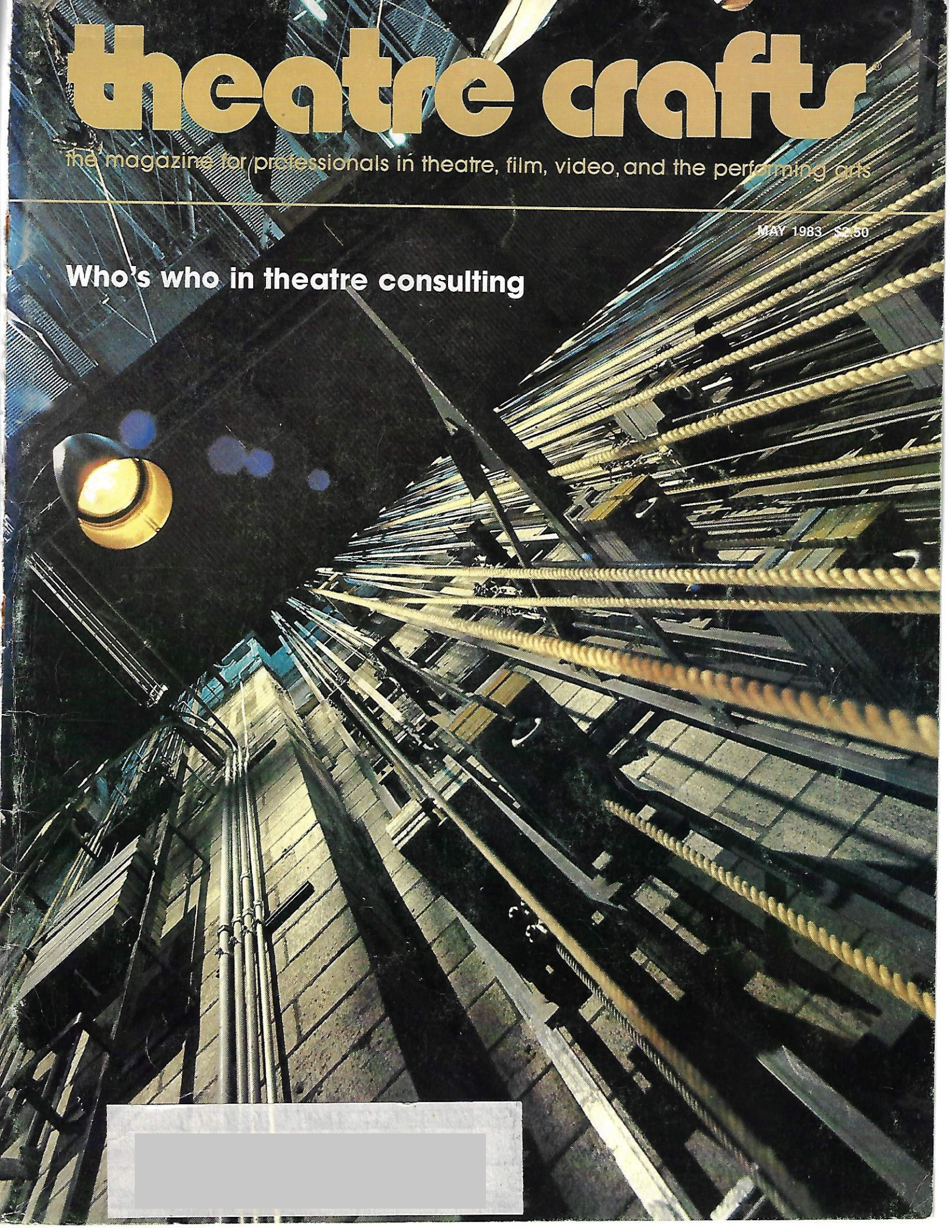


# theatre crafts

the magazine for professionals in theatre, film, video, and the performing arts

MAY 1983 \$2.50

Who's who in theatre consulting



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**Previews:** The *Theatre Crafts Directory 1983/84* comes your way as the June/July issue. Over 200 new listings—totalling over 850—and lots of new categories. This guide to manufacturers, suppliers, and distributors is the definitive resource for the performing arts across the country.

**On the cover:** But will it fly? At Santa Barbara City College Theatre, theatre consultants Landry & Bogan designed the rigging, stage lighting, theatre sound and communications, movable forestage system, orchestra enclosure, and theatre layout. Architect and engineer: Daniel, Mann, Johnson, Mendenhall—project manager: Richard G. Conklin. Acoustical consultant: Bolt, Beranek and Newman. General contractor: Don Green. Rigging: Westmont Industries. Lighting: main theatre—Kliegl Bros., arena theatre—Control Devices. Sound and communications equipment: Acromedia Corp. Photo: Landry & Bogan



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Who's who and what's happening in theatre consulting. *Theatre Crafts* profiles selected consulting firms around the country.

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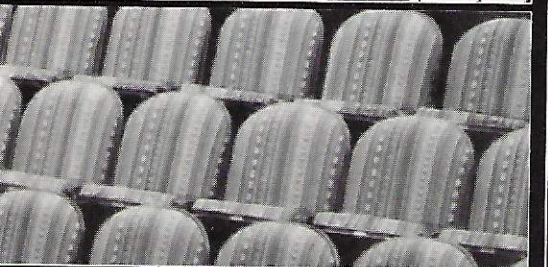
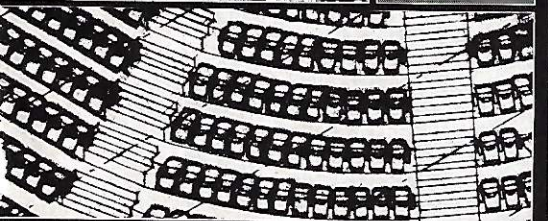
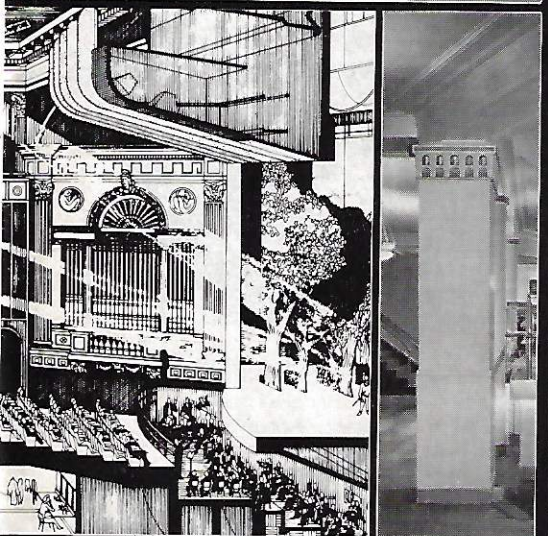
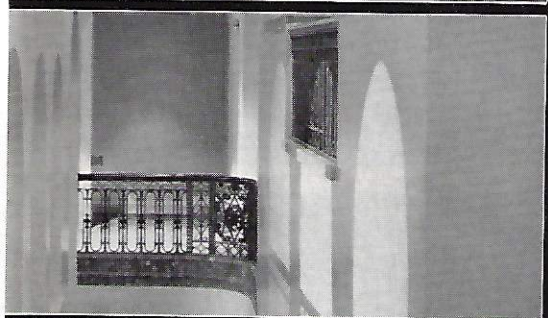
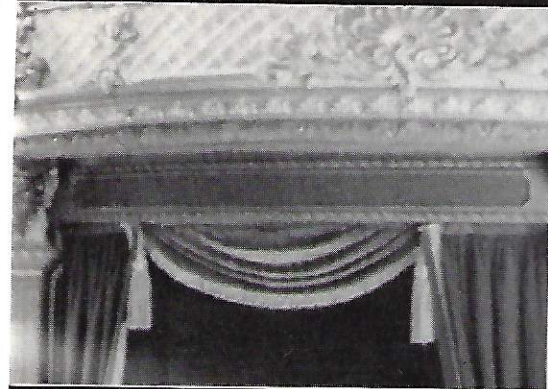
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# The consultant and the theatre

by Susan Levi Wallach

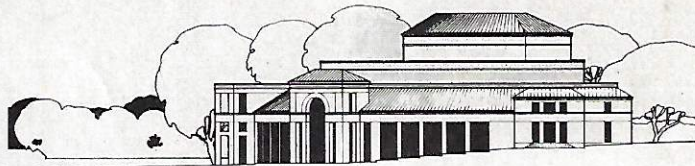
"One of the reasons that most architects find it difficult to design theatres is that they don't have enough direct experience living in them to understand what the problems are that have to be solved with a piece of architecture," states theatre consultant Roger Morgan. "If you don't understand the problem, there is no way you can ever come up with a correct solution." The art of theatre architecture in the 20th century is complex and confusing compared with the equipping of theatre spaces in other times. Today's theatres come in all shapes and sizes—not only the traditional proscenium but arena and thrust as well—to accommodate audiences of several dozen to several thousand, and often for multipurpose use.

Through most of the history of theatre architecture, the designer commissioned to design a theatre did just that: he designed the building and the house and the stage. Sometimes, as with Wren, he was a stage designer as well. True, there were architects who specialized in theatre and could act as their own "consultants." But eventually the breadth of knowledge required to be both an architect and a designer of theatres became too complex. Richard Wagner, when building his theatre at Bayreuth in the middle of the 19th century, recognized the problem and had Carl Brandt, an expert in technical production, serve as his theatre consultant and technical advisor on the project. In America, that realization came considerably later. It was not until well into the 20th century that architects began calling on theatre experts, such as Stanley McCandless (at Yale), Ben Schlanger, and lighting designer Jean Rosenthal for advice. Theatre equipment manufacturers' representatives have traditionally been a source of information, though that information could be expected to be biased toward and limited to their company's products. Still, it was the architect who designed the theatre, and the architect was likely to put architectural design first, before thinking about how to accommodate theatre technology—a situation, Iain Mackintosh, of Theatre Projects' London office, says produced "terrible theatres that really didn't work at all."

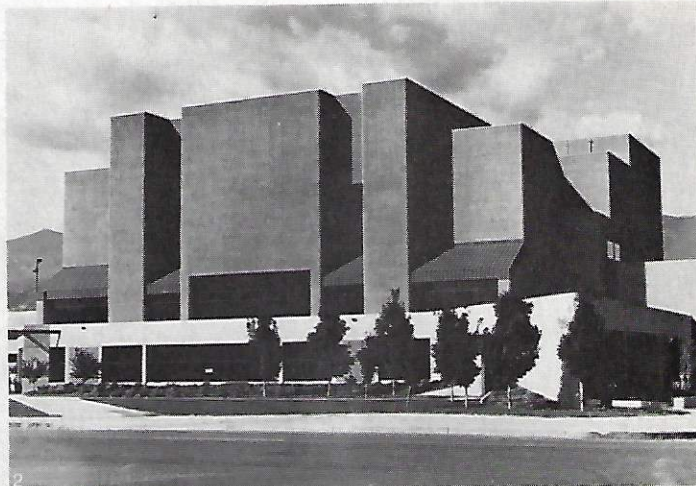
George Izenour can be considered the dean of theatre consulting in the United States. Professor of theatre design and technology and director of the electro-mechanical laboratory at the Yale School of Drama until his retirement, in the late 1950s when asked to advise on a theatre construction he instead insisted that he be a working part of the design team and specify the theatre itself. Although some people who would be in theatre consulting's vanguard, Rosenthal for one, were already channeling their expertise into designing theatres, it wasn't until the late 1950s that anyone was formally recognized as a theatre consultant.

With theatre equipment more and more complicated, it only made sense that the theatre professionals most familiar with the technical needs of a theatre—lighting designers and, to a lesser extent, technical directors—go into the new field. Since no academic programs have been devel-

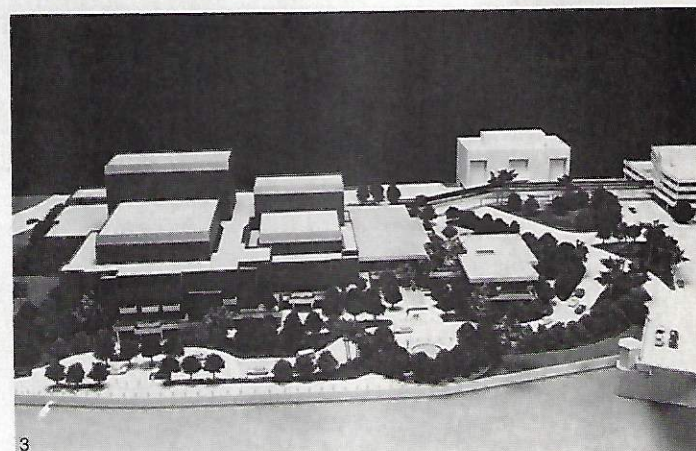
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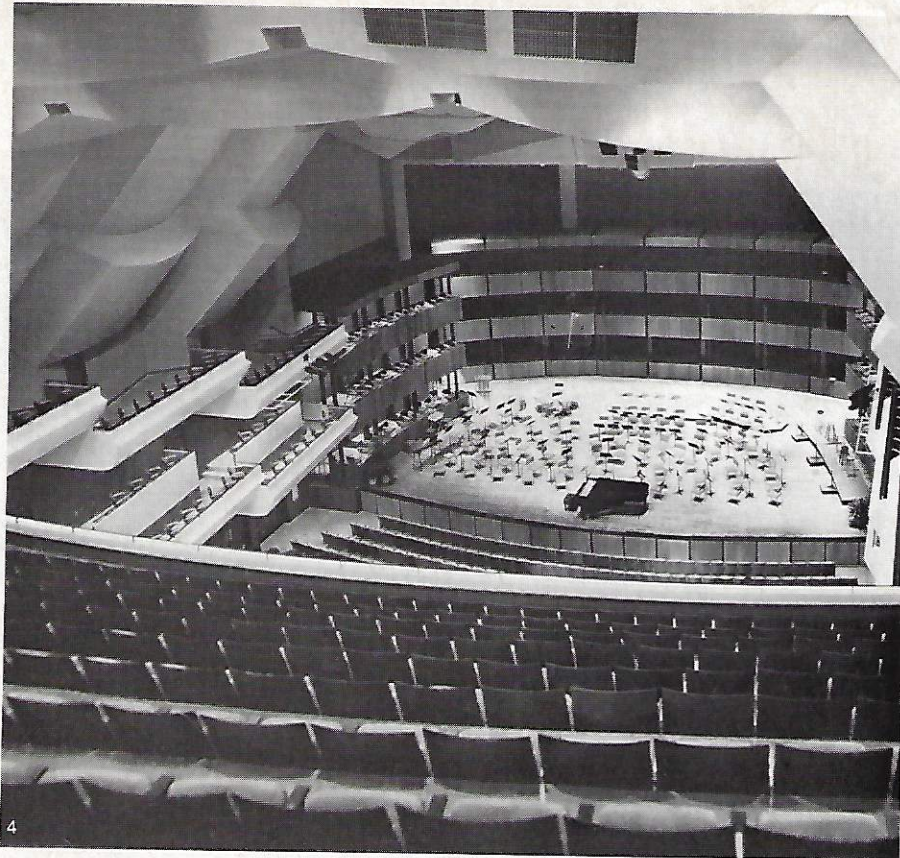


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One of Artec's current projects is a permanent home for the Alabama Shakespeare Festival (1), slated to open in 1985 on the grounds of benefactor Winton M. Blount's estate, in Montgomery, Alabama. ASF artistic director Martin Platt has worked closely with Artec on developing plans for a 750-seat auditorium, a cabaret, and support facilities. Architect: Thomas Blount. Also in the works is the Tampa Bay Performing Arts Center (3), combining a 2,400-seat festival hall, 900-seat playhouse, and 300-seat community hall. Architects: McElvly Jennewein Stefany & Howard and ARCOP Inc. Structural engineer: Thornton-Tomasetti. Electrical engineers: Burton & Rolley, Inc. and Crossey Engineering, Inc. El Pomar Hall at the Pike's Peak Center (2, 4, and 5), in Colorado Springs, echoes the design and flexible acoustics of the Centre-in-the-Square (6), in Kitchener, Ontario. Pike's Peak Center architects: John James Wallace Associates and Clifford Nakata & Associates. Acoustics: Artec. Structural engineer: Howard C. Dutzi & Associates. Electrical engineer: Consulting Engineers, Inc. Mechanical engineer: BHCD Engineering, Inc. Rigging: Hoffend & Sons. Lighting: Strand Century. Sound: Spectrum West. Seating: American Seating. Centre-in-the-Square architect: Rieder & Hymmen. Acoustics: Artec. Mechanical and electrical engineer: Walter Fedy McCargar & Hachborn Ltd. Rigging: Hoffend & Sons. Lighting: Electro Controls. Sound: Gerr Electro Acoustics. Seating: ducharme ltd.

# Artec Consultants, Inc.

by Susan Lieberman



According to Robert Wolff, of Artec Consultants, "Consulting begins when the client decides there is a need for something." From then on, Artec applies a variety of professional theatre services, including acoustics, to fulfill the need. But more important than any technical skill is what Wolff calls "the moxie to put different people together in such a way that their disparate goals mesh."

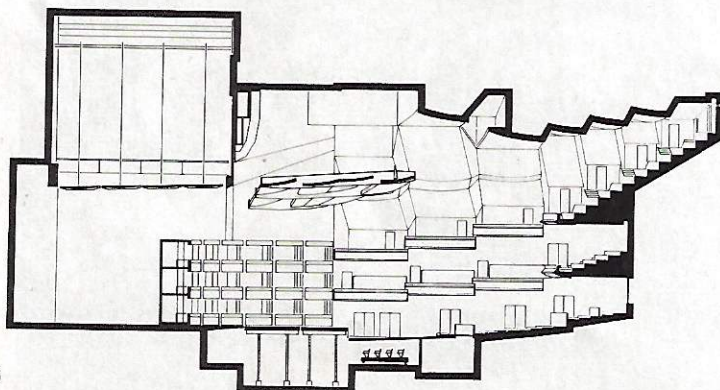
Wolff, principal theatre planning consultant, hesitates to classify the firm as specializing in large concert halls; however examples of Artec's work in this field are scattered throughout North America. In Kitchener, Ontario, stands the massive Centre-in-the-Square, seating just under 2,000 continental style, with a stage house ready for the Ring Cycle or Frank Sinatra. The recently opened El Pomar Hall, in Colorado Springs under the shadow of Pike's Peak, refines the design of the earlier Kitchener structure. And squeezed into a corner of Artec's New York office is the model of Dallas's forthcoming 2,200-seat symphony hall.

Creating spaces suitable for world class opera and symphonies, as well as pop singers, presents a special challenge to a staff consisting of several consultants who were—or still are—practicing musicians. Given the eclectic backgrounds represented here, meshing begins in-house.

It then moves beyond the office to the architect and client—a delicate and complex process of team work. Wolff says, "I think of the process like this: the architect is a person who has enormous eyes and tiny ears. Now the music people have enormous ears and teeny weeny eyes. But theatre people—maybe because I'm mostly a theatre person, I'm biased—have big eyes and big ears. They're the ones who are especially hurt if the acoustics of a room are bad or if the aesthetics are a shambles or if people are seated in the wrong place to enjoy a performance." The point is to integrate management, technical, acoustical, and aesthetic considerations—a process of compromise and adjustment which can often lead to innovation.

What sets Artec apart from most other theatre consultants is a long history of

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# Landry & Bogan

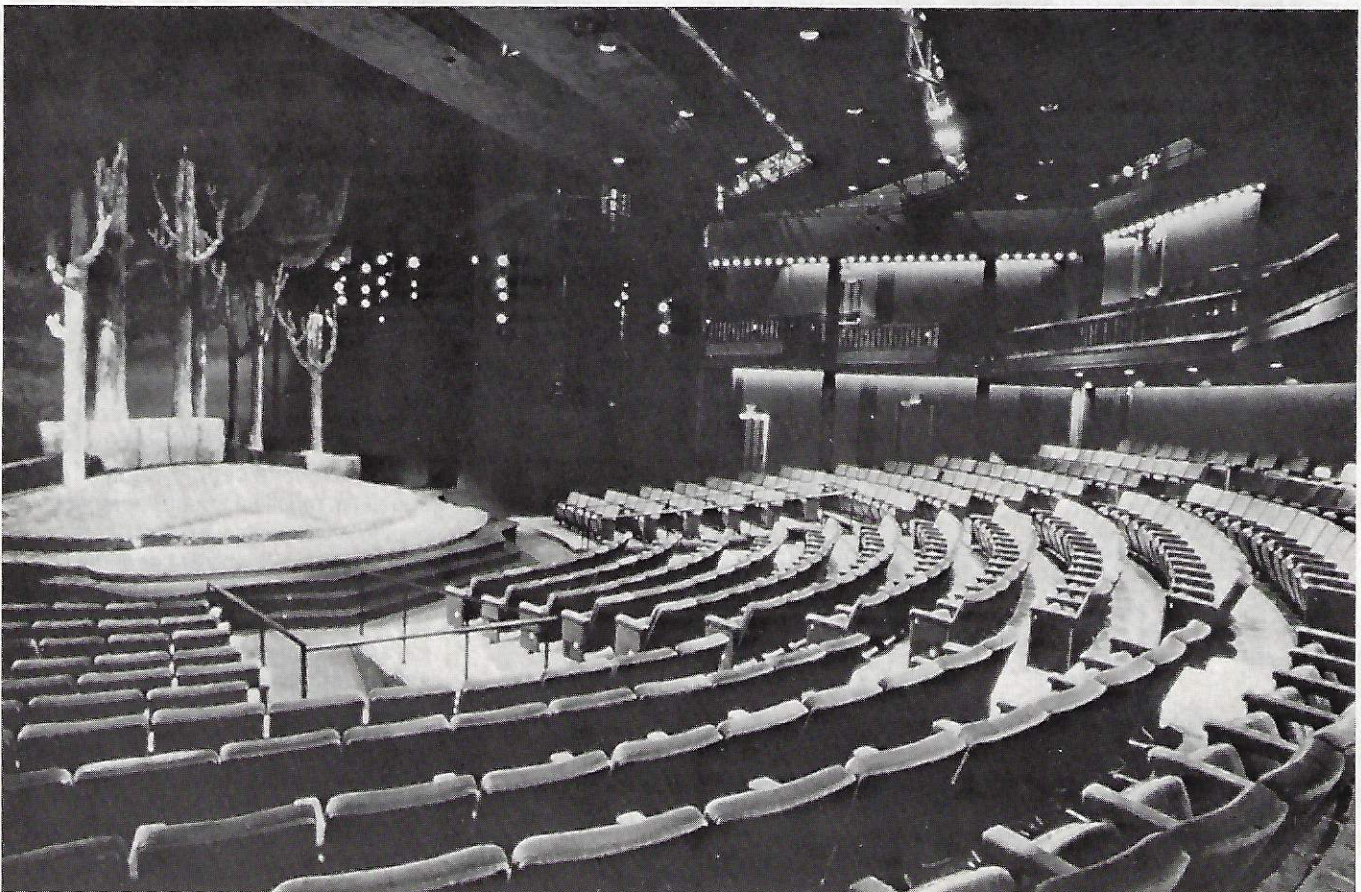
When theatre consultant and architect Jack Bogan is asked for the philosophy behind the work Landry & Bogan does, his answer is, "I'm tempted to break out in that quotation from Shaw about a theatre being a factory of thought, a temple of inventive man, an armory against despair and dullness, and so on. Live theatre may be the last hope for the social sharing of an experience. You can share an experience that has an equal emotional impact on a lot more people by going to see the Stones at Yankee Stadium. But it ain't the same. In a theatre, you're actually in the room with another person who is doing something better than nearly everybody else can do it—whether it's Doug Henning or Sarah Bernhardt. An experience, certainly, that's not matched by seeing a film clip or by sitting 450' from Mick Jagger.

"Mainly, though, we just tend our garden. Whatever the role of theatre is, whatever it does, it does it better if it works technically. And that's our job. It's not necessary for us to think too deeply on whether we're saving the world."

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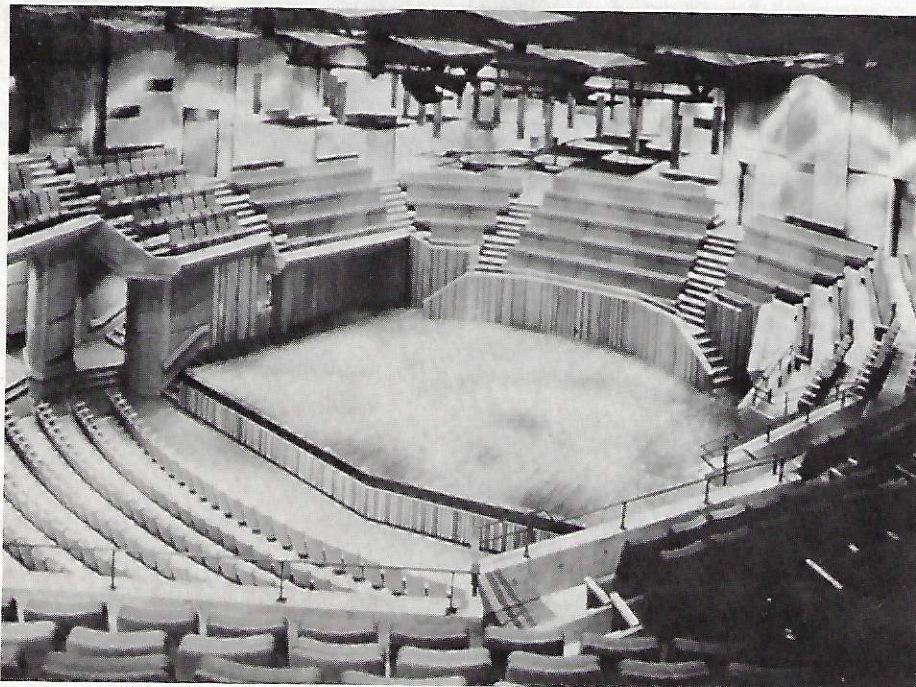
Theatre consultants Paul Landry and Jack Bogan, principals of Landry & Bogan, have worked on about 100 projects to date. Recently, they were consultants on the 582-seat Old Globe Theatre (below), in San Diego, when it was rebuilt in 1982 following destruction by fire. The firm designed the theatre layout, rigging, stage lighting, special lifts, scenic towers, and, with Dan Dugan and Roger Gans, theatre sound and communications. Architects: Liebhardt, Weston and Associates—project architect: Eugene Weston. Structural engineer: Kariotis, Kesler, and Allys. Mechanical and electrical engineer: Dunn, Lee, Smith, Klein and Associates. Acoustical consultant: Purcell + Noppe + Associates. Special theatre design consultant: Richard Hay. Rigging: Olesen Corporation. Lighting: Strand Century. Sound and communications: Communications Company. With architects Broome, Oringdolph, O'Toole, Rudolph & Associates, Landry & Bogan worked on the construction of Lewis and Clark College's 300-seat Fir Acres Theatre (above). The firm designed the theatre layout, rigging, and stage lighting for the project, which was completed in 1977. Project architect: Robert Oringdolph. Structural engineer: Rose and Breedlove. Mechanical engineer: C. W. Timmer Associates. Acoustical consultant: Robin Towne Associates. Lighting: Control Devices. Rigging: Stagecraft Industries.



