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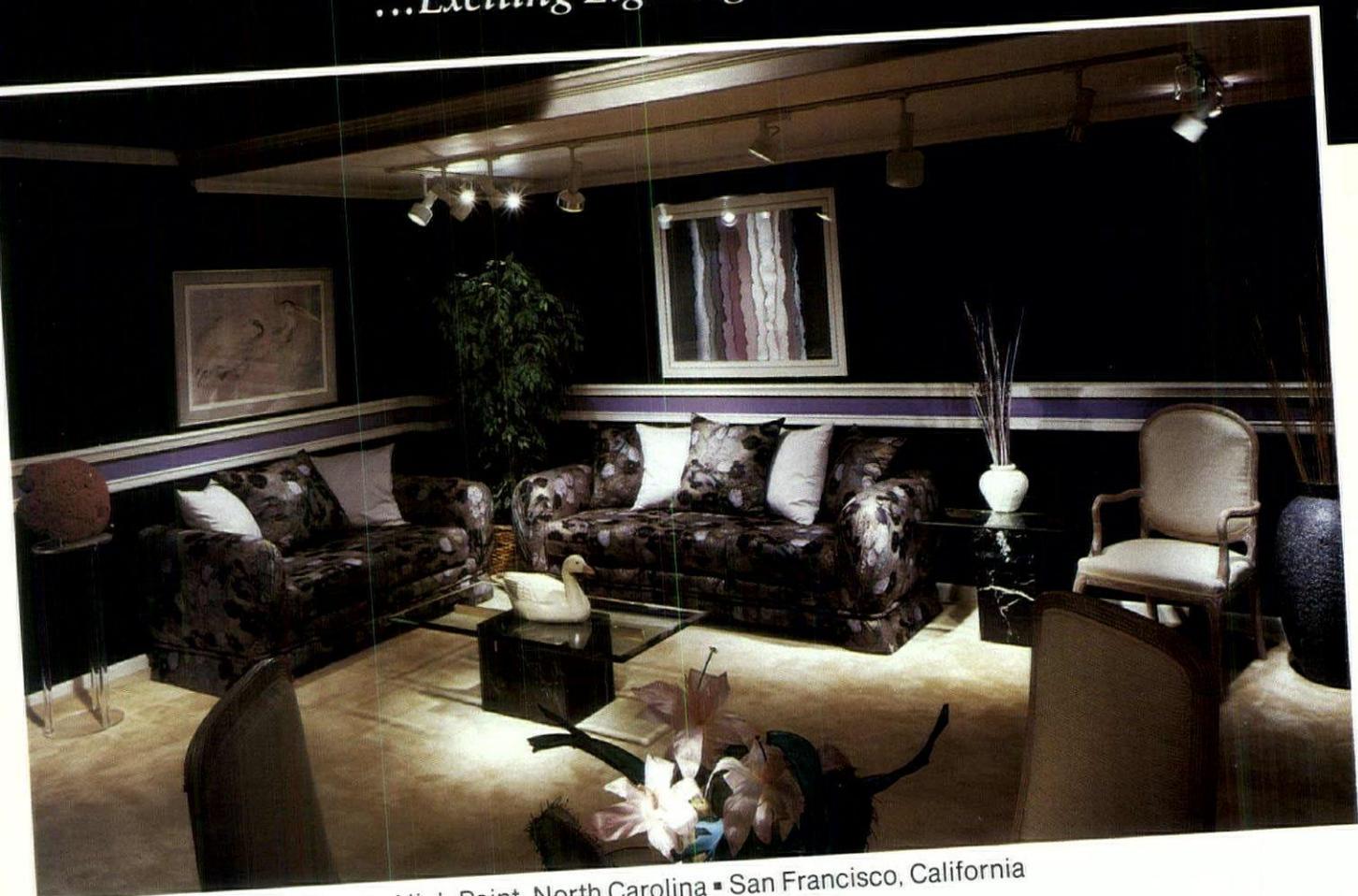
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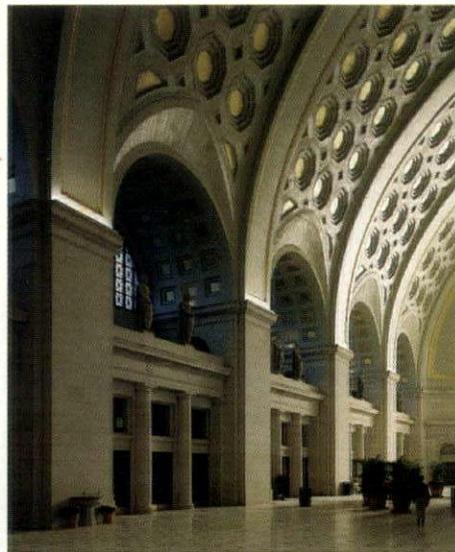
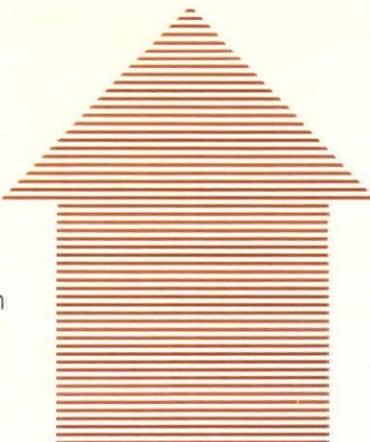
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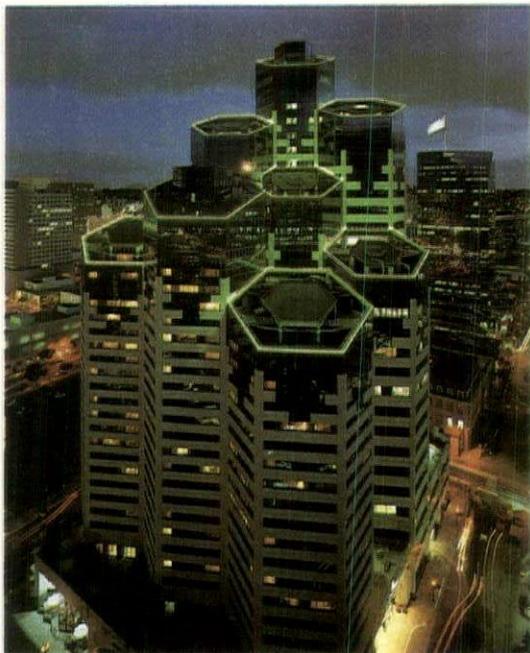
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LIGHTING

AUGUST 1991
VOLUME 5, NUMBER 8



COVER PHOTO BY STEPHEN WHALEN

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ARCHITECTURAL LIGHTING (ISSN 0894-0436) is published monthly by Gralla Publications, a division of Miller Freeman Inc., and a member of United Newspapers Group, 1515 Broadway, New York, NY 10036. Phone (212) 869-1300. Subscriptions: U.S. and possessions—1 year (12 issues) \$36. Canadian—1 year \$45. Other foreign—1 year \$125. Single copy price: U.S.—\$6 plus postage; outside the U.S.—\$8 plus postage. **Prepayment required for single copy orders.** Address all single copy requests along with payment to ARCHITECTURAL LIGHTING, 1515 Broadway, Suite 3201, New York, NY 10036. **CUSTOMER SERVICE INQUIRIES** call (609) 461-3838 weekdays from 9 a.m. to 5 p.m. (EST) or write to ARCHITECTURAL LIGHTING, PO Box 7611, Riverton, NJ 08077-7611. Allow 4 to 6 weeks for change of address; provide old mailing label and new address, including ZIP or postal code. **POSTMASTER:** Send address changes to ARCHITECTURAL LIGHTING, PO Box 7611, Riverton, NJ 08077-9111. Second class postage paid at New York, New York and additional mailing offices. Copyright 1991 Gralla Publications. All rights reserved.

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COMPACT FLUORESCENTS COME INTO THEIR OWN

I was talking to lighting designer David Apfel the other day (his work will be featured in the September issue) and he made an interesting observation. A decade ago, when industry mavens were predicting which light sources would most likely blossom in the future, the great hope was for metal halide and high-pressure sodium (HPS). Enormous improvements in those light sources have been made—particularly in the color rendering of HPS, and the downsizing of metal halide.

But the surprise in the race came with the dark horse fluorescent. I can even remember experts believing that fluorescent had run its course with nowhere else to go. But here it is today in a hundred different shapes, sizes, and colors, slowly easing its way into formerly incandescent-only sockets.

Compact fluorescents are even becoming respectable enough to look at “naked”—in the open, unconcealed by louvers and lenses. Architect Dhiru Thadani not only had compact fluorescents installed in a retail space included in this issue, but has them glowing proudly in his own office (left).

“Our office is located in an historic building. The facade is a literal copy of Palazzo Da Porta-Festa, 1647-52 by Andrea Palladio in Vicenza, Italy,”

Thadani says. “The space we occupy is 26 feet x 21 feet. We conceptually subdivided each dimension into three, resulting in nine equal areas (or a nine square composition).

“At the intersections of the grid we built four, 7-foot high towers/bookshelves with extended ‘shoulder pads.’ On each shoulder pad we installed a porcelain/compact fluorescent lamp with a wire mesh colander that screens the transformer. The towers/bookshelves have an anthropomorphic quality and we named them after the great master architects of the 20th century: Corbusier, Wright, Mies and Aalto,” Thadani says.

“The ceiling is made of exposed dark-stained wood beams and planks,” Thadani notes. “The eight compact fluorescents help light the ceiling plane, as well as provide adequate ambient light for the office. Workstations use incandescent or halogen task lighting.

What’s lacking, according to Apfel, and probably is on the drawing board right now of many a manufacturer, is a greater variety of fixtures designed specifically for the compact fluorescent. Going fast are the days when compact fluorescent will be thought of only as a replacement for existing incandescent. Already here are the days when compact fluorescent is used as a legitimate light source in its own right.



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ON THE RIGHT TRACK

BY CHRISTINA LAMB
ASSOCIATE EDITOR



CHALLENGE Despite the number of dog race tracks constructed in recent years, no lighting guidelines for this type of application could be found by Lee Montgomery, principal of Leem, Inc., who searched for such information in order to light the Corpus Christi Greyhound Race Track. This was the designer's first dog track, and as he discovered, design principles applicable to horse tracks are commonly used, but the results are often unfavorable. "Greyhound tracks need more intense light so the spectators, and cameras, can distinguish details; the animals, and the numbers they wear, are smaller," Montgomery says.

DESIGN TECHNICAL CONSIDERATIONS High footcandle levels were required for spectators to clearly see the event, and for the race dogs to chase the target, or lure. Yet, at the same time, the lights could not be so bright as to blind the dogs. "They're looking up," says Montgomery, "as opposed to a horse that's looking down or straight ahead. So they can easily be distracted by lights, and there's no jockey to control them." Consulting architect Jim Bird of Bird, Fujimoto and Fish requested a minimum of 100 footcandles all around the track, building to 200 footcandles on the front stretch to ensure adequate light for video cameras taping the races.

METHOD The architecture dictated relatively low mounting heights for the 156, 1,500-watt metal halide fixtures. "The building has such a nice profile, we didn't want to take away from the lines of the structure," Montgomery says. Fifty-two fixtures are mounted along the roof of the one-story clubhouse, on one- or two-row light racks with the front row of lights mounted just over the parapet of the building.

The remaining fixtures are distributed among 11 50-foot-tall poles forming a half-circle around the track. Using taller poles allowed the designer to use a fewer number of them. "The old philosophy was to have 10-foot poles around the track," says Montgomery. "To light it properly, there would be one every 20 feet, so it'd look like a picket fence. A row of lights on a lot of short poles all the way around a track interferes with the spectators' observation of the race. A reduced number of taller poles clears the field of view."

The light sources face away from the clubhouse. While this increases spectator enjoyment, the lights could have presented a hazard to drivers on an adjacent, major roadway. Lee selected fixtures with complex glare control capabilities, so that although the facility is clearly visible from the highway, the light is cut off at the edge of the track, making it unobtrusive. Four quartz lamps were installed for emergency power.

To conserve energy, a bi-level switching feature is used. Prior to the start of a race, between races, and at other times when high footcandle levels aren't needed, the metal halides operate at low power. Right before the race begins, the lights are switched to full-power, adding drama and focusing all attention to the track. This feature also allows track operators to maintain consistent levels of illumination inside the clubhouse. Here, at Corpus Christi, rather than turning down the clubhouse lights at the start of the race, the track lamps are turned up so that those inside can still read their race cards.

CONCLUSION This project was a first place winner in the South Texas IES lighting design competition, and will be entered in the regional IES awards competition in 1992.



ROUNDING THE BEND: Metal halide fixtures, mounted on tall poles, form a semi-circle around the Corpus Christi Greyhound Race Track, and remain unobtrusive to spectator viewing.

DETAILS

PROJECT: CORPUS CHRISTI GREYHOUND RACE TRACK

LOCATION: CORPUS CHRISTI, TX

OWNER: CORPUS CHRISTI GREYHOUND ASSOCIATION; JACK TRIPLETT, track manager

LIGHTING DESIGNER: LEE MONTGOMERY, LEEM, INC.

ARCHITECT: BIRD, FUJIMOTO & FISH: Jim Bird, AIA, consulting architect; Turner & Sosa, AIA, project architect

PHOTOGRAPHER: SAMMY GOLD

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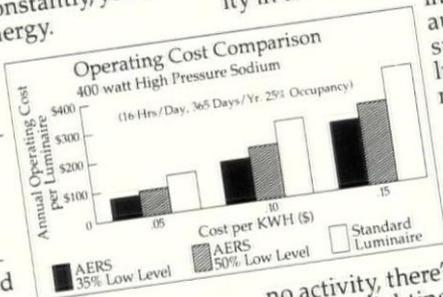
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Atlantis Sculpture Unveiled at 191 Peachtree

The lobby of the new 50-story One Ninety One Peachtree Tower in downtown Atlanta is distinguished by a massive 54-foot-high x 80-foot-wide wall sculpture which was designed by luminous glass and metal sculptor Ray King.

The Atlantis sculpture is a grouping of eccentric hand-built pieces of bronze and glass illuminated from within by neon lighting.

"The setting, together with the shapes and arrangement of the forms, and the play of light on the bronze and glass, give the piece a quality that is magical and almost aquatic," King says. "This is what led me to title the piece Atlantis."

King worked on Atlantis for approximately one year. Like many of his large-scale commissioned works for specific sites, he was concerned with the integration of art and architecture. Hence, he designed a wall-mounted piece that responds to the line, shape, and texture of its architectural and geographic environment.

The 1.2 million-square-foot One Ninety One Peachtree Tower opened in December 1990 and was designed by John Burgee Architects, with Philip Johnson as design consultant.

King's works range from projected-light installations to suspended groupings of color-anodized aluminum and glass forms. He frequently uses metalsheet, which he shapes and insets with glass elements like lenses, prisms, and etched glass slabs. Illumination—neon, fluorescent, incandescent, and natural light—is always a major concern in his work.



THE SCULPTED LOOK: The lobby of One Ninety One Peachtree Tower in Atlanta is embellished with an illuminated glass and bronze sculpture titled the Atlantis.



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Bulgari, Paramount Capture 1991 Lumen Award

The 1991 Lumen Awards were announced and presented at a dinner held in New York on June 24, 1991. Awards of Excellence went to Howard Brandston, Robert Prouse, and Randy Sabedra of H.M. Brandston & Partners for the Bulgari jewelry store; and Paul Marantz, Barry Citrin, and Bill Sherman of Jules Fisher & Paul Marantz Inc., for the Paramount Hotel.

Citations were given to Howard Brandston, the late Gene Stival, Chou Lien, Thomas Thompson, and David Bourgeois of H.M. Brandston & Partners for the Osaka Aquarium; and Carroll Cline of Cline Bettridge Bernstein Lighting Design for Capital Research Company.

The Lumen Awards Program is sponsored by the New York Section of the Illuminating Engineering Society of North America. The program was developed to encourage and publicly recognize excellence, professionalism, ingenuity, and originality in lighting design.

The jury for this year's awards included: Maryann Hay, Syska & Hennessy; Ann Kale, Ann Kale Associates; L. C. Pei, Pei, Cobb, Freed & Partners; Mark Roush, Philips Lighting; Sara Schrage, S. Schrage Lighting Consultants; and Richard Shaver, Edison Price, Inc.

The program committee was chaired by Susan Brady, Horton•Lees Lighting Design, and Sydney Forman, Lighting Dynamics. Committee members: Teal Brogden and Barbara Cianci, Horton•Lees Lighting Design; Arthur Brown, The Lighting Group; Keesler Cronin, International Lights; Patricia Pinckney, Stan Deutsch Associates; and Steven Silverstein, Kurt Versen Company.

ALA Starts Showroom Location Hotline

By dialing 1-800-BRIGHT IDEAS, and then keying in their phone numbers, callers will receive the location of the American Lighting Association (ALA) member showroom nearest them.

