



INTRODUCTION

In the mid 1960's During L.M. Holder III's tenure at the University of Texas school of Architecture, he made a career decision to **create architecture in harmony with the specific climate of the site.** Upon graduation, he went to work for Thomas Leach and Associates, a design oriented firm with a tendency to design and detail buildings in the Frank Lloyd Wright style. Emphasis was placed on architectural details and site considerations with little importance placed on the climatic aspect of the design process. During his five year tenure, Mr. Leach allowed Holder to integrate climatic sensitivity into office design. Meanwhile, working at home, Holder designed systems to perform well in a hot humid climate, see that they were integrated properly into building, and to analyze the performance of those systems. Such systems included solar orientation for cooling and heating, shading devices, daylighting, natural ventilation, ventilation induced by the form

of the structure, night flushing, double ventilated roof systems, and performances of physical characteristics of material. Many of the systems developed were derived from the study of indigenous architecture of the region. Strategies were studied to determine their essential elements, then current technology was integrated into the system to improve its performance whenever possible.

When the energy crisis became a reality in 1973, a sincere interest in energy efficient building developed. Many people thought a heavily insulated box with a low ceiling and no windows would be the most efficient structure. Research indicated a very different solution, especially in cooling climates. Holder advocated the **design of climate responsive spaces which could be made energy efficient and at the same time, create better living environments.**

ADVOCATE FOR AN ENLIGHTENED APPROACH TO ENERGY CODES

In speaking out for a more regional solution and performance based guidelines, Holder became a spokesman for alternative solutions. In the mid 1970's, Holder was selected to serve on, and eventually, was elected chairman of the City of Austin's Energy Conservation Commission. During this service, his influence was instrumental in the development and passage by the council of some of the nation's first performance standards for equipment efficiency and minimum standards for building construction.

About the same time it became apparent to Holder that if someone or some group didn't speak up, we would be strapped with prescriptive codes hampering design and delaying innovation. About this time Holder was appointed to the State Committee for Energy Codes for Texas State

Building. He was to serve as the representative of the Texas Society of Architect and successfully lobbied *against* ASHRAE 90-75 and *for* performance guidelines for both the building shell and the mechanical systems.

His work on the development of energy codes led to being selected as speaker for several conferences including the following:

Energy Codes: **Building Codes Official Conference**
Environmental Protection Agency. Dallas, 1976

Energy Codes: **Energy Seminar-University of Houston,**
Houston, 1977

Energy Codes: **Architects and Engineers Conference**, Dallas, 1977.

In 1984, both Holder and Mike Hart, P.E. were appointed to the Austin Building Code Revision task force. The purpose of the task force was to reduce the allowable energy consumption in new commercial construction. They were able to get a code adopted based on ASHRAE SP-41 which included performance criteria on individual building systems with ample allowance for tradeoffs between systems. It included maximum power densities on lighting and alternate compliance by computer simulation. The new code has reduced the allowed building energy consumption by 20-25% with minimal restriction on building design. The code was presented in a paper at the 1985 Symposium for improving building energy efficiency.

Austin’s Adoption of ASHRAE SP-41 into the local energy codes “Improving Building Energy Efficiency in Hot and Humid Climates” M.N. Hart, P.E. and L.M. Holder III, AIA, Texas A&M University, College Stations, Texas

During the mid 1980’s Holder was asked to serve on a committee with the specific purpose of developing national energy standards for residential construction. The committee included architects, engineers, developers, builders, and other allied professions. For over two years Holder traveled to Washington, DC, in order to aid in the development of standards upon which the codes would be based. Holder insisted that the proposed codes for implementation be performance based and supported the premise that the use of a microcomputer based process would be beneficial. Due to Holder’s influence, the final version of the code included a performance based microcomputer program for compliance. The committee was sponsored by the Department of Energy and the board of participants worked under the following title:

ASHRAE SP-53 Technical Committee
To produce a National Residential Energy Standard



About the same time, Holder was appointed to the Energy Task Group of Austin Plan, a comprehensive plan for Austin’s future. He was instrumental in including renewable energy in the fuel mix for future energy needs. Several large photovoltaic power plants and other

renewable project have been built since the plan’s implementation.