# S. Leonard Auerbach & Associates



KARL H. RIEK



According to Len Auerbach, head honcho of S. Leonard Auerbach & Associates, the theatre consulting process "is one of determining needs and removing obstacles. We find so many elements in a building that have to be dealt with, from the structure that keeps the roof up, to air conditioning ducts, to stairways that land in the wrong direction in relation to the door. Obstacles have to be dealt with and compromises have to be made."

Since its formation in 1973, S. Leonard Auerbach & Associates has worked on an international roster of theatre projects—in lighting design, audio-visual and television consulting, and acoustics, as well as in general theatre consultation. Recent theatre consulting projects include the Al-Deffi Assembly Hall (in design, ELS Design Group, architects), in Jubail, Saudi Arabia; the Berkeley Repertory Theatre (1980, Angell/Lockwood, architects); the Minneapolis Children's Theatre at the Minneapolis Institute of Fine Arts (1974, Kenzo Tange and Urtec, and Parker Klein Associates, architects); the Kimo Theatre (1982, Harry Hoshour, architect), in Albuquerque; and the Solvang Theaterfest (1983), in Solvang, California. Except for the Kimo, which was a renovation, all are new constructions.

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In British Columbia, S. Leonard Auerbach & Associates served as theatre consultants on the University of Victoria's University Centre. The first surround hall in Canada, the 1,355-seat auditorium (left bottom) opened in 1978. Architects: The Wade Williams Partnership. Acoustical consultant: Bolt, Beranek and Newman, Inc. Rigging: Grosh Scenic Studios. Lighting: Control Lighting. Seats: ducharme ltd. Auerbach & Associates also did full-scope theatre consulting on the University of Texas-EI Paso's fine arts complex drama theatre (left top). The complex opened in 1974. Architect: Mamon & Mok. Acoustical consultant: Bolt, Beranek and Newman, Inc. Lighting: Kliegl Bros. Rigging: Stagecraft Industries. Seats: J.G. Also with Bolt, Beranek and Newman, Auerbach & Associates worked on the Reichold Cultural Center, St. Thomas, Virgin Islands. The firm did full-scope theatre consulting on a 2,000-seat amphitheatre (left center), which opened in 1976. Architects: Walz & McLeod. Lighting: Kliegl Bros. Rigging: J.R. Clancy.

# Brannigan-Lorelli

Although the long credit list for Brannigan-Lorelli Associates includes theatres big and small, specialized and multipurpose, the word "center" stands out: Saratoga Performing Arts Center, Toronto Performing Arts Center, Lincoln Center, James L. Knight International Center, 55th Street Dance Theatre/City Center. Robert Brannigan and Robert Lorelli know about performing arts centers.

Brannigan, formerly a Broadway stage manager and lighting designer, got his first taste of managing large-scale cultural events at the Seattle World's Fair in 1962. Then followed a period as director of operations, director of production, and theatre consultant for Lincoln Center. Before opening an independent theatre consulting service with Robert Lorelli in 1975, he served as director of production at New York's City Center of Music and Drama, organizing cultural exchanges and international tours.

Lorelli began as chief engineer for Joseph Vasconcellos, Inc., a stage equipment manufacturer. Responsible for designing and installing equipment at Lincoln Center, the New York World's Fair, hotel ballrooms, and elsewhere, he learned not only the technical ins and outs of these spaces, but the management and budget demands as well. In 1972 he applied all this to City Center, where he was appointed director of operations. A decade later he and Brannigan took charge of the renovation of City Center, acting as both client and consultant on a theatre they knew intimately.

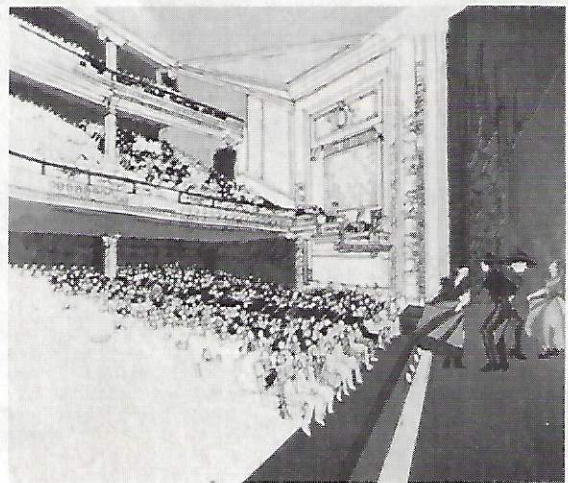
"The one thing we have that other theatre consultants don't is the hands on," says Lorelli. "We're aware of what goes into establishing an arts center." Working with them are a licensed electrical engineer, Icarus Pyros, and Paul Le Doux, an engineer who specializes in rigging design.

An absolute must on any project, according to Lorelli, is "very reliable equipment, anything that saves labor. One thing we do not try to do is reinvent the wheel. A lot of consultants come from academia and what they'll do is try out something in theatre. We do not do that. Unless equipment has a proven track record, we will not recommend it."

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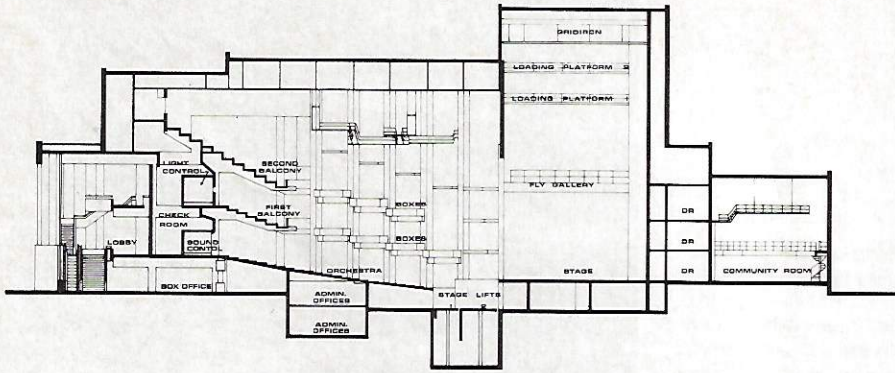


Brannigan-Lorelli oversaw renovation of New York's City Center of Music and Drama (above) in 1982. Architects: Lebensold Affleck Nichol Hughes Khosla/Rothzeit Kaiserman & Thomson Associates. Acoustics: Bolt, Beranek and Newman, Inc. Lighting: Kliegl Bros. Plans for the San Antonio Performing Arts Center (right) involve transforming two old vaudeville houses into a downtown cultural complex. Architects: Ford Powell Carson/ARCOP Syracuse combined cultural and civic services at the Civic Center of Onondaga County (top and bottom right). Architects: Lebensold Affleck Nichol McAfee Malo. Acoustics: Russell Johnson Associates. Rigging: Hoffend & Sons. Lighting: Major Electric. The James L. Knight International Center (right center), in Miami, opened in 1982. Architects: Ferendino Grafton Spillis Candela. Acoustics: Christopher Jaffe. Lighting: Electro-Controls.



# Insurance

## The price of advice



According to Webster's, consulting means "to provide professional advice." To insure (also according to Webster's) is "to assure against a loss by a contingent event on certain stipulated conditions or at a given rate or premium." Add to these untenable terms a third word—theatre—and you have something that almost defies definition: insurance for theatre consultants.

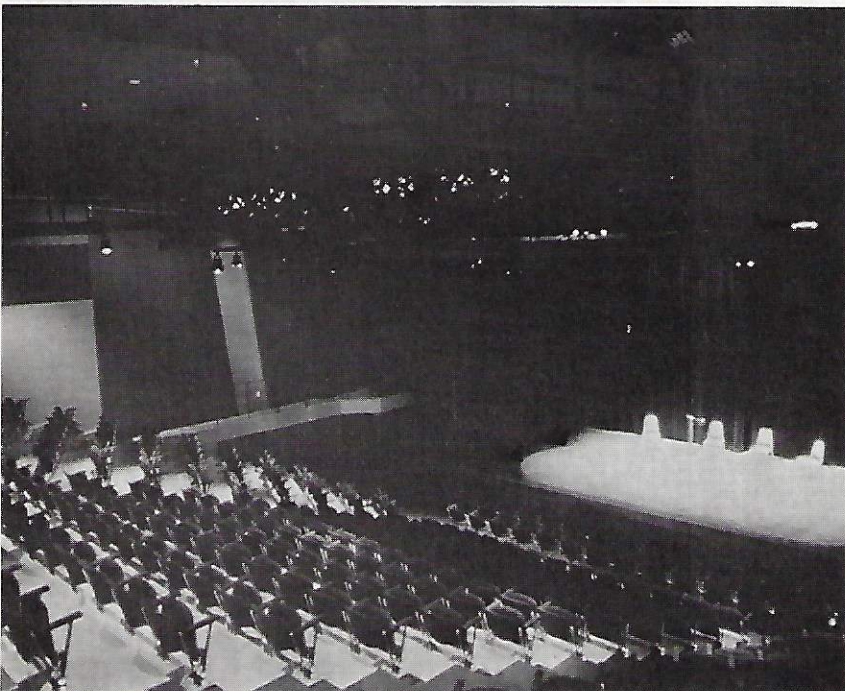
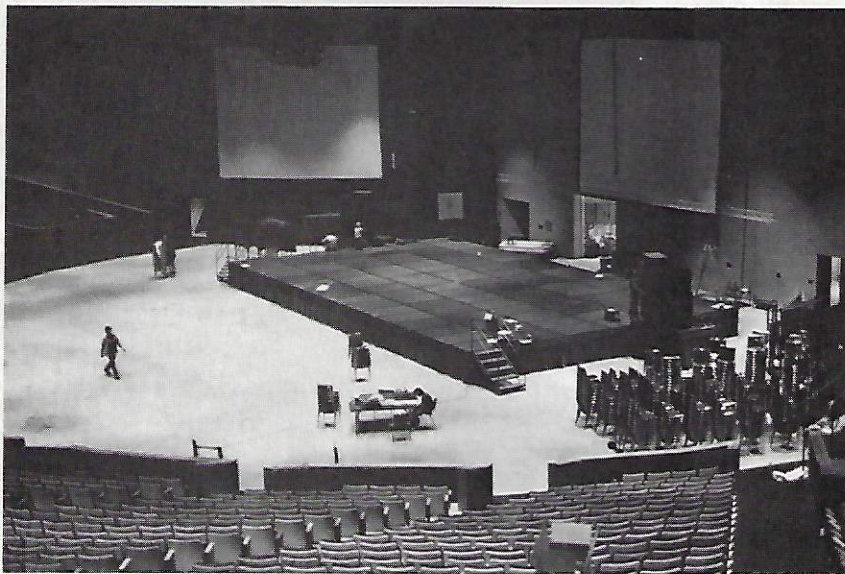
To some extent, the problem in obtaining insurance for an occupation that involves complex technology, physical spaces, and human lives is one of definition. It is difficult to define the parameters of a theatre consultant's job. It is even more difficult to determine the nature of coverage for the essential, but vague, service of "professional advice."

Insurance companies insure professionals. But theatre consultants—a hybrid species of stage designers, architects, academics, and engineers—have no specific criteria for professionalism. No requisite degrees, no qualifying examinations, no licensing boards. Like theatre folk generally, consultants acquire professional status by a combination of experience, imagination, and common sense.

To further complicate the issue, says Van Phillips of Jones & Phillips Associates, "The general public, as well as insurance people, have no awareness of what a theatre consultant does." Consultant Roger Morgan concurs: "Insurance companies do not understand us because there are only two dozen of us out there."

Consequently, theatre consulting firms have tremendous difficulty obtaining coverage unless they have licensed architects or engineers on staff. In those cases, the standard "Errors and Omissions" liability is most common. Bob Davis, head of theatre consulting services for Jules Fisher Associates, points out that "Generally, companies will only sell liability to people who are licensed. And there is no license for what we do. It's Catch-22. I would recommend that anybody building anything should do

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# Jules Fisher Associates, Inc.

"Computers," observes Bob Davis, head of theatre consulting services for Jules Fisher Associates, "do not enjoy the theatre at all." Therefore, relying on them to design performance spaces "is a horrible mistake. Computers don't know what's good."

Jules Fisher Associates, Inc.—a separate company from Jules Fisher Enterprises, Inc., the production company, and Jules Fisher & Paul Marantz Inc., architectural lighting designs—is a four-man team wedding practical experience with academic training in architecture, scenic and lighting design, theatre history, and engineering. Active stage designers in New York and regionally, the theatre consultant group, Jules Fisher Associates, takes a somewhat offbeat, humanistic approach to theatre consulting.

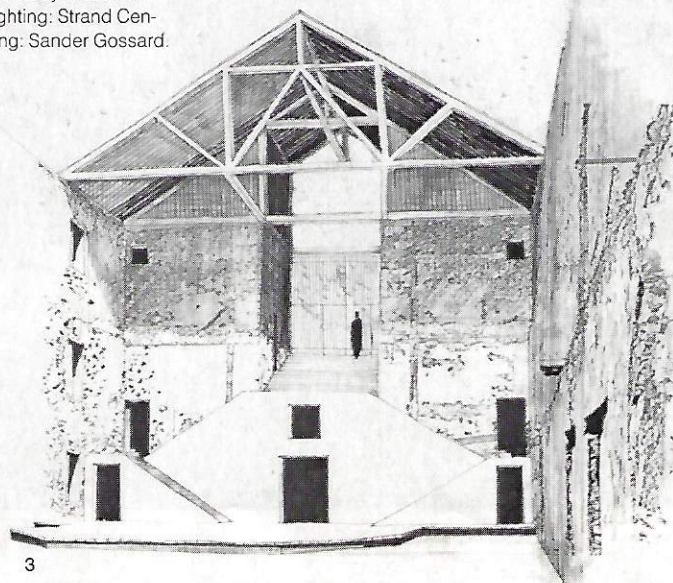
From Denver's Boettcher Concert Hall—the first 360° surround hall in the United States—to Dallas's Miracle at Pentecost Diorama, Jules Fisher Associates attracts projects with unusual requirements and many unknowns. As Davis puts it, "those which are totally looney and demand an entirely different expertise." But in its 20 years of operation, the firm has handled projects of all kinds, from the most bizarre to the most mainstream.

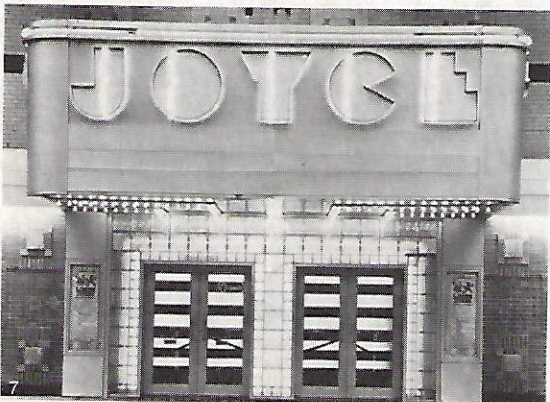
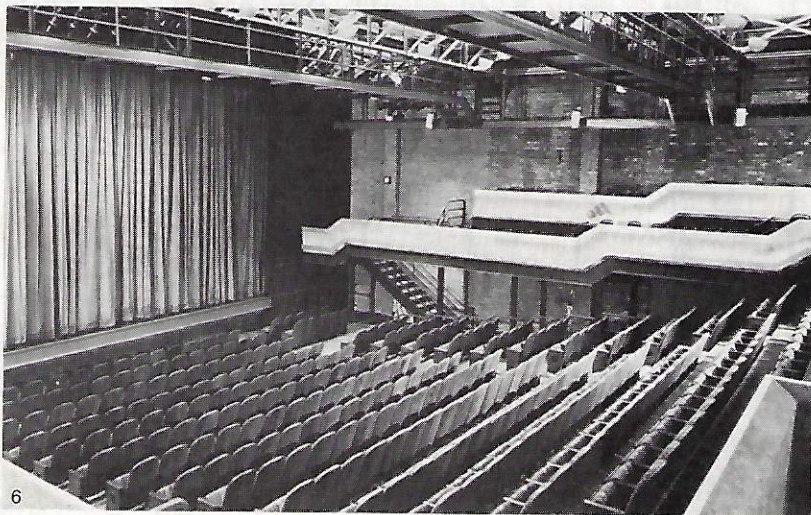
For every burned-out 19th century Shaker barn (slated to become a 500-seat theatre) and Chelsea cinema (the Joyce Theater, recently converted into an almost ideal dance auditorium), there is a community (the Eugene Performing Arts Center, in Oregon) or professional (the forthcoming Filene Center at Wolf Trap) facility in which traditional institutional needs, rather than novelty, are the priority.

Whatever the space, one idea prevails: the physical structure is secondary to the event of live performance. "Theatre is community," says Davis. "Theatre is people who have gathered in a place to share a performance." Although much time is spent working out the nuts and bolts, Davis insists, "our input is not technical. It's theatre function. That includes how suited the space is aesthetically to what the director's aims are and what the audience wants to have happen

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Jules Fisher Associates were consultants on the Eugene Performing Arts Center (1 and 2), in Oregon, a renovated facility which opened in 1982. Architects: Hardy Holtzman Pfeiffer. Acoustics: Christopher Jaffe. Rigging: Sander Gossard & Associates. Lighting: Strand Century. As both theatre consultant and architect, Joshua Dachs is working on the conversion of a 150-year-old Shaker barn (3) into a theatre, scheduled to open in phases on the grounds of the Darrow School, New Lebanon, New York. The 2,242-seat C. W. Post College Concert Theatre (4 and 5) accommodates the campus's varied range of cultural events. Architects: Mitchell-Giurgola. Acoustics: Bob Hansen. Lighting: Strand Century. Seating: Irwin Seating. Another renovation project with Hardy Holtzman Pfeiffer was the Joyce Theater (6 and 7), an old cinema in the Chelsea section of Manhattan, which opened in 1982. Choreographer Eliot Feld, who wanted the space for his ballet company, was involved in tailoring the space to the needs of dancers. Unseen details include a special dance stage (one surface for modern, one for ballet), a separate heating/cooling system for the stage house, and a warm-up room in the basement. Architects: Hardy Holtzman Pfeiffer. Lighting: Strand Century. Rigging: Sander Gossard.





## Up to standard:

## Section 504

by Robert Long

Nineteen eighty-three marks the tenth anniversary of Public Law 93-112, more commonly known as the Rehabilitation Act. In it is contained Section 504, which states:

No otherwise handicapped individual in the United States shall, solely by reason of his handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.

Passed by Congress as an outgrowth of the enhanced public awareness of social equality, the ruling has helped to extend the needs of the handicapped into all areas of performing arts management, audience development, and facility design. The law went fully into effect in 1977. That year, every performing arts organization dependent upon federal funding faced a reevaluation of its program in respect to accommodation of the handicapped.

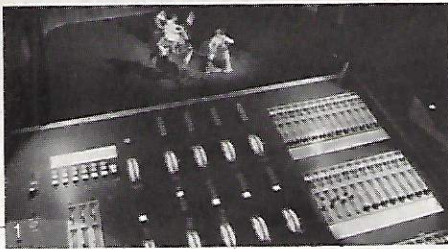
Jessica L. Andrews, director of theatre programs at FEDAPT, observes that the initial reactions of anxiety and hesitation among organizations with performance facilities have given way to a sense of responsibility. Many of these groups have initiated special programs for the handicapped, offering services that welcome the handicapped as audience members and that follow through by making their theatregoing experience as convenient and pleasurable as possible.

In a pamphlet entitled "Program Accessibility for the Disabled Theatre-Goer," author Pat Sternberg states, "the greatest barriers to the world of the disabled are those built by attitudes, not concrete and wood." So the removal of physical barriers is only a part of the total effort to provide a safe and enjoyable entertainment experience for the handicapped. The visually or hearing impaired require other adjustments. Theatregoing is a complex experience—from initial point-of-contact, through advertising, to ticket purchase, arrival, performance, and return.

Paula Terry, of the Arts and Special Constituencies Project, a department of the National Endowment for the Arts that

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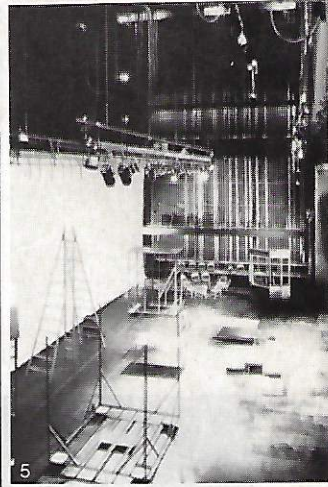
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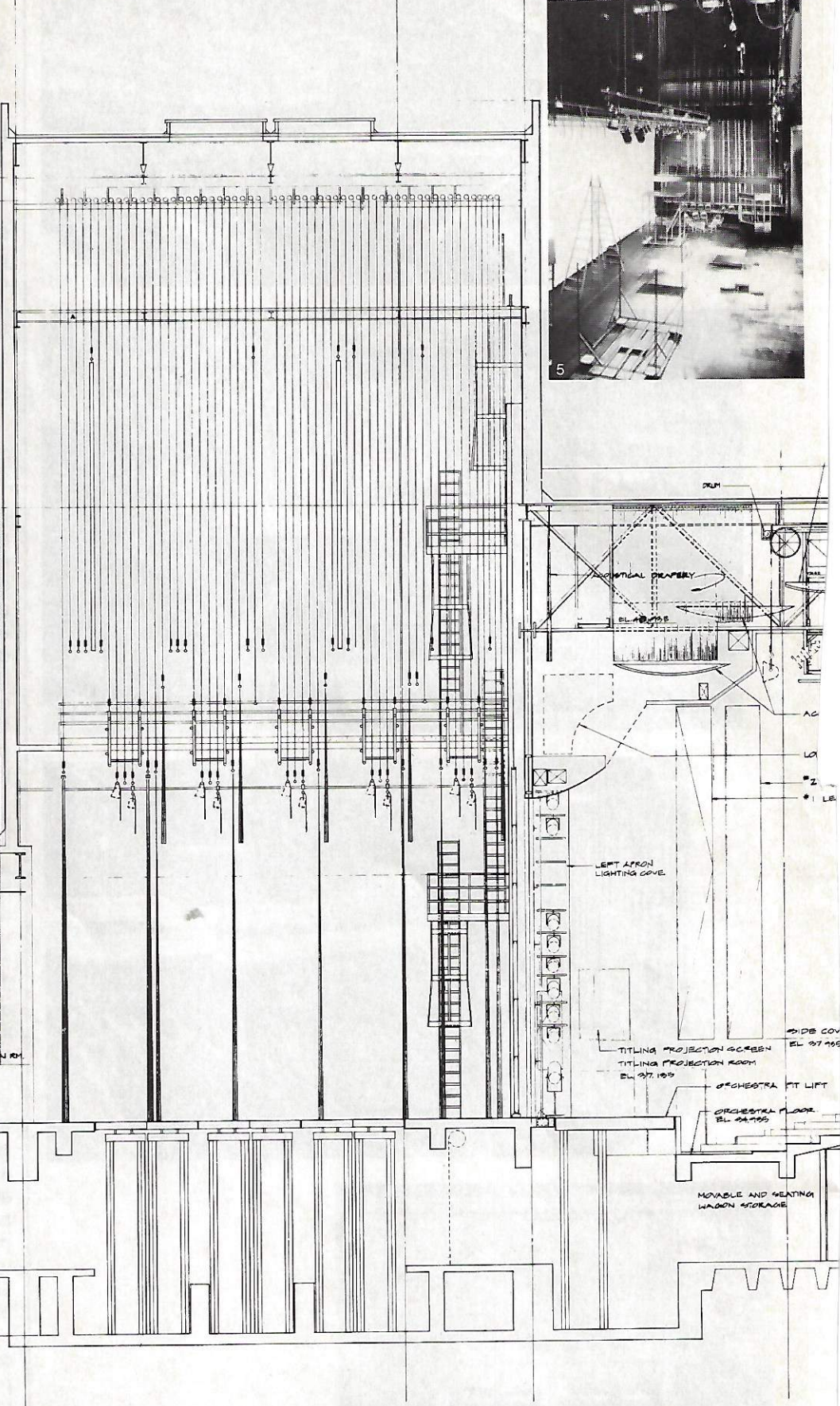
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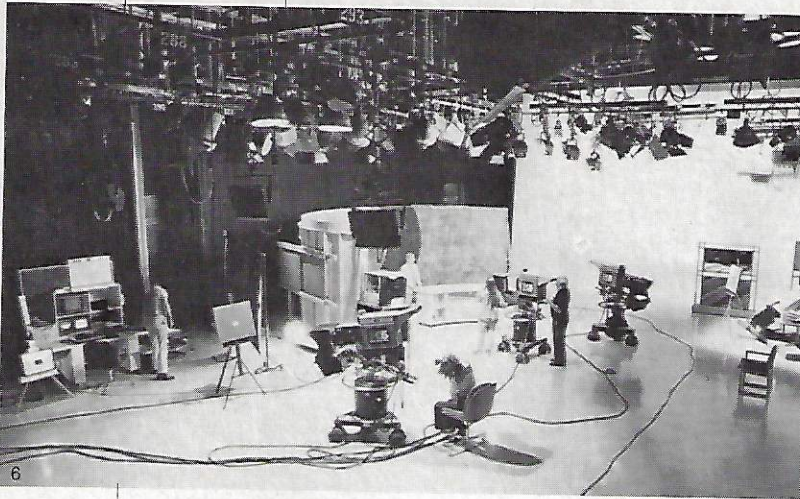


