Automation
and Architecture

The Louisiana Architect

Volume VI
Number 1 January, 1967

The Louisiana Architect

Volume VI
Number 1 January, 1967

Official Journal of
The Louisiana Architects Association
of the
American Institute
of Architects

CONTENTS:

The Future 6
The next twenty years

The Computer 7
Architecture and Automation

Merit Award 8
Barras and Breaux, AIA

Merit Award 10
Barron, Heinberg and Brocato

Industrial Plants 12
Special design services

Is owned by the Louisiana Architects Association, not for profit, and is published monthly, Suite 200, Jack Tar Capitol House Hotel, Baton Rouge, La., telephone 348-4331. Editorial contributions are welcome but publication cannot be guaranteed. Opinions expressed by contributors are not necessarily those of the Editor or the Louisiana Architects Association. Editorial material may be freely reprinted by other official AIA publications, provided full credit is given to the author and to the LOUISIANA ARCHITECT for prior use.

Printed by PIKE BURDEN PRINTING, INC.

Editorial

Dick Thevenot

man's efforts

Almost all of man's effort has always been geared to the future. The farmer who plants seed in the spring hopes to see it sprout in the summer sun, to mature in the fall, and nourish him in the winter, so that next year he may be able to plant more seed than before. We are kept alive by our dreams, plans and work for a future better than today, and the fortunes of our future are determined by how imaginative the dreams, how carefully considered the plans and how hard the work. If this is true for man it is true also for the associations of man and thus for the LAA.

Thankfully there is a strong desire among LAA architects to solve their common problems and determine future events. Many of the profession's problems are not new, we've been complaining about them for years. Others exist but are not recognized and still others will arise out of trends now evident. We'll not solve all of the problems this year or the next, and some we will perhaps never solve, but some we can and will solve.

a guide for '67

As a guide for '67, we have facts from a survey made in '66 which show what LAA members consider to be the most important tasks at hand. They are: Better public relations and education of the public to appreciate good architecture; higher professional ethics and enforcement of ethical standards; continued emphasis on legislation affecting architects; and stopping the infringement upon the practice of architecture. These worthy old problems, are the first order of business this year.

Your LAA office has already set machinery in motion to determine the best approach to several problems, namely; architectural appreciation, legislative obstacles, plan stamping, the breach of professional ethics, the continuing education of the practicing architect, and closer liaison with other industry groups. In each case the effort of all LAA members will determine the final results.

Louisiana's architects are also living with problems which many either refuse to face, or do not recognize. One of these is the lack of influence architects have in planning for future school, municipal and state needs. Perhaps this year the LAA will be able to encourage a few architects to become involved in politics, to seek positions on planning commissions and to take on leadership responsibilities with their Chamber of Commerce and other influencial groups.

doors of opportunity

LAA architects in '67 hopefully will admit to each other that they have a profit motive and will produce ideas and plans to make their work more rewarding for themselves as well as the public. Personal, financial success could free architects to play a more dominant role in the centers of influence. In our culture, financial success is recognized as a sign of wisdom and leadership, thus it opens many doors of opportunity for public service and personal advancement.

To solve the problems of the more distant future, and to set goals for five and ten years to come, the LAA might do well to call upon the experience and talent of its past presidents, or some other select body who could intelligently read the trends of our time. Hopefully they might offer some advice to direct our course.

As 1967 begins, the health of the profession looks good. It could be better, much better, but whether or not it will be depends on what we do to determine our future.

The Future

The next twenty years

Because January is a good time to think about the future and because our readers hopefully are people who play an important role in planning our environmental future, perhaps you would like to take a look 20 years ahead. Kaiser Aluminum and Chemical Corporation recently retained several noted scientists and analysists to do some "star gazing" into the future. From a copyrighted game called Future produced by Kaiser here are 50 possible changes which may occur in the world of tomorrow. Each prediction is assigned a percentage "probability rating."

40% Continental shelves are mined for ores

40% Computer-programmed use of all agricultural land areas is introduced

60% Drugs to control personality are widely accepted and used

20% Annual wage of $6,000 is guaranteed to all breadwinners

60% Short-term weather forecasting is highly reliable

60% Effective world-wide fertility control is practiced

80% Wide practical uses are made of lasers in industry and medicine

40% World crop loss is drastically reduced

40% Household robots are widely used and facsimile newspapers are printed in the home

80% Manned military space base exists

40% Racial barriers are effectively eliminated

80% Economic production of fresh water from oceans is possible world-wide

40% Low-cost thermonuclear power is widely used

40% Air and water pollution are under control

80% 3 out of 4 people in the U. S. live in cities or towns

60% Manned lunar base exists

40% Fewer than nine countries possess nuclear weapons

60% Defense budget is less than 10% of Gross National Product

60% Full-color 3-D TV is in use on a global basis

20% Human brains linked to computers extend man's intelligence

20% Effective physical treatment of mental illness is possible

20% Staggered work week replaces Monday-through-Friday standard

20% Economic and military alliance exists between the U. S. and the U.S.S.R.

