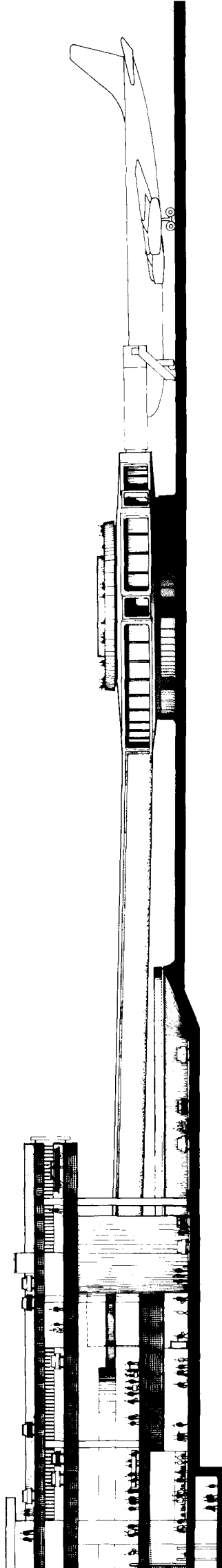


IA JOURNAL

SEPTEMBER 1970





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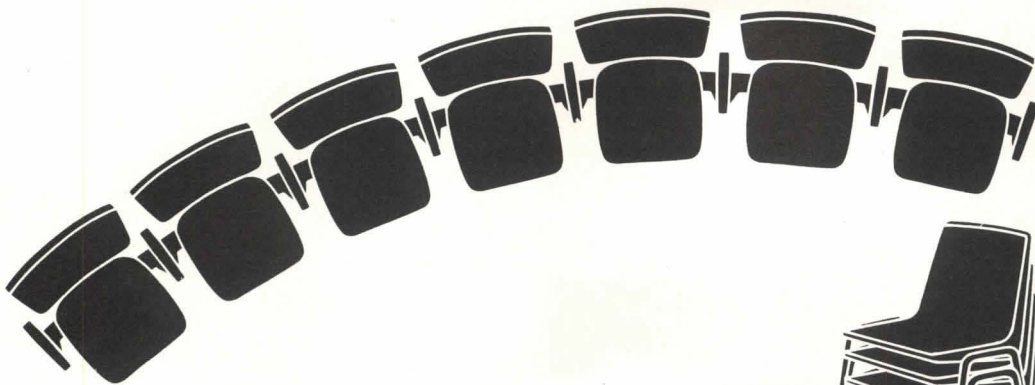
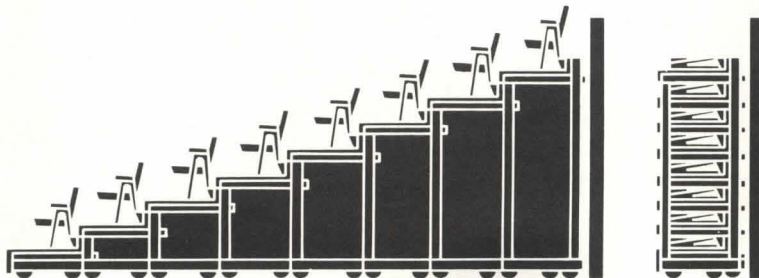
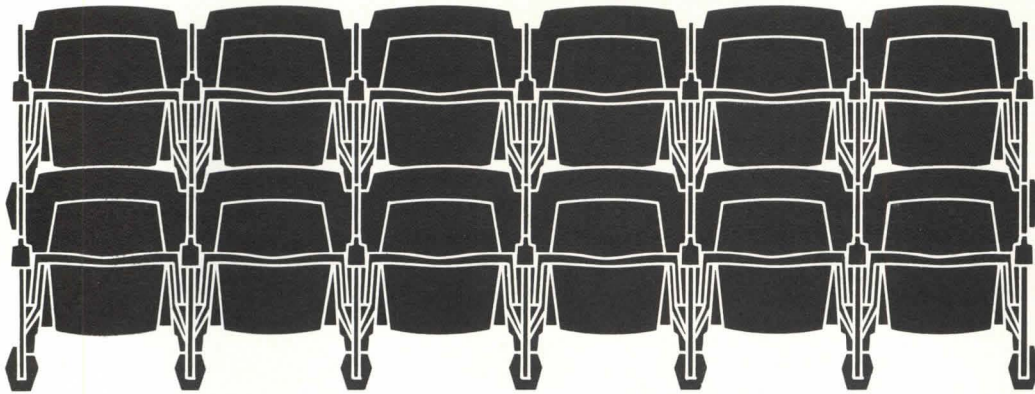
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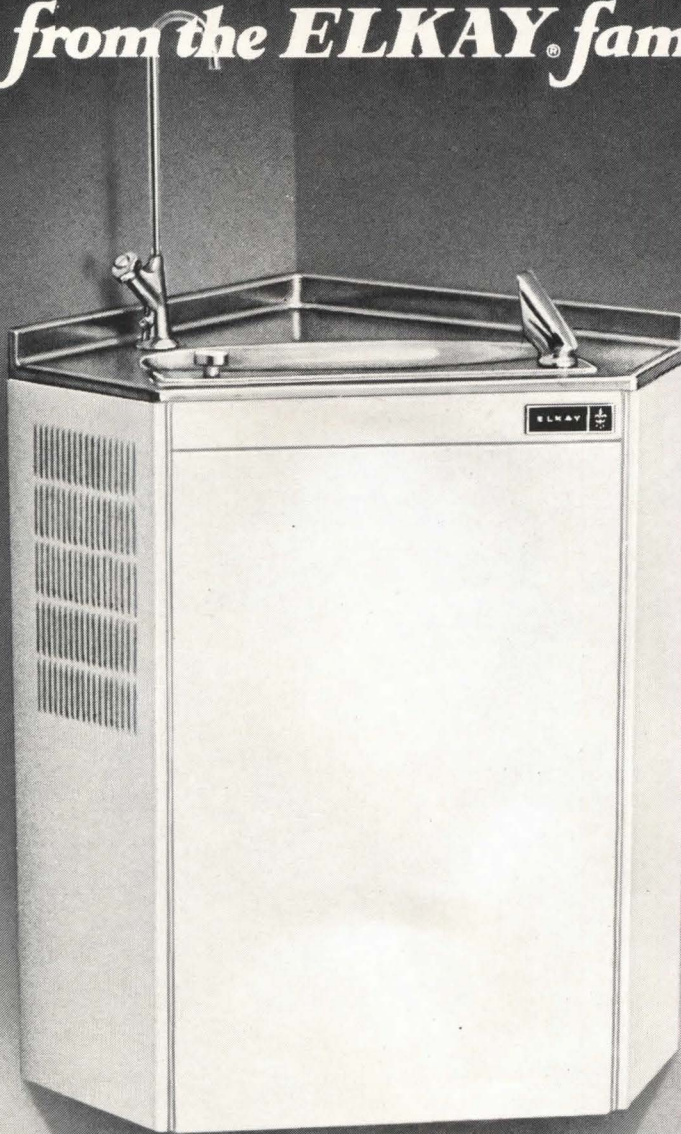
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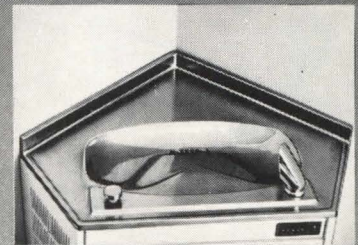


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AIA JOURNAL

SEPTEMBER 1970

Bess Balchen	THE HOVERING PROBLEMS OF AIRPORTS	33
	<i>They are many and they are complex, but overshadowing all others is the matter of funding</i>	
	VERY MUCH DOWN TO EARTH: PLANNING THE AIR TERMINAL	34
	<i>Some present-day facilities with data on walking distances, curbspace, parking, size, etc.—and cost</i>	
Ansel E. Talbert	FOR THE JOY OF AIR TRAVEL: MORE AMENITIES BELOW	44
	<i>The pain of hanging around the airport may turn to pleasure at last for temporarily grounded passengers</i>	
Bergthor F. Endresen	CRUX OF THE MATTER: SYSTEMS TO KEEP THEM FLYING	46
	<i>Good layout of service, check-out and refueling systems gets them off again fast, up where the money is</i>	
John G. Duba	TO CHECK THE HIGHFLYING DOLLAR: CLOSER TEAM COOPERATION	50
	<i>It's a must if we ever want to provide functional, efficient terminals for the funds we have available</i>	
	BOSTON 1970	53
	<i>President's message; proposed bylaws and resolutions; 'Day of Awareness'; Task Force on Professional Responsibility; keynote address; London speech; ACSA</i>	

DEPARTMENTS

Comment and Opinion	6	Events	80
Outlook	10	Letters	81
Institute Page	28	Advertisers	83
Books	78	Service Information	84

COVER

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VOL. 54, NO. 3

comment and opinion

REFLECTIONS ON BOSTON: The 102nd convention of The American Institute of Architects is now history, but the ramifications of what happened there will be felt in the AIA and in the profession generally for years to come. It is apparent that a goodly number of members left Boston harboring many more questions than were answered during the week of June 21, as is suggested in our Letters department this month. A half-dozen or so issues debated on the floor were controversial and complicated, to say the least, and 1970 will go down as a year in which the delegates definitely did not sit on their hands. Even before the convention got underway, the assistant secretary, J. Winfield Rankin, HON. AIA, remarked, "In my 23 years with the Institute's staff, I have not seen such an array of business session topics, touching on so many areas of the architect's work and the nation's needs."

It is not my purpose here to get involved in any of the proposed bylaw changes and resolutions. What action was taken on each and every one is reported in our convention coverage; and we have attempted to capture the flavor of the pro and con arguments on all of the major issues, with two exceptions: the California amendments dealing with mail ballots for 1) election of officers and 2) bylaw changes and policy questions; and the new membership classifications and qualifications — all of which were spelled out in a preconvention notice. The discussion of these defeated measures was so confusing, particularly in view of procedural questions which kept popping up, that an understandable recap in the space allowed is not feasible. It is our hope, however, that these matters, which undoubtedly will come up again next year, can be aired in the AIA JOURNAL prior to the Detroit convention.

Perhaps just as significant as what transpired in Boston and its aftermath is another, broader-in-scope consideration that is being discussed more and more today: the validity of the convention process itself. For example, A. O. Bumgardner, AIA, editorializing in the July issue of *Environmental Design: West*, raises some doubts: "The idea that the AIA — as a national organization — can do its business on the convention floor as a town meeting is a myth. There are far too many members. . . . Should Grassroots conferences be expanded for the real business of the profession? Should the national convention be purely ceremonial? Is it already?"

Getting back to Boston, Monday-morning quarterbacking of each previous convention seems to have become a favorite sport of the membership, so I would like to throw my ideas into the hopper. My suggestions are that:

1. The business session be conducted as a continuous unit on two successive days, say, Tuesday and Wednesday.
2. Greater emphasis be placed on the professional program to make the convention more meaningful to the practitioner in terms of seminars, workshops, etc. And what has happened to that stimulating speaker who, on some occasions in the past, brought the audience spontaneously to its feet with cheers?
3. The Awards Luncheon, which has always been a most pleasant affair and really does not conflict with anything else on the calendar, be reinstated as a regular function. This year's experiment with the awards presentation during the business session cut into time badly needed by the delegates.
4. The logistics of the Host Chapter Party be kept simple. Another thought: Replace that event with the popular at-home parties.

ROBERT E. KOEHLER

ACKNOWLEDGMENTS

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37—Sandy Gandy
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42—left, Eastern Airlines: Lee C. Bright;
right, Bert Brandt & Associates
43—below right, Eastern Airlines: Lee C.
Bright
45—International Air Transport Association

46—left, Department of Transportation;
right, George Cserna
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NEXT MONTH

"One of the most pervasive changes in education in recent years has been brought about by the development of a potent educational 'technology.' Where the educator once depended upon words and chalk to communicate, educational technology now provides him with a vast array of resources with which to do the job. Projectors, recorders, television, teaching machines, audio laboratories, dial-access systems and computers are being utilized to communicate new experiences to both individual and group learners."

So begins the leadoff presentation, co-authored by two staffers of the Center for Architectural Research at Rensselaer Polytechnic Institute, with the cooperation of the AIA Committee on Architecture for Education. The result is truly a resource document, a working guide for the architect, complete with bibliography.

Other features for October: A Los Angeles architect raises some pertinent questions about definitive master plans and asks if a more realistic approach, as the scale becomes even larger, is a set of guidelines of quality spelled out and really enforced by ordinance; the architect-president of Production Systems for Architects and Engineers, Inc., reviews what has been accomplished with its first production system, MASTERSPEC, and evaluates the service PSAE has to offer architectural/engineering firms; and the dean of the School of Architecture and Environmental Design at Buffalo describes the thinking behind that new institution in one of several articles in the Architectural Education section, the second of this year.

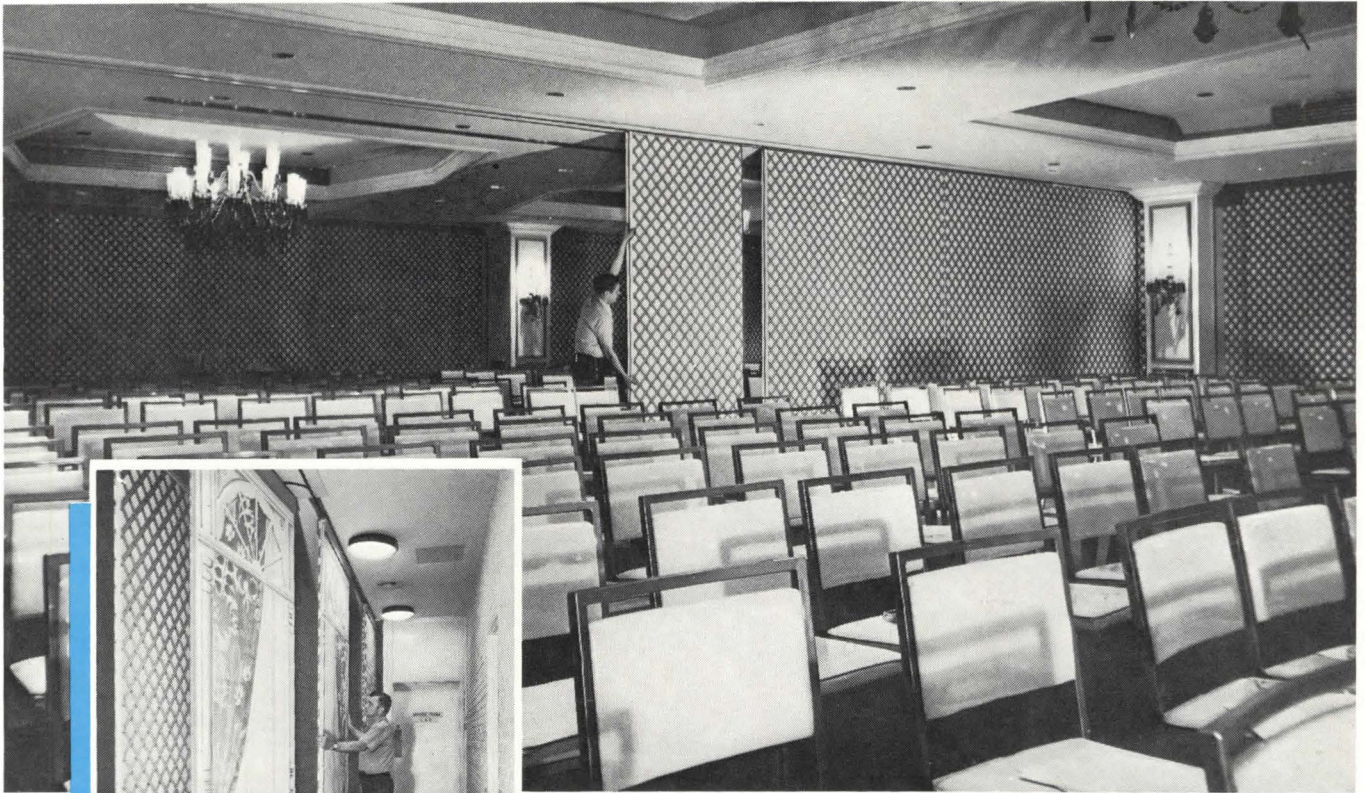
ASIDES

Those involved with airport design have a time-consuming and complex — and probably quite frustrating — job on their hands. What they don't need is an extra factor to cause additional work. But what the designers of the six facilities presented on pages 35 to 41 have had in recent weeks is just that, when the AIA JOURNAL asked them to get together specific facts and figures on their respective projects.

However, now that it's all over, we are left with the impression that it was all fun and no work. The cheerful cooperation from each one gives cause to express our gratitude. And this goes for everyone else involved in the making of our section on airports: the Federal Aviation Administration, the Air Transport Association, the various airlines and others. It's heartening to see that there's still time for courtesy and goodwill in this hectic age in which we live.

As a footnote, your editor would be remiss not to give special recognition regarding the 20-page presentation. While the contents of any single issue and/or section normally represent input from the entire editorial staff in one way or another, in this particular case the planning, assembling and editing has been the work of one individual: Bess Balchen. Another bouquet goes to our art director, Suzy Thomas, who has painstakingly redrawn a large share of the plans of the airports shown. □

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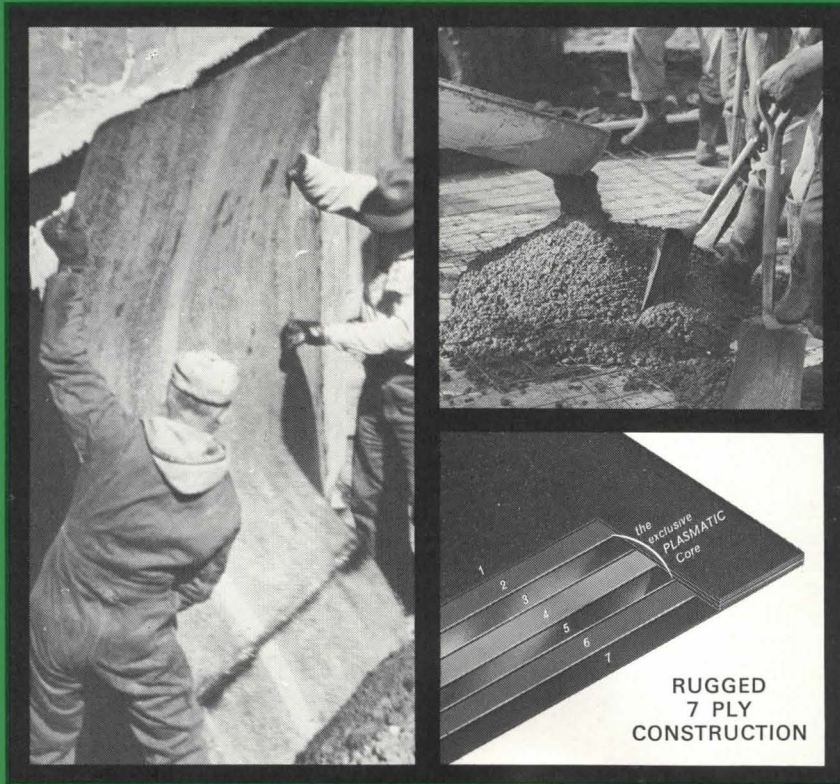
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Santa Barbara Channel Controversy Is Real Test for Environmental Quality Control Act

"There can be no choice but to remove all oil operations from the Santa Barbara Channel as soon as possible," said Robert Cleveland, president of the Santa Barbara Chapter AIA, in testimony on July 22 before the Senate Interior Subcommittee on Minerals, Materials and Fuels, chaired by Senator Frank E. Moss (D-Utah). Cleveland said architects and California residents of the coastal area fear "more oil spills, certainly," unless drilling stops.

William L. Slayton, AIA executive vice president, also testified at the hearing, at which time the AIA asked Congress to create a marine preserve in the Santa Barbara Channel and a national park of the Channel Islands to protect the scenic passage from oil spills and other hazards.

The AIA, backed by a resolution from its convention in Boston, supports bills by California Senators Alan Cranston (D) and George Murphy (R) as well as Senator Edmund S. Muskie (D-Me.), Cleveland explained. The combined effects of these bills would be a permanent stop to drilling in the entire channel.

Cleveland said the Institute opposes the

Administration's bill outlined by Interior Secretary Walter J. Hickel, which would cancel 20 oil drilling leases and establish a federal marine sanctuary in 198,200 acres. Critics of the bill say drilling would still be possible in some 650,000 acres not covered by the proposal. Cleveland, terming it a "little plan," called for a big one that will turn the tide against those "who would despoil our environment for the sake of personal gain." The AIA takes the position that it would not make sense to "protect the waters and sea floor of the channel and then abandon its islands" threatened by "exploratory oil drillings, unwise real estate development and bombardment by Navy practice missiles."

Slayton said that the Santa Barbara oil drilling issue is an early test of how effective the Environmental Quality Control Act of 1969 can be. He said that the AIA backed the law and commends the public and Congress for organizing to deal with environmental perils. Slayton also supported creation of a new Environmental Protection Administration and the Oceanographic and Atmospheric Administration as significant attempts to deal with pollution problems.

In Buffalo, Louis Sullivan's Art Is Still Respected, Treated with Loving Care

It's always a delight to report good news, and good news it is when an architectural masterpiece from the past is handled lovingly by its current owners. Nearly half a century after the death of Louis Sullivan, his decorative style is still preserved in his last steel-framed skyscraper in Buffalo.

From its base to a frieze capping the 13th story, the 75-year-old Prudential Building's exterior is covered with geometric patterns cast into its clay sheathing. Arched lunettes receive careful artistic attention.

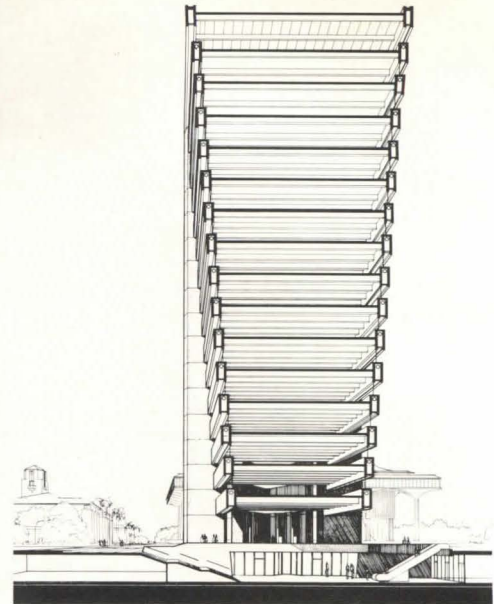
In the most recent modernization project, plate glass windows of the ground floor are being pushed back four feet to show the full beauty of Sullivan's columns and to create a colonnade effect congenial with new buildings in the city's business district. This eliminates the forward projection of the windows which had been ordered to enlarge window display space, probably over the vigorous protests of Sullivan.

No changes have been needed in the building's original steel framing. A few years ago, Bethlehem Steel Corporation structural shapes were used in the construction of a penthouse for automatic elevator equipment. A specimen of the 75-year-old steel frame was analyzed to be sure it could carry the additional load on the roof. It could. Sullivan had designed for the future.

As a postscript, David S. Arnold, assistant director of publications for the International City Management Association, has written the Institute that some kind of "commendation should go to the Peoples Federal Savings and Loan Association in Sidney, Ohio, for the way they have taken care of their building which was designed by Louis Sullivan in 1917." Described as a "handsome red brick structure with striking mosaics on the exterior," the building has been in active use ever since it was built. "The air cooling system that Sullivan installed," states Arnold, "has been modified to provide a full airconditioning system. The vault, installed by the Mosler Safe Company, is still in use."



Modernization continues at Prudential, but Sullivan's ornamentation is preserved.



Uninterrupted glass openings the length of each floor provide views of mountains, sea. State Capitol and City Hall are neighbors.

Statewide Competition Presents Honolulu with Tiered Tower

"Powerful, direct and beautiful" are the adjectives used by the five-member jury in describing the winner in the competition for Honolulu's Municipal Office Building. The award went to the design team of Dixon Steinbright, Shizuo Najita and James Walter of the Honolulu office of Naramore, Bain, Brady & Johanson, with William M. Svenson, AIA, architect in charge.

The winning design is for a 16-story, reinforced concrete building, tiered in effect, affording larger office space at the top. The ground floor is an open courtyard for a see-through public area, suitable for effective landscaping. The jury based its selection on strict rules embracing functional architecture and accommodations, conforming to a budget of \$8 million.

The first prize award carries a cash payment of \$20,000, which is considered an advance payment of fee for architectural and engineering services.

The five-man jury included three from Hawaii: Thomas H. Creighton, FAIA, planning consultant for the University of Hawaii; Fujio Matsuda, director of the State Transport Department; and Albert Hamamoto, local contractor and engineer. The other two members were George T. Rockrise, FAIA, vice president of the AIA, and Charles D. Stickney, AIA, winner of a similar municipal competition for a new civic center in Los Gatos, California. Professional adviser was A. Bruce Etherington, AIA, head, Department of Architecture, University of Hawaii.

Architectural Inquiry to Be Considered At November Conference in Cincinnati

Current research by architects and nonarchitects on a wide range of problems affecting how Americans live will be highlighted at a major conference on architectural research in Cincinnati on November 1-3. The seventh

continued on page 16

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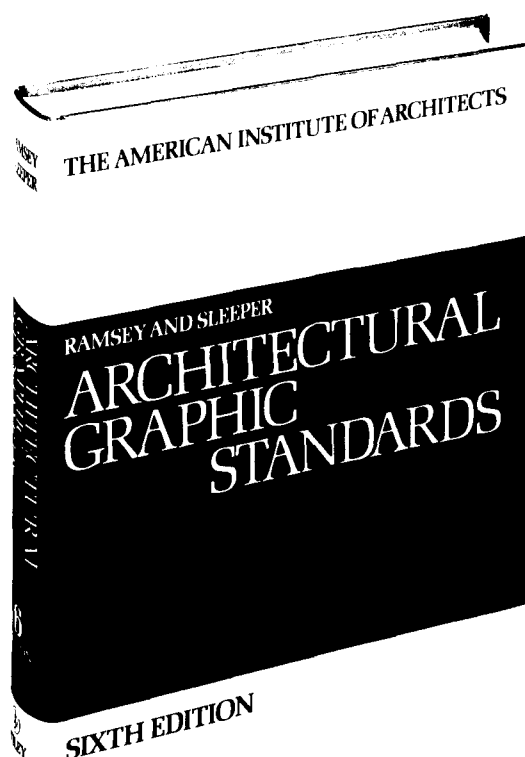
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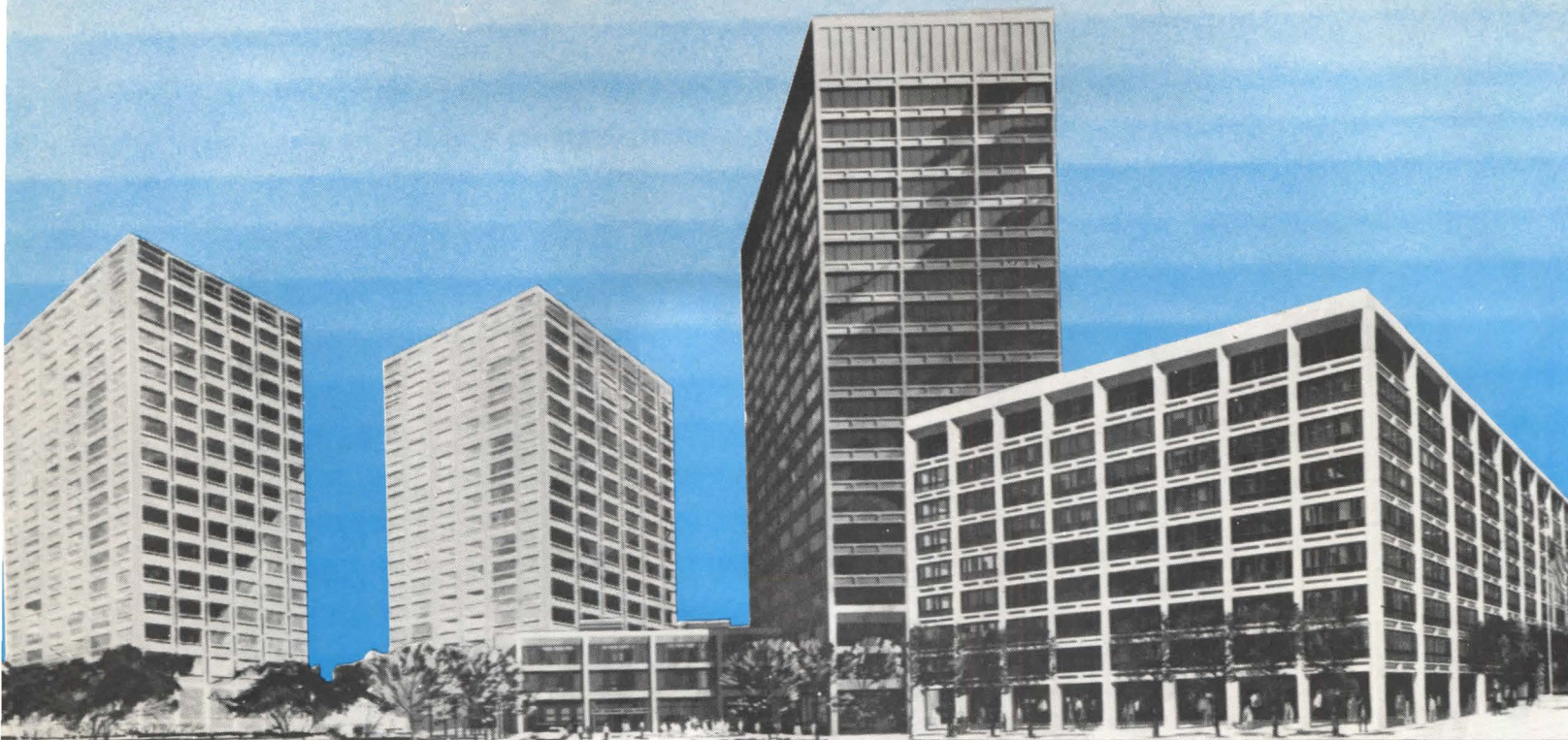
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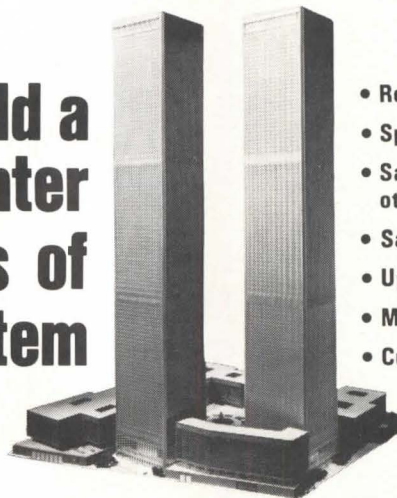


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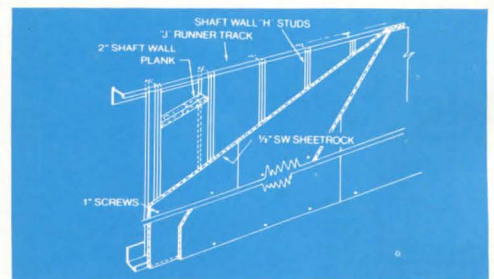
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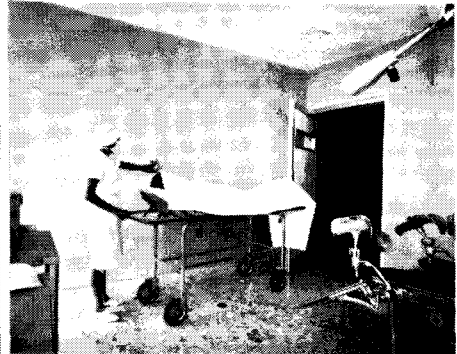
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annual Architect-Researcher's Conference is co-sponsored by AIA's Department of Education and Research and the Department of Architecture at the University of Cincinnati.

About 30 research papers on such subjects as design of courtrooms, industrialized housing, computer applications, shelter for American Indians, urban transportation and behavioral patterns will be presented. About 300 participants are expected to attend. Papers presented at this year's conference will appear in the fourth annual publication of the proceedings of the conference; abstracts of the papers will be published in the October AIA JOURNAL.

Detroit's Robert F. Hastings, FAIA, who will assume the presidency of the Institute in December, will discuss the AIA's attitude toward research and its implications for future policy.

A feature of the conference will be a symposium on new directions in environmental design graduate education. The panelists: William H. Ittelson, City University of New York; Roslyn Lindheim, University of California, Berkeley; and Raymond G. Studer, Pennsylvania State University.

The conference will be held at Stouffer's Cincinnati Inn. Information and registration material may be obtained from Professor John M. Peterson, AIA, Department of Architecture, University of Cincinnati, Cincinnati, Ohio 45221.

Peruvian Needs Grow Greater Day by Day As Appeal for Help Goes Out to the AIA

The terrible earthquake which devastated many parts of Peru is still taking its toll. The Institute received a request from Secretary General Jamie L. Marqués, FAIA, of the Panamerican Federation of Architects' Associations to give its moral support and sympathy to Peruvian colleagues. Members of the federation are called upon to collaborate with Peruvian architects in helping thousands left without homes and still suffering hunger, cold and sickness.

Marqués, who is located in Montevideo, Uruguay, asks AIA members for any kind of contribution — medicine, provisions, shelter articles, clothes, money — to help relieve the Peruvian desolation.

Donations may be sent to the attention of architect Juan Francisco Benites Dubeau, Colegio de Arquitectos del Peru, Avda. Arequipa 3420, San Isidro, Lima, Peru.

Chicago Library Acquires a Bit of Mies With 400 Books from His Collection

The books a man possesses afford an insight into his interests, his philosophy and his personal values. Future scholars who want to know more about Mies van der Rohe will be aided in the search by a study of the 400 volumes from his personal library now located at the University of Illinois Chicago Circle Library.

The books represent one of the largest collections of Mies' belongings remaining in the city where he worked and lived nearly half his life. His personal papers are now in the Library of Congress and his drawings in the Museum of Modern Art in New York.