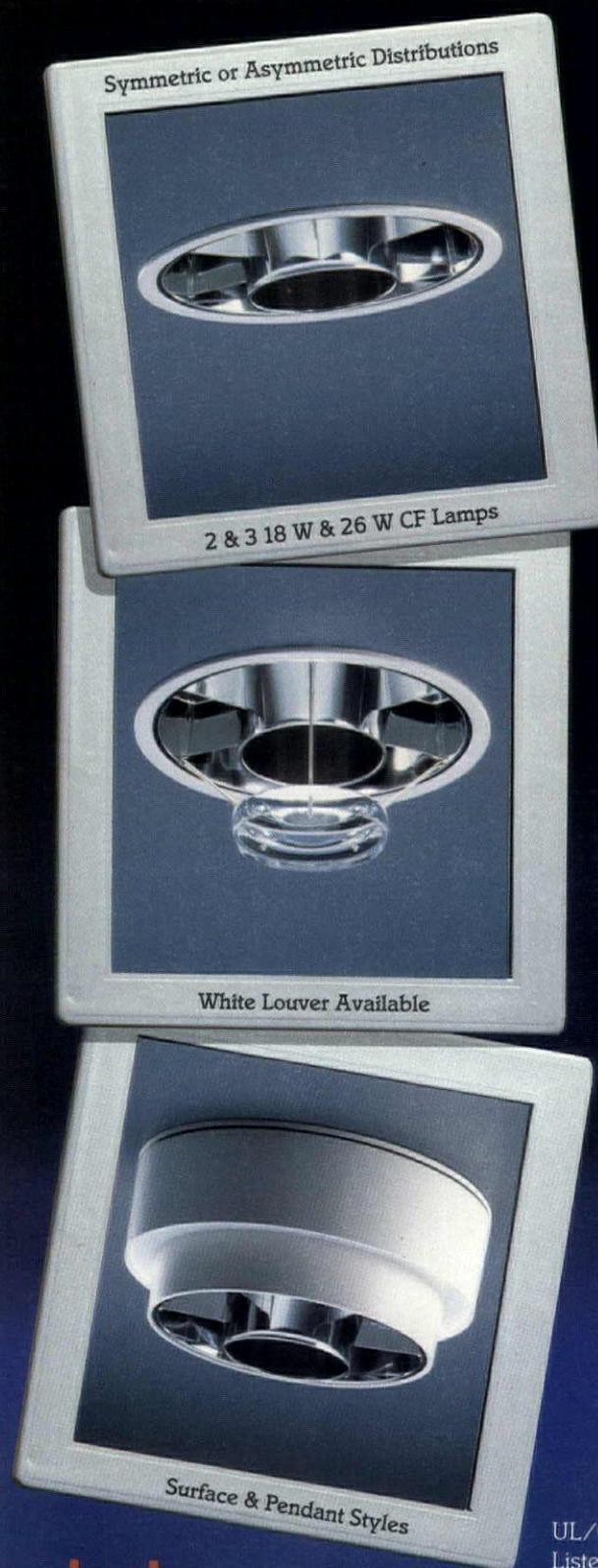
The ALA is a not-for-profit trade organization representing members of the residential and commercial lighting industry in the United States and Canada.

The ALA's current membership consists of 600 showroom dealers, 125 manufacturers, and 100 manufacturer representatives.

Serving as an educational, public relations, and lobbying group for these three segments of the industry, the ALA is aiming to improve the professionalism of lighting sales personnel; upgrade the quality, safety, and energy efficiency of lighting parts; maintain fair legislation and reasonable regulations; and expand the lighting market by stimulating greater consumer demand for lighting products.

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Projects In Progress

The University of Illinois at Urbana-Champaign has retained Perkins & Will, in association with Sasaki Associates, Inc., to provide architectural, engineering, and landscape services for the university's new Temple Hoyne Buell Hall. The 73,000-square-foot academic facility is scheduled for completion in 1993, and will be shared by the School of Architecture and the Departments of Landscape Architecture, and Urban and Regional Planning.

Robert Young Associates, Inc., is providing the planning and design services for Neiman Marcus' new stores in Troy, MI, and Scottsdale, AZ; and for the remodeling of Woodward & Lothrop in Chevy Chase, MD.

Lighting Sciences Inc., has been selected as an independent software quality review consultant by the Global Change Division of the U.S. Environmental Protection Agency for the Green

Lights Program. In its capacity as consultant, Lighting Sciences will be in charge of quality assurance for the software. This will include checking the accuracy of the software's logic and calculations. The Green Lights program encourages major U.S. corporations to install energy-efficient lighting technologies.

Boyack Scholarship Presented

Andrea Benassi from the University of Minnesota, is the 1991 recipient of the Lee Boyack Memorial Scholarship. The \$2,500 award was presented to Benassi at the American Society of Interior Designers (ASID) National Conference Student Connection held in Denver in July.

Lezlie Johannessen from the Academy of Art College in San Francisco will receive an expense-paid, week-long training course at Lutron Electronics in Coopersburg, PA.

The Lee Boyack Memorial Scholarship for lighting is given annually to a graduating senior in an accredited interior design program who has presented a creative educational use for the scholarship monies. For more information, contact: Lee Boyack Memorial Scholarship, c/o Design Foundation, Two Henry Adams Street, Suite 301, San Francisco, CA 94103.

Correction

In Architectural Lighting's article "EPA's 'Green Lights' Promises Companies Profits, Publicity," (May 1991), information regarding database listings should have read as follows: The database will present all product information as specifications, and any manufacturer (whether a Green Lights ally or not) whose product meets those specifications will have the opportunity to have its product listed. Architectural Lighting regrets the error.



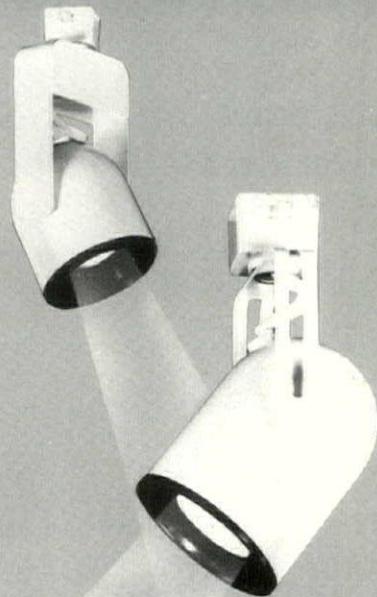
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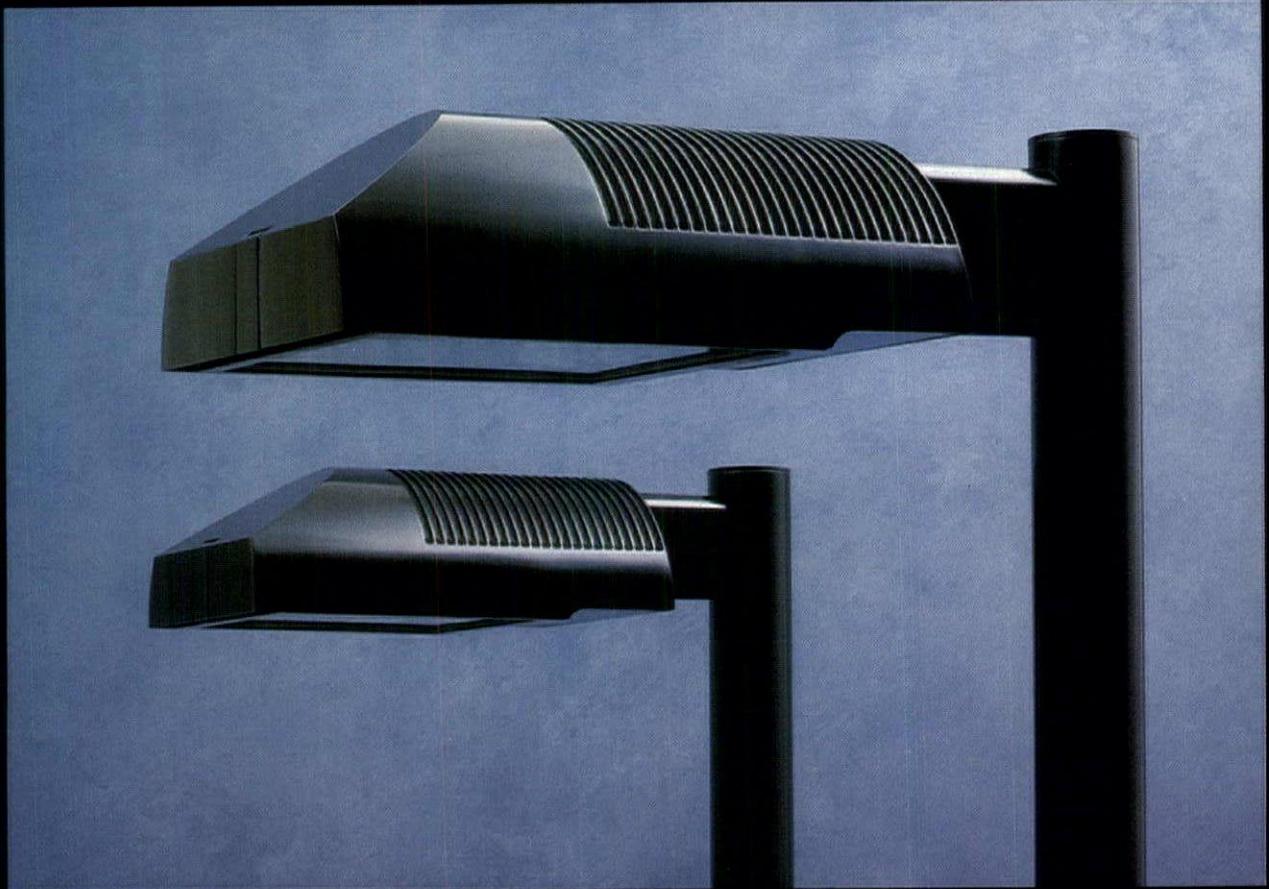
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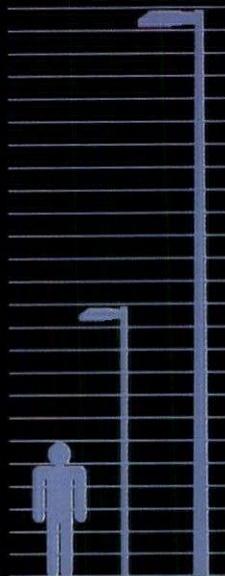
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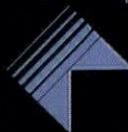
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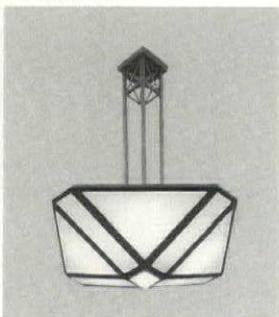
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RESTORED ST. REGIS TO OPEN IN SEPTEMBER

New York's St. Regis Hotel, built in 1904 by John Jacob Astor, will reopen September 10, 1991, after a three-year restoration, which cost more than \$100 million.

"The new St. Regis will rival the grand hotels of Europe," says John Kapioltas, chairman, president, and chief executive officer of ITT Sheraton Corporation, which owns and operates the landmark hotel.

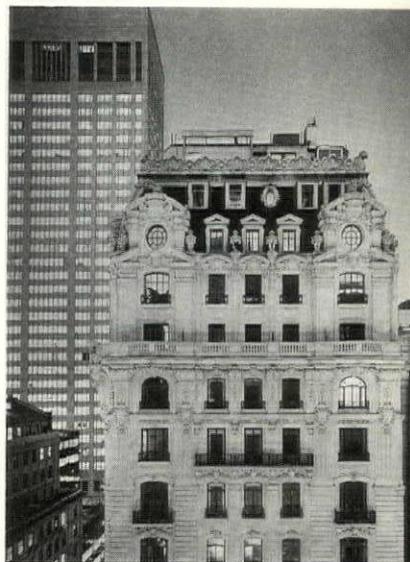
The architect for the renovation is Brennan Beer Gorman/Architects. The interior design is by ITT Sheraton Corporation, Brennan Beer Gorman Monk/Interiors, and Graham Design. Project consultants include: Theo Kondos Associates, lighting; Flack & Kurtz Consulting Engineers, mechanical and electrical; and DeSimone, Chaplin & Dobryn Consulting Engineers, structural.

When it reopens, guests will enjoy the splendor of the original. The fabled King Cole mural, created by Maxfield Parish, is being restored to amuse visitors at the bar; the St. Regis Roof will again be the site of social events; and the warm oak and mahogany paneling and marble fireplaces of the second-floor library and suites will serve as business and social meeting places.

Guest rooms will be oversized, many 30 percent larger than before, with 12-foot ceilings, and Louis XV reproduction furniture. The marble bathrooms will be like those found in grand European hotels, with the majority containing double sinks, deep European-style tubs, and separate shower stalls.

The renovation also included the installation of advanced infrastructural and building systems, including electrical, HVAC, plumbing, security, computer, and fire protection.

When the 20-story hotel was built, it was the tallest hotel in Manhattan. A 20-story east wing was added in 1927. The original architects for the hotel were Trowbridge and Livingston, who also designed the Hayden Planetarium and the B. Altman building. The hotel has been closed for renovation since 1988.



COMING IN DECEMBER

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INTO THE PRESENT

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Lighting Products Rated in New Guide

Lighting decision makers have a new resource at their fingertips—The Guide to Performance Evaluation of Efficient Lighting Products.

Prepared by the Lighting Research Center, a department of Rensselaer Polytechnic Institute, the guide is designed to simplify specification writing for building managers, and lighting program development for utilities. Information is presented for many sources, and readers without a strong lighting background will find technical definitions in the publication's glossary.

The guide is the first publication offered by the National Lighting Product Information Program. The program is co-sponsored by the United States Environmental Protection Agency, the Lighting Research Center, the Lighting Research Institute, the New York State Energy Research and Development Authority, and the Northern States Power Company.

For more information about the guide, call the Lighting Research Center at (518) 276-8716.

Green Lights Adds New Category to Program

Representatives from the U.S. Environmental Protection Agency (EPA) recently announced the formation of the Lighting Management Company Ally category to complement the Green Lights program.

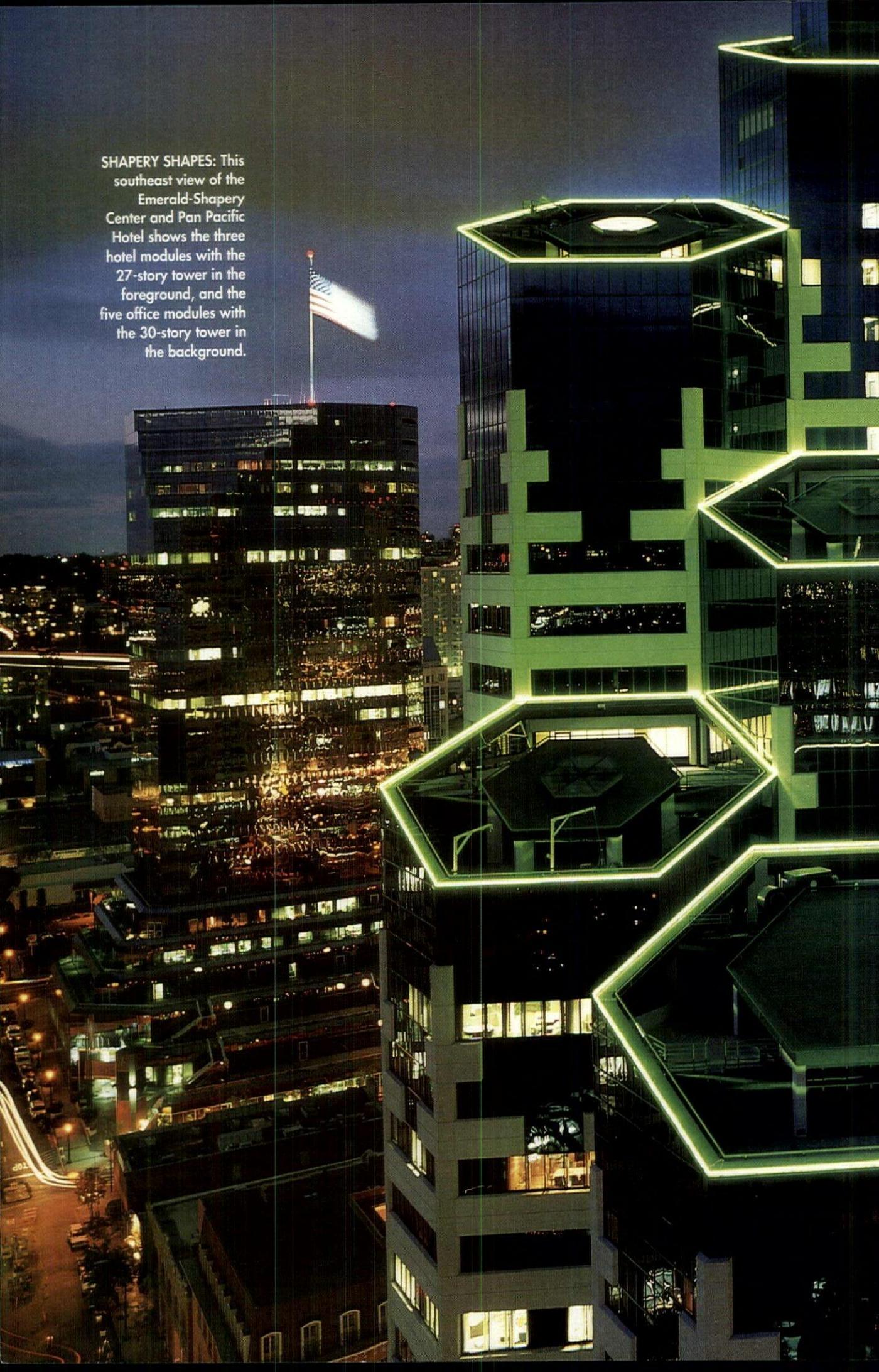
Green Lights is the EPA Global Change Division's voluntary, non-regulatory program, which encourages U.S. corporations to use energy-efficient lighting technologies wherever they are profitable, and maintain or improve lighting quality. Almost 40 lighting management companies joined the program as allies by signing and submitting their "memorandum of understanding," a list of mutual obligations and criteria for entering the program.

