

monthly

BULLETIN

michigan society of architects

april

1970 50c

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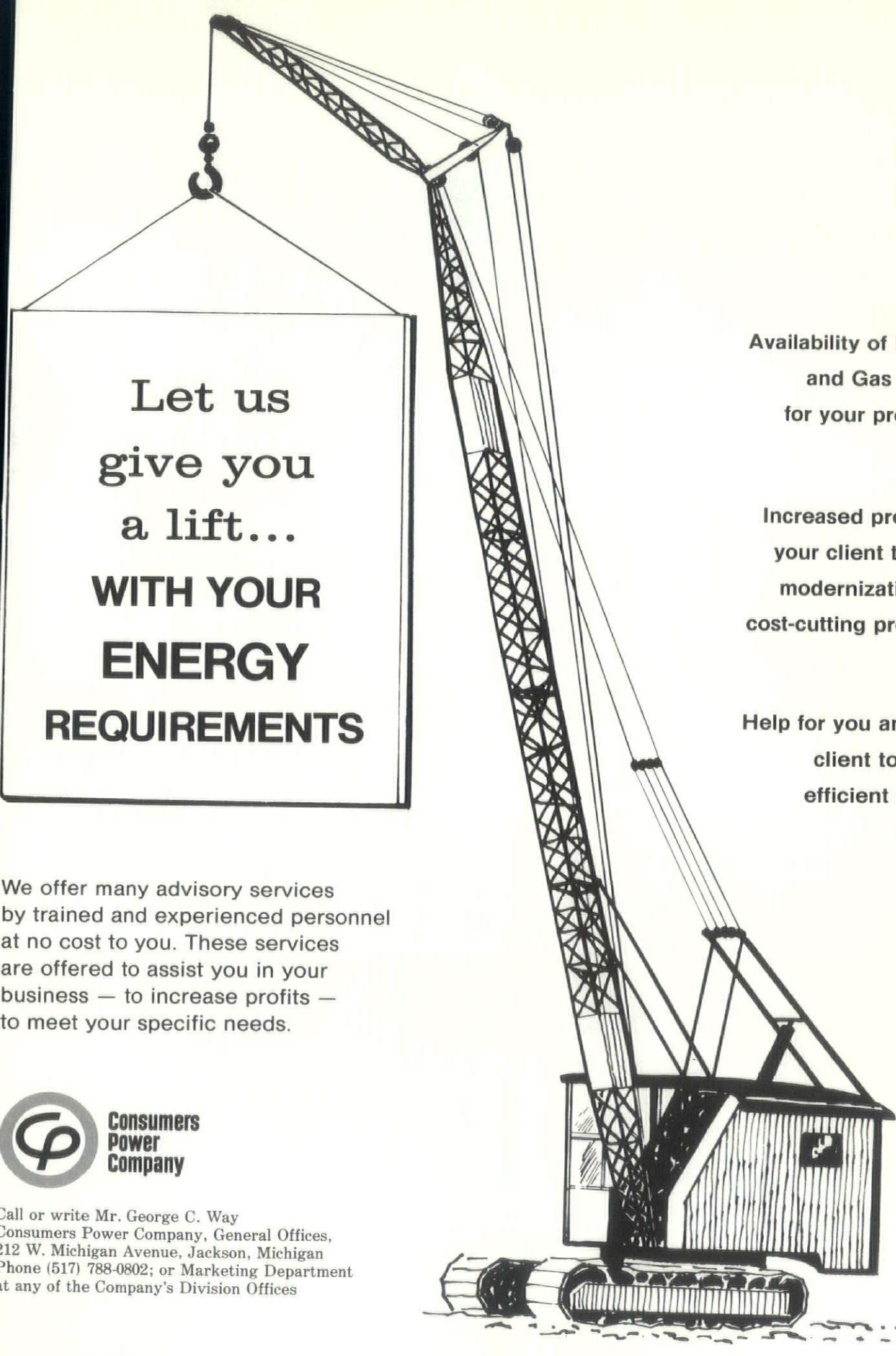
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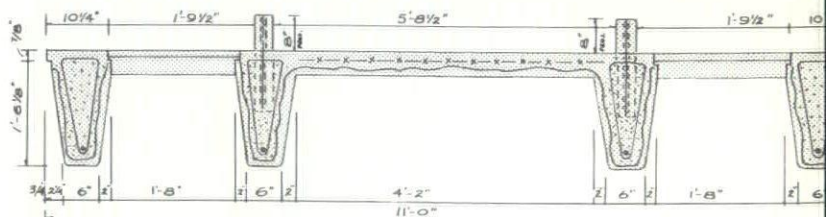
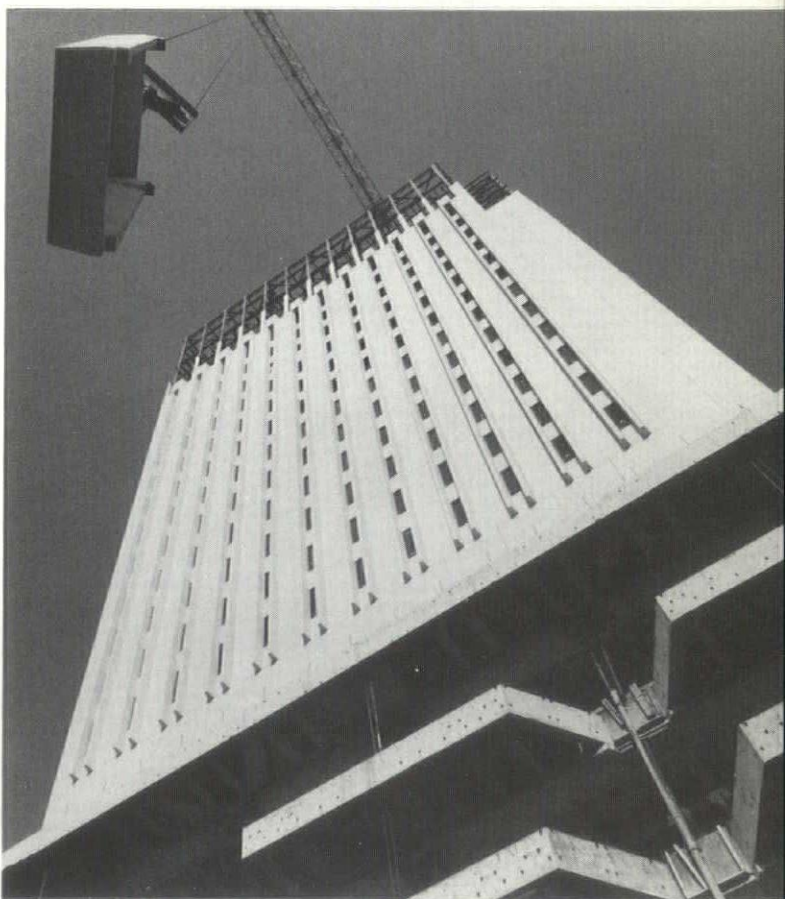
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MEDUSA



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EDITORIAL

The following resolutions were passed at the general business meeting of the Michigan Society of Architects at the 56th Annual Convention in Grand Rapids on March 5, 1970.

New College of Architecture — University of Michigan

Whereas the improvement of the quality of life and of the natural and man-made environment is and will be for the foreseeable future a major concern of our society; and whereas the structures and spaces which form our towns and cities constitute a major part of that environment; and

Whereas in order to educate new and additional architects and design professionals who will have the knowledge and skills to enable them to deal competently with the problems of an increasingly complex society and technology, it is necessary to provide additional physical facilities, space, and staff for their education and training; and

Whereas the only state-supported school of architecture in Michigan is able to serve only a limited enrollment because of facilities which are inadequate, crowded, and obsolete, and detrimental to the proper education and training of architects; We therefore commend the Governor and the Legislature of the State of Michigan for including in its Capital Outlay Program funds for planning Design at the University of Michigan, and we urge its approval to enable the University to continue to fulfill its responsibilities in the training of architects and related design professionals. Approved by the Michigan Society of Architects at its annual meeting March 5, 1970.