Austin Plan
A Comprehensive Plan for Austin – Energy Task Group 1986.

Throughout his career, L.M. Holder III made a special effort to design houses for clients in all economic levels. Most of

the selected homes designed and built for economically challenged clients were limited to those Holder felt would operate the houses as they were designed. In 1986, Holder decided to use the techniques he developed for a wider range of clients. He entered and won an affordable housing competition sponsored by the City of Austin

Affordable Housing Competition Winner 1986
City of Austin Housing and Community Service Department

First place design winner for the construction of four prototype residences. The intention of this competition was to produce low cost, energy efficient housing. During this period, Habitat for Humanity was starting in central Texas with another architect designing the homes. Holder offered assistance in the production part of the architectural service and became active in general planning sessions for Habitat for Humanity. He was able to integrate many of the concepts used in the Affordable Housing Competition into the design process. In late 1989, C.J. Burleson, who lived in Kerrville, Texas in a custom designed house by Holder, called and asked him to design the first Habitat for Humanity House in Kerrville. Holder agreed and construction started in January of 1990. Holder has designed 10 new Habitat Houses for Kerrville. Holder was able to integrate many of the houses and developed techniques to build a home of quality construction using less skilled labor. He worked with the Kerrville Habitat for Humanity leadership to integrate these techniques as well as their ideas into the houses. The resulting construction produced some of the most cost efficient housing in the southwest region according to Bob Haynes, the current director of the Kerrville Habitat for Humanity. The houses were designed and built to operate in harmony with the climate of Kerrville.

In the early 1990’s, Holder was asked to serve on the renewable energy committee for the STEPP program. The STEPP report planned future energy needs including solutions for the next 20 years in Texas. Renewable energy has received favorable consideration and is included in the energy mix for the future needs of the state. One of the largest wind farms outside of California is constructed in Texas as well as many other renewable energy projects since the STEPP Report was published.

State of Texas Energy Policy Partnership – STEPP
Renewable Energy Committee 1993



As part of the implementation of the STEPP Report, roundtable discussion conferences were convened on energy related subjects throughout the state. Mr Holder was asked to attend and participate in two of these conferences. The

information gathered will be used to further renewable and sustainable technologies in the state on a continuing basis.

Renewable Energy Electric Technology Assessment Round Table State of Texas Sustainable Energy Development Council, Houston, Texas 1995.

Sustainable Cities Roundtable State of Texas Sustainable Energy Development Council Austin, Texas 1995

As the scope of Holder involvement in energy efficient living increased, he found the area of transportation in need of addressing. It became apparent that the bicycle was a very sensible mode of transportation both now, and in the future. Most local transportation involves operating a motor vehicle. Public transportation's impact can be enhanced by the integration of bicycles into the origin and destination distance. For the bicycle to be a significant factor, proper integration of the bicycle into the transportation network must be accomplished. To this end Holder became involved in the planning process of roadway systems. He has taken an active role in local and statewide projects.

Holder has participated in the development of the Austin Metropolitan Trails Council to design a comprehensive network of trails and roadway access for the greater Austin Area. He has been commissioned by the Central Texas Council of Governments to provide the bicycle master plan for the Texas cities of Temple, Belton, Killeen, Copperas Cove, and Harker Heights.

During the past 25 years, Holder has been a strong advocate and often one of the authors of minimal but meaningful code revisions to promote performance based energy standards. He has encouraged and pioneered the use of renewable and sustainable energy sources. His successfully constructed examples have contributed to the confidence that these energy sources are viable alternatives. He has advanced the science and art of planning and building by advancing the standard of architectural practice in the area of energy efficiency, along with renewable and sustainable energy utilization.