Although the EPA does not endorse program allies, Green Lights Director Bob Kwartin says he expects the Lighting Management Company Allies can help program partners reach Green Lights goals. Overall goals include achieving lighting efficiency for the entire U.S. business community by 1993. This efficiency would eliminate 4 percent of total carbon dioxide emissions, 7 percent of sulphur dioxide emissions, and 4 percent of nitrous oxides emissions in the United States.

NO STOPPING GREEN LIGHTS: NALMCO president C. Charles Occhino, far right, and past president Norma Frank were welcomed into the Green Lights program by director Bob Kwartin, second from left, and mission contractor Peter Weisberg, left.

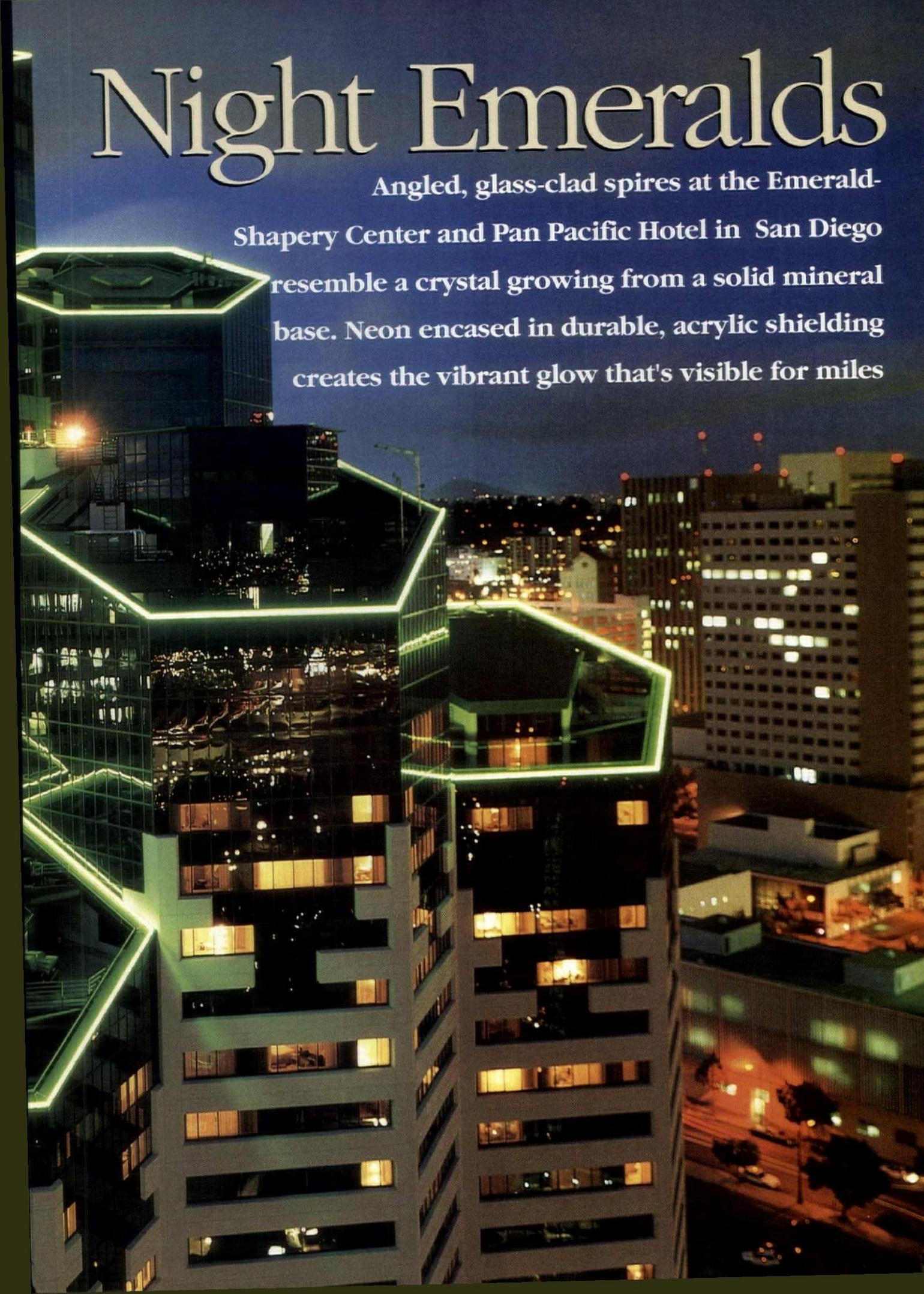


SHAPERY SHAPES: This southeast view of the Emerald-Shapery Center and Pan Pacific Hotel shows the three hotel modules with the 27-story tower in the foreground, and the five office modules with the 30-story tower in the background.



Night Emeralds

Angled, glass-clad spires at the Emerald-Shapery Center and Pan Pacific Hotel in San Diego resemble a crystal growing from a solid mineral base. Neon encased in durable, acrylic shielding creates the vibrant glow that's visible for miles



Combining concrete, glass, and neon in a kind of architectural alchemy, the Emerald-Shapery Center and Pan Pacific Hotel in downtown San Diego forms a cluster of crystalline towers that has transformed the city's skyline. Since its completion last April, the 700,000-square-foot, mixed-use development at 402 West Broadway has been widely recognized as a bold experiment in geometry, color, and light.

The center is comprised of eight hexagonal modules that rise to varying heights to create an organic crystalline form. The five modules to the north comprise a steel office-building structure that includes a 30-story tower. The three southern modules fronting Broadway form the 436-unit concrete hotel structure with a 27-story tower.

The office and hotel complexes are connected by a 100-foot-high glass atrium with roof structures at the sixth and eighth floors. "Bridge balconies" tie the second and third floor hotel function areas together, allowing access to the 24,000-square feet of meeting rooms and ballrooms that open onto the atrium. The center also includes two restaurants and various retail shops on the ground floor. These carefully designed mixed-use facilities on the street level, and two levels above, have created continuous activity on weekdays as well as on weekends, during the day, as well as at night.

The center is a joint venture between Shapery Enterprises and San Diego 109 Inc., a subsidiary of Tokyu Corporation of Japan. The hexagonal, crystalline design is based on American architect Frank Lloyd Wright's philosophy of imitating natural formations in architecture, according to managing partner Sandor Shapery.

"It's an attempt to create more with less," he says.

The architect for the center is C.W. Kim, AIA, San Diego. "A team effort created the overall unique design," Kim says. "The crystalline design is based on an organic natural form. The hexagonal theme—which is carried throughout the plan, from the column grid to the paving pattern and onto the skylight grid on the roof—unifies the design, while setting the building apart from the conventional rectangular floor plans. The angled, glass-clad spires at the top of the building are reminiscent of an emerald crystal growing from a solid mineral base."

Although its unique design is sufficient to distinguish the

center and to prompt comparison with the city's other architectural landmarks, such as Symphony Towers and the First National Bank Building, its principal attraction is the soft green nighttime glow of the hexagonal parapets that crown each module. These parapets are trimmed with green neon tubing covered with cylindrical, transparent acrylic shielding. It is this combination that creates the diffuse bands of light, which form a luminous hexagon atop each module, rather than the stark outline produced by exposed neon. The light is also visible on flights coming into San Diego Airport and from as far away as La Jolla and Coronado.

"I think the lighting contributes to the uniqueness of the whole project," Kim says. "If you're not careful, lighting can

become 'visual noise', in which case the architecture and the building lighting try to 'shout' separately. Good lighting design, however, always reinforces the space and the architectural expression."

William Lam provided conceptual consultation on the lighting in the project's preliminary stage. According to Lam, the center's form and color combine to create a "memorable image and subtle landmark for the city."

"The base building hexagon by itself is an excellent concept architecturally," says John H. Anderson, project lighting consultant. "However, the cut, or slanted hexagon, afforded the lighting designer an opportunity to create a unique nighttime architectural expression."

The external lighting fixtures were chosen to create the desired effect in the most practical and efficient way. According to Anderson, neon was used rather than "light-tubes" because neon tubes and transformers are much less obtrusive and fit almost anywhere. Also, longevity was a key element, and the expected lamp life of neon

tubing is a minimum of 10 years. In addition, Anderson noted, all outdoor luminous tube lighting fixtures are exempt from the requirements of the Palomar Observatory lighting code, which limits the brightness of outdoor lighting within 100 miles of Mount Palomar (San Diego is approximately 90 miles away).

"Green neon was the most natural choice," Anderson says, "because it provided a definite contrast with the existing blue and red signs in the city's skyline and gave visual color to the titled 'Emerald-Shapery Center'."



CASCADING SCULPTURE: The mobile sculpture by Richard Lippold appears to tumble from the skylight ceiling of the atrium, which joins the office and hotel complexes. Brass extrusions outlining the triangular skylights hide 1,968 feet of neon that combines with natural light to illuminate the atrium. "Twinkle lights" in fixtures attached to brass extrusions define the skylights and are reflected in the atrium's brass detailing.

PHOTOS BY STEPHEN WHALEN

The green neon was formulated as usual, he says, by varying the argon and mercury content in the tubes.

Anderson wanted to create an "illusion of larger light" using a transparent medium. To achieve this effect, the 2,000 feet of 5/8-inch-diameter neon tubing was covered with 3-inch-diameter extruded transparent Plexiglas "shield refractors." From a distance, the width of the light bands appears "larger, almost illusory," he says. "This effect is made possible by the transparent acrylic shielding that has a U-shaped configuration. This effectively shapes the emitted lumens into a directed source at the parapet cap, reflecting and enlarging the image of the neon tubes."

According to Anderson, the neon tubes emit more than 440,000 lumens.

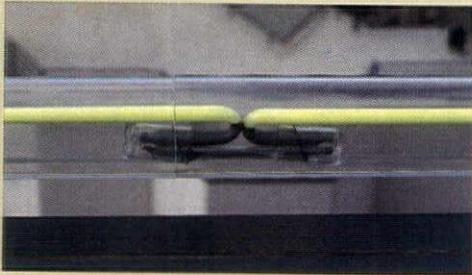
"The shields gave us exactly what we needed for proper control of luminance values," Anderson says. Using extruded Plexiglas for the shielding allowed less energy to be used for lighting the parapets. With the acrylic lens, we were able to use one-half the original lumens per foot of tube. We originally planned to use 60 mA current, but the ability to easily shape the lens to an optimum shape for lumen refraction dispersal permitted a reduction to 30 mA." The total wattage for the exterior neon lighting is approximately 7 kilowatts (i.e., 146 watts per 40-foot tube section x 6 sides x 8 modules).

Besides its superior optical properties, the Plexiglas was used for the shielding because of its durability—it offers up to 10 times the impact resistance of standard acrylics and exhibits superior weatherability without the need for special ultraviolet coatings.

In addition to enhancing the lighting effect, the acrylic shielding also contributes to the safety of the building environment. According to the San Diego City Building Department, the National Electrical Code requires that all outline lighting constructed with exposed neon must be installed no less than 8 feet above a finished grade. The shields protect the neon tubes from damage by the elements and from window-washing equipment. They also prevent contact with the high-voltage tubes by maintenance workers and window washers, and by office workers and hotel guests on balconies.

The interior lighting was chosen to carry through the organic crystal structural theme and to complement the external lighting. The state of California limits the number of watts per square foot of lighting that can be designed into office buildings and other public spaces to 1.25 watts per square foot, with credits given for automatic control devices. Such regulation, Anderson says, has turned most new buildings into "task-lighted" structures with very efficient lighting systems.

To ensure an indirect light source with at least a 10-year life, 3,500-degree Kelvin white argon and mercury clear glass tubing producing 125 lumens per foot was used. The lamp source is hidden behind a brass extrusion reflecting the light that washes up to a skylight. (Light output per skylight is equivalent to three 100-watt A lamps.) The 82 triangular sky-



THE VIEW ACROSS the corner of the hexagonal parapet shows the angular joint between refractor shields covering the angled neon tubing. Power cabling is visible in the foreground.

A CLOSE-UP of the 5/8-inch-diameter neon tubing covered with 3-inch-diameter extruded transparent Plexiglas. Acrylic shields prevent personal contact with high-voltage neon tubes, insuring safety and guarding the tubes against damage.

light sections have 8-foot sides for a total of 1,968 linear feet of neon. According to Anderson, light at the floor level of the atrium, from the combination of neon and skylight illumination, is approximately 1.5 footcandles.

Affixed to the bottom of the brass extrusions are brass fixtures with 1-watt lamps placed 4 inches off center.

"I was trying to simulate a canopy of stars that could be reflected in the large amounts of brass detailing around the atrium, and which would define the triangular skylights," Anderson says.

Total power output from these fixtures is 5.88 kilowatts (1,968 feet x 3 watts per square foot); lumen output to the atrium floor approximately 130 feet below is negligible.

The entire skylight grid is washed in a very soft light that offers a bright background for the atrium's mobile, which was created by internationally recognized sculptor Richard Lippold. The sculpture will soon have 14 150-watt medium-flood PAR 56 incandescent fixtures illuminating it from the sides and ends of the atrium, which will add to the overall illumination of the area, Anderson says.

The design team believes that the effect of the Emerald Shapery Center will be felt far beyond San Diego and southern California. ■

DETAILS

PROJECT: EMERALD-SHAPERY CENTER

LOCATION: SAN DIEGO

CLIENT/OWNER: SHAPERY ENTERPRISES and SAN DIEGO 109, INC., a subsidiary of TOKYU CORPORATION OF JAPAN

LIGHTING DESIGNER: JOHN H. ANDERSON & ASSOCIATES, LIGHTING CONSULTANTS

LIGHTING CONCEPTUAL CONSULTATION: WILLIAM LAM ASSOCIATES, INC., LIGHTING DESIGN CONSULTANTS

ARCHITECT: C. W. KIM, AIA

PHOTOGRAPHER: STEPHEN WHALEN, STEPHEN WHALEN PHOTOGRAPHY

LIGHTING MANUFACTURERS: LITELAB: 1-watt lamps in brass atrium fixtures; ROHM AND HAAS COMPANY: Plexiglas DR acrylic—Plexiglas and DR are registered trademarks; SANDEE ADVANCED THERMOPLASTIC EXTRUSIONS: design and manufacture of Plexiglas shields; SIGNTECH ELECTRICAL ADVERTISING, INC.: manufacture and installation of neon tubing, skylight brass extrusions in atrium, and installation of Plexiglas shields



Mall Function

Stylish lighting schemes plus efficient lamps equal solid mall design for the '90s

BY CATHERINE SCHEITING SALFINO
MANAGING EDITOR

The "mall" as we know it today—a mammoth, enclosed construction housing a few anchor stores and dozens of satellite shops—has been around for decades. And every town in the U.S., no matter how remote, seems to be within a half-hour's driving distance of one, maybe even two. In some locations, several abound.

But some of those older malls must now compete with flashy new centers, which feature a bevy of emporiums, eateries, and entertainment. How do businesses keep their share of the customer traffic?

One way is by getting a makeover, as in the case of the Westwood Mall in Houston.

The 20-year-old shopping center was renovated and given several new eye-catching areas, including an atrium, a food court, and a magnificent glass-front entrance. Lighting designer Craig Roeder, principal of Craig A. Roeder Associates, Inc., Dallas, was called upon to add illumination drama and excitement on a very tight budget, while meeting stringent energy codes.

