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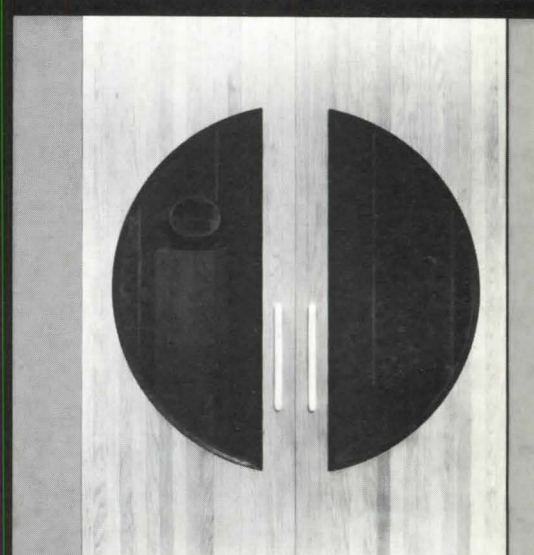
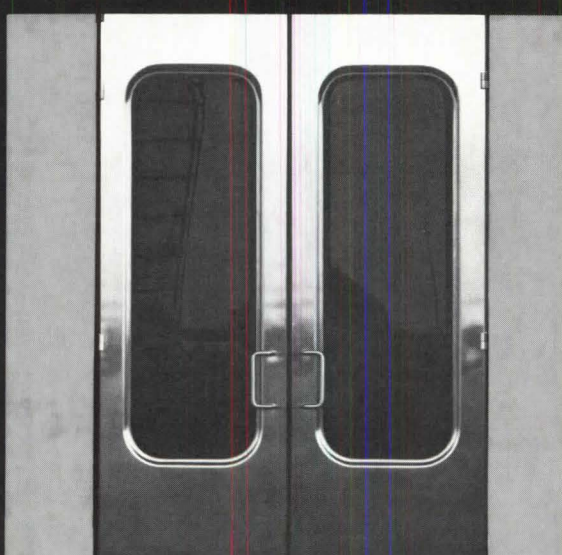
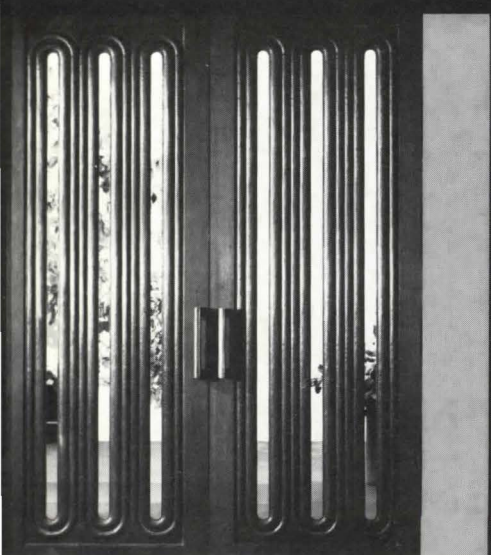
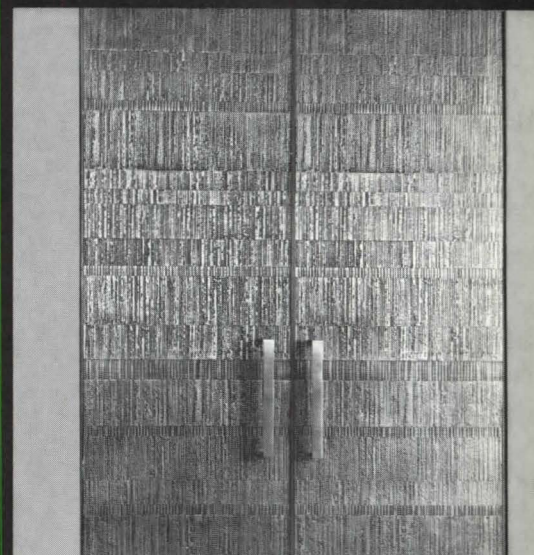
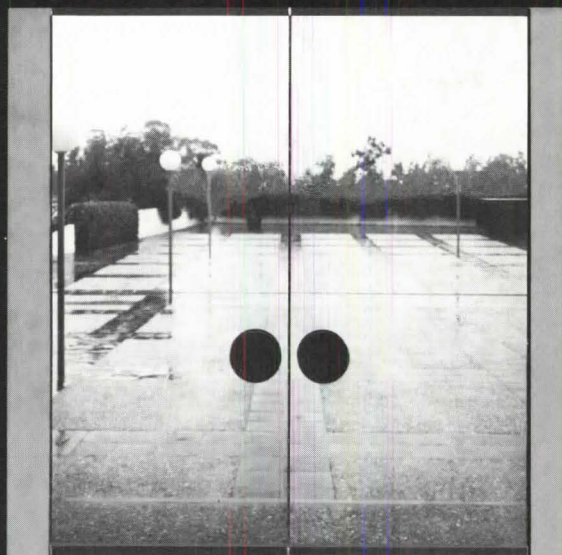
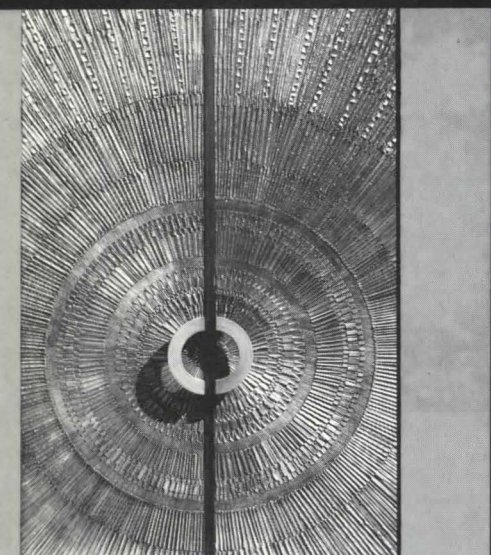
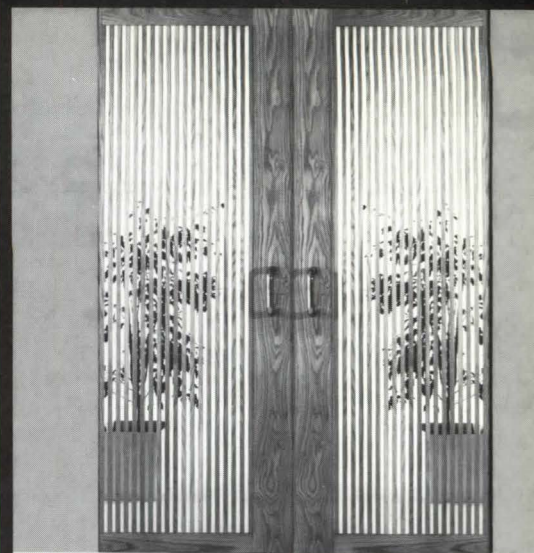
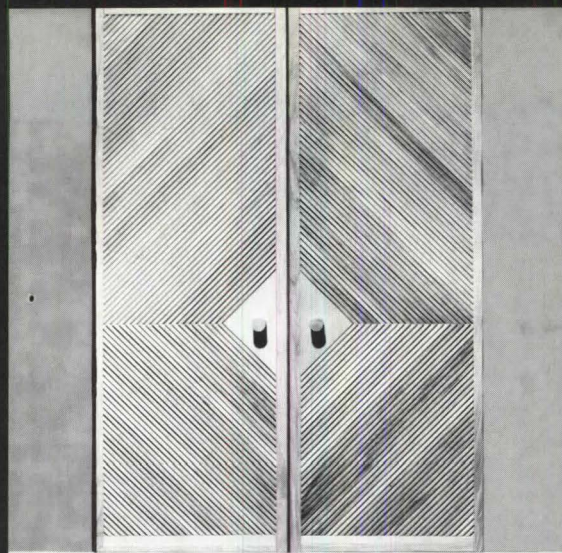
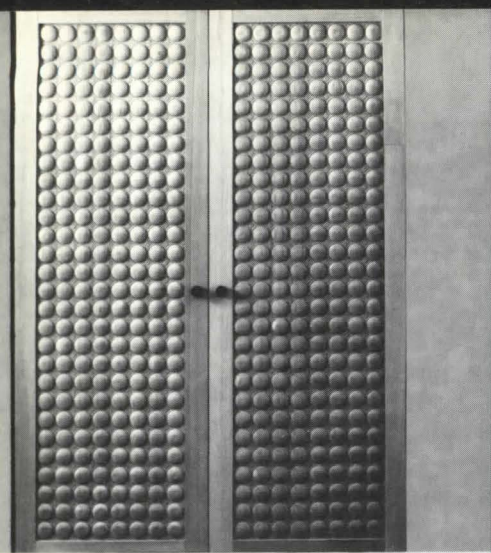
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AIA JOURNAL

Washington: A Capital City

Some reasons for optimism, even enthusiasm, about its prospects—Donald Canty 18

The Federal Triangle: Hidden Treasures of a Walled City—Lois Craig

They may soon be brought to light, and it brought to new life 20

The Maturing of the Nation's Most Important Park—Benjamin Forgey

Shaped over a 200-year period, it is emerging much as early planners intended 32

The Unbuilt Capital: Lost Plans for Washington—Wilcomb E. Washburn and Kathryn Cousins, AIP

The city has generated more than its share of grand urban visions 42

Maintaining the Fabric of an 'American Paradise'

In St. Croix, new efforts to save landmark buildings—Neil Letson 56

Using Wind Tunnels as Tools for Designing and Adapting Buildings

A San Juan pool and grandstand fitted for athletic games—Ralph H. Crump 60

Cover: Photo by Robert Lautman of one of a pair of circular staircases in the elevator lobbies of the post office building, Federal Triangle, Washington, D.C. (See p. 22)

Departments

Events and Letters	4	Books	62
Going On	8	Advertisers	82

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AIA JOURNAL, official magazine of The American Institute of Architects, published monthly except May and August, when semimonthly, at 1735 New York Ave. N.W., Washington, D.C. 20006. Telephone: (202) 785-7300. Subscriptions: for those who are, by title, architects, architectural employees and to those in architectural education (faculty, schools and students), and to libraries, building construction trade associations and building products manufacturers: basic rate \$12 a year; \$8 to ASC/AIA affiliate members and student chapters (bulk orders) in the U.S., its possessions and Canada. For all others: \$18 a year in the U.S., its possessions and Canada; other countries to those who are by title, architects: \$18 a year. All others outside the U.S., its possessions and Canada: \$30 a year. Single copies: \$2 each; Mid-May 1978 issue: \$7.50 each. Publisher reserves the right to refuse unqualified subscriptions. For subscriptions: write Circulation Department; for change of address: send Circulation Department both old and new addresses; allow six weeks. Second class postage paid at Washington, D.C., and additional mailing offices. Quotations on reprints of articles available. Microfilm copies available from University Microfilm, 300 N. Zeeb Road, Ann Arbor, Mich. 48106. Referenced in *The Architectural Index*, *Architectural Periodicals Index*, *Art Index*, *Avery Index to Architectural Periodicals*. © 1978 by The American Institute of Architects. Opinions expressed by contributors are not necessarily those of the AIA.® VOL. 67, NO. 7.

EVENTS

July 12-14: Course on How to Prepare an Economic Impact Assessment, University of California, Berkeley.

July 12-14: Department of Energy Solar Update, Atlanta (repeat conferences: July 16-18, San Francisco; July 19-21, Chicago; July 23-25, Boston). Contact: Trinity University, 715 Stadium Drive, San Antonio, Tex. 78284.

July 12-14: Course on Housing and Community Development Law, University of California, Berkeley.

July 14-16: Conference and Exhibit on Solar 78 Northwest, Sheraton Hotel, Lloyd Center, Portland, Ore. Contact: Solar 78 Northwest, 620 S.W. Fifth Ave., Room 610, Portland, Ore. 97204.

July 19-21: Workshop on Life-Cycle Cost Application, Boston, sponsored by AIA and the American Consulting Engineers Council (repeat workshops: Aug. 16-18, Seattle; Sept. 20-22, Kansas City, Mo.; Oct. 9-11, Atlanta; Nov. 15-17, Anaheim, Calif.; Dec. 6-8, Denver). Contact: ACEC, 1155 15th St. N.W., Washington, D.C. 20005.

July 21-25: American Society of Interior Designers International Exposition of Designer Sources, Washington Hilton Hotel, Washington, D.C. Contact: Ed Gips, ASID, 730 Fifth Ave., New York, N.Y. 10019.

July 22-25: American Society of Interior Designers annual conference, Washington Hilton Hotel, Washington, D.C. Contact: ASID, 730 Fifth Ave., New York, N.Y. 10019.

July 27-29: Stanford Conference on Design, Stanford University, Stanford, Calif.

July 28-Aug. 4: Institute on Energy Conscious Design, Harvard Graduate School of Design, Cambridge, Mass. Contact: Peter Smeallie, AIA Research Corp., 1735 New York Ave. N.W., Washington, D.C. 20006.

July 31-Aug. 4: Seminar on Energy Conservation in Buildings, Hotel Sonesta, Hartford. Contact: Energy Educational Services of Connecticut, 266 Pearl St., Hartford, Conn. 06103.

Aug. 1: Abstracts deadline, call for papers, symposium on the corrosion of reinforcing steel in concrete, to be held Dec. 5-7, Bal Harbour, Fla. Contact: Jane B. Wheeler, American Society for Testing and Materials, 1916 Race St., Philadelphia, Pa. 19103.

Aug. 1: Abstracts deadline, call for papers, international symposium on the behavior of building systems and building components, to be held Mar. 8-9, 1979, at Vanderbilt University. Contact: Fred W. Beaufait, P.O. Box 1533, Station B, Vanderbilt University, Nashville, Tenn. 37235.

Aug. 7-28: Architectural tour of Europe (London, Athens, Rome, Florence and Paris). Contact: William A. Kelly, AIA, 14901 Bestor Boulevard, Pacific Palisades, Calif. 90272.

Aug. 15: Entries deadline, Owens-Corning Energy Conservation Awards Program. Contact: W. N. Meeks, Owens-Corning Fiberglas Corp., Fiberglas Tower, Toledo, Ohio 43659.

Aug. 18-20: Participatory Design Conference, University of California, Santa Cruz.

Sept. 25-28: International Federation of Landscape Architects world congress, Salvador, Brazil. Contact: IFLA, Arco Velho, Ramalhao, Sintra, Portugal.

Oct. 23-27: World Congress of the International Union of Architects, Mexico City. Contact: Maurice Payne, AIA, Institute Headquarters, (202) 785-7364.

Oct. 24-25: Architects in Industry Seminar, St. Francis Hotel, San Francisco. Contact: Fred Marks, AIA Headquarters, (202) 785-7366.

June 3-7, 1979: AIA convention, Kansas City, Mo.

LETTERS

Architects in the Hall of Fame: My wife and I are members of the coalition committee formed by the National Sculpture Society to save the Hall of Fame for Great Americans from abandonment and possible demolition.

The classical structure in the Bronx, N.Y., was designed by Stanford White. Here Presidents and statesmen, scientists, humanitarians, authors, military leaders, educators and other are commemorated by a commissioned bronze bust and a tablet with appropriate words regarding the national leaders' accomplishments.

To date, about 35 organizations are represented on the coalition committee, and all—including AIA—have written letters of support.

Some historic information of interest to architects is not generally known. Ten members of AIA have been candidates for the Hall of Fame, but none was elected. Seven of the ten architects are listed in the chart that accompanied an article entitled "An Architectural Family Tree That Traces the Paths to Fame" by Roxanne Williamson in the January issue. These architects are Henry Bacon, Charles Bulfinch, Daniel Hudson Burnham, Richard Morris Hunt, Charles Follen McKim, Henry Hobson Richardson and Louis Sullivan.

Nominations for the Hall of Fame are no longer accepted. A few of my selections for some possible future nominations are: Robert Mills of South Carolina, the first American native born architect,

who designed the Washington Monument in the nation's capital; Stanford White of McKim, Mead & White, who designed the Hall of Fame as well as the adjacent Gould Library; Raymond M. Hood, who deserves selection for Rockefeller Center alone, and William Rush of Philadelphia, this nation's first native born sculptor.

*E. James Gambaro, FAIA
Brooklyn Chapter/AIA
New York City*

Underground Architecture: Terrific roundup of underground architecture in the April issue, which included the Terraset Elementary School by Davis, Smith & Carter (p. 44). The evacuated tube solar collector system at Terraset was designed by Smith, Hinchman & Grylls Associates Inc., using the more than two years' experience we have had with the collector on our downtown Detroit roof.

*James P. Gallagher
Smith, Hinchman & Grylls Associates Inc.
Detroit*

I am always astonished and forever a believer that the pen is mightier than the sword. The point in question is the underground monastery church designed by Stanley Tigerman, FAIA (p. 42). It seems the author has more imagination than the architect. I cannot believe that anyone could say that this contemporary structure recalls a crown of thorns. Little is followed of the revised Vatican II liturgy of the Roman Catholic Church. The author suggests that the altar could be placed in the center of the congregation. This would make a greater mortal sin with regard to the new liturgy of the church.

Awards in architecture, motion pictures and television's arts and sciences are too numerous, frivolous and worthless. Only the test of time is truly the judge of any good work of architecture. Surely, this building will never go down in history as a terne metal crown of thorns.

As for the energy-saving berm, again this was a device used by architects long before energy conservation was considered a serious matter in this country. The church was designed purely for other reasons than energy design, such as architectural gymnastics, as is so often the case in ecclesiastical architecture today.

We have a considerable quantity in church architecture in the U.S., but almost no quality. It appears the Eastern section of the country has taken over creative architectural quality for the Midwest. We also look to Europe now and in the past for its creative genius in ecclesiastical architecture. This is not to condemn all American architects who work in church design, but only to restate that quality is hard to find—and to finance and build.

*James R. Cronin, AIA
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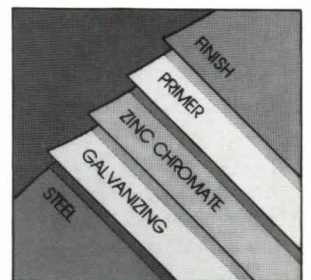


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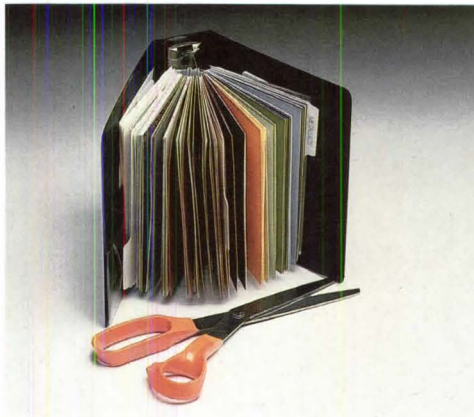
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Advertising Ban Lifted, Design/Build Test Voted

"We have come to grips with issues that have troubled us for many years. I am truly proud," said Elmer E. Botsai, FAIA, president of the Institute, at the conclusion of the business sessions at AIA's 1978 convention in Dallas. The delegates, in debate that was emotional, and often passionate, had overturned decisions made in San Diego in 1977, voting with decided majorities to change AIA's ethical rules on two counts. First, the delegates voted almost three to one (1,505 to 528) to permit AIA members to engage in design/build and contracting activities for an experimental three-year period; and second, by 82 percent, they voted to further change the ethical code by lifting AIA's longstanding ban on advertising. This proposal yielded 173.25 delegate votes in favor of unlimited advertising; 177.17 votes in favor of retaining the ban, and 1,568.18 in favor of restricted advertising.

The debate on design/build was lengthy, and sometimes acrimonious, while that on advertising, in striking contrast, was brief as the delegates faced what one of them called "the inevitable."

The design/build bylaw change was proposed on the basis of a report of a task force composed of Harold C. Fleming, Hon. AIA, Institute public director; Jerome M. Cooper, FAIA, and John M. McGinty, FAIA, past Institute president. The report, previously endorsed unanimously by the board, calls for a three-year experimental period during which time AIA members are permitted to engage in design/build and contracting activities. A committee would ascertain the number of AIA members engaged in construction and the effect on membership, make an analysis of risk/reward, including liability, and of the impact upon the scope of AIA services required as well as of shifts in perception by both society and AIA members of the role of the architect.

This disciplined experiment "could be changed at any time," Botsai said. Ac-

ording to the report, the board at its March 1981 meeting could recommend to end the experiment and the permissive rules, to end the experiment and permanently adopt the ethical rules or to continue or modify the experiment for another three years. Fleming, who presented the report to the convention, said, however, that this "will not become policy by exhaustion."

The new wording of the ethical code spells out guidelines and safeguards. For the first time, it is now permissible for the



architect's compensation to be affected by profit or loss on labor and materials. However, the code states that "members of AIA should serve their clients competently and exercise unprejudiced professional judgment in their behalf."

Speaking in favor of the report, McGinty said that the issue was not just design/build, but "a much more fundamental question of our response to change." Members could "defend the status quo by erecting a wall around ourselves and limiting our numbers, or we can see in the challenge an opportunity to extend our influence into new areas of endeavor," he said.

There are risks in both approaches, McGinty said. The risk of the status quo is the "diminishing effect of the architect's professional and moral influence," and the risk in change is "that we might lose our way on unfamiliar ground and sacri-

fice by dilution the knowledge and principles we started out with." The way of the task force report, he said, was to accept society's challenge for greater involvement of the profession in the building process, with risks minimized "by some very specific ethical guidelines to help those who elect to practice in this new manner."

Jerome Cooper, who had opposed design/build at the 1977 convention, said that the report, which he supported, was not a solution but a process toward a solution. He said that it was still his belief that "the workings of contemporary society are far too intricate and the construction process far too complex for the architect to believe that he can utilize the design/build process to return himself to the once-hallowed and sometimes mythical position of the master builder." He said that he still believes that to engage in design/build and contracting activities will mean a descent "into the quagmire of conflict of interest," causing architects to be cast as adversaries of their clients, who will then "turn to others for objective and unblemished advice."

Cooper said that his greatest fear, however, was the divisiveness of the issue. If an answer to the problem exists, he said, it can only be found through controlled experimentation. Members, he said, should "join together and recognize that there may be reasonable points on both sides of the issue."

Scott Ferebee, FAIA, former Institute president, spoke in opposition to the report, urging delegates to not give up "true professionalism." E. William Marshall, FAIA, also a former president, called for AIA to be united in its approach, regardless of the outcome.

Before the vote was called, the California council/AIA withdrew a proposal which called for a change in the ethical code to permit members to perform services "where compensation is derived from the building process." George Bis-

continued on page 12

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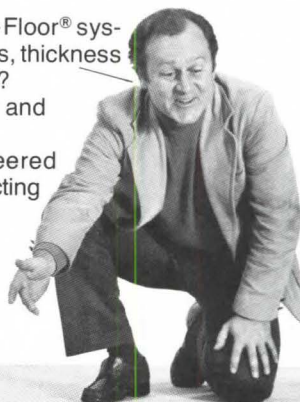
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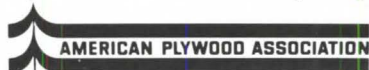
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Going On from page 8

sell, FAIA, of Newport Beach, Calif., said that the proposal had been submitted before the task force report was seen. Thus, convention delegates voted on only two issues: to keep the status quo or to accept the task force report.

The new ethical code which was approved calls, among other things, for the owner to receive written notice "of the existence of the member's conflict of interest," and that the owner have for review during the design/construction process the terms of construction subcontracts and other data. Also, the owner "shall be fully informed of the cost and other consequences of any proposed change." Further, the "professional authority and responsibility of the design architect" shall be protected.

In the discussion on advertising, Botsai told the delegates there were three choices: the prohibition only of advertising that is deceptive and misleading; a "moderate liberalization" of the ethical standards, or no change in the code of ethics. A vote for the third choice, he said, would "guarantee lawsuits" and conflicts with the Department of Justice.

Speaking in favor of liberalization of the ethical standards on advertising, Thomas H. Teasdale, AIA, a board member, said that "nobody has beat the Justice Department on this issue." Unless the delegates acted, he said, it might end up with the Justice Department writing AIA's ethical rules. Speaking in opposition of this view, J. L. Clement, AIA, of Dallas, said that a change "would be like wagging our tails for the Justice Department." He said that this is a question of principle and one worth fighting for to the end.

The liberalized change which carried permits AIA members to buy "dignified advertisements" only in the print media. The advertising firm may indicate its name, address, telephone number, staff, description of fields of practice in which qualified and availability and costs of basic services. Prohibited are testimonials, photographs or comparative references to other architects.

Both the design/build and advertising changes in the rules of professional conduct go into effect on July 1, 1978.

Aside from the ethics changes, the resolutions causing most debate concerned continuing education and recertification. The convention passed a resolution which states that "AIA does not advocate adoption of license renewal or maintenance legislation by the states." It says that in those states actively considering or establishing a license renewal requirement that it is AIA's belief that such requirement "should be based upon broad professional development principles."

Except for the matter of design/build, passions ran highest over debate on

whether continuing education as a condition for AIA membership should continue to be studied. President Botsai twice relinquished the chair to First Vice President Ehrman B. Mitchell Jr., FAIA, and the debates and sundry proposed amendments and discussions of language caused frequent conferences regarding parliamentary procedures.

Botsai, who left the chair because of "prejudice," spoke from the floor as a delegate at large. The resolution under consideration, submitted by the Grand Valley chapter, resolved that "AIA shall not make continuing education a mandatory requirement for membership" in the Institute.

Botsai, who viewed the resolution as a "foreclosure" on a study of whether continuing education should be a requirement for AIA membership, called this "one of the most important resolutions of this decade." To foreclose further study, he said, "is to say that we are so perfect that we cannot tolerate improvement of our



standards of professional development." He called for AIA members "to stand up and say we wish to lead."

Those in favor of the resolution said that architects are educated every day on the job. "We are free citizens," said one delegate, "and we do not want AIA to take away this freedom" by the imposition of mandatory continuing education. Scott Ferebee predicted that continuing education as a requirement for membership would reduce the membership by half.

Burtch Beall Jr., FAIA, chairman of the continuing education committee, reminded the delegates that a vote in favor of the resolution would stop an orderly process. He asked for continued development of proposed standards, saying that AIA must continue to pursue a standard of excellence and aim toward a professional society which "goes beyond licensing."

The resolution was defeated by a standing vote of the delegates, after which Botsai said that AIA's policy is to continue to study the matter of professional development as a possible requisite for membership and that it must be brought back again for vote in some future convention.

An amendment to a resolution regarding convention site selection also led to another spate of heated debate. The amendment, submitted by the California council and endorsed by the New England region, asks that criteria for the selection of future convention sites include the criterion that conventions "shall only be held in states that have ratified the Equal Rights Amendment." This would take effect in 1980 and would no longer apply after passage or defeat of the ERA. Beverly A. Willis, AIA, of San Francisco spoke for the amendment, asking the delegates to vote in its favor "for the sake of human justice and dignity."

Those in favor said that it was time for AIA to stand for equal justice; those opposed said the amendment was unfair to those who live in states which have already refused to pass the ERA, and that they should not be penalized by what some consider to be an "illegal boycott." The standing vote was so close that the chairman called for a written vote. The amendment won by a vote of 1,157.90 to 774.85. The resolution in toto calls for the establishment of a task force "to prepare selection criteria, selection process and convention objectives for action by the board no later than the 1978 annual meeting." According to the amendment, one criterion to be considered is whether the state in which the convention is to be held has ratified the ERA.

In other convention business, Charles E. Schwing, FAIA, of Baton Rouge, La., was elected first vice president to succeed Ehrman Mitchell as president in 1980. Elected to vice presidency were Robert C. Broshar, AIA; James M. Harris, AIA, and R. Randall Vosbeck, FAIA. Robert M. Lawrence was re-elected to a two-year term as secretary. Joseph F. Thomas, FAIA, will continue as treasurer. The newly elected officers will assume their responsibilities in January 1979.

1748 Roman Map Redrawn In Sections by Architects

Twelve internationally known architects, including four from this country, were asked by the Italian Ministry of Transportation to participate in an exhibition that opened in Rome's Markets of Trajan in May. The four American architects are Romaldo Giurgola, FAIA, New York City; Michael Graves, AIA, Princeton, N.J.; Colin Rowe, Ithaca, N.Y., and Robert Venturi, FAIA, Philadelphia.

The exhibition, entitled "Rome Interrupted," features a 1748 map of Rome by Giovanni Battista Nolli. The map was divided into 12 rectangular segments to facilitate the printing of the original plates. Each participating architect has

continued on page 16



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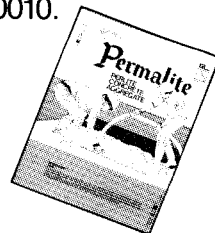
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Going On from page 12

produced a scheme for one of the 12 sectors, using the Nolli map as a base for "interventions"—additions and/or subtractions in the design of the assigned sector. The aim of the exhibition is to make contemporary urban assumptions from the Nolli plan.

Each architect was allowed to specify the activities considered appropriate to his assigned sector. For example, at right (top) is the Nolli plan for the Porta Maggiore sector of Rome. Below it is Michael Graves' scheme for this sector, showing a large keystone garden surrounded by housing and cultural and commercial activities that have been newly designed or reinstated from earlier Roman periods.

A collage of the 12 new proposals has been reassembled into a single map which is exhibited adjacent to the original Nolli plan. Also, there are 12 separate sections displayed, one for each architect, with descriptions of each proposed scheme. After the exhibition closes in Rome, it will travel to Paris, London and New York City.

Design Center Directors Form a National Group

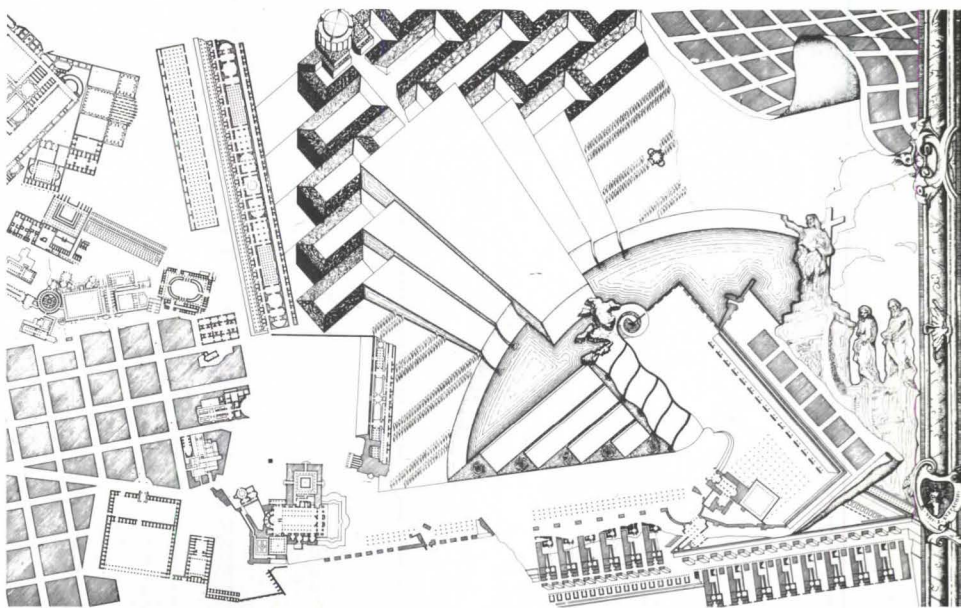
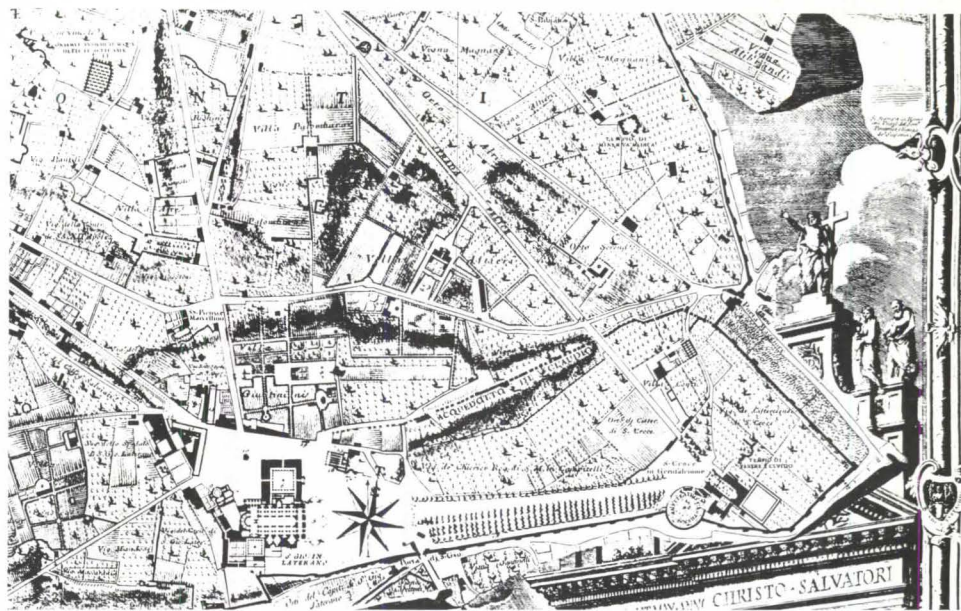
A representative group of directors of the 80 community design centers across the country met at AIA headquarters recently and established the national Community Design Centers Directors Association (CDCDA). The purpose of the new organization is "to promote the interests of the not-for-profit community-oriented architectural and planning services organizations." Toni Harris-Gaskin, executive director of the Architects' Community Design Center in Newark, was elected president.

