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LIGHTING

JANUARY 1990 \$8.00

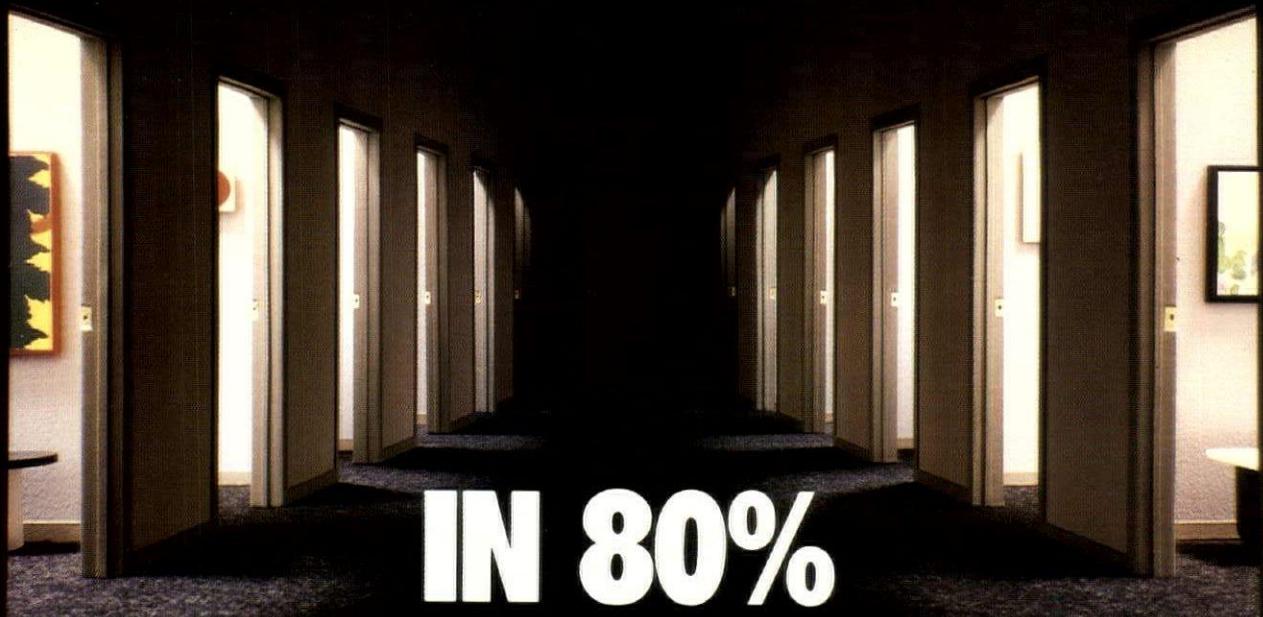


**CLASSIC
RICHNESS
RESURGENS
PLAZA LOBBY**

**DOBBS FERRY OFFICE
THEATER OF LIGHT**

**GITANO SHOWROOM'S
COLOR CONCEPTS**

00066 ***** 5-DIGIT 02139
86J515FRA00 01 AR 9999
REY BERG PTNR ARCH
S/HOWLAND ASSOCIATES
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IN 80% OF THESE OFFICES, THE LIGHTS ARE ON BUT NOBODY'S HOME.

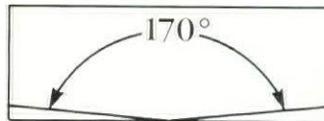
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Unfortunately, lights are left on in hallways, classrooms, and outside, too.

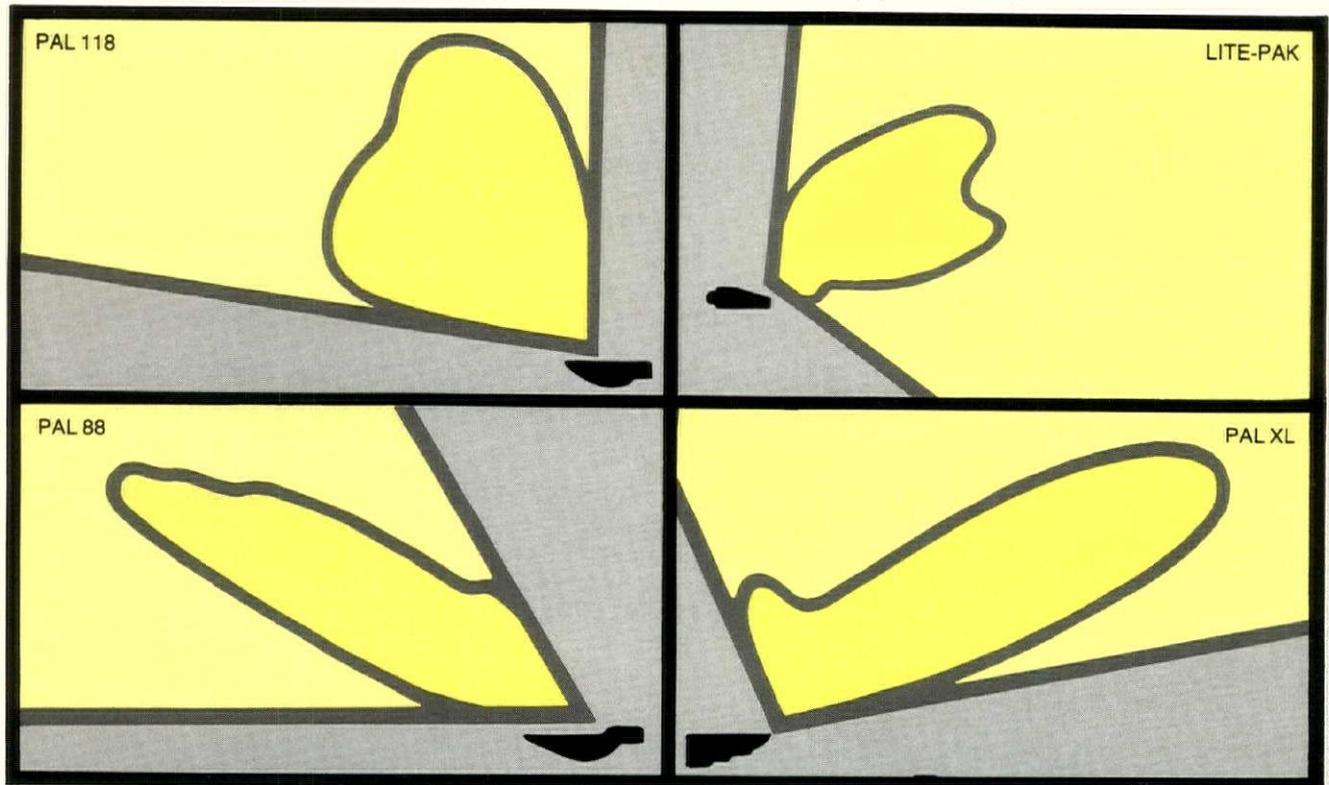
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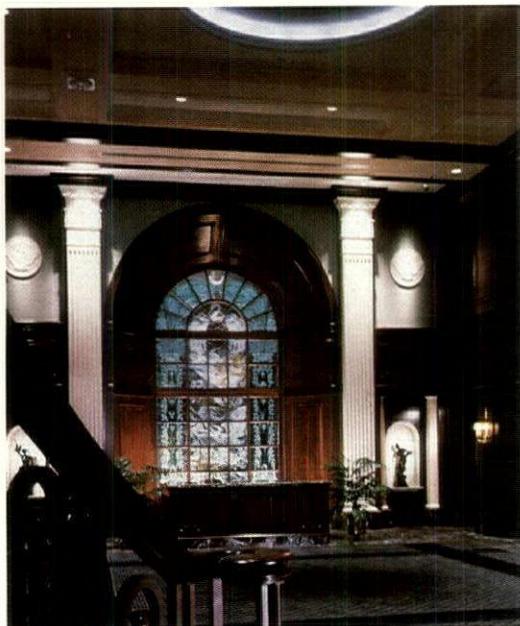
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ARCHITECTURAL
LIGHTING

JANUARY 1990
VOLUME 4, NUMBER 1



COVER PHOTO BY GABRIEL BENZUR INC.

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GROUND EFFECTS

This tree is illuminated by three of the favorite lamp choices of landscape designers – from left to right, a 70 watt Metal Halide HQI, a 100 watt Mercury Vapor, and a 100 watt Quartz Halogen. A landscape rainbow – same tree, different effects. Hydrel recognizes the importance of lamp selection by offering a wide line of fixtures to protect and conceal the source.

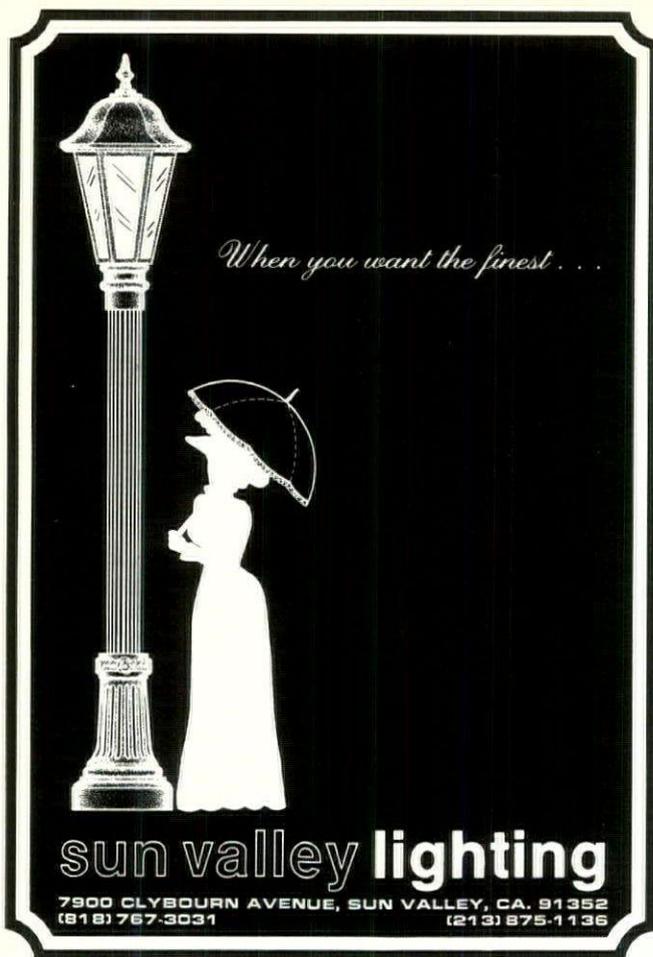
Hydrel's 4500 Series Accent Lights were used in this illustration. The 4530 for the Metal Halide lamp, the 4519 for the Mercury Vapor lamp, and the 4525 for the Quartz Halogen lamp. The 4500 Series was designed for the rigors of the outdoor environment. Hydrel's forty years of experience has proven the value of providing the finest materials, testing and ongoing innovation to provide products with an extra margin of reliability.



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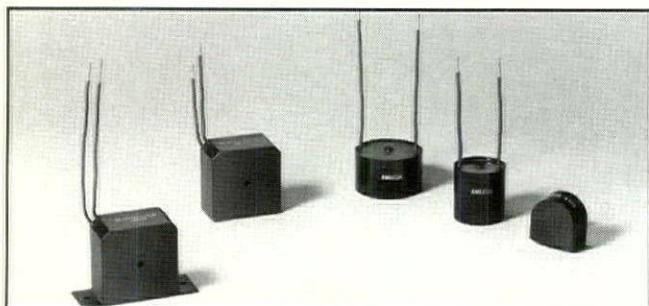


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	1-1/2"			1-1/4"	Centerhole
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ARCHITECTURAL LIGHTING
will present Readers' Choice
Hall of Fame Awards
in recognition of
individual contributions
to the lighting industry
and lighting design/engineering
profession during LightFair
April 10-12, 1990
at the New York Hilton

We invite you, our readers, to decide who will be inducted into the lighting Hall of Fame. Honorees nominated should have demonstrated outstanding accomplishments in any of the categories listed below.

Please fill out and return the coupon below, or drop us a letter or postcard by
MARCH 10, 1990.

I NOMINATE the following industry leaders to the
Hall of Fame (more than one nomination in each
category can be made):

LIGHTING DESIGN/
ENGINEERING: _____
PRODUCT DEVELOPMENT: _____
RESEARCH _____
EDUCATION: _____
OTHER: _____

Please attach a note briefly stating WHY each nominee
deserves to be recognized.

NAME OF SUBMITTOR _____

**DEADLINE FOR RECEIPT OF NAMES IS
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Mail to:

ARCHITECTURAL LIGHTING

ARCHITECTURAL
LIGHTING

Hall of Fame
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1515 Broadway, 34th Floor
New York, NY 10036

What Makes The World Go Round?

What's the key to making lighting a real achiever? Education. Create higher perceived value for good lighting in the public's mind," said Fred Heller, Genlyte chairman, in an address at the 1989 IES Annual Conference.

Well, who's responsibility is educating the public? Some say non-profit associations. Ah, but there's a catch. Consider the enormous difficulty in trying to raise funding for lighting education when there are so many other worthy and serious causes competing—life-threatening diseases, natural disasters, environmental problems.

Enter lighting manufacturers, and rejoice that they are capitalizing on the connections between education and profits. The trend today is toward building showrooms and labs that reveal the effects of light in relation to realistic settings, as well as feature product displays.

Increasing awareness of lighting among consumers will benefit lighting design professionals and manufacturers alike through heightening demand for products and services.

So, what makes the world go round? Love, of course, but in business, money helps, too.

WANDA JANKOWSKI
EDITOR

Lightolier Introduces Lightstyles '89



Educating the consumer and the professional about lighting as a creative medium is the focus of the recently announced Lightstyles '89 initiative from Lightolier, a division of Genlyte, which reflects a \$5 million plus investment in product, presentation technique, and marketing tools.

The highlight of the marketing and product campaign is the use of up-front showroom displays which present lighting concepts and products in vignettes to illustrate lighting effects.

Shown is the dining room vignette which demonstrates a variety of fixtures and techniques—downlighting, uplighting, decorative, task, ambient—keyed into dimmers and controls that produce numerous combinations.

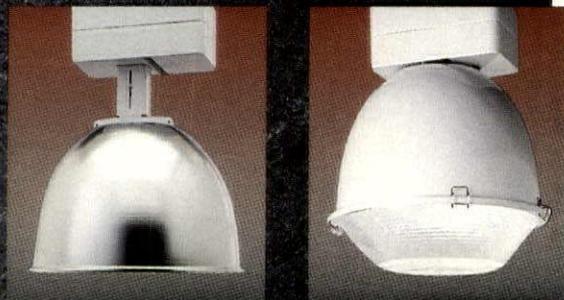
We're not afraid of the competition.

