In this Issue:

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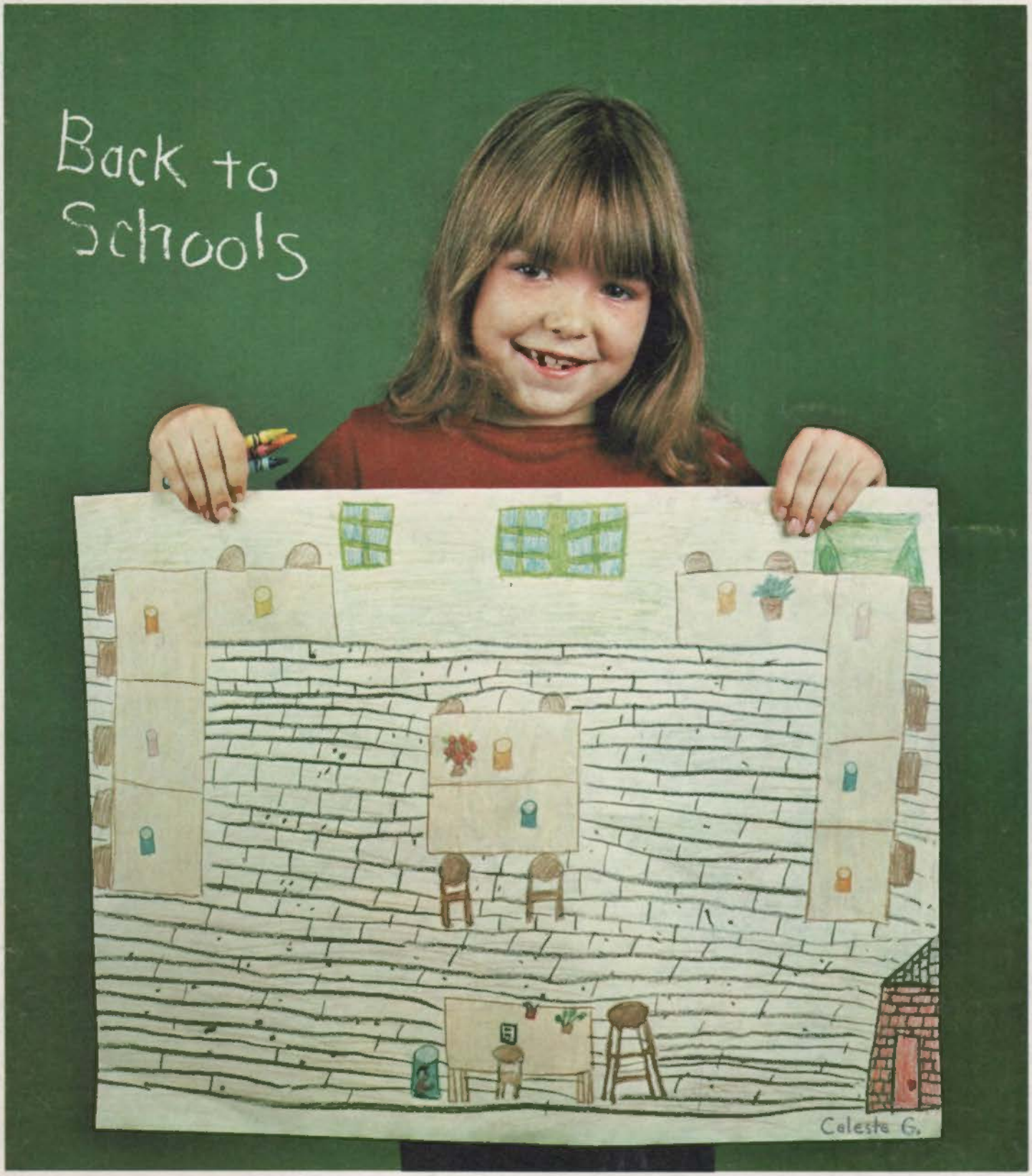

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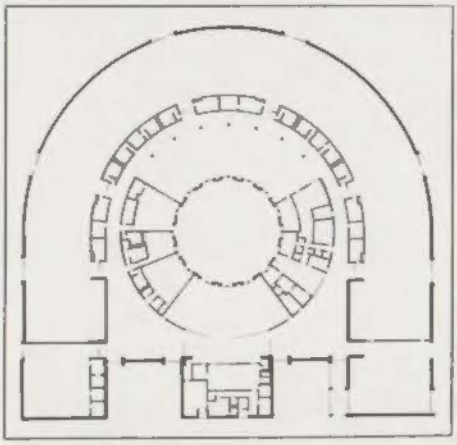

On the Cover: *Second-grader Celeste Guthrie displays her crayon-rendered "space plan" for her classroom at Mathews Elementary School in Austin. (See "Architects in Schools," page 18.) Photography by Rick Patrick.*

Coming Up: *To coincide with TSA's annual meeting Nov. 1-3 in San Antonio, the November/December issue of* Texas Architect *will examine the unique blend of regional, cultural and architectural ingredients which seems to make San Antonio so special.*

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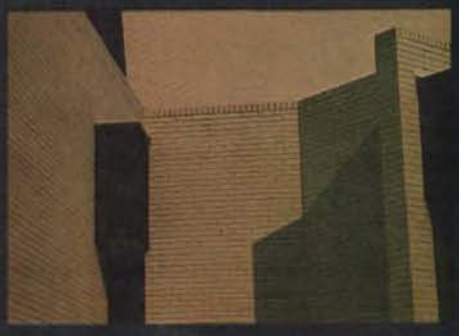

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About this Issue

Look, look. See the school.

In this issue, we look at schools. We look at trends. We look at concerns. We look at very good schools.

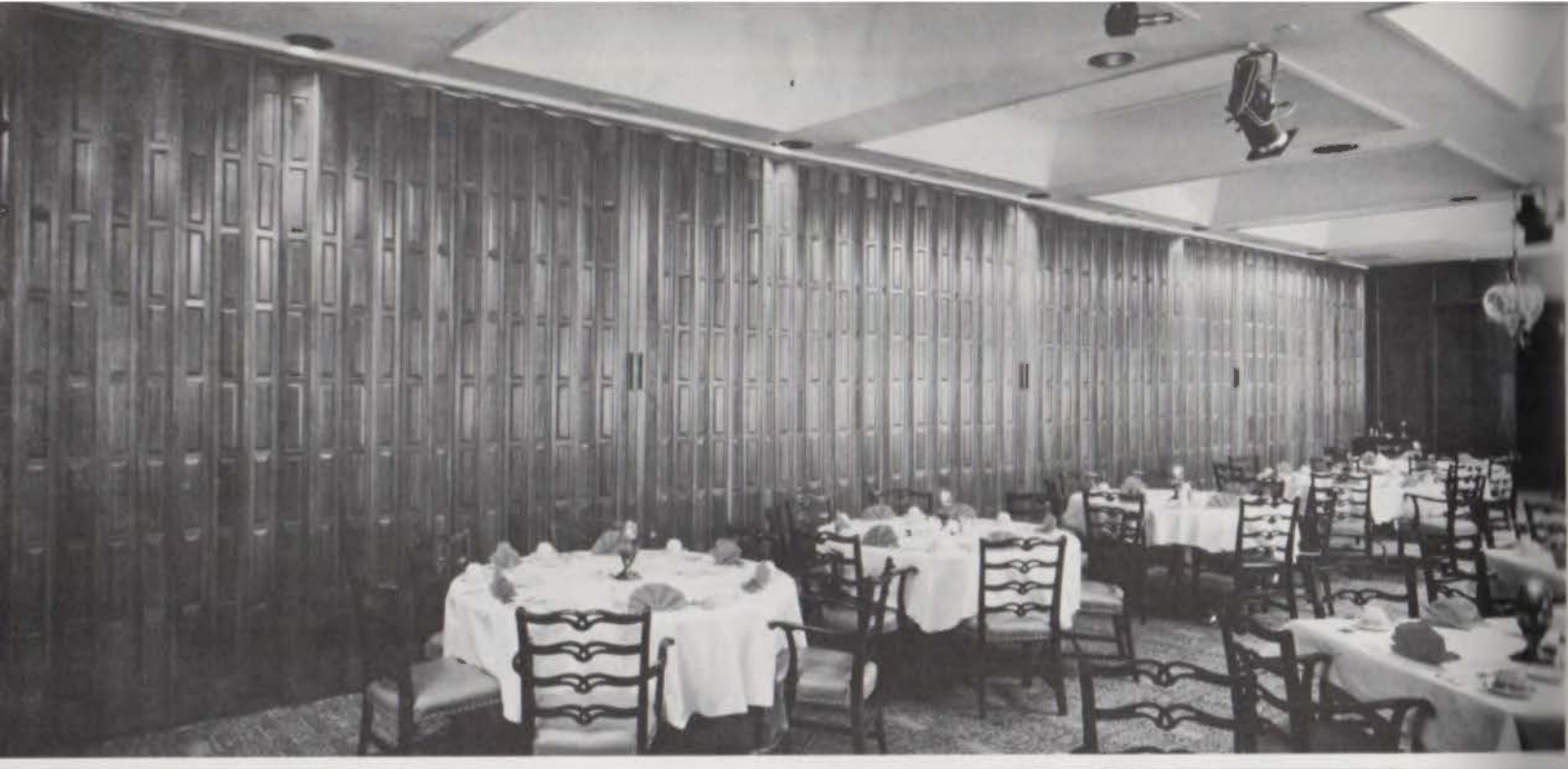
And in going back to schools, we find there still is much to learn. How, for example, can we make learning environments richer as our coffers for education are made poorer through incessant inflation and an intensifying tax revolt? We long have overcome the urge to erect lavishly ornamental neo-classical monuments as halls of learning. But how "basic" can we get, how many design corners can we cut, before the finished product becomes a shabby offering to the cause of education?

How can we succeed at developing alternative energy systems in the face of flagging federal commitment and the pay-back imperative? (Read about architect Jack Corgan's experience with solar for schools, beginning on page 23.)

And how can we design schools to facilitate the needs of education when education itself is in such a state of turmoil and flux?—not the turmoil of shootings and busing and strikes, necessarily, but the more basic confusion spawned by vacillation in teaching concepts and educational theory. The not-quite-all-out commitment to team teaching and the open plan, for instance, has produced all too many examples in Texas of "contained" classrooms formed by tacky partitions defiantly propped up in open areas, as well as inefficient circulation patterns deriving from changes in the program—in short, schools that don't quite work. (See Michael McCullar's "Whatever Happened to the Open Plan?" beginning on page 15.)

In facing these challenges, there *is* some progress being made. Innovative use of materials and refinement of "found space" are two approaches to cutting costs without sacrificing quality. The energy problem is being lessened, if not through radical alternative systems, at least through a new emphasis upon energy-saving design forms and sensible siting. And the problem of how to plan for changing educational trends is being addressed with a measure of success through the concept of flexible space—space which can be modified with minimal difficulty to accommodate change in learning programs.

In making evaluations such as these about the status of school design, we always have been quick to point out that learning *per se* cannot be produced directly through design; the role of architecture in education, we have said, is merely to serve as a felicitous environment in which the spirit of learning can thrive. But what we are prone to overlook in issuing such disclaimers is that daily exposure to a good building is a lesson in itself. It is a lesson for the child of the ghetto. It is a lesson, as well, for the child whose aesthetic notions have been fashioned by the neon strips and the paste-on fronts of suburbia. The lesson is that good design *does* make a difference. And if ever we are to have a preponderance of beautiful, livable buildings, it is a crucial lesson indeed.—LPF



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That Precious Tomato

At the risk of getting scratched from *Texas Architect*, I will devalue the schoolhouse.

It's not as important as we architects make it out to be. It won't teach. Won't reform youths. Won't take the place of a good principal. Nor will it eliminate tooth decay, as one Texas state official claimed. But it's not all that bad either—if put in its proper place.

Remember the '50s and '60s? Those were the days when the patter of little feet was louder than Merrill Lynch's thundering herd. Just before the school building boom, the internationally famous architect Richard Neutra visited Texas A&M where I was an instructor. In a moment of inspiration I asked the Great Man (he was) how he would go about designing a school. Mr. Neutra unhesitatingly replied, "I would design it just as I would a tomato cannery." Absurd! He continued, "My approach to designing a tomato cannery is first to passionately study the precious tomato—how it is grown, picked, brought in from the fields, cleaned, cooked, canned, packaged, and shipped. Most certainly I would want to study the process of preserving and reinforcing its God-given qualities and nature's endowment." Mr. Neutra then added, "The same would hold true in the design of a school. First I would study the tender, living, growing young humans—the most sensitive, precious goods on the planet. Then I would become intimately acquainted with the educative process to make sure we are readying and preparing them for shipment into our communities of tomorrow."

That hit home. And hard. My obsession with self-contained classrooms, cross ventilation, team teaching, integrated subject matter, curriculum, building systems, age-level classroom grouping, schools within a school, sun controls, pods, and open plans seemed incidental. They were. They still are.

These concepts—like fashion in men's shirts and ties, like ribbon windows and punched hole windows—come and go. But Mr. Neutra's tomato notion has never lost its truth—the student is the real client and is more important than educational or architectural concepts.

There is a hierarchy of values relating to education. Mr. Neutra clearly understood this hierarchy as it relates to the schoolhouse.

1. The *student* always comes first. Better to have a good student than a good teacher. The student will make it, even with a mediocre teacher.

2. The good *teacher* comes next. How nice to have a good student with a good teacher working together—with the right chemistry, the good teacher can stretch the good student to become an excellent student. Better a good teacher than a clever curriculum.

3. Next comes the *curriculum*. A good student with a good teacher in a unique program can optimize the development of that student—even in a barn, if it doesn't get in the way of learning.

4. Finally, we come to the *schoolhouse* in the hierarchy of values. Fourth place. Low? No. The schoolhouse is very, very important to the student. It is the generic place of learning. The largest, most expensive educational tool. Often more "home" than real home. The physical learning environment. The schoolhouse, as a functional and beautiful space, can promote education efficiency, inspire, and serve the student in the pursuit of knowledge, skills and wisdom.

This would be ideal—a good student with a fine teacher involved in a unique curriculum housed in a superbly designed school.

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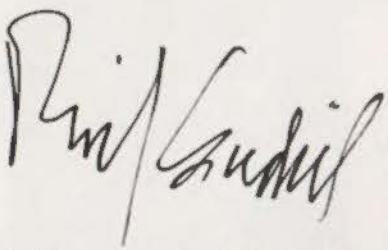

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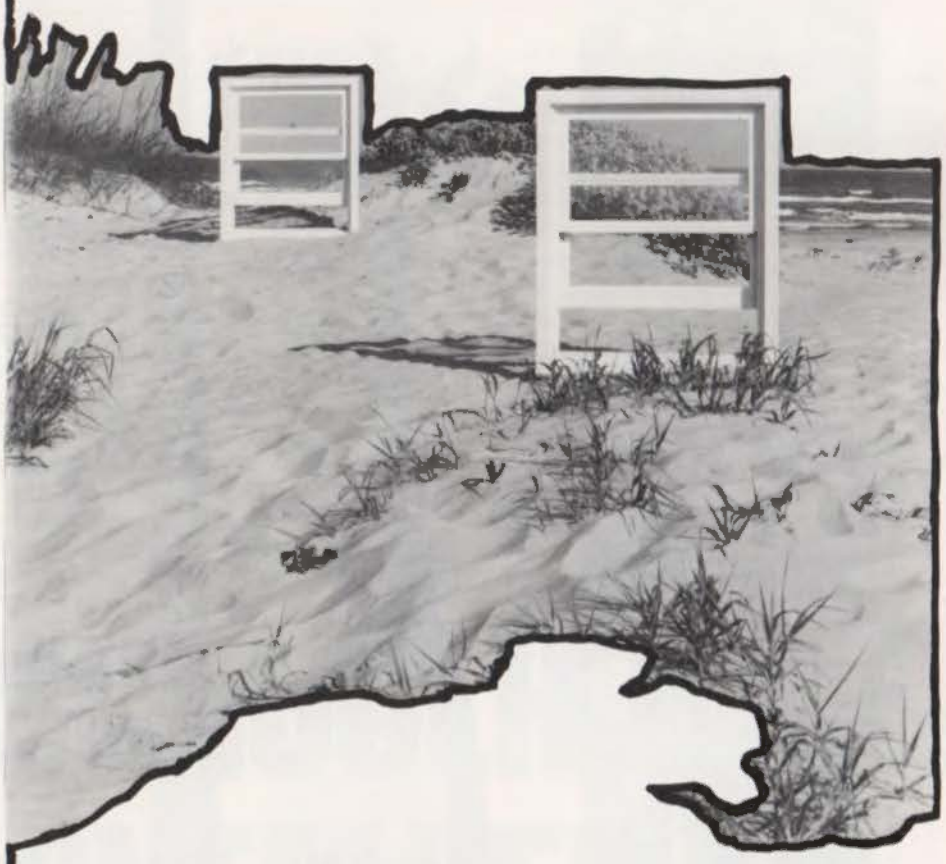

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(B) Modified Dragon Light has five globes set on a gently tapering slender base.

(C) The Rams Base Lamp holds one globe and is anchored securely by a claw-foot pedestal centered with a bas-relief. Rams heads accent corners.

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TEXAS SCHOOLHOUSE: AN OVERVIEW

BY BEN E. GRAVES

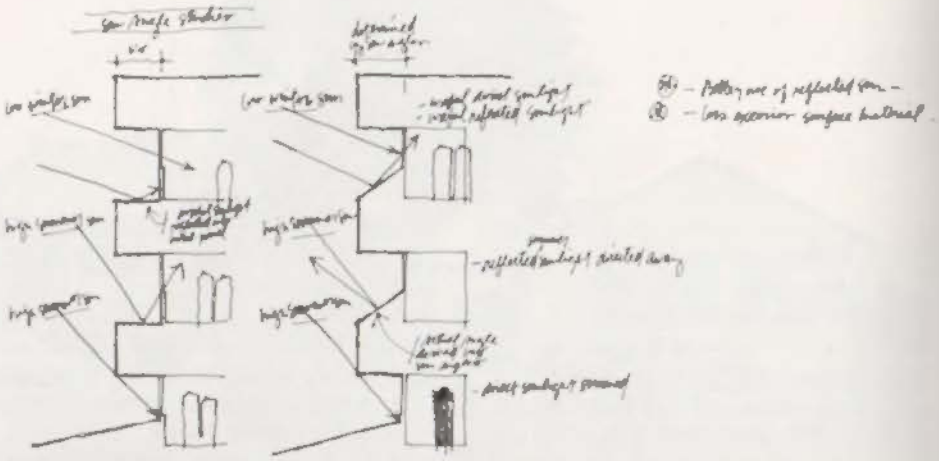
Today, Texas is where the action is in educational facility planning. Since World War II, Texas has been looked upon as a leader in innovative school design and approaches to education. In the late 1950s and early 1960s, when some Texas schools started airconditioning their facilities, this was considered so significant it was reported in national professional and general circulation publications and was the subject of special reports for the Educational Facilities Laboratories (EFL), a national research foundation. Texas led the way to controlled environments in schools.

