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New Face of Public Housing

High-rise ghettos are giving way to low-scale apartments of dubious design quality.

THE BALTIMORE SUN

ABOVE RIGHT: Lafayette Courts, a 1955 public housing complex in Baltimore, was demolished in August to make way for two-story row houses (inset).

This year, a revolution is taking place in public housing. Outdated high-rise projects are being torn down in record numbers to make way for smaller row houses and garden apartments. Towers in Newark, Charlotte, Tulsa, Philadelphia, Chicago, Atlanta, Baltimore, New Orleans, and Milwaukee have already been razed, with the demolition of hundreds more units planned for Denver, San Juan, San Antonio, St. Louis, and Washington, D.C. Altogether, 32 public housing authorities are now taking part in a $1.5 billion government-sponsored program to downsize public housing.

The Department of Housing and Urban Development (HUD) has wisely undertaken this effort to improve not only the architecture of public housing projects, but the lives of the people who inhabit them. "Learning campuses" is how HUD Secretary Henry Cisneros describes the new developments, where he believes tenants will live temporarily while taking classes or training for jobs.

Combining housing with education centers and job training programs is a good idea. However, HUD has set no standards for the design of its new buildings. The agency wants public housing to "blend in with the surrounding community," to mirror the way inner-city neighborhoods looked before postwar high-rises were constructed. But HUD doesn't spell out how this goal should be accomplished, leaving local authorities to decide. As a result, the quality of the most recent low-rise housing varies from tightly woven row houses to overblown suburban tract houses. Some of these designs appear no better than the vertical ghettos they replace.

Given its vast rebuilding program, HUD should have considered a federally sponsored design excellence program, modeled on that of the General Services Administration, to foster high standards for new housing. At the very least, HUD should encourage local authorities to consider more than Neo-Traditional and market-rate prototypes when planning urban blocks. Our inner cities need not be turned into the "olde townes" and suburbs that many of HUD's new projects sadly resemble. Contemporary row houses or even sensitively designed high-rises might be the right solution for some sites. HUD could also tailor units to the growing single-parent families and elderly populations who are public housing's largest constituency. Shared kitchens, health clinics, and community rooms would take their place alongside job training centers.

After decades of neglecting public housing, HUD deserves credit for building anew. But in the agency's haste to demolish outdated towers, the rare opportunity to revolutionize housing design has been lost.

Deborah K. Dietsch

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Letters

Public space collaborations

This letter is to clarify the roles of landscape architect Michael Van Valkenburgh and architect Stanley Saitowitz in designing and developing Mill Race Park in Columbus, Indiana (August 1995, pages 80-85). Michael Van Valkenburgh was the lead landscape architect responsible for the development of the park program and master plan. Michael laid out and located all structures, roads, lights, signage, sidewalks, and parking. Paul Kennon, who died unexpectedly in 1989, was the original architect of the park's structures.

Michael served on the committee, which included myself and several other community members, that selected Stanley Saitowitz to replace Paul Kennon. Stanley and Michael then worked as a team, a collaborative effort that resulted in a world-class park now being enjoyed by thousands of people annually.

Chuck W. Wilt, Jr.
Director of Parks and Recreation
Columbus, Indiana

Thank you for your excellent article on Tempe's artist-designed transit shelter projects (August 1995, pages 76-77). We appreciate the opportunity to showcase the work of our fine local artists, but we would like to add the invaluable contribution of collaborating architect Robbie Reid, who developed the design for the city's standard transit shelters and worked with each of the four artist teams on the design of concept plans for the shelters.

The city of Tempe strongly supports the concept of artist-architect collaboration in both public art and public works projects, as architects are uniquely qualified to provide the comprehensive talent to guide these special projects.

Michael Costello
Mary O'Connor
Public Works Department
Tempe, Arizona

Diluting the profession

"Building Commissioning" (June 1995, pages 123-129) discusses independent commissioning agents and the needs of technically complex buildings. It is my opinion that architects and engineers should be talented enough to handle projects without a lot of these specialty consultants. Doubling up has reached far beyond necessary limits.

"Commissioning" a building is what construction professionals should automatically be doing within normal services. A client is buying a building that will perform; a contractor is contracting to construct a building that will perform; and an architect should be smart enough to design and detail a building that will perform. Owners already view architects as egomaniacs who don't listen to their needs, don't perform services on time, and don't care about their budgets.

Please don't water down the profession even more by recommending that a third party be added to the design team, at additional fees, for the sole purpose of getting our buildings to work.

Haven D. Mankin, AIA
Oklahoma City, Oklahoma

Events

Exhibitions

LOS ANGELES. "Frank Lloyd Wright and Japan," through January 7, 1996, at L.A. County Museum of Art. Contact: (213) 857-6000.

NEW YORK. "Manhattan Civic Center Exhibit," October 20-December 2, at the Municipal Art Society. Contact: (212) 935-3960.

"Robert Moses and the Shaping of New York," through December 8, at the PaineWebber Art Gallery. Contact: (212) 713-2885.

WASHINGTON, D.C. Early growth of nation's capital, October 15-March 3, 1996, at the Octagon and Anacostia museums. Contact: (202) 638-3221.

Conferences

ATLANTA. "Marketing: The Lifeblood of Professional Practice," November 11 at Georgia Institute of Technology. Contact: (404) 894-2547.

NEW YORK. "Recycling Excess Health Facilities: Challenges and Opportunities," October 12, sponsored by AIA New York Chapter. Contact: (212) 683-0023.

"Stainless Steel for Architectural Applications," October 26-27, sponsored by Specialty Steel Industry of North America. Contact: (202) 342-8630.

InterPlan contract furnishings trade show, November 1-3. Contact: (800) 950-1314.

PHILADELPHIA. "Celebrating Cities," Urban Land Institute's annual conference, October 31-November 4. Contact: (800) 321-5011.

PITTSBURGH. "City Form and Architecture," AIA design conference, October 12-15. Contact: (202) 626-7482.

WASHINGTON, D.C. Metalcon International, October 24-26, sponsored by the Metal Construction Association. Contact: (800) 537-7765.

Competitions

Three competitions for Barcelona in conjunction with the International Union of Architects World Congress. Registration deadline: **October 31.** Entries due **April 30, 1996.** Contact: 011-34-3-301-5000.

Great American Main Street Awards, sponsored by the National Trust for Historic Preservation. Entries due **November 1.** Contact: (800) 441-2018.

KeyWest AIDS Memorial design competition. Entries due **November 3.** Contact: (305) 292-7722.

Theater technology architecture awards. Entries due **November 6.** Contact: (212) 807-7171.

AIA London/U.K. Excellence in Design Awards. Projects by Europe-based architects, as well as designs in Europe by Americans, are eligible. Entries due **November 24.** Contact: 011-44-171-930-9711.

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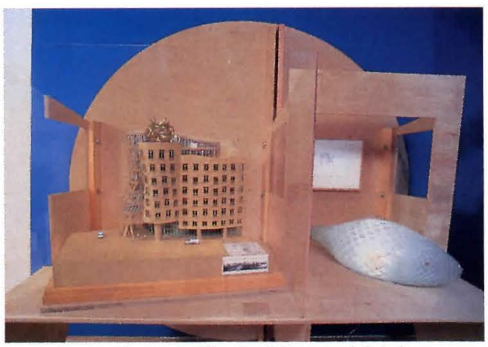
News



FRANK GEHRY: Prague office building and fish lamp.

AWARDS EXHIBIT: Sorkin design incorporates multimedia.

PAST WINNER: Gaetano Pesce's airport lamp and umbrella chair.

BEN BLACKWELL PHOTOS

Chrysler Awards on Display in San Francisco

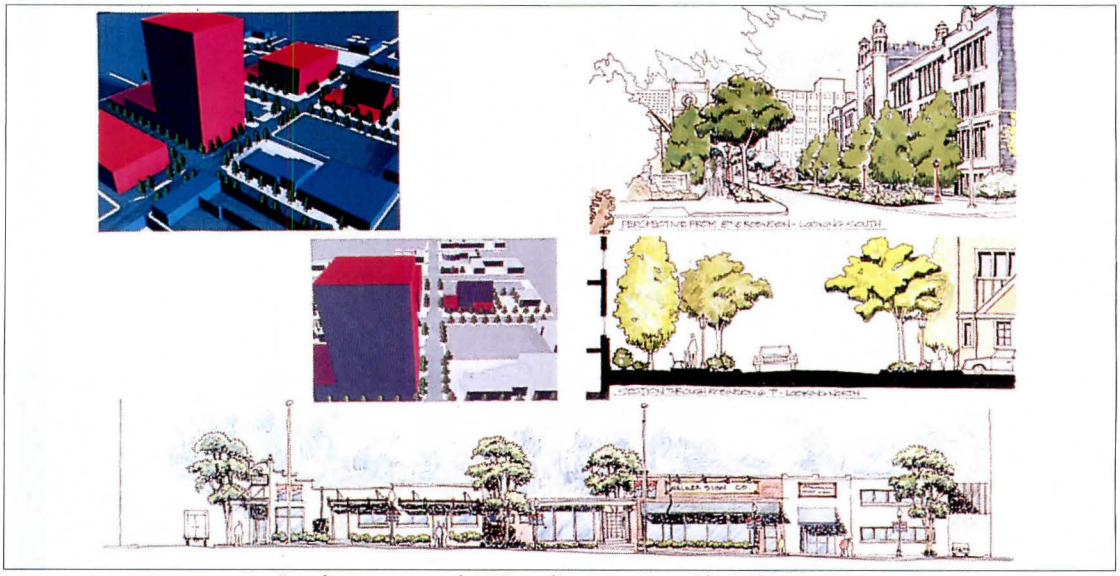
"Subjects and Objects," an exhibition of winners of the Chrysler Award for Innovation in Design, opened August 16 at the Mario Botta-designed San Francisco Museum of Modern Art. The museum's first major design exhibition is organized by new Curator of Architecture and Design Aaron Betsky and designed by New York architect Michael Sorkin. Chrysler awards recognize excellence in disciplines ranging from architecture to graphic design, and carry a $10,000 prize. According to Betsky, the jurors rewarded "designers seeking to define new forms and social relationships at the edges of physical reality."

Winner Frank Gehry certainly meets these criteria. For 20 years, Gehry has pushed the esthetic edges of architectural design with his wrenching reconsiderations of form- and space-making. In a more culturally critical way, so has designer James Wines of SITE, whose wry, poetic work was also honored.

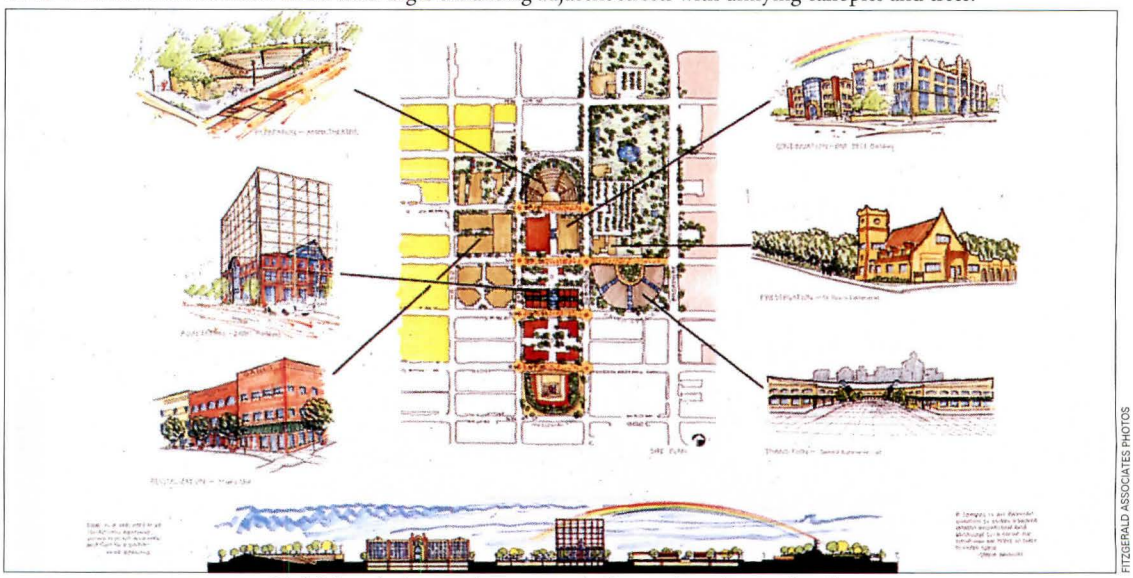
Similarly, honoree Ralf Hotchkiss was recognized for developing a prototype wheelchair for countries whose resources further impede their physically challenged populations. Computer-generated advancements were a jury favorite, such as the dazzling digital effects of Robert Greenberg's R/GA Digital Studios, whose recent Coca-Cola commercials bring Humphrey Bogart and other screen legends into the 21st century. Cryptographer Philip Zimmermann's PGP (Pretty Good Privacy) program allows anyone with a computer and a modem to encode information with absolute security. Graphics firm ReVerb was also honored for its presentation of multi-ethnic Southern California.

Included in the show are previous winners, ranging from the fantasies of Lebbeus Woods to Paul MacCready's breathtaking human-powered airplane, the Gossamer Albatross. Sadly, the contrast between Woods and MacCready points out the relative decline of architecture as a source for true innovation in design, and the continuing dissonance between leading-edge architecture and the pressing social conditions it so studiously manages to avoid.

Woods will get an opportunity to display more relevance in his earthquake-centered "San Francisco Project," opening December 16. Architect William Wurster will be showcased beginning November 17. Betsky's ambitious debut season suggests a promising new venue for architecture.—*Reed Kroloff*



SHORT-TERM RECOMMENDATIONS: Local team urges enhancing adjacent streets with unifying canopies and trees.



FITZGERALD ASSOCIATES PHOTOS

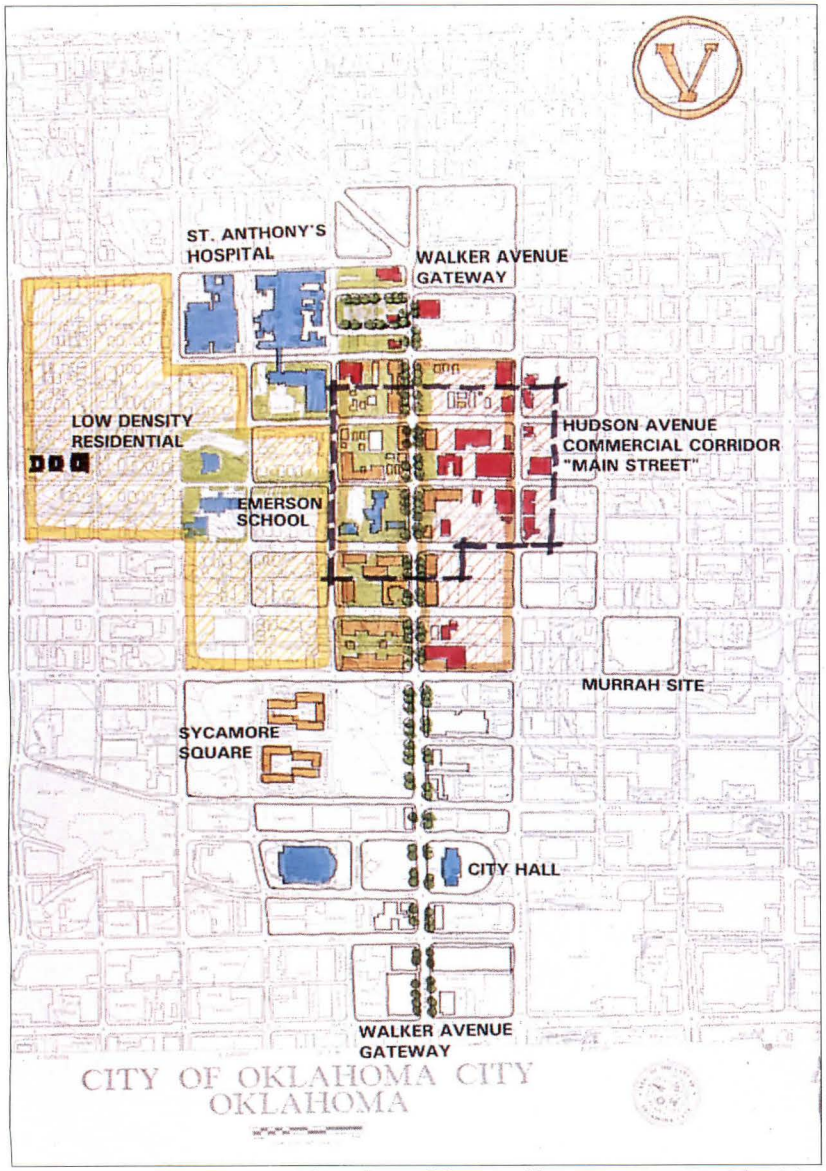
LONG-TERM RECOMMENDATIONS: Link Murrah site to urban centers by improving vistas and walkways.

Oklahoma City Charette Addresses Bomb Site and Downtown

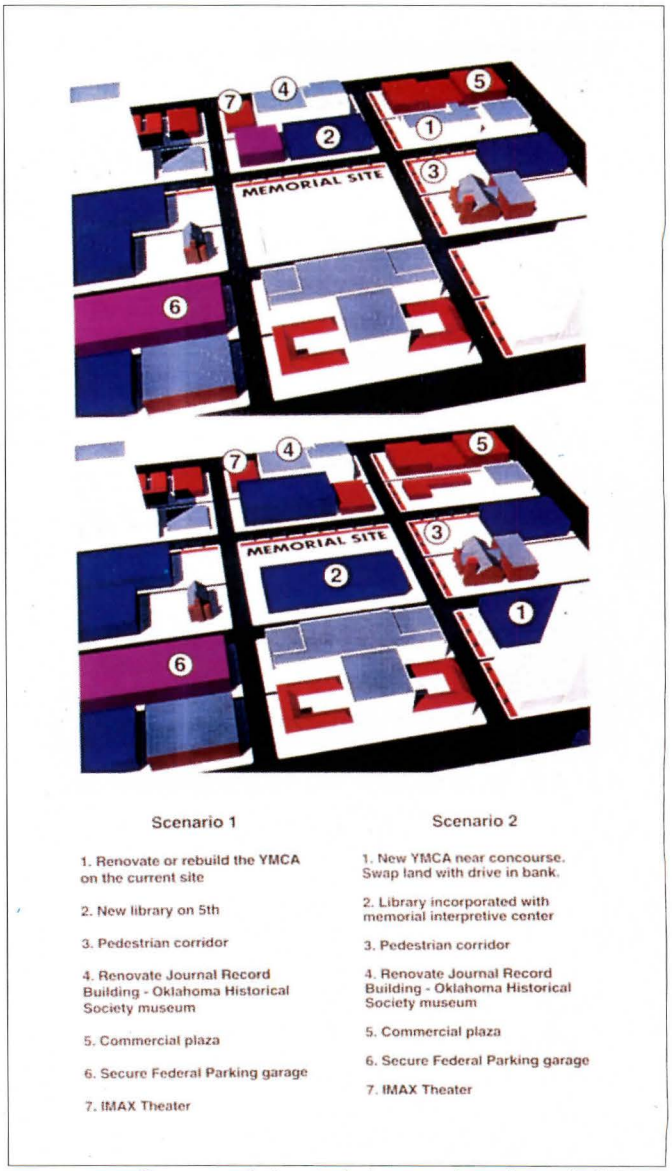
When a bomb exploded in front of the Alfred P. Murrah Federal Building on April 19 in Oklahoma City, 39 square blocks of the city's North Downtown district were shaken. "The media concentrated only on the gaping hole in the federal building," explains Oklahoma City Planning Director Garner Stoll, "but the damage was far more extensive. If you go to the site and walk around, there is a huge, 12-block area that is completely vacant." In fact, more than 300 buildings, 25 of which are listed on the National Register of Historic Places, were affected by the blast. These include churches, businesses, and a federal courthouse located directly behind the Murrah building, with which it shared a parking garage that has been closed since the bombing.

Designing a long-range plan for rebuilding North Downtown was the subject of a charette held in Oklahoma City on July 24 and 25. Sponsored by the Design Arts Program of the National Endowment for the Arts (NEA), the workshop addressed not only the bomb site, which will one day incorporate a memorial, but efforts to revive its surrounding neighborhood. Participants included architects Elizabeth Plater-Zyberk and Hugh Hardy; landscape architect Peter Walker; Denver City Planning Director Jennifer Moulton; graphic designers Michael Donovan and Nancye Green; and Jinni Benson, principal of Community Design Exchange. In preparation for their visit, six local teams comprising business and property owners, local designers and architects, and community leaders intensively studied the area.

Mayor Ronald Norick opened the design workshop, admonishing participants to "restore confidence and provide a road map for rebuilding" the city. The mayor was followed by a spokesman from each of the six teams, whose analyses stressed preservation and reuse of existing buildings and the importance of locating civic or public anchors in the area to



DOWNTOWN PLAN: Improvements along thoroughfares would encourage commercial activity.



MEMORIAL SITE: Recommendations include renovating adjacent buildings.

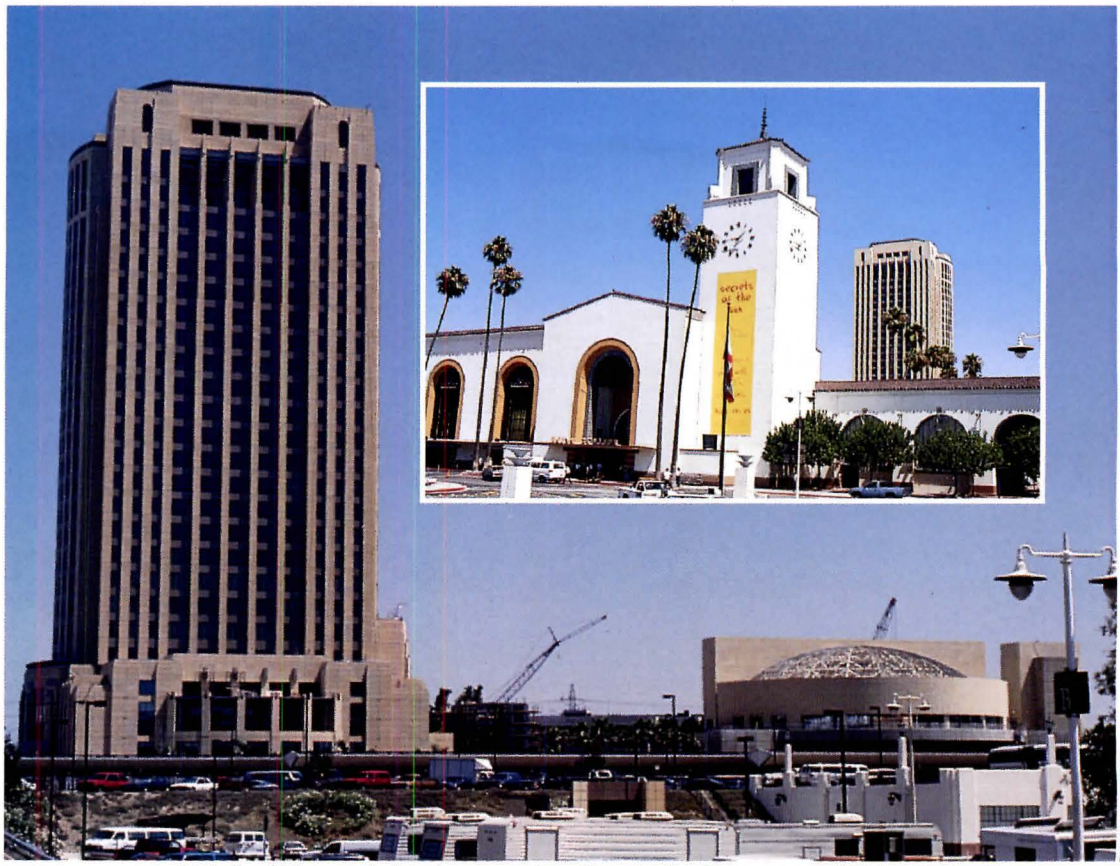
signal business owners that North Downtown is worth reinvestment. Workshop members then examined the area closely for two days, producing recommendations.

For the neighborhood surrounding the bomb site, the group suggested focusing rebuilding as tightly as possible on existing activities. They also urged rezoning the area for commercial, residential, and mixed-use developments (current zoning is for industrial use only); creating more public spaces; expanding transportation links throughout downtown; and incorporating the district into the ongoing master plan to upgrade the city's recreational and cultural spaces (ARCHITECTURE, June 1995, pages 36-37).

For the bomb site, the workshop members concluded that a memorial was outside their purview and should be discussed by local citizens, a process already under way. However, the charette participants agreed that a physical memorial on the Murrah site is extremely important to developing North Downtown, and they urged that a national or international competition be held for the memorial's design. They stressed that the competition should encourage participants to address uses for adjacent buildings, and that neighboring property owners be included in the process.

"Twenty years ago," reports participant Hugh Hardy, "there would have been a giant master plan to tear it all down and build a shopping mall. But rather than a grand new vision, we advocated a gentle prescription for recovery." The group's recommendations are being considered by Oklahoma City's planning department, city council, and property owners. A formal report, prepared by New York City-based graphic designers Donovan and Green, will be issued this fall.

In December, the Urban Land Institute (ULI) plans a similar workshop in Oklahoma City to address economic needs. And Congress recently approved a $39 million supplemental Community Development Block Grant for the city. Meanwhile, the NEA and the National Building Museum are cosponsoring "We Will be Back: Oklahoma City Rebuilds," an exhibition exploring residents' reactions to the bombing and involvement in the rebuilding process, including the NEA-sponsored charette. The exhibition, curated and designed by museum consultant Sharon Blume and architect Lynne Breslin, will be on view at the museum from November 17 to March 17, 1996. A day-long design symposium at the Building Museum, sponsored by the AIA, will examine security issues on November 17. And the museum plans a one-day symposium on the recovery in February that will include the charette and ULI teams, and representatives from Oklahoma City.—*Heidi Landecker*



TOM BONNER PHOTOS

MTA HEADQUARTERS: McLelland Vasquez-designed tower anchors Gateway development east of Union Station (inset).

Transit Headquarters Opens in Los Angeles

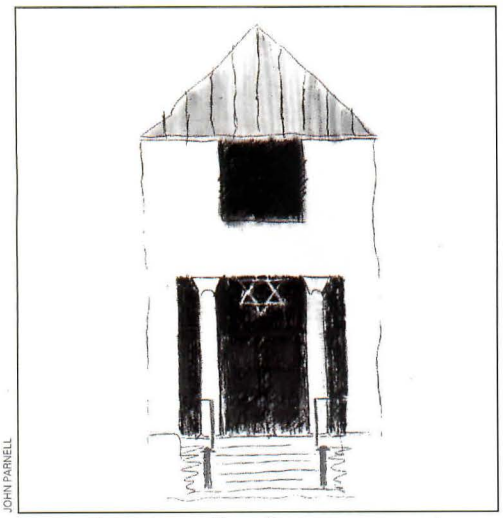
This month, the Los Angeles County Metropolitan Transportation Authority (MTA) moves into its new 628,000-square-foot headquarters designed by McLelland Vasquez and Partners. The 26-story MTA tower is the focal piece of the controversial Union Station Gateway development, which is nearing completion on a site just east of historic Union Station and north of downtown. The MTA inherited the Gateway project in 1993, when the transit agency was created through the merger of the Los Angeles County Transportation Commission and the Southern California Rapid Transit District, which originated the Gateway project in 1990.

The project was financed by a combination of federal, state, and local grants and substantial funding from the MTA. Catellus, a private development firm, contributed an additional $10 million for pedestrian-related improvements. Masterplanned by Ehrenkrantz & Eckstut Architects, the Gateway will join the new MTA headquarters and 10 million additional square feet of leasable office, hotel, and retail space to the East Portal, a station for bus, rail, and subway lines (ARCHITECTURE, August 1993, pages 93-99). The steel-and-glass-domed station, designed by Ehrenkrantz & Eckstut with RAW Architecture, will be linked to an underground concourse connecting a new subway platform with John and Donald Parkinson's historic mid-1930s Union Station to the west.

Both the East Portal and the MTA's high-rise are organized around a hippodromelike bus plaza with landscape design by Hanna/Olin. The whole complex will be enlivened by the most ambitious public arts project in recent Los Angeles history. Local artists are collaborating with designers and engineers in a percent-for-art initiative to create a series of bus stalls, paving designs, seating, and other elements.

The MTA is billing Union Station Gateway as both a civic center and an intermodal transportation hub for the Southern California region, but critics argue that the $145.5 million project represents yet another edge-city speculative development generated at the expense of downtown and the taxpayer. Despite the project's many amenities, its developers have had marginal success in attracting tenants, due to Los Angeles County's saturated commercial real estate market. So far, the only major tenant to have signed on is another government entity, the Metropolitan Water District, which is relocating from its current downtown address.

Scarcity of tenants is not the only controversial issue associated with the new complex. Each new MTA transit node throughout Los Angeles County is planned for low-density or affluent areas ripe for development rather than in areas of proven transit need. And the MTA is also scaling back the city's popular bus service (ARCHITECTURE, April 1994, pages 43-45), thus effectively cutting off mass transit services to large numbers of working-class Angelenos. As the largest complex developed in partnership between the public transit agency and the private sector, the Union Station Gateway project ultimately epitomizes MTA's flawed planning policies.—*John Edward Cramer*



JOHN PARNELL

SKETCH: Entrance recalls earlier synagogue on site.

SCOTT FRANCES / ESTO

TEMPLE ISRAEL: Facade reveals reductive approach.

SCOTT FRANCES / ESTO

INTERIOR: Clerestory in eastern wall illuminates rabbinical platform.

CONFERENCE CHAIR: Denise Scott Brown

DIVERSITY: C. Wing and M. Woo

Synagogue Architecture on View in New York

In 1988, the Temple Israel congregation in Greenfield, Massachusetts, commissioned New York architect M. Louis Goodman to design a new synagogue. An exhibition at the Jewish Museum in New York, on view until January 14, demonstrates how Goodman's wooden building sensitively combines the European and American heritages of its congregation through materials and form. On display are sketches and models by Goodman, drawings by Project Architect Norman Cox, black-and-white photographs of 18th-century Polish synagogues, and color photographs of the completed temple.

The roof of the new synagogue is double-sloped and tiered, fusing the dormered, pitched roofs of New England houses with references to the overhanging roofs of Eastern European synagogues. However, the new building is more than just an imitation of historical precedents. The reductive quality of its flush, cedar shiplap siding and the square aisle and clerestory windows mark the building as Modern.

One of two striking wooden models is cut away to show a section through the sanctuary. A single vault hovers reverently over rough plaster walls and bleached oak floors, and a clerestory bathes the Ark and raised rabbinical platform in light.

In this model and the other artifacts that are on view, the Jewish Museum's exhibition displays the same restraint and respect that Goodman applied to the synagogue's design.—*Jessica B. Dawson*

AIA Diversity Conference Held in San Francisco

Against the backdrop of a nationwide debate on affirmative action, in a state where the governor has made the issue a centerpiece of his presidential campaign, the AIA held its second annual Diversity Conference in San Francisco from June 11 to 13. Organized by AIA Program Director Jean Barber and the AIA's National Diversity Committee, the 200 conference participants were offered a choice of more than 25 lectures, workshops, and caucus sessions with topics ranging from "Shattering the Glass Ceiling and Picking up the Pieces" to "Multiculturalism in the Classroom." Keynote speakers included David Rice, chairman of the Organization of Black Designers; Ernesto Vasquez, principal of McLarand Vasquez & Partners; former Los Angeles City Council member (and former mayoral candidate) Michael Woo; and Winona LaDuke, program director of the Seventh Generation Fund's Environmental Program, a Native American advocacy organization.

Woo offered a specific and thoughtful list of tasks for the AIA to undertake to improve its diversity, warning, "There can be no compromise on affirmative action." Rice suggested that rather than various groups cutting increasingly narrow slices of the professional pie, "We must increase the size of the pie."

However, it was Venturi, Scott Brown and Associates Partner Denise Scott Brown's compelling remarks that set the tone for the conference. "I am interested in inner diversity...and learning how to draw strength from it," she offered when describing her own changing self-definition as both a woman and an architect, a Jew married to a Gentile, a young person and a widow, and a South African and an American.

Conferees challenged the profession and AIA to recognize, attract, and promote leadership more responsive to women and minorities, maintaining that all architects benefit from multiculturalism in design. But proceedings were long on rhetoric and short on proposals; discussions and lectures often seemed to dissolve into gripe sessions or testimonial contests. Former Diversity Conference co-chair and Art and Architectural Design Principal Stephen Glassman, however, believes the underlying message of the conference transcends these shortcomings. "Conferences like this are important," Glassman asserts, "because the profession needs to be aware that its own diversity ensures health and growth in a country whose demographics—and our clients—are becoming increasingly diverse." This awareness would be an appropriate point of departure for next year's meeting, which is scheduled to be held August 23 through 25 in Boston.—*R.K.*

Kenneth Walker, FAIA, *designer of retail space. Pioneer of interactive marketing. Innovator. And specifier of carpet made of DuPont Antron.*

On the Boards

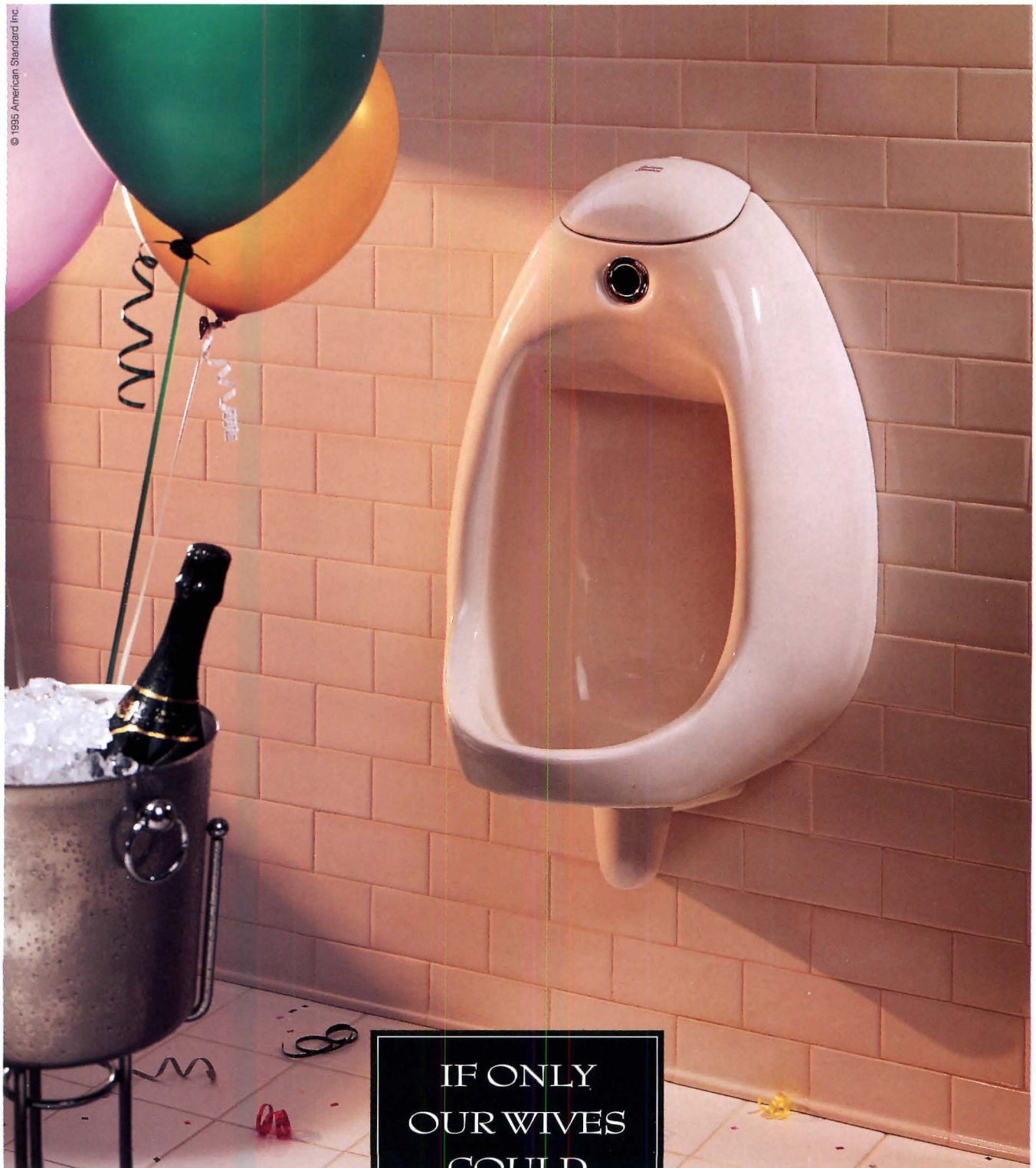
A new library and arts building inaugurates a school's master plan.

Lick-Wilmerding High School
Library Arts Building
Simon Martin-Vegue
Winkelstein Moris, Architect
San Francisco, California

Lick-Wilmerding High School differs from other San Francisco private preparatory academies in that its curriculum stresses technical, visual, and performing arts in addition to more traditional subjects, and it still has land available for building. Local architect Simon Martin-Vegue Winkelstein Moris (SMWM) is addressing both conditions architecturally, with a master plan for the campus and a new building to house a library and arts facilities.

The Library Arts building will establish the southern edge of the campus, enclosing a central ceremonial lawn and forming an arts courtyard with the adjacent workshop. It is the first evidence of SMWM's master plan, which intends to bring a more identifiably "campus" character to the currently suburban disposition of the site. SMWM designed the 17,000-square-foot structure as a barrel-vaulted, rectangular solid with two equally sized floor plates hidden behind a leaning front wall. The skylit second-story library will house up to 25,000 volumes and contain both private study and exhibit spaces. Design studios, classrooms, and offices are located below.

The wood-frame structure will be sheathed in an understated skin of corrugated and flat cement board with exposed fasteners, hand-troweled plaster, and operable aluminum windows that have been placed to capture unobstructed downtown views. Its interiors will feature metal tension rods, two steel kingposts, and exposed, curved, 24-inch-deep glue-laminated trusses. Construction of the $2.95 million building is set to begin next June, with completion in time for the 1997 spring semester.—*Reed Kroloff*



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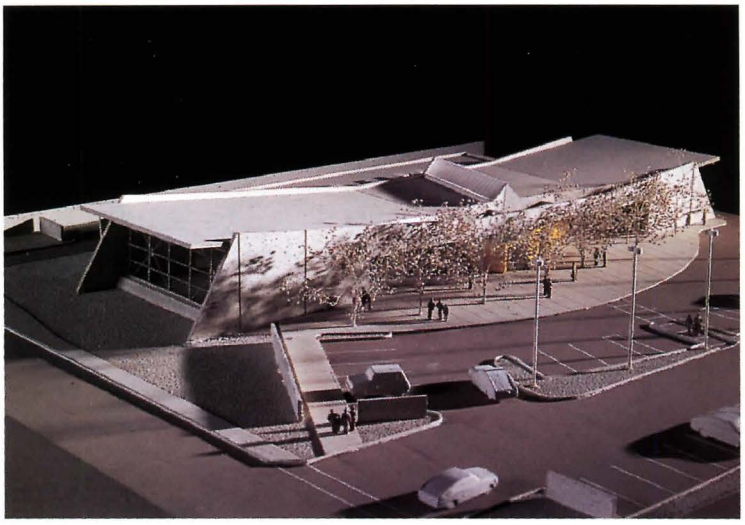
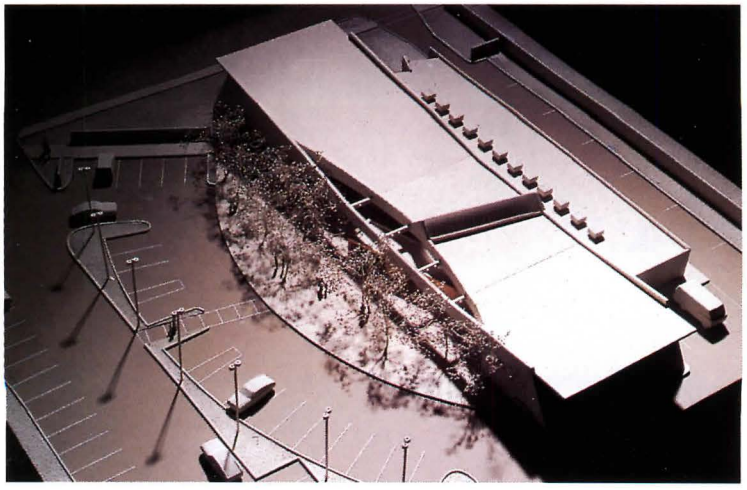
On the Boards

A library extends architectural quality to a Phoenix suburb.





Juniper Branch Library
Phoenix, Arizona
Randall Fonce Architects

Over the last 10 years, City Librarian Ralph Edwards has assembled the most sophisticated body of architecture in Phoenix. And he has done so commissioning only local architects, such as Will Bruder and DWL Architects & Planners, joint architects of the new Central Library (pages 56-65), and Randall Fonce, designer of the new Juniper Branch Library.

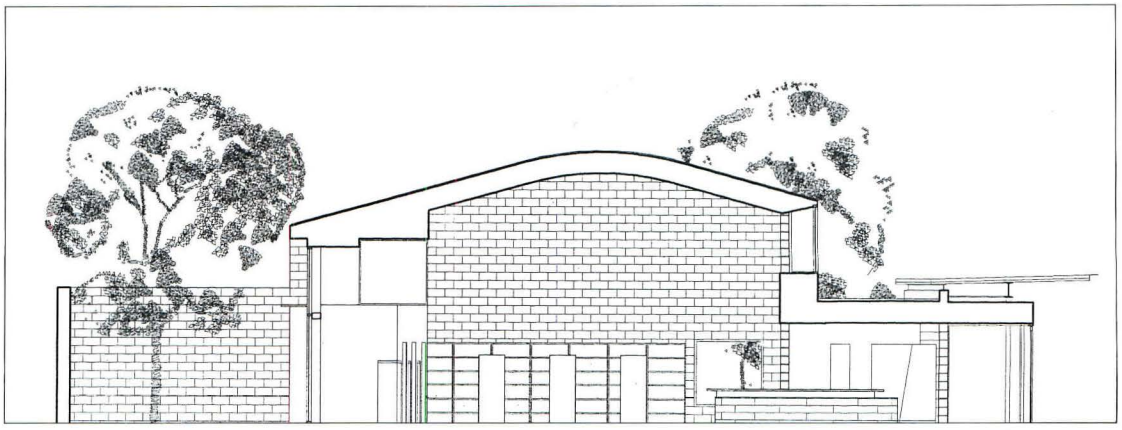
Fonce's suburban branch will be the only library within a 5-mile radius. The facility will house 50,000 books and a 120-person meeting room that doubles as a children's theater. Its site is bounded by fast-food outlets, retail, and houses, and fronts a major thoroughfare.

Fonce set the building perpendicular to the street, creating a protected entry court for patrons and intriguing views of library interiors for passing motorists. He then split the building into three parts: the tree-shaded entry court, a central hall holding all of the books and reading stations, and a staff services block that also contains the meeting room. By gathering all the public functions into one space and applying an understated palette of finish materials, Fonce created a generous volume that belies the building's modest 14,435 square feet.

The architect further expanded the space with a butterfly-wing roof, which rises toward the north and south ends of the building to capture optimal daylight. When combined with the protected glazing on the entry court, these exposures should result in primarily daylit spaces.

Constructed of steel trusses and sandblasted tilt-up concrete, the library will be built for about $97 per square foot, including all site-work, furnishings, finishes, and professional services. It is expected to open next spring.—*R.K.*

On the Boards



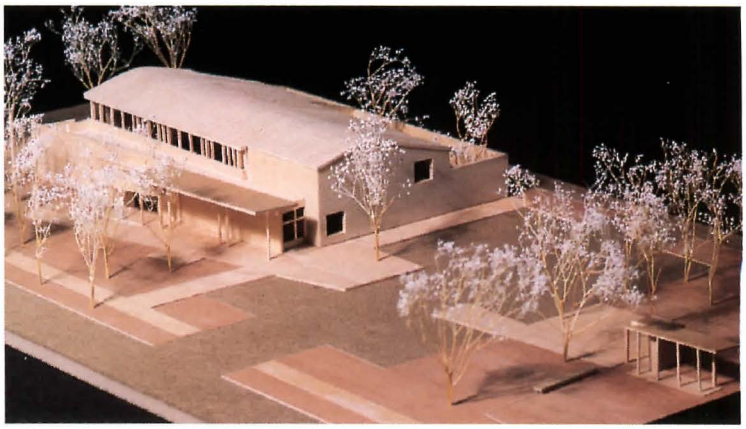
A branch library in north Denver doubles as a community meeting place.

Valdez-Perry Branch Library
Denver, Colorado
ArchitectureDenver

Citizens of the Globeville, Elyria, and Swansea neighborhoods of north central Denver, Colorado, want more from the new Valdez-Perry Branch Library than a place to check out books. They requested that the new library anchor the three neighborhoods, which are cut off from the downtown core by two major highways, and provide a place for community assembly.

Historically a point of entry for immigrants to Denver, the area now houses a large Hispanic population. Residents specifically asked that the new library's children's reading room not be segregated from the main reading area, as is often done to reduce noise levels, and that tables be pushed aside on occasion so that the main reading room can extend outdoors into an enclosed courtyard.

Principals Steve Chucovich and Ali Gidfar of ArchitectureDenver responded with a rectangular open plan comprised of six 30-foot-square bays. Measuring 90 feet long, a vaulted central reading room runs the entire length of the building and half its width, with clerestory windows lining the north and west facades (section above).



To the east of this space, a 30-foot-square service block anchors the corner of the 4,700-square-foot structure. Additional reading areas to the south of the service area spill out into a walled-in courtyard, overlooked by private study rooms. A narrow wing containing the main entrance, librarian's office, and study area angles off the 30-foot grid to the west. The diagonal established by the entrance connects to elements of a proposed public garden designed by ArchitectureDenver for an adjacent vacant lot. The garden project currently awaits funding.

ArchitectureDenver drew upon inexpensive stock materials for this low-budget library: loadbearing concrete masonry units secured by an exposed structural steel frame. The interior and exterior surfaces of the blocks will be sanded to expose their pebble aggregate for a stone-like finish. Colored concrete blocks procured from manufacturers' overstock will be blended at random to animate the facades. Inside, a maple veneer ceiling will follow the pitch of a standing-seam metal roof.

Funding for the library's construction cost of $670,000 was set aside in a 1990 vote, and the land was donated by the grandchildren of John Perry, whose 1910 grocery store occupied the site for 30 years. The other namesake, Bernard Valdez, is a Hispanic community leader in Denver and a local role model.

The Valdez-Perry Branch Library is scheduled for completion next spring. Together with the recent conversion of a 1920s Spanish Revival school into a theater three blocks away, the new library and proposed gardens will strengthen efforts to bring cultural amenities to this growing area.—*Ann C. Sullivan*

On the Boards

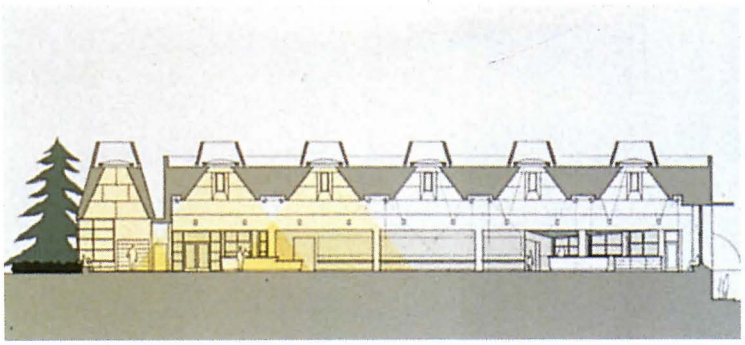
A cast stone addition unifies the disparate parts of a 1931 library in Connecticut.