Through its community development committee, AIA has encouraged the development of design centers, providing a forum for their representatives at its conventions for the exchange of ideas and information. In several areas, design centers are affiliated with local AIA chapters; several design center directors represent their regions on the AIA community development committee.

Design centers have the common goal of providing free or low-cost architectural and planning services to individuals and community groups who cannot afford regular fees for such services. The purpose is to improve the quality of life in low-income communities throughout the country.

The first design center was established in New York City's Harlem in 1964. Since that time, similar centers have been formed in both urban and rural areas.

The new national organization of di-



rectors is the outcome of the growth of the concept. The design center movement is viewed by many persons as a means of help in overcoming the deterioration of American cities. It is hoped that the new organization will have an impact upon the problem of the quality of life for low-income citizens everywhere in the nation.

For additional information, contact: Toni Harris-Gaskin, Executive Director, Architects' Community Design Center, 370 Orange St., Newark, N.J. 07107.

Addenda to March Issue

Architectural credits in the March issue (p. 19) for the John F. Kennedy memorial and for Thanks-Giving Square in Dallas should have included the name of John Burgee, AIA, who worked with Philip Johnson, FAIA, on the projects.

Also in the March issue (p. 82) in an article on the participatory conference on design centers held in Cincinnati, the full name of the AIA committee responsible for the event—the arts and recreation committee—was not given.

GSA Evaluates Furniture In the New HEW Building

The second of GSA's "lessons learned" monographs developed by its design action center has been published. The first was on task/ambient lighting in the Norris Cotton Federal Building in Manchester, N.H. (see April, p. 14). The second, entitled "Lessons Learned: Systems Furniture Evaluation Study," deals with research on user reaction to the furniture selected for the Department of Health, Education and Welfare's new Hubert H. Humphrey Building in Washington, D.C.

Among the recommendations made to managers of federal programs is that senior staff members who have private offices are a "powerful deterrent" to worker satisfaction with open office planning and systems furniture. It is also suggested that a sprinkler system be used when systems furniture is specified since the current fuel load requirement places

continued on page 72



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A Capital City

Suddenly it has become possible to be not only optimistic, but enthusiastic, about Washington, D.C. Not long ago it was a bitterly divided city, part slum and part clumsy classicism, proclaimed by its most prominent resident, for his own political purposes, the "crime capital of the nation," a commercial and cultural backwater and, with some notable and noble exceptions, an architectural anachronism.

Today, if we may be permitted a touch of hometown pride, it is one of the nation's most interesting cities as well as the

capital. Crime has been contained, young families are transforming some of the slums—although sometimes to the pain of the poor, it must be said, and admittedly large pockets of decay remain—there is a spurt of private investment downtown, and the cultural (and gastronomic) life of the city has been enormously enriched.

Architecturally the outlook also is generally, if not uniformly, positive. Recent major additions to the capital have gone well beyond the derivative monumentality of prewar years and the bland, stripped-down modern of the immediate postwar era. And the city's largest client, the federal establishment, is showing a welcome tendency to make its buildings generators of life instead of dead cells in the urban organism.

In this issue, we look at one such effort in the Federal Triangle, the huge red-roofed wedge to the right of the Mall in the



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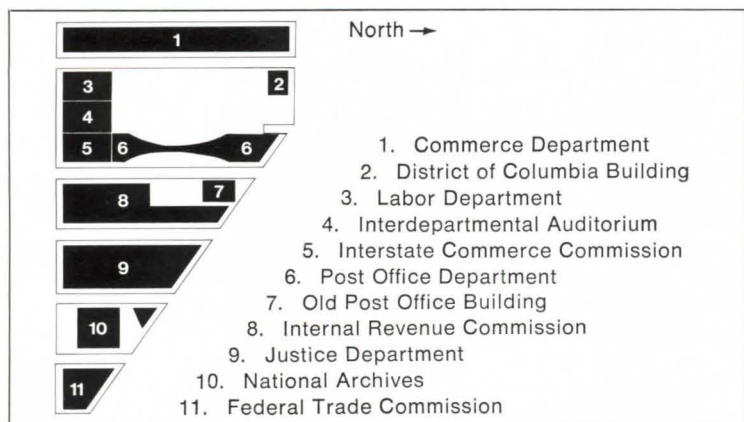


photo (whose elements are diagrammed at left), and at the role of the Smithsonian Institution and myriad others in shaping the Mall itself. (Among the contributions of the Smithsonian and the related National Gallery of Art in the photo are, along the left edge of the Mall from bottom, the Air and Space Museum, the Hirshhorn, and the original red brick towers and sandstone crenelations. Along the right edge from bottom are the new east wing building of the National Gallery, the gallery itself, the Museum of Natural History and the Museum of History and Technology). Quite some contributions.

Our final Washington view is a look at some intriguing schemes for the capital that went unrealized. In some cases it was just as well, but nearly all could be called visionary. For as a center of power and publicity, this is a city that has always encouraged the making of big plans. *D. C.*



Hidden Treasures of a Walled City

They may soon be brought to light, and the Federal Triangle to new life. By Lois Craig

Midway along the avenue connecting the White House and the U.S. Capitol is a walled city. Here the more mundane work of government is done by thousands of civil servants in gloomy warrens jerry-built into columned edifices originally intended to house in splendor the prideful headquarters of the departments of Commerce, Labor, Justice and Post Office, as well as the Interstate Commerce and Federal Trade commissions, the Internal Revenue Service and the National Archives. Although the impenetrable image of the multibuilding Federal Triangle can be ameliorated by an air view of the honeycomb of courtyards and passages, the pedestrian's experience is one of forbidding stone temples engraved with solemn quotations, landscaped with automobiles and bristling with guards.

But the pedestrian may be in for some surprises in the not-distant future. A law that portends new life for federal buildings, a design competition, an experiment in evaluating interior public spaces, new Pennsylvania Avenue development and an operating subway system may yet animate the public spaces of the wedge-shaped federal enclave that was constructed in the decade from 1928 to 1938. The results could bring to view original splendors of ceremonial spaces, outdoor rooms, New Deal artwork and Art Deco designs, which abound throughout the Triangle. Most of these treasures are now either off limits to the public or buried in the accretions of cheap and banal adaptations to changing administrative needs.

The complex had its roots in the 1902 McMillan commission plan for Washington, which envisioned turning the core of the city into a monumental, neoclassical government center. An eight-block-long land area, which came to be known as the Federal Triangle, was designated for large federal office buildings. But development awaited the advent of President Herbert Hoover and his Secretary of Treasury Andrew Mellon to marshal the arguments and the dollars that would be the cornerstones of the largest public building complex heretofore attempted in this country.

The burgeoning business of government, accomplished in scattered and often leased spaces, was due for a doctrine of centralization and its concomitant assumptions of efficiency and economy. That the megastructure of the state required an architectural megastructure seemed inarguable.

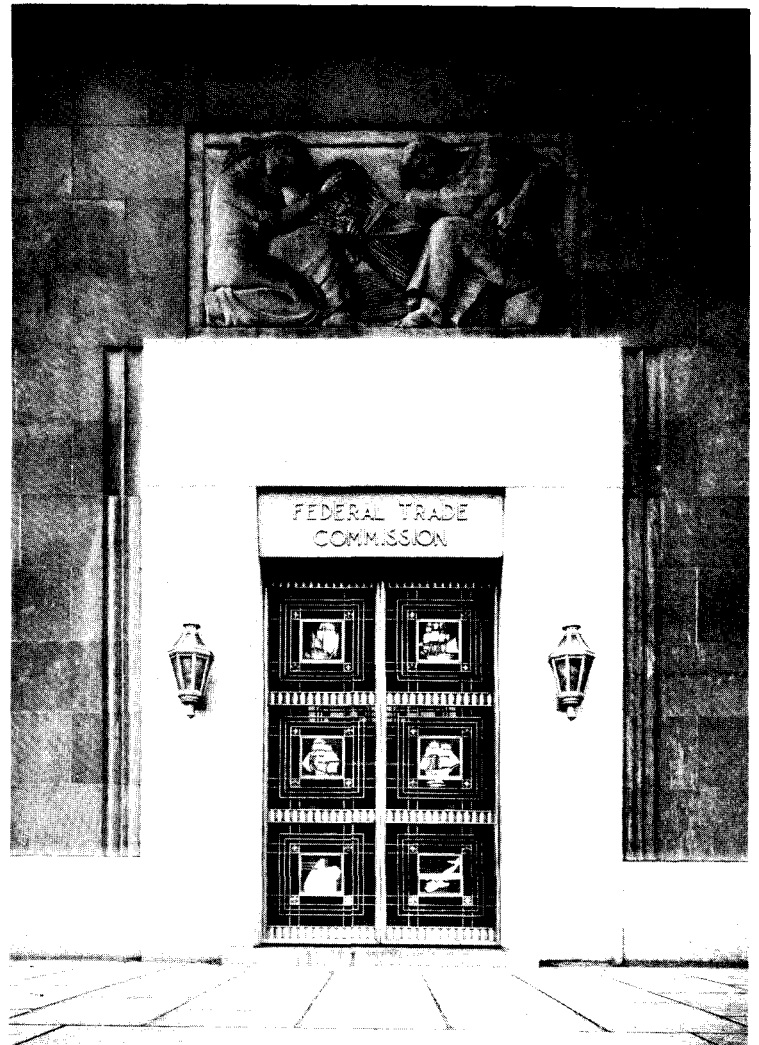
Indeed, under Mellon's style of management, plans for the Triangle proceeded in an atmosphere of remarkable harmony for a major public works project. Mellon's chief architectural adviser, Edward H. Bennett, submitted plans to the Public Buildings Commission, which in turn recommended them to Mellon. The Commission of Fine Arts expressed its long-standing support for a unified composition. Congress obliged with the money and with permission to finesse the traditional practice of using government architects.

The architectural design was then elicited from a board of

architectural consultants, selected by Mellon and promised for their public service the design commissions for individual buildings in the Triangle. Serving on the board in addition to Bennett, who presided as chairman, were Louis Ayres, Arthur Brown Jr., William Adams Delano, John Russell Pope and Milton B. Medary (on his death succeeded by his partner, Clarence C. Zantzing). Louis Simon represented the Treasury Department. When Congress voted the money, Ayres was designing the Department of Commerce; Brown was given Interstate Commerce and Labor; Delano was assigned the circular plaza and Post Office Department facing it; Simon was given the Internal Revenue, and Medary the Department of Justice. Pope later got the Archives building, and Bennett the Apex building.

Although Washingtonians were experiencing a frenzy of post-war architectural aggrandizement and landscape embellishment, the plans for the Federal Triangle were distinctly awesome. In

Across page, the Federal Triangle from the Museum of History and Technology. Below, door grilles, "The Growth of Communication and Trade," by William McVey, illustrating sailing ships, ocean freighters and airplanes on the FTC building doors.



Ms. Craig is a Boston writer and historian who was formerly senior editor of *City* magazine and director of the National Endowment for the Arts' federal architecture project. She prepared this article under an NEA design project fellowship, drawing upon research for her forthcoming book *The Federal Presence*, soon to be published by the MIT Press.



Office landscape clutters the monumental Patent Office search room of the Department of Commerce, which abuts Pennsylvania Avenue's new western plaza. The ceiling is elaborately tinted.

Lavish ornament for the business of bureaucracy.

spirit, the Beaux-Arts design echoed the palatial Louvre-Tuileries complex in Paris with its colonnades, open courts and arched passageways. But the Triangle site was a third again the size of the Parisian. It was, in fact, about half the land area of Pompeii A.D. 79.

Horizontality was an impressive feature of the Triangle—as it was of other official behemoths rising in Washington in the 1930s. Restricted in the 1910 height act intended to protect the prominence of the Capitol and the Washington Monument, Washington buildings outdid each other in spreading across the landscape. The first building to be completed in the Triangle, the Department of Commerce, covered eight acres and was then the largest office building in the world. Eight hundred persons could be accommodated at one time in its 36 elevators. In length it exceeds the U.S. Capitol as well as the British Houses of Parliament. And it is longer than the Chrysler building is tall.

Even more striking as the Triangle designs proceeded were the outdoor spaces. Commerce alone has six interior courtyards. If completed and landscaped as planned, the grand plaza between Commerce and the western face of the Post Office building and the circular plaza to the east would have been among the largest outdoor rooms in America. The composition was grandly Beaux-Arts.

After thousands of carloads of granite and limestone were hoisted into place on the Triangle, no hint remained of the thoroughly modern steel framework that carried the neoclassic curtain facades. The most extensive uniform cornice line money could buy hid the gutters and downspouts—and the recessed attic floors. Even the once untidy Tiber Creek, prominent in early views of Washington, vanished into a conduit beneath the Department of Commerce and its supporting concrete piles, which, record keepers claimed, if laid end to end would form a line 80 miles long.

Some of the largest stones ever quarried in this country were hewn from Indiana's limestone hills, roughed down to a ship-pable tonnage, trimmed again at the National Archives building site and carved into guardian statues for the largest bronze doors in the world. Roman gladiators, Indians, Greek maidens, genii and muscular workmen populated the friezes, pediment panels, high and low reliefs and free-standing statues that described each building's function. The most commonly used symbol in the Triangle was fasces, a bundle of rods tied around an ax, first used in the Roman Empire to denote authority and power.

Inscriptions on the facades provided additional lessons in his-

tory, democratic principles and the contributions of each agency's work to the progress of civilization. Little could Postmaster General Joseph Holt have imagined the scribbled words of his 1859 report carved in stone. Yet there they were, circling a facade of the monumental Post Office Department building:

"The Post Office Department, in its ceaseless labors, pervades every channel of commerce and every theatre of human enterprise, and while visiting as it does kindly, every fireside, mingles with the throbbings of almost every heart in the land.

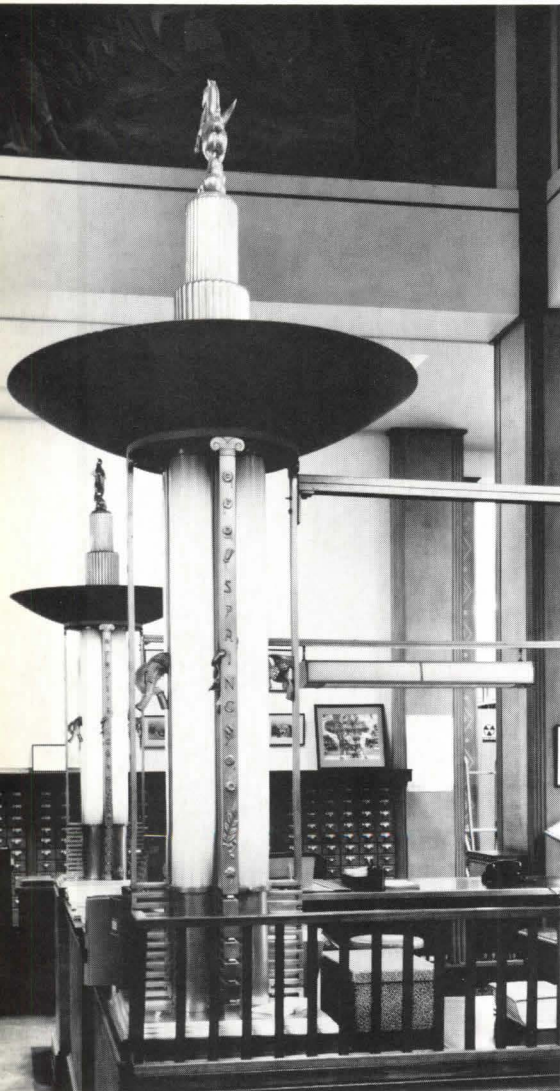
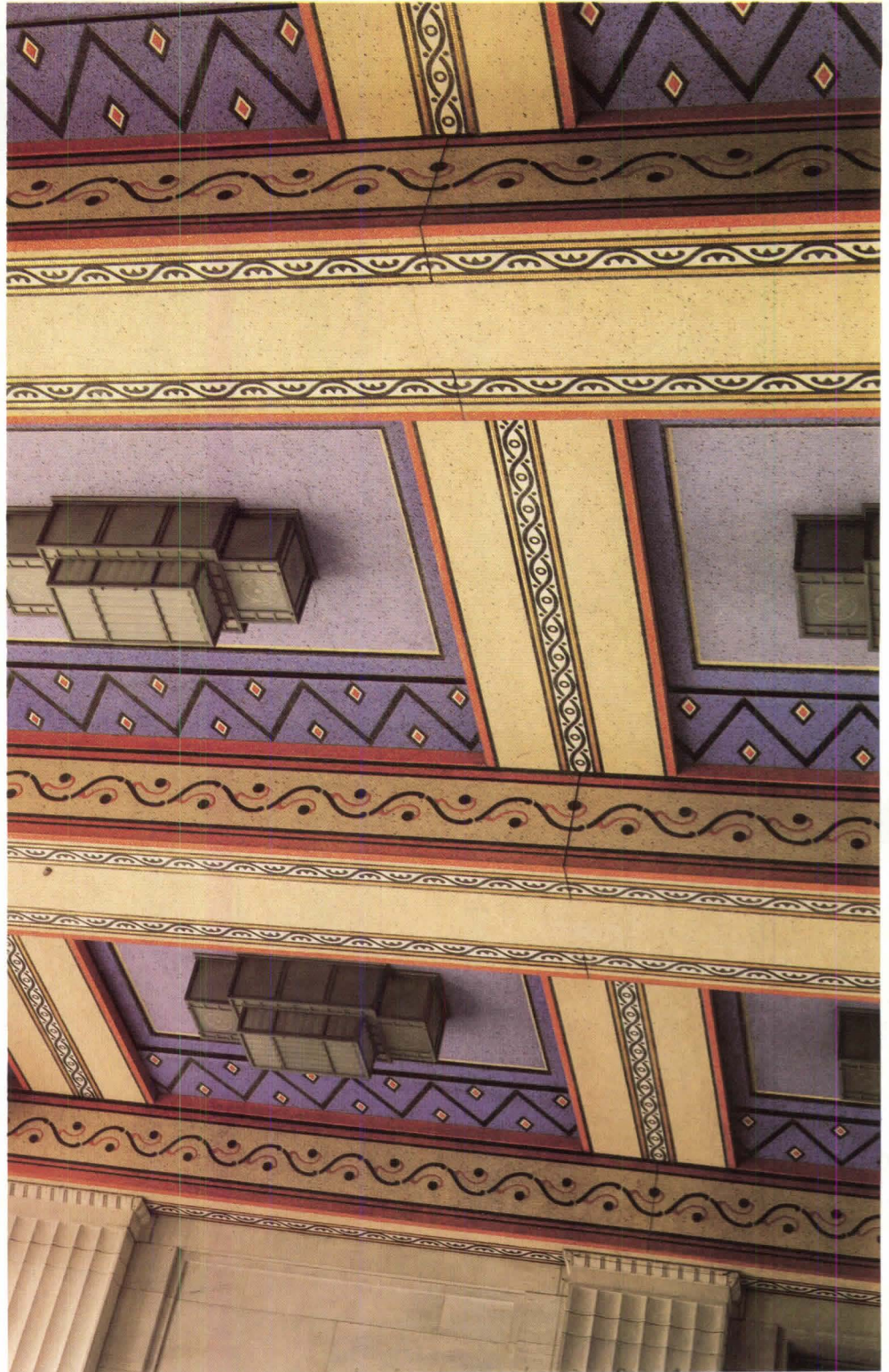
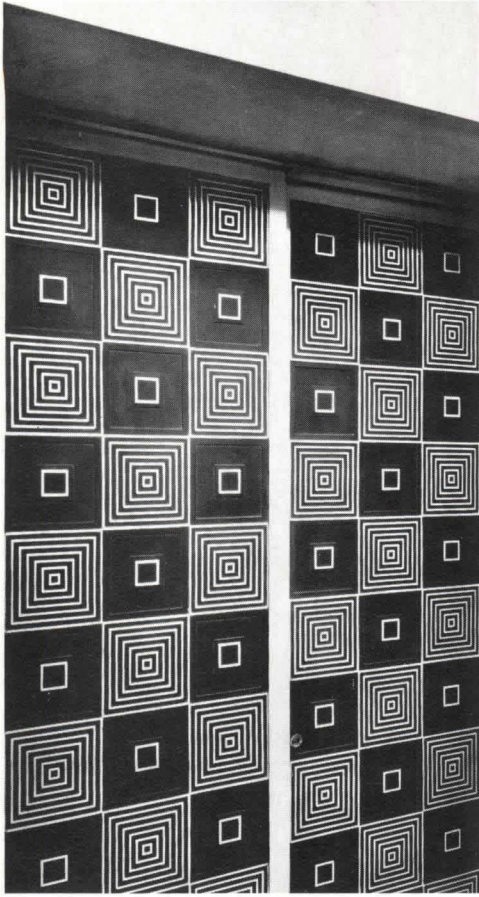
"In the amplitude of its beneficence it ministers to all climes, and creeds, and pursuits, with the same eager readiness and with equal fullness of fidelity. It is the delicate ear trump through which alike nations and families and isolate individuals whisper their joys and their sorrows, their convictions and their sympathies, to all who listen for their coming." Of such incised posturing, Horatio Greenough once wrote, "It is the translation of rhetoric into stone—a feat often fatal to the rhetoric, always fatal to the stone."

Stone was not the only lavishly ornamental material in the Triangle. A local newspaper criticized the Post Office Department's use of 3,500 bronze window frames and nickel silver for eight ground floor windows and two entrances as "almost a jeweler's job." The Department of Justice building used enough aluminum trim, according to a contemporary account, "to make not only forks and spoons but pots and pans for a whole city." One early observer marveled that "a caller at the Justice Department swings open aluminum doors some 20 feet high, boards an aluminum elevator, looks appreciately at bas-reliefs cast in aluminum, runs his hand along aluminum stair railings, looks out aluminum-framed windows and reads by the light of aluminum fixtures. In the Great Court, half the size of most city blocks, is a large aluminum fountain." Although the masonry facades hewed to their neoclassical orthodoxy, the trim, particularly that in metal, often flourished elegant Art Deco designs.

Lore has it that Secretary Mellon aspired to equal the amenities provided the civil service in London's Whitehall. The results were certainly not standard federal supply. Marble-

The text continues on page 28. On the intervening pages is a portfolio of interior spaces and decorative details. Across page, the interdepartmental auditorium, where the North Atlantic Treaty was signed in 1949. The five-story high, French Empire room features huge bronze chandeliers patterned on the fasces, a recurring symbol throughout the Triangle. The GSA has restored the auditorium and adjoining conference rooms to their original 1935 design. The auditorium seats 1,325.





Department of Justice, Art Deco-style: metal elevator doors (above left); aluminum lamps on the main desk of the library (left), and (above) a concrete fresco ceiling, by John Joseph Early, over

a portico entrance. Across page, the main lobby of the Department of Commerce, featuring a Renaissance-style ceiling coffered with rosette paneling, richly painted and gilded.



Aluminum and mahogany: ceremonial entrance (right) to the great reception room, Justice Department, featuring 18 tempera-on-canvas panels, the "Great Codifiers of the Law" by Boardman Robinson. The aluminum railings are in a wheat motif. Below, decorative ceiling panels and an aluminum light fixture in an adjoining anteroom. At bottom, the richly carved mahogany paneling in the reception room of the postmaster general's office. Across page, one of the best preserved spaces in the Department of Commerce, the law library.





Encroachments, misuse, and a beloved obstacle.

mosaic flooring, chandeliers, elaborately gilded, painted and coffered ceilings adorned monumental, multistoried lobbies. The interdepartmental auditorium, gilded with gold leaf and flanked by colonnades, soared five stories high. Both the great court and the library of the Department of Justice rose two stories. The reception room of the postmaster general's suite also was carried to two stories to gain a more imposing effect.

Besides cavernous dimensions, executive suites featured private elevators, vaulted ceilings, sumptuous paneling in butternut, oak, cherry, walnut. Spacious libraries and conference rooms were richly paneled and decorated with lineal yards of government-commissioned murals. Rare books were kept in specially designed vaults; displays were housed in bronze-framed cases. The model Benjamin Franklin Postal Station in the new departmental building was considered the finest in the country. The Department of Commerce had on its lower level reportedly the largest noncommercial aquarium east of the Mississippi and on its roof a star-gazing observatory for the Coast and Geodetic Survey. The immense patent search room contained two-to-four-story stacks for storage of more than three million patents.

Individual departmental auditoriums, cafeterias, infirmaries, mail systems—it was complete government and, no doubt, a marvel to the 17,700 federal employees who were working there by the mid-1930s. Unlike the ubiquitous cubicle spaces associated with the denizens of contemporary bureaucracy, many of the early interior areas were remarkably open, loft-like spaces with glass partitions to provide better light and to make supervision easier.

For a time, employees also could hope that the promise of the Interior courtyards might be fulfilled. When the architect for the Commerce building presented his designs to the Commission of Fine Arts, he noted that over 60 percent of the million net square feet of office space faced on the six interior courts and cautioned, therefore, that “they should be kept clear of all structures

and be planted, have fountains, etc., in fact be pleasant and quiet and cool as the parks on which the exterior walls will face. . . .”

To the planners in the late 1920s, the grand ensemble acclaimed the confidence of federal clients in the modern administrative state and in the importance of its trade and commerce. In a fitting symbolism for the time, the three-block-long Commerce building comprised the base of the triangular land parcel and the Federal Trade Commission the apex. Across the Atlantic, similar architectural statements acclaimed more ominous political aspirations.

To anyone of historical bent at the time, like civic planner Elbert Peets, the Triangle also evoked the forgotten intentions of the capital city's first plan by Pierre L'Enfant, which envisioned tree-lined vistas and dispersed federal offices. In fine Washington tradition, planners unmindful of the implications of scale or the separation of government from the life of the city argued their scheme's devotion to L'Enfant's intentions. Peets ironically suggested a statue of L'Enfant at the remaining corner of an earlier planned square. “Let the sainted hero of American civic art,” wrote Peets, “be shown facing toward the Department of Justice building, violently tearing out his hair.” What additional grief might have been displayed for the later gargantuan FBI building behind the proposed statue can only be imagined.

Despite the cavils of critics about the Romanization of Washington, the public was early caught up in the excitement of superlatives. There were good-humored jokes about size and extravagance. And when President Hoover laid the cornerstone of the Post Office building in 1932, he ascribed a new purpose to the Triangle's construction program—providing employment for the country. “It is part of the sound policy of speeding the growth of Government facilities in time of depression.” Less than two years later, a member of Franklin Roosevelt's New Deal cadre, James A. Farley, would dedicate the new building.

Signs of diminished expectations began to set in. On Jan. 18, 1934, a joint meeting of the board of architectural consultants, the fine arts commission and the National Capital Park and





Above, the old post office meets the unfinished Internal Revenue building. At left, a fountain on the edge of the so-called great plaza gives a clue to unfulfilled landscaping plans. The paved area has been crowded with cars since the 1930s.

Planning Commission approved a general plan for the Triangle—showing that landscaping for the great plaza would include a central panel “executed in grass instead of as a pool.” By 1935, the plaza was a crowded parking lot, and no amount of vision or pressure since has been able to move the cars from this bastion of personal privilege.

The last building completed in the Triangle was the so-called Apex building. For some time, debate ensued over whether there should be a building or a small park at the tip of the Triangle. By the time the argument was resolved, the nation was deep in depression. Denuded of the rich decorations of other Triangle structures, the 1937 building reflected new austerities and priorities. Still standing in the way of the Triangle’s completion as planned were the municipal building (1908) and the towered and turreted old post office (1899).

Over the next four decades, the buildings in the Triangle were tortured into submission for changing tenants and the changing apparatus of government technology. The total work force in the Triangle today is roughly the same as it was in the 1930s. But the demands on the buildings, including the demand for individual offices, have produced the appearance of overcrowding. In the early 1970s, for instance, the high, skylighted ceilings of the Commerce library were lowered and covered with acoustical tile. Much of the original library space was converted to offices. At the same time, a major renovation of the building, at 60 percent of the original construction cost, took place. The installation of central airconditioning made it necessary to lower ceilings more than three feet throughout the building. Light bulbs removed in a thoughtless interpretation of new energy standards,

heavy drapes, clashing colors, furniture castoffs, haphazard partitioning, cluttered courtyards. The original porosity of the building succumbed to the gloom of architecture disappearing underground.

If designers can count on anything, it is the demise of master plans. The long span from plan to completion and the complexities of the exercise of power in a democracy result in a lot of in-the-meantime forces messing up original renderings. And they ensure the influence of changing economic and technological forces as well as the accommodation of diverse cultural and political influences, often unschooled in the niceties of baroque or Beaux-Arts or, for that matter, modern planning.

For decades, Washington planners anticipated the demolition of the neo-Romanesque post office, which held its ground at a crucial point in the Triangle—blocking completion of the grand circle formed by the eastern arcade of the new post office building and the proposed western arcade of the Internal Revenue building. The proponents of the Triangle plan’s completion made their last stand with the Pennsylvania Avenue Plan of 1964. Its first view was of a completed Federal Triangle looking out on a grand 800x900-foot plaza. Some solid 19th century buildings that stood in the way of this ceremonial vision were marked for demolition, including the Willard Hotel and all but the vestigial tower of the old post office.

Those who could envision the correct completion of the design of the Federal Triangle and the potential urbanity of its great outdoor spaces had to contend with those who saw gray temples and parking lots as a blight on Pennsylvania Avenue and as a barrier between the cultural and recreational area of the Mall on the south and the commercial city on the north. The entire Triangle plan was damned for the lack of its fulfillment. Had the grass and trees been growing where intended, arguments for completion might have fared quite differently.

Other in-the-meantime forces intervened. Lack of funds delayed implementation of the 1964 Pennsylvania Avenue plan. A large hunk of inaccessible concrete for the FBI headquarters claimed a piece of the avenue’s real estate. Preservationist and anti-big building sentiments were rising across the country and forcing an accommodation with existing buildings. This and another essentially romantic trend—the rediscovery of “complexity and contradiction” in architecture—served, at least temporarily, to halt the acceleration of change and chance, which has swamped the art of civic design in our time.

Successive plans for the avenue reflected these new attitudes. In 1976, the plan approved by Congress bore faint resemblance to the sweeping imperial right of way of 1964. Old buildings would be adapted to new uses; some housing would be mixed with commercial development. The old post office was marked for refurbishment and reuse as the future home of government art agencies. Potential for new life in the area was further increased in 1976 with Congressional passage of the Public Buildings Cooperative Use Act. The act allows mixed cultural and commercial activities on the pedestrian levels of federal buildings. (Incorporated in the old post office will be 36,000 square feet of commercial use.)

