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America rebuilding — a problem in continuity

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YAMASAKI'S NEW DELHI PAVILION

A feature attraction in President Eisenhower's whirlwind, 11-nation tour last month was the just-completed World Agricultural Fair in New Delhi, where the U.S. was represented by a gold-domed pavilion designed by Architect Minoru Yamasaki (shown above talking to Indian workers). Yamasaki's pavilion, which Eisenhower opened at night ceremonies (lower picture), is really four buildings between which stand 32 precast concrete golden domes, each 17 feet across and 40 feet high. The domes cover open walkways between the buildings and around the several lagoons and fountains that separate the buildings.

1960 will be another big year for building—probably slightly bigger than the all-time record of 1959. This was forecast last fall by FORUM (Oct. '59), and last month it was underscored by the annual predictions of the Department of Commerce.

Commerce predicts a construction total of $55.3 billion, a 2 per cent increase over 1959, which was in turn a whopping 10 per cent higher than 1958. (Allowing for price increases, the physical volume of building in 1960 will probably be about the same as in 1959.) FORUM had forecast a 1960 total for new construction of $55.7 billion, a rise of 1.5 per cent from 1959. The difference in the over-all building totals reflects the difference in the timing of the two forecasts: FORUM's forecast, made just as the steel strike was getting under way, was based on an estimate of $54.9 billion of new construction in 1959, whereas Commerce's forecast, made at year-end with solid knowledge of just how much the strike had cut into construction, based its forecast on a 1959 total of only $54 billion. FORUM's forecast for 1960 was therefore based on higher 1959 totals than Commerce's, although both predictions agree closely on the amount of over-all dollar increases.

The biggest difference of viewpoint between FORUM and Commerce lies in estimates for residential construction in 1960. Although both forecasts see a drop in new dwelling unit construction (largest single category of building) in 1960, FORUM is somewhat less pessimistic than Commerce, which predicts a hefty $1 billion drop in homebuilding. FORUM forecast a drop of half that magnitude. In any case, homebuilding is certain to decline in 1960—down from the record level of $17 billion last year, a 25 per cent increase over 1958. Homebuilders themselves have recently been predicting declines of from 10 per cent to 12 per cent in new housing starts. The reason for the anticipated decline is, of course, the tight mortgage money market. Some easing of this situation is foreseen for later in 1960. And there is a distinct possibility that Congress may give homebuilding the same sort of shot in the arm as it did last year, when it voted an emergency $1 billion for the Federal National Mortgage Assn. to buy home mortgages, and thereby expand the volume of lendable home mortgage funds.

Commerce supports FORUM's prediction that apartment construction will continue to boom in 1960 as it did last year, and will thereby account for a larger proportion of total new dwelling units than has been the case in recent years.

Commerce is more bullish on the outlook for non-residential construction than FORUM is; the biggest single difference lies in the Commerce prediction for office building—up $300 million in 1960, compared to FORUM's estimated rise of only $50 million. A major reason for this difference stems from Commerce's feeling that many projects that got under way last year will, for lack of steel and other reasons, contribute heavily to the statistics for 1960.

At first glance, Commerce would appear to be more bullish on industrial construction, also, but the biggest differences between the two forecasts are not in the 1960 figures but rather in those for 1959. The steel strike evidently accounted for a bite of about $700 million out of 1959 industrial construction, for this is the difference between Commerce's post-strike forecast (of $1,950 million for '59) and FORUM's pre-strike prediction ($2,020 million). As for 1960, the two predictions are within $50 million of each other ($2,400 million for Commerce, $2,450 million for FORUM) and in any case it will make the biggest year for industrial construction since the all-time peak in 1957.

On most other non-residential building categories, FORUM and Commerce are pretty much in agreement. One notable difference, however, shows up in estimates of social and recreational construction, which has been one of the fastest growing segments of building for several years. Whereas FORUM predicted a rise of only $25 million in social-recreational construction, Commerce anticipates a 30 per cent increase, raising the 1960 total to $700 million.

Both forecasts are almost identical in predictions of public building totals for 1960, but there are two significant differences: 1) Whereas FORUM predicted highway construction would be the same as in 1959, Commerce foresees a $100 million drop, which is, coincidentally, exactly the difference in

continued on page 6
the two estimates of 1959 highway building; and 2) Forum forecast a $100 million rise in military building, but Commerce predicts a $115 million drop.

On the whole, the two forecasts support Commerce's observation that "New construction in 1960 should act as a stabilizing force, but not contribute to the over-all economic expansion as it did in 1959."

Segregation in Dallas a problem for AIA in '62

At last fall's board meeting, the directors of the American Institute of Architects enunciated a new policy: "That facilities be selected for national conventions which do not restrict any members of the AIA in the exercise of their membership rights as defined in the by-laws and related documents."

The reason for this new policy was, of course, the controversy over last summer's convention in New Orleans.

Several chapters, including the New York City chapter, were prepared to call for a resolution demanding such a statement, because of the fact that segregation in New Orleans prevented Negro members of AIA from participating fully in convention functions. (Although AIA has few Negro members, none of whom went to New Orleans, several said they would have gone to the convention if it had been in a non-segregated location.) An open floor discussion of the problem was avoided by shrewd maneuvering in New Orleans, but the directors promised to draft a policy statement at a subsequent meeting.

The big question now is not this year's convention in San Francisco, or the 1961 meeting at Denver, but rather the following year's scheduled meeting in Dallas. AIA Executive Director Edmund Purves told Forum last month that "We don't anticipate any difficulty whatever" in Dallas, and added that "We have been pretty well assured by Texas members that it would be all right." Dallas AIA Chapter President George L. Dahl says he has been "assured by municipal officials and hotel people that there will be no segregation problems for Negroes attending the AIA convention."

But the fact is that none of the major Dallas hotels will serve Negroes today in public dining rooms or provide Negroes with room accommodations. A manager of one of the city's largest hotels says flatly "It just isn't done yet — I know of no exceptions among Dallas hotels." Negroes can attend sessions in private meeting rooms, and be served in private dining rooms in Dallas, but that is the limit of nonsegregation. In fact, there are three damage suits pending against the Statler-Hilton because that hotel refused to honor reservations made by Negroes coming to Dallas from out-of-town. But that hotel still holds firmly to a segregation policy. As a spokesman said last month, "We hope this situation will eventually work itself out, but right now we still have to go along with the general policy maintained by hotels in this area."

AIA's directors meet again late this month, and presumably the Dallas situation will be a topic of discussion. If no action is taken, it is likely that the same chapters that attempted to switch the site of last year's convention from New Orleans will work to get away from Dallas. And, as one AIA member said last month, "We will not be put off this time by the excuse that there is not time enough to make the switch."

Big business gets into Columbus renewal

Two powerful business organizations recently merged interests to form a new urban renewal company which could become a major force on the U.S. redevelopment scene. The two companies, Nationwide Development Co. and John W. Galbreath & Co., announced the formation of the United Redevelopment Corp. and indicated that the new company's first venture would be to try to get the job of redeveloping the Goodale District of Columbus, Ohio, a 55-acre multi-use site about one mile northwest of the city's central business district.

Columbus redevelopment is a natural for the new corporation, because both Galbreath and Nationwide have home offices there. Nationwide is a subsidiary of huge Nationwide Insurance and Galbreath is one of the biggest land developers in the U.S. Galbreath made his first move toward urban renewal last summer, when his company set up a special renewal division, headed by A. Charles Brooks, who has worked closely with Columbus's Slum Clearance and Rehabilitation Commission when he was a member of the Development Committee for Greater Columbus, a private advisory group. Galbreath enlisted the aid of long-time friend, Murray D. Lincoln, president of Nationwide Insurance, and the joint venture was launched. In 1953, Galbreath sold Lincoln 1,170 acres of land near Columbus on which Nationwide built its Lincoln Village community, for which Galbreath was sales agent.

The area that will be United Redevelopment's first target is an aging section of Columbus commonly called Flytown, not because of its insect muster, but rather because of the transient nature of its inhabitants over the years. Despite the seedy nature of the area, it is strategically located, accessible to Ohio State University, the Battelle Memorial Institute, and downtown Columbus. The tentative plan of the Slum Clearance and Rehabilitation Commission calls for two to four family houses on about one-third of the residential area, the rest to be three-story and high-rise apartments making a total of about 1,000 units. SCAR wants to sell the residential and commercial areas (about 35 of the total 55 acres) as one package to a single redeveloper, and it is expected that the new Galbreath-Nationwide combine will have a fast and clear inside track. Not only does the new combine have solid financial
backing (the project will probably cost around $20 million) but, being familiar with the city's problems, it knows pretty well what SCAR demands. SCAR hopes to take bids by next spring on Goodale, and will reserve the right to pick any redeveloper, regardless of who might offer the low bid.

United Redevelopment is concentrating on redevelopment in its own yard at least for now. The expectation is that it will also develop plans for the city's biggest renewal area, the 110-acre Market-Mohawk project, but that so far is still in preliminary stages. However, the new company says it will not restrict itself to Columbus alone, although it has no definite plans for bidding on areas in other cities yet.

AIA Pres. Richards hits New York school plans

Last month, AIA President John Noble Richards vigorously attacked a proposal approved by New York Gov. Nelson Rockefeller to offer stock school plans to small communities in the State. Richards characterized the proposal as "socialized school building," and "planned waste," and noted that of 26 states that have previously attempted to use stock plans for schools, only six still use the technique, and five of those provide plans only for four-room schoolhouses.

Rockefeller, with the caution of an unannounced presidential candidate, refused to back the stock plan scheme wholeheartedly, but did give it his "qualified support." At the last session of the New York State legislature, a bill was introduced that would have made it mandatory that stock plans be used by cities of less than 125,000 persons. This measure died in a committee of the State Senate, but its sponsors say that they will submit it again this year. Rockefeller's scheme would be voluntary; the cities would be able to choose, if they elected to use the stock plan system, from about half a dozen different plans.

Richards, in his address before the New York Society of Architects, pointed out that stock plans, although conceived to save money by eliminating the architect's fee, actually are more costly. They are not easily adaptable to special problems of site and varying community needs. And schools, Richards asserted, "should reflect the character and uniqueness of each community." Perhaps the most damaging argument against the stock-plan scheme, is that they are not geared to incorporate "new advances in design and materials." Richards also pointed out that, in a recent investigation of the Bureau of Design and Construction of the New York City Board of Education, it was found that the cost of preparing plans by municipal architects ran from 18 to 20 per cent of the total construction cost, while private architects charge fees, for the same projects, of from 6 to 9 per cent. Concluded Richards: "The city saves 10 per cent when it commissions a trained private architect."

Chicago suburb fights integrated housing

Integrated housing, heretofore largely an urban phenomenon, was creating headlines in suburbia last month, specifically in Deerfield, Ill., on Chicago's North Shore. And integration in housing was taking a giant stride toward reality throughout the biggest home-building state in the U.S.—California.

In California, the State Attorney General, Stanley Mosk, last month ruled that the recently passed state law prohibiting discrimination "in all business establishments of any kind whatsoever" applies to real estate offices. This, in effect, makes it unlawful for any real estate agent to discriminate in the sale or rental of any dwelling unit. Although Mosk's opinion is not the final legal word, it will stand until a court decision can reverse it.

In Deerfield, the question of integration is at a more workaday level than in California. Builder Morris Milgram, 43-year-old head of Modern Community Developers, Inc. (FORUM, Oct. '58), which has built two integrated housing developments near Philadelphia, Pa. (where Milgram himself lives), and two near Princeton, N. J., has bought a 51-lot site in Deerfield. There he proposes to sell 12 of his $30,000 to $35,000 homes to Negroes. Most of Deerfield's suburban, executive-class families are fighting Milgram, often hysterically, but so far ineffectively. An unofficial poll taken recently by the group opposing the project reportedly shows 3,500 residents against the integrated development.
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velopment, only 460 for it, and professional rabble-rousers have converged on Deerfield in recent weeks to keep the pot bubbling.

Milgram, for his part, is still calm, even in the face of threats by Deerfield’s Park Board to condemn his project site, if he does not sell it to them. Milgram hopes to keep the balance of Negroes to whites at about 1-to-3, as he has attempted to maintain quotas for minorities in all his other projects. (Milgram usually stabilizes the quota in the first few years of the project by requiring Negro sellers to sell only to Negroes, and whites to whites, or by simply buying up the houses himself should residents wish to sell.) Most of the arguments against Milgram’s scheme are based on prejudice, or, in some cases, fear that property values will be hurt by the project. (Values have not fallen in any of Milgram’s other projects.) The next hurdle for the builder will be to prevent the Park Board, or some other town body, from taking over the site by condemnation. Milgram says he will fight such a move by legal action, and adds, “I trust the people of Deerfield will abandon hysteria and realize that the sale of a few homes to Negroes of comparable economic and cultural backgrounds will not change property values.” As for the poll, showing Deerfield against his project by almost nine to one, Milgram says “Human rights exist regardless of any poll.”

Soviet architects have their troubles, too

One of the first Soviet activities to be “liberated” following Stalin’s death over six years ago was architecture, but recently, Soviet architects have complained that they are not getting needed support from either the government or the Communist party. Architect Aleksandr V. Vlasov, writing in the influential government paper Izvestia, recently charged, that although architects are laboring to achieve “reasonable simplicity and function” in design as a reaction to the more traditional rococo Russian style, builders and city planners are lagging behind. Also, Vlasov charged, there is no effort being made to educate the people to know and appreciate good “style” in furniture and clothing, as well as architecture, sculpture, and painting. Vlasov also said that architects cannot do an adequate job in the face of the conservative de-

sign traditions followed by many of the Soviet communities and republics.

Soviet architects have been grumbling that builders have not done justice to their advances in design, and more recently, there has been some criticism that the architects themselves have not been providing the proper leadership for the Soviet building boom, and this is reportedly the reason for Vlasov’s article. How much effect Vlasov’s article will have remains to be seen, but at least architecture no longer seems to be the stepchild it was for nearly 40 years under the Bolsheviks and Stalin.

NAREB ponders money, economics of renewal

Recently, about 5,000 Realtors trekked to Toronto, Ontario for the annual convention of the National Association of Real Estate Boards. Although there were several speeches and sessions extolling the wonders of the host nation, and Toronto, the Realtors were understandably more preoccupied with their own problems south of the border, particularly the question of high interest rates. On this issue, the visitors from the U.S. seemed unwilling to see their own plight (rates on conventional mortgages run about 6 to 6½ per cent in the U.S.) in the context of Canadian mortgage rates—7 to 7½ per cent. Besides voicing wide-spread complaints about the stifling effects of high interest rates on building—and on real estate speculation—NAREB officially called for the establishment of a new National Monetary Commission to investigate the structure of monetary and credit mechanisms in the U.S. Such a move is a direct outgrowth not only of the association’s growing concern over rising rates, but also of their fears that rates might be going still higher next year. These fears were reinforced by the annual survey of the Society of Industrial Realtors, which queried 300 financing agencies, found that 72 per cent believed rates would rise further next year, while only 2 per cent foresaw any drop. However, 20 per cent of the correspondents foresee a greater supply of mortgage funds next year, relative to this year, while 84 per cent forecast less money available, and 46 per cent believe available funds will about match 1959 levels.

The Realtors did considerable thinking and talking about the 1960s. Outgoing president James Udall predicted that for every two homes built in the fifties, there would be three built in the sixties, and the same would be true of shopping centers. And he said that “in the older areas of your city, a 1970 observer will see still more changes in new construction, in alteration of buildings, in removal of old structures that will make some of these areas unrecognizable in comparison with the appearance they present today.”

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TURNER-GALBREATH PROPOSE $200 MILLION NEWARK REDEVELOPMENT PLAN

The redevelopment of a vast area adjacent to downtown Newark was proposed last month by Turner Construction Co. and John W. Galbreath & Co. The plan, which must be approved by the city, proposes four new office buildings (with a total 1-million ft. of space), and a residential development of 10,000 units in high- and low-rise structures. Architects for the venture are John R. Diehl & Francis R. Stein, of Princeton, N.J.
By way of instructing members on how they might utilize monies that NAREB hopes can be saved from recommended reductions in government spending (and presumably in taxation), the American Institute of Real Estate Appraisers, an affiliate of NAREB, published a series of case studies in real estate investment, showing how wealthy investors can enrich themselves while seemingly racking up staggering losses. For instance, one wealthy investor sunk over $8 million into the purchase of an office building ($1.7 million of this was his equity, the rest mortgage loans) which would produce no cash flow whatever for 19 years. In the first six years the total of interest on his mortgage plus depreciation charges exceed the net rent receipts from the property, and thus the investor has no taxable income whatever. After this time, however, the portion of amortization that is taxable rises more steeply, and so it is at this six-year point that the investor should sell. The payoff, according to the AIREA survey: Normal income, subject to high income tax rates, is deferred for six years while additional equity value is gained. This value is taxable at lower capital gains rates when the property is sold. Also, the net loss on income can be used as an offset against other income.

Such tax-loss mumbo-jumbo invariably generates more interest at NAREB meetings than does the question of routing urban blight, but the conventioners were drawn to attention by the remarks of James W. Rouse, mortgage banker and ACTION head, who is an old hand at preaching urban renewal in terms his listeners understand. Rouse warned the realtors that for cities to fail to get on with renewal "may be the most impractical action of all." He cited the "enormous economies" in coordinating public and private programs related to a comprehensive plan of neighborhood growth. In particular, Rouse mentioned "the huge savings to local government in the acquisition of land for schools, public buildings, and highways if the needs are projected and the sites acquired in advance of development and ahead of need."

New Jersey protests plans for giant jet-age airport

A huge, jet-age airport 25 miles west of Manhattan in an area known as the Great Swamp of New Jersey's Morris County was proposed last month by the Port of New York Authority. The airport's 10,000 acres would make it twice as big as Idlewild, now the biggest in the U.S. (The Dulles International Airport, now getting underway at Chantilly, Virginia, will also cover about 10,000 acres.) Runways would be 12,000 feet long, about double the length of most conventional big-city airport runways today, and buffer zones would be included, in the form of empty land parcels blocking the airport off from surrounding residential areas.

The Port Authority presented impressive arguments for the new airport, all pitched to the growing inadequacies of the area's three present air terminals, which the Port says will not be able to meet traffic needs by 1965. However, Jersey residents and legislators rose in quick protest to the Port's ambitious scheme. At a preliminary meeting, representatives from Morris County denounced the project, and many powerful Jersey figures boycotted the meeting completely because the highly profitable Port Authority last year ducked responsibility for aid to Jersey commuters. Governor Robert B. Meyner has said that a key factor in his approval or disapproval of the proposed airport will be the noise factor, but Meyner is hardly in favor of the plan, at least so far. Meyner said he would have to have "more than the assurance of the Port Authority" that jet engine noise would not be a nuisance to the well-heeled suburban communities surrounding the airport site. The Port Authority must have the approval of the State legislature to extend its present boundaries in New Jersey before the airport could be built, as Morris County is outside PA's present jurisdiction.

Should the New Jersey governmental units involved all approve the airport, it would be finished, according to the Port Authority, by 1968. Total cost, will be about $220 million.

Briefs

Metropolitan government is a dying notion, according to Prof. Robert C. Wood, M.I.T. political scientist. Pointing to rejections of metropolitan government proposals by voters in St. Louis and Cleveland at last November's elections, Wood predicted that, "The can of worms of all local governments jumbled together is going to remain on the American scene...you can be sure there will be no systematic redrawing of the boundaries of local governments, except in isolated instances." Wood's pessimism may be reinforced when results are known of a Ford Foundation-financed survey into voters' reasons for killing St. Louis metro proposals.

Workers in the building trades racked up one of their best post war years in terms of wage gains, in the year ended last July, according to the Bureau of Labor Statistics. With plumbers and iron workers leading the way (each group won a 20 cent per hour raise), building trades workers averaged hourly increases of 16 cents in the 12 months, pushing the average to $3.51 per hour. Top paid workers: bricklayers at $4.04 per hour.

Shopping centers out of railroad stations is the aim of a New York real estate farm, which has bought both the Rochester and Buffalo passenger terminals of the New York Central. The purchasers are Atkinson & Troutman, who have developed shopping centers in Indianapolis and commercial developments elsewhere in the U.S. The railroad will replace the stations with newer and, presumably, smaller facilities.
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No federal program has suffered worse under the two terms of the Eisenhower Administration than the public housing program. It has been consistently stifled by the White House, and, recently, has been victim to personal feuds within the units of the Housing & Home Finance Agency itself. In terms of accomplishment, the record has been bleak. Not all of the Public Housing Administration's troubles can be laid at the feet of 62-year-old Commissioner Charles E. Slusser, who has headed the program for six and a half years. Slusser started his tenure (after an unprecedented five terms as mayor of Akron, Ohio, 1944-1953) as an enthusiastic supporter of the housing philosophies of the late Senator Robert A. Taft, who had advocated a six-year, 810,000 unit program. Yet Slusser has never been permitted to ask for more than 35,000 units a year, and has, in fact, had to fight to keep that volume. Meanwhile, administrative difficulties both in Washington and in the cities themselves have led to a pile-up of over 99,000 units of public housing under contract, but not under construction yet.

Last month, Slusser, who has had the support of neither the professional "public housers" nor his own Administration, warily resigned. No successor has been named to inherit the stagnant muddle that has become the federal public housing program.

NEW DIRECTOR FOR GREENWALD'S EMPIRE

When builder Herbert S. Greenwald was killed on a Chicago-New York flight last February, he left behind a multi-million dollar complex of luxury apartments and urban renewal projects, either finished or in various stages of completion—and no apparent successor. Greenwald had shown little talent for setting up any chain of command, had himself tirelessly pored through every detail of his many projects (FORUM, May '58).

The job of pulling together the 50 odd separate corporate entities Greenwald had established, and of keeping the whole operation functioning, fell to the man who will manage the organization that has been formed out of the Greenwald empire—Greenwald's lawyer (since 1950) and associate, 37-year-old Bernard "Barney" Weissbourd.

Weissbourd is an energetic native Chicagoan, who lives in nearby Evanston, Ill., with his wife and four children. (Greenwald, unlike Weissbourd, was a confirmed city-dweller who lived in a plush apartment in one of his Mies van der Rohe-designed glass-walled towers on Chicago's Lake Shore). Weissbourd, however, has other similarities to his former client besides being a Chicago native. Like Greenwald, he comes from modest circumstances—he was a brilliant scholar—he graduated from high school at 15, finished studies for a B.S. in chemistry at the University of Chicago (Greenwald's alma mater) in three years, entered law school at the urging of Chicago's President Robert M. Hutchins. The war interrupted his law studies, but, in 1943, Weissbourd was called back to Chicago to work on the famed Manhattan Project, which developed this nation's first atomic bomb.

Weissbourd returned to law school, and in 1950 became a partner of Joseph P. Antonow, who was Greenwald's lawyer. Weissbourd took over management of Greenwald's legal affairs, and, as the two men became friendly, Greenwald leaned on Weissbourd for help in the management of his business affairs as well.

At first it was not certain that Weissbourd would head the new corporation—now called Metropolitan Structures, Inc.—or whether one of Greenwald's powerful backers, such as Empire State Building owner Henry Crown, might take over. (Crown will still be an important backer of Metropolitan Structures.) But last month, Weissbourd became president of Metropolitan Structures and immediately announced the start of a project that had never gotten much beyond the idea stage when Greenwald was busily building in half a dozen cities.

The new project is a large motel-hotel in downtown Chicago. The hotel portion, which will be joined to the motel, will be 11 stories high, have 250 rooms. The total cost of the project—$4 million. The building will be glass and aluminum faced, on a concrete frame.
Perhaps the most interesting fact about the motel-hotel is that it is not an urban renewal project and will not be designed by Ludwig Mies van der Rohe, Greenwald's famous co-worker on most of his projects. (The architect for the motel-hotel will be A. Epstein & Sons.) Weissbourd said last month: "I think Mies is a great architect. . . . I intend to work with Mies as Greenwald did, but also I will be employing other architects for specific jobs."

Weissbourd also says that, where "Greenwald was interested in the designs of Mies, I am more interested in the technology of Mies. . . . I have the same basic interest in research and technology that I did when I was a scientist." Like Greenwald, he feels that U.S. building technology is somewhat laggard, and he hopes to pep it up by encouraging new techniques and materials in his own projects. For this purpose he plans to set up a research section in his own company.