In the mid-1960s, the limelight was focused on California when extensive publicity was directed to "systems" schools (those, mostly open-plan, using a standardized, modular building process) built in that state. Interestingly, systems schools never made much impact in Texas, although at least one Texas-based firm—Caudill Rowlett Scott of Houston—was involved in the program on the national level.

In the late 1950s and early 60s, modernization and "found space" were the top subjects for reporters and the basis for seminars at national educational conferences. Modernization was getting its fair share of attention in Texas, but the approach of finding non-educational space and converting it to educational use was an interest limited to the cities. One of the most dramatic examples to come out of Texas was the conversion of a downtown department store into the first campus for Dallas Community College. The conversion received numerous awards and is still considered a leading example of this type of design.

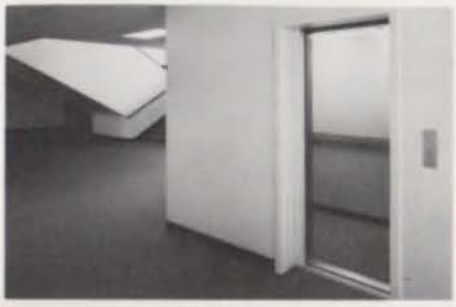
Today national educational planning interests are dominated by what to do with excess space in the Midwest and East and, in California, what to do with no money in the wake of the much-publicized Proposition 13. Not so in Texas, one of only seven states projected to gain in student population. A study, conducted by Market Data Retrieval of Westport, Conn., lists Texas along with Alaska, Colorado, Hawaii, Oregon, Utah and Washington as states in which stu-

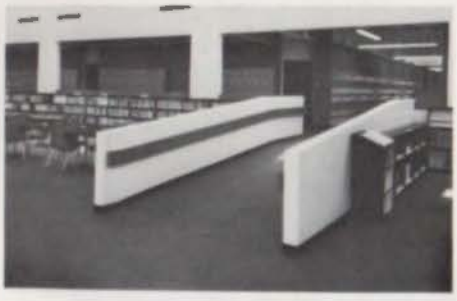
ABOVE: Buda Elementary School, Buda, remodeled by Pfluger & Polkinghorn, Austin.



Sun angle studies. Page Southerland Page, Austin.

BELOW: Elevator at Chancellor Elementary School and ramp at Killough Middle School, both in Alief, demonstrate current emphasis on barrier-free design. Golemon & Rolfe, Houston.





Photos by Rick Gardner

Photo by Rick Gardner

Flexible space, Killough Middle School, Alief. Golemon & Rolfe, Houston.

ABOVE: The Houston school system turned an outmoded building into "space for special programs we've talked about for years."

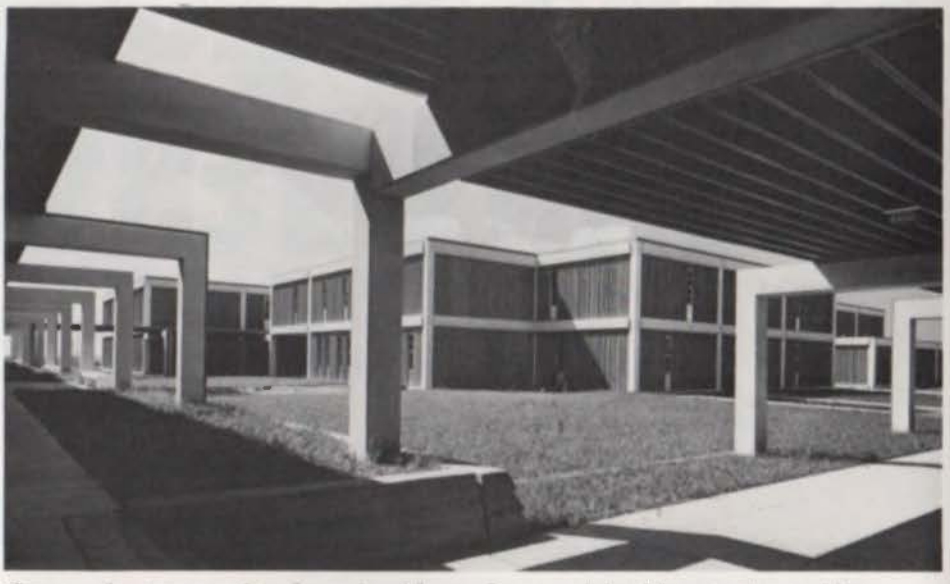


Photo by Mears Photography

Concern for conservation shown in wide overhangs, minimal fenestration and low-maintenance materials at Austin's Reagan High School. Page Southerland Page, Austin.

dent enrollment has yet to "top out." Now the school planning spotlight is focused once again on Texas as educational facility planners face the challenge of providing for increased pupil populations. And they are thinking of more than merely providing space, as can be seen by the following current concerns:

Energy

We are far past the days of citing statistics on the number of oil days left. Everyone involved in facility management or planning is painfully aware that the cost of energy is taking too large a share of the budget. Most school districts have initiated do-it-yourself energy savings programs and architects and engineers are involved in energy audits leading to actual redesign of systems and building changes to reduce the energy cost burden. (See page 23.)

At a recent meeting of school administrators, a superintendent received a prolonged round of applause when he stated: "Any architect is irresponsible who doesn't explore all the energy options and their projected costs on any new building being designed." And that is what is happening. Texas architects are responding to the critical problems caused by the energy crisis, and schools just being completed or on the drawing boards reflect this concern. Approaches range from the most basic conservation measures to experimental solar designs.

Barrier-Free

The "Education for All Handicapped" Act (PL 94-142) is forcing school districts to take a careful look at existing facilities. The older the facility, the more likely corrections will have to be made. Therefore, along with changes for energy efficiency, facilities are being modified to comply with the intent of the act to assure handicapped persons' access. That this is becoming an important design consideration is demonstrated in current projects throughout the state.

Back to the Basics

The cry for a return to the "Three Rs" of education is resulting in a swing of the pendulum away from the open-plan school to a more traditional floor plan arrangement. Debating the merits of this change by school boards and administrators can only result in endless argument, but this is a trend in Texas and nationwide. In Austin, for example, the design of a new elementary school became the subject of an open debate by the board. The significant point of this discussion was the desire of the trustees for assurance that the open-plan design could be easily converted to closed classrooms using partitions.

A study of plans for new school designs shows, however, that the pendulum has not yet swung all the way back. Several points are obvious:

- Schools are being planned to be easily flexible to accommodate changing educational concepts.
- It is recognized that experiences ranging from individual study to large groups must be planned for.
- A variety of spaces of differing sizes is part of the newer designs.
- Traditional classrooms, especially at the elementary level, are using furniture and equipment imaginatively to create "enclosed open space."

Community Use

"Community use" is a concept whose importance is growing. EFL is currently involved in an international study on the subject. EFL defines a community school, at the simplest level, as a schoolhouse that has some recreational activities for adults in the evenings. There is probably no schoolhouse in Texas that does not serve this function to some degree. But EFL points out that, in its broadest application, a community school is an educational institution which provides an array of social services such as health care, legal aid, recreation, counseling and day care.

A current dramatic example of such a center is housed in a former shopping complex in the East Oak Cliff section of Dallas. (East Oak Cliff is a court-ordered subdivision of the Dallas school system.) The new center is a concrete working symbol of action on two major thrusts:

- Creating a school/community climate which affirms education and the Black experience.
- Developing a community outreach and involvement program which reinforces the home/school partnership.

This community school concept could be identified as the most important trend in educational facility planning. With the current rush toward tax reform, the idea will probably be given even more impetus as public bodies explore ways to offer services at lower cost.

The Specialized School

The "Magnet School" idea may not have originated in Texas, but this approach to education is certainly being put to powerful use here. Such programs in Houston and Dallas are visited by hundreds of educators and planners each year. The diversity of these programs is reflected in titles such as the following in Dallas: Arts Magnet High School, Law and Public Administrator High School, Transportation Institute, High School for Health Professions, Human Services Center, Business and Management Center. Others are in the planning stage.

Where are such schools housed? The Arts Magnet is in an old high school which has been imaginatively renovated; the Transportation Institute is located in a former Cadillac agency showroom and garage just out of the central business district, and nearby, in another old high school, the Business and Management Center enjoys remodeled space that duplicates a large office environment.

In Houston, there is no doubt about the commitment to the Magnet School concept: a giant horseshoe "magnet" frames the front entrance of the central administration offices on Richmond Avenue. The district's current building program includes two new Magnet Schools: a High School for Health Professions, planned in cooperation with the Baylor College of Medicine, and a High School for the Performing and Visual Arts.

This brief attempt to isolate important trends concerning the Texas schoolhouse leaves no doubt that educational facility planning remains an active area and offers unlimited challenge to educational planners and design professionals.

Ben E. Graves, HAIA, director of educational programming and planning at Page Southerland Page in Austin, is a long-term member of the national AIA Committee on Architecture for Education. He is a past-president of the Council of Educational Facility Planners/International. Prior to joining Page Southerland Page, he was a project director with Educational Facilities Laboratories.

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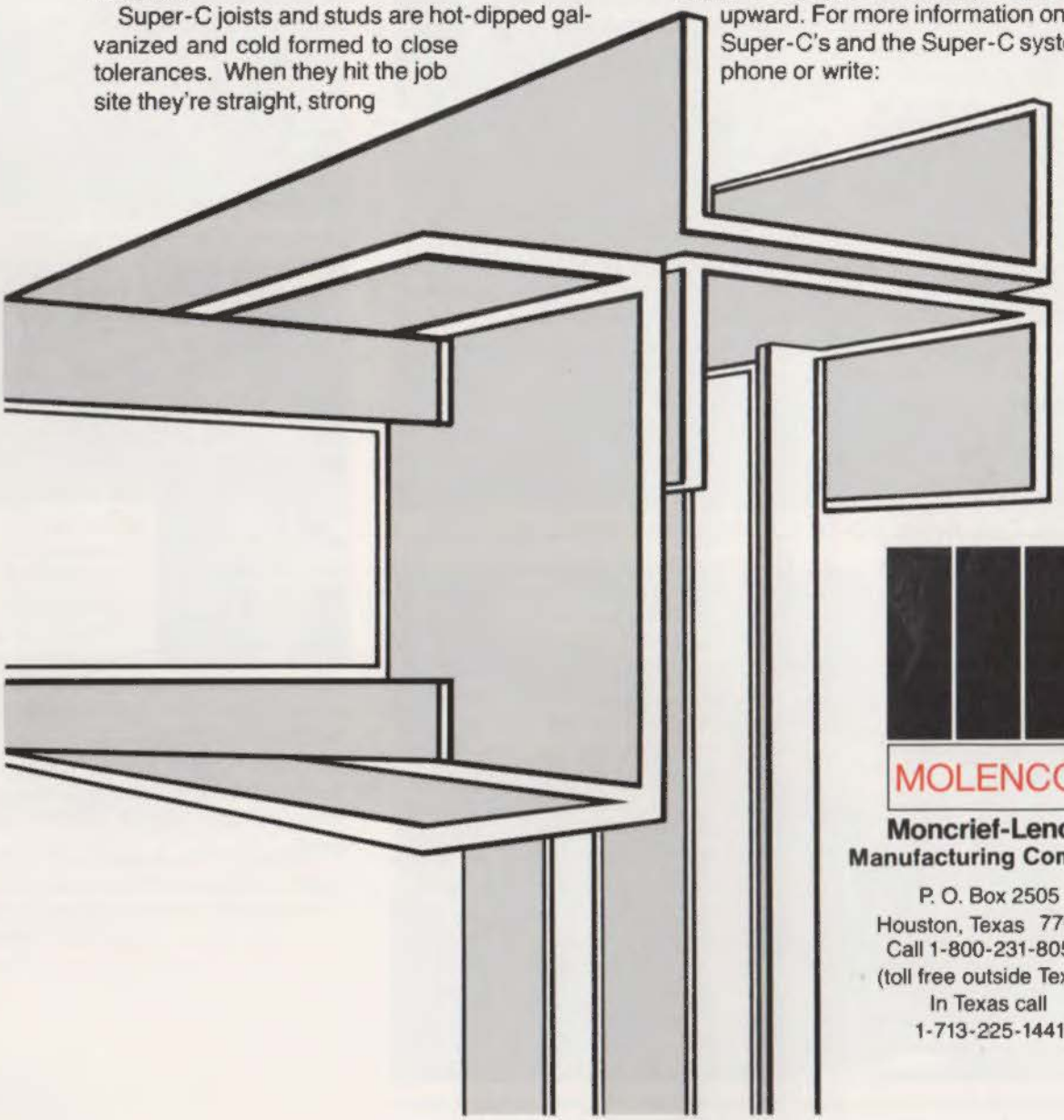

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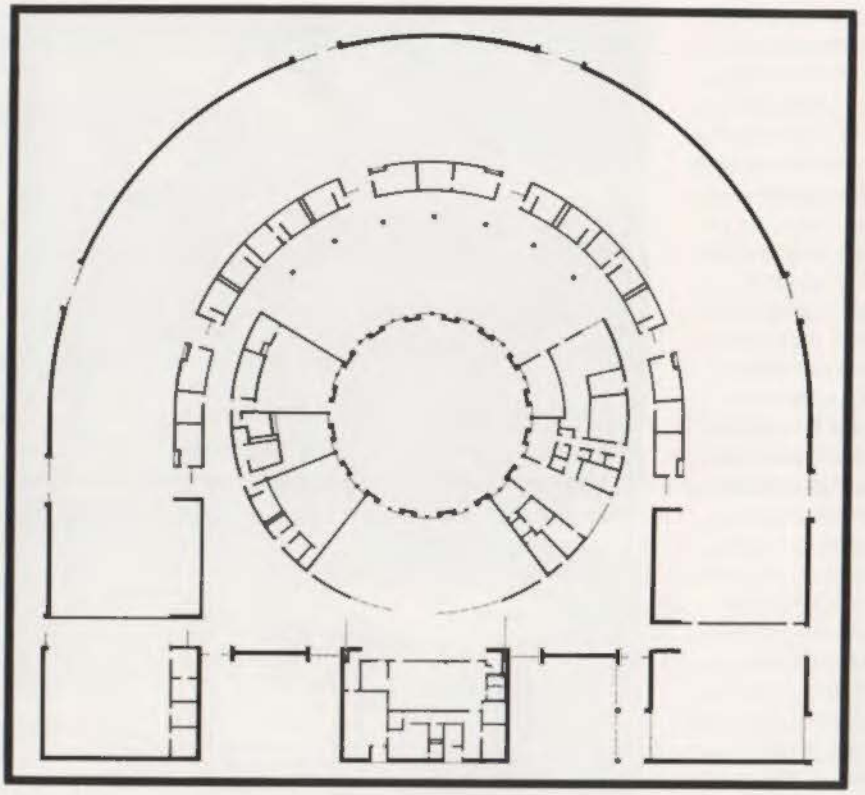


Whatever Happened to the Open Plan?

By Michael McCullar

Of the innovations in schoolhouse function, construction and design in the last 20 years or so, from team-teaching to systems-building, few have stirred as much lasting controversy as the infamous "Open Plan." Heralded in the late '50s as the most substantial breakthrough in educational design since the cellular division of the one-room schoolhouse, the open-plan concept did indeed change the direction of schoolhouse architecture, but its revolutionary novelty was a fleeting one. During two decades of experimentation, the concept has been a hot topic of debate in school board meetings and drafting rooms all over the country. It has been linked in many minds, along with T.V. and the New Math, to the permissiveness and freedom of the '60s which seemed to render so many high school graduates veritable illiterates on college boards of the '70s. Its critics have charged that too often the wide-open, amorphous space—the open plan in purest form—set a better stage for supervised chaos than formal education, and that given the choice by design, too many open-plan teachers opted for jerry-rigged classrooms with portable partitions that never seemed to move.

This back-to-basics re-evaluation, however, has not in most cases resulted in a complete return to the rigidity of the double-loaded corridor. Instead, in Texas at least, where the open plan gained an early foothold some 20 years ago through the pacesetting influence of Houston architect Bill Caudill (one of its earliest champions and writer of this issue's guest editorial), a sort of open-plan/self-contained hybrid has emerged, combining the free-flowing space of the open plan with the delineated territory of the structured classroom. The open plan, in other words, is alive and well, according to many Texas educators and architects; it has simply been modified in its evolution over the years. School boards now are charging architects to design schools featuring the best of both worlds, not only to assuage disenchanted parents and teachers but, in effect, to bring schools closer to the original open-plan ideal—flexibility. "The open plan is a school plan of options," says Bill Moellendorf, Austin Independent School District's director of new school facilities, "not necessarily a school plan of wide-open spaces. The fact that many open-plan schools have been permanently partitioned says something about open-plan flexibility—the teacher is simply exercising his or her option to close it off."

Indeed, flexibility proved to be one of the open plan's lingering problems as well as one of its lasting influences. In the beginning, it placed untested demands upon the modern classroom teacher. Instead of the architect's permanently shaping interior space, the teacher assumed the responsibility of continuously molding "teaching areas" out of corkboard screens, mobile mini-lockers, plants, hassocks and beanbag chairs. The idea was to keep the learning environment vital and varied and in the process to prevent the cinder-block, fixed-desk myopia that gradeschoolers and adolescents are so prone to suffer, by statute. The essence of the open plan is to define space rather than divide it, and to facilitate learning

that is free and fun instead of a regimented drag. But too often the teacher accustomed to the structured classroom had trouble making the transition. An instinctive "territorial imperative" carried over from the classroom caused partitions to remain fixed and teachers and students to remain confused.