Environmental Quality

Inasmuch as the continued uncontrolled destruction of natural resources and the accelerating pollution of our air, land, and water poses a clear and recognizable threat to the quality of life and possibly to its very existence—and inasmuch as the President of the United States and the Governor of the State of Michigan have made the issue of pollution and environmental quality a matter of urgent national and state priorities;

And since we as Architects and professionals in environmental design are intimately concerned with the environ-

ment, both natural and man-made and since we have long recognized the need for continued, strong, and vigorous efforts by government, business industry, and individuals, to preserve and protect that environment and to improve the quality of human life by whatever means available; and

Whereas, education in environmental awareness at all levels essential to enable citizens and communities to cope with present problems and avoid future ones;

We therefore resolve, at this annual meeting of the Michigan Society of Architects, that we support and encourage all efforts by local, state, and federal governments to achieve an end to environmental pollution and the improvement of environmental quality; recommend the creation of commissions at both state and national levels to coordinate the efforts of all groups engaged in environmental studies and programs; and urge Senators Hart and Griffin and all Michigan Representatives to support Senate Bill No. 3237 and House Bill No. 14753 to provide funding for the creation of new curricula in environmental education.

Approved by the Michigan Society of Architects at its annual meeting March 5, 1970.

State Housing Authority Revenue Bonds

Whereas the legislature of the State of Michigan has recognized the need for state participation to cope with the critical shortage of housing in Michigan by creation and funding of the State Housing Development Authority; and that authority has undertaken vigorously to support the efforts of local and nonprofit sponsors in the development of new and rehabilitated housing for low and moderate income families; and

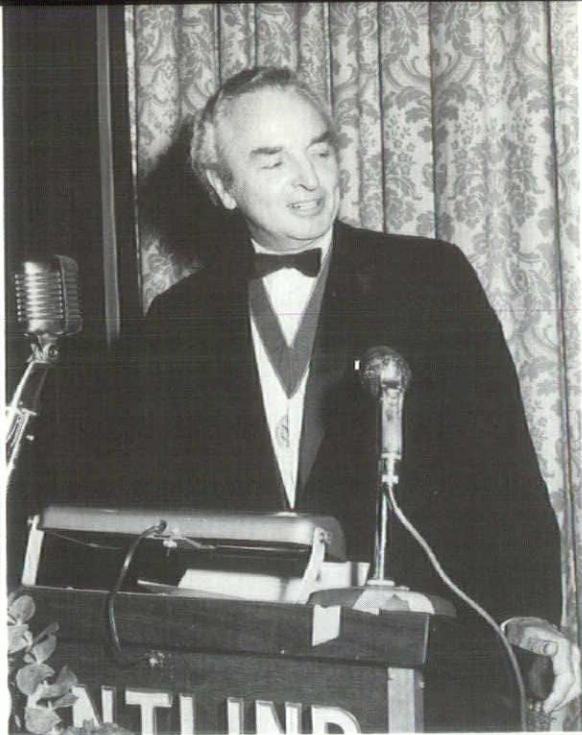
Whereas the Governor has recommended to the legislature an increase in the Revenue Bonds Authorization of the State Housing Development Authority from \$50 million to \$300 million in order to more adequately cope with the need for housing developments; and

Whereas we believe that this increase is in the best interests of all the people of the State of Michigan, we



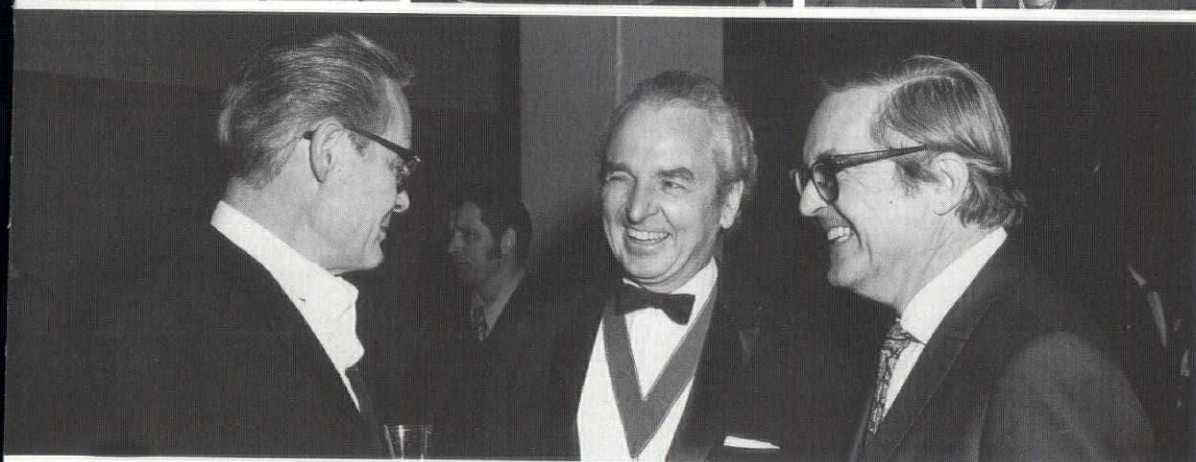
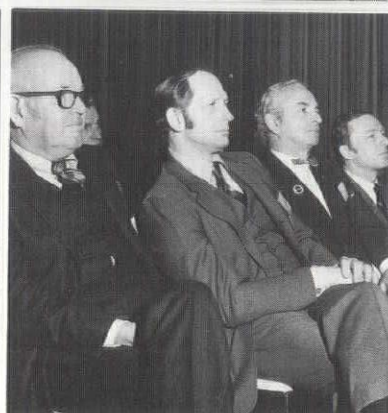
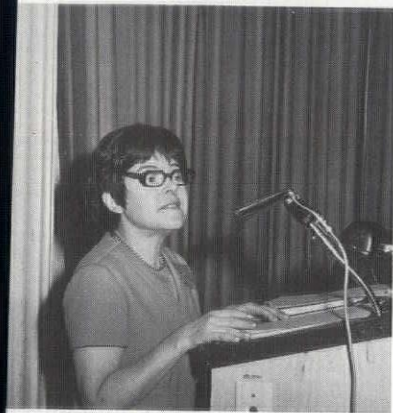
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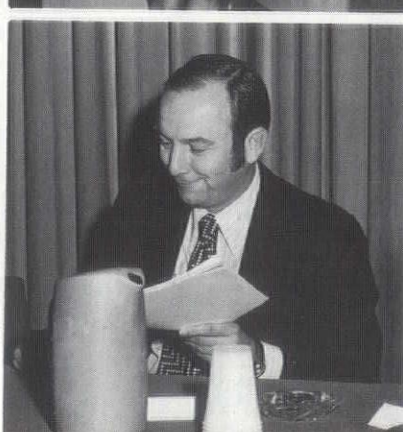
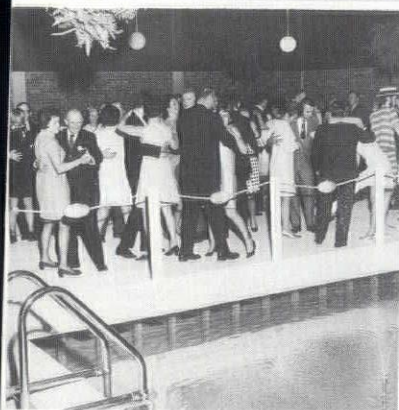


Thurs., March 5





**Fri.,
March 6**



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therefore resolve at this annual meeting of the Michigan Society of Architects that we support this proposal and urge its adoption by the legislature of the State of Michigan. Approved by the Michigan Society of Architects at its annual meeting March 5, 1970.

State Housing Law Revision

Whereas a Governor's Commission has recommended to the legislature the creation of a State Housing and Construction Code Commission, one of whose responsibilities would be to draft and to administer a new State Housing Law; and

Whereas the present law, passed in 1917 and amended piecemeal many times since that time is an outdated and inadequate document for present conditions;

We therefore at this annual meeting of the Michigan Society of Architects support the recommendations of the Governors Commission and urge the legislature to take all steps necessary to implement its recommendation in regard to the creation of a new State Housing Law.

Approved by the Michigan Society of Architects at its annual meeting March 5, 1970.

Resolution

Whereas, the districts, sites, buildings, and objects which are architecturally, historically and culturally significant in our state and communities are the living examples of our historic past, and as such are vitally important to our present environment, and

Whereas, it must be declared a policy of the State of Michigan that special effort should be made to preserve that environment, and

Whereas, House Bill 2966 has been introduced to provide a legal basis for those local communities which wish to take action to preserve significant historical sites and structures within the community, and to authorize local communities to take advantage of recently enacted Federal Legislation which provides for grant-in-aid assistance for historic preservation, and

Whereas, House Bill 4194 has been introduced to provide similar protection as provided by Section 106 of the Historic Preservation Act of 1966 for any district, site building or object on the State Historic Register,

THEREFORE, BE IT RESOLVED by the Michigan Society of Architects, a Region of the American Institute of Architects, that this organization representing the architectural profession in the State of Michigan firmly supports the concepts as embodied in these two Bills and urges the State Legislature to take prompt, positive action thereon.

