The 'villain of the piece' is really poor design—failure to specify a proper base. This is true in almost every case of bituminous break-up. The base is the keystone of any asphalt paving, whether it be a giant parking area or a private driveway, a well-traveled primary road or a quiet side street. It must be carefully engineered for structural soundness, easy application, long-life stability, and economy.

Asphalt Products Corporation supplies all standard asphaltic mixtures, from modern plants, conveniently located. We also offer technical assistance. After all, we'd hate to see you caught 'off-base'.

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Volume 41 - No. 11

3 News

6 Annual Meeting and Election Results of Detroit Chapter

11 Editorial

12 Computers 1 — The Gigo Dilemma

14 Computers 2 — Solving Old Problems in New Ways

17 Building Technology Communications

23 Advertisers Index Classified

26 Calendar

Cover: a surface generated with the aid of a digital computer and its display unit. Prof. B. Herzog, University of Michigan.
At the ripe old age of two this building was recaulked with G-E Silicone Sealant.

(The original caulk couldn’t stand the weather.)

Was it the Florida heat or a hurricane named Dora?

Chances are, both caused the polysulfide caulk in this Florida hospital to break down in just two years. (And it was guaranteed for five!)

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So recaulk with G-E Silicone Construction Sealant. Or use it from scratch and forget about recaulking. It comes in standard caulking cartridges and a range of permanent colors.

Another product of General Electric Research is Silicone Traffic Topping. A new concept in Traffic Coatings offering many advantages over conventional floor and deck systems.
Frank Elected

At the State convention of the Historical Society of Michigan held in Lansing, Richard Frank, AIA was elected to the office of Vice President for the year of 1967.

Frank, a member and Past President of the Mid-Michigan Chapter, has been on the Board of Trustees of the Historical Society since 1963, a member of The Mackinac Island Historical Society, Detroit Historical Society, The Society of Architectural Historians, The National Trust for Historic Preservation and The American Association of Museums.

His firm, Frank & Stein has been instrumental in historical projects, such as The Reconstruction of Fort Michilimackinac, in Mackinaw City, The Restoration of Fort Mackinac on Mackinac Island, Reconstruction of Fort Wayne, in Fort Wayne, Indiana, and The Rome Historical Development in Rome, New York.

AIA Documents Revised

Revisions to four of its documents, including the A201 document on General Conditions of the Contract for Construction, will be published by The American Institute of Architects on October 15 for use by its more than 22,000 members.

The other documents include A101 Owner-Contractor Agreement, B131 Owner-Architect Agreement on Percentage of Construction Cost, and E301 Standard Filing System and Alphabetic Index. They were produced by the Institute's national Committee on Documents Review comprising representatives of four AIA committees and the AIA's Commission on Professional Practice.

Since publication of the new documents was announced earlier this year, most interest in the revisions has centered on A201. Its history dates back to 1911 when the first edition, the "Standard Document," was prepared. Subsequent editions have incorporated the thinking of the leaders of the construction industry through more than 50 years.

The 10th edition now being published is a thorough reorganization of the "General Conditions" document, which reduces the 44 articles of the past several editions to 14.

The Institute's president, Charles M. Nes Jr. FAIA, Baltimore architect, pointed out that the 10th edition is more than just a major reorganization of content. The documents committee had the assistance of legal and insurance counsel, other practitioners and outside design and construction organizations, which resulted in a complete rewriting. Every word was literally dissected and analyzed in the light of today's conditions of practice, he said.

A major change is the introduction of an indemnification or "holdharmless" clause. This is designed to keep the owner and architect from being the target of lawsuits for personal injury or property damage resulting from the negligence of the contractor, his agents or employees on a building project.

Article 4.18 as it appears in the new edition states that the contractor shall hold harmless the owner and architect in all legal claims for injury to an employee of the contractor or a member of the public or for damage to a property near the construction site if this damage is caused in whole or in part by any negligent act or omission of the contractor or subcontractor.

It further provides that if legal claims are made against the owner or architect by an employee of the contractor or a subcontractor, the indemnification obligation shall not be limited by the amount of workmen's compensation or other benefits payable by the contractor or any subcontractor.

However, the obligations of the contractor under this paragraph shall not extend to any claim which is substantially or wholly attributable to a defect in drawings or specifications prepared by the architect.

The entire subject is explained in a revised Chapter 13 of the Architects Handbook of Professional Practice. Five chapters were revised this year, and these will also be available on October 15.

The new edition of A201 has prompted discussion through the industry since it was introduced at the AIA's annual convention in Denver in late June. At that time the Institute's Board of Directors approved it after hearing objections voiced by the Associated General Contractors to the indemnification clause.

Previously a claim based on negligence of the contractor may have led to additional claims against the architect for failing to detect the negligence of the contractor in his control of operations at the site, and against the owner merely because the property was his. The Institute feels that on principles of basic fairness, it is justifiable to require the contractor to indemnify the architect and owner in these cases, Nes said.

The burden on the architect was also increased in the past by workmen's compensation laws which have often released the contractor from further liability if he has paid claims under workmen's compensation laws, and then permitted the architect to be sued for an amount which can be many times that for which the contractor was held liable under workmen's compensation.

"A properly drawn indemnification clause is a reasonable and practical way to correct this basically unfair situation," said AIA President Nes. He emphasized that the architects' organization feels the clause is equitable, is for the protection of all parties, and is insurable and legally defensible.

Nes echoed the sentiments of the Commission on Professional Practice which in June stated, "It is essential that today's successful architect be able to perform his professional services in an atmosphere of complete assurance and understanding if he is to achieve his best work."

In addition to the four revised docu-
ments to be released on October 15, the five Handbook Chapter revisions include Chapter 7, Insurance and Safety Bonds; 9, Owner-Architect Agreements; 13, General Conditions of the Contract; 14, Specifications, and 17, Owner-Contractor Agreements.

Headquarters, Octagon Restoration Fund Drive Begins

An intensive nationwide campaign to raise $900,000 by the end of 1966 to enable the Institute to start construction on its urgently needed new headquarters building and to restore the cherished Octagon House as part of one comprehensively-planned program starts this month under the direction of 26 regional AIA chairmen.

The convention also approved, subject to confirming action at the 1967 convention, sale of the Octagon House to The American Institute of Architects Foundation, Inc. Approximately two-thirds of the $900,000 goal will go toward that purchase, with the balance to be applied to restoring the Octagon House to make it a distinguished symbol of early American architecture in the nation's capital. The AIA will use the proceeds of the sale to reach a level of equity sufficient to ensure that the total building program can go ahead at one time.