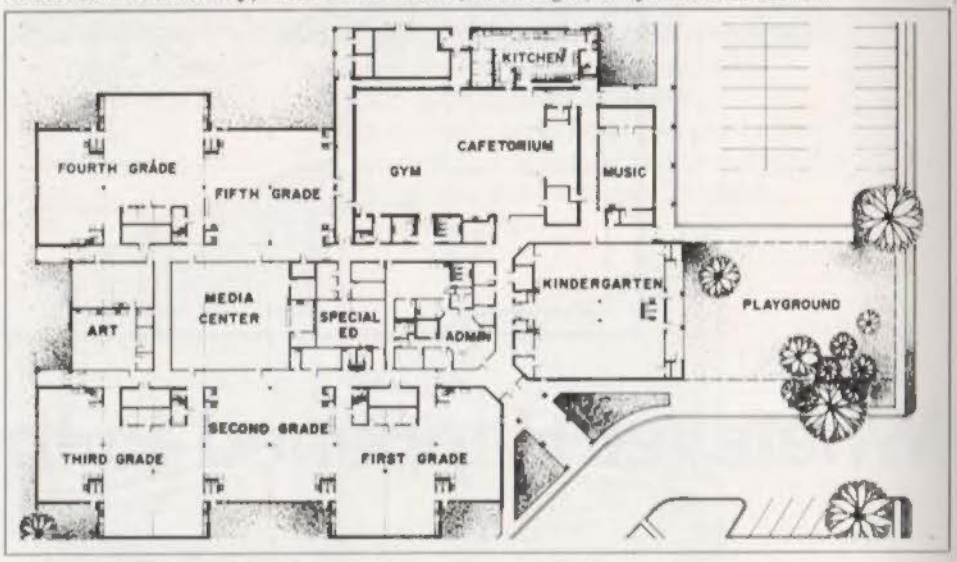
New teachers fresh out of college often had even less of an idea of what they were getting themselves into. Although at least one Texas college of education—at the University of Houston—built a college of education complex that was itself an open plan design, no formal program was established to train teachers to teach in open-plan schools. "The experiential part was the key element," says Dr. Howard Jones, of the University of Houston's College of Education. "I guess what we were trying to do was more or less have the open environment ourselves and allow students to make their own decisions, to be eclectic about it and to allow students to see that *they* could learn in it and to identify the kinds of skills they would need to deal with it after graduation." (Jones adds that although the building, designed by the Houston firm Wilson, Morris, Crain & Anderson and completed in 1971, "has a multitude of movable walls and everybody kept talking about the fact that we can move them anytime we want to, I can only think of one wall that's been moved since the building was built.")

Where the open plan has been successful during its evolution, from geodesic gymnasium to hybrid, the critical keys to that success have been ongoing in-service training programs for the faculty—teachers with or without open-plan experience—and established educational programs from which the open plan emerges as an architectural consequence, and not vice versa.

One of the textbook examples of the successful open plan in Texas is the Spring Independent School District just north of Houston, in which all 13 campuses from kindergarten to high school are open-plan in one form or another. School Superintendent Joe Beneke, an avid proponent of the concept, says the district embraced the open plan in the early '70s not as a fad but as part of a carefully planned and calculated program in anticipation of rapid growth in the area, "with the idea that, given this growth, how should we build schools to accommodate it which will be more like the schools of tomorrow than the schools of yesterday?"

The district set out from the beginning

Deer Park Elementary, Deer Park. Cavitt, McKnight, Weymouth, Houston.



Open plan "hybrid," Southcreek Elementary, Austin. Danze and Davis, Austin.

to do it right: selecting new teachers and principals, designing brand new schools, soliciting parent and faculty input in the design process, initiating in-service training programs for teachers to keep them abreast of innovations in school design and function, all to insure the support of the community and the compatibility of staff with a pre-planned mode of instruction. And the result of all this meticulous planning, says Beneke, is that the program and the architecture in which it is housed both work remarkably well, with 86 percent of the parents (at last count) supporting it all wholeheartedly.

But the Spring Independent School District meets all the demographic, historic and economic criteria of a community receptive to "progressive" education. As recently as the late '60s, Spring was a small rural district with two schools. Today it is a growing, upper-middle-class-white suburban community in which most of the schools have been built in the last eight years. What about older suburban school districts, or urban and rural districts? How receptive are they to the open plan, hybrid or otherwise? According to the Texas Education Agency, partitions are going up right and left in experimental open-plan schools across the state. The fact is, the very term "open plan" has become almost anathema to many local school boards, parents and teachers today. In Round Rock, just north of Austin, a community rapidly becoming an Austin suburb but still clinging to the character of a small Texas town, the open plan has been a subject of ongoing debate since the first open-plan school was completed there in 1974. School Superintendent Noel Grisham, who has held that post for 22 years, says it just hasn't gone over very well. "It's been a lively issue in Round Rock," Grisham says, "and the current back-to-the-basics trend is definitely getting away from the open classroom building and the open curriculum. The open plan demanded a lot more from the teachers and it seemed to cost more to build and operate. And research hasn't shown that students really learn anymore in the open plan than they do in the traditional classroom." Grisham

Photo by Rick Gardner

Sarah Vickers Chancellor Elementary, Alief. Golemon & Rolfe, Houston.

says Round Rock already has made the turnaround: in expanding two open-plan schools in the district, the new facilities in both cases were traditional classrooms —some with flexible walls, "but teachers are using the walls fully."

The turnaround to the modified open plan, if not to the strictly traditional classroom, has come about largely in response to kinks in the prototype. Experimenting with the open-plan design over the years, educators and architects have learned, for example, that it doesn't work as well for high schools as it does for elementary schools. The further specialized education becomes, the more structured its facilities must be. It was exceedingly more difficult, in other words, for a high school with shop classes, and language, chemistry and typing labs to be as completely wide-open as a kindergarten or grade school, levels which seem to thrive on many open-plan features—colorful graphics, mobile and malleable furniture—and whose programs are inherently less diversified. In responding to the restrictions of the day, architects also have reassessed the level of energy consumption in the open plan, investigating the use of skylights and clerestory lighting, and methods of reducing heating and airconditioning costs. And many architects, reluctant to play the role of educator, have learned to temper their enthusiasm about the open plan, and to warn educators of the pitfalls before selling the idea.

"We like to tell educators before they jump into the open plan that they must have everybody on their side before making the leap," says Al Weymouth of the Houston firm Cavitt, McKnight and Weymouth. "We tell them that they've got to be committed to it, on every level, from public to school board to superintendent to principals to teachers. If there's one person on one level who doesn't like the system, it's not going to work."

The most critical level of acceptance, where the ultimate responsibility rests for the success or failure of a program, is the faculty level. And although the maxim "A good teacher can teach anywhere" is a popular notion among administrators and parents, the fact is that most teachers' teaching styles and personalities are conducive to a particular educational format. Hence, one of the major problems of the open plan, as Austin high school teacher Ann Vaughan sees it, is that too many of the larger districts hire teachers and assign them indiscriminately to a classroom situation, regardless of their teaching styles and preferences. "There's not a whole lot of choice."

Such arbitrary assignment practices, says Vaughan, linked with continually changing curricular requirements and programs, have taken a lot of the punch out of the open plan in Austin high schools. As a result, she says, a majority of Austin teachers either oppose it or lack the necessary enthusiasm to make it work.

"Nevertheless, it's still in the hearts and minds of a lot of us," says Vaughan, who would rather teach in the open plan than in any other setting. "It's a beautiful option, for teachers as well as students; it's a great learning experience for both. It requires a different teaching style than the traditional classroom and a lot more planning, organization and control. But it's exciting and exhilarating to me as a teacher, and it is to students too when it's handled well."

Reluctant to view the open plan as a panacea, many educators and architects maintain that *any* kind of educational program or facility will work when handled well. In fact, definite, testable benefits of the open plan have been hard to come by. It is not really any cheaper—or more expensive. More often than not, there is a cost trade-off in the open plan; money saved on the elimination of walls and doors is earmarked for carpeting and acoustical tile, essential noise-reducing ingredients. And achievement tests have been less than conclusive about its effectiveness, whether or not students do in fact learn more in an open space than in a closed classroom.

But there is an effect of the open plan that can be pegged. In the end, says Wally Scott, Bill Caudill's partner in the Houston firm of Caudill Rowlett Scott, "The lingering influence of the open plan will prove to be the openness and friendliness of the atmosphere it creates." The changing open-plan concept has yielded "schools all over the country that really are 'egg crates' but don't look or feel like egg crates because a little glass has been used in just the right places." The open plan has "opened the box." It has liberated school design.

Architects in Schools

Julie, left, and Terri work on a classroom space plan with a scale-model design kit.

Ami peers out of the green private space created by her class.

Ed, right, and Ricky experiment with Geo-D-Stix to design the polyhedral structure.

By Janet Felsten

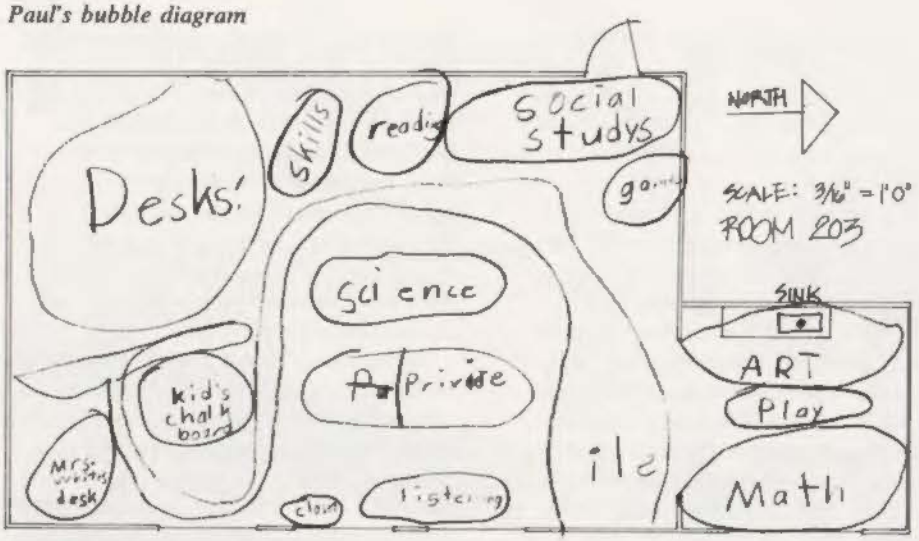
Think back to your elementary school days. What image of your school environment first comes to mind? A long, empty hallway lined with lockers? The long hand of the clock as it clicks the minutes away? A model row of cursive mounted above the blackboard—Aa, Bb, Cc . . .? Perhaps the carved legacy left by past occupants of your desk? Twenty years from now, Ed Sheppard is likely to think about the green polyhedral "private space" he designed and co-constructed with his classmates.

As a student at the Mathews Elementary School in Austin, Ed has had an active role in determining his classroom environment because of Mathews' participation in a nationwide Architects-in-Schools Program. He and his second/third grade classmates spent several months last autumn examining, analyzing, redesigning and actually reshaping their learning space through such projects as the green polyhedral enclosure that gave students a place in which to be alone.

Architects-in-Schools is a component of the Artists-in-Schools Program of the National Endowment for the Arts (NEA) sponsored jointly by the Education Program and the Architecture/Environmental Arts Programs of the NEA. This component places design professionals in residencies at elementary and secondary schools throughout the country to interact with students, teachers, administrators and members of the community.

Ed Sheppard's green "private space" was a result of a long series of his personal design explorations that I, as the resident design professional at Mathews, was in a position to facilitate and witness. Though his two-dimensional abili-

Paul's bubble diagram



ties were unexceptional, for his age level, and his attitude toward school was less than enthusiastic, Ed bloomed when given the opportunity to work in three dimensions. He began by experimenting with Geo-D-Stix, wooden sticks of varying lengths, and five-, six- and seven-sleeved plastic connectors, in the free-time center I set up in the school library. After a few days, I introduced him to platonic solids. Soon he reproduced tetrahedrons, octahedrons and icosahedrons from two-dimensional drawings.

Newspaper Dowel

The class rolled newspaper dowels and built tetrahedrons, learning how triangulation could give structural stability. Ed went home, developed a stronger dowel by rolling more paper into a shorter stick, and built numerous tetrahedrons and octahedrons.

And on several occasions, he borrowed my copy of *Order In Space* by Keith Critchlow, a very sophisticated study of geometric relationships, and reproduced at home for his own pleasure many of the configurations shown therein.

When the class selected private spaces as a priority need for their room, Ed used the Geo-D-Stix to arrive at a design for a two-chambered polyhedral structure. Working with two assistants and me as technical advisor, he measured, sawed, drilled, bolted together and painted the structure. The floors were custom-carpeted by piecing together scraps. One wall was made by stretching a lacy length of fabric to create muted lighting.

Concurrently, Ed's interest in school increased and his work in other subjects improved. His teacher and parents attributed this upturn to gratification from his architectural studies, which, in an end-of-school questionnaire, he listed as his favorite subject ("arkiteckittor"). Four months after completion of that major construction project, Ed borrowed the Geo-D-Stix again and soon returned proudly with an icosahedron he had built from memory. The enchantment was as strong as ever.

Ed's class and two other second grades were involved in the series of activities I called "Environmental Awareness and Classroom Design." We began by examining the children's everyday environments at home and at school. They focused on how they perceived their surroundings and why they liked or disliked certain spaces, dealing with concepts such as color, texture, shape, scale, movement, structure, community, privacy and sound as related to spaces. We analyzed their classrooms and determined their needs for learning environments. Through discussion, drawing, writing, diagrams and models, we arrived at plans of action and moved into the implementation phase of the design process —always the most exciting time since the children soon discovered that their decisions were actually to result in changes.

Private Spaces

The two second grades settled on private spaces, one taking the form of a dog's head, the other a complete mouse, and all members of the classes participated in their construction. In the second/third grade, we redesigned the entire room, making a ten-foot-square carpet area from scraps, choosing fabric and stuffing nine large floor pillows, building a loft and two private spaces, painting a mural and rearranging the desks.

Marsha White, the second/third grade teacher, commented, "Most of the students gained some sense of responsibility from the course by learning to make decisions which would affect their environment directly and immediately. This has made possible more variety in instructional methods; students are now more able to work independently in small groups without direct supervision, as well as in large-group instruction. This class seems to be very mature by comparison to others, but I feel that the architecture program has been responsible for the changes observed."

Student Evaluations

Near the end of the term, Marsha's students discussed what they had learned from their design experiences. Terri now noticed the architecture of buildings. Lee Ann said she was more aware of change and how to make decisions to change things. Celeste particularly enjoyed learning to use tools as she helped to build the loft. Kendall liked working with shapes and colors to design the rug. Sang Ho valued learning to paint straight up and down while finishing the green private space. Ami cited the opportunity to try out her own ideas with the space planning kit (scale-model furniture, acetate-covered one-inch-grid graph paper and grease pencils). And Ricky thought it was wonderful to be able to build useful things and to *teach each other* in the process.

This awareness course touched on many issues dear to my heart, perhaps made vivid by my own elementary school experiences. It asks the teacher and students to work together as equals, showing respect for each individual's perceptions and experiences. The teacher articulates and re-examines the thought processes behind the environment she or he created for the children. The children are ele-

vated to a position of shared responsibility, where they must be sensitive to each other's needs and try to make decisions for the common good. The solutions are not waiting on the page of a textbook, but must be arrived at by observation, analysis, planning and experimentation. Children rely on and further develop their own resources, often discovering talents that no one considered important within the school context before. The teacher has more opportunities for creativity and improvisation, while gaining new insights into the dynamics of the classroom.

My residency in Austin was preceded by a 6½-month residency with the Abilene Independent School District which focused on the outdoor environments at two junior high schools and one elementary school. At Crockett Elementary, students, staff, parents and community joined forces to implement a major portion of a plan developed for an outdoor classroom. A waterfall, pond, Texas-shaped sandpit, shrubbery, flower beds, class garden plots and a 30 ft. by 6 ft. mural transformed an under-utilized area into an educational resource. Community participants ranged from a seventy-year-old gardening expert to the National Guard. During the following year, school staff, students, parents and a junior high school construction class added an amphitheatre, a "tree house" study area and more plants to the outdoor classroom, continuing to implement the plan developed through the residency. The Abilene Chapter of the Texas Society of Architects offered program support during and as follow-up to the residency.

My Austin residency has been extended into a second year and will expand its focuses to include more community involvement and use of local resources, as well as teacher workshops to maximize the potential impact of the Architects-in-Schools Program system-wide. At at time when teachers and students are virtually bombarded with "new" and "progressive" educational theories, techniques and programs, I am made aware of the need to view my own efforts with objectivity. In making my assessment, I always come back to the program evaluation made by a second grade teacher in Austin: "I became more aware of the school environment; I want to arrange my room so it is beneficial for the children." Her statement is deceptive in its simplicity, bespeaking a tremendous change in perspective and reflecting a fundamental awareness which is the essence of the Program itself.

Janet Felsten, who has a B.S. degree in Environmental Design from the Philadelphia College of Art, is beginning her third Architects-in-Schools residency in Texas. She spent the summer as a consultant on evaluation and planning in the Office of the National Coordinator for Architects-in-Schools, Educational Futures, Inc., in Philadelphia.

Program Description

The Architects-in-Schools Program involves teachers, students and community members in activities framed by the following nationally established program objectives:

- To bring about an awareness and understanding of the built environment for itself and as it relates to the natural environment.
- To use the built environment as a vehicle for understanding and teaching of the traditional academic subjects within the existing curriculum.
- To be a resource person to students and teachers, learning and teaching about the built environment.
- To help students and teachers analyze their surroundings and to help plan and carry out changes.
- To involve students and teachers in the design process by bringing the methods of design into the school.
- To involve oneself with the students and teachers in a project with a visible product.
- To develop a continuing involvement of the community and school using the built environment as a focus.
- To insure continuity by passing on to teachers some of the architect's tools, special skills and knowledge, thereby maximizing the effectiveness of the residency.

Residencies are funded by grants from the National Endowment for the Arts matched by state arts agencies and local schools and/or community organizations. State arts agencies are responsible for selecting residency sites and participants and for program implementation. The National Coordinator's Office for the program provides training, program support, documentation and evaluation of the residencies. At many sites, local chapters of the American Institute of Architects have provided direct financial and/or manpower support.

