ARCHITECTURE CALIFORNIA
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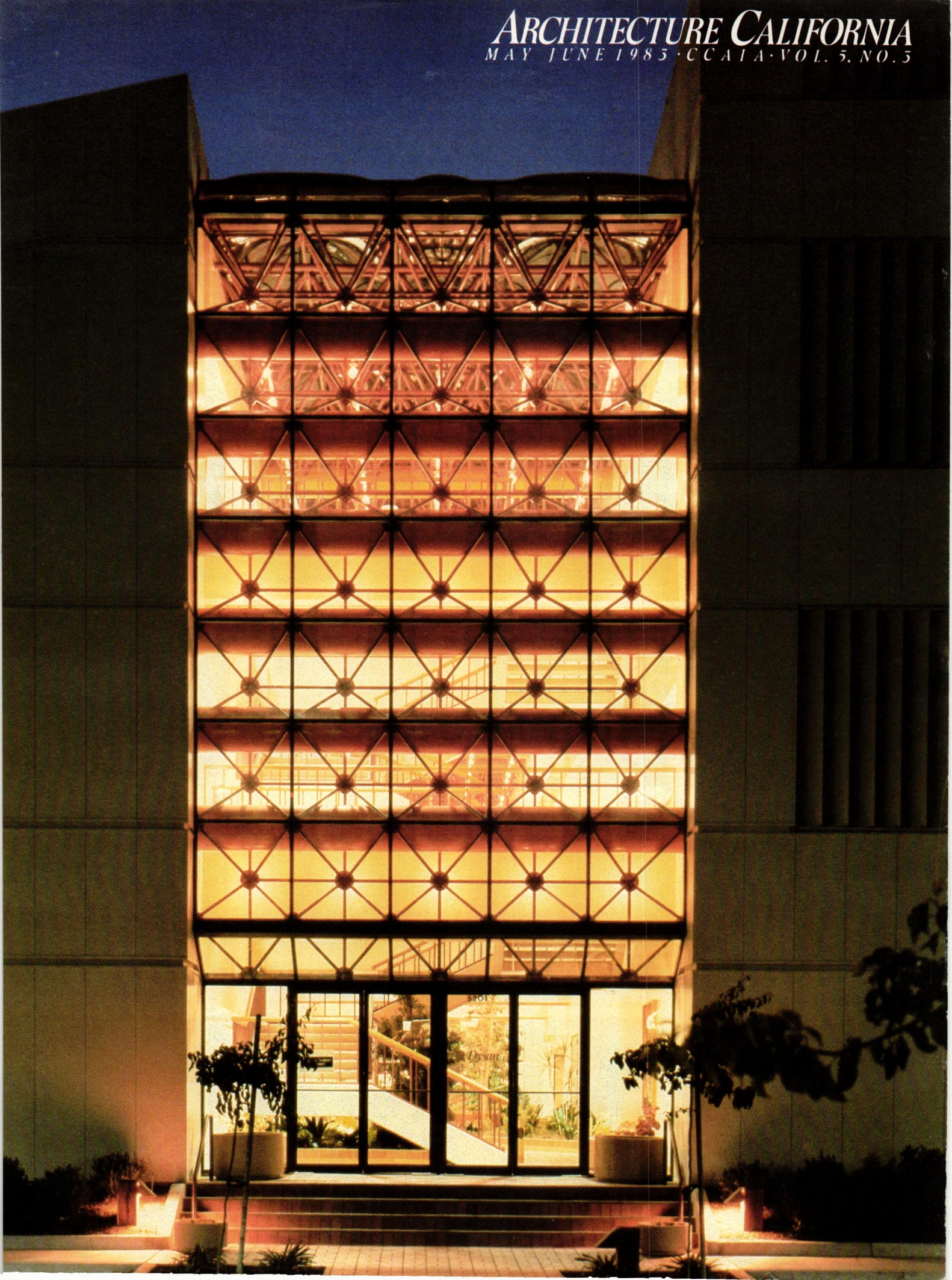

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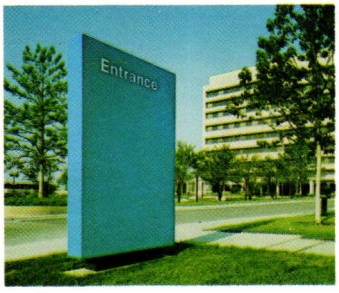

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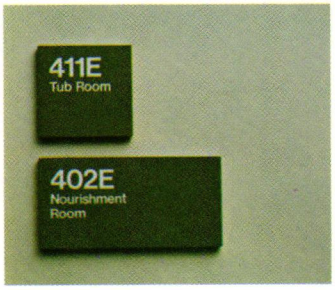

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Directories

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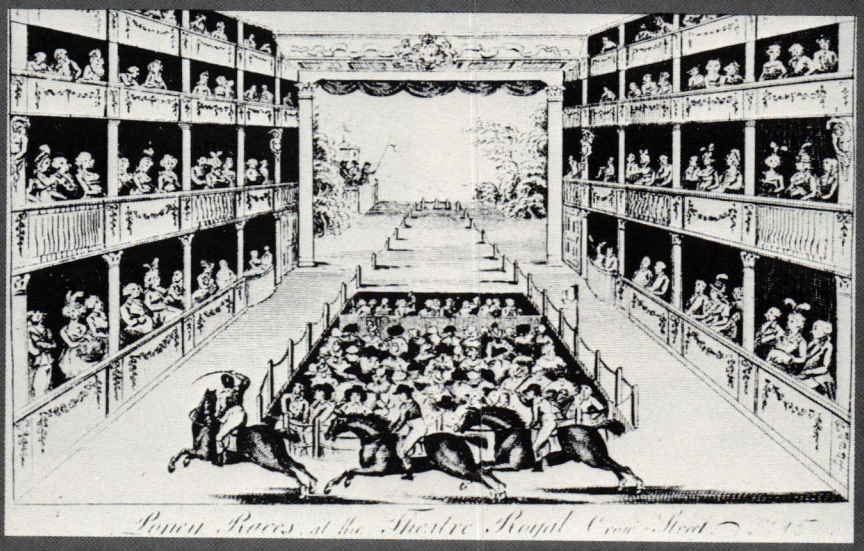

DEPARTMENTS

COVER: Dysan Office Building, Santa Clara.
Architect: John C. Hill, Jr., AIA, Frizzell Hill Moorhouse Beaubois, Inc. and Hill-Adams, Inc.
Client: W. F. Batton & Co., Inc.
Photographer: Jane Lidz.

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The College of Fellows

The American Institute of Architects has advanced 14 California architects to the College of Fellows for their "notable contributions to the profession." Among the architects receiving the profession's highest honor are

- Clark Arthur Davis, FAIA; Stone, Marraccini and Patterson Architects and Planners; San Francisco Chapter;
- John L. Fisher, FAIA; Skidmore, Owings & Merrill; San Francisco Chapter;
- Harry C. Hallenbeck, FAIA; Hallenbeck, Chamorro & Associates; East Bay Chapter;
- David Klages, FAIA, Orange County Chapter;
- Kenneth C. Kruger, FAIA, Santa Barbara Chapter;
- Richard L. Lewis, FAIA, Central Valley Chapter;
- William Sperry Lewis, Jr., FAIA; Deems/Lewis & Partners; San Diego Chapter;
- Donald MacDonald, FAIA, San Francisco Chapter;
- Thomas Bruce Moon, FAIA, Orange County Chapter;
- Robert A. Odermatt, FAIA; ROMA Architects; East Bay Chapter;
- Richard Schoen, FAIA, Los Angeles Chapter;
- Gerald Gamliel Weisbach, FAIA, San Francisco Chapter;
- Zelma G. Wilson, FAIA; Wilson & Conrad Architects; Ventura County Chapter;
- Donald E. Wudtke, FAIA; Wudtke Watson Davis & Engstrom; San Francisco Chapter.

Reviewing Design Books

The *Design Book Review* prints timely, comprehensive and informed reviews of current books in architecture, interior design, landscape architecture, and planning. Issued quarterly, the *Design Book Review* is available by subscription ($12/year individual, $14/year institutions) from 1414 Spring Way, Berkeley, CA 94708. Phone: (415) 548-9250.

Operating Statistics

The sixth annual survey of operating statistics for 1982, just released, gives a current profile of the design profession across the country. The survey is based on data accumulated through the AIA Computer-based Financial Management System, administered by Harper and Shuman, Inc. of Cambridge, MA. The survey found:

- The median size firm surveyed has 35 people. One out of each 10 people in the firm is a principal. The ratio of principals and technical to nontechnical personnel is 3 to 1, which is substantially lower than 1981's figures of 4.5 to 1. A reduction in work load and technical people without a corresponding reduction in core administrative staff is implied by this figure, according to the survey.
- Hourly rates of pay are up to 9 percent over 1981. Principals are job costing their time at a rate of about $25 to $27 per hour ($50,000 to $55,000 per year).
- An average of nearly 18 percent of total office salaries is spent to provide for payroll taxes, insurance, and other miscellaneous out-of-pocket benefits.
- The average number of paid time-off is nearly 26 days per year, 10 percent of the total work days in the year.
- The average overhead rate of 169 percent includes employee benefits, and is reasonably consistent with last year's figure of 165 percent.
- The 8 percent average profit on a typical "good" job is more than the firmwide average on all jobs, which

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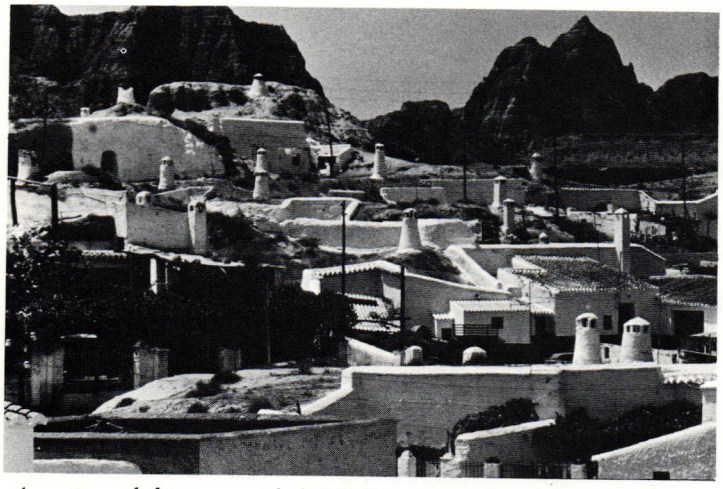
Toyota National Headquarters

The California Building Officials Awards of Excellence recently were presented to four projects that "best exemplify a pleasant living and working environment, and by way of imagination and professional skills, solve the many problems confronting the design and construction industry today." The Webb Residence in Malibu, designed by Marshall Lewis, AIA, received the top award in the Single Family category. The Commercial/Industrial award went to Toyota National Headquarters, USA, designed by William Akiyama, AIA of Williiam L. Pereira Associates. Saint Anne's Home in San Francisco, designed by Mark Appleton, AIA of Anshen & Allen was recognized in the Multifamily category. The Boyd Street Place in downtown Los Angeles, designed by Derek Parker, AIA, received an award in the Rehabilitated Building category.

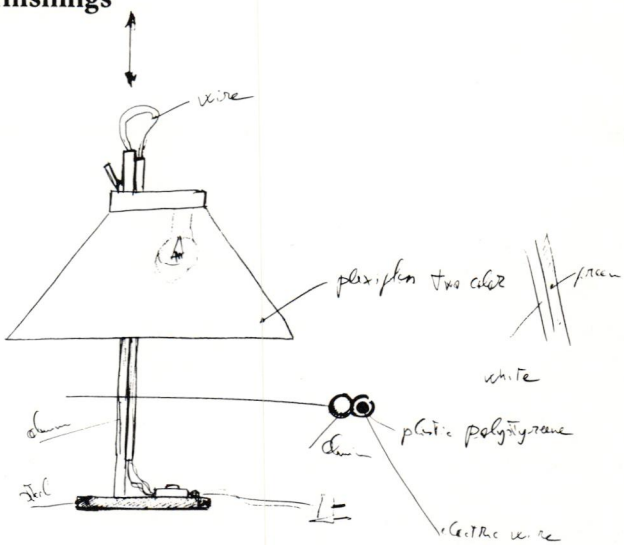
Bathazar Korab

The Thousand Oaks Library, designed by Albert C. Martin and Associates, received an Award of Excellence for Library Architecture in the 11th Library Buildings Award Program sponsored jointly by The American Institute of Architects and the American Library Association. The Thousand Oaks Library provides 56,000 square feet of usable space within a single story building. The hot, semiarid climate required a design that minimized heat gain, and the library function demanded a large amount of daylight. The architects met both requirements through the form and siting of the building. A concrete structure houses mechanical equipment, while a steel truss framework encloses the library's one large room and supports a series of shed roofs. The exterior light colored plaster walls match the heat reflecting metal roof, and the insulated bands of windows admit daylight that penetrates the interior. Natural ventilation is augmented by a water storage, low pressure cooling and heating system. Storage of chilled or heated water allows for off-peak use of the mechanical plant and saves significant amounts of energy.



A major exhibition entitled "Mediterranean Indigenous Architecture, Timeless Solutions for the Human Habitat," focuses on four distinct Mediterranean regions: the Adriatic coast of Yugoslavia, the Aegean islands of Greece, the hilltowns of central Italy and the Andalusian region of southern Spain. The exhibition consists of 150 display panels illustrating selected towns with photographs, sketches, watercolors and batiks, as well as town plans and historical development. This is a documentation of cultures, isolated, often untouched by modern technology, flourishing today as living examples of centuries past. The exhibition presents the landscape, the people and the culture, as well as analytical diagrams of specific design elements which contribute to the livability of the villages. The highly creative architecture and community planning solutions and the spirit of these human environments offer fresh inspiration for architects today. Produced by architects Steven and Cathi House of the San Francisco firm House + House, the exhibition will be on display from May 11 through June 30 at the San Francisco Chapter, AIA, 790 Market Street, San Francisco.

Furnishings



Ernesto Gismondi

A highlight of West Week, the recent international contract furniture design symposium sponsored by PDC 2, was a Design Charrette and Evaluation featuring Dr. Ing. Ernesto Gismondi, president of Artemide; Michael Graves, FAIA, for Sunar; Paolo Piva for Stendig; and Massimo Vignelli for Hauserman. Moderator Charles Moore, FAIA gave each designer 45 minutes to design five items: a chair, lamp, settee, table and "whatever else ought to go near these worthy pieces." As 500 people milled past the sketching designers, Moore cautioned, "Designing is not entirely involved in the first 45 minutes of inspirational genius, but takes lots of hours of struggle and persuasion and justification and change which are not part of our program. So I hope you won't think this is all there is to it, and that the fee should be organized accordingly."

shows a 2½ percent profit margin (before tax). This profit margin is down substantially from last year.

- On the average, it takes nearly $25,000 of capital to support each employee. This number is up 10 percent from last year, and is likely to increase substantially in the future, as more automation enters the design profession.
- On the average, it takes 2½ months (75 days) to collect invoices.

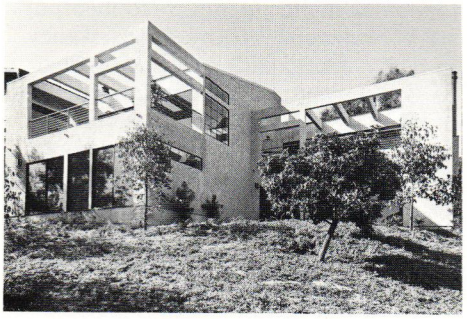
Plan Checking Reforms

The City of Sacramento is streamlining its building permit/plan checking procedures. The effort grew out of AB-941 (McCarthy) which requires all cities and counties to "provide for coordination of review and decision-making and the provision of information regarding the status of all applications and permits for residential developments . . . by a single administrative entity."

In response to this legislation, the City of Sacramento decided to review and reform its residential and commercial building permit/plan checking procedures. Initially, major commercial permit applications were routed among five departments for an average review time of 13½ weeks. There was no single source of information on project status, no one person or office to keep track of applications, and no overall checklist of plan requirements for applicants. The revamped process now takes only six weeks to complete.

What's the secret? City analysts who studied the existing system found that decentralization led to inefficiency. The City Manager's Office proposed several solutions. More staff was assigned to do specialized plan checking functions, to establish a centralized location for project information, and to improve communications.