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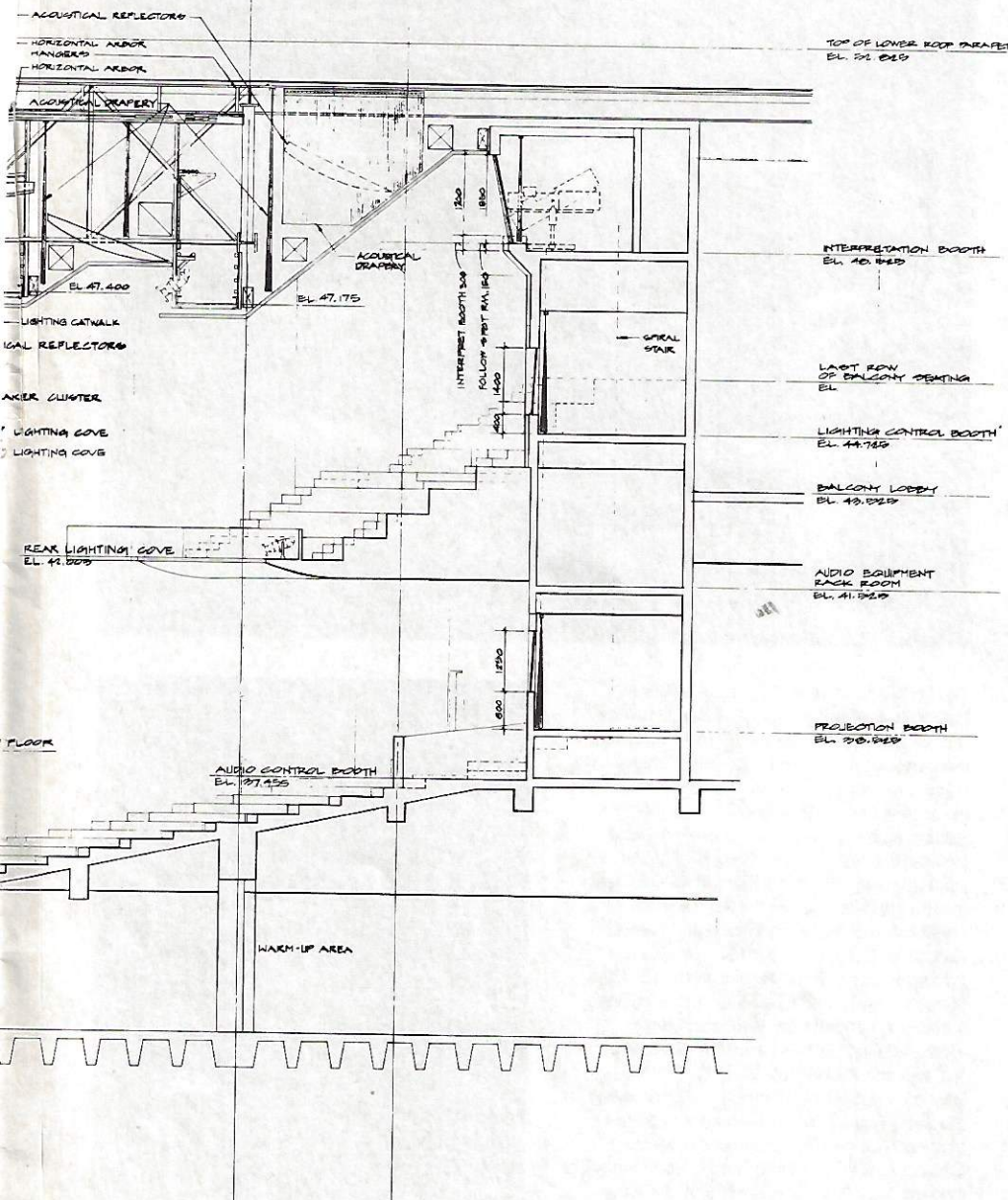
## George Thomas Howard & Associates

By his own admission, George Howard is a big fellow. And his company's role in the field of theatre consulting is of no mean size. Founded in 1958 (about the same time as Jean Rosenthal Associates), George Thomas Howard & Associates ranks in the category of elder statesman for this relatively young field.

Howard himself has been in the theatre since he started sweeping up after the kids' show in Portland. Working his way through college as a stagehand, he came out with a BA in physics and graduate degrees in electrical engineering. In 1958, following a stint as a theatre, motion picture and television lamp specialist at General Electric, Howard returned to the West Coast—Seattle in particular. There he worked with B. Marcus Priteca (architect of most of the Pantages Theatres west of the Mississippi). It was about this same time that Jean Rosenthal was working on the Los Angeles Music Center and, as Howard comments, "The two of us were parallel."

Theatre in the Northwest dried up after the World's Fair, and Howard went to work running the West Coast operation of Kliegl. Returning to consulting, the firm's first major project was the Grand Ole Opry. About the same period, they worked on the Angus Bowmer Theatre at the Oregon Shakespearean Festival and the International Hotel (now the Hilton).

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Currently on the drawing boards at George Thomas Howard & Associates is the Tong Yang Broadcasting Mass Communications Centre Theatre (left) in the Joong Ang Daily News Building, Seoul, slated to open in 1985-86. George Howard describes the project as "totally automated—all motorized rigging, motorized lifts, and wireless motorized stage wagons." Over the years, the George Thomas Howard office has been involved in consulting on a number of casino hotels in Reno, Las Vegas, and Atlantic City, as well as numerous television studio installations (KING-TV, Seattle, 6). At the other end of the spectrum are the theatre consulting jobs for colleges and universities. The Evergreen State College (Olympia, Washington) Communications Building was a multi-faceted project (small theatre, 1; dance studio, 3; counterweight sets, 5). For the Cypress College Theatre (4, and black box, 2), their assignment included scenery handling systems, stage curtains and draperies, lighting control and dimming systems, and stage lighting equipment and distribution.

# Across the board

## Other consultants

Combing lists of working theatre consultants, *Theatre Crafts* came up with a random sampling of consultants big and small. Some are not currently involved in a project. Some combine other work (teaching, technical direction, design) with theatre consulting jobs. Some are full-time consultants and have extensive job lists. Together, they are representative of the scope of the theatre consulting field, both in terms of the diversity of their approaches and the diversity of their projects.

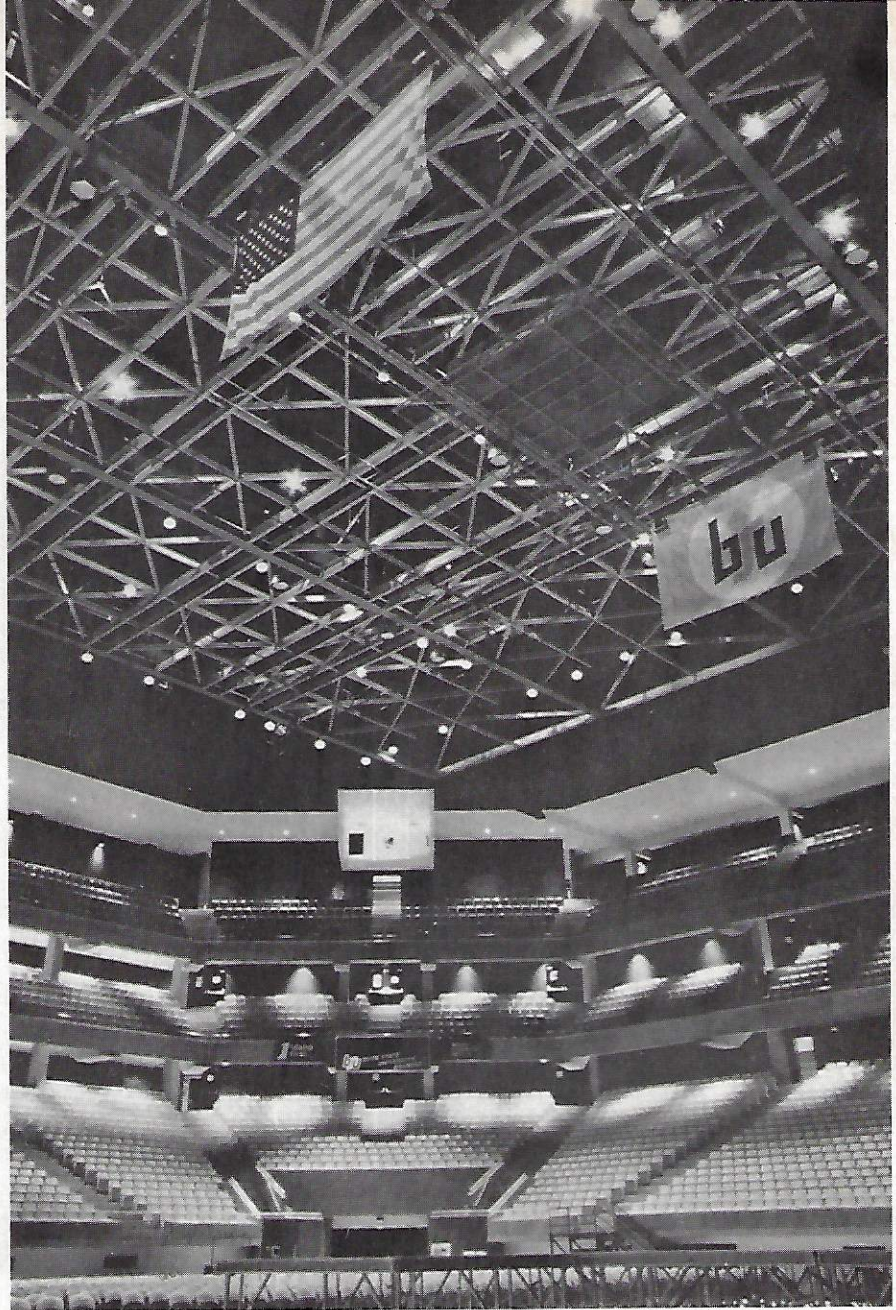
The editors

### Brian Arnott Associates

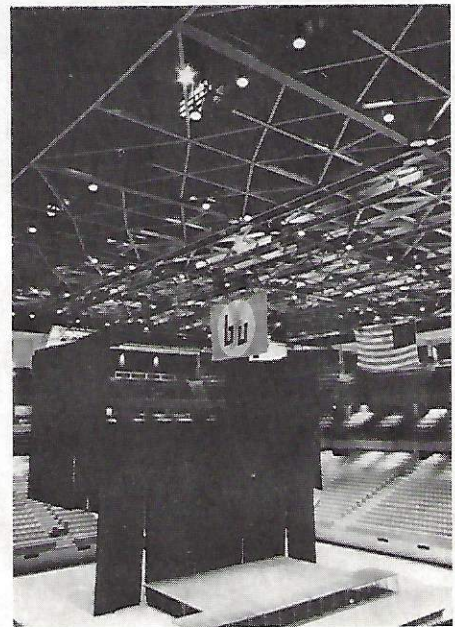
To Brian Arnott, the consultant has "a responsibility to assist the client in the most effective use of budgetary resources. This involves the development of an orderly financial plan, which corresponds to the physical plan and which will be subject to a minimum of revisions." At the same time, he notes that a good design begins with "a fundamentally sound idea whose reason for being arises directly from the history, character, or needs of the community or client."

Arnott has spent more than 15 years as an arts management and planning consultant. He is head of Brian Arnott Associates, a consulting, management, and design firm with offices in both Toronto and Edmonton. It is not surprising, given his veneration for theatre traditions, that he should be a firm believer in renovating and restoring old theatres whenever possible. "Often, there is a kind of character in an existing building that inspires you to a certain solution. Indeed, it produces a building that incorporates elements of both the old and the new, a building that gives you a sense of the continuum of history along with the excitement of the new. Sometimes when you are given the *tabula rasa* of a new building, you just don't create anything that is as exciting as when you restore or convert an old building. A lot of good, modern, functional theatres are just not that inspiring as architecture."

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The challenge for Jerit/Boys at Boise State University was designing a 12,000-seat pavilion (above and right) that could function as more than a sports arena. Architect: Cline Smull Hamill Quintieri Associates. Acoustics: Paoletti Lewitz Associates. Sports facility planning consultant: Aper Consulting Services. Rigging: Hoffend & Sons. Lighting: Colortran. At Mississippi University for Women a multiform 330-seat theatre (right top) serves the needs of the speech and communications department. Architects: Gambelin and Smith. The Music Education Center (right center) at North Dakota State University, with a 200-seat recital hall and 1,000-seat concert hall, was completed in 1982. Architect: Foss Associates. Acoustics: R. Lawrence Kirkegaard. Rigging: TRS Inc. Seating: Ideal Seating Company. Exemplifying the trend in building arts facilities for educational and civic use on community college campuses is the Macomb County Community College fine arts building (far right), in Clinton Township, Michigan. Architect: TMP Associates. Acoustics: R. Lawrence Kirkegaard. Rigging: Hoffend & Sons. Lighting: Strand Century Seating; American Seating.



## Jerit/Boys Incorporated

Based in Oak Park, Illinois, a Chicago suburb studded with Frank Lloyd Wright homes, Ron Jerit and Teddy Dean Boys are well placed to help shape regional arts centers in America. A brief ride brings them to a major airport nexus for their ongoing trips to Boise, Tulsa, Anchorage, or Modesto.

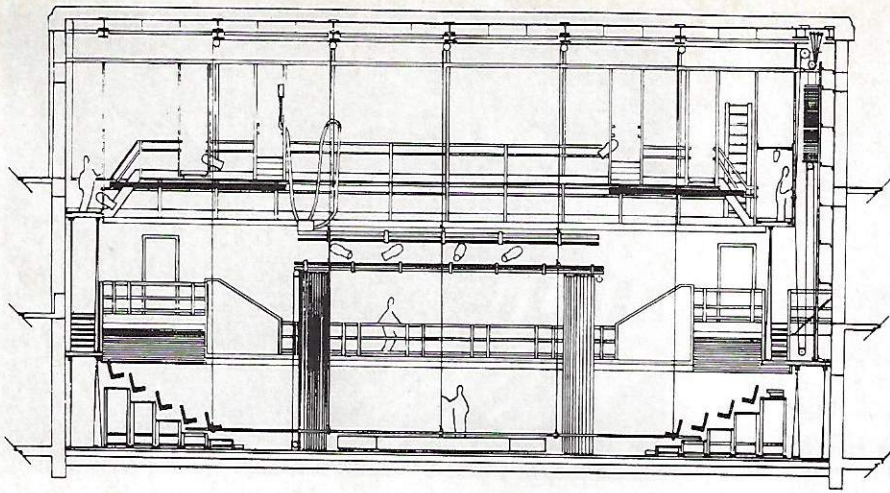
Formerly theatre consultants with Bolt, Beranek and Newman, Jerit and Boys started their own firm in 1978 when BBN closed its theatre consulting division. Jerit contends, "We have not limited our theatre consulting practice to any building type or design solution that we repeat over and over." Jerit/Boys, however, has concentrated on developing cultural facilities in small and medium-sized metropolitan areas.

Not only is this a specialty. Multi-purpose civic and school complexes are a source of excitement for the partners. Over the past fifteen years they have observed a nationwide trend to place more emphasis on local performing artists, not just national touring groups. The creation of regional nonprofit foundations, subsidizing a wide variety of events, "trickles down into the actual physical provisions of an arts facility," states Jerit. "It must allow for the technical requirements of many different kinds of performers. A home-produced season puts a strain on a building that you might not have with one-night stands."

According to Jerit, "Our commitment is to the multipurpose auditorium because: most small cities can't afford an opera house or music hall. The technology of this more flexible space has reached a fairly high level of development, and we're keen on continuing to perfect that solution." Boys describes his firm's approach as "well balanced. We don't specialize in any one aspect—lighting or rigging, for instance—so that other parts of the project suffer."

Like many consultants, Jerit and Boys feel strongly about early participation in a project. "We spend an awful lot of time discussing building trends with clients," says Jerit. "We act as resource people and help focus a community's energies and resources in the right direction. A lot of projects never get off the ground because there isn't that sit-around-the-campfire talking time between civic lead-

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# Roger Morgan Studio, Inc.

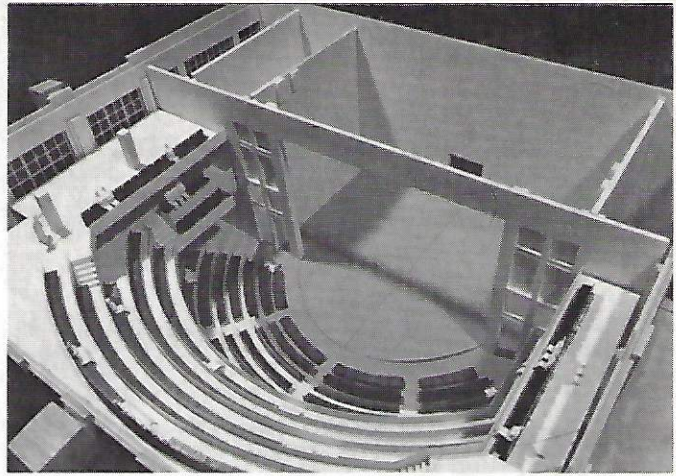
"One of the problems I have with contemporary architects," says Roger Morgan, of Roger Morgan Studio, "is that their expressions are so muted and so controlled that you can't always tell a theatre is a theatre unless you look really closely—like the Uris and the Minskoff. The more we build these little tame buildings, the more we lose sight of one of the main qualities of theatre. All the sizzle on the outside is half of what it's there for. I think that most people who go to the theatre or the ballet or concerts go for pleasure—to enjoy themselves. I think that lots of us in theatre, particularly those who are university-trained—which means just about everybody in theatre in New York—have been told that theatre is some important mission and we should be thankful to work in it. I think the public doesn't regard it that way. And I think that, in fact, we get more fun out of working in theatre than we get satisfaction of great artistic goals."

When in 1969 Morgan opened the Roger Morgan Studio, Inc., he had already, as stage designer Jo Mielziner's assistant, worked on the Vivian Beaumont and Forum theatres (Lincoln Center), the White House's East Room stage, the Power Center for the Performing Arts (University of Michigan), and the Krannert Center (University of Illinois). Since setting up his own firm, Morgan has planned a host of university, multi-purpose, and resident theatres around the country. Projects include the American Place Theatre (New York, new construction, 1971), the Center Stage (Baltimore, adaptive re-use, 1975, which won the AIA's resident theatre design award in 1978), the Indiana Repertory Theatre (renovation and restoration, 1980), and the mammoth Playhouse Square renovation/restoration in Cleveland, now underway. With the current renovation/restoration of the Elgin/Wintergarden Theatre Complex in Toronto, Morgan's work has expanded into Canada as well.

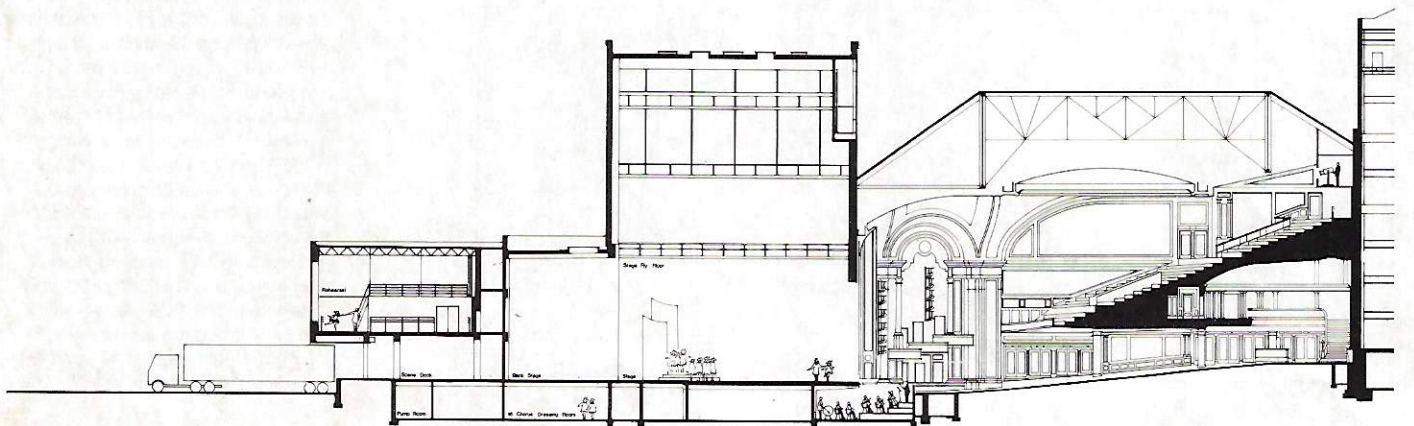
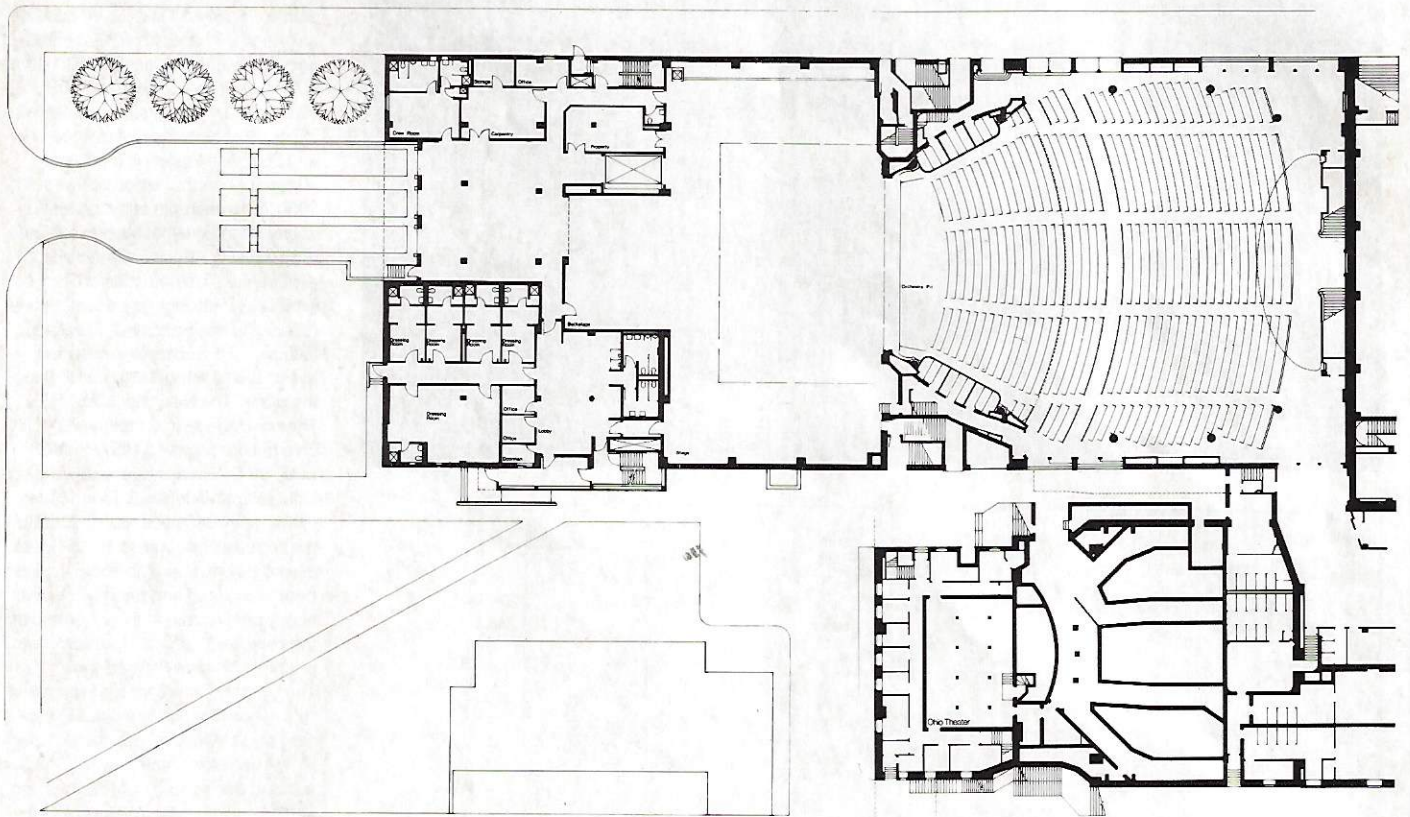
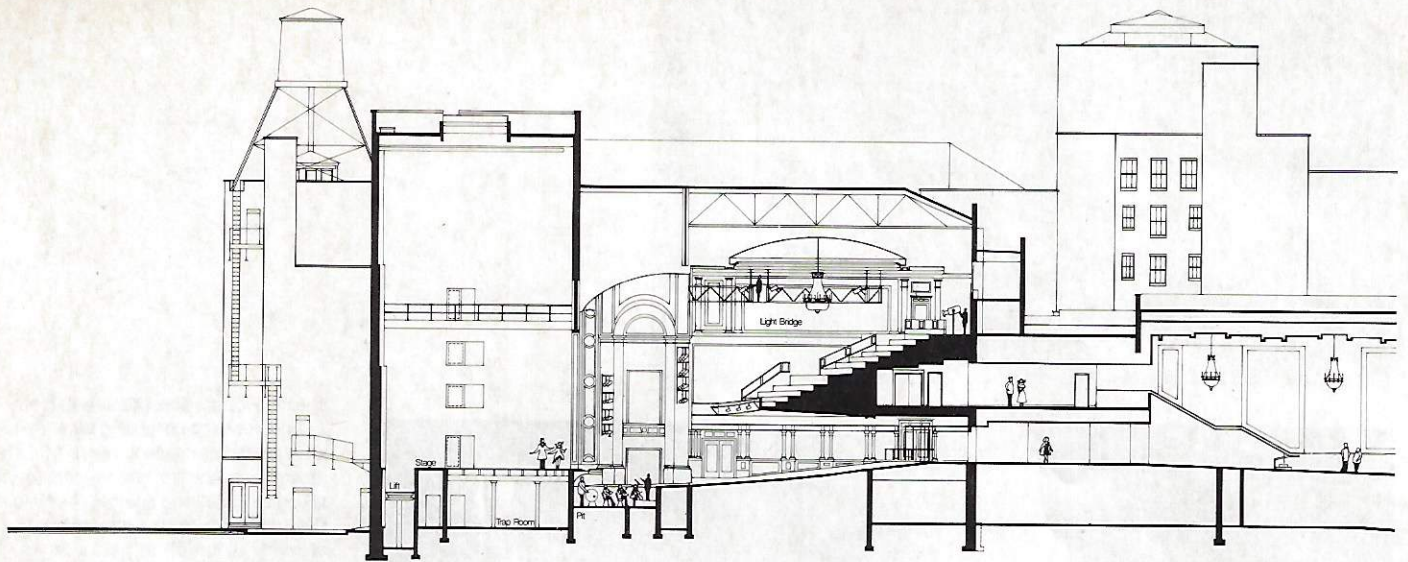
"We are like a Chinese restaurant," Morgan quips, talking about his firm. "You pick one service from column A and one from column B. We offer a pretty wide variety"—all general theatre consulting services, he adds, except acoustical design. The studio's principal service, however, is the initial planning and design of theatres and related spaces. "On about half our projects, we are asked to take the lead in the design of the theatre—the auditorium, the stage, and the pit. This was true with Center Stage and Syracuse Stage. And it is true with the renovation of the New Amsterdam's roof theatre"—a current 42nd Street project that also entails restoration of the New Amsterdam's main theatre. The Nederlander Organization is the client. "We get the slope and style and form of the theatre basically established. That's done in collaboration with the architect, but we tend to take the lead in the early stages. Later on, the architect has a stronger position in carrying the work out."