Contributions to the Foundation, which are deductible on individual federal income tax returns, can be made now in full or divided over a three-year period. The Board of Directors decided to ask the members for a once-in-a-lifetime major contribution to the profession rather than alternatives such as raising dues.

During October, members will receive detailed information on the campaign and building plans. Regional campaign chairmen are organizing chapter efforts to ensure that all members possible are called upon personally. Robert F. Hastings, FAIA is the chairman of the Michigan campaign.

They're Blowing Up A Storm At Detroit Testing Laboratory

This storm, man-made, is testing a curtain wall as big as the building to see how it will hold up and perform in a real storm. Water is sprayed on the front of the section by fifteen nozzles. A pressure difference is created between the front and back surfaces of the curtain wall. The combination is roughly equivalent to an 8" per hour downpour combined with a 50 mile per hour wind. Operator at right controls wind simulation; visual inspection for leaks is made during and after test. Structural strength is measured at the equivalent of a 100 mile per hour wind. The curtain wall was manufactured by North American Aluminum Corporation of Kalama-zoo. Detroit Testing Laboratory is approved by the Architectural Aluminum Manufacturers Association to perform these tests.

Looks like Inz Spector got himself into an impossible situation. Still, there are some people just like him. For instance, there are those who think "test cuts" should be taken on every roof that's ever laid. Little do they know that under present day quality control methods there is NO "exact" method of determining the "exact" weight of materials used in a roofing system.

The methods presently used to determine the number of plies and moppings on an installation are far from conclusive. At best, it's mainly conjecture. Isn't it rather meaningless to take a 12" x 12" piece of the roofing "sandwich", weigh it, analyse it, then multiply the results by 100 and declare unequivocally that the results obtained determine what the rest of the system contains? That's how it is done today.

Isn't it logical to assume that the more openings there are in a roof, the more chance there is of an eventual failure? We can see no valid reason why a roof should be cut until after such time as a failure has occurred.

However, if you insist that a roof must be cut, then do it on the job-site while the workmen are there to make immediate repairs. Why wait for laboratory results on a roofing test cut sample when you can have immediate on-the-scene visual inspection?

Inspect, if you must, but please DON'T cut the roof!

Roofing Industry Promotion Fund

Burleigh Grime
Executive Secretary

8469 E. Jefferson Ave.
Detroit 14, Mich.

Area Code 313
822-0700
What would you think about a water heater without a tank?

Or an oven without sides?

Or a living room without walls?

We've given them a lot of thought. Super-fast tankless gas water heaters will deliver instant hot water in homes of the future. Another new idea in the pilot model stage is a radiant gas oven that will bake a cake in minutes. And gas research scientists are perfecting radiant heaters that turn your patio into a year 'round living room. All these exciting new developments are part of our pledge that you'll LIVE MODERN...FOR LESS...WITH GAS.
At the Ponchartrain Hotel on October 6, the Detroit Chapter elected William R. Jarrett to the office of Vice-President (President-Elect), Robert W. Yokom, Secretary, Robert B. Alpern, Treasurer, Gerald E. Crane, Chapter Director, and Ralph T. Bergsma and Louis Menk as MSA Directors.

Frederick G. Stickel, 1966 Vice-President, will assume the office of President, succeeding Louis Rossetti, on January 1, 1967.

Tellers appointed by Rossetti for the ballot count were Arthur Hyde, Gus Muth and Earl Pellerin.

The 1966 Gold Medal of the Detroit Chapter, AIA, was presented to Clair W. Ditchy, for his long and devoted service to the interests of the Chapter, the State, the American Institute of Architects and the profession as a whole.
New Parking Structure

A new General Services Building and Parking Structure, designed by Albert Kahn Associated Architects and Engineers for the Henry Ford Hospital, is now under construction on the northwest corner of the hospital grounds, at the intersection of West Bethune and the Lodge Freeway in Detroit.

The building will provide six floors of parking space above grade, with a protective roof over the entire "L" shaped structure. Although similar in exterior design treatment to the existing Hospital Parking Facility, located directly across the street to the north, the new structure, unlike its award-winning neighbor, will provide a below grade level for housing principal service facilities essential to operation of the entire hospital.

The unique hyperbolic paraboloid concrete panels screening the new building above the first floor will create a harmonious relationship to the existing parking facility, and the red brick around the ground floor will link it visually with the older buildings of the Ford complex.

The wall panel design of this latest building, as in the original parking structure, is distinctive and functional. Shape of the panels will provide a sculptured appearance which will vary continuously with the moving location of the viewing eye, and to the fast-moving motorist on the nearby Freeway, the line of shadow along the sweep of the building will appear to be ascending or descending, suggesting that each panel is different from its neighbors, although actually all 2800-plus panels forming the screen will be identical.

This sculptured grille marked a radical departure from past exterior treatment of open-deck parking structures when it was introduced in the Ford Hospital Parking Structure erected earlier. The doubly curved panels, of pure white concrete, will not only screen the vehicular activity within from view but offer a controlled attractive surface appropriate to the setting in an institutional-residential neighborhood.

The new facility will house a central kitchen, radiotherapy department, and general stores and mechanical equipment spaces in a below-grade service area, physically linked with the existing hospital by means of an underground passage to permit ease of inter-hospital movement.

The efficient new central kitchen will provide facilities for the preparation and supplying of all food to the hospital. Among these facilities are a separate modern bakery and special battery powered trains to convey prepared food to distribution centers throughout the hospital.

The 12,000 square foot radiotherapy department housed in the service area is planned as one of the finest and most advanced in the country. Its underground location reduces greatly the shielding material normally required for such areas, and the flexibility of its design ensures adequate space to accommodate the most modern equipment conceivable.

New Book Announced


The Handbook of Mechanical Specifications for Buildings and Plants, a practical guide to the selection of items that should be included in a specification, provides detailed checklists for such individual units of equipment as steam generators and boilers, nuclear reactors, hydro-electric units, heating and air conditioning systems, fire and refrigeration compressors, diesel engines, pumps and turbines, ice making, etc. Specification writers with the task of preparing a specification for unfamiliar equipment can write an effective specification by following the information and guidance presented in this Handbook.

The material is arranged to help the specification writer to think about what is wanted and to make sure that no important details of the specification are omitted.


Detroit Testing Laboratory offers the largest and most complete independent testing, inspection, supervision, and quality assurance service in Michigan.

Our large Construction Services Department is staffed by thoroughly qualified engineers and technicians, available, on call, to help solve the many unique problems encountered in today's complex construction field.