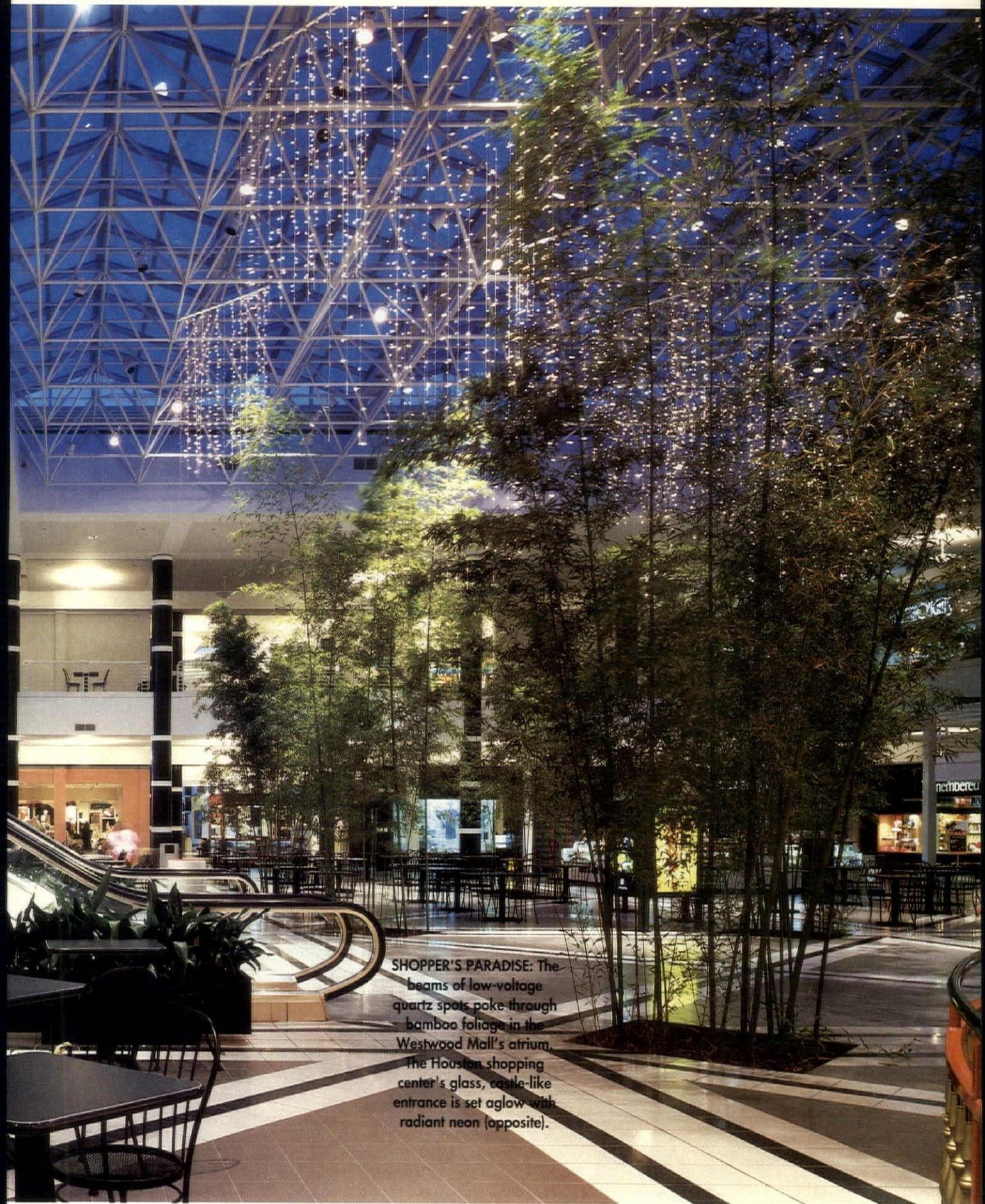
"After working on about seven malls, I've discovered a lighting trick that I really like to use for the store fronts," Roeder says. "I indirectly light them."

Pendant fixtures housing 100-watt, 3,000-degree Kelvin metal halide lamps are suspended in front of each shop. These provide what Roeder describes as plain lighting.

"See, if everything were exciting, nothing would be exciting," Roeder explains. "By having plain lighting in the corridors, the store fronts seem to pop forward. And that's what is really important—selling the merchandise."

PHOTOS BY CAROLYN BROWN & CRAIG BLACKMON





SHOPPER'S PARADISE: The beams of low-voltage quartz spots poke through bamboo foliage in the Westwood Mall's atrium. The Houston shopping center's glass, castle-like entrance is set aglow with radiant neon (opposite).



THE SOOTHING & THE SPECTACULAR: A custom neon creation (above) marks the end of the skylight corridor. Twinkling star showers add to the excitement, while pendants cast an indirect glow before the store fronts (opposite). The food court (below) soothes with low-voltage PAR 56 illumination. Per square foot: light watts are 1.2; installation costs were a low \$4.

The atrium gets its glow from low-voltage 240-watt narrow and wide beam quartz spots. The lamps are focused on the bamboo plants below, helping them to grow while casting foliage projections over the floor.

The food court provides a relaxing environment for a respite from shopping.

"It's a very pretty space," Roeder says, "so I wanted to create a warm, inviting area through the lighting. I didn't want just another sea of metal halide shining down."

Low-voltage PAR 56 track lamps were affixed to a grid system, allowing for easy maintenance using a cherry picker.

One of Roeder's challenges was coming up with a dimming system that didn't cost a lot of money.

"We often put \$30,000-\$40,000 worth of dimming in a mall because it saves lamp life and costs," he says. "So instead, we used a little transformer that went to 100 volts on all the atrium lighting. We stepped it down to dim the lighting 10-15 percent. A transformer can be made in any size. And since you have to pay for the transformer anyway, there was no additional cost on cranking the lights back slightly."

The lighting team also had to work within very tight energy codes—2 watts per square foot.

"It was a big challenge but when you're using 100-watt metal halides, quartz spots, and neon, it works," Roeder says.

The space's high drama comes from the highly placed 60-milliamp neon tubes of green and blue. The neon is a technique that Roeder never really used in his previous mall projects. But, he says, after seeing the skylights' V lines throughout the space, the choice seemed appropriate.

"The colors are very pretty," he says. "It's not just another vanilla envelope, so to speak. There's nothing worse than a skylight at night because it becomes the proverbial black hole. Also, we, along with the architect, OmniPlan, Inc., thought that it would brighten the space."

Other brightening elements are the cascades of little Italian lights, which look like masses of stars trailing down from the glazed roof.

"I think malls have features like that because they add more of a sparkle," Roeder says. "And it's sparkle that catches the eye and sells merchandise."

The glass front was part of the expansion. Here Roeder created a simple neon circle in a triangle design that works with the glass.

"I don't like things that get too busy," he says. "I think it's fun to do some real safe, fun, simple forms and then they don't become complicated or confusing. They're forms that people can easily deal with psychologically."

This was a custom design, Roeder says.

"We took the shapes that we felt the entrance created and worked with them," he says.

Because of the tight budget, Roeder had to cut an elaborate neon sculpture and neon that was to lead down the avenues away from the center court.

"But that's okay. Things came out the way they're supposed to, and I don't feel that the project suffered because of the cuts," he says. "And you know what? It might have been too much."

Now the mall features fun neon in the court to draw people out there, and a tranquil center court that "seems like a city park in the middle of this circus," Roeder says. "I think it worked out very well." ■

DETAILS

PROJECT: WESTWOOD MALL

LOCATION: HOUSTON

CLIENT: EQUITABLE REAL ESTATE, INVESTMENT MANAGEMENT, INC./ALAN MCKAY

LIGHTING DESIGNER: CRAIG A. ROEDER ASSOCIATES, INC.; CRAIG ROEDER, ROBERT OAKES

ARCHITECT, INTERIOR DESIGNER: OMNIPLAN, INC.

LANDSCAPE ARCHITECT: MESA DESIGNS

GENERAL CONTRACTOR: HOAR CONSTRUCTION

PHOTOGRAPHER: CAROLYN BROWN & CRAIG BLACKMON

LIGHTING MANUFACTURERS: HYDREL: custom burial fixtures; OMEGA: accent lights; LITELAB CORP.: atrium track fixtures; NEOTECK: neon; STERNER: bollards, handrails; NORBERT BELFER: strip lighting





Optometrist

Espresso

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5-7

Reading Lights

An East Coast design firm creates a flexible illumination plan for a dramatic Midwest college library

BY CHRISTINA LAMB

ASSOCIATE EDITOR

The library at Illinois' Augustana College, a liberal arts school founded in 1860 by Swedish immigrants, and home to 2,200 students, boasts a history borne by royalty, and a legacy bound by tradition.

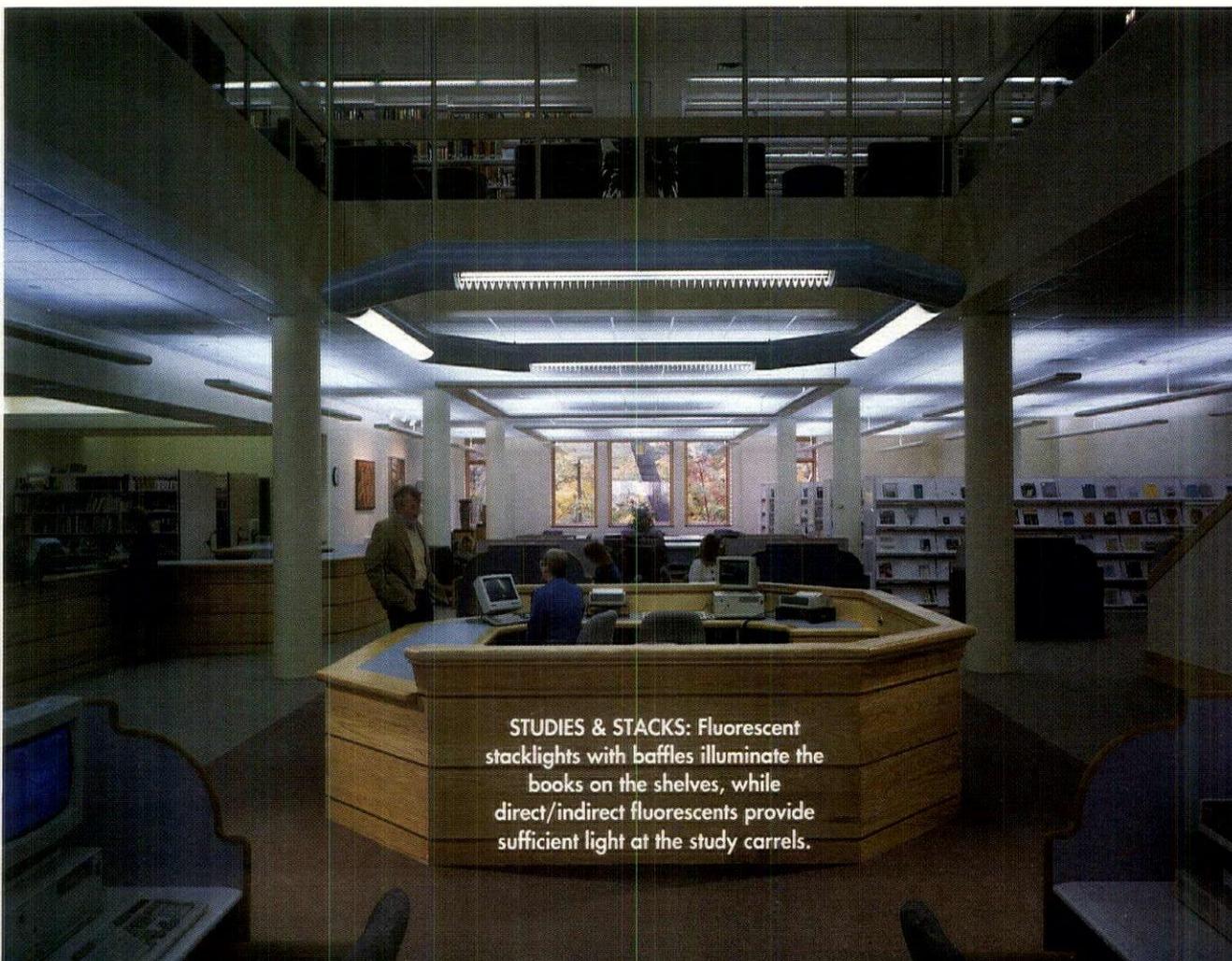
Since its beginning, the school has had strong ties with Sweden. King Charles XV provided the college with 5,000 volumes from his late father, Oscar I, establishing Augustana's original collection. Denkmann Library, built more than 75 years ago, was constructed to house these royal books, but over the years, the number of volumes expanded. In 1988, with a collection exceeding 350,000 volumes, the first Scandinavian college in the U.S. built a library for \$12 million.

"This is a campus that's in two very separate pieces. It sits on the high plateau of the only east-to-west portion of the Mississippi River," says Alexander Howe, project designer and senior associate at Shepley Bulfinch Richardson and Abbott, Boston. The library includes wide windows that provide magnificent views of the Mississippi River to the north and the campus to the south.

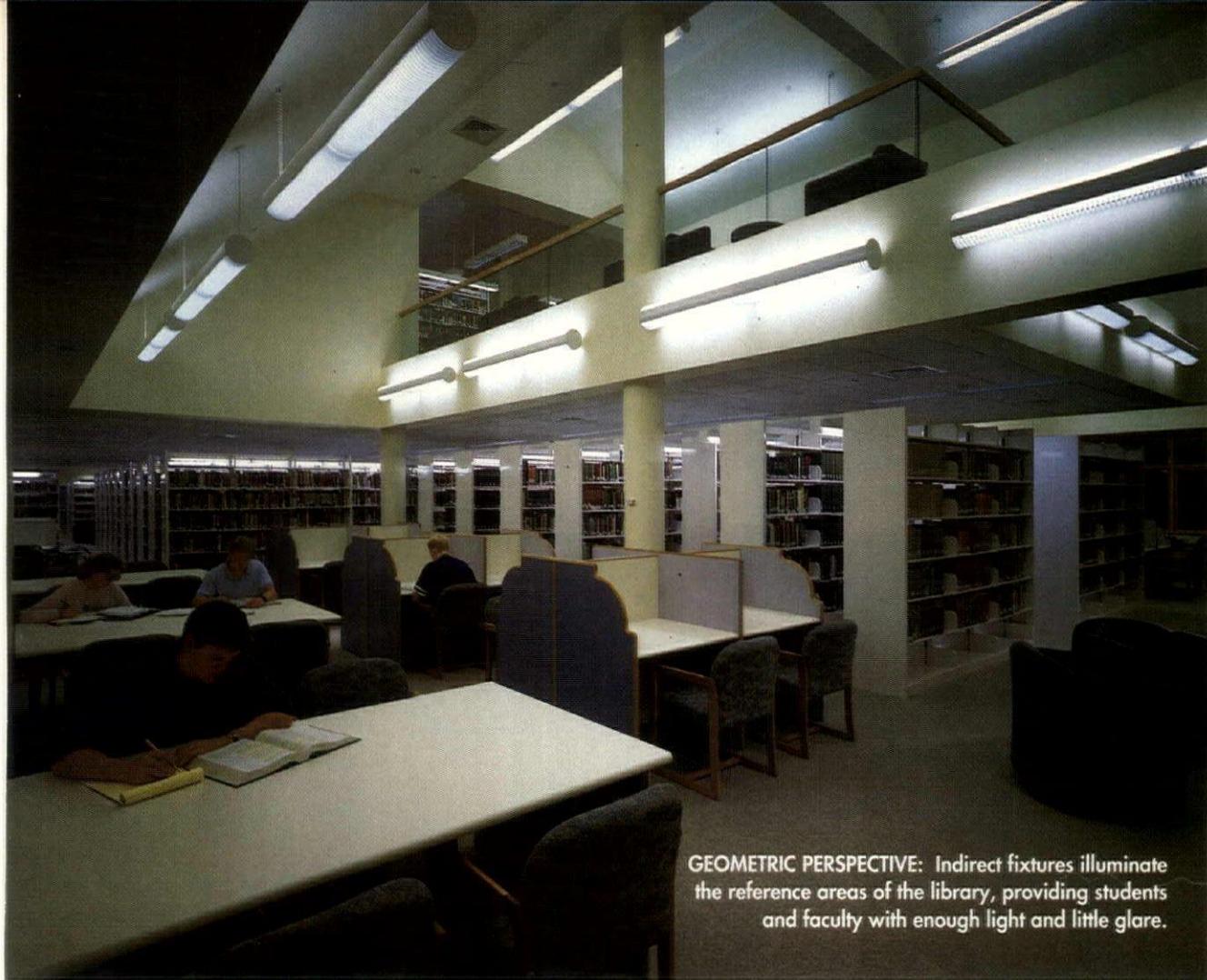
The original lower campus, which is like a valley, is surrounded by high ridges, and as the college and campus grew in the 20th century, construction of residence halls began on the higher areas of landscape, while the academic and athletic heart remained below.

Two major complexes were constructed on two of the three fingers of land that project above the academic valley, and there was one promontory that had not been built on. The team of architects decided to put the library there and create a tower, which provides a pedestrian passage through the academic heart of the campus. The new library, the principal academic resource of the campus, is also at its center, joining the upper and lower levels of the college grounds.

"Now, in thinking about the lighting," says Howe, "that meant it was very important that this be a building dramatically illuminated in the evening, and that the lighting conform to what we preach about libraries these days: The plan must be flexible as possible, but articulated nevertheless—not a supermarket.