When the AIA Gold Medalist came to the US in 1938, he brought little with him but his books. According to Richard Seidel, Chicago Circle librarian, many of the books in the collection deal with philosophy and, surprisingly perhaps, with biology.

Canton Bears the Stamp of Firestone, Both in Buildings and Civic Deeds

Charles E. Firestone, FAIA, discovered he was afraid of electricity back in the early part of this century when he was studying electrical engineering at Ohio State University. That's why he transferred to the University of Michigan and took up architecture. He worked in several Detroit firms before coming to Canton, Ohio, in 1915, where he continued his architectural practice.

Firestone designed scores of the most prominent industrial, educational, commercial, public and residential buildings in north-eastern Ohio. Among them are Fawcett Stadium, the old Canton Post Office, Timken Vocational High School, Walsh College and the Canton YWCA.

Almost until the time of his death on July 13 at the age of 80, Firestone was prominent in civic and professional affairs. He served as president of the National Council of Architectural Registration Boards and the Society of Architectural Examiners. He was a member of the Ohio State Board of Examiners for Architects for 20 years. At one time he was president of the Eastern Ohio Chapter AIA and of the Architects Society of Ohio. He served as chairman of the editorial board of the *Ohio Architect* for a time.

In addition to his many other professional duties, Firestone was a member of the building commission that established the building code and building department in Canton. He was vice president of the Home Savings & Loan Co. in Canton and chairman of the Canton Water Commission.

Deaths

- JAMES H. FULLERTON
New York City
- SILVIO PETER MARRACCINI
San Francisco
- JOHN C. MCEWEN
St. Louis
- CONSTANTINE A. PERTZOFF
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- LAWRENCE B. SORENSEN
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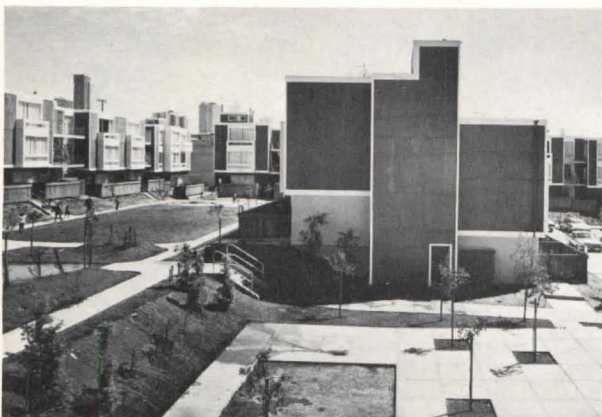
Martin Luther King Square Offers Stoops, Lessons for Blacks and Whites Alike

The stoop is an architectural form inherent in many older neighborhoods. The crowded slum apartment dweller views the street as an extension of his living area, and the stoop becomes a traditional meeting place. Backyards are too isolated and are infrequently used in an urban environment. The upper or middle classes may find the street unfriendly and alien, but the lower income dweller views it as a place for meeting friends and for children to play.

These are among the findings in a report entitled "Designing for Street Life" by the architectural firm Kaplin & McLaughlin of San Francisco and New York. The report is based on observation and interviews with lower income residents, predominantly black,

in the neighborhoods of San Francisco and Oakland. Martin Luther King Square in San Francisco has been conceived to conform to the report's findings whereby the living habits of the occupants are taken into account without the imposition of new and uncomfortable standards.

The report on street life recognizes that the street is no longer as safely used as it once was. Therefore, in the Martin Luther King Square, consisting of 60 townhouses and 50 apartments, the porches or stoops are surrounded by fences which allow a relationship to the street and also provide shelter. The porches offer living area, a vantage point to watch children in the playgrounds and a place to chat with neighbors.



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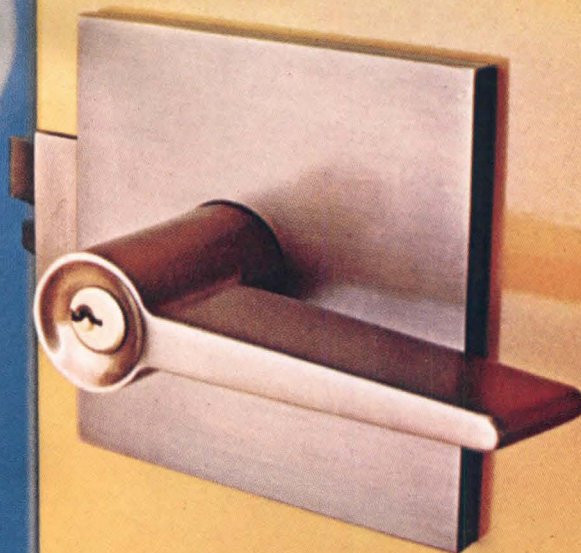
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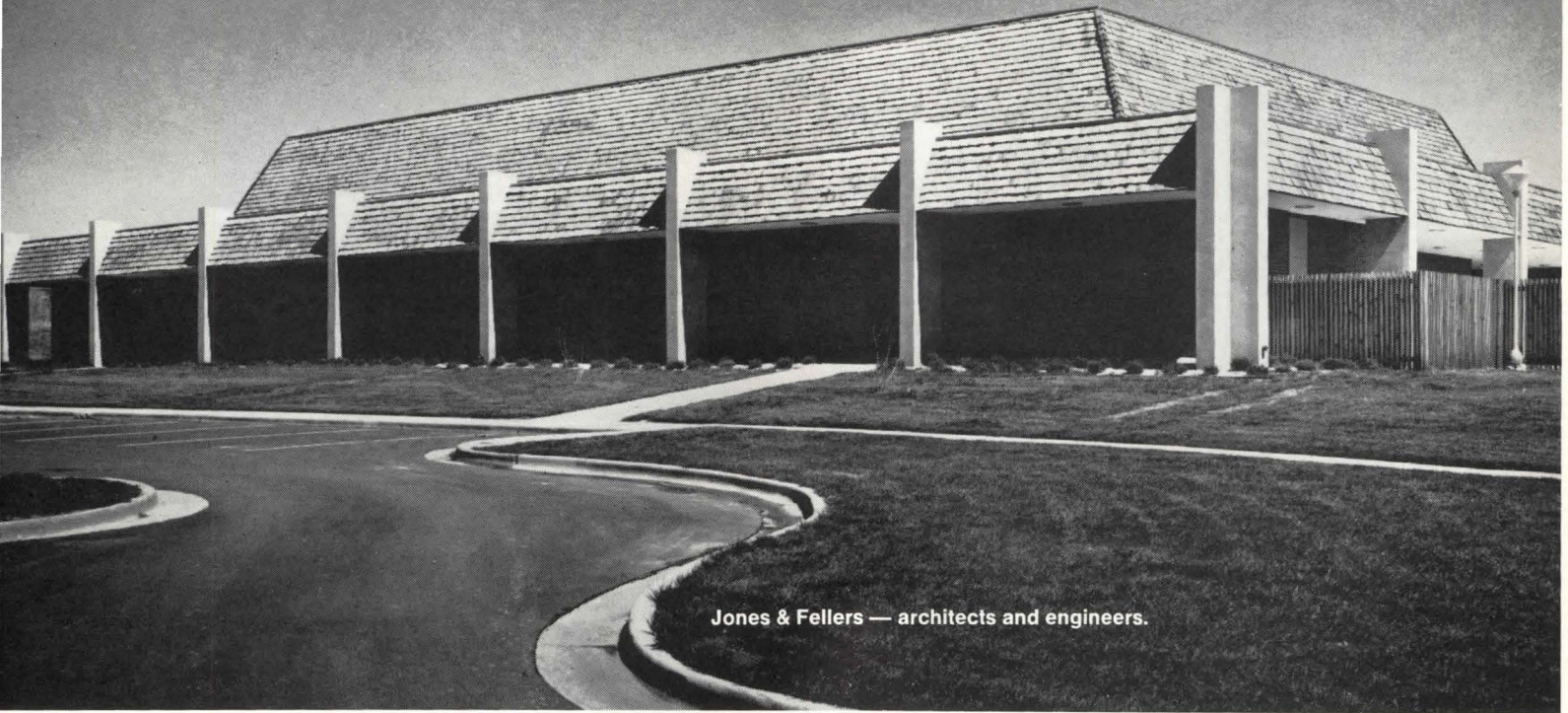
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Georgia State Hospitals safeguard with Sargent Maximum Security System

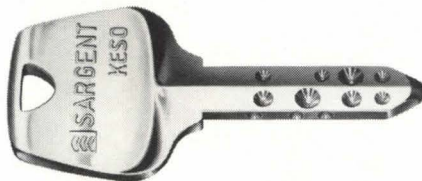


The Georgia Regional Hospitals have an architectural design in common — a low cluster of buildings, rather than a towering, forbidding institution. This is the Augusta hospital which is typical.

The state of Georgia has just completed three regional hospitals in Savannah, Augusta, and Atlanta. They form the vanguard of 8 to 10 such hospitals, each designed to provide the best possible treatment for emotionally disturbed or mentally retarded patients.

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New Program, New Positions

"Architects are becoming increasingly aware of the critical need for educating the public about environmental problems and for improving the professional's capacity for effecting solutions," states Gerald M. McCue, FAIA, chairman of the AIA Commission for Education and Research. Commenting upon the establishment of a new Department of Education and Research, McCue said that the Institute's executive vice president William L. Slayton has "created an administrative framework which will provide for the increased activity by the AIA in these important areas."

In response to the recommendations contained in the report on the future of the profession, *Creating the Human Environment*, increased emphasis will be placed upon activities in three areas, according to McCue: guiding of school teachers for better education of the public; encouraging and implementing research which will develop new knowledge and theory about the environment and new techniques for creating solutions; and mounting a major, continuing education program for improvement of the existing architectural profession.

"These objectives," says McCue, "will require a factorial increase in the emphasis to be placed upon improving our profession's contribution to knowledge and practice through research and, similarly, the institution of continuing education programs at a scale whereby we may materially expand the understanding and professional skills of a majority of the nation's architects." He calls for support by the AIA staff and board, by all local and regional organizations and by each individual architect. The program is termed by McCue as one of the "utmost urgency for preparing the profession for the increased demands of the near future."

The department will be headed by 30-year old James E. Ellison, formerly assistant director of Education Programs and executive secretary of the Association of Collegiate Schools of Architecture since April 1968. Ellison, who holds a Bachelor of Arts degree in pre-architecture from Stanford University and a Bachelor of Architecture degree from the University of Utah, worked with the architectural firm of Edwards & Daniels & Associates in Salt Lake City prior to becoming associated with the AIA.

Donald Conway, associated with the United States Gypsum Company since 1966,

has been appointed as AIA's director of Research.

Another promotion at the Octagon is that of Arthur T. Kornblut, AIA, from director of Professional Practice Programs to administrator of the Department of Professional Services. The accent is on youth again, for Kornblut is 29 years old. He has been associated with the AIA headquarters staff since November 1969. He succeeds Frank L. Codella, AIA, department head for 3½ years, who has joined Charles Luckman Associates in New York in a senior management position.

Kornblut received a Bachelor of Architecture degree from Rensselaer Polytechnic Institute and a law degree from the University of Akron. A registered architect in Ohio and Connecticut and a member of the bar in Ohio and the District of Columbia, he was on the staff of Glaus, Pyle, Schomer, Burns & DeHaven, an architectural and engineering firm in Akron.

Slayton said of both Kornblut and Ellison that "they have clearly demonstrated their ability to plan and execute imaginative professional programs."

Vernon A. Williams, a graduate in architecture from the University of Illinois, has been appointed director of AIA's Community Development/Design Center Services. He will concentrate on generating funds from the federal government, national institutions and local foundations to help CDCs already operating in about 50 neighborhoods and will seek to help establish and fund new CDCs. The AIA national convention in Boston gave a strong endorsement to participation in the expansion of CDC efforts.

Williams, a founder of the Black Architects Collaborative, worked in the Garfield and Kenwood-Oakland neighborhoods in Chicago to aid citizen planning and for the city of Chicago in the city architect and traffic engineering offices.

He says that "too often and too long architects, planners and public agencies have ignored the needs and desires of the minorities and the poor." He hopes the CDC programs will "address themselves to all of the basic issues which confront community life-style." At the AIA, Williams will be involved also in the Council of Black Architectural Schools and programs in equal opportunities and creative economics.

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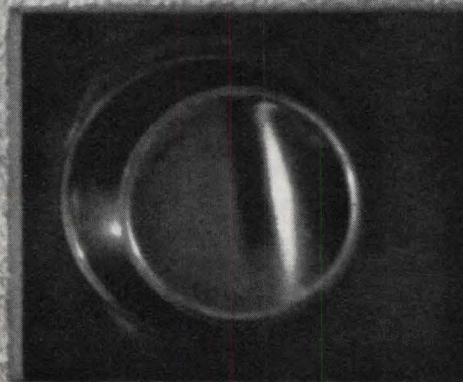
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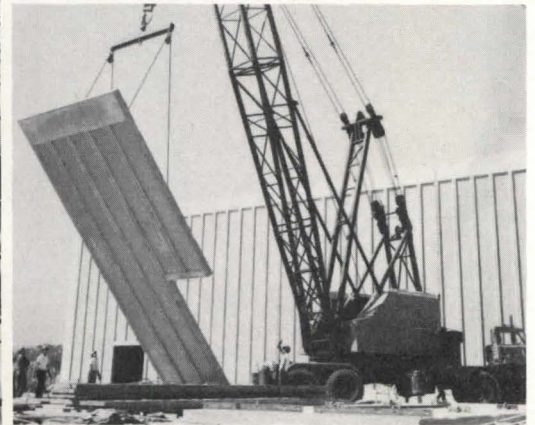
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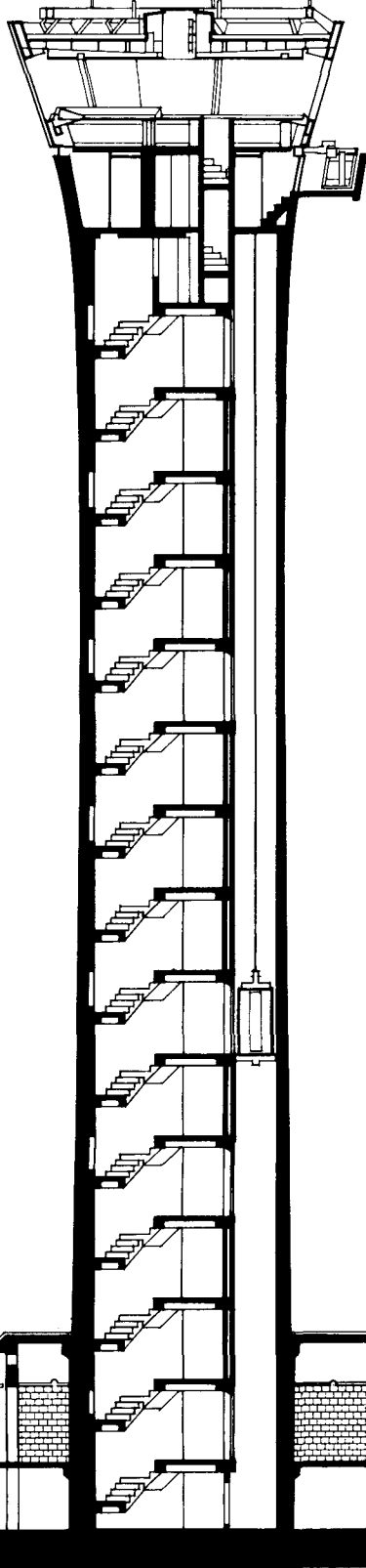
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But warnings such as these, as we have seen from sad experience, have gone unheeded, mostly for lack of money.

Money, more than any other factor, has kept us from making air transportation into the smooth-running business it should be. With enough funds, we could have cleared up our congested airways; we could have had better-functioning air terminals and better access to airports in trafficked areas; and we might have solved the aircraft noise and pollution problems.

Today, in addition to the air transportation mess we are faced with, we face the need for some 800 new and the expansion of some 3,000 existing airports in the United States within the next few years. With the Airport and Airway Development and Revenue Act of 1970, annual appropriations for airports and navigation and control systems soared by almost 175 percent for fiscal year 1971 and a total of \$15 billion is guaranteed over the next 10 years. While a giant step in the right direction, the legislation does not include improvement or construction of terminals. Therefore, to keep in step with the development on the runway side of aviation, architects will have to muster all their ingenuity to provide more efficient terminals and more terminal for the money as well.

Among the quagmire of considerations for airport designers, the passenger comes first; then there are the requirements from behind the scene, from that vast airport crew which keeps the show running, and from the airlines. Added to this is the factor of uncertainty: about future needs both when it comes to the number of travelers and the types of aircraft to accommodate. One constant remains: The money will always be scarce.

Some of the considerations mentioned are discussed in the following pages, which start off showing what six present-day terminal designs have to offer and for what cost. □

Very Much down to Earth: Planning the Air Terminal

The call from airlines to architects these days is strong and clear: away from the monument-type terminal to lower cost, lower maintenance, purely functional structures.

Terminals under construction the world over show a trend in this direction. The designers of at least one terminal in the US are considering the use of unfinished, open steel trusses; from Germany comes the suggestions of finding a standard terminal concept with prefabricated parts and of prefabricated aircraft docking facilities which could be ready for use at the same time as a new aircraft type.

Then there's the thought of using less permanent, more diverse structures for terminals and hangars, too, along the lines of the Netherlands Pavilion at Expo '67 (AIA JOURNAL, July '68) or the Theme Pavilion at Expo '70 (April).

Better use of the acreage would be possible if the FAA's "line of sight rule" could be revised and closed circuit television or other devices were taken into use.

Long-term planning is another cost reducer. Lack of it has so far cost the federal government and everybody involved with air transportation plenty. Millions have been squandered on patchwork expansion which will not, in many cases, make the airport better geared to meet the future. Long-term preconstruction planning will make it possible to make the airport an integrated part of the community. Joseph A. Foster, director of Houston's Department of Aviation, has suggested a land bank for development of airports with this purpose in mind, pointing out the importance of the airport as an economic center of gravity. This way, the land might also be had at lower cost.

Much closer cooperation between planners is another potential for cost reduction. Behind each airport now in the planning or construction phases lie years of study by groups of experts who have scanned the world in search of innovations in airport layout. Why not pool this information under some neutral agency and make it readily available to those interested?

As a contribution in this latter direction, we have collected some pertinent data on four major US airports and on two terminals on already existing airports. Five of these facilities are

now being planned or are under construction; one — Houston Intercontinental Airport — has been in operation since June 1969.

The hundreds of new airports we need in the US will be of various sizes, most of them probably small; answers to a trend toward shorter trips and so-called reliever airports. But large or small, airports, although demands differ from one locality to another, have some very basic requirements in common — this holds true also for the terminal.

One such requirement is a life-span long enough to make an airport economically justified. Each concept shown here has expansion possibilities in most directions (figuratively, of course), and most of that expansion can be done without halting daily traffic or inconveniencing the travelers.

Another one is an easier meeting of passenger and plane. All six designs reveal great strides here: Some have a minimum walking distance of less than 100 feet from entrance to gate. In this connection, it is interesting to note that none makes use of mobile lounges. This may be for several reasons. The air industry is concerned about the labor situation and also with the cargo. Automated handling of this has so far not been possible with the lounges. Another worry is the difficulty with a mobile lounge versus a 747 with its 400 or so passengers; presently the lounge can handle only about 100 persons. Also of concern is the unwanted extra traffic on the taxiways. An earlier obstacle, that of fitting the lounge to planes of varying sizes, has been solved by one manufacturer with a passenger pod that can be elevated or lowered. This opens the possibility of having separate arrival and departure gates.

But initial cost of the lounges, their operation and maintenance have been held by some to make them almost prohibitive (between \$200,000 to \$250,000 each); others claim that they will reduce the cost of the terminal proper. Obviously, this is a question open for further study. Let us hope that whoever undertakes it will share his findings.

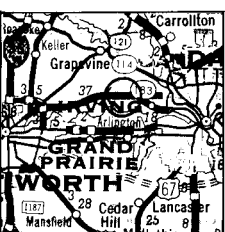
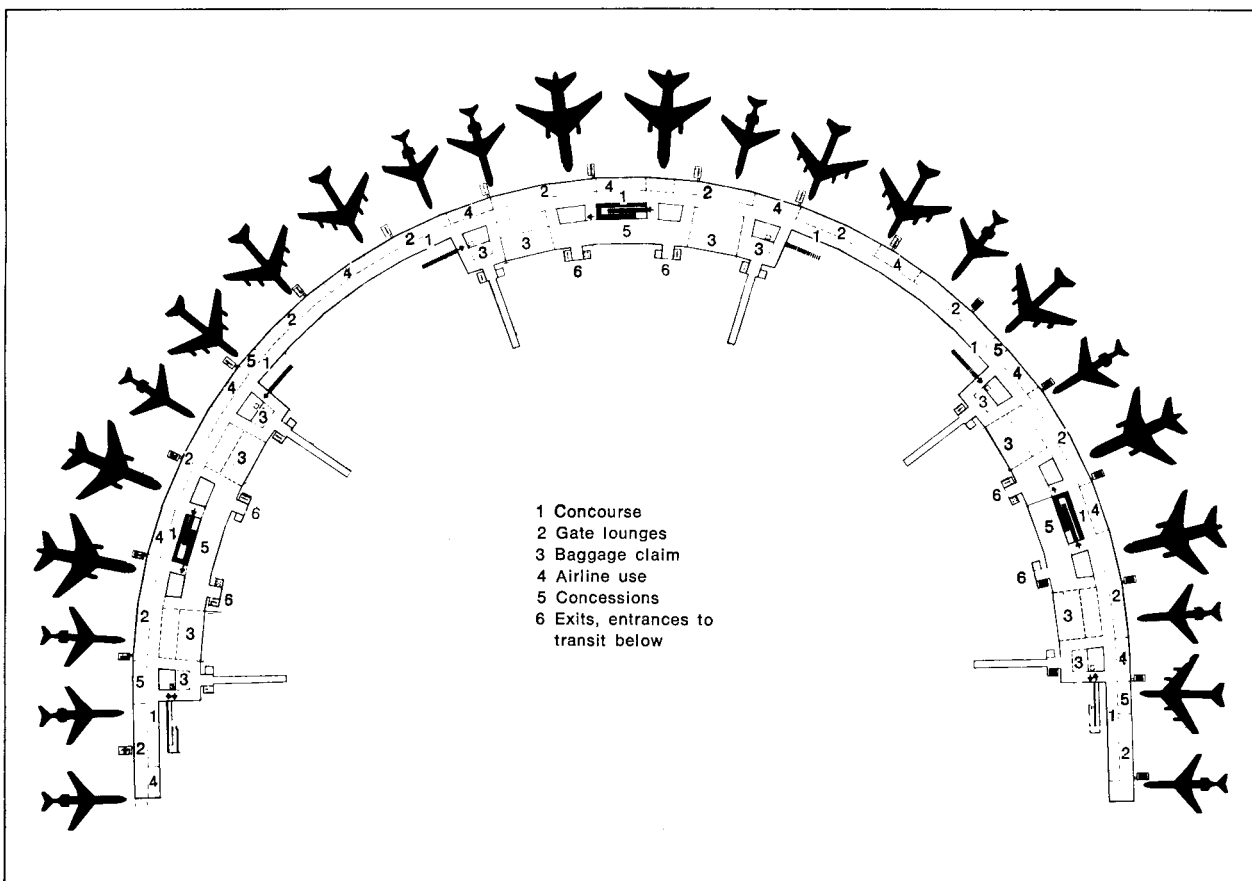
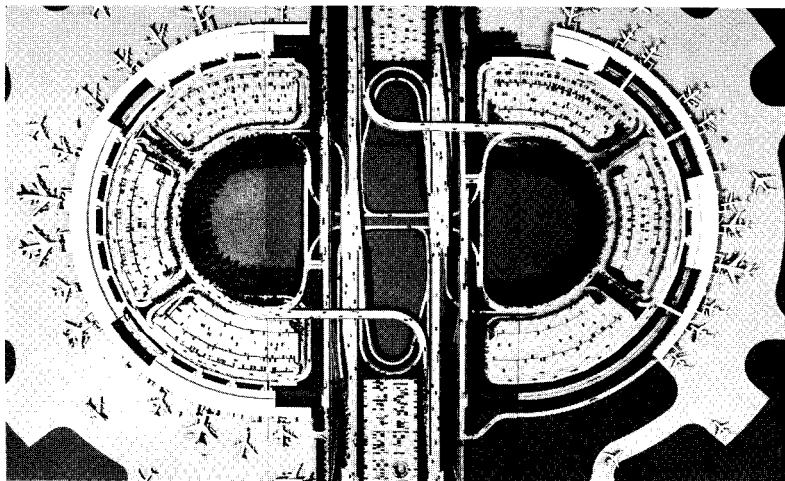
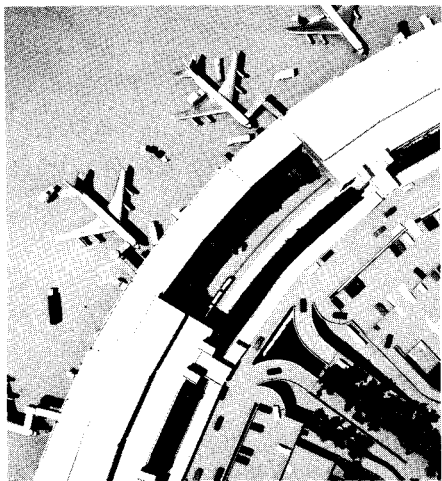
At the moment, the plans shown in the following pages represent some of the most forward concepts in airport and terminal thinking within the money-available range. The information has been obtained through the willingness and cooperation of the Dallas/Fort Worth Regional Airport Board and the owners and planners of all the other facilities.

The data has been made as parallel as possible in each case but naturally there are deviations. We urge a study of what's behind the cost of the gates in each instance.

How well an airport functions is, in the end, decided by its daily operation and along with the Houston plans and data, therefore, we follow up with a closer look at this airport.

Sentinel of the airport is the control tower, which as a rule is built and operated by the Federal Aviation Administration. I. M. Pei & Partners are architects for the FAA of a standard tower (preceding page) which is now in use from Alaska to Texas. Free standing, the pentagonal shaft may be built in six different heights. The base, for the most part below grade, houses electronic equipment and administrative personnel; it is modular for anticipated expansion. The cab, a prefabricated glass and metal capsule, is joined to the concrete tower by a metal ring, which serves as the track for the window washing mechanism. An economical advantage besides the standard design is that there is no need to relocate the tower with increased airport activities. For airports with low activity, towers that are part of the terminal buildings are more economical.

Passengers at D/FW arrive and depart at separate road levels; those departing reach entrance on second level which holds concourse and gate lounges, while those arriving, after claiming baggage in concourse, go one flight down to exits. Concessions and restaurants are on concourse level. Rapid transit system makes three stops per terminal. Parking is initially on grade within unit semicircles. Continuous drive for delivery and service vehicles is under terminal. Materials are precast concrete (exposed aggregate finish), aluminum anodized panels, solar bronze glass; concourse floor is steel framed.

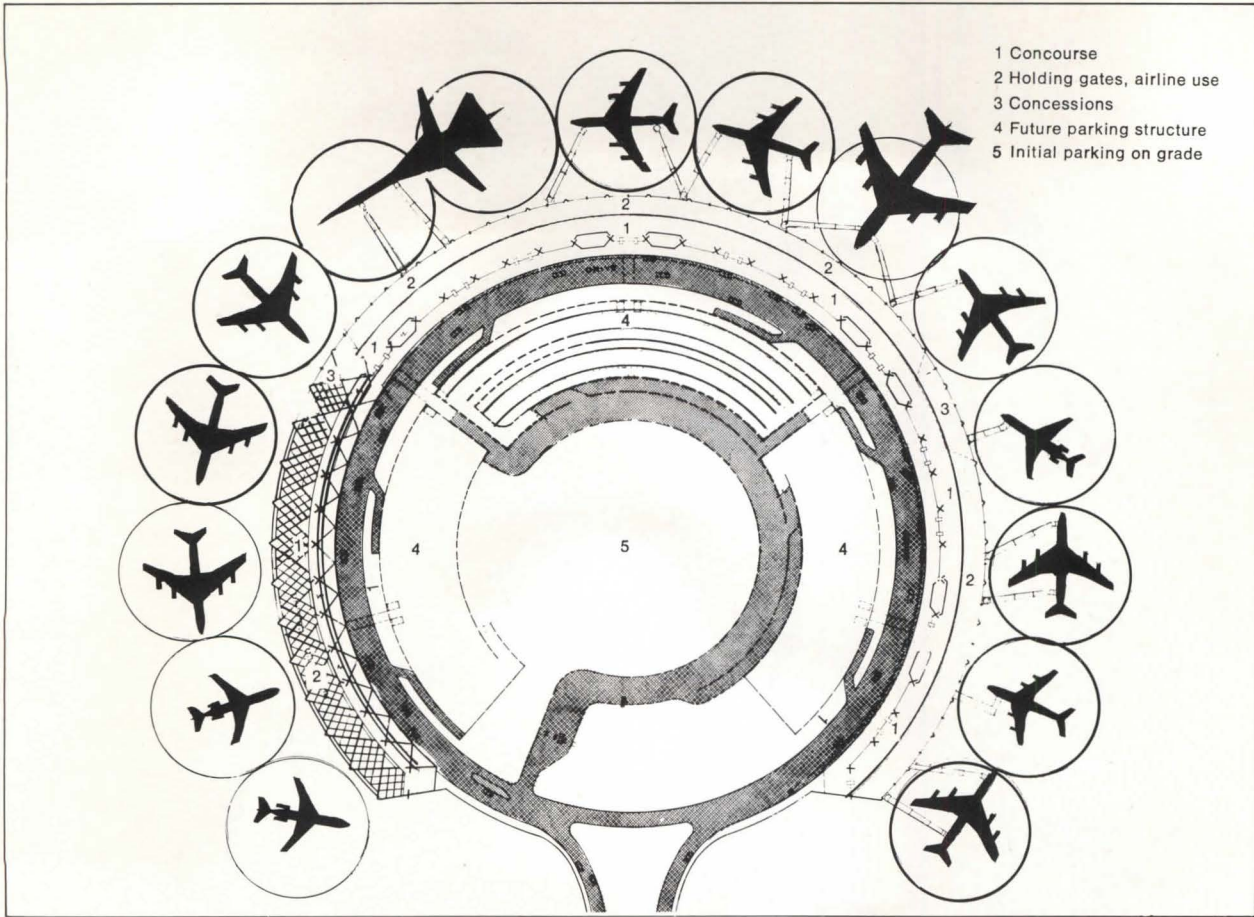


DALLAS/FORT WORTH REGIONAL AIRPORT

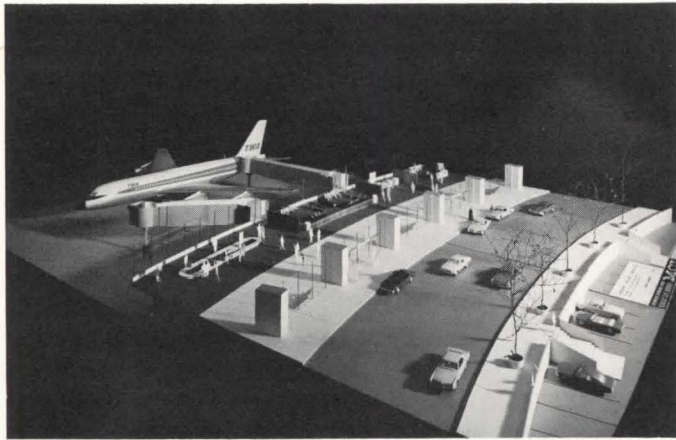
Planning started 1965; scheduled to open 1973
Architects: Hellmuth, Obata & Kassabaum, Inc. and Brodsky, Hopf & Adler; principals of team: Gyo Obata, FAIA, and Richard Adler; project administrator: Tom Bear
Structural Engineers: LeMessurier Associates, Inc. and Terry-Rosenlund Co.
Owner: Dallas/Fort Worth Regional Airport Board (Cities of Dallas and Fort Worth)
Area: 16,000 acres +
Access: About 17 miles by improved state highway from either downtown Dallas or Fort Worth
Cost: Total amount allocated for construction of 5 terminals \$75,700,000 (escalated cost). Cost per terminal not available. Average cost per gate \$946,250 all inclusive
Terminals: Initially 5; possible ultimate 13. Average size 297,000 square feet (first phase; expansion vertically and horizontally)

Gates: 16 in fully developed terminal; 208-221 ultimately
Curbspace: Approximately 10,000 feet for arrivals, the same for departures per terminal; 250 feet per gate for each
Parking: Ranges from 47 to 146 cars per gate on grade initially (depending on airline); ultimately 114 to 200
Pedestrian traffic: Roadways will have to be crossed from parking areas at designated points
Walking distances: Entrance to gate: maximum 270 feet, minimum 180 feet; parked car to gate: maximum 630 feet, minimum 544 feet; arrival gate via baggage claim to exit: maximum 300 feet, minimum 240 feet
Baggage check-in: Sidewalk, counter and gate; can be computerized
Baggage claim: Decentralized; subject to airline requirement

People in transit: Estimated by 1975, 12 million; by 1985, 25 million
In-terminal transportation: Rapid transit system with 3 stations per terminal building; total of 22 elevators, 46 individual escalators for first 5 units
Interterminal transportation: Rapid transit (system under active development)
Cargo facilities: First phase, proposed facilities to be located within the terminal areas; second phase, proposed facilities to be located in a remote cargo city
Financing: Revenue bonds.



Passengers at KCI arrive and depart at a common curb. Parking initially will be on grade within the unit loops. Advance information from airlines, and graphics system, to identify flight and gate numbers will guide passengers so they can park as close as possible. Continuous drive for delivery and service vehicles is under terminals. Mezzanines will house restaurants and additional airline office space. Materials are cast-in-place reinforced architectural concrete; plastic impregnated hardwood flooring; 2½-inch acoustical glass on air-side, plate glass on land-side walls.