Approved by the Michigan Society of

Architects at its annual meeting March 5, 1970.

Construction Code Commission

Inasmuch as the state of Michigan presently has no uniform standard building and construction codes and there are presently about 1200 separate political subdivisions separately administering codes that may differ substantially from one another, and that there are no construction codes whatever in approximately one-half of the state; and

Whereas this situation seriously hinders procedures for testing and evaluating new technology, results in a lack of efficient factory inspection of factory-produced housing, impedes centralized research in developing new building concepts at the state level, and adversely effects construction costs; and

Whereas a Governor's Commission has recommended the establishment by the legislature of a State Housing and Construction Code Commission, with the responsibility of drafting and administering a uniform state Construction Code, and which would incorporate the Codes and activities of the State Plumbing, Electrical, Elevator, Boiler and Fire Boards, and the State Fire Marshal

We therefore, at this annual meeting of the Michigan Society of Architects, support the report of the Governors Commission and urge the creation of a State Housing and Construction Code Commission to implement the recommendations of the Governors Commission.

Approved by the Michigan Society of Architects at its annual meeting March 5, 1970.

Due to an error in the Program Plumbing & Heating Industry of Detroit was not included. The complete list of MSA Prize Donors is below.

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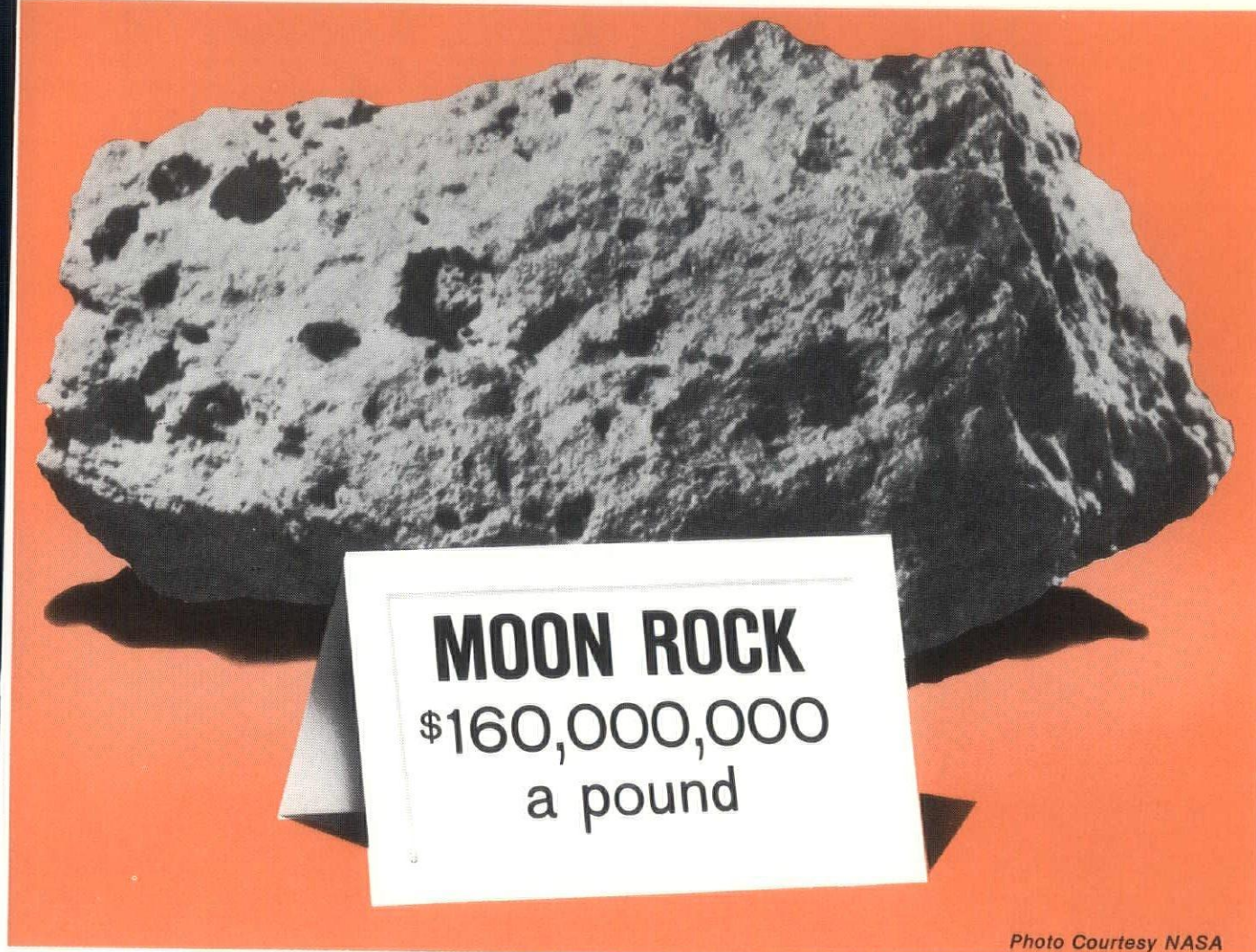


Photo Courtesy NASA

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To date, NASA's moon shots have cost around twenty four billion dollars. Apollos 11 and 12 brought back 150 pounds of moon rock. This figures out roughly at \$160 million a pound.

We have no quarrel with the price. For some projects, only original moon rock will do. And if you like antiques, moon rock is 3½ billion years old.

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La Grand Vitesse

A talk by Mrs. Nancy Mulnix at the 56th Annual MSA Convention, Thursday, March 5, 1970.

Today the great piece of sculpture created by Alexander Calder for Grand Rapids is standing on the site for which it was designed: the City-County plaza.

The sculpture is called LA GRANDE VITESSE which means "The Great Swiftmess." But Sandy Calder says it really means "The Grand Rapids!" It is the first piece of art in the history of this country to be jointly commissioned and financed by both federal and private contributions. Thus it truly belongs to all of the people—not to just a special few!

This stabile is the largest Calder in this country. It is 43 feet high, 53 feet long, about 30 feet wide, and it weighs 42 tons! It is made of steel plate 12mm. thick, and the final assembly required joining together 27 major sections by using 1561 specially designed Calder bolts—and then welding together all the bolts and seams. And as you know, the stabile is painted a glowing red—Calder's favorite color and a spectacular contrast to the stark architecture on the plaza.

I said that Calder designed LA GRANDE VITESSE just for us—and he really did! Calder studied the building blueprints, the site, the entire composition of Vandenberg Center—even the Plaza aggregate and the facade stone in preparation for the designing of the sculpture. The result of his meticulous care and concern is that his sculpture has become as integral a part of the estastic whole as any of the buildings! It's rather like having a gown made to your exact measurements by Ballenciaga or Chanel!

The sculpture is also an engineering feat as well as an esthetic one—a true product of our times! It is a fantastic combination of art and technology—for the structural stiffeners and gussets have become a very integral part of the entire design. An 8 foot scale model of LA GRANDE VITESSE had wind tunnel testing to insure its structural integrity—just like a jet plane!

Alexander Calder is probably the only artist alive who can create art this big and make it work!

Calder is the first truly important American sculptor and is, perhaps, the best known sculptor living today. He is known as the man who made sculpture

move with his creation of the delicate airborne mobile.

Consequently, he is one of the few artists who can lay claim to the creation of a new art form. His mobiles have fascinated everybody who see them from children to philosophers and scientists. Albert Einstein used to study their patterns of movement for hours—utterly spellbound! And Jean-Paul Sartre once called a mobile "a small private celebration."

Calder's mobiles are in every important museum in the world, and he is the only American exhibited in the Pushkin Museum in Moscow.

This man—who put sculpture into orbit—adding time to space long before man began to explore it—also creates pieces of stationary sculpture called stables. Many critics feel that his stables are Calder's most impressive achievement. Recent ones have been commissioned for the Smithsonian Institute, Expo 67, the Summer Olympics in Mexico, Lincoln Center, UNESCO, MIT, the U.N. Bldg., and ours—the best of all!

Calder the artist is an extraordinary human being—and so is Calder the man!

1. He was born in Philadelphia—72 years old.
2. Father, grandfather both sculptors.
3. 1919—graduated as a mechanical engineer from the Stevens Institute of Technology.
4. 5 years in the Merchant Marine—logging camp in Oregon
5. Began art career as a newspaper illustrator—studied under John Sloan.
6. 1926—Paris and the Wire Circus.
7. Mondrian—Miro.
8. Mobiles—1930. Married Louisa James—1931.
9. 1932—stables.