STUDIES & STACKS: Fluorescent stacklights with baffles illuminate the books on the shelves, while direct/indirect fluorescents provide sufficient light at the study carrels.

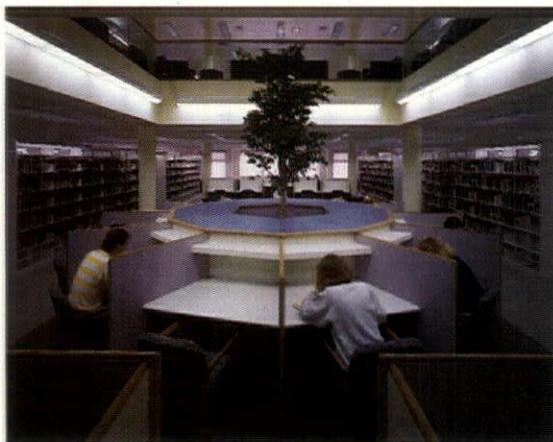


GEOMETRIC PERSPECTIVE: Indirect fixtures illuminate the reference areas of the library, providing students and faculty with enough light and little glare.

"We wanted this concept to be immediately perceivable at night, and sometimes even during the day depending upon the lighting conditions, by students and faculty walking along the face of the building, or just looking at the structure from any angle," Howe says.

"Our idea was to have low lighting levels, and not illuminate the ceilings in the dense portions of the interior," Howe says. "We wanted very task-specific lighting at the interior book stacks and then to be able to do special lighting—indirect scheme lighting—throughout the perimeter, which has a special character depending upon where you are in the building, and the architecture of that particular space."

The new five-story, 85,000-plus-square-foot Augustana library has entrances at the top and bottom, and a main service area at the second level. Here, 30- to 40-watt fluorescent lamps in concealed cove fixtures gently wash the ceiling and sides of the soffits, defining the entry space and circulation desk area. Recessed in the soffits are 10-inch diameter downlights, which provide additional illumination at the library's entry point and for tasks performed at the main desk.



"The lighting works within the library bay, where there's a narrow line of ceiling tile centered on the columns. This forms a kind of floating representation of the structure," says Howe.

Low ceiling indirect fixtures, suspended in 16-foot lengths, cast a glow on the ceiling, while suspended fluorescents, in a square configuration measuring 15 feet per side, are positioned over reference carrels. The indirect illumination of these fixtures allows students to work comfortably at their

stations, without unwanted glare on library computers.

Key to the lighting design was the idea that the students be very closely related to the outdoors, with a series of study areas developed around the perimeter of the building and a dense block of collections in the interior.

Reading areas are located near windows around the perimeter of the building. Where there are vaulted ceilings, suspended direct/indirect fixtures are used, and where there are flat ceilings, recessed parabolic fixtures evenly light the area.

"The lighting in the perimeter serves to reinforce the structural bays of the library and any particular ceiling treat-

PHOTOS BY NICK WHEELER



GENTLE WASHING: Recessed downlights, concealed in coves, provide a soft wash on the ceilings and soffits, and illuminate the main desk at the library's entrance.

ments," Howe says.

Stack lights equipped with baffles are attached to the book shelves. This system ensures a distribution that provides enough light from the top bookshelf to the bottom for reading titles and locating volumes.

As soon as the line between the perimeter reading areas and the stacks is crossed, the lighting schemes become varied.

In the double height spaces of the upper floors, direct/indirect fixtures are both suspended from the ceiling with cable, and mounted on the vertical faces of the balconies. The tops of these fluorescent fixtures are acrylic, while the bottoms have round baffles to minimize veiling reflections on reading material. Also, where there are high, flat ceilings, 1-foot x 8-foot surface parabolic, pendant-mounted luminaires with louvers and 10 percent fluorescent uplight provide general illumination.

"The reading carrels in the library are not wired," Howe says. "So, the illumination in these reading areas had to be the proper lumen output from the suspended fixtures. I've been to the school several times and it's not too bright—it washes the ceiling very nicely and the sidewalls of the soffits."

A semi-recessed track lighting system is installed along all of the walls in the main service area, and walls around the elevator core and the main stairwell. These highlight beautiful

artwork on the walls that separate the reference and periodical areas from conference, administration, and seminar rooms.

The lighting, while very interesting and capable of heightening the effect of the architectural spaces inside, does not interfere with the sense of being close to the outdoors.

Furthermore, the system accounts for the transitions from one space to another, ensuring that the contrasts between these areas are comfortable to the users. ■

DETAILS

PROJECT: AUGUSTANA COLLEGE LIBRARY

LOCATION: ROCK ISLAND, IL

CLIENT: AUGUSTANA COLLEGE

ARCHITECT: SHEPLEY BULFINCH RICHARDSON AND ABBOTT, BOSTON

LIGHTING DESIGNER: SHEPLEY BULFINCH RICHARDSON AND ABBOTT

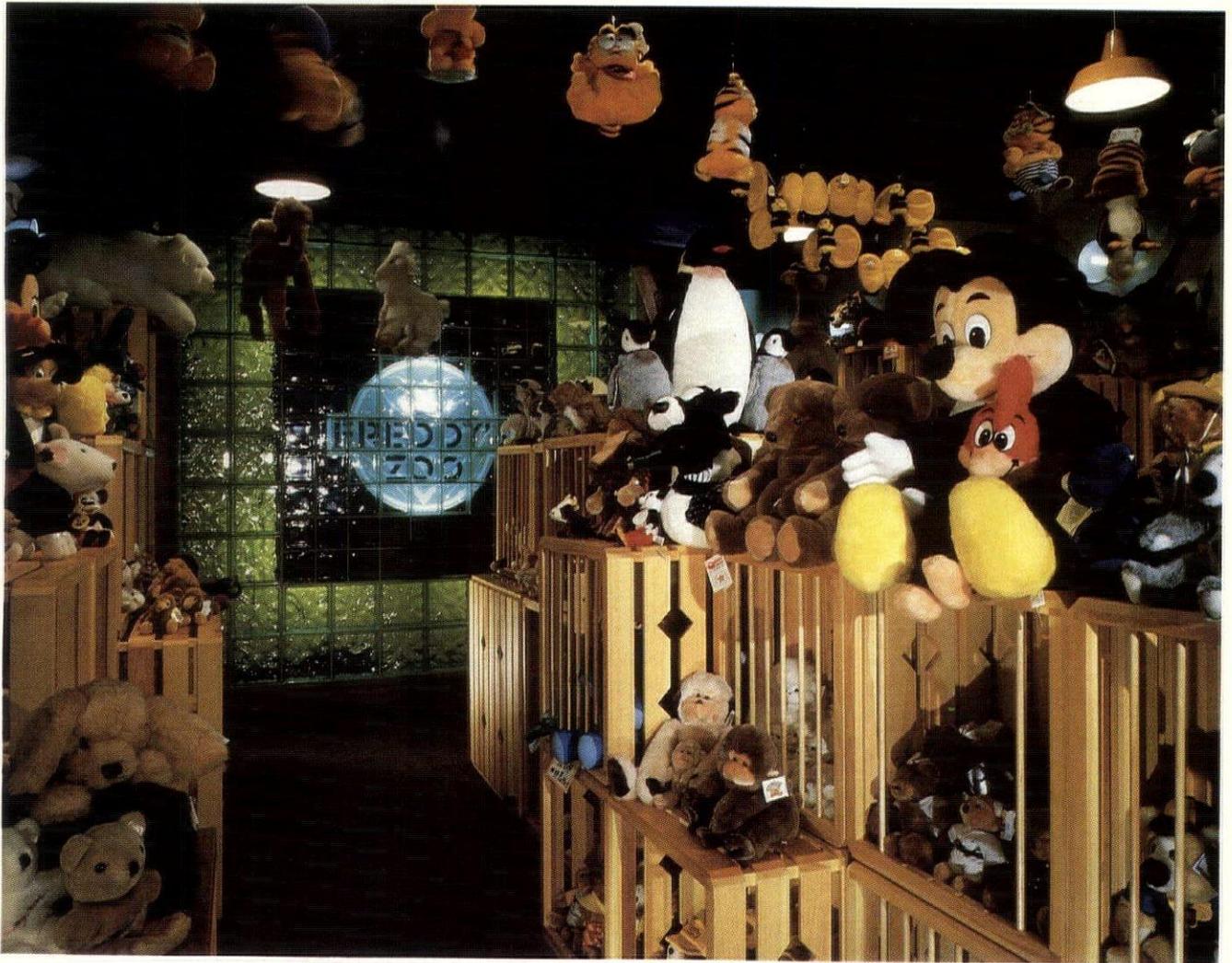
INTERIOR DESIGNER: SHEPLEY BULLFINCH RICHARDSON AND ABBOTT

ELECTRICIAN: KIMBELL, JENSEN, WEGERER & WRAY

PHOTOGRAPHER: NICK WHEELER

LIGHTING MANUFACTURERS: LITECONTROL: stacklights, low ceiling indirect fixtures, concealed cove fixtures; NEORAY: direct/indirect fixtures with cable and wall mount; COLUMBIA: 1-foot x 8-foot troffers with uplight and continuous louver; PRESCOLITE: recessed downlights

Animal Act



Thadani Hetzel Partnership's interior and lighting design creates a distinctive identity for the variety of stuffed pets sold at Freddy's Zoo

BY WANDA JANKOWSKI

EDITOR-IN-CHIEF

Though some of the animals in Freddy's Zoo are caged, even if they weren't, they'd be harmless—even the lions, tigers, and bears. Freddy's Zoo is an 1,100-square-foot stuffed animal retail store at the Potomac Mills Mall in Woodbridge, VA. The Thadani Hetzel Partnership was charged with extending and integrating the merchandise's theme into a complete interior package that comprises the cabinetry and display system, store logo, business cards and stationary, and shopping bags, as well as interior and lighting design. And all this with a turnaround time of 60 days.

"Retail mall managements often entice new leasees with 45 days of free rent in exchange for opening the store for business within that period of time," says Dhuru Thadani, AIA. "And then the leasee has 15 days before the contract goes through. So the retailer gets 60 days free rent and most want to be in business from the day they begin paying rent.

"The retailer can just go out and buy flat shelving off the rack and drop in a lay-in ceiling with fluorescents," says Thadani. "That's quick and you don't have to think about it. But the owner of Freddy's Zoo wanted a distinctive environ-

PHOTOS BY GORDON BEALL



LIFE'S A CIRCUS: (Above) Compact fluorescents are centered in the zebra patterns. The millwork—like the circus wagon (below) and the cashier's desk (top, right)—was divided among three shops to meet the 60-day deadline. (Below, right) track fixtures are ceiling-mounted between the blue banners.



The mall retailer can just buy off-the-rack shelving and drop in a lay-in ceiling. But the owner of Freddy's Zoo wanted a distinctive environment that carried through the theme of the store.





ment, and we really had to come up with an inventive way to make this store different and catchy."

Bright yellow neon that spells out Freddy's Zoo and frames two windows attracts attention to the store's facade.

A merchandise display system was developed that centers on the idea of featuring animals in slatted wooden boxes that resemble shipping crates used for transporting real animals. Several module types were developed that allow for stacking and rearrangement. Wood dowel cage bars can be taken off to remove the merchandise, and then easily replaced to control customer access. The largest cage looks like a circus wagon and is placed near the entrance to make an impact and catch the attention of mall-walkers.

The interior walls are adorned with a yellow and black graphic pattern derived from the store's logo and reminiscent of zebra striping. Eight wall-mounted compact fluorescent fixtures run along the walls. They are mounted at the center of each zebra pattern, 4 feet on center and 7 feet above the floor. Though the wire mesh colander screens the transformer from view, the light source is left exposed.

Blue canvas banners are suspended from the ceiling 4 feet on center and 5 feet deep. They act as a backdrop for hanging animals, and as a baffle for the adjustable ceiling-mounted track lighting system. The track fixtures had contained 150-watt incandescent or 150-watt halogen lamps. Incandescent units were used for general illumination and the halogen pinspots were used to highlight particular animals. But since the

store has been in operation, the light sources have been changed to low-voltage incandescent because of their longer life and the diminished need for relamping. Eight industrial pendant fixtures are suspended between and hang down below the banners to illuminate and define the circulation route.

The glass block wall in the rear is backlit with fluorescent strips and adorned with the Freddy's Zoo logo, attracting customers to the back of the store, while shielding the storage area beyond.

The architects had the project completed within the 60-day schedule and at a total cost—including materials, construction, installation, and fees—of \$51,000.

"We did about 31 sheets of detail drawings that the shops used instead of creating their own drawings. We also used three millwork shops for all the woodwork—crates, cashiers' desk, and cages. One shop bought all the materials and shipped them to the other two shops, so there was a consistency in look. By spreading the work around, no one shop was overloaded and we were able to meet the schedule." ■

DETAILS

PROJECT: FREDDY'S ZOO

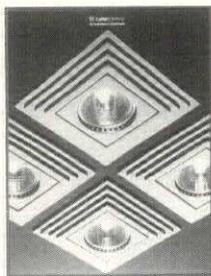
LOCATION: WOODBRIDGE, VA

LIGHTING DESIGNER AND ARCHITECT: DHIRU THADANI, AIA., PETER HETZEL, MIKE LAWRENCE, AND GLENN WALLACE, THADANI HETZEL PARTNERSHIP

PHOTOGRAPHER: GORDON BEALL

LIGHTING MANUFACTURERS: LIGHTOLIER: track and pendant fixtures; LEVITON: porcelain sockets; PHILIPS LIGHTING: compact fluorescent lamps

WINDOW SHOPPING: Bright yellow neon spells out "Freddy's Zoo" and lines the perimeters of the windows in the facade.



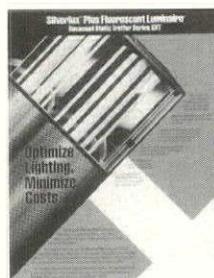
RECESSED LIGHTING TRIMS

The new European Collection catalog features high-design trims available in lead crystal, and walnut and metal finishes. All units accept MR 16 lamps up to 50 watts and can be adapted to most 4-inch-diameter Capri low-voltage housings. Capri Lighting, division of Thomas Industries, Los Angeles. **Circle 75**



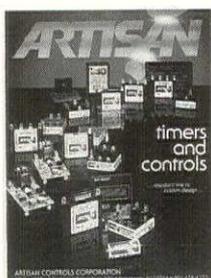
LOW-MOUNTING LUMINAIRE

A four-color brochure features the Lobay V luminaire, which provides uniform lighting and low brightness at low mounting heights. Used with 200- to 400-watt high-pressure sodium, and 175- to 400-watt metal halide and mercury vapor lamps, the Lobay V fixture is suited to industrial, commercial, and warehouse applications. The fixture features a die-cast aluminum housing, a spun aluminum reflector, silicon gaskets, and a flat, long-life acrylic lens. Holophane Company, Inc., Newark, OH. **Circle 76**



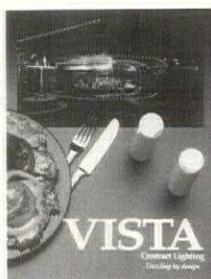
FLOUORESCENT FIXTURES

New literature for the Silverlux Plus recessed fluorescent lighting fixtures describes the patented reflector system, and the performance and aesthetic characteristics of the product. Manufactured by The Robert Group, Wood-Ridge, NJ, the UL-classified fixtures come in the air handling or static series. 3M Construction Markets, St. Paul, MN. **Circle 84**



STANDARD TIMERS

A complete line of solid state standard timers are features in this 100-page engineering guide. Product photos, key features, dimensions, and technical specifications are provided. Also highlighted are several control products used in the HVAC, food equipment, elevator, transit, gate, and security industries. Artisan Controls Corporation, Parsippany, NJ. **Circle 78**



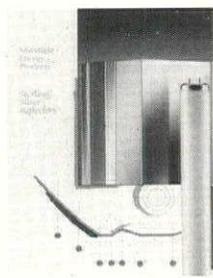
TUBE & STRIP LIGHTING

A complete line of lighting options is featured in a variety of full-color brochures detailing event, effect, and contract tube and strip lighting systems. The systems offer a variety of holding fixtures, a choice of several light intensities to meet requirements, and the ability to dim any line. Options are available for indoor and outdoor usages. Vista Manufacturing, Inc., Elkhart, IN; Ponder, TX. **Circle 79**



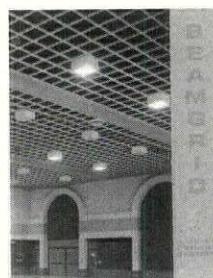
EXIT SIGNS

A 12-page, full-color brochure describes the new Galaxy Series of exit signs. The series has architectural quality, die cast aluminum construction, soft corner design, and state-of-the-art lamp and electronics technology. The Galaxy Series is offered in the Incandescent Group, the Compact Fluorescent Group, the Floor Proximity Group for public safety, to be followed by the LED Group. Lightalarms Electronics Corporation, Baldwin, NY. **Circle 80**



LIGHTING REFLECTORS

A six-page, full-color brochure describes the Sterling Silver Reflector lighting fixture inserts. The reflectors are designed to maximize fluorescent lighting fixture output while reducing the number of lamps and ballasts needed by as much as 50 percent. The reflectors utilize a highly reflective, mirror-like surface with a series of computer-calculated bends for maximum efficiency and fixture performance. Silverlight Corporation, Burr Ridge, IL. **Circle 81**



CEILING SYSTEMS

The Beamgrid open cell ceiling systems are featured in a new full-color brochure. The open cell systems create the illusion of a ceiling, without the need to organize holes for building service fixtures. The Beamgrid ceilings are designed for easy installation and provide an economical solution for everything from small shops to large public areas. The literature describes the variety of color, sizes, and modules available for use in either new commercial construction or renovations. Alcan Building Products, Charlotte, NC. **Circle 82**



ROADWAY LIGHTING

A new brochure features roadway lighting systems for greater highway visibility. Described are the HMS High Mast System, median mount systems, and offset (Vector) systems. Lowering devices are also represented. The systems include a wide selection of lamps, wattages, light patterns, materials, poles, mounting configurations, and mounting accessories. The brochure also explains the capabilities of the company's Computer Aided Lighting Analysis (CALA) software. Holophane, Newark, OH. **Circle 83**

illuminating art work involves a delicate balance between revelation and control

Exhibit Design

Gazing at the great masterpieces of Picasso, Renoir, or Matisse, a patron of the arts marvels at the vibrant colors and intricate designs. When staring at a finished work of artistic genius, however, an onlooker may not realize that there is more to the work of art than meets the eye. Presentation is a key factor, and illumination is an essential aspect to showing art at its best.

