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Plastic laminates are both functional and decorative, but much of their appeal is because of what they can be made to look like. Thomas Vonier

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Aldo Rossi's sketch for the University of Miami School of Architecture.

Rossi's First U.S. Design

"An architecture school should be an example to its students," said Tom Regan, Dean of the School of Architecture at the University of Miami. Regan and his faculty felt strongly that the architect for the expansion of the three-year-old school, housed now in a former dormitory, should be someone of international stature.

The choice of Italian architect Aldo Rossi answered these concerns, and others. As one of five jurors for an international competition to design a master plan for the entire university last spring, Rossi was familiar with the campus. His use of masonry construction "seemed right to us for Miami," added Regan. It doesn't hurt the fledgling

(continued on page 30)

Le Corbusier: A "Modest" Tribute at MoMA

The Museum of Modern Art in New York held what it termed a "modest" tribute to commemorate the centennial of the birth of Le Corbusier this spring. An exhibition of models and drawings of five key buildings designed between 1926 and 1933, entitled "Le Corbusier: 5 Projects," ran during April and May. At the end of April, a symposium (continued on page 27)

Corbusier at Carpenter

"Le Corbusier the Ebullient" would have served well as title for the just-closed Boston exhibition of sculpture, painting, and drawing borrowed from the Fondation Le Corbusier and housed in the architect's one American building. Other exhibitions marking the centenary of his birth may be attended with the ambivalence that the present generation feels towards the Swiss architect and all other (continued on page 27)



London's National Gallery addition, designed by Venturi, Rauch & Scott Brown, is reviewed on page 43.



Two rooms from a hypothetical tenement renovation by Colin Cathcart/Kiss + Partners.

Finding Room in the City

Nine projects for a hypothetical tenement renovation on Manhattan's Lower East Side were on view at the City Gallery in New York for a brief four weeks in April and May. Twelve young architects participated in this "investigation," coordinated by Columbia University professor Susana Torre. (The exhibition was curated by Mark Robbins.) Torre's invented program called for the renovation of 300- to 450-square-foot apartments in an existing tenement for a minimal (*continued on page 30*)

Pencil Points

Richard Meier & Partners has been awarded the commission to design the City Hall in The Hague, Netherlands (P/A, April '87, p. 27). City commissioners overruled the architectural jury's recommendation of Rem Koolhaas, voting for Meier's scheme by a margin of 35 to 9.

The Cooper Union in New York is establishing the first endowed chair in lighting design in North America, named after Sidney Feltman, a former vice president of Lightolier Inc.

Kenzo Tange, recipient of the 1987 Pritzker Architecture Prize, has been named design architect for the new American Medical Association headquarters building in Chicago. The Tokyo-based architect will also act as master planner for a 7.5acre mixed-use development surrounding the AMA building.

Frank Gehry, in association with Herbert Lewis Kruse Blunck of Des Moines, has been selected to design a new Laser Laboratory for the University of Iowa.

Johannes Van Tilburg, Santa Monica, is designing the San Diego Design Center, set to open summer, 1988. Gensler & Associates are consulting on interiors and will be responsible for space planning. The \$45 million, 340,000-square-foot Center is the first to include indoor/outdoor furnishings, landscaping materials and artwork, swimming pools, and spa equipment.

North Adams, Mass., is the proposed site for the largest contemporary art museum in the world. Mass MoCA, organized by the Williams College Art Museum, will be housed in an empty 20-acre factory complex. It will feature works from the collection of Count Giuseppe Panza, an Italian industrialist whose collection consists primarily of American art from the 1960s and 1970s. In addition, the German Architecture Museum in Frankfurt has promised the long-term loan of contemporary architecture models and drawings.

John Scofield's folding music stand, which won an award in the 2nd P/A International Furniture Competition (May 1982, p. 160), is now on display at the Museum of Modern Art, New York, and on sale at the museum shop.



Entrance Stair at Milan Triennale by Cino Zucchi.

Spaghetti Westerns in Milan

The exhibition "Imaginary Cities," organized for the XVII Triennale of Milan (February 7 to May 17) summed up the current state of urban design. The exhibition was split into two sections: The first, "A Trip to Italy," chronicled the travels of a hypothetical "wandering architect" whose descriptions are sometimes sentimental and sometimes scientific. The second section, on the other hand, presented new projects prepared specifically for the Triennale by 70 architects, working in cooperation with the public and private authorities of the nine cities of Rome, Florence, Bologna, Venice, Ancona, Palermo, Naples, Turin, and Milan. These "Nine Projects for Nine Cities" addressed relevant issues in each, such as the nature of the "political city" in Rome, the highway system around Florence, the redevelopment of the area of Monteruscello in Naples, and reuse of the Milan railroad yards.

The show has already produced two volumes of impressive documentation, prepared by Vittorio Magnago Lampugnani and Vittorio Savi for the "travelogue" and Carlotta de Bevilacque and Alberto Ferlenga for the new projects section. The two volumes, which correspond to the different spirits of the exhibition itself, also portray the diverging editorial lines of two prominent Italian architectural publications. Lampugnani has recently joined forces with Mario Bellini as assistant editor of the lavish monthly Domus, while Ferlenga has been an essential member of the editorial workshop producing the more scholarly quarterly *Lotus International.* The latter magazine is also directed and edited by Pierluigi Nicolin, curator of this show.

In inviting the participants in "Nine Projects," Nicolin favored his own city. Representatives of the design cultures of the United States, Ticino Region, and Vienna were paired with local stars in three different areas of Milan. Gustav Peichl confronted Giorgio Grassi at the Bovisa, and Luigi Snozzi met Nicolin himself at Porta Genova. The simultaneous appearance in Milan of John Hedjuk, Diana Agrest and Mario Gandelsonas, and Steven Holl added a decidedly American note in the best Spaghetti Western tradition. Sandro Marpillero The author, an architect, is adjunct professor of urban design at Columbia University.

An Interim Plan for Boston

A decade deep into their building boom, Bostonians finally saw some new planning restrictions installed this spring. The city's so-called IPOD—interim planning overlay district—should soon institute what one architect called "damage control" en route to implementation of the first new zoning plan in 22 years.

The controls worked out by the Boston Redevelopment Authority (BRA) would cap development while the city details a more exact plan (P/A, Oct. 1985, p. 29) by 1989. Both would curtail the unrestricted building that has thrust some 1.5 million square feet of office space a year for a decade into the city's densely developed core.

Basically a height-control approach, the BRA's "meanwhile" measure set a limit of 155 feet (approximately 12 stories) in the center, with 30- to 40-story buildings on the edge. At the same time, it established ten district committees to elaborate on or change those restrictions.

Most Bostonians applauded the IPOD and breathed a communal sigh of relief. Even as they adopted a wait-and-see spirit towards the final form of the plan, the Boston Society of Architects praised the call for a generation of smaller buildings in the city, while criticizing the "fairly simplistic and unsophisticated" approach to design through height control. The BSA has also pushed the city to implement a long-gestating plan to install a Design Review Committee under John de Monchaux, dean of the MIT School of Architecture and Planning. Jane Holtz Kay

Not-So-New Tendencies

As part of the celebrations marking the 10th anniversary of the Pompidou Center in Paris, eight architects and designers were asked to create an installation "anticipating the stylistic expression of the year 2000 and . . introducing a new way of living." Ron Arad, Paolo Deganello, Hans Hollein, Jan Kaplicky and David Nixon, Toshiyuki Kita, Javier Mariscal, Alessandro Mendini and Philippe Starck are the prophets of "New Tendencies: the Avant-Gardes of the End of the 20th Century' (through Sept. 7).

Whatever the Pompidou's intentions, it is hard to regard the results as anything other than frivolous, expedient, or self-serving advertisements for the designers. Starck's boutique sells other souvenirs emblazoned with his "universal logo," a dead ringer for the once ubiquitous happy face. Mendini's house of the future is filled with his furniture, whose manufacturers are listed prominently. This avantgarde is not only old hat, but on the make. *Daralice D. Boles*



Installation by Alessandro Mendini.



Le Corbusier, Palace of the Soviets, 1931.

MoMA (continued from page 25) entitled "Le Corbusier Between the Wars: Architecture and Ideology" was held in conjunction with the exhibition. Both were organized by Stuart Wrede, MoMA's acting director of the Department of Architecture and Design, in association for the symposium with Kenneth Frampton, chairman of the Division of Architecture, Planning, and Preservation at Columbia University.

The exhibition included 40 original drawings loaned by the Fondation Le Corbusier in Paris, and the original models of the Palace of the Soviets (1931) and Villa Savoye (1929-1931), which the museum owns. Newly commissioned for the show from Paul Bonfilio were models of the Swiss Pavilion (1930-1932) and of the Salvation Army building (1929-1933). Bonfilio's model of Villa Stein (1926-1928) was commissioned by the museum for an exhibition in 1970-1971. If any fault could be found in the small but exceedingly handsome show, however, it would lie in excessive restoration over the years of the two original models: They are from Le Corbusier's own hand, but as cleaned up they are indistinguishable from the new ones.

Seven scholars at the symposium presented papers, which were arranged in chronological order and dealt with different aspects of Le Corbusier's career. Kenneth Silver of New York University discussed his early career as Jeanneret; how he first came to attention in Paris as a scholar/writer on the German decorative arts, how he was later to develop Purism, with Ozenfant, in opposition to the Cubism of Picasso and Braque, and how they fought to reconcile Cubist principles with the French Classical tradition. Beatrice Colomina of Columbia University focused on Le Corbusier and the Object, revealing his almost maniacal fascination for and collection of industrial-products catalogs. Tim Benton, author of The Villas of Le Corbusier, and cocurator of the comprehensive Le Corbusier show at London's Hayward Gal-



Le Corbusier, Untitled, 1957.

lery (P/A, May 1987, p. 29) revealed how so many details worked out in the private houses were later so brilliantly put to use in the public housing schemes. Brian Brace Taylor, editor of *Mimar*, focused on the Salvation Army building and Le Corbusier's preoccupation with healthful living.

The day ended with Jean-Louis Cohen, senior fellow at the National Gallery in Washington, discussing Le Corbusier and his relationship with revolutionary Russia, and Mary McLeod analyzing his relationship with America. Kenneth Frampton summed up the day's proceedings and also presented an exegesis of the linear cities.

This symposium was serious, and in many instances was severely critical of Le Corbusier. But in summation, Kenneth Frampton, while discussing technology, asked the audience "to remember that many of the materials and methods were new at the time and had never been tried before; that Le Corbusier's technological failures were parallel to his technological courage . . . he had extraordinary courage." Although the tribute was "modest" and critical, it did nothing to affect, but only added to, Le Corbusier's status as a giant of our century. **David Morton**

Carpenter (continued from page 25) shadowed heroes of the Modern movement, but Harvard University chose the celebratory mode of welcoming the hero "home" to his Carpenter Center for the Visual Arts.

Assembled by the Center's director Louis Bakanowsky and installed in a handsome design by Roger Brandenberg-Horn, the exhibition filled Le Corbusier's gallery with solid, often rough-hewn polychromatic sculptures, large, deep-toned canvases, black-and-white lithographs and drawings.

Professors Eduard Sekler and Jerzy Soltan gave stirring accounts of his genius in a symposium on the architect. And despite ongoing criticism of the Carpenter Center-including an attack on its "intolerable disregard for environment" in the recent Harvard: An Architectural History by Bainbridge Bunting and Margaret Floyd-Bakanowsky praised the "extraordinary building. The vitality that (Le Corbusier) instituted into this architecture had its roots in the atelier."

Wall-to-wall in the gallery, the viewer saw the best of a rich and spirited oeuvre. Primitive and sophisticated, playful and heavy, the oils on canvas or the carved works (often executed by or with J. Savina) populated the space with icons of an era and a man. Whatever our attitude towards his rational antiurban vision and its outcome, Le Corbusier's visual genius is unshaken. Jane Holtz Kay

Urban Activities in Florence

Fiat, the largest private car manufacturer in Italy, has distinguished itself recently with the promotion of major cultural events. Following the international competition to redesign its Lingotto factory (P/A, Aug. 1984, p. 23), Fiat financed the restructuring of Palazzo Grassi in Venice by Gae Aulenti as an art museum that opened last year (P/A, April 1986, p. 25). This year, Fiat focuses on Flor-

(continued on page 28)



Elevated promenade for Fiat site proposed by Halprin.

Florence (continued from page 27) ence: there, in the suburban area of Novoli, the company owns an enormous 320,000square-meter factory site.

The site's future includes public offices, the Florence Judicial Court (now located in the historical center of the city) and Fiat's Tuscan branch. As the buildings will cover only half the space available, the remainder will be transformed into a park, a badly needed resource in suburban Florence.

Laurence Halprin, the 70year-old urban landscaper, has been appointed director of this new suburban scenography. This pursuer of the "ecology of form," who has transformed parts of San Francisco, Portland, and Minneapolis, approaches this work with due respect to the city he considers "a work of art ... with an exceptional energy."

His solution is poetic as well as efficient: a central lake is enclosed on three sides by office buildings, provided with underground parking and connected by drives and footpaths.

Fiat is not alone in caring for Florence: the city of Florence and Arno (a group of nine sponsoring firms) organized an exhibit in the beautiful Belvedere Fort that studied the past and future relationship of the city to the River Arno. The show, which closed in March, was divided into four sections, starting with the river's history and continuing with new plans (of particular interest is a study for pedestrian areas by Ernesto Rogers). A third section studies the confrontation of other European cities and their rivers. Finally the last section, called "Architects under 35" groups 30 projects by young architects, chosen by ten wellknown European urbanists, such as Adolfo Natalini, O.M. Ungers, Oriol Bohigas, and others, proposing desirable solutions for suburban Florence on the river Arno.

The old saying "better late than never" applies well to these new, healthy movements in Italy, where a frenzy of building, executed without respect to history or town-planning, has damaged old cities like Florence. **Donatella Smetana**



The overlapping shell roofs of the Baha'i House of Worship in New Delhi recall the Sydney Opera House.

A Second Sydney

The Sydney Opera House pushed the limits of both the design and construction technology of its day, resulting in excessive cost overruns and delays. Whatever other lessons might be learned from that experience, the importance of knowing when to, or when not to, use advanced technology surely numbers among them.

In that light, the Baha'i House of Worship recently completed in New Delhi, India, offers a constructive comparison. Designed by Iranian architect Fariburz Sahba and British structural engineers Flint & Neill, the Baha'i temple employs similar overlapping shell roofs and, like the opera house, evokes through its structure an image expressive of its site and function-in this case, that of a ninesided lotus flower, which is an important symbol in both the Baha'i religion and Indian culture. Like the Sydney Opera House, the design of the Baha'i project also demanded the extensive use of computers, producing a complex geometry of toroidal, parabolic, and spherical shells. Those are remarkably thin: the inner leaves are a uniform 7.8 inches thick, while the outer leaves increase from 5 to 10 inches from top to bottom.

The important difference between the two buildings lies in their construction. The Sydney Opera House shells were built using a large number of prefabricated, elliptical sections clad in tile. While that sophisticated solution befitted the avant-garde image of the building, such con-

struction proved too complicated and exacting. The building of the Baha'i House of Worship, in contrast, followed a much more traditional path. The shells were made of cast-in-place concrete, each of which involved a continuous pour to minimize construction joints. The formwork, made of plywood and shaped over timber and welded steel armatures, had a removable back panel that facilitated the concrete's vibration. In keeping with that traditional technology was the way in which concrete was handled on the site: carried in 50-pound loads in baskets balanced on people's heads.

The designers of the Baha'i temple resorted to other lowtech solutions as well. To avoid the use of air conditioning, they cool outside air by drawing it over the pools and fountains that surround the structure before bringing it into basement openings and allowing it to rise through the hall and out vents in the roof. The structure itself also helps reduce indoor temperatures in traditional Indian fashion: the white marble exterior reflects the sun's radiant heat while the glazing, shaded by overhangs, lets in daylight with little direct sun.

The different execution of these otherwise similar projects is explained, in part, by differences in climate and economic conditions. India is not Australia. But their differences also mark a change in thinking in the last 20 years about what constitutes an appropriate use of technology. Unlike the Sydney Opera House, the Baha'i House of Worship shows that high-tech concepts do not always demand high-tech solutions. *Thomas Fisher* (*News report continued on page 30*)



Interior of the Baha'i House of Worship.



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Rossi (continued from page 25) school that theirs will be the first building by Rossi in this country. Although the architect presents his schematic design this month, the sketch shown here describes the academic Acropolis he would build up above this flat Floridian landscape. Asked to supply the public spaces missing in the present school, Rossi groups an auditorium, reference library, exhibition gallery, classrooms, and jury spaces in several structures along an existing axis that leads to a lake.

The school will name an associated local architect for the project this month, as fund-raising efforts begin. *Daralice D. Boles* **Room** (continued from page 25) budget of \$15,000.

Redefining minimum housing standards for the 1980s, however, was only one of the issues raised in this exhibition. The projects are "neither about how to reproduce a suburban middleclass home nor about how to compress the affluent urban lifestyle into 300 square feet by clever packaging and scaleddown furniture," wrote Torre in her introduction. "They are architectural essays on a kind of urban life that embraces the city and accepts a measure of publicness into one's private life.'

Not all of the projects live up to this lofty agenda. Still, the nine designs by architects Raymond Beeler and Joanne Douvas; Colin Cathcart/Kiss + Partners (page 25); John Loomis and Keith Hone; Sultan Kolatan and William J. MacDonald; Jo Landefeld; Brian P. McGrath; Mark Robbins; and Donna V. Robertson are more interesting as a group of alternatives than as individual exercises. Together they issue a "call for the imaginative and disciplined design of urban housing for those outside the luxury market, a pursuit calling for public support."

That strong demand for action is backed by a surprisingly hefty list of sponsors, including major architectural firms such as Clark Tribble Harris & Li; Eisenman/Robertson; Fox & Fowle; Kohn Pedersen Fox; Prentice & Chan, Ohlhausen; Swanke Hayden Connell; and James Stewart Polshek, plus institutions like the Real Estate Board Foundation, and individuals. Their support of this show, a symposium, and a catalog, available for the remarkably low price of \$5, ensured that these otherwise academic exercises found the public forum they deserve. *Daralice D. Boles*

Architecture on Film in Bordeaux

What happens when an irresistible force meets an immovable object? The attempt to marry cinema and architecture confronts this paradox, as an essentially dynamic medium embraces an inherently static subject. Andy Warhol reduced the problem to its essentials—he pointed a camera at the Empire State Building and simply let it roll. The tower retained its mysteries while the viewer turned to stone. This March in Bordeaux, less hermetic approaches animated the third Festival International du Film d'Architecture.

FIFARC 3 solicited films and videos made since 1984 about architecture, urbanism, and the "urban environment." The response numbered 270 entries from 30 countries. A selection committee organized thematic programs (Portraits, Patrimony, Landscape, etc.) and three competitions, including one sponsored by UNESCO for the "International Year of the Homeless" declared by the United Nations. An international jury headed by French architect Jean Nouvel awarded a dozen prizes from a purse exceeding \$30,000; over the course of three days, three theaters screened nearly 60 hours of film.