We are the competition, because we build our products to exceed your quality standards.

For cooler performance and extended life, our die cast housings have a thermal chimney separating the ballast from other electrical components. To resist corrosion, all fixtures are finished with acrylic powder paint. And whether it's hydroformed aluminum or prismatic acrylic, our reflectors are designed for high efficiency and low glare.

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In Wisconsin: 800-236-7500

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CONFERENCES & EXPOSITIONS

MARCH 19-22. NCGA '90. Anaheim Convention Center; (703)698-9600.

MARCH 23-26. 1990 WAVM Market. Showplace Design Center, San Francisco; (415)431-1234.

MARCH 23-28. Furnidec '90. Helexpo Fairgrounds, Thessaloniki, Greece; 031-222.233.

MARCH 30-APRIL 1. Seventh Annual Advanced Residential Construction

Conference and Exhibition. Leominster, MA; (802)254-2386.

APRIL 8-11. National Lighting Conference. Robinson College, Cambridge, England; CIB SE, Lighting Division, Conference Committee, Delta House, 222 Balham High Road, London, SW12 9BS, England.

APRIL 10-12. Lightfair. New York Hilton, New York City; (404)220-2107.

APRIL 11-12. Southwest Builds '90. Phoenix Civic Plaza, Phoenix, AZ; (213)477-8521.

MAY 19-22. AIA Conference. Houston; (202)626-7396.

JUNE 14-16. Lighting World/Chicago. McCormick Place, Chicago; (212)391-9111.

SEMINARS & WORKSHOPS

MARCH 7. Chicago Illumination Design Awards (IES seminar). Merchandise Mart, Chicago; (312)527-7981.

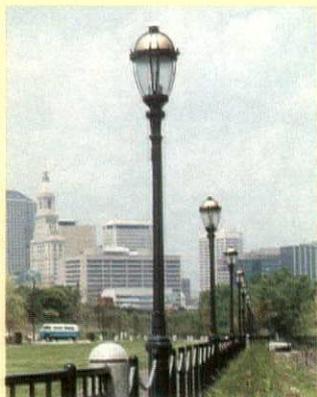
MARCH 13. IIDA Award Presentation, Stevenson Haus, Hazel Park, MI; (313)237-9038.

MARCH 19-21. "Reflector Design—Theory and Practice." Stapleton Plaza Hotel, Denver; (508)745-6870.

APRIL 5. "Lighting Building Exteriors," (IES seminar). Merchandise Mart, Chicago; (312)527-7981.

MAY 3. "The Impact of Color and Light on Office Exteriors," (IES seminar). Merchandise Mart, Chicago; (312)527-7981. ■

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Seven 1989 IALD Design Awards Presented

The outstanding balance between lighting and architecture, the emotional impact of light, technical excellence, and innovation are what separated the three projects presented with Awards of Excellence, and the four honored with Citations from the approximately 100 projects submitted in the 1989 Awards Program of the International Association of Lighting Designers (IALD). The awards were presented at a dinner held November 10, 1989 at the Parker Meridien Hotel in New York City.

Several of the projects outlined below will be featured in upcoming issues of *Architectural Lighting*.

AWARDS OF EXCELLENCE

NATIONAL GALLERY
OF CANADA
OTTAWA, ONTARIO

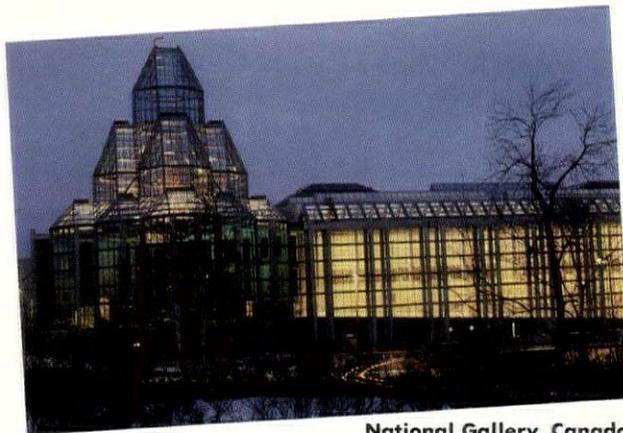
LIGHTING BY Paul Marantz, IALD, Charles Stone, and Susan Brady, Jules Fisher & Paul Marantz, Inc., New York, NY

JURY COMMENT

Praiseworthy is the romanticism of the design, coupled with its technical excellence, particularly the success of a two-story skylight shaft in creating a quality of light on the ground level, which is equal to the light on the second, or top, story.

DETAIL The two-story skylight shafts are lined with a highly reflective silver-coated mylar. At the bottom, a lens reverses the columnating effect of the long shaft and provides batwing distribution of the daylight. Visitors can see the workings of the shaft through a six-inch slot in the lens grid, and through portholes in the crossovers on the second floor.

PHOTOGRAPHER
Malak of Ottawa



National Gallery, Canada

ROYALTON HOTEL
NEW YORK, NY

LIGHTING BY Paul Marantz, IALD, and Bill Sherman, Jules Fisher & Paul Marantz, Inc., New York, NY

JURY COMMENT

The lighting is fresh, innovative, romantic, and dreamy with a consistent, though varied, sensibility that exactly fits the architecture.

DETAIL Illumination in the small lobby lounge is provided by custom-designed downlights with 3-inch apertures, miniature low-voltage incandescent striplights concealed in the dome cove, and floor-mounted recessed uplights.

PHOTOGRAPHER
Tom Vack



Royalton Hotel

CONTINUED ON PAGE 12

AWARDS OF EXCELLENCE

CONTINUED FROM PAGE 11

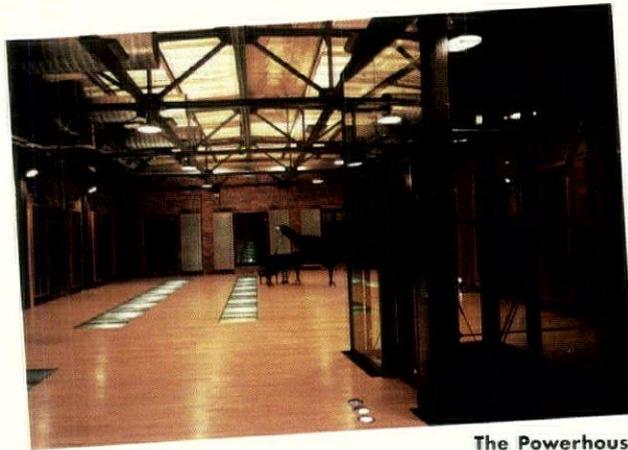
THE POWERHOUSE
PRIVATE RESIDENCE
DALLAS, TX

LIGHTING BY Pamela Hull
Wilson, IALD, Dallas, TX

JURY COMMENT

Integration, consistent theme, and inventiveness characterize the design that "exudes energy and makes you smile."

DETAIL The third floor, which is used primarily for



The Powerhouse

chamber music, has original reflector fixtures relamped with silver-bowl lamps, sheet metal scoops that use incandescent lamps to uplift the concrete ceiling, and junction boxes that accept clamp-on incandescent accent lights for special occasions.

PHOTOGRAPHER

James F. Wilson

CITATIONS

THE DAME POINT BRIDGE
JACKSONVILLE, FL

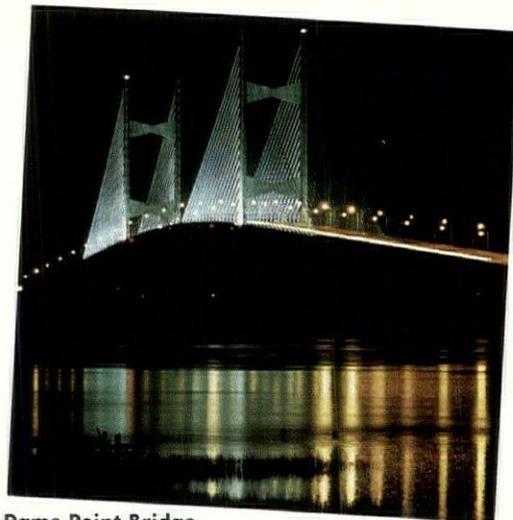
LIGHTING BY Robert J.
Laughlin, Jr., Winter
Park, FL

JURY COMMENT The straightforward solution is an example of knowing when to stop. The bridge is equally graceful at night as during the day.

DETAIL Cables are lighted with 400-watt metal halide lamps in a marine-type floodlight fixture with narrow vertical and wide horizontal beams mounted between every other set of cables and aimed straight up. A platform was built at the towers to mount 400-watt metal halide lamps, alternating with 400-watt high-pressure sodium lamps to add warmth and color. These lamps are mounted in the same fixture used for the cables, but with narrow vertical and narrow horizontal beams. In addition, three 1,000-watt very-narrow beam metal halide fixtures were used to reach the top of the 470-foot towers.

PHOTOGRAPHER

Richard Carlson



Dame Point Bridge

SULLIVAN & CROMWELL
LAW OFFICES
NEW YORK, NY

LIGHTING BY Richard
Nash Gould, Theresa Atkin,
and John Fetterman,
Richard Nash Gould
Architects, New York, NY

JURY COMMENT The lighting, while quiet and well balanced, adds needed detail to the architecture and represents a more-than-competent solution to a conventional type of project.

DETAIL Compact, custom-designed wall sconces that use 40-watt full-frost tensor bulbs for minimal heat dissipation problems and low lamp replacement cost provide accent lighting in the reception and gallery circulation areas. Custom-designed patterned glass skylight fixtures lamped with 40-watt fluorescents define circulation points in circulation areas.

PHOTOGRAPHER

Jeff Goldberg/ESTO



Sullivan & Cromwell

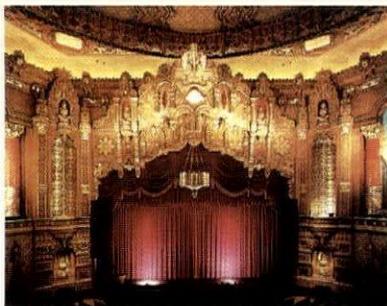
KYOTO ARTS
AND FASHIONS STORE
NEW YORK, NY

LIGHTING BY Toshiko
More, New York, NY

JURY COMMENTS
Restraint characterizes the
design, and the designer
synthesizes the architecture
and lighting to arrive at a
simple, well-balanced
solution exactly right for
the space.

DETAIL To achieve
flexibility required by
changing displays, track
lighting is hidden in the
central ceiling soffit and
installed perpendicularly to
the floor, with different
types of lights to spot
and wash.

PHOTOGRAPHER
Peter Paige



Fox Theater



Kyoto Arts

FOX THEATER
RESTORATION
DETROIT, MI

LIGHTING BY Ron
Harwood, Illuminating
Concepts, Farmington
Hills, MI

JURY COMMENT The
designer maintained the
clarity of the architecture
while concealing the light
sources well, and achieved
a high level of detail.

DETAIL The proscenium
front is illuminated by first-
level balcony rail lights
with the addition of 500-
watt PAR 56 spots. The
Buddhas at left and right of
the stage are lit with high-
intensity display lights
located within the niches.
The grillwork above the
Buddhas is uplit with red-
gelled and ungelled
halogen PAR 38 lamps.

PHOTOGRAPHER
Scott Sutton

1989 IALD Awards Jury

Gordon Anson, chief lighting
designer, National Gallery of
Art, Washington, DC

Justin Henderson, senior editor,
Interiors

Carl Hillman, IALD, IES, Carl
Hillman Associates, Inc., New
York, NY

Hayden McKay, AIA, IALD,
MIES, Hayden McKay Lighting
Design, New York, NY

L.C. Pei, AIA, Pei Cobb Freed &
Partners, Architects, New York,
NY

Scott Strasser, director of design
(Dallas), CRS Sirrinc, Inc.,
Dallas, TX

Andre Tammes, IALD, Lighting
Design Partnership, London and
Edinburgh

TO LEARN MORE Though 1990
Awards Program deadlines for
entries had not been set by press
time, more information can be
obtained from: Marion Greene,
IALD, 18 East 16 Street, Room 208,
New York, NY 10003,
212-206-1281. Submission of an
entry is not restricted to IALD
members. ■

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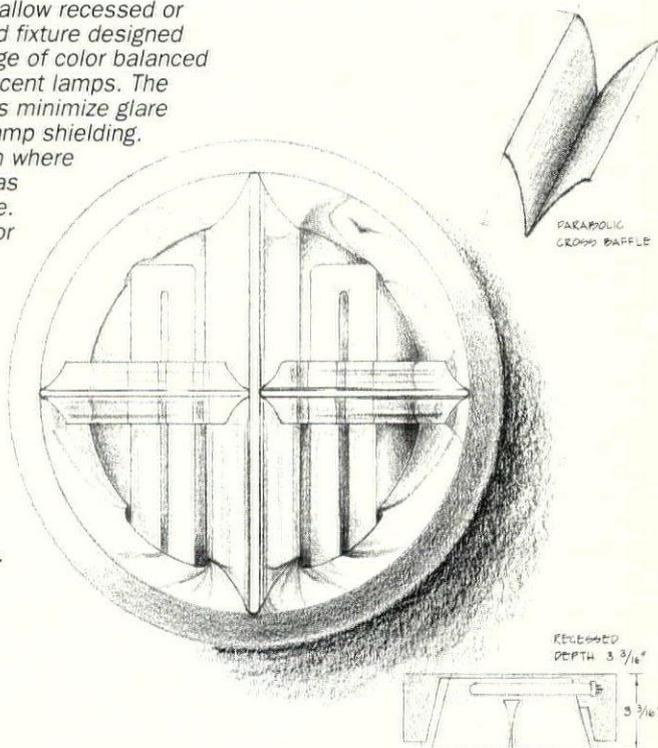
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surface mounted fixture designed
to take advantage of color balanced
compact fluorescent lamps. The
parabolic louvers minimize glare
by maximizing lamp shielding.

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incandescent was
once appropriate.