Greenwich Library
Addition and Renovation
Greenwich, Connecticut
Cesar Pelli & Associates

Cesar Pelli & Associates is renovating and expanding Greenwich, Connecticut's main public library, following a 1994 master plan developed by the firm. Adjoining a residential neighborhood, the existing library is composed of a 1931 limestone structure, which formerly housed a local department store, and a two-story concrete-and-brick wing added in 1967. Pelli's 32,000-square-foot two-story addition will extend to the east of the original structures, filling in a triangular site.

A series of outdoor courtyards inserted between the original buildings and Pelli's addition will distinguish old from new. The first floor of the addition will contain the library's circulation services, periodicals, business sections, and a lobby. The library's music and video collection and an art gallery relocated from the existing building will be housed on the second floor. Administrative offices and children's collections in the original structures will also be renovated.

Pelli's addition will be clad in cast stone matching the character of the 1931 limestone building. Small, punched windows along the south facade will distinguish the addition from the older building's facade, with its large, arched windows. Construction is scheduled for completion in late 1997.—*Raul A. Barreneche*



Los Angeles Public Library,
Los Feliz Branch
Los Angeles, California
Barton Phelps & Associates

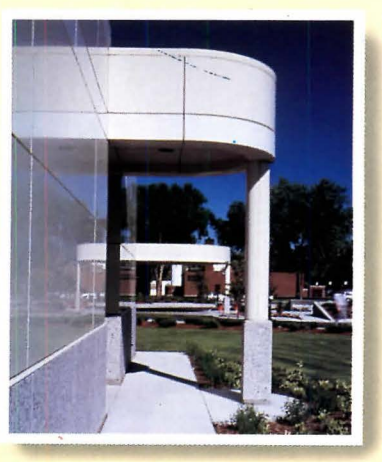
The Los Feliz area of Los Angeles boasts houses by Bernard Maybeck and R.M. Schindler, as well as Frank Lloyd Wright's iconic Hollyhock and Ennis houses. For this historic neighborhood, architect Barton Phelps has designed a new branch of the city's public library at the southern edge of Griffith Park.

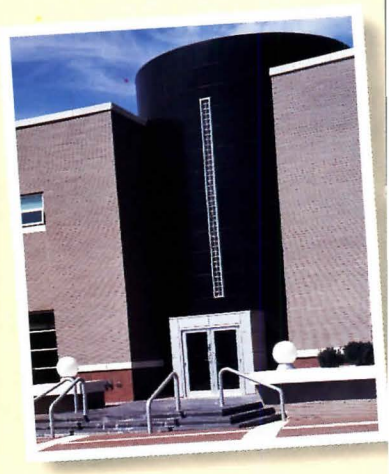
The 11,000-square-foot library will be composed of two separate single-story volumes arranged around a terraced, landscaped courtyard to the east, which doubles as an outdoor amphitheater. The larger block along the western edge of the site will contain the main reading room, book stacks, administrative offices, circulation services, and a children's wing.

Each bay of the reading room will be crowned by a pyramidal light monitor. Tall, deeply recessed windows along the length of the new branch library's west-facing facade will be angled to the north to maximize views of Griffith Park's hills and famed observatory. The fan-shaped children's area to the east of the main reading room will incorporate a storytelling room in a whimsical, double-height tower, designed to recall traditional California farm structures, which overlooks the outdoor courtyard.

At the end of the reading room enfilade, a separate double-height reading area fitted with a steep pyramidal roof and skylight will punctuate the northwest corner of the site. At night, the lanternlike tower will mark the main entrance and become a beacon for the library.

A smaller, wedge-shaped block at the north end of the site will contain a small bookstore and an auditorium. A small lobby will connect the auditorium block to the linear reading rooms. Construction of the $2.3 million project should be completed by 1997.—*R.A.B.*



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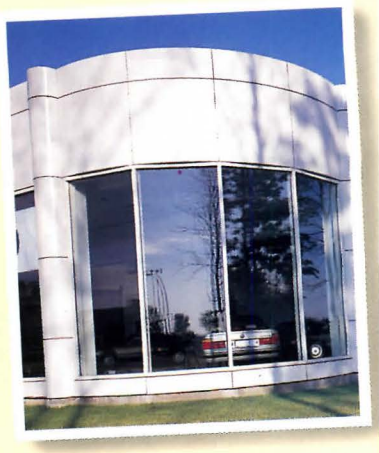
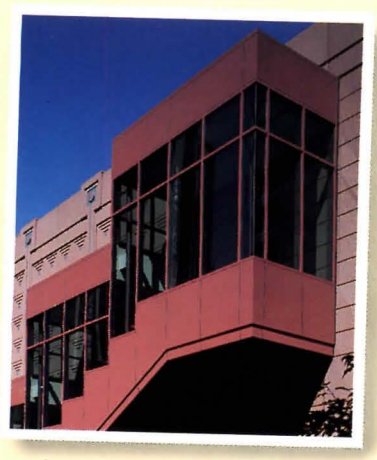
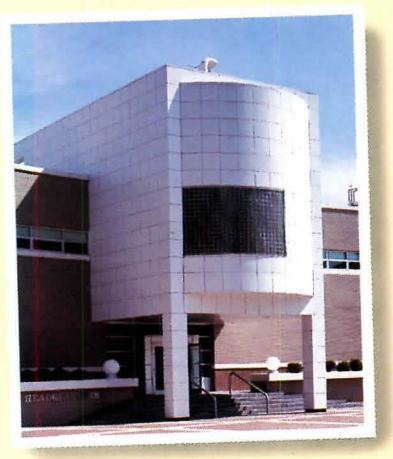
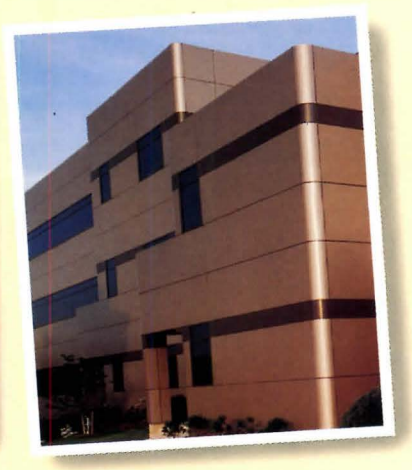








Protest

Chicago's new post office turns its back on the formal potential of its riverfront site.

CENTRAL POST OFFICE: New building's parking garage faces Chicago River.

CORNER VIEW: Clumsy assemblage of precast, glass, and steel proves that less is more.

Post Office Ignores Urban Traditions

Chicago's old Central Post Office has sat astride Congress Parkway for more than half a century. Designed by Graham, Anderson, Probst, and White, the 1933 building's position only four blocks east of the intended site of Daniel Burnham's enormous Civic Center reinforces Burnham's central axis for the city. The functions of this imposing structure have recently been transferred to a new post office, designed by Knight Architects Engineers Planners, that is located directly to the south of Burnham's building.

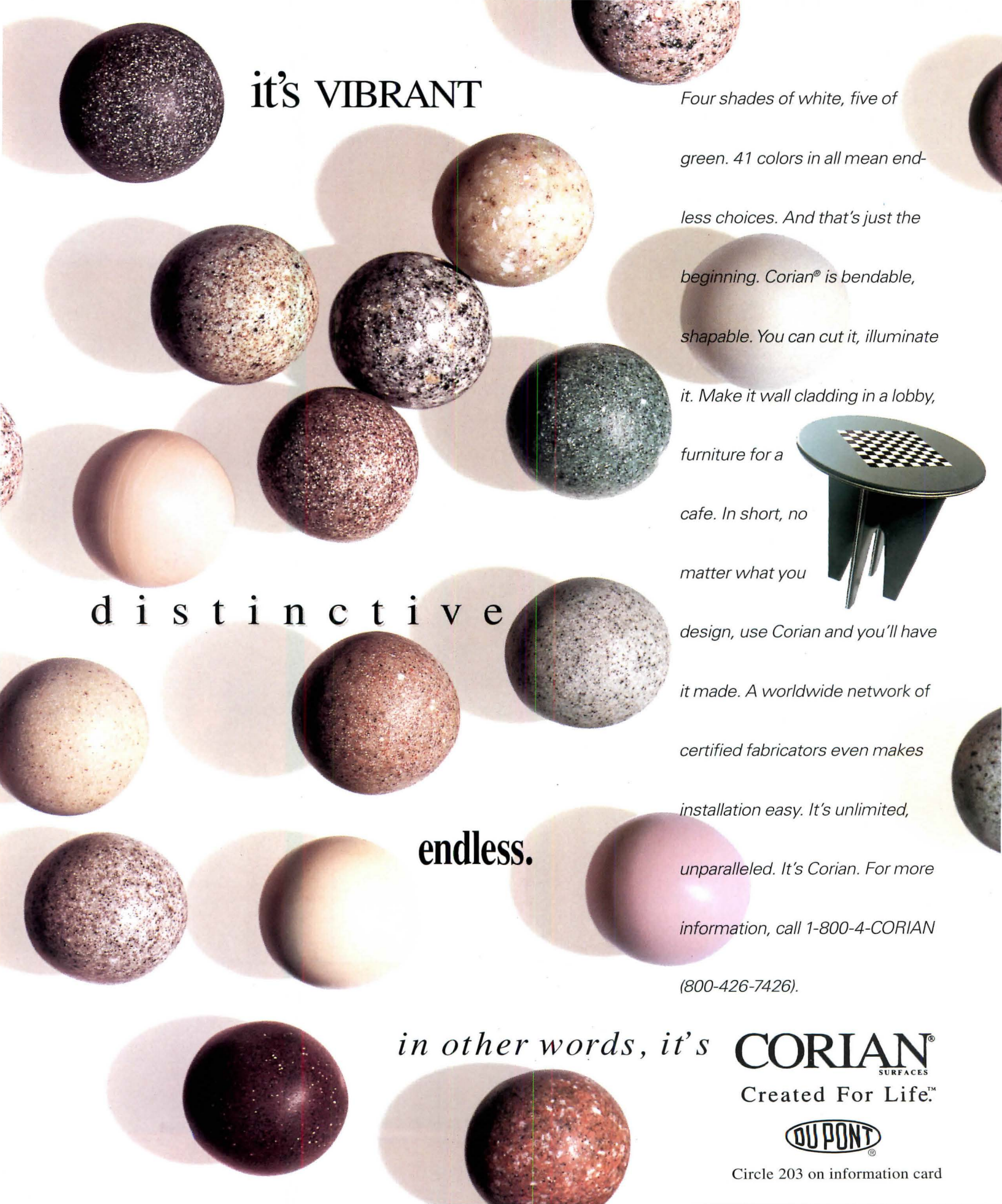
Although the area west of the Chicago River where the new facility is located is still relatively underdeveloped, the site remains strictly urban, with the sinuous shore of the river forming its eastern boundary and the north, west, and south sides facing heavily trafficked streets. Disappointingly, Knight has ignored the site's formal potential and produced a building based on the most banal suburban industrial-park formula.

The new Central Post Office is a huge concrete box variously clad in precast and metal panels, with an aggressively designed front facade that mocks the 1933 post office, which is now being studied for other uses. This front constitutes a futile attempt at public architecture by Knight, and is a curious amalgam of disparate pieces.

A precast concrete tower with punched openings vainly strives to match the height of the original post office. Careening recklessly into the side of the tower are a two-story arcade of heavy steel members and a requisite curved glass curtain wall. The arcade splays slightly, creating a plaza of little grace and no civic virtue.

Both arcade and curved form penetrate the tower's base and pop mindlessly out the west side of the building, to reveal a canopy-covered entry too small to make an effective visual statement and far too high to protect visitors from the elements. Moreover, the precast concrete, metal panels, and glass curtain wall mix and match in awkward ways that fail to reveal any logic.

Finally, the new post office simultaneously echoes an office building, a convention center, an airport terminal, a parking garage, and a bus depot. Chicago's architectural legacy provides noteworthy examples of each building type. Unfortunately, the new post office's hybrid design fails to add a useful chapter to any part of the city's rich urban history.—*Edward Keegan*



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The Future of Libraries

Libraries must assume a more community-minded role, SOM's Craig Hartman argues.

Of all the different building types that architects design, the library is the one most directly affected by the electronic revolution. The computerization of the library that began with the card catalog has evolved to a stage where books and journals are moving steadily from printed to electronic form. Where does the library as a building fit into this transformation? Both architects and librarians have a considerable stake in the answer.

It is remarkable how constant the formal qualities of the buildings we call libraries have been over many centuries. From the monastic libraries of the Middle Ages, through the Renaissance and into the 19th century, the nature of the material that was held in libraries and its accessibility to the public changed radically, yet the casework probably changed more than the buildings did. Like their predecessors, today's libraries still provide space for books and for the people who read them. They have the same need to accommodate the activities of reading and studying to a community of users, and to provide settings that support these activities.

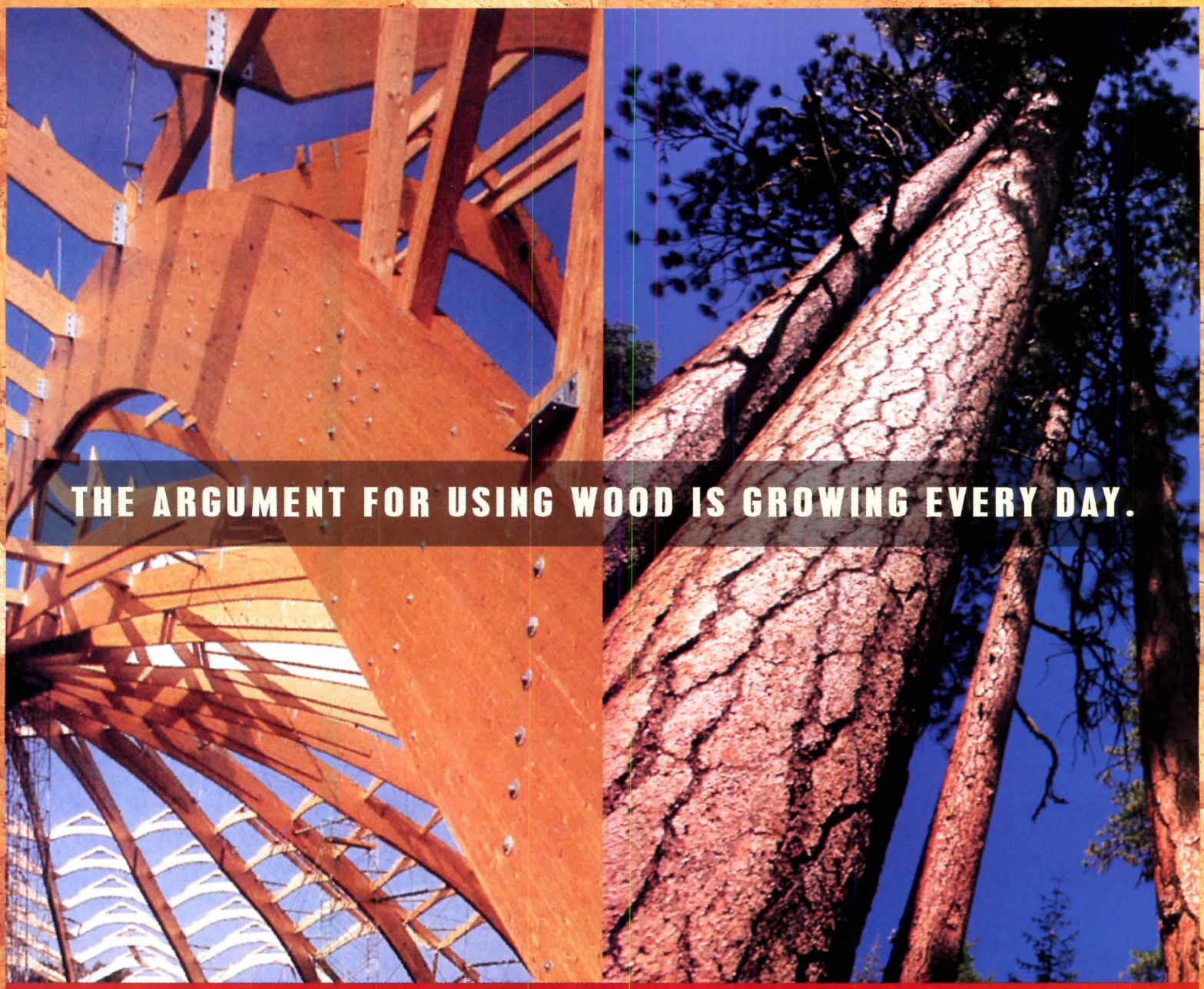
The history of libraries, however, is marked by changes no less revolutionary than those we are now experiencing. At the time of Michelangelo's Laurentian Library in Florence, the sheer cost of books meant that they had to be chained. Long after Gutenberg and the demise of the chained library, limits to the accessibility of knowledge perpetuated a caste system favoring an educated elite. In the United States, it was not until the end of the 19th century, with Andrew Carnegie's successful efforts to build public libraries across America, that this monopoly on knowledge was eliminated.

In this century, we have seen public libraries grow to the point where their need for public funds has begun to exceed the public's willingness to pay. As public support has fallen short, libraries have joined museums and symphony, opera, and ballet companies in seeking funding from foundations and private sponsors. New urban public libraries continue to be built—Phoenix, Denver, and San Antonio are three examples in this issue. Yet, in this increasingly paperless age, does it make sense to build a library? And if it does, what kind of structure should it be?

Historically, a library was a building organized around two functions: storage and reference. As books and library patrons proliferated, the spatial requirements of these two functions increased and libraries grew larger and larger. Today, the physical connection between storage and reference can be replaced by a virtual one, and the spatial needs of both can be reduced, if necessary, to almost nothing. Corporate libraries in particular have moved far in this direction. Yet some major companies, in shifting to telecommuting to reduce office space, have found that their libraries are now the one remaining place where people can still meet informally to share experiences and gain a sense of each other as colleagues. This communal characteristic of libraries almost guarantees their perseverance as a building type.

Yet the electronic revolution also cuts people free of space and time constraints in liberating and very efficient ways. It gives them unprecedented access to data such as market quotes, and the ability to sift through and analyze large quantities of information rapidly. This access has a price, however. It requires a substantial investment in equipment and in learning to use that equipment to obtain information. The cost of equipment and hookup charges make the Internet inaccessible to many people who lack the private means or a corporate/institutional subsidy to get on-line. The Internet and its commercial equivalents come closest to universal access, but at present they fall far short of the completely open and cost-free access to information offered by most public libraries.

From the standpoint of history, the electronic revolution is simply the latest chapter in a much longer saga that might be called the "ephemeralization" of information. From



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1. Salwasser, H., MacCleary, D., and Snellgrove, T., "New Perspectives on Managing the U.S. National Forest System", Report to the North American Forestry Commission Sixteenth Session, 1992, USDA Forest Service, Washington, D.C. 2. USDA Forest Service, RPA Timber Assessment Update, 1993. 3. Koch, Peter, Wood Science Laboratory, "*Wood vs. Non-wood Materials in US Residential Construction*: Some Energy-Related International Implications" Working Paper #36, October 1991, for the Center for International Trade in Forest Products, University of Washington.

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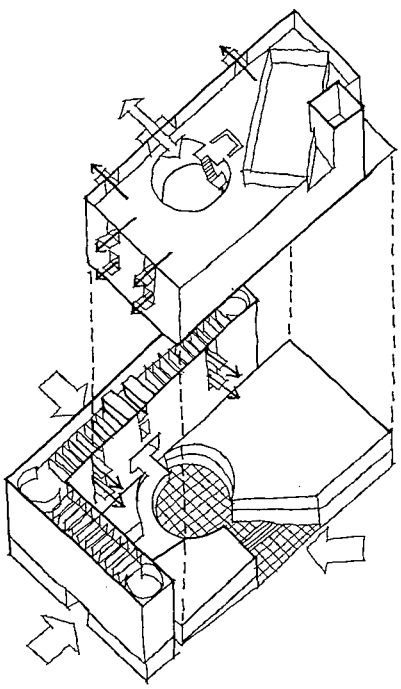
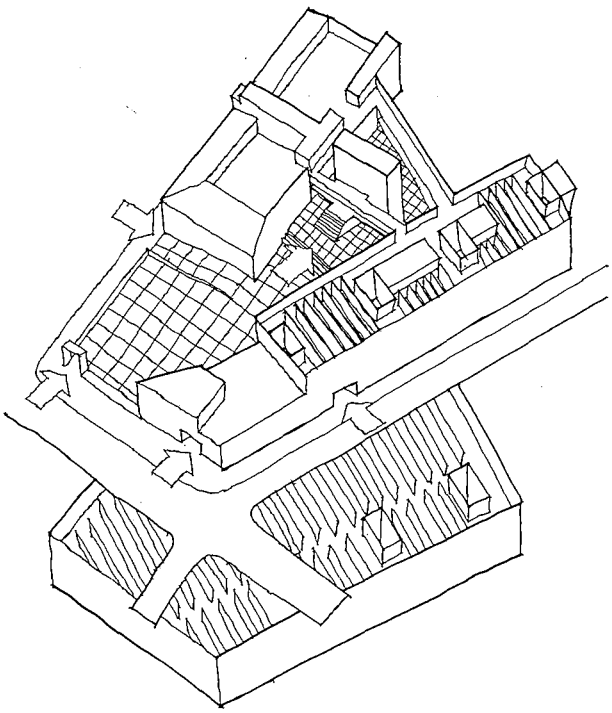
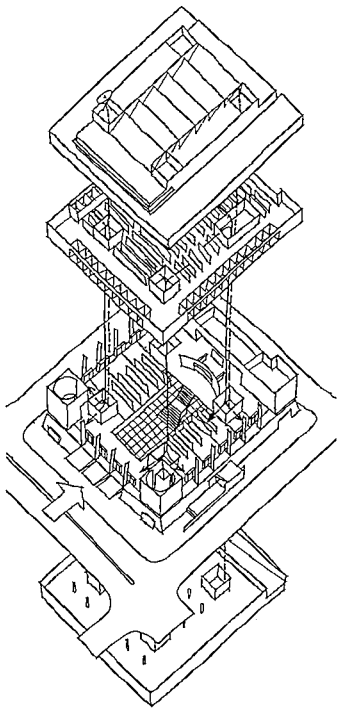
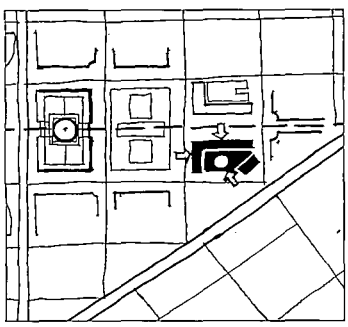
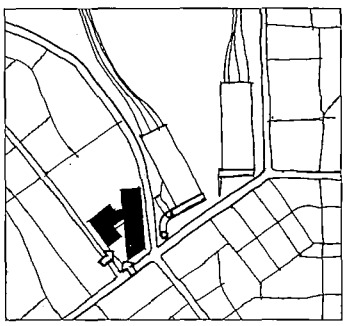








SAN FRANCISCO MAIN LIBRARY



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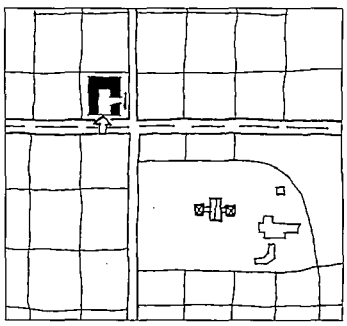

LIBRARY OF VIRGINIA

paint daubed on cave walls, we have evolved through clay tablets, papyrus scrolls, vellum manuscripts, paper, and microfilm and microfiche, to finally reach the electronic page, with its promise of paperless, and ultimately even wireless, transmission of ideas and images. This new technology offers unprecedented power to access, organize, and analyze enormous quantities of data, but it has artistic and pedagogical possibilities that are only just beginning to be explored.

Where does this leave the library? Will it disappear as a building type? There is some precedent for building obsolescence in the 20th century—the tuberculosis sanatorium, for example. Libraries may not disappear, but it is not at all clear if they will survive in their present form. Technology commentator John Browning, writing in *Wired* magazine, claims that "instead of fortresses of knowledge, there will be an ocean of information." Libraries, therefore, should be considered as harbors—places where skilled navigators and the latest equipment can be found.

As the need for storage decreases, the service functions of libraries may increase proportionally. Many of these services already exist today, but will have greater importance in the future: education, for example, so that people can master the new equipment and information services, such as data analysis and organization, and subsequently develop new methods of conveying ideas and information.

Libraries are also cultural institutions that must compete with others for the same disappearing public and philanthropic funds. Because their common survival may depend on it, we can expect to see more hybrids like the Pompidou Center in Paris, Fumihiko Maki's recent Center for the Arts in the Yerba Buena Gardens district of San Francisco, or Antoine Predock's Museum of Science and Industry in Tampa, Florida, in which the public library is but one element of a multipurpose cultural setting.

To understand where libraries as a building type are today and where they are heading, it may be helpful to review some current examples, completed or in design, that illustrate how librarians and their architects are

ABOVE LEFT: Library by Pei Cobb Freed and Simon Martin-Vegue Winkelstein Moris completes unfinished edge of San Francisco's Neoclassical civic center. Rotated mass for special collections and through-block public passageway respond to streets. ABOVE CENTER: British National Library's skewed volume turns its back on adjacent train stations to create monumental entry court. Architect Colin St. John Wilson arranged public functions informally around central court, with reading rooms above. ABOVE: For Library of Virginia in Richmond, SOM cupped public areas such as bookstore, auditorium, and exhibit space around three-story lobby. Second floor reading rooms enclose lobby and face street.

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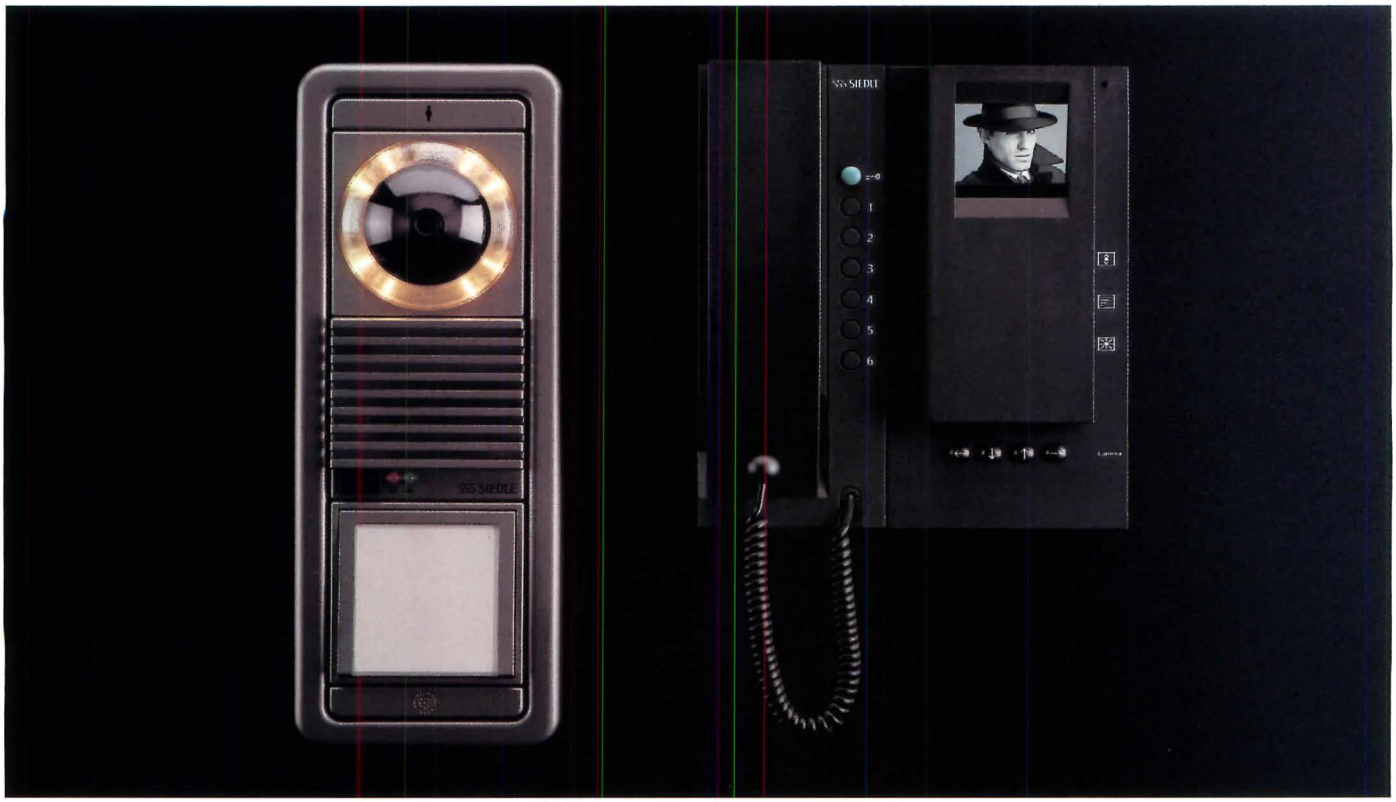

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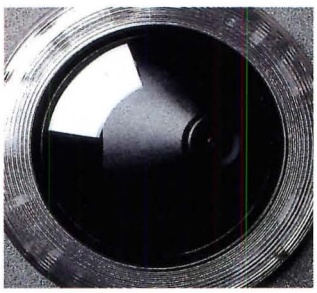

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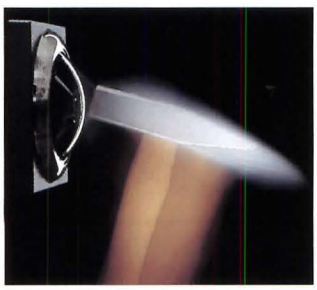

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currently thinking about the problem. Two examples of the late-20th-century urban public library are Colin St. John Wilson's new British Library, and the San Francisco Main Library designed by James Freed and Cathy Simon. They are best understood as transitional buildings that mark the beginning of a change from the library as "fortress of knowledge" to "ocean of information." Although differing in overall shape and appearance, the two libraries are similar in that each organizes its programs around an open core—an atrium or interior plaza. The British Library houses some of England's most famous book and manuscript collections; the new library is organized around these collections to the extent of making the George III Collection, housed in a six-story tower, the visual focal point of the building.

While the new British Library more or less turns its Modern back on nearby St. Pancras Railway Station, an icon of late Victorian-Gothic Revival, the architects of the new San Francisco Main Library set themselves the more difficult task of trying to relate to both the city's Beaux-Arts Civic Center and its adjoining commercial district. To accomplish this goal, the library is designed as two L-shaped blocks—one Neoclassical, the other Modern. Although more compact than the new British Library, San Francisco's new library is similarly organized around an interior core—in this case, an atrium and stairway at the center of the building that provide access to its various collections.

These two libraries are transitional in that, while they still fulfill a traditional storage function requiring considerable space, storage is primarily dedicated to special rather than general collections. San Francisco's Main Library, the brainchild of City Librarian Kenneth Dowlin, is even more ambitious. When it opens, it will have 800 computer terminals and a collection that is largely accessible electronically. Dowlin's library reaches out to children and young people by offering them a broad range of media. It also serves as a resource for historical and cultural material specific to San Francisco.

Our firm's Library of Virginia, now under construction in Richmond, is designed to address the potential roles of a major public library in the broadest possible sense. Located between the city's civic and central districts, it is a key part of the revitalization of Richmond's main downtown shopping street, incorporating its most public facilities—the bookstore, interpretive exhibit space, computer training lab, auditorium, and conference center—at street level.

While the library caters to researchers and legislative patrons, it also serves as the statewide hub of an electronic library network that connects it to every public library in the state, including those in even the smallest towns. This same network lets people in the library use its terminals–or their own laptops–to access the library's on-line catalog of collections as well as those of the state university system. Thus it is accessible to all Virginians, as both a traditional library and a virtual one that people can "visit" from their home computers or from terminals in their neighborhood schools and libraries.

Why should a library continue to be a place rather than an address on the Internet? A library today is, almost invariably, a community of men and women with specific training in research methods and information systems—a community that also values knowledge and culture, and is prepared to instill that appreciation in others. Like any community, it needs a physical setting to give it identity and to support its activities and services. The electronic revolution makes human encounters, which are the real basis of community, even more valuable and necessary, not less so.—*Craig Hartman*

Craig Hartman, FAIA, is the designer of the Library of Virginia and the partner in charge of design for the San Francisco office of Skidmore, Owings & Merrill (SOM). John Parman and Cheryl Parker of SOM contributed to this article.

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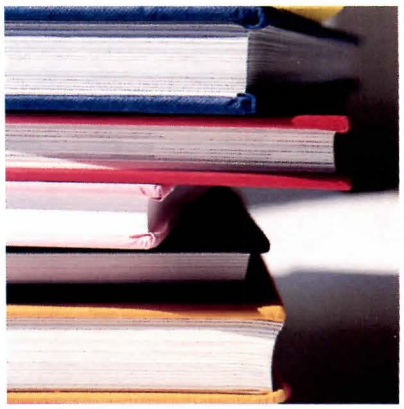


City Libraries

The biggest boom in libraries since the 1960s is occurring right now, with many under construction in our largest cities. In addition to those featured in this issue, libraries have recently opened or are under way in Miami, Charlotte, Cincinnati, Las Vegas, Los Angeles, Chicago, and San Francisco. Intriguingly, this proliferation of book repositories is happening just as electronic media are revolutionizing access to information. But as Denver City Librarian Rick Ashton observes, the low-tech activity of reading a book is a fundamental path to knowledge that will never be supplanted by high-tech alternatives. Indeed, computers are taking their place alongside traditional book stacks and study carrels as integrated, indispensable reference tools. Furthermore, the social role of libraries is expanding with the inclusion of meeting rooms, day-care facilities, art galleries, and retail. No longer simple reference centers, these new libraries are being conceived as civic magnets—*cornerstones of urban* revitalization designed to bring people back downtown.

Phoenix Central Library
Phoenix, Arizona
bruderDWLarchitects

Desert Illumination

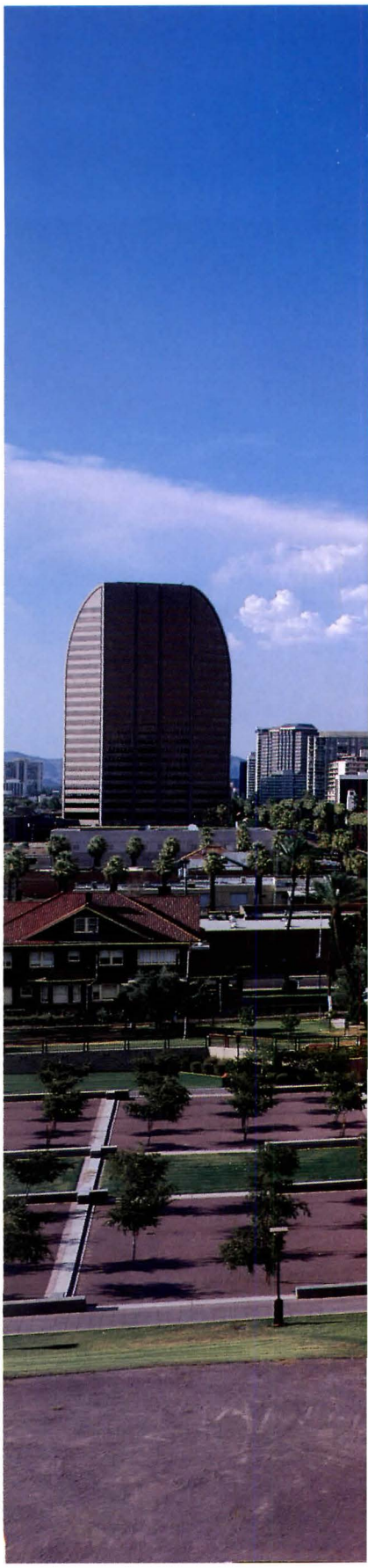
One of the best ways to grasp the character of Will Bruder's new library in Phoenix is to see it through the windshield of a car when driving west across the sprawling city. As the freeway sweeps into a sunken corridor, the library suddenly comes into view on the skyline, an abstract billboard of uncertain size. The building holds its own in a shapeless setting by the tight minimalism of its form, the visual tension of its surfaces, the ambiguity of its scale, and the haunting texture of its metallic facades, which glint and glimmer in the strong Arizona sunlight. It sets off a string of associations that run from the industrial to the natural, even to the geological.

From north-south streets, the library presents an image both dignified and welcoming. The fierce sunlight and noisy traffic of Central Avenue are kept at bay by curved flanking slabs clad in corrugated copper. Between them, floors are stacked on reinforced concrete columns, which rise the full height of the building. Both south and north ends are fully glazed, allowing glimpses of people inside. The southern glass facade is protected from the sun's rays by means of computer-controlled louvers, while the northern facade is fitted with angled fabric sails.

The curved copper facades of the library are reiterated in the tense arc of the roof and in the receding stainless steel plates above the entrances, which guide people past low, sinuous walls of finely laid stone to canopies of splayed steel. These curves are rediscovered inside the building, especially in the symmetrical entrance tunnels that converge on the concave light shaft at the heart of the library. Called the "crystal canyon," this glassy vertical slot rises the full height of the building and acts as a central point of orientation.

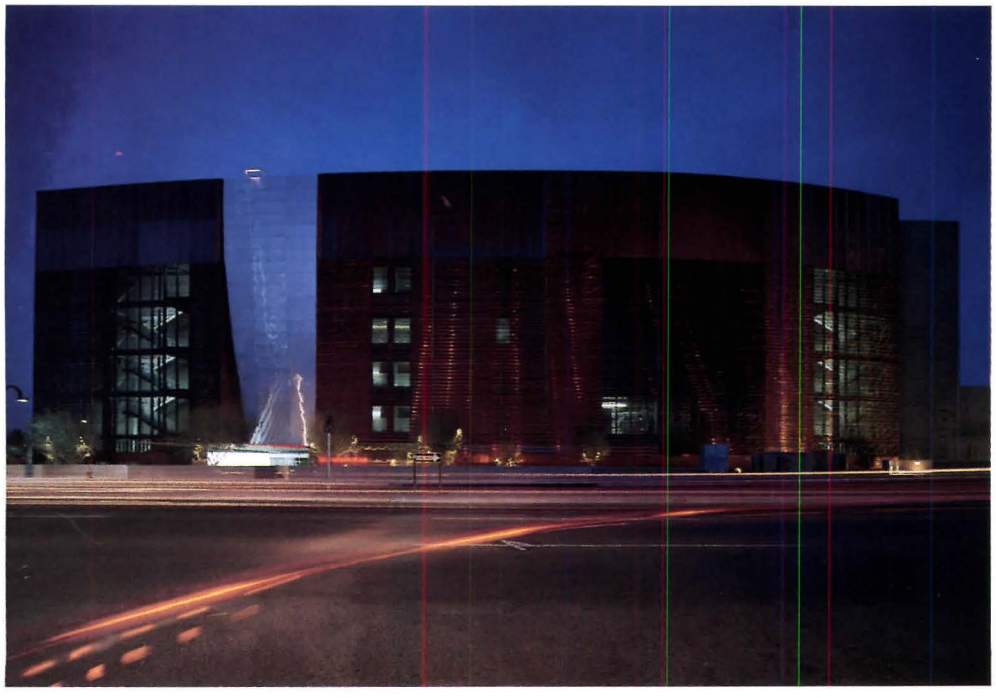
The main volume of the library is a flexible, open-plan structure with a grid of precast concrete columns. Ducts and electrical systems are slotted into the crossbeams. Flanking this central space, the copper-clad curved elements known as "saddlebags" contain mechanical services and fire stairs. Here, the structure consists of a steel frame with concrete walls clamped onto the armature.

A mundane interpretation of the Phoenix Central Library is that it is a colossal, air-conditioned warehouse protected from the ferocity of the sun by insulating layers, employing the same sort of straightforward structural system as a factory or a roadway bridge. But Bruder has managed to raise prosaic technology to the level of architecture by making it obey a formal order and by translating it into metaphorical terms corresponding to his concept of the public library as a late-20th-century popular institution.



THESE PAGES: *New Phoenix Central Library* occupies prominent site on Central Avenue in downtown. Copper-clad service zone filters out noise of traffic; adjustable louvers protect glazed south facade from fierce sunlight.

BELOW: Copper-clad west facade is visible from freeway passing under site.
BOTTOM: At night, interiors can be seen through perforated copper on east side.
FACING PAGE, TOP: Bordered by new park designed by HNTB, library will be southern anchor of proposed Arts District Walk, connecting Heard Museum, Phoenix Art Museum, and Phoenix Little Theater.
FACING PAGE, BOTTOM: Grand reading room on top floor glows at night through louvered south facade.



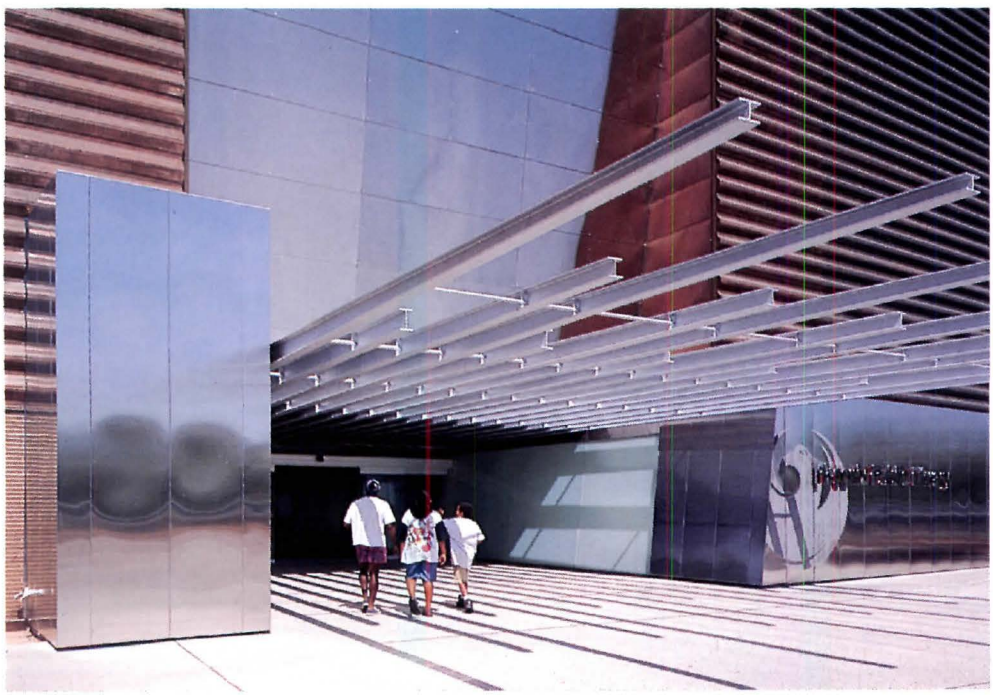
The ground floor functions as an information forum, with a large auditorium, a children's library, and a *mediathèque* for videos and discs. Level two contains general reference, periodicals, and the interlibrary research department. Level three is set aside for staff areas and storage. Level four is reserved for rare book collections, seminars, and lectures. Level five houses the entire nonfiction collection in a grand reading room with long views of the city and distant landscape.

Natural light is central to the meaning of Bruder's building. The connection between light and enlightenment is a familiar theme in library design, exemplified by Henri Labrouste's Bibliothèque Nationale in Paris (1875). Light filters into the fifth floor reading room at the north and south ends through glazing, and a gap between the roof and the east and west walls allows the sun to play across the concrete surfaces. Above the tapered concrete columns, each laminated circular skylight has a small hole in its blue interlayer positioned to produce a zenithal beam of light. This arrangement alludes not only to ancient hypostyle halls with their grids of ceremonial columns toplit through small openings, but also to the candle-flame flowers sprouting from the top of cacti.

In addition to the crystal canyon, there are numerous transformations of light passing through layers of opaque, transparent, or semireflective material: double-glazed, smoked panes with optical fibers playing behind them, simple metal screens punctured with holes, and sequences of spaces alternating between light and shadow. The inventive use of materials and textures has long been a hallmark of Bruder's architecture, and in the Phoenix Central Library he succeeds in taking standard products such as perforated metal plates and embedding them within his own metaphorical themes.

The corrugated copper cladding of the east and west facades is the best example of this poetic transformation. Dense and opaque when seen from a distance, it becomes light,

BELOW: Teflon-coated fabric sails shield north side from sun.
BOTTOM: Splayed I-beam canopy shelters main entrance. Copper sheeting was specified with deeper corrugations for building's center section.
FACING PAGE, TOP: Tensegrity structure supports bowed roof. Perimeter precast concrete walls are attached to steel structure of "saddlebags."
FACING PAGE, BOTTOM: Illumination and transparency convey notion of library as an open, popular institution.



even immaterial on closer inspection. At night, the perforated surfaces are like veils.

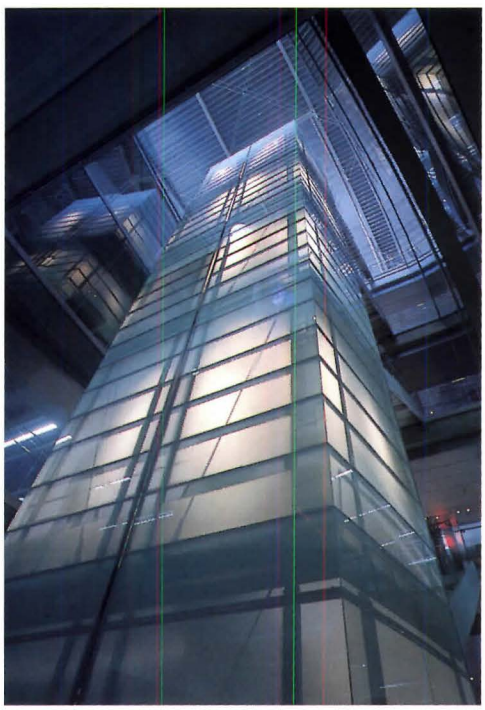
Unapologetically an example of American Middle Tech, the corrugated copper skin makes numerous allusions: to silos, freight cars, rustication, the Wrightian notion of a striated exterior, and even to geological formations and the ribbed skin of desert plants. In contrast to the deliberately crude concrete surfaces protruding at each end of the building and the polished steel surfaces above the entrances, the copper reads, in a bizarre case of reverse tectonics, as a weightless wall. Bruder takes a basic fact of much day-to-day American construction—the sandwiching together of separate layers of skin, structure, and insulation—and walks a knife-edge between the modern and the historical, the natural and the mechanical.

The theme of unpeeling layers, perceptual and actual, is pursued inside and outside the library to convey Bruder's idea of arriving at a luminous center, a place for the opening of the mind. Given this attention to the poetics of the object, it is disappointing that more ways were not found to bring natural light down into the belly of the building, other than the 28-by-48-foot central atrium.

The rigidity of the overall concept disallows subtler interventions that might have given a more intimate contact between reader and city. Nor are Bruder's junctions and connections always as clean as one might have wished. There is an awkward transition in the building between the ground level of the crystal canyon and the rest of this floor, where the visitor simply trickles past a book-control checkpoint to enter. And in the upper reading room, a complicated structural beam under the end of the bowed roof obscures the idea of a hovering parasol.

The new Phoenix Central Library corresponds to a key moment in a city's evolution when the need for cultural monuments appears, a need manifest in several other projects of note currently under construction in Phoenix (ARCHITECTURE, April 1995, pages

BELOW LEFT AND RIGHT: Main staircase behind elevator banks is enclosed in laminated, translucent 3/8-inch-thick glass panels supported in a steel frame with structured silicone joints.
BOTTOM: Glass-enclosed elevators are visible across atrium.
FACING PAGE: Computer-controlled mirrors in skylights above atrium direct daylight deep into five-story, glass-enclosed "crystal canyon."