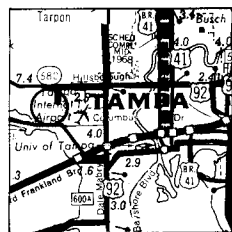
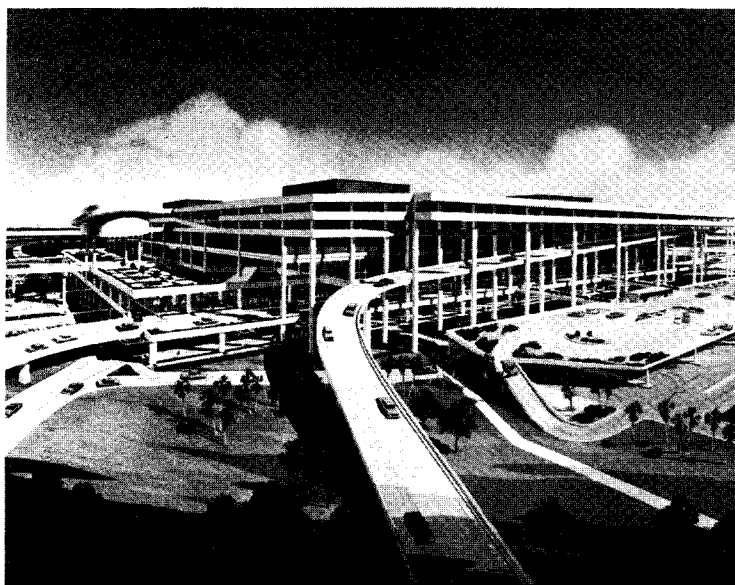
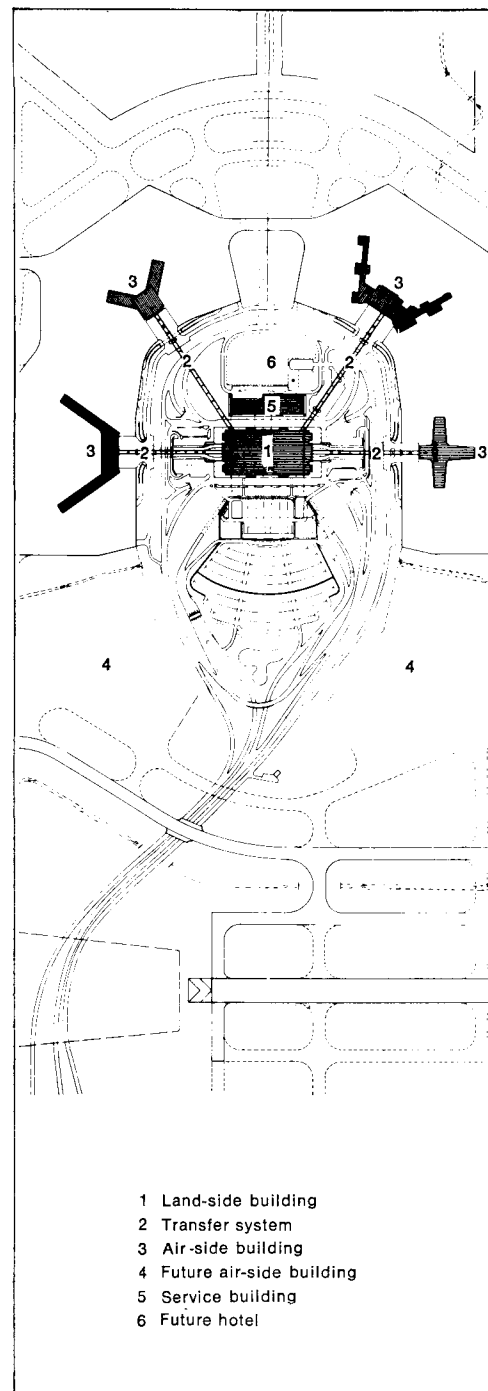
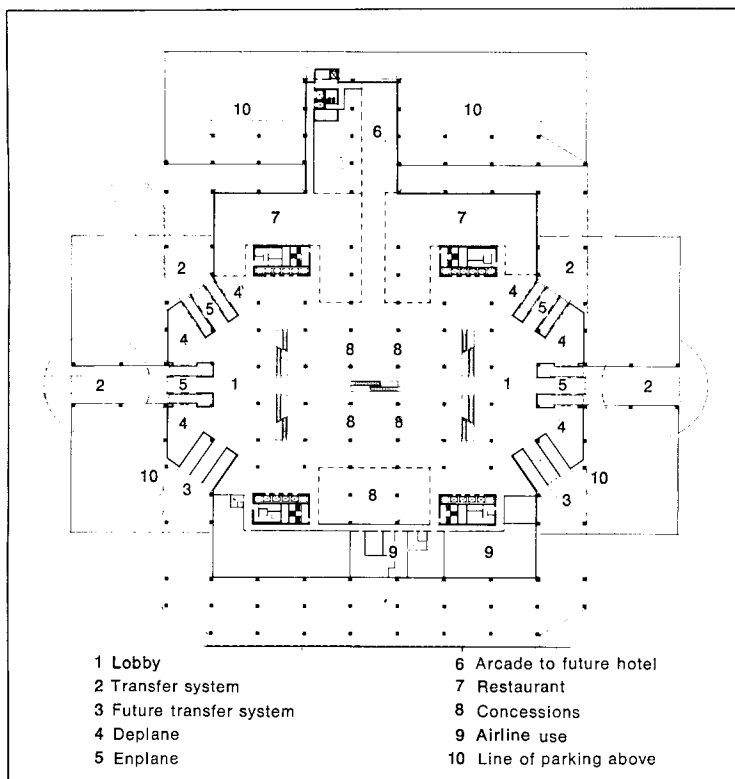
KANSAS CITY INTERNATIONAL AIRPORT

Planning started 1965; scheduled to open 1972
Architects: Kivett & Myers
Engineers: Burns & McDonnell
Owner: City of Kansas City
Area: 5,000 acres; plans for additional 5,000
Access: 19 miles by expressway from downtown Kansas City; rapid transit on existing right-of-way in planning stages
Cost: Total estimate \$220 million (including land, all improvements); cost of each terminal unit \$9,275,000 (not including land, fees, furnishings or tenant improvements); average cost per gate \$618,333
Terminals: 3 units under construction, 4th in master plan; 336,000 square feet per unit
Gates: 15 per unit; 45 initially; 60 ultimately

Curbspace: 2,100 feet per unit, common for arrivals and departures; 140 feet per gate
Parking: Initial average 166 cars per gate on grade; parking structure planned within each unit with combined total capacity of 16,800 cars
Pedestrian traffic: Initially, roadways will be crossed from parking areas; bridges over roadways from parking structures planned
Walking distances: Entrance to gate: maximum 120 feet, minimum 65 feet; parked car to gate: maximum 560 feet, minimum 155 feet; arrival gate via baggage claim to exit: maximum 290 feet, minimum 125 feet; arrival gate via baggage claim to parked car: maximum 730 feet, minimum 215 feet.

Baggage check-in: Counter; sidewalk in some areas; can possibly be computerized
Baggage claim: Conveyors; 1 per 4 gates with 450 to 600 feet per terminal, or average 30 to 40 feet per gate
People in transit: At opening, 10.2 million per year; ultimately 13.6 million
In-terminal transportation: 10 elevators (7 public, 3 freight) per unit
Interterminal transportation: Constant mini-bus service
Cargo facilities: 5 separate cargo buildings planned for first phase
Financing: General obligation bonds for land acquisition (1952); revenue bonds for airport and supporting facilities.

Passengers at TIA arrive and depart at separate levels—on grade and second—on roadways that encircle the airport's main, or land-side, building. Structural parking is above land-side building. Lobby on third level is central meeting point for transfer to or from gates in air-side buildings. Automated, elevated shuttlecars are links between land-side and air-side lobbies. Concessions are in main lobby and also in air-side buildings. Materials are exposed concrete, brick, glass and metal siding.



TAMPA INTERNATIONAL AIRPORT

Planning started 1963; substantial completion scheduled for late 1970

Consultants: Leigh Fisher, airport consultant; Leigh Fisher Associates, aviation consultant; J. E. Greiner Company, general technical consultants; Reynolds, Smith & Hills, architects

Owner: Hillsborough County Aviation Authority

Area: 3,200 acres

Access: 4.5 miles by expressway from downtown Tampa

Cost: Total \$80 million (includes airfield improvements; no land cost involved); cost per gate including fee (not including land, furnishings or tenant improvements) \$2 million (includes 3-level roof parking structure)

Terminal: Landside building, about 500,000 square feet (plus 700,000 square feet roof parking structure); 4 airside buildings, each of about 160,000 square feet, expandable to 6 buildings

Gates: 40 initially, 74 ultimately

Curbspace: 1,300 feet for arrivals, 1,300 for departures; 32.5 feet per gate for each category initially

Parking: Present, 80 cars per gate within structure and outside; ultimate total 6,400 cars; employee parking in outlying area with bus connection to buildings

Pedestrian traffic: Roadways will have to be crossed by people using outside parking facility

Walking distances: Entrance to gate: maximum 700 feet, minimum 300 feet; parked car to gate: maximum 700 feet, minimum 390 feet; arrival gate via baggage claim to exit: maximum 690 feet, minimum 300 feet; arrival gate via baggage claim to parked car: maximum 690 feet, minimum 340 feet

Baggage check-in: Sidewalk and counter; can be computerized

Baggage claim: Conveyors in two areas in landside building; 1,507 linear feet, or about 37.5 feet per gate; expandable to 3,962 feet total

People in transit: Present, 3.8 million; 6 million in first stage, 1980

In-terminal transportation: Landside building: 16 passenger elevators, 3 service elevators; 8 additional passenger elevators may be installed; 10 individual escalators (connecting the three passenger levels); 4 escalators may be added; airside buildings: 14 passenger elevators and 24 escalators total

Interterminal transportation: Automated elevated passenger shuttlecars from landside building to all airside buildings; 84 persons per minute each way to each airside building

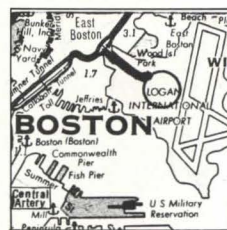
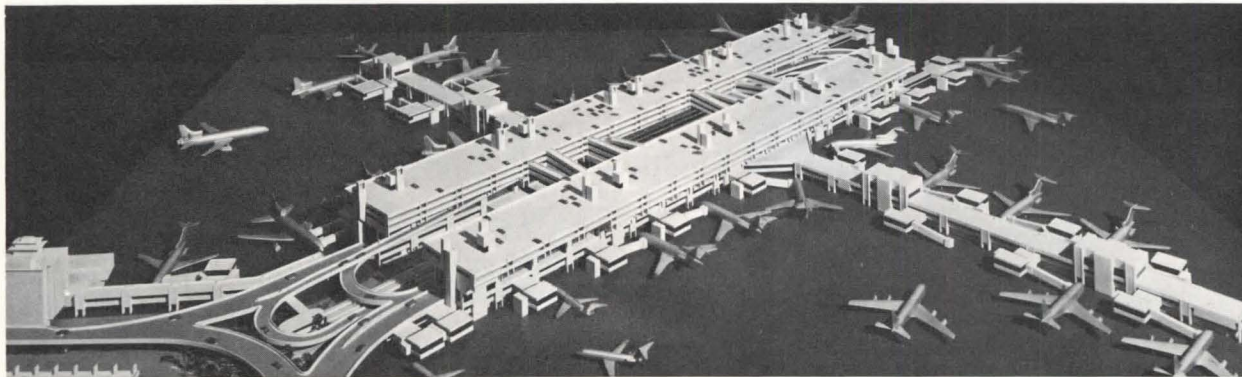
Cargo facilities: Cargo on passenger aircraft will be topped off at airside buildings;

planning underway for future cargo facilities

Financing: \$67 million revenue bonds sold; \$13 million anticipated additional revenue bonds.



Passengers at South Terminal, LIA, arrive and depart at separate levels on roadways that go through the building in a U-shape. Departing passengers arrive on the third level, go one flight down to second, or concourse, level to ticketing and holding gates. Arriving passengers go from concourse level down one flight to baggage claim and exits. Concourse level holds restaurants and concessions; parking is on four levels above. Materials are pre-stressed and precast exposed concrete.



South Terminal LOGAN INTERNATIONAL AIRPORT

Planning started 1967; scheduled to open 1974

Architects: John Carl Warnecke & Associates and Desmond & Lord, Inc.; coordinating architect: James A. Nash, AIA

Engineers: Zetlin, De Simone, Chaplin & Associates; Joseph R. Loring & Associates

Owner: Massachusetts Port Authority
Area: Part of already existing Logan International Airport

Access: 3 miles from downtown Boston; expressway to within 1 mile of terminal; subway station 1 mile from terminal

Cost: Terminal, \$38 million (not including land, fees, furnishings, tenant improvements or \$17 million roof parking structure); \$1,270,000 per gate

Terminal: 660,000 square feet initial stage (plus 940,000 square feet roof parking structure including ramps from roadways); 725,000 square feet ultimately, including one finger and a south wing

Gates: 30 initially; 34-36 ultimately

Curbspace: 2,400 feet for arrivals, the same for departures; 80 feet per gate for each initially

Parking: Initially, 90 cars per gate on upper levels; employee parking in outlying area with bus connection to buildings

Pedestrian traffic: Elevator from roof parking; no need to cross roadways

Walking distance: Entrance to gate: maximum 700 feet, minimum 100 feet; parked car to gate: maximum 1,300 feet, minimum 100 feet;

arrival gate via baggage claim to exit: maximum 750 feet, minimum 100 feet; arrival gate via baggage claim to parked car: maximum 1,500 feet, minimum 200 feet

Baggage check-in: Sidewalk and counter; will be computerized when such a system is available at competitive cost

Baggage claim: Conveyors; planned 780 feet, or 26 feet per gate; may be extended to 1,350 feet, or about 37 feet per gate with ultimate number of gates

People in transit: Planned for a total estimate of 9 million in 1990

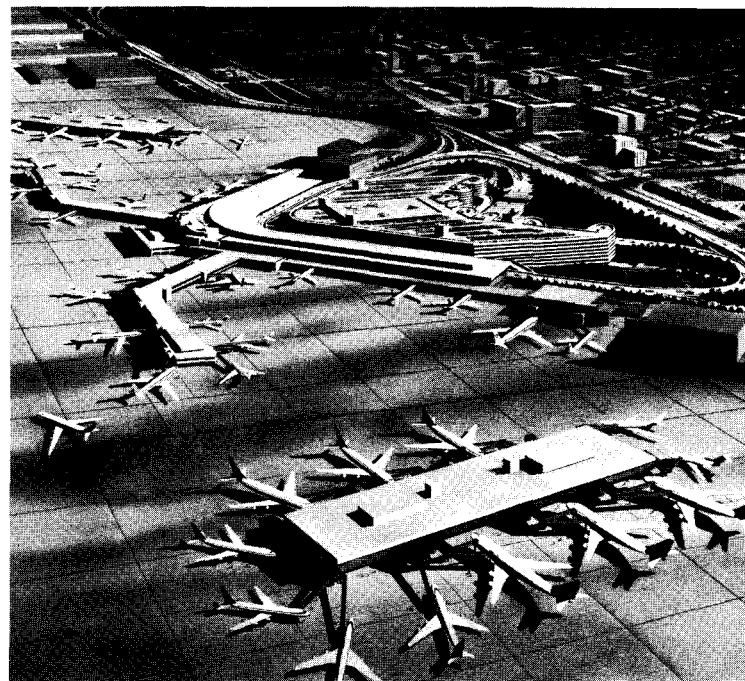
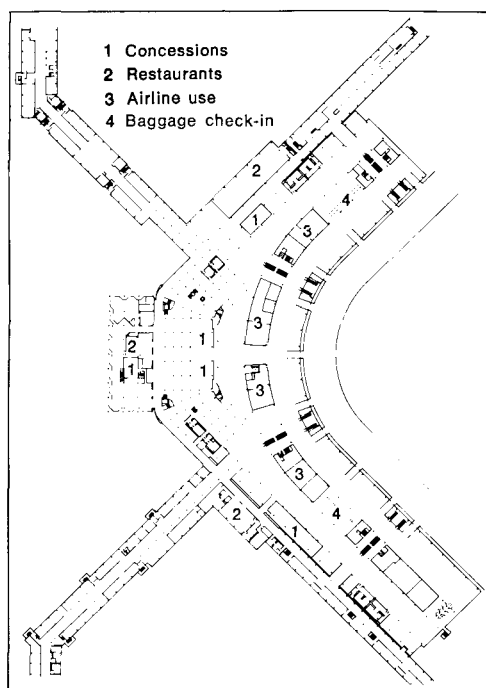
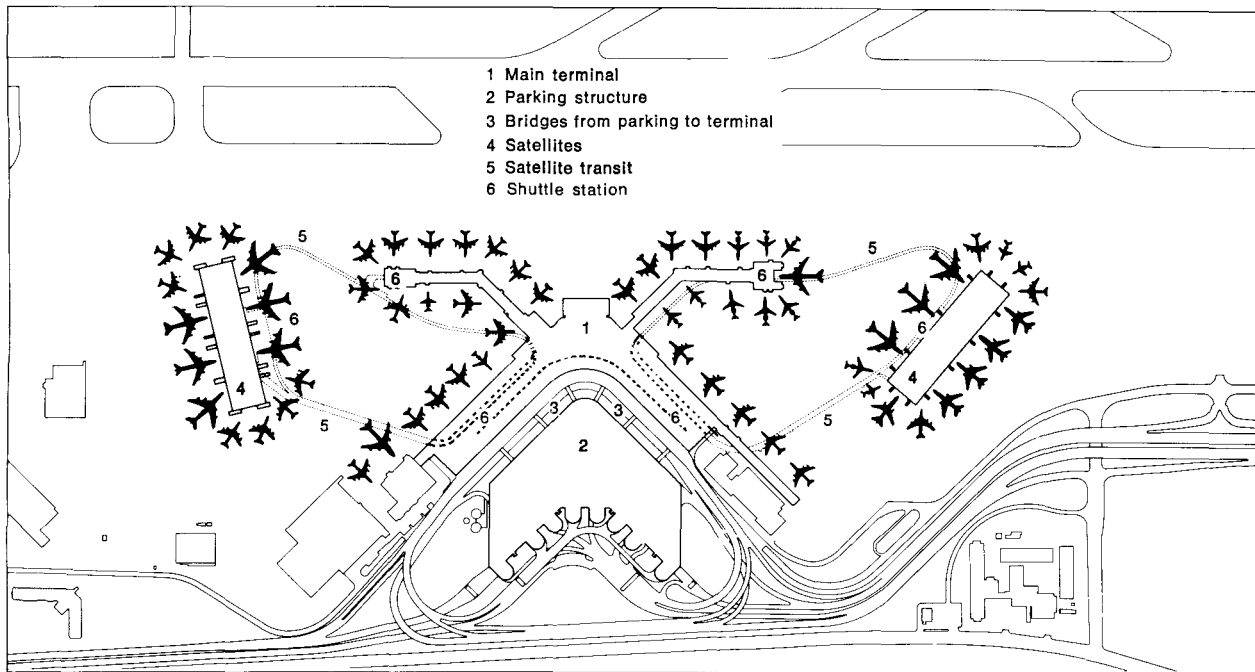
In-terminal transportation: 13 elevators planned (connecting all floors and parking); future capability 22 elevators; 26 individual escalators (connecting enplaning, concourse and deplaning levels). There are provisions to incorporate moving sidewalks in the fingers

Interterminal transportation: Bus service loops airport at 8-minute intervals. The MPA is considering the installation of a people mover for the airport in general and the terminal has capacity to accept stations for this system

Cargo facilities: Cargo taken to main terminal in the plane, unloaded and taken from there to cargo area

Financing: MPA revenue bonds.

Passengers at SEA-TAC arrive and depart at separate road levels; those departing enter at the ticketing level, proceed directly via the esplanade to holding gates, or go down two levels to the transit stations for transfer to satellites; those arriving go from gates down one level to baggage claim and exits or take under-apron transit from satellites to main terminal, then go up to baggage claim. Those who park in parking structure cross to main terminal in enclosed bridges. Expansion of terminal surrounds the original building. Materials are steel frame structure, anodized aluminum window wall with tinted gray glass, laminated plastic wall panel system, granite-clad columns, terrazzo floor and suspended metal ceiling.



SEATTLE/TACOMA INTERNATIONAL AIRPORT

Planning started 1966; substantial completion scheduled 1971-72

Architects: The Richardson Associates; project architect: Allen D. Moses, AIA

Structural engineers: Donald G. Radcliffe, The Richardson Associates; Victor O. Gray Co.

Owner: Port of Seattle

Area: 1,600 acres, total airport; 182 acres, expanded terminal area.

Access: 13 miles from Seattle, 17 miles from Tacoma via interstate highway

Cost: \$85,382,000 initial phase (including parking, tenant areas, furnishings, \$5 million automated people mover system, \$5 million automated computerized baggage system and 5 miles of access-road system and related site development, but not including land, fees, apron paving, field utilities or special tenant items); cost per gate \$1,447,000/total terminal area; \$980,000/passenger terminal

Terminal: 3,774,000 square feet (includes parking structure, 2 satellites and remodeled areas, not original terminal or structural roadways)

Gates: Initially 59; ultimately 66

Curbspace: 1,500 feet for arrivals, the same for departures; plus 500 feet located at 4 automobile baggage check islands in parking structure

Parking: Initially 79 cars per gate, ultimate total 8,675 spaces; employee parking in outlying area with shuttle connection

Pedestrian traffic: Enclosed bridges from parking to main terminal; no need to cross roadways

Walking distances: Entrance to gate: maximum 570 feet, minimum 215 feet; parked car to gate: maximum 1,200 feet, minimum 350 feet; arrival gate via baggage claim to exit: maximum 620 feet, minimum 265 feet; arrival gate via baggage claim to parked car: maximum 1,250 feet, minimum 400 feet

Baggage check-in: Counter and express walk-through areas in terminal plus 4 drive-through check-in islands in parking structure (automated and computerized)

Baggage claim: 16 claim dispensers and 3 claim slides for odd-sized baggage; total 1,656 feet, or about 28 feet per gate

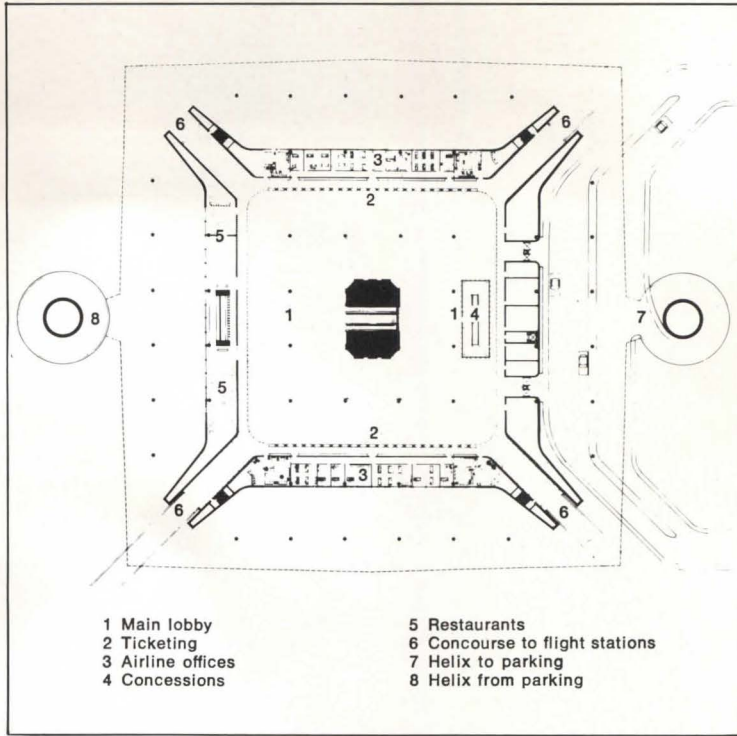
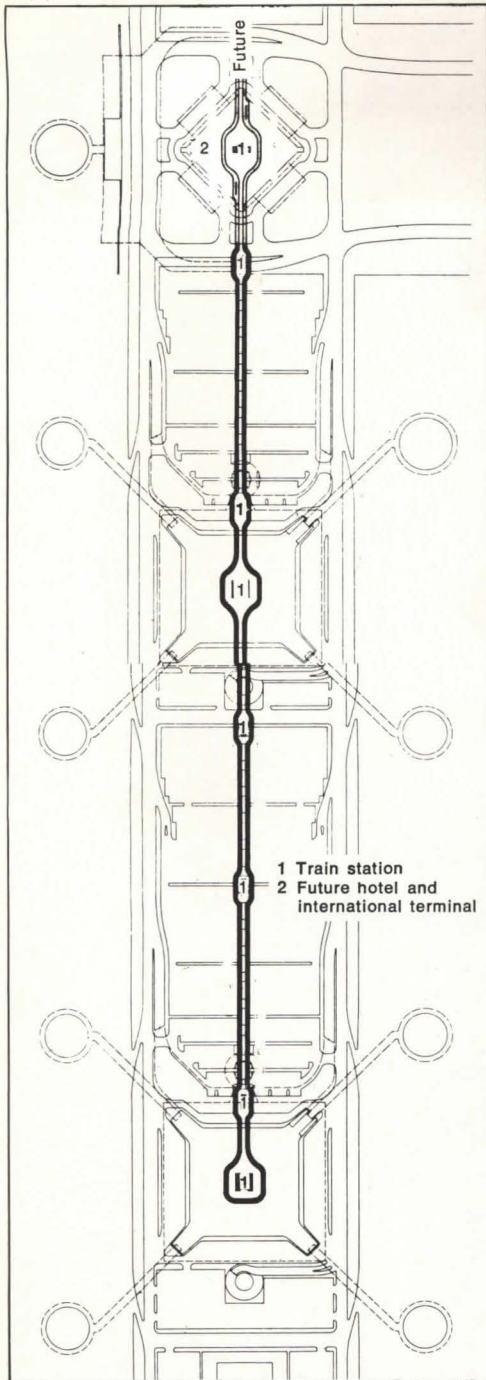
People in transit: Initial phase 6 million passengers per year; ultimately 20 million

In-terminal transportation: Initially, 8 elevators in main terminal, 10 in parking structure, 4 in south and 2 in north satellite; 24 escalators in main terminal, 8 in south and 3 in north satellite; numbers will be increased with expansion

Interterminal transportation: Automated transit vehicles under apron to satellites with shuttle under main terminal. Initially 9 vehicles for 400 persons, ultimately 1,200 persons, on each loop at 5-minute intervals.

Cargo facilities: In other area of field

Financing: Port of Seattle revenue bonds.



Passengers at HIA arrive and depart at separate road levels. Those departing reach entrance on second level which holds main concourse and flight stations, while those arriving go one flight down to baggage claim and exits. Concessions are in lobby; restaurants on the second level and mezzanine. Parking is on third level and roof or on grade between units. Battery powered train, below grade, provides inter-terminal transfer and also stops at on-grade parking lots. All four sides of each terminal are open for auto traffic. Materials are cast in place and precast reinforced concrete, anodized aluminum, tinted glass.

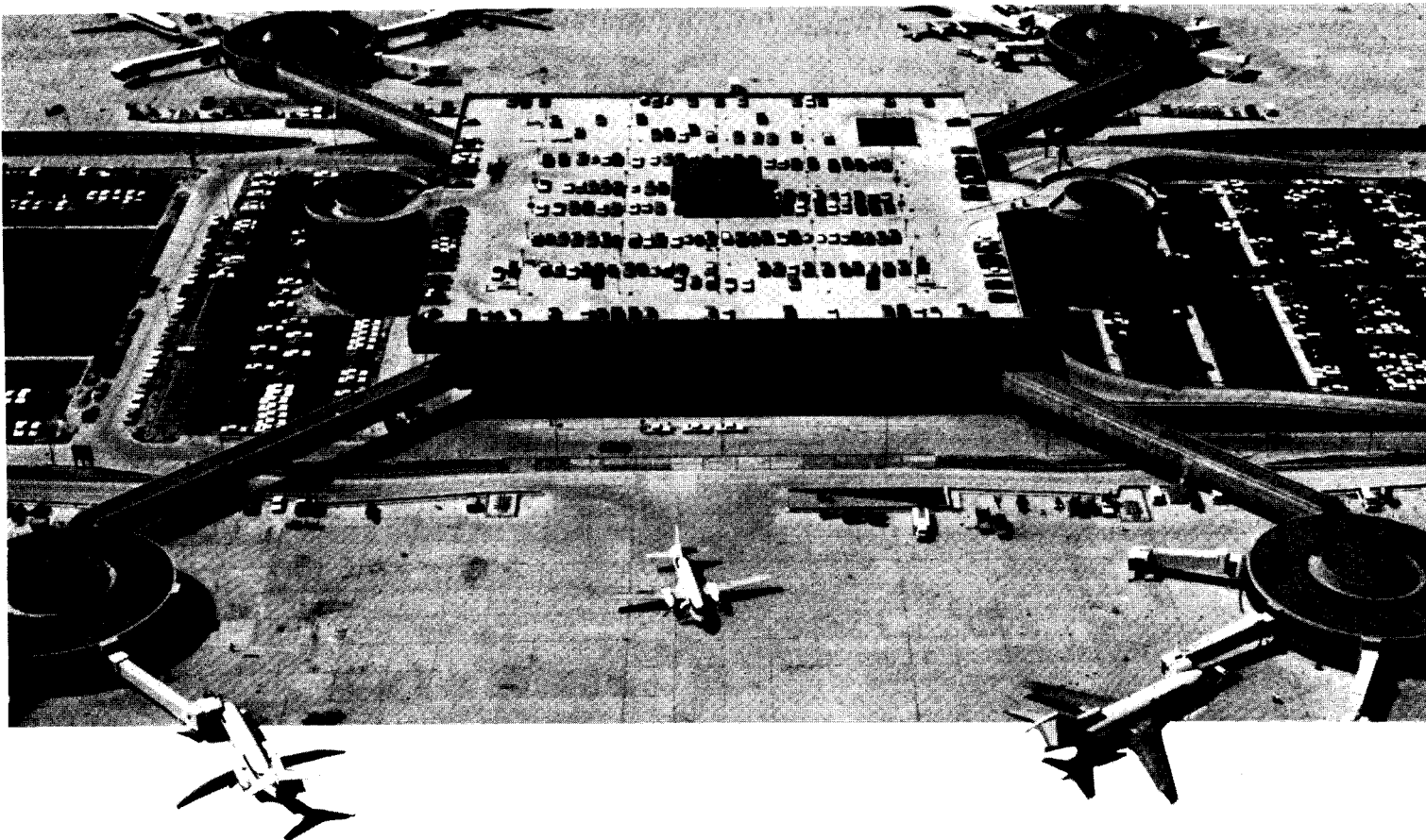


HOUSTON INTERCONTINENTAL AIRPORT

Planning started 1961; opened 1969
Architects: Golemon & Rolfe and G. Pierce, Goodwin & Flanagan (formerly Pierce & Pierce); project manager; Ralph A. Zander, AIA
Engineers: Engineers of the Southwest
Owner: City of Houston
Area: 7,300 acres
Access: 20 miles by expressway from Houston
Cost: Total to date, \$110 million (including land, all improvements). The two terminals to date, \$14,677,103 (not including land, fees, furnishings, tenant improvements or \$6.5 million third level and roof parking structure, but including interterminal train); \$366,927 per gate
Terminals: Two finished, two more and an international terminal planned; present terminals 636,500 square feet total (plus 636,500 square feet roof parking structures including spiral ramps)
Gates: 20 per unit; 40 initially; ultimately 80

Curbspace: 720 feet for arrivals, 2,680 for departures per terminal; 36 and 134 feet per gate, respectively
Parking: Present, 78 cars per gate on upper levels and between terminals; ultimate total 11,036. Employee parking in outlying area with bus connection to buildings
Pedestrian traffic: Connection with minitrain or elevators from parking areas; no need to cross roadways
Walking distances: Entrance to gate: maximum 700 feet, minimum 525 feet; parked car to gate: maximum 1,375 feet, minimum 600 feet; arrival gate via baggage claim to exit: maximum 800 feet, minimum 625 feet; arrival gate via baggage claim to parked car: maximum 1,375 feet, minimum 600 feet
Baggage check-in: Sidewalk and counter; can be computerized

Baggage claim: Conveyors; 4 per terminal with 410 linear feet per terminal, or about 20 feet per gate
People in transit: Present, 4.5 million per year; by 1975, 10 million; ultimately 15 million plus
In-terminal transportation: 4 elevators per unit (connecting all levels); number may be doubled. 4 escalators per unit (connecting train level through second levels)
Interterminal transportation: 4 sublevel trains (ultimately 8-12) connecting terminals and future hotel; time interval 2 minutes; 700 persons per hour initially
Cargo facilities: Airlines and others have 80,000 square feet in two expandable cargo buildings with aircraft apron frontage; freight forwarders have 60,000 feet in three buildings without such frontage; existing cargo aircraft apron may be expanded to 3,750 feet
Financing: By City of Houston revenue bonds.



With a little over a year of operation behind it, Houston Intercontinental Airport — the only jet airport planned and built in the United States during the 1960s — has reached the end of its breaking-in-period. What would the designers have changed if they had to do it all over?

Nothing much, according to Harry A. Golemon, AIA, senior partner of Golemon & Rolfe who, with G. Pierce, Goodwin & Flanagan (formerly Pierce & Pierce), are architects for the airport. Most travelers seem pleased with the way HIA functions.

“The Houston plan is a new concept. The linear unit terminals have roads on all four sides and are connected by an underground minitrain,” Golemon says. “The HIA concept, as it is referred to, was reached by a team determined to place the passenger where he belongs: in the center of things. It is completely opposite from the air-side/ground-side airports used since way back during barnstorming days, when you had a spot for the Model T in front of the tin hangar, the pasture with the runway behind it. With Dulles International Airport, this layout has been exploited to its fullest.”