Since that time Calder has been refining and perfecting his art and setting a style no one has ever been able to successfully imitate although many have tried.

Those of us who worked to secure the stabile for our city have had the unforgettable opportunity to know this man and his family in a most wonderful and intimate way. We went to Sache, France in the spring of 1968 to see the model of LA GRANDE VITESSE. The Calders divide their time between the little village of Sache and their legal residence of Roxbury, Connecticut. One daughter lives in Sache, the other in New York. His warmth and generous hospitality to us were wonderful! Calder is a gentle man by nature—but he has great physical strength. His life is full of good friends, and he seems one of the most satisfied people I have ever known. He and Louisa have been

married nearly 40 years, and they are inseparable—someone once said that Sandy is mobile and Louisa is stabile! Very compatible!

You may ask why this determination to have a monumental piece of sculpture by this man in the heart of our city. What does it mean?

Well, first of all, people—all kinds of people will be made aware—really aware—of sculpture and of art in general.

An editorial in a Winston-Salem paper called it the "symbol of an impressive and dynamic central city." Vandenberg Center certainly is that, and that symbolism could be the second reason.

Many people also recognize the value the stabile will have as a tourist attraction and attention-getter—and all of this is undeniably true.

But there is more to it than all of that!!!

Today we are beginning to realize that affluence and scientific technology cannot guarantee happiness! Sooner or later we realize that we need a sense of direction and an understanding of our purpose. And the arts and the humanities in their highest forms, have always told us who we are, where we are going, and what it means to be a human being. They have helped us understand ourselves and our reasons for being. And they have helped to make life bearable.

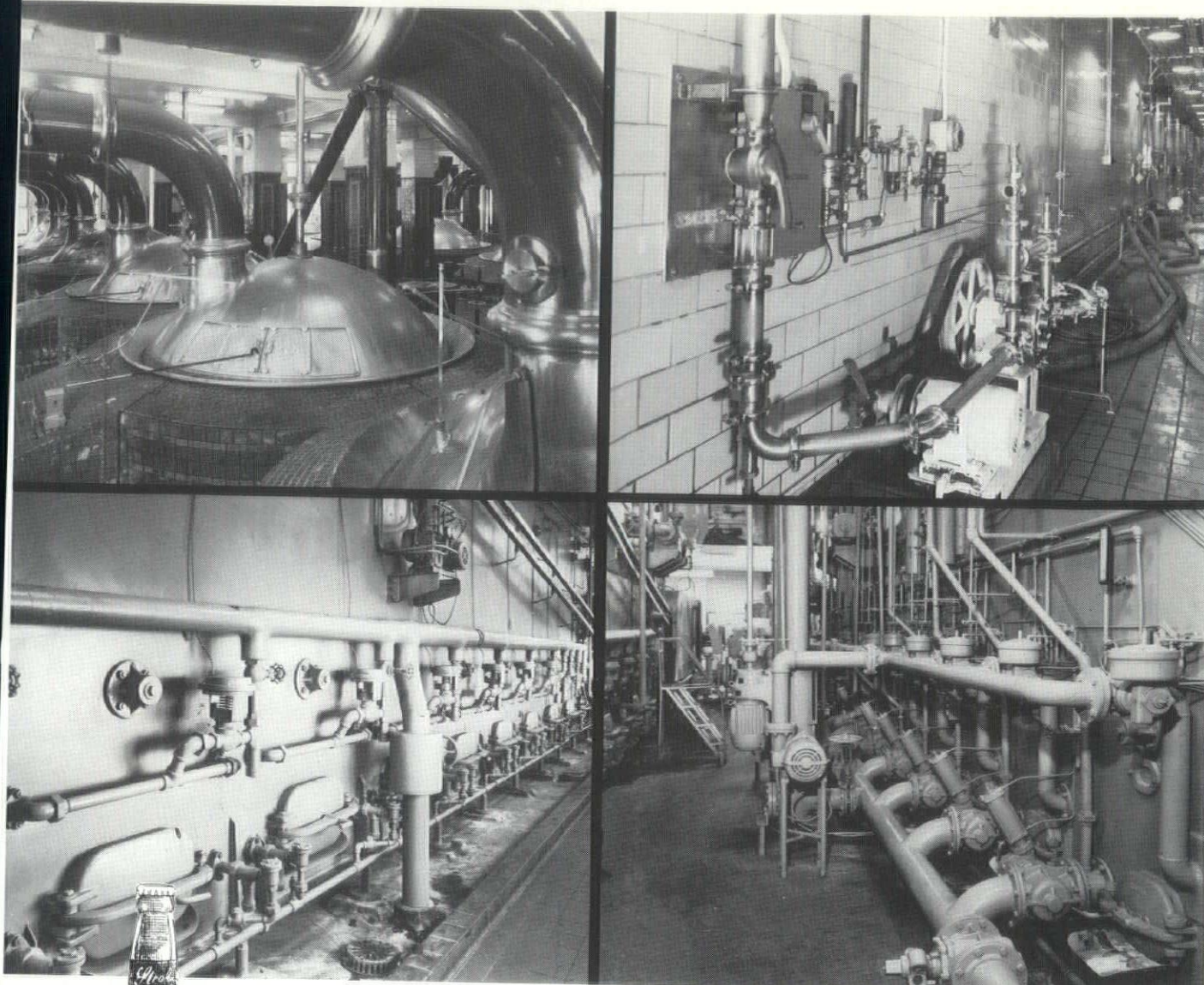
Furthermore, involvement in the arts is one of the last exercises we have for free and unprogrammed imagination and thought. In order to sustain this nation that was founded on everyman's right to achieve, then I think we must nourish and value creative thought!

We are working hard to feed and clothe humanity, but we musn't forget that we must also keep alive and nourish a man's spirit as well as his body, his courage as well as his pocket-book, and a man's very delight in life!

Alexander Calder puts a great deal of his own special delight in life into his art—and if a Calder mobile is a "small private celebration" then perhaps a LA GRANDE VITESSE is a large public one!

The buildings in Vandenberg Center stand as monuments to our concern for our standard of living; and the Calder stands as a symbol of our concern for the quality of our lives! It gives proper recognition to the artist and his necessary place in our society.

And the Grand Rapids' Calder stands as vibrant testimony to a future that will belong to those who are willing to assume responsibility and who believe that our greatness lies before us, not behind us. And that, quite simply, is an act of faith.