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ballast; 120 or
277 volt. The
energy efficient
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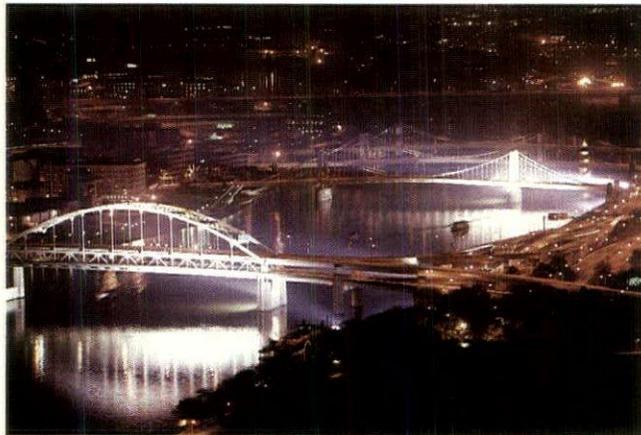
EDISON PRICE LIGHTING

ARCHITECTURAL LIGHTING AT ITS BEST

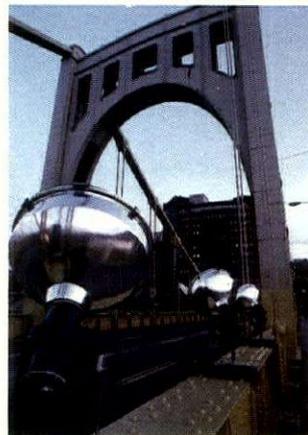
Edison Price Inc., 409 East 60 Street, New York, NY 10022 Tel: 212-838-5212 Fax: 212-888-7981

Circle No. 9 on product card.

A Glimpse Of Brilliant Bridgework



STEELTOWN'S BRIEF MAKEOVER: High pressure sodium lamps placed along the bridge ledges (right) were part of the unique but temporary lighting scheme created for two of Pittsburgh's bridges, lit fully (left) and inside and underneath only (below).



BY CATHERINE SCHEITING SALFINO
MANAGING EDITOR

When Pittsburgh's Fort Duquesne and Sixth Street bridges were temporarily lit for two nights last October, the event carried all the excitement of an opening night at the theater—which is just what the organizers hoped for.

The crowd that came to see the one-of-a-kind event

gathered for a pre-theater dinner buffet aboard a cruise boat that was moored on the Allegheny River. After dining, everyone took a short stroll to their seats at the temporary "Bridge Street Theater." The crisp night air was filled with the buzz of anticipation but soon a hush fell over the crowd.

And then, the lights came up.

The lighting of the bridges couldn't be an ordinary event, said lighting designer Abe Feder, of Lighting by Feder in New York.

"What we were doing wasn't ordinary," he explains. "We were lighting something temporarily—lighting the bridges for two nights, and then taking everything down. Gone. As if it was never there. Like building and striking a theater stage set."

Feder was approached with the proposition of lighting the bridges a year and a half ago by the Greater Pittsburgh Office of Promotion. Mary Kay Poppenberg, president of the agency, says lighting the bridges is a very old idea, but city officials just recently decided to pursue the project.

Because the city has 12 bridges, it was decided that only two bridges, which are very different structurally, would be lit on the city half of each. The challenge was to unify the diverse structures with light and make them each identifiable as a "Pittsburgh bridge."

Poppenberg said permanent bridge lighting is meant to assure people that the downtown area is safe, stimulate riverfront development, and lure visitors to the former steel town. Brilliantly-lit bridges, she says, would be a reflection of the city's renaissance.

So Feder met with Pittsburgh officials and when he offered his ideas for the project, they wondered how it would look.

"I said, 'Run a test.' Nobody runs a test on a project of this magnitude," Feder says. "Usually the lights are installed and that's the way they stay."

The \$50,000 test and subsequent feasibility study, which is due this month, will determine if it is aesthetically and financially

DETAILS

PROJECT: FORT DUQUESNE BRIDGE, SIXTH STREET BRIDGE

LOCATION: PITTSBURGH, PA

CLIENT: CITY OF PITTSBURGH

LIGHTING DESIGNER: ABE FEDER, LIGHTING BY FEDER

TECHNICAL SUPPORT: DUQUESNE LIGHT COMPANY

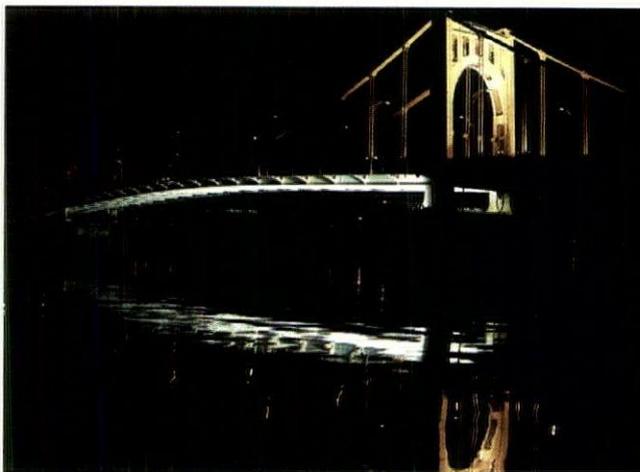
ELECTRICAL CONTRACTOR: SARGENT ELECTRIC COMPANY WITH IBEW-LOCAL 5

PHOTOGRAPHER: HERB FERGUSON, FERGUSON PHOTOGRAPHIC ENTERPRISES

LIGHTING MANUFACTURER: COOPER LIGHTING: on bridge ledge—1,000-watt high-pressure sodium lamps; GENERAL ELECTRIC: under bridge—1,500-watt Multi-Vapor metal halide lamps; PHILIPS: on trucks—1,800-watt HMI metal halide derivative; Nova Industries

"LIGHT THE BRIDGES" EVENT: October 25 and 26, 1989

KEY QUOTE: "There were so many unique aspects to this project, it was like an adventure."—Abe Feder, lighting designer

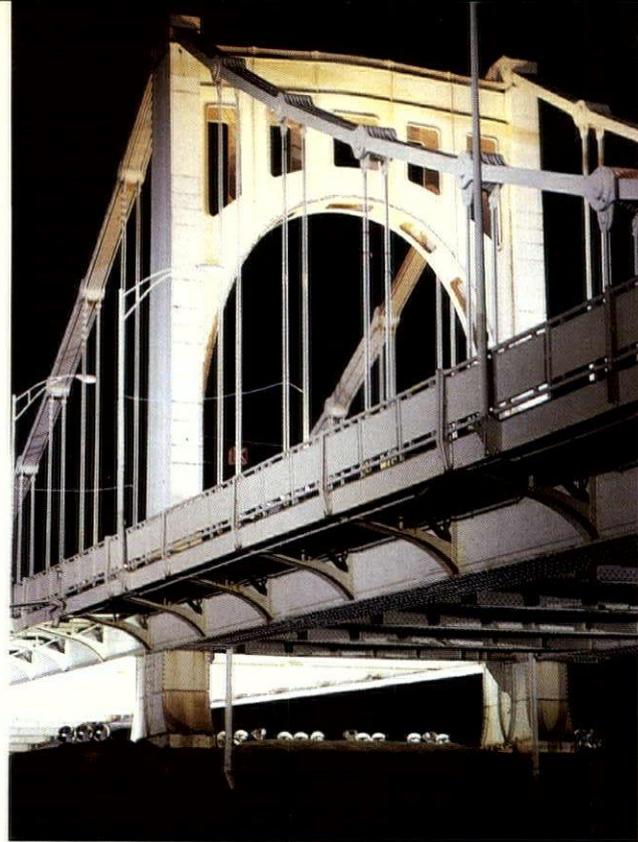


FROM OUT OF THE DARK:
Both superstructures were illuminated from inside, from below, and from the shore in lighting designer Abe Feder's three-step application.

sound for the city to light all 12 bridges. The test was made economically possible by the donation of time and materials by over 24 supporters, which included General Electric, Philips Lighting, Cooper Lighting, Nova Industries, the Duquesne Light Company, Sargent Electric Company, and the IBEW-Local 5.

Feder lit the bridges in three steps, each calling for a different lighting technique. First, he lit both bridges from within with 1,000-watt high pressure sodium lamps. Fourteen of these lamps were placed between the cables and aimed upward from the ledges of the Fort Duquesne Bridge. Sixteen lamps were affixed in the same manner on the Sixth Street Bridge. The interiors of each superstructure were washed in a golden glow by the 60-foot beams of light.

With the second step, it became apparent that the test was unique in more ways than one. Feder lit underneath the bridges with luminaires he developed—1,500 watt metal halide lamps that he put in BT 37 400-watt casings to attain a 16 degree beamspread. Eighteen of these fixtures were lined along the pier of each bridge. The lights were aimed at the underside of the bridges and the illumination refracted onto



the water below.

"If there's no light under the bridges, the structure may as well be over the Grand Canyon because you can't see the water," Feder says. "And the water is key to this project—it's part of the total design."

Judging from crowd reaction, the final technique was considered by many observers to be the most powerful. About 300 feet from the bridges, four pick-up trucks were stationed on the wharf, two on each side of each bridge. Mounted on racks on each truck were 12 1,800-watt lamps that are a derivation of the HMI metal halide lamps. When all 48 lamps were switched on, a cool white light was targeted on the bridge exteriors.

"I deliberately overwhelmed the audience with the truck lights," Feder says. "With many projects, people say, 'I wonder what it would look like if it were brighter.' The way I did the bridges, people knew what it looked like with a flood of light—and they generally thought it could be dimmer."

Feder says if the bridges

are to be lit permanently, he will use only a fraction of the 48 truck lamps used for the test. Also, for a permanent application, Feder says he would create architectural forms placed on shore to house the fixtures.

"There has to be some kind of lighting aimed at the bridges to reveal the structures," Feder says. "Otherwise, the top and bottom of the bridges are lit but they aren't revealed as a whole. Once the bridges are brought out of the darkness, they add to the city's landscape."

This opinion, albeit biased, was popular with Pittsburgh Mayor Sophie Masloff.

"There's no question, it's very beautiful," she said after the test. "It's a magnificent sight. It would be nice if it became permanent."

"However, we need to determine all of the costs and figure out who will share them. Where are the meters for these things?" she joked. "The Duquesne Light Company donated the power for this testing. But we have to look at future costs."

Duquesne Light officials estimated that based on fixtures used in the test, it could cost up to \$25,000 a month to light all 12 bridges. However, Poppenberg says it would probably cost less since fewer fixtures, meaning less power, would be used for a permanent project.

Some other practical concerns that will be taken into account in Feder's feasibility study regard the lighting's relationship to airplane, boat, and automobile traffic, as it could affect visibility.

Another factor noted in the November 13 1989 *Pittsburgh Post-Gazette* came from city astronomers at the Allegheny Observatory. They stated that the bridge illumination shot upward, creating too much light pollution. They also said the lighting used for the test contained a red component that caused interference with the particular telescope used at their facility.

A cooperative effort is being made to deal with these and other complex considerations if the bridge lighting does become permanent.

"What many people seem to forget is that this was a test, the point of which was to achieve the ultimate brilliance and then work within that framework—refine it," Feder says.

Now that most of the steel mills in the city have shut down, officials are focusing on creating a brighter, sleeker image for Pittsburgh. Some say brilliantly-lit bridges could be the sign that says as much. ■

McKesson Lobby—From Dismal To Dazzling

BY CHRISTINA LAMB
ASSISTANT EDITOR

ELEVATOR LIFT: Appearing dark and dismal, the large entry lobby and elevator bank at the foot of the 38-story McKesson office building needed a lift. Fluorescent, HQI metal halide, and quartz PAR 38s produce a brighter atmosphere while enhancing the dark surfaces. (Left) Head-on view of elevator bank. (Below) Elevator bank and remodeled lobby.



CHALLENGE Surrounding the elevator core of the McKesson office building, the 28-foot-high perimeter lobby was lit by 300-watt downlights that were severely downwattaged to reduce costs. Dark finishes and surfaces, such as the flamed granite walls, added to the already gloomy atmosphere. Aesthetics needed to be improved with better, more efficient lighting.

DESIGN/TECHNICAL CONSIDERATIONS Criteria for the relighting included: increasing light levels in the lobby and the inner elevator lobby; enhancing art exhibits to be displayed in the lobby and allowing for nighttime viewing from outside the building; and increasing system flexibility to accommodate the rotating exhibits. This was to be accomplished while adhering to an \$11/square foot installed budget and a 1.2 watts/square foot energy restriction. Due to outdoor construction, it was also important that light be directed away from the glass curtain walls so that any notice of dust and dirt adhering to the glass would be minimal.

METHOD Tri-phosphor fluorescents, HQI metal halide, and quartz PAR 38s have been used throughout the project. Bi-axial SP 30s are used in sconces, and T8 SP 30 lamps in wall slots. The 39-watt 3K biaxial fluorescent uplighting components with kicker reflectors have been coordinated with the finish in the inner lobby and the scale of the elevator doors.

A combination of broad washes from fluorescent uplighting, grazing, and downlighting angles have been used in the inner lobby. HQI recessed adjustables directed toward the granite walls make the mica chips sparkle in the outer lobby. All recessed adjustable fixtures use 70-watt 3K MQI compact metal halide lamps for high ceiling focal lighting in the lobby. To accommodate the art exhibits, beam conditioners and spread lenses have been installed.

CONCLUSION "Stringent energy restrictions require the use of efficient, and good, color rendering sources. Fixture and ballast changes are often required, but installation costs are offset by energy savings," according to Ross DeAlessi, Luminae Souter Lighting Design. The McKesson Lobby project commenced in March 1988, was completed by December of that year, and has been awarded the 1988 Edison Award of Distinction and the 1989 IES Edwin F. Guth Award of Merit.

DETAILS

PROJECT: MCKESSON LOBBY REMODELING

LOCATION: SAN FRANCISCO, CA

ARCHITECT: WESSEL & ASSOCIATES

LIGHTING DESIGNER: ROSS DEALESSI, PRINCIPAL, LUMINAE SOUTER LIGHTING DESIGN

ELECTRICAL ENGINEER: RANDAHL LAMB

PHOTOGRAPHER: BOB SWANSON, SWANSON IMAGES

LAMP MANUFACTURERS: GENERAL ELECTRIC CO., OSRAM CORP

FIXTURES MANUFACTURERS: MIROFLECTOR CO., INC.; ELLIPTIPAR, INC.; PREVIEW SYSTEMS

BUDGET RESTRICTIONS: \$11/SQUARE FOOT INSTALLED, 1.2 WATTS/SQUARE FOOT

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STARE CASE: Grand view of the luxurious monumental staircase looking back toward the elevator lobby for office floors.



Creating The Exterior Image

SIDE LIGHTS

LIGHTING IS SELLING POINT

The stepped exterior of Resurgens Plaza resembles a 1920s urban office building.

Classic detailing is provided by precast concrete cornices and moldings, fluted columns, and graceful arches. The nighttime illumination enhances the impact of the traditional styling, allows the building to be appreciated by onlookers from miles around, and serves as a distinct selling point.

FLOODLIGHTING IS FLOURISHING "When the building was being planned and designed a couple of years ago, it was unusual to have exterior lighting," says lighting designer, Joseph DiBernardo. "Today, floodlighting is the trend."