One of the inherent problems with the traditional air-side/ground-side scheme, Golemon thinks, is the inconvenient trek from parking and ticket counter to gate. “Dulles has eliminated the counter-to-gate problem with its mobile lounges but not the parking-to-entrance problem. However, lounges have so far not been economically feasible in initial or operational costs for most airports. Therefore, after exhaustive studies here and abroad, our team came up with the HIA concept.”

Obvious advantages of this concept are:

- close-in parking (between terminals as well as on the roofs, with access to main lobbies by minitrain and/or elevators)
- shorter walking distances from curbside and parking to planes
- increased curbspace for unloading and loading passengers
- interterminal transfer via minitrain
- short, uncluttered concourses between main lobby and flight

stations to allow trickle loading and unloading, thus avoiding the need to keep crowds contained at holding gates.

Last, not least, comes the fact that the airport may be expanded with additional terminals without disrupting daily operations or increasing passenger walking distances. Each unit can remain at its original size which, Golemon explains, the team chose as the optimum for Houston. So far, two units are finished; two more and an international terminal are planned. A hotel, now under construction, is situated between the four terminals.

“Passenger convenience had first priority in our decision making. If passengers are inconvenienced, problems will multiply,” says Golemon, who stresses that teamwork made the concept possible and that his “we” takes in more than the architects and engineers: the City of Houston’s administration and City Council, its Departments of Aviation and Public Works and its financial consultants; all airlines flying in and out of Houston; lighting, graphic and landscape consultants; as well as concessionaires or their consultants.

According to Albert S. Golemon, FAIA, founder of the Golemon & Rolfe firm, work on the design of the airport began in ’61. After studies of air facilities the world over, the HIA team had reached one conclusion: that the only way to design an airport for present-day and future needs would be with a fresh start, away from the air-side/ground-side hang-up. In 1963, the general layout was agreed upon. Groundbreaking was in June ’65.

Still another advantage of the HIA concept, evident to most only at second glance, is that with the grade level dug down 6 feet, all four sides of each terminal are used for auto traffic. One side, which holds the baggage claim and car rental areas, is for taxis and limousines, one is for private cars, one for rental cars. The fourth side is reserved for baggage and building services. A ramp to the second level makes it possible to deposit departing passengers at the main lobby (with ticketing, concessions and coffee shops). Four concourses from each corner of the lobby lead to

Concourses from flight stations to main lobby are intentionally simple, without distractions to cause congestion. People movement provides life. Concourses bridge roadways; fences hold lampposts and shield against blast from jets.



the flight stations. Vertical movement of the departing passengers is therefore not necessary.

The credit for these latter design criteria, Harry Golemon explains, goes for the most part to the director of Houston's Department of Aviation, Joseph A. Foster. Foster, incidentally, is mentioned in Arthur Hailey's *Airport* as one of a handful of airport experts in the US.

The HIA concept also eliminates the need for the public to cross roadways at any point. The travelers who park on top of one of the terminals take the elevators to the desired floor; those who park between terminals can take the minitrain and elevators to reach the lobbies. A minitrain station is at the midway point of the parking lot.

But for all its advantages, HIA has been the target of some criticism. One of the main complaints is the distance from downtown Houston (20 miles) and the lack of good limousine service.

"As long ago as 1951, the Federal Aviation Administration said that Houston would need a larger airport by the late '60s. It advised against expansion of the fairly new Houston International Airport since the area around it was becoming more densely populated every year. With a future airport in mind," Golemon explains, "a group of Houston businessmen bought up 3,000 acres of land which they turned over to the city at cost, \$600 an acre, 10 years later. The City of Houston acquired the additional acreage through a revenue bond sale.

"Therefore, the land was obtained at very reasonable cost and its location was — and still is — considered by the planners as nearly perfect, tucked in as it is between two expressways. HIA, like just about every other airport ever built, soon won't seem so far away since it will be followed by other activities. One sign of this is that adjacent land now is \$5,000 an acre.

"As for rapid transit to Houston, chances are probably nil for the near future. Houstonians still prefer their cars."

A confirmation of this is the fact that use of public transit in Houston has decreased considerably during the last decade. Airport traffic alone is not enough to support a rapid transit system, and in Houston, therefore, helicopter and STOL aircraft service is now in use as a logical supplement to ground transportation.

Another complaint is that the road system around the buildings at HIA is too tight, with too sharp turns. But ac-

ording to George F. Pierce Jr., FAIA, partner of G. Pierce, Goodwin & Flanagan, the original plan calls for one more lane when needed.

HIA, with its present two terminals, was built to accommodate 4.5 million persons a year, which it now does. By 1975, the figure is expected to double. Already, dissatisfaction has been expressed with overcrowded conditions at certain hours.

This, says Pierce, "refers to ticket counter crowding only. The situation will be remedied when the airlines get more efficient ticket processing. In other areas we don't expect overcrowding even when the jumbos arrive. The flight stations, for instance, now handling up to 500 persons per hour, are so close to the main lobby that people can wait there and be onboard in a matter of minutes. On arrival, passengers don't stop but keep right on going. As for greeters and well wishers, the concourses can easily be closed off for anyone but travelers if necessary. When the design of HIA was started, the SST was the thing and the jumbos were not even on the drawing boards. However, we did add one extra large flight station for Delta Airlines after construction began."

Adjectives such as slow, noisy, bumpy and cramped have been attributed to the interterminal minitrain.

"They are appropriate to a degree," concedes Golemon. "However, it was the best available system on the market when it was installed. The trackless trains cost only \$290,000 and they *do* serve the purpose. By adding inflated instead of solid rubber tires and a spring suspension system, the ride will be smoother. Some of these revisions are now in progress. When the hotel and the additional units are completed, the question of replacing the train with another type of people mover may crop up — if by that time there is a perfected one on the market. The price, naturally, would be considerably higher."

The concourses leading to the flight stations have been termed dark, sterile and dull.

"Comments on their darkness must have come from passengers who have arrived at night during Houston's drive to save power shortly after the airport's opening. We purposely designed them simple and without windows — we want people to move through with nothing to detract them in order to avoid congestion — and it works. People movement, for which the concourses were designed, makes them visually exciting."

Visitors and travelers who come to the airport expect to see the field and the planes, especially from the restaurants. At HIA, some have commented, both restaurants and coffee shops look out over the parking lots while airline offices face runways.

"This," explains Golemon, "is because ticket counters are along the left and right sides as you enter the lobbies; consequently airline offices are just behind them. Had we used these locations for the restaurant facilities, passengers would have had longer walks from entrance to ticket counter to gate. We couldn't turn the terminals 90 degrees either, then the helicals to and from the roof parking would have interfered with the road system. The scope of the view, which includes aircraft, a portion of the terminal and the concourse concrete structure as well as cars, is exciting and dynamic."

The baggage claim area is found by some to be too far removed from taxis and limousines.

"The longest distance is only 250 feet, the shortest 150. We see the location of private and rental cars equally important as that of taxis and limousines. Obviously, then, the baggage conveyor belt has to be in a central place. We are aware of some airlines' wishes to have baggage claim by the gates," Golemon goes on, "This, however, would be too far to walk with baggage."

HIA was designed with ramps at all curbs for handicapped persons and there are central elevators on all levels. There's a paraplegic toilet in each terminal, but there is only one door — which is heavy to open — to get in and out of the restrooms.

"Taking the handicapped into account is still a fairly new thing and Senate Code 111 was not in effect until the last stages of construction. A double, electronically controlled door might have been the answer in this case. Our firm has the invariable philosophy that if the user complains, a better solution must be found for the next project."

The signs leading to the airport have been commended for their clarity; both exterior and interior signs have been called "stunning" by billboard people. But inside, the travelers don't always find the signs easy to follow, especially in the train area.

"We have learned some lessons in wording," Golemon declares. "For instance, references to east and west, etc., are meaningless since most travelers are unknowing when it comes to compass directions. The next time around we will make some changes."

"One thing I would like to mention while we are on the topic of signs is that the City of Houston, or more specifically the director of the Department of Aviation, has control — through a lease provision — over all tenant-constructed improvements and alterations within the terminal and in the airport complex, as well as over graphics and signs. This control came about through the

suggestion of the architects. It was not an easy thing to accomplish; in fact, it took some real doing since politics certainly is involved. But the efforts were well worth it: with this provision, the airport will be prevented from getting a cheap look, so common where the concessionaires are on their own."

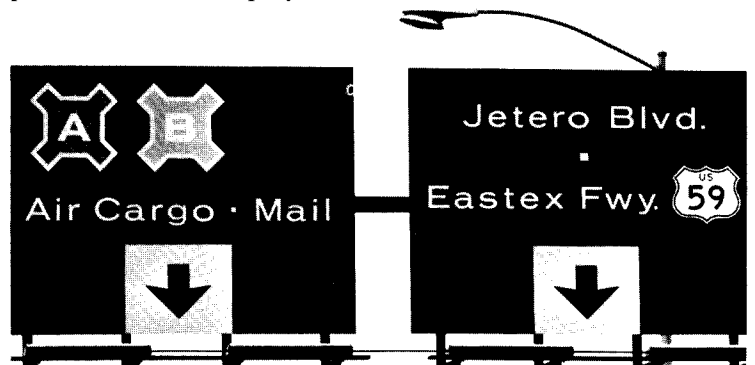
Presently serving as airport consultants for the City of Houston are HIA's two architectural firms and the engineers, reviewing everything from site planning to exterior designs and materials, landscaping, graphics, advertising or identifying signs, their placements and numbers, as well as exterior lighting.

If a tenant plans construction or alterations, the regular procedure starts with a preplanning session between him and the airport consultants in order that the former may get a clear understanding of items that will be checked for conformance to city requirements. Then follows a review of schematic or preliminary drawings and, later, of the construction drawings. The consultants must report on these reviews in writing to the aviation director. Construction or alterations cannot be started until the director has given his approval. During construction, any change that would affect the esthetic or technical quality of a project must be submitted to the consultants for approval.

"The design control also includes landscaping. The airport has a landscape master plan which each tenant has to follow, and he also has to keep his land up to set standards. This plan has been approved by the City Council as a guideline for land development.

"The design control is not dictatorial," Golemon explains. "The lessees may select their own architects and are given a wide range of choices of materials which makes it feasible for them to express their individuality. Being airport consultants is of the greatest importance to us since it permits us to have continued responsibility for our work. We hope the arrangement will set a precedent for future projects."

BESS BALCHEN



Signs at HIA (by Architectural Graphics) are hailed for their handsomeness, exterior signs also for their clarity. To maintain original appearance, airport owner has control, through a lease provision, over all tenant-constructed improvements and alterations, graphics and signs.



For the Joy of Air Travel: More Amenities Below

by ANSEL E. TALBERT

With massive new efforts by the federal government to relieve our congested airports and protect their surroundings, and with citizen interest and pride in these facilities, they may at last become assets to their neighborhoods and havens to air travelers.

Airports have come a long way in architectural (and other) beautification — as well as in functional efficiency — since the early days of air transportation.

The trend away from bare concrete and bleak landscaping has been in progress for some time. Planners at major international terminals have worked overtime not only to keep the flow of air traffic moving but to keep passengers happy within the airport area.

Take Terminal 1 at London's Heathrow Airport, for example, on which converge 57 airlines from 48 countries. Opened in 1968, it is one of the largest and most modern airport buildings of its kind in Europe, comprising an efficient two-level design with arriving and departing passengers separated. The roof of Heathrow's oldest passenger building, Terminal 2 (opened in 1955), has been redesigned to include handsome terraces, gardens, lawns and cafes with a panoramic view of the entire airport. It is suggestive of a seaside promenade.

At Kennedy International, with the completion of Trans World Airlines' Flight Wing One and British Overseas Airways new terminal — both with their own federal inspection areas — approximately 25 percent of all arriving passengers will be removed from Kennedy's International Arrival Building and thereby lessen its almost constant crowd.

These are only straws in the wind characterizing massive efforts to relieve congestion while at the same time offering travelers pleasant surroundings.

The most important such effort to date, certain to have powerful effect both on traffic flow and airport esthetics, is the Airport and Airway Development and Revenue Acts of 1970. This was signed by President Nixon last May and went into effect the beginning of fiscal year 1971. The bill assures the Federal Aviation Administration \$15 billion over the next 10 years for modernization and expansion of the nation's airports and for improvement of navigation and control systems. This is not only a jump of almost 175 percent over recent annual appropriations, but the bill also covers 10 years, thereby putting the FAA in a position to plan far ahead rather than to have to dicker with Congress for funds each year. This new situation will save time and money in more ways than one.

The funds derive from increased taxes on general aviation fuel and passenger tickets; new taxes on departing overseas travelers and air freight; and registration fees for all aircraft of more

than 2,500 pounds take-off weight. (Prior to July 1, only a nominal \$2 to \$3 was paid for paperwork by plane owners.)

The money will be used for:

- Planning — A total of \$75 million in grants (not to exceed \$15 million a year) will be available for airport system planning and for airport master planning. Recipients will have to foot one-third of the cost of a project.
- Construction — For fiscal year 1971, \$280 million (1970's budget was \$80 million). Recipients will have to match the amounts with 50 percent.

While construction of terminals is not included in the bill, John H. Shaffer, FAA administrator, says specifically that besides being aimed to relieve congested conditions, the act "assures environmental protection for completely new airports." It will do this, according to Shaffer, in the following ways:

- Any airport site or runway extension must be acceptable with respect to its impact on the natural resources "including wild life and scenery."
- Airports must comply with regards to air and water quality standards.
- Interests of communities served by or affected by the airport must receive due consideration.
- The Secretary of Transportation will consider the relationship of each new airport to the rest of the ground, sea or air transportation system serving its particular area.

Shaffer is optimistic about overcoming the growing public intolerance of airports through the mediums of beautification, the cutting down or elimination of smoke producing aircraft engine emissions and the control of noise.

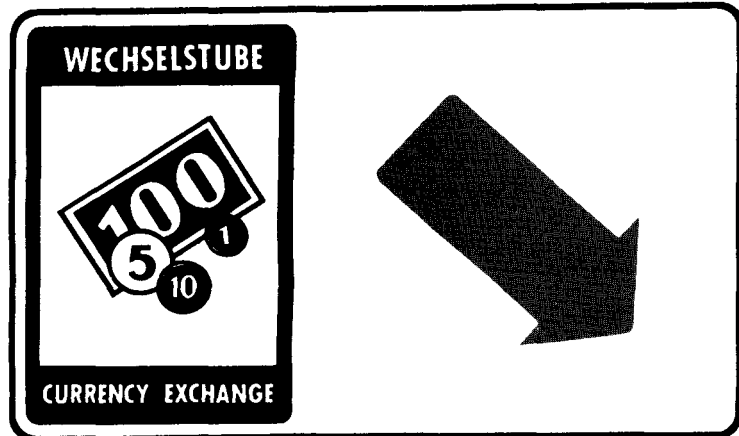
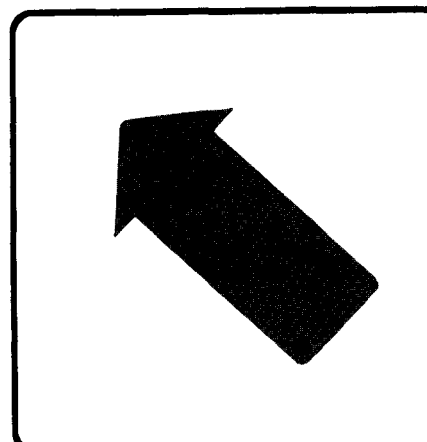
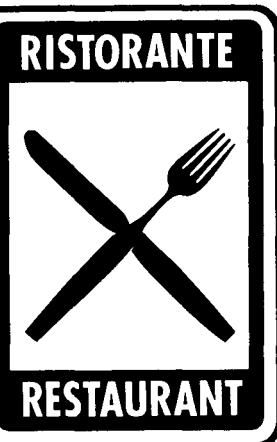
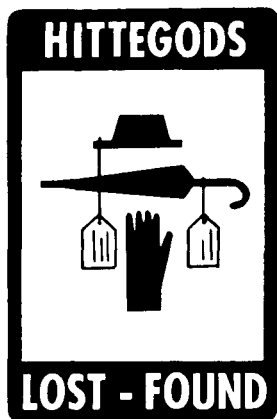
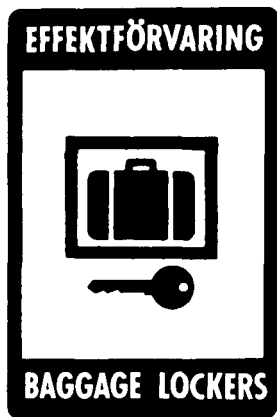
In all, the highly important drive to make airports as esthetically pleasing as possible not only to air passengers and their friends but to people living in their general vicinities is growing, particularly in the United States. It has received strong impetus recently from militants and well-organized conservationists and others who, critical of what they see as the airports' increasingly adverse effect on ecology, have blocked or delayed the building of new jetports. This happened in such sections of the country as the New York and Greater Miami metropolitan areas.

This development is having considerable effect not only in writing "environmental protection" into the plans of new ones but also in the improvement of existing airports. It is not generally known that in this connection, the FAA has an "Airport Beautification Award" for which all US airports are eligible. This award is being conferred in a conservative manner to recognize tangible

Mr. Talbert is executive editor of *Air Transport World* and author, among other books, of *Famous Airports of the World*.

These are some of the location and directional signs developed and recommended by the International Airtransport Association for use especially in international terminals. Symbols, even though generally accepted and understood, should be accompanied by explanatory text. In addition to good signage to help traffic flow in terminals, IATA also points to the importance of having advertising material which does not conflict with the signposting. (The planners of Houston Intercontinental Airport have found a solution to this problem; see p. 43.) Signs should be standardized, IATA contends, but exterior road signs should be the same as those used on roads outside the airport in the country concerned.

The placement of signs is as important as the signs themselves. Arthur Allen Hitchcock and Courtney Hashimoto, fifth-year architectural students who undertook a study of passenger orientation in airports, conclude among other things that passengers look for visual cues for direction only when confronted by explicit decision points; up to such points they follow the general flow of people movement. Consequently, decision points should be minimized and explicitly defined.



and measurable improvements, either through face lifting or through outstanding efforts to stimulate public interest and support of an airport through creative projects. Airport communities do the nominating.

A short time ago, the FAA gave the award to a small commuter airline and executive travel/general aviation airport at Skaneateles, New York, now a real aviation showplace located in the beautiful Finger Lakes Region of the state. Specifically, the honor was conferred for a remarkable job of blending the flying field and its ground facilities harmoniously into the natural surroundings. The harmonizing took place through a modest step-by-step approach during which the 23-year-old sod strip was converted into a modern facility. Today, the Skaneateles Airport has one 3,200-foot and one 3,400-foot runway.

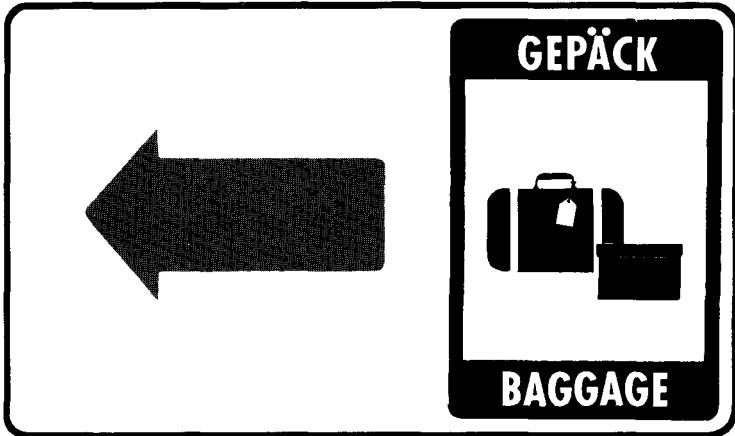
Another winner of the award, which was established in 1967, is the much larger Philip Bellard Municipal Airport at Topeka, Kansas. Here, local citizens joined with the airport authorities in helping to create what the FAA calls "a healthful, esthetically and culturally pleasing, and productive facility serving the traveling public and the community."

Some relatively large US domestic and international airports used by the major airlines also have received the "Airport Beautification Award," including the Phoenix (Arizona) Sky Harbor Airport; Jacksonville, San Diego and Guam International Airports; and Palo Alto Municipal.

To travelers who are kept waiting in airports — and unfortunately many of us are these days — pleasing surroundings are of the greatest importance. A basic necessity is a good circulation pattern within the terminal and between terminals and, in addition, good signage. Few things are more irritating to the weary, bundle-burdened traveler than to have to trot over hard-surfaced floors on a vain search for one facility or another. Add to this the frustration of foreigners who don't speak the native language, and the logical outcome should be clear, easy-to-understand signs. Not only do such signs help the individual traveler; they also contribute to the efficient flow of traffic in the terminal. Signs that are difficult to understand only add to the confusion. It is also important that the signs are placed at heights where they can be quickly spotted and easily read.

Why not adapt an international standard for airport graphics? In Europe, such a standard is getting more widespread use not only in airports but also on the highways. Such symbols for airport signs are recommended by the International Air Transport Association. In addition to helping the traveler, they reduce the cost of developing individual signage for each airport.

With the mobility the peoples of the world have today, it would seem natural for the US to follow Europe's example. □



Crux of the Matter: Systems to Keep Them Flying

by BERGTHOR F. ENDRESEN

Passenger convenience, a prime consideration for designers of airports, will amount to just about nil if behind-the-scene people and services don't get the same attention. And this latter area is where an airport provides real economy for the airlines.

Architects who get involved in the creation of airports must consider an array of parameters which did not exist a few years ago. The complexity of a modern airport is so overwhelming that unique considerations must be applied in every instance. The one basic problem — and the major factor to be encountered by anyone who has anything to do with the design of an airport — is increased crowding.

Within the scope of this term comes everything from crowding of airplanes in the sky, in holding patterns, on the runways, in the maintenance shops and hangars and at the ramps, to crowding of automobile parking lots, taxi stands, bus terminals as well as crowding of people at airline ticket counters, in coffee shops, restaurants and at baggage pickup stations. Add crowding behind the scenes — in the flight control centers, the towers, the dispatcher offices, the mail delivery and air cargo pickup stations.

By 1975, airline passenger traffic in the United States will have reached the 300-million mark. By that time we should have built 800 new airports and expanded and modernized an additional 3,000. A typical big-city airport will handle close to 100,000 passengers and 1,000 airplanes per day. When the monster

jets go into service, any major airport may find itself faced with the situation of handling five or six of these giants at the same time. Maybe 5,000 people will be crowding into the terminal at once, coming or going. Visualize 10,000 to 15,000 suitcases and parcels jamming even the most modern moving-belt distributor system with their owners scrambling to find them. Imagine that many people demanding prompt transportation to or from the airport.

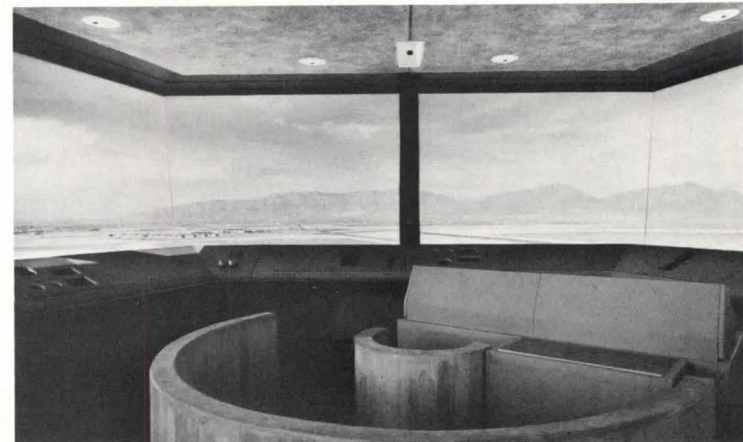
Increased crowding already has become prohibitive for the airlines to cope with at most big airports. Chicago's O'Hare has reached a peak of over 2,000 landings and take-offs in one day (an arrival or departure every 21 seconds during the busiest hour); at Kennedy in New York peak-hour delays range up to 19 minutes per plane with some individual delays running as high as 40 minutes. Five years ago, delays at New York airports cost one airline (United) more than \$400,000 in wasted fuel, extra crew pay, etc. Today these outlays amount to nearly \$1 million.

Over the past decade, passengers and passenger-miles have more than doubled. Estimates for the next 10 years range from doubling of current traffic to quadrupling of it. Between 1965 and 1966, US airline passenger total rose from 95 million to more than 110 million, better than a 16 percent gain in one year. According to Federal Aviation Administration estimates, the traffic will jump from more than 170 million passengers in 1970 to well over 430 million in 1980.

Of course, this increased crowding does not stem from some urge to travel, blooming in almost every breast. It is the result of a maze of sociological factors, ranging from affluency and population explosion to complexity and haste in communications between people all over the world. Be that as it may. Airport planning, design and construction must be done accordingly.

In the past, airports, like the airways where there are not

Well organized working space becomes of even more consequence as air traffic grows. The old and the new: cab of control tower at Washington's National Airport and of tower by I. M. Pei & Partners (p.34).



enough traffic controllers and equipment to provide the needed safety standards, have suffered from shortsightedness and from a national transportation policy that for too long was stacked overwhelmingly in favor of the automobile. Airports became noisy installations where the air was filled with noxious fumes, where chaos resulted if operations were halted because of bad weather and where any kind of expansion meant paralyzation of the entire system.

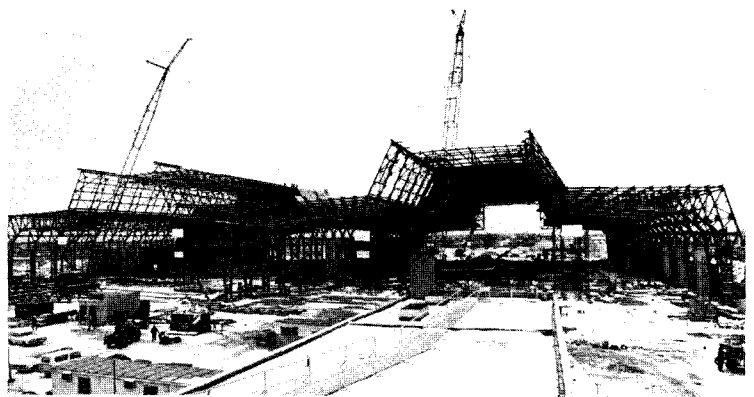
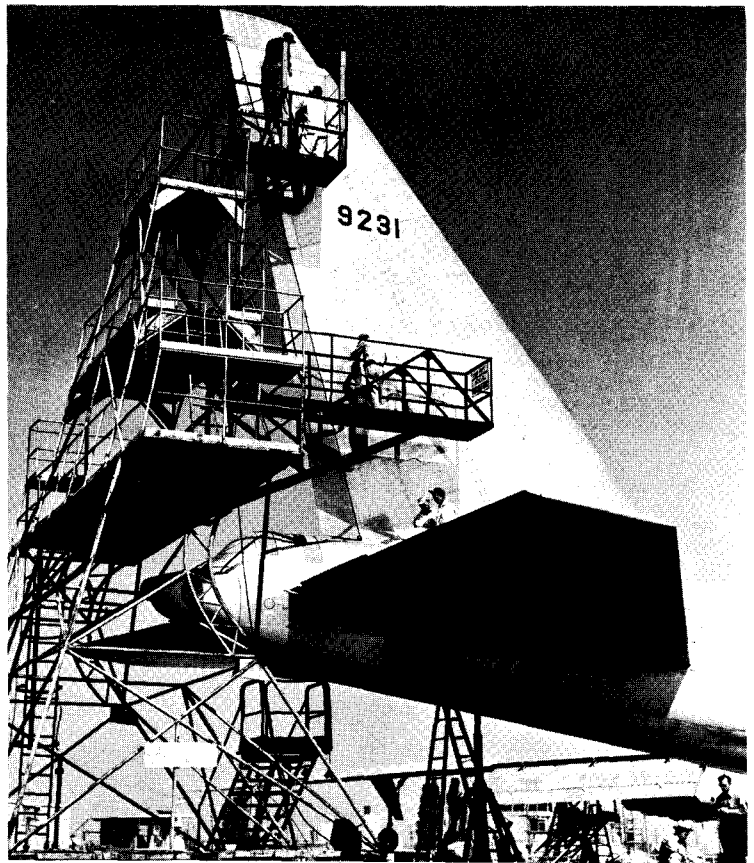
Architects designed airport terminals with passenger comfort in mind and with very little consideration for the most important aspect of air travel: the concept of airport systems support. The first addition to the primitive terminal was a washroom for the public. Then, someone thought of adding a newsstand and a stand-up coffee shop. More elaborate terminals included a couple of public telephone booths, a shoeshine stand, a bar, maybe even a bookstore. In the '40s and '50s, the boom reached its peak and designers of air terminals became more elaborate than ever. By now it had become customary to include smartly designed restaurants, post offices, banks, florist shops, gift shops, bakery shops, barber shops, game rooms as well as children's playrooms, an array of advertising booths and stands with everything from rent-a-car service and insurance sales to just plain information booths and swanky cocktail lounges for the airlines' VIP customers. But all these considerations never amounted to more than a superficial support for the airline passenger.

The crux of the matter — and the basic parameters for modern-day airport operations — are to be found in the behind-the-scene support systems that will result in safety, efficiency, economy and comfort, not only to the public but to the thousands of officials and airline employees who work at the airport and who are supposed to keep things running smoothly around the clock.

Very few of today's 200 million airline passengers have had the opportunity to take a peek behind the scenes at our big-city airports. Therefore, it is understandable that the public cannot grasp the reasons for the delays, the crowding, the near mid-air collisions, the breakdowns, the lack of equipment, the inadequacies and the lost baggage. Unfortunately, it remains a fact that most of our big airports have impressive terminal buildings, but the lifeline of airport systems support hardly exists. Offices for airline dispatchers, air freight and maintenance personnel often consist of overcrowded, windowless pits in some remote basement area. Hangars for repair and maintenance are often located in areas across the field; storage shops for parts and components may be a mile away. Eating and washroom facilities for airport personnel always seem to have been neglected, not to speak of parking space or adequate facilities for technicians and controllers who are responsible for overall air traffic safety.

To keep its fleet of modern aircraft flying, Eastern Airlines estimates that it employs 130 personnel for each aircraft. About five or six of these make up the actual crew, most of the remainder work right at the airport, performing a wide range of necessary services. The public normally is aware of some of the above-the-surface functions conducted — they meet ticket agents, the agent at the gate and perhaps baggage service personnel. But they never meet with the dozens and dozens of controllers, dispatchers, weathermen, mechanics, maintenance personnel and host of others working under incredibly crowded conditions and in neglected facilities behind the scenes.

Too many passengers; too many people working at the airports; too many airplanes and too few runways; too many people and too many cars on inadequate road networks; too few hangars and shops for maintenance; too many inadequate support facilities for aircraft loading and unloading, engine and aircraft check-



All-weather maintenance facilities are fully as important as well-functioning terminals. The crude and the efficient: makeshift scaffolding and hangar (Ammann & Whitney; Burns & McDonnell) for Pan Am's 747s.

out and testing plus constant near-breakdown situations in traffic control support — these represent some of the current headaches.

Some of the most frequently discussed solutions include an impressive list of radical ideas and suggestions (some with such a high price tag that they are out of reach). Since they don't make land any more, the cost of it continues to soar. The problem of finding suitable locations for the construction of airports, consequently, has become paramount. So there is talk about building airports at unconventional sites: in New Orleans' Lake Pontchartrain, in the Great Lakes or in the Atlantic Ocean. Airports in the water may be on partially filled-in land, on concrete islands or on huge platforms. Use of special rapid transit and high-speed ground transportation systems, such as monorail and subway trains, certainly will help combat the increased crowding. And the use of helicopter and V/STOL connections may also make possible new airports located farther out from the cities. These are well-known factors which designers have advocated over a number of years. Likewise, those who are concerned with airport planning are fully aware of the need for rapid mass con-

veyor systems for both passengers and baggage and a host of other modern systems for handling of the traveling public.

But two basic problems remain unsolved in most cases: The crowding continues because whatever techniques or methods are introduced never seem to be enough; and the lack of consideration for the behind-the-scene support systems continues, with the result that the crowding, delays and miseries in this important area add to the problems in the first area. They go hand in hand. In other words, it is not going to be possible to streamline the handling of passengers at the ticket counters or execute on-time takeoffs and arrivals unless adequate facilities for traffic control, dispatching, air freight handling, mail service, maintenance, repair and refueling are provided.

As we progress into the '70s, the situation is getting worse. Already, we have reached a point where big-city airports have become vast conglomerates. The transit services bringing passengers to and from the airports require elaborate terminal facilities of their own; the same applies to air freight and mail operations. Even more important is that each airline may operate its own, self-sustained terminals as an entity within the overall system, making it terminals within terminals within terminals. And it doesn't end here. Terminal facilities have even been split within a single airline. For example, Eastern Airlines' shuttle service from New York to Boston and Washington, D. C., is completely separated from the airline's other operations. Certainly, it is important to provide the ultimate in design for passenger handling and comfort. However, a decentralized layout such as this is never efficient and it is important that architects and engineers of future airports find ways to avoid similar airport sprawl conditions. But it is even more important that they put greater emphasis on solving the problems connected with the technical service support systems.

In analyzing the basic parameters — which did not exist only a few years ago — let's look at some of the factors which confront us today:

1. The airlines and the aircraft manufacturing industry are in an incredible financial slump and are suffering economically more than ever. This situation prevails at a time when increases in both passenger traffic and air freight are on a constant upswing, with resultant requirements for new aircraft, much bigger and faster and tremendously more expensive than the first-generation jets.
2. While the new aircraft are expensive to acquire, they are even more costly to maintain and service and require ground support equipment of a kind which never existed before.
3. With the introduction of more and more of the bigger and faster aircraft, the ground and traffic control requirements become more acute and more complex every day. Use of sophisticated electronic equipment, including expensive communications machinery, computers and data processing facilities, has become mandatory, adding to the overall costs of keeping airplanes flying and requiring more installation space at the airports themselves.
4. The official forecasts for increase in passenger traffic (by the FAA and the Air Transport Association) are stunning, but the forecasts for increase in air freight operations are just plain fantastic. ATA data prefigure a sixfold increase in air cargo from 5 billion ton-miles in 1969 to more than 30 billion ton-miles in 1979. Many experts predict that air cargo will have outstripped passenger traffic by 1980. Yet, there is hardly any existing airport equipped to handle even a small percentage of the air cargo volume predicted for the next few years. In fact, few airports have adequate facilities even for today's air freight volume.
5. Supporting the increase in passenger and air cargo traffic and subsequent complexity of service, checkout and maintenance for

the bigger aircraft may force many airlines to establish costly airport facilities under the "terminal-within-terminal" concept — to great disadvantage and discomfort for the traveling public.