60% Expenditures for recreation and entertainment are double those of 1966

40% Free public education through college is available to all

40% Teaching machines are important source of instruction

40% Roadless vehicles open new areas for travel

20% Per capita Gross National Product is up 100% since 1966

60% Most urban people live in high-rise multi-use buildings

20% Limited weather control is carried out globally

20% Agricultural production is increased by direct genetic manipulation

20% Elements manufactured to order from sub-atomic "building blocks"

60% Private passenger vehicles are barred from most city cores

40% Computerized medical diagnosis is in wide use

40% The United Nations has become a more effective international power

80% Annual investment in automated equipment is 10 times that of 1966

60% More than 120 million autos are in use in the U. S.

20% Unemployment rate in the U. S. is lower than in 1966

20% Substantial increase in food supply is obtained through ocean farming

80% Ultra-light metal substitutes are in wide use

20% Most business is conducted by picture phone

60% Implanting of artificial organs is common practice

60% World agricultural production is 50% above that of 1966

40% Computer-controlled highway traffic has been introduced

60% Currency is virtually eliminated by credit cards

40% Average work week is shortened to 32 hours

20% Regular commercial transportation by rocket has been instituted

60% No war directly involving the U. S. occurs during 1986

40% Education and arts become lifelong pursuits of many

40% Men land on Mars by 1986

Ritual, Change and the Computer

This article is reprinted from the Michigan Society of Architects' November magazine and is the first of several articles on automation, computers and trends in other fields, which will appear in the Louisiana Architect in 1967.

Architecture today is confronted by forces of change as great, if not greater, than those created by the Industrial Revolution of the late 19th Century. It should be no surprise. Architecture has constantly been influenced by forces of society, changing values, changing technology, changing economics, changing mores and rituals.

In our twentieth century society we should be well equipped to deal with the concept of change. The architectural profession and the building industry, however, are steeped in ritual. Many of the craft operations of the building industry are still perpetuated even though changes in technology have made them obsolete. The architect's practice, though broader in scope and more complex in nature, still relies on trial and error procedure for designing, and the number of tedious and non-productive repetitive operations conducted in an architect's office grow at an alarming rate.

This is news to no one, but, the question remains how can a profession as old as architecture and a trade as old as building change.

The argument of course comes ringing back that the profession has changed. "Our office uses Critical Path." "We use the computer in our analysis of steel frames." These are typical of the responses received when an office is challenged as to its progressive status. While important, these developments are no more important to progress than were the developments of scheduling and the use of the slide rule. They only made more efficient use of operations which were already known.

Three revolutions are occurring simultaneously, each related to the other but each with its own implication, the information revolution, the communication revolution and the automation revolution. They have in fact been active for sometime but they are just now beginning to affect the architectural profession. The one element common to all three revolutions is the computer.

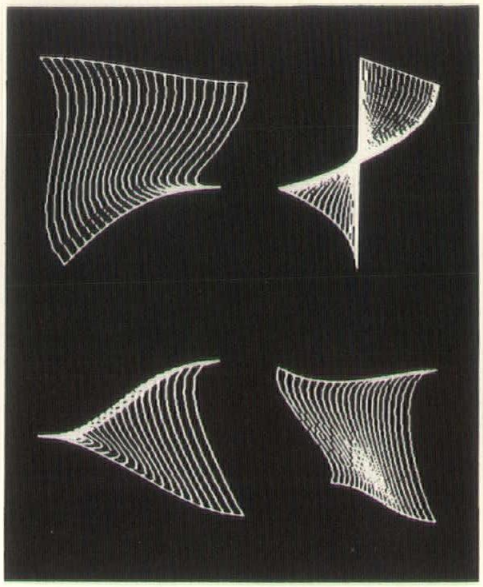
If anything is to shake the architectural profession out of its ritualistic practices the new technology of the computer will. Whether the computer is a threat or a promise remains to be seen. If we insist on using the computer to perform our ancient rituals it will certainly be a threat. It can spawn more bad buildings in a year than an architect could accomplish in a lifetime. The reason is quite simple. We have few criteria on which to evaluate the success of a building.