Over the past sixty years, DTL has saved time, money, and doubt for countless government agencies, contractors, engineers, and architects. Large or small, each receives the same careful, unbiased attention.

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Independent balancing of air and water distribution systems to assure conformance to architects' and engineers' specifications.

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- Metallurgical testing
- On-the-job testing and control
- Compatibilily evaluation of materials
- Verification
- Specification adherence
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  - Concrete and masonry products, Asphaltic products, Aggregates, Roofing materials, Curtis Wall, Sealants, Insulation, Paints, Steels, Pipe, Plastics, and other construction materials.

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Phone: 358-2100

November, 1966, / 7
Roofing Contractors To Hold Seminar

Members of the MSA and CSI are cordially invited to the first in a series of meetings on roofing problems to be held at the Statler-Hilton Hotel on November 22, 1966.

Dinner and refreshments will be served prior to the meeting.

Phase one in this series will call on well qualified speakers who will explore the problems of built-up-roofing and will recommend solutions that would eliminate costly delays in construction.

Present figures indicate that approximately one hundred will be present at this first meeting.

Please telephone E. B. Grime, Executive Secretary, Roofing Industry Promotion Fund (822-0700) for reservations no later than November 18, 1966.

Ready Power Company Announces New Sales Assignments

Charles E. Berlin, General Sales Manager of Ready Power Air Conditioning and Refrigeration Products Division, has announced the appointments of William B. Cooper as Sales Manager of Econo Cool Systems and J. E. Bowers, Merlin V. Burkert, George J. Post, James Furry, Benjamin B. Ponce and Robert W. Stephenson as Regional Sales Managers for Econo Cool and Econo Gas Systems.

The Econo Cool Air Conditioning line includes three basic types of natural gas engine driven air conditioning equipment for comfort cooling — compressor and condensing units from 20 to 130 tons and integral chiller packages up to 250 tons.

Ready Power Packaged Air Conditioning Systems are in use throughout the world in churches, motels, hospitals, office buildings, apartments and in many other industrial and commercial installations.

Ready Power introduced its Econo Gas Systems for supermarket low and medium temperature cooling, air conditioning and heating in 1965. In less than a year, a coast to coast Econo Gas distributor organization has produced an order backlog. National grocery publications have pointed to savings of up to $10,000 for the average supermarket using the natural gas driven Econo Gas Systems in place of the conventional electrically drive systems.

William B. Cooper, appointed Sales Manager of Econo Cool Systems, joined Ready Power three years ago as a National Sales Engineer. For the past year, he has served as assistant Sales Manager of Air Conditioning Products. Prior to joining Ready Power he held major engineering and sales positions with nationally-known refrigeration and air conditioning manufacturing firms.

In 1934, Cooper received a Bachelor of Science degree in electrical engineering from Ohio University. Two years later he was awarded a Master of Arts degree from Ohio State University. More recently, he has done post graduate work in engineering at the University of Cincinnati and Wayne State University.

A member of the American Society of Heating, Refrigeration and Air Conditioning Engineers, Cooper is credited with numerous articles and professional papers on air conditioning.

J. E. Bowers, named Midwestern Division Regional Sales Manager for Econo Cool and Econo Gas Systems, was a field service engineer for the Seal-right Company before joining Ready Power 13 years ago as a regional sales manager. He has participated in numerous engine air conditioning seminars for architects, contractors and gas utilities and conducted Ready Power Field Service schools throughout the country.

WHENEVER SPECIFICATIONS CALL FOR CONCRETE

READY MIXED

PROVIDES MORE ADVANTAGES

Whatever the construction need, ready-mixed concrete offers distinct advantages to the builder. A simple telephone call can bring concrete to the job-site... conveniently... at the right time... and economically. Ready-mixed concrete producers are prepared to supply the precise mix to meet any desired durability and strength. And precision equipment enables them to maintain tightly controlled uniformity of mix regardless of the size of the order. Ready-mixed concrete is a quality product and the technically trained men are ready to serve the construction industry. Consult them on your next building project.

MICHIGAN READY-MIXED CONCRETE ASSOCIATION, INC.
521 N. Washington
Lansing, Michigan
Merlin V. Burkert, named Southern Division Regional Sales Manager for Econo Cool and Econo Gas Systems, joined Ready Power in 1964 after many years of experience in the power field including three years with Fairbank-Morse as Assistant Sales Manager of the Engineering Division.

Benjamin B. Ponce, the new South American Regional Sales Manager, was associated with United States Motors for 15 years and has over 25 years of experience in Central and South America.

Robert W. Stephenson, named West Coast Division Regional Sales Manager, joined Ready Power in 1950 after graduating from the University of Illinois with a degree in communication engineering and business. He worked in the St. Louis and Cincinnati area and was later transferred to the Western States where he pioneered Ready Power natural gas-driven engine air conditioning in that area.

George J. Post has 25 years experience as a Sales Engineer in the air conditioning, refrigeration and heating field with major manufacturers. He will serve the Southwest Division including the states of Texas, Louisiana, Colorado, New Mexico, Oklahoma, Arkansas and Mississippi.

James Furry will serve the Central States Division. A graduate of Bowling Green University with a B.A. degree in Marketing and Accounting, Mr. Furry took post graduate work at Cleveland State University in Air Conditioning and Refrigeration Engineering. Prior to joining Ready Power, he worked with a manufacturing representative on natural gas products and air conditioning equipment.
Smith Appoints Associates

Frederick Baessler and Edward Hammarskjold have been made associates in the Detroit firm of Eberle M. Smith Associates, Architects and Engineers.

Baessler is a native of Grand Rapids and a graduate of the College of Architecture of the University of Michigan, 1935. With the exception of a three-year period as a Navy lieutenant aboard destroyers in the Pacific during World War II, he has devoted more than 30 years to the general practice of architecture in Michigan and New York. His work is reflected in Japan and England as well as the United States and Canada.

Hammarskjold obtained his degree in Architecture at the University of Michigan in 1950. Like Baessler, he is on his second tour of duty with the Eberle M. Smith firm.

Prior to rejoining the firm two years ago he spent three years setting up the Department of Architecture at the University of Nigeria in West Africa. Earlier, he was an instructor in Architecture at the University of Michigan and from 1956 to 1963 he was principally engaged in private professional architectural practice in Ann Arbor and in Detroit.

Improvement Program for Masonry Producers

A state-wide plant improvement program to encourage Michigan masonry producers to make customer services more attractive and efficient is being sponsored by the Concrete Products Association of Michigan.