CHANGING THE STANDARD OF ARCHITECTURAL PRACTICE

In the year 1976, Holder formed his own firm, L.M. Holder III, AIA. Since his original work predated the energy crisis, he had been **integrating energy system into his forms created for architectural expression**. Many of his contemporaries tried to flaunt the energy efficient system, thereby creating dated architecture. The projects Holder produced broadened his field of professional acceptance and likewise the scope of lectures presented. In 1976, Holder enrolled in a short course through the Engineering Department at the University of Texas on active solar technology. The following year, he was asked to join the teaching staff to expand the scope of the class.

Holder's part of the course was titled as follows:

Architectural Adaptation of Solar and Passive Energy Systems Energy Conservation and Solar Seminar. University of Texas. Austin, 1977,1978,1980.

Holder continued to integrate climate response techniques



with current technology into his architectural projects. The projects were successful and Holder presented numerous Professional Development Programs, conferences,

and served as a guest lecturer at Universities.

These organization are as follows:

Energy Codes and Passive Energy Systems Professional Development Programs. Texas Society of Architects, Houston Chapter. Houston, 1977.

Passive Energy System. Texas Society of Architects Convention. El Paso, 1977.



Architectural Adaptation of Solar and Passive Energy Systems Texas Society of Architects, Austin Chapter, University of Texas. Austin, 1978.

Architectural Adaptation of Solar and Passive Energy Systems Texas A&M University Guest Lecturer. Texas A&M University School of Architecture. College Station, 1979,1981.

During the late 1970's, passive solar technology, in combination with energy conservation techniques, was becoming well understood. Performance of the existing applications in local climates was reality. Due to the level of understanding and demonstration performance of the technology, people were beginning to recognize a potential for this type of technology to make significant reduction in energy consumption patterns of the nation. It was evident that climate adapted designs, or what was being labeled passive solar designs, had greater potential for energy conservation than creating "the insulated box."

In order to gain public awareness and support for the new techniques of energy conservation, the state of Texas sponsored a series of seminars to be given. Holder was selected and served as editor, in addition to being one of the authors of the Passive Design Workbook for the seminars. Following publication of the workbook, he was to present eight workshops at various location in Texas. The series was extremely well received and very successful, with additional workshops presented at most of the sites for a total of fourteen workshops throughout the state. The State of Texas eventually funded a solar conference and a follow-up seminar. The organizing staff and presenters at the workshops, conferences, and seminars formed the foundation for the Texas Solar Energy Society (TXSES). The staff continued to provide energy and solar related energy projects, many of which were funded in part or in whole by the State Government. Funding paid the staff and other costs for TXSES. Holder has served on the board of directors for sixteen of the last twenty years since the formation of the society. Roy Holder is currently serving on the board TXSES, which has been and continues to be an active organization in renewable energy and solar promotion and education. Presentations given by Mac Holder during the formative years of the society included the following:

Passive Energy System Texas Solar Realities, 1979, Sponsored by the Texas Energy and Natural Resources Commission. (TENRAC). Fourteen (14) lectures throughout the State of Texas, including Austin, Houston, Dallas, Lubbock, El Paso, Corpus Christi, Brownsville, and San Antonio.

Case Study- Passive Solar Office Buildings. Texas Solar Realities 1979 Statewide Conference.

Passive Energy Systems Wichita Falls, 1979.

The manual produced for the seminars:

Solar Realities '79-Passive Solar Workbook sponsored by: State of Texas Governor's Office of Energy Resources and the Texas Solar Energy Society. Responsibility: Passive workbook coordinator and commercial consultant. Author of section on Design Principles. Additional seminars were



presented to students, professionals, and other interested audiences. These presentations explained the principles of climate specific design appropriate for the regions. Such seminars include the following:

Architectural Adaptation of Solar and Passive Energy System Texas A.& M. University, 1980

Architectural Adaptation of Solar and Passive Energy System Louisiana Society of Convention, 1981

Architectural Adaptation of Solar and Passive Energy System Austin Homes Show. Austin 1981, 1982, 1984, 1985, 1986.