Although the fine arts commission has been the historic stalwart for completion of the original Triangle plan, a competition-winning design for the old post office received commission approval early this year. The commission, however, withheld approval of public use entrances that face the truncated ends of the Internal Revenue building.

In response, the General Services Administration, which is responsible for construction and maintenance in the Triangle, initiated a three-stage design competition to resolve the treatment of the leftover courtyard space between the old post office and Internal Revenue and the misfit of architectural geometries. The winner of the competition will subsequently prepare a new master plan for the entire Triangle. The plan will address the new certainties—retention of both the old post office and the



A competition and a challenge for urban design.

municipal building, operating subway stops in the Triangle, and the Public Building Cooperative Use Act. The once moribund corner where the old post office stands has not only come to life but has literally kicked life into its once threatening but lately disfavored neoclassical neighbors. Now, the disfavor shows signs of waning as downtown open space becomes a rare and valued commodity.

In the first round of competition, the GSA regional public advisory panel chose nine teams of designers for second-stage interviewing. From the interviews, conducted by an in-house GSA panel in May, three finalists emerged: the joint venture of Sasaki Associates, Shepley Bulfinch Richardson & Abbot and Gindele & Johnson; the joint venture of Sert, Jackson & Associates, J. W. Lindsey & Associates, Lozano, White & Associates and the SWA Group; and Harry Weese & Associates.

Each team will be paid \$40,000 for design presentations to take place this summer. Several boards and a model are required. The program allows "selective demolition of the IRS building."

New architecture is certainly a possibility, although another approach might live with the architectural misfit with grace and humor. Landscaping, art, new uses would transform the pedestrian's experience. And be less expensive than a resolution of cornice lines. And less recalcitrant to the one certainty in the future of the Triangle—change.

Energy standards and telecommunications technology, for instance, may well interact to create entirely new programs to meet federal work needs. The buildings, already thoroughly outmoded for the hardware associated with carrying on the business of bureaucracy, invite an emphasis on what fits in rather than on what can be fitted into.

Ultimately, the plethora of use demands in the center city offer a range of more compatible choices. District planners have suggested a public center for cultural, educational and conference needs, for exhibits describing the work of government. Housing and prime office space would be welcome additions to

Above, the uncompleted arcade of the 'new' post office building, by Delano & Aldrich. This arc forms the eastern half of the uncompleted circular plaza. Across page, the aborted arcade of Internal Revenue, where it abuts the old post office building.

downtown renewal. To be seriously considered, these options would have to survive the capital city planning battleground, presided over by agencies, commissions, committees and boards.

The urban design opportunity is enormous. Not only the exterior spaces but also, by virtue of the Public Buildings Cooperative Use Act, the interior ground floor spaces can be interwoven into a great scheme of public activities connected with the new life of the Mall and of Pennsylvania Avenue.

A model interior design process for public spaces in the Triangle was recently developed for the Commerce Department by the National Endowment for the Arts' federal design improvement program. At the invitation of Commerce officials, a panel of public and private designers evaluated public sites in the departmental building and proposed a three-stage restoration of the building to its original integrity.

All renovation work was halted pending the review of the panel's report, which in sum, recommended: Throw out the accumulated junk, put back and clean up the original materials and ornamentation, imaginatively light the spaces, drastically improve the housekeeping. The space, said one panelist, is the message. The panel also recommended finding a permanent public use for the great patent room opening onto the new western plaza of Pennsylvania Avenue. (Three hundred workers now making ad hoc use of the hall, once the patent search room, are scheduled to move out this summer. Already new piecemeal claims are being staked out.) A master plan should guide the development of the building, and a curator, unconnected with political changes, should be appointed to oversee future use and adaptations.

But it is the automobile and not a surfeit of plans that could ultimately halt the impetus for change in the Triangle: Existing alongside government provided parking are now new subway stops and substantial bus service—a striking demonstration of the conflict of federal subsidy policies. Over the years, several proposals have been made for underground parking in the area. But even underground parking needs re-evaluation. Mall planners found that providing one parking space creates demand for two. Of course, they also found that trying to eliminate any spaces could provoke a court injunction.

Should the representatives of federal employees now resist the logic of car removal in the Triangle, they may count on causing discomfort where it matters. For, on Capitol Hill among the rights most jealously guarded are parking rights. If the logic obtains for relying on Washington's new transportation system to give public places back to people in the Triangle, might not Capitol Hill itself be next?

The crux of civic life, nowhere more physically comprehensible than in public places, is the abeyance of individual prerogatives for the enhancement of the social realm. "You have to pay for the public life," wrote architect Charles Moore, FAIA, a decade ago. A marked imbalance between private satisfactions and community good, particularly characteristic of contemporary society, is evident everywhere in neglect and decay—no less in public places than in public ethics or in the tax system, a codified edition of public values.

In the larger sense, the opportunities in the Triangle are neither about preservation nor the resolution of styles. They are about the public life. Many of the great historic spaces are enhanced by evidence of "misfit," of things "not right" or left over where additions are made. The original "unfinishedness" of the Triangle is now mostly seen in plan and mostly perceived by historians of planning. The significant "unfinishedness" is in what has happened to the existing complex. To recover and maintain for public benefit the beauty of courtyards, plazas, auditoriums, conference rooms, grand spaces, to bring to new freshness and importance to the minimuseums now hidden away, would add much to the enjoyment of downtown—and much to improving the image of government. The original planners of the Triangle knew what they wanted. The question is, do we? □



The Maturing of the Mall

Shaped by a variety of hands and attitudes over 200 years, it is emerging much as its early planners intended. By Benjamin Forgey

The completion of I. M. Pei's east wing building for the National Gallery of Art (page 40) is but another chapter in an astounding story that has gone on now for nearly 200 years. This is the development, more haphazard than might seem by the results, of the nation's most important public park more or less along lines first established by Maj. Charles Pierre L'Enfant's bold plan for a capital city.

The story is still unfinished. There is one major building site left and several minor ones along the Mall, that epochal stretch of greensward that reflects L'Enfant's geometry. And there are a number of important issues that have been left unresolved or half resolved.

Nonetheless, the outstanding fact is that the Mall today looks better than at any time in its long history. How this came to be is a complicated story, much of which has been told and to which I shall refer but briefly.

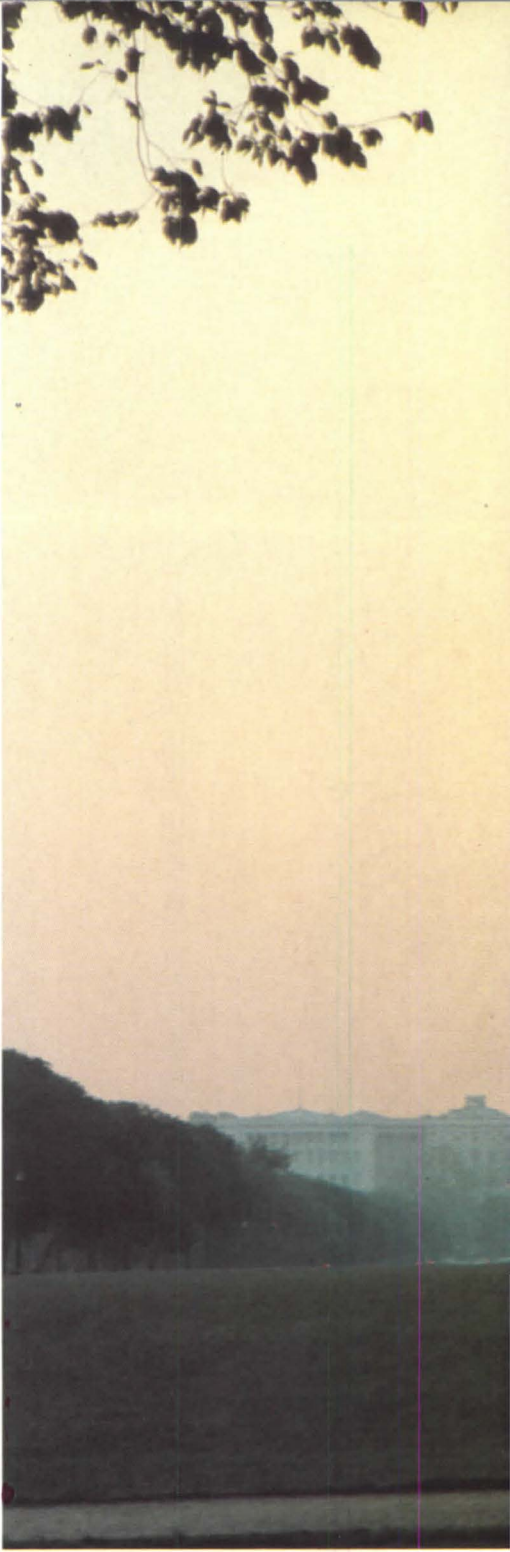
One of the paramount reasons is the audacity and power of L'Enfant's original conception, based firmly in the baroque traditions of his native France. A second major reason is that in 1901 the Senate Park Commission (the McMillan commission) took L'Enfant's geometry and established it as the basis of the Mall we know today.

It is impossible to understand anything that has happened on the Mall, good or bad, without keeping in mind the diffusion of groups and people with some power over the place. The National Park Service has primary responsibility for the greensward and the tree panels. Because all but one of the buildings that now line the Mall are museums under its domain, at least ostensibly, the Smithsonian Institution has been the primary architectural client.

The General Services Administration also gets into the act, although so far it has had scant impact on any esthetic decision. The National Gallery of Art, only in title a part of the Smithsonian, runs its own entirely independent architectural show. The Commission of Fine Arts, established in 1910 as a direct consequence of the McMillan commission plan, has played an important role in decisions affecting both the Mall and the buildings despite its advisory status. So, too, has the National Capital Planning Commission, the principal steward of the federal interest in planning and building decisions in the District. From time to time politicians also have played important roles.

Thus, when we consider the Mall—the way it is and will be—we are not discussing a single client, and certainly not a single architect, nor even a single guiding architectural sensibility. We are talking about a set of clients whose jurisdictions often overlap and whose attitudes about what has been done and should be done differ, often fundamentally. It is a situation where foolish compromise often prevails. But then, too, much that is foolish has been prevented.

The one inescapable fact with which anyone must deal in this situation, however, is that in spite of significant changes and omissions, the McMillan commission plan for the Mall was substantially carried out. With a few exceptions, the buildings have been put where the commission said they should be put. More



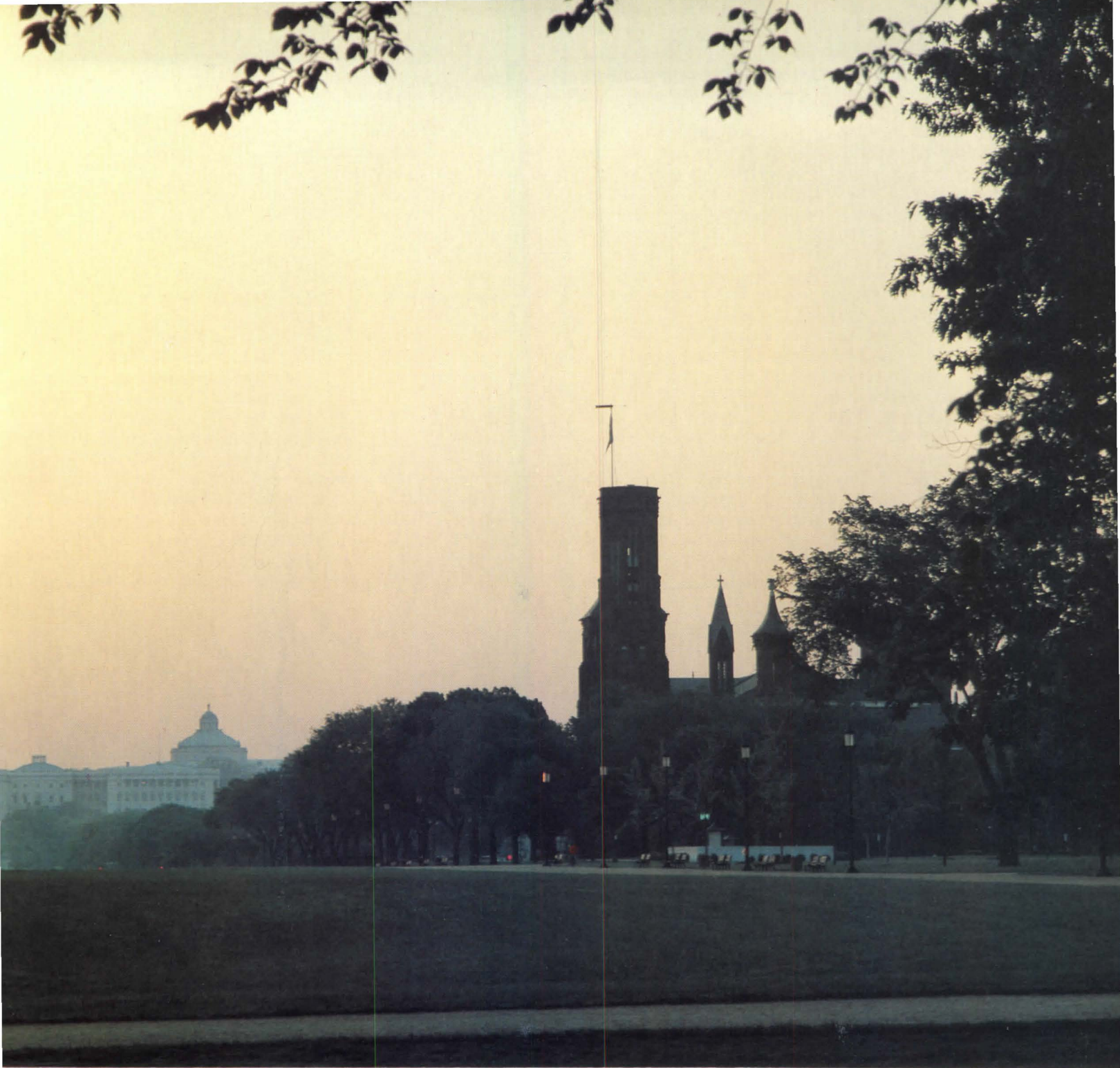
The Mall at dawn, where meet the two dominant influences on its development—the federal establishment and the Smithsonian. James Renwick's 1849 'Castle' (right) remains the Smithsonian's unsurpassed architectural achievement.

important is the great central tapis vert, with its borders of linear carriageways and its tree panels of elms four in a row spaced exactly 50 feet apart.

Recent official plans for the Mall, prepared by Skidmore, Owings & Merrill, have been self-consciously preservationist in spirit. The idea, in theory anyway, has been not to change the McMillan commission park, but to improve it, to refine it and to bring it up to date.

Disagreements over these plans, however, were strong, and blood was spilt along the way to getting anything done at all. To some extent these fights illuminated the power relationships of the contending parties, and the philosophical differences, as well. Though things have not been quite so clear cut, I think a fair summary would put the Smithsonian and its able secretary, S. Dillion Ripley, on one side of the question with the fine arts commission and its fellow keeper of the purity of the greensward, the National Capital Planning Commission, on the other. SOM and the National Park Service found themselves at different points somewhere near the middle.

Mr. Forgey: art and architectural critic for the *Washington Star*.



The outspoken Ripley has been a force to contend with on the Mall almost from the moment of his appointment to head the Smithsonian in 1963. He has insisted, publicly and emphatically, that the Mall should be a more lively, active, attractive place for people to be.

There is more than an echo of history in Ripley's colorful disparagements of the "sort of dead hand of the McMillan plan" as a "Forest Lawn by the Potomac" that results in a "subjection of the Mall to a long, stately row of elms." Ripley's actual victories in the contest with the "very conventional" people who insisted on protecting the McMillan plan (some of them to the very letter) have been few. The net result of his verbal assault and small victories, however, has been to speed along a positive change in public attitudes toward the Mall. Much more than before, people go there not just to visit the museums or admire the vista, but actually to use it as a park—to fly kites, throw Frisbees, take picnics and do whatever things people do in parks.

But if Ripley, as he says, hadn't the appetite or (willing allies) to push for a complete revision of the McMillan plan, the Smith-

sonian adamantly opposed a crucial part of the SOM plan for the Mall. This was the proposal to close the McMillan "carriage-ways" to automobile traffic and—more important to the Smithsonian museums—to automobile parking. Fortunately, the Smithsonian won only half of this battle, and when the plan was approved, the two car-clogged roadways directly adjacent to the greensward were refitted solely for the use of pedestrians. How much more beautiful an urban park the Mall is today as a result of that action! And so much for the consistency of large institutions.

The battle over parking is far from over, however. The Smithsonian recently has revived an old proposal to build a vast garage under the Mall. Superficially, from a design standpoint anyway, this proposal has the merit of being almost invisible, but it beats me to figure out what kind of planning sense it makes to roll out an expensive, if submerged, welcome mat for cars in an area that in the near future will be ringed by subway stops. In fact, there already is an operational station with egress, as they say, directly onto the Mall.

Uneven new buildings and sensitive restorations.

When one turns attention from the Mall itself to the buildings on its flanks, it's fair to say that no one in his right mind would claim an unending succession of great, or even very good, exercises in the art of architecture. For my part, I find the variety, in both style and quality, greatly preferable to the sort of "harmony" we would have today had all the buildings been styled according to the Beaux-Arts, World's Columbian Exposition prejudices of the McMillan commissioners. The Mall as it stands today is a sort of architectural museum reflecting some of the best, worst and in-between episodes in the history of American public building over the past 125 years.

The McMillan commissioners in fact were quite rude with the existing buildings on the Mall. Their drawings even presumed that Renwick's charming, fashionably eclectic, red sandstone "castle" would somehow disappear. Fortunately, Renwick's building survived, as did Cluss & Schulze's notable polychrome brick shed, completed in 1880 as "The National Museum" and known today as the Arts and Industries building. This building, not incidentally, has been handsomely restored to a period flavor on the inside by architect Hugh Newell Jacobsen, FAIA. As a client, the Smithsonian gets generally high marks for this job and for restoration of two other, off-the-Mall buildings, Renwick's fashionably French (1859) building that originally housed the Corcoran Gallery of Art, and the Greek revival old

Patent Office building in downtown Washington, now shared by the National Collection of Fine Arts and the National Portrait Gallery.

The buildings completed under the more or less direct guidance of the McMillan plan included Hornblower & Marshall's Museum of Natural History (1910), whose attractive domed rotunda was much fought over because the Capitol was thought to be the only building worthy of a dome in the capital city. The last major contribution to the Mall before World War II was John Russell Pope's temple for the Andrew Mellon's National Gallery of Art (1941), an impressive horizontal stretch of a building with acres of beautiful Tennessee marble, crisp cornices and a fine interior plan.

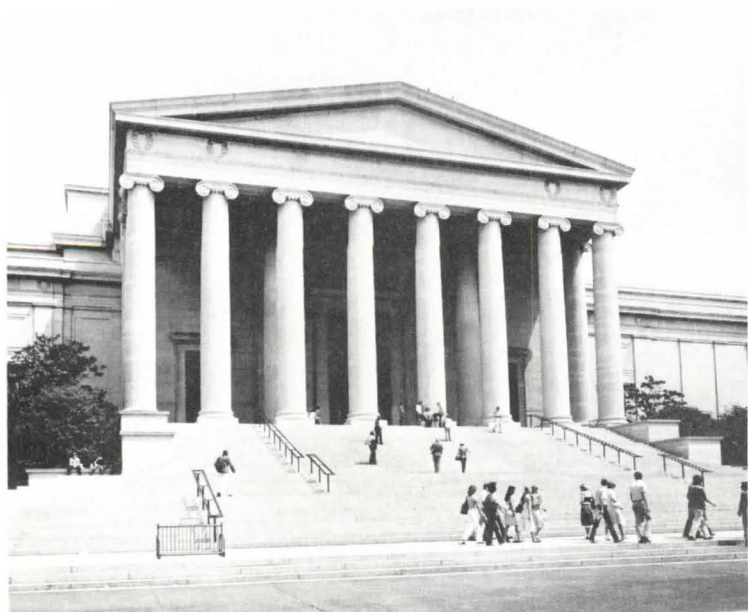
High and low points alike have been attained in the Smithsonian's postwar building program, although the highest point—Pei's new building—really is strictly a National Gallery affair. The first postwar building, the Museum of History and Technology by Walker Cain, FAIA, (completed 1964), a box on a pedestal with poorly proportioned vertical slabs standing in for a neoclassical colonnade, is a good example of an aggressively bland contemporary compromise with Washington's architectural past—unfortunately a familiar building type in postwar Washington. Inside, it's a fascinating museum and an architectural dud. The lowest point was reached, however, with the wings for the Museum of National History (Mills, Petticord, Mills)—functional space, for sure, but cheap and rude in detail.

Cluss & Schulze's 1880 'National Museum' as colorfully restored by Hugh Newell Jacobsen for a bicentennial display patterned on the 1876 Philadelphia centennial exhibition.





The Renwick (left), also restored by Jacobsen, was the first Corcoran Gallery. John Russell Pope's 1941 National Gallery of Art was the last structure to be completed on the Mall until Walker Cain's 1964 Museum of History and Technology (below).



A concrete pillbox, a procession of marble blocks.

Undeniably the most controversial among the new Mall buildings is the Joseph H. Hirshhorn Museum and Sculpture Garden (1974) designed for the Smithsonian by Gordon Bunshaft, FAIA, of Skidmore, Owings & Merrill's New York City office. Bunshaft's concrete blockhouse in the form of a hollowed circle resting on four muscular piers is a better building than it usually is credited to be, but it sure would be improved some if the wall that surrounds it (parts of which contain mechanical equipment for the building) would disappear. Then the forthright drama of its sculptural shape would be really forthright from all angles: Both the building and the sculptures that surround it would get some much-needed air.

The Hirshhorn building and sculpture garden is a particularly fascinating study in the politics and economics of architecture on the Mall, too. SOM's first proposal (not Bunshaft's) for the building was to bury it and top it with a garden terrace, an idea emphatically rejected by Hirshhorn, the donor of the art. Bunshaft's building lost a lot in necessary cost-cutting, too, including a wrapping of travertine and a restaurant that would have nicely linked the building to the sculpture garden.

That garden, originally proposed as a long, narrow, sunken

strip stretching north-south across the Mall in homage to a cross-axis at that point proposed in the McMillan plan, is a study in itself. Congressional pressure, having little to do with esthetic matters but stated, as always, in high fallutin' terms, and several other factors persuaded Bunshaft at the last minute to change the original plan in favor of locating the garden next to the building.

Even that story isn't finished, however. The existing garden, better than the long trench going the wrong way but still pretty severe for a "garden," is at the moment being redesigned.

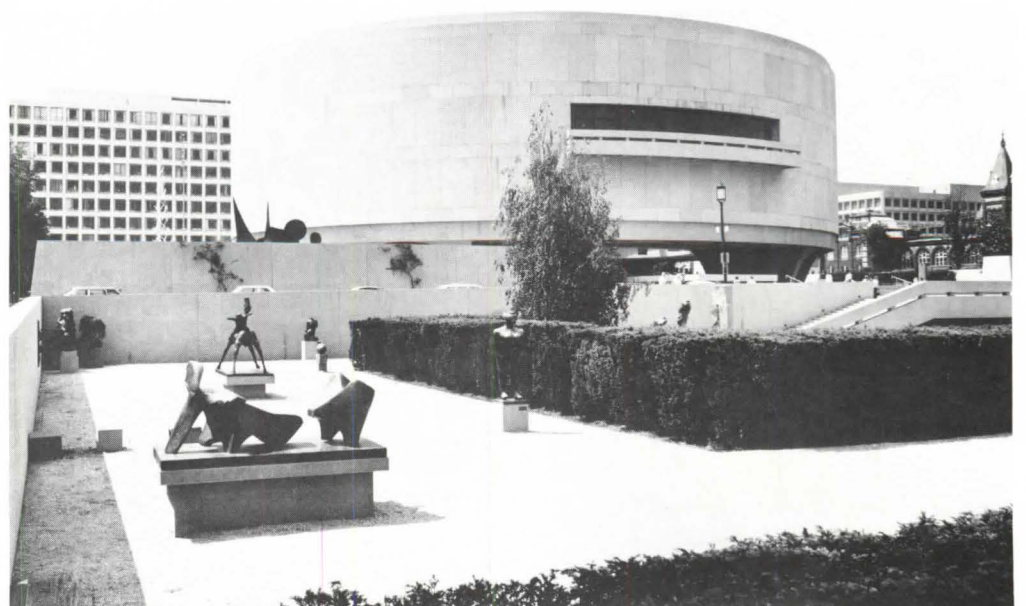
The Gyo Obata, FAIA, (Hellmuth, Obata & Kassabum) design for the new Air and Space Museum is a study of another sort, for in umpteen meetings with the fine arts commission over a period of nearly 10 years (the building for a while fell victim to the Vietnam war) the building changed radically in almost every aspect except the necessity for a series of high, hangar-like spaces inside. It emerged as a trim, huge building with two distinct, almost contradictory faces—a rather grim, if stately, marching band of marble-sheathed blocks to the south, facing Independence Avenue, and a vastly more hospitable parade of marble and soaring glass panels on the Mall side. Inside, the combination of high, white steel struts and roofs open to the sky provide a touch that is appropriately exhilarating.

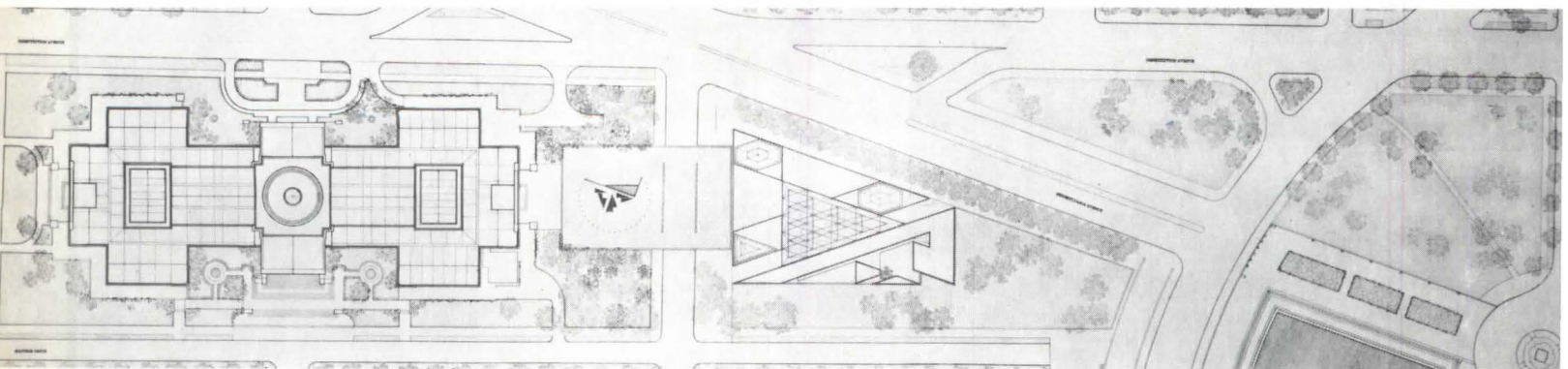
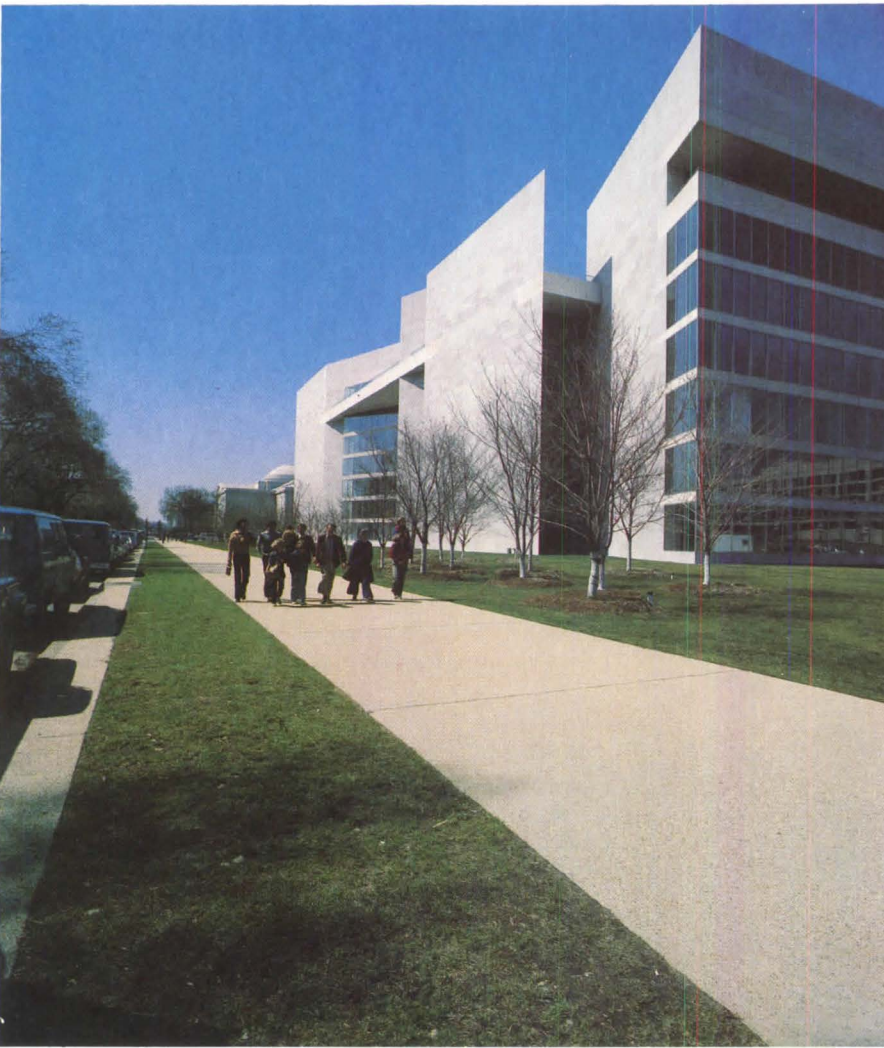
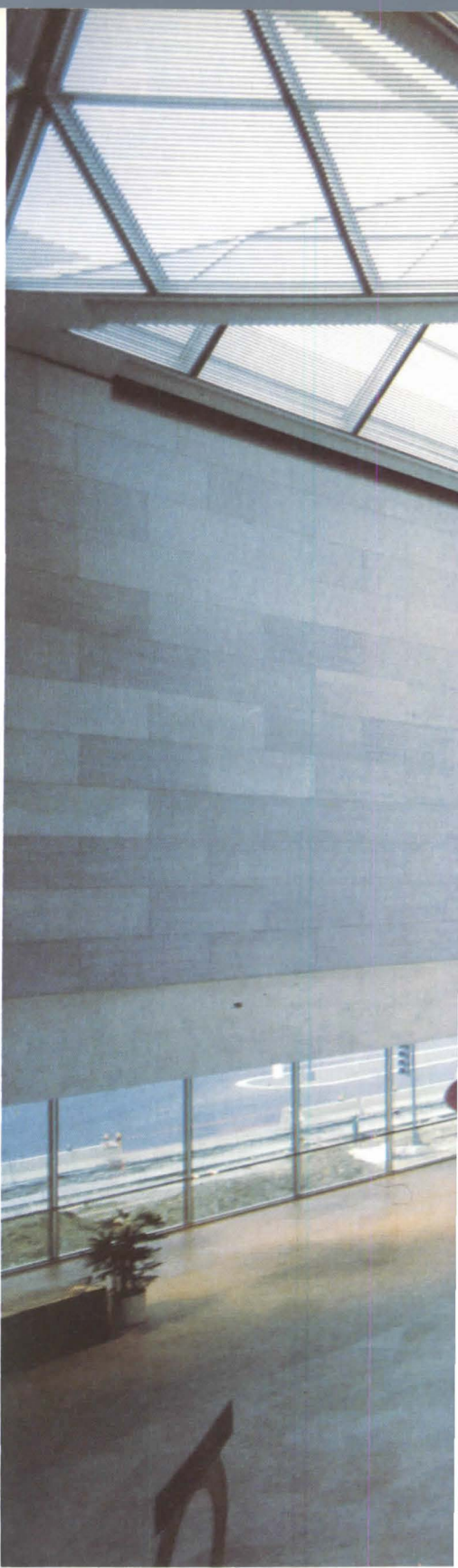
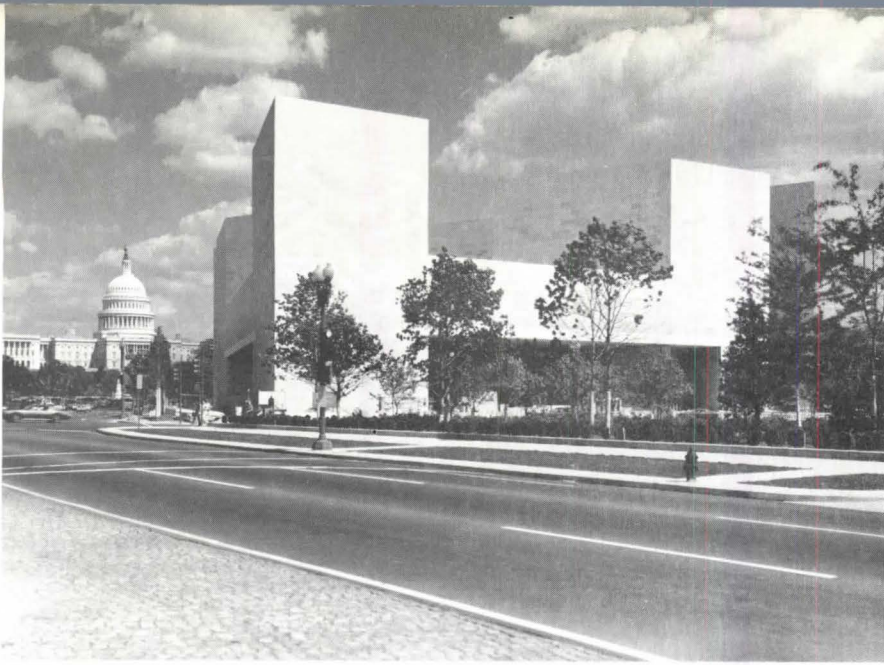


Full-height glazed panels expose the flying machines of the 1976 Air and Space Museum, by Hellmuth, Obata & Kassabum, to the Mall.