The thought of the computer immediately stirs apprehension. A bundle of wires and circuits doing our thinking for us would be a monster, indeed. But, the computer is no greater threat to what we like to think of as creativity than science is to art. Steven Anson Coons of MIT has stated the relationship between computer and man quite beautifully in the September issue of Scientific American.

"Man is quite good at inventing and organizing ideas, making associations among apparently unrelated notions, recognizing patterns and stripping away irrevelant detail; he is creative, unpredictable, sometimes capricious, sensitive to human values. The computer is almost exactly what man is not. It is capable of paying undivided attention to unlimited detail; it is immune to distraction, precise and reliable; it can carry out the most intricate and lengthy calculation with ease, without a flaw and in much less than a millionth of the time that would be required by its human counterpart. It is emotionless, or so we suppose. It suffers from neither boredom nor fatigue. It needs to be told only once, thereafter it remembers perfectly until it is told to forget, whereupon it forgets instantly and absolutely.

When man and machine work together, the shortcomings of each are compensated by the other, which leaves both partners free to exercise their individual powers in a common enterprise. The potential of such a combination is greater than the sum of its parts."

Such a poetic response to the relationship between man and computer could only come from man.



Three orthographic views and a perspective view (upper right) of a single surface. The perspective was generated by the computer from the three orthographic views given it. When registered on a cathode-ray tube a change in any one of the views will automatically cause a change to be made in the other views.

Merit Awar

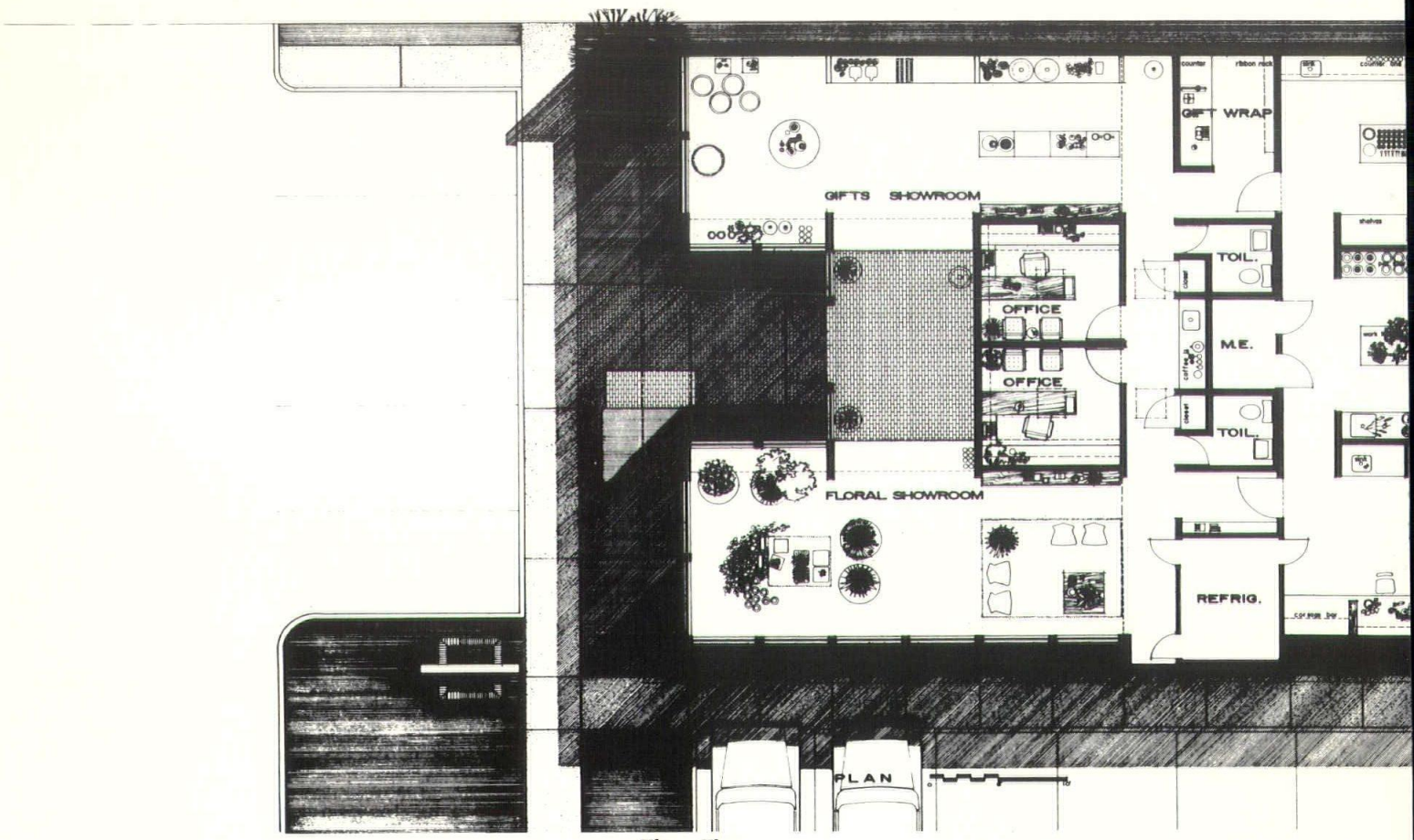
Aurora Flowers and The Gift Gallery
Crowley, Louisiana
Donald Fruge, Owner