HPS ENHANCES DETAILS Since the building is located on a confined site, the lighting fixtures had to be mounted on the building itself. Golden glows emanate from high-pressure sodium fixtures using 150-, 250-, and 400-watt lamps positioned to graze the flattened Corinthian-style columns, and the intricate cornices and moldings.

At street level, wall sconces furnish sidewalk illumination. The undersides of the seven keystone arches are underlit by concealed, low-wattage, high-pressure sodium floodlights.



RESURGENS PLAZA'S

Classic Richness

Decorative and recessed luminaires
enhance the traditional detailing of the
speculative office building lobby

BY WANDA JANKOWSKI
EDITOR

The lighting had to reveal the space properly, without drawing attention to itself," says Joseph DiBernardo, IALD, JDA Lighting Design Inc., New York, NY, lighting designer for Resurgens Plaza, a 27-story speculative office building in Atlanta's Buckhead District.

The details of the lobby space to which DiBernardo refers—rich, wood paneling, moldings, and fan details; plaster columns and medallions; and marble

PHOTOS BY GABRIEL BENZUR

DETAILS

PROJECT: RESURGENS PLAZA

LOCATION: ATLANTA, GA

CLIENT: RESURGENS PLAZA SOUTH ASSOCIATES

LIGHTING DESIGNER: JOSEPH DIBERNARDO, IALD, JDA LIGHTING DESIGN INC.

ARCHITECT: SMALLWOOD, REYNOLDS, STEWART, STEWART AND ASSOC.

FRANGIAMORE ETCHED GLASS DESIGNER: CHRISTA FRANGIAMORE

LIGHTING MANUFACTURERS: OMEGA: downlights; LUMARK: floodlights; EMR: chandelier, sconces.

PHOTOGRAPHER: GABRIEL BENZUR, INC.

TECHNIQUE: EXTERIOR: HPS mounted on cornice moldings. INTERIOR: combinations of recessed and decorative luminaires.

KEY QUOTE: "The space dictates the lighting solution, as is usually the case."—Joseph DiBernardo

FAN FARE: Carved, fan-shaped details, pilasters and medallions (left) are accented and grazed by recessed luminaires in this view from the lobby center looking into the garage elevator lobby. The etched glass window (right) is backlit by tungsten halogen track fixtures lighting onto sheer curtains which close at night.

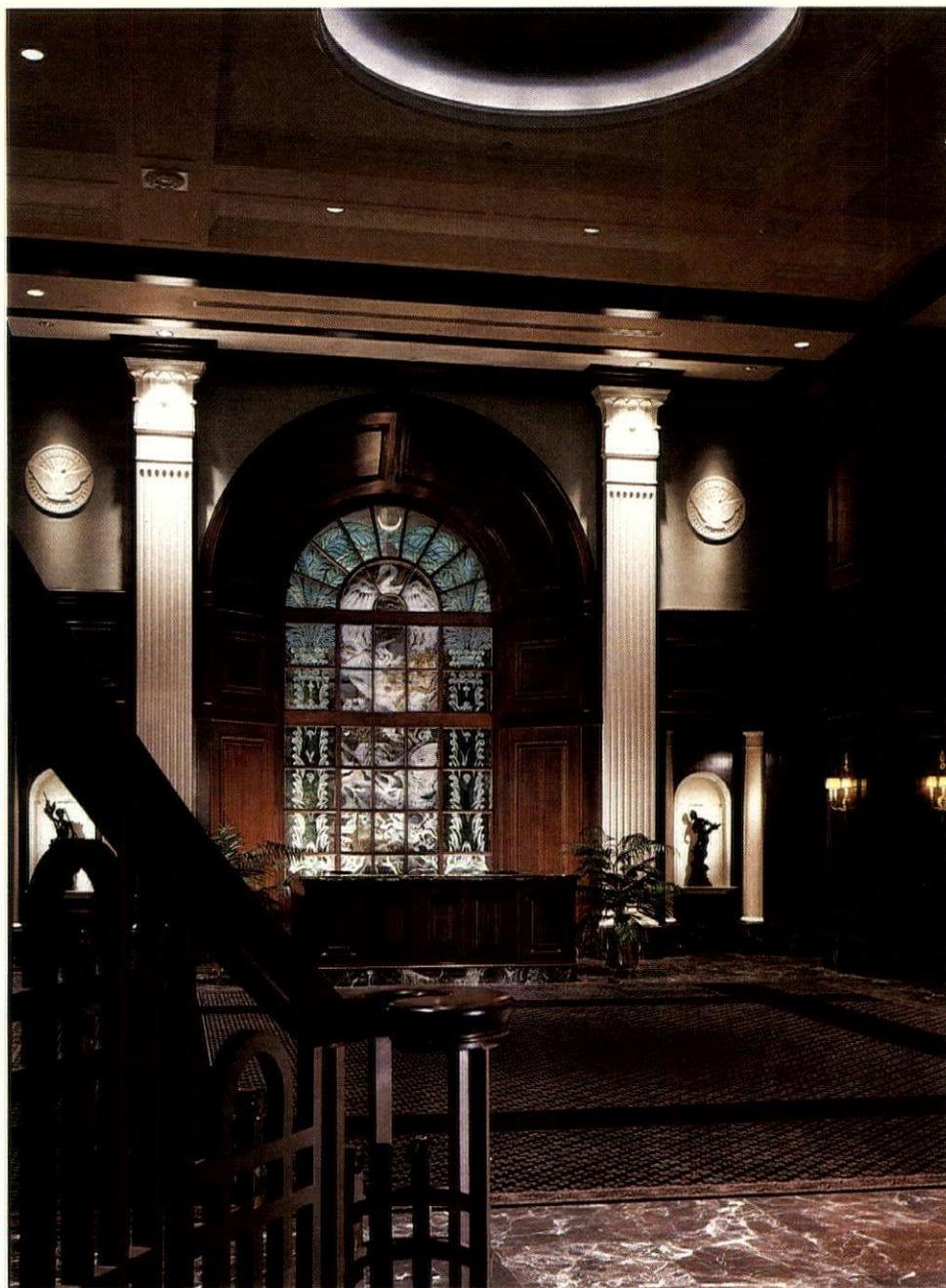
flooring—create a setting more reminiscent of a 1920s hotel lobby than a 1980s urban office complex.

But traditionalism in architecture seems to be making a comeback.

"Most buildings in the area are glass towers," DiBernardo says, "which makes Resurgens Plaza an uncommon entity. The classical look with infinite variations, however, has become a trend."

The two-story lobby is located on the eleventh and twelfth floors, above 10 stories of parking garages. The floors are accessed from three areas: the street entrance lobby, the parking garages, and the lobby adjoining the MARTA train station beneath the building.

The focal point of the lobby is a large, arched etched glass window, designed by Christa Frangiamore, featuring Atlanta's ever-rising phoenix as its theme. The window and adjoining wall stand approximately 2 feet from the second, exterior building window wall. In the daytime, the etched glass is softly illuminated by daylight. At night, sheer curtains, which are pulled behind the etched glass windows, are illuminated by



track-mounted halogen fixtures to form a backdrop for the glass.

General lighting for the lobby comes from several sources.

"Dome coffers are painted sky blue," DiBernardo explains. "Two are uplighted by rings of cool white fluorescent lamps overlapped to eliminate the shadows that would have been cast between lamps mounted end-to-end."

The third, central dome contains no uplighting, but

has a brass chandelier suspended from its center.

Each dome is surrounded by four ceiling coffers that form a square. Each coffer contains two adjustable downlights fitted with 250-watt quartz PAR lamps, which enrich the warm, inviting appearance of the curved monumental staircase, and marble flooring.

Sconces, which match the pattern of the chandelier, add interest to the paneled walls. Circular pendant fixtures near the elevators on

each lobby level provide indirect illumination.

Perimeter, recessed accent lights containing low-voltage PAR 36s softly emphasize the plaster columns, medallions, and shell-patterned niches.

"The space dictated the lighting solution, as is usually the case," DiBernardo reiterates. In this case, the classic elegance of the interior dictated a simple, yet thoughtfully conceived lighting design that heightens the richness of the space. ■

DOBBS FERRY OFFICE

Theater Of Light

BEFORE AND AFTER

Although the building has been used for varied commercial enterprises since its construction in the mid-19th century—a blacksmith's shop, warehouse, and silent motion picture theater among them—perhaps the most interesting period in its history occurred in its theater years.

When Stephen Tilly purchased the building in 1988 for the purpose of using it as his office, traces of its theatrical history still survived, even though the most recent tenant had been a moving and storage company.

"The local historical society asked us to preserve what we could from the medieval revival style architecture of the Playhouse period," Tilly says. "We were able to save the original wood beam ceiling, and an intricate balcony railing."

The renovation, however, was extensive. "The entire interior was gutted," Tilly explains. "We went down to the bare frame. Heating, cooling, wiring, and lighting have been totally redone."

The changes included moving the office entrance from the front to the side of the building (the building's separate storefront now houses a hat shop); adding a conference room above the area formerly used as the stage; and replacing all the windows and adding more to allow in an abundance of daylight.

Varied effects serve as functional, comfortable office lighting, as well as examples for visiting clients

BY WANDA JANKOWSKI
EDITOR

"We wanted the office to display different lighting effects and modes," says Stephen Tilly, AIA, Stephen Tilly Architect, Dobbs Ferry, NY.

The mid-19th century building Tilly purchased to house his office had been best known as the Dobbs Ferry Playhouse, a legitimate theater that operated from 1930-1959.

So it is fitting that Edward Efron, Edward Efron Associates, New York, NY has created a "theater of light" that incorporates an array of effects which serve a dual purpose. The lighting is used for office tasks and as a display for clients.

"The lighting design and architectural concepts combine the traditional styling of the salvaged details that we didn't want to violate, and contemporary lighting techniques. We use a variety of sources, fixtures, and dimmers, which could serve as examples to clients," Efron says. "We used a wide range of light sources except high-intensity discharge, because most of Stephen Tilly's clients are residential."

PHOTOS BY EDWARD EFFRON



Before



After



MULTI-FUNCTIONAL WORK AREAS

In order not to violate the medieval revival style ceiling, 45-, 90-, and 150-watt PAR 38 halogen fixtures have been mounted on tracks that run parallel along two edges of the ceiling.

"The track fixtures are not meant to be used as task lighting," Effron says, "because the shadows would be too harsh."

They do furnish ambient light in the open, high-ceilinged space, as well as illumination for using the horizontal storage files in the balcony work area, and for the material samples wall on the lower level opposite the balcony corridor, where shelves will be installed.

Each work station is equipped with typical architect's task light.

An HVAC duct that runs beneath the balcony corridor has been concealed in a built-up soffit. Fluorescent luminaires with 16-cell parabolic louvers have been installed next to the duct to light the wall where plans are tacked up for viewing. Each luminaire has a pull chain, so individual lights can be turned on as needed.

The bookshelves in the reference area are illuminated by recessed wall-washers fitted with 150-watt A-lamps.

The variety of lighting effects that is used continues throughout areas not shown—an indirectly lit private office, a small kitchen, and a bathroom.





MULTI-LEVELLED VARIATIONS

The office has several levels which ascend in the following order:

- Lower work area
- Storage area and kitchen
- Catwalk and balcony work area
- Administration and reception area
- Mezzanine waiting area/landing
- Conference room cupola

This view of the proscenium arch typifies the intent of the office lighting in its varied, scene-like appearance.

"The variations in the colors of the fluorescent and incandescent light sources chosen make this stairwell resemble a multi-levelled stage set," Tilly says.

After the photo was taken, a theatrically rigged pipe with variable focus ellipsoidal fixtures attached had been installed to increase stairway illumination, accent additional plantings, and capitalize aesthetically on the theatrical quality of the space.

GUIDING LIGHTS

The stairway (left) leads to the conference room. The circular, frosted glass plates on the small luminaires can be removed easily to replace the 15-watt S-lamp behind them.

In contrast, the stairway that leads to the balcony (right) features lantern-like luminaires placed above eye level. The housings are theater originals.



DETAILS

PROJECT: STEPHEN TILLY ARCHITECT OFFICE

LOCATION: DOBBS FERRY, NY

CLIENT: STEPHEN TILLY

ARCHITECT: STEPHEN TILLY, AIA, STEPHEN TILLY ARCHITECT

LIGHTING DESIGNER: EDWARD EFFRON, EDWARD EFFRON ASSOCIATES—DESIGNING IN LIGHT

LANDSCAPE ARCHITECT: ELIZABETH MARTIN

ELECTRICIAN: KEN DESOUSA

CONTRACTOR: SCOTT MCBRIDE

THEATRICAL RIGGING: I. WEISS & SONS

PHOTOGRAPHER: EDWARD EFFRON

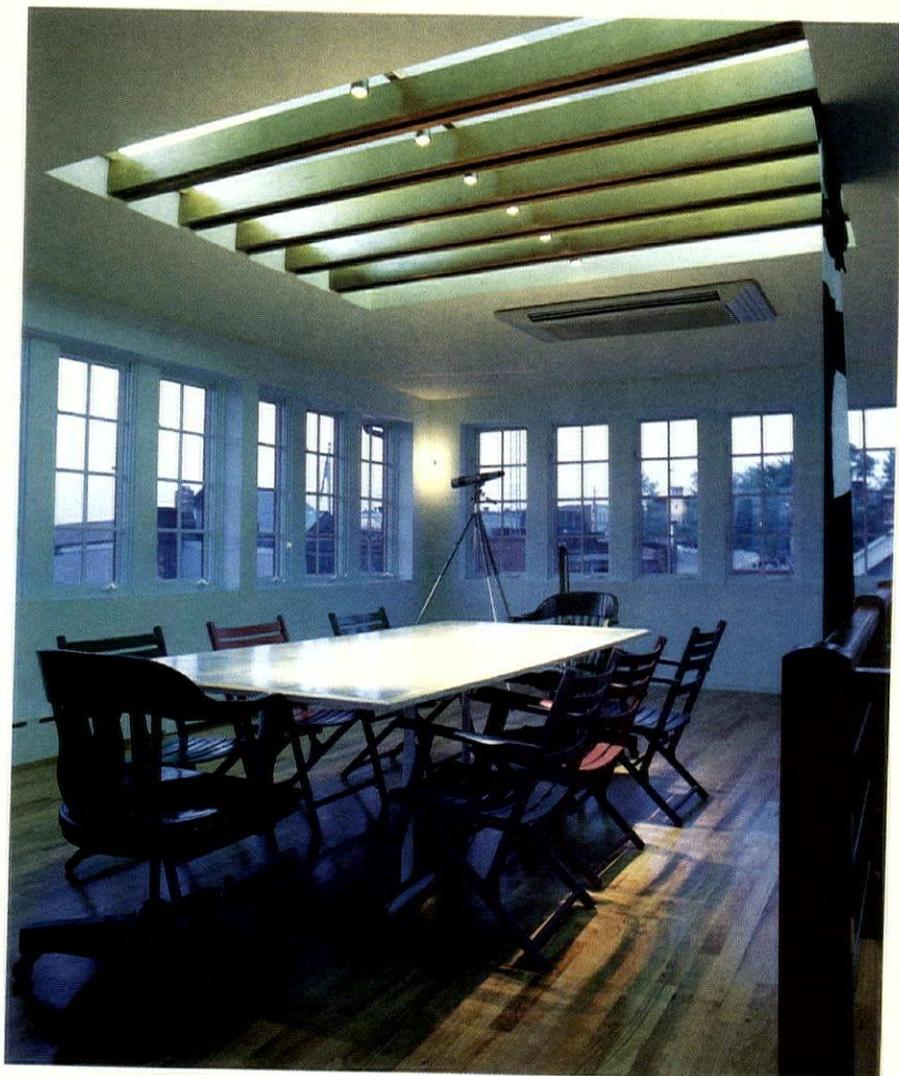
LIGHTING MANUFACTURERS: ALKCO: recessed fluorescent fixtures; ARTEMIDE: wall sconces; B-K LIGHTING: low-voltage, surface-mounted fixtures; DAYBRITE: recessed parabolic troffers; EDISON PRICE: recessed wall washers, adjustable PAR 38s; HALO: recessed shower light; KOCH + LOWY: task lights; LEGION: surface-mounted fluorescent channels; LEVITON: Decora switch; LIGHTOLIER: track lights, PAR 38 lampholders, exterior wall mounted fixtures; LUTRON: Centurion and Nova dimmers; PERFECTLITE: recessed step light; TBD: outdoor fixtures.