Entries varied wildly in form, content, and quality. Ethnology, sociology, and travelogue rivaled strictly architectural analysis. Some films were talky and plodding, but the buildings at least were clear; others presented poetic glimpses of details as incoherent as they were beautiful. There was straightforward propaganda, in "New Aspects of Rural Construction in China," and surrealistic humor, in "Betaville," a detective story set in a Post-Modern nightmare. And throughout there was music, as if Schopenhauer's remark that architecture is frozen music might be a key to its presentation in film.

The Festival Grand Prize was (continued on page 32)



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Film (continued from page 30) awarded to Marianne Visier's

"Phantoms of our actions past ...," a ten-minute examination of Rob Mallet-Stevens' Villa Noailles in Hyères, now a ruin. The original conception, bold camerawork, and palpable sense of the building set the film, the work of a 26-year-old fine-arts student with no previous experience in film or architecture, apart from all other entries.

The one truly critical film presented was awarded the Public's Prize, tallied from votes cast by viewers, largely local architecture students. "Builders of the Bad Years" offered a scathing indictment of the Belgian Ministry of Public Works, exposing highway projects of staggering waste with such malicious humor the viewer was caught between laughter and tears. Other highlights included a film by Agnes Varda on Parisian caryatids and a witty Cuban look at the difficulties of high-rise neighbors.

The jury publicly regretted the scarcity of contemporary architecture among the entries. Because cinematic qualities were weighed as heavily as architectural ones, the general emphasis seemed less on buildings than their inhabitants, more on narrative than analysis. But if the professional hungered for details, perhaps the public was persuaded of the link between architecture and daily life.

If film becomes an accepted method of building presentation, will it affect the architecture thus represented? Beaux-Arts drawings, favoring plan and elevation, gave precedence to symmetry and ornament; the Modern movement substituted models and axonometrics to emphasize volume and plane. Nouvel suggests that cinematic treatment focuses on the signifying aspects of buildings rather than their formal elements. Might this elicit an architecture where coherence is less important than communication-Disneyworld, for example? This question remains to be explored.

FIFARC also included exhibitions, discussions, and inaugurated a "mediatheque" comprising a computer-based databank of architectural films that will soon be accessible worldwide. And, thanks to State aid, every event was free to all. Now envisioned as a biannual affair, FIFARC 4 is scheduled for Spring, 1989. A similar festival will be held in Lausanne, Switzerland, October 21–24, 1987. *Thomas Matthews*

The author, who writes occasionally for P/A, is at present based in Bordeaux.

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EDAW and associated architects propose a new plan for Mission Bay, a former industrial district in South San Francisco.

A New Plan For Mission Bay

In the late 1970s, when office space was at a premium, a new downtown was planned for the section of San Francisco south of Market Street, an area called Mission Bay. A hundred years earlier, the shallow 260-acre swamps fed by Mission Creek had been filled to create sites for industry and railroad yards. The subsequent decline of manufacturing and rail shipping left Mission Bay the last underdeveloped site near downtown.

In 1981, the Southern Pacific Land Company (the largest land owner in Mission Bay with 170 acres) moved to capitalize on the area's development potential with a plan by I.M. Pei & Partners/WRT Associated that won a P/A Citation in 1984 (P/A, Jan. 1984, pp. 142–144). This effort was finally defeated by a combination of adverse community reaction and a downturn in the market for office space.

In October 1984, after negotiations, Mayor Dianne Feinstein sent a letter to the Santa Fe Pacific Realty Corporation (the merger of the Southern Pacific and Santa Fe Railroads' real estate divisions) giving new guidelines for Mission Bay. Gone were the high-rise office towers of the Pei Plan and the "newtown-in-town" image, kin to New York's Battery Park City. Buildings were not to exceed 8 stories; housing-30 percent of it affordable-would take priority over other uses; office space was to be devoted to "secondary office uses," the kind rapidly moving to the suburbs; and open space was paramount. A second letter from the Mayor in May, 1986 added a ballpark, a 500room hotel, and more housing.

- 300/90m

In May 1985, the Department of City Planning, under the direction of Dean Macris (Alec Rash, project director), started the planning process for this new "urban neighborhood." The political process that consumed the months prior to the publication of the proposed plan in January 1987 was both

Figure-ground study at street level.



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Portion of plan illustrating possible design guideline implementation.

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P/A NEWS REPORT



Neighborhood commercial street.



Guidelines for pedestrian way (left) and Long Bridge St. (right).

exemplary and mind-boggling. Forty community organizations and a dozen or so established civic groups were also very active. Given the myriad cooks, each with his own right recipe, the clarity and integrity of the highly commendable plan now before the city and Santa Fe Pacific Realty seems nothing short of miraculous.

The Urban Design team, directed by Larry Dodge and Teresa Rea of EDAW, was drawn from several firms. Nonresidential building prototypes were designed by Donn Logan and Frank Fuller of ELS/Elbasani & Logan; research and design prototypes by Kwan Henmi; housing prototypes and block types by Daniel Solomon & Associates; and open space by Danadjieva & Koening Associates. All firms also collaborated on the overall plan.

Despite serious impediments, such as the elevated stretch of I-280 that wraps around the area and three different internal street grids, the architects created a street system that meshes well with existing conditions. Moreover, they have given the new neighborhood a distinction that few older ones have: active engagement with the Bay through shoreline parks.

The major thoroughfare, Third Street, is planned as a mixed residential and large-scale shopping street. Long Bridge Street, a pedestrian-oriented residential street with neighborhood retail, parallels Third, recalling a pattern typical of other city neighborhoods. A variety of transit systems, from MUNI buses to trains and trolleys, will serve the area.

Net housing density will be about 97 units per acre, comparable to that of the city's denser neighborhoods. The requirement for one-to-one street parking challenged the tight relationship between dwelling and street that contributes so much to the livability of the pre-automobile neighborhoods. The designers have, however, overcome the potentially dull effect of parking podiums by developing a "sidewalk encroachment zone" in which stairways, stoops, and other elements interrupt the podium walls, tying units above. to the sidewalk. On-street parking will also be permitted and curb-cuts minimized.

Dan Solomon's precepts for designing housing in the San Francisco tradition (P/A, July 1986, pp. 106-111) are used here but adapted to the special conditions of an all-new neighborhood. Since the housing will be developed in likely increments of 200-500 units, at least in the early phases, the danger to the overall unity of the plan is that developers will create inward-turning, unrelated projects. Block-by-block guidelines seek to prevent this but cannot guarantee the desired results.

An optimistic view of the future of the Proposed Mission Bay Plan has the Design Development Agreement hammered out by the end of this fall and the Plan approved by mid-1988. The new neighborhood that will take shape over the next 20 to 30 years could be the best one yet. *Sally Woodbridge*

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Perspectives

The proposed Sainsbury Wing of the National Gallery in London, designed by Venturi, Rauch & Scott Brown, is the latest, and perhaps the last, design for a controversial site.



National Gallery of London (foreground) and proposed addition (rear) by Venturi, Rauch & Scott Brown.



The National Gallery Tries Again

On April 14, the Trustees of the National Gallery in London unveiled the design for a new wing by Venturi, Rauch & Scott Brown of Philadelphia. The architectural press turned out in full for the press conference, but it was the presence of television crews, who cover architecture only when it is sufficiently sensational, that recalled the controversial history of this commission.

Numerous architects have tried their hand at designing a Gallery extension on the constricted site adjacent to William Wilkins's 1838 Gallery on Trafalgar Square. The saga began over four years ago with a competition won by British architects Ahrends Burton Koralek. That hapless firm so modified their Modernist design to please an increasingly hostile press and public that they ended up pleasing no one, least of all their client. Prince Charles himself delivered the coup de grace in his celebrated address on the evils of Modern architecture, (continued on page 44)

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P/A NEWS REPORT



View up the main stair.

Venturi (continued from page 44) auditorium, and information facilities. The top-floor galleries, dedicated exclusively to the museum's Early Renaissance collection (which includes such masterpieces as Jan van Eyck's Arnolfini Marriage and Uccello's Battle of San Romano) are lighted by simple clerestory windows. These small rooms are scaled perfectly to the art if not to the growing crowds of museum-goers.

By placing the art galleries on the top floor, connected via bridge to the main museum next door, the architects arrived at the happy necessity of a stair. They have made the most of it, prolonging the promenade up the full length of the addition, with dramatic views through an all-glass façade to the Neo-Classical Gallery or, on the return trip down, to Trafalgar Square.

There are in fact not one but two flights of stairs: Jubilee Walk, a public passage from Trafalgar to Leicester Square, rises alongside the internal grand stair, between the Gallery and its addition. This parallel works as a pairing of opposites that will flip flop, light to dark, from day to night.

From Trafalgar Square, moreover, the glazed stair is a tease; it is the one place where the wing reveals itself. "The new building," the architects write, "presents a different face at each of its edges." A flurry of Classical columns and pilasters east of the wing entrance pays homage to Wilkins's Gallery portico. "Moving west," the architects continue, "the Classical elements are gradually simplified and a large Regency window is introduced to maintain identity with the scale and character of Pall Mall.

... The west façade matches the character of (Whitcomb Street) through its combination of brick, stone, and iron, the scale of its articulation, the quality of its details, and the interest of its shop windows.... The rear of the new extension is straightforwardly designed in stone and brick. To pedestrians approaching Trafalgar Square from Leicester Square, the façade will read as a strong but reticent wall flanked by trees."

This type of serial contextualism is not new; indeed, one of the most accomplished examples to date—the Clore wing of the Tate Gallery, designed by James Stirling and Michael Wilford—opened just last month (P/A, May 1987, pp. 43–44). The three-dimensional effect of this design device, however, is disquieting. Studying the Sainsbury Wing is rather like watching a studio movie in which the car and actors remain stationary while the scenery rolls by.

Asked at the press conference whether he had to sacrifice the integrity of his own building in deference to its surroundings, Venturi argued that Trafalgar Square needed no new monument of his own making, a sentiment most Londoners probably appreciate. Yet his design underscores the difficulty of designing a building whose identity is bound up in other buildings. The Sainsbury Wing is assertively contextual, calling attention at every turn to its own polite behavior. Daralice D. Boles



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66 None of us studied architecture expecting to be defendants in a lawsuit. Most architects are creative peoplethey may or may not be businessmen, although the better they are in business the better it is-but few expected to be defendants in this changing profession. It's something that has affected me personally, and, I expect, the growth of many architectural firms. It's caused me concerns, maybe burned me out, in spite of the fact that we've won every one of our suits.

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I feel very good about them. **??**



Marchin David Dala

Dave Dubin is a principal in Dubin, Dubin and Moutoussamy, a 75-yearold architectural firm based in Chicago. He is past president of both the Chicago and Illinois AIA. We value our relationship with his firm and thank him for his willingness to talk to you about us.

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P/A Calendar



Zaha Hadid, Berlin Building, 1986, at Protetch Gallery, through July 17.

Exhibitions

Through June 28

The Function of Ornament: The Architecture of Louis Sullivan. Cooper-Hewitt, New York (See P/A, Nov. 1986, p. 26).

Through June 28

The Machine Age in America 1918–1921. Museum of Art, Carnegie Institute, Pittsburgh, Penn. Also, **August 16–October** 18, Los Angeles County Museum of Art, Los Angeles (See P/A, Nov. 1986, p. 110).

Through June 30

What Could Have Been: American Unbuilt Architecture of the 80's. Memphis Brooks Museum of Art, Memphis, Tenn.

Through July 17

Interlacing: The Elemental Fabric, curated by Jack Lenor Larsen. American Craft Museum, New York.

Through July 17

Zaha Hadid: Architectural Drawings. Max Protetch Gallery, New York.

Through July 19

American Decorative Window Glass, 1860–1890: The Home as Heaven Below. National Building Museum, Washington, D.C.

Through July 19

Frank Lloyd Wright and the Johnson Wax Buildings: Creating a Corporate Cathedral. Cooper-Hewitt, New York. Also, **August 15–October 11,** Farish Gallery of Rice University, Houston (See P/A, April 1986, p. 27).

Through July 19

Die Revision Der Moderne: Postmodern Architecture 1960– 1980. Williams College Museum of Art, Williamstown, Mass. Also, **September 1–November 7,** IBM Gallery of Science and Art, IBM Building, New York (See P/A, Sept. 1984, p. 26).

Through July 19

Graphic Madrid: Contemporary Spanish Architectural Drawings. Octagon Museum, Washington, D.C.

Through July 26

American Art Deco. Renwick Gallery, Smithsonian Institute, Washington, D.C. Also, **September 26–November 1**, Center for the Fine Arts, Miami, Fla.

Through July 31

New and Different: Home Interiors in 18th Century America. Museum of American History, Smithsonian Institution, Washington, D.C.

June 13-September 6

The Golden Age of Ottoman Architecture: Sinan, Sultan Suleyman's Court Architect. The Art Institute, Chicago.

June 25-September 15

Mario Bellini: Designer. The Museum of Modern Art, New York.

June 27–July 4

Landscape Pleasures: Designers Collaborate with Nature. Participants include Richard Meier, Paul Segal, Robert A.M. Stern, and others. The Parish Art Museum, Southampton, N.Y.

June 30-September 30

Robert Adam and Kedleston Hall: The Making of a Neoclassical Masterpiece. Cooper-Hewitt, New York.

July 7-August 7

The Architecture of Herman Miller. Gallery at the Old Post Office, Dayton, Ohio. July 21–September 27 Art Nouveau Bing: The Paris Style 1900. Cooper-Hewitt, N.Y.

August 16–November 1 The Art that is Life: The Arts and Crafts Movement in America 1875–1920. Los Angeles County Museum of Art, Los Angeles (P/A, May 1987, p. 32).

August 16-September 20

Long Island Modern: The First Generation of Modernist Architecture on Long Island, 1925– 1960. Guild Hall Museum, East Hampton, N.Y.

Competitions

July 20

Entry Deadline, West Hollywood Civic Center Design Competition. Contact Helen J. Goss, City of West Hollywood, 8611 Santa Monica Blvd., West Hollywood, Calif. 90069 (213) 854-7461.

August 3

Registration deadline, Society of American Registered Architects 1987 Annual Design Awards. Contact 1987 SARA Awards Chairman, Society of American Registered Architects, 320 N. Michigan Ave., Chicago, Ill. 60601-3170.

Conferences

June 19-23

Architecture '87: Fact, Future + Fantasy, American Institute of Architects' National Convention, Orlando, Fla. Contact Joy Brandon, AIA, 1735 New York Ave., N.W., Washington, D.C. 20006 (202) 626-7464.

June 23-25

Intellibuild '87, Washington, D.C. Contact International Intelligent Buildings Association Press Staff, 1815 H St., N.W., Suite 1000, Washington, D.C. 20006-3604 (202) 295-6320.

June 23-26

A/E/C Systems '87 and DesCon '87, Washington D.C. Convention Center, Washington, D.C. Contact Conference Director, P.O. Box 11318, Newington, Conn. 06111 (800) 445-7790. (continued on page 52)

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P/A NEWS REPORT

Calendar (continued from page 51) July 13–17

"Shelter and Cities—Building Tomorrow's World": Sixteenth International Union of Architects World Congress, Brighton, England. Contact UIA Congress Secretariat, 72 Fielding Road, Bedford Park, Chiswick, London W4 1DB, England.

July 22-25

American Society of Interior Designers National Conference, Toronto, Ontario, Canada. Contact Communications, ASID, National Headquarters, 1430 Broadway, New York, N.Y. 10018 (212) 944-9220.

July 27-31

SIGGRAPH '87, Fourteenth Annual Conference on Computer Graphics and Interactive Techniques, Anaheim, Calif. Contact SIGGRAPH '87 Conference Management, 111 E. Wacker Dr., Chicago, Ill. 60601 (312) 644-6610.

August 2-6

1987 Illuminating Engineering Society of North America Annual Conference, Scottsdale, Ariz. Contact Cindi Altieri, IES, 345 East 47th St., New York, N.Y. 10017 (212) 705-7269.

August 5-8

"Monterey '87: Influences on Design," Industrial Designers Society of America National Conference, Monterey Conference Center and Doubletree Inn, Monterey, Calif. Contact IDSA, 1142-E Walker Rd., Great Falls, Va. 22066 (703) 759-0010.

August 6-8

International Perspective on Environmental Graphics, Society of Environmental Graphic Designers' 1987 National Conference, Cranbrook Academy of Art, Bloomfield Hills, Mich. Contact Sarah Speare, Executive Director, SEGD, 47 Third St., Cambridge, Mass. 02141 (617) 577-8225.

August 13-15

"Architecture and Landscape Architecture," Council of Educators in Landscape Architecture 1987 Conference, Rhode Island School of Design, Providence, R.I. Contact Margaret McAvin, Conference Chair, Rhode Island School of Design, Providence, R.I. 02903

August 16-21

Design '87, Amsterdam RAI Congress Center, Amsterdam, The Netherlands. Contact Secretariat Design '87, QLT Convention Services, Alton House, Keizersgracht 792 1017 EC Amsterdam, The Netherlands.

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P/A Practice

Computers: Nicholas H. Weingarten suggests CAD software tests.

Law: C. Jaye Berger discusses partnership formation and terms.

Specifications: William T. Lohmann advises careful review of client's General Conditions.



Computers: A Few Simple Tests

To peruse the current advertisements for CAD systems, one would think that advanced computer graphics and architectural applications have finally arrived at the personal computer level. While today's PC-based CAD systems have some impressive capabilities, many lack consistency and sophistication. There are far too many vendors offering a panoply of meaningless features while failing to provide the most basic necessities: adequate viewing control, consistent and robust graphic interaction, and versatile geometric data types. The vendors of PC-based CAD systems defend their actions by claiming that they can only bring to market that which the end-users will purchase. When selecting PCbased CAD systems, use the following tests, which will show vendors that the profession is genuinely interested in 3D design, complex calculations, and nonorthogonal spaces, and that the many current offerings in such areas are woefully inadequate.

Display Tests

Bring to the demonstration a sketch of a 30-story tube structure with a bull-nosed stair tower, a pyramidal roof, and a slightly inclined wall (figure 1). If the system is a true 3D system, it should have no problem repeating the windows up any of the façades. Nor should there be any difficulty drawing the mullions on the sloped skylight.

Request a view normal to the inclined plane of the atrium skylight. If done properly, you should be able to see the mullions as a horizontal and vertical grid, with no "stair-stepping" of the lines on the screen. The occurence of such "jaggies" indicates that the view is not really normal to the plane or that the image is slightly twisted on the screen. If possible, draft some additional mullions on the skylight.

Ask to see the project in architectural perspective (i.e., with the verticals still vertical). Then ask for the hidden lines to be removed. If the system has correctly modeled the windows as voids, you should be able to see through the façade to the backs of the other surfaces. Notice that most systems create holes in polygons by subdividing them into separate pieces and that these leave seams when hidden lines are removed.

Ask to step inside the 20th floor and look back out through one of the openings. Observe how easy or difficult it is to position yourself correctly in three dimensions. If the image shows many lines crossing in the middle of the screen, the system fails to perform what is called a hither clip and will not let you walk inside your data space. Some systems will work properly in wire-line, but will fail when the fill is turned on or when hidden lines are removed. Ask to move three feet back from where you are standing. The system should not need to return to plan view to accomplish this.