Operating from Greenwald's old penthouse office at 135 S. La Salle St., Weissbourd says he will continue to press the work Greenwald started in urban renewal. He hopes to build more units in Detroit, Brooklyn, and Newark, where Greenwald started renewal projects, and he is considering projects in several smaller cities.

**BRITAIN'S ENERGETIC INVESTOR**

The recent announcement that a British development firm, City Centre Properties, Ltd., had made a $25 million investment in the proposed $100 million Grand Central office building in New York, generated interest on both sides of the Atlantic, but was no surprise to the many Britshers who have had dealings with City Centre's energetic chairman, Jack "King" Cotton.

The 57-year-old Cotton has a reputation for executing massive projects with dispatch and efficiency. Several months ago, one of Cotton's representatives approached builder Erwin Wolfson about City Centre investing in Grand Central City, and the deal was clinched shortly thereafter. Besides the New York venture, in which his firm is a half-partner, he is working on a $20 million redevelopment project in London's Piccadilly Circus, an $18 million commercial-residential project at Notting Hill Gate (near Hyde Park), office buildings in Birmingham, South Africa, and the West Indies as well as a large development in South Wales.

Cotton rose to success from the obscurity of a Birmingham real estate office, where he took a job after attending King Edward's School and Cheltenham. On his 21st birthday Cotton quit his job, set up

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a one-man office which was soon giving his former employer a run for his money. He also launched, after his career was successfully established in the mid-1930s, an architectural firm called Cotton, Ballard, and Blow. Cotton himself is not a trained architect, but he has strong convictions about the value of design and has a hand in the designs of all his projects. (Not all staid Britons share Cotton's taste, however. His firm's design for the major building at Piccadilly Circus, a 13-story office building, has created a major fuss in London, and set off an official investigation. Most of the criticism centers about the fact that Cotton proposes to make the building's facade a massive patchwork of billboards.)

Cotton today has most of the attributes of the modern, self-made millionaire. He is humble and self-effacing despite his dynamism in business dealings. He claims he likes to listen rather than talk, carries a cigarette lighter to light other persons' cigarettes (he smokes an occasional cigar, does not drink). Cotton characteristically expresses ignorance and some abhorrence of the grimy commercial world to which he is forced to devote some measure of his time, and claims to find his real pleasure in his art collection, his golf, and his gardening. Cotton reportedly has said, "I have never understood money. I don't even sign the checks myself—that's the part of it I never understand. Money for its own sake has never meant much to me. All I want to do is to spread happiness wherever I am and however I can." He has also reportedly said, "I'm not a man who gives away money easily. I'm a very difficult man when it comes to parting with it. I think about it a very great deal."

If there seems to be some ambivalence in Cotton's own mind about the value of money, there is none in what he does with it. He lives on a lavish scale, with a suite in the West End's posh Dorchester Hotel, a Georgian mansion at Marlow on the banks of the Thames, and another home in Birmingham.
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Glass for beauty—A monumental bas-relief, smoothly integrated with shimmering curtain-walls of glass; that’s the headquarters of the Mutual of Hartford Insurance Company, Hartford, Conn. And that’s one of the beauties of glass. It blends so well, so unobtrusively with other architectural materials.

The great east façade is 110 feet long and 30 feet high. Cast from an original sand mold by sculptor Costantino Nivola, it consists of 132 concrete panels. The northern and southern exposures are framed in curtain-walls of glass, manufactured completely by Pittsburgh Plate Glass Company. Spandrels are dramatic Sable SPANDRELITE®, Pittsburgh’s glass in color. Windows are SOLARGRAY® Plate Glass for maximum light with minimum glare. And PITTCO® 82-X Metal Construction frames these components into a weathertight, timeless unit.

Pittsburgh’s contribution didn’t stop there. HERCULITE® Tempered Plate Glass Doors, West Tension Doors, PITTCO Hinges, Heavy Plate Glass windows, Polished and Rough Plate Glass partitions and Fiber Glass Insulation—all Pittsburgh products, all imaginatively used in the new structure.

When designing with glass, consider Pittsburgh Plate Glass Company as your complete source of supply. We have the production and supply facilities to meet your needs. Call on our Architectural Representatives for help with your glass applications. No obligation, of course.


Contractor: Industrial Construction Co., Hartford, Conn.

PITTSBURGH GLASS

... the basic architectural material
Glass for color—It's the Millville, New Jersey, office of The Prudential Insurance Company of America. And it's a shining example of what glass does for a building. Spandrelite®, Pittsburgh's heat strengthened glass with ceramic color fused to the back, gives the curtain-wall its rich Peacock Blue luster. There are 18 standard hues of Spandrelite, with custom colors aplenty. And all of it is available in polished or
twill finish. These glass spandrels are tough. They can hold their own against sharp impact, window-rattling weather, or teeth-chattering temperatures. They won't corrode and are non-absorbent. We have a full-color booklet that will tell you all about Glass Clad Curtain-Wall systems. If you'd like a copy, write to Pittsburgh Plate Glass Company, Room 9233, 632 Fort Duquesne Blvd., Pittsburgh 22, Pa.

*Architect: Frank Grad & Sons, Newark, N. J. Contractor: Massett Bldg. Co., Atlantic City, N. J.*
Glass for light—Every school needs a lot of glass. It invites natural daylight to cheer up the artificial light inside. It makes classrooms bright and lively for sharper vision, higher morale, and better grades. And it lets students enjoy nature all day long, yet protects them against her ugly moods.

That's the way it is at Maple Heights Junior High School, Maple Heights, Ohio. Walk around the building or through it—you'll find Pittsburgh Glass everywhere. PENNVERNON® Window Glass, TUBELITE® Metal Doors, ¾” Polished and Heavy Plate Glass, HIGH-FIDELITY® Mirrors—all contribute to the sprightly atmosphere and spacious design. Consult your architect about the many famous Pittsburgh glass products now being used in school construction.

Architect: Outcalt, Guenther & Associates, Cleveland, Ohio

Contractor: H. F. Juergens, Bay Village, Ohio
The new Pittco '900' Series—You can frame windows and glass-clad walls completely with the related components of the new Pittco '900' series. It is provided with a drainage system. All members are aluminum; all fastenings are concealed; all glass is held in neoprene strips and recessed to increase daylight opening. And the clean beauty of every line is strikingly apparent. For details, consult your Pittco Metal Representative.

Pittsburgh Plate Glass Company

Paints • Glass • Chemicals • Fiber Glass  In Canada: Canadian Pittsburgh Industries Limited
A roundup of recent and significant proposals

AMERICAN BAPTISTS' HEADQUARTERS AT VALLEY FORGE

Vincent G. Kling chose a circle to represent the unity of purpose of his client, the American Baptist Convention, which will bring all of its agencies together in this center at Valley Forge, Pa. Three office stories ring a chapel and courtyard (above), each agency's arc-shaped space separated by projecting stair towers. To symbolize the spread of missionary work, the one-story graphic arts building fans out from the ring (right). The smaller building (foreground) is a cafeteria and conference center. Cost: $5.5 million.

APARTMENTS AND ROW HOUSES IN WASHINGTON, D.C.

Two schemes recently put forward would spruce up Washington's Foggy Bottom area: a $20 million residential project (left), and the National Cultural Center (below). For the 6.5-acre residential site, Architects Kennard & Kennard propose 800 dwelling units divided into seven- and eight-story apartment buildings and row houses grouped around a swimming pool, pedestrian malls, and an outdoor cafe. A footbridge (far left) would span the inner belt highway and lead to the National Cultural Center. An underground garage would provide 1,600 parking spaces.

NATIONAL CULTURAL CENTER

Edward Durell Stone's design for the National Cultural Center in Washington D.C. (right) is a $61 million giant curving over the Potomac on built-up terraces. Inside, under the dome, there will be a round hall big enough to hold a Presidential Ball or a formal reception. Branching out to the left and right will be a symphony hall to seat 5,000 and a large theater. Small auditoriums for chamber music and lectures will flank a 4,000-seat opera house at the rear.
Turn loose your creative imagination on Vibrapac Architectural Block. One style alone gives you countless numbers of wall patterns. And each Vibrapac wall provides fireproof, textured beauty of dramatic contrasts. What's more, it's so easy to maintain. Specify this exciting product, Vibrapac Architectural Block, on your new building projects.

Most Vibrapac block plants can meet your specifications for architectural block—in many styles and sizes, interesting textures, and distinctive colors. Write for our A.I.A. Design Block Bulletin No. 139.
KOPPERS RESEARCH CENTER

Eventually the Koppers Company will concentrate all its research activities on a 176-acre site in Monroeville, Pa. The bird's-eye view (left) is the complete center, the first part of which will be finished later this year. Now under construction are a laboratory and office building (near left) and a power plant. In the second stage, Koppers will build an applied research building (center). Architects: Voorhees, Walker, Smith, Smith & Haines.

COUNTY HOME FOR THE AGED IN KANSAS

Early this year Johnson County, Kan., will begin construction in Olathe of a $700,000 home for the county's aged (below), financed wholly from a bond issue approved last year. Each major section will be linked visually by the consistent use of folded-plate, thin-shell concrete roofs and physically by covered walkways. Included in the scheme are (left to right): a recreation and therapy wing, a cylindrical chapel, an infirmary, a one-story administration building, a long residential wing, and a dining hall (not shown). Associating architects: Mackie & Roark, John Lawrence Duw.

SOUNDPROOF MUSIC BUILDING AT PRINCETON

By sinking practice rooms underground and soundproofing throughout, Architects Moore & Hutchins hope to make Princeton's music building (below) an acoustical marvel. The corrugated central portion will be a two-story hall large enough to hold a symphony orchestra or the university's band and glee club; faculty offices and classrooms will stretch out at either side. The exterior will be limestone with bronze sash. The necessary funds, estimated at $1 million, are being sought as part of a $53 million campaign.

CALIFORNIA CHURCH

Thin-shell concrete is the chief material in a three-building church complex (left) by Welton Becket & Associates in Los Angeles. Concrete hoops will alternate with glass wedges in the small chapel, and seven concrete vaults will span the sanctuary (near left). Colored glass chunks, embedded in concrete, will enclose the sanctuary's east and west ends and extend part way over side windows. The third building is a two-story rectangular fellowship hall.

LOS ANGELES OFFICE-AND-WAREHOUSE BEHIND A SCREEN

Parke, Davis & Co. has commissioned well-known architects to design its combination branch offices and warehouses and is setting them on major traffic routes. Like others in the program, the project for Los Angeles (above) will be close to highways and rail lines; and it was designed by Charles Luckman Associates. Both buildings in the combination will be of reinforced concrete; the office portion (right) will be screened by a lacy aluminum grille extending 5 feet out from the aluminum window wall.
THE BURGESS-MANNING 3-WAY FUNCTIONAL CEILING

UNIFORM RADIANT HEATING
UNIFORM RADIANT COOLING
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has the SIX POINTS of SUPERIORITY that make it your Best Buy

- STRUCTURAL SIMPLICITY
- MAINTENANCE ECONOMY
- ACOUSTICAL EFFICIENCY
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- VISUAL SATISFACTION
- FLEXIBILITY

Design & Physical

For complete descriptive information, write for "The Story of The Burgess-Manning Ceiling." It tells how you can obtain the ultimate in indoor comfort.

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709 East Park Avenue, Libertyville, Illinois

STRUCTURAL SIMPLICITY
Installed with usual suspended ceiling methods and components... no special framing for troffers... space above ceiling instantly accessible.

MAINTENANCE ECONOMY
Ceiling surface easily washable... all individual panels easily and quickly removable without damage... no mechanical maintenance... nothing to get out of order.

ACOUSTICAL EFFICIENCY
Choice of sound absorption coefficients identical to those of standard perforated metal panel acoustical ceilings... highest obtainable with regular construction.

THERMAL PERFORMANCE
Uniform heating and cooling... the only ceiling having direct contact between pipe grids and panels for even, efficient thermal conduction over the entire heating and cooling area.

VISUAL SATISFACTION
Special decorative designs available through variety of combinations in color, surface texture, inter-mixed panel sizes. Standard finish: high-grade baked-on flat off-white enamel complementing all room colors.

FLEXIBILITY
Thermally and visually adaptable to any building module... panels and troffer lights inter-changeable... panels salvageable for continued use in future remodelling and room changes.
$2 MILLION FLORIDA PLAYHOUSE

When the elaborate theater above is built, Fort Lauderdale theater-lovers will sample a host of luxuries: a staffed nursery for matinee-goers' children, a teen-age soda fountain and lounge, an art gallery, a library, a penthouse and club for post-performance dining and dancing, and a drive-in ticket window. Alfred Browning Parker's design boasts the largest marquee in the world, allowing 30 cars to discharge their passengers at once. Building regulations require a hurricane-resistant reinforced concrete frame.

BOEING RESEARCH CENTER NEAR SEATTLE

As part of its push into basic research, the Boeing Airplane Co. plans an entirely new research center close to Seattle. The wall of the first unit (below), a laboratory, will be hung with porcelain enamel panels and gray heat-resisting glass. The small projecting portion (foreground) will grow into the next section: a two-story office building. Walter Dorwin Teague Associates, designers of the whole center, hid storage facilities in underground tunnels.

SCIENCE BUILDING AT WASHINGTON STATE COLLEGE

Late this spring the new science building at Western Washington College of Education in Bellingham (below) will open its aluminum doors. Inside, students will find a planetarium, aquarium, and greenhouses, plus an assortment of laboratories, lecture rooms, and faculty offices, all wrapped in an outside facing of colorful ceramic tile. The building's architect, Paul Thiry of Seattle, estimates the total cost (including equipment, furnishings, and fees) at $2.5 million for 102,000 square feet of floor area.

SPACE-AGE RESEARCH CENTER

Nortronics, a division of the Northrop Corp., will build a 50-acre research center on the Palos Verdes peninsula south of Los Angeles. Four of the five buildings in the first segment (right) will be office-laboratories whose roof-top vents and other utilities will be consolidated and enclosed in double folded-plate concrete penthouses. Slightly removed from the quadrangle, the fifth structure will be a two-story administration building (top) built of steel and glass. Architects: Charles Luckman Associates, Los Angeles.

TOLEDO FEDERAL BUILDING WITH A LANDSCAPED SETBACK

In downtown Toledo, the General Services Administration will build a seven-story, $5 million Federal Building (above), designed by the local firm of Bellman, Gillett & Richards. Set behind a 30-foot landscaped area on the front and a 9-foot strip at the side, it will be faced with granite on the first floor and a porcelain enamel curtain wall above. In addition to a ground-floor post office, other U.S. agencies will share the building when it is completed in 1962.
Quick, inexpensive openings for electrification!

... whenever you want them, wherever you want them — with Celluflor

The typical office interior today is streamlined to the nth degree. Big open work areas — a bare minimum of walls.

Where, then do you put the miles upon miles of wire a modern office building needs now — and the additional miles it's sure to need tomorrow? More and more architects are reaching this logical conclusion: In Celluflor.

Since Celluflor provides wiring raceways 6" o.c. under every square foot of floor area, no worker need ever be more than inches away from electrical, telephone, and dictation service outlets. Whenever a tenant needs a new connection, he has an electrician drill through the floor and pull up the wires — anywhere in the room! Circuits can be changed — new service outlets installed or relocated — without costly alterations.

Many buildings with a future use this floor with a future — including Union Carbide office building, New York City, and Kaiser Center office building, Oakland, California.

There are other advantages of Celluflor — savings of steel, footings, construction time, and overhead. See Sweet's — or write for Catalog 270.
Aluminum curtain wall . . . plastic window tints . . .
electronic guard system . . . water-repellent brick

ALUMINUM WALL SYSTEM
combines stock shapes, varied sizes
For high-rise buildings, the Reynolds Aluminum Economy Wall System HR802 (below) integrates stock components in a choice of finishes and sizes. Operating within a framework of three basic window modules (3 feet 8 inches, 4 feet, and 4 feet 4 inches), the architect can select a wall section ranging from 8 to 12 feet high. Typical mullion and panel details are shown in drawings, right. The aluminum panels are finished in either porcelain enamel or baked enamel, and their cores are glass fiber or laminated cement asbestos and foamed styrene, respectively. The average cost for the wall is $4 to $4.50 per square foot, excluding glazing. Manufacturer: Reynolds Metals Co., Richmond 18, Va.

Plastic coating is "flowed" on window, using a hose attachment. Tinted portion, left, shows how plastic film cuts glare.

TINTED-IN-PLACE GLASS
filters sun and heat through plastic
While the Eastern Airlines terminal at New York's International Airport (Forum, Nov. '59) was under construction, its architects learned that a strike would prevent delivery of the colored glass they specified. It was then, says Project Architect Alexander Bernhard (of Albert Gray's office), that they hit on the idea of tinting the glass in place. They hired a Chicago firm to apply a yellowish-green plastic coating to the terminal windows, its intensity and transparency varied for sun-control purposes. A deep-colored, somewhat opaque coating was squirted on the control tower to give maximum protection from sun and glare; less sunny areas got lighter, more transparent coats.

Eastern Airlines' tinted-to-order glass is but one example of the growing use of plastic glass coatings on new construction.

continued on page 56
NOONTIME, U.S.A. The clock strikes twelve—all America steps out to lunch. In company cafeterias employees have a welcome chance to relax and associate with other fellow members. Halsey Taylor is in this picture—has been for years—with modern cafeteria coolers that speed service and provide health-safe drinking water. Plant and management know that whether it’s a cooler or a fountain, if it’s Taylor-made it’s always dependable! The Halsey W. Taylor Co., Warren, Ohio.

Halsey Taylor

- They’re many different kinds of cafeteria coolers in the Halsey Taylor line... some water-cooled, others air-cooled, all designed for lifetime service.

ASK FOR LATEST CATALOG, SEE SWEET’S OR THE YELLOW PAGES

Until recently, their use was pretty much limited to older structures in need of a "lift" or as an antidote to high air-conditioning bills during a hot summer.

The three best-known suppliers in the field buy their coatings from paint manufacturers, use similar application methods, and employ factory-trained dealers. The coatings are: Acorn Advertisers, Inc.'s Plastic Glass Tint, made by the Rinshed-Mason Co. (the one applied to Eastern's terminal, photo above); American Glass Tinting Corp.'s Sun-X, made by Du Pont; and National Plastic Coating's Sun-Tint, made by Western States Lacquer Corp.

The application method common to all three is a "flow process." From a hose and nozzle at the top of the window, colored plastic runs evenly over the pane, the excess dripping into a trough at the bottom. There are minor variations in technique: Sun-X and Sun-Tint are inside coatings requiring no maintenance; Plastic Glass Tint usually goes outside and requires waxing and gentle polishing every two months. All three products are available in frosted and clear tints, such as green, blue, amber, gold, and gray; combinations give slightly different shades.

The major advantage of the plastic coatings is that they are cheaper than factory-tinted glass—as little as a third as much, says one company. Costs vary, of course, depending on the nature of the job, but the three firms quote costs at 40 cents to $1.50 per square foot. Because the coatings reduce sun heat and glare, they are often used in store windows to cut fading losses—instead of shades, curtains, and awnings. They have also been widely used on factory, bank, and office-building windows to cut air-conditioning costs.


AUTOMATED GUARD SYSTEM protects industrial plants

Electronic devices to snare a thief, sniff a fire, or watch plant gates are parts of...
a complete protective system developed by Minneapolis-Honeywell Regulator Co. From a central control board (see photo), a single guard can keep close watch on an entire plant and extend his surveillance to its boundaries up to 20 miles away.

Because no two plants need identical protection, the Honeywell Electronic Security System, which is built to order around a compact console (4 by 4 feet, 2 feet deep), is adapted to whatever coverage is desired by the addition of subsystem panels. Though many combinations can be worked out, the manufacturer recommends at least two detection systems used in combination, chosen from such devices as fire and smoke detector heads, tamperproof magnetic switches on windows, electronic noise and motion detectors, and capacitance electronic fencing. Any of these alert the guard by both an audible alarm (horn, buzzer, or bell) and a visual alarm (lights on the panel) that indicate where the trouble is. By means of push-button switches on the panels, a guard can control entry at plant gates and keep track of a visitor—a truck, for instance—by following it on TV. He can also speak with visitors over a two-way communication system. Electronic noise and motion detectors rely on pickups spotted about the building and a device called the Vitronic Eye, which detects changes in light patterns. Another motion detector, the Sono-Sentry, picks up changes in the sound-wave pattern made by beaming an audible signal into a closed area. An electronic fence, which detects the presence of unauthorized persons within 3 feet of it, also has a built-in compensator to prevent false alarms from such harmless causes as rain, sleet, birds, or blowing paper.

The savings from the substitution of electronics for manpower are expected to be considerable, up to 40 per cent of a company's annual operating expense for security. As for completeness, the manufacturer says the system "can detect any form of building security violation presently known to us." Even if the single guard should collapse at his post, a built-in safety device flashes a warning to police headquarters in the area.

Manufacturer: Minneapolis-Honeywell Regulator Co., 2747 Fourth Ave. South, Minneapolis 8.
new U.S. Mission Building installs durable McKinney Hinges

There's a new addition to the United Nations. It's the impressive U.S. Mission to the United Nations Building. The unique design consists of a 12-story office wing with a facade of cast stone, an adjoining service core and a 2-story auditorium wing. Located near the U.N. Headquarters complex, the Mission Building functions as the only U.S. Embassy office building within the continental United States.

McKinney Hinges were chosen for installation throughout this proud addition to the U.N. It is through trouble-free performance on important jobs such as this, that McKinney has built a reputation for fine quality and dependability.

On your next job, give your clients the best. Specify McKinney Hinges.

Associate Architects: Kelly & Gruzen—Kahn & Jacobs, New York, N.Y.
Hardware Contractors: Atlantic Hardware & Supply Co., New York, N.Y.
Hinges: 475 pair of McKinney 4⅛ x 4⅝ full mortise ball bearing butt hinges, plus additional quantities of other McKinney ball bearing hinges.

PROTECTIVE BRICK TREATMENT reduces water absorption rate

A chemical beauty treatment applied to brick directly from the kiln helps them retain their new look by reducing water absorption and, in turn, discoloration. (The photo shows a treated brick, top, and an untreated one after 6 hours in a sodium-sulfate solution.) Especially recommended for very porous brick, such as the common and antique varieties, Silaneal seals out enough water, while allowing the brick to “breathe,” to minimize staining and efflorescence. Silaneal is a dilute silicone solution applied to brick as a dip or spray which dries to a colorless, odorless film.

Silaneal-treated brick offers some distinct advantages over untreated brick of high suction rate: a handsomer appearance over a long period (even white or light-colored brick will stay new looking longer), and the “wetting down” step in bricklaying can be eliminated.

Some brick manufacturers offer treated brick at no extra cost; others charge a slight premium.

Manufacturer: Dow Corning Corp., Midland, Mich.

MACHINE-APPLIED FIREPROOFING undercoats existing metal roof deck

Following the disastrous fire at General Motors' Livonia, Mich., plant six years ago, which was fed by dripping asphalt from the roof, similar metal roof deck installations in industrial buildings were downgraded from “incombustible” to “combustible.” Two years later, the Factory Mutual Engineering Division of the Associated Factory Mutual Fire Insurance Companies, after extensive tests, set up two categories for existing insulated metal deck construction: Class I, low combustibility; Class II, all others.

For those rated Class II, a New Jersey firm manufactures a product called Cafco Blaze-Shield, an inexpensive coating which has been accepted by Factory Mutual as a means of upgrading Class II systems to Class I without installing sprinklers. Sprayed to the underside of a metal roof deck, it forms a light-density coating offering thermal insulation and improved sound conditioning at a cost of about 25...
cents per square foot. The material is a blend of inorganic mineral fibers and binders, shipped dry in bags, and mixed with water on the site.

Manufacturer: Columbia Acoustics & Fireproofing Co., Stanhope, N.J.

PERFORATED FACING TILE absorbs and “loses” sound

Stuffed with a sound absorbing glass-fiber pad and perforated with a myriad of \( \frac{3}{4} \) inch surface holes, ceramic glazed structural facing tile has taken on acoustical properties. The new product is SCR Acoustic—the initials represent the Structural Clay Products Research Foundation of Geneva, Ill., which developed the tile.