With these facts in mind, it is clear that we need a new plan of attack for airport architecture and construction.

First, big-city air transportation must be served by networks of efficient airports. Studies by the Urban Land Institute show that in the year 2000, 77 percent of the population will be living on only 11 percent of the land, in four great urban sprawls: California, Chicago-Detroit, Florida and the northeast corridor from Boston to Norfolk. A minimum of 77 percent of the air travel will be within these centers. Thus a network of efficient airports means that each big city in these congested areas must be served by several airports. Already, we have reached the saturation point for many of our big-city airports. Further expansion simply means more complexity and further crowding. Big cities, such as Chicago and New York, must be served by five, six or more airports. Some of these may be built in the water, some may be located as far away as 60 or 70 miles, which is immaterial if the airports have 150-mile-per-hour monorail transit links with the city.

Airports must be designed not only for passenger convenience but also for airline convenience and economy. Streamlining of aircraft handling must be accomplished in such a manner that a big aircraft, such as the Boeing 747, can be serviced, checked out, refueled and made ready to turn around and take off in not more of a time period than it takes to unload the arriving passengers and their baggage. It costs the airlines enormous sums of money to keep these expensive machines on the ground. At many airports they must be hauled away to some distant point for even minor checkout service of engines, electrical and hydraulic systems. Thus the ideal design for a docking facility for these aircraft would be one that will enable ground support crews to go to work on the aircraft the minute the first passengers and the first piece of baggage leave the plane.

It is a paradoxical dilemma that this may be achieved under the terminal-within-terminal concept. Installations for ground support systems may be located on one side of a docking facility while the passengers embark or disembark on the other. But this concept (terminal-within-terminal) may easily cause unwanted miseries for the passengers. It is commonplace to arrive at some transit point on a particular airline only to find that a connecting flight has been delayed or canceled. The solution may be to continue on another carrier but, inevitably, the other airline's terminal or check-in facility is located at the other end of the field. It may involve a two-mile walk or even an intra-airport taxi ride.

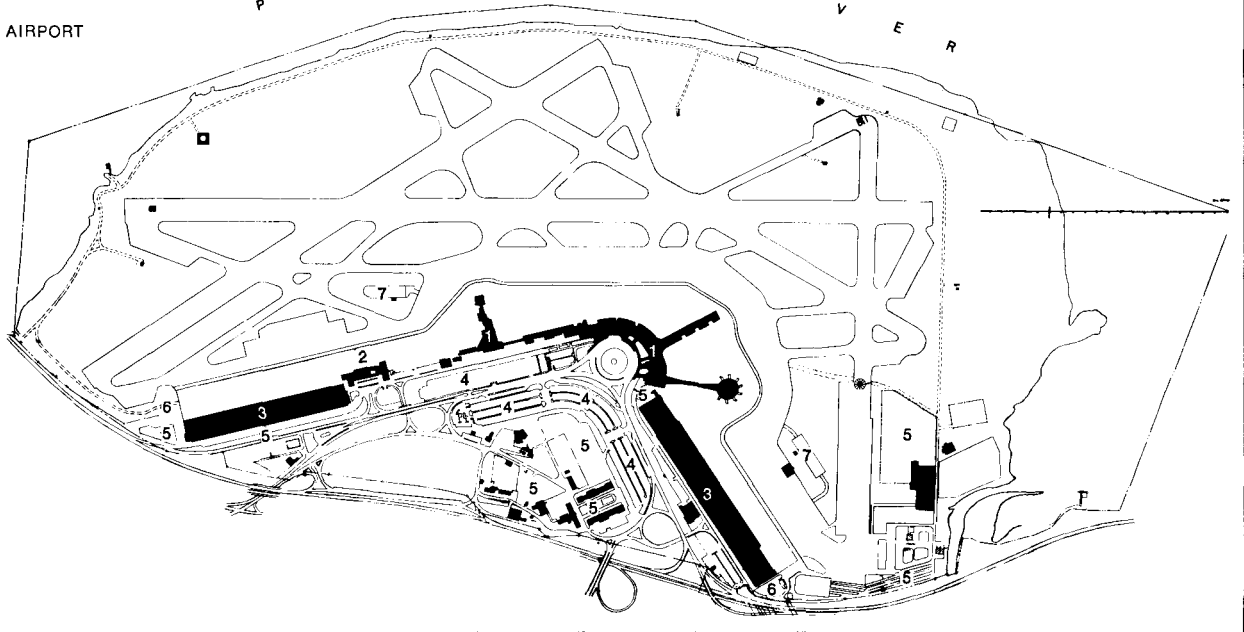
In consideration of the third point in the parameter stipulations mentioned, it is apparent that designers must provide adequate facilities and maximum convenience as far as all traffic control and safety installations are concerned. Bigger airports and bigger aircraft mean more elaborate arrangements for more conventional and auxiliary power, emergency and fire fighting equipment, runway lighting, access and taxiing ramps, and larger and better space for the increased number of airport personnel.

I have visited or been in and out of most big airports throughout the world, and my organization, American Avitron, Inc., has enjoyed the privilege of conducting important systems design work including complete overhaul, maintenance and ground support facilities for several major international airlines and several major airports and cities. One important lesson we have learned

Mr. Endresen is president of American Avitron, Inc., an international firm which is marketing aerospace components, making engine testing equipment and designing total systems to handle giant jets on the ground.

WASHINGTON NATIONAL AIRPORT

- 1 Terminal
- 2 General aviation
- 3 Hangars
- 4 Public parking
- 5 Employee parking
- 6 Fuel storage
- 7 Fueling pad



is that the spiderweb type terminal-within-terminal concept often leads to chaos if any irregularity occurs, such as those caused by bad weather, delays, equipment breakdown, etc. Also, the installation of ground support checkout equipment and the setting-up of service shops for maintenance, plus adequate storage facilities for spare parts, tend to become cumbersome. In this respect, Washington's Dulles International Airport probably is the most convenient from a service point of view, with respect to both airlines and passengers.

At Dulles, the aircraft itself never reaches the terminal — or any terminal within a terminal. Passengers are transferred to the main terminal by mobile lounges. For any transfer the passenger will always be within a short distance of other airlines' ticket counters and he will board his continuation flight from another gate within easy walking distance. (After the planned expansion of Dulles, these distances very likely will increase.)

Service, checkout, ground support of any kind including refueling, commence at once after arrival, sometimes just off the runway by a short distance, other times in the service area across the field and away from the passenger terminal.

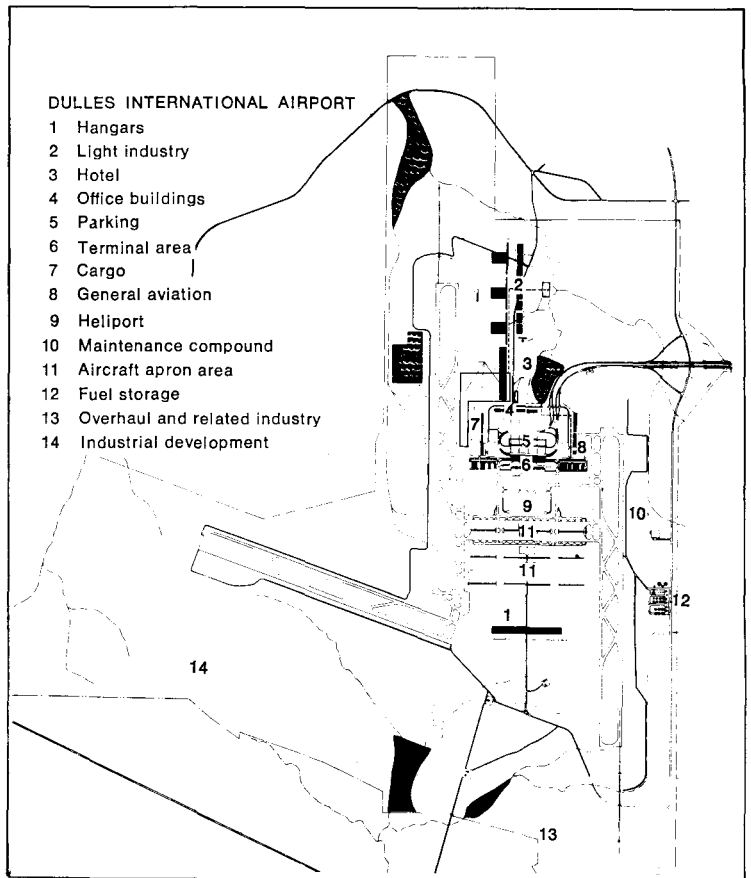
Dulles, generally speaking, is considered just about the best we have today but it has its awkward shortcoming in that the umbilical cord to Washington consists of a single highway instead of a combination of highway/downtown-to-airport helicopter service/150-mile-per-hour monorail support.

It is not difficult for architects to obtain estimates for passenger and traffic growth as well as for predicted air cargo volume growth. And it is old hat to design and plan public facilities on the basis of such studies and estimates. It makes it possible to incorporate planning for the proper amount of space for the various facilities, ranging from number of parking lots to the capacity of airport restaurants and other facilities. But it is considerably more tricky to anticipate the need for the behind-the-scene systems support and its complex facilities because few studies are available; the inadequacies and experiences of the past have been miserable, and predictions for future needs must necessarily be determined by the complexity of the flying machines themselves and their need for service and ground support.

Thus efficient and satisfactory design, layout and planning of airport systems support with its conglomerate of facilities rep-

DULLES INTERNATIONAL AIRPORT

- 1 Hangars
- 2 Light industry
- 3 Hotel
- 4 Office buildings
- 5 Parking
- 6 Terminal area
- 7 Cargo
- 8 General aviation
- 9 Heliport
- 10 Maintenance compound
- 11 Aircraft apron area
- 12 Fuel storage
- 13 Overhaul and related industry
- 14 Industrial development



Economical airport layout gains in significance with rising costs of maintenance and taxiing of planes. The unplanned and the planned: Washington's National and Dulles International Airports.

resent a challenge not only to the architect but to the airlines, to the official airport personnel (FAA) and to the people who finance the airport. In the past, systems support has almost always been neglected, sometimes overlooked completely. However, those with experience in aviation ground support in general know what it is all about. In the planning of expansion of existing airports and in the construction of new ones, these experts certainly can be of great help to everyone concerned, including architects.

THE HOVERING
PROBLEMS OF AIRPORTS



Nineteen mobile classroom units put together end to end keep passengers from three airlines out of the weather at Greater Philadelphia Airport during construction of new terminal. Robert M. Ovelman, director-facilities of Allegheny Airlines, designed the instant terminal over a 600-foot walk. With wheels off units, dividing walls removed and carpet installed, presto: business as usual. Total cost was \$300,000, work took less than one week, units can be used again.

To Check the Highflying

Functionality and efficiency are words that are heard again and again from the airlines in connection with airport planning. To these is now added cooperation — an element which will have to be taken into use by architects and planners if the gap between airport needs and available funds is ever to be bridged.

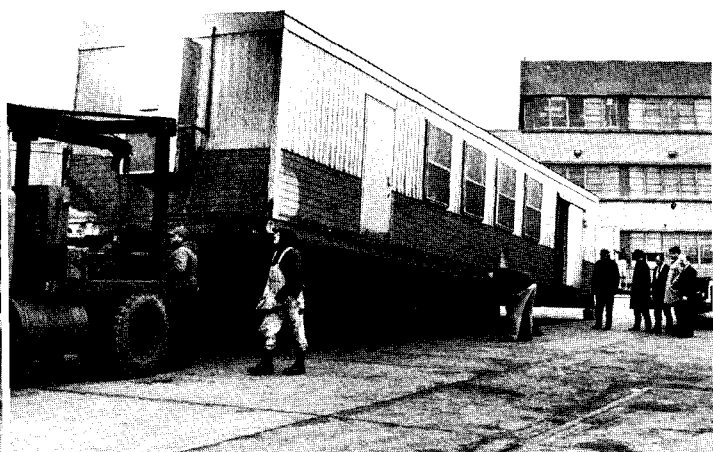
Basic to any discussion of airport architecture and planning is a review of where the airline industry stands in respect to its financial ability to participate in programs of airport modernization and expansion.

This situation of the industry appears at first blush to be an incongruous one. On the one hand, the demand for air travel continues to rise — although it is now showing signs of slowing down from the 13 percent annual growth rate which it has been averaging over the past decade — but, on the other hand, earnings are declining at an alarming pace.

Air transportation has for many years now been the most important mode of public transportation. Ten years ago the airlines accounted for only 44 percent of intercity passenger miles performed by rail, bus and private automobile. But in 1969, the airlines' share of intercity passenger travel had grown to 75 percent. At the current rate of growth, more than 90 percent of all intercity passenger travel will move by air in 1975.

Because so many travelers rely on the scheduled airlines for intercity travel and because the airlines directly and indirectly are called upon to finance airport development programs, the present financial condition of the United States scheduled airline industry is cause for great concern. The current economic slowdown in the general economy is but one contributor to the ailing health of the industry.

The reasons are many but the principal cause lies in the rapidly increasing costs which are being experienced in nearly every phase of airline operations. In particular, the airlines have been vulnerable to unprecedented wage demands. The cost of



Dollar: Closer Team Cooperation

by JOHN G. DUBA

labor, in fact, has become the industry's principal ungovernable expense and has been the major contributing factor in the escalating spiral of costs. The industry is now spending about 45 percent of its total operating expenses on manpower. Other factors involved in the industry's accelerating cost spiral include rapid increases in interest expense, fuels and supplies, landing fees and rentals at airports. These fees and rental charges are often the major source used by airport operators to pay costs of airport development.

Compounding the seriousness of the industry's financial problems are the tremendous capital outlays which are being made by the airlines — at a time when the cost of capital is at a record level — to accommodate the continuous growth in demand for air travel. In 1969, the airlines took delivery of 335 new aircraft valued at \$2.46 billion. During 1970, the airlines will take delivery of another 116 new aircraft representing a capital outlay amounting to \$1.9 billion.

Looking ahead to 1975, the industry will invest a total of \$6.6 billion over this five-year period in flight equipment and \$2.5 billion in related airport ground and terminal facilities.

Equally important over this period will be the industry's payments to airports — landing fees, rentals and other charges, which, it is now anticipated, will amount to \$3.3 billion. As in the past, most of these payments will be utilized by airports to assist in the liquidation of airport revenue bonds. It is obvious that the financial health of the airlines will play an important role in the development of airport facilities during the coming years as their ability to commit funds for airport terminal projects and to support airport revenue bonds will be largely determined by their ability to earn an adequate return on investment.

A new means for financing airport development was instituted when the President signed into law the Airport and Airway Development and Revenue Act of 1970 on May 21. The major cost of this program will be borne by airline passengers and

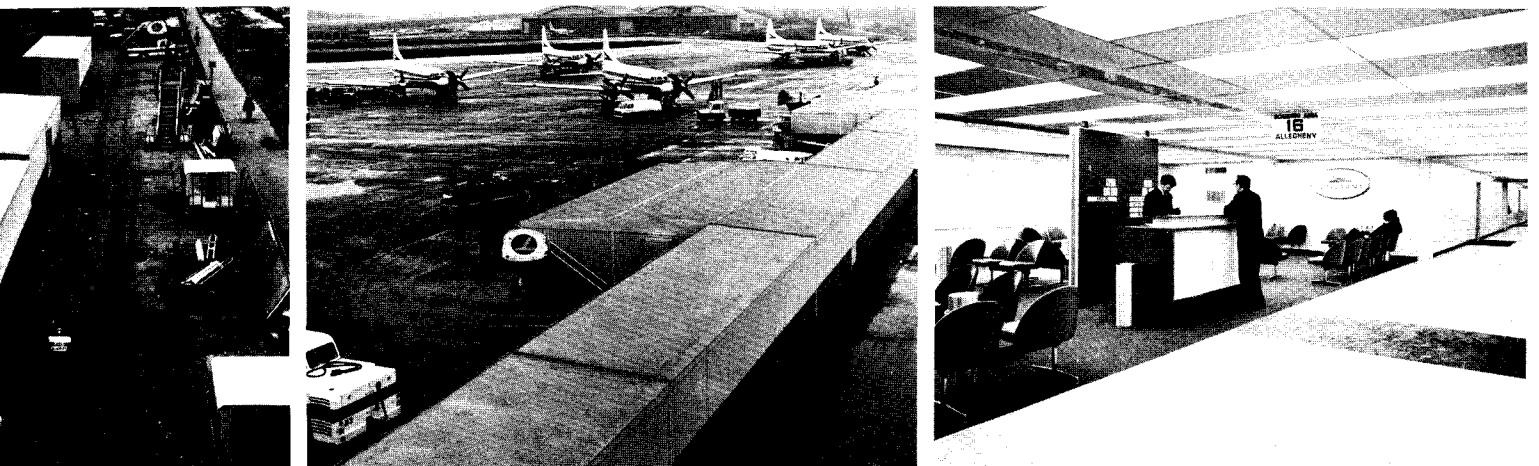
shippers, who will assist in paying for the facilities which they use through new taxes.

Although the new legislation is a step in the right direction toward meeting the tremendous capital requirements for airport development in this country, funds from the trust fund which has been established may not be used for development of terminal facilities. This is particularly unfortunate because the overwhelming proportion of the total capital requirements for airport development in the next decade will be in the terminal area rather than on the airfield side. The airlines estimate, for example, that about 80 percent of the \$6.5 billion needed at the nation's 22 large hub airports will be required to expand and modernize already overcrowded terminal facilities.

A contributing factor to the large amount of funds which will be needed for development of terminal facilities has been a rapid escalation in construction costs in recent years. In the inclusive period between 1967 to 1969, for example, construction costs rose at the rate of 1 percent per month. Taking into account the effects of recent union contracts, construction costs in 1971 will be at least 77 percent more than similar construction in 1960 — only 11 years later.

In addition, the impact of new and larger aircraft (such as the Boeing 747, DC-10 and L-1011) upon boarding volumes will mean that in 1975 the basic elements of the terminal will have to be much larger than they now are at our hub airports. The large volume of passengers at these hubs in the '70s will require the development and installation of automated systems for transporting people, for ticketing and boarding and for baggage handling. These systems will require a great deal of imagination and it is obvious that cost saving approaches will be essential to accomplishing the goal of moving people and baggage more efficiently through the airport terminal.

Within the framework of this situation, more realistic and creative approaches to airport planning and design are going to



be required. This means, for one thing, closer cooperation between architects, airport planners and airline personnel. For the terminal facilities which are going to be needed over the next decade cannot be built with the limited amount of funds which will be available. New ideas will have to be generated to bridge the gap between needs and resources. In particular, the airlines must be consulted in all stages of planning so that a better mutual understanding of objectives and cost limitations can be created.

Perhaps the most counterproductive of airline efforts in the past has been the construction of unnecessarily grandiose and elaborate terminal buildings. Those involved with airport development must resist temptations to erect monuments to civic pride. This is not to say that terminal structures should not be esthetically pleasant, but that functionality and economy should not be sacrificed to this end. Aviation facilities must not suffer the same fate as railroad stations by becoming functionally obsolete with no alternative uses. Such facilities ultimately serve as a fiscal drain on the passengers and the communities which they were intended to serve and have no future worth except as architectural landmarks which cannot be modified or removed because of their esthetic and cultural value.

Another important aspect of airport planning lies in improving airport access capabilities. The airport access problem already represents one of the most serious problems facing many large hub airports, and it is anticipated that access will become a significant limiting factor to airport development as early as 1973. Farsighted metropolitan area planners will incorporate airport service as an integral part of the transportation plan for the region. Since such access facilities represent a substantial asset to the community, financing of these projects should be undertaken by the community rather than the airport users.

Complicating the problems of airport terminal planning are the unknowns of technological change and the potential for premature obsolescence. In this sense, timing becomes essential to the success or failure of the project. Further, while terminal concepts are being explored, money is being expended on land acquisition, airfield construction, roadways, parking structures and other facilities. Thus the number of alternative concepts available to the parties involved tends to decrease as time goes on. This element of lost time often results in crash programs to develop whatever long-term solutions still exist along with expensive short-term, interim solutions. Improved planning procedures which incorporate systematic appraisal of priorities and alternatives are the best potential for dealing with these problems.

Any discussion of airport planning would be incomplete without giving consideration to the environmental or ecological aspects. It must be recognized that despite the advances being made by airlines and aircraft manufacturers in the reduction of smoke and noise, the most effective course of action lies in farsighted planning for airport development. For what we are seeing today is simply a manifestation of a prediction about aviation made by Francesco de Lana, an Italian Jesuit, as long ago as 1670: "God would never allow such a machine to fly since it would cause much disturbance among the civil and political governments of mankind."

If we are to avoid such disturbances in the future, we must adopt farsighted approaches to regional and area planning which consider both the interests of the airport and of the community. Through compatible land use planning, the community can protect its public investment in the airport and insure that the most

beneficial use of the land in the airport area is made. Zoning of land located in close proximity to the airport for compatible uses can serve to increase the economic value of the property and to produce new tax revenues for the community. In addition, effective zoning codes will serve to minimize or eliminate community/airport friction related to problems of noise.

There is a great potential for widespread sharing of ideas and experiences among airport planners and architects, something which would accomplish a great deal toward eliminating or minimizing the duplication of effort which now exists. Far too little attention has been focused upon what has been done elsewhere and on how previously completed projects could be improved upon. Only too often is an airport design initiated and developed without drawing upon the wealth of past experience which exists. This duplication of effort is wasteful of both time and money during design. Furthermore, the extended period of time consumed for planning and design inevitably results in higher construction costs.

More emphasis is needed on developing functional designs and more efficient construction methods which will reduce costs but maintain quality. A promising area in this regard lies in the development of modular construction techniques.

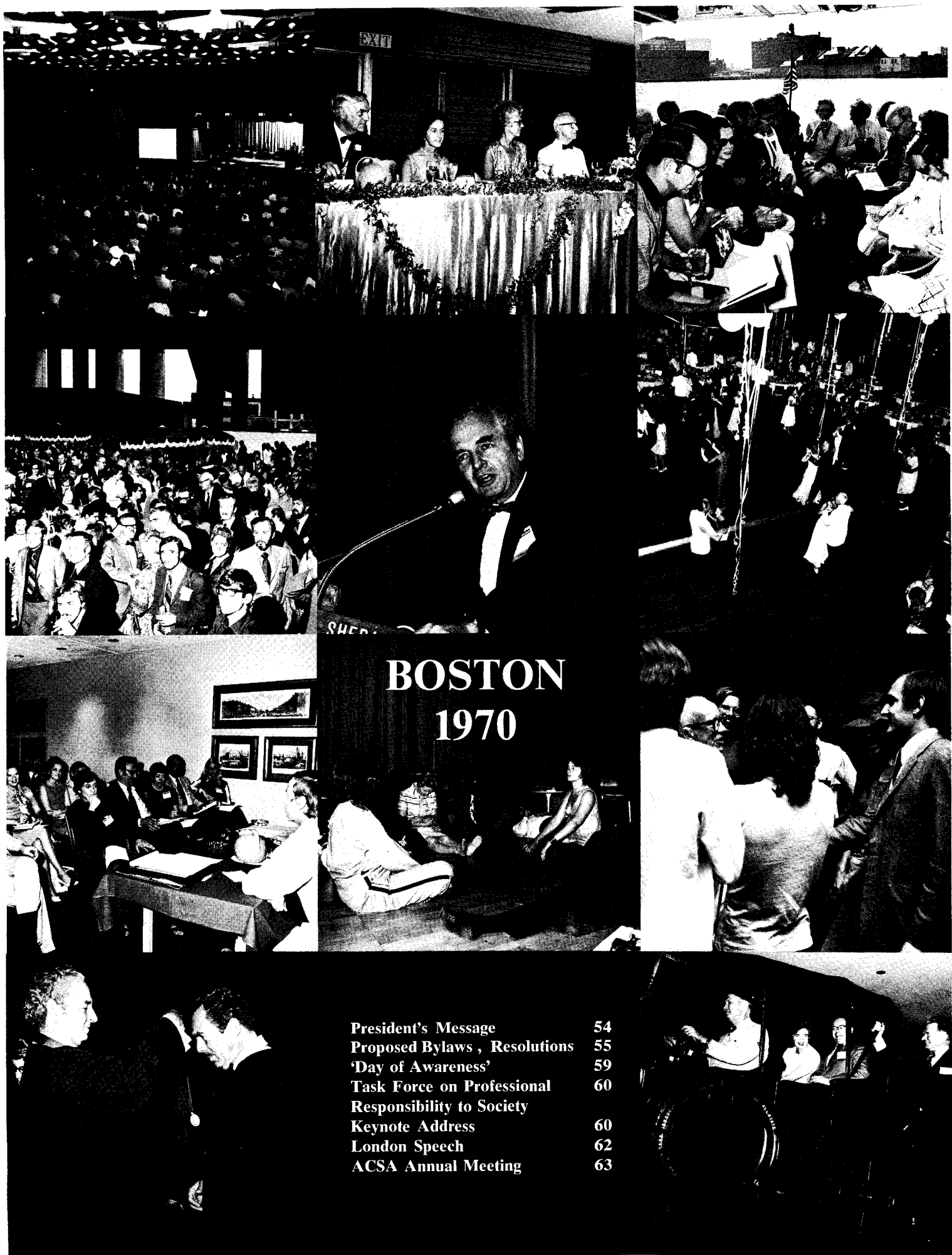
Oftentimes temporary facilities with no salvage utility are constructed, only to be torn down upon completion of the major project. Standardized interim facilities which could be dismantled and relocated would be a most desirable development. Allegheny Airlines has made a start in this direction with the development of a new temporary concourse/passenger lounge complex at the Greater Pittsburgh Airport. The new structure, designed as a solution to a temporary lack of passenger handling facilities while a new terminal is being built, is much less costly and requires far less time to install than the usual type of temporary facility.

The structure incorporates 19 mobile units joined end to end to produce a 600-foot long concourse. Joined to this concourse are four gate-area passenger lounges, which consist of two side-by-side mobile units with the center dividing wall removed.

The new concourse has the additional advantage of mobility which permits the airline to dismantle it and relocate it to another airport where the airline may be in need of interim terminal space. This particular structure was installed in less than a week's time and represented a 75 percent savings in cost over the usual type of temporary facility which would have had no salvage value.

The above example is an indication of how the airline industry is meeting its obligation — through the development of efficient airport ground facilities — to keep pace with the continually increasing public demand for air transportation. (The other and still larger part of this obligation is represented by the industry's acquisition of the most advanced aircraft available.) Admittedly, it is but a first step which will be improved upon in the future. The construction industry and the design professions must join the airline industry in refining this and other suggested solutions which are now only in the conceptual stage. Undeniably, there is great potential for reducing the costs involved in planning, designing and constructing airport terminal projects. But beyond effective cost reduction programs, there will have to be closer cooperation among planners and users, improved planning procedures, more emphasis upon functional requirements — and more attention paid to compatible land use planning if the dream of Edgar Allen Poe is to be realized: "*The great problem is at length solved! The air as well as the earth and the ocean has been subdued by science, and will become a common and convenient highway for man.*"

Mr. Duba is vice president, Airport Facilities, Air Transport Association.



BOSTON 1970

President's Message	54
Proposed Bylaws, Resolutions	55
'Day of Awareness'	59
Task Force on Professional Responsibility to Society	60
Keynote Address	60
London Speech	62
ACSA Annual Meeting	63

Tacticians or Technicians?

Excerpts from the message by
President Rex Whitaker Allen, FAIA.

President Allen's Tribute to Reuther: Walter P. Reuther was still young at 62, at an age when most men are anticipating retirement, and with numerous triumphs such as high wages for auto workers but also disappointments with the merger of CIO and AFL, he remained in the forefront of change and belief. Recently, he was deeply engaged in planned, fabricated housing units. Many of the ideals and policies Mr. Reuther championed came to pass and are now accepted as part of the American way of life with hardly a ripple of opposition.

This would indicate that those ideals and policies were on course and that Mr. Reuther's later ideas of profit sharing, health insurance for all, public backing for housing for private developers and designers, given incentives to produce quality, might also prove beneficial.

In 1957, Walter Reuther was given a standing ovation at our centennial convention. We have lost a voice of social concern and, yes, of professional responsibility, of leadership, of commitment to values — a constructive, innovative force. His death was a great loss not only to us but to our nation and to the world.

(The AIA Board of Directors has established a \$2,500 scholarship for the disadvantaged in memory of the United Auto Workers' president who was to have been the Purves Memorial lecturer.)



McGraw Hill's bash in City Hall



When I set the theme for this convention, it was in response both to a recognition of dynamism and the growing awareness of the architect's professional responsibility to society. In the intervening six to eight months, dynamism has been demonstrated by the emergence of another concern: the deterioration of our physical environment. For years there have been those who decried our despoliation of the earth, but it was not until we saw the earth's portrait from the moon that it was brought home that our spaceship is a mighty small self-contained planet with limited resources and limited area for waste disposal.

Even from seven miles up, many of you have become increasingly aware of the environmental changes that man is perpetrating. The atmosphere, so blue as seen from outer space, can be an awe-inspiring sight even from an airplane. But it can also be frightening to look down on a tortured eroding landscape. We had better become aware of what we are doing as a nation because we are the worst offenders. And as architects, don't we have a peculiar and particular responsibility? Aren't we fond of claiming that we are the designers of the man-made environment? The public is our client. As professionals, don't we have the responsibility to provide the public with expert advice and leadership?

Arthur Drexler of the Museum of Modern Art in New York has been quoted as saying, "Suppose that we could think of architecture not as a thing but as a process for perfecting the earth." What a challenge! A city would not be looked upon as a cluster of buildings but as a "force field" in which "energy transactions take place through the media of various organic systems." Using new technologies such as the computer and old ones such as calculus, it is possible to synthesize divergent and dynamic inputs. The architect with more information at hand may then be better able to design for "process," design for "use," perhaps not to "perfect" the earth but at least to make it more habitable for us all.

To work effectively in such a dynamic atmosphere, the architect must acquire not only new skills but new attitudes, particularly the recognition that we are at any one moment part of a continuum of change. The recently published report on the future of the profession, *Creating the Human Environment*,* states that the present era is like a "shock-front" and that during the next 15 to 20 years we will have societal changes of depth and consequence to match those associated with the industrial revolution.

The studies point out the significance to the design professions of the increased pressure for public participation. As architects,

we must expect that the public will "demand" a participatory role in determining and selecting the quality of the environment and that more often design issues will be resolved in the public arena. We must develop mechanisms to make this possible in a constructive manner.

The report characterizes the building industry as a "lag sector of an industrialized nation" and states that attempts will be made to bring it more nearly into alignment with the other more productive industries of our economy. The future of the building industry will be greatly influenced by the current belief that the present industry cannot meet this need. The results of this belief will bring additional public pressure for government action to break the present roadblocks to industrialization. These actions will have significant effect upon the profession as they will bring new actors into the construction industry in order to increase its efficiency and capacity. The profession must anticipate that many of the present constraints against a more conventional "industrial form" will give:

- Sponsorship of research and development in the only major industry in the United States which has not provided for itself.
- Direct land assembly and the granting of eminent domain to provide larger parcels up to and including new towns.
- The adoption of national codes and a breakdown of protective registration laws, trade restrictions or other barriers in order to permit national acceptance of new technologies and mass-produced construction.
- The creation of market assemblages to entice manufacturers into the building industry.
- New incentives to produce partnerships among finance, development and construction (perhaps most important of all).
- Incentives which will permit the application of known industrial management and construction techniques to the industry.
- Tax benefits and investment incentives which will remain crucial as always in the prospect of distant production for increased capital shortage for long-term investment.

It is extremely critical to recognize that actions in these areas may be first instituted to meet specific public sector problems of social stress such as "poverty" and "urban core," and therefore may not seem to affect the average practitioner. One must expect, however, that the patterns evolved will be of such magnitude and so formative that they will soon have major impact on all types of work, including the private sector.

The report flatly predicts that the most important changes in process in the entire building industry will be in the area of the design professions in the form of a professional management based upon newly emerging information retrieval and delivery systems and problem-solving techniques growing out of automated cybernation. Management service will be the area of the most significant change in the methods of practice, and this area may see the greatest influx of new actors into the construction industry. The most dramatic changes will be:

- Automated data storage and retrieval systems for a better decision base providing design criteria, materials data and standards.

* Reviewed in the AIA JOURNAL, June, p. 106.

- Interindustry communication systems for transfer of data "on line" during design and construction.
- Decision methodology which permits congruent rather than sequential consideration of data and criteria by several disciplines and which permits automated comparisons of design alternatives.
- Methodologies for interacting with the social institutions for determining design criteria and providing participatory planning.
- Automated planning and control methods which relate decision making to time, economic control and material flow in the construction process.
- Research and development in the private sector of the building industry, particularly in construction process technologies and in social and behavioral research to bring it more closely in line with our knowledge of the physical sciences.

The profession and its individual practitioners will have leadership only to the extent that they are most qualified; leadership will come from ability rather than traditional authority as the dynamic period in the near future; the effectiveness of architects in influencing the environment and in playing an important role will be strongly measured by whether we demonstrate leadership where the action is. We cannot sit on the sidelines of the important social and political issues which affect the environment and expect a piece of the action when the nasty part is over.

Similarly, we must be on the leading edge of where new technological developments are expected to take place. We must anticipate. Good intentions and a willingness to participate will not be enough. We must become qualified in the most advanced problem-solving techniques in the most critical problem areas and then we must embark upon a government and public relations program which lets people know our views and expeditiously even when controversial.