City plan checking and building permit procedures currently are being overhauled with the approval and support of the City Council. Gregory Hatfield has been appointed to the newly-created position of Building Permit Manager to serve as a central source of information and to supervise plan checking procedures. The plan checking staff is being expanded and consolidated within the Building Inspections Division to process applications more efficiently. A microcomputer, which has replaced hand-kept logs in tracking applications, now can pinpoint the status of any project at any time. And the Office is developing a checklist of requirements, model plans, and handouts to explain specific regulations and procedures.



Ryan Roulette

Spec houses in Mission Hills, designed by Dale Jenkins, AIA of Buss Silvers Hughes & Associates, were among nine projects honored in the Fourth Annual Residential Design Awards sponsored by the San Diego Chapter, AIA and San Diego Home/Garden *magazine. Janice Batter, AIA and Michael Batter of Batter Kay Associates received the Best of Show Award, and an award for Outstanding Achievement in the Single Family category. The Outstanding Achievement for Remodel went to Dale St. Denis, AIA, St. Denis and Associates. Awards of Excellence were presented to Marc Tarasuck, AIA, Stephen Borow, AIA, Bruce R. Dammann, AIA, Michael B. Wilkes, AIA and Esao Sumida, AIA.*

Builder's Choice

Builder magazine has announced its third annual Builder's Choice awards program to recognize excellence in design and planning of all types of housing and commercial buildings completed between June 1981 and June 1983. Entries must be submitted by June 17, 1983. For entry forms, write Builder's Choice Competition, 15th & M Streets, N.W., Washington, D.C. 20005. Phone: (202) 822-0390.

CCAIA Sponsors Legislation

Four bills have been introduced on behalf of the CCAIA this Legislative Session. Copies are available at the Council office, 1414 K Street, Ste. 320, Sacramento, CA 95814.

AB 535, Campbell would provide statu-

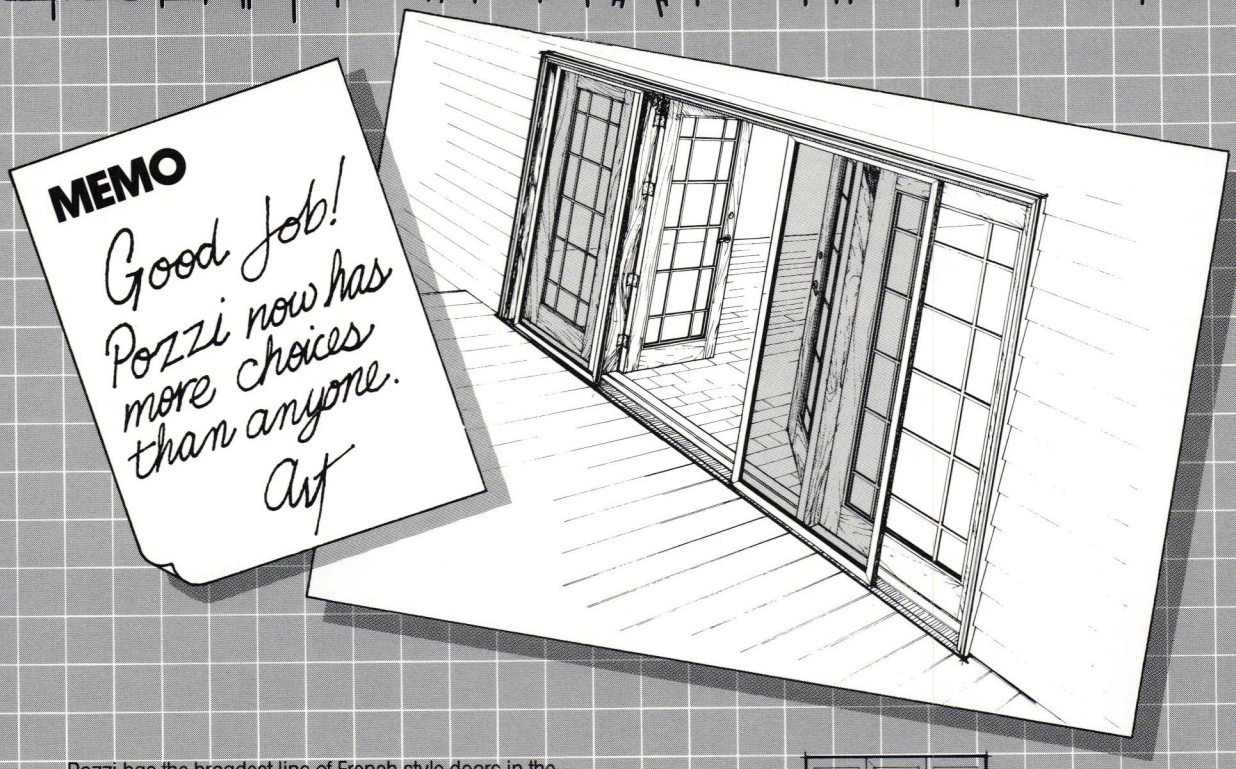
tory authority for architects to incorporate as professional corporations, if they so desire. Organizing as a professional corporation provides an optional method of business organization, more simple incorporation procedures, and the intangible benefit of enhanced prestige. There are also tax advantages, participation benefits in qualified profit-sharing or pension plans, corporate health benefits, and reduction of personal liability exposure. AB 535 would not alter existing law allowing architects to form general corporations. It is merely another alternative for those firms and single practitioners who may not qualify for, or receive benefit from, forming general corporations. AB 535 passed its first hearing in the Assembly Consumer Protection and Toxic Materials Committee without a dissenting vote and is now waiting for a vote on the Assembly floor.

SB 753, Maddy would provide that architects, engineers and land surveyors who furnish engineering, planning, or design services for any work of improvement shall have a design professional lien upon the property, even in the absence of commencement of construction. The lien would be in effect for 10 years unless released or legal action is commenced on the contract or agreement. The design professional lien would be subordinate to the lien created by any construction lender which finances the project. Once work begins, the design professional lien would merge with all other mechanics' liens. SB 753 has yet to be considered in its first committee hearing.

SB 1049, Montoya would revise the structure of the State Board of Architectural Examiners by adding two architect members and one public member. This would result in a board structure of five architects, six public members, and one registered building designer. SB 1049 has yet to be heard in its first committee hearing. The author is Chairman of the Senate Business and Professions Committee.

SB 1195, Craven-Greene, as introduced, would delete the automatic repeal date of January 1984 for the Certificate of Merit statutes and continue those statutes in existence. The bill also specifies that the person providing opinions regarding possible negligence be of the same discipline as the defendant; that the name and address of the person providing opinions be discoverable; that the attorney's fees, costs and witness fees be awarded against the attorney for the plaintiff if the plaintiff's attorney fails to comply with the provisions of these statutes. The purpose of SB 1195 is to make it more difficult for architects to become parties to "frivolous lawsuits."

Pozzi French Style Patio Doors



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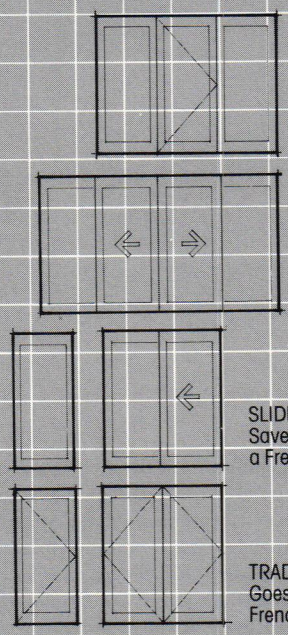

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Beverly Hills Civic Center

The program for the Beverly Hills Civic Center Design Competition, held last year, included an addition to the existing City Hall and construction of a new police facility, fire department headquarters, library, cultural resources center and related parking. These needs were to be met within the 10 acre, two block Civic Center area between big and little Santa Monica Boulevards and Crescent and Alpine Drives. The present fire department headquarters, library and some parking exist on site with the 1932 Spanish Baroque City Hall designed by William Gage. Planning and space requirements for the new facilities were identified by Prima Associates of Santa Monica prior to the selection of competitors.

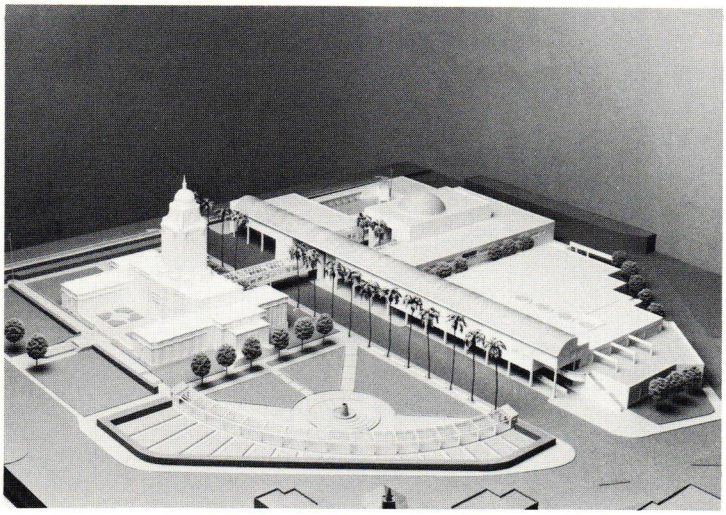
The six firms invited to the Competition were instructed to concentrate on the orientation and relationships among the new and old buildings, rather than developing proposals for individual structures. The services of the design principal of each firm were required to be committed to the project from beginning to end. Submittals were anonymous until the Jury Report was sent to the City Council. Cost estimates for concept designs were submitted to the City Council only after the Jury made its recommendations.

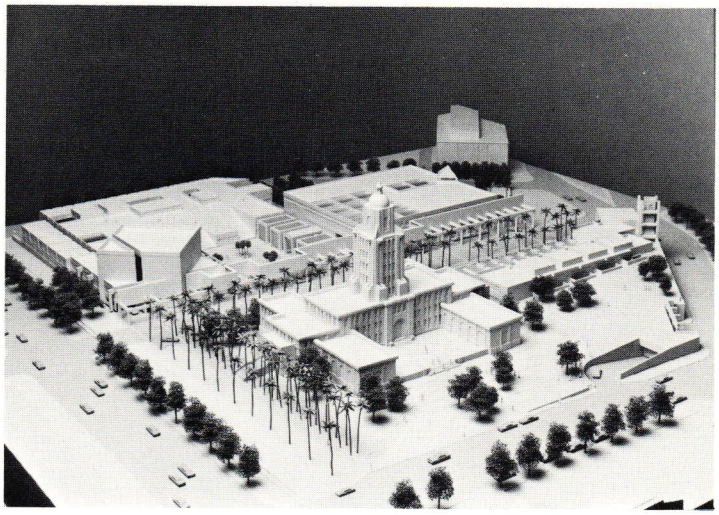
The Competition followed AIA criteria, and was assisted by the National Endowment for the Arts. The Jury included M. Paul Friedberg, FASLA; Anthony J. Lumsden, FAIA; Esther McCoy; Daniel Solomon, FAIA; and Richard Saul Wurman, FAIA. Donald J. Stastny, AIA, AICP was the Professional Advisor.

The public actively participated in the competition process. Each design concept was presented at a public hearing, and models were displayed anonymously at the gallery of the city's Bedford Drive parking structure. Beverly Hills' closed circuit television station broadcast the presentations, Jury Report, and public meetings. The public was encouraged to submit preference cards to the City Council.

In selecting as the winner Design Concept VI, by Charles Moore, FAIA, the Jury said, "We have been confronted with a brilliant and beautiful design which thoroughly addresses the specific issues at hand, and also assimilates what is best and most positive in urbanism and urban theory throughout the world today and advances its cause."

Following are the design concepts for the Beverly Hills Civic Center Competition, and edited Jury comments.



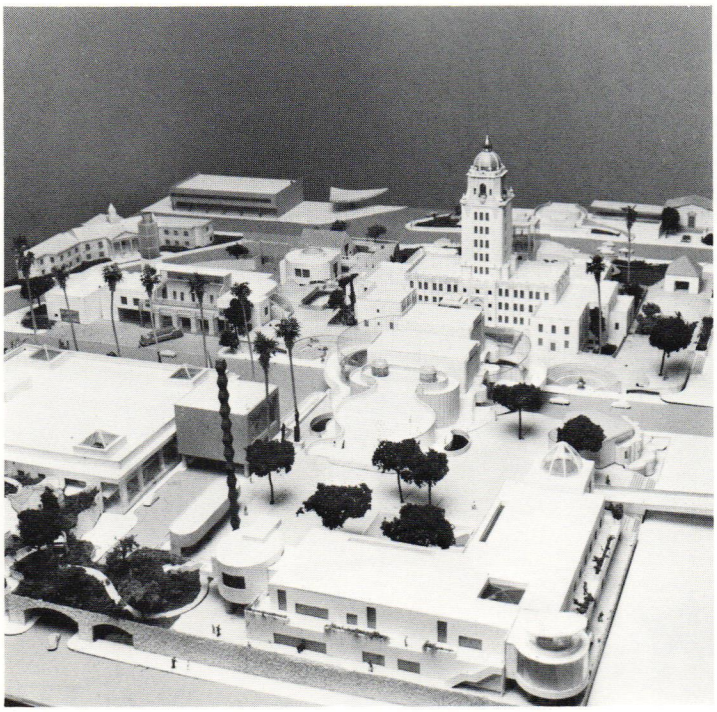


Design Concept I
Gwathmey Siegel & Associates, Architects
New York

Concept I is unique in that it places all of the new facilities east of Rexford. The overriding intent of this concept is to minimize competition between the new facilities and City Hall ... The architecture of the new facilities is reserved in character. Their neutral presence is ordered by the long three story building placed along Rexford acting as a backdrop to the existing City Hall. Public spaces other than the major garden are limited ... The minimal geometry of the garden makes the expanded park empty, arid and vacuous. The garden is located where it would be least experienced by the users ... There was some concern about the Police Department functions being wrapped around the auditorium. These concerns related to potential security problems and ... the potential psychological problem of jail/auditorium proximity. Placing the Fire Department at the north portion of the site will create exiting difficulties for the fire vehicles during peak traffic periods ... This scheme suggests the Police Department, cultural facility, Fire Department and underground parking be built at one time. It is not as easy to phase as other concepts.

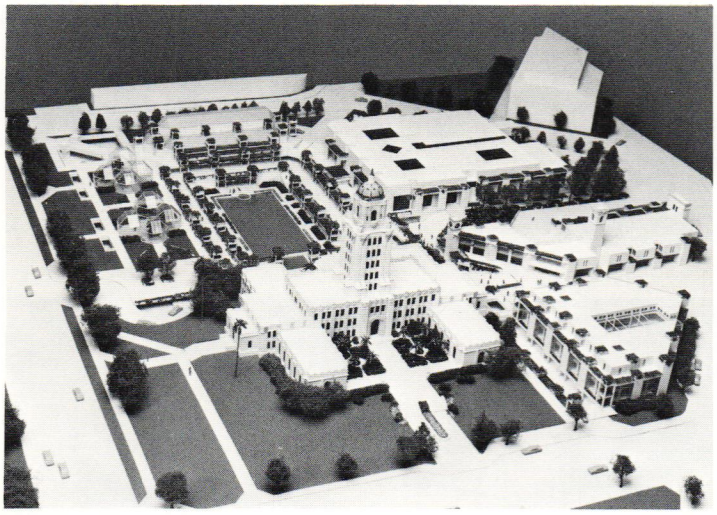
Design Concept II
Eisenman/Robertson, Architects
New York

A simple large colonnade paralleling Rexford neutralizes and screens a variety of program elements and presents a dignified facade complementing City Hall. Rexford becomes a ceremonial street for automobiles and pedestrians ... This is the only concept that proposes an alternate use for the existing Library. The Police Department is located in the existing Library building ... A new Library is adjacent to the cultural facility, both sharing an outdoor court on axis with City Hall. A monumental stair would act as amphitheatre seating; this and the courtyard would allow City Hall to be a focal background to any event ... The proposed Police Facility firing range location is unsatisfactory, being positioned on an upper floor where noise would be a problem. Also, the underground jail would either have a daylight deficiency or, because of skylights, have security problems ... The Fire yard, roofed to make a garden south of City Hall, restricts fire drill..., would be noisy and is unsatisfactorily vented. The opening at roof park level is a security hazard. Palm trees immediately in front of the Fire Station ... would restrict turning patterns ... Remodeling the Library as a Police Facility would be difficult to phase ... The benefits of reordering the site into functional areas do not outweigh the problems in phasing the complex. The plan's best feature is a dignified composition of public open space.