Acoustically, the tile has a sound-absorption factor of 65 per cent and a sound transmission loss of 47 decibels, making it suitable for school cafeterias and corridors, music rooms, gymnasiums, and factory areas. A 4-inch wall has a fire-resistance rating of one hour, or two hours if backed by \( \frac{3}{4} \)-inch of plaster.

When the perforations occur at regular intervals, the tile pattern resembles pegboard; a random-punched version is also available (see photos). In either pattern, the tile may be ordered in 25 glaze colors but in only one size: 4 by 5 by 12 inches.

It costs 2 or 2\( \frac{1}{2} \) times as much as structural glazed facing tile.

Manufacturer: Metropolitan Brick, Inc., 1017 Renkert Bldg., Canton, Ohio.

PLASTIC FLAGGING TAPE marks boundary lines, danger spots

Some brightly colored vinyl tapes are made by Keuffel & Esser to flag stakes marking boundary lines, property and utility lines, and danger areas. The tapes are 1\( \frac{1}{4} \) inches wide and cost 96 cents for a 300-foot roll. They are said to be weather- and wind-resistant, and are easily marked with a pencil or ball-point pen.

Manufacturer: Keuffel & Esser Co., Adams and Third Sts., Hoboken, N.J. END
On a dry lake bed, 12 miles southwest of Kansas City, Vic Regnier built himself

This is Phase One. It includes 21 stores, 12 offices and a 13,000 sq. ft. basement

Architect: John F. Granstedt, Kansas City, Mo.  Structural Engineers: Uri Seiden & Associates, Kansas City
Contractor: Vic Regnier Builders, Inc., Kansas City  Structural Steel Fabricator: Hankens Steel Erection Co., Belton, Mo.
800 feet of ranch style shopping. Its name: Ranch Mart. Its cost: $1,250,000.

auditorium. Phases Two and Three will add store and office space, plus bowling alley and large department store. Because Ranch Mart is located in the heart of the tornado belt, Regnier gave it a strong backbone of steel—500 tons of USS Steel. “Experience has shown us,” says Regnier, “that structural steel gives a building permanent strength. It’s also the fastest, most economical material for tying a building together.” Vic Regnier is sold on steel and U.S. Steel’s ability to deliver, fast, anywhere in the country.
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Investigate how MONTGOMERY can help you modernize your present elevator system economically for better service to your tenants and clients.

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Plan to use Kliegl Pinhole Downlights in your next project. In the meantime, for complete information, write for our Architectural Lighting Catalog.

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SUPERIOR **ALL-COPPER PLUMBING** IN THIS SCHOOL
AT LOWER COST TO TAXPAYERS

COPPER SANITARY DRAINAGE LINES roughed-in among structural members at Gower School. This space-saving installation would have been impracticable with heavy, bulky pipe requiring threaded or caulked joints.

COPPER SANITARY DRAINAGE LINES for second floor lavatories at the Gower School. Light weight of copper tube and ease of making solder joints save many dollars on multiple installations like this. Compact assemblies eliminate wide plumbing walls, give greater usable floor area.

Phil Bergeron and Jerry Wehrmeister, plumbing contractors near Chicago, have found that the installation economies with copper tube and solder-joint fittings enable them to offer all-copper plumbing—water supply and sanitary drainage—at a cost lower than competitive bids based on installing ferrous piping. Recent jobs awarded to them as low bidder include the Gower School, the LaGrange Township Junior High School, a church, health center, two restaurants and a store. Anaconda was used for all these jobs. Phil Bergeron says, "We specify Anaconda Copper Tube and Fittings because their consistent fine quality and close tolerances makes our work easier and keeps the job costs within our estimates."

Contractors, builders, and architects the country over are finding that they can provide long-lasting, low-maintenance all-copper plumbing at a cost competitive with ferrous piping. For information on Anaconda Copper Tube and Fittings, write for a copy of Publication C-33. Address: The American Brass Company, Waterbury 20, Conn. In Canada: Anaconda American Brass Ltd., New Toronto, Ont.
Architectural lighting

a new catalog by Century

New architectural developments demand a wider range of lighting equipment. Century's latest catalog presents concise information on lighting instruments for creative interiors. Four categories are presented which serve a multiplicity of functions: downlighting, diffuse lighting, wall lighting and accent lighting. As a first step in planning and selecting the proper lighting unit, Century will send its new architectural lighting catalog on request.

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containing a sensational Ultra-Violet Light Inhibitor and Mildewcide. It is guaranteed to outlast and outwear ANY clear finish in its price class. Therefore, the next time you want a deluxe, long lasting clear redwood finish, you are invited to specify Super Liquid Raw-Hide (A.I.A. File No. 25-B-17)

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MOUNT VERNON, NEW YORK
Facade of the proposed office building for the State Employees Building Corporation in Sacramento, California, combines insulation value with handsome appearance. Thinlite panels of clear vista tiles, accented with colorful ceramic-faced glass tiles, were selected for floor-to-ceiling installation. They provide good vision while effectively reducing costs of air-conditioning the building. Vista panels also admit maximum light and provide low heat transmission. Spandrel panels are green for contrast. Gray anodized aluminum struts are custom-finished to the architect's specifications.

Complete freedom of design with prefabricated THINLITE curtain walls
As it has for so many other new buildings all over the country, Thinlite prefabricated curtain walls bring design distinction and beauty to the proposed office building for the State Employees Building Corporation in Sacramento, California.

For Thinlite combines all the excellences of curtain wall construction... plus almost limitless design freedom. Colorful random designs... exciting mosaic patterns... you have a wide choice of colors, shapes and textures, in stock or custom-prefabricated panels. No two Thinlite buildings need look alike!

Thinlite is a completely weathertight wall. A double-Neoprene gasketing system automatically locks out wind and weather. All component parts are prefabricated. Very little cutting and fitting are needed at your job site. And that means really big construction savings for your clients! They save on maintenance, too, because Thinlite panels are self-washing. Aluminum struts can’t rust or rot.

Thinlite offers you a brand-new dimension in design freedom. Send for complete data file on Thinlite now. Write Kimble Glass Company, subsidiary of Owens-Illinois, Department AF-1, Toledo 1, Ohio.

Thinlite Curtain Wall
AN 11 PRODUCT

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GENERAL OFFICES - TOLEDO 1, OHIO
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Recently an independent research organization asked architects: "What brand of flush veneered doors is your first choice preference?" More than twice as many chose Roddis than the next leading brand! Why this great vote of confidence?

These architects know the Roddis name represents a standard of quality and craftsmanship unmatched in the industry. A standard maintained through more than 60 years of manufacturing and design leadership.

Today, more and more architects are specifying Roddis Doors. In the nation's schools, for example, School boards . . . and taxpayers . . . are vitally concerned that their new schools be built of quality products for greatest long-run economy. They insist on doors that will assure proper function, low maintenance and safety, for decades to come. Roddis has them!

Roddis now offers the most complete wood door line wholly designed and produced by a single manufacturer. May we send you our latest brochure? Write to:

Roddis Plywood Corporation, Marshfield, Wisconsin.

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THE MOST RESPECTED NAME IN DOORS
CURTAIN WALLS
by GENERAL BRONZE

FOR THE NEW HOME OFFICE BUILDING
EQUITABLE LIFE ASSURANCE SOCIETY
NEW YORK CITY

Contractor: Turner Construction Co.
Architects: Skidmore, Owings & Merrill

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STREET

CITY, ZONE, STATE
America rebuilding

A problem in continuity

Recalling how the discovery of America "fired the imagination of the Old World to the point of frenzy," the French Dominican priest R. L. Bruckberger asks himself what the first settlers found on the New Continent that so captivated them and all others? And he replies, "Their delight lay in finding nothing. They had to start afresh ... as though they stood on the threshold of history." They were in paradise. "As they set foot upon those wild, abandoned shores, these Puritans first carefully shook from their feet the dust of the ancient European Babylon, then kneeled to bestow a pious kiss upon the Promised Land, the tabula rasa of their Utopia."

Tabula rasa, the "clean slate," is what America is no more. The offspring of the early Utopians are now born into a nation which is a world power with a built-up civilization — and a built-up country.

Yet that first deep habit persists, and the Song of the Broadaxe and the Song of the Open Road have been followed by the daily western on the tv screen. Accustomed to the thought of the great open lands next door, Americans find it hard to grasp that people unhappy in existing cities cannot simply move out and onward as before, creating new communities—or suburbs—and leaving old messes behind, as the pioneers did. Adjusted to independent, individual enterprise, the sons of the pioneers find with dismay that no matter where they build they are soon surrounded—and not always happily—and the value of what they do becomes dependent very largely on others.

Subtly and gradually there has grown a new frontier that ranges not outward from existing boundaries but inward into existing communities which the pious forefathers and their not so pious successors founded. Here lies the new job to be done, and it is a job of rebuilding; here, to paraphrase Carlyle, now lies America. Not yet is America suffused, however, with the idea of rebuilding. Not yet is there an avid appetite for rebuilding, or a considered approach to it, or a proper technique for it. Not yet has this new exploration been met with hallelujahs. (continued)
The sheer scope and speed of the transformations that have already been effected, without hallelujahs, should nevertheless fire the imagination. Within less than a century the heart of Chicago was transformed from a city of wood to one of brick, then one of steel, but with elements of the wooden city still remaining. Los Angeles, which was, rather unbelievably, a nice little cowtown in 1880, population 11,000, became successively an orange town, a retirement town, a movie town, an oil town, an air center, a manufacturing center, and the world's biggest roadtown; and the bits and pieces of all this stand intermingled.

Sums spent for individual building renovation are big but give only a partial picture of America's never-ending redevelopment. Adequate statistics do not exist, so building economists such as Miles Colean have furnished shrewd approximations. According to Colean, for every three dollars that the American spends on new construction he spends another dollar and more on maintenance and repairs, or "patch and paint work." The annual maintenance and repair bill is moving upward from $20 billion. Beyond that there are alterations and additions of all kinds, moving upward toward $12 billion, and of this the share devoted to houses and buildings is over $8 billion.

The full scope of rebuilding

A far more vivid notion of the coming rebuilding problem may be gained by contemplating the three so-called "explosions" that will reinforce one another. The well advertised population explosion means, according to the best prognosticators, that the year 1970 will see 213 million Americans compared with 178 million today, and the year 2000 may perhaps see as many as 375 million. Add a predicted gain for the decade of 10 to 20 million in automobile population, "exploding" onto perhaps $60 billion worth of new highways. Top it with a $500 billion boom in new construction—equal in value, though of course not in bulk, to all existing structures.

Now the point is that all of this will happen on the same total land area, no more; and inevitably a great deal will have to be changed in existing built-up areas. Since one man's building stands in everyman's city, his single structure, even if he builds it completely new, is in respect to the city as a whole merely an alteration. And ever more often the individual building, too, may have to be altered in the future rather than wildly torn down to make way for a new one, as America husbands her resources under continuing defense burdens.

What this all adds up to is America Rebuilding.

Now in all such discussions of growth and trend, there is one hidden but rock-hard assumption—the assumption that American building is a continuity. This might seem hardly worth mentioning, it is so self-evident. Yet it works squarely against ingrained American habit, the habit of considering only new buildings as significant—and as a never-ending series of separate undertakings on fresh land viewed as tabula rasa.

America lacks a controlling philosophy which considers its history as a continuity, its cities as a continuity, its architecture as a continuity, and the life cycle of the individual structure as one, to be so planned from the very beginning of each undertaking. The cities of America are full of "fresh starts," and so is its architecture, and so is its building technology. The consequence is too much new building that disrupts instead of furthering city organization, too much new architecture that is not adjusted to the existing city picture, and new building that is not fitted for efficient conversion—whether by addition, remodeling, or demolition—not to speak of remodeling that fits with nothing.

The problem of restoring harmonious continuity is the key problem to which the editors have devoted this issue of FORUM. They have not forgotten that it must be achieved mainly by voluntary agreement and mutual adjustment, not by superimposed authority. The issue is divided into four sections: rebuilding as the art of cities, as building economics, as building technology, and as architecture. Continuity is conceived as no relapse into the past, no surrender. It is viewed as the essential economy of effective progress. Nor does it betray the great American dream. After many a deviation and mistake, the evidence is that Americans are ready to apply themselves to the new exploration: really converting the Promised Land of the forefathers into the New Jerusalem for the children.
America rebuilding

CITIES

1 2 3 4
College Hill map shows proposed 25-year plan for organic redevelopment. The shaded area indicates the extent to which the college campuses are likely to grow. Numbers refer to the following landmarks: (1) the First Baptist Church; (2) St. John's Cathedral; (3) Benefit Street; (4) Roger Williams Spring; (5) the Rhode Island School of Design; (6) Brown University; (7) Pembroke College; and (8) the Hope High School and its grounds. The panoramic view, below, shows most of College Hill today, with its sadly rundown waterfront on the Providence River in the foreground. The area at right is centered on South Main Street; the white spire visible at far left is that of the First Baptist Church.
Providence hopes to preserve its architectural tradition by integrating structures of the past with plans for the future

The story of College Hill in Providence, R. I., is a fine demonstration of what can happen if a band of enthusiastic amateurs and idealistic professionals decides to tackle the impossible.

The impossible, in this case, is a 400-acre neighborhood about two minutes’ drive from downtown Providence (see plan and panoramic view, opposite). This neighborhood—College Hill—has been largely and happily by-passed by progress (one reason: it is tough to build a rhinestone factory on a 30-degree slope); it contains three college campuses—Brown, Pembroke, Rhode Island School of Design; it boasts the lovely, Gibbs-inspired First Baptist Church of 1775, and the charming, neo-Gothic, Episcopal St. John’s Cathedral of 1810; it also includes numerous, handsome old houses, ranging from earliest Colonial, through stately Greek Revival, to exuberant Victorian, some in fine shape, most of them falling apart due to neglect. It has, moreover, two distinct slum areas—a predominantly Negro slum to the north, a predominantly Portuguese slum to the south; and, finally, it can point to a liberal dose of historic associations: Roger Williams built his settlement at the foot of College Hill, Washington and Revere stopped off and slept in houses along Benefit Street.

The routine way of rebuilding as heterogeneous an area as this would probably be to encourage the colleges to handle their own problems with whatever aid might be available to them, and to hand over everything else to a developer to tear down and rebuild from scratch. There would be a few, polite obituary notices lamenting the sad loss of historic Benefit Street, and there would be some irate editorials about inadequate relocation of displaced families; but progress must be served.

Instead, College Hill has taken the first steps to becoming an organically renewed community. It has fully recognized the problem of urban continuity by determining to preserve what is best in its past, and it has just as fully recognized the problem of urban growth by determining to find a place for new construction. And in doing these things, College Hill has avoided the mistakes of preservationists in areas like Georgetown (where all new construction must conform to outdated styles and standards), and the equally serious mistakes of ruthless modernists elsewhere, who have plunked big (and foreign-looking) projects into the midst of established neighborhoods.

Initiative from below

The spark that touched off a remarkable series of chain reactions at College Hill was a rather insensitive move some eight years ago by the management of Brown University. At that time, Brown decided to build a vast complex of bulky, false-Colonial dormitories and tore down some 30 historically valuable houses, including Governor Padelford’s house, to clear the site. Providence preservationists were up in arms, but could do nothing to stop the destruction. They did, however, determine to stop any more of this architectural erosion and turned to the City Plan Commission for help.

The Plan Commission, in turn, applied for aid under Section 314 in the Federal Housing Act which empowers the federal Urban Renewal Administration to make grants to specific cities for certain “demonstration studies.” The Commission persuaded federal authorities
to help finance a study of how an important, historic area might be renewed. The federal government chipped in with close to $50,000, the Preservation Society raised about $20,000 by popular subscription, and the Plan Commission agreed to supply an additional amount (in staff services, etc.) to bring the city's share of the cost up to 50 per cent of what the Government had provided.

There is nothing new about a preservationist society raising money to save a famous building or a famous street. But there is something distinctly new about the realization, on the part of the Providence preservationists, that their objectives could be attained only if they were linked to proposals for intelligent, future growth. The Providence preservationists never thought that they could (or should) make a museum out of College Hill; they did think, however, that there was a legitimate place for tradition in any plans for the future.

Help from many quarters

With the funds in hand, the Plan Commission retained Blair Associates to help conduct the College Hill demonstration study. Before long, the Providence demonstrators discovered that they had available to them numerous resources in unexpected places on which to draw for help.

There was, for example, Dean Darby Betts of St. John's Cathedral. Dean Betts, who had once studied architecture, helped develop a program under which the Diocese would acquire historically valuable but run-down houses around St. John's Cathedral, remodel them from foundations to roof, and turn them into housing for the aged. There was also Mrs. Malcolm Chace, a well-to-do preservationist who decided to buy more than a dozen run-down, but historically valuable houses at the north end of Benefit Street—the "spine" of College Hill—and restore them completely, leaving only the interiors to be fixed up by families wishing to buy the 2 to 4,000 square foot shells for from $11,500 to $18,000. There was Austin Daley, at City Hall, who went to work in the College Hill slum areas and managed to get some 500 dwelling units brought up to standard by their landlords simply by enforcing the minimum housing laws. There was the National Park Service which—it suddenly turned out—was perfectly willing to consider making the area around the Roger Williams Spring a National
College Hill, as it looks today, is shown in these photos; the drawings, from the demonstration study, show how it might look tomorrow. Opposite are typical, residential areas: (1) Early 19th century houses on Benefit Street; (2) Georgian house to the south of the Brown Campus; (3) suggested renewal of backyard area, with off-street parking and small, communal playgrounds; (4) a row of houses remodeled by Mrs. Chase on Benefit Street; and (5) suggested off-street parking behind Benefit Street, designed to take advantage of sloping terrain. Above and below are shown commercial and institutional areas; (6) a typical shopping area on Thayer Street; (7) a proposal for a small, pedestrian shopping mall; (8) the First Baptist Church, built in 1778; and (9) the new dormitories of the Rhode Island School of Design, completed recently by Architects Robinson, Green & Beretta, with Pietro Belluschi as consultant. These modern buildings blend well with existing structures on College Hill.

Park. There was a young architect, William D. Warner, who, as project director, covered every square inch of College Hill, took hundreds of photographs, studied ways of relating modern structures to neighboring old ones. There was the fact that, as one preservationist put it, "the atmosphere down at our City Hall was exceptionally good—the Plan Commission put in much more time and energy than they were being paid for." There were the colleges on College Hill which—after some clumsy, initial moves—became staunch allies of the project. And, finally, there was the Providence Redevelopment Agency—one of the most active in the country—which was constantly studying potential redevelopment sites within and around the College Hill area, and which was to play an increasingly important role as the study neared completion (of this, more in a moment).

A program for continuity

Last summer, after two years of concerted effort on the part of these Providence citizens and agencies, the demonstration study was completed. It was presented in a handsomely illustrated, 213-page booklet which detailed the problems of historic preservation, of zoning, traffic, parking, slum clearance, etc., listed specific proposals for the renewal of College Hill, and then presented a program for communal action. The study was one of the finest jobs of its kind ever done in the U.S. and attracted immediate public support, both in Providence and throughout the rest of the State.

In brief, the study proposed that the mile-long Benefit Street be turned into a "historic trail," with an enlarged Roger Williams Park and Museum near the north end of the street, and with tourist facilities near its south end, along Providence's sadly neglected waterfront. The study further proposed a new shopping center along Thayer Street, at the eastern fringe of College Hill, in place of the honky-tonk shopping facilities that now exist in the area. And it finally proposed the rehabilitation of numerous streets and blocks on College Hill by various means: by the restoration of historically valuable structures; by the removal and possible replacement of unsalvageable buildings (the replacement, generally, taking the form of modern houses carefully related in form and scale to neighboring old ones); and by the introduction of pedestrian walks, parks, playgrounds
and off-street parking areas. The drawing, opposite, shows the sort of result envisaged by the study.

First steps toward realization

So far, so good. But beautiful dreams have been put on paper before, only to die in the cold light of daily reality. Will this be the fate of the College Hill study?

Apparently not. In the few months since the study was first published, the following concrete steps have been taken:

› a permanent College Hill committee has been formed, with Dean Betts as chairman, to guide the development of the proposed plans;
› an act providing for “Historic Area Zoning” (as proposed in the original study) was passed by the Rhode Island General Assembly during its 1959 session and made applicable to other towns in the State as well. Significantly, owing to the influence of Dean Betts, this farsighted act does not repeat the error of George-town’s proprietors in demanding that new construction must be “look-alike,” fake-antique. Five other Rhode Island towns are about to enact Historic Area zoning ordinances as envisaged by the new act;
› a bill to create a historic park at the site of Roger Williams Spring will come up before Congress at its next session;
› there has been an intense interest in the proposal on the part of Providence banks (the R. I. Hospital Trust put a copy of the report on every executive’s desk), on the part of the College Hill institutions, and on the part of both local and out-of-town developers;
› finally, and most importantly, the Providence Redevelopment Agency decided, last month, to extend its Randall Square Project area to take in a large portion of College Hill, thus preparing the worst slum areas on College Hill for possible renewal under Title I (see map below).

To most of the enthusiastic amateurs connected with the study, these indications of progress are still hard to believe. For the past ten years or so, Providence—like many other New England towns—has been hard hit by the flight of certain industries to the South. Providence’s economic future did not look bright. Still, the City of Philadelphia seemed to have similar problems a dozen years ago, yet it managed to push ahead simply because its various citizens’ groups provided the initial impetus. It looks as if the story might be repeated in Providence.

The chain reaction started at College Hill has spread to other New England areas as well: at Newport, Yale’s Christopher Tunnard is conducting a similar study, and another effort is under way at Portsmouth, N. H. But the most important, immediate dividend of the College Hill study may be this: impressed by the College Hill effort, the Urban Renewal Administration a year ago offered a grant to Providence for another “Demonstration Study,” of the downtown area. This study will be completed in the spring and should have an important impact upon the future development of the city.

In 1953, when the preservationists first started their hue and cry, few “realists” thought they had a chance to achieve more than a couple of newspaper headlines. Today, as a result of dedicated citizen-action and enlightened support from City Hall, Providence is in a state of ferment and, despite many remaining obstacles, great things seem within reach. Not every urban renewal problem can be tackled this way; but many of them can be, and the approach tried in Providence seems more suitable to our society than renewal by fiat—from above.
Study proposes that fine houses on College Hill (above) be preserved and integrated with new ones of similar scale (below).
Without complete clearance, few decaying neighborhoods have re-established themselves; but from those that have, a hope for renewal in continuity may emerge.

Important as they seem today, the precedents for rebuilding America's cities will not be the dramatic clean-slate projects such as Pittsburgh's Golden Triangle office complex, New York's cultural center at Lincoln Square, or the housing at Chicago's Lake Meadows (below). Instead, future renewal will likely follow patterns now being set in the Society Hill projects in Philadelphia or in the Hyde Park-Kenwood community renewal program to the south of Lake Meadows (sketch right)—efforts where clearance and reconstruction are strategically knitted into subtle renewal programs of many dimensions. Perhaps even a few districts such as Jackson Square in San Francisco (page 101), where brand-new building is practically unknown, or Factor's Walk in Savannah (page 102), where the touch of remodeling has been so light as to be hardly noticed, may bulk as important to the future as today's biggest Title I projects. Indeed, if a project like Eugene, Oregon's Courthouse Square Civic Center (page 100) is a proper portent, American cities large and small will tie civic improvements, private construction, and Title I renewal into programs of integrated city rebuilding. And in these programs the distinction between building and rebuilding will be all but erased.

This new pattern does not mean that large-scale projects will be unnecessary. Where decay has eaten too deep, or where a neighborhood has neither saving grace nor heart, large-scale clearance and reconstruction may be the only solution. In the case of Lake Meadows, at least, the replacement of what may well have been the nation's number one slum with apartment towers in a wide grass meadow was doubtless a wise exorcism. In fact, Architect George Fred Keck, a long-time resident of the Hyde Park-Kenwood area, believes that the community around the University of Chicago can be renewed short of complete clearance primarily because the closer-in Lake Meadows section was completely cleared. "Now, instead of a slum, we have the best neighborhood in Chicago next door," says Keck.

Julian Levi, executive director of the non-official South East Chicago Commission, gadfly-prodders of Hyde Park-Kenwood's renewal, draws the distinction between the two neighborhoods this way: "In Lake Meadows they were working on a corpse. Here we've got a live patient, and we try not to forget it."