Energy Efficient Income Property Texas Solar Realities 1981 statewide Conference. In 1981, Holder was selected to be part of the American Institute of Architects' "Energy on Architecture" instructor team. Not only was it a great honor,



but the lectures were given in teams of two which enabled Holder to be paired with a variety of other instructors from around the nation.

Instructors shared information with each other and learned as much, if not more, than the attendees. Over 50 instructors were selected to begin the programs each being evaluated by attendees of the seminar. Following several years of presentations, Holder was among the few (less than 20) presenters who remained as a speaker. Additionally, he was one of the only instructors who would give any one of the three level, two day seminars alone when there were insufficient attendees to justify two instructors.

Early in the existence of the seminars, one of the first presentations in California given by two other instructors went poorly. Subsequently, California architects decide to develop their own program. The AIA headquarters requested another change at the statewide convention in Huntington Beach. Harrison Fraker and L.M. Holder III were sent to give the presentation. At the conclusion of the seminar, California architects decided to support the Energy in Architecture Seminars scheduled in California. In 1983, the team of Fraker and Holder was given a **Certificate of Appreciation** for presentation in Sacramento by the participating architects.

The program included several methods of hand or graphical calculation of a building's energy consumption. As part of the presentation for the program, Holder transferred Huber Beuhrer's hand calculation produce to a spreadsheet computer calculation. Holder brought a computer to the presentation and allowed the attendees to explore the effects of multiple options in the calculation process. In the early 1980's, this was quite unique and made a significant impact in the participants. When the AIA decided to extend the program to include microcomputer based energy analysis, Holder was selected to assist in the development of the program. His spreadsheet calculation process was included as one of the programs in the work book and presented at the microcomputer based energy analysis seminars. The seminars include the following:

Energy in Architecture Instructor for a series of workshops sponsored by the American Institute of Architects. Phoenix, Denver, Knoxville, Atlanta, Tampa, Dallas; (2) Los Angeles, Newport Beach, Orange County; (3) Sacramento, Cheyenne, San Diego, Tallahassee. 1981-1985.

Microcomputer Based Energy Analysis American Institute of Architects. Participating in program development, Holder wrote one of the four computer programs used in the seminar; served as instructor at Washington, D.C, Richland, San Diego, Dallas, Sacramento 1984-1985



L.M. Holder III, AIA continued to develop analysis tools to include more provisions and express additional factors to determine human comfort beyond temperature and relative humidity. He extended this practice to include commercial buildings. In

1978, Holder designed and built an office building using day lighting, natural ventilation, night flushing, high efficiency zoned air conditioning units, active solar space heating, and one watt per square foot artificial lighting. At a time when professionals were questioning if buildings could be designed and built to operate at 55,000 BTU/s.f./yr., the building operated at 35,000 BTU/s.f./yr. During a Department of Energy conference in Denver in 1982, Holder's commercial building was one of the three most efficient buildings presented and was the only one built in a climate where humidity and cooling are major considerations.

Holder incorporated the design parameters for climate compatible building into charts and other methods of instruction to guarantee comprehension by a wider variety of professionals. Development of a series of seminars and a workbook encompassed these efforts. These presentations and seminars include the following:

Spicewood Office Park: A Case Study In Passive Solar Office Design

Department on Energy Seminar for Designing and Managing Energy Conscious Commercial Building Workshop. Denver, 1982. **Energy Efficiency and Teamwork** Seminars for architects, engineers and building owners. Sponsored by the State of Texas; 1983-1984

Design Tools for Evaluating Alternative Strategies' Impact on Human Comfort

L. M. Holder III, AIA and M. N. Hart PE Conference on Improving Building Energy Efficiency in Hot Humid and Climates Texas A&M University College Station, Texas 1985.