BILL TIMMERMAN

76-85). Bruder's idea is distinguished by his transformation of the local landscape—the palm groves and mesas—into modern architectural terms. His updated version of a hypostyle hall draws lessons from Frank Lloyd Wright's Johnson Wax Building (1936) or Le Corbusier's Parliament in Chandigarh (1963), while the primary gesture of metallic curves reacting to a wider landscape owes something to minimalist sculptors such as Richard Serra. But Bruder adapts these influences to fit his own ideas.

Popular without being populist, regionally sensitive without being regionalist, Bruder's library makes a contribution to the general architectural culture of today well beyond the American Southwest. Parallel lines of research are evident in the mechanistic precision and sensitivity to natural forces of the Australian Glenn Murcutt's work; the abstraction binding together hidden images in the buildings of Swiss architects Jacques Herzog and Pierre de Meuron; the transformation of urban banality in projects by Frank Gehry and Rem Koolhaas; and the elaborate transparencies of Jean Nouvel. But the library also develops from Bruder's own earlier experiments and vocabulary; it even returns to the evocative minimalism in crude industrial materials—corrugated metal, rusty steel, scaffolding poles—of his own desert studio of 15 years ago.

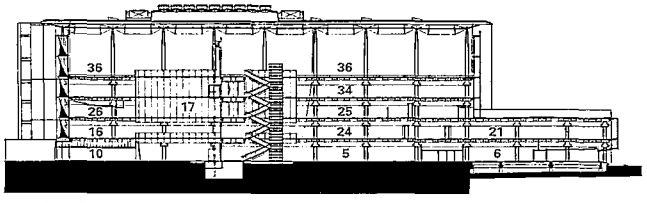
At a time when American architecture seems doomed to ricochet between cheap Postmodernism, arbitrary Neo-Modernism, and the remote theorizing of academia, it is heartening to find a work rooted in the daily facts of its society, in the myths of its place, and in the features and forces of the natural setting. Whatever its faults and limitations, Bruder's Phoenix Central Library uses the slang of contemporary construction to make an architecture of evocative space, light, and material.—*William J.R. Curtis*

William Curtis's most recent book is Denys Lasdun: Architecture, City, and Landscape.

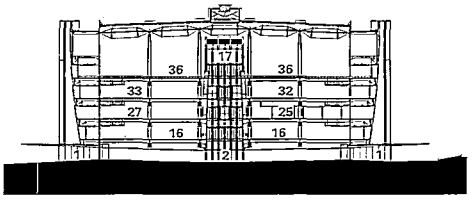
SECTIONS: Southern volume (right) houses microfiche and children's library. Saddlebags on east and west increase in size on upper floors.
PLANS: Curved profile of saddlebags is repeated in glass walls of atrium.
FACING PAGE, TOP: Reading room's tensegrity roof has circular skylights.
FACING PAGE, BOTTOM LEFT: Bruder designed shelving's built-in light fixtures.
FACING PAGE, BOTTOM RIGHT: Atrium's glass cage interrupts east-west main axis of reading room.

PHOENIX CENTRAL LIBRARY
PHOENIX, ARIZONA

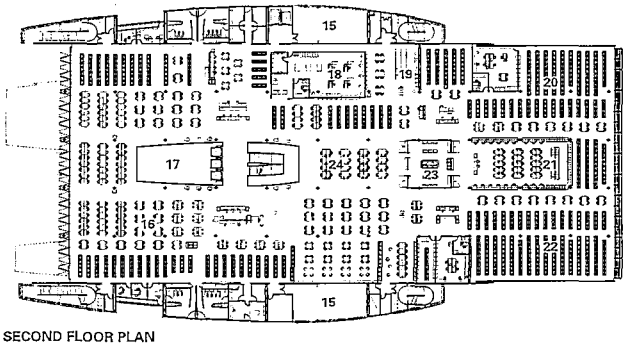
ARCHITECT: bruderDWLarchitects, a joint venture between William P. Bruder and DWL Architects & Planners—Will Bruder, Wendell Burnette (lead designers); Carleton Van Deman (project manager); Bob Adams, Marc Arnold, Lito Aquino, Maryann Bloomfield, John Chopas, Lauren Clark, Mark Dee, Beau Dromiack, Dan Filuk, Michael Haake, Frank Henry, Toni Ann Hindley, Sharon Kraus, Rick Joy, James Lindlan, Dean Olsen, Peter Pascu, Vicky Ramella, Jeff Wagner (project team)
LANDSCAPE ARCHITECT: Martino & Tatasciore
ENGINEERS: Ove Arup & Partners (structural/acoustic/building systems); Bates/Valentino Associates (building systems); Hook Engineering (civil)
CONSULTANTS: Mason Associates, Professional Library Consultants (library); lighting dynamics (lighting); Tait Solar Company (daylighting); Construction Consultants Southwest (cost); FTL/Happold (structural fabric)
DEVELOPMENT MANAGER: CMX Group
GENERAL CONTRACTOR: Sundt Corp
COST: $28 million
PHOTOGRAPHER: Timothy Hursley, except as noted



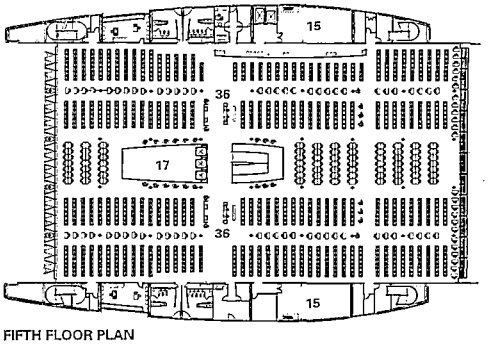
NORTH-SOUTH SECTION



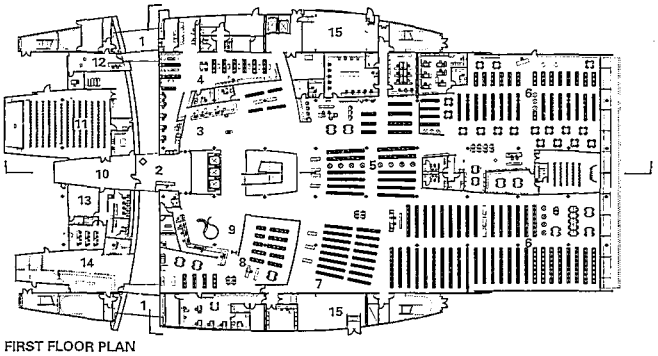
EAST-WEST SECTION



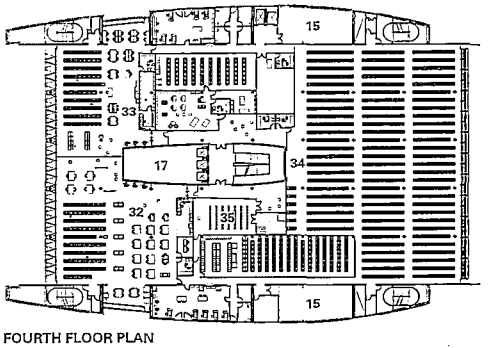
SECOND FLOOR PLAN



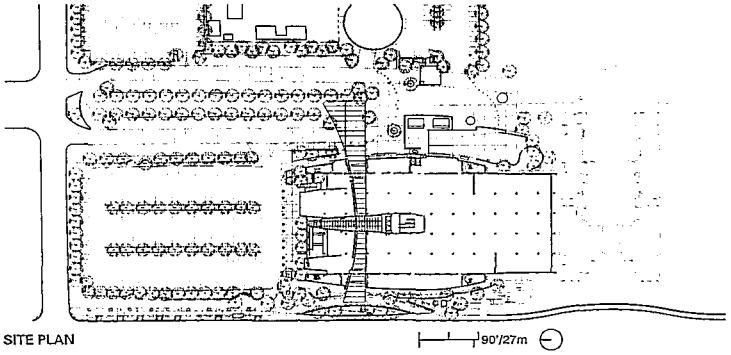
FIFTH FLOOR PLAN



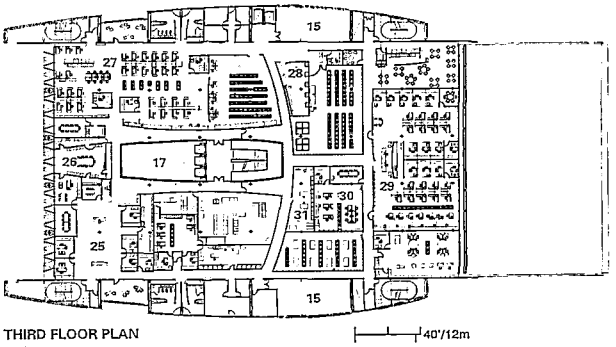
FIRST FLOOR PLAN



FOURTH FLOOR PLAN

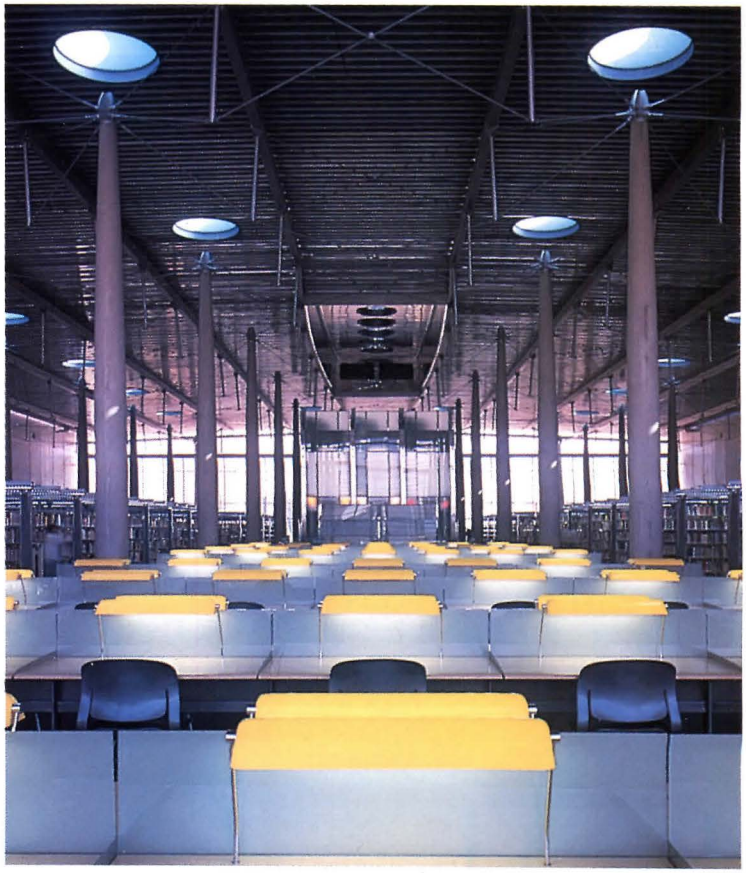


SITE PLAN



THIRD FLOOR PLAN

1 ENTRANCE
2 LOBBY
3 CHECK-IN
4 CIRCULATION
5 FICTION
6 CHILDREN'S LIBRARY
7 BIOGRAPHY
8 VIDEOS
9 CHECK-OUT
10 GALLERY
11 AUDITORIUM
12 GIFT SHOP
13 MEETING ROOM
14 RESTAURANT
15 SERVICE
16 REFERENCE
17 ATRIUM
18 INTERLIBRARY LOAN
19 MAPS
20 GOVERNMENT DOCUMENTS
21 MICROFICHE
22 PERIODICALS
23 COPY CENTER
24 COMPUTERS
25 ADMINISTRATION
26 BOARD ROOM
27 TECHNICAL SERVICES
28 MAIL ROOM
29 LIBRARIAN'S OFFICE
30 COLLECTION DEVELOPMENT
31 GRAPHICS
32 ARIZONA COLLECTION
33 MUSIC LIBRARY
34 CLOSED STACKS
35 LECTURE
36 NONFICTION COLLECTION



National Library of France
Paris, France
Dominique Perrault, Architect

Towers of Books

The National Library of France is President Mitterrand's last *grand projet*, a monument to French culture, and an impetus to Paris's eastward development. The 3 million-square-foot library is located on the Seine's left bank, opposite the Finance Ministry (another *grand projet*), the new Parc de Bercy (to which there will be a footbridge), and Frank Gehry's American Center.

In 1989, 35-year-old Parisian architect Dominique Perrault won the competition for the library with a proposal for a raised plaza overlooking the Seine. Along with the Parc de Bercy, it will be the easternmost of the monumental open spaces facing the river, which include the Champs de Mars, Invalides, Tuileries, and Jardin des Plantes.

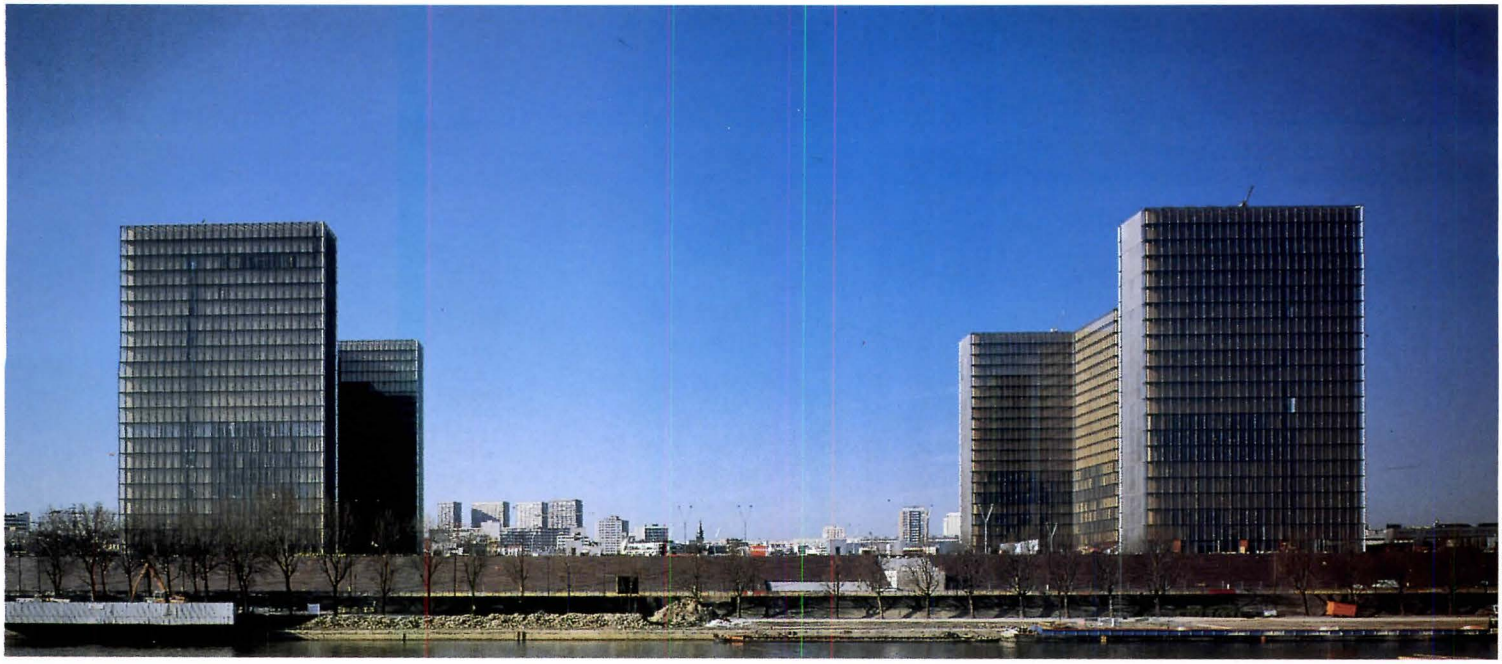
Perrault designed the library's plaza, similar in size to the Place de la Concorde, to enclose a low, tree-planted court, dimensioned to that of the Palais-Royale adjacent to the Louvre. Around this sunken court, he arrayed reading rooms below the plaza, from which rise four L-shaped towers containing the stacks. The towers resemble books standing on end, with transparent facades to make visible the growth of the book collection.

The design provoked a furor, especially because Perrault raised heavy books skyward to perish in the sun. Yet the bold clarity of his design remains uncompromised, though revisions have tempered its perversity. Book storage has been expanded immensely to house the bulk of the national collection, not just postwar volumes as intended initially.

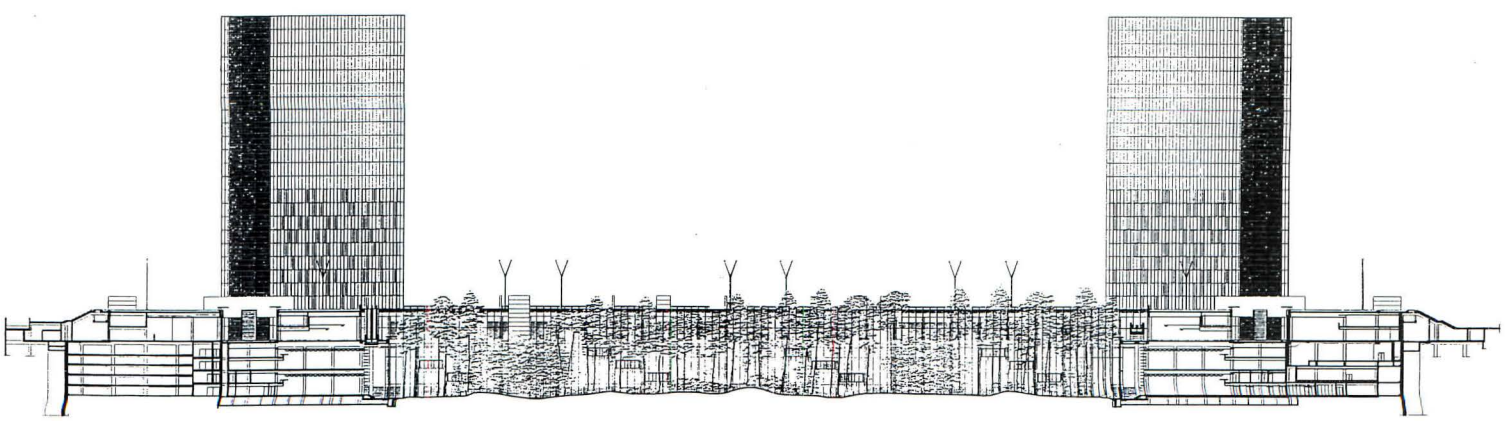
In addition to 400,000 volumes on 20 miles of open shelves, the library accommodates 12 million more volumes on 250 miles of reserve stacks. About half of these are in basements; the others, now protected by wooden walls behind the glass facades, occupy the top 11 floors of the towers. Offices on the lower floors are shaded by vertical, individually controlled wooden louvers, and the resulting animation contrasts with the blankly repetitive panes of the upper facades. Wood is used—startlingly lavishly—to deck the vast plaza and its steps as well. The tops of full-grown pines project tantalizingly above the plaza's center, which is edged by a sunshade-cum-handrail.

The public enters the library by descending at each narrow end of the court to the first basement level and into a large lobby, part of a ring of public areas that include reading rooms and broad ambulatories. Accredited researchers may continue through the lobby down escalators to dramatically tall halls, toplit through the lower windows of the towers above. Woven steel mesh lining the walls recalls tapestries and intensifies the dungeon-like feeling of these halls, an apt prelude to the

THESE PAGES: From across the Seine, the National Library's towers resemble half-open books on end. Behind the glass facades, timber sunscreens protect books on upper floors; pivoting wooden panels shade offices below.



ROBERT CESAR / ARCHIPRESS



FACING PAGE, TOP: Viewed from Parc de Bercy across the Seine, towers rise from wood-decked plinth.
FACING PAGE, CENTER: Towers bracket vista down length of central court. Woven metal mesh encloses fire stairs on towers' end bays.
SECTION: Lobbies and researchers' reading rooms below flank courtyard.
BELOW: Sunken forest is overlooked by glass-enclosed hallways.
BOTTOM: Sunshades edging top of central court double as balustrades.

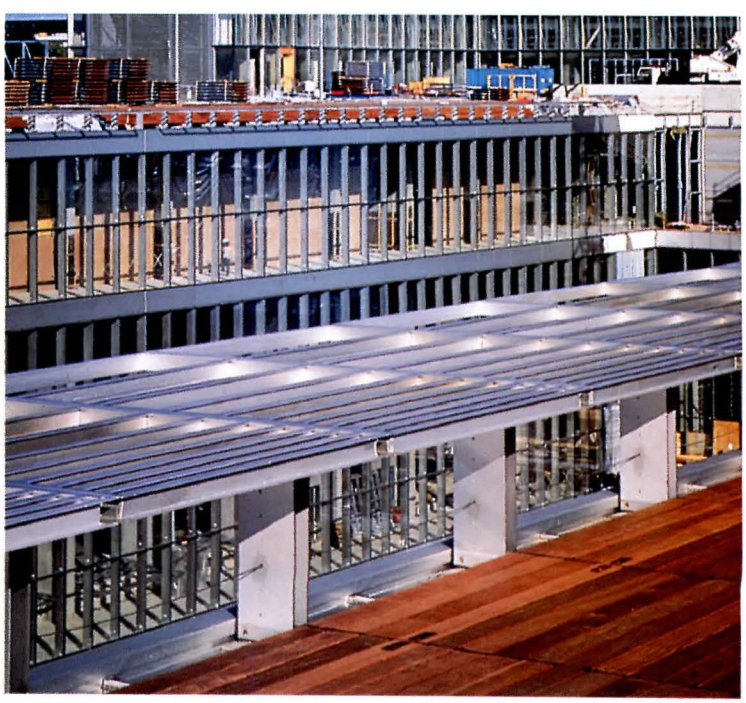
cloisterlike ambulatory and monastic calm of the researchers' reading rooms.

What is striking throughout the building is Perrault's minimalist abstraction—the extreme lack of detail, curves, and any other tactile or sensual dimension. Even the pine forest in the courtyard is sealed off, as remote as a mirage. In this contemplative realm, Perrault has achieved his ambition of combining such opposites as grandeur and intimacy, transparency and enclosure.

However, this aloof, abstract, and seemingly weightless building ultimately fails as a civic monument and public place within Paris. The towers are too insubstantial to anchor themselves or their surroundings in place; their smooth facades offer no friction or detail to arrest attention and the flow of space. Seen from a distance, the towers are obviously related, but the larger of the pair of gaps between them suggests that all four cannot belong to one building. Moreover, their Modernist minimalism reads as corporate cost cutting, so that the new library seems more a business complex than a civic monument. Perrault should have defined the open books with "covers" to clarify that the towers form a single whole, to define a central location, and perhaps also to convey some *civitas.*

Up close, the library is truly enigmatic. No entrance is visible. Instead, largely blank towers rise from what appears to be an enormous pile of timber. Once the entrance is found and the building penetrated, certain inadvertent messages are suggested: gaining knowledge is a process of excavation in which scholars are privileged to dig deepest, both downwards and backwards in time, to reach the studious quiet of medieval monks. With its gigantic book-sculptures dominating a vast wooden plaza, the whole complex resembles a mausoleum commemorating the passing of print's hegemony.—*Peter Buchanan*

Volume two of Peter Buchanan's Renzo Piano Building Workshop: Complete Works *was published in May 1994 by Phaidon Press.*



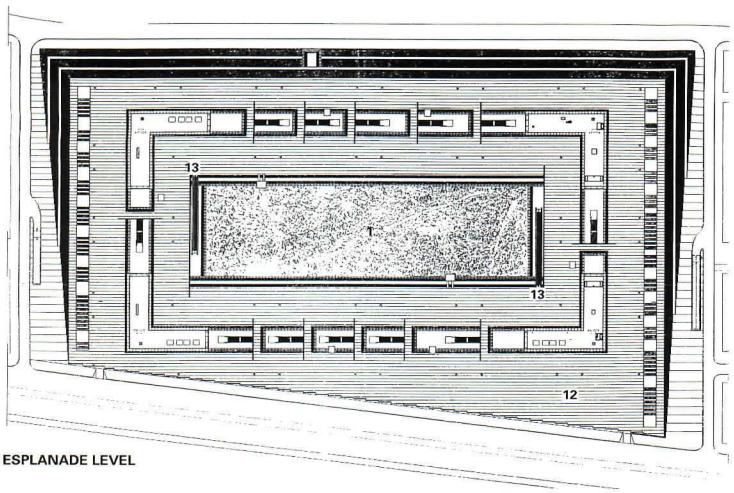
ROBERT CESAR / ARCHIPRESS

1 COURTYARD
2 RESEARCHERS' READING ROOM
3 RESEARCHERS' HALL
4 AUDIOVISUAL LIBRARY
5 CATALOGS
6 PARKING
7 PUBLIC READING ROOM
8 LOBBY
9 STAFF RESTAURANT
10 PUBLIC RESTAURANT
11 CONFERENCE HALL
12 PLAZA
13 ENTRANCE

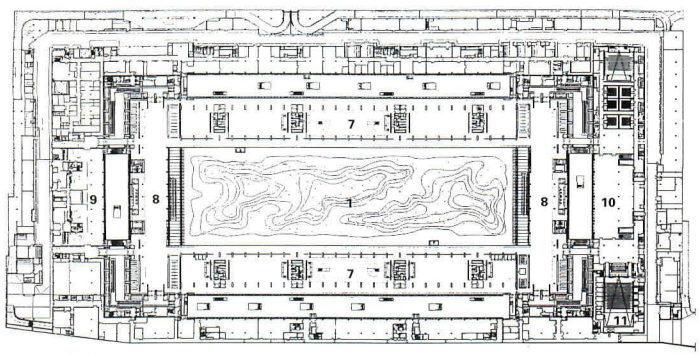
FACING PAGE, TOP: Ambulatory leads from lobby to public reading rooms.
FACING PAGE, BOTTOM: Researchers' rooms flanking court have 36-foot-tall ceilings with steel-mesh baffles.
PLANS: Esplanade is decked in wood; level below contains public areas; lowest level houses researchers' rooms.
BELOW: Public reading room stairs lead to mezzanines with computers.
BOTTOM: Ambulatories are lit by fixtures designed by Perrault.

NATIONAL LIBRARY OF FRANCE
PARIS, FRANCE

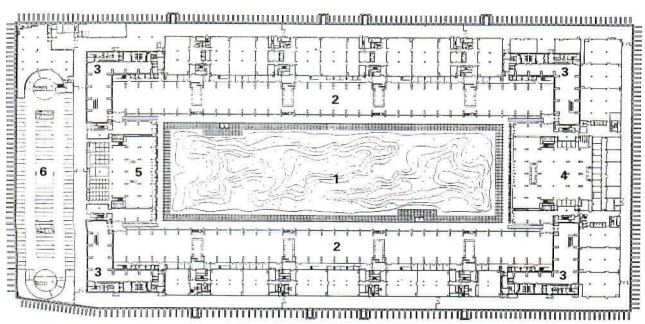
ARCHITECT: Dominique Perrault Architect, Paris—Dominique Perrault, Aude Perrault, Gaëlle Lauriot-Prevost, Daniel Allaire, Gabriel Choukroun, Guy Morisseau, Jean Luc Bichet, Jean François Candeille, Yves Conan, Maxime Gasperini, Pablo Gil, Franck Michigan, Thierry Meunier, Inge Waes, Jérôme Besse (project team)
ENGINEERS: Sechaud & Bossuyt (structural); ACV (acoustics); Sauveterre-Horizon (landscaping); Syseca (electrical/security/telecommunications); Technip Seri Construction (mechanical)
CONSULTANTS: Guy Huguet (construction manager); Didier Onde, Sophie Thomas (interiors); Erik Jacobsen (landscape); Pieffet-Corbin-Tomasina (cost estimating)
COST: $7.1 million
PHOTOGRAPHER: Michel Denancé/ Archipress, except as noted



ESPLANADE LEVEL



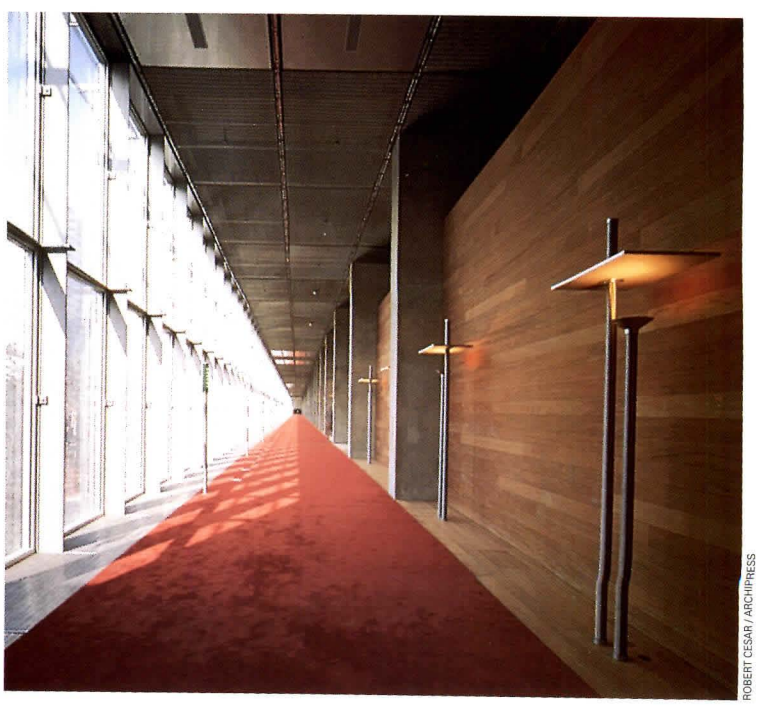
FIRST BASEMENT LEVEL



SECOND BASEMENT LEVEL

166'/50m


ROBERT CESAR / ARCHIPRESS


ROBERT CESAR / ARCHIPRESS

Library Square
Vancouver, British Columbia
Moshe Safdie and Associates, Architect

Canadian Colossus

Library Square is Vancouver's most controversial new building since the design of Arthur Erickson's Simon Fraser University in nearby Burnaby was made public in 1963. In 1991, the city decided to run a limited competition among three established North American firms rather than tap the local design community. The choice of Moshe Safdie as the competition winner caused an uproar among local architects, especially since Safdie has been awarded some of the most important public design commissions of the past dozen years in Canada. His design for Library Square was criticized by local architects and critics as having nothing "West Coast" about it and likened to the Colosseum in Rome. (Protesting University of British Columbia architecture students satirically wore togas to the opening of the library this past May.) Regionalist Modernism, of the type practiced by Arthur Erickson, has been strong in Vancouver, and despite the fact that it has grown to become a cosmopolitan metropolis in recent years, the city clearly does not like its cultural identity tampered with.

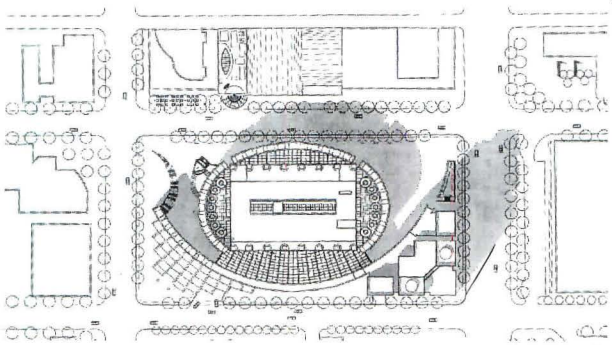
Yet, in the five months it has been open, Library Square has already proved to be a considerable success. To start with, Safdie has adopted an intriguing site plan in a district of Vancouver that badly needed visual brightening and enhanced community facilities. Downtown South, where the library is located, has been designated for a civic center since the 1920s, and while several public and cultural buildings have clustered there, the ensemble has not added up to much until now. Safdie's complex is intended to anchor the group. Visible from several approaches to downtown, the new building had to make a big, sculptural statement.

Working with local associates Downs/Archambault & Partners, Safdie differentiated stacks from reading areas by placing the books in an oblong, eight-story glass box and the reading rooms in a freestanding precast concrete wall. Elliptical in plan and four monumental stories high, this concrete wall is constructed with a granite aggregate of terra-cotta hue (the granite is local) and abstracted Classical detail.

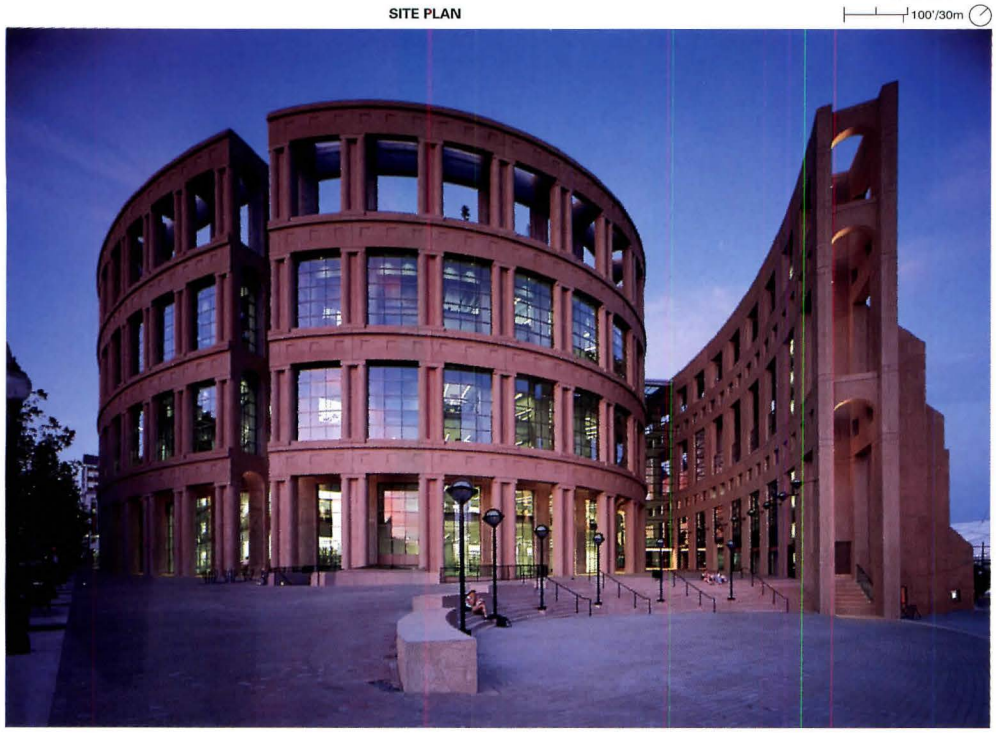
Why did Safdie distinguish the library's outer face and its inner workings so sharply? The architect responds that the working library of a big city in the 1990s should be "inviting and transparent" and incorporate the latest in computer technology. Yet, especially in Vancouver, a somewhat memoryless place, Safdie sought to evoke traditional values of learning and citizenship on the outside of the building, to shape "a civic place with a sense of civic identity."

THESE PAGES: Occupying a block in downtown Vancouver, Library Square consists of retail and community facilities (foreground), library stacks and reading rooms (behind), and a government-leased office tower (right).

SITE PLAN: Oblong box of stacks nests within precast concrete wrapper.
BELOW: Wrapper is articulated by trabeation and abstracted Classical detail.
BOTTOM: Office tower has openings that adjust in scale to adjacent ring wall.
FACING PAGE, TOP: Curved south wall of tower inflects to shape and scale of library's "ghost wall."
FACING PAGE, BOTTOM: Entrance plaza creates public space. Buttressed wall (right) contains retail, restaurant, and community facilities.



SITE PLAN



The library's curved "ghost wall" does indeed recall the Roman Colosseum, especially when seen against a second wall that looms up at the south end of the site and sweeps toward a 22-story office building at the northeast corner. The precast walls, opening out to form an entrance plaza at the southwest corner, enclose a generous, glass-roofed concourse in front of the library that becomes an indoor civic square—welcome in Vancouver's soggy climate—with shops and cafés facing the multilevel library inside.

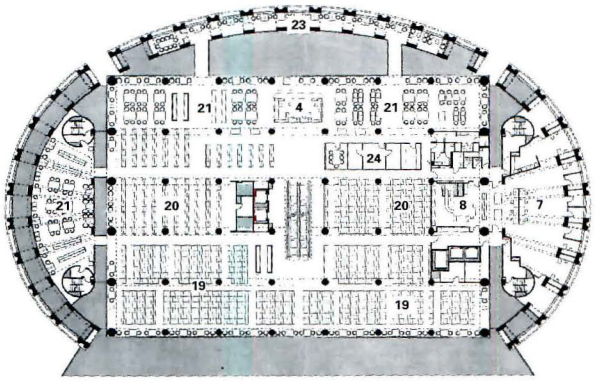
The office building, which is leased by Canada's federal government, is also clad in precast concrete panels two stories high with the same granite aggregate as those of the library, and has a taut, green glass bay at its northeast corner. The building may seem an intruder to Library Square, but it helped finance the complex and serves to pin the group down visually, especially when seen from a distance. Safdie harmonized the tower with the other volumes by varying its fenestration to adjust to that of the library's curved wrapper beside it.

The library is designed to encourage free public access, a principle Vancouver holds dear. Key features of the plan result from extensive consultation with citizens, who were polled on their responses to the shortlisted competition designs. Seventy percent of respondents preferred Safdie's, and the jury, composed of civic officials and architects, also strongly preferred the organization, circulation, and lighting of his design. The great sweep of the atrium and the wideness of the entrance connote openness, and Safdie even exposed the ends of the library's floors to allow the public to see into the workings of his complex machine for literacy.

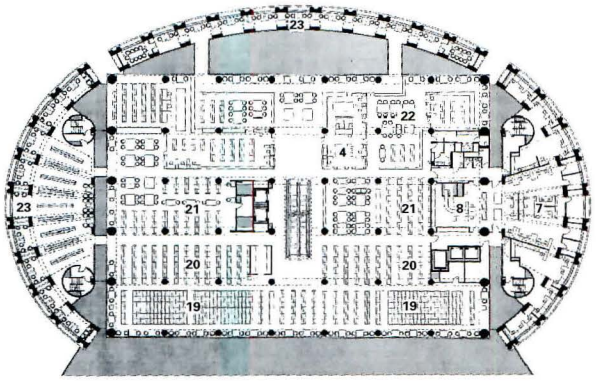
Library users expressed a desire for clear circulation and ready access to information and popular collections. Simplicity is a hallmark of the plan—a bank of wide escalators runs up through the center of the building, on axis with the entrance, and another descends to an attractive children's library. The

PLANS: Library Square is entered via a sweeping ramp (left). Shops, restaurants, and raised galleries open off concourse; library is entered over a bridge across "moat." Stacks are configured within rectangular volume (center), encircled by reading rooms. **FACING PAGE:** Overlooked by readers in study carrels, concourse is a glazed, all-season civic square with shops and cafés behind arcaded wall (right).

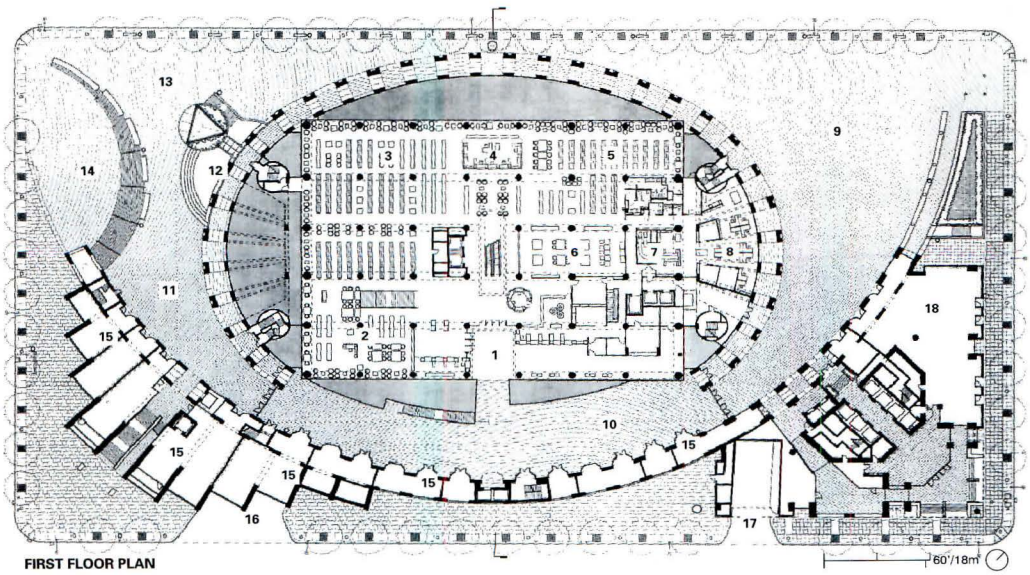
1 LIBRARY ENTRANCE
2 YOUNG ADULTS LIBRARY
3 POPULAR READING LIBRARY
4 SERVICE DESK
5 MULTILINGUAL LIBRARY
6 INFORMATION CENTER
7 STAFF WORK AREA
8 COLLECTION MAINTENANCE
9 NORTH PIAZZA
10 PROMENADE
11 ENTRANCE RAMP
12 FOUNTAIN
13 SOUTH PIAZZA
14 AMPHITHEATER
15 RETAIL
16 PARKING ENTRANCE
17 SERVICE VEHICLE ENTRANCE
18 FOOD COURT
19 COMPACT STACKS
20 STACKS
21 REFERENCE
22 RESTRICTED REFERENCE
23 READING GALLERY
24 CORPORATE SERVICES



FIFTH FLOOR PLAN



FOURTH FLOOR PLAN



FIRST FLOOR PLAN

library's boxy core—what Safdie calls its "storehouse"—is a straightforward grid of unimpeded floor plates for flexibility and continuous structural columns of exposed concrete. Standard facilities such as photocopy booths, telephones, and rest rooms are placed identically on all floors, and large, well-marked information desks meet visitors at the top of each escalator. The lighting is comfortable, diffused by indirect fixtures and wide, shallow ceiling coves.

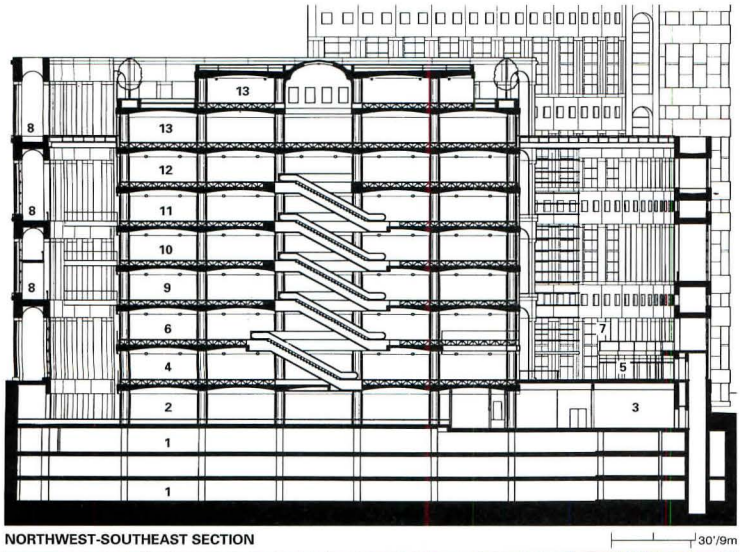
Everyone, patrons and staff, praises the spaciousness of the library, and the building's decor (except for Safdie's custom-designed furniture) is so plain that it could almost be mistaken for a postwar product of Modernism updated for the Information Age. It is as though the old library on Robson Street and its transparent ground story has been moved, inflated somewhat, and wrapped in a moody, opaque mantle signifying Vancouver's increased sophistication.

The transition from the central glass pavilion to the reading rooms at the periphery is abrupt, with a five-story chasm yawning between the two elements. Narrow catwalks are stretched across the gap. These slitlike spaces are uncomfortably vertiginous, but the linear reading rooms that occupy the concrete outer shell are undeniably impressive, with vast windows and a palette of materials deeper and richer than that of the central building. Safdie's hierarchies of space echo one another, offering glimpses and, occasionally, startling views.

Criticism of the new addition to Library Square has been directed toward the alleged excess of its pinkish-brown concrete envelope: it is too Roman, too florid, too expressionistic, too foreign, too assertive. Forceful it is, but one actually wishes it had more of the richness and intricacy for which the generally gray light, moisture-laden air, and conformist esthetic of Vancouver call out. Why not add panels of colored—or even gold—mosaic to the "triglyphs" of the abstracted frieze over the ground-floor colonnade? Why not move

SECTION: Constructed of steel and exposed concrete, library core is traversed by escalators. Reading rooms at perimeter are reached by bridges.
BOTTOM: Reading rooms vary in height from 10 to 35 feet, creating well-lit studies with tantalizing views of public concourse and downtown Vancouver.
FACING PAGE: Skylit, five-story Piranesian shafts spanned by catwalks rise between rectangular library core and curved reading gallery around periphery.

1 PARKING
2 CHILDREN'S LIBRARY/ TECHNICAL SERVICES
3 MEETING ROOM
4 ENTRANCE
5 RETAIL
6 LANGUAGES, LITERATURE, AND SOCIAL SCIENCES
7 PROMENADE
8 READING ROOM
9 BUSINESS AND ECONOMICS
10 PERIODICALS
11 HISTORY AND GOVERNMENT
12 ADMINISTRATION
13 OFFICES/FUTURE EXPANSION



NORTHWEST-SOUTHEAST SECTION 30'/9m

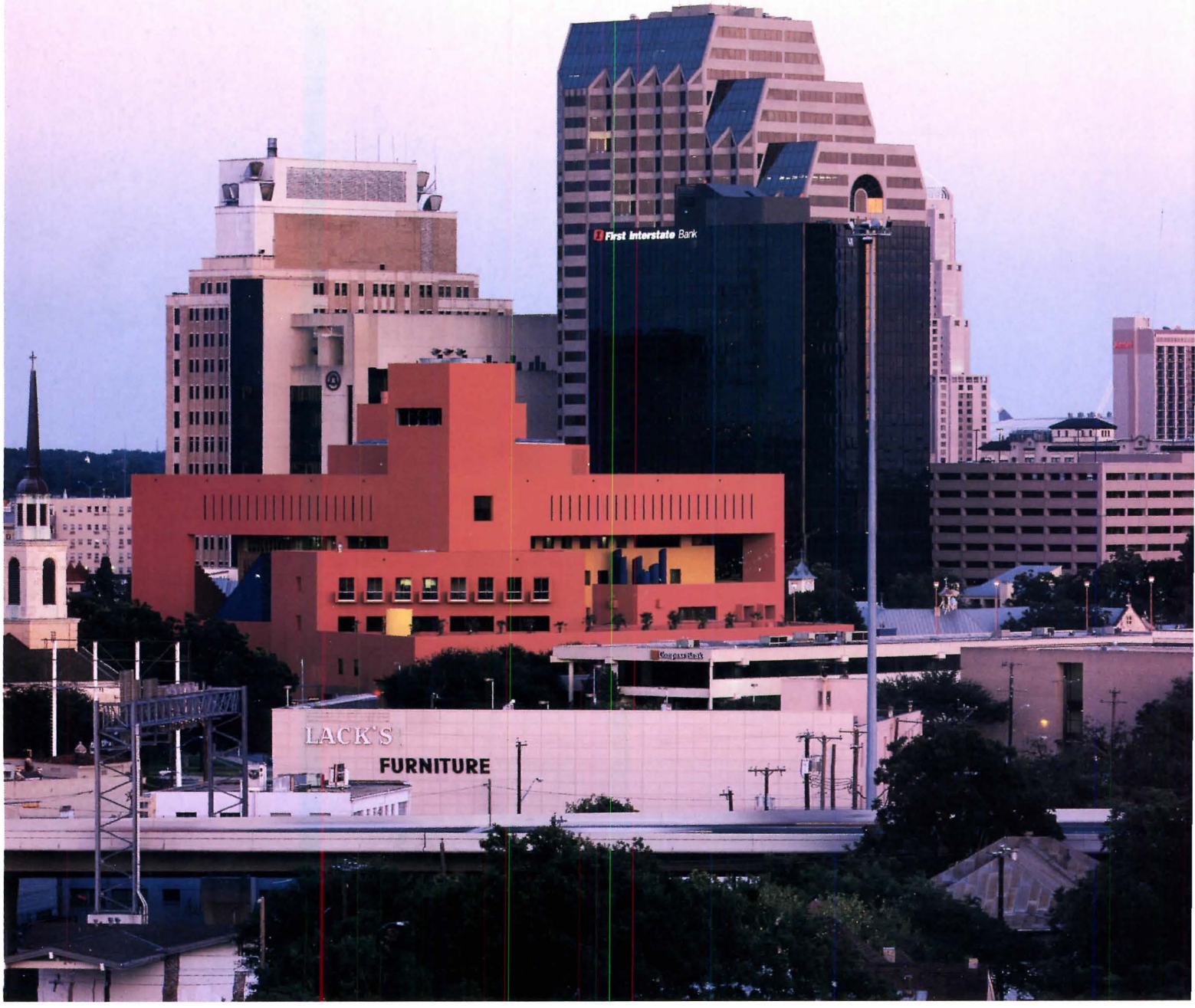
some of the blue of the reading room furniture out onto the walls? And how sad that a planned roof garden was eliminated from the program—or rather, modified, for there is a garden up there, resting on two floors of provincial offices added to the library in a bureaucratic afterthought.