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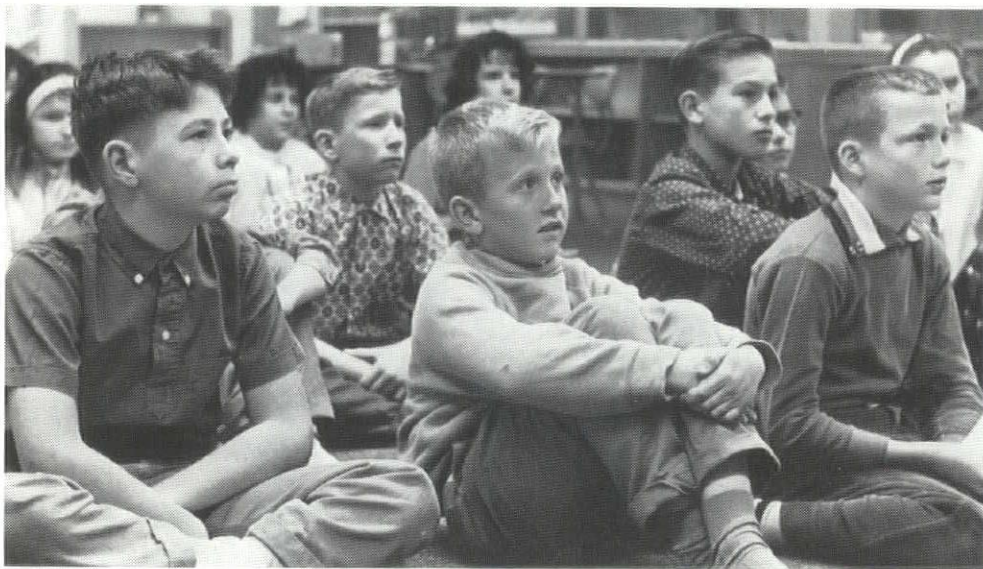
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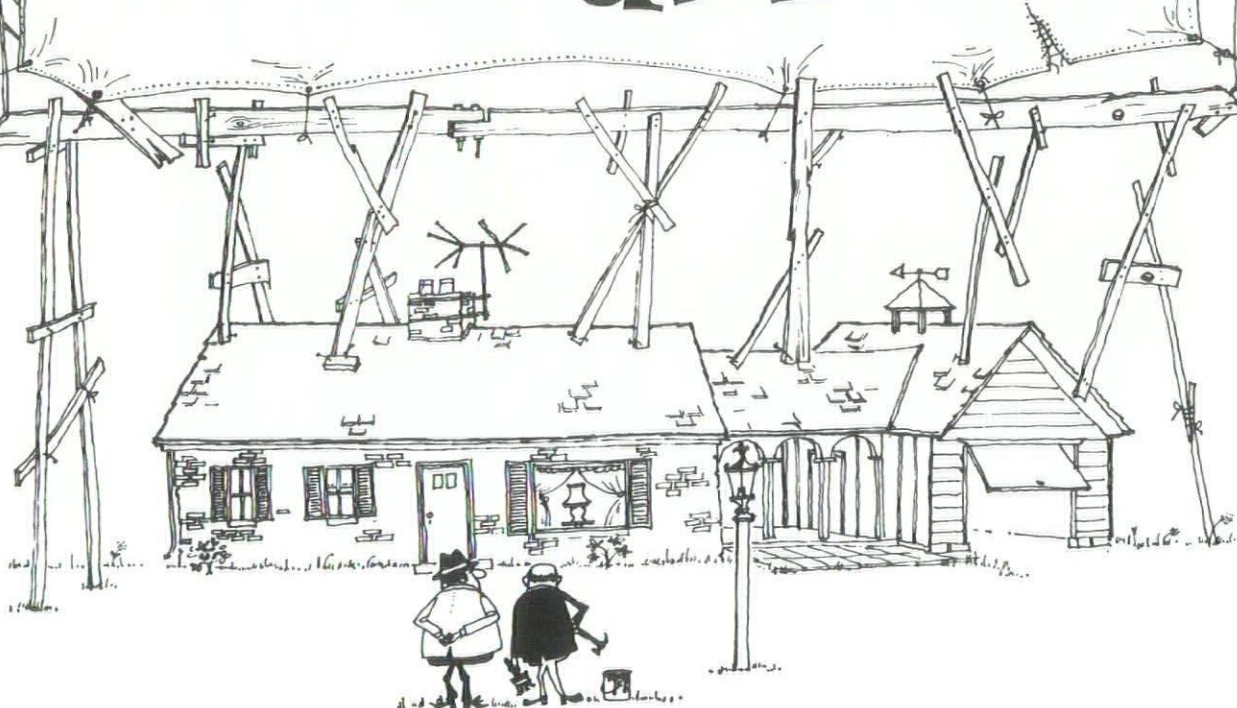
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LIAISON: A Must For The Telephone Company and For You

by

Howard Curtis
General Telephone Company

General Telephone Company will provide any services that will assist architects, building engineers, general contractors, or anyone in the building industry in designing adequate and economical means of providing telephone service to our customers and your clients.

Virtually all buildings being designed today will house telephone company customers who will want all cables and apparatus concealed. Customers today want to change the telephone locations freely and frequently without disruption to their business; change instruments as their business needs demand; and they want new devices installed with no muss or fuss and at as little cost as possible. "Don't bother me with details," our customers say, "all we want is the instrument. Hide the rest of that stuff somewhere."

That last sentence presents our problem: Where do we hide "the rest of that stuff?" We think the answer can be found by having better liaison with architects and all of the building industry, something we have not had in the past. Many times we are not aware that a major building is to be constructed until all the basic design has been completed. We have caused a lot of these problems ourselves by not making architects and the building industry aware of our needs. Historically, we have directed nearly all of our attention to the installation and maintenance aspects of our business and paid scant attention to bettering the housing of these facilities. Until recently, we have had very little pre-construction involvement in the type of facilities provided for communications use.

Communications consultants in each of our five divisions act as contact persons between our company and our business customers, assisting our customers in determining the type of telephone facility needed to conduct their business. Although our communications consultants are aware of the space requirement necessary for the different types and sizes of switching equipment and that different size cables have to be run to each instrument depending on the type equipment and instruments being used, additional consultation is

often recommended.

Our division engineering groups design cable facilities from our central offices to the customers' premises and within the customers' premises to all locations where facilities will be required. Pre-construction planning will often facilitate economy and convenience for your customer and ours.

General Telephone's communications consultants and the division engineers are available to consult with architects and building engineers to help determine the communications needs of the building or client and to assist in laying out equipment rooms, terminal closets, risers from one floor to another and conduit systems or underfloor duct systems. They can also relate the specific requirements of the telephone company in providing services.

One of our requirements in buildings that must be provided with switching equipment is an equipment room. The room should be used only for telephone equipment and should be capable of being locked for the protection of that equipment. The room will house the heart of the communications system and therefore should be centrally located in a dry place, above any possible flood level. That equipment should be accessible to telephone company personnel at all times. The room should be well lighted, ventilated, properly equipped with electrical outlets and as dust free as possible. Floor supports should be adequate to sustain heavy switching equipment, normally 150 lbs. per sq. ft. The size of this room will depend on the size and type of equipment necessary to provide adequate service to the customer.

When underground building entrance cables are necessary, underground conduit should be provided from the property line to the building. The telephone company will connect its conduit to that of the customer so the size and location of the conduit must be coordinated with the telephone engineer.

Another important item in multi-floor buildings is a cable riser system. This riser system provides a means for bringing cables to all floors where they will be needed. Risers should be lo-

cated directly above each other, when possible, for the most economical and efficient installation.

After the cables have been brought to each floor, it is necessary to provide a means of routing distribution cables to all locations where communications facilities are required. Unless a suitable means of concealment is provided, our standard method of placing these cables will leave them exposed.

The best way to conceal distribution cables in office or commercial buildings is with an underfloor duct system or cellular floors. Properly designed, this system will provide access to any desk or equipment location with floor outlets. Future desk requirements or even wall partition rearrangements will not present a problem for a carefully designed raceway system.

Suspended ceilings without conduit are not recommended because of the accident hazards involved in working on ladders over desks and other objects. Also, maintenance and repair are difficult, exposure to power is difficult to control, and occupants are disturbed while work is in progress. In addition, the occupants of one floor may be disturbed as service is provided to the floor above.

Perimeter raceways are not recommended either, since they provide for telephone locations along outer walls only. A perimeter raceway used as a feeder duct for cellular or other underfloor duct systems may be suitable in some buildings but it is not generally recommended because it will involve access to private office space and inconvenience to the office tenants.

Planning for underfloor raceways will vary for different types of buildings but there are some rules of thumb that will apply in most cases:

(1) Individual apartments in a large apartment building can be prewired during the construction of the building by the telephone company but a conduit system must be provided from each of these apartments to a central location where distribution cables can be terminated.

(2) Raceways should be designed in office buildings to provide for one desk and one telephone for each 100 square feet of office space.

(3) Raceways should be designed to

serve a floor area of reasonable size. The recommended maximum zone is 10,000 square feet but the most economical zone is 4,000 to 6,000 square feet.

(4) Feeder raceway capacity for underfloor systems should be one inch per 100 square feet of space to be served.

If you are still thinking of a telephone as a simple instrument with one small pair of wires serving each instrument, some of these requirements may sound like we are asking for gold plating. But, if you consider that many of the telephone instruments presently in use require 25 pair, 50 pair, and even 100 pair cables to each instrument, these requirements won't sound outlandish.

During the life of a new building, communications needs may include videophones, data sets, facimile transmission and receiving units, intercom, paging systems, security systems, computer access, and probably many other items that aren't even being considered at this time. These are the reasons that we need a flexible raceway system and adequate equipment space provided for during the initial planning stages of these buildings.

These also are the reasons General Telephone Company will provide—at no cost—any service that will assist architects, building engineers, general contractors, and anyone else in the building industry in designing an adequate and economical means of pro-

viding total communication to your clients and our customers.

Adequate liaison between our company and your industry can be a big step toward providing more functional and flexible buildings and communications systems for both your customers and ours.

Our five division offices are located at: Muskegon, Three Rivers, Adrian, Owosso and Alpena. Communication consultants and division engineers can be contacted at any of these division offices or by calling any of our local business offices and asking that a communication consultant or an engineer get in touch with you. We would appreciate being contacted during the very early stages of planning for any major buildings in our operating area.