Energy Analysis Using Microcomputers American Institute of Architects National Convention, San Antonio, Texas 1986

The manual produced for one of the seminars:

Energy Efficiency and Teamwork Design of commercial Building (A seminar workbook)



Sponsored by Energy Efficiency Division of the Public Utility Commission-State of Texas. Developed by: L.M. Holder III and Michael N. Hart,

PE, 1984

In the mid 1980's, L.M. Holder III, AIA continued practicing energy consulting and architecture while attempting to computerize his facilities. He experienced problems other offices and institutions were facing in file management and speed of document production. He was incorporating techniques into the architectural practice which are commonplace today, but at the time were quite innovative. It was in the process of working through the problems that produced a series of lectures on computer connection. Such lectures include the following:

Getting To 1:1 With Micro Based Cad/D and File Management for Micro Cad/D American Institute of Architects National Convention, San Antonio, Texas 1986.

Advisory Task Force For integrating computers into the curriculum for the College of Architecture and Environmental Design, Texas A&M University, 1986.

L.M. Holder III, AIA contracted with the State of Texas in the mid 1980's to provide energy consulting services to school districts and their architects. **The project continued for ten years, for many of those years, consulting services were provided on over 200,000 s.f. of schools per month.** During this period Holder declined to provide any kind of architectural services to school districts in order to avoid any potential conflict of interest. Since fees were paid by the



State of Texas, consulting services were provided without charge to architects, engineers, and school districts. Holder provided "state of the art" recommendations, on lighting design and technical specification for implementation. Savings were quantified using

computer simulations for energy consumption, lighting, day lighting, many other strategies particular to individual projects. He was able to show the architects, engineers, and school districts strategies that would have the most significant savings. One of the projects won an award for energy excellence. Consulting service provided included

analysis, daylighting analysis, lighting analysis, natural ventilation simulation, and controls and operation recommendation.

Bowie High School Austin, Texas Society of Architects 1989 Award for Energy Excellence BLGY, Architects for the Projects and L.M. Holder III AIA, Energy Consultant.



Information recommended in the early years of the program became common practice in later years. Holder developed lighting level guidelines for schools in the mid 1980's which were significantly less than the current IES Guidelines for that time, but closely paralleled the current, recently released, IES Guidelines. By providing technical specifications on new technology and equipment, Holder was able to give confidence to school officials, architects, and engineers to increase the acceptance and saturation of new ideas into the marketplace. Ideas incorporated included energy computer simulations, building operation, glazing systems, glazing coating, day lighting, controls, night flushing, natural ventilation, insulation location and type, lighting, optimum location of light fixtures, fixture bulbs, and ballast types. Holder was constantly challenged to recommend systems and strategies to save 20-40% of energy to be consumed by the schools as the schools were becoming more efficient in the later years of the program than those analyzed in the earlier years.. Due to high level of satisfaction the state had in the energy consulting services of L.M. Holder III, he was asked to provide additional recommendations for many other types of state owned buildings. Seminars conducted during this period include the following:

Guidelines for Energy Conscious School Design in Texas

Provided for the Energy Resource Center for Texas schools to encourage the design of energy efficient schools in the state of Texas. Guidelines were produced to include lighting standards which closely paralleled current Illuminating Engineering Society lighting standards and energy guidelines checklist for all disciplines. 1986.

Energy Efficient Renovations and Additions Texas Association of School Business Officials Conference Galveston 1988.

Energy Efficient School Design in Texas School Workshop series presented in various cities throughout Texas; including Houston, San Antonio, Lubbock, and El Paso. 1992.

Manual produced for the Schools Energy seminar;
Guidelines for Energy Efficiency in Texas Schools
Written by L.M. Holder III, AIA, Tom McKittrick, FAIA, James McClure, PE, and Larry Degelman, PE.