Taking into account the numerous variables that differentiate an artistic public space, such as the size of the room, height of the ceiling, and scope of the exhibit, there are a number of chief concerns that warrant attention in most every setting.

CONTROLLING ULTRAVIOLET

At the top of the lighting ladder of concerns is controlling the level of ultraviolet radiation that is emitted from lights.

"Light is a form of radiant energy. When art is exposed to it, its absorption of this energy can induce chemical changes, which can be detrimental," according to Randall Whitehead, principal at Light Source, San Francisco. "For long-term viewing, such as in a permanent museum collection, the amount of ultraviolet radiation that is exposed to the art is one of our biggest concerns," Whitehead says.

"Often, no one worries about radiation affecting a painting," says Carl Hillmann, Carl Hillmann Associates, New York. "But when the art is of any value or is particularly sensitive to radiant energy, we have to control the ultraviolet and the infrared radiation, particularly when lighting drawings and prints." A variety of fixture filters are available to cut down on the amount of UV radiation emanated by the lamps.

"There is a high ultraviolet factor from direct daylight as well," Whitehead says. "Even for a short period of time, sunlight will affect the art. It is best to have blinds or shades on windows to cut down on the amount of natural sunlight that is coming in."

Another factor to consider when illuminating a gallery is the light that can reflect off a glass-covered canvas.

"When light is directed on the work, a glare can be emitted that affects the viewing process," says Whitehead. He recommends cross illumination: by taking a center line of the art and spacing two fixtures at angles, the glare is reduced.

But while much attention is paid to the intensity and spacing of lighting for a public art space, there is also an intrinsic need to make the space more appealing to the eye.

"Art is interactive," says Philip Jacobson, partner of the Seattle-based TRA, Architecture Engineering Planning Interiors. "The value of the art and the nature of the material being shown, as well as the setting that they are being shown in, needs to be taken into account. Putting art in a subway system will require different lighting from an exhibit in a museum. In some cases, general lighting is sufficient, while in others, there is a need to highlight art."

MUSEUM VERSUS RETAIL

According to Hillmann, in a gallery where art is for sale, it needs to be the center of attention.

"If I am lighting a gallery painting, I want to make the work reach out to the viewer," he says. "But in a museum or a home, while the light should flatter the artwork, it must do this in a way that is almost subliminal. Depending on the work at hand, the lighting should give the room a more balanced and humane look."

"A growing trend in museums today is to spend more time combining accent and ambient lighting to give the rooms a humanized feeling," adds Whitehead. "People feel and look great in a space that has ambience. By adding more light and dark contrast, people tend to stay in museums longer."

The projects that follow feature two kinds of exhibit lighting: the night lighting of the permanent outdoor Chinese garden exhibit at the Asia Pacific Museum in Pasadena; and the lighting of a retail gallery in New York's Soho district that is designed for the appreciation as well as the sale of art.

China Peace

The Asia Pacific Museum's Oriental garden can be enjoyed at night thanks to Griff Williams' soft and subtle lighting



CAMOUFLAGE: Fixtures have been concealed as much as possible. Even the wiring for tree-mounted units has been painted to match the bark. Higher lighting levels are used on the stairway (top right) for safety and on the landing to accommodate a speaker's podium for special events.

Exhibit Design

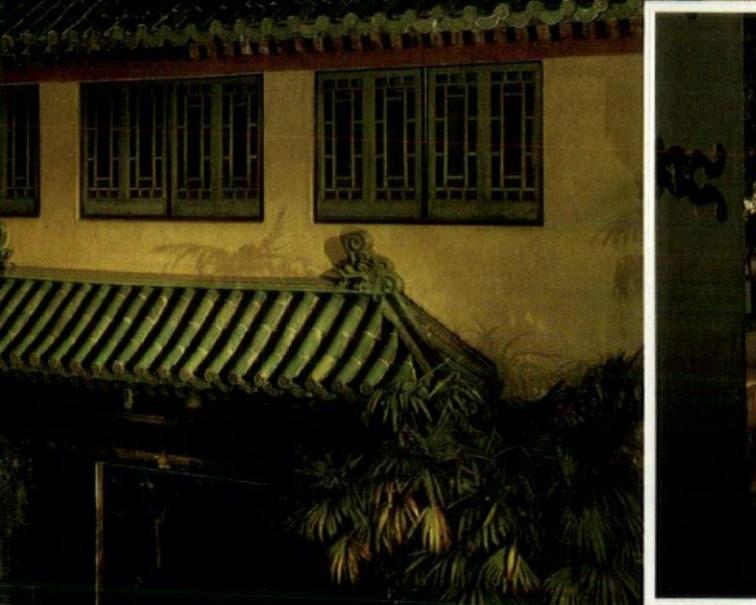
BY WANDA JANKOWSKI
EDITOR-IN-CHIEF



“It’s the best example in North America of a Chinese garden,” says independent lighting consultant Griff Williams, who was presented with the opportunity to bring new life at night to the serene courtyard garden of the Pacific Asia Museum in Pasadena, CA, via soft and subtle lighting. The courtyard is a permanent “exhibit” enjoyed not only by museum visitors, but by attendees of the special events and social activities held there.

“The client wanted to beautify the garden—that was their primary goal,” says Williams. “But they also needed a system so the courtyard could be used for special evening events. Since most of the museum patrons are older, enough light had to be provided for their safety and comfort as well.”

What the client did not want in the redesign was what had existed previously—widespread floodlighting. Instead, Williams chose a gentle approach, creating soft plays of light and shadow, and concealing fixtures and hardware as much as possible.



“The intention was to softly light up the whole place, without spotlighting or creating glare,” says Williams. “The fixtures I use are unobtrusive to begin with. They are made out of solid brass with a verde finish, like the green of the foliage. Even if I stuck one right under a tree, you’d still have to look for it to see it.”

The system Williams designed is low voltage. Trees are uplit with medium flood, MR 16 fixtures. Wide flood MR 16 luminaires are mounted in the tops of trees to cast light down through leaves and branches, creating playful moonlight patterns on the ground.

“You can’t see the fixtures up in the trees, because we painted the wires a bark color, and stapled them to the tree trunks,” says Williams. “Though you can’t hide wires com-

PHOTOS BY CHRISTOPHER COVEY



RELAMPED LANTERNS: Previously installed pendant fixtures that held 120-watt PAR lamps have been cleaned, rewired for low voltage, and relamped with 25-watt, 12-volt A-lamps.

pletely—you're going to see them from some angle—we tried to put them at the backs of the trees as much as possible." Transformers are mounted at the tree bases.

The tree-mounted fixtures provide general illumination, but also offer accent lighting with low-voltage fixtures that house 35-watt M 71 lamps. These fixtures, which highlight the Fu dogs and rock formations, are fitted with 6-inch and 10-inch snoots to shield side glare.

"We also placed fixtures under the eaves of the building," Williams says. "A lot of joists come out every few inches and in between them we hung fixtures and shot light down."

The stairways are illuminated by 50-watt MR 16 spotlights with linear spread lenses. Illumination on the landing comes from medium floods mounted under the eaves.

Ground-mounted lighting includes 25-watt, single contact lamps fitted with linear spread lenses. Submersible PAR 36s light the pond.

Existing pendant lanterns were retained, cleaned, rewired for low voltage, and relamped with 25-watt, 12-volt A lamps to replace the 120-watt PAR lamps.

"I cut the amount of energy used by the previous system, even though I used about four times the fixtures," he says. "There had been a system of flood PAR lampholders mounted on stakes in the trees. They were probably using about 4,000 watts and I think I have a maximum of 2,500 watts with my low-voltage system."

Many people are familiar with a Japanese garden, but in a Chinese garden, "the whole approach is bigger," says Williams. The philosophy is similar to a Japanese garden in that each thing has its purpose. But in the Japanese gardens, they clip the plants very close, and the design emphasis is on smallness. In China they have more space and room, and this is reflected in the more expansive designs.

The courtyard is open to the sky and flooded with sunlight during the daytime. It is surrounded by the museum that exhibits Chinese artifacts and art works. ■

DETAILS

PROJECT: ASIA PACIFIC MUSEUM COURTYARD

LOCATION: PASADENA, CA

CLIENT: ASIA PACIFIC MUSEUM

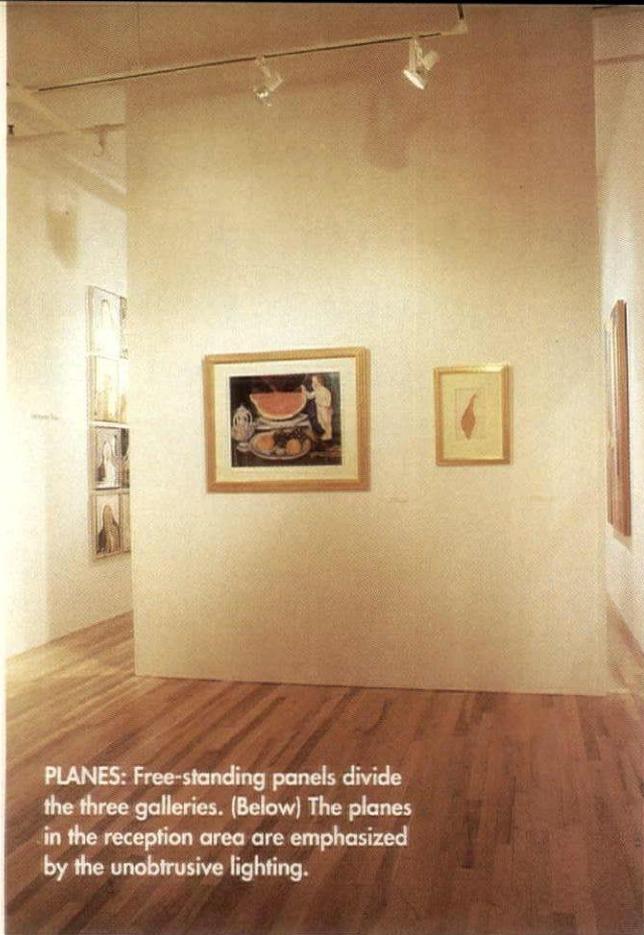
LIGHTING DESIGNER: GRIFF WILLIAMS, LIVING IN LIGHTING

PHOTOGRAPHER: CHRISTOPHER COVEY, CHRISTOPHER COVEY PHOTOGRAPHER

LIGHTING MANUFACTURERS: DREAMSCAPE LIGHTING; NIGHTSCAPING, LORAN, INC.; KIM LIGHTING: existing pendants

Exhibit Design

BY WANDA JANKOWSKI
EDITOR-IN-CHIEF



PLANES: Free-standing panels divide the three galleries. (Below) The planes in the reception area are emphasized by the unobtrusive lighting.

The Snyder Fine Arts Gallery, located in a former industrial-use building in the Soho section of New York, showcases and sells modern American art from the 1920s through the 1950s. The raw, pre-gallery space included high ceilings, a bank of windows along one wall, and three classical columns running down the middle of the space. Architect David Estreich opted to bring character to the gallery interior by combining traditional and modernist architectural elements.

"We combined the traditional 'living-room-like' qualities that exist in 57th Street galleries, with the modern, open look of the Soho loft galleries," Estreich says. "We didn't have to create complicated lighting. We were able to use a simple lighting system to complement the clean-lined architectural spaces."

The gallery is organized into two major sections, each embodying a different architectural style: open galleries and support spaces, including offices, storage rooms, and reception areas. The viewing galleries are divided into three spaces that decrease progressively in size, and are separated from each other by two freestanding planes.

"This creates dramatic vertical slots between the galleries, and gives them a sense of openness and unity," Estreich says. "One similarity between museum and retail gallery lighting is that you are trying to make the artwork look its best. In the

DUAL Personality

This Soho gallery's traditional and modernist architectural elements are blended with the help of simple, discreet lighting



Snyder gallery, we tried to create a museum-like quality so that a person can walk around the space and appreciate the art.

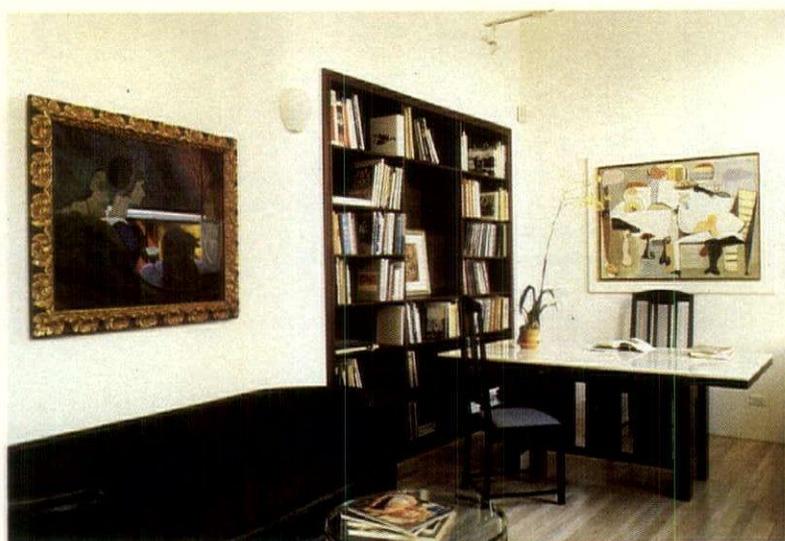
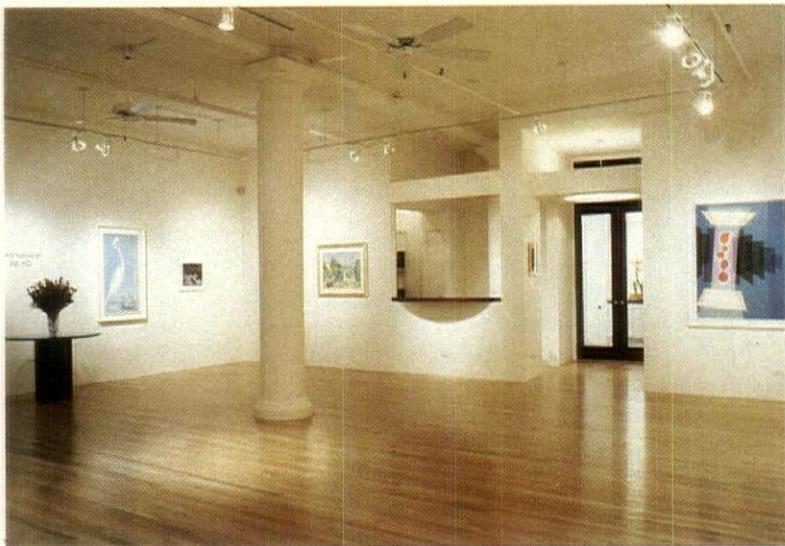
"We kept the lighting very low-key. We were concerned with quality of light more than the look of the light fixtures, so we did a simple layout of track lighting, without using very high-tech, visible fixtures," Estreich says.

Rather than creating pools of light surrounded by shadows to highlight the art, Estreich chose to provide general illumination that washes the white walls and furnishes an overall high level of illumination.

"It's not like the lights focus specifically on each painting," Estreich says. "Illumination reflects off the walls and light-colored floors, defines the planes, and makes the gallery section appear cleaner and plainer than the front reception area and offices, which look more carved and sculptural.