Some projects, restorations in particular, involve the firm less than others. On restorations, "it's all there. It's just in crummy shape. We help to put the theatre back into usable condition." Most restoration projects require RMS to "do the rigging and the lighting and help the client choose the colors of the theatre. We help in planning—but we don't take as strong a position on—the public spaces like the lobby, because there

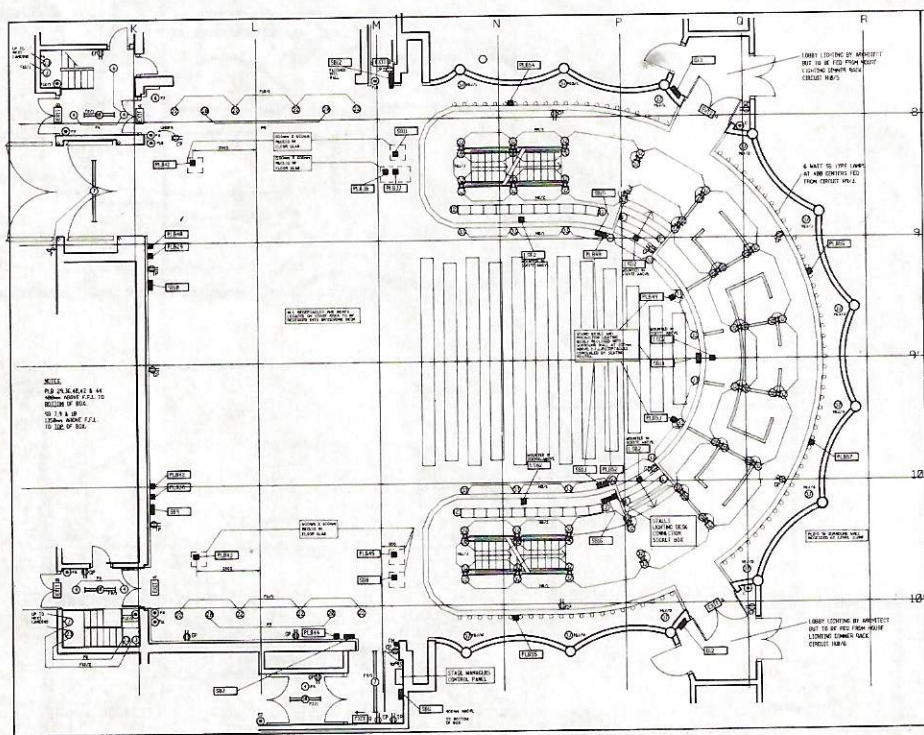
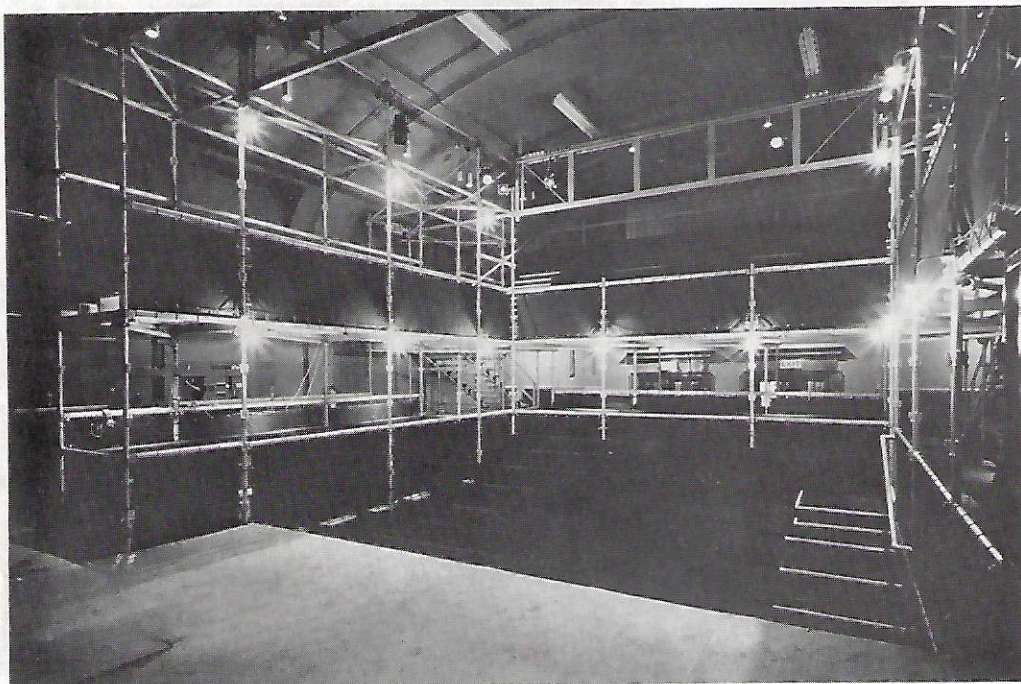
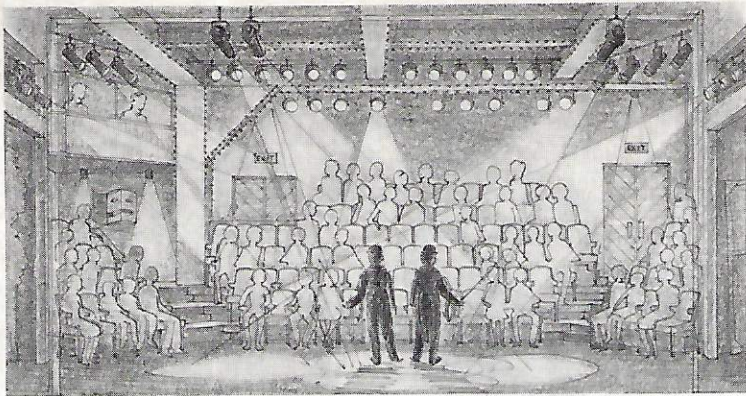
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In progress at Roger Morgan Studio is the renovation of the New Amsterdam Theatre's roof theatre (model, top) for the Nederlander organization. For the Broadway house's main theatre, RMS is working principally on the technical systems. For the roof theatre, RMS is working with the architects, The Ehrenkrantz Group, on all details of physical planning. Equipment and house furnishings have not yet been chosen. Target date for completion is September 1983. The Pier Six Concert Tent (above), in Baltimore's Inner Harbor, involved RMS in design and specification of stage and house lighting systems, as well as in general consultation on rigging, sightlines, and backstage and support spaces. The new construction opened in 1981. RMS also designed the concert shell. Architect: William Gillitt. Tent structure: Future Tents, Inc. Acoustical consultant: Jaffee Acoustics. Dimming: Electro Controls. With architects Dalton, van Dijk, Johnson & Partners (project architect: Peter van Dijk), RMS has been working on Cleveland's Playhouse Square project—restoring the Ohio Theatre (longitudinal section, right top) and renovating the State Theatre (longitudinal section, right bottom). The firm worked with van Dijk on the design of the State's \$7 million stage house (stage and orchestra level plan, right center), laying out rehearsal studios, backstage areas, loading facilities, the orchestra pit, and other spaces. RMS is also designing and specifying drapes, house curtain, stage floor, and control booth. Equipment and house furnishings have not yet been selected. The Ohio Theatre restoration involved RMS in the design and specification of technical systems and amenities and in the layout of the seating plan. Dimming: Strand Century. Rigging: Tiffin Studios. Seats: American Seating Company. For both theatres: acoustical consultant: Jaffee Acoustics; structural engineers: Barbar and Hoffman; mechanical and electrical engineers: Byers, Urban, Klug, White & Partners.







Theatre Projects Consultants—primarily a London-based consulting firm—has an international roster of clients. In recent years, the firm has been undertaking an increasing number of jobs in Canada and, with the recent opening of their New York office, has become increasingly active in the United States. The firm's list of projects and range of expertise is vast and varied in size, scope, scale, and budget. Philosophically near and dear to Richard Pilbrow's and designer Iain Mackintosh's hearts is the Georgian courtyard theatre concept. The Tricycle Theatre (left center; client: Wakefield Tricycle Company; architect: Tim Foster) in the Kilburn section of London, which opened in 1980, is an example of the galleried courtyard theatre that Mackintosh feels is the most conducive to the theatrical experience. This particular project, built within severe budgetary constraints (\$50,000), was specified, Tinker-toy-fashion, for the company who then assembled the theatre according to the plans. The New York office of Theatre Projects is currently working on a master planning study for a 99-seat, Off Off Broadway theatre, the Double Image (left top). Eldon Elder of the New York office has described the space as one with less than ideal ceiling height where an eccentric load bearing column and beams imposed heavy restrictions. At the other end of the complexity and budget scale are two other Theatre Projects jobs. The Calgary Centre for the Performing Arts, where the firm is providing planning and consulting, is slated to open early 1985 (Architects: Raines, Finlayson and Barret) and consists of a concert hall, two drama theatres, and a small film theatre (computer drawn electrical plan of Calgary's Theatre Two, left bottom). Opened in March 1982, the Barbican Theatre seats 1,166 in a space conceived by Peter Hall and John Bury (TP served as theatre consultants) to suit the requirements of the Royal Shakespeare Company. In the house, shallow balconies (right top) cantilever successively closer to the stage and the large raked stage has rear stages and scenery storage space behind with a high grid to accommodate and store scenery for the company's repertory schedule (lighting bridge, right center, and view from the stage, right bottom).



## Theatre Projects Inc.

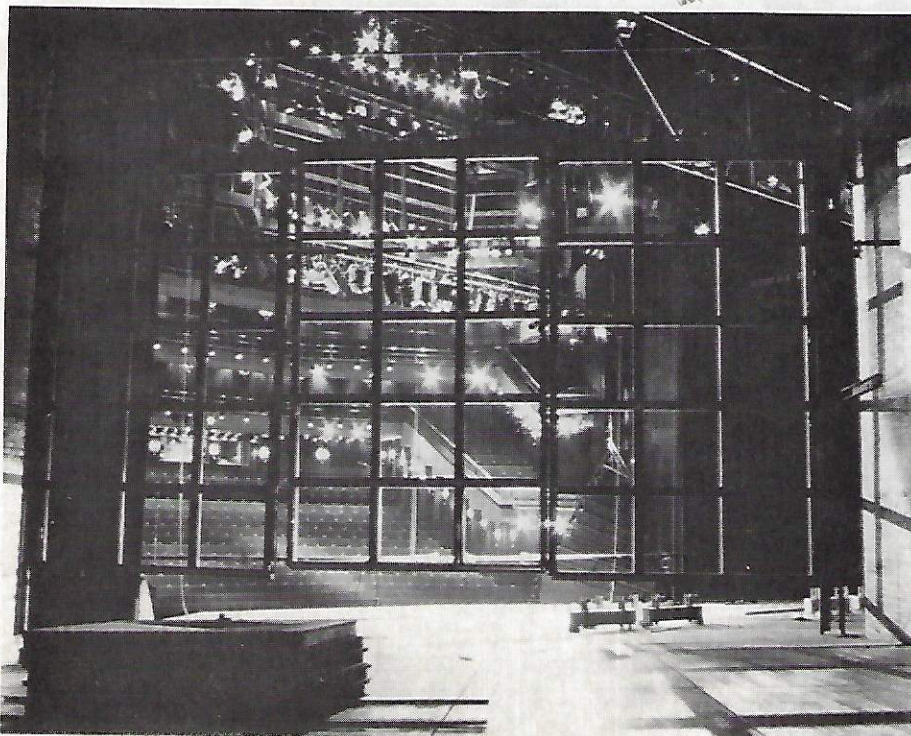
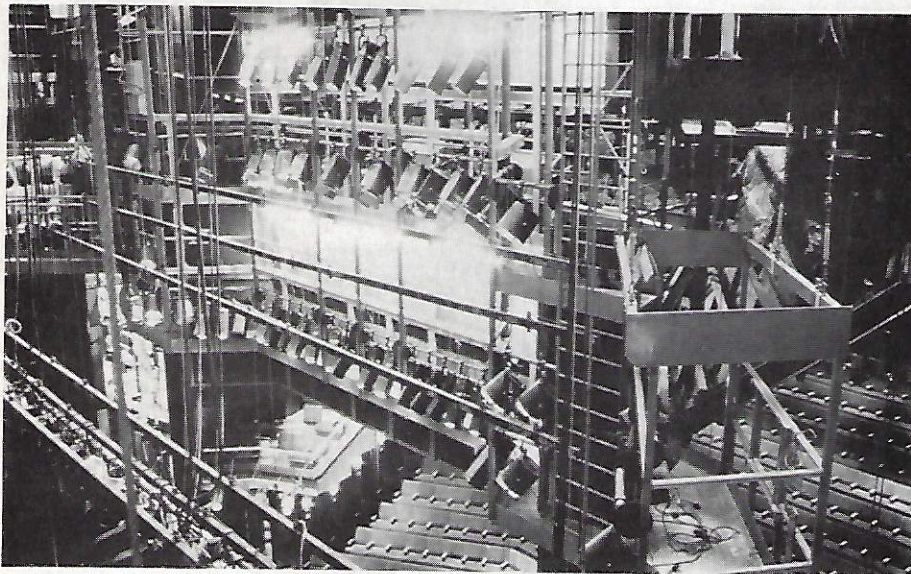
Theatre Projects Inc. has just celebrated its 25th anniversary. A quarter century since its founding by lighting designer Richard Pilbrow, Theatre Projects is now the closest thing to a conglomerate that we have in the performing arts. A tour of the nooks and crannies of the TP operation in London would take you from the small building at 10 Long Acre where Pilbrow's offices are and where another building adjoins at the rear, around the corner to Langley Street where a former banana storage warehouse now houses other TP divisions, across the Thames to new spaces housing yet more operations. And then, because this is a far flung operation, there are also offices around the world: primarily Amsterdam, Mexico City, New York, Washington, Los Angeles, Toronto, Hong Kong, Singapore, and Sydney.

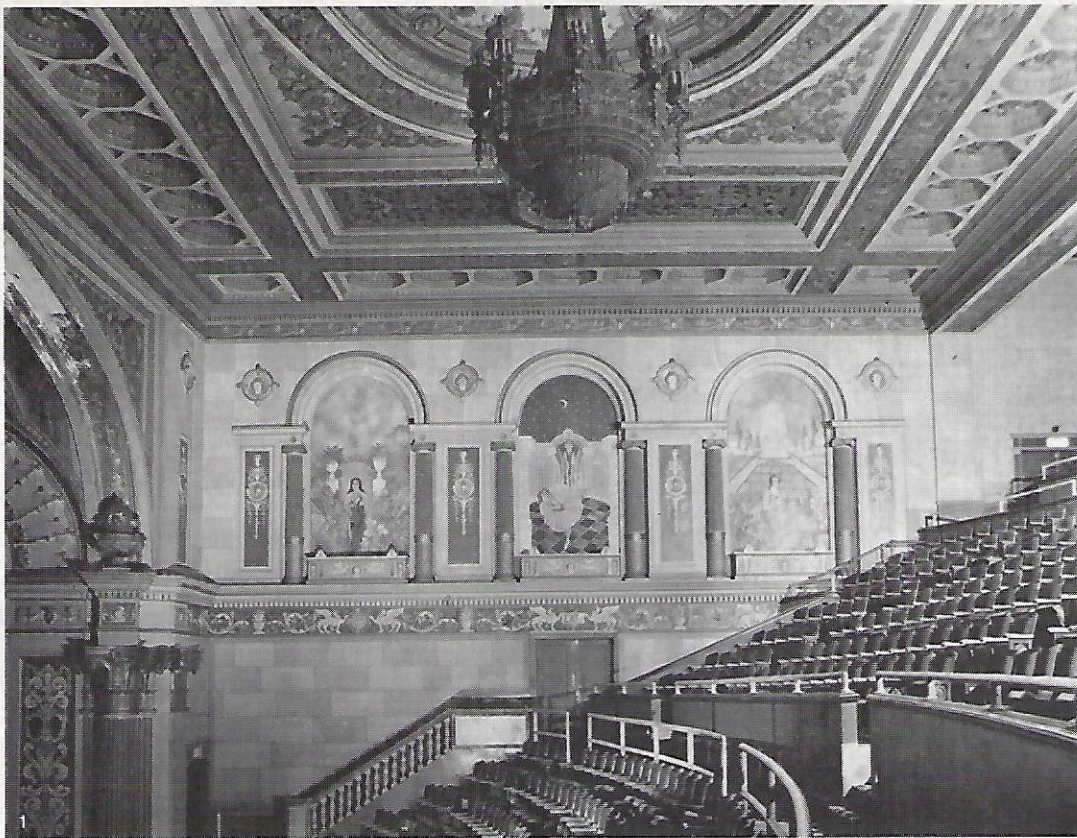
With various of their group of companies, Theatre Projects Inc. is involved in just about all aspects of the performing arts including lighting rental, sound rental, audio-visual services for conferences and industrials, rock concert rental and services, architectural lighting (design and manufacture of fixtures and of spaces). A Trust administers training courses at LAMDA and another company produces shows—frequently in collaboration with Harold Prince. One of this diverse family of interrelated and interlocking companies is Theatre Projects Consultants. Since the early 1960s, Theatre Projects has helped over 100 clients renovate, restore, or plan new performing arts spaces in over 24 countries.

Richard Pilbrow, who started out as a stage manager and lighting designer, now finds, "I'm spending most of my time on consultancy, which seems to take us to various places around the globe. I spend the rest of my time running the firm, which has grown like a many-headed monster."

With a view to actively expanding their operation and services into the United States and Canada, Theatre Projects now lists offices in New York, Los Angeles, Toronto, and Washington. This relatively recent and active expansion into the North American market, which currently has TP working on over 15 North Ameri-

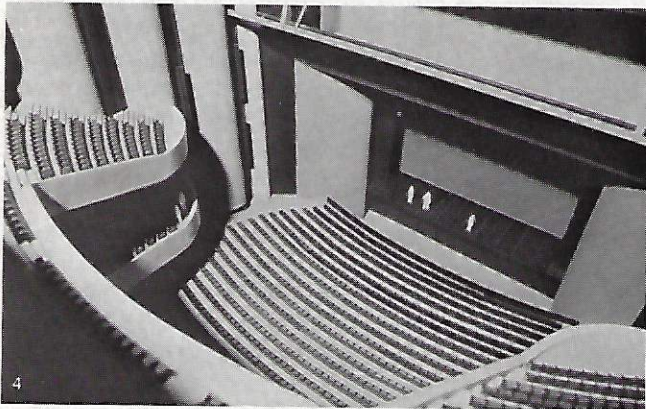
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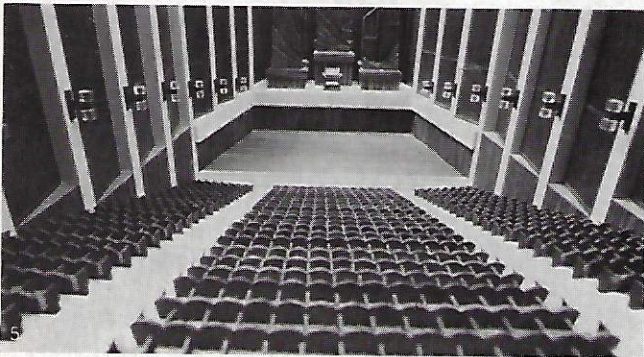


One of the oldest theatre consultation firms in the country, Jean Rosenthal Associates has been in business since 1958. The Strand Theatre, in Shreveport, is one of the firm's current restoration projects (1, before, left) and is scheduled for completion in 1984. Architects: Haas + Massey Project architect: Lester Haas. Acoustical consultant: Boner Associates. Equipment and interior furnishings not yet selected. A major new construction project, completed in 1980, is the University of Texas-Austin's performing arts complex. JRA designed the 3,000-seat Concert Hall (4) and the 700-seat Recital Hall (5). Architects: Fisher & Spillman. Project architect: Pat Spillman. Acoustical consultant: Boher Associates. Dimming: Kliegl Bros. Lighting: Kliegl Bros., Altman, Berkey Colortran. Rigging: Peter Albrecht Corp. Seating: American Seating. JRA has worked on a number of projects with architects Johansen & Bhavnani, including the Lemberg Drama Center (2) at the Usdan Center for the Performing Arts, Long Island, New York, which opened in 1976. Project architect: Ashok Bhavnani. Dimming and lighting: Kliegl Bros. Engineering: Nordheimer Associates. Also with project architect Bhavnani, JRA worked on the 467-seat Merkin Concert Hall (3) in the Abraham Goodman House, New York City, which was completed in 1979. Acoustical consultant: Peter George Associates. Dimming: Kliegl Bros. Lighting: Altman. Rigging: American Stage Co. At Niagara Falls, JRA designed the Rainbow Center Plaza amphitheatre (6; inside the control booth, 7), seating 1,500 and completed in 1979. Architect: Abraham W. Geller. Theatre, electrical, and audio consultants: Jean Rosenthal Associates. Dimming: Berkey Colortran. Lighting: Altman, Berkey Colortran. Audio installer: Hunt and Bell, Inc.

# Jean Rosenthal Associates



NORMAN MCGRATH



NORMAN MCGRATH



"The jumping off place for any theatre construction," says Nananne Porcher, president of Jean Rosenthal Associates, Inc., "is the program and the budget. What are your needs and how much money do you have to fulfill them." Jean Rosenthal Associates, founded in 1958, is one of the oldest theatre consulting firms in the country. The firm's founder was Jean Rosenthal, the late lighting designer known preeminently for her collaborations with Martha Graham and her work for the Mercury and Federal theatres.

It was when she was with the Federal Theatre, in the 1930s, that Rosenthal started renovating and re-rigging abandoned theatres; she started her own theatre production service (TPS, Inc.) in 1940, and that evolved into JRA. Nananne Porcher joined TPS in 1944, as Rosenthal's assistant. During the same period, and until the 1960s, Porcher also worked as production stage manager for the New York City Ballet, the José Limon and Martha Graham dance companies, the American Dance Festival, and the Dallas Civic Opera. She has lit over 100 operas throughout her career and recently was co-lighting designer with JRA associate Clyde Nordheimer on the relighting of the Falls of Niagara.