The trick, of course, is to match the treatment to the case. But until recently, too many public officials, businessmen's committees, and city planners tended to consider any neighborhood as the "corpus delicti" for a "renewal"
Community renewal plan for Chicago's south-side community of Hyde Park-Kenwood is obtaining a focus in civic space and civic spirit in the new shopping plaza and town-house squares now being built by Webb & Knapp. The project by Architects I.M. Pei and Harry Weese replaces decayed stores in the core of the area.
Transformation of Chicago's gloomy 55th Street into a residential square surrounding two ten-story apartment buildings (1) and a stretch of Harper Avenue nearby into an elegant small town-house square (2) are parts of the Title I project now bringing new residential patterns to the heart of Hyde Park-Kenwood. A smaller pedestrian square in the shopping center (3), now being completed, proves a pleasant contrast to the stores it replaced, while the first of nearly 250 owner-occupied town houses (4) proves that city living can be attractive. (The town houses sell in a range between $19,000 and $38,000.) Nearby, the University of Chicago is doing its part in the 55th Street transformation by constructing a new men's residence hall (5) by Architect Harry Weese, while in other parts of the community other institutions, schools, churches, and groups of individuals are preparing to participate in the new renewal plan.
program. Too often, as in Brooklyn's historic Heights section, a neighborhood fast renewing itself has had to contend with unsympathetic renewal schemes or antithetical civic monuments at its peripheries, imposed upon it unwanted.

On the other hand, antiquarians and quick, slick promoters tended to hang shutters on useless buildings and set old lanterns on antiquated streets needing far more drastic reconstruction. In Savannah, Georgia, for example, hard-by some fine, no-nonsense commercial rebuilding at Factors' Walk, a useless gas manufacturing plant was renovated into "colonial" houses and apartments. Ingenious as such performances may be, they miss the point as sadly as the most grandiose official "renewal" plans.

Unfortunately for people who like their answers in simples, it is not enough simply to mix treatments either. For every subtle and proper mixture of saved buildings and new buildings like Providence's College Hill (page 90), there are ten cases of arbitrary or insensitive mixtures such as St. Louis' soon-to-be-complete Plaza Square renewal where two churches mixed with six slab towers merely confuse the otherwise orderly arrangement.

Worse yet is Norfolk, Virginia's "Colonial Square," a 20-acre section of the 140-acre downtown renewal, where, according to the renewal plan, three surviving colonial buildings will be surrounded by a "colonial composite—a more modern version of the old village green."

Even more common than Norfolk's sadly misplaced effort at continuity is the effort to restore the appearance of the past at all costs. New Orleans' Vieux Carré Commission, for example, with legal authority to enforce their edicts, insists that all portions of a structure, even those parts behind high garden walls, be restored in the ancient style of the Quarter. Except for the window air conditioners, all new construction must look as if it is a century-and-a-half old. Recently the style fetish took its ultimate turn when a filling station was approved because it was designed to match a segment of old slave quarters on the site.

The truer values

However, pleasant these nostalgic tokens may be, to save them alone is to miss the point. Restoring old buildings and establishing ersatz architectural cohesion are dilettante acts compared to preserving sound social structures, maintaining important investments in structures, and continuing fundamental characteristics of community form and design. Indeed, if a single one of these values is present in the first place, it calls for more careful nourishment in a renewal program than the finest piece of "architecture worth saving."

Actually, to nourish these values, it is not so much what's done as how it's done that's important. The first step in the Hyde Park-Kenwood renewal, for example, was to clear and rebuild, under Title I, a delinquent and decayed commercial stretch of 55th Street. With this core area renewal under way, a community renewal plan was developed. This plan, which was approved in the fall of 1958, delineates a few further clearance areas around the periphery of the community and next to existing parks, public facilities, and institutions. Now at last, with the new Title I "town houses" being occupied and the residents of the community possessing a clear understanding of the further stages of the plan, the Hyde Park-Kenwood Community Conference is planning an all-out, house-to-house rehabilitation campaign. With strict code enforcement teased out of City Hall and a $30 million local mortgage kitty available, Conference Director Harry Bovshow is hopefully mapping a successful private rehabilitation program.

A strategic renewal need not be the sole pre-

UNBUILDING AMERICA

Rape of the front yard. The carefully planned, positive efforts to rebuild a better America are the subject of this issue of Forum. Unfortunately, they are far outnumbered by the unplanned, negative incidents of unbuilding that are continually taking place everywhere. For example: the commercial violation of a residential front yard (above) fostered by careless zoning laws or lax administration. This example of unbuilding and the others scattered through this issue are all from the recent "Plus and Minus" exhibition of Cincinnati's Contemporary Arts Center, which recently took a hard look around the city.
Courthouse Square in Eugene, Oregon was enlarged by one-half block when the courthouse (top) was replaced by a new structure by Architects Wilmsen & Endicott (center). Included in the $2.5 million project, which was based on a master plan prepared five years ago by a collaborative group of nearly two dozen local architects, was a parking structure for 229 cars and a handsome new landscape for the Square itself. Around the edges of the project are some related private ventures including an old structure remodeled into a legal center and a pedestrian walk developed through an old alley connecting the Square to Eugene’s main street (photo right). Several owners of buildings with rear ends facing the Square are remodeling them. Next stage in the public phase of the plan is a new municipal center adjacent to the existing development. The site for the new development is part of a Title I renewal area. Next important stage in the private phase of the plan is the construction of a new United States National Bank on the square.

A big-city neighborhood. Eugene, Oregon, a county seat with a population of 45,000, is in the midst of a many-faceted reconstruction of her Courthouse Square area, thanks to a master plan prepared by a committee of local architects five years ago (page 100). Actually, the big city has a harder time of it. Without an articulate leadership and the power of the University of Chicago, the Hyde Park-Kenwood program probably would not have had a chance in the vast reaches of Chicago.

Fortunately, however, the lesson of Hyde Park-Kenwood’s program has not been lost on the city. An omnibus municipal agency, termed the Community Conservation Board, has been established to steer similar programs through the maze of federal, state, and local assistance programs and to coordinate the planning, legal, and operating functions of some 12 other municipal organizations which are involved in one phase of urban renewal or another.

This municipal coordinating agency should be a salutary example to cities elsewhere, where inter- and intra-government confusion has caused some tragic strategic errors in renewal. Despite the requirement of a community renewal plan in the Housing Act of 1954, too many cities blunder their way through renewal programs. (“It’s hard enough,” says one HHFA official, “to get them to face Mecca.”)

How rare, for example, is the case of the Title I renewal area of Philadelphia’s Society Hill. This project overlooking the Delaware River (FORUM, Dec. ’58) was ready to go when the completion of the new produce market
San Francisco's Jackson Square, which is not a square at all but a collection of renovated buildings on Jackson, Gold, and Pacific Streets between Montgomery and Sansome (photos right), started its renewal in the late thirties when the city's serious artists, joined by a few architects and decorators, began converting loft spaces to studios. According to one of these early residents: "It was too good a thing, too close to downtown to remain unnoticed. Inexorably the decorators moved in, rents went up, and the artists moved out—to North Beach, Potrero Hill, and the Fillmore District."

But with the intrusion of decorators and wholesale showrooms into the Jackson Square neighborhood came new amenities such as street trees. (San Francisco is virtually a treeless city.) Moreover, although the decorators predominate, there is much else going on in Jackson Square which is good for the city as a whole. A little theater group, the Company of the Golden Hind, has taken over an old music hall next to Herman Miller Co.'s showroom. Architect John Bolles has established a handsome commercial art gallery near his own building.

As in many other self-renewing areas, Jackson Square, containing old buildings of the highest value, garish structures left from the "Barbary Coast" or later "International Settlement" days on Pacific Street, and nondescript structures of later days, should now consider how much of this past should be preserved. The city, for its part, should consider ways of bringing enclaves such as Jackson Square into the mainstream of the city instead of looking on them as islands of preciosity.

caused the buildings on the site, formerly used by food wholesalers now relocated in the new market, to be vacated. Thus, a painful time of uncertainty was avoided.

**Graceful houses and obstinate residents**

While the replacement of old market streets with urbane apartment towers and town-house groups will provide an important anchor for Society Hill, the telling circumstances is the existence of hundreds of Revolutionary Period houses on the streets nearby. As any Philadelphia realtor knows, there has been a slow trend back to these houses ever since the end of World War II, when architects, advertising men, and a liberal sprinkling of *The Saturday Evening Post* editors started resettling the area. (The trend was recently aided by Mayor Richardson Dilworth, who has a new $150,000 home on Society Hill.)

On Society Hill, as in many another neighborhood from Washington's Georgetown to the backside of Boston's Beacon Hill, renewal occurred despite bad structural and sanitary conditions, mixed and incompatible land use, and inadequate open space and public facilities. Obviously, these sobering indices, important as they are, do not signal the intangible value of a
Factors' Walk, a group of buildings along Savannah, Georgia's river front, was constantly being built and rebuilt through the prosperous nineteenth century. The Cotton Exchange (left, photo at right), constructed in 1887, straddles a city street which bisects the row of warehouse-office buildings and was one of the first buildings in the U.S. to use "air-rights." The handsome buildings, generally two stories high when viewed from the bluff side and five stories high when viewed from the riverfront, fell into a period of neglect with the decline in southern cotton fortunes.

In 1952, when the Cotton Exchange closed, the Chamber of Commerce bought and restored the structure for its own use (Architects: Levy & Kiley), thus stimulating a revival of the historic Walk. In 1956, the city joined the effort by remodeling the Thomas Gamble Building (right). (Architects for the remodeling were Cletus W. & William P. Bergen.) Today, fresh paint and air conditioning signify rehabilitation elsewhere on the Walk.

handsome old landmark like Benefit Street in Providence's College Hill renewal, nor do they reveal the instinctive remodeling possibilities in a bedraggled Jackson Square warehouse in San Francisco.

Indeed, Jackson Square, which inside of this decade snowballed from an area of abandoned honky-tongs and whisky warehouses into a posh, elegant, and occasionally overdecorated center for the decorative arts (page 101), is perhaps the nation's top recent example of private renewal. The question is, why does this activity occur in sections such as Jackson Square when it is so hard to start elsewhere?

The answer is obtained, quite simply, by consulting the people and looking at the areas they choose. In a word, they are alike. Both the areas and the people in them are unusual. Russell Lynes would call the people "taste-makers." Normally, they are artists, writers, teachers, and professional people, naturally led by architects and planners unwilling to take their own suburban or high-rise medicine. The areas are identifiable as somewhat special "places," normally convenient to downtown and (unfortunately for the cause of American democracy) segregated or naturally immune from pressures of Negro settlement. (Possible exception: Hyde Park-Kenwood, where after initial concern, Negro settlement eased up to near 40 per cent without any local panic—an almost unheard-of phenomenon.) In these neighborhoods, there is normally an intimate small scale to buildings and streets. Row-house neighborhoods, for instance, have a far better chance than high-rise or apartment-house districts.
Magdalen Street in Norwich, England, was selected as a joint demonstration by the Civic Trust and the Norwich City Council of how an area could be improved, without major alterations or expense, if all concerned could be persuaded to work together. Typical Magdalen Street (before and after photos, right) had lost much of its charm and character. The answer was to assess the street as a whole, and with the help of the experienced eyes of Industrial Designer Mischa Black of the Design Research Unit and Norwich Architect Bernard Polkind, After numerous meetings with local merchants, the designers developed a manual which stated general principles and objectives and established color and graphics systems for the street. Public agencies cooperated as the local merchants began translating the manual into the renovation of their own shops. Street lighting poles, for example, were removed, and new lights were attached to buildings. The church and the bank were spotlighted at night to substitute for obtrusive street lighting.

Districts which look inward to small parks or central open spaces come back quicker than those on endless grid-pattern streets.

Time and again, from New York's Sutton Place renewal in the twenties to the Jackson Square renewal in the fifties, the right combination of ingenious individuals and distinctive neighborhood qualities has resulted in renewal, regardless of odds. But only now, a decade after the evolution of renewal as a public venture, are the cases of natural renewal being occasionally stimulated by public authority. From such small ventures as the $40,000 remodeling of the Thomas Gamble Building on Factors' Walk in Savannah for a library and municipal offices and a $76,000 remodeling of the old Cotton Exchange for a Chamber of Commerce Headquarters (page 102), to such major integrations as the massive program now successfully launched in Hyde Park-Kenwood, public programs and private investment are here and there in pursuit of the same goals.

And as small as these beginnings may be compared to future urban rebuilding (page 104) they are, nevertheless, hopeful portents.

In many communities, the technique of joint public and private effort may be hard to learn. In these places, a beginning might be made with such common materials as street signs, canvas awnings, and paint. As was discovered in the experimental Magdalen Street project in Norwich, England (right), such a project is enough to challenge the best designers, the soundest economists, and the most patient politicians.

Actually, it's not so much what's done as how it's done that counts.
America rebuilding

The future of cities

Despite economists' predictions that metropolitan "gray areas" are doomed, a FORUM roundup of urbanists indicates that the city must and can be rescued.

It is impossible to miss the note of dismay that pervades current economic writings on urban problems. What they chronicle is decline, and the authors generally offer no cure but only pious sentiments concerning the future.

At the start of the last decade, American cities were declining only relatively: they were still growing in population, trade, and jobs but not so fast as the surrounding suburbs. Today the decline of central cities has begun to appear absolute. The graphs representing the central cities' share of things, as shown in Raymond Vernon's study (at the Harvard School of Business Administration) on The Changing Economic Function of the Central City, all point downward. Boston, Chicago, Detroit, Pittsburgh, St. Louis, and San Francisco all had absolute declines in number of manufacturing jobs and were approaching toward actual declines in commerce. New York is the most prominent city that has suffered an absolute decline in population but far from the only one. How could this be? Is not new growth in America 85 percent urban?

The answer is that the vaunted urban population growth is indeed occurring in metropolitan regions but at the fringes, and not at the centers. Consequently the central cities are declining in the very face of urban growth.

Because of this over-all decline, the successful examples of spot or area rebuilding reported on previous pages have had to be labeled for the moment as "the exceptional comebacks." Most of the economists believe that total slum clearance and city rehabilitation would call for subsidies so massive as to wreck the federal budget. This is generally said with regret and swathed in loquacious politeness.

Of course economists have been thoroughly wrong before in predicting what could not be done, and they speak always out of a prevailing climate. (For example, they may have other interests more pressing in their opinion.) At the exact moment of the economists' dire declarations about cities, the national economy as a whole is doing reasonably well despite a federal budget half devoted to defense, despite massive subsidies to agriculture, and to the automotive and fuel industries too in the form of a $40 billion program of federally subsidized highways. Then again intense study of city economics is still new, and especially the study of all the city's "little local economies." As the Committee for Economic Development itself has pointed out, "the situation is comparable to our lack of knowledge about the national economy prior to about 30 years ago, when we began to develop our first system of national accounts with which to measure the national economy." Moreover, economists tend to base predictions on the present state of the arts, crediting the effect of past major inventions but not daring to imagine major ones in the future. So General Otto Nelson, of New York Life, has trenchantly declared with respect to city rebuilding: "The things economists predict will happen only if we are stupid."

The critical problem: "gray areas"

After all these skepticismisms regarding economic prediction have been registered, it still remains highly prudent to take these predictions into account and to rely on economic motives, especially in dealing with the crux...
of the problem of arresting city deterioration by rebuilding, the rescue of the so-called "gray areas."

"Gray areas" are called gray because they are not clearly one thing or another, and of all city areas their prospects look the most hopeless. They lie neither at the city center (which still retains some power as a magnet) nor at the fringe in the suburbs (which have space for living); their boundaries are amorphous; their building uses are mixed residential, commercial, and industrial. Charles Blessing, Director of Planning in the City of Detroit, declares mordantly that "gray areas as used in recent economic studies include all of the corporate city except the central business district itself." Gray areas as commonly described are far from being all slum, containing as they do good sound districts of middle-class housing; but these are nevertheless the areas in which slums start soonest. Dr. Luther Gulick calls them "massed areas of contiguous obsolescence."

In dealing with these great gray areas as the core of the city problem, FORUM agreed with Dr. Gulick and Coleman Woodbury that the frequent habit of "trying to recreate the physical cities of the late nineteenth and early twentieth centuries" is nonsense. So the magazine asked top-rank urban economists and planners what should be done to put gray areas on a more solid footing—and a new one. Should deteriorating gray areas be left alone to find their own market level? Or should new uses be encouraged? In the city of the future what kinds of use belong in today's gray areas, and can support themselves there? What changes in federal, state, or municipal housing policy might reverse residential decline and stimulate upturn? Could codes and code enforcement secure continued improvement? And what could be done by spot renovation?

Aid needed

Only Charles Blessing, speaking out of his experience in Detroit; gave the view that indefinite deterioration was not in the cards on a market basis: the others said it was, but that the city could simply not let it happen. "The social cost in human suffering and degradation is too great," said Dr. Gulick, and the economic cost to the city too heavy. Moreover, said he, "even zero valuation will not induce anyone to buy and do something with the worst properties, and without these nothing can be started up," so solutions cannot be obtained by "natural market" economics. Blessing thought that a federal expenditure equal to the investment in foreign aid—$70 billion in 15 years—would suffice to help cities revitalize themselves. Even now, Blessing deposed, Detroit is moving systematically to rebuild 11 per cent of the city.

All assumed that housing would be the mainstay of the revitalized gray area, and James Felt, realtor chairman of the New York City Planning Commission, thought that in New York moderate-priced rental and cooperative housing in renewal areas could compete effectively with VA and FHA housing in the outlying suburbs, because of reduction in travel time and cost of commutation.

Housing needed

It was Catherine Bauer, housing expert at the University of California, who was most emphatic that gray-area problems are closely related to the over-all housing situation. "These vast areas require a continuous process of redevelopment and drastic modernization serving all income groups," she said. This process can never even get started as long as federal policies result primarily in a chronic housing
shortage and in limiting the market for new housing almost wholly to upper-income families. “We are barely meeting the minimum demands for new housing created by family formation and increased population in our cities,” she quoted Builder Carl Mitnick of San Francisco as saying, “and we are doing absolutely nothing to forestall further deterioration in our existing stock of houses.” “The shortage keeps old housing overvalued,” continued Miss Bauer, “insures the constant creation of new slums instead of modernization, maximizing the evil effects of racial discrimination, and makes redevelopment excessively expensive. The limited market for new housing keeps most families penned up in old structures, and insures a continuance of the shortage. Under these conditions, the handful of heavily subsidized, high-density apartments produced by present renewal policy, by and large solely for very high-income or very low-income families, probably only makes the situation worse for gray areas in general.”

Economic free choice needed

Others, like Miss Bauer, linked the housing shortage in general with the special “gray area” problem: a big and growing proportion of its inhabitants is, so to speak, place-locked. Negroes, Puerto Ricans, Mexicans, and Orientals in particular cannot move even when they have the money. Mr. David A. Wallace, director of the Planning Council of The Greater Baltimore Committee, Inc. was especially emphatic on this aspect. To loosen up those solid pockets of racial minority surrounded by blight that drag down gray areas, he proposed major programs to a) open up opportunities for Negro housing in the suburbs, and b) obtain nondiscriminatory laws securing scattering of Negro communities within cities. Manifestly not an easy thing to accomplish, having possibilities of backfiring if not skillfully managed, this would of course lift that monopoly advantage which the slum landlord derives from captive occupancies, throwing entire areas into deterioration.

Community pattern needed

Such reasoning was only one manifestation of the importance attached by planners to physical pattern as a key factor in urban economics—a factor so sadly neglected by conventional economists. Chester Rapkin of the University of Pennsylvania’s Institute for Urban Studies was one, but not the only one, who emphasized that “the key to renewal of gray areas is scale.” Although, said he, a large potential demand exists for moderately priced accommodations in these locations, “the demand will be forthcoming only if the scale of operations is large enough to create a totally new environment.” Such environment, he did not trouble to add, could often supply a greater scale of effective spaciousness for individual families. Useless, said he, to try renovating isolated structures or even blocks surrounded by acres of deterioration. And Felt, enlarging on this point, emphasized importance of new zoning, and moreover of a “community renewal program” making the natural local communities within a big city the units for study and action.

The influence of physical pattern on economic demand in a real estate situation came up again and again in other declarations: some emphasized the value of spotting civic improvements such as schools strategically to encourage Felt’s local communities (in cities most inhabitants distinctly “buy” a neighborhood and not simply a dwelling), and others stressed the importance of cutting new traffic and parking patterns to improve within-city access.

Some industry can return

In the matter of industrial uses, nothing very radical was suggested. Obviously, said Mr. James Saalberg of the Detroit City Planning staff, supplementing the answers of Charles Blessing, modern technology has made old industrial plants within the city obsolete, but specialized industries can thrive again within today’s gray areas, provided only that planning gives them rapid access and “elbow room.” And nobody has yet fully explored how greatly some industries might benefit from in-city location, and how much more compactly modern industrial plant, like the later automobile, can be built, compared to the sprawling models which were justified by efficiency calculations but rested really on a primitive concept of inefficient space use (see FORUM, Dec. ’59, on in-city industrial parks). Moreover, nobody has yet spelled out how beneficently the new industrial compactness might work if coupled systematically with new zoning that would allow clean modern industry to live conveniently next door to clean modern housing. But
this has been the thesis, on other occasions, of New York Architect-Planner Ralph Walker. It could improve the economy of gray areas.

**Code enforcement**

On one of FORUM’s questions the response was unexpectedly unanimous. None of the urban specialists agreed with the view professed by many realtors that code enforcement would be enough by itself to enforce significant renovation. All who responded to this question stressed that although there is wisdom, as Rapkin remarked, in demolishing the worst properties and boarding up empties that may eventually be reclaimed—thus deflating them of their inflated values and making them cheap enough for private or public acquisition for improvement—large-scale condemnation of occupied dwellings, in the face of serious shortages in the low-income range, could only throw people into the street and cause political uproar.

Far better to remove those extra financial burdens placed on rental housing by both the Federal Treasury and the procedures of federal agencies, which have helped bring down the share of rental housing in the total output by two-thirds between the years 1929 and 1959. Rental housing is city housing and gray area housing. And Felt in New York pointed with justifiable pride to the wide range produced in his city of unassisted private programs—FHA’s 207 or 213, and conventionally financed (though the latter tends to serve only higher incomes). Said he, some admixture of higher income population is desirable in gray areas, and not undesirable. So too, once a neighborhood is on the upward swing, through the mixed rehabilitation and new construction re-development of large areas under Title I, liberal application of Section 220 would supply to individuals the needed financial assistance for renovations.

Summing up, the urban specialists interpreted the prophecies of city doom by the economists as the first admission ever made that the American economy might have to take a big licking in a major area, and stand helpless before the abandonment of a big investment and a decline in the standard of living. In part, the response was simply an angry rejoinder that “this cannot be, because we will not let it be.” Yet the major burden of the response was of a wider and more general significance.

What it was based on was the one thing which economists had not dared, or had not thought, to foretell in the city area—a better product, by the application of imagination. The urbanists talked about new invention—applied to the city itself to transform the city. And an urban building, so their replies implied, is not like other commodities. It is not a single object, nor one freely shipped and traded. Firmly fixed to one spot, the building depends on its spot: it is like a drama of which an integral part is the stage, the setting, the surrounding. Such a setting, as an inseparable element of the building’s economic value, can be produced only by joint action of many agencies private and public. But “economists don’t understand space,” as Catherine Bauer keenly observes, so they are quite unable to measure all those crucial city inventions that relate to space arrangement.

It may be that within the coming decade some cities will continue to shrink. Some gray areas may prove useful only for recreation or urban agriculture. But the cities in general refuse to abandon their huge investment, economic, social, and cultural. And they will prove that whereas architecture does mighty well to study economics, the salvation of urban economics lies in understanding architecture and planning.