CONFERENCE ROOM CUPOLA

Daylight streams in from windows on all four sides of the conference room, which has been built above what had been the stage when the building served as a legitimate theater.

A fluorescent cove around the perimeter of a square channel left open in the level ceiling provides uplighting into the peaked roof beyond. Bronze low-voltage fixtures, commonly used in outdoor applications, have been mounted onto a custom copper channel which crosses above the sleek wood beams.

The cove, accent lights, and a corner wall-mounted decorative fixture operate with multi-circuit controls.



TIPS ON PROPER MAINTENANCE

SIDE LIGHTS

"If you leave a simple chart with your client," Effron says, "indicating the intent of the lighting design, as well as what replacement sources to use, you have a chance at protecting the design."

Effron supplied Stephen Tilly with a simplified lighting plan that indicated:

- What the fixture should focus on
- Direction of focus
- Dimmer number
- Lamp beam spread and wattage

for the two rows of track fixtures mounted above the two levels of work areas.

Maintenance problems can result from the client's inability to visualize. In this case, Effron was fortunate to have an architect as the client. But in other cases, he says, "clients can find it difficult to visualize from drawings. It is helpful, particularly in the case of residential clients, to give them some sense of what the lighting design is trying to accomplish.

"Clients are more interested in participating in their lighting today than they were five or 10 years ago," Effron. ■

■ Fashionable Colors



CORRIDORS OF DESIGN: To add stimulating color and projections to the Gitano showrooms and Hall of Light (below), a variety of luminaires were used, including (left), a framing projector, a custom gimbel fixture, a low-voltage halogen lamp, and an MR 16 fixture that holds color filters.



The spirit of a New York clothing showroom is captured with light

BY CATHERINE SCHEITTING SALIFINO
MANAGING EDITOR

Spirited clothing calls for a spirited selling atmosphere, and that was the order placed with lighting designer Leni Schwendinger of Light Projects when she had to create a lighting scheme for the Gitano clothing showrooms in New York.

The spirit, rhythm, and freshness of the sportswear was to be reflected in the lighting of 24 showrooms and the office cafe. The lighting also needed to break up the symmetrical architecture of the space. But the lighting couldn't be purely a flight of fancy—it needed to be functional so buyers could see the true colors of the clothing. "But even though so much was required of the

DETAILS

PROJECT: GITANO CORPORATE HEADQUARTERS—SHOWROOMS, CAFE

LOCATION: NEW YORK, NY

CLIENT: GITANO

LIGHTING DESIGNER: LENI SCHWENDINGER, LIGHT PROJECTS

ARCHITECT: RONALD BORUS

ELECTRICAL ENGINEER: JACOBY ELECTRIC

PHOTOGRAPHERS: PETER MAUSS/ESTO, photos bottom p. 26, p. 27, and DARWIN K. DAVIDSON PHOTOGRAPHY all others

LIGHTING MANUFACTURERS: GENERAL ELECTRIC, SYLVANIA: MR 16 low-20-, 50-, 75-watt voltage halogen lamps; USHIO: 100-watt low-voltage halogen lamp; LIGHTOLIER: tracks; HARRY GITLIN: custom designed Gimbel fixture; ALTMAN: 3-inch Fresnel fixture; Lightstar fixture; Hexa fixture; RDS-GREAT AMERICAN MARKET: Mini Scene Machine; ROSCO: Roscosleeve; BAUSCH & LOMB: dichroic filters; DEVON GLASS: Pyrex filters

KEY QUOTE: "The adventurous use of color can add a dynamic look to many applications."—Leni Schwendinger, lighting designer

PHOTOS BY DARWIN K. DAVIDSON AND PETER MAUSS/ESTO



COLORFUL COLLECTION: The reception area of the Gitano showroom headquarters sets the pace for the rest of the floor's lighting, with brightly-hued MR 16 Gimbel fixtures that hold dichroic filters.



FASHION SCENE: A special effects projector in one of the company's reception rooms throws an image from the Gitano ad campaign onto a panel in the Hall of Light.

lighting scheme, I was really limited in my lighting flexibility to a certain degree," Schwendinger says. "The client had already made certain decisions about the type of fixture that was going to be used. The location of the track fixtures and the choice of MR 16 Gimbel units were etched in stone when I joined the project. So I had to figure out what would work with these fixtures to achieve the look they wanted."

In each area, the client's main priority was to keep the small fixtures for aesthetic reasons.

"But to me, the result of the lighting, not the fixture, is the most important thing,"

Schwendinger says.

A major challenge, Schwendinger says, was achieving the beamspreads necessary for each showroom with the small MR 16 Gimbel fixtures. The fixtures had to illuminate the two levels of the open closets where the garment samples are hung, a metal grid where garments are displayed for buyers, and a conference table.

Another challenge was lighting sandblasted glass panels that make up what is called the Hall of Light, which runs the length of the showrooms. One wall of each showroom is part of the Hall of Light. Schwendinger

says the client's fixture choice was not the best for the Hall of Light application because it didn't have slots that would hold color filters or barn doors.

Schwendinger filled the hall with light by using a variety of fixtures. An MR 16 framing projector that offers optimal optics and holds 35mm slides or templates is placed next to the custom-made Gimbel MR 16 fixture that was the client's choice. Schwendinger also modified a theater fixture to hold a 100-watt low-voltage halogen lamp that offers functional barn doors and a color frame that holds glass filters.

Filling out each room with more color is another small MR 16 fixture that holds color filters. The recessed covers are lit with fluorescent tubes filtered with color sleeves.

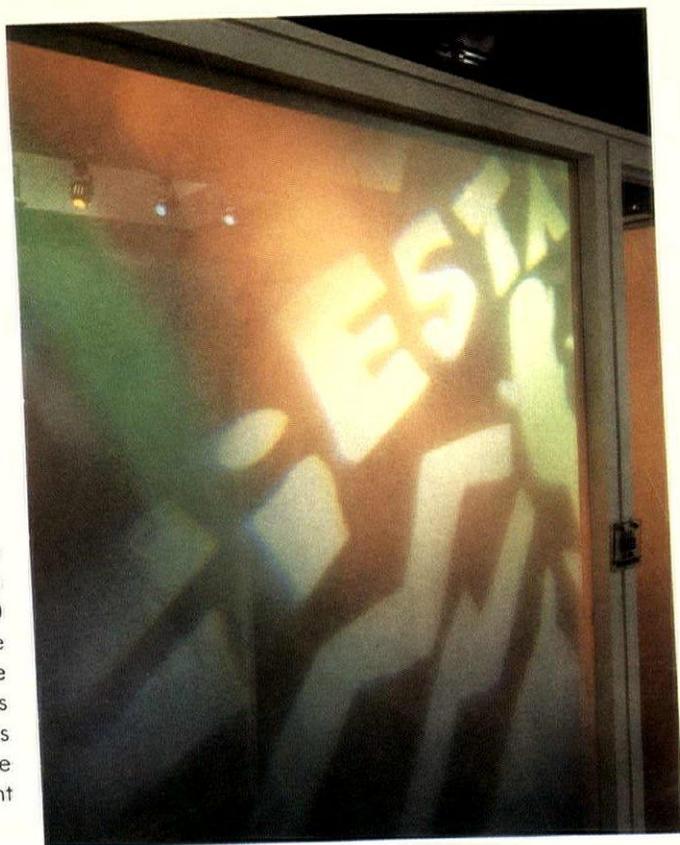
A mini theatrical framing projector was also used in the Hall of Light to add drama to the reception area and to show some of the client's clothing on a major scale. The machine is a modular projection system—a professional-quality special effects projector scaled for use in small spaces. It uses interchangeable lenses to project images. A transparency from the Gitano ad campaign was inserted at the optical plane of the machine for the current image.

The MR 16 framing projector was used to project the fabric colors of the season, like the "Fiesta" motif on the panels in the Hall of Light. Schwendinger inserted a photo-etched template into a slot in the low-voltage halogen lamp to achieve this effect.

The colors and projections in the hall are changed about every eight months to a year, based on the palette of colors that is in fashion in the clothing world.

"I had to find the best filters that would offer a wide-ranging color palette," Schwendinger says. "The dichroic filters were the only ones that would work with

SIGNATURE STYLE: The energy of Gitano clothing is reflected in this Hall of Light panel. The "Fiesta" image comes from an MR 16 framing projector behind the glass panel.



the client's fixture. But since they have such uneven color—green can come in 10 different shades—I chose Pyrex glass filters for the other fixtures. The Pyrex is available in two split glass pieces so heat can escape and I can use two different colors on one fixture."

While Gitano's was a complex project, Schwendinger says it was breaking new territory in showroom/office lighting.

"Keeping track of all of this was the key. There are 600 fixtures, beamspreads, wattages, and focusing to keep track of. It would have been easier if it was a trade show

application because it would have been put up and taken down in the course of a few days and we wouldn't have had to worry about maintenance. But I came up with a theatrical lighting plot to keep track of it all."

Schwendinger says each week the relamping and

focusing are checked by Light Projects technicians.

Another regular maintenance area is the replacement of the lighting track's corner connectors. Schwendinger says the electricians claim that because of the client's choice to use a remote transformer that is hidden in

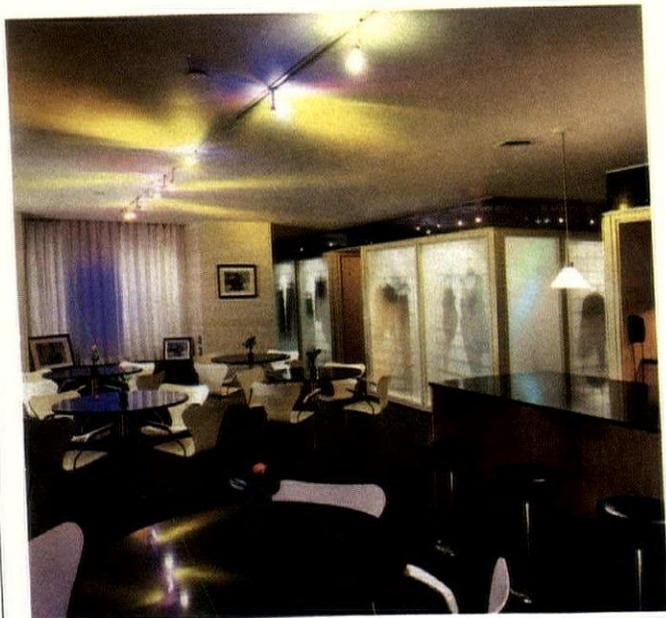
the ceiling rather than local transformers that are placed visibly next to each fixture, the corner connectors arc and five to six lamps at a time lose power.

"This has been a recurring electrical maintenance problem," she says. "The only way to resolve it is if the client switches to local transformers. But they prefer to repair because they say locals add bulk and create a hodge podge look. Since their emphasis is on smallness, they transformed the track itself instead of the individual fixtures."

The repairs, she says, are performed about every two months.

"But this is the look they want, so to them it's worth the work," she says.

"An adventurous application of color can add spaciousness, life, and dynamism to a project."



WORKING WITH COLOR

SIDE LIGHTS

SUBTLE BLENDING AVOIDS OUTDATING Since the client didn't want the "standard office lunchroom," the Gimbel

MR 16 fixtures with varied dichroic filters were used to give the room (left) a dramatic look.

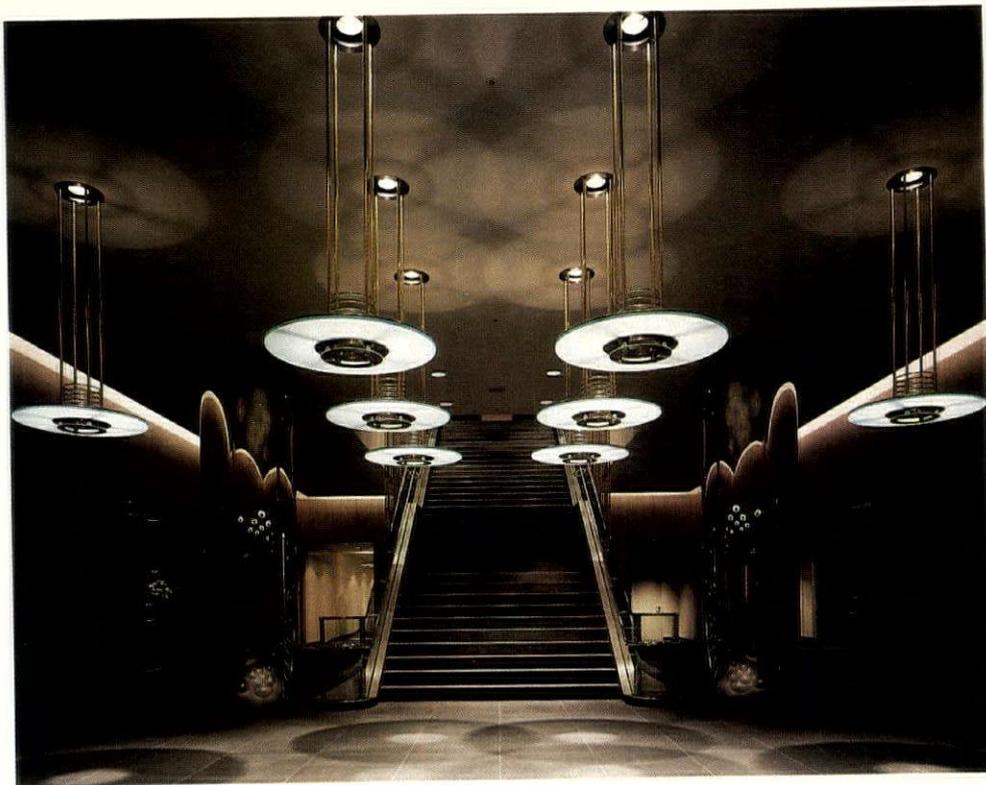
"Today there is more focus on light as an interior design element. People are using light to create color combinations with fabrics and painted walls. They're willing to take risks to make spaces look uncommon. They're becoming more adventurous in retail, restaurants, and showrooms."