Eclecticism along the Independence Avenue side of the Mall (left) and Skidmore, Owings & Merrill's Hirshhorn Museum and Sculpture Garden (below).







A 'noble building' largely shaped by its site.

To end a piece such as this on a happy note—on two reasonably happy notes, in fact—seems improbable. But the year is 1978, and fact is sometimes stranger than fiction, even on the Mall. Or perhaps especially there.

In his east wing building for the National Gallery of Art, I.M. Pei, FAIA, did for the northeastern end of the Mall just what the Museum of History and Technology failed to do on the Mall's northwestern end, notwithstanding the fact that in most respects the challenges were greater: an oddly shaped site, painfully exposed, and a program that called for two buildings with different functions (an office and study-center building, and a gallery building on axis and in character with its demanding

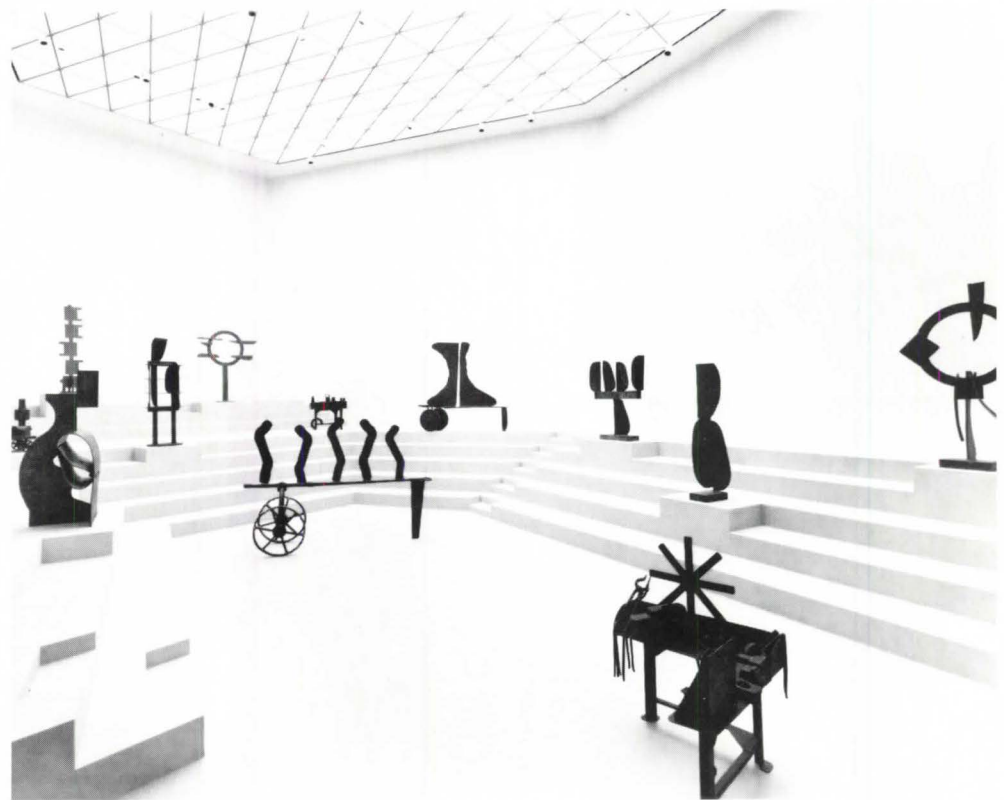
parent). Pei's noble building, saved from arrogance by the clarity and honesty of its conception and execution, proudly announces its 20th-century birthright, while paying respectful homage to the architectural past of the Mall, and of monumental Washington.

The east wing, a trapezoid sliced sharply into two triangles, is in plan, section and elevation a constant spatial, geometrical surprise. The outside-inside contrasts are fantastic, although this is not the only way Pei stood Beaux-Arts principles on their heads while paying them respect. Outside, the building presents four distinct faces, each notably different from the other, each in its way quite extraordinary.

Inside, Pei's open court (*above*), in plan a triangle locking together two triangles, covered with a vast space frame of inter-



Warm, more enclosed, spatially varied, the individual galleries provide counterpoint to the soaring, sparsely appointed central space. Right, an amphitheater-like setting for metal sculpture. Many of the galleries are similarly angular and skylit.



Knife-edge geometries and a soaring space frame.

locking tetrahedrons, is an almost bewitching contrast to the knife-edged solid geometries of the exterior: a complex, exhilarating exploration of kinetic space that nonetheless leads visitors clearly to more appropriately scaled galleries where artworks are shown. Nor does visual surprise and pleasure end with the main court or its adjoining galleries. The library in the office-study center building, for instance, is a soaring contemporary equivalent of the great Beaux-Arts reading room of the Library of Congress.

As for the Mall itself, well, I am not at all sanguine about the foresightedness or effectiveness of its various custodians. Each of them needs constant watching and prodding.

Hey there, National Park Service, why don't you do some-

thing about those disgracefully dumpy fast-food huts you have taken to littering the place with? Hey there, fine arts commission, why don't you poke and prod until this happens, instead of dreamily complaining that pushcarts would be the solution? Hey there, Smithsonian, why don't you get off it with that outrageous plan for a parking garage? And, hey there, alphabet soup, each and every letter, NPS, SI, FAC, NCPC and all the rest, get yourselves together and put those pathways in tip-top shape, and get some more shade onto them. Right away! Summer is here, already.

Well, nobody's perfect. It is time to consider that its surround of magnificent museums (even those that don't look so good), has become at last a great national treasure of a public park, greater probably than even L'Enfant, that vast dreamer, would have imagined. □



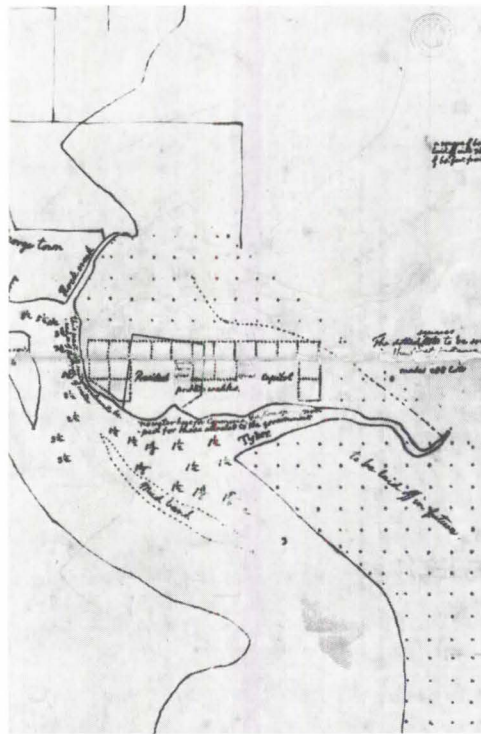
The Unbuilt Capital: Lost Plans for Washington

By Wilcomb E. Washburn and Kathryn Cousins, AIP

Washington, D.C., has traditionally been a magnet for noted architects and city planners. The possibility of planning on a heroic scale with federal support, and the national publicity any planner of Washington receives, have provided the necessary encouragement. Washington is recognized as a well planned city. It is one of the few in America where you can use the original city plan as a local street map to find your way around.

Four months after George Washington appointed Pierre L'Enfant to plan the city on the wilderness site, L'Enfant had a draft which contained the essence of the city today: the Capitol, White House, Washington Monument, Mall and the street system. The first President deserves much of the credit for getting the plan "on the ground" quickly. Speed was important since there was danger that Congress might move the capital elsewhere if construction proceeded too slowly.

While L'Enfant's plan of grand spaces is welcome today, an early diplomat called Washington "the city of magnificent distances" and Charles Dickens in the 1840s said it was more like a "city of magnificent intentions." Dickens also complained about "spacious avenues that begin in nothing and lead nowhere." In the city's centennial year, 1900, there still



A cartoon of the times (left) critical of the McMillan commission, which would have removed some trees from the Mall and replaced them with massive buildings. Above, Jefferson's plan.

was a lot to complain about, including a railroad station and tracks on the Mall. The rest of the nation was in the middle of the City Beautiful movement, but not Washington. The American Institute of Architects was so appalled that it called a national convention in 1901 to discuss the future planning and development of Washington. Bringing in leading architects of the day, the Institute initiated a dialogue that attracted the attention and support of Congress.

Senator James McMillan, chairman of

Ms. Cousins is regional manager in the office of coastal zone management, Department of Commerce, and a former member of the board of governors of the American Institute of Planners. **Mr. Washburn** is director of the office of American studies, Smithsonian Institution, and president of the Columbia Historical Society.

the Senate committee of the District of Columbia, seeing the need for advice to evaluate the plans proposed by the AIA members and to prepare other ones, introduced a Senate resolution to create a Senate parks commission. The resolution and name of the commission grossly understated its purpose, which probably helped to get it approved. McMillan, under the guidance of professionals like Charles Moore, strove to develop a comprehensive plan for central Washington as well as to develop a park scheme extending even beyond the central area. The commission's report, prepared by three of the nation's outstanding planners/architects—Daniel Burnham, Charles McKim and Frederick Law Olmsted Jr.—has since become a classic city plan. Its concepts were emulated throughout the nation.

Although L'Enfant's plan established the basic form of the city and the McMillan commission attempted to re-establish it, many plans have been offered for all or portions of the city which have never been implemented. For example, Thomas Jefferson's proposed plan for the city and his design for the White House were rejected. Some of the lost plans were good; some were bad. What follows is a sample.

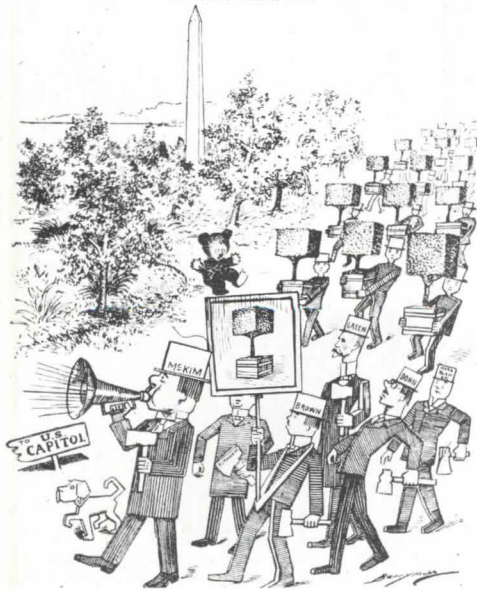
Six Decks Atop the Avenue

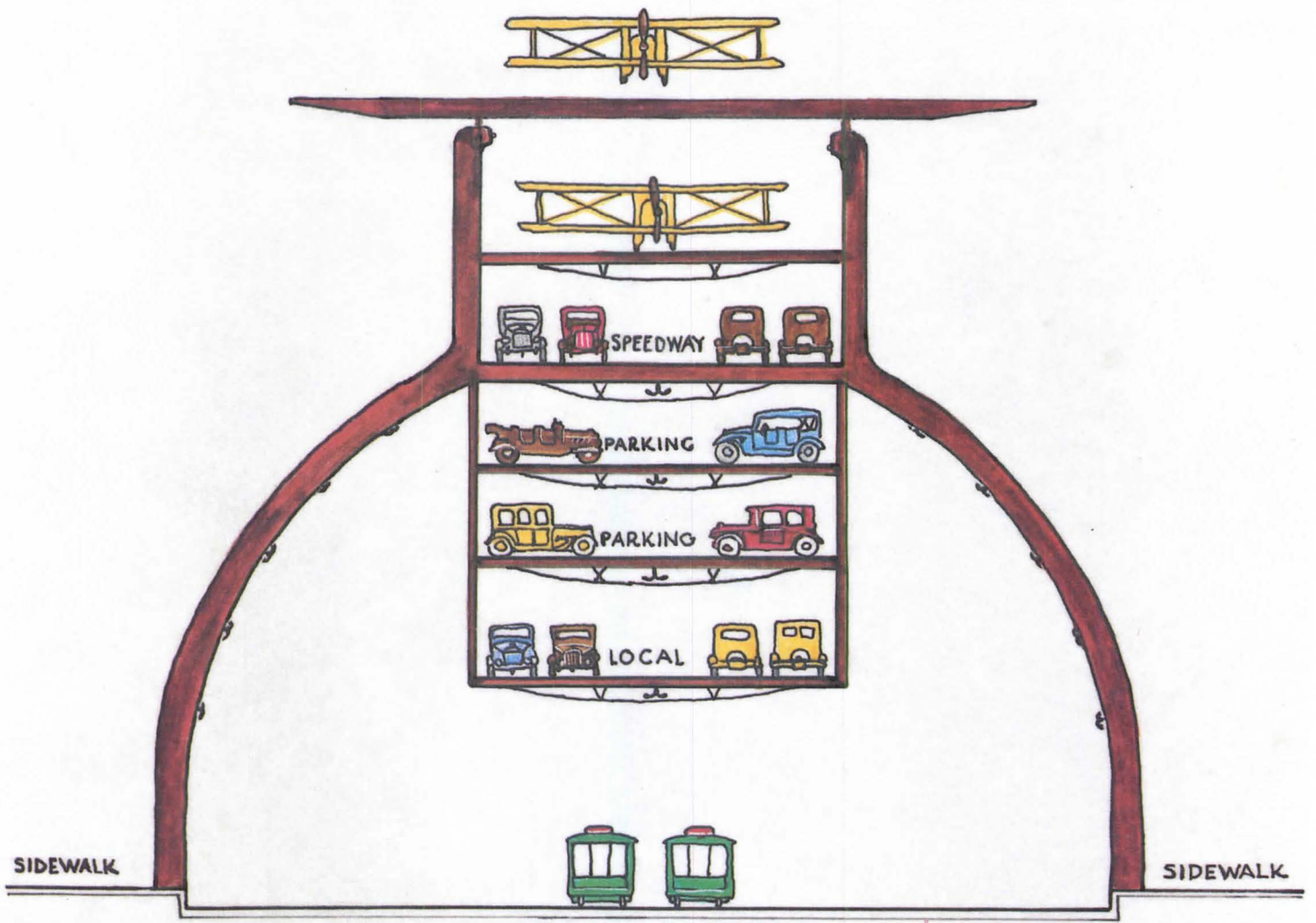
A plan for adding six decks atop Pennsylvania Avenue, including an airplane landing strip, received serious consideration in 1925. The structure would, in the opinion of its creator, "do away with congestion" and enable drivers to travel the entire length of the project, from the Capitol to Key Bridge, in five minutes. The decks were to be supported from an all-steel arch that would bridge the avenue curb to curb. The street would be used for streetcars, the first deck for local traffic, the next two levels for parking, the next one as a speedway and the top two for airplane storage and a landing strip.

Carroll Livingston Riker, a mechanical engineer, conceived and developed the plan. He was best known in Washington for having designed in 1887 a dredging pump (the most powerful to that time) which created the filled land of Potomac Park for 50 percent of the cost estimated by the Army engineers. Riker was also the originator and builder of the first warehouse refrigerators in the world. In 1925, he was 72 years old, living close to the District near Falls Church, Va., trying to gain support for his viaduct proposal.

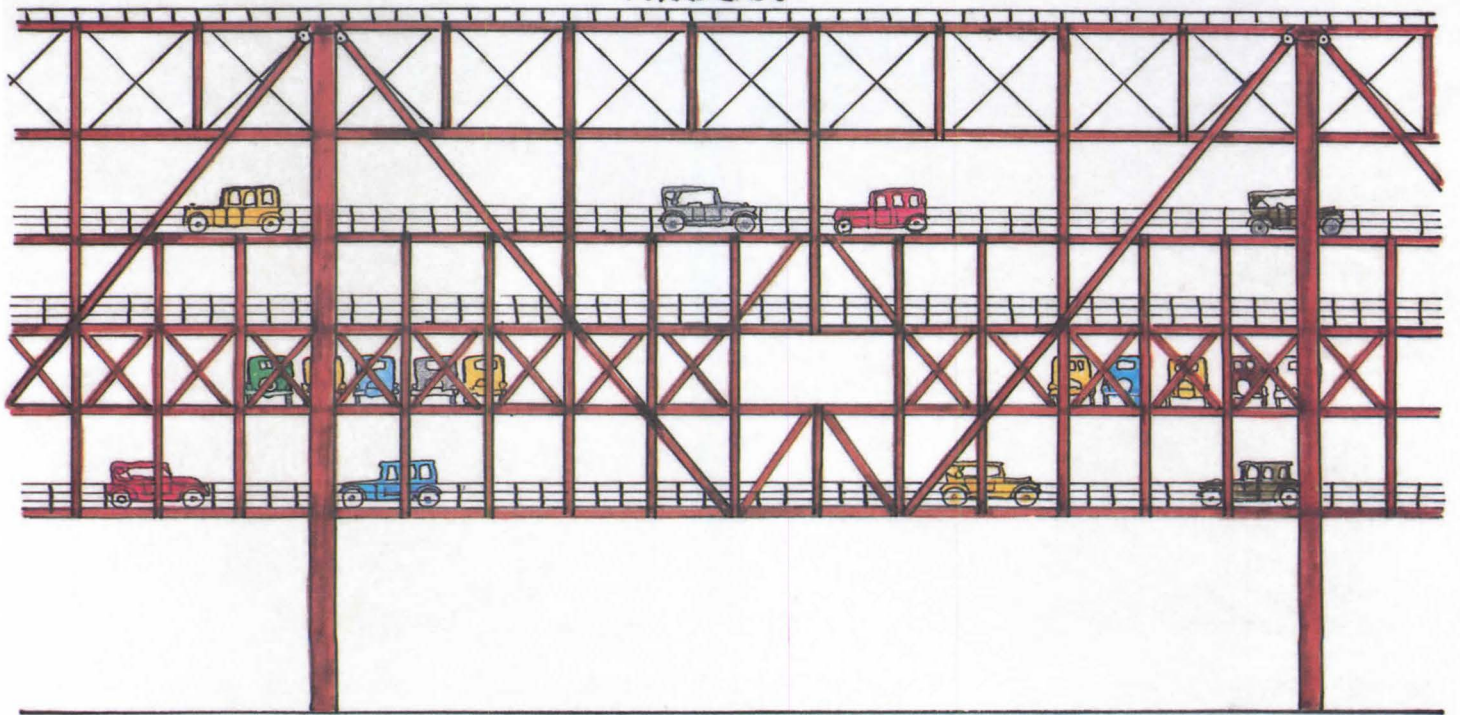
Riker estimated the cost at \$2.5 million per mile. Funds were to be raised from local businessmen. Only the first four floors would be built in the first stage. Ten miles could be completed and operating in two years. The two parking levels would house 2,500 cars per mile. The parking would cost 10 cents an hour or

GROUP OF LE NOTRE-MCKIM TREE-BUTCHERS AND NATURE-BUTCHERS.
Architect McKim, Architect Burnham, Architect Glenn Brown, Architect Green, Architect Hornblosser, Architect Dunn.





RIKER PARKING VIADUCT



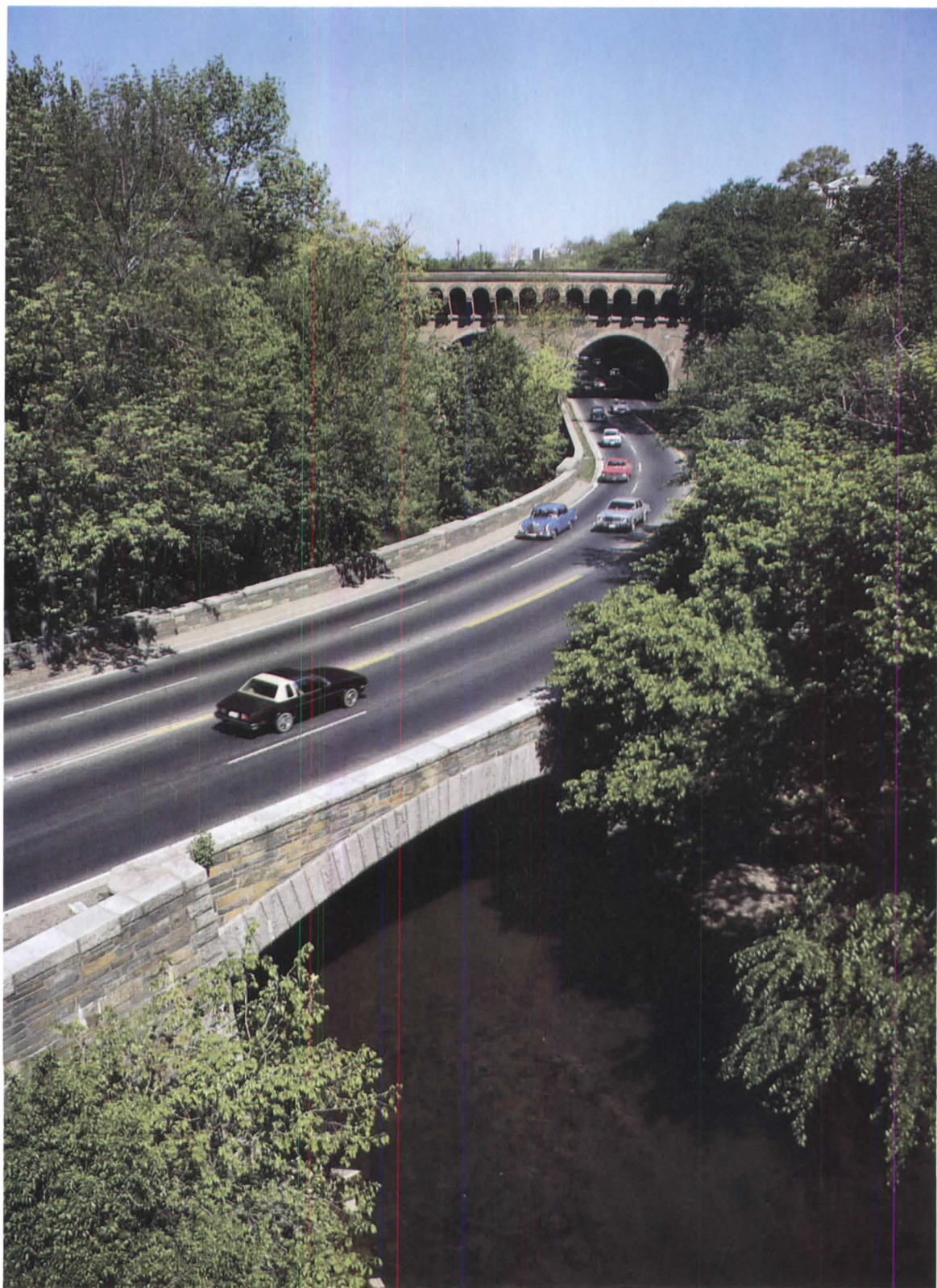
25 cents a day if purchased by the month. At these rates, 8 percent of the cost of the structure would be paid off each year. The city would be responsible for lighting, painting and policing the structure in return for having it built privately.

Gen. George W. Goethals, who oversaw construction of the Panama Canal, inspected Riker's plan and said, "The plan is feasible and I will, if arrangements can be made, take charge of construction." Each floor was to be 40 feet wide

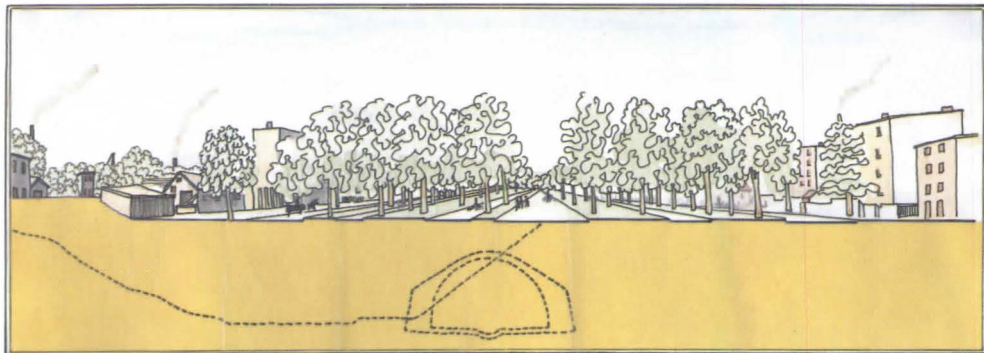
and covered with a "semielastic, noiseless, fireproof rubber composition." According to the *Washington Times*, even members of the fine arts commission "agree on the viaduct's wonderful lighting possibilities and its beautiful decorative effect."

Support and interest came from many sources. Isaac Gans, a former president of the Chamber of Commerce, tried to interest 200 businessmen in investing in the viaduct. W. W. Everett, first vice president of Woodward & Lothrop department

store, stated that he would "in every way . . . assist and subscribe to a large number of parking spaces." Representative Allard H. Gasque of South Carolina introduced a bill in the House "to authorize the appointment of a commission to determine routes, approaches, etc., for an automobile parking viaduct of four floors to be constructed in the city of Washington under the direction of General Goethals." The bill was referred to the House District committee where it died.



Rock Creek, the park and parkway today (right) and as it was at the turn of the century (bottom, opposite).



Drawing adapted by Carole Palmer



A Filled-in Rock Creek Valley to Improve 'Squalid' Georgetown

Plans to fill in Rock Creek Valley from Massachusetts Avenue to the Potomac River were prepared in 1893 by William T. Rossell, then engineer commissioner of the District of Columbia, in response to a resolution of the U.S. Senate. Rock Creek Valley was to be level with Georgetown and the western edge of Washington. The creek would be channeled beneath in a huge sewer main.

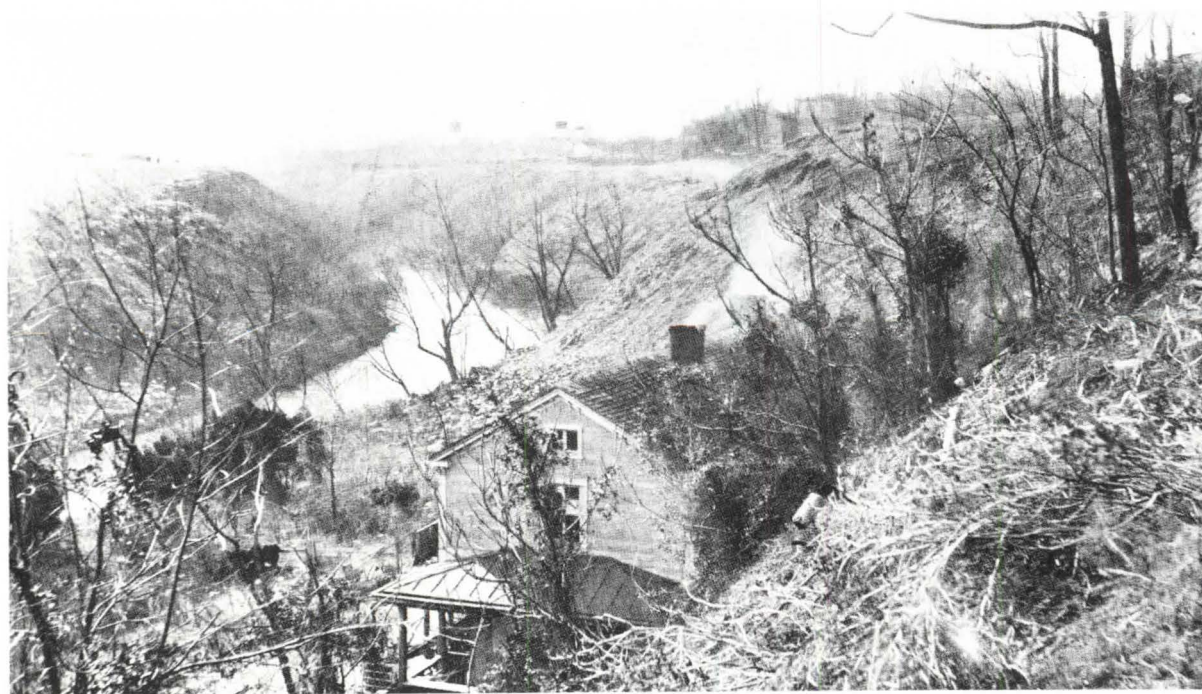
The plan was so well accepted that in 1902, when a crossing over the park along Massachusetts Avenue was built, it took the form of a culvert and fill on the assumption that the plan of 1893 would be carried out. The present Massachusetts Avenue bridge replaced that structure.