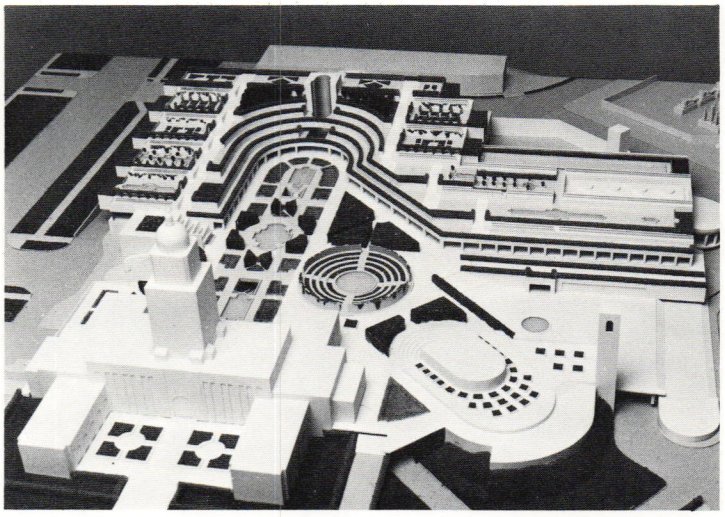
Design Concept V
Frank O. Gehry & Associates, Inc.
Santa Monica

Concept V divides the space into four parts, split by Rexford in the middle, and with City Hall occupying the whole of the northwest quadrant ... Straddling Rexford is a cultural facility with curved balconies on two levels around the two staggered buildings. The Cultural Facility continues into the northeast quadrant as a sweep of steps leading to a platform with two miniature echoes of the City Hall dome ... The L shape around the northeast corner is the Police Department ... The grand space is for the most part the Baroque steps, provocative in their allusion to the Spanish Steps in Rome ... The southwest quadrant is dominated by the Fire Department, which occupies the original space, but ... is much expanded. The old facade of the building has been retained but screened with a glass front ... (Concept V) shows a clear understanding of parking and circulation requirements as they relate to the surrounding street system. The scheme also shows an awareness of cost. Although the Jurors appreciated how its formal inventiveness constituted an original approach to urban design, most felt that the scheme fell short of establishing a strong civic presence through either an ensemble of buildings or a set of spaces created by the buildings. The major criticism of this Concept was that it created a large space that was not grand ... The elevated plaza and the small structures flanking City Hall tended to choke off the building—"cut it off at the knees," as one Juror expressed it.



Design Concept III
Moshe Safdie & Associates, Inc.
Harvard University

Concept III, which eliminates Rexford Drive, treats the north half of the site as a whole, using the City Hall as a focus for a long reflection pool, tiered garden area and Cultural Facility at the northeast edge ... The Library, at the southeast edge, fronts on a view of the pool ... The Fire Department faces the west side of the Library, is on the original site, and retains the old tower ... The placement results in insufficient yard space for turning and repairs; it also may result in noise pollution for the Library. The Police Department ... is set at an angle to the Fire Station. One member of the Jury felt that Concept III excelled in the development of an architecture of meeting. The fine relationship between the axially located reflecting pool and the tiered walkways, which allowed the visitor arriving by car to see sunlight, sense the fresh air, and be instantly oriented, created a place that citizens could feel was their own—a place to meet others. Ultimately, there were other factors concerned with the specific performance of parking, architectural detail, location of utility lines, *etc.,* that mitigated against this scheme. However, it captured the imagination of the Jury as it established a centering device with an almost resort-like patina, reflecting well the locale, the citizenry, and the climate.

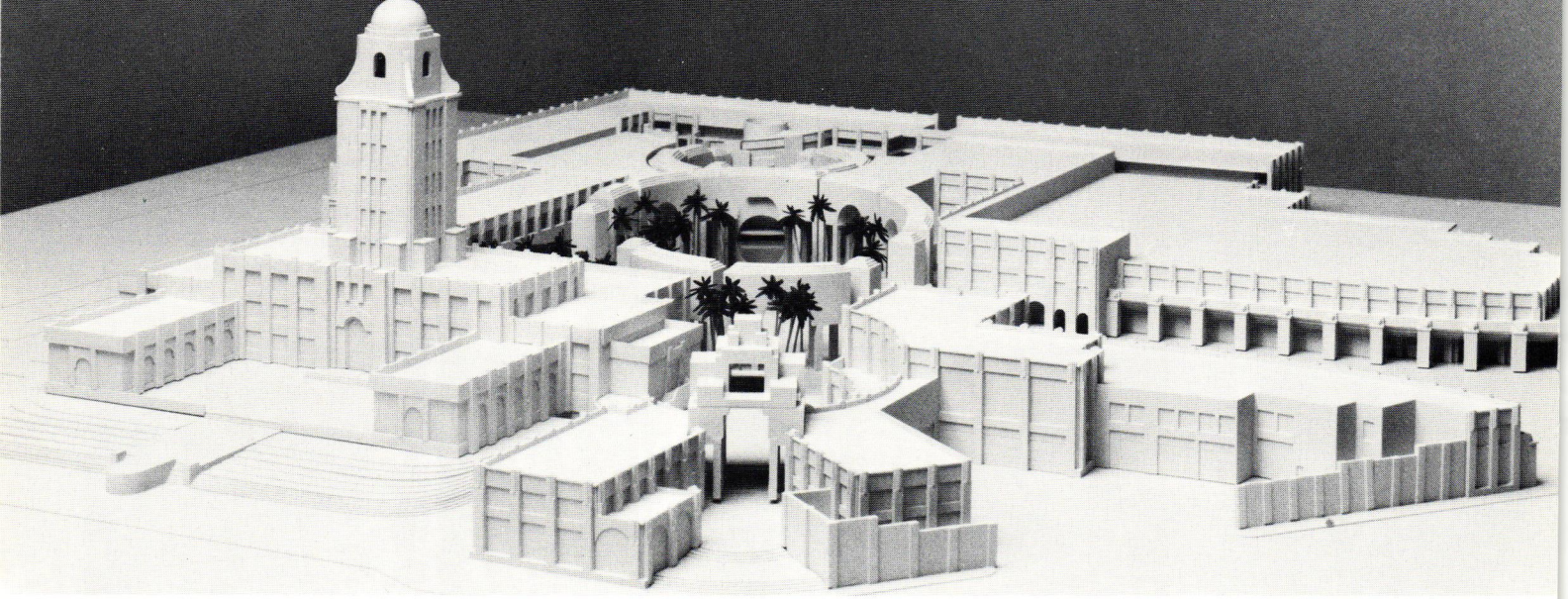


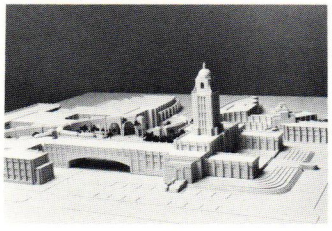
Design Concept IV
Arthur Erickson
Vancouver, Canada

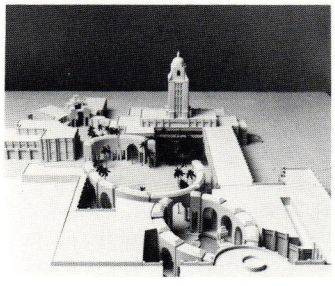
Concept IV closes Rexford and creates a vast complex of public gardens east of City Hall, terracing up the rooftops of facilities to house the various elements of the program. The scale of the idea is bold and appropriate, but the rigid geometries of its great gesture create a series of unresolved and probably unresolvable conflicts with elements of the program and circulation. The dominant formal idea is a horse-shoe shaped ring of terraces with a diagonal cut from the terraces to the former Rexford right of way. The existing fire station is replaced with a new cultural facility connected to the Library on this diagonal axis. This configuration allows City Hall to form the edge of public gardens with a new monumental axis centered on its tower stretching east ... The rooftop terraces ... contain a series of small formal gardens. The Jury felt that these spaces would be agreeable if a little surreal, but that they are so remote from workaday circulation that they would be little used ... Underneath the grand geometries of the public gardens, parking, the Library, and the police and fire facilities are fit with considerable awkwardness and irresolution ... Though elements collide in strange ways, the character of the architecture and of the gardens show much polish and sophistication ... It seems, however, inconsistent that an architecture based upon a monumental expression of structure according to modernist doctrine would have no spatial reality that corresponds to the geometry of the structure.

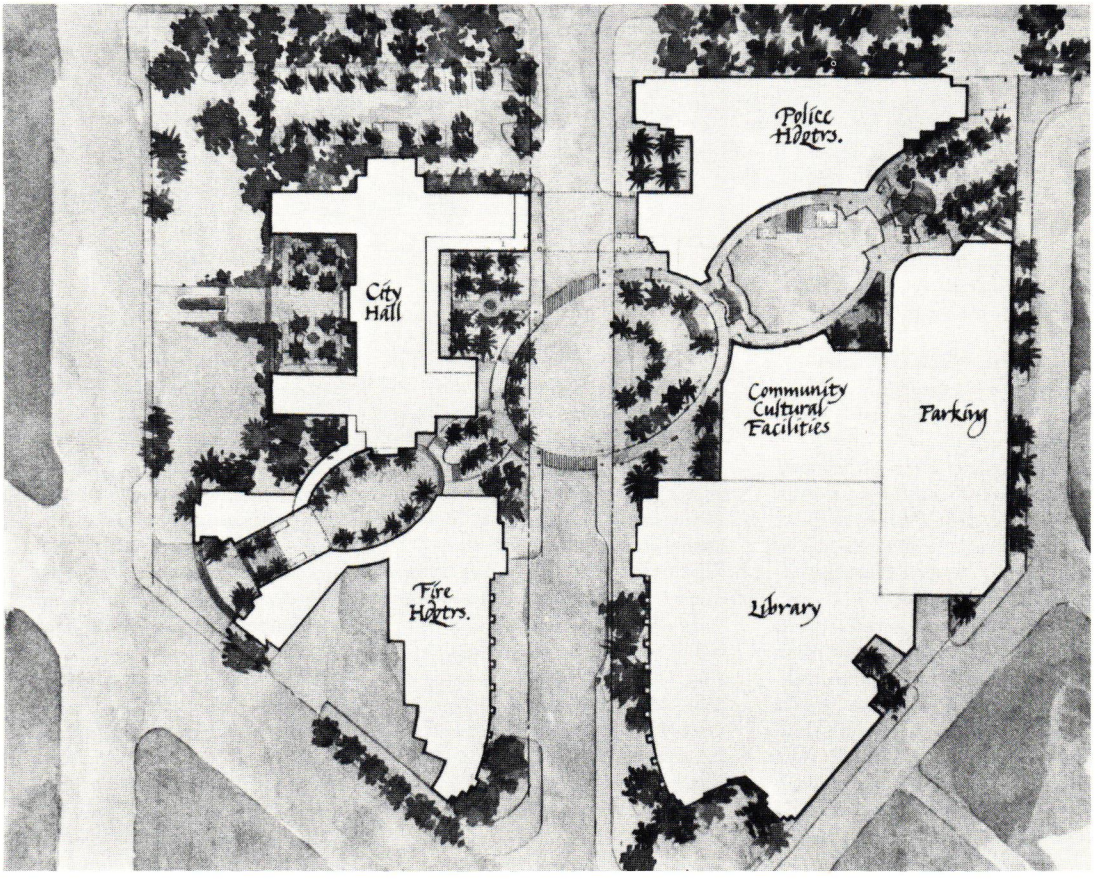
Design Concept VI
Charles W. Moore, Architect
Los Angeles

Public space in Concept VI is organized around three arcaded elliptical courts along a diagonal axis. Rexford remains open to traffic, passing through the central and grandest of the three courts, which serves also as the vehicular entrance to public parking. The new Police Facility spans over Rexford forming a monumental urban gate. At the south end of the site, buildings flanking Rexford splay to frame a most handsome view of the central court and bridge beyond. The automobile, here so central to the life of the town, has been made to engage the architecture romantically and joyously ... The elements of the program are arranged around the three courts with their arcades serving as the pedestrian linkages among functions. The axis through the courts connects with the main flow of pedestrians to the Civic Center from the business district ... The real virtuosity of this design is its resolution of conflicting geometries —the strength and coherence of its edges, the clear figure of the courts, the interiors which are both faithful to the program and inventive. This design does not treat the existing City Hall as an isolated and mummified object from some remote other culture, but considers it as part of a larger, still living, still vital organism ... Traffic layout is salutary with benefit derived from the provision of separate parking structures for each major category of user. Retention of Rexford and location of parking segregates peak hour through traffic from peak hour traffic generated by the Civic Center. Design VI is also carefully considered with respect to phasing, and permits the City to serve its immediate needs for Police and Fire facilities, separately or concurrently, without undertaking major utility relocations, street closures or the funding of the cultural and public elements of the Civic Center.



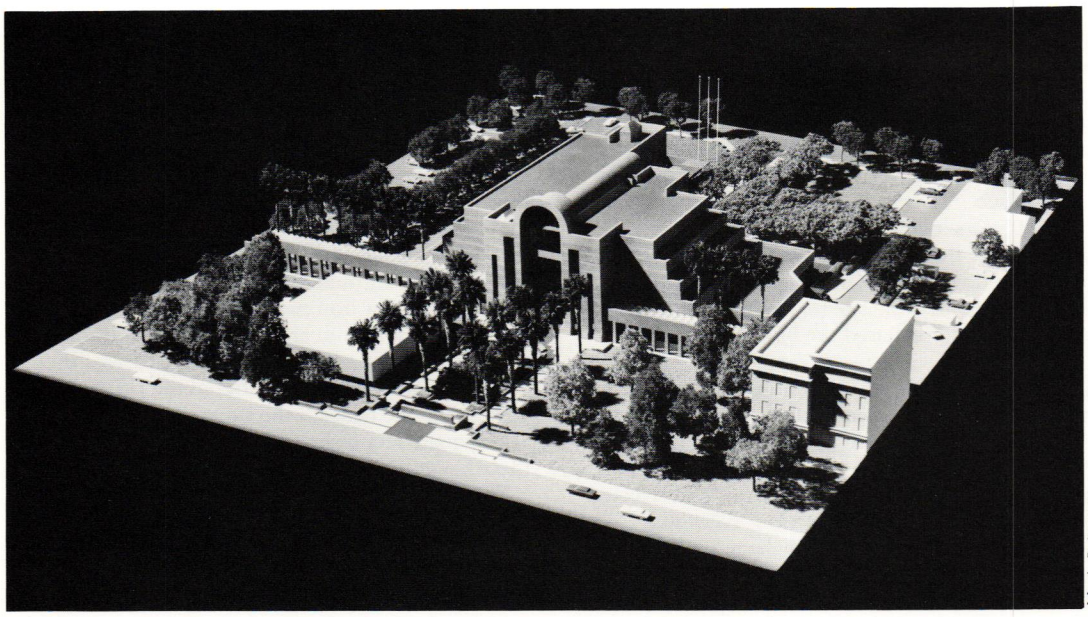




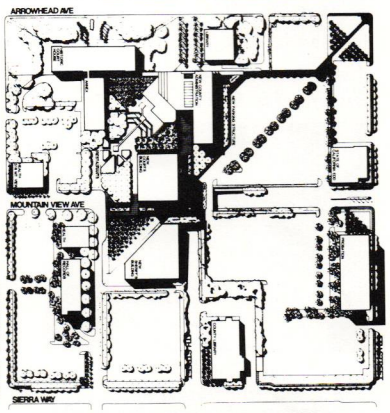


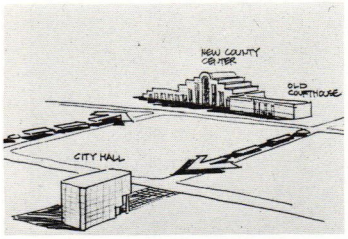
Monterey Design Conference, 1983

Hall of Administration, the County Center
San Bernardino
Kurt Meyer/Archiplan Collaborative,
a Joint Venture



Mark Schwartz





The new County Center will be the symbolic gateway to the San Bernardino County Government complex planned for the four block site. The closure of Fourth Street offers the opportunity to place the new 165,000 square foot Hall of Administration on the center of Fourth Street where it visually relates and reaches out to the historic downtown. Third and Fourth Streets thus become a couplet of two "governmental" urban design axes. Standing on Third Street looking west, a visitor sees the City Hall of San Bernardino. Standing on Fourth Street looking east, the visitor sees the County Center with the snowcapped San Gorgonio Mountains in the background. These structures create a sense of place and orientation in the urban design pattern of San Bernardino.