A list of JRA's new constructions spanning the last two decades includes the Juilliard School at Lincoln Center (all facilities), the Dorothy Chandler Pavilion at Los Angeles Music Center, Theatres at Plas des Arts, in Montreal, the theatre and music complex at the University of Texas-Austin, and the Birmingham Jefferson Civic Center, in Alabama. Restorations include the Walnut Street Theatre, in Philadelphia, the Carolina Theatre in the Roger Stevens Center at the University of North Carolina, in Winston-Salem, the Majestic Theatre, in Dallas, and the Paper Mill Playhouse, in New Jersey.

JRA is actually an amalgamation of independent consultants, many of whom have their own corporations, all of whom work on theatre projects individually according to their specialties when not involved in those contracted through the firm. Associates include several electrical-mechanical engineers, a structural engineer, several lighting designers (including Porcher), a seating and sightline specialist, and a box office specialist. When a project is contracted through JRA, says Porcher, "We all put our heads together to be sure we don't have light spill in the wrong places, that we have controls to the stage manager, that the theatre is zoned properly for heating, ventilation, and air conditioning—so you don't have to heat or cool the lobbies to keep the proper ambient temperature in the control booths. We do a complete analysis of all the seating and sightlines and make the architect restructure the rise or change the seating placement if necessary. Each of us contributes a different kind of expertise to the job."

JRA's set-up has a further advantage, Clyde Nordheimer, the firm's electrical-mechanical engineer, points out. "JRA doesn't have the overhead of paying salaries each week. Associates get paid only for the hours we work on a project." A percentage of that is then deducted for fixed office expenses.

But perhaps the most important advantage—and one they believe sets JRA apart from other theatre consultation firms—is that its personnel includes not only working theatre profession-

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## THE CONSULTANT continued from page 12

oped specifically to train people in theatre consulting (the Yale School of Drama's graduate program in theatre architecture comes closest), lighting designers, who among designers tend to have the most technical backgrounds, continue to dominate the profession.

If ever there was an all-encompassing job title, that title is theatre consultant. Even consultants find it hard to pin down. While an architect may design the structure in which a theatre space is housed, it is the theatre consultant who determines and frequently equips the theatre itself—its size, shape, number of seats, the relationship of the audience to the performers and to themselves.

The theatre consultant can be hired either by the client or the architect. Given a choice, most consultants say they prefer to be brought in before the architect—to work with the client directly on the initial planning and programming of the facility. What follows for the theatre consultant are a series of fairly standard stages in the progression of a theatre from concept to concrete: the design development phase, the schematic drawing phase, the construction plan phase, the bidding phase, the construction phase. All neatly labeled, all belying the intensity of the interaction among architect, client, and consultant. Nonetheless, no matter who has hired them, theatre consultants tend to state that they are there to serve the project. To paraphrase Izenour, what will succeed as theatre is not necessarily what the client thinks will succeed as theatre. To serve a project, the theatre consultant becomes the advocate of the needs of the performers and the audience—the facility's users. (Theatre consultant Len Auerbach, in fact, went so far as to say his job is to "remove obstacles" that clients and architects unwittingly put in the users' way.) As advocate, the theatre consultant takes the client's needs and desires, combines them with his knowledge of theatre logistics, and produces—possibly with the aid of an acoustical consultant, an electrical-mechanical consultant, a structural consultant, a sight-lines expert, and any number of other consultants—the specifications for a functional theatre.

In the process, there are some mammoth issues to address. Since the client is rarely the user (more likely a landlord or a board of directors having slight familiarity with theatre requirements), the theatre consultant has to deal not only with what the client wants but also with what he does not know he wants. Initially, for instance, on a new construction the

theatre consultant may supply what the client needs to consider aesthetically and practically in deciding between a proscenium and a thrust stage. This is especially crucial in the multipurpose performing arts centers that have flourished (on college campuses in particular) since the cultural building boom of the 1960s, where one house is often required to be both drama theatre and concert hall. Along the way, the theatre consultant specifies how much space is needed between rows of seats in the house, the best location for front-of-house lighting positions, and how many lights an actor needs on a makeup mirror. Theatre consulting, in the end, has as much to do with putting mop sinks backstage in a new building as it has to do with preserving the fine details of a mural in a historic opera house undergoing renovation.

The 1960s and its go-go economy translated into a run of new theatre constructions—many of the major regional theatres were built during that time. The trend beginning in the early-1970s was away from new construction and toward renovation and restoration of existing theatres, and conversion and adaptive re-use of structures originally built for other purposes (schools, storefronts, gymnasiums, movie palaces, and warehouses are common candidates). The reason in the first case can be a community's desire to preserve and use a historic theatre. In the second case, the reason is apt to be cost: it is always less expensive to adapt than to build from scratch.

Such projects are more difficult, and if the theatre consultant has an ongoing challenge, this may be it. Says Roger Morgan, "There is new construction and then there is everything else." A new construction is limited by site and budget. As the consultant designs the theatre, he can make the technological provisions necessitated by modern theatre equipment. With "everything else," the limitations are compounded. On a conversion or adaptive re-use, at minimum the exterior and weight-bearing walls are already in place. On a renovation or a restoration, the same consultant says, it is a matter of imposing 1980s' technology on a building not designed to accept it. In addition, "You find things in those walls you never knew were there. You find problems. You find an underground spring. You dig a hole for an orchestra pit and you see water coming out."

Regardless of the great experience and expertise required to consult successfully and sensitively, theatre consulting is in fact a profession without standardized training or licensing of any sort. That lack

is discomfiting to some of its practitioners. Comments one, "You can hang up your shingle and say 'I'm a theatre consultant' if you designed a kindergarten play." George Izenour, who has become one of theatre consulting's more controversial figures, puts it more strongly:

"Most theatre consultants are not even theatre consultants. The technical director in every college theatre in the country thinks he's a theatre consultant. But he doesn't know anything about buildings."

The trouble, Izenour claims, is that theatre consulting is not really a profession. "It ought to be but it isn't—because it's not recognized in the public domain. And it never will be worth a damn until it is. There's no professional training, no licensing, no nothing."

"Theatre consultants ought to have the training, essentially, of engineers. You should have a knowledge of structural, mechanical, and electrical engineering. I think there are two or three who practice engineering. I'm one of them. Most theatre consultants are blue sky guys who talk a lot of nonsense to architects. But they don't know how to execute anything. You've got to take some responsibility. That's what the theatre consultant won't do.

"Just read the history of the sad art,"

Izenour continues. "The Germans are the only ones who understand it. They are the only true professionals. The rest of us are all a bunch of amateurs." Izenour's theory does not get a lot of support. Many consultants believe otherwise—that engineering is not the first concern of a theatrical space. It is the intangible, "emotional" quality that is more important.

A number of consultants have banded together to form a professional society for those in the field. Led by Len Auerbach (S. Leonard Auerbach & Associates), they have formed the American Society of Theatre Consultants. According to Auerbach, the society is "an organization limited to full-time professional theatre consultants. It was established primarily to foster standards of quality among the consulting practices and to improve the industry—the industry being technical theatre and theatre design. Members have to have an established track record"—the university-based designer who does consulting on the side need not apply.

"We plan to be a working organization, rather than an organization in name only. We are planning seminars at least twice a year, meetings in retreat with people from the world of theatre who affect our

work—directors from repertory theatres, people from the European theatres and from European technical industries, from the lighting industry and the rigging industry. For instance, we could invite five of the prominent regional theatre directors to join us for a weekend to discuss their problems and where theatre is going from their points of view. We would then be able to respond, both technically and philosophically, in our work, producing buildings that respond to the artist rather than to a budget."

In this *Theatre Crafts*' special report on theatre consultants our purpose is to provide an overview of this complicated field while covering the recent and current projects that exemplify the state of the art. We selected a dozen theatre consultants whose work seemed to represent the industry's range to profile in depth and chose not to cover at this time those consultants whose work is highly specialized (such as acoustical consultants Bolt, Beranek and Newman). We then selected a dozen more to include in an abbreviated form. As always, this was done within the limitations of space. *Theatre Crafts* will continue as always to cover the field of architecture and theatre consulting in future issues.

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Lee Abraham	Acting
Barbara Barker	Dance
Oscar G. Brockett	Theatre History and Criticism
John W. Brokaw	Theatre History
Suzanne Buckley	Dance
Leon Danielian	Dance
James Daniels	Acting/Voice
Ruth Denney	Drama Education/Creative Drama
Bernerd Engel	Acting/Directing
Paul Gaffney	Acting/Directing
John Hood	Technical Theatre
Frederick J. Hunter	Theatre History and Criticism
Steven P. Knight	Technical Theatre/Technical Director
Amarante Lucero	Lighting Design
Lynn Murray	Drama Education
Gwendolyn Nagle	Costume Design
David Nancarrow	Lighting Design
Paul D. Reinhardt	Costume Design
John R. Rothgeb	Scene Design
Lathan Sanford	Dance
Robert Schmidt	Scene Design
Betsy Shevey	Acting/Directing
Yacov Sharir	Dance
Ted Shine	Adjunct Professor/Ethnic Theatre
Webster Smalley	Playwriting
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## ARTEC

continued from page 13

acoustical work, begun in the 1950s by the firm's founder and chief consultant, Russell Johnson. Today, rooms designed with variable acoustics are commonplace. But a few decades ago, the notion that a space could serve both speech and music ran contrary to a tradition of fixed acoustics practiced in England and the United States. The loosening of old technical restrictions occurred alongside the loosening of artistic restrictions, as well as the rise of regional arts. Towns unable to support separate auditoriums for opera, symphony, dance, and drama can now produce all the arts in a single house. A forerunner in this development, Johnson and his associates incorporate acoustical solutions in designing multi-purpose structures as a matter of course.

Some would argue with the union of consulting and acoustics within a single firm. Wolff finds the combination to be of great value because, he explains, "we can offer a solution that has been refined from both viewpoints." He and Johnson studied theatre at Carnegie Tech roughly sixteen years apart from one another—Johnson concentrating on architectural aspects and Wolff on technical

theatre and stage design. Both were also musicians.

Working exclusively as acoustics consultants on a project, they discovered that often, the theatre consultant did not have the same thought process or background as they did. Wolff recalls, "We were out of sync. The theatre consultant would give a recommendation, then we would give a recommendation. The two would be in conflict. Meanwhile, the architect would be sitting there with the client, neither of them knowing what to do about it. Well, what we do now is give unified recommendations."

Ideally, recommendations begin in the planning stage before final decisions have been made about such things as auditorium shape and size. "If someone calls up and says 'We're planning a 3,000-seat symphony room,'" says Wolff, "we're not overjoyed about that because it's so enormous." Precisely this request came from the Dallas Symphony Hall clients who also wanted the acoustics to rival the finest concert halls in Europe. Fortunately, both client and architect—I. M. Pei—agreed on a 2,200-seat plan, designed not only to maximize sound quality, but also avoid vast distances between listeners and musicians.

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which opened with a performance by soprano Roberta Peters and the Colorado Springs Symphony Orchestra in October 1982, characterizes Artec's technical and philosophical approach in many respects. Initially, Wolff and Johnson found themselves with plans for a fan-shaped auditorium—inherently bad for symphony and opera. Reshaping the hall into a three-tiered, 2,150-seat space, they employed several techniques to accommodate the community's programming plans for classical music, Broadway musicals, dance, straight drama, lectures, and films.

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One final detail in the new facility—unrelated to acoustics, unnoticed by most visitors, but well remembered by

Wolff—reveals something of Artec's style of "moxie." It is the ramp running inconspicuously alongside the building, providing handicapped access to backstage. "The architect tells me that cost \$7,000," muses Wolff. "For weeks on end, I would put it in the drawings and he would take it out because it was too expensive. Then I would come back and put it in again and he'd take it out. Finally it stayed... I just tired him out, I guess."

**Artec Consultants Inc.**  
245 Seventh Avenue  
New York, New York 10001  
(212) 242-0120

**Founded:** 1972

**Staff:** Russell Johnson, president and principal acoustics consultant. Robert Wolff, principal theatre planning consultant. Travis Selmier, management and operations consultant. Randy Cormack, theatre planning consultant. Nicholas Edwards, acoustics consultant. Dan Koetting, theatre planning consultant. Robert Essert, acoustics consultant. Carol Allen, theatre planning consultant. Steven A. Wolff, management and planning consultant. Paul Garrity, theatre planning consultant. Seth Orbach, lighting consultant.

**Fees:** Vary.

**Major jobs completed in the last five years:** Centre-in-the-Square, Kitchener, Ontario: new construction, 1980. Architects: Rieder & Hymmen. Pike's Peak Center, Colorado Springs, Colorado: new construction, 1982. Architects:

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John James Wallace Associates and Clifford Nakata & Associates.

**Current projects:** Performing Arts Center, University of Wisconsin, Platteville, Wisconsin: new construction, 1983. Architects: William P. Wenzler. Dallas Concert Hall, Dallas, Texas: new construction, 1986. Architects: I. M. Pei. Tampa Bay Performing Arts Center, Tampa, Florida: new construction, 1986. Architects: McElvy Jennewein Stefany Howard/ARCOP.

## LANDRY & BOGAN

continued from page 14

Paul Landry and Jack Bogan bring complementary backgrounds to their theatre consultation firm, Landry & Bogan (formerly Landry, Hunt & Bogan). Bogan is a licensed architect (MFA, Yale School of Art and Architecture). Landry is a longtime consultant and former Stanford University associate professor whose first firm, Paul Landry & Associates, opened in 1965. They met while working on the construction of the Zellerbach Auditorium, in Berkeley; in 1970, a year after its completion, they decided to combine forces in a formal partnership.

If the firm can be said to have a specialty, it seems to be designing thea-

tres and performing arts centers for colleges and universities. In part, says Bogan, this is because "Paul's students from Stanford are now department chairs at various places in the educational establishment." Recent university projects include the Prescott College Theatre (John Carl Warnecke & Associates, architects), in Arizona, the College of Marin Performance Hall (Corwin Booth, Inc., architects), in Kentfield, California, the University of California-Davis's speech and drama building and theatres (Gardner Dailey & Associates, architects). But the firm also regularly works on general theatre projects, including the Kenai Civic Center (George Filler, architect), in Alaska, the South Coast Repertory Theatre (Ladd Kelsey Woodward, architects), in Costa Mesa, California, the American Conservatory Theatre (R. F. McCann, architect), and the San Bernardino Amphitheatre (Jack Bogan, architect).

"We've done a lot of programming and planning directly for a client, before the architect's on board, particularly for universities and colleges," Bogan says. "Since I'm an architect, we've also done a few projects on our own—for instance, the rehabilitation of two city-owned theatres, a community theatre and a children's theatre, here in Palo Alto."

Landry & Bogan become involved in projects chiefly through word-of-mouth. "We're working on one job and then the phone rings," is how Bogan puts it. "We have worked with a lot of good architects who keep coming back. Architects who get to us while doing their first theatres are usually referred either by other architects who have done a theatre with us or by the owner, who tells the architect he'd damn well better get a theatre consultant. When the architect starts asking who theatre consultants are, if the owner doesn't tell him about us, someone else does."

A new construction, Bogan explains, typically starts with "a budget, a site, and a client with a bunch of desires who may or may not know his real needs. By the time we've finished the schematic design, we'll know what we really need to build with the money we have." With an existing facility, "we look at the space and figure out what its potential is. It may not have much, and we may not have many choices to make. Then we sit down with the client and figure out which of those choices are to his benefit. If there's only one, we figure out what it will cost to exercise it, and the client tells us whether he thinks it's worthwhile." A tougher problem, however, arises when the client does not know whether to work with the building he has or to build a new one.

"We really have to do quite a bit of guessing," Bogan says of that situation. "Because we really can't develop either option far enough to know really which one is going to work best." Inevitably, Bogan adds, it is the building's eventual users—management, performers, and audience—and not the client, who will have to determine that. "Management wants a theatre that works, and will continue to work, and that has low operating costs," he explains. "They don't want a building that is so flexible that the janitor can't run it. We, more than the architects, are responsible for making sure that you can back a truck up and unload a show onto the stage without having to raise the ticket prices three dollars to pay for a crew of coolies to carry it down the hall."

"Our responsibilities to the audience are to enable them to exit safely, comfortably, and quickly, and to enable them to see and hear from anyplace you make them sit. To some extent, that's the acoustician's responsibility—but if we don't get the sightlines to break right, then the acoustician starts from behind the eight ball."

Although an architect himself, Bogan thinks of architects as "the process through which what we know about how a theatre works has to pass. If left on his

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own, an architect will put the green room 150' from the stage to make it convenient for the audience after the show. He doesn't know it's for the actors. We have to tell him that. This goes on all the time. We have to provide support for the actors. We have to make sure that they can get to the toilets without going through the chorus dressing rooms, and that the chorus can get to them as well. A theatre has to work backstage. The flow of people and materials and the timing are difficult technical problems. An architect mainly wants to superimpose the formal idea on a building. A theatre consultant who is trying to get a theatre to function properly is going to give the architect some real arguments. That's what we do for a living." SLW

**Landry & Bogan**

642 High Street  
Palo Alto, CA 94301  
(415) 326-2414

**Founded:** 1970

**Staff:** John Raphman, lighting designer.

**Fees:** Vary.

**Licenses:** Bogan is a licensed architect.

**Insurance:** Liability and Errors and Omissions.

**Major projects completed in past five**

**years:** Old Globe Theater, San Diego, California: reconstruction, 1982. Architects: Liebhardt, Weston & Associates. Los Angeles Pierce College Theatre, Woodland Hills, California: new construction, 1980. Architects: Neptune & Thomas. Seaver Center of the

Pepperdine University, Malibu, California: new construction, 1980. Architects: Neptune & Thomas. San Joaquin Delta College Theatre, Stockton, California: new construction, 1978. Architects: E. J. Kump + Gwathmey, Sellier, Crosby.

**Current projects:** Palo Alto community theatres, California: rehabilitations, 1984. Architect: Jack Bogan. Round Valley High School auditorium, Springer, Arizona: new construction, 1984. Architects: Orcutt/Winslow Partnership. Kenai High School auditorium, Alaska: new construction, 1984. Architects: Harold Wirum Associates. Performing arts center, Anchorage, Alaska: new construction, 1985. Architects: Skidmore Owings & Merrill and Haeg/Bettis.

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**AUERBACH**

continued from page 15

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In addition, Auerbach claims, Auerbach & Associates is "perhaps the largest innovator of new technical theatre products and methods, in the way of new rigging designs and concepting of lighting control systems. We're constantly designing new apparatus, instead of working out of catalogues. Right now on Ordway Music Theatre [a new construction slated for completion in 1984], we are putting out a concept for a dimming system that doesn't exist yet, and we are asking manufacturers to come up with the equipment. Our work in this area has

to do with solving a design problem—trying to save money rather than spend it. It's not for the sake of being clever. There's a reason for it."

Auerbach has been designing theatres since the early 1960s; prior to that, he worked in theatre as a lighting designer, scenic designer, technician, TD, and house manager. He has, he says, "worked practically every position backstage that you can imagine. And I also have a background as an architect" (Auerbach is an associate member of the American Institute of Architects and holds an MFA in theatre design from Carnegie-Mellon University). The combination, he asserts, yields a "real human concern in dealing with performing arts facilities. I have first-hand knowledge of everything everyone has to encounter. At Auerbach & Associates, we're concerned with proper design of dance floors, and we're concerned with the design of safe fly galleries. We're also concerned that the performers have easy access onstage from the dressing rooms and the green room. Performer circulation is a very critical part of the consulting process. The performers spend more time in the theatre than they do in their homes. The workplace is their home. And therefore, I think they should feel at home, not like they're dealing

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with obstacles.

"We get involved in very few restorations," Auerbach points out. "And the restoration in its pure form I am not very interested in. A limited restoration and conversion into a working facility, on the other hand, I am very interested in. Theatres built 40 or 50 years ago have nothing to do with the state of the art as we know it now. It's very difficult to take a building of that era and make it meet all the needs of a major performance facility for the year 2000. Physical obstacles are built in that are very hard to overcome. Most of them have to do with sightlines, audience circulation, front-of-house lighting positions, and the overall size and configuration of the stage.

"Now that's a pretty big menu to deal with—and unless the client is willing to deal with the facility as more than just a paint-and-carpet fix-up, I think the restoration is pointless. The client has to be willing to make physical changes. Maintain the spirit of the old structure, maintain as much decor as possible—but sacrifice the elements that don't work."

Auerbach would not get involved in a restoration/renovation project unless he has some leeway to make the building function efficiently and safely. "We've been called in many times to work on buildings that have had glorious restorations

of their interior decor. Old movie palaces being converted into roadhouses. There are more hazards for the performer in those places than you can imagine. We say, 'You're putting all this money into the front of the house. What about the back of the house? You forgot it!' They say, 'Oh, we're not going to rig very much. No need to replace the rigging. Maybe one or two lines just to put the electrics on.' And we tell them they're crazy and walk away."

Clearly, as a theatre consultant Auerbach prefers new constructions. When you are dealing with a new building, he says, "you have the opportunity to develop its character with the architect. You take a life's experience in the theatre and try to cover all aspects of the program, technically and philosophically. You help the architect realize his design objectives in a functional way. We've been involved in projects where the client wanted a classic music hall, European opera house configuration for the house. At the same time that we are helping the architect develop the design for this classic geometry, we are making sure that everyone in the audience will be able to see and hear well and that the building will be able to support the activities that it's meant to—whether these are grand operas or chamber ballets."

It is not unusual for Auerbach & Associates to be brought in on a project by the owner or client—often before the architect. In such instances, the firm does feasibility studies ("of limited scope"): initial planning and programming studies that show whether the project is likely to succeed in the community for which it is being created. "When a group or a city is anticipating the need for a performance facility, we help them establish what the exact need is—based upon artistic and community requirements—and establish a budget and a program. We work with the users."

Auerbach sees his responsibilities to the owner/client, users, and audience as all overlapping. Like other consultants, he prefers to think in terms of working for the project rather than for the client or for the architect. "By saying that, we look out for all the potential performing activities that a project is being planned for. It is impossible to anticipate every exact activity that might be brought into the building throughout its life, whether it be a small community theatre or a major performing arts facility. You find that someone is going to come along and use it in a way that you never even dreamed of. If the theatre can respond to that, you've done a great job."

As for the audience, to Auerbach the

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responsibility is "manifold. We attempt to make sure that everyone is comfortable from a design angle—all aspects of audience flow, seating, sightlines." Ultimately, however, all this pragmatism belies a broader, theoretical concern for the mesh-

**"Plays written for free spaces are relegated to experimental theatres, storefront theatres, warehouse theatres . . ."**

ing of theatre-as-a-building and theatre-as-an-art. The point of confluence, says Auerbach, is the playwright. "The playwright has traditionally dealt with the proscenium stage because it is the most common form. Plays written for free spaces are relegated to experimental theatres, storefront theatres, warehouse theatres—because the playwright has not been an active part of the design process. We've never really dealt with the playwright's point of view. Not since Shakespeare has any major playwright worked in a free form to any extent. And Shakespearean theatre started with no form at all. It was adaptive use." SLW

**S. Leonard Auerbach & Associates**

1005 Sansome Street  
San Francisco, CA 94111  
(415) 392-7528

**Founded:** 1973

**Staff:** Malcolm Yuill-Thornton, senior theatre consultant and project manager. Ursula (Holly) Auerbach, business manager and design consultant. Robert Scales, associate consultant. Alek Rapoport, theatre designer. Mark Nedzbala, technical project development and project coordinator. No licensed engineer on staff.

**Fees:** Clients billed on hourly basis.

**Insurance:** None

**Major jobs completed in last five years:**

(Full-scope theatre consulting on all except as noted.) Valdez Performing Arts Center, Valdez, Alaska: new construction, 1982. Architects: GDM. Harrah's Center Street Cabaret Theatre, Reno, Nevada: new construction, 1981. Architects: Skidmore, Owings & Merrill. Harrah's Marina Hotel/Casino, Atlantic City, New Jersey: systems coordination on new construction, 1981. Architects: BWB, Architects. Berkeley Repertory Theatre, Berkeley, California: new construction, 1980. Architects: Angell/Lockwood. University of Victoria Concert Hall, Victoria, British Columbia: new construction, 1978. Architects: The Wade Williams Partnership.

**Current projects:** Solvang Theaterfest, Solvang, California: new construction, fall 1983. Architects: Ross Associates. Seattle Center Resident Theatre, Seattle Washington: new construction, fall 1983. Architects: Naramore,

Bain, Brady & Johanson. New Mexico State University Hershel Zohn Drama Theatre, Las Cruces, New Mexico: remodelling, fall 1983. Al-Deffi Assembly Hall, Jubail, Saudi Arabia: new construction, 1984. Architects: ELS Design Group. Westlake School Amphitheatre, Bel Aire, California: new construction, spring 1984. Architects: Parkin Architects. Ordway Music Theatre, St. Paul, Minnesota: new construction, fall 1984. Architects: Benjamin Thompson & Associates. Red Deer Arts Centre, Red Deer Alberta: new construction, fall 1984. Architect: Arthur Erickson. University of Montana Fine Arts/Radio-Television Complex, Missoula, Montana: new construction, fall 1984. Architects: CTA Architects-Engineers. University of California-Irvine Events Center, Irvine, California: new construction, 1985. Architects: Parkin Architects.

**BRANNIGAN-LORELLI**

continued from page 16

One technical innovation that Lorelli questions is motorized rigging. "The comment was made at a seminar I attended awhile ago that all systems of the future would be motorized. That's a crazy statement. With all those moves happening simultaneously at the Metropolitan Opera, motorized rigging is necessary—no question about it. But why install a motorized system in a high school where a student who pushes a button doesn't know how to stop it?"