As the banks of Rock Creek (which was gradually being narrowed by the constant dumping of trash over its sides) became more and more unsightly, support grew for filling in the creek entirely. The "closed valley" plan foresaw a wide boulevard built atop the fill with house lots alongside available for sale. One of the reasons for the proposal was that the "squalid conditions" of Georgetown might

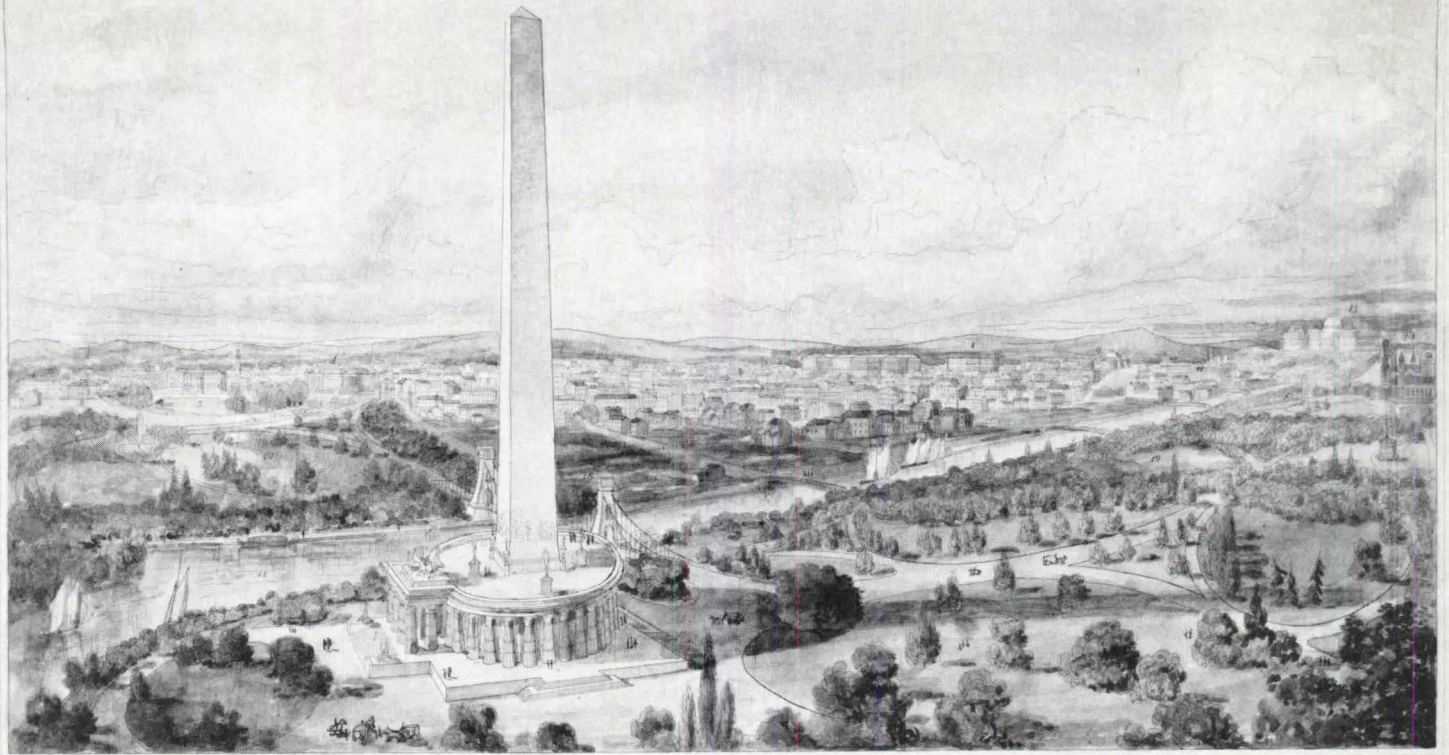
be improved with easier access to Washington proper. Many Georgetown residents believed that the value of their property would thereby be enhanced.

In 1906, the Senate park commission, which had been created in 1901 to recommend Washington's future planning needs, urged that the "closed valley" plan be scrapped and an "open valley" plan adopted. Although estimates of which plan would be more costly varied, the commission asserted that it would be cheaper and more beautiful to leave the valley open. In an effort to provide support for the "open valley" plan, some members of the National Society of Fine Arts met at the residence of Mrs. Alice P. Barney on Massachusetts Avenue, overlooking the park, and decided to suggest to the council of the society that it appoint a subcommittee to be called the "Rock Creek Valley Preservation Committee." The committee consisted of several AIA members, with Glenn Brown acting as secretary. The committee's report sought to refute the arguments of the "closed valley" proponents, and undoubtedly influenced AIA, in its annual convention the following month, to pass a resolution approving the action of the National Society of Fine Arts in advocating the retention and beautification of Rock Creek Valley and opposing the plan to fill in the valley.

In 1908, the engineer commissioner of the District of Columbia studied the different alternatives of complete or partial fills of the valley between Massachusetts Avenue and Potomac Park and concluded that the open treatment should be adopted. As a result, Washington preserved its beautiful rural park in the heart of the city and provided a connecting link to the broad areas of Rock Creek Park above Massachusetts Avenue.



A section through the proposed 'closed valley' (top) showing the sewer main for the creek. Map depicts the street system as it would have appeared after the valley was filled.



- 1 Navy Department
- 2 War do.
- 3 President's House
- 4 Treasury & State Dep't
- 5 Willard's Hotel
- 6 Irving Hotel
- 7 Patent Office
- 8 Post do.
- 9 City Hall
- 10 Brown's Hotel

WASHINGTON, D. C.

Published by Smith, Corcoran, Architects and Engineers

Ocean Bank Building 218 Fulton St.

- 11 National Hotel
- 12 R.R. Depot
- 13 Capitol
- 14 Smithsonian Inst.
- 15 National Theatre
- 16 Suspension Bridge
- 17 Entrance to Public Grounds
- 18 Canal
- 19 Public Grounds, designed by A. J. Downing

A Romantic Vision of the Mall: Curving Walks and Evergreens

In the middle of the 19th century, the Mall, or central portion of L'Enfant's plan, was still unrealized. The Washington Canal, running down the present Constitution Avenue, was little more than a sewer. The great Mall, stretching from the Capitol to the uncompleted Washington Monument, was devoid of L'Enfant's proposed 400-foot-wide avenue lined with great mansions. It was a muddy wilderness, remote from the principal life of the city, notable chiefly for James Renwick's Smithsonian Institution castle then rising in its midst.

Joseph Henry, first secretary of the Smithsonian, who himself had been called down from Princeton to "redeem" Washington's intellectual life, now joined with William W. Corcoran, Washington's leading banker and philanthropist, to convince President Millard Fillmore to call down from Newburgh, N.Y., the leading landscape architect of his day, Andrew Jackson Downing, to redeem Washing-

ton's physical appearance. Downing's plan was, in fact, approved by President Fillmore and ordered to be carried out.

Downing died in a steamboat accident in 1851 and Congress became increasingly stingy with funds to carry out the plan. As a result, the vision of Downing was realized only in part, while the overall plan was gradually abandoned, eroded or forgotten. Downing, through his voluminous writings and commissions, turned America from its preoccupation with classic dignity to a more romantic naturalism. He anticipated the park as the "lung" of increasingly polluted cities, and as an oasis of carefully cultivated natural beauty in the midst of the build-up masonry blocks of America's growing urban grids.

The "Smithsonian Pleasure Grounds"—still evident as late as 1930—best expressed his plan for curving walkways and carriageways bordered by carefully selected trees, particularly evergreens. Because of his death and Congressional opposition (to say nothing of the more concealed hostility of the commissioner of public buildings, whose authority Fill-

more had authorized him to supersede) the canal was not reclaimed to carry picturesque sailing vessels under cable-hung bridges. One can get a better impression of Downing's vision, perhaps, in New York's Central Park, constructed during and after the Civil War on a plan by Frederick Law Olmsted Sr., who acknowledged Downing as his master.

Downing's design for Washington has suffered from the attacks of later critics (if it has been noticed at all) for its refusal to accept the classical and formal forms that many think appropriate to the dignity of the national capital. Downing, however, sought to honor the democratic ideal by creating an environment that would inspire warmth rather than awe and that would invite rather than repel. Some of his ideas are re-emerging in the edges of the present Mall (re-established in its formal dignity in the 1930s). Examples are Constitution Gardens north of the Reflecting Pool, and the Smithsonian Institution Festival of Folk Life held every year on the Mall.

Moving the President's Abode Among 16th Street Embassies

By 1900, the White House was so overcrowded it was "not fit either as an office or a residence for the President of the United States" according to Senator James McMillan. The second floor of the White House contained all the offices of the growing Presidential staff and provided living quarters of the usually large Presidential families. Things were so bad, in fact, that President Grover Cleveland moved his family to a "suburban" house on Woodley Lane and commuted to the White House during his second term.

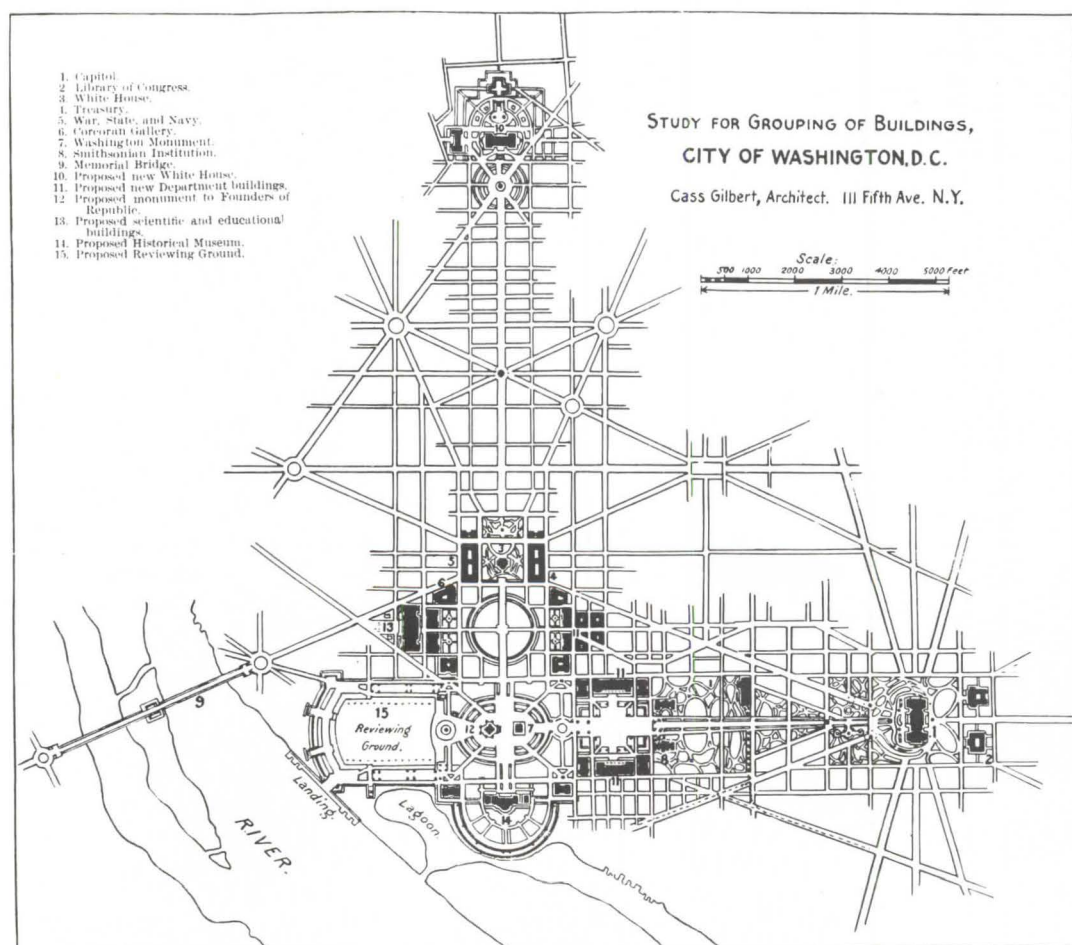
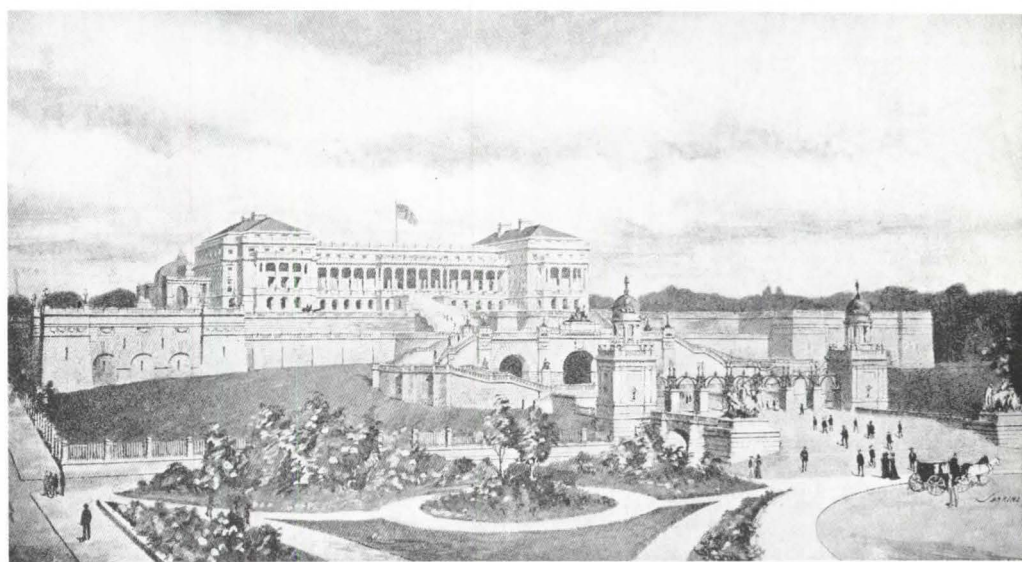
To handle the overcrowding, one proposal was to turn the White House over for offices and build a new executive mansion one mile north on 16th Street. This plan was suggested by architect Cass Gilbert at AIA's 1901 convention held to discuss the future planning and development of the city. Gilbert, one of America's outstanding architects, was later to become president of AIA and a member of the Commission of Fine Arts. In Washington, he would design the Chamber of Commerce building and the Supreme Court.

At the turn of the century, 16th Street was developing as the most fashionable residential area in the District. Embassies were locating there and many of the city's wealthy citizens were building homes. The new executive mansion would have had a better view of the city and have had a

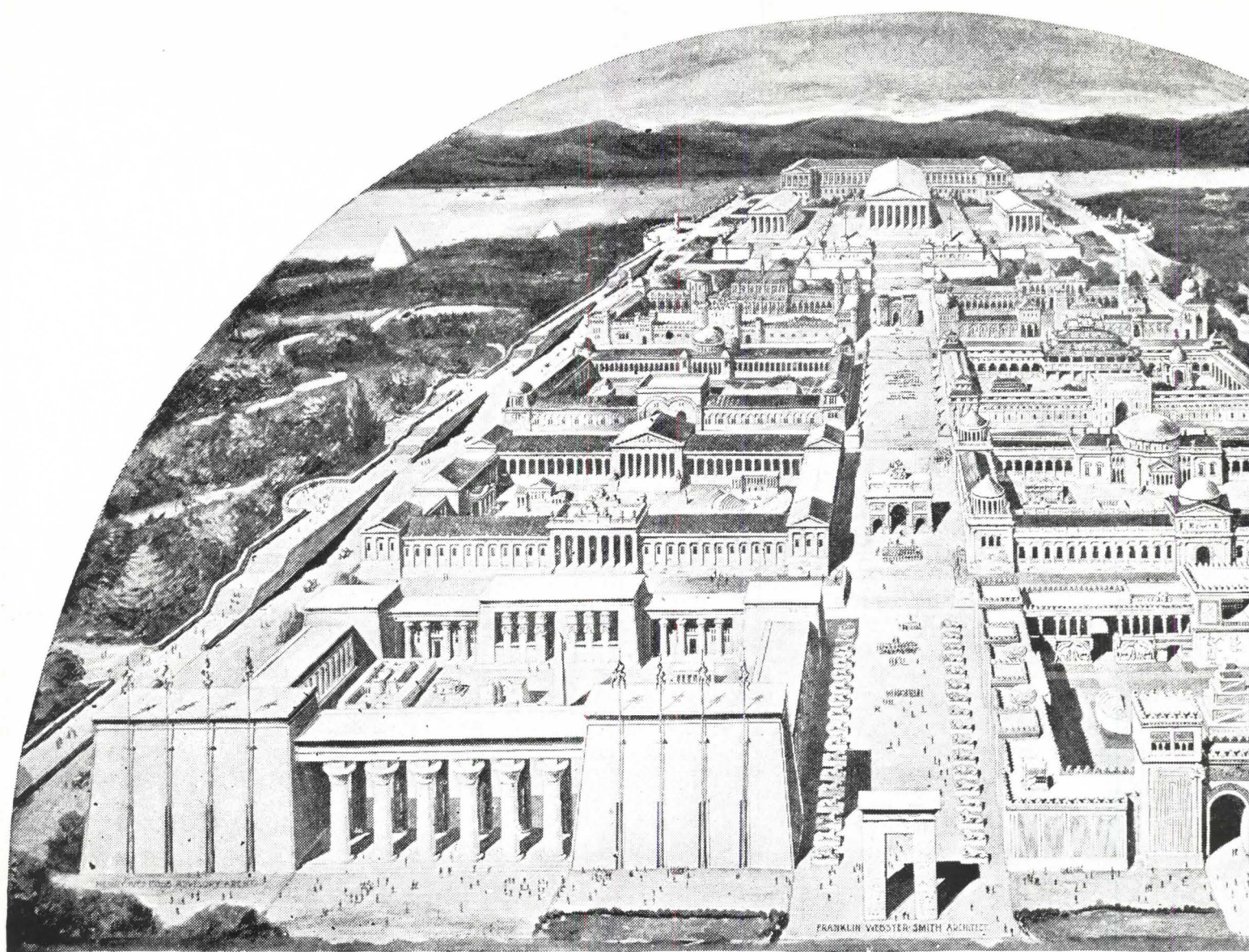
more pleasant and healthy climate because of its elevation. The plan was politely rejected by the Senate park commission because "the plan has not as yet commended itself to popular opinion."

The Senate park commission, instead, considered two other alternatives to solve the overcrowding problem. One was to add east and west wings to the White House, but it was felt they would dwarf the historic mansion and destroy its individuality. The third proposal, to move the

executive offices of the President to another location, was adopted by the commission. President Theodore Roosevelt also favored this plan, and it was quickly implemented. McKim, Mead & White was hired to remodel the mansion to serve its primary residential function. Fortunately, the Senate park commission's recommendation to place the new executive offices in the center of Lafayette Square was another lost plan of Washington.



One proposal, by Paul J. Pelz, for a new President's residence. Cass Gilbert's map shows placement some two miles up 16th Street from the White House.



PAUL J. PELZ,
HENRY IVES COBB, } Advisory Architects.

FRANKLIN WEBSTER SMITH, Architect.

An 'American Acropolis,' from White House to the Potomac

In 1900, Franklin Webster Smith, a businessman formerly of Boston, petitioned the Senate and House of Representatives for support for his design for a coordinated series of "national galleries of history and art." Smith planned to recreate at actual scale the great architectural buildings of the ancient world. The buildings would contain exhibits on the art, religion, manners and customs of the ancient nationalities.

Smith, who spent 50 years of study (including 19 journeys abroad) on the plan, sought for his "American Acropolis" a 63-acre site centered on the present

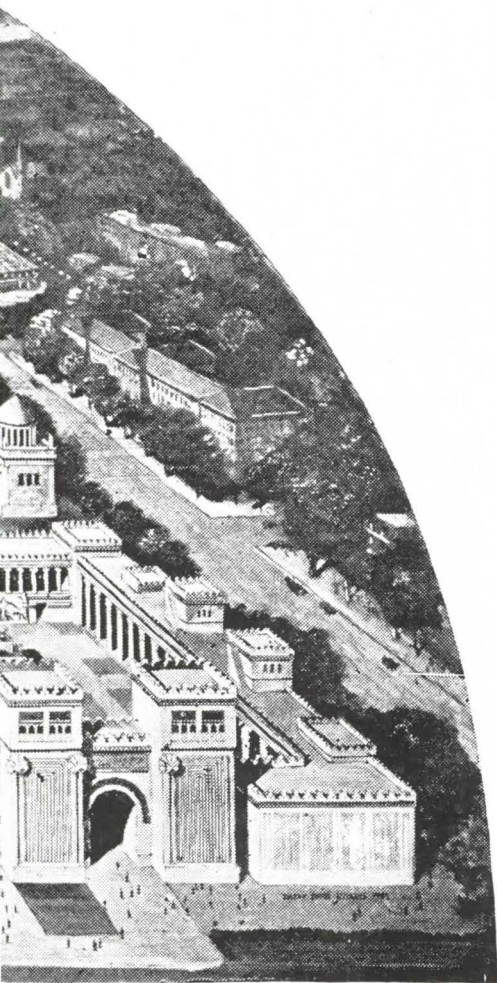
area of the State Department between the Potomac and the White House.

To provide an appropriate entrance to his Acropolis, Smith proposed condemnation of the buildings occupying the area of the Federal Triangle and the creation of several wide avenues that would lead from the Capitol grounds. In addition, Smith proposed a 200-foot-wide Centennial Avenue straight down the Mall past the Washington Monument to the area south of his Acropolis. All the proposed changes emphasized the grandeur that would be Washington's if Congress was willing to support his plan.

Smith's vision of the future Pennsylvania Avenue would be hard to recognize today. Since he believed that "Pennsyl-

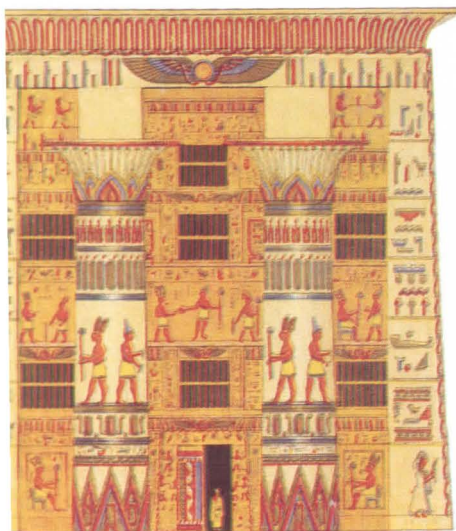
vania Avenue will ultimately be Haussmanized . . . a prompt and effective stroke of Napoleonic legislation is demanded." Smith called for the removal of all trees from Pennsylvania Avenue and from the grand avenue he proposed to run from the Capitol to his "Columbian Parthenon" on the site of old Observatory Hill. In place of trees, Smith proposed "colonnades, about 20 feet wide, at some distance from the facades of the buildings."

Although Smith liberally distributed copies of his proposal gratis to all members of Congress, and though he opened something called the Halls of the Ancients on New York Avenue as a sample of the institution, the proposal was still-born. Smith was to die a frustrated man.



BY DODGE JENKINS, Pinxit.

The plan for the national galleries of history and art, using structures replicating various famous architectural monuments of the ancient world. Below, a proposed wall decoration adapted from an Egyptian temple.



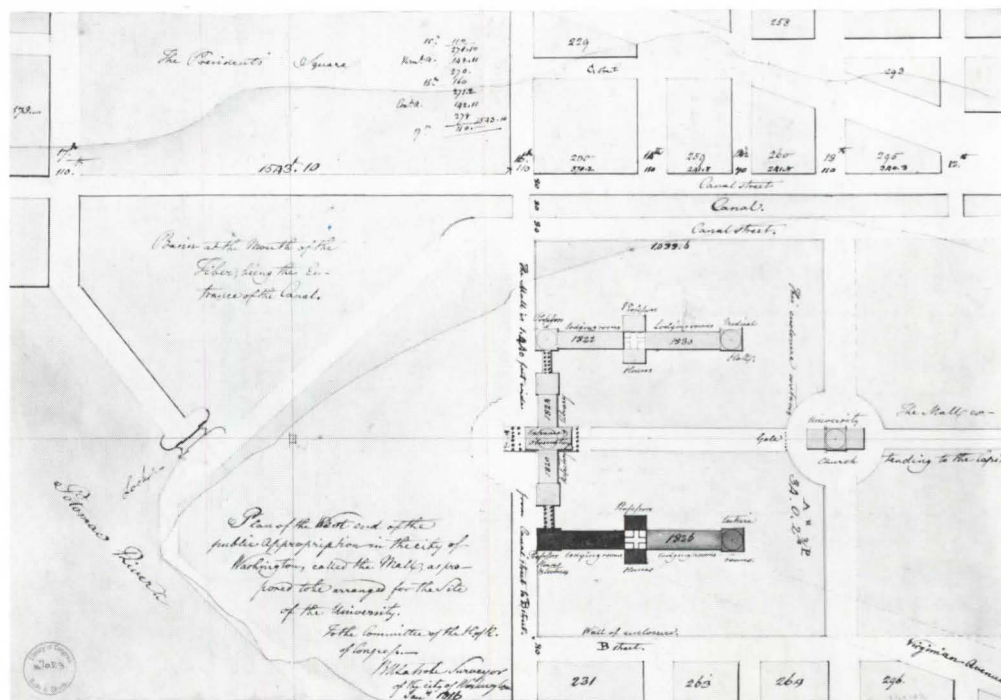
Echoes of Jefferson's Campus In a University on the Mall

In 1816, Benjamin Latrobe, surveyor of the City of Washington, presented a plan for a university in the capital city, a dream cherished by George Washington. Latrobe's plan locates the university at the west end of the Mall directly facing the Capitol and due south of the President's Mansion. That site had been reserved by L'Enfant for an equestrian statue to George Washington, a focal point in the French military engineer's grandiose plan for the new capital. No one had at that time taken definite steps to create a monument to Washington, though the issue had been debated in various Congresses. (Several decades later a private group would organize itself to create a monument to the nation's first hero.) As a result of this inaction, the site was open and Latrobe oriented the uni-

versity with an eye to its dramatic vista of Capitol Hill.

Connected wings (or "ranges"), to house professors and students, flanked an axis extending from a central library and observatory. The plan resembles closely Thomas Jefferson's scheme adopted in 1817 for the University of Virginia where the principal building (housing the university library) looks down an open vista between parallel ranges of student and faculty housing to the hills west of Charlottesville. Jefferson and Latrobe worked closely together and it is difficult to determine who was most influential in the design of Washington's proposed national university.

It was only with difficulty and by other hands that George Washington's dream of a university (if not a national university) in the nation's capital was realized with the founding of the Columbian College (later George Washington University).



Above, Latrobe's sketch for placement of university buildings on the Mall south of the President's Mansion.

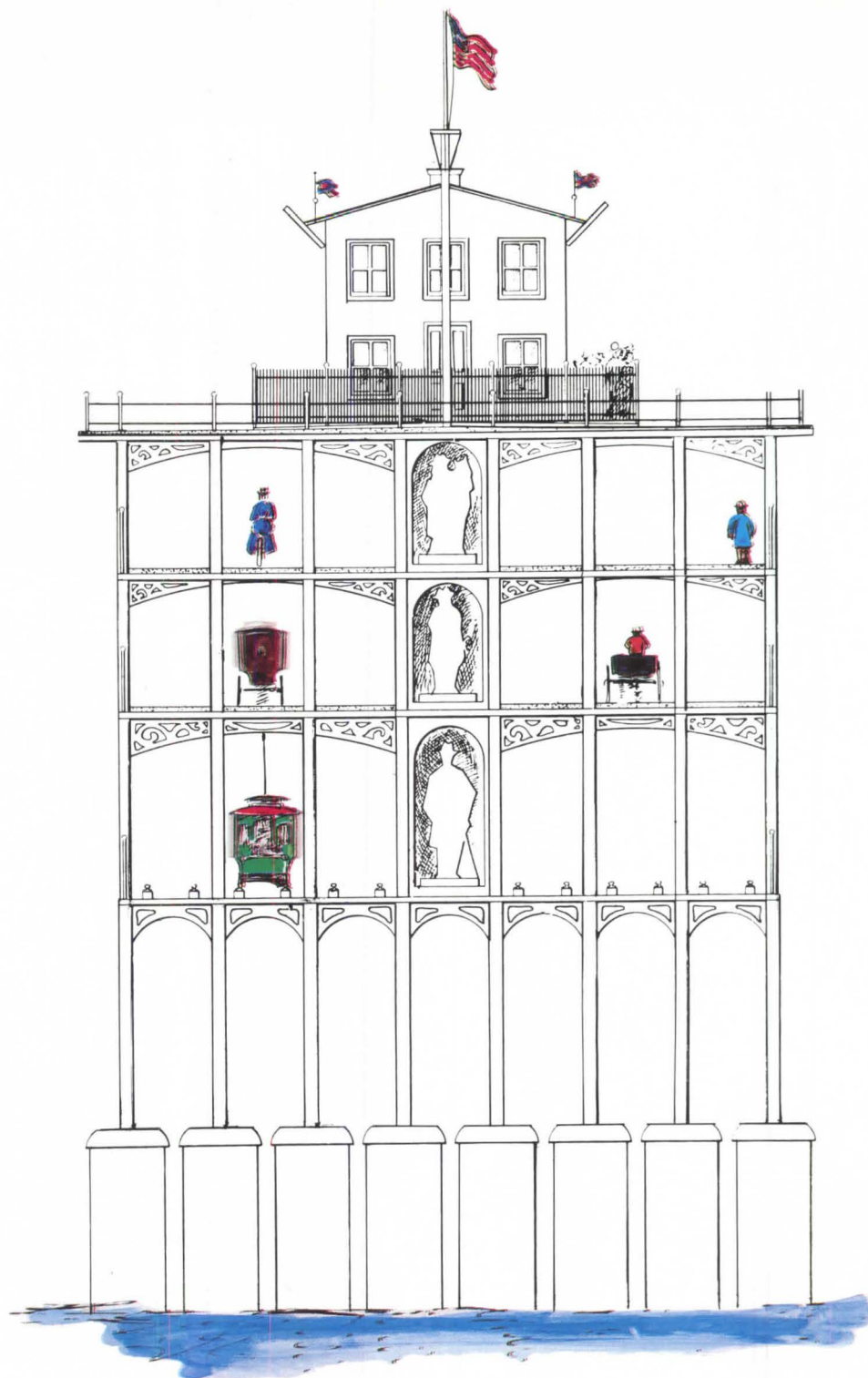
A Multilevel Memorial Bridge And a Channel 'Ponte Vecchio'

A bridge over the Potomac River "symbolical of the firmly established Union of the North and the South" was proposed as early as 1851 by Daniel Webster. But the bridge did not become a practical possibility until the Senate park commission of 1901 recommended such a bridge as the culminating link in its proposed extension of the Mall beyond Washington Monument to a proposed new memorial to Abraham Lincoln. The bridge would link the Lincoln Memorial with Arlington, Va., the home of Robert E. Lee.

One of the proposals was submitted by a Civil War veteran from Maine, J. Deering Reed, who had founded an engineering firm after the war. Reed proposed a multilevel structure of iron and steel containing hotels, dining rooms, botanical gardens and even a "first-class vaudeville theatre." The bridge would contain three levels for transportation: a lower level for electric cars, a roadway for carriages above it and a bicycle path atop the roadway. Sailboats with 40-foot masts could pass under the bridge.

Reed did not neglect the symbolic character of the bridge. The southern facade would have niches in which three statues of Confederate generals would be placed; its northern facade similarly provided for statues of three Union generals. Reed presented his plan, which he estimated would cost \$5 million, to members of Congress in a brochure published by himself. The plan failed to gain approval. Instead, the park commission's proposal for a low structure, "a monumental rather than a traffic bridge, but a significant element in an extensive park scheme," was approved. The final design, by McKim, Mead & White, was not accepted by Congress until 1924.

A strikingly similar proposal for a multilevel bridge across the Potomac's Washington Channel was made in 1966 by Chloethiel Woodard Smith, FAIA, in a report to the secretary of the Interior. Smith's proposed bridge linked the 10th Street Mall axis of the *L'Enfant Plaza*

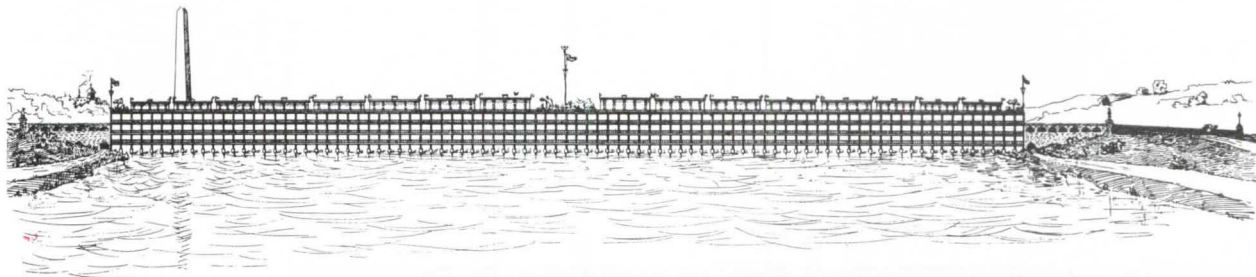


area with the proposed National Fisheries Center and Aquarium in East Potomac Park.