Barras and Breaux, AIA Architects, Lafay

Jury Comments:

Resisting the usual temptation for exhuberent exhibitionism, this simple, economical, and straightforward building forms an excellent background for neighborhood retailing.

The frame buildings of the old residential area were important to the design approach. We felt that their size and character in relation to a new building placed in with them would have an affect on the immediate surroundings, and that the building should blend with these surroundings rather than contrast. But at the same time we were primarily interested in the building's ability to serve its function—that of merchandizing fine floral and gift items.



Floor Plan

1966

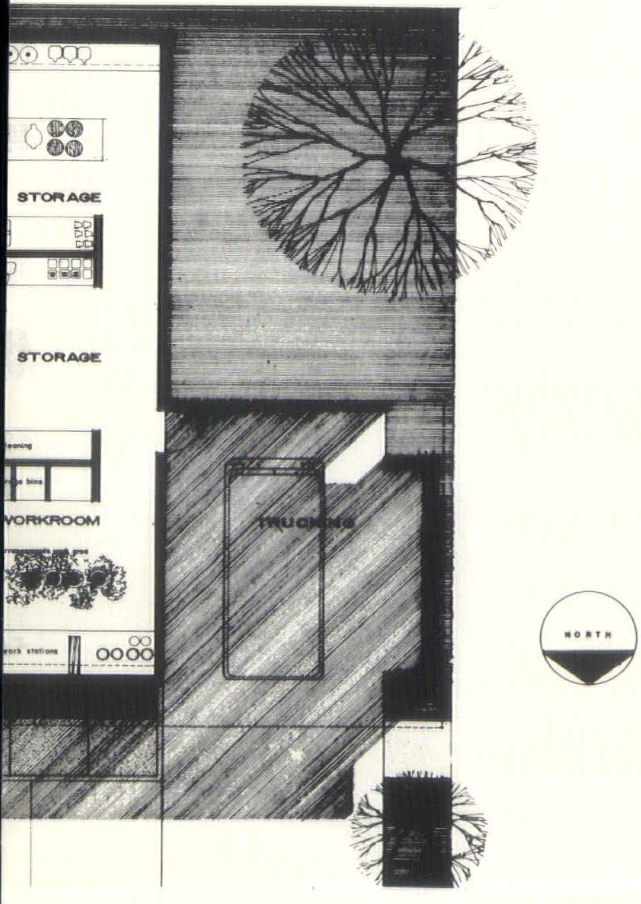
uisiana

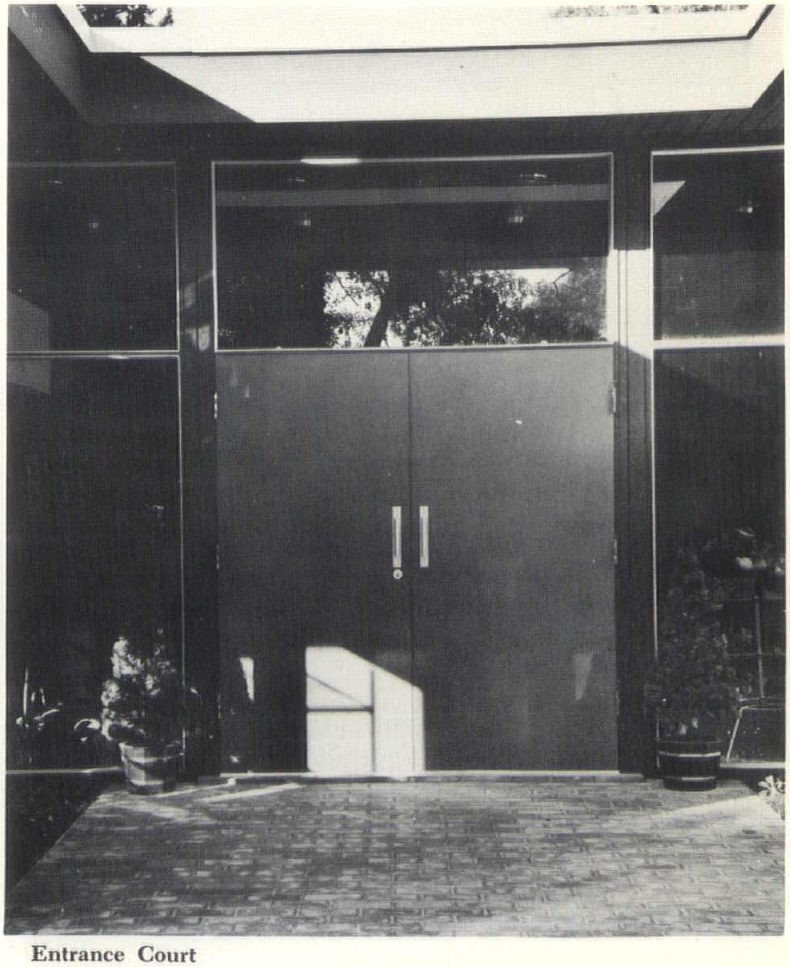
The use of simple rectangular masses and planes to form the building rather than more dynamic forms with a polished—"here we are, come in and meet the merchandize!"—look.

We felt that the build should be simple in form, warm and residential in character through the use of natural and stained wood, while the merchandize itself showing through the show windows coupled with the fine line detail where planes and materials join together would give the building the necessary commercial character.

Flowers and gifts can both be pre-planned for impulse buying, and therefore the two businesses marry well in one shop if the plan is properly arranged. Because the gift shop is a separate function and is secondary to the flower shop (the owner sells flowers and rents space to the Gift Gallery) the plan is open to permit and suggest free movement from one side of the shop to the other, yet well divided into zones through the treatment of the sequences of interior spaces.

The Gift Gallery





Entrance Court

Merit Award

Water Pump Station No. One, Alexandria, Louisiana • **Barron, Heinberg and Brocato**