Collectively and as individuals we must forge ahead into new problem areas and new areas of skill. We must not inhibit our members from experimenting with new roles and responsibilities and partners. We must expect more diversity in the norms of the profession and its institutions and plan for, rather than fear, those changes.

The future is not preordained; it is what we will choose to make it. It will be a match of our objectives, our ambitions and our capabilities. The profession of architecture cannot provide even a small fraction of the services required for the enormity of the environmental tasks ahead. The role it plays as part of the total process will depend upon the image which it holds for itself and the ability of its practitioners to prepare themselves to share a leading role. As Jerry McCue has asked us, "Will we be tacticians or technicians?" This is the challenge. □

EDITOR'S NOTE: All of the commentaries which appear in the sidebars have been excerpted from the original texts.

Increased Dues, New Ethical Standards, New Headquarters

*A review of the proposed
bylaw changes and resolutions.*

The proposed bylaw changes and resolutions are discussed here in the same order as they appeared in the documents issued prior to the convention for ease of reference. In the case of the resolutions, the aim is to convey the intent; therefore, the wording may vary from the original motions.

PROPOSED BYLAW CHANGES

I Increases in corporate and supplemental dues. Passed.

As the opening speaker, First Vice President Robert F. Hastings, FAIA, told the delegates, "There are only two things that we can be sure of right now. One is that we can't stand still as a profession; we must rise or fall. The second is that what we do today, what we do at this convention, will establish the direction and a program, and create once and for all the decision as to whether The American Institute of Architects is going to step into the leadership role in the creation of our new environment."

E. James Gambaro, FAIA, of the Brooklyn Chapter, responded, "On the proposed dues increase, there is no specific program or budget as to how these vast sums will be spent . . . I say that the most valued asset of the AIA is its membership. For the Institute to risk its financial and professional viability is to risk its independence of contemporary pressures and demands by groups and organizations outside the area of our own. We cannot be all things to all people.

"Now the time has come when we must decide if we are an organization of architects or an organization of political sociologists," Gambaro continued. "We cannot be both. If we attempt to do so, we will divide our members, dissipate our strength and resources, diminish our influence as a professional group and also, as we wish to believe, leaders in the construction industry."

Several speakers took the floor to support the dues increases. Among them was Douglas Steinman Jr., president of the Texas Society of Architects, who said the professionals in his state "enjoy a position of trust and confidence in the minds of leaders of business and government that is unprecedented. And this happy condition is the result of these vigorous programs which the Institute through its recent Board of Directors has put into operation." Texas AIA members recently voted a state dues increase to pay for expanded activities and services, he added.

Jules Gregory, FAIA, of the New Jersey Society of Architects, then offered an amendment to the effect "that no dues increases be approved by this convention without the provision that 50 percent of all funds be appropriated for the programs of the Task Force on Professional Responsibility."

Two speakers who followed — S. Scott Ferebee Jr., FAIA, director of the South At-

Slayton's Initial Report to Convention: I have been much impressed with the individual member's devotion, input and time spent on Institute affairs. . . . I can say that I know of no other organization that generates such high quality, intensive membership participation. It is the Institute's major strength and its major resource. . . . I shall endeavor, in my position as executive vice president, to organize the internal structure of the Institute so as to utilize this major resource to its fullest potential.

And in seeking this objective, I hope the Institute can begin to play a role as a national institution commensurate with its membership resources. . . . It is he, the architect, who fashions the man-made environment. It is to the architect, working in tandem with the other design professions, to which the country must turn for the building of tomorrow's America and the rebuilding of today's America.

Though it is to the architect that America must turn for its future environment, the country has not yet turned to the Institute for the prescription, the guidance, the leadership in determining how best to build that environment.

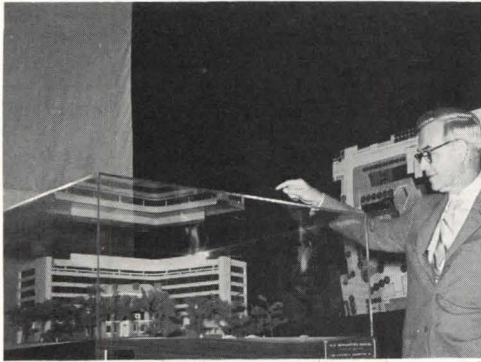
The Institute needs to fashion itself as something more than an organization of individual architects. It needs to fashion itself as an institution to which the country can indeed turn for leadership.

In no other profession does the public interest so closely relate to the individual member's objectives. The superior man-made environment is the architect's objective. Restraints to this objective abound. Only through collective action, through institutional endeavors, can such restraints be removed and the leadership of the architects be established.

But the Institute, of course, has functions other than leadership in shaping the man-made environment. It must deal with the needs of the individual architect in building and improving his practice, in enlarging his capacity, in furnishing practice aids, in providing the assistance, the continuing education, that will enable him not only to serve his clients better but to increase their number.



AIA officials Slayton, Allen



Hastings with Headquarters model

Officers as of December Board Meeting: President: Robert F. Hastings, FAIA; first vice president: Max O. Urbahn, FAIA; vice presidents: Richard M. Bennett, FAIA; Robert J. Nash, AIA; George M. White, AIA; secretary (re-elected): Preston M. Bolton, FAIA; treasurer (continues two-year term): Rex L. Becker, FAIA.

Six new directors: Carl L. Bradley, AIA, East Central States; Max Flatow, FAIA, Western Mountain; James J. Foley, AIA, Ohio; Hugh McK. Jones, FAIA, New England; Louis R. Lundgren, AIA, North Central; Darrel D. Rippeteau, AIA, New York.



Task Force Chairman Train



Minority Leader Winter

lantic Region, and a delegate whose identity cannot be verified, declared that the amendment was based on "a falsehood" in that a sizable sum of money already had been raised or allocated for work in this area.

The amendment was defeated, while the original resolution passed. Under its provisions, corporate membership dues will increase from \$75 to \$84 next year. Supplemental dues could go to a maximum of 5 percent of the Social Security tax over a three-year period. (The supplemental levy has been 2 percent of this tax.) The bylaw change permits an increase of no more than 1 percent in any one year. For the first year, the increase will mean around \$7.50 extra for each of a firm's technical and professional employees, Hastings estimated.

II Proposed New Standards of Ethical Practice. Passed.

In presenting the very last item on the agenda—the business session adjourned at 6:15 on Thursday evening—President Allen requested that the delegates "simply take action to either adopt the standards that are currently proposed or reject them; and then get some expression, if they are rejected, as to what corrections you want to make."

Two delegates immediately recommended that the standards be referred back to the task force for further study. Jack D. Train, FAIA, task force chairman, and Max O. Urbahn, FAIA, director of the New York Region, both urged the convention to defeat any tabling motion.

H. B. Oppenheimer, of the New York Chapter, followed suit by saying, "Our chapter and many others organized special committees, proceeded to put in many, many hours of work. . . . The moment has come to move on this. This is not something that is irrevocable, and we can further develop it as we go; but there are substantial changes contained in the revision, and we of the New York committee urge that the proposed standards be approved as they stand as a basis for further work."

H. Samuel Krusé, FAIA, of the Miami Chapter, then introduced a substitute motion calling for approval of the standards "as to the three principles on page 2 of the Task Force Report, format and content, and charge the board to rewrite the language of the proposed standards to reflect the criticism collected, published and disseminated over the name of Arch R. Winter, FAIA, as 'A Critical Review.'"

In commenting on his "so-called minority report," Winter, director of the Gulf States Region, pointed out, "I came belatedly to this question; only at the spring board meeting did I take any part in it because no one on the board or elsewhere was taking any viewpoint other than that of the task force. For the first time there was a minority report indicating to our membership that there were other views than those of the task force held within the board. Hopefully, it will be followed by others."

"Unless we have adequate time to discuss and debate the issues in the Ethical Standards—and the board already has decided to recommend to this convention that we approve, not rewrite, the standards on the floor—unless we have time to adequately discuss them

and to gain from the delegates some feedback as to their feeling and reaction as to the important points, we will not serve our purpose," Winter declared.

"Therefore, it seems to me that the question is whether to put off any consideration of the Ethical Standards for another year or to resign ourselves to a full discussion here this evening. In the latter case, we will still be faced with the fact that many people have already left their places and that we are debating the issue with only a part of our delegates."

The pro and con arguments that followed centered around one segment of members insisting that a vote be taken now, without starting debate all over again, and the other maintaining that the standards should be returned to either the old task force or a new one and brought back next year.

Following the defeat of the already cited Krusé motion, Secretary Preston M. Bolton, FAIA, moved the adoption of the proposed Ethical Standards as submitted to the membership.

Robert L. Durham, FAIA, of the Seattle Chapter, took the floor. "Some of us in this meeting have talked as if we did not now have standards. This is not the truth, and the cases that have come before the Judicial Board are pretty good evidence that the present standards are not unworkable."

"I think it is rather unfortunate that, in the agreement President Allen made with chapter presidents, we in this meeting are forced to vote only on those that are now written by the task force when in truth members of the board have been in the halls of this convention considering a number of different possible amendments to those bylaws," Durham commented.

"I cannot help but feel that action at this moment, regardless of how impatient some of you might be for accepting or encouraging change in our professional concept, is ill-advised. I have heard in this convention two members of the Judicial Board say that if we approve the standards as proposed there will be no further use for their services."

A vote on the motion was taken, with President Allen reporting, "I think the 'Ayes' have it quite clearly." Winter then asked for a roll call vote, which requires approval by one-third of the delegates who are present. Having been approved, the vote was taken, to be weighted and processed by the tellers, and the session was adjourned. The results, announced at the Gold Medalist's Ball that night, showed 867.32 for and 647.75 against the Proposed Ethical Standards.

III Authorization to the board to transfer real property to a wholly owned business corporation and to execute leases. Passed.

As he introduced the subject and the architect for the project, Urbahn, chairman of the Committee on Institute Headquarters, explained, "The past two conventions approved and charged the Board of Directors to proceed with the new Headquarters Building. We are not here to ask for your approval. This has been accomplished."

Urbahn later pointed out that a nonprofit organization like the AIA cannot assume mortgage obligations at current market rates under District of Columbia tax laws.

Norman C. Fletcher, FAIA, principal in charge for The Architects Collaborative, Cambridge, Massachusetts, said that the new building, estimated to cost \$7.5 million, will provide large spaces for expanded programs, exhibits, a library and a meeting room. The Octagon House, which the AIA Foundation recently restored for around \$350,000, and its garden will be carefully preserved and enhanced by the new structure, he added. (For a more detailed report, see AIA JOURNAL, June, p. 15).

Urbahn then commented on the costs. He quoted the basic cost of the building, including escalation of 7.1 percent, at \$5.75 million. All secondary costs — feasibility study, taxes during construction, landscape and sculpture, outside consultants, demolition, etc. — represent another \$1.75 million, with related costs — moving expenses, rent during construction, etc. — making up the remainder. The cost per square foot, net, is \$30 and grows, with the attendant secondary costs, to \$39.

He said that the AIA building fund now stands at \$1.3 million and that the rent fund during 1971-72 will total \$650,000. The mortgage commitment obtained at 9¾ percent is \$5.2 million.

Urbahn told the convention that working drawings will be completed in October, with a bid opening before the first of the year. Construction should start January 1 following demolition of the current Headquarters Building and the adjacent Lemon Building. Completion is expected by December 1972.

Among several questions raised was one posed by Chuck Geary, president of the Uptown Design Center, Chicago, "How does this building relate to those problems [housing] such as those that exist in Chicago and many other areas? Is this just another headquarters?" he asked.

President Allen responded by stating that the building would enable the Institute to become "a more effective way of communicating and of working with all the programs of the profession as a whole." He also explained that very little of the cost of the building could be used for other purposes. Most of the cost is being met by mortgage funds, to be repaid from rents on the upper four floors.

When discussion was called following the seconding of the resolution, Charles H. Kahn, of the Kansas Chapter, spoke. "In the meeting of the Task Force on Professional Responsibility, a committee was established to bring to the floor of the convention some substitute proposals, one of which has to do with the building of the new Headquarters." He then offered a resolution asking "that plans . . . be halted until such time that it be demonstrated that the AIA membership in convention direct the executive vice president to hire a full-time fund raiser to execute the commitment made in Chicago."

Meanwhile, President Allen called for action on the original resolution, which carried, before considering the substitute.

When a point of order was raised as to procedures in introducing resolutions, Allen replied, "I am informed that a resolution may be introduced by a delegate. He does not have to poll his delegates. Each one of you

here acts as an individual as well as a representative of your chapter and as long as you are in fact a registered delegate, this is in fact in order."

Kahn, who made it clear that he was not speaking for the Kansas delegation but only as a member of a group working with the task force on the previous afternoon, then reread the substitute resolution with slightly different wording: "that plans . . . be halted until such time that it be demonstrated that the Chicago commitment has become a major priority of the AIA."

Vice President Francis F. Lethbridge, FAIA, then questioned "whether this is a statement from a splinter group."

Vice President George T. Rockrise, FAIA, task force chairman, maintained that the resolution "was not written by the task force. It is my understanding that, after the presentation yesterday morning, at a rap session in the afternoon there was sentiment among those in the audience which caused them to form a caucus at which I was not present. A caucus is privileged to bring any resolution it pleases. I read the resolution, and I want to make it clear that this was done spontaneously; but that does not end my responsibility."

Rockrise then went on to refer to the professional responsibility survey from which he had quoted in his report on the preceding day, saying that the amount of money involved — "remember that the \$15 million was simply an order-of-magnitude figure" — was not the point at issue.

Taylor Culver of Washington, D. C., who originally proposed the \$15 million at the Chicago convention as president of the Association of Student Chapters/AIA, took exception to Rockrise. He said that "the true fact is that we had the majority of the task force members and that constitutes what we as a committee decide." With that, the resolution was tabled.

IV New procedure for election of officers and directors. *Item 1 — mail ballot for national officers — defeated. Item 2 — election of directors — passed with some substitute wording.*

The motion as passed read "that effective in 1971 the bylaws be revised to permit the election of directors of regions by a regional convocation of delegates representing the members of each chapter or by direct mail ballot of the members in the region after the candidates shall have appeared and presented their platforms and qualifications at a regional convocation, subject to time schedules and procedures established by the board."

V Corporate membership: US citizenship to be no longer required. *Passed.*

VI New membership classifications and qualifications. *Referred back to the Bylaws and Rules Committee after much debate.*

VII Professional affiliates to be included in state organizations. *Passed.*

VIII Executive vice president as a member of the Board of Directors. *Withdrawn.*

California amendment on dues (items 11 and 12). *Referred to the Task Force on Structure (formerly Subcommittee on AIA Structure).*

California amendments on bylaws. *Defeated.*

Awards for Helping the Handicapped: Three architectural projects received the second annual Bartlett Awards from the Institute and the President's Committee on Employment of the Handicapped. The joint award is given to those winners of the AIA Honor Awards which offer handicapped persons ease of movement in approaches, entrances and interior spaces.

The 1970 winners: Lincoln Elementary School, Columbus, Indiana — Gunnar Birkerts & Associates, with Sieco, Inc. as supervising architect; Whitney Museum of American Art, New York City — Marcel Breuer & Hamilton Smith, with Michael H. Irving as consulting architect; the Cannery, San Francisco — Joseph Esherick & Associates.

The Potomac Valley Chapter AIA was presented the Distinguished Service Award for its study of barrier-free architecture and another study devising a method to make the nation's capital new rapid transit system accessible to the handicapped. Edward H. Noakes, AIA, was project director for both studies, supported by grants from the Department of Health, Education and Welfare.



Long night on George's Island



Microphone-frequenter Gambaro

'The Forces of Change in Building': A pre-occupation with cost comparison in the home-building field can be getting in the way of solving the housing crisis, an official of the Department of Housing and Urban Development told a seminar entitled "The Forces of Change in Building in the '70s" and sponsored by the Producers' Council, Inc.

Harold B. Finger, Assistant Secretary for Research and Technology, said that the present housing deficit is getting worse as we worry about the costs and that both problems must be considered together. The nation must change its ways of producing housing, he commented, if the shortage problem is to be met. He explained that the industrialized approach to production is considered of primary importance because a continuing deficit will generate progressively higher prices.

Asked when actual building would begin under the Operation Breakthrough program, Finger said that it was hoped that some units would be up during this calendar year. Asked where, he stated, "We are pushing all locations at the same time. We'll have some construction on many of the prototype sites simultaneously, according to present plans."

In response to a question about the impact of Breakthrough on industry, Finger said that all contracts with the 22 systems builders should be completed within the next two weeks [July 6] and that HUD is talking with site developers to speed up that part of the program. Meanwhile, all 50 states and 27 cities are involved in Breakthrough with their own personal representatives.



Interpace's commemorative

Ohio amendment on bylaws. Defeated.

This motion would have all bylaws voted on by direct mail after discussion of the proposed changes at the annual convention.

RESOLUTIONS COMMITTEE REPORT

The delegates passed all of the following resolutions unless otherwise noted.

Resolution 1: Calls on the President and Congress to exert leadership in reordering this nation's priorities — emphasizing the domestic programs necessary to preserve man's limited natural habitat — to provide an adequate supply of housing and to attack the root causes of social and economic ills.

Resolution 2: Urges the nation to adopt new tax, zoning and land use concepts and labor unions to support advancements in building construction.

Resolution 3: Challenges the profession to assume new responsibilities in the decision, design and delivery process as outlined in the Future of the Profession Report.

Resolution 4: Supports the United Nations Conference on the Human Environment.

Resolution 5: Backs the AIA-aided Community Development (Design) Centers now operating in about 40 cities by calling for a national fund raiser.

Resolution 6: Continues cooperation with governmental agencies by providing professional and technical advice on architecturally related Office of Civil Defense programs but limits endorsement, sponsorship and support only for specific purposes.

This was a substitute motion, the original resolution asking that the AIA not endorse continued support of the Fallout Program and that the Institute conclude its existing contractual obligations as soon as possible.

Resolution 7: Supports NCARB in its program to change and unify architectural registration procedures.

Resolution 8: Calls on government and industry to give the highest priority to allocating human and financial resources to halt pollution of air, water and land; asks for large-scale plans for the preservation of our priceless heritage, our beautiful coasts, such as the Santa Barbara Channel National Marine Sanctuary.

Resolution 9: Seeks support of fitting projects in every community in the United States toward the enhancement of our environment as part of the 1976 bicentennial.

The word "physical" was deleted from the original resolution.

Resolution 10: Supports the Environmental Education Act.

Resolution 11: Calls for the abolishment of the College of Fellows. *Defeated.*

Resolution 12: Suggests that the Institute re-evaluate its present in-house expenses and efficiency to gain the most effective use of its funds. *Referred to the board.*

Resolution 13: Seeks to limit location of the Board of Directors and Executive Committee meetings in Washington, D. C., except at the discretion of the board for good and sufficient reasons. *Tabled.*

Resolution 14: Opposes the requirement that the architect obtain topographical or boundary line surveys and subsoil data as is being

spelled out by federal agencies. *Referred to the board.*

Resolution 15: Voices opposition to labor union product boycotts that inhibit reforms in the construction industry.

Resolution 16: Orders the AIA's staff and officers to prepare programs to meet problems of small architectural firms which still contain a majority of the membership.

Resolution 17: Recognizes the importance and contribution of the architect in government and industry, and encourages the implementation of development programs.

Resolution 18: Recommends the appointment of a task force of students and practitioners to investigate the effect of NCARB, NAAB and ACSA on the future of the profession. *Referred to the board.*

Resolution 19: Calls on the President and Congress to reduce our military commitment to an absolute minimum consistent with our nation's security and to transfer massive federal help to the cities.

Resolution 20: Asks the Institute to induce corporations in which it maintains partial ownership to abandon environmentally destructive practices through the offering of AIA votes or other strategies. *Defeated.*

Resolution 21: Proposes the establishment of a Division of Environmental Policy in the Institute. *Referred to the board.*

Resolution 22: Mourns the passing of Walter P. Reuther and his wife.

Resolutions 23, 24: Express appreciation to the speakers, President Allen, etc.

Presented from the floor: Gambaro resolution on political action. *Defeated, but a substitute motion carried.*

This resolution had been brought up on Tuesday during the reading of the Report of the Board (p. 16 referring to political action) and ruled out of order in that it was new business. It stated "that the AIA and its component organizations shall not engage in any political activities that will directly or by implication endorse or oppose candidates for public office or political issues."

In the earlier discussion, John L. Wright, FAIA, director of the Northwest Region and Government Affairs chairman, emphasized that the matter referred to "is a prospectus. We are studying this because we have been requested to do so by many members across the country, and I would appreciate getting input into our committee. . . . This is not a program that has been instituted and is underway; it is in a study phase."

At the later meeting, several spoke against the resolution as being "too broad" and that the word "political" is too difficult to define.

Director Ferebee then offered a substitute motion which "would simply enjoin the AIA board not to endorse any political candidates for office, its intent being that the Institute would be allowed to study, and take action on, political issues that affect architects."

Speaking out in favor of Gambaro's original resolution, Emil J. Szendy, of the New York Chapter, said, "I think it is essential that we should maintain our integrity as an independent professional organization, not committed to the Democrats or the Republicans or somebody else."

The substitute motion carried, cutting off discussion on the original resolution. □

Environmental Perils: Both on and off Stage

An attempt to untangle
the 'Day of Awareness' happening.

"Impertinence is out of place anywhere," stated S. P. R. Charter, leadoff speaker, when he was interrupted by a group of youths who tromped on the stage during a program on "Environment: Awareness and Action," sponsored by the AIA and the Association of Student Chapters/AIA.

Charter, a physicist who, since 1945, has devoted himself to the area of human ecology and is editor-publisher of the periodical *Man-on-Earth*, author of books and journal articles and professor at San Jose State College in California, had been scheduled to speak on "The Planning Myth—Limits and Limitlessness: Man's and Earth's." The program as scheduled would have followed Charter's address with a "multimedia, issue-oriented experience" called "Experiments in Awareness."

Everything began well enough. Charter had been introduced by Art Hacker, chairman of ASC's Student Planning Committee, as a man of "style, wit, wisdom and clarity." In his speech, Charter had noted that "a design theory for man on earth does not yet exist," and because of "total human interference and the needed human intercession, a design theory is most essential." He said that the choice now, especially to architects and planners, is this: "Are we going to become more human or less human? We cannot humanize the machine, the designed device and structure; we can humanize only ourselves." The architect who rapes the earth for economic gain or stature "is no different from the timberman who brutalizes the forest and himself. Each of us, when we brutalize our environment, brutalize ourselves as well as those we profess to love and to cherish."

"We live in the most designed society in the world," Charter said, and he sketched some of the problems of the physical and social environment. "A new whole attitude needs to be developed and nurtured and man's dictatorship of earth needs to be modified. Of all man's dictatorships, the dictatorship of planning and design can most readily be modified, precisely because our technological expertise is so enormous."*

Just about this time, somebody screamed. Charter turned from his notes, refusing to let the incident pass. He remarked that "absurdity has no place and becomes an obscenity during a discussion of such a critical challenge as man's survival." Chaos followed. A yellow-robed man and one garbed in white leaped to the stage, grabbed the microphone and accused Charter of being "irrelevant." As student leaders and convention officials ejected the two men, the one with the yellow costume who said his name was "Radar" and that he was a reg-

istered architect from San Francisco, though not an AIA member, attempted to lead the audience in the Lord's Prayer and was soundly booed. Both men left.

Hacker apologized for the interruption, declaring that it was "not planned." While the audience was recovering from the shock, Troy West, a 30-year-old architect who is professor at Pittsburgh's Carnegie Mellon University, led a contingent of several young architects, again non-AIA, who had been authorized to participate in the day's session, up to the stage.

West announced that he and his fellows were leaving the convention to form an organization of professionals to work with low income groups "struggling to liberate themselves from where they live."

After West's group had left, around 75 brightly garbed students, both men and women, then presented the "Experiments in Awareness" group-participation program. The goal of the presentation, according to Jonathan Krown, a Yale law student who helped organize the program, was to help architects "experience color, sound, light and, most importantly, togetherness" so that they could come together during the afternoon session to plan joint action in their communities.

The presentation, a sort of loosely programmed sensitivity training, included slide shows, rock music, dancing, humming and active participation by the delegates. ASC leaders considered "Experiments" a success in light of student/professional interaction and the discussion that afternoon.

Referring to the interruption of Charter's speech, Krown said the group involved calls itself "South Coast Inc.," and its purpose was "to try to stop business as usual, to make the delegates to this convention think and question Charter's talk which dwelt on intellectualism rather than direct joy and action."

Institute First Vice President Robert F. Hastings said, "We are greatly disturbed and terribly upset. We apologize to Dr. Charter." Hastings later persuaded Charter, who had been the students' choice for a speaker, to return to the stage, after the light and sound show, for brief comments. Charter accused himself of *hubris*, the sin of overweening pride which ancient Greeks believed was punished by the gods. He said that "the situation was almost inevitable," because of his *hubris* in thinking of himself as "a close friend with students."

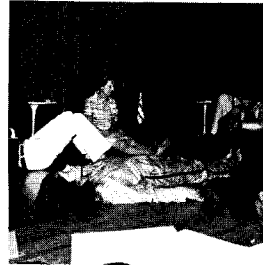
The afternoon program was considerably more restrained. Ian L. McHarg, educator, planner, practicing landscape architect (Wallace, McHarg, Roberts & Todd of Philadelphia) and author, in a rapier-fast and deceptively casual delivery called on architects to understand the way the world works unless they wish to witness "calamitous destruction." He said the real definition of architecture is "the creative process of finding fit environments and adapting them for survival." (His speech will be excerpted in the November AIA JOURNAL.) McHarg's remarks were followed by 12 concurrent regional workshops on the problems of environmental control and the architect's role in helping solve these problems. □



Students' own Dr. Charter



"Experiments in Awareness"



Slide Show Competition Winners: Winning entry: "America — A New Synthesis," produced by a group of students at the Rhode Island School of Design, entered by the Rhode Island Chapter; first runner-up: "Why Ugliness? Why Not?" produced by F. Eugene Smith, entered by the Eastern Ohio Chapter; second runner-up: "Midtown Blight? An Audio-Visual Presentation for the People of New York City," produced by two students at Cornell University, entered by the New York Chapter; special commendation: "Wildflowers," produced by architect Ernest E. Burden, entered by the New York State Association of Architects.

All the premiated shows, except the winner, are available on loan from AIA Headquarters. Due to special techniques employed, the first-place entry may be previewed by arrangement with the Rhode Island Chapter.



Scottish-brogue McHarg

* Because the speech is copyrighted, permission has not been obtained to excerpt more than 500 words.



ASC's Michael A. Interbartolo

Statement by Mexico's Jorge E. Medellin: In such a distinguished gathering of this renowned Institute which brings together the outstanding architects of the United States as well as Honorary Fellows from many lands—among whom, though unworthy, I now am to be counted and for which I feel grateful and deeply honored—I find myself reflecting on the meaning of the permanent drive in human conduct, evident in the need to build dwellings. I should like to seek with you some new light in the search for solutions to the grave problems that beset us today.

If our task is to build man's abode, we should also be capable of expressing this in terms of town planning. Cities are a plurality of dwelling places and they must allow for life in common among the inhabitants. We must not forget, however, that before we attempt to unite the cells of a honeycomb, we must pay attention to the design of each of the individual units. City planning cannot forego the need to consider that in the first place we are under the obligation of designing a house in keeping with our ideas of the good life for every man. Only thus will our professional endeavors result in the creation of adequate environments for the life of societies.

The humanistic requisites of an authentic culture, together with those esthetic, moral and social requirements and the aims of justice, lead us to recognize those rights inherent in man, equivalent in rank to liberty and capable of tempering with a sense of human feeling the precepts of the law. If we proclaim the right to work, to education, to health and leisure, let us also proclaim from our particular professional field and from the classrooms in our universities the right of all men to have dwellings in accord with their condition as humans. As its social corollary, let us claim for men the right to lead life so that they may have the time and leisure to gather within settings capable of promoting the best of life's activities and leading to spiritual fulfillment.

Convinced of the true value which our professional work creates, I am certain that we shall always have the ability to build, even with the simplest materials and with the most elemental technological means, abodes in which man may find a response to his own dignity.



Keynoter Muskie

The Commitment in 1970

*A report of the Task Force on
Professional Responsibility.*

Architects are contributing more than \$5 million a year in time and money to help America's poor neighborhoods rebuild, said George T. Rockrise, FAIA, in reporting on the work of the Task Force on Professional Responsibility to Society, which he chairs.

Using a questionnaire circulated this year by the Institute as his basis, Rockrise estimated that about 3,300 members are donating some \$660,000 annually to help the poor and, in addition, time worth from \$4 million to \$16 million a year, depending on what dollar figure is used. Rockrise called on the Institute to do more than it has in the past (*see* the status report of the AIA's involvement in community improvement in the AIA JOURNAL, June, p. 64).

In commenting on the key task force achievements to date, Rockrise cited:

- The six-year AIA/Ford Foundation scholarship program.
- Help to community development/design centers, including placement of VISTA volunteers for manpower.
- Successful efforts to help gain accreditation of black schools of architecture, with three of the six unaccredited schools ready to announce their accreditation.
- Strong links between mostly white AIA members and black schools in such states as Texas.
- Dispatch of black professionals to the schools as lecturers, in a joint program with the National Urban League.
- On-the-job training programs in which 30 youths are now enrolled.
- Applications to the federal government and foundations seeking some \$4.5 million in help for programs and projects which architects will help operate.

Rockrise reported that the AIA has appropriated \$150,000 so far for the task force's mission, committing \$500,000 for the AIA/Ford Foundation scholarship program.

It was announced in June that 20 youths who plan to use architectural careers to help rebuild America's cities are the first recipients of the new \$1 million scholarship program sponsored by the AIA and the Ford Foundation. Most of the winners, who come from Texas, New York, Connecticut, California, Louisiana, Kansas, Georgia and the District of Columbia, will attend schools of architecture for five to six years. The program is intended to aid those under 30 who would not otherwise attend college. A demonstrated interest in design and city problems and the capability to complete college work, with assistance, are key requirements for the candidates. The AIA and the foundation hope to help 20 to 25 additional students to enter the program in September 1971 and 20 to 25 in 1972.

Rockrise and other speakers insisted that the AIA must battle to persuade political leaders to alter national priorities and stated

that the AIA should step up its own spending to help community development/design centers now operating in some 50 cities and should increase scholarship aid for college architectural training for minority groups plus technician and on-the-job training. Rockrise said the Institute also needs to turn its spotlight on practices in government and the building/financial sector which block quality housing for all.

"We are suffering from social cancer," said Grady E. Poulard, director of Community Services for the Institute, in a statement to the convention. Stating that the upheavals we are witnessing today are but symptoms of our sickness, Poulard called upon members to abandon "band-aid mentality and move speedily toward surgical action." Our malady—the interrelated problems of racism, militarism and poverty—cannot be cured by one sector of the society, said Poulard, but the AIA can provide "a sterling example of the kind of surgical action we need in this country."

Poulard cited that 80 percent of all black Americans living in our 20 largest metropolitan areas are still locked in festering ghettos; that about 83 percent of American Indians also live under conditions of poverty and hunger; that the unemployment rate for minorities continues to be more than twice the rate for whites; that we give more scholarships to foreign students than to blacks in this country; and that we spend \$40 billion per year to wage war in Vietnam but less than \$4 billion to wage war against poverty. He suggested that the social cancer will spread and deepen and ultimately destroy us unless white Americans take a hard look at our predicament, acknowledge our past mistakes and make a necessary, painful reparative swing in the opposite direction. Poulard called upon the AIA for a "more courageous, imaginative role" and pleaded that we begin "by looking first at what needs to happen within the ranks of the AIA." □

The Future Is in Our Cities

*Excerpts from the keynote address by
Senator Edmund S. Muskie*

Our cities have become festering places for decay, frustration and violence. Urban unemployment is rising. Inflation continues. Moratoriums are being imposed on new building in an increasing number of communities because sewage treatment facilities are unequal to the burden placed upon them. Our suburbs sprawl endlessly outward to escape the city's problems and in search of cheaper land. As they sprawl, they stretch local services and local taxes, further destroying the sense of identity and community that engenders citizens rather than transients.

We know what to do. We know how to correct our mistakes and restore the urban environment. The technology is available. That part of it that needs change can be improved on an accelerated basis, given the commitment of a space or a highway pro-

gram. The design skills are available and have been for a long time.

But we do not have the money. We do not have it because we do not yet have a national commitment to reallocate our resources and put our own house in order. We do not have a commitment because there has been no leadership to create it.

We cannot build a new America in Indochina. We cannot repair and restore the old America with the SST and a "grand tour of space." We cannot build a whole society with the ABM and MIRV.

Yet in a time when America's future is at stake and our people are crying for a feeling of community, military items get the front end of the budget. Our future gets the scraps that are left.

Only when our domestic needs become our first priority will they get the front end of the national budget. After we allocate enough of our resources where they belong, then we can spend however much money we need to defend ourselves under a rational policy. Shifting our resources to housing, transportation and public facilities is only one step in the direction of the kind of future we all want for America.

Building communities and a whole society requires more than cold cash. It also needs the warmth of people working together, making their own decisions and deciding on the shape of the cities that will shape their lives.

Urban renewal, the highway program and housing programs have taught us about designs, locations and construction that pay no attention to the needs and hopes of those most directly affected. Building communities will require much more effective partnership between you and your *real* clients — the people who will live in the cities you design. This kind of partnership can lead to a society in which there are whole communities, in which people have a sense of identity and in which they have a sense of controlling their own destinies.

This is the ethic with which we can build a new America. It is the ethic with which we can make whole communities in all our cities and towns. We can:

- Create a national program of land development and voluntary resettlement.
- Remove the pressure from our swollen cities and restore them.
- Give new life to our small towns and rural communities.
- Guide this revitalization through statewide development plans.

We should caution ourselves that new towns and a new pattern of urban growth must not be seen as panaceas. We must not seize upon them as *the* answer, as if we had no past, as if we should desert our cities. We cannot pick up our resources and run away from our urban centers, leaving them to blight and their residents to hopelessness. New towns can reduce the pressures on growing urban communities, but they cannot solve their festering problems. Massive investments to deal with those problems is the essential corollary of new towns.