The Center is designed to enhance the interaction of the public with the process of governing. The plan allows participatory democracy by providing a central meeting place that brings the citizens and their government together to deliberate.

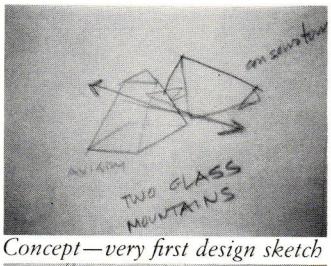
The entry level of the five story building houses the various public service activities and the conference center. The second level is occupied by a combination of administrative and service functions that have significant public interaction. The third level is occupied by administrative and service functions that have limited public interaction.

The County Council occupies the fourth floor. The offices of Board of Supervisors and the County Administrator's offices are located on the fifth floor. All five levels are served by high-speed elevators which are located in the main central space. This central space provides the focal point around which is grouped the office building block, the Board Chambers and the Conference Center. All of these elements are integrated into a single unified building mass. This project provides a building that is easily integrated into the present County Center Master Plan without significant alterations.

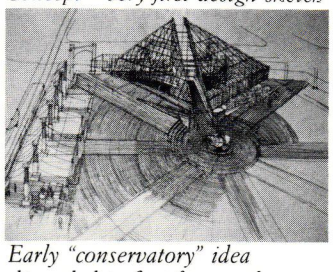
—Kurt W. Meyer, FAIA

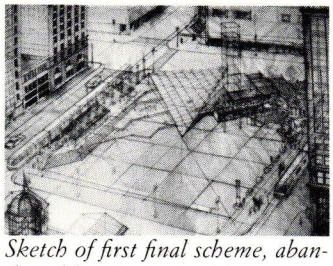
Client:
County of San Bernardino.
Architect:
Kurt Meyer/Archiplan Collaborative, a Joint Venture; Kurt W. Meyer, FAIA, principal in charge; Mark Hall, master planning; Ralph Dickson, project manager; Chong Kim, AIA and Francisco Behr, project designers.
Civil Engineer:
Rogoway/Borkovetz Associates.
Mechanical Engineer:
T-MAD; Nack & Sunderland, Consulting.
Electrical Engineer:
T-MAD Engineers.
Structural Engineer:
Johnson & Nielsen Associates.
Space Planning and Interior Design:
Michael Sanchez & Associates.
Landscape Architect:
POD, Inc.
Acoustics:
Purcell & Noppe & Associates.
Kitchen:
Kaschober & Sovich.

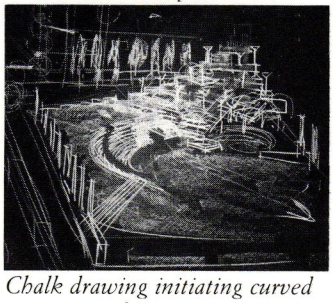
Pioneer Courthouse Square
Portland, Oregon
Martin/Soderstrom/Matteson Architects, P.C.

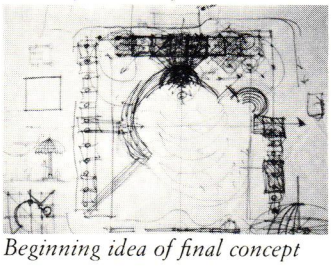


Concept—very first design sketch


Early "conservatory" idea discarded in first few weeks


Sketch of first final scheme, abandoned late in competition


Chalk drawing initiating curved stairway and ramp


Beginning idea of final concept

The gestation and birth of Portland's Pioneer Courthouse Square is a story rich in human endeavor. First came the dream, as in all great ventures, and the sharing of that dream by many people dedicated to the creation of a very special place for themselves and their children in the very heart of their city. Different points of view bonded in spirit and energy to bring about this dream—but not without a family feud.

The block that will become Pioneer Courthouse Square has played a central role in the development of Portland. It was the site of Portland's first schoolhouse, and later the grand old Portland Hotel. Although the Hotel was the pride of the city and the center of social activity for more than 50 years, it was razed in 1951 and replaced with a two story parking lot.

For 30 years, two levels of ugly, dirty parking lots occupied the center of Portland, until a comprehensive downtown plan was established. The plan proposed that the site be dedicated to open space. The city purchased the block, and a Citizens' Advisory Committee recommended that an international design competition be held to determine the future of Pioneer Courthouse Square.

The Design Competition was announced in early 1980. From 750 responses, 162 submissions were received. The Jury interviewed 10 firms and selected five finalists: Eisenman/Robertson, New York; Geddes, Brecher, Qualls, Cunningham, Philadelphia; Lawrence Halprin & Charles Moore, San Francisco and Los Angeles; Machado/Silvetti/Schwartz/Silver, Boston; and our Portland team.

The Bowsers

I decided to form a special team of local talent in various professions other than architecture. The team included Robert Reynolds, artist and photographer; Lee Kelly, sculptor; Terence O'Donnell, author and historian with the Oregon Historical Society; Spencer Gill, writer; and Douglas Macy, a landscape architect. Lovingly referred to as the "Portland Bowser Club," we gathered weekly with expensive cigars and good Scotch for review of the week's design efforts.

Our design approach immediately took a strong and wonderfully human direction. Early programming sessions centered on two major areas of concern: What are the uses and activities that make public open spaces vital, interesting places? And what are the most appropriate forms and materials that will relate to the richness of surrounding buildings and streets?

Design motivators began with my emotional responses to the nature of this place, its people, and my involvement here for over 20 years. I studied the shadow patterns and the patches of sunlight influenced by the neighboring terra cotta clad buildings. I remembered the stoa of Attalus in Athens that I had studied years ago, and I began to research ancient Greek villages and their public squares. The stoa and its use of shelter, edge definition and marketplace became a strong influence.

It became clear that Portland needed an urban square, an "American" square, not another park. But what was an American square, and how would Americans most likely use a public square? We carefully explored the studies of William Whyte for insights.

Other strong forces impacting the project were future (1985) light rail lines on two bordering streets, the recently constructed brick paved transit mall on the east boundary, and space definition created by several excellent buildings of the 1920s.

Portland's cast iron past was reviewed and contemplated. Maximum areas of sunlight and shaded areas were plotted. The grade changes across the site were considerable and offered the potential of enclosed space beneath the square itself. More than 7,000 square feet of leasable space became a part of the scheme.

We chose brick paving to extend from the square proper, across traffic lanes and sidewalks to the building facades on neighboring streets. Our purpose is to visually liberate the square from its constricting 200 foot property line, and to give the peripheral pedestrian and motorist the sense of being "in" the square.

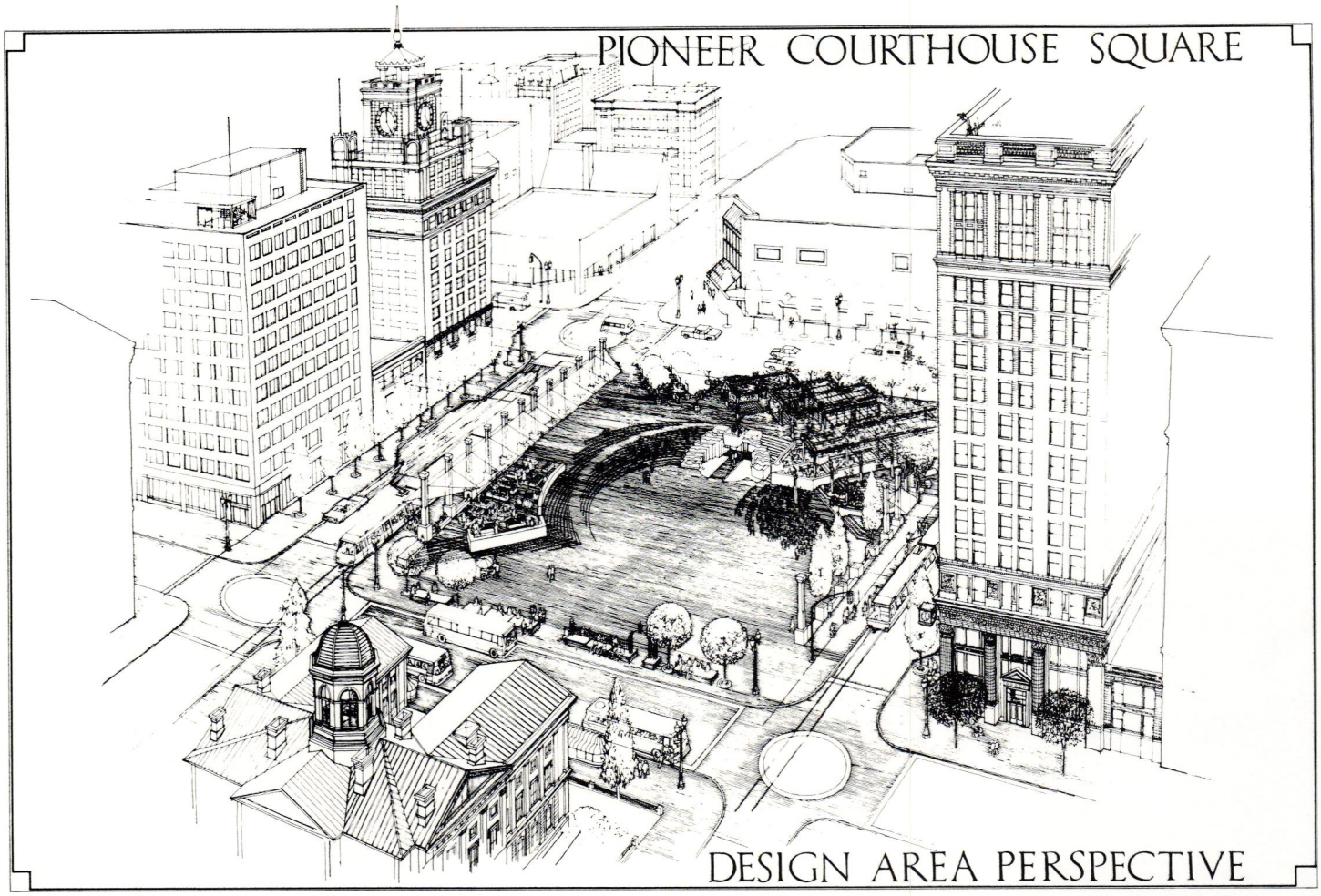
From the southeast corner, a line of 12 monumental columns extends west. These relate to the surroundings of the square in several ways: the level of their capitals to the building floor lines on the north and south sides of the square; in their classic character to four of the adjacent structures; in their glazed terra cotta sheathing to the facing material of three of these structures.

Proceeding clockwise around the square, we cross a raised terrace which, together with the monumental stairway, solves the grade change. A "stramp" is provided across the stairway for the handicapped.

The north end of this monumental stairway is interrupted by an arch of terra cotta with the entrance to an enclosed lower level area. The podium-like keystone of the arch will serve as a place of public address.

Behind the keystone stand tinted glass-covered pergolas, latticed in bronze and crowned with arbors

Client:
Portland Development Commission.
Architect:
Martin/Soderstrom/Matteson Architects P.C.
Landscape Architect:
Walker & Macy.
Structural Engineer:
Roger McGarrigle.
Mechanical Engineer:
Zanders Billings Associates.
Electrical Engineer:
Morrison, Funatake, Inouye, Andrews.
Project Managers:
Cameron Hyde and Marc Bevens.
Interior Design:
Martin/Soderstrom/Matteson, Karen Bowery.
General Contractor:
Island Construction Company.
Construction Manager:
Bob Griffith.



of climbing roses. These will house a food service area with enclosed and open-air seating. This area was chosen to take maximum advantage of the sunlight year around.

Below the pergolas, to the east, lies a small amphitheater, designed to serve as a canvas-covered orchestra or bandstand or, using it in reverse, as a seating area for small musical or stage performances.

The north side of the square functions differently. It is the disembarkment point for L.R.T., so there is little need for covered waiting areas. Here, the logic and order of the stoa concept dissolve. Four columns remain to support the L.R.T. cables and a small covered area. Some columns are missing, some have fallen selectively to provide seating elements, some are replaced by trees. This romantic, emotional association with classical ruins intimates the cycle of past, present and future. Progressing around the square, we come to an actual artifact of the square past: the wrought iron gate of the Portland Hotel, placed where it originally stood. Based on these design concepts, our interdisciplinary team was selected as designer for Pioneer Courthouse Square.

The Family Feud

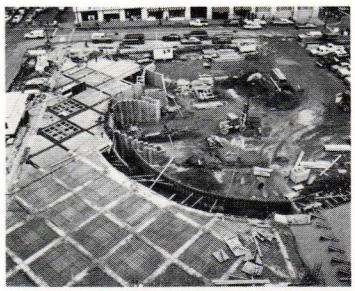
The Jury's decision did not ensure completion of the project. Lengthy council hearings and uncertainty about project funding presented a formidable obstacle. Political forces and lack of downtown business support nearly sabotaged the entire effort.

To draw attention to the project delay, we painted a stylized blueprint of the square over the entire site, with help from local architects and volunteers. The color chosen was, naturally, brick red. The project remained in the public's eye and a group of fine citizens stepped forward to raise the necessary funds. They called themselves The Friends of Pioneer Square. A strong uprising of public support combined with the help of several council members and the media gave the project the buttressing necessary for its ultimate success.

The Friends went into action with a marketing scheme to bolster public involvement. It was the right to "own" a piece of the square, to have your name stamped in an individual brick and placed in the square. As a result, 50,000 name bricks were sold, with a financial benefit of nearly $750,000.

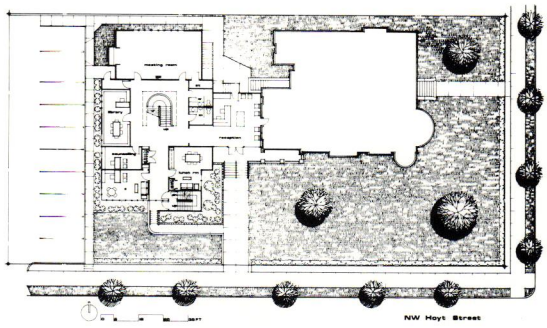
The project ultimately was bid at about $50,000 under budget. Construction is now underway with a completion date scheduled well before Christmas.

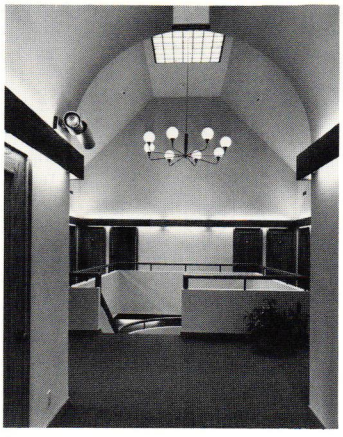
—Willard Martin, FAIA

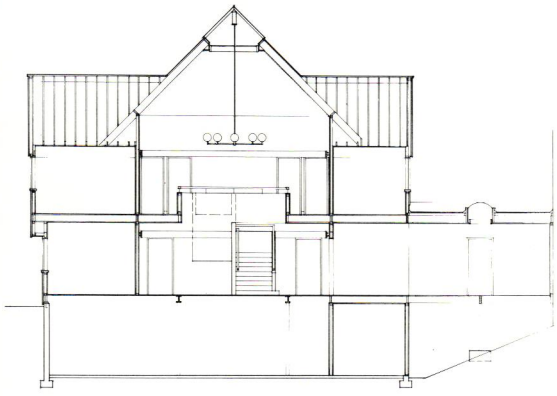


Project that is being constructed, illustrating jury's input after winning competition

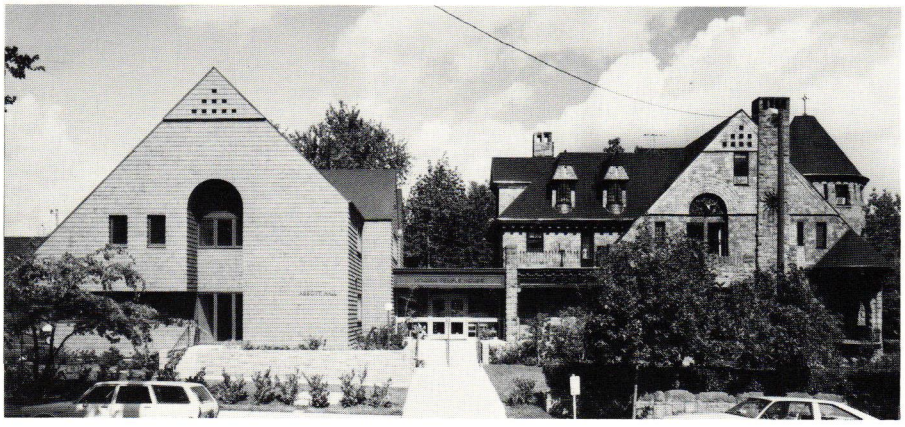
The William Temple House Addition
Portland, Oregon
Fletcher Finch Farr Partners







SECTION LOOKING NORTH



Abbott Hall is an addition to the William Temple House, originally known as the MacKenzie House, a designated historic landmark constructed in 1878 for one of Portland's early families. Located at the south edge of the city's northwest residential district, it is used by the Episcopal Laymen's Mission Society for social and psychological counseling with an annual case load of 18,000 people. The facility had been housed for the previous ten years in the original mansion.