Request to see a true 30-60-90 oblique view of the building mass. Be sure that you are not seeing an orthographic drawing instead. A true oblique will have the same scale in all three axes, and in this case, a perfect right angle in plan. Orthographic views will fail to display either or both of these properties. Ask for the hidden surfaces to be removed from this particular view. Systems that can actually display true axonometric and oblique views usually distort depth information and can no longer remove hidden lines or surfaces.

Manipulations Tests

Ask for a simple floor plan to be built up (figure 2). See whether or not the system will repeat the elevators and the saw-toothed wall on the southeast façade. Systems that only repeat entities along the X and Y axes will have difficulty locating these objects properly.

Request to extend the building ten feet to the southeast, but leave the core in its present loca-(continued on page 64)

Specifications: Client's General Conditions

By far, the majority of construction contracts in the United States incorporate the standard general conditions documents of the American Institute of Architects (AIA A201) or the Engineers' Joint Documents Committee (EJCDC 1910-8). They are familiar tools that have been thoroughly tested in the courts and in the field.

But many clients, for whatever reasons, prefer to use their own general conditions. Such clients are usually developers, large corporations, or public agencies with extensive and continuing building programs. Sometimes a construction manager will insist on using in-house general conditions. Such documents normally reflect the authors' unique ex-(continued on page 60)

Law: Partnership Agreements

This article is the first in a series of three that will discuss various aspects of architects' partnerships.

Partnership, a common form of doing business for architects, involves two or more individuals who agree to share profits and losses. It is a complex relationship and one that requires much forethought and planning if it is to be successful. Unfortunately, many architects leap into seemingly casual partnership arrangements without written partnership agreements that discuss such issues as how the partnership will be managed and profits divided or what will happen if a partner withdraws, dies, or retires. When a dispute occurs between the partners, there is often nothing in writing to clarify the agreement's terms.

Most partnerships begin with the best of intentions; the parties want to complement each other creatively and make lots of money. Problems between partners occur when there is an (continued on page 60)

The following general conditions or supplementary conditions items are a start toward an effective checklist:

- Indemnification of the architect and consultants.
- Naming of the architect and consultants as additional insureds (comprehensive liability, property damage, and builder's risk policies).
- Insurance limits and other requirements from the owner's insurance advisor.
- Notice to the architect of a change in or non-renewal of insurance policies.
- Clearly defined role of the architect as observer.
- Visits to the site at "appropriate intervals."
- Architect's right of access to the work.
- Architect's right to reject work.
- Architect's right of final decision on artistic effect.
- Responsibility for permits, fees, and notices.
- Payment provisions for materials stored on-site and off-site.
- Prior approval of off-site storage by the owner only.
- Retainage requirements.
- Changes in contract cost and time by change order.
- Approval of change orders by the owner and contractor only. Definitions of "furnish" and "install."
- Reference documents in effect 30 days prior to issue date of the bid documents.
- Resolution of conflict within the contract documents.
- Architect's ownership of documents.
- Number of contract documents for the contractor without charge.
- Performance and payment bond requirements. Contractor's mechanical/electrical coordinator (for large or
- complex project).
- Unlimited warranty and correction of work for minimum 1 year after substantial completion.
- Definition of "substantial completion."
- Certification of substantial completion by the owner only.

These additional items should be included in Division 1 sections if written by the client:

- Detailed procedure for submittals.
- Contractor's prior initialed review of submittals.
- Architect's review (or approval) of submittals.
- Architect's review (only) of the progress schedule.
- Architect's review (only) of subcontractors.
- Cost of quality control testing.
- Notice to the architect prior to testing.
- Conditions for consideration of proposed substitutions.
- Contractor's cost of redesign due to accepted substitutions. Preparation by the contractor of list of items to be completed or
- corrected prior to inspection for substantial completion. Preparation by the contractor of field record documents.
- Submittal by the contractor of contract closeout documents.

These items must be clearly defined in, or explicitly excluded from, the general conditions:

- No architect's responsibility for or control or charge of construction means, methods, or techniques, sequences, or procedures.
- No architect's responsibility for or control or charge over the acts or omissions of the contractor or other persons performing the work.
- No architect's responsibility for the contractor's failure to carry out the work in accordance with the contract documents.
- No architect's responsibility for safety precautions or programs.
- No notification of accidents to the architect.
- No architect's right (or responsibility) to stop the work.
- No architect's right (or responsibility) to approve the contractor's employees.
- No architect's certification of code compliance.
- No architect's review (or approval) of means of protection.
- No architect's review (or approval) of safety precautions or
- programs. No architect's review (or approval) of temporary facilities.

Specifications (continued from p. 59) perience (or lack thereof) and the biases of their legal counsel. Almost without exception, they contain pitfalls for the unsuspecting architect.

General conditions form a contractual base for the owner/ contractor agreement and, indirectly, for subcontracts under it. They define the roles of the parties to the contract with regard to payment, inspection, insurance, termination, and other requirements and must be tailored for a specific project. They also define the role of the architect. Especially for that reason, the general conditions must be reviewed carefully for potential liability exposure.

The architect's review of the client's general conditions should be guided by underlying concerns: (1) ability of the contractor to complete the work in a reasonable manner under the stipulated requirements, (2) consistency of the general conditions with the owner/architect agreement, and (3) coordination of them with the contract documents prepared by the architect. The review should be made in depth, paragraph by paragraph, working with an attorney if appropriate. Alternate wording, prepared as supplementary conditions, should be discussed with the owner.

Potentially troublesome items also should be discussed. Direct conflict with the related owner/ architect agreement may be evident. Requirements on the contractor may be too restrictive for effective control of the project or for reasonable cash flow. Wording may be inconsistent or, even worse, ambiguous. Some requirements may be in the wrong location. Industry standards recommend that certain information should be placed in the instructions to bidders or Division 1 specification sections, not the general conditions. Other requirements may not even be applicable to the specific project (performance and payment bonds, references to separate contracts, local ordinances, liquidated damages, completion of portions of the work, etc.).

A review checklist is helpful and should be refined and expanded to incorporate new concerns. Such precautions positively affect the working relationship of all participants in the construction process. Ultimately everyone benefits from a clear definition of the responsibilities in the contract documents. William T. Lohmann, AIA, FCSI

The author is Specifications Manager for Murphy/Jahn, Chicago.

Law (continued from p. 59)

imbalance. One partner may suddenly not be bringing in as much business as the others, or may become more involved in administrative matters, or may have personal problems that divert his attention.

Before prospective partners sign a written agreement, they should confront the "what ifs." What if one of you wants to leave the partnership to teach or go into business with someone else? What if you do not get along and want to dissolve the partnership? What if one of you wants to take on a project and the others do not? What if one of the partners signs a check for \$5000 without mentioning it to the other partners? A partnership agreement drafted by an attorney will help partners to focus on these issues and resolve them before they occur.

The first question to be answered is whether you really want to be partners. Sometimes a joint venture or consulting relationship may be better since these relationships involve less of a long-term commitment and allow the individuals to see if they really want to work together as partners. It should be noted, however, that not all partnerships have to last indefinitely. Individuals can agree to be partners for two years and then renew their agreement if all is going well.

Next, you want to decide what to call yourselves. In many states the name of the partners must be included in the title: Smith & Jones Architects or The Smith/ Jones Partnership. A certificate of doing business as partners also will usually have to be filed with the county clerk.

The next major issue to be decided is how to share profits and losses. The important point to remember is that there is no one right way to handle this. Some partners share profits and losses equally and some share them according to percentages depending on who brought in the project, who is managing it, and who is working on it. There are other ways to handle this, which an attorney can recommend. It is important to remember that in states with statutes governing partnerships, if you do not have your own provision, the statute may apply.

The agreement must state the amount of capital, if any, each partner will be contributing to the firm and whether it will be in cash or some other form. If it is not in the form of cash, its value will have to be specified. If one (continued on page 62)

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Contraction of



P/A PRACTICE

Law (continued from p. 60) partner does not contribute capital, sometimes his future share

P/A PRACTICE

TYN TRACTICE

Computers (continued from p. 59) tion. Watch the order and complexity of operations carefully. Stretching elements has become a more common operation, but the necessary steps in nonorthographic moves are very unwieldy.

Change an elevator cab to a new color, pick it up and "accidentally" drop it directly on top of another cab. Ask how to move the misplaced cab back to its original position. This cannot always be done by picking, since objects are often selected by starting at the top of the display list and returning the first item hit. This makes it almost impossible to grab overlaid objects consistently. matters is also very important. The partners should decide who can sign checks. Signatures of there are many partners, you must decide on voting rights. It can be one-man, one-vote or hours are devoted to partnership business, and whether architectural work or teaching can be

orthogonal axes that are at an

angle to the X-Y axes. Ask if

you can automatically use these

values to move an object. Having

to retype the values is not consid-

Ask to orient your building on

ered an acceptable solution.

a site map. See if the building

can be rotated on the site. Ask

Try to delete just the elevator cabs from the plan. Picking each line is very tedious, but picking by rectangular box will grab too much or too little. Advanced systems will let you pick by enclosing desired objects with an irregularly shaped fence.

Create the columns in the plan as symbols external to the drawing itself. See if altering the external symbol affects the plan drawing. Many systems require that you specifically reload external symbols in each drawing in which they occur. This is often done to protect drawings from accidental changes, but it makes it difficult to alter global details, fonts, or other parameters without accessing every drawing in a project set.

Place a number of text strings on the plan. Then request that all text containing a certain phrase be doubled in size. Select a few text strings and change their justification so that they are below the reference point instead of above it. A consistent system will permit you to select graphic entities by almost any parameter and modify almost any attribute.

Calculation Tests

Many clearances are calculated as distances along preferred axes. Ask for the relative distances (i.e., the difference in X, Y, and Z values) between two points. See if this can be done in

ONE

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for the clearance or the measurement of the angle formed by the building and the site. Suggest that you are doing space planning and have a department that occupies the entire floor, excluding the elevator core. Ask for a polygon to be constructed, outlining that department and its area calculated. Ask for the area a second time and see whether all of the points must be input again. Many systems do not include polygons as geometric entities and force you to repick the edges of a complex shape each time you need the

Ask for a second example in which a single department occupies two noncontiguous spaces. Very few systems support a single polygon composed of two separate bounded areas, but it is a very useful concept when calculating areas or performing quantity surveys. Having to calculate the sum of the two areas by hand is not an appropriate solution to this problem.

area.

Some vendors will complain that these tests are just one person's view of what a CAD system should possess. Likewise, many might feel that the tests are too abstract or too difficult to program. None of these replies is acceptable. These tests exercise basic concepts at the core of a CAD system and demonstrate the difficulty most systems have with what are really very simple commands. Furthermore, the algorithms needed to perform these tests have already been published and few, if any, require major programming efforts. Nor have any of the examples encompassed practices or designs that would be out of the ordinary in most architectural or interiors firms. The fact that very few PC-based CAD systems can accomplish these tasks demonstrates just how much we need to educate the vendors about professional needs. It is a task long overdue. Nicholas H. Weingarten

The author heads the computer consulting and software development firm of Weingarten Associates in Chicago.

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David Rockwood David Rockwood Architect & Associates Portland, Oregon



Age: 32.

Education: BArch, University of Oregon, 1978; MArch, Princeton University, 1983.

Experience: Worked in the offices of Gordon H. Hoops, Selig/Henslee, Batey & Mack, and Michael Graves; has taught at the Oregon School of Design and the University of Oregon; began current practice in 1984. Influences: Le Corbusier, Terragni, Eisenman, and Venturi's writings. Comments: Although the formal ramifications on my work are obviously guite different from the direction of Venturi's work, the main idea for me was in seeing architecture as a very rich medium. I'm interested in how you could begin to set up initial concepts and then posit concepts that are different from the first, presenting both simultaneously to allow the possibility of understanding those differences.

Much of my interest in Terragni stems from Eisenman's writings on the manipulation of form. I admire his knowledge and rigorousness about approaching things. Even after I visited Terragni's work in Como, he remains something of a mystery to me.

I'd like my firm to stay reasonably small, simply because I'm enough of a perfectionist that I'd like to keep my hand in all work we do. Economic conditions, especially in Portland, have put a new emphasis on the whole marketing game. I think that's something young architects didn't always have to understand.



Rockwood designed the house in the Hayden Bay Marina neighborhood for his parents; it is sited on a 40' x 120' flat lot in a waterfront PUD in which each house allows a permanent 10-foot easement on one side for use by the adjoining property. The principal views are of Hayden Bay and the Columbia River to the north, seen even from second floor master bedroom (top) across the two-story entry atrium.

Based on a vertical and horizontal grid of 11'- 6", the structural system of the house comprises two interconnected concepts. Precast concrete sandwich panels are used in floor, roof, and wall construction (see P/A, March 1987, p. 117) teamed with a system of steel tube wall and roof frames. Submodules of 5'-9" and 2'-10½" further divide the overall grid.

Wall panels are made up of a 3½-inch inner (bearing) and a 3-inch outer layer of pumice concrete, separated by 3½ inches of rigid urethane insulation. Welded wire girders bind the outer panels together. Floor and roof panels are also 10 inches thick, but comprise a 2½-inch shop-poured layer, 5 inches of rigid insulation, and a 2½-inch field-poured layer, completed after electrical and mechanical elements are placed.

Spatially and visually, the notions of three-dimensional grid and the volumes produced by that grid are reinforced in the house. Despite a considerable amount of written philosophy about this project, Rockwood says, "I don't see the house as something highly abstract, the way people might see Peter Eisenman's work." With reference to influences he has experienced, he continues, "I think the house still has signs of closure, through the layers, even though it may be eroded to some extent, as an approach. Some symmetry and axial relationships are still set up in many of the rooms. I continue to see validity in those notions, and to change them without a solid philosophical reason would be simply reactionary."







Project: Rockwood Residence, Portland, Oregon.

Architects: David Rockwood Architect & Associates, Portland. Elizabeth Williams Architect, assistant.

Clients: Lawrence and Vera Rockwood. Consultants: Resseger/Gotchall Consulting Engineers, structural; McGinnis Engineering, mechanical, with major contributions by Lawrence Rockwood; Lawrence Rockwood, electrical; Island Landscape, landscape, with major contributions by Vera Rockwood.

General contractor: A.C. Schommer & Sons.

Photos: Strode Eckert Photographic.



Glenn Allen Neighbors Kerns Group Architects, P.C. Washington, D.C.





Age: 27.

Education: BArch, University of Maryland, 1982.

Experience: Kerns Group Architects, Washington, since graduation. Now an associate.

Comments: I value unpretentious sensitivity and simplicity most highly. The challenge of tight budgets has taught me the importance of clarity, of getting to the point in solving problems, elegantly and distinctively, but without excess baggage. Design, after all, is the attempt to control disorder.

I have learned a great deal working with the Kerns Group. It is a small enough firm—about 20 people that each person is intimately involved with all areas, but large enough to have a variety of building types. I most of all admire the Kerns Group's philosophy of contextualism. Form should not be created for form's sake, but should capture the spirit of the location and its history, and should be appropriate to the building's use and users.



The Montessori Country School in Darnestown, Md., was designed to be a stimulating environment for its pupils, and at the same time simple enough to meet a \$30 per square foot budget. For simplicity, and to complement the rolling, treeless pastureland on which the 3600-square-foot building is sited, the spaces—two classrooms, an office, and bathrooms to serve the adjacent pool—were organized into a rectangle that nestles into the hill and follows its slope. To give the young children an opportunity to learn how the building's

nents and systems were exposed. The structure is simple, with 36foot-long truss joists spanning the space, and materials are basic—

parts are interrelated, the compo-

exposed concrete block, stained plywood, and inexpensive aluminum windows. Because of the tight budget, every part of the building had to be functional, so that when possible, each part has a double function: The rhythmic overhang, for example, provides a decorative cap, while its threefoot depth on the south side (above and top right) acts as an energy-conserving device. Only the entrance (top left) has obviously applied decoration, whimsical to suit its young users, and distinctive to give importance to its function.

The Montessori Country School won an American Wood Council Award in 1984. **Project:** Montessori Country School. **Architects:** Kems Group Architects, P.C., Washington, D.C. (Glenn Allen Neighbors, project architect).

Client: RMK Partnership, Germantown, Md.

Consultants: Mesen-Sargent-Partnership, structural; E.K. Fox & Associates, Ltd., mechanical.

General contractor: Cowell Construction.

Photos: As noted.



Philip Holden Holden Architects St. Louis

Age: 34.

Education: Heriot-Watt University, Edinburgh, Scotland, College of Art, School of Architecture, 1974–75; University of Kansas, BEnvironmental Design, 1976; BArch, 1979. Experience: Ittner & Bowersox, 1977–78; Stanley Tigerman & Associates, 1979–81; Harry Weese & Associates, 1981–82; Holden Architects, 1983–present.

Influences: Mario Botta, Richard Meier, earlier Harry Weese, also Arata Isozaki, Hans Hollein. Comments: The work of Meier, Isozaki, and Hollein is more mental, more complex, even Classical in certain ways, than many. I like Graves a bit, and Tigerman. I don't want, visually, to do what they do, but I admire that they just do it, with conviction and spirit. Tigerman has had an impact on me, though not stylistic, and Bill Bowersox has also contributed a lot.

I have found that practice is just so do-able; I'm currently working on increasing staff and space. I'd eventually prefer to have a staff of 7–10 to be able to handle diverse midsize projects. Once you get to the point of needing a middle management, l think you've got problems. As for pitfalls of early practice, I've encountered only a few that are bothersome. Being my own sole design head was tough at first. What attitude was I supposed to take? Isolation is one of the hardest things. It is mentally difficult to keep the excitement level high without adequate sounding boards from which to get responses to ideas. The other difficulty is getting and keeping quality staff.









1 STAGE 2 MEETING HALL 3 KITCHEN 4 BAR 5 MULTH-USE/GYM 6 SIX CLASSROOMS ABOVE project (bottom) in Washington, Mo., and the St. Joseph's Croatian Hall meeting facility (top) in St. Louis are both additions to existing complexes. Program for the multi-use addition included a basketball gym/assembly space with a stage and auxiliary areas and six classrooms. A stage was also required for the meeting hall, with kitchen and bar areas, in a freestanding building in the earlier complex. Both are clad in brick, Our Lady of Lourdes being in 8" x 8" units and St. Joseph's having light accent courses. Reflective glass block and reflective glass were used in Our Lady of Lourdes, and both projects have thermal break windows.

The Our Lady of Lourdes multi-use

Projects: Our Lady of Lourdes School, Washington, Mo., and St. Joseph's Croatian Hall, St. Louis, Mo.

Architects: Holden Architects, St. Louis. Client: Archdiocese of St. Louis.

Consultants: Weintraub & Associates, structural; McMichael/Auman Consultants, mechanical.

General contractors: WW Construction, Our Lady of Lourdes addition; Vince Kelly Construction, St. Joseph's Croatian Hall.

Photos: John William Nagel.



Joe Mashburn Mashburn-Maffei Architects Bryan, Texas

Age: 45.

Education: BArch, University of Houston, 1978; MArch, Texas A&M, 1982.

Experience: Worked in offices of Howard Barnstone, Charles Tapley, and Burdette Keeland; began own practice in 1983; is currently assistant professor and graduate design coordinator of department of architecture, Texas A&M University.