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**UNBUILDING AMERICA**

Strangulation by wire. In an effort to keep up with new times, old neighborhoods have required ever more ungainly communications services, systems built upon systems, poles braced by other poles. And often perched in the middle, as above this row of rundown Cincinnati houses, is a transformer, looking like a symbolic hangman caught up in his own equipment.
Main Street’s vanishing patina

The cities of America have been called melting pots, but their commercial heat never succeeded in melting the stubborn individuality of all the craftsmen who migrated to this country from over the world in the past century to open flavorful little stores. In just the 2,500 city blocks of Manhattan Island, for example, there still are 33,000 separate shops, and even after several generations a surprising number of their older fronts remain very personal essays: large painted eyes stare out from optometrists' windows; giant keys dangle from locksmiths' window heads; stripes, and more stripes, proclaim barbers. It is a fetching, humorous, eye-language. Its accent is the kind of rich raw color which improves with age, acquiring heart with layers of city grit.

In today's blast of rebuilding, however, many of the most stubborn of these pockets of vitality are at last crumbling, if not torn down totally, being mutilated in the name of improvement, their personalities tamed into the conformity of the current stock store-front package—neat, hygienic, faceless. The loss of these odd old store fronts is a poignant regret but a difficult one to explain. Is it just the pain of cutting any long-lasting visual connection with the past? Possibly so, because the past is surely the biggest ingredient of the present. Certainly, architects are laboring mightily in the design of shopping centers to bring back some of this human richness.

A human patina on a building, however, cannot be prefabricated overnight. It took many years of storekeepers' pleasure in their customers, in their trades, and in their neighborhoods to give these store fronts their meaty subjective charge. It also took pride in even a prosaic way of life. If this kind of individual storekeeper is being remodeled out of existence—as it seems he is—this, too, may be something to be uneasy about.
A pair of well-worn barber shops which hit two of today's architectural targets: richness and mood.
They look hale and hearty, but since being photographed three of these eight old storefronts have perished before progress.
A classical commercial hypnotist, above, and, right, a city vegetable patch.
America rebuilding

The money in modernization

At the tender age of fifteen—often less—every building in the country is a candidate for remodeling; but not all are worth the cost.

The best hope for the rebuilding of America's cities lies in the happy fact that usually there is money to be made in modernization. Often it is big money—in higher rental income or expanded business volume. Sometimes modernization pays off by pulling a building out of an economic tail spin, or by forestalling one. Other times it is used to convert a building to a new purpose at a substantial saving to the new occupant over the cost of erecting a new building. Some recent cases in point:

- In Chicago, a ten-story loft building was refurbished for about $250,000 and converted into office space, raising the average rent from 92 cents to $3.50 per square foot—a net increase of about $350,000 a year.
- In Philadelphia, an eight-story cigar factory was transformed into a modern hospital for $1,950,250—about $634,000 less than the cost of a new building of comparable size.
- In St. Ann, Mo., the St. Louis County Library spent $120,000 to convert a 750-seat theater into a branch library—at a saving of $30,000 over costs of comparable new quarters.
- In Washington, D.C., Builder-Realtor Elmer L. Klavans converted a 60-year-old four-story walk-up into 96 apartments (double the original number) for $330,000, and raised its annual rent roll from $36,000 to $102,000.

In the vast business of building modernization ($4 billion of expenditures last year) it would be too much to expect that every job would be as successful as those cited above. Indeed, there are countless failures: many buildings are ineptly remodeled; many others are remodeled that should not have been. To be certain of ending up on the right side of the ledger, the intelligent investor in modernization knows the economics of the business. He is familiar with the elementary fact that the need for modernization stems from three kinds of obsolescence: physical, mechanical and economic. And, he knows that obsolescence is not simply a matter of age.

Obsolescence of the physical variety is related to design and structure. If a building's floors are not capable of carrying today's heftier office machines, if its space cannot be readily subdivided to house the larger number of employees per square foot that new buildings accommodate, if the structure is such that new wiring and air-conditioning ducts cannot be inconspicuously fished through the floors or ceilings or walls—if its physical obsolescence has gone this far, it is probably not worth the cost of modernization. Such are the problems unhappily faced by the famous Carson, Pirie, Scott department store in Chicago. The biggest threat to the preservation of this Louis Sullivan masterpiece is the difficulty of unobtrusively bringing in the new wiring needed for modern merchandising techniques.

The second kind of obsolescence is related directly to the rate of technological development within the building industry. Since World War II, mechanical obsolescence has been stepped up greatly by the perfection of air-conditioning, automatic elevatoring, high-intensity lighting, wide-span structure, sound control, underfloor wiring, and a host of other mechanical details. As a consequence, buildings erected immediately after the war, though still in style architecturally, became obsolete in many ways almost overnight. After completing its first three Gateway Center buildings in Pittsburgh,
for instance, the Equitable Life Assurance Society had to spend $800,000 to convert them to automatic operatorless elevators. It found that this large outlay was fully justified, however, by the consequent wage savings.

Because they are out in plain sight, physical and technical obsolescence are easy to see and correct. Not so, economic obsolescence. It relates to such intangibles as the size of the building in relation to its intended purpose, the purpose in relation to the use of the neighboring buildings, and the outlook for their use in relation to the general economic health of the neighborhood. It is quite possible that a comparatively new, well-equipped building could be economically obsolete, for neighborhoods are constantly changing. A first-class building in a sharply declining neighborhood is obviously a poor modernization risk; but a “low use” building in an improving neighborhood would be a good candidate for modernization, conversion, or replacement.

Solving the problem of economic obsolescence is even more difficult than diagnosing it. Often the only answer is to sell and get out and take one’s loss. (Incidentally, if the price is low enough, it may permit the new owner, who will have a much smaller stake in the property, to work out an economically sound program of modernization, conversion, or replacement—in much the same way that redevelopers benefit from the write-down of cleared slum lands.)

Correction of economic obsolescence is often impossible because of factors beyond the control of the property owner. An owner might, for instance, find it impossible to purchase adjoining property to make room for a replacement building that would be big enough to be economically feasible. And unless he takes a commanding position in the neighborhood, he runs the risk of having the area decline as the result of the lethargy of his neighbors.

Mistakes of this kind are not easy to make, however, for in a declining area—or even in one that is uncertain—the owner will find that it is almost impossible to obtain reasonable long-term financing for modernization. His bankers will save him from getting into trouble. The lenders will not advance funds for modernization today with any more alacrity than for new construction. Among the five largest life insurance companies, not one has a special department to process loans for commercial property uplifting. Instead they examine such loan applications on the same criteria as new building loans, and today such lending is done far less on the security of the real estate alone than on the credit standing of the owner and the security of his leases.

Although the overriding general considerations outlined above may govern his decision and the decision of the lenders who may finance the project, an owner of a building will of course have to come to grips sooner or later with the specific economics of his own particular property. What will its modernization cost, and how much increased income may be anticipated? According to Architect Kenneth H. Rippen, a New York specialist in office layout and remodeling, “Office space costs $20 to $40 a square foot to build and $5 to $15 a foot to recondition.” Philadelphia Architect Clarence S. Thalheimer sets a much higher price on modernization: “By spending 60 to 70 per cent of what a new building would cost, an owner can do a top-notch remodeling job on a central business district building, and he will have extended the life of the building by 25 years—assuming that it is well located.

Obviously, no two cases are alike, and the opinions of these two architects indicate that the range is sweeping. However, much can be learned from the experience of experts operating in the nation’s biggest modernization market—New York City. Five case studies are briefed on the facing page; a sixth case is presented in detail on the pages that follow.
Five case studies in modernization economics:

- Last year National Biscuit Co. moved into new quarters in New Jersey and vacated 1,855,000 square feet of floor area in 23 office, commercial, and manufacturing buildings in the industrial section of midtown Manhattan. The property was sold to Syndicate Louis J. Glickman for a purchase money mortgage of $5 million, plus an agreement to spend at least $2 million on modernization within the next two years. Actually, Glickman's modernization program will cost almost $4 million, including $480,000 for new elevators and shaftways, $150,000 for improving existing elevators, $775,000 for heating, plumbing, and sprinkler system improvements, $175,000 for electrical service improvements, and $850,000 for tenant area alterations and improvements. Last month approximately 650,000 square feet had been leased for about $1.25 per square foot, and negotiations were underway on leases for another 500,000 square feet.

- When it moved uptown from Union Square to its new building at 5th Ave. and 37th St. in 1905, Tiffany & Co. proudly described it as a "palace" that Architects McKim, Mead & White had been commissioned to design as "the noblest of its kind." But times changed, Tiffany & Co. continued to prosper, and in 1940 it moved to another new building still farther uptown. After a series of real estate transactions, and use as a blood donor center during the war, the 37th St. building was sold in 1951 to Henry Goelet, who modernized it to the tune of $1 million, including architect's fee. Major expenses were $350,000 to raise the original ground floor several feet to street level, to cut modern show windows out of the masonry walls for new ground-floor stores, and to construct a new 15,000-square-foot intermediate floor in the upper portion of the original high-ceilinged ground floor; $91,000 for office-tenant partitions and alterations; $109,000 for new store windows and alterations; $42,000 for a private elevator to the intermediate floor; and $315,000 to remodel the lobby and convert four elevators to operatorless operation. Including the new floor, the building's 350,000 square feet of rentable floor area, and immediately started to upgrade it. For a central air-conditioning system he spent $175,000 (about $2.20 per square foot), and had no difficulty in persuading tenants to pay an extra $1 per square foot for the service. For this he used $50,000 in cash, and financed the other $125,000 with the manufacturer over three years. Currently he has a $200,000 elevator conversion program in process, which will be paid for with a $100,000 loan from a commercial bank and $100,000 from building reserves. He also has spent another $50,000 on washroom improvements; nothing on the exterior. Architect: Arnold A. Arbelt.

- Early in 1956, H. H. Barrie, a hat manufacturer, had to move from the site of a slum clearance project. About three blocks away at 101sty & 45th St., he purchased an 85 by 135 foot, five-story and basement building erected about 1875, for which he paid $75,000 cash over three mortgages totaling $154,000. The occupant of the single large ground-floor store had just gone out of business, cutting the rental income of the building to about $42,000 a year; other store vacancies in the area were most of the blame. Barrie took one floor of the building for his hat making operations and, after subdividing the ground floor into three stores, occupied one of them as a sales outlet for his hats. Rents from the two other stores, plus rent increases from upper floor tenants, have now raised the building's rent roll to $58,000 a year. Barrie's subsequent modernization program will cost about another $60,000 in cash, and $2,000 for steam cleaning the exterior of the building, $15,000 for the store conversion work, $10,000 for modernizing and enlarging the lobby, $15,000 for a new operatorless passenger elevator cab, $5,500 for new electric lines, $2,000 for new sprinkler heads, $8,000 for new sidewalks, and $3,000 for fluorescent lighting and redecorating in all public areas. He also is modernizing tenant office areas and washrooms as leases are renewed. Since taking over the building subject to an existing, open $65,000 first mortgage, Barrie has been able to obtain a new ten-year, $85,000 first mortgage from a savings bank, has reduced the second mortgage from $48,000 to $39,000, cash has eliminated the third mortgage. Neighbors credit him with spurring other improvements in the area (store vacancies have been declining) and he has received several offers for the improved building that would have given him an attractive profit. Although he had never previously engaged in property management or modernization, Barrie's experience in this case has led him to consider buying and modernizing other buildings on an investment basis to supplement his hat business.
America rebuilding

An office building reborn

Imaginative redesign transforms an outmoded structure into an elegant Fifth Avenue showpiece

One of the more sophisticated commercial remodelings of recent years, exceptional even for New York's fashionable Fifth Avenue, is the conversion of a 35-year-old department store and office building into airily handsome new headquarters for Koninklijke Luchtvaart Maatschappij, N.V., better known as KLM Royal Dutch Airlines.

KLM, which had helped start "airline row" ten years earlier in a narrow, five-story building on Fifth Avenue near 46th Street, was looking around for more space when Brokers Cushman & Wakefield suggested the 13-story McCutcheon building three blocks north. Like many companies, KLM was hesitant about getting into the real estate business beyond its own immediate needs. But a heavily traveled, highly international corner right across from Rockefeller Center, plus enough space to serve almost any future expansion, proved a proposition not easy to resist. KLM signed a net lease of 20 years and two 25-year options with the owners, New York's venerable Henry Phipps Estates, agreed to take over operation of the building and spend at least $1,750,000 bringing it up to date.

To satisfy its own needs, KLM planned on spending more, and did (see photos and cost breakdown overleaf). After the realtors had helped relocate some 50 small office tenants who had space above the old five-story store, Architect Ladislav Rado and his KLM counterpart, Walter Hart, worked with Turner Construction Co. to clear out interiors and begin refurbishing. As in most modern or modernized

New building entrance: fine proportions, materials picked to last.
buildings, mechanical improvements took the lion's share: $1.3 million, or about 40 per cent of total remodeling costs. In KLM's case this included new lighting and rewiring for A.C., conversion of the three existing office elevators to automatic cabs at $60,000 each, relocation and refitting of washrooms, and installation of a heating-air-conditioning system using two 230-ton absorption units in the penthouse and three fan rooms to serve floor zones with varying requirements. The system takes advantage of cheap New York steam in summer to do its cooling, operates economically at a fraction of capacity when serving late-working reservations and ticket offices on lower floors. Cost: about $4.50 per square foot for 138,000 square feet of office space.

The most striking element of the $3 million modernization, however, is the transformation of McCutcheon's heavily-enclosed main sales floor into an artful and highly visible KLM ticket office. By stripping off the old masonry up through the second storey, encasing the steel columns in white marble, and inserting bronze spandrel grilles and a cast aluminum frieze, Architect Rado fashioned a slimly elegant, nicely detailed façade 35 feet high. Not only does the new façade fit the old building as though it had been there all along, but it does the city a rare kindness by opening up a whole corner along a crowded street. The chief attractions visible inside, apart from fresh-faced KLM clerks, are a 10-foot openwork globe which turns slowly in the front corner, and a vast "electric mural" which twinkles behind the ticket counters like a night air view of city lights. (The mural, designed by MIT Professor-Artist Gyorgy Kepes, is made of black-faced aluminum panels with thousands of perforations, backed by colored glass and batteries of flashing lights.)

Back of this inviting sales office, the other half of the L-shaped, 12,000 square foot ground floor awaits rental to a store with its own

**ARCHITECTS**: Antonin Raymond & L.L. Rado  
(Howard Bonington, project manager)  
**COORDINATING ARCHITECT FOR KLM**: Walter Hart  
**ENGINEERS**: Paul Weidlinger (structural),  
Ebner Associates (mechanical, electrical)  
**MURALIST**: Gyorgy Kepes  
**GENERAL CONTRACTOR**: Turner Construction Co.
Low-ceilinged area at the rear provides intimate contrast.

New main floor displays a bold balcony, a twinkling mural.

Mural of night-flight uses colored glass, blinking lights.
These four handsome buildings have benefited from remodeling — plus sensitive redesign — in various degrees

Several years ago, when New York Architects Steinhardt & Thompson were asked to remodel an old warehouse in Newark, they responded so enthusiastically and so inventively that their client wound up before an arbitration board. The site and existing buildings were his on a long-term tax-free fixed rental from the city, but when the city fathers saw the transformation which the architects brought about in the old shambles of a structure (new walls, new windows, new interior finish, new services, new heating and cooling, new lighting, plus a new wing), they asked for taxes. This was no remodeling, they grumbled, but a new building on their site and the city was entitled to taxes on that basis.

Although no city money had gone into the renovation, the argument wound up in arbitration, where teams of experts for complainant and defendant vied to establish when a remodeling does or does not equal a replacement, justifying a new land lease. The defendant won the nod, but the fact that he subsequently resold his lease at a substantial profit did not add to the clarity of the situation, or to the city’s contentment with the decision.

On these nine pages are five progressive illustrations in the depth of remodeling, ranging from a millionaire’s old mansion on Manhattan’s upper Fifth Avenue that was very tenderly and tactfully transformed into a school of fine arts, to a classic art museum in Texas remodeled by a new wing which all but devoured the old be-columned temple. Legal definitions aside, what this ascending order of good renovations demonstrates—as does every remodeling—is that the essential to success is the establishing of just what degree of change the client wishes to bring off, not only in the physical services of the building but in its character. In other words, the building not only has to be remodeled, but redesigned.

Handled with architectural care, a fine Fifth Avenue mansion is converted into a fine arts school

In 1911 tobacco magnate James B. Duke decreed himself a town house on New York’s Fifth Avenue at East 78th Street, and turned to a famous, fastidious Philadelphia architect, Horace Trumbauer, for its exquisite Louis XVI design. When, in 1958, Duke’s widow and daughter, Doris, decreed the house should become New York University’s, to shelter one of the nation’s largest graduate department of fine arts, they turned again to a Philadelphia architectural firm for the light touch which would preserve Trumbauer’s triumph but make the structure more usable to the new owner—and on a modest budget ($150,000).

Trumbauer had traveled to France for his “inspiration,” modeling the house precisely after the Hôtel Labottière in Bordeaux—but bigger. The new architects—Robert Venturi, Cope & Lippincott, a young firm—thought, instead, of more recent sojourns in Italy. One of the architectural feats most prominent there is the number of beautiful palazzi which have been transformed into useful civic buildings
Duke mansion exterior remains its solid, dignified self.

Interior was remodeled lightly, discreetly; projection screens in lecture room were added without scarring panels.
without marring their aged exquisiteness, by accepting age as the basic element of the environment. So that is what they did with the Duke house.

The exterior was unchanged; inside, the service rooms in the basement became slide collection departments and the like. On the main floor the drawing room became a seminar room, the ballroom a lecture room, the library a lounge, the dining room a reading room. Reception rooms became administration offices, and the main hall an exhibition space. On the second floor, seven bedrooms and sitting rooms were invested with book shelves, and an eighth with stacks, splitting the department's library into sections. Marble bathroom walls were burlapped, the floors corked, and the bathrooms became offices, as did the 15 or so servants' rooms of the third floor.

Typical of these architects' politeness toward their Philadelphia predecessor was their treatment of his paneled walls and lighting. Almost nothing was hung directly on Trumbauer's paneling. Even the stock shelving stands independently of the walls, on its own structure. Crystal chandeliers remain resplendent in the large rooms (with recessed downlights added in the ceiling to aid in note-taking). In providing the necessary projection facilities, screens were not hung on the walls, but were floated out from walls on brackets. Furniture was chosen discreetly, not to try to match the decor but to exist amiably within it: for example, simple but graceful imported Czechoslovakian bentwood chairs.

Small as the changes seem, the designers, by maintaining a strict and stylish consistency in every detail, succeeded quietly in taking over the environment. In deciding not to carve up this great period house they also struck a sensible blow against what Architect Venturi terms wryly "America's cult of obsolescence." With the Duke donation to N.Y.U. the city did lose a sizeable chunk from its tax roll (the house was assessed at $50,000, the land at $800,000) but it was lucky to retain this nugget of charm from a fancy past.

The old inner keep of a west coast political boss is refurbished—but not defavored—for business use.

A half mile from San Francisco Bay, and not far from the rising Jackson Square section (see page 101), the new Columbus Tower juts up at a major intersection, its Byzantine-blue, gilt-trimmed dome glinting prosperously in the superior California sun. But a year and a half—and $155,000 in renovation costs—ago, this was the Sentinel Building, a running down remnant of earthquake days available for a total price of $76,000.

It was picked up at that price by a Dutch-born trader and investor, Robert Moor, who had settled in San Francisco; he asked Architect Henrik Bull to renovate it. The building was constructed in 1906 in a spare-no-expense spirit by a baronial political boss, Abe Ruef. In Bull's opinion its period spirit deserved retention, so he restored it with a stylish paint job and not too many exterior changes. But, by just one or two degrees of obsolescence more than the Duke House, this building did need physical overhaul. Bull ripped out the disorganized ground floor walls and replaced them with rich blue glass mosaic tile and tall windows, and he also gutted the plumbing, heating, elevating, and electrical systems.

Within four months of the upper floors' completion they all were rented. The ground floor then became a crowded coffee shop, and the basement is being remodeled for a radio station. Gross rentals are already up from a pre-renovation $11,000 to $39,000, the net up from $5,000 to $26,500.

Forty years after a three alarm fire in Aspen, Colorado, a new owner repairs the damage

This group of small stores waited a long time to be remodeled, but when it happened the physical change was major; only the exterior facade survived, and even a part of this became a false front, the entry to an outdoor space behind it. This sophistication, however, was intrinsic in the approach to the remodeling, for false fronts are a real part of the enduring character of the old Victorian mining town of Aspen, Colorado. The people who have been coaxing this souvenir town to life in recent years aim deliberately to reproduce the flavor of its original, silver-rush atmosphere—not only for the sake of nostalgia, but sound commerce.

It was on this basis that Architect Fredric Benedict was able to persuade a national drugstore chain not to help modernize the corner drugstore with the usual gleaming armor of metal and porcelain enamel, but instead to let him modernize it only up to about 1890. Next to the drugstore, behind an old wood-columned facade, he sunk a courtyard restaurant below street level, with small shops opening off a sidewalk level passage, and a new floor of rental office space upstairs.

The new owner is pleased with the financial remodeling of this corner. He bought the burned out package at the fire sale price of $16,000 in 1954, but the fire had happened so long before that there was a 25-year-old cottonwood tree growing up out of the old cellar (Benedict kept it and focused the restaurant court on it). The rubble of the second floor of the drugstore had not even been removed, but left standing, with a new roof added at its old floor level. The rental income was $75 per month from the druggist for ground level plus basement.

In addition to the buying price, the new owner, a retired tanner, invested $122,000 ($100,000 for the office wing and restaurant and shops, $3,000 for the restaurant terrace and balcony, $19,000 for the drugstore) and raised the monthly gross rent to $1,318.

Old façade, burned out at left, became half store, half plaza screen.

Remodeled front is topped by a second story of offices facing the plaza at right.
Renovation by devouring: Houston's classic museum is enlarged by a new "wing" of considerably different classic cast

Until quite recently the Houston Museum of Fine Arts had two colonnaded facades with a stoney architectural air of massive resistance. It was a Greek temple with hardly a Texas accent.

At present the Houston Museum of Fine Arts ostensibly has a new "wing," yet it is a fact that the new wing almost completely takes over the bleak old classic building. The new portion is a thing of airy elegance which doubles the floor space of the old museum and brings the old place right up to date in the display world of modern art.

The central Greek colonnade, the original grand entrance of the old building, still stands. This, however, is no longer the main entrance, but is now, in effect, the back porch, and this was the abrupt about-face with which Architect Ludwig Mies van der Rohe accomplished his transformation. The new section, an $850,000 gift to the Museum, contains essentially the same kind of space Mies was discussing decades ago for a hypothetical museum: one big room with the complete flexibility of no permanent partitions or columns. To get this space he suspended the big roof 30 feet above the floor from four large girders above its plate. Across the new front he fanned a gigantic wall of grey tinted glass in a graceful curve.

The new museum already looks forward to the next remodeling. "When they came to me," says Mies, "they wanted an addition to an existing building, but I told them you'd better think of an end. Cullinan Hall must be part of a master plan so we know where to go in the future." The master plan which he provided establishes that the next addition to the museum will not be a further remodeling of its new character, but a real continuation: the curved glass wall will come down, and a two-story extension of glass walled galleries will be added.

ARCHITECT: Mies van der Rohe; RESIDENT ARCHITECTS: Staub, Rather & Howze; STRUCTURAL ENGINEER: Kornacker & Associates; MECHANICAL AND ELECTRICAL ENGINEER: H. C. Will; GENERAL CONTRACTOR: Farnsworth & Chambers Co., Inc.
Wide-span roof, hung from trusses, shelters a single big exhibition space.

New building presents a curved façade to the street; the old classic porticos face to the rear and the right.
A final question concerning individual buildings: is remodeling sometimes suffocation?

In comparison with the extensive, painstaking enlargement of the Houston Fine Arts Museum, remodeling can also seem quite easy. The complete "skin job" is all too tempting to many building owners and designers, who see in it a way to wash away all past stylistic sins and start anew with a fine, freshly powdered face, grafted on the old building's skull.

This of course is understandable, especially in commercial buildings, where the aura of newness can itself rent office space, or sell merchandise. The cosmetic industry is a big one.

But when a skin job is merely confusing (see photo upper right—quick, which is before, which is after?) or when it wipes a lot of expression off an old face and replaces it with vacuity (lower right) it is difficult to justify as complete by any measure.
Remodeling, still a haphazard process, is not yet industrially efficient—except where a few architects and engineers have made a start.