Despite these limitations—most owing to budgetary constraints—Library Square shows early signs of being a true asset to Vancouver. The public is visiting the library in such droves that its shelves are embarrassingly bare. Even after the human tide recedes, a stylish public gathering place will remain. Vancouver's new library provides a strengthened cultural center and a memorable civic monument in what is not, except for Arthur Erickson's Robson Square and spectacular mountain views, an especially distinguished downtown.—*Christopher Thomas*

Christopher Thomas teaches the history of art and architecture at the University of Victoria.

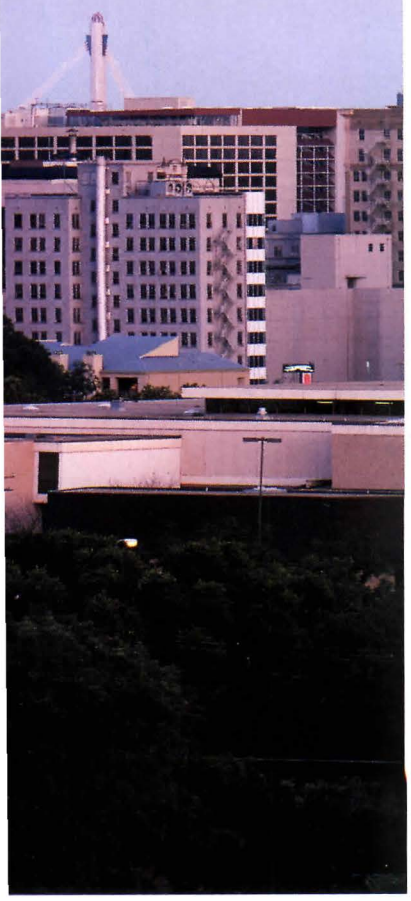
VANCOUVER LIBRARY SQUARE
VANCOUVER, BRITISH COLUMBIA

ARCHITECT: Moshe Safdie and Associates, Boston, Massachusetts—Moshe Safdie (principal-in-charge); David Galpin, Philip Matthews, Ron Beaton, Michael McKee (project team)
ASSOCIATE ARCHITECT: Downs/Archambault & Partners
ENGINEERS: Read Jones Christoffersen (structural); Keen Engineering (mechanical); Schenke/Bawol Engineering (electrical)
CONSULTANTS: Ove Arup and Partners (structural/mechanical concepts); Cornelia Hahn Oberlander (landscape); Brown Strachan (acoustics); Fisher Marantz Renfro Stone (lighting)
PROJECT MANAGER: N.W. Fletcher & Associates
GENERAL CONTRACTOR: PCL Constructors Pacific
COST: $125 million
PHOTOGRAPHER: Timothy Hursley


First Interstate Bank
LACK'S
FURNITURE

San Antonio Central Library
San Antonio, Texas
Legorreta Architects

Texas Flower



Ricardo Legorreta's Central Library explodes on the landscape of downtown San Antonio, Texas, like a gigantic bouquet of flowers, making everything around it look anemic. In a city that has neglected color despite its rich Latino heritage, the bold, red-walled library appears to have awakened a dormant cultural memory. Several small buildings around town have suddenly erupted in splashes of magenta and cobalt blue paint. The new library is turning up in advertisements and posters, a sure sign of incipient landmark status. And most importantly, it is being used.

Three thousand people a day have walked through it since May, triple the number of visitors to the old main library. New library cards are being issued at the rate of 250 per day. "This library is not a warehouse for books," explains Director June Garcia. "It is a public meeting place for all kinds of things."

Legorreta won the 1991 design competition for the library by exploiting the possibilities of an eccentric triangular site previously occupied by a Sears store. He incorporated the store's two-story parking garage into his design as a freestanding building, then notched, carved, sliced, and rotated the other volumes to create dramatically different facades for each adjacent street. On all sides, he added terraces, courtyards, and gardens, some recessed or sunken, others exposed and gridded, that conflate indoor and outdoor space while offering dramatic views of the city.

This civic spirit carries over to the interior, where a six-story atrium, 60 feet on a side, rises through the center of the building. Some staff members have complained that the atrium is too dominant and consumes too much stack space. Others wish that Legorreta had been less a sculptor and more a space planner in laying out individual floors. But no one seems willing to sacrifice visual excitement for dull efficiency.

Legorreta embraces asymmetry for its aggressive modernity as well as for its evocation of the simple, ad hoc construction of older vernacular buildings. He has spoken movingly of visiting vast Mexican haciendas as a boy, and of learning firsthand the rewards of mystery and surprise. His buildings cannot be read at a glance; they must be explored slowly, space by space. Thus, the sun-washed entry courtyard of the San Antonio library leads to a cool blue foyer, then across a paved lobby to the soaring atrium, its yellow walls radiating welcome.

These bold gestures are balanced by numerous smaller ones that make Legorreta's Modernism intimate and approachable. The 64-year-old Mexican architect is a master of the forced perspective and the framed view

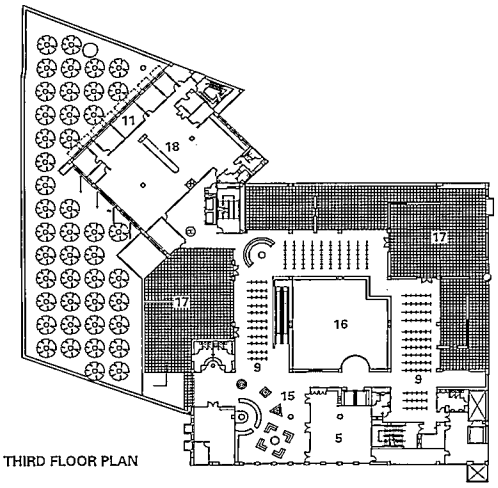
THESE PAGES: San Antonio's bold new Central Library dominates the city's neutral skyline. More than simply decorative, Legorreta's colors are inspired by the red clay, bright murals, and brilliant native clothing of Mexico.


BUSES
ONLY

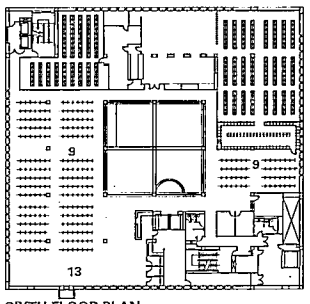
FACING PAGE: Legorreta's dynamic forms converge at a key intersection. Purple drum houses small study room off reference area.
BELOW: Angled volume (left) contains offices; volume with cooling tower houses stacks and offices over main entrance; reference and catalog area (foreground) is topped by garden.
BOTTOM: Legorreta sculpted main volume with slotted openings, recesses, and overhangs; yellow section denotes terrace with outdoor seating.

1 ENTRY
2 RECEPTION DESK
3 POPULAR LIBRARY
4 FOYER
5 MULTIPURPOSE
6 GALLERY
7 GIFT/BOOK SHOP
8 MEDIA CENTER
9 STACKS
10 COURTYARD BELOW
11 CONFERENCE
12 STAFF WORKROOM
13 READING ROOM
14 PERIODICALS
15 CHILDREN'S AREA
16 ATRIUM
17 ROOF TERRACE
18 WORK AREA
19 COMPUTER ROOM
20 ADMINISTRATION

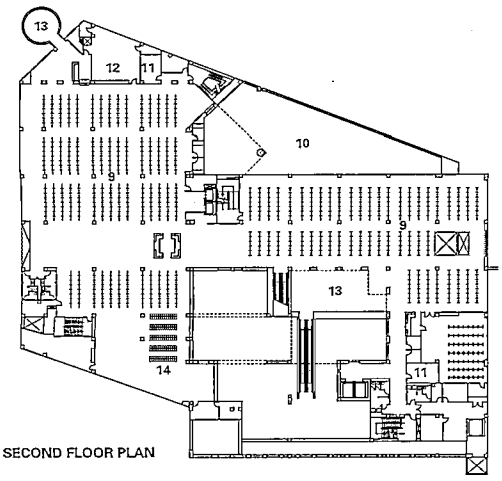
PLANS: Numerous gardens and terraces extend exterior spaces. Stacks and study areas surround six-story atrium. First floor contains media center, gallery, and circular study room at northeast corner; main reading room is located on second level.
FACING PAGE, TOP: Sunken garden and restaurant are hidden behind street wall; atrium and children's area are framed by gridded window.
FACING PAGE, BOTTOM: Slanting wall bisects site for future expansion.



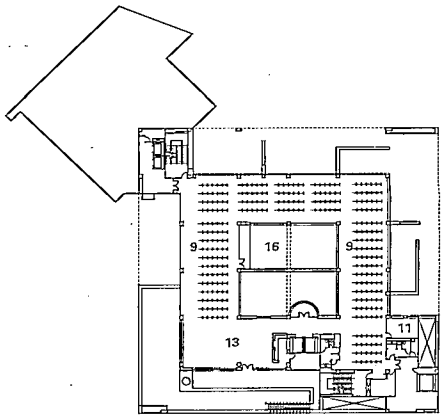
THIRD FLOOR PLAN



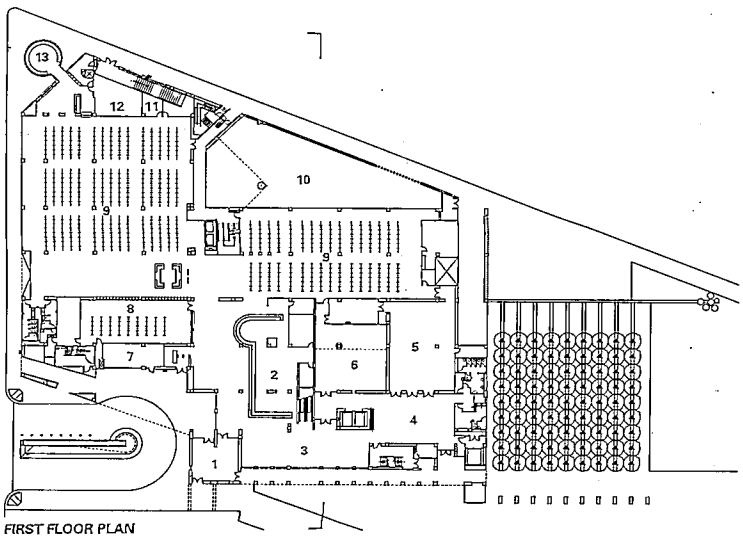
SIXTH FLOOR PLAN



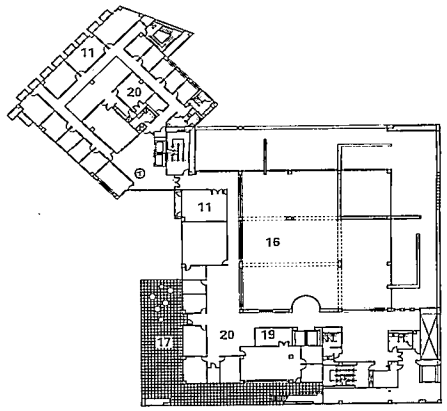
SECOND FLOOR PLAN



FIFTH FLOOR PLAN



FIRST FLOOR PLAN

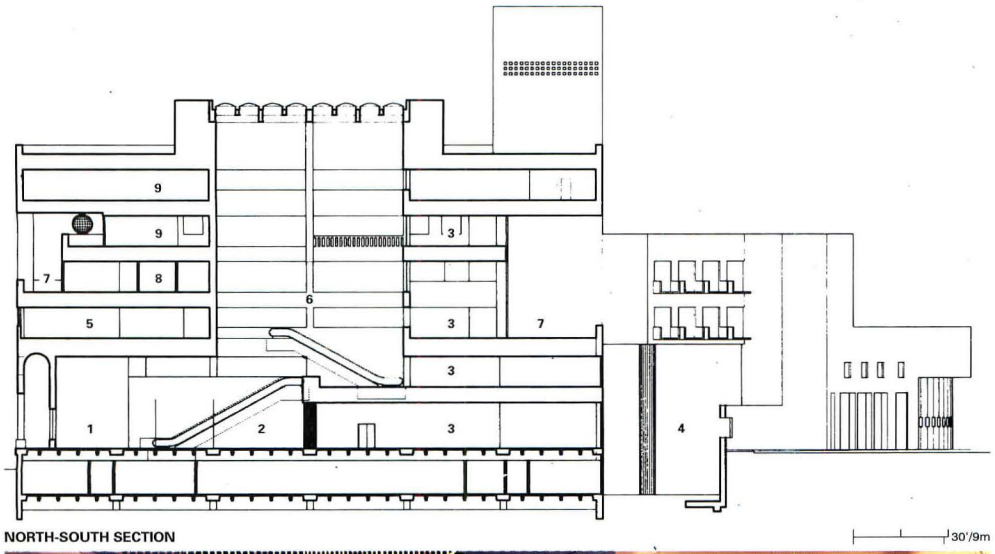


FOURTH FLOOR PLAN

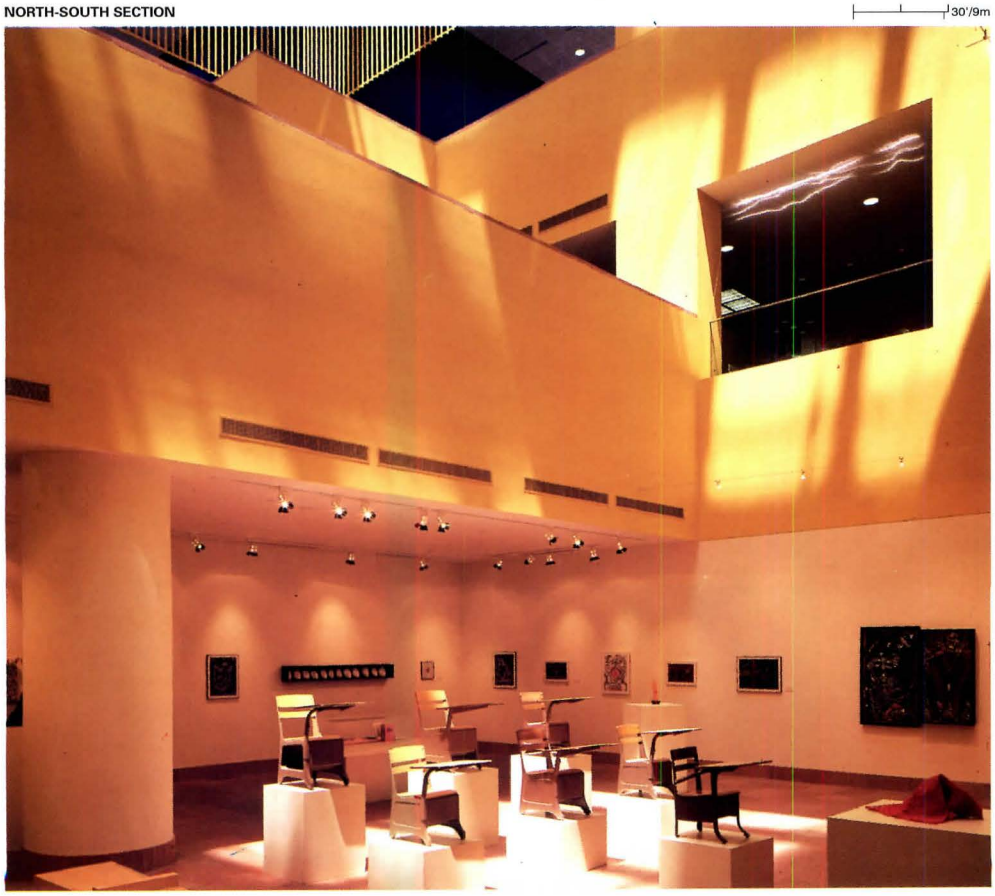
FACING PAGE: Main reading room occupies second level of central atrium.
BOTTOM: Gallery is tucked beneath reading room at base of atrium.
SECTION: Terraces (left) and offices (right) flank central atrium.

SAN ANTONIO MAIN LIBRARY
SAN ANTONIO, TEXAS

ARCHITECT: Legorreta Architects, Mexico City—Ricardo Legorreta (principal-in-charge); Victor Legorreta, Noe Castro (design architects)
ARCHITECT OF RECORD: Johnson-Dempsey & Associates
ASSOCIATE ARCHITECT: Davis Sprinkle
LANDSCAPE ARCHITECT: James Cooper
INTERIOR DESIGNERS: Ford, Powell & Carson; Humberto Saldaña; Callins & Associates
ENGINEERS: Danish-Lundy-Pinnell (structural); Goetting (mechanical)
PROJECT MANAGEMENT: 3D/M
GENERAL CONTRACTOR: H.A. Lott
COST: $21 million
PHOTOGRAPHER: Paul Bardagjy



NORTH-SOUTH SECTION



that direct the eye outward to a fragment of landscape or inward to a wall or a doorway. In the San Antonio library, for example, slotted windows cast mysterious shadows on the floor, a purple bench sits surrealistically against a yellow wall, and a row of columns recalls a De Chirico painting.

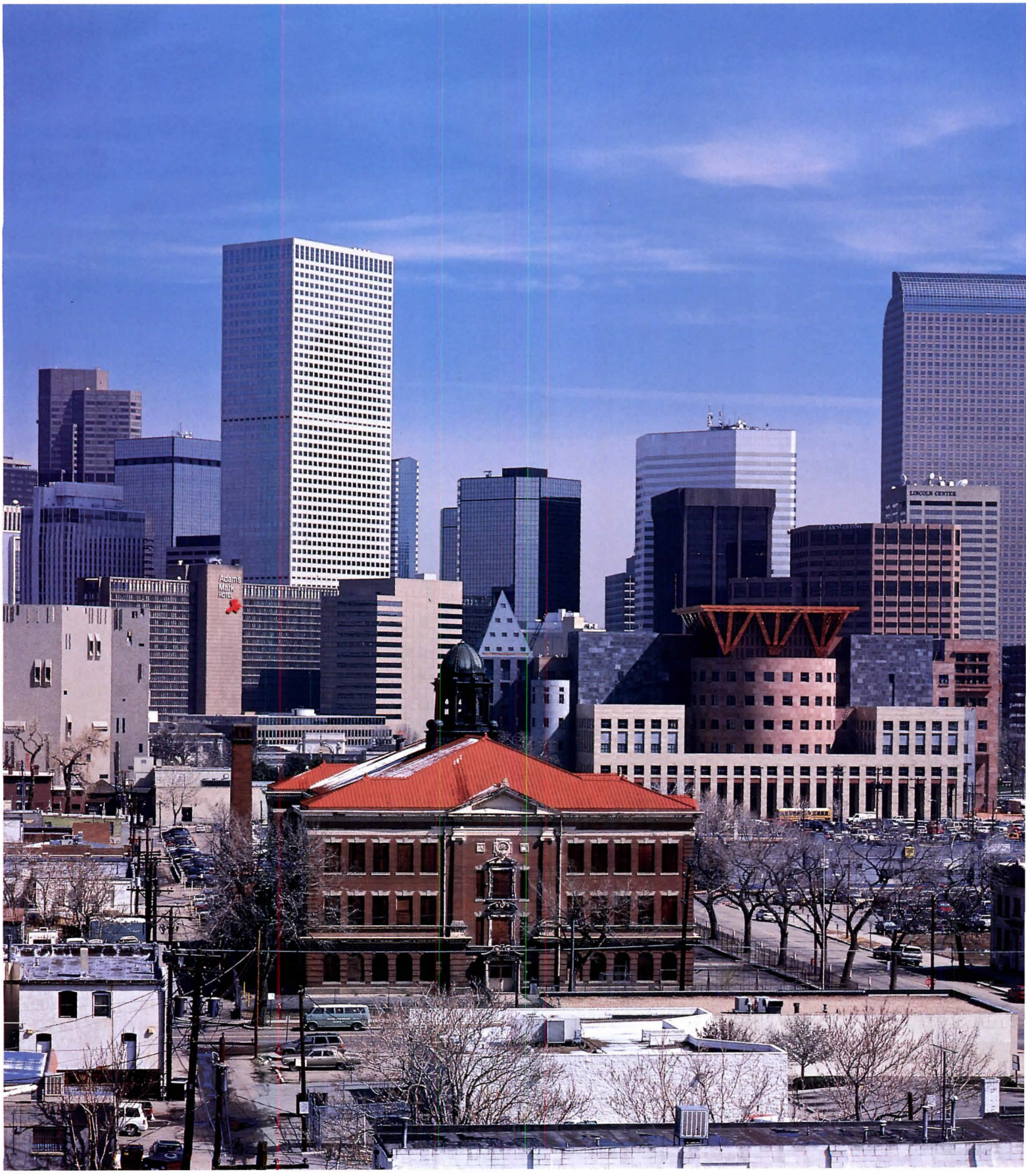
Yet if light animates the Central Library, color makes it unforgettable. Like his mentor Luis Barragán, Legorreta uses color as a basic building material rather than merely as decoration. "Instead of saying I will make a wall and paint it red," he has said, "I say I will make something red and it will be a wall."

In Solana, at IBM's regional headquarters near Dallas, homeowners threatened to sue Legorreta over his magenta and yellow walls and pylons until he persuaded them that these colors were found in native Texas wildflowers. His sources for San Antonio go back further—to the red clay of central Mexico, to the work of the great Mexican muralists, to the brilliant clothing of native Indians. The effect is the same: to dramatize shape, turn walls into abstract paintings, and stir the emotions and the imagination.

The $38 million San Antonio Central Library caps an arduous struggle to bring the city's chronically underfunded libraries up to standard. Most of the money came from a 1988 bond issue, which made it clear that unless San Antonio upgraded its libraries, the city would get left behind in the 21st century.

Not only is the new library twice as large (240,000 square feet), with twice the capacity (750,000 volumes) of the old, it contains a computerized catalog in English and Spanish, access to the Internet and numerous national databases, laptop hookups, and an on-line reprint service for 17,000 journals. It also houses meeting rooms for 20 to 200 people, a restaurant, and a bookstore.

"The new building is a living symbol of the city's commitment to education in the broadest sense—to lifelong learning," Garcia praises. "And it says that in a bold and dramatic way."—*David Dillon*


Adam's
Mark
Hotel
LINCOLN CENTER

Denver Central Library
Denver, Colorado
Michael Graves, Architect, with Klipp Colussy Jenks Dubois

Stacks of Nostalgia

This library is not some 'brave new world,'" explains Michael Graves, describing the new Central Library in Denver, Colorado. "It's about sitting in a comfortable chair with a book." Adds City Librarian Rick Ashton, "Reading books on paper is 'low' technology that will not fade away…it's an activity fundamentally associated with libraries."

Denver's new Central Library certainly accommodates readers, with chairs, tables, and lamps packed into every space unoccupied by stacks. When these are combined with a shifting color palette, playful carpet patterns, and a virtual catalog of rich finish detailing, the resultant visual clutter domesticates the formality of Graves's architecture. It also makes the place look busy, even on the rare occasion that it isn't.

With the most cardholders per capita in the nation, Denver takes full advantage of its library system: the new facility alone hosts some 5,000 visitors daily to its millions of books, government documents, and renowned Western History collection. The 540,000-square-foot building also occupies a critical site. Sandwiched between the feisty citadel of Gio Ponti's Neo-Medieval Denver Art Museum and Rogers Nagel Langhart's lifeless composition for the Colorado Historical Society and Colorado Supreme Court, the new library completes the southern side of the Beaux-Arts governmental mall anchoring downtown Denver.

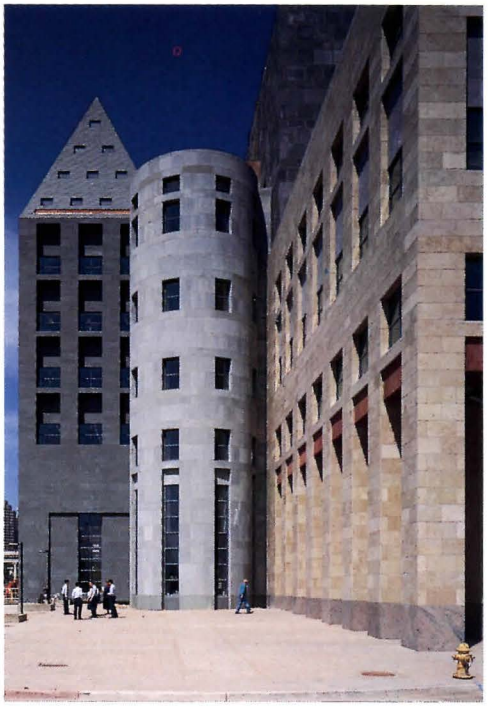
Graves and local architect Klipp Colussy Jenks Dubois were well aware of the prominence of their project and its location. Having bested Robert A.M. Stern, Denver-based Hoover Berg Desmond, and others in a 1991 two-stage competition, they recognized that Ashton wanted a building that delivered "a message about [its] importance to the community." They also knew the library wanted to increase the collection's accessibility from 25 percent to 85 percent and that the existing main library on the same site had to be preserved. Given the site constraints, adding 400,000 square feet to the 133,000-square-foot Burnham and Hoyt original without overwhelming it was unrealistic.

The Graves/Klipp solution grasps the older building from above, then presses it into the flank of the addition, a clumsy embrace reminiscent of Graves's ill-fated attempt to expand the Whitney Museum of American Art. The exaggerated scale, flattened traditional forms, and earthen color schemes that are Graves signatures simply do not lend themselves to easy rapprochement with other architectural languages. Instead, the chunky massing of cubes, cylinders, slabs, and towers dominates the existing library.

THESE PAGES: Denver Central Library achieves civic presence against backdrop of high-rises. City hopes library will spur development of neighborhood to south (foreground), which includes the historic Evans School (left).


THE DENVER PUBLIC LIBRARY
P Allright Parking

FACING PAGE: Library's more-or-less symmetrical arrangement of forms is clad in German limestone and color-matched concrete. Central drum houses Western History collection and reading room. Gehryesque copper crown hides mechanical equipment.
BELOW LEFT: Library entrance is under campanile; shop is located in cylinder.
BELOW RIGHT: Arcade features granite bases and buff limestone shafts.
BOTTOM: Copper-clad pavilion will house children's reading room.

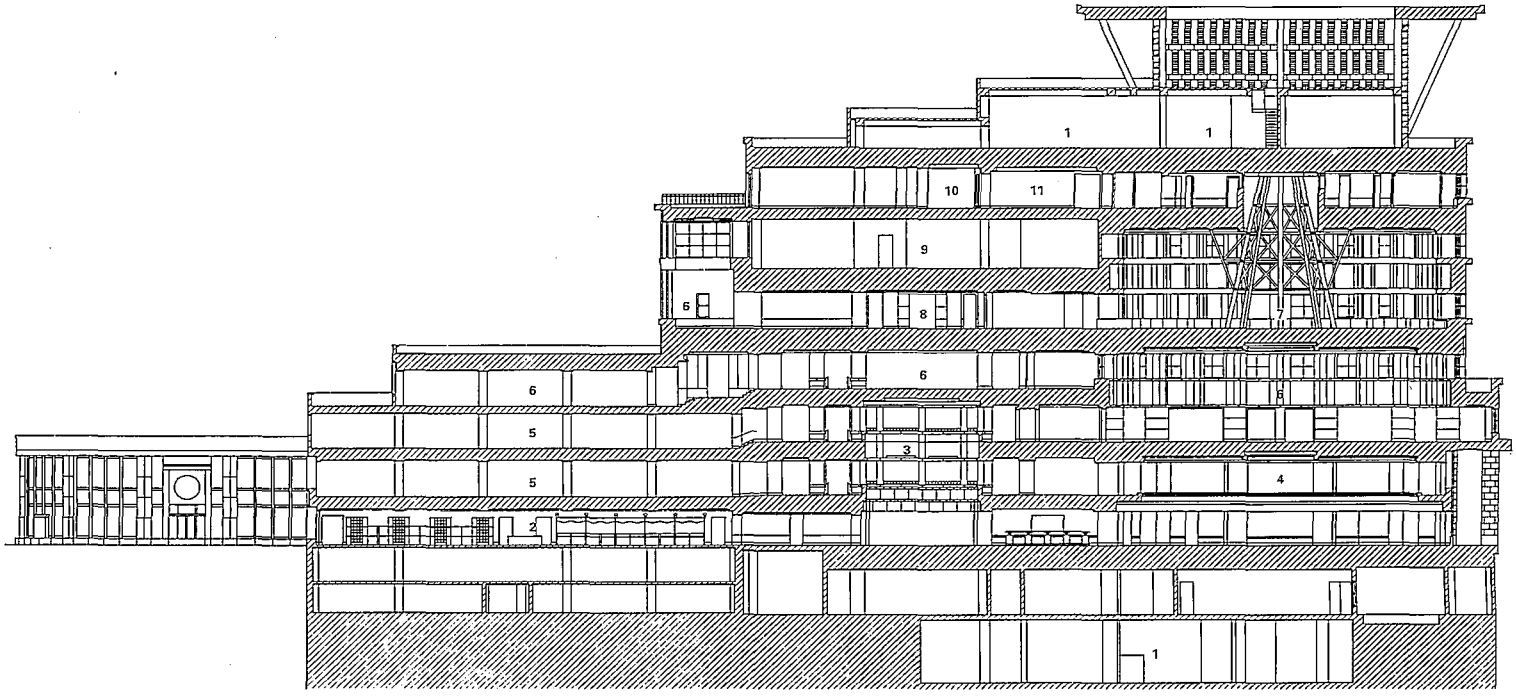


ANDREW KRAMER

FACING PAGE, TOP: Lobby continues exterior limestone as interior finish; furniture-grade maple grid mimics shelves. FACING PAGE, BOTTOM: Central spine on ground floor incorporates information desk (left). Panels separating floors now hold murals by Ed Ruscha. SECTION: Drum at library's southern end houses Western History collection and mechanical room in crown. PLANS: New (right) and old (left) buildings are linked by great hall.

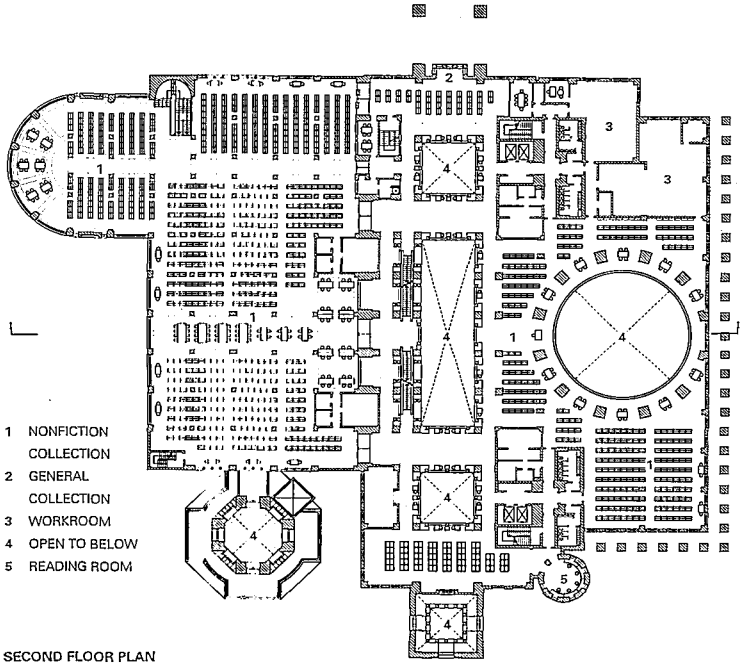
FOLLOWING PAGES, TOP LEFT: Periodicals room on ground floor is furnished with tables from Denver's Carnegie Library, now a municipal building. FOLLOWING PAGES, BOTTOM LEFT: Art Deco-inspired light fixtures provide formal contrast to playful carpet patterns. FOLLOWING PAGES, RIGHT: Oil derrick sculpted from refinished 19th-century construction timbers is focus of Western History reading room.

1 MECHANICAL/SERVICE
2 CHILDREN'S LIBRARY
3 GREAT HALL
4 REFERENCE ROOM
5 OPEN STACKS
6 READING ROOM
7 WESTERN HISTORY COLLECTION
8 GENEALOGY COLLECTION
9 CLOSED STACKS
10 GALLERY
11 TRAINING ROOM



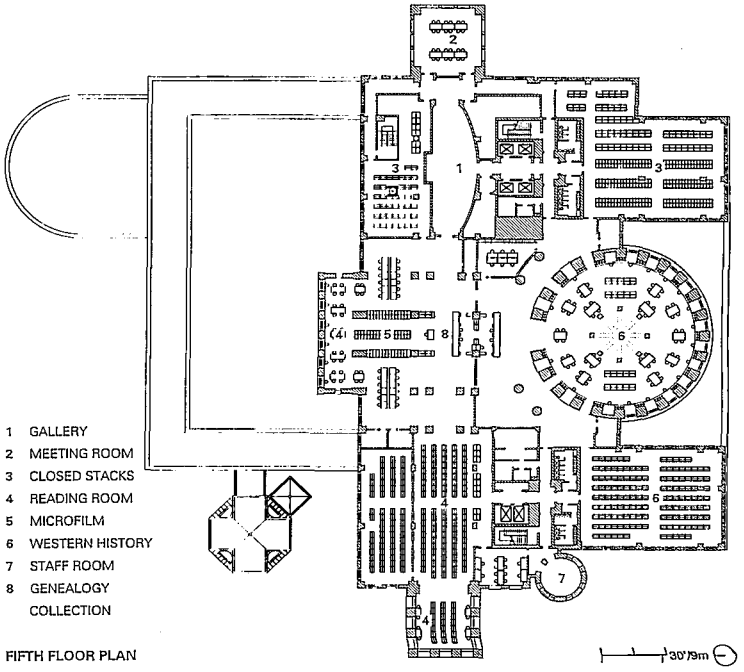
NORTH-SOUTH SECTION

30'/9m



1 NONFICTION COLLECTION
2 GENERAL COLLECTION
3 WORKROOM
4 OPEN TO BELOW
5 READING ROOM

SECOND FLOOR PLAN



1 GALLERY
2 MEETING ROOM
3 CLOSED STACKS
4 READING ROOM
5 MICROFILM
6 WESTERN HISTORY
7 STAFF ROOM
8 GENEALOGY COLLECTION

FIFTH FLOOR PLAN

30'/9m

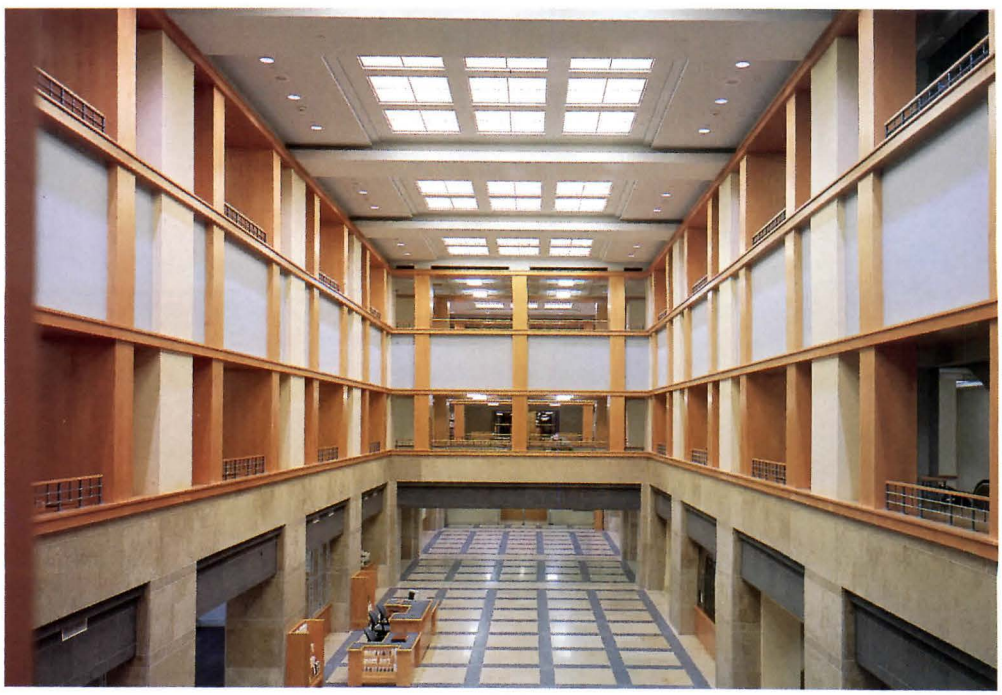
Moreover, the addition is awkward, with too many different pieces competing for attention. The powerful cylinder rising from the center is cut off in mid-ascent by an ungainly copper crown that looks borrowed from Frank Gehry. The smaller cylinder near the west entrance seems an afterthought. The composition slips between symmetry and asymmetry, an uncomfortable middle ground between the Classical and the Modern.

Urbanistically, the building fares better, establishing a clear wall at the edge of the civic plaza while deftly linking the two neighboring museums. The addition is organized along a central spine, which shares a Graves/Klipp-designed plaza with the art museum to the west and gestures powerfully toward the courthouse/historical society complex to the east. In an effort to encourage revitalization efforts, the Graves/Klipp design presents its most prominent facade to the underdeveloped south.

In addition to the "great hall" linking device, the Graves/Klipp team carves a number of other clear figural spaces out of their building. Those housed within the Gunnar Asplund-inspired drum anchoring the southern facade are most successful, particularly the Western History reading room, which rotates around a dramatic, outsized derrick sculpture.

The sculpture is an appropriate image for a building so fundamentally about nostalgia. The Denver Central Library pays homage to its 19th-century Beaux-Arts site, Burnham and Hoyt's Modern Classicism, and late-20th-century precedents set by Graves himself and others. From familiar forms to welcoming furniture, this library can be a comforting place, but at the expense of the excitement and challenge of the new.

"Architecture is not about progress," claims the preeminent Postmodernist in a gently disingenuous defense of his work. "It's about character—in this case, the character of library." What Graves has failed to address in Denver is how that character must evolve in the next century.—*Reed Kroloff*



DENVER CENTRAL LIBRARY
DENVER, COLORADO

ARCHITECT: Michael Graves, Architect, Princeton, New Jersey —Michael Graves (principal); Tom Rowe (project architect); Mary Yun (job captain)
ASSOCIATE ARCHITECT: Klipp Colussy Jenks DuBois, Denver —Brian R. Klipp (directing principal); Cornelius R. DuBois (principal-in-charge)
ENGINEERS: S.A. Miro (civil/structural); The Ballard Group (mechanical); John L. Altieri Consulting Engineer (associate mechanical); Gambrell Engineering (electrical)
CONSULTANTS: Engel/Kieding Design Associates (interior design); Badgett and Coover-Clark Architects (landscape design); Clanton Engineering (lighting); Weber Design Partners (graphic design); David L. Adams and Associates (acoustics); Lerch, Bates, & Associates (elevators); Associated Construction Consultants (cost estimating); Thomas Ricca Associates (kitchen design); Aguirre Engineering (soils engineer); Kelly Surveying (surveyor)
GENERAL CONTRACTOR: Hyman/Etkin Construction
COST: $49 million
PHOTOGRAPHER: Timothy Hursley, except as noted

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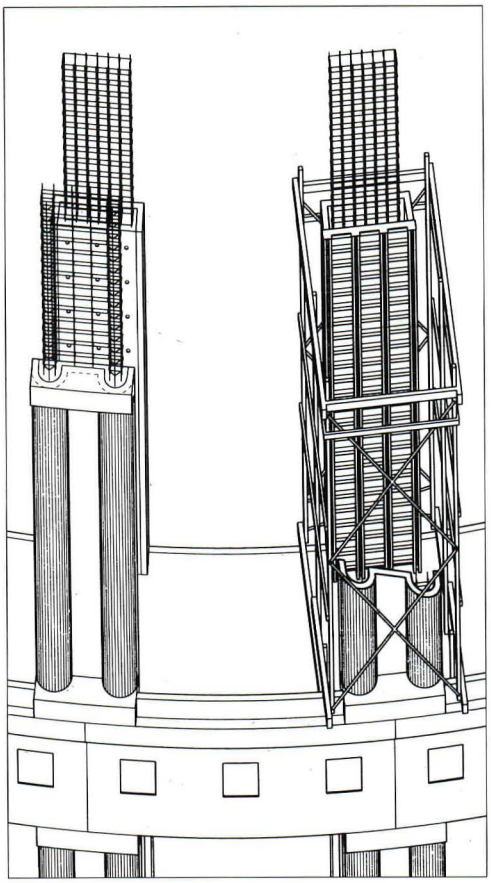
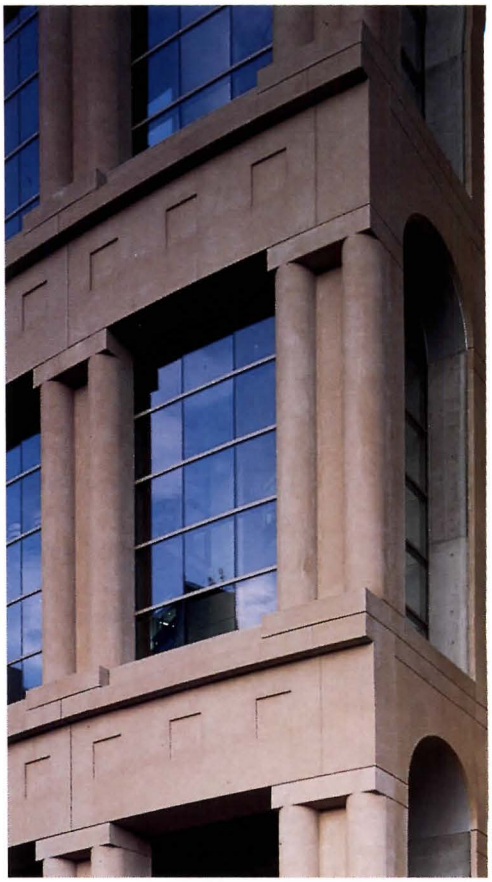
Technology & Practice





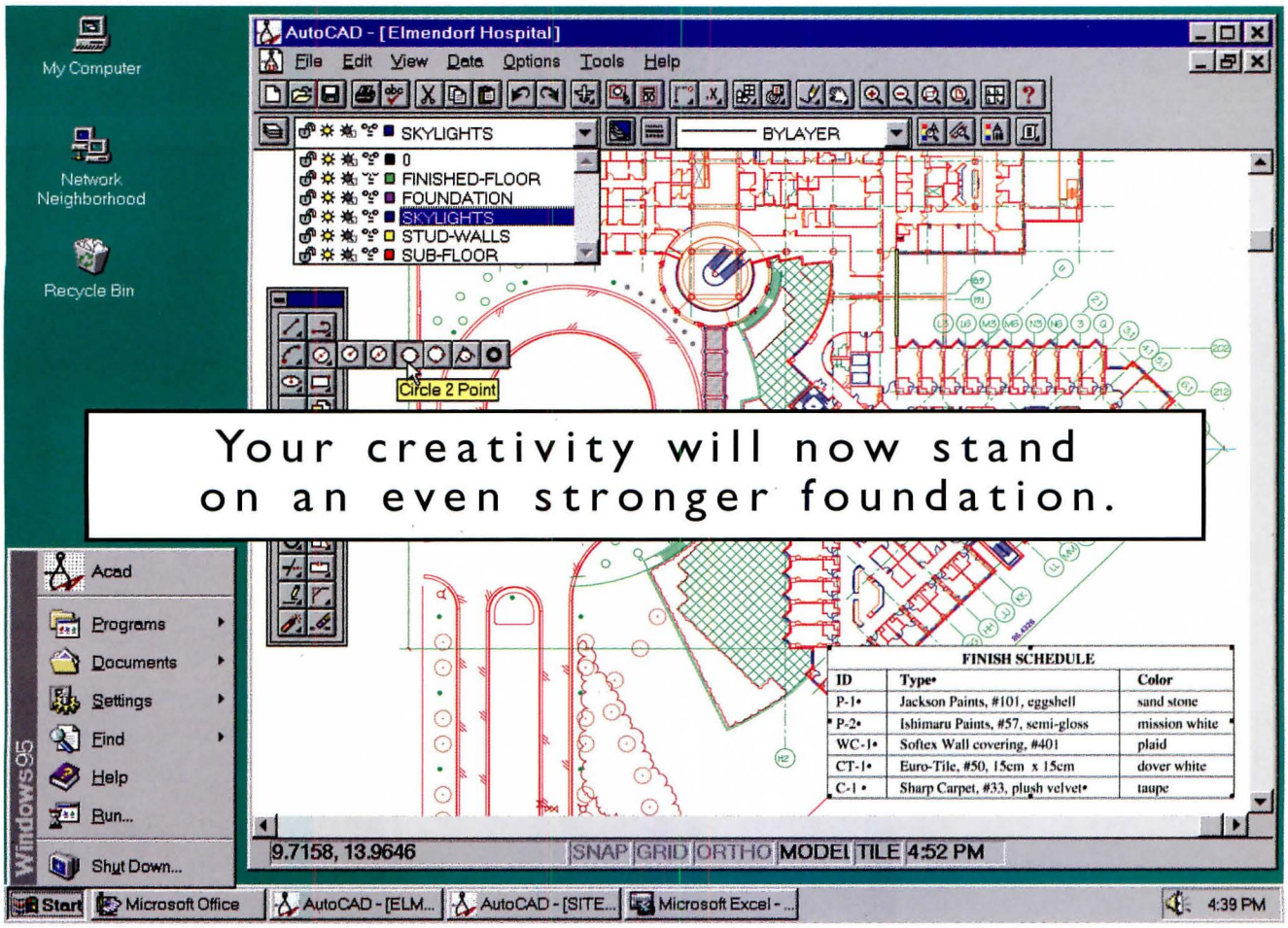
TIMOTHY HURSLEY

Technology & Practice extends our coverage of libraries by exploring their inner workings. The first of the three library-related articles details the integrated formal and technical strategy adopted by architect Moshe Safdie for Vancouver's Library Square (above). In Safdie's library, precast concrete units serve as formwork for cast-in-place concrete, and interstitial spaces double as air shafts.

The second technology article uncovers the structural and mechanical details of architect Will Bruder's Phoenix Central Library, where the simple profile and open plan belie the building's complexity. The library's roof, for example, exploits a tensegrity structure that allows cables and purlins to seemingly float above the concrete columns, and computer-controlled mechanical louvers and skylights continually adjust to modulate the desert sunlight.