We must remember also that we are a nation of states. This new program of decentralization and settlement can and should be ad-

ministered by the states. With federal help, each state should create a comprehensive statewide plan for development.

Grant consolidation and coordination can help the states guide and channel growth. The location of highways, airports, branches of state universities, state hospitals and recreational centers can revitalize the economy of communities whose residents now must leave those towns to find jobs.

The state, aided by the federal government, can restore existing communities and, where desirable, create new freestanding communities, combining existing and new elements of their public investment programs. Such communities can be built within heavily blighted urban areas; on the peripheries of cities where they can arrest sprawl and provide healthy mixes of housing and income levels; and in underdeveloped rural areas.

To implement these land development programs, the states can utilize several planning devices. One is the state development corporation, such as that created by the State of New York to acquire land, plan development and contract with private developers who agree to carry them out.

A second device is the formation of metropolitan government councils to deal with regional urban needs. A good case in point is the Twin Cities Metropolitan Council, created by the State Legislature of Minnesota to coordinate the developmental programs of seven counties and 20 units of government.

The metropolitan council sets guidelines for land use, requires early community participation in transportation planning and makes regional improvements in urban areas.

The state is in an ideal position to standardize its building codes or even exempt certain classes of construction from their provisions. California did this recently for factory-built housing. The state can enact planned unit development ordinances to allow the design of fully articulated communities without respect to single-purpose zoning laws.

Finally, we must re-examine our single-purpose government programs to make them more flexible and more responsive to community needs. In the highway program, for example, the citizens of a community should have the power to decide — without monetary loss or penalty — not only where and how a highway should be built, but whether it should be a highway or a rail transit system. Transportation is the single most important determinant of urban land use, and the wrong formula can make a healthy community sick.

All of these plans depend upon our understanding of the intense and intricate pattern of relationships that define our communities and our society. Too many plans have occurred by accident for too long. We need to make plans with the magic to stir men's minds. We need to execute them in such a way that every citizen of every community can be a part of those plans.

Centuries ago, man realized that he was not powerless to shape his life. We began to exercise the talents of engineers, architects and builders, and we shaped our cities and our towns. Then we lost control, and now we have today's urban environment.

Today, we must redesign, reshape and re-



Old acquaintances Allen, Gold Medalist Fuller

Remarks by the Gold Medalist: The really powerful hope we have lies in our young. . . . My great hope lies in the hope that each child is being born in the presence of more reliable information and a great deal less misinformation — each one with his own spontaneous truth and better information, bringing an extraordinary condition in our young people. That's what I am getting from eight- and ten-year olds — unbelievably imaginative, magnificent, extraordinary, well-informed thinking about our planet being a universe, a beautiful universe, and they have to make it work.

I say we have the young, full of idealism, making the breakaways in many ways, feeling the older world is inadequate and asleep at the switch. I find the young ones are not just in the breakaway phase at all but coming through with a brilliant kind of thinking.

I would remind you of a beautiful thing said by Tennyson: 'The old order changeth, yielding place to new;/And God fulfills Himself in many ways,/Lest one good custom should corrupt the world.'

Tennyson was deeply aware of what science has just discovered: the altering of the environment, the regenerative process. What seems to be the most reliable, beautiful custom would bring about the greatest revolutions, and that is what is going on in our educational institutions. . . . There are great changes coming in the way of teaching; through television, methods of teaching are changing greatly. We have the young not knowing what they ought to do to replace it, but the old has not yet pulled apart until it begins to be vulnerable and obsolete. We are in for change, very great change.

It's perfectly clear that you can't make the world work if you have one side against the other. So we are going to see all the sovereignties go. Don't let fear and apprehension get you as things change rapidly. Don't get panicky. Do have faith. The regenerative principles are operative in our universe and the great mystery which surrounds all science permeates our lives. Evolution seems to be continuity, trying to make man succeed on earth. We are witnessing this greatest transition of all — humanity in the birth of all humanity — and succeeding, coming out of the womb, piercing ignorance, until we discover what we really have in our minds. The young world has discovered this, has no use for superstition, no use for hypocrisy. And if we really come through this beautiful birth — we know of so many births that are still births, and there is a possibility man may not make it — but if he does, it will be in terms of integrity and love.



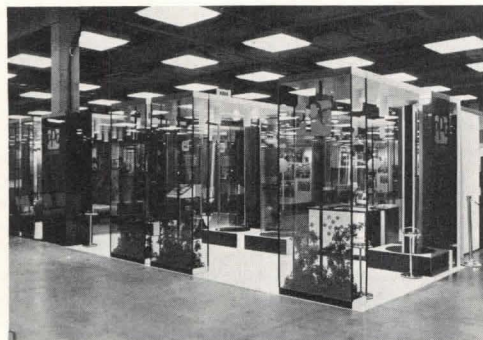
Host R. S. Reynolds Jr.

A Day in London Town: The Royal Institute of British Architects was host for a recessed session in London on Monday, June 29, with President Peter F. Shephard welcoming the some 500 guests from the United States. A discussion by four local architects on private and public practice in Britain, new towns and conservation was sandwiched in between a luncheon and a reception.

Two days later, a contingent of AIA officials went to Paris to see President Allen present the \$25,000 R. S. Reynolds Memorial Award to the firm of Lods, Depondt & Beauclair for a low cost housing project in Rouen (see the July AIA Journal).



No. 1 Weyerhaeuser



No. 2 PPG Industries



No. 3 Knoll International

new our nation. We must build a whole society. Once again we need your talents and your commitment. If we all once again assume the morality, the dignity and the clarity of purpose that have been our heritage, together we can lift the spirit of America. □

The Architect and Industry in Britain

Excerpts from an address by Peter Trench.

Are architects trying to shoulder a greater responsibility than society expects or demands of them?

The architect, so the argument runs, is concerned with the total environment. This ranges from town planning through the design of a single building to the design of components. For his task, the complete architect requires a knowledge of economics, sociology, esthetics, the arts, some of the sciences, ergonomics; he needs a knowledge of finance, the law, local and central government. He must have the ability to manage; he must understand structure; and he must possess the qualities of leadership; etc., and so I could go on. The incomplete architect, of which there are a few, misses on one or two of these cylinders, but he is an architect notwithstanding in that he has completed the required studies and, by law, is allowed to practice.

Now there are in addition to those who consider themselves custodians of the environment many more who teach, who research, who write, who work in commerce, who administer central and local government departments and do many other jobs of varying degrees of interest and excitement and usefulness. To us in industry, they are all architects. We have watched with interest the debate on whether architects should be allowed to become directors of building firms and retain their professional status. Architects are everywhere, and their quest for *Lebensraum* and their insatiable appetite for an ever-increasing sphere of influence is a source of wonder to us builders. Once we reckoned that their job was designing and that we knew how to build. Architects now know how to build — or some of them do — and we wonder not where they are going next, but what will be left for us to do. Some of us are thinking of going in for design.

A great deal, of course, depends on the interpretation of the word "architect" and the word "design." Is the man who is not called upon to design anything an architect at all, or has he merely (no, "merely" is the wrong word — perhaps *only*) been architecturally trained? Could a man who has been trained as an engineer or a historian or an economist or a sociologist or a builder do equally well the job some architects are doing?

Then again, is the concept of total design meaningful if it does not embrace the method of turning that design into reality? Indeed, is it meaningful if a knowledge (or is it a flair) of how to assess the options open is lacking? Design certainly cannot be confined to the drawing board.

To the rest of us in industry, the profession seems to have arrived at a cross roads — or to be pedantically accurate — a bifurcation. Some believe the decision has already been taken. But we don't see it that way. We want to know whether you, the architects, wish to be considered part of the industry or whether you wish to remain outside it.

I have no intention of tangling with the philosophy of professionalism. I have stuck my neck out far enough already. If integrity is part of it, however, so is competence; and the two are related. I would ask you to bear one or two things in mind. The rest of us are not standing still. In the United Kingdom (you Americans don't know what you are missing!), the role of the quantity surveyor is changing, and it is changing to the architect's disadvantage. He is getting closer to the client; he is depending less on your patronage; he is showing the first signs of resistance to being your specification writer.

The contracting side is changing, and we are beginning to see the real polarization of the small and the large. The large are becoming a force to be reckoned with: No longer uneducated, untrained, insensitive or servile, they employ men of equal calibre and standing as the professionals and are quite ready to push out the parameters of industry to embrace some of your responsibilities if you do not wish to step inside. The engineers are with us; so are the manufacturers.

The growing power of government influence through the public purse is steadily having an effect on the industry. Call it intervention, interference or cooperation, if you like, but it is there. And you feel it like we feel it, in this at least we are partners. It is my impression that the majority, with some notable exceptions, of "we-are-part-of-the-industry" type architects are in public employment and that the majority of the traditional-role type are in private practice. The unifying forces include, of course, the Royal Institute of British Architects and the sordid commercial fact that, anyhow for the present, private architects here depend to a large extent on public sector patronage for their livelihood.

I am too long in the tooth to take sides in this argument, nor do I see anything to be gained by "stirring the pud," particularly in front of our American guests. I would speculate, however, that this sort of topic could well be on their doorstep one day, if it is not there already.

Where I as a member of the industry *am* concerned — because I am ultimately on the receiving end of it* — is in the education and training of the two schools of thought and the people in between. Must it be the same? As I see it, there are some who see the traditional role of the architect continuing for many years to come. Deep down they would prefer every building to be different, and they are concerned more with scale and visual delight than with anything else: Despite some lip service, they do not wish to be too involved with the nuts and bolts of the industry. They may well be right, and we should respect their views, but whether they can expect to continue to be the leaders of the building team is another matter!

* Deputy chairman of the Lowell Construction Group.

At the other end of the spectrum we have the industrialized component building school whose concern is with joints and tolerances and performance specifications, etc., etc. These latter architects are, of course, nearer to us than the former, particularly in their requirements for education and training. Indeed, both of us are drawing closer together in our needs, and one sees the first glimmer of a construction industry academy turning us both out.

I fear that the industry, born of adaptability and reared on flexibility and expedience, is not desperately excited about the struggle between the "one off," the component, the model and the process approach. It has learned that change is incredibly slow. It cannot believe other than that the traditional one-off approach, coupled with the lowest bid philosophy, is here for a long time to come; and it sometimes asks, in dark corners, whether it is possible that the architect is worrying too much about his role of tomorrow and not enough about what is required of him today.

So what does the industry ask of him today? All sorts of things, of course, some more outrageous than others. It asks for an appreciation of the fact that the industry is becoming more capital intensive. And it is in the interest not only of the client but also the community that optimum use is made of that capital.

Secondly, the industry is paying increasing attention to management techniques and better site control. The flow of information from the architect in its timing, in its quantity and in its quality has a vital bearing on the implementation of a predetermined plan. Moreover, because of our system in this country, the true price of delays, variations and their effect on site morale, unlike in the United States, is never paid for.

Lastly, we the builders are by no means perfect, but we have skills, both management and technical, which architects still do not possess. Those skills are at the disposal of society no matter what approach to building eventually wins. We only ask that they be recognized and for the right conditions in which to demonstrate them. □

ACSA Takes a Hard Look at Itself

A report of the annual meeting and related events

A self-study, that's what the Association of Collegiate Schools of Architecture has needed for some time. In this organization, which has long existed with the image of a "deans' club," several deans and others have seen fit in the past few years to speak out on the need for change — even drastic change.

As recently as last December, in the AIA JOURNAL's ACSA section, George Anselevicius, dean of the Washington University School of Architecture in St. Louis, condemned the published 1969 ACSA annual report, labeled the 1969 Chicago annual meeting a fiasco and characterized ACSA

committees as excuses for inaction. But that wasn't all. He also clearly challenged the leadership of ACSA with a range of thoughtful and creative suggestions, beginning with one aimed at taking a new look at the basic objectives of the organization.

At about the same time that Anselevicius was drafting these thoughts, the association's Board of Directors, meeting for the first time under the new leadership of Charles Burchard, correctly sensed the need for new objectives, priorities and programs, as well as a new structure to respond more effectively to the direct needs of architectural schools and educators. ESP perhaps. It is interesting to note that without realizing it, the board discussed and took positive action on all of the suggestions Anselevicius was about to propose.

The existing ACSA committee structure was scrapped; committee chairmen were retained as consultants. The self-study theme for 1970 and 1971 was brought into sharp focus. A number of new programs were launched which would provide direct input to the self-study. A greater number of ACSA board meetings were scheduled for the year. Operational ties with The American Institute of Architects, National Council of Architectural Registration Boards and National Architectural Accrediting Board were strengthened by means of the assignments of ACSA directors with other ACSA members on joint education/research committees.

One familiar sticky problem remained unresolved: money. To pay for all of this new activity, the ACSA board authorized expenditures of approximately \$9,000 in excess of the annual income of about \$21,000. The board reasoned that, although the ACSA general reserve fund would be cut in half, this deficit spending was necessary if the association would continue to exist at all in the challenging 1970s.

It appears that the expense was not only necessary but very worthwhile in terms of the excellent progress made this year on a number of self-study activities.

ACSA/HUD Program: Currently in progress, it can be classified literally as a self-study program in that it is serving as the model of a new kind of service which ACSA is hoping to provide to its member schools. This program is mentioned here because one of its associated activities, the ACSA/HUD Workshop, immediately preceded the ACSA annual meeting in Boston.

The proposal to the Department of Housing and Urban Development, funded just two brief months before the workshop, has as its primary objective the complete development of curricula which are sensitized to social concerns, including new architectural options in public service. Funding was acquired to assist ACSA in retaining consultants, offering the workshop and publishing a fully detailed curriculum statement for the use of interested ACSA schools and a brief modified statement describing the advocacy role and new forms of architectural practice which these curricula majors will be expected to generate. The latter statement, which will probably appear in brochure form, will be distributed in great numbers to high schools and counselors and to officials of Upward



NCARB's Geddis

A Giant Step in Licensing Reforms: Culminating about four years of work, the National Council of Architectural Registration Boards has adopted a new examination process for architect-license candidates and the phasing out of the present four-day, 36-hour version.

The resolution, as approved after spirited debate during the annual convention in Boston, has these two key points: 1) professional degree from an accredited school or satisfactory completion of a qualifying exam will be required for admission to the professional exam beginning in June 1972; 2) A qualifying exam will be offered to persons who do not hold an accredited architectural degree but who possess equivalent experience or education.

Having been accepted by the AIA Board of Directors at its pre-convention meeting, the program for the new exam will require action by state and territorial legislatures, state regulatory boards and the schools of architecture. (An in-depth analysis of the philosophy behind the new exam will appear in the November AIA Journal.)

The delegates at the June 18-20 sessions also adopted legislative guidelines; continuance and broadening of reciprocity between the United States and other countries; and revision of the NCARB constitution and bylaws promoting flexibility and streamlining of procedures. (For background on the licensing reforms and guidelines, see the AIA Journal for June '70 and Nov. '69.)

Elected to serve with President William J. Geddis, Brookline, Massachusetts, were Daniel Boone, FAIA, Abilene, Texas, first vice president and president-elect; Thomas J. Sedgewick, AIA, Flint, Michigan, second vice president; Harry E. Rodman, FAIA, Troy, New York, secretary; E. G. Hamilton, FAIA, Dallas, treasurer.



Greeter S. S. Peter Stuyvesant



NAAB's Richardson

NAAB Directors: Ambrose M. Richardson, FAIA, of Champaign, Illinois, is the new president of the National Architectural Accrediting Board. He and A. Quincy Jones, FAIA, of Los Angeles, represent the Institute on the eight-member board.

The other organizations and their representatives are: NCARB — Secretary Arthur F. Sidells, AIA, Warren, Ohio, and John M. Amundson, AIA, Springfield, Oregon; ACSA — Past President Harlan E. McClure, FAIA, Clemson University, and Alan T. Taniguchi, AIA, University of Texas; general education — Oakley J. Gordon, University of Utah; allied design professions — planner David A. Crane, AIA, Philadelphia.



ACSA's Burchard

Bound and similar programs which are likely to provide professional degree candidates motivated toward inner city problems.

As revealed to the 100 ACSA members attending the workshop, ACSA hopes to follow this program with assistance to interested consortia of schools in the six association regions in seeking grants for implementing the new curricula in these schools.

Interpreting the immediate enthusiasm in ACSA members generated by the workshop and the projected follow-up activities, it appears that ACSA has found a most workable and effective model for providing services to its member schools.

ACSA/HUD Workshop: The actual workshop was stimulating but one day was far too brief a period of time in which to cover adequately the ambitious agenda — really a detailed working paper outlining problems and initial proposals for remedies, organized by the special ACSA Task Force along with carefully selected program consultants.

The one-day workshop followed an evening social hour and dinner and a keynote address by Ralph J. Warburton, AIA, HUD special assistant for urban design, in which he charged architectural educators with the responsibility of meeting the demands of the nation's people for environmental quality, by means of design education substantially responsive to the public interest, focused on goals rather than methods, and focused on commitment and interdisciplinary leadership rather than compartmented ineffectuality.

Workshop discussions — effectively generated in an in-the-round audience — concentrated on four broad concerns: the student (pre-university recruitment and counseling, and funding problems); the university role (admissions, tutorials, and interdisciplinary and intercollege relationships); the professional curriculum; and the role of the profession.

In addition to ACSA members, university admissions and recruiting officers were invited to participate. Also, a number of students and community leaders from Washington, D. C., Philadelphia and New York received small grants to attend the workshop.

In the morning, useful hard-hitting discussions on the first two topics were cut off due to lack of time. After lunch, there was a great deal of interest — perhaps pressure — from the majority of blacks in attendance to pursue the central issue of whether there would actually be a genuine total commitment from schools of architecture and the profession at large to follow through on any of the workshop recommendations. As in other conferences which have been held related to similar concerns — the 1969 AIA/ACSA Teachers' Seminar in San Francisco, for example — there was really no adequate resolution of this question. A high level of apprehension and distrust prevailed. Time flew — and eventually ran out. The entire matter of the actual new curriculum never reached the floor for discussion.

But a great deal of positive input to the overall program did result from the workshop. The ACSA Task Force and consultants will make use of this input in developing the final curriculum statement and recruitment brochure.

Self-Study Programs: Some resolutions resulted which were thrust to the ACSA annual meeting the following day. These were all related to ACSA's commitment to the development of substantial funding to assist disadvantaged and minority students, and to increase the numbers and activities of effective community development centers and other community service programs. Interestingly, the resolutions gave clues of new services and approaches to problems which ACSA should develop: lobbying, fund raising, coordinating programs in consortia of schools, etc. Excellent self-study material.

The 1970 annual meeting, held in Boston June 19-21, served as an opportunity for the ACSA board to provide an interim progress report to the membership on the ACSA/ HUD effort and a number of other self-study programs, and to seek membership support for their continuation next year.

Enthusiastic membership support for the self-study came in the form of passage of specific resolutions related to various programs and by way of passage of two critical administrative resolutions — one calls for a significant dues increase for all member and associate member schools; the other names the ACSA board as a constitutional committee to review and recommend changes in the association's outdated constitution and bylaws, including these considerations: student membership on the board, membership and officer categories; changes that may be needed for affiliation with other associations in environmental design; the relationship of regional groups of schools to the national structure; and the entire matter of voting privileges. The membership also recommended an examination of the language of the constitution and bylaws with the assistance of a competent attorney.

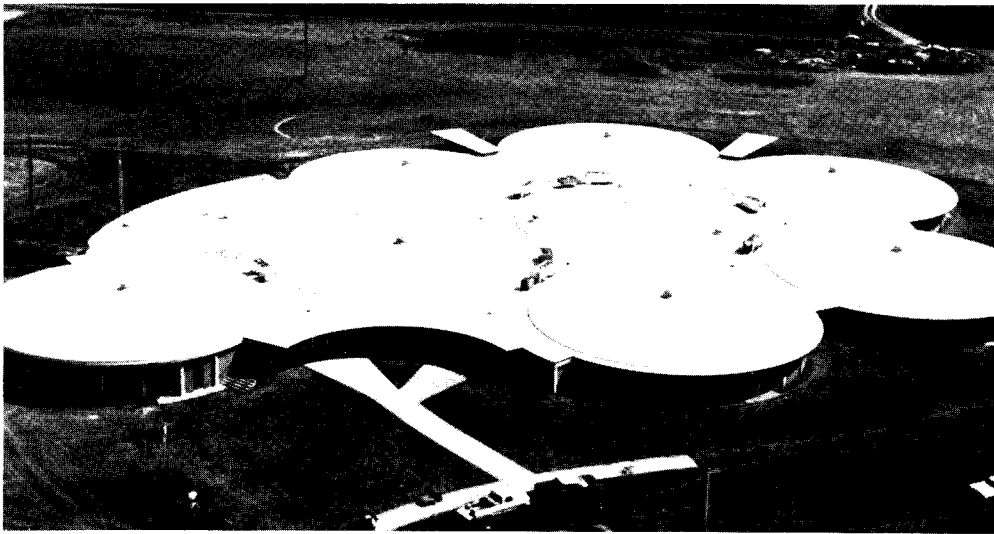
Many of the current problems in the association caused by the outdated and confusing constitution have been subtly hinted in the broad resolution passed by the membership, such as the lack of student participation in association affairs, ambiguous membership categories and no voting privileges for individual members.

Regional Studies: The annual meeting was oriented around one of the major self-study programs initiated by the ACSA board. Early in the school year, three interrelated studies were assigned to groups of ACSA regions, focusing on the implications for changes in ACSA and architectural education drawn from the new, highly publicized AIA Future of the Profession Report. Each of the three studies focused on a different general area of concern in education: curriculum, research and public service. Position papers were prepared on these three topics by select regional committees and were made available to the membership prior to the annual meeting. Then, all three were briefly presented in an annual meeting session as an introduction to simultaneous workshops in which the three topics and the resulting implications for ACSA were elaborated.

These workshops were quite successful. Initially scheduled for two hours one afternoon and one wrap-up hour the next morning, they endured for three and one-half hours

continued on page 74

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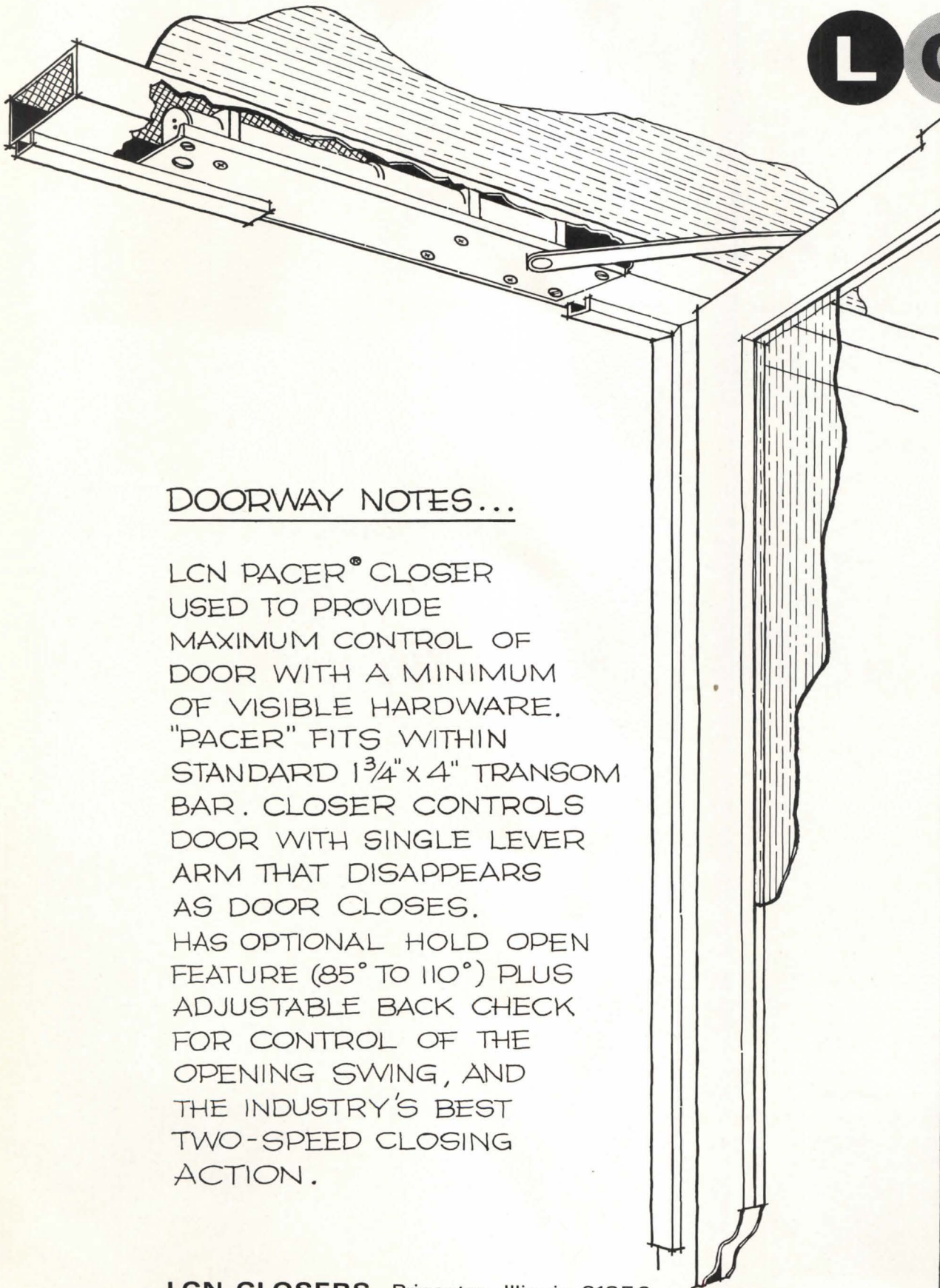
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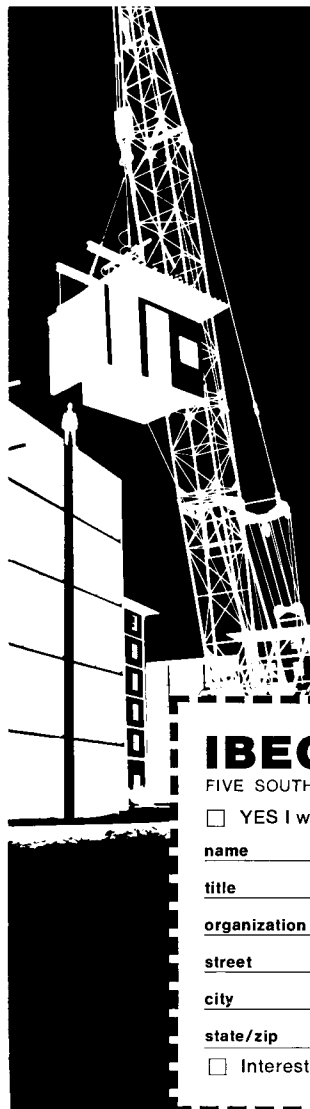
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ACSA from page 64

the second morning, mildly disrupting the overall meeting schedule.

The research workshop produced the most promising feedback. Commenting that evaluative research techniques are totally missing in the education process and that the quality of current so-called research in the profession is poor, the group recommended that schools might develop means of determining when research is truly good research, and when a process is "design" and when it is "research." The group also commented on the need for determining the appropriateness of applying "research techniques" in an architectural context and the need for an adequate common research language. Resolutions were approved by the ACSA membership which commit ACSA schools to encourage and train competent personnel in architectural research and which commit the ACSA to develop a prospectus for a scholarly publication of architectural research and to support the regional research committee — the same one organized to develop the research position paper — to pursue other projects.

Comments from the curriculum workshop indicated an acknowledgement of the current widespread state of flux in the programs and objectives of architectural schools. The group's suggestions reinforced the ACSA board's view of the great role ACSA must play in school-to-school and educator-to-educator communications.

The public service workshop reinforced several notions developed in the ACSA/ HUD Workshop, particularly the charge to ACSA to provide the common front — the political clout — to reach out, in cooperation with the AIA, and influence those in power to make necessary changes to solve urban and other environmental problems. This group also strengthened the ACSA board philosophy that the association should continue to develop, with outside funding, a wide range of curricular and teaching aids for the use of interested schools. The ACSA/ HUD Program is serving as an excellent example of this kind of service.

Two-Year and Professional Schools: The ACSA membership was exposed to the partial findings of a survey ordered by the board early in the year, dealing with the relationships which exist between two-year technical and junior colleges offering architectural programs and the ACSA professional schools.

These relationships are loosely structured and not very well understood and have never been well documented. The ACSA board reasoned that since two-year schools are now emerging in great numbers as a new potent force in architectural education, it is time to examine closely the existing situation and, through analysis, determine what appropriate relationships should exist. As a result of this study, the board also intends to develop a position on potential two-year school membership and participation in the association.

The surveys were designed by James Suter, a psychologist, and Robert Bell, assistant professor of architecture, University of Maryland. Forms sent to two-year schools differed from those sent to professional schools. In both, there was an attempt to distinguish be-

tween technical schools and junior colleges offering either feeder programs or terminal programs.

After preliminary analysis, it appears that there are significant problems related to the transferring of credits of graduating students from two-year feeder programs to professional schools. It also appears that most two-year schools have a sincere interest in establishing stronger ties to professional schools, whereas professional schools do not necessarily respond with a similar attitude.

Although the results of this program may be controversial, they will be extremely useful, particularly for helpless students who attend two-year feeder programs in good faith, only to find that credits are not transferable to professional schools.

Interprofessional Relations: The ACSA board also initiated preliminary discussions with the Association of Collegiate Schools of Planning and the National Council for the Instruction of Landscape Architecture, to pursue the potential of a full merger of these and perhaps other environmental design educational organizations, or at least the creation of a cooperative umbrella organization for purposes of improved communications.

President Burchard reported to the annual meeting a series of very constructive conversations which have to date resulted in a great deal of interest among the boards of the three organizations. The ACSA membership enthusiastically supported a resolution which empowers the board to explore these relationships further.

Educational Services Agency: Another service ACSA will provide comes as a result of the efforts of Dean Burnham Kelly of Cornell University in developing a proposal to the Federal Council on the Arts and the Humanities. The proposal, which has been funded by the Endowments for the Arts and Humanities, is intended to support a complete survey of all federal funds which are available for research in architecture and environmental design.

This entire effort is part of a broader attempt on the part of Kelly, along with others, to develop an educational services agency to assist the schools and individual educators and researchers in coordinating their research efforts and in locating potential sources of private and government funds.

Added Thrust for '71: All in all, the 1970 annual meeting allowed the reporting of a potpourri of these and other efforts. In 1971, for example, the ambitious ACSA board intends to pursue the development of a model for an interschool information network, to be implemented through ACSA. New and innovative communications techniques will be reviewed for potential use in the network. All of this will happen along with a wrap-up on the self-study.

The membership was rather pleasantly surprised to hear of the excellent progress made this year by the association. The board left Boston with a strong mandate from a happy membership to continue all of these separate efforts which, collectively, have every promise of resulting in a brand new ACSA, dramatically restructured and responsive to the increasing needs and demands of the schools and the profession.

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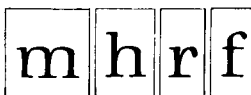
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• CLAUDE W. STEELE
Convention Manager
Houston Convention-Exposition Office
NATIONAL ASSOCIATION OF HOME BUILDERS
P.O. Box 2005
Houston, Texas 77001

• Non-members return this form directly to above.

• All Hotel Reservations must be arranged through the NAHB Houston office prior to January 8th.

PRELIMINARY SCHEDULE

Friday, January 15:
Sub-Committees
Preliminary Meetings as required

Saturday, January 16:
All Day — Standing Committee Meetings
P.M. — Directors Reception

Sunday, January 17:

A.M. — Convention Opening —
Directors Brunch
Noon — Exposition Opening
P.M. — Special Meetings
as Required

Monday, January 18:

A.M. — Convention Programs
— 1970 Board Meeting
P.M. — Convention Programs
— 1970 Board Meeting
— Annual Membership Meeting

Tuesday, January 19:

A.M. — Convention Programs
P.M. — Convention Programs
— Spike Club Party

Wednesday, January 20:

A.M. — Convention Programs
— 1971 Board Meeting
P.M. — Convention Programs
— Election of National Officers
— Annual Banquet

Thursday, January 21:

A.M. — Convention Programs
Noon — Convention-Exposition
Closes

MEMBERS TEAR OUT AND SEND FORM TO YOUR LOCAL HBA. NON-MEMBERS SEND TO ADDRESS ABOVE. USE INDIVIDUAL FORM FOR EACH PERSON OR COUPLE.

Hotel Reservation and Advance Registration

(Preliminary Meetings January 15 & 16)

MAIL TO: NAHB Houston Convention Office / P. O. Box 2005 / Houston, Texas 77001

Please make the following hotel reservation and/or advance registration. Enclosed is a check for \$_____ in U.S. Funds for advance registration. PLEASE MAKE CHECK PAYABLE TO the National Association of Home Builders. DO NOT SEND CASH.

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NAHB Member or International Affiliate Wives \$ 20.00
Non NAHB Member (Men/Women) \$150.00

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Arrival Date _____ (Important) Departure Date _____ (Important)

TYPE OF ROOM: Single _____ One Double Bed _____ Twin Beds _____ Suite (1 or 2 bedroom) _____

Hotel/Motel Preference _____
HOTEL ACCOMMODATIONS ARE NOT REQUIRED

Name: _____

Firm Name: _____

Street Address: _____

City: _____ State: _____ Zip: _____

IMPORTANT: This form cannot be processed without full official association name and should be approved by your local HBA or NHBA of Canada or International Affiliate.