Participating design professionals have included architects, landscape architects, urban and preservation planners, architectural historians and environmental designers. They have ranged from professionals in mid-career to young architectural graduates. Working individually and in teams, their time commitments have varied from one day a week to full-time involvement in the schools. The National Council of Architectural Registration Boards has approved the Architects-in-Schools Program to qualify as practical training experience toward registration. Since the program's inception during the 1976-77 school year, the number of residencies has expanded from 39 professionals working with 62 sites in 22 states to a projected 55 residents with 73 sites in 33 states in 1978-79.

In Texas, Abilene, Austin and Galveston are the only communities which have taken advantage of the Architects-in-Schools Program. In previous years, the Texas Commission on the Arts and Humanities has had funding for several residencies but was unable to disburse the funds due to lack of interest.

For more information, contact:
Architects-in-Schools Program
Texas Commission on the Arts and Humanities
Box 14406, Capitol Station
Austin, Texas 78711
Telephone: 512-475-6593.

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BY C. JACK CORGAN

ENERGY MATTERS

A SCHOOL DESIGNER'S RANDOM THOUGHTS

It reminds me of a spring lawn party: Lots of fun. Cool breeze. Clouds gathering—probably a shower. Actually a tornado.

1978. Good economy. Or is it . . . Great Gatsby!

Do you remember waiting 10th in line at the gas station? "Ten-gallon limit please." GM was on its heels. Not five years ago!

It's gonna happen again.

"But we just finished air-conditioning the City's schools. The climate is hot in Texas!" And cold in winter.

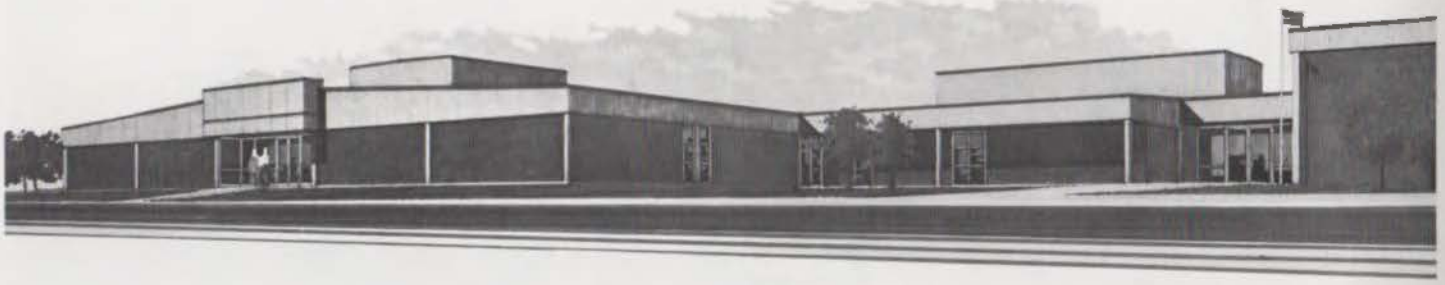
Not long ago our firm used an IBM 360 Computer to help design a new middle school for the Plano Independent School District. We programmed the computer to simulate the expected operating conditions—and costs—of several alternative designs. This analysis told us to set the windows back for shade, to use insulating glass, to use outside air for wintertime cooling, and to double up on roof and wall insulation. The building's almost completed now.

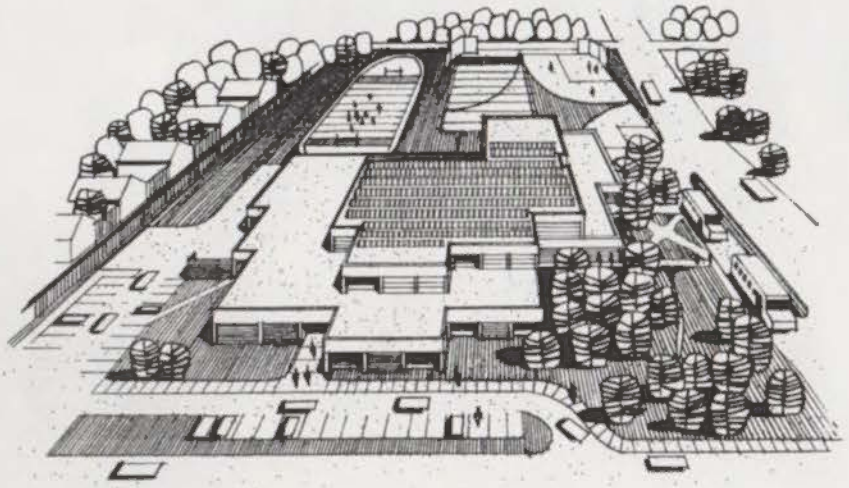
"How about *solar*?" We designed a complete space heating and domestic water heating system for the building, and prepared an ERDA (read, DOE) grant application for our client. ERDA thought the system was technically superior—but no more money for Texas.

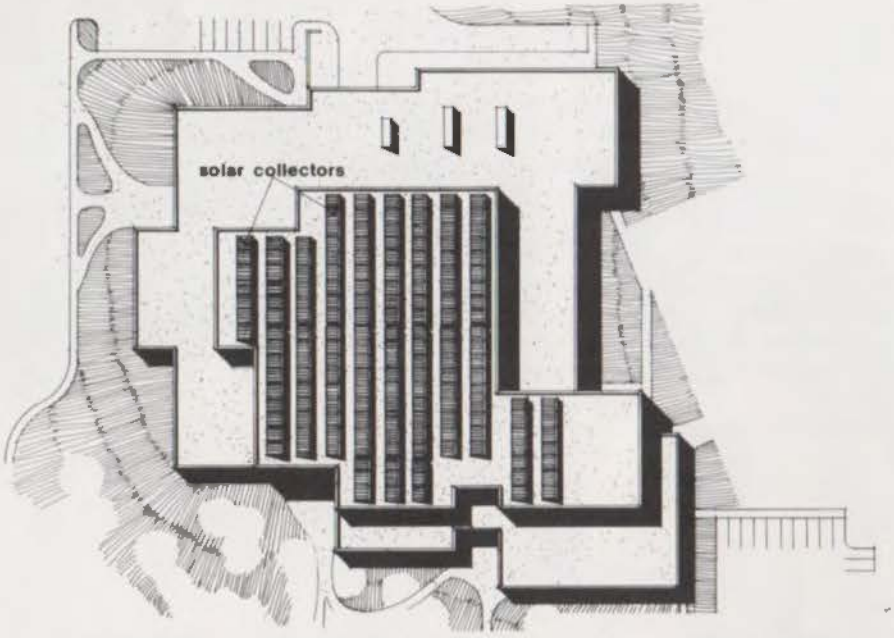
Oh, by the way, the solar heating system, a good one, would have taken over 20 years to pay off, even allowing 10 percent utility escalation cost each year. The costs just aren't there right now. But we need to work on it.

After the turn-down on the solar grant

C. F. Saigling Elementary School in Plano designed in 1974.







Original Plano solar scheme which, though "technically superior," failed to be funded.

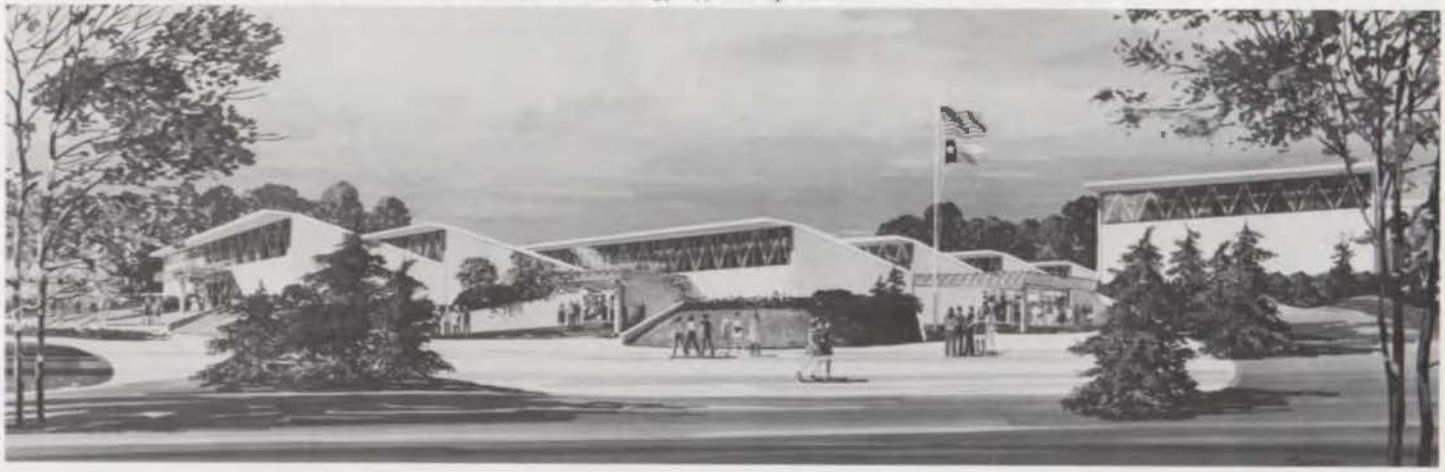
application, we became involved in a search for building forms which were inherently energy conserving. The Thomas and Harrington Elementary Schools in Plano afforded the opportunity to utilize those forms. These schools have exterior walls with earth berms on the outside up to six feet above the interior floor slab. Remember how cool Grandma's cellar was? The mechanical system is a variable volume system with low fan horsepower. Almost one-fourth of the building is designed to use no artificial light. Big, south-facing (right, *south*) light monitors admit desirable natural light. These schools, too, are currently being completed.

In the fall of 1977, the C. F. Saigling Elementary School in Plano was completed. The original design was initiated in 1974, and it utilized our best thinking in energy conservation for schools. In 1977, we were asked to participate in a national program to assess energy usage for buildings in the United States designed prior to 1974 (Arab Oil Embargo). We assisted with this study and, later in the spring of 1978, were selected to receive a Department of Energy grant to "redesign" the Saigling School. This grant, which was administered by the AIA Research Corporation, allowed us the opportunity to further sharpen our capabilities.

First, all quantities and energy-related qualities were measured on the Saigling School. This included roof area, wall area, percentage of window area, HVAC and lighting system, gross building area and insulating values. This data, including available actual operating data, was fed into a computer to serve as the design base.

The purpose of the grant was to measure "normal" energy usage for build-

Experimental redesign of Saigling School for maximum energy efficiency.



ings designed before the "energy crunch." The grant provided the time and resources to redesign a particular building (through schematic design phase) to consciously reduce energy usage. Results will be tabulated by building type (school, hospital, office building, etc.) and geographic area to establish reduced energy consumption guidelines for use in formulating national energy reduction policies by the United States Congress.

We have just completed our responsibilities, the results of which are contained in a highly technical 138-page report. The "new" design was developed with the assistance of the nation's foremost experts specially trained in each area of building energy conservation techniques. It was developed, however, specifically for the Texas region.

This revised design scheme features a compact floor plan that reduces the amount of square footage (while still accommodating the same program), as well as exterior wall surface. Mechanical penthouses were taken from the roof and placed at the perimeter to help create buffers between the interior conditioned space and the exterior. In addition, this perimeter wall is bermed to six feet high to help the insulation factor.

South-facing sawtooth skylights bring in natural light that is sufficient even on a cloudy day. Horizontal screens over the glass of the skylight disperse direct light rays. High-intensity discharge lamps controlled by photocell sensors supplement the natural light on particularly cloudy days or at night.

Landscaping constitutes the third key feature of the school. Windbreaks in the form of evergreen trees were employed to temper the cold north winds, while on the south and west sides of the school leafy deciduous trees form a shady ring. During the wintertime, the bare trees allow the sun to reach and warm the school. Entry points provide the bulk of vertical wall glass on the school, and these are shaded by leafy arbors of jasmine.

People ask us, "What is the Texas vernacular (of contemporary architecture)?" It certainly is not the mirrored building which is designed for an arbitrary, non-climate. If there is such a thing as a Texas style, it would be characterized by vigorous use of local materials, such as brick, concrete, and stucco. It would have an exterior "skin" that would retain or disperse internal temperatures based on the building's occupancy. It would likely be light in color to reflect the heat of the Texas sun, certainly not dark grey or black. There does seem to be an inherent, continually evolving Texas style. And there are even climate-influenced sub-styles which, for example, separate Gulf Coast architecture from arid West Texas architecture.

Sure, there are some answers. Some architectural. Some political. Texas *is* a big and complex place. Gotta work harder.

Architect C. Jack Corgan is president of Corgan Associates, Inc., in Dallas, a firm with a broad range of practice including schools. Corgan, during the last eight years, has been principal-in-charge for some 30 educational projects and has written articles for several national education journals. He holds bachelor's and master's degrees from M. I. T.

Photos by James Lemkin

The author's office, in Dallas' old Kirby Building, itself exemplifies some applicable design concepts for energy conservation. The massive, Neo-Gothic building has carefully placed and shaded windows which actually work. The air-handling system uses outside air in the cooler months. The narrow (28-ft.) space lined with windows permits natural illumination throughout; minimal supplemental lighting keeps the energy level low.

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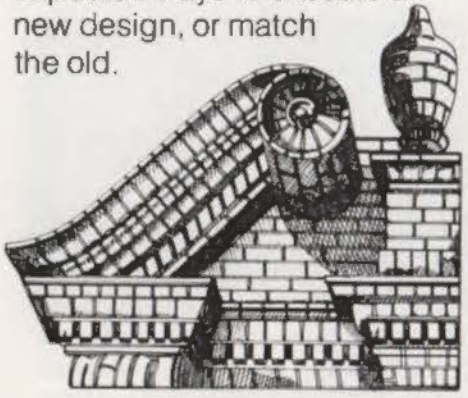

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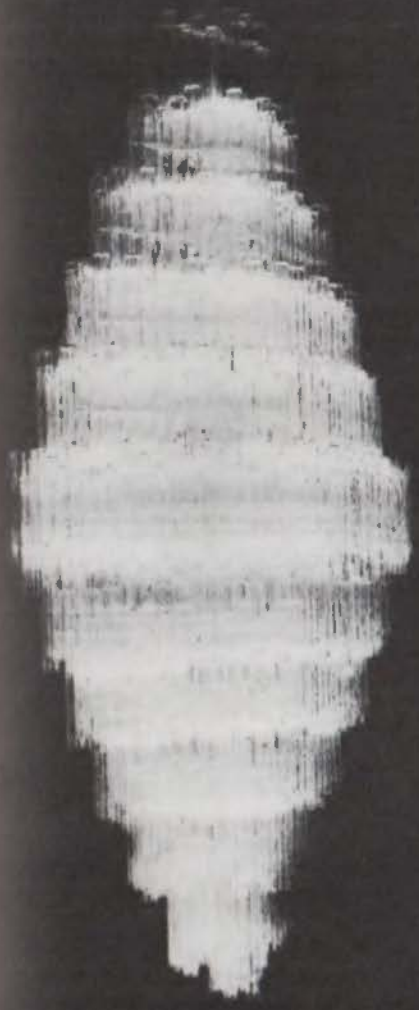

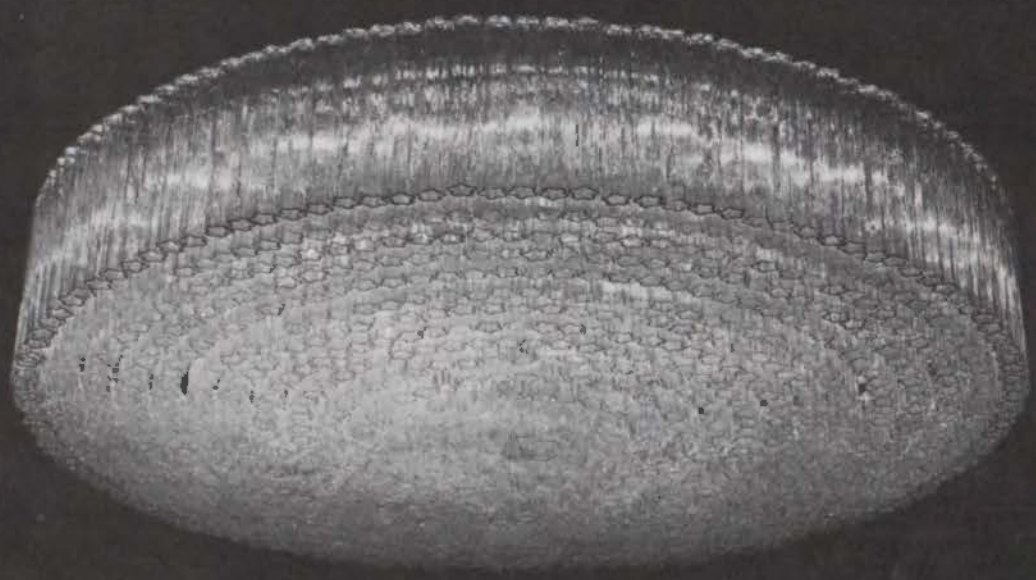

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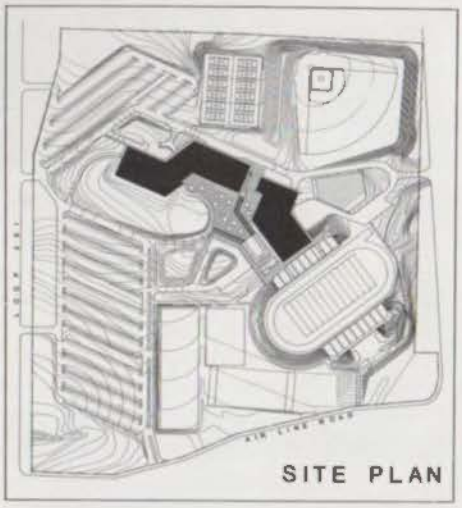