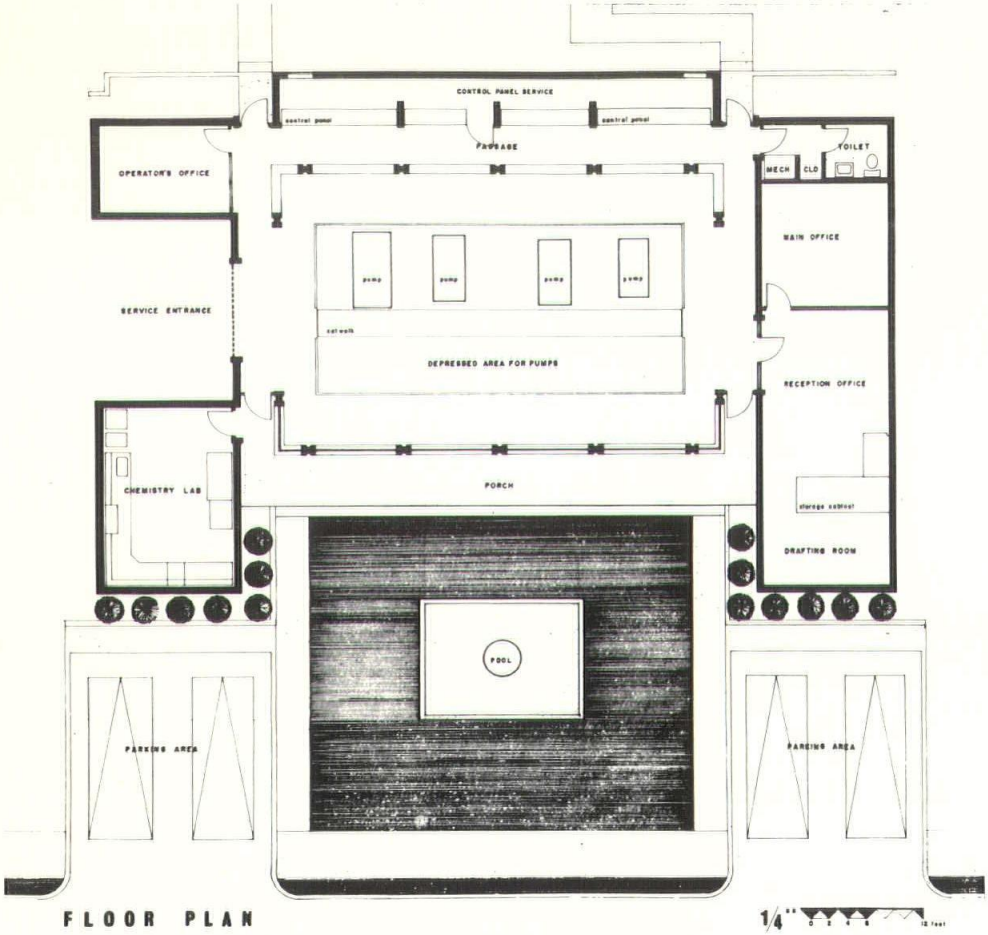
by R. L. Lawrence

City of Alexandria, Louisiana, **Owner**
Pan American Engineers, **Structural Engineers**
Leroy A. Staples, **Mech. and Elec. Engineers**

Jury Comments

Although the Jury felt that certain of the structural details were over designed, this basic solution for a neglected problem is an asset to its community.

Floor Plan



A DECADE of planning went into the new pumping station at Alexandria, La., but for every day of those 10 years, the pumps worked while housed in a wooden "shack." Finally, in 1963, the new pumping station was built, constructed around the "shack," which was torn down after the new building was finished. Thus, this station was literally built from the "inside out."

This story began in the early fifties, when the National Board of Fire Underwriters (now the American Insurance Association) recommended a new main pumping station in order to improve the city's fire insurance rating. At that time the main high-service pumps were located in the old power plant and were under the supervision of power department personnel. This divided control was unsatisfactory, obviously, but it took the gentle nudge from NBFU to provide the impetus to move to proper location and housing.

Plans and Procedures

When the first plans were drawn and cost estimates made, it was apparent Alexandria couldn't afford a new pumping station. More plans were drawn, more estimates, and more procedures considered—and a decision reached. There was enough money to install the foundations, pumps, and piping, but the building would have to wait—at least for a time. And so, the station was built, housed in a "temporary" shack to protect the motors from the weather.

The weather cycles of 10 years came and went before the community voted a bond issue to build the new station worthy of this city.

The New Station

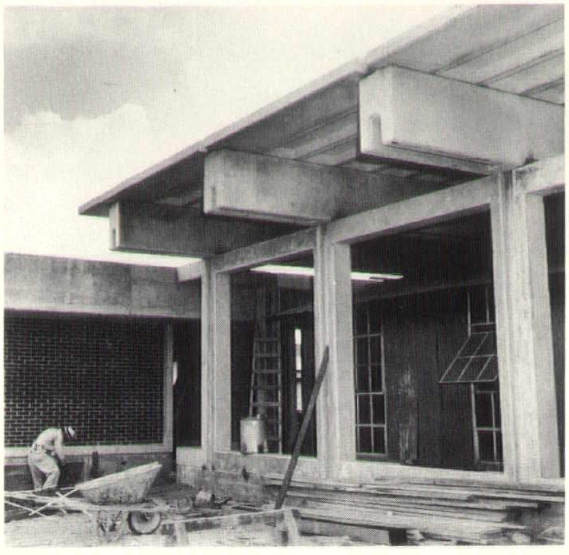
The Fire Underwriters had stipulated a wind-and-fire-proof structure. Operating considerations demanded the awesome task of coordinating all phases of the work to prevent prolonged pump shut