Our program was twofold: to relieve wear on the existing facilities not originally designed for such intense public use, and to provide additional counseling and meeting spaces. The addition replaced an adjacent garage and two burned-out Victorian residences not deemed salvable.

The building entrance was relocated to front on a park and elementary school across the street in order to afford a visual continuation of the existing structure and to provide a central tie between the addition and the imposing older building. The entry further reorganizes the previously confusing circulation system and provides much needed control and security.

The existing building had no provisions for the handicapped in any of its spaces. The addition provides a handicapped entrance with a buzzer system at the west end. All facilities on the first level—meeting rooms, library, toilet rooms, counselors' offices, waiting and secretarial—are designed for handicapped access.

The two story addition groups the rooms around a central skylit stair and invokes the residential character and general forms of the original structure without attempting to duplicate the ornate detail of the interior and exterior.

The existing building is a wood framed structure finished with sandstone ashlar and slate shingles. The addition, also of frame construction, is sided with cedar shingles stained to approximate the color of the stone and is roofed with black asphalt shingles to match the existing slate. These materials reinforce the unity of the completed complex. A sandstone planter wall continues the line of the existing stone wall to tie the old and new together.

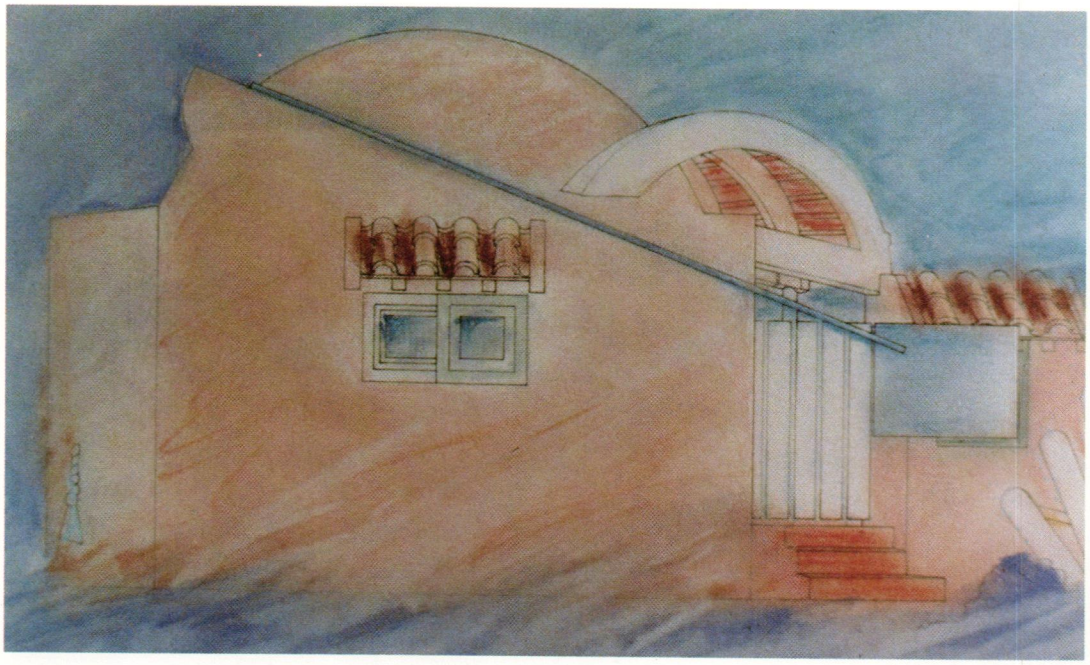
Interiors of the building are finished in thin-coat plaster with oak trim and doors. It is fire sprinklered throughout, employs an electric air-to-air heat pump HVAC system, and uses extra insulation and thermopane windows for energy conservation.

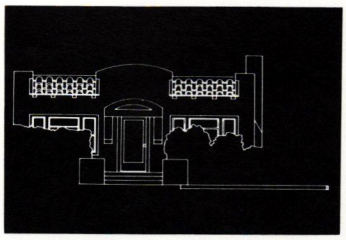
Abbott Hall was designed over a period of one and one half years with the input of the Board members, the staff, as well as Portland's Northwest District Neighborhood Committee and citizens of the area. The addition was a conditional use in the city's planning code. Many meetings with the local neighborhood groups and the Portland Planning Commission took place. After numerous revisions, final refinements, delays and appeals up to the City Council level, the design evolved to its final scheme to achieve unanimous backing of all concerned.

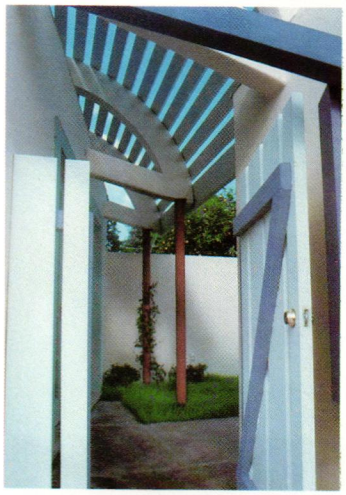
—*William L. Fletcher, FAIA*

Client:
Episcopal Laymen's Mission Society.
Architect:
Fletcher Finch Farr Partners.
Structural Engineer:
Van Domelen/Looijenga and Associates.
Mechanical and Electrical Engineer:
McGinnis Engineering, Inc.
Landscape Architect:
Mitchell & Nelson Associates.
General Contractor:
Bingham Construction.

A Pig With a Purple Eye Patch
San Diego
Pacific Associates Planners Architects, Inc.







"A Pig with a Purple Eye Patch" was our first project. The program was straightforward: increase the master bedroom, remodel the kitchen, and develop a studio out of a detached one car garage. Yet the site, context, existing plans and envelopes suggested a more complex problem.

The front of the house looked undeniably like a pig. Not an ugly pig, mind, you—it appeared quite dignified and matronly—but a pig nonetheless.

Being small, the house holds its posture by its formal, symmetrical organization. You approach it, rising slightly, on axis with its center. The windows properly flank the door, one on each side. Sun protection for the windows is provided by tiled awnings that look like painted lashes. The door is centered, covered by a classical bowed pediment, an appropriate suggestion for entry. Yet this glamorous emblem is wonderfully compromised by a screen door. To make a noble gesture to the street, the parapet swells slightly over the major axis. Behind the adorned face is a box, and around the corner is the garage.

Along with the programmatic requirements, we needed to garnish, color, and adorn the box. To give this decorative gesture substance and feeling, we chose to use the compositional elements of the front house, while allowing the inherent differences between the two buildings to provide identity and complementary familiarity.

The narrative of two pigs and their common formal language gives the two buildings a structural order. We tied the buildings together using an inflated picket fence for yard security. Staying with traditional building materials, a familiar scale and the right balance of indication, we fit within the neighborhood context.

The faces were used to evoke emotion and make a gesture of personality, as well as talk of frontality and street. The fence and trellis provide texture. The trellis, an eyebrow, gives sun protection.

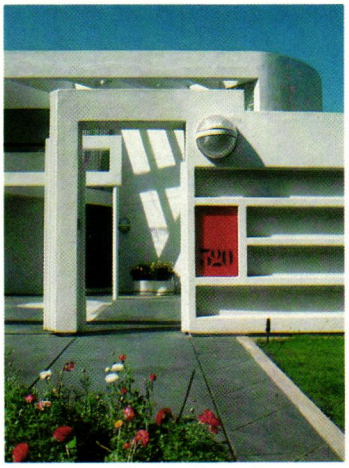
Although the narrative structures the design and provides joy, we were more interested in another level of understanding: how the building would be perceived. The Eye Patch describes the basic blocks of composition, line and shape. The skewed plan was reinforced by the trellis to create perspective and directional pull. The ears were set to imply gesture and rotation. There is implied symmetry, asymmetry, then symmetry again. Elements are twisted, precariously set, and articulated to set up imbalance.

Color is used carefully to articulate, organize, evoke feeling, and reflect light. Small incidents happen under the larger order, to create scale and give a sense of discovery.

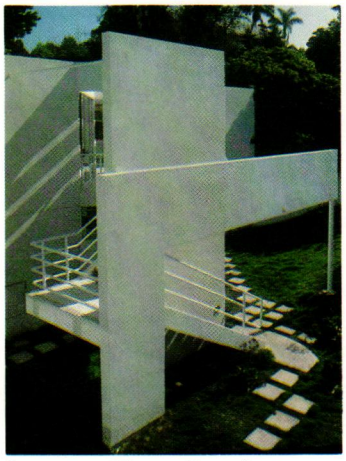
—Richard S. Yen, AIA

Client:
Glenn Harrison, DDS.
Architect:
PAPA: Richard P. Dalrymple, architect; James L. Leighton, AIA; Richard S. Yen, AIA.
Colorist:
Kathy McCormick.

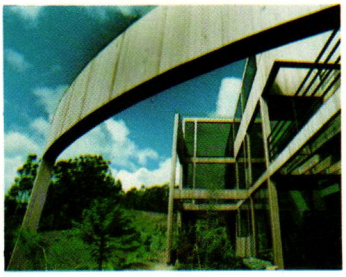
The Canvas of Architecture
Batter Kay Associates
Solana Beach



Serpentine House, Front Entry



Serpentine House, Rear Stair



Brenneman House

Serpentine House, Interior Pool

Our interest in architecture is in the making of space. Not scaleless space, but space that has an order, that contains, that is moved through as part of a spatial sequence—space that is uplifting in spirit and gets its measure from human scale.

The plan, for us, is the organizer; the section, the energizer. We use a consistent set of elements and assemblages to make space. The use of a consistent vocabulary in dealing with the assemblages has provided us with an evolutionary means of expression.

One of the elements of most interest to us is the wall. The wall, throughout time, has had symbolic, philosophical, and physical implications to all architects. It is the canvas of architecture.

Our interest in the wall has evolved over time. It began as a simple element and grew into a complex assemblage. Our early buildings were walls: walls that were eroded to make space, to mark entry, or view. They were solid forms with chunks removed. The voids were treated as elements and became as important to the architecture as the solids.

As we examined the wall and explored how it should respond to view and deal with adjacent exterior space (very important in southern California), erosion began to give way to transparency. Solid walls became window walls. As the area of transparency grew, the nature of the wall became less massive. The solid wall was cut away to reveal posts and beams. A transparency developed that allowed the architecture of the interior to move through the wall to the exterior, so that both areas became an integral part of the spatial sequence of the building.

Elements of the interior walls now could reach through as a part of the building's skin, to capture and to begin to define exterior rooms. The duality of transparency and the more solid, fragmented flying planes creates tension that never existed in the eroded wall.

The solids play against the thin skin openness. This contrasting was further studied in playing the open rail against the solid rail. The rail, the stair, low wall and curved/undulating walls became elements to us, and as elements, part of our vocabulary. These elements are used to project motion and closure, providing a link that ties together vertical and horizontal space in the same way that earlier elements reach into the landscape to capture exterior space. Combining the cuts (solids and voids) with other elements, the wall becomes an assemblage.

Assemblages become screens in the same way solid walls give way to transparency. As an integral part of the building architecture, the screen can be moved to control view in and out, provide privacy, and add a new depth to the building. The various assemblages of the wall were now combined.

These more complex assemblages take on a three dimensional quality. Sections are pulled away from the wall surface and become layered planes, creating lightness or density, depending on the nature of these forms. The compound layered wall allows for a play of light and shade, as well as a variety of texture. Through the complexity of the wall, the building becomes more expressive. The assemblage becomes the architecture.

—Michael P. Batter

WARREN RESIDENCE
Client:
Mr. & Mrs. Frank Warren.
Architect:
Batter Kay Associates.
Structural Engineer:
Fred Nerlinger.
Interiors & Landscape:
Batter Kay Associates.
Contractor:
Pat Timmins Construction.

BRENNEMAN RESIDENCE
Client:
Mr. & Mrs. Stephen Brenneman.
Structural Engineer:
Raymond Beckwith.
Contractor:
Concept 35.

SERPENTINE HOUSE
Structural Engineer:
Raymond Beckwith.
Interiors & Landscape:
Batter Kay Associates.
Contractor:
David Kay Construction.

Warren Beach House

Khedive Ismail's Palace
Cairo, Egypt
FHMB architects

The Palace was built on Gezira Island by Khedive Ismail to entertain Napoleon III and Empress Eugènie during the opening of the Suez Canal in 1869.

There were three different palaces within the building. The wing which housed the Imperial couple was a Second Empire extravaganza containing a throne room. The Khedive had the garden wing, which was in garish Parisian-Islamic style, and the third wing was sedate Louis XV. The grounds later became the Gezira Sporting Club, the center of fashionable Cairo for decades.

In 1974, I was sent by Marriott Corporation to Egypt to produce drawings for a new hotel on the site of the Palace. The Palace was a third class hotel near collapse. Water had entered the roof over the throne room, and the ceiling was about to cave in. Huge rats were running around the parquet and marble floors. The Aubussons were in shreds because some vandal had installed a sleazy nightclub over these remarkable carpets. (The rugs later were saved.) Several remodelings had ruined the Nile entrance and turned it into a truck dock and garbage dump.

The plan of the central Palace was simple. The outward facing grand salons were arranged "en suite." A wide hall connected them with hundreds of courtyard rooms used for servants. We ripped out everything except the fine peripheral rooms. These were restored.

Floor to floor heights were nine meters, about thirty feet. This allowed us to build a new four story building within the demolished Palace core. The new building is invisible, and contains all the workings of a modern hotel. We added a roof garden restaurant/nightclub.

A new bridge was being planned over the Nile with ramps that would raise the river frontage four meters above the ground floor. We reassembled bits and pieces of ornamental iron porches to build a new "Golden Porch" on the Nile. We raised the new porch floor level four meters—high enough to accommodate the bridge ramps. This was the only major change in the building exterior.

We designed two flanking towers. Rooms around the gardens were laid out around a trefoil courtyard. These rooms shut out the din of Cairo. We kept the towers distant from the Palace to give it breathing space: it was important that the Palace not look like a small set of rare books squeezed between two oversized bookends. The towers will be more attractive when the Nile-front balconies are dripping bougainvillaeas.

—Wm. Kenneth Frizzell, AIA

Client:
Marriott Corporation, Willard Marriott and James Durbin.
Architects:
Frizzell Hill Moorhouse Beaubois, San Francisco and Santa Barbara; Ahrens Di Grazia Frizzell, Rome; Sayed Madbouli, Cairo. Project architect for Marriott: Arthur Ferrante.
Project Supervisor:
Charles Allison, KBA International
Interiors:
Ed Dann.

A Traditional Design Approach

Robert Harvey Oshatz, Architect
Portland, Oregon

Except for the basic elements of design composition, I stay away from design theories. They seem too transitory and irrelevant to my work. Design theories tend to prejudice the mind. Without architectural theories, the process of designing a structure remains in its purest form, simply solving a given problem. Design becomes an integrative process of its key ingredients: program and environment. The program makes a project unique, and the seed to a solution is found within the problem itself.