However, Schwendinger says, there is a sort of danger in using color in architectural spaces.

"The blending has to be subtle. A lighting concept and approach to color has to be explored carefully. Otherwise, a lot of combinations could end up dating an application, making it look very 60s or 70s." ■



BRONZE BEAUTY: The lobby renovation includes installation of etched glass rings suspended from polished solid bronze tubes. Fluorescent cove lighting (right) on the first floor washes the travertine walls and defines the perimeter.



Vanishing Act

DETAILS

PROJECT: Lobby and auditorium portions of regional administrative center renovation. The building was designed by Skidmore, Owings & Merrill in the early 1970s.

CLIENT: UNDISCLOSED.

LOCATION: OAKLAND, CA

ARCHITECT, ENGINEER, INTERIOR DESIGNER: SKIDMORE, OWINGS & MERRILL, SAN FRANCISCO, CA

PHOTOGRAPHER: CHRISTOPHER IRION

LIGHTING MANUFACTURERS:

LITELAB: yoke-mounted downlights, and modular strip lighting;

DEVINCENZI ARCHITECTURAL

PRODUCTS: custom fabricated lobby

pendants; YORKVILLE INDUSTRIES:

colored projection lamps;

COLORTRAN: miniature projection ellipsoid fixtures.

TECHNIQUES: Pendant structure mounted onto recessed units.

KEY QUOTE: "Here, our best design

solution was our simplest, utilizing stock fixtures and readily available lamps. . ."—project designer Gregory Hildebrand

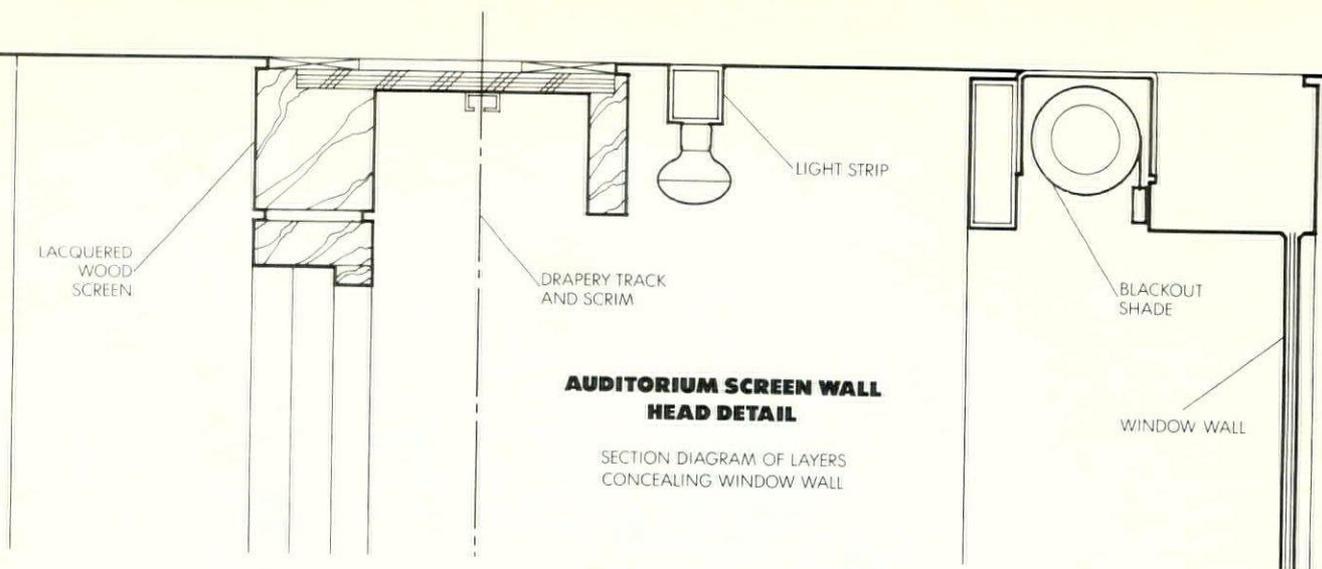
Theatrical fixtures off-stage but effective in administrative center renovation

BY CHARLES LINN, AIA
EXECUTIVE EDITOR

Skidmore, Owings & Merrill (SOM) recently completed the renovation of a building it originally designed during the 1970s. In two important spaces, the lobby and auditorium, the renovation focused on lighting, using fixtures and effects normally found in the theater.

"The building lobby was finished originally in materials and lighting that were, at that time, classic SOM—travertine marble walls, black granite flooring, anodized bronze trim, and an extensive use of downlighting," says project designer, Gregory Hildebrand,

PHOTOS BY CHRISTOPHER IRION



IDSAs, formerly with SOM's San Francisco office.

"Our goal was to redesign the lobby to provide indirect light, warm color, and added definition to the room," says Hildebrand. SOM's designers wanted to come up with a solution that "provided a combination of direct and in-

direct light, and introduced a sculptural element into the grand lobby space that would bring the lighting down to a more human scale."

At the first floor of the lobby, fluorescent cove lighting has been add-

ed to wash the travertine walls and define the perimeter of the room. A series of custom pendants have been designed and fabricated for the lobby over the central staircase. The pendants consist of etched glass rings suspended from polished solid bronze tubes, and anchored

by rings of brushed stainless steel.

At first glance, the pendants appear to be attached to ordinary downlights. The pendants and the recessed light fixtures are separate units. The SOM team took this approach to avoid the time and expense involved



PASTEL PATTERNS: In the auditorium, miniature ellipsoidal projectors cast foliage patterns.



in getting a custom fixture tested and labeled.

"One of the criteria was to come up with a pendant that wasn't in itself electrical, and didn't require reinventing a stock fixture, or attaching anything to one.

"The fixtures are reflectors and receptors of light, all the while allowing some of the beam to pass through unimpeded," Hildebrand notes.

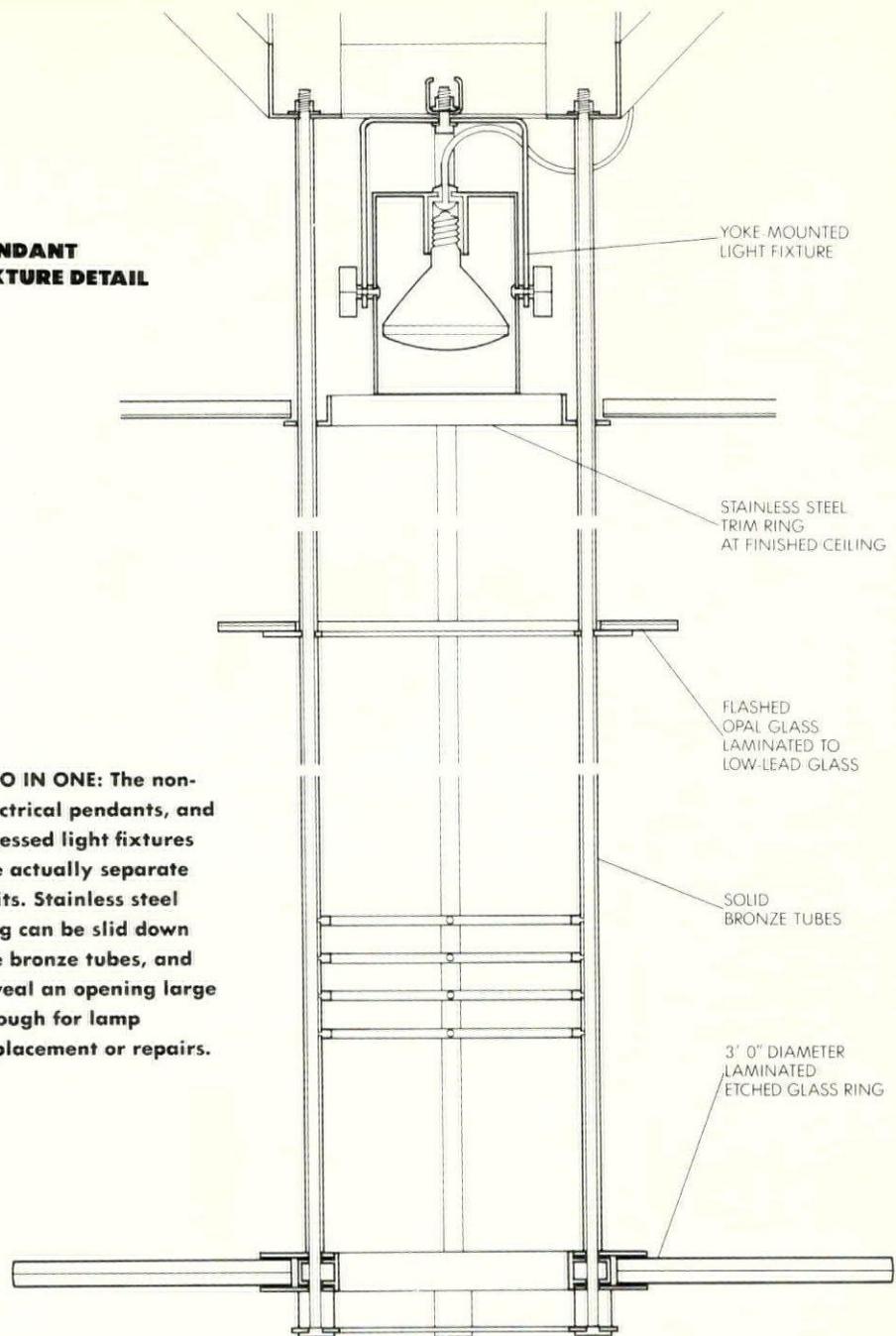
Rings of translucent, white flashed opal glass have been added at selected locations to reflect some of the light onto the colored Venetian plaster ceiling. Below the rings of opal glass, three-foot-diameter rings of sand-blasted, acid washed glass pick up some of the remaining light, and diffuse it further.

Direct light from 250-watt quartz PAR 38s strikes the floor through the openings in the center of each glass ring. The pendants are spaced so the center of the direct beam passing through the openings in the rings strikes the intersection of four 2.5-foot slabs of granite flooring.

The recessed fixtures are yoke-mounted cans normally used in theatrical applications and attached to stage rigging. Here, the fixtures are bolted to the pendant's suspension system, and are plugged into an electrical outlet above the ceiling. The stainless steel

PENDANT FIXTURE DETAIL

TWO IN ONE: The non-electrical pendants, and recessed light fixtures are actually separate units. Stainless steel ring can be slid down the bronze tubes, and reveal an opening large enough for lamp replacement or repairs.



trim rings at the ceiling are attached to the bronze tubes, and can be slid down the tubes, allowing access to the light fixtures and their junction boxes. The trim ring conceals an opening in the ceiling large enough to allow the entire fixture to be removed if necessary.

Hildebrand says using separate units allowed SOM to work with a company that specializes in fabricating architectural metalwork.

The quality of materials

and the techniques of construction were superior—all the materials are solid, and not plated, he says. "The pendant parts were individually assembled at the site on a threaded rod infrastructure. It runs the entire length of the pendant and is secured to the structural steel provided above the ceiling."

The auditorium had to be renovated into a multipurpose space for conferences, dining, or audio-

visual presentations, all on a tight budget. Here, another theatrical lighting technique is used to illuminate a translucent drapery.

"We wanted to give the space a stage set quality, with what I'd describe as 'pre-function' ambient lighting—lighting that wouldn't be overpowering, but would allow a person to sit down, relax, and wait for a presentation to begin," Hildebrand says. "The views of the city weren't ideal from the win-

dows, so we devised a series of screens. There is a blackout drapery at the existing window wall. In front of the blackout drapery is a second drapery made of translucent scrim material. In front of this drapery we placed an open lacquered wood screen."

Between the blackout drapery and the scrim, Hildebrand placed a modular light strip, lamped with two colors of blue R lamps. Alternating zones of each color emphasize the geometry of the screen. The scrim is installed on an electrically operated drapery track, and moves aside at the push of a button to expose the light strip for relamping.

"We had a need to work within certain budget requirements for the ceiling in the auditorium," says Hildebrand, "so we installed a concealed spline ceiling, and left it open at each row



INTERSECTING CIRCLES: Pendants are positioned so direct downlight from 250-watt quartz PAR 38s strikes the intersection of four 2.5-foot slabs of granite flooring.

of lighting, positioning the slots to relate to the geometry of the wooden screen. Everything within that slot above the ceiling plane—the ductwork, the sprinkler system, the ceiling suspension system—has been painted

black."

Within each slot, a row of downlights has been suspended, as well as a single miniature ellipsoidal projection fixture. This fixture is fitted with a stainless steel foliage pattern that is proj-

ected onto the front of the scrim.

"We used the leaf pattern," Hildebrand says, "to take people out of context a bit and give them the feeling that they're in another space."

"Complex lighting components are not always needed to provide elaborate architectural lighting solutions," Hildebrand says. "In fact, just the opposite is sometimes true. Here, our best design solution was our simplest, utilizing stock fixtures and readily available lamps to achieve a variety of special effects." ■

WORKING WITH GLASS

SIDE LIGHTS

PENDANTS SAFE FROM EARTHQUAKE "In an exception to California rules, ball-and-socket swivel

connectors have not been used in the lobby pendant fixtures in order to prevent excessive swing in an earthquake, due to the unattenuated weight of the glass," designer Gregory Hildebrand notes. "We are confident that in the case of even a severe quake, the rods might possibly fall, but the pendants won't fall." The pendants apparently suffered no damage in this October's earthquake, which measured 7.1 on the Richter scale.