**"We try to be the right arm of the client . . ."**

About lighting systems, Lorelli holds the same view: "You've got tremendous minds out there among lighting designers. If you give them something, they'll make it work. But the tendency today has been to give them absolutely everything so they don't have to think anymore. I'm not saying that we do not agree with technology—we absolutely do. But too many people go overboard." At the Florida Theatre, in Jacksonville, and the Shubert Theatre in New Haven—both renovation projects in the works—the firm strives to provide an efficient, flexible lighting system without imposing overly elaborate technology on auditoriums not originally designed to accommodate it.

Lorelli emphasizes that after years of working within cultural organizations, he and his associates can relate more effectively to owners. "One thing we pride ourselves on is that our budgets are close to the projection," he explains. "We never make a projection which is likely to exceed the budget by more than 10-15%. Never. Sometimes you see projects that come in 200-300% over budget. To me, that just shows the people involved

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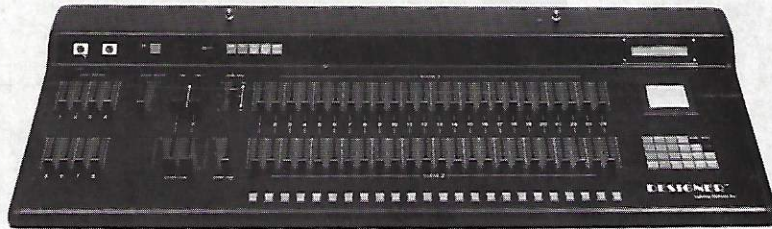


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don't really know their jobs.

"We try to be the right arm of the client and assess his needs in relation to the ideas of the architect. When you start talking about function and it impedes aesthetics, there's always a compromise somewhere long the way. What we try to do is talk about how the theatre is going to be used and then plug in the spaces. Ideally, we like to get on a project before the decisions have been made."

Currently, the firm is working with Phillip Johnson on the new Cleveland Play House, which incorporates both new and renovated structures. Because of the healthy rapport between Johnson/Burgee and Brannigan-Lorelli—cultivated over the course of many joint endeavors—the former gives the latter much leeway in the actual design of the performing space. Says Lorelli, "we establish a design plan, which takes in the total facility and allocates square footage and various spaces. The stage has to be so big, so many dressing rooms, support spaces, seating areas, lobbies, public toilets. At that point, the architect picks it up and develops the envelope."

What causes problems, he continues, is when "the envelope is already there and we have to work from the outside in. You're locked into a space. What we like is for somebody to say, 'We want to build this theatre. Let's work it out.'"

SUSAN LIEBERMAN

### Brannigan-Lorelli Associates, Inc.

140 West 57 Street  
New York, New York 10019  
(212) 265-2816

**Founded:** 1963

**Staff:** Robert P. Brannigan, president and theatre consultant. Robert A. Lorelli, vice president and theatre consultant. Icarus Pyros, chief engineer (licensed). Paul Le Doux, design engineer. Rosemarie Feurtado, office manager.

**Fees:** Vary.

**Insurance:** Errors and omissions.

#### Major jobs completed in the last five years:

Saint Peter's Church Theatre, New York, New York: new construction, 1977. Architects: Hugh Stubbins. Asia Society Auditorium, New York, New York: new construction, 1981. Architect: Edward Larrabee Barnes. James L. Knight International Center, Miami, Florida: new construction, 1982. Architects: Ferendino Grafton Spillis Candela. 55th Street Dance Theater/City Center, New York, New York: renovation, 1982. Architects: Rothzeid Kaiserman & Thomson/ARCOP.

**Current projects:** The New Play House Theatre, Cleveland, Ohio: renovation with new construction. Architect: Johnson/Burgee. Florida Theatre, Jacksonville, Florida: renovation. Architects: KBJ Architects. Shubert Theatre, New Haven, Connecticut: renovation.

\*all their work under a licensed engineer or architect."

Teddy Dean Boys, principal consultant with Jerit/Boys, says, "Insurance is just not around." As a precaution, all lighting and rigging plans prepared by the firm are reviewed by the project's licensed structural and electrical engineers so that "we are covered by the architect's overall responsibility."

Several years ago, a group called Theatre Consultants of America, headed by Van Phillips, was formed for the expressed purpose of investigating the insurance situation. They found that while agents were receptive to the idea of developing policies, their insurance companies were not. As the field attracts more members and becomes more complex technically, however, consultants are making moves to establish formal guidelines for their profession. Or rather, become recognized as a profession and therefore eligible for insurance suited to their special needs.

One problem in developing a standard insurance package is the enormous stylistic and organizational differences within the profession. There is, for example, George Thomas Howard—trained as an electrical engineer with a litany of licenses to his credit. His firm, with offices in Hollywood, Las Vegas, and Atlantic City, carries Errors and Omissions and extensive fire insurance. However expensive, these policies are available to him because there is a licensed architect, as well as structural and electrical engineers, on staff. "We find most of our clients want us to have insurance," he explains, "because they have to have insurance, and often their insurance company will not cover them for an unlicensed theatre consultant."

After 20 years of designing performance spaces throughout the world, Jules Fisher Associates does not carry insurance and has no plans to do so in the future. According to Davis, "The majority of consultants don't carry it, primarily because it's extraordinarily expensive. Also, we don't feel it is necessary." Neither does Artec Consultants, which has an even larger, more diverse staff than Jules Fisher Associates.

Roger Morgan, on the other hand, expresses concern. "Basically, we are not in a very good position in terms of liability," says Morgan, who finds that offering professional advice on a project can leave an individual consultant very vulnerable. Without liability, he emphasizes, "we just have to sit there and take the

risk. One safeguard is that we aren't worth very much. It's just a small office and there's little money here. They can only take what you've got." On the other hand, "If something terrible happened and I got into an awful lawsuit over something we were connected with on a job, it could put me out of business. But I can't lie awake nights thinking about it."

SUSAN LIEBERMAN

## JULES FISHER

continued from page 18

when they go to the theatre. Basically, they want their socks knocked off. They want to cry. They want to laugh. They want to have a powerful experience. A lot of things go into making that. We are not simply serving the technical people in the theatre. Primarily, we are serving the audience and the director."

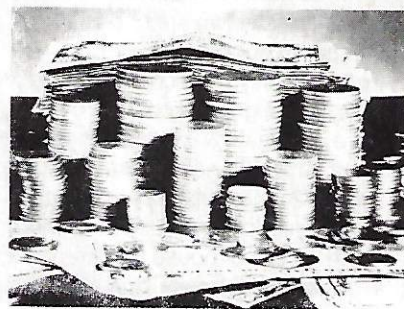
To that end, Davis rails against accepted trends in modern architecture; among them, one of the major innovations of the past 30 years: the economical, sightline perfect, fan-shaped thrust stage. "It's a disaster emotionally. You cannot do anything exciting in a fan-shaped auditorium. The idea has been to make a floor that is theoretically the correct rake so that you get theoretically good sightlines. And you draw all those little rays from people's eyes over people's heads. A computer can do that very well. Then you say, 'Oh well, the people on the sides can't see too well, so we'll just cut out those seats and build big walls there instead.'

"These decisions are wrong—so unbelievably wrong. They take the spark out of the experience of going to the theatre." According to Davis, a theatre consultant's job is to translate function into form without extinguishing the spark. This means directing the focus of an auditorium toward the stage and creating a sense of intimacy—a room filled with people—regardless of the number of seats.

A case in point is the Joyce Theater. Once a small movie house in the Chelsea section of Manhattan, the space was purchased by choreographer Eliot Feld to provide a medium-sized venue for his own ballet company, as well as outside modern and classical troupes. Despite limited wing space, no fly loft, and other defects, Davis recalls that Feld took the attitude, "I don't care if it's not perfect. I'm going to do it anyway."

Feld worked closely with architects Hardy Holtzman Pfeiffer and Jules Fisher Associates in designing the 474-seat courtyard-shaped theatre. Lining the salmon-colored brick walls on either side are two

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loges, each with a single line of seats, which overlook the three-tier raked orchestra with an intermediate slope. Davis much favors the courtyard shape for the warmth generated between spectator and performer when the two are enclosed by "a wallpaper of people."

Another Jules Fisher consultant, Joshua Dachs, is designing a courtyard style theatre in upstate New York between the walls of an 1858 Shaker barn, razed by fire in 1972. The multiphase project involves constructing a box office, lobby, and other front-of-house facilities under the remaining staircase, and using the

staircase as a stage for outdoor performances until the theatre is built and original Shaker roof restored. Dachs, like Davis, has an architecture degree from Cornell University and lighting design experience. With a foot in each field, Dachs finds "we have an easier time communicating with clients because we can discuss spatial concerns, as well as decide how many circuits the lighting system needs."

According to Davis, another important function of a theatre consultant is to coordinate the efforts of others. In addition to the client and architect, there are

usually other consultants on the job —acousticians, rigging specialists, sometimes a local expert in stage operations. "The project wouldn't happen without a certain amount of finesse in putting it all together," says Davis. "We have a lot of fun interfacing with these people because they have skills we enjoy sharing."

"The City of Amsterdam hired our firm to sort out a set of contract documents in which the stage equipment and building plans were at odds with each others," Davis notes. "Every department was in great shape until they tried to coordinate with another one." By the time the various factions were brought together, every dimension in the stage house had changed.

However well the staff speaks the languages of specialists, the firm does not intend to expand their own services into other areas, such as acoustics or engineering. "We don't want to be greedy and try to usurp more responsibility at the expense of what we do well," asserts Davis.

Furthermore, he takes a strong stand against consultants offering both theatre consulting and acoustical services. "The architect frequently assumes that if he does one-stop shopping, certain problems will be resolved beforehand. This may seem very attractive. The problem is that each firm has a dominant craft —either it is primarily an acoustical firm or a theatre consulting firm—and there is always a sacrifice in the weak half of the organization."

Dachs points out, "If you have separate consultants, they are both advocates for their particular area, and hopefully something constructive will come out of the conflict."

Offering advice on how to choose a theatre consultant, Davis champions a characteristically offbeat, intuitive method. "The relationship between the consultant and the client has got to be a very direct, personal one," he says. "A terribly formal selection process of resumes and interviews can be a lot of energy gone to waste. What you should really do, I feel, is meet a theatre consultant on a train by accident and say, 'Oh, you're a theatre consultant? Well, I'm building a theatre.' And if the consultant responds, 'Hey, that's an exciting concept,' then you've got the start of a successful project."

SUSAN LIEBERMAN

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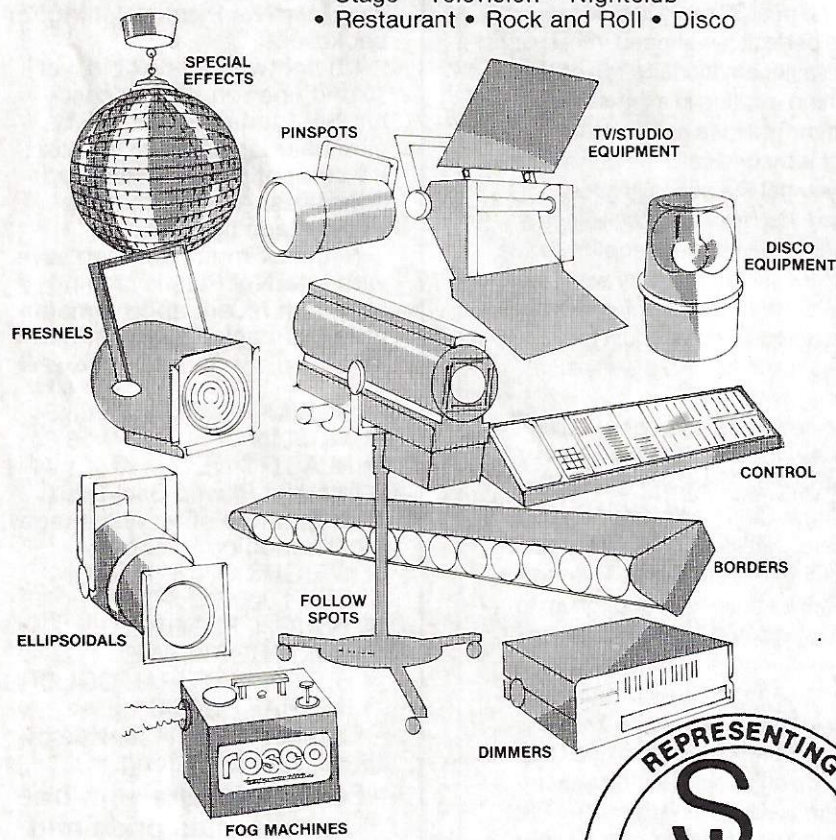
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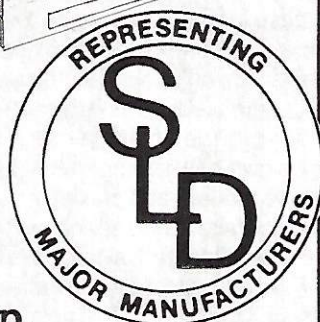
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theatre consultant. Joshua Dachs, theatre consultant.

**Fees:** Vary.

**Insurance:** None.

**Major jobs completed in the last five years:**

Denver Center for the Performing Arts, Denver, Colorado: new construction, 1979. Architects: Kevin Roche John Dinkeloo & Associates. Boettcher Concert Hall, Denver, Colorado: new construction, 1979. Architects: Hardy Holtzman Pfeiffer Associates. Eugene Performing Arts Center, Eugene, Oregon: renovation, 1982. Architects: Hardy Holtzman Pfeiffer Associates. C. W. Post College Concert Theatre, Greenvale, New York: new construction, 1982. Architects: Mitchell-Giurgola Associates. Joyce Theater, New York, New York: renovation, 1982. Architect: Hardy Holtzman Pfeiffer.

**SECTION 504**

continued from page 19

acts as an advisory group for projects involving the handicapped, suggests to all organizations seeking NEA support that they form local advisory committees that include representatives of various types of handicaps, thereby assuring first-hand advice on specific issues of physical access and accommodation.

**Commercial concerns**

Although federal funding for the arts has experienced a sharp cutback due to the nation's economic ills, the accommodation of the handicapped continues to expand far beyond the areas of the performing arts that were once, and in many cases still are, dependent upon federal financing. The accommodation of handicapped audience members is a prime concern of most theatre planning consultants and is evident in the majority of new performing arts facility constructions and renovations.

Theatre planners now recognize their obligation to provide the handicapped audience members with an enjoyable experience much as they attempt to accommodate the nonhandicapped. The American Institute of Architects, the nationwide professional organization of registered architects, promotes designs and regulations for the removal of physical and structural barriers, both interior and exterior. It bestows the Bartlett Award on those projects recognized for their excellence in design in terms of accessibility to the handicapped.

Wheelchair access ramps are perhaps the most easily recognized features of a building that has been designed to accommodate the handicapped. Upon further inspection, you can usually spot other details, such as wheelchair-accessible telephone booths, drinking fountains, ticket windows, elevator buttons, and restroom facilities. Less obvious are 32"

minimum door width openings and removable auditorium seating in various areas of the auditorium to allow for wheelchair-bound audience members.

An ever increasing number of theatres have installed hearing assist systems that provide high quality sound through portable headsets for the hearing impaired. For the visually impaired, organizations are encouraged to make available cassette recordings that can be sent out in advance, providing verbal descriptions of the scenery, costumes, performers, and elements of the action, which might be difficult to follow by the visually

handicapped audience member.

A national mandate by the White House Conference on Handicapped Individuals proclaims:

It is imperative that architectural barriers be vigorously eliminated and that all environments be engineered to safely accommodate individuals with disabilities. Individuals must have access to and safe use of the humanmade environment if they are to enjoy the same rights and opportunities as other people to participate fully in everyday living activities.

Attitudes are a greater barrier to the handicapped than are stairsteps and narrow doors. In many cases, an organiza-

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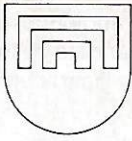


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tion may have to make a psychological shift in order to overcome an initial sense of apprehension and financial anxiety toward implementing a barrier-free environment for its handicapped patrons.

A pamphlet from the Arts and Special Constituencies Project of the NEA, called "504 and the Performing Arts," presents highlights of Section 504, ten steps for compliance, how to reach local handicapped citizens, and the ten most common architectural problems in facility design. Capital funds are often available from local governments, and grant programs exist for improving physical accessibility in public buildings.

Long is on the faculty of the Hammerstein Center for Theatre Studies at Columbia University and is a member of the New York office of Theatre Projects Consultants.

### GEORGE HOWARD

continued from page 21

"Then the MGM Grand in Las Vegas came along," Howard recalls, "starting in late 1972. About the same time was the Washington State Pavilion for Expo 74." And, the firm began to grow. What was a two to three person firm in the early 70s (with a former associate from

Kliegl and wife Karen Holm Howard, now president of the company) has grown to a 20-person firm with offices in Los Angeles, Las Vegas, and Atlantic City.

Since those early 1958 days, George Thomas Howard & Associates has been involved in theatre consulting projects of great diversity with wide ranging budgets and differing responsibilities. In fact, the company now calls itself "public assembly facilities consultants." Everything from regional theatre facilities (like the current Los Angeles Actor's Theatre project), college and university complexes (Evergreen and Cypress), World's Fair pavilions (Expo 74), large arts centers (like the current Kentucky Center for the Arts and Joong Ang in Seoul) to television studios (like KCET in Hollywood or KING in Seattle) as well as mammoth casino hotel projects in Las Vegas (both the original and the reconstructed MGM Grand), Reno, and Atlantic City. George Howard points out that the work in television came about because nobody in Los Angeles could do rigging for a television studio. And that the work in Las Vegas was an outgrowth of work he did while with Kliegl. His firm started out designing the showrooms and grew into doing audio and video (including surveil-



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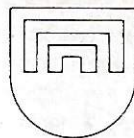
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lance) systems. About the showrooms Howards notes, "We probably have more extensive machinery in many of them than any opera house in this country. The only thing we can compare it to are certain opera houses in Europe."

Specialists in the design and engineering of systems, George Thomas Howard & Associates break down their areas of expertise into the finest and most minute of detail: audience facilities (seating plans and sightlines, seating equipment, exiting and holding areas, ticket sales and ticket office layout, food and liquor concession facilities); lighting (theatrical, exhibit, public and specialty area, sign and marquee, dimming distribution, electronic memory equipment); stage equipment (scenery movement systems—manual, scenery movement systems—powered, orchestra pit lifts—slowspeed/normal floorload, stage lifts—highspeed/heavy floorload), miscellaneous powered stage and auditorium machinery. In television and radio, their experience list includes broadcast facilities, camera positions, cable distribution systems, and closed circuit systems. For audio systems—sound reinforcement, paging intercommunications, multi-channel projection sound, conference and lecture systems, conference center and exhibition hall

meeting room design, language translation, information systems, and exhibit utilities distribution. In audio-visual—lecture facilities, motion picture projection systems, projection booth design, scenic projection systems. And at the end of the list, GTH tosses in construction, movement and storage of acoustical shells, facility programming and/or reprogramming, and renovation, remodeling and/or restoration. Work at GTH is detailed and involved and the firm's accomplishment is the sum of all the parts.

George Howard comments that "most architects perceive that all consultants services are alike." But of course they aren't. Is the consultant just giving parameters? Is the job put out as a "criteria job?" Is the job "fully engineered?" Consistent with his background as an electrical engineer, it is hardly surprising that licenses and insurance are an important consideration at GTH. Howard is licensed in every state in which they do a job. Local codes require local knowledge. Earthquakes in California ("The counterweights had better stay on the wall") or the tundra in Alaska (what's the permafrost level?). While GTH does not keep a full-time structural engineer on staff, engineering is an important part of their work. George Howard points out,



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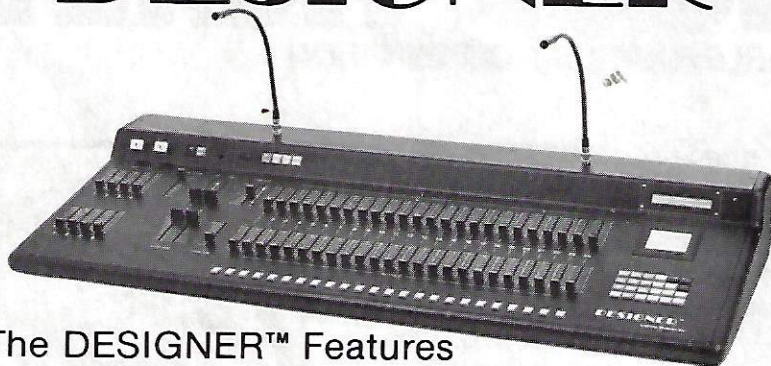
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How does GTH approach the job of consulting? "There are some consultants in the country who have given different architects the same theatre 10 or 15 times," says Howard. "Many architects hire a theatre consultant assuming that he is going to hand them everything. That is probably the only way an architect can make money on a theatre. The way fees are set in this country he doesn't have the money in the fee to design a complete theatre. So even if the architect thinks he is going to design the theatre, all of a sudden he finds out there is far too much detail—specialized detail. So that when some consultants can walk in and say, 'Here, I've got a package.' They'll jump at it. We don't normally do that. We normally design for the individual theatre. No two people ever want exactly the same number of

seats. Grade conditions may have to vary. Every architect and maybe every owner wants to see something that is theirs."

So while George Thomas Howard may have a preference for a certain kind of theatre space (the Angus Bowmer is his personal favorite), he finds that as a matter of practicality client/architect/and conditions come first. However, Howard continues, "We think that as the consultants we definitely influence what is presented and how it is presented. As such if our work is properly done, the experience is enhanced whether the audience realizes it or not. They would possibly realize a lack if something were missing. But proper theatre is the fact they don't realize it's all there. Good sound is the sound you don't hear—and don't know you're hearing. Same thing as lighting. If you do a show and light it so that you're aware of all the lighting, the question I have to ask is, 'Were you doing the show for the lighting or were you doing the lighting for the show?' And the same is true of a building."

Howard currently describes himself as "living on an airplane." The business side of the business of theatre consulting is ever-present. He admits that for a period of time while they were so busy on Atlantic

City, jobs were walking in the door—but new business development is imperative for a consultant to continue to be that busy. "Certain jobs," notes Howard, "come because we have worked with the architect before. Others, because we know or hear that they are coming up."

George Thomas Howard & Associates has worked on projects with widely varying budgets. \$300 million for the Atlantic City Tropicana. \$30 million for the Kentucky Arts Center. But as Howard comments, "It is not uncommon for us to get involved in the \$1 to \$1.25 million project. That's a very important point. If we can't do the small ones, we don't know how to do the big one, and vice versa. You have to be able to do them all. Normally we get the comment that we're too expensive to do the little ones. The client who hires us finds out that we're far less expensive than the people who are not used to doing the little jobs."

Fees are structured on the amount of work that GTH anticipates in a project. A fixed fee for a fixed amount of work. Major changes or revisions in a project necessitate a renegotiation. The fee structure, according to Howard, "is one of the things that will separate the professional consultant from the amateur. Once you're on a fixed fee, particularly if you've

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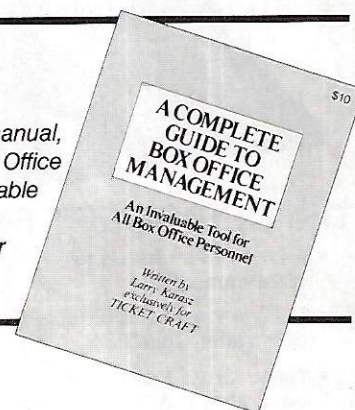
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**Architects on staff:** Charles Wallace Barrow Jr., Arthur Marton, Michele McDonough.

**Engineers on staff:** George Thomas Howard, Richard T. Dills

**Licenses:** As above.

**Insurance:** Federal and state unemployment, assorted policies for on and off premises office coverage, workers' compensation, general liability and professional liability.

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**Major jobs completed in the last five years**

**(selected):** MGM Las Vegas: reconstruction, 1981. Evergreen State College Communications Building, 1978. KING-TV, Seattle, 1981. Playboy Hotel and Casino, Atlantic City, 1981.

**Major projects in the works (selected):**

Glad Tidings Temple, 1983. Joong Ang Daily Newspaper Building, 1985-86. Kentucky Center for the Performing Arts. Architects: Caudill, Rowlett, and Scott, 1983. Conan Swordplay & Sorcery show, Universal City. Architect: Nuttall, Uchizono Associates, 1983. Los Angeles Actors' Theatre Performing Arts Center. Architect: John Sergio Fisher & Associates, 1984. Joslyn Center, Torrance, California., Architect: H. Wendell Mounce & Associates, 1984.

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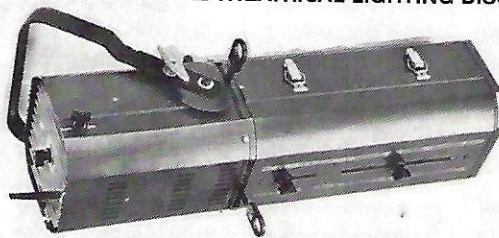
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ers and arts people. In fact, if someone told me our involvement must be limited to one of the traditional phases, I'd say our greatest impact could be made in the initial programming, preplanning, and fundraising stages. I think there's a tendency in our profession to jump ahead to technical solutions without getting into the economic and social impact."