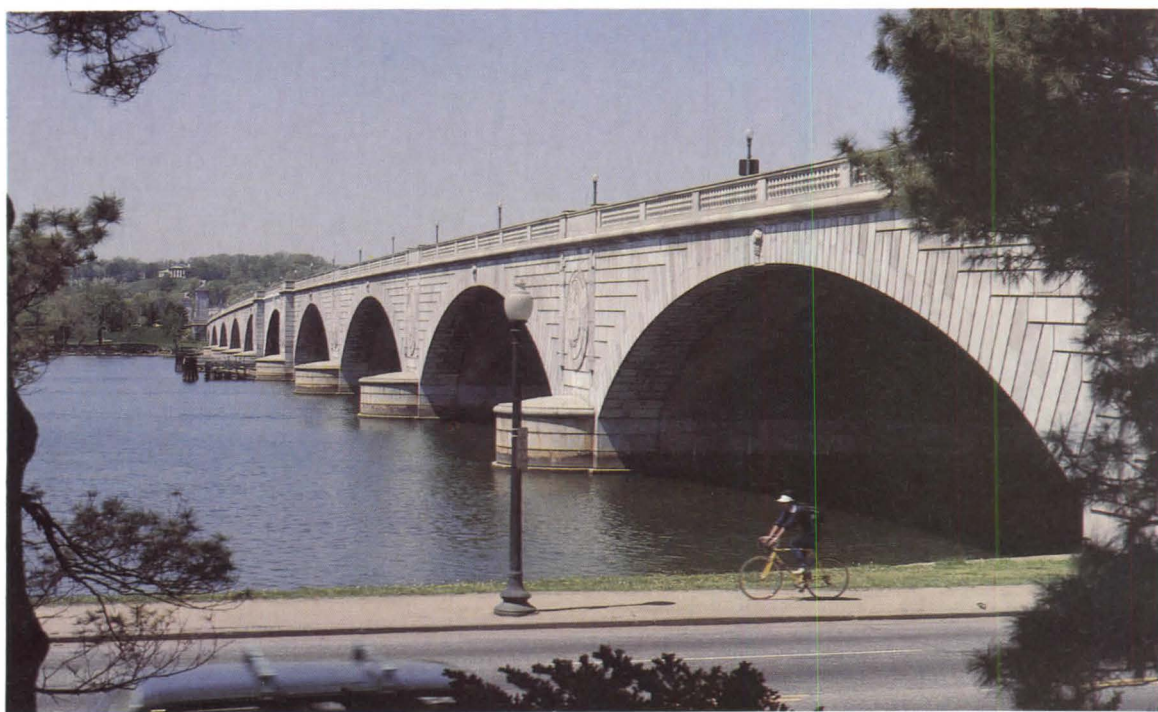
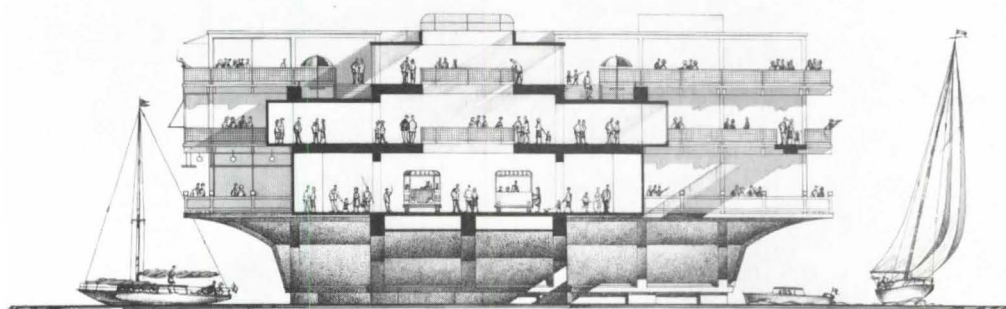
The aquarium was never built because its chief Congressional sponsor died; as a result, the bridge lost its ostensible reason for being. Nevertheless, Smith's bridge, like Reed's, was a dramatic effort to utilize the normally unused air space over and alongside a transportation span for nontransportation uses, such as restaurants, marinas, shops, galleries, roof terraces and the like. Not only did the bridge, thus conceived, serve important esthetic as well as transportation functions (for pedestrian and limited vehicular traffic),

but it made the bridge financially self-supporting.

Rents from the space available on the bridge and lease of the water rights below would have allowed the bridge, in the architect's opinion, to be privately financed without the expenditure of public money. Dubbed a "Ponte Vecchio" type bridge by its designer and by the public, the span recalled the possibilities inherent in medieval bridges such as its namesake in Florence. Although the bridge has remained merely a vision, it may perhaps help to inspire yet another multilevel bridge which will serve interests other than those of automobile drivers.



A section (left) and perspective (above) of Reed's bridge proposal. Below, McKim, Mead & White's bridge today leading to the Custis-Lee mansion in Arlington, Va. At right, Chloethiel Woodard Smith's 1966 proposal for a bridge across the Washington Channel.



Allen Freeman

Burying Streetcars in Subways, Precursor of the Metro Concept

In 1944, a plan to move Washington's thriving streetcars underground along routes similar to the present-day routes of Metro was proposed. Warning that "the day of reckoning cannot long be postponed," engineering consultants to the D.C. board of commissioners claimed "city merchants will abandon the heart of the city and its fate and move to outlying areas" unless traffic conditions were handled more efficiently.

The study found "that operation of rapid transit trains is not likely to become necessary" because of Washington's low density, but it stated that the subways could readily be modified to handle rapid transit cars if later it was desirable.

Three major routes were proposed: the Connecticut-G Street subway would start north of Dupont Circle, turn east on G Street and end at Union Station. The Pennsylvania Avenue subway would go from Washington Circle to a point beyond the House office buildings on Capitol Hill. The 14th Street subway would start south of Thomas Circle and go under the Mall to the Department of Agriculture buildings.

One advantage of building such a sys-

tem in the 1940s was the high percentage of people already using transit, who would not need to be seduced out of their autos. In 1940, 48 percent of the workers arrived by transit to the central business and government district. In 1968, 28 percent of workers arrived by transit.

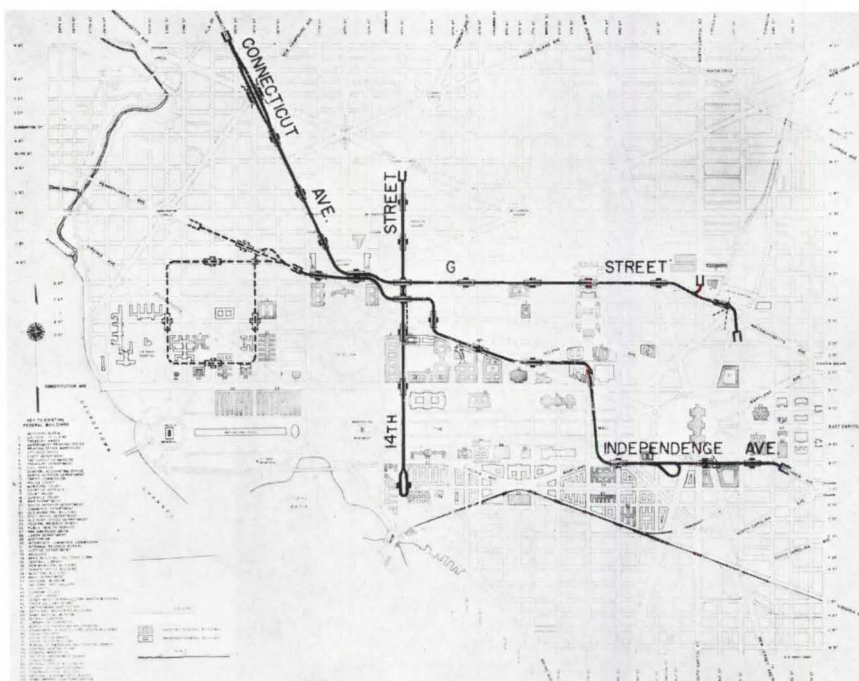
Rapid movement of commuters and pedestrian safety may not have been the prime reasons for the proposal to move the streetcars below ground. The report is also laced with comments on how the plan would make available two more lanes for automobiles on the streets. Since the report points out that 15,000 people can be moved per hour in a traffic lane of streetcars compared to 2,500 people per hour in a lane of cars, one wonders why the engineers didn't suggest that some streets be turned over entirely to streetcars, if rapid and safe movement of people was the key issue.

The estimated cost of constructing the three subways (7.1 miles) was \$56.4 million. The cost did not include the streetcars, as Capital Transit Co., privately owned, would continue their operation in the subways as well as on the surface. The plan did not indicate who would pay this large sum, except that it "cannot be entirely financed by private enterprise." Capital Transit was in agreement and, in fact, the company's lack of interest was the determining factor in the failure to implement the plan.

Plans have been followed, even when expensive, when they "stir men's minds." Daniel Burnham, chairman of the Senate park commission, made famous a statement that planners have followed for decades: "Make no little plans, for they have no power to stir men's minds." On the other hand, planners are now aware that some of these big plans can be rather insensitive on the local level, and that is where we all live. "Make no plans that arouse citizen opposition" may be a more appropriate phrase in the 1970s.

Plans get lost when well-defined responsibility for their implementation is absent. Would any of the Metro subway have been built without the Washington Metropolitan Area Transportation Agency? Is lack of well-defined responsibility a problem with the "Year 2000 Plan?"

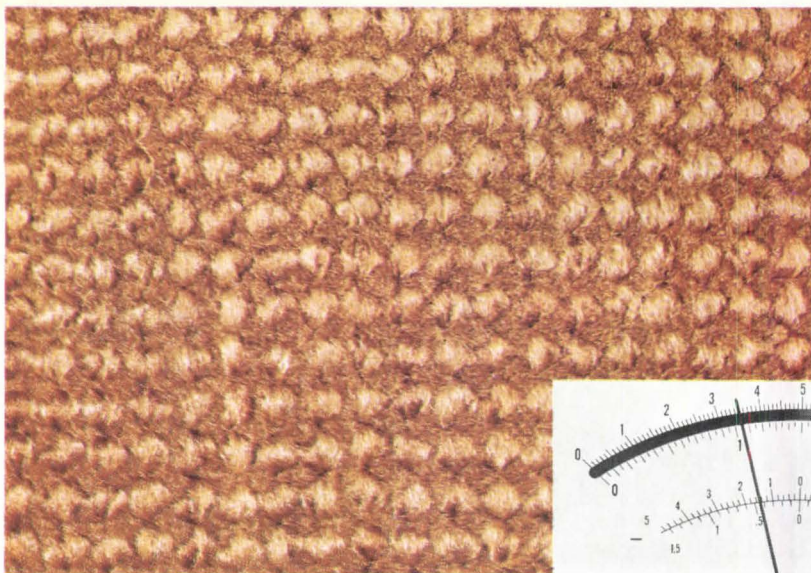
Washington has raised great expectations among planners concerned with its development; it has also been the burial ground for the hopes of many. Even those planners whose ideas have been incorporated into the city's fabric—L'Enfant, Downing, Burnham, Owings—have often left Washington shaking their heads in despair or disgust. But despite the city's pitfalls and frustrating array of feuding authorities, it is, for the planner, as Theodore Roosevelt described the Presidency, a "bully pulpit." □



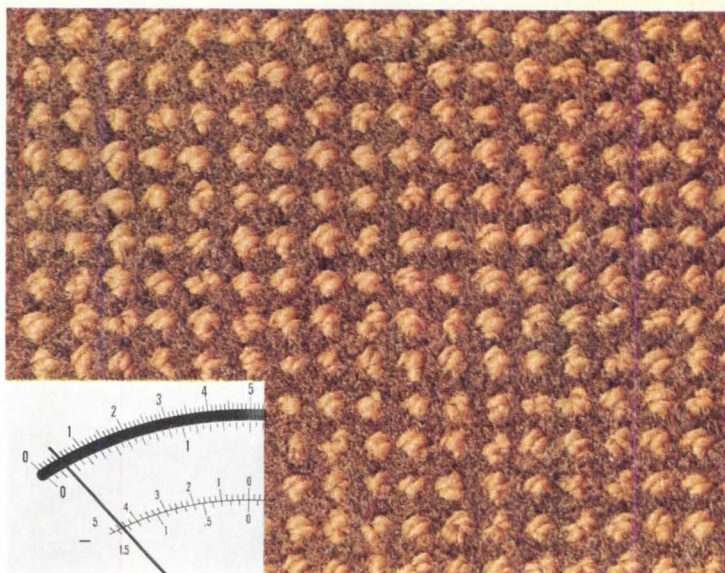
The proposed streetcar subway system (above) and the corresponding part of today's Metro rail system (top). At right, a streetcar, the last of which was seen on Washington streets in the early '60s, at the Dupont Circle underpass.



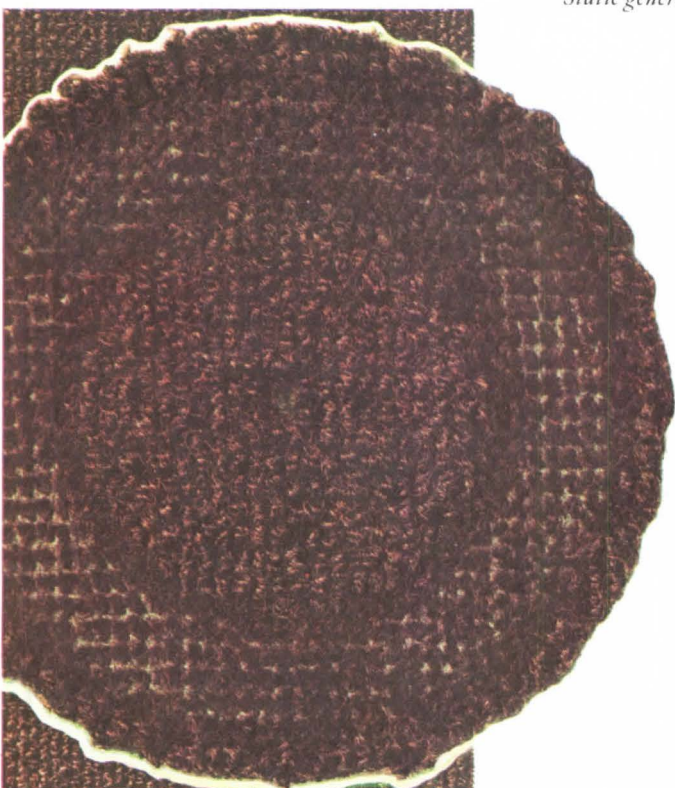




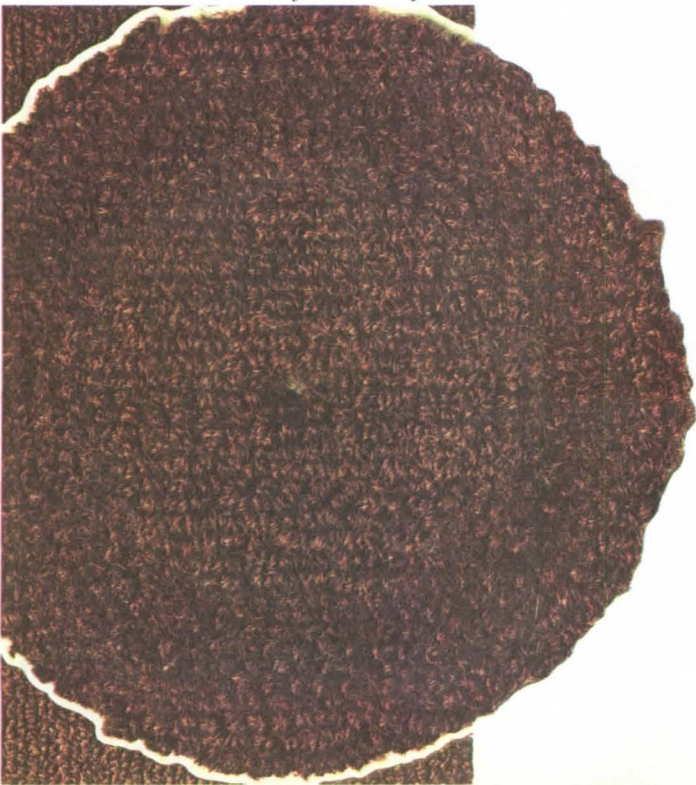
Static generated by nylon.



Static generated by Fortrel PCP.



*Acrylic after 1,800 cycles on a Taber Abrader.
Fortrel PCP after 1,800 cycles on a Taber Abrader.*



Which carpet

You're looking at photos of the actual results of three tests conducted by Certified Testing Laboratories, Inc. on carpets of Celanese Fortrel PCP producer colored polyester, and commercially available carpets of similar construction in different fibers.

Fortrel PCP outperforms them all.

More Durable.

After only 1,800 cycles on a taber abrader (taber abrasion test ASTM D-1175), the carpet of acrylic fiber reached the breaking point (abraded to the backing) and registered a pile weight loss of 11.6%. The carpet of Fortrel PCP polyester didn't reach the breaking point until 22,000 cycles! And didn't lose 11.6% of its pile weight until 29,900 cycles!

Less Static.

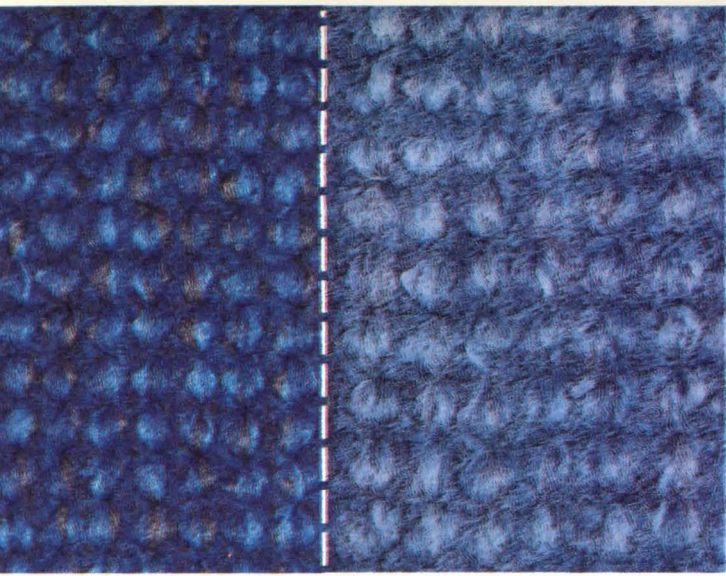
In checking static generation, the AATCC Walk Test with Neolite Soles (134-1969) was conducted.

Carpet of Fortrel PCP polyester generated a mere .5 kilovolt, well below the threshold of human sensitivity.

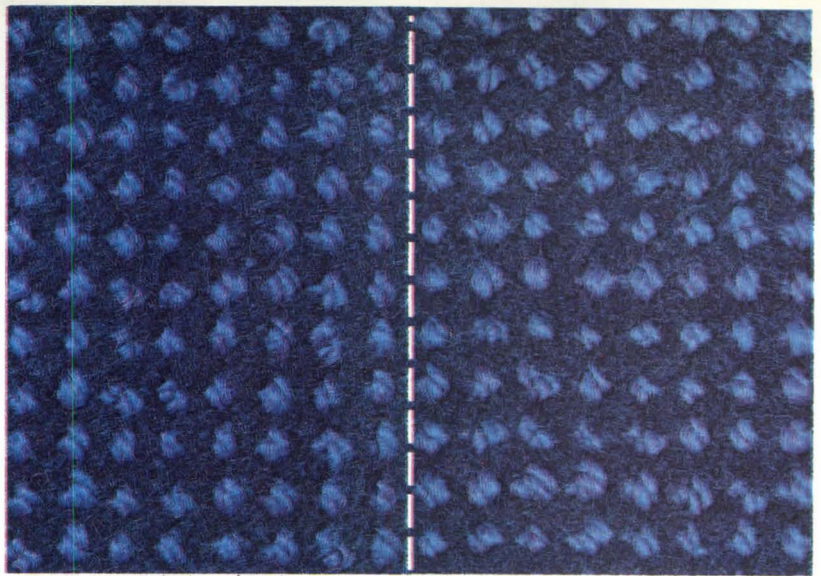
(Even below the level necessary for such delicate applications as computer rooms and hospitals.) The carpet of Antron II, even with metallic protection, generated seven times as much static—3.5 kilovolts.

No Fading.

In the AATCC Colorfastness to Light Test (Test Method 16E), the carpet of Fortrel PCP polyester showed no evidence of fading or color change after



Nylon before & after exposure to 1500 hrs. of Xenon-Arc lamps.



Fortrel PCP before & after exposure to 1500 hrs. of Xenon-Arc lamps.

do you want on your floor?

1500 hours of exposure to Xenon-Arc lamps. (That's 18 times the industry standard.) The carpet of nylon had faded substantially well before 1500 hours.

Wear Guaranteed.

These are only three of twelve exacting standards that every carpet of Fortrel PCP polyester must meet before it is awarded our five-year wear guarantee. It's the *only* wear guarantee available anywhere on contract grade polyester carpeting and it guarantees that "if the surface pile of the carpet wears more than 10% within five years from the date of initial installation, Celanese will replace the affected area with equivalent carpeting at absolutely no cost to you."

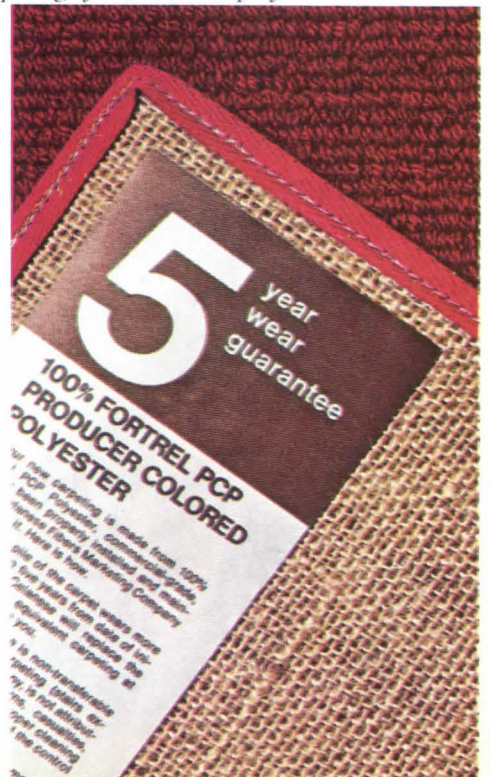
Now you can be sure which carpet you want on your floor. The one that resists static, fading, wearing, staining, soiling, and mold. And has the only five-year guarantee around.

Fortrel PCP.



The back of most carpeting.

The back of carpeting of Fortrel PCP polyester.



If your new carpeting is made from 100% Fortrel PCP polyester, commercial-grade, and has been properly installed and maintained, Celanese Fibers Marketing Company guarantees it. Here is how.

If the surface pile of the carpet wears more than 10% within five years from date of initial installation, Celanese will replace the affected area with equivalent carpeting at absolutely no cost to you.

Note that the guarantee is non-transferable and applies only to carpeting (stairs excluded) for which wear, if any, is not attributable to negligence or burns, casualties, cuts, pulls, and the use of improper cleaning methods or other causes beyond the control of Celanese.

This guarantee applies only to commercial-grade carpet as defined in Fortrel Polyester Carpet Performance FT-207.



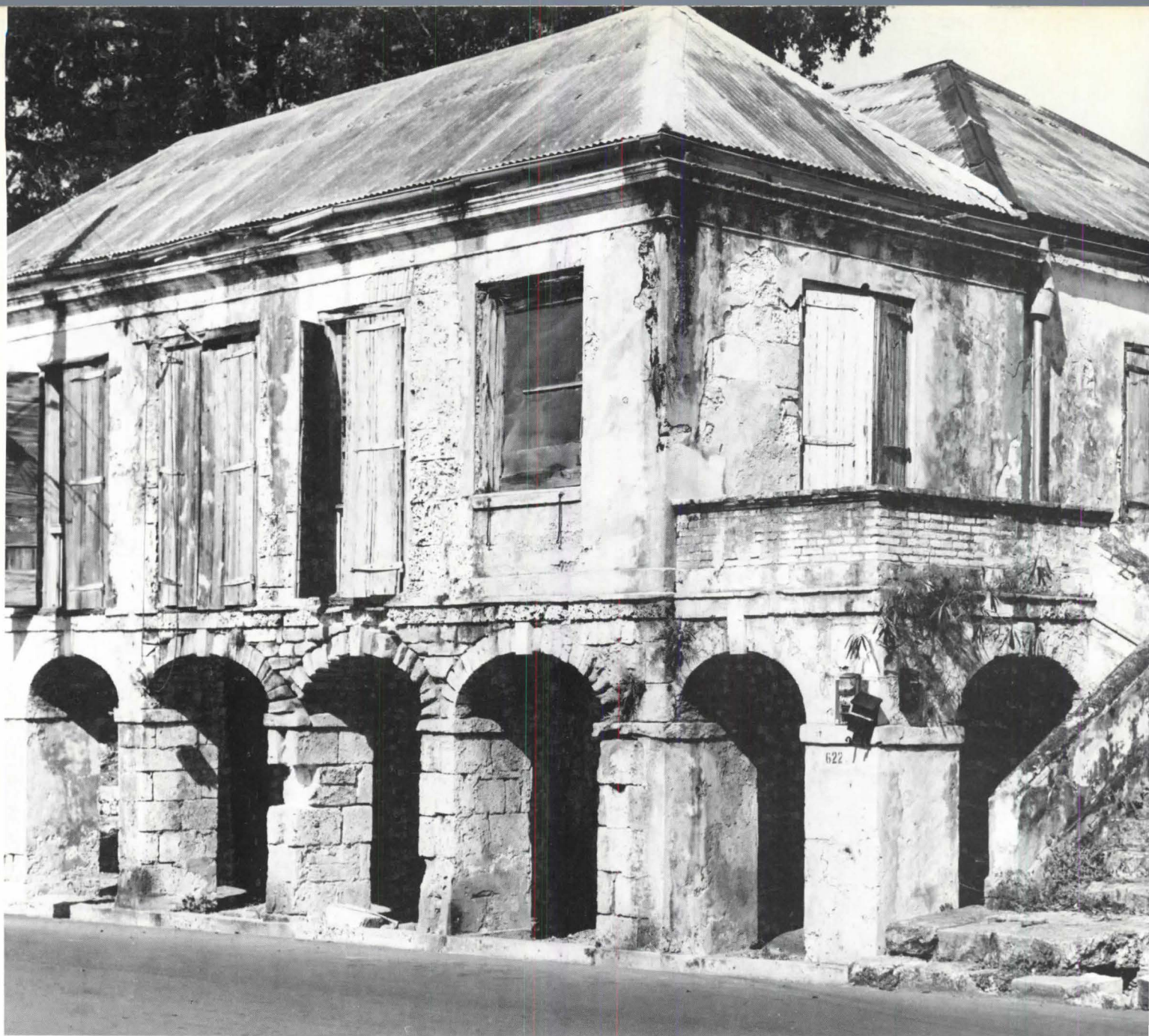
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Circle 11 on information card



Maintaining the Fabric of an 'American Paradise'

In St. Croix, U.S. Virgin Islands, new efforts are being made to save background buildings as well as major landmarks. By Neil Letson

St. Croix, in the U.S. Virgin Islands, was born in conflict and nursed on the rich juices of the sugar cane plant.

It has changed markedly since Columbus discovered it in 1493, and in the nearly 500 intervening years has alternately suffered and prospered from the forces of nature and history.

Mr. Letson is a free lance journalist who writes from Washington, D.C., Johannesburg and Bermuda. He is a former assistant editor of the JOURNAL.

St. Croix has been fought over, bought, sold, colonized, captured and recaptured. Seven flags have flown over its 84 square miles. England, Spain, Holland and France have all claimed it at one time or another, and the tally does not include periods of possession by aboriginal tribes, pirates, squatters, private owners, religious and trading companies. A few times the island was not occupied by anyone.

It was finally the Danes who came to stay and who, for almost 200 years, cared for the island during good times and bad.

The U.S. acquired St. Croix (and the other Virgin Islands) in 1917, but the civilizing influence of the Danes is most apparent in architecture in and around the principal town of Christiansted and the smaller but more picturesque Frederiksted.

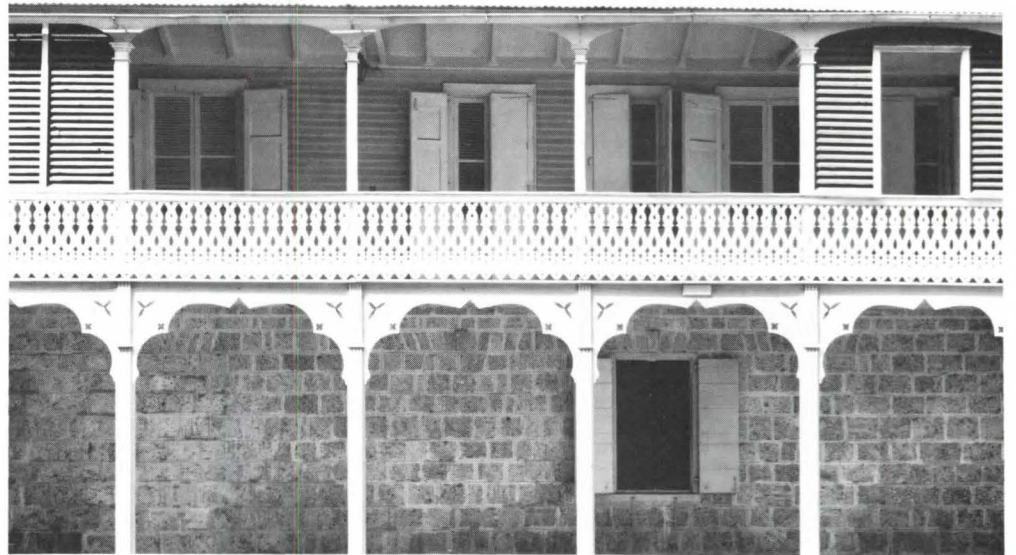
These towns are monuments to a highly developed colonial culture of the 17th and 18th centuries. The wealth of buildings dating from the flowering period of these towns constitute a distinctive chapter in the architectural history of Denmark.



Photographs by Jan Henle



Opposite: typical Frederiksted house of the type erected after the fire of 1878. Upper story, comprising the living quarters, erected above the storage floor. In Frederiksted, the sidewalk usually lies outside the colonnade. This page: The traditions of the Empire-style make themselves felt in the street facades of these structures with their delicate details.



Architects from Copenhagen have mapped, measured, surveyed and photographed the town, street-interiors and buildings in the same way the historic buildings have been dealt with in Denmark.

Earnest efforts have been made by both the U.S. National Park Service and the island's own landmark societies to cherish the valuable buildings and street-interiors.

However, through the years St. Croix has lost much of the record of its historical past and much is in serious jeopardy. The island is in danger of losing the very blend of European and West Indian charm and tranquility so eagerly sought by the half-million tourists who arrive each year clutching fistfuls of cash.

The major historical landmarks—which include two 18th century forts, a customs house (now undergoing restoration) and a sugar plantation greathouse—are carefully protected.



Government House, built by the Danes in the 18th century, continues to function in its original capacity, even though the Virgin Islands government is now based on St. Thomas. Many old buildings have been restored in the commercial center of Christiansted. Poorly designed and junky modern intrusions, however, considerably reduce the effectiveness of the efforts to preserve the 18th century Danish ambiance.

The esthetic deterioration is compounded by a building boom that seems specifically designed to strip the island of its beauty. Despite warnings contained in a recent report on the ecological impact of growth on St. Croix, native and mainland developers get away with building vast shoreline condominium properties, destroying the natural and architectural beauty of the previously undamaged sections of the island.

St. Croix is a microcosm in which all the social and economic ills of urban and suburban America are present and compounded. The island finds itself in an increasing state of disrepair, with festering wounds inflicted by "progress."

What was once a monument to the good taste of the Danish colonizers now seems to feature Pizza Hut, McDonald's and Kentucky Fried Chicken. What is called the "American paradise" is quickly turning into paradise lost.

In the most serious and immediate danger are the smaller, less remarkable buildings in the towns and on the various estates across the island.

The value of these buildings lies in their providing background and continu-

ity for the more significant structures. Time, the tropical climate and the wrecker's ball are working against the preservation of many of these buildings. If they are destroyed by any of these forces, or public indifference, St. Croix will be left with a few historic monuments in an alien environment and the urban blight of mainland American will have come in its awful finality to this beautiful island.