As libraries increasingly rely on electronic media, wiring has taken on tremendous importance. Our computer feature shows how architects of three public libraries strategically wired study spaces for maximum access and flexibility.

This month's residential feature, a San Diego house by architect Jeanne McCallum, also focuses on the equilibrium between technology and artistry. In this budget-conscious bungalow conversion, structural elements become the finishes, and unexpected imagery arises from crisply detailed common materials.



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From Systems to Architecture

Moshe Safdie generates form from structural and mechanical components.

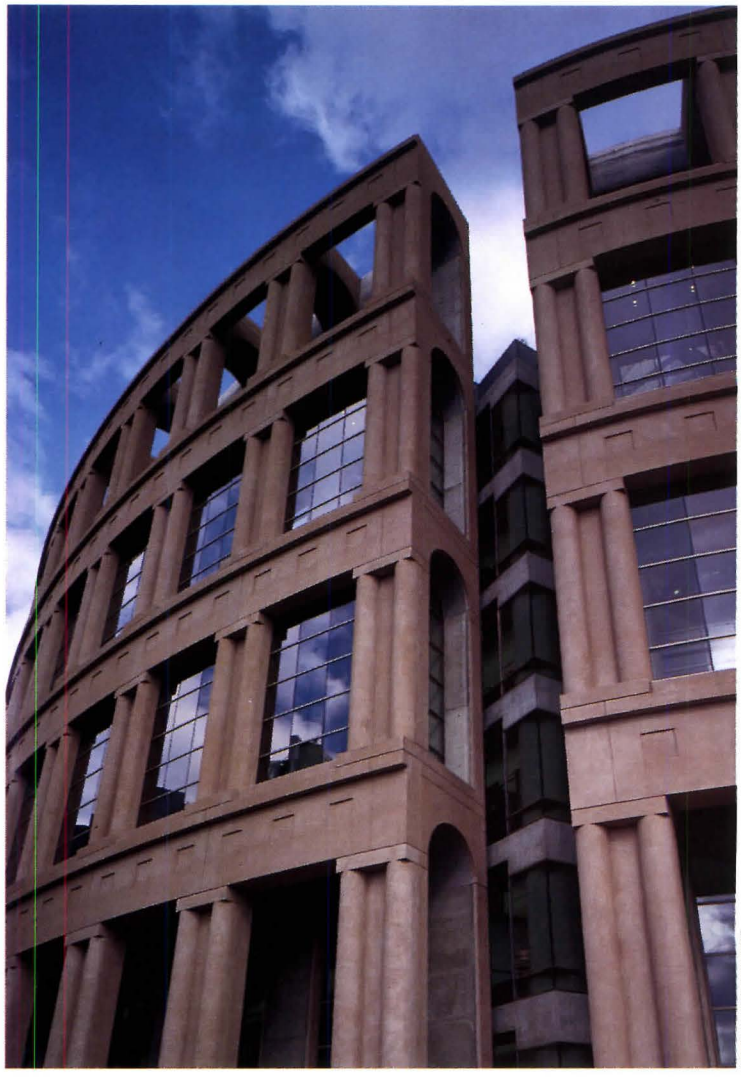
TIMOTHY HURSLEY

ABOVE RIGHT: Seven-story elevation inside concourse reveals exposed plenum beneath raised floor.

At Library Square in Vancouver (pages 72-79, this issue), architect Moshe Safdie distinguishes stacks from reading areas by specifying independent structural systems and building materials. Traditional colonnaded reading rooms at the perimeter contrast with the glass-clad central core of stacks, where open-ended raised floors reveal supply and return air ducts, sprinkler piping, and electrical cable trays. Five-story light wells, spanned by bridges, maintain the separation between reading rooms and stacks.

The library's colosseumlike exterior is actually more unconventional in construction than the minimalist box it encloses. The shell's enormous precast panels double as formwork for cast-in-place concrete, creating integrated structural members. This precast kit-of-parts includes columns ranging from 16 to 28 feet high and 9-foot spandrels stacked four high.

Safdie glazed the intersections between the colonnades and corners of the library box to contain exhaust air and to double as light wells. The raised floors, which Safdie exposed on every level, are more educational than innovative. Critics predict that dirt will soon cloud these public windows to the library's mechanical and electrical innards, but in the meantime, library patrons are receiving a crash course in building systems.—*Ann C. Sullivan*



TIMOTHY HURSLEY PHOTOS

Precast Concrete Formwork

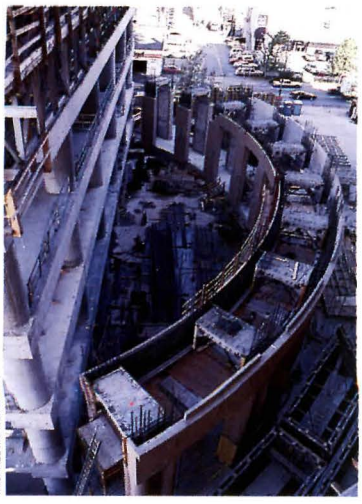
The four-tiered colonnade wrapping Library Square incorporates what are purportedly the largest pieces of precast concrete cladding in North America. These freestanding volumes, containing reading areas and private study rooms, are constructed of precast panels that double as formwork for poured-in-place concrete. The hybrid columns turn a sandblasted face to the outside of the colonnade, while unfinished cast concrete lines the interior elevations of the narrow passages (above right).

Specifying precast concrete cladding as formwork reduced the amount of temporary sheathing required to form the entire frame of each 30-foot-high bay. It also eliminated the additional step of hanging precast panels like shingles after the structure was cast and formwork removed. Moreover, the loadbearing capacity of the integrated precast and cast-in-place frame results in a substantially stronger wall, one that is structurally independent of the central library core.

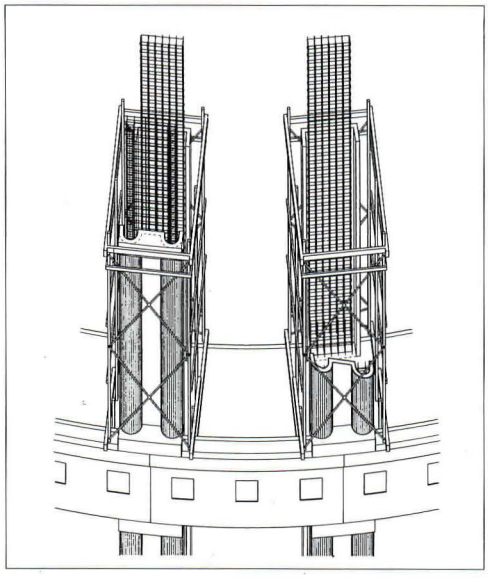
The double-height bays were constructed without dividing the 21-foot-high columns into two sections. This vast length required a careful sequence: Contractor PCL Constructors Pacific devised a steel mounting frame to align the front and rear precast column pieces while reinforcing caging was assembled and plywood formwork secured at each level. Hooks inside the panels allowed the units to be lifted into place and strengthened the bond between the precast and poured concrete. Once the columns were poured and set, precast spandrels and arches spanning the 12-foot depth were placed. A metal deck was laid and a top slab poured, ready for the next level of the structure.

The colonnade is open on the ground level. The middle two tiers, corresponding to the heights of the third and fifth floors of the main volume, are glazed. Bridges connect the narrow appendages to the open stacks and provide lateral bracing for seismic support. The fourth level of the colonnade remains an empty frame to accommodate future vertical expansion of the glazed box containing the library stacks.

ABOVE LEFT AND RIGHT: Kit-of-parts for colonnade comprises twin-columned panels, U-shaped back piece, spandrel, arch, deck, and end caps.
FACING PAGE: Construction photos capture placing of precast arch (top); temporary framing securing columns (center); and cast columns in preparation for metal deck and topping slab (bottom). Diagrams show assembly sequence: mounting frames align precast columns (1, 2); reinforcing bar built up to next level and formwork placed at interior faces (3, 4); and precast spandrels added, metal deck placed, and top slab poured (5, 6).



MICHAEL McKEE PHOTOS



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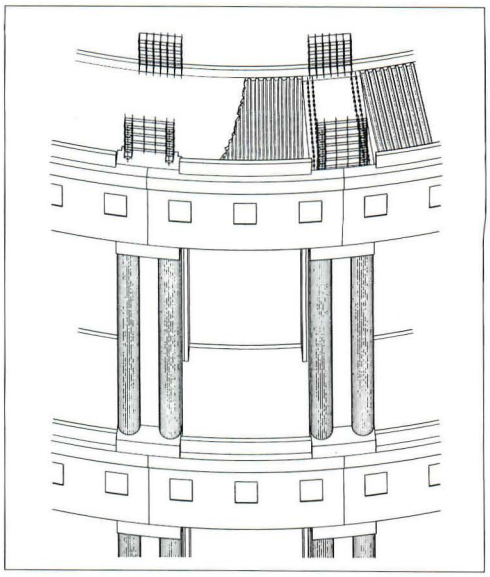

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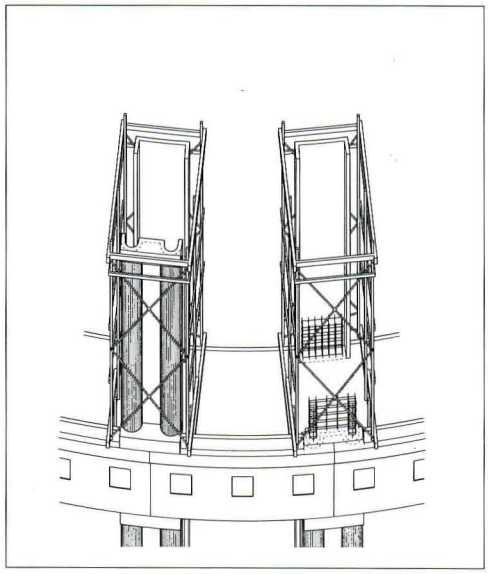

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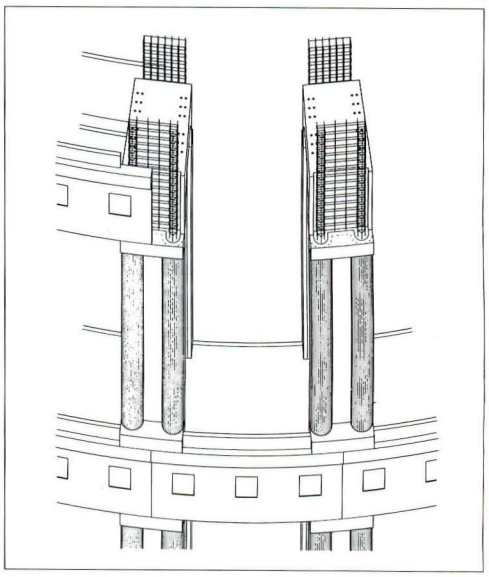

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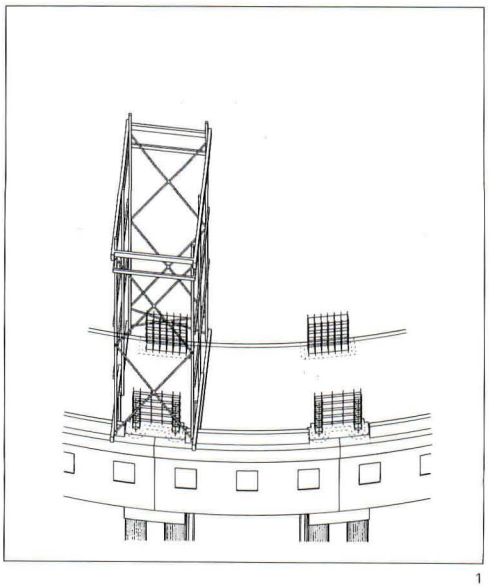

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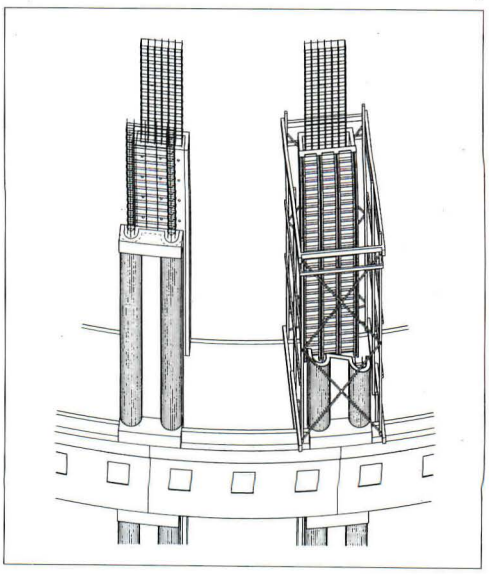

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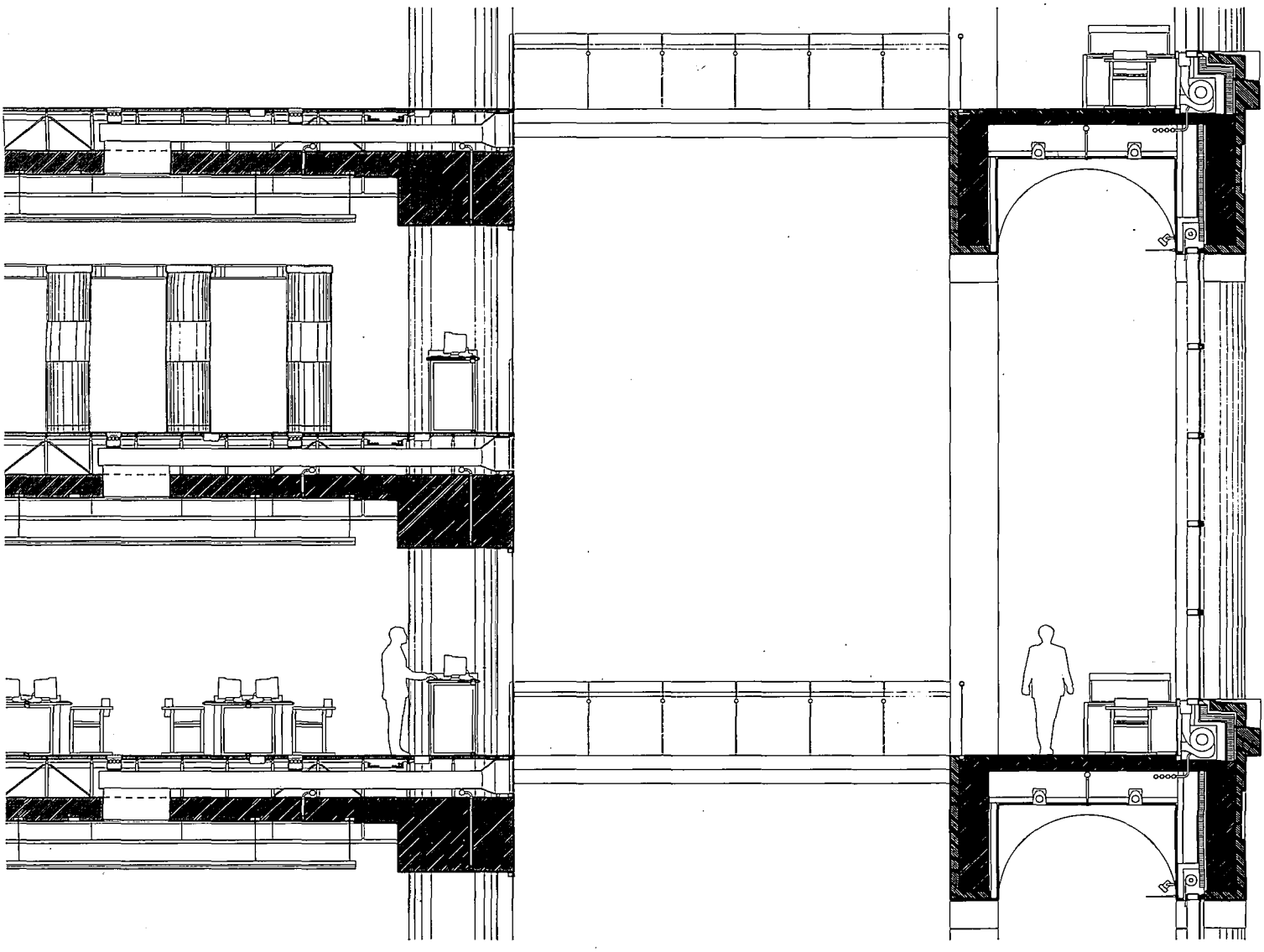


Mechanical Systems

Safdie treats Library Square's mechanical systems as integral programmatic components rather than required ductwork. The library's plan—a rectangular volume of stacks inscribed within circular segments for reading areas—provides the interstitial space for return air. At the intersection of the glass box and colonnaded enclosure, Safdie turned the awkward voids into gigantic glazed air shafts, complete with hardware for window washers. An open-ended raised floor on each level complements this strategy of exposed mechanical systems. From the atrium, the maze of supply and return air ducts, sprinkler piping, and cable trays with electrical, communication, and computer wiring is clearly visible through continuous glass panes that stretch from each ceiling and terminate at the concrete slab between floors.

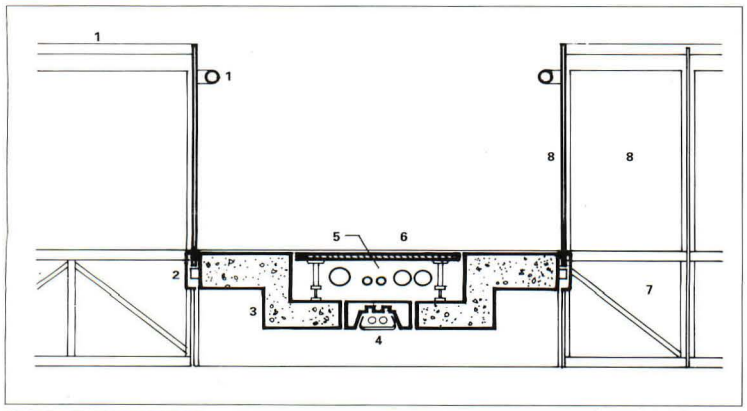
Inside the box, several hundred circular floor outlets supply tempered air from ducts originating in mechanical rooms buried beneath the parking structure. Linear ceiling diffusers, aligned with lighting and sprinklers in a recessed channel cast in the concrete vaults, expel air through ducts located in the floor above. These ducts discharge exhaust into the glazed air shafts which in turn feed back down to the basement mechanical rooms, terminating the loop. The distribution of air from floor to ceiling follows natural convection currents, reducing energy demands in order to meet Vancouver's stringent energy efficiency requirements.

Some of the exhaust air from the two lowest floors heats and cools the public concourse. A plenum running along the perimeter of the box facing the concourse is pierced by 10-inch-diameter openings that channel a combination of fresh air and filtered exhaust into the space. Dampers control the amount of tempered air released. Safdie anticipates that the temperature in the concourse will remain halfway between outdoor air temperature and building temperature.

These mechanical systems underscore Safdie's selection of wiring systems for spatial flexibility. The raised floors enable easy access to cable trays for rewiring electrical systems as departments are moved or equipment is replaced. In addition, 60 percent of the entire floor plate can support loads up to 250 pounds per square foot, allowing compact shelving to be reconfigured.

SECTION: Slots in ceiling vaults house mechanical and electrical components. FACING PAGE, TOP LEFT AND LEFT DETAIL: Mechanical and electrical services are extended in bridges over light wells. FACING PAGE, TOP RIGHT: Shafts between box and wrapper transfer exhaust air. FACING PAGE, RIGHT DETAIL: Struts brace steel supports under floor panels.

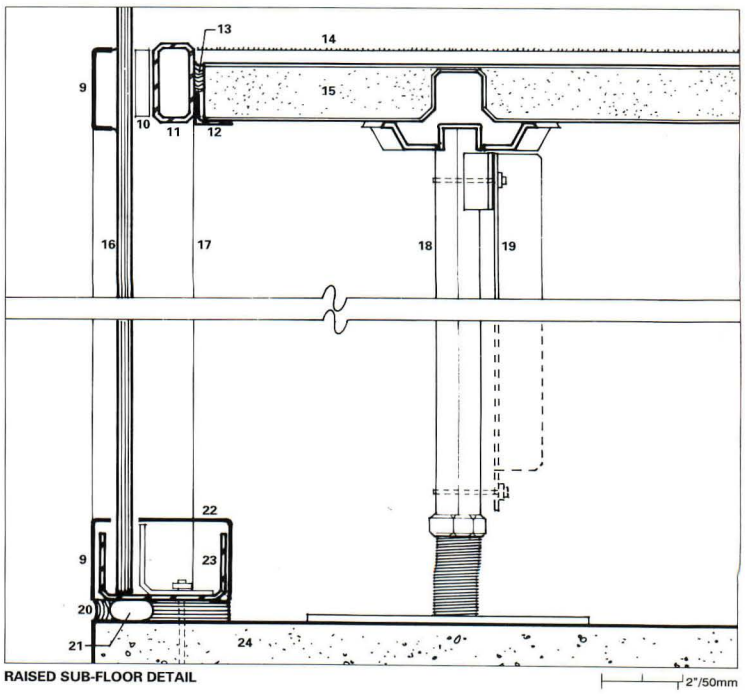
TIMOTHY HURSLEY PHOTOS



SECTION THROUGH BRIDGE

16"/40cm

1 STAINLESS STEEL HANDRAIL
2 BREAKFORM STEEL OVER PLATE
3 POURED CONCRETE BRIDGE
4 LIGHT FIXTURE
5 ACCESS MECHANICAL SPACE
6 STEEL ACCESS FLOOR PANEL
7 ACCESS FLOOR SPACE
8 GLASS BALUSTRADE
9 BREAKFORM STEEL PLATE ADHERED WITH SILICONE
10 SILICONE SPACER
11 PAINTED STEEL TUBE
12 STEEL ANGLE
13 FOAM TAPE
14 CARPET TILE
15 ACCESS FLOOR PANEL
16 STRUCTURAL GLASS, CONTINUOUS TO CONCRETE BEAM ABOVE
17 STAINLESS STEEL BAR
18 STEEL VERTICAL SUPPORT
19 STEEL DIAGONAL BRACING
20 SEALANT
21 BACKER ROD
22 PAINTED METAL COVER
23 STEEL CHANNELS, CONTINUOUS BETWEEN UPRIGHTS
24 POURED CONCRETE SLAB



RAISED SUB-FLOOR DETAIL

2"/50mm

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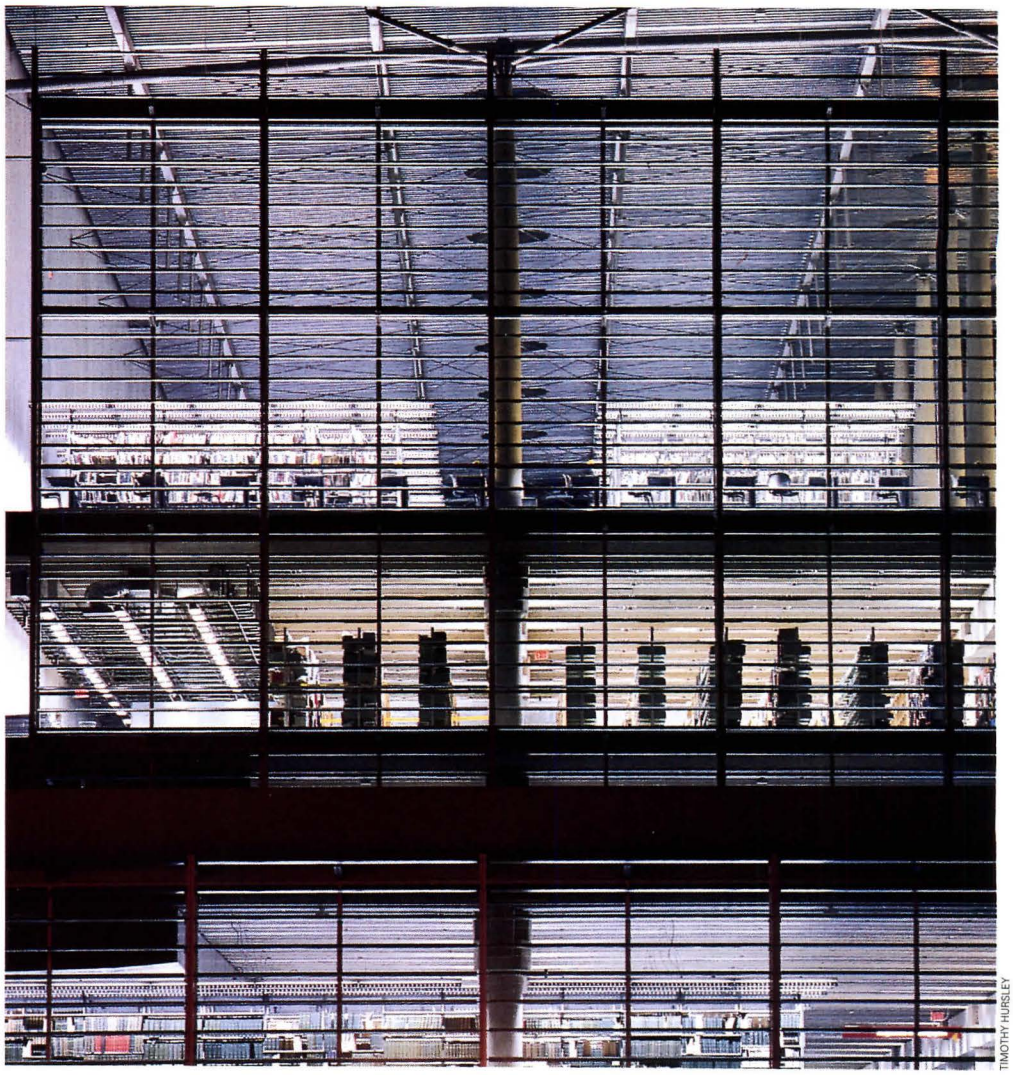


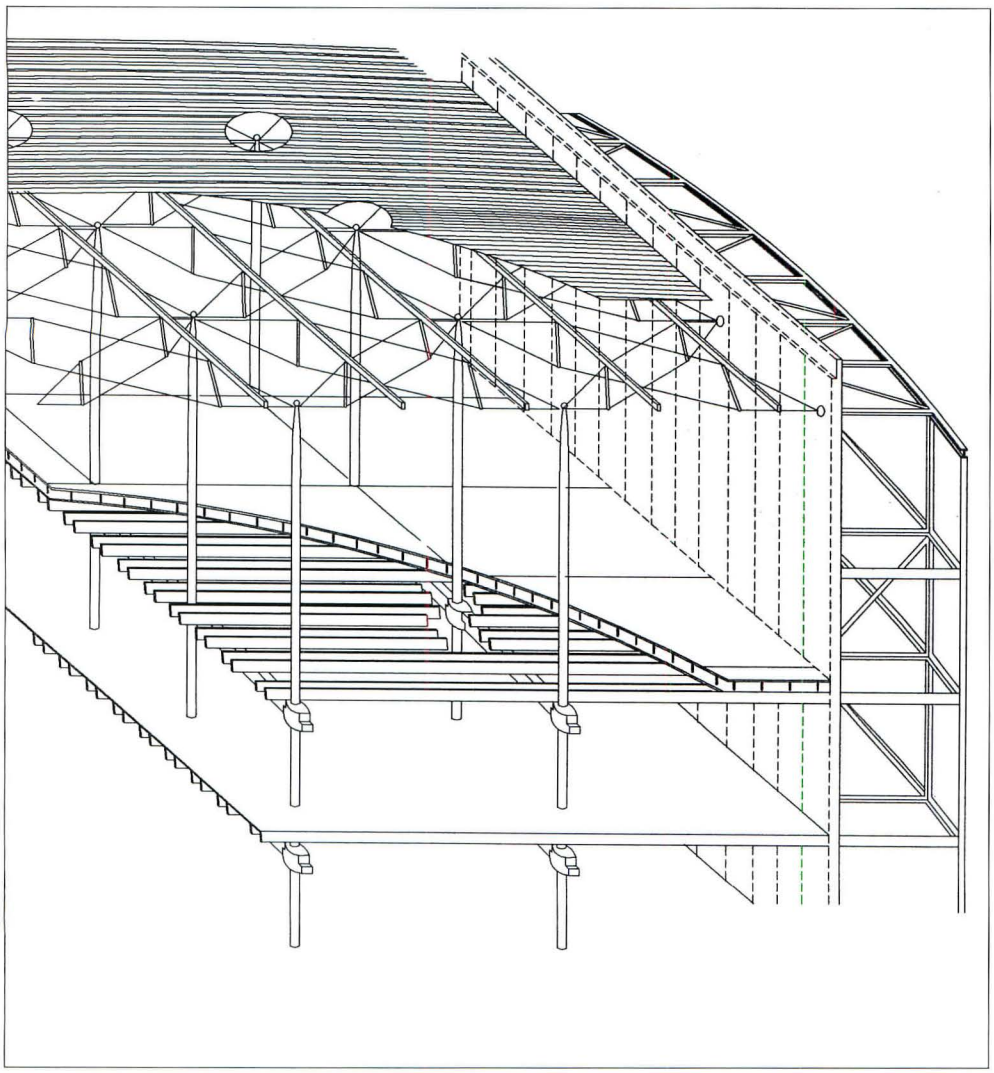
TIMOTHY HURSLEY

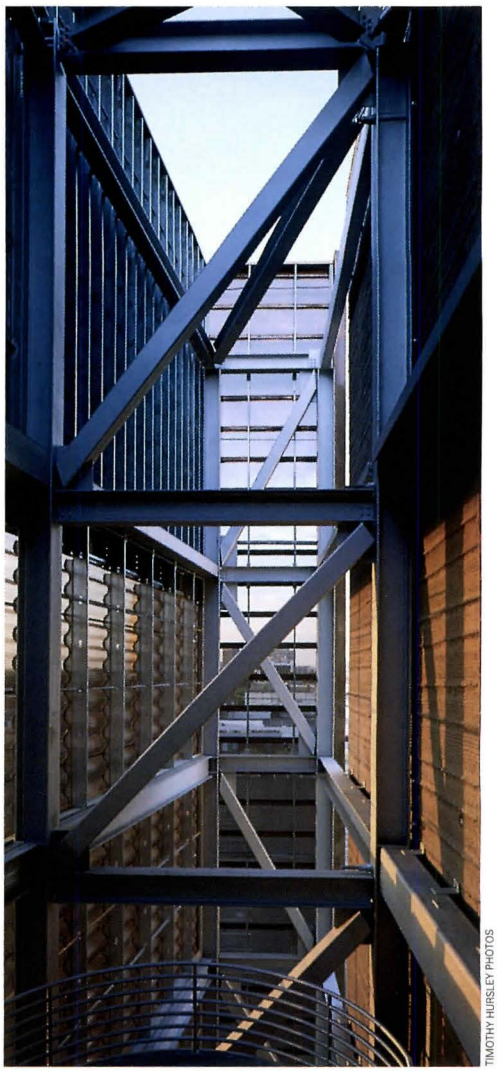
ABOVE RIGHT: Library's concrete structure and tensegrity roof are visible through motorized aluminum louvers.

One of the most technically expressive public buildings in America is not designed by Norman Foster, Richard Rogers, or Nicholas Grimshaw, but by Arizona architect Will Bruder. The new Phoenix Central Library (pages 56-65, this issue) brings sophisticated building technology to the Southwest at the remarkably low cost of $100 per square foot.

Bruder designed his open-plan "warehouse for books" to accommodate future change and growth, collaborating with the Los Angeles office of engineering guru Ove Arup & Partners to develop a way to distribute mechanical, electrical, and telecommunications systems anywhere in the building. On lower floors, ducts, wires, and cables are tucked between structural concrete joists, and flexible conduits dropped in as required. On the fifth floor, systems are contained beneath a flexible raised floor deck. Bruder even detailed the building's glazed north facade so it can be taken apart and reassembled for future expansion.

Bruder also paid close attention to the library's energy performance. The north facade is fitted with fabric sails that shade its glazed skin from sunlight while maximizing views; motorized aluminum louvers on the library's south facade (above) adjust automatically to eliminate interior glare and heat gain while allowing views of the city and mountains beyond.—*Raul A. Barreneche*





TIMOTHY HURSLEY PHOTOS

Structural Systems

The new Phoenix Central Library is a concrete box flanked by service cores to the east and west and topped with a lightweight, cable-supported roof. Book stack dimensions dictated a primary structural grid of 32-foot, 8-inch-square bays. Following this grid, the first four floors are constructed of precast concrete T-stems and beams supported on precast columns. The library's east and west perimeters are enclosed by 8-foot, 2-inch-wide loadbearing precast concrete wall panels that fit within the overall structural grid. In designing these walls, engineer Ove Arup & Partners determined that 12-inch-thick walls would not radiate absorbed heat into the building until evening, when excess heat would be radiated back out into the cool night air.

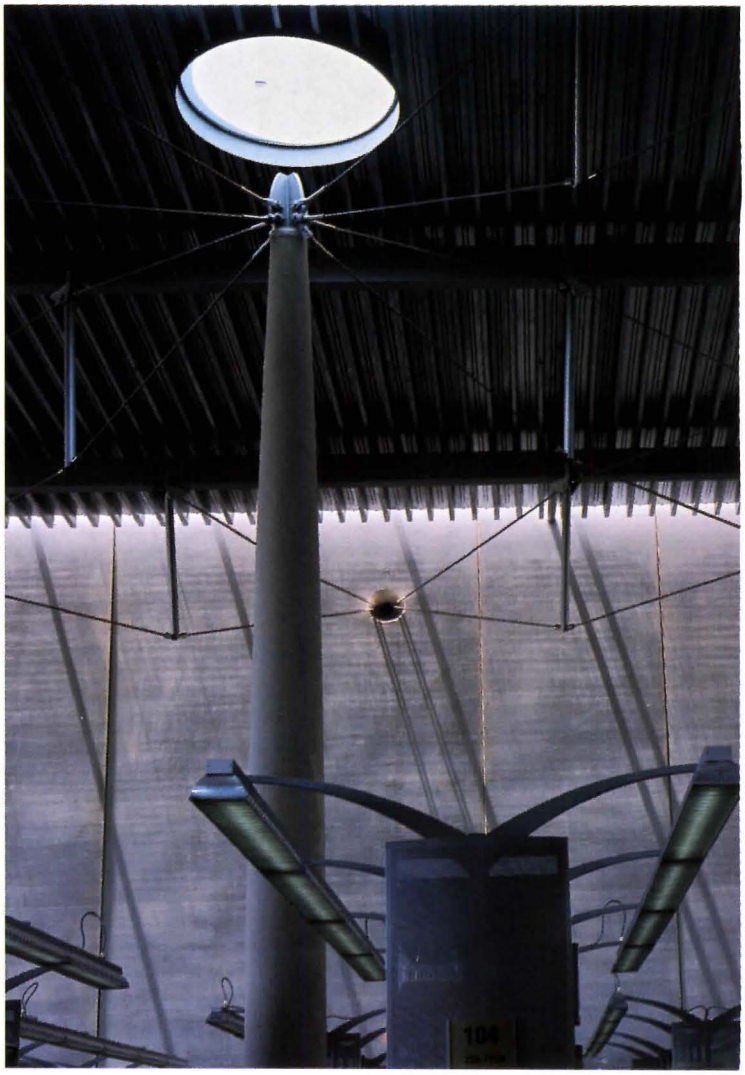
Outside the precast walls, steel-framed "saddlebags" act as the primary east-west lateral bracing for the entire library structure. The saddlebags contain fixed services, such as stairs, rest rooms, and mechanical and electrical power sources. Their braced-frame structures are clad in both perforated and solid copper panels (above right).

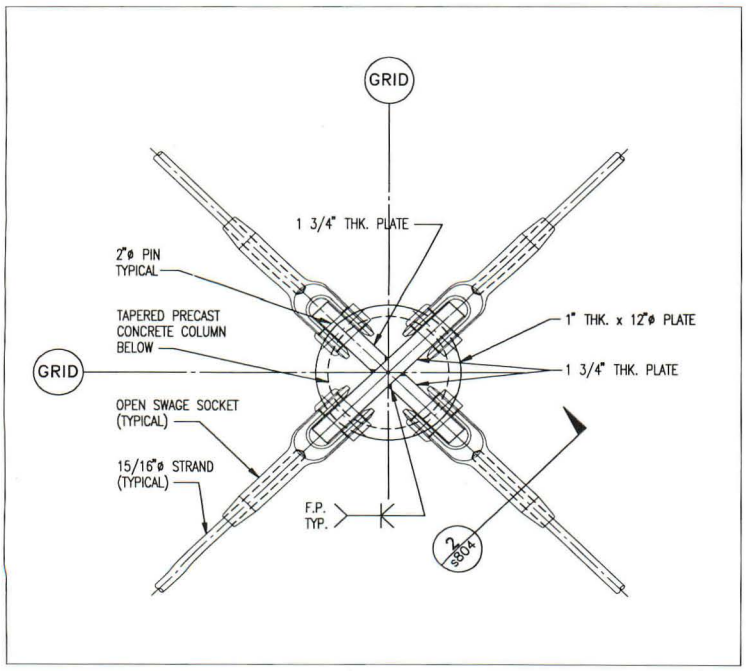
One of the library's most innovative structural maneuvers is the cable-stayed tensegrity roof crowning the fifth floor reading room (drawing, above). Developed by Arup engineer Michael Ishler, the corrugated galvanized-steel roof appears to float above the candlestick-shaped columns, which taper in diameter from 2 feet at the library's lower floors to just 10 inches atop the fifth floor reading room, as loads on the columns diminish.

Steel caps bolted to the top of each 30-foot-high column anchor tensile cables that support a series of stainless steel struts. These struts appear suspended between cables, but they actually support the north-south purlins that in turn support an insulated galvanized-steel roof-deck, perforated for acoustic absorption.

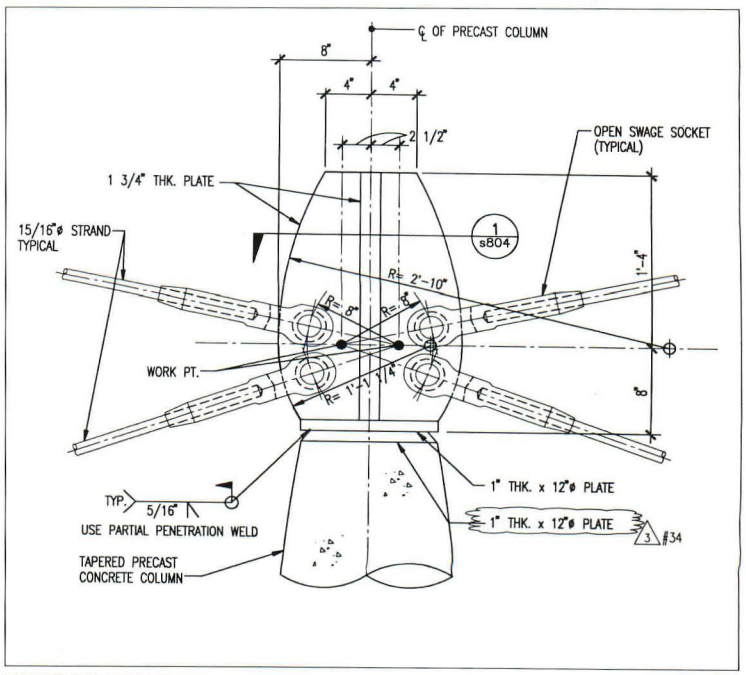
Within the roof, Bruder inserted 6-foot-diameter skylights and located each above a column. The tops of the drum-shaped skylights are fitted with two layers of 1/4-inch-thick laminated glass, located above a pair of 1/4-inch-thick layers and one 1/8-inch-thick layer of laminated glass that enclose a blue interlayer in which a 4-inch-diameter hole is cut. On the summer solstice, sunlight is intended to pass through the clear openings as if to "light" the candlestick columns.

FACING PAGE, TOP LEFT AND RIGHT: Slot between wall and roof admits daylight; tensile cables supporting roof are anchored to braced steel frame of saddlebags through east and west walls.
FACING PAGE, PLAN AND DETAIL: Steel cables are bolted to caps that are fastened to columns. Cables transfer roof loads from purlins to saddlebag.

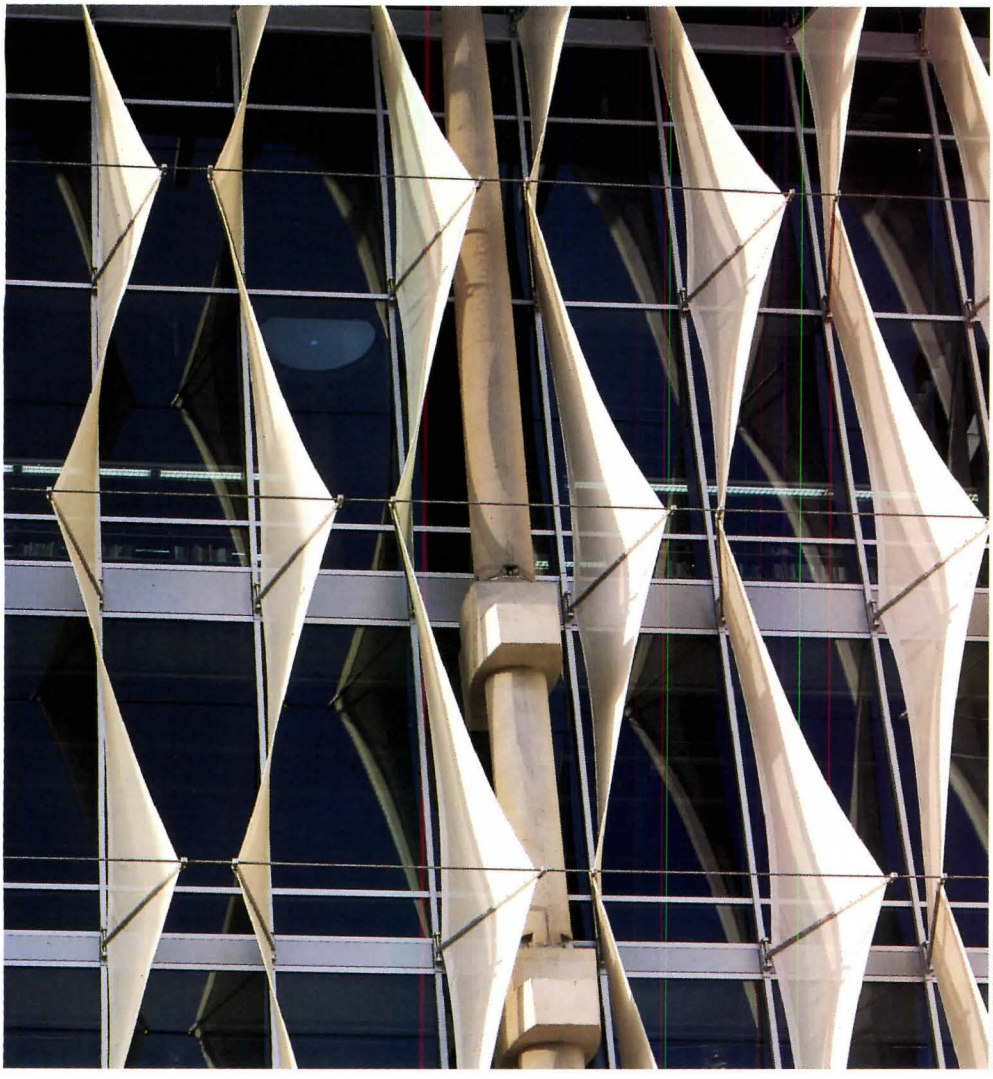




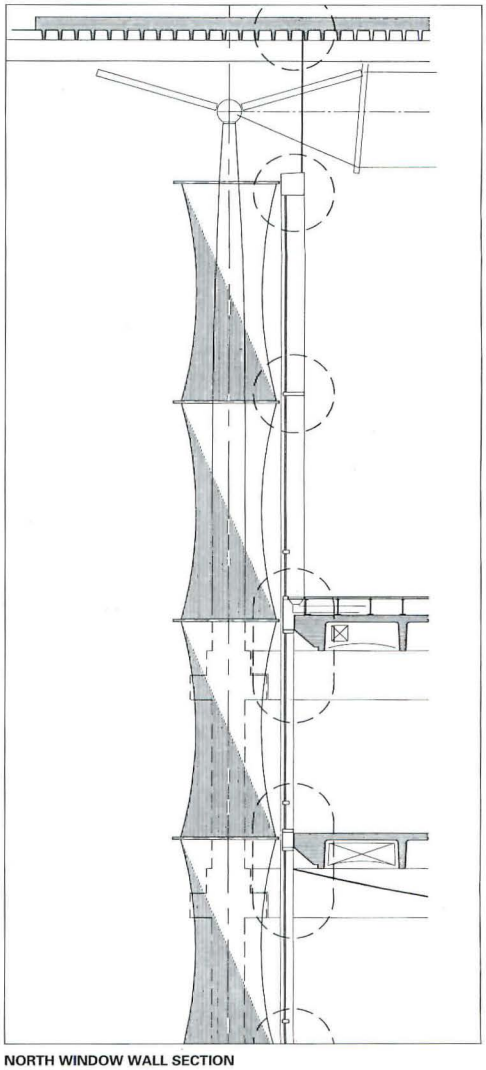
PRECAST COLUMN CAP PLAN



PRECAST COLUMN CAP DETAIL



TIMOTHY HURSLEY PHOTOS



NORTH WINDOW WALL SECTION

Fabric Sails and Skylights

In Phoenix's desert climate, sunlight is more a liability than an amenity. So Bruder and his team devised ways to cut down on harsh glare and solar gain while maximizing daylight and views inside the library.

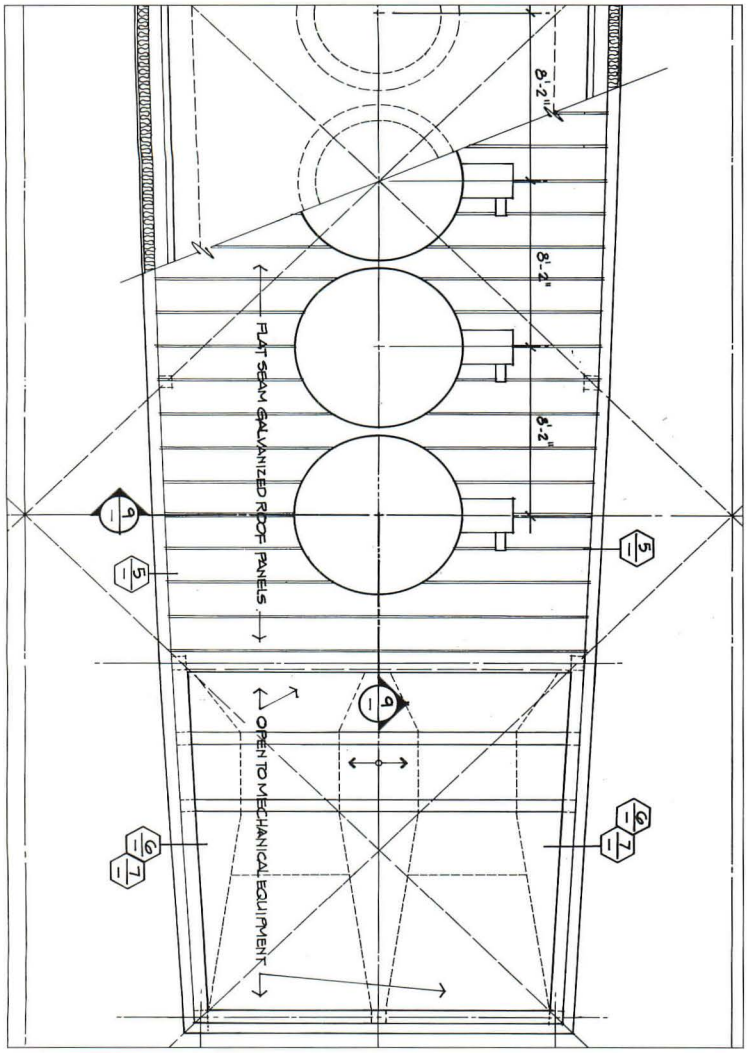
On the glazed north facade, the architect installed Teflon-coated acrylic fabric sails to shade the glass and minimize glare (above). The perforated sails provide shade between March and September—when the sun rises north of east and sets north of west—without obstructing views of the city and mountains beyond. New York City-based FTL/Happold generated computer models to determine the precise geometric profiles that would eliminate direct sunlight. The rigging components were detailed and crafted by the Fabric Shop, a tentmaker in Monmouth, Maine.