HBA of _____ Local Assn. No. _____
INDICATE IF YOU ARE A NON-MEMBER

PLEASE CHECK BUSINESS CLASSIFICATION (ONLY ONE) YOU WISH TO APPEAR ON YOUR BADGE:

- | | | |
|--|--|---|
| 10 <input type="checkbox"/> Builder | 23 <input type="checkbox"/> Architect | 27 <input type="checkbox"/> Financial |
| 20 <input type="checkbox"/> Sub-Contractor | 24 <input type="checkbox"/> Manufacturer | 28 <input type="checkbox"/> Utility |
| 21 <input type="checkbox"/> Retail Dealer (Lumber, Building Materials) | 25 <input type="checkbox"/> Engineer | 29 <input type="checkbox"/> Other _____ |
| 22 <input type="checkbox"/> Wholesale Dealer (Jobber, Mfg. Rep.) | 26 <input type="checkbox"/> Real Estate | |

PLEASE CHECK PROGRAM INTEREST:

- | | | |
|--|---|--|
| A <input type="checkbox"/> Land Development | F <input type="checkbox"/> Construction | J <input type="checkbox"/> Commercial-Industrial |
| B <input type="checkbox"/> Business Management | G <input type="checkbox"/> HUD Program | K <input type="checkbox"/> Mobile Home Parks |
| C <input type="checkbox"/> Financing | H <input type="checkbox"/> Marketing | L <input type="checkbox"/> Property Management |
| D <input type="checkbox"/> Remodeling — REHAB | I <input type="checkbox"/> Apartments | M <input type="checkbox"/> Federal Legislation |
| E <input type="checkbox"/> Design | | |



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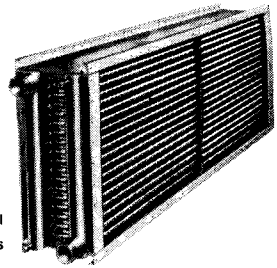
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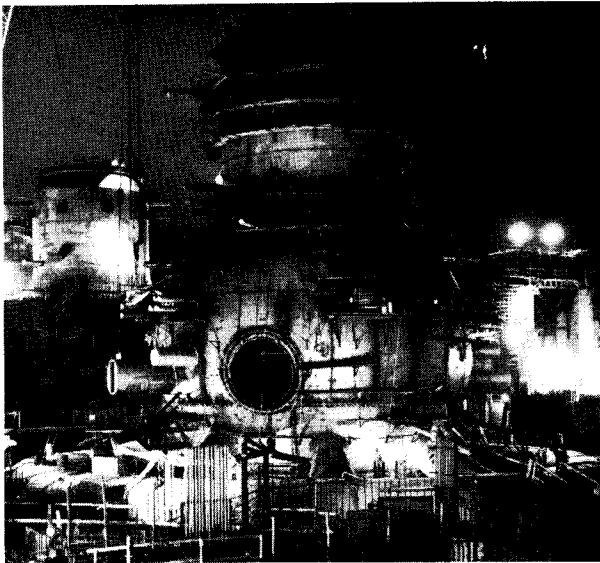
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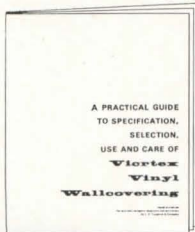
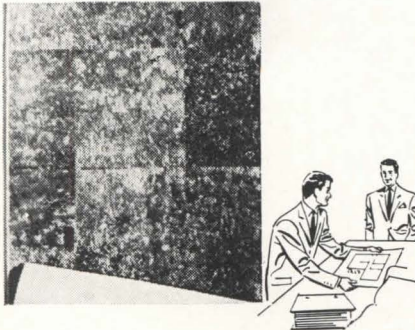
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BOOKS

Plastics for Architects and Builders. Albert G. H. Dietz. Cambridge: MIT Press, 1969. 129 pp. \$7.95.

When a scientist chooses to write highly technical subject matter in simple language directed to the average person, uninformed in the field, the task is made doubly difficult. I have mixed feelings about Dietz's new book entitled *Plastics for Architects and Builders*.

Dietz has the ability to communicate intelligently with student and colleague, professional and nonprofessional. He has poise and wit as well as an amazing storehouse of knowledge of his field. Few men have his knowledge and experience and even fewer have his reputation and eminence. He has distinguished himself in his discipline through a long and fruitful career as teacher, lecturer, author, innovator, designer, scientist and visionary. The name of Albert G. H. Dietz has become synonymous with plastics; he is among the deans of his field.

Dietz's book is excellent — for students and totally uninformed laymen. However, it is directed to the architect and builder, to whom he seems to be talking down, trying to make the subject too simple and too primary. It would have better been titled *A Primer of Plastics*. As I completed it, my feelings were "now that I have read the introduction, let's get into the meat of the subject"; but the book was read, and I felt cheated in not finding more of Dietz in it.

According to Dietz, the book was written to acquaint architects and builders with plastics from an elementary educational standpoint in simple, understandable terms; and in this respect he has succeeded. He has discussed many materials, many processes and many properties, distinguishing them and keeping them alive.

The book is clear, orderly and logical. It is interesting, informative, practical and modest. Its style is light, easy to read and fast moving. Potentials are described, applications noted and engineer-properties made meaningful by their simplicity.

Examples used are excellent, well chosen for beauty, clarity and detail. Photographs in black and white, and in color, are supplemented and complemented by Scott Danielson's witty, clean and precise line drawings which are among the best I have ever seen. An excellent device used is to place a detail drawing adjacent to a photograph. Descriptions of the illustrations are clear and complete.

Dietz covers the background of plastics through classes, characteristics, chemistry and properties so simply and basically that even a child can comprehend.

The best of Dietz is in the section on end uses and applications: structural, non-

The reviewer, a well-known consultant on plastics, architecture and the decorative arts, is an occasional contributor to the AIA JOURNAL.

structural, semistructural and decorative. He discusses raw materials, manufactured parts and composites, indicating how they can be used in building. He takes basic architectural forms and shows them sequentially emerging from material and property combinations into structure, i.e., a ribbed roof or room component. He talks about properties, additives, tests and codes.

The book ends with descriptions of plastics manufacturing processes, a phase which I felt more properly belonged earlier in the book.

Dietz uses plastics terms generically, but he also uses the ASTM abbreviations. For those already confused by technical names, the abbreviations will add confusion but will serve as a good reference.

I recommend the book for light and informative reading. And, as the soft cover suggests, I would hope to see this book dog-eared from use on the desks of students, novices and those architects, engineers and builders too proud to admit their inability to understand and who need a simple source book written in basic English to help them grasp the intricacies of plastics in today's building applications. ARMAND G. WINFIELD

Contrast Rendition in School Lighting. Foster K. Sampson. New York: Educational Facilities Laboratories, 1970. 104 pp. Free.

This study's purpose was to determine how the contrasts in light from different sources affect the ability to see visual tasks in schoolrooms. Every architect concerned with the design of educational facilities can use it to good advantage. Its information will help him to supply good light at lower cost. It is free; so don't let a moment go by without requesting a copy from EFL.

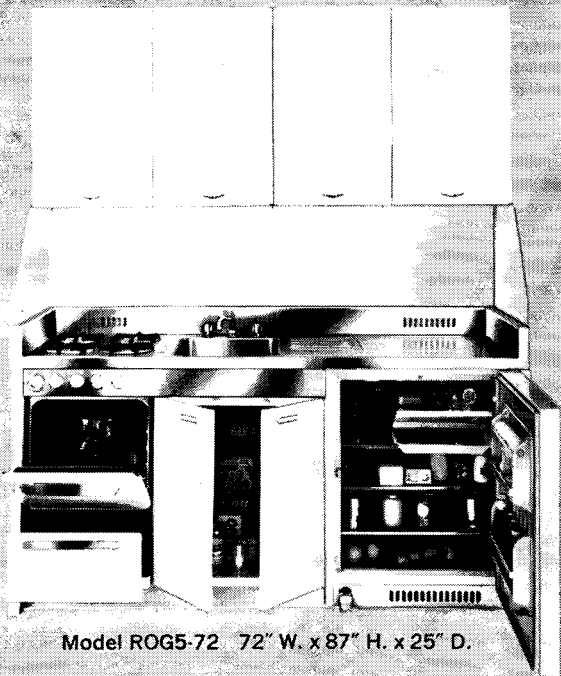
Building Contracts for Design and Construction. Harold D. Hauf. New York: Wiley, 1968. 342 pp. \$10.95.

By an architect experienced in the administration of design and construction work, this helpful book provides a considerable amount of practical information pertaining to contractual relations. Because of the expanding concept of professional liability in recent court decisions, emphasis is placed upon the role of architect-engineer in the selection and specification of materials and on his responsibilities during the construction phase. Standard or prototype contract documents are cited in the text and reproduced for illustrative purposes.

Urban Planning in Transition. Edited by Ernest Erber. New York: Grossman, 1970. 323 pp. \$15 hardbound, \$4.95 paperbound.

A collection of papers from a conference assembled by the American Institute of Planners in 1968 at which time specialists in many areas took a look ahead to the year 2017. □

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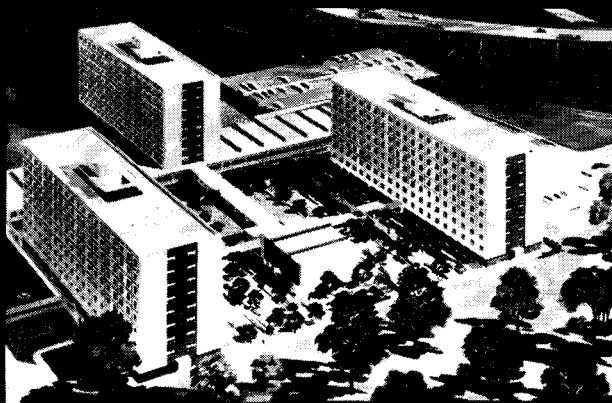


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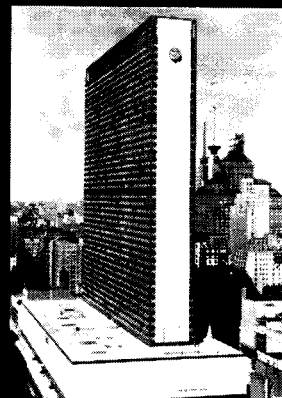
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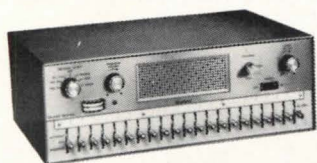
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events

AIA State and Region

- Sept. 24-26:** New Jersey Society of Architects, Chalfonte-Haddon Hall, Atlantic City
- Oct. 7-9:** Northwest Region, Honolulu
- Oct. 8-10:** Alabama Council, Tutwiler Hotel, Birmingham
- Oct. 19-22:** New York and New England States, Regional Conference, Monticello, N.Y.
- Oct. 22-24:** Kentucky Society of Architects, Phoenix Hotel, Lexington
- Oct. 29-31:** Architects Society of Ohio, Stouffer's Cincinnati Inn, Cincinnati

National

- Oct. 4-8:** Prestressed Concrete Institute, Leamington Hotel, Minneapolis
- Oct. 17-21:** American Institute of Planners Annual Convention, Minneapolis
- Oct. 22-25:** Industrial Designers Society of America, Pocono Manor Inn, Pocono Manor, Pa.
- Nov. 1-3:** Architect/Researcher's Conference, Stouffer's Cincinnati Inn, Cincinnati
- Nov. 3-6:** Industrialized Building Exposition and Congress, Louisville, Ky.
- Nov. 4-8:** National Trust for Historic Preservation, Charleston Municipal Auditorium, Charleston, S. C.
- Nov. 18-19:** Building Research Institute, Fall Conference and Annual Meeting, American Hotel, Washington, D. C.

International

- Sept. 21-25:** UIA Town Planning Commission, Washington, D. C.
- Oct. 4-7:** National Association of Home Builders' International Apartment Conference, Statler Hilton and Mayflower Hotels, Washington, D. C.
- Oct. 28-30:** International Environmental Design Conference, Mellon Institute, Pittsburgh

Competitions

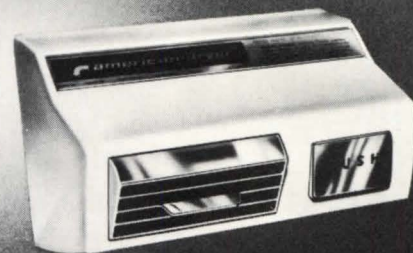
- Nov. 15:** Submissions due, renovation of old town of Karlsruhe and its integration within town center. Contact: Sekretariat des Wettbewerbs, Rathaus Stadtplanung-samt, 7500 Karlsruhe, Germany.

Fellowships

- Dec. 31:** Applications and submissions, in the form prescribed, due: Rome Prize Fellowships for 1971-72. Contact: Executive Secretary, American Academy in Rome, 101 Park Ave., New York, N. Y. 10017.

Call for Papers

- Dec. 1:** Author, subject and abstract due: Joint RILEM-ASTM-CIB Symposium on the Performance Concept in Building Construction, to be held in Philadelphia in May 1972. Send submissions to: RILEM-ASTM-CIB Symposium, 1916 Race St., Philadelphia, Pa. 19103.



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letters

Boston: A Post-Mortem

The Boston convention business sessions represented a travesty on the democratic process. It demonstrated vividly the need to pass a bylaw change to require votes by the membership through mail ballot. In the case of the Democratic and Republican national conventions, to which ours might be compared, at least most of the delegates were actually *elected* representatives.

National AIA business, such as election of officers, changes in bylaws and votes on important policy issues, is conducted at conventions by so-called "delegates," who consist of a few of the more affluent members, those whose way is paid or those who have a special reason to attend. This is understandable, since it would be idle for our chapter to elect delegates and give them the privilege of spending \$500 or more to go to Boston. As a result, California was represented by 64 delegates, sharing 233 votes, or an average of 3.5 votes per person. This varied by chapter — one chapter with 14 votes being represented by one individual. In contrast, many chapters from the East had as many individuals as they had votes.

Except for the election of officers, every resolution is first tested by a voice vote. It is a proven fact that Bob Gordon of Pasadena cannot shout 14 times as loud as a Boston delegate, yet the president of the Institute is put in the unfair position of deciding from the resulting din whether to call for a standing vote. In this event, it is even more clear that Bob Gordon could not stand 14 times as tall as a Boston man. A roll call vote can be required by a vote of one-third of the delegates on the floor, but this is rarely done since each roll call, which takes account of the weighted vote, takes at least one hour.

Tuesday morning's business session started fairly promptly, but after the time consumed by general business, the presentation of the new Headquarters Building and approval of relevant business action, the clock had reached high noon. In spite of the lateness of the hour, President Allen introduced two resolutions on dues increases and made the following statement: "We are falling behind schedule, but I think we should have at least the presentation and then probably the discussion which I am sure you will want to have postponed until the business meeting on Thursday."

The president-designate then read a prepared statement advocating the need for the dues increases. Toward the end of this discourse, several of our delegates asked me to be released since they understood there would be no vote on that issue until Thursday. I had the same understanding, and at least half of our delegation left the floor, as did at least one-third of the total delegates on the floor. The remaining delegates

voted to approve the dues increases by a voice vote as determined by the chair. Thus I estimate that a few hundred so-called delegates, representing God knows how many actual votes, approved two substantial dues increases for 23,000 members. Even though I would have voted in favor of the increases, I think this is one hell of a way for any organization to conduct its affairs.

Most of Thursday morning was consumed by award presentations, giving the president on Thursday afternoon the challenging assignment of dealing with more than 20 resolutions, substitute motions, motions to table and some other heretofore unheard-of Robert's Rules of Order. That masterpiece of confusion, the Proposed New Standards of Ethical Practice, was finally introduced after closing time, allowing minimum time for debate. A roll call vote was handed in at about 6:30 p.m. It was announced that evening that it had passed by a simple majority.

Our basic proposal is that officers, bylaw changes and policy issues determined by the board should be voted upon by corporate members of the Institute by a direct mail ballot to each member and transmitted back to the Institute through chapters. Passage of this bylaw change would permit presentation of candidates and their qualifications, as well as *debate* on policy issues and bylaw changes at the national convention, but would allow the membership to vote directly on the business of the Institute after having an opportunity to become well informed in writing and by those attending the convention.

We are encouraged by the appointment of Vice President George White as chairman of a new Task Force on Structure and by the clear demonstration the convention provided, which should have convinced the board that radical changes have to take place if we are to avoid future fiascos.

ROBERT E. ALEXANDER, FAIA
Los Angeles

In 1937, I attended my first AIA convention in Boston. At the time I was a graduate student at MIT: young, idealistic and attentive. The convention was a great experience, and during the intervening years I have attended many conventions, often as a delegate. Some were great; all were good.

If my present state of mind prevails, the 1970 convention will be my last. I left Boston depressed and discouraged. I felt that the conduct of the business meeting, especially the way the increase in dues was handled, left much to be desired. I left the hall after 12:30 for a noon luncheon meeting, as did many others, under the impression that the voting would occur on Thursday, only to learn later that it was all over. Great! I can only describe such tactics as "sneaky." What were they afraid of? Most members are reasonable and understand the

need for more operating funds. Complaints were widespread.

The planned student program was an insult to intelligence, an outrage and a disgrace. The unplanned bordered on obscenity and madness. Like children throwing tantrums, an audience is required, or there is no purpose. The news media cooperated beautifully. Those who allowed the students to put on such an exhibition, and I am not talking about the dissident group who took over, may excuse themselves by saying, "We did not know what they planned." I can only say that they should have known. They were responsible. About the only things going for those immature students are arrogance, impudence and vast inexperience. Their usefulness in any well-run office would be nil.

Pure luck and good advice saved me from the George's Island fiasco. It sounded like an expensive, poorly organized flop. The few bright spots of the convention, actually, had nothing to do with it: the dinner at the Union Club, alumni luncheon and Sam Chamberlain's autograph party.

Much more of this sort of carrying on at conventions and I foresee serious trouble for the AIA from within its own membership. Perhaps that lunatic gang of "spoiled brats" were not too far off base when they stomped out to start a new organization! For myself, disenchantment is complete.

JOHN SULLIVAN JR., AIA
Dayton, Ohio

Beginning with Portland in 1968, AIA conventions have dwelt mostly on matters other than our professional affairs — politics, sociology, foreign affairs — and in Boston we became military leaders, statesmen and advisers to the President of the United States on "national security" under resolution 19!

Having been an active participant at many conventions since 1925, I have seen the swings of the pendulum. I do hope that the 1971 Detroit convention will see the leadership of the Institute return to its members. Students, noncomponent organizations and nonmembers should never again be permitted to take control of our convention, our business affairs, our Institute and our destiny.

The most valued asset of the Institute is its members, and their financial capabilities are not endless. For the AIA to risk its financial and professional viability is to risk its independence of contemporary pressures and demands by groups and organizations outside the area of our own organization. We cannot be all things to all men. The Institute was not founded for the purpose of curing all human ills, social and moral.

The Boston convention showed that the time has come when our members must decide if we are an organization of *architects* or of *political sociologists*. We cannot be both. If we attempt to do so, we will divide our members, dissipate our strength and resources and diminish our influence as a professional group of leaders in the construction industry.

We are becoming so preoccupied in socio-political arenas that we cannot see what is

going on in our own. One of the many items of unfinished business pertaining to our own profession is the inroads being made by "specialist" groups which are taking over the practice of architecture in different forms and with effective publicity. While we concern ourselves with social responsibilities in all fields, these specialists are effectively making our profession their business.

A great disappointment both to my wife and me was that the heavy business schedule of this convention left no time to see either the old or new Boston and no time for planned and impromptu visits with old and new friends. These visits are both a great pleasure and a stimulus for the exchange of ideas and are an important part of any con-

vention. The spirit of friendliness and fellowship so prevalent at previous conventions was sadly missing. It was truly a wild and woolly convention.

A sociological phenomenon is that when organizations no longer know what they are doing, they start trying to do *everything*. To return to our original and basic purpose with renewed seriousness would be an action at once radical and constructive.

My loyalty to the Institute is unchanged, and my interest and efforts to serve will continue as always. E. JAMES GAMBARO, FAIA
New York City

I think the members of the Institute who were unable to attend the Boston convention

would be interested in my personal observations. This was my first national convention in 23 years of corporate membership which, incidentally, began in Boston.

First, the business sessions were improperly scheduled and poorly planned. The timing of the discussion of the Proposed New Standards of Ethical Practice, late Thursday afternoon, was a disaster. By that time at least a quarter of the attendees had left the convention. The business sessions should have started on Monday afternoon rather than Tuesday morning and continued until completed, with the most important matters at the top of the agenda instead of at the bottom.

Second, I have serious misgivings about the method by which we elect our national officers. I am not convinced that the one-man/one-vote concept is the answer, but I definitely favor some form of mail ballot — a proposal defeated at Boston. I strongly urge the new board to address itself to this matter without delay.

Third, I experienced bewilderment, boredom, disappointment and frustration at much that was said in Boston. I was not at all surprised at the massive frustration expressed by the blacks in our profession and the students in attendance. I hasten to add that I do not condone some of their actions and manner of speech.

The Institute has precious little time in which to set its priorities in order — one year, perhaps two at the most. The Boston convention has provided the challenge, and a second theme for Detroit might be "How to Get With It." I fear for that convention and for the whole national convention idea unless the Institute quickly succeeds somehow in turning itself around so as to enable it to approach the last quarter of the 20th century the way we find it today.


WILLIAM LYMAN, AIA
Birmingham, Mich.

The AIA convention has come and gone. The tumult and the shouting of five hectic days have died down, and all that remains is a wilted corsage, a fistful of deductible bills and a metric ton of pregnant printed matter which, unfortunately, is not guaranteed to self-destruct.

But something important happened in Boston. We had barely shaken the dust of the highway off our boots when we were ushered into a reception of truly Lucullan splendor. It was at this moment that we realized that this convention was to be symbolic of a lot of things we profess to deplore.

We partook, first off, of a medieval banquet at the lordly hand of McGraw-Hill, Inc., and I confess that I enjoyed my hypocritical fill just like everyone else. There was a continuous flow of platters of food and drink which hardly reflected our supposed involvement in the plight of the less well-endowed. The setting itself, outdoing both Piranesi and Fellini, was a breathtaking example of architectural magnificence, resembling a miracle play in a 13th century cathedral.

The exhibit halls (the commercial environment) served only to reinforce the impression of limitless, and for the most part,



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pointless affluence. The diversity of products was matched only by the ingenuity of their respective purveyors who lined the aisles to seduce the potential specifier. Succulent viands appeared as if by magic at the proffer of a yellow ticket. It was here I learned why America's most recently discovered majority is so notoriously silent — they are busy eating.

That aspect of the environment composed of the coming generation (many of whom had traveled at their own expense from California as well as Canada to demonstrate their desire to communicate with humanity in general and the architectural establishment in particular) was marred for one precarious instant when the only line of communication between those over 40 and their hirsute progeny was Dr. S. P. R. Charter's blackthorn walking stick. The history of man's courtesy advanced a giant step when our guest returned to the podium. The impact of this incident was further softened in a brief ceremony in which numerous accredited architects mingled unabashedly in a totally integrated phantasmagoria of balloons, bazoos, rhythmic deep-breathing and fervent hand-holding.

The environment dominated by our hooded and newly beribboned colleagues, within the neoclassic vastness of one of the nation's most prestigious museums, followed the standard pattern with few surprises and a minimum of disappointments. The same might be said of the program of awards and citations. Above all, we offer our sincere apologies that the selection of Buckminster Fuller as Gold Medalist took so unconscionably long.

The professional environment was characterized by little more than the usual haggling over funds, punctuation by points of order and constant reference to sacrosanct bylaws. The full message of the convention that started with Senator Muskie's address was brought into focus in an impassioned dissertation by landscape architect Ian McHarg. Our whole dynamic society, with its myriad problems, its vanities, its contradictions, must learn, according to this gifted ecologist, that nature will make excellent company when we learn that we are its captive guests, not its hosts.

When everything else about the 102nd convention blends and vanishes into history, when all those free refreshments and all that printed matter have been fully recycled, McHarg's talk will echo in our minds. Will we act — as well as listen? Or will we go right on eating? ROBERT H. MUTRUX, AIA
 Wilton, Conn.

Mrs. Neutra Comments

I want to thank you for your Comment and Opinion about Richard Neutra in the June issue. Your remark that "Mr. Neutra remained in my opinion one of the most underrated practitioners of our day" struck a responsive chord. When I compare the quantity and quality of editorial attention that was paid to my husband's passing in the rest of the world (especially in Germany, Switzerland, Austria, Italy and Spain) with the one received in the US press, your statement is

very correct. I am also overwhelmed by the more than 800 letters and telegrams I have received from all over the world.

When I reflect upon the fact that my husband arrived in this country as a poor immigrant nearly 50 years ago, without connections, and made his career in this country—the only country in which he could have made such a career, as he always said—it is a strange fact, is it not, that the contribution he has made to architecture and life in general is so much more appreciated abroad than in America.

MRS. RICHARD NEUTRA
Los Angeles

Suitable Floor for Dancers

It has been recently called to my attention by the head of the AGMA, the dancers' union, that four relatively recently built auditoriums have stage floors of such hardness that AGMA is seriously considering banning them to dance companies. A hard floor, as you may know, often causes serious injuries to dancers of such a nature that they may be out of commission for six months.

We have been working with AGMA and have discussed the problem with architects, engineers, stage designers and dancers. Specifications are being drawn up for two different solutions to this problem. AGMA and our organization will have these floor specs available for architects who wish to inquire about a suitable floor for dance. Incidentally, the byproduct of a good floor for dancers is the fact that such a floor is probably also beneficial acoustically, as well as being better for actors and singers.

Is there any way through your Institute of notifying American architects of this small but crucial requirement for dancers? Dance companies are becoming more and more popular attractions in halls throughout the country. It would be most unfortunate if architects unwittingly should prevent their performing, especially when the remedy is so simple.

ADAM A. PINSKER
Executive Director, Association of American
Dance Companies
New York City

Another Reader on Tokyo's New Imperial

Re: New Imperial Hotel in Tokyo. Move over, Karl Kamrath (May '70). I, too, feel dejected about the demolition of Frank Lloyd Wright's original hotel. I, too, wrote to its owner, Mr. Inumaru, pleading to save the central core and incorporate it in the new design. And I, too, received no reply in spite of the fact that I related to him that I have been bringing over 400 American customers, mostly architects, to his hotel in the past 15 years as I thought being a businessman he might be sensitive to this type of threat.

I have just returned from Tokyo and, with some misgivings, I stayed at the new Imperial Hotel. I have been informed also from "insiders" about the details of the project which led me to believe that it could have been worse.

In my opinion, any reference to the "Hilton-like" architecture is irrelevant.

KENNETH M. NISHIMOTO, AIA
Pasadena, Calif.

architects information service

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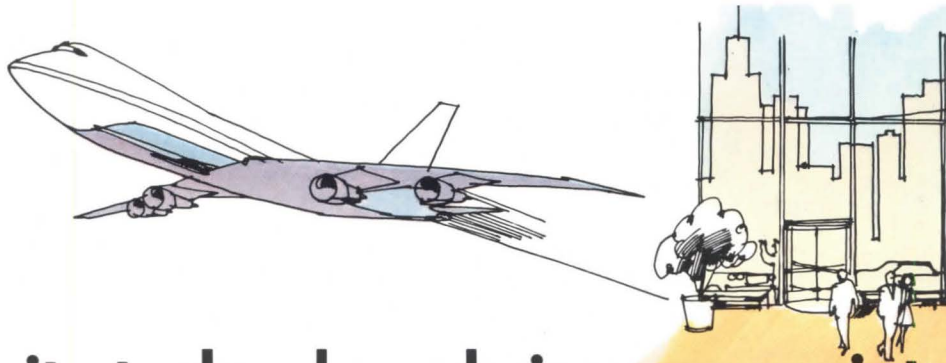
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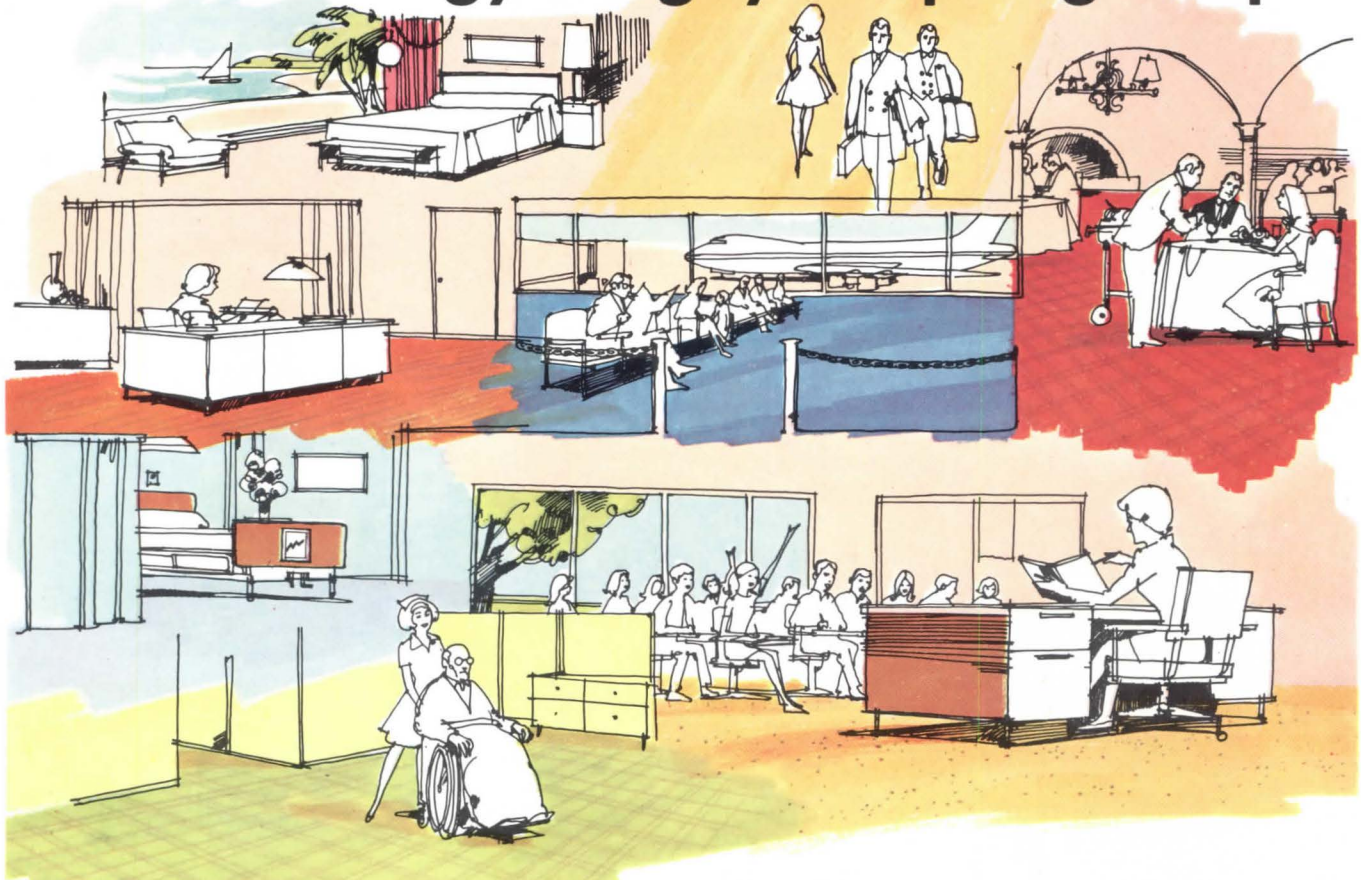
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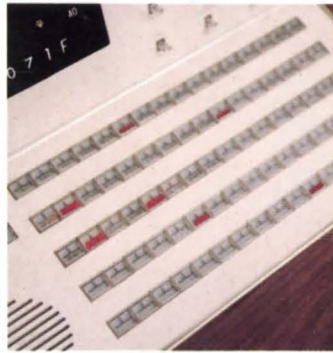
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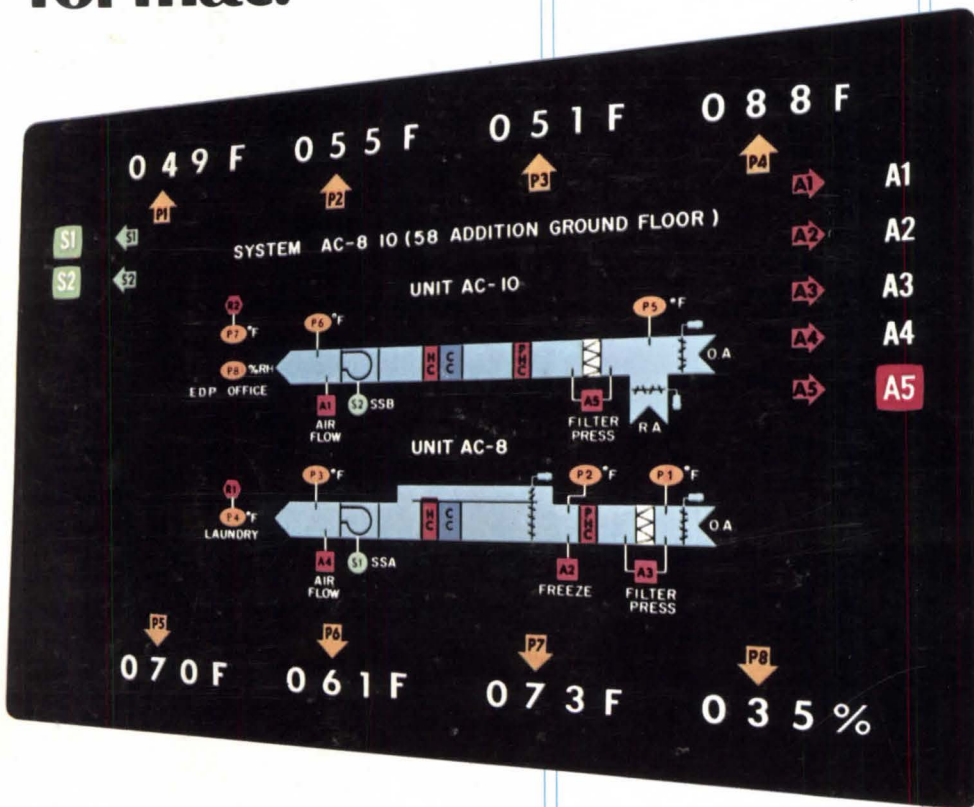
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