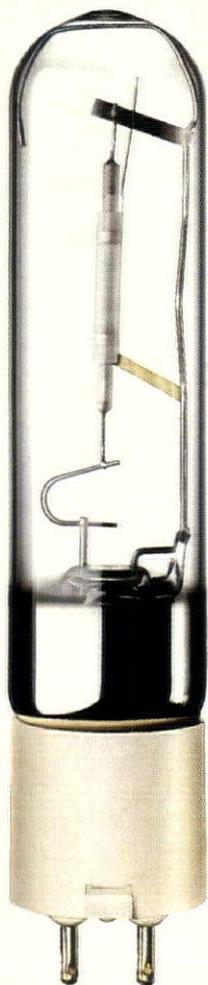
LAMINATE SUSPENDED GLASS Earthquake or not, glass suspended overhead can still present a potential safety hazard if, for example, struck by a ladder during relamping. So, both the flashed opal glass and the larger etched glass rings have been

custom fabricated of two pieces of glass with a .030-inch clear plastic inner-layer laminated between.

"Laminated glass is much safer because it may shatter, but it will remain intact. I think it's important to use it in overhead lighting—especially out here in California," Hildebrand says. "I'd prefer using tempered glass, but even though it breaks into little pieces when fractured, it still rains down onto the floor."

LOW LEADS PREVENTS TINTING Hildebrand went to great lengths to secure glass with a low-lead content to prevent the green tinting that occurs when opal glass is laminated to clear glass of a high lead content. He worked with the glass fabricator to obtain an acceptable polished edge condition for the larger etched glass ring.

"A precise finish on the edge is critical; if the inner layer melts during finishing, the glass will be discolored," Hildebrand explains.



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Getting Lighting Built Right—Part 1

The author is senior principal and CEO of Luminae Souter, San Francisco. He is on the faculty of California College of Arts and Crafts, is active in IES and Designers Lighting Forum of Northern California, and teaches lighting design classes for the ASID, IBD, and the American Lighting Association.

BY JAMES R. BENYA
PE, IALD

Anyone who has ever lavished a great deal of special care on a lighting design knows that getting it built with that same degree of care and attention can be a struggle. Plenty can happen between that heady moment when the concept is first put onto paper and the day when the electrical current surges through the lighting system in the finished building for the first time. That's why lighting designers must be especially diligent, or their concepts may be left, so to speak, on the drafting room floor.

MODIFYING BY MALEFACTORS

These days, projects usually involve a design team consisting of a number of consultants, including architects, landscape architects, interior designers, electrical engineers, audio visual specialists, and lighting consultants. Each team member has some input on the lighting design for the project. Based on the advice of all other design team members, a prime professional, such as the architect, then makes all the final decisions. As the prime professional, the architect would produce reflected ceiling plans and various details. The lighting would be circuted by the electrical engineer.

The first potential trouble for a design involves the actions of the prime profession-

al. For example, instead of following the advice of the other team members exactly, some will modify the design as they see fit. That may be fine if revisions are reviewed by the original team members. But frequently, the prime professional completes the bid documents without team review or further team input. This problem usually occurs on projects with limited consultant fees and fast-breaking deadlines. The resulting lighting installation can be quite problematic, especially if the design is complex, or utilizes specialized equipment with which the prime professional is not completely familiar.

As a minimum measure against arbitrary modification of the design, it is helpful for the team members to make clear to the prime professional and put in writing the function and purpose of the design and accompanying specialized equipment. Although this may not com-

PRIME PROFESSIONAL REVISIONS TO DOCUMENTS WITHOUT TEAM REVIEW CAN CAUSE PROBLEMS

pletely prevent modification, at least the prime professional would understand the consequences of such changes before authorizing them.

ANTICIPATE SURPRISE PACKAGES

During bidding, electrical contractors request prices for the lighting equipment from electrical distributors, who in turn request them from manufacturers' representatives. Even if their products are not specified on all items, every rep submits pricing for as much of the equipment as they think they can provide, either as specified or as "or equal" substitutions. The price for this package of fixtures is given to the distributor, often without break-out pricing for individual fixture types. The distributors add their own profit and overhead, and pass the price on to the contractor, who submits it as part of the electrical bid.

The ability for one corporation to package, or provide every piece of lighting equipment required for a project from one of its own manufacturing divisions, is said to be the impetus behind the conglomeration of lighting manufacturers during the last few years. In this regard, conglomeration has been successful, and has concentrated pricing power into a few hands. The major packagers are said to control over 60 percent of the commercial, commodities lighting equipment market. The representatives of these lines generally round out the package with important independent specification manufacturers.

Occasionally, manufacturers' reps may use their access to the special products made by these independent specification manufacturers

WHAT MAKES RECURRING NIGHTMARES

- 1 Lighting design modified by primary pro without review by other team members.
- 2 Unexpected substitutions of products by reps unequal to those originally specified.
- 3 Shop drawings submitted late that don't allow for review by the lighting designer.
- 4 Value engineer's changes that damage the aesthetics and performance of the system.

How to Make Single-Name Specs Stick

Most governmental and institutional clients require three-name specifications or some other mechanism to assure competition and prevent unethical specifying relationships. Many designers see this as an unreasonable limitation on creativity, as some of the finest lighting products are not generic.

Even for governmental projects, the designer may specify a single-name product without permitting any substitutions, provided several important considerations are taken into account:

- That every reasonable effort has been taken to find an equivalent or generic product
- That all generic products have the appropriate number of specified manufacturers
- That the unique products have been isolated (see "Anticipate Surprise Packages" section pages 36-37)
- That the specifier remains open to reviewing proposed substitutions or "knock-offs" and considers accepting such substitutions solely on the merits of their photometric performance and physical properties.

Try writing a letter to the client before the job is bid indicating your intent and why you have chosen to specify a single-name product. It may be necessary to reinforce your point with a technical rationale, such as comparative calculations or some sort of qualitative assessment. Avoid specifying something simply because "it's the best" unless you can prove that it is and that it's needed for the project.

to force the designer to accept an entire fixture package. This situation can be extremely costly, as well as essentially void the intent of the competitive bidding process.

In this day and age, it is sheer folly not to account for packaging. To write specifications for packages, the lighting designer has to think like a packager. First, design and specify with packages in mind. For example, if you're specifying Lithonia troffers, specify Lithonia's downlights or specify some other downlights handled by the same manufacturer's representative. Avoid cross-specify-

ing on the same job, such as putting Lightolier (Genlyte) downlights together with Benjamin (Thomas) troffers.

Second, separate and identify special luminaire types from commodities, especially when three-name specifications are required. Indicate in your specifications that the representative must furnish pricing for these fixtures independent of the package price. This way, the representative for a specialty product can't force the specifier to approve the entire package at a premium price. The rep must remain competitive on commodities like troffers and downlights.

Ultimately, the number of substitutions requested for specified lighting equipment

is inversely proportional to the amount of business the specifier's projects represent to the manufacturer's representative requesting the substitutions. A major lighting design or engineering firm with "clout" will not see many unwelcome substitutions, whereas architects and others whose project output represents a low dollar volume to the rep may be wide open for substituting and packaging. Every lighting specifier should reach a clear understanding with his or her reps so that substitutions are at least discussed in a professional manner before bids are submitted.

CHECK ALL SHOP DRAWINGS

Also called project or product data, shop drawings are literally a proposal of the fixture that will be installed on the project by the contractor. The proposal should be complete with lamps and other pertinent information that affect lighting, such as the dimming systems. Shop drawings are generally submitted to the architect for approval.

Shop drawings are the designer's final opportunity to offer input on the type of lighting equipment that will be installed before real cost and time commitments are made. The designer should thoroughly check every detail of each item specified. If the submittals are not clear, whoever is approving them should insist on samples or any other information needed to approve or reject the proposal. Once ap-

TO PROMOTE

SWEET DREAMS

1 Make design's purpose and need for specialized equipment absolutely clear to prime pro in writing.

2 To avoid substitute surprises, specify with "packages" in mind. Identify special luminaire types from commodities.

3 Check every detail of shop drawings. With unclear items, insist on samples or more information.

4 Demonstrate to clients a willingness to reconsider the design to meet financial goals and gain input into the value engineering process.

proved, the shop drawings supersede the specifications.

RAISE QUESTIONS ABOUT DETAILS

There is a long history of disputes involving shop drawings and the designer's liabilities. Most lawyers advise design professionals to check for "conformance with design intent" and to avoid exact details such as mounting hardware. A good rule of thumb for the designer is to definitely accept or reject the general luminaire type (manufacturer and catalog family, trim type, lamp, etc.) and to raise questions concerning exact details, such as incorrect voltage, or ceiling type. If a rejection is made, it helps both parties to attach a letter stating the reasons why, and requiring a resubmission for approval.

Because so many of today's projects are "urgent," the relatively slow process of shop drawings can pose its own problems. Many times, the consultants never have the opportunity to approve the shop drawings because the submittal is late or, occasionally, not submitted at all. Specialized consultants like lighting designers need to be especially vigilant, as the prime professional is often encouraged to check the shop drawings in a hurry and without review by other consultants.

Value engineering is a popular process seen by many corporations and governmental agencies as an integral part of the cost control process. It presumes that over-design has occurred because the original design

team does not have time to carefully consider and second-guess every decision. The "value engineer" is, in effect, a paid second-guesser.

One should note that the term is not value *architecture*. If carried out as it should be, value engineering ought to consider aesthetics as well as economics. Unfortunately, a value engineer's perception of "quality" is only as good as that value engineer's design skills. Too many lighting designs are value engineered by persons who have little interest or skill in perceiving and interpreting the design's aesthetic values.

INPUT INTO VALUE ENGINEERING

But even worse, value engineering has become a misnomer for blatant cost cutting. Electrical contractors are encouraged to provide this service, as most value engineering schemes split cost savings between the contractor and the owner. Most value engineering proposals circumvent the shop drawing process, and many times the design team is not advised of the changes.

SHOW THE CLIENT YOU ARE WILLING TO MODIFY TO GAIN INPUT INTO THE VALUE ENGINEERING PROCESS

Sometimes the value engineer's changes do improve the cost-effectiveness of the project without damaging its beauty. But in the world of highly evolved technical lighting design, not many contractors-turned-value-engineers are knowledgeable enough to make correct substitutions, so the project ends up looking cheaper and its performance suffers.

To protect against poor value engineered solutions, the lighting designer begins by conveying a responsible attitude to the client. By demonstrating willingness to reconsider and, if necessary, modify the lighting design to meet a client's financial goals, the lighting designer will often gain the opportunity to be part of the value engineering process. If a prime professional is using consultants, it is extremely important that they be involved, too.

FOLLOW THROUGH PUNCHLISTING

A final inspection and punchlist, or checklist, of work that needs to be completed is something every project should receive from its designers. This is the only

way that the owner can be certain that every product and material paid for was installed.

As in other phases of the work, clients who want to minimize design fees will not encourage or pay for the punchlist service, unless there is a fatal flaw in the project. If the client is unwilling, the lighting designer should make every attempt to at least walk through on his or her own time. If a major error, incorrect or unapproved substitution or other flaw has occurred, write a letter advising the client of the problem. Most clients, when advised that the completed project is not what they paid for, will be glad to pay the professional's fee to straighten out the mess. Even if not, at least the lighting designer's follow-through will not be readily forgotten.

WORK WITH THE CONTRACTOR

Attitude problems are the most frequent cause of poor communication between the contractor and designer, and failure to work out effective substitutions and schemes for value engineering. Lighting designers who demonstrate willingness to cooperate and skill in managing the lighting cost will be remembered for future projects. And contractors will first approach the lighting designer to help develop a value engineering proposal when and if the project is over budget.

Part 2 on cost management and alternative delivery methods will be featured in the March 1990 issue. ■



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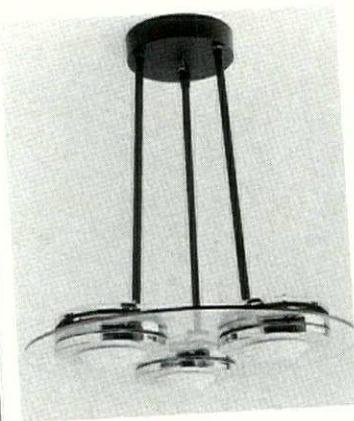
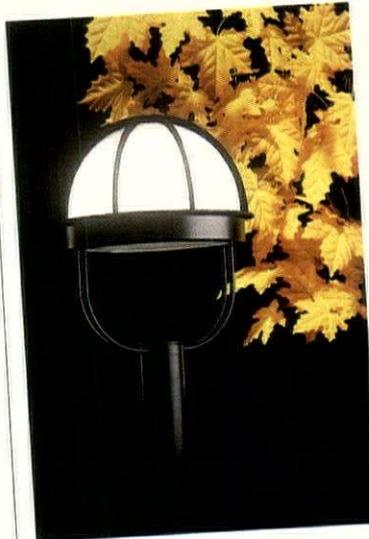
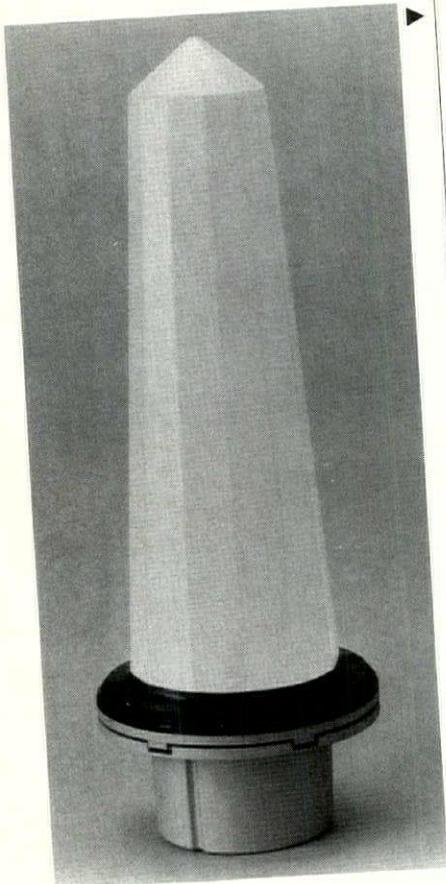
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EMCO'S BOLLARD FIXTURE LINE now includes low-level and wall-mounted architectural, traditional, and obstruction bollards. The bollards feature extruded aluminum or polymer concrete housings, five lamp sources, five optical systems, and various finishes. Emco Lighting, Milan, IL. **CIRCLE 40**

THE STEELTITE LINE OF ENCLOSED 304 and 316 stainless steel industrial lighting fixtures from Guth Lighting is designed for applications requiring corrosion resistance and protection from moisture, acids, or alkalis. The line includes 65 models for fluorescent, HID, and quartz lamp types and features a truncated triangular housing design. Guth Lighting, St. Louis, MO. **CIRCLE 41** ▼