The Planner & Power

by

Consumers Power Company

With a service area covering 67 of the 68 counties in Michigan's Lower Peninsula and ranging from major cities to small communities, Consumers Power Company has learned to adapt its services to meet a variety of needs. The Jackson-based utility is experienced in the application of electric and gas energy to every type of building from large shopping centers and industrial complexes to the simplest hunting cabin.

Services provided to architects and engineers by Consumers Power range from furnishing assistance on energy requirements to analyzing operating costs of all types of structures and applications. Marketing representatives in each company service area provide assistance in ascertaining such factors as lighting needs, service voltage, wiring capacity, requirements for space and water heating, air conditioning, and even whether a building will need humidifying or dehumidifying equipment.

Consumers Power supplies electric

service to more than one million customers in over 1,500 communities and townships. Gas service is furnished to some 825,000 customers in over 690 communities. Nearly 25 percent of all customers receive both gas and electric service from the company.

Electricity is produced in 29 generating plants using hydroelectric, coal burning, steam generating and nuclear sources. Most gas supplies are brought from Texas, Oklahoma, Kansas and Louisiana and delivered in part by the Michigan Gas Storage Company, a subsidiary of Consumers Power.

The area served by the company is divided into 15 operating divisions, with division headquarters located in Alma, Battle Creek, Bay City, East Detroit, Flint, Grand Rapids, Jackson, Kalamazoo, Lansing, Livonia, Muskegon, Pontiac, Royal Oak, Saginaw, and Traverse City.

Each division Marketing Department has separate gas and electric marketing representatives specializing

in handling customer needs. Within each department, individual experts determine commercial and industrial gas requirements and electric power, commercial and lighting needs.

General supervision of the division marketing activities and programs is provided by the company's general office marketing department. Responsibility for coordinating these activities with architects and engineers is George C. Way, general sales engineer. Working with the aid of nearly 300 marketing and gas and electric sales representatives throughout the company's service area, Mr. Way is able to assist in the planning of any type of building or structure. He can tell the architect what services the company provides, the manner in which architects can best take advantage of these services, the individuals to contact for the various services, the procedures and policies about which architects should be aware and the rules-of-thumb to facilitate architectural planning.

In recommending complete energy

requirements for a planned building. Consumers Power representatives consider three main factors: Availability of electric and gas energy for the project; how the architect can help his clients obtain the most efficient utilization; and, in the case of a business enterprise, how to best utilize these energy sources to increase profits.

As every building planner knows, the application of electricity and gas to building requirements has gone far beyond the lighting fixture and space heater and can involve considerable planning and engineering if optimum results are to be obtained. Comfort conditioning of buildings today can include heating, air conditioning, ventilation, purification, humidification, and heat transfer or storage. Lighting today not only illuminates, it enhances, accentuates, directs, sells, secures, and heats. To supply these and many other requirements, today's buildings are dependent on a continuous, steady and reliable supply of electric and gas service. The company's sales representatives are experienced in all phases of the supply, distribution, control application and utilization of electric and gas service to insure proper building operation.

It is probably in the area of lighting, which is universal to all buildings, that the company can offer the single greatest source of advice and assistance to the architect and engineer. The company lighting sales representative is truly an expert in the field of lighting design, application, equipment and costs.

The company recognizes the architect and engineer to be the single greatest influence in the application of electric and gas energy to new buildings and projects. Several programs have been developed to reach this influential group and secure mutual cooperation and assistance such as company education and information meetings with architects and engineers, hosting interested architects and engineers to outstanding institutes or installations such as the General Electric Lighting Institute at Nela Park, participation in the architects and engineers annual conventions or meetings, and sponsoring field trips for architects and engineers to major company facilities. The company has also made available to architects and engineers a Company Information Book. It contains information on standard rules and regulations in the application of gas and electric rates, rate computation formulas, cost comparison charts, maps of the area served, and office locations for all Consumers Power personnel who can assist architects and builders.

Another major service provided by Consumers Power Company to architects and builders is site-selection in-



formation. Marketing representatives in the 15 divisions also reside in their respective areas and know these areas thoroughly. Any information exchanged as to possible location of a facility is held in strict confidence.

In assisting in location of a site, data is available which will answer a multitude of questions which you or your client may have. Statistics are available on:

1. Population, including income and age composition.
2. Information regarding the growth projection for a specific area.
3. Information on the general economic condition in a specified area.
4. Traffic counts on major access roads.
5. Commutation patterns in and out of a prescribed area.
6. Information on proposed or planned highways.
7. Relative land acquisition costs in a specific area.
8. Information regarding new housing developments and urban renewal projects in a prescribed area.
9. Social and cultural facilities.
10. The major industries and the approximate number of people they employ, along with the wage scale.

Data is also available on new industries that have announced plans to move into an area; on existing and planned educational facilities; the number of retail stores; listings of existing hotels and motels, including the number of rooms for each; and the number of restaurants and the type of clientele patronizing them. Topographical information, such as soil characteristics and water tables, is available. Sources of available capital such as banks and insurance companies are provided, along with the current cost of money from such sources.

Government regulations, including zoning, licenses and tax information can be provided to a builder, in addition to assisting with plans for the utilization of gas and electricity. Consumers Power provides information on other public utilities including telephone, water and sewers.

For the future, Consumers Power is planning to provide for the energy needs of a large portion of the more

than 10 million Michigan residents expected by 1980. Its total electrical generating capability is expected to rise from 3.5 million kilowatt-hours in 1969 to nearly six million by 1974. Natural gas sales are estimated to reach 373 billion cubic feet by 1972.

To increase its electric generating capacity, the company is building nuclear generating plants near Midland and at Palisades, near South Haven, and Michigan's first pumped storage facility at Ludington. The electricity from these facilities, some of which will be sold to other electric utilities, will total nearly four million kilowatts.

Consumers Power knows that advance planning is as old as architecture itself and is a fact-of-life for the modern architect. As a combination utility, its representatives know the characteristics and adaptability of both gas and electric energy and can provide information that will save time and effort for the architect or consulting engineer.



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The Application Of Electricity

by

The Detroit Edison Company

"If there's a question about the application of electricity . . . ask Edison!" Detroit Edison cooperates closely with architects in the most efficient and economical application of electric energy in the buildings that architects design for location anywhere in the utility's service area. The same advisory service is available to the architect who is involved in modernizing or altering an existing structure: industrial, commercial, institutional or residential.

Contact with any of the 73 customer offices throughout the utility's southeast Michigan service area will channel an inquiry to the proper department or individual. The phone number to keep on file is 962-2100, extension 3218 or 3406.

EARLY COMMUNICATION

The best, most effective use of Edison service is gained by asking for recommendations early in the design or modification of a structure. Then the electrical aspects of working drawings can be prepared in the way that will be most satisfactory to and in the best interest of an architect's client.

It sometimes happens that a building design will reach an advanced stage of development before the electric utility becomes aware of the project. Typical difficulties which may then arise are these. The electric service entrance may have been planned for one exterior wall but it would be easier, faster and more economical to lead the service in from the opposite direction. Or electrical facilities and equipment in a structure may be planned for one voltage when another voltage may be the only one immediately available in the area.

And with increasing frequency, communities are legislating against overhead distribution lines in new areas. To plan a building for overhead electric service in such a situation creates difficulties which can be avoided when the electric utility is taken into an architect's confidence at the earliest feasible moment.

In the Detroit Edison service area, prints which show the proposed electrical system of a building should be sent to the company's Commercial Marketing Division. After review in this division, the plans are sent to other utility departments which may become involved, the Primary Inspection and Service Planning Departments, for example. Judgment and recommenda-

tions concerning the electric proposal's feasibility are passed back to the architect. Should changes from the original proposal be recommended, they can be most easily resolved at this point, before design development has progressed too far.

SPECIFIC SERVICES

When there are significant developments in the electric industry which promise to be of interest to architects, Detroit Edison arranges meetings, demonstrations and discussion sessions to which architects are invited. For example, there are 69 electrically heated schools or school additions in the Edison service area, including six in the Detroit Public School system. When this concept was first proposed not too many years ago, architects were naturally interested and concerned—especially concerned about the economics of electrically heated school buildings. Detroit Edison arranged a series of meetings with architects at which all the ramifications of school buildings and electric heat were thoroughly explored. Authorities from outside the Detroit Edison Company were often a major part of these meetings.