Boys notes that "Often you get a list of functions from the people who are going to use the facility and dollar figures from an administrator. And they don't match. If we can get into a community or univer-

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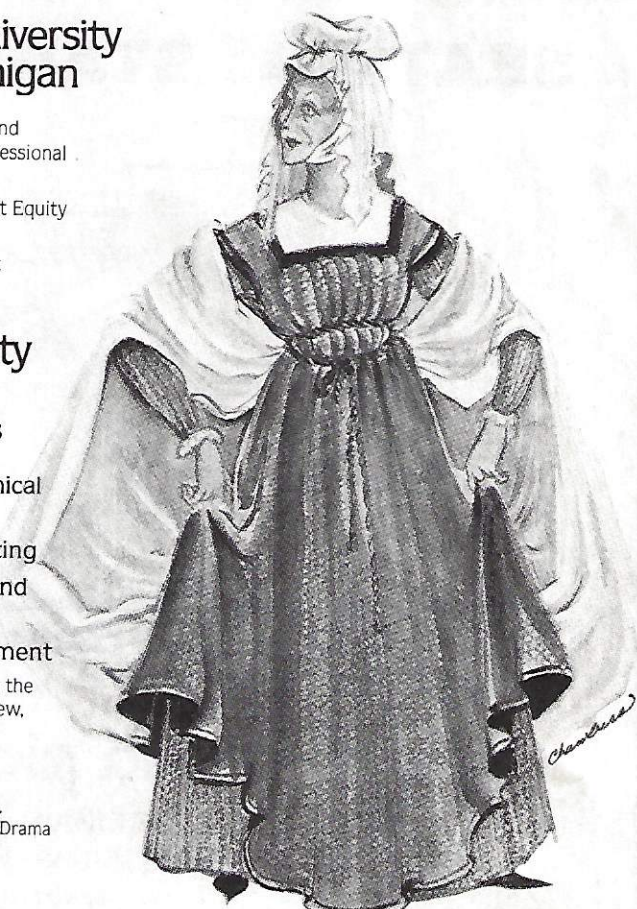
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sity soon enough and sort out what the users want on paper, we can get—with the help of an architect—a much more accurate construction budget than the administrator can come up with, digging through the last 12 issues of *Architectural Record*—or whatever mysterious process some administrators seem to use.”

Jerit/Boys is currently working on a complex for the University of Alaska, in Anchorage, scheduled to open in 1986. “In the first round of discussions, everybody insisted they wanted a black box theatre,” explains Boys. “Then we drew it on a piece of paper and a few things became apparent. One, the university theatre department is not very big and hands are few. Well, it takes a lot of manpower to turn these flexible black boxes around. They didn’t have the money to motorize it either. Then the university requested that the space be available for lectures and morning classes. As we talked, the clients finally realized that what they really wanted was a fixed thrust theatre which didn’t have to be reconfigured every morning. So we turned the form around at the outset.”

Money is of great concern to Jerit/Boys, both in terms of available budget and long-range financing of an institution. One economy move, which the firm imple-

mented at the Von Braun Civic Center, in Huntsville, Alabama, is to consolidate all the arts agencies within an area. “Not only does it keep people from working in their basements,” Jerit points out, “but also, by housing them in one place, you increase everybody’s ability to get funding and to use one another’s resources.”

With an eye toward financial self-sufficiency for its clients, the firm has consulted on numerous facilities—the Huntsville complex, the Morrison Center in Boise, the Tallahassee-Leon County Civic Center in Florida—in which massive arenas and exhibition halls were built to help carry the cost of smaller spaces offering less profitable arts programming. Pavilions, originally conceived of as sports arenas only, “are now being stretched to their absolute limits and capabilities,” according to Jerit. If well designed, an arena can house popular music concerts and other attractions which contribute to the cost of athletic events. Says Jerit, “The Boise arena probably pushes it as far as anyone has gone. You could bring anything in from the Lippizaner Horses to Kris Kristofferson.”

Looking ahead, he regards funding as “the single biggest challenge over the next twenty years. As more citizens of a community experience a deterioration in

public services like police and hospitals, the more difficult it will become to get money for the arts. New projects will continue to happen, but I think we’re going to see them strung out on a long-term schedule. Whereas now people plan cultural centers to open in phases over five years, projects will be designed to span a ten-year period.”

The secret, he concludes, is to be ready with a concrete idea, because “nobody ever knows when money is going to become available.” When that occurs, educators, administrators, and public officials should already have documentation in hand about what to build, where to build it, how much it will cost, and whom it will serve.

SUSAN LIEBERMAN

**Jerit/Boys Inc.**  
1116 Lake Street  
The Village Mall  
Oak Park, Illinois 60301  
(312) 524-2288

**Founded:** 1978

**Staff:** Ron Jerit, principal consultant. Teddy Dean Boys, principal consultant.

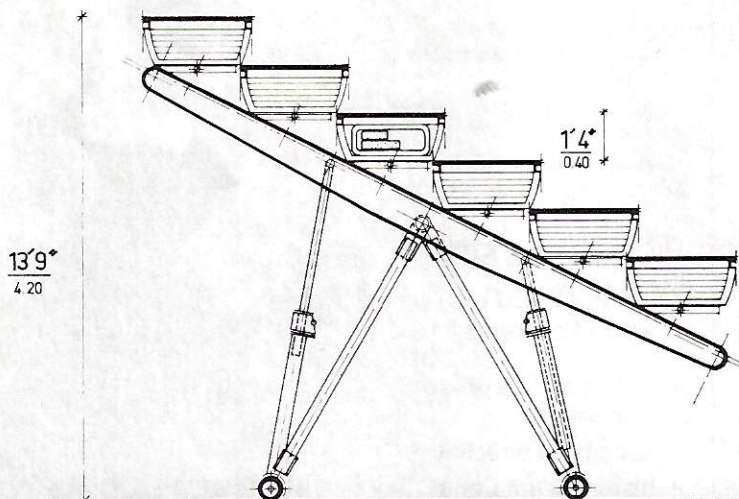
**Fees:** Vary.

**Insurance:** None.

**Major jobs completed in the last five years:**

Tulsa Performing Arts Center, Tulsa, Oklahoma: new construction, 1977. Architect: Wozencraft Mowery & Sanders. James K. Polk State Office Building and Cultural Center, Nashville,

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Tennessee: new construction, 1980. Architects: Taylor & Crabtree. Morrison Performing Arts Center, Boise, Idaho: new construction, 1982. Architects: Cline Smull Hamill Quintieri Associates. Soldotna Senior High School, Soldotna, Alaska: new construction, 1979. Architects: Harold Wirum Associates. Fine Arts Building, Macomb Community College, Clinton Township, Michigan: new construction, 1982. Architects: TMP Associates.

**Current projects:** Centennial Hall, Juneau, Alaska: new construction, 1983-84. Architects: Ackley Jensen Associates.

## THEATRE PROJECTS

continued from page 27

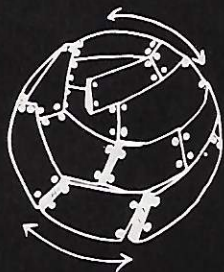
can projects, has been viewed by some United States theatre consultants with extreme hostility. TP takes it all in stride noting that they have always encouraged hiring of Americans in Great Britain (pointing to the projects on which they brought in acoustician Russell Johnson) and that in fact Theatre Projects is also a United States corporation. The North American staff includes Wally Russell (formerly president of Strand Century), Louis Fleming (formerly managing director of Artec Consultants) and Eldon Elder (author, designer, and in recent years a busy theatre consultant).

Theatre Projects began theatre consulting work in the early 1960s with projects like the Leatherhead Repertory, a space at Hull University, the Birmingham Rep, Gravesend, and others—followed by a reworking of the lighting positions for the second season at Chichester. That association with Laurence Olivier led to work with the National Theatre at the Old Vic and ultimately to work on the new National Theatre of Great Britain. Almost simultaneously, Peter Hall asked Pilbrow to work with him on what was to become the Barbican. While those two theatres actually opened over five years apart, they were originally conceived and designed about the same time. Pilbrow notes that largely as a result of their work at the National, Theatre Projects Consultants began getting a lot of overseas work—and for a time they were quite busy in Iran. While over the years there has been a lot of publicity, negative and positive, about the National, in retrospect Pilbrow believes that the theatre "simply wasn't ready." And that once open, finding the time to finish the project as well as coping with the failure of subcontractors made it nigh on to impossible to get the building finally completed. Since the fall of 82, the National has been completely finished.

While much of the heart and ganglia of Theatre Projects Consultants remains in London where Pilbrow, Dick Brett, Iain Mackintosh, David Staples, Alan Russell, and the computers to assist in drafting are headquartered, at almost any stage in a given project's development the US team is supplemented by designers and consultants from the London office. Pilbrow and Staples set up shop in Portland to be on-site for the Portland Center for the Performing Arts project. Pilbrow and Lou Fleming visit the Cayman Islands Arts Center project. Lou Fleming and Iain Mackintosh visit the Thousand Islands Performing Arts Center. Iain Mackintosh is in Wilmington, North Carolina, doing on-site inspections for the Thalian Hall and St. Thomas Church conversion plan. Wally Russell is in Calgary inspecting that project's progress.

Call them empirical if you will. Call them romantic. Any conversation with the designers of Theatre Projects Consultants immediately convinces you that here is a group with a mission. While the nitty-gritty of engineering and systems design ultimately figures into any project in which they become involved, it is only after the early planning process. It was not always thus. The more involved the

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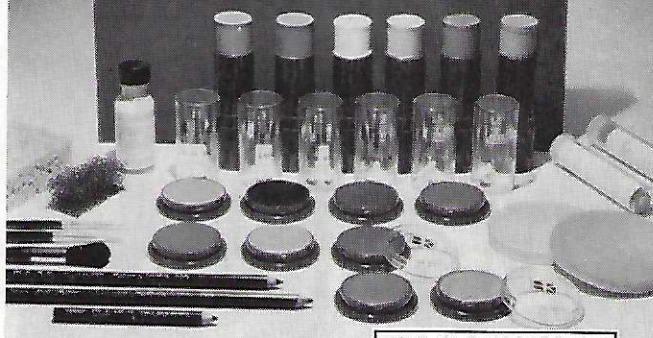
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company got in the technical side of the theatre consulting process, the more conscious Pilbrow became that "the technical part was only a small part of what we ought to be concerned about and that the most important part was how do you make theatres more exciting places to be in. The TP consultants talk with an excitement and a fervor about design: what it can do, how it can enhance the experience of the audience, the actor (and ultimately, the bank balance of the producer). Here is a group with definite ideas about what makes good theatre and why others are wrong.

Richard Pilbrow comments, "The theatre consultant has broadly seen his responsibility to be technical and the architect has expected from his consultant insight into the obscure world of theatrical techniques. Of course these things are important. They will range from ensuring adequate spaces placed in a functional relationship to each other to the details of the equipment installations. Equipment will be chosen according to circumstance and budget and will perhaps range from off the shelf items to the new frontiers of technology." But the Theatre Project team sees its responsibility as more than making sure that the right stuff gets in the right place. Spin-

ning indictments against theatres with too large a seat count, "over large auditoriums, flexible mechanical monsters with moving blocks of seating, ceilings, or walls to funereal black boxes. Flexible and ready for anything perhaps, but usually incomplete in each manifestation" so says Pilbrow, "lacking in theatrical or architectural atmosphere, highly expensive to operate and with costly areas of black hole to fill with scenery."

What does TP champion instead? The courtyard theatre. The Elizabethan courtyard (a space, as Pilbrow points out, that bred a "plethora of dramatists—Shakespeare, Johnson, the Elizabethans and Jacobean, Moliere, Calderone, Lopa de Vega," and others. The Georgian courtyard (as manifest at Bury St. Edmunds and the Bristol Old Vic). Today, the late 20th century kin of those earlier theatres can be seen in TP projects like the Iain Mackintosh-designed Cottesloe at the National, the Wakefield Tricycle Theatre in London, and Christ's Hospital School in Horsham.

What are the prime characteristics of this performance space where the magic of theatre can ignite? Courtyard is the word that comes up frequently and courtyard embodies the basic concepts where the artists and the audience share

the same space. As Pilbrow points out, until relatively recently, "In order for all to enjoy the live performance, auditoria, whatever their seating capacity, had to be as intimate as atmospheric and as three dimensional as possible. Positive words are "a shared theatricality, a sense of occasion and of intimacy." This is and was generally "achieved by surrounding the performer with his audience as compactly as possible and on several levels." Another way of looking at it is papering the walls with people via multi-leveled galleries, via sweeping horseshoe balconies and/or via wrap-around boxes.

It is hardly surprising that the most passionate and articulate proponent of the Theatre Project courtyard concept, Iain Mackintosh, is a man whose academic leaning finds him curating exhibits on 18th century subjects—Garrick, the Georgian Playhouse, 200 years of Covent Garden—as well as editing a recent volume, *Curtains!*, which identifies and catalogues pre-1914 theatres and music halls in Great Britain. In addition to being an all-round theatre professional in the humanist vein, Mackintosh points to a career with the Prospect Theatre (which he founded) of 12 years of touring in 125 different theatres in 21 countries.

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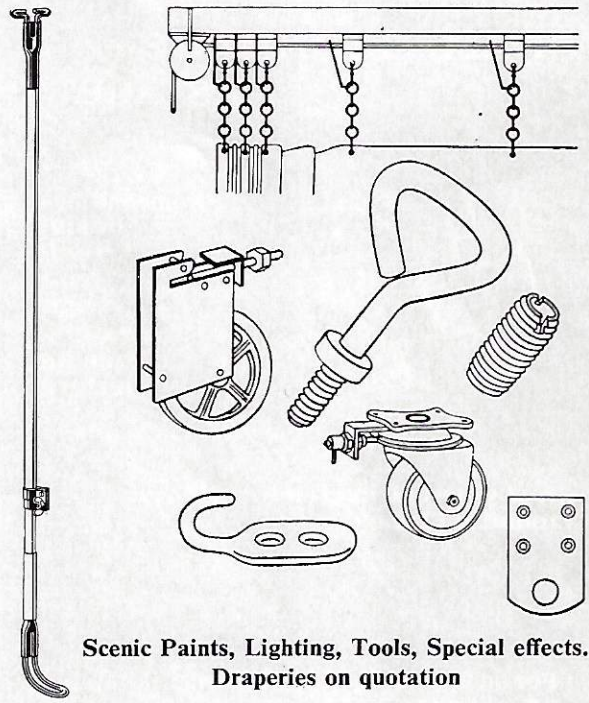
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Mackintosh joined Theatre Projects in 1973 as a theatre design consultant. He recalls, "Richard had reached the stage where he was concerned that his organization was being asked to design equipment for bad theatres. I have only two criteria for what is a good theatre. Whether it enhances the actor's or the singer's performance and whether it increases the audience's enjoyment." For Mackintosh, "The actor is the single most important element in the theatre and he has to be in a building that enables him to communicate. It's all about bringing people together." His first project was the Cottesloe, the third stage of the National (design concept by Iain Mackintosh in conjunction with the architects, Sir Denys Lasdun, and the National Theatre Company. The only brief from Peter Hall, the National's new director, was to get 450 people into a space allotted to 250. "I turned," Mackintosh continues, "to the 18th century theatre because the greatest influence in those touring years with the Prospect was working in the Georgian Theatre in Richmond, Yorkshire."

A bit of Prospero's insubstantial pageant is what Mackintosh wants to see in theatre architecture. Eschewing theatres that are like concrete bunkers,

Mackintosh notes, "An element of improvisation must run through good theatre even at the large scale. The magic of theatre depends in a sense on the fact that it is all being created for you and hence can dissolve before your eyes.

"What we're trying to do in theatre architecture is to transform a collection of human beings into an audience. And audience enjoyment isn't expressed by lots of leg room and being able to get a drink easily at the interval. Audiences sometimes even like to be squashed in tight. It's more fun." As Mackintosh points out, tests have been done and it has been proven that a person will laugh quicker or cry quicker having been exposed to a red and gold room than a black or gray one. "By and large, in both Britain and North America, the audiences prefer the old auditoriums and the new lobbies. The actors prefer the old stages and the new dressing rooms."

Of course, while Mackintosh's preference runs to the 18th century he readily admits that it is not suitable for all situations or for every client—"All courtyards aren't the same and there are many ways to create excitement. You end up doing what the client wants. But let us have no mistake about it, one of the problems of being a consultant is iden-

tifying with the client.

"The consultant is working for a number of people. He ultimately works for the actor and the audience, but they're not going to pay the bills. He has to communicate through the architect and the other consultants. Therefore, he is part of a team. The consultant generally works for two clients. I call them the money client and the user client. The money client has to raise the finances and is invariably a representative of community enthusiasm and interest. The user client, if there is one, is a theatre company or an orchestra, or whatever. Sometimes it is a single articulate director who has very specific ideas. Sometimes it is a combination of technician and designer and manager.

"Theatre Projects starts off by sharing experiences. This is done by showing slides of theatre architecture of different countries, different periods, good ones and bad ones. We spend a lot of time looking and discussing. When we have got a little bit closer to knowing what they want, we get into an airplane and we go and visit theatres, together with the user client, and with the architect if he's been appointed by now. We share the experiences. We sit in theatres we like or ones that we don't like. We talk about the

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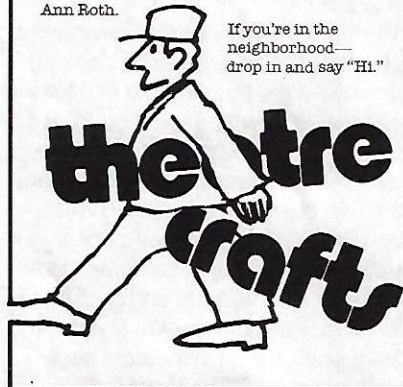
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theatre they're going to build. What a consultant is trying to do is to make the user client (and sometimes the money client) not look at things through the consultants eyes but rather to open their own eyes. What we don't want to do—and this is what I think architects throughout the world—and not just theatre architects—often get wrong is to sit down and simply ask, 'What do you want?' What somebody says he wants at first is rarely what he really wants at the end. The discovery of what he really wants is a very complex process. When you're asked by a client to convert an existing building or to renovate an existing theatre the approach is slightly different. You first have to discover what the building is capable of. You must go into it with the possibility that it is not going to work. It demands a particular strong mindedness to say, 'I'm sorry, I've news for you—you've got the wrong building.'

"Once you've got a shared intention, you can then get onto the bread and butter of theatre consultancy—sheer, practical, down-to-earth, hands-on, sleeves-rolled-up, technical consultancy. Getting the building which you agreed to create properly equipped in all the technical departments."

Pausing for a moment, Mackintosh continues, "Technical planning is quite a loose process because I think you must allow the technician and the designer to change things. As a consultant you don't patronize technicians or designers. You give the technician something which you yourself would like to work. Although you are influenced by your own taste, you are hired as a dispassionate person to take the long view. We don't believe that theatre architecture or auditorium architecture is a question of 'dynamic systems engineering'. We don't start with the nuts and bolts of seeing and hearing. They are vital but we come to the nitty-gritty after we have discussed the fundamentals and the profundities. The nitty-gritty is equally important but it is a sequence to which you address yourself intellectually."

PATRICIA MACKAY

### Theatre Projects Consultants Ltd.

14 Langley Street  
London WC2H9JG, England

Theatre Projects Inc.  
27 West 67th Street  
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**Engineers on staff:** Structural engineer and assorted electrical engineers led by Dick Brett and Bob Anderson.

**Licenses:** As above.

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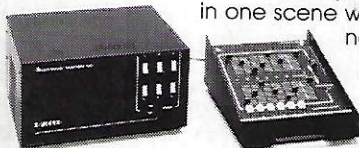
**Fees:** Four to five tiered structure based on the amount and degree of work contracted.

**Major jobs completed recently (selected):** The National Theatre of Great Britain. Architect Sir Denys Lasdun. Lyric Theatre, Hammer-smith, a restoration. Christ's Hospital Arts Center. Architect: Howell Killick Patridge & Amis. Tricycle Theatre, London. Architect: Tim Foster. The Barbican Theatre. Architect: Chamberline Powell & Bon.

**Projects on the boards (varying assignments from feasibility to final):** Calgary Center for the Performing Arts. Architect: Raines Finlayson and Barrett, 1985; Portland Center for the Performing Arts. Architects: Broome, Oringdulph, O'Toole, Rudolf & Associates, ELS Systems, Barton Myers, 1984-85; St. Lawrence Center. Architect: The Thom Partnership, 1983. Tivoli Theatre, Washington DC. Architect: Vitetta Group/Studio Four in association with Ward Bucher Architects, study; Citadel II, Edmonton. Architect: Chandler Kennedy Architectural Group, 1984.

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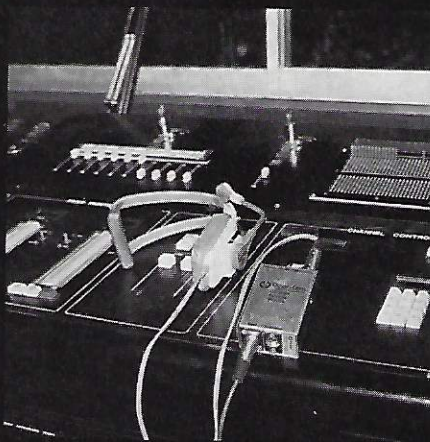
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TIM BAY

### Peter George Associates

As theatre consultants on projects ranging in size from a 5,000-seat multiple use theatre at the University of Baghdad (The Architects Collaborative, architects), in Iraq, to a 100-seat studio theatre in The Exchange Theatre (Richard Meier & Associates and Edwin Stromsten, architects), in New York, Peter George Associates, Inc., claims to be as involved in theatre consulting as in the acoustical consulting the firm is known for. Although the firm continues to work with other theatre consultants in acoustics only, it often serves a project in both capacities. In doing so, Peter George Associates works on room acoustics and sound isolation as well as on planning, programming, and design of the theatre in question.

In addition to its work with new constructions, in the last several years the firm has begun adding projects involving the improvement, upgrading, recycling, restoration, or renovation of existing theatres—many of them pre-1930. Principal

among these projects are the Walker Fine Arts Center, Asheville, North Carolina (1982, gymnasium recycled into a 400-seat stepped floor proscenium house with support spaces. Dalton Morgan & Partners, architects), the Asolo Opera Theatre (1982, renovation of theatre built in 1926. Skidmore Owings and Merrill, architects for the renovation), and the Brooklyn Academy of Music (1976-82, renovation. James Stewart Polshek & Partners, architects). Says Peter George, "Most of our work has been concentrated in university and college theatre, although we're now getting into municipal facilities quite a bit. We're able to provide theatre and acoustical consulting. I have sufficient experience in both areas to respond to both theatre and acoustical problems. This tends to help initial design concepts especially. I can deal with the shapes of spaces better."

SLW

### Jones & Phillips Associates

Ted Jones and Van Phillips are university instructors—Jones at Indiana University and Phillips at Purdue—and active stage designers, in addition to operating a theatre consulting service. The two consultants break down their services into three categories—concept and design, equipment budgeting, and production design.

Representative consulting projects include the Georgia World Congress Center II, in Atlanta, featuring a full theatre and dining complex and multimedia center (Thompson, Ventulett, Stainback & Associates); the 7,000-seat Sundome, in Sun City, Arizona (Hawkins and Lindsey, architects); and the Musical Arts Center at Indiana University (Woollen Associates, architects). Jones & Phillips Associates have also done numerous restoration projects, such as the Pittsburgh Memorial Auditorium—a 1922 Masonic auditorium (Seidler, Owsley

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SUSAN LIEBERMAN

### Lustig & Associates

Based in St. Louis, Lustig & Associates call themselves "design," rather than simply "theatre," consultants. Design refers to an environmental approach to projects: the firm offers an extremely wide range of services, from theatrical rigging and acoustics consulting to interior and landscape design.

Five principal consultants, each with an area of specialization, have been involved in projects ranging from the Richmond, Virginia, coliseum (Vincent G. King & Partners, architects), to the Carleton College Fine Arts Center, in Minnesota (Harry Weese & Associates, architect), to the University of Massachusetts at Boston television studio, to the J. C. Penney "Experience" (Communico, Inc., producer). The staff includes a theatre consultant (Edgar Lustig), lighting consultant (James F. Hisserich), acoustical consultant (Arthur F. Niemoeller), graphics and sculpture consultant and artist (Robert C. Smith), and landscape consultant (Robert E. Goetz).

One notable project amid the firm's lengthy list of mainstream college and civic arts facilities is the fun house for Busch Gardens, in Tampa, Florida—surely an endeavor calling all of Lustig & Associates' various facets into play.

SUSAN LIEBERMAN

### V. Piacentini

A gift for shuttle diplomacy and a firm grasp of theatre crafts are the indispensable skills of the theatre consultant, suggests consultant Vincent Piacentini. This theatre consultant must "act as a kind of translator between the production

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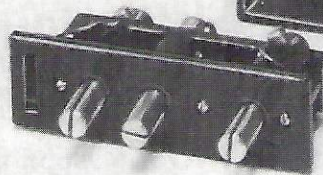
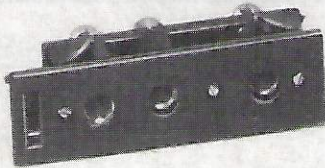
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people and the architect and engineers." And often, Piacentini adds, the consultant will have to also play go-between and interpreter for the production staff and management.

"One of the major functions of the theatre consultant is precisely that of all-round explainer, translator, and teacher. The consultant, however, must never lose sight of the audience—their safety, comfort, hearing, and seating are always givens."

Piacentini came to theatre consulting with a solid footing in the technical end of theatre. He was an architecture student at Washington University, in St. Louis, and went on to work in regional, academic, and Off Broadway theatres as a designer, technical director, and director. Currently, he is president of V. Piacentini, a theatre consulting firm in St. Louis.