Influences: Raphael Moneo, Kenneth Frampton, and Texas vernacular architecture.

Comments: Our practice is very small. I teach full time, thus my time is limited. My commissions are mostly residential design or consultation, and the actual make-up of design teams varies with the commission. Some jobs involve joint venture with other architects, and assistance usually comes from students hired on a contract labor basis. The office conforms to Tony Predock's definition of regionalism: "That's when you can't get work out of state."

Our office good guys are Raphael Moneo, when he speaks of architecture "arriving"—"When our thoughts about it acquire the real condition that only materials provide"; and Kenneth Frampton, when he talks about Critical Regionalism having as its fundamental strategy—"To mediate the impact of universal civilization with elements derived indirectly from the peculiarities of a particular place."





The Mashburn House, also known as the Long, Skinny House, is the architect's own; for himself, his wife, and child. It was the recipient of a design award from the Texas Society of Architects in 1986, and was a first place design award of the Association of Collegiate Schools of Architecture in that same year.

The house has two unusual aspects: its shape and its materials, which derive from a combination of factors involving the site, certain economies, and interest in particular building types and materials. The architect's interest in the metal agricultural and light-industrial buildings common to Texas (and in Airstream trailers he once had one as a bedroom, appended to a "real" house) led to the corrugated galvanized steel siding used inside and out, and on the roof. From his interest in Texas vernacular architecture and in the desire to preserve all of the trees on the 6.3-acre site of wild bush, and also from climatic concerns, the modified "dog trot" house emerged: Major living spaces flank a central entry hall that runs through the house from front to rear, and the 186-foot-long building snakes around the site to avoid trees. "Like its ancestors," Mashburn explains, "this house allows economical zoning of heating, cooling, and ventilation systems to match our daily and seasonal patterns. The long east-west wings catch the southern breeze

while shutting out excess sun. The house is elevated on concrete piers to allow drainage from subtropical storms."

Throughout, the architect has chosen simple modular materials of economical, low-maintenance, and rural quality, which allowed speed and economy of construction by a very small working crew. The 1800 square feet of the main living portions of the house are air conditioned, while the central "dog trot" hall (facing page, bottom) is heated in winter by a wood stove.





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Project: House for Joe, Julia, and Mars Mashburn (The Long, Skinny House), College Station, Texas.

Architects: Mashburn-Maffei Architects, Bryan, Texas (Joe Mashburn, partner in charge).

Client: Joe, Julia, and Mars Mashburn. Consultants: Tom Woodfin, landscape; Julia Mashburn, interiors; Carrol D. Claycamp, structural.

General contractor: Monte Trenckmann. Cost: \$85,212.00; \$36.40 per sq ft. Photos: Ken Appelt.



Michael Wisniewski Duncan-Wisniewski Architecture Burlington, Vt.

Age: 34.

Education: Cornell, psychology, 1970–72; Berlin Summer Academy in Architecture, 1977; BArch, Cornell, 1978.

Experience: David Luce, Arch., 1978–79; Office of Colin P. Lindberg, 1980–82; Mannie Louis Lionni, 1983 (all in Vermont).

Influences: C.G. Jung; Asplund, Le Corbusier, Aalto; Japanese architecture; Richardsonian and Shinale-Style architecture; Cornell faculty. Comments: Vermont is a relatively poor state, and the harsh weather makes building expensive. Clients, native or otherwise, have a Yankee sense of self-reliance and thrift. As a result, the majority of our work consists of less than full architectural services. This is beginning to change, both as our firm matures and as the Vermont public realizes that much of what has been built here since 1945 does not live up to New England picture-book standards.

Our firm, formed in 1984, consists of Michael Wisniewski and Robert Duncan (a year older), both registered architects. We have a 13' x 13' office in my partner's house, with two computers.

The form of our firm—lean and mean—results from both necessity and choice.

Necessity: Partial services mean more jobs to survive—and less fat. We feel we can be more efficient with only two of us; some day we might like to add two more people.

Choice: We like to be involved with a job personally; we don't like to manage others or beat the bushes to keep the troops busy. We both have small children and we want flexibility to be with them as they grow. A visitor to the office is likely to find kids playing hide-and-seek or painting on the computers.







The Millyard is a new 44-unit residential condominium on a site across the Winooski River from Burlington, where a factory once stood. It relates in form and scale to a neighboring mill, now renovated for housing.

The Millyard's three-story section, with all units reached via a second-floor corridor, allows all living rooms to have the desired view south toward the river. The typical two-bedroom units are interspersed with three-bedroom layouts at the ends and around entry bays. On the entry side, three gabled doorway projections are linked to bridges from the parking area; marking these points on the river façade are recessed balconies. The typical walls reflect the interior layers, with a floor of bedrooms between too glassier bands of living rooms. The brick walls stop short of the roof and are extended at the ends. Wisniewski takes pleasure in the way the enclosing elements have been made dynamic—the walls stretched and the roof lifted—the whole seemingly held together by linear elements such as window mullions and balcony railings.

The 52,500-square-foot structure was completed in 1985 for \$2,129,154, or \$40.50 per square foot, including site work and interior finishes. Project: Millyard, Winooski, Vt. Architect: Duncan-Wisniewski Architecture (known at the time as Michael Wisniewski, Architect) in association with the Office of Martin S. Tierney, Burlington, Vt. (Michael Wisniewski and Martin Tierney, principals in charge).

Client: Millyard Development Corp. Consultants: Civil Engineering Associates, structural/civil; Avengco, plumbing/ electrical.

General contractor: Trizone Construction.

Photos: Michael Wisniewski.



Craig Wakefield Grund Austin, Texas









The Blackshear Homestead is located in the 100-year-old Blackshear neighborhood of Austin, Texas. The project site is made up of eight small lots of 6000 to 7200 square feet each, located on one city block. Eight single-family houses were built for eight families who had to have a minimum of three members and an income that was 50 percent of the local median, or between \$12,000 and \$20,000 per year.

The Craftsman-influenced houses, which cost between \$29,000 and \$32,000, or an average of \$30.70 per square foot, were financed with HUD grants administered through the City of Austin, and have been sold through a "rent-to-own" program to families who had never owned a home before. The project was carried out by a nonprofit corporation, made up of neighborhood residents with the help of a private developer. As such, it is one of the first of its kind for building-owneroccupied homes for very low income families.

The eight houses in the Blackshear neighborhood are of concrete and wood-truss foundation, with conventional framing, aluminum windows, wood siding, composition shingles, and stucco underpinning. They were consciously designed and constructed to recall what existed before an urban renewal program substantially destroyed the neighborhood in the 1960s. **Project:** Blackshear Homestead, Austin, Texas.

Architects: Tom Hatch Architects, Austin (Craig W. Grund, project architect; Ronn Basquette, Jana McCann, Brooke Sween, Pat Cornelison, Karen King, Tom Hatch, project team).

Client: Blackshear Neighborhood Development Corporation with Henneberger & Associates.

General contractor: Foribs, Inc. **Costs:** \$249,539 (\$30.70 per sq ft) for the eight houses.

Photos: James Minor—Guerrero Photographic Group.

Age: 31.

Education: BS in Art and Design, MIT, 1977; MArch, University of Texas, Austin, 1982.

Experience: Project architect, Tom Hatch, Architects, Austin, 1982–86. Currently freelance and contract work.

Influences: Carlo Scarpa, James Stirling, Robert Venturi.

Comments: When I went to Texas, in 1979, things were pretty terrible for architects in the East. Texas was different from what I thought it would be; it was nicer.

In working with the Blackshear Homestead (while at Tom Hatch Architects), we met frequently with the neighborhood board; sometimes it was tricky because the aspirations of the neighborhood people were different from what we expected. We wanted to work from the existing fabric, from old photos, etc., but they were looking for something contemporary. However, Blackshear represents an evolution. A project we had worked on two years earlier had a more conventional suburban character. Blackshear is now getting back together, and is in fact influencing other areas nearby.

I was fortunate to work for a small firm; I had a chance to learn all the basics. At Tom's (Tom Hatch Architects) office we did just about everything. The problem with big offices is that by the time they get big, they seem to lose a bit of energy; they don't seem to have the spunk of smaller firms. I'd now like to work for a bigger office; I feel it's necessary to define my skills.



Alan Wanzenberg Jed Johnson, Alan Wanzenberg & Associates, Inc. Alan Wanzenberg, Architect, P.C. New York

Age: 36

Education: B.A., University of California, 1973; MArch, Harvard University, 1978.

Experience: I.M. Pei & Partners, 1978–81. Established own firm with interior designer Jed Johnson in 1982, and formed Alan Wanzenberg, Architect, P.C. in 1986.

Influences: Robert Venturi, "for saying that it's ok to borrow"; Philip Webb; C.F.A. Voysey; Jean-Michel Frank; Frank Lloyd Wright.

Comments: We don't look for a signature. We look for the idea, and try to be consistent. We'd rather be known as straight copyists than as exaggerating or vulgarizing an idea. It's better to do a good copy than a bad take-off. Our work should have a clean, direct quality that evokes an honest, positive emotion, especially in houses. A house shouldn't become too much of an analytical exercise.

I find that the previous generation of architects has a certain cynicism and self-consciousness. If you scratch the surface, there is a negative quality. A lot of people our age would like to break away from that.

I see more and more people devoting large amounts of money to design, and people are much more interested in the issue of craft.

When we started out, we wanted something like an atelier, but the more we've grown, the more traditional our office structure has become. My partner and I come from "anti-structure" backgrounds, but most of the people in our office, who are younger than we are, are much more conservative, and much less flexible. One thing I learned in working for a large firm is which battles are worth fighting for, and which are not.



The 200-square-foot north gatehouse (above) for the 1500acre Conyers Farm residential development was designed in what architect Alan Wanzenberg calls "National Park architecture" style, with wood frame construction, cedar shingles, and pine and poplar trim. It stands to the north and east of the Conyers Farm clubhouse (photos and plans, facing page), a 9000-square-foot renovation of a ruined stone barn. A tennis court and dormers were added to the building, but were clad in cedar shingles to distinguish them from the older structure. The architects kept the original door and window openings of the barn, and wrapped an expansive deck around the main level of

the clubhouse. Inside, the "Adirondack lodge"-style clubroom (facing page, bottom) was given cedar paneling, a new fieldstone fireplace, and a mixture of authentic Stickley furniture and sympathetic adaptations. The architects' sensitivity to the nuances of historical interpretation extended to the copper light fixtures they designed for the interior and exterior of the building. Polo grandstand and overall site plan are shown overleaf (p. 78). Project: Gatehouse and clubhouse, Conyers Farm, Greenwich, Conn. Architects: Jed Johnson/Alan Wanzenberg & Associates, Inc., New York (Elizabeth Hammond, Alex Antonelli, Peter Rissetto, Terry Nelson, Kit Huber, Adriana Colin, project team).

Client: Conyers Farm Development Corp. Consultants: Hanington Engineers, structural (clubhouse); Deborah Nevins, Landscape and Garden Design, landscape. General contractor: Franco Brothers, Inc.

Photos: John Hall.

















The polo grandstand at Conyers Farm (above) was built in six weeks, using pole barn construction, gang-nail roof trusses, and cedar shingles trimmed with pine and poplar (as in the gatehouse) for the main pavilion structure, which houses the box seating. Joined to this structure is the steel scaffolding that supports the bleacher seating for 300 (top). The box seats are accessible from stairs on the back of the grandstand (above), as well as from the twin stairs that flank the bleachers.

Project: Polo grandstand, Conyers Farm, Greenwich, Conn. Architects: Jed Johnson/Alan Wanzenberg & Associates, Inc., New York. Client: Greenwich Polo Club, Inc. Consultants: Peter Scott, structural; Deborah Nevins, Landscape and Garden Design, landscape. General contractor: Old Town Barns.

General contractor: Old Town Barns. Photos: John Hall.



Bonnie Roche Bonnie Roche and Associates, Inc. New York

Age: 41.

Education: B.S. in dance, Skidmore College, 1968; Architectural Association, London, 1974–75; Yale School of Architecture, 1976–77; MArch, Massachusetts Institute of Technology, 1979.

Experience: Skidmore, Owings & Merrill, 1979–1983. Opened own office in 1983.

Influences: Traditional Japanese architecture; Adolphe Appia (pioneering modern Swiss set designer); Mies van der Rohe; Louis Kahn; Carlo Scarpa.

Comments: I really love a sense of theatricality in architecture; it comes from my dance aesthetic. I got into architecture through my interest in movement and space, and in the sense of dramatic illusion. . . . Set design is a very strong influence, and I like to use very real materials in unorthodox ways.

I worked in the production department at Skidmore, Owings & Merrill for three and a half years, because I wanted to learn the craft of building. ... But you never consider the business aspect of architecture when you start your own office. I never thought of architecture as isolated from the real world, but it is always a surprise to find yourself suddenly in business.

The media give young architects much more exposure today, which is an advantage. There is much more hype, too, because architecture is becoming more an issue of fashion, which I don't approve of.





In this renovation of a 4000square-foot New York apartment, **Bonnie Roche concentrated her** efforts on the kitchen (above) and office (not shown), both of which total about 1000 square feet. (The client, a jewelry designer, made her own design statement in the other spaces.) While Roche felt that it was important to continue the proportions and axial formality of the entry, living, and dining rooms in the kitchen and office, the understated, rather hardedged feel of her design contrasts sharply with the ornate, decorative approach taken by the client in the more public areas of the apartment. Roche's materialsstainless steel for the door frame and work table, polyester lacquer for the kitchen cabinets and room divider, and backpainted glass for the door, counter backsplashes, light cove, and work table topare clean, yet full of depth and richness. Her etched-out squares in the glass door create a sense of transparency without sacrificing privacy, and the cove lighting evokes a sense of space beyond the literal plane of the wall; with the backsplashes, they make the cabinets appear to float. The work table's glass top is counter height, but its stainless steel supports are standard table height, thereby mediating between function and tradition.

Project: Apartment renovation, New York. Architects: Bonnie Roche and Associates, Inc., New York (Larry Kenny, associate). Client: name withheld by request. Consultants: Shelly Karten, mechanical; Howard Hershberger, lighting. General contractor: Lennie Construction Corp. Photos: Wolfgang Hoyt.



Penthouse K New York

Colin Cathcart, Gregory Kiss, Peter Anders, Chuck Felton, John Loomis Kiss + Partners

Peter Anders Peter Anders Architect

Keith Hone, Tim Nanni, Anne Sax Keith Hone & Associates

Associated firms: Ace Architecting (Chuck Felton, Jon Frismna, William Wunder); Sarah Calkins Design. **Ages:** 28–34.

Education: BS in Architecture, University of Michigan, 1976 (Anders); B Environmental Studies, Uníversity of Waterloo, 1978 (Cathcart); BA, Smith College (Calkins); BS, Yale University (Felton); BArch, University of Virginia (Hone); BA, Yale University, 1979 (Kiss); BA, Stanford University, 1973 (Loomis); BA, Carleton College, 1977 (Nanni); BA, Amherst College, 1980 (Sax). All received MArch, Columbia University, 1982, 1983, or 1984.

Experience: Two architects work full-time for other architectural firms. Majority founded separate practices upon graduation from Columbia in shared studio space dubbed "Penthouse K."

Comments: We share equipment, resources, experience, criticism and labor in a noncompetitive way, recalling some of the positive qualities of the Columbia studio. The results of our frequent in-house "competitions" are often presented as alternatives to clients. The office code is informal; collaborations are loose and nonhierarchical.

We share some discontent with the nature of the profession, especially in the early years: In large offices in New York, graduate architects often work below their educational level, without exposure to the broad experience of the profession, and without any control over the design on their desk. Short on practical experience and established clientele, we have had to work within the cracks of normal practice and exercise a little imagination.







The Chronar factory (above) is the first of a series designed by Kiss + Partners for the production of amorphous silicon photovoltaic cells. A long, white concrete block wall set parallel to rail lines separates public and office functions from restricted production areas. The office block is faced in ceramic tile in a pattern approximating the electrochemical cross-section of the factory product. The skylighted center hall is shaded by a bank of photovoltaic panels. The architects have developed a standard specification and design guide for Chronar factories, based on this design, which was used to plan a factory complex in Harbin, China, and one in Birmingham, Ala.

Project: Photovoltaic Manufacturing Facility, Port Jervis, N.Y.

Designers: Kiss + Partners (formerly Kiss and Cathcart), New York (Colin Cathcart, Gregory Kiss, designers, with Peter Anders, Charles Felton, Jon Frishman, John Loomis, Sandra McKee, Val Rynnimeri, Michael Starr).

Client: Chronar Corporation. Consultants: Linda Chu, landscape; Christina Bibler, interiors; Neil C. Montgomery, Butler Manufacturing Co., structural; Ambrosino, Depinto & Schmeider, mechanical.

General contractor: Zitone Construction (Bill Zernhelt).

Photos: Simo Neri. Portrait, clockwise from bottom right: Felton, Cathcart, Loomis, Calkins, Hone, Kiss, Anders, Nanni.





This renovation of an East Side apartment by architect Peter Anders (above) copes with a completely conventional space. The ceiling trellis is used to distinguish zones of activity and enliven a "pancake" ceiling. The curve of trellis and dining table is continued in the splayed bedroom wall, whose studs support wood shelves. Viewed end on, the shelves grant a glimpse of the bedroom windows; from the side, they are a denser "lumber pile, like things thrown into the corner," says the architect.

Small enough for two, yet large enough for eight people on holiday, the house designed by Keith Hone for his retired parents is a complex of three structures grouped to shape an archetypal farm courtyard (above right). The house itself focuses on a doubleheight, timbered "greatroom" (right) while guest rooms and the pool changing room fill the silo. The third structure functions as a two-car garage with a storage loft above.









Project: Peterson Apartment, New York (above left). Architect: Peter Anders Architect, New York (Peter Anders, Val Rynnimeri). Client: Dr. Mark Peterson. General contractor: Tim Lutz. Photos: Mark Darley.

Project: House in Oldwick, N.J. (above right).

Designers: Keith Hone & Associates (Keith Hone, John Loomis, project team). Client: Mr. and Mrs. Basil Hone. Consultants: Sieglinde Anderson, landscape; Icarus, interiors; G. Thomas Bible, Steven Winter Associates, structural. Photos: Langdon Clay; reprinted by permission from House Beautiful.





Deborah Berke Deborah Berke & Associate New York

Age: 33.

Education: B.F.A., Rhode Island School of Design, 1975; Honors Thesis, Architectural Association, London, 1976; BArch, Rhode Island School of Design, 1977; Master of Urban Planning and Urban Design, The City University of New York, 1984.

Experience: Institute for Architecture and Urban Studies, 1979–83; partner, Chatham Berke Associates, 1980–82; Assistant Professor, School of Architecture, University of Maryland, 1984–1987. Founded own firm in 1982.

Influences: Louis Kahn; Judith Wolin ("at RISD, she was the first person who told me that you could think about architecture, that a design didn't have to spring full-blown from your gut").

Comments: I don't regret never having worked for a large firm, but I have had to learn to run a business on my own. I don't mind the effort involved in maintaining a small firm, and we stress the importance of team effort in our office. Having always been involved in teaching has had a definite influence on my practice: We talk about ideas—not just architectural ideas, but broader cultural issues, and we talk a lot about art. I also see teaching as a way to maintain peer contact, with both faculty and students, and I am part of a New York-based reading group, ReVisions. Today's climate for young architects is better than ever, because of rising public awareness of design issues.