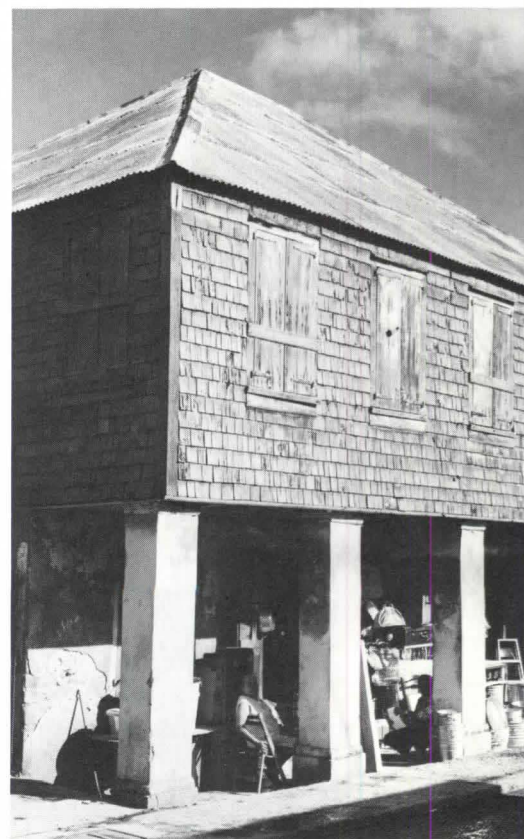


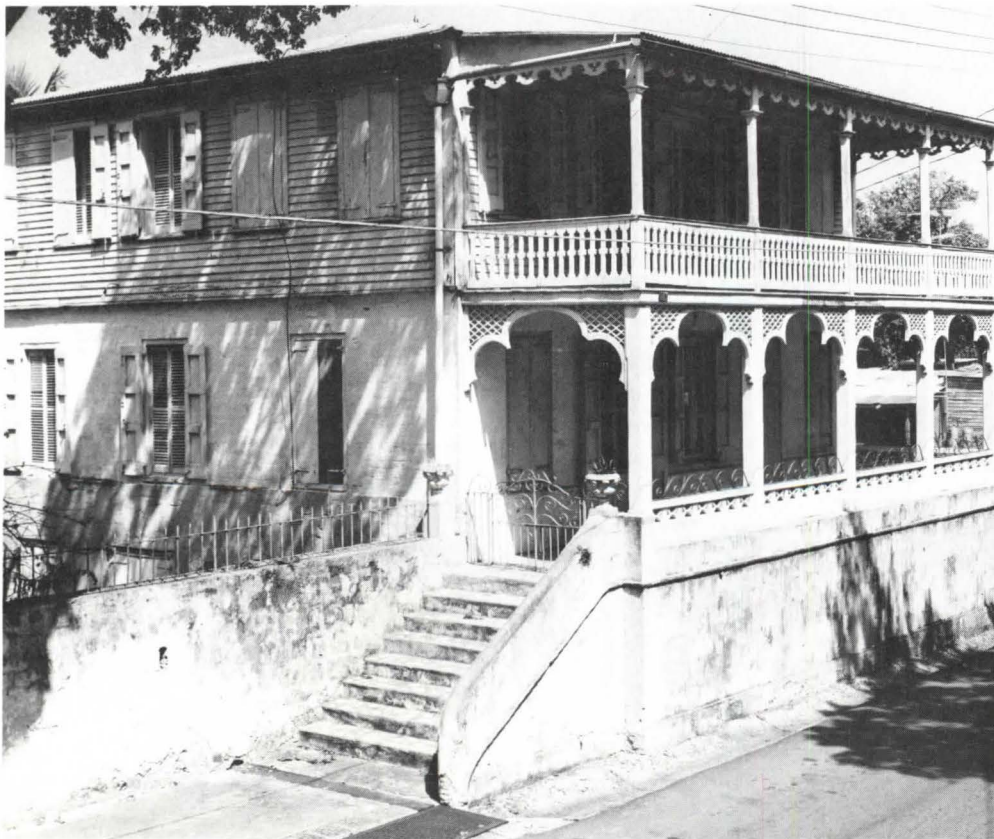
The authors of *Three Towns: Conservation and Renewal of Charlotte Amalie, Christiansted and Frederiksted of the U.S. Virgin Islands*, prepared by the Department of Town Planning, Royal Danish Academy of Fine Arts, have said: "... It is more important for the townscape to preserve the character of a whole street ... than merely to conserve the more distinguished buildings."

The need to increase public awareness of the architectural heritage of St. Croix was the subject of a recent AIA headquarters exhibition of photographs taken by St. Croix photographer Jan Henle, working with grants from the Virgin Islands Council on the Arts, the National Endowment for the Arts, the Virgin Islands chapter/AIA and assistance from private contributors. Henle's photos, some of which are shown on these pages, include both buildings which are in danger and others which have been rehabilitated without loss of their West Indian character or charm.

Later this year the photographs, including the ones which accompany this article, will be shown in St. Croix. They will then become documents to aid in the work of historic preservation and in planning the future architectural development of the Virgin Islands. □

Above: excellent example of a well utilized and perfectly maintained building on St. Croix. This one serves as a Government office. Below: details of structures which could be easily rehabilitated for residential or commercial use.





Long, open or enclosed galleries were designed to afford a view of life in the street, the sea and to catch the breeze. Few of the rooms of the dwelling story have ceilings, but continue to underside of roof, while partitions come to an end at a level with outer walls. Above these, the rooms are separated by fragile louvres to permit free air circulation.

Using Wind Tunnels as Tools for Designing and Adapting Buildings

A case study in which a San Juan pool and grandstand were made safe for use in the Pan-American Games. By Ralph W. Crump

As highrise buildings have soared above the urban environment, architects and town planners have discovered wind problems around the bases of high buildings. Otherwise pleasant plazas and malls sometimes are rendered useless by uncomfortable wind conditions even on calm days.

Air flow considerations also are important in areas where people depend on natural conditions for cooling.

In any setting, control of winds may be accomplished by the following:

- selective grouping of buildings;
- correct choice of building form;
- use of wind screens, trees and shrubs and architectural features;
- modification of topographic features.

Architects have found general climatic information available from nearby weather stations of limited value. Often, data still are needed to relate wind conditions to the specific site and its microclimate. The best tool is a wind tunnel.

Early building studies using wind tunnels were almost exclusively related to pressure distribution to determine wind loadings. During the past decade, research in fluid mechanics has made possible the development of wind tunnels capable of simulating winds in the lowest 1,000 feet of the atmosphere. Here are some questions that can be answered:

- What environmental characteristics will result from topographic modifications?
- How can existing topography be modified to provide the best environment for a stadium, residential complex or new city?
- What will be the wind forces on doors and windows in a tall building?
- What effect will the completed building have upon doors and windows in existing buildings?
- To minimize potential air pollution problems, where should an industrial facility be located?
- What modifications will be required to a building site with wind problems so as to make it comfortable and safe?

One of the few wind tunnels in the U.S.

Mr. Crump, associate professor of architecture at Cornell University, contributed "Games That Buildings Play with Winds" to the JOURNAL (March 1974).

capable of answering these questions was designed and built and is operated by the department of architecture at Cornell University. It has an open working section—an area adjacent to the model platform which allows ready access for adjusting and photographing the model while the wind moves through the tunnel.

Transparent air masses are made visible through the use of bubbles filled with a helium mixture. The composite bubble density is nearly equal to the density of surrounding air. The bubbles are implanted upstream from the model platform area. As many as 30,000 bubbles per minute can be generated. They have a life span of from one to two minutes, sufficient time for visualization. By observing the air flow, one gains a qualitative feel for the dynamic three-dimensional characteristics of the wind.

A swimming pool and grandstand complex in San Juan, Puerto Rico, provide a good case study, where offshore winds cause waves in the racing pool, generate severe gusts over the high diving pool and prohibit competitive events in the pool.

Puerto Rico, which will host the Pan-American Games in 1979, commissioned Cornell to study the pool and recommend

changes to make it safe for swimming events during the games. Sage Action, Inc., and Hector Bonilla Norat, AIA, a Puerto Rican architect, participated.

The first step was to combine conditions found on the pool site with documentation of climatological information from the San Juan area. These studies spanned several months and served to locate wind directions and velocities over the pool and surrounding area. Next, a model of the pool and nearby ocean and upwind topographic features was built to a scale of one inch equals ten feet. The model was placed in the tunnel, which was adjusted to simulate gusty wind.

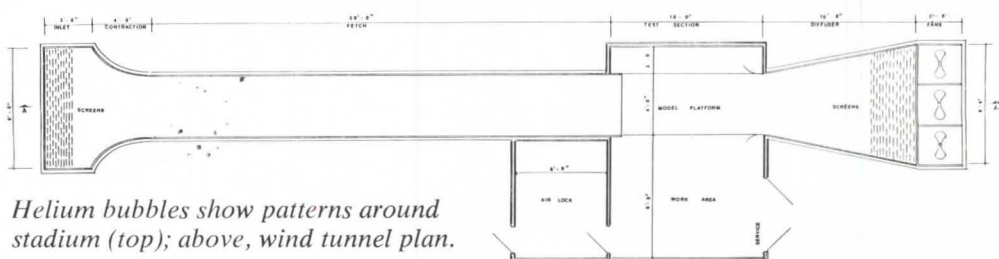
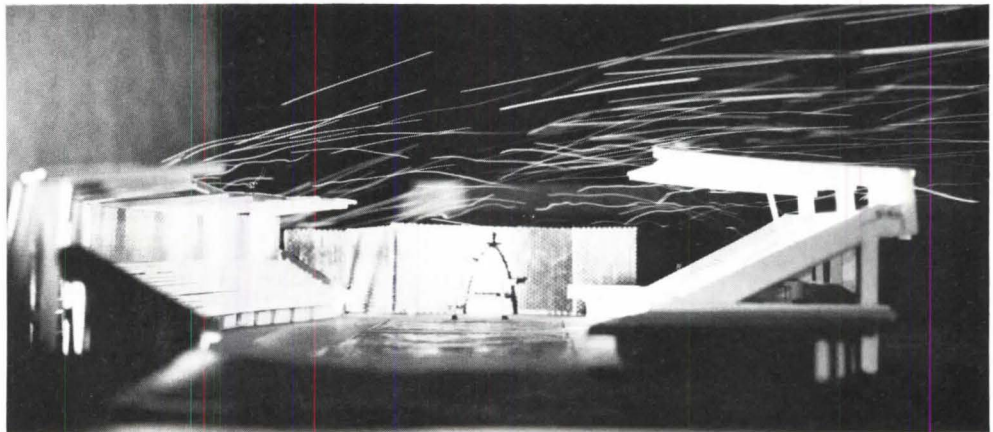
Using flow visualization techniques with helium bubbles, modifications were made in the model to resolve the severe gusts over the racing pool and high boards.

A high, perforated wall was placed east of the diving pool and a low perforated wall was placed along the upper edge of the bleacher. These, combined with high trees placed on the windward side of the pool, reduced velocities to minimal levels.

At this point, architects Bonilla Norat-Oliver Smith were commissioned to redesign the stadium so it would double the grandstand capacity and to provide a roof over the seats. As models of possible new designs were made and tested in the tunnel, it became apparent that the addition of these features created new wind problems, particularly in the grandstand area.

A solution was finally found utilizing the angled roofs of the grandstands to skip the wind over the pool and seating areas. The perforated walls were retained to control winds at the pool and diving board.

The new pool complex is now under construction. Wind tunnel study techniques made it possible to solve this problem prior to construction, thus avoiding costly postconstruction adaptation. □



Helium bubbles show patterns around stadium (top); above, wind tunnel plan.

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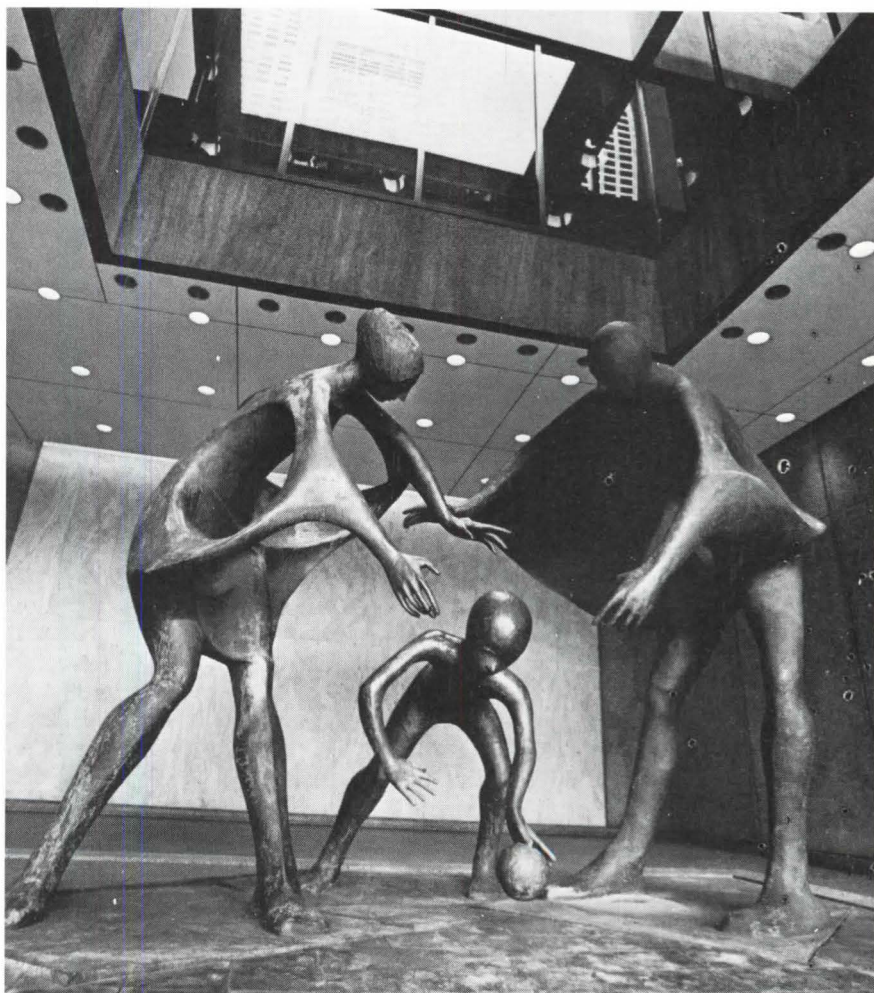
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AIA JOURNAL/JUNE 1978 61

A Style Behind Which a 'Reformist Impulse Lurked'

Sweetness and Light: The 'Queen Anne' Movement, 1860-1900. Mark Girouard. New York: Oxford University Press, 1977. 250 pp. \$29.95.

"'Queen Anne' has comparatively little to do with Queen Anne," begins Mark Girouard in a fascinating story of the merry romp of Richard Norman Shaw, Edward Godwin, Kate Greenaway and Walter Crane through the ruins of the English past and whatever else struck their fancy to create a new image. The result, the Queen Anne, was unorthodox and a direct challenge to the older generation.

Reacting to the ponderous seriousness of the High Victorians, a younger generation, the "fashionable set," valued suave manners and taste over morality, and "art" over didacticism. This group purchased the new style and it quickly dominated the new Board Schools, the Chelsea Embankment, Tite Street, Cadogan Square, Bedford Park and the "high" and "low" architecture of the seaside and pubs.

Composed of features drawn from the British past, a little genuine Queen Anne, some Wren, Georgian and Robert Adam, the Queen Anne cocktail was embellished with Francois I, Dutch, Flemish and Japanese elements. Tall and delicate, generally constructed out of red brick with white trim, the typical Queen Anne building had odd gables, freely treated ornamental details of sunflowers, swags, pediments and cherubs and the ever present curving bay window. It was the home of refined esthetics and enlightened social climbers.

The Queen Anne received a lot of kidding in its own day and even now it is hard to be completely serious about a movement that took such joy in breaking the rules of their fathers and creating challenging and engaging architecture. A study of Richard Norman Shaw's designs reveals subtle shifts in symmetry, window sizes, bay windows that erupt upward past the cornice and become dormers and interior spaces that structurally should not

exist. Delight is the key word for much of Shaw's work.

He was probably the most talented, certainly the best known, of the Queen Anne generation, though there are others such as J. J. Stevenson, Edward Godwin, Ernest George and H. A. Peto who are well worth studying. Certainly, the oddest is Philip Webb, best known as architect of William Morris' "Red House" (below). Webb scorned "fashion" and so abandoned the Queen Anne idiom and, of course, became even more "fashionable." Webb wanted an "absence of style" to be evident in his work and misanthropically designed awkward, unfashionable houses for the smart set.



While architecture is the main carrying theme of *Sweetness and Light*, of equal interest is the social-cultural background of the patrons of the new style. In the 1860s, an artistic class of painters, poets, essayists and hangers-on began to emerge and achieve equal footing with the upper middle class. Artists needed special housing, and hence developed the studio house and flat, even for those with little functional need for the space.

In contrast to the artists were other supporters of the new style, upper middle class individuals whom Girouard characterizes as "enlightened." He uses for his analogy Matthew Arnold's famous phrase from *Culture and Anarchy* (1869) "Sweetness and Light." A challenging interpretation, but other than for a few brief paragraphs Girouard leaves it hanging except for repetition of the phrase. Arnold may have been ironical, but there is such a serious tone to his work that to reduce him to a frivolous phrase is an

error. Behind the superficial elements of Queen Anne a reformist impulse lurked, and this fact should be stressed.

The Burlington Magazine in 1882 described an imaginary house of Mr. Philistine Jones: "He has a dado, and blue and white china may be spied in nooks and corners—he has eschewed gilt—he has ceased to care for stucco—he lives in a Queen Anne house and actually has begun to think about the shape of his jugs. This improvement is rapidly spreading through all classes of society—good taste is no longer an expensive luxury to indulge in."

A parody—the quotation indicates both the reform aspect of the Queen Anne and the methods of accomplishment, not simply by architecture but also the associated arts. Considerable energy went into the creation of "The House Beautiful"; furniture of several styles from William Morris' Sussex chair to the Sheraton and Chippendale revivals, and Godwin's Japanese idiom were produced along with wallpapers, fabrics, fittings, china and other items. Gardens and dress (especially for women and children) came under scrutiny. Children's books illustrated by Randolph Caldecott and Kate Greenaway are part of the movement. Queen Anne was a thoroughgoing attempt to alter life styles.

The Queen Anne, of course, had considerable influence in the U.S., especially in the national guise of the "shingle style" and the "modern colonial" of McKim, Mead & White, Robert S. Peabody, Arthur Little and others. Girouard has an important chapter on this aspect and adds some new information on how Queen Anne and associated decorative arts came to this country. He also notes variations outside the Eastern watering hole circuit, such as San Francisco, St. Paul, Minn., and suburbs across the U.S. that are equally worthy of recognition and study.

Sweetness and Light is as important a book as Girouard's earlier *Victorian Country Houses* (1971). He writes with wit and verve that is sadly absent in most architectural history. The Queen Anne was an important movement of the 19th century—the self-consciousness of the

continued on page 68

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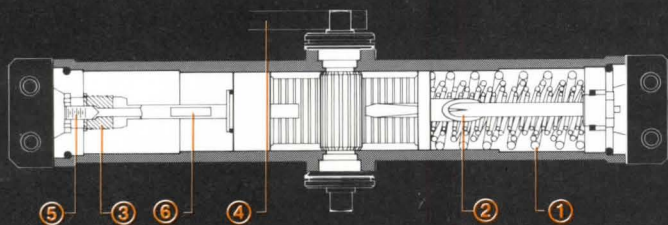
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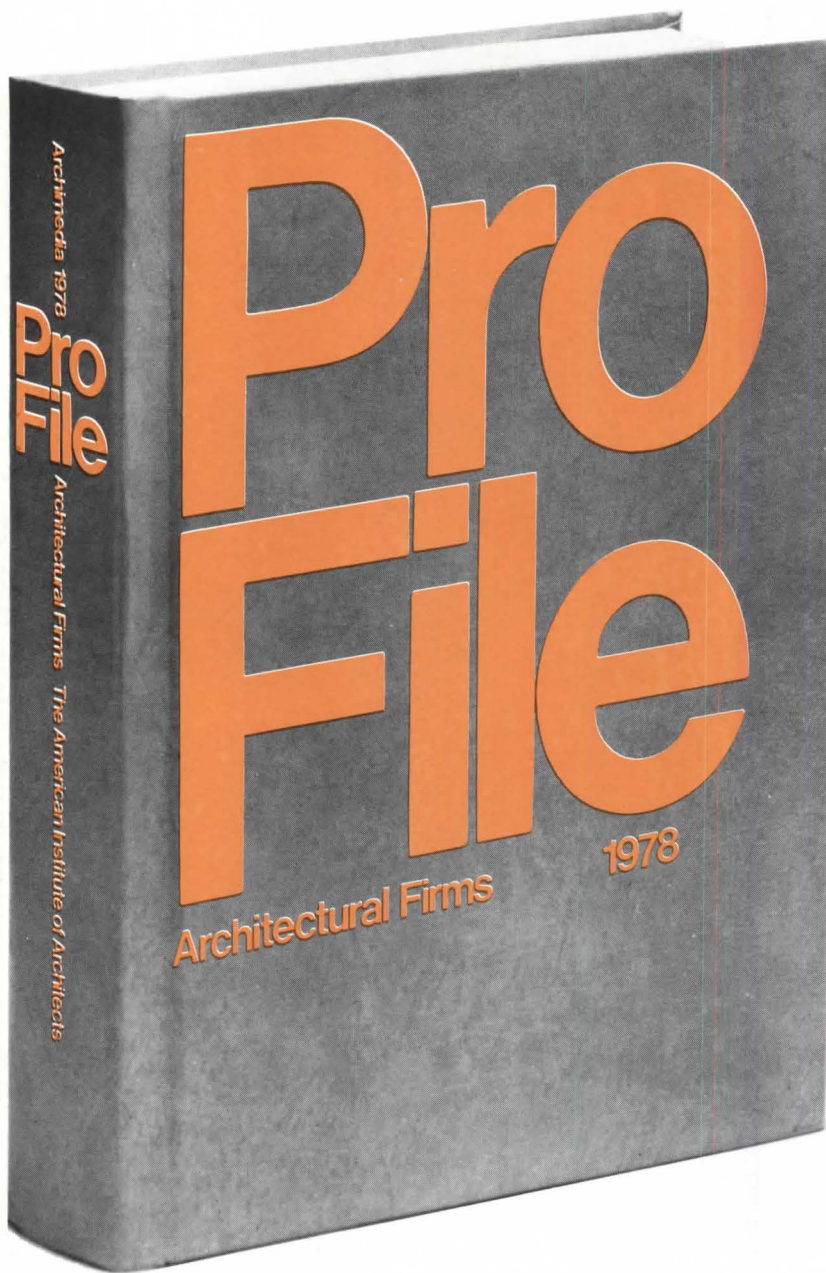
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Books from page 62

participants to create something new and different speaks to the modern age.

It is doubtful if we ever learn from past mistakes or successes, but *Sweetness and Light*, beyond the joy of the writing and the excellent illustrations, has a claim on our attention. While there are manifold differences, it is possible that we may recognize the reflection in the mirror as we peruse the book. If nothing else, the book may give a perspective of humor to the present contortions of architecture. From the Queen Anne came both increased historicism and the modern movement, a split we are still trying to understand, and perhaps mend. *Richard Guy Wilson, Associate Professor of Architectural History, University of Virginia*

'The Awesome Solemnity'

Gothic Architecture. Louis Grodecki. New York: Abrams, 1977. 444 pp. \$37.50. (Available to AIA members for \$33.75 from the Institute department of publications marketing.)

Louis Grodecki, a teacher of medieval art at the University of Paris, has produced a handsome book, containing a text of scholarly merit and 440 carefully selected illustrations to show the reader how Gothic architecture developed.

The pointed arch, an ancient form, arrived from the East with the Moors in Spain and then appeared in the rest of Europe in the 11th century. Gothic construction, previously unknown, through vaulting, arching, buttressing and pinnacled, created a system of opposing thrusts and vertical pressures which could withstand sinking and buckling, making possible thinner walls, greater window space and the addition of great height in interior space. The huge Gothic cathedrals, enhanced by the addition of mystical light passing through enormous stained glass windows, is a symbol of Christian expression. Visions of Paradise are formed by the towers and pinnacles.

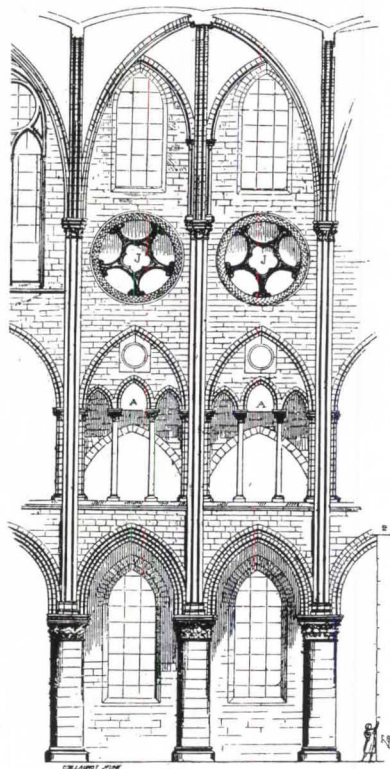
The author traces the development of Early Gothic from Norman Romanesque in the 12th century. He tells of the importance of St. Denis, Sens and other cathedrals, particularly the prodigious influence that Laon had in northern France and adjacent areas, spreading the new Gothic architecture. At this point, however, the reader is weighted down by descriptions of obscure churches for which there are no illustrations. At times, the text becomes a mere recitation of facts gleaned from already produced studies which are acknowledged in the bibliography.

But we do learn. The early working of vaulting and buttressing to produce height, space and light and the awesome solemnity of Gothic ecclesiastical archi-

ture is illustrated and discussed for a great variety of cathedrals, churches, abbeys and monasteries. Interesting facts disclose characteristics in the architecture based solely on regional influences.

A brief description of the early Gothic expansion in the 12th century outside France into England and areas of Europe discloses that the native Gothic influence forcefully established itself, although the French contacts were present. English Gothic developed from the French and affected what was happening in Norway. A much slower growth of Early Gothic occurred in Germany and the Holy Roman Empire. Strong Romanesque architectural preference delayed the Gothic spirit, but there are evidences of Gothic infiltration during this time. In Italy, San Francesco of Assisi, built in the 13th century, was the Gothic forerunner. Spain, tied to early influence from France and Burgundy and the expansion of Cistercian and Cluniac monasteries, became an Early Gothic convert.

After the long experiment in the 13th



century, Classical or High Gothic made its appearance with the full blossoming and perfect balance of Gothic architecture. The cathedral plans of Chartres, Reims, Amiens, Bourges and others presented in this book illustrate the symmetry of form achieved. With the building of Chartres, cathedral construction changed and immediately influenced Soisson, Reims and Amiens. Interesting histories of both Chartres and Reims are given, plus descriptions of the construction of more and more elaborate cathedrals until we reach Beauvais. This last colossal cathedral suffered the collapse of its vaults

(eventually rebuilt), but the era ended.

A different architecture evolved in northern France and Burgundy, and there are good illustrations of this nonmonumental architecture. The French gradually produced what became the Rayonnant or court style, a lighter and airier Gothic architecture, reducing the size of the structures and thus reducing the wall thickness. By bringing window levels lower but still achieving a soaring effect with high stained glass walls supported by abutments on the exterior, a jewel such as Sainte-Chapelle became the glorious example of this lighter, smaller expression of Gothic progression.

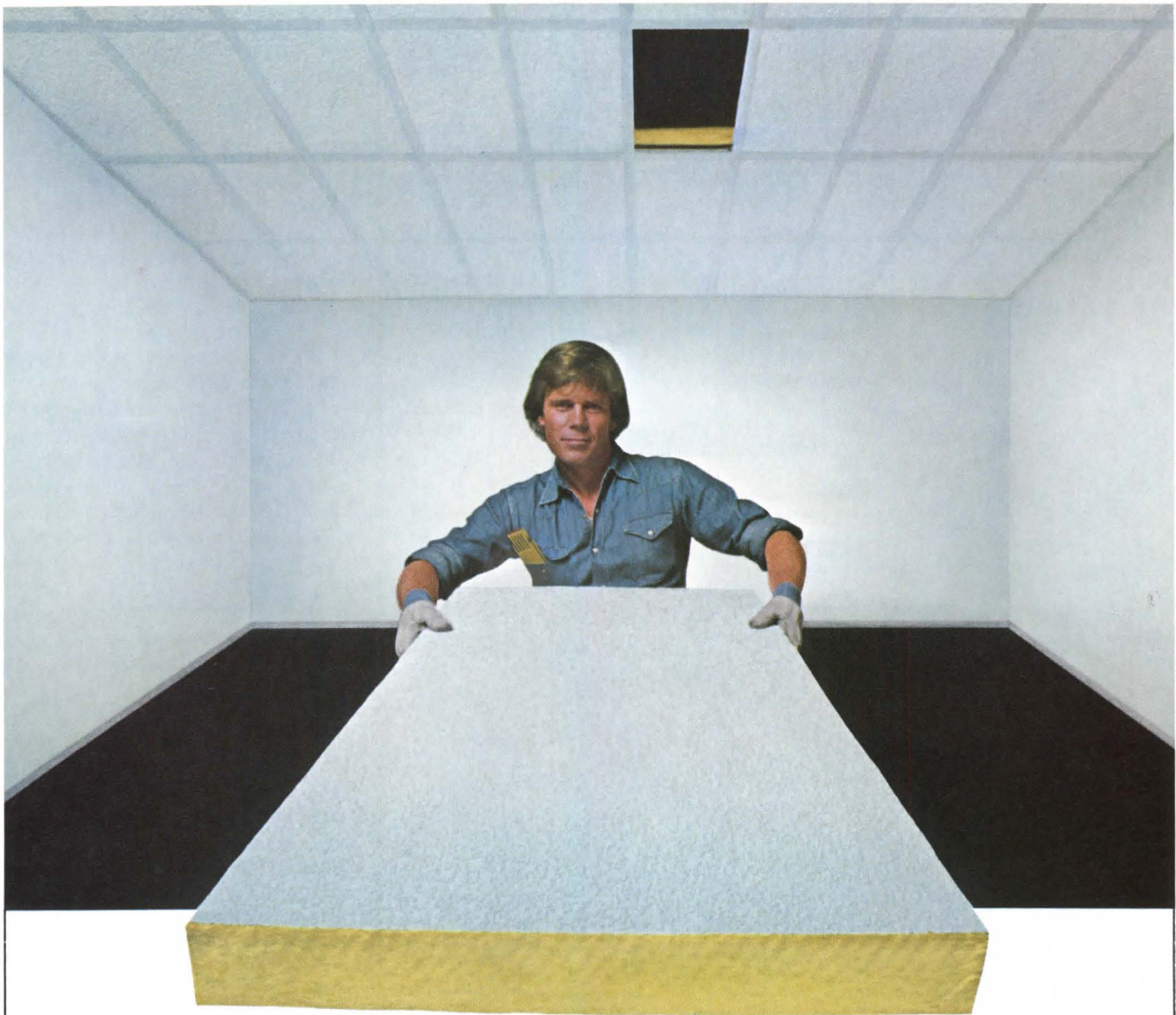
In England, Gothic sources can be traced to Canterbury and the Cistercian abbeys in the north and to Worcester Cathedral in the southwest. There is a slight difficulty with the text here, for Canterbury is positively identified as the first Gothic structure and later becomes "not the unique point of entry." There is good exposition on the difference between English and French Gothic architecture, with illustrations of the elaborate vaulting and rich decoration by the English.

In Germany and the Holy Roman Empire, there was early and strong opposition to the Gothic style. The Romanesque tradition was deeply embedded, but by 1250 there was a gradual infiltration by way of Strasbourg. In Cologne, the cathedral was patterned after Amiens but introduced its own Gothic ideas. The Dominicans and Franciscans established themselves in German cities and the rise of the bourgeoisie expanded their power. These orders started with sober structures but after 1300 simplicity gradually evolved into the elaborate.