SITE PLAN

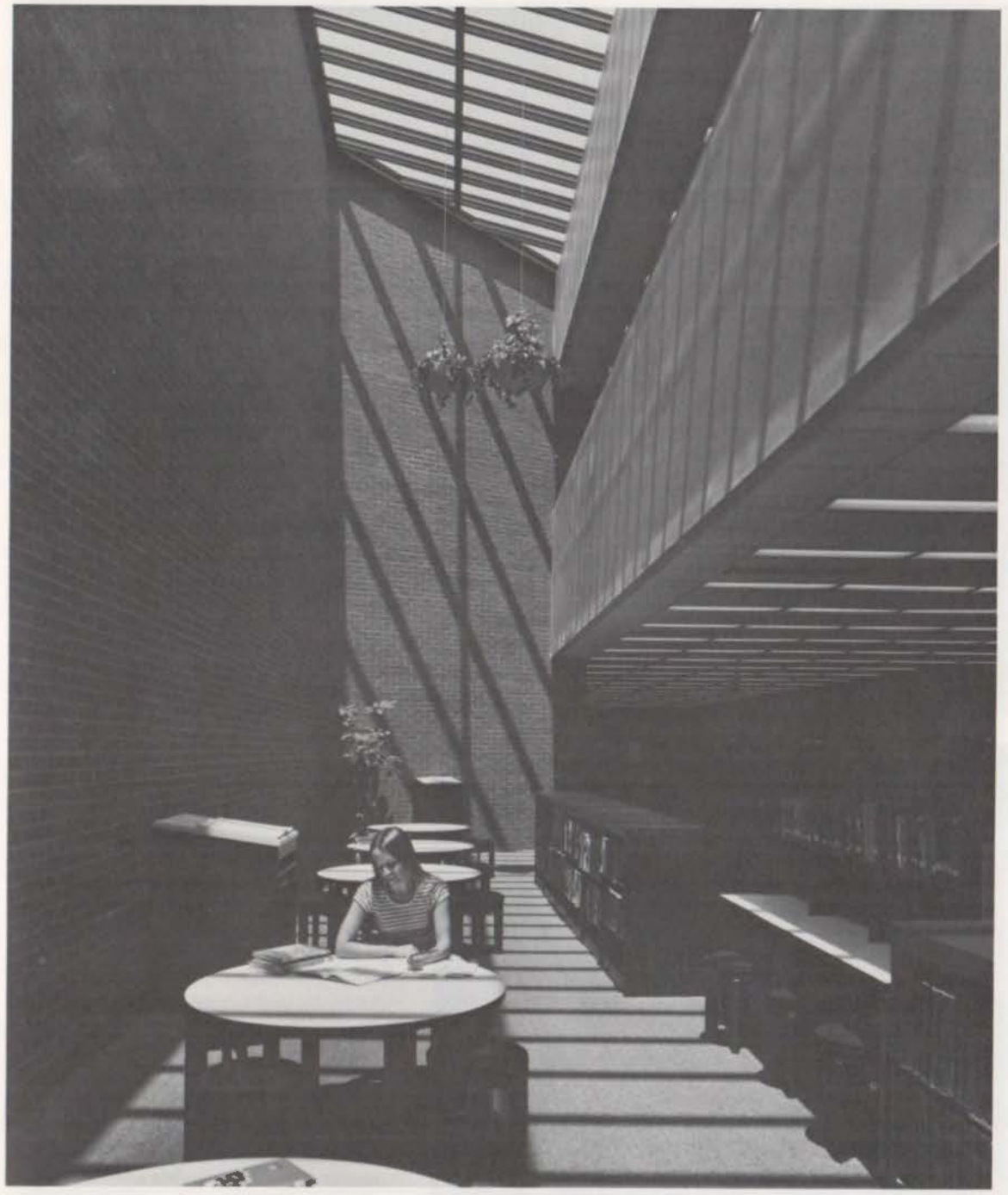
Design objectives were simply stated. School administrators and trustees of the Longview Independent School District wanted the new Longview High School to be an identifiable, stimulating and creative environment, not only for students and faculty but for community residents as well. While providing stimulating environs for teaching and learning during the day, the building also would be open to the public after hours for adult education, recreation and community meetings.

Architects of the Longview firm Allen, Buie & Associates created a striking low-profile, angular structure which provides dramatic contrast to the smooth, rolling contour of the site. Two heavily textured, continuous horizontal bands of stucco separated by reflective glass define the building's upper level. Recessed brick and glass walls at grade emphasize the white bands, with a 10-foot overhang on the upper level providing sheltered entrance and protecting outdoor circulation. Architects made economical use of the irregular terrain of the 66-acre site by locating the football field and track in an existing bowl area, exploiting an almost natural seating arena. Parking terraces conform to the topography of the site and are separated by existing tree buffers, eliminating the vast views of asphalt and automobiles found on many campuses.

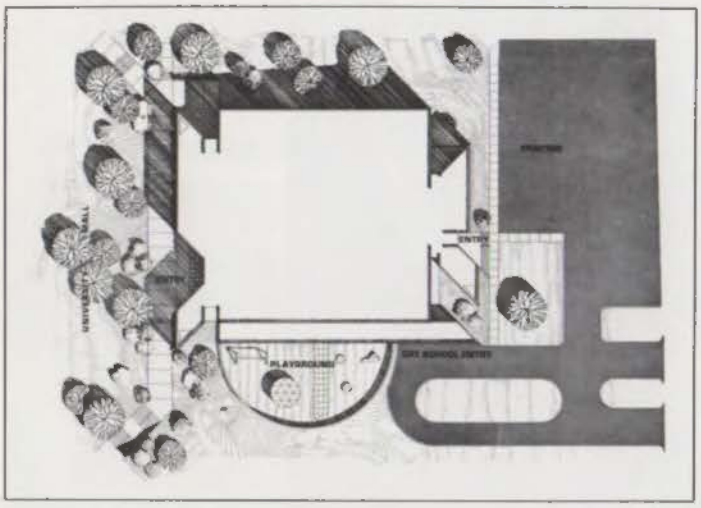
Early on in the design stage, conferences including students, faculty and architects revealed the necessity for teaching spaces with varying degrees of openness and enclosure. This need, combined with the school board's desire for a stimulating, creative environment, generated a scheme of flexible but self-contained classrooms opening onto wide "interior streets." A programmed learning center and auditorium were given prominent locations within the building to make them readily accessible, thereby encouraging their use. The auditorium was designed as an extension of the learning center with the flexibility of accommodating both large and small groups.

Architects: *Allen, Buie & Associates, Inc., Longview*
Consulting Engineers: *John J. Guth, Inc., Shreveport, La. (mechanical and electrical); Aillet, Fenner, Jolly and McClelland, Shreveport (structural)*
Kitchen Planners: *Mulhauser-McCleary, Houston*
Landscape Design: *Van Zandt Cormier, Inc., Dallas*
General Contractor: *LaRoe Building Company, Inc., Terrell*

First Honor Award Texas Architecture 1977



Editor's Note: *TSA's 1977 design awards competition yielded three First Honor Awards, five Honor Awards and eight Awards of Merit, projects which will be featured in* Texas Architect *throughout the year.*



A Place for Teaching Teachers

As the hub of professional teacher education at Sam Houston State University in Huntsville, the three-story, 80,000-square-foot Teacher Education Center was designed to simulate a wide range of contemporary teaching situations as well as provide facilities for traditional classroom instruction. In addition to college classrooms and labs, the center also houses facilities for early childhood and special education and a speech and reading clinic, giving education students the opportunity to gain valuable experience working with professional staff, parents and children from the surrounding community.

With much of the program planning done by a university building committee prior to the design stage, architects from the Houston firm Rapp Fash Sundin/ Incorporated (formerly Rapp Tackett Fash) were charged primarily with integrating an established program with a facility, planning circulation, designing a building, and working out the associated technical problems of the $2,320,000 project.

One major concern was segregating access and circulation of the two primary—and diverse—users of the building, university students and children. Architects took advantage of a sloping site in placing the entrance to the build-

Photos by Maurice Miller

ing for university students on the second level, where they enter from the campus mall. Children enrolled in classes on level one enter from a public street on the opposite side of the building.

Yet another concern was flexibility. While simulating contemporary teaching problems, the building's spaces had to be flexible enough to accommodate a continually changing educational program. To that end, all vertical circulation, restrooms and mechanical rooms were placed outside the square, main body of the building, keeping it free of incumbrances that might inhibit future reorganization. These functions are housed in trapezoidal elements on opposite sides of the building which also were designed to emphasize the entrances to the center on the first and second levels.

Honor Award
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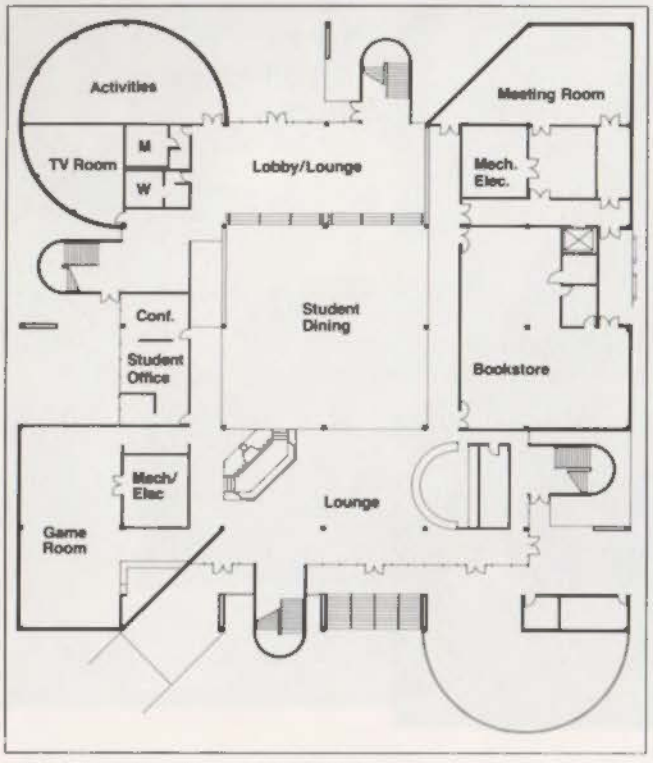
1977

Architects: *Rapp Fash Sundin Incorporated (formerly Rapp Tackett Fash), Houston*
Consulting Engineers: *Walter P. Moore & Associates, Incorporated, Houston (structural); Ray S. Burns & Associates, Houston (mechanical and electrical)*
Acoustics: *Joiner-Pelton-Rose, Incorporated, Dallas*
General Contractor: *Fleetwood Construction Company, Houston*

Photos by Ed Stewart & Associates



First-floor plan, University Center.

Student lounge, University Center.

Study area in Science and Math Building.

Honor Award
Texas
Architecture
1977

'Real' Campus for a New University

Created in 1971 as Tyler State College and housed in an old junior high school building in Tyler, what is now Texas Eastern University eventually outgrew its renovated birthplace serving an expanding educational market. The university is one of a growing number of "upper level schools," two-year colleges offering only junior, senior and graduate curricula designed to accommodate advancing junior college students who wish to continue their studies toward bachelor's and graduate degrees.

From the very beginning, plans were for the school to eventually acquire enough acreage in the Tyler area for construction of a "real" campus. In time, 200 acres of piney woods in southeast Tyler were donated to the state as a site for a new campus and the college's name was changed to Texas Eastern University. In August 1976, classes opened in three new buildings on the new university campus.

Designed by the Houston firm Caudill Rowlett Scott, the new university was completed in June 1976 as the first phase of a master plan which provides for the future addition of several new campus buildings. The goal was to establish a senior college architectural character and vocabulary in the first phase which could be smoothly continued in future phases.

The master plan calls for buildings to ride the contours of the site along the edge of a large ravine overlooking a man-made lake which serves as the focal point of the heavily wooded site. Although student housing is part of the long-range plan, a majority of the students will continue to commute. Thus, the campus design features wide, informal corridors within the buildings, several small departmental lounge areas, a multi-use student center and ample parking areas, all seen as important in meeting both present and future needs of the students.

The sculptured brick buildings—at present, an administration building, a science and mathematics building and the student center—follow the master plan in conforming to the contours of the ravine, and all circulation, sometimes enclosed, sometimes open but covered, allows for a variety of views to and across the lake. A footbridge will link these buildings with future buildings on the other side of the lake.

Architects: *Caudill Rowlett Scott, Houston*
Landscape Design: *Johnson, Johnson & Roy, Inc., Ann Arbor, Mich.*
Food Service: *James F. Cauley, Houston*
General Contractor: *Allen M. Campbell Company, Tyler*

Access to Education

In May, 1965, Dallas County voters created the Dallas County Community College District with approval of a $41.5 million bond issue. The following year the district's first two-year community college, El Centro, opened its doors for the fall semester in downtown Dallas. Since then, five more campuses have opened throughout the county, one of the most recent of which is Cedar Valley College in Lancaster, designed by the Dallas firm Jarvis Putty Jarvis and opened in 1977.

Committed like the others to providing every person in Dallas County convenient access to a quality education, Cedar Valley is designed to accommodate a variety of educational programs and student ambitions. Classes range from traditional freshman and sophomore courses for students wishing to advance eventually to senior colleges and degrees to vocational courses to non-credit, continuing education programs. Facilities for these offerings include a Learning Resource Center, Business/Management Institute, Humanities/Social Science Building, Campus Service Center, Communications Building and a Technologies/Math/Engineering Building, all linked closely together by an outdoor mall with "open corners" to allow for easy expansion in several directions.

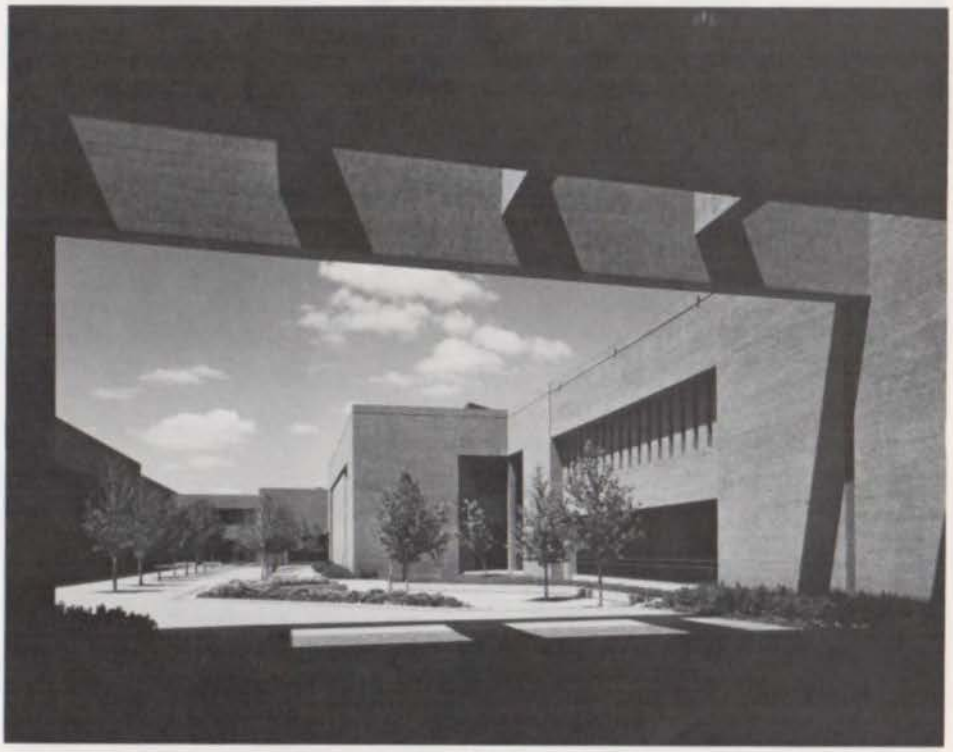
An earthen dam was constructed on

Award of Merit
Texas
Architecture
1977

Learning Resources Center.

the 353-acre site, impounding a 12-acre lake which serves as a central focal point of the campus. Buildings were sited to preserve natural grades—providing multi-level, on-grade entrances that improve internal circulation—and to take advantage of views of the lake. An outgrowth of building placement on the peninsula formed by the lake is a scheme of de-centralized parking which, along with strategically placed earth berms, is designed to avoid the typical mass parking lots found on similar campuses.

Architects: *Jarvis Putty Jarvis, Inc., Dallas*
Engineering Consultants: *Datum Structures, Inc., Dallas (structural); William K. Hall & Co., Dallas (mechanical); Raymond L. Goodson, Inc., Dallas (civil)*
Landscape Architects: *Myrick Newman Dahlberg, Inc., Dallas*
Acoustics: *Joiner, Pelton, Rose, Inc., Dallas*
Interiors: *JPJ Interiors, Inc., Dallas*
Food Services: *H. G. Rice & Co., Irving*
General Contractor: *Robert E. McKee, Inc., Dallas*



Outdoor mall from main entrance.