Holder began to expand the presentation of his concepts to the national solar arena in the late 1980's. Much of what was written and presented did not address the problems associated with the hot humid climates, and his were accepted for presentation at various conferences. Presentations in the **Emerging Architecture Section** of these conferences are presentations given at night and are the feature presentations of the conferences. Presentations made at the conferences. They include the following:

Two Passive Homes In Hot Humid Climates American Solar Energy Society - 12th Annual Passive Solar Conference, Portland Oregon, 1987.



Daylit- Naturally Ventilated- Passive Solar Office Building in a Hot Humid Climate
International Solar Energy Society, SOLAR 89, Denver Colorado.

Daylit-Naturally Ventilated-Passive Solar Office Building In A Humid Climate
International Solar Energy Society, SOLAR 89, Denver Colorado.

Twenty Years of Passive Solar in a Hot Humid Climate
Presentation at the **Emerging Architecture Section** of International Solar Energy Society, SOLAR 89, Denver, Colorado.

Goals Strategies, and Results for A Passive Solar, Daylit , Naturally Ventilated High School In a Hot Humid Climate International Solar Energy Society, SOLAR 89, Denver, Colorado.

Workshop-Passive Solar Building Design American Solar Energy Society, SOLAR 90, Austin Texas.



Twenty Years of Passive Solar in Hot Humid Climate
Requested to represent at the **Emerging Architecture Section** of American Solar Energy Society, SOLAR 90,

Austin, Texas.

A Passive Solar House in A Hot Humid Designed to Be Cooler Both Winter And Summer 1991 Solar World Conference, Denver, Colorado.

During the late 1980's and early 1990's, Holder shifted the focus of his research to achieving human comfort in spaces without walls, and in projects which use minimal energy, or produce more energy than they use. The Wind Generator Repair Facility is a North Texas State University building partially funded by the State and US Department of Energy Grants. It was substantially built by University personnel and student labor. Strategies employed include optimum orientation, active and passive heating, low E clear glass, daylighting, natural ventilation, night flushing, radiant barrier, 2 kW Photovoltaic Array and 5 kW wind generator. **The project generates 1.5 times the energy it uses.** Excess power charges the batteries of an electric van or is fed back into the utility grid.



Presentation about this building included the following:

Passive and Active Solar Wind Generator Repair Facility in Canyon, Texas North Texas Association of Energy Engineers, 1991, Dallas, Texas

Operation Results of a Passive and Active Solar Wind Generator Texas American Solar Energy Society, SOLAR 92, Cocoa Beach, Florida. In 1994 the facility won a national energy award.

Tomorrow's Energy Today United States Department of Energy National Energy Award for Technology and Education



Research and interest in the area of "spaces without walls" allowed Holder to design and construct assembly and circulation areas, in schools and churches, as well as recreation, entertainment, and areas, and living area

extensions in a residential constructions. Daylighting, natural ventilation, and radiant heat are among the techniques used.

Spaces Without Walls In A Hot Humid Climate American Solar Energy Society, SOLAR 92, Cocoa Beach, Florida.

In 1994 Holder teamed up with the Lower Colorado River Authority, Kerrville Public Utility Board, and John Hoffner, PV consultant, to design and install a photovoltaic lighting system. The park is located at the center of town in a 25' flood plain. Although it is heavily used during daylight hours, occasional flooding has prevented the installation of lighting for evening usage. The PV lights are placed on the array and situated in the trees that line the river. An area greater than four acres is illuminated each evening.



Photovoltaic Lighting Systems for Louise Hays Park by L.M. Holder III & L.M. Holder IV. American Solar Energy Society, Inc., SOLAR 94, San Jose, California.

Gem of the Hills is a 5,400 square foot passive solar senior citizen recreation center built by the members of the organization. Almost all the labor has been provided by men and women over 60 years of age. Since its completion, it has been used on a regular basis as a community center for the entire area. The building employs passive heating, daylighting, natural ventilation, night flushing, low E operable windows, radiant barrier, solar water heating, and many other systems that **allow the building to be occupied almost the entire year without artificial lights or operating mechanical systems.** Much of the power consumed is used by the commercial kitchen refrigerators. The building has operated at 8 to 12,000 BTU/s.f./yr.