The Sward House (above) is one of ten designed by Deborah Berke at the new town of Seaside, Fla. (P/A, January 1984, pp.138–139; July 1985, pp. 111-118). Berke calls the 1800-square-foot, woodframe vacation house "much more diagrammatic" than her earlier Seaside work; living, circulation (in the form of 900 square feet of covered porches), and service spaces are organized in three distinct zones. On the second floor, the porch is the only means of access to the three bedrooms, and the parents' room is separated from the two children's rooms by the stair. The living area volume is the most "complete" formally, while the service volume "erodes" at the second-floor level.

Project: Sward House, Seaside, Fla. Architects: Deborah Berke & Associate, New York (Deborah Berke, principal; Carey McWhorter, associate; Melanie Hennigan, Miche Booz, assistants; Alan Dynerman Architect, design development phase). Client: Charles and Linda Sward, Atlanta, Ga.

General contractor: Michael Warner, Warnerworks. Photo: Steven Brooke.




Moosepac (site plan, right) is a 233-unit, 82-acre residential development in northern New Jersey, scheduled to begin construction this fall. Distortions of the imposed regular street grid by existing site conditions create identifiable public spaces: a nature walk; a promenade; a public park; and a tree-lined avenue. The houses are made of factorybuilt modules, or "boxes," four to six of which are joined and fully finished on the site. One attached and four detached house types (see example, above) were developed to conform to the constraints of modular construction while preserving the integrity of traditional house types.

Project: Moosepac, Jefferson Township, N.J.

Architects: Deborah Berke & Associate, New York (Deborah Berke, principal; Carey McWhorter, associate; Miche Booz, Melanie Hennigan, Scott Wing, design team; John Hannah, Julie Watterau, assistants).

Client: Harvey Gerber, Gerber Homes Inc., Newtown, Conn.

Consultants: Beardslee Engineering, civil engineering.





Irby Hightower Michael Lanford Billy Lawrence Bobby Michael McGlone Alamo Architects San Antonio, Texas

Ages: 32, except Lanford who is 33. Education: BArch, University of Texas at Austin, 1977 (Hightower, Lanford), 1978 (Lawrence, McGlone).

Experience: Individually worked for Johnson/Burgee, Hardy Holzman Pfeiffer, Fox & Fowle, and Friday Architects.

Influences: Robert & Atlee (early 20th-Century San Antonio firm), Robert Venturi, Louis Kahn, James Stirling, Sir Edwin Lutyens.

Comments: When we started our own firm, we had no work and no money. We began by doing work with a developer and working drawings for local firms; anything that we could, we would do. Only now, after three years, are we becoming known through word-of-mouth.

While starting your own firm can be frustrating, it's a whole lot better than working for someone else. It gives you a sense of making things happen and of responsibility since, good or bad, it's yours.

It seems that much of the architecture being done today has gotten away from addressing the many issues required to make a good building. The problem begins in the schools. If, in the 1960s, there was an effort to teach an understanding of issues almost to the neglect of architecture, today, the emphasis seems to be on giving students a facility with particular styles and little understanding of what they mean. Having a facility with a style is a great way to succeed, since it allows you to establish quickly an identity in the marketplace, but it's not how good buildings are made.







Alamo Architects' first major project was the relocation and restoration of the Fairmount Hotel in San Antonio and the design of an addition to it. They were first hired by the local conservation society to document the building in drawings and photographs prior to its demolition. They then worked with a local developer to move and restore the building for use as a luxury hotel. (At the time of its move, the 2200-ton building was, according to the Guinness Book of World Records, the heaviest building ever moved in one piece on pneumatic wheels.)

On its new site, the original building was chemically cleaned and the original porches rebuilt, based upon old photographs. An addition was constructed that repeats the rhythm of small and large bays in the original structure, but differs in its form and detail.

The main floor contains a lobby in the addition and a bar/restaurant in the original building, with a stair in the connection between the two. On the upper floors, the smallness of the original guest rooms and the existence of only four bathrooms required a major rearrangement of spaces. New bathrooms were inserted into the original corridors and the old light well was floored over to become the new corridor. The stepped form of the addition allowed the creation of several private terraces accessible from guest rooms. **Project:** The Fairmount Hotel, San Antonio, Texas.

Architects: Alamo Architects, San Antonio, Texas.

Client: The Fairmount Hotel Company. Consultants: Design Continuum, hotel interiors; Therese Wills Castor, restaurant interior; Feigenspan & Pinnell, structural; William Dorbandt, mechanical; Chroust Lawford, kitchen designer; ADM Associates, purchasing agent; August Architecture and Ann Benson McGlone, restoration; Architectural Lighting Design, restaurant lighting. General contractor: Guido Brothers Construction Company.

Photos: Alamo Architects, Swain Edens.



Andrew Friedman Walter B. Melvin, Architect New York, N.Y.

Age: 27. Education: BArch, Cooper Union, 1981.

Experience: Walter B. Melvin, Architect, 1979–81 part-time; 1982– present, full-time.

Influences: Cooper Union and Walter Melvin.

Comments: To me, the most important issue in architecture is the unity of design and structure. I believe in developing a strong, clear, balanced plan, and allowing the site, materials, and structure to have a good play in the design. All these factors should integrate themselves—not be added—into one thing.

I would suggest that all architecture students work during the summer in construction, to get real on-site experience. While I didn't do that, I was able to balance my designoriented education at Cooper Union with summer jobs with Walter. Coming from a family of builders in Maine, he was able to lead me to appreciate fully the importance of structure and detailing. After graduation, I bought and renovated (first as workman, then as contractor) two 19th-Century rowhouses, in which I learned a vast amount about how a building works.

This brings me to one of my major concerns with the profession today the divorce between design on paper and the real building. I am distressed to see firms pass the working drawing responsibility to other firms. A design should develop even as it is being detailed.







The Beach House, designed by Friedman for a site in Bridgehampton in eastern Long Island, is located on a narrow tract of flood plain bounded on the north by a bay and on the south by an oceanfront road and high dunes. Zoning permitted construction on only a small area of the site.

One of the primary decisions made in the design was to allow the landscape to dominate over the house. This was done by conceiving of the house as a platform raised above the dunes, and by emphasizing the axis providing views to the ocean and the bay.

To free the "platform" from the dunes, the wood friction piling foundations are exposed to reduce the impact on the open landscape. The 2000-square-foot house sits on the platform, enclosed principally by sliding panels to hold out the elements in winter. (There are a further 3000 square feet of decks, including roof terrace.) The house is intersected by the view axis (top right), and on the ground level, the axis is marked by a walkway leading from the house to the bay.

The transition between inside and outside is treated as a sequence of covered, sunscreened, and open spaces. The simple, exposed wood-frame platform construction is contrasted with the more carefully finished wood of the deck railings, sliding panels, and stairs (top left). **Project:** Beach House, Bridgehampton,

Architects: Walter B. Melvin, Architects, New York (Andrew Friedman, project architect).

Client: Mr. & Mrs. Sullivan.

Consultants: Chesterfield & Associates, structural; Creative Landscaping, landscapina.

General contractor: Biltim Contracting. Photos: Kevin C. Rose.



Kem Hinton Tuck Hinton Everton Architects Nashville, Tenn.





Age: 33.

Education: BArch, University of Tennessee, 1977; MArch, University of Pennsylvania, 1981. Experience: Gresham, Smith & Partners, 1977-80, 1981-84; Venturi, Rauch & Scott Brown, 1981; Tuck Hinton Everton (left to right in photo), 1984-present. Influences: Kahn, Venturi, Hollein, Graves; also Stirling and Botta. Comments: We stay away from developing a certain look to our work, but have tried to set up a certain approach. There are three partners in this firm, and our design is not an individual process; our work is a melding of images. Establishment of common goals among our partners has been key in our progress so far. We hope we've set higher standards than many; we've carved a niche, and in a way we're also trying to fill the niche, since we have to convince people we do better work.

It's a great frustration to me that architects have so few commissions that allow them to participate in and investigate technological advances. We should be able to do that. I hope we'll still have time to investigate energy sources; I'm afraid the energy crisis will come back to haunt us.

We have a hobby that happens to be our business. Things like taxes and payroll have a way of separating hobby from business, but for us it's all the same thing. I think that's reflected *in our commitment* to the work. We don't consider any project that comes to us less desirable than any other; some might have more impact on Nashville, but we look at each as a great design opportunity. We've had fun on every project we've done.

Nashville's banks of the Cumberland River have only recently begun to be appreciated for the amenities to be gained there. In the areas both across the river from the business district and northeast along the western banks, most of the land has been used for strictly utilitarian functions or ignored. One site only a few blocks north of the CBD most recently had been the location of a long industrial shed, formerly an ironworks. Tuck Hinton Everton was asked to design Riverfront Apartments, a housing complex on the site, the pioneering venture to capitalize on the river views and begin a renaissance of this forgotten light industrial area. Over the years, the shed had

grown bay by bay, until its length finally reached over 900 feet. The other dominant structure on the site was a 180-foot chimney, a remnant of a former city incinerator abutting the Jefferson Avenue bridge, at the north end of the property. Since the owner wanted to make the most of the river views, the decision to make the complex linear seemed natural; Hinton and his colleagues then proposed that the shed be stripped of its rusting metal siding, cleaned, and retained as covered parking and entry shelter for the units. They also wanted to make a feature of the chimney, a striking reminder of the industrial character from which the area is being reclaimed.

Enough land existed between the shed and the steep river bank to permit most of the 145 units to address the river directly (above); a cluster of courtyard units at the north end of the site focuses on the chimney (right), making a portal. A swimming pool and deck for the complex is located at the edge of the bank off of this courtyard. At the south entry, another block of new units includes the rental office, the security office, and the laundry. In a prime location because of their proximity to downtown, the units are rental apartments, with the capability of conversion to condominiums if the owner elects.













Original ironwork on the existing shed was sandblasted and painted, leaving ventilation fans and sash units in place. Transformers from the site were also refinished, and are stationed like sentinels (above) at the ends of the complex. Textured block screen walls and stairs are offset by metal grillework symbolic of the product made in the shed in the past. Projecting catwalk bridges (left) were salvaged as well, access elements for earlier overhead cranes. Projecting from under the shed, the apartments are clad in vinyl siding, and were built for about \$44 per square foot, based on habitable gross area.

Project: Riverfront Apartments, Nashville, Tenn.

Architects: Tuck Hinton Everton Architects, Nashville, Tenn. (Garry Askew, Kathy Anderson, Virginia Carter Campbell, Gary L. Everton, Bill Heath, Kem Gardner Hinton, Stanley Overton, Chris Remke, Carlton Sperlich, Seab A. Tuck III, project team). Client: Mr. Miles Warfield, Brookside Properties.

Consultants: Stanley D. Lindsey & Associates, structural; Entech Engineering, Inc., mechanical; Gresham Smith & Partners, civil; Hodgson & Douglas, landscape. **General contractor:** Orion Building Corporation.

Photos: Rion Rizzo/CreativeSources.



Marc Angelil Sarah Graham Angelil/Graham, Architecture Boston



Experience: Founded joint practice in 1982. Angelil now teaching at Harvard. Graham has taught at the Boston Architectural Center and Rhode Island School of Design. **Influences:** Admires the work of Louis Kahn, Le Corbusier, Luis Barragán, Palladio.

Comments: We don't place a lot of emphasis in our work on style and image; we're more interested in resolving a problem and exploring its tectonic qualities. The appearance is a result of the process. We also do a lot of competitions as a way of loosening up, or we'll invent a theoretical project and work on it over the summer when things are slow. We'll take a piece of music or a painting, for example, and explore it in architectural terms. So on the one hand we are interested in craftsmanship and precision in the making of things, and on the other we push our exploration of theory.

We are moving to Los Angeles this fall. We've been a little disappointed in Boston. Our colleagues and clients are very conservative. We want to start now on totally new ground.







"It's another world up there," says Marc Angelil of the penthouse offices (top plan and photo) he and partner Sarah Graham designed for the roof of a new four-story office building on the Charles River. The black metal vertical walls and white rectangular roof contrast with the brick office building below, built at the same time to the designs of another architect.

The Lab for Construction Technology at Harvard's GSD is itself an exercise in the selection and manipulation of materials. Vinyl flooring is used for both the floor and desk surfaces, and every third joint of the concrete brick wall is raked to match the module of existing concrete block walls.



Project: Penthouse and interiors, Cambridge, Mass.

Architects: Angelil/Graham Architecture, Boston (Marc Angelil, Sarah Graham, Frano Violich, Barry Price). Client: Altid Enterprises.

Consultants: Patti Associates, structural;

Kenrick & Hall, mechanical; Verne G. Norman, electrical.

General contractor: P.J. Stella Construction.

Photos: Eduard Hueber.

Project: Laboratory for Construction Technology, Harvard University Graduate School of Design, Cambridge, Mass. **Architects:** Angelil/Graham, Boston (Marc Angelil, partner in charge; Bruce Fullerton, Sarah Graham).

Client: Harvard University GSD (Dan Schodek, Professor of Architectural Technology).

Consultants: Verne G. Norman, electrical.

General contractor: ISI. Photos: Eduard Hueber.



Matthew Bialecki Office of Rural Architecture New Paltz, N.Y.

Age: 28

Education: BArch, California Polytechnic State University, 1981. Experience: Worked with various New York City firms: Marvin Meltzer; Sidney Philip Gilbert & Associates; Naomi Leff & Associates, 1982–85. Principal, Office of Rural Architecture, 1985–present.

Influences: Environmental artists such as Robert Smithson; Frederick Law Olmsted; Louis Kahn; Shaker architecture.

Comments: The hamlets in Upstate New York are farming communities set in open fields with clearly defined edges. But that clarity has been eroded in some areas as development has occurred. There is a need for archetypes of rural land planning that would reinforce the sense of these towns. The very concept of "rural" is difficult. Neither urban nor wilderness, a rural landscape necessitates a balance of man and nature whose implementation is the ultimate challenge of sound planning.

I've been interested in the ongoing debate about regionalism and its link with rural settlements. I've also been studying the links between pared-down vernacular architecture and Modernism. That has led to an obsession with geometry. The houses at Outlook Farm reflect that: The Cross house plays upon the spatial implications of a cross shape.

It's important for an architect to understand the community—its history and memories.







Matthew Bialecki is a general partner in the team developing **Outlook Farm near New Paltz,** New York. The idea of the project was to show how rural development could take place without destroying the landscape or encouraging suburban sprawl. The land plan for Outlook Farm is considerably less dense than what the local zoning code allows. Houses are mainly located in wooded areas or at the edges of open areas. Easements insure that the open spaces will be preserved. The Cross house (top) is one of the first to be built there. Located at the edge of one of the open spaces, it reflects the form of the local vernacular although it is much more controlled, with a

square proportional system governing the placement of walls and openings. Other houses planned or under construction at Outlook Farm include the Shaker House (middle), which strikes a balance between vernacular and modern forms, and the Bennett House (bottom) that combines barn imagery such as the silolike form with abstract geometry: in this case, a segment of a dodecagon.









Project: Cross House, Outlook Farm, New Paltz, N.Y.

Architects: Office of Rural Architecture, New Paltz, N.Y. (Matthew Bialecki, architect; David Murray, job captain).

Client: Outlook Farm Associates (Stuart Phillips & Matthew Bialecki, general partners).

Consultants: Wanda Nicholson, specialty painting; Gene Mitchell, Mitchell Electric, lighting; Maria Urquidi, project coordination.

General contractor: Phillips-Nolan Construction (Stuart Phillips, Lyle Nolan, builders).

Photos: Mark Darley.



Neal I. Payton Neal I. Payton, Architect Washington, D.C.

Age: 30.

Education: BArch, Carnegie-Mellon, 1978; MArch, Syracuse, 1981. Experience: Academic: Assistant professor, University of Virginia, 1980–85. Visiting associate professor, Rice University, 1985–86. Academic Director, Summer Program in Architecture, Catholic University, 1987. Practice: SOM New York, 1980. CHK Architects, Arlington, Va., 1986. Has also run own practice since 1978.

Influences: Most significantly, Werner Seligman.

Comments: Teaching is the most important thing I've done in my life. I find academia and the professional world an excellent balance: Practice allows me to test studio ideas and recharge my teaching; teaching keeps me idealistic, keeps me from forgetting my values. Teaching does keep me from expanding my practice, however. Mainly I've entered competitions (and been premiated in several, including a second prize, with W. Byrd, S. Nelson, and B. Christenson, for the Coldspring Masterplan).

How has student work changed in the last years? It has improved enormously. Since history has been integrated into the design curriculum, there has been an optimism that you can teach architecture—there are rules and transmittable ideas. There is also great confidence that one can learn from the American city.









The Shap Residence in Glenwood, Md., sits at the top of a steeply pitched knoll on a 2.4-acre heavily wooded site. The house maximizes views to a stream on the south and a valley on the southwest, while minimizing north views.

The 2000-square-foot house is carefully planned in front-to-back zones that are rhythmically organized. There is, first, a service zone, then a narrow circulation zone (top right), a wide living zone, a narrow brise-soleil zone, and balancing the service zone on the first floor, a wooden terrace zone. The flat roof of the service zone contrasts with the sloped roof of the living zone, making the layering especially visible (northwest side view, middle right). The service zone is bounded on the west by a glass block wall, and the living area is clad in plywood, but the latter, "not content to sit within the layers previously articulated," explains Payton, "emerges from the shell clad in a board and batten grid and erodes into a glazed wall (left in photo above)." The wooden frame at the rear (above) contrasts with the almost solid front. Project: Shap Residence, Glenwood, Md. Architect: Neal I. Payton, Architect, Washington, D.C. Client: Steve and Joanne Shap. General contractor: John Bowers, Columbia, Md. Photos: ®Prakash Patel, 1987.



Carlos Jimenez Carlos Jimenez Architectural Design Studio Houston

Age: 28.

Education: U. of Tennessee, 1976– 77; BArch, Univ. of Houston, 1981. Experience: Bowley/Jimenez, Architecture, 1982; own studio, 1983–present.

Influences: Admires Kahn, Barragán, Asplund, some works by Rossi, and "we all have a debt to Le Corbusier"; Latin American churches and ruins; vernacular buildings of rural Tennessee.

Comments: I am enjoying the lifelong process of becoming an architect—the opportunity to create space and move people. It is a privilege to pursue this path, and I do it—to use Rimbaud's phrase—with a "burning patience."

I get more inspiration from films and poetry than from recent architecture. Post-Modernism is an instant replay of everything we know about architecture. I believe buildings should be utterly simple, with complexities woven in. I get distressed by the gymnastics some architects go through for originality.

Up to now, my studio has consisted only of me; I hope to hire someone in the near future. Now, I have to be part-time accountant, part-time modelmaker, and so on, but there are satisfactions in knowing every part of the process, seeing the dayby-day making of architecture.

I was a visiting critic at Rice this year, with fifth-year students. It was fruitful, and I hope to do it again. I am now doing a house for the owner of the press (facing page), along with other houses and small-scaled projects. I am doing what I have chosen to do, at some personal sacrifice, but I am never sorry to have made this choice.