Billowing in plaster dust, probing, chipping, gouging with blunt instruments to find and pull out old building entrails, remodeling goes on all the time, but only as building's stepchild and architecture's bastard. There is almost no architectural literature devoted to remodeling. Yet a big share of the $20 billion reported as spent annually on "maintenance and repair" is actually remodeling, and so is a big share of the "additions and alterations" bill of $12 billion more—$4 billion on non-residential buildings.

Since remodeling is certain, moreover, to increase, the time has come to get it dignified, discussed, and incorporated into the industrial structure of America. There are precedents in other fields. The rebuilding of machines is, for example, no longer haphazard, or treated as a stepchild. One of the great social services rendered by Ford Motor Company to consumers was inauguration of the replacement service whereby a motor or other machine connected with the automobile could be promptly removed in favor of a factory-reconditioned substitute while the ailing part went back to be rebuilt itself under factory-controlled conditions. Before that the motorist was at the mercy of corner-garage mechanics for delicate rebuilding operations, and the building owner to this day still depends largely on something like that.

The building industry itself does have some precedents for more industrialized remodeling. Long ago office partitions, for example, began to be so designed that they could be removed, rearranged, or replaced so quickly, and with
so little disruption, that this remodeling process was no longer referred to as “remodeling” at all. It was not sufficiently messy.

To arrive at better practice it is necessary first to redefine remodeling in a more progressive, industrialized fashion; then to comb existing practice for industrializing leads; and finally to formulate some principles that might help start an industrialized remodeling theory.

A good remodeling definition would be simply the extension of a good building definition. Good building today is the efficient assembly at the site of subassemblies prepared in industrial establishments. By the same reasoning, remodeling is the efficient dis-assembly, reassembly, or changed reassembly, of parts of the same kind. And the “disassembly” share of it is held to a minimum.

The reason why old-timers will never agree that there can be industrialization of remodeling is the axiom that “every case is different.” A quick review will reveal this—but further observation will show that it is far from the whole truth.

When a building owner has remodeling in mind—either for purposes of efficiency or for prestige, and in either case for more income—the first step of his architect is to examine the building and then recommend three or four alternative preliminary schemes. If one of these is tentatively accepted, an engineering study is made next, to determine the limitations imposed by the existing structure (“every building is different”) and the cost of renovation. If the plan involves extensive rebuilding, the engineering study will require tedious days of exploration, because oftentimes the original engineering drawings no longer can be found. In very old buildings the engineer has to tear into the existing fabric to find what is there. Engineer Fred S. Dubin believes that the most creative aspect of rebuilding technology lies in this original analysis “of the building’s function, structure, and mechanics.” Says he: “The objectives of rebuilding are the same as new building—to come up with the most efficient collection of systems possible—but the ways of achieving the objective are more devious in a rebuilding project.”

The trend toward new kinds of system

Different as every case of remodeling is from every other, there is nevertheless enough likeness among groups to lead to some classification. There are, for example, exterior façade jobs, interior rearrangement jobs, interior finish jobs, and mechanical or electrical jobs. Significantly enough, façade jobs predominate; and the reasons why they predominate show that remodeling is cheapest where it is most industrialized, i.e., systematic. The first reason why a façade remodeling is easier and less costly is that façades are the most accessible part of a building, and accessible with minimum disturbance either to the existing fabric or to the occupants. The second reason is that once a new façade system has been devised, the operations—from bay to bay and from floor to floor—are repetitive and can be industrially rationalized. The third reason lies in the recent development of industrialized curtain walls and screen walls. The curtain wall device has allowed many an old building, no longer requiring windows, to hide itself behind vertical acreages of corrugated aluminum facing, rapidly assembled; and the still more recent peek-a-boo screen wall, equally prefabricated, allows existing windows to remain in use, with only a little pointing up, behind the screen which makes the building look new. The secret of economy in curtain and screen is that their erection involves the absolute minimum of disassembly to the existing construction; they simply add a new as-
New facade for 13 stores in downtown Knoxville involved more than an aluminum screen. Photo (above) shows the old, dingy area to the rear of the stores; these buildings were torn down to provide parking space, then the new facade and promenade were added to the rear of the 13 stores (sketch, above), giving them unity and a new face.

Retaining character: The new facade for Block & Kuhl's store in Peoria (below) keeps the basic proportions and appearance of the old building. Instead of hanging a completely new skin, the architects retained the cornice and pilasters, inserted ceramic veneer panels. The sketch indicates the method used to bolt panels to the steel frame.

Examples of recent facade work illustrate increasingly industrialized methods. In the Block & Kuhl Department Store renovation in Peoria, Ill. (below), Architects Smith, Hinchman & Grylls found a wonderful chance to retain the existing proportions and good character of the building, including an existing cornice difficult to reduplicate in its decorative effect today. The decision adopted by the architects and owners was not to hang a new skin on the building but simply to remove existing windows and spandrels from between existing columns and floor beams, and to insert ceramic veneer panels—an easy, standardized, repetitive operation yielding more character and prestige than any other which, in this instance, might have been adopted. The square foot cost was $6, as against $8 to $10 for an equivalent new wall.

Knoxville, Tennessee's Gay Street Promenade (above) shows a still more industrialized answer. Architects Painter, Weeks & McCarty found they could cover the "rear" wall with a block-long string of stores with a single metal filigree screen of aluminum, 54 feet high and 550 feet long. The advantage of such a screen is of course that it is an independent new structural assembly, which can go up as quickly as new construction does, and which needs to be anchored to the existing wall only at intermittent points with easily adjustable steel braces. Nor does such a screen have to be bent in and out to every nook and cranny of existing façades, as a skin-tight remodeling assembly or substructure, put together with all the ease and efficiency of new building.
New grilles for Miami’s Dade Federal Savings and Loan building (photos and sketch, left) was installed by breaking through the existing masonry wall and welding supporting members to the building’s steel columns.

Floor-by-floor renovation is illustrated in New York’s Newsweek building. A new air conditioning system was installed as an independent unit on each of the building’s top floors. A small air compressor unit was closeted on each floor, as shown in a typical floor plan (above).

Old ducts were used anew in the renovation of the Museum of Modern Art’s air conditioning system (above), at a saving of some $150,000. The system’s capacity was tripled and extended to the upper floors, which had not previously been air conditioned.

Aluminum facade on Thalhimer department store, in Richmond, designed by Architects Copeland, Novak & Israel, creates a large, unified structure. The small corner buildings were altered during the renovation. The new frame for the skin was bolted to the old masonry wall.
would; nor do existing windows and masonry need more than a utility job of repointing, hidden as they are behind the scintillating new screen. With the screen, the former "rear" wall was made the front.

Just to complete this brilliant job of remodeling, the architects put up a block-long, elevated, covered promenade, after razing junky old buildings nearby to clear the way for a combined parking lot on that side. (Photo, page 135). The result was to transform the character of an entire downtown area. Technically the interesting thing about this elevated walkway is that it, like the new façade, was built as an independent new subassembly. Its support was made independent of existing structure, so once again there was notable absence of tearing into the old work.

Certainly the façade for the Dade Federal Savings and Loan building, in Miami, by Edwin T. Reeder Associates, Architects and Engineers (opp. page, top), illustrates an industrialized approach, with its utilization of a standard grille, supported by linkage to the building's existing steel columns. No technical difficulties were encountered in this project.

Within the building

In interiors, too, good remodelers disturb as little of the existing building assembly as they can. Example: the Newsweek building in New York, a 42-story structure, which is having its interior treated by Engineers Jaros, Baum & Bolles, as really 42 different renovation projects in a single building. Once again the principle of efficiency calls for disturbing existing structures as little as possible. The air-conditioning system, in particular, avoids the bulky risers of a central system; these would have to cut through floor after floor, always in alignment. Using the more compact compressor units now furnished by air conditioning manufacturers as a great aid to fussless remodeling, the engineers needed only to install horizontal ducts, which were put in place just as they would have been in a job of new construction, above false ceilings in the corridors. The result was that tenants on each floor received an air conditioning system all their own (see plan, left, above).

In the case of the Museum of Modern Art in New York and its air conditioning system, Engineer Dubin worked another switch. Here a central system, since outgrown, was already installed. Among the "structures" that Dubin wanted to preserve with minimum disruption was the central duct system itself, which luckily proved to be well placed and of heavy-gauge construction, and therefore capable of handling triple the air velocity without buckling. Accordingly Dubin kept the ducts at a saving of $150,000, replaced the old compressors and blowers in the basement with larger units, changed the air outlet diffusers for the higher velocity, and set sound-attenuating boxes behind them. For the upper working-space floors, not previously air conditioned, Dubin did have to run new ducts and new diffusers, but he employed a steam absorption system instead of electric, to avoid the disturbance of adding new electrical capacity in an old building. (The added cooling was 150 tons.) Incidentally, basement space has been reserved already for a 400-ton unit, doubling the present capacity of the whole building, to serve a planned addition as big as the present establishment. This cost is estimated at only $5,000 but the expenditure may save as much as $50,000 of excess cost that would accrue in future air conditioning of the new space, if such anticipatory provision had not been made (see plan, left, below).

In all these examples, two ideas constantly recur: progressive remodeling is done in such a way as to disrupt existing assemblies as little as possible, and to arrange matters so that any new assemblies can be built as nearly as possible as if the job were a new building.

UNBUILDING AMERICA

Imprisonment of the plaza. When a pedestrian park is built, its liberating influence is always hoped to extend beyond the immediate park limits. In this Cincinnati case, however, the buildings that border the park shut it in, looming like the walls of a prison. And the park visitor, taunted by slogans of "joy" and "liberty", serves out his time with the vain patience of the yardbird.
Startling new efficiencies have entered building through new concepts. Prefabrication was one; modular design another; articulated design a third. Industrialized remodeling can be the next.

There is scarcely a competent remodeler alive who does not know the first principle of remodeling: "Disassemble just as little of the existing building assembly as you can." And yet the mental set of human beings is such that the very word "remodeling" evokes the image of an existing structure being taken apart and reshaped. Several years ago there was the interesting example of the University of Miami, which wanted a modern building designed on a leftover traditional concrete frame. Two architects broke their heads over how to change the frame to fit new plans. The third, Robert Little, says he woke up one morning with the better answer: "Change nothing—leave the old frame just as it is. Where something different is needed, don't take away—add."

The notion, "don't take away, add," which Little promptly dubbed "additive remodeling," was the germ of a fine new idea. His particular application of it, in Miami, was offbeat, and perhaps not of universal significance—although Miami did get the equivalent of a good modern building without the cost of either building a whole new frame or monkeying with the old one. (Where Little needed different support, he simply added concrete-filled pipe columns; where needless stairs were bothersome, he simply added an easy ramp on top; where windows did not fit between columns, he simply added a foot or two of cantilevering and let them "slide past.") But Little's discovery was capable of being generalized. To the first maxim, "Disassemble as little of the existing structure as you can," it added a second: "If possible produce a new subassembly independent of the old." To put it rather summarily, this means lining old rooms with new "false rooms," just as the building facade is lined with a new "false front." What is avoided is all the deep surgery of altering the old structures and finishes themselves, an occupation ill suited to this non-handicraft age.

The intrinsic advantage of building these closely fitting but independently constructed "stage sets" and "drops" into the existing structure or in front of it is that the erection procedure is made as direct and simple as new construction; the needed anchorages to the old, being confined to a few points, are achievable with a few adjustable gimmicks. Contrasted with this, the old-fashioned procedure depends on endless scribing, and troweling, and fitting, all by expensive labor. Moreover, in keeping with the new idea, the new utilities and service systems need not be sunk into the wall but can usually be built on the surface of the old wall; the work is done in the open, and after that a sort of vertical "plenum" is created by putting up a new "false wall," out in front of the new utilities, on exactly the same principle as "false ceilings" are now used to create and disguise open plenums for ductwork overhead. Today's thin partition materials are thoroughly suitable for all this, and the only new manufactured element that would be useful would by "remodeling" door and window frames with wider, or perhaps adjustable, heads, jambs, and sills.

So far, so good: the new subassembly, produced independently of the old to which it is attached, involves the minimum of wasteful disassembly of the old. Yet this does not ex-
Design for future change: Architect Louis Kahn's approach to the problem of anticipating a building's future needs is illustrated in his Medical Research Laboratory for the University of Pennsylvania, above and right. Kahn carefully separates "servant space" from "served space." Thus, each of the building's three laboratory towers has sub-towers rising alongside; these sub-towers house ducts, conduit, pipes, fire exits. As new mechanical equipment is added, it will be placed in the sub-towers' servant spaces.
haust the new thinking already available towards industrialized remodeling. Such industrialization and rationalization has to start at the very beginning, with the building's initial design. For many years, Mr. K. Lönberg-Holm, buried in the cavernous recesses of the F. W. Dodge Corporation, has been trying to put across the concept that all buildings, like all organisms, are subject to a life cycle, as predictable and as inevitable as the life cycle in Nature. The building cycle involves research, design, construction, use and elimination—and repeat. One of Holm's chief contentions is that design which anticipates the cycle as a whole makes each succeeding step more rational and easier.

To anticipate the future it is not necessary, however, to make the mistake that some architects have made, misinterpreting Holm's idea. For example, it may be an error to provide excess capacity, such as excess elevator shafts, in the beginning, against possible future need. In the interval between construction and reconstruction a new technology may come up, such as today's electronically equipped elevators, permitting more work to be done or more volume carried in the existing space and making the extra space a waste. The new idea does mean providing the kind of building in which added shafts, and other such things, would be easy to introduce if needed: and there is a world of difference between this valid idea and its misinterpretation.

Holm's principle, "Anticipate remodeling in the initial design," carries a corollary, which might be put this way, in keeping with the very important principle of design articulation: "Design each 'system' in the building—the structural system, the heating or air-conditioning system, the wiring, the plumbing, etc.—to be self-contained for easy assembly, with interconnections to other systems held to a minimum and made easy to alter."

Some examples of anticipatory design

Such building ideas greatly clarify principles which average practice tries only to approximate. But approximations exist.

For example, Architect William Tabler, in his Dallas Statler Hotel, pioneered the construction of multi-story bathroom stacks as "substructures" independent of the building frame. Almost unlimited remodeling will be easy in the future without touching the structure.

It is possible that Philadelphia Architect Louis I. Kahn has made a further rational advance toward rational remodeling. In his Medical Research Building for the University of Pennsylvania, now under construction, Kahn has gone beyond making independent substructures out of the mechanical and electrical services; he has, so to speak, built a separate house for them. There is a house for the people (which Kahn calls "master space") and a house for the services (which Kahn calls "servant space"), both clamped to one another (see illustration, p. 139). The so-called "servant spaces" are giant building columns hollowed out and expanded to create closets, or little rooms, at every floor, containing the vertical supply. Horizontal distribution is through those familiar plenums, or "mechanical attics," which are in common use today over "false" ceilings. Obviously all sorts of remodeling will be possible in the "space for the people" without need for any important disruption of mechanical service, and vice-versa mechanical changes can be made in the mechanical "house" with minimal disruption for the people. In Kahn's hands all this has made for more expressive and better architecture. Similar treatment, in a one-story horizontal building, has been achieved by Engineer Fred Dubin and Architect Warren Ashley, whose enlarged "crawl space" under the new Concord Carlisle high school is another example of a "house" for the mechanical systems permitting the easy and almost unlimited remodeling of supply to rooms above.

Here, then, are the beginnings of a rationale transforming remodeling into a systematic, industrialized operation:

- Minimum disassembly of existing structure.
- All possible work by addition, not subtraction.
- Where possible, production of new subassemblies independent of the old, making production as systematic as "new building."
- Maximum self-containment for all building systems; interconnections held to a minimum and made easily changeable.
- Anticipation of remodeling in the initial design—not by advance provision of excess areas or facilities but by design which will make such provision easy at the right time.
- And, perhaps, design which will give building service systems their own house.
The linking of past to future in the city is an esthetic as well as economic and human necessity

It may be seen at this point that, beyond the plaster dust and the rending noise of the remodeler's crowbars, this issue of FORUM is attempting to look at the rebuilding of urban America in a new way—or at least in a way relatively new for most Americans. It is an attempt to see rebuilding not as isolated events of public or private enterprise, with all the haphazard charms or horrors of street accidents, but as an opportunity to relate rebuilding old or new to the living fabric of the city, its functions, flavors, neighborhoods, and economics, its past and its future. Underlying all this is the strong feeling that if order is ever to be drawn out of the present urban chaos, there must enter some governing elements of good taste and even esthetics, a reawakening to the over-all architecture of cities.

Next to language, as Lewis Mumford has pointed out, the city remains man's greatest work of art. Beside the city, all other arts and sciences are marginal or subsidiary, for the city in its focusing of human consciousness is the mother and habitation of all these. The roots of the city go deep in the human condition, and the city's physical growth through the centuries reflects all stages, triumphs, defeats, and crises of the human spirit. The very nexus of the modern crisis is in the cities.

In mankind's long transition from nomadic to communal being, the first pure expression of the now dominant Western concept of the city occurred in Greece, an ideal that man could not long live up to. Its next great expression was in the medieval city, a walled organic growth around cathedral and castle, which lost in freedom what it gained in cohesion, through a warm, tightly knit warren of irregular streets. Modern research has established that the city of the Middle Ages was not the dungeon it has been painted but a balanced, homogeneous creation, held together by common belief, a city of rural-based trade and clean handcraft industries, wind- and water-powered. It existed in a world marvelously underpopulated by present standards, no major city of the fourteenth century exceeding 50,000 souls. Its vestiges may still be found in small, clean agricultural towns, to which men return with some refreshment.

In the great creative explosion of the Renaissance, the medieval city was opened out to new vistas, plazas, splendors, and growth, reaching a formal but humane order, with some echoes of the Grecian unities, in the eighteenth century and the Enlightenment. Hard on the heels of this, however, and stemming from one of the central forces of the Renaissance—experimental science—came what some have judged to be a new Dark Age: the industrial revolution. In its first raw stages, only beginning to abate, the new industrialism set the now familiar urban pattern of dark industrial towns and vast metropolitan conurbations, of mechanical riot, congestion, and population endlessly exploding. Behind these great and unprecedented new energies was the rise of private capitalism, based on individual judgement, which loosed a certain anarchic force upon the development of city and environs. Instead of the city being viewed as a work of art, designed for the enlargement and repose of the human spirit, it came to be seen largely and simply as a mechanism for making money.

On balance, industrialism so far has generated more good than evil, in the sense of having opened an entirely new epoch in human
A quiet stressing of structural lines and arched brickwork over windows makes this new school wing in Turin, Italy, of uncompromising modern design, discreetly a part of the old edifice in the background. Architect: Giorgio Raineri.
development, of making possible more and fuller life, of offering the only surcease thus far to brute labor and human poverty. And in the advanced technics of electricity, electronics, and chemistry lies the promise of a cleaner, more humane and effortless stage of physical well-being. But unless industrialism begins to solve its pressing urban problems, the residue of early clutter, ugliness, and waste, it too may be superseded by another order.

The saving principles

The difficulty is that, whereas the creation of cities in the past flowed out of a slow, almost instinctive molding of form to human use and aspiration, with time to heal all wounds, the modern city has come so fast so far, and on such a scale, divorced from nature, that any rebuilding of it closer to human dimensions demands a conscious effort, a conscious esthetic to guide it. No such esthetic yet exists—and this issue of FORUM may point the way toward some few general principles of urban renovation, old and new, recognized in part, and already in practice here and there.

Elimination. No rebuilding on the scale needed can be accomplished without a conscious policy of elimination. Elimination is at the base of all art, as it is of all healthy biological organisms. Much of the urban product of the earlier industrial revolution is hopelessly obsolete and not worth saving; e.g., old-law tenements, large patches of gray area, many marginal industrial buildings, most transportation systems. Many renovations of old neighborhoods or other areas cannot get started or begin to make sense without first eliminating dead tissue or applying the scalpel for entirely new developments—see the Hyde Park–Kenwood project in Chicago, page 98. Research and a planned program are needed to develop the instruments, economic, governmental, or otherwise, to make elimination a continuous civic process, so that new slums and gray areas are not being created faster than the old are cleaned out.

Segregation. To bring more orderliness to the city, a conscious policy of segregation, not of the racial variety but of urban functions, needs to be developed. Absolute separation of vehicular from pedestrian traffic is now a fairly well-recognized goal of advanced planners; segregation of residential neighborhoods from heavy industrial and others (new light industries may cleanly fit in) is likewise pursued; segregation may extend even to the design theory of new buildings (see page 138) to separate the mechanical from other interior functions for greater ease of operation, maintenance, and future change. Specialization is a powerful fact of modern life, and it may well be extended further into the structure of the city. The solution to such an area as New York's garment district, for instance, may be to divert through-traffic around over or over it on elevated highways, leaving street level for truck deliveries and its own peculiar form of pushcart traffic, thus isolating the district to allow it to redevelop to its own specialized needs. An example on a smaller scale may be seen in Knoxville's newly integrated shopping block, page 135. What is needed to guide such developments is re-examination of what goes where in the modern city, what constitutes a neighborhood in modern terms, about which almost nothing is known today, again calling for a strong draught of research.

Continuity. To knit all this together without too much rigidity, there is growing need for a new principle of urban continuity, a connective tissue of architectural design to remove raw edges, heal over scar tissue, and link past to present and to the future. To save what is best and salvageable from the past is not only an economic but a strongly esthetic and human necessity. The conviction, indeed, has been growing for some time that what is needed in the modern metropolis, scarified by over a century of industrial drive, is some of the medieval city's biological balance, the interpenetration of greenness and human-scale neighborhoods, some of the Renaissance city's splendors, the opening of space to a new order, without for a moment relinquishing the basic, hard-won advances of modern technics and design. For this new synthesis, to which many signs are pointing, research can be of little direct help. Only the development of esthetic judgement and desire can forward the design.

Of continuity and contrast

The new continuity needed on the city scene is of a subtle kind. It is not per se the slavish restoration of ancient forms or the dusty pursuit of a new eclecticism, which, wherever tried,
This modern church house and school for century-old First Presbyterian Church on lower Fifth Avenue, New York, maintains continuity by simply repeating the church's Gothic quatrefoil parapet as ornament. Architect: Edgar Tafel.
On Venice's Giudecca Canal, this new apartment house next to the Church of the Holy Ghost (right) maintains a timeless Venetian air with its staggered marble balconies and deep-etched windows. Architect: Ignazio Gardella.
has led in the main to a dead level of mediocrity or the lifeless air of a museum. Careful modernization of certain elegant city features and areas—the better New York brownstones, Georgetown's quiet, shaded streets, the colonial mews of old Philadelphia—can preserve a certain valid charm in cityscapes, but it does not begin to grapple with the major problems of industrialism's raw edges in the city, the vast deteriorating areas of no particular style or character.

Nor does the new continuity desired exclude contrast, the shock of the new, the quietly assertive statement of contemporaneity. The concept of foreground and background building is valuable here to divert the dullness of simple-minded sameness. Rather the new architectural continuity should seek to express a rapport between old and new in the echoing of a line, a detail, a texture of materials, on wholly modern terms; in cleaning up and emphasizing structure; in treating surroundings with respect; in, finally pursuing above all fitness, perhaps the most subtle and difficult element to achieve in the practice of the social arts.

Few of these qualities have been particularly characteristic of America until recently. The frontier spirit and pioneer industrialism, with their contempt for the past, have only begun to give way to a subtler, more civilized spirit. Such a project as the Providence regeneration (page 90) would have been unthinkable a decade ago, and though it is yet but a dream, it is a hopeful one. However, nearly all the illustrations on these pages showing the quality in continuity to be striven for are European. Not that the European cannot be guilty of bad taste—see the picture at right, and much of the rebuilding of war-torn capitol like London—or that these examples are wholly faultless. But the European has had centuries of working and reworking the palimpsest of his cities into the loving symbols of the human community. Paul Schneider-Esleben's new office tower in Düsseldorf (page 143) and Ignazio Gardella's new apartment house next to the Church of Spirito Santo in Venice (page 148) may stand as shining symbols of that subtle art.