At this time, most architects do recognize the importance of collaborating with a theatre consultant, although this is not always the case, Piacentini notes. "Some architects still approach the design of a theatre with the idea that they know all that they need to know—and what they don't know can be supplied by manufacturers. This is a real mistake, and it shows in the theatres they build. With the best intentions in the world, manufacturers have prejudices, not to mention serious conflicts of interest. And the result is that the architect will end up buying the wrong materials or equipment for the theatre that is being built."

Piacentini prefers structuring his fees on a flat rate basis, rather than charging either an hourly or a percentage rate. "A flat fee gives impartiality, which is very desirable. On the other hand, there is always the possibility of the suspicion that you might be thinking of making more money if you boost the costs when you are working on a percentage basis."

TIM BAY

### Jerry Rojo

"The program is probably the most important step in the planning of a new theatre, and this is where the theatre consultant can play an invaluable role," says Jerry Rojo, head of the dramatic arts department at the University of Connecticut.

This program should be the philosophical blueprint for the theatre, Rojo explains. As a consultant, Rojo addresses a constellation of questions during this assessment period. "Who is going to use the theatre, and under what conditions? What kind of scene shop will you have? What kind of audience will be coming to this theatre? What will be the schedule of performances? What kind of space and mood should be set by the lobby? Where are you going to put the parking spaces? How close should the seats be? These are the kinds of basic questions that have to be answered long before anybody sits down at the drafting table."

This may sound like common sense, but, Rojo laments, many theatres are built without this solid foundation of research and study. "What happens is that in many states the building goes out to bid, and often the architect lands the job because of some political payoff—not because of any prior experience in building a theatre. This architect, in turn, hires his own consultant, who must answer to him. The results can be disastrous, since nobody is looking out for the people who will use the theatre—the audience or management. That is one thing to always remember—the consultant should answer to the client."

Rojo worked for over ten years in the Off Broadway avant-garde laboratory of the last two decades—with Andre Gregory and Richard Schechner, among others. Later, he applied some of the lessons he learned during that period to an environmental theatre he designed at Sarah Lawrence College.



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The activist spirit of that apprenticeship has left its mark on his philosophy of theatre. "I believe that despite the huge popularity of movies and television, that living theatre is and will always be an important element to the human soul. It offers a sense of ritual, bringing people together in a unique, communal way, linking us together in an emotional bond that cannot be duplicated by films or TV."

### Donald Swinney

Architects have had a bad press when it comes to theatres, says theatre consultant Donald Swinney. "There has been a lot of criticism of theatre buildings, and much of it is justified." In many cases, however, the blame goes to the group or committee who commissioned the job.

"The reason is that the client or owner, in many cases, doesn't know what he wants. Frequently, you will go into a project, and have to do the feasibility study. You have to do the entire planning of the project, because it has not been thought through carefully. I'm afraid that I have worked in situations like that where the person or persons commissioning the building really had no idea whatsoever of what should go into the building, and yet they wanted the best building possible."

Currently head of the technical department at Hofstra University's drama school and also a consultant with Jean Rosenthal Associates, Swinney has worked as a theatre consultant for some 27 years. Consulting, he says, "just sort of evolved from my experiences in technical theatre." For Swinney, the job of theatre consultant is to take "the vision of the architect and the other planners and translate that vision into logical terms that can be realized." The cardinal rule, he emphasizes, is the well-known dictum that form should al-

TIM BAY

ways follow function. "For example, if you are dealing with a space that is supposed to be a musical hall, that has different qualifying characteristics or requirements than if it is supposed to be a multipurpose space. If it is a children's theatre, then you have to design something that is very different from a road house. I always bear in mind the performer and performance that will be housed in that space."

Swinney prefers to be paid on a flat fee basis, rather than by the hour. "In general, I think that flat fees are a much better idea. The client will be assured that the consultant will certainly stay with the project through completion. In my case, I think that by charging a flat fee, I reaffirm to the client my commitment to the project."

TIM BAY

### Douglas Taylor

"The biggest problem you run into is when somebody has a pet idea. One should never create a theatre that is a monument to one person's ideas, a showcase for the architect's vision—despite what Ayn Rand says. The important thing to remember is that ideas go in and out of style, but theatres remain."

These words of warning are from a theatre consultant who says that he has been lucky in this respect—"Most of the architects I've dealt with realized that they didn't know very much about theatre and were very willing to listen to me." Douglas Taylor has been a theatre consultant for many years. He studied with George Izenour at Yale, and earned his stripes after working at a number of academic theatres, including those at the University of Wisconsin and Dartmouth, before settling down to his present post at the University of Missouri-Kansas City. He is also technical production director at the Missouri Repertory Theatre.

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## OTHER CONSULTANTS

continued

Money—more precisely, shrinking budgets for new theatres—is having the biggest impact on theatre construction these days, Taylor says. “We are in the middle of a cost crunch. What we are seeing now are good, practical theatres, but nothing luxurious. For example, you are not going to have something like the Hopkins Center, at Dartmouth, which was built in 1962 at the cost of \$7.5 million. What would that translate into in today’s dollars? Cost saving has become an important factor, and this is reflected in the kind of materials that are now used.”

The more positive, flip side of this economic crunch is the growing trend toward renovations and conversions, Taylor declares. “Today, a community or school will think first about taking an existing theatre and trying to restore or renovate it before embarking on building something new. Suddenly, all kinds of buildings—abandoned opera houses, old movie theatres, a storeroom for city hall, an old airplane hangar—are being converted into theatres. Today, clients are more likely to look around to see what they have, and take the time to restore and modernize some lovely old theatre that had been abandoned.”

TIM BAY

### William Warfel

“I try first of all to help the client define needs and philosophy,” says theatre consultant William Warfel, who is also head of the theatre lighting program at the Yale School of Drama. “I work with them in understanding the image of the theatre, the kind of work that will be performed there, and the kind of audiences that will be attending those performances.”

Warfel thinks that his responsibilities are equally divided among the client, audience, and performer. “By creating the best possible environment for the performer and technical people, I will also have helped create the right atmosphere for the audience and fulfilled the plan envisioned by those who commissioned the theatre.”

Some of his work comes through Yale, Warfel explains, when the drama school receives calls from people looking for a theatre consultant. But most of his jobs are either from architects that he has worked with previously or by way of his contacts in the theatre. Since 1978, he has been a partner with John Hood in a theatre consulting firm called Systems Design Associates. “John used to be with George Izenour, and so we get architects that he had worked with during those years.”

The same basic criteria, Warfel says, guide him whether he is working on a restoration/conversion or on a new theatre. “If I am restoring an existing theatre, I try to keep it as near in spirit to the original as possible, while making it technologically advanced, in order to have the best environment in which to see and hear the performance, handle the scenery, and so forth. But technically, the same criteria hold true if I am creating a theatre from scratch. I analyze the sightlines, the seating configurations, the stage machinery, the lighting system. The point is to see whether the space fulfills the functions that the client needs, and can I, economically, make the changes necessary so that it will eventually fit those needs.”

TIM BAY

### Peter Wexler

“In a sense, you are creating a factory, and the actors, designers, and technicians are the workers in that factory. You must try to give them an environment where they can successfully use the tools of their trade. You may be producing illusions or magic in that space, but you can’t lose sight of the

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fact that it is a very practical working area."

Peter Wexler is a stage, lighting, and costume designer who has also worked in the creation of several theatre buildings—although rarely, he says, in the formal role of theatre consultant. "I am a free-floating designer, and often I will enter into the project as the designer, or as the producer, or as the developer." He has the advantage of training in architecture—he went to architecture school at the University of Michigan—which provided him the ability to talk both the language of the theatre person as well as that of the architect. This understanding of the architect's special language and skills is an invaluable asset for the theatre consultant, he says.

"So many things enter into the creation of a theatre," Wexler declares. "Just take the responsibility to the audience. You have to think about such mundane but potentially crucial things. Is there convenient parking? How close should the audience sit to each other? And then there are the larger philosophical questions, such as what kind of image should this theatre have to attract this audience?"

According to Wexler, the theatre consultant has to walk a tightrope when dealing with the client on the project. "At the beginning, during the planning stage, all that management is most interested in is creating a big impression, getting the most for the money." The theatre consultant must bring them down to earth, Wexler says. "The planning stage is when they should be doing a great deal of serious study and evaluation. At this point, the theatre consultant should be acquainting them with the myriad problems and issues, pointing out what should be done and, most importantly, what would be fiscally responsible."

Ego is often the loudest voice in the crowd, not sense or aesthetics, Wexler adds ruefully. "The manager is often yelling at you—not because he wants to save money, but because he wants to establish that he has the right to say that this is what should be happening."

Wexler, however, enjoys the challenge of collaborating on the creation of a theatre. "When you are creating a new theatre, the sky's the limit. You can apply your talents of invention and imagination to help create a theatre out of nothing. On a renovation, you have the pleasure of preserving and enhancing something that might be architecturally quite lovely. And unlike a show, which is highly perishable, theatres endure."

TIM BAY

### John S. Wright

"To be a theatre consultant, you should have strong convictions but also be flexible," says theatre consultant John S. Wright, adding that the consultant "must always be willing to work within the constraints of available resources." Wright is president of Technical Directions Incorporated, a four-year-old New Orleans firm that has worked primarily in Louisiana and the Deep South.

Money often proves to be a powerful limitation, he adds. "These days, people are looking for the best value for their money. But because of the economic situation and the constantly rising cost of materials, they don't fully realize the skyrocketing costs of building." The result is that sometimes the theatre consultant and the architect "may have to compromise their ideals to fit into the client's budget."

Straitened economics, however, do not always cramp the style of the theatre consultant. "I have learned something from every job that I have done. And one thing that I am constantly discovering is that there are many ways of doing things. It is almost always possible to find novel and cost-effective solutions to problems. And it is always gratifying to have a client who is willing to try new things—who is willing to work with you on exploring new ways of doing things."

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Soaring building costs have also resulted in a growing interest in remodeling or converting existing structures, Wright says. "Right now, I am working on the renovation of the Orpheum, an old New Orleans vaudeville house"—being reincarnated as a theatre to the tune of \$3 million. As Wright notes, "A new building on this scale would have cost four times as much."

TIM BAY

## ROGER MORGAN

continued from page 24

is no reason for us to assume that we can do those better than the architect.

"Our big problem is adding modern technology. Usually that means rigging and lighting out in the auditorium where there never were stage lights before. How do you integrate everything and not destroy the character of the space? You have to tiptoe around existing stuff that is viewed as sacred.

"We had a tricky problem of that sort at the Grand Opera House, in Wilmington," Morgan continues. "They had a mural on the ceiling that they wanted to preserve, and we thought that it was important to have a lighting slot up there. We were able to come up with a solution, but it took a lot of hand holding.

Often, Morgan asks for input from the people who will be performing in the facility. "For instance, on the State Theatre, in Cleveland, we had many meetings with the Cleveland Ballet and the Cleveland Opera—the two major companies that will work there. They were brought in by the client. In addition, I called people like Dan Butt, production manager of American Ballet Theatre, which is going to play in that theatre, and I said, 'If you could have it the way you'd like, how would you have it?' A lot of time, it doesn't have anything to do with costs. It has to do with putting a door here instead of there. Same amount of money for the door."

Jobs come to the Roger Morgan Studio primarily through referrals: "Somebody that we've done a terrific job for will say that to somebody else." They come both through the owner or the person behind the project, and from the architect—one who is putting together a team to go after a particular job or one who has the job and is looking for a consultant.

It hardly matters, Morgan comments, if the architect knows much about theatres. "What I care about is if they have that wonderful ability to understand the problems when you present them and are creative about finding solutions. The architect is the principal operator in the process of creating a building. So the architect must be able to administer the project, keep all the consultants working together and with the architect and the owner. The number of consultants on a theatre project is gigantic. It's the difference between working on a play and working on a musical. In a musical, there's a choreographer and a musical director and a composer. When an architect does a theatre, as opposed to another sort of building, suddenly there is a theatre consultant and an acoustician, along with electrical, mechanical, and structural engineers.

"What I try to do when we are being interviewed for a job is convince the people involved that we can relate and work well together. Because you make some awfully big decisions, many of which eventually become irreversible. The relationship between the theatre consultant and the architect and the owner is crucial to the project's success. If the balance isn't right, you won't understand each other."

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**Current projects:** New Amsterdam Theatre, New York City: restoration of main theatre and renovation of roof theatre, fall 1983. Architects: The Ehrenkrantz Group. Wheeler Opera House, Aspen, Colorado: restoration, November 1984. Architects: William Kessler & Associates. State Theatre, Playhouse Square, Cleveland: renovation, early 1984. Architects: Dalton, van Dijk, Johnson & Partners. Circle Theatre, Indianapolis: renovation, July 1984. Architects: Dalton, van Dijk, Johnson & Partners. GeVa Theatre, Rochester, New York: renovation and restoration, fall 1984. Architects: Lawson, Pulver, Knapp. Cincin-

nati Symphony Pavilion, Ohio: new construction, July 1984. Architect: Michael Graves. Elgin/Wintergarden theatres, Toronto, Canada: renovation/restoration, 1985. Architect: Mandel Sprachman.

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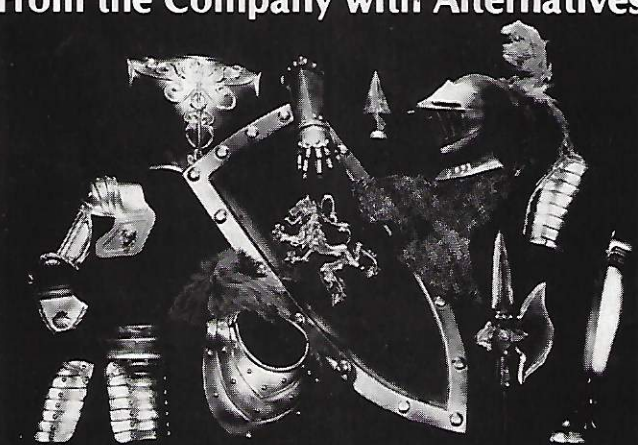
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als but also licensed engineers. "People who think that they can be theatre consultants by just giving advice and doing sketches can't service a project properly," Porcher emphasizes. "We're responsible for, first of all, seeing that the other consultants are qualified, and then following them every step of the way—through shop drawings, field inspections of installations, check out of final systems, and personnel training. We think you have to be responsible for the systems you design. We have to be sure that the people using the facility have the information they need to keep that very complicated operation that is a theatre functioning."

Nonetheless, occasionally a project comes along with a specification that no one at Jean Rosenthal Associates has dealt with before. When that happens, says Porcher, "We know where to find someone who has. At the Paper Mill Playhouse [Johansen & Bhavnani, architects. Project architect: Ashok Bhavnani], we were asked to design a built-in track floor with underfloor cables and winches. In most theatres, if you want a track floor you lay a complete and temporary deck with facilities for cables and rigging and all the things that make the onstage tricks work. And so we went to one of the companies that do the Broadway floors and said, 'How can we accommodate this in a permanent floor?' We retained Metro Studios' Bernie Weiss as our consultant for this project." Often, Jean Rosenthal Associates gets involved in a project—

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be it new construction, restoration, or renovation—through the architect. Porcher and Nordheimer recently were considering requests from eight different architectural firms; all were preparing proposals for the same project and wanted JRA to be part of their teams. (JRA elected to go with all eight, since only one would ultimately get the contract.) In other cases, JRA is asked to work on a project by the client, before the architect is chosen, and then helps the client select the architect. "It depends entirely on the way the client wants to do it," Porcher remarks. "Some architects don't want to have anyone who isn't under their control. We really don't care, as long as the architect will listen to us. We're there to serve the project. Who pays us doesn't matter." But, she adds, "We try, if we can, to get in before the architect—because then by the time the architect comes along, we've refined what the architect has to design."

(Where architects are concerned, Porcher continues, "You end up teaching school all the time, even when you're working with the bigger architectural firms that do a lot of theatres." The reason is turnover: Porcher says that although JRA may have worked with the same architectural firm on three or four projects, the project architect is nearly always different.)

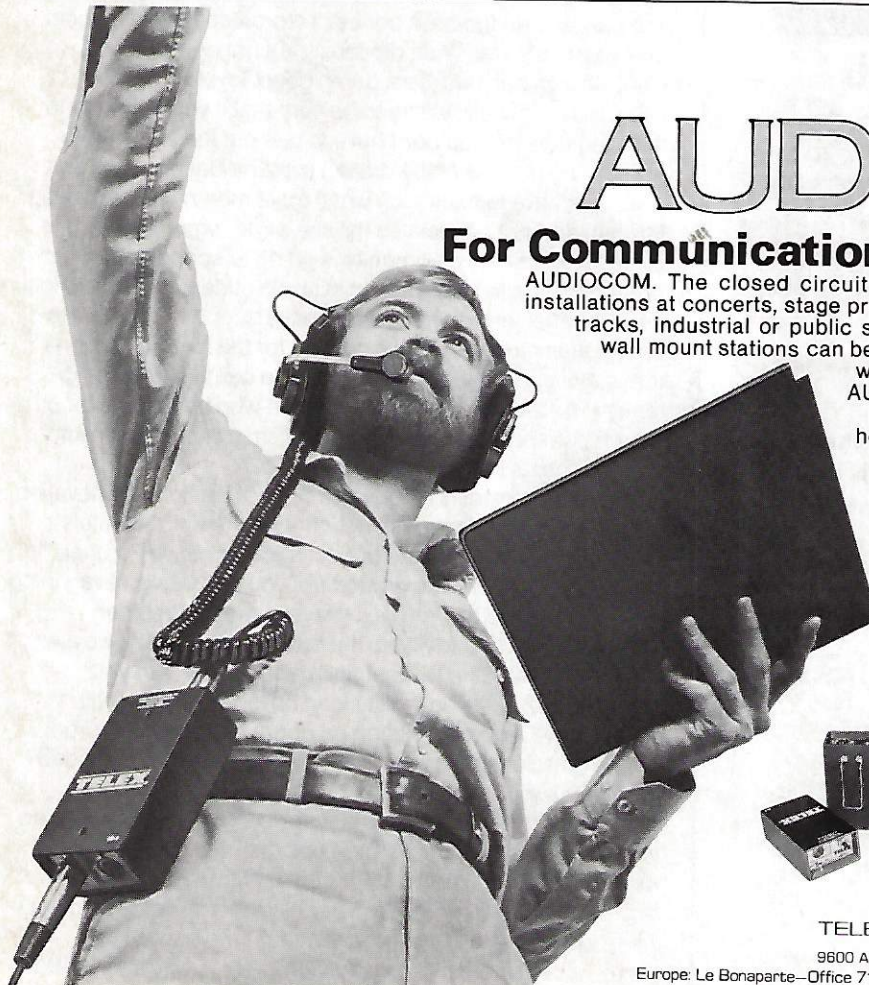
The student center at Duke University—which opened in March 1982 and contains an 800-seat drama theatre, a 200-seat experimental theatre, and a 525-seat film theatre—is an example of JRA's preferred approach to a project. Explains Porcher, "Duke doesn't have a theatre department, but it does have a large and varied group of clubs putting on shows. The university wanted to build a facility for these people but didn't have a clue what was needed. We came in with the campus planners right at the beginning. We devised a questionnaire for the administration and the students. We had three days of interviews. Then we were able to write a



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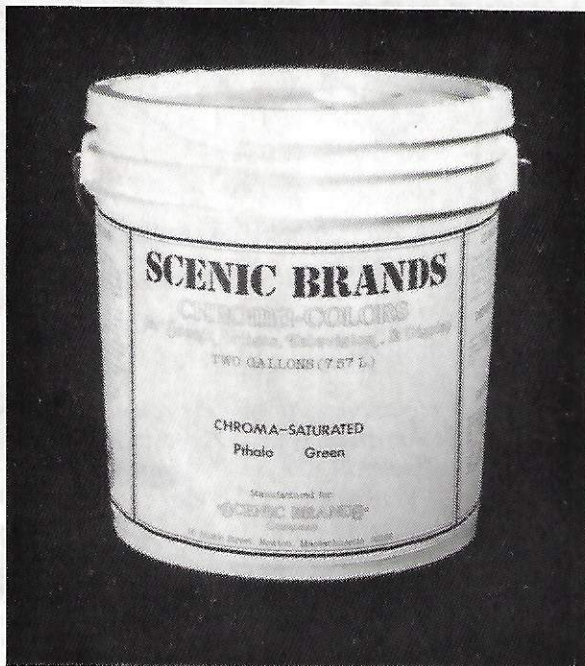
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program. By the time the architects [Hayes Howell & Associates. Project architect: Dick Mitchell] got involved, the people at the university knew what they were building."

Par for the best laid plans, those for the student center slightly went awry. It was, Porcher thinks, a classic instance of the consultant's dilemma. "I said, 'You really need two rehearsal halls, one for each theatre,'" she recounts, "'because when the techies are putting up the show, you still need a place for rehearsals.'" The university didn't think any rehearsal space was necessary—if one theatre was busy, the students could rehearse in the other. "As we built, we found a chunk of unused space in the basement. You think we could get them to finish it? Absolutely not. You think we could persuade them to put a knock-out in the wall? No. They just boxed it up. Six weeks after the center opened, I got a call from the university architect. The students didn't have any place to rehearse, he said, because both theatres were busy. Why was there no rehearsal space?"

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**"It's not going to be a Cadillac job, but it will be a damn good Toyota."**

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Porcher says she designs every theatre as if she were going to be on staff there for the first year. She wants "everything in it—to the limits that the budget can supply. We never try to load a job and we always work within the budget. But we try to get the best bang for the buck. If the client has \$500,000 to spend and the program is within the realm of possibility, we'll do it. If it's not, we'll say, 'You can't build this on that budget. Go back and raise some more money or don't do the project.' You can also do the bare bones of a project and leave room for expansion, yes. Then obviously, it's not going to be a Cadillac job, but it will be a damn good Toyota.

"If a job is phased, we try to be sure that if you build A and then you build B, you don't have to tear out the stuff in A to add C. The phases of the project must be designed so that you never have to backtrack when more money is forthcoming." Porcher and her associates try, she says, "very, very hard to evaluate where the community is going to spend its money. Are they going to keep paying in terms of dark nights and lost time because of extensive changeovers, or do they want to spend their money in the beginning for the mechanizations that make changeovers speedier? You can't solve all problems with mechanics, and I'm not one who believes in those ultra-mechanized stages. But certain mechanizations amortize their costs in a very short time."

Whether a project is a conversion, a restoration, a renovation, or a new construction does not change the fundamentals of JRA's approach—only the project's givens. Says Porcher, "If you're building from the ground up, you can design everything the way it should be. You don't have to modify. In other instances, you already have the building. But again, we always approach it from the budget and the program. Are you building a \$2.5 million facility for a college or for a small community? Are you building an opera house for New York City? What does the client want? What does the client need? What does the client not know is needed?"

And what do the clients think they need but really should do without? "At the University of Texas, they were absolutely certain that they needed a 60' proscenium in the concert hall in order to fit the orchestra onstage. We said, 'Let's go to the gym and set up the orchestra. Because we have to tell you—Covent Garden's proscenium is 46'. La Scala's is 50'.

The Paris Opera's is 51'. The Met's is 54'. So they set up a full symphony orchestra and it fit beautifully in 52'. And we got a 52' proscenium."

SLW

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**Founded:** 1958

**Staff:** Clyde Nordheimer, PE, electrical-mechanical engineer. Donald Swinney, theatre planning and seating and sightline planning. Mickey Kinsella, space planning. Candace Kling, architectural lighting. Charles Cheskin, PE, structural engineering.

**Fees:** Clients are billed hourly during program development. Upset (maximum) figure given for design development phase and client is billed on an hourly basis against the maximum.

**Licenses:** Nordheimer and Cheskin are licensed engineers.

**Insurance:** Nordheimer and Cheskin carry professional liability insurance.

**Major jobs completed in last five years:** Aaron Davis Center at City University of New York, New York City: new construction, 1980.

Architect: Abraham W. Geller. University of Texas-Austin Recital and Concert halls: new construction, 1980. Architects: Fisher & Spillman. Paper Mill Playhouse, Milburn, New Jersey: reconstruction, 1982.

Architects: Johansen & Bhavnani. The Carolina Theatre in the Roger Stevens Center at the University of North Carolina, Winston-Salem: restoration, 1983. Architects: Newman, Calloway, Johnson, Winfree. The Majestic Theatre, Dallas: restoration, 1983. Architects: Oglesby Group.

**Current projects:** George Street Playhouse, New Brunswick, New Jersey: adaptive use, fall 1983. Architects: Gatarz-Venesia. The Strand Theatre, Shreveport, Louisiana: restoration, fall 1984. Architects: Haas + Massey. Wortham Center's opera house and theatre, Houston: new construction, fall 1985. Architects: Morris \* Aubrey. Alley Theatre, Houston: new construction, no opening date announced. Architects: Morris \* Aubrey.

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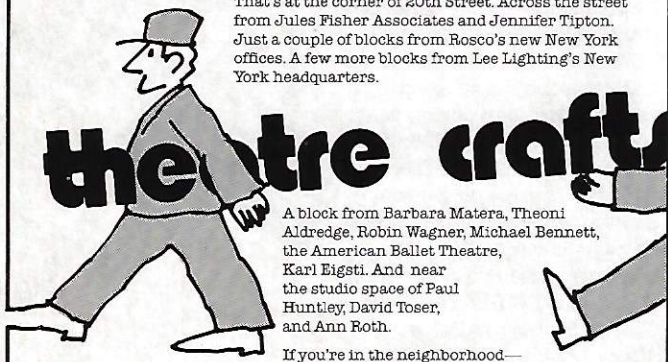
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