1966

A Architects, Alexandria, Louisiana

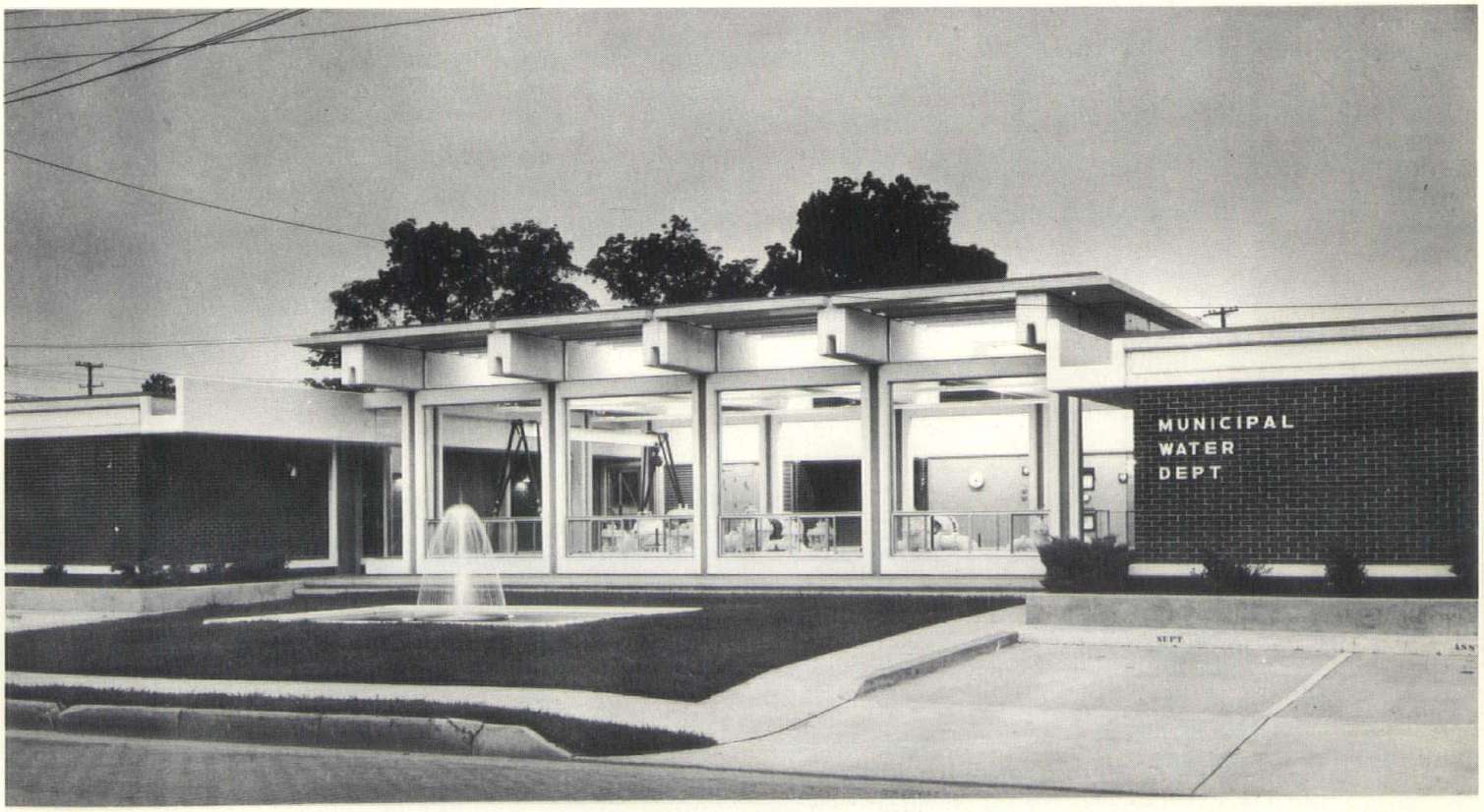
down. Also, special plans were formulated to energize the motors from a new panel, temporarily located in—of all places—the nearby "temporary" administration offices. The panel was to be moved later to the new building, with shut-down time as short as possible. While these plans were not designed to cause the bidders to "expect the worst," such was certainly the case.

Our architects selected the design to utilize brick, pre-stressed concrete, and glass. While construction proceeded, the temporary "shack" remained in place until the roof of the new structure was in place. The shack was then demolished and the debris removed.



During construction, temporary structure remains as new structure walls go up.

Front View



Industrial Plants

Special Design Services

The planning and design of industrial plants involve special architectural considerations which owners and investors should know about, according to The American Institute of Architects.

The national professional society of architects has a national committee of experts in industrial architecture which offers advice and information to both owners and architects to create good plant design.

As one member says: "As architecture, the industrial plant is unique. It may cost one per cent of the dollar volume generated inside it within a year's time. But the way that penny is spent may add or substract from the amount of profit found in that dollar. The very existence of such a building depends upon an economic analysis that justifies its construction."

Design Challenges

For these reasons, design of an industrial plant — and the steps leading up to design — add up to an exacting process, AIA says. Today's experience shows that industrial plants often must be built in a hurry to meet market or government demands. One architect with heavy experience in the field says that "before the plant is finished, it may be expanded. And, in the end, its success or failure is measured in what it contributes to profits. This makes for a very challenging set of circumstances."