The 28 fabric sails are fastened to aluminum struts bolted to horizontal mullions at each level of the north facade. At the top of each sail, a pair of cables anchors the fabric to a tubular steel beam spanning the length of the facade; another pair of cables, tied to steel anchors bolted to the concrete foundations, secures the bottom of each sail. Kevlar ropes inserted into fabric sleeves at the edges of the sails help keep them rigid. Meanwhile, horizontal cables stretching the width of the north facade brace the aluminum struts and tie them to the steel framing of the saddlebags (above, section).

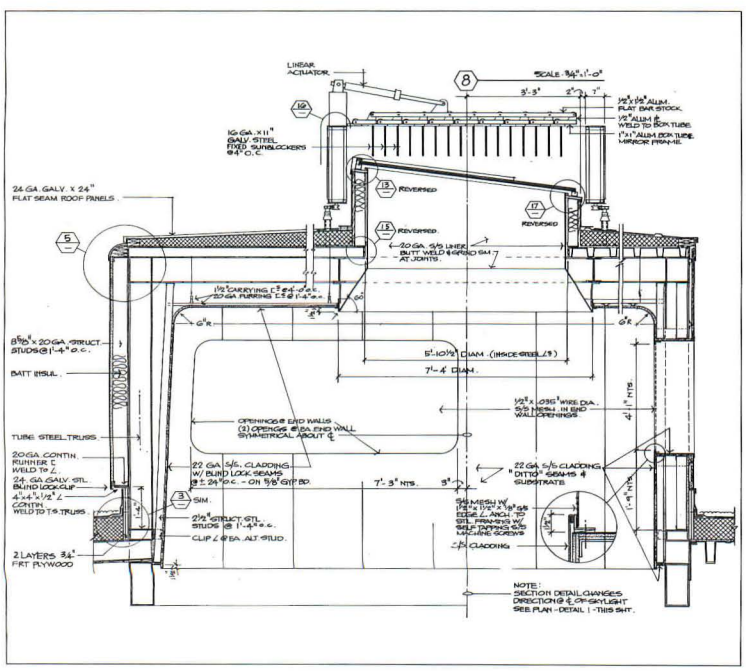
Daylight is also diffused in the library through nine skylights atop the library's central atrium. Bruder collaborated with local specialist Tait Solar to develop a way to eliminate glare by fitting each skylight with a circular frame supporting motorized, mirrored louvers that reflect sunlight into the building. A row of six sensors mounted on the library's roof measure sky conditions for brightness. This data is fed to computers that control the angle of the mirrored louvers. Computers also track the sun's position in the sky and rotate the louvers during the course of a day to follow the path of the sunlight.

A second set of solid steel louvers, suspended below the mirrored blades, blocks overhead midday sun from penetrating between the mirrored louvers. The motorized louver system successfully tames the harsh Arizona sun inside the library, but the system seems unnecessary, requiring technically complex maneuvers to achieve minimal effect.

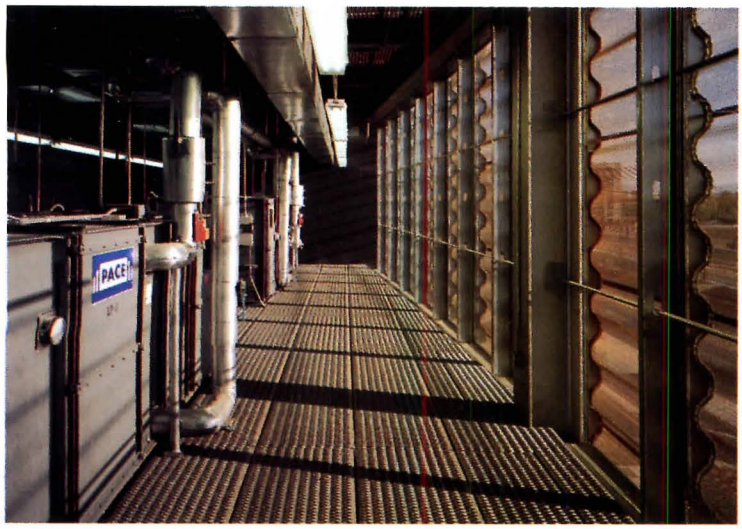
ABOVE LEFT AND SECTION: Perforated, Teflon-coated fabric sails are braced by aluminum struts and cables.
FACING PAGE, PLAN AND TOP RIGHT: Spacing of 6-foot-diameter skylights over atrium conforms to structural grid.
FACING PAGE, SECTION AND BOTTOM RIGHT: Computers track sun angles and brightness to control mirrors atop skylights.



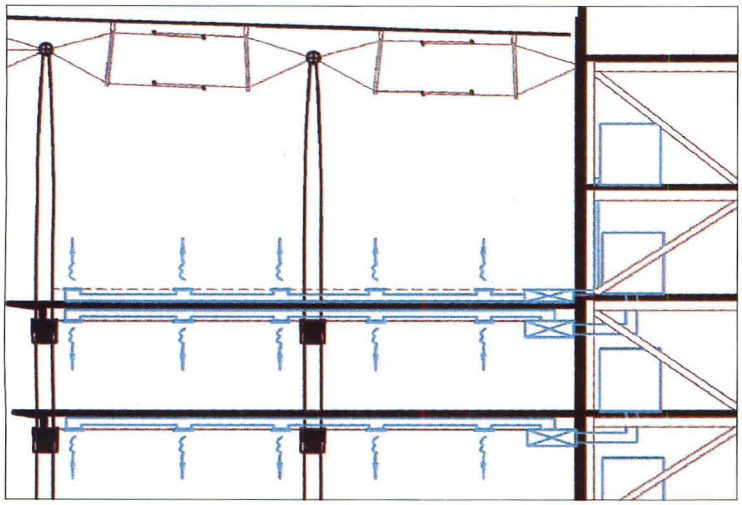
SKYLIGHT PLAN



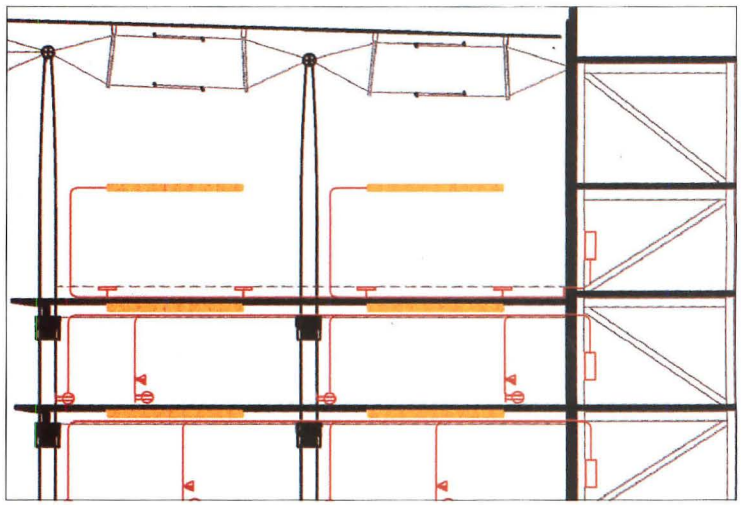
SKYLIGHT SECTION



TIMOTHY HURSLEY PHOTOS



AIR DISTRIBUTION



POWER DISTRIBUTION

Mechanical Systems

Bruder maximized the library's flexibility by separating all fixed services from the main concrete volume and inserting them into six-story volumes on the east and west sides. Each of the 270-foot-long saddlebags contains exit stairs, rest rooms, service elevators, and electrical, mechanical, and telecommunications risers and equipment. Ducts and conduits are fed from the saddlebags into the central space through openings punched in the precast concrete walls at east and west perimeters (facing page, center drawing).

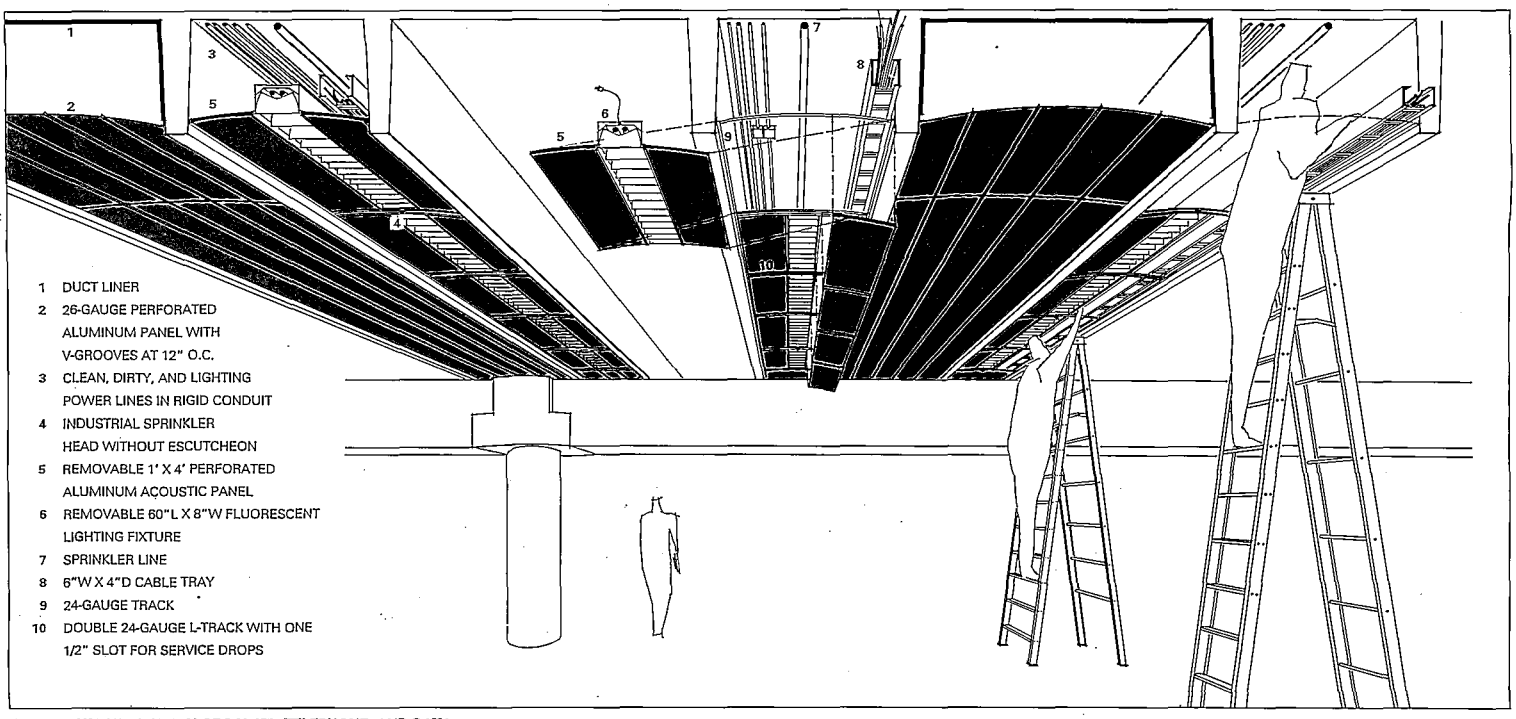
Bruder and the Arup engineers considered a raised floor deck, which offers maximum flexibility, to distribute the building systems at each level, but found that it was prohibitively expensive. So the team devised a cheaper, equally flexible system. Along the perimeter walls, they installed perforated aluminum panels concealing huge supply and return air ducts, electrical conduits, and cable trays for telephone and computer wires, all feeding from the saddlebags. These power "bellies" are hung from the concrete structural T-stems and extend north-south the entire length of the library (facing page, bottom drawing).

Cabling for air ducts, light fixtures, sprinkler lines, and telecommunications wires extends east-west from the power bellies on the library's lower four floors and is suspended from the floor slabs in the spaces between precast concrete T-stems (facing page, top drawing). Curved, perforated aluminum panels, providing acoustic absorption and easily removed for maintenance, conceal the ducts and cables and enclose the space around light fixtures.

Steel conduits delivering power to the book stacks (fitted with built-in light fixtures), computers, and electrical outlets are simply dropped from the ceiling as required. The conduits are suspended by Y-shaped stainless steel wires anchored to the underside of the concrete floor slabs and structural T-stems.

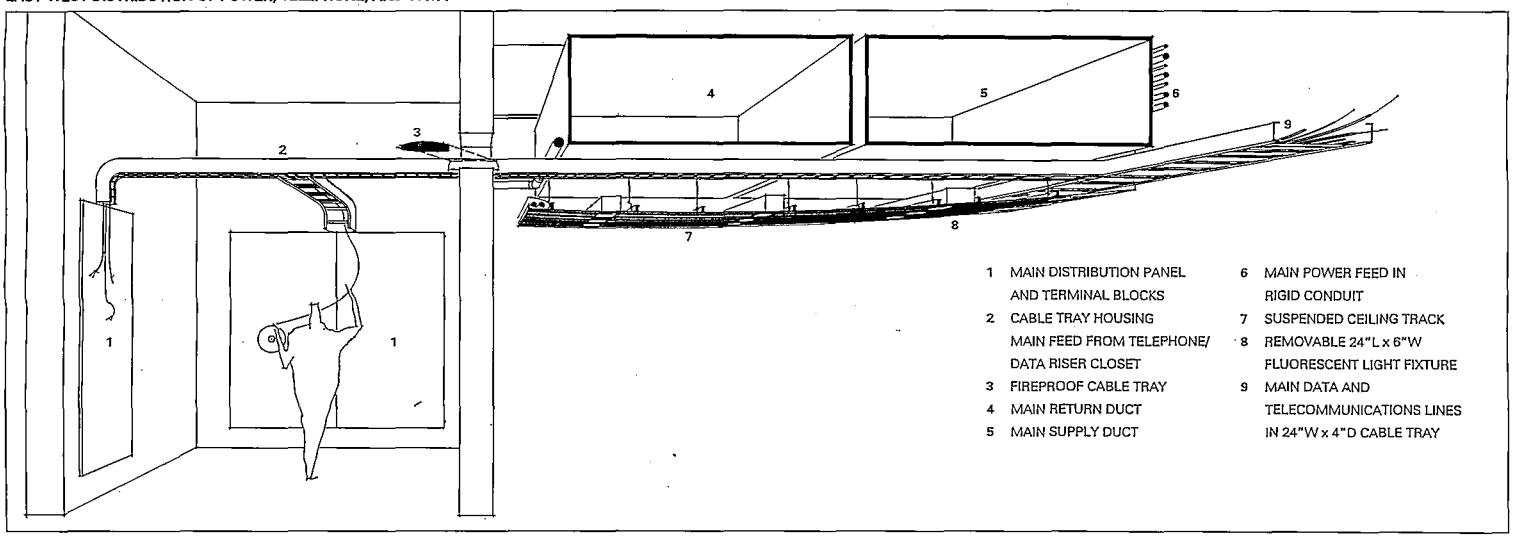
On the top floor, Bruder specified a raised floor system, since ducts and conduits could not be concealed in the tensegrity roof over the 36-foot-high reading room. Services are fed from the saddlebags and laid in the 12-inch-deep plenum between the structural concrete slab and the raised floor deck. Air ducts and electrical outlets are punched through at varying intervals within the grid of book stacks and study desks. New openings can be added should the organization change.

TOP LEFT: Exterior saddlebags contain fixed building services.
TOP RIGHT: Conduits, sprinklers, and air ducts are concealed between T-stems.
SECTIONS: On lower floors, air and power are routed from saddlebags to paneled ceiling ducts. Underfloor ducts supply reading room.



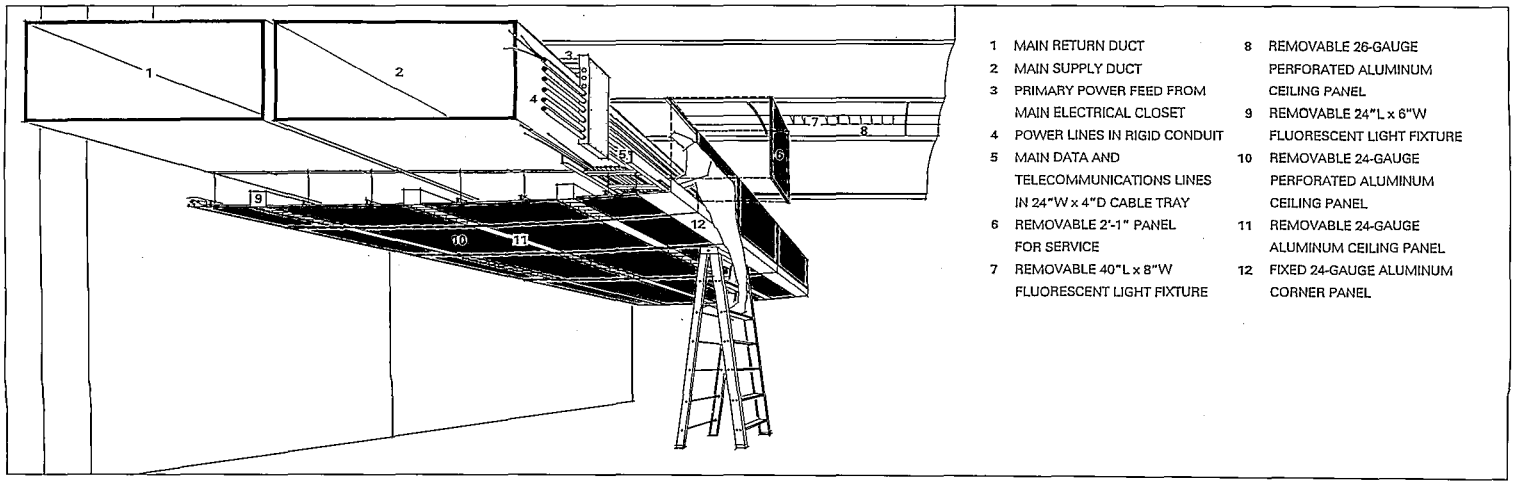
1 DUCT LINER
2 26-GAUGE PERFORATED ALUMINUM PANEL WITH V-GROOVES AT 12" O.C.
3 CLEAN, DIRTY, AND LIGHTING POWER LINES IN RIGID CONDUIT
4 INDUSTRIAL SPRINKLER HEAD WITHOUT ESCUTCHEON
5 REMOVABLE 1' X 4' PERFORATED ALUMINUM ACOUSTIC PANEL
6 REMOVABLE 60"L X 8"W FLUORESCENT LIGHTING FIXTURE
7 SPRINKLER LINE
8 6"W X 4"D CABLE TRAY
9 24-GAUGE TRACK
10 DOUBLE 24-GAUGE L-TRACK WITH ONE 1/2" SLOT FOR SERVICE DROPS

EAST-WEST DISTRIBUTION OF POWER, TELEPHONE, AND DATA



1 MAIN DISTRIBUTION PANEL AND TERMINAL BLOCKS
2 CABLE TRAY HOUSING MAIN FEED FROM TELEPHONE/ DATA RISER CLOSET
3 FIREPROOF CABLE TRAY
4 MAIN RETURN DUCT
5 MAIN SUPPLY DUCT
6 MAIN POWER FEED IN RIGID CONDUIT
7 SUSPENDED CEILING TRACK
8 REMOVABLE 24"L x 6"W FLUORESCENT LIGHT FIXTURE
9 MAIN DATA AND TELECOMMUNICATIONS LINES IN 24"W x 4"D CABLE TRAY

MAIN FEED OF POWER, TELEPHONE, AND DATA



1 MAIN RETURN DUCT
2 MAIN SUPPLY DUCT
3 PRIMARY POWER FEED FROM MAIN ELECTRICAL CLOSET
4 POWER LINES IN RIGID CONDUIT
5 MAIN DATA AND TELECOMMUNICATIONS LINES IN 24"W x 4"D CABLE TRAY
6 REMOVABLE 2'-1" PANEL FOR SERVICE
7 REMOVABLE 40"L x 8"W FLUORESCENT LIGHT FIXTURE
8 REMOVABLE 26-GAUGE PERFORATED ALUMINUM CEILING PANEL
9 REMOVABLE 24"L x 6"W FLUORESCENT LIGHT FIXTURE
10 REMOVABLE 24-GAUGE PERFORATED ALUMINUM CEILING PANEL
11 REMOVABLE 24-GAUGE ALUMINUM CEILING PANEL
12 FIXED 24-GAUGE ALUMINUM CORNER PANEL

NORTH-SOUTH DISTRIBUTION OF POWER, TELEPHONE, DATA, AND AIR

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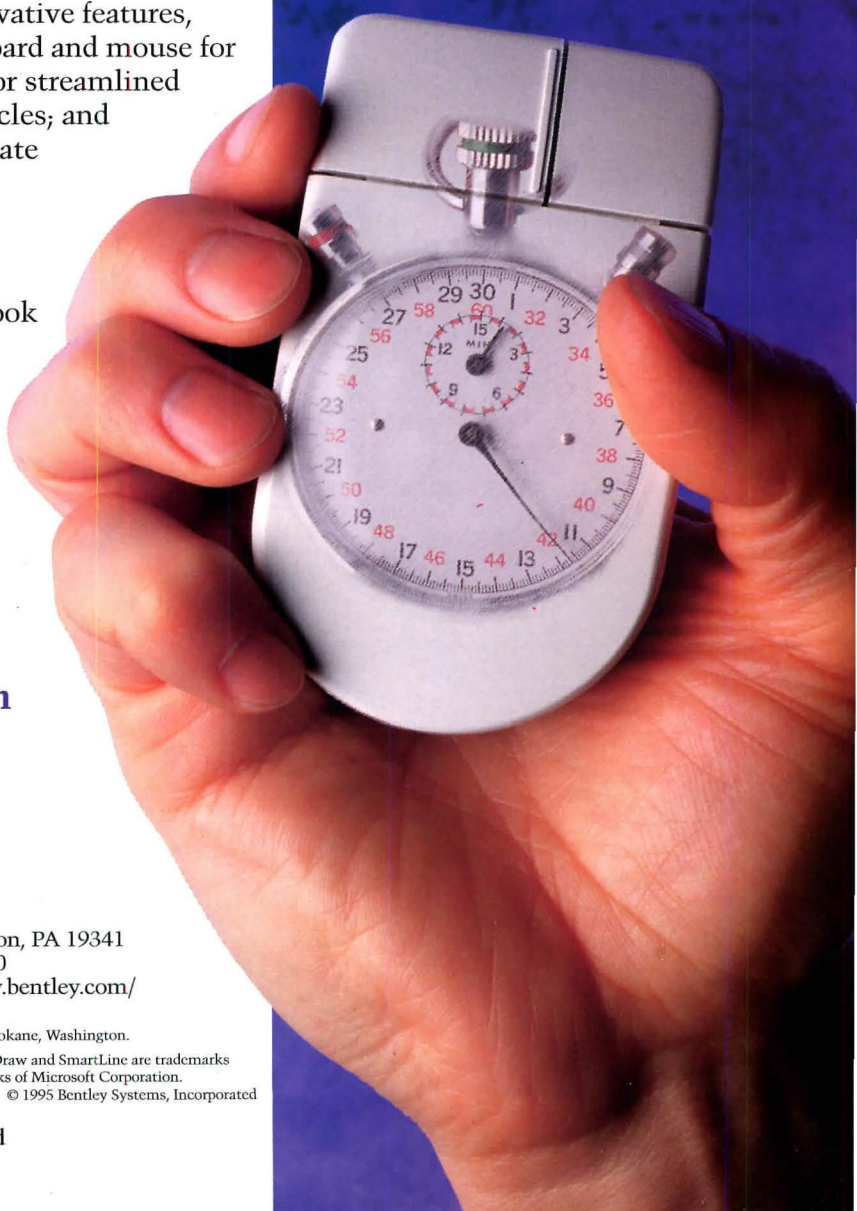

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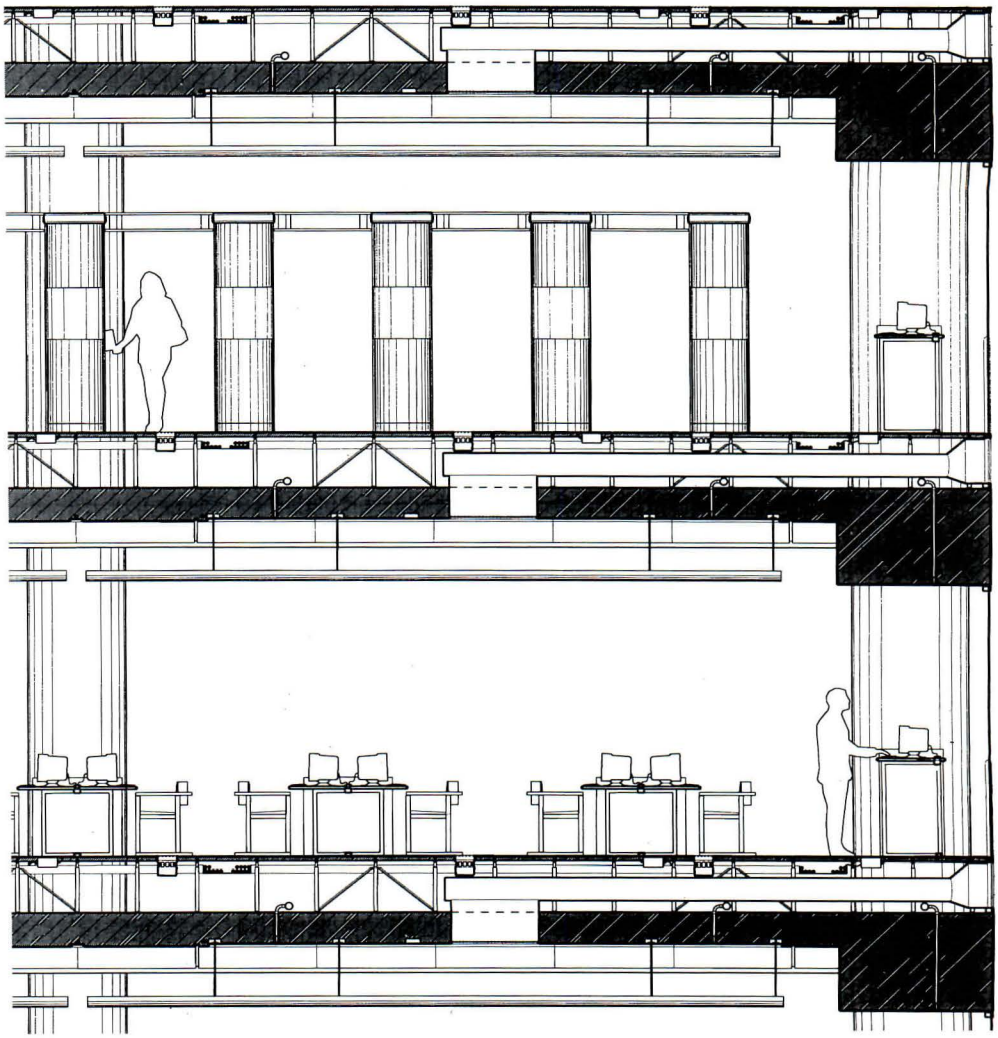
Circle 223 on information card

Wiring the Public Library

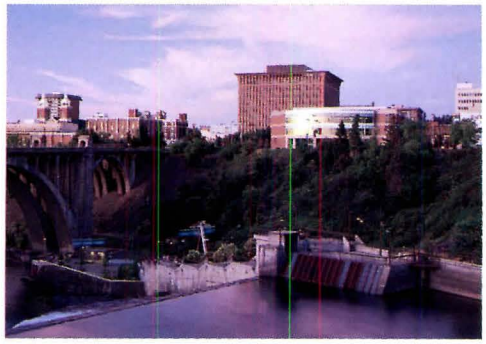
Computerized information is changing the way architects configure library interiors and infrastructure.



ABOVE RIGHT: In Vancouver's new library, computer wiring and air ducts are located within raised floors.

Libraries are in a state of flux. Once storehouses of printed material, they are increasingly incorporating electronic media to provide the public with the most timely information and research tools. As a result, architects are equipping libraries with power and data receptacles at strategic locations so that staff can set up equipment as needed, patrons can plug in their own laptops at study carrels, and teachers can wire up hardware in conference rooms.

The typical open plan of a public library allows librarians to shift or add book stacks and furniture, but with few wall partitions, this openness actually restricts placement of wiring. Spacing modules for book stacks differ from those for workstations, so locating wiring receptacles that can accommodate future changes to the library layout is tricky. Ideally, librarians would like all areas to be accessible to their electronic networks. Moshe Safdie and Associates achieved full access at Vancouver Library Square (pages 72-79, 101-105) with a raised floor similar to those installed in computer rooms. Other architects have relied on alternative approaches that yield varying degrees of flexibility: running cable through spaces designed between floor beams; threading wire through prefabricated channels within steel decking; and mounting conduit within off-the-shelf cable trays attached to the underside of a concrete floor slab.—*Nancy B. Solomon*



STRODE ECKERT PHOTOS

TOP LEFT: Spokane Falls is visible from bowed window wall on north side.
TOP RIGHT: Entrance tower at southeast corner faces Spokane's downtown.
ABOVE LEFT: Power and data receptacles are set into extruded aluminum raceway below windowsill.
ABOVE RIGHT: Centrally located terminals can access library's electronic card catalog as well as the Internet.
FACING PAGE, LEFT DRAWING: Cabling from first floor computer room leads to intermediate distribution frames in electrical rooms throughout library.
FACING PAGE, RIGHT DRAWING: Cellular planks alternate with metal decking to maintain open wiring channels.
FACING PAGE, PLAN: Stacks, carrels, and computers on top two floors can be rearranged and still have access to power and data receptacles.

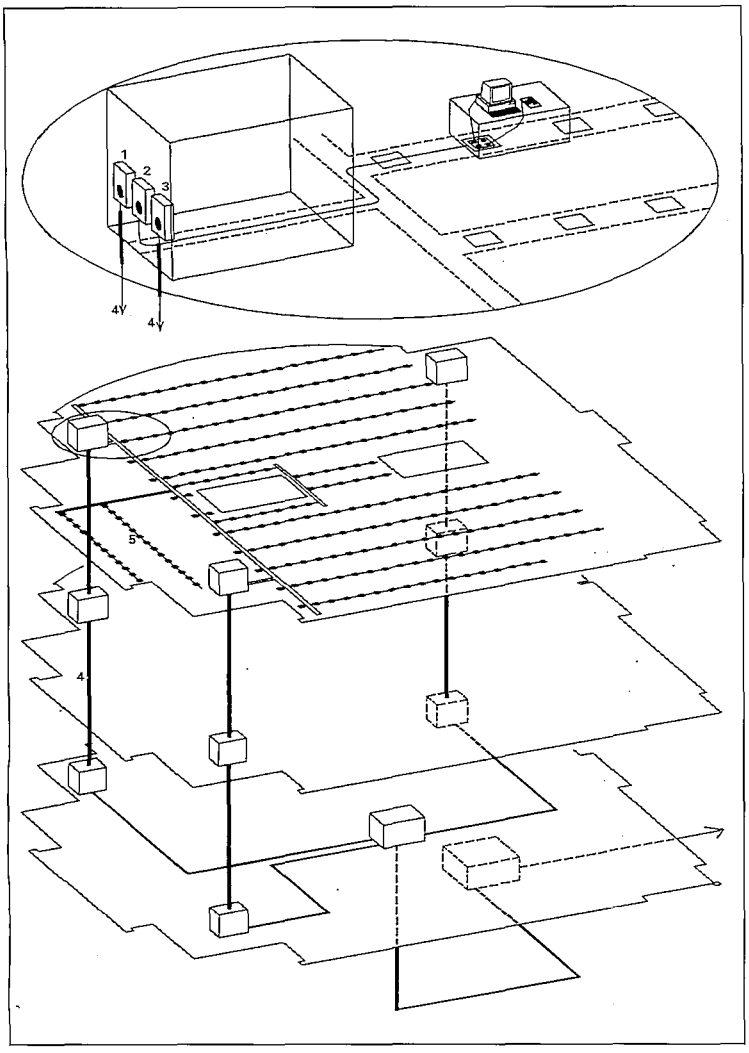
Spokane Public Library
Spokane, Washington
Thomas Hacker and Associates

Spokane, Washington's public library is globally wired through the Internet's World Wide Web. Yet the architects of the 126,000-square-foot institution made sure the library's patrons were not cut off from their local community. "There is a tendency for people to dive into the computer and its world rather than understand the actual world around them," observes Design Principal Thomas Hacker of Thomas Hacker and Associates in Portland, Oregon.

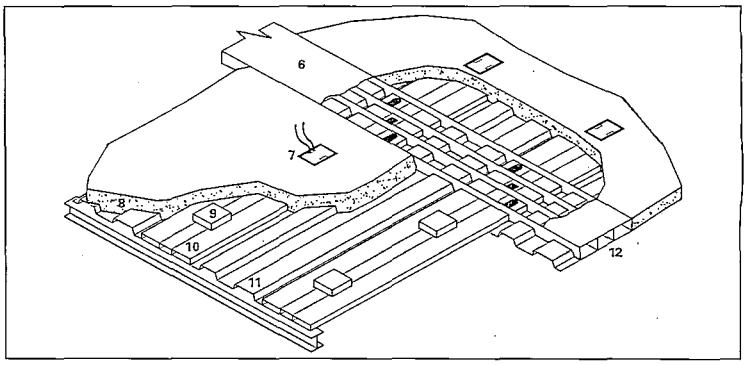
Except for a public gallery and meeting room, the first floor houses primarily technical support, with the major reading and reference facilities on the second and third floors. On each level, a 15,000-square-foot open floor plate stretches from north to south, interrupted only by a central grand stair and light well. The architects purposely placed the service desks and main catalog terminals in this zone to encourage interaction among patrons.

The expansive floor plates, divided by open stacks, tables, and study carrels, are terminated by reading areas with views of the city and Spokane Falls. The long-distance views also provide needed relief to eyes strained by lengthy sessions on computer monitors. Like bookends, support spaces run along both the east and west facades.

To ensure access to wiring no matter how shelving, furniture, and computer equipment are subsequently arranged in this open plan, the architects specified infloor raceways that can accommodate data and power receptacles every 5 feet on center in either direction. The network is built within a steel decking system that doubles as formwork for the concrete slab. Across most of the floor, two 2-foot-wide standard decking planks alternate with one 1-foot-wide modified plank to span the building's steel structure. The modified plank has been prefabricated with three paral-

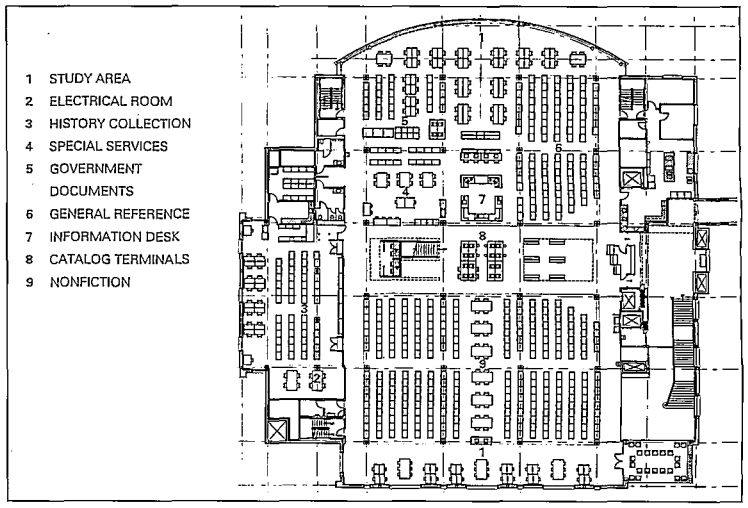


INFORMATION CABLING NETWORK



COMPOSITE STEEL DECK AND INFLOOR CELLULAR RACEWAY SYSTEM

1 VOICE BACKBONE PATCH PANEL
2 CATEGORY 5 PATCH PANEL AND UTP CABLE
3 OPTICAL FIBER LIGHT-INTERFACE UNIT, AND ETHERNET HUB
4 VERTICAL RISER CABLE
5 COMPOSITE STEEL DECK AND INFLOOR CELLULAR RACEWAY SYSTEM
6 HEADERDUCT COVER
7 FLOOR ACCESS PANEL
8 CONCRETE
9 ACCESS BOX
10 OPEN CELL
11 METAL DECKING
12 HEADER CELL



SECOND FLOOR PLAN

lel channels running continuously along its length, punctuated every 5 feet by raised, hollow access boxes covered by galvanized steel. The channel runs are linked by a header duct set perpendicular to the planks at one end of the system. Concrete is poured over the steel decking to form the 6 1/2-inch-thick floor. The tops of the access boxes are then covered with a thin concrete layer so that the deck appears monolithic.

After the pour, concrete is tapped out with a hammer and the galvanized steel cover removed from access boxes where power and data ports are currently desired. Wiring is pulled through the channels in the steel decking to those points. An activation assembly is inserted into the hollow boxes to provide the electronic juncture between the infloor wires and the plugs from the computer equipment above. A prefabricated access panel, equipped with matching carpet, then covers the receptacle box to blend it into the rest of the finished floor.

If a change in furniture layout is necessary to accommodate more computer terminals, other access boxes can be activated by simply removing the carpet in the appropriate location and following the same installation procedures. Current budget limitations prevented the library from activating all boxes at once. However, Daniel L. Walters, the library's director, anticipates that as demand increases and telecommunications costs decrease, more jacks will come on-line.

Spokane's information-cabling network begins in the basement, where the city's fiber-optic network and the telephone company's copper service cable reach the building at the telephone service entrance. Both types of cabling continue up to the main distribution frame within the computer room on the first floor. Here, wires from the phone system are routed through a patch panel into multipair phone cables. These copper cables in turn carry voice communications to patch panels within intermediate distribution frames (IDFs) in electrical rooms on each floor. A parallel set of fiber-optic cables distributes data communications from the central computer room to fiber-optic light-interface units within the same IDFs.

Once in the IDFs, the signals carried over fiber optics are converted to signals carried over copper cables by local-area-network hubs. The phone and data cabling is then threaded down into the floor, across to the header duct, and into side channels of the modified decking planks. Power cabling emanating from electrical panels adjacent to the IDFs follows a similar route to the center channel. Computers, phones, and other electronic equipment can then be plugged into the activation assemblies.

When designing libraries today, the design team must be sensitive to both technology and public space. To achieve the best results, Walters contends, architects must have a greater understanding of the building's infrastructure than ever before.

STEVEN EVANS PHOTOGRAPHY

TOP: Perforated brise-soleil on southern parapet filters light entering the third floor reading room.
ABOVE LEFT: On-line public-access computers are stationed within four-column clusters; conical reflectors diffuse light from clerestories.
ABOVE RIGHT: Floor monuments beneath study tables in south reading room afford power access.
FACING PAGE, AXONOMETRIC: Plenum between double beams in structural bay system serves as wiring raceway.
FACING PAGE, PLAN: Floor- and wall-mounted receptacles are distributed throughout third floor.
FACING PAGE, SECTION: Vertical fins, conical reflectors, and brise-soleil prevent glare while allowing natural light.

Richmond Hill Central Library
Richmond Hill, Ontario
A.J. Diamond, Donald Schmitt and Company, Architect

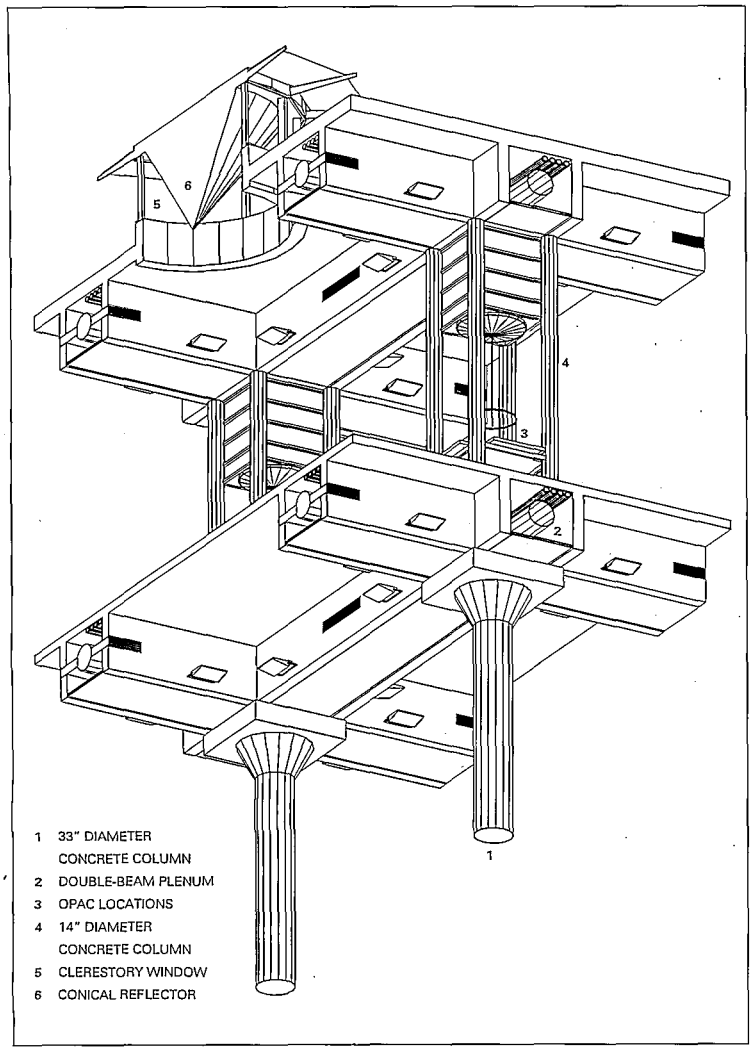
Flexibility in housing 170,000 volumes and a host of electronic equipment was of paramount importance to the library staff and architects of the 75,000-square-foot Richmond Hill Central Library, which replaced a 40-year-old, 15,000-square-foot structure in suburban Toronto. "Essentially, we were looking for a distribution system that could take change," recalls Partner-in-Charge Jack Diamond of Toronto's A.J. Diamond, Donald Schmitt and Company.

Two stacked, double-height loftlike spaces, each with intermediate mezzanines, are the result. The first floor houses a children's library, audiovisual area, and support services; the mezzanine above supports multipurpose rooms. The third floor contains the main reference and reading rooms, and the top mezzanine houses a local history room, administrative offices, and computer room.

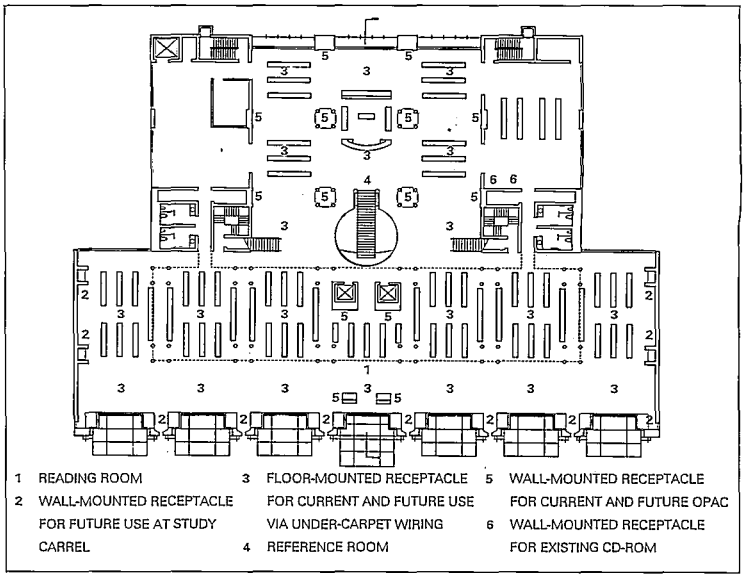
Both volumes are divided into 30-foot-square structural bays. The corners of the lower bays are defined by 33-inch-diameter concrete columns, those of the upper bays by clusters of four 14-inch-diameter concrete columns. The columns and column clusters support paired concrete beams.

Diamond and his team developed a hybrid system of distributing power and data lines. They ran wiring above suspended ceilings, through concrete slabs, and, capitalizing on their structural scheme, alongside mechanical ducts and sprinkler pipes in the plenum between the double beams.

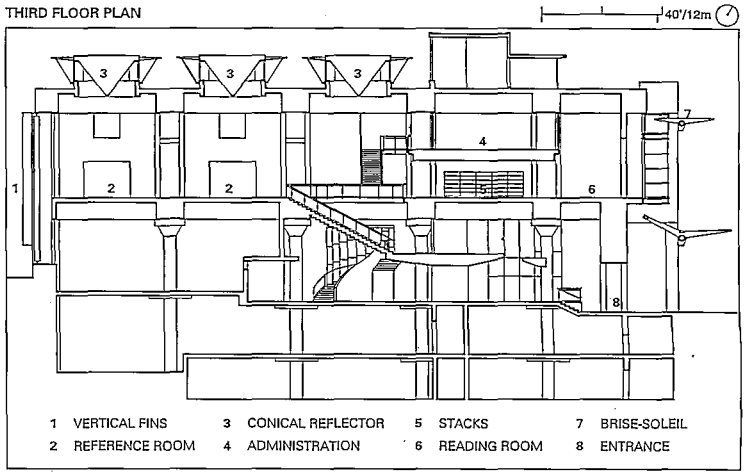
The local area network begins on the west side of the fourth floor in the computer room, where conduit carrying a fiber-optic cable backbone travels above a suspended ceiling to an adjacent electrical closet. Mounted on the walls of the closet, the conduit descends through the floor slabs to stacked electrical



ISOMETRIC OF TYPICAL BAY



THIRD FLOOR PLAN



NORTH-SOUTH SECTION

closets on each floor below. A second conduit of fiber-optic cable runs to an electrical closet on the east side, via the plenum in the fourth floor ceiling, and to each closet on subsequent floors. Within the electrical closets, incoming signals are converted from the fiber-optic cable to a standard copper cable before traveling to their final destination.

On most floors, conduit has been cast in place within the 14-inch slab so that power and data cabling can be pulled from electrical closets to cast-in-place transition boxes located at the center of each bay. These 15-by-15-inch, 3-inch-deep boxes are covered with hinged steel plates, flush with the slab's top, and hidden under carpet tiles. Flat wire under the carpet can be plugged into the appropriate boxes and run to four-receptacle monuments at strategic locations. The monuments are attached adhesively to the concrete slab and can be relocated as needed.

In the north reference room on the third floor, however, the architect elected to thread conduit from the electrical closet through the double-beam plenum under the floor slab, because the amount of wiring required to feed this computer-intense area was too great to be handled through the slab alone. Conduit running horizontally through the plenum turns up in the center of each of the four column clusters. Here, it passes through the slab and into custom-designed cabinets housing the central processing units of the four on-line public-access computers (OPACs) at each cluster.

Additional conduit runs from the double-beam plenum, up through the slab, and into six 10-inch-deep wall cavities along the perimeter of the north reading room to service additional OPACs. Like the beam plenum, the wall cavities double as chases for other services, such as the rainwater leaders.

Data and power transition boxes are set in the center of each bay in the north reference room. Instead of traveling from the electrical closet to the boxes entirely through the slab, conduit is first routed within the double-beam plenum before turning at right angles into the slab. In the south reading room, conduit follows the standard installation through the concrete slab to power and data transition boxes in the floor. In addition, conduit running through the slab has been turned up and cast into two concrete shear walls, and into the rear walls of two elevator shafts, to accommodate four additional OPACs. Another series of conduit runs up from the slab through the exterior wall to junction boxes at the perimeter study carrels.