The creation of a design is grounded in the interrelationship of three basic compositional elements—dominance, transition and identity.

Dominance occurs when one element or group of elements controls and brings the focus of attention to itself over the other components in a composition. In the Albany Office Building, the weathering steel with its geometric patterns takes on a dominance over the other elements around it. It is the controlling focal point, yet within itself, its geometric pattern is an exercise in transition.

Transition occurs when one element or group of elements makes a modulating movement with succeeding components in a composition. In the C.A. Bright Tower, the changing nature of the vertical to horizontal elements is achieved through a transitional stage where the heights of individual vertical elements step down into horizontal components. This modulating movement is related to the visual movement of the sun around the structure. Yet within all the transitional movement, there is an identity of repetitive floors in patterns of three.

Identity occurs when one element or group of elements has a similarity of character with one another. This may mean that the individual elements are identical or each element may have its own individuality. The interplay of dominance, transition and identity creates the building's sense of simplicity, rhythm and harmony.

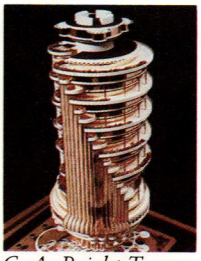
Simplicity in its purest form is achieved when all elements are in harmony, all parts are interdependent. Nothing can be removed without affecting the balance. Simplicity is no excuse for plainness. Ornamentation, when it enhances a design, is as much a part of simplicity as any other balancing element.

Rhythm gives a structure its basic measurement, its unique scale and human character, and its sense of movement. In the Great Horned Owl residence, there is a definite rhythmic flow as the structure changes from its rectangular vertical shaft to a flowering blossom at its top.

Harmony is a pleasing relationship of elements, a sense of agreement between color, texture, and manmade and natural environments. In the Killian residence, the relationship of the white aspen grove against the soft curvature of the black stonework and the branch-like structure of the wood elements in the glasswork, gives the building a harmonious sense with nature.

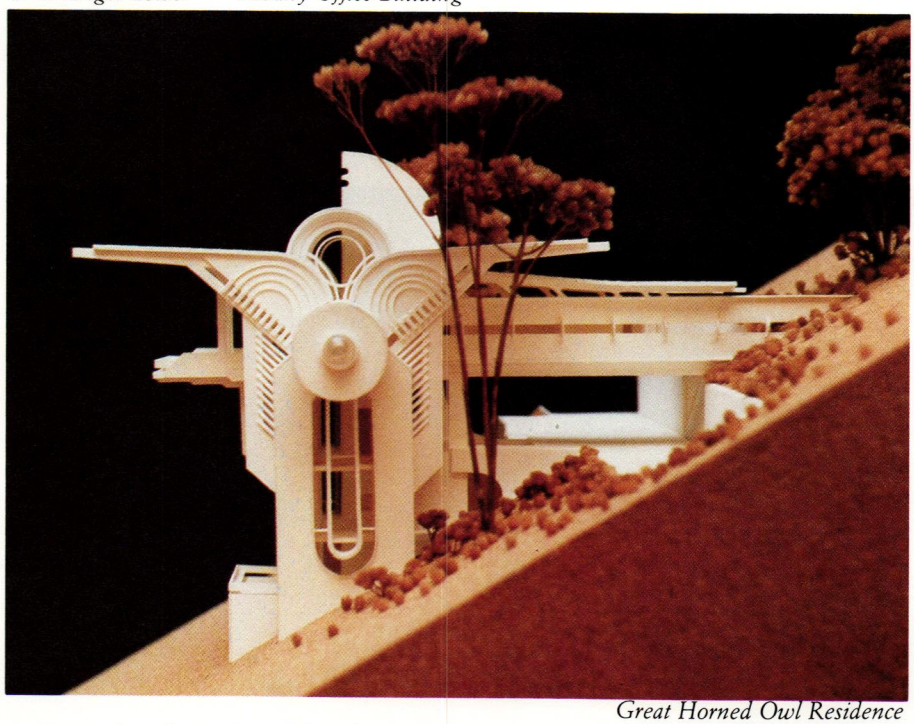
Architecture is a synthesis of logic and emotion. When carried to its logical conclusion, a traditional design approach produces very imaginative structures. It is only a question of how much of an artist we architects choose to be.

—*Robert Harvey Oshatz*

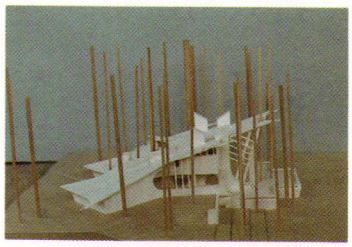


C. A. Bright Tower

Albany Office Building



Great Horned Owl Residence

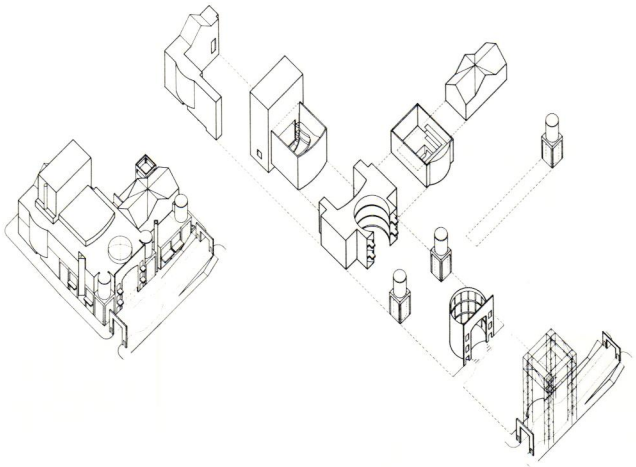


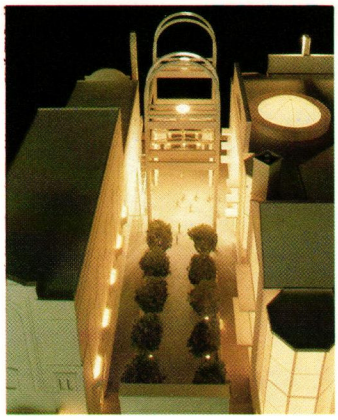
Killian Residence

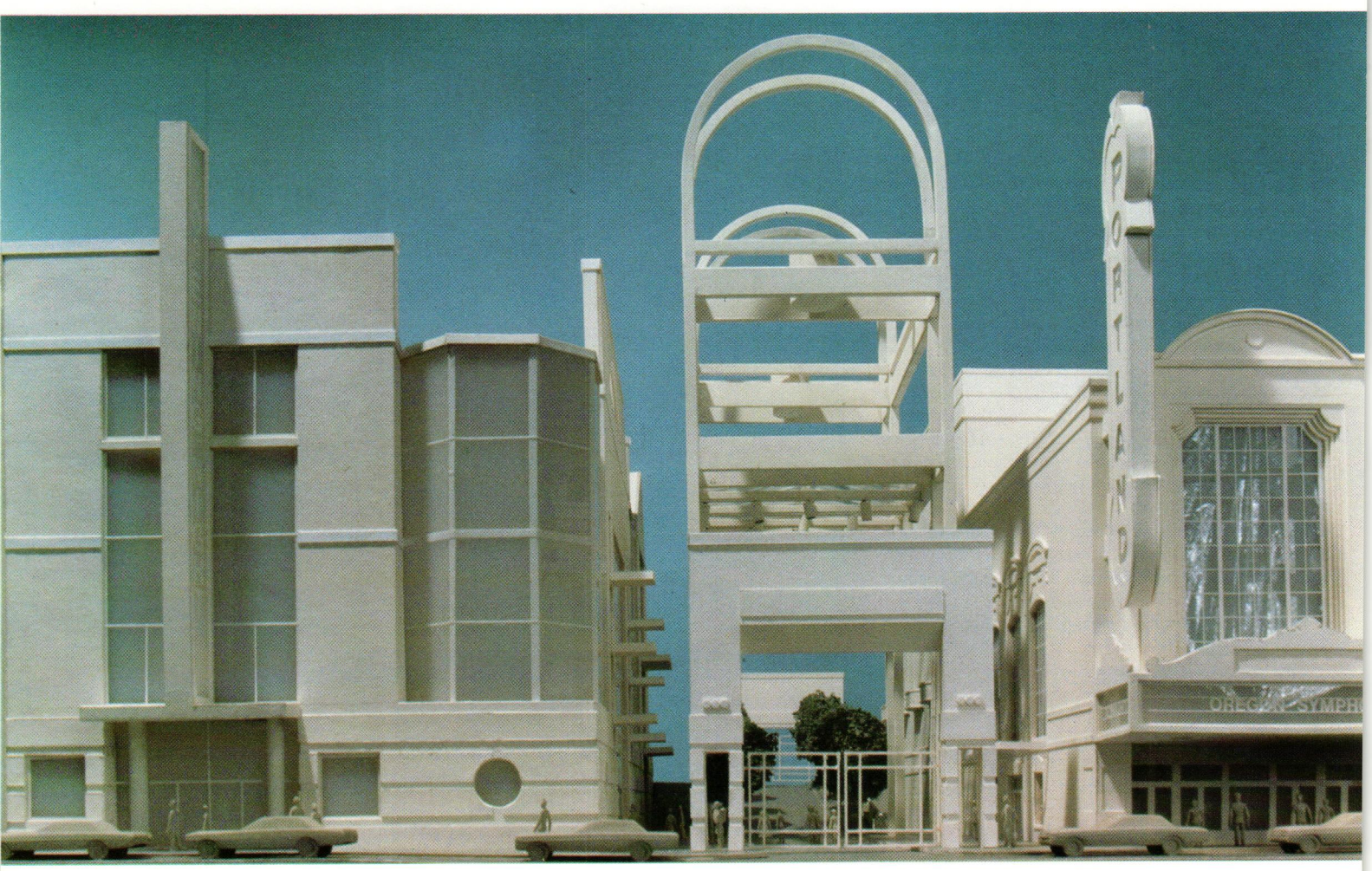
ALBANY OFFICE BUILDING
Client:
Ronald L. Smith.
Architect:
Robert Harvey Oshatz, Architect.
Structural Engineer:
R. T. Miller Engineering.

KILLIAN RESIDENCE
Client:
George Killian.
Architect:
Robert Harvey Oshatz, Architect.
Structural Engineer:
R. T. Miller Engineering.

The Portland Performing Arts Center
Portland, Oregon
ELS Design Group; Broome, Oringdulph, O'Toole, Rudolf & Associates; and Barton Myers Associates, a Joint Venture







Client:
Performing Arts Center Committee and the City of Portland.
Architect:
ELS Design Group; Broome, Oringdulph, O'Toole, Rudolph and Associates; Barton Myers Associates.

Theater Consultant:
Theatre Projects Consultants, Richard Pilbrow.
Acoustics:
R. Lawrence Kirkegaard & Associates.

Mechanical Engineer:
C. W. Timmer Associates/ with Syska Hennessey.
Electrical Engineer:
Interface Engineering Incorporated.
Structural Engineer:
CH2M-Hill.

Going to the theater, be it music, dance or drama, can transcend entertainment and become a major social experience. Bud Oringdulph, Barton Myers and I have this greater good firmly in mind as we lead our joint venture team and our consultants through the design process of the Portland Performing Arts Center.

Our team was the successful entrant in a unique selection competition which attracted some 90 entrants. The final stage involved a symposium in which, during three successive weeks, each finalist spent one week in Portland to interact with local theater groups and civic leaders. At the conclusion of each team's week, there was a public presentation of the team's thoughts about the program, design and site of the facility. The other finalist teams were Geddes, Brecher, Qualls & Cunningham, Philadelphia; and Philip Johnson & John Burgee with James Stewart Polchek, New York.

Our intention is to make a truly urban theater experience in the tradition of London and New York. We want the theater buildings to be part of Portland's fabric, not civic monuments. The activity of the lobbies and foyers is intended to spill over onto the sidewalk, investing the area with vitality.

The site and the building program are made to order for this approach. Portland's downtown is an intensely urban place. Its grid of small blocks with structures built tightly against the sidewalk convincingly validates the American tradition of town planning. The Performing Arts Center complex will occupy two of these blocks in the middle of downtown. These blocks front on Broadway, which is the historic movie theater and entertainment street.

One block is occupied by the 1927 Paramount Theater, designed by Rapp and Rapp of Chicago. The Paramount will be the home for the Oregon Symphony after a careful renovation of its interior and restoration of its exterior. Across Main Street, there will be two new theaters—a 900 seat intermediate theater for touring shows, repertory drama, dance and chamber music, and a 450 seat showcase theater for drama productions requiring flexible audience and stage arrangements.

Existing buildings will remain on our two block site. Next to the Paramount is the Heathman Hotel, which was built about the same time. Presently it is slated for renovation into a first class business hotel. The new theaters will share their block with the Congregational Church, one of Portland's most important historic buildings. We intend to design our new complex to fit within the context of these existing buildings. The Congregational Church particularly requires a formal response in shaping the showcase theater which will abut it. We are attempting to emulate the church's basic geometry and organization.

A key ingredient in the architectural scheme is the Main Street concept, as it relates to the experience of going to the theater, and in its role as part of the city's overall urban design. Main Street is designated as a major pedestrian street in Portland's plan, although it will continue to carry vehicular traffic. Within the Performing Arts complex, it will be a covered plaza and the arrival court to the theaters. New doors in the Paramount will open onto Main Street opposite the entrance to the intermediate theater. The canopy will provide shelter for arrivals and intermission activities. Gateway arches at each end of the block will define the Performing Arts precinct.

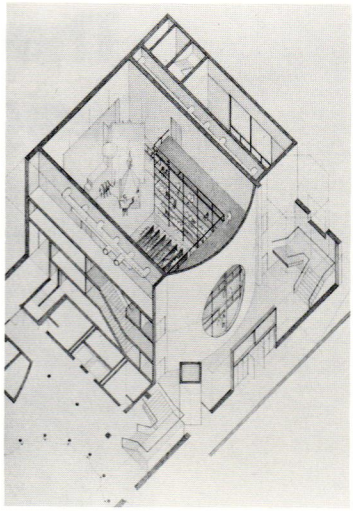
The Main Street entrance to the intermediate theater is in the form of a proscenium arch. Patrons passing under this proscenium arch will be like actors walking onto a stage. The lobby space simulates the form and scale of a classic opera house within which those who have entered can turn to watch new arrivals pass through the proscenium.

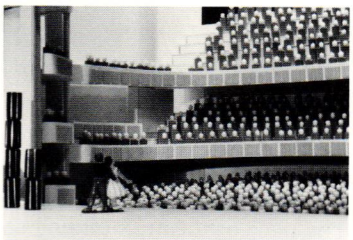
The new theaters, like the Paramount, also have entrances on Broadway and on Park Avenue. The Broadway entrances have the flavor of existing movie houses in the area with highly lit marquees and lively signs. The Park Avenue entrances will be quieter in deference to the nature of the cultural campus of the park blocks. Through the location and design of the many entrances, including stage door and service entrances, we intend that all sides of the complex contribute to the life of Portland.

The exteriors of the new theaters will use high quality materials common to architecture in Portland—brick and stone masonry. The buff colored brick on the existing Paramount will be mixed with darker bricks in patterns similar to those of the Paramount and the Heathman Hotel. These patterns will be divided by string courses of the dark basalt which is the major material of the adjoining Congregational Church.

The innovative performing spaces, designed with the help of Theatre Projects Consultants and Lawrence Kirkegaard, acoustician, coupled with the architectural concepts described above, will create a community resource that is rare for medium sized cities. If our intentions are successfully achieved, the Portland Performing Arts Center will be the most important urban theater complex in North America.

—Donn Logan, FAIA





Lively Communication through Theatre Design

by Richard Pilbrow

The performing arts—theatre, music, opera, dance—are surviving and even growing, despite current economic woes. The pace of theatre building seems to be on the increase as many communities, who a decade ago wouldn't have dreamt of such a thing, are now planning or building their new 'Performing Arts Centre.'

Those words can drive a practitioner of the arts into ecstatic elation or deep depression. On the one hand, a glimpse of more work for all. On the other, a vision of marble halls, civic monuments, overlarge auditoria, inefficient stages, skimped essentials or foolish luxury, expensive to run, lacking any feeling of welcome, warmth or humanity: an architect's temple to the muses that seems to defy its audiences to relax and enjoy themselves, and actually impedes the talent of its artists and their supporting technicians.