"We also brought the track system down a foot or so. It is

PHOTOS BY GINNY HOOD



TRACK TRICK: The track system (top, left) is suspended about 18 inches below the ceiling, creating a clean plane of light. The office (above, left) is neutral-toned to accommodate private showings of artworks. The reception area (right) and offices enjoy daylight from a window wall.

suspended at the same level as a rim detail etched on the columns beneath the capitals—about 18 inches below the ceiling,” Estreich says. “The lighting system hovers below the sprinkler system, and helps the space look more uncluttered by creating its own visual plane of light.”

The offices and reception area are created from architectural elements that shift from the modernist planning but are not traditional in the pure sense.

“However, they do have a carved quality. We tried to make it look very sculptural. You see the cutouts and soffits, with more play of light and deep shadows, and sharp lines,” Estreich says.

“The receptionist, for example, sits on axis with the column featured in a niche behind the reception desk. Adjacent is the anteroom leading to the office area. The axis is celebrated with the traditional concept of the oculus, or domed ceiling, here abstracted and reinterpreted as an open soffit.

“Though the dome has a light fixture in it, the

The track system hovers below the sprinklers, providing an uncluttered look



idea was not to focus on the fixture, but to have light emanate and glow from that little dome,” Estreich says.

In the reception area, track units mounted on the side wall, where they are not visible to visitors, cast light on the column.

Mahogany and glass French doors lead to the two offices for the gallery's principals. Each pair of doors is topped with glass transoms that echo the design of the windows and allow natural light into the gallery area. A living room space in between the offices is used for meetings and private showings/sales. The offices and meeting room are also illuminated with track fixtures. ■

DETAILS

PROJECT: THE SNYDER FINE ARTS GALLERY

LOCATION: NEW YORK

CLIENT: THE SNYDER FINE ARTS GALLERY

LIGHTING DESIGNER AND ARCHITECT: DAVID ESTREICH, ARCHITECTS

PHOTOGRAPHER: GINNY HOOD

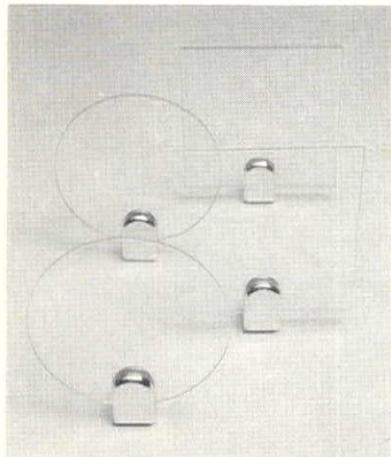
LIGHTING MANUFACTURER: CAPRI LIGHTING



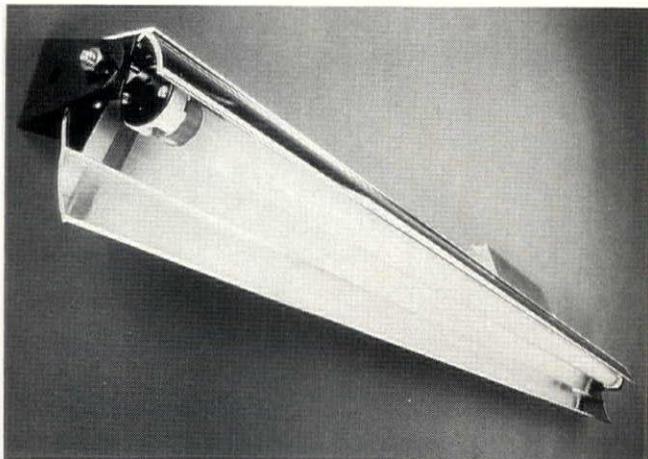
CLEAN AND CLASSIC LAMPHOLDERS



EARTH-TONED CLASSIC ART DECO



GLASS UV FILTERING LENSES



COMPACT FLUORESCENT FIXTURE

GLASS UV-FILTERING LENSES

IllumiLens U.V. and IllumiLens H.T. are glass ceramic lenses designed to counteract either the effects of ultraviolet radiation or significant temperature changes without a considerable loss of light emitted by equipment like metal halide and halogen lamps, and other high-intensity/high-wattage systems. The lenses are available in 3- and 5-millimeter thicknesses, and can be custom cut up to 30 inches x 56 inches. Nippon Electric Glass, Ltd. of Japan; distributed in North America by Technical Glass Products, Seattle **Circle 50**

COMPACT FLUORESCENT FIXTURE

The Concealed Small Fluorescents fixtures use small-diameter fluorescent tubes in asymmetric reflector mountings that provide the same light output of larger fixtures. The reflector projects the light uniformly without harsh socket shadows or striations on lighted surfaces. A patented socket and adjustable support bracket make the reflector easy to aim. They are available in a range of energy-saving wattages, and come with electronic ballasts. Elliptipar Inc., West Haven, CT. **Circle 51**

CLEAN AND CLASSIC LAMPHOLDERS

New additions to the Halo Ambiente Collection of track fixtures are the Filo I, Filo II, and Gabbia series. Filo I has a perforated cowl that softens direct light, and is scaled for use with low-voltage and halogen PAR lamps. Filo II redefines the geometric lines of Filo I with an all wire design, and uses 50-watt PAR 20 lamps. The Gabbia series features an open form frame that follows the contours of a lamp so the lamp becomes a prominent design element. The unit uses 75-watt PAR 30 and 75-watt R 30 lamps. Halo Lighting, Elk Grove Village, IL. **Circle 52**

EARTH-TONED CLASSIC ART DECO

The classic art deco CitiLamp line is now available in four earth-tone colors: satin steel plating, copper plating, cobalt blue metallic enamel, and teal metallic enamel. Additional colors in the line include wrinkle black, and the metallic hues of silver, taupe-charcoal, rose, and jade. The CitiLamp line includes a collection of desk lamps first built 50 years ago by the company. Art Specialty Co., Chicago, IL. **Circle 53**



CEILING FIXTURE FAMILY



ENERGY-SAVING PAR LAMPS

CEILING FIXTURE FAMILY

Mira is a family of contemporary, UL-listed ceiling fixtures designed by Italian architect Ezio Didone. It consists of three models, all of which measure 24 inches in diameter and radiate diffused light downward from a single 200-watt halogen lamp. Mira/S is a pendant fixture that suspends from a black or chrome 'egg' by means of three curved chrome rods. The egg is suspended from a ceiling rose by a cord and three cables with a maximum length of 8 feet. Mira/PG hangs 24 inches from its black or chrome ceiling rose by three slightly curved chrome rods. Mira/P, a 6-inch-deep, low-profile model, mounts directly to the ceiling and is also available with a 32-watt fluorescent light source. Flos Incorporated, Huntington Station, NY. **Circle 54**

BRASS AND PORCELAIN CHANDELIERS

The Georgian Collection includes a dozen new chandeliers with coordinating two-light wall brackets in solid cast brass and traditional solid brass and porcelain. The models are available in 10 light, two-tier; eight- and five-light traditional Georgian; six-light with downlight; and elongated Georgian classic six-light types. Murray Feiss, Bronx, NY. **Circle 57**



BRASS AND PORCELAIN CHANDELIERS



PORTABLE REMOTE CONTROL

ENERGY-SAVING PAR LAMPS

The LitePAR "AT" 70- and 45-watt PAR 30 and PAR 20 lamps combine the benefits of halogen lighting with Litetronics lamp features. The LitePAR units can replace standard 100-, 75-, or 50-watt incandescent reflectors, and 75- or 50-watt halogen PAR lamps. A patented mounting system locks the halogen capsule firmly in the lamp assembly. The lamps are available in both flood and spot beam patterns, and have a rated life of 2,500 hours. Litetronics International, Alsip, IL. **Circle 55**

PORTABLE REMOTE CONTROL

The DEC Remote Command System permits the operation of lights and appliances from up to 75 feet away. The system consists of the hand-held transmitter and a plug-in transceiver. The system sends radio-transmitted command signals through walls and ceilings from anywhere inside or outside the home. The transceiver picks up the signal and conveys it along the AC wiring network to up to eight groups of receiver modules set to the same letter code. Leviton Manufacturing Co., Inc., Little Neck, NY. **Circle 56**

LOW-VOLTAGE HALOGEN SYSTEM

Illudec low-voltage lighting system is based in an insulated, perforated cable with contact openings spaced 1-inch apart. The Halogen Mini-Spot can be placed at any point along the cable, which can also be installed into a plastic mounting rail with an adhesive back. Also available are Mini-Lights with incandescent lamps for tape lighting. Multi-Contact USA, Inc., Santa Rosa, CA. **Circle 58**

OFFICE TASK LIGHT

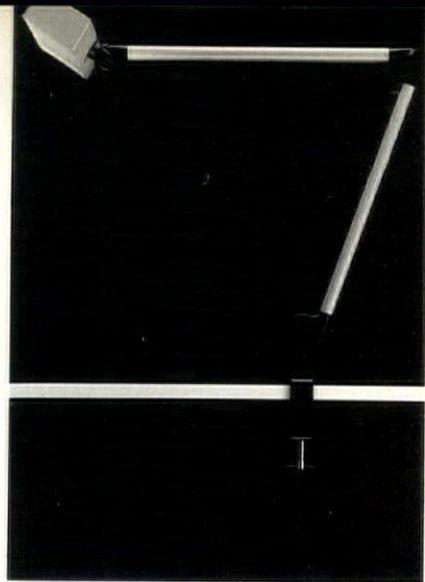
The Milano office task light is part of the Euro-Select Series. It features a prismatic diffuser that directs light onto the work area, reducing glare and reflections. The Milano is offered in single and twin arm styles that provide both horizontal and vertical movement, enabling the user to position the lamp. The fixture uses one 13-watt, PL lamp, and comes in matte black and light grey. Custom colors are available on special orders of 50 or more. The unit may be mounted by clamp, table base, or open office furniture system panel bracket. Waldmann Lighting Company, Wheeling, IL. **Circle 59**

RECESSED HOUSING MINIATURE TRIMS

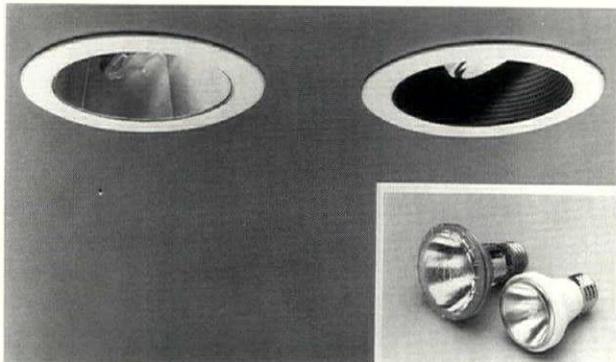
These miniature trims are designed to be used with the company's R4 Series of recessed housings. The trims have adjustable sockets so lamps can swivel and adjust depending on the size of the lamp. A 50-watt PAR 20 lamp adjusts with a 20-degree tilt. The smaller 55-watt PAR 16 lamp adjusts up to 30 degrees from vertical. Models offered include the R441 with grooved black baffle, the R442 with clear reflector, the R443 (not shown) with gold reflector, and the R444 (not shown) with polished black reflector. Capri Lighting, Division of Thomas Industries Lighting Group, Los Angeles. **Circle 60**



LOW-VOLTAGE HALOGEN SYSTEM



OFFICE TASK LIGHT

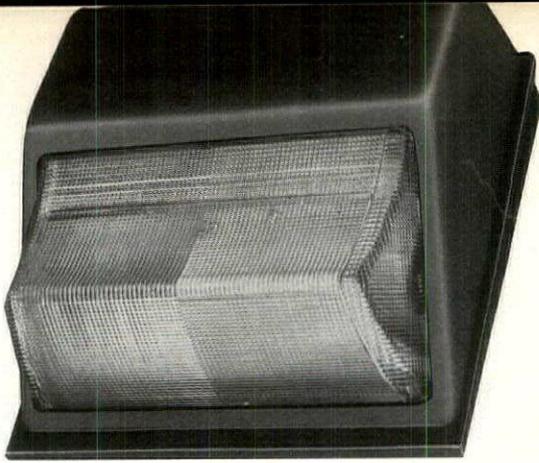


RECESSED-HOUSING MINIATURE TRIMS

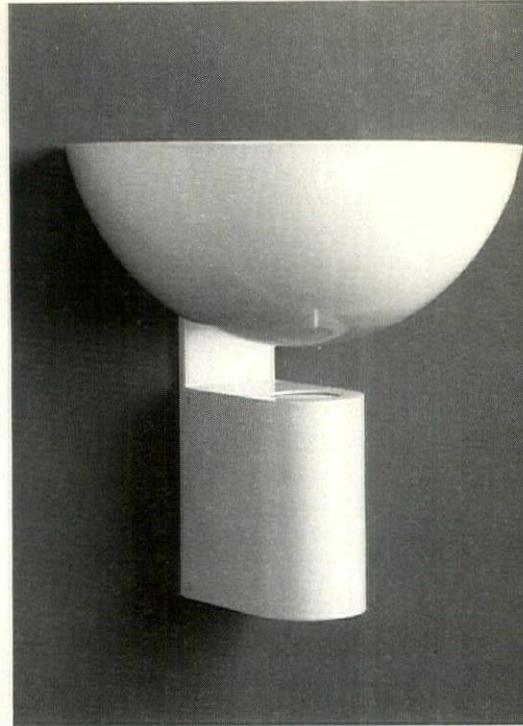
Something's happening...
Something exciting...
Something **HOT.**

from
Abolite Lighting

ABOLITE
LIGHTING

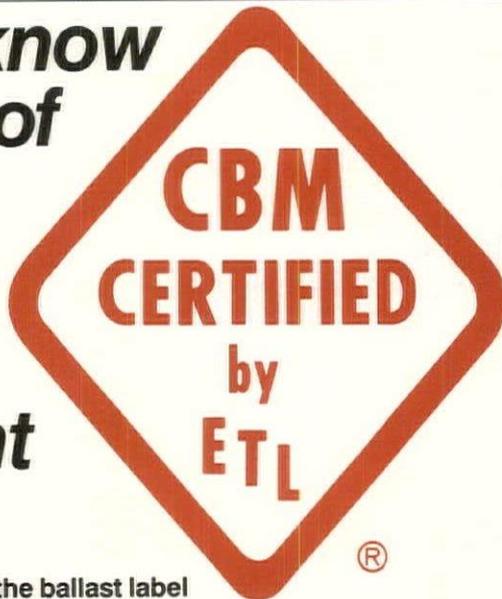


BUILDING-MOUNTED WALL LIGHT



METAL HALIDE INDIRECT FIXTURES

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Because "CBM Certified" on the ballast label is your assurance of quality and performance.

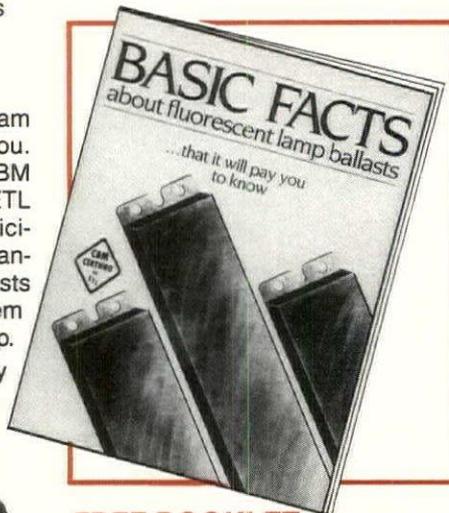
It means:

-  Ballasts that provide specified lamp performance, including full light output and rated lamp life...from the "certified-for-use" types listed on the ballast label...performance that meets or exceeds the requirements of ANSI C82.1 and C78.
-  Ballasts that meet the standards of ANSI/UL 935.
-  Ballasts that provide efficient use of energy...operate at high power factor, too.

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FREE BOOKLET

Contains facts about ballasts and fluorescent lighting it will pay you to know.