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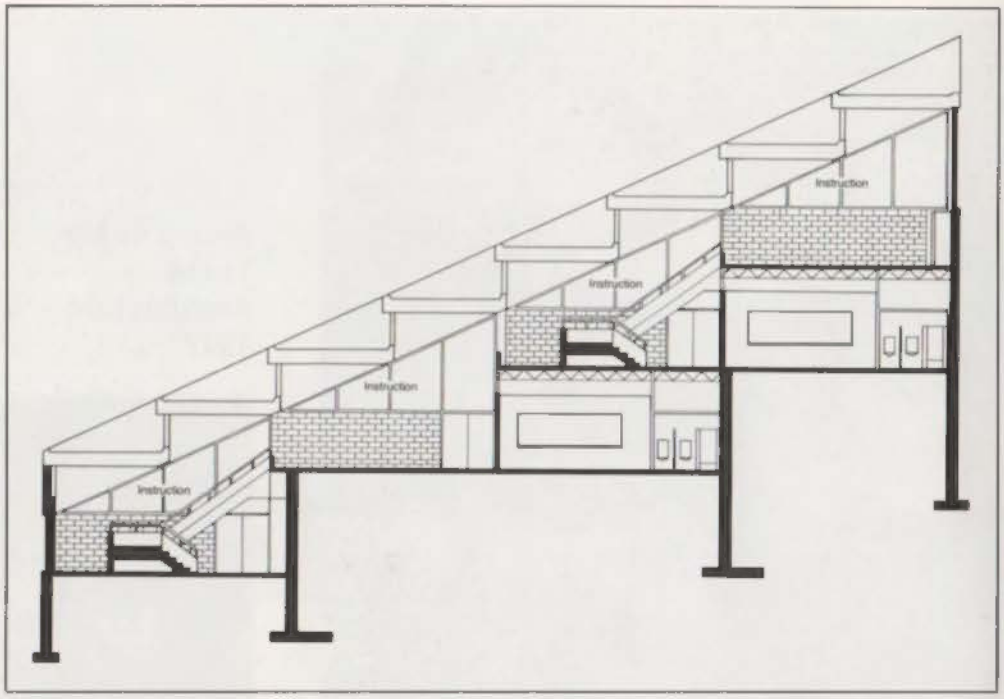
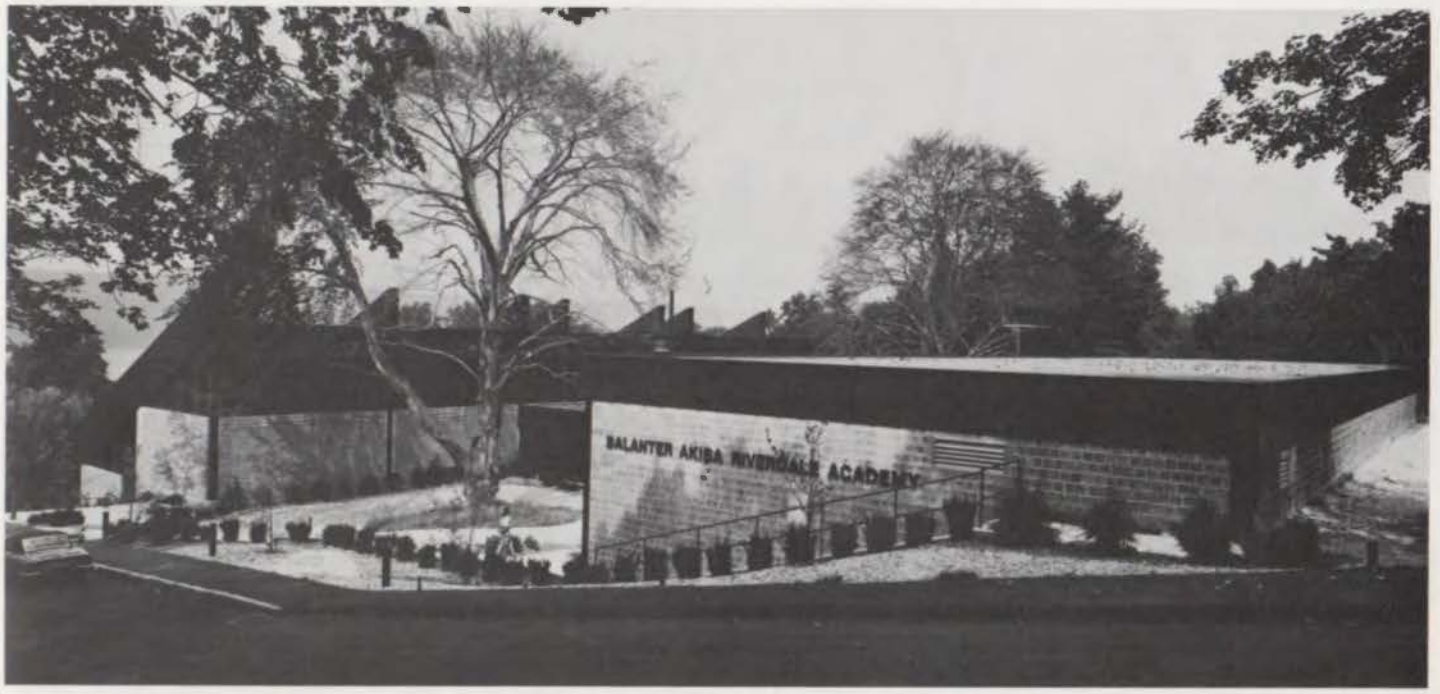
Texas
Architecture
1977





Academy on a Hill

A dramatically sloping site, a strong religious emphasis, an open-plan educational program—and two 150-year-old copper beech trees—posed the major design challenges for architects of the Houston firm Caudill Rowlett Scott in designing the Salanter-Akiba-Riverdale Academy, a private Hebrew elementary school in the Riverdale section of New York City.

Formerly the estate of the late conductor Arturo Toscanini, the 4.6-acre site in a residential neighborhood offered a natural, wooded hillside setting and a panoramic view of the Hudson River for design and construction of the 42,300-square-foot academy. Although clients originally chose flat land at the bottom of the estate as the site, architects concluded—with the help of site analysis by area environmental experts—that it would be better to utilize the hillside than to avoid it and to reserve the flat portion of the site for playfields. Thus, architects designed the building in "stepped-down" form to follow the natural contour of the hillside and to provide a clear view of the Hudson from every space in the main academic area of the building. The school was designed *around* two massive copper beech trees (flanking the chapel), and a large weeping willow. An assortment of bushes and evergreens also was maintained to preserve the ecological balance of the site and to promote an awareness and appreciation of their surroundings among the students.

Inside, the open-plan learning environment centers around a main learning resources center. Instructional spaces on each side of the center are linked with a shared, central core of administrative and additional learning resource areas which are a half step below the instructional spaces at every level of the building. Instructional spaces are identifiable through color-coding of walls and are further defined by large, brightly colored abstract designs consisting of letters of the Hebrew alphabet. The chapel is placed at the main entrance of the academy so that anyone entering the building will pass by it and also serves to link the stepped-down academic block with the gymnasium-auditorium at the top of the site.

Architects: *Caudill Rowlett Scott, Houston*
Partner-in-Charge: *Jack W. Smith*
Project Manager: *Charles Baskett*
Graphic Designer: *Carrell Deans*
Educational Consultants: *Engelhardt & Engelhardt, New York, N.Y.*
General Contractor: *Miller & Raved, Inc., New York, N.Y.*

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4. To answer questions and exchange ideas with a panel of leading pool architects, designers and public officials

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Stamford, Conn.

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DR. FREDRICK KAHMS
Purdue University

The Integrated Aquatic Recreational Facility
HOWARD BOGIE
Seattle, Wash.

How Competitive Requirements Affect Your Design
MILTON F. JOHNSON/AIA
Palo Alto, Calif.

New Concepts in Natorium Illumination
ERIC THRUN/P.E.
British Columbia

Solar Pools A Natural Partnership
WINSTON BOONE
Mountain View, Calif.

New Innovations in Indoor Pool Design
JAMES CARLBERG/Architect
Vancouver, Canada

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Schools Architecture:

THREE OUTSTANDING PROJECTS

As in years past, a major feature of the 17th Annual Joint Convention of the Texas Association of School Boards (TASB) and the Texas Association of School Administrators (TASA) held in September of last year in San Antonio was an exhibit of outstanding school architecture from across the state, sponsored jointly by the TASB, TASA and the Texas Society of Architects (TSA) to acquaint school trustees and administrators with current trends, innovations and standards in Texas school design. In addition to participating in workshops and seminars and strolling through commercial exhibits, some 4,000 school officials attending the three-day conclave (Sept. 24-26) had a chance to view 29 exhibits of Texas school architecture chosen for display by a joint jury of TASB, TASA and TSA representatives. Entries were limited to new projects, renovations and additions and "recreated" facilities for public, private and parochial schools of all levels, from kindergarten through the 12th grade, as well as two-year community colleges, and had to have been completed between Sept. 1, 1972 and Sept. 1, 1977. Judging was based primarily on the architectural solution of the project and how well that solution reflected the stipulated academic program.

Following are reports on three out of four projects chosen by the jury for special recognition in the exhibit, all receiving Citations of Excellence as outstanding examples of outstanding Texas schoolhouse architecture. (One project, Longview High School by Allen, Buie & Associates of Longview, also was a winner of a 1977 TSA First Honor Award and is featured in this issue's Design Awards section, page 28.) At presstime, TASA and TASB are gearing up for their 18th Annual Joint Convention to be held Sept. 23-25, again in San Antonio. *Texas Architect* will feature projects cited for excellence in this year's Outstanding School Architecture Exhibit in a later issue.

Jonesboro High School

When a tornado destroyed a Jonesboro, Arkansas, high school in 1973, a new school had to be designed and built economically, quickly, with attention to an expanding program and with precautions against another twister. Architects of the Houston firm Caudill Rowlett Scott designed the new Jonesboro High School with all glass concentrated inside along interior courtyards to conserve energy, display student activity and to reduce potential risks of damage and injury in the event of another tornado. A sunken media center, surrounded by academic areas, serves as a focal point and allows long views across activity areas. The brick-clad, steel-systems building was designed for strength, flexibility and quick, economical construction. To accommodate the expanding range of academic programs, the school can be open-plan, compartmentalized or combinations of the two, depending on need and changing philosophy. Improvements upon the old also include expanded space for fine and performing arts, facilities for life-long athletics as well as spectator/team sports, a variety of teaching spaces, from open-plan to traditional classrooms, areas for vocational as well as academic studies and facilities for after-hours community use and adult education.

Location: *Jonesboro, Arkansas*
Owner: *Jonesboro Independent School District*
Architects: *Caudill Rowlett Scott, Houston*
General Contractor: *S. J. McDaniel Construction Co., Jonesboro*

Photos by Richard Payne

J. L. McCullough High School

The Woodlands, a new and rapidly growing residential area in the piney woods just north of Houston, needed a high school for the area's rapidly growing sub-population of high-school-age students, some 3,000 in grades 9 through 12. The program called for major educational divisions to be organized into "houses" for identity, and to help humanize the scale of the necessarily large facility. And to ease student access, administrative functions were to be decentralized and organized by grade level.

In joint venture, the Houston firms Simmons, Cavitt, McKnight and Weymouth and McKittrick, Drennan, Richardson and Wallace responded to program criteria by designing a 281,750-square-foot linear building along a two-level "main street" extending from a bus *porte cochere* at one end to an automobile drop-off point at the other. Educational division houses of a wide academic range, from fine arts to industrial arts, were expressed as brick elements appended to the main thoroughfare. A student commons, a major communal space for dining and large-group gatherings, opens main street to views of the wooded, 50-acre site to the north. Skylights along main street and in the learning resources center admit natural light and, together with windows separating the houses and at the ends of the major corridors, serve to prevent occupants from feeling buried within the large complex.

Location: *The Woodlands*
Owner: *Conroe Independent School District*
Architects: *Simmons, Cavitt, McKnight and Weymouth, Houston, and McKittrick, Drennan, Richardson and Wallace, Houston*
General Contractor: *Spawglass, Inc., Houston*

Tarrant County Junior College

As in many community colleges—as well as public schools—these days, the educational emphasis of Tarrant County Junior College's Northwest Campus in Fort Worth is on service to the surrounding community as well as academic excellence for the student body. While fulfilling the traditional junior college role of preparing students for ultimate transfer to senior colleges and universities, the college offers courses and associate degrees in a variety of vocational fields and serves as a "community centered institution," providing facilities and courses for community activities and adult continuing education.

Designing for that multiple role, architects of the Fort Worth firm Geren Associates began with a one-building concept, centrally locating the learning resource center (housing theater, lecture hall and library) as the hub of the complex, then extending classrooms and offices outward, taking advantage of the views offered by the 193-acre site and an adjoining lake. Design of the building allows for internal circulation throughout the facility, in both open and closed passageways, except for the separate physical education and maintenance buildings. Parking for the commuter campus was conveniently located and well-lighted, minimizing distances required for students to travel from car to class during the day or night. Other important design considerations included multiple use of space, future expansion and provisions for the handicapped and elderly.

Location: *Fort Worth*
Owner: *Tarrant County Junior College District*
Architects: *Geren Associates, Fort Worth*
General Contractor: *Gilmore & Walker, Inc., Fort Worth*

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TOWN AND GOWN

The University Takes the Lead (Or Should) In a Spirited Architectural Dialogue

By Robert G. Venn

During the early development of a city, the primary object (architecturally speaking) is the quickest and most economical enclosure of space. With urban maturity comes the realization that aesthetic and visual considerations are increasingly important; as more of the inhabitants regard themselves as permanent residents and less as transients, there is more emphasis on, and concern with, the quality of life.

A major element in the maturing process of a city—and its quality of life—are its educational institutions, particularly colleges and universities. As the principal centers of learning, they should provide examples of the best and most innovative thought in all areas. This role of the university demands that we subject its works to a critical and careful examination to insure that it fulfills expectations, both functionally and aesthetically. Hence, we should continuously ask ourselves: What is the overall visual effect of a university as a whole? How does it greet the incoming student, and what does it suggest, architecturally, to the city it calls home?

In Lubbock, as a case in point, a city showing signs of maturation and growing rapidly beyond the boom-town stage, the major center of learning is Texas Tech University, a campus whose architectural expression appears to take several forms:

- A continuation of the presumably traditional Spanish influence, as seen in various additions to the central campus area.
- A somewhat anonymous institutional style, exemplified by a new medical school.
- Various compromises between the two.

It seems evident that, although these approaches may seem to differ somewhat, the end result is the development of a definite, common uniformity, possibly at the expense of visionary or even contemporary design. Presuming that this uniformity is desired and planned, the advantages might be seen as:

- A visual continuity or conformity of aesthetic expression. In other words, the buildings are either somewhat anonymous or at least resemble one another, lending a certain unity to the campus.
- A pleasing visual effect in the detailing of those structures in which the above-mentioned Spanish motif is evident. The various entrances to the University Center/Music Building, for example, are replete with carved stone work and well-developed complex forms providing a certain richness in overall effect.

Well-developed traditional form.

Anonymous Institutional style.

Various compromises.

The disadvantages, on the other hand, stem from the fact that a university is by its very nature a place which should stimulate experimentation, stretch minds, open new vistas for exploration—and create a bit of controversy in the process. People should be made to think when they attend school; and because of this fundamental responsibility, perhaps the most important visual information provided by a university—its architecture—should not be conducive to calm acceptance, nor should it be so inoffensive and lacking in interest as to be easily ignored. In the same way that each student in a university is exposed to all types of creative development in a respective field and is brought into contact with a broad range of knowledge, so should the campus provide a wide variety of the most creative developments in architecture.

At Texas Tech the process by which an architectural firm is chosen is no doubt similar to that used by other institutions. Basically, a list of firms which in the past have been found to be capable and reliable is submitted to the University Planning Office by the school's Office of New Construction. Selections from the list are sent to the Building Committee of the University Board of Regents. Recommendations are made and, ultimately, a firm is invited to submit a proposal for the required structure.

It is clear that a selection process such as this will be, from its inception, relatively risk-free. But it is also clear that it precludes experimentation in the choice of a firm. In the interest of providing more architectural variety, several other approaches suggest themselves:

- An open competition—national or international—for each major structure. The level of response would be hard to gauge, but with an open-minded and knowledgeable jury, there is the possibility that the campus—hence the student body, the faculty and the city of Lubbock as a whole—could be greatly enriched by the results.
- A patronage system, such as that used in Columbus, Indiana. In this scheme, architectural fees for public buildings are paid by the city's leading industry, the condition being that the firm chosen be among those considered to be the guiding lights of contemporary practitioners.

Of the two alternative approaches, the former perhaps would best express the

role of the university in seeking out those who could be in the forefront of future architectural development. While the patronage system has been effective, the tendency in using it is to choose architects currently in vogue—certainly better than choosing to work in an expression that was in vogue several hundred years ago, but still not offering a wide range of possibilities. A competition offers the possibility of drawing on a large number of architects who are talented but relatively unknown.

Granted, either process would lead to emotional and intellectual involvement on the part of the observer and a controversial structure is a likelihood. Some might hate it and some might love it. The result, however, would be discussion, excitement and thought (probably in that order) and, ultimately, intellectual growth. Naturally, there is an element of experimentation in all new ideas. This, of course, poses the possibility of aesthetic or even functional dissatisfaction or failure, to one degree or another. But the risk is worth taking as it always has been taken by all who feel that something better and more beautiful always can be done and by those who believe that architecture, like all other fields, must be in a continual state of development to be a valid pursuit.

A university should wish the right to claim for itself the most excellent school of languages, of engineering, of fine arts —greatness in every facet of education. Similarly, it should seek justification for claiming possession of examples of the best and most innovative architecture. This will not be accomplished as long as we settle for the vernacular of the past, or rely solely on the tried and proven elements of current architectural vocabularies, no matter how successful they are. Only in the future may be found those elements capable of placing the school, and in turn the city, in the forefront of creative development.

Robert G. Venn holds a master of arts degree and a master of fine arts degree from the University of Notre Dame and is an assistant professor in the Division of Architecture at Texas Tech University where he teaches freehand drawing, mechanical drawing and sculpture.

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Projects in Progress

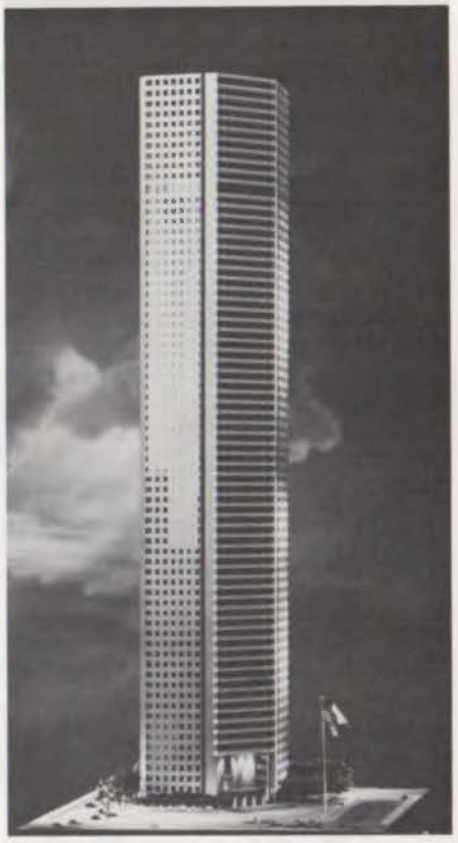
Seventy-Story Skyscraper Planned for Houston

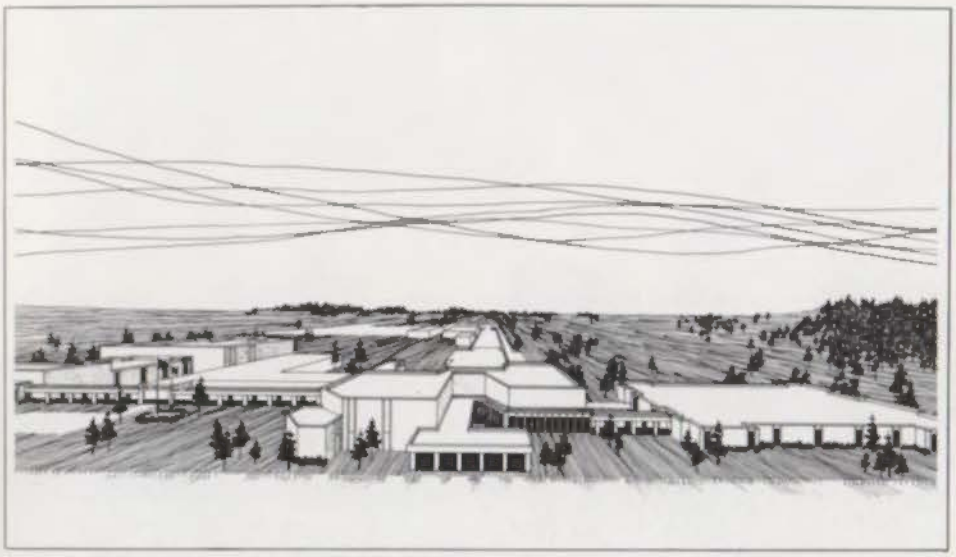
Houston developer Gerald D. Hines has announced plans for a 70-story skyscraper in downtown Houston which will be the tallest "composite" (structural-steel-frame and cast-in-place concrete) building in the world, not to mention the tallest building outside of Chicago and New York. Called El Paso Tower in Texas Commerce Plaza, the complex will be located on the downtown block bounded by Texas, Travis, Capitol and Milam, with a 1,200-car parking garage on the block directly east. Architects of the Houston firm **3D/International** are collaborating with I. M. Pei & Partners of New York on the project, scheduled for groundbreaking in late September and initial tenant occupancy in 1980.