Industrial profitability depends not only upon the efficiency of plant design, the architects emphasize, but upon the characteristics of the market for the product to be produced, the efficient assembly of land, selection of the best site, the site area's transportation system, the local tax picture, and choice of the best short and long-term options in financing construction.

An analysis of these and still other factors will be needed to determine whether the facility should be built at all, and, if so, whether it should be owned or leased. Such analysis are being provided to industrial clients today by a number of architects who specialize in industrial projects.

Examples Cited

Examples of how such factors can influence industrial decisions were cited as follows:

A West Coast aerospace firm retained an architect to design a manufacturing plant in an industrial park. While making a feasibility study of the site, the architect found out that traffic saturation of the surrounding roadways would occur even before his client's plant was finished. As a result, specific recommendations for roadway changes were submitted to and accepted by county and State highway officials. The client's industrial investment was protected.

An Atlanta architect was asked to help his client select one from among four possible sites. The architect chose an irregular site which laymen would ordinarily overlook. The reason: Knowing the industrial process involved, he spotted a way in which the terrain could aid the production process. By siting the plant into the side of a small hill, the architect was able to design a "split-level" building which allowed raw materials to be brought in at an upper level and fed into a gravity-flow mixer. The design allowed elimination of a conveyor system and labor costs.

Because the government might suddenly accelerate its demands for certain industrial products, a Philadelphia architect planned the design and construction process for his client's factory so that all phases could be telescoped into an efficient "crash program" if circumstances required. As it happened, they did.

Four weeks after the speedup notice was given, foundation drawings were issued by the architect. Six weeks later, the steel contract was let. General construction drawings for 300,000 square feet of floor area were ready within 60 days and put out for bids. Drawings for two equivalent phases were finished in another four weeks. When the client received his bids for the first phase, he was able to produce drawings for the remaining footage and negotiate a single contract. One year after the go-ahead sign was given, 20 per cent of the 900,000 foot facility was in full operation. The entire plant was operating by the end of the second year. A full year of construction time was saved by the architect's advance planning and managerial sikll.

Community Advantage

Because of demands such as these, service to industry is one of the most challenging tasks given to the architectural profession.

One spokesman says: "The industrial building enjoys a special place in our history, and for good reason. It's the physical symbol of our industrial might. Socially, it shows how far we've advanced since the squalor of the industrial revolution. Esthetically, it's become an advantage to the community rather than an eyesore. Architecturally, it takes the best we've got and gives us back valuable experience which is of growing use in the solution of other design problems."

Colonel LaMatt is on the spot in Texas

In the land of the ten-gallon hat, Colonel LaMatt's water heaters are BIG. A Ruud Copper Sanimaster, after all, holds 18 to 85 gallons. And heats water fast when you need it, at the temperature you require. And Sanimasters are trouble-free too, suh. You won't have to be calling for the Rangers all the time. Here, near the new Houston Astrodome, Colonel LaMatt is looking over construction of a building in which Ruud Copper Sanimaster Water Heaters will be used. The Colonel does this for lots of folks; even starts planning with them in the blueprint stage, and often before that.

For 32 years now, Colonel LaMatt and his staff of water heater specialists have been planning reliable hot water service for all kinds of business, industry and institutions, all over the South. With the double-barreled efficiency of training and experience, they'll have the answers to most hot water problems right in the corral. If they haven't, they'll round them up for you. Ruud Copper Sanimasters work more efficiently, last longer, and cut your operating costs. You got a water problem, partner? Big? Small? Let Colonel LaMatt help you. Call 522-9991, area code 504, collect TODAY.

LAMATT AGENCY, INC.

840 BARONNE STREET, NEW ORLEANS, LA. 70113
AREA CODE 504 / 522-9991

285 CUMBERLAND STREET, MEMPHIS, TENNESSEE 38112
AREA CODE 901 / 324-3661

WATER HEATER SPECIALISTS FOR LOUISIANA, ALABAMA, MISSISSIPPI, ARKANSAS, TEXAS & TENNESSEE

SAVE MONEY! LEASE RUUD WATER HEATERS
for Apartments / Coin Operated Laundries / Commercial Installations

THE LOUISIANA ARCHITECT
Suite 200 — Capitol House Hotel
Baton Rouge, Louisiana 70821
— Return Requested —

Mr. George E. Pettengill, Librarian
The American Institute of Architects
1735 New York Avenue N.W.
Washington, D. C. 20006

BULK RATE
U. S. POSTAGE
PAID
Baton Rouge, La.
Permit No. 389