The individual architect, or architectural firm, may call on the utility at any time to ask for suggestions about:

Lighting

Electric space heating and air conditioning

Electric water heating

Food service equipment

As the market for electric heat and central electric air conditioning grows, new products are introduced and De-

troit Edison evaluates those of significance. A sprayable, urethane-base insulation; a urea-formaldehyde, foam-in-place insulation and solid state controls are some recent ones. A service of the utility is to share its findings in this area with inquiring architects.

For the architect who's about to plan an all-electric housing project—whether single or multiple—Detroit Edison personnel can be of service. The utility will assist, on request, in:

The design of a total electric environmental control system, (heating, cooling, electrostatic air filtering, humidifying, dehumidifying).

Determining heat loss and gain.

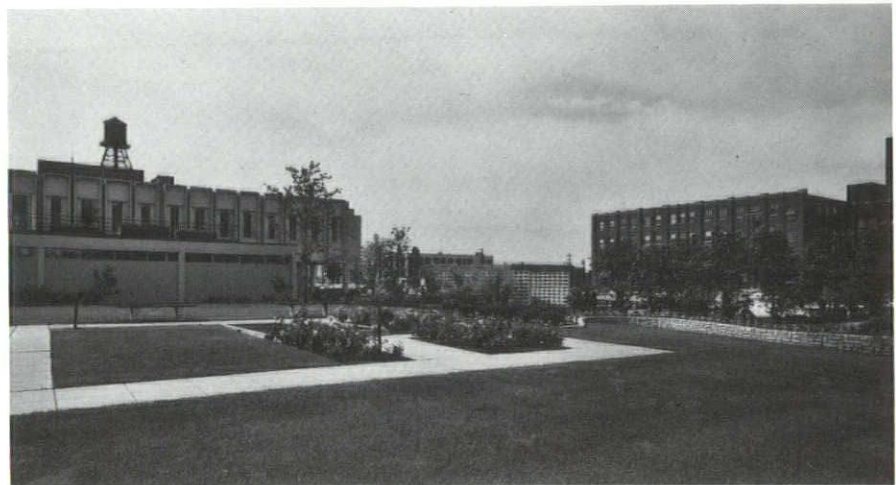
Designing kitchen layouts.

Estimating electric operating costs.

SOME RECENT INNOVATIONS

Detroit Edison has now computerized its procedure for estimating electric operating cost for all electric buildings and the service is available to architects. Especially valuable in estimating operating costs in multiple dwellings, the figures are monthly—not an average of 12 months; show kilowatthour consumption and proportionate cost for each of the major electrical uses.

Underground electrical distribution continues to be increasingly popular in new residential areas, including new apartments and town houses; mobile home parks; light industry or commercial projects. As a corollary, there is increasing use of pad-mounted electric transformers, installed at grade level. Where service requirements previously called for the installation of a transformer in a vault in many new build-



Two parallel masonry screen walls plus strategic planting hide a pad-mounted electric transformer and a large-capacity air conditioning condenser. DETROIT EDISON CO.

ings, the substitution of pad-mounted transformers is a considerable saving.

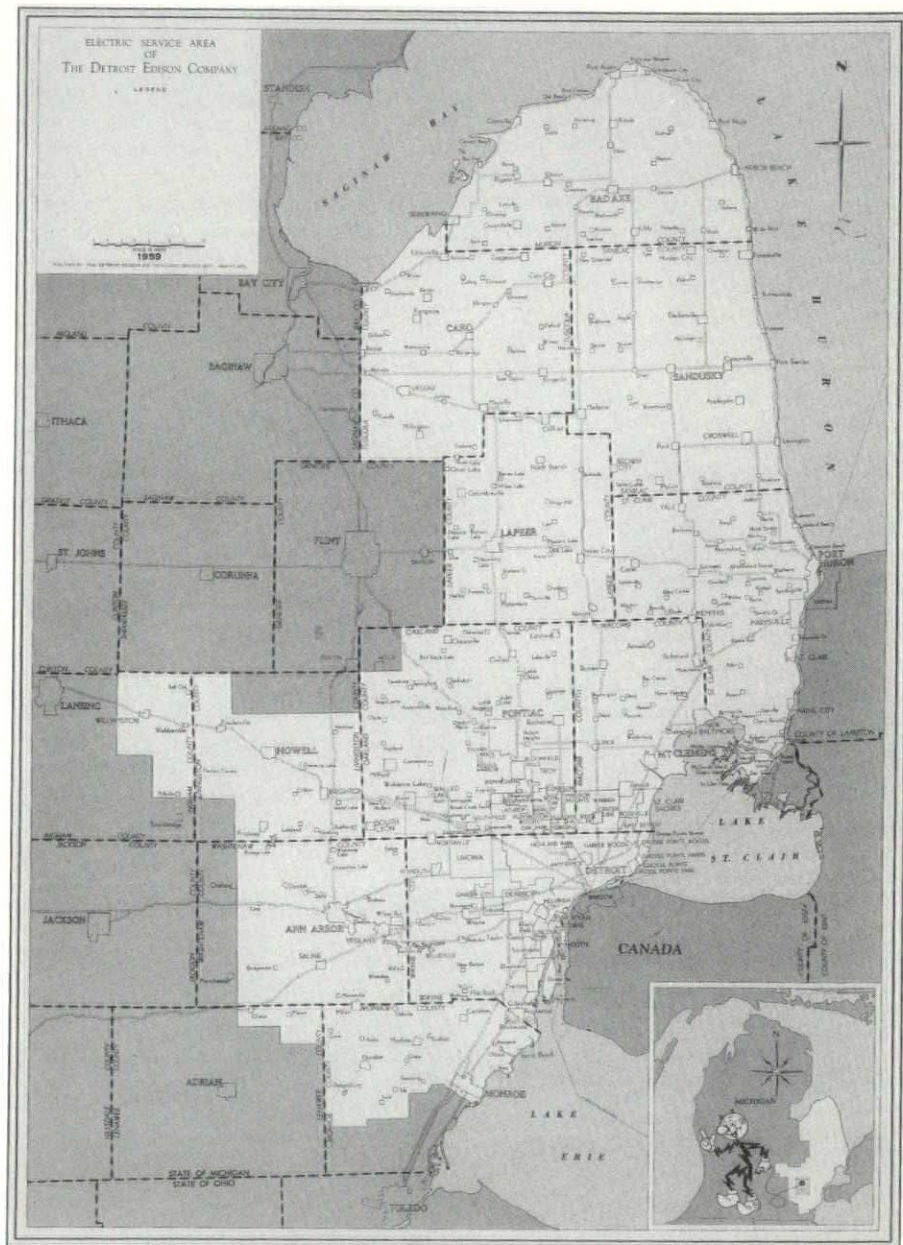
In recent years, there has been a notable increase in lighting levels in commercial and industrial offices and buildings. The heat which is a by-product of such lighting can now be put to work to heat the room, area or building containing the lighting — "heat-by-light."

Ventilated lighting fixtures have been developed which, together with an air handling system, make it possible to move that heat where it can become a major part of any comfort heating which must be provided. Very often, the only actual heating equipment, as such, which need be specified is some supplementary heating for night-time, weekend or exceptionally cold weather use. The air handling system can also be designed to provide air conditioning in hot weather.

EDISON ELECTRIC RATES

There are specific electric service rates, or riders on rates, which apply in certain situations. These rates and riders result in a significant savings, and a lower average cost per kilowatt-hour. Among the rates which will interest architects are: Detroit Edison's All Electric Domestic Service Rate, the All Electric School Rider, and the Commercial Space Conditioning Rider, (when permanently installed comfort heating and cooling are electric and when any humidity control and water heating are electric). The latter rider is the applicable one when there is a so-called "heat-by-light" installation. The actual rates are readily available to anyone interested and may be had by contacting any Detroit Edison customer office or the phone numbers given above.

Architects' inquiries can be channeled through any of the 73 customer offices that Edison has throughout southeast Michigan. In the metropolitan Detroit area, phone 962-2100, ext. 3218 or 3406.



Architect and Builder Service

by

Michigan Bell Telephone Co.

An Architects and Builders Service that can save time and money and assure adequate communications for the life of a building is available from the Michigan Bell Telephone Company.

In fact, the free preplanning service is offered from coast to coast to architects, consulting engineers and builders by all Bell Telephone companies, said Herbert Osgan, who is in charge of Michigan Bell's Architects and Builders Service Center.

Osgan's group includes six building industry consultants, all of them engineers. The consultants travel between 75,000 and 80,000 miles a year to help Michigan architects and builders plan for communications in modern buildings.

Generally, the business industry consultants make the initial contact with the architect or builder. Usually, this is a phone call shortly after the project is announced in Dodge Reports, a commercial reporting service for the construction industry. Sometimes information is through other sources and some requests come directly from architects.