The 1.9-million-square-foot tower will contain 1.6 million square feet of net rentable office space, commercial and storage space and two below-grade levels of parking for approximately 180 cars. Clad in pale gray polished granite and dual-pane glass, the tower will mark somewhat of a return to more traditional forms and materials in architecture. Beginning with a four-sided design, architects cut one corner at 45 degrees to create a fifth side that becomes the face of the structure. This front facade is an 85-foot, column-free span of glass and steel allowing for panoramic views of Buffalo Bayou and the entire west side of Houston.

Architects have designed the tower to have an appearance of lightness and a distinctive personality resulting from the contrasting play of the traditional and modern expressions of skyscraper form.

Placed off-center to the northeast corner of the site, the tower will occupy one third of the full square block, creating a one-acre granite pedestrian plaza. Landscaped with trees and seasonal flowers, the open space will feature a sculpture (yet to be commissioned) and serve as the forecourt of the tower and a focal point for surrounding downtown buildings. Entrance to the building will be from the plaza through revolving glass doors into a 25-foot-high, 85-foot-wide lobby clad in granite with a five-story glass wall opening onto the plaza.





New Building Program For Hughes Springs ISD

On the drawing boards of the Longview firm **Scott/Singleton & Associates** is a $3,950,000 building program for the Hughes Springs Independent School District involving construction of a new junior high school, auditorium, cafeteria and elementary school and renovation of an existing high school, all scheduled for completion in August 1980.

Plans call for the consolidation of three campuses into one, allowing for use of a common auditorium, cafeteria and athletic facilities while maintaining a separation between student grade levels. To achieve that separation while maintaining the integrity of the campus, architects have taken advantage of natural terrain features which help to separate buildings and playground areas and have linked the common, centrally located facilities with covered walkways.

The predominant building material for the new buildings is loadbearing masonry, with interior finishes of brick, block, terrazzo, carpet, epoxy paint, ceramic tile and suspended acoustical ceilings.

The 52,400-square-foot junior high school is designed to accommodate 430 students and includes classrooms, science and arts and crafts labs, a central learning facility, gymnasium and exercise area with dressing rooms and a teacher center and administrative area. The new auditorium, with 16,490 square feet, will seat 850 persons and include a projection room, dressing rooms and an adjacent lobby, student activity area and music room. And the 40,050-square-foot kindergarten and elementary school is designed to accommodate 570 students and includes classrooms, art and music rooms, a library, teacher center, multipurpose room and administrative area.

Educational Skills Center Now Under Construction

Construction is now underway on a $4 million Educational Skills Center for the Houston Community College System which its architects, of the Houston firm **Koetter Tharp Cowell & Bartlett,** have designed to be an abrupt departure from the bland, one-story brick structures which so often house skill and trade programs. Upon completion, scheduled for June 1979, the new center will feature an open, two-story lobby with skylighted atrium, porcelain panels of deep red on the building's brick and glass exterior and landscaping with large trees along streets leading to the center.

The 103,000-square-foot structure, next to the Houston Technical Institute, will house shops and classrooms for vocational skill and trade development which are presently in the old Taylor public school building. Plans also have been made for use of the adjacent technical institute by the community college system by the fall of 1978.

Designed to accommodate 600 students, the new skills center will provide shops for operating engineers, major appliance, radio and television repair, welding, roofing, painting and asbestos work as well as a machine shop. Classrooms, offices for program supervisors and a learning resources library also will be included.

Funded by a $4,194,557 grant from the U.S. Department of Commerce's Local Public Works Program, the center will be strategically located to serve an area of Houston with a substantial level of unemployment and need for a nearby community college training program.

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TSA Town Meetings

At presstime, TSA's Houston Chapter is applying the finishing touches to plans for the fourth in TSA's yearlong statewide series of "Town Meetings" on TEXAS: THE QUALITY LIFE. Previous meetings—in an attempt to establish better communication between the design profession and Texas citizens on "the quality life" as Texans envision it—have been held in San Antonio, Waco and Austin. Meetings are also scheduled this fall for Abilene, Amarillo, Beaumont, Corpus Christi and Dallas. Following is a summary of plans for the Houston session.

In an effort to stimulate creative responses to the challenges of growth in Houston, TSA's Houston Chapter has organized a conference entitled "In Search of Quality Growth" to be held the morning of September 29 at Houston's Hyatt Regency Hotel.

Co-sponsored by the Houston Chamber of Commerce, the City of Houston and the Harris County Commissioners Court, the conference will address the problems of growth through such areas of discussion as urban mobility, inner-city revitalization, parklands, the quality of working life and the growth experiences of other major urban areas.

In order of their appearance, speakers include Houston Mayor Jim McConn, Harris County Judge Jon Lindsay, KPRC-TV News Editor Ray Miller, Houston Chamber of Commerce President Louie Welch, American Institute of Architects Executive Vice President David Meeker Jr., FAIA, and U.S. Undersecretary of Commerce Dr. Sidney Harman.

Miller will moderate a panel discussion including Houston's Metropolitan Authority Chairman Howard Horne and prominent developer Gerald D. Hines, in addition to Lindsay, McConn, Welch and Meeker. An audience question-and-answer period will follow.

The meeting will conclude with luncheon and Harman's address. Harman, founder of the high fidelity equipment manufacturer Harman International Industries, Inc., is widely known as a major force in the development of work humanization programs and will address the subject of "the quality of working life."

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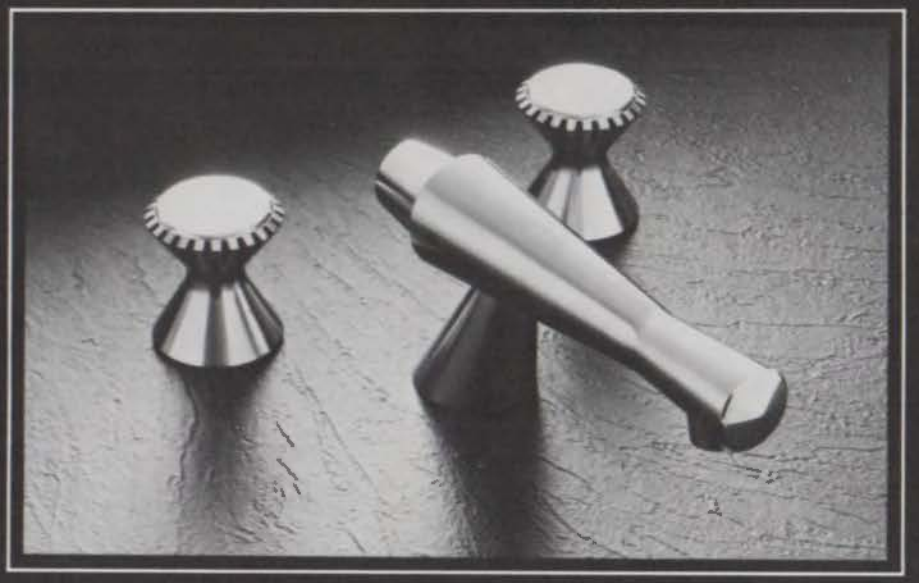

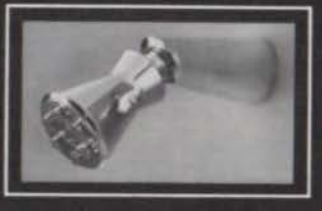

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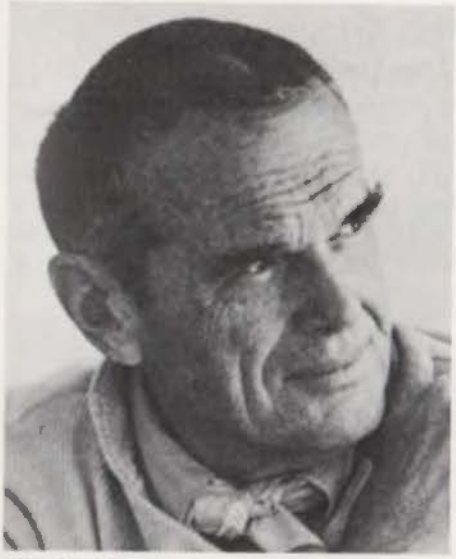
In the News



Charles Eames

Charles Eames Dies at Age 71

Charles Eames, noted architect, inventor, poet and filmmaker, best known for his classic chair designs, died suddenly in St. Louis August 21 at the age of 71.

Eames, whose "influence on 20th century design is unparalleled," said AIA Executive Vice President David Meeker upon learning of his death, received the AIA's prestigious 25 Year Award earlier this year for his home in Pacific Palisades, Calif. The house, built by Eames in 1949, established a tradition for modern residential design in the United States through the use of prefabricated steel.

In 1957 Eames received the Institute's Craftsmanship Medal for furniture design and in 1962 was awarded the AIA's Industrial Arts Medal.

Eames' popular chair designs include his molded plywood chair, developed with Eero Saarinen during the early '40s; the Fiberglass chair (1950), the classic "Eames Chair" (1956) and his special designs for tandem seating in Chicago's O'Hare Airport and Dulles Airport outside of Washington, D.C.

During the 1950s and '60s, Eames became increasingly interested in film and multi-screen presentations. He produced a multi-screen film for the U.S. exhibition in Moscow in 1959, using a technique which was elaborated for the U.S. Science Pavilion at the 1962 Seattle World's Fair. His filmmaking interest continued in the 1970s. He was working on a film about Monet in St. Louis at the time of his death.

Texas Project Chosen For ACA/AIA Exhibit

The Bastrop Federal Youth Correction Center, designed by the Houston firm Caudill Rowlett Scott, was one of 20 projects chosen from 43 entries as examples of current justice/correctional facilities design in the 1978 Exhibition of Architecture for Justice Facilities, sponsored jointly by the American Correctional Association (ACA) and the American Institute of Architects (AIA).

The 20 projects were exhibited at the ACA's 108th Annual Congress of Corrections August 20-24 in Portland, Ore.

Jurors considered such criteria as adequacy of program, aesthetics, grouping of functional areas, accessibility, flexibility, environmental controls, safety and site adaptation.

The 175,500-square-foot facility near Bastrop, scheduled for completion in November 1978, will feature one of the largest solar heating and cooling systems in the world, supplying about 60 percent of the facility's heating, hot water and airconditioning needs.

Bastrop Youth Correction Center.

The design of the 500-inmate facility is an attempt to blend a residential with an educational environment. Each inmate will have an individual room and will combine classroom work with an eight-hour workday. A "downtown" area will have an umbrella roof and will house administrative and visitor facilities, reception and discharge areas, laundry, commissary, dining room and clinic. For security, pre-cast or poured-on-site concrete will be used for the exterior and inmate windows will be made of "Lexon" plastic, first developed for windshields of 747 aircraft. The plastic will be laminated between two sheets of glass, providing as much security as the traditional barred window.

The 20 ACA/AIA Exhibit projects also will be displayed at the AIA Committee on Architecture for Justice regional seminar Oct. 4-6 in Boston.

Folk Art Survey Now Underway

A two-year survey of contemporary folk art in Texas, conducted by a Texas A&M University research team, is now underway in an effort to locate Texas folk artists, document their histories and exhibit their works for the public and posterity.

Principal investigator Patrick W. Ryan, an assistant professor of environmental design at Texas A&M, says the survey seeks to locate artists of the Texas folk or "naive" school, the "untrained, non-academic, non-imitative fine artists working in Texas."

Folk-art painting by Walter Cotton.

In addition to paintings, drawings and sculpture, the survey may encompass works not ordinarily considered to be "fine art," such as quilt-making, if the works exhibit the "fine art" quality characteristic of the true folk artist. "The works of the visionary, the primitive, the didactic, the religious, the conceptualist, the independent who creates because it is a necessary part of life," says Ryan, "are all of great interest."

Given the scope of the survey, Ryan says, architects, designers and artists can be of invaluable help in locating folk artists across the state. Interested persons knowing the identity and location of an artist and the nature of the work may contact Ryan at P.O. Drawer E.G., College Station, 77840. Telephone: (713) 845-1143.

TBAE Votes to Adopt IDP Resolution

The Texas Board of Architectural Examiners (TBAE) has voted to implement a resolution requiring experience in the 14 practical training areas outlined in the Intern Architect Development Program (IDP) syllabus for admission to the professional registration examination.

While formal enrollment in the IDP

still will not be mandatory, the TBAE vote means that satisfactory completion and documentation of IDP practical training criteria *will* be mandatory for all candidates who take the registration exam in 1981 and beyond. And the Board generally agrees that the best way for a candidate to satisfy that training criteria is as a full participant in the IDP. (See *Texas Architect*, March/April, 1978.)

To be eligible to enter the IDP, which will be administered by local TSA chapters across the state, persons must have an accredited professional degree in architecture or have passed sections A,B,C and D of the equivalency test currently offered by TBAE.

The Board urges candidates, whether enrolled in the IDP or not, to inform themselves of the scope of requirements and how to satisfy them as quickly as possible before taking the registration exam.

Persons interested in enrolling in the IDP may obtain forms and information from NCARB Headquarters, 1735 New York Ave., Suite 700, Washington, D.C. 20006.

Houston, Dallas Lead In First Quarter Housing Starts

Houston and Dallas lead in construction of new housing units nationwide in the opening quarter of 1978, according to McGraw Hill's F.W. Dodge Division Report released in July.

The report cites Houston as the most active housing area in the country for the period with 15,979 units, followed by Dallas with 9,473. Other leading housing areas during the first quarter of the year were Phoenix with 9,304 units, Riverside/San Bernardino with 7,999, Los Angeles/Long Beach with 7,784, Chicago with 6,807, Denver with 6,223, San Diego with 6,090, Seattle/Everett with 5,489 and Fort Lauderdale/Hollywood with 4,722 units.

The report indicates that total housing starts nationwide for the opening quarter increased 6.5 per cent compared to the same period last year. After adjustment for seasonal variations, however, the first quarter total for the nation showed an 11 per cent decline from the last quarter of 1977, attributed largely, the report says, to the unusually harsh winter weather during the early months of 1978. Looking ahead, the report predicts that rising interest rates and diminished availability of mortgage money point to a slowdown in residential building in the second half of 1978.

Architectural Drawings On Exhibition

"200 Years of American Architectural Drawing," an exhibit organized jointly by the Architectural League of New York and the American Federation of Arts, is now being shown at Fort Worth's Amon Carter Museum, continuing until Oct. 22.

The exhibit features over 200 drawings by more than 80 American architects,

Chicago Tribune Tower, Isaac Stokes.

from Thomas Jefferson to Frank Lloyd Wright to such notable contemporary architects as Paul Rudolph and Robert Venturi, representing a cross-section of American architectural drawing over the last 200 years.

The show was made possible in part by grants from the National Endowment for the Arts, the New York State Council on the Arts, the Graham Foundation and the Architectural League of New York.

Also featured during the Amon Carter exhibit is a film series on architecture presented each Tuesday and Thursday at 4 p.m. in the Amon Carter Museum Theater. The program includes short films on such topics as classical architecture, architects Frank Lloyd Wright, Louis Kahn, Eero Saarinen, I. M. Pei and Philip Johnson, film animation and computer graphics in architecture and conservation and preservation. Admission to the film series is free.

Historic Poster Series Available

A limited-edition series of nine serigraph posters, each featuring an historic structure in a Texas town, from the Pfeil "Sunday House" in Fredericksburg to the Cotton Exchange Building in Houston, is now available from TSA offices in Austin.

The colorful silk-screen posters were designed by James A. Bishop and Associates, Houston, to encourage interest in historic preservation in Texas and to single out some of the state's most historically significant architecture. Other buildings featured in the series are the Alamo in San Antonio, the House of the Four Seasons in Jefferson, the Lundberg Bakery in Austin, the Robertson House in Salado, the John W. Stafford House in Columbus, the Gresham House in Galveston and the Rummel House in Round Top.

The posters may be ordered individually for $5 apiece (plus tax) or as a complete series for $40 (plus tax).

Also available from the TSA office of interest to preservationists is *The Texas Historical Preservation Manual*, compiled and published by TSA's Historic Resources Committee to aid and educate architects and laymen in the increasing practice of preservation, restoration and adaptive reuse of older buildings across the state. Cost of the manual is $21.

Historic poster.

Shedding New Light On Solar Application

Some of love's first light has seemed to fade from the American infatuation with solar power, but a group of architects at The University of Texas at Austin think the relationship can be saved and nurtured.

Dr. Michael Garrison, assistant professor of architecture and director of the Integrated Solar Demonstration Project at UT-Austin, says there is a "very real possibility that the complete thermal-comfort requirements for a home at present standards" can be provided at relatively low cost by "passive systems," those

"Greenhouse" under construction.

which do not change the temperature mechanically. A total energy-demand reduction of up to 85 percent is possible, Garrison says, with effective "leak plugging" (insulation, weather stripping, storm windows) and a combination of passive systems designed for the region in which a home is built.

Funded by a $28,000 grant from the Texas Energy Council and a matching grant from the University Research Institute, the UT solar demonstration project is testing four such passive energy systems in the form of a "solar greenhouse," combining "high mass solar walls," an "earth-air heat exchanger," "solar chimney induced air movement" and a "solar greenhouse air-loop system." The idea is to determine the best materials to use and the most efficient ways to operate the systems and to adapt them for combined use in the Central Texas region.