FLOOR PLAN

NA

10/3m









Jimenez's own studio, on the lot next to his house, looks very simple, but illustrates his convictions. He uses color to identify and "delineate" buildings in their surroundings—also to respond to the intense colors of Houston's sky and greenery. The studio is the color of Texas bluebonnets, but varies with the light, looking, for instance, more purplish in winter. Jimenez finds the scale, texture, and thermal qualities of concrete block ideal for Houston. He also finds the way glass block responds to light and resists temperature changes appropriate. Simple as the studio is, it has windows of special dimension and other custom elements.

Project: Jimenez Studio, Houston. Designer: Carlos Jimenez/Architectural Design Studio, Houston. Consultants: none. General contractor: Designer. Photos: Paul Hester.











The Houston Fine Art Press, which produces art books and lithographs, is located in a semi-industrial neighborhood. Here again, Jimenez has built of concrete block, with sloping roofs (here clad in corrugated metal). The appearance of simplicity relies on some custom elements such as hand-applied stucco, special steel trusses for the bowed roof, and architect-designed lighting. Here, too, a bold color—magenta—gives exterior identity. Stucco, says Jimenez, is a material he respects, and coloring it discourages unsightly staining. The building and the parking court, on this narrow walled site, have an almost equal positive-negative relationship. The windows were placed to frame

specific views from the interior. As in the studio, interior walls and ceilings are white, allowing the carefully admitted daylight to bounce around for maximum effectiveness; floors, woodwork, and occupants provide the interior color. Jimenez says the owner deserves much credit for giving such a young designer this commission and supporting his design decisions; one of his current commissions is a house for the same client. Project: Houston Fine Art Press. Designer: Carlos Jimenez/Architectural Design Studio, Houston. Client: Richard Newlin, press owner. Consultants: K.C. Shah Associates, structural. Photos: Paul Hester.



Jesse Reiser Reiser/Umemoto Studio Brooklyn, N.Y.

Age: 29.

Education: BArch, Cooper Union, 1981; MArch, Cranbrook Academy of Art, 1984.

Experience: Prix de Rome in Architecture, 1984; Fellow in Architecture at the American Academy in Rome, 1984–1985. Worked for John Hejduk and Aldo Rossi. Established own studio with Nanako Umemoto in 1986.

Occupation: Architect, sculptor. Comments: I'm trying to recapture what's been lost in architecture, what it was before it became a service profession. I think there are great possibilities now—certain people are moving towards a more expanded notion of architecture as a means of interpreting the world, as it did up to the end of the 18th Century. On the other hand, there are people trying to make it a more efficient, technical exercise. I consider architecture the mother of all the arts.







Two memory theaters: Mnemonic Architecture for a Village on the Hudson River (left, top and bottom) and Theater for the Occupations of Saturn (above). Elements of the latter sculpture have been enlarged and reworked for a landscape design in Sands Point, N.Y.



Paul Florian William Worn Stephen Wierzbowski Florian-Wierzbowski Chicago

Ages: 37 (Florian, Worn), 34 (Wierzbowski).

Education: BA, Washington University, 1973; MArch, University of Illinois, Chicago, 1983 (Florian). BArch, Carnegie Mellon, 1975; MArch, University of Illinois, Chicago, 1982 (Wierzbowski). BS in Psychology, University of Illinois, 1972; MArch and MA in Psychology, University of Illinois, 1979 (Worn). Experience: Have worked for Sir Robert Matthew, Johnson-Marshall & Partners; Holabird & Root; Skidmore, Owings & Merrill; Machado/ Silvetti.

Occupation: Collaboration of architects and artists involved in residential, exhibition, and furniture designs.

Comments: We've modeled our office after that of Charles Eames, where work is structured as a collaborative effort among architects, artists, and graphic designers, and where no stone is left unturned in solving a problem. In Bauhaus fashion, we also believe you can design anything once the problem is properly set up. That has allowed us to work at several scales, from the design of furniture and exhibits to houses and shops. We consider all of it to be architecture.

Exhibition design is an excellent way of testing ideas since museums don't have as many preconceptions as homeowners about their public image. We treat the museum as a civic place so that the inside of the gallery takes on the character of an exterior public space. Such scale shifts, and ambiguous formmaking in general, is very much a part of all our work. It allows the familiar to appear new and the new, familiar.



A stand containing an interactive computer terminal that Florian-Wierzbowski designed as part of the exhibit "Architecture & The City," the Museum of Science and Industry in Chicago.



Kyong Park STOREFRONT for Art and Architecture New York

Age: 32.

Education: BS in Architecture, University of Michigan, 1978. **Experience:** Architectural work in offices in Detroit and New York; art works exhibited in galleries in New York, Michigan, and Illinois.

Occupation: Founder and director of STOREFRONT for Art and Architecture, a not-for-profit organization that provides space for the exhibition and discussion of critical issues in the arts and society.

Comments: We support art and architecture that engages public issues, whether they're social issues such as homelessness or aesthetic issues such as that posed by the Whitney Museum addition. We try to break artists and architects out of the isolation that comes with commercial pressures by providing a forum where alternative works can be exhibited and new ideas discussed.

We want to show, particularly to young architects, the alternatives. We're often misunderstood as being unfocused, when what we're trying to be is evolutionary.

We also try to promote collaborations both internally among the people of STOREFRONT and externally with community groups and public agencies. That collaboration is important because problems such as homelessness can't be solved by any one profession or group.

I feel that there's a growing interest among artists and architects in aesthetic freedom and moral responsibility, but there are not enough places where they can come together to discuss openly their work and its relation to public issues. I'd like to see many more active organizations like STOREFRONT, although it isn't easy. What really keeps the place going are the people who give it their time and support.



Oasis Studio

Boston

Portrait: Three of five members of Oasis Board of Directors—Tom Barry, Mark Nielsen, Mark Connor—foreground, with other Oasis members.

Age: 25-35.

Education: Varied professional degrees.

Experience: Founded Oasis in 1982 as a nonprofit, after-hours studio where architects and artists could work on individual projects in a critical environment.

Occupations: Practicing architects, artists, composer.

Comments: Oasis is at any given time defined by its members. It's a fluid situation. We now have 16 full members who pay for studio space and 75 affiliate members. We've got three group projects going: *Touchstone* magazine (underwritten by Charette Corporation and Payette Associates); an installation for City Hall Plaza as part of First Night 1987 (see caption); and the Boston Projects, which are intended to identify leftover spaces in Boston and propose new uses. We also sponsor member shows and lectures.





Chris Downey

The Gateway to the Future (above, left and right), a collaborative design by Oasis for New Year's Eve (First Night), 1986.



Kevin J. Flynn Michael Fox Incorporated St. Louis

Age: 31.

Education: BA in Environmental Design, University of Kansas, 1977; MArch, Washington University, 1979. Experience: Assistant Technical Director and Technical Director, Edison Theater, Washington University, 1980–85; Production Consultant, Edison Theater, 1986–present; Architect, Michael Fox Inc., St. Louis, 1985–present.

Occupation: Architect; theatrical lighting and production consultant. Comments: Theatrical lighting gives you the opportunity to use light in creating illusions. Often architects take lighting for granted and do not realize its potential, for example, in making small spaces appear larger.

The advantage of being involved in theater as an architect is the gratification of seeing your ideas quickly built. The two fields complement each other, and in fact, there are a number of architects who have studied and worked in both.



Working simultaneously in two fields also keeps you fresh; when you tire of one there is always the other. It also gives you a useful specialty. In the architectural office where I now work, I serve as a lighting resource person for the whole firm. Set for Moon on a Rainbow Shawl, Edison Theater, Washington University.



P. Greg Raymond Kirk T. Haley ArchiTemps Personnel Services Oakland, Calif.

Ages: 29.

Education: AB Architecture, 1980; MArch, 1983, U.C. Berkeley (Raymond); AB Architecture, U.C. Berkeley, 1980 (Haley). Experience: Both were project

designers for the Residential Design Group and architects for Lawrence Berkeley Laboratory.

Occupation: Own and operate a personnel service for architectural temps.

Comments: We saw a need in the profession for an architectural temp service that would relieve firms of having to hire and fire and that would give employees job security. Encouraged by the results of market research, we began ArchiTemps in 1985.

There are five categories of people

who come to us. There are those who see temporary work with a variety of firms as a way of finding the ideal permanent job. There are those, mostly just out of school, who see it as a way of getting a variety of experiences. There are independent architects who seek temporary work during lulls in their own practices; many of these employees also are our clients when they have a lot of work and need staff. There are some people who just don't want permanent work-who want a periodic change of environment. Finally, there are retired people who want to continue working yet don't want a fulltime job.

We see the company expanding in three areas: expanding the number of services to include such things as screening prospective employees or helping with staff planning; expanding our geographical coverage; and expanding the disciplines we offer to include such fields as engineering. We've been encouraged by the response of architects to our service; many have wondered why something like this hadn't been done before.



Wesley R. Janz Janz/Abrahamson Minneapolis, Minn.

Steven A. Lombardi

San Diego, Calif.

Age: 33.

Education: BS in Architectural Studies, 1976; MArch, University of Wisconsin-Milwaukee, 1978.

Experience: Architect with Inter-Design, Hammel Green & Abrahamson, and Seitz Yamamoto Moss, 1979–83; taught design theory and methods at the Minneapolis College of Art and Design.

Occupation: Principal in a firm that uses the design process to develop, position, and name new products and companies.

Comments: Our design process for new products is based upon an architectural model. We program information, generate schematic ideas using outside consultants, develop the most fertile ideas, and specify a fully developed brand personality.

The more time architects spend thinking beyond the making of buildings, the better off the profession and society will be. What architects have to offer clients is a process, which does not have to lead to a building. Corporate America has begun to recognize the value of the design process in developing products, but few architects see what they do as having any connection to that.

What we have tried to do is to take the design process and apply it as broadly as possible. Our project mix is varied, bordering on insane. A recent week found us delving into carbon zinc and alkaline battery differences, exploring Pee Wee Herman's promotional possibilities for child/adult markets, comparing acne problems of teenagers yesterday and today, and analyzing "premium" products.



Samples of products that Janz/ Abrahamson helped define or name.



Education: New York Institute of Technology, 1974; BArch, Southern California Institute of Architecture, 1979.

Experience: Has worked for architects William Pereira, Johannes Van Tilburg, Tom Grondona, P.A.P.A., and Charles Slert. Founded own design studio, 1979.

Occupation: Architect, BSH, San Diego. Furniture, lighting designer. Comments: I get very bored doing just one thing. I try to get involved in all aspects of design—color, lighting, furniture, even clothes. I don't buy art by other people—I do it myself and change it from month to month.

It's very flattering to be one of maybe two American designers who have signed with Artemide. (Lombardi's candle sconce, called Lantern, will be introduced by Artemide this fall.) But I won't spend the rest of my life doing lighting. I'm wide open.



Lantern (above left) will be introduced by Artemide at the Milan Furniture Fair this fall. Lightscape (right) was designed with land-



scape architects Land Studio of San Diego as part of a grant proposal for public art.



Jacquelin S. McBride Public Facilities Department Boston

Age: 38.

Education: BArch, Virginia Polytechnic Institute, 1970; Master of Science in Architecture Studies, MIT, 1984.

Experience: Worked for architectural firms in Connecticut and Massachusetts, 1970–1982. Assistant professor of architecture, University of Houston, 1984–1986; Adjunct professor, Roger Williams College, 1986. **Occupation:** Senior architect, Public Facilities Department, City of Boston.

Comments: Working in the public sector is not an alternative to architecture per se, but an alternative to being in a conventional office. We are the voice of the client—the City of Boston. Some 450 buildings are currently owned by the city, and

many will be improved or altered as part of Boston's new five-year plan. My job is to make sure that the architects on those projects get the information they really need, when they need it. My team also ensures that the clients' needs are accurately reflected, and that bidding and construction run smoothly.

It is essential that the architect be the designer. I can influence aesthetic questions, but I don't want to control them. Our goal is to choose good, strong architects appropriate to the task and then let them do their work.

I'm working in a city that I care about. This particular program was attractive to me because it's new—it started only last August. I was worried that this was a departure from the normal career path of an architect, but now I feel that I'm actually stronger. An architect learns through case studies. I'm doing three police stations now, for example, and it's interesting to watch the similarities and differences. We have an impact on the environment at large scale.

I don't, however, intend to do this forever, in the standard bureaucratic sense of working until pensioned. I'll do this until I'm not learning anymore, or until I feel I'm no longer contributing.



Duo Dickinson Mackall & Dickinson, Architects Branford, Conn.

Age: 31.

Education: BArch, Cornell University, 1978.

Experience: Vincent Trocchia, Architect, New York, 1978–79; with Louis Mackall since 1979.

Occupation: Architect, author of mass market books on architecture: Adding On, The Small House, and (to be published next year) The New American Home; Adjunct Professor of Architecture at Roger Williams College.

Comments: I started to write because I wanted to demystify architecture for the public, to show that architecture isn't exclusive or only for the rich. Like psychotherapy, architecture, which once seemed esoteric to people, is now more widely understood and depended upon.

Young architects with low budget projects have to be creative in ways large firms do not. And we have to listen more to clients. You quickly



learn that providing a service and making a product are not mutually exclusive.

The advantage of pursuing more than one career is that there are always options when times get tough. With the various things that I do, I sometimes find myself in the position of being an arsonist and fireman at the same time.



Duo Dickinson's own house (above left) and the cover of his book Adding On published by McGraw-Hill.



Stephen Skinner Omnibus Simulation Los Angeles, Calif.

Age: 28

Education: BA in Architecture, University of California, Berkeley, 1981

Experience: Sandy & Babcock, 1981-82; Ellen Christophe, 1982-83; Omnibus simulation, 1983–present. Occupation: Manager of computer modeling for a company that provides computer graphics and animation services for the motion picture and television industry. Comments: I use my architectural training in my present job. Because of the three-dimensional nature of our work, many of the same visual and spatial skills come into play. We work extensively, for example, with orthographic drawings and models in order to design and digitize our computer models. But some aspects of my architectural experience, such as the organization of projects, I have had to unlearn: In the film business, things can change up to the last minute.



This is an alternative career that other architects should consider. Many of the people in my department have had design backgrounds. There also is a lot of on-the-job training, even for people who studied computers in college, which I didn't. Another benefit is the salary, which is higher than what I could expect in a design firm. The music video for Mick Jagger's "Hard Woman" involved a composite technique in which a film of Jagger going through his motions on a stage against a neutral background is overlaid with a film of computer-generated characters animated to fit Jagger's movements.



Kenneth Sanders Architectural Systems Research Santa Ana, Calif.

Age: 28.

Education: BArch, University of California, Berkeley, 1980. Experience: Esherick, Homsey, Dodge & Davis, 1980–82; Skidmore, Owings & Merrill, 1982–85; Cal-Comp, 1985–87; ARS, 1987. Occupation: CAD consultant to architects, providing system selection and implementation as well as software development.

Comments: Most CAD systems are general purpose drawing systems that are forced to fit architects' requirements. Also, most are too hard for the average architect to use; the people driving the development of software are often not that concerned with its accessibility. Companies focus on adding features to their systems without addressing basic architectural issues, such as how a set of drawings might be organized or modified.

The fault lies as much with the architectural profession as it does with computer vendors. The profession has never defined what an architectural CAD system should be; the AIA, which should help with that definition, has instead acted as a dealer. At the same time, many CAD vendors have not described what their systems can do in terms that architects can understand. As a result, architects' expectations are usually either too high or too low. They are either disappointed when a system doesn't do all that they hoped or unaware that a system can do more than they think possible.

I think all architecture students

should acquire some computer skills, not because it will make them more money, but because those skills will be needed by everyone in the future.

I still think of myself as an architect and see myself returning to a firm. My role now is primarily one of education—helping people's expectations fit the reality and creating a greater independence in the use of computers on the part of architects. In one sense, my job is to make my job obsolete.

Alternative Careers



Kathleen A. Dorgan Capitol Hill Improvement Corporation Albany, N.Y.

Age: 30.

Education: BArch, Rensselaer Polytechnic Institute, 1981. Experience: Architectural designer, Troy Architectural Program, a nonprofit community design center, 1977–1980.

Occupation: Executive director, Capitol Hill Improvement Corporation.

Comments: Community design centers are to the practice of architecture what legal aid societies are to law. People make a conscious decision to work in community design when they could make more money elsewhere. At the same time, I can look back on almost any day's work and see something worthwhile. A lot of the work we do is not architecture but loan packaging or homeownership seminars. At present, however, we're doing a lot of design work. Most of it is rehabilitation, but we're now building five new facilities to



house the homeless.

There's a tremendous need for architects in this field. Right now there is not much information in most of the schools about community design centers, and that's a problem. It's an opportunity to get into parts of the design process a young architect might not get into for years in conventional practice. Design for infill housing for Philip Street in Albany by Kathleen Dorgan—one of four hypothetical designs in an educational project intended to generate public discussion of infill architecture and explore a variety of aesthetic alternatives.



Lucilo A. Peña Trammell Crow Design and Construction Dallas

Age: 30.

Education: B Design, University of Florida, 1978; MArch, Cornell University, 1982.

Experience: Project designer, WZMH Group, Dallas, 1982–1984. **Occupation:** Director of Design, Trammell Crow Design and Construction/Dallas Market Center Company, Dallas.

Comments: When I was with WZMH, all I did was schematic design. I enjoyed that very much but felt I needed to learn more about the whole process. There are a lot of factors other than design that influence whether or not a project goes ahead. Eighty percent of the projects I'm working on now get built, so I've gotten a lot of experience very fast. We develop the program for a project, select the architects, and work with them on the design. I'm earning more as a developer than as an architect, but you have to enjoy what you're doing, or it isn't worth it.



1400 Turtle Creek, a Trammell-Crow project in the Design District of Dallas (WZMH Group, architects).



Mark T. Reeves Sparber, Shevin, Shapo & Heilbronner Miami, Fla.

Age: 32.

Education: BArch, 1978; MArch, 1980; Juris Doctor, University of Miami, 1984.

Experience: Lecturer in Architecture, University of Miami, 1980–81; Architect, Connell Associates, 1980– 84; Attorney, Sparber, Shevin, Shapo & Heilbronner, 1984–present.

Occupation: Attorney, with specialty in construction, zoning, and land-use law.

Comments: I became interested in law dealing with public contracts as an architect. I also saw a need since our part of Florida has a vast regulatory framework dealing with zoning and land-use matters.

Backgrounds in architecture and law are totally complementary. For anyone involved in business, a basic legal education is becoming essential. Also, the trend among law firms is to specialize, so that attorneys with previous professional experience are in high demand. I'd recommend it for other architects. I continued to work as an architect while going to law school at night. While I was numb with work, I still think that that is the way to do it. I can't see stopping one career to learn about another. I never went through a trauma of switching careers because I never had the time. I left the architectural firm on a Friday and began at the law firm on the following Monday.

I've stayed active in architectural organizations and have written a legal column for the local AIA publication. I've personally gotten a lot out of it. If I ever went back to architecture, it would be to try my hand, on the side, as a developer. The architectural background lets you see how buildings go together; and the legal background, how building deals are made.

P/A Technics Skin Deep

Plastic laminates are more varied and colorful than in the past, but they still demand that attention be paid to their substrate, adhesion, and fabrication.