Perhaps the most articulate of European architects struggling with the problem of continuity in the city is Giovanni Michelucci of Florence, who went into near retirement under Mussolini to free himself from the "formal slavery" of academic training and Fascist ideals, and blossomed forth in the postwar rebuilding of his native city. His most notable work is the new addition to the Cassa di Risparmio or savings bank in the heart of the old quarter, which manages, under a series of rolling vaults and sensitively handled glazing, to fit without break into the old façade and into the landscape of a quiet cathedral garden and famous cathedral dome to the rear. "What I esteem most highly," says he, "is a work which, when completed, will look as if it had always been there. It is a work like a public square where nothing subjegates man, and everything, even when apparently chaotic, is justified by an internal order."

Elsewhere Michelucci has said: "I feel a great melancholy when I see the foundations of old buildings weathered by time being steeped in a chemical compound merely to prolong their life, whereas a building which is being transformed to suit the current needs of men is always a source of delight to me. I should like each of my own buildings, from the day of their completion, to appear to be ready for any such future adaptations. But this attitude calls for a renunciation on the part of the architect of the habit of interposing himself between the design and the men who will eventually use the completed building, and a renunciation of methods and media that are too sophisticated for the client. . . .

"I do not thereby mean to criticize the ration-
alist movement in architecture, which has been historically justified by the many positive contributions it has made; I am criticizing that vestigial rigidity of stand which can still be discerned in many of the works of architects of my generation. I am criticizing the lack of courage to let go and recognize the human and imaginative elements in design; I am criticizing above all the fear of `yielding' something to popular taste. . . . One needs to sense the manner whereby traditional popular elements can be harmonized with the new, and one needs to uncover within oneself certain experiences common to all men. . . .

“Our purpose should not be for each architect to build his own triumphal arch but to contribute to the form of the city, as if it were a living being whose harmonious existence provides a justification of our work and of our lives.”

The future discipline

It is an open question whether in the anarchy of modern art and times such idealism or discipline can flourish. Or whether in the individualism of the democratic process, the determination of real estate business to allow only that kind of zoning or control that squeezes out the highest rent per cubic foot of available site, and the general apathy of many government leaders to all things urban, whether men can go on to build more harmonious, homogeneous, and humane cities.

But the place, the only place to make a beginning is on the design boards of the architectural profession, and in the minds of men of good will and good taste. Democracy can work only thus, by persuasion, example, and the setting forth of good works. If this is well done, the rebuilding of cities may yet catch that tide of hunger for expression of the arts in which there are many popular and provocative omens of things to come.
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SWEDISH MUSIC

A new client that is emerging as one of Europe's more amenable architectural patrons is the management association. A case in point is the Association of Swedish Employers, which recently commissioned Architect Anders Tengbom to design this training college on an inlet outside of Stockholm. The college consists of four main buildings: a dormitory, dining hall, staff building, and student center. Whether or not the sharp notches of the dormitory's two-story brick façade give the students' rooms better views or light control (see plan and interior, far left), they do give the campus a characteristic, vertical rhythm that sounds right amid the surrounding pines and birches.
WHISKY FACE IN JAPAN

In the hills above Osaka, where the low mean temperature and high humidity provide an environment ideal for whisky-making, the Yasui architectural firm has given the Kotobuki-ya Brewing Co. two new buildings and a recognizable corporate face. Both buildings are concrete-framed and are sheathed in ceramic tile. The smaller building (background, photo above) is the distillation plant. The larger, which is used for sorting and processing the grain, is topped by two ribbed-steel drying towers that symbolically recall the form of the company's original furnace.

HEALTH IN MANILA

Another post-U.N. indication that international cooperation can result in good architecture is the World Health Organization's building in Manila by Philippine Architect Alfredo J. Luz. It consists of two elements: An elliptical conference hall and a rectilinear, four-story administration building. The underside of the conference hall's quadri-partite shell roof is acoustically treated; from it is suspended a baffle housing air conditioning and lighting (photo at left).

TENSION IN BONN

Bonn's new Beethoven Hall not only looks unusual externally (above), with its dome swelling above the Rhine bank restaurants and lounges, it also has an unusual interior plan. Concert-goers are routed down a long corridor from the box office, past the cloakrooms, and through outer and inner lobbies before they reach the main hall. Architect Siegfried Wolske, by this plan, hoped to "create emotional tension." He also hoped to prevent "the conventional mass-feeling" among the audience by separating the 1,400 chairs in the egg-shaped main hall, by providing stairs from the floor of the hall to the balconies (see plan) and by covering the dome's steel structure with a playful, bright yellow plaster ceiling (below).
Those who feel that modern architecture is cold and forbidding will find easy evidence for their claim in this Swiss crematorium. For although it is well designed, in a series of courts, gateways, and buildings of varied height, there is a precise formality about the installation that seems somewhat grimmer than necessary. Visitors enter beneath a high arch, proceed down a long avenue (above) and beneath a lower arch, arrive eventually at an antiseptic, slightly raised porch which separates the tilt-roofed “memorial hall” from the low-lying crematorium. Beneath the porch is a hidden passageway which provides an efficient, one-way shuttle between the two buildings. Only in the memorial hall (right), where a breadspreading cross dominates a wood-ceilinged chapel, does the architecture (by Zurich Architects Edi and Ruth Lanners) offer room for compassion.

Australian Architect Robert Eggleston chose a wheel-shaped roof for his Bendigo (Victoria) service station not merely because it seemed an appropriate form but also because of the possibilities of cantilevering it out from the station’s circular core. The wheel consists of 42-foot lengths of galvanized steel that are turned up at their edges like tapered troughs. The troughs, one facing up, the next facing down, are bolted to each other and come in to a concrete ring beam at the core. An additional advantage of this construction method was that the identically proportioned troughs could be stacked up in a “nest,” were transported the 600 miles from the shop in one load.

Hans Schilling’s St. Alban’s church is a striking memorial to the war dead of Cologne. It is built of stone from the rubble of the city’s bombed buildings (mostly the old Cologne opera house). The lofty walls of the church, pierced by a series of random windows (photo below), lead up to a kind of climax at the peak of the apse. In plan, the apse appears as a parabolic bulge in the pentagonal form.
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The elements which make sound energy difficult to control are the almost friction-free medium of air, and the tremendous range of the human ear as a sound receiver. Since most speech and typical office machine sounds fall within the area of maximum ear sensitivity (600 to 6,000 cycles), proper control within this range is a major element in increasing worker efficiency and reducing office fatigue. The noise level of a room can be measured in terms of decibels, the smallest amount of sound the human ear can detect. Most offices have a rating of between 40 and 80 decibels. The job must be analyzed to see what type of sound problem exists. If noisy machines annoy people in the room, then the problem is one of soaking up the noise or sound absorption. If the problem is to stop the sounds that originate in the room from going into the next room, then it concerns transmission, and walls, rather than partitions, must be installed.

its solution with GR soundex partitions

Sound waves travel in every direction from their source. When they strike something, part is absorbed and part bounces off in all directions. SOUNDEX partitions trap and absorb sound waves. They have a noise-reduction coefficient (NRC) of .85, which means we can reduce the noise level as much as 38% in some rooms. Where the problem of sound transmission is concerned, Soundex walls are recommended. The sound blocking quality of these walls rates high (40 decibels), more than enough for all but "heated" discussions.

the secret is the floating core principle

The construction of SOUNDEX partitions is such that as sound passes through the perforations of the partition surfaces it is partially soaked up by the 1/4" fiberglass behind the holes. Waves that get through the glass set up vibrations in the center baffle which, acting as a diaphragm, returns the waves to be "re-absorbed" in the fiberglass on each side of it. Thus the patented "floating core" principle doubles the partition sound absorbing efficiency.

GR PRODUCTS INC.
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Orlando, Florida
Architects:
THE EDWIN T. REEDER ASSOCIATES
Miami, Florida

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The panel is our Crystopal Pattern No. 71. You’ll see why our glassmakers combined these two types of glass when you step into the room.

You will be aware of a subtle, sophisticated control of light. For the crystal prisms transmit a high level of illumination while lowering brightness. The dash of opal reduces reflected glare, blends the various lamp hues into a single warm tone.

An added benefit only glass can confer: the impression our room makes on your hundredth visit will be the same as your first.

For these glass panels won’t fade. Warp. Or discolor. The lighting effect the architects planned into the room is there to stay.

We hope you can arrange to visit our new building soon. You’ll find it a three-dimensional textbook on how to use glass as a structural, design, and light control medium.

Meanwhile send for a free copy of our “Commercial Lighting Application Guide.” It’s a useful working bulletin that explains how to achieve the kind of lighting you see here. Write: Corning Glass Works, 64 Crystal Street, Corning, N. Y.
IGNAZIO GARDELLA. Introductory essay by Giulio Carlo Argan. Edited and published by Edizioni di Comunità, Via Mansoni 12, Milan, Italy. 201 pp. 8" x 10", Illus. About $8.00.

Ignazio Gardella is one of Italy's most consistently promising architects. This chronologically arranged review of his work seems to explain, unintentionally, why there is a possibility that he will never build a widely-acclaimed masterpiece. Now in his middle years, Gardella was a young man at the time of Italian architecture's conflict against Fascist formalism, and he actively participated in that struggle. Indeed, his work today is still marked by a persistent informality that is delightful without ever being beautiful, skillfully planned without ever looking organized. And perhaps it is this undogmatic character, this concern for the peculiarities of a building and its site (see his Venice apartment house, above), that has kept his modest reputation from becoming something more.

While being grateful for this well-prepared book in English and Italian, readers will undoubtedly miss a more informative introduction. The essay supplied by Giulio Carlo Argan sounds depressingly like a conversation overhead at an international architects' convention.


This is the second part of the far-reaching New York Metropolitan Region Study that Harvard's Graduate School of Public Administration is carrying out for the Regional Plan Association. The first part of the Study was an introductory look at the city's problems and prospects (Forum, Dec. '59); six more close-up studies and a concluding volume by Study Director Raymond Vernon will round out the undertaking.

Editor Hall's volume concentrates on the city as a manufacturing center, spotlighting women's and children's apparel, printing and publishing, and electronics as the industries that best reflect the town's changing manufacturing status. Together, the three industries employ 28 per cent of the city's working population. Each of the "case studies" is made in an effort to find out what forces are effective in keeping the industry in New York and what forces attempt to pull it outward. And in each case the objective is pursued with both reportorial zeal and academic thoroughness. It is the analysis of these centrifugal and centripetal forces that readers from other cities will find of particular help in estimating the stability of their own manufacturing operations.

Editor Hall hesitates to make any dogmatic conclusion from the results of his writers' reports. But he does hazard a guess that New York's greatest attribute as a manufacturing center is its off-beat character, its ability to shuck off standardization (that American virtue) and to come up with a better mousetrap—quickly.


This third volume in the New York Metropolitan Region Study by Pulitzer-prize winning Harvard historian Oscar Handlin, is a well-balanced, astute look at one of the big city's most urgent problems—the fast-breaking changes wrought by a heavy influx of Negroes and Puerto Ricans in recent years. Handlin foresees a 60 to 75 per cent increase in the Negro and Puerto Rican populations of the New York metropolitan region in the next two decades, which will raise their percentage of the total region's population from its current 12 per cent to nearly 20 per cent. This growth in New York's Negro and Puerto Rican communities need not be a cause for alarm, Handlin says, although he admits that social disorder has been "an inescapable concomitant of all urban growth, whatever the population involved."

The responsibility for minimizing such disorder, Handlin feels, lies squarely with the community—the problems involved "can best be solved through the development of communal institutions under responsible leadership." Significantly, Handlin adds that a lessening of prejudice and a coincident rise in social and economic opportunities are "essential to such development." Although Handlin, with a his—continued on p. 164

Architectural Forum / January 1960
torian's eye for significant detail, draws parallels between current Negro and Puerto Rican migration to New York and earlier migrations from Europe, he also acknowledges that the "newcomers" of today have two additional barriers to overcome besides the more traditional ones. These are color and fundamental changes in the city since the 19th century when most European migration occurred.

Handlin says it will take more than "slum clearance or expansion of recreational facilities" to improve the conditions under which the newcomers must live and work. "When color and ethnic identity cease to be unbearable burdens, when opportunity for jobs, education and housing become genuinely equal, and when the family acquires a measure of stability, the Negroes and Puerto Ricans will at least have a firm base upon which to construct a sound communal life."

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To operate the system, the operator presses a button for the floor desired. When the carrier is moved into the loading station, the Magnetic Memory device automatically transmits a signal to the carrier tabs or to the tabs on the container (whichever method is used). When it reaches the correct floor, a reading head decodes the digital signal and commands the unloading station to deliver the container.

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San Francisco, that proud-bosomed, fog-crowned princess among American cities, has easily had more literate lovers than all those of dowager Boston and teen-aged Los Angeles combined. As bullfighter-portraitist-restaurant Barney Conrad points out in this latest "unabashed valentine", everyone from Rud Kipling ("a mad city, with women of remarkable beauty") to Chronicle columnist Herb ("Baghdad by the Bay") has wrestled with San Francisco's unique charms, without ever really pinning her down. Conrad's own love song is composed in a few lively words and many striking pictures: the inevitable but nonetheless lovable portraits of Black Bart in handlebars, Emperor Norton in epaulettes, and Lillie Coit in her bottle of booze; some extraordinary shots of the '06 fire, the bridges, fog, cable cars, people, and architecture (mostly the grand old styles, with Wright's V. C. Morris store thrown in for luck and a wealth of newer Bay Area accomplishments left out).

Lover Mel Scott, on the other hand, looks at his princess with the more sober eyes of a city planner and teacher, prying into her colorful and sometimes scandalous past in an attempt to guide her ever-promising future. The physical growth and pains of few metropolitan regions have been so lengthily documented as in this book: the petty civic rivalries and high-handed traction gangs; the Burnham plan of '05, the Regional Plan Association of '25-'27, and other early, agonizing attempts to get people to look at their growing metropolis as a whole; the struggles for water supply, ports, airports, parks, highways, rapid transit, bay crossings, clean air and water; the beginnings of a new era of redevelopment and planning.
Tight money ... twin embassies ... no schools

THE MONEY CRISIS

Developer William Zeckendorf called for a popular outcry against the shortage of money at a full HHFA forum in New York.

There is nothing that I can tell you, at the present moment, that is more important than the subject of tight money. The nation's solvency is at stake. It is not just a matter of our industry as such. It is not just a matter of our wishes to restore our communities. We are in a very dangerous position. Not since 1922 or 1933 have money rates been known to achieve the present level. This economy is on trial. I cannot believe that the ingenuity of the nation's economic administrators has such faults as to permit this to continue and not to try to remedy it. People don't seem to be aware of what is happening, and I only can tell you that unless the voice of the American people is raised against this anachronistic approach to the economy, we are in for trouble, and it will start with Congress.

WHAT CRISIS?

Presidential Assistant Don Paarlberg, speaking before the National Lumber Manufacturers Association in Washington, took a rather more conservative view of the money situation than Mr. Zeckendorf (above).

I am aware of the problems posed for the housing industry and urban renewal by a short supply of credit and a high rate of interest. The housing industry probably is more vulnerable to changes in the availability of credit and in the interest rate than is any other large segment of American business. A rise in the rate of interest might persuade a hesitant citizen to postpone the purchase of a home, while it might not persuade him to postpone the purchase of a television set. High interest rates and limited credit supplies are a reflection of a high level of economic activity and a strong demand for credit. They are the inescapable result of a credit picture which results from necessary efforts to curb inflation.

It might be possible, by making credit superabundant, to supply funds to all who desire to borrow and thus to bring about a temporary reduction in the rate of interest. But such a flood of credit would feed the fires of inflation and create more problems for the housing business than it could possibly solve. No knowledgeable and responsible person would recommend such a course.

IT'S THE PLANNERS' FAULT

When speaking before the Northeastern Regional Conference of the American Institute of Planners, Webb & Knapp Vice President William L. Slayton turned on his hosts as the major factor responsible for bad urban design.

In large urban redevelopment areas you have a tremendous opportunity to create something bold and imaginative. You have the opportunity to experiment—to try out new ideas. You have a chance to break away from standard layouts. For heaven's sake, stop using the criteria of the suburban subdivision for these in-town areas. I'm convinced that the planning schools forget we have cities—they limit their training to subdivisions. They still talk of buffer apartments between commercial and residential. They still have a horror of mixing land uses. Where are...continued on p. 172
Alcoa* Alumalure opens up whole new areas of imagination, new possibilities for beauty—without adding premium cost! Select from 11 handsome colors, plus natural aluminum finish. You can add this striking new beauty at rather astonishing low cost . . . whether you're planning an industrial building, school, shopping or recreation center, warehouse, or any other structure.

All the construction and long-range economies of Alcoa Aluminum are yours. It covers more area faster during erection because it comes in sheets as large as 48 in. wide, 30 ft long. It is lightweight, goes up faster, handles easily. Aluminum requires no maintenance because it's corrosion resistant. Available in your choice of corrugated, V-bead ribbed or flat sheet. And Alumalure*, a tough, baked enamel finish on aluminum, has already passed the 15-year mark in a rigorous test of durability. Lasting beauty remarkably low cost that's worth investigation now!

Your local Alcoa sales office has samples. For color swatches and full technical data, write: Aluminum Company of America, 823-M Alcoa Building, Pittsburgh 19, Pa.

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Building site, courtesy George A. Fuller Co., New York, N.Y.

Alcoa has an established architectural consulting service for architects, owners, consulting engineers, contractors. For technical counsel on aluminum applications, contact your nearest Alcoa sales office.

For exciting drama watch "Alcoa Presents" every Tuesday, ABC-TV, and the Emmy Award winning "Alcoa Theatre" alternate Mondays, NBC-TV.
the planners who are looking at what people want—or can be expected to want—in in-town living?

You can encourage good urban design if you will stop discouraging it. Planners are one of the major obstacles to good urban design. It is you who are inhibiting new ideas, new approaches, and really good design. How?

First, by approaching design mathematically through the controls of the zoning ordinance. You measure density by families or people per acre, and relate it to housing types. You do not examine the design to ascertain its livability nor relate the design to the kinds of families who will live in the area. You establish mathematical limits and say that anything above is bad. And you even say that low density is good per se!

You do the same thing with coverage, set back, height, street width, parking, etc. You do not examine a design in terms of function. You examine it by mathematical formula. This will not produce good design.

You should be working with designers to help break down your sterile, mathematical standards. When you have a chance to work with a competent designer, you should encourage, not discourage, new approaches and ideas. I repeat, it is the planner who is stifling good urban design.

THE SCHOOL AS MUSEUM

Remembering Jonathan Swift’s advice to the English regarding the disposition of the children of Ireland, William Harlan Hale, writing in the November Horizon, posed a similarly drastic solution to the U.S. school problem.

Though I have long passed into that Place where—as I wrote in my epitaph—my indignation can no longer lacerate my heart, I remain the Enemy of all Oppression, Pretense, and human Vanity. Having turned my Thoughts, for many Years, to the Follies of the Learned, I now offer for your consideration a Proposal that may resolve your Difficulties, silence your Opponents, and lead to a unique Fulfillment.

It is more modest than the Proposal I once offered for the Disposition of the Children of Ireland, the times then being of far greater Disorder and Distress. My present thought is simply that publick Educators in America, having so widely abandoned Education in all but Name, now draw the logical Conclusion and discontinue it altogether, closing the Schools as Relicts of the Past and transferring their remaining Exercises to Playgrounds and Playhouses.

The Advantages of this Proposal are obvious and many. It would lift a crushing Burden of Taxation. It would relieve Parents who are now filled with Melancholy at the Failure of their Children to do better in their Studies, or even to learn to read, from further Anxiety on this account. It would release many Teachers, now bound to lives of Penury, to more promising Employment. It would, by removing the Temptations of Literacy, eliminate the Incursions of foreign Propaganda against which your Statesmen have inveighed—and it would turn out the Scribblers of your popular sheets upon other pastures, too, thereby augmenting the world’s useful Labour Force.

What immense Possibilities would arise, if my Proposal were acted upon! The Pursuit of Happiness, long professed as an American goal, would now be made complete, particularly for the tender Young on the Threshold of Life. School buildings would be left as mere Museums, giving mute testimony, as Monuments, Tombs, and Catacombs now do, to Man’s Struggles and Burdens in the Past. END
Reynolds helps the inevitable happen faster with aluminum in Modern Architecture

A metal that is rustproof, light, strong . . . that combines initial economy with virtual freedom from maintenance . . . is destined inevitably to swift rise in the construction field. Add aluminum's natural beauty, plus the ability to take on many colors and finishes, and you have further design values for the architect.

Reynolds has helped the inevitable happen faster. Engineering and design teamwork with manufacturer-customers, architects and builders have improved both products and application techniques. The development of roll fabricating and other production methods have further reduced costs. And Reynolds, with the world's largest anodizing facilities, has pioneered in the use of color.

Reynolds has also explored new architectural realms for aluminum, as well as dramatizing accepted uses, in the building of the Company's national headquarters in Richmond and its regional headquarters in Detroit. You are invited to visit these imaginative yet practical showplaces. For further information write Reynolds Metals Company, Dept. AM-5, Richmond 18, Virginia.

WALLS

demonstrate aluminum' swift rise

Reynolds-fabricated aluminum grids form the exterior of the Commonwealth Promenade Apartments and the 900 Esplanade Apartments, Chicago.

No matter what the job, large or small, Reynolds engineers are always ready to help you with specialized design projects in aluminum. If your office Library does not have Reynolds authoritative three volume set “Aluminum in Modern Architecture,” please write to Dept. AM-5, Reynolds Metals Company, Richmond 18, Virginia.

Introducing REYNOLDS NEW MULTI-STORY ECONO-WALL SYSTEM 202!

The new REYNOLDS ECONO-WALL SYSTEM 202 specified for this building provides a multi-story wall having all the advantages of stock units, yet permitting the architect to coordinate aesthetically with his own design. The insulated wall panels, which fit three basic window modules, are available in a choice of porcelain enameled and baked enameled finishes. Mullions offer a range of structural capacity. Installation of windows and panels erected from the inside minimizes construction time. This economical system for schools, office buildings, apartments, etc., is another convincing demonstration of aluminum’s versatility.

ARCHITECT:
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EDUCATION for youth and adult RECREATION for all the family

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2nd prize $5,000.00
3rd prize $2,500.00
6 Merit Awards of $500.00

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3rd prize $500.00
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eligibility

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Students of schools which are members or associate members of Collegiate School of Architecture as of 1959/60.

NOTE: Special awards for students not successful in general competition. Students winning a major award will not be considered for student awards.

Endorsed by the National Institute for Architectural Education. (Subject to approval of submission of this program.)

jury

HENRY L. KAMPHOEFNER,
Dean, School of Design, North Carolina State College, Raleigh, North Carolina
DR. HARRY JAMES CARMAN,
Dean Emeritus, Columbia College, N. Y.
WILLIAM W. CAUDILL, AIA,
Houston, Texas
JOHN LYON REID, FAIA,
San Francisco, California
EBERLE M. SMITH, AIA,
Detroit, Michigan

Professional Adviser
A. GORDON LORIMER, AIA

TURN PAGE FOR DETAILS
The First Annual Competition had as its premise "Better Living for the Middle Income Family". A quarter section site of 160 acres adjacent to a new industrial park was chosen as typical of sites now being developed throughout the country as tract housing.

The architectural profession was given the challenge of developing this property as "A Place to Live and Rear a Family". Many significant solutions were presented which, it is hoped, will result in improvement of tract development.

The Second Annual Competition extends the challenge to the architectural profession for the next important element of family living—"Education for Youth and Adult—Recreation for All the Family".

Many communities are struggling with the problem of bond issues successively added to the community tax burden as the continued pressure of educational needs forces the sometime reluctant community into action. These educational taxes added to the taxes required for other needed and desirable community facilities, such as parks and recreation, cumulate in an economic drain on the middle income house owner. There is therefore a daily growing problem of solving the overall community needs on a long range basis of physical planning and financial funding.

Last year's winning design provided for neighborhood community facilities at its core with safe pedestrian access. The local school authority has felt that the 614 dwelling units provided warrant an elementary school at the core of the development and has taken independent steps to achieve this. However, Junior High School, High School and Community College facilities will eventually be needed for the large residential growth in the surrounding territory.

While short of the ideal and limited by existing controlling factors a definite attempt has been made by the Municipal Government to establish suitable zoning conditions for future growth. Through a collaborative effort of community and industry, a generous tract of land has been made tentatively available for community education and recreation needs subject to demonstration of its suitability and financial feasibility under a long range bonding program.