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Circle No. 17 on product card

METAL HALIDE INDIRECT FIXTURES

The Metal Art Design line of indirect metal halide fixtures, designed by Stan Davis, includes freestanding and office-panel mounted models, and wall sconces with built-in ballasts. The company originally designed the fixtures to solve problems associated with eye-strain and fatigue where computer terminals are used. The new fixtures use smaller reflectors, but distribute an unusually broad peripheral pattern of illumination across the ceiling using 175-watt to 400-watt high-output, metal halide lamps. Orgatech America, Beverly Hills, CA. **Circle 61**

BUILDING-MOUNTED WALL LIGHT

The 400-watt building-mounted wall light has a clear, prismatic glass refractor that is thermal/shock resistant. The one-piece, die-cast aluminum housing is hinged for easy maintenance, and the quick disconnect feature allows for simpler installation and servicing. The specular aluminum reflector is precision-formed. The luminaire is UL-listed for wet location feed-through wiring, and is offered in a polyester-coated dark bronze finish. Models are available for 150-watt through 400-watt high-pressure sodium and metal halide lamps. Day-Brite Lighting, Tupelo, MS. **Circle 62**

NEW PRODUCTS



LARGE-SPACE FIXTURES

LARGE-SPACE FIXTURES

The 1,000-watt SFU series of fixtures are designed to provide economical, glare-free lighting for gymnasiums, natatoriums, clean manufacturing facilities, and other large-space facilities with high ceilings. The symmetrical lighting distribution is achieved with the spun aluminum reflector working in conjunction with high-output metal halide lamps. A variety of decorative housings are offered, and attach easily to the reflector assembly. The SFU standard finish is satin white, but other colors can be ordered. The fixture length is 84 inches, and the stem is chrome-plated with a 5/8-inch diameter. SPI Lighting, Mequon, WI. **Circle 63**

EMERGENCY LIGHTING UNIT

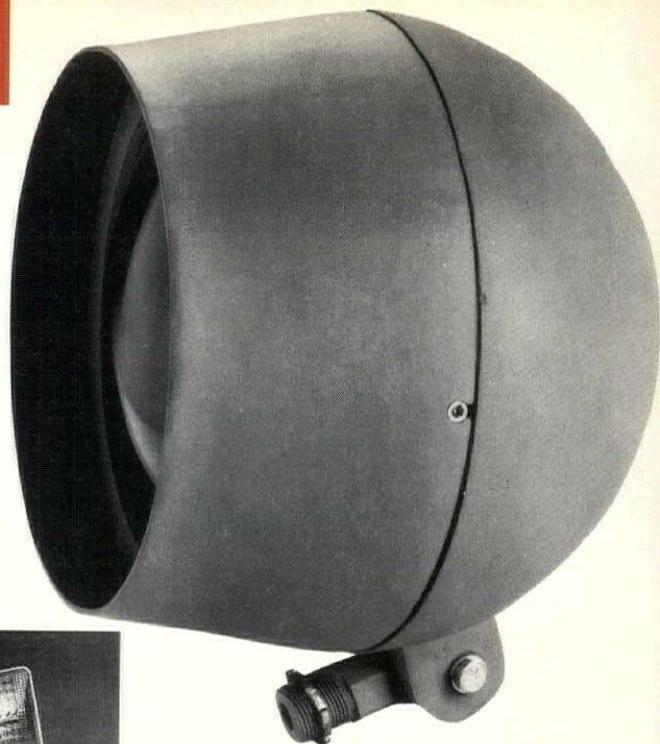
The CR6 comes in a matte ivory finish and is designed with the electronics completely recessed into the ceiling. Only the face plate and two lamp heads are visible. The CR6 is available in a variety of wattages, including 14, 18, 25, and 28 watts. The 14- and 28-watt versions are supplied with NiCad batteries. The unit has Accu-Chip Charger reliability, and upon detection of a power failure, will provide emergency light for 90 minutes. Chloride Systems, Burgaw, NC. **Circle 64**

ARCHITECTURAL FLOODLIGHT

The Vector features a rugged cast aluminum housing with an adjustable .75-inch fitter. It is suited for multi-unit trough mounting, and available for use with 300-watt and 500-watt PAR lamps. Magni-Flood Inc., West Babylon, NY. **Circle 65**



EMERGENCY LIGHTING UNIT

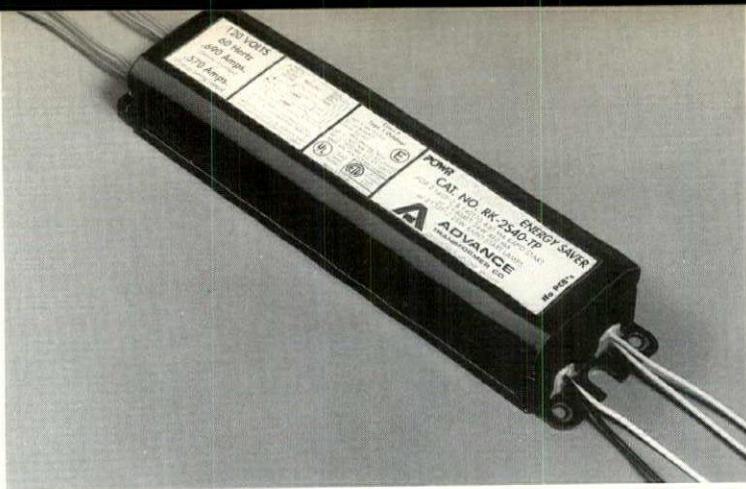


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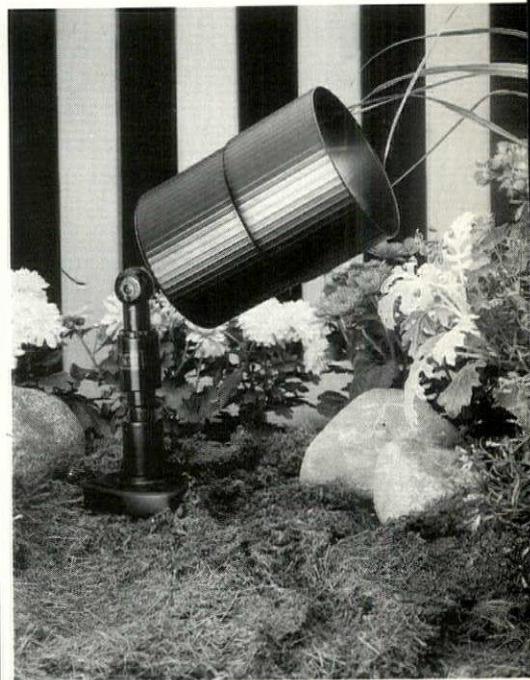
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HALOGEN FLOODLIGHT

RAPID-START LAMP BALLAST

The PowrKut Mark IV ballast for two rapid-start lamps employs proprietary technology to achieve energy savings without sacrificing light output in fluorescent lamps. This allows the basic lighting performance levels for which lighting systems were originally designed to be maintained. It is suited equally for spot replacement, retrofit, and new construction applications. The ballast is A sound rated, runs 25 percent cooler than conventional electromagnetic ballasts for long life, has standard wiring, a standard size can, and a metalized film non-PCB capacitor. The unit is UL-listed. Advance Transformer Co., Rosemont, IL. **Circle 66**

HALOGEN FLOODLIGHT

The PL145 halogen floodlight features a recessed lamp that cloaks the light and emphasizes the area being lit. It uses a 25-watt halogen PAR 36 lamp. Baked epoxy enamel paint is electrostatically applied to the housing to provide a durable finish. Wall-mount and conduit-mount models are available. Intermatic Inc., Spring Grove, IL. **Circle 67**



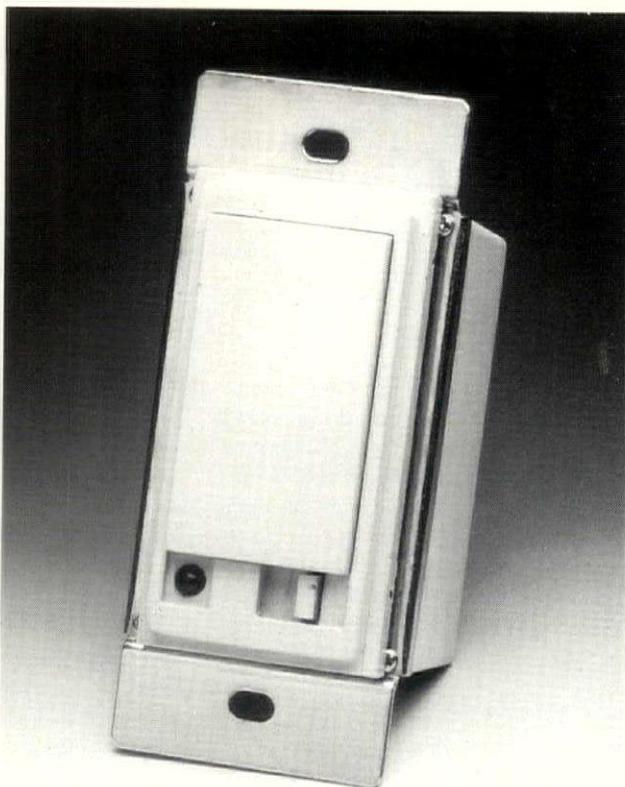
DUSK/DAWN LIGHTING CONTROLS

DUSK/DAWN LIGHTING CONTROLS

The SunTrackers electronically calculate the movement of the sun to turn lights on at dusk and off at dawn. This makes it possible to turn lights off at a preset time at night and turn them on before sunrise for maximum lighting control and energy savings. They are designed especially for outdoor lighting, parking lots, and billboards. One and two channel models are available. Both feature two SPDT relays, 15A resistive and inductive rating, 24-hour programming with skip-a-day, 365 day calendar, automatic daylight savings time and leap year adjustment, and 100 hours of battery carryover at 70 degrees. Paragon Electric Company, Inc., Two Rivers, WI **Circle 90**

AUTO-OFF SWITCH

The Reflex auto-off switch automatically turns household lights off once the occupant leaves the room. A built-in, adjustable timer allows homeowners to program the switch to turn lights off up to 30 minutes later. It controls up to 500 watts of incandescent lighting, is intended for indoor installation only, and is not designed for use with three-way circuits. The switch fits in a standard electrical switch box and requires connecting only two wires to the existing line. The unit is UL-approved, and carries a five-year limited warranty. Heath Zenith, Benton Harbor, MI. **Circle 91**



AUTO-OFF SWITCH



**Sizzling...
Sensational...
Hot.**

**The Neveaux Wave
...so hot it sizzles.**

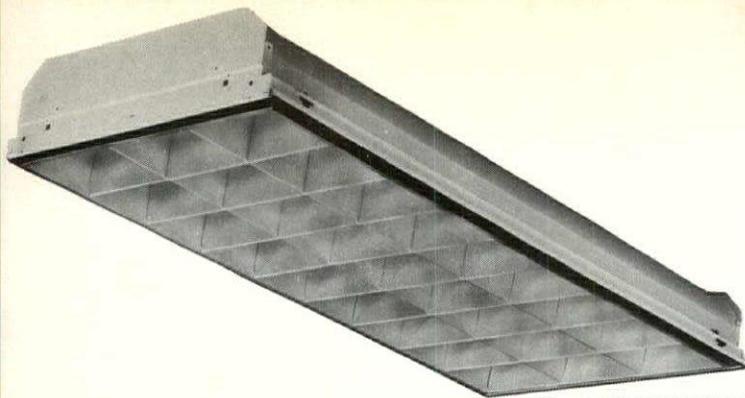
ABOLITE
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For a complete color brochure, call (800) 837-5483 or your local Abolite Representative.

NEW PRODUCTS



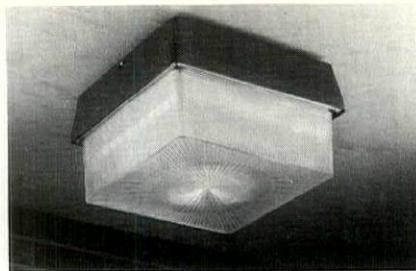
VDT LUMINAIRE

CANOPY/AREA LIGHT

Lyte Cube mounts to any canopy or ceiling where heights do not exceed 15 feet. Applications include parking garages, walkways at strip shopping malls, maintenance areas, industrial corridors, low-ceiling warehouses, and storage areas. The unit is available with 70- to 175-watt high-pressure sodium or metal halide lamps, and comes prelampped so it does not need to be opened during installation. The Lyte Cube housing comes fully gasketed with a UL label for wet locations. Stonco Lighting, A Genlyte Company, Union, NJ. **Circle 93**

DIGITAL ILLUMINANCE METER

The Model IM-3 Digital Illuminance Meter combines micro-processor technology with a stable silicon diode photocell to provide both simple operation and accuracy over the extended measuring range. The unit features a liquid-crystal digital

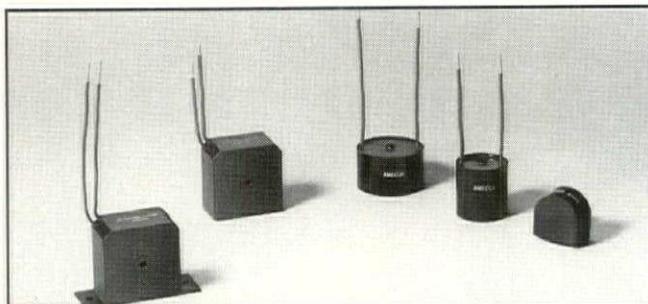


CANOPY/AREA LIGHT

display, and a detachable detector head for remote readings, switchable reading from lux to footcandles, auto-zero calibration, auto range measuring, two output terminals (analog and digital), and an optional keyboard. Topcon Instrument Corporation of America, Paramus, NJ. **Circle 94**

VDT LUMINAIRE

The Ultra luminaires are designed specifically to provide high visual comfort in areas with video display terminals (VDTs). The Ultras are large cell, aluminum parabolic louvered fixtures available with a choice of ceiling configurations: Grid (NEMA G), Flange (NEMA F), Z-spline/Modular (NEMA M/Z), and Screw Slot (NEMA SS). The fixtures provide brightness control and high comfort levels to room occupants. Day-Brite Lighting Co., A division of Thomas Industries Inc., Tupelo, MS. **Circle 95**



New Packaged Debuzzing Chokes Offer No Noise In No Time . . .

Extremely quick and easy to install for both new and retrofit applications, Amecon's new line of architectural chokes essentially eliminate noise in dimmers, lamps, and fixtures. The chokes are professionally packaged to dramatically reduce installation time

as they mount to standard recessed fixtures, remote areas and wall boxes. They're built with high temperature, high impact, fire retardant UL recognized materials. Attractively priced, they're rated at 50 and 75 watts at 12 volts, and 400 to 750 watts at 120 volts.

CONFIG.	DIA.	HEIGHT	WIDTH	DEPTH	MTG.
CIRCULAR	2"			1-3/16"	Centerhole
	1-5/8"			1-1/2"	Centerhole
	1-1/2"			1-1/4"	Centerhole
SQUARE		2-3/32"	2-3/32"	1-3/32"	Vert/Horiz
	"ARCH"	1-3/8"	1-3/8"	3/4"	PCB/Vert

Applications are recommended for all types of architectural light dimmers: accent, decorative, display, and nearly anywhere a noise-rejection system is required. Call or write for new Technical Bulletin/ Selection & Design Guide ALC-0689.



AMECON Quality Magnetics & Electronics

Amecon, Inc., 1900 Chris Lane, Anaheim, CA 92805
TEL: (714) 634-2220, FAX: (714) 634-0905

Circle No. 21 on product card

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DIGITAL ILLUMINANCE METER

Conferences & Expositions

1991 SHOW DATES

September 6-8 Eco Expo. Jacob K. Javits Convention Center, New York City; (619)295-3461.

September 20-21 IBD/ASID Conquest III. Marriott Hotel, New Orleans; (601)863-3325.

September 25-29 Isabelle C. Greene's Mid-Atlantic Tour: Longwood Silver Garden and Others. (805)963-4364.

October 20-22 Electrical Industry Exposition and Fiber Optic Expo. Moscone Center, San Francisco; (301)657-3110.

October 28-31 CMC '91 and A/E/C Systems. Nashville, Tennessee; ((502)388-7656.

November 21-24 Metropolitan Home Show. Jacob K. Javits Convention Center, New York City; (212)686-6070.

December 4-6 A/E/C Systems. Toronto; (502)388-7656.

December 7-10 NADI 99th Visual Merchandising/Store Planning/Shop Fitting/Point of Purchase/Display & Design Market. New York Passenger Ship Terminal, Piers 90-92; (212)213-2662.

1992 SHOW DATES

February 15-19 A/E/C Systems. Berlin, Germany; (502)388-7656.

June 2-4 ShowTech '92—International Trade Fair and Congress for Entertainment Technology, Stage Engineering, Equipment, Organization. Berlin Exhibition Fair Grounds; 030/3038-0.

June 8-11 A/E/C Systems '92. Dallas; (502)388-7656.

July 9-11 INDEX '92. Anaheim Convention Center, Anaheim, CA; (212)391-9111.

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SYLVANIA LIGHTING DIVISION, US, Sylvania Lighting Center, Danvers, MA 1-800-544-4828.

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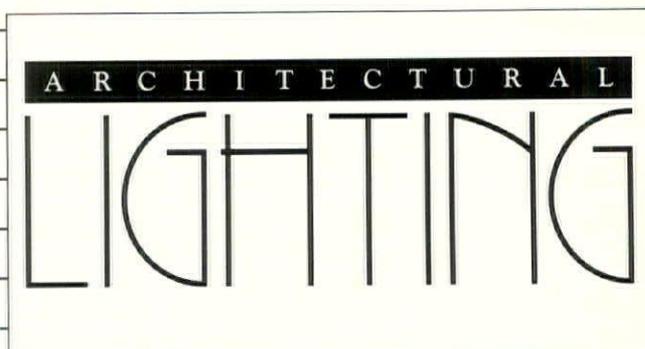
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Inlite Corp.	415-849-3230	H.L. (Tex) Bell	& Fixture	503-281-7948	Jim Kelly
Kim Lighting	818-330-3861	Henry Glover			
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