Architects commissioned to build for the arts start with enthusiasm. Such a project is a special challenge that combines subtleties of finance, technology, planning and aesthetics. Yet why do so many new performance spaces feel barren, sterile or just wrong? At the same time, why is so much exciting performance coming from informal, 'off-Broadway' type converted cellars, garages or brownstones? What must be done to improve new spaces—and to make them as enjoyable to be in as theatres used to be "in the olden days"?

Something fundamental is missing in modern theatre design. The theatre consultant previously has seen his responsibility to be technical, and the architect has expected from his consultant insight into the obscure world of theatrical techniques. Of course these things are important. They range from ensuring adequate spaces placed in a functional relationship to each other to the details of the equipment installations. But the theatre consultant must contribute more, must represent the art and practice of live performance.

A Galleried, Flexible Space

Until the early years of this century, public performance of music or theatre could only happen face to face—radio, records, cinema and TV were still to come. The artist *had* to share the same space as the audience. Theatre, opera house and concert hall design evolved over several hundred years. In order for all to enjoy the live performance, auditoria, whatever their seating capacity, had to be as theatrical, as intimate, as atmospheric, and as three dimensional as possible. This was achieved by surrounding the performer with his audience as compactly as possible and on several levels. Warmth, atmosphere and coziness must have been the buzz words in theatre design among our ancestors.

The famous Elizabethan theatre was derived from the galleried inn courtyard. In these bustling multilevel spaces, a platform would be erected and a play performed. Burbage, in constructing the first custom built theatre in London, followed this precedent. The Elizabethan courtyard theatre clustered its audience tightly around and above the actor. It was a broadly popular theatre, which was widespread in the 17th Century across France, Germany, Scandinavia and, perhaps earliest of all, in Spain. From there it spread to Mexico and the New World. Even theatres of China, Japan and parts of the Middle East are astonishingly similar and yet, presumably, grew from different roots.

How else *could* a building evolve that was only intended to gather people intimately together to share an experience of storytelling? In the open air, people cluster around a speaker. Children wriggle through to kneel at the front. As the crowd grows, the more distant and adventurous will seek a higher vantage point—a tree, rock, wall, or balcony. The courtyard evolved from such natural sources, but took the form derived from the building techniques of the age.

There have been many attempts to produce flexible theatres with different actor/audience arrangements within one space. The results range from mechanical monsters with moving blocks of seating, ceiling or walls, to the funereal "black box." Flexible and ready for anything perhaps, but usually incomplete in each manifestation, lacking in any atmosphere, highly expensive to operate, and with costly areas of "black hole" to fill with scenery.

The courtyard design makes the job easier. The galleries both define and frame the space architecturally. They also take a goodly portion of seats above the main floor, thus halving the problems of re-shaping and re-positioning the stage. The galleries can with ease surround arena, thrust or transverse stage. An end stage, with or without proscenium, can be placed at one end of the room with conventional orchestra stalls and, if necessary, orchestra pit. Finally, the whole centre space may be a flat floor for environmental theatre with actor and audience intermingled. Even with this most radical form of staging, the galleries provide the advantage of choice to an audience. They can 'join in' or 'sit this one out' dependent upon age, attitude or inclination.

The flat-floored space with galleries around possesses another sort of flexibility. It's a marvelous room for other events: an exhibition of crafts, a bridge tournament, children's playgroup, scout jamboree, or fund raising ball. There is evidence that the Shakespearian stage was demountable to allow bull-baiting.

The courtyard is the root form for most later theatrical development. It simply grew in size and sophistication. The thrust stage slowly retreated, as Renaissance scenic influence enlarged the role of visual spectacle, limitations of stage lighting indoors increased the need for a proscenium frame, and sheer eco-

nomics enlarged the auditorium. As the stage retreated behind the proscenium, sightline problems changed and balconies facing the stage became deeper. Iron cantilevers accelerated this trend into the later period of Victorian and Edwardian times, which bequeathed us the theatres of Broadway and London's West End.

The success of these theatres lies not in their gilt and decoration, but in the complex geometry of their architecture which creates a relationship between each and every spectator as well as with performers. They become places to enhance lively, human scale communication between people.

Equality, Fraternity and the Cinema

The arrival of the cinema coincided with a post-1918 social revolution. Cinema demands that its audience see (from the front) a large white screen filling one end of the room, rather than a mere mortal, about six feet tall. Cinemas and theatre both have rows of seats but there, perhaps, their similarity ends. (It's very misleading that a cinema is often called a theatre in North America.)

Cinema layouts demand no side boxes, simply a good frontal view, if possible on one level. An early 20th Century desire for a more egalitarian society seized on this with enthusiasm. In the vertically-stacked theatres, the central "king's box" has the best view. Let everybody then share this view. Elements of cinema design were applied to theatre design and, carried to extremes, over 2,000 people are trying to share this "perfect" view, with "perfect" sightlines and "perfect" acoustics, so beloved of architects and consultants in the 1950s. Add modern regulations and standards of comfort, and we have those overstuffed, barren, soulless, fan-shaped halls with blank walls, devoid of atmosphere, where from the furthest rows the actor appears a midget, under half an inch high.

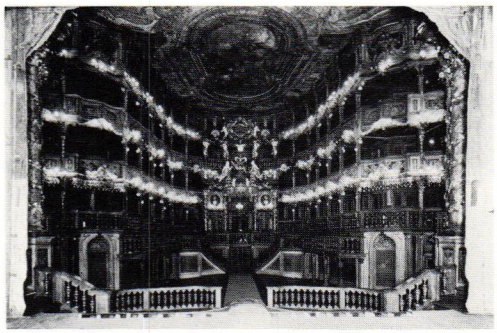
Perhaps we don't want to return to a theatre so planned as to split our audience by a class distinction that is irrelevant today. But is layering our audience vertically so awful? One hundred years ago, each level had separate entrance and exit systems to protect the gentry from the hoi-polloi. Today, vertical circulation in the foyers can enrich architecture and its audiences' appreciation. In a country where vertical circulation (by elevator) is so common, it is no great shame to go to the top. Among the audience, furthermore, several levels and angles of view toward the three-dimensional performers allow a range of choice and price that is both appreciated and needed.

Across North America, from Alberta to Miami, school and civic "auditoriums" have spread their dead hand upon the vitality of the performing arts. Of course, spiraling costs demand a sufficient seat count. But what is sufficient? How easy it is to kill the fragile growth of creativity by setting it in a desert—or a block of concrete. Sir Laurence Olivier declared in the early days of design for England's National Theatre that he was unable to act effectively to a person sitting further than 65 feet away. The audience for musicals, dance, opera and symphony can be seated at greater distances. But for each activity, the greatest restraint in seat numbers, balanced against economics, must be made for human contact and feel to survive.

If the performance spaces are of high quality, the finest artists will appear—in person. And if the building is intensely used by all the public, and if ingenious and intelligent development has maximized the life and income within the centre, success will result. That success will spread beyond the walls of the theatrical world. It will revitalize the city centre in which it is placed, enhance the community's way of life and its reputation, bring new people and businesses to the region and make those already there want to "stay home" rather than migrate to more "civilized"—fun—places.

We live in daunting times. Potential for major growth in the performing arts is there, but competition from the explosive expansion of video in all its manifestations is growing. New methods will—with ever improving quality—bring the world's best productions into our homes: The Metropolitan Opera, La Scala, the Royal Shakespeare's *Nicholas Nickleby,* and *E.T.* will be but a switch away. However, none have the uniqueness that live performance possesses—provided it is very good and experienced by all to its best advantage in intimate surroundings.

We in the arts must set our sights on excellence. It is probably easier to build a building successfully than to create that special brand of magic that success in performance requires. Furthermore, flexible use of an auditorium, even more intense



Opera House, Bayreuth

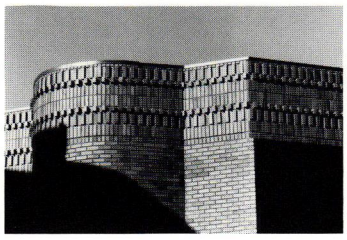
use, places new demands on artist and technician alike. But architecture can and must help. From that all-demanding myth of efficiency we must turn toward buildings that reflect that essence of live performance: its liveliness. Theatre and concert halls must provide that unique meeting place between living people where a vivid live performance can enrapture spectator and performer alike.

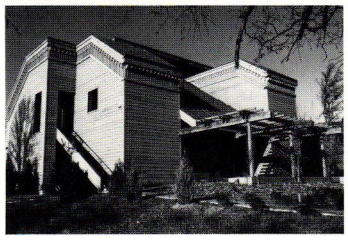
The famous director, Peter Brook, has said, "It is not a question of good buildings and bad: a beautiful place may never bring about an explosion of life, while a haphazard hall may be a tremendous meeting place. This is the mystery of the theatre, but in the understanding of this mystery lies the only science . . . it is not a matter of saying analytically what are the requirements, how best they could be organized—this will usually bring into existence a tame, conventional, often cold hall. The science of theatre building must come from studying what it is that brings about the more vivid relationships between people."

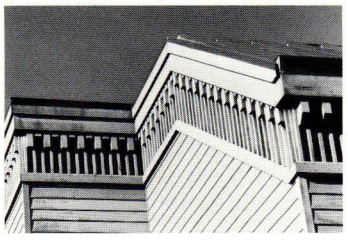
A clarion call for theatre architecture—but also a call of relevance to all architecture today. Theatre has often "held up a mirror to nature." Perhaps the need for human scale space for performance finds an echo in man's need for liveable space in life.

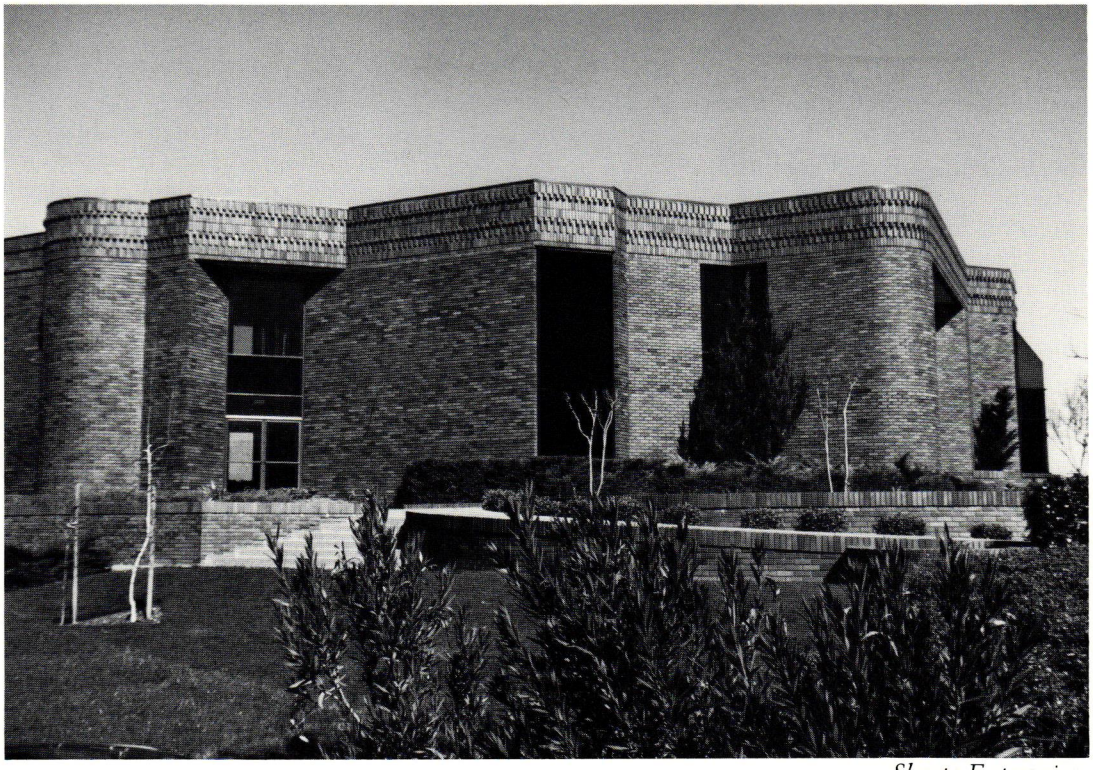
Richard Pilbrow is Chairman of Theatre Projects Consultants —a renowned theatre consulting organization with offices in Los Angeles, New York, Toronto, London and Mexico City. Theatre Projects has been responsible for over 100 projects in 25 countries, ranging from the Royal Shakespeare and National Theatres of Great Britain to the St. Lawrence Centre renovation in Toronto and arts centres in Calgary, Alberta, Canada; Portland, Oregon; and Beverly Hills, California. Mr. Pilbrow also designed and constructed what is thought to be the largest neon sign in Africa.

An Architectural Character for Redding
Woodward Nichols AIA









Shasta Enterprises

Redding consists of small-scale buildings with little architectural character. By designing small structures with the dignity, impact, and importance usually reserved for much larger buildings, we hope to give Redding an architectural character.

Shasta Enterprises, the developer of an office park on a cliff above the Sacramento River, wanted to set a style that would attract clients with the interest and capacity to enhance the site with high-quality structures and attractive landscaping. Other than interior space needs, the client imposed only two conditions: innovative design and a look of permanence.

The building is roughly triangular, with a long, glazed side facing the river view. The entry elevation faces south, and the large expanse of glass allows the sun to warm the interior brick walls and floor. A terraced waterfall and pond nestled under the winding staircase in the two story lobby space humidify the interior environment.

The building is integrated into its site through gradual terraced landscaping, where brick again predominates. The intrigue of this building results from the combination of curved and angular walls. That concept is carried throughout the landscaping, walks, ramps and steps.

The exterior consists entirely of brick, metal and glass. The flashed common brick relieves the massive forms and provides a sense of human scale. The fenestration uses butt-glazing to achieve solid sculptures of glass integrated with the forms of the building.

Located adjacent to the Shasta Enterprises Building, our own office provided an opportunity to show prospective clients how we could relate to an architectural context without copying or competing with existing structures. We made our building of wood, while maintaining the architectural character and extensive detailing of the neighboring brick building. Standard pieces of lumber were used for all detailing. The copper roofing relates to the copper flashing on the brick building, but was selected for its inherent indestructibility and the way it weathers to a warm patina, aging in much the same manner as the redwood siding.

—Les L. Melburg

Client:
Shasta Enterprises.
Architect:
Woodward Nichols AIA.
Project Architect:
Gene Nichols, AIA.
Contractor:
Larry Mack Construction.

gram also required a large computer center, crime labs, classrooms, finger print files, a bulk storage warehouse and a cafeteria. Happily, a number of program objectives coincided with our office objectives—a humane work environment, an energy-conscious building, and clear circulation. We saw these elements as potentially strong form determinants.

Some of the "big ideas" began to emerge from our two-day workshop. To create a secure yet humane work environment, we decided to bring the outside inside, with sheltered courtyards where the employees could enjoy the benign Sacramento climate without going through the security system. We developed a "Town Center" with a square large enough for a lunchtime volleyball game. Overlooking the square is the cafeteria and a generous sun deck. Side "streets" lead to small courtyard "neighborhood turfs" which can be claimed by the various bureaus within the department.

From the "crystal-clear circulation" requirement came a simple grid of east/west "streets" branching off a main north/south "street," with a public entrance at one end and an employee entrance at the other. This simple "tree" will enable the building to expand sideways without disruption to the basic building systems.

