamps, and diffuser type for any of 108 mechanical-ceiling systems or 21 roof-deck systems now in existence. Lighting Products Inc., Highland Park, Ill.

On Free Data Card, Circle 222

SPECIAL EQUIPMENT

Snow Melting

Steel Pipe Snow Melting and Ice Removal Systems is an informative 32-page booklet on the efficiency and economy of underground heating systems. Many basic questions are answered about snow-melting systems as used in driveways, sidewalks, loading docks, parking areas, and malls. Design tables, suggested layouts, and installation recommendations are provided. Committee of Steel Pipe Producers, American Iron and Steel In-

DOCKLEVLER

Efficiency • Safety • Economy

Write today for full information.

EQUIPMENT COMPANY

946 AUSTIN AVENUE • ALBION, MICHIGAN

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For more information, turn to Reader Service card, circle No. 221

114
Plan view of two Walk-Ins, one a normal temperature and the other a low temperature, installed at Dobyns-Bennett High School, Kingsport, Tennessee.

Specifications prepared by Mr. Larry J. Poole, Architect, 214 Commerce Street, Kingsport, Tennessee.

**Bally pre-fab walk-ins**

**all-metal coolers and freezers**

World's most advanced design. New materials and construction techniques offer architects an opportunity to provide tremendous refrigeration advantages to their clients.

Urethane 4" thick (foamed-in-place) has insulating value equal to 8½" fibreglass. Standard models can be used as freezers with temperatures as low as minus 40° F. Urethane has 97% closed cells... cannot absorb moisture... ideal for outdoor use.

Speed-Lok Fastener designed and patented by Bally for exclusive use on Bally Walk-Ins. Makes assembly accurate and fast... easy to add sections any time to increase size... equally easy to disassemble for relocation.

New foamed door, so light in weight it ends forever the "hard pull"... the "big push". Door is equipped with new type hand lock (with inside safety release) and convenient foot treadle for easy opening. Also has special hinges that close door automatically. Magnetic gasket guarantees tight seal.

Self-contained refrigeration systems combine balanced capacity condensing units and refrigeration coils. Mounted and hermetically sealed with necessary controls on small wall panel. Simplifies installation. Four-hour factory test assures quiet, efficient, trouble-free operation.

A designed system (Lighting by Fedor) that opens new chapters for "effortless" lighting in large areas. For this impressive installation Kliegl produced: a 40' x 42' luminous central ceiling—24 ten-foot square fixtures for two adjacent areas—and 450 linear feet of continuous reflected light.

For maximum profit on a project, keep your problems to a minimum. That, in short, is why so many leading architects, designers and engineers call on Kliegl for assistance with the planning and production of their lighting designs. In installation after installation, Kliegl experts have saved time and money with their authoritative knowledge based on more than six decades of experience in reflector design and optics craftsmanship. For your next project, no matter how large or small, why not simplify your problems with the "Great Name in Lighting"—Kliegl. No obligation, of course. Call or write us today!

Write for Free Architect's Fact File which includes 12-page brochure... Specification Guide... and sample of urethane wall construction.

See Sweet's File, Section 25a/Ba
Sun Control and Privacy Control

Literature from Tropicraft includes a 4-page folder on their "Woven Wood" products for sun control and privacy control, and a 26-page price list and specifications guide. Uses suggested in the folder are draperies, window shades, folding doors and movable walls, floor screens, canopies, and awnings. Weft materials are aluminum or wood (Philippine mahogany, fruit-wood, walnut, fir, pine, and bamboo); warp materials are chenilles, cottons, nylon, and metallics. Different materials make visual interest. Among the lines are a moderate-priced group of machine-loomed stock designs and a handwoven collection of stock and custom designs. Tropicraft of San Francisco, 568 Howard St., San Francisco 5, Calif.

On Free Data Card, Circle 224

Fire Protection

Fire Protection Equipment for All Types of Buildings, 26 pages, features a fold-out specifications flap that simplifies selection of the appropriate type of cabinet and refers the reader to pages containing complete data. Cabinets have various combinations of hose rack, hose up to 100' in length, fire department connection, fire extinguisher, and other equipment. Elkhart Brass Manufacturing Co., Inc., Elkhart, Ind.

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SEAL OUT SUB-GRADE WATER and BUILD IN FLEXIBLE STRENGTH

Specify Hydroshield Mastic and Heavy Duty Glass Fiber Mesh from Addex

No matter how good the job of masonry or how carefully concrete is placed, water can eventually penetrate a foundation wall — unless you specify a water barrier flexible enough to adjust to hairline cracking and minor structural stresses.

- Hydroshield Mastic seals out water and is unaffected by long immersion either before or after curing. It is not damaged by soil alkalinity or acidity and adheres tightly to damp or even wet concrete surfaces.

- Heavy Duty Glass Fiber Mesh is made from "E" glass, the most acid and alkali resistant of all fibrous glass. It reinforces the Hydroshield and is impervious to decay.

TOGETHER THEY FORM A MONOLITHIC WATERPROOF BARRIER THAT HAS LASTING ABILITY TO ADJUST TO SURFACE STRESSES WITHOUT RUPTURING.

McQuay gives you true multi-zone design with its Seasonmaster central-station air conditioning units, accurately serving up to 14 separate areas. The zone damper section is engineered by McQuay for minimum maintenance and to virtually eliminate air leakage. The design features the following:

- Hot and cold dampers are permanently pinned to a common rod at a 90 degree angle to each other. This feature, coupled with a truly rugged framework, eliminates misalignment problems.
- Each damper rod rotates on nylon bearings to assure smooth, efficient operation.
- Each damper (both hot and cold deck) closes against double seal neoprene gasketing backed up by metal stops. Neoprene gasketing around the entire perimeter of each damper virtually eliminates air leakage problems.
- The zone damper section is insulated to prevent sweating. McQuay zone dampers are available for either horizontal or vertical air discharge arrangements. For double-duct applications, a discharge collar is furnished.

Your McQuay representative will be happy to show you how the Seasonmaster exactly meets your multi-zone air conditioning requirements. Or write directly to McQuay, Inc., 1638 Broadway N. E., Minneapolis 13, Minnesota.
cheaper by the half dozen

A revolution is underway in modern shower-room planning, and Bradley Column Showers are at the forefront. Why? Because Bradley Columns started the entire swing to group showers, proving they could serve up to six people at one time with only one set of plumbing connections — saving valuable space and cutting installation costs as much as 80%! Bradley Columns caught on fast because they also provided more design freedom; increased traffic flow; saved water and maintenance costs. (They were so successful that they prompted the development of four other Bradley Group Showers: Multi-Stalls, Wall-Savers, Modesty Modules and Panelons.) In short, Bradley Columns added up because their expenses didn't. And, today, they're saving money, space and time in modern buildings across the country — because architects know that showering is cheaper by the half-dozen. Ask your Bradley representative for assistance on specific applications.

And write for latest literature. Bradley Washfountain Co., 2377 West Michigan Street, Milwaukee 1, Wisconsin.

For more information, turn to Reader Service card, circle No. 313