LAMINATION—the fabrication of composite building materials and elements by the superpositioning and bonding of successive layers of different materials—has long been used in construction. Egyptian builders who glued and laminated wood for structural applications in 1500 B.C. probably did so for the same reasons we use lamination today:

• The method combines the properties of its constituent components to obtain composite properties that are new, unique, or otherwise impossible to achieve; and

• Lamination makes it easier or less expensive to obtain properties and performance attributes that would be too difficult or costly using solid facing materials.

Lamination now encompasses so wide a variety of functional and decorative applications that it can't really be called a single, easily defined technical field. High strength laminates are used for automotive, aerospace, and industrial applications, as well as for situations as ordinary as surrounding a utility sink.

The most dramatic breakthroughs, however, are visual; never has there been such a proliferation of colorful designs using plastic laminates in architecture. While it's not quite fair to say that the impacts and the motives are entirely decorative because plastic laminates do offer many superior functional qualities—there's no denying that architects are drawn to the materials primarily because of what they can be made to look like.

Still, the term "laminate" has lingering negative connotations. For years the industry produced materials and objects intended to look as if they *weren't* made from plastics or from laminates; the idea was to conceal the "true" materials and methods of manufacture by disguising the thin veneer. The objective was something looking like "real wood," without the costs and maintenance troubles that might actually entail. Who, after all, doesn't own a "genuine wood-grained" something (away from which the "wood" is now peeling)?

Today, for many reasons, plastic-based laminates are coming into their own; they are being taken seriously by designers and end-users. In addition to an improved family of wood-grained laminates, there are now highly resistant plastics available in many colors and surface treatments.

So it's all right—and even better than all right for interiors, furnishings, and finishes to look as if they are made out of plastic. There is, however, more than just a residue of the desire to overcome, or at least to conceal, the "thinness" and superficiality of laminates.

Beating the Brown Line

The use of high-pressure decorative plastic laminates in buildings dates to the late 1920s. Electrical equipment manufacturers, working with new materials for insulating applications, recognized the potential of laminates for interior architectural use; one industry veteran suggests that these design possibilities became apparent mainly through the use of laminates for decorative cases on early tube-type radios. This is one reason why, still today, the major standards governing the use of decorative laminates emanate from committees of the Na**Examples from the enormous and** still expanding range of patterns, sheens, textures and colors available in decorative laminates: from the Formica Corporation, Portuguese Lioz Marble (1), Thistle Optix (2), and Gourmet Oak (3); from Wilsonart, Brown Leather (4), Granite (in Chemsurf®, a chemical resistant surface) (5), and Ivory Cream (6); from Nevamar, Grey Kaleidoscope (in their scuff-resistant ARP Surface®) (7), Mauve Glyphx I (8), and Green Birds Eye (9). From the Italian firm Abet Laminati, distributed in the U.S., comes a variety of unique patterns (10, 11, and 12) from their Decori Serigrafia series (Abet pattern numbers 519, 581 and 212). **Background pattern is Beige Clear Sand by Formica.**



Heraldic shield and pennants above the entrance to WestWeek 1987 at the Pacific Design Center (13) were produced by Los Angeles designers A2Z from recently released Formica patterns. The design employs rigid laminates to imply soft materials.

Classical Cabinet (14), designed by Paul Chiasson and crafted by John Engel, uses Formica COLOR-CORE[®] throughout. Materials were routed and layered to achieve effects of depth and texture.

Peter Shire's Mohave Table (15) also uses COLORCORE[®], but in a manner that reinforces the monolithic quality of the laminate. Each layer of kraft paper that is used to create solid-color laminates carries color.

Interior systems for the South Shore Gastroenterology Clinic on Long Island (16), by Mojo-Stumer Architects, are executed in Nevamar's scuff-resistant ARP Surface[®] materials. A bullnose crown molding, also in laminate, outlines the reception desk.

Background pattern is Haze Papercraft by Formica. tional Electrical Manufacturers Association.

The laminates seen most often on "standard" countertops and casework are made from successive layers of kraft paper, impregnated with melamine or phenolic plastics, or sometimes a combination of the two. Laminates intended for horizontal application are generally .050 inch thick (*sans* core or substrate). For vertical applications, where impact resistance may be of less concern, the laminate can be thinner. The industry's principal standard identifies seven generic types of high-pressure decorative laminate:

General purpose, suitable for most applications and temperature resistant up to 275 F.

Postforming, suitable for thermoforming under carefully controlled fabricating conditions.

Cabinet liner, intended for use only in cabinet interiors.

Backer, usually produced without a decorative face and used only to balance the construction of a panel.

Specific purpose, which is similar to, but thicker than, general purpose laminate.

High wear, which is specially treated for resistance to surface abrasions.

Fire-rated, to be used where fire codes call for the use of rated materials.

Also, several manufacturers offer static-resistant laminates, designed for use in computer environments, or in other situations where static electric buildup must be minimized.

In the standard general purpose product, only the top layer, about 6 mils thick, has color; thus the laminate section shows a characteristic brown line imparted by the phenolic-soaked layers of paper beneath the top surface. Unless hidden by careful detailing, this brown line is seen on edges exposed at corners and joints. This can give laminated furnishings or surfaces an appearance that some people characterize as "cheap." There are many ways around this problem, but the curved edge leads the way.

One laminate manufacturer calls this the age of the curve in interior design and furnishings. This may be largely a matter of tastes and preferences, of looks and of style; but it's also a direct response to the perceived limitations of the standard laminate material.

Curved edges for such materials hide visual exposure of the brown line; they are also less subject to marring from accidental impact and less hazardous than sharp edges to passers-by. Thus, post-forming of sheet materials to achieve curves and radii is increasingly common.

For postformed applications, where the material is fitted to curves or radii in the field by fabricators, thinner laminate sections can be used. Here, however, the width of the laminate sheets may have to be kept within limits (one manufacturer says not wider than 24 inches) in order to avoid stress cracking that can develop more easily in ultra-thin materials. Radii of ½ inch outside dimension and ¾ inch inside dimension are possible with standard laminates; tighter radii can be formed using thinner material.

Manufacturers also offer edge stocks with a solid (instead of laminated) appearance, to be used in combination with the laminate sheet stock. These



are available with special stripe and accent treatments, color coordinated to match or to complement the colors of the laminates.

Those New Solids

A relatively new line of product offerings, which boast of "solid" colors throughout the material, present another way to beat the brown line. While they may not appear to be laminates at all, they're also composed of paper layers. The difference is that each layer of paper throughout the laminate has color, and is impregnated with a clear melamine. In addition to giving the appearance of a monolithic or solid material, these products can be tooled in ways that standard laminates cannot.

When edge-routed or shaped, they don't show the striation common in ordinary decorative laminates (unless layers of different colored materials have been combined purposely to achieve special effects, such as pinstripe accents). Solids can be face routed up to depths of .035 inch; they can be sandblasted; and they can even be sanded with fine papers and then polished.

The solids have properties ordinarily associated with woods, such as a monolithic appearance and a uniform response of the material to toolings. The actual thicknesses of the "solid" laminates, however, are not much changed from their brown-line counterparts.

Cores and Substrates

All decorative laminates must be applied over some base material in order to give a component ultimate rigidity and strength. Laminates have a directional grain and they respond to moisture, humidity, and temperature by expanding and contracting in a manner similar to wood. The dimensional change in the width of laminate sheets exceeds that in the length by a ratio of 2 to 1. Generally it's advisable to use core materials with characteristics similar to those of the laminate, and to assure that the adhesives transfer any stresses acting on the laminate directly to the substrate.

Laminate fabricators and manufacturers express surprise and dismay at what they believe is the archaic knowledge of architects when it comes to substrates: "Many still believe that plywood is the best core material," says one laminate manufacturer's technical representative, "when in fact it can be one of the worst!" He identifies mediumdensity flakeboard, or particle board, as the superior core material, for two reasons: its coefficient of expansion is similar to that of most decorative laminates; and it achieves a generally superior bond with the laminate adhesives. Birchfaced plywood is also routinely used and preferred by some. Medium density fiberboard is also suitable, but rougher cores, including large-chip particle board and solid lumber, are discouraged.

Fabricators report wide regional variations in the silica sand content of particle board, which can have an effect on the life of tools (sand content is one reason that sparks may fly, literally, when particle board is cut or routed). And, as with many other wood-based building materials, there are concerns over outgassing from adhesives and bonding agents, as well as over chemical toxicity in fires. While these are areas in which the industry

Edge details are of primary importance. Aside from functional considerations (such as avoiding joints in places where water might infiltrate, or using curved edges to reduce the potential for hooking clothing on passers-by) there are many visual possibilities. Typical details include butt edges, using solid-color laminates (17); postformed rounded edges, in which the laminate is wrapped over a rounded substrate (18); pinstriped edges, produced by layers of solid-color laminates that are edge-routed (19); wood chamfer edges, using a layer of hardwood within the laminates (20), or routed to form an ogee profile (21); post-formed double radius edges (22); rounded edges using post-formable laminate wrapped over a bullnose substrate (23); post-formed waterfall edges, where the laminate is terminated after the drop of the radius (24); and post-formed no-drip doubleradius edges, used to help retain spilled liquids on horizontal surfaces (25). Details 17–21 courtesy of Formica Corporation. Details 21–25 courtesy of Wilsonart. **Background pattern is Beige** Dorian Marble by Formica.

Technics-Related Products

'Print' high-pressure laminates, manufactured in Italy by Abet Laminati, consist of solids, geometrics, and abstract designs. Straticolor is a composition that, when cut away, reveals colored layers. There is also an exterior grade available primarily in solid colors. ATC Distributing Corp. *Circle 106 on reader service card*

Mettle[®] laminates have etched brass and copper finishes. Available in 48" x 120" and 24" x 120" sheets, they can be machined like plastic laminates and are easily applied with contact cements. The October Co. *Circle 107 on reader service card*



The Vogue Collection of laminates is expanded to 25 with the addition of six new colors. The new colors are Parisienne Peach, Impressionist Blue, Rubellite Red, Bluewing Teal, Asteroid Gray, and Blossom White. They are available in glossy and textured finishes. Nevamar Corp. *Circle 108 on reader service card*

Pionite laminate line has more than 168 choices, including 86 solid colors and marbles, slates, patterns, textures, and woodgrains. The selections are available in suede, gloss, and embossed finishes. There is also a fire-resistant grade. Sterling Engineered Products. *Circle 109 on reader service card*

Four laminates offering a variety of textures and designs are: Mirroflex[®], mirrored plastic in faceted patterns; Nu Metal[®] metallic and plastic with polished and brushed finishes; Nu Wood[®] real wood veneers; and DUROpal[®] with unique surface textures. Advanced Technology. *Circle 110 on reader service card*



Laminates in unique patterns and woodgrains in multiple colorways and finishes coordinate with Formica's Color Grid® and Color Trends[®]. The new designs are American Granite (shown), Clear Sand, Dust, and Papercraft patterns; Contract and Graceful Oak woodgrains. American Granite has a glossy finish; Clear Sand has a matte finish; Dust and Papercraft are available in both. Formica Corporation.

Circle 111 on reader service card



Wilsonart Decorative Tambours can be used as wallcovering, wainscoting, backsplash in kitchen or bath, on cabinet faces, and on roll-top storage units. A 12-page brochure illustrates colors and finishes available. It includes a chart that summarizes materials, patterns, sheet size, and profiles offered. The tambours are made from wood as well as plastic laminates. Ralph Wilson Plastics Company. *Circle 200 on reader service card* (See P/A Technics, page 99)

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Books

Sustainable Communities: A Design Synthesis for Cities, Suburbs, and Towns by Sim Van der Ryn and Peter Calthorpe. Sierra Club Books, San Francisco, 1986, 238 pp., \$25.00.



Technologies and Lifestyles

"Sustainability implies permanence" say the authors of this valuable collection of insights into planning for the 21st Century. Permanence is a commodity in short supply at present, the double tragedy of a society that couples planned obsolescence of its produce with a linear processing of its resource base. A permanent sustainable existence can be envisaged either as fortuitous encampment between an inexhaustable store of wealth and a bottomless pit, or as the recognition of the recurrent energy and resource flows of our natural environment and the organization of our lives within these limits. This book defines sustainability in terms of the latter.

To date, sustainability has been discussed either at the national and global level in terms of resource policy, or at the homestead, "eco-house" scale in terms of appropriate technology. This book pursues the scale at which architects and planners work, rather than that of politicians or builders. It addresses American cities and, in particular, their suburban annuli, and asks the question "What would (these) look like if we designed them toward sustainability? The authors exhibit the broad concern for civic development that motivated earlier proponents of new towns, raising a question as compelling as that which kindled the Garden City conception of Ebenezer Howard and the Radiant and Broadacre ideals of Corbusier and Wright. In this case, however, the authors do not present one essential vision but, rather, a collection of visions illustrated as case studies. Sustainability, they reason, is afforded by the regional solar flux and geology: "Like the word 'appropriate,' 'sustainability' is qualified by its context . . . energy and materials (must) be in balance with what the region can supply continuously through natural processes."

The case studies cover four existing communities, together

with a proposal for the redevelopment of a disused air force base as a model sustainable community for 5000 people. The text is accompanied by illustrations, photographs, and diagrams describing the sustainable resolution of such needs as energy and water supply, basic food production, waste treatment and recycling, transportation, and local employment. As to what such settings would look like, the authors envisage attached and clustered housing at roughly double the present density levels, freeing interstitial land for common amenity and forms of metropolitan agriculture, and allowing light public transit systems a better chance of success. Improved local employment and the rarefaction of shopping and services would require shorter trips, whether to shop, work, or daycare. The sustainable community "will be information rich, more responsive to place, biologically balanced, and as in earlier times, will shift its focus from design for purely private consumption to the enjoyment and celebration of what we share in common.'

Unlike earlier visionary proposals, this is not the work of a single mind. The case study analyses were the product of design workshops involving 45 diversely qualified professionals —an interdisciplinary group assembled as much for the holistic vision of its members as for their individual expertise. The group was convened as the Westerbeke Conference, and in the course of a week in the summer of 1980 it forged a product that has been honed by the authors.

The case studies, though, are only half the book. Commentaries by several of the conference participants form the other. They are intended to elucidate the "context," not the regional context of a sustainable community, but the cultural context of a Western urban industrial society in transition to a sustainable society. Paul Hawken, author of *The Next Economy*, outlines his view of the shift from a "mass" economy to an "information" economy wherein, to put it bluntly, intelligence supersedes brute force as the valued commodity. John Todd asks if this intelligence cannot be unveiled by turning toward natural systems for the inspiration for our actions and, in the process, deriving a dimension of sanctity in our relationship with the natural environment. Other commentators deal with self-reliance versus selfsufficiency, planning for the changing attitudes toward family life, and allaying myths associated with public transportation and urban agriculture in a renewable-resource-based economy. Concerning the latter, David Katz offers the example of the Marais district in the heart of Paris in the late 19th Century, when some 3000 acres of intensive agriculture enabled the Parisians to profit from, rather than be cursed by the dung mountains excreted by horses.

The authors successfully answer their opening question, but their response is constructed on a shaky foundation. There is an uneasy alliance between the two major premises of the book: that sustainability involves "vastly reduced energy budgets" as societv's functions are constrained by regional renewable energy flows, and that a sustainable community should not require "major changes in lifestyle." They clearly intend the case studies to be transitional models, treading softly on the notion of change. Radical change is not popular, it's true, but sustainability is a radical concept and in the final analysis involves major changes in the way we live. Behavior patterns have been shown to affect demand dramatically. Residents of exactly similar dwelling units, for example, are known to diverge twofold or more in their demand for energy. Technical efficiency alone is not sufficient; "major changes in lifestyle" is a goldmine for a sustainable society. As Pierre Dansereau concluded in one of his CBC broadcast lectures, "the richness of our inscapes is preliminary to a good management (continued on page 112)



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of our landscape."

The succession to a sustainable state obviously begins with a "pioneer" stage, involving the adoption of strategies that bring the least trauma and pain, but progresses to its "climax" state. As the lower energy regime bites deep, habits will change. The implication of this book is that this climax state can, or would, be achieved without major changes in lifestyle. It is an inaccurate message.

We do not need to be shy about change. If one accepts a link between energy flow and the maintenance of a set of social values, then a change in the social order is inevitable as society moves to a lower level of energy consumption. It is obvious that the authors realize this from their observation "that a sense of place is a habitat within, rather than a settlement beyond, the ecosystem (and) that the public domain must become richer as the private domain becomes more frugal." But they are hesitant to embrace this within their program for sustainability. Truly sustainable communities will be those in which technologies and lifestyles evolve in tandem. Bruce Coldham

The reviewer is an architect in Montague, Mass.



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bronze, solar gray, solar cool, Low E, or Low-E with Argon. And sizes. Tilt-Turns are available from 17" x 23" on up. Just as important is the option these windows give you

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Georgia Marble, HCA's Natural Choice

Limestone was originally suggested for HCA's new data center in Nashville, Tennessee, but HCA chairman Thomas F. First, Jr. asked HCA's design committee to consider marble as an alternate.

"The marble was more expensive, but the lower cost of installation and maintenance was an overriding factor, and when we factored in the value of added beauty, we felt very comfortable with our decision," says Joe Hodge, HCA Vice President of Information Systems and a design committee member.

The ability of The Georgia Marble Company to deliver the 1-inch stone veneer within a 14 month fasttrack construction schedule was another key factor in HCA's decision.

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Building Owner: Hospital Corporation of America, Nashville, Tennessee Architects: Gresham, Smith and Partners, Nashville, Tennessee Material: Pearl Grey Georgia Marble®

Circle No. 346 on Reader Service Card

New Products and Literature

104 Technics-Related Products120 New Products and Literature continued













Folding Furniture

Selecting suitable furnishings that can be easily stored and moved quickly may be stylishly done with folding furniture. Featured here are some new designs for contract, institutional, and residential markets.

Marco Zanuso upgraded a popular European park chair to the sophisticated Celestina for Zanotta (1). Frame finishes include stainless steel, burnished chromium plated steel, or stove enameled steel. Seat cover leathers complement the optional enamel finishes. Celestina is available from Furniture of the 20th Century.

Circle 100 on reader service card



For multi-functional rooms, Howe Furniture announces the Concorde Table (2, 3) which folds from 4' x 12' to only 14 inches wide and 5 feet 7 inches high. Finesse, a stain-resistant material with the appearance of leather, is one of many tabletop treatments offered.

Circle 101 on reader service card

Interna Designs introduces "Movie," a tubular steel folding armchair by Poltrana Frau (4). A range of leathers is offered for the covering.

Circle 102 on reader service card

Matteo Grassi, represented by D.F.C., offers a small, mobile desk designed by Oscar Tusquets. Tabor (5) provides



calfskin side pockets for light storage.

Circle 103 on reader service card The Clack Chair (6) from Fixtures Furniture folds very simply: the back frame slots into special grooves in the seat, which in turn folds down on the legs. The chair comes in bright chrome or black epoxy finish. *Circle 104 on reader service card*

Philippe Starck designed the Francesca Spanish (7, 8) folding armchair. Constructed of steel tubing, the chair is available from International Contract Furnishings with a metal or polyurethane back and silver or black baked epoxy finish. *Circle 105 on reader service card* The Renaissance Window System, easy to maintain and energy-efficient, can be customized to fit any opening. The field fabrication process allows historic trim and casing detail to be reproduced on site by the installers. Nonstructural casing trim is available in 53 colors for historic color accuracy. Rich Aluminum Company.