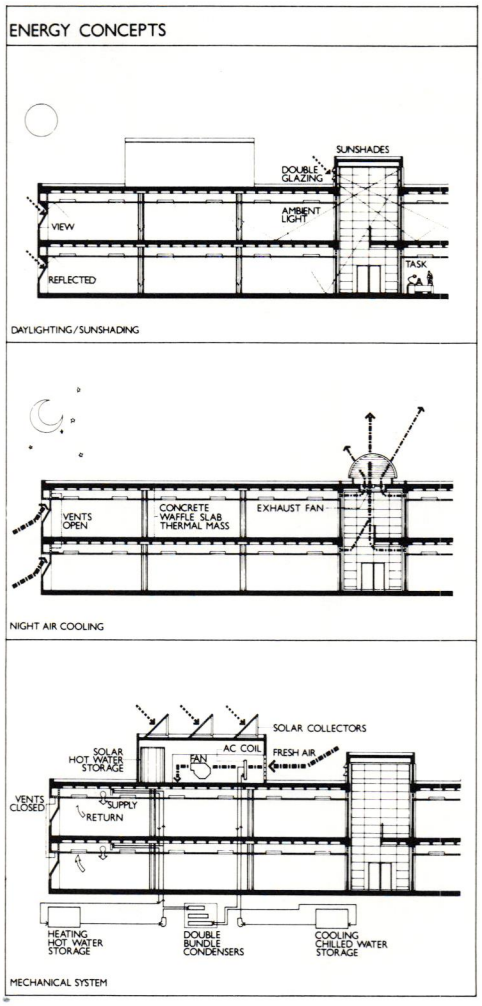
With the help of Fred Dubin, our energy consultant and a key workshop participant, the basic energy strategies were developed: an east/west orientation, high thermal mass, a compact plan, shaded south glass and good daylighting. We discovered that in the winter the entire building could be heated by the waste heat generated by the computers, and in the summer the building's thermal mass could be cooled by the cool night air coming up the valley from the ocean. Conventional night-air cooling systems use the HVAC ducts to force fresh air through the building. Our system is far more efficient because it uses the two story "streets" as lungs, with large, low-velocity fans which draw night air directly into the plenum space. The imagery of the circular fans developed into round windows in doors and shear walls, circular stair landings and a circular graphics system.

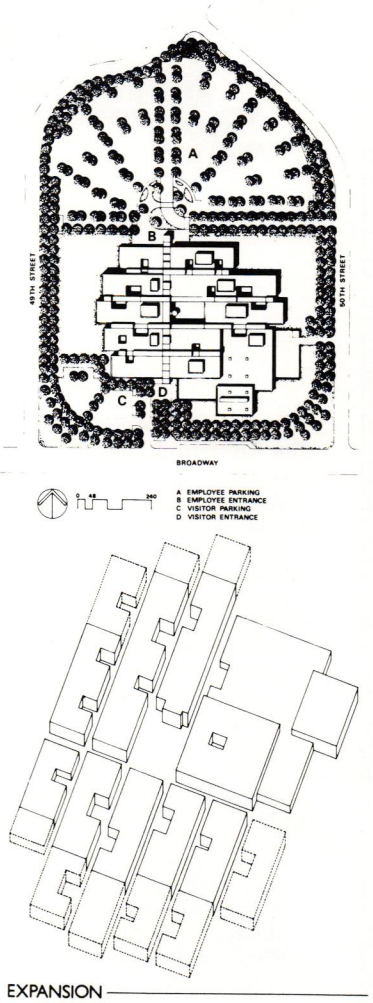
Other energy concepts include hot and chilled water storage, low-level ambient lighting, solar domestic hot water, double-glazing throughout, and a computerized energy management system. The projected energy consumption of our building is 38,000 BTU/sf/year, which is approximately one-third of what a conventional office building used to consume.

During design development, we built many study models to refine various elements of the building. A study of the exterior wall profile developed into a high band of shaded glass for good daylight penetration (it also provided an exterior soffit for the night air cooling vents) and a low view strip for the seated employees.

Severe budget constraints force us to a spare and simple palette of materials—a painted stucco exterior, scored concrete floors in the "streets," steel pipe rails, and a low partition system designed by us and built by Correctional Industries to screen all of the State's mismatched, re-used office furniture.

—James E. Caldwell, Jr., AIA





COMPUTERS

Great Expecta

by Eric Schreuder

Computer systems are introduced into architectural offices in the expectation that certain benefits will result, that the benefits will outweigh the costs, and that the benefit/cost ratio achieved will lead to an acceptable return on the investment that is made. The expected costs and how they are structured will be the topic of a future article. This article focuses on how to assess the benefits your firm can expect from computerization.

Increased Productivity

Productivity benefits are achieved essentially by replacing labor with capital. These benefits usually accrue in the form of reduced costs as a result of: reduction in total professional, technical and clerical person-hours required; reduction in the time taken to complete the project; savings in space required for personnel, desks, files, *etc.*; faster detection of problems before they become costly; and reduction of the routine, clerical tasks in professional and technical staff jobs, and possible replacement of some high-level jobs with lower-level jobs.

Reduced Response Time on Projects

A major benefit of computer use is the ability to complete a project in significantly reduced time. This may result in: the capacity to accept tight-schedule projects that otherwise could not be taken on; substantial reduction in eventual construction cost in an inflationary economy; the ability to redesign on short notice to take advantage of fluctuating costs of construction methods (*e.g.,* steel versus poured-in-place concrete); the capability to make rapid emergency design revisions, minimizing losses resulting from such emergencies; and faster billing to clients, and reduction of carrying costs of unbilled work-in-progress.

Enhanced Design Quality

The design decisions with the largest impact on building costs and quality are usually made early in the design process. As the process continues, it involves detailed refinement of an increasingly "frozen" concept, with decreasing impact on building cost and quality. Most of the design quality benefits of computer use will follow from software applied in the early stages of the design process. Look-

tions

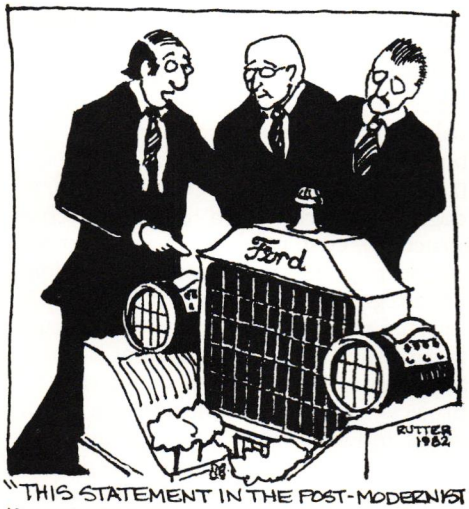
ing at a variety of computer-generated design alternatives and specifications at the beginning of the design process allows you to choose the most cost-effective solution, and reduces the possibility of costly surprises during later phases of design development or construction.

Design quality benefits are considerably less tangible, and less easily measured, than productivity and elapsed time benefits. But they do accrue in the form of a higher level of client satisfaction, and a better competitive position.

Reduction in Errors

Design and documentation of a building involves making a large number of individual decisions, coordinating the work of many different people, and producing a great deal of detailed information. Errors will occur with statistical regularity, in even the best-run design firms. The result is client dissatisfaction, re-doing work, lawsuits, diverted management time, and high errors and omissions insurance rates. So reduction in errors is an important potential benefit of computer application.

Computer use requires a systematic approach to the design process. The machine requires specific data, so your thinking is forced to be logical and precise, rather than general and vague. The computer helps you discover errors before you are on-site, and reduces the possibility of error due to incomplete or outdated information. Effective coordination among many disciplines is enhanced by having a central, correct repository of accurate information.



Dick Rutter, AIA, Bolles Associates

"THIS STATEMENT IN THE POST-MODERNIST IDIOM WILL BE MOST STRIKING AT NIGHT WHEN THE LOW VOLUMES TO EACH SIDE OF THE MAJOR MASSING ARE LIT!"

Enhanced Management Effectiveness

Computer systems can increase the effectiveness of firm and project management by: providing a more structured, controlled information flow; better monitoring of expenditures (for example, by automatically keeping records of time spent in different design development phases or in tracking how much time is spent in structural analysis); closer control of data access and security, which keeps project information separate and accessible only to authorized personnel; achieving greater budget and schedule predictibility by replacing relatively unpredictable human performance with precisely predictable machine performance.

Business Development Benefits

With increasing frequency, sophisticated clients, particularly large corporations and government departments, are making possession of adequate computer capability part of the qualification criteria in design firm selection. Also, many large organizations have, or would like to use, computer-based facilities management systems. A firm that can offer or can interface to such systems, both to obtain data on existing facilities and to provide machine-readable descriptions of new facilities, has a clear competitive advantage.

Smoothing Out Peaks and Valleys

One of the most conspicuous facts of life in a design practice is workload peaks and valleys, to which the firm's staffing must adjust. These fluctuations make it difficult to maintain staff continuity. But computer methods may smooth out this effect. Staff not working on projects during an economic downturn can be reallocated to database development and software research and development. The benefits from these activities show up on billable project work at a later date.

Building the Worth of the Firm

A very large part of the worth of a design firm consists of the technical and design knowledge residing in its princi-

pals and staff members. This is difficult to protect and retain. When people leave the firm, their knowledge leaves with them.

But databases and software developed within a firm can encode that knowledge in a tangible, protectable form. So an important, long-term effect of computer use is to build the worth of the firm through the accumulation of intellectual capital: valuable data bases, software libraries and procedures.

Assessing the Benefits

An important first step in assessing the benefits of computer technology is to determine the tasks that may benefit from automation. A simple, yet thorough master plan for computer development can help you avoid problems and deal realistically with the key issues in applying computer technology in your office.

A well-conceived master plan for computer capability development does not need to be extensive or elaborate, but it does need to deal realistically with the key issues. It is helpful to develop an immediate plan, covering a few months of start-up, with precise objectives and a detailed task list; a one year plan, with some broader objectives; and a five year plan, dealing with general long-term goals. All of these plans will have to be adjusted as you go along, but even a provisional plan is a better guide to action than no plan at all.

Examine Your Firm

The starting point for planning is a careful look at the firm itself. Who does what job? What tools are used to achieve a job? Where do bottlenecks exist because your staff lacks the correct tool or information? What information has to flow between staff members in order to complete a task? What does each task produce—a report, a drawing? How long does it take to produce this? Where does your staff spend too much time getting too little done?

Take the time to identify how your office works, outlining: the firm's size, volume of work, and growth projections; building type and scale specialization (*i.e.,* what sorts of projects are typical?); degree to which related functions such as structural, civil, mechanical and electrical engineering, space planning, and interiors are integrated within the firm; organizational structure (*i.e.,* a "vertical" structure of specialist departments or a "horizontal" structure of teams that carry projects through); established office standards and procedures; staff resources; and financial situation, plans and policies.

Track a few typical projects through the office, to see how various tasks are handled, how schedule and manpower allocations are set, and where the time

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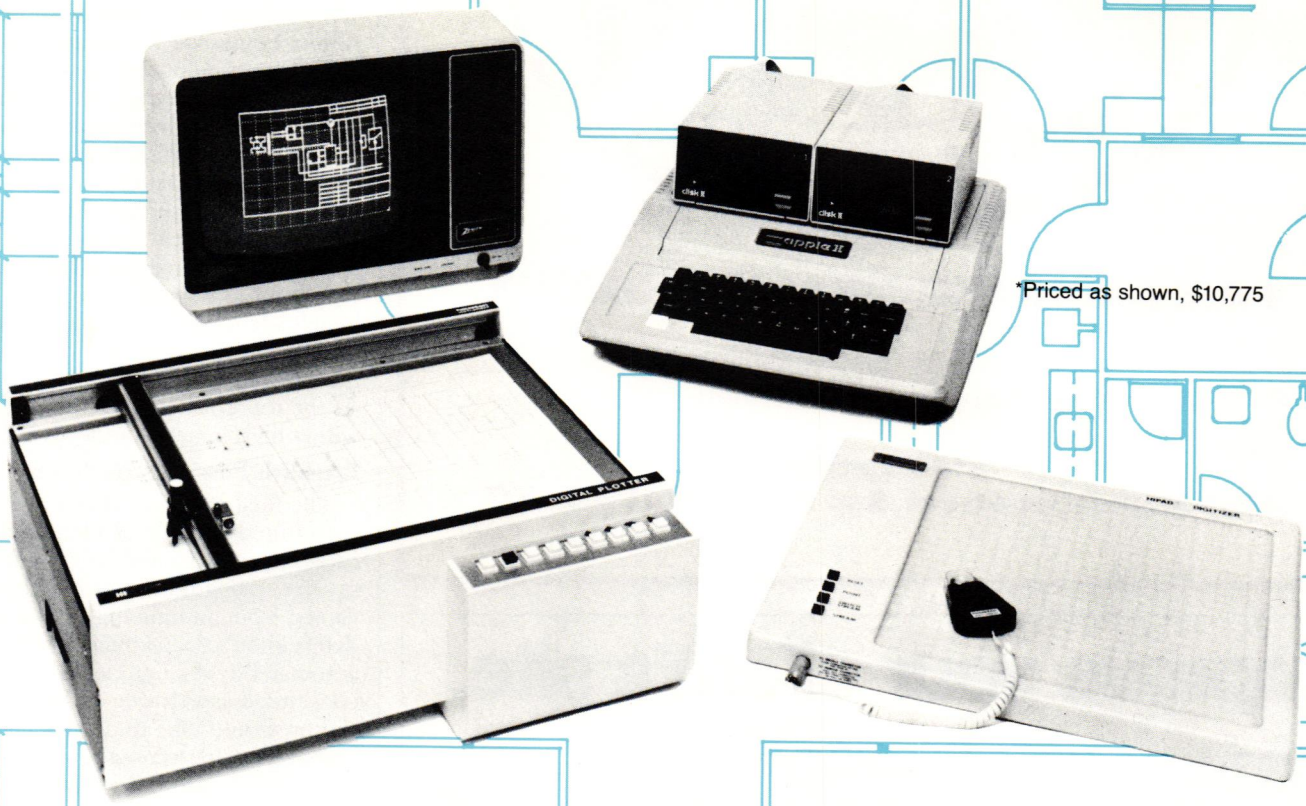

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and effort really go.

Examination of your firm will yield a list of functions that could be automated, such as job cost accounting, payroll, specification production, or drawing. Familiarize yourself with the automation options available in the marketplace by reading computer advertisements and talking with consultants and company representatives.

A cost/benefit analysis will help to develop a list of potential applications and to place them in a priority order. The goal here is to identify those applications providing the greatest return on investment, looking at the ratio of all the benefits (return) to all of the costs (investment) for a given application. This generates a list of applications ordered by the value of this ratio.

Applications having a high cost but also a large benefit (such as CADD) would show up relatively high in the list. Applications having low cost and low benefits (such as some database functions like word processing and data management) would show up in a similar place. At the top of the list would be the items with a high benefit and low cost.

Establish Possible Cost Savings

The final step is to determine whether each function that was identified as being capable of automation will result in a savings. Using the list of possible benefits gained from automating the function, determine the percentage of each that is automatable. As a guide, this can be considered as the time an inexperienced person would take to do this task, or perhaps as a percentage gain in efficiency. For example, are you paying a project architect to do a task a clerical could do with a computer?

Determine the time taken per year, per function. Does staff time for revising specs, for example, cost more or less than acquiring a word processor?

Then calculate the automatable time per year, the total time multiplied by the automatable percentage. The difference between this and the cost of automatable time will give you the amount of cost savings a computer provides.

Once you have identified potential applications for automation, and have assigned numbers to the possible benefits obtained from automation, the costs of automating these applications will rank them in terms of their return on investment. In the next article, we will discuss the costs of automation.

Eric Schreuder is an associate at The Computer-Aided Design Group in Santa Monica, where he is a consultant in selection and application of computer systems and a principal systems analyst and software developer. Mr. Schreuder is a registered architect in South Africa.

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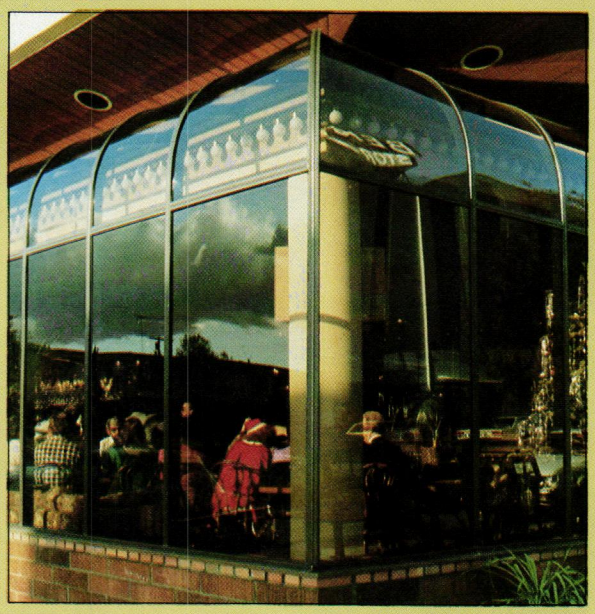

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