The architect introduced a number of mechanisms to provide generous natural light while eliminating glare on computer screens: vertical fins on north-facing windows block low northwest light during summer afternoons; conical reflectors diffuse light from clerestories above the north reference room; and a horizontal, perforated brise-soleil along the south reading room perimeter filters light entering this area.

NICK MERRICK / HEDRICH-BLESSING PHOTOS

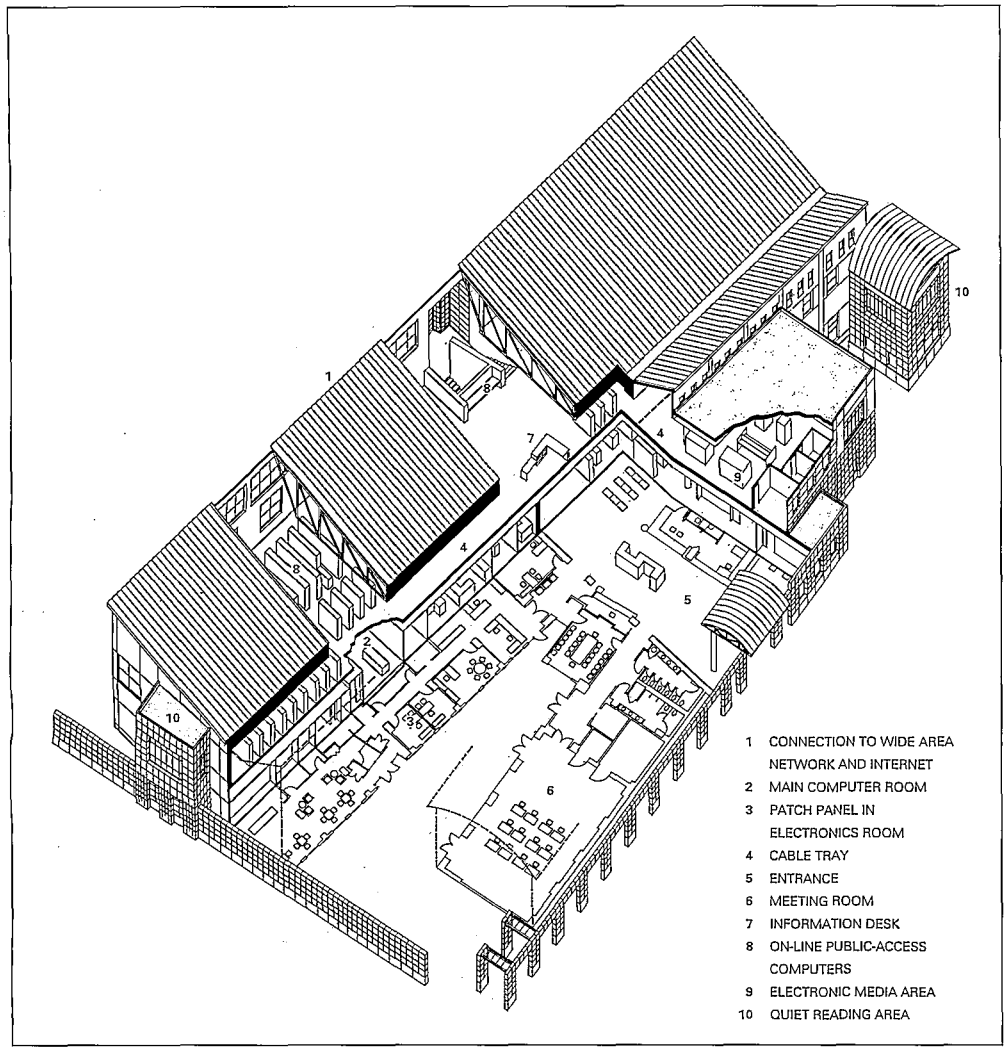
TOP: Newport Beach Central Library is divided into book collections (left) and specialized facilities (right).
ABOVE LEFT: To avoid glare on computer screens, architects specified translucent glazing for nearby skylight; an open-grid ceiling system diffuses light.
ABOVE RIGHT: Reading tables, equipped with data and power ports, line the perimeter of stacks. Large, north-facing windows admit daylight. Ducts above stacks bend downward to supply cool air as close to patrons as possible.
FACING PAGE, AXONOMETRIC: Cabling runs from computer room along cable tray mounted under second floor to data ports throughout library.
FACING PAGE, PLAN: On-line public-access computers face stairs and are built into ends of second floor stacks.

Newport Beach Central Library
Newport Beach, California
Simon Martin-Vegue Winkelstein Moris and James Lawson Pirdy

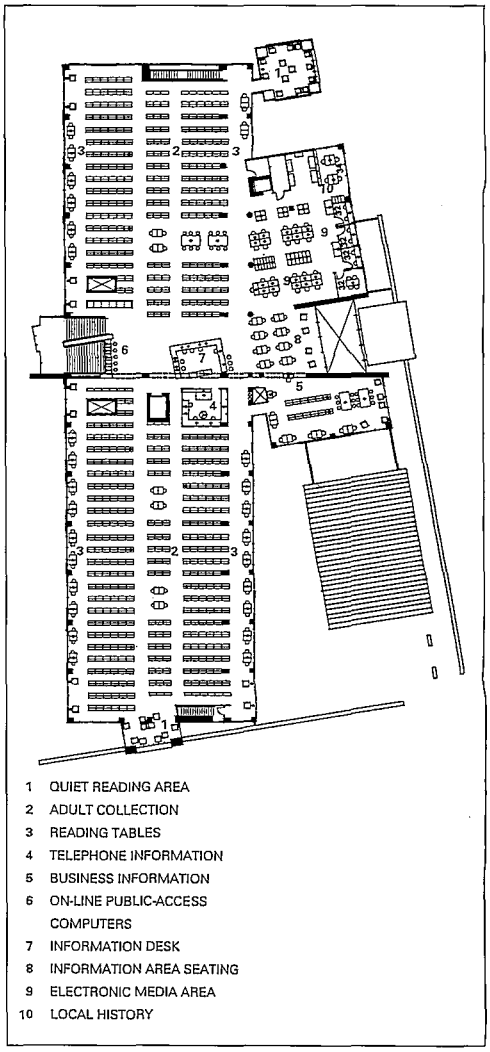
When planning the new 52,000-square-foot Central Library for Newport Beach, California, to replace the existing 14,000-square-foot facility, Assistant Librarian Thomas Johnson had visions of running conduit around the whole building so that computers and equipment could be plugged in anywhere. "But that would be very expensive," admits Johnson, now head librarian for the Rancho Mirage, California, public library, "so we had to make choices."

With limited funding, architects Simon Martin-Vegue Winkelstein Moris (SMWM) and James Lawson Pirdy worked with Johnson to select a straightforward, economical method of wiring distribution: running it along standard cable trays beneath the floor slab. They organized the two-story stucco-and-slate building into two basic components. A shed to the north houses the popular library, children's room, and adult collection, while smaller, discreet volumes to the south contain more permanent specialized areas, such as a meeting room, bookstore, and divisions of business information and local history.

Nearly column free, the shed's second floor provides a high, open expanse for flexible layouts. Stacks currently march down the full length of this tall space, interrupted only by information desks, a central circulation zone, and a few tables. Study carrels line the perimeter wall. About a dozen on-line public-access terminals, providing catalog information, are centrally located in the circulation zone. Several more are built into the ends of the stacks, so that users can find books immediately. Computers at the information desks have full access internally to the catalog and externally to the Internet, and outlets placed along the perimeter tables allow the public to plug in their own laptops.



AXONOMETRIC



SECOND FLOOR PLAN

The library's main computer room is on the first floor in the administrative area. Here, four computers function separately as Internet host, network server, on-line catalog, and data processor. Signals from the main computers are distributed to patch panels in the adjacent electronics room, from where 3/4-inch conduit runs up through the wall into a cable tray underneath the second floor. The tray serves as a data distribution backbone to support the routing of computer lines throughout the building. At appropriate junctures, conduit continues from the tray through walls, floors, or electronic chases built into custom casework. For each data port, a continuous, unspliced copper cable runs from the patch panel, through the conduit and tray, and back into conduit again until it reaches its specific destination. Because the architects were wiring to precise locations instead of creating a universal grid, the client insisted on reviewing detailed furniture layouts during schematic design.

With the increased amount of electronic equipment now available in the public library, including not only catalog terminals but microfilm readers, CD-ROM drives, printers, and fax machines, architects must carefully consider how to mitigate the ensuing noise and heat associated with these products. At Newport Beach, the architects segregated much of the machinery in an area south of the adult collection and created quiet areas without data ports. The ceiling height in this electronic media area is lower than that of the shed and contains proportionately more supply and return grilles, making it easier for the mechanical system to compensate for the excess heat, explains project architect Linda Sobuta of SMWM.

The architects also took care to design lighting systems that would be compatible with the computers. On the north side, they provided open-weave shades to control the amount of daylight that penetrates the reading room during summer. On the south side, they installed similar shades, recessed windows, and designed horizontal, perforated metal screens on the exterior. SMWM also inserted skylights in several locations within the shed roof. The architects studied sun angles for the locations of the skylights and relied on several techniques to avoid glare, including placing the skylights away from monitors, designing them with deep wells, and specifying translucent glazing. Where ceiling heights permitted, indirect lighting fixtures were selected. In the lower height spaces filled with equipment, the architects called for multicell parabolic reflectors set into the suspended ceiling system to diffuse the downwardly directed light.

The appearance of the terminals was also a major concern. "Computers need to be visually prominent," explains Sobuta, "but they can become an eyesore." The architects detailed custom furniture to hide the often unsightly backs and sides of equipment and the inevitable spaghetti of tangled cords.

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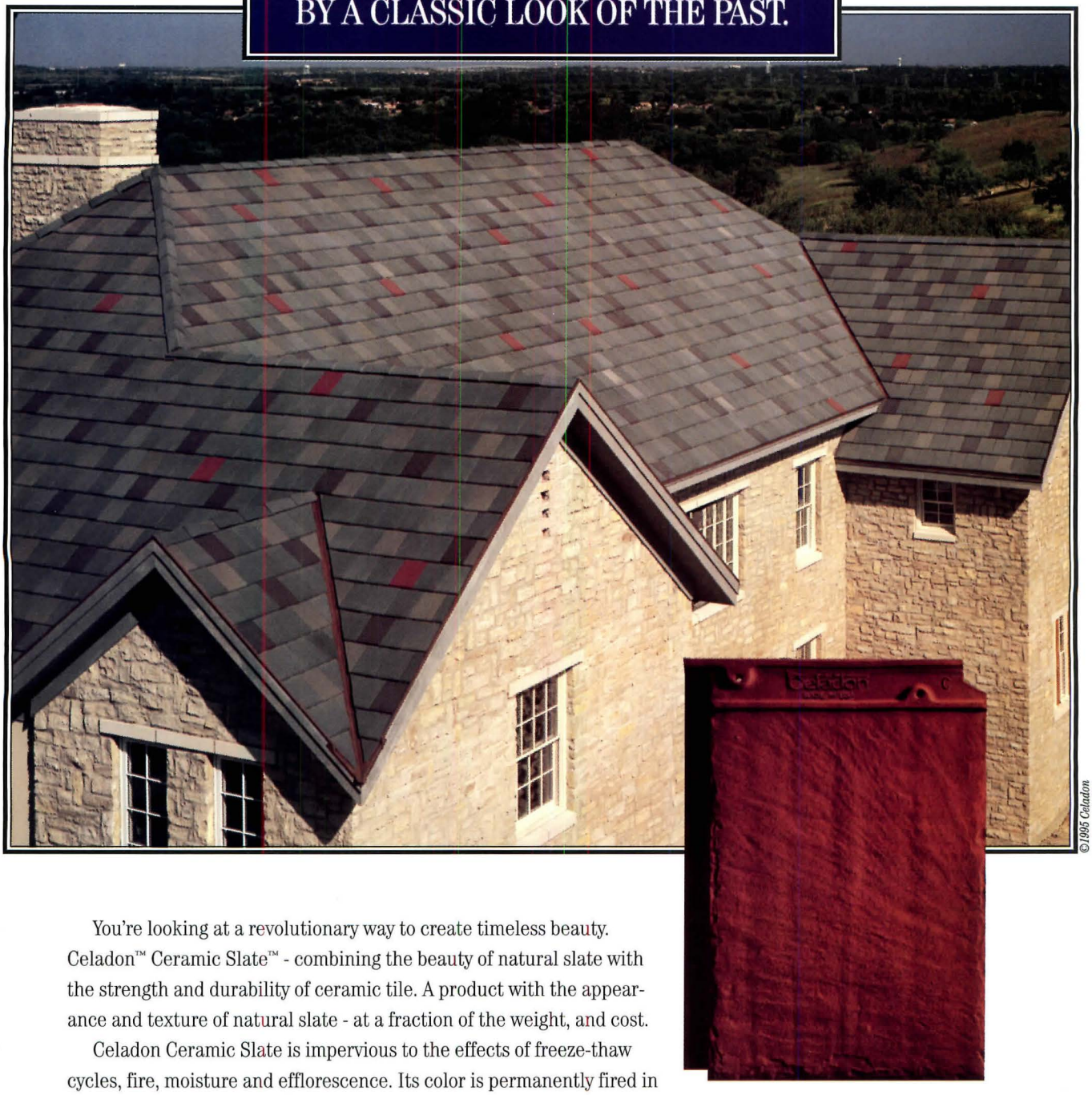

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From Street to Sanctum

Architect Jeanne McCallum crafts a playful retreat of modest materials for artists.

ABOVE RIGHT: McCallum-designed house steps four levels down steeply sloped site. Entrance pavilion is clad in galvanized sheet metal.

In the hills of San Diego's Encanto neighborhood, local architect Jeanne McCallum has transformed an unassuming bungalow into a dramatic composition for two artists; the result engenders images of a studio loft while providing the privacy and comfort of a suburban retreat.

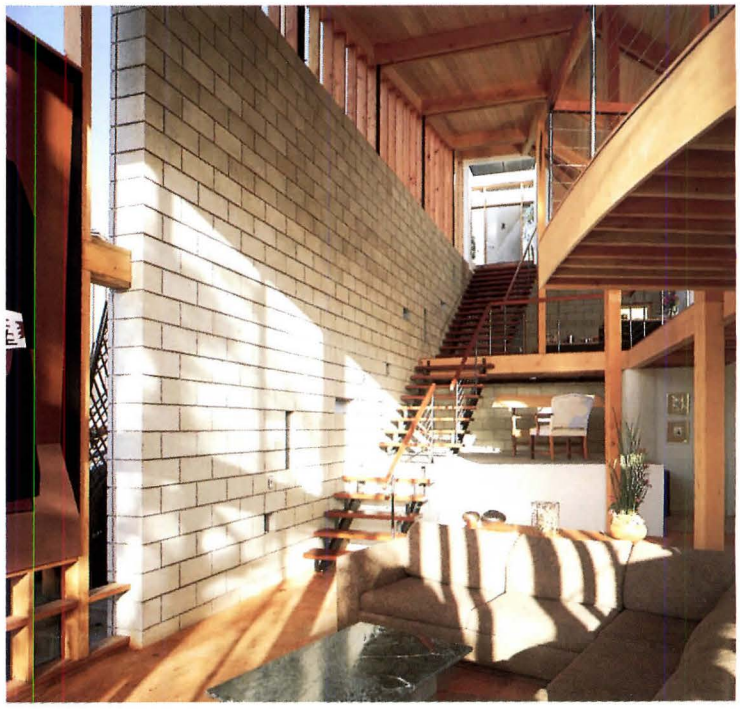
Guarded by a genial sentinel tower and accessible only by means of a bridge, McCallum's addition meets the street with a strength of character that belies its modest size and budget. Her clients wanted a more visible entrance, but the front door of their original house was below grade, and setback requirements meant any new entrance would have to be pulled back to where the site slopes away. The bridge and entrance tower solved both problems, and also provided a playful metaphoric link between street and sanctum.

Beyond the facade, the house drops quickly in deference to local height restrictions and its steeply raked site. McCallum's plan traces a three-dimensional contour diagram, stepping down four levels and widening slightly to capture views. This unfolding of space and the southern wall's generous glazing make the addition feel much larger than its 1,200 square feet and 18-foot maximum width. The new building contains a living room at its lowest level; an office or study above; kitchen, hall, and dining room on a mezzanine; and the entrance at the top level—all connected by a single flight of stairs. To the east, the 700-square-foot original now holds bedrooms, baths, and a library.

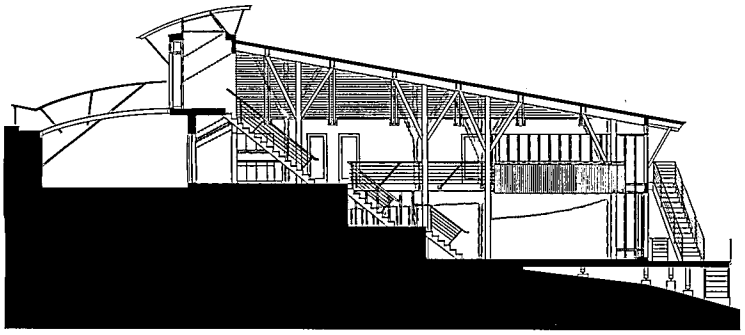
McCallum designed an airy, light-filled space of exposed concrete masonry units and construction-grade lumber with glass infilling. Built of pier-and-beam foundations and balloon framing over masonry walls, the house is topped by an angled, partially pitched standing-seam metal roof. The roof is carried on an exposed, glue-laminated 6 by 12 ridge beam and twinned 4 by 10 joists, supported by 6 by 8 lumber columns. On the west side, a block wall stiffens the structure, transfers roof loads, and provides thermal mass. It also serves as both a privacy screen and an armature for the owners' regularly changing murals.

Although the construction is straightforward, the architect's diverse vocabulary of materials required careful detailing, especially where wood, glass, metal, and concrete all come together in a small space. The entrance pavilion is a case in point, with its skylights, strut-supported flying roof, punched window protrusions, and glass-encased front door. "We had an extremely tight budget," admits McCallum, who has practiced solo in San Diego for eight years, "so the structural materials had to be the finish materials."

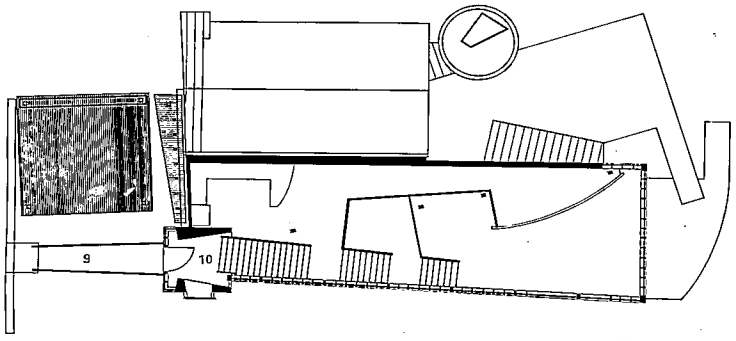
The unorthodox profile of the house, starting with its entrance, appealed to the clients' fascination with science-fiction imagery, particularly the time-machine of television's "Dr. Who," which often bridged worlds. McCallum's addition helps her clients make the same leap in the more prosaic setting of San Diego.—*Reed Kroloff*



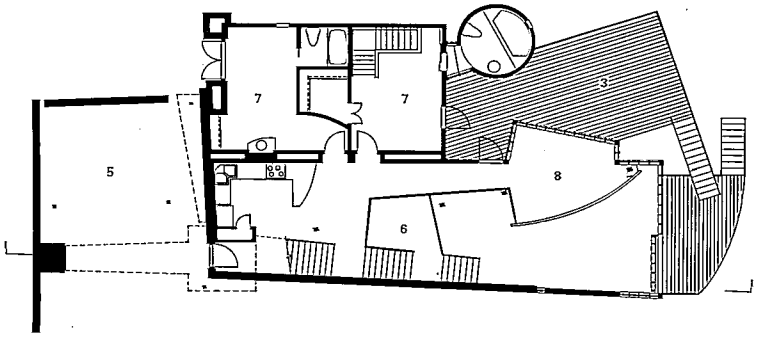
TOP LEFT: Tower is detailed in wood, glass, and metal; wood door is painted. Vaulted roof rides on galvanized pipes and wood framing. Projecting window allows views to rear of site.
TOP RIGHT: Laminated wood bridge over service court is supported by block retaining wall and metal tie rods.
ABOVE LEFT: Mezzanine level with dining area (left) overlooks living room.
ABOVE RIGHT: Block wall provides privacy, thermal mass, and lateral stiffening, and supports ceiling loads.



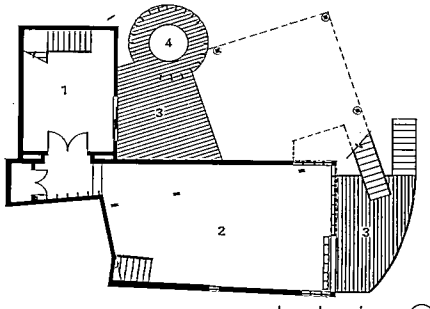
NORTH-SOUTH SECTION



ENTRANCE FLOOR PLAN



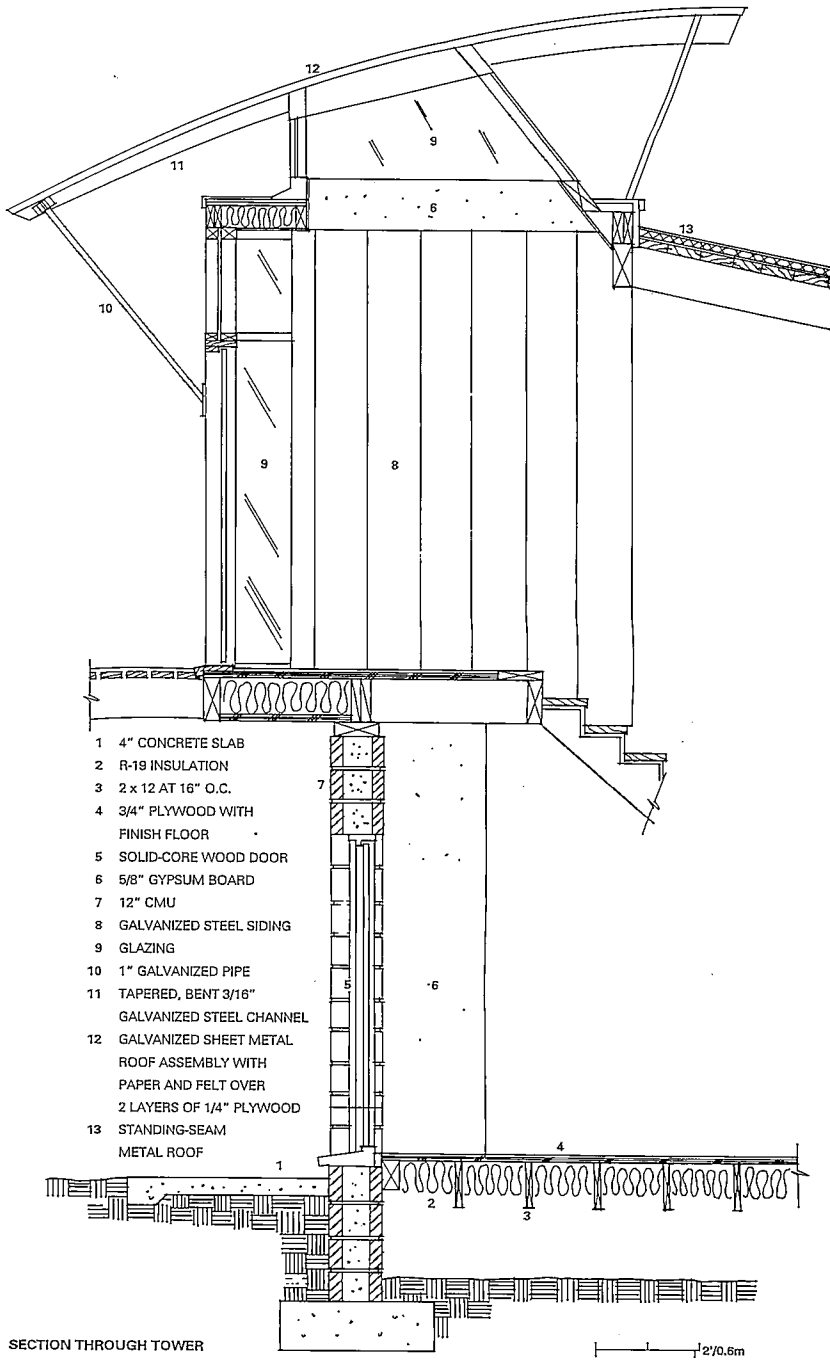
MAIN FLOOR PLAN



BASEMENT FLOOR PLAN

10'/3m

1 LIBRARY
2 LIVING ROOM/ ART STUDIO
3 DECK
4 WHIRLPOOL
5 WORKSHOP
6 STUDY
7 BEDROOM
8 DINING ROOM
9 BRIDGE
10 ENTRANCE



1 4" CONCRETE SLAB
2 R-19 INSULATION
3 2 x 12 AT 16" O.C.
4 3/4" PLYWOOD WITH FINISH FLOOR
5 SOLID-CORE WOOD DOOR
6 5/8" GYPSUM BOARD
7 12" CMU
8 GALVANIZED STEEL SIDING
9 GLAZING
10 1" GALVANIZED PIPE
11 TAPERED, BENT 3/16" GALVANIZED STEEL CHANNEL
12 GALVANIZED SHEET METAL ROOF ASSEMBLY WITH PAPER AND FELT OVER 2 LAYERS OF 1/4" PLYWOOD
13 STANDING-SEAM METAL ROOF

SECTION THROUGH TOWER

2'/0.6m

SECTION: Ridge beam is supported by braced 6 by 8 columns. From entrance pavilion (left), stair leads first to kitchen and dining mezzanine, then to office, and down into living room (right).
PLANS: New trapezoidal wing is added to west of existing house (top). Master bath is located in circular volume.
DETAIL: Section through entry tower reveals traditional masonry bearing wall supporting balloon framing. Metal tie rods and glass frames support angled, partially pitched roof of entrance tower.

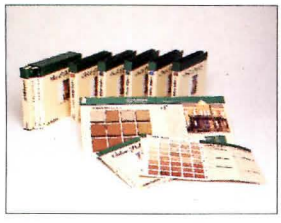
WEISS/CHURCHILL HOUSE
SAN DIEGO, CALIFORNIA

ARCHITECT: Jeanne McCallum Architect, San Diego, California—Jeanne McCallum (principal); Mary Wilkinson, Roger Hill (project team)
ENGINEER: Walter Cooke & Associates
CONSULTANT: Marlon Blackwell (design development)
GENERAL CONTRACTOR: Bruce Hanson
PHOTOGRAPHER: Anne Garrison/David Hewitt

ARCHITECTURE'S LITERATURE PORTFOLIO

The Literature offered on these pages (with rare exception) are free for the asking. Simply fill out one of the postage paid reader service cards located elsewhere in this issue, circle the appropriate numbers and drop it in the mail.

Boral Bricks, Inc.



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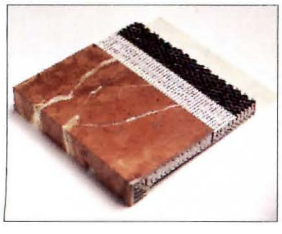
Circle 15.

Stone Panels, Inc.



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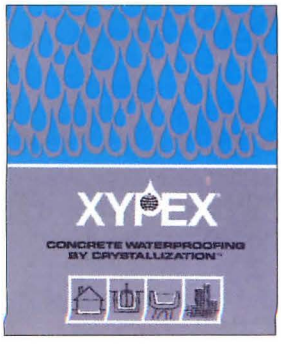
Xypex Chemical Corporation



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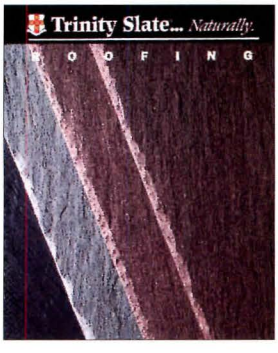

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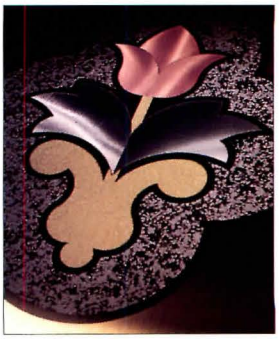
Surface Design + Technology



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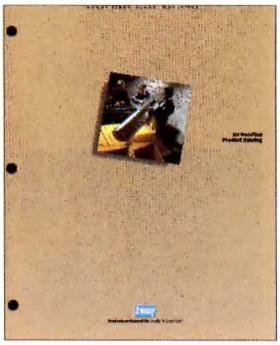

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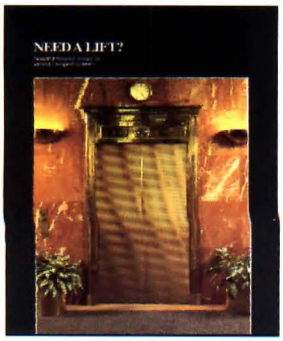

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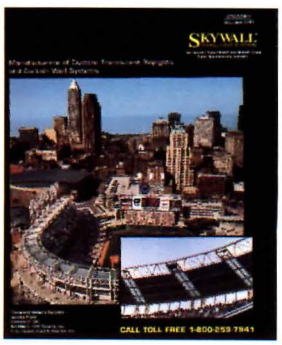
Skywall Translucent Systems



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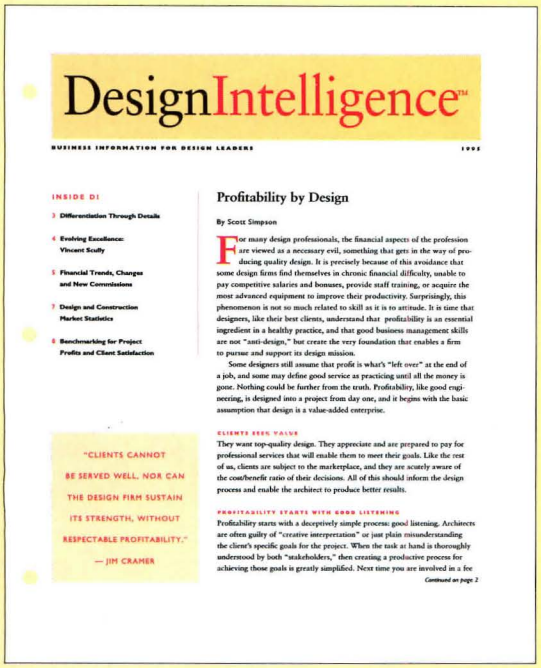
Design



DesignIntelligence™

BUSINESS INFORMATION FOR DESIGN LEADERS 1995

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3 Differentiation Through Details

4 Evolving Excellence: Vincent Scully

5 Financial Trends, Changes and New Commissions

7 Design and Construction Market Statistics

8 Benchmarking for Project Profits and Client Satisfaction

"CLIENTS CANNOT BE SERVED WELL, NOR CAN THE DESIGN FIRM SUSTAIN ITS STRENGTH, WITHOUT RESPECTABLE PROFITABILITY."
— JIM CRAMER

Profitability by Design

By Scott Simpson

For many design professionals, the financial aspects of the profession are viewed as a necessary evil, something that gets in the way of producing quality design. It is precisely because of this avoidance that some design firms find themselves in chronic financial difficulty, unable to pay competitive salaries and bonuses, provide staff training, or acquire the most advanced equipment to improve their productivity. Surprisingly, this phenomenon is not so much related to skill as it is to attitude. It is time that designers, like their best clients, understand that profitability is an essential ingredient in a healthy practice, and that good business management skills are not "anti-design," but create the very foundation that enables a firm to pursue and support its design mission.

Some designers still assume that profit is what's "left over" at the end of a job, and some may define good service as practicing until all the money is gone. Nothing could be further from the truth. Profitability, like good engineering, is designed into a project from day one, and it begins with the basic assumption that design is a value-added enterprise.

CLIENTS SEEK VALUE

They want top-quality design. They appreciate and are prepared to pay for professional services that will enable them to meet their goals. Like the rest of us, clients are subject to the marketplace, and they are acutely aware of the cost/benefit ratio of their decisions. All of this should inform the design process and enable the architect to produce better results.

PROFITABILITY STARTS WITH GOOD LISTENING

Profitability starts with a deceptively simple process: good listening. Architects are often guilty of "creative interpretation" or just plain misunderstanding the client's specific goals for the project. When the task at hand is thoroughly understood by both "stakeholders," then creating a productive process for achieving those goals is greatly simplified. Next time you are involved in a fee

Continued on page 2

When clients talk about your firm, they're really talking about you and your leadership. *DesignIntelligence* is a newsletter that presents new management ideas and insights that help you grow.

Each issue of *DI* features insights and knowledge on the issues that impact the design business environment, the art of management, effective leadership, economic and political wisdom, and the implications of change.

MORE GROWTH AND CHALLENGING CHANGES AHEAD

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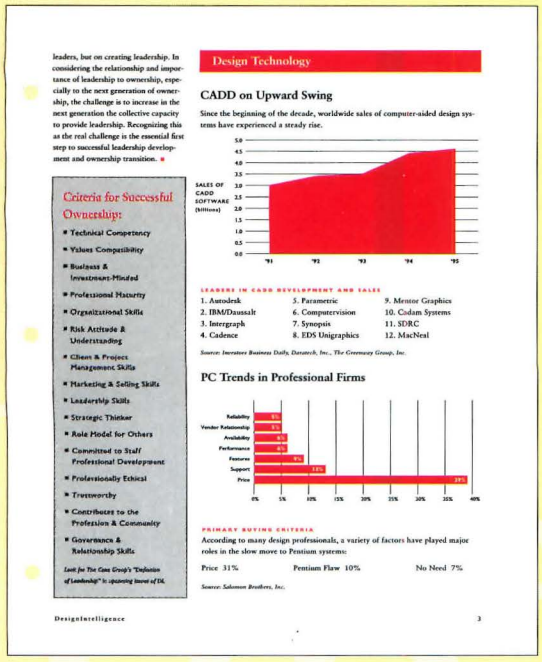

leaders, but on creating leadership. In considering the relationship and importance of leadership to ownership, especially to the next generation of ownership, the challenge is to increase in the next generation the collective capacity to provide leadership. Recognizing this as the real challenge is the essential first step to successful leadership development and ownership transition. ■

Criteria for Successful Ownership:

- Technical Competency
- Values Compatibility
- Business & Investment-Minded
- Professional Maturity
- Organizational Skills
- Risk Attitude & Understanding
- Client & Project Management Skills
- Marketing & Selling Skills
- Leadership Skills
- Strategic Thinker
- Role Model for Others
- Committed to Staff Professional Development
- Professionally Ethical
- Trustworthy
- Contributes to the Profession & Community
- Governance & Relationship Skills

Look for The Coxe Group's "Definition of Leadership" in upcoming issues of DI.

Design Technology

CADD on Upward Swing

Since the beginning of the decade, worldwide sales of computer-aided design systems have experienced a steady rise.

SALES OF CADD SOFTWARE (billions)

LEADERS IN CADD DEVELOPMENT AND SALES

1. Autodesk	5. Parametric	9. Mentor Graphics
2. IBM/Dassault	6. Computervision	10. Cadam Systems
3. Intergraph	7. Synopsis	11. SDRC
4. Cadence	8. EDS Unigraphics	12. MacNeal

Source: Investors Business Daily, Datatech, Inc., The Greenway Group, Inc.

PC Trends in Professional Firms

PRIMARY BUYING CRITERIA

According to many design professionals, a variety of factors have played major roles in the slow move to Pentium systems:

Price 31% Pentium Flaw 10% No Need 7%

Source: Salomon Brothers, Inc.

DesignIntelligence 3

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Intelligence™

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Financial Trends, Changes, and New Commissions

THE DI CAPSULE REPORT

Capsule Report offers the latest in announcements of new projects, appointments, construction market indicators, and industry trends. Project announcements are selected from Construction Market Data. CMD is a member of the Southern Construction Information Network, which gathers and publishes information on projects throughout North America. For more information on project announcements, call CMD at (301) 441-8390.

Construction Cost Index information is provided by R.S. Means and Co., and is an update to Means Building Construction Cost Data 1995 (BCCD). You can use these values by applying the percentages shown to the weighted averages in-dex from BCCD. For more information, call (800) 448-8182.

Regional strength is indicated by triangles (1 weak–5 strong).

1. New England—Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont

★★★

Providence: Materials up 0.33%; Installation down 0.73%. Average down 0.26%

The chip of economic expansion is moderating, according to the Federal Reserve. Retail is slower than last report. Manufacturing has also slowed a bit. Most design firms report a short-ening backlog of work and client groups report no or very small increases in capital spending and employment. Institutional and housing ar-eas show signs of improvement and may move upward within the next few weeks.

Middlebury College is seeking an architect for the estimated $20 million Science Center in Middlebury, VT. (802) 388-3711 • Perry Dean Rogers Architects has been selected for the $10 million library at Old Dominion University • Cambridge Seven Architects has been selected for the new 600 room hotel and conference center at Logan Airport in Boston • Dimmitory Bosarn Anderson Inc. will design the new Oyster River School in Durham New Hampshire. Other consultants include landscape architects, Larson and Associates and civil engineers Norway Plains Associates • Tinhorn, Yaffee, Prescott has been selected to design the $40+ million Wilhanta College Science Center • Finegold, Alexander & Associates has been selected for the $9 million Chelsea Learning Center.

2. New York—Fairfield Connecticut area, New York and New Jersey

★★★

Syracuse: Materials up 0.01%; Installation up 0.24%. Average up 0.14%

Economic conditions for designers are mixed with an interest and engineering picking up from the last report although much of the new work is outside the region. Office vacancy rates in downtown New York City and suburban markets unfortunately are up this year. The de-mand for commercial and industrial loans has remained robust • Pei Cobb Freed & Partners has been selected to design the $6.2 million Ball State Alumni Center • Engineers selected for the project are FRP Inc. • Robert A.M. Stern planning has prevailed in the state and city officials selection of Tishman Realty and Construction working with Walt Disney Co. The $305 million hotel and entertainment complex is consid-ered a cornerstone of plans to transform New York's Times Square area.

3. North Atlantic—Delaware, Southern New Jersey, Eastern Pennsylvania

★★★

Wilmington: Materials down 0.12%; Installation down 0.73%. Average down 0.44%

Design business activity showed less strength recently than earlier in the year. Client groups in the manufacturing area reported a drop in orders and shipments. Retailers said sales ran at a steady pace, but were below forecasts. The Federal Reserve said loan demand in general was modest. Few new large capital projects have been announced.

4. East Central—Ohio, Eastern Kentucky, Western Pennsylvania, Northern West Virginia

★★★★★

Cincinnati: Materials up 0.21%; Installation down 0.81%. Average down 0.27%

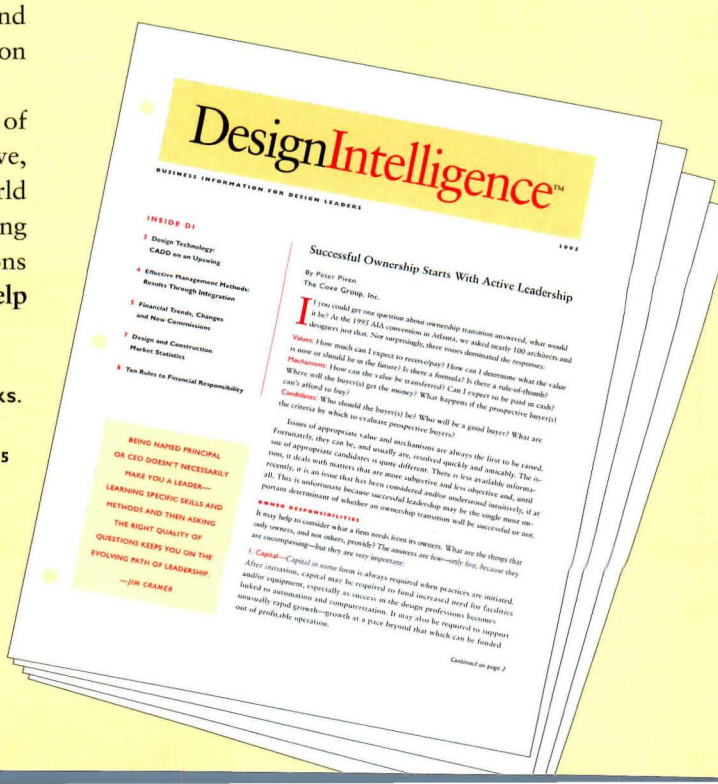
Continued on page 6

WHAT YOUR COMPETITION IS DOING . . .

Information on the economy and market trends is the core of *DesignIntelligence*. Markets are changing constantly. Still, every two weeks or so there are almost always $10–12 billion in new projects in the United States alone. Who's getting these commissions? What building types? Who are the clients?

Here you will be able to scan for critical information to help you understand your competition. *DI* charts the trend-setting projects worldwide and reports on both pre-planning and the newest A/E/ID/P selections.

DI also brings you the latest economic news from each of the 12 regions of the U.S. and worldwide. Based on information supplied by the Federal Reserve, The Inter-American Development Bank, The U.S. Dept. of Commerce, The World Bank, GSA, Construction Market Data, Inc., R.S. Means and Co., and leading associations, we bring together the latest financial statistics, their implications and opportunities. **This information is put together with one purpose: to help move your firm forward to the top.**


DesignIntelligence™

BUSINESS INFORMATION FOR DESIGN LEADERS

1995

INSIDE DI

Successful Ownership Starts With Active Leadership

By Peter Piven
The Coxe Group, Inc.

If you could get one question about ownership transition answered, what would it be? At the 1995 AIA convention in Atlanta, we asked nearly 100 architects and designers just that. Not surprisingly, three issues dominated the responses:

Values: How much can I expect to receive/pay? How can I determine what the value is now or should be in the future? Is there a formula? Is there a rule-of-thumb?

Mechanisms: How can the value be transferred? Can I expect to be paid in cash? Where will the buyer(s) get the money? What happens if the prospective buyer(s) can't afford to buy?

Candidates: Who should the buyer(s) be? Who will be a good buyer? What are the criteria by which to evaluate prospective buyers?

Issues of appropriate value and mechanisms are always the first to be raised. Fortunately, they can be, and usually are, resolved quickly and amicably. The issue of appropriate candidates is quite different. There is less available information, it deals with matters that are more subjective and less objective and, until recently, it is an issue that has been considered and/or understood intuitively, if at all. This is unfortunate because successful leadership may be the single most important determinant of whether an ownership transition will be successful or not.

OWNER RESPONSIBILITIES

It may help to consider what a firm needs from its owners. What are the things that only owners, and not others, provide? The answers are few—only five, because they are encompassing—but they are very important.

1. Capital—Capital in some form is always required when practices are initiated. After initiation, capital may be required to fund increased need for facilities and/or equipment, especially as success in the design professions becomes linked to automation and computerization. It may also be required to support unusually rapid growth—growth at a pace beyond that which can be funded out of profitable operation.

Continued on page 2

BEING NAMED PRINCIPAL OR CEO DOESN'T NECESSARILY MAKE YOU A LEADER—LEARNING SPECIFIC SKILLS AND METHODS AND THEN ASKING THE RIGHT QUALITY OF QUESTIONS KEEPS YOU ON THE EVOLVING PATH OF LEADERSHIP.

—JIM CRAMER

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Comply Lap Siding, Flooring and Sheathing—Oregon Strand Board COMPLY is a superior alternative to conventional siding and panel products. Comply exceeds traditional products in strength, stiffness, machinability and overall quality consistency. It is moisture and insect resistant and is guaranteed not to delaminate. COMPLY is a solid core 5-ply panel that out performs waferboard, plywood and oriented strandboard in all applications.
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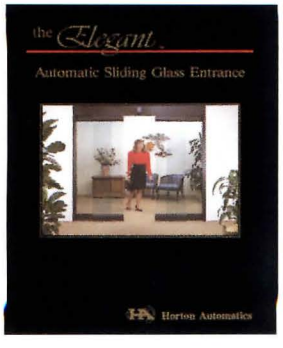
Horton Automatics



Horton Automatics Elegant™ automatic sliding glass entrance system meets the demands of modern architecture yet conforms to building codes and energy conservation requirements. Automated by the state-of-the-art, micro processor driven, Series 2001 operator. Glass panels slide quietly on a concealed track. For emergency egress, a breakout feature that allows panels to swing out is also available. Call 1-800-531-3111.
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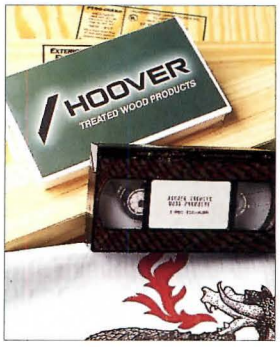
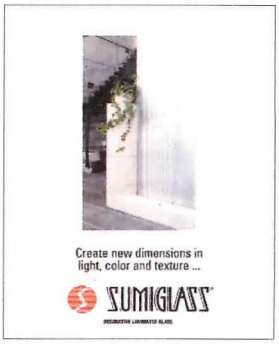
Hoover Treated Wood Products



New video from Hoover Treated Wood Products Inc. shows how treated wood is produced and tested, and describes Hoover's complete line of treated wood products including **PYRO-GUARD** interior type fire retardant treated lumber and plywood, **EXTERIOR FIRE-X** exterior type fire retardant treated lumber and plywood, and **CCA KDAT** preservative treated lumber and plywood that's kiln dried after treatment.
Circle 45.

Sumiglass by North American Glass



Sumiglass by North American Glass is a designer series of laminated safety glass. Printed films, decorative papers and even some fabrics can be laminated between glass to create a stunning light control and privacy product. Choose from a variety of stock patterns or allow us to create a custom pattern for you.
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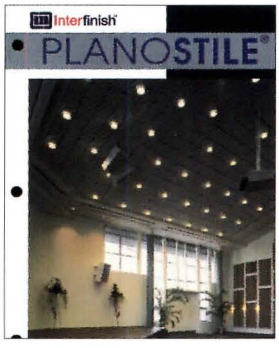
Interfinish



New Planostile Metal Ceiling Tiles offer a choice of styles and suspension system options with the low maintenance, dust free, durable characteristics of an all metal ceiling system. Planostile tiles offer a choice of metal thicknesses, powder coated paint finishes, perimeter moldings, and Acoutex, a new lightweight non-woven material applied to perforated panels to provide additional sound absorption. Interfish—A Division of Chicago Metallic Corporation.
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A/D Fire Protection Systems Inc.