Gem of the Hills Senior Citizens Community/Recreations Center Presented at the Emerging Architectures Section of American Solar Energy Society, Solar 94, San Jose, California.

Gem Of The Hills Senior Citizens Community/Recreation Center Texas Solar Energy Society/Texas Renewable Energy Industries Association; Texas Renewables '94, Austin, Texas.



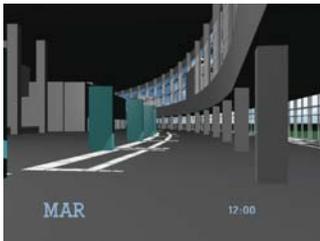
In 1994 L.M. Holder was selected to become an instructor for the Passive Solar Industries Council's Solar Energy Research Institute's Passive Solar Design Strategies: Guidelines for Home Builders. The seminars are presented by a team of two instructors and given throughout the country to home builders, architects, engineers, utility

personnel, and interested individuals. The presentation focused on effective passive solar design strategies and calculation procedures appropriate for the specific climate of each region of the workshop.

Passive Solar Design Strategies: Guidelines for Home Builders. Passive Solar Industries Council, workshop presented in El Paso, Austin, and Dallas.

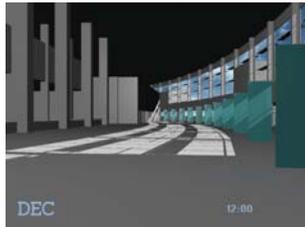
Holder was also one of the instructors for the Renewable Living Workshop for a statewide convention in Texas.

Workshop-Renewable Living Texas Solar Energy Society/ Texas Renewable Energy Industries Association; Texas Renewable '94, Austin, Texas.



While providing daylight consulting services for the new Austin Airport project, L.M. Holder III was having difficulty portraying the full impact of the shading device arrangement by the design architects. Holder's staff produced an animated video

of the interior showing the concessions area one day of each month of the year for both the designed and the recommended configuration. The use of animation allowed all parties involved to *visually understand* the recommendation made by L.M. Holder III. Following the viewing, Holder's recommended shading devices were integrated into the design. The video was presented along with a paper at the American Solar Energy Society conference as follows:



Energy, Shading, and Daylighting for The New Austin Airport Terminal

by L.M. Holder III & L.M. Holder IV American Solar Energy Society, SOLAR 95, Minneapolis, Minnesota

From 1996 thru 1998 several presentations were made regarding Bridgepoint Office Complex in Austin, Texas.



Bridgepoint is a 450,000 sf, 5 Office Building Complex. In addition to having many energy features, it was named the "most successful office complex in Austin in a decade" by the Austin Business Journal in 1997.

Integrating Daylighting Into a 3,000 Seat Church Auditorium and Network Quality Television Production

This project was designed by the Overland Partners



Architectural Firm for Riverbend Church. A 175' wide by 60' tall arched window was installed on the north face to allow the audience to see the panoramic views of the tree covered hills on the other side of the valley in the Texas Hill

Country. LM Holder III predicted the potential problems and minimized their adverse effects. ASES Conference, Portland, Oregon, 1999

CONCLUSION

L.M. Holder III has researched on energy efficient systems, integrated those systems into his architecture, and shared the results with professionals and non-professionals alike. He has produced buildings which operate at levels considered unattainable in years past. He has presented more than 80 seminars and lectures (mostly for national organizations) to share the information that makes the buildings work. Holder has provided energy consulting services on hundreds of private sector as well as institutional buildings for state and local governments. He has advanced the science and art of planning and building while advancing the standard of architectural education and training by researching, implementing, and presenting

information on energy efficiency, as well as renewable and sustainable energy sources.

On May 11, 1996 L. M. Holder III was made a Fellow of the American Institute of Architects for his "pioneering work in energy conscious design and his efforts to advance the profession's ability to create environmentally compatible architecture."