Hot controversy and concern exists in the community as to the validity of current educational techniques and the need for a stiffer educational approach to match the technical demands of the space age. The rising cost of modern educational plants has been very strongly challenged. It has been decided to retain a firm of architects to prepare a feasibility study of the use of the above tract of land for education and active and passive recreation, and to submit preliminary plans for the first projected element of construction, a Junior High School.

You are the hypothetical architect

This is the program: Overall development of the 280 acre site with integration of the following facilities:

1. Junior High School for 2,000 students.
2. High School for 2,500 students.
3. Community College (2 years) for 1,200 students.
4. Active and passive recreation for a rapidly growing satellite community providing greatest flexibility and sustaining revenue potential within the limitations of available land.
5. Adult use of educational and associate athletic facilities to the greatest extent possible without sacrifice of prime function.

The existing county road will be restricted for local access but the substantial volume of traffic engendered by the proposed community facilities shall be considered, including the problem of safe access to the site from the rapidly growing residential area to the southwest.

The overall study need be developed only to the extent necessary to demonstrate general site planning and functional integration or juxtaposition of facilities for maximum usage at minimum overall cost.

The Junior High School shall be developed in sufficient detail as to demonstrate educational objectives, plan organization, architectural character and general type of construction. Anticipated construction cost shall be given as a lump sum for the building only, excluding site development beyond a line five (5) feet from the building. Cost per square foot of gross area and cost per pupil shall be stated.

To permit uniformity of cost factors the local conditions shall be considered the U.S. Average of 535, as published in Engineering News Record Building Cost Index, listed below.

A typewritten analysis stating the educational objectives considered and developed in the solution shall be incorporated in the submission together with any other pertinent data which the Contestant may wish to present for the consideration of the Jury.

I believe that only through education can we meet the many challenges and problems of today. How to provide the necessary physical facilities, without sacrificing educational quality and imposing too-heavy tax burdens, is a problem weighing heavily on every community. It is hoped that this competition will stimulate practical, workable solutions to this great challenge and develop a closer collaboration between the architect, educator and private citizen."

SEYMOUR MILSTEIN, President

Mastic Tile Division • The Rubberoid Co.

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**Building Cost Index Dec. 25, 1958**

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**Average Temperature in °F.**

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**Prevailing Winds**

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**Average 12 mph**
The RUBEROID Co.

design competition

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Houston, Tex. • Joliet, Ill. • Long Beach, Calif. • Newburgh, N.Y.
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Architectural Forum / January 1960
method of submission

Each submission shall consist of not more than three 30x40 illustration boards, used vertically, of sufficient weight to permit handling and display. Drawings shall be in black and white suitable for reproduction. For uniformity in judging, the overall site plan shall be drawn at the scale of 1" equals 200'. Typewritten information, schedules, etc. may be applied to front of illustration boards. There shall be no projecting lettering or other materials. Each board shall have a thin card mounted face inward on the back with gummed tape, bearing the Contestant’s name (or names, if a joint submission), address, and school or office affiliation; a statement signed by the Contestant(s) that this particular submission has not been previously submitted in any other competition; the name of the individual or individuals to whom award check is to be made payable and address of the individual to whom it is to be mailed if award is made for the submission. If the contestant is an undergraduate student he will so indicate on the back of the submission.

Submissions shall be addressed to Mastic Tile Division, The Rubberoid Co. and delivered to The Architectural League of New York, 115 East 40th Street, New York 16, New York, not later than 12 Midnight on June 30, 1960. Submissions will be returned by prepaid registered mail wherever possible. However, the sponsor cannot assume responsibility for loss or damage to entries. Exhibit, reproduction and publication rights are reserved by the sponsor for a period of one year after award.

Submissions will be numbered in order of receipt and each will be anonymous until the Jury has judged the entries which are identified by number only. The Jury shall have full and final power in the selection of all entries for award. By taking part in this program the Contestant(s) agree(s) that he shall have and make no claim against the Jury, any member thereof, the sponsor, the endorsing institutions, on account of anything that may be done or omitted to be done, except for awards made to him. The mailing of the check payable in the amount awarded to the name or names given on the original entry shall constitute full payment of the award.

Notification of awards to entrants will be made by the sponsor as soon as practicable after judging is completed, and payment of award as above shall also be made as soon as practicable.

The sponsor has not set any restrictive conditions as to materials, method of construction, or design classification. It is hoped that the results of this competition will awaken community interest toward long range growth planning.

NOTE:
It is felt that the problem of distribution of answers to questions may cause inequities among contestants. Therefore the contestants should rest on their own judgment of the problem as stated.
ANOTHER NORTON first!

new TRIMLINE SURFACE-MOUNTED DOOR CLOSERS

set new standards of architectural harmony with the clean-lined simplicity of contemporary door design.

SEE THE FOLLOWING PAGES FOR FULL DETAILS

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As architectural "gingerbread" has continued giving way to the clean, uncluttered look, the need for door closers to match has grown increasingly urgent. Norton design has always kept well ahead of that need, but never at the cost of reducing efficiency for the sake of compactness or styling.

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More New-Look NORTON Closers For New-Look Doors

Engineered for today's demanding service requirements, styled for the modern look in today's doors and trim, yet with no deviation from traditional Norton quality and operating efficiency.

SERIES 750 CORNER-TYPE CLOSER

New extruded aluminum closer for metal or wood exterior doors with narrow top rail.

Powerful as it is, this unique closer is amazingly inconspicuous because it blends so smoothly with the door's top rail. The arm channel is set into the top rail so that it cannot be seen. Full rack-and-pinion mechanism combines with a special spring to assure maximum durability and unvarying efficiency. Handles the heaviest of standard exterior doors with ease.

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A miracle of compactness... projects only 1 1/2 inches from door... less than half as much as regular surface-mounted closers. Nevertheless, this closer is designed and built in the Norton tradition to withstand constant use, maintaining full closing power and top operating efficiency at all times. For interior doors only... Models 702N and 703N.

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Norton developed this series to satisfy the many requests for closers like 702 and 703, but heavier and more powerful. Shell is of molded aluminum enclosed in a wrought metal covering of pleasing modern design. Projects only 2". Suitable for doors up to 3'6" x 7'... regular or holder arms... surface-mounted shoe only.
Norton's outstanding new Trimline series is product of this policy. The trim, modern lines which suggested the name make Trimline closer ideal for the narrow-rail doors now so widely used, but they are equally at home on any door. Trimline closer mounts neatly on the top rail, and are equally at home on any door. Trimline closer mounts neatly on the top rail, eliminates hangovers, blends beautifully into the trim, and unobtrusively complements the design of the door.

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Trimline closers are true liquid-type closers with the rugged dependability of the time-tested, Norton-originated rack-and-pinion mechanism. They are powered by a specially designed spring of highest-quality steel. Closing speed can be precisely regulated with ease, quiet operation throughout the swing of the door. The shell is lightweight aluminum, a container for the Nortol fluid which provides both checking action and constant lubrication of every part. Trimline closers are non-handed, too; can be used on doors opening either left or right.

The Trimline series comes in sizes B, C, D and E, to handle doors of all standard weights and sizes...any desired type of arm. Send today for detailed specifications. No obligation...just mail coupon on page 4 of this insert.

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The out-of-sight closer that never intrudes upon the clean lines of modern door design.

The name INADOR applies not merely to a single model but to a complete line of single-acting closers for metal or wood interior doors hung on butts. Correctly installed, the INADOR closer is virtually invisible, since the entire mechanism fits snugly in the top rail of the door.

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Norton lintel-concealed door closers

Here's the closest approach yet to a completely invisible door closer. Size for size, it matches any surface-mounted exposed-arm closer in power. It can also be equipped with a concealed arm as illustrated, providing almost 100% concealment when door is closed. Double-piston action used in no other concealed closer permits this one to be changed from right to left hand in the field. All other advantages of Norton Surface-Mounted Closers PLUS maximum concealment for harmony of design.

Closers like this have served for 50 years or more!

Among the most widely used of all closers is the Norton Standard Model Full Surface Closer shown above. Here is the up-to-date version of the original Norton Door Closer, hailed as "revolutionary and challenging" when introduced in 1880. Many thousands of similar Norton Door Closers are still in daily use in some of America's best-known public buildings after 30 years and longer in continuous service. Available in sizes B, C, D, E and F, with standard fitting to meet every door closer need.

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With GJ you have the one complete line of builders' hardware designed for most every problem of stopping or holding the door... including the safe cushioning and silencing of the door's action.

If yours is one of those "never before heard of" types of problems, keep in mind that GJ engineers have worked out special adaptations to meet unusual problems of installation and function for over 35 years. Some of the early adaptations are "standards of the industry" today.

And if it's extra quality you require for hard daily usage, long continuous wear, etc., these are assured by GJ's long record of producing "life of the building" hardware.

Meeting door control problems—one and all—is our only business. Every order gets the careful consideration of experienced door control engineering. Your specification always means more when you write in "...shall be GJ...".

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write for details 4422 North Ravenswood Avenue • Chicago 40, Illinois
Membrane fireproofing: a re-examination

For years, membrane fireproofing has been the standard method of attaining low-cost fire protection in floor-ceiling assemblies. For example, where one-hour or two-hour construction was required—and an acoustical ceiling was wanted—most specifications called for mineral fiber acoustical tile cemented to either a lath and plaster or gypsum board membrane. The acoustical ceiling tile alone could not offer rated fire protection to the structural members in the assembly.

Acoustical tile offers rated fire protection

Now a new method of membrane fireproofing, Armstrong Acoustical Fire Guard, eliminates the need for intermediate fire protection between the suspended tile ceiling and the structural floor above. Acoustical Fire Guard is the first acoustical ceiling tile to offer rated fire protection to structural steel. Floor-ceiling assemblies using Acoustical Fire Guard as the only protective element beneath the structural floor have received one-, two-, and four-hour ratings from Underwriters’ Laboratories, Inc.

Because Acoustical Fire Guard eliminates the need for additional fire protection above the suspended ceiling, it offers significant savings in construction time and cost. It is installed in a completely “dry” operation; there are no delays of the kind caused by “wet” work. This has already enabled many general contractors to save three to six weeks’ construction time.

Through elimination of materials and labor, Acoustical Fire Guard can mean savings of up to 30¢ per square foot, depending upon locale, building design, type of fire protection being considered, and type of alternative acoustical ceiling being considered.

There are many instances when Acoustical Fire Guard ceilings will provide greater fire protection than would be the case with alternative methods. In such cases, this additional protection will usually be recognized in the form of lower fire insurance rates—year after year—on the building and its contents.

Acoustical Fire Guard offers unlimited accessibility to pipes, ducts, and electrical fixtures above the acoustical ceiling. Its acoustical efficiency is built in at the factory and does not depend upon the skill of the man who installs it. And it is an interior finish that requires no job painting after it is installed.

Acoustical Fire Guard has been chosen for millions of square feet of fire-retardant ceilings in commercial, institutional, educational, and industrial buildings across the country.

If you would like to learn more about this remarkable new ceiling, contact your Armstrong acoustical contractor or your nearest Armstrong district office. Or write to Armstrong Cork Company, 4201 Rooney Street, Lancaster, Pa.
St. Luke's Church, Camillus, (near Syracuse), New York—a beautiful example of advanced wood technology put to use in church architecture. Here laminated hyperbolic paraboloid construction made possible this dramatic application of the ancient Christian symbol of the triangle. Sargent, Webster, Crenshaw and Folley, architects.
Design should never be the servant of material—

for new answers...look to WOOD

What matters creativity—unless materials at hand can translate the blueprint into reality? Wood can modestly boast of its versatility, of its close association through the centuries with the highest aspirations of architects and craftsmen alike. It is no less true today! Thanks to the new technology of wood, laminated beams and other products undreamed-of ten years ago are making way for a new era of structural sophistication. Add to this the new work in wood preservatives, the new opportunities in exterior and interior colors, finishes and textures—you have what amounts to a new material whose only design limit is your imagination! For more information on designing with wood, write to:

NATIONAL LUMBER MANUFACTURERS ASSOCIATION
Wood Information Center, 1319 18th St., N.W., Washington 6, D.C.

for freedom of design, look to wood

Architect Percival Goodman wanted a dramatic entrance screen for Temple Beth El in Providence, R. I. Egg-crate wood wall has insets of stained glass, provides rich shadow patterns and luminous color.

When design calls for unobtrusive elegance, wood is the natural choice. Here neutral hardwood paneling creates a handsome backdrop for objects of art in a private home. Philip C. Johnson, architect.

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entrance on 49th Street. Atop the building, two setback floors have been redone as the airline’s main U.S. offices, with a small executive lounge, conference rooms and an employee cafeteria above (photos right).

On the intervening eight floors, additional funds have been allotted to partition 96,000 sq. ft. for tenants, who will pay $6 to $7 per sq. ft. for full office floors (slightly more for partial floors), about the same as for comparable space in new buildings nearby. Other costs—new furniture, displays, moving expenses, telephones, taxes, lost rental income during construction, and legal, brokerage and management fees—will bring KLM’s total remodeling investment to about $3.6 million, a bargain compared to complete demolition and new construction on the site. KLM will be content to break even on the operation of its new building; greater prestige, more business, and a home suitable for years to come are counted ample profit.
Sanymetal uses extra strong hardware especially designed for porcelain, such as these brackets designed to properly carry the weight of large panels and prevent sagging. Deluxe Porcena installations should have hardware that is beautiful as well as strong. Flush design of Sanymetal hinges, hinge brackets, latches, etc., gives you the clean, attractive appearance you want.

You can be confident of beauty, of long-run economy, when you select Sanymetal Porcena porcelain enamel on steel as the material for toilet compartments. In 24 years of experience, and thousands of Porcena installations, there has not been one failure due to material or design. The secret of this record lies in the quality porcelain, the strong hardware, and the correct handling and assembly technique which Sanymetal uses. For an example of results, ask us about the case of one large school system, where vandalism or deterioration causes the replacement of toilet compartment panels (of another material) at the rate of one per calendar day, but where a Sanymetal PORCENA installation has stood up, year after year, without damage.

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3,893 ft. of movable Aetnawall-A almost entirely replaced interior masonry walls throughout the working and executive areas in the new Berkshire Life Insurance Building, Pittsfield, Mass. A wide range of partition panels gave unusual flexibility to
translucent Kalwall Panel Unit Walls...

A new low in installed cost...

Factory Preassembly
Translucent Panels, Opaque Panels, windows and louvers — all are preassembled to your arrangement at the Kalwall plant. Completed modular units require only perimeter sealing at the site. Units are available in sizes up to 4' x 20', in a variety of colors and light transmission factors—there's nothing for workmen to assemble.

Simplified installation
Fasten clamp-type head and sill in opening — position panels, — and seal with Kalwall battens and elastic sealing tape. It's that simple to install the Kalwall Panel Unit Wall.

3-story motel — no supporting framework required

Send in prints of your job. They'll be back in a matter of days showing you how simple, how practical it is to build the Kalwall Panel Unit way.

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POURED COLUMN
POURED FLOOR

SECTION AA. Precast cellular concrete Flexicore decks provide fireproof structural floors and roofs at Fairmay Apartments, Chicago. The five buildings are masonry wall-bearing except for reinforced concrete stairway and elevator core. Design called for 75 psf live load.

TYPICAL FLOOR FRAMING. Each 3800-sq. ft. Flexicore deck was placed, leveled and grouted in two days. Available on third day as work deck for erection of walls and frame for next story.

SECTION BB. Clear span of 18'-6" between masonry bearing walls permits simplified design and fast construction. Underside of Flexicore deck is exposed for finished ceiling.

How to Design a Low-Cost, Fireproof Apartment Building

Edward Marks, Architect, Evanston, Illinois

The use of Flexicore precast decks permitted Fairmay Apartments to meet Chicago's strict fire code, and resulted in substantial savings to the owners. High-speed erection permitted earlier occupancy and exposed Flexicore slabs eliminated ceiling plaster.

For more information on this project, ask for Flexicore Facts No. 78. Write The Flexicore Co., Inc., Dayton, Ohio, the Flexicore Manufacturers Association, 297 S. High St., Columbus 15, Ohio or look under "Flexicore" in the white pages of your telephone book.
Matching modern architectural thinking is the combination of Bestwall's lightweight gypsum materials and their adaptability—freedom of design and interior finish . . . . plus the all-important "margin of safety", FIREPROOFING.

Specify custom quality products manufactured by the Bestwall Gypsum Company, exclusive producers of glass textile fibered gypsum plasters. One square yard of membrane fireproofing plaster contains 1,500,000 lineal feet of glass fibers.

In addition to gypsum lath and base coat plasters, the Bestwall product line also includes attachment clips, accessories and finishing plasters—all designed to complete the "margin of safety" system.

Additional details and architectural specifications for Bestwall Membrane Fireproofing can be obtained from your local Bestwall representative, or write . . .

Bestwall Gypsum Company
Ardmore, Pennsylvania
Plants and offices throughout the United States
Capital renewal... low embassies... forgotten schools

A NEW WASHINGTON

Forum:
Your article, “First Steps Toward a New Washington” (Dec. ’59), tells two stories well:
1. That good design and good architecture with scope, variety and taste can and must be part of our thinking in urban renewal projects; and
2. That successful urban renewal, within the atmosphere of our free and private enterprise system, must give a reasonable return on investment to encourage a proper flow of capital for such projects. This does not mean exorbitant profits, but it does call for a return comparable to that of other competing investment opportunities.

Jim Scheuer’s experience in the Capitol Park Apartments bears these points out in a very practical way.

ALBERT M. GREENFIELD
Bankers Securities Corporation
Philadelphia

EMBASSIES AT 5½ PER CENT

Forum:
I would like to comment on your December editorial on the State Department’s foreign buildings program. I doubt if the criticism Congressman Hays makes on the taste of the architectural committee would have arisen if there had not been an economic problem. He naturally suspects this fancy architecture costs a lot of money. However, in the case of the embassy, residence, and office building I designed in Tegucigalpa, Honduras (photo, left), my records indicate quite another reason for the high cost. This reason was related to foreign policy but in such a way that it would not be obvious to investigators.

In the first place my fee was certainly on the low side, 5½ per cent including Spanish notes on the drawings, Spanish translation of the specifications and checking of shop drawings, but excluding supervision. Furthermore, it was figured partially on budget cost and partially on bid price but not on the final cost.

The original budget cost was so low that Congressman Hays certainly could not criticize it. The records show that after the bid opening I forced the successful bidders to revise their prices downward so that the general contract amounts plus a reasonable contingent came to about $400,000. But later this was revised upward (to $600,000) for no other purpose than to allow the local builders to break even.

In other words it may be that in a number of cases such as this the additional cost would have been justified policywise, but must be looked on as foreign aid rather than as building cost.

MICHAEL M. HARE, architect
Smithtown, N. Y.

SCHOOLS ARE FOR TEACHING

Forum:
In our obsession with what you aptly call the “productivity push” we seem to be forgetting that education is not so much produced as induced (FORUM, Nov. ’59). The quality of a man’s education is to be measured not by how much he has learned and how quickly he has mastered it, but by the strength of his intellect and the sensitivity of his spirit. And there is no evidence at all that education in this sense can be mass-produced.

To be sure, we need to attack our present inadequacies, for our schools are full of them, and we are desperately short of creative new approaches to the old persistent problems. But it would be too bad if we were to become so engrossed with the clever manipulation of space, time, groups, and gadgetry that we forgot what we began looking for in the first place.

This, we must continue to emphasize, is a school in which each student can enjoy close relationships with teachers who are not only efficient instructors, but also wise and able counselors—an institution whose principal purpose is to help youngsters improve and grow as individuals.

The most useful buildings, in the long run, will be those which are best designed to facilitate that kind of education.

JOHN H. FISCHER, dean
Teachers College
Columbia University
New York City

Forum:
Your November story, “The productivity push in schools,” is the first I have seen that attempts to pull together most of the “experiments” in secondary education and place them in proper focus for the benefit of the architects. If there is one thing an architect should do in designing schools in the next few years, it is to keep in mind continued on page 200

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SELF-CHEATING CITIES

Forum:
Your excellent editorial titled "Cheating the Cities" (Sept. '59) brings out the need for a blast at the cities themselves. Overlooked it seems, is the 'God helps them that help themselves' approach to urban renewal.

The cities have been cheating themselves for a long, long time. The cheating has been extreme, and done primarily on the basis of discriminatory enforcement of health and safety codes, the subsidy of slum areas by low taxes and the penalizing of new construction by high taxes.

Many slum buildings would be eliminated if minimum health and safety codes were as rigorously enforced for all existing buildings as they are on new construction.

Land taxes, separate from improvement taxes, should be determined by zoning. If all lands in a city were taxed on this basis, slums would pay the same land tax as rigorously enforced for all existing buildings as they are on new construction.

Tax penalties on new construction force new developments outside the city boundary. Taxes on new residential construction are often many times the tax on a comparable size house on an identical size lot in an identically zoned area. It is understandable that the market price of a house should vary due to physical condition, plan, design, etc.; but to the city the cost of the facilities and services are the same. It is not reasonable that the city discriminate between identical land use improvements.

These three premises, if acted upon by the cities, would make it unprofitable to misuse land and neglect buildings: Slums and blighted areas would no longer be good investments.

Federal aid cannot be expected to solve urban deterioration year after year but instead should be called upon to solve the spot problems that the cities cannot of their own honest effort solve themselves.

LYMAN ENNIS, architect
Los Angeles

Reader Ennis' premise regarding the vigorous enforcement of health and safety codes for existing buildings is correct, so far as it goes. The unhappy problem is that the more strenuously codes are enforced, the more people are put on the streets.—ED.

LIGHT ON CHURCHES

Forum:
Father Scott's "Journey among churches" in your December issue is an admirable examination of intent as well as technique in architecture, one which all of us should welcome, especially from outside the ranks.

But I wonder at his joy in the exuberant church design, as opposed to the austere, the thoughtful. (See his illustration of Barr's chapel at Hem, France — photo above, top.) Father Scott emphasizes color above all else in his article: "... there can be no excuse if the church fails to provide it. Indeed, if I were asked what impressed me most in all the new churches I saw, I would sum it up in that one word."

The new Shrine of the Immaculate Conception in Washington, D.C. unfinished in many ways, has clear glass where the stained glass eventually will be. And while I am sure that this big Byzantine type is not the kind of church Father Scott, as a clear opponent of eclecticism, likes, it struck me that the clear cool light of day coming into that vast space gives it a wonderfully thoughtful quality, evoking that contemplative passion, religion. I wonder if it will be as evocative when the jewelry is added, the colored glass, Frettiere, yes.

It makes me remember a very dissimilar church, Mies van der Rohe's little chapel on the campus at Illinois Institute of Technology in Chicago (bottom photo). I don't remember any color there. But I do remember being caught by the seriousness of the space. I am not a Calvinist, incidentally, but a Catholic.

MICHAEL MAAS, architect
New York City

ELECTRIC HEAT

Forum:
Your article "Electric heating puts on the heat" (Forum, Oct. '59) made good, convincing reading until I came to the quotation from "one of the manufacturers." He mentions a heating system costing $300,000. That is about 15 per cent of a normal job. So the job would figure to be a $2 million school building. Where is the client who pays an 8 per cent fee on a commission of that kind and size? And is there any support for the statement that an electrical system will cost half as much? And what's that about architects who specify the more costly system for no other reason than to fatten their fee? Come, come, manufacturer, what have you manufactured?

PETER VAN DER LAAN, chairman
Public and Professional Relations Committee
Michigan Society of Architects
Detroit

It speaks well for a profession that it is quick to defend its ethical practice, though not to the exclusion of possible fault or criticism. Forum reported the view of a reputable manufacturer, who must necessarily be nameless. The figures used were merely for purposes of example.—ED.
GLASWELD is United States Plywood's new all-mineral building panel, supplied in over 20 permanent exterior colors. Appropriate to a wide range of applications in curtain wall construction, Glasweld stays flat and will not "oil-can," "orange-peel," rust, or corrode. It is weatherproof and fireproof. Because Glasweld is permanently colored, it does not require maintenance. It machines cleanly and can be cut on the site. Used as a facing for a component panel, Glasweld will not photograph any core material. Glasweld is guaranteed colorfast.

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FACTORY MOLDED CORNERS: 4" and 6" high for outside corners; 4" high only for inside.

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