A/D Firefilm® Decorative, Thin-Film Intumescent Fireproofing. A/D Firefilm® permits the designer to use the appearance of exposed steel with the steel fully protected from fire. Rated up to 2 hours for beams and columns. It is applied as a thin-film coating 0.016 to 0.120 in. thick. During a fire, A/D Firefilm® expands to form a meringue-like layer up to 4 in. thick which insulates the steel from fire. The topcoat is available in most colors in gloss and semi-gloss finishes. A/D Fire Protection Systems, Inc, (800) 263-4087 or (416) 292-2361.
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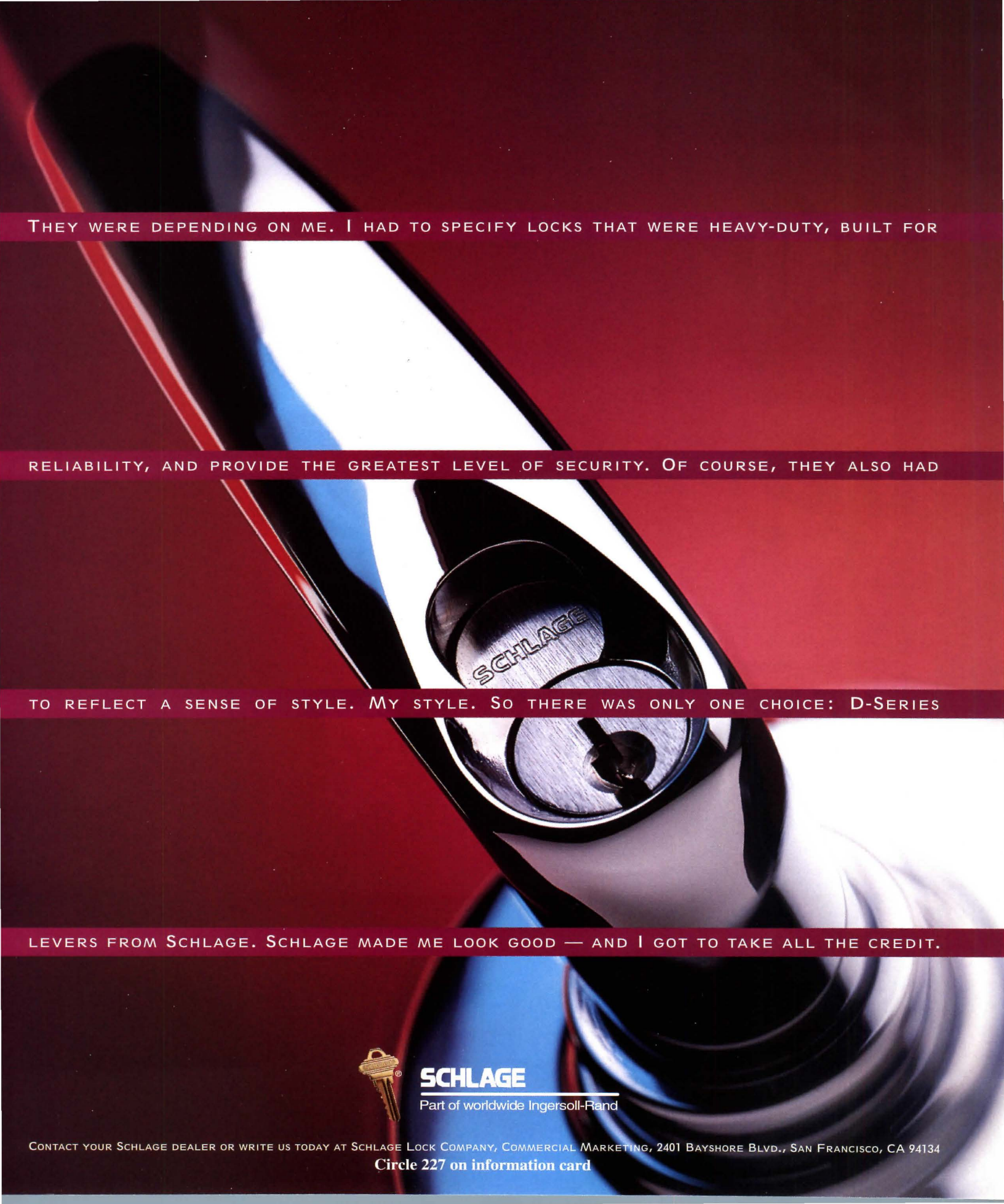
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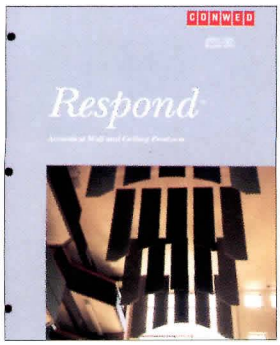

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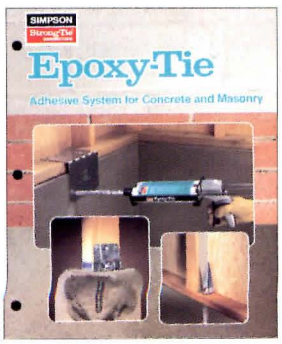
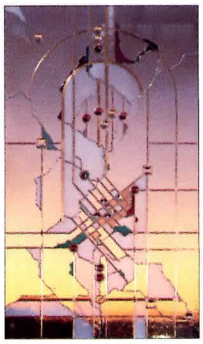


High-strength anchoring easier with EPOXY-TIE™. Low-cost system for retrofits in concrete or masonry provides stronger anchoring than mechanical anchors. Bond strength up to 12,400 lb. tension; 7,200 lb. shear. Epoxy-Tie™ bonds with surrounding concrete; anchor is less prone to sideburst during close-interval installation. Higher resistance to moisture and vibration than mechanical anchors. Full information in brochure **F-ET.**
Circle 71.

Monarch Studio's, Inc./Michael F. Pilla



Architectonic Art Glass designed and executed under complete supervision of principal artist, Michael F. Pilla, of Monarch Studios, Inc. This art glass is typically constructed with copper cames, complimented by a unique fabrication system, and a wide variety of glass as desired. Monarch Studios is an art glass studio that has been working with design professionals creating original work since 1976. **(612) 644-7927.**
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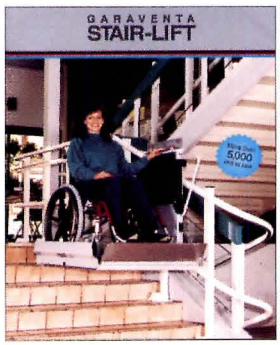

New Stair-Lift Brochure—If you've been wondering why the Garaventa Stair-Lift is the first choice of building owners around the world, get a copy of our new brochure. It'll spell out the reasons why Garaventa is the world's most popular stairway access solution. It's more attractive, durable and reliable, and safer and easier to use than any other platform lift. Quite frankly, Garaventa is the best value. Call today: 800-663-6556 or 604-594-0422.
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Permanence and durability of exterior materials were major considerations in the design of the Virginia Farm Bureau Building in Goochland County, near Richmond. Carneal and Johnston, Inc., Project Architects, convinced the owners that TCS, terne-coated stainless steel, was the most prudent choice for the roof because it represented a long-term value. TCS is, according to Ken Bunch, Principal Architect, "...the most permanent, maintenance-free roofing material available."

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Follansbee will be happy to send you substantiating evidence.

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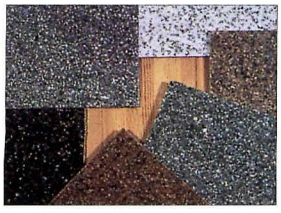

Granite Supreme 5000 Series—Institutional • Commercial • Industrial • Residential. Fritztile introduces flexible granite. An incredible, resilient flooring that combines the beauty, strength and durability of natural granite stone at a fraction of the cost of a comparable granite surface. This series provides an elegant monolithic appearance to accent any interior and installs as easily as vinyl composition tile. For a brochure featuring specifications of this remarkable new tile or other Fritztile products, call 1-800-955-1323.
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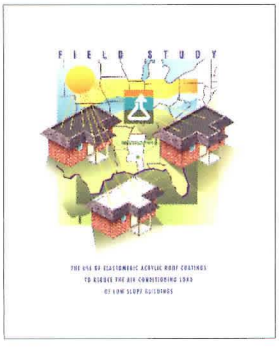
Rohm and Haas Company



ACRYLIC ROOF COATINGS SAVE ENERGY AND EXTEND THE LIFE OF A ROOF! This attractively illustrated brochure shows how elastomeric acrylic roof coatings can substantially reduce air conditioning energy demand, while prolonging the life of a roof by protecting it from degradation by heat, sunlight, water and thermal shock.
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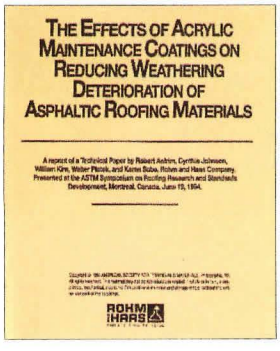
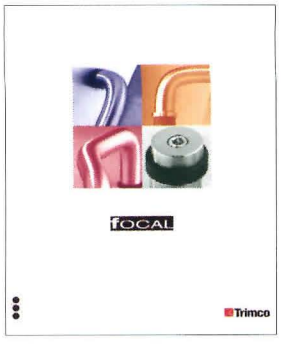


ACRYLIC COATINGS PROTECT ASPHALT ROOFS—This new, comprehensively illustrated brochure shows how elastomeric acrylic maintenance coatings reduce weathering deterioration on asphalt-based roofing materials. This publication is a compilation of a presentation that was made at the recent ASTM Symposium On Roofing Research And Standards Development.
Circle 83.

Trimco



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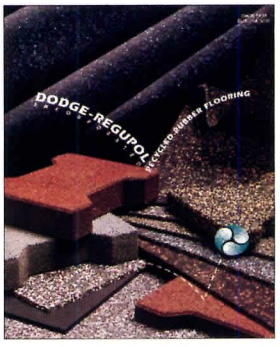
Dodge Regupol



Dodge Regupol's new 8-page brochure describes and illustrates in detail the attributes of its innovative recycled rubber flooring products. Made from 100% premium quality recycled rubber, Everlast Tile™, Ever-Roll™, and Regupol™ Pavers & Tiles are suited for an infinite variety of commercial, industrial and sports applications and offer natural resiliency, unmatched durability and environmental acceptability.
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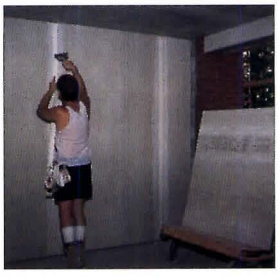
Louisiana-Pacific



FIBERBOND® wallboard is designed for use in corridors, classrooms, dormitories and other high traffic areas where impact resistance and low maintenance are required. Reinforced with fiber from recycled newspapers, panel may be used in standard and fire-rated applications. FiberBond meets ASTM c36 requirements and is available in 3/8", 1/2" and 5/8" thicknesses, 4' widths and 8', 9', 10' and 12' lengths. Exterior wall sheathing also available. For a free brochure, call (800) 299-0028, ext. 329.
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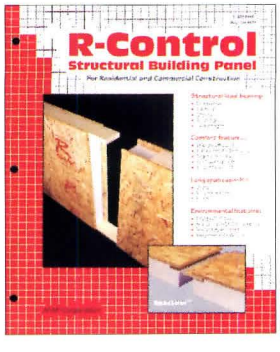

Structural Building Panels—R-Control® Panels, a strong one-piece structural system, provide superior insulation in exterior walls, roofs/ceilings, and floors. Pre-engineered lumber facings and solid EPS insulation create a monolithic structure. R-Control has passed structural and fire tests as prescribed by national building code authorities. AFM's EPS contains no CFC's, HCFC's, HFC's, or formaldehyde. R-Control is manufactured across the nation. Call 1-800-255-0176, or write AFM Corporation, P.O. Box 246, Excelsior, MN 55331.
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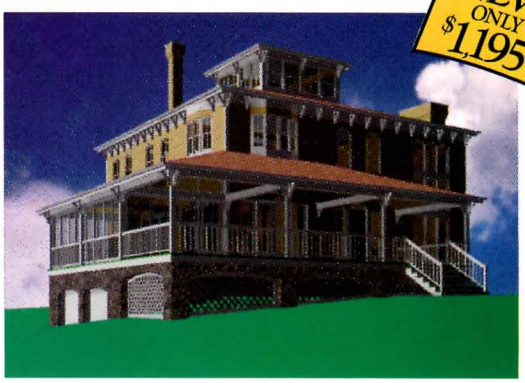
Auto-Architect and new Auto-Architect LT for the HOME BUILDER

Two great reasons to choose Softdesk application software



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Are you a field professional looking for the right design software for your laptop PC? Would you like to add more application-oriented seats to your design office for production work? Do you want to use computer-aided design in your office, but it seems too expensive and complex? If you've been hesitating to automate for any reason, the wait is finally over.

Presenting new *Auto-Architect LT for the Home Builder,* designed especially for home builders and field professionals on the go. All that's required is Windows or Windows NT. *Auto-Architect LT for the Home Builder* includes AutoCAD component technology from Autodesk, which means the quality and compatibility of AutoCAD are built right in. And *Auto-Architect LT for the Home Builder* is loaded with many tools and features for the type of work you do. What's best is that the price is right. Don't hesitate any longer – this is the software you've been waiting for! Call one of the Softdesk Resellers listed below or your local Softdesk Reseller to order today!

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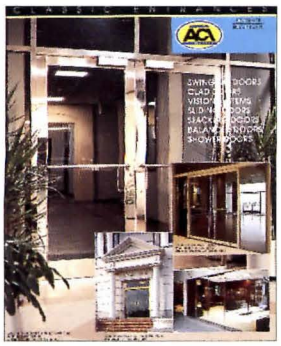
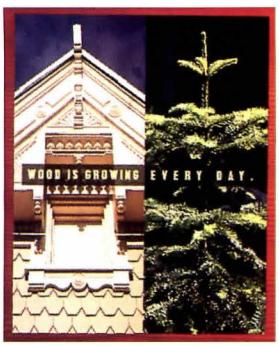
ACI Distribution



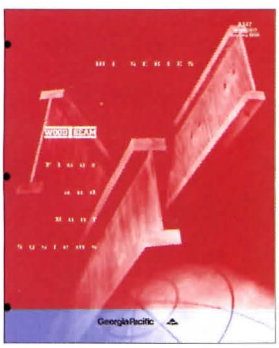
CLASSIC ENTRANCES from ACI Distribution—Include a wide array of interior and exterior glass door styles suitable for all types of retail and commercial applications. Using a number of metals, finishes, and glass tints, these outstanding entrances and full-view vision systems provide designers complete design flexibility without sacrificing strength and security. ACI Distribution also offers a complete line of glass handrails.
Circle 91.

Wood Products Promotion Council



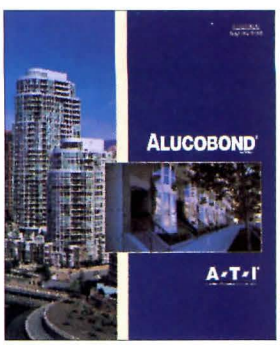
This free, four-page color booklet discusses renewability and environmental issues as they pertain to wood and wood products. It includes forest sustainability figures, quantifiable building material manufacturing comparisons and wood recycling advances. It also reviews the advantages of engineered wood products. A source list is included for further reading.
Circle 95.

Georgia-Pacific



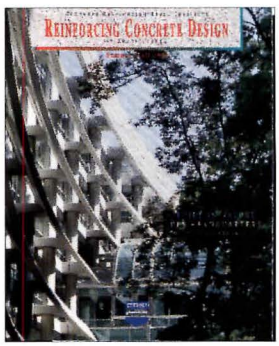
Georgia-Pacific Engineered Lumber—Georgia-Pacific offers brochures detailing three engineered lumber products. G-P Lam® LVL (laminated veneer lumber) beams and headers are specially designed and constructed for stability and high strength. WI Series and GPI Series Wood I Beam® joists, primarily used as a structural component in floor and roof systems, also may provide support as window, door and garage door headers.
Circle 99.

Alucobond Technologies, Inc.



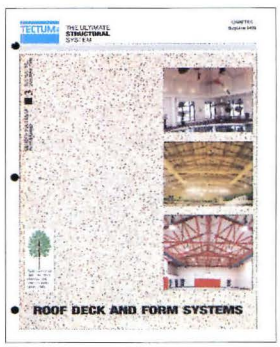
NEW ALUCOBOND™ MATERIAL CATALOG AVAILABLE—This new 12-page, full-color catalog illustrates recent applications in a wide range of new and retrofit applications plus provides complete general and technical information for Alucobond® Material and Alucobond 21® Material. A current color chart is also included plus a description of attachment methods.
Circle 103.

CRSI



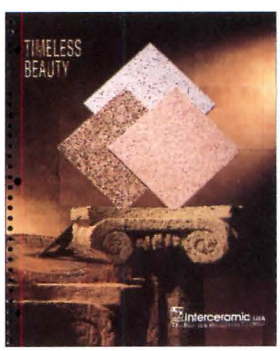
CRSI Reinforcing Concrete Design in Architecture—First issue of new series on prominent structures recently constructed. Focusing on the UPS Corporate offices in Atlanta are initial design, design details and technology used in this cast-in-place reinforced concrete structure. 6-page, 4-color brochure includes photographs and technical drawings. Available free from CRSI. Phone 708-517-1200, FAX 708-517-1206.
Circle 93.

Tectum Inc.



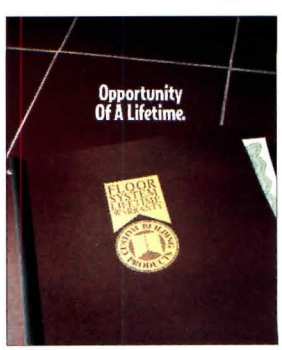
Acoustical Roof Deck Systems—Tectum Inc. has published a new brochure of specifications for its line of Roof Deck and Form Systems. This brochure reflects Tectum's environmentally friendly roof deck product line, technical support data, specifications, options, installation steps, sound absorption levels and fire endurance testing. Since 1949, Tectum Inc. has manufactured acoustical roof and interior products at their headquarters in Newark, Ohio.
Circle 97.

Interceramic, USA



With Interceramic's Maxima series, the possibilities are endless. With four colors, coordinating trim and a Group V rating, Maxima is an ideal tile for any residential or commercial application. Extreme durability, skid inhibiting features, decorative inserts and a 20-Year limited warranty against wear makes Maxima the perfect choice. Add life to your design with one of five rich Maxima Accent colors in 8x8 or 12x12 sizes or use Maxima Accents alone. The design potential is limited only by your imagination. Call 1-800-496-TILE.
Circle 101.

Custom Building Products



Lifetime Warranties for Tile Installation Systems—Custom Building Products offers two 4-pg. color brochures describing its exclusive Lifetime Warranties for wood subfloor and bathtub surround tile installation systems. The brochures include framing requirements, warranty system requirements, and certification instructions for this unprecedented level of protection provided by Custom tile installation products. Questions? Contact Custom Building products at (800) 272-8786.
Circle 105.

OPERA

New classic form in harmony with indirect lighting.

Compact fluorescent lamps, unique rebound reflector system, cool/quiet electronic ballast orchestrated within a low profile. The result, superior optical performance and wide light distribution, is especially ideal for low-ceiling applications.

The union of elegance and function, now appearing in the Opera Series. Call for your free ticket.

SPI Lighting Inc.
10400 North Enterprise Dr.
Mequon, WI 53092

414 242 1420
414 242 6414 FAX

SPI

Circle 233 on information card

Style-Mark, Inc.

Incorporate Moulded Architectural Accents into Interior and Exterior Designs—Style-Mark's registered **Product Specification Manual** has everything you need to incorporate our polyurethane millwork into your interior and exterior designs. Our four-color catalog features photos and drawings of over 1000 designs cross-referenced to our Technical Catalog. The manual also has custom ordering information, architectural specifications, price list, and order form for our new CAD/DXF Library.
Circle 107.

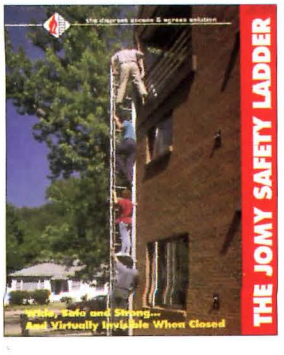
Advance Lifts, Inc.

Advance Lifts introduces its new Safety-Dok Model 2400—a vertical rising platform that transfers loads on a level plane and fits into existing 6' x 8' dock leveler pits to provide a ramp free safety zone on a loading dock and eliminates the potentially dangerous ramping conditions of a dock leveler or ramp. To protect personnel, a Safety-Dok is used whenever loads are moved via non-powered material handling equipment. It carries a 5 year structural warranty and has an oven baked enamel paint finish to insure long life.
Circle 111.

Landscape Forms, Inc.

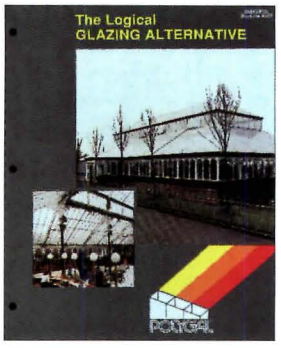
Durable, Colorful Aluminum Umbrellas—Solstice™ from Landscape Forms, provides a spot of shade, a splash of color. Engineered for durability, Solstice features aluminum panels, struts and frame - no steel to rust, no fabric to deteriorate. May be left up year 'round. Coordinates with our durable, exterior tables. Finishing is Pangard II polyester powdercoat; wide range of colors. Choose from solid or perforated panels. Call 800/430-6201 for brochure.
Circle 115.

Jomy Safety Ladder



The Discreet Access & Egress Solution—Security requirements, space constraints, and aesthetic considerations are a few of the problem-solving applications for the JOMY Safety Ladder. The ladder's discrete appearance makes it an ideal solution for access and egress requirements. The JOMY Safety Ladder looks like a drainpipe when closed, but opens to a heavy-duty ladder with slip-resistant rungs and a **safety rail.** JOMY Safety Ladder Co., 1728 16th St., Ste 201, Boulder, CO 80302, 800-255-2591.
Circle 119.

Polygal

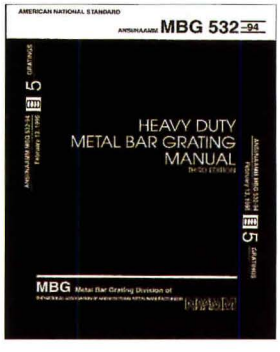


POLYGAL® solar grade polycarbonate structured sheet materials for indoor and outdoor glazing applications are available in a variety of standard and custom thicknesses and colors. POLYGAL sheets can be cut, drilled, arched and fastened with ordinary tools. Because POLYGAL materials offer 200 times the impact strength of glass at 1/6th the weight, supporting structures can be lighter and spans can be longer, saving both labor and material costs. Non-prorated 10 year limited warranty for most applications.
Circle 109.

Versico Incorporated

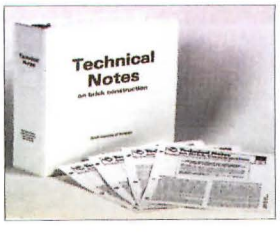
Versiweld™ Premier single-ply roofing is an advanced technology thermoplastic membrane made from inert polymers. The Versiweld® Premier sheet is heat-weldable and features a tough polyester scrim to increase puncture resistance. Roofing warranties are available for commercial installations of Versiweld roofing. Versiweld brochure by Versico Incorporated.
Circle 113.

NAAMM



Heavy Duty Bar Grating Manual Revised by NAAMM—Heavy Duty Metal Bar Grating Manual, Third Edition, 1994, ANSI/NAAMM MBG 532-94. Includes current technical data on heavy duty bar gratings of structural carbon and stainless steel. The load tables are based on the design formulas and procedures found in MGB 534, Metal Bar Grating Engineering Design Manual. The manual includes metric equivalents using the modern metric system from ASTM E380.
Circle 117.

Brick Institute of America



Technical Notes on Brick Construction is a series of publications that contain design, detailing and construction information based on the latest technical developments in brick masonry. Illustrated with drawings, photographs, tables and charts, nearly every aspect of brick masonry is covered. Purchases of a complete set will automatically receive updates and new Technical Notes as they are published. Cost: $75.00 including Binder less 20% professional courtesy discount. Publication #TN 100. Brick Institute of America, 11490 Commerce Park Dr, Reston, VA 22091-1525 (703) 620-0010, Fax (703) 620-3928.
Circle 121.

To Design The Perfect Glass Colors, Our Engineers Didn't Go To The Lab. They Went On Vacation.

Admittedly, it's a strange place to design glass colors. But not when that glass is Azurlite® from PPG. Because no other glass can match the beautiful Mediterranean-blue color of Azurlite. And when combined with one of four exciting coatings, you'll understand why the gulf between us and the competition is ever widening. Our Solarcool® coating lends Azurlite a distinctive deep-sea green color. While Stainless adds reflectivity to a deeper blue tint. Antique cuts down on reflectivity, while creating an even richer ocean blue-green hue. And Titanium reduces reflectivity even further to heighten a blue color so deep, you can almost dive right in. Solarcool coating is available directly from PPG, while Stainless, Antique and Titanium applications are available from your fabricator. Like Azurlite itself, coated Azurlite offers superior energy efficiency, especially when used in an insulating unit with Sungate® coated low-E glass as the inner light. And, of course, both Azurlite and coated Azurlite keep structures cool and well lit on the inside. And strikingly beautiful on the outside. So if you're looking for the right glass color, turn to Azurlite from PPG. Because with new colors like these, you're guaranteed to make a splash on any skyline. Call 1-800-2-GET-PPG for more information.

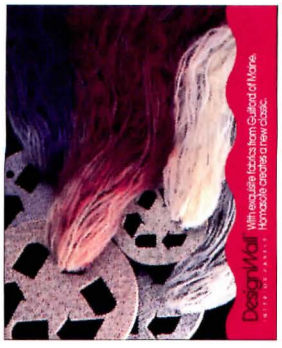
PPG

Azurlite, Solarcool and Sungate are registered trademarks of PPG Industries, Inc.

AZURLITE
Glass by PPG Industries

Circle 235 on information card

Homasote Company

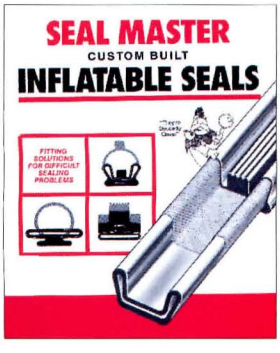


DesignWall™ Interior Panels—DesignWall Interior Panels, made from recycled post-consumer wastepaper, are composed of Guilford of Maine FR 701® fabric laminated to N.C.F.R. Homasote. These Class "A" flame spread rated tackable panels are ideal for residential and commercial applications. Available in four designer colors. Homasote Company, P.O. Box 7240, West Trenton, NJ 08628-0240.
Circle 123.

American Olean Tile

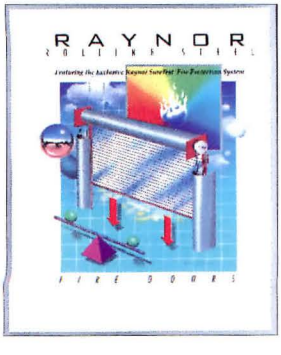
Contract Colorways Diskette Selects American Olean Tiles, Other Surfaces For Color Coordinated Projects—Specifiers can select colors for commercial spaces in minutes with the American Olean Contract Color-ways™ system. Diskette includes American Olean wall tile, floor tile and grout colors, plus laminate, toilet partition, solid surfacing and plumbing fixtures colors. A Printout of colors from 13 manufacturers targets colorways for projects. PC (Windows™) and Macintosh versions. Free.
Circle 127.

Seal Master Corporation



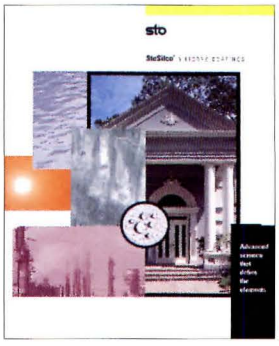
SEAL MASTER INFLATABLE SEALS—New six-page brochure shows typical inflatable seal construction, configurations, retaining systems and air connections. Custom designed seals offer solutions where gaps exist in sealing weather, liquid, noise, hot/cold, light/dark, pressure, EMI, RFI, radiation, contaminants, dust, pastes, pellets and powders. Inflatable seals are used virtually anywhere a positive seal is needed between two opposing surfaces. Design assistance available. Seal Master Corp., 368 Martinel Dr, Kent, OH 44240, (216) 673-8410, Fax (216) 673-8242.
Circle 131.

Raynor Garage Doors



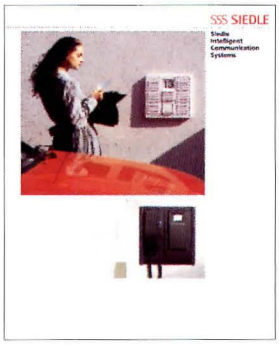
New SureTest Fire Door—"The most significant advance in rolling fire-door technology in decades" has just been introduced by Raynor Garage Doors. The simple design of the new SureTest Fire Protection System actually encourages frequent drop-testing. The door is tested in seconds and requires no special tools or costly service calls. For literature and a free video about the SureTest System, call 1-800-4-RAYNOR.
Circle 135.

Sto Corporation



Sto's technologically-advanced, silicone-enhanced coatings are engineered to protect a building from common environmental hazards, such as humidity, water, air pollution, and sun exposure. StoSilco coatings are water repellent, vapor permeable, non-thermoplastic, and UV resistant. They stay cleaner and drier, reducing surface degradation and the need for constant maintenance.
Circle 125.

Siedle

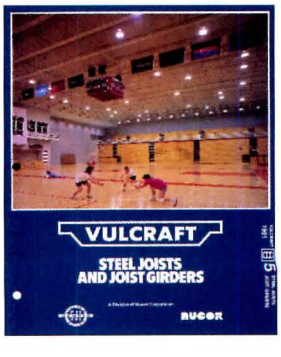


Siedle Intelligent Communication Systems—Featuring Siedle Vario® Intercom Lobby Units—Video Security for apartments, residences and offices . . . Easikey, the Intelligent Key-Letterbox System—and the System telephone HT 611-01—the fastest way to the house door and around the house, complete with watchdog, doorman and nameplate. For full catalog, set up information and architecture specs, call toll free 800-874-3353 or 610-353-9595.
Circle 129.

Designplan Lighting, Inc.

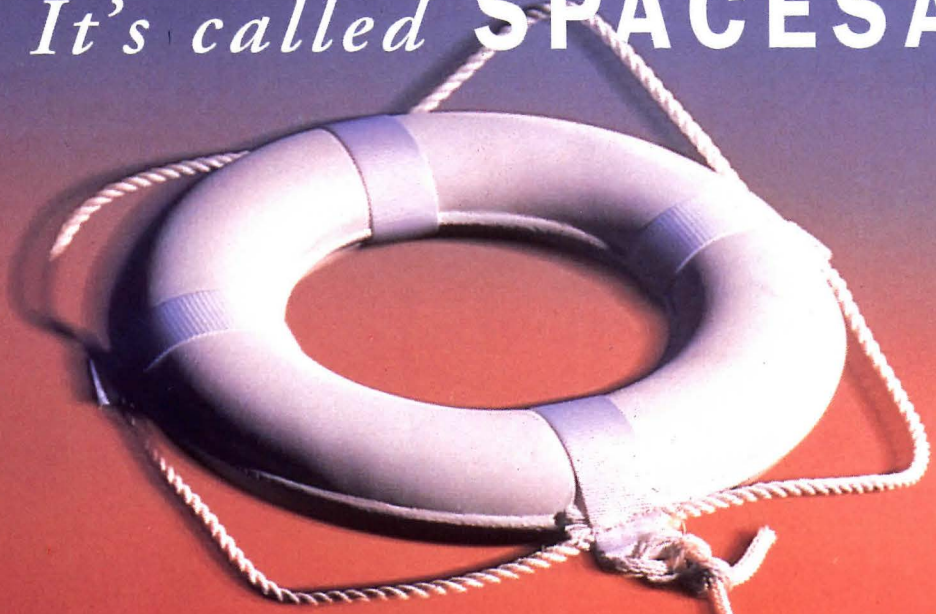
New Quadrant Series. Vandal resistant compact luminaires. All steel pure zinc coated, prime and finished in powder polyester finish. Lenses UV stabilized polycarbonate. Electrical components mounted on removable tray for quick disconnect. High power factor ballasts - most electronic. Most fluorescents with starting temperatures as low as 23 F. UL listed wet label for walls and ceilings. Introducing also new Quadrant HiD in 50 W.HPS. Designplan Lighting, 13 Front St, P.O. Box 129, Frenchtown, NJ 08825 (908) 996-7710, Fax (908) 996-7042.
Circle 133.

Vulcraft



STEEL JOISTS AND JOIST GIRDERS. This 94-page design manual provides indepth information for the optimum use of steel joists and joist girders. As the largest producer in the United States, Vulcraft has the most experience and expertise in the application, design and manufacture of these products. The economies of steel joists and joist girders contribute to their increasing utilization.
Circle 137.

It's called SPACESAVER.



But it could be called

MONEY *saver,*

TIME *saver, or*

PERSONNEL *saver.*

Most of all it's an office manager's LIFESAVER.

In the rough seas of running an office these days – time, space and key personnel are at risk. Their loss affects efficiency, productivity and organization – and ultimately threatens your bottom line.

Preserving these resources is critical to success. Though none of this is news to you, how a storage system can help probably is. Not any storage system, but Spacesaver. Mobile shelving with a unique design and precision engineering that can give you 100% more storage capacity without using one foot of additional space. Give Spacesaver a call. Let us help rescue your company's resources. 1-800-492-3434.

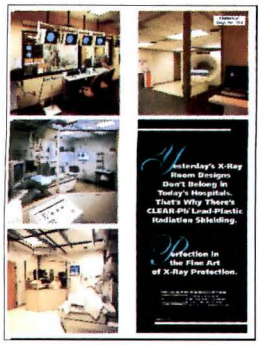
For more information on Spacesaver, circle these Reader Service Card numbers:

Spacesaver Systems for...

- *General Office 3*
- *Legal 5*
- *Financial 7*
- *Health Care 9*
- *Education 11*
- *Government 13*

SPACESAVER
High density mobile storage systems.

Nuclear Associates



Free X-Ray Shielding Brochure—New full-color brochure showcasing user-designed CLEAR-Pb® Lead-Plastic Radiation Shielding Modular Barrier Control Booths and Windows. CLEAR-Pb® Lead-Plastic is a unique, lead-impregnated transparent plastic that is rugged and shatter-resistant. Window Panels are available in over 200 stock sizes up to 6' x 8', with lead equivalencies from 0.3 to 2.0mm. The design possibilities are endless! Before specifying any radiation shielding product, get the facts on the #1 choice in radiation shielding, CLEAR-Pb®.
Circle 139.

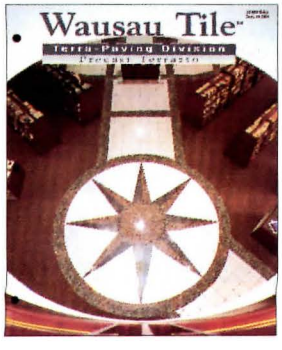
Nixalite of America, Inc.

BIRD AND CLIMBING ANIMAL CONTROL. Nixalite of America Inc. manufactures a stainless steel barrier providing long lasting and effective control for pest birds and climbing animals. Nixalite blends with the surrounding architecture and does not detract from structural design. Nixalite's brochure provides information and lists model specifications, estimating procedures, mounting systems, accessories and special services. 800/624-1189 or fax 800/624-1196.
Circle 143.

Pemko Manufacturing Co.

Thresholds/Weatherstripping/Continuous Hinges—Pemko's 1995 full-line catalog illustrates many fire labeled, smoke labeled, barrier-free access, sound tested, and custom fabricated threshold and weatherstripping products. New products include: patented ADA compliant ramp thresholds, PemkoHinge™-patented continuous geared aluminum hinges, low-closing-force reversible automatic door bottoms, nylon brush weatherstripping, and locking astragals.
Circle 147.

Wausau Tile

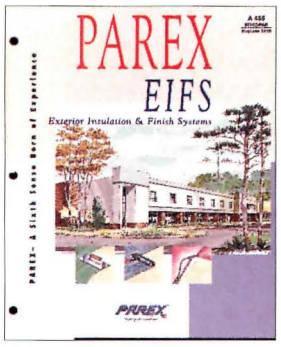


About Wausau Tile—Wausau Tile, Inc. manufactures concrete pavers, precast terrazzo flooring, site furnishings, recreation equipment and precast architectural specialties, including screen printed and cast-in concrete signage. Wausau Tile combines the skills of its more than 200 employees to manage projects from start to finish: product design, process engineering, pattern building, mold making, manufacturing, technical service and shipping.
Circle 151.

Case Window and Door

Case Window and Door combines German durability and engineering with US architectural millwork finishes to manufacture windows, doors, window walls, and rolling glass walls for luxury residential and commercial projects. Wood products are custom made with any appropriate wood species. Metal-clad options are available. Hardware accessories are virtually unlimited. **1-800-227-3957.** 301 Green St, Schenectady, NY 12305.
Circle 141.

Parex, Inc.



Versatile? Customized? Durable? Cost Effective? If you seek any combination of these for your next exterior cladding project, make it a point to explore the array of Parex Exterior Insulation and Finish Systems. Whether residential or commercial, new or a retrofit, this brochure will walk you through EIFS, system by system, to insure the right choice. Get answers to your technical questions by calling 1-800-LEPAREX (537-2739).
Circle 145.

Sternberg Vintage Lighting

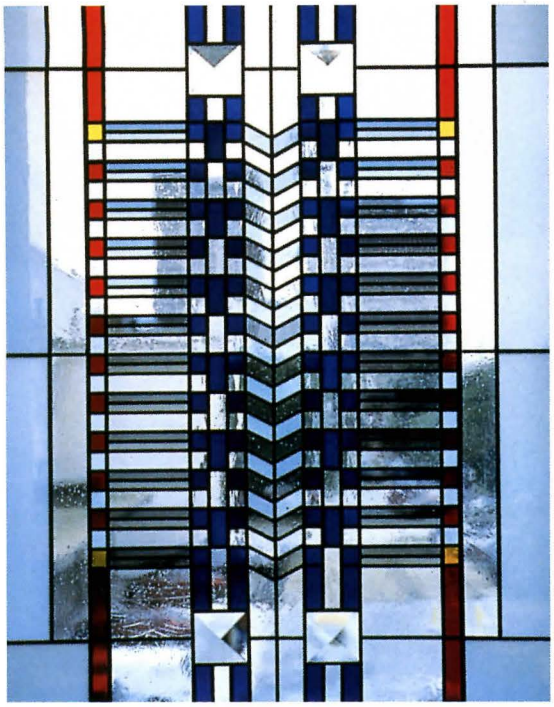
NEW LARGE SCALE ORNAMENTAL POLE—Sternberg Vintage Lighting introduces a new, large scale pole for use on city streets, in parking lots, parks and other commercial installations. This informational sheet and several others showing new products will be sent with a 64-page full color catalog to specifiers requesting information.
Circle 149.

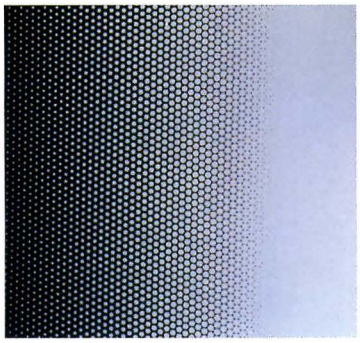
ARCHITECTURE LITERATURE PORTFOLIO UPCOMING ISSUES

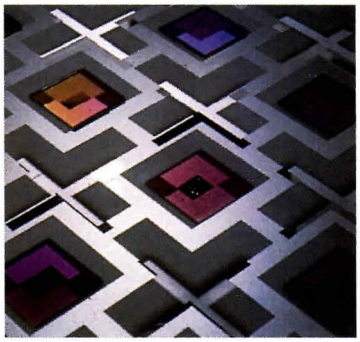
ISSUE DATES	CLOSING DATES
January 1996	November 24, 1995
April 1996	February 23, 1996
July 1996	May 24, 1996
October 1996	August 23, 1996

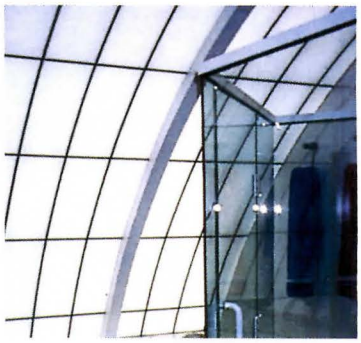
Products

Architectural glass incorporates insulative, fire-resistant, and decorative properties.









TOP: Arthur Stern, a stained-glass artist based in Benicia, California, creates architectural glass for religious, residential, and government buildings around the United States. Stern recently designed two windows and a bas-relief sculpture for the new R.B. Long Federal Courthouse in Baton Rouge, Louisiana (pictured). In addition to his original work, Stern has restored windows at houses designed by Frank Lloyd Wright, including the Martin and Storrer houses, and considers Wright an important influence on his work. Stern attributes the inspiration for his abstract designs to their architectural settings.
Circle 401 on information card.

ABOVE: Cesar Color's ChromaFusion Architectural Glass series features a patterned interlayer sandwiched between two panels of float glass. Gradation Dot (pictured), designed as a visual transition between opaque and transparent glass, is the most recent pattern to be added to the series. The progression from translucent or opaque to clear is created by an imprinted pattern of dots with diameters that decrease gradually across the panel, until the dots seem to disappear entirely.
Circle 402 on information card.

TOP RIGHT: Pyrostop, a transparent, fire-resistant wall panel that has been available in Europe for more than 15 years, will be distributed in North America by Technical Glass Products. It is made of laminated glass layers and can be applied to doors, walls, and transoms. Designed to create a barrier against heat and sound as well as fire, Pyrostop is available in thicknesses ranging from $^{3}/_{8}$ inch to $2^{1}/_{8}$ inches, with fire ratings from 20 minutes to 2 hours.
Circle 403 on information card.

ABOVE: Inner-Lite, a decorative glazing technique patented by Architectural Glass Design, incorporates decorative elements such as beveled, etched, or textured glass into an insulated glass panel. Until recently, the Inner-Lite technique was applied only to custom installations. The company now offers Preferred Patterns, a line of selected geometric and organic motifs that make it easier for architects and designers to incorporate Inner-Lite products into their work. Preferred Patterns glass can be sized to meet client specifications and adapted for a variety of interior and exterior uses.
Circle 404 on information card.

ABOVE: A Kalwall roof system shapes the curving, barrel-vaulted studio of a beach house in Newport, California (pictured), designed by architect Ron Yeo. In addition to diffusing natural light in order to reduce glare and shadows, Kalwall panels filter ultraviolet rays. Made of fiberglass bonded to a grid of aluminum extrusions, the panels are available in various densities of translucent insulation and can be specified flat or curved. Kalwall panels are typically installed as skylights, windows, and curtain walls.
Circle 405 on information card.

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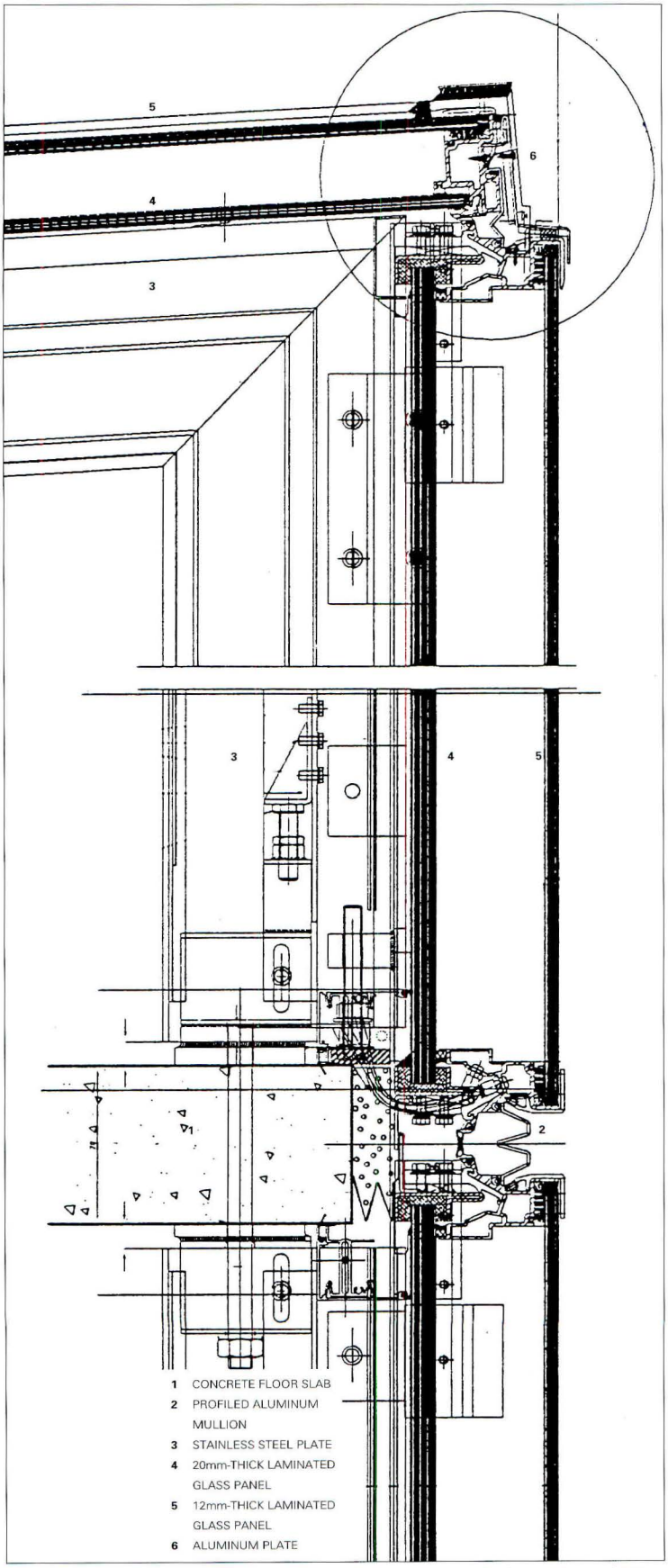
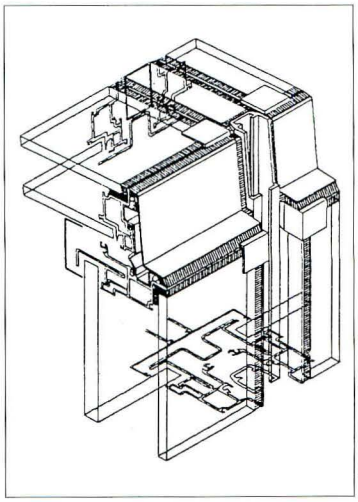
Details

Laminated curtain walls clad the gargantuan glass blocks of France's National Library.



SECTION THROUGH TOP FLOOR OF TOWER



National Library of France
Paris, France
Dominique Perrault, Architect

Parisian architect Dominique Perrault sheathed the four L-shaped towers of the new National Library of France (pages 66-71) entirely in glass. The exterior curtain walls of the ethereal glazed towers are composed of a layer of 12-millimeter-thick laminated glass and a layer of 20-millimeter-thick laminated glass, separated by a 9-centimeter-wide airspace. The roughly 4-by-2-meter panels are held in place by anodized aluminum mullions bolted to the library's concrete structural floor slabs.

Behind the vertical mullions of the curtain wall, Perrault inserted 18-centimeter-wide stainless steel plates. The plates extend floor-to-ceiling and are bolted to the concrete slabs. They provide bracing for the glazed curtain wall panels, which are clipped to the plates with stainless steel bolts, and support adjustable 3-by-1-meter wooden louvers that shade the library interiors.

At the top floor of each tower, horizontal stainless steel plates welded to the vertical members support a laminated glass roof assembly similar to that of the exterior curtain walls. An anodized aluminum frame with extruded silicone joints holds the 1-by-2-meter insulated glass panels in place. The panels are bolted to concrete columns located 2 meters behind the glazed facades.

At the exterior edge of each tower, the panels are supported by anodized aluminum plates (above). At the inside edge, the panels, sloped 6 percent for proper drainage, are fitted with stainless steel coping.—*Raul A. Barreneche*

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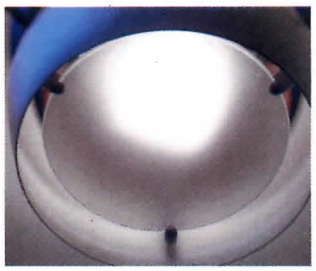

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