The building industry consultants establish a case history for each project and follow its progress. Recently, the Michigan Bell Architects and Builders Service Center began using a computer to store data and information about buildings.

"The actual planning for communications equipment space and ducting

is done in the architect's or consulting engineer's office," Osgan said. "We encourage architects and builders to plan telephone requirements for 40 to 50 years, the average service life of a building."

Generally, occupants of an office building require a business telephone for each 100 feet of usable floor space. However, the chief objective is to design facilities for communications that will adequately accommodate telephone cabling throughout each building. This is particularly important because of the increasing use of new communications devices.

Michigan Bell's Architects and Builders Service Center is familiar with new products and new structural developments that the building industry is putting to use. Among the details that are stressed are equipment room space for large office buildings requiring Private Branch Exchange (PBX) equipment; floor loading requirements; special conduit needs and commercial power requirements for communications equipment.

The Architects and Builders Service Center coordinates its planning efforts with other Michigan Bell engineering groups and marketing department representatives to determine customers' requirements to meet their service demands.

Bell Telephone System statistics indicate that each business phone is moved on the average of once every two years. It is readily understandable

how important each access to floor ducting and facilities can be. Quick access provides for a minimum of disturbance to an office building's occupants and speeds up service on the moving of phones and new installations.

The building industry consultants can help architects improve the interior appearance of buildings by keeping communications cables out of sight and out of the way.

"Our building industry consultants can save valuable time and often money with their experience in planning for communications needs," Osgan said.

The Michigan Bell Architects and Builders Service Center will help plan for facilities in all buildings with 6,000 square feet of space or more. Local telephone plant engineers assist architects and builders with smaller buildings.

Michigan architects, consulting engineers and builders can obtain the free assistance in planning equipment space and other communications facilities by calling collect 357-4906 (area code 313). A telephone directory of all Bell System Architects and Builders Service Centers throughout the United States and Canada is available from Michigan Bell's Architects and Builders Service Center.

Inquiries can be telephoned or directed to Herbert Osgan, Room E-45, 23500 Northwestern Highway, Southfield, Michigan 48075.

Energy Analysis Program

by

Michigan Consolidated Gas Company

Every architect, regardless of his talents, has to depend on others for the success of his projects. He may design the most beautiful, functional, efficient, structurally sound building in the world . . . but if it is uncomfortable for people to live or work in, or too costly to operate . . . he's in trouble.

That is where the experts at Michigan Consolidated Gas Company come into the architectural picture; the heating and air conditioning engineers, specialists in total energy systems, make-up air, industrial processing, cooking, water heating and the myriad

of other uses of thermal energy. As the state's largest gas utility, Michigan Consolidated supplies more fuel to more homes, commercial buildings and industries than any other source. As a consequence, it retains the best men available and researches every new development in the field.

For many years Michigan Consolidated's Industrial and Commercial Sales Department and its Major Project Sales Division have offered a variety of helpful services to architects.

The newest of these is a computer program capable of providing complete feasibility studies on proposed projects.

Under development for more than a year, this program is now available to architects and mechanical engineers through the Major Project Division headed by John W. Turko, P.E.

Called the "Energy Analysis Program" the thorough, but simplified four-part program computes the hour-by-hour energy requirements of commercial or industrial buildings, determines the resulting energy that would be consumed by each major piece of equipment, and compares the economic attractiveness of various systems that could be used to meet the energy requirements.

Part I of the program takes into account that thermal requirements of a building generally vary appreciably with time or temperature. Thermal load components taken into consideration are solar radiation, internal heat, transmission gains or losses, balance heat, process heat and fresh air (sensible and latent). Local weather data is employed in Part I to determine, hour by hour, the net effect of these thermal components by simulating the operation of the building or complex under investigation.

Output data of Part I shows heating and cooling peaks each month and the outdoor conditions existing when the peaks occurred. Also obtained from Part I are the monthly energy requirements for heating, humidification, cooling, processing and base electrical requirements.

Part II of the program is used when separate buildings of a complex are being investigated or when an area within a building has thermal components that vary differently than the remainder of the building. Each building or parts of a building are analyzed separately and their hourly components

are then summed to find the total energy requirements.

Part III of the program is concerned with equipment selection and equipment operation. Various systems that could meet the energy requirements calculated in Parts I or II are evaluated. The major pieces of equipment of each system are analyzed under simulated operating conditions to determine the energy required to meet the hourly loads calculated in Parts I or II.

Output data from Part III consists of monthly natural gas and electrical consumptions, peak electrical demands, engine operating hours, chiller operating hours, number of hours system capacity is required, recoverable heat (as from engines or turbines) available and recoverable heat used. From this the mechanical engineer can more accurately size heating and cooling equipment needed.

Part IV of the program compares the economic attractiveness of each system, considering the operating costs and capital investment, and determines return on investment based upon depreciation and financing employed by

the client.

Turko said that, in perfecting its program, the utility has field tested against existing buildings "and it has proved amazingly accurate."

William Marion, manager of Industrial and Commercial Sales, pointed to a number of other services available to architects. Through the New Business Division, under manager Thomas F. Reilly, architects can obtain required information on service piping and metering, codes and regulations pertaining to natural gas, and the availability or location of natural gas mains. New Business also has a follow-up service from the start of construction until all gas equipment is operating properly.

Marion suggested that architects can best take advantage of the company's service by contacting the New Business Division at the earliest possible state of planning. "This procedure would help avoid undue delays in providing bidders with necessary information. We also like to know of any alterations in the project that might change fuel or piping requirements and construction schedules," he said.



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NEWS

Student Involvement in the Urban Crisis

By: Dale Scrace

Student Project Coordinator
Urban Affairs Director SC/AIA

Activity of a new and exciting nature can be found these days at the campus of Lawrence Institute of Technology in Southfield, Michigan, as a group of students of the Architectural Department make their effort to pay more than lip service to the problems afflicting our cities today.

Under the direction of instructors Robert Champlain and John Suhr, student project coordinator Dale Scrace and advice from the community leaders, the students divided into groups of five and are planning a community park to be located on Brainard Street between Cass Avenue and Second Blvd., an area just north of the Downtown area. The site is located adjacent to the Brainard Street Youth Center which serves street kids between the ages of eight and twenty six evenings a week.

Requirements for the park were not imposed on the community as is often the case in urban recreation attempts, but were developed by meetings between the people at the Youth Center, the students and through research into the community park concept as it exists in Detroit and other cities. Additional contact by the students, with city agencies such as, the Planning Department and other agencies such as the Model Cities and Deprived Area Recreation Team, helped to achieve a better grasp on the problems affecting the community.

Armed with research information and community requirements, the design process began to move forward. Group responsibility and interaction were very important goals for this project. Members of the group were individually responsible for specific areas of the project. Areas such as client contact and research were collectively responsible for the master plan and design concept for this group. Learning to work in teams is one of the real problems which students of Architecture must learn to overcome if they are to become effective members of our profession. Through this Project these students are learning first hand, the experience and importance of involvement with people at all levels of the project.

The design stage of the project consisted of each group developing what they collectively felt to be the solution

to the recreation needs of the community. A special meeting was held at the Lawrence Institute of Technology, at which time Center people met with the students and spent several hours discussing each project. Representatives from the Department of Parks and Recreation, the Junior Chamber of Commerce of Detroit and representatives from the News media were present. From the design stage of the project came ten plan proposals which were displayed at the Brainard Street Youth Center and at St. Patrick Community Center. Discussion about the proposals helped the student groups and all concerned gained a better insight into the possible avenues for development of the park. This took place between quarters at Lawrence Institute of Technology and upon return for the Spring Quarters at Lawrence Tech in March. The students, complete with the community reaction and instructor's comments, developed the final plans for the park and improvements for the Youth Center and the Community Library, which make up the total site. Thus, when the final presentation of the master plan was made, the solutions were a coordinated effort on the part of the instructors, the students, the community leaders and most importantly; the community itself to grasp the recreation needs of the Cass Corridor Community and together, solve one phase of the urban crisis.

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ARCHITECT: Warren Holmes Co.

Clubhouse Uses Stage Construction

This is the site of the new Michigan State University Faculty Clubhouse in East Lansing. Stage construction was employed to overcome mud and snow problems and provide clean storage space for supplies. This hot mix asphalt base was put down last fall and the final wearing course will be completed this year. When you let your job to a prequalified MAPA contractor member you can expect to get fine work like this.



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