GARDCO'S GLOW TOP LANTERN ACCOMMODATES four different segmented reflectors for glare-free illumination. Soft, uniform light is produced through the translucent dome. Wall, post top, and arm mounting is offered. Gardco Lighting, San Leandro, CA. **CIRCLE 42**

PRESTIGELINE'S QUARTZ HALOGEN LINE features torchieres, desk-top models, wall units and ceiling fixtures. These fixtures also include full-range dimmers and are available in enamel finishes. Prestigeline, Inc., Brentwood, NY. **CIRCLE 43**





LITELAB'S LUMI-FLEX LINEAR LIGHTING SYSTEM can accommodate accent, task, and indirect lighting applications. Replaceable 3.75-watt lamps provide incandescent illumination, and segmented and continuous reflectors concentrate directed light in curved or straight applications. Lumiflex offers modular connections for easy installation and can be field-cut and curved. Litelab Corp., Buffalo, NY. **CIRCLE 44**



GE LIGHTING SYSTEMS' HUDSON LUMINAIRE provides cutoff optics for roadways and many other outdoor facilities. The clear glass lens and reflector are mounted inside the hinged canopy. The fixture uses HPS lamps of 50 to 150 watts. Decorative poles are available. General Electric Co., Hendersonville, NC. **CIRCLE 45**

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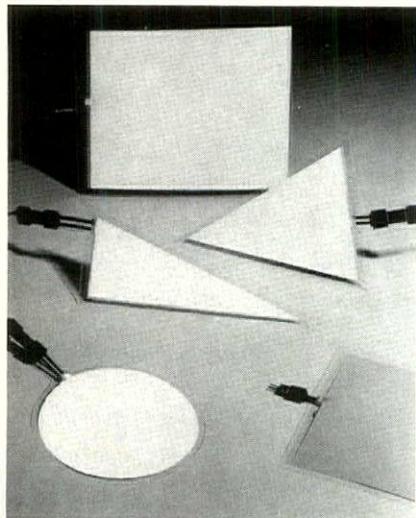
Ultrapar units, in popular sizes, will now be manufactured at Williams' Carthage, Missouri plant. For more information on these or any of Williams' full line of high-quality, energy-efficient, specification-grade lighting products, contact:

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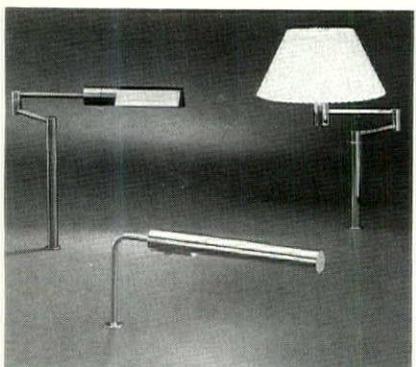


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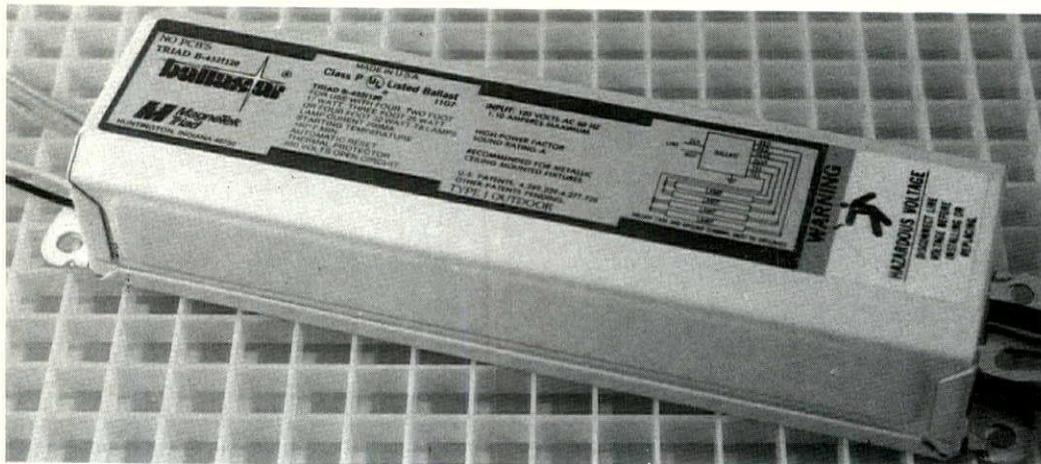
▶ **PERMA-LIGHT, FROM QUANTEX CORP.,** is an electro-luminescent lamp that gives off light without producing heat. This product is available in a variety of shapes and sizes. Quantex Corp., Rockville, MD. **CIRCLE 49**



▶ **THE DESK MOUNTED LAMP SERIES FROM CASELLA LIGHTING** features dimmers and interchangeable heads and shades. Casella's C1900 cylindrical Lecturn Lamp is 8 inches in height, the C1920 Swing Arm Lamp is 14 inches in height, and the C1920 Swing Arm Lamp is 12 inches in height. Casella Lighting, San Francisco, CA. **CIRCLE 47**



▶ **THE OPTIMAX LIGHT CONTROL SYSTEM FROM LITHONIA LIGHTING** is a fluorescent lighting system that eliminates glare, and provides appropriate levels of general illumination for tasks. This recessed parabolic, with a specular aluminum louver designed to direct light away from glare-producing angles, provides a uniform level of 70 maintained footcandles of illumination. This system is available in 2-foot x 4-foot and 2-foot x 2-foot models. Lithonia Lighting, Conyers, GA. **CIRCLE 48**

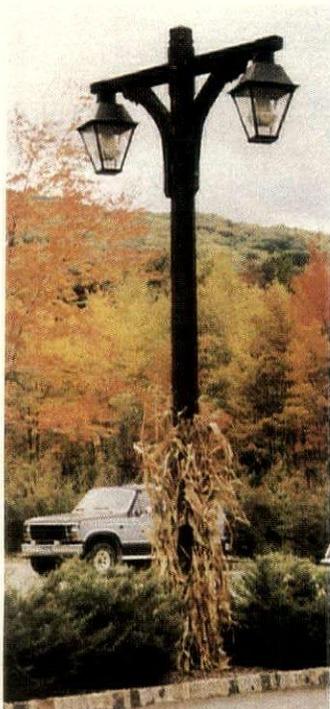
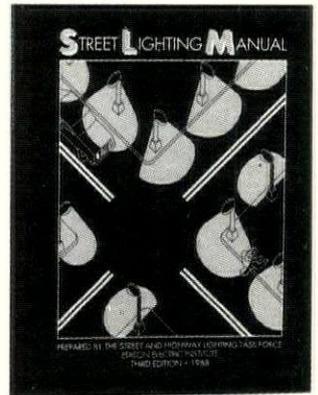


▶ **MAGNETEK TRIAD'S BALLAST OCTIC T8 ELECTRONIC BALLASTS** are designed to reduce energy consumption levels when installed in new or retrofitted fixtures. The T8 ballasts are parallel wired and available in two-, three-, and four-lamp fixtures. Magnetek Triad, Huntington, IN. **CIRCLE 46**

EEI Updates *Street Lighting Manual*

REVIEW BY
CHARLES LINN, AIA
EXECUTIVE EDITOR

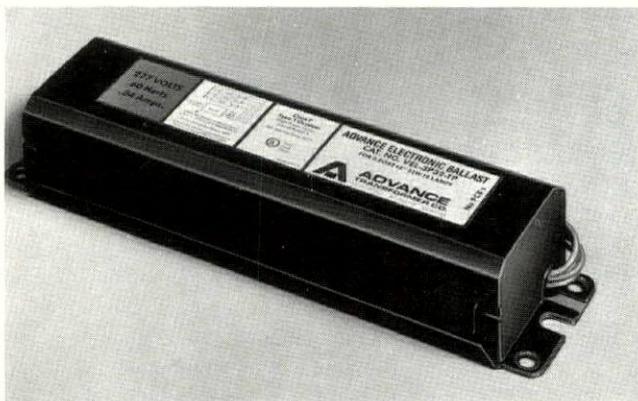
Street Lighting Manual, Third Edition, Edited by William L. Maner and James E. Jewell. Washington, D.C.: Edison Electric Institute, 1988. 152 pages. \$40.



RYTHER-PURDY'S TRADITIONAL TYPE T lighting standard is constructed of western red cedar. The rustic design is particularly suited for condominiums, parks, parkways, shopping centers, and other large landscaped areas. The standard is offered in three post sizes from 7 to 10 inches square with mounting heights from 14 to 40 feet. Various arm lengths may be specified; plinth blocks to house a splice or transformer are optional. Ryther-Purdy Lumber Company, Old Saybrook, CT. CIRCLE 50

ADVANCE TRANSFORMER'S 3-LAMP PARALLEL CIRCUIT ELECTRONIC BALLASTS use 87 input watts at 120 volts, and 83 watts at 277 volts. These ballasts have an

average life expectancy of two years and are protected against voltage surges and line transients that could damage them. Advance Transformer Co., Rosemont, IL. CIRCLE 51 ■



In revising the *Street Lighting Manual* for the first time in nearly 20 years, the Street and Highway Lighting Task Force of the Edison Electric Institute took on the difficult task of trying to be useful to everybody—from electrical utility sales people and engineers to maintenance people and architecture students.

The resulting manual is quite good, but it just can't be all things to all people. Its graphics, layout, and printing quality are attractive. Unfortunately, the focus of the book and the level of technical understanding expected of the reader is inconsistent.

For example, the second chapter, on the physics of light, and early parts of the third chapter, on principles of light control, both seem to assume the reader has never been exposed to the most basic principles of lighting.

Chapter 4, on photometry, charges into material on photometric characteristics and uses of photometric data that the novice will find hard to understand. In Chapter 5, on light and vision, the book again reverts back to the

most elementary material.

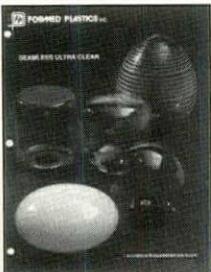
Chapter 6 covers theory and principles of street lighting, including pavement luminance, glare control, and weather conditions, and is one of the best chapters in the book.

Chapter 7 concerns itself with the *American National Standard Practice for Roadway Lighting ANSI/IES RP-8*. Those who acquire the *Street Lighting Manual* will want to pick up a copy of *RP-8* as well. The *Manual* refers often to *RP-8*, which covers a number of topics that the *Street Lighting Manual* does not.

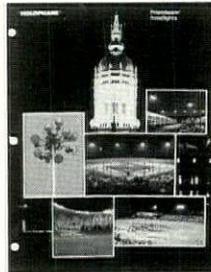
Chapter 8 covers planning and design. Sample problems and most of the basic equations and calculation techniques are covered here. The chapters on history, light sources, ballasts, luminaires, poles, and maintenance are all well done. ■

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Formed Plastic's brochure outlines the numerous shapes and sizes of its Ultra Clear streetlights. They are available in polycarbonate and acrylic, and come in clear, bronze, and white. Formed Plastics, Carle Place, NY. **CIRCLE 30**



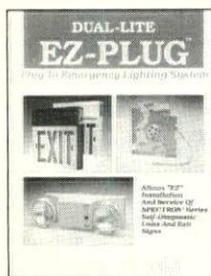
HID Floodlight
Prismbeam, an HID floodlight, is described in Holophane's 12-page color brochure. Details on the fixture's construction and mounting flexibility are provided. Various pole packages and lowering systems are also available. Holophane Co., Inc., Newark, OH. **CIRCLE 34**



Reviews And Data
Teledyne Big Beam's 40-page color catalog on emergency and portable lighting equipment reviews products with features, dimensions, and photographs. The catalog also includes excerpts from the National Electric Code, Life Safety Code, and battery and technical information. Teledyne Big Beam, Crystal Lake, IL. **CIRCLE 31**



Reflectors For Fluorescent Fixtures
A four-page color brochure from Mirrorlite Inc. describes the applications of specular aluminum reflectors, and other lighting and energy control devices that improve the output and cost of fluorescent lighting systems. Mirrorlite Inc., New York, NY. **CIRCLE 35**



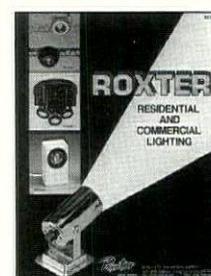
Emergency Lighting
Dual-Lite's brochure on its EZ-PLUG plug-in emergency lighting products is four pages and describes the installation, maintenance, and service of the units and exit signs. The brochure reviews the products' features and components. Dual-Lite, Emergency Lighting Division, Newtown, CT. **CIRCLE 32**



High-Intensity Discharge Data
Voight's application-data brochure features high-intensity discharge lighting for industrial, commercial, and public spaces. Downlight, vertical task light, and widely spread upright are distributed simultaneously from one lighting unit. Voight Lighting Industries, Inc., Leonia, NJ. **CIRCLE 36**



Brass Chandeliers
All nine models in the Williamsburg chandelier line are featured in American Lantern Company's six-page color brochure. Each fixture is made of solid brass and is available in a wide range of styles. Matching wall sconces are also available. American Lantern Co., Newport, AR. **CIRCLE 33**



Halogen Fixtures
Small, low-profile standard, and low-voltage halogen fixtures for Mini Truss and track lighting are featured in a 16-page color catalog. Other fixtures such as high-tech ceiling and retrofit fixtures are also featured. Roxter Manufacturing Corp., Long Island City, NY. **CIRCLE 37**

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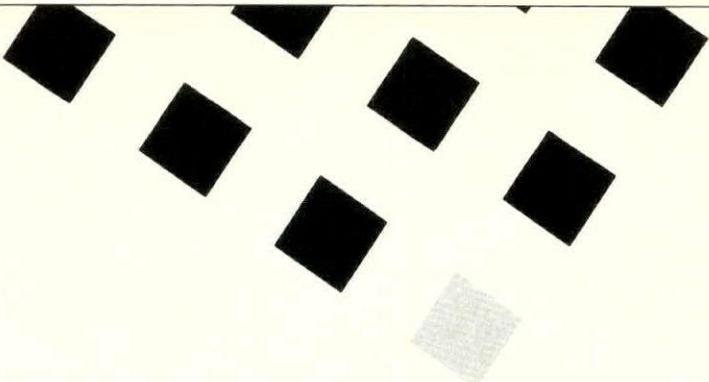
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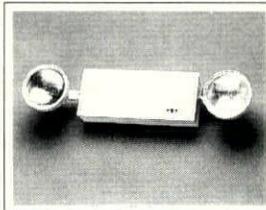
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