A solar greenhouse differs little from an ordinary greenhouse—a translucent or transparent shell which allows a maximum of the sun's heat to enter a structure. For horticultural purposes, hot air

(up to 140 degrees Fahrenheit at the top, even in winter) is confined to the greenhouse. Allowed to circulate properly, however, that solar heat can bring warm air throughout the structure of a home. The hot air also can be circulated below the ground to raise the temperature of a dirt storage mass from 65 degrees to 75 degrees, to continue warming the home at night for up to a week if necessary. Since it uses diffuse as well as direct light—on which most solar collectors depend—a greenhouse system operates in both sunny and cloudy weather. And in summer, the circulating air in the greenhouse can be vented to cool the structure just as well as an attic fan.

The goal of the project, conducted by Garrison and fellow researchers David Smith, adjunct assistant professor, and graduate students Daniel Perez and Jeff Morris, is not to prove such systems work. None of the concepts is new, and each has been used successfully on an individual basis. Instead, in addition to testing materials, efficiency and adaptability to Central Texas, the research team hopes to develop locally available and relevant data on the systems in a form that can be used readily by architects and builders and ultimately to develop design criteria for use of the four systems in any part of the country.

Garrison says the increasing interest in passive energy systems has far-reaching implications for practicing architects as well as homeowners. If such systems are to work, he says, many professionals will have to return to school for continuing education in such systems and in the concept of regional architecture.

Dallas' Flying Horse Again Lighting Skyline

"Pegasus," the famous red-neon flying horse on top of Dallas' Mobile Building, is once again lighting the night skyline.

City crews restored the sign this summer and turned it on for the first time in about three years. The neon horse was one of the notable points of the Dallas skyline when the 29-story Mobile Building was the city's tallest structure.

"Pegasus," Dallas.

The building, which is listed in the National Register of Historic Places, has long since been surrounded by taller skyscrapers. The oil company gave the downtown building to the city last year and the city is offering it for sale.

As part of a designated historic landmark, the red horse is protected by the city's historic preservation ordinance.

Design/Build Briefing Planned

Responding to questions raised by the recent lifting of an ethical ban on design/build activities by AIA, a one-day legal briefing sponsored by *Architectural Record* magazine on drafting proper legal frameworks for design/build projects is scheduled for five U.S. cities beginning

September 8.

Entitled "Laying the Legal Groundwork for Design/Build Ventures" and conducted by noted Washington, D.C. attorney and architect Arthur T. Kornblut, the briefing will be held Sept. 8 at the Hyatt Regency Hotel in Washington, D.C.; October 20 at the Water Tower Hyatt House in Chicago; November 13 at Peachtree Plaza in Atlanta; December 15 at Century Plaza in Los Angeles; and January 15 at Houston's Hyatt Regency. The one-day session is limited to 30 persons in each location.

Structured primarily for top management members of architectural and engineering firms now engaged in design/build or considering entering the market, the briefing will cover, among other topics, the current climate for design/build, general principles of design/build liability, contract preparation, insurance coverage and bonds, implied warranty and strict liability, licensing and taxation, government regulations, organizing to engage in design/build projects and dispute resolution.

Registration fee for the briefing is $495 per person. Interested persons may register by contacting Charles Hamlin at *Architectural Record*, 1221 Avenue of the Americas, New York, N.Y. 10020. Telephone: (212) 997-3088.

Swimming Pool Design Seminar Slated

A swimming pool design and technical seminar, sponsored for the fifth straight year by New York swimming pool product manufacturer KDI Paragon, Inc., will be held Oct. 31 and Nov. 1 at the Americana Inn and Conference Center at Six Flags Over Texas in Dallas.

The workshop, featuring authorities in various aspects of swimming pool design, technology and use, is designed to expand the capability of architects and planners to obtain and handle commissions for commercial, industrial, club and school swimming pools.

Entitled "The State of the Art in Swimming Pool Design," this year's seminar theme will focus on market requirements and technology, featuring a slide show and descriptions of outstanding natatorium designs from around the world.

Interested persons may obtain more information about the seminar by contacting KDI Paragon, Inc., 12 Paulding St., Pleasantville, N.Y. 10570. Telephone: (914) 769-6221.

News of Firms

West & Humphries Architects, Inc., Dallas, has announced the relocation of its offices to the Metropolitan Savings Tower, 5944 Luther Lane, Suite 707, Dallas 75225. Telephone: (214) 363-9700.

Joseph C. Freeman, Architect, has announced the opening of offices at 4105 Ave. D, Austin 78751, for the general practice of architecture with special emphasis on restoration and adaptive re-use.

Hans C. Jensen, C. David Kelley and Steven Peters have been named associate partners and John A. Oualline and Joseph W. Santamaria have been named associates of the Houston firm **Pierce Goodwin Alexander, Architects, Engineers, Planners.**

Anthony Frederick, Architect, Houston, has announced the addition of Donald Echols to the firm as a project manager.

Project Designer Don Hertel has been named an associate in the Houston firm **Rapp Fash Sundin/Incorporated.**

The Brooks Association for Architecture and Planning, with offices in An-

gleton and Houston, has announced the relocation of its Houston office to the Stewart Title Building, 2200 West Loop South, Suite 895, Houston 77027. Telephone: (713) 871-0667.

Houston-based **3D/International** has announced the promotions of James L. Anderson, James H. Joiner, Peter L. Kusnerz and Charles B. Richardson to associates in the firm's architecture and interior architecture divisions.

John W. Gary, former partner in the Big Spring firm Gary and Hohertz, Architects, has announced the formation of the firm **Gary and Company, Architects/Planners,** 1510 Scurry St., Big Spring 79720. Telephone: (915) 267-3151. Associated with the new firm are senior associate Ron K. Gilmore and junior associates Lonnie F. Gary and James Richard Gilliland.

Austin architects David Graeber, A. M. Simmons and Tommy Cowan have announced the formation of the firm **Graeber, Simmons, Cowan, Architects,** with offices located at First Federal Plaza, 200 E. 10th St., Austin 78701. Telephone: (512) 477-9417.

The Houston firm **Brooks/Collier** has announced the expansion of its staff and the relocation of its offices to the Design Center, 3133 Buffalo Speedway, Houston 77098. New members of the firm are project manager Harry A. Harwood and Craig A. Kress, in charge of material and building systems technology.

Clovis Heimsath Associates, Architects, Planners and Energy Consultants, with offices in Fayetteville and Houston, has announced the appointment of Harold Carson as a managing partner in the Houston office and Brad Cutright as project architect and photographer in Fayetteville.

Austin's Tips Building Bought for Restoration

One of Austin's most architecturally and historically significant buildings, the 101-year-old Tips Building on Congress Avenue, has been purchased for restoration and reuse by Austin's Franklin Savings Association.

Tips Building, late 1870s.

Charles Betts, president of the savings group, said restoration of the building's facade will begin in March 1979. Project architect will be John Klein, of Bell, Klein & Hoffman, restoration architects of Austin.

Franklin bought the building from the Austin Heritage Society for $190,000, $50,000 of which came from a Texas Historical Commission acquisition grant.

The Heritage Society bought the building last year because it considered it "one of the most important buildings on Congress Avenue," according to Mary Margaret Albright, first vice president of the society. The building's historical and

architectural significance lies in the fact that it was built by one of Austin's first industrialists, successful hardware merchant Walter Tips, and was designed by Austin architect Jasper Preston, who also designed Austin's famous Driskill Hotel and other stylistic Victorian buildings in Austin. (See *Texas Architect*, May/June 1978.)

The Tips Building restoration will be Franklin Savings' fourth such project in the Austin area.

Industry News

American Hot Tub Industries, Dallas, has announced the introduction of a new 24-hour hot-tub system. For a detailed brochure, interested persons can contact John Fournier, 13270 Midway Road, Dallas 75240. Telephone: (214) 239-1194.

Castlebury-Held Handprints has introduced a new pattern in its Dallas Decorative Center showroom collection of wallcoverings and fabrics. Entitled "Francesca," the custom pattern is an adaptation of a detail in the fresco of the Mission San Jose in San Antonio, the queen of the chain of historic Spanish missions

"Francesca."

in Texas. Representing a number of major wallcoverings and fabric lines, Castlebury-Held has developed its own collection not to compete with its manufacturers but to "fill some gaps in the various lines," says Steve Castlebury, "and especially to create some designs that are regional in their inspiration."

Walker & Zanger, ceramic tile and marble importer headquartered in Glendale, Calif., has announced the opening of two new showrooms in Houston, one at the Decorative Center, 5120 Woodway, and one at 11500 South Main. General manager of the Houston office is Peter Maskell.

David Sutherland, Inc., furniture, wallcovering, carpet, lighting and hardware distributor, has announced the opening of a new showroom at the Decorative Center in Houston, 5120 Woodway, Suite 120, Houston 77056. Telephone: (713) 961-7886.

Terra Firma Tile Company in Dallas now features custom tiles designed, baked, glazed and painted by tile designer Dorothy Davis, one of only a few tile artisans in the Southwest who specialize in the Majorca faience technique, a centuries-old glazing process. Davis gained her experience in tile design and production during a four-year apprenticeship with a small tile company in Grimaud, France. Her Terra Firma designs range from tiles for the bathroom to the kitchen to the swimming pool and can be originals or reproductions of existing designs. Terra Firma Tile Company, 2906 N. Fitzhugh, Dallas 75204. Telephone: (214) 827-0552.

Karl Mann Associates, a New York-based art, tapestry and furniture distributor, has announced the opening of a new gallery at the John Edward Hughes Showroom in Dallas' Oaklawn Plaza, 1444 Oaklawn Plaza, Suite 100, Dallas 75207.

DOE Workbook Now Available

An energy conservation workbook for architects and builders outlining energy-saving techniques, materials and equipment for use in energy-conscious design has been published by the U.S. Department of Energy (DOE).

The 423-page document, entitled *Minimum Energy Dwelling (MED) Workbook*, is intended to encourage residential builders to use energy saving concepts in future developments. Compiled as a result of a joint government/industry energy savings demonstration project in two houses in Southern California, the workbook explains how architects and builders may implement tested techniques in design, construction methods, building materials and solar energy together with conventional space heating and cooling and hot water systems.

The workbook is available for $9 a copy from the National Technical Information Service, Port Royal Road, Springfield, Va., 22151. Telephone: (703) 557-4650.

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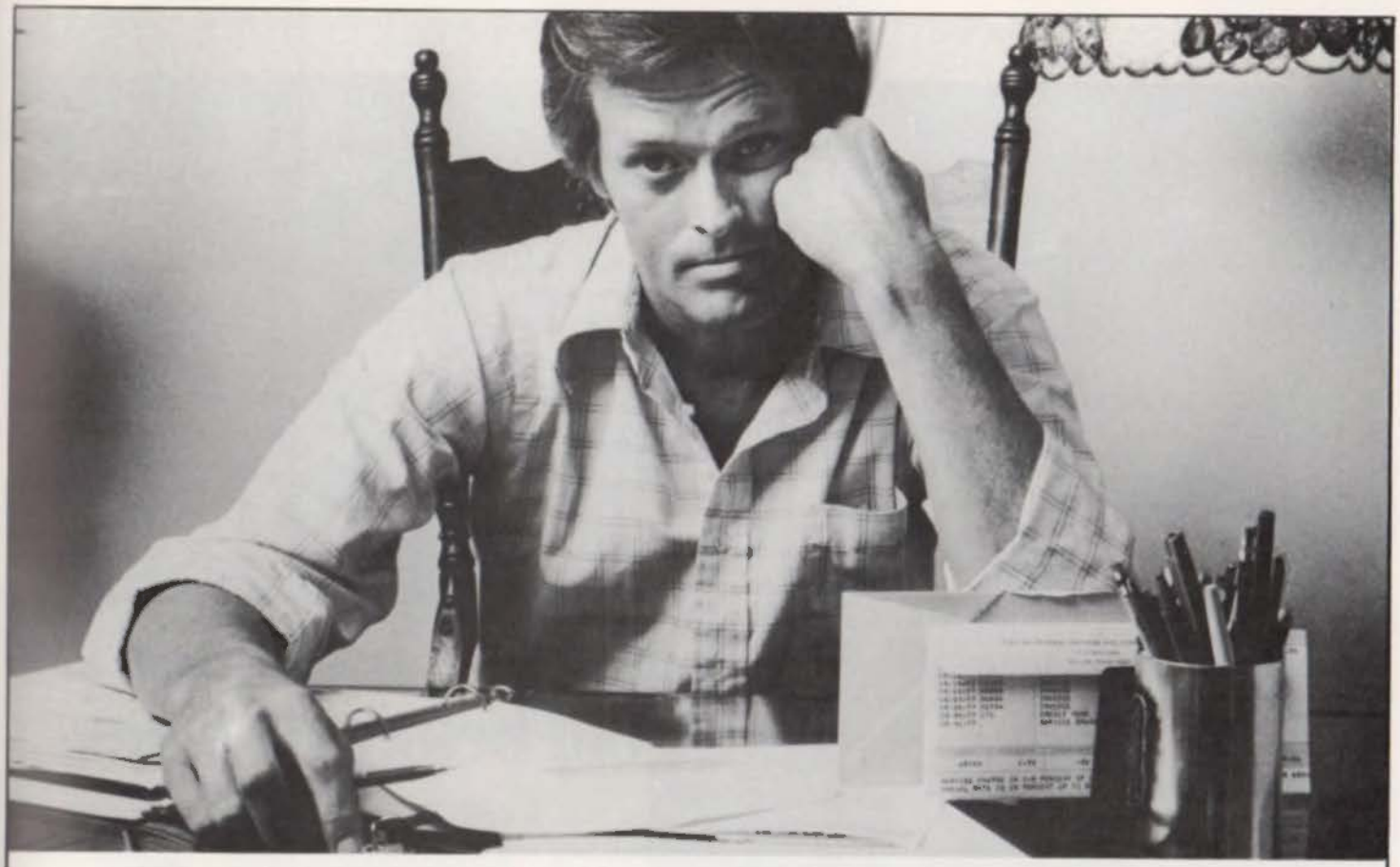

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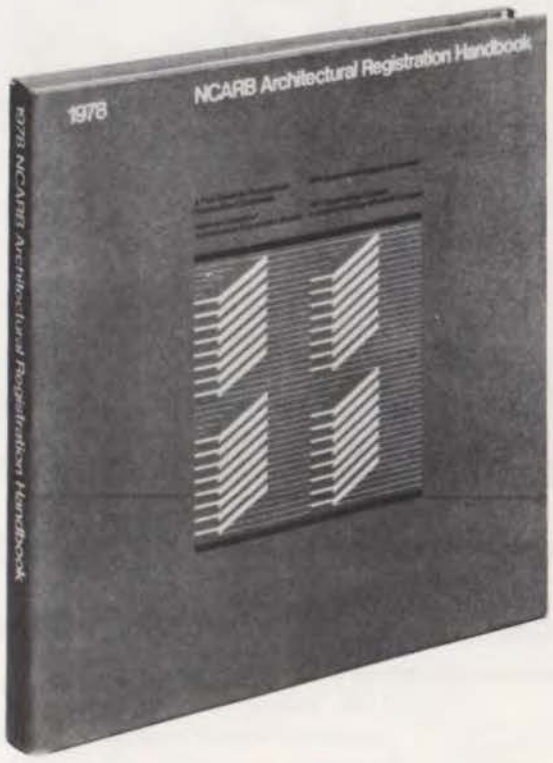

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Letters

Editor: The article "Religious Architecture and the Rebirth of Imaginative Vision" in the July/August issue of *Texas Architect* does this office somewhat of an injustice. I fully realize this was unintentional. I refer specifically to the passage: ". . . Mission Concepcion site for a festival of performing arts, and on to the campus of Trinity University, which is graced by the architecture of O'Neil Ford, one of the Congress' honored guests." To take nothing away from O'Neil Ford's creative contribution to the design of Trinity University, I would like to cite a few facts of which the author may not have been aware:

- In 1947-48, I made the feasibility studies of three possible sites for Trinity University, resulting in recommending the present site. O'Neil was not involved with the project at that time.
- Originally, the University's Board of Directors selected Harvey P. Smith, Sr., and me as architects for the new university. Smith was later replaced by O'Neil Ford.
- O'Neil and I entered into a joint-venture agreement in October, 1951, to perform architectural services for Trinity University on a 50/50 basis.
- Although O'Neil has taken the lead in designing the buildings, this office has made major contributions in the areas of construction drawings, contracts and job management as well as having been consulted during the design phase.

So it is somewhat unfair to this office to mention only O'Neil Ford and not give us our due credit. I take it upon myself to do so only to set the record straight.

Bartlett Cocke, FAIA
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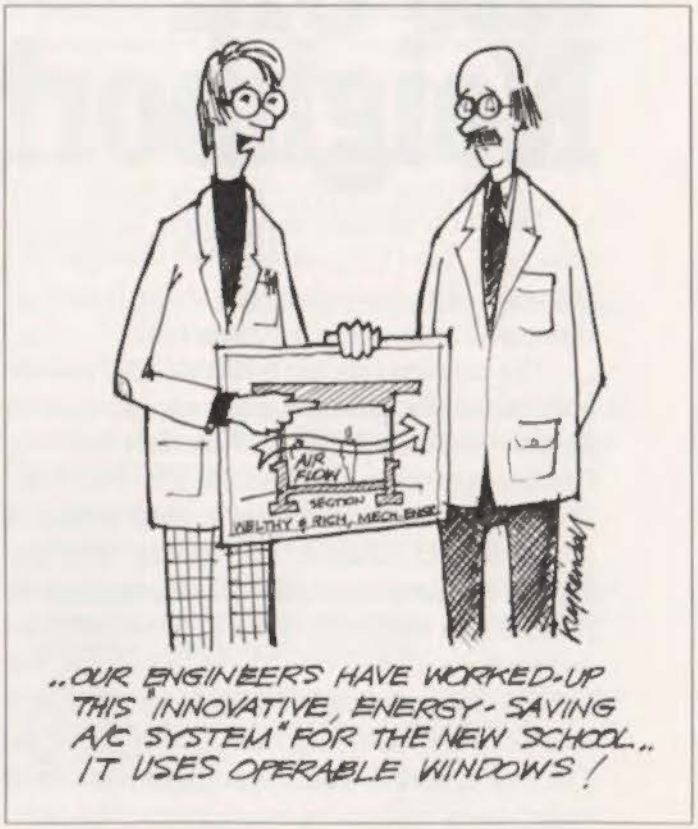

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