The 13th century in Italy saw its first Gothic structures rise in Assisi and Bologna. The cathedral in Siena, started in 1250, spent its next 150 years being architecturally altered so that it is now "one of the most monumental failures in the history of Italian adaptation to Gothic." The Palazzo Publico, unlike the failed cathedral, was "city planned" in the 14th century and is the beautiful center space for regulated architecture on its perimeter, some of which contains medieval art masterpieces. The Gothic municipal buildings, palazzos, castles, bell towers and the delights of Venice follow in orderly description.

A number of interesting influences are seen in Spain. The Romanesque was adapted from France in northern Spain. In the south, the Muslims left their building techniques and decoration which were firmly fixed before Islam was thrust out. The Gothic of France became an influence in the 13th century, but the Spanish used their own interpolation of the style. By the 16th century, Gothic architecture

continued on page 70



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Books from page 68

had become a Spanish, Muslim, French, Rhenish and Flemish combination of sumptuous show to overwhelm.

Portugese Gothic is discussed in a short but fascinating account. The Cistercians built a monastery in Alcobaca in the 12th century which is still there in all its Gothic glory. The Dominican Church of Santa Maria de Vitoria, Batalha, erected in the 14th century, is beautifully revealed in both prose and picture as are other Gothic gems in Portugal.

The book concludes with a fine pot-pourri of French and other architecture of the late Middle Ages, and a summary relates the growth of Gothic from its French beginnings and gradual spread

into the Western world. The vigor of Gothic architecture remains as a testament to medieval man, who created an enormous architectural history in Gothic construction. One gains a large insight into the accomplishment from the pages of this book. *Elizabeth and Robert Class*

Pocket Guide to the Location of Art in the United States. Originated by Mary Douglass Freeman; compiled by Emma Lila Fundaburk. Luverne, Ala.: Emma Lila Fundaburk (P.O. Box 231, Luverne, Ala. 36049), 1977. 314 pp. \$5, plus 50 cents shipping, paperbound; \$10, plus 75 cents shipping, hardbound.

There is so much information jammed into this book that it is difficult to use, but

the conscientious seeker of art will find it most worthwhile. Art is defined to include not only the visual arts, but also architecture, and even festivals. Arranged alphabetically by state, the book guides the user to the arts of each state's cities and towns. It gives information on such an array of topics as museums, galleries and art centers; art fairs, festivals, parades and competitions; exhibitions and collections; selected artworks and sculpture gardens; historic and other interesting structures; art councils, clubs, associations and historical societies; chambers of commerce, commercial galleries and other sources; brochures, articles and books about art in a particular area.

There is one state which this user knows well, namely South Carolina. The section on this state outlines, of course, the wonders of Charleston and of Brookgreen Garden. But it also indicates that the hamlet of Roebuck possesses the attraction of Walnut Grove plantation, built about 1765, and that the town of St. Matthews possesses a county historical museum.

The compiler says the effort took "long years of work." It's no wonder. It is recommended to all libraries, and to travelers.

Historic Courthouses of New York State: 18th and 19th Century Halls of Justice Across the Empire State. Herbert Alan Johnson and Ralph K. Andrist. Photographs by Milo V. Stewart. New York: Columbia University Press, 1977. 174 pp. \$19.95.

County courthouses provide an interesting commentary on the social, historic and cultural significance of the courts in the time when they were erected. They also reflect America's changing architectural styles over the course of history. This picture book of all the known county courthouses built before 1900 that were still standing in 1976 shows New York State's varied and diverse legal history. It also reveals equally as much about the architecture that was deemed fit to contain and express the law.

There are several photographs of each courthouse, as well as a concise history of its architecture and construction. Even more fascinating, perhaps, are the sketches on what went on in some of the courthouses. For example, a trial in the Herkimer County courthouse gave Theodore Dreiser the basis for his *An American Tragedy*. Susan B. Anthony, the pioneering suffragette, was tried in the Ontario County courthouse. The New York County courthouse is a monument to Boss Tweed who promised the people a courthouse worthy of the city. He provided them with such a structure but at an astronomical cost.

The book will interest scholars of American architecture and of law, as well as admirers of the Empire State. □

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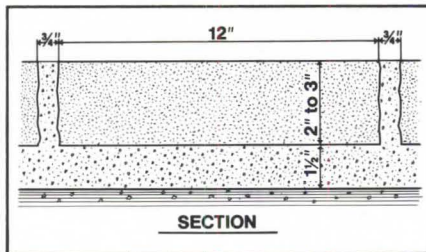
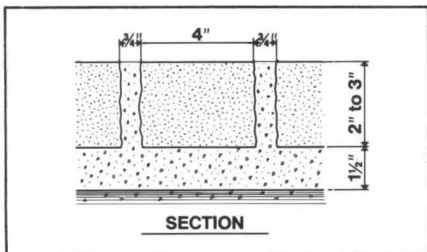
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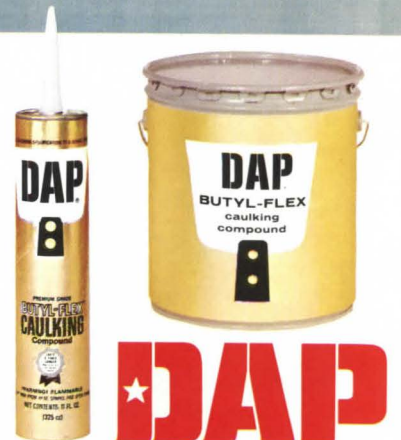
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INNOVATIONS IN DESIGN: One of a series created for DAP Architectural Sealants. Design and rendering by Richard P. Howard Associates, Architectural Illustrators, Sylvania, Ohio. Harold R. Roe, A.I.A.



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Going On from page 16

a "serious burden on the best use of space and of systems furniture." And responsibility for the maintenance and repair of workstations should be assigned.

There are several recommendations to designers of work environments, the first being that a comprehensive study of user needs should be made. Each office and workstation "should have the capacity to be reconfigured to accommodate handicapped people on an 'as needed' basis," and handicapped people should be located closest to main walkways. The square footage of a workstation is said not to be appreciably increased when there is adequate room for wheelchairs.

Further, the designers are advised to give careful attention to flexibility of location of telephone and power outlets. The best quality of acoustic ceilings should be provided. There should be no visual access from main corridors to workstations to eliminate distractions.

Recommendations are also made to manufacturers of systems furniture. Among them: Where phone or face-to-face conversations are frequent, there should be available sound-absorbent panels; a sound-masking system is necessary to suppress task-generated office noise; furniture systems should be equipped with cable-managing devices for electrical and telephone equipment; a graphic identification system should be provided, and each worker should be provided with private display areas.

For additional information, contact: Vivien Woofter, HEW, Division of Architecture, Room 4065, 330 Independence Ave. S.W., Washington, D.C. 20201.

Alaskans to Vote on Plan For Building Capital City

Alaska's legislature spent the last session, ended this month, in the preparation of an omnibus bill that would authorize the building of a new capital city 70 miles north of Anchorage. On Nov. 4, the people of Alaska will vote for or against an authorization in general obligation bonds. It is estimated that the cost to the state of building the new city and of moving the capital from Juneau will amount to about \$1.4 billion. Total cost, including private funding by developers, is estimated at approximately \$3.5 billion.

It is reported in the press that some Alaskans are worrying about the project because revenues from the new pipeline are estimated at \$100 million less in 1978 than anticipated. Those in opposition to the new capital have insisted that all costing be done, including inflation to the 1994 target date at 8 percent per year. The anticipation is that government will grow at 6 percent per year. Opponents of



the project hope that it will be abandoned if the people have to pay for it solely from taxes.

Earlier, an invitational design competition, overseen by the new capital site planning commission, resulted in the acceptance of a concept developed by a San Francisco joint venture architectural and urban design team of Bull Field Volkman Stockwell-Sedway/Cooke (*see* Feb., p. 14). A final concept was presented to the legislature in March.

Henrik Bull, FAIA, a principal in the architectural firm, says that the emphasis in the design of the new capital "was on bringing nature into every part of the city and making the surrounding wilderness accessible to all parts." The plan, he says, was also dictated by a "simple bus transit system which puts over 70 percent of the people within 1,000 feet of the line." The joint venture has now completed the work for which it was under contract.

Currently, an exhibit consisting of a 24-square-foot illuminated site model and eight 12-foot-square multicolored panels depicting aspects of the proposed new city has been "on the road" over the state to let the people of Alaska know about the plans for their new capital city to be built on a 102-square-mile site which is on a broad plateau about 700 feet above the Susitna Valley floor, wrapped around the slopes of Mount Bullion with beautiful vistas of Mount McKinley.

The current concept is expected to be

fully executed by 1994 for a projected city of 37,500 inhabitants. The first phase of building the city would be finished in 1982. If the bond authorization is passed, the following 18 months would be used in site preparation and for engineering, planning and design work necessary for refining a detailed development plan.

The natural site has dictated land use (photo of model, above). About three-fourths of the site would remain open space with only access corridors. Special areas of beauty would be set aside and never built upon. Trail systems would run along major park corridors or parallel a busway. Smaller paths would connect housing clusters to schools, and neighborhoods to each other. Major automobile roadways would flow on two arterials—a crosstown parkway and a loop road to serve the two town centers.

The design concept for the new city embraces such principles as a strong downtown for state governmental functions and major business and commercial activities; the maintenance of a city size suitable for walking between places as an alternative to private automobiles; compactness of development for land and energy conservation; neighborhoods of mixed housing and shopping facilities, with small residential clusters.

The downtown area would contain more than 2.3 million square feet of governmental services space and 300,000

continued on page 74

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Going On from page 72

square feet of major retail space. The joint venture team has proposed a "commons" to serve as a community gathering place and a spot where legislators could gather on an informal basis. There would be a convention hotel and other tourist accommodations, performing and visual arts center, library, museum, university extension, churches and indoor and outdoor recreational facilities. Some apartments, condominiums and town houses would be sited in the downtown.

Two village centers would contain 13 acres of commercial services, a high school and/or junior high school of 40 acres and two or three churches. There would be an array of housing choices. The plan provides for 1,245 low-density, single-family lots; 2,500 medium-density single-family lots; 3,740 town houses and single-family clusters; 1,250 mobile home spaces and 3,740 apartments. The centers would be close to shops and services.

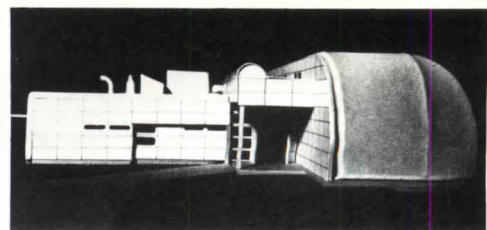
According to a report to the people of Alaska prepared by the new capital site planning commission that was distributed in 15 state newspapers, the new capital city would have many designers. "It is the nature of this plan that it not be designed all at once and by a select few, regardless of their talents. The plan anticipates the building of the city over a long period of time with many individuals responsible for separate parts," the report says. "It says that each private building will find "its own appropriate expression. The public buildings, too, will vary in architectural form as they will in size, purpose and the time of their construction."

A design review process is envisioned to "allow a proper dialogue between the public's interest in the environment and those private rights and interests expressed in individual projects." The process will require that every builder consider the environmental impacts of his work.

'78 Reynolds Prize Won By Georgia Tech Student

Roberto E. Paredes, a fifth-year architectural student at the Georgia Institute of Technology, has won first place in the 1978 Reynolds aluminum prize for architectural students. His design (model above) is for a prototype health center that would provide comprehensive medical services for rural areas. The \$5,000 prize will be divided by Paredes and his school. The award, administered by AIA, is given annually "for the best original design in which creative use of aluminum is an important contributing factor."

Certificates of excellence were awarded to Allen T. Koster, University of California at Berkeley, for a design which provides for factory-produced housing,



and to Gary K. Kauakami, University of Hawaii, for a solar control system that can be added to slab-type apartment buildings.

The first place entry is designed to be mass-produced. The facility, affiliated with a nearby hospital, would help alleviate the problem of unavailability of health care in areas of up to 10,000 population. The energy-conscious design has a southern-facing, flexible fabric wall which doubles as a solar collector making the facility totally self-sufficient for heating and cooling requirements, says Paredes.

The jury consisted of Roger H. Clark, AIA (chairman), North Carolina State University; J. Norwood Bosserman, FAIA, University of Virginia; Daniel T. Dolan, student at Yale University and 1977 winner; Patsy Orton, student at the University of Florida, and Loren A. Steel, student at Kansas State University.

AIA Ascertain Number of Registered U.S. Architects

If you go to the Census Bureau to find out how many architects there are in this country, you will be confused by the figures. The total includes marine architects, draftsmen and many other categories. The guesses about the number of architects will vary according to the sources consulted. One reason for this confusion is that the term "architect" is not defined. If you want to know how many registered practitioners there are, however, AIA has arrived at what is probably the most accurate figure to date. The number as of April 26, 1978, was 55,218.

The elusive number was a concern of William S. Slayton, Hon. AIA, when he was executive vice president of the Institute. In an effort to arrive at a fairly accurate figure, he requested each AIA state component organization to provide him with its state licensing board's roster of registered architects. This alone was not enough to give an accurate figure, of course, because one architect may be registered to practice in several states.

The next step, then, was to call in Tom Ainsworth, manager of data processing at AIA. He explains the process that followed, which required a year to complete: "With the aid of a computer and a clerk's eyeball, we attempted to delete from the total list the names of architects

continued on page 77



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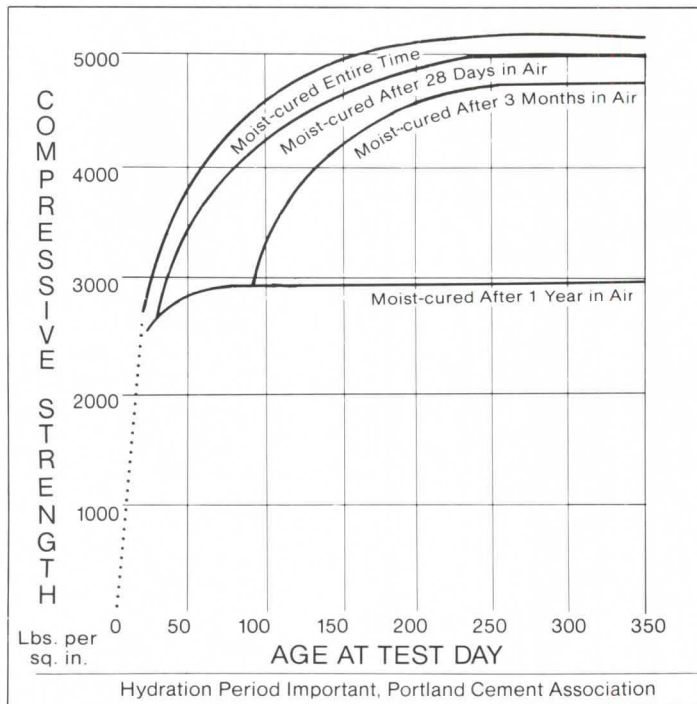
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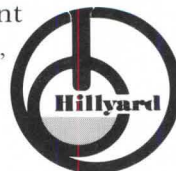
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CANADA		
Calgary	Hans van der Woerd	(403) 253-8660
Sarnia	Jack Struck	(519) 344-8881
Thunder Bay	Bob McGonigal	(807) 344-3881

Going on from page 74

with similar addresses." Thus, as far as humanly possible, duplications were weeded out in arriving at the figure of 55,218.

Richard Freeman, group executive for component/information at AIA, under whose supervision the final compilation was made, concedes there may be an error of 3 percent or more. He calls the figure of April 26 "a Polaroid shot of the situation as it was on that day."

According to the computer printout, there were 66,160 registrations. A total of 10,942 duplicate registrations were deleted in coming up with the 55,218 figure. Of this number, 27,327 are members of AIA, or about 50 percent.

In a comparison with the American Bar Association, it was ascertained that in March of this year about 52 percent of the nation's lawyers belong to ABA. At that time, ABA had 225,964 members and estimated that there were 431,918 lawyers.

The American Medical Association reported that in December 1976 it had between 205,000 and 210,000 members. AMA's estimate of the total number of doctors at that time was put at 409,446. Hence, roughly 50 percent of the doctors belong to AMA.

AIA/AIA Foundation Gives \$111,400 in Scholarships

The AIA/AIA Foundation scholarship committee recently awarded scholarships to 97 persons for continuing study in accredited schools of architecture. The 1978/79 winners were selected from 264 applicants. Total funds available amount to \$111,400 from 13 scholarship funds. This year's awards to individual students range from \$500 to \$2,000.

Scholarships are given in two categories: to students in either of the last two years in an accredited first professional degree program and to holders of a first professional degree who wish to continue beyond this degree in programs of architectural study and research.

Two of the 1978/79 scholarships are in the latter category, and awards were made to David Scott Clarke, AIA (Yale University) and to Robert Hamilton Wicker (McGill University).

The committee (DeVon Carlson, FAIA, chairman; Leon Bridges, AIA; Richard Dozier, AIA; Jean Young, AIA, and student Julia Takahashi) considered four primary factors in making a selection of scholarship recipients: the student's statement of purpose, supportive comments from the dean or administrative head of the architectural school, the financial need of the student and the student's academic record. The amount of

each scholarship is related "to how strong the student is academically and how substantial his/her financial need is."

The 97 scholarship recipients will study in the 1978/79 academic term in 45 accredited schools of architecture in this country and one school that is recognized by the Royal Architectural Institute of Canada.

Deadline for applications for 1979/80 scholarships is Feb. 15, 1979. For further information, contact Ray Charity, AIA headquarters.

National Trust Honors Efforts in Preservation

The National Trust for Historic Preservation has selected 1978 winners of awards for achievements in the field of historic preservation. The awards were presented in May during ceremonies marking national historic preservation week.

The following received the David E. Finley award for "outstanding achievement in the preservation, restoration and interpretation of sites, buildings, architecture, districts and objects significant in American history and culture at the state or regional level":

- The Garden Club of Virginia, for the preservation and restoration of 23 historic gardens in the state.
- John L. Cotter of Philadelphia, for "his distinguished service for more than 35 years as an archeologist. . . ."
- Historic Green Springs, Louisa County, Va., for its "long and tenacious struggle to preserve the area's historic environment."
- Mystic Seaport, Inc., Mystic, Conn., for its program of displaying, preserving and interpreting historic vessels.
- Roosevelt University and Mrs. John V. Spachner of Chicago, for the restoration of the Auditorium Building and Theater by Adler & Sullivan.

For "outstanding achievement in special areas in support of historic preservation, though not necessarily in preservation itself," the Gordon Gray award was given to:

- Nellie L. Longworth of Washington, D.C., executive director of the national lobbying group Preservation Action.
- City of Cambridge, Mass., for publication of the *Survey of Architectural History in Cambridge*.
- Mrs. Gray D. Boone of Tuscaloosa, Ala., editor and publisher of *Antique Monthly* and *The Gray Letter*.
- Four banks in Oak Park, Ill., for financial support of the purchases of the Frank Lloyd Wright home and studio.

The National Trust's president's award for "achievement in preservation that is of significance to the community" was presented to the following:

continued on page 78

Going On from page 77

- Town of Alderson, W. Va., for preserving a 1914 bridge across the Greenbrier River.
- Cleveland Trust Co. and Union Commerce Bank, Cleveland, for the restoration of two Beaux-Arts buildings that continue to serve their original functions.
- Mrs. Rosemary Stroub Davison of Florissant, Mo., for leadership in preservation efforts in her community.
- Whatcom County Park and Recreation Board, Bellingham, Wash., for the restoration of a late 19th-century farm and homestead.

The National Trust also gives a public service award "for outstanding achievement by public officials in the enhancement of the environment through historic preservation."

Awards in 1978 went to Moon Landrieu, former mayor of New Orleans; Henry C. Chambers, mayor of Beaufort, S.C.; Richard H. Chambers, chief judge in the ninth circuit, U.S. Court of Appeals, San Francisco; William D. Schaefer, mayor of Baltimore; Edward R. Oppel, head of the bureau of construction management in Baltimore, and Robert C. Embry, former commissioner of the Baltimore department of housing and community development and now assistant secretary, HUD.

AIA Headquarters Staff: Changes and Additions

Nancy Truscott has assumed the position of general counsel for AIA. She has been assistant secretary and legal counsel since Oct. 1976.

Alan Stover, AIA, will work with Mrs. Truscott as deputy legal counsel. He has been director of documents for AIA since June '74. In his position as deputy legal counsel, Stover will also act as counsel to the documents committee and counsel to the national judicial committee.

Robert Packard, AIA, will become the director of the newly consolidated documents/graphic standards division within the practice and design department. Packard will continue as editor of the revised edition of *Architectural Graphics Standards* and assume the additional responsibility of overall coordinator of the AIA documents program.

Jim Schuping has been promoted to the position of administrator of component affairs. Schuping has been with AIA since Jan. 1977 as director of local component services and membership coordinator.

Tom Bennett will succeed Mrs. Truscott as assistant secretary. He worked as an assistant to a U.S. congressman and senator before coming to AIA in 1971.

He first was director of Congressional liaison and, since 1975, has been the director of state component affairs.

Architect/attorney Dale R. Ellickson, AIA, has joined AIA as assistant director of the practice division. He will help focus greater attention on professional liability concerns, strengthen programs that generate major practice-oriented publications and help administer and edit manuscripts for AIA practice publications.

Ellickson received a bachelor of architecture degree from the University of Minnesota and a law degree from the Atlanta Law School. In Atlanta, he managed a variety of architectural and planning projects including work on that city's proposed subway system. He also practiced law with an Atlanta firm and worked two years as an urban designer for the new town of Jonathan, Minn.

Another new staff member is Marisa Ramirez de Arellano, AIA, who is deputy director of professional interest programs. She is a graduate of Carnegie-Mellon University, was an architect with the federal bureau of prisons, a planner with the Pittsburgh department of city planning and had an architectural practice in Washington, D.C., before joining the staff of the Institute.

Robert Rosenfeld is changing desks at
continued on page 80

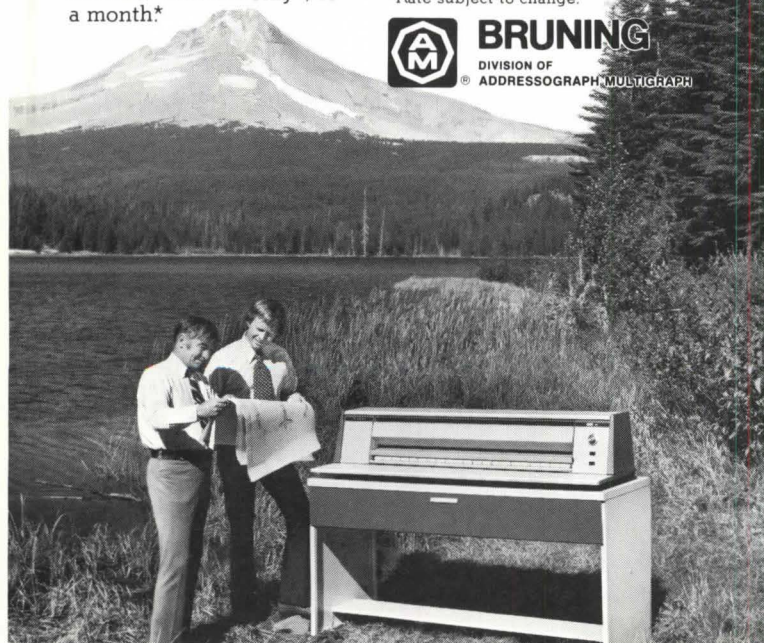
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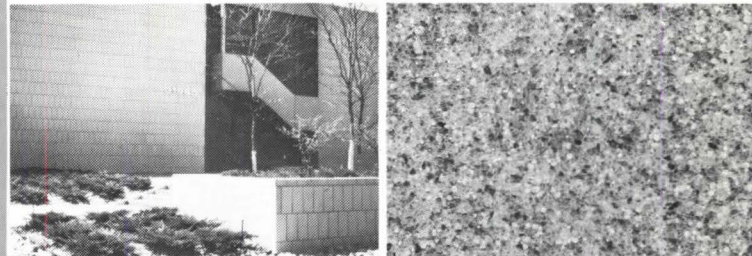
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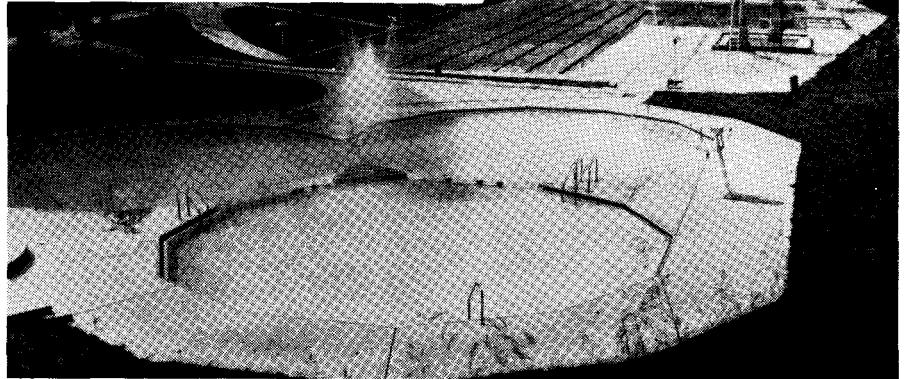
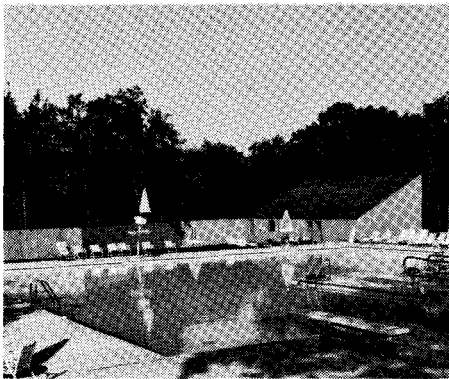
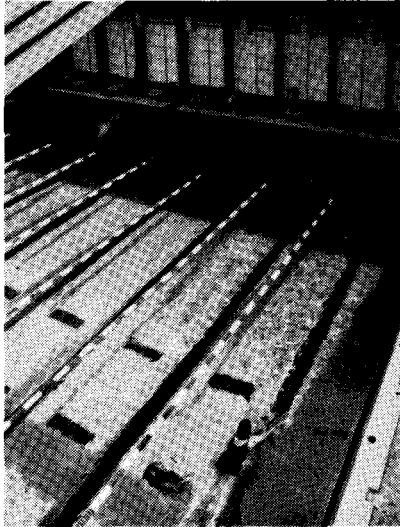
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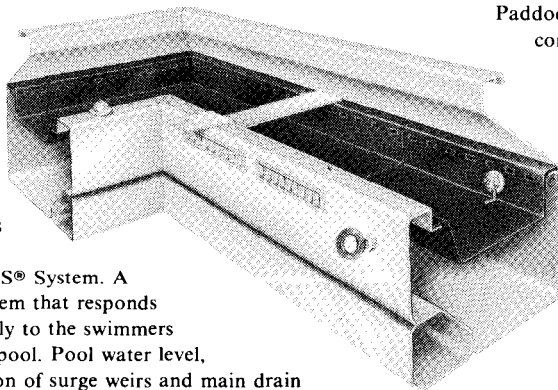


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Going On from page 78

AIA. He will assume the position of assistant director of continuing education this month, upon the conclusion of his term as vice president of the Association of Student Chapters/AIA.

Deaths

Edward O. Anderson, Salt Lake City
Byron H. Becker, Phoenix
W. C. Bierrum, Kalispell, Mont.
Willard R. Burks Jr., Pine Bluff, Ark.
Edwin G. Charle, St. Louis
Howard T. Chow, Los Angeles
Horace M. Coy, Toledo, Ohio
Benedict Farrar, St. Louis
Gordon B. Ferguson, Albuquerque, N.M.
Bertram C. Hill, Dallas
Frederick C. Hummel, FAIA, Boise, Idaho
Ross R. Hutchason, La Canada, Calif.
Joseph Levy Jr., Brooklyn, N.Y.
James D. Lorenz, Dayton, Ohio
Robert M. Miller, Albany, N.Y.
Joseph J. Patterson, FAIA, Fort Worth, Tex.
Eugene H. Paulus, Versailles, Mo.
Emmit M. Robison, Kansas City, Mo.
E. J. Rutledge, Scranton, Pa.
Howard C. Snyder, Yonkers, N.Y.
Walter D. Spelman, Rockville Centre, N.Y.

Frederick Stanton, Evanston, Ill.
Bertram D. Stuart, Seattle
James H. Ticknor, Glencoe, Ill.
David Ward, Cleveland
Willard J. Wendt, Toledo, Ohio

Newslines

The Historic House Association has been established through the efforts of the National Trust for Historic Preservation. HHA will represent the interests of private owners of historic houses before government bodies and will provide its members with information on sources of money, programs and laws affecting their properties. James C. Massey will serve as executive director of the new organization. The HHA headquarters are at the Decatur House, 740-748 Jackson Place, N.W., Washington, D.C. 20006.

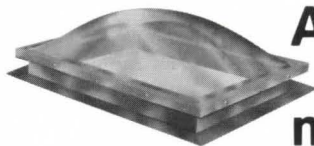
Architects' drawings as an art form was the subject of a recent exhibit entitled "Imaginary Architecture" on New York City's Wall Street. Sponsored by New York University's graduate school of business administration, the aim was to show the business community how the architect's original vision moves from the first sketch to final reality. The work of four young architects—Francoise Bollack, Tom Killian, Geraldine Pontius and

David Prendergast—was shown. All are employed by architectural firms in Manhattan.

A program of obtaining artworks has been initiated by the Veterans Administration. The artworks, to be installed in and around VA facilities, are aimed at improving the environment for patients, staff and visitors. Most of the artworks will be designed as permanent parts of each building project, although some art will be bought separately. For information, contact Blake J. Ratliff, (202) 389-2911.

Douglas Bruce Eason of Clemson, S.C., and **Margaret Moore** of Albuquerque, N.M., have been awarded graduate fellowships in health facility design, given annually by AIA and the American Hospital Association.

"**Urban Law and Policy**" is the title of a new periodical to be published quarterly by the North Holland Publishing Co., 52 Vanderbilt Ave., New York, N.Y. 10017. Edited by Patrick McAuslan of England and Otto J. Hetzel, Wayne State University law school, the concern of the magazine is the impact and role of law and urbanization on each other. Subscriptions are \$46 yearly. □



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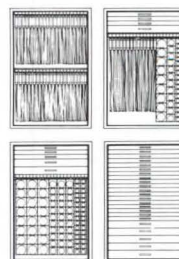
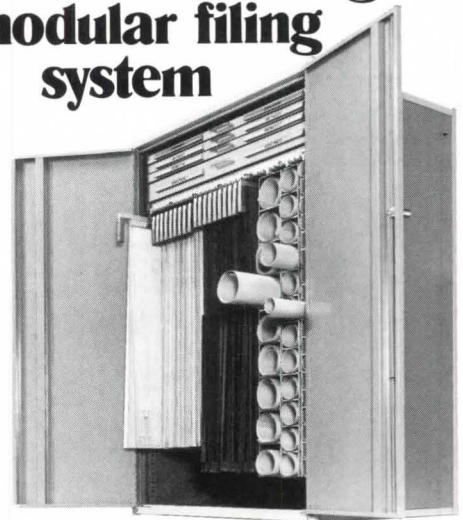
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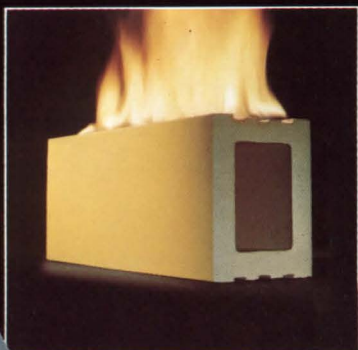
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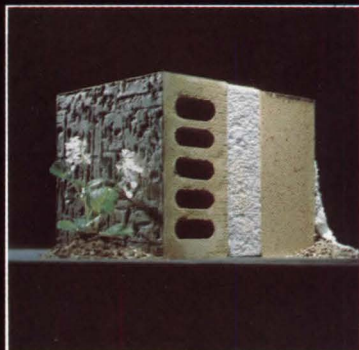
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