Masonry producers who make the most improvements to plant facilities will receive CPAM awards based on inspections made by an impartial panel of judges. Selection of the judges will be announced.

The plant improvement program is part of the CPAM's general campaign to stimulate better display of masonry products by producing firms and to encourage improved customer services. Judging will be based on plant attractiveness, use of masonry materials, neatness, and facilities for meeting customer needs.

The Concrete Products Association of Michigan is the principal state organization representing masonry producers. The group maintains offices at 76 West Adams, Detroit, with C. A. Sirrine as executive director.

Announcements

The name of The Detroit Marble Company has been dissolved, and all transactions pertaining to the Detroit Marble Company will be in the name of Vermont Marble Company.

The address will remain at its present location, 14255 Schaefer Highway, Detroit, Michigan 48227, Telephone 313-273-7088.

Dear Mr. Beckley:

Thank you for your very fine editorial ("Where have all the draftsmen gone?") in the June issue of the MSA Bulletin. Your comments on the role of the architectural technician and the discussion of our program at Ferris State College are especially appreciated. We have been preaching the value of sub-professional technical education for almost a decade, and it is a pleasure to see the profession beginning to recognize this as an important phase of architectural education.

We have noted with interest the activity at both the national and state level in this area. The AIA Professional Education Research Project at Princeton with its corollary program of investigation into technician training, and the recently established AIA "Task Force on Architectural Technician Training" evidence the growing concern across the nation for the dwindling supply of competent support personnel in architects' offices. The recently announced study of current and future needs of Michigan industry for drafting and design engineers indicates the developing interest in the specialized needs of this field in our own state.

As your editorial points out, in this day of technician and technical education, it is only logical that the training of the architectural draftsman be accomplished under a program of formal education developed around the skills and knowledge necessary to communicate the architect's design concepts to the builder. The expansion and growth of two year curricula present a strong medium for the development of appropriate educational programs. However, there is a great need to bring the attention and interest of the Michigan architectural profession to bear on this problem. A strong cooperative effort must be made by Architecture and Education in analyzing and implementing the real needs in order to create truly effective programs.

Very truly yours,

James B. Shane, AIA
School of Technical and Applied Arts
Ferris State College
Big Rapids, Michigan.
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 in 1966 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 building 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 irrelevant 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.

Two articles in this month's magazine consider the implications of the computer on architectural practice. The first deals with the promise of the ever improving computer technology and its implication for creating major changes within the architectural profession and building trade. The second article concerns itself with the computer and its use for solving old problems in new ways. Both articles reflect changes which are taking place and will be taking place in the profession. In both instances the conclusions are obvious. Architectural ritual is due for a change.

November, 1966 / 11
Gigo: is the computer technician's term for "garbage in-garbage out". Perhaps better than any other expression it presents the dilemma created by the increased use of the computer in our society and more specifically by our profession. Computer technology is advancing rapidly. We can no longer afford to ask whether we should use it, but instead, how can best we use it.

Architects have been seriously contemplating the use of computers for the last five or six years. A number of larger firms have incorporated computers in their practice, already, using them for data processing chores, payroll accounting, structural analysis, heating and air conditioning analysis, etc.

Computer technology has continued to develop at an accelerating rate, however, and the implications for the architectural profession today are quite different from what they were only a year or two ago.

What have these advances in computer technology been and how do they effect the architectural profession?

Advances in computer technology which can be seen to have an immediate effect upon the way the architectural profession will use this technology can be noted as follows.

IMPROVEMENTS IN LANGUAGE AND COMMUNICATION INPUTS AND OUTPUTS, IMPROVEMENTS IN HARDWARE, IMPROVEMENTS IN SOFTWARE AND THE TIME-SHARING CONCEPT.

The language of the computer is simple binary logic based on 0 and 1. It is simple in its process, but if you can imagine a language which has as its alphabet only the letters A and B you will have some understanding of the difficulty encountered in understanding the computer's language. In a sense, the binary language of the computer made communication with it possible only through a language analogous to morse code. As ideas, thoughts, and calculations become complex the problem of translation becomes increasingly difficult for the user.

Computer technologists have realized for sometime the computer is only as good as a person's understanding of how to communicate with it. For this reason a great deal of effort has recently gone into the development of translator languages. A translator language can convert information in various forms to the language of the computer. It is therefore becoming less important for the user of a computer to have knowledge of how the computer works and the language by which it must operate.

COMMUNICATION INPUTS AND OUTPUTS

Nearly all the languages which take the form of input into the computer are now designed to be related to the everyday vocabulary of a word's or expressions of the user. The only difference is the computer is not ambiguous.

Words such as "POOR" (which can have a qualitative or quantitative meaning in normal language context) can have only one meaning to the computer.

As well as being able to understand typed word forms of communication the computer can now also "read" information put into it in graphic form. This attribute has fantastic implications for the architectural profession, as will be noted later.

IMPROVEMENTS IN HARDWARE:

Computer hardware is the "apparatus" of the computer itself. In 1950 there were only 10 or 15 computers in existence, today there are 35,200. The population increase of computers is something like that of humans, for in 1975 it is predicted there will be 85,000 computers. Increases in speed and capacity, brought about mainly in the last few years by microelectronic circuits, have both reduced the size of the computer and increased its efficiency several thousand times. A calculation done by a computer in one hour in 1950 can now be performed in a matter of seconds.

The computer manufacturers have also learned some lessons from Detroit and offer a wide range of accessories. Most important of the accessories are the teletype, and cathode-ray-tube which makes communication between computer and user both fast and direct.

IMPROVEMENTS IN SOFTWARE:

Computer "software" is the description given to the programs of instruction that makes a computer operative. The original computer programs were organized to utilize the computer's ability to process vast quantities of data. Such a program can be quite complex, so complex that a human would have a difficult time following it without a great chance of error. Although the problem is complex, it is mechanical and predictable and the computer merely grinds away at the solution, faster and more accurately than a man could of course.

Recently experiments have been made which link man and computer together as a system. The computer program consists of both data and a logic system. The computer's logic system is again a simple one based on a binary 1 - 0 or YES - NO program. A computer using this simple logic, however, can manipulate complex sets of information making comparative evaluations of certain questions which the user can ask of it directly. The user can thus respond to the output which is given by the computer and the computer can respond to the changing input of the user. Together the user and the computer can work in an exploratory way, constantly refining and, expanding the problem which is being worked.

TIME-SHARING

The concept of time-sharing has made possible many of the advances which have been discussed thus far. Man's responses are much slower than the computer's. To utilize the computer economically in the past, programs were introduced to the computer one at a time in sequential order. Though the computer was working efficiently, a mistake in the program or data meant the user had to get back in line for another run after correcting his error. In
a large central processing facility this might mean lengthy delays (sometimes days) even though it took only a few seconds of computer time to perform the operation.

The computer, however, does not have to handle programs one at a time or sequentially. It can handle, in fact, a number of programs simultaneously. By giving a large number of users direct access to the computer they can in effect share the time of the computer. The time used for human response and print out equipment is enough for the computer to handle the request of many other users.

ARCHITECTURAL IMPLICATIONS:

Architecture is not an exact science. There is inevitably no single solution to any architectural problem. There are, however, a number of best solutions.

The process of design is essentially one of finding a solution which best seems to solve the functional, economic, and aesthetic requirements of a particular problem. The design process itself is characterized by several steps. 1. Defining the goals and objectives of the problem. 2. The collection of data and the analysis of requirements which relate to the problem. 3. The development of alternative concepts and solutions. 4. The evaluation and refinement of the alternative solutions.

The success of any architectural design is dependent upon the architect's ability and success with each one of these steps. The creative process is a process of experimentation with ideas, conceptualizing and testing. A designer goes through a series of alternative proposals, evaluations, and refinements in achieving a solution which best meets the conditions of the problem. To preserve his ideas it is usually necessary that he commit them to paper. He usually has difficulty remembering all the ideas and the result of his evaluations unless he does.

A computer equipped with a cathode-ray-tube is essentially a piece of tracing paper with an infinite dimension. Computer aided design utilizes the cathode-ray-tube as an extension of the computer on which an endless number of images can be projected. But, the cathode-ray-tube has definite advantages over paper. It stores any image placed on it with a light pen. The image can be made to disappear or appear at the operator's will. The image can be animated; it can be made to rotate about an imaginary axis; it can be made to change its size. Given three views of an object, the computer can create a fourth, and reproduce it at any size and in an infinite variety of positions.

This is a tool designers have never had in the past. What is its potential? This is still to be discovered. It would seem if anything it could prolong the time when solutions are sought and evaluated. Relationships and alternatives can be considered which were discarded in the past because of a lack of time for development. But, more importantly, we can actually see relationships we would never have seen before.

Given the extension of the computer by the use of a cathode-ray-tube the computer becomes itself an extension of man. We are no longer talking about the computer as a fancy calculating machine. Its potential for extending man's creative exploration of design solutions seems unlimited.

At the same time this new potential creates new demands upon us. We now have a mechanism for testing our design ideas, but what do we test them against. Our design criteria have to be carefully specified. Our systems of evaluation have to be more carefully defined.

If we put garbage in we will only get garbage out.

The computer generated images were provided by Prof. B. Herzog of the University of Michigan.
computers 2
solving old problems in new ways

The General Electric Computer Time-Sharing System

14 / Monthly Bulletin, MSA
The Time Sharing concept has opened the door to the use of the computer by the architectural profession. Now an architectural office can rent computer service, with access assured whenever it is desired, for the cost of a good draftsman.

The ability of the computer to operate at incredible speed and its ability to store information in vast quantities and its capability of working on more than one problem at one time have made it possible for a large number of users to be connected to a computer simultaneously, reducing the cost appreciably and increasing the convenience many fold.

As the diagram of General Electric's Time Sharing System illustrates (opposite) the operation is really not a simple one. Several computers are used in the network; some for storage, some for translation, some for processing. The operation for the user however is quite simple.

As a subscriber to a time sharing service a Teletype keyboard terminal is installed in the user's office. This terminal is connected to the computer system through the public telephone network. To activate the system the computer is called by telephone. The computer answers with a confirmation tone. This means the user is hooked up. Interaction with the computer is started by typing HELLO on the keyboard of the Teletype. This initiates a short series of questions which are typed out on the Teletype. The user enters a code name on the Teletype which identifies him as a bonified user and indicates the store of information which is his. Next the name of the programming language which is to be used is specified by the user.

At this point the computer asks the user to specify whether the problem to be solved is NEW or OLD, and the user gives the problem name. If the problem is OLD, the system retrieves it from the storage area, and the user may add to it or modify it in any manner he may choose. If the problem is NEW, the user composes, edits, and tests the program right at the terminal keyboard. When the program is ready the user types the word RUN. The system immediately performs its calculations and responds by typing its reply on the Teletype unit.

Once a program is established it is stored in the computer system. By listing a series of instructions someone may use the computer who is not actually familiar with the program operations. A learning program lists the steps of the program and asks the user to supply it with data when necessary.

Although the computer system is shared with others, you have the feeling that you are the only user. The high
speed of the computer enables it to keep busy most of the time. While the user is thinking about the next instruction, or while the output is being printed, another user's program is being instantly processed.

Many computations are of short duration and require only intermittent access to the computer. You can type in a problem, get the answer and, if necessary, try it again with different conditions or data without ever getting any indication that the computer is doing anything else.

Programs stored in the system are assured of protection. They can be obtained only by giving the proper user code. To further assure protection the program may be put on a punched tape which is fed through the Teletype machine.

Charges for such a system presently run around $350 per month. The cost of telephone service is separate and will vary depending upon the location of the Teletype to the processing center. A Teletype with a normal amount of use costs the equivalent of a good draftsman. If used wisely it can do the work of a countless number of man hours.

The computer system offers the user two distinct advantages. Tedious calculations can be done in a fraction of the time it would take for human calculation saving both time and the chance for error and freeing a man for more valuable work. It is also possible to explore alternatives which would otherwise be too costly to calculate. The user can thus perform a service both to himself and the client in a more thorough investigation of the problem.

An interesting illustration of these possibilities is demonstrated by a program for “heat loss/heat gain” developed by Smith, Hinchman and Grylls Associates, Inc., Data Processing Department headed by Ali Moussavi-Nasle, using leased time on an IBM 1620.

Using the normal manual method, it takes from three to four weeks to calculate precisely a new building’s air conditioning needs. Smith, Hinchman and Grylls’ program does it in a few hours. The actual computation and print-out of the requirements analysis takes just three to four minutes.

In addition to the tremendous time advantage, the program quickly can evaluate comparative heat loss/heat gain for alternate construction materials or building orientations. It can spell out air conditioning requirements on a room-by-room basis, on a zone basis, or for the total building. And it can analyze needs for different times of day, or different seasons of the year.

The “heat loss/heat gain” provides a detailed analysis of cooling load on the basis of key building parameters, always including the type of construction and materials, orientation on the site and the azimuth. Information inputs to the computer specify square footage areas of glass, walls, roof, ceilings, and partitions. Outside and inside conditions, such as dry ball or wet ball, relative humidity and seasonal temperatures, and the number of building zones are included.

The engineer also enters the “U” factor (heat transmission rate) and feeds in data on occupancy heat (number of people times the sensible and latent heat average per person). Other heat load factors, such as type and wattage of the building’s lighting system, motor-generated heat, window shading coefficients, etc. may also be entered.

The engineer has the option of requesting a cooling load analysis by individual room or zone, or the total building load. He can use the various input parameters of construction detail, orientation and “U” factor in almost limitless combination. And he can, if he chooses, specify a given time of day for maximum load or let the computer calculate the peak load hours.

The output from the computer, available in minutes, gives the building description, location, and conditions. It lists the solar glass factor by facade orientation, the combined temperature gains, infiltration, internal heat, latent heat, outside air heat, estimated heating load and the total tons of air conditioning needed.

A number of computer programs already exist which have been “canned” and are available for general use. The number of these programs will grow as the demand becomes greater. Typical of such a program is (STRESS) Structural Engineering System Solver an application program developed by IBM for structural engineering problems. STRESS analyzes two- or three-dimensional structures with prismatic members. Structures may have either pinned or rigid joints, and may be subjected to concentrated or distributed loads, support motions or temperature effects. Types of structures STRESS can analyze include space frames, rigid frames, trusses, building frames, box culverts, tunnel sections, plane grids and plane frames.

The STRESS program is available on IBM’s 1130 Computing System. The 1130 is a high speed, desk-size computer designed specifically for engineering and research applications. Such combinations of “hardware” and “software” provided by the 1130 make it possible for architectural and engineering firms to operate their own Computing Systems, quite economically.

The Time Sharing system provides smaller offices with the opportunity of developing programs for computer use, at a reasonable cost with many opportunities for saving money in time consuming calculations and costly mistakes with the opportunity of rendering a more complete client service. Larger offices, now have the opportunity through such systems as the IBM 1130, to operate their own computing systems with a great deal of diversity including graphic output devices.

The opportunities for developing new approaches to old problems is just beginning.

This article was prepared with the cooperation of Charles C. Rencreel, General Electric Co., Information Processing Center, Mr. Roger Mathews, Associate Systems Engineer for International Business Machines Corporation and Smith, Hinchman and Grylls Associates, Inc. Architects, Engineers and Planners.
In the architectural planning of any commercial building, communications needs are no less important than the requirements for heating, lighting, plumbing and ventilating systems.

There is an additional consideration to be reckoned with in planning telephone facilities for a new building. Unlike the plumbing or heating systems which usually remain unchanged, telephone apparatus must frequently be moved, many times in a hurry, without major interruption to office routines.

This is not a problem in a well "telephoned" building. Properly located and planned facilities can be rearranged with a minimum of inconvenience and with a minimum of personnel "down" time which, obviously, could be costly if prolonged.

To assist in integrating communications facilities into basic plans, the Michigan Bell Telephone Company provides an Architects and Builders Service. This consulting service — free of charge — will help you judge the type of planning you need for communications.

Since the architect, engineer and contractor design a building to be a functional extension of a tenant's business, the most economical approach is to evaluate the communications requirements of a building in the earliest blueprint stages. Telephone equipment, conduits, raceways, riser cable systems, wiring and outlets which are planned during construction or renovation to coincide with the layout of office spaces will provide lasting convenience and efficiency, even when the tenant's communications needs change.

It is almost impossible to exactly predict communications needs because the demand fluctuates constantly. However, based on knowledge of building use, the customer, and current equipment, the Telephone Planning Consultant is in a position to recommend the cross-sectional areas of raceways, the amount and size of apparatus closets to serve a given building, and telephone density — which is ratio of phones to usable floor area. His recommendations anticipate a building life of 40 to 50 years.

The benefits of under-floor ducts and cellular floors...
naturally are important. One advantage to a raceway system is the concealed cable distribution facility, since it increases efficiency by enabling every desk or each piece of communications equipment to be served from immediately adjacent floor outlets.

There also is the added flexibility which a raceway network or ducts provide, since they allow communications systems connecting to be made easily wherever needed. When re-location of partitions or movement of personnel and furniture is necessary, equipment modifications are possible with minimum delay and inconvenience. In addition, raceways eliminate surface wiring along baseboards or overheads to improve appearance and increase desirability of the spaces.

Determining how much raceway is needed to serve a given floor area involves more than computing the cross-sectional area of the cables needed to serve the instruments. The Telephone Planning Consultant must be sure that the raceway will accept the cables to be installed. Tests on pulling telephone cables into underfloor ducts have revealed that a duct approximately 9 sq. in. in cross-sectional area, for instance, may accept up to only 3 sq. in. in cross-sectional area of cables with pulls less than 100 lbs., which is only one-third of the actual area of the raceway.

**APPARATUS CLOSETS**

Another consideration is the apparatus closet. The variety of features provided by today's modern communications systems requires that relay cabinets and auxiliary apparatus be relatively near telephone locations. Installing this apparatus in a closet eliminates operating noise and contributes to the overall appearance of office space. In addition, when telephone maintenance or change-over is required, telephone personnel may do their work without inconvenience to the office staff. A properly located closet reduces the duct heading cost by substantial amounts.

To lay out a closet, the Telephone Planning Consultant determines the size of the area to be served. He translates this into numbers of instruments, using the density factor. From experience, Telephone Planning Consultants can estimate how much equipment is needed to back up each instrument. Knowing the amount of equipment required, he then estimates the space required for the apparatus closet. Planning the telephone closets in the preliminary stages avoids the cost of later revising the working drawings when changes are required for the telephone service eventually offered by the architect's client.
CABLE RISER SYSTEM

The backbone of a commercial building's telephone communications network is the cable riser system. This system provides the facilities for bringing cables from the main telephone terminals to each floor of the structure. The riser cables may be brought up either through riser conduits or shafts, depending upon the type and size of the building. Through pre-planning and proper location, the riser system will provide an economical and efficient conduit installation, while minimizing space requirements.

PBX EQUIPMENT AND TERMINAL ROOMS

When planning commercial spaces, attention should be given to switchboard equipment rooms, which house the large equipment needed for the anticipated phone service, and the main terminal room, which is the connecting point between building and outside facilities.

Because of the many variables involved, it is to the designer's advantage that this important space be planned with the help of the telephone company.

If buildings are to be properly prepared to accept com-

 Proper design of cable riser systems and raceways in commercial buildings allow sufficient capacity not only to accept the initial wiring installation for communications needs, but also provide capacity for future requirements.

The benefits of under-floor ducts and cellular floors naturally are an important factor in designing buildings for today's communications. There are many advantages to these raceways systems as cable distribution facilities, since they increase efficiency by enabling every desk or piece of communications equipment to be served from adjacent floor outlets. In this type of raceway installation, telephone wires which connect outlets are located inside the floor and permit flexibility for future communications needs.
Communications systems that occupants require, it is evident that architects, engineers and consultants combine knowledge in planning from the earliest stage. Tenants today are seeking buildings which are planned for complete communications, now and in the future. Modern communications facilities increase the desirability of leased space, since it ensures that any number of business communications systems can easily be installed. There are several which businessmen are finding increasingly more valuable to streamline daily operations, and architects are finding important for planning and design purposes.

PUBLIC TELEPHONE SERVICE

This is an important consideration for the architect in designing any building. Tenants, visitors, employees and casual traffic all require easily accessible and conveniently located public telephones. In addition to being an appreciated public service, public phones provide profitable income to your client.

Public phone booths are offering a new flexibility in basic design, size, materials and colors to preserve building design integrity. The versatility of booths — single or multiple, recessed or free standing — makes possible a variety of arrangements to serve all locations, both indoor and outdoor.

The telephone company can suggest the logical number, as well as locations, for public telephones according to a building's function, floor layout and potential traffic patterns.

Architects and consulting engineers can use the considerations outlined here as a guide or starting point in planning. Michigan Bell's Architects and Builders Service offers in depth experience and knowledge to help provide facilities for modern, complete communications services. Advance planning provides buildings with lasting communications convenience that reflect continued tenant desirability of spaces.

Michigan Bell's Architects and Builders Service can be reached by calling collect Area Code 313 357-4906. The Telephone Planning Consultants travel statewide; a "collect" call will bring them to your door.

The above article was prepared in cooperation with the Michigan Bell Telephone Company.
Comprehensive Architectural Services

General Principles and Practice edited by William Dudley Hunt, Jr., prepared by The American Institute of Architects, 241 pages, $8.00.

Here is a timely report on what lies ahead in the rapidly expanding area of architectural services. It describes what these services will be like ... how architects can prepare for them... how they will be coordinated and unified ... and how they will be compensated for.

This important book is based on the pioneering efforts of the American Institute of Architects' Committee on the Profession to discover better methods of architectural practice for the present and for the future. It reflects changes that have taken place in the practice of architecture, architectural education, registration, and other areas. And it describes how architecture will be practiced in the years to come—in wide ranging, large-scale complex developments and in smaller buildings.

Outlining the role of the modern architect, this book discusses the changing requirements that have led to the concept of comprehensive architectural services. It deals with the practice of these services in various building situations and show how architects can market their services to clients, what clients expect, and how services can be performed to meet the requirements of both the client and the public. Legal, ethical, educational, and related questions are given full consideration.

Also covered in detail are how architects can perform comprehensive service for promotional projects or for entrepreneurs ... how such services as analysis of finances, feasibility, and real estate are performed ... and how auxiliary services not traditionally involved are performed.

Brennan Elected President of C.S.I.

William M. Brennan has been elected President of the Detroit Chapter of the Construction Specifications Institute. Brennan is with the Specifications Department of the architectural firm of Giffels & Rossetti, Inc. of Detroit.

Other officers include, John Urban, AIA 1st Vice-President, with Minoru Yamashiki & Associates, Andrew D. Rae, 2nd Vice-President, President of William's Products, Inc., Edwin G. Siegel, Treasurer, with Siegel, Swiech and Associates, and A. Robert Bliven, AIA, Secretary, with Germany, Klees & Bliven of Detroit.

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Creative Structural Engineer in mid-thirties. Work includes design development, technical writing, engineering services, lecturing before professional groups. Some travel is required. Degree in C. E. required, with advanced degree in structures desired. Experience in concrete design and construction helpful. Job located at Michigan headquarters of well-known national engineering organization. Submit a complete resume and salary requirement to Box 1000, Monthly Bulletin, MSA.

ADVERTISERS' INDEX

Asphalt Products Corp. 2nd cover
Belz, Charles R., Co. 10
Century Brick Co. 24
Den Braven, M. 22
Detroit Edison Co. 4th cover
Detroit Testing Laboratory, Inc. 7
Duo-Wire (Div. of Lightweight Aggregates Corp.) 25
Glanz & Killian 9
Holmes & Associates 2
Levy, Edw. C., Co. 3rd cover
Mechanical Heat & Cold 22
Michigan Consolidated Gas Co. 5
Michigan Drilling Co. 24
Michigan Ready-Mixed Concrete Assoc., Inc. 8
Palombit Tile Co. 24
Roofing Industry Promotion Fund 4
Supersine 24
Turner Brooks, Inc. 10
U. S. Steel Corp. 21
Wesco, Inc. 23

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November, 1966 / 23
Sipperley Appointed Chief Architect

Keith M. Sipperley has been appointed Chief Architect of the Ford Motor Company, Central Staff. He will replace Mr. J. P. Spellacy who will assume the position of Chief Facility Planning Engineer.

Sipperley graduated from the University of Michigan, receiving his Bachelor of Architecture in 1960. Received numerous scholarships and the President’s Award while at the University of Michigan. Received AIA medal for student honors in 1960. Member of the Tau Sigma Delta Honorary Society.

He was employed by Smith, Hinchman & Grylls from 1960 until 1965 when he joined the firm of Ford & Earl Design Associates for one year. He is a member of the Michigan Society of Architects Convention Committee on Registration for 1966 and currently Chairman of Exhibit Design for the 1967 MSA Convention.

Rockrise Named Hud Adviser on Design

George T. Rockrise FAIA, of San Francisco, Calif., nationally recognized architect and planner, has been appointed Adviser on Design to the Secretary of the Department of Housing and Urban Development.

Secretary Robert C. Weaver announced the appointment at a press conference held at The Octagon, headquarters of the American Institute of Architects.

Secretary Weaver, who also announced that Mrs. Estelle Dodge, president of Estelle Dodge Associates, New York City, will study the use of works of art in urban redevelopment, said the appointments were made to help bring about higher standards of beauty and design in urban areas.

"These advisers will greatly strengthen our efforts to stimulate and support communities as they improve the quality of the urban environment, replacing the clutter and disunity of the past with satisfying surroundings that are pleasant and inspiring," said Weaver.

The Secretary quoted President Johnson’s earlier stated desire to "introduce, into all our planning, our programs, our building, and our growth, a conscious and active concern for the value of beauty. If we do this, we can be successful in preserving a beautiful America."

Rockrise’s primary assignment, said Weaver, will be to spearhead the HUD’s drive to raise the quality of design throughout all of its programs. He will strengthen working relationships with such design groups as the AIA and the American Society of Landscape Architects.

The new adviser will also serve as HUD’s liaison with professional associations of builders and developers, and with universities, research and development firms and private groups on matters relating to design and esthetics.

Rockrise will provide professional and technical design assistance for such specific HUD programs as urban renewal, neighborhood facilities, historic site preservation, urban mass transit and low-cost housing, according to the Secretary. Rockrise also will direct the HUD Design Awards programs.

Rockrise has been a practicing architect, planner, urban designer and landscape architect for more than 20 years. He has been associated since 1960 in the architectural and urban planning firm of Rockrise and Watson.

The firm has executed several commissions for the Federal government as well as for private clients. It has worked with several West Coast schools and colleges and local public agencies in the urban renewal field.

The new HUD adviser has received numerous awards for design excellence, including two national Awards of Merit from the AIA (1953 and 1959). He is author of seven books and several articles on architecture and home building. In 1963 he was named a Fellow of the AIA, which he currently serves as a member of the Esthetics Committee.

Holder of a bachelor of architecture degree in architecture from Columbia (1941), Rockrise has taught and lectured at the University of California, Stanford, Cornell, and Syracuse Universities and the University of Utah.

Mrs. Dodge will visit a number of universities and the University of Utah. Mrs. Dodge has been an art consultant to architects, builders, and developers on office buildings, factories, and apartment houses. Among her clients have been CIBA Pharmaceutical Company, the Banker’s Trust Company, Revere Copper and Brass, Inc., Joseph Meyerhoff Corporation, the William Kauffman Organization and International Nickel Company.

AISC Design Awards Given Two Michigan Buildings

The American Institute of Steel Construction awarded two Michigan Buildings, from 100 entries received, for "Outstanding Esthetic Design in Structural Steel."

The First Federal Building, Detroit's newest skyscraper, and the Birmingham-Bloomfield Bank a correspondent of the Bank of the Commonwealth) Wixom, Michigan were the recipients of the coveted AISC awards.

Smith, Hinchman & Grylls Associates, Inc., Architects for the First Federal Building accepted a double honor for this project inasmuch as they were responsible for the structural engineering as well as the design concept. Others receiving recognition for their participation were: George A. Fuller Company, Chicago and Walter L. Couse and Company, Detroit, General Contractors and the R. C. Mahon Company, Structural Steel Fabricators.

The Judges: Lawrence B. Anderson, FAIA, Massachusetts Institute of Technology; Mario J. Ciampi, FAIA, San Francisco; Charles M. Nes, Jr., FAIA, President American Institute of Architects, Baltimore; John C. Portman, Jr., AIA, Atlanta and Dr. Lev Zetlin, New York commented on the increasing stress being placed on esthetics in buildings of "monumental size" and expect even more versatility in the future. They also complimented the AISC for initiating, in 1960, their awards program designed to stimulate aesthetic design in structural steel.

New Office in Grand Valley

Gordon McCarty, Professional Associate member of the Grand Valley Chapter. has opened an office for the practice of architecture, landscape design and planning. A native of Grand Rapids, McCarty is a graduate of the University of Michigan and has been associated with architectural firms in Ann Arbor, Cleveland and Grand Rapids.

The address of the new firm is 4056 Plainfield Avenue, N.E., Grand Rapids.
Meinzinger Promoted
By McKinley.

Jerry Meinzinger, 2716 Lomond Street, Kalamazoo, has been promoted to position of a district sales manager for the O. O. McKinley Co., Inc. of Indianapolis, manufacturer of sun control and architectural metal products.

Meinzinger has been a sales representative for the company since 1961. He is a native of Detroit, a graduate of Western Michigan University and has lived in Kalamazoo since 1950.

In his new duties he will be responsible for the company's sales in all of Michigan, northern Indiana and the Chicago marketing area.

Rossetti Appointed
To Arts Council

Louis Rossetti, FAIA, president of the Detroit Chapter of the American Institute of Architects, has been appointed by Governor Romney as a member of the new Michigan State Council for the Arts.

Rossetti, who is affiliated with the firm of Griffels and Rossetti, Inc., will serve as chairman of the Council's committee on architecture, architectural landscaping, and city planning.

The 15-member Council is the governing body of the new state agency which began operation July 1, with funds appropriated by the legislature at its 1966 session.

The Council's purpose is to stimulate and encourage the study and presentation of the performing and creative arts throughout the state.

Its administrative offices are at 7310 Woodward Avenue in Detroit.

BENEATH THE BEAUTY...IS STRENGTH!

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November, 1966 / 25
CALENDAR

1966

November 5 Co. Gallery. Recent Paintings and Sculpture
November 9-30 XXth Century Masters, exhibit. J. L. Hudson Co. Gallery. Work in all media by Picasso, Matisse, Braque, Miro and Dubuffet

December 3- Art & Artifact, exhibition. J. L. Hudson

1967

January 4 Co. Gallery, Decorative objects created by fine artists - anonymous to Leger, Klee. Calder, etc.
April 12, 13 & 14 MSA 53rd Annual Convention - Civic Center. Lansing
May 10-12 Wisconsin Chapter. Lake Lawn Lodge. Delavan. Wisconsin

September 8-10 New Jersey Society of Architects. Essex and Sussex Hotel. Spring Lake. New Jersey

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EDISON
Here's an automotive dealership that was architecturally designed— from the ground up. The facility: Rinke Pontiac Sales and Service in Warren, Michigan. The result: an integrated design—functional

Showroom for Rinke—Showcase for Slag

in form, pleasing to the eye, with top to toe durability, all economically achieved. Slag was an important construction material in the project. It was used as the aggregate in the asphalt-paved areas. And in the built-up roof, again, the aggregate selected was Slag. Didn't we tell you Slag was versatile?

Owner: Rinke Sales & Service, Warren
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Roofing Contractor: Milbrand Maintenance Inc., Warren
Paving Contractor: Detroit Concrete Products Corp., Detroit

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