Circle 114 on reader service card

Classroom Heating and Cooling



Coquette pedestal sink, an addition to the shell line of china fixtures, is 191/2 inches wide and 17 inches deep. Scaled for use in pairs or for a powder room or compact bath, Coquette is available in all Porcher colors, including shaded colors. It has a built-in overflow and can accommodate a single-hole or 4-inch centerset faucet. Porcher, Inc. Circle 112 on reader service card

APA Design/Construction Guide: Residential and Com-

mercial covers construction applications of plywood and other structural panels. There is information on panel applications for floors, walls, siding, and roofs. Diagrams and tables show a number of options applicable to residential and commercial installations. Diaphragms, fireand wind-resistance, noise control, and energy conservation are also discussed in the 56-page guide. American Plywood Association.

Circle 201 on reader service card

Vitreous china lavatory Model 190 has a shallow bowl that permits a wheelchair to roll under it, a concave front for faucet accessibility, and an antisplash rim that protects the user's clothing. It is available in several colors and white. Norris Plumbing Fixtures.

Circle 113 on reader service card

System Bulletin UV-1-240 describes the features and benefits of the Herman Nelson Classmate HVAC systems designed for the classroom. Features include quick response time to sudden thermal changes and economical ventilation cooling. The ventilator neutralizes heat gain from people, lights, and the sun. Units are available in a variety of sizes and models. American Air Filter. Circle 202 on reader service card

Nonasbestos architectural panels for fascias, soffits, spandrels, interiors, and dry-built walls in commercial, multiunit residential, and institutional buildings are described in a 24page, full-color brochure. Physical properties and design characteristics of each panel type, as well as textures, colors, sizes, and applications, are discussed. The brochure also provides design considerations for panel attachment, installation details and illustrations. Manville, Mineral Panels Dept.

Circle 203 on reader service card



Computer Aided Planning to expedite specifying, ordering, and planning of Allsteel products is explained in a four-page brochure. Specifically for the contract furniture market, features of this PC-based software include computer drafting, project organization and management, product specification and pricing, and order entry. Allsteel Inc.

Circle 204 on reader service card



The Chicago chair, designed by Gary Peterson, can be used as a desk chair, a guest chair, a lounge chair, a club/dining chair, or a conference room chair. The downward curve of the arm allows it to slide under tables of varying heights. Chicago chair will be available in a choice of finishes to satisfy many tastes and corporate budgets. Donghia Furniture & Textiles. Circle 115 on reader service card

Glenshire and Glenshire Tweed Genon® vinyl wallcoverings are offered in the same 16 colors. Glenshire has four-color flecks resembling a heathered, woven flannel design. Glenshire Tweed's four-color flecks are printed on a larger scale and are more widely spaced to simulate a multicolored wool fabric. DiversiTech General. Circle 116 on reader service card

Hypsam[™] waterproofing system for new construction and reroofing applications consists of a Hyload cap membrane sheet with an SBS modified asphalt adhesive. It requires no heat, no open flames, no chemical bonding agents and adheres permanently to itself and the substrate. It is resistant to puncture and abrasion, and most holes are sealed automatically by the rubberized asphalt. Hypsam can be applied to insulation boards, smooth-surfaced BUR assemblies, cast-in-place or precast concrete, steel decking with gypsum board attached, and plywood decking. Hyload, Inc. Circle 117 on reader service card

A history of asphalt booklet

contains information on characteristics and properties of asphalt, the origin and methods of manufacturing asphalt, and its various uses. It examines the two primary modifiers used in roofing membranes: atactic polypropylene for torch-applied materials; and styrene-butadiene-styrene for mop-applied materials. Nord Bitumi U.S., Inc. Circle 205 on reader service card

Bali[®] Ultra[®] blind All-In-One[®] control system raises, lowers, and tilts the blind with a single cord. A patented clutch and gear assembly enables just one cord to perform all the functions. It is crash-proof during raising and lowering, can be set at any length, and always stops so that the bottom rail is level. Carey-McFall Corporation. Circle 118 on reader service card

Video and photographic systems for internal visual documentation and analysis of images acquired through borescopes, fiberscopes, and video-imagescopes are discussed in an eightpage, full-color brochure. It explains choices available to the user, advantages and disadvantages of the types of equipment, and accessories available to meet special requirements. There is also a section on techniques of measurement and image analysis. Olympus Corporation, Industrial Fiberoptics

Circle 206 on reader service card

Div.



Lytetrim miniature track lighting has fixtures small enough to hold in the palm of the hand. Because of its small size, Lytetrim can be installed under shelves and cabinets or along stairways. It offers four elements: fluorescent, basic light, spot light in three finishes (shown), and linear fluorescent light. Lightolier. Circle 119 on reader service card

Urethane Insulation in Residential Building—A General Introduction, describes the ways in which polyurethane foam can improve thermal resistance. The 20-page booklet provides information about some of the products, applications, and benefits of polyurethane and polyisocyanurate foam insulation in residences. Products include polyurethane sheathing, nailable urethane board, urethane-insulated siding, urethane-core doors and windows, and insulated wall panels. Application areas are walls, roofs, ceilings, doors, and windows. Mobay Corporation.

Circle 207 on reader service card (continued on page 122)
Capability

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High resolution for monitoring clarity.

The Visible Difference

ITC-410

Ikegami's advanced technology and skill build responsive capacity and performance into every one of its high quality black and white video cameras. There's a reliable, economical Ikegami camera designed and engineered to fulfill the requirements of any monitoring application.

The easy-to-install ITC-410 featured above, for example, with horizontal resolution of 650 lines or better. ALC of 100,000:1. Automatic beam control for consistent operation, 2:1 interlace and synchronization for compatibility with auxiliary TV equipment. A low-light level version is available. Auto-iris is standard on all models.

There's an Ikegami ultra-miniature ICD-200 solid state chip camera available. Shock- and vibration-resistant, it provides steady, distortion-free performance even in strong magnetic or electrical fields. The ICD-200 even resists sensor burn for long, operational life. Also available in 24 volt AC, line-lock, phase-adjustable configuration.

ITC-420

Need remote capability? consider the ITC-420 $\frac{3}{3}$ " Vidicon camera, which adds low-cost installation to economical price. A single coaxial cable transmits both power and video signals. Automatic beam control circuit assures consistent operation, while a cable length compensation switch provides accurate control.

For excellent performance in a compact, lightweight unit, see the ITC-400, with an ALC range of 20000:1. Plus auto-iris control. Automatic beam control. DC and low-light level options. Vertical phase-adjustable.

And for cost-savings on ultra-high sensitivity and high resolution, Ikegami offers the ITC-510 1-inch video camera. Featuring resolution of 850 lines or better for magnificently clear images. Rugged, heat-dissipating aluminum enclosure. Featuring line-lock and genlock. Low-Light version available, too.

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ITC-510



Seating catalog provides detailed information on product design and performance, as well as photographs, diagrams, complete specifications, ordering information, and accessories. The 16-page catalog includes upholstered, plywood, plastic, and shell chairs, steel and upholstered stools, and customdesigned products. Garrett Industries, Inc.

Circle 208 on reader service card

Open Yoke trac spotlight T444 is 37% inches long and 5 inches in diameter, with a 4-inch aperture. The lampholder rotates 358 degrees horizontally and 105 degrees vertically. It uses a 12volt PAR36 lamp and a 50VA coil and core power pack transformer. Finish is white or black. Juno Lighting, Inc. *Circle 120 on reader service card*

Shatter-resistant window films

added to retrofit safety products by 3M's Energy Control Products are: Scotchtint Outdoor Shatter-Resistant Window Film for application to the outside of glass windows; and Scotchtint Shatter-Resistant Window Film that combines shatter-resistance with sun control properties. Applied to either side of normal window glass, both films will pass a 100-foot-pound impact test according to ANSI Z97.1 3M. *Circle 121 on reader service card*

Dense grouts are now offered in 29 colors, with the addition of 11 new selections: evergreen, aquamarine, violet, rose, dark blue, rust, fawn, mauve, honey, raspberry, and blue-gray. They can also be custom blended to any color or shade in quantities of 1500 pounds or more. A blend of sanded portland cement, washed quartz aggregates, and color-fast pigments, the grout can be used with quarry tile, brick and cement pavers, slate, and ceramic tile. W.R. Bonsal Company.

Circle 122 on reader service card

Regal Aqua Pearl paint is higher in luster than eggshell-finish, but softer than semigloss. It has a highly durable washable surface and dries in less than an hour. Tools can be rinsed in soap and water. The paint can be applied to primed wallboard, plastic, wood trim, cabinets, doors, and paneling. There are nine shades of white and 1600 custom colors. Benjamin Moore & Co.

Circle 123 on reader service card

Roofing membranes of polymeric sheet are manufactured by a process that flows the resin through a nonwoven fiberglass or woven polyester reinforcement. The sheet can be installed on flat or sloping roofs and is resistant to UV rays, fire, and a variety of chemicals. Construction details, cross sections, a table of physical properties, and guide specifications are included in a four-page brochure. Sarnafil, Inc.

Circle 209 on reader service card

Automated Entrance Systems

brochure describes and illustrates automatic sliding doors; manual sliding door for hospital rooms that breaks away to allow beds to be moved; swinging doors; and dual access doors with manual operation and power-assist for handicapped accessibility. The brochure also covers automatic fire doors, pedestrian-sensing systems, and activating devices. Gyro Tech, Inc., Lanson Industries, Inc. *Circle 210 on reader service card*



Walltrak WCOMP shelving units hang from a predrilled aluminum track mounted to the wall, the only permanent installation the system requires. Shelves can be adjusted to accommodate new or updated equipment and supplies. The system includes three sizes of shelves with brackets, a computer keyboard drawer that slides out for use and under for storage, three 61-inch-long uprights, and one 8-foot track. Bretford Manufacturing, Inc.

Circle 124 on reader service card

'Balanced Seating' by Dr. A.C. Mandal, Chief Surgeon, Finsen Institute, Copenhagen, Denmark, recognizes the difficulties associated with conventional chairs and concludes that chairs with front-seat-tilt can prevent back pain by positioning the body in a balanced position. Documentations are based on tests of the flexion of various parts of the body. Made possible by a grant from Fixtures Furniture and other funding, the report is available without charge. Fixtures Furniture.

Circle 211 on reader service card



Cygnus Series seating, designed by Bert England, has either open or closed arms. It is offered in the company's Kaleidoscope collection of wood finishes and fabrics. The front legs continue to form the arms of Cygnus, which has an exposed wood frame and a gracefully sculptured back. CorryHiebert Corporation.

Circle 125 on reader service card

Built-Up Roofing Systems Design Guide, a generic product and performance guide, assists specifiers in the selection of components. The Guide contains sections on design considerations, materials, and application. The design section lists the desired properties, performance information, and references for judging the characteristics of each roofing system component. References are based on accepted roofing standards. The materials section defines the generic products used in roofing systems. Copies are \$6 each and can be ordered from: Asphalt Roofing Manufacturers Association, % Sumner Rider & Associates, 355 Lexington Ave., New York, N.Y. 10017.

Ceramic tiles and accessories

shown in a four-page color brochure include terra cotta and solid color tiles, as well as a variety of floral, scenic, and geometric designs. The brochure provides information about obtaining a 96-page catalog of tiles and a 16-page catalog of accessories, which include platters, vases, and animal figures. Country Floors, Inc.

Circle 212 on reader service card

Tele-Power Poles are dual-channel, tri-channel, or modular, allowing expansion of the system without rewiring. They are used in any away-from-wall location where electrical power and communications wiring are needed. Complete information is provided in an eight-page, fourcolor brochure that includes an ordering guide. The Wiremold Company.

Circle 213 on reader service card

Mars Template catalog shows the expanded range of Mars templates and lettering guides. The 20-page catalog has a clear illustration and description of each template, arranged by category for easy selection. Templates have a matte, glareresistant surface and are transparent green for easy visibility. J.S. Staedtler, Inc. *Circle 214 on reader service card*

The Mobus Vertical Plan Filing System files up to 1500 drawings without the need for clamping. The pin mechanism permits fast retrieval and keeps the drawings in sequence. Cabinet size is 54" x 39" x 201/s" deep and requires only five square feet of floor space. Dale/Dompro Ltd. *Circle 126 on reader service card*



Outdoor furniture for adults and children is made of openweave steel that is protected by a plastisol coating. According to the manufacturer, it will not rot, rust, crack, chip, peel, or warp. It is flame-resistant and not affected by extremes in temperature, sea water, sewage, acid rain, and abrasives. The line includes picnic tables, benches, tables, and chairs. A six-page brochure illustrates the furniture in color. Wabash Valley Midwest, Inc.

Circle 215 on reader service card

Marble and stone, imported from Israel, are shown in color in a six-page brochure. Tiles are currently offered in 12" x 12" x .4" and 24" x 24" x .6", with quotations available on other sizes. Sivan Stone and Marble. *Circle 216 on reader service card* (continued on page 124)

Tradition Enhancing Technology



An age-old art of bamboo umbrella making provides inspiration. And Nippon Steel the design opportunities.

Imagine. A total overhead cover, uncluttered, columnless. Ridding the feeling of confinement. The product: NS SPACE TRUSS SYSTEM. Made by a firm that works wonders with steel.



Building Construction & Engineering Division



Head Office (Tokyo) Telex: 22291 New York Tel: (212) 486-7150 Los Angeles Tel: (213) 624-4101 Houston Tel: (713) 652-0922 Circle No. 367 on Reader Service Card **Brite-Ply** two-ply roofing membrane has a white EPDM top ply and a black EPDM base. There are two types: a nonreinforced 60-gauge membrane for the Brite-Ply adhered system; and a fabric-reinforced 45-gauge membrane for the company's new mechanically fastened system, which has the fasteners located beneath the membrane and inside the adhesive seam area. Carlisle SynTec Systems. *Circle 127 on reader service card*



Stoway Drafting Table consists of a precision drafting top on a fully adjustable steel base that can be set up or closed in seconds. Top options are ³/₄-inch basswood with steel end cleats or self-edged white melamine. Sizes are 24" x 36" or 30" x 42". Tilt adjusts from horizontal to 45 degrees, height from 29 inches to 45 inches. Mayline Company, Inc.

Circle 128 on reader service card

Security Glazing consisting of a three-ply laminate of wire-glass and polycarbonate provides a 45-minute fire-rated security barrier. This is a further development of the company's previously certified 20-minute design and is said to be the only fire-rated security glazing system in existence. Sierracin/TransTech. *Circle 129 on reader service card*

Standard carpet and vinyl colors available for Steelwall® operable wall systems are shown in Bulletin A-620. It includes fullcolor examples of the 32 standard carpet colors and 105 standard vinyl colors, and includes UL fire ratings and weights. Custom finishes such as fabric, plastic laminate, prime paint, or veneers are available on request. Richards-Wilcox Div., White Consolidated Industries. *Circle 217 on reader service card* The Electronic Copyboard instantly produces letter- or fullsize copies of anything written on or attached to the board's surface. It has a highly durable, scratch-resistant porcelain enamel surface; a writing space larger than other boards currently available; and the capability to copy all or just part of the information on its surface. There are wall-mounted and freestanding reversible boards to serve all sizes of conference and meeting rooms. Bruning. Circle 130 on reader service card

Standing seam roof system with VersaLok self-locking side joints allows panels to be snapped together into a weather-tight roof or mechanically seamed with a seaming tool. Detail drawings in a four-page brochure illustrate, among other features, concealed clips that secure the panels to the framing members and the sealing at eaves and ridge caps. A table of allowable live loads is included. ECI Building Components.

Circle 218 on reader service card

Dens-Shield[®] tile base is a fiberglass-faced gypsum board with a water-resistant coating that is virtually unaffected by water and moisture. It provides a smooth, sound base for ceramic tile that won't swell, soften, decay, delaminate, or disintegrate when installed as recommended. Dens-Shield is lighter, easier to handle, and faster to install than cement-based products. No special cutting or drilling tools are required, and conventional fasteners hold it in place. Georgia-Pacific. Circle 131 on reader service card



The Nena chair from B&B Italia, designed by Richard Sapper, folds into an accordion shape because of a unique aluminum knuckle joint. The lightweight frame is made from tubular fiberglass. Seat and back are marine-grade plywood with polyurethane and Dacron padding, covered in leather or fabric. Herman Miller. *Circle 132 on reader service card*



The Royal Palace Collection of hand-woven silks, from Jim Thompson Tai Silk Co., consists of cords, stripes, and solids. The fabrics are suitable for upholstery and wallcovering. They have a Class A fire rating and are inherently soil resistant. Rodolph, Inc.

Circle 133 on reader service card

Thermastructure® building systems design guide explains how the 24-gauge galvanized steel and expanded polystyrene panels serve as basic load-bearing exterior and interior wall, roof, and floor components. They are compatible with standard building materials and can be covered with almost any roofing, siding, or interior finish. Windows, door openings, and electrical conduits are premolded in, and a whole wall can be raised at once. Radva Corporation.

Circle 219 on reader service card

Red cedar shingles come in eight-foot panels laminated to a wood backing. A 12-page brochure illustrates panel construction, shingle exposure and spacing, and fancy cuts available. Full-color photos show a variety of buildings on which shingles were used. Shakertown Corp. *Circle 220 on reader service card*

Indiana Limestone brochure describes the "thin wall system" of limestone cladding. Drawings show typical spandrel and floorto-floor panels and a cross section of the system. New buildings and additions to landmark buildings are shown in color. Harding & Cogswell.

Circle 221 on reader service card

Rolling doors and grilles 24page catalog includes service doors, insulated doors, fire doors, counter fire doors, smoke control doors, and auto-test fire doors. There are also motor operators, rolling grilles and counter doors, wood and antique brass counter doors, and side coiling closures. Each listing includes description, illustration, detail drawings, and specifications. The Cookson Company. *Circle 222 on reader service card* **Permalite®** perlite masonry loose fill insulation brochure covers the product's installation in block, cavity, and veneer walls and the physical properties of the insulation. A table compares the thermal resistance of insulated and uninsulated 6-inch to 12-inch lightweight and standard weight masonry blocks. There is a comprehensive list of standards, specifications, tests, and references. Grefco, Inc. *Circle 223 on reader service card*

Segment Window SWC 4-0 is compatible with a unit dimension of 4'-0" and can be used above casement windows in most standard ceiling height applications where half-round windows may not fit. The window has a seamless polyurethane outer frame, and a natural wood interior that can be painted or stained to match other woodwork. It is available with a primed exterior or factory-applied finish in a number of colors. Webb Manufacturing, Inc.

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GPS Spectra opaque finish panel systems color choices are included in a portable, hinged box. For use in client conferences, presentations, or personal decision-making, the sample kit makes it easy to see at a glance and coordinate each of eight different colorways for oak panels. Each wood "color chip" and laminate sample is removable, replenishable, and fully identified on the back. The Gunlocke Company. *Circle 136 on reader service card*



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(continued on page 